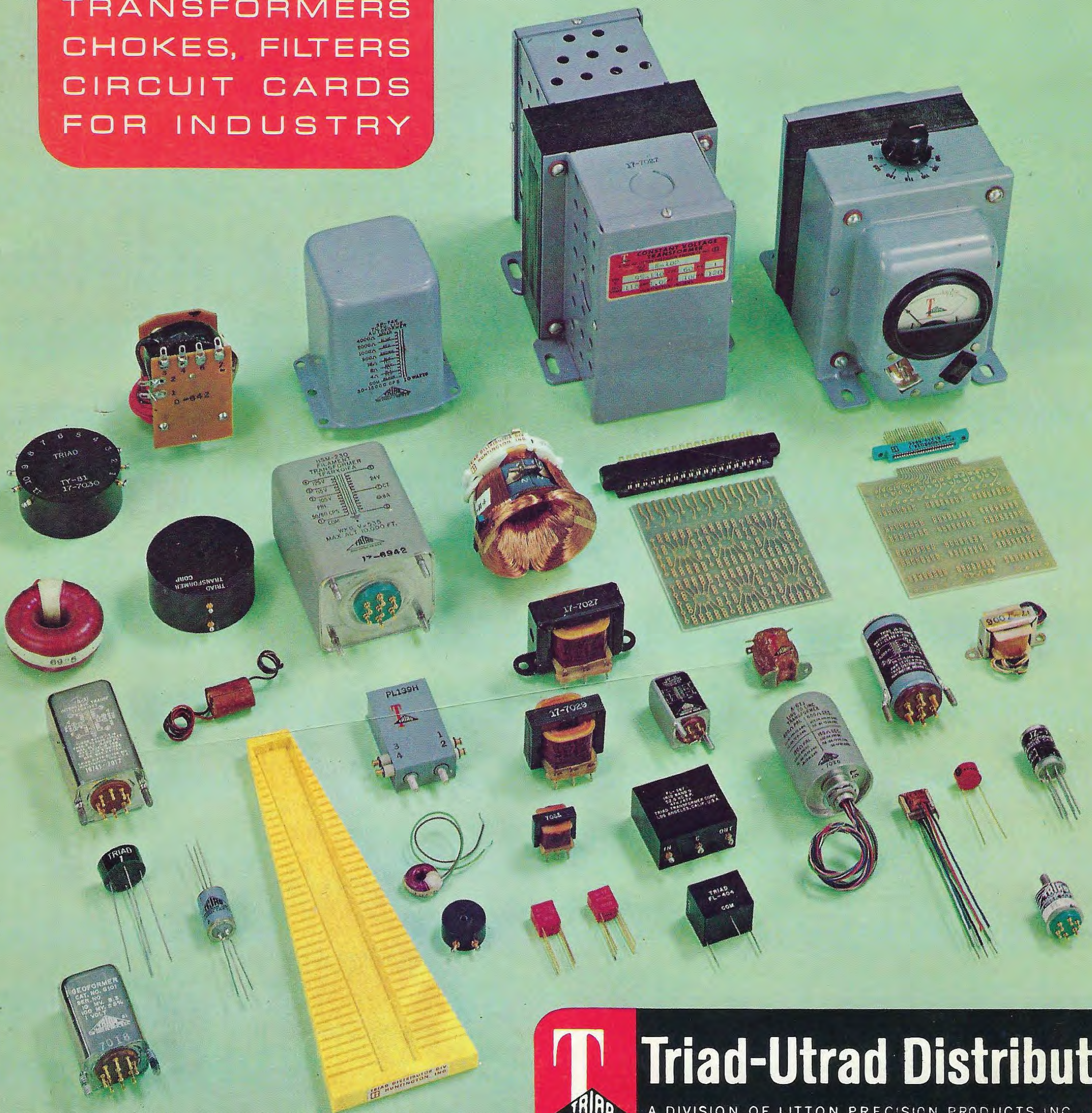


TRIAD 1971-1972 CATALOG

TRANSFORMERS
CHOKES, FILTERS
CIRCUIT CARDS
FOR INDUSTRY



Triad-Utrad Distributor

A DIVISION OF LITTON PRECISION PRODUCTS INC





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A-4X	44	4.42	CO-13500-2	25	10.65	EC-600A	22	7.00	EM-100A	23	6.33	F-14Z	6	3.37
A-5X	44	4.54	CO-13510-1	25	10.17	▲EC-700	22	4.75	EM-150	23	4.73	F-15U	6	12.52
A-6X	44	3.43	CO-13510-2	25	10.65	▲EC-700A	22	7.08	EM-150A	23	6.40	F-16X	6	4.43
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A-61J	43	14.27	▲EA-004	23	3.35	▲EK-050A	22	9.00	ET-007	22	4.60	F-45X	6	4.17
A-64J	43	7.27	▲EA-004A	23	5.77	▲EK-060	22	5.93	ET-007A	22	7.03	F-46X	6	3.87
A-65J	43	11.60	EA-005	23	3.37	▲EK-060A	22	9.09	ET-010	22	4.62	F-47U	10	8.45
A-66J	43	11.14	EA-005A	23	5.78	EK-080	22	5.98	ET-010A	22	7.08	F-48U	10	12.14
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A-68J	43	12.40	EA-007A	23	5.78	EK-100	22	5.92	ET-015A	22	7.10	F-50X	6	5.59
A-69J	43	9.14	EA-010	23	3.38	EK-100A	22	9.45	ET-020	22	4.65	F-51X	6	5.63
A-70J	43	7.50	EA-010A	23	5.80	▲EK-120	22	6.13	ET-020A	22	7.17	F-52X	6	4.42
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A-81X	47	3.46	EA-025	23	3.47	EK-200A	22	9.55	ET-040	22	4.80	▲F-57X	6	4.40
A-83X	47	4.17	EA-025A	23	6.08	EK-250	22	6.40	ET-040A	22	7.37	▲F-58A	6	19.50
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C-11X	12	4.59	EA-300	23	3.88	EK-2500A	22	10.54	ET-400	22	5.07	F-83A	7	14.75
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C-14A	12	7.45	EA-500	23	4.08	EK-4000A	22	10.67	ET-700	22	5.10	F-91X	11	5.05
C-14X	12	5.37	EA-500A	23	6.83	EK-5000	22	7.47	ET-700A	22	7.70	F-92A	11	8.50
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C-28X	12	3.47	EC-007	22	3.78	EM-002A	23	5.33	EX-006A	23	7.25	F-117X	11	4.50
C-29X	12	4.07	EC-007A	22	6.12	▲EM-003	23	3.95	EX-008A	23	7.25	F-118X	11	3.87
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G-135	36	24.02	HSM-236	18	23.15	K-106	21	165.90			
G-150	36	19.60	▲HSM-237	18	16.49	KA-1	21	2.50			
G-183	37	29.41	HSM-238	18	30.19	KA-2	21	2.50			
G-202	35	26.21	HSM-239	18	18.67	KA-3	21	3.25			
G-235	36	24.17	HSM-240	18	21.77	M-1X	47	3.48			
G-250	36	22.19	HSM-241	18	44.83	M-3X	47	5.77			
G-255	36	23.10	HSM-245	18	53.51	M-4Z	47	4.17			
G-266	37	26.61	HS-247	18	70.53	M-6X	47	4.77			
G-274	37	26.17	▲HSM-248	20	29.18	M-7AL	47	11.22			
▲G-283	37	24.92	HSM-249	20	15.25	M-8AL	47	14.77			
G-284	37	24.57	HSM-250	20	17.60	▲M-12AL	47	22.15			
G-285	37	20.00	HSM-251	20	24.27	M-15A	47	9.05			
G-286	37	25.15	HSM-252	20	31.16	M-16AL	47	11.34			
G-301	35	20.82	▲HSM-253	20	47.06	MK-1	27	3.25			
G-306	35	21.40	HSM-254	20	67.46	MK-2	27	3.25			
G-309	35	63.89	▲HSM-270	20	26.04	MK-3	27	4.10			
G-310	35	49.87	HSM-271	20	33.87	MK-4	27	4.10			
G-313	35	21.77	HSM-272	20	48.19	N-1X	13	4.23			
G-315	35	21.57	HS-273P	40	19.65	N-3M	13	10.09			
G-335	36	20.00	HSM-301	20	21.10	N-4M	13	11.75			
G-336	36	19.74	HSM-302	20	12.44	N-5M	13	15.13			
▲G-350	36	18.91	HS-303	20	14.49	N-7M	13	27.57			
G-388	37	16.34	HSM-305	20	16.95	N-7MG	13	28.77			
▲G-391	37	18.91	HSM-307	20	22.65	N-9M	13	61.33			
G-394	37	14.02	HSM-315	20	23.59	N-9MG	13	57.38			
G-401	35	19.60	HSM-319	20	33.87	N-11M	13	69.68			
G-435	36	23.89	HS-331	20	9.37	N-11MG	13	67.26			
▲G-435TS	36	25.85	HS-333	20	10.67	N-34X	13	6.37			
▲G-437	36	23.52	HS-335	20	14.20	N-35M	13	24.13			
G-455	36	23.07	HS-339	20	16.50	N-48X	8	4.15			
G-500	37	34.44	HS-341	20	17.75	N-49X	8	5.78			
G-501	37	32.84	HS-400	19	15.34	N-50M	13	53.62			
G-502	37	35.84	HS-401	19	23.17	N-51X	8	5.18			

▲ Discontinued item, available until stock depleted.

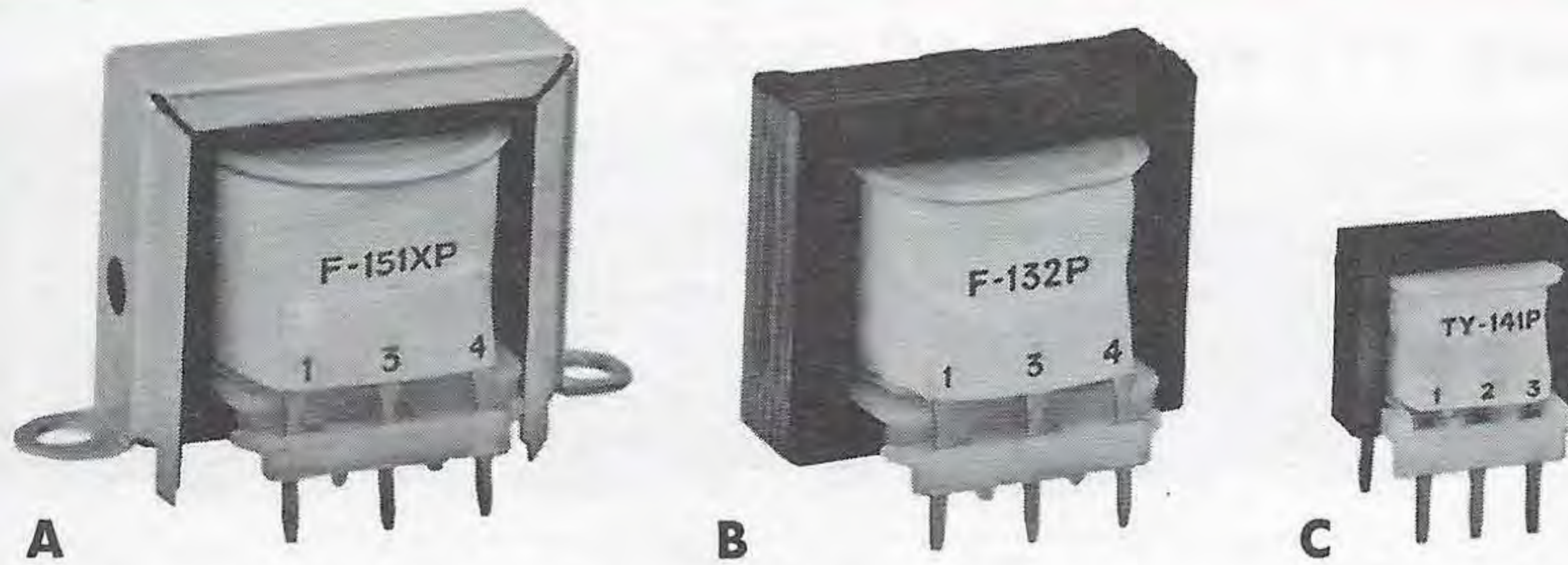


Type No.	Page No.	Net Price	Type No.	Page No.	Net Price	Type No.	Page No.	Net Price	Type No.	Page No.	Net Price	Type No.	Page No.	Net Price
▲P-17AL	16	28.41	R-46A	16	28.51	S-14Z	42	2.33	SP-48	32	7.78	TY-62X	39	3.77
P-18AL	16	66.97	R-49BC	17	22.90	S-15X	45	3.04	SP-49	32	7.48	TY-63X	40	5.20
▲P-20AL	16	65.33	R-49BS	17	25.97	S-16X	42	2.33	SP-50	32	7.62	TY-64X	40	5.32
P-30A	16	42.88	R-50A	17	26.06	S-17X	42	2.58	SP-51	32	7.67	TY-65Z	40, 47	4.59
P-213AL	16	26.43	R-50BC	17	24.60	S-18X	42	2.89	SP-52	32	7.98	▲TY-66A	40, 47	10.22
P-215AL	16	31.42	▲R-51BC	17	22.19	S-18Z	42	2.89	▲SP-63	32	7.23	TY-67A	40	11.60
P-216AL	16	56.47	R-52BC	17	17.15	S-19Z	45	4.25	SP-64	32	7.27	TY-68S	9	6.60
P-217AL	16	35.31	R-53Z	15	5.87	S-20X	42	2.26	SP-65	32	7.50	TY-69S	9	8.33
P-218AL	16	63.00	R-54X	15	4.04	S-20Z	42	2.27	SP-66	32	8.48	TY-70S	9	8.53
P-220AL	16	55.19	R-56A	15	7.48	▲S-21A	45	4.72	SP-67	32	7.55	TY-71S	9	8.53
PL-4	54	10.05	R-58A	14	18.39	S-21Z	45	5.37	SP-68	32	8.90	TY-74S	9	12.93
PL-5	54	12.13	R-59A	16	18.90	S-22A	41	8.05	SP-69	32	8.50	TY-75A	9	18.76
PL-6	54	12.13	▲R-60BC	17	20.39	S-23X	45	2.53	SP-70	32	6.95	TY-76A	9	11.70
PL-10	54	1.81	▲R-61BC	17	22.29	S-24A	41	7.58	SP-106	32	7.07	TY-78	9	14.59
PL-11	54	1.95	▲R-62BC	17	28.42	S-25Z	46	5.13	SP-107	32	5.98	TY-79	9	15.50
PL-20	54	3.33	R-63BC	17	16.15	S-26X	45	2.70	SP-108	32	6.22	TY-80	9	15.02
PL-21	54	3.43	R-64BC	17	18.25	S-27A	41	7.12	SP-117	32	6.28	TY-81	9	14.98
PL-30	54	5.38	▲R-65BC	17	17.24	S-28X	41	4.99	SP-118	32	6.02	TY-82	9	15.28
PL-31	54	5.27	▲R-66BC	17	18.59	S-29X	41	5.20	SP-128	32	5.93	TY-83	9	22.12
PL-32	54	5.27	▲R-67BC	17	16.15	S-30X	42	2.48	SP-310	33	.84	TY-84	9	23.27
PL-33	54	5.38	R-68A	15	11.48	S-31A	41	11.22	SR-45Z	41, 46	7.45	TY-85	9	24.60
PL-34	54	5.27	R-69BC	17	20.86	▲S-32A	41	8.82	▲SR-74K	46	6.45	TY-86	9	23.51
PL-80E	54	10.94	R-70A	16	16.05	S-35A	41	13.13	SX-201	41	7.44	TY-88	9	13.86
PL-80H	54	12.14	R-71A	14	21.12	S-36A	41	9.32	SX-202	41	7.41	TY-89	9	13.86
▲PL-81E	54	11.47	R-72A	14	14.49	S-37X	42	4.43	▲SX-203	41	7.26	TY-90	9	16.25
▲PL-81H	54	12.25	R-73B	15	10.01	S-38X	42	2.64	SX-204	41	7.44	TY-91	9	16.25
▲PL-81P	54	11.67	R-74BC	17	17.99	S-38Z	42	2.64	▲SX-205	41	7.50	TY-92	9	16.51
▲PL-82E	54	11.39	R-76BC	17	27.87	S-39X	45	2.69	SX-206	41	7.59	TY-93	9	24.77
▲PL-82H	54	12.69	▲R-77BC	17	20.27	S-40X	42	3.47	SX-207	41	7.62	TY-94	9	22.27
▲PL-82P	54	12.02	R-77BS	17	31.72	S-41X	42	2.48	SX-208	41	10.47	TY-99	9	14.49
▲PL-83E	54	12.17	R-78BC	17	18.65	S-42A	41	21.00	T-1X	38	5.43	TY-100	9	23.95
PL-83H	54	12.92	R-81BC	17	24.32	S-43Z	46	5.42	T-2X	38	5.30	TY-101	9	19.39
PL-83P	54	12.27	R-81BS	17	32.09	S-44Z	46	4.88	T-3X	38	5.42	TY-102	9	19.75
PL-84E	54	11.82	R-82B	10	17.22	S-46A	41, 46	10.24	T-5X	38	4.93	TY-141P	5	4.70
PL-84H	54	13.07	R-83A	13	18.71	S-47Z	46	4.72	T-11X	38	4.57	TY-142P	5	4.25
▲PL-84P	54	12.42	R-84K	6, 13	10.39	S-48Z	42	2.00	T-12X	38	5.27	TY-143P	5	4.15
▲PL-124E	54	11.39	▲R-85A	13	15.99	S-50X	42	2.71	T-13X	38	4.08	TY-144P	5	4.70
PL-124H	54	12.77	R-94H	10, 14	26.11	S-51X	45	4.25	T-14X	38	4.00	TY-145P	5	3.55
PL-139E	54	9.80	▲R-98B	14	13.70	S-52X	45	4.97	▲T-15X	38	4.12	TY-158X	40	5.03
PL-139H	54	10.88	▲R-99B	14	12.80	S-53X	45	4.60	T-20X	38	4.52	TY-159X	40	5.17
PL-139M	54	11.75	R-104A	15	6.76	S-54X	45	4.88	T-21X	38	4.13	TY-160X	40	5.65
▲PL-140E	54	11.39	R-104B	15	6.88	S-55X	45	6.37	T-22X	38	4.10	TY-200X	9	8.38
PL-140H	54	12.77	R-105A	15	8.05	S-55Z	45	6.43	T-23X	38	4.85	TY-201TZ	9	5.63
PL-140M	54	13.85	R-105B	15	8.11	S-56Z	45	5.27	T-24X	38	3.88	TY-202X	9	6.10
PL-146E	54	11.39	R-106A	15	8.54	S-57Z	45	6.43	T-25X	38	4.03	TY-462	9	17.44
PL-146H	54	12.72	R-106B	15	8.63	S-58X	44	3.74	T-26X	38	4.00	TY-468	9	12.70
PL-146M	54	13.84	▲R-107A	15	7.60	▲S-59Z	45	5.72	T-31X	38	4.38	TZ-1	49	6.12
PR-21AL	16	62.19	▲R-107B	15	7.60	S-60A	41	13.36	T-32X	38	3.33	TZ-2XT	49	6.38
R-2C	15	6.63	R-108A	15	8.92	S-61Z	45	7.15	T-33X	38	5.47	TZ-5	49	8.07
R-3A	15	7.68	R-108B	15	8.99	S-62X	45	4.63	T-34X	38	3.18	TZ-7	49	4.38
R-4A	14	7.67	R-109A	15	8.87	S-63X	45	4.04	T-35X	38	3.95	TZ-13	49	6.37
▲R-4B	14	7.62	R-109B	15	8.83	S-64X	45	2.80	T-41X	38	4.47	TZ-15	49	4.62
R-5A	14	9.12	R-110A	15	10.42	S-65X	45	3.03	T-42X	38	4.28	TZ-17XT	49	5.07
R-5B	14	9.07	R-110B	15	10.34	S-66X	45	3.38	T-101X	38	3.82	TZ-24XT	49	5.80
R-6A	14	9.37	R-111A	15	10.88	S-67X	42	2.74	T-102X	38	2.48	TZ-25	49	5.25
R-6B	14	9.29	R-111B	15	10.81	S-68Z	45	3.78	TY-20Z	40	4.80	TZ-26	49	4.65
R-7A	14	9.12	R-112A	15	10.90	S-69Z	45	5.35	TY-23X	39	5.74	TZ-28	49	3.60
R-7B	14	9.07	R-112B	15	10.82	S-70Z	46	4.57	TY-24X	39	7.31	▲TZ-29XT	49	4.72
R-8A	14	10.04	▲R-113A	15	7.57	S-71Z	46	5.95	TY-25X	39	6.76	TZ-32XT	49	4.87
R-8B	14	9.99	R-113B	15	9.16	S-72Z	46	5.95	TY-26X	39	10.34	TZ-103XT	49	3.53
R-9A	14	11.52	R-114A	15	12.05	S-73X	46	4.70	TY-27XT	39, 49	4.37	VR-30Z	54	5.74
▲R-9B	14	11.35	R-114B	15	12.05	S-76Z	45	6.03	TY-28XT	39, 49	4.25	Y-12-1	5	7.68
R-10A	14	11.89	R-115A	15	8.50	S-77U	45	12.88	TY-29X	40	5.22	Y-17-1	5	9.65
R-10B	14	11.70	R-115B	15	8.50	S-78Z	46	5.65	TY-30X	40	3.82	Y-22	5	9.80
R-11A	14	12.50	R-116A	15	13.84	S-79Z	46	6.00	TY-31X	40	3.31	Y-24	5	9.74
R-11B	14	12.32	R-116B	15	13.88	☞S-81X	44	3.34	TY-32X	39	3.76	Y-40	5	9.71
R-12A	14	12.42	R-118A	15	15.64	S-129Z	46	6.08	TY-33X	39	3.76	Y-48	5	9.06
R-12B	14	12.40	R-118B	15	15.44	S-130Z	46	4.01	TY-34X	39	3.76	Y-60-1	5	11.80
R-14A	14	14.84	R-120A	15	17.40	S-131X	46	3.45	TY-35X	39	3.02	Y-70	5	8.94
R-14B	14	14.79	▲R-120B	15	12.75	S-132X	46	4.15	TY-35XT	39	2.99	YT-101	5	9.76
R-16A	14	16.10	R-121A	15	18.22	S-133Z	46	5.85	TY-36X	39	3.82	YT-111	5	12.34
▲R-16B	14	16.05	R-200A	10	18.50	S-142A	41	12.38	TY-37X	39	4.82	YT-113	5	14.02
R-17A	14	18.53	R-201A	10	18.30	S-144A	41	18.34	TY-37XT	39	4.82	13125	26	7.35
R-18A	14	16.13	R-202A	10	17.40	S-146A	41	19.10	TY-38X	39	4.64	13500-1	25	7.10
R-18B	14	15.92	R-203A	10	15.97	▲S-149A	41	18.35	TY-38XT	39	4.64	13500-2	25	7.60
R-19A	14	16.45	R-204A	10	16.94	S-2501	46	1.30	TY-39X	39	6.25	13510-1	25	7.10
R-20A	14	15.02	R-205A	10	16.22	S-2502	46	1.70	TY-40X	39	4.12	13510-2	25	7.60
R-20B	14	14.87	R-206B	10	12.33	S-2505	46	1.90	▲TY-41X	39	5.13	13511	25	12.65
R-21A	14	21.15	R-208A	10	9.19	S-2510	46	2.25	TY-42X	39	4.58	13540	24	7.60
R-21B	14	20.97	R-675A	17	23.93	S-7001	46	1.30	TY-43X	39	4.94	13541	24	7.60
R-22A	14	9.49	S-1X	42	2.48	S-7002	46	1.70	TY-44X	39	4.25	13542	24	7.60
R-22B	14	9.61	S-2X	42	2.46	S-7005	46	1.90	TY-45X	39	4.59	13543	24	7.60
R-23B	15	7.68	S-3X	42	2.56	S-7010	46	2.25	TY-45XT	39	4.40	13544	25	17.65
R-24A	14	24.80	S-4X	42	3.20	SP-4	32	10.50	TY-46X	39	2.98	13545	24	7.60
R-24B	14	24.80	S-5X	42	3.32	SP-5	32	9.95	TY-47X	39	4.84	13546	24	7.60
R-25A	14	33.14	S-5Z	42	3.37	SP-7	32	9.52	TY-48X	40	4.21	13600-1	26	10.65
R-26A	16	27.54	S-6X	42	2.41	SP-11	32	8.27	TY-49X	39	4.21	13600-2	26	12.35
R-27A	16	44.03	S-6Z	42	2.46	SP-13	32	9.07	TY-50X	39	7.21	13605	26	6.90
R-28A	16	31.94	S-7X	42	2.56	SP-15	32	8.99	TY-51X	39	4.37	13610	26	7.39
R-29A	15	6.76	S-8X	42	2.41	SP-20	32	8.72	TY-51XT	39	4.49	13750	26	3.92</

PRINTED CIRCUIT TRANSFORMERS COMPONENTS FOR CRT DISPLAYS



COMMERCIAL GRADE

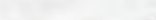


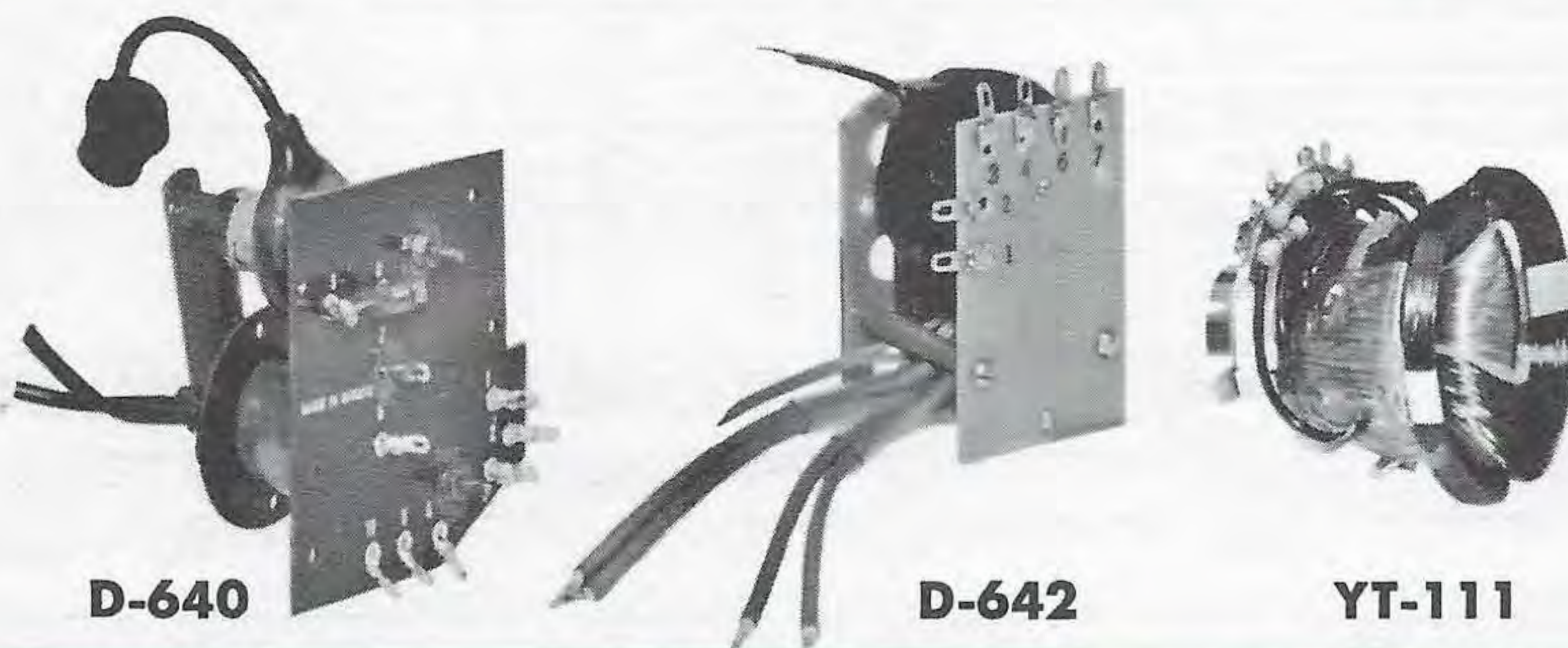
This series of transformers includes units for both audio and power applications in transistorized control and instrumentation. Fifteen of the units provide a voltage stepdown and isolation from power line at relatively low power levels of 1½, 4½ and 7 watts at 4 to 38 volts when connected in parallel, and 8 to 76 volts when series connected. Precision spaced plug-in terminals provide fixed mounting centers—the kind usually found only in costly molded units. You get the benefits without the high cost plus maximum power with optimum equipment miniaturization.

LOW-VOLTAGE, LOW-CURRENT PLUG-IN PRINTED CIRCUIT POWER TRANSFORMERS 115 volts, 50/60 Hz Primary

	Cat. No.	Fig.	Output Watts	SECONDARY		H.	Dimensions		Pin Dim.		Mtg. Dim.	Wt. Oz.
				Series Conn.	Parallel Conn.		W.	D.				
	F-131P	B	1½	8V CT @ .188A	4V @ .376A	1⅛	1 ²⁵ / ₆₄	1 ⁵ / ₃₂	⅜ ₁₆	.041		3.5
	F-132P	B	1½	15V CT @ .100A	7.5V @ .200A	1⅛	1 ²⁵ / ₆₄	1 ⁵ / ₃₂	⅜ ₁₆	.041		3.5
	F-133P	B	1½	30V CT @ .050A	15V @ .100A	1⅛	1 ²⁵ / ₆₄	1 ⁵ / ₃₂	⅜ ₁₆	.041		3.5
	F-134P	B	1½	54V CT @ .028A	27V @ .056A	1⅛	1 ²⁵ / ₆₄	1 ⁵ / ₃₂	⅜ ₁₆	.041		3.5
	F-135P	B	1½	76V CT @ .020A	38V @ .040A	1⅛	1 ²⁵ / ₆₄	1 ⁵ / ₃₂	⅜ ₁₆	.041		3.5
	F-141XP	A	4½	8V CT @ .562A	4.0V @ 1.124A	1 ²⁵ / ₆₄	2 ³ / ₈	1¼	⅜ ₁₆	.041	2	7.5
	F-142XP	A	4½	15V CT @ .300A	7.5V @ .600A	1 ²⁵ / ₆₄	2 ³ / ₈	1¼	⅜ ₁₆	.041	2	7.5
	F-143XP	A	4½	30V CT @ .150A	15V @ .300A	1 ²⁵ / ₆₄	2 ³ / ₈	1¼	⅜ ₁₆	.041	2	7.5
	F-144XP	A	4½	54V CT @ .084A	27V @ .168A	1 ²⁵ / ₆₄	2 ³ / ₈	1¼	⅜ ₁₆	.041	2	7.5
	F-145XP	A	4½	76V CT @ .060A	38V @ .120A	1 ²⁵ / ₆₄	2 ³ / ₈	1¼	⅜ ₁₆	.041	2	7.5
	F-151XP	A	7½	8V CT @ .940A	4.0V @ 1.880A	1 ⁴¹ / ₆₄	2 ¹³ / ₁₆	1 ¹⁵ / ₃₂	⅜ ₁₆	.041	2 ³ / ₈	10.5
	F-152XP	A	7½	15V CT @ .940A	7.5V @ 1.000A	1 ⁴¹ / ₆₄	2 ¹³ / ₁₆	1 ¹⁵ / ₃₂	⅜ ₁₆	.041	2 ³ / ₈	10.5
	F-153XP	A	7½	30V CT @ .250A	15V @ .500A	1 ⁴¹ / ₆₄	2 ¹³ / ₁₆	1 ¹⁵ / ₃₂	⅜ ₁₆	.041	2 ³ / ₈	10.5
	F-154XP	A	7½	54V CT @ .140A	27V @ .280A	1 ⁴¹ / ₆₄	2 ¹³ / ₁₆	1 ¹⁵ / ₃₂	⅜ ₁₆	.041	2 ³ / ₈	10.5
	F-155XP	A	7½	76V CT @ 1.00A	38V @ .200A	1 ⁴¹ / ₆₄	2 ¹³ / ₁₆	1 ¹⁵ / ₃₂	⅜ ₁₆	.041	2 ³ / ₈	10.5

PLUG-IN PRINTED CIRCUIT AUDIO TRANSFORMERS

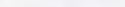
	Cat. No.	Fig.	Output MW.	Primary Impedance	Secondary Impedance	Pri. D.C. Unbalance	H.	Dimensions W.	D.	Pin Dim.		Wt. Oz.
	TY-141P	C	100	10,000 CT	10,000 CT	4 ma.	$\frac{5}{8}$	$\frac{13}{16}$	$\frac{19}{32}$	$\frac{3}{16}$	0.42	1
	TY-142P	C	100	10,000 CT	2,000 CT	4 ma.	$\frac{5}{8}$	$\frac{13}{16}$	$\frac{19}{32}$	$\frac{3}{16}$	0.42	1
	TY-143P	C	100	10,000 CT	1,500 CT	4 ma.	$\frac{5}{8}$	$\frac{13}{16}$	$\frac{19}{32}$	$\frac{3}{16}$	0.42	1
	TY-144P	C	100	15,000 CT	15,000 CT	4 ma.	$\frac{5}{8}$	$\frac{13}{16}$	$\frac{19}{32}$	$\frac{3}{16}$	0.42	1
	TY-145P	C	100	600 CT	600 CT	15 ma.	$\frac{5}{8}$	$\frac{13}{16}$	$\frac{19}{32}$	$\frac{3}{16}$	0.42	1



INDUSTRIAL YOKES & FLYBACKS

Triad has many types of yokes and flybacks, originally designed for replacement in TV receivers, which are now being widely used in CRT display devices for monitoring, measuring, computing, and command and control. Some representative units with their electrical and physical specifications, are listed below. In addition to these, there are many others which can be modified to fit your needs—or we can design both yokes and flybacks to your specific requirements.

Cat. No.	°Deflection	Inductance—MH		ResistanceΩ		Network Values				Dia. Rear	Length Less Cover	CRT Neck Size
		Horiz.	Vert.	Horiz.	Vert.	C-1	R-1	R-2	R-3			
Y-12-1	50-70	8.3	50.0	12.5	60.0	56	—	560	560	3⅛	2⅝	1⅝ ₁₆
Y-17-1	50-70	13.5	41.5	19.5	52.0	68	1.0k	560	560	3⅛	2⅝	1⅝ ₁₆
Y-22	70	18.5	41.5	30.0	52.0	—	—	—	—	3⅛	2⅝	1⅝ ₁₆
Y-24	70	30.0	41.5	52.0	52.0	—	—	—	—	3⅛	2⅝	1⅝ ₁₆
Y-40	90-92	12.0	43.0	15.0	39.0	—	—	—	—	3⅛	3¼	1⅝ ₁₆
Y-48	90-92	22.0	3.3	34.0	3.0	—	—	—	—	3⅛	3¼	1⅝ ₁₆
Y-60-1	110-114	18.3	13.2	30.0	12.7	118	—	150	150	3¾	2⅝	1⅝ ₈
Y-70	110-114	12.0	40.0	22.0	37.0	—	—	—	—	3⅛	2⅝	1⅝ ₈
YT-101	110-114	20.0	20.0	36.5	6.1	—	—	—	—	3¾	2⅝	1⅝ ₈
YT-111	90	.135	54.0	0.32	40.0	—	—	500	500	1¾	2¼	20mm
YT-113	90	.075	94.0	0.2	55.0	—	—	—	—	1¾	2¼	20mm

Cat. No.	Application	CRT	H.V. Out.	Typical Operating Conditions		Deg. Defl.	Yoke Horiz. "L"
				Source Voltage			
 D-640	Tube Type	12"	10KV	140V		110°	18.6mH
 D-642	Transistor	12"	10KV	12V		90°	80μH
 D-644	Transistor Tripler HV	9"	10KV	12V		90°	125μH

New item. CT for Center Tap.



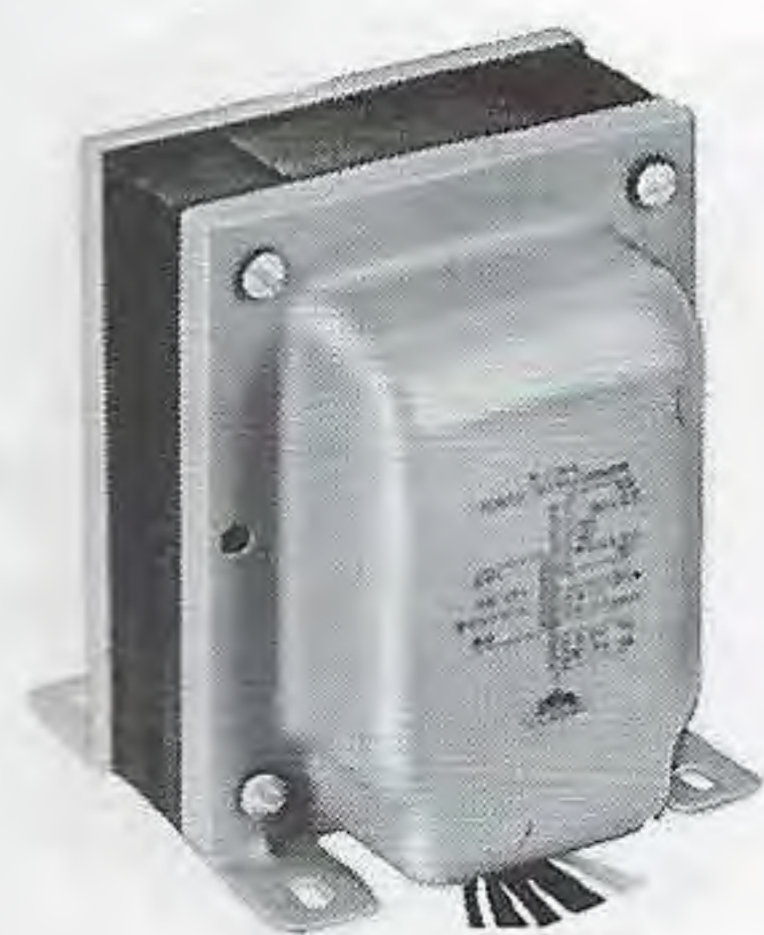
FILAMENT / single secondary / primary 115 volt, 50-60 cycle

Type No.	Secondary		RMS Test Voltage	Case Type	Connections or Lead Holes Used	Case Dimension			Mounting Dimension		Mtg. Hole Size	Max. Unit Wt. Lbs.
	Volts	Amps				H	W	D	MW	MD		
F-1X #	2.5 CT	3	1500	X	Leads	1 $\frac{5}{8}$	2 $\frac{1}{2}$	1 $\frac{5}{8}$	2 $\frac{3}{8}$		$\frac{3}{16}$	.68
F-72Z #	2.5 CT	5	Pri. 1500 Sec. 7500	Z	Pri. Leads Sec.-Lugs.	2 $\frac{3}{32}$	3 $\frac{1}{8}$	2 $\frac{1}{8}$	2 $\frac{1}{2}$		$\frac{3}{16}$	1.7
F-6X #	2.5 CT	6	Pri. 1500 Sec. 2500	X	Leads	1 $\frac{5}{16}$	3 $\frac{5}{16}$	1 $\frac{3}{4}$	2 $\frac{1}{2}$		$\frac{3}{16}$	1
F-3X #	2.5 CT	10	Pri. 1500 Sec. 3000	X	Leads	2 $\frac{9}{32}$	3 $\frac{3}{4}$	2 $\frac{1}{8}$	3 $\frac{1}{8}$		$\frac{3}{16}$	1.7
F-5U	2.5 CT	10	Pri. 1500 Sec. 7500	U	Leads	3 $\frac{1}{16}$	2 $\frac{1}{2}$	2 $\frac{1}{16}$	2	1 $\frac{7}{8}$	$\frac{5}{16} \times \frac{3}{16}$	2.2
F-71U #	2.5 CT	10	Pri. 1500 Sec. 10,000	U	Pri. Leads Sec. Leads	3 $\frac{1}{16}$	2 $\frac{1}{2}$	2 $\frac{1}{16}$	2 $\frac{1}{4}$	2 $\frac{1}{8}$	$\frac{5}{16} \times \frac{3}{16}$	2.6
F-7X	5 CT	3	1500	X	Leads	1 $\frac{5}{16}$	3 $\frac{5}{16}$	2	2 $\frac{1}{2}$		$\frac{3}{16}$	1.3
F-8X	5 CT	6	1500	X	Leads	2 $\frac{9}{32}$	3 $\frac{3}{4}$	2 $\frac{1}{8}$	3 $\frac{1}{8}$		$\frac{3}{16}$	1.7
F-12X	5 CT	8	2500	X	Leads	2 $\frac{1}{32}$	4	2 $\frac{1}{4}$	3 $\frac{1}{16}$		$\frac{3}{16}$	2.5
F-9U	5.2 CT	13	1500	U	Leads	3 $\frac{1}{16}$	2 $\frac{1}{2}$	3 $\frac{1}{4}$	2 $\frac{1}{4}$	2 $\frac{3}{8}$	$\frac{5}{16} \times \frac{3}{16}$	4
F-15U #	5 CT	15	Pri. 1500 Sec. 3000	U	Leads Lugs	3 $\frac{1}{2}$	2 $\frac{7}{8}$	2 $\frac{1}{16}$	2 $\frac{1}{4}$	2 $\frac{3}{16}$	$\frac{5}{16} \times \frac{3}{16}$	3.25
F-10U #	5 CT	14	Pri. 1500 Sec. 10,000	U	Leads	3 $\frac{1}{16}$	3 $\frac{3}{16}$	3 $\frac{1}{4}$	2 $\frac{1}{2}$	2 $\frac{9}{16}$	$\frac{5}{16} \times \frac{3}{16}$	4.75
F-11U	5.2 CT	24	1500	U	Leads	3 $\frac{1}{16}$	3 $\frac{3}{16}$	3 $\frac{7}{8}$	2 $\frac{1}{2}$	3 $\frac{1}{16}$	$\frac{5}{16} \times \frac{3}{16}$	6.75
F-13X	6.3	.6	1500	X	Leads	1 $\frac{3}{8}$	2 $\frac{3}{8}$	1 $\frac{3}{8}$	2		$\frac{3}{16}$	.37
R-84K	6.3†	.6	Pri. 1500 Sec. 3500	K	2-Leads	2 $\frac{3}{4}$	2 $\frac{1}{4}$	2 $\frac{1}{16}$	1 $\frac{1}{2}$	2 $\frac{3}{8}$	$\frac{3}{16}$	1.5
F-14X #	6.3 CT	1.2	Pri. 1500 Sec. 2500	X	Leads	1 $\frac{5}{8}$	2 $\frac{1}{2}$	1 $\frac{5}{8}$	2 $\frac{3}{8}$		$\frac{3}{16}$	.7
F-14Z #	6.3 CT	1.2	Pri. 1500 Sec. 2500	Z	Leads	1 $\frac{5}{16}$	2 $\frac{3}{8}$	1 $\frac{5}{8}$	2		$\frac{3}{16}$	.7
F-52X	6.3†	1.2	Pri. 1500 Sec. 5000	X	Leads	1 $\frac{5}{16}$	3 $\frac{5}{16}$	1 $\frac{3}{4}$	2 $\frac{1}{2}$		$\frac{3}{16}$	1
F-51X #	6.3-5†	2	Pri. 1500 Sec. 5000	X	Leads	1 $\frac{5}{16}$	3 $\frac{5}{16}$	2	2 $\frac{1}{2}$		$\frac{3}{16}$	1.25
F-53X	6.3	4	Pri. 1500 Sec. 5000	X	Leads	2 $\frac{1}{32}$	4	2 $\frac{1}{4}$	3 $\frac{1}{16}$		$\frac{3}{16}$	2.1
F-43X #	6.3	4	1500	X	Leads	1 $\frac{5}{16}$	3 $\frac{5}{16}$	2	2 $\frac{1}{2}$		$\frac{3}{16}$	1.25
F-16X	6.3 CT	3	Pri. 1500 Sec. 2500	X	Leads	1 $\frac{5}{16}$	3 $\frac{5}{16}$	2	2 $\frac{1}{2}$		$\frac{3}{16}$	1.3
F-18A	6.3 CT	6	1500	A	1-Leads	3 $\frac{1}{16}$	2 $\frac{1}{32}$	2 $\frac{5}{8}$	2	1 $\frac{1}{16}$	$\frac{3}{8} \times \frac{3}{16}$	2.5
F-18X	6.3 CT	6	1500	X	Leads	2 $\frac{1}{32}$	4	2 $\frac{1}{4}$	3 $\frac{1}{16}$		$\frac{3}{16}$	2.3
F-19X†	6.3 CT-6 CT	6	2000	X	Leads	2 $\frac{1}{32}$	4	2 $\frac{1}{4}$	3 $\frac{1}{16}$		$\frac{3}{16}$	2.3
F-21A	6.3 CT	10	1500	A	1-Leads	3 $\frac{1}{32}$	2 $\frac{1}{32}$	3 $\frac{1}{8}$	2 $\frac{1}{4}$	2	$\frac{3}{8} \times \frac{3}{16}$	3.8
F-20U†	6.3 CT-6 CT	11	Pri. 1500 Sec. 3000	U	Leads	3 $\frac{1}{2}$	2 $\frac{7}{8}$	3	2 $\frac{1}{4}$	2 $\frac{7}{16}$	$\frac{5}{16} \times \frac{3}{16}$	4
F-17U #	6.3 CT Lo-Cap.	15	Pri. 1500 Sec. 10,000	U	Pri. Leads Sec. Leads	4 $\frac{1}{4}$	3 $\frac{1}{2}$	3 $\frac{3}{4}$	2 $\frac{3}{4}$	2 $\frac{1}{2}$	$\frac{5}{16} \times \frac{3}{16}$	7.5
F-22A	6.3 CT	20	2000	A	2-Leads	3 $\frac{7}{8}$	3 $\frac{3}{32}$	4 $\frac{1}{8}$	2 $\frac{1}{2}$	3	$\frac{3}{8} \times \frac{3}{16}$	7
F-24U†	7.5 CT- 6.3 CT	8	Pri. 1500 Sec. 3000	U	Leads	3 $\frac{1}{2}$	2 $\frac{7}{8}$	2 $\frac{1}{2}$	2 $\frac{1}{4}$	2 $\frac{5}{16}$	$\frac{5}{16} \times \frac{3}{16}$	3.65
F-28U†	7.5 CT- 6.3 CT	25	Pri. 1500 Sec. 3000	U	Leads & Lugs	4 $\frac{5}{8}$	3 $\frac{1}{16}$	3 $\frac{5}{8}$	3	3 $\frac{1}{16}$	$\frac{5}{16} \times \frac{3}{16}$	7.5
F-23U	10 CT	7	1500	U	Leads	3 $\frac{1}{2}$	2 $\frac{7}{8}$	2 $\frac{1}{2}$	2 $\frac{1}{4}$	2 $\frac{7}{16}$	$\frac{5}{16} \times \frac{3}{16}$	3.9
F-29U†	12 CT-11 CT 10 CT	11	Pri. 1500 Sec. 3000	U	Leads	4 $\frac{3}{8}$	3 $\frac{1}{2}$	3 $\frac{3}{8}$	2 $\frac{3}{4}$	2 $\frac{9}{16}$	$\frac{5}{16} \times \frac{3}{16}$	6.5
F-25X	12.6 CT	1.5	1500	X	Leads	1 $\frac{5}{16}$	3 $\frac{5}{16}$	2	2 $\frac{1}{2}$		$\frac{3}{16}$	1.3
F-44X #	12.6 CT	2	1500	X	Leads	1 $\frac{5}{16}$	3 $\frac{5}{16}$	2	2 $\frac{1}{2}$		$\frac{3}{16}$	1.25
F-26X #	12.6 CT	2.5	1500	X	Leads	2 $\frac{9}{32}$	3 $\frac{1}{16}$	2	3 $\frac{1}{8}$		$\frac{3}{16}$	1.55
F-40X #	26.8 CT	1	1500	X	Leads	1 $\frac{5}{16}$	3 $\frac{5}{16}$	2	2 $\frac{1}{2}$		$\frac{3}{16}$	1.3
F-55X	26.8 CT	1.7	1500	X	Leads	2 $\frac{1}{32}$	4	2 $\frac{1}{4}$	3 $\frac{1}{16}$		$\frac{3}{16}$	2.3
F-57X	25.2 CT	1	1500	X	Leads	1 $\frac{5}{16}$	3 $\frac{5}{16}$	2	2 $\frac{1}{2}$		$\frac{3}{16}$	1.5
F-41X #	25.2 CT	2	1500	X	Leads	2 $\frac{1}{32}$	4	2 $\frac{1}{4}$	3 $\frac{1}{16}$		$\frac{3}{16}$	2.2
F-56X	25.2 CT	2.8	1500	X	Leads	2 $\frac{1}{32}$	4	2 $\frac{1}{4}$	3 $\frac{1}{16}$		$\frac{3}{16}$	2.5
F-50X #	Sec. 6.3-5 Pri. 6.3-5 Special Fil. Line Matching Transformer	2	Pri. 500 Sec. 5000	X	Leads	1 $\frac{5}{16}$	3 $\frac{5}{16}$	2	2 $\frac{1}{2}$		$\frac{3}{16}$	1.2
F-45X #	24 CT	1	1500	X	Leads	1 $\frac{5}{16}$	3 $\frac{5}{16}$	2	2 $\frac{1}{2}$		$\frac{3}{16}$	1.3
F-46X #	24	1	1500	X	Leads	1 $\frac{5}{16}$	3 $\frac{1}{16}$	2 $\frac{1}{8}$	2 $\frac{1}{2}$		$\frac{3}{16}$	1.4
F-54X	35 CT	1.5	1500	X	Leads	2 $\frac{1}{32}$	4	2 $\frac{1}{4}$	3 $\frac{1}{16}$		$\frac{3}{16}$	2.2
F-58A	50 CT	5	1500	A	Leads	4 $\frac{5}{8}$	3 $\frac{1}{16}$	4 $\frac{1}{2}$	3	3 $\frac{3}{8}$	$\frac{3}{8} \times \frac{3}{16}$	10.0
F-59X	60 CT	.4	1500	X	Leads	1 $\frac{5}{16}$	3 $\frac{5}{16}$	2	2 $\frac{1}{2}$		$\frac{3}{16}$	1.3

FILAMENT TRANSFORMERS FILTER REACTORS



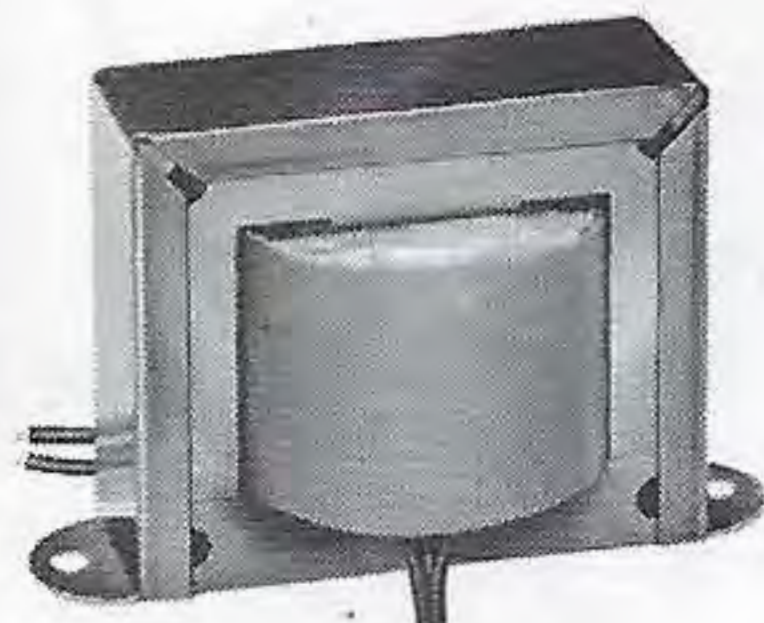
COMMERCIAL GRADE



A Case



Z Case



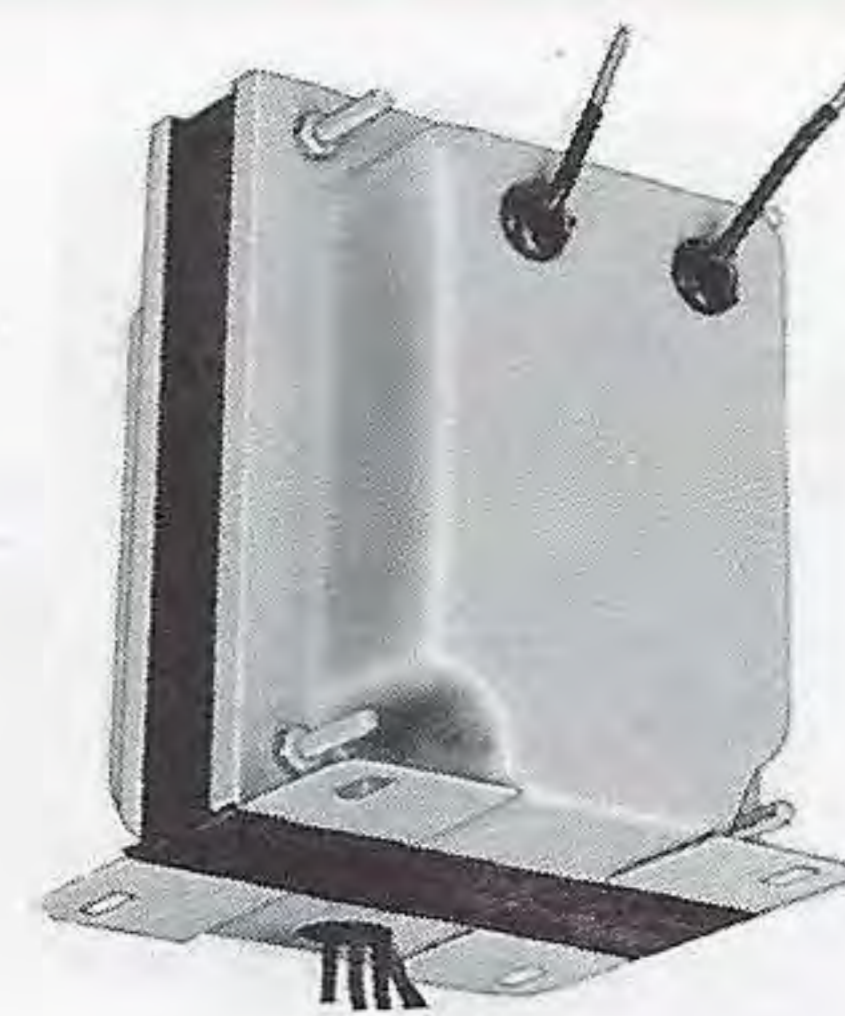
X Case



U Case



K Case



AL Case

Triad Filament Transformers offer precision and reliability for low temperature rise under continuous operation. They are lightweight, small, and have a proven record of long life and

superior regulation characteristics. Coil and core are Climatite varnish impregnated to protect against moisture and eliminate lamination chatter. Voltages shown are at full rated load.

FILAMENT / multiple secondary / primary 115 volt, 50-60 cycle

Type No.	Secondary		RMS Test Voltage	Case Type	Connections or Lead Holes Used	Case Dimension			Mounting Dimension		Mtg. Hole Size	Max. Unit Wt. Lbs.
	Volts	Amps				H	W	D	MW	MD		
F-27U	10 CT 2.5 CT	10 10	1500 7500	U	Leads	4 $\frac{3}{8}$	3 $\frac{1}{2}$	3 $\frac{3}{4}$	2 $\frac{3}{4}$	2 $\frac{9}{16}$	5 $\frac{1}{6}$ x3 $\frac{1}{16}$	6.2
▲ F-30A	6.3 CT 5 CT	8 3	1500	A	2-Leads	3 $\frac{1}{32}$	2 $\frac{31}{32}$	3 $\frac{1}{4}$	2 $\frac{1}{4}$	2 $\frac{1}{8}$	3 $\frac{3}{8}$ x3 $\frac{1}{16}$	4
F-32A	6.3 CT* 6.3 CT*	3 3	1500	A	1-Leads	3 $\frac{3}{16}$	2 $\frac{21}{32}$	2 $\frac{5}{8}$	2	1 $\frac{11}{16}$	3 $\frac{3}{8}$ x3 $\frac{1}{16}$	2.5
F-34A	6.3 CT* 6.3* 6.3* 6.3*	1.75 1.75 1.75 1.75	1500	A	2-Leads	3 $\frac{3}{16}$	2 $\frac{21}{32}$	3	2	2 $\frac{1}{16}$	3 $\frac{3}{8}$ x3 $\frac{1}{16}$	3.3
F-36A	6.3 CT* 6.3* 6.3* 6.3*	3.5 3.5 3.5 3.5	1500	A	1-Leads	3 $\frac{7}{8}$	3 $\frac{3}{32}$	3 $\frac{1}{2}$	2 $\frac{1}{2}$	2 $\frac{3}{8}$	3 $\frac{3}{8}$ x3 $\frac{1}{16}$	5
F-38A	6.3 CT* 6.3* 6.3 5 CT 5	5 5 1 2 4	1500	A	2-Leads	3 $\frac{7}{8}$	3 $\frac{3}{32}$	3 $\frac{3}{4}$	2 $\frac{1}{2}$	2 $\frac{5}{8}$	3 $\frac{3}{8}$ x3 $\frac{1}{16}$	6
F-42A	12.6 CT* 12.6*	2.5 2.5	1500	A	1-Leads	3 $\frac{1}{32}$	2 $\frac{21}{32}$	3 $\frac{1}{8}$	2 $\frac{1}{4}$	2	3 $\frac{3}{8}$ x3 $\frac{1}{16}$	3.7
F-83A† #	12.6 CT* 12.6 CT*	5 5	Pri. 1500 Sec. 2500	A	2-Leads	3 $\frac{7}{8}$	3 $\frac{3}{32}$	3 $\frac{3}{4}$	2 $\frac{1}{2}$	2 $\frac{5}{8}$	3 $\frac{3}{8}$ x3 $\frac{1}{16}$	6

* Windings may be connected in series to obtain their combined voltage when properly phased. Current will be equal to the current of the lowest winding. Example: Two 6.3V. windings @ 2A. in series would be 12.6V. @ 2A. Windings may also be connected in parallel to obtain combined current. Example: Two 6.3V. windings @ 2A. in parallel would be 6.3V. @ 4A.
CT for Center Tap. † Tapped primary 105-115-125. # 60 cycle operation.

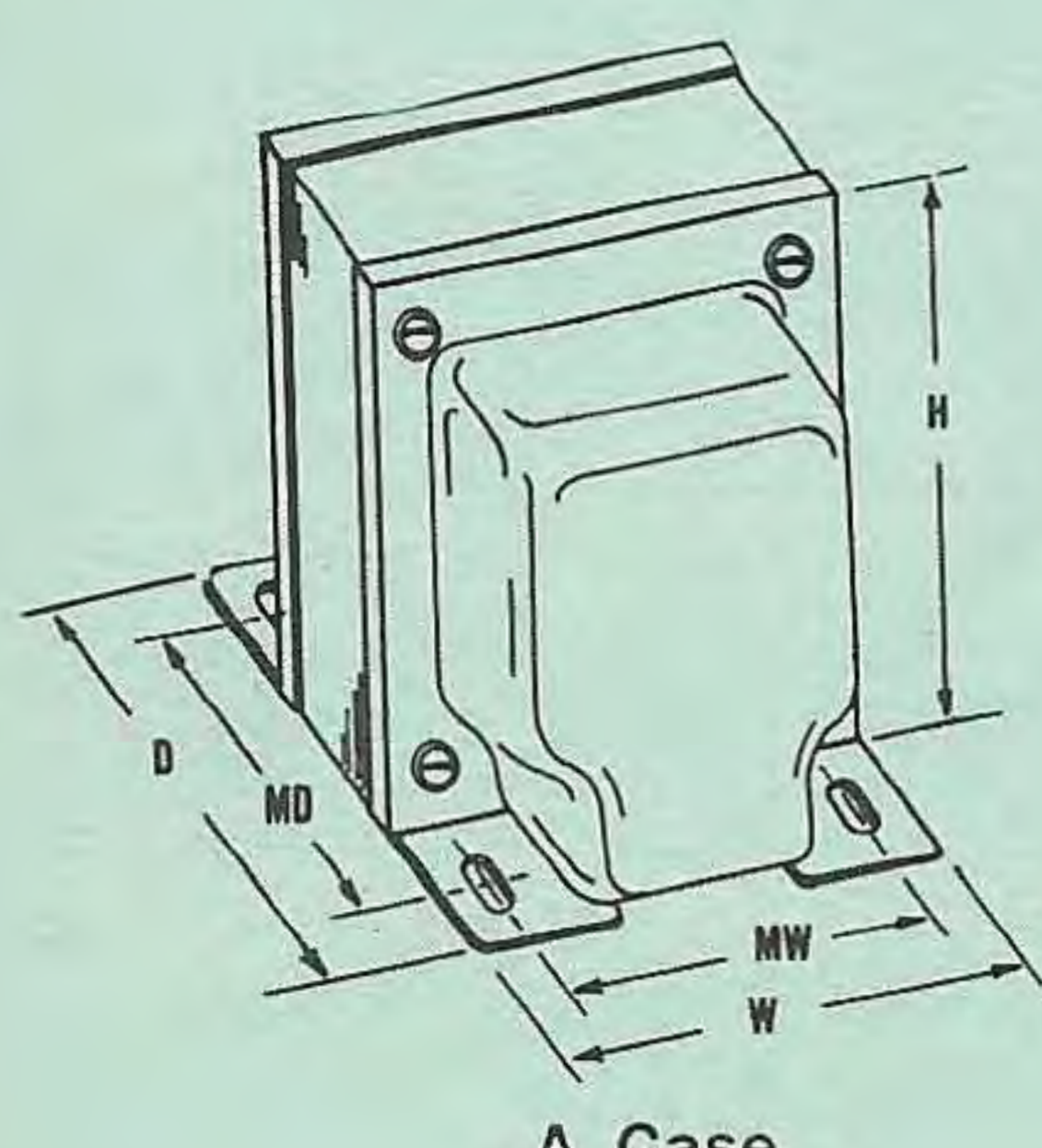
SWINGING FILTER REACTORS

Triad's highly dependable Swinging Filter Reactors provide a swinging input reactance which substantially improves the reg-

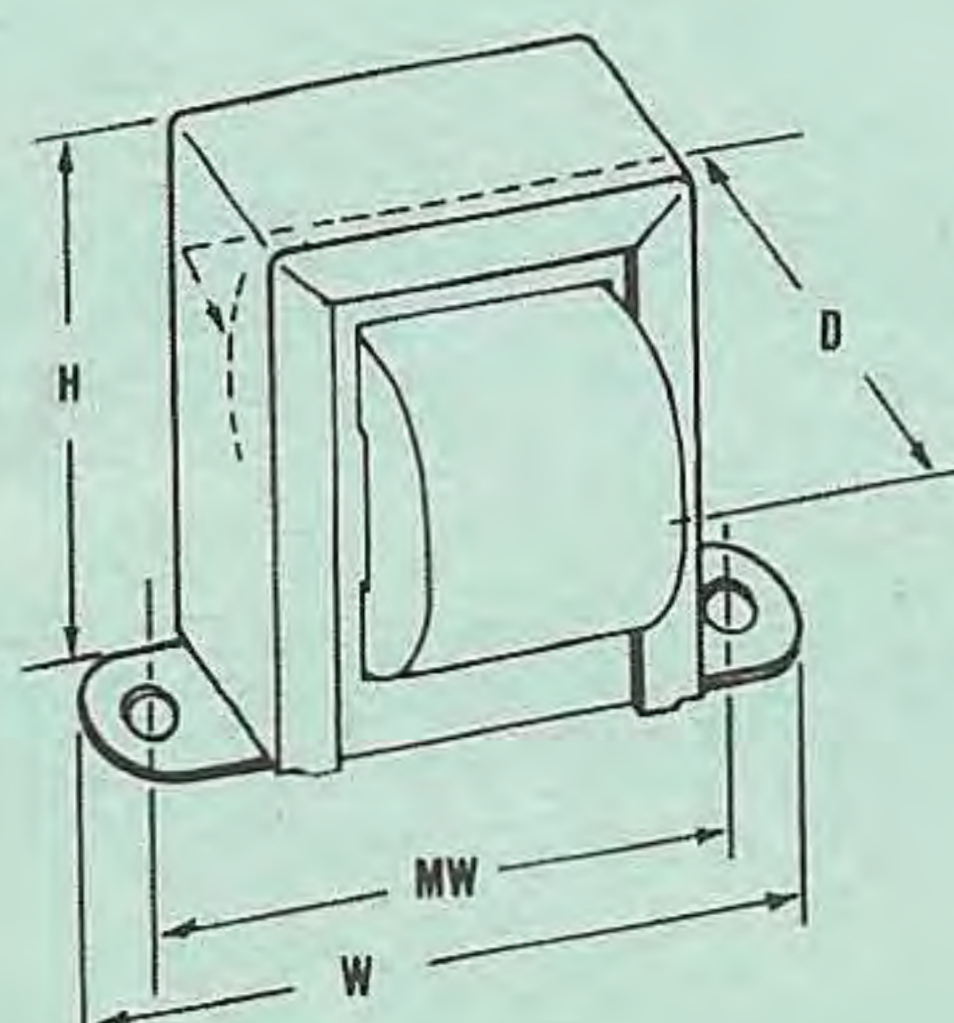
ulation of high voltage power supplies and prevents DC voltage from rising to the maximum peak AC rectifier input.

Type No.	Current DC MA.	Inductance Henries††	Resistance Ohms	RMS Test Voltage	Case Type	Connections	Lead Holes Used	Case Dimension			Mounting Dimension		Mtg. Hole Size	Max. Unit Wt. Lbs.
								H	W	D	MW	MD		
C-31A	20/200	25/5	150	2500	A	Leads	1	3 $\frac{1}{32}$	2 $\frac{31}{32}$	3 $\frac{1}{2}$	2 $\frac{1}{4}$	2 $\frac{3}{8}$	3 $\frac{3}{8}$ x3 $\frac{1}{16}$	4.6
C-33A	30/300	25/5	105	3000	A	Leads	1	4 $\frac{1}{4}$	3 $\frac{1}{32}$	4 $\frac{1}{8}$	2 $\frac{3}{4}$	3	3 $\frac{3}{8}$ x3 $\frac{1}{16}$	7.6
C-32AL	35/350	20/4	105	5000	AL	Leads	2-Side	4 $\frac{5}{8}$	3 $\frac{15}{16}$	4	3	2 $\frac{7}{8}$	3 $\frac{3}{8}$ x3 $\frac{1}{16}$	8
C-35A	40/400	20/4	65	3000	A	Leads	1	4 $\frac{5}{8}$	3 $\frac{15}{16}$	4 $\frac{1}{2}$	3	3 $\frac{3}{8}$	3 $\frac{3}{8}$ x3 $\frac{1}{16}$	10.5
C-39A	50/500	25/5	65	3000	A	Leads	1	5 $\frac{5}{16}$	4 $\frac{1}{2}$	5 $\frac{1}{8}$	3 $\frac{1}{2}$	4 $\frac{1}{8}$	1 $\frac{1}{2}$ x1 $\frac{1}{4}$	16.75

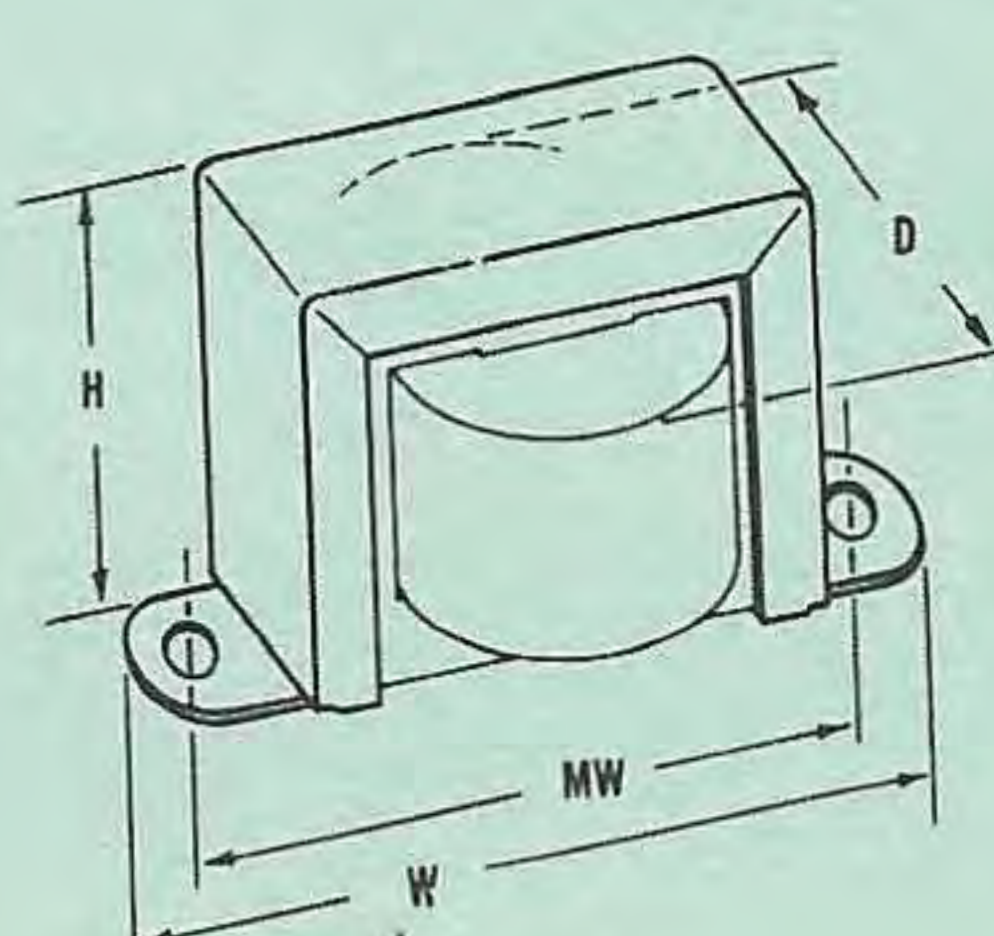
†† Inductance tolerance—20% + 50%. ▲ Discontinued item, available until stock depleted.



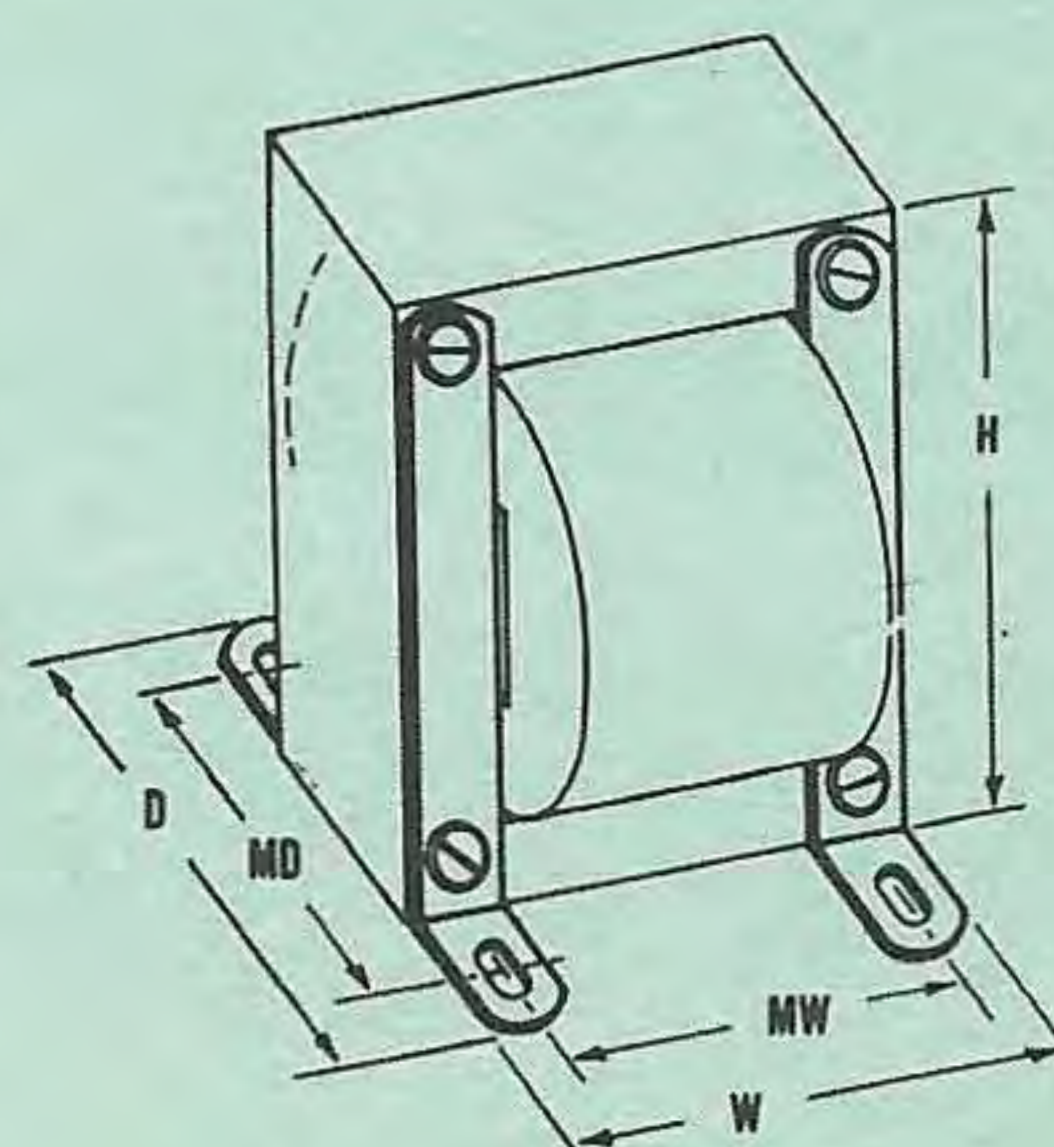
A Case



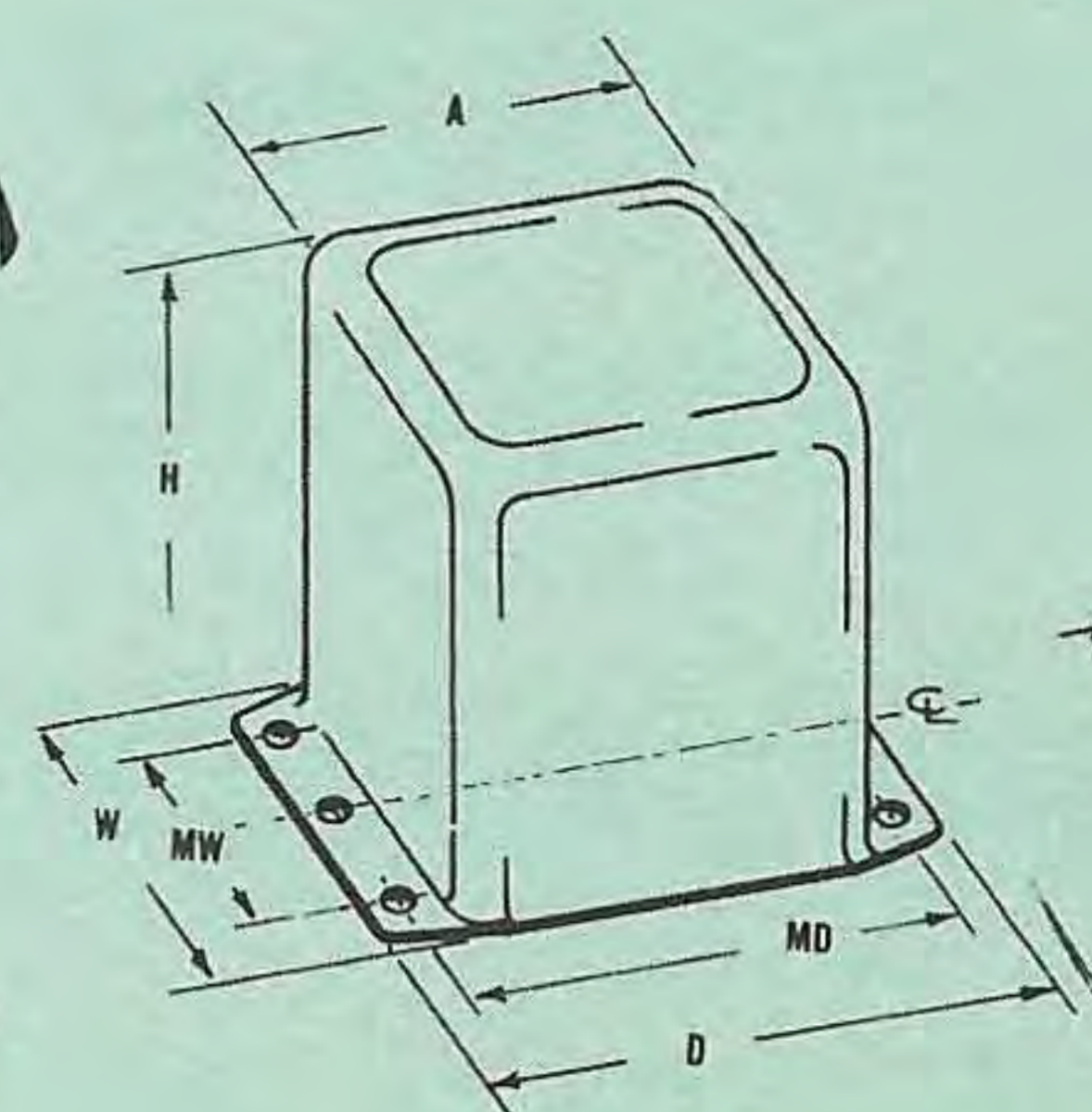
Z Case



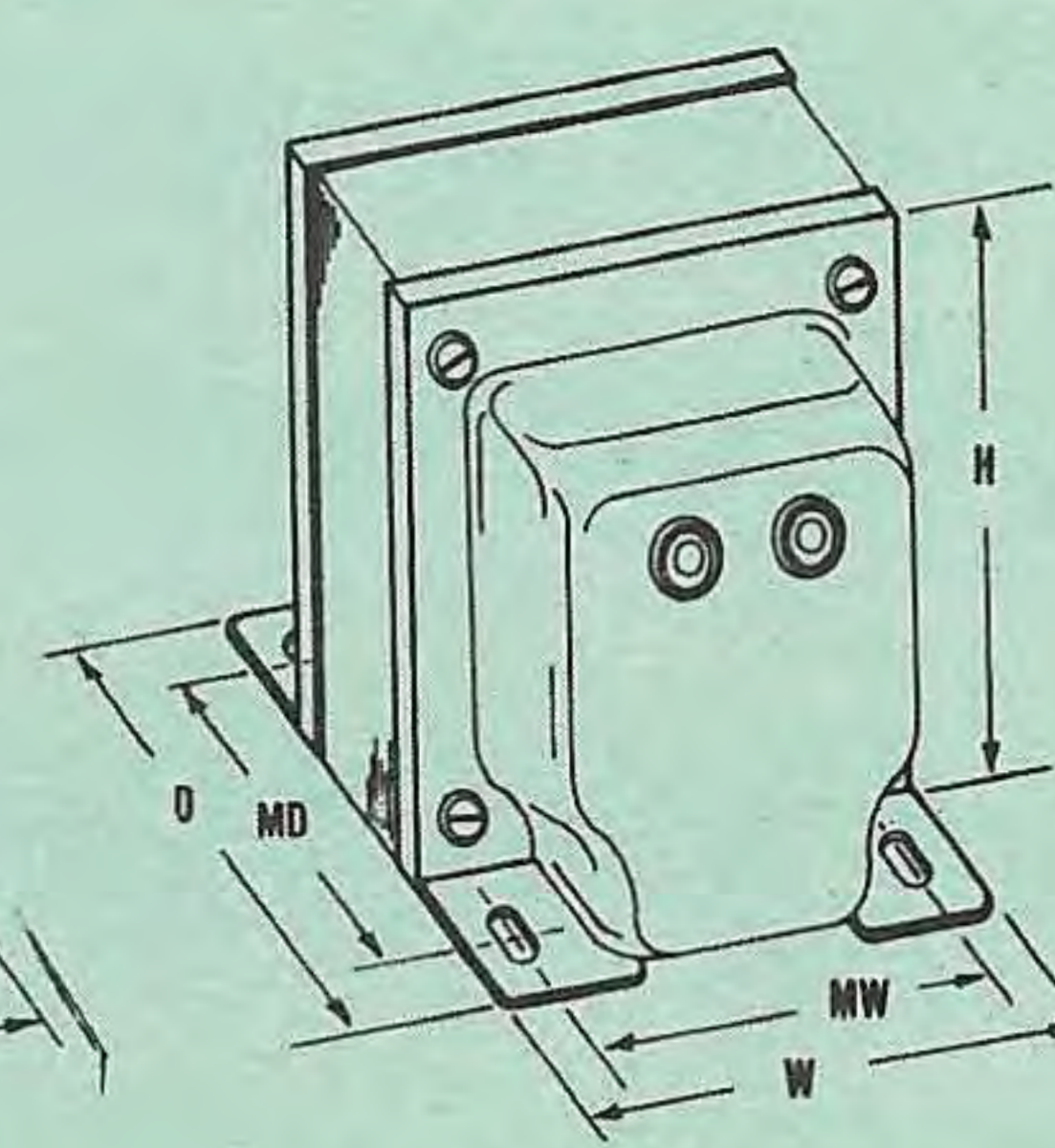
X Case



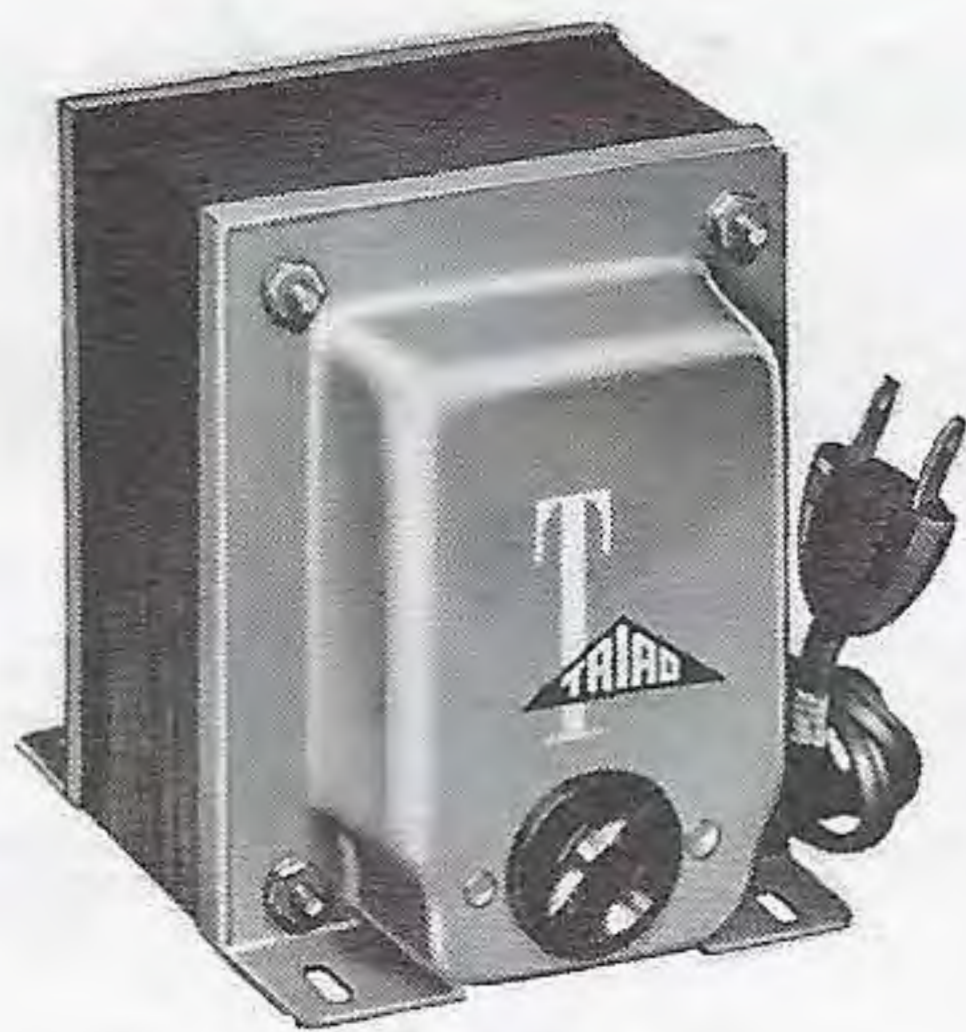
U Case



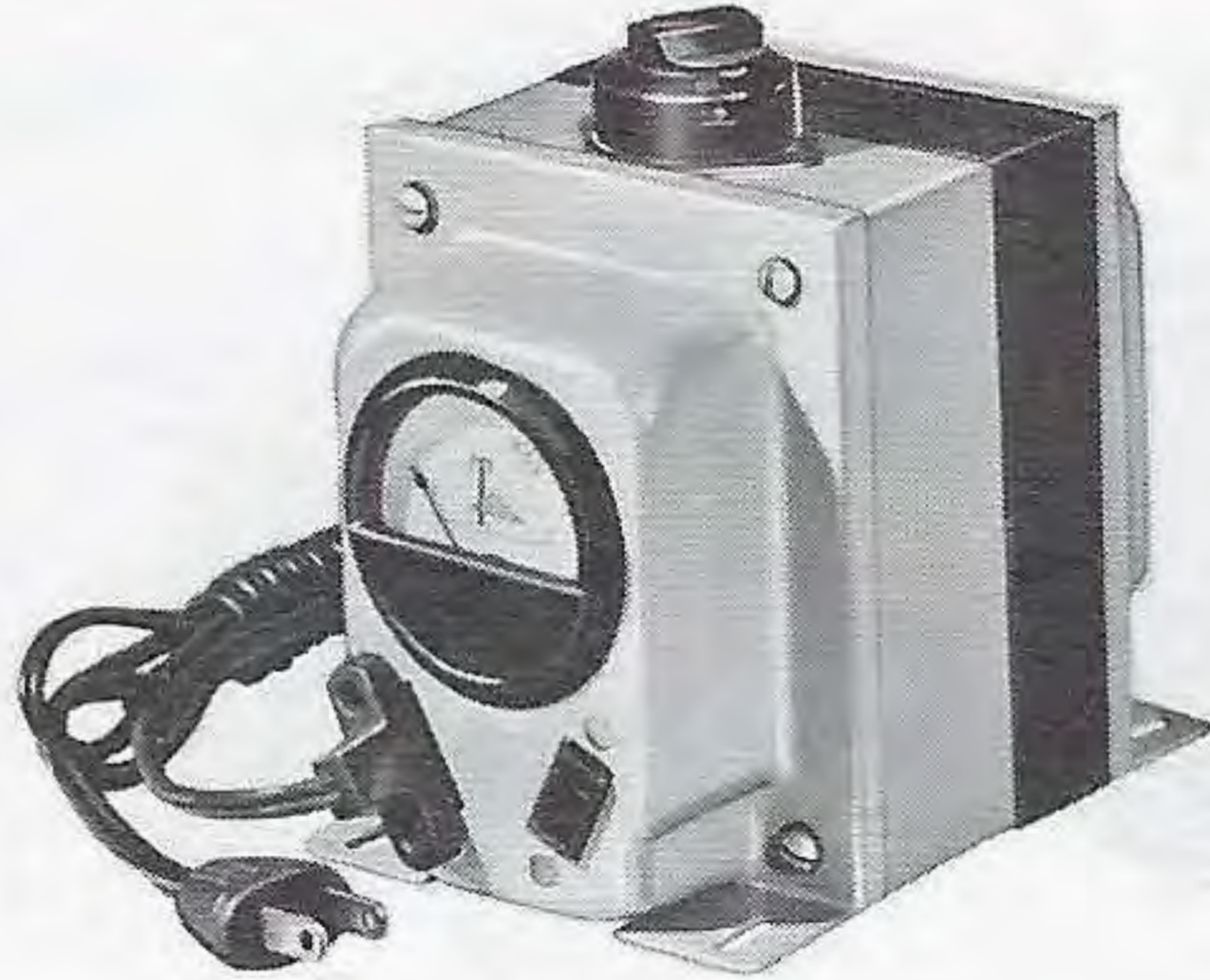
K Case



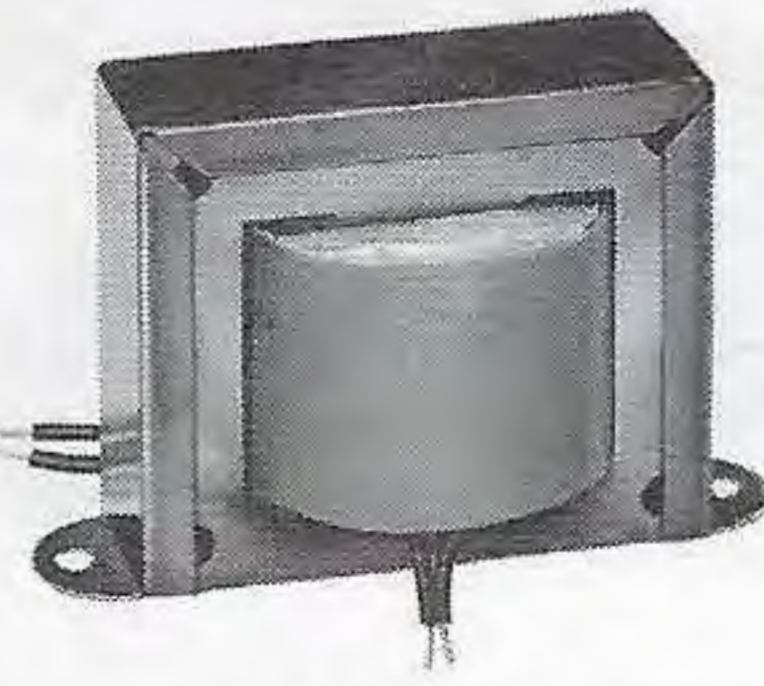
AL Case



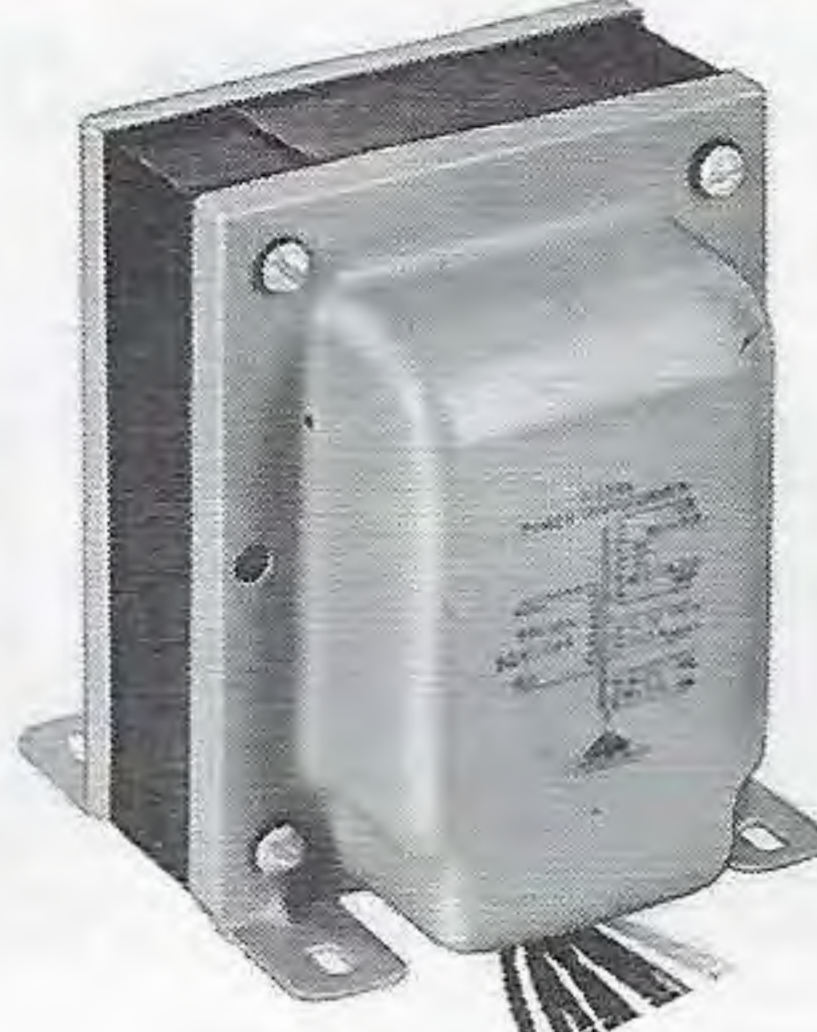
M Case



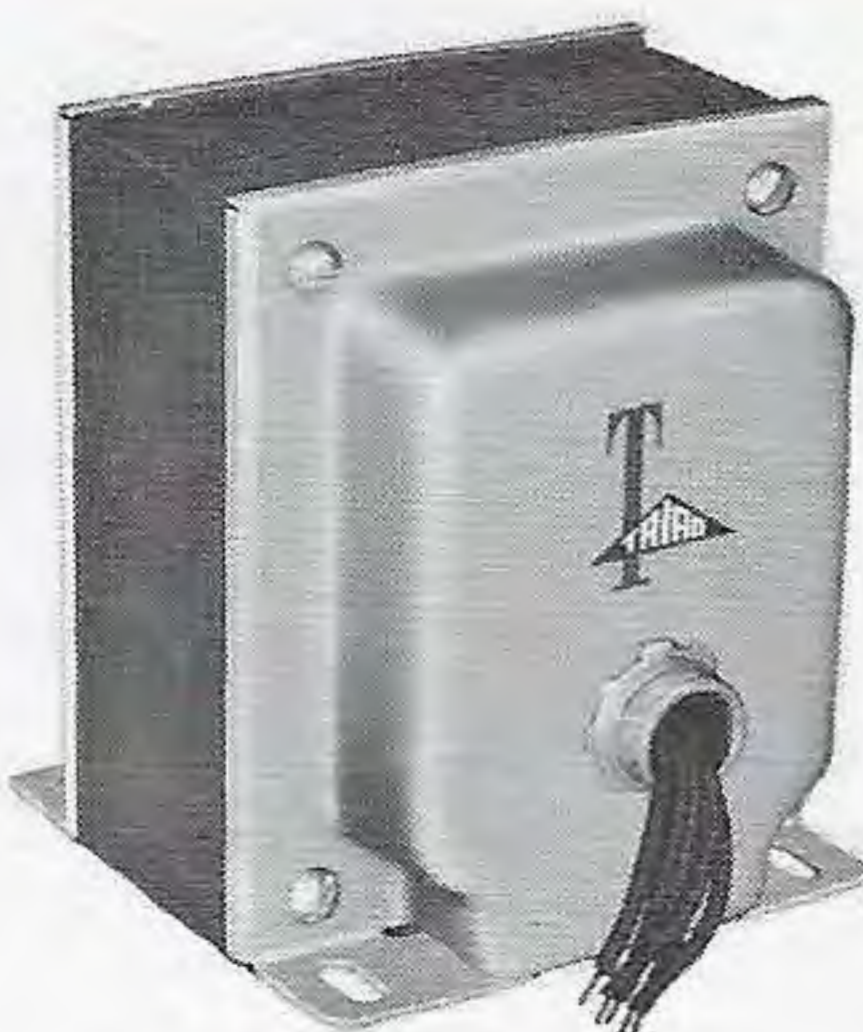
MM Case



X Case



A Case



AC Case

ISOLATION / 50-60 cycle

All units on this page have static shields

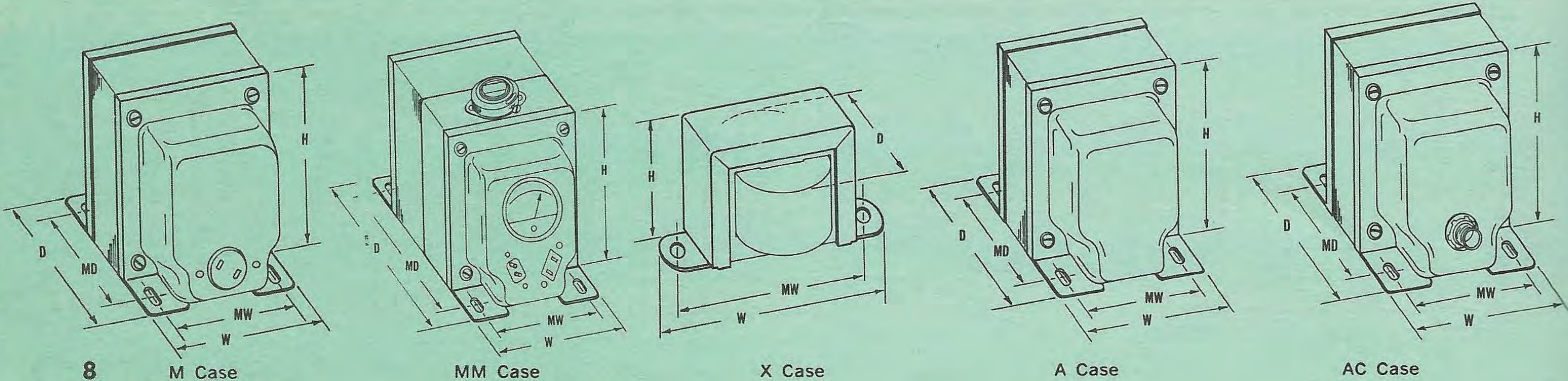
Type No.	Output Watts (VA)	Primary Volts	Secondary AC		RMS Test Voltage	Case Type	Connections	Lead Holes Used	Case Dimension			Mounting Dimension		Mtg. Hole Size	Max. Unit Wt. Lbs.
			Volts ± 5%	Amps					H	W	D	MW	MD		
N-48X	15	115	115	.13	1500	X	Leads	—	1 ⁵ / ₁₆	3 ⁵ / ₁₆	2	2 ¹ / ₁₆	—	3/ ₁₆	1.35
N-49X	35	115	57.5-115§	.3	1500	X	Leads	—	2 ⁹ / ₃₂	3 ¹ / ₁₆	2 ¹ / ₈	3 ¹ / ₈	—	3/ ₁₆	1.9
N-51X#	35	115	115	.3	1500	X	Leads	—	2 ⁹ / ₃₂	3 ¹ / ₁₆	2 ¹ / ₈	3 ¹ / ₈	—	3/ ₁₆	1.7
N-68X	50	115-230§	115	.435	1500	X	Leads	—	2 ⁹ / ₃₂	3 ¹ / ₁₆	2 ¹ / ₈	3 ¹ / ₈	—	3/ ₁₆	1.7
N-53M	85	115	115	.74	1500	M	6' Cord, Plug & Socket	—	3 ¹ / ₃₂	2 ³ / ₃₂	3 ⁵ / ₈	2 ¹ / ₄	2 ³ / ₈	3/ ₈ x3/ ₁₆	4.7
N-54M	150	115	115	1.3	1500	M	6' Cord, Plug & Socket	—	3 ⁷ / ₈	3 ³ / ₃₂	4 ¹ / ₄	2 ¹ / ₂	3	3/ ₈ x3/ ₁₆	7
N-73A	150	115	115-230§	.65	1500	A	Leads	1	3 ⁷ / ₈	3 ³ / ₃₂	3 ⁷ / ₈	2 ¹ / ₂	2 ³ / ₄	3/ ₈ x3/ ₁₆	7
N-74A	150	115	57.5-115§	1.3	1500	A	Leads	1	3 ⁷ / ₈	3 ³ / ₃₂	3 ⁷ / ₈	2 ¹ / ₂	2 ³ / ₄	3/ ₈ x3/ ₁₆	7
N-67A	150	115-230§	115	1.3	1500	A	Leads	2	3 ⁷ / ₈	3 ³ / ₃₂	4 ¹ / ₈	2 ¹ / ₂	3	3/ ₈ x3/ ₁₆	7
N-55M N-55MG*	250	115	115	2.17	1500	M	6' Cord, Plug & Socket	—	4 ⁵ / ₈	3 ¹⁵ / ₁₆	5	3	3 ⁷ / ₈	3/ ₈ x3/ ₁₆	11
N-66A	250	115-230§	115	2.17	1500	A	Leads	2	4 ⁵ / ₈	3 ¹⁵ / ₁₆	4 ⁵ / ₈	3	3 ⁵ / ₈	3/ ₈ x3/ ₁₆	11
N-57M N-57MG*	500	115	115	4.35	1500	M	6' Cord, Plug & Socket	—	5 ⁵ / ₁₆	4 ¹ / ₂	6 ¹ / ₄	3 ¹ / ₂	5 ¹ / ₈	1 ¹ / ₂ x1 ¹ / ₄	23.75
N-59M N-59MG*	1000	115	115	8.7	1500	M	6' Cord, Plug & Socket	—	5 ⁵ / ₁₆	4 ¹ / ₂	8	3 ¹ / ₂	6 ⁷ / ₈	1 ¹ / ₂ x1 ¹ / ₄	34
N-56M#	150	95-130 5V Steps	115	1.3	250	MM	Detachable 6' Cord, Plug, Switch, Socket & Meter	—	4 ⁵ / ₈	3 ¹⁵ / ₁₆	5 ³ / ₈	3	4 ¹ / ₄	3/ ₈ x3/ ₁₆	7
N-52M	350	95-130 5V Steps	115	3.04	250	MM	Detachable 6' Cord, Plug, Switch, Socket & Meter	—	4 ⁵ / ₈	3 ¹⁵ / ₁₆	7 ³ / ₄	3	6 ⁵ / ₈	3/ ₈ x3/ ₁₆	17
N-469A#	50	220-440§	115	.435	1500	A	Leads	1	3 ³ / ₁₆	2 ²¹ / ₃₂	2 ¹ / ₂	2	1 ¹ / ₁₆	3/ ₈ x3/ ₁₆	2.3
N-470A#	150	220-440§	115	1.3	2000	A	Leads	1	3 ⁷ / ₈	3 ³ / ₃₂	3 ⁵ / ₈	2 ¹ / ₂	2 ¹ / ₂	3/ ₈ x3/ ₁₆	5.5
N-471A#	300	220-440§	115	2.6	2000	A	Leads	1	4 ⁵ / ₈	3 ¹⁵ / ₁₆	4 ³ / ₈	3	3 ³ / ₈	3/ ₈ x3/ ₁₆	10.25

UNIVERSAL ISOLATION / AUTOFORMER / VOLTAGE CONTROL / 50-60 cycle

Have four 115-volt windings. Both primary and secondary may be connected for 115 or 230 volts.

Type No.	Output Watts (VA)		RMS Test Voltage	Case Type	Connections	Lead Holes Used	Case Dimension			Mounting Dimension		Mtg. Hole Size	Max. Unit Wt. Lbs.
	Isolation	Autoformer					H	W	D	MW	MD		
N-64AC	500	1000	1500	AC	Leads	1 Conduit	5 ⁵ / ₁₆	4 ¹ / ₂	5 ¹ / ₂	3 ¹ / ₂	3 ⁷ / ₈	1 ¹ / ₂ x1 ¹ / ₄	15
N-62AC	1000	2000	1500	AC	Leads	1 Conduit	6 ¹ / ₂	5 ¹ / ₂	6 ⁵ / ₈	4 ¹ / ₄	4	3/ ₄ x3/ ₁₆	29.5
N-60SC	2000	4000	2500	SC	Leads	Knockouts	4 ³ / ₄	8 ¹ / ₂	13 ¹ / ₂	7 ⁵ / ₈	7 ⁵ / ₈	9/ ₃₂	56

* Has 3-wire plug, cord and socket. § Split winding. # 60 cycle operation.



TRANSISTOR POWER SUPPLY TRANSFORMERS



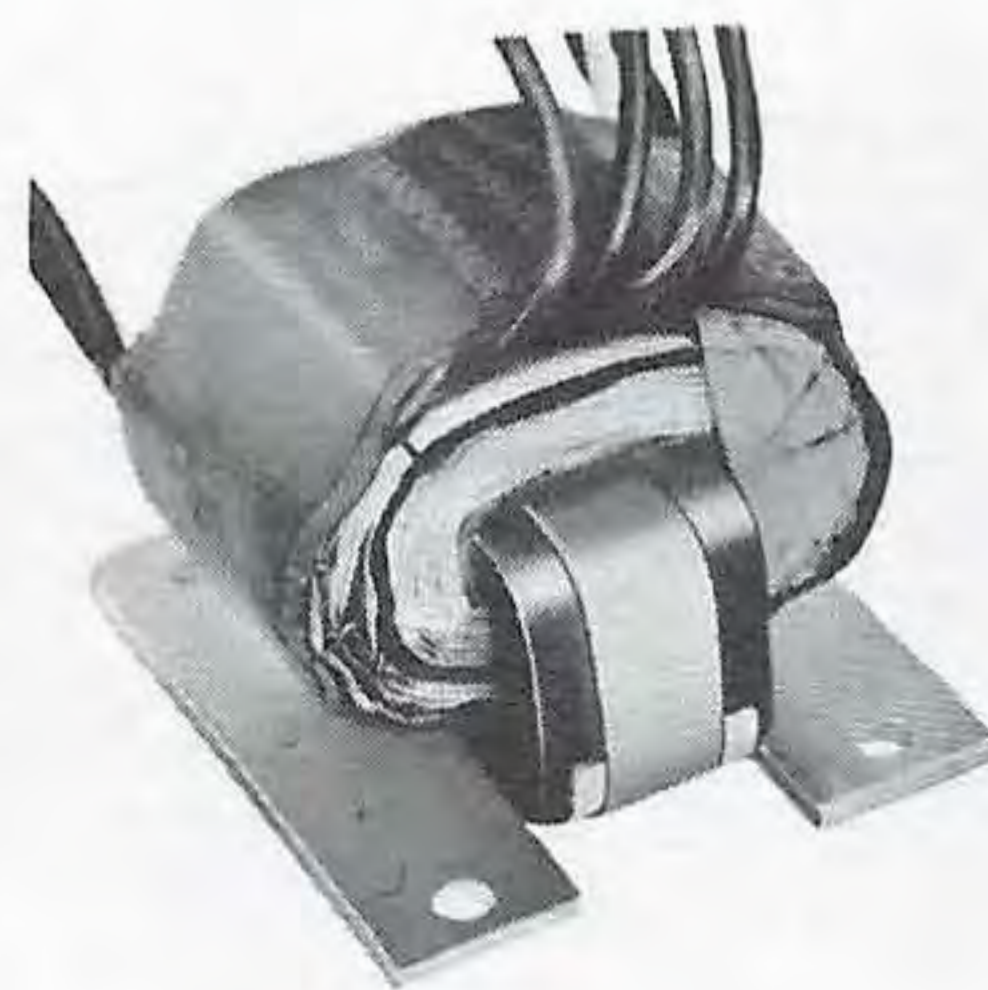
COMMERCIAL & MIL GRADE



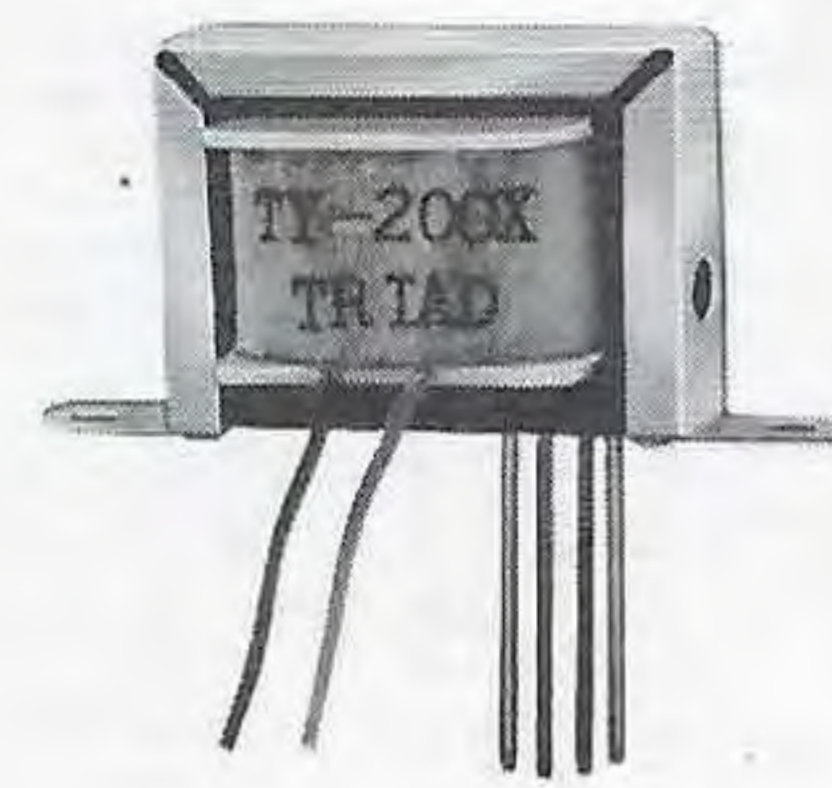
Type EE



Type A



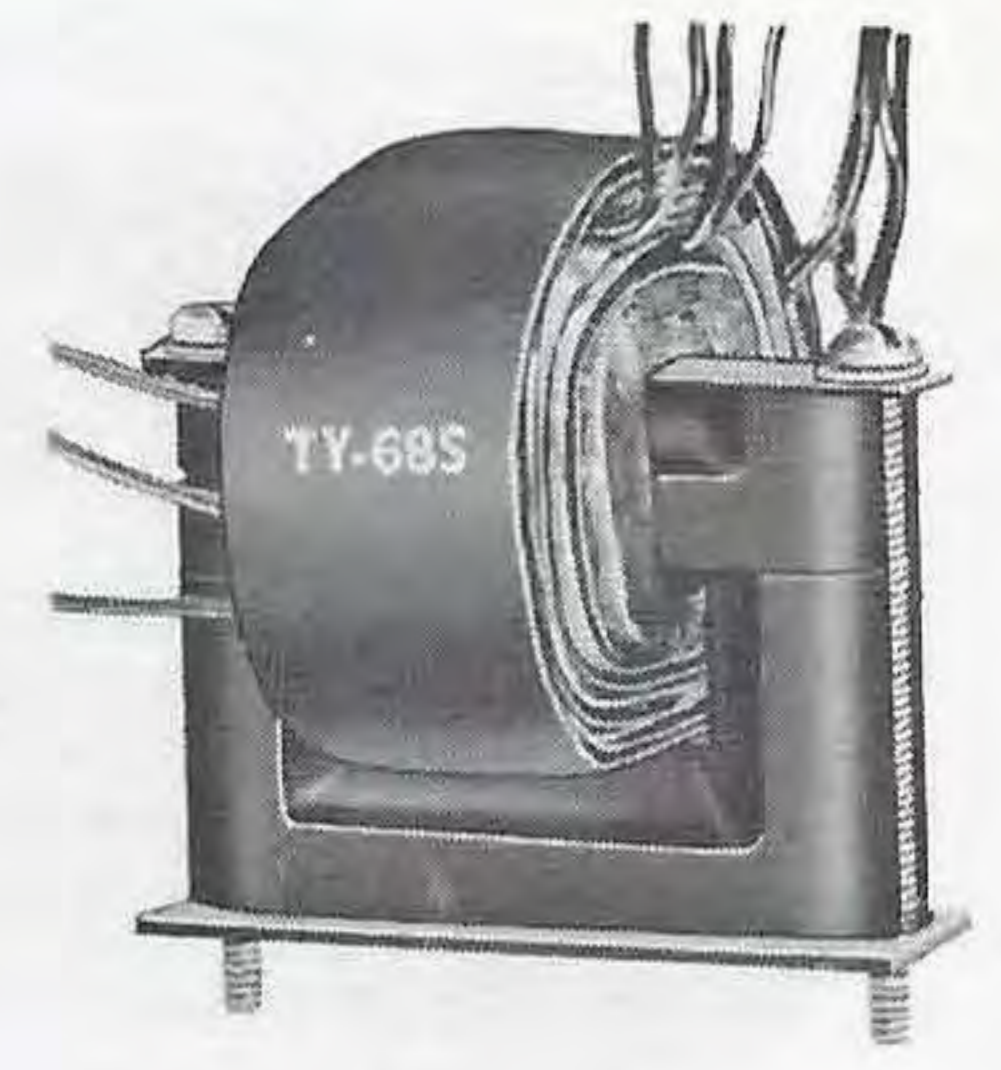
Type L



Type X



Type TZ



Type S

These quality transformers are produced in either (1) commercial open-frame, double varnish and vertical-shielded types, or (2) epoxy molded toroidal types exceeding the Grade 5, Class R

requirements of Specification MIL-T-27B TF5RX40ZZ. Complete information on these units will be found in the Triad Engineering Bulletin on Transistor Power Supply Transformers.

EPOXY MOLDED TOROIDAL TYPE / dc to dc

Type No.	D.C. Source Volts	D.C. Volts out of Rectifier		D.C. Millamps. Maximum	Case Type	Dimensions—Inches				Weight Lbs.
		F.W. Bridge	F.W. C.T.			T	D	H	M	
TY-78	12.6	250	125	100	EE	1/2	1 3/4	1 1/16	1 1/4	.35
TY-79	12.6	300	150	200	EE	3/4	1 3/4	1	1 1/4	.35
TY-80	12.6	325	162.5	150	EE	3/4	1 3/4	1	1 1/4	.35
TY-81	12.6	375	187.5	200	EE	3/4	2	1	1 1/4	.50
TY-82	12.6	450	225	150	EE	3/4	2	1	1 1/4	.50
TY-83	12.6	500	250	250	EE	1 1/8	2 3/4	1 3/8	3/16	.85
TY-84	12.6	600	300	200	EE	1 1/8	2 3/4	1 3/8	3/16	1.00
TY-85	12.6	600	300	350	EE	1 5/8	2 7/8	1 7/8	3/16	2.00
TY-86	12.6	425	212.5	350	EE	1 1/8	2 3/4	1 3/8	3/16	1.00
TY-88	28	250	125	80	EE	1 3/32	1 3/16	1 1/16	7/64	.25
TY-89	28	300	150	100	EE	1 1/2	1 3/4	1 1/16	1 1/4	.35
TY-90	28	325	162.5	200	EE	3/4	1 3/4	1	1 1/4	.35
TY-91	28	375	187.5	200	EE	3/4	2	1	1 1/4	.50
TY-92	28	450	225	200	EE	3/4	2	1	1 1/4	.50
TY-93	28	500	250	250	EE	1 1/8	2 3/4	1 3/8	3/16	.85
TY-94	28	600	300	200	EE	1 1/8	2 3/4	1 3/8	3/16	1.00
TY-99	6	300	150	100	EE	3/4	1 3/4	1	1 1/4	.35
TY-100	6	325	162.5	150	EE	3/4	2	1	1 1/4	.50
TY-101	6	375	187.5	200	EE	1 1/8	2 3/4	1 3/8	3/16	1.00
TY-102	6	450	225	150	EE	1 1/8	2 3/4	1 3/8	3/16	1.00

OPEN AND VERTICAL SHIELDED TYPES / dc to ac

Type No.	Primary D.C.	Secondary	Case Type	Dimensions—Inches			Mounting Dimensions		Weight Lbs.
				H	W	D	MW	MD	
TY-468	28	110-115-125v 400cps 60 watts	L	1 7/8	2 1/4	2	1 7/8	1 3/8	1 1/2
TY-462	12	110-115-125v 400cps 60 watts	L	1 7/8	2 1/4	2	1 7/8	1 3/8	1 1/2
TY-75A	12	110-115-125v 60cps 115 watts	A	3 7/8	3 3/32	3 1/2	2 1/2	2 3/8	5
TY-76A	12	110-115-125v 60cps 60 watts	A	3 3/16	2 1/32	2 5/8	2	1 1/16	3

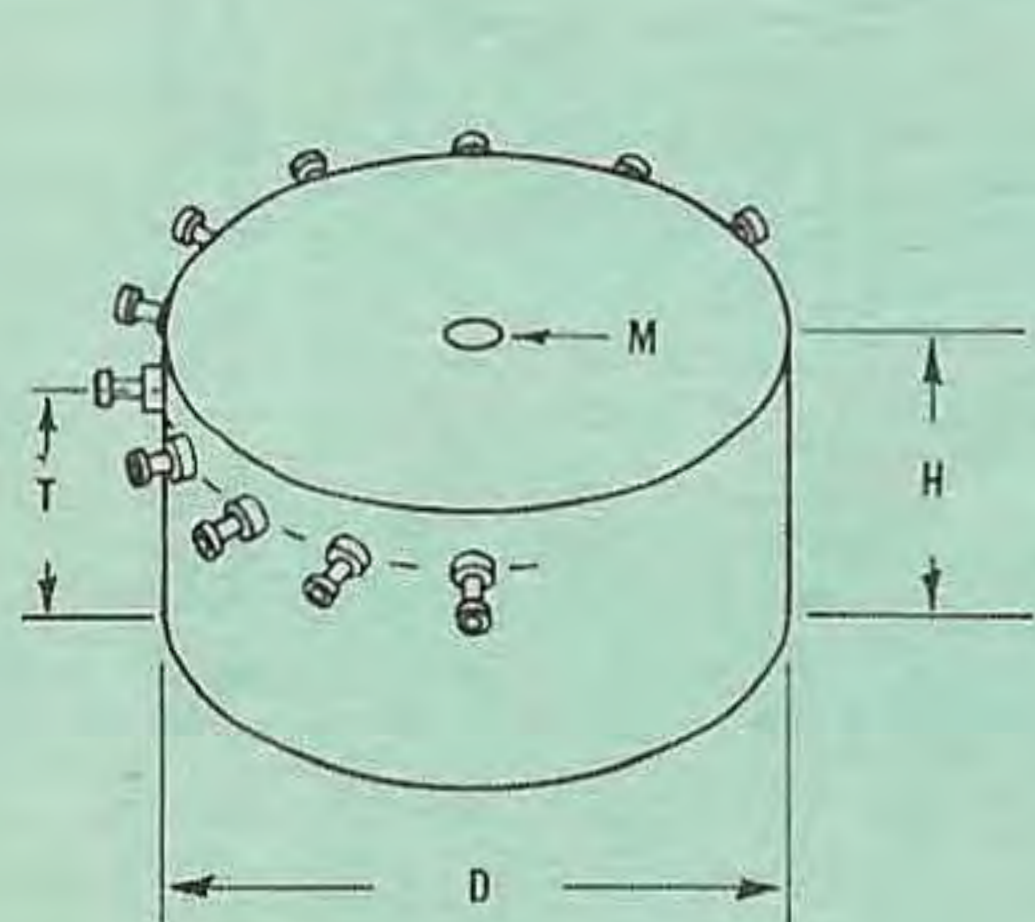
OPEN TYPE / 12 volt dc to dc

Type No.	D.C. Volts out of Rectifier F.W. Bridge	D.C. Volts out of Rectifier F.W. C.T.	D.C. Milliamperes Maximum	Dimensions—Inches			MW	Weight Lbs.
				H	W	D		
TY-68S	250	125	65	1 3/4	1 3/4	1 1/32	1 1/2	.2
TY-69S	300	150	100	1 7/8	1 7/8	1 1/8	1 1/2	.5
TY-70S	325	162.5	150	2	2 3/8	2 7/16	1 1/2	.6
TY-71S	375	187.5	200	2	2 3/8	2 7/16	1 1/2	.65
TY-74S	600	300	200	2	4 1/8	3	3 3/4	1.07

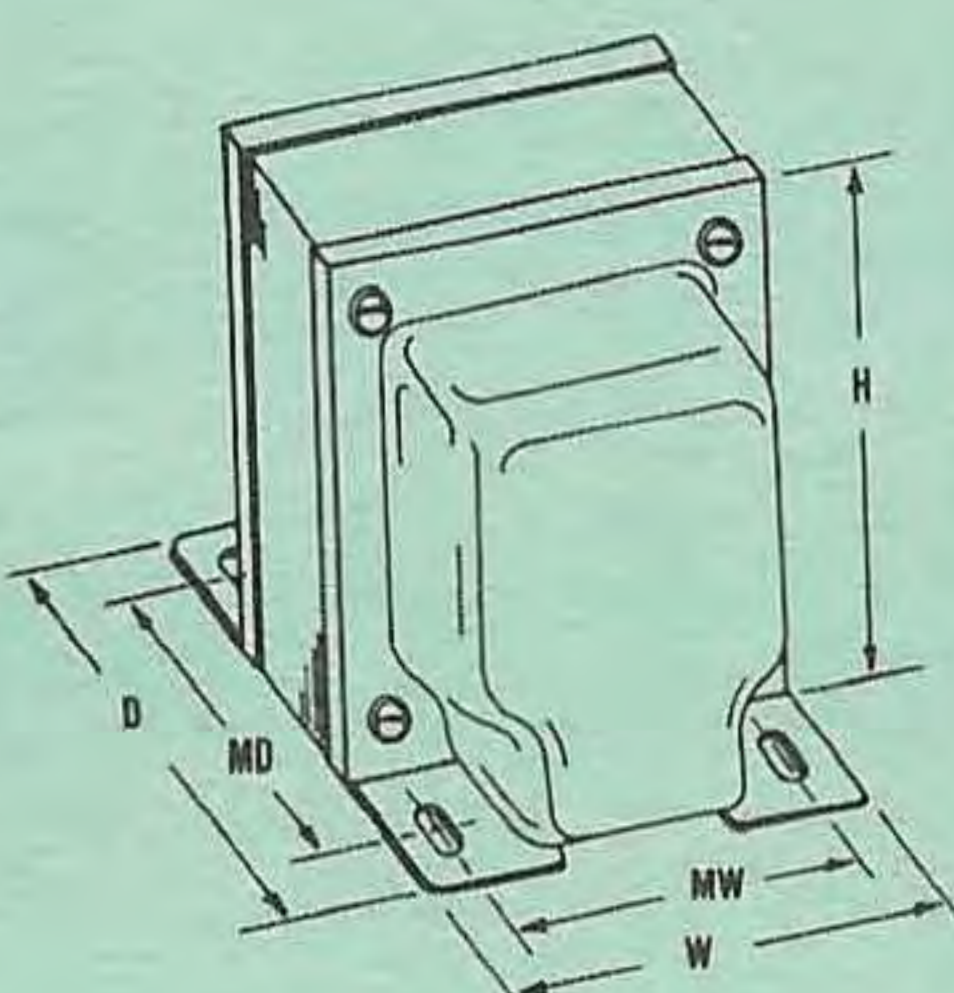
OPEN TYPE / dc to dc converter

Type No.	*Typical operation		Case Type	Dimensions—Inches			MW	Weight Lbs.
	Input	Output		H	W	D		
TY-200X	3 v.DC @ 20 ma.	1050 v.DC @ 25 μa.	X	1 3/16	1 5/8	7/8	1 3/8	.08
TY-201TZ	4 v.DC @ 15 ma.	500 v.DC @ 50 μa.	TZ	7/16	1 1/2	7/16	—	.015
TY-202X	4 v.DC @ 45 ma.	550 v.DC @ 80 μa.	X	1 3/16	1 5/8	7/8	1 3/8	.08

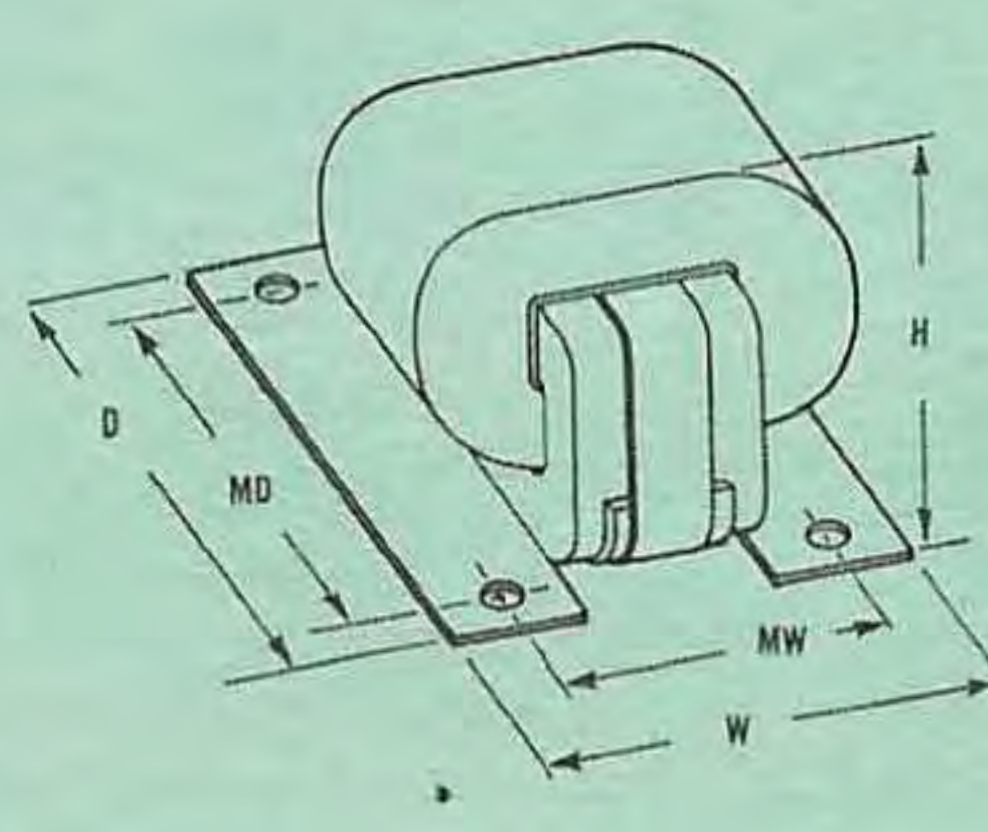
* May vary with circuit components, load requirements, etc. † Has additional winding for bias in SSB transmitters. Provides 100-125 VDC (half-wave rectifier) @ 5-10 ma. max.



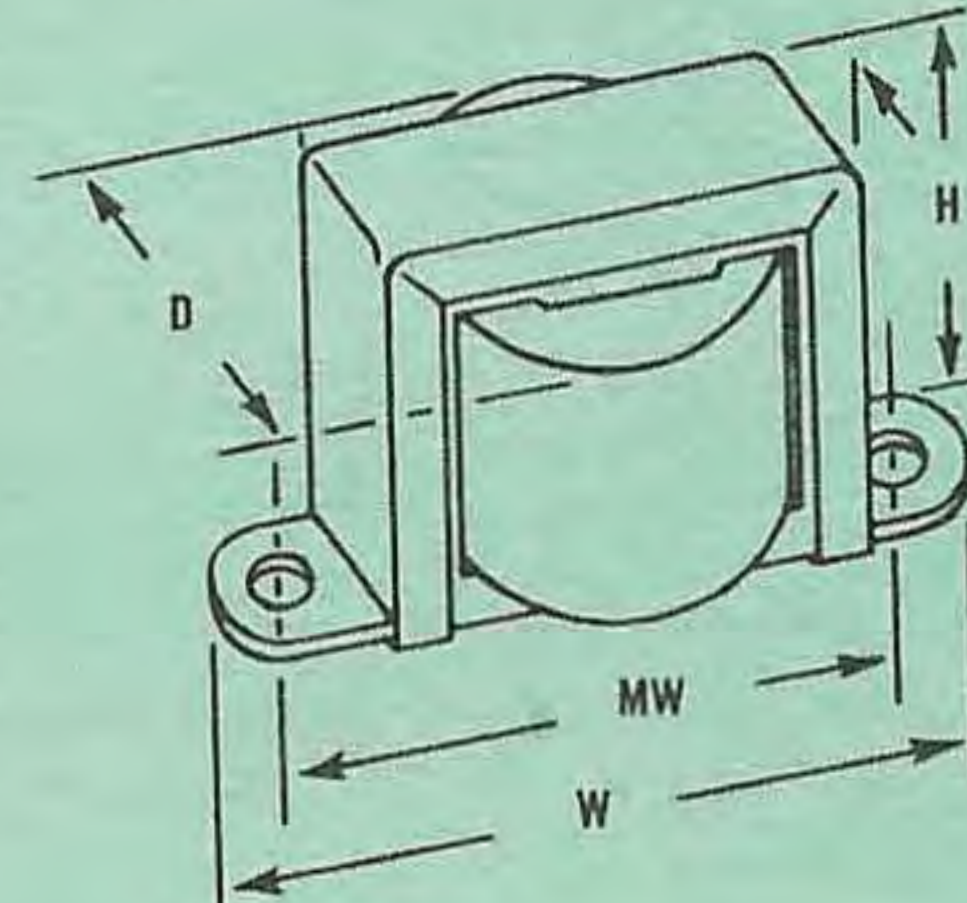
Type EE



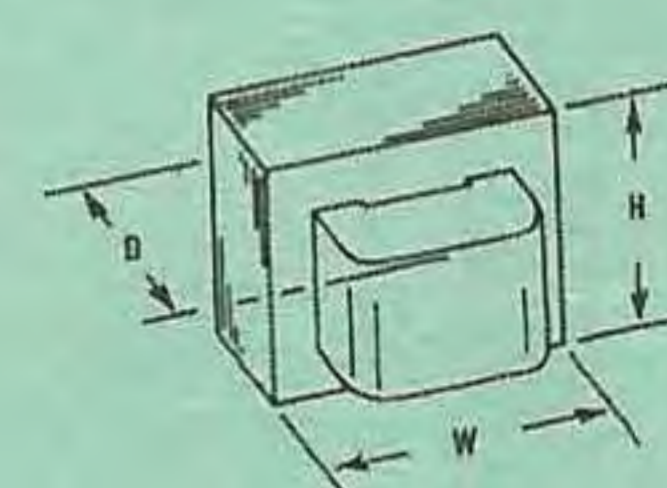
Type A



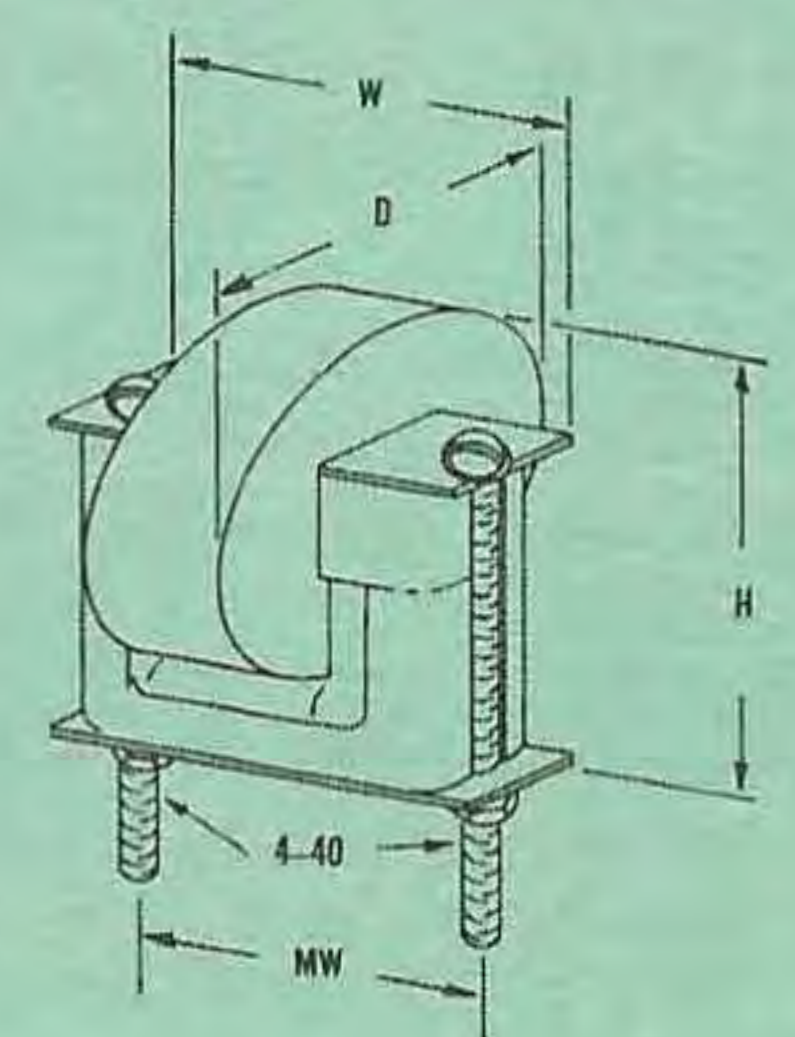
Type L



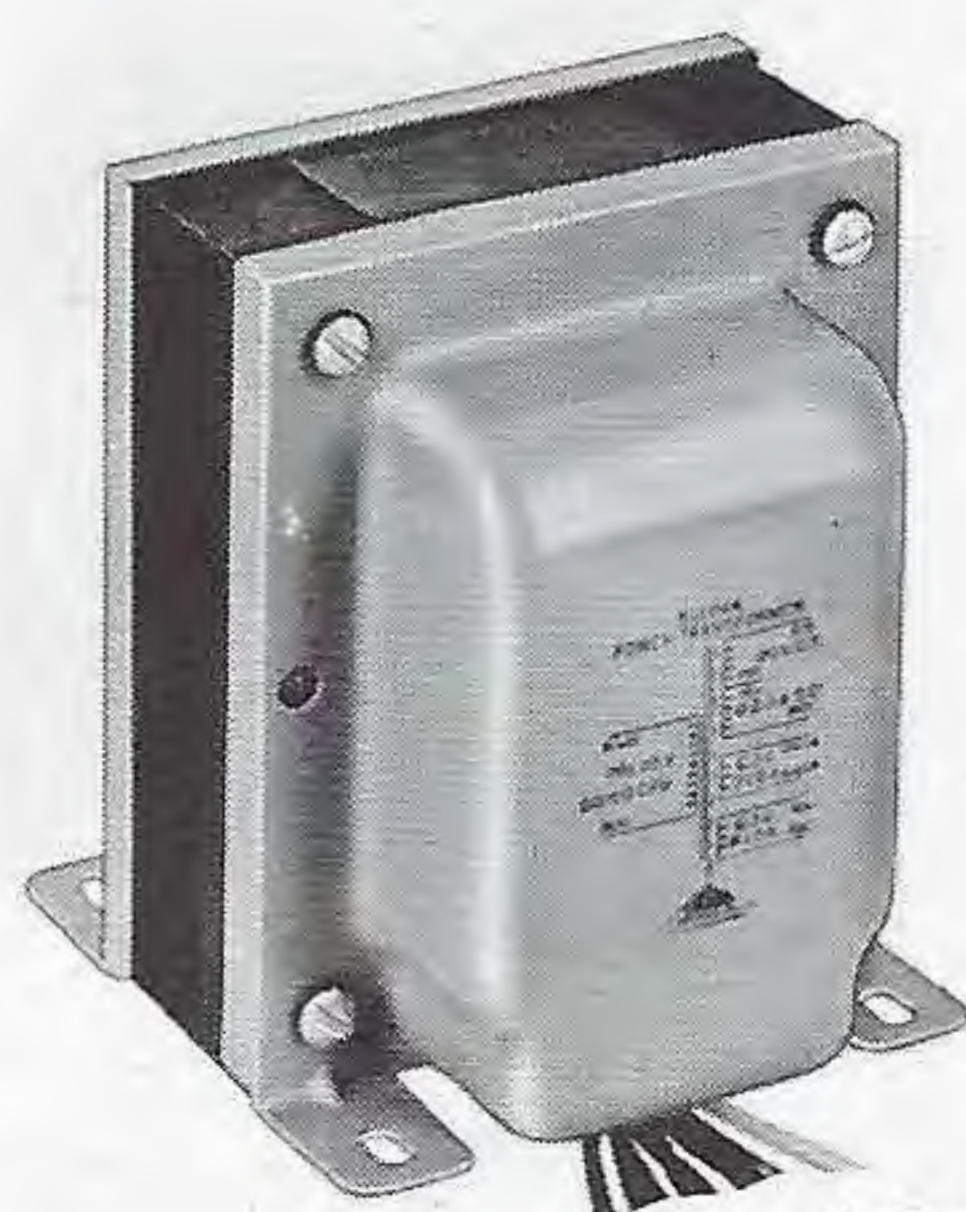
Type X



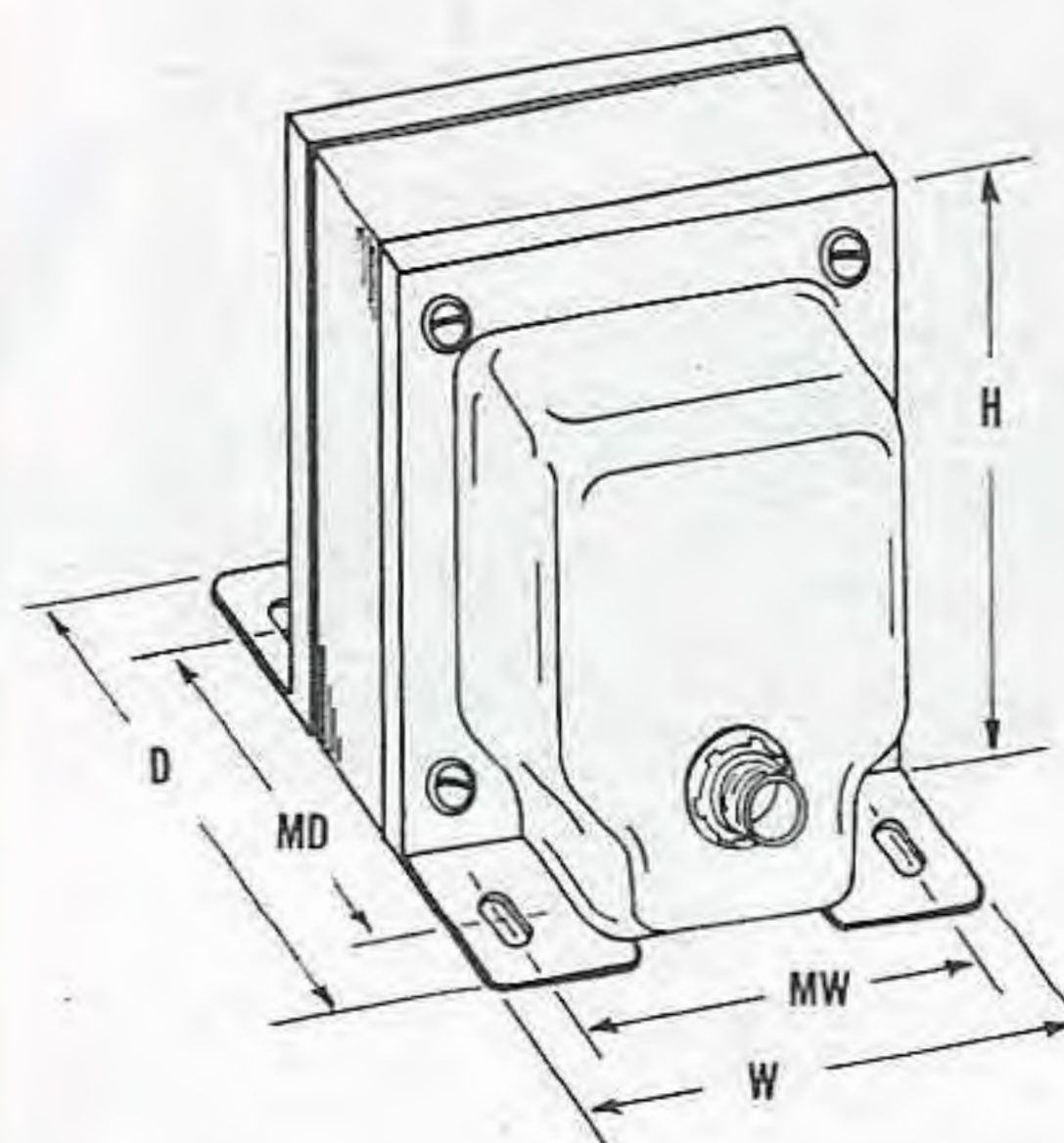
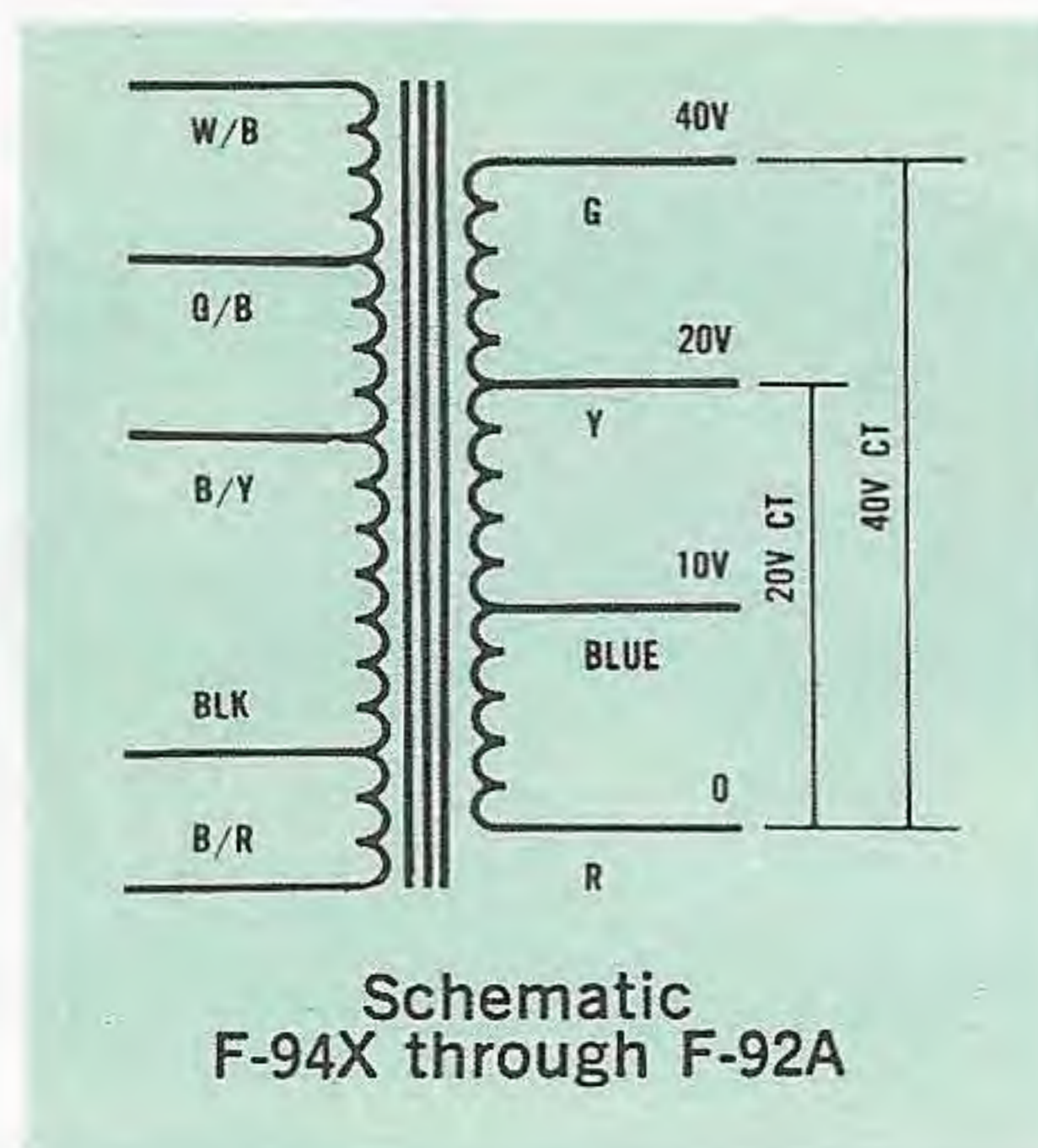
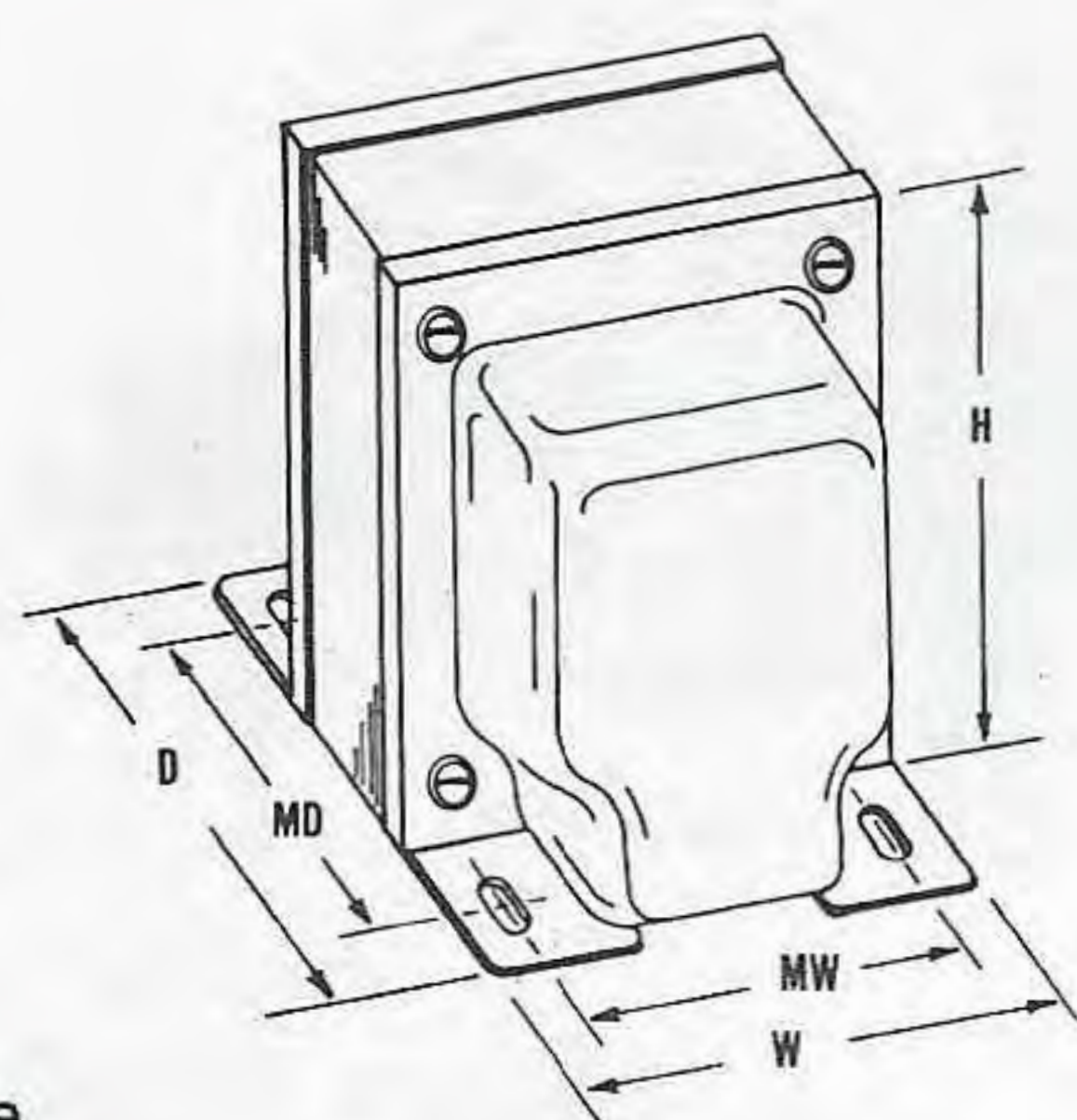
Type TZ



Type S



A Case



AC Case

Triad Universal Rectifier Power Transformers are designed for solid-state rectifier supplies. The DC voltage shown is for circuits A and B. Higher voltage can be obtained through the use

of capacitor input filters; in that case, however, rated DC current must be reduced approximately by 2. If a voltage doubler circuit (D) is used, current must be reduced approximately by 4.

UNIVERSAL RECTIFIER POWER / primary 50-60 cycle

Type No.	Primary Volts	Secondary AC		DC Volts		RMS Test Voltage	Case Type	Connections	Case Dimension			Mounting Dimension		Mtg. Hole Size	Max. Unit Wt. Lbs.
		Volts	Amps	Half Wave	Bridge				H	W	D	MW	MD		
F-47U	115	0-17-18	3	6-7	13-14	1500	U	Leads	3 $\frac{1}{8}$	2 $\frac{1}{16}$	3	1 $\frac{5}{8}$	2 $\frac{3}{8}$	1/4 x 1/8	3.2
F-48U	115	0-17-18	6	6-7	13-14	1500	U	Leads	3 $\frac{1}{16}$	3 $\frac{1}{16}$	3 $\frac{1}{16}$	2 $\frac{1}{2}$	2 $\frac{1}{16}$	5/16 x 3/16	5.5
F-49U	115	36*	3	13	26	1500	U	Leads	4 $\frac{5}{8}$	3 $\frac{1}{16}$	3 $\frac{3}{4}$	3	3 $\frac{1}{16}$	5/16 x 3/16	9.75
		36*	3	13	26										
F-60U	115	0-6.5-13-19.5-26	3	9	18	1500	U	Leads	3 $\frac{1}{2}$	2 $\frac{7}{8}$	2 $\frac{1}{16}$	2 $\frac{1}{4}$	2 $\frac{3}{16}$	5/16 x 3/16	3.5
F-61U	115	0-24-27-30-33-36	3	13	26	1500	U	Leads	3 $\frac{1}{16}$	3 $\frac{1}{16}$	3 $\frac{1}{4}$	2 $\frac{1}{2}$	2 $\frac{1}{16}$	5/16 x 3/16	5.65
F-67U #	110-120	0-24-27-30-33-36	8	13	26	1500	U	Leads	4 $\frac{5}{8}$	3 $\frac{1}{16}$	4 $\frac{3}{8}$	3	3 $\frac{1}{16}$	5/16 x 3/16	10.75
F-63U	115	0-8-9*	2	-	6-7	1500	U	Leads	3 $\frac{1}{8}$	2 $\frac{1}{16}$	2 $\frac{1}{16}$	2	2 $\frac{1}{16}$	5/16 x 3/16	2.3
		0-8-9*	2	-	6-7										
F-64U	115	0-7-8-9	7	-	5-6-7	1500	U	Leads	3 $\frac{1}{2}$	2 $\frac{7}{8}$	2 $\frac{3}{4}$	2 $\frac{1}{4}$	2 $\frac{3}{16}$	5/16 x 3/16	3.5
F-62U #	105-115-125	9*	10	-	7	1500	U	Leads	4 $\frac{5}{8}$	3 $\frac{1}{16}$	5 $\frac{1}{4}$	3	4 $\frac{1}{16}$	5/16 x 3/16	16
		9*	10	-	7										
		9*	10	-	7										
		9*	10	-	7										
F-68U #	115	9 CT*	3.5	-	7	1500	U	Leads	3 $\frac{1}{16}$	3 $\frac{1}{16}$	3 $\frac{1}{16}$	2 $\frac{1}{2}$	2 $\frac{1}{16}$	5/16 x 3/16	5
		9*	3.5	-	7										
		9*	3.5	-	7										
		9*	3.5	-	7										
F-65U	110-120	0-140-150-160	.75	60	115	1500	U	Leads	3 $\frac{1}{16}$	3 $\frac{1}{16}$	3 $\frac{3}{8}$	2 $\frac{1}{2}$	2 $\frac{1}{16}$	5/16 x 3/16	5.8
F-66U	110-120	0-140-150-160	2.5	60	115	1500	U	Leads	5 $\frac{3}{8}$	4 $\frac{1}{16}$	5 $\frac{1}{4}$	3 $\frac{1}{2}$	4	5/16 x 3/16	19
F-74U	117	28 CT*	2	-	-	1500	U	Lugs	3 $\frac{1}{16}$	3 $\frac{1}{16}$	3 $\frac{1}{4}$	2 $\frac{1}{2}$	2 $\frac{5}{8}$	5/16 x 3/16	5.7
		28 CT*	2	-	-										
F-75U	117	28 CT*	4	-	-	1500	U	Lugs	4 $\frac{1}{8}$	3 $\frac{1}{16}$	4 $\frac{3}{8}$	2 $\frac{3}{4}$	3 $\frac{3}{4}$	5/16 x 3/16	10
		28 CT*	4	-	-										
F-79U #	115	0-24-26-28-30	15	11.4	22.8	1500	U	Leads, Lugs	3 $\frac{1}{16}$	4 $\frac{5}{8}$	5 $\frac{1}{2}$	3 $\frac{3}{4}$	4 $\frac{1}{16}$	5/16 x 3/16	18.5
F-80U #	115†	0-12-13.5-15-16.5-18*	20	-	13	1500	U	Leads	5 $\frac{3}{8}$	4 $\frac{1}{16}$	5 $\frac{1}{2}$	2 $\frac{3}{4}$	4 $\frac{1}{2}$	5/16 Dia.	25
		0-12-13.5-15-16.5-18*	20	-	13										
F-84AC #	115 or 230§	12 CT*	10	-	8.5	2000	AC	Leads (2 Holes)	4 $\frac{5}{8}$	3 $\frac{1}{16}$	5 $\frac{1}{8}$	3	3 $\frac{5}{8}$	3/8 x 3/16	12.7
		12 CT*	10	-	8.5										
F-85U	115†	5-7.5	20	-	8-12.5	1500	U	Leads	4 $\frac{1}{2}$	3 $\frac{3}{4}$	4 $\frac{1}{2}$	3	3 $\frac{1}{2}$	5/16 x 3/16	12
		5-7.5	20	-											
R-94H #	115	180‡	.5 DC	-	Doubler 470	1500	H	Leads (2 Holes)	3 $\frac{1}{16}$	4 $\frac{5}{8}$	5 $\frac{1}{2}$	3 $\frac{3}{4}$	4 $\frac{3}{8}$	3/8 x 3/16	17
		117V. Bias	.005 DC	-											
		6.3V.	5.5												
		6.3V.	5.5												

SOLID STATE RECTIFIER POWER / primary 117 volts, 50-60 cycle

Type No.	Secondary No. 1		Secondary No. 2		Secondary No. 3		RMS Test Volts	Case Type	Connections	Case Dimensions			Mounting Dimension		Mtg. Hole Size	Max. Unit Wt. Lbs.
	Volts	DC ma.	Volts	Amps.	Volts	Amps.				H	W	D	MW	MD		
R-200A	200-0-200	400	6.3	3	6.3	3	1500	A	Leads	4 $\frac{1}{4}$	3 $\frac{5}{8}$	4 $\frac{1}{8}$	2 $\frac{3}{4}$	3 $\frac{1}{16}$	3/8 x 3/16	7.1
R-201A	150-0-150	600	6.3	2.5	6.3	2.5	1500	A	Leads	4 $\frac{1}{4}$	3 $\frac{5}{8}$	4 $\frac{1}{8}$	2 $\frac{3}{4}$	3 $\frac{1}{16}$	3/8 x 3/16	7.1
R-202A	100-0-100	800	6.3	2	6.3	2	1500	A	Leads	4 $\frac{1}{4}$	3 $\frac{5}{8}$	4	2 $\frac{3}{4}$	2 $\frac{1}{16}$	3/8 x 3/16	6.9
R-203A	50-0-50	1600	6.3	1.5	6.3	1.5	1500	A	Leads	4 $\frac{1}{4}$	3 $\frac{5}{8}$	3 $\frac{3}{4}$	2 $\frac{3}{4}$	2 $\frac{1}{16}$	3/8 x 3/16	6.0
R-82B	35-0-35	3500	-	-	-	-	1500	B	Leads	2 $\frac{1}{16}$	3 $\frac{3}{4}$	4 $\frac{1}{2}$	3 $\frac{3}{4}$	3	-	8.3
R-208A	40-0-40	1200	-	-	-	-	1500	A	Leads	3 $\frac{1}{2}$	2 $\frac{1}{16}$	3 $\frac{5}{8}$	2 $\frac{1}{4}$	2 $\frac{1}{2}$	3/8 x 3/16	4.4
R-204A	40-0-40	2000	6.3	1.5	6.3	1.5	1500	A	Leads	4 $\frac{1}{4}$	3 $\frac{5}{8}$	3 $\frac{7}{8}$	2 $\frac{3}{4}$	2 $\frac{1}{16}$	3/8 x 3/16	6.5
R-205A	30-0-30	2500	6.3	1.5	6.3	1.5	1500	A	Leads	4 $\frac{1}{4}$	3 $\frac{5}{8}$	3 $\frac{3}{4}$	2 $\frac{3}{4}$	2 $\frac{1}{16}$	3/8 x 3/16	6.0
R-206B	27-0-27	1250	-	-	-	-	1500	B	Leads	2 $\frac{1}{4}$	3 $\frac{3}{4}$	3 $\frac{1}{2}$	3 $\frac{1}{8}$	2 $\frac{1}{2}$	-	4.8

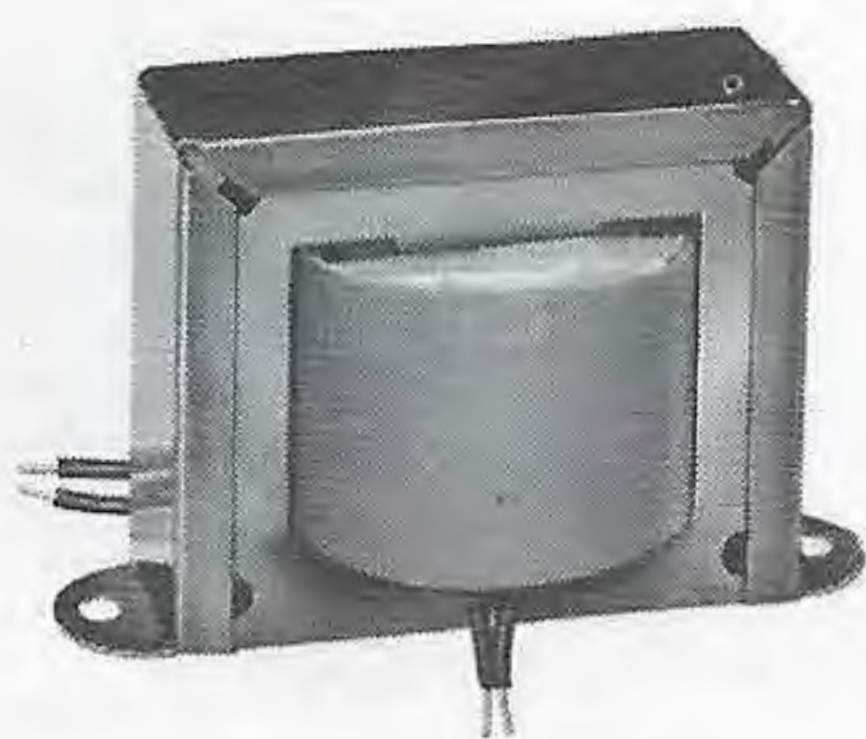
* Windings may be connected in series to obtain their combined voltage when properly phased. Current will be equal to the current of the lowest winding. Example: Two 6.3V. windings @ 2A. in series would be 12.6V. @ 2A. Windings may also be connected in parallel to obtain the combined current. Example: Two 6.3V. windings @ 2A. in parallel would be 6.3V. @ 4A.

‡ Static Shield. # 60 cycle operation. † Tapped primary to produce lower voltages. § Split winding. CT for Center Tap.

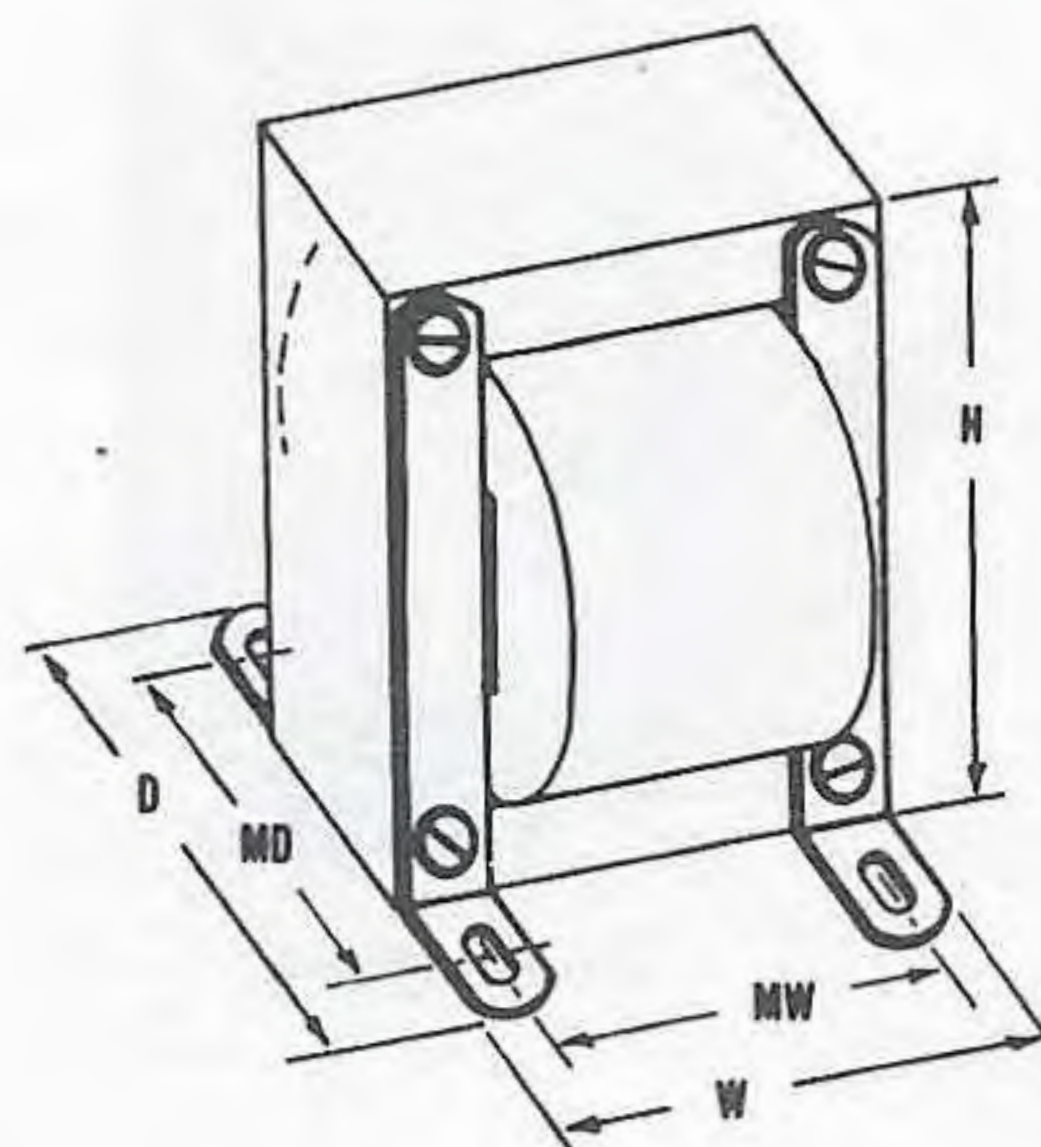
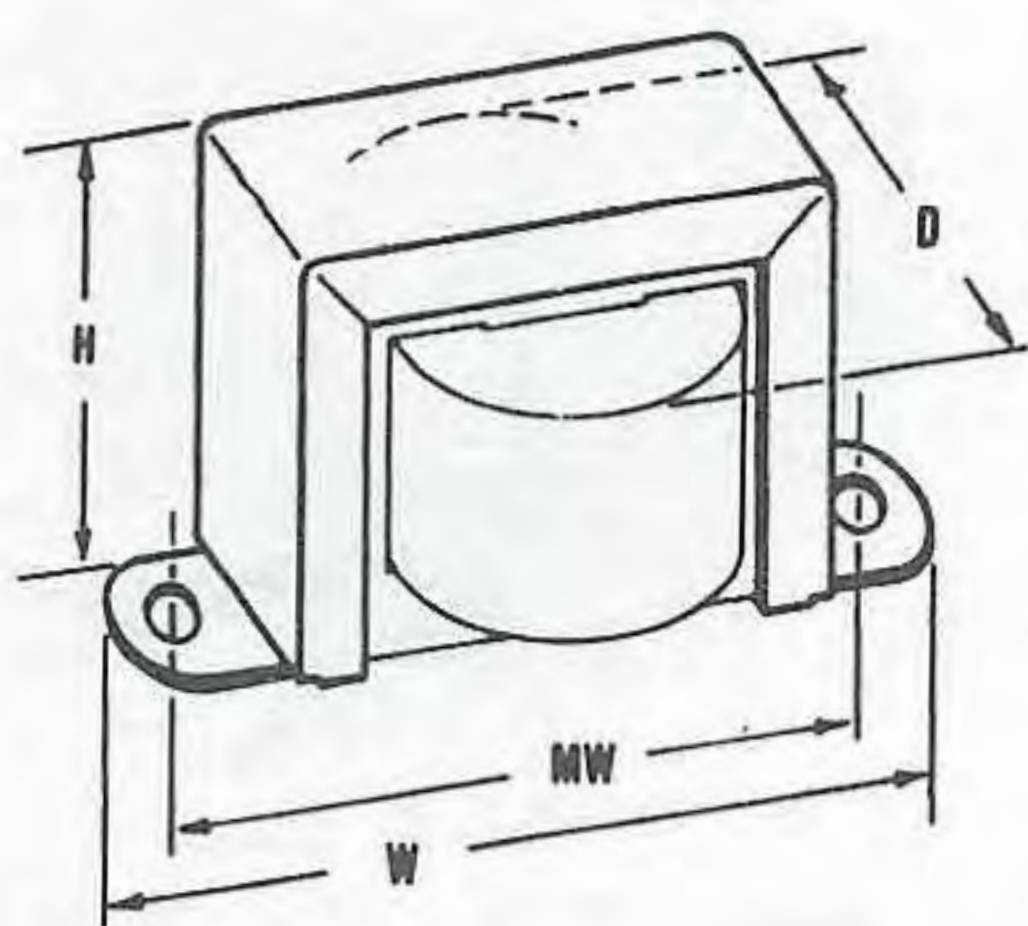
POWER TRANSFORMERS



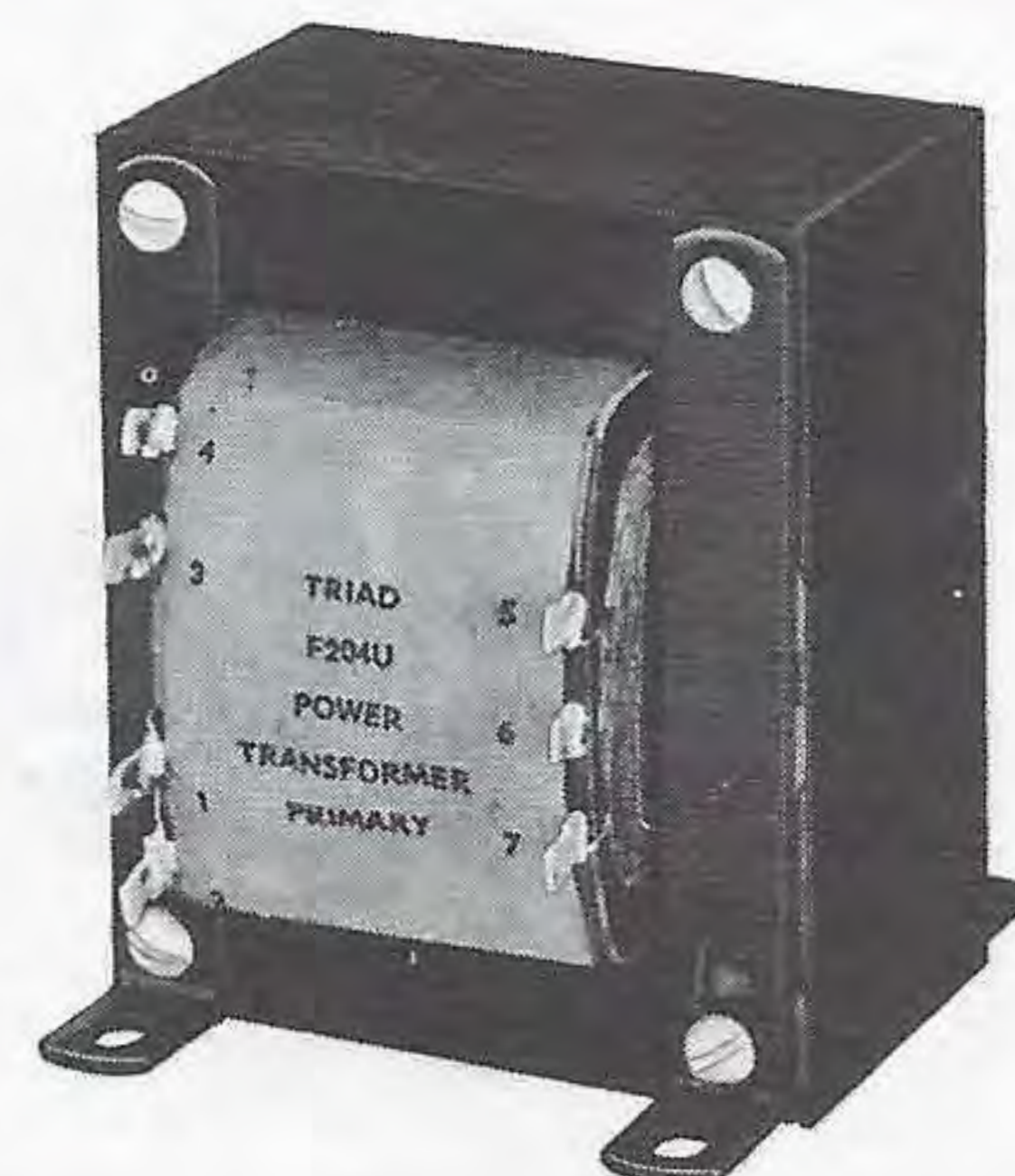
**COMMERCIAL
GRADE**



X Case



U Case



LOW VOLTAGE RECTIFIER / transistor drive voltage, 50-60 cycle

Type No.	Primary Volts	Secondary AC		DC Volts		RMS Test Voltage	Case Type	Connections	Case Dimension			Mounting Dimension		Mtg. Hole Size	Max. Unit Wt. Lbs.
		Volts	Amps	Half Wave	Bridge				H	W	D	MW	MD		
F-94X	115†	10-20 CT-40 CT	.035	15	30	1500	X	Leads	1 3/8	2 3/8	1 3/8	2		3/16	.5
F-90X	115†	10-20 CT-40 CT	.1	15	30	1500	X	Leads	1 5/8	2 13/16	1 5/8	2 3/8		3/16	.7
F-91X	115†	10-20 CT-40 CT	.3	15	30	1500	X	Leads	2 3/32	3 11/16	2	3 1/8		3/16	1.5
F-93X	115†	10-20 CT-40 CT	.75	15	30	1500	X	Leads	2 19/32	4	2 1/4	3 3/16		3/16	2.4
F-92A	115†	10-20 CT-40 CT	1	15	30	1500	A	Leads (2 Holes)	3 3/16	2 1/32	3	2	2 1/16	3/8 x 3/16	3.25

LOW VOLTAGE LOW CURRENT / primary 117 volts, 50-60 cycle

Type No.	Secondary		RMS Test Voltage	Case Type	Connections or Lead Holes Used	Case Dimension			Mounting		Mtg. Hole Size	Max. Unit Wt. Lbs.
	Volts	Amps				H	W	D	MW	MD		
F-112X	14 CT	0.25	1500	X	Leads	1 3/8	2 3/8	1 3/8	2		3/16	.4
F-113X	12	0.15	1500	X	Leads	1 3/8	2 3/8	1 3/8	2		3/16	.4
F-114X	12	0.7	1500	X	Leads	1 5/8	2 13/16	1 5/8	2 3/8		3/16	.8
F-115X	24 CT	0.085	1500	X	Leads	1 3/16	2 1/16	1 1/4	1 3/4		3/16	.3
F-116X	24 CT	0.2	1500	X	Leads	1 3/8	2 3/8	1 1/2	2		3/16	.45
F-117X	24 CT	0.4	1500	X	Leads	1 5/8	2 13/16	1 5/8	2 3/8		3/16	.8
F-118X	24 CT	0.7	1500	X	Leads	1 15/16	3 1/4	2	2 13/16		3/16	1.30
F-119X	26.8 CT	0.15	1500	X	Leads	1 3/8	2 3/8	1 1/2	2		3/16	.45
F-120X	26.8 CT	0.5	1500	X	Leads	1 15/16	3 1/4	2	2 13/16		3/16	1.3

UNIVERSAL RECTIFIER POWER / primary 117 volts, 50-60 cycle

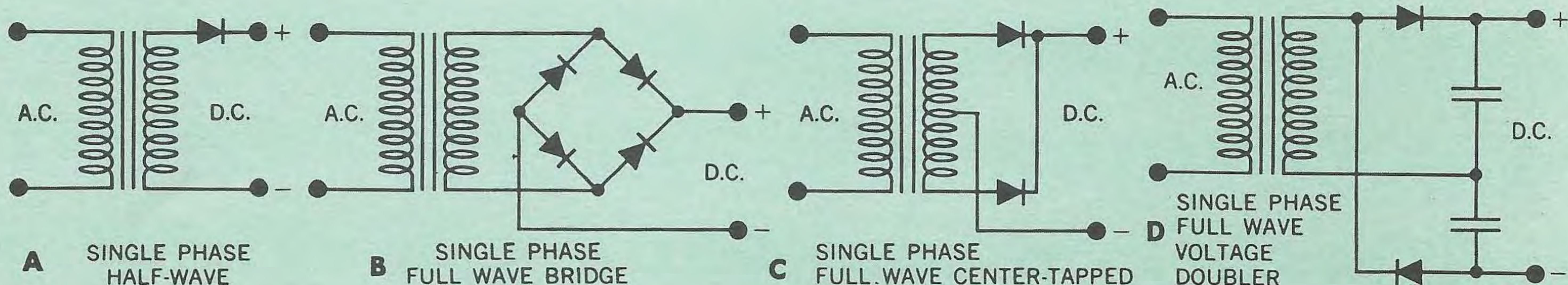
These Triad units give maximum flexibility when integrated into full-wave CT or bridge type circuits with silicon or selenium rectifiers.

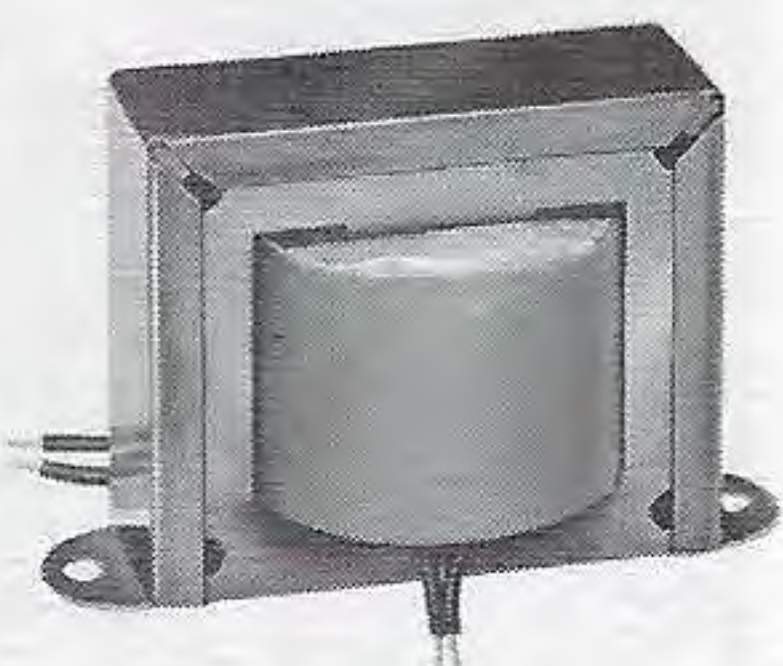
No. F-200A has two identical secondary windings, each supplying 13 or 18 AC volts at 900 DC ma. Secondary voltages are selected by primary taps. The other 4 units have primaries connected to terminals 1, 2, 3 and 4. A separate winding connected to terminals 5, 6 and 7 is used in series with the primary to in-

crease or decrease the secondary voltage output. The secondaries of these transformers consist of two identical windings which may be connected to give a wide variety of output voltages. Instructions packed with each unit indicate specific terminal connections and voltage combinations which may be obtained by using the taps on both primary and secondary windings, plus the "bucking" action of the additional primary winding.

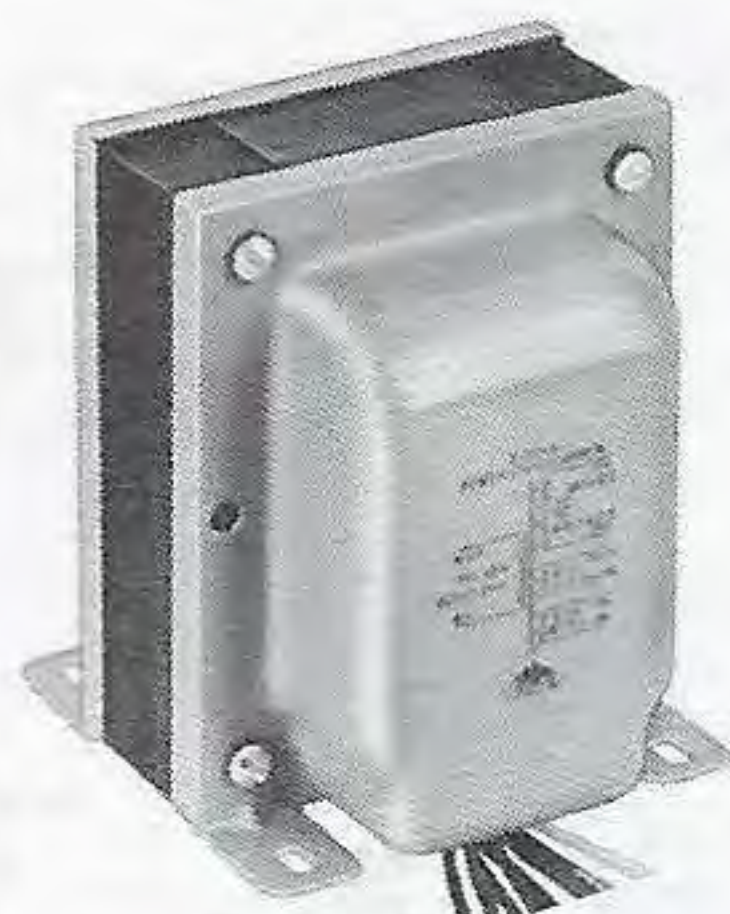
Type No.	Secondary No. 1 AC Volts	Secondary DC Amps		Secondary No. 2		RMS Test Volts	Case Type	Connections	Case Dimensions			Mounting Dimension		Mtg. Hole Size	Max. Unit Wt. Lbs.
		Full Wave CT	Bridge	AC Volts	DC Amps				H	W	D	MW	MD		
F-200A	13 or 18 @ .9 ADC	-	-	13 or 18 @ .9 ADC		1000	A	Leads	3 3/32	2 1/32	2 7/8	2	2		2.7
F-202U	11.0 to 29.5	2.0	1.25	-		1000	U	Lugs	3	2 1/2	3	2	2 1/8	5/16 x 3/16	2.5
F-203U	12.0 to 30.0	4.0	2.0	-		1000	U	Lugs	3 3/8	2 13/16	3 1/4	2 1/4	2 3/8	5/16 x 3/16	3.8
F-204U	11.5 to 29.0	8.0	4.0	-		1000	U	Lugs	3 3/4	3 1/8	4 1/8	2 1/2	2 7/8	5/16 x 3/16	6.1
F-205U	12.0 to 29.5	12.0	6.0	-		1000	U	Lugs	4 1/8	3 1/16	5 1/8	2 3/4	3 1/4	5/16 x 3/16	9.1
F-206U	12.1 to 29.2	15.0	8.0	-		1000	U	Lugs	4 7/16	3 3/4	5	2 15/16	3 3/4	5/16 x 3/16	12.6
F-207U	12.2 to 29.0	22.5	12.0	-		1000	U	Lugs	5 1/16	4 3/8	5 7/8	3 1/2	4 1/4	5/16 x 3/16	20.5

RECTIFIER CIRCUITS





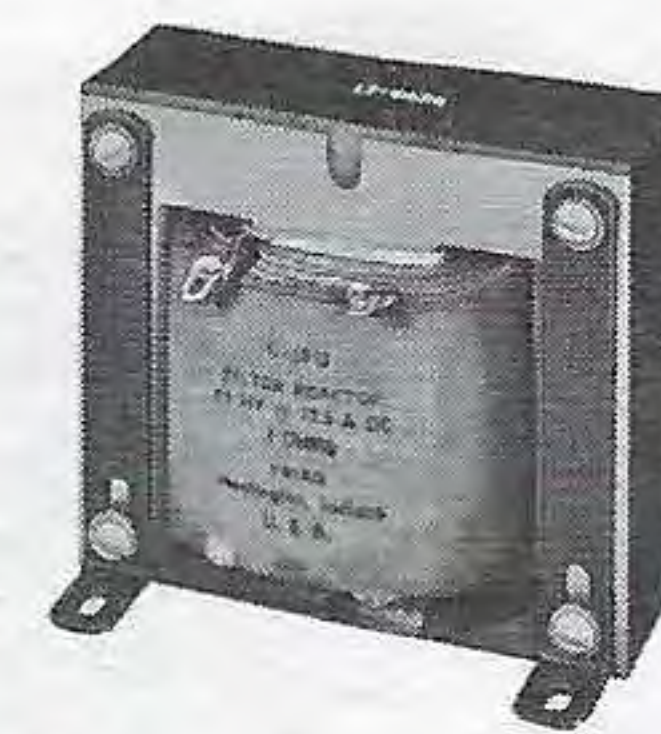
X Case



A Case



AL Case



U Case

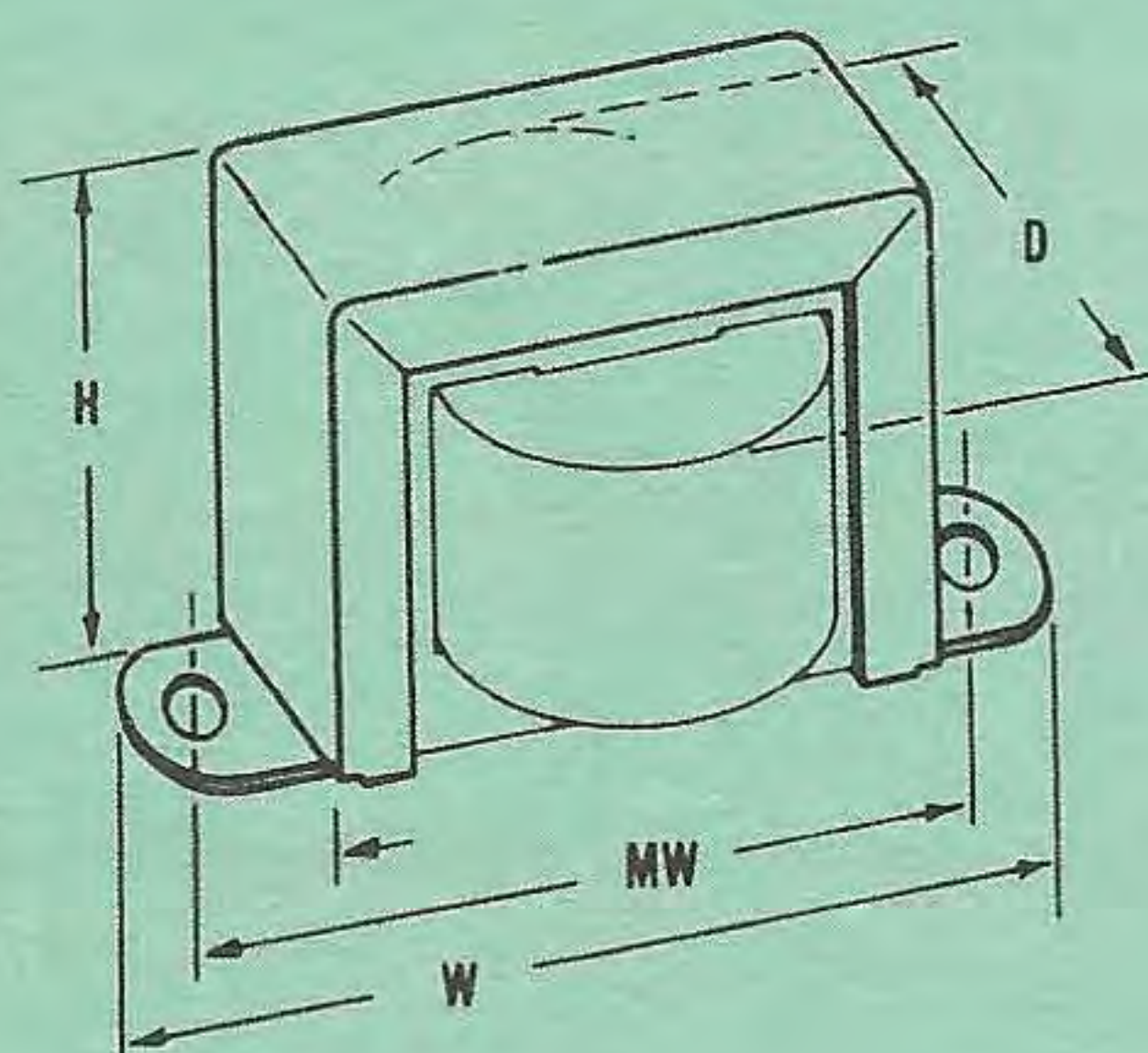
SMOOTHING FILTER REACTORS

Type No.	Current DC MA.	Inductance† Henries	Resistance Ohms	RMS Test Voltage	Case Type	Connections	Lead Holes Used	Case Dimension			Mounting Dimensions		Mtg. Hole Size	Max. Unit Wt. Lbs.
								H	W	D	MW	MD		
C-2X	15	2	70	1500	X	Leads	—	1 $\frac{3}{8}$	2 $\frac{1}{8}$	1 $\frac{1}{4}$	1 $\frac{3}{4}$		$\frac{3}{16}$	.21
C-30X	15	50	3500	1500	X	Leads	—	1 $\frac{3}{8}$	2 $\frac{3}{8}$	1 $\frac{1}{2}$	2		$\frac{3}{16}$	.42
C-1X	20	15	1000	1000	X	Leads	—	1 $\frac{3}{8}$	2 $\frac{1}{8}$	1 $\frac{1}{4}$	1 $\frac{3}{4}$		$\frac{3}{16}$	.21
C-3X	50	10	500	1500	X	Leads	—	1 $\frac{5}{8}$	2 $\frac{1}{8}$	1 $\frac{1}{2}$	2 $\frac{3}{8}$		$\frac{3}{16}$	.6
C-4X	50	4	360	1500	X	Leads	—	1 $\frac{3}{8}$	2 $\frac{3}{8}$	1 $\frac{3}{8}$	2		$\frac{3}{16}$	.35
C-6X	65	5	330	1500	X	Leads	—	1 $\frac{5}{8}$	2 $\frac{1}{8}$	1 $\frac{1}{2}$	2 $\frac{3}{8}$		$\frac{3}{16}$	.6
C-5X	75	12	390	1000	X	Leads	—	1 $\frac{15}{16}$	3 $\frac{5}{16}$	1 $\frac{3}{4}$	2 $\frac{13}{16}$		$\frac{3}{16}$	1
C-8X	75	7	240	1500	X	Leads	—	1 $\frac{15}{16}$	3 $\frac{5}{16}$	1 $\frac{3}{4}$	2 $\frac{13}{16}$		$\frac{3}{16}$	1
C-7X	90	10	270	1000	X	Leads	—	1 $\frac{15}{16}$	3 $\frac{5}{16}$	2	2 $\frac{13}{16}$		$\frac{3}{16}$	1.3
C-9X	90	4	100	1500	X	Leads	—	1 $\frac{15}{16}$	3 $\frac{5}{16}$	1 $\frac{3}{4}$	2 $\frac{13}{16}$		$\frac{3}{16}$	1
C-11X	110	6	160	1500	X	Leads	—	2 $\frac{9}{32}$	3 $\frac{11}{16}$	2	3 $\frac{1}{8}$		$\frac{3}{16}$	1.5
C-10X	125	9	250	1000	X	Leads	—	2 $\frac{9}{32}$	3 $\frac{11}{16}$	2	3 $\frac{1}{8}$		$\frac{3}{16}$	1.6
C-12A	160	6	165	1500	A	Leads	1	2 $\frac{25}{32}$	2 $\frac{11}{32}$	2 $\frac{1}{2}$	1 $\frac{3}{4}$	1 $\frac{3}{4}$	$\frac{3}{8} \times \frac{3}{16}$	2
C-12X	160	6	165	1500	X	Leads	—	2 $\frac{9}{32}$	3 $\frac{11}{16}$	2 $\frac{1}{8}$	3 $\frac{1}{8}$		$\frac{3}{16}$	1.75
C-13X	160	3	75	1500	X	Leads	—	2 $\frac{9}{32}$	3 $\frac{11}{16}$	2 $\frac{1}{8}$	3 $\frac{1}{8}$		$\frac{3}{16}$	1.75
C-14A	200	6	150	1500	A	Leads	1	3 $\frac{3}{8}$	2 $\frac{21}{32}$	2 $\frac{5}{8}$	2	1 $\frac{11}{16}$	$\frac{3}{8} \times \frac{3}{16}$	2.5
C-14X	200	6	150	1500	X	Leads	—	2 $\frac{19}{32}$	4	2 $\frac{1}{4}$	3 $\frac{9}{16}$		$\frac{3}{16}$	2.3
C-16A	200	10	150	2500	A	Leads	1	3 $\frac{1}{2}$	2 $\frac{31}{32}$	3 $\frac{1}{2}$	2 $\frac{1}{4}$	2 $\frac{3}{8}$	$\frac{3}{8} \times \frac{3}{16}$	4.5
C-21X	225	1.5	65	1500	X	Leads	—	1 $\frac{15}{16}$	3 $\frac{5}{16}$	1 $\frac{3}{4}$	2 $\frac{13}{16}$		$\frac{3}{16}$	1.1
C-24X	240	1	50	1500	X	Leads	—	1 $\frac{5}{8}$	2 $\frac{13}{16}$	1 $\frac{1}{2}$	2 $\frac{3}{8}$		$\frac{3}{16}$	.75
C-15A	250	4	100	1500	A	Leads	1	3 $\frac{3}{8}$	2 $\frac{21}{32}$	2 $\frac{5}{8}$	2	1 $\frac{11}{16}$	$\frac{3}{8} \times \frac{3}{16}$	2.65
C-15X	250	4	100	1500	X	Leads	—	2 $\frac{19}{32}$	4	2 $\frac{1}{4}$	3 $\frac{9}{16}$		$\frac{3}{16}$	2.3
C-23X	260	1.2	45	1500	X	Leads	—	1 $\frac{15}{16}$	3 $\frac{5}{16}$	2	2 $\frac{13}{16}$		$\frac{3}{16}$	1.35
C-27X	290	.7	30	1500	X	Leads	—	1 $\frac{5}{8}$	2 $\frac{13}{16}$	1 $\frac{1}{2}$	2 $\frac{3}{8}$		$\frac{3}{16}$	.75
C-36X	300	.5	30	1500	X	Leads	—	1 $\frac{3}{8}$	2 $\frac{3}{8}$	1 $\frac{1}{2}$	2		$\frac{3}{16}$	.5
C-17X	300	1.5	40	1500	X	Leads	—	2 $\frac{9}{32}$	3 $\frac{11}{16}$	2	3 $\frac{1}{8}$		$\frac{3}{16}$	1.6
C-18A	300	8	90	2500	A	Leads	1	3 $\frac{7}{8}$	3 $\frac{3}{8}$	3 $\frac{7}{8}$	2 $\frac{1}{2}$	2 $\frac{3}{4}$	$\frac{3}{8} \times \frac{3}{16}$	6.3
C-19A	300	10	105	3000	A	Leads	1	4 $\frac{1}{4}$	3 $\frac{11}{32}$	4 $\frac{1}{8}$	2 $\frac{3}{4}$	3	$\frac{3}{8} \times \frac{3}{16}$	7.75
C-25A	310	2.6	44	1500	A	Leads	1	3 $\frac{3}{8}$	2 $\frac{21}{32}$	3 $\frac{1}{8}$	2	2 $\frac{3}{8}$	$\frac{3}{8} \times \frac{3}{16}$	3.6
C-42AL	350	8	105	5000	AL	Leads	2-Side	4 $\frac{5}{8}$	3 $\frac{1}{2}$	4 $\frac{1}{8}$	3	2 $\frac{7}{8}$	$\frac{3}{8} \times \frac{3}{16}$	8
C-34X	350	.6	35	1500	X	Leads	—	1 $\frac{5}{8}$	2 $\frac{13}{16}$	1 $\frac{1}{2}$	2 $\frac{3}{8}$		$\frac{3}{16}$	.6
C-28X	350	1	35	1500	X	Leads	—	1 $\frac{15}{16}$	3 $\frac{5}{16}$	2	2 $\frac{13}{16}$		$\frac{3}{16}$	1.35
C-29X	375	1.5	50	1500	X	Leads	—	2 $\frac{9}{32}$	3 $\frac{11}{16}$	2	3 $\frac{1}{8}$		$\frac{3}{16}$	1.6
C-50X	400	2	40	2500	X	Leads	—	2 $\frac{19}{32}$	4	2 $\frac{1}{4}$	3 $\frac{9}{16}$		$\frac{3}{16}$	2.3
C-20A	400	6	60	3000	A	Leads	1	4 $\frac{5}{8}$	3 $\frac{15}{16}$	4 $\frac{1}{2}$	3	3 $\frac{3}{8}$	$\frac{3}{8} \times \frac{3}{16}$	10.5
C-22A	500	10	65	3000	A	Leads	1	5 $\frac{5}{16}$	4 $\frac{1}{2}$	5 $\frac{1}{8}$	3 $\frac{1}{2}$	4 $\frac{1}{8}$	$\frac{1}{2} \times \frac{1}{4}$	16.5
C-45AL	500	10	65	5000	AL	Leads	2-Side	5 $\frac{5}{16}$	4 $\frac{1}{2}$	5 $\frac{1}{8}$	3 $\frac{1}{2}$	4 $\frac{1}{8}$	$\frac{1}{2} \times \frac{1}{4}$	17.75
C-40X	600	.32	10	1500	X	Leads	—	1 $\frac{15}{16}$	3 $\frac{5}{16}$	2	2 $\frac{13}{16}$		$\frac{3}{16}$	1.3
C-47U	1A/2A	.3/.075§	3/.75	1500	U	Leads	—	3 $\frac{1}{2}$	2 $\frac{7}{8}$	3 $\frac{3}{8}$	2 $\frac{1}{4}$	2 $\frac{11}{16}$	$\frac{5}{16} \times \frac{3}{16}$	4.6
C-56U	2.0	.035	.75	1500	U	Lugs	—	2 $\frac{1}{4}$	2 $\frac{5}{8}$	2	2 $\frac{3}{16}$	1 $\frac{3}{4}$	$\frac{5}{16} \times \frac{3}{16}$	2
C-48U	2.5A/5A	.08/.02§	.61/.155	1500	U	Leads	—	3 $\frac{13}{16}$	3 $\frac{3}{8}$	3 $\frac{9}{16}$	2 $\frac{1}{2}$	3 $\frac{1}{16}$	$\frac{5}{16} \times \frac{3}{16}$	6.75
C-57U	4.0	.025	.55	1500	U	Lugs	—	3 $\frac{1}{8}$	3 $\frac{3}{8}$	2 $\frac{1}{4}$	2 $\frac{13}{16}$	2 $\frac{1}{8}$	$\frac{5}{16} \times \frac{3}{16}$	3.5
C-49U	5A/10A	.032/.008§	.19/.05	1500	U	Leads	—	4 $\frac{1}{4}$	3 $\frac{1}{2}$	3 $\frac{5}{8}$	2 $\frac{3}{4}$	3 $\frac{1}{16}$	$\frac{5}{16} \times \frac{3}{16}$	8
C-58U	8.0	.01	.15	1500	U	Lugs	—	3 $\frac{1}{8}$	3 $\frac{3}{4}$	3	3 $\frac{1}{8}$	2 $\frac{1}{2}$	$\frac{5}{16} \times \frac{3}{16}$	5.5
C-59U	12.5	.01	.10	1500	U	Lugs	—	3 $\frac{1}{2}$	4 $\frac{1}{8}$	3	3 $\frac{1}{16}$	2 $\frac{3}{8}$	$\frac{5}{16} \times \frac{3}{16}$	6.25
C-80U	20A/40A	.024/.006§	.1/.025	1500	U	Lugs	—	5 $\frac{5}{16}$	4 $\frac{1}{16}$	5 $\frac{1}{2}$	2 $\frac{3}{4}$	4 $\frac{1}{2}$	$\frac{5}{16} \times \frac{3}{16}$	21.25
C-60U	22.5	.005	.06	1500	U	Lugs	—	3 $\frac{3}{4}$	4 $\frac{1}{2}$	4 $\frac{5}{8}$	3 $\frac{3}{4}$	3 $\frac{1}{2}$	$\frac{5}{16}$	12.75
C-26X	100	.2 to 1.5 Tapped	95	2500	X	Lugs	—	1 $\frac{15}{16}$	3 $\frac{5}{16}$	2	2 $\frac{13}{16}$		$\frac{3}{16}$	1.25
▲C-43X	300	.05 to 1 Tapped	40	5000	X	Lugs	—	2 $\frac{19}{32}$	4	2 $\frac{1}{4}$	3 $\frac{1}{16}$		$\frac{3}{16}$	2

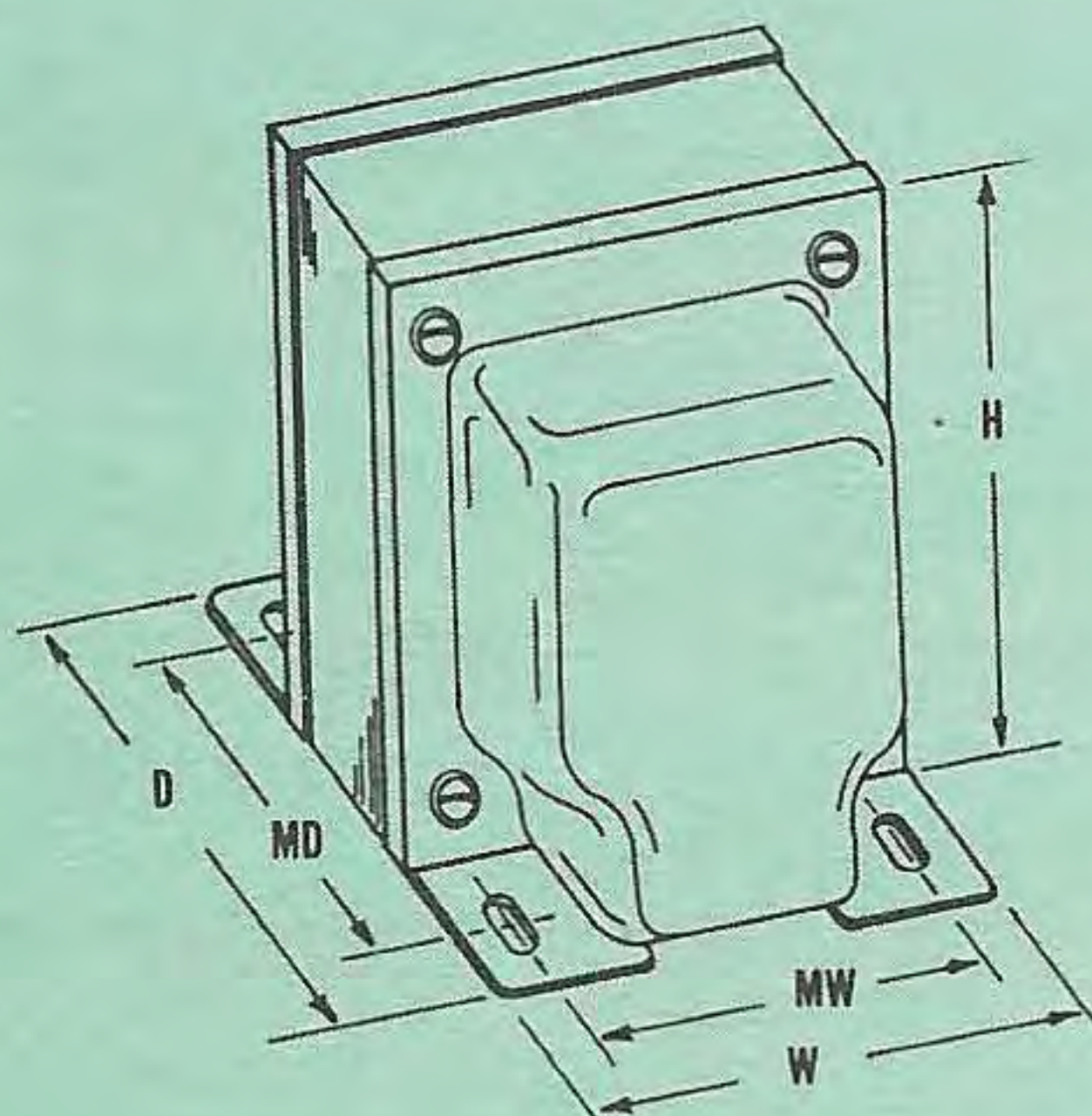
† Inductance tolerance —20% +50%.

§ Split winding.

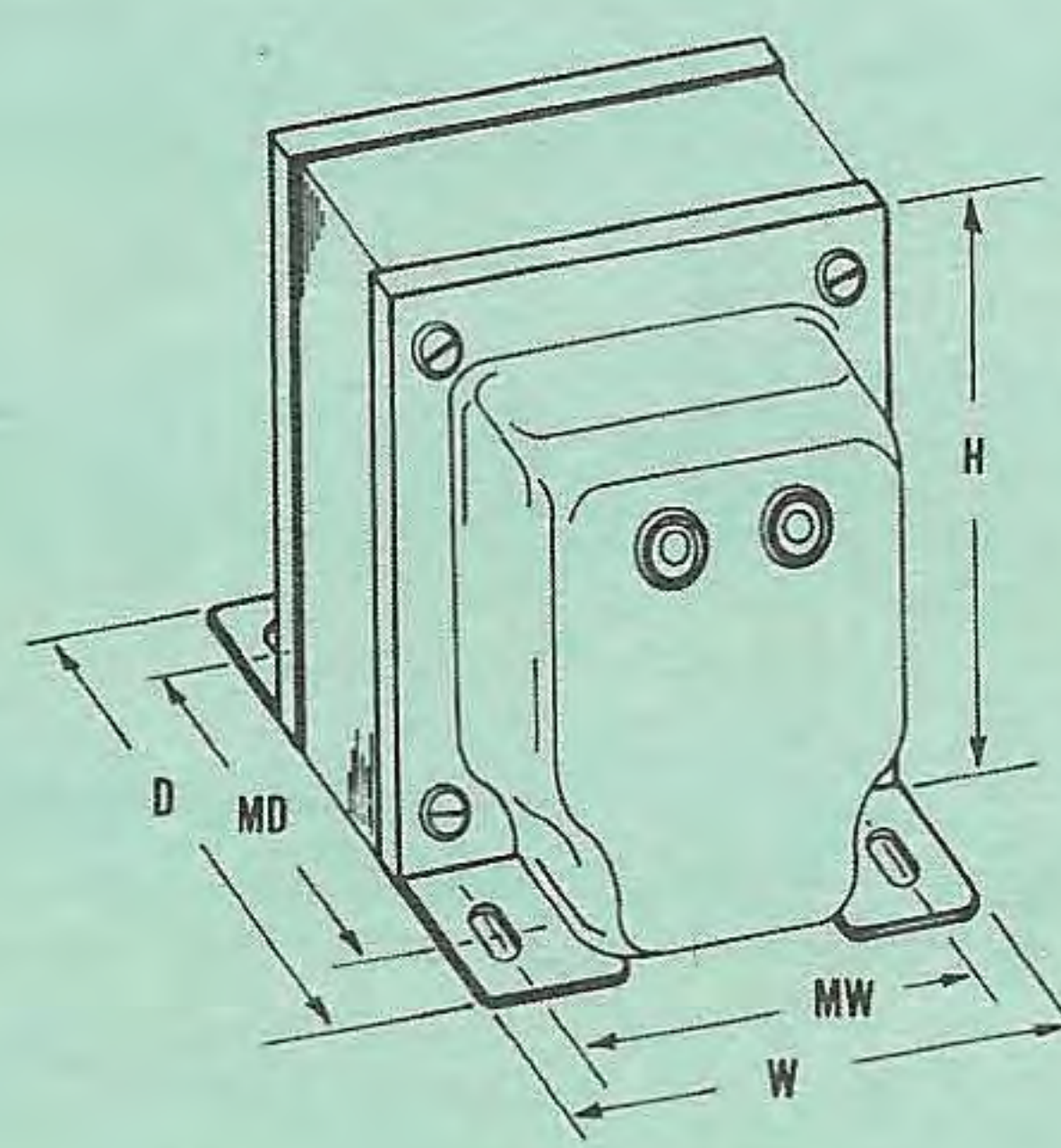
▲ Discontinued item, available until stock depleted.



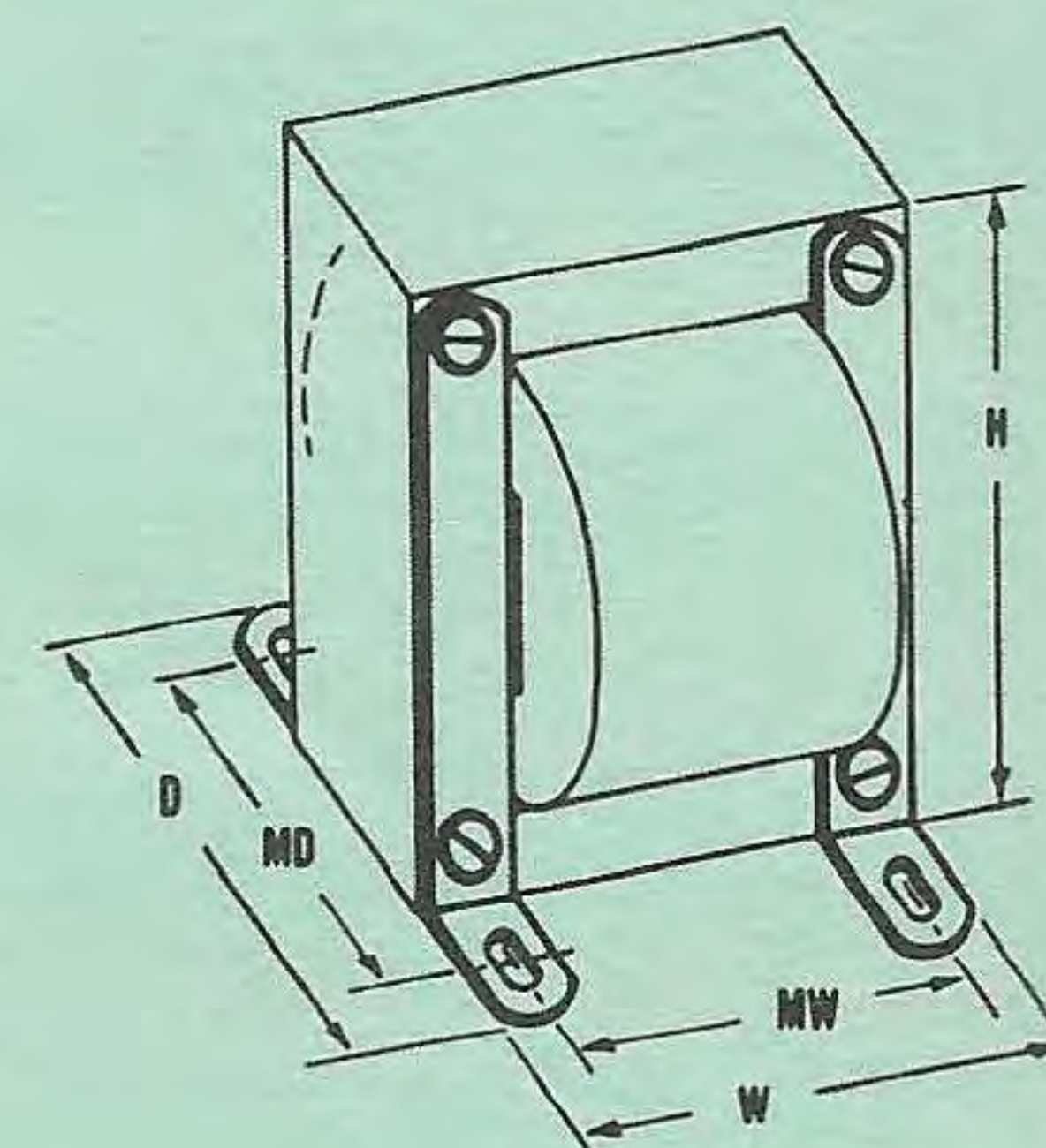
X Case



A Case



AL Case



U Case

POWER TRANSFORMERS



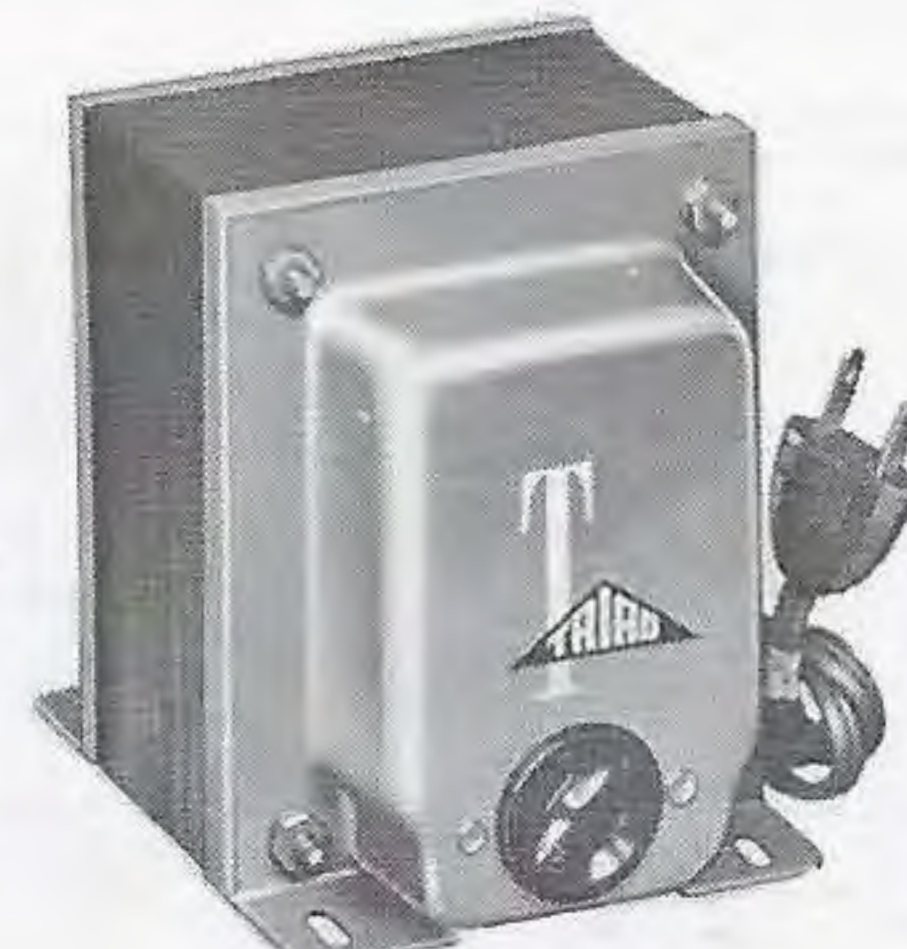
COMMERCIAL GRADE



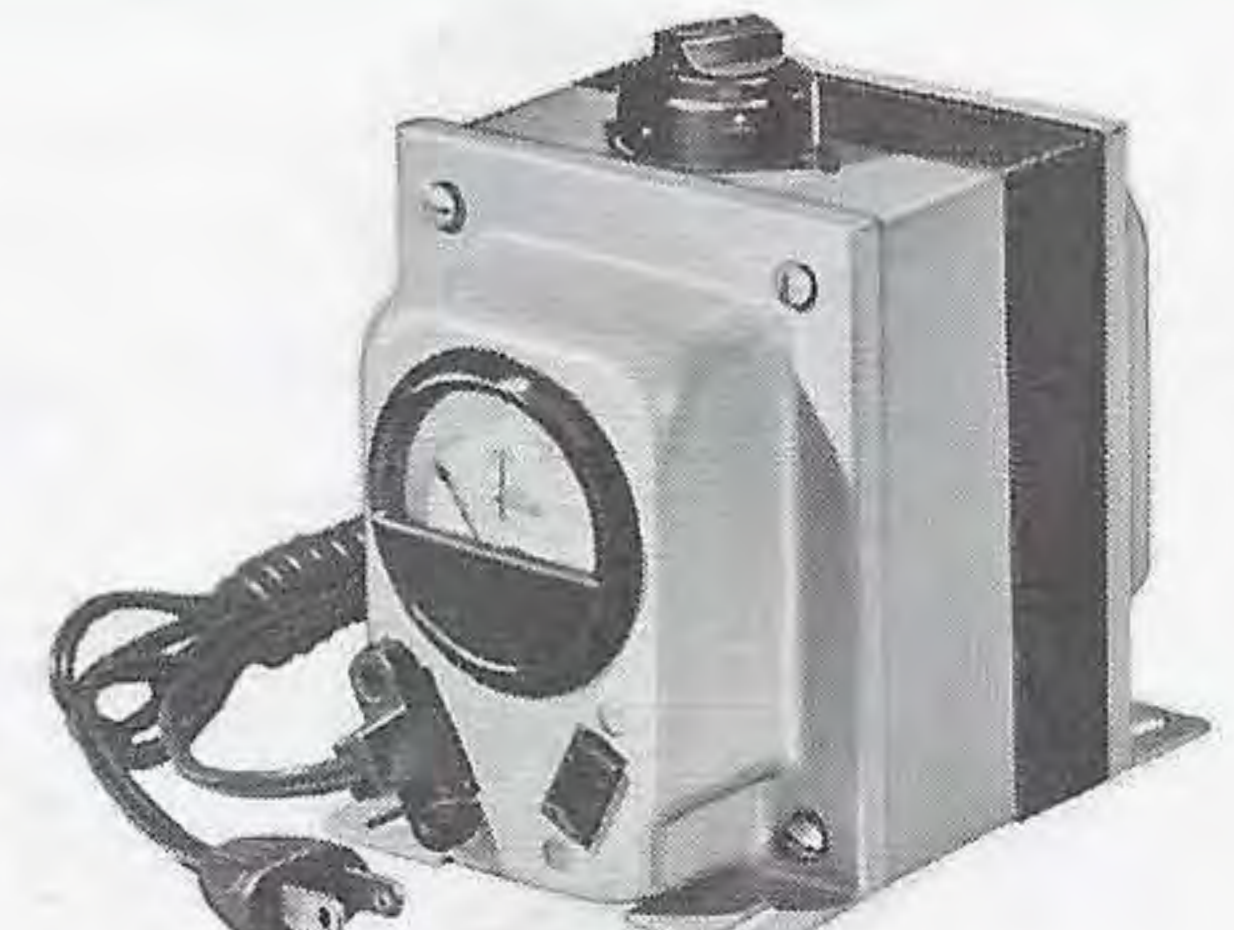
K Case



C Case



M Case



MM Case

STEPDOWN AUTOFORMERS / 50-60 cycle

Type No.	Output Watts (VA)	Primary Volts	Secondary		RMS Test Voltage	Case Type	Connections	Case Dimension			Mounting Dimension		Mtg. Hole Size	Max. Unit Wt. Lbs.
			Volts $\pm 5\%$	RMS Amps				H	W	D	MW	MD		
N-1X	50	230	115	.435	1500	X	Leads	2 $\frac{3}{32}$	3 $\frac{1}{16}$	2	3 $\frac{1}{8}$	—	3 $\frac{1}{16}$	1.5
N-3M	85	230	115	.74	1500	M	6' Cord & Plug & Socket	3 $\frac{1}{32}$	2 $\frac{3}{32}$	2 $\frac{7}{8}$	2 $\frac{1}{4}$	1 $\frac{5}{8}$	3 $\frac{1}{8}$ x 3 $\frac{1}{16}$	3
N-4M	150	230	115	1.3	1500	M	"	3 $\frac{1}{32}$	2 $\frac{3}{32}$	3 $\frac{5}{8}$	2 $\frac{1}{4}$	2 $\frac{3}{8}$	3 $\frac{1}{8}$ x 3 $\frac{1}{16}$	4.7
N-5M	250	230	115	2.17	1500	M	"	3 $\frac{7}{8}$	3 $\frac{3}{32}$	4 $\frac{1}{4}$	2 $\frac{1}{2}$	3	3 $\frac{1}{8}$ x 3 $\frac{1}{16}$	7
N-7M	600	230	115	5.22	1500	M	"	4 $\frac{5}{8}$	3 $\frac{1}{16}$	5	3	3 $\frac{7}{8}$	3 $\frac{1}{8}$ x 3 $\frac{1}{16}$	12
N-7MG†														
N-9M	1250	230	115	10.85	1500	M	"	5 $\frac{1}{16}$	4 $\frac{1}{2}$	6 $\frac{1}{4}$	3 $\frac{1}{2}$	5 $\frac{1}{8}$	1 $\frac{1}{2}$ x 1 $\frac{1}{4}$	24
N-9MG†														
N-11M	2000	230	115	17.4	1500	M	"	5 $\frac{1}{16}$	4 $\frac{1}{2}$	8	3 $\frac{1}{2}$	6 $\frac{7}{8}$	1 $\frac{1}{2}$ x 1 $\frac{1}{4}$	33.25
N-11MG†														
N-34X	150	0-95-105-115-125-135	115	1.3	250	X	Lugs	2 $\frac{1}{32}$	4	2 $\frac{1}{4}$	3 $\frac{1}{16}$	—	3 $\frac{1}{16}$	2.2
N-35M	250	95-130 (5V Steps)	115	2.17	1500	M	Detachable 6' Cord, Plug, Switch & Socket	4 $\frac{1}{4}$	3 $\frac{1}{32}$	5	2 $\frac{3}{4}$	3 $\frac{3}{4}$	3 $\frac{1}{8}$ x 3 $\frac{1}{16}$	4.2
N-50M	500	95-130 (5V Steps)	115	4.35	250	MM	Detachable 6' Cord, Plug, Switch, Socket & Meter	4 $\frac{5}{8}$	3 $\frac{1}{16}$	5 $\frac{1}{4}$	3	4 $\frac{1}{8}$	3 $\frac{1}{8}$ x 3 $\frac{1}{16}$	7.25

† Has 3-wire cord, plug and socket.

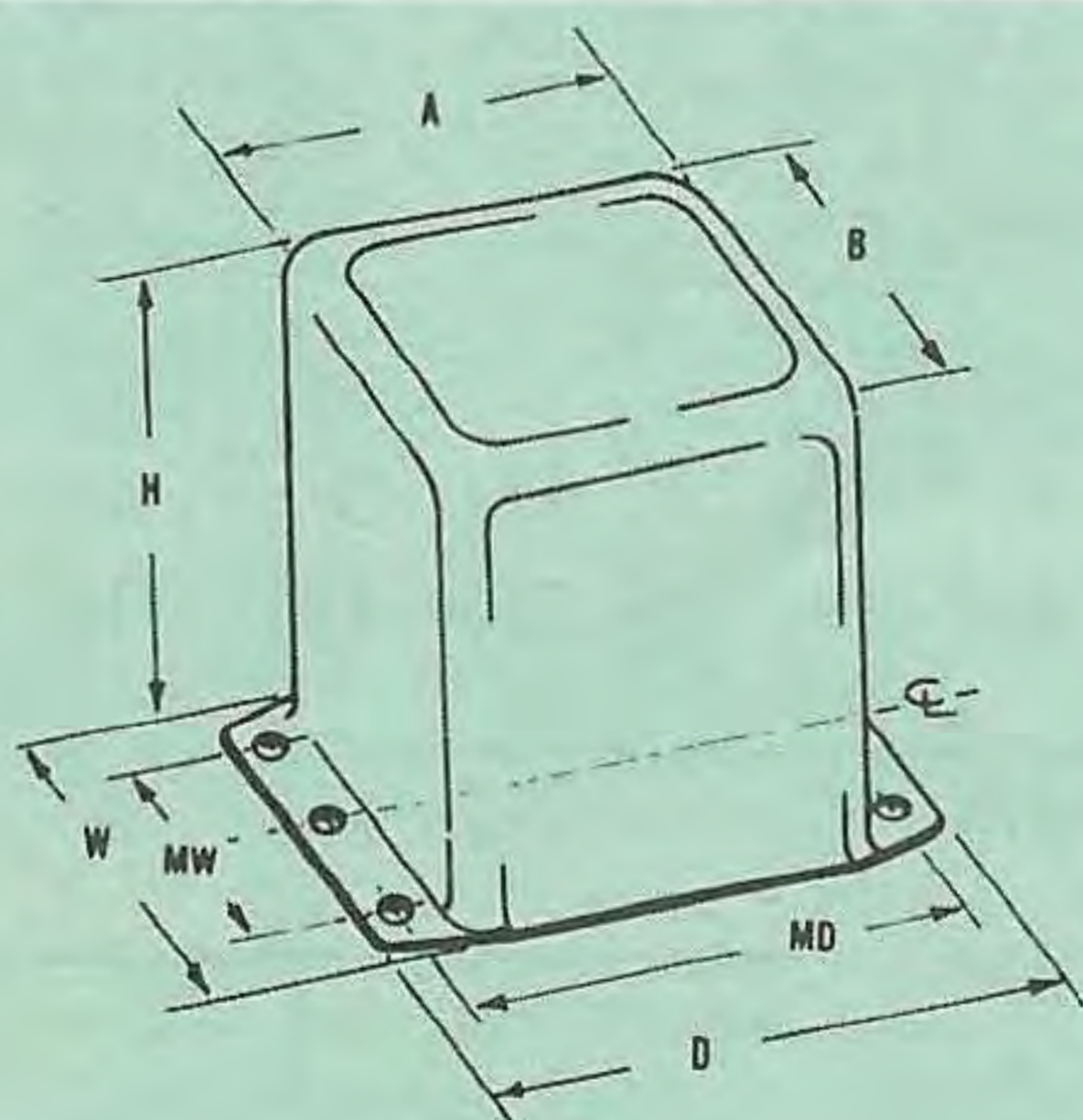
SIGNALING / 60 cycle

Type No.	Primary Volts	Secondary AC Volts	Amps	RMS Test Voltage	Case Type	Connections	Case Dimension			Mounting Dimension		Mtg. Hole Size	Max. Unit Wt. Lbs.
							H	W	D	MW	MD		
F-102X	115	4-8-12-16-20-24	2	2500	X	Leads	2 $\frac{3}{32}$	3 $\frac{1}{16}$	2 $\frac{1}{2}$	3 $\frac{1}{8}$	—	3 $\frac{1}{16}$	1.75
F-104U	115	4-8-12-16-20-24	4	2500	U	Leads	3 $\frac{1}{2}$	2 $\frac{7}{8}$	2 $\frac{1}{16}$	2 $\frac{1}{4}$	2 $\frac{1}{16}$	3 $\frac{1}{16}$ x 3 $\frac{1}{16}$	3.13

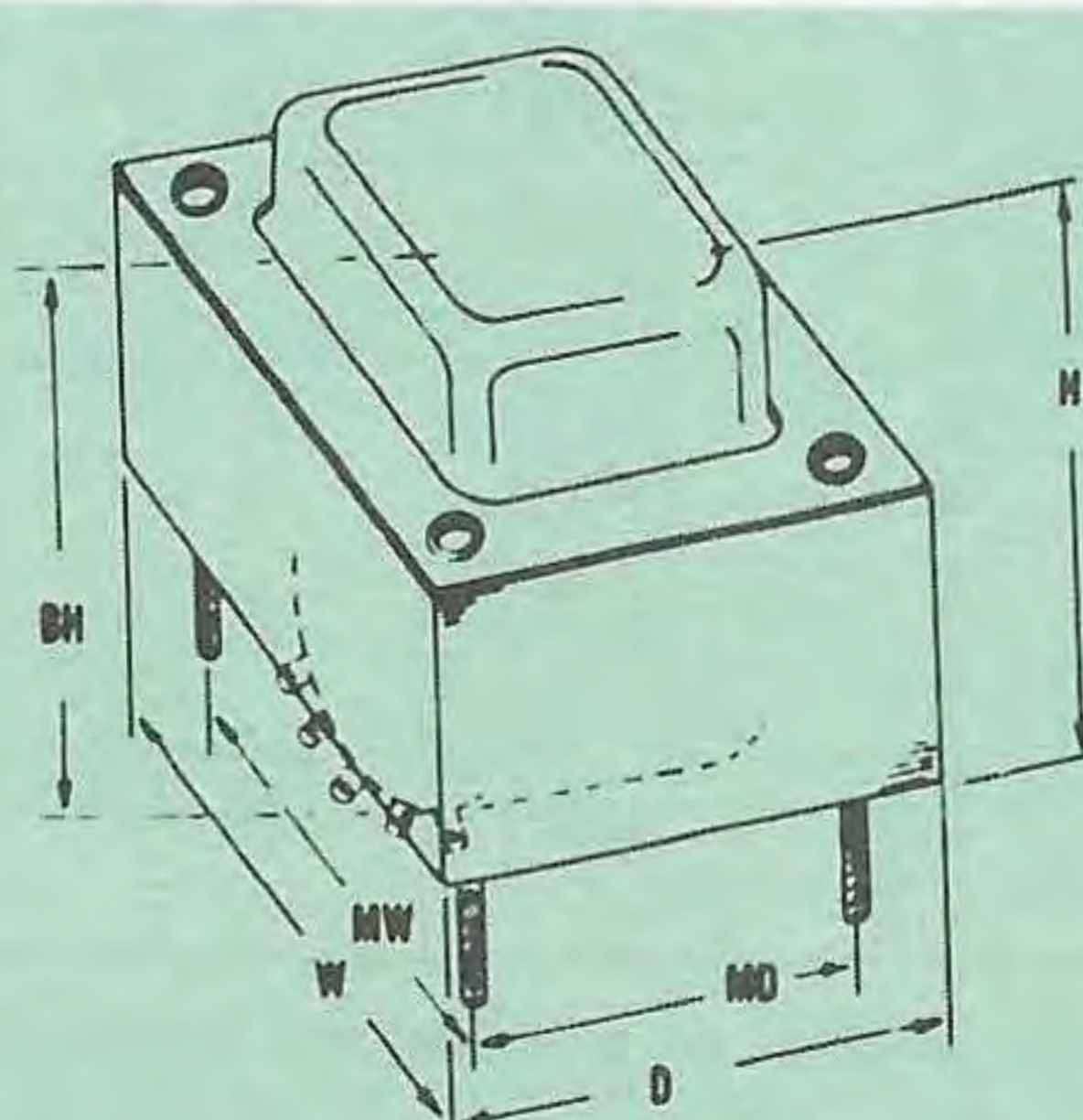
CATHODE RAY TUBE / primary 115 volt, 50-60 cycle

Type No.	Secondary AC Volts $\pm 5\%$	DC Ma.		Rectifier Filament		Other Filaments		RMS Test Voltage	Case Type	Connections or Lead Holes Used	Case Dimension			Dimension Mounting		Max. Unit Wt. Lbs.
		Cond. Input	Choke Input	Volts $\pm 5\%$	Amps	Volts $\pm 5\%$	Amps				H	W	D	MW	MD	
R-41C	440-0-440-1250	125 5	158 —	5 2.5* 2.5*	3 1.75 1.75	6.3	.6	(2.5V & 6.3V)—3500 Others—1500	C	Lugs	3 $\frac{1}{4}$	4 $\frac{3}{16}$	3 $\frac{1}{2}$	3 $\frac{1}{16}$	2 $\frac{3}{4}$	7.5
R-45C	400-0-400-800	30 5	38 —	5* 5*	2 2	6.3 6.3 CT 6.3	.6 3 1	Pri. & 6.3 CT 1500 Others—3000	C	Lugs	2 $\frac{5}{8}$	3 $\frac{3}{4}$	3 $\frac{1}{8}$	3 $\frac{1}{8}$	2 $\frac{1}{2}$	4.5
R-43C	1600	3	—	—	—	0-2.5-5-6.3 0-2.5-5-6.3	1 3	Pri.—1500 Others—4200	C	Lugs	2 $\frac{3}{8}$	3 $\frac{1}{16}$	2 $\frac{1}{16}$	2 $\frac{1}{2}$	2	3.5
R-83A • #	400-0-400-650	70 3	— —	1.25† —	.3	6.3 CT 6.3	3.5 .6	6.3V.6A-3000 Others—1500	A	2-Sides	3 $\frac{1}{32}$	2 $\frac{3}{32}$	3 $\frac{3}{4}$	2 $\frac{1}{4}$	2 $\frac{5}{8}$	5
R-84K • •	—	—	—	—	—	6.3	.6	3500	K	2-Sides	2 $\frac{3}{4}$	2 $\frac{1}{4}$	2 $\frac{3}{4}$	2 $\frac{3}{8}$	1 $\frac{1}{2}$	1.5
▲ R-85A • • •	1825 180 117	3 475 Rms 200 Rms	— — —	1.25 — —	.2	6.3 CT	5.65	1500	A	2-Sides	3 $\frac{7}{8}$	3 $\frac{3}{32}$	4 $\frac{5}{8}$	2 $\frac{1}{2}$	3 $\frac{3}{4}$	7.5

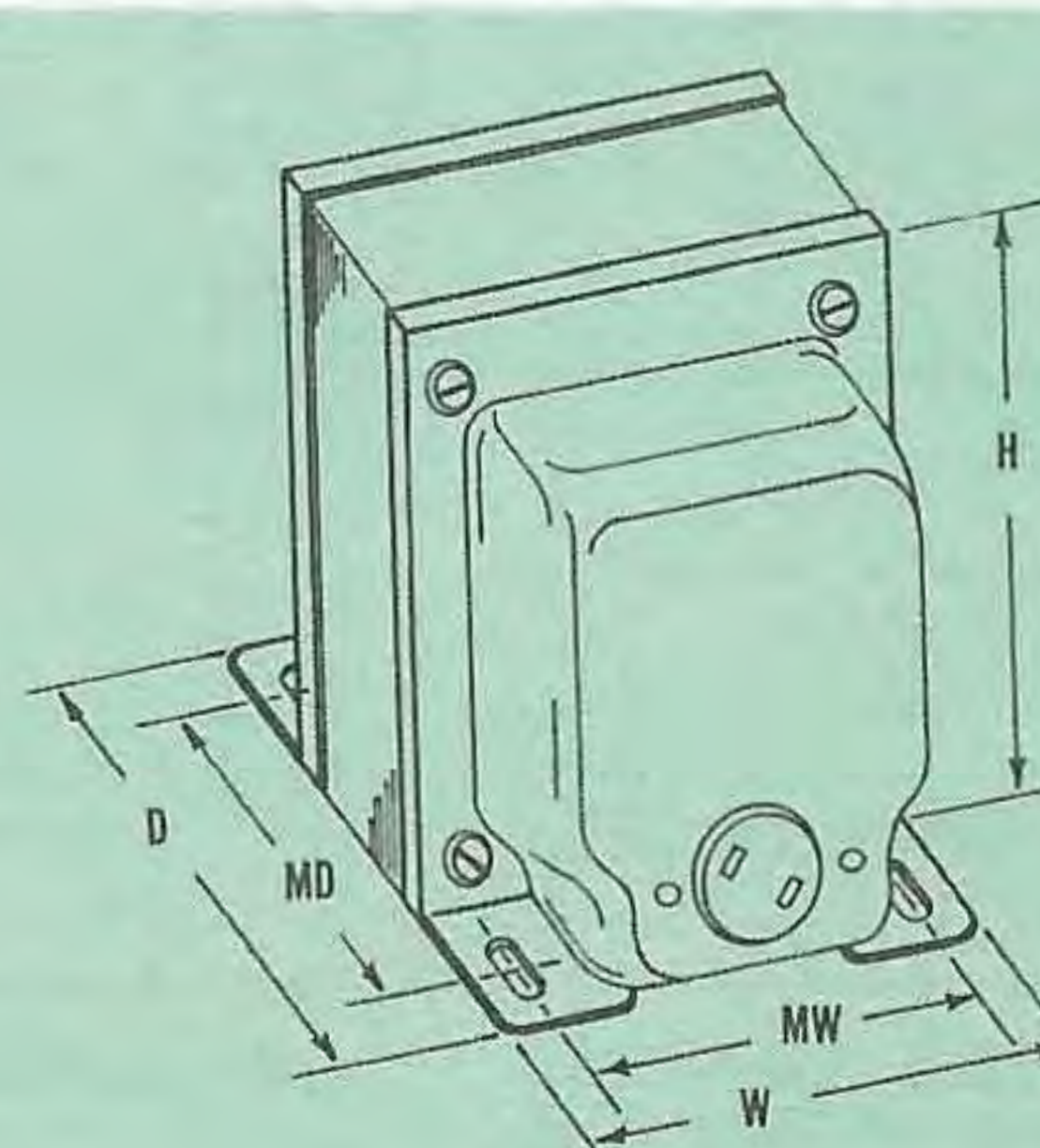
• Direct Replacement for Power Transformer in Model 0-12 Heathkit Scope. • • CRT Filament Transformer for Heathkit Model OP-1 Scope. # 60 cycle operation. • • • CRT Transformer for Heathkit Model OP-1 Scope. If complete power transformer is needed, both R-84K & R-85A must be used. † Static shield.
* Windings may be connected in series to obtain their combined voltage when properly phased. Current will be equal to the current of the lowest winding. Example: Two 6.3V. windings @ 2A. in series would be 12.6V. @ 2A. Windings may also be connected in parallel to obtain the combined current. Example: Two 6.3V. windings @ 2A. in parallel would be 6.3V. @ 4A.
† 2 ohm 2W resistor in series with filament when IV2 is used. ▲ Discontinued item, available until stock depleted.



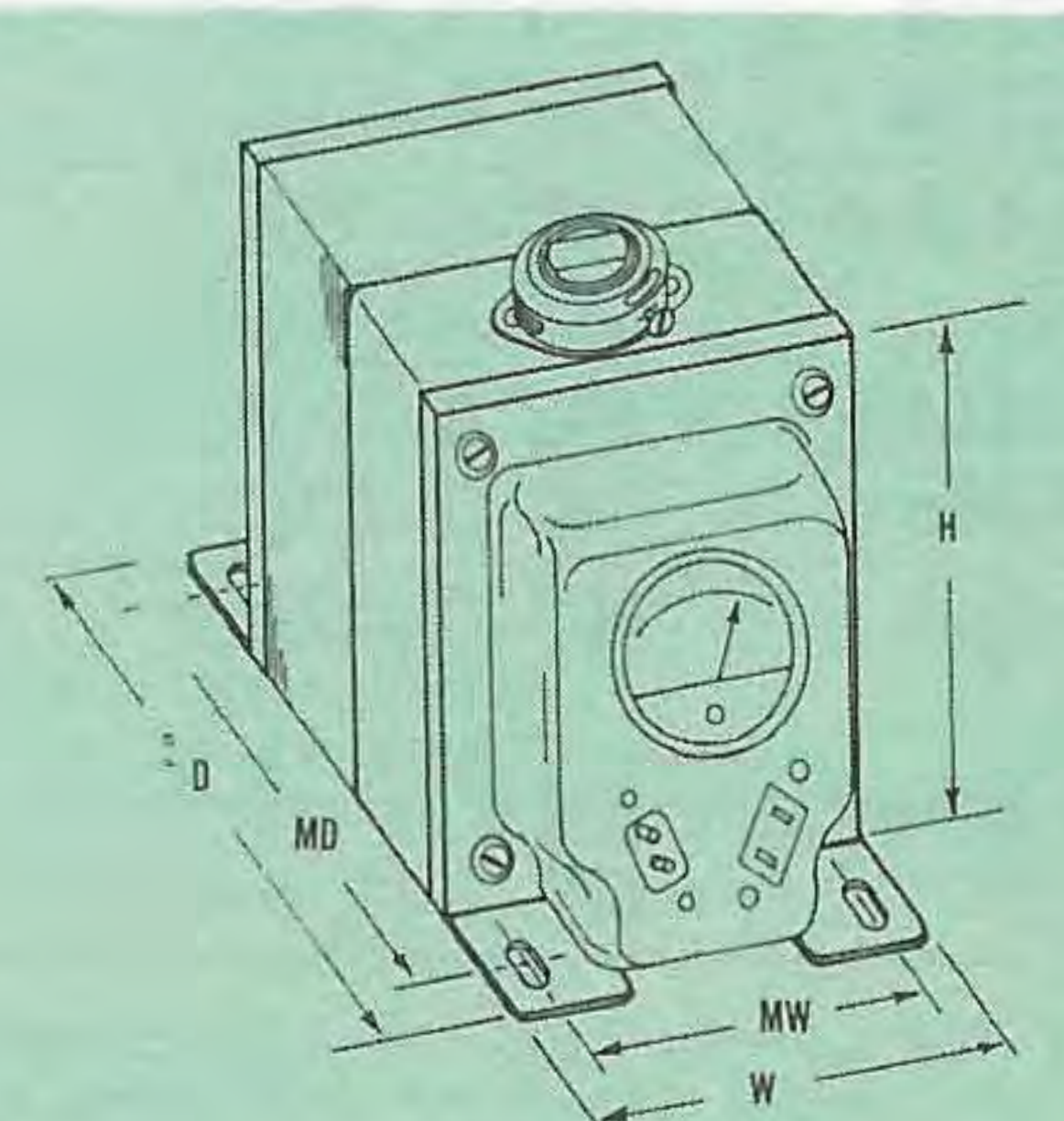
K Case



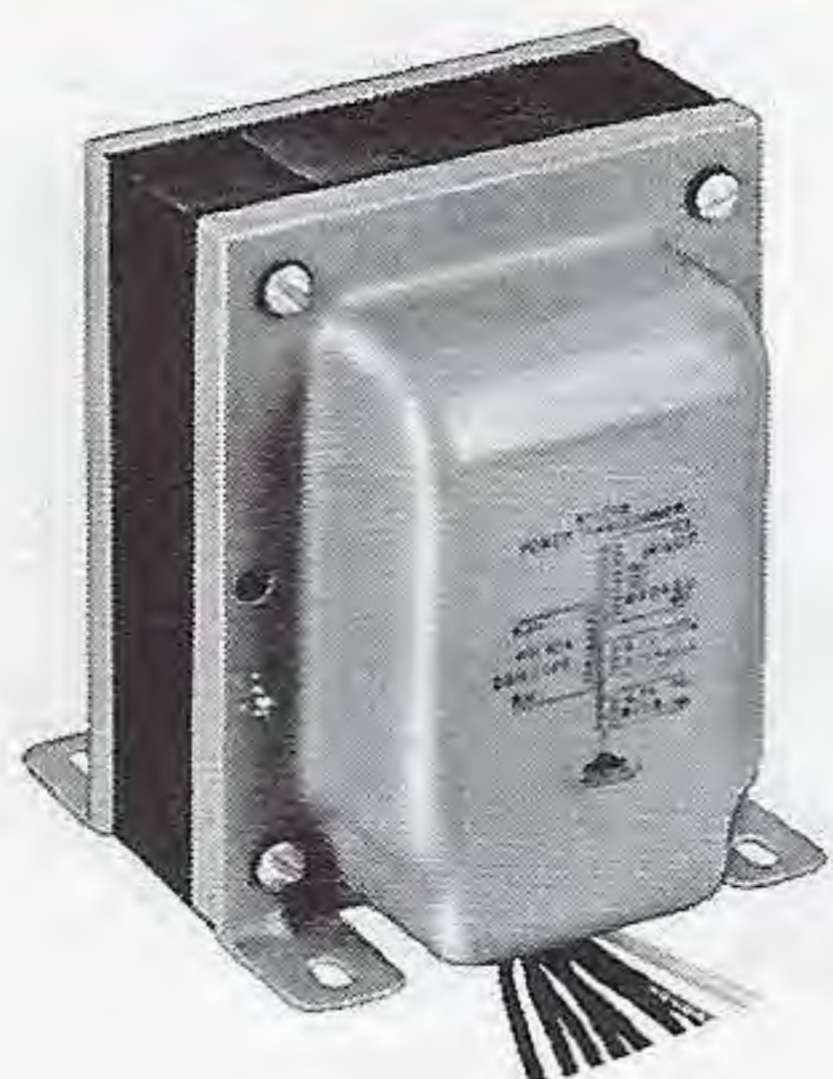
C Case



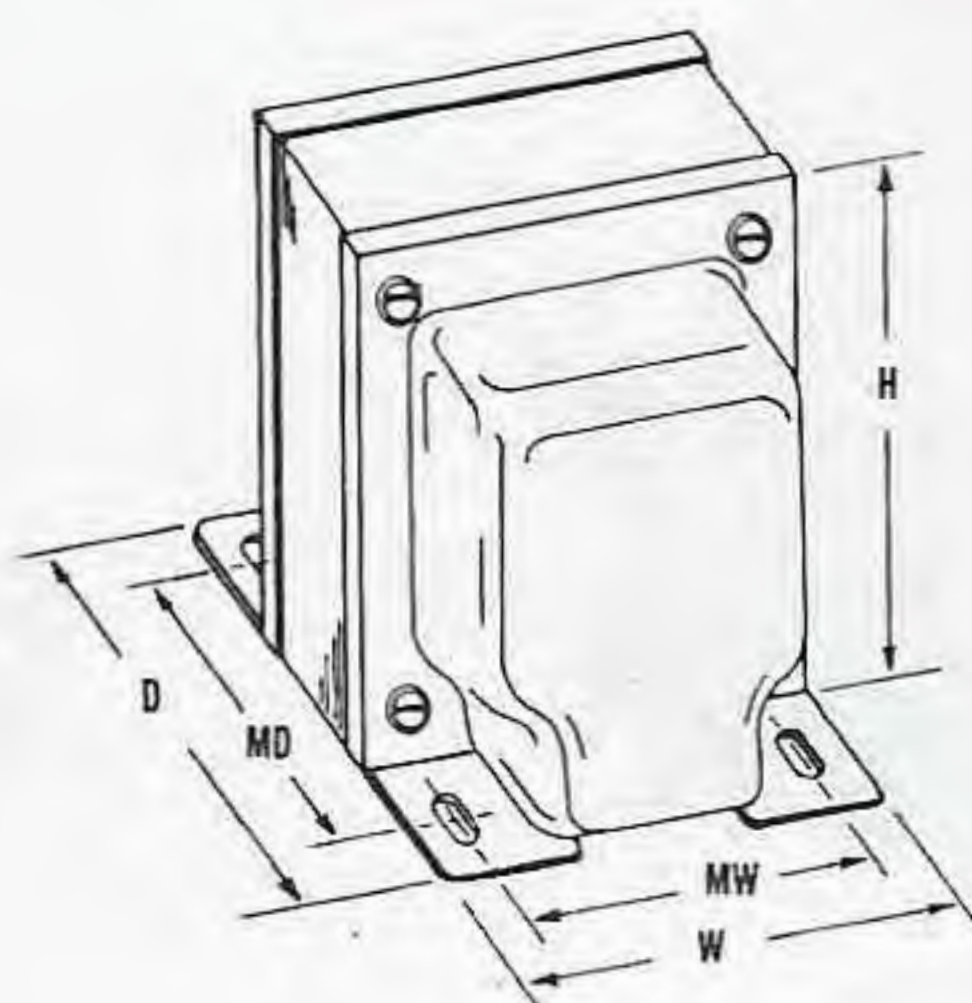
M Case



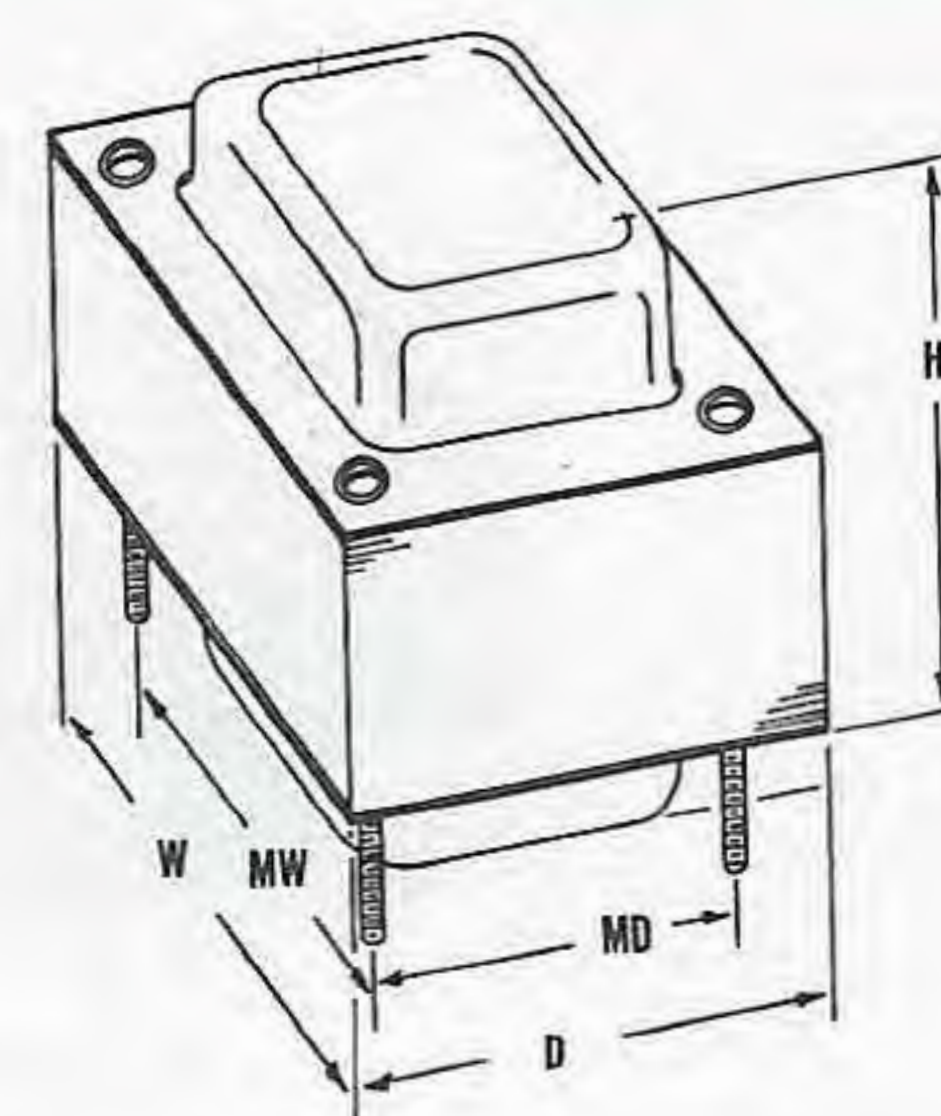
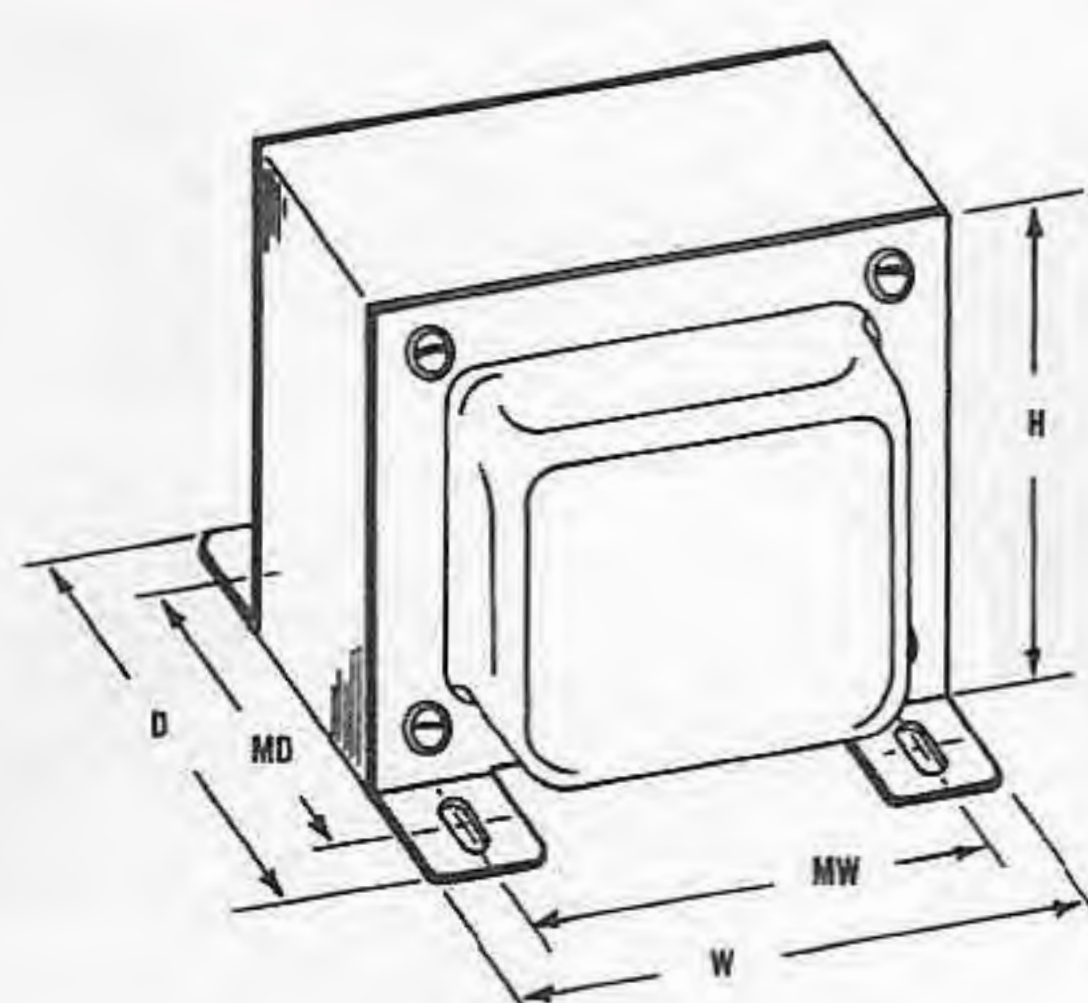
MM Case



A Case



H Case



B Case

Triad power components incorporate features not available before in comparable plate and filament units, and their quality is substantially higher than that of other commercial grades. Features: UL-approved lead materials . . . varnish impregnated, insuring greatest protection against moisture as well as pre-

vention of lamination chatter . . . Copper foil shielding . . . temperature rise well within commercial limits . . . permanent, legible circuit diagram marked on every smooth, baked gray enamel case.

COMBINED PLATE AND FILAMENT / primary 115 volt / 50-60 cycle

Type No.	Secondary			Rectifier Filament		Other Filaments		RMS Test Volts	Case Type	Lead Holes Used	Case Dimension			Mounting* Dimension		Max. Unit Wt. Lbs.
	AC Volts ± 5%	DC Cond. Input	Ma. Choke Input	Volts ± 5%	Amps	Volts ± 5%	Amps				H	W	D	MW	MD	
R-4A	250-0-250‡	40	51	—	—	6.3 CT	2	1500	A	1	2 ²⁵ / ₃₂	2 ¹¹ / ₃₂	2 ⁵ / ₈	1 ³ / ₄	1 ⁷ / ₈	1.75
▲ R-4B	250-0-250‡	40	51	—	—	6.3 CT	2	1500	B	1	1 ⁷ / ₈	2 ⁵ / ₈	2 ³ / ₁₆	2 ³ / ₁₆	1 ³ / ₄	1.75
R-5A	300-0-300‡	65	82	—	—	6.3 CT	2.7	1500	A	1	3 ³ / ₁₆	2 ²¹ / ₃₂	2 ⁵ / ₈	2	1 ¹¹ / ₁₆	2.75
R-5B	300-0-300‡	65	82	—	—	6.3 CT	2.7	1500	B	1	1 ³ / ₄	3	2 ¹ / ₂	2 ¹ / ₂	2	2.75
R-6A	240-0-240‡	50	63.5	5	2	6.3 CT	2	1500	A	1	3 ³ / ₁₆	2 ²¹ / ₃₂	2 ⁵ / ₈	2	1 ¹¹ / ₁₆	2.75
R-6B	240-0-240‡	50	63.5	5	2	6.3 CT	2	1500	B	1	1 ³ / ₄	3	2 ¹ / ₂	2 ¹ / ₂	2	2.75
R-7A #	300-0-300‡	50	63.5	5	2	6.3 CT	2	1500	A	1	3 ³ / ₁₆	2 ²¹ / ₃₂	2 ⁵ / ₈	2	1 ¹¹ / ₁₆	2.75
R-7B #	300-0-300‡	50	63.5	5	2	6.3 CT	2	1500	B	1	1 ³ / ₄	3	2 ¹ / ₂	2 ¹ / ₂	2	2.75
R-22A #	190-160-0-160-190‡	70	89	—	—	6.3	.6	1500	A	1	3 ³ / ₁₆	2 ²¹ / ₃₂	2 ⁵ / ₈	2	1 ¹¹ / ₁₆	2.75
				—	—	6.3 CT	3									
R-22B #	190-160-0-160-190‡	70	89	—	—	6.3	.6	1500	B	1	1 ³ / ₄	3	2 ¹ / ₂	2 ¹ / ₂	2	2.75
				—	—	6.3 CT	3									
R-8A	250-0-250‡	75	95	5	2	6.3 CT	2.5	1500	A	1	3 ³ / ₁₆	2 ²¹ / ₃₂	3 ¹ / ₈	2	2 ³ / ₁₆	3
R-8B	250-0-250‡	75	95	5	2	6.3 CT	2.5	1500	B	1	2 ¹ / ₄	3	2 ¹ / ₂	2 ¹ / ₂	2	3
R-9A	300-0-300‡	75	95	5	2	6.3 CT	3	1500	A	1	3 ¹ / ₂	2 ³¹ / ₃₂	3 ¹ / ₄	2 ¹ / ₄	2 ¹ / ₈	3.5
▲ R-9B	300-0-300‡	75	95	5	2	6.3 CT	3	1500	B	1	2	3 ³ / ₈	2 ¹³ / ₁₆	2 ¹³ / ₁₆	2 ¹ / ₄	3.5
R-10A	262.5-0-262.5‡	90	115	5	2	6.3 CT	5	1500	A	1	3 ¹ / ₂	2 ³¹ / ₃₂	3 ⁵ / ₈	2 ¹ / ₄	2 ¹ / ₂	4.5
R-10B	262.5-0-262.5‡	90	115	5	2	6.3 CT	5	1500	B	1	2 ³ / ₈	3 ³ / ₈	2 ¹³ / ₁₆	2 ¹³ / ₁₆	2 ¹ / ₄	4.5
R-11A	350-0-350‡	90	115	5	3	6.3 CT	3.5	1500	A	1	3 ¹ / ₂	2 ³¹ / ₃₂	3 ³ / ₄	2 ¹ / ₄	2 ⁵ / ₈	4.25
R-11B	350-0-350‡	90	115	5	3	6.3 CT	3.5	1500	B	1	2 ¹ / ₂	3 ³ / ₈	2 ¹³ / ₁₆	2 ¹³ / ₁₆	2 ¹ / ₄	4.25
▲ R-98B	325-40-0-325‡	100	127	5	3	6.3 CT	3	1500	B	1	2 ¹ / ₈	3 ³ / ₈	2 ¹³ / ₁₆	2 ¹³ / ₁₆	2 ¹ / ₄	4.5
R-12A	275-0-275‡	110	140	5	2	6.3 CT	5	1500	A	1	3 ⁷ / ₈	3 ³ / ₃₂	3 ³ / ₈	2 ¹ / ₂	2 ¹ / ₄	4.5
R-12B	275-0-275‡	110	140	5	2	6.3 CT	5	1500	B	1	2 ¹ / ₄	3 ³ / ₄	3 ¹ / ₈	3 ¹ / ₈	2 ¹ / ₂	4.5
R-14A	350-0-350‡	125	160	5	3	6.3 CT	4.5	1500	A	1	3 ⁷ / ₈	3 ³ / ₃₂	3 ⁷ / ₈	2 ¹ / ₂	2 ³ / ₄	6
R-14B	350-0-350‡	125	160	5	3	6.3 CT	4.5	1500	B	1	2 ³ / ₄	3 ³ / ₄	3 ¹ / ₈	3 ¹ / ₈	2 ¹ / ₂	6
R-72A #	400-0-400‡	140	178	5	3	6.3 CT	4	1500	A	2	4 ¹ / ₄	3 ¹⁹ / ₃₂	3 ⁵ / ₈	2 ³ / ₄	2 ¹ / ₂	5.75
R-16A	350-0-350‡	160	200	5	3	6.3 CT	5	1500	A	1	3 ⁷ / ₈	3 ³ / ₃₂	4 ³ / ₈	2 ¹ / ₂	3 ¹ / ₄	7
▲ R-16B	350-0-350‡	160	200	5	3	6.3 CT	5	1500	B	1	3 ¹ / ₄	3 ³ / ₄	3 ¹ / ₈	3 ¹ / ₈	2 ¹ / ₂	7
R-17A	375-0-80-375‡	160	200	5	3	6.3 CT	5	1500	A	2	4 ¹ / ₄	3 ¹⁹ / ₃₂	4 ¹ / ₄	2 ³ / ₄	3 ¹ / ₈	7.25
						2.5 CT	5									
R-18A	375-0-375‡	175	220	5	3	6.3 CT	8	1500	A	1	4 ¹ / ₄	3 ¹⁹ / ₃₂	4 ³ / ₈	2 ³ / ₄	3 ¹ / ₄	8.5
R-18B	375-0-375‡	175	220	5	3	6.3 CT	8	1500	B	1	3 ¹ / ₈	4 ¹ / ₈	3 ⁷ / ₁₆	3 ⁷ / ₁₆	2 ³ / ₄	8.5
R-58A	437.5-0-437.5‡ (2000V Test)	185	235	5	3	6.3	3	1500	A	2	4 ⁵ / ₈	3 ¹⁵ / ₁₆	4 ³ / ₈	3	3 ³ / ₈	9.5
				(2000V Test)		6.3	4									
▲ R-99B	300-40-0-300‡	200	255	—	—	6.3 CT	4	1500	B	1	2 ⁵ / ₈	3 ³ / ₄	3 ¹ / ₈	3 ¹ / ₈	2 ¹ / ₂	6
R-19A	375-80-0-375‡	200	254	5	3	6.3 CT	6	1500	A	2	4 ⁵ / ₈	3 ¹⁵ / ₁₆	4 ³ / ₈	3	3 ³ / ₈	9.5
						2.5 CT	10									
R-20A	350-0-350‡	200	255	5	3	6.3 CT	8	1500	A	1	4 ¹ / ₄	3 ¹⁹ / ₃₂	4 ³ / ₈	2 ³ / ₄	3 ¹ / ₄	9.25
R-20B	350-0-350‡	200	255	5	3	6.3 CT	8	1500	B	1	3 ¹ / ₈	4 ¹ / ₈	3 ⁷ / ₁₆	3 ⁷ / ₁₆	2 ³ / ₄	9.25
R-21A	400-0-400‡	200	255	5	3	6.3 CT	6	1500	A	2	4 ¹ / ₄	3 ¹⁹ / ₃₂	4 ⁷ / ₈	2 ³ / ₄	3 ³ / ₄	9.25
R-21B	400-0-400‡	200	255	5	3	6.3 CT	6	1500	B	1	3 ⁵ / ₈	4 ¹ / ₈	3 ⁷ / ₁₆	3 ⁷ / ₁₆	2 ³ / ₄	9.25
R-71A #	450-0-450‡ (2000V Test)	250	317	5	4	6.3	4	1500	A	2	4 ⁵ / ₈	3 ¹⁵ / ₁₆	4 ⁷ / ₈	3	3 ⁵ / ₈	12
				(2000V Test)		6.3 CT	2									
R-24A #	400-0-400‡	300	380	5	6	6.3 CT	6	1500	A	1	4 ⁵ / ₈	3 ¹⁵ / ₁₆	4 ³ / ₈	3	3 ³ / ₈	14
R-24B #	400-0-400‡	300	380	5	6	6.3 CT	6	1500	B	1	3 ¹ / ₈	4 ¹ / ₂	3 ³ / ₄	3 ³ / ₄	3	14
R-25A	400-0-400‡	500	635	5	6	6.3	3	2000	A	2	5 ⁵ / ₁₆	4 ¹ / ₂	5 ⁵ / ₈	3 ¹ / ₂	4 ⁵ / ₈	19
						6.3 CT	7									
R-94H #	180‡ 177	(500 MA in doubler ckt) 5 MA (Bias)		—	—	6.3	5.5	1500	H	2	3 ¹⁵ / ₁₆	4 ⁵ / ₈	5 ¹ / ₂	3 ³ / ₄	4 ³ / ₈	17
				—	—	6.3	5.5									

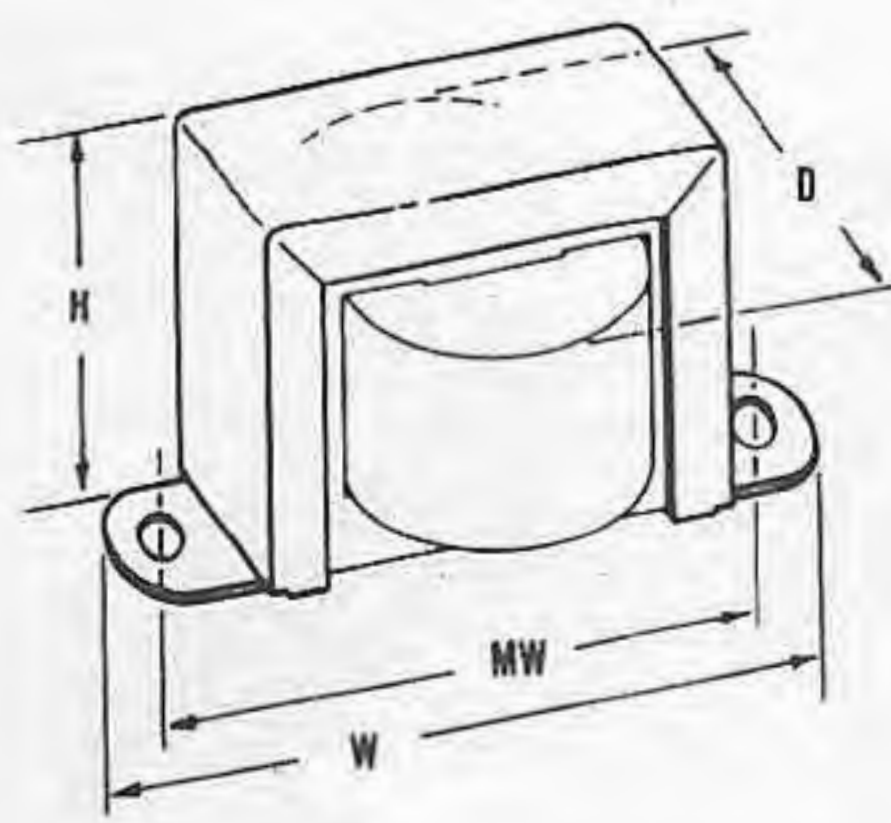
CT for Center Tap. ‡ Static shield. # 60 cycle operation.
* Mtg. Hole Size For "A" case types, ³/₈x³/₁₆ except R-25A; ¹/₂x¹/₄.

▲ Discontinued item, available until stock depleted.

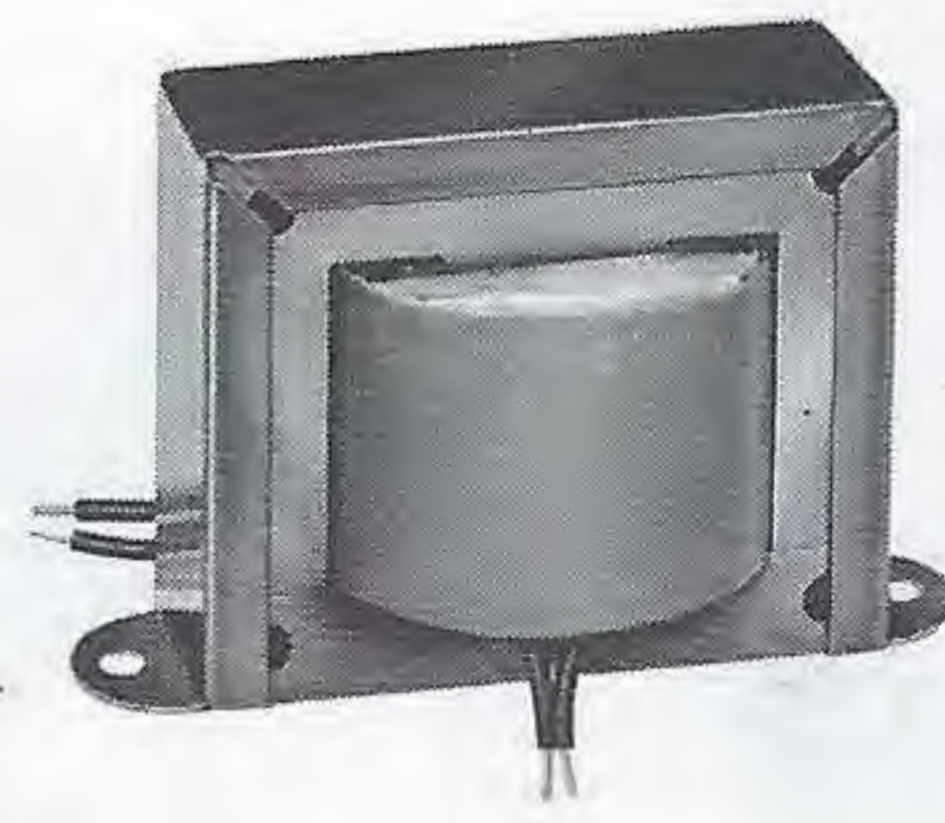
POWER TRANSFORMERS



**COMMERCIAL
GRADE**



X Case



R-2C Case

Triad Instrument Power Transformers have become the field leaders in critical instrumentation applications. Combined Plate and Filament Power Transformers, at realistic and reasonable prices, embody all the performance capabilities and construction

features typical of Triad products, such as: shielding . . . impregnation . . . freedom from chatter . . . all in conformance with most rigid quality control standards.

FOR PREAMPLIFIERS, VTVM, ETC. / primary 115 volt — 50-60 cycle

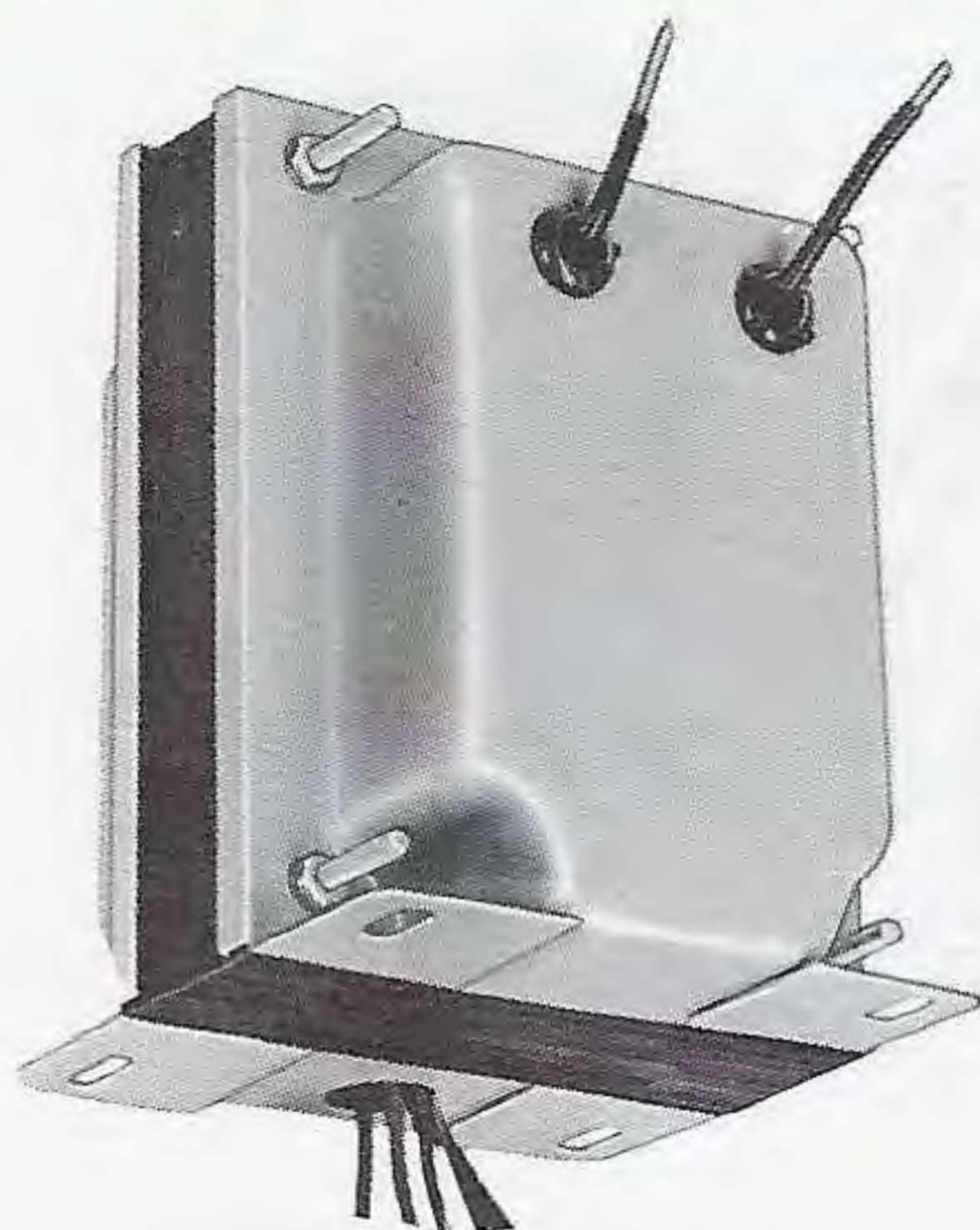
Type No.	Secondary			Rectifier Filament		Other Filaments		RMS Test Voltage	Case Type	Connections or Lead Holes Used	Case Dimension			Mounting Dimension		Mtg. Hole Size	Max. Unit Wt. Lbs.
	AC Volts ± 5%	Cond. Input	DC Ma Choke Input	Volts ± 5%	Amps	Volts ± 5%	Amps				H	W	D	MW	MD		
R-68A†	400-0-400	30	38	5	2	6.3* 6.3*	1.2 1.2	2000	A	1	3 ³ / ₃₂	2 ¹ / ₃₂	3 ¹ / ₈	2	2 ³ / ₁₆	3/8x3/16	3
R-2C‡	135	15	19	—	—	6.3	.9	1500	C	Leads	1 ³ / ₄	1 ⁷ / ₈	1 ¹ / ₁₆	—	1 ¹ / ₄	—	1
R-23B‡	125-0-125	22	28	—	—	6.3 15.5-12.6	.8 .6	1500	B	1	1 ⁷ / ₈	2 ⁵ / ₈	2 ³ / ₁₆	2 ³ / ₁₆	1 ³ / ₄	—	1.75
R-3A‡	250-0-250	20	25.5	—	—	6.3 CT	2	1500	A	1	2 ²⁵ / ₃₂	2 ¹¹ / ₃₂	2 ¹ / ₂	1 ³ / ₄	1 ³ / ₄	3/8x3/16	1.75
R-53Z	250-0-250	25	32	—	—	6.3	1.0	1500	Z	—	2 ⁵ / ₁₆	2 ⁷ / ₈	2	2 ³ / ₈	—	3/16	1.0
R-29A‡	115-0-115	40	51	—	—	6.3 CT	1.5	1500	A	1	2 ²⁵ / ₃₂	2 ¹¹ / ₃₂	2 ³ / ₈	1 ³ / ₄	1 ⁵ / ₈	3/8x3/16	1.75
R-30X‡	135	50	64	—	—	6.3	1.5	1500	X	Leads	2 ⁵ / ₁₆	3 ³ / ₄	2 ¹ / ₈	3 ¹ / ₈	—	3/16	1.5
R-54X‡	115	15	19	—	—	6.3	.6	1500	X	Leads	1 ⁵ / ₈	2 ¹ / ₁₆	1 ⁵ / ₈	2 ³ / ₈	—	3/16	1
R-56A‡	130	20	25	—	—	0-15-22.5-30	.6	1500	A	2	2 ²⁵ / ₃₂	2 ¹¹ / ₃₂	2 ³ / ₄	1 ³ / ₄	2	3/8x3/16	2
R-73B‡#	135	200	282	—	—	6.3 CT	5.5	1500	B	1	1 ⁷ / ₈	3 ³ / ₈	2 ¹³ / ₁₆	2 ¹³ / ₁₆	2 ¹ / ₄	—	2.75

COMBINED PLATE AND FILAMENT / primary 115 volt, 60 cycle

Type No.	Secondary			Rectifier Filament		Other Filaments		RMS Test Volts	Case Type	Lead Holes Used	Case Dimension			Mounting Dimension		Mtg. Hole Size	Max. Unit Wt. Lbs.
	AC Volts ± 5%	Cond. Input	DC Ma. Choke Input	Volts ± 5%	Amps	Volts ± 5%	Amps				H	W	D	MW	MD		
R-104A‡	250-0-250	40	51	—	—	6.3 CT	2	1500	A	1	2 ²⁵ / ₃₂	2 ¹¹ / ₃₂	2 ¹ / ₄	1 ³ / ₄	1 ¹ / ₂	3/8x3/16	1.55
R-104B‡	250-0-250	40	51	—	—	6.3 CT	2	1500	B	1	1 ¹ / ₂	2 ⁵ / ₈	2 ³ / ₁₆	2 ³ / ₁₆	1 ³ / ₄	—	1.55
R-105A‡	300-0-300	65	82	—	—	6.3 CT	2.7	1500	A	1	3 ³ / ₁₆	2 ²¹ / ₃₂	2 ¹ / ₂	2	1 ¹ / ₁₆	3/8x3/16	2
R-105B‡	300-0-300	65	82	—	—	6.3 CT	2.7	1500	B	1	1 ⁵ / ₈	3	2 ¹ / ₂	2 ¹ / ₂	2	—	2
R-106A‡	240-0-240	50	63.5	5	2	6.3 CT	2	1500	A	1	3 ³ / ₁₆	2 ²¹ / ₃₂	2 ³ / ₈	2	1 ¹ / ₁₆	3/8x3/16	2.1
R-106B‡	240-0-240	50	63.5	5	2	6.3 CT	2	1500	B	1	1 ¹ / ₂	3	2 ¹ / ₂	2 ¹ / ₂	2	—	2.1
▲ R-107A‡	300-0-300	50	63.5	5	2	6.3 CT	2	1500	A	1	3 ³ / ₁₆	2 ²¹ / ₃₂	2 ¹ / ₂	2	1 ¹ / ₁₆	3/8x3/16	2.35
▲ R-107B‡	300-0-300	50	63.5	5	2	6.3 CT	2	1500	B	1	1 ⁵ / ₈	3	2 ¹ / ₂	2 ¹ / ₂	2	—	2.35
R-108A‡	250-0-250	75	95	5	2	6.3 CT	2.5	1500	A	1	3 ³ / ₁₆	2 ²¹ / ₃₂	2 ⁵ / ₈	2	1 ¹¹ / ₁₆	3/8x3/16	2.4
R-108B‡	250-0-250	75	95	5	2	6.3 CT	2.5	1500	B	1	1 ³ / ₄	3	2 ¹ / ₂	2 ¹ / ₂	2	—	2.4
R-109A‡	300-0-300	75	95	5	2	6.3 CT	3	1500	A	1	3 ¹ / ₂	2 ³¹ / ₃₂	2 ⁷ / ₈	2 ¹ / ₄	1 ³ / ₄	3/8x3/16	2.9
R-109B‡	300-0-300	75	95	5	2	6.3 CT	3	1500	B	1	1 ⁵ / ₈	3 ³ / ₈	2 ¹³ / ₁₆	2 ¹³ / ₁₆	2 ¹ / ₄	—	2.9
R-110A‡	262.5-0-262.5	90	115	5	2	6.3 CT	5	1500	A	1	3 ¹ / ₂	2 ³¹ / ₃₂	3 ¹ / ₈	2 ¹ / ₄	2	3/8x3/16	3.25
R-110B‡	262.5-0-262.5	90	115	5	2	6.3 CT	5	1500	B	1	1 ⁷ / ₈	3 ³ / ₈	2 ¹³ / ₁₆	2 ¹³ / ₁₆	2 ¹ / ₄	—	3.25
R-111A‡	350-0-350	90	115	5	3	6.3 CT	3.5	1500	A	1	3 ¹ / ₂	2 ³¹ / ₃₂	3 ¹ / ₈	2 ¹ / ₄	2	3/8x3/16	3.25
R-111B‡	350-0-350	90	115	5	3	6.3 CT	3.5	1500	B	1	1 ⁷ / ₈	3 ³ / ₈	2 ¹³ / ₁₆	2 ¹³ / ₁₆	2 ¹ / ₄	—	3.25
R-112A‡	275-0-275	110	140	5	2	6.3 CT	5	1500	A	1	3 ¹ / ₂	2 ³¹ / ₃₂	3 ¹ / ₄	2 ¹ / ₄	2 ¹ / ₈	3/8x3/16	3.7
R-112B‡	275-0-275	110	140	5	2	6.3 CT	5	1500	B	1	2	3 ³ / ₈	2 ¹³ / ₁₆	2 ¹³ / ₁₆	2 ¹ / ₄	—	3.7
▲ R-113A‡	325-0-325	40	51	5	2	6.3 CT	2	1500	A	2	3 ³ / ₁₆	2 ²¹ / ₃₂	2 ⁵ / ₈	2	1 ¹¹ / ₁₆	3/8x3/16	2.3
R-113B‡	325-0-325	40	51	5	2	6.3 CT	2	1500	B	1	1 ³ / ₄	3	2 ¹ / ₂	2 ¹ / ₂	2	—	2.3
R-114A‡	350-0-350	125	160	5	3	6.3 CT	4.5	1500	A	1	3 ⁷ / ₈	3 ³ / ₃₂	3 ¹ / ₄	2 ¹ / ₂	2 ³ / ₈	3/8x3/16	4.7
R-114B‡	350-0-350	125	160	5	3	6.3 CT	4.5	1500	B	1	2 ³ / ₈	3 ³ / ₄	3 ¹ / ₂	3 ¹ / ₈	2 ¹ / ₂	—	4.7
R-115A‡	340-0-340	70	89	5	2	6.3 CT	2.5	1500	A	2	3 ³ / ₁₆	2 ²¹ / ₃₂	3	2	1 ¹⁵ / ₁₆	3/8x3/16	3.5
R-115B‡	340-0-340	70	89	5	2	6.3 CT	2.5	1500	B	1	2	3	2 ¹ / ₂	2 ¹ / ₂	2	—	3.5
R-116A‡	350-0-350	160	200	5	3	6.3 CT	5	1500	A	1	3 ⁷ / ₈	3 ³ / ₃₂	3 ³ / ₄	2 ¹ / ₂	2 ⁵ / ₈	3/8x3/16	5.65
R-116B‡	350-0-350	160	200	5	3	6.3 CT	5	1500	B	1	2 ⁵ / ₈	3 ³ / ₄	3 ¹ / ₈	3 ¹ / ₈	2 ¹ / ₂	—	5.65
R-118A‡	375-0-375	175	220	5	3	6.3 CT	8	1500	A	1	4 ¹ / ₄	3 ¹⁹ / ₃₂	4	2 ³ / ₄	2 ⁷ / ₈	3/8x3/16	7.45
R-118B‡	375-0-375	175	220	5	3	6.3 CT	8	1500	B	1	2 ³ / ₄	4 ¹ / ₈	3 ⁷ / ₁₆	3 ⁷ / ₁₆	2 ³ / ₄	—	7.45
R-120A‡	350-0-350	200	255	5	3	6.3 CT	8	1500	A	1	4 ¹ / ₄	3 ¹⁹ / ₃₂	4 ¹ / ₈	2 ³ / ₄	3	3/8x3/16	8.25
▲ R-120B‡	350-0-350	200	255	5	3	6.3 CT	8	1500	B	1	2 ⁷ / ₈	4 ¹ / ₈	3 ⁷ / ₁₆	3 ⁷ / ₁₆	2 ³ / ₄	—	8.25
R-121A‡	400-0-400	200	255	5	3	6.3 CT	6	1500	A	1	4 ¹ / ₄	3 ¹⁹ / ₃₂	4 ³ / ₈	2 ³ / ₄	3 ¹ / ₄	3/8x3/16	8.25

* Windings may be connected in series to obtain their combined voltage when properly phased. Current will be equal to the current of the lowest winding. Example: Two 6.3V. windings @ 2A. in series would be 12.6V. @ 2A. Windings may also be connected in parallel to obtain the combined current. Example: Two 6.3V. windings @ 2A. in parallel would be 6.3V. @ 4A.

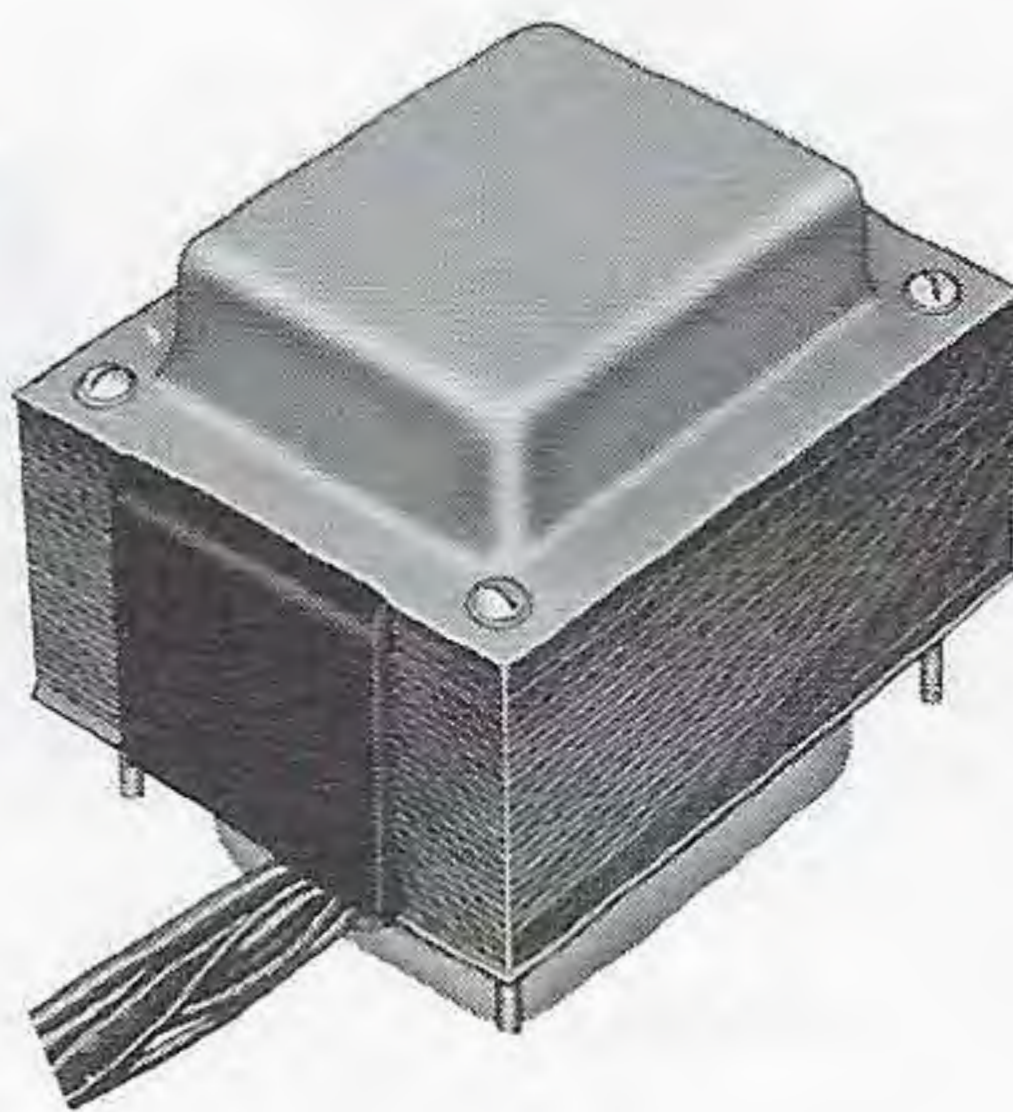
CT for Center Tap. ‡ Static shield. # 60 cycle operation. ▲ Discontinued item, available until stock depleted.



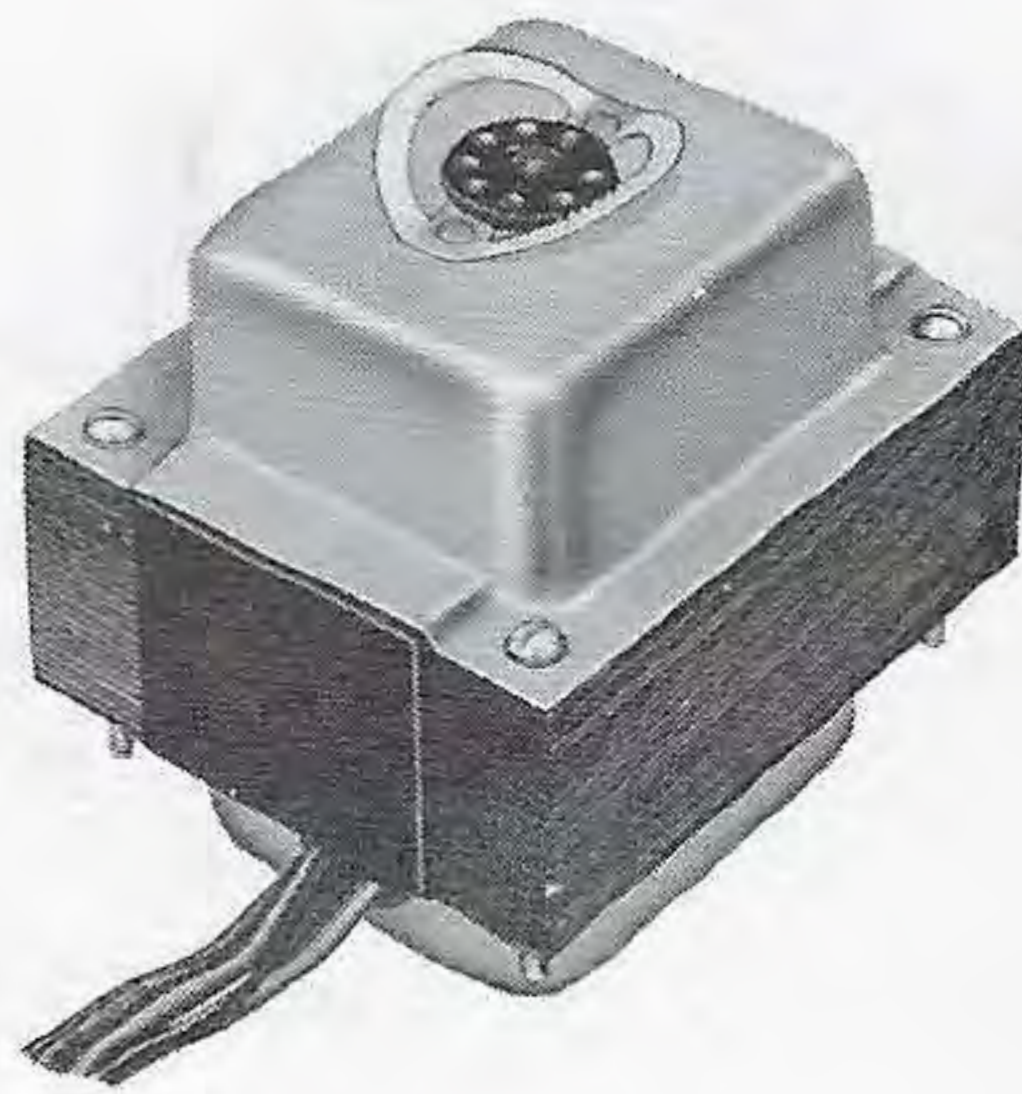
AL Case



A Case



BC Case



BS Case

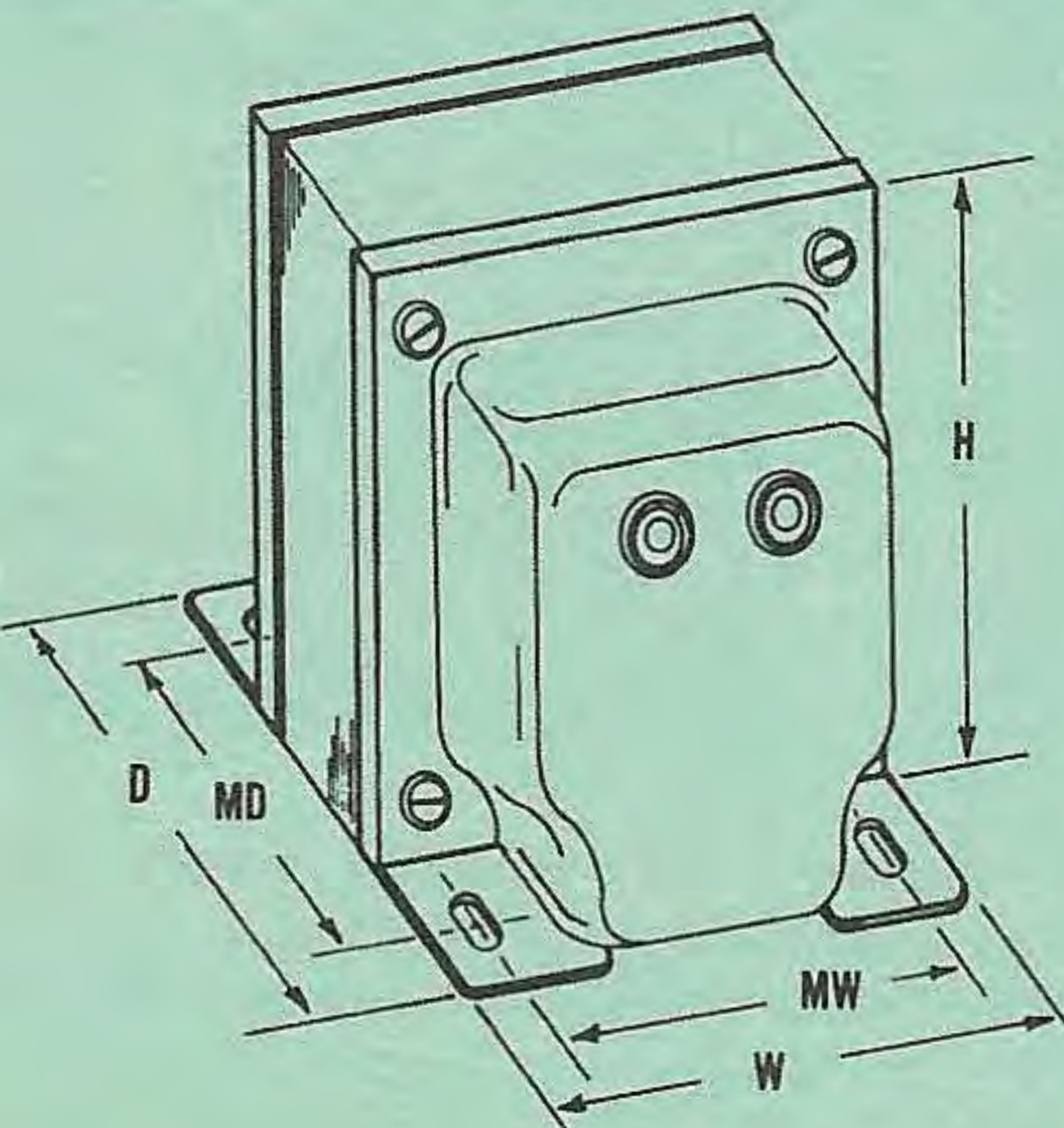
REGULATED POWER SUPPLY / primary 115 volt, 50-60 cycle

Type No.	Secondary†† AC Volts ± 5%	DC Ma.		Rectifier Filament		Other Filaments		RMS Test Voltage	Case Type	Connections or Lead Holes Used	Case Dimension			Mounting Dimension		Max. Unit Wt. Lbs.
		Cond. Input	Choke Input	Volts ± 5%	Amps	Volts ± 5%	Amps				H	W	D	MW	MD	
R-70A‡	440-0-440	59	75	6.3 6.3	.6 .3	6.3 6.3	.9 3	2000	A	1	3 ¹ / ₁₆	3 ³ / ₃₂	3 ³ / ₈	2 ¹ / ₂	2 ¹ / ₄	4.5
R-26A‡	440-360-0-360-440	157	200	5	3	6.3 CT 6.3 6.3	8 3 1	2000	A	1	4 ⁵ / ₈	3 ¹⁵ / ₁₆	4 ⁵ / ₈	3	3 ³ / ₁₆	12
R-59A	600-0-600	200	254	5.0	3	6.3 6.3	3 3	2200	A	2	4 ¹ / ₂	3 ¹³ / ₁₆	4 ¹ / ₂	3	3 ³ / ₁₆	10
R-28A‡	625-0-625	236	300	5	6	6.3 CT 6.3* 6.3*	8 3 3	2500	A	2	5 ⁵ / ₁₆	4 ¹ / ₂	5 ⁵ / ₈	3 ¹ / ₂	4 ⁵ / ₈	20
R-46A‡	625-0-625 130	278 50	350 -	5	4	6.3 6.3* 6.3*	4 1 1	2500	A	2	5 ⁵ / ₁₆	4 ¹ / ₂	5 ⁵ / ₈	3 ¹ / ₂	4 ⁵ / ₈	20
R-27A‡	750-0-750	315	400	5	6	6.3 6.3	8 3	3000	A	2	5 ⁵ / ₁₆	4 ¹ / ₂	7 ¹ / ₈	3 ¹ / ₂	6 ¹ / ₈	30

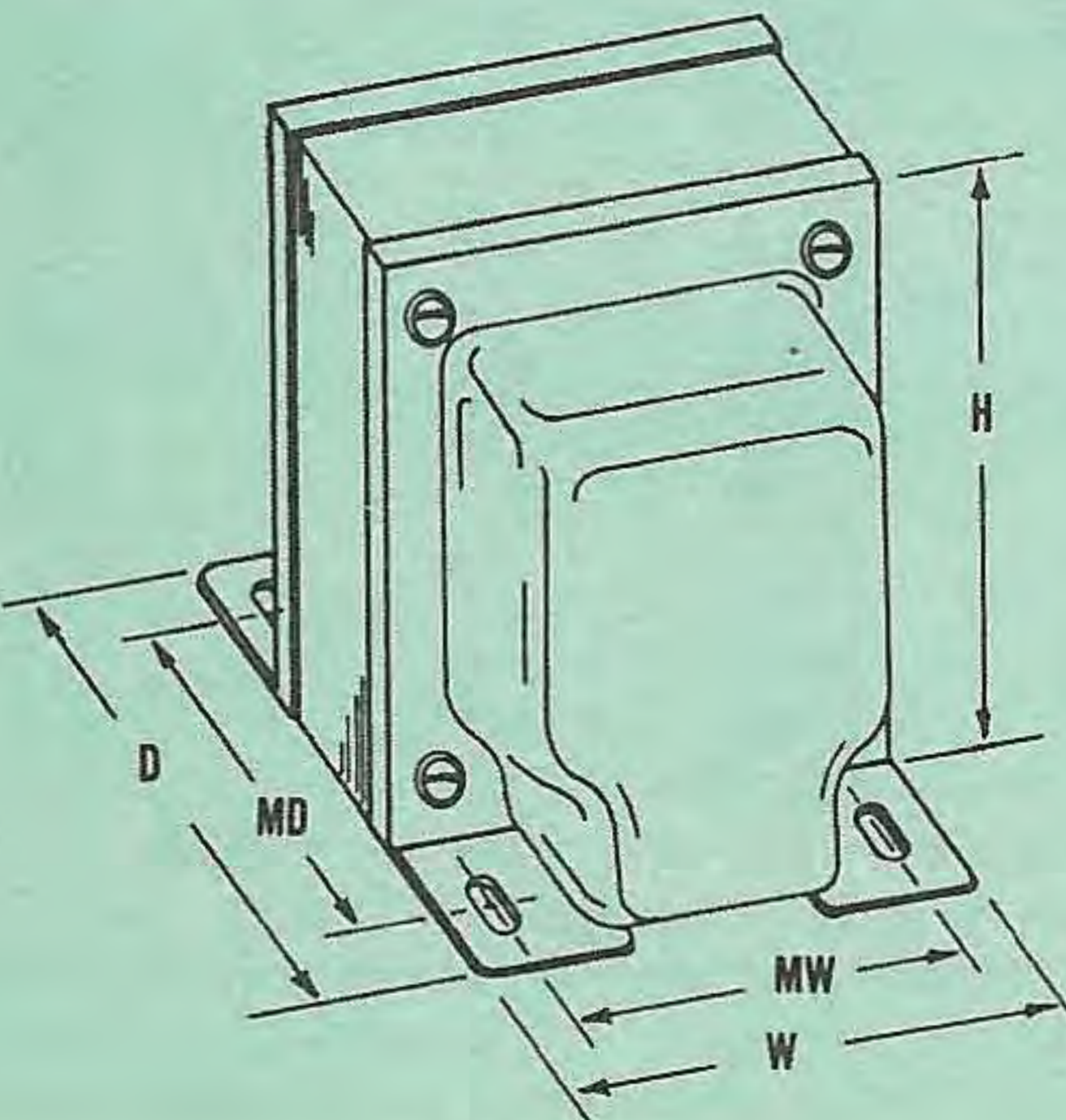
PLATE POWER / primary 115 volt, 50-60 cycle

Type No.	Primary AC Volts	Secondary		Rectifier	Filament	RMS Test Voltage	Case Type	Lead Holes Used	Case Dimension			Mounting Dimension		Max. Unit Wt. Lbs.	
		AC Volts†† ± 5%	DC MA — Choke Input ICAS						Volts ± 5%	Amps	H	W	D		MW
▲ P-1A‡	115	220-110-0-110-220	160	192	5	3	1500	A	1	3 ¹ / ₃₂	2 ³ / ₃₂	3 ¹ / ₄	2 ¹ / ₄	2 ¹ / ₈	4
P-3A‡	115	300-150-0-150-300	300	360	5	4	1500	A	1	3 ⁷ / ₈	3 ³ / ₃₂	3 ⁷ / ₈	2 ¹ / ₂	2 ³ / ₄	6.25
P-5A‡ #	115	550-0-550	250	300	5	4	2500	A	1	4 ⁵ / ₈	3 ¹ / ₁₆	3 ⁷ / ₈	3	2 ⁷ / ₈	8
P-7A‡ #	115	617.5-0-617.5	250	300	5	4	2500	A	1	4 ⁵ / ₈	3 ¹ / ₁₆	4 ¹ / ₈	3	3 ¹ / ₈	9
P-30A‡	117	600 CT	500**		6.3*	4.0	3000	A	1	6 ¹ / ₂	5 ¹ / ₂	5 ³ / ₄	4 ¹ / ₄	3 ³ / ₄	25
		105	80	Bias Wdg.	6.3*	4.0									
P-9A‡	115	617.5-0-617.5	500	600	5	6	2500	A	1	5 ⁵ / ₁₆	4 ¹ / ₂	5 ⁵ / ₈	3 ¹ / ₂	4 ⁵ / ₈	18
P-11A‡ #	115	727.5-0-727.5	250	300	—	—	2500	A	1	4 ⁵ / ₈	3 ¹ / ₁₆	3 ⁷ / ₈	3	2 ⁷ / ₈	8.5
P-213AL‡	115-230	890-0-890	250	300	—	—	3000	AL	1 + 2□	5 ⁵ / ₁₆	4 ¹ / ₂	3 ⁷ / ₈	3 ¹ / ₂	2 ⁷ / ₈	9.5
P-14A‡†	115	890-712.5-0-712.5-890	250	300	—	—	3000	A	2	5 ⁵ / ₁₆	4 ¹ / ₂	4 ⁵ / ₈	3 ¹ / ₂	3 ⁵ / ₈	13.5
P-15AL‡	115	1170-0-1170	250	300	—	—	3500	AL	1 + 2□	5 ⁵ / ₁₆	4 ¹ / ₂	5 ¹ / ₈	3 ¹ / ₂	4 ¹ / ₈	16.5
P-215AL‡	115-230	1170-0-1170	250	300	—	—	3500	AL	1 + 2□	5 ⁵ / ₁₆	4 ¹ / ₂	4 ³ / ₈	3 ¹ / ₂	3 ³ / ₈	13.5
P-16AL‡	115	1215-0-1215	500	600	—	—	4000	AL	1 + 2□	6 ¹ / ₂	5 ¹ / ₂	6 ¹ / ₄	4 ¹ / ₄	4 ¹ / ₄	30
P-216AL‡	115-230	1215-0-1215	500	600	—	—	3500	AL	1 + 2□	6 ¹ / ₂	5 ¹ / ₂	5 ³ / ₄	4 ¹ / ₄	3 ³ / ₄	25
▲ P-17AL	115	1440-0-1440	250	300	—	—	4000	AL	1 + 2□	5 ⁵ / ₁₆	4 ¹ / ₂	5 ⁵ / ₈	3 ¹ / ₂	4 ⁵ / ₈	19.75
P-217AL‡	115-230	1440-0-1440	250	300	—	—	4000	AL	1 + 2□	5 ⁵ / ₁₆	4 ¹ / ₂	4 ⁵ / ₈	3 ¹ / ₂	3 ⁵ / ₈	14.75
P-18AL‡	115	1440-0-1440	500	600	—	—	4000	AL	1 + 2□	6 ¹ / ₂	5 ¹ / ₂	6 ³ / ₄	4 ¹ / ₄	4 ³ / ₄	32
P-218AL‡	115-230	1440-0-1440	500	600	—	—	4000	AL	1 + 2□	6 ¹ / ₂	5 ¹ / ₂	6 ¹ / ₄	4 ¹ / ₄	4 ¹ / ₄	27.5
▲ P-20AL‡	115	1650-0-1650	350	420	—	—	4500	AL	1 + 2□	6 ¹ / ₂	5 ¹ / ₂	6 ³ / ₄	4 ¹ / ₄	4 ³ / ₄	33.3
P-220AL‡	115-230	1650-0-1650	350	420	—	—	4500	AL	1 + 2□	6 ¹ / ₂	5 ¹ / ₂	5 ³ / ₄	4 ¹ / ₄	3 ³ / ₄	24.5
PR-21AL‡ #	115-230	1650-0-1650	500	600	—	—	4500	AL	1 + 2□	6 ¹ / ₂	5 ¹ / ₂	6 ¹ / ₄	4 ¹ / ₄	4 ¹ / ₄	29

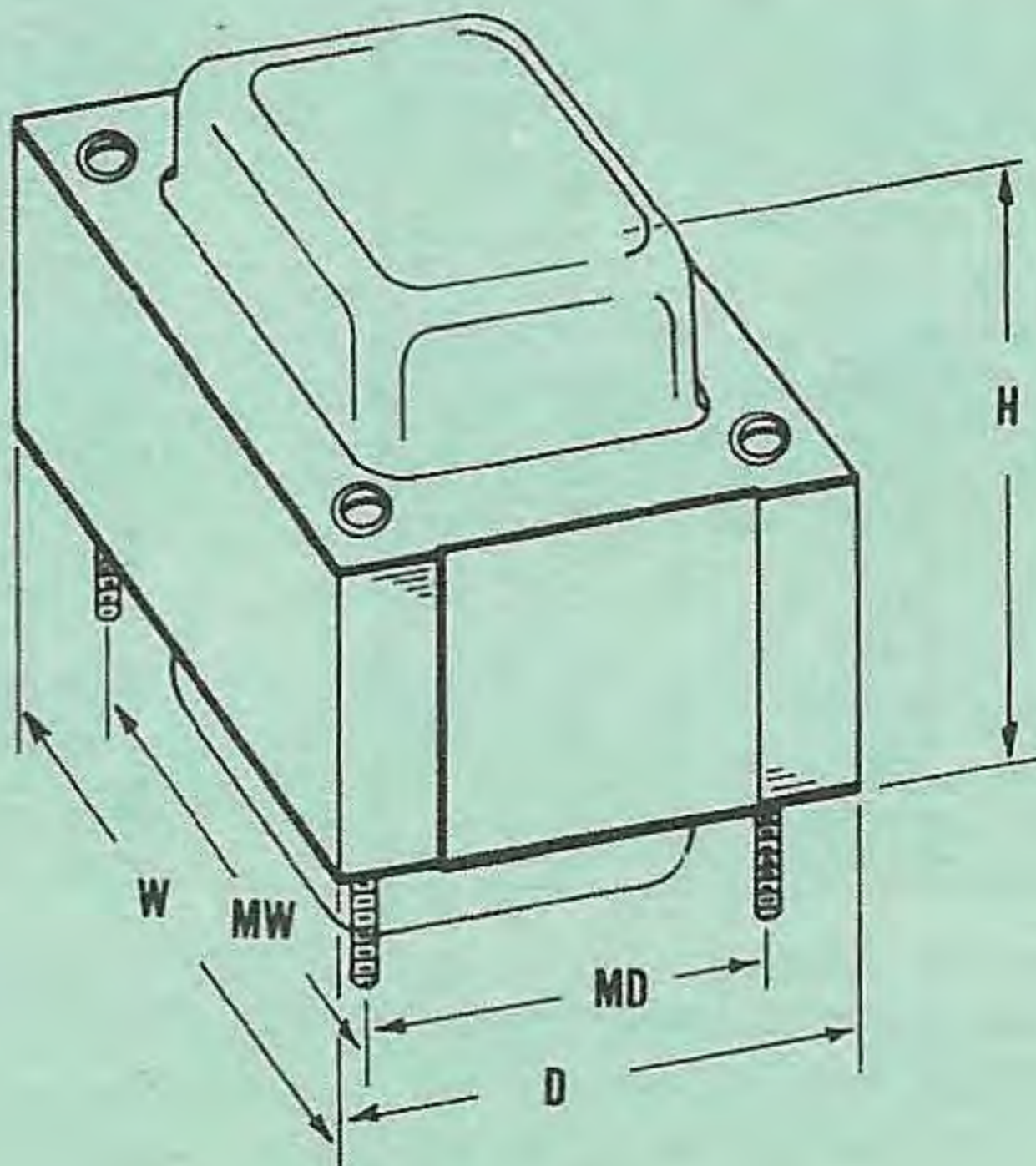
*Windings may be connected in series to obtain their combined voltage when properly phased. Current will be equal to the current of the lowest winding. Example: Two 6.3V. windings @ 2A. in series would be 12.6V. @ 2A. Windings may also be connected in series to obtain the combined current. Example: two 6.3V. windings @ 2A. in parallel would be 6.3V. @ 4A.
CT for Center Tap. □ Plate leads out side of case for rectifiers. ‡ Static shield. # 60 cycle operation. † Tapped primary to produce lower voltages.
†† Secondary CT must be grounded. ** Full wave bridge capacitor input. Secondary CT need not be grounded. ▲ Discontinued item, available until stock depleted.



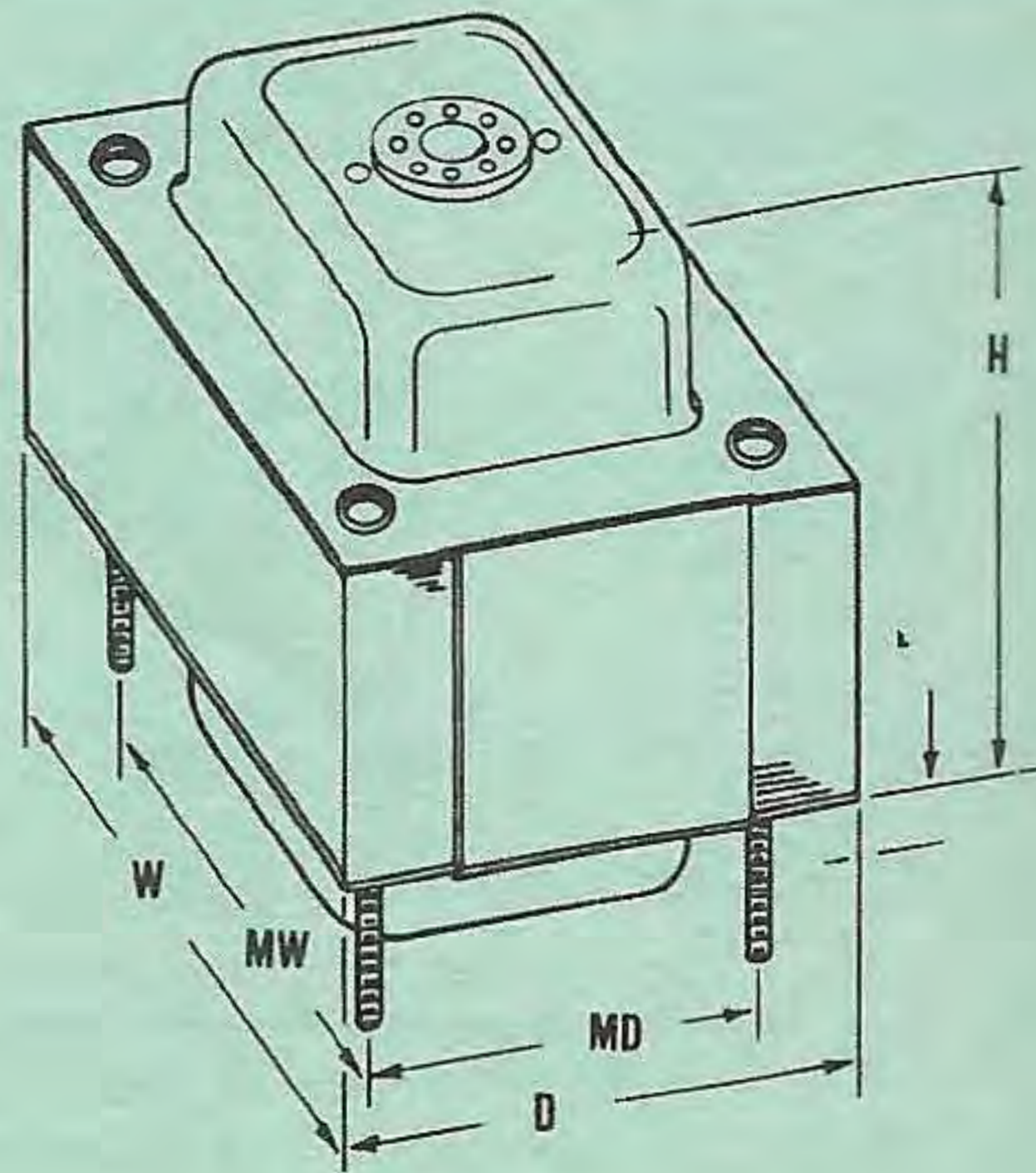
AL Case



A Case



BC Case



BS Case

POWER TRANSFORMERS



COMMERCIAL GRADE

Triad Special Power Transformers are Climatite treated, both coil and core, to furnish greatest protection against moisture and to eliminate lamination chatter. Maximum utility and minimum

temperature rise are inherent factors, built in through top-quality design and manufacturing procedures.

SPECIAL POWER / multiple filament industrial, primary 115 volt, 50-60 cycle

Type No.	Secondary AC Volts ± 5%	DC Ma.		Rectifier Filaments		Other Filaments		RMS Test Volts	Case Type	Lead Holes Used	Case Dimension			Mounting Dimension		Max. Unit Wt. Lbs.
		Cond. Input	Choke Input	Volts ± 5%	Amps	Volts ± 5%	Amps				H	W	D	MW	MD	
R-37BC‡	367.5-0-367.5	275	350	5	6	6.3 6.3/5	8.5 2(d)	1500 4000(d)	BC	1	3 ⁷ / ₈	4 ¹ / ₂	3 ³ / ₄	3 ³ / ₄	3	13
▲ R-38A‡	375-0-375	225	285	5	3	6.3 6.3 6.3	10 2.5 1.2(d)	1500 1500 4000(d)	A	1	4 ⁵ / ₈	3 ¹ / ₁₆	4 ³ / ₄	3	3 ⁵ / ₈	12
R-38BC‡	375-0-375	225	285	5	3	6.3 6.3 6.3	10 2.5 1.2(d)	1500 1500 4000(d)	BC	1	3 ⁷ / ₈	4 ¹ / ₂	3 ³ / ₄	3 ³ / ₄	3	12
R-39BC‡	320-0-320	225	285	5	3	6.3 6.3	10 1.2(d)	1500 4000(d)	BC	1	3 ⁷ / ₈	4 ¹ / ₂	3 ³ / ₄	3 ³ / ₄	3	12
R-40BC‡	390-0-390 or 220-0-220	300	380	5 5 5	3 3 2	6.3 6.3 6.3	8.5 3.5	2000	BC	1	3 ⁷ / ₈	4 ¹ / ₂	3 ³ / ₄	3 ³ / ₄	3	14
R-42BC‡	337.5-0-337.5	185	235	5	3	6.3 6.3	7 2(d)	1500 4000(d)	BC	1	2 ¹ / ₂	4 ¹ / ₂	3 ³ / ₄	3 ³ / ₄	3	8
R-49BC‡	325-0-325	240	305	5	3	6.3 6.3 6.3	9 .9 1.2(d)	1500 1500 4000(d)	BC	1	3 ⁵ / ₈	4 ¹ / ₂	3 ³ / ₄	3 ³ / ₄	3	15
R-50BC‡	395-0-395 or 325-0-325	310	395	5 5 5	3 2 3	6.3* 6.3* 6.3	5 5 2.6	2000	BC	1	4 ¹ / ₈	4 ¹ / ₂	3 ³ / ₄	3 ³ / ₄	3	15
R-50A‡	395-0-395 or 325-0-325	310	395	5 5 5	3 2 3	6.3* 6.3* 6.3	5 5 2.6	2000	A	1	4 ⁵ / ₈	3 ¹ / ₁₆	5 ¹ / ₂	3	4 ³ / ₈	15
R-49BS‡	325-0-325	240	305	5	3	6.3 6.3 6.3	9 .9 1.2(d)	1500 1500 4000(d)	BS	1	3 ⁵ / ₈	4 ¹ / ₂	3 ³ / ₄	3 ³ / ₄	3	13
▲ R-51BC‡	252.5-0-252.5	320	405	5	6	6.3* 6.3* 6.3	5 5 1.2(d)	1500 1500 4000(d)	BC	1	3 ¹ / ₈	4 ¹ / ₂	3 ³ / ₄	3 ³ / ₄	3	13
R-52BC‡	300-0-300	270	340	5	3	6.3* 6.3* 6.3	5 5 1.2(d)	1500 1500 4000(d)	BC	1	3 ¹ / ₈	4 ¹ / ₂	3 ³ / ₄	3 ³ / ₄	3	13
▲ R-60BC‡	230-0-230	300	380	5	6	6.3 6.3 6.3	10 2.5 1.2(d)	1500 1500 4000(d)	BC	1	3 ³ / ₈	4 ¹ / ₂	3 ³ / ₄	3 ³ / ₄	3	12
▲ R-61BC‡	280-0-280	300	380	5	6	6.3* 6.3* 6.3	6 6 1.2(d)	1500 1500 4000(d)	BC	1	3 ⁷ / ₈	4 ¹ / ₂	3 ³ / ₄	3 ³ / ₄	3	14
R-62BC‡	340-0-340	290	368	5	6	6.3 6.3 6.3	10 2.5 1.2(d)	1500 1500 4000(d)	BC	1	4 ⁵ / ₈	4 ¹ / ₂	3 ³ / ₄	3 ³ / ₄	3	16
R-63BC‡	131	980	1.25A.	-	-	6.3 6.3 6.3	9 .6 1.2(d)	1500 1500 4000(d)	BC	1	3 ¹ / ₈	4 ¹ / ₂	3 ³ / ₄	3 ³ / ₄	3	11
R-64BC‡	260-0-260	270	340	5	3	6.3	10	1500	BC	1	2 ⁵ / ₈	4 ¹ / ₂	3 ³ / ₄	3 ³ / ₄	3	8.75
▲ R-65BC‡ #	275-0-275	270	340	5	3	6.3	10	1500	BC	1	2 ³ / ₄	4 ¹ / ₂	3 ³ / ₄	3 ³ / ₄	3	9
▲ R-66BC‡ #	290-0-290	270	340	5	3	6.3	10	1500	BC	1	2 ⁷ / ₈	4 ¹ / ₂	3 ³ / ₄	3 ³ / ₄	3	9
R-67BC‡ #	300-0-300	250	318	5	3	6.3	9	1500	BC	1	3 ¹ / ₈	4 ¹ / ₈	3 ¹ / ₁₆	3 ⁷ / ₁₆	2 ³ / ₄	9
R-69BC‡ #	275-0-275	270	340	5	3	6.3	10	1500	BC	1	3 ¹ / ₈	4 ¹ / ₈	3 ¹ / ₁₆	3 ⁷ / ₁₆	2 ³ / ₄	9
R-74BC‡ #	340-0-340	190	240	5	3	6.3 6.3	7.8 1.2(d)	1500 7500(d)	BC	1	3 ³ / ₈	4 ¹ / ₂	3 ³ / ₄	4 ¹ / ₁₆ (Special Mounting)	3 ⁵ / ₁₆	11
R-76BC‡ #	325-0-325	350	445	5	6	6.3* 6.3* 6.3	8 5 2(d)	1500 1500 4000(d)	BC	1	3 ⁷ / ₈	4 ¹ / ₂	3 ³ / ₄	3 ³ / ₄	3	13
▲ R-77BC‡ #	275-0-275	350	445	5 CT	6	6.3 6.3 6.3	8 6 2(d)	1500 1500 4000(d)	BC	1	3 ³ / ₈	4 ¹ / ₂	3 ³ / ₄	3 ³ / ₄	3	12
R-77BS‡ #	275-0-275	350	445	5 CT	6	6.3 6.3 6.3	8 6 2(d)	1500 1500 4000(d)	BSS	1	3 ⁷ / ₈	4 ¹ / ₂	3 ³ / ₄	3 ³ / ₄	3	12
R-78BC‡ #	350-0-350	200	254	5	3	6.3 6.3 6.3	6 4 2(d)	1500 1500 5000(d)	BC	1	2 ⁵ / ₈	4 ¹ / ₂	3 ³ / ₄	3 ³ / ₄	3	9
R-81BC‡ #	295-0-295	350	445	5	6	6.3 6.3 6.3	8 5 2(d)	1500 1500 4000(d)	BC	1	3 ⁵ / ₈	4 ¹ / ₂	3 ³ / ₄	3 ³ / ₄	3	12
R-81BS‡ #	295-0-295	350	445	5	6	6.3 6.3 6.3	8 5 2(d)	1500 1500 4000(d)	BSS	1	3 ⁵ / ₈	4 ¹ / ₂	3 ³ / ₄	3 ³ / ₄	3	12
R-675A‡ #	330-0-330	270	340	5	6	6.3 6.3	9.35 1.2(d)	1500 4000(d)	A	1	4 ⁵ / ₈	3 ¹ / ₁₆	4 ³ / ₄	3	3 ⁵ / ₈	10

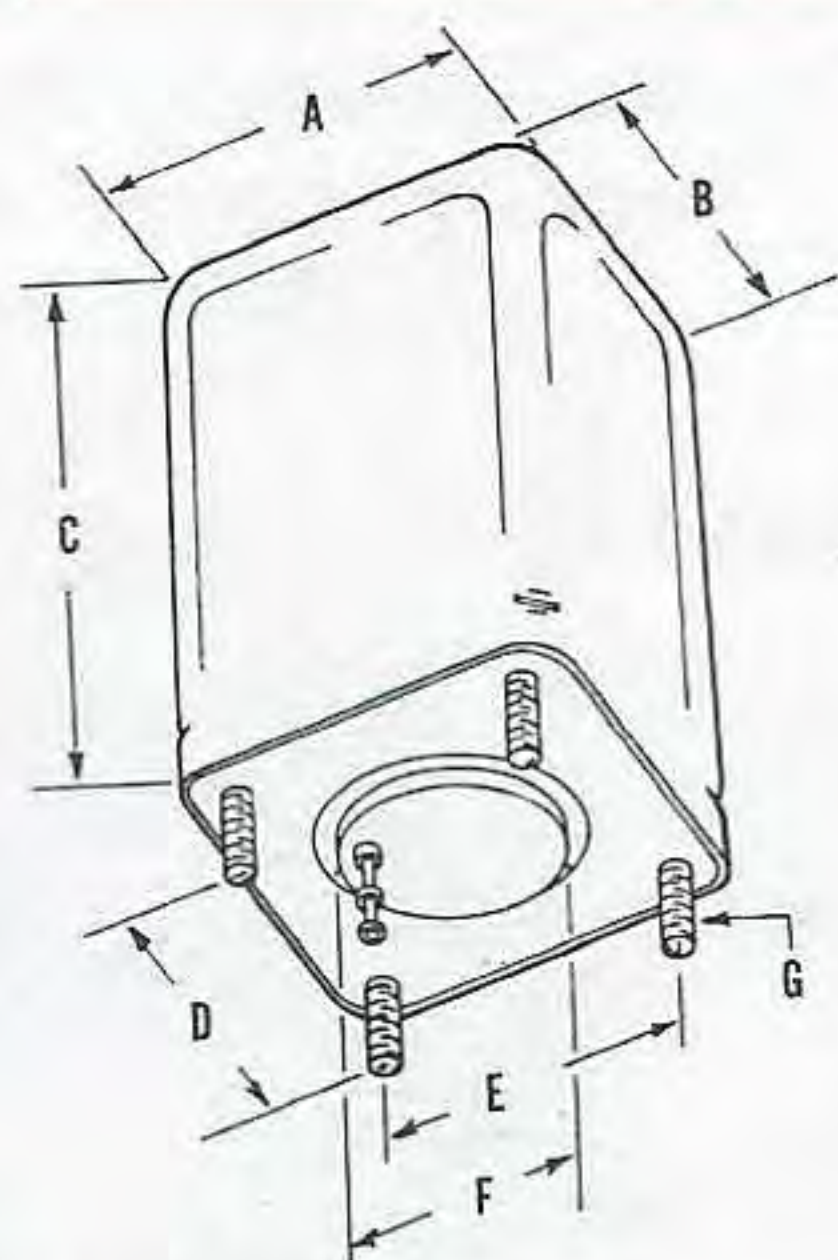
‡ Static shield. (d) Damper winding. CT for Center Tap. # 60 cycle operation. ▲ Discontinued item, available until stock depleted.

* Windings may be connected in series to obtain their combined voltage when properly phased. Current will be equal to the current of the lowest winding. Example: Two 6.3V. windings @ 2A. in series would be 12.6V. @ 2A. Windings may also be connected in parallel to obtain the combined current. Example: Two 6.3V. windings @ 2A. in parallel would be 6.3V. @ 4A.



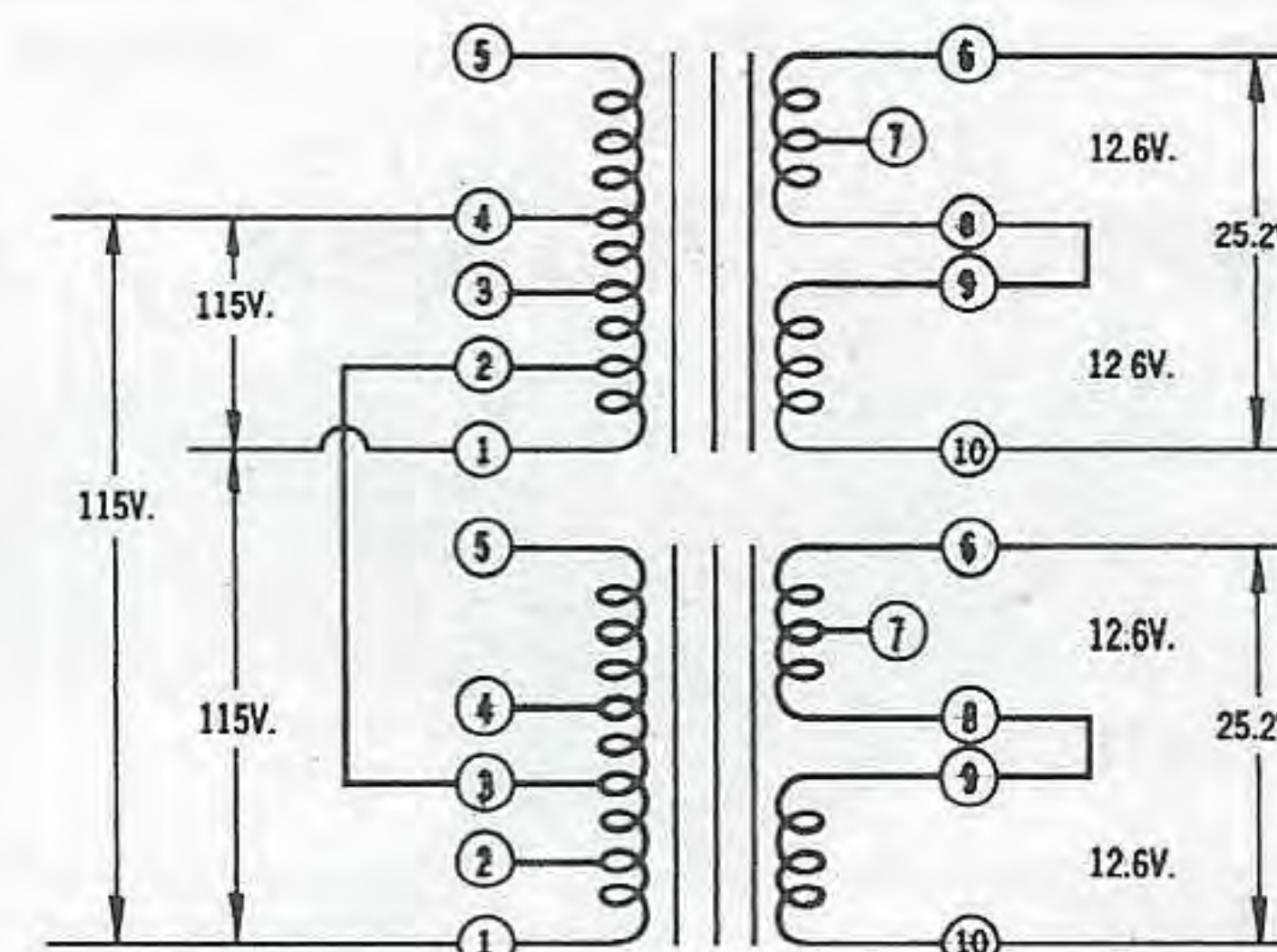
HS
HSM

HS & HSM Case
See case chart, page 19



Primary 115V. 400 C.P.S. 3 Phase
to
2 Phase 25.2V. or 2 Phase 12.6V.
Secondaries on each Transformer
can be used in Series,
Parallel or Separately

Schematic for Scott Connection using two HS-442'S



COMBINED PLATE AND FILAMENT / primary 115 volt / 50-60 cycle

Type No.	Mil Type Number	Secondary Plate Supply		Filaments		RMS Test Voltage	F. Dim Inches	Mil Case Type	Max. Unit Wt. Lbs.
		A.C. Volts	D.C. Ma. Cond. In	D.C. Ma. Choke In	Volts	Amps			
HSM-200#	TF4RX03FA	120‡	100	127	6.3 CT	1.6	1500	FA	2
▲ HSM-201	TF4RX03GA	250-0-250‡	20	25.4	6.3 CT	2	1500	GA	3.2
▲ HSM-202	TF4RX03EA	120‡	20	25.4	6.3 CT	.6	1500	EA	1.125
HSM-203	TF4RX03JB	300-0-300‡	50	63.5	6.3 CT	2.5	1500	JB	4.85
					5	2			
HSM-205	TF4RX03JA	350-0-350‡	70	89	6.3 CT	3	1500	JA	6.1
					5	3	2000		
HSM-207	TF1RX03KA	350-0-350‡	120	153	6.3 CT	5	1500	KA	8.75
					5	3			
HSM-208	TF1RX03KA	313-0-313‡	200	254	6.3/5.0	3	1500	KA	9.2
					6.3 CT	5			
HSM-241	TF1RX03LA	350-70-0-350‡	150	190	6.3 CT	6	1500	LA	10.75
					6.3	2			
					5	3			
HSM-212	TF1RX03LA	500-400-0-400-500‡	117	150	6.3 CT*	4	2000	LA	11
					6.3*	4	1500		
					6.3/5*†	4			
HSM-245	TF1RX03MA	400-350-0-70-350-400‡	200	254	6.3 CT	6	1500	MA	15
					6.3	4			
					5	6			
HSM-216	TF1RX03MA	500-400-0-400-500‡	157	200	6.3 CT*	5	2000	MA	14.5
					6.3*	5			
					6.3/5*†	4			
HS-247	TF1RX03YY	400-350-0-70-350-400‡	300	380	6.3 CT	8	1500	GP-15°	21.75
					6.3	4			
					5	6			
HSM-218	TF1RX03YY	500-400-0-400-500‡	235	300	6.3 CT*	6	2000	GP-15°	24.5
					6.3*	6			
					6.3/5*†	6			
HSM-219	TF1RX02YY	800-380-0-380-800‡	(800)31.5	40			2800	GP-15°	22.5
115/230V. Pri			(1600)180	230					

FILAMENT / 50-60 cycle

Type No.	Mil Type No.	Primary Volts	Filaments		RMS Test Voltage	F. Dim Inches	Mil Case Type	Max. Unit Wt. Lbs.
			Volts	Amps				
HSM-223	TF4RX01YY	115	6.3	.6	1500	7/8	AJ-2 ■ ■	.75
HSM-225#	TF4RX01EA	0-105-115-125	6.3 CT	2	1500	7/8	EA	1.25
HSM-226#	TF4RX01FA	0-105-115-125	6.3 CT	3.6	1500	7/8	FA	2
HSM-224	TF4RX01HB	0-105-115-125	6.3 CT	5.5	2500	7/8	HB	4.5
HSM-234	TF4RX01KA	0-105-115-125	6.3 CT*	10	Pri. 1500	1 3/8	KA	9.15
			6.3*	10	Sec. 2500			
HSM-227	TF4RX01GA	0-105-115-125	6.3 CT*	3	Pri. 1500	1 3/8	GA	3.25
			6.3*	3	Sec. 2500			
HSM-229	TF4RX01JB	0-105-115-125	6.3 CT	8	2500	1 1/16	JB	5
HSM-233	TF4RX01EA	0-105-115-125	12.6 CT	.8	1500	7/8	EA	1.25
▲ HSM-237	TF4RX01FA	0-105-115-125	12.6 CT	2	2500	7/8	FA	2
HSM-230	TF4RX01FA	0-105-115-125	24 CT	.8	1500	7/8	FA	2
HSM-239	TF4RX01GA	0-105-115-125	24 CT	1.5	2500	7/8	GA	3.25
HSM-240	TF4RX01GA	0-115-230	12.6 CT*	1.5	2500	1 3/8	GA	3.25
			12.6*	1.5				
HSM-236	TF4RX01JB	0-105-115-125	12.6 CT*	2	2500	1 3/8	JB	6.5
			12.6*	2				
HSM-228	TF4RX01JA	0-105-115-125	6.3 CT*	6	Pri. 1500	1 3/8	JA	6.3
			6.3*	6	Sec. 2500			
HSM-231	TF4RX01JB	0-105-115-125	6.3 CT	5	2500	1 3/8	JB	4.9
			5 CT	3				
HSM-232	TF4RX01HA	0-105-115-125	2.5 CT	10	Pri. 1500	Special Hi-Voltage	HA	4
					Sec. 7500			
HSM-235#	TF1RX01MA	0-105-115-125	10 CT	10	2500	Special	MA	13
			2.5 CT	10	7500			
HSM-238#	TF4RX01JA	0-105-115-125	26 CT*	2	2500	1 3/8	JA	7
			26*	2				

▲ Discontinued item, available until stock depleted.

* Windings may be connected in series to obtain their combined voltage when properly phased. Current will be equal to the current of the lowest winding. Example: Two 6.3V. windings @ 2A. in series would be 12.6V. @ 2A. Windings may also be connected in parallel to obtain the combined current. Example: Two 6.3V. windings @ 2A. in parallel would be 6.3V. @ 4A. ■ ■ See case chart, page 48. CT for Center Tap. † Tapped for 5-Volt rectifier use. ‡ Static shield. # 60 cycle operation. ° GP-15 dimensions 4 3/4" x 5 7/8" x 6 5/8" high. Mounting centers 3 3/4" x 4 7/8".

POWER TRANSFORMERS

Designed and Constructed to meet MIL-T-27B

380-1500
CYCLE



COMMERCIAL
GRADE

	AH	AJ	EA	EB	FA	FB	GA
A	1 $\frac{1}{8}$	1 $\frac{1}{8}$	1 $\frac{1}{4}$	1 $\frac{1}{4}$	2 $\frac{1}{8}$	2 $\frac{1}{8}$	2 $\frac{3}{8}$
B	1 $\frac{1}{8}$	1 $\frac{1}{8}$	1 $\frac{1}{4}$	1 $\frac{1}{4}$	2 $\frac{1}{8}$	2 $\frac{1}{8}$	2 $\frac{3}{8}$
C	1 $\frac{3}{4}$	2 $\frac{3}{8}$	2 $\frac{3}{4}$	2 $\frac{1}{8}$	3 $\frac{1}{8}$	2 $\frac{1}{2}$	3 $\frac{1}{4}$
D	1 $\frac{1}{4}$	1 $\frac{1}{4}$	1 $\frac{3}{8}$	1 $\frac{3}{8}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	2 $\frac{1}{8}$
E	1 $\frac{1}{4}$	1 $\frac{1}{4}$	1 $\frac{1}{4}$	1 $\frac{1}{4}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{3}{4}$
G	3 $\frac{3}{8}$	3 $\frac{3}{8}$	3 $\frac{3}{8}$	3 $\frac{3}{8}$	3 $\frac{3}{8}$	3 $\frac{3}{8}$	3 $\frac{3}{8}$
I	6-32	6-32	6-32	6-32	6-32	6-32	6-32
Wt. (ave.) lbs.	4 oz.	9 oz.	1	15 oz.	1 $\frac{3}{4}$	1 $\frac{1}{2}$	2

	GB	HA	HB	JA	JB	KA	KB
A	2 $\frac{3}{8}$	2 $\frac{5}{8}$	2 $\frac{5}{8}$	3 $\frac{1}{8}$	3 $\frac{1}{8}$	3 $\frac{3}{8}$	3 $\frac{3}{8}$
B	2 $\frac{3}{4}$	3 $\frac{1}{8}$	3 $\frac{1}{8}$	3 $\frac{3}{8}$	3 $\frac{3}{8}$	3 $\frac{1}{2}$	3 $\frac{1}{2}$
C	2 $\frac{1}{2}$	4 $\frac{1}{4}$	3 $\frac{1}{8}$	4 $\frac{7}{8}$	3 $\frac{7}{8}$	5 $\frac{1}{4}$	4 $\frac{5}{8}$
D	2 $\frac{1}{8}$	2 $\frac{1}{4}$	2 $\frac{1}{4}$	2 $\frac{5}{8}$	2 $\frac{5}{8}$	3	3
E	1 $\frac{3}{4}$	1 $\frac{5}{8}$	1 $\frac{5}{8}$	2 $\frac{1}{8}$	2 $\frac{1}{8}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$
G	3 $\frac{3}{8}$	3 $\frac{3}{8}$	3 $\frac{3}{8}$	3 $\frac{3}{8}$	3 $\frac{3}{8}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$
I	6-32	8-32	8-32	8-32	8-32	10-32	10-32
Wt. (ave.) lbs.	1 $\frac{3}{4}$	2 $\frac{1}{2}$	2 $\frac{1}{4}$	4 $\frac{1}{2}$	4	7 $\frac{3}{4}$	7

	LA	LB	MA	MB	NA	NB	OA
A	3 $\frac{1}{8}$	3 $\frac{1}{8}$	4	4	4 $\frac{5}{8}$	4 $\frac{5}{8}$	5 $\frac{1}{2}$
B	4 $\frac{5}{8}$	4 $\frac{5}{8}$	4 $\frac{1}{2}$	4 $\frac{1}{2}$	5 $\frac{1}{8}$	5 $\frac{1}{8}$	4 $\frac{1}{2}$
C	5 $\frac{1}{8}$	4 $\frac{1}{2}$	6	4 $\frac{1}{2}$	6 $\frac{1}{8}$	5 $\frac{1}{2}$	6 $\frac{3}{4}$
D	3 $\frac{5}{8}$	3 $\frac{5}{8}$	3 $\frac{1}{2}$	3 $\frac{1}{2}$	4 $\frac{1}{8}$	4 $\frac{1}{8}$	3 $\frac{3}{4}$
E	2 $\frac{1}{2}$	2 $\frac{1}{2}$	3	3	3 $\frac{1}{2}$	3 $\frac{1}{2}$	3
G	1 $\frac{1}{2}$	1 $\frac{1}{2}$	5 $\frac{5}{8}$	5 $\frac{5}{8}$	5 $\frac{5}{8}$	5 $\frac{5}{8}$	5 $\frac{5}{8}$
I	10-32	10-32	1 $\frac{1}{4}$ -20	1 $\frac{1}{4}$ -20	1 $\frac{1}{4}$ -20	1 $\frac{1}{4}$ -20	1 $\frac{1}{4}$ -20
Wt. (ave.) lbs.	9 $\frac{1}{4}$	8 $\frac{1}{2}$	13 $\frac{1}{2}$	12 $\frac{1}{2}$	18	16	21

COMBINED PLATE AND FILAMENT / primary 115 volt / 380-1500 cycle

Type No.	Mil Type Number	Secondary Plate Supply			Filaments		RMS Test Voltage	F. Dim Inches	Mil Case Type	Max. Unit Wt. Lbs.
		A.C. Volts	D.C. Ma. Cond. In	D.C. Ma. Choke In	Volts	Amps				
HS-402	TF4RX03AJ	238-0-238†	20	25.5	6.3 CT	1.5	1500	2 $\frac{3}{32}$	AJ	.75
HS-401	TF4RX03EB	250-0-250†	40	51	6.3 CT* 6.3*	1 1	1500	7 $\frac{1}{8}$	EB	1.2
HS-400	TF4RX03AH	125†	25	31.7	6.3 CT	.8	1500	2 $\frac{3}{32}$	AH	.344
▲ HS-404	TF4RX03FA	225-0-225†	120	152	6.3 CT 6.3/5.0	3 3	1500	7 $\frac{1}{8}$	FA	2
HS-405	TF4RX03GA	300-0-300†	70	89	6.3 CT* 6.3* 6.3/5†	2 2 2	1500	1 $\frac{3}{8}$	GA	2.7
HS-407	TF4RX03JB	300-0-300†	120	152	6.3 CT* 6.3* 6.3/5†	3.5 3.5 3	1500	1 $\frac{3}{8}$	JB	4.65
HS-409	TF4RX03HA	350-0-350†	150	190	6.3 CT 6.3/5†	4 3	1500	1 $\frac{3}{8}$	HA	3.75
HS-413	TF4RX03JA	225-0-225†	200	254	6.3 CT* 6.3* 6.3/5†	6 6 4	1500	1 $\frac{3}{8}$	JA	5.5
HS-415	TF1RX03KB	400-300-0-300-400†	200	254	6.3 CT* 6.3* 6.3/5†	6 6 6	2500	1 $\frac{3}{8}$	KB	7.5
HS-417	TF1RX03LA	400-300-0-300-400†	300	380	6.3 CT* 6.3* 6.3/5†	6 6 6	1500 1500 2500	1 $\frac{3}{8}$	LA	10

ISOLATION / primary 115 volt / 380-1500 cycle

Type No.	Mil Type No.	Secondary			RMS Test Voltage	F. Dim Inches	Mil Case Type	Max. Unit Wt. Lbs.
		Volts	Current	VA				
HS-470†	TF4RX01EA	115	.35A.	40	1500	7 $\frac{1}{8}$	EA	1.5
HS-471†	TF4RX01FA	115	.7A.	80	1500	7 $\frac{1}{8}$	FA	2
HS-472†	TF4RX01GA	115	1.39A.	160	1500	7 $\frac{1}{8}$	GA	3.1
HS-474†	TF4RX01JA	115	2.6A.	300	1500	7 $\frac{1}{8}$	JA	6.25
HS-475†	TF1RX01KA	115	4.4A	500	1500	7 $\frac{1}{8}$	KA	8.75

FILAMENT / 380-1500 cycle

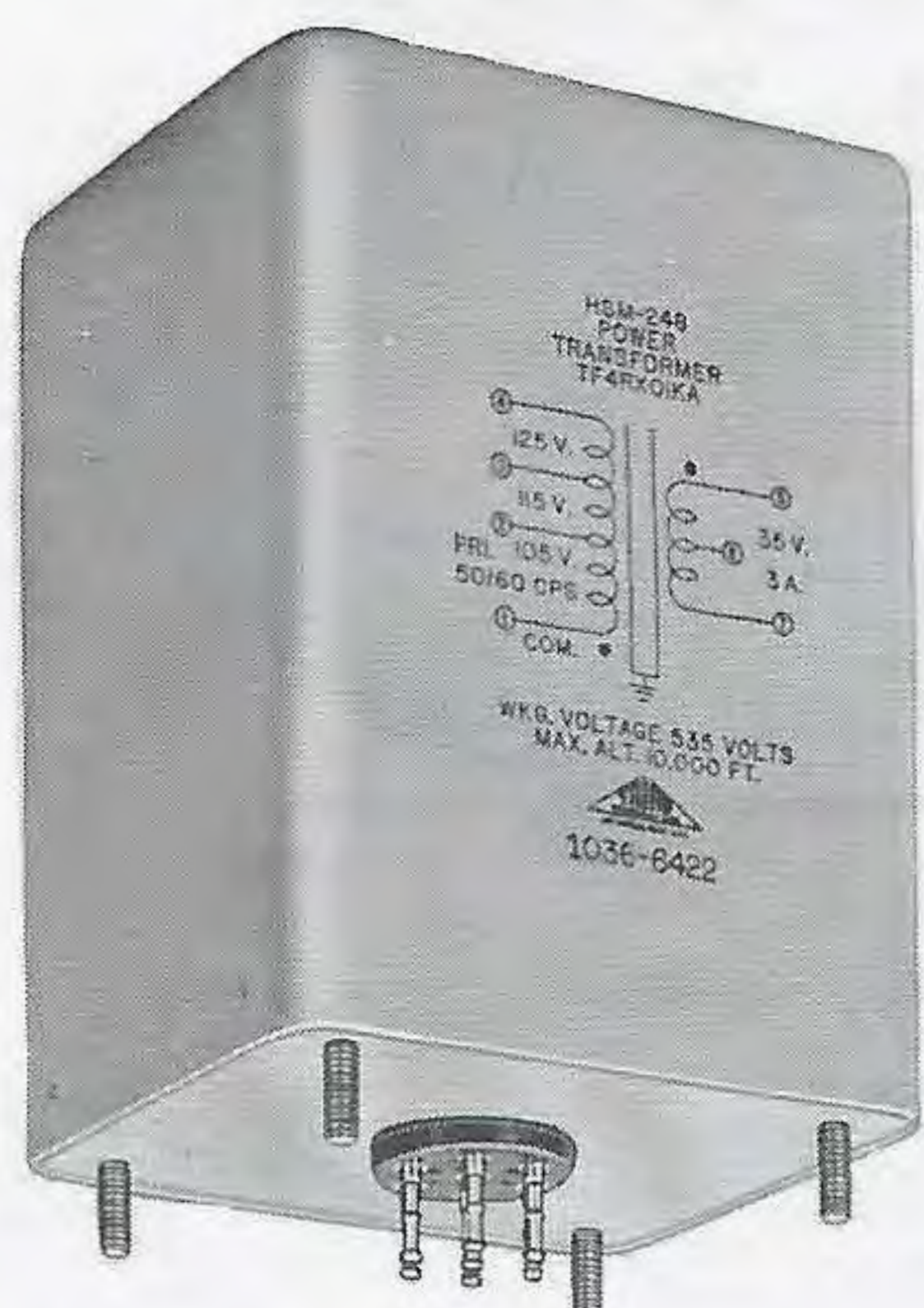
Type No.	Mil Type No.	Volts Primary	Filaments		RMS Test Voltage	F. Dim Inches	Mil Case Type	Max. Unit Wt. Lbs.
			Volts	Amps				
HS-436	TF4RX01AH	115	6.3 CT	1	1500	2 $\frac{3}{32}$	AH	.3
HS-425	TF4RX01YY	0-105-115-125	6.3 CT	2	1500	7 $\frac{1}{8}$	AJ-2 ■■	.65
HS-427	TF4RX01EA	0-105-115-125	6.3 CT	5	Pri. 500 Sec. 2500	7 $\frac{1}{8}$	EA	1.12
HS-445	TF4SX01EA	0-105-115-125	12.6 CT	3	2500	1	EA	1.2
HS-438	TF4RX01EA	0-105-115-125	24 CT	1.5	1500	7 $\frac{1}{8}$	EA	1.2
HS-433	TF4RX01FA	0-105-115-125	6.3 CT* 6.3*	5 5	Pri. 1500 Sec. 2500	1 $\frac{3}{8}$	FA	2
▲ HS-435	TF4RX01FA	0-105-115-125	6.3 CT* 6.3* 6.3/5†	3.5 3.5 3	2000	1 $\frac{3}{8}$	FA	1.85
HS-441	TF4RX01HA	0-105-115-125	5 CT* 5* 2.5 CT	10 10 10	2000 7500	Special	HA	4
HS-443	TF4RX01YY	0-105-115-125	12.6 CT* 12.6*	.8 .8	1500	7 $\frac{1}{8}$	AJ-2 ■■	.75
HS-442 For Scott connection	TF4RX01EA	0-57.5-99.7-115-120	12.6 CT* 12.6*	2 2	1500	7 $\frac{1}{8}$	EA	1.25
HS-444 For Scott connection	TF4SX01FA	0-57.5-99.7-115-120	26 CT* 26 CT*	2 2	2000	.9	FA	1.9

▲ Discontinued item, available until stock depleted.

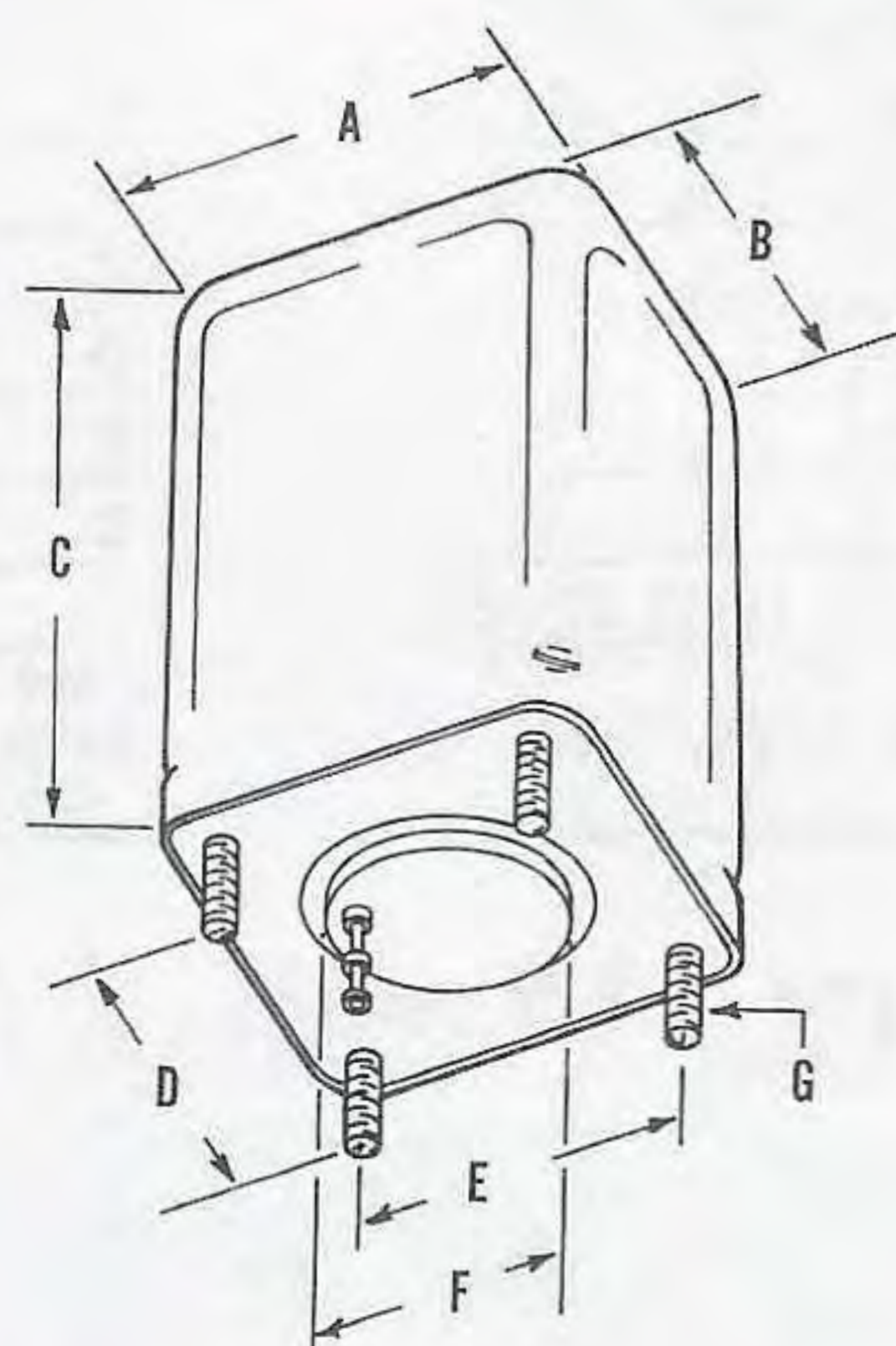
* Windings may be connected in series to obtain their combined voltage when properly phased. Current will be equal to the current of the lowest winding. Example: Two 6.3V. windings @ 2A. in series would be 12.6V. @ 2A. Windings may also be connected in parallel to obtain the combined current. Example: Two 6.3V. windings @ 2A. in parallel would be 6.3V. @ 4A. ■■ See case chart, page 48. † Tapped for 5-Volt rectifier use. CT for Center Tap. ‡ Static shield.



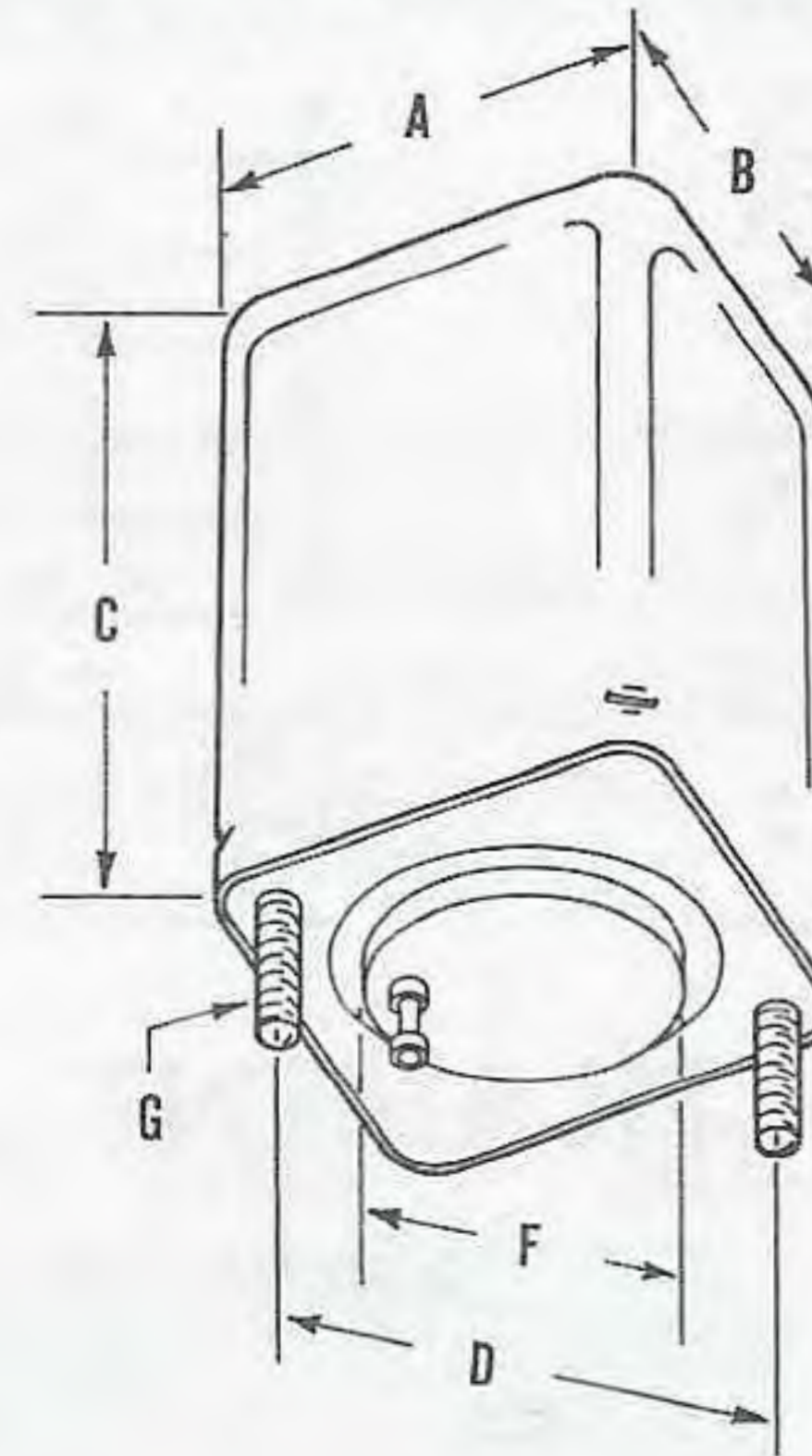
Designed and Constructed to meet MIL-T-27B



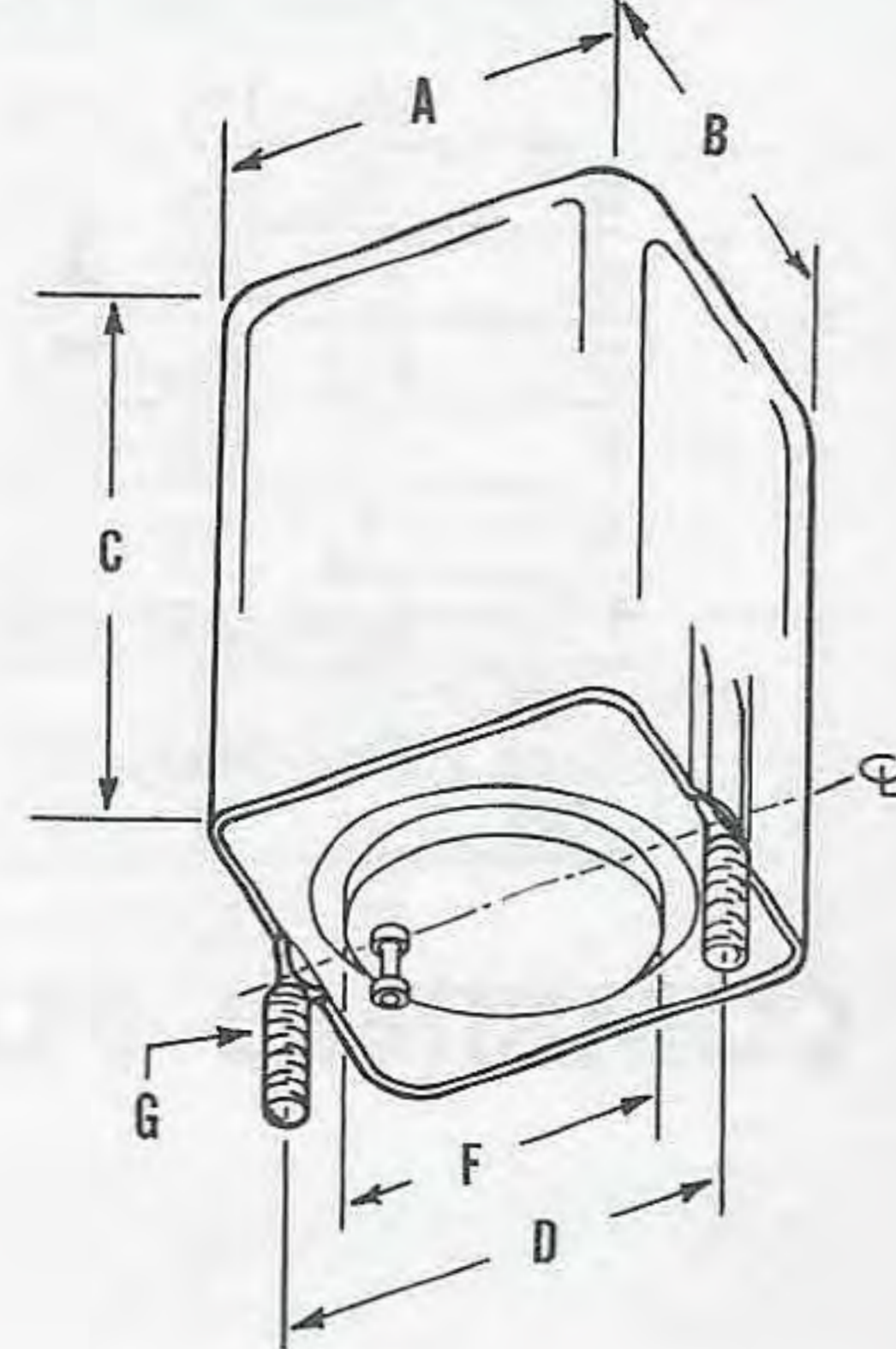
HC, HS
and HSM
Case
(See Chart
Page 19)



AJ-2 Case



AH-2 Case



ISOLATION / 50-60 cycle

Type No.	Mil Type No.	Primary Volts	Secondary Volts	Secondary Current	VA	RMS Test Voltage	F. Dim. Inches	Mil ¹ Case Type	Max. Unit Wt. Lbs.
▲HSM-270	TF4RX01JB	115/230	0-105-115-125	.4A.	50	1500	7/8	JB	4.7
HSM-271	TF4RX01KA	115/230	0-105-115-125	1A.	125	1500	7/8	KA	9.25
HSM-272	TF4RX01NB	115/230	0-105-115-125	2A.	250	1500	1 3/8	NB	17.25

BOX SHIELDED ISOLATION / 50-60 cycle / epoxy potted with leads

Super shielded isolation transformers with less than .03 mmfd capacity between primary and secondary.
Specifically engineered for circuitry where isolation from power line noise is critical.

Type No.	Secondary Volts	Secondary Current	Primary Volts	VA	RMS Test Volts	Chassis Cut-Out For Leads	Mil ¹ Case Type	Max. Unit Wt. Lbs.
HC-115	115	1A	115	115	1000	3/4	KA	20
HC-300	115	2.6A	115	300	1000	3/4	NB	3

LOW VOLTAGE / 50-60 cycles / for solid state applications

Type No.	Mil Type No.	Primary Volts	Secondary AC Volts*	Secondary RMS Amps.	RMS Test Volts	DC Volts CT FW	DC Volts FW Bridge	Mil ¹ Case Type	Max. Unit Wt. Lbs.
▲HSM-248	TF4RX01KA	105/115/125	35 CT	3	1500	14.5	29	KA	9
HSM-249	TF4SX02AH	115	8.25-40.5	.02-.065 DC	1500	6.6-24	6-53	AH	5 oz.
HSM-250	TF4SX02AJ	115	8.25-40.5	.07-.22 DC	1500	6.6-24	6-53	AJ	13 oz.
HSM-251	TF4SX02FA	115	8.25-40.5	.4-1.2 DC	1500	6.6-24	6-53	FA	2
HSM-252	TF4SX02HA	115	8.25-40.5	1.0-3.0 DC	1500	6.6-24	6-53	HA	4.5
▲HSM-253	TF4SX02KA	115	8.25-40.5	2.5-7.5 DC	1500	6.6-24	6-53	KA	9.25
HSM-254	TF4SX02OA	115	8.25-40.5	6.0-18.0 DC	1500	6.6-24	6-53	OA	23.25

*Primary taps can modify nominal AC voltages by -6%, +6% and +12% on types HSM-249 through HSM-254

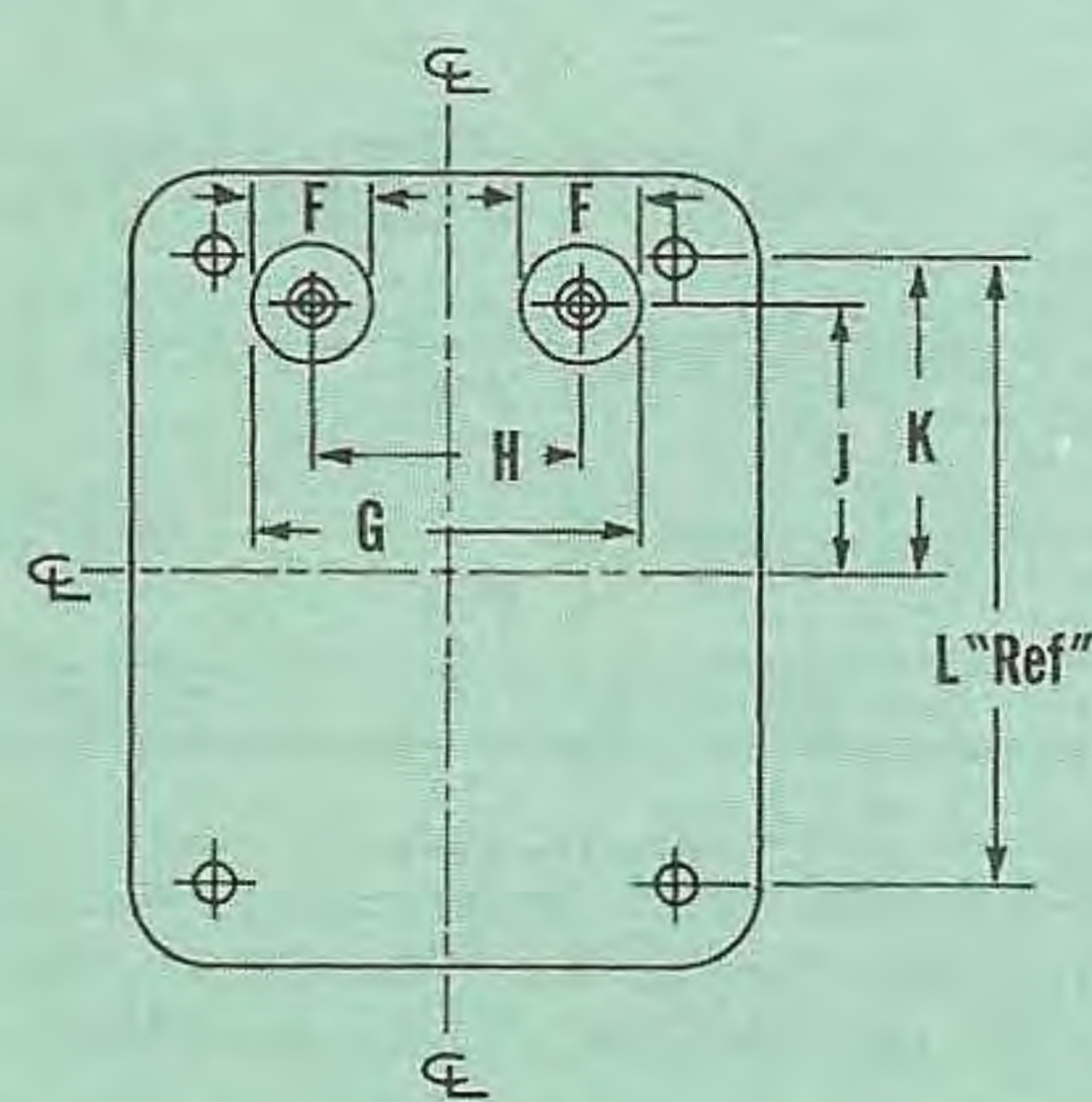
FILTER REACTORS / inductance tolerance +50%, -20%

Type No.	Mil Type Number	DC MA	Inductance Henries	DC Resistance	RMS Test Voltage	Terminal Dwg No.	Drawing Dimensions						Mil ¹ Case Type	Max. Unit Wt. Lbs.
HSM-301	TF4RX04EB	20	30	1000	1500	1	F	G Max	H	J	K	L ± 1/4	EB	1.2
HSM-302	TF4RX04AJ	20	14	560	1500	-	1/4	27/32	1/16	5/8	1 1/16	1 3/8	AJ	.75
HS-331	TF4RX04YY	40	4	375	1500	4	1/4	29/32	1/2	43/64	43/64	1 11/32 ± 1/32	AH-2 ■■	.35
HS-303	TF4RX04EB	50	12	385	1500	2	1/16	1 23/64	1 1/16	1 1/16	1 1/16	1 3/8	EB	1.25
HS-333	TF1RX04YY	70	3	225	1500	5	1/4	29/32	1/2	-	1 5/8	1 5/8	AJ-2 ■■	.75
HSM-305	TF4RX04GB	70	15	300	2500	3	1/16	2 13/32	1 3/4	7/8	1 1/16	2 1/8	GB	2.4
HS-335	TF4RX04EB	120	3	150	1500	1	1/4	27/32	1/16	3/8	1 1/16	1 3/8	EB	1.12
HSM-307	TF1RX04JB	120	15	185	2500	1	1/16	1 11/32	1 1/16	1 1/8	1 5/16	2 5/8	JB	5.25
HS-339	TF4RX04FB	200	3	105	2000	1	1/4	59/64	1/2	27/32	27/32	1 11/16	FB	1.75
HSM-315	TF4RX04JA	200	10	100	2500	1	1/16	1 11/32	1 1/16	1 1/8	1 5/16	2 5/8	JA	6.6
HS-341	TF4RX04GB	300	2	48	2000	1	1/4	29/32	1/2	1	1 1/16	2 1/8	GB	2.5
HSM-319	TF1RX04LA	300	10	85	2500	1	1/16	1 11/32	1 1/16	1 1/2	1 21/32	3 5/16	LA	12.2

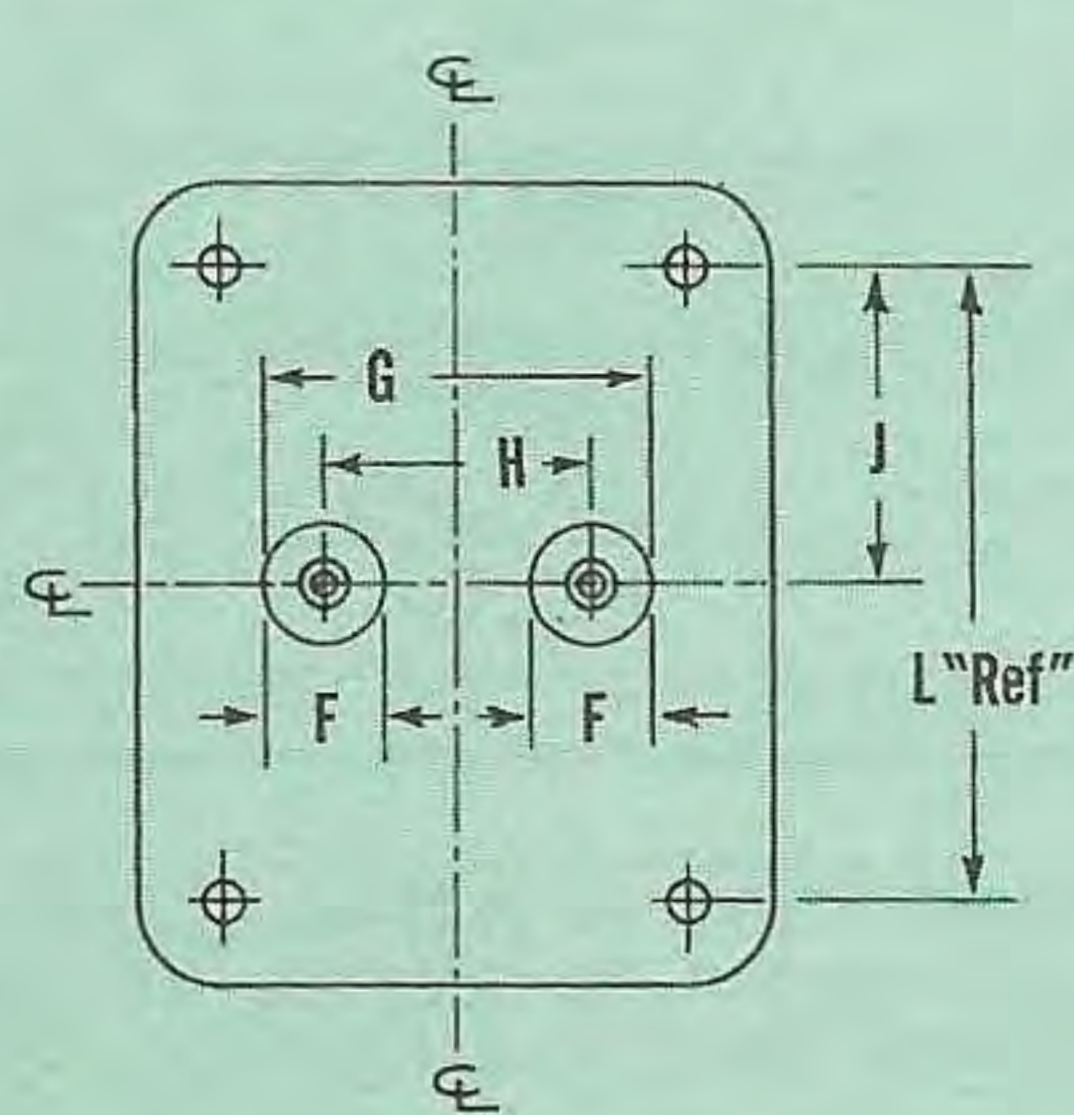
¹ See case charts, page 19.

■■ See case chart, page 48.

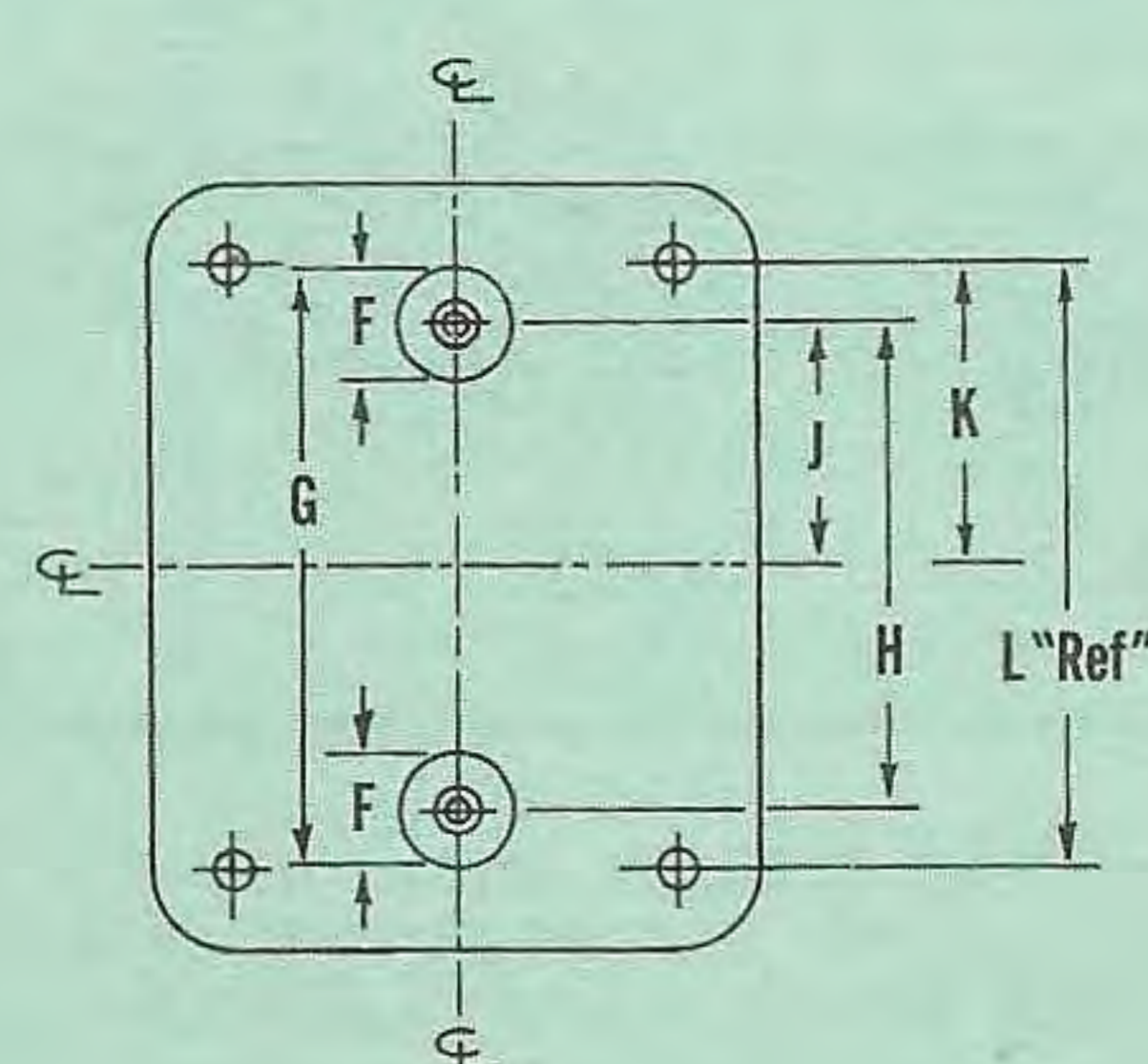
▲ Discontinued item, available until stock depleted.



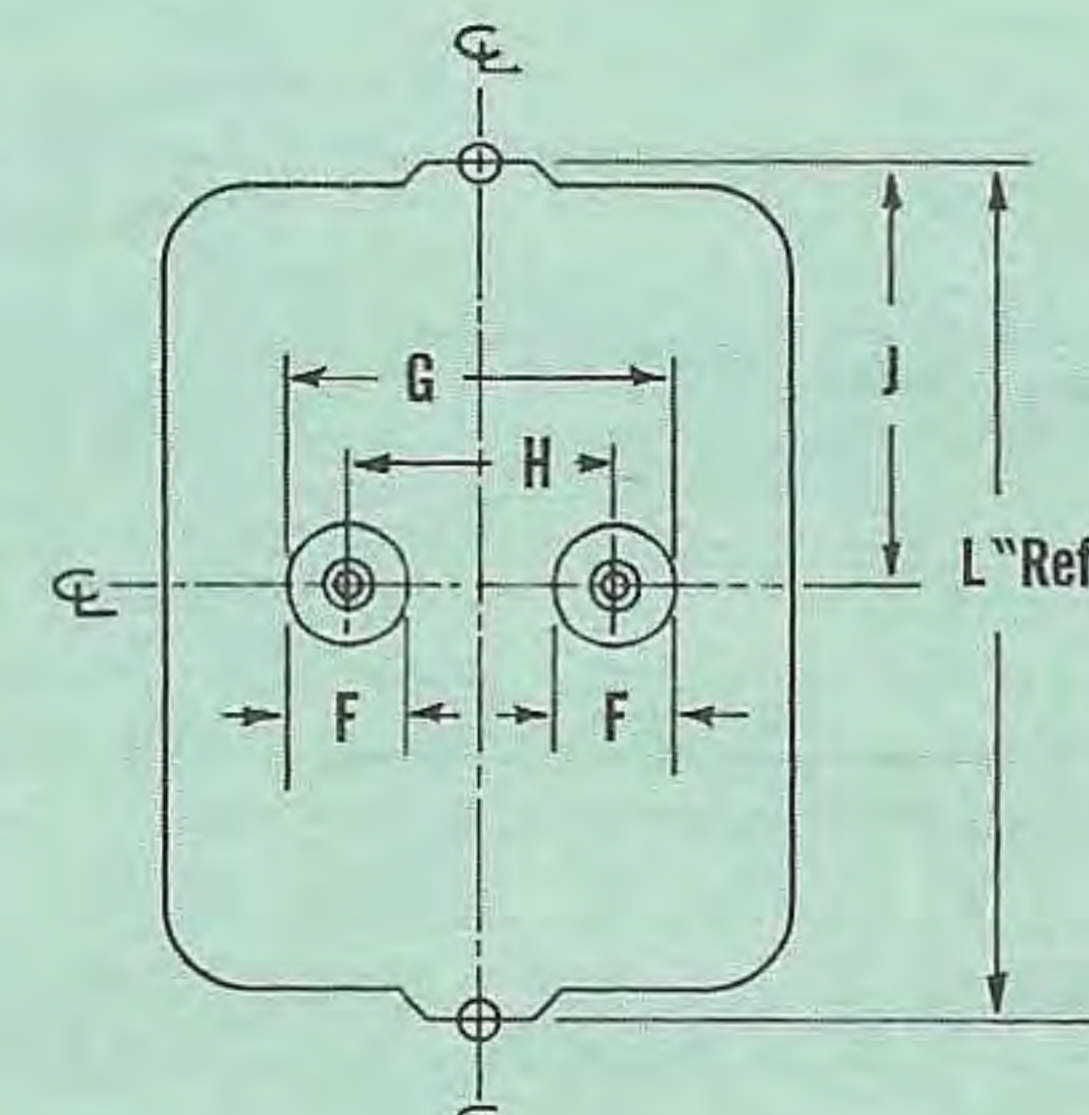
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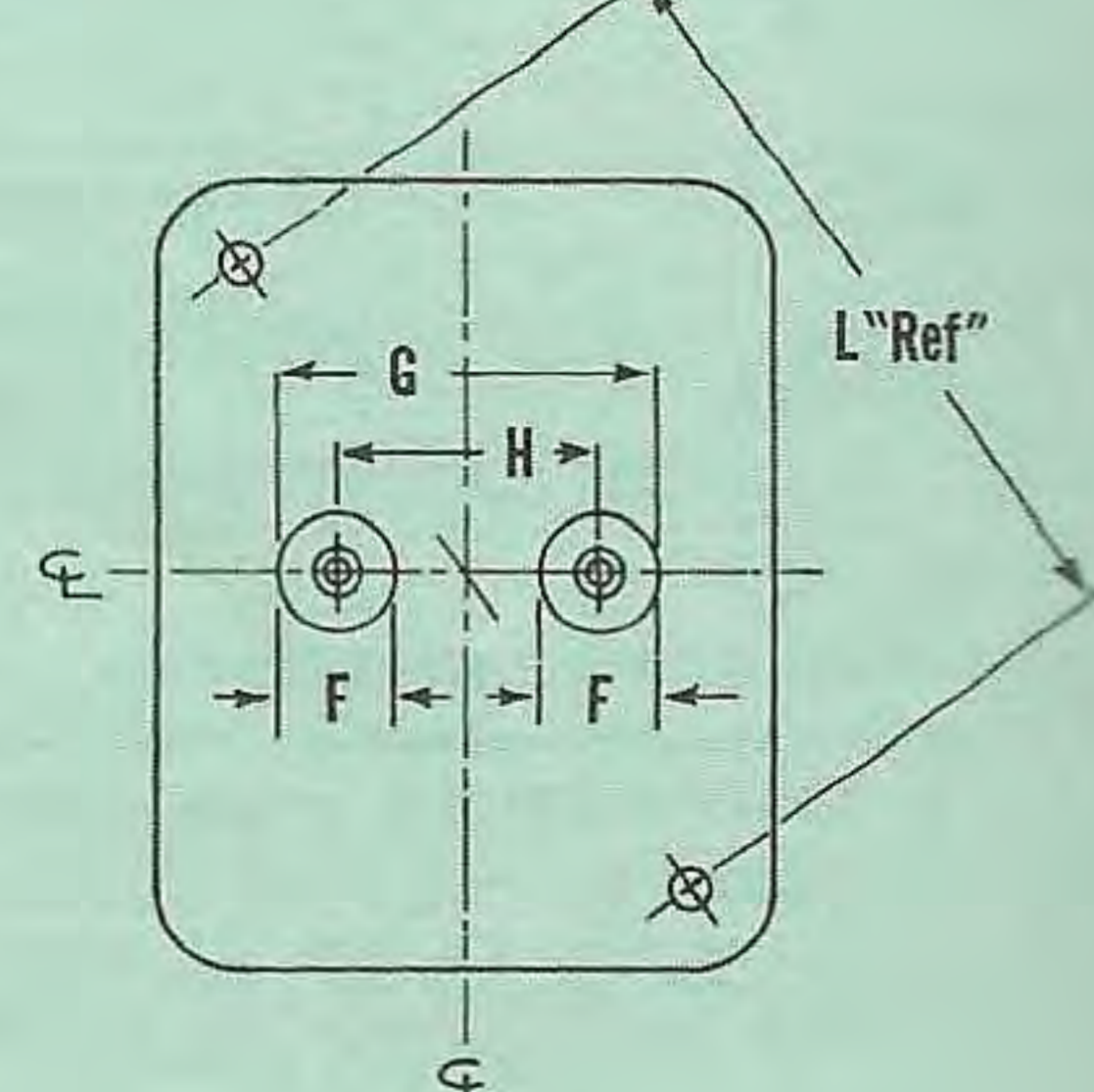
2



3



4

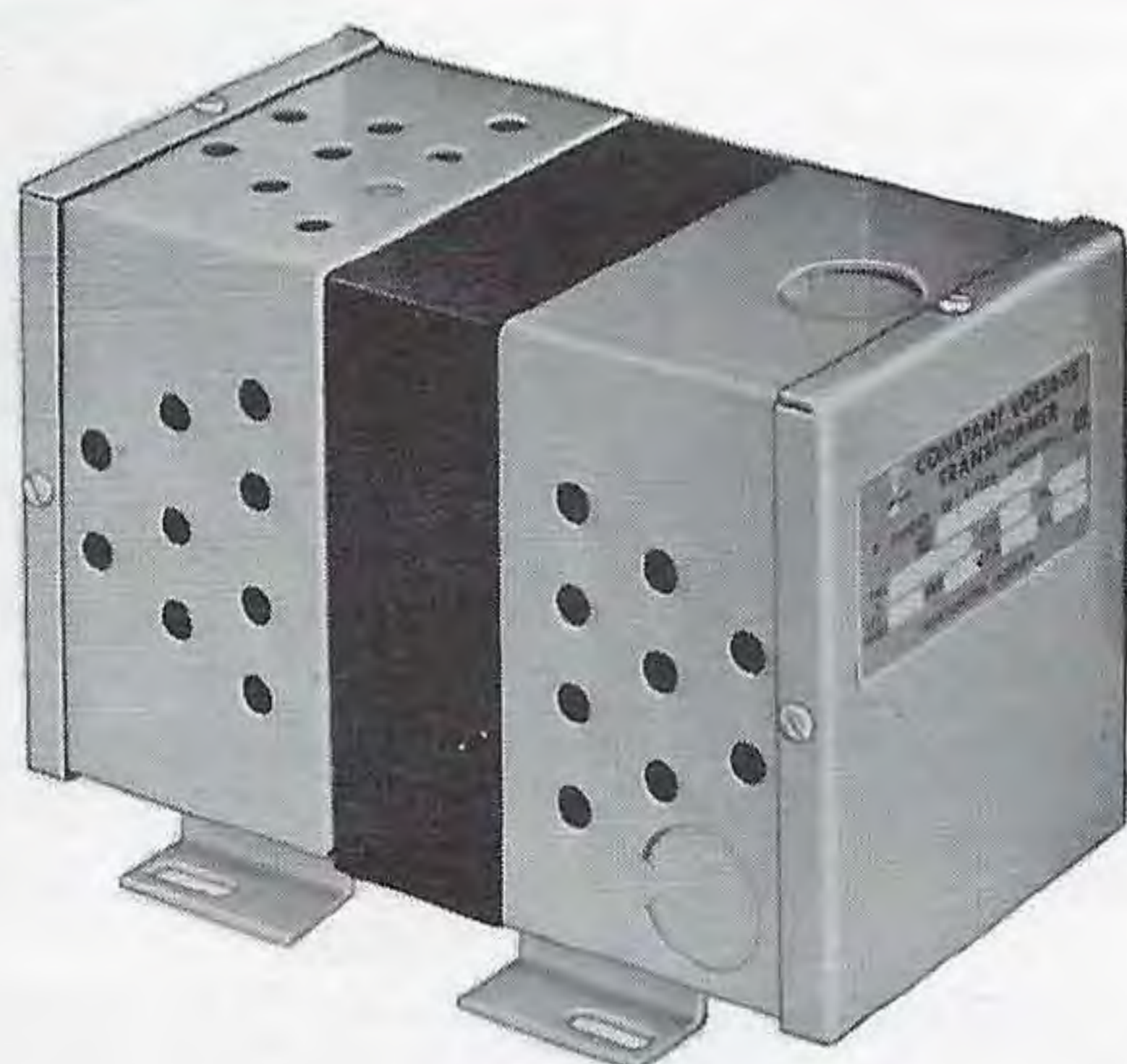


5

VOLTAGE STABILIZERS CONTROL TRANSFORMERS



COMMERCIAL GRADE



VS Case



KA Adapter



SC Case

VOLTAGE STABILIZERS

If you're designing new voltage-sensitive devices—or looking for ways to improve present ones—you can cut out pounds of dead weight, assure utmost accuracy, by using Triad's new compact Voltage Stabilizers instead of larger, heavier units. Triad takes advantage of new materials and techniques to effectively solve the problems of over and under voltage in these small light-weight units of extreme reliability.

Output Voltage is constant within 1% of nominal voltage even when input is varied as much as 15% from nominal. Output can be completely short-circuited with no damage to transformer

even over extended periods. Mounting is the same as competitive units of same rating, for complete interchangeability.

Primary and secondary windings of all units are completely isolated from each other, greatly reducing shock hazard. Connections are made to screw type terminals on a terminal board inside the cover. Knockouts are provided for lead exits on top, bottom and sides. The K-48U is a low-voltage unit for use in transistor or control circuits. Capacitor for external mounting is supplied with each transformer. By varying connections and rectifier configurations, the user may obtain 12, 24, 36 and 48 volts at 50 va.—or combinations of these.

Triad No.	Rating Va.	Input volts	Output volts	Case Style	Dimensions							Wt. lbs.
					A	B	C	D	E	F	G	
K-48	50	95-130	24 CT @ 1 amp. 24 CT @ 1 amp.	U	3¾	2¾	3⅛	2⅞	2¼	—	2¾	3
K-100	30	95-130	118	VS	5⅝	3⅜	3⅜	3	3½	⅝	4	4.8
K-101	60	95-130	118	VS	6	3⅜	3⅜	3	3½	⅝	4	6.2
K-102	120	95-130	118	VS	6½	3⅝	5⅛	3	3½	⅞	4	10.6
K-103	250	95-130	118	VS	7⅞	5⅝	6⅛	4⅞	6⅛	½	6⅞	21
K-104	500	95-130	120	VS	10⅜	5⅝	6⅛	4⅞	6⅛	½	6⅞	33
K-105	750	95-130	120	VS	14	5⅝	6⅛	4⅞	6⅛	½	6⅞	46
K-106	1000	95-130	120	VS	15⅝	5⅞	6⅛	4⅞	6⅛	½	6⅞	60

ADAPTER KITS

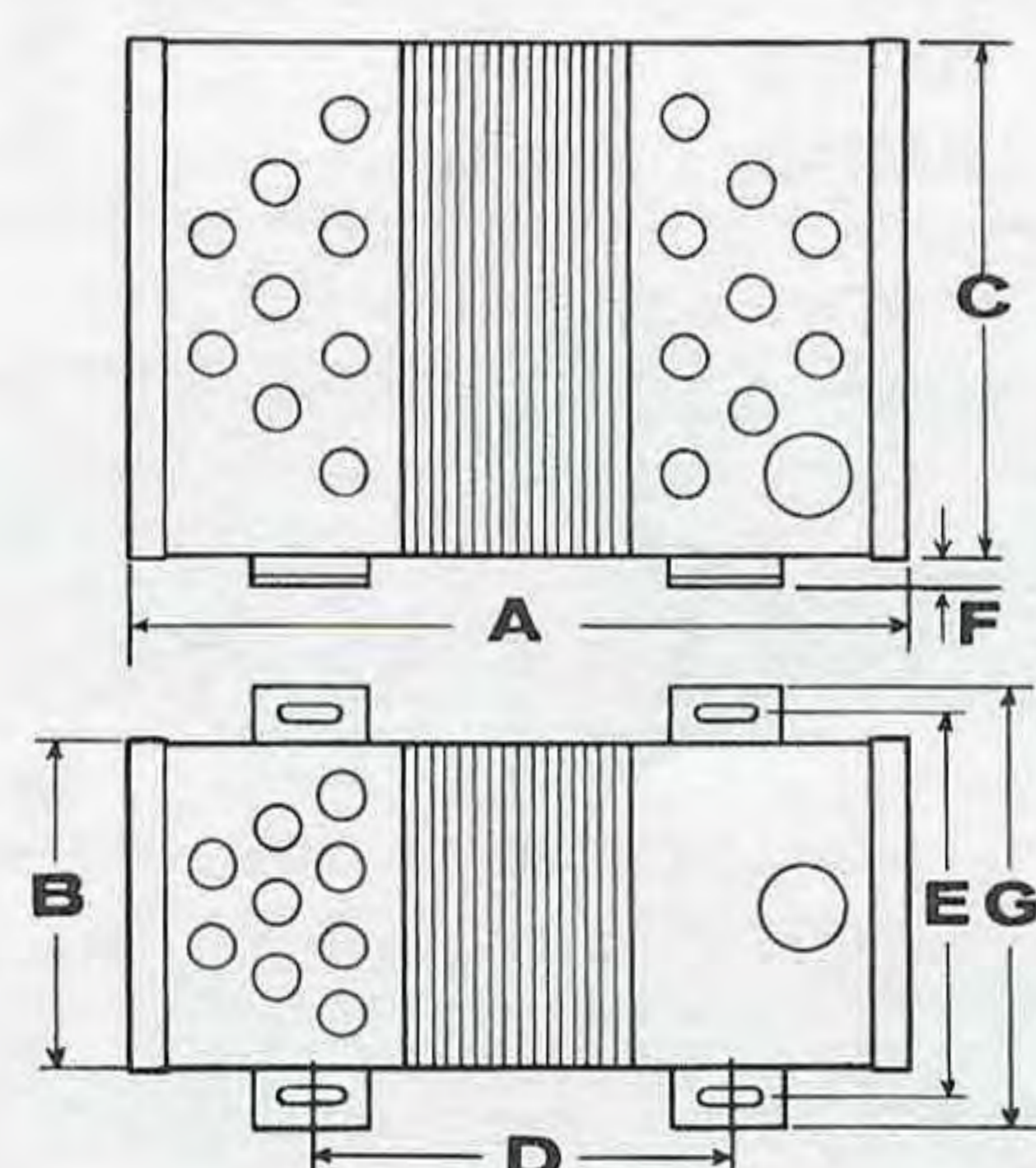
- KA-1 Used with K-100, K-101
- KA-2 Used with K-102
- KA-3 Used with K-103, K-104, K-105

CONTROL TRANSFORMERS / 6, 12, 24 volt secondaries

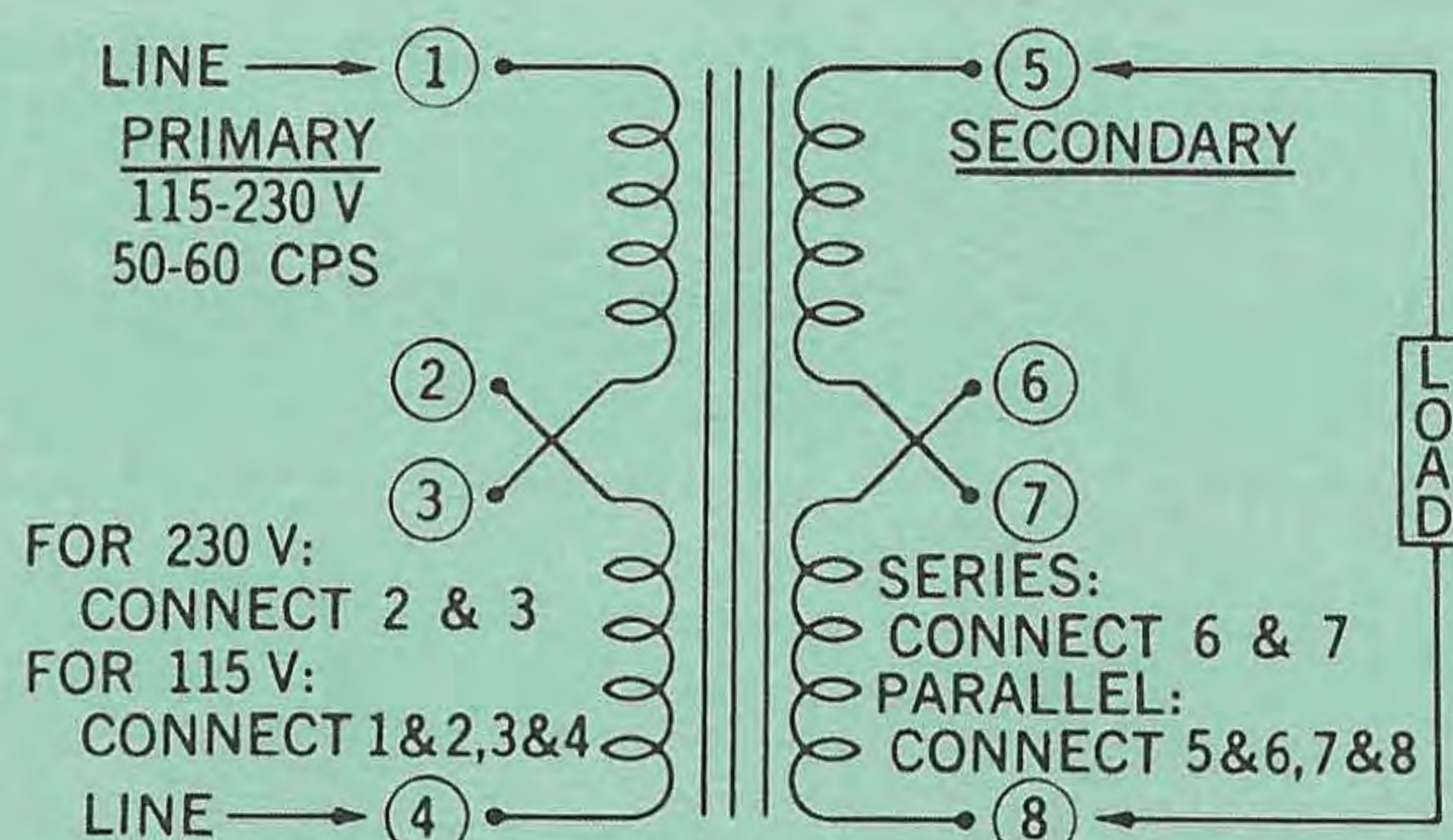
For use with relays, solenoids, small motors, speed changers, pumps, heating elements, control valves for fluids and gases, fans and blowers, electronic tubes, automatic assembly equip-

ment, recording devices, elevators, door openers, low voltage lamps and similar applications.

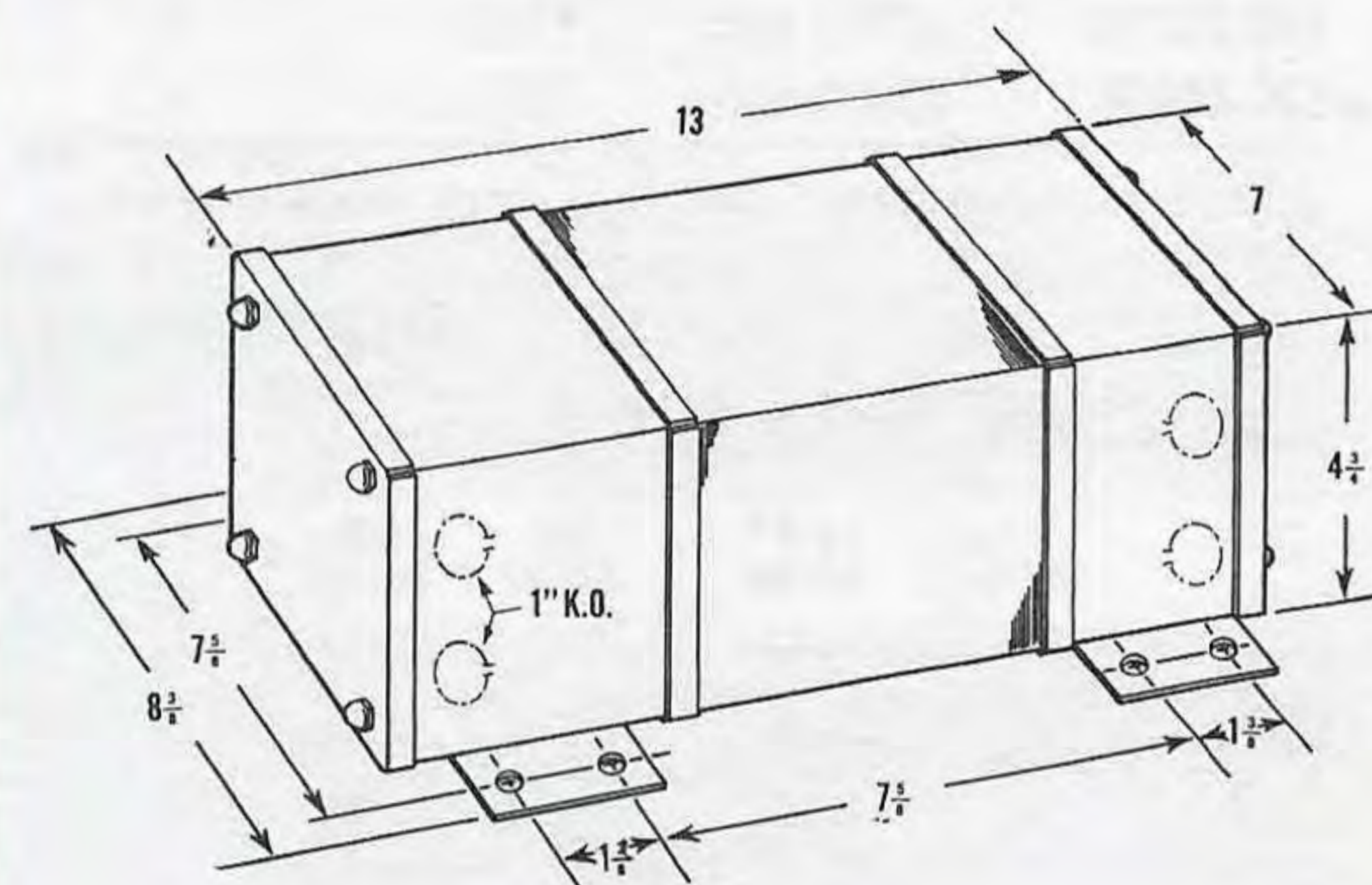
Type No.	Primary	Secondary		VA Rating	Case Type	Connections	Height Overall	Base Area	Mtg. Dim.	Mtg. Hole Size	Shpg. Wt. in Lbs.
		Parallel	Series								
F-105Z	115V/230V 50/60 CPS on all	6V @ 2A	12V @ 1A	12	Z	Lugs	2 $\frac{3}{8}$	2 $\frac{7}{8}$ x 1 $\frac{3}{4}$	2 $\frac{3}{8}$	3 $\frac{1}{16}$	1
F-106Z		6V @ 4A	12V @ 2A	24	Z	Lugs	2 $\frac{3}{4}$	3 $\frac{1}{8}$ x 2	2 $\frac{13}{16}$	3 $\frac{1}{16}$	1 $\frac{1}{2}$
F-107Z		12V @ 4A	24V @ 2A	48	Z	Lugs	3 $\frac{1}{8}$	3 $\frac{5}{8}$ x 2 $\frac{3}{8}$	3 $\frac{1}{8}$	3 $\frac{1}{16}$	2 $\frac{1}{2}$
F-108U		12V @ 8A	24V @ 4A	96	U	Lugs	3 $\frac{1}{2}$	2 $\frac{7}{8}$ x 3	2 $\frac{1}{4}$ x 2 $\frac{1}{4}$	5 $\frac{1}{16}$ x 3 $\frac{1}{16}$	4 $\frac{1}{4}$
F-109U		12V @ 16A	24V @ 8A	192	U	Lugs	4 $\frac{1}{8}$	3 $\frac{3}{4}$ x 3 $\frac{1}{2}$	3 x 2 $\frac{3}{4}$	5 $\frac{1}{16}$ x 3 $\frac{1}{16}$	8



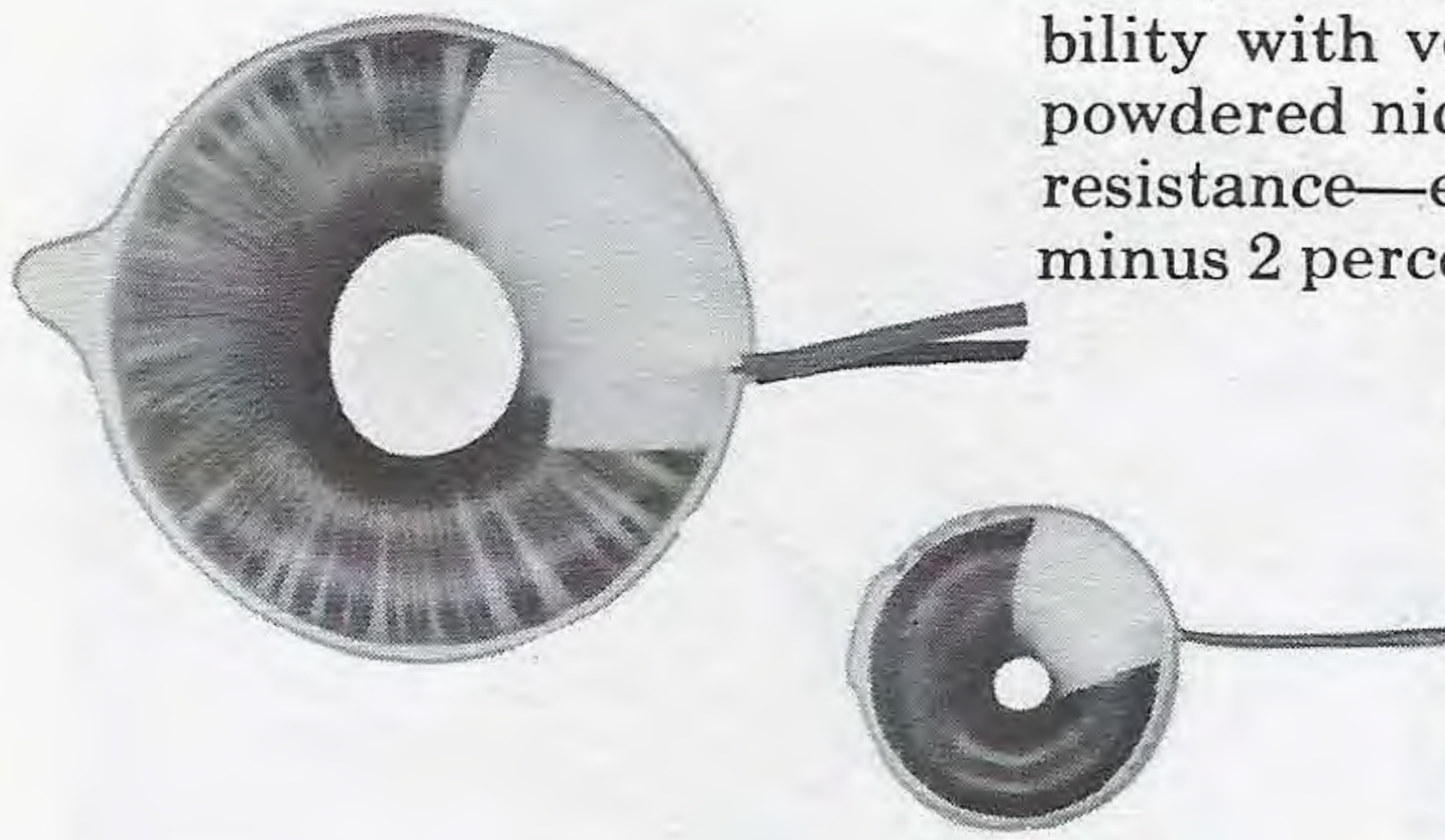
VS Case



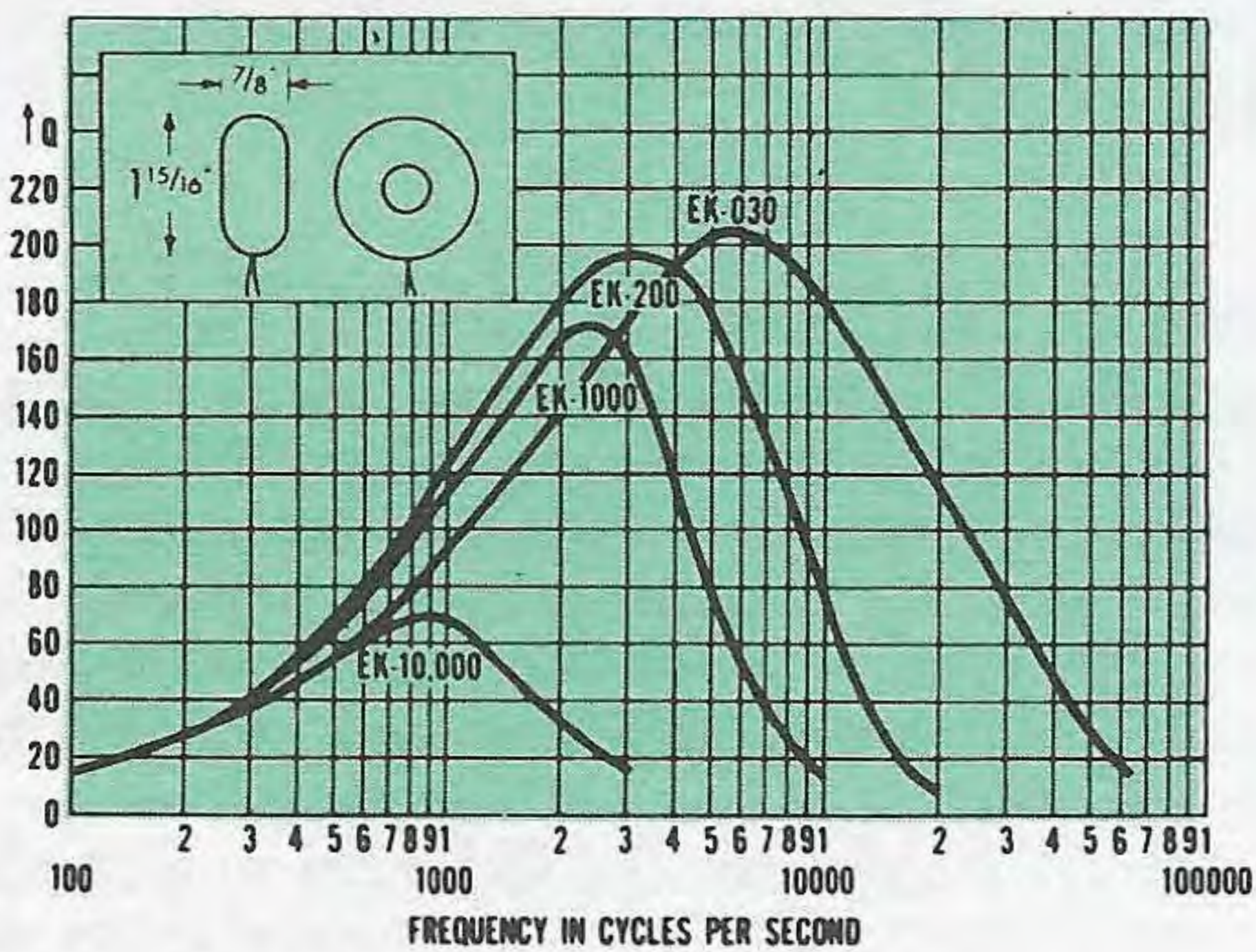
Control Transformer Connections



SC Case

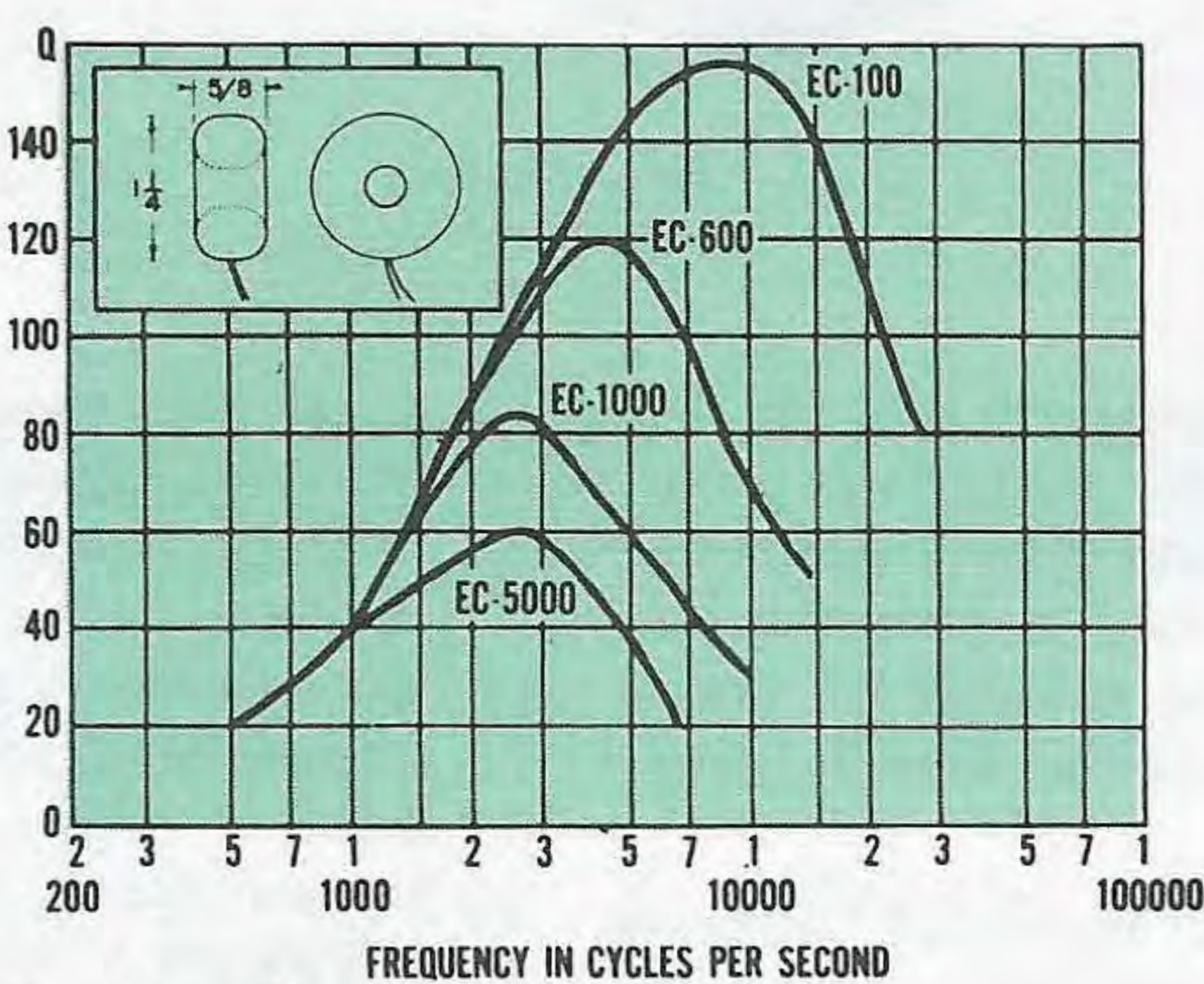


Triad Toroidal Inductors have the highest Q and highest measure of stability with voltage and temperature variations. These units have cores of powdered nickel alloy and are wound with low distributed capacitance and resistance—each coil providing a minimum inductance tolerance of plus or minus 2 percent. Triad toroids may be ordered with standard leads in strong plastic coating, or epoxy molded, encapsulated per Specification MIL-T-27B; TF5RX20ZZ. To specify molded toroids with gold-plated fixed terminals, an "A" should be added to the full type number; for example, EM-001A. Should special applications require even closer tolerances, call your Triad representative for assistance.



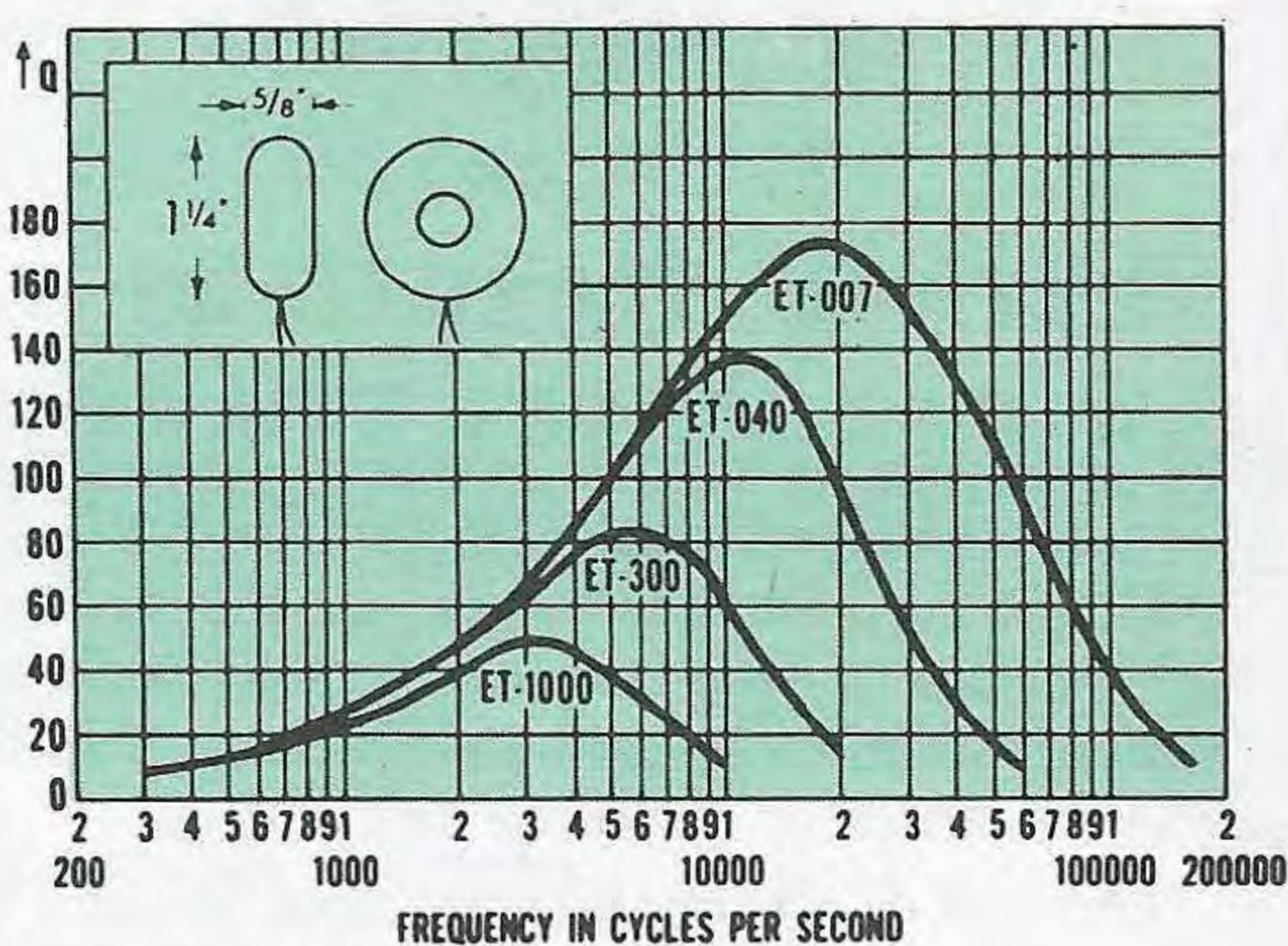
EK Series

For maximum "Q" and power.



EC Series

Optimum combination of size, power and "Q".



ET Series

Optimum combination of size, power and "Q".

Type No.	Ind.	Res. ohms approx.	DC-ma. for 5% ind. drop
▲EK-010	10 mh	.82	262
EK-020	20 mh	1.10	185
EK-030	30 mh	1.40	150
EK-040	40 mh	1.90	130
▲EK-050	50 mh	2.4	116
▲EK-060	60 mh	2.6	106
EK-080	80 mh	3.1	92
EK-100	100 mh	4.4	82
▲EK-120	120 mh	4.8	75
EK-150	150 mh	6.20	67
EK-200	200 mh	7.50	58
EK-250	250 mh	9.0	52
▲EK-300	300 mh	12.00	47
EK-400	400 mh	14.0	41
▲EK-500	500 mh	19.0	37
EK-700	700 mh	27.0	31
EK-1000	1000 mh	45.00	26
EK-1500	1500 mh	67.00	21
EK-2000	2000 mh	100.00	18.4
EK-2500	2500 mh	108	16.5
EK-3000	3000 mh	116	15
EK-4000	4000 mh	150	13
EK-5000	5000 mh	200	11.6
EK-7000	7000 mh	300	9.8
▲EK-10000	10000 mh	350	8.2
EK-20000	20000 mh	800	5.8
EK-30000	30000 mh	1250	4.7
▲EK-40000	40000 mh	2000	4.1

Type No.	Ind.	Res. ohms approx.	DC-ma. for 5% ind. drop
EC-001	1 mh	.40	520
EC-002	2 mh	.56	368
EC-003	3 mh	.70	300
▲EC-004	4 mh	.82	260
EC-005	5 mh	.92	233
EC-007	7 mh	1.05	195
EC-010	10 mh	1.30	165
EC-015	15 mh	1.60	134
EC-020	20 mh	1.85	116
EC-030	30 mh	2.85	95
▲EC-040	40 mh	4.20	82
EC-050	50 mh	5.50	74
EC-070	70 mh	8.30	62
EC-100	100 mh	13.00	52
EC-200	200 mh	23.00	37
EC-250	250 mh	33.00	33
EC-300	300 mh	35.00	30
EC-400	400 mh	42.00	26
EC-500	500 mh	72.00	23
EC-600	600 mh	80.00	21
▲EC-700	700 mh	68.00	19.5
EC-1000	1000 mh	134	16.5
EC-1500	1500 mh	200	13.5
EC-2000	2000 mh	220	11.6
EC-3000	3000 mh	370	9.5
▲EC-4000	4000 mh	550	8.2
EC-5000	5000 mh	780	7.4
EC-7000	7000 mh	700	6.2
EC-10000	10000 mh	1100	5.2

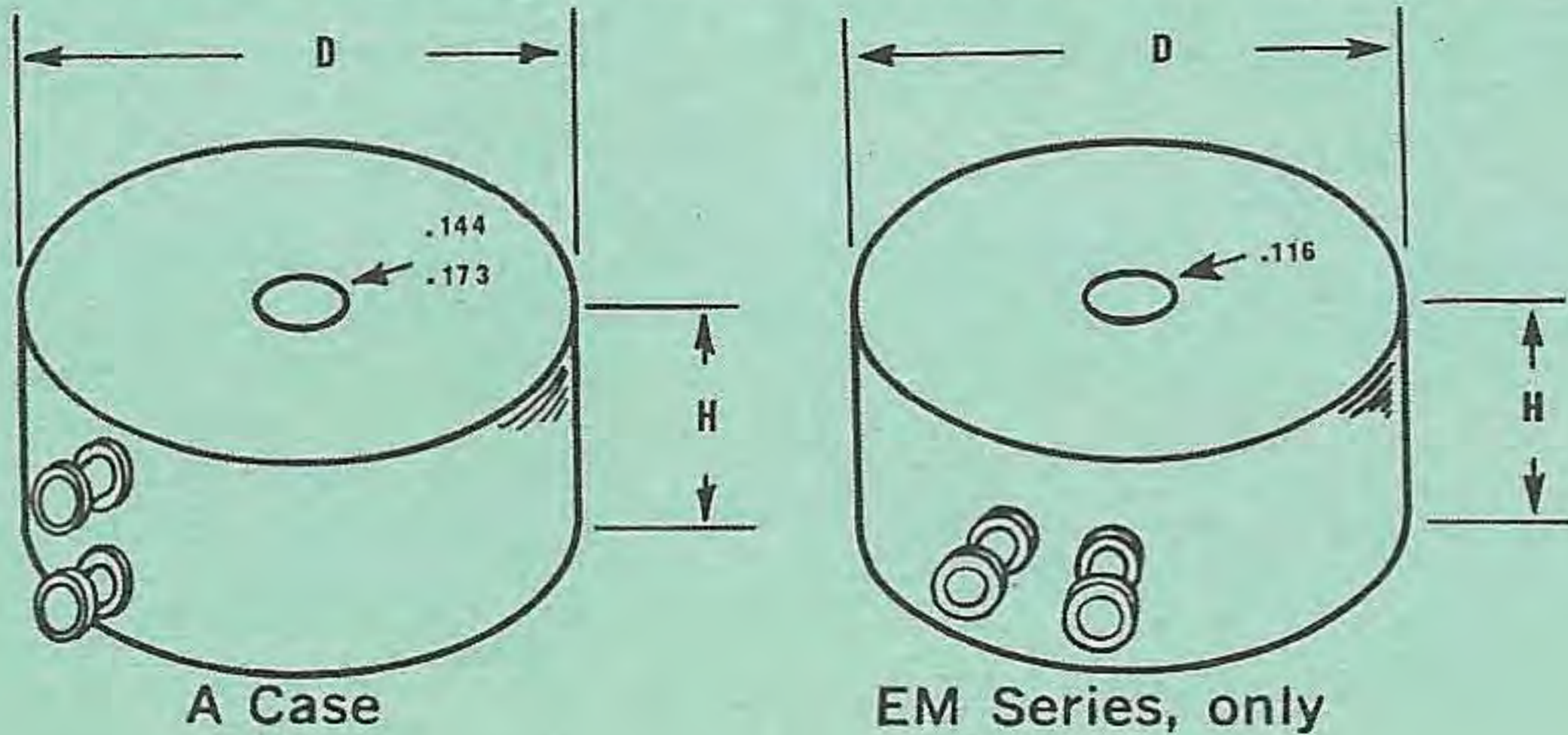
Type No.	Ind.	Res. ohms approx.	DC-ma. for 5% ind. drop
ET-001	1 mh	.30	680
ET-002	2 mh	.50	480
ET-003	3 mh	.68	396
▲ET-004	4 mh	.81	342
ET-005	5 mh	1.10	306
ET-007	7 mh	1.50	260
ET-010	10 mh	2	217
ET-015	15 mh	2.85	177
ET-020	20 mh	4.0	153
ET-025	25 mh	4.8	137
ET-030	30 mh	6.5	125
ET-040	40 mh	9.2	108
ET-050	50 mh	10.3	97
ET-060	60 mh	14.5	88
ET-070	70 mh	15.0	82
ET-100	100 mh	24	68
ET-150	150 mh	35	56
ET-200	200 mh	44.5	48
ET-250	250 mh	64	43
ET-300	300 mh	70	40
ET-400	400 mh	94	34
ET-500	500 mh	108	31
ET-700	700 mh	173	26
ET-1000	1000 mh	230	22

▲ Discontinued item, available until stock depleted.

Note: For molded toroids with gold plated fixed terminals, add A to type number.

OPEN TYPE SIZES AND WEIGHTS

	EA Series	EC-ET Series	EK Series	EM Series
DIA.	1	1 1/4	1 5/16	3/4
HT.	3/8	5/8	7/8	3/8
I.D.	5/16	7/16	9/16	5/32
WT. (oz.)	.6	1.6	5	.2



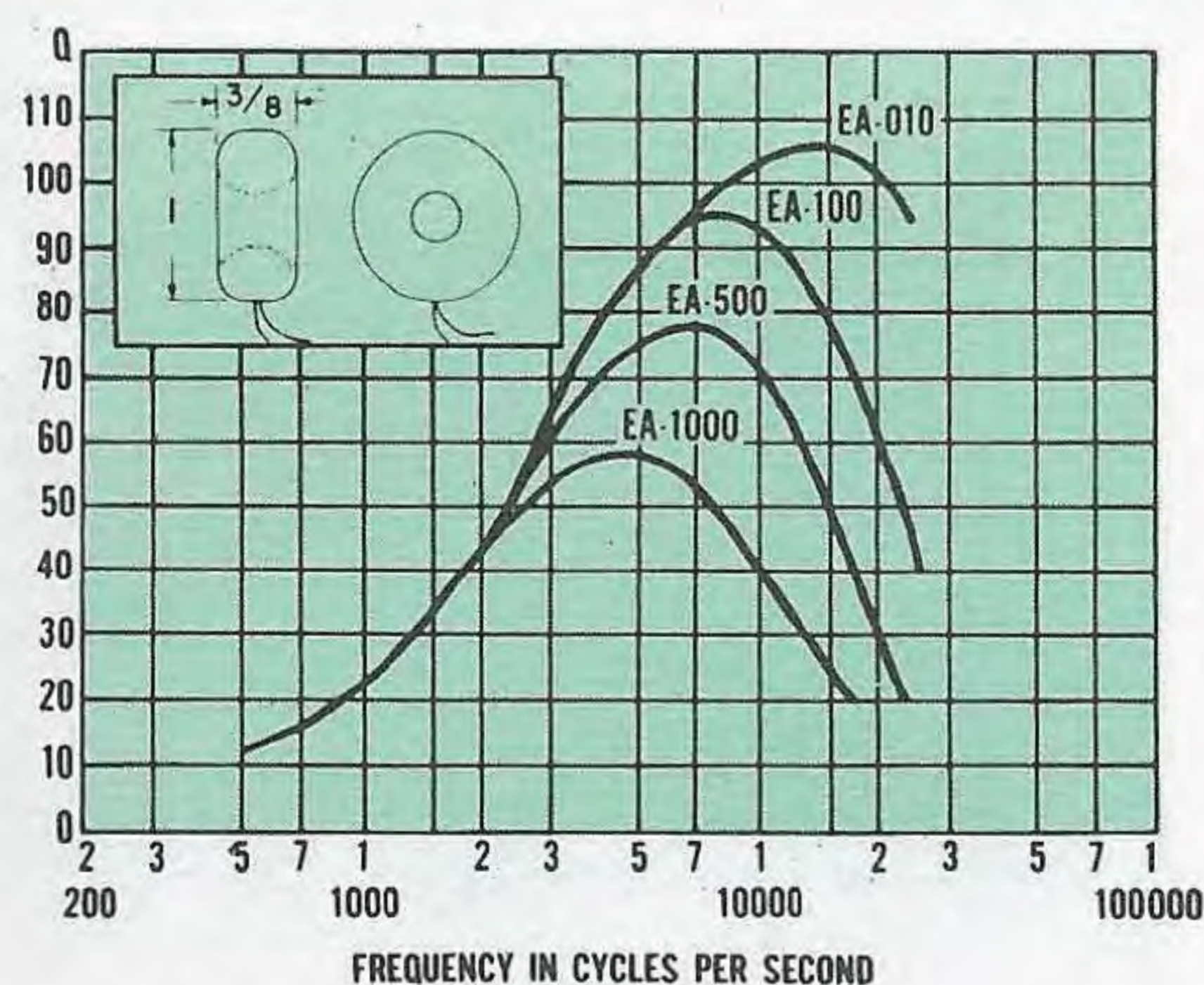
MOLDED TYPE SIZES AND WEIGHTS

	EA Series	EC-ET Series	EK Series	EM Series
DIA.	1 1/16	1 5/16	2	3/4
HT.	1/2	23/32	1	3/8
WT. (oz.)	.8	2	6	.3

TOROIDAL INDUCTORS



COMMERCIAL
& MIL GRADE



EA Series

Smaller size for compact circuitry such as airborne applications.

Type No.	Ind.	Res. ohms approx.	DC-ma. for 5% ind. drop
EA-001	1 mh	.40	270
EA-002	2 mh	.58	192
▲EA-003	3 mh	.73	157
▲EA-004	4 mh	.85	135
EA-005	5 mh	1.10	121
EA-007	7 mh	1.35	102
EA-010	10 mh	2.10	86
EA-015	15 mh	3.10	70
EA-020	20 mh	4.25	60
EA-025	25 mh	4.80	54
EA-030	30 mh	6.70	50
EA-040	40 mh	9.50	43
EA-050	50 mh	11.0	38
EA-070	70 mh	16.0	32
EA-100	100 mh	23.0	27
EA-150	150 mh	37.0	22
EA-200	200 mh	42.0	19
EA-250	250 mh	60.0	17
EA-300	300 mh	70.0	16
▲EA-400	400 mh	95.0	14
EA-500	500 mh	115	12
EA-600	600 mh	150	11
▲EA-700	700 mh	160	10
EA-1000	1000 mh	260	8.6

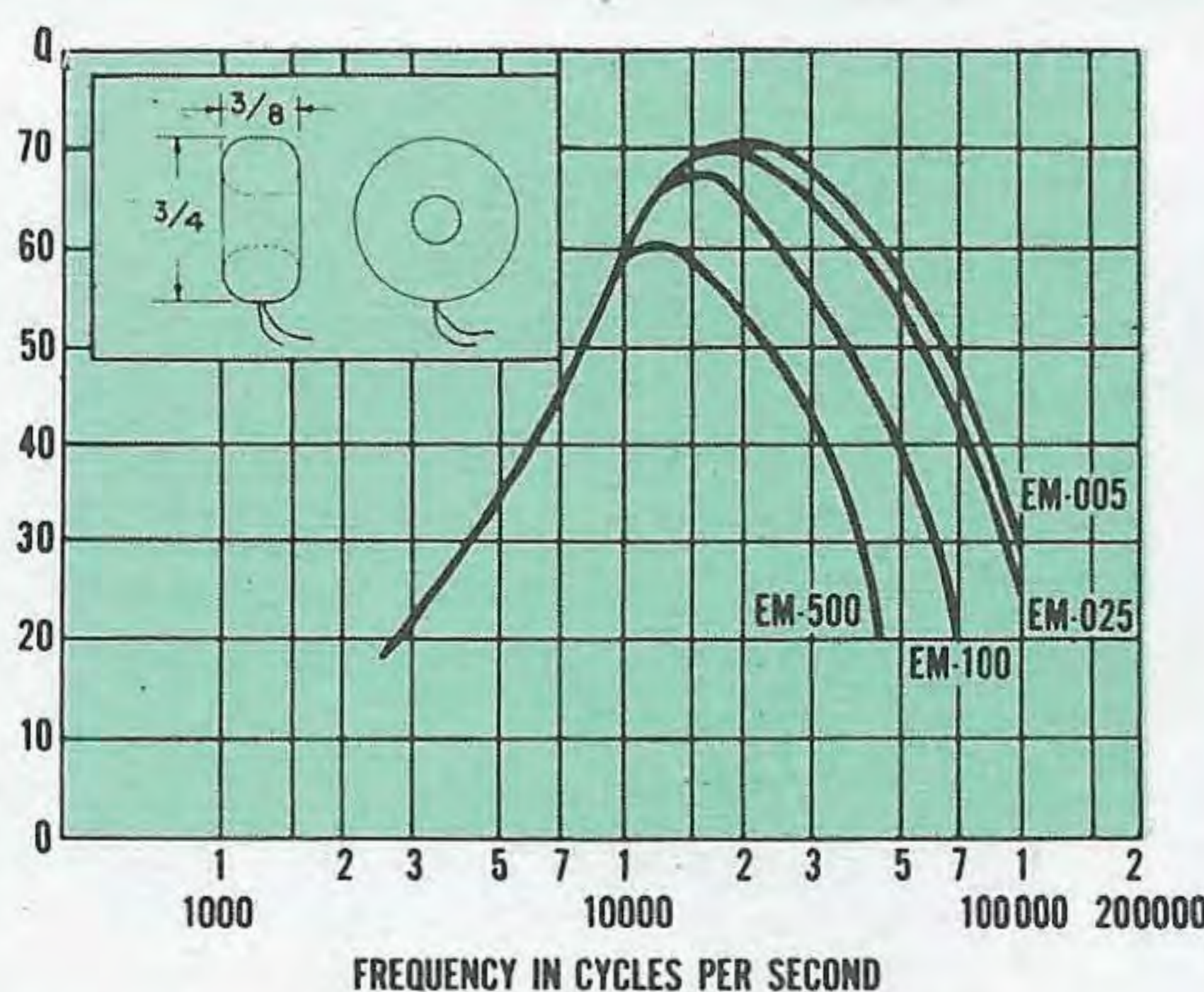
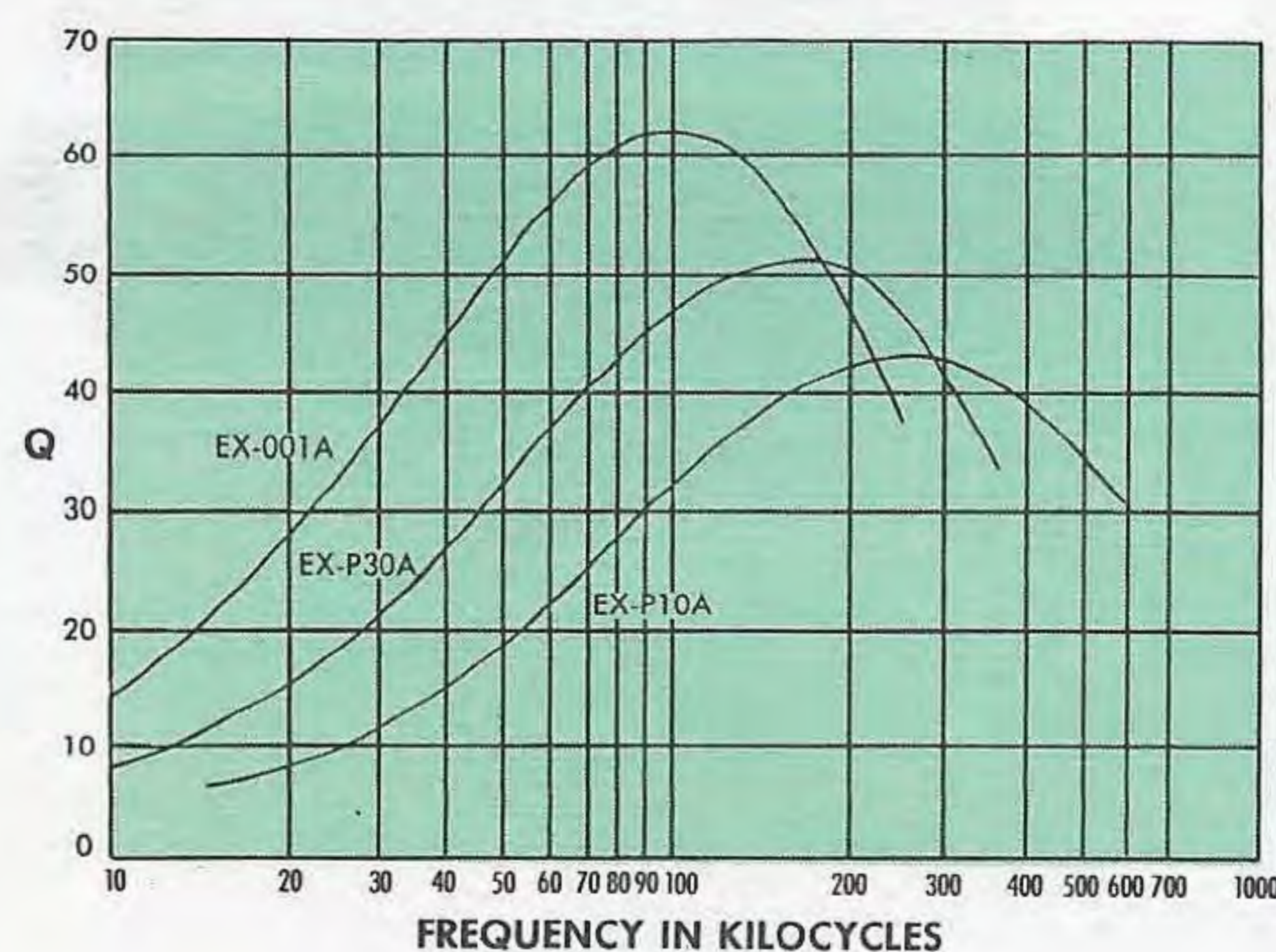
▲ Discontinued item, available until stock depleted.

"Q" vs. frequency curves on Sub-miniature Inductors

$$Q = \frac{\omega L}{R_{eff}}$$

$\omega = 2\pi f$ where f is freq. in cps
 L = inductance in henries
 R_{eff} = effective resistance

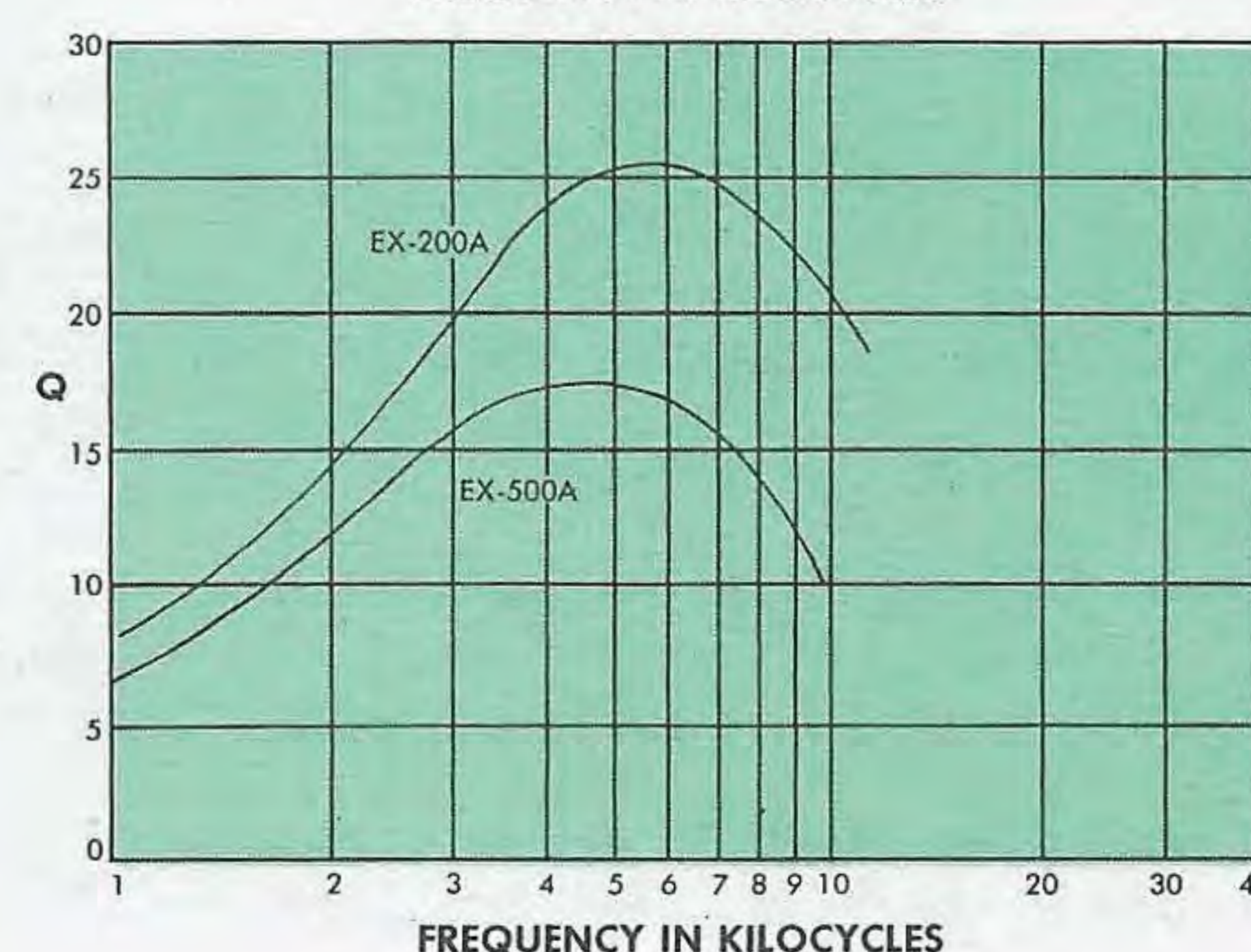
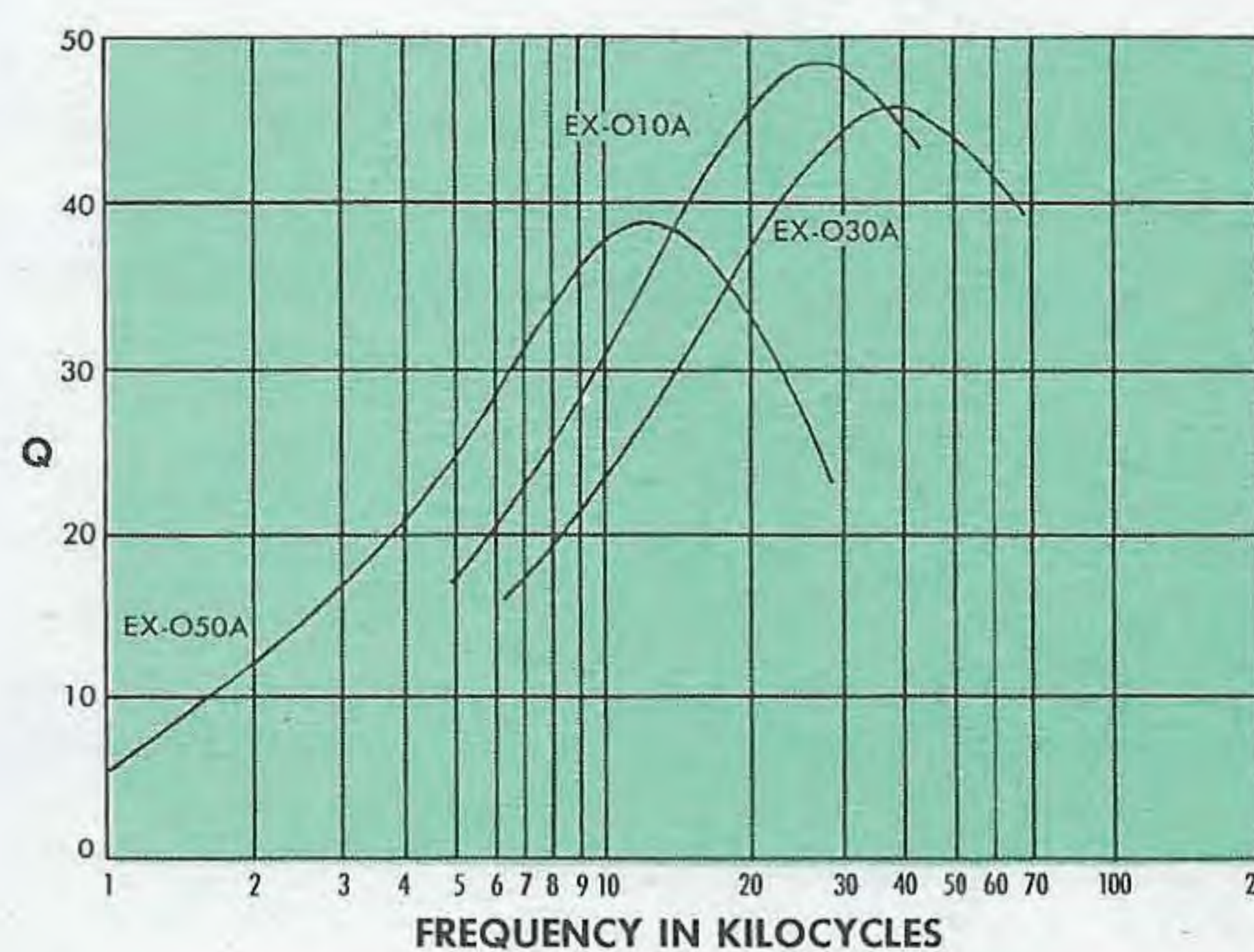
These curves show "Q" versus frequency for eight typical Triad type EX toroidal inductors. At low frequencies the effective resistance consists principally of the DC resistance of the coil; therefore, "Q" increases linearly with frequency. As the frequency is raised, core losses (hysteresis, eddy current and residual) increase the effective resistance. Distributed capacity in the winding effectively increases the reactive impedance until resonance, then reduces it. As a result, the "Q" curve levels off and then drops.



EM Series

For extremely miniaturized circuits such as missile applications, where size and weight must be kept to a minimum.

Type No.	Ind.	Res. ohms approx.	DC-ma. for 5% ind. drop
EM-001	1 mh	1.25	150
EM-002	2 mh	1.70	108
▲EM-003	3 mh	2.25	87
EM-004	4 mh	2.60	76
EM-005	5 mh	3.10	68
EM-007	7 mh	4.5	57
EM-010	10 mh	6.5	48
EM-015	15 mh	10.0	39
EM-020	20 mh	11.5	34
EM-025	25 mh	16.5	30
EM-030	30 mh	18	27.6
EM-040	40 mh	27	24
EM-050	50 mh	30	22
EM-060	60 mh	40	19.5
EM-070	70 mh	43	18
EM-100	100 mh	66	15
EM-150	150 mh	100	12.5
EM-200	200 mh	115	11
▲EM-250	250 mh	155	9.6
EM-300	300 mh	180	8.8
EM-400	400 mh	265	7.6
EM-500	500 mh	295	7
EM-700	700 mh	400	5.8
EM-1000	1000 mh	650	4.8



TRIAD SUB-MINIATURE TOROIDAL INDUCTORS



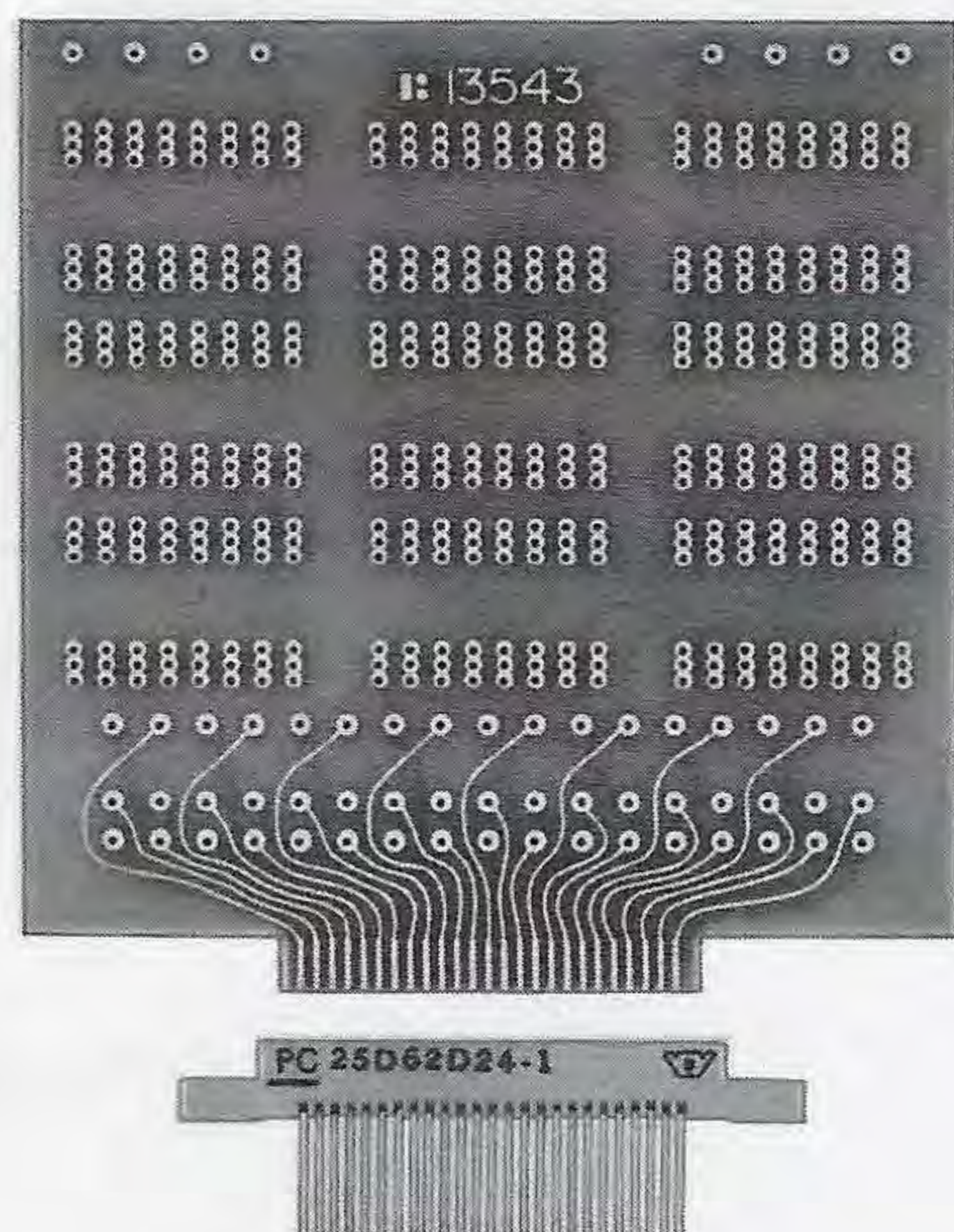
Triad sub-miniature toroidal inductors, designed for quick, easy printed-circuit board mounting, are now stocked for immediate delivery in a range of standard ratings from 50 micro-henries to 400 milli-henries. Case size of all units is $\frac{7}{16}$ inch diameter by $\frac{1}{4}$ inch high.

Triad sub-miniature inductors are toroidally wound on permalloy powdered cores. Encapsulated in high temperature epoxy resin. Weldable or solderable leads of gold plated nickel alloy. Highly resistant to severe acceleration, shock or vibration. Manufactured to meet the requirements of MIL-T-27B, Grade 5 Class S (MIL type TF5SX20ZZ). Average weight, .1 oz.

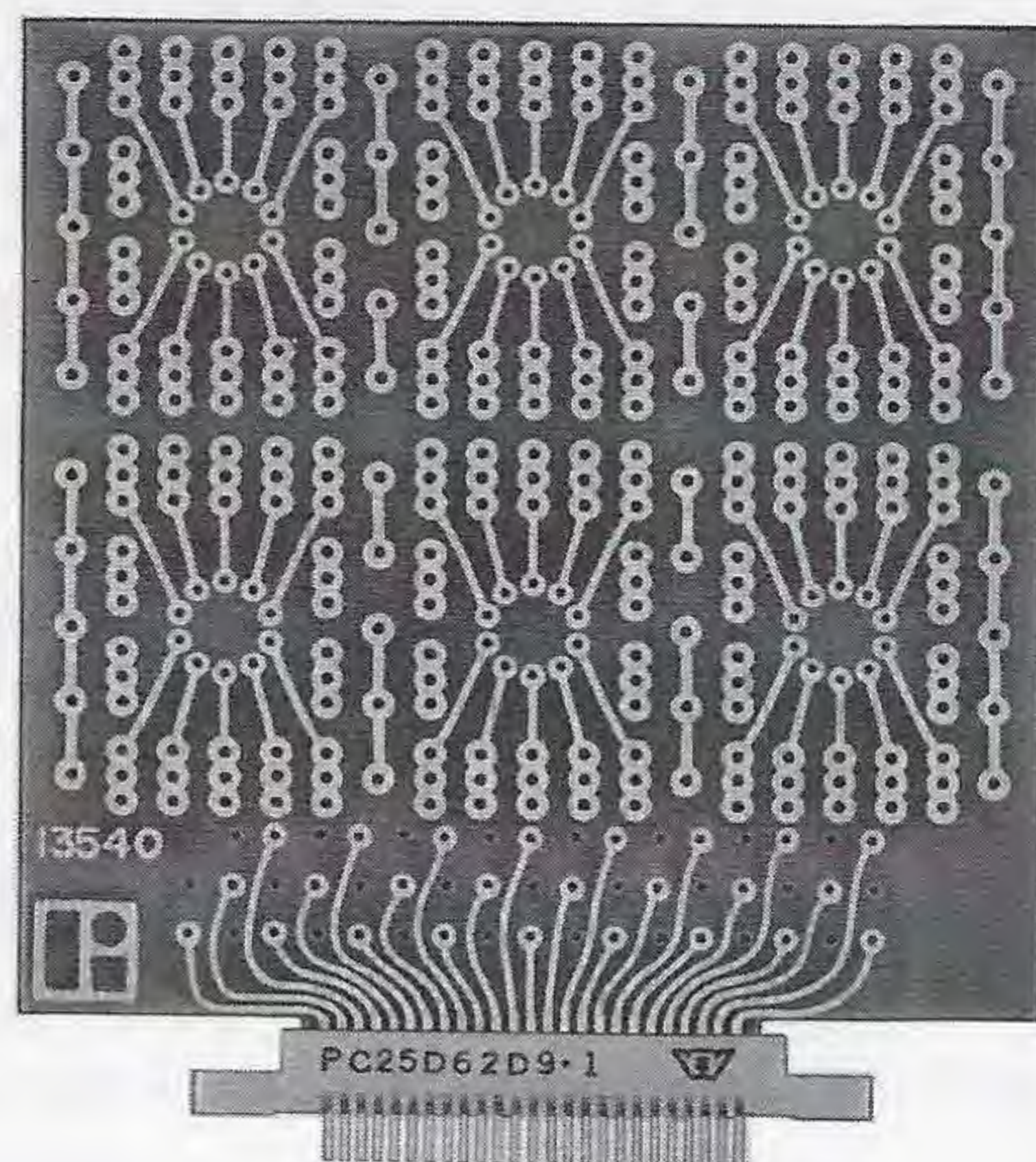
Type No.	Ind.	Res. ohms approx.	DC-ma. for 5% ind. drop
EX-P05A	50 μ h	1.2	75*
EX-P10A	100 μ h	1.4	75*
EX-P20A	200 μ h	2.0	75*
EX-P30A	300 μ h	2.3	75*
EX-P50A	500 μ h	3.0	75*
EX-P60A	600 μ h	3.0	75*
EX-001A	1 mh	4.3	75*
EX-001.5A	1.5 mh	4.9	60*
EX-002A	2 mh	8	60*
EX-002.5A	2.5 mh	5.3	60*
EX-003A	3 mh	6.5	60
EX-005A	5 mh	11	47
EX-006A	6.0 mh	11.5	43
EX-008A	8.0 mh	13.0	37
EX-010A	10 mh	15.6	33
EX-012.5A	12.5 mh	17.0	30
EX-015A	15.0 mh	23.0	27
EX-020A	20 mh	35	23
EX-025A	25.0 mh	37.0	21
EX-030A	30 mh	55	19
EX-040A	40.0 mh	54.0	15
EX-050A	50 mh	62	14
EX-060A	60.0 mh	82.0	12
EX-100A	100 mh	130	10
EX-120A	120 mh	142.0	8
EX-200A	200 mh	139	6
EX-300A	300 mh	206	5
EX-400A	400 mh	310	4.5

* Will give less than 5% inductance drop but should not be exceeded under operating conditions.

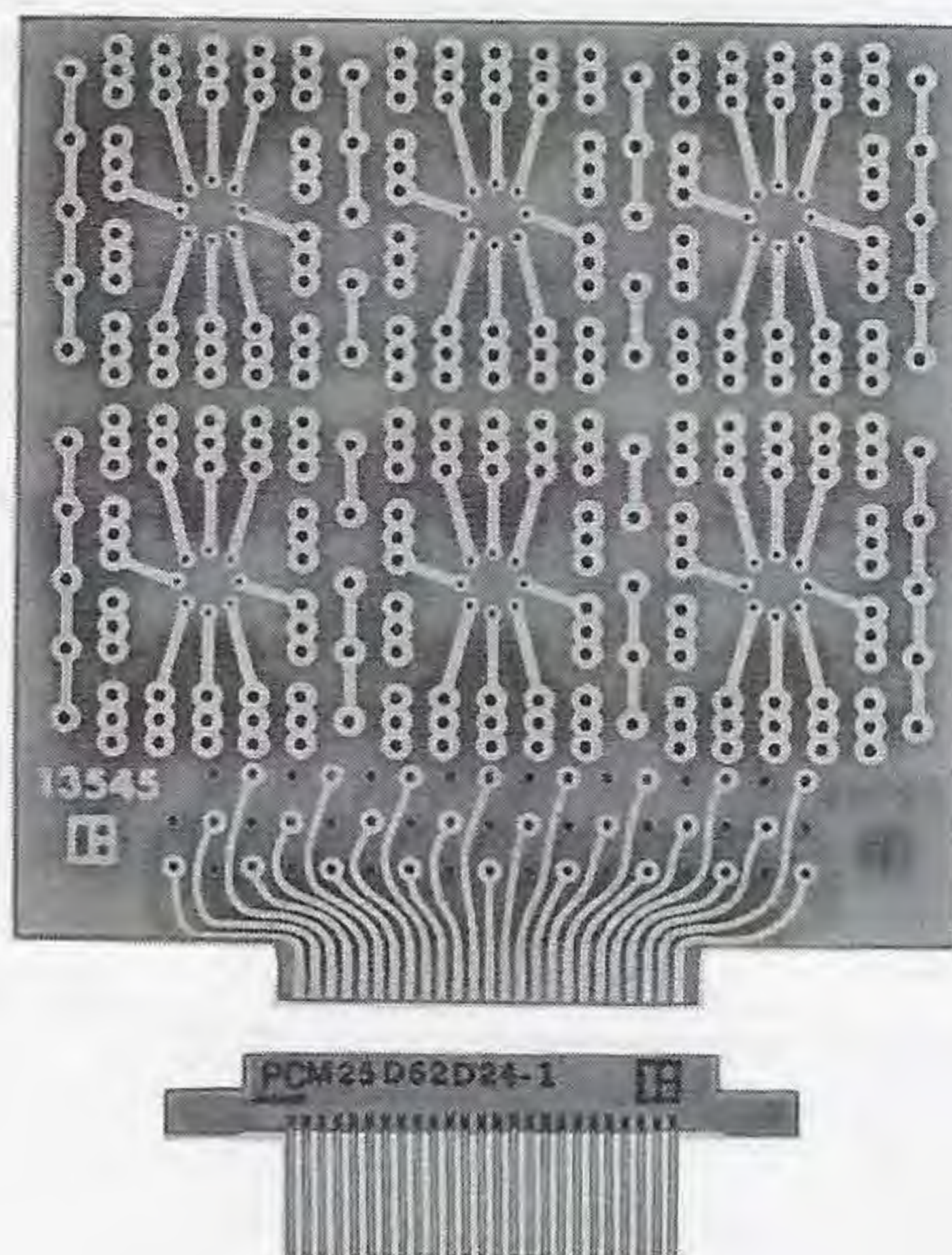
Inductance tolerance of EX-P05A through EX-P50A is $\pm 5\%$; EX-001A through EX-400A is $\pm 2\%$.



Cat. No. 13543
and Cat. No. CO-13543



Cat. No. 13540
and Cat. No. CO-13540



Cat. No. 13545
and Cat. No. CO-13545

For 14-lead or 16-lead dual in-line plug-in integrated circuits

Integrated circuit cards for breadboarding and testing of 14-lead or 16-lead dual in-line IC packages. Available with or without applicable Winchester connector. Both the 13542 and 13543 are two-sided cards of $\frac{1}{16}$ inch G-10 glass epoxy, for mounting as many as nine plug-in IC's. All holes are .030 in. to accept most round or flat leads.

No. 13542 Board for Dual In-Line Packages. Overall dimensions, 2.976 in. by 3.273 in. **No. CO-13542 Board** with Winchester 8BD18S connector—an 18-contact double-side readout type with bifurcated contacts on .156 in. centers.

No. 13543 Board for Dual In-Line Packages. Overall dimensions, 3.000 in. by 3.187 in. **No. CO-13543 Board** with PCM25D62D24-1 connector—a 25-contact double-side readout type with contacts on .050 in. centers. Molding material is flame resistant per MIL-M-14 Type SDG-F. Contacts are beryllium copper gold plated.

For TO-5's and flat packs

You get the advantages of component intermix, economy and universality when you plan your integrated circuit design, assembly and packaging of TO-5's and flat packs on a Triad card.

Once your circuit is proved out on a 13540 or 13541 standardized Triad card, there is no necessity to transfer components to a final circuitry package and then prove it out again. You can go directly from prototype to production.

Both the 13540 and 13541 are two-sided cards of $\frac{1}{16}$ in. G-10 glass epoxy, with flat pack mounting tabs on one side and TO-5 pads on the other. You can mount up to six TO-5's or six flat packs—or combinations of both. The only difference between the boards is the connector pattern.

No. 13540 Board. Overall dimensions, 3.000 in. by 3.187 in.

No. CO-13540 Board includes a PCM25D62D24-1 connector—a 25-contact double-side readout type with contacts on .050 in. centers. Molding material is flame resistant per MIL-M-14, Type SDG-F. Contacts are beryllium copper, gold plated.

No. 13541 Board. Overall dimensions, 2.976 in. by 3.273 in.

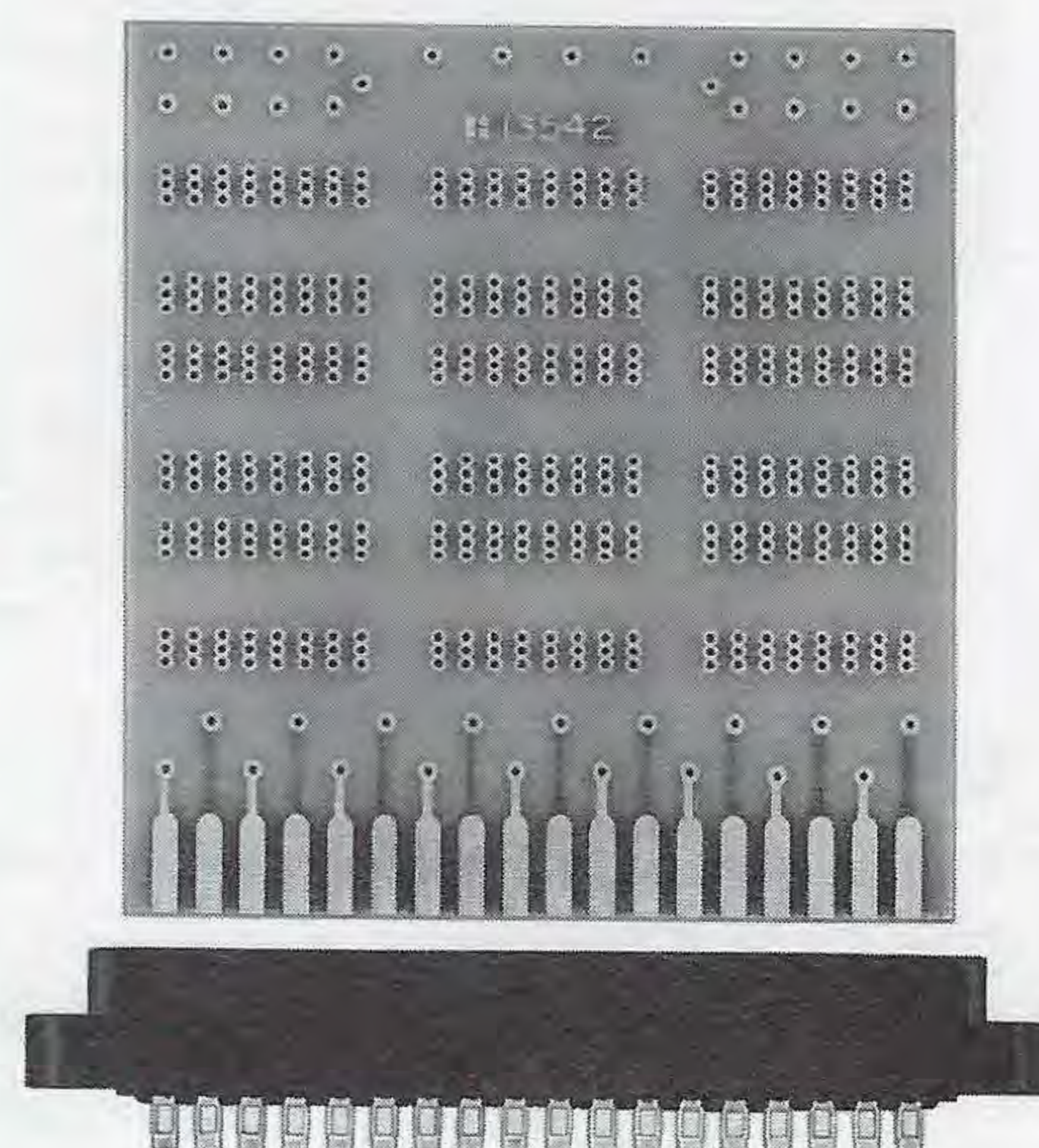
No. CO-13541 Board includes an 8BD18S connector—an 18-contact double-side readout type with bifurcated contacts on .156 in. centers.

For 8-pin TO-5 case type units and flat packs

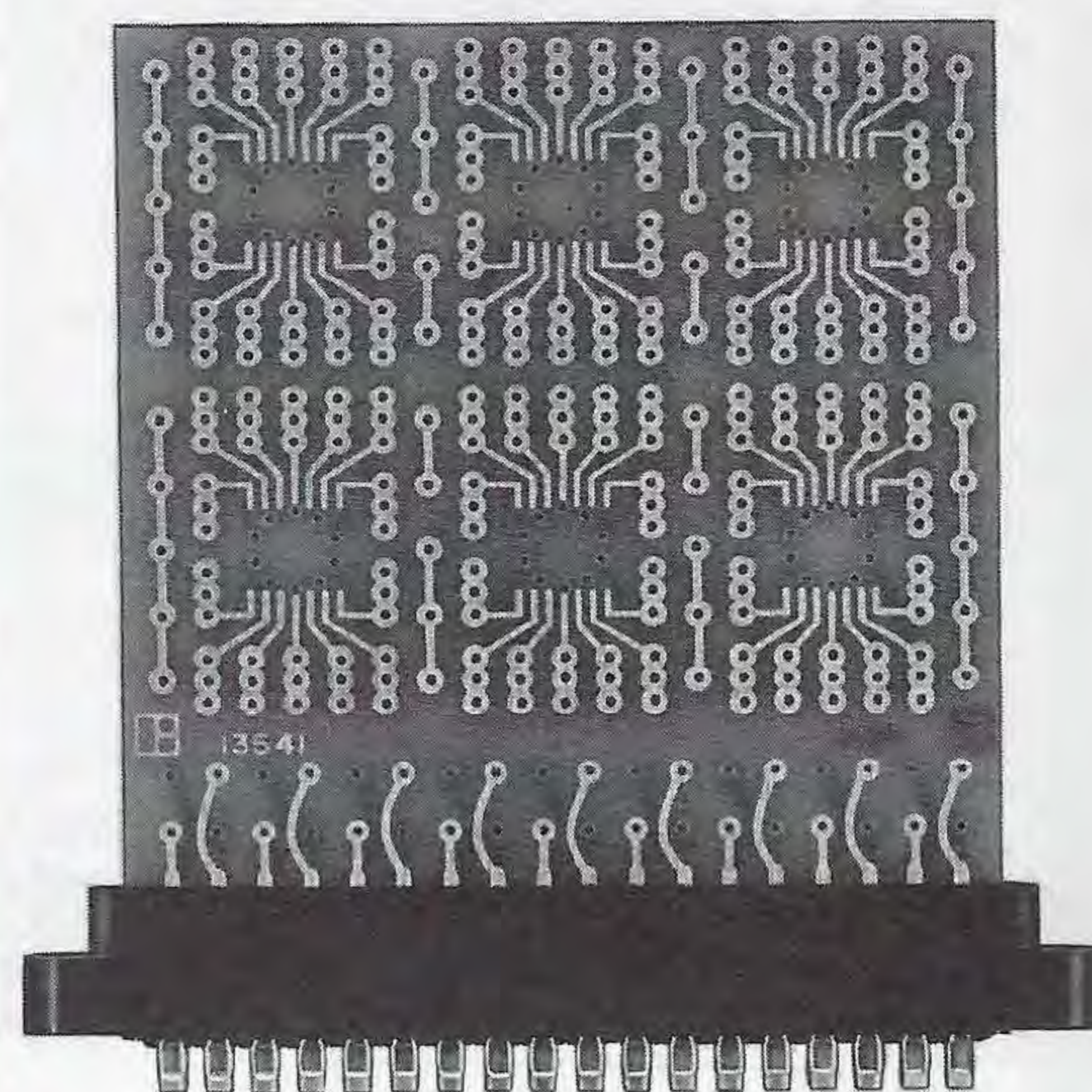
Two double-sided circuit cards, furnished with or without connector, for prototypes or limited production runs of circuitry using 8-pin TO-5 case type units and flat packs. Base material of all boards is $\frac{1}{16}$ inch G-10 glass epoxy. Whether you are working on high density packaging for specialized use or more economical medium packaging densities, there are versatile Triad boards for both integrated circuits and discrete components.

No. 13545 Board. Has six 8-pin TO-5 pads on one side and six 14-pin flat pack mounting pads on the other. **No. CO-13545 Board**, is furnished with a Winchester PCM25D62D24-1 connector—a 25-contact double-side readout type with contacts on .050 inch centers. Molding material is flame resistant per MIL-M-14, type SDG-F. Contacts are beryllium copper. Overall dimensions 3.00 inch by 3.187 inch.

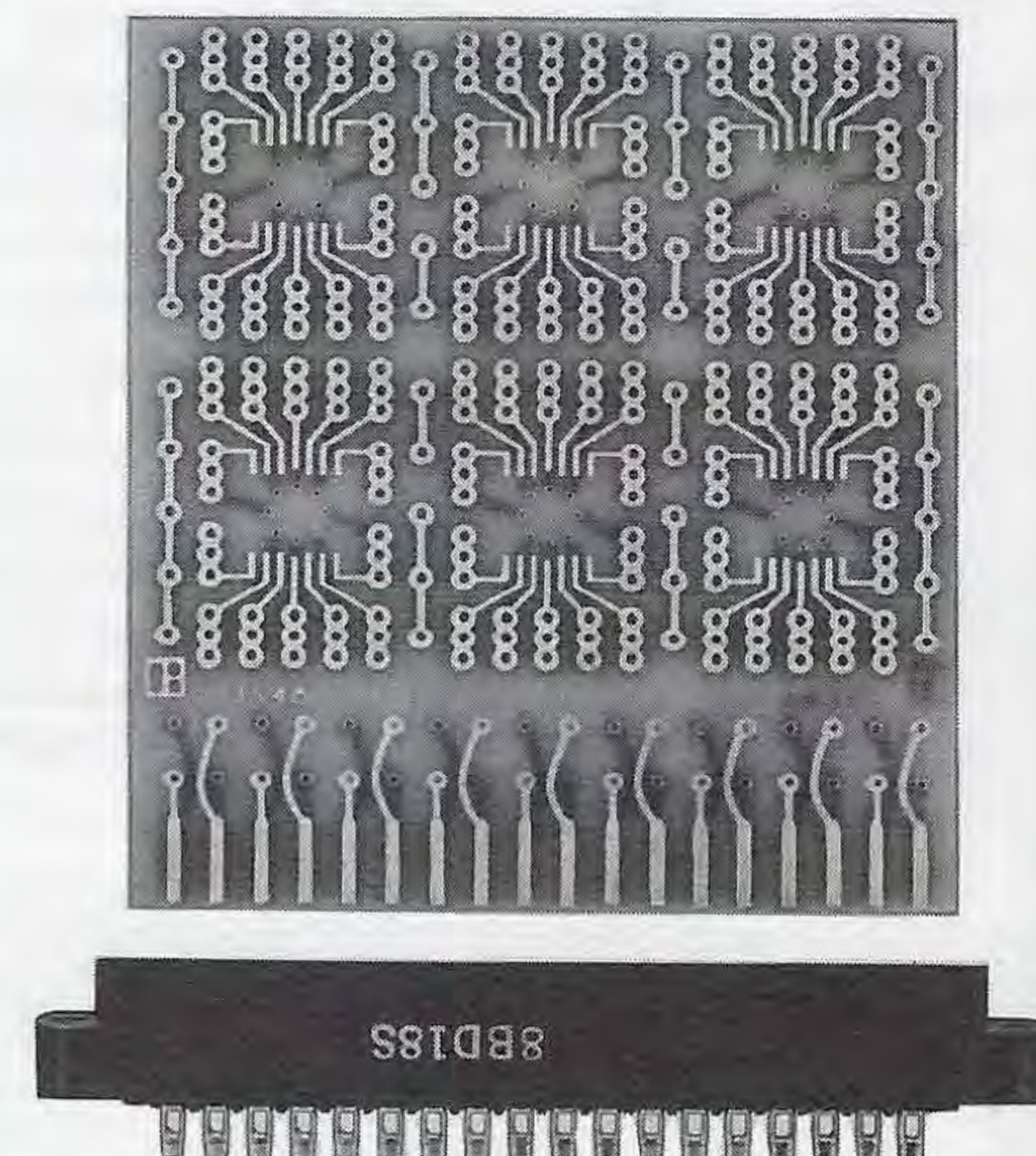
No. 13546 Board. Same as No. 13545, but with overall dimensions 2.976 inch by 3.273 inch and different connector pattern. **No. CO-13546 Board** has Winchester 8BD18S connector—an 18-contact double-side readout type with bifurcated contacts on .156 inch centers.



Cat. No. 13542
and Cat. No. CO-13542



Cat. No. 13541
and Cat. No. CO-13541



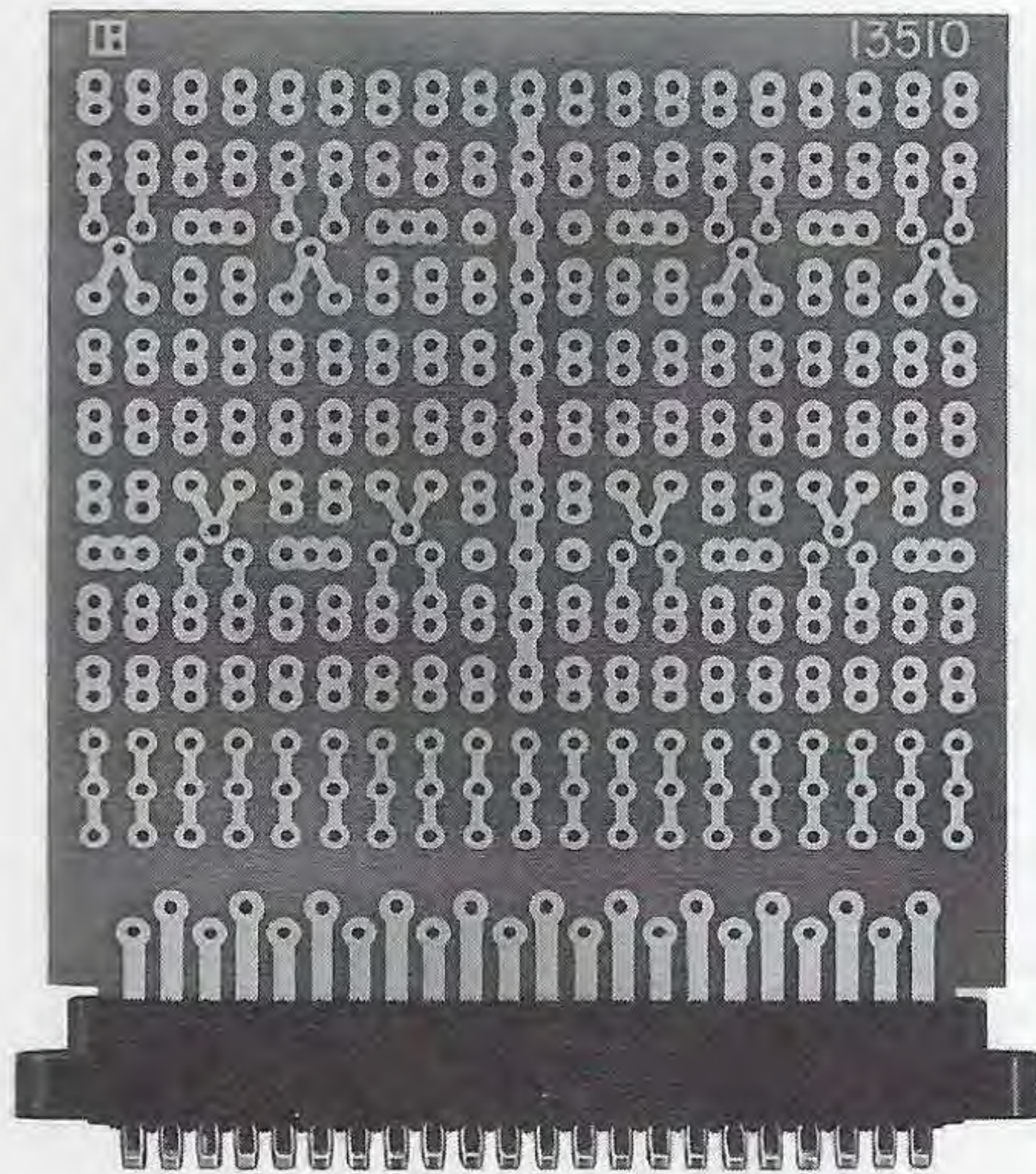
Cat. No. 13546
and Cat. No. CO-13546

UNIVERSAL CIRCUIT CARDS AND WINCHESTER CONNECTORS



**DISTRIBUTED
BY TRIAD**

NOTE: Finish on all boards shown on pages 24, 25 and 26 is bright immersion tin.



Cat. No. 13510
and Cat. No. CO-13510



Cat. No. 13544
and Cat. No. CO-13544

Many universal circuit cards are supplied with the applicable Winchester connector for quick and easy assembly of prototypes and short runs. The listing on pages 24 and 25 shows the types that are available from stock.

The Winchester 8BD18S and 8BD22S connectors are molded from phenolic type MFG material per MIL-M-14. Precision, uniform bifurcated contact surfaces are pressed firmly against the PC terminal area by the double-acting flat spring grip that maintains a constant and non-damaging contact at all times. Individual identification of contacts is provided on front and rear body faces for easier wiring and circuit tracing.

The Winchester PCM25D62D24-1 has straight contact tabs to permit lead insertion in through holes for wave or dip soldering applications. Exclusive design short-path contacts create a short, direct low resistance electrical path between board and back plane inter-connection.

No. 13500-1 Board has 233 mounting pads of one or more holes each, front and back, for a total of 444 holes per card. Standard hole size, .052". Land pattern is compatible with standard .1 grid design. Placing of holes permits insertion of components directly into board. Has 22 fingers to fit any standard plug-in, right angle or swage-type connector with .156" spacing. May be sawed or sheared to adapt to any circuit. Size 4" x 4½". Base material ¼" paper epoxy.

No. 13500-2 Board is same as above but glass epoxy.

No. CO-13500-1 and No. CO-13500-2 Boards include 8BD22S connector.

No. 13510-1 Board. An extension of the 13500 card, advanced design including specific transistor locating holes, a ground bus down the center of the card and more convenient location for pad rows. Has 190 mounting pads of one or more holes each, front and back, for a total of 421 holes per card. Has 22 fingers for any connector with .156" spacing, plus 22 pairs of pads located for installation of Elco-type connectors. Standard hole size, .052". Size 4" x 4½", ¼" thick. Paper base epoxy.

No. 13510-2 Board same as above but glass epoxy.

No. CO-13510-1 and CO-13510-2 Boards include 8BD22S connector.

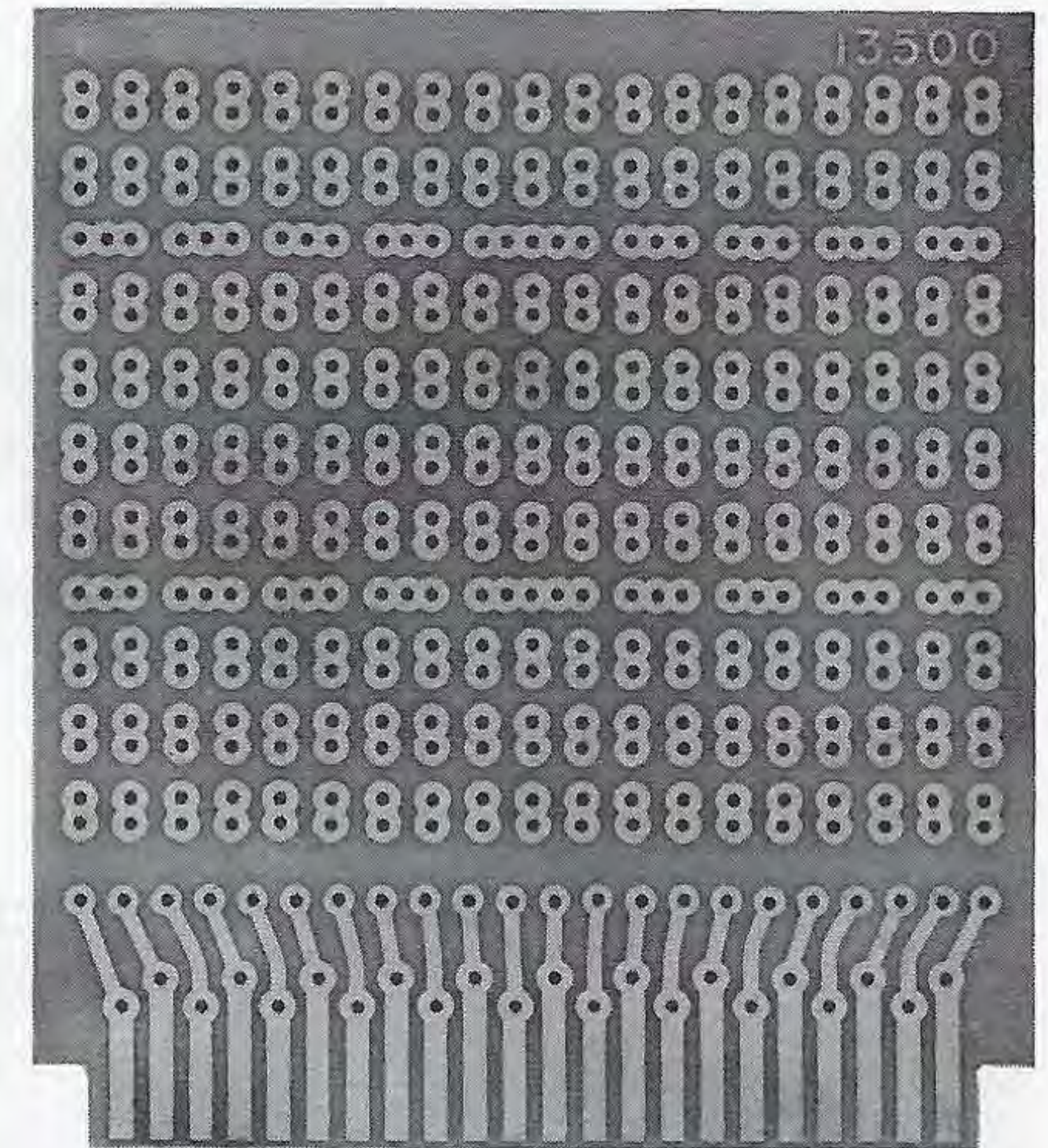
No. 13511 Board. An extension of the 13510 card, incorporating specific transistor locating holes, ground bus down the center and more convenient location for pad rows. Size 4" x 7". Base material, ¼" paper base epoxy. Has more than 300 mounting pads of one or more holes each, front and back, for a total of more than 650 holes per card. Has 22 fingers on both ends to fit any connector with .156" spacing, plus 22 pairs of pads conveniently located for installation of Elco-type connectors. Standard hole size, .052".

No. CO-13511A Board includes one 8BD22S connector.

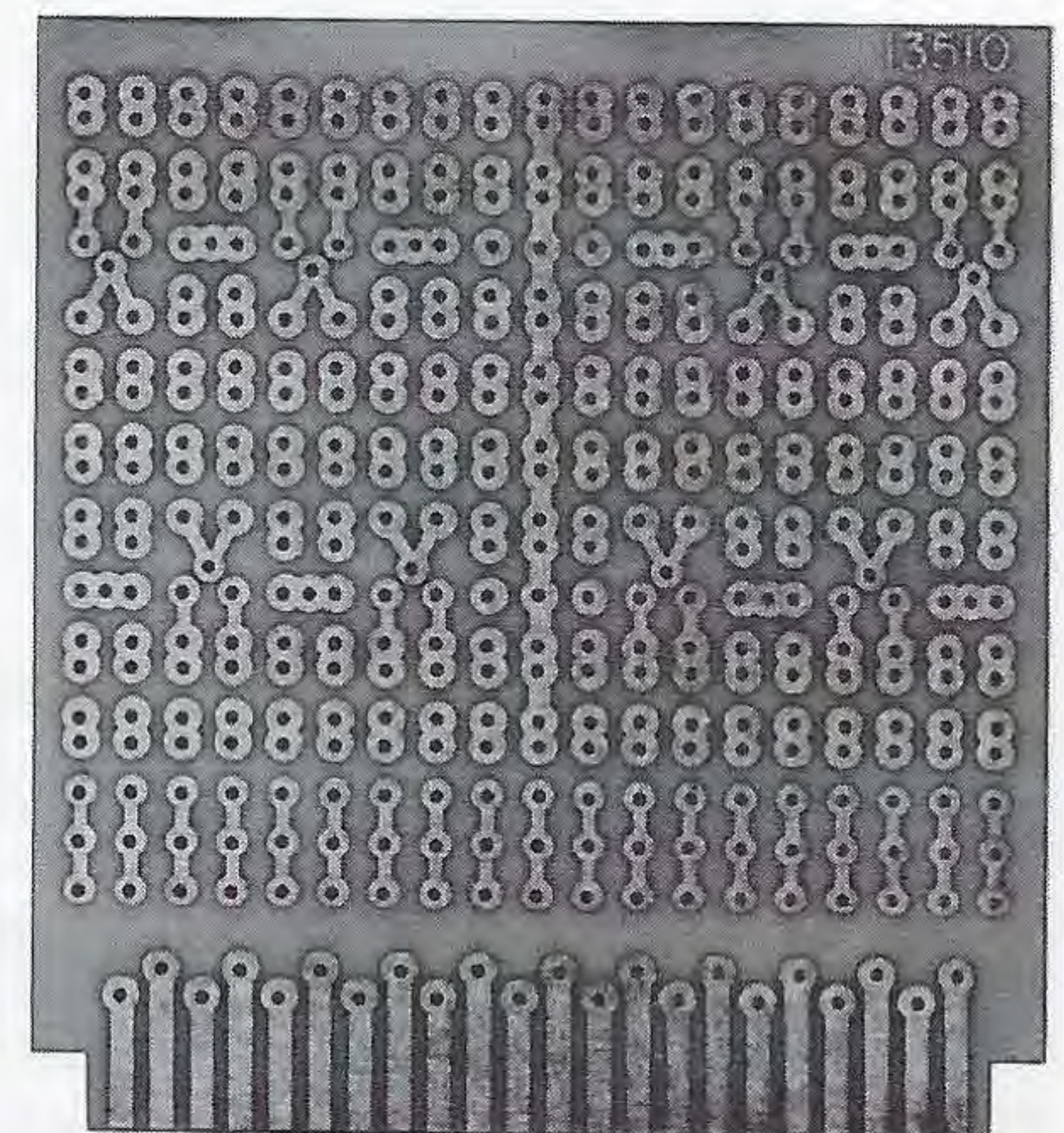
No. CO-13511B Board includes two 8BD22S connectors.

No. 13544 Board. Accommodates as many as sixteen 8-pin TO-5 case types of components. Overall dimensions, 3.000 inch by 4.860 inch.

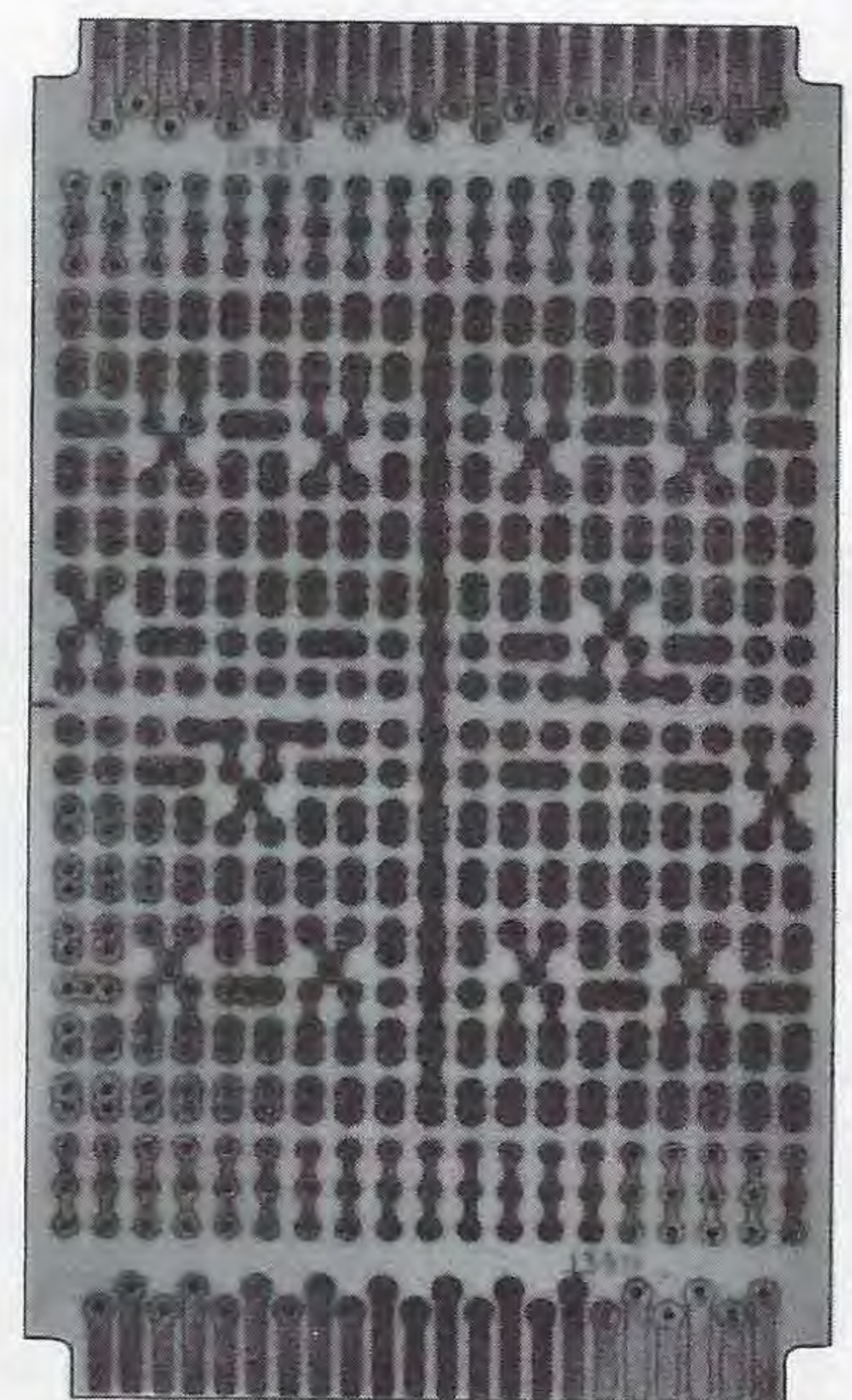
CO-13544 Board includes Winchester PCM25D-62D24-1 connector—the same as used on CO-13545.



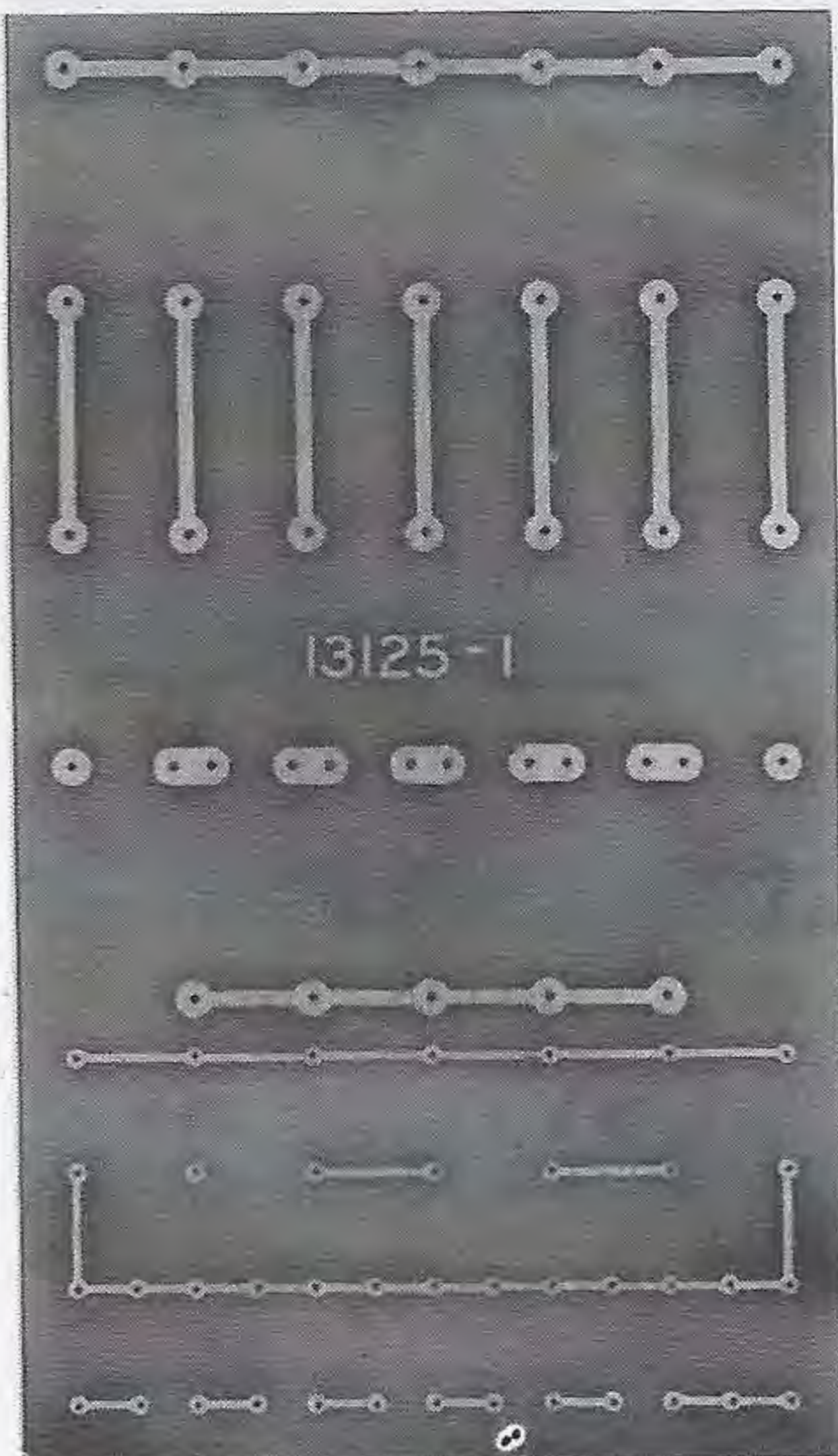
Cat. No.
13500



Cat. No.
13510



Cat. No.
13511

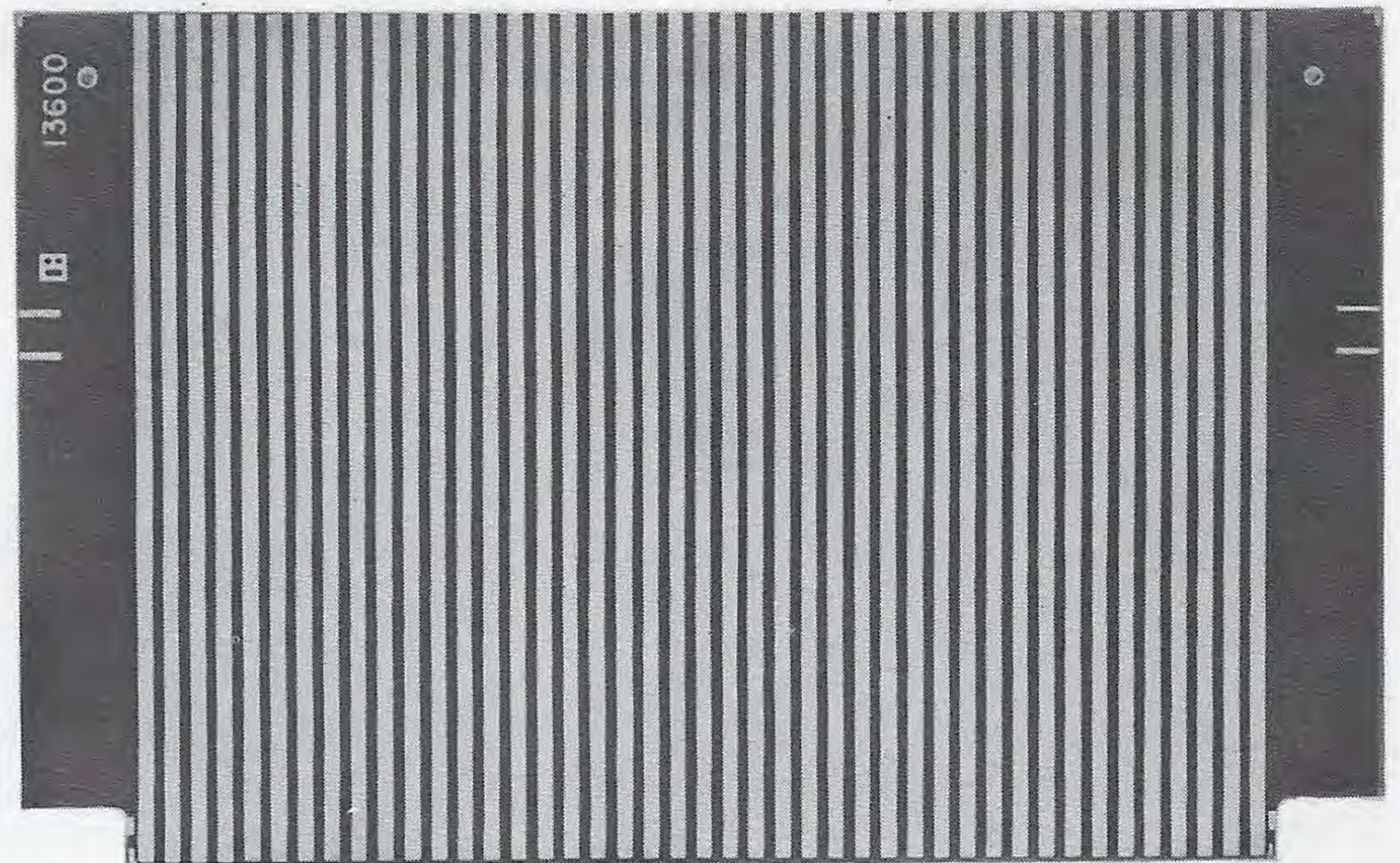


NO. 13125 NASA TRAINING BOARD

This single-side board of G-10 glass epoxy is designed and manufactured to meet the requirements of NASA-sponsored solder training schools. Size $3\frac{1}{2}$ " x $6\frac{1}{4}$ ", $\frac{1}{16}$ " thick, 1 oz. copper one side. Conductor widths, .062" and .031".

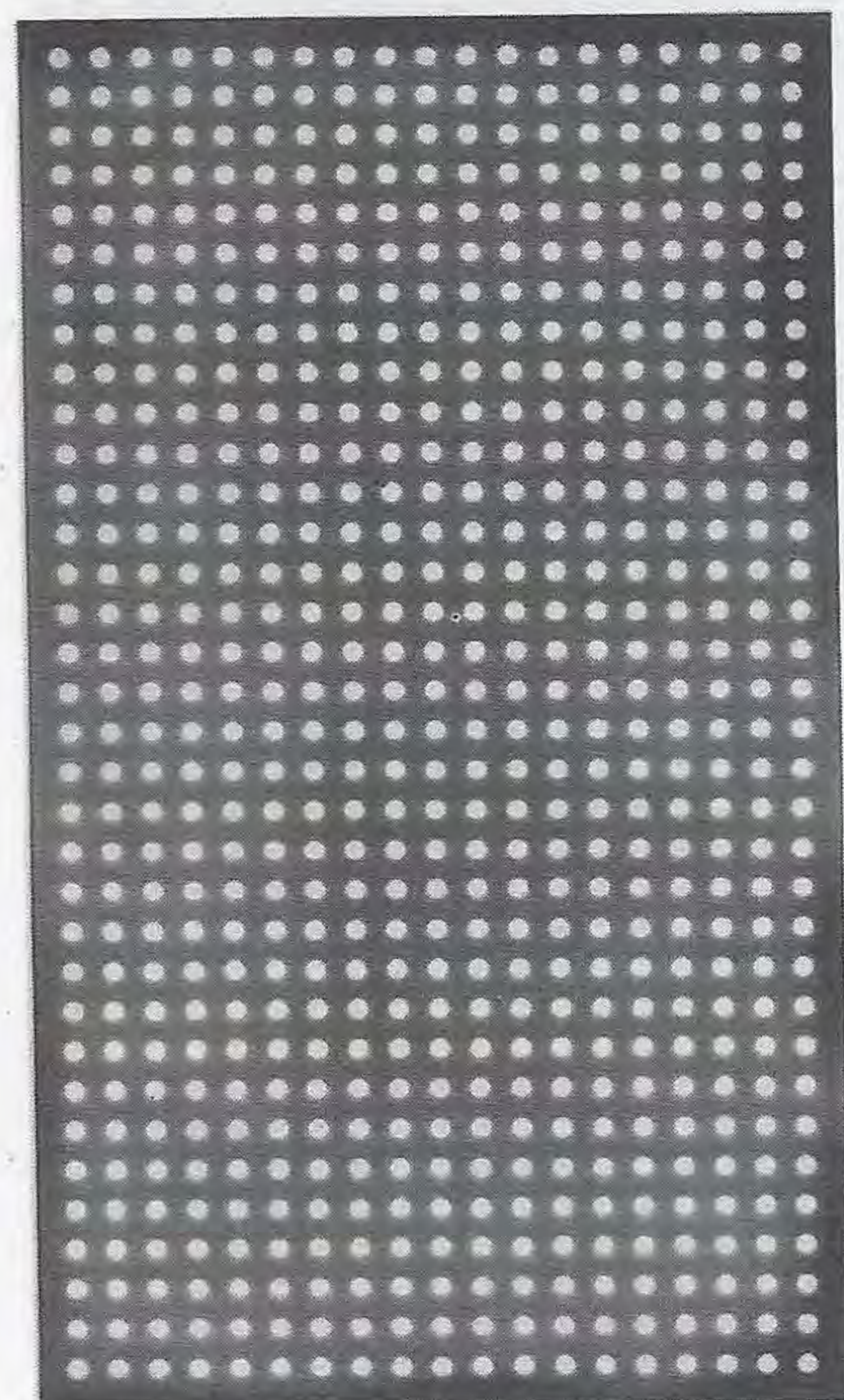
▲ NO. 13801 (.093" hole size) PRE-PUNCHED TERMINAL CARD

Provides an over-all grid of pre-punched holes for breadboarding as well as production. Especially useful for subminiature circuitry using transistors and small diodes. The holes accommodate a variety of standard turned terminals as well as push-in terminals. Has 646 holes (19x34) on .020" centers. Board may be broken off along the hole lines when it is inconvenient to saw. Paper base epoxy. $\frac{1}{16}$ " thick; size 4" x 7".



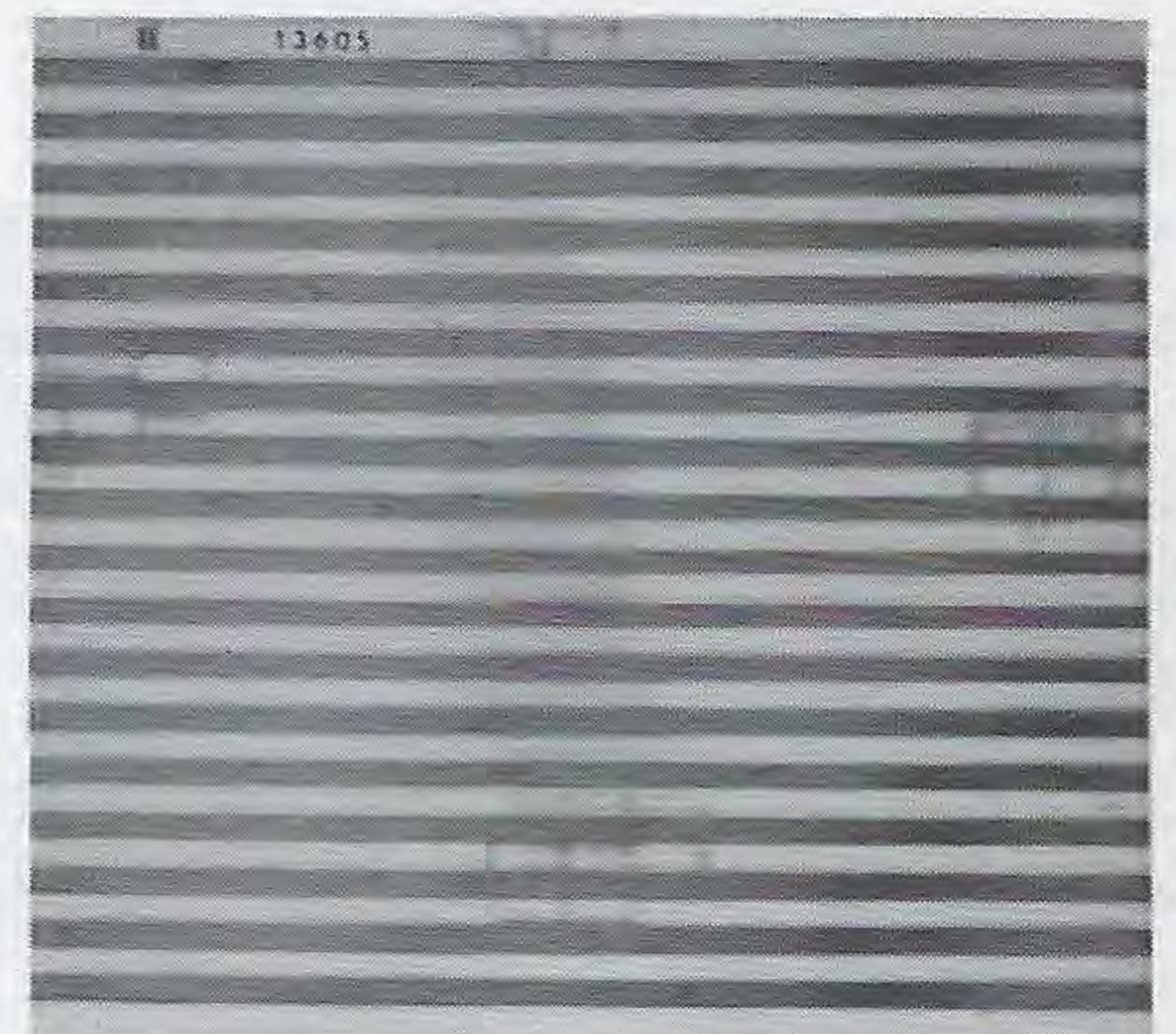
NO. 13600-1 EXTENDER CARD

Used to extend the fingers of a circuit card to allow access to boards mounted in racks or panels. Frees both sides of electronic circuit for maintenance under operating conditions, engineering change testing during operation, and investigation of parameters or parameter changes during operation. Wire harness ends may be soldered to the card to provide a means for plug in. Measures 5" x 8" with 43 extension strips on each side of the board. Base material is $\frac{1}{16}$ " paper epoxy. Standard .156" spacing for most printed circuit connectors. Also stocked in glass epoxy as No. 13600-2.



✚ NO. 13605 EXTENDER CARD

Measures 2.976 x 3.273" with 18 extender strips on each side of the board. Base material is $\frac{1}{16}$ " glass epoxy. Standard .156" spacing for most printed circuit connectors. Also stocked as CO-13605-A with one Winchester 8BD18S connector, and as CO-13605-B with two 8BD18S connectors, a double-side readout type with bifurcated contacts.

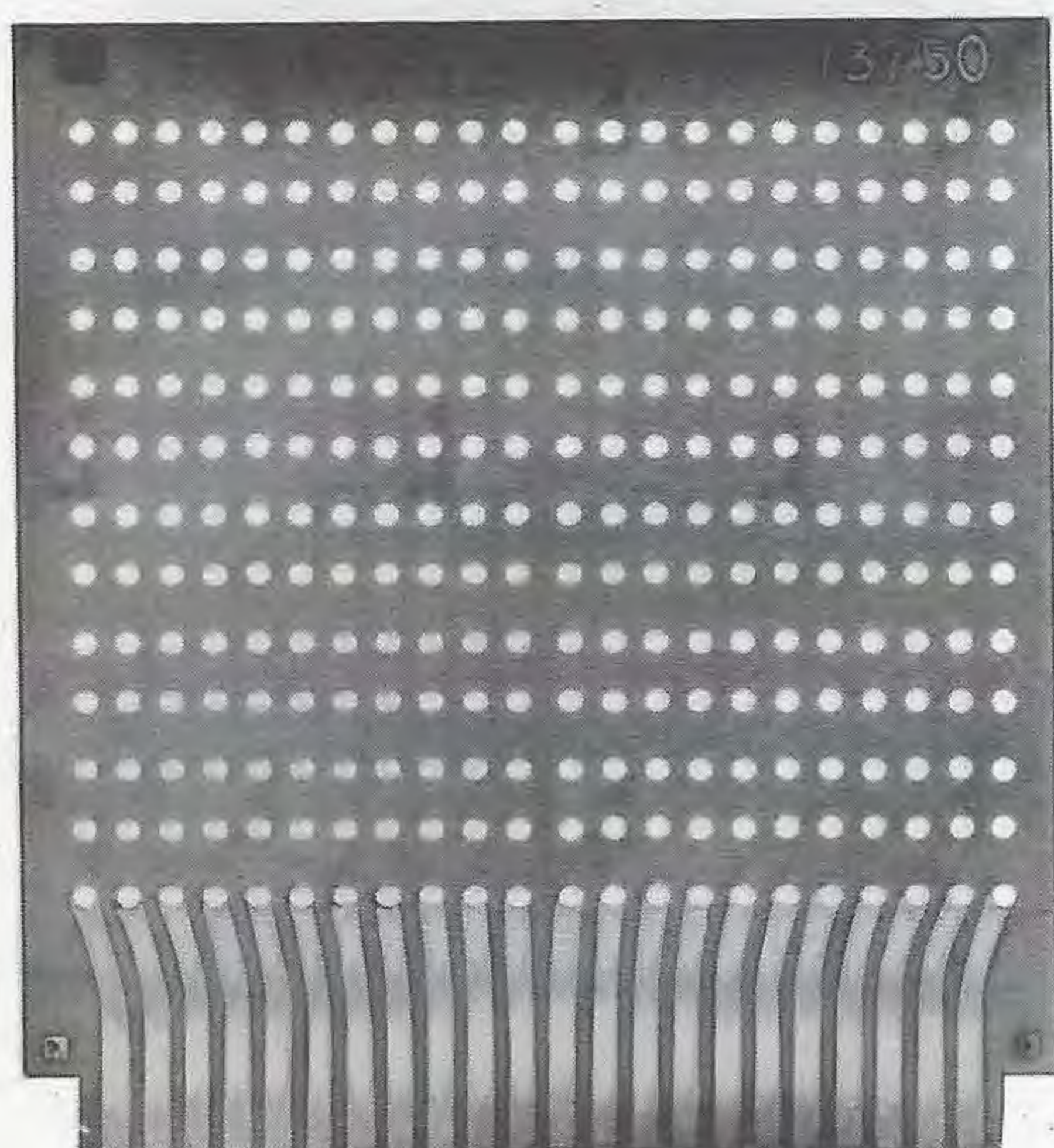


✚ NO. 13610 EXTENDER CARD

Measures 3.000 x 4.860" with 25 extender strips on each side of the board. Base material is $\frac{1}{16}$ " glass epoxy. Standard .050" centers. Also stocked as CO-13610-A with one Winchester PCM25D62D24-1 Connector, and as CO-13610-B with two PCM25D62D24-1 connectors, a double-side readout type with beryllium copper gold-plated contacts. Molding material is flame resistant per MIL-M-14 type SDG-F.

Used in development of prototype printed circuitry and design testing of circuit layout. Either card allows use of more than 300 terminals in seven rows of $\frac{1}{2}$ " spacing on each side. Permits mounting of an almost unlimited number of components to either or both sides of cards. Cards have 22 fingers with standard spacing of .156" to allow use with most printed circuit connectors. Size 4" x $4\frac{1}{2}$ ", $\frac{1}{16}$ " paper base epoxy. No. CO-13750 and CO-13751 Boards include Winchester 8BD22S Connector.

▲ Discontinued item, available until stock depleted.
✚ New item.



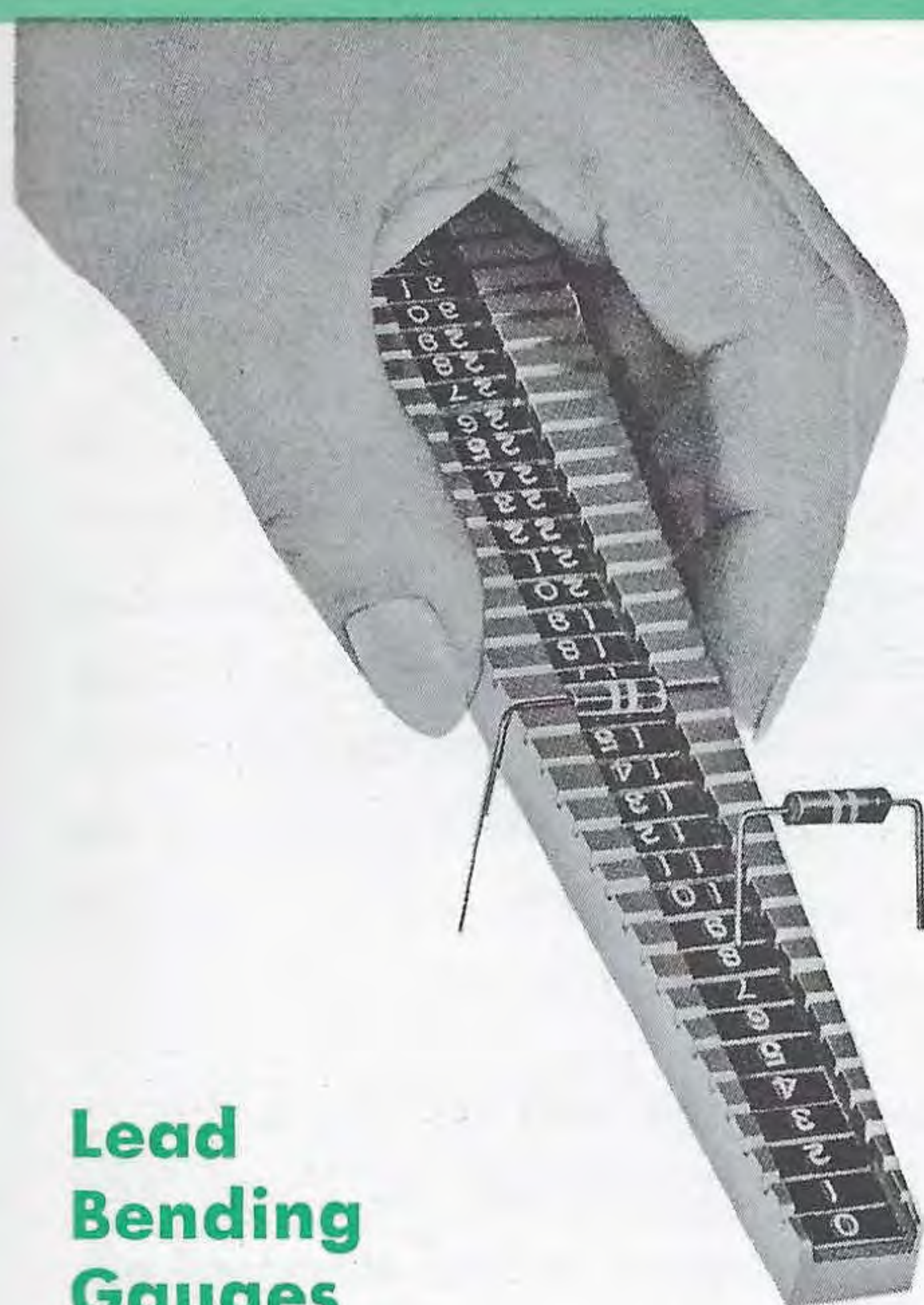
NO. 13750 (.093" hole size) NO. 13751 (.063" hole size) PLUG-IN TERMINAL CARDS



CIRCUIT CARD EXTRACTORS LEAD BENDING GAUGES



**DISTRIBUTED
BY TRIAD**



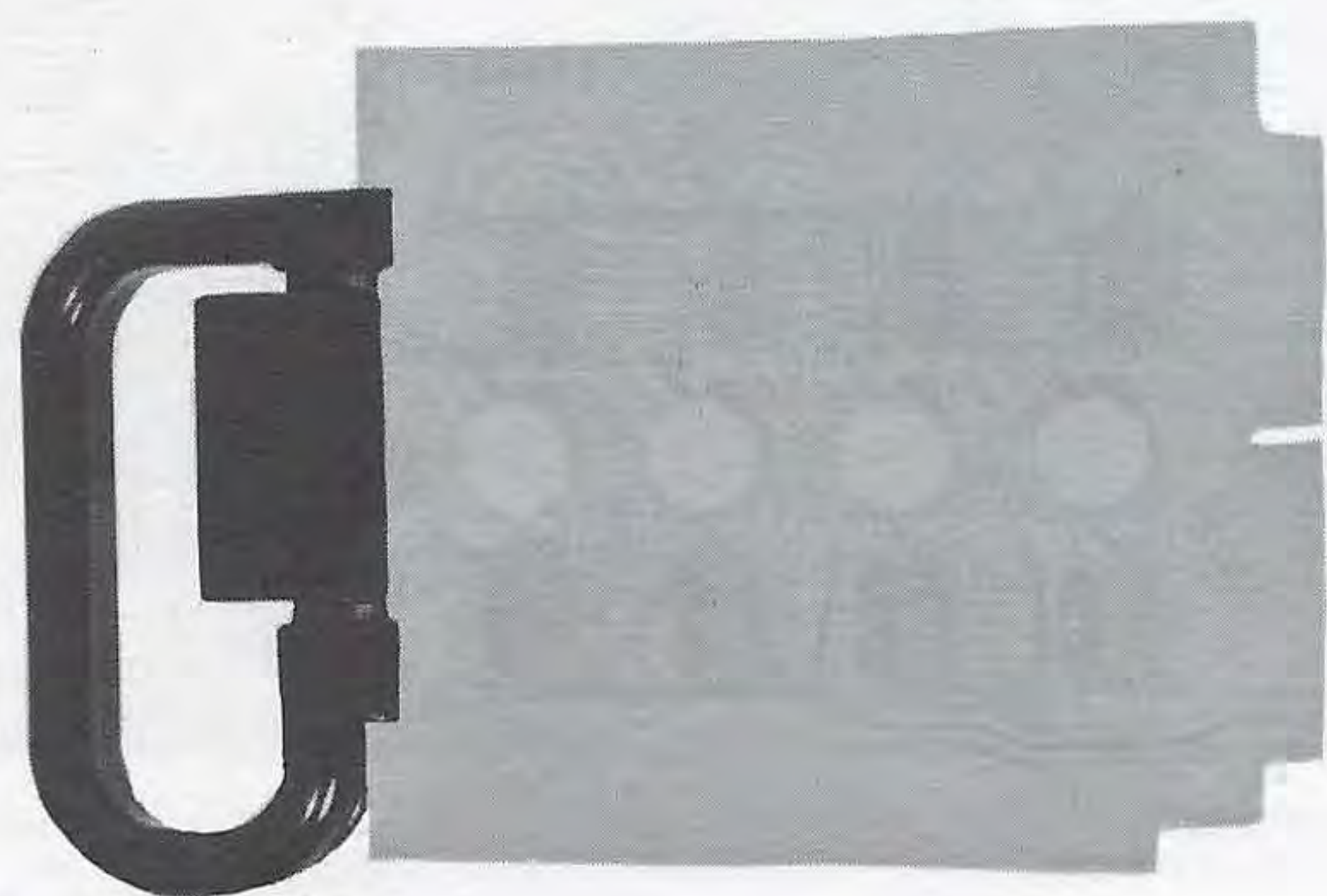
No. MK-1
No. MK-2
No. MK-3
No. MK-4

Lead Bending Gauges

A set of four MK lead bending gauges will provide fast, accurate forming for most components used in printed board circuitry. All models have 40 numbered positions. Each position is numbered and leads are bent rapidly with gentle finger pressure. No other tools are required. Aggravation and physical damage to components associated with "free bending" by long-nose pliers are completely eliminated.

The MK-1 gauge (.375 to 1.50 centers) is designed for ¼-watt resistors, although diodes, disc capacitors and other parts of similar size may be processed. The MK-2 gauge (.50 to 1.50 centers) is for ½-watt resistors and items of similar sizes. The MK-3 gauge (.75 to 2.50 centers) is designed for 1-watt resistors and similar components. The MK-4 (.875 to 2.50 centers) is used on 2-watt resistors and items of similar size, with special features to accommodate the DO outline "TOP HAT" diodes. These methods are currently being employed to determine the correct component lead spacing:

- (1) The gauges may be used to "sight" the proper position by aligning the correct slot between the holes or terminals to be used, and noting the slot number for future reference.
- (2) The design draftsman may select the proper slot number and make a notation on the list of materials by the component's reference designation.
- (3) The appropriate numbers may be silk-screened on the board. This method is being used successfully on very large and complex units. Jumper wires are also formed using the numbering systems, giving a uniform appearance to the completed assemblies.



NO. CE-4 Circuit Card Extractor



Adjusts to fit card widths from 4 to 6 inches. Does not interfere with components on card. Will not damage card in any way. Grabs card securely on edges. Measures 6½ x 4¾ inches. Heavy gauge steel, nickel finish.

NO. CE-5 Extractor for integrated circuit cards

This rugged, light-weight tool is "made to measure" for miniature integrated circuit cards and modules. With its interchangeable parts, the CE-5 is adjustable to all boards ranging from one to four inches in width. Grips the edges of the board and allows for easy handling, insertion and extraction. Measures 4¼ x 4½ inches.



NO. CE-1 Card Extractor

Space requirements much less than finger-hole type. Becomes integral part of card until released. Cam action, quick release. One-handed operation with 60-lb. pull. Sturdy plastic construction. Measures 4¼ x 2½ inches.

UTRAD meets industries' broad needs with a broad line of magnetic components

Most of the standard off-the-shelf items shown in this catalog are made by Triad-Utrad, at the same location as the Distributor Division, and are indicative of Utrad's diverse capabilities. However, Utrad's primary purpose is the design and manufacture of magnetic components other than standards.

Utrad came into being as a specialist in custom components, and the company annually produces hundreds of thousands of such varied products as those shown on the opposite page. They are representative of the many different types which Utrad makes for its customers in the home entertainment, military, communications and broad industrial markets.

Utrad products range from deflection components for television and video display equipment to high reliability transformers for military use, from tiny transistor transformers to heavy-duty magnetron pulse transformers and magnet coils for microwave cooking.

Utrad employs a versatile staff of design engineers and technicians whose sole purpose is to work directly with you in the initial stages of your equipment development. In addition, Utrad supports the design activity with a model shop to effect the most expeditious han-

dling of engineering prototypes and pilot line runs. Utrad has unique machines and methods in all departments; a temperature-controlled room for the winding and assembly of miniature fine-wire components, toroidal inductors and transistor power supply transformers; an in-plant machine shop with tool and die making facilities; an automated conveyor system for large-scale production of deflection yokes.

Every year, the product line as well as the industry recognition of Utrad has been gaining in scope and stature. Although you will frequently find standard off-the-shelf items to be of tremendous assistance in your initial prototype and production programs, since they are readily available, there are countless applications so unusual that only a custom component will do the job.

When the circuit indicates something special, we urge you to call on Utrad, or the representative listed on the back cover, for assistance.

TRIAD-UTRAD, HUNTINGTON

A DIVISION OF LITTON PRECISION PRODUCTS INC.

305 N. Briant St. • Huntington, Ind. 46750

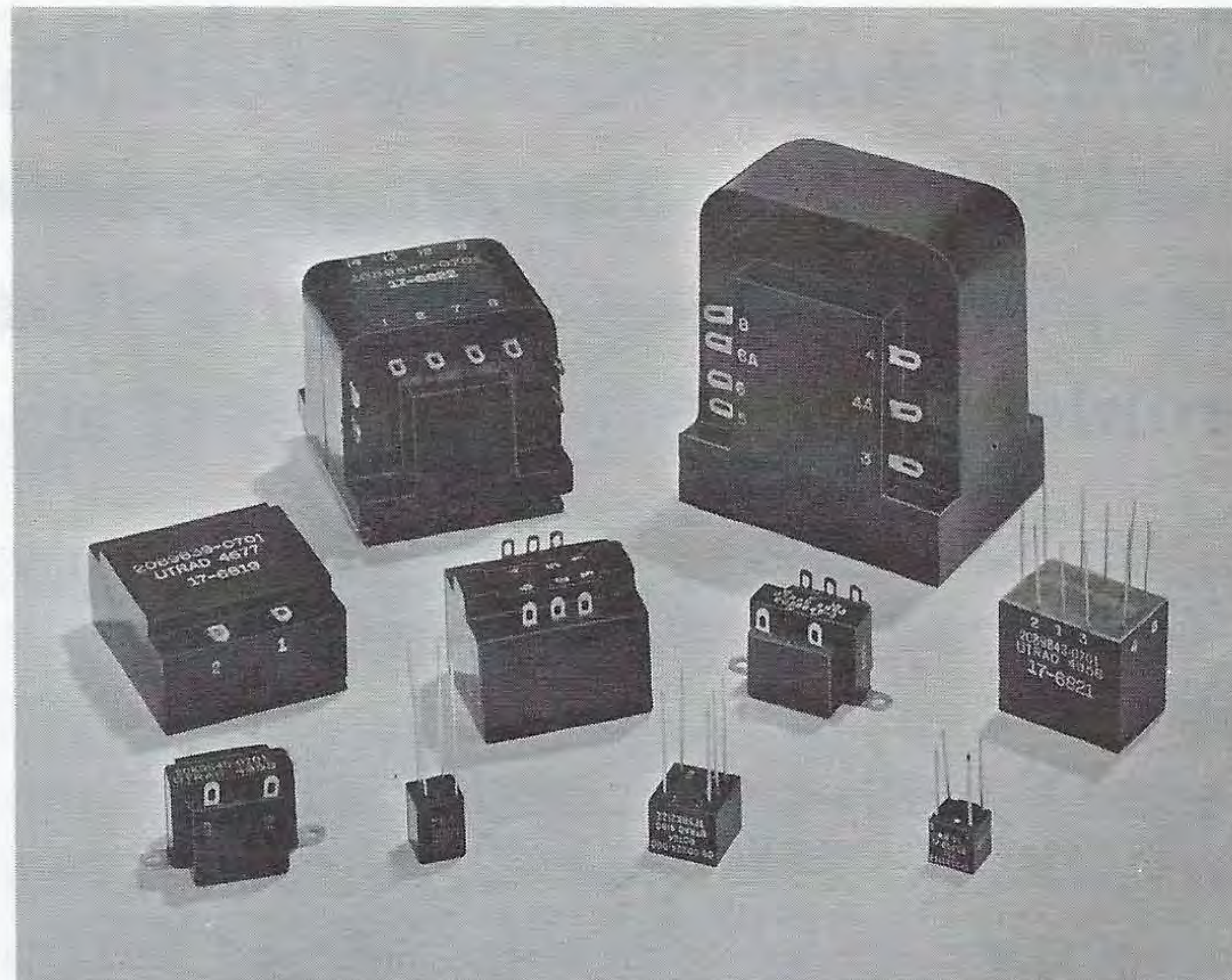
Telephone (219) 356-7100 • TWX: 810-333-1532



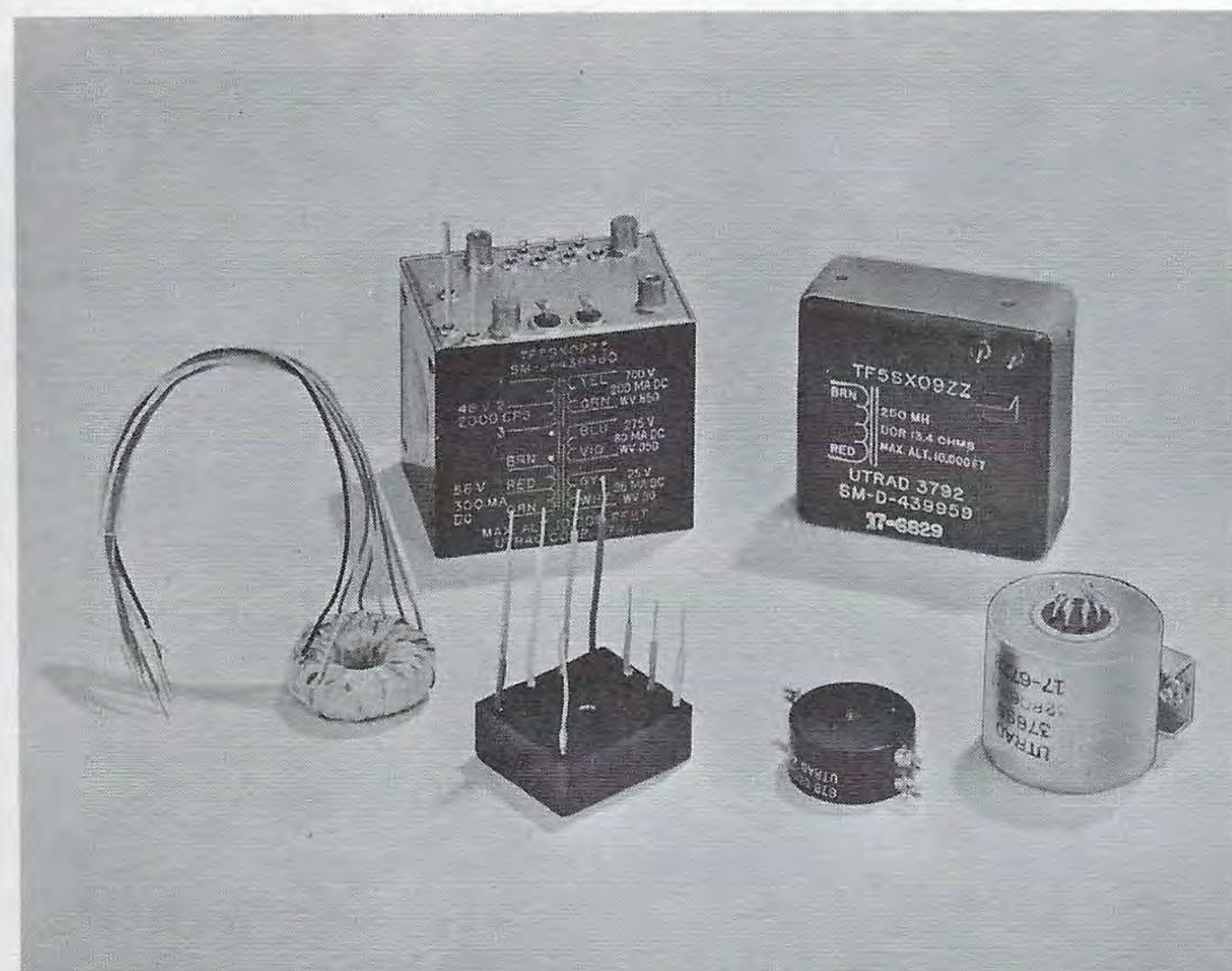
Aerial view of Utrad plant in Huntington, Indiana



"Mini-Yoke" (center) for leading color television receivers. Special "fly-back" transformer and deflection yoke with vertical toroidal winding for high resolution video display use.



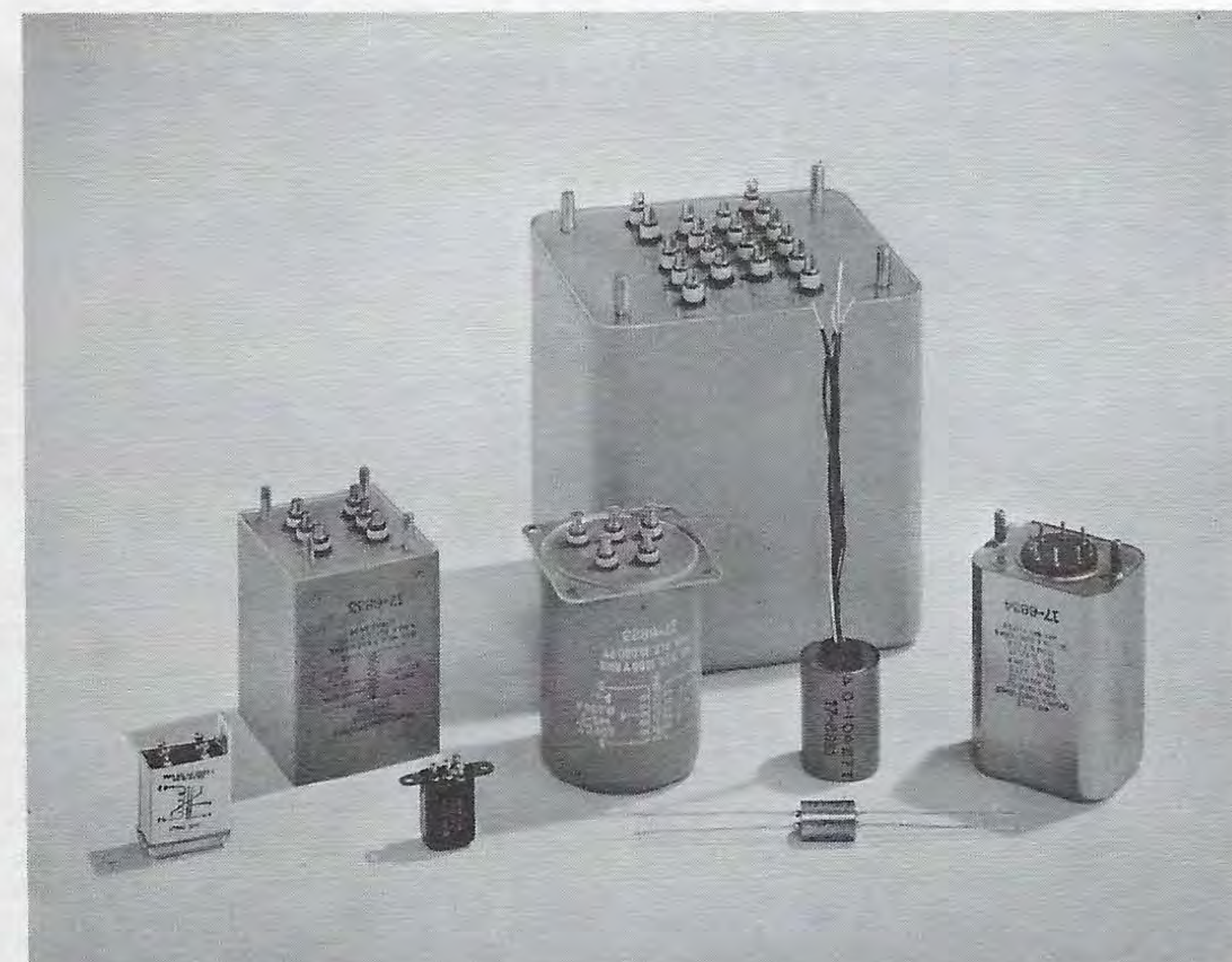
Epoxy encapsulated transformers built to meet MIL-T-27B specifications, Grades 4 and 5. Styled for either printed circuit board or chassis mounting.



Toroidal transformers and inductors for MIL-T-27B Grades 4 and 5 applications, and in open taped/dipped construction. Used in power inverters, at audio frequencies and where a low exterior magnetic field is desired.



Filament transformer and ferroresonant plate transformer for microwave cooking applications.



Hermetically-sealed transformers built to meet MIL-T-27B Grade 4 specifications. Power, audio and specialized low frequency designs with up to 90 db. shielding.



High voltage power supply for use in electrostatic air filtering and electrostatic photocopying equipment.

Triad has the resources and the skills to solve your special transformer, inductor and filter problems

Turn first to Triad if you're wrestling with difficult design problems involving transformers, inductors or electric wave filters. In addition to designing and building many of the standard units shown in this catalog—and stocked by your local electronic parts distributor—the Triad plant in Venice, California devotes most of its design skills and production capacity to special, custom-built units to the specific requirements of original equipment manufacturers.

The facilities shown on this page are typical of Triad's advanced technology in meeting exacting military needs. Many of the leading military and aero-space companies—Hughes Aircraft, General Dynamics, Collins, Raytheon, Sperry, Honeywell, J. P. L., to name just a few—look to Triad for solutions to their toughest problems.

If a Triad standard transformer won't do the job, take your problem to the Venice plant for a solution.

TRIAD-UTRAD, VENICE

A DIVISION OF LITTON PRECISION PRODUCTS INC.
4055 REDWOOD AVE. • VENICE, CAL. 90293

Telephone: (213) 390-3571, (213) 870-5381

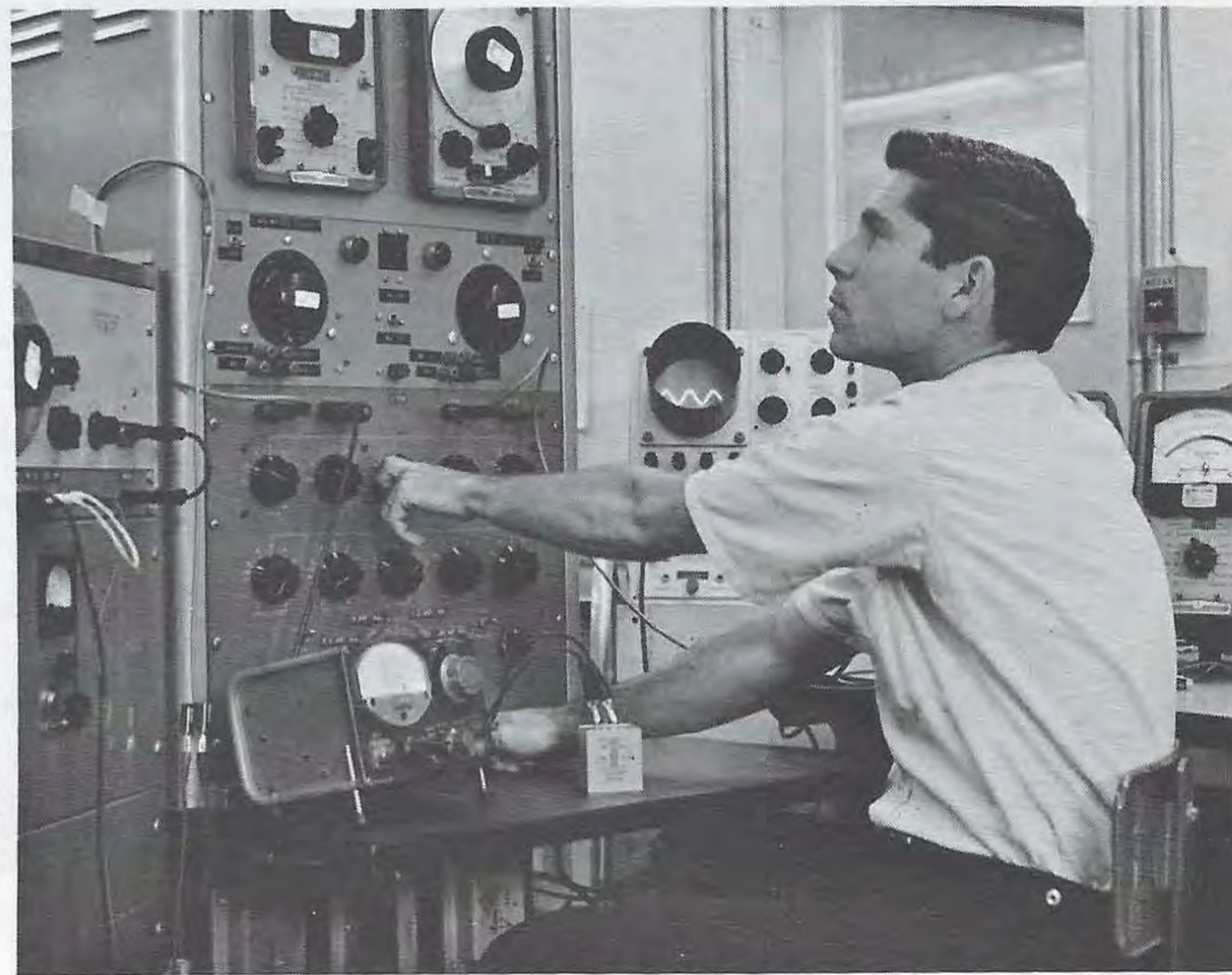
TWX: 910-343-6477



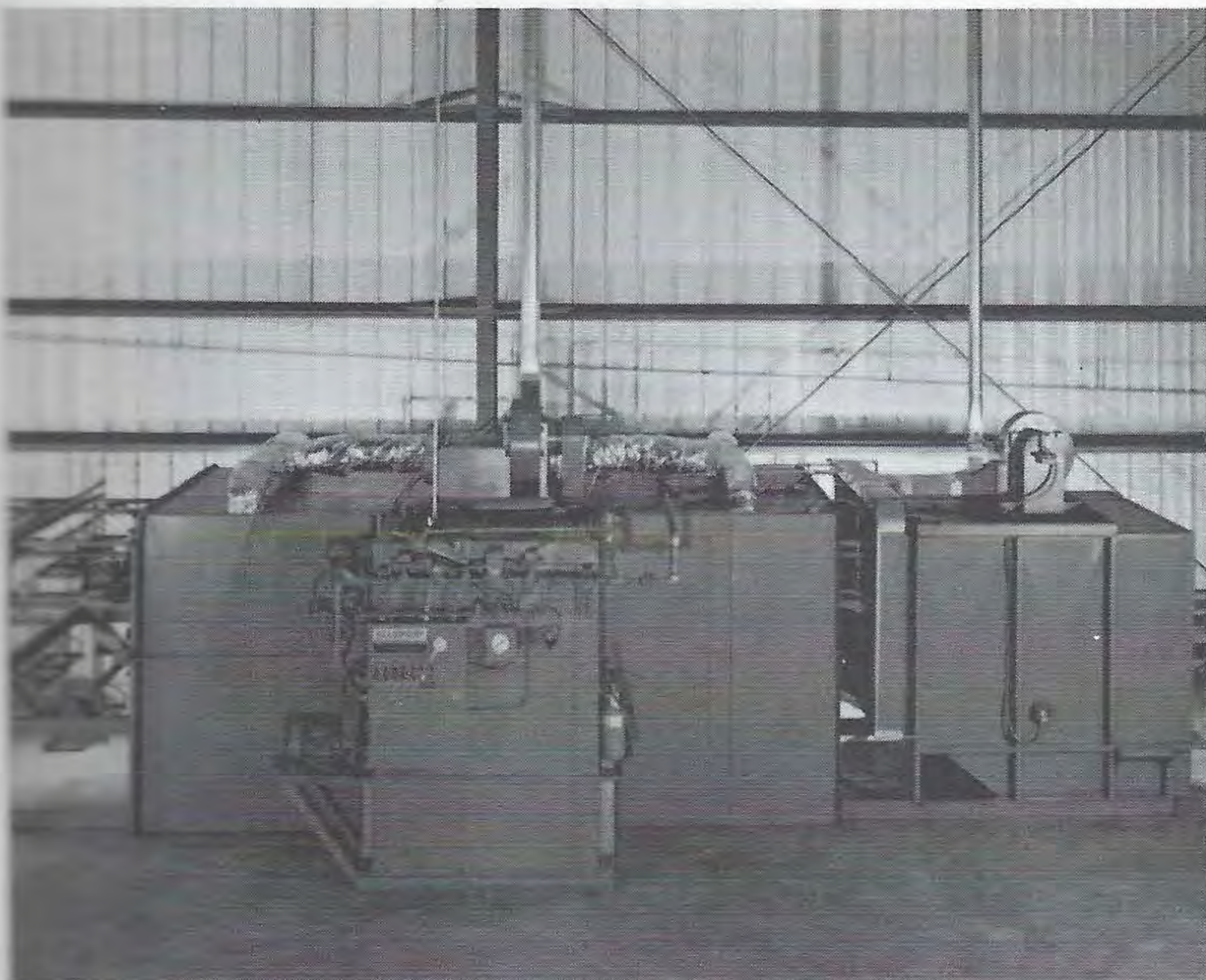
A view of some of the many multiple winding machines in Triad's Venice, California plant. The "Christmas tree" procedure dramatically cuts production time.



New automatic bobbin winding machines in the Triad Venice plant. These also shorten production time and assure prompt deliveries.



Triad's quality assurance laboratory is DESC-approved for performing qualification tests to Mil-T-27 and Mil-F-18327 for QPL.



Impregnation system in Chula Vista for transformers built in Tijuana



General view of assembly and inspection operations on circuit card assemblies and transformers.



Wave soldering machine for printed circuit card assemblies.

Triad de Mexico offers the same fast, dependable, precision craftsmanship long associated with Triad's history.

Look to this efficient facility for your special volume production requirements in the commercial or high reliability areas of:

- PRINTED CIRCUIT BOARD ASSEMBLIES
- CABLE AND HARNESS ASSEMBLIES
- ELECTRONIC TRANSFORMERS

This Tijuana location offers expert workmanship, close quality control, and quick delivery into all areas by plane, train or motor freight. No needless time-consuming expensive delays in getting your finished products to you quickly and to specification.

Facilities shown on this page represent a small portion of the capabilities and production space available for your specific design requirements.

For complete information on the advantages of using TRIAD DE MEXICO write, wire or phone:

TRIAD de MEXICO

TRIAD-UTRAD, (TIJUANA)

DIVISION OF LITTON PRECISION PRODUCTS INC.
4055 REDWOOD AVE. • VENICE, CAL. 90293

Telephone: (213) 390-3571, (213) 870-5381
TWX: 910-343-6477

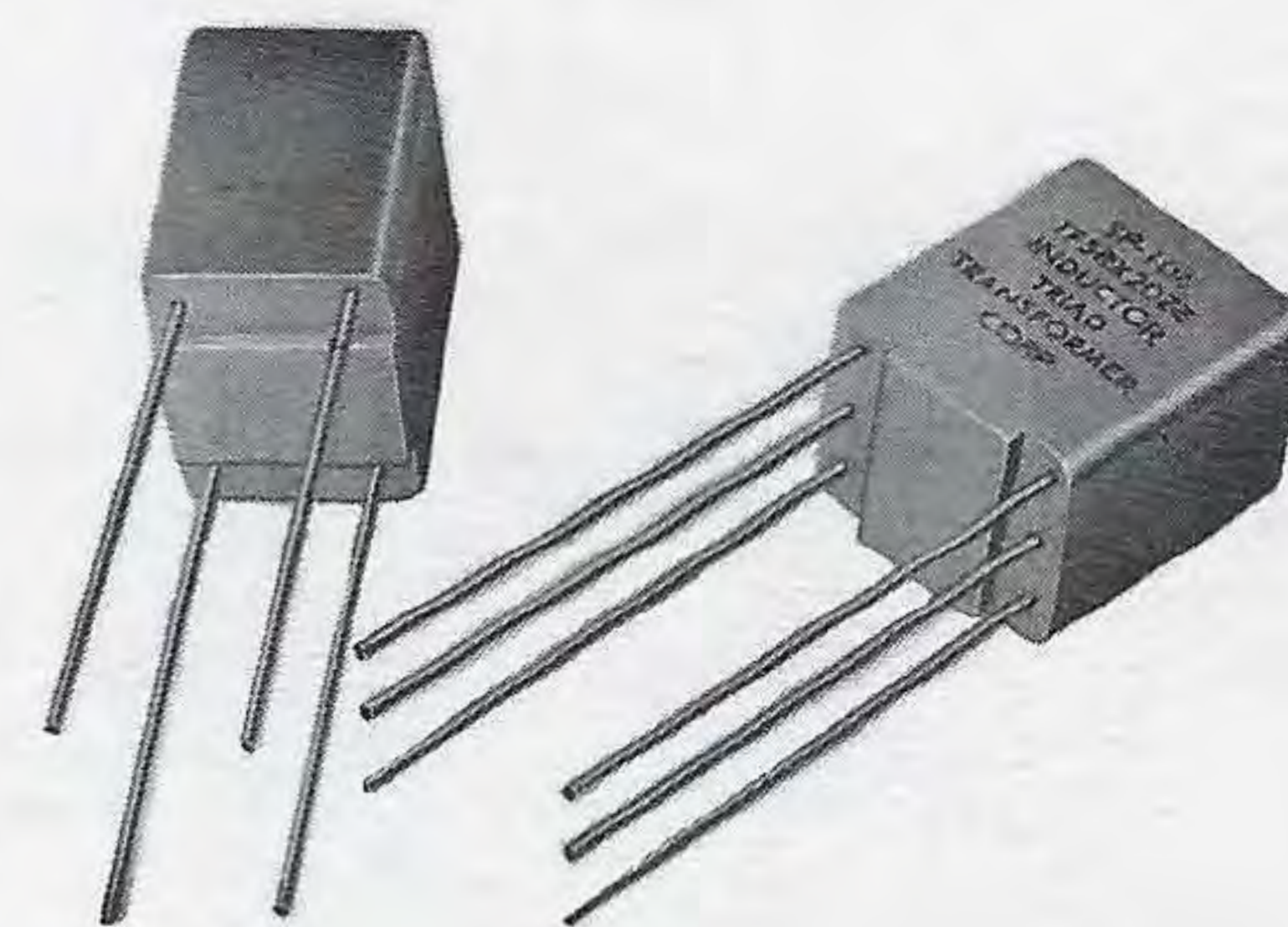


Loading components on printed circuit card preparatory to wave soldering.

RED SPEC TRANSISTOR TRANSFORMERS

Difficult, complex assembly processes make the Red Specs a notable achievement in high-quality miniaturization. They offer the same quality and reliability as larger units which use far less sophisticated materials. All Red Spec transformers are designed and constructed to conform to the rigid requirements of Specification MIL-T-27B.

Features of the reliable Red Specs: solid epoxy molded case . . . legible, permanent circuit data on every unit . . . base mounting pad for ready inspection of all solder joints . . . high-strength .020-diameter nickel alloy leads . . . no stripping or tinning required . . . operating voltage: 150 volts DC . . . exceptional operation from 100 to 100,000 cycles . . . base dimensions of only .310 by .410 inch . . . total height of just .465 inch . . . weight: 1/10 ounce . . . lowest possible fatigue factor . . . dry hydrogen-annealed Trialloy, deep-drawn .020-inch case available for providing as much as 20 to 45 db magnetic shielding. (See SP-310 case and dimensions on opposite page.)



Type No.	Mil Type Number	Power Level In MW	Application	Matching Impedance		Max MA DC Unbalanced In Primary	DC Resistance		Overall Turns Ratio	Fig. No.
				Primary	Secondary		Primary	Secondary		
SP-4	TF5SX16ZZ	10	Input	200,000 CT	1,000 CT	0	5300	100	14.1:1	3
SP-5	TF5SX16ZZ	25	Input	50,000 CT	1,000 CT	0	3800	75	7.1:1	3
SP-7	TF5SX16ZZ	10	Input	200,000	1,000	0	5300	100	14.1:1	1
SP-11	TF5SX13ZZ	40	Interstage	25,000/20,000	1,000/800	.5	1700	115	5:1	1
SP-13	TF5SX13ZZ	40	Interstage	25,000 CT/20,000 CT	1,000 CT/800 CT	.5	1700	115	5:1	3
SP-15	TF5SX13ZZ	50	Interstage	10,000 CT	1,500 CT	1	1050	300	2.57:1	3
SP-20	TF5SX13ZZ	50	Driver	10,000 CT	1,200 CT	1	1050	200	2.88:1	3
SP-21	TF5SX13ZZ	50	Driver	10,000 CT	2,000 CT	1	1050	330	2.24:1	3
SP-22	TF5SX13ZZ	50	Driver	10,000	2,000 CT/500§	1	1050	146/168§	4.48:1:1	4
SP-29	TF5SX13ZZ	50	Driver	10,000 CT	500 CT	1	1050	80	4.47:1	3
SP-32	TF5SX17ZZ	50	Output	500	50	3	60	8	3.16:1	1
SP-33	TF5SX17ZZ	50	Output	1,000	50	3	145	8	4.4:1	1
SP-34	TF5SX17ZZ	50	Output	600	3.2	3	70	.76	13.6:1	1
SP-35	TF5SX13ZZ	50	Output	1,200	3.2	2	131	.76	19.3:1	1
SP-36	TF5SX13ZZ	50	Output	10,000	3.2	1	1160	.81	55.8:1	1
SP-42	TF5SX17ZZ	50	Output	150 CT	12	10	18	2.7	3.54:1	2
SP-47	TF5SX13ZZ	50	Output	1,500 CT	12	3	179	2.9	11.2:1	2
SP-48	TF5SX13ZZ	50	Output	7,500 CT	12	1	796	2.9	25:1	2
SP-49	TF5SX17ZZ	50	Output	300 CT	600	7	41	98	1:1.42	2
SP-50	TF5SX17ZZ	50	Output	500 CT	600	3	67	98	1:1.1	2
SP-51	TF5SX17ZZ	50	Output	900 CT	600	4	104	96	1.22:1	2
SP-52	TF5SX13ZZ	50	Output	1,500 CT	600	3	168	92	1.58:1	2
▲SP-63	TF5SX13ZZ	50	Output	1,200 CT	3.2	3	131	.87	19.3:1	2
SP-64	TF5SX13ZZ	50	Output	1,600 CT	3.2	2.5	186	.8	22.3:1	2
SP-65	TF5SX13ZZ	50	Output	8,000 CT	3.2	1	790	.76	50:1	2
SP-66	TF5SX13ZZ	50	Output-Isolation	10,000 CT	10,000 CT	1	1000	1300	1:1	3
SP-67	TF5SX17ZZ	50	Output-Isolation	600 CT	600 CT	3	72	92	1:1	3
SP-68	TF5SX13ZZ	50	Output-Isolation	10,000	10,000 CT/2500§	1	1000	565/650§	2:1:1	4
SP-69	TF5SX17ZZ	50	Output-Isolation	600	600 CT/150§	3	72	40/45§	2:1:1	4
SP-70	TF5SX17ZZ	50	Output-Isolation	600	600	3	72	92	1:1	1
SP-106	TF5SX20ZZ	—	Audio Choke	6HY	—	2	1700	—	—	5
SP-107	TF5SX20ZZ	—	Audio Choke	1.25HY	—	2	180	—	—	5
SP-108	TF5SX20ZZ	—	Audio Choke	3.5HY	—	2	1100	—	—	5
SP-117	TF5SX20ZZ	—	Audio Choke	.9HY	—	2	110	—	—	5
SP-118	TF5SX20ZZ	—	Audio Choke	.3HY	—	4	42	—	—	5
SP-128	TF5SX20ZZ	—	Audio Choke	.1HY	—	5	15	—	—	5

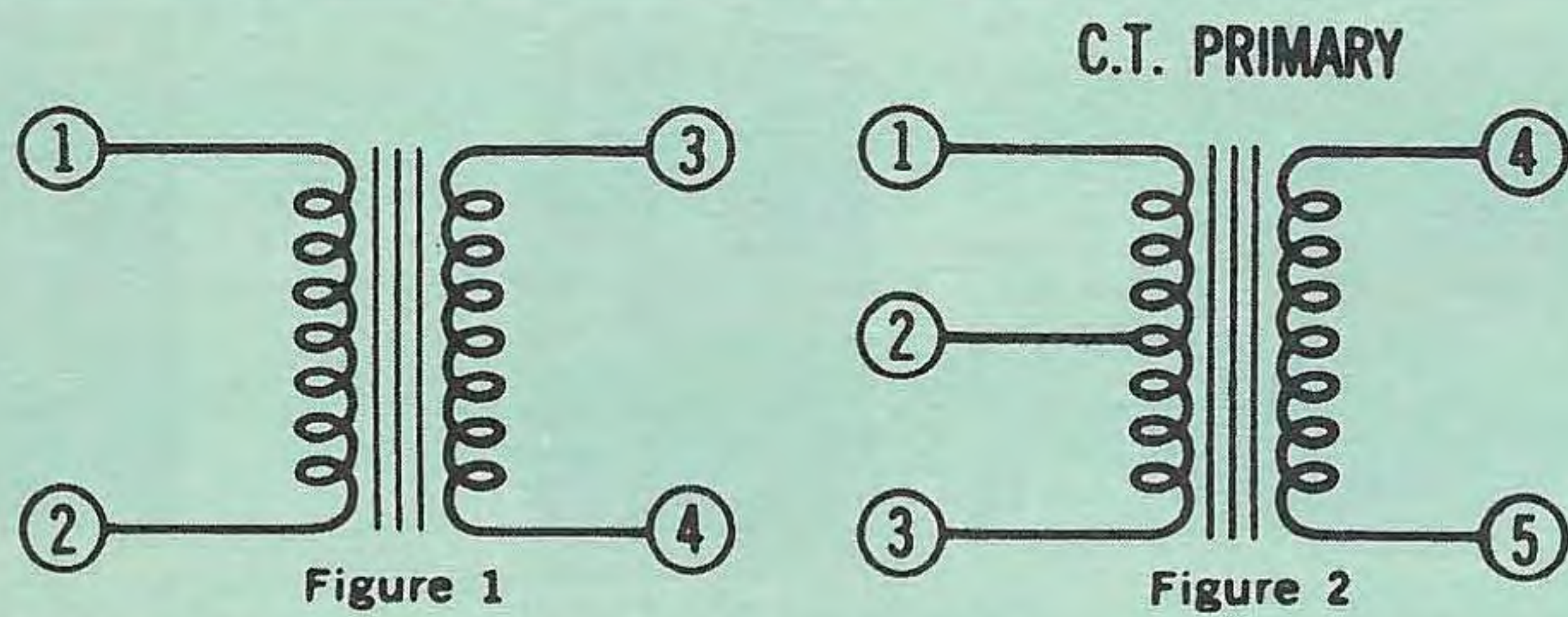
CT for Center Tap. § Split Secondary. ▲ Discontinued item, available until stock depleted.

AUDIO TRANSFORMERS

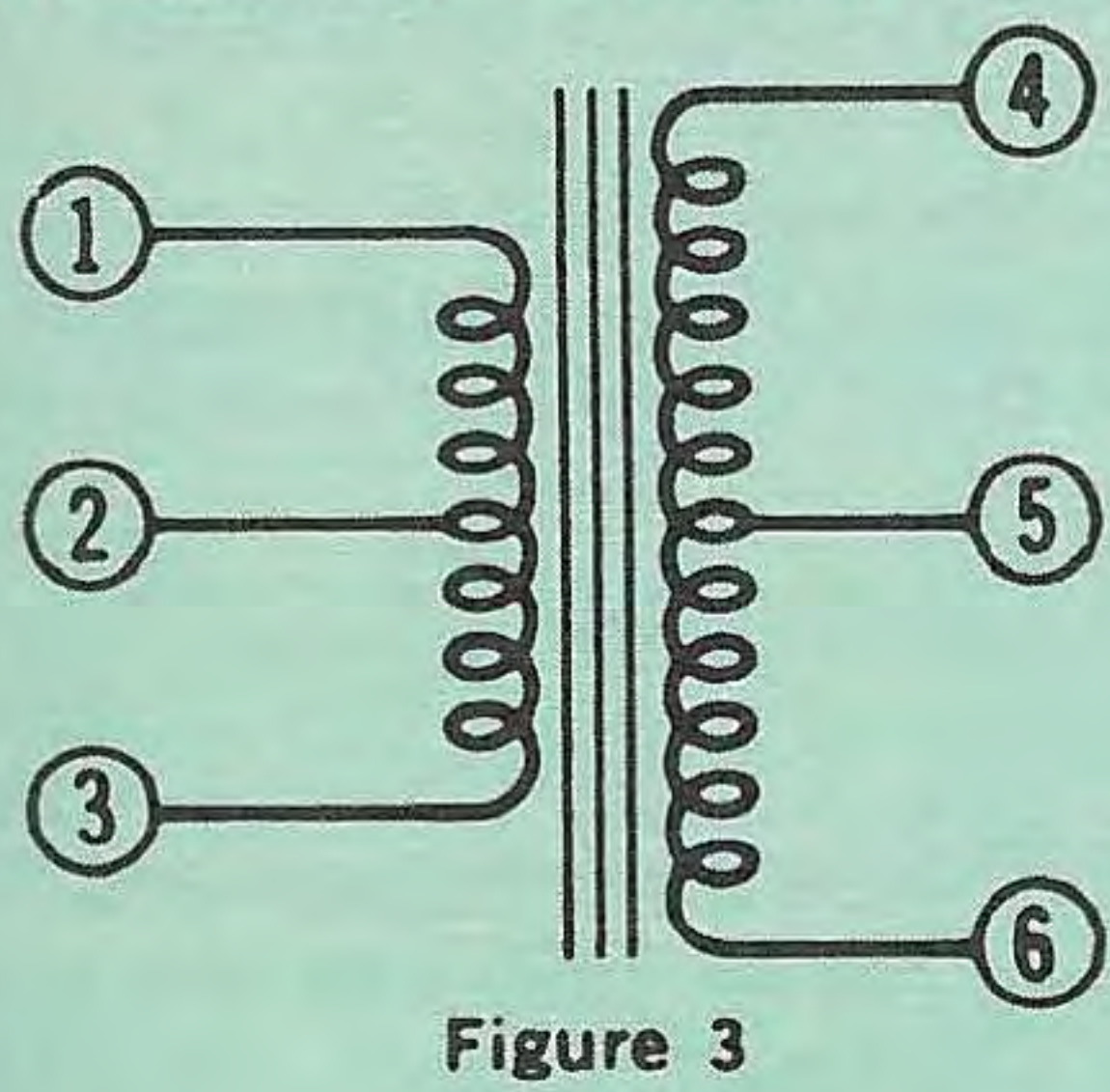


**MILITARY
GRADE**

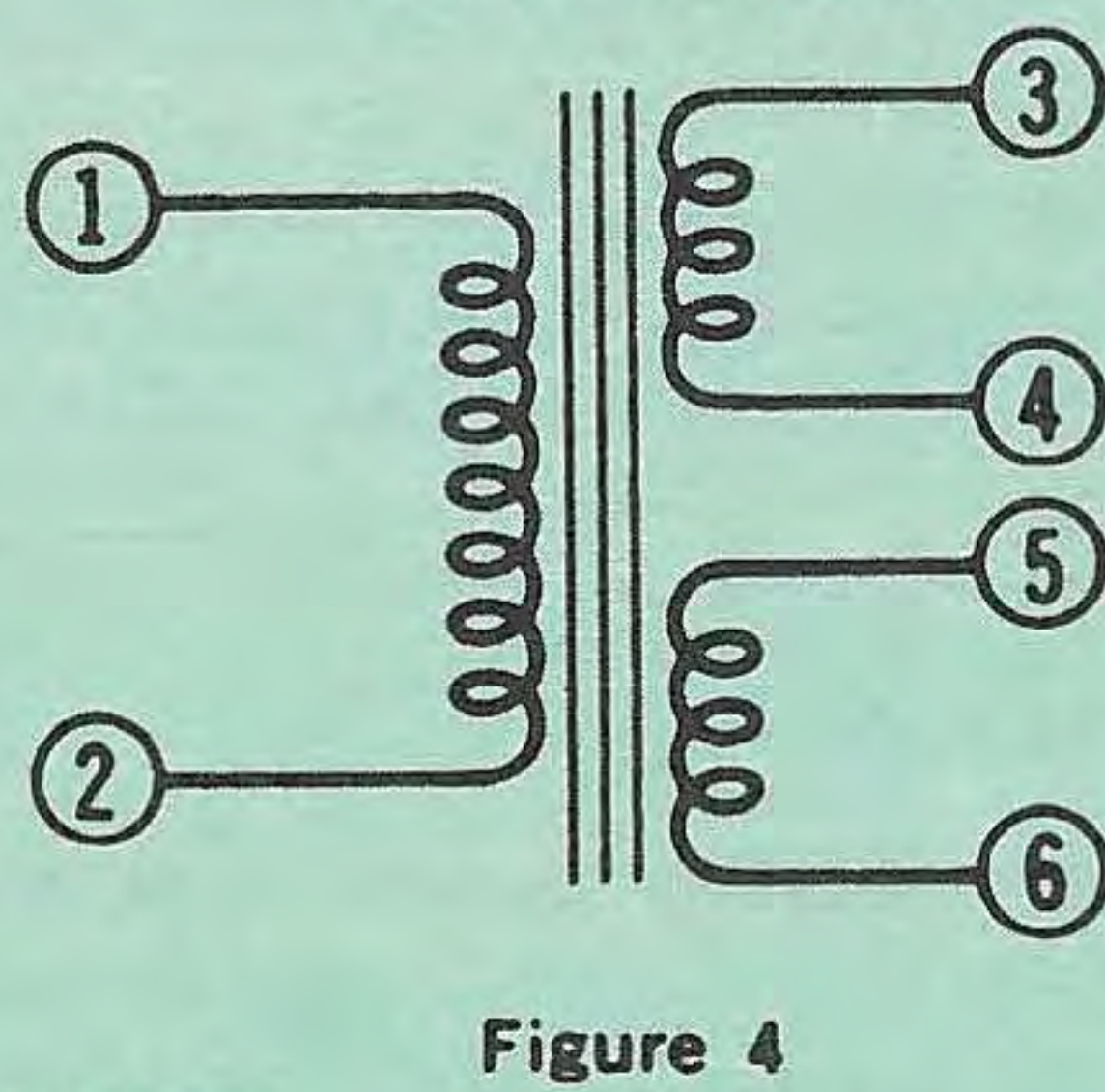
RED SPEC SCHEMATICS



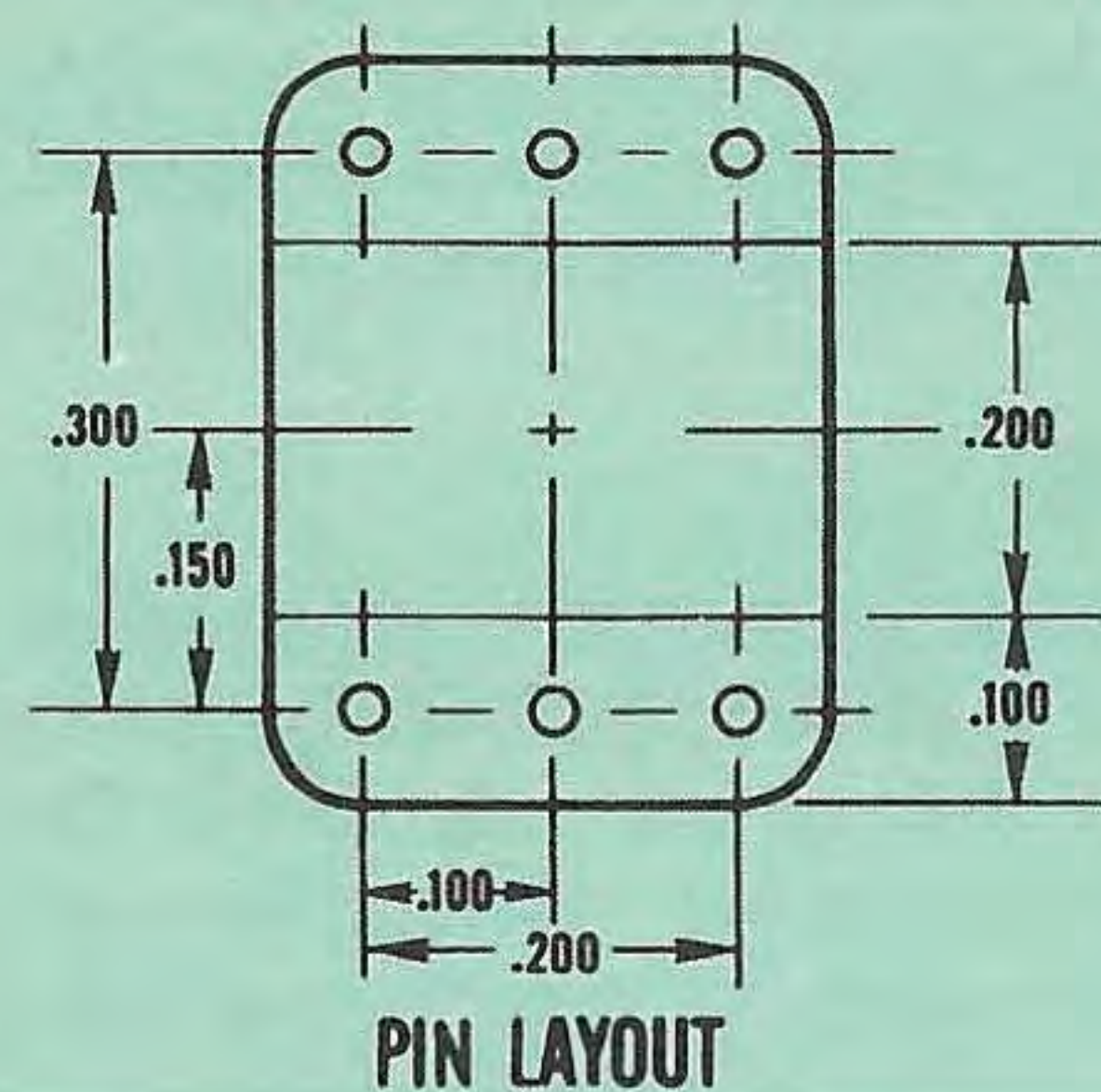
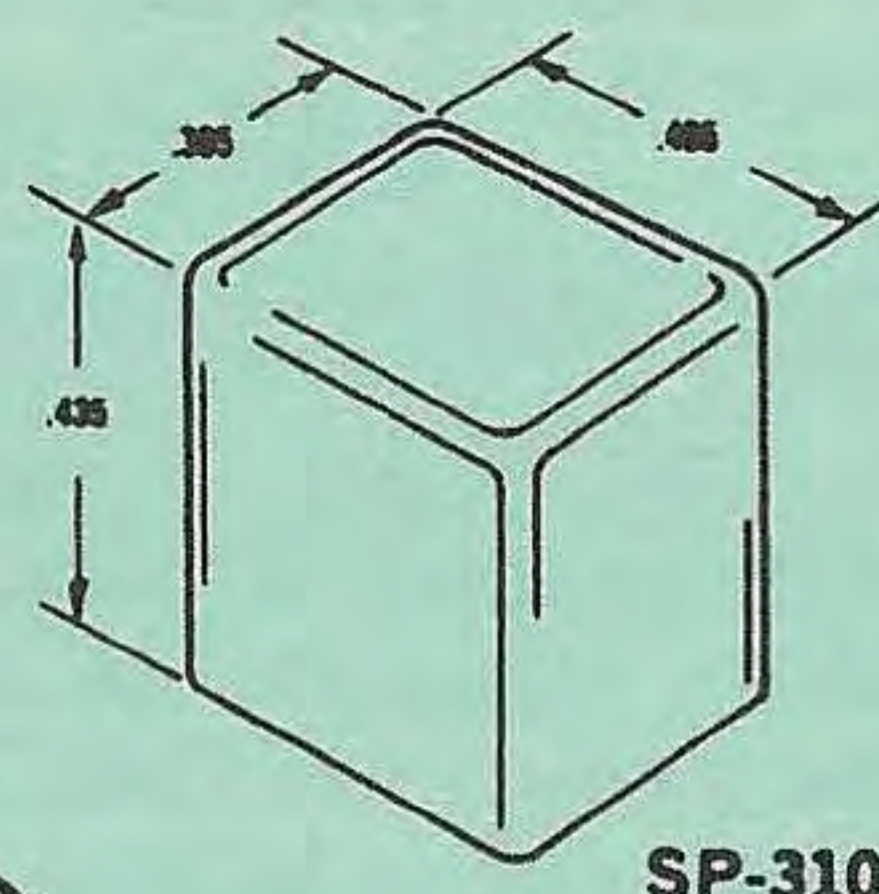
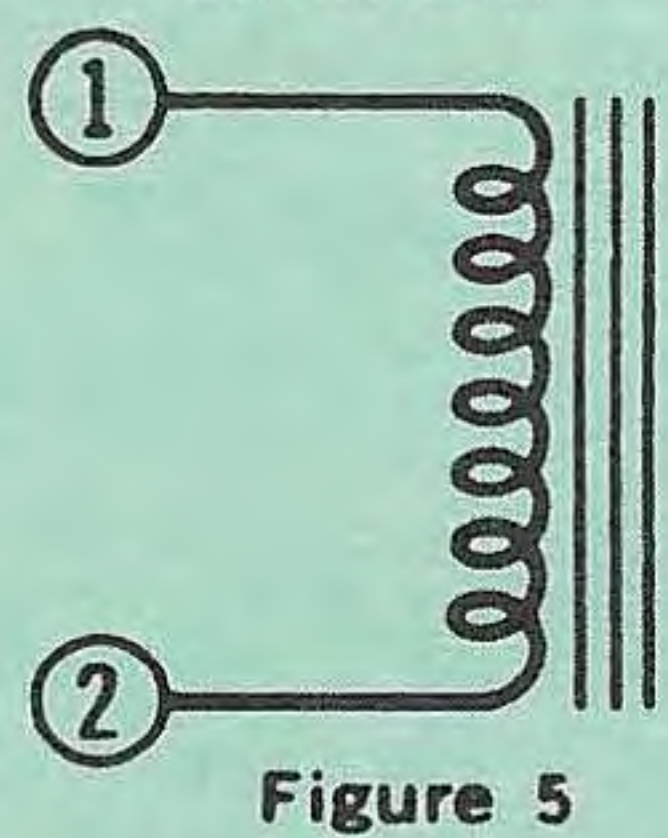
TAP PRIMARY — TAP SECONDARY



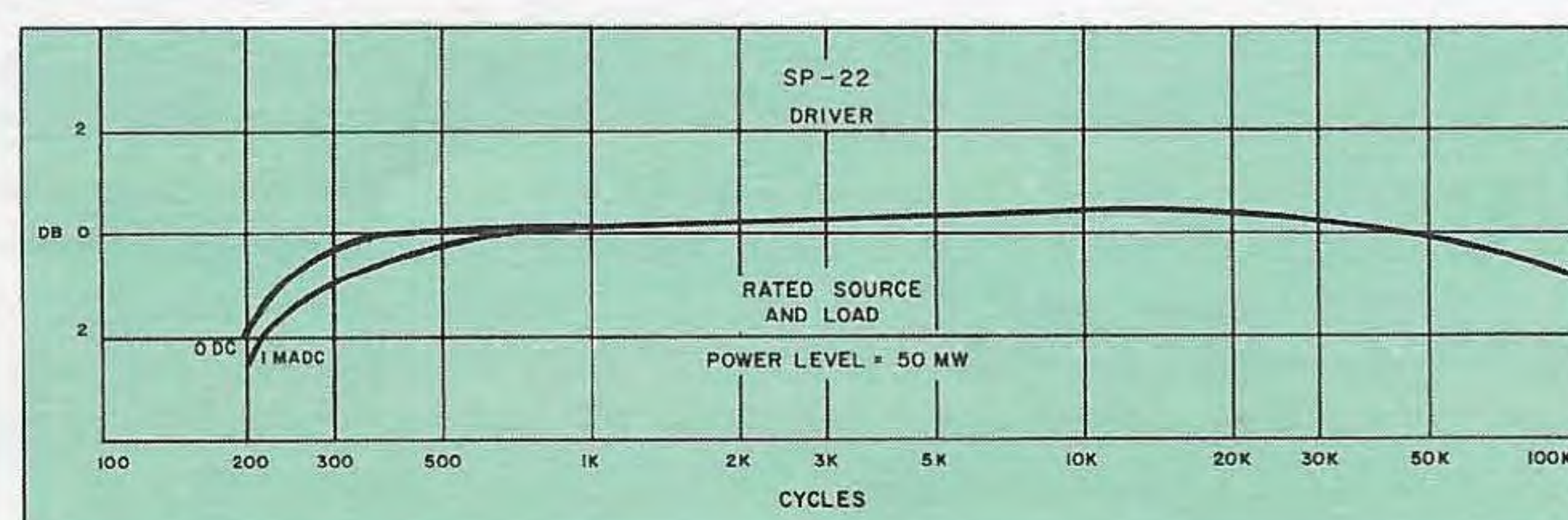
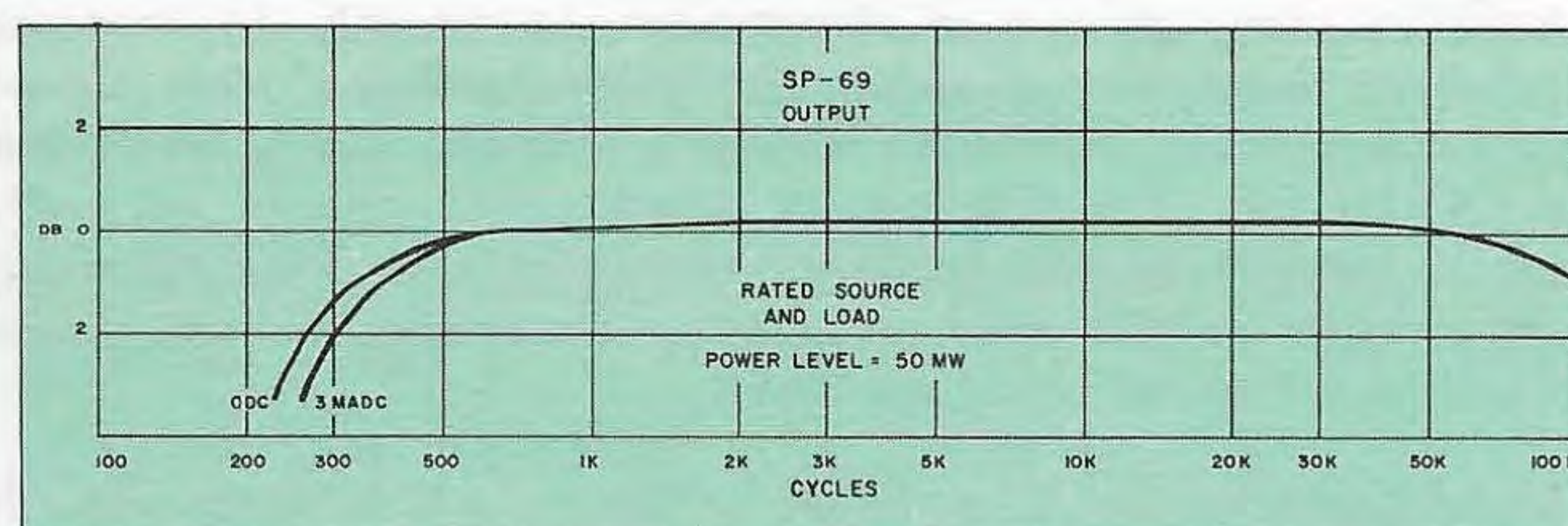
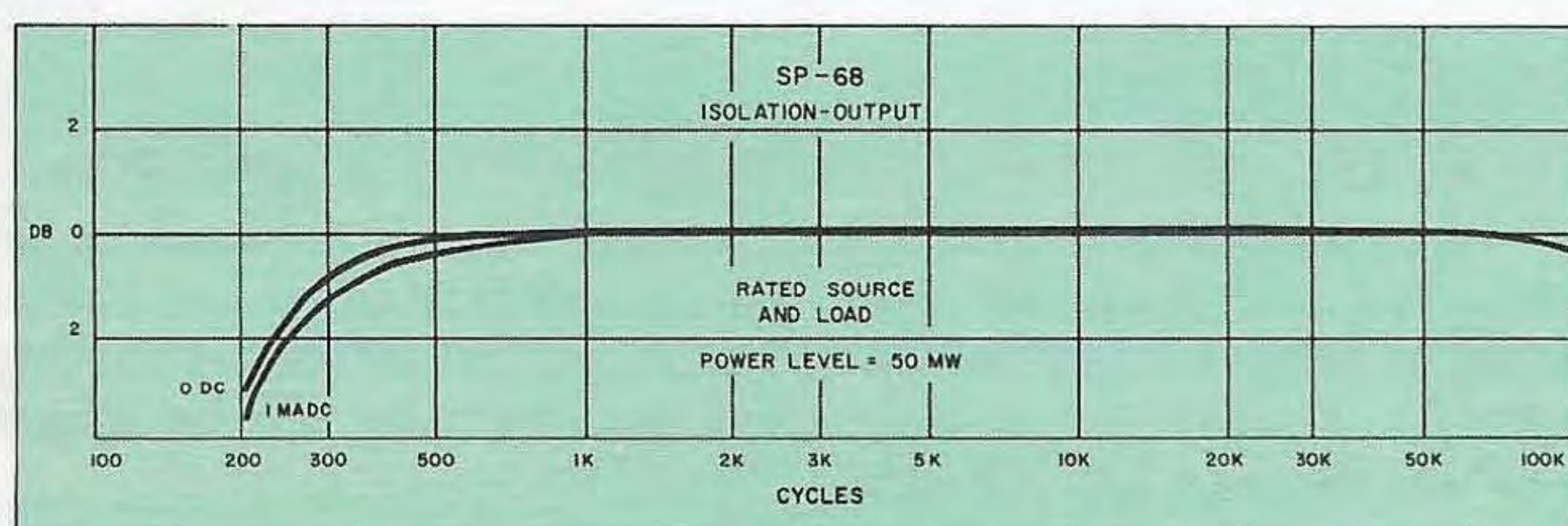
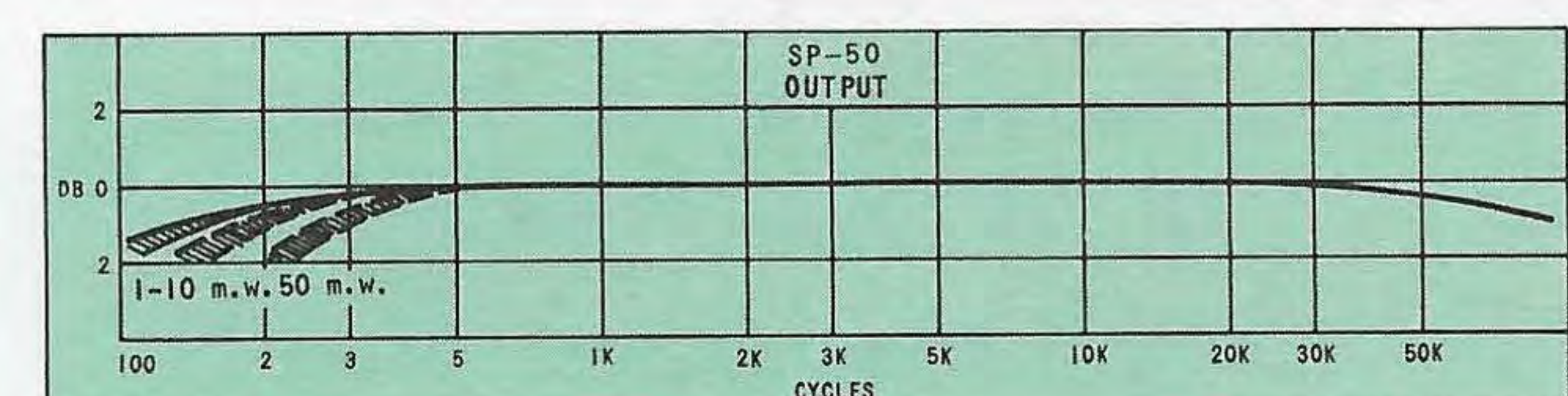
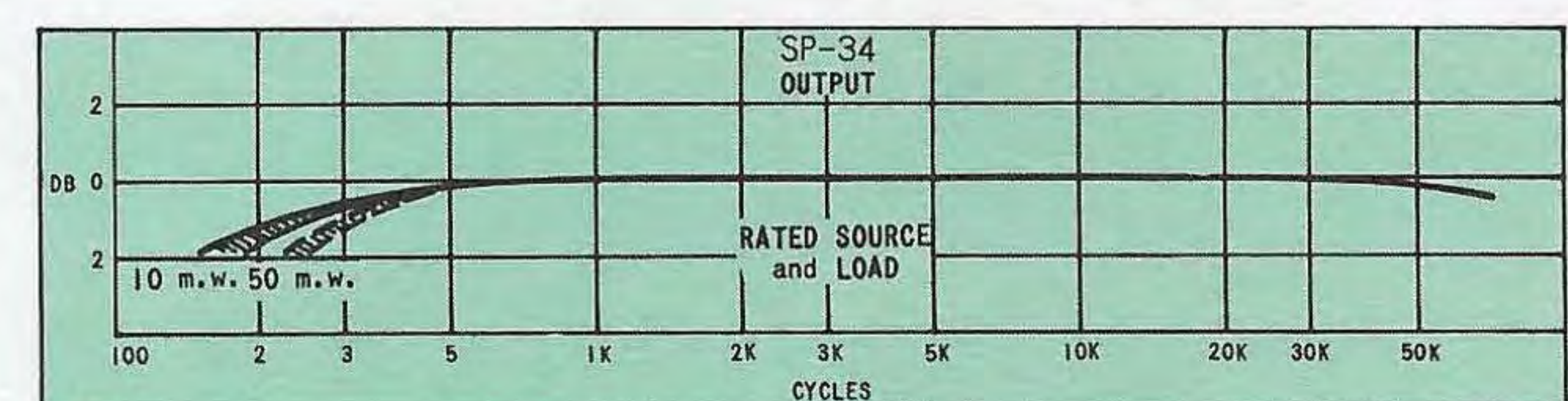
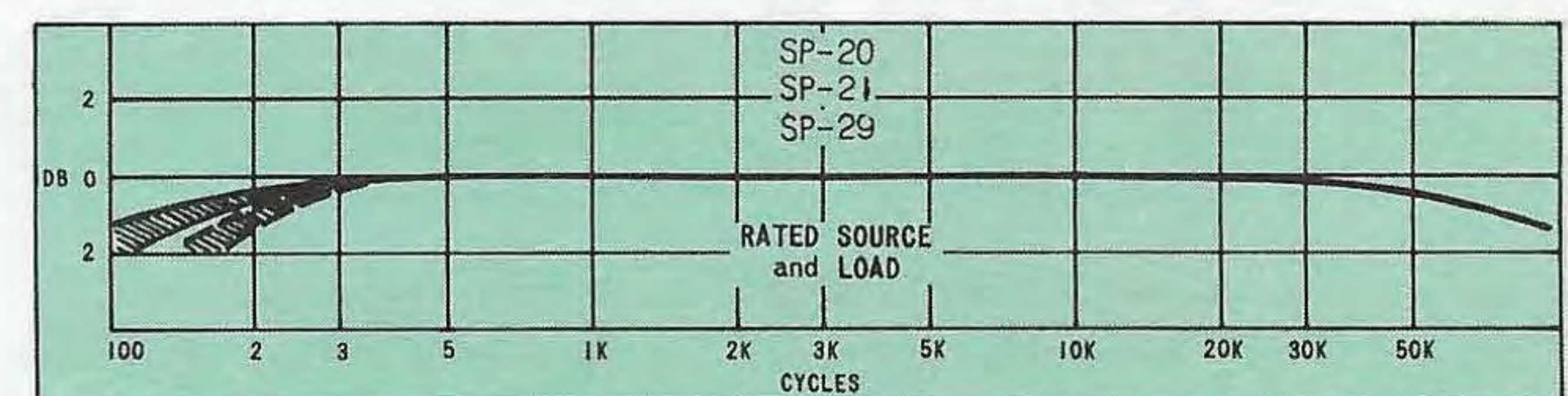
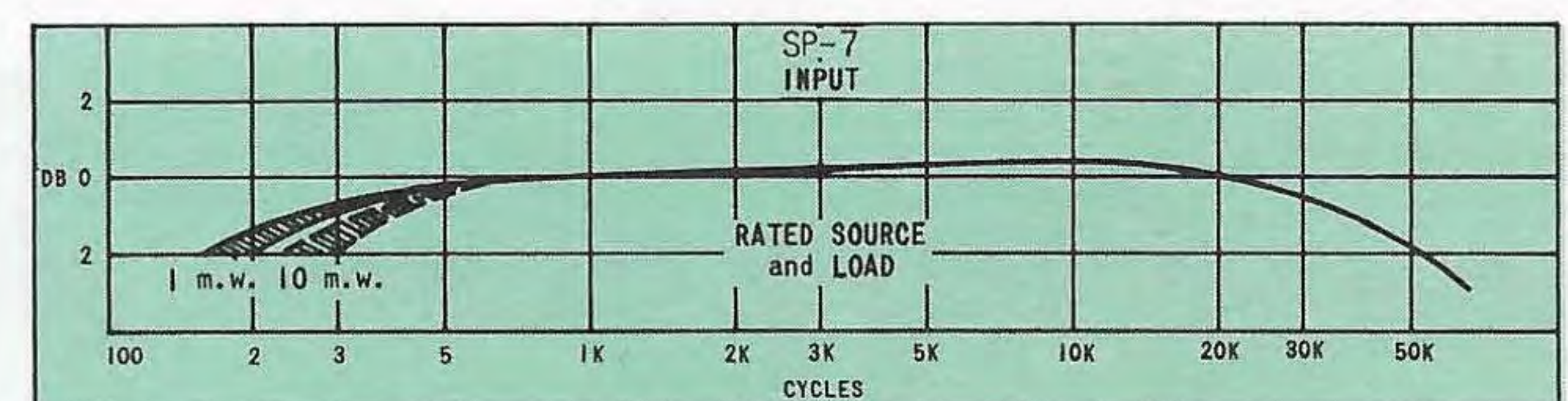
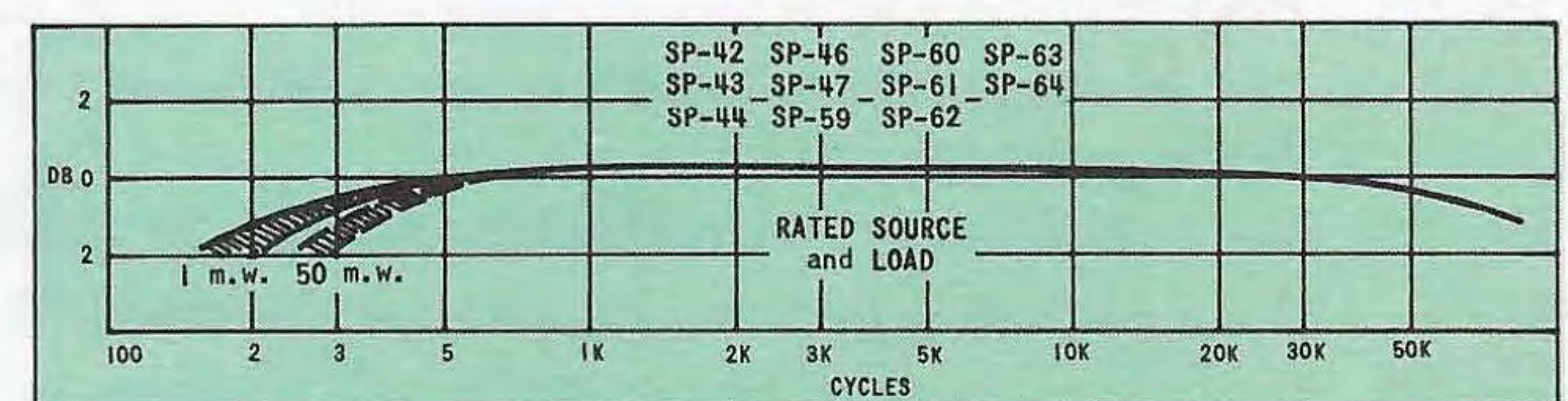
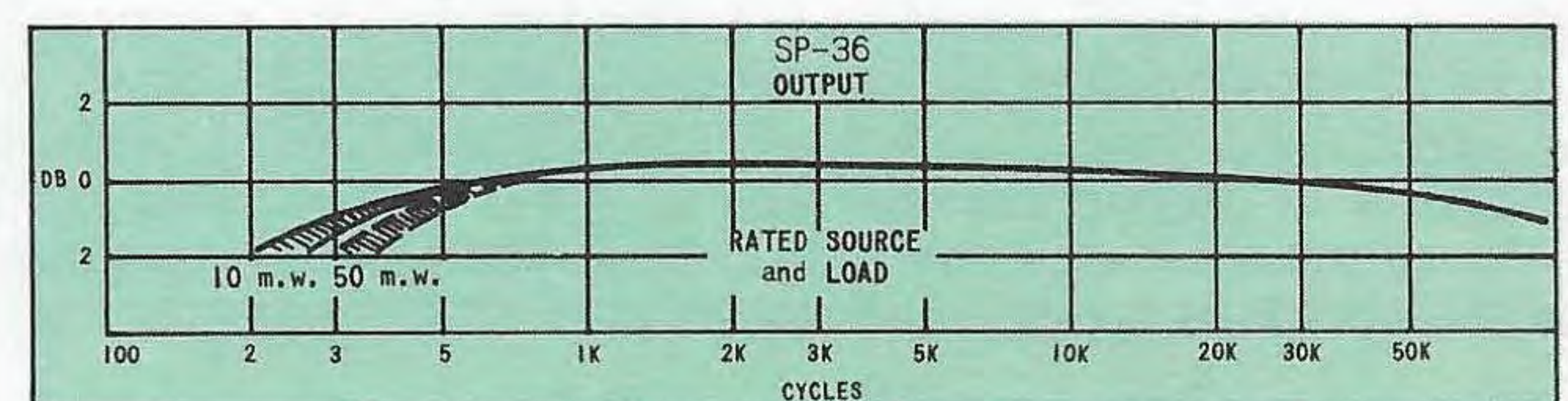
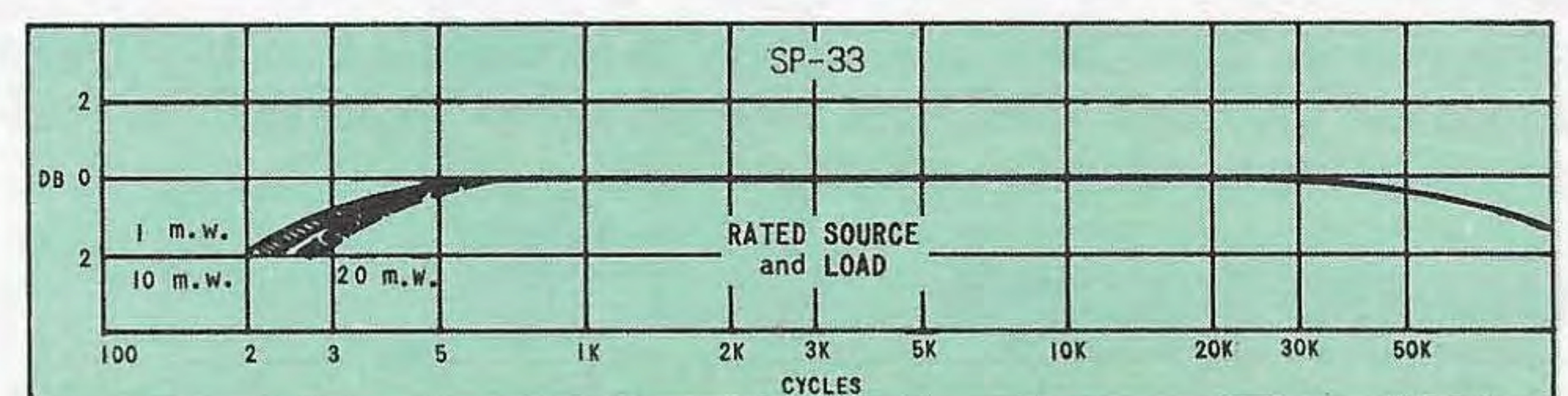
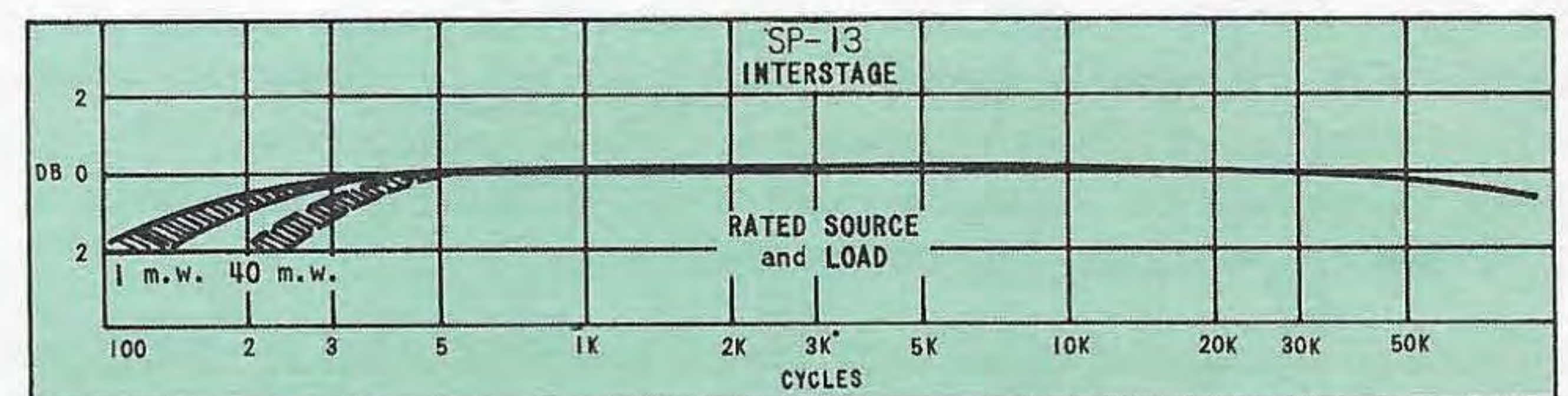
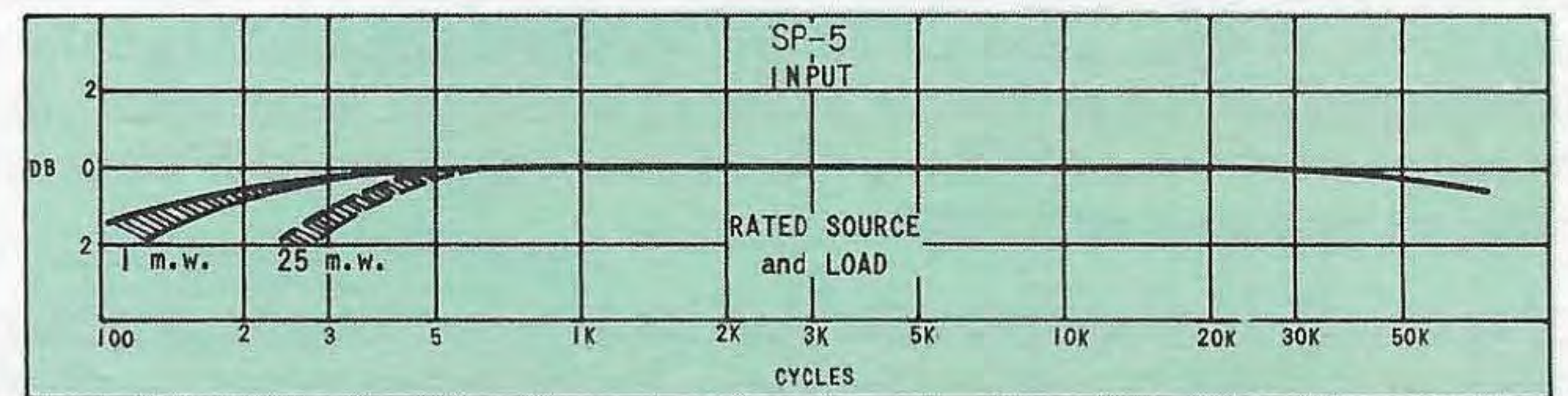
SPLIT WINDINGS



INDUCTOR



TYPICAL PERFORMANCE CHARACTERISTIC CHARTS



Advances in instrumentation techniques, particularly in low-level signal measurements, have emphasized the need for transformers capable of discriminating against interference that often accompanies signal voltages. Interference problems due to stray magnetic fields, ground loops, common-mode signals and machine-made noise can be reduced and even eliminated for all practical purposes by using the Triad standard shielded transformers, reactors and filters.

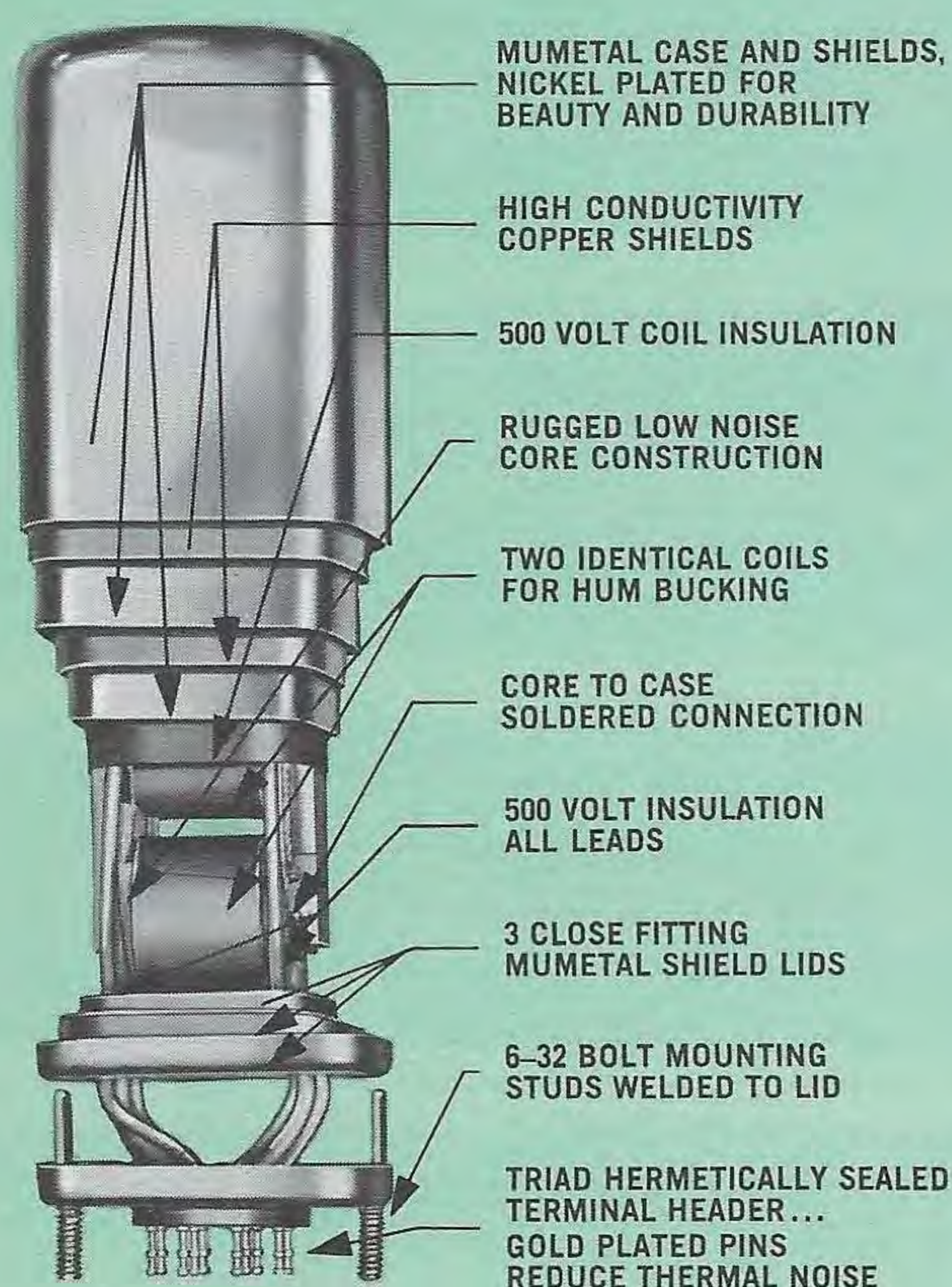
Magnetic components intended for low-level systems generally fall into the following categories: input transformers; chopper input transformers; interstage transformers; output transformers; filter reactors; and low pass filters. Because many of these types were originally developed by Triad to meet the stringent requirements of geophysical recording equipment, the trade-name "Geoformer" has become almost synonymous with Triad low-frequency magnetic components.

Since mechanical vibration, stray magnetic fields or stray voltage pickup impairs the signal to noise ratio of micro-volt range instrumentation, an understanding of the shielding techniques employed in Triad low-level components, as well as pertinent information on their electrical and physical parameters, will aid the engineer to specify suitable units.

MAGNETIC SHIELDING

All cases used for housing Triad low-frequency components are drawn from Mumetal and dry hydrogen-annealed after fabrication to provide the greatest possible low-density permeability. When Mumetal cases are used with heavy copper interleaving, maximum attenuation as high as 100 db. is achieved; additional reduction in pickup through use of humbucking coils can add 45 db. in the most effective plane. Stray field shield designations for the standard types listed are:

- P—1 one Mumetal case gives 45 db;
- P—1H P—1 shielding with humbucking coils gives 90 db;
- P—3 two Mumetal cases with copper interleaving gives 70 db;
- P—3H P—3 shielding with humbucking coils gives 115 db;
- P—5 three Mumetal shields with interleaving gives 95 db;
- P—5H P—5 shielding with humbucking coils provides 135 db in most effective plane.



POWER LEVEL

The power level shown opposite each unit is the maximum value for the lowest frequency shown. When low-frequency response is higher than the low frequency indicated, the power level can be increased by adding plus 3 dbm. each time the frequency is doubled—provided that the power level does not exceed plus 25 dbm.

IMPEDANCE

The impedances shown opposite the standard components are matching impedances and do not necessarily indicate the measured impedance of the transformer windings; rather, they indicate that the transformer will perform within the specifications and data ranges when matched and loaded at the stated impedance.

FREQUENCY RESPONSE

Special emphasis has been placed on the 5 to 2,000 cycle range, with gradual attenuation of frequencies above 2,000 cycles. In many applications, the 3 db. point has been brought down to one cycle or a fraction of one cycle. While the high-frequency response has been deliberately sacrificed to obtain the necessary low-frequency response, the 3 db. point on many standard Triad units is 8,000 to 10,000 cycles.

INDUCTANCE

Unless otherwise stated all inductances are within plus or minus 5% of standard. However, individual units may often fall within plus or minus 2% of the standard. During testing on a special bridge, a low potential voltage is maintained across the unit's coil with voltage levels and frequencies as specified. No test is conclusively made until coils have been normalized at 26°C.

CHOPPER APPLICATIONS

A chopper is basically a SPDT switch that runs continuously and in synchronism with its drive voltage. It is used in servo, measuring and coupling circuits immediately ahead of the chopper input transformer to "chop" a DC signal so that it is changed to an AC square wave. Low level AC signals can be amplified more easily than DC signals.

The chopper input transformer transfers 30 to 500 cycle "chopped" transducer or thermocouple signals to instrument amplifiers. A center-tapped primary on the transformer is necessary to permit the switching action of the chopper which changes the DC to AC. Triad chopper input units supply exceedingly close balance between the two halves of the primary winding. Special core treatment techniques assure minimum noise in microvolt ranges of input signals.

In addition to the G-20 Series of Chopper Transformers, Triad standard input and interstage transformers have been widely and effectively used for pulse applications like those encountered in chopper circuits. The frequency responses indicated are measured using sine wave signals. For reasonable accuracy, square wave response can be determined from sine wave response by this method . . . determine a sine wave response of fundamental over 16 to fundamental times 10, for fundamental square wave with 10 percent rise time, 10 percent droop (a square wave of 1000 cps with rise time and droop of 10 percent requires a transformer which is plus or minus 1 db from 63 cps to 10 kc).

INPUT TRANSFORMERS

Type No.	Primary Inductance @ 10MV-60 CPS	Primary Matching Impedance In Ohms	Secondary Matching Impedance In Ohms	DC Resistance		Turns Ratio	Frequency Response In C.P.S. ± 1DB	Max. Level DBM	Stray Fields Shield	Case and Mounting	Weight
				Primary In Ohms	Secondary In Ohms						
G-2‡ ▲G-2H3‡	8.7 h.	500\$-333-233-200\$ 125\$-67½\$-50\$-17\$	157,000\$ or 39,250\$	50	10,400	1-17.7	9.5-5000	0	P5-H P3-H	GP-4T GP-3R	11½ oz. 8 oz.
G-4‡	.9 h.	60\$-44-30\$-25 15\$-7½\$-5\$-1.25\$	157,000\$ or 39,250\$	9	10,400	1-51	11-5000	0	P5-H	GP-4T	11½ oz.
G-5‡ G-5TS‡	55 h.	1000\$-666-466-400\$ 250\$-135\$-100\$-34\$	137,000\$ or 34,250\$	235	15,500	1-11.75	3-4000	-10	P1-H P5-H	GP-3P GP-5W	7¾ oz. 1 lb.
G-7‡ G-8‡	11.5 h.	500\$-333-233-200\$ 125\$-67½\$-50\$-17\$	315,000\$ or 78,750\$	58	16,220	1-25	7-3000	-10	P1-H P5-H	GP-3P GP-5W	7¾ oz. 1 lb.
G-10‡	8 h.	500\$-333-233-200\$ 125\$-67½\$-50\$-17\$	712,000\$ or 178,000\$	72	20,000	1-37.7	10-1700	0	P5-H	GP-5W	1 lb.
G-12‡	10 h.	500\$-125\$	50,000**	165	20,000	1-10	10-3000	0	P1-H	GP-2L	5¼ oz.
▲G-14‡ G-14TS‡	6.8 h.	500\$-333-233-200\$ 125\$-67½\$-50\$-17\$	450,000**	54	12,500	1-30	14-2000	-10	P1-H P5-H	GP-2K GP-4T	5¼ oz. 11½ oz.
G-17‡	4 h.	200\$-50\$	442,000**	17	26,000	1-47	8.5-2500	-10	P3-H	GP-3R	8 oz.
G-101‡ G-101TS‡	8.3 h.	500\$-333-233-200\$ 125\$-67½\$-50\$-17\$	145,000**	120	10,000	1-17	11-3700	-10	P1-H P5-H	GP-1D GP-3R	3.2 oz. 10 oz.
G-202‡	8.3 h.	500\$-125\$	392,000**	94	13,000	1-28	11-1800	-10	P1-H	GP-1F	3.2 oz.
G-301‡	3 h.	500\$-125\$	145,000**	106	6500	1-17	30-3200	-10	P1-H	AF-1	1.5 oz.
G-306‡	7 h.	500\$-125\$	60,000**	190	6500	1-11	15-12,000	-10	P1-H	AF-1	1.5 oz.
G-309‡	6.4 h.	32\$-8\$	320,000\$ 80,000\$	5.5	44,000	1-100	1-2000	-10	P5-H	GP-5W	1 lb.
G-310‡	22.0 h.	320\$-80\$	175,000**	80	13,800	1-22.4	3-2500	-10	P1-H	GP-1F	3.2 oz.
G-313‡	10.5 h.	500\$-125\$	36,000**	350	5600	1-8.5	10-18,000	-10	P1-H	AF-1	1.5 oz.
G-315‡	5.2 h.	500\$-125\$	114,000**	235	6700	1-15.1	19-7000	-10	P1-H	AF-1	1.5 oz.
G-401‡	8 h.	500\$-125\$	157,000**	100	9800	1-17.7	11-4000	-10	P1-H	GP-1F	3.2 oz.

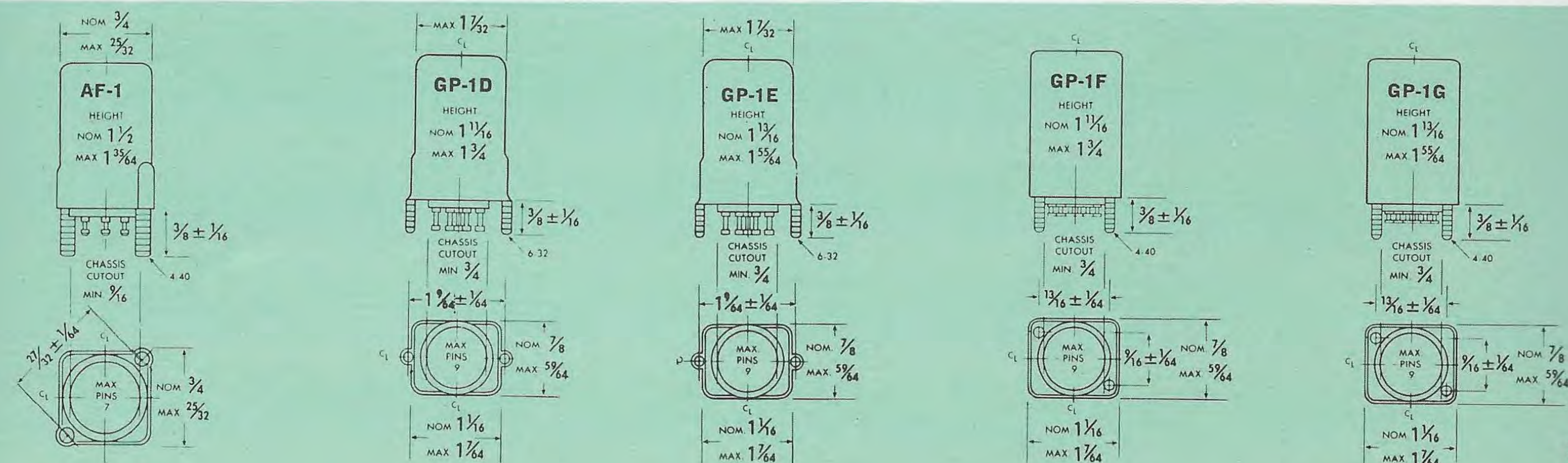
CHOPPER INPUT TRANSFORMERS

Type No.	Turns Ratio	Minimum Primary Inductance @ 1V-60 CPS	Maximum Primary Volts @ 60 CPS	Primary Matching Impedance In Ohms	Secondary Matching Impedance In Ohms	DC Resistance		Stray Fields Shield	Case and Mounting	Weight
						Primary In Ohms	Secondary In Ohms			
G-20‡	1:8	120 h.	25	10,000 CT or 2500	640,000 CT	370	21,000	P5-H	GP-4T	11½ oz.
G-21‡	4:1	1200 h.	84	200,000 CT	12,500 CT	4000	1300	P1-H	GP-2L	5¼ oz.
G-21TS‡								P5-H	GP-4T	11½ oz.
G-22H‡	1:4	1000 h.	90	50,000 CT	800,000 CT	2200	19,000	P1-H	GP-3R	7¾ oz.
G-22‡								P5-H	GP-5W	1 lb.
G-23‡	6.32:1	1000 h.	75	40,000 CT	1000 CT	4400	160	P1-H	GP-2L	5¼ oz.
G-24‡	1:1	400 h.	19.5	40,000 CT	40,000 CT	1625	1625	P5	GP-5S	1 lb.
		Low capacity coupling less than .02 µµF between windings.								
G-25‡	2:1	800 h.	70	40,000 CT or 10,000 CT	10,000 CT	3200	2200	P1-H	GP-2L	5¼ oz.
G-25TS‡								P5-H	GP-4T	11½ oz.

TRANSISTOR TRANSFORMERS

Type No.	Min. Pri. Ind. @ 100MV-60 cy. With No Un- balanced D.C. Current	Impedance Ohms		Turns Ratio	D.C. Resistance (Ohms)		Frequency Response in Cycles Primary Signal of 1 Volt Unbalanced D.C. Secondary Current of								Max. Level dBm	Stray Fields Shield	Case & Mounting	Weight
		Pri.	Sec.		Pri.	Sec.	1 Ma.		2 Ma.		3 Ma.		5 Ma.					
							- 3dB	- 1DB	- 3dB	- 1DB	- 3dB	- 1DB	- 3dB	- 1DB				
G-18‡ G-18TS‡	60 h.	1000 or 250	125 or 31	2.83:1	500	44	5 to 20,000	8 to 7000	5 to 20,000	8 to 7000	6 to 20,000	9 to 7000	7 to 20,000	10 to 7000	+10	P1-H P5-H	GP-1F GP-3P	3.2 oz. 10 oz.
G-19‡ G-19TS‡	65 h.	1000 or 250	1000 or 250	1:1	540	230	12 to 7000	15 to 3800	12 to 7000	15 to 3800	12 to 7000	15 to 3800	20 to 7000	40 to 3800	+10	P1-H	GP-2L	5¼ oz.
G-30‡	20 h.	1000 CT	2500 CT	1:1.58	350	1800	20 to 8000	40 to 4200	22 to 8000	45 to 4200	40 to 8000	75 to 4200	70 to 8000	160 to 4200	+ 8	P1	GP-1F	3.2 oz.

‡ Static shield. § Balanced two windings. §§ Balanced parallel windings. ** Balanced windings C.T. CT for Center Tap.
▲ Discontinued item, available until stock depleted.



INTERSTAGE TRANSFORMERS

Type No.	Primary Inductance @ 10MV-60 CPS	Primary Matching Impedance In Ohms	Secondary Matching Impedance In Ohms	DC Resistance		Turns Ratio	Frequency Response In C.P.S. $\pm 10\text{dB}$	Max. Level DBM	Stray Fields Shield	Case	Weight
				Primary In Ohms	Secondary In Ohms						
G-31† G-32†	350 h.	10,000 \$ or 2500 \$\$	100,000 \$ or 25,000 \$\$	1400	10,000	1-3.16	5-5000	-15	P1-H P5-H	GP-2K GP-4T	5¼ oz. 11½ oz.
G-33†	725 h.	10,000 \$ or 2500 \$\$	90,000 \$ or 22,500 \$\$	2100	14,000	1-3	3-3500	-10	P1-H	GP-3P	7¼ oz.
G-36	135 h.	10,000 \$ or 2500 \$\$	22,500 \$ or 5625 \$\$	1600	2350	1-1.5	13.5-25,000	-10	P1	GP-1D	2¾ oz.
G-40† ▲G-40TS†	230 h.	10,000 \$ or 2500 \$\$	483,000 \$ or 120,700 \$\$	1100	17,000	1-7	7.5-1500	-10	P1-H P5-H	GP-3P GP-5W	7¼ oz. 1 lb.
G-48 G-48TS	18 h.	1000 \$ or 250 \$\$	250 \$ or 62½ \$\$	165	40	2-1	10-30,000	-10	P1 P5	GP-1D GP-3P	2¾ oz. 10 oz.
G-135 G-235	300 h.	10,000 \$ or 2500 \$\$	75,000 \$ or 18,750 \$\$	2800	9000	1-2.75	6-5000	-15	P1-H P1-H	GP-1D GP-1F	3.2 oz. 3.2 oz.
G-335	80 h.	10,000 \$ or 2500 \$\$	75,000**	1700	5400	1-2.72	20-10,000	-10	P1-H	AF-1	1.5 oz.
G-336	160 h.	10,000 \$ or 2500 \$\$	22,500**	2600	4200	1-1.5	12-20,000	-10	P1-H	AF-1	1.5 oz.
G-435 ▲G-435TS	285 h.	10,000 \$ or 2500 \$\$	90,000**	2700	9500	1-3	6.5-5000	-15	P1-H P5-H	GP-1F GP-3R	3.2 oz. 10 oz.
▲G-437†		10,000 \$ or 2500 \$\$	22,500**	2000	3650	1-1.5	6-15,000	-20	P1-H	GP-1F	3.2 oz.

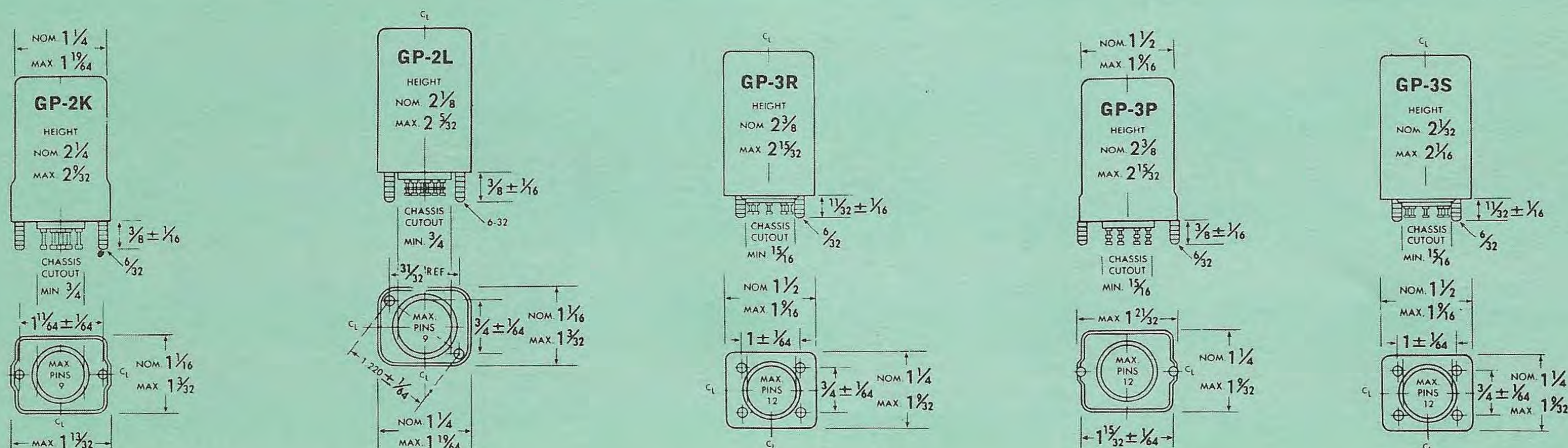
OUTPUT TRANSFORMERS / standard

Type No.	Primary Impedance In Ohms	Secondary Impedance In Ohms	Primary Inductance @ 100MV	Freq. Resp. In C.P.S. $\pm 10\text{dB}$	Max. Level DBM	DC Resistance		Turns Ratio	Stray Fields Shield	Case and Mounting	Weight
						Primary In Ohms	Secondary In Ohms				
G-51	15,500 \$ or 3750 \$\$	500 \$-125 \$\$	915 h.	3-7000	-10	2600	80	5.47-1	P1-H	GP-2K	5¼ oz.
G-51A	15,500 \$ or 3750 \$\$	500 \$-125 \$\$	65 h.	45-7000	+10	2600	80	5.47-1	P1-H	GP-2K	5½ oz.
G-53	16,000 \$ or 4000 \$\$	500 \$-333-233 200 \$-125 \$-67½ \$ 50 \$-17 \$	1600 h.	2-3000	-10	4400	105	5.65-1	P1-H	GP-3P	7¼ oz.
G-53A	16,000 \$ or 4000 \$\$	500 \$-333-233 200 \$-125 \$-67½ \$ 50 \$-17 \$	94 h.	35-3000	+10	4400	105	5.65-1	P1-H	GP-3P	8¼ oz.
G-54	20,000 \$ or 5000 \$\$	60 \$-45-30 \$-24 15 \$-7½ \$-5 \$-1.3 \$	1750 h.	2-3000	-10	4000	12.5	18.25-1	P1-H	GP-3P	7¼ oz.
G-59	600 \$-150 \$	600 \$-150 \$	15 h.	7-6000	+10	46	62	1-1 or 2:1 or 1:2	P3-H	GP-4T	11½ oz.

miniature and sub-miniature

G-57	18,000 CT	500 \$-333-233 200 \$-125 \$-67½ \$ 50 \$-17 \$	280 h.	10-22,000	-10	2200	137	6-1	P1	GP-1D	2¾ oz.
G-64	500 or 125	500 or 125	3 h.	28-30,000	+10	80	80	1-1	P1	GP-1D	2¾ oz.
G-65	500 or 125	16 or 4	3 h.	28-30,000	+10	72	3.9	5.6-1	P1	GP-1D	2¾ oz.
G-150	15,000 CT \$	16 \$-12-8 \$-6½ 4 \$-2 \$-1½ \$-35 \$	1000 h.	3-10,000	-20	6500	4.5	30.5-1	P1-H	GP-1D	3.2 oz.
G-250	15,000 CT \$	16 \$-12-8 \$-6½ 4 \$-2 \$-1½ \$-35 \$	1000 h.	3-10,000	-20	6500	4.5	30.5-1	P1-H	GP-1F	3.2 oz.
G-255	15,000 CT \$	60 \$-45-30 \$-24 15 \$-7½ \$-5 \$-1.3 \$	1000 h.	3-15,000	-20	6500	21	15.8-1	P1-H	GP-1F	3.2 oz.
▲G-350	15,000 CT \$	16 \$ or 4 \$	400 h.	8-25,000	-10	4100	7	30.6-1	P1-H	AF-1	1.5 oz.
G-455	20,000 \$ or 5000 \$	50 \$-25-12.5-3	1450 h.	3-15,000	-10	4000	22	20-1	P1-H	GP-1F	3.2 oz.

\$\$ Balanced parallel windings. ** Balanced windings C.T. ‡ Static shield. \$ Balanced two windings. CT for Center Tap.
▲ Discontinued item, available until stock depleted.



A.V.C. OUTPUT TRANSFORMERS

Type No.	Primary Impedance In Ohms	Secondary Impedance In Ohms	Primary Inductance @ 100MV	DC Resistance		Turns Ratio	Stray Fields Shield	Case and Mounting	Weight
				Primary In Ohms	Secondary In Ohms				
G-72	16,000 § or 4000 §§	256,000 § or 64,000 §§ and 150 § or 37½ §§	500 h.	1900	16000 32	1-4 10.3-1	P1-H	GP-3P	7¾ oz.

miniature

G-266	10,000 § or 2500 §§	10,000 § CT & 10,000 §	150 h.	700	1220 1440	1-1-1	P1-H	GP-1F	3.2 oz.
G-274	15,000 § CT	240,000 § CT and 140 § or 35 §§	200 h.	2000	9800 60	1-4 10.3-1	P1-H	GP-1F	3.2 oz.

FILTER REACTORS / standard

Type No.	Inductance 100MV	$Q = \frac{\omega L}{R}$ @ 60 cy.	DC Resistance In Ohms	Low Percentage Taps	Stray Fields Shield	Case and Mounting	Weight
G-80	1050 §-800 § 550 §-400 § 280 § h.	11	13,000	None	P1-H	GP-2K	5½ oz.
G-84	1000 § h. 250 §§ h.	14	10,000	4 - 2½% 2 - 5%	P1-H	GP-3P	8¼ oz.

high "Q" *

Type No.	Inductance Henries 100 MV-60 Cy.	DC Resistance in Ohms	Low Percentage Taps	Stray Fields Shield	Case and Mounting	Weight
G-500 TF4QX09YY	18 § 4.5 §§	77.7	4 - 2½% 4 - 5%	P-1	GP-4T	12.5 oz.
G-501 TF4QX09YY	5 § 1.25 §§	16.7	4 - 2½% 4 - 5%	P-1	GP-4T	12.5 oz.
G-502 TF4QX09YY	100 § 25 §§	392	4 - 2½% 4 - 5%	P-1	GP-4T	12.5 oz.

miniature

Type No.	Inductance 100MV	$Q = \frac{\omega L}{R}$ @ 60 cy.	DC Resistance In Ohms	Low Percentage Taps	Stray Fields Shield	Case and Mounting	Weight
G-183	1050 § h.-800 § h.-550 § h. 400 § h.-280 § h.-245 § h. 153 § h.-133 § h.-80 § h. 68 § h.-45 § h.	9	11,500	None	P1-H	GP-1E	3.4 oz.
▲G-283	1050 § h.-800 § h.-550 § h. 400 § h.-280 § h.-245 § h. 153 § h.-133 § h.-80 § h. 68 § h.-45 § h.	9	11,500	None	P1-H	GP-1G	3.4 oz.
G-284	1000 § h.-250 §§ h.	9	13,000	4 - 2%	P1-H	GP-1G	3.4 oz.
G-285	500 § h.-125 §§ h.	9	10,500	4 - 2½%	P1-H	GP-1G	3.4 oz.
G-286	10 h. § 2.5 h. §	30	52	None	P1-H	GP-1G	3.4 oz.

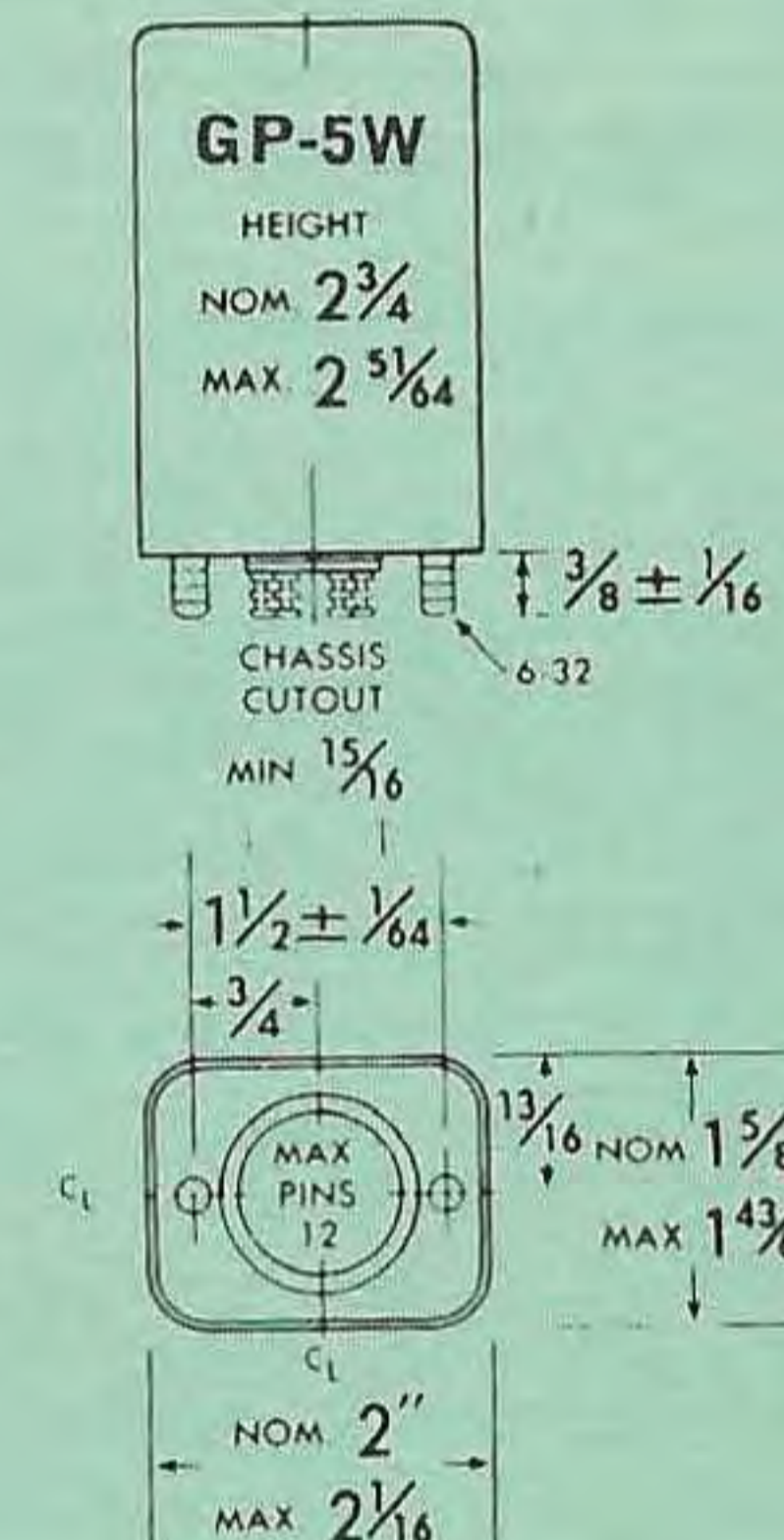
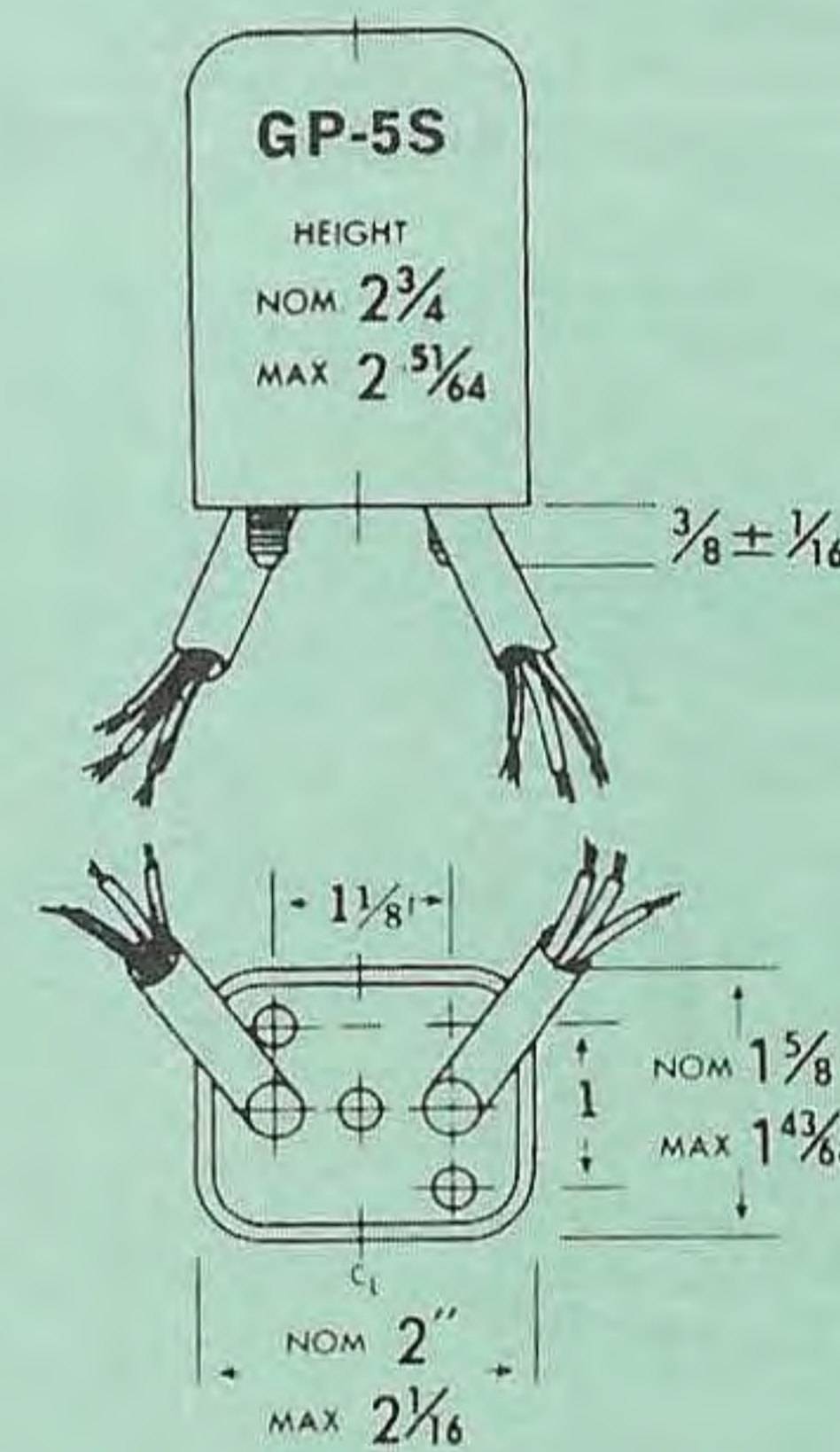
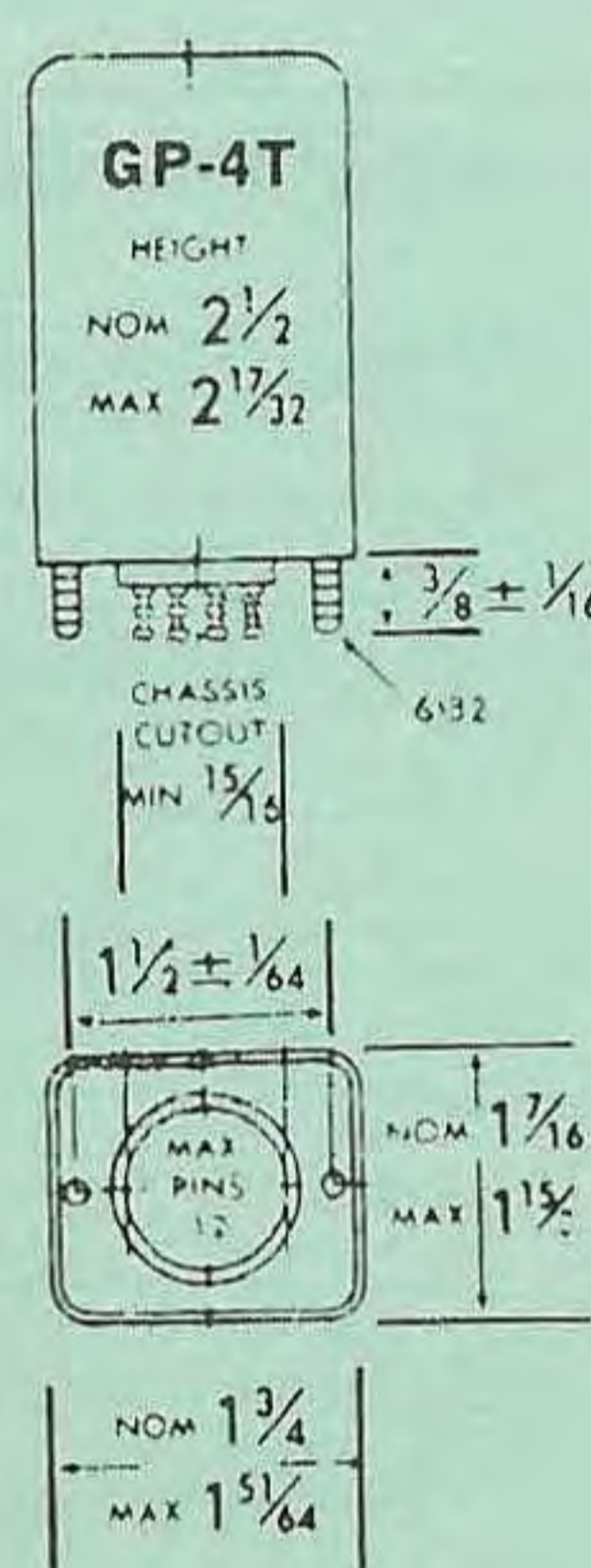
sub-miniature

G-388	1000 h.	9	12,000	2 - 2%	P1	AF-1	1.5 oz.
▲G-391	300 h.	9	5400	2 - 2%	P1	AF-1	1.5 oz.
G-394	100 h.	9	1950	2 - 2%	P1	AF-1	1.5 oz.

§ Balanced, two windings. §§ Balanced, parallel windings. CT for Center Tap. ▲ Discontinued item, available until stock depleted.

*It is difficult to obtain High Q at low frequencies from small inductors which utilize molybdenum permalloy powder cores. In order to provide exceptional Q values, the G-500 series has been introduced. The reactors, composed of a laminated structure, are adjusted in our laboratory to within ±5% of nominal at 60 cycles. Two identical windings brought out to eight terminals provide series, parallel or center tapped connections. In addition four ±2½% taps provide adjustment to nominal value of inductance.

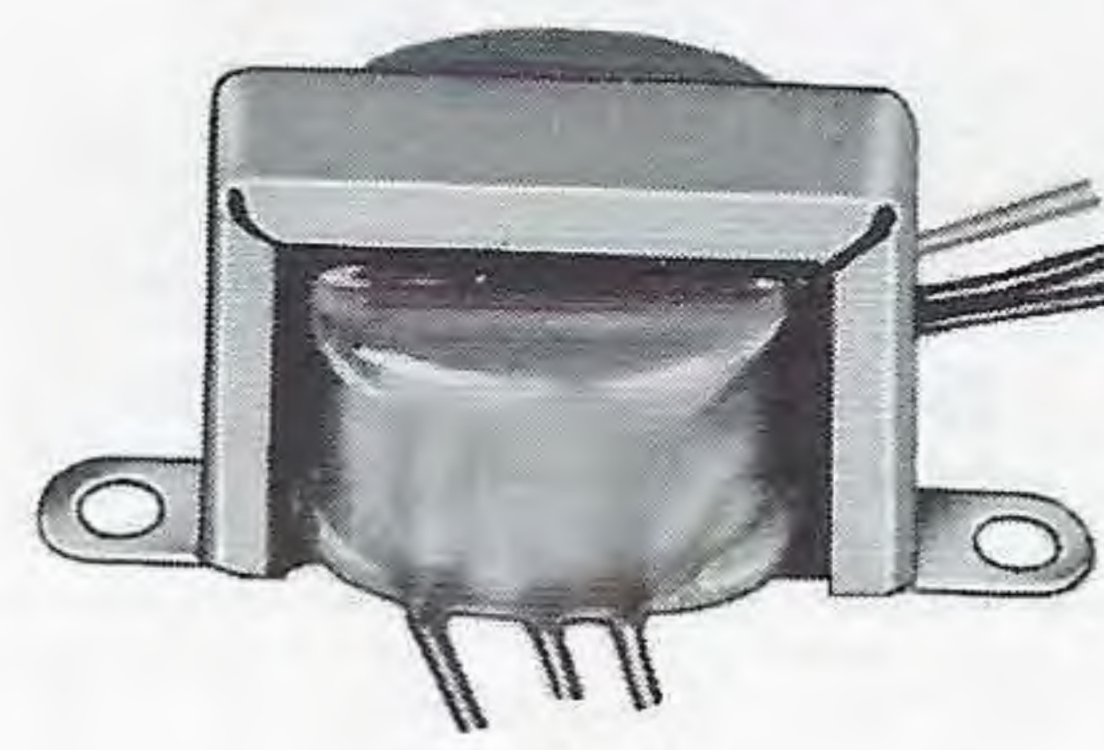
This series features: Reduced size and excellent stability. Inductance variation is less than 1% from .1 V to 1.0 V, 60 cycles.



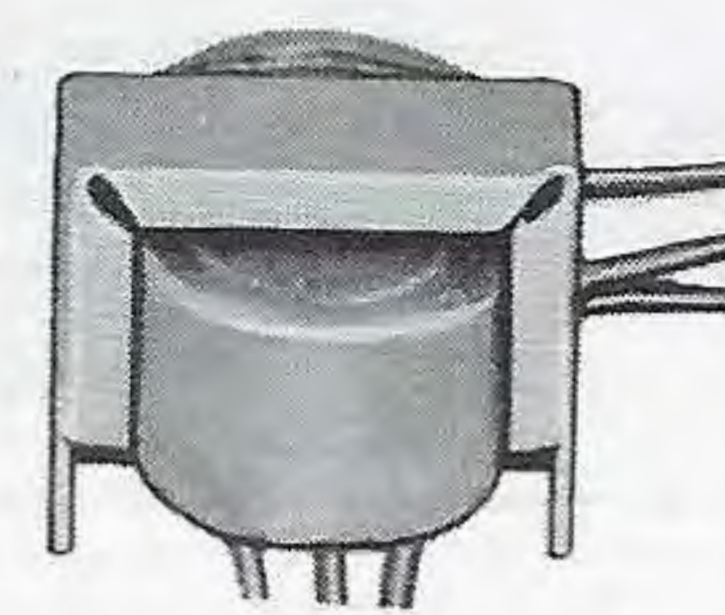


MINIATURE AUDIO "trijets"

Highly dependable Triad Trijets open frame units, Climatite treated (both coil and core) for protection against moisture and for prevention of lamination chatter.



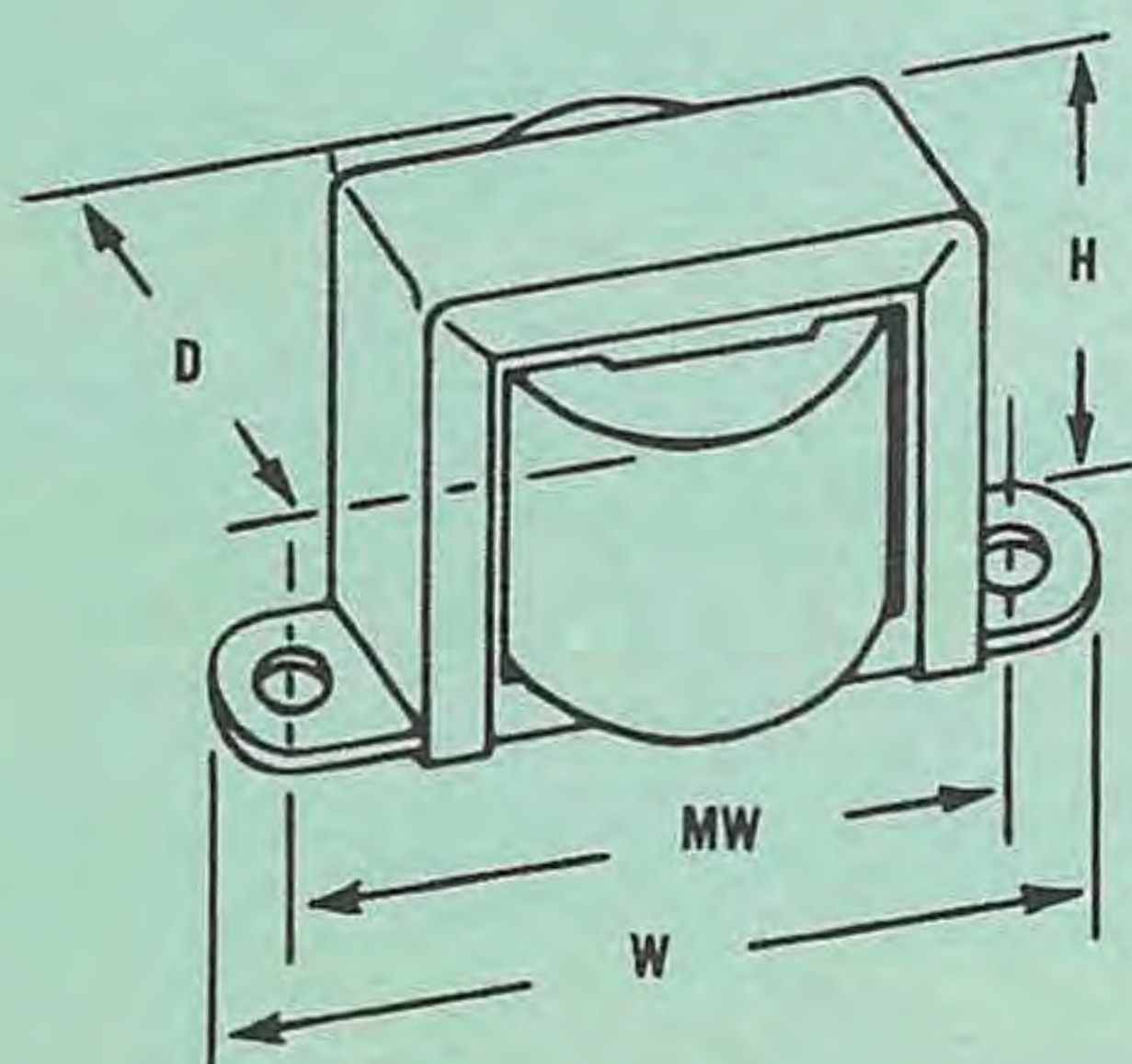
X Case



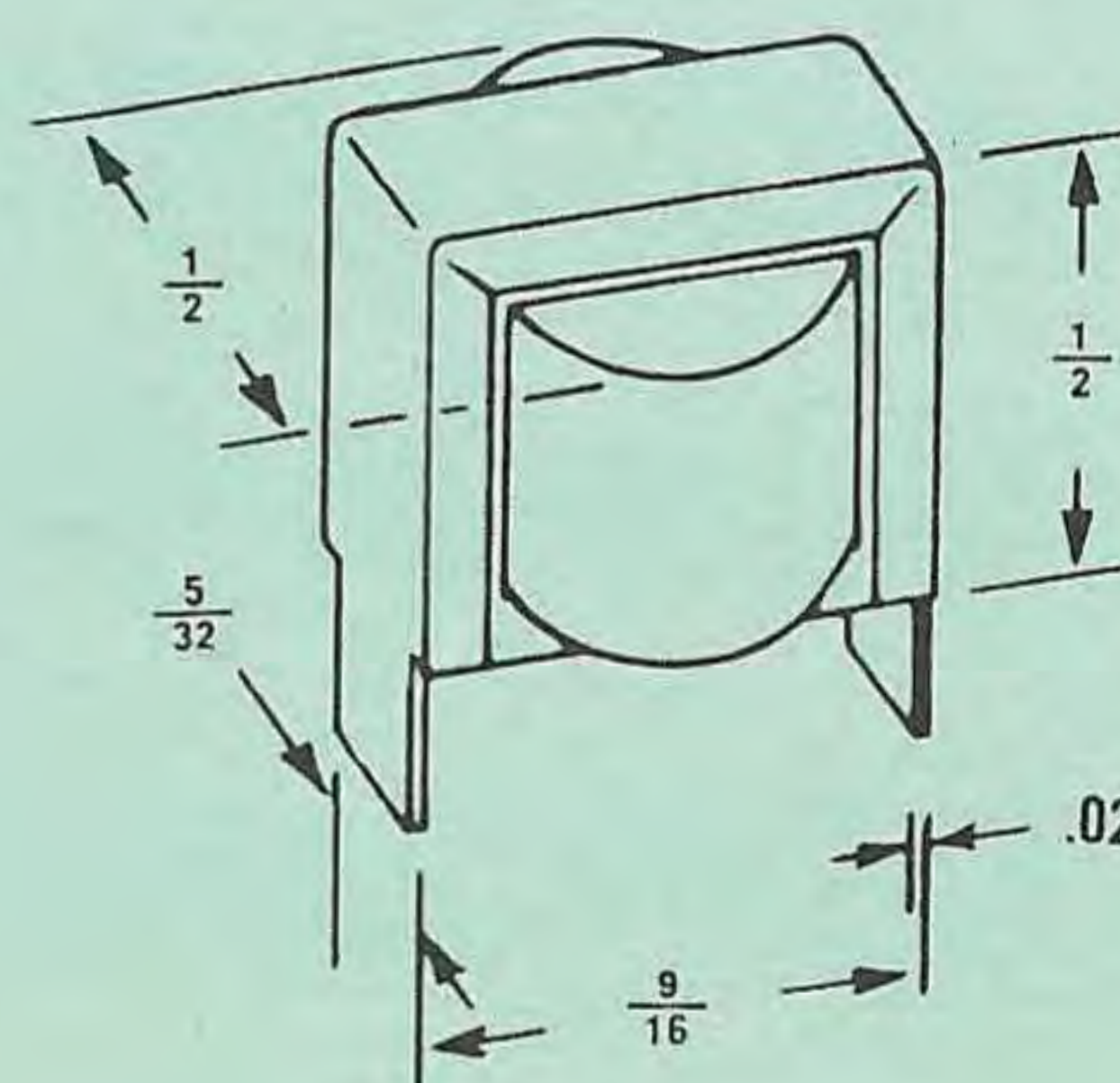
XT Case

Type No.	Power Output	Application	Matching Impedance		DC Resistance		Overall Turns Ratio	Frequency Response $\pm 3\text{DB}$	RMS Test Volts	Case Type	Connections	Case Dimension			Mounting Dimension MW	Mtg. Hole Size	Max. Unit Wt. Lbs.
			Primary	Secondary	Pri-ary	Sec-ondary						H	W	D			
T-1X‡	1MW.	Line or Mike to Grid	600/250/50	50,000	80	3200	1:9.16	60-15,000	500	X	Leads	$\frac{5}{8}$	$1\frac{1}{32}$	$\frac{3}{4}$	1	.100	.045
T-2X‡	1MW.	Line or Mike to Grid-Hi Gain	600/250/50	250,000	44	3600	1:20.6	100-15,000	500	X	Leads	$\frac{5}{8}$	$1\frac{1}{32}$	$\frac{3}{4}$	1	.100	.045
T-3X	1MW.	Line or Mike to Single or P.P. Grids	600/250/50	60,000 CT	100	3600	1:10	60-15,000	500	X	Leads	$\frac{5}{8}$	$1\frac{1}{32}$	$\frac{3}{4}$	1	.100	.045
T-5X‡	1MW.	Mike or Voice Coil to Grid	30/12/4	50,000	7	3500	1:39.7	50-15,000	500	X	Leads	$\frac{5}{8}$	$1\frac{1}{32}$	$\frac{3}{4}$	1	.100	.045
T-11X	10MW.	Interstage-Plate to Grid	15,000	50,000	1100	2860	1:1.81	60-15,000	500	X	Leads	$\frac{5}{8}$	$1\frac{1}{32}$	$\frac{3}{4}$	1	.100	.045
T-12X	10MW.	Interstage-Plate to Single or P.P. Grids	15,000	60,000 CT	1350	2700	1:2	60-15,000	500	X	Leads	$\frac{5}{8}$	$1\frac{1}{32}$	$\frac{3}{4}$	1	.100	.045
T-13X	10MW.	Interstage-Plate to Single or P.P. Grids	15,000 3 MA. D.C.	95,000 CT	1330	3300	1:2.5	350-7,000	500	X	Leads	$\frac{5}{8}$	$1\frac{1}{32}$	$\frac{3}{4}$	1	.100	.045
T-14X‡	10MW.	Line to Grid	200	500,000	63	4900	1:50	300-3,000	500	X	Leads	$\frac{5}{8}$	$1\frac{1}{32}$	$\frac{3}{4}$	1	.100	.045
▲T-15X	10MW.	Plate to Grid	15,000	1 Megohm	370	4450	1:8.2	150-15,000	500	X	Leads	$\frac{5}{8}$	$1\frac{1}{32}$	$\frac{3}{4}$	1	.100	.045
T-20X	10MW.	Output-Plate to Line	15,000	600/250/50	1330	58	5:1	60-15,000	500	X	Leads	$\frac{5}{8}$	$1\frac{1}{32}$	$\frac{3}{4}$	1	.100	.045
T-21X	10MW.	Output-Plate to Line	30,000	50	1100	15	24.5:1	100-15,000	500	X	Leads	$\frac{5}{8}$	$1\frac{1}{32}$	$\frac{3}{4}$	1	.100	.045
T-22X	10MW.	Output-Plate to Line	15,000 3 MA. D.C.	600/250/50	1330	58.8	5:1	350-7,000	500	X	Leads	$\frac{5}{8}$	$1\frac{1}{32}$	$\frac{3}{4}$	1	.100	.045
T-23X	10MW.	Output-Single or P.P. Plates to Line	20,000 CT	600/250/50	2000	70	5.76:1	60-15,000	500	X	Leads	$\frac{5}{8}$	$1\frac{1}{32}$	$\frac{3}{4}$	1	.100	.045
T-24X	10MW.	Plate or Transistor to Transistor	10,000 CT 2 MA. D.C.	2000 CT	1000	200	2.24:1	50-20,000	500	X	Leads	$\frac{5}{8}$	$1\frac{1}{32}$	$\frac{3}{4}$	1	.100	.045
T-25X	10MW.	Plate to Line or Transistor	12,000 CT 2 MA. D.C.	600 CT/150\$	1350	70	4.47:1	50-16,000	500	X	Leads	$\frac{5}{8}$	$1\frac{1}{32}$	$\frac{3}{4}$	1	.100	.045
T-26X	20MW.	Transistor to Line or Transistor	50,000 CT .5 MA. D.C.	600 CT/150\$	2500	70	9.1:1	100-15,000	500	X	Leads	$\frac{5}{8}$	$1\frac{1}{32}$	$\frac{3}{4}$	1	.100	.045
T-31X‡	10MW.	Line to Line	600/250/50	600/250/50	55	80	1:1	50-15,000	500	X	Leads	$\frac{5}{8}$	$1\frac{1}{32}$	$\frac{3}{4}$	1	.100	.045
T-32X	20MW.	Transistor to Transistor or Line	1500 CT 2 MA. D.C.	600 CT/150\$	150	60	1.58:1	50-20,000	500	X	Leads	$\frac{5}{8}$	$1\frac{1}{32}$	$1\frac{1}{16}$	$1\frac{1}{16}$	.125	.04
T-33X‡	10MW.	Isolation-High Impedance	5000 CT	5000 CT	1500	2200	1:1	60-15,000	500	X	Leads	$\frac{5}{8}$	$1\frac{1}{32}$	$\frac{3}{4}$	1	.100	.045
T-41X	1MW.	Transistor-Driver-Single to Push-Pull	1000 10 MA. D.C.	200 CT	428	128	2.25:1	20-15,000	500	X	Leads	$\frac{5}{8}$	$1\frac{1}{32}$	$1\frac{1}{16}$	$1\frac{1}{16}$	.125	.04
T-42X	1MW.	Transistor-Output-Single to Voice Coil	9800 2 MA. D.C.	15	855	1.73	25.5:1	200-50,000	500	X	Leads	$\frac{5}{8}$	$1\frac{1}{32}$	$1\frac{1}{16}$	$1\frac{1}{16}$	.125	.04
T-34X	20MW.	Transistor or Line to Transistor or Line	500 CT 2 MA. D.C.	500 CT/125\$	45	55	1:1.03	50-20,000	500	X	Leads	$\frac{5}{8}$	$1\frac{1}{32}$	$1\frac{1}{16}$	$1\frac{1}{16}$	.125	.04
T-35X	10MW.	Transistor or Line to Transistor	600 CT 1 MA. D.C.	2000 CT/500\$	68	200	1:1.7	50-20,000	500	X	Leads	$\frac{5}{8}$	$1\frac{1}{32}$	$\frac{3}{4}$	1	.100	.045
T-101X	-	Audio Choke	50 HY .75 MA. D.C.	-	4000	-	-	-	500	X	Leads	$\frac{5}{8}$	$1\frac{1}{32}$	$\frac{3}{4}$	1	.100	.045
T-102X	-	Coupling Reactor	6 HY. or 3 MA. D.C.	4 HY- 6 MA. D.C.	295	-	-	-	500	X	Leads	$\frac{5}{8}$	$1\frac{1}{32}$	$\frac{3}{4}$	1	.100	.045

§ Split winding. CT for Center Tap. ‡ Static shield. ▲ Discontinued item, available until stock depleted.



X Case



XT Case

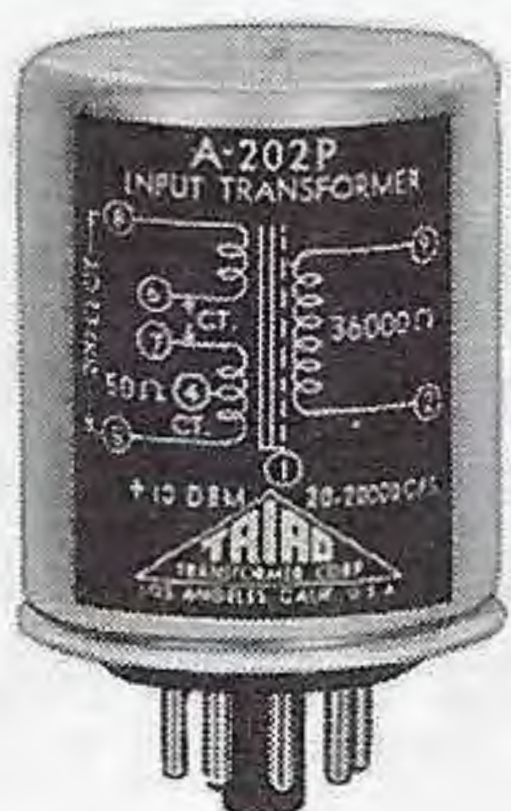
MINIATURE AUDIO TRANSISTOR TRANSFORMERS

Developed primarily for transistor circuitry, Triad miniatures can be applied with equal effectiveness in tube circuitry. Skillful design of these units permits the reversing of primary and secondary windings with virtually no loss in coupling characteristics. Power wattage given in the table is for lowest operating frequency; this wattage can be increased by as much as five times

at the center of the frequency response curve. Frequency response will be equal to, or better than ± 3 db. 300-10,000. These form just one group of the many Triad miniature transistor types available immediately from the shelves of your stocking distributor. Units trademarked "Triad" outperform and outlast all others of equivalent type and price.

Type No.	Power Output Watts	Application	Matching Impedance		DC Resistance		Overall Turns Ratio	RMS Test Volts	Case Type	Connections	Case Dimension			Mounting Dimension MW	Mtg. Hole Size	Max. Unit Wt. Lbs.
			Primary	Secondary	Primary	Secondary					H	W	D			
TY-23X	.1	Driver-Single to Sgl or P.P.	50000 .5MA D.C.	500 CT	6090	47.5	10:1	500	X	Leads	$\frac{5}{8}$	$1\frac{1}{32}$	$1\frac{1}{8}$	$1\frac{1}{8}$	.125	.045
TY-24X	.2	Driver-Single to Sgl or P.P.	50000 .5MA D.C.	3,000 CT	3720	250	4.08:1	500	X	Leads	$1\frac{1}{8}$	$1\frac{1}{8}$	1	$1\frac{3}{8}$	.120	.08
TY-25X	.2	Driver-Single to Sgl or P.P.	100000 .5MA D.C.	200 CT	9900	19.5	22.4:1	500	X	Leads	$1\frac{1}{8}$	$1\frac{1}{8}$	1	$1\frac{3}{8}$	.120	.08
TY-26X	.2	Driver-Single to Sgl or P.P.	100000 .5MA D.C.	3000 CT	9880	318	5.78:1	500	X	Leads	$1\frac{1}{8}$	$1\frac{1}{8}$	1	$1\frac{3}{8}$	.120	.08
TY-27XT	.01	Output-Single or P.P. to Line	500 CT 2MA D.C.	500 CT	37.5	51.5	1:1	500	XT	Leads	$\frac{1}{2}$	$\frac{5}{16}$	$\frac{1}{2}$	$\frac{5}{16}$	—	.025
TY-28XT	.01	Output-Single or P.P. to Line	500 CT 2MA D.C.	200 CT	38.2	25	1.58:1	500	XT	Leads	$\frac{1}{2}$	$\frac{5}{16}$	$\frac{1}{2}$	$\frac{5}{16}$	—	.025
TY-32X	.2	Interstage-Sgl or P.P. to P.P.	200 CT 2MA D.C.	2000 CT	29	233	3.18:1	1000	X	Leads	$1\frac{1}{8}$	$1\frac{1}{8}$	1	$1\frac{3}{8}$	.120	.08
TY-33X	.2	Output-Single or P.P. to V.C.	400 CT 5MA D.C.	16/8/4	30	3	5:1	1000	X	Leads	$1\frac{1}{8}$	$1\frac{1}{8}$	1	$1\frac{3}{8}$	.120	.08
TY-34X	.2	Interstage-Sgl or P.P. to Sgl or P.P.	400 CT 5MA D.C.	2000 CT	41	128	2.25:1	500	X	Leads	$1\frac{1}{8}$	$1\frac{1}{8}$	1	$1\frac{3}{8}$	.120	.08
TY-35X TY-35XT	.1	Interstage-Sgl or P.P. to Sgl or P.P.	500 CT 2MA D.C.	150 CT	57	32	1.82:1	500	X XT	Leads	$\frac{5}{8}$	$1\frac{1}{32}$	$1\frac{1}{8}$	$1\frac{1}{8}$ $5\frac{1}{64}$	.125	.04
TY-36X	.2	Interstage-Sgl to Sgl or P.P.	2000 2MA D.C.	1500 CT	165	140	1.15:1	500	X	Leads	$1\frac{1}{8}$	$1\frac{1}{8}$	1	$1\frac{3}{8}$	.120	.08
TY-37X TY-37XT	.2	Interstage-Sgl or P.P. to Sgl or P.P.	2000 CT 4MA D.C.	8000 CT	200	550	1:2	500	X XT	Leads	$1\frac{1}{8}$	$1\frac{1}{8}$	1	$1\frac{3}{8}$ $1\frac{1}{8}$	.120	.08
TY-38X TY-38XT	.2	Interstage-Sgl or P.P. to Sgl or P.P.	3000 CT 4MA D.C.	1000 CT	263	105	1.74:1	500	X XT	Leads	$1\frac{1}{8}$	$1\frac{1}{8}$	1	$1\frac{3}{8}$ $1\frac{1}{8}$	.120	.08
TY-39X	.2	Output-P.P. to V.C.	4000 CT 4MA D.C.	16/8/4	333	1.8	15.7:1	500	X	Leads	$1\frac{1}{8}$	$1\frac{1}{8}$	1	$1\frac{3}{8}$	.120	.08
TY-40X	.1	Interstage-Sgl to Sgl or P.P.	5000 1MA D.C.	200 CT	440	27	5:1	500	X	Leads	$\frac{5}{8}$	$1\frac{1}{32}$	$1\frac{1}{8}$	$1\frac{1}{8}$	.125	.04
▲TY-41X	.1	Interstage-Sgl to Sgl	16000 1MA D.C.	4000	1373	330	2:1	500	X	Leads	$\frac{5}{8}$	$1\frac{1}{32}$	$1\frac{1}{8}$	$1\frac{1}{8}$	.125	.04
TY-42X	.1	Output-Sgl to V.C.	20000 .5MA D.C.	8/4	1440	1.07	50:1	500	X	Leads	$\frac{5}{8}$	$1\frac{1}{32}$	$1\frac{1}{8}$	$1\frac{1}{8}$	.125	.04
TY-43X	.1	Interstage-Sgl to Sgl or P.P.	20000 .5MA D.C.	800 CT	1435	82	5:1	500	X	Leads	$\frac{5}{8}$	$1\frac{1}{32}$	$1\frac{1}{8}$	$1\frac{1}{8}$	.125	.04
TY-44X	.2	Output-Sgl to V.C.	1000 10MA D.C.	16/8/4	181	3.8	7.9:1	500	X	Leads	$1\frac{1}{8}$	$1\frac{1}{8}$	1	$1\frac{3}{8}$	.120	.08
TY-45X TY-45XT	.2	Output-Sgl or P.P. to V.C.	500 CT 5MA D.C.	16/8/4	56	3.8	5.2:1	500	X XT	Leads	$1\frac{1}{8}$	$1\frac{1}{8}$	1	$1\frac{3}{8}$ $1\frac{1}{8}$	.120	.08
TY-46X	.25	Interstage-Sgl to P.P. or Sgl	100 100MA D.C.	1000 CT	5.5	60	1:3.15	1500	X	Leads	$1\frac{3}{8}$	$2\frac{3}{8}$	$1\frac{1}{2}$	2	$\frac{3}{16}$	
TY-47X	.2	Output-Sgl or P.P. to V.C.	2000 CT 10MA D.C.	16/8/4	260	3.95	11.2:1	500	X	Leads	$1\frac{1}{8}$	$1\frac{1}{8}$	1	$1\frac{3}{8}$	.120	.08
TY-49X	.3	Interstage-Sgl or P.P. to Sgl or P.P.	500 CT 12MA D.C.	5000 CT	40	245	1:3.15	500	X	Leads	$1\frac{3}{8}$	$2\frac{3}{8}$	$1\frac{3}{8}$	2	$\frac{3}{16}$	.4
TY-50X	.04	Input-Sgl to Sgl or P.P.	125000 0 D.C.	2000 CT	5500	120	8:1	500	X	Leads	$1\frac{1}{8}$	$1\frac{1}{8}$	1	$1\frac{3}{8}$	.120	.08
TY-51X TY-51XT	.05	Driver-Sgl or P.P. to Sgl or P.P.	2000 CT 10MA D.C.	200 CT	748	120	3.16:1	500	X XT	Leads	$\frac{5}{8}$	$1\frac{1}{32}$	$1\frac{1}{8}$	$1\frac{1}{8}$ $5\frac{1}{64}$	.125	.04
TY-52X	.1	Driver-Sgl or P.P. to Sgl or P.P.	20000 CT 1MA D.C.	2000 CT	2140	327	3.17:1	500	X	Leads	$1\frac{1}{8}$	$1\frac{1}{8}$	1	$1\frac{3}{8}$	.120	.08
TY-54X	.1	Interstage-Sgl to Sgl or P.P.	15000 1.5MA D.C.	200 CT	2130	55	8.65:1	500	X	Leads	$1\frac{1}{8}$	$1\frac{1}{8}$	1	$1\frac{3}{8}$	.120	.08
TY-55X	.2	Interstage-Sgl or P.P. to Sgl or P.P.	2000 CT 2MA D.C.	500 CT	140	65	2:1	500	X	Leads	$1\frac{1}{8}$	$1\frac{1}{8}$	1	$1\frac{3}{8}$	.120	.08
TY-56X	.05	Interstage-Sgl to Sgl or P.P.	10000 1MA D.C.	2000 CT	1034	334	2.24:1	500	X	Leads	$1\frac{1}{8}$	$1\frac{1}{8}$	1	$1\frac{3}{8}$	.120	.08
TY-57X	.2	Output-Sgl or P.P. to V.C.	250 CT 10MA D.C.	16/8/4	34.6	3.7	3.94:1	500	X	Leads	$1\frac{1}{8}$	$1\frac{1}{8}$	1	$1\frac{3}{8}$	.120	.08
TY-58X	.2	Output-Sgl or P.P. to V.C.	125 CT 15MA D.C.	8/4	16	2.2	3.97:1	500	X	Leads	$1\frac{1}{8}$	$1\frac{1}{8}$	1	$1\frac{3}{8}$	.120	.08
TY-59X	.2	Interstage-Sgl or P.P. to Sgl or P.P.	5000 CT 1MA D.C.	50,000 CT	378	6410	1:3.16	500	X	Leads	$1\frac{1}{8}$	$1\frac{1}{8}$	1	$1\frac{3}{8}$	.120	.08
TY-60X	.1	Input-High Imp. to Transistor	200000 0 D.C.	1000	8400	195	14.2:1	500	X	Leads	$\frac{5}{8}$	$1\frac{1}{32}$	$1\frac{1}{8}$	$1\frac{1}{8}$	.125	.04
TY-62X	.1	Output-Sgl to Voice Coil	10000 2MA D.C.	4	709	1.5	50:1	500	X	Leads	$\frac{5}{8}$	$1\frac{1}{32}$	$1\frac{1}{8}$	$1\frac{1}{8}$	.125	.04

CT for Center Tap. ▲ Discontinued item, available until stock depleted.



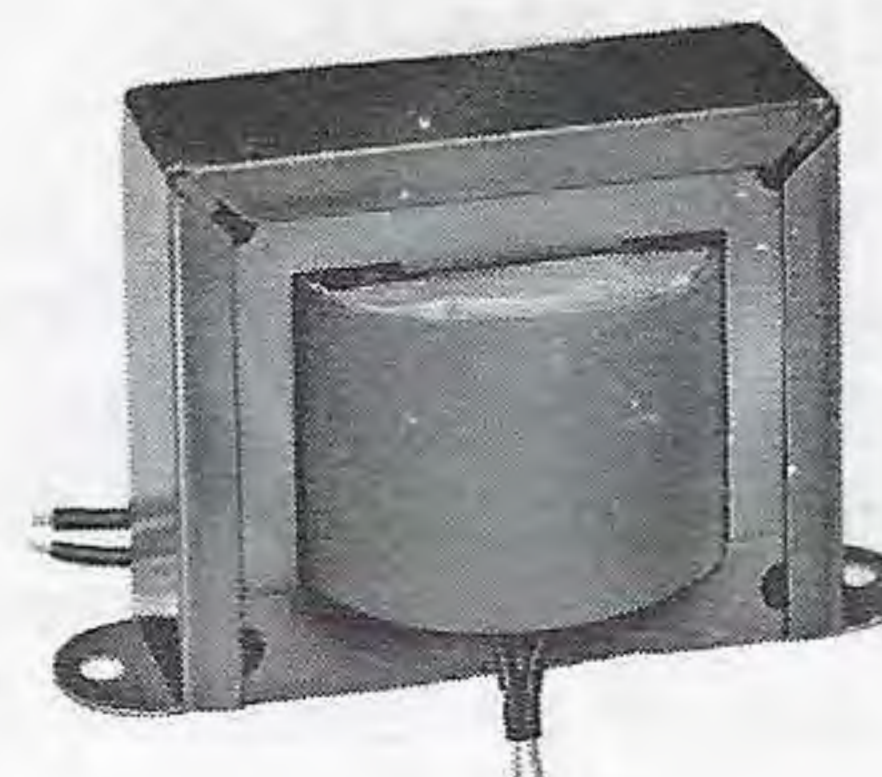
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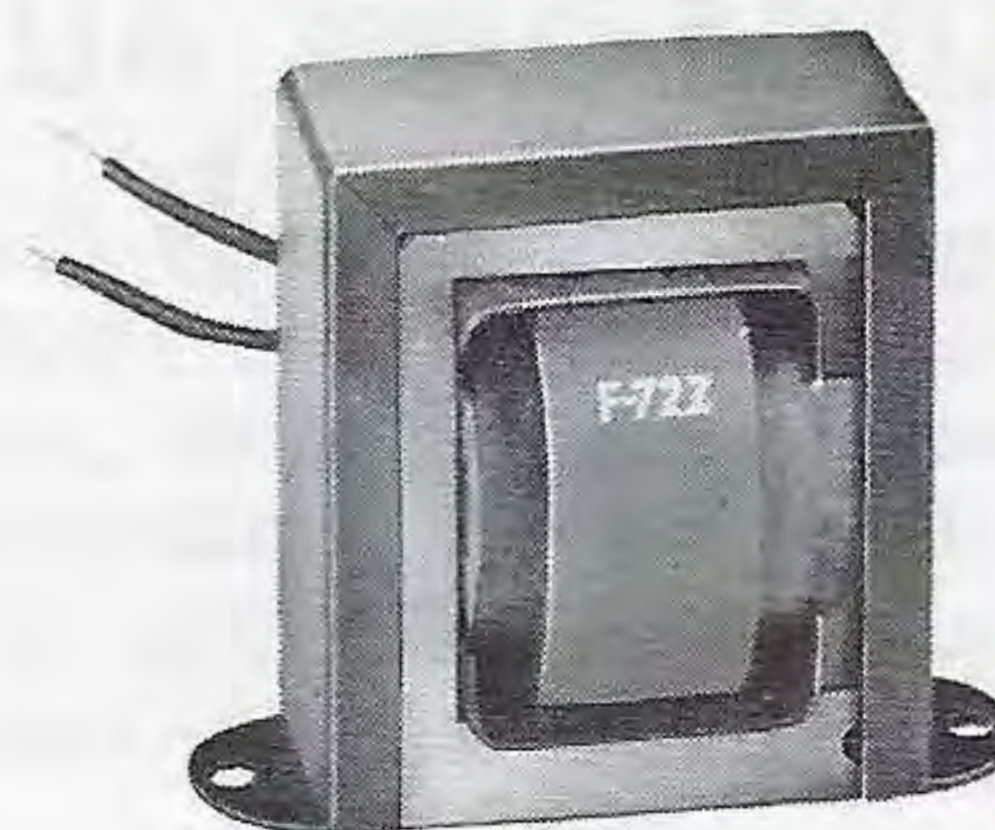
HS-273P



A-210P



X Case



Z Case

PLUG-IN INPUT

Type No.	Application	Matching Impedance		D.C. Resistance		Overall Turns Ratio	Freq. Resp. ± 3 DB	RMS Test Voltage	Mag. Shielding	Case Type	Case Dimension		Max. Unit Wt. Lbs.
		Primary	Secondary	Primary	Secondary						H	D	
AA-200P	Line or Mike to Grid	200 CT/50 CTs	36,000	40	2300	1:13.6	50-15,000	500	70 DB	P 9 Pin	2½	1¼	.25
A-202P	Line or Mike to Grid	200 CT/50 CTs	36,000	45	2600	1:13.6	30-15,000	500	90 DB	P 9 Pin	2¾	1¾	.5
HS-273P	Line or Mike to Grid	200 CT/50s	80,000	14	3460	1:20	30-20,000	500	70 DB	Octal 8 Pin	1¾	1⅝	.35
A-210P	Isolation for Stereo Amplifiers—To eliminate Ground Loop Disturbance	27,000	27,000	4025	5660	1:1	20-20,000	500	45 DB	A-210P	2⅝	1⅞	.25

Note: All items have electrostatic shield between primary and secondary plus magnetic shielding.

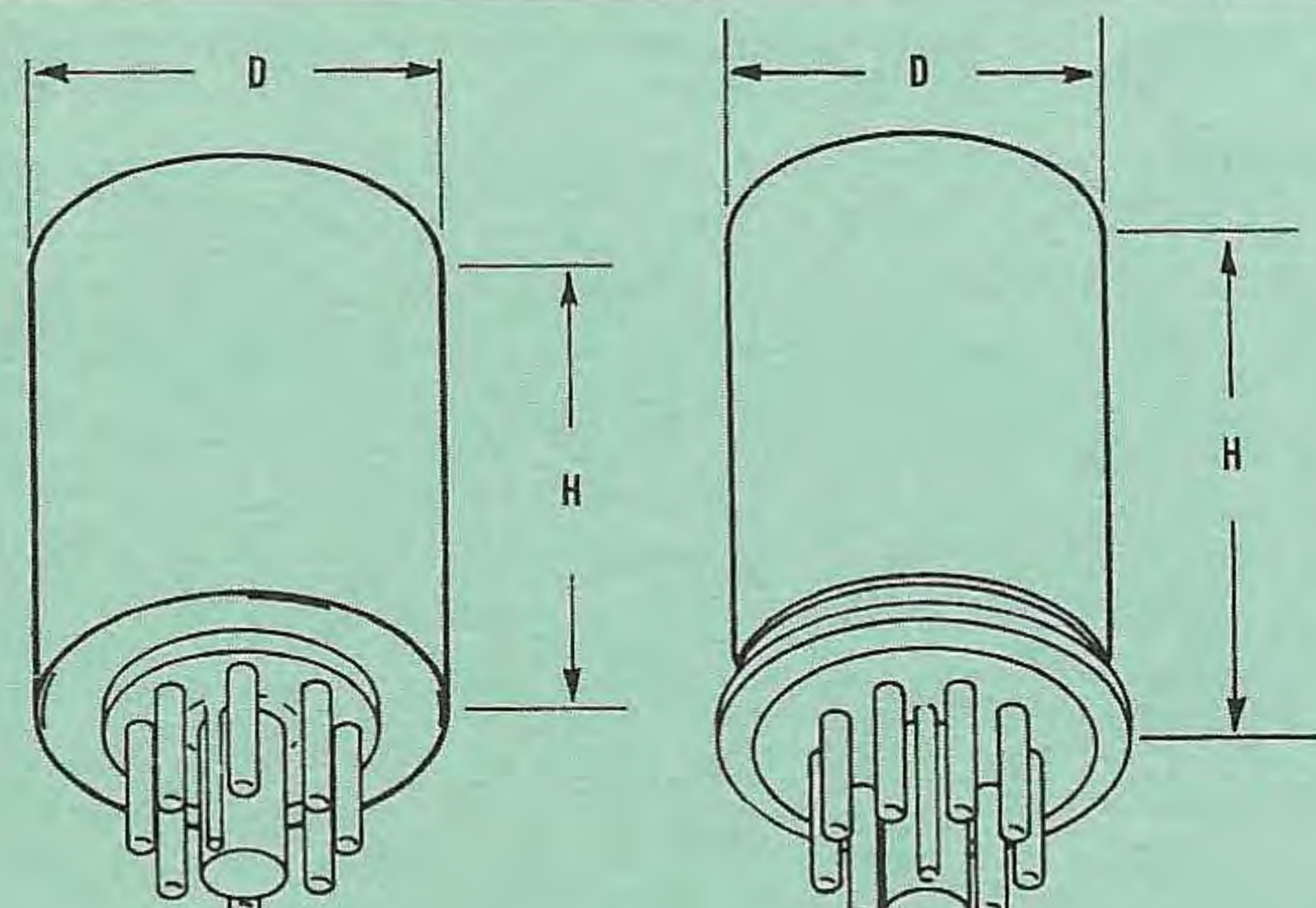
OUTPUT AND DRIVER TRANSISTOR TRANSFORMERS / medium and high level

Type No.	Power Output Watts	Application	Matching Impedance		D.C. Resistance		Overall Turns Ratio	Freq. Response ± 3 DB	RMS Test Voltage	Case Type	Connections	Case Dimension			Mounting Dimension		Max. Unit Wt. Lbs.
			Primary	Secondary	Primary	Secondary						H	W	D	MW	MD	
TY-29X	8	Output-Push-Pull to V.C.	24 CT 500MA D.C. Bal.	8/4	2.57	2.2	1.73:1	30-20,000	1000	X	Leads	1½	3½	1¾	2½	1	1.1
TY-31X	2	Output-Sgl or P.P. to V.C.	200 CT 50MA D.C. Bal.	8/4	27	1.4	5:1	50-10,000	500	X	Leads	1¾	2½	1¼	1¾		.21
TY-48X	.5	Output-Class B P.P. to V.C.	100 CT 40MA D.C.	16/8/4	14	4	2.5:1	50-20,000	500	X	Leads	1¾	1½	1	1¾		.08
TY-30X	2	Output-Sgl or P.P. to V.C.	100 CT 100MA D.C. Bal.	8/4	14.4	1.1	3.54:1	50-10,000	500	X	Leads	1¾	2½	1¼	1¾		.2
TY-53X	.6	Driver-Sgl or P.P. to Sgl or P.P.	200 CT 10MA D.C.	400 CT	26.5	58.6	1:1.4	20-20,000	1000	X	Leads	1½	3½	1¾	2½		1
TY-61X	.5	Driver-Sgl to Sgl or P.P.	100 100MA D.C.	100 CT	10.6	10	1:1	50-10,000	1000	X	Leads	1½	2½	1½	2¾		.6
TY-63X	5	Output-P.P. 2N68's to V.C.	48 CT 275MA D.C. Bal.	16/8	4.5	1.4	1.72:1	50-10,000	1000	X	Leads	1½	3½	1¾	2½		1
TY-64X	10	Output-P.P. to Voice Coil	32 CT 575MA D.C. Bal.	16/8/4	2.24	1.3	1.44:1	300-10,000	1000	X	Leads	1½	3½	1¾	2½		1
TY-65Z	10	Modulation-P.P. Class B to Modulation	32 CT 575MA D.C. Bal.	6K/4K/3K	1.9	275	1:13.7	300-3000	1500	Z	Leads	2½	2½	2	2¾		1.3
TY-20Z	10	Output P.P. to Voice Coil	100 CT 500MA D.C. Bal.	16/8/4	1.5	1.6	6:1	300-10,000	1000	Z	Leads	2¾	2½	1¾	2¾		1
TY-66A	40	Modulation-Class B-P.P. to Modul.	6 CT 5A. D.C.	6K/4K/3K	.158	80	1:31.6	300-3000	Pri 1500 Sec 3000	A	Leads-2	3½	3½	3¾	2½	2¼	5.2
TY-67A	40	Output-Class B P.P. to Voice Coil	6 CT 5A. D.C.	16/8/4	.174	.24	1:1.63	300-3000	1500	A	Leads-2	3½	3½	3¾	2½	2¼	5

TRANSISTOR DRIVER TRANSFORMERS / split secondary

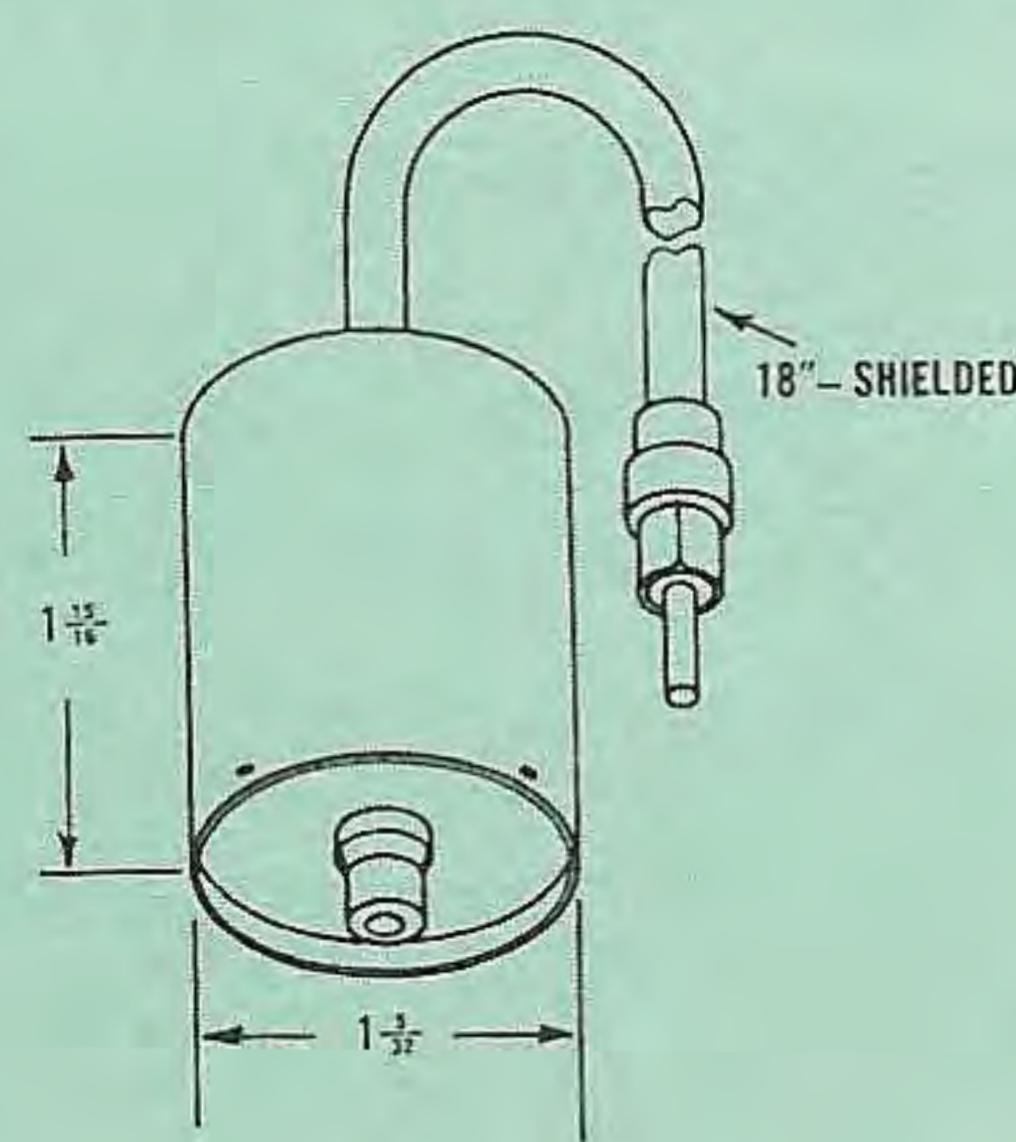
Type No.	Power Output Watts	Turns Ratio	D.C. Resistance		Max. Pri. D.C. Ma.*	Min. Pri. Inductance**	RMS Test Voltage	Case Type	Connections	Case Dimensions				Mtg. Hole Size	Max. Unit Wt. Lbs.
			Pri.	Ea. Sec.						H	W	D	MW		
TY-158X	3-5	1.5:1:1	3	3.6	50	.2H	500	X	Leads	1½	3½	1¾	2½	¾	1.2
TY-159X	3-5	3:1:1	11	3.6	50	.8H	500	X	Leads	1½	3½	1¾	2½	¾	1.2
TY-160X	3-5	6:1:1	45	3.6	50	3.5H	500	X	Leads	1½	3½	1¾	2½	¾	1.2

*For single end operation—may also be used in P.P. circuits. **Measured at 3V, 60 CPS and rated D.C. CT for Center Tap. § Split winding. ▲ Discontinued item, available until stock depleted. ■ New item.

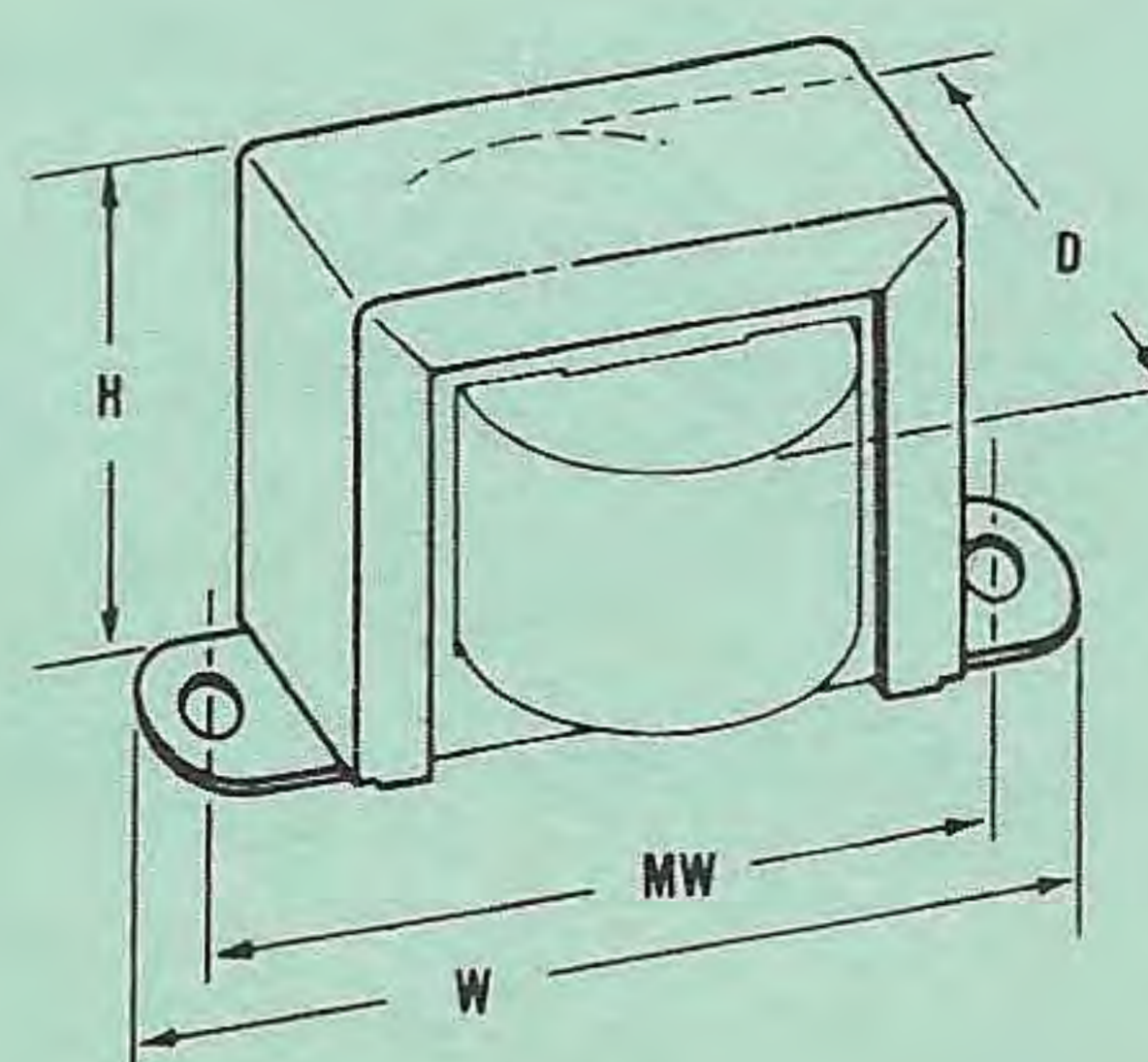


P Case, 8 Pin

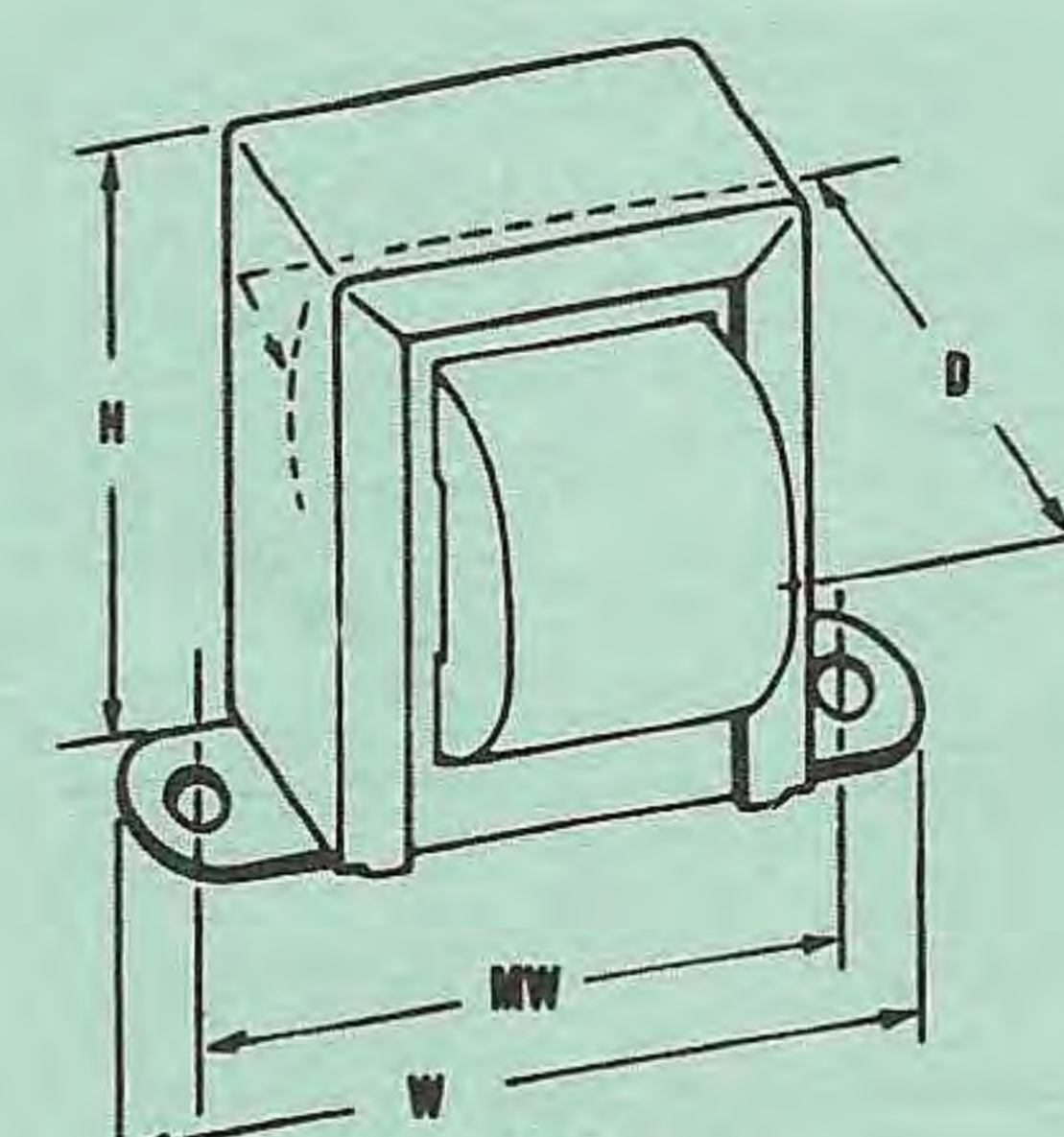
P Case, 9 Pin



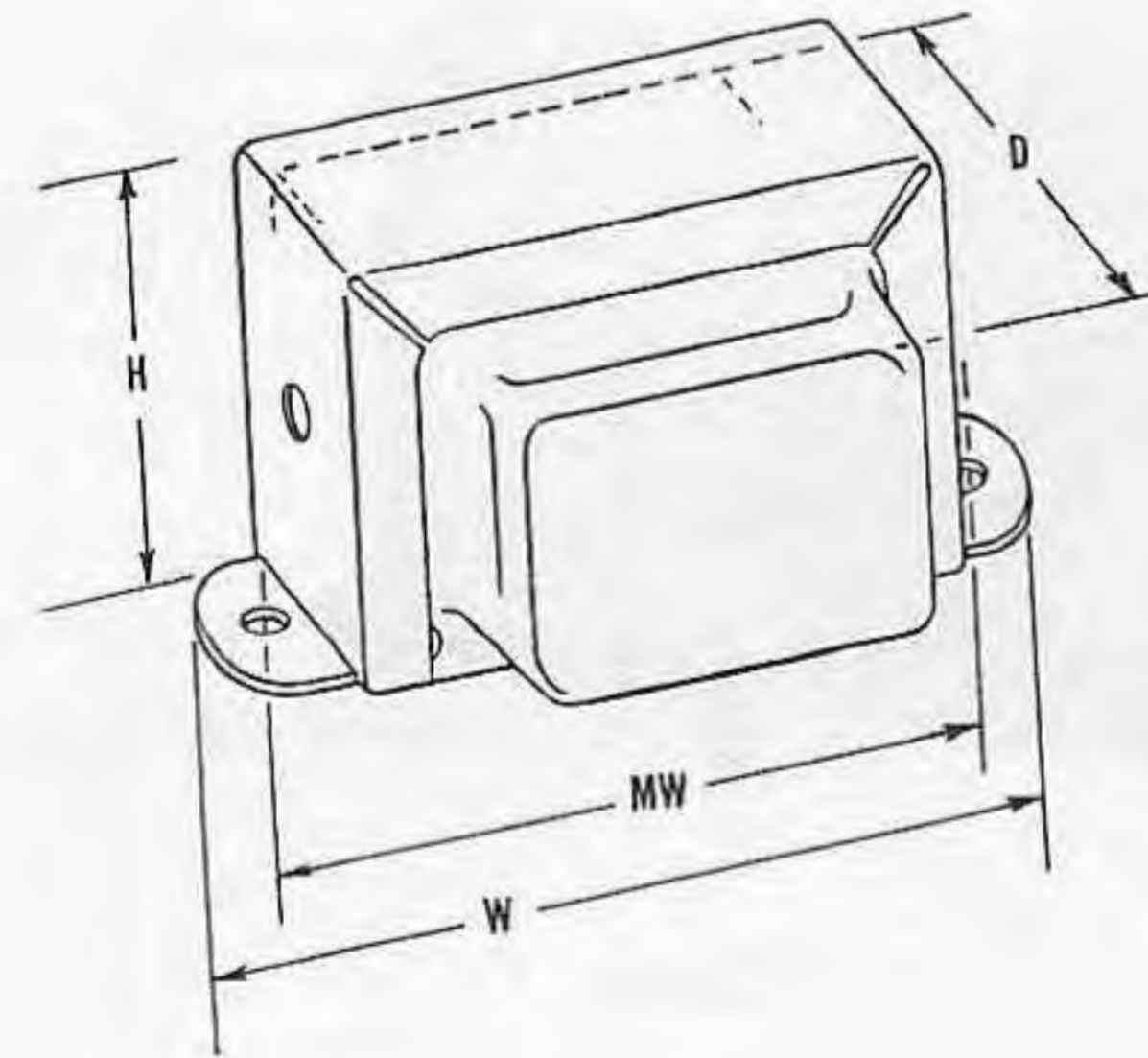
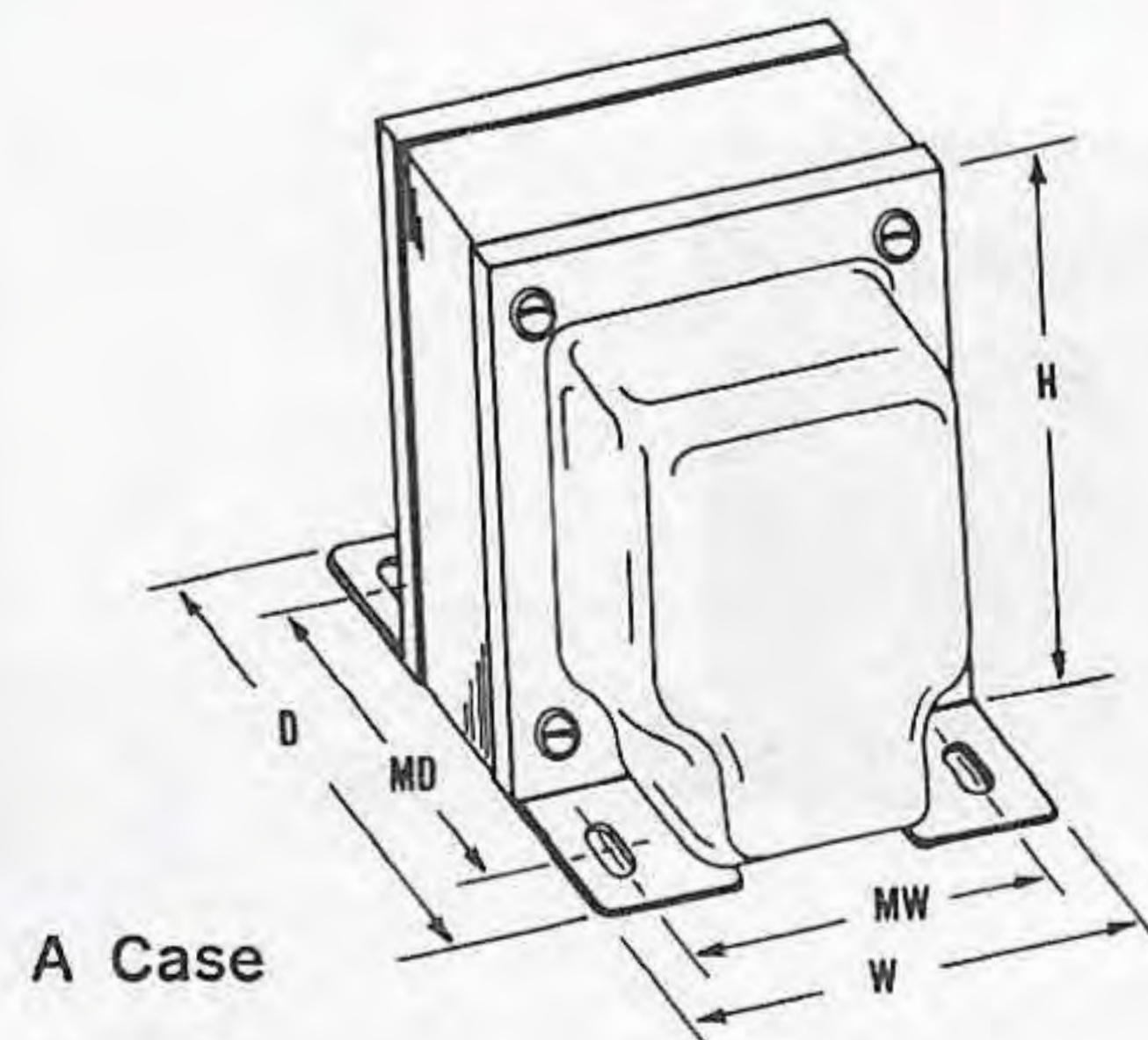
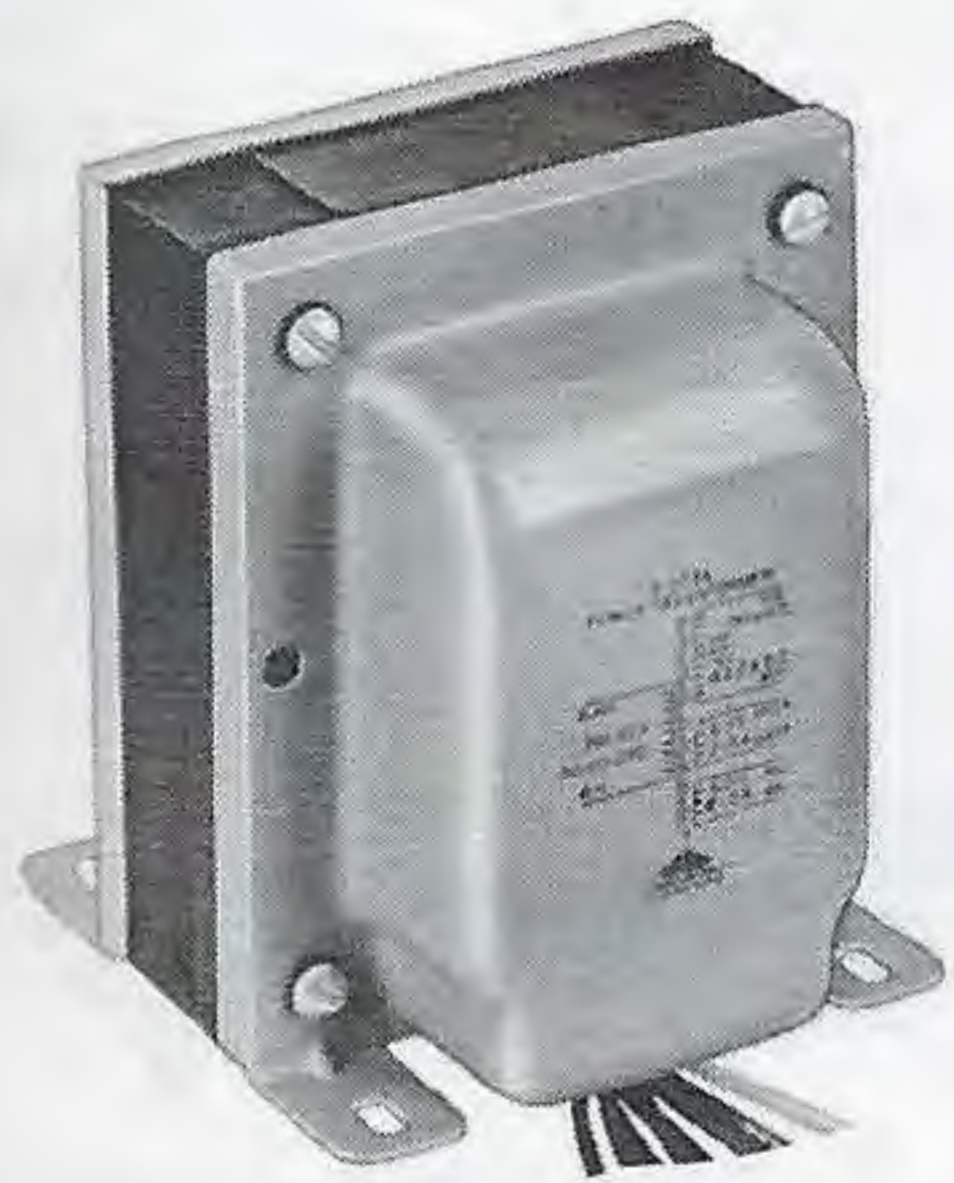
A-210P



X Case



Z Case



SX Case

HIGH FIDELITY OUTPUT / tube to line or voice coil

Type No.	Output Watts	Application	Matching Impedance		D.C. Resistance		Primary Ma. D.C. Per Side	Overall Turns Ratio	Frequency Response ± 3 DB	RMS Test Voltage	Case Type	Connections or Lead Holes Used	Case Dimension			Mounting Dimension		Max. Unit Wt. Lbs.
			Primary	Secondary	Pri-ary	Sec-ondary							H	W	D	MW	MD	
S-31A	15	P.P. 6V6's, EL84's, etc. to Speaker	8000 CT	16/8/4	470	.33	40	22.2:1	30-20,000	1500	A	1	3 $\frac{3}{8}$	2 $\frac{1}{2}$	3 $\frac{3}{8}$	2	2 $\frac{1}{2}$	3.8
▲S-32A	15	P.P. 6V6's, EL84's, etc. to Line	8000 CT	500/250/125	455	28.2	40	4:1	30-15,000	1500	A	1	3 $\frac{3}{8}$	2 $\frac{1}{2}$	3 $\frac{3}{8}$	2	2 $\frac{1}{2}$	3.8
S-142A	15	P.P. 6V6's, EL84's, etc. to Speaker	8000 CT ■	16/8/4	450	.76	50	22.2:1	20-20,000	1500	A	2	3 $\frac{3}{8}$	2 $\frac{1}{2}$	3 $\frac{3}{8}$	2	2 $\frac{1}{2}$	3.75
S-35A	20	P.P. 6L6's, etc. to Speaker	5000 CT	16/8/4	320	.8	80	17.6:1	20-20,000	1500	A	1	3 $\frac{3}{8}$	2 $\frac{1}{2}$	3 $\frac{5}{8}$	2	2 $\frac{1}{2}$	4.3
S-36A	20	P.P. 6L6's, etc. to Line	5000 CT	500/250/125	310	30	80	3.16:1	20-20,000	1500	A	1	3 $\frac{3}{8}$	2 $\frac{1}{2}$	3 $\frac{5}{8}$	2	2 $\frac{1}{2}$	4.25
S-144A	25	P.P. 7189A or Equiv. to Speaker	8000 CT ■	16/8/4	240	.58	100	22.2:1	10-15,000	1500	A	2	3 $\frac{1}{2}$	2 $\frac{3}{4}$	4 $\frac{1}{4}$	2 $\frac{1}{4}$	3 $\frac{3}{8}$	6
S-146A	25	P.P. 5881, 6L6's, etc. to Speaker	6600 CT ■	16/8/4	250	.715	80	20:1	10-50,000	Pri. 2000 Sec. 1500	A	2	3 $\frac{1}{2}$	2 $\frac{3}{4}$	4 $\frac{1}{4}$	2 $\frac{1}{4}$	3 $\frac{3}{8}$	5.75
▲S-149A	50	P.P. Par. EL84's or Equiv. to Speaker	3300 CT ■	16/8/4	126	.6	130	13.85:1	20-75,000	2000	A	2	4 $\frac{5}{8}$	3 $\frac{1}{2}$	4 $\frac{1}{2}$	3	3 $\frac{3}{8}$	8
S-42A	50	P.P. Par. 6L6's Class A to Speaker	4500 CT	16/8/4	147	.56	140	16.9:1	30-15,000	1500	A	1	4 $\frac{1}{4}$	3 $\frac{1}{2}$	4 $\frac{5}{8}$	2 $\frac{3}{4}$	3 $\frac{1}{2}$	8.25
SR-45Z	10	70 Volt Line Autoformer	4000/2000/1000/500	16/8/4	255	.77	-	15.7:1	20-20,000	1000	Z	Leads	2 $\frac{3}{4}$	3 $\frac{1}{8}$	2 $\frac{1}{8}$	2 $\frac{1}{2}$		1.75
S-46A	20	70 Volt Line Autoformer	2000/1000/500/250	16/8/4	88	.82	-	11:1	30-15,000	1000	A	1	3 $\frac{3}{8}$	2 $\frac{1}{2}$	3 $\frac{3}{8}$	2	2 $\frac{3}{8}$	4

OUTPUT / tube to voice coil & line

Type No.	Output Watts	Application	Matching Impedance		D.C. Resistance		Primary Ma. D.C. Per Side	Overall Turns Ratio	Frequency Response ± 3 DB	RMS Test Voltage	Case Type	Connections or Lead Holes Used	Case Dimension			Mounting Dimension		Max. Unit Wt. Lbs.
			Primary	Secondary	Pri-ary	Sec-ondary							H	W	D	MW	MD	
S-27A	8	Single Plate to Line or Speaker	2500	500/16/8/4	260	34	80	2.22:1	40-12,000	1000	A	1	2 $\frac{5}{8}$	2 $\frac{1}{2}$	2 $\frac{3}{8}$	1 $\frac{3}{4}$	1 $\frac{5}{8}$	1.75
S-28X	5	Single Plate to Line or Speaker	7500	500/16/8/4	595	35.8	40	4.05:1	50-12,000	1000	X	Leads & Lugs	1 $\frac{1}{2}$	3 $\frac{3}{8}$	1 $\frac{3}{4}$	2 $\frac{1}{2}$		1
S-29X	5	Single Plate to Line or Speaker	5000	500/16/8/4	660	56	45	3.16:1	50-12,000	1000	X	Leads & Lugs	1 $\frac{1}{2}$	3 $\frac{3}{8}$	1 $\frac{3}{4}$	2 $\frac{1}{2}$		1
S-22A	15	P.P. Plates to Line or Speaker	5000 CT	500/16/8/4	424	48.3	50	3.16:1	25-15,000	1500	A	1	2 $\frac{5}{8}$	2 $\frac{1}{2}$	2 $\frac{5}{8}$	1 $\frac{3}{4}$	1 $\frac{7}{8}$	2.5
S-24A	15	P.P. Plates to Line or Speaker	8000 CT	500/16/8/4	675	39.5	40	3.98:1	20-15,000	1500	A	1	2 $\frac{5}{8}$	2 $\frac{1}{2}$	2 $\frac{5}{8}$	1 $\frac{3}{4}$	1 $\frac{7}{8}$	2.5
S-60A	35	P.P. Plates to Line or Speaker	6600 CT	500/250/16/8/4	118.5	9.6	150	3.65:1	30-20,000	2000	A	2	3 $\frac{3}{8}$	3 $\frac{3}{8}$	3 $\frac{3}{8}$	2 $\frac{1}{2}$	2 $\frac{1}{4}$	4

■ Williamson type circuit may be used. Taps on primary for proper screen operation. CT for Center Tap.

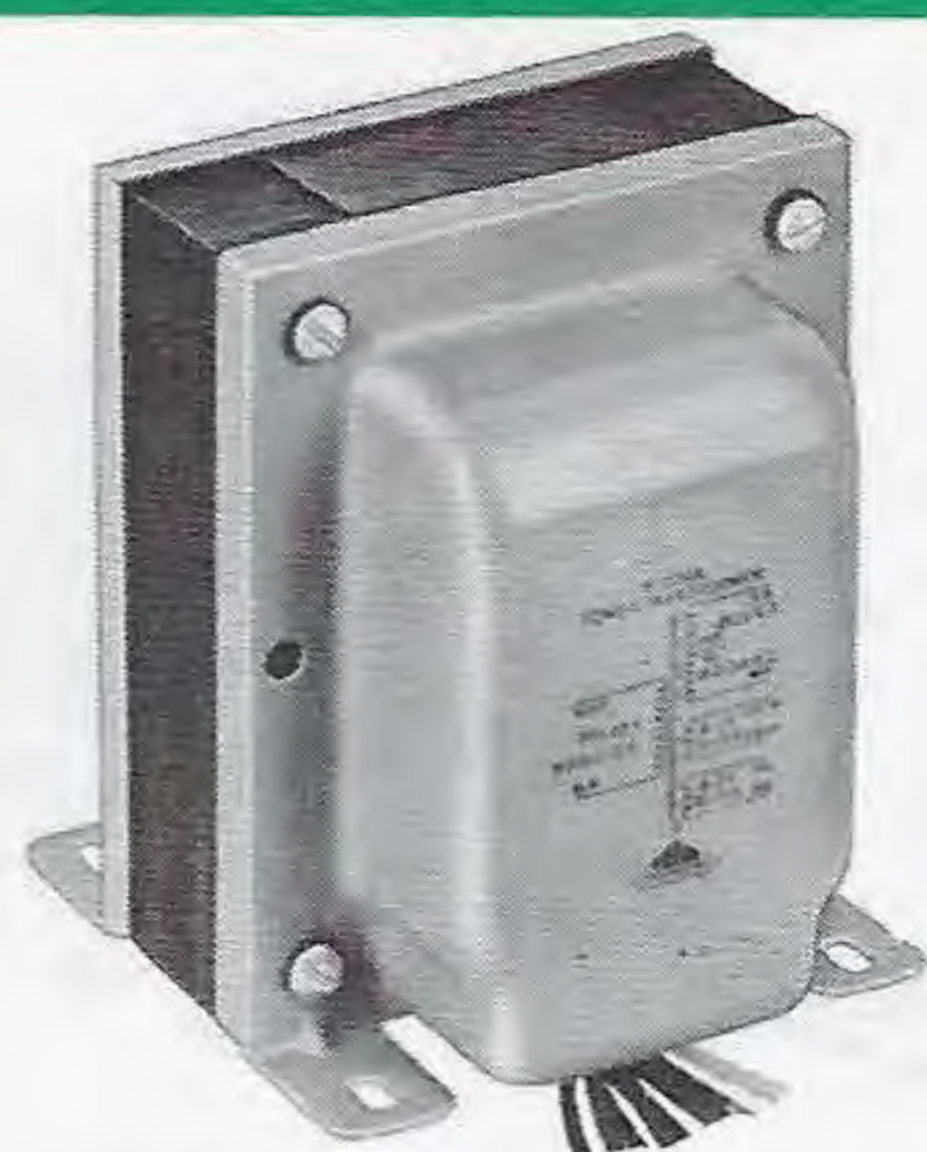
HIGH FIDELITY OUTPUT / for "low profile" amplifiers / case type SX

Give maximum performance in low-height limited-space amplifiers — particularly those which incorporate high-gain pre-amplifier stages, and which are prone to hum pickup. All SX

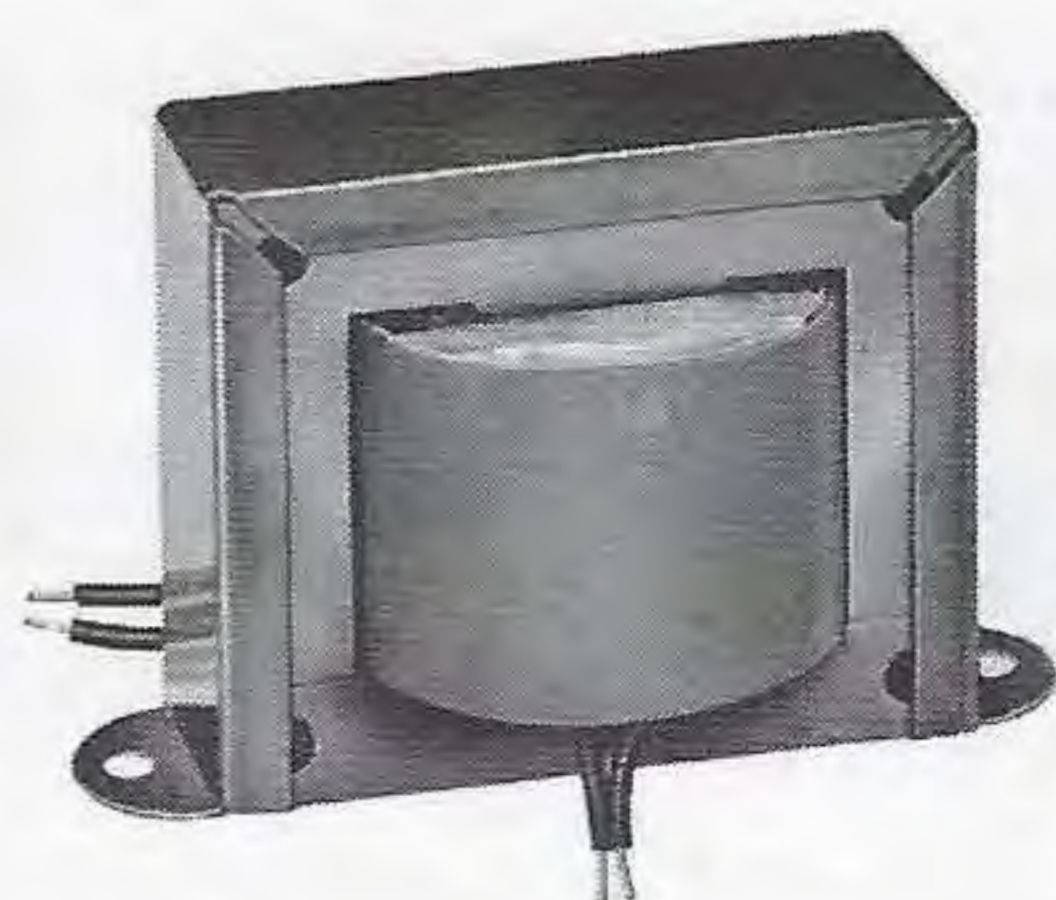
units are in cases 2 $\frac{1}{2}$ " high, 3" wide and 2 $\frac{3}{4}$ " deep, with mounting dimension of 3 $\frac{1}{16}$ " (mtg. hole size $\frac{3}{16}$ "). Weight 2 $\frac{1}{2}$ lbs.

Type No.	Output Watts	Application	Matching Impedance		Overall Turns Ratio	Frequency Response ± 2 db.	RMS Test Volt.
			Primary	Secondary			
SX-201	10-15	Williamson circuit	3300 CT	4/8/16	13.3:1	20-20,000	1500
SX-202	10-15	Williamson circuit	4500 CT	4/8/16	15.5:1	20-20,000	1500
▲SX-203	5-7	Single-ended oper.	5000	4/8/16	16.5:1	20-20,000	1500
SX-204	10-15	Push-pull oper.	5000 CT	4/8/16	16.5:1	20-20,000	1500
▲SX-205	10-15	Push-pull oper.	6600 CT	4/8/16	18.8:1	20-20,000	1500
SX-206	10-15	Williamson circuit	6600 CT	4/8/16	18.8:1	20-20,000	1500
SX-207	10-15	Williamson circuit	8000 CT	4/8/16	21.2:1	20-20,000	1500
SX-208	10-15	Push-pull oper.	8000 CT	4/8/16	21.2:1	20-20,000	1500

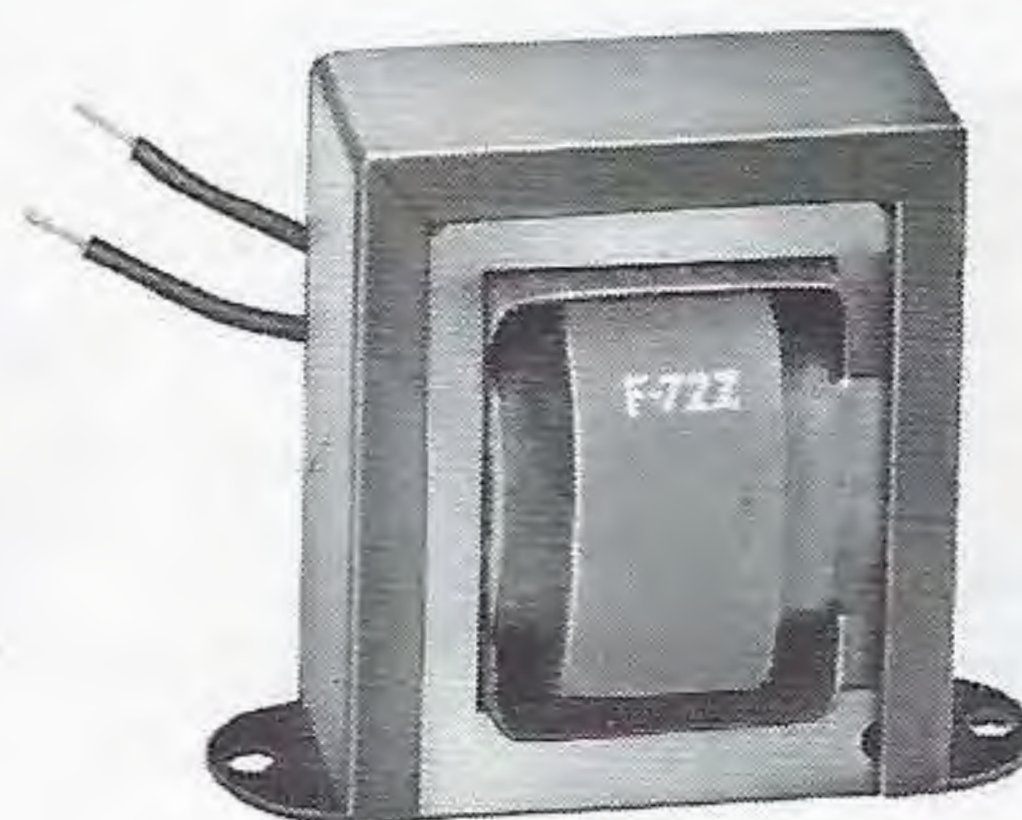
▲ Discontinued item, available until stock depleted.



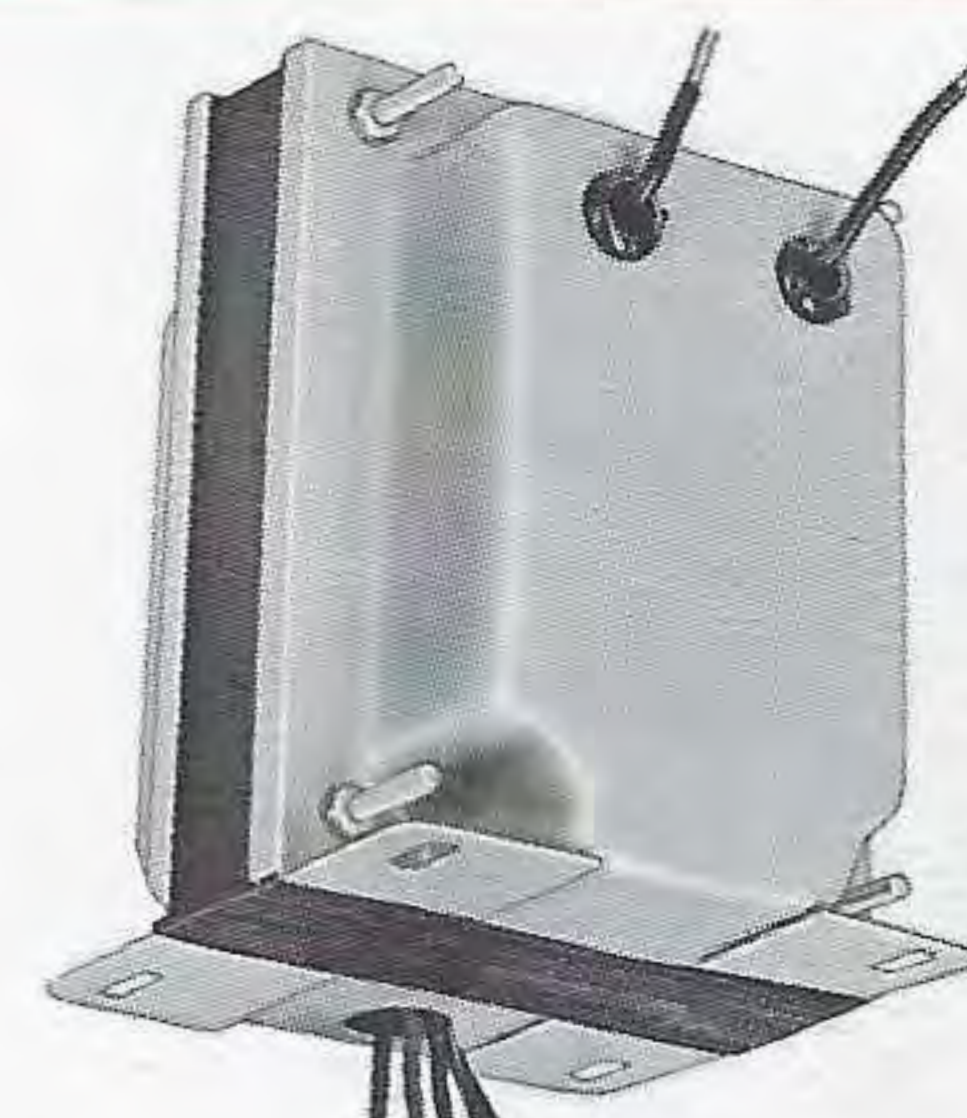
A Case



X Case



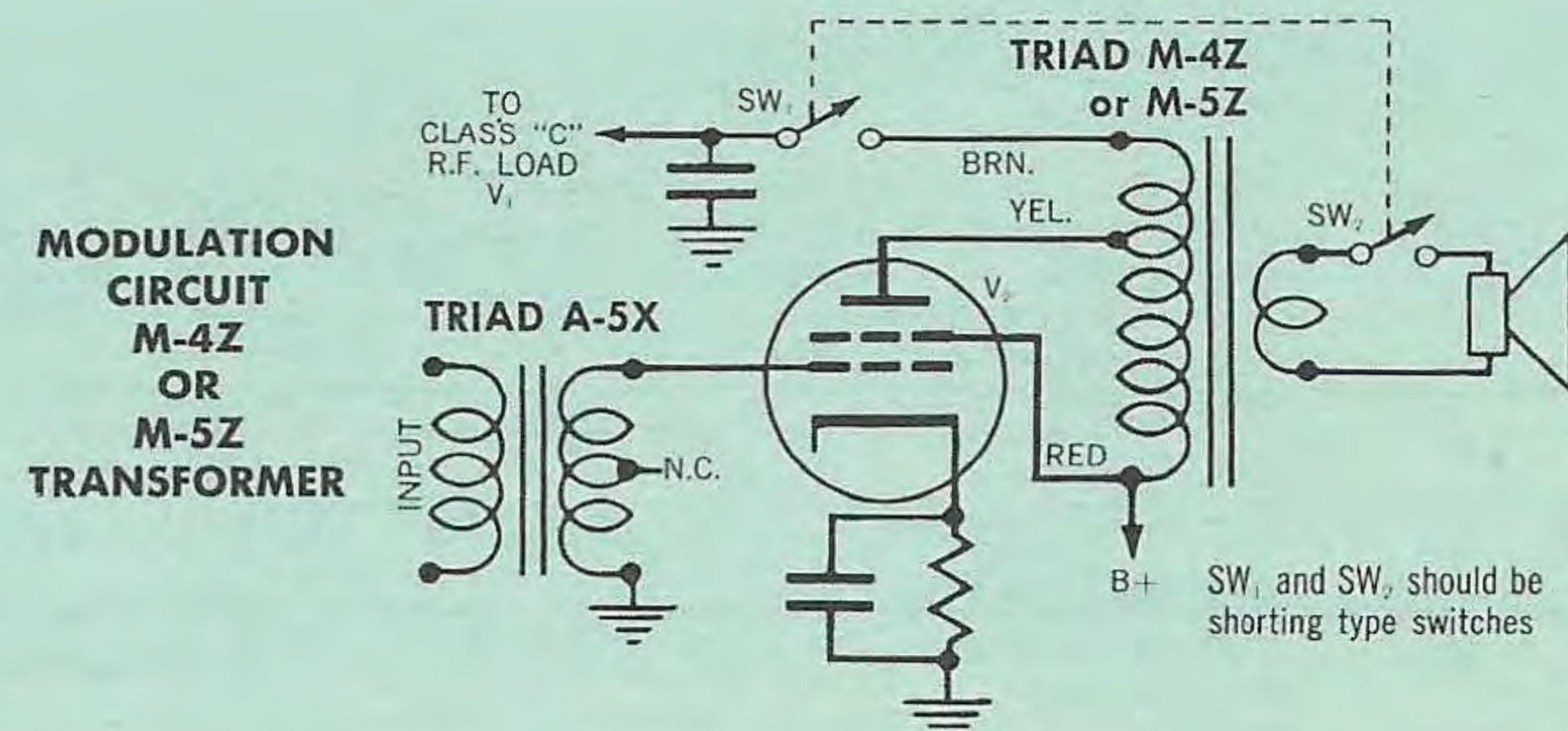
Z Case



AL Case

Available in a wide range of sizes and mounting types, Triad Replacement Output Transformers are specifically engineered for mounting in precise chassis locations. Units are Climatite treated, manufactured to the same exacting standards as more costly types. Triad transformers give the most complete coverage in impedance and wattage ranges, provide best response in minimum space, and outlive all others of comparable scope.

Triad transformers for transmitter audio circuitry are widely used, field-proved, highly reliable, and sensibly priced. In development and design of efficient, flexible modulator units, Triad is the recognized leader.



REPLACEMENT OUTPUT / single tube to standard voice coil / 3-4 ohms

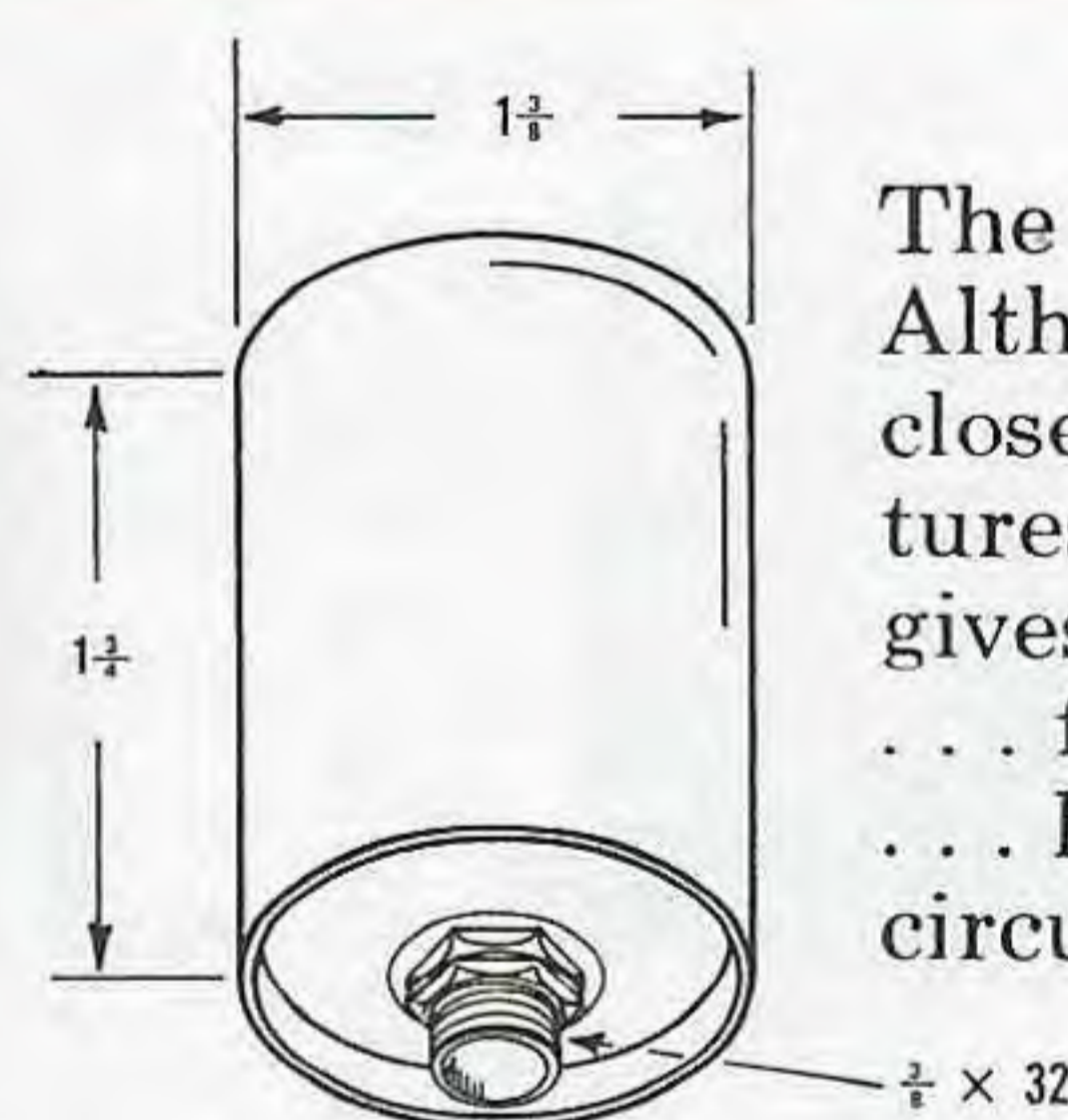
Type No.	Output Watts	Primary D.C. MA	Matching Impedance		DC Resistance		Overall Turns Ratio	RMS Test Voltage	Case Type	Case Dimension			Mtg. Dim.	Mtg. Hole Size	Max. Unit Wt. Lbs.
			Primary	Secondary	Primary	Secondary				H	W	D			
S-40X	.25	5.5	14,000	3-4	1380	.63	65.8:1	500	X	1 3/8	1 5/8	1	1 3/8	.120	.08
S-37X	.25	4	25,000	3-4	2350	.63	88.4:1	500	X	1 3/8	1 5/8	1	1 3/8	.120	.08
S-20X	2-3	50	2000	3-4	97	.5	22.4:1	1500	X	1 3/8	2 1/8	1 1/4	1 3/4	3/16	.21
S-20Z	2-3	50	2000	3-4	97	.5	22.4:1	1500	Z	1 7/8	1 13/16	1 1/4	1 1/2	3/16	.21
S-12X	2-3	50	2500	3-4	138	.52	26.8:1	1000	X	1 3/8	2 1/8	1 1/4	1 3/4	3/16	.21
S-12Z	2-3	50	2500	3-4	138	.52	26.8:1	1000	Z	1 7/8	1 13/16	1 1/4	1 1/2	3/16	.21
S-16X	2-3	50	3000/5% tap	3-4	207	.31	27.3:1	1000	X	1 3/8	2 1/8	1 1/4	1 3/4	3/16	.21
S-14Z	2-3	50	4000	3-4	332	.31	35:1	1500	Z	1 7/8	1 13/16	1 1/4	1 1/2	3/16	.21
S-6X	2-3	35	5000	3-4	440	.42	39:1	1000	X	1 3/8	2 1/8	1 1/4	1 3/4	3/16	.21
S-6Z	2-3	35	5000	3-4	440	.42	39:1	1000	Z	1 7/8	1 13/16	1 1/4	1 1/2	3/16	.21
S-48Z	2-3	35	6500	3-4	540	.31	45:1	1500	Z	1 7/8	1 13/16	1 1/4	1 1/2	3/16	.21
S-8X	2-3	30	8000	3-4	477	.34	48:1	1000	X	1 3/8	2 1/8	1 1/4	1 3/4	3/16	.21
S-8Z	2-3	30	8000	3-4	477	.34	48:1	1000	Z	1 7/8	1 13/16	1 1/4	1 1/2	3/16	.21
S-11X	2-3	30	10,000	3-4	670	.32	53.7:1	1000	X	1 3/8	2 1/8	1 1/4	1 3/4	3/16	.21
S-11Z	2-3	30	10,000	3-4	670	.32	53.7:1	1000	Z	1 7/8	1 13/16	1 1/4	1 1/2	3/16	.21
S-38X	2-3	15	16,000	3-4	1420	.31	71:1	1500	X	1 3/8	2 1/8	1 1/4	1 3/4	3/16	.21
S-38Z	2-3	15	16,000	3-4	1420	.31	71:1	1500	Z	1 7/8	1 13/16	1 1/4	1 1/2	3/16	.21
S-13X	2-3	10	25,000	3-4	1780	.36	84.6:1	1000	X	1 3/8	2 1/8	1 1/4	1 3/4	3/16	.21
S-13Z	2-3	10	25,000	3-4	1780	.36	84.6:1	1000	Z	1 7/8	1 13/16	1 1/4	1 1/2	3/16	.21
S-2X	3-5	55	2000	3-4	150	.5	23.8:1	1000	X	1 3/8	2 3/8	1 3/8	2	3/16	.45
S-1X	3-5	60	2500	3-4	150	.5	27:1	1000	X	1 3/8	2 3/8	1 3/8	2	3/16	.45
S-30X	3-5	60	3000	3-4	187	.5	30.5:1	1000	X	1 3/8	2 3/8	1 3/8	2	3/16	.45
S-41X	3-5	50	4000	3-4	300	.34	35.4:1	1500	X	1 3/8	2 3/8	1 3/8	2	3/16	.45
S-3X	3-5	40	5000	3-4	495	.5	40:1	1000	X	1 3/8	2 3/8	1 3/8	2	3/16	.45
S-7X	3-5	30	7500	3-4	740	.53	46.6:1	1000	X	1 3/8	2 3/8	1 3/8	2	3/16	.45
S-17X	3-5	30	10,000	3-4	600	.38	53.3:1	2000	X	1 3/8	2 3/8	1 3/8	2	3/16	.5
S-50X	4-6	60	2500	3-4	117	.32	24.9:1	1500	X	1 5/8	2 13/16	1 1/2	2 3/8	3/16	.6
S-67X	4-6	60	3200	3-4	155	.35	27.9:1	1500	X	1 5/8	2 13/16	1 1/2	2 3/8	3/16	.6
S-18X	4-6	45	8000	3-4	675	.35	49.3:1	1500	X	1 5/8	2 13/16	1 1/2	2 3/8	3/16	.6
S-18Z	4-6	45	8000	3-4	675	.35	49.3:1	1500	Z	1 5/8	2 3/8	1 1/2	2	3/16	.6
▲S-10X	4-6	45	10,000	3-4	920	.34	39.2:1	1500	X	1 5/8	2 13/16	1 1/2	2 3/8	3/16	.6
S-4X	5-8	70	3000	3-4	130	.26	55:1	1000	X	1 5/8	3 1/8	1 3/4	2 13/16	3/16	1
S-5X	5-8	50	5000	3-4	283	.275	30.7:1	1000	X	1 5/8	3 1/8	1 3/4	2 13/16	3/16	1
S-5Z	5-8	50	5000	3-4	283	.275	39.2:1	1000	Z	2 3/8	2 7/8	1 3/4	2 3/8	3/16	1
S-9X	5-8	50	7500	3-4	635	.17	46.7:1	1000	X	1 5/8	3 1/8	1 3/4	2 13/16	3/16	1
S-9Z	5-8	50	7500	3-4	635	.17	46.7:1	1000	Z	2 3/8	2 7/8	1 3/4	2 3/8	3/16	1

▲ Discontinued item, available until stock depleted.

AUDIO TRANSFORMERS



COMMERCIAL GRADE

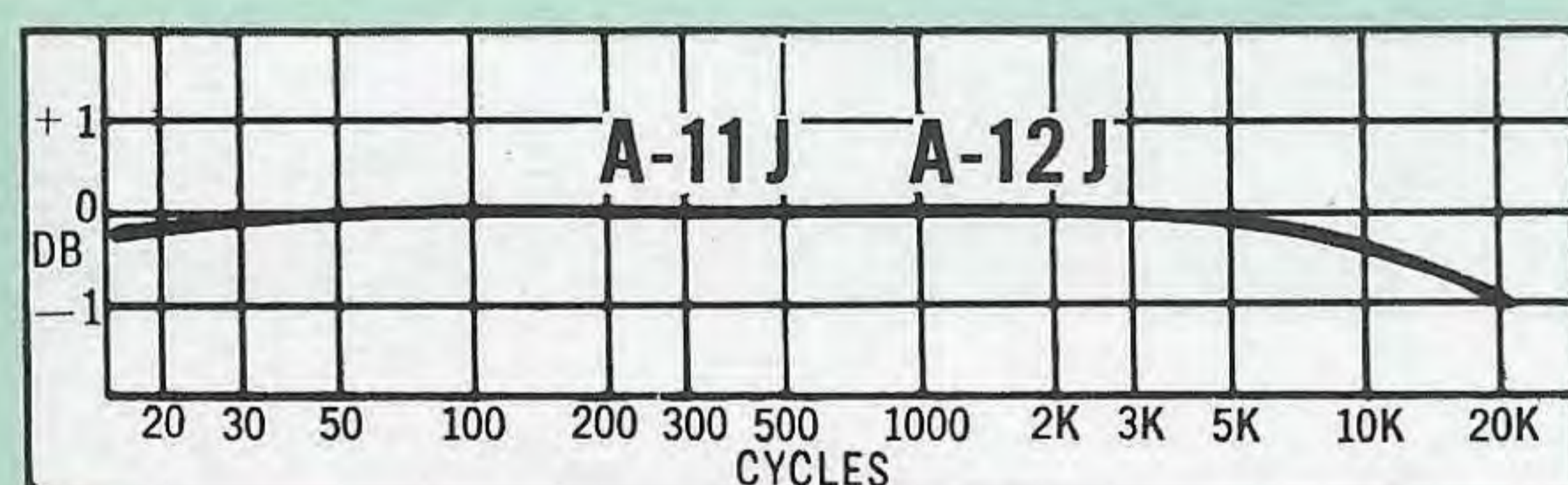


The flexibility of Triad J Series transformers permits amplifiers to exceed broadcast standards. Although economy in construction places them in a lower price class, these units approach and closely approximate the performance characteristics of more costly hermetically sealed units. Features: single-hole mounting, allowing rotation for maximum hum reduction . . . alloy shielding gives 40 to 60 db hum reduction (60 to 80 db in Types A-11J and A-12J) . . . wide frequency ranges . . . flexible leads for ease of mounting . . . input units electrostatically and magnetically shielded . . . light weight . . . smooth, baked gray enamel cases, 1 3/8" diameter, 1 3/4" above chassis . . . legible circuit diagrams permanently affixed to every case.

J SERIES / low level high fidelity

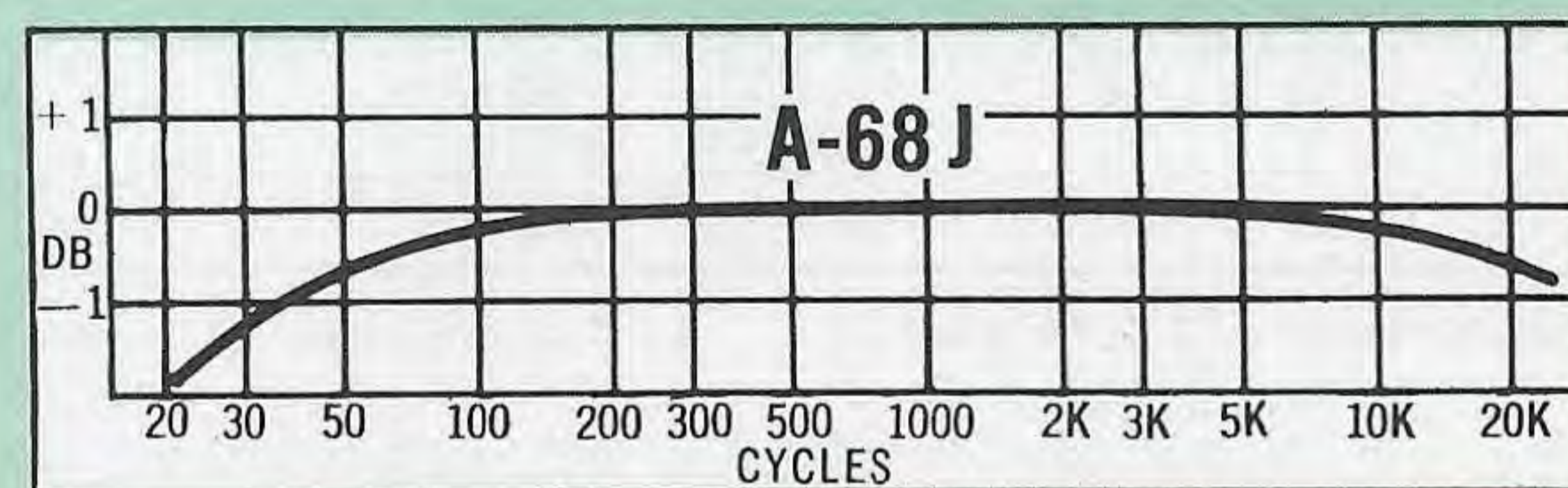
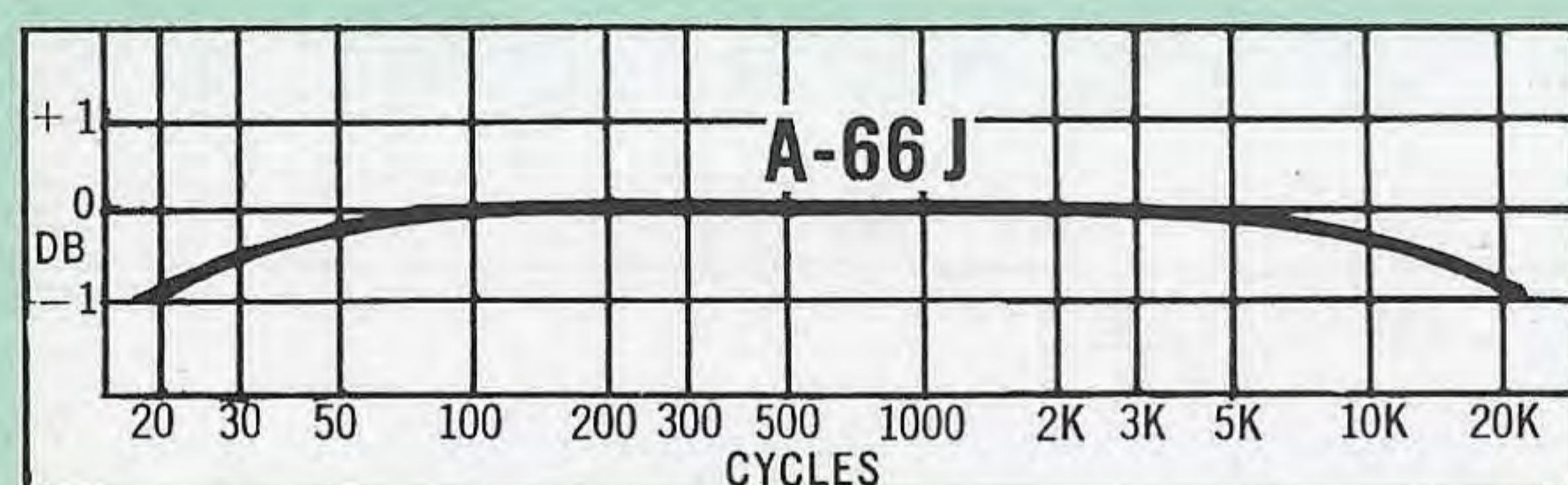
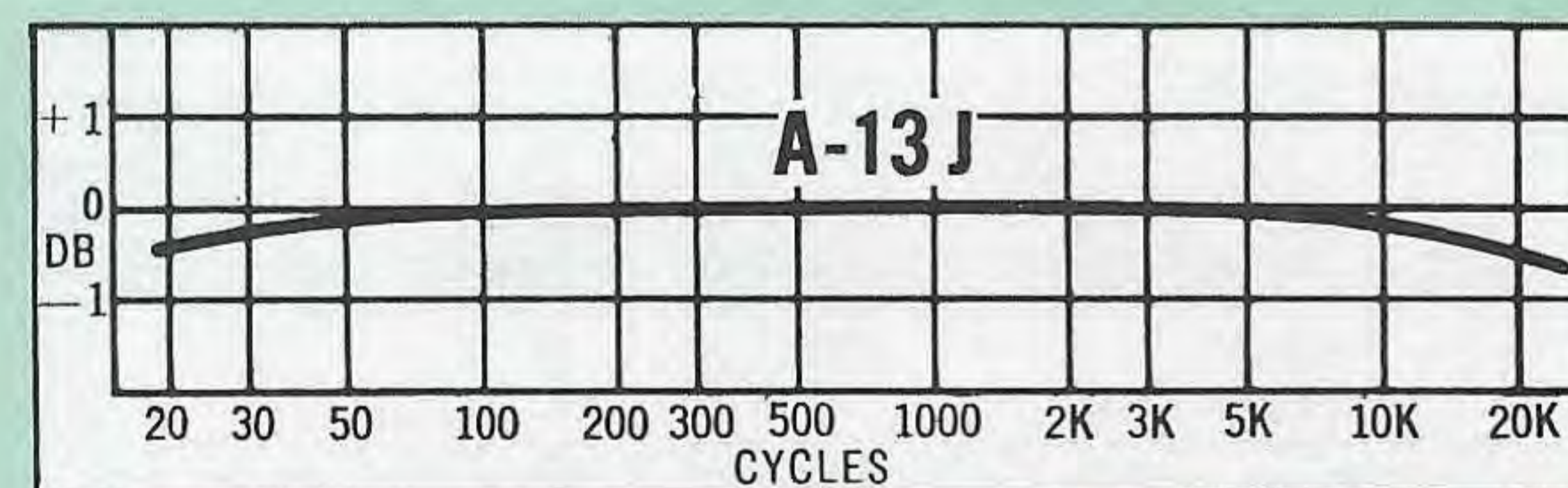
Type No.	Power Output	Application	Matching Impedance		D. C. Resistance		Overall Turns Ratio	Freq. Resp. $\pm 3\text{dB}$	RMS Test Voltage	Case Type	Connections	Case Dim.		Mtg. Hole Diameter	Max. Unit Wt. Lbs.
			Primary	Secondary	Primary	Secondary						H	D		
A-9J‡	1MW	Line or Mike to Grid	600/250/50	85,000	32.7	3450	1:12	30-15,000	500	J	Leads	1 3/4	1 3/8	3/8	.35
A-10J‡	1MW	Balanced Line or Mike to Single Grid	600 CT/150 \$\$\$	60,000	33.7	3380	1:10.5	30-15,000	500	J	Leads	1 3/4	1 3/8	3/8	.35
A-11J‡	10MW	Line or Mike to Grid	600/250/50	60,000	50	5000	1:10	30-15,000	500	J	Leads	1 3/4	1 3/8	3/8	.35
A-12J‡	10MW	Balanced Line or Mike to Grid	600 CT/150 \$\$\$	60,000	50	4920	1:10	30-15,000	500	J	Leads	1 3/4	1 3/8	3/8	.35
A-13J‡	1MW	Line to Line or Transistor	600/300/200 CT/110/50 \$\$\$	600 CT/150 \$\$\$	62	70	1:1	30-15,000	500	J	Leads	1 3/4	1 3/8	3/8	.35
A-52J	100MW	Line or Transistor to Line or Transistor	500 CT/125 \$\$\$ 20 MA D.C.	2000 CT/500 \$\$\$	50	200	1:2	30-15,000	500	J	Leads	1 3/4	1 3/8	3/8	.35
A-56J	100MW	Line or Transistor to Voice Coil	500 CT/125 \$\$\$ 15 MA D.C.	16/4 \$\$\$	50	1.5	5.6:1	30-15,000	500	J	Leads	1 3/4	1 3/8	3/8	.35
A-64J	500MW	Line or Transistor to Transistor	100 CT/25 \$\$\$	40 CT/10 \$\$\$	10	4	1.58:1	30-15,000	500	J	Leads	1 3/4	1 3/8	3/8	.4
A-70J	100MW	Line or Transistor to Line or Transistor	500 CT/125 \$\$\$	100 CT/25 \$\$\$	50	10	2.24:1	30-15,000	500	J	Leads	1 3/4	1 3/8	3/8	.35
A-79J	200MW	Transistor to P-P Transistors or Line	1000 10 MA D.C.	200 CT/50 \$\$\$	302	138	2.2:1	20-15,000	500	J	Leads	1 3/4	1 3/8	3/8	.35
▲ A-50J	750MW	P-P Plates to Voice Coil	10,000 CT	4/8	1000	.8	35.3:1	30-15,000	500	J	Leads	1 3/4	1 3/8	3/8	.4
A-58J	100MW	P-P Plates or Transistors to Line or Transistors	10,000 CT/2500 \$\$\$	2000 CT/500 \$\$\$	1000	200	2.24:1	30-15,000	500	J	Leads	1 3/4	1 3/8	3/8	.35
A-40J	10MW	Plate to 1 or 2 Grids	15,000	115,000 CT	1540	4020	1:2.76	30-15,000	500	J	Leads	1 3/4	1 3/8	3/8	.35
A-41J	32MW	Tube to 1 or 2 Grids	15,000 8 MA D.C.	80,000 CT	1392	8109	1:2.3	30-15,000	500	J	Leads	1 3/4	1 3/8	3/8	.35
A-55J	100MW	Plate to Line	15,000	600/250/50	1020	46	5:1	30-15,000	500	J	Leads	1 3/4	1 3/8	3/8	.35
A-61J	50MW	Line to 2 simultaneously loaded lines or transistors	600/150 \$\$\$	600/150 \$\$\$ 600/150 \$\$\$	47	40 40	1.4:1:1	60-15,000	500	J	Leads	1 3/4	1 3/8	3/8	.35
A-65J	100MW	Single or Push-Pull Plates to Balanced Line	15,000 CT	600 CT/150 \$\$\$	1630	73	5:1	30-15,000	500	J	Leads	1 3/4	1 3/8	3/8	.35
A-66J	100MW	Plate to Line	15,000 4 MA D.C.	600/250/50	1740	81.2	5:1	40-15,000	500	J	Leads	1 3/4	1 3/8	3/8	.35
A-68J	100MW	Sgl or P-P Plates to Balanced Line	15,000 CT 4 MA D.C.	600 CT/150 \$\$\$	1723	81	5:1	40-15,000	500	J	Leads	1 3/4	1 3/8	3/8	.35
A-69J	100MW	P-P Plates or Bridging to Line	25,000 CT/6250 \$\$\$ 2.5 MA D.C.	500 CT/125 \$\$\$	2500	50	7.1:1	50-20,000	500	J	Leads	1 3/4	1 3/8	3/8	.35
A-78J	100MW	1 or 2 Transistor to Balanced Line	2,000 CT	600 CT/150 \$\$\$	112	48.5	1.82:1	30-15,000	500	J	Leads	1 3/4	1 3/8	3/8	.35
A-57J	50MW	Line or Transistor to Line	600/250/50	600/250/50	40	44	1:1	30-15,000	500	J	Leads	1 3/4	1 3/8	3/8	.35
A-67J‡	50MW	Balanced Line to Balanced Line	600 CT/150 \$\$\$	600 CT/150 \$\$\$	43.8	44.1	1:1	30-15,000	500	J	Leads	1 3/4	1 3/8	3/8	.35
A-75J	-	Audio Choke	16 HY	-	470	-	-	-	1000	J	Leads	1 3/4	1 3/8	3/8	.35
A-77J	-	Audio Choke	250 HY/62.5 HY 5 MA DC/10 MA D.C.	-	7500	-	-	-	500	J	Leads	1 3/4	1 3/8	3/8	.35

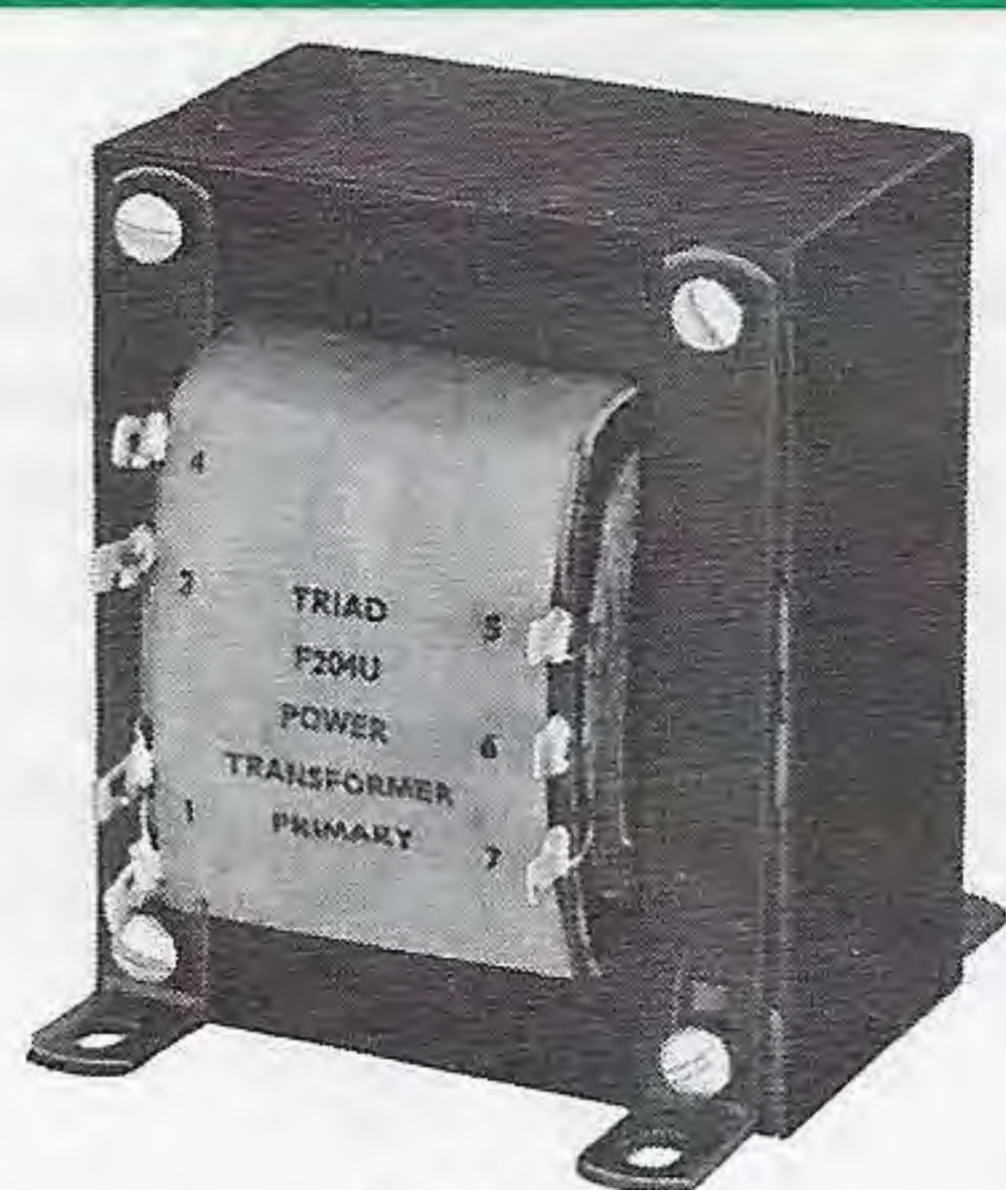
CT for Center Tap. ‡ Static shield. \$\$\$ Split winding ▲ Discontinued item, available until stock depleted.



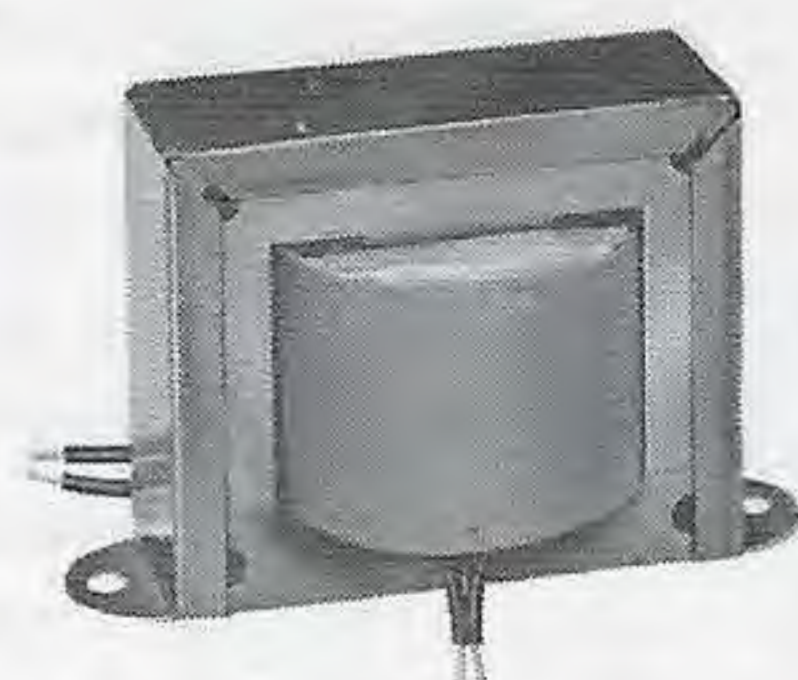
PERFORMANCE CURVES

A-11J
A-12J
A-13J
A-66J
A-68J

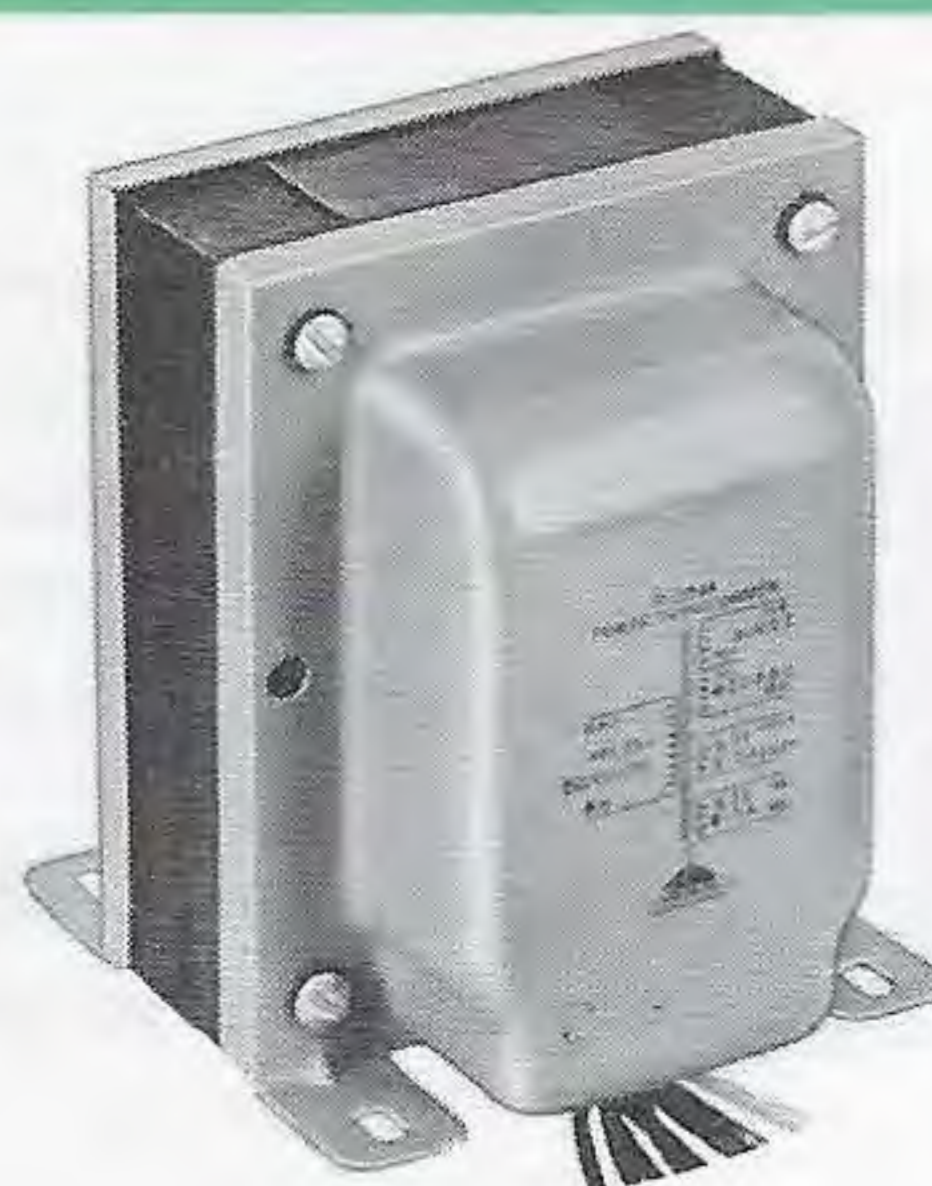




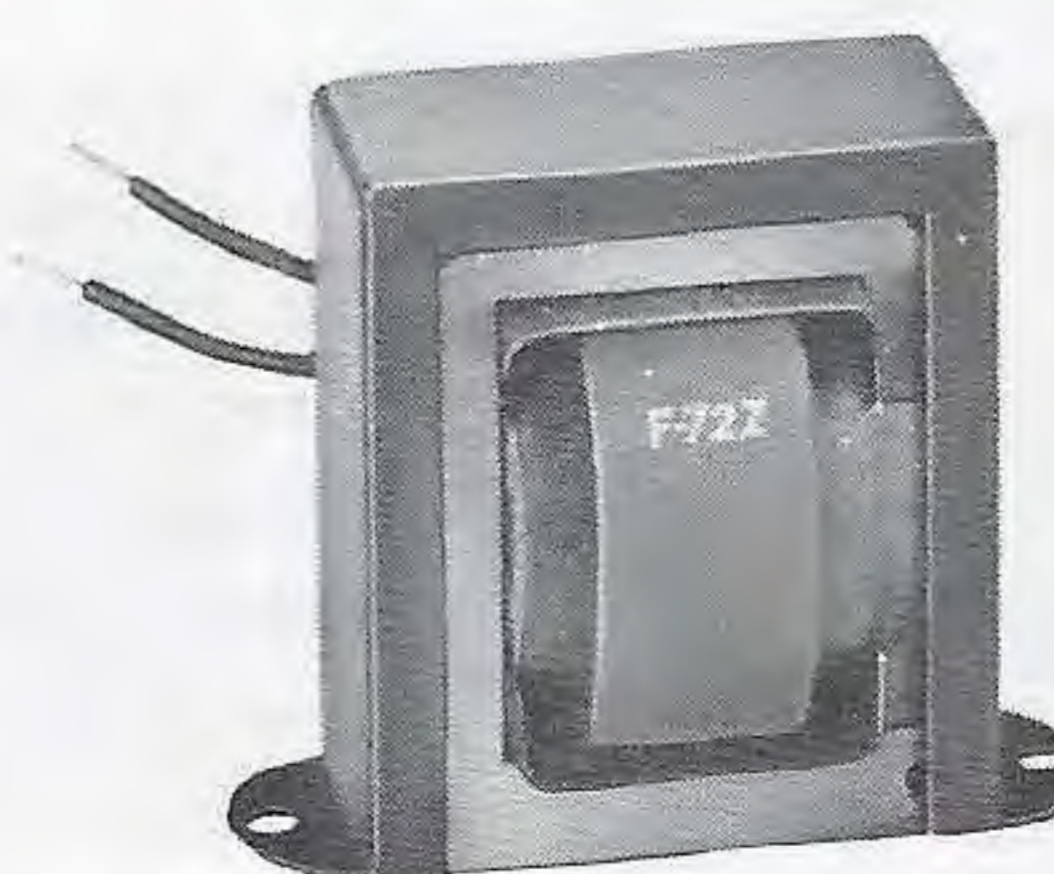
U Case



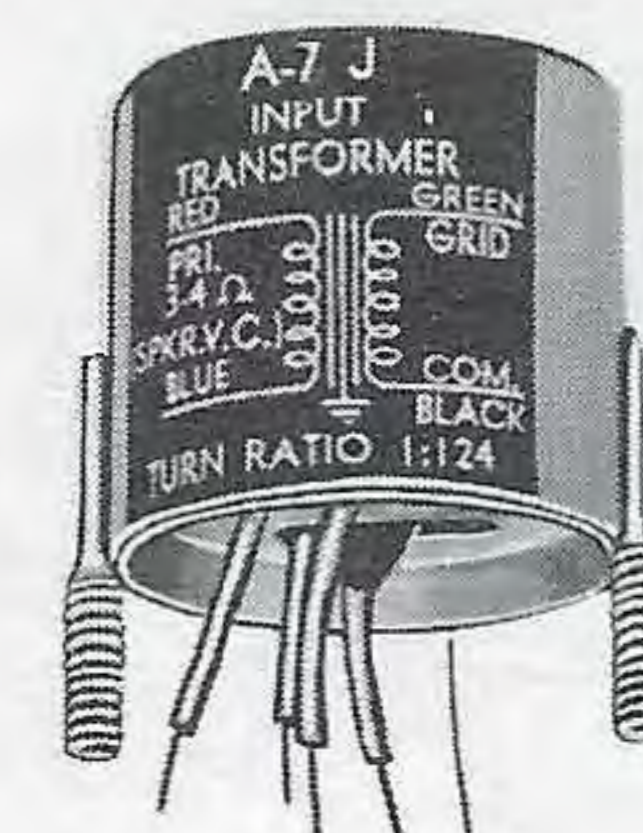
X Case



A Case



Z Case



A-7J Case

These medium-priced audio components are manufactured to Triad's strict quality control standards to provide highly reliable performance in minimum over-all space. Designed for quick and easy mounting, they have exceptional construction features which make them ideal for replacement purposes in public address, amateur radio, and all other audio systems. Like all standard Triad units, these are instantly obtainable from your stocking Triad distributor.

Triad's research, quality control, and production capabilities have combined to turn out complete transformer coverage for today's complex tube and circuitry developments. As industry leader in the replacement field, Triad offers: minimum over-all size . . . greatest life expectancy . . . easy mounting . . . exact location placement in chassis . . . widest range of types and power ratings . . . economical price.

INPUT / line or microphone to grid

Type No.	Output Watts	Application	Matching Impedance		DC Resistance		Primary Ma. D.C. Per Side	Overall Turns Ratio	Frequency Response $\pm 3\text{dB}$	RMS Test Voltage	Case Type	Connections or Lead Holes Used	Case Dimension			Mounting Dimension		Mtg. Hole Size	Max. Unit Wt. Lbs.
			Primary	Secondary	Pri-ary	Sec-ondary							H	W	D	MW	MD		
A-1X	1	Mike or Line to Grid	100	98,500	4.44	1455	-	1:31.4	100-15,000	500	X	Leads	1 $\frac{1}{8}$	2 $\frac{1}{8}$	1 $\frac{1}{4}$	1 $\frac{3}{4}$	$\frac{3}{16}$	$\frac{3}{16}$	.21
A-3X	1	Line or Mike to Grid	400 CT	195,000	5	1290	-	1:22.1	200-10,000	500	X	Leads	1 $\frac{1}{8}$	2 $\frac{1}{8}$	1 $\frac{1}{4}$	1 $\frac{3}{4}$	$\frac{3}{16}$	$\frac{3}{16}$	.21
A-4X	1	Line to Single Grid	500 CT/333/ 200 CT/125/ 67.5 CT/50	72,000	32.6	1290	-	1:12	100-20,000	500	X	Leads	1 $\frac{1}{8}$	2 $\frac{1}{8}$	1 $\frac{1}{4}$	1 $\frac{3}{4}$	$\frac{3}{16}$	$\frac{3}{16}$	.21
A-5X	5	Mike or Line to Single or P.P. Grid	100	700,000 CT	1.1	3600	-	1:83.3	100-15,000	500	X	Leads	1 $\frac{5}{8}$	2 $\frac{3}{8}$	1 $\frac{1}{2}$	2 $\frac{3}{8}$	$\frac{3}{16}$	$\frac{3}{16}$	.6
A-6X	1	Intercom-Speaker V.C. to Grid	8/4	50,000	.74	1420	-	1:79.6	150-20,000	500	X	Leads	1 $\frac{1}{8}$	2 $\frac{1}{8}$	1 $\frac{1}{4}$	1 $\frac{3}{4}$	$\frac{3}{16}$	$\frac{3}{16}$	.21
A-7J	.01	Intercom-Speaker V.C. to Grid	3.2-4	50,000	.54	612	-	1:124	150-10,000	500	A-7J	Leads	1 $\frac{1}{32}$		1 $\frac{1}{32}$	1 $\frac{1}{8}$	$\frac{3}{16}$	$\frac{3}{16}$	.25

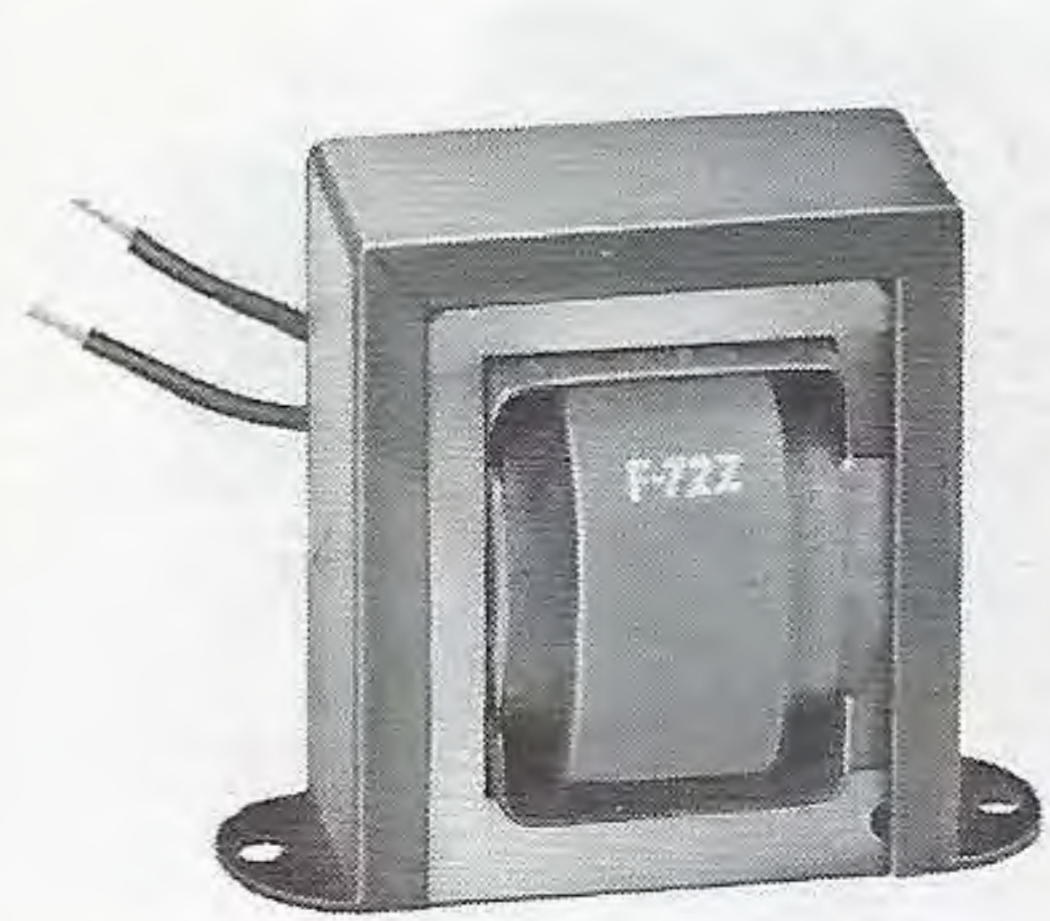
INTERSTAGE / plate to grid

Type No.	Output Watts	Application	Matching Impedance		DC Resistance		Primary Ma. D.C. Per Side	Overall Turns Ratio	Frequency Response $\pm 3\text{dB}$	RMS Test Voltage	Case Type	Connections or Lead Holes Used	Case Dimension			Mounting Dimension		Max. Unit Wt. Lbs.
			Primary	Secondary	Pri-ary	Sec-ondary							H	W	D	MW	MD	
A-31X	3	Plate to Single or P.P. Grids	10,000	90,000 CT	885	2660	10	1:3	100-10,000	500	X	Leads	1 $\frac{1}{8}$	2 $\frac{3}{8}$	1 $\frac{3}{8}$	2		.45
A-33X	6	Plate to Single or P.P. Grids	10,000	90,000 CT	1250	3750	20	1:3	70-10,000	1000	X	Leads	1 $\frac{1}{8}$	3 $\frac{1}{8}$	1 $\frac{3}{4}$	2 $\frac{1}{8}$		1
A-35A	15	Plate to Single or P.P. Grids	10,000	90,000 CT	1315	4950	25	1:3	50-10,000	1000	A	1	2 $\frac{5}{32}$	2 $\frac{1}{32}$	2 $\frac{3}{8}$	1 $\frac{3}{4}$	1 $\frac{5}{8}$	1.75
A-39A	15	P.P. Plates to P.P. Grids	20,000 CT	45,000 CT	2320	3460	25	1:1.5	50-10,000	1000	A	1	2 $\frac{5}{32}$	2 $\frac{1}{32}$	2 $\frac{3}{8}$	1 $\frac{3}{4}$	1 $\frac{5}{8}$	1.75
A-42Z	6	Multi-Ratio Single or P.P. Plates to Single or P.P. Grids	15,000 CT 15,000 CT 3750	135,000 CT 33,750 135,000 CT	1310	3910	20	1.3 1:1.5 1:6	70-10,000	1500	Z	Leads	2 $\frac{1}{8}$	2 $\frac{7}{8}$	1 $\frac{3}{4}$	2 $\frac{3}{8}$		1

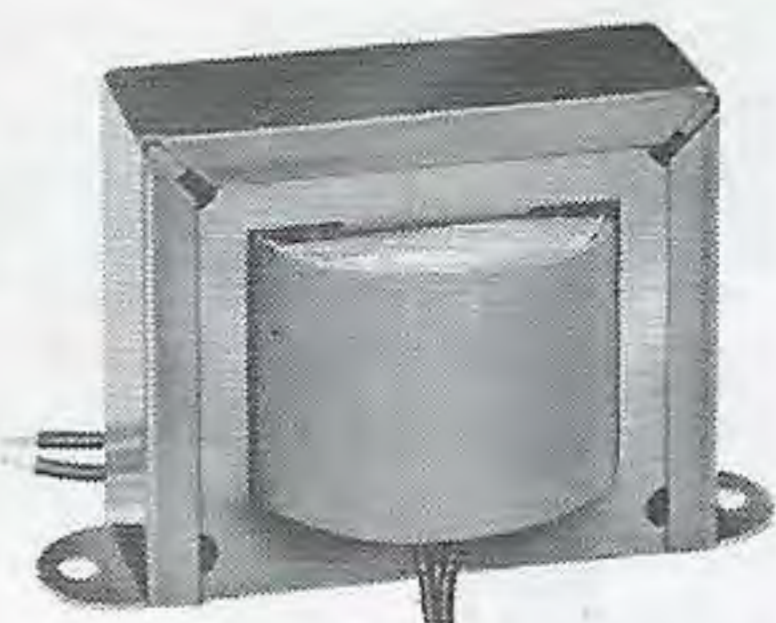
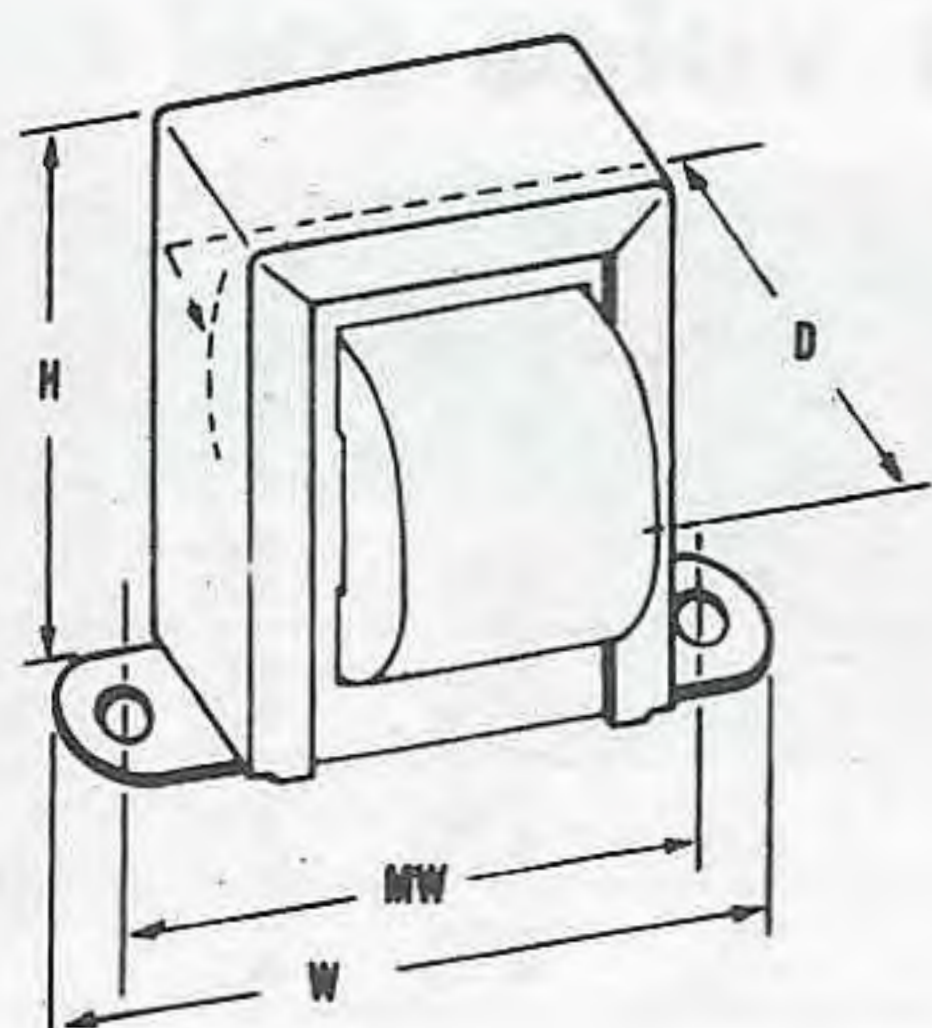
OUTPUT / low level

Type No.	Output Watts	Application	Matching Impedance		DC Resistance		Primary Ma. D.C. Per Side	Overall Turns Ratio	Frequency Response $\pm 3\text{dB}$	RMS Test Voltage	Case Type	Connections or Lead Holes Used	Case Dimension			Mounting Dimension		Mtg. Hole Size	Max. Unit Wt. Lbs.
			Primary	Secondary	Pri-ary	Sec-ondary							H	W	D	MW	MD		
A-51X	1	Plate to Lo Imp. Line	7000	50	564	5.35	20	11.8:1	200-8000	1000	X	Leads	1 $\frac{1}{8}$	2 $\frac{1}{8}$	1 $\frac{1}{4}$	1 $\frac{3}{4}$	$\frac{3}{16}$	$\frac{3}{16}$	.21
A-53X	2	Single or P.P. Plates to Line	18,000 CT	600/250/ 50	1160	38	20	5.5:1	70-7000	1000	X	Leads	1 $\frac{1}{8}$	2 $\frac{1}{8}$	1 $\frac{1}{2}$	2 $\frac{3}{8}$	$\frac{3}{16}$	$\frac{3}{16}$	.6
▲A-54X	2	Single or P.P. Plates to Speaker	7700 CT	8/4	600	.8	28	30:1	150-20,000	1500	X	Leads	1 $\frac{1}{8}$	2 $\frac{3}{8}$	1 $\frac{1}{8}$	2		$\frac{3}{16}$	.45
S-58X	1	Line to Line	600 CT/ 150 Ω	600 CT/ 150 Ω	46	47.2	-	1:1	100-10,000	500	X	Leads	1 $\frac{1}{8}$	2 $\frac{1}{8}$	1 $\frac{1}{4}$	1 $\frac{3}{4}$	$\frac{3}{16}$	$\frac{3}{16}$	.21
☛S-81X	1	Line to Line	600	600	46	47.2	-	1:1	100-10,000	500	X	Leads	1 $\frac{1}{8}$	2 $\frac{1}{8}$	1 $\frac{1}{4}$	1 $\frac{3}{4}$	$\frac{3}{16}$	$\frac{3}{16}$	.20

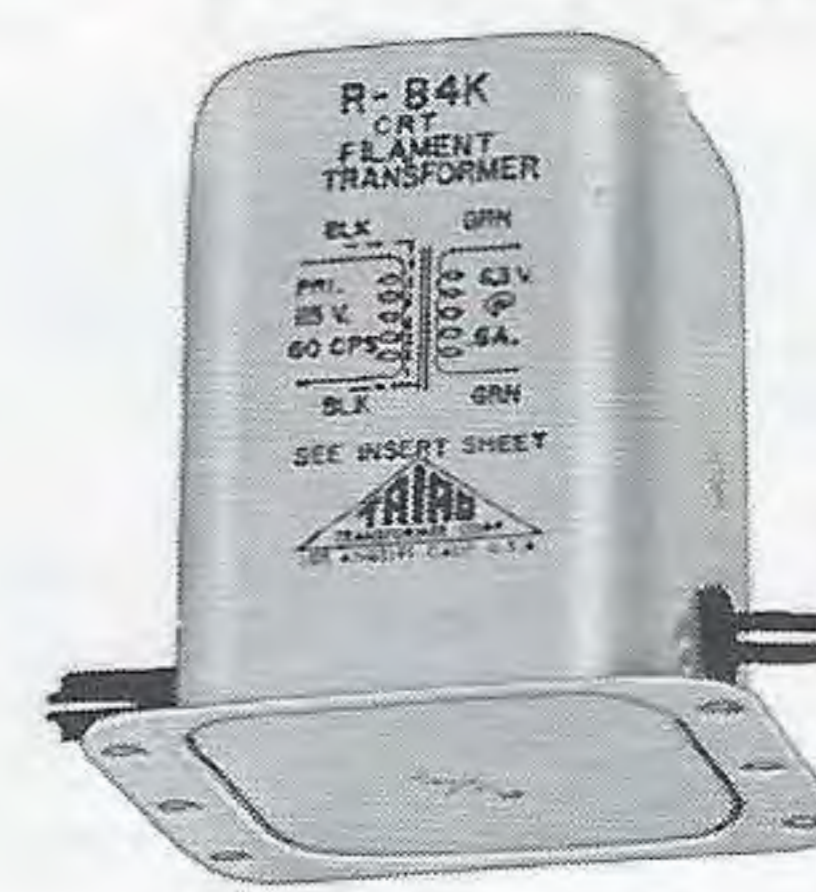
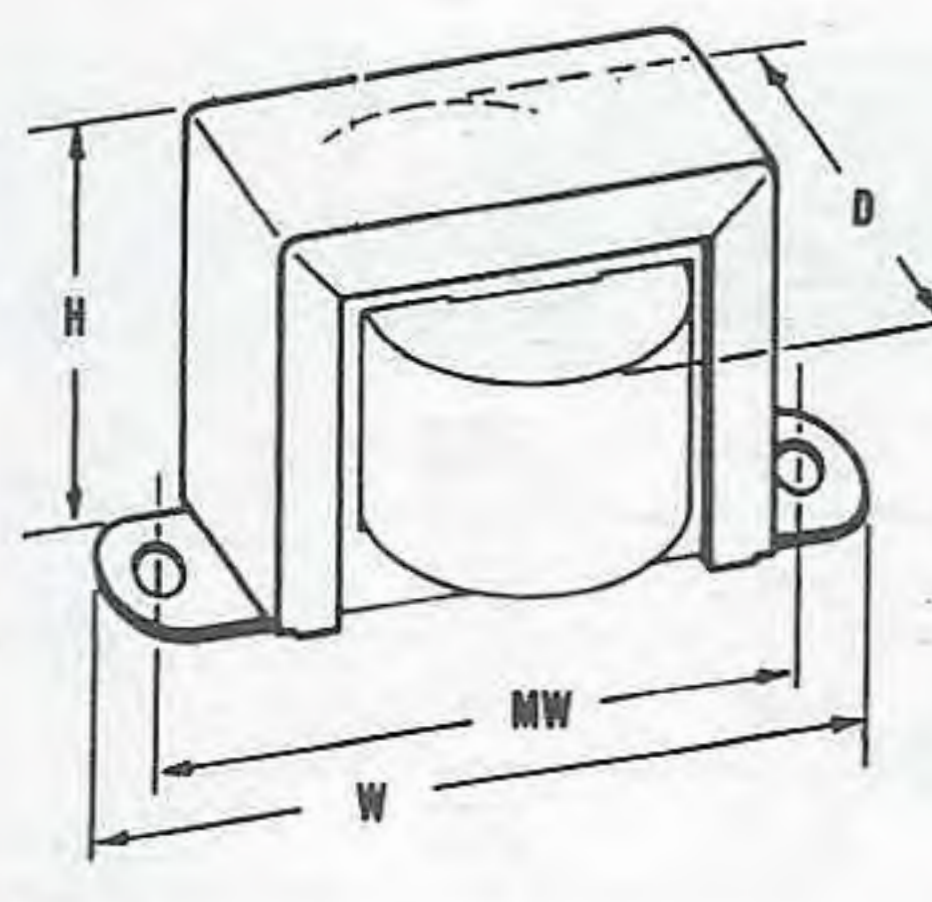
CT for Center Tap. Ω Split winding. ▲ Discontinued item, available until stock depleted. ☛ New item.



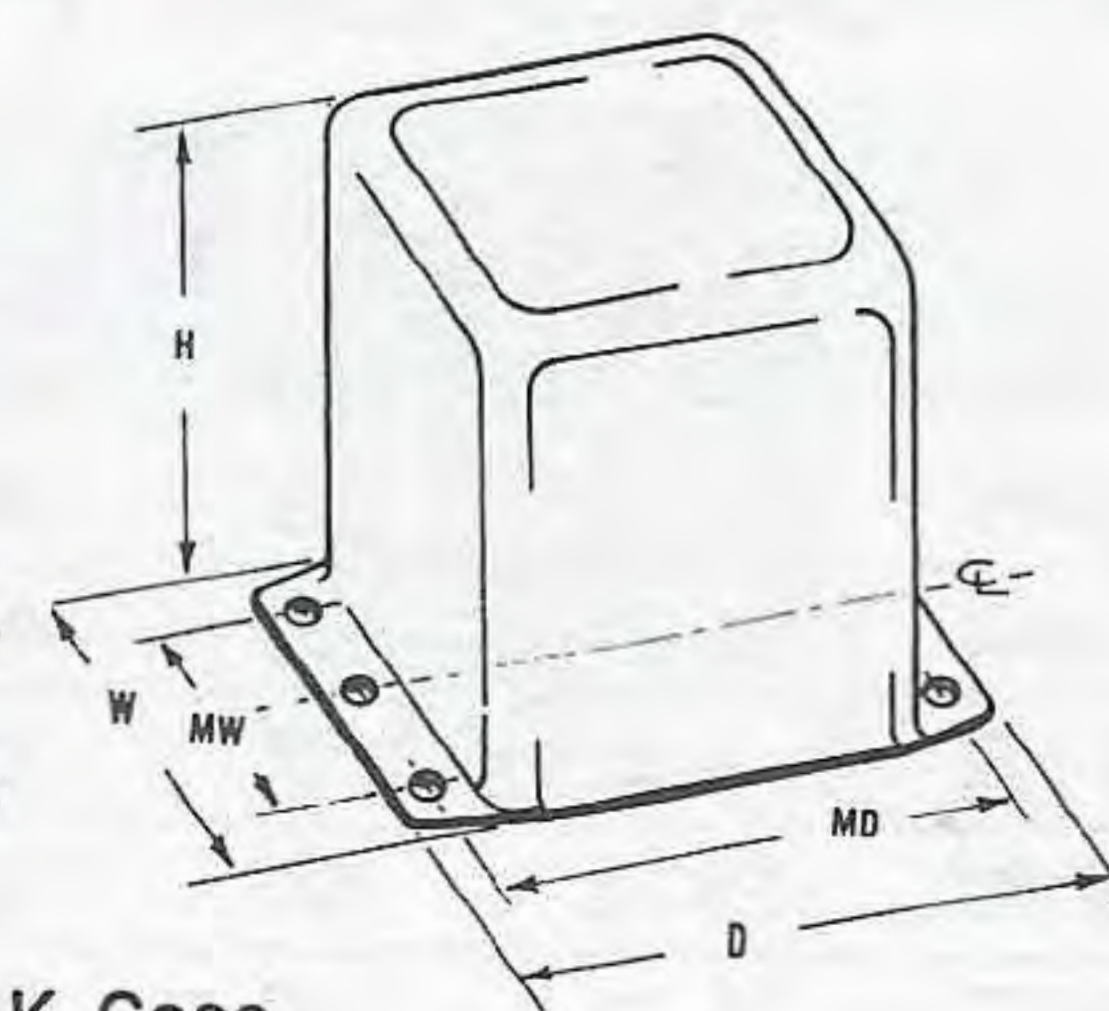
Z Case



X Case



K Case



BULK-PACKED LINE— MATCHING TRANSFORMERS

These line matching transformers available in bulk only are the most reliable, easy-to-install and economical choice for use in efficient public address systems. Leads are color-coded for instant identification, and stripped and tinned for use with twist-on solderless connectors provided in each box.

Type No.	Output Watts	Secondary Impedance	H	Dimensions—inches W D	MC	Wt. Lbs.
FOR 70.7-VOLT CONSTANT VOLTAGE LINE						
S-7010	10/5/2.5	8 ohms	1 ⁵ / ₈	2 ³ / ₄ 1 ³ / ₈	2 ³ / ₈	.50
S-7005	5/2.5/1.25	8 ohms	1 ³ / ₈	2 ³ / ₈ 1 ³ / ₈	2	.37
S-7002	2/1/0.5	8 ohms	1 ³ / ₈	2 ³ / ₈ 1 ³ / ₈	2	.37
S-7001	1/0.63/0.32	8 ohms	1 ³ / ₁₆	2 ¹ / ₁₆ 1 ¹ / ₈	1 ³ / ₄	.25
FOR 25-VOLT CONSTANT VOLTAGE LINE						
S-2510	10/5/2.5	8 ohms	1 ⁵ / ₈	2 ³ / ₄ 1 ³ / ₈	2 ³ / ₈	.50
S-2505	5/2.5/1.25	8 ohms	1 ³ / ₈	2 ³ / ₈ 1 ³ / ₈	2	.37
S-2505	2/1/0.5	8 ohms	1 ³ / ₈	2 ³ / ₈ 1 ³ / ₈	2	.37
S-2501	1/0.63/0.32	8 ohms	1 ³ / ₁₆	2 ¹ / ₁₆ 1 ¹ / ₈	1 ³ / ₄	.25

OUTPUT / 70.7 volt line to voice coil

Type No.	Output Watts	Type	Secondary Impedance	D. C. Resistance Primary Secondary		Freq. Resp. ± 3DB	RMS Test Voltage	Case Type	Case Dimension H W D			Mounting Dimension MW MD		Mtg. Hole Size	Max. Unit Wt. Lbs.
S-73X	5/2.5/1.25/.625/.31	Isolation	16/8/4	838	1.17	40-15,000	1500	X	1 ³ / ₈	2 ³ / ₈	1 ³ / ₈	2		3/16	.45
S-70Z	5/2.5/1.25/.625/.31	Autoformer	8/4	580	.65	40-15,000	1000	Z	1 ¹¹ / ₁₆	2	1 ³ / ₈	1 ²³ / ₃₂		3/16	.45
S-47Z	8/4/2/1/.5	Isolation	16/8/4	515	.93	30-20,000	1500	Z	1 ¹⁵ / ₁₆	2 ³ / ₈	1 ⁵ / ₈	2		3/16	.67
S-78Z	10/5/2.5/1.25	Isolation	16/8/4	157	.84	40-20,000	1000	Z	1 ¹⁵ / ₁₆	2 ³ / ₈	1 ¹ / ₂	2		3/16	.6
S-25Z	10/5/2.5/1.25	Autoformer	8/4	120	.475	30-20,000	1000	Z	2 ⁵ / ₁₆	2 ⁷ / ₈	1 ³ / ₄	2 ³ / ₈		3/16	1
S-71Z	10/5/2.5/1.25	Autoformer	16/8/4	148	.835	40-20,000	1000	Z	1 ¹⁵ / ₁₆	2 ³ / ₈	1 ¹ / ₂	2		3/16	.6
SR-45Z	10/5/2.5/1.25	Autoformer	16/8/4	267	.866	20-20,000	1000	Z	2 ²³ / ₃₂	3 ¹ / ₈	2 ¹ / ₈	2 ¹³ / ₁₆		3/16	1.8
▲SR-74K	10/5/2.5/1.25	Weatherproof Autoformer	16/8/4	257	.8	30-15,000	1000	K	3 ³ / ₃₂	2 ¹⁹ / ₃₂	3 ³ / ₃₂	1 ³ / ₄	2 ¹¹ / ₁₆	3/16	2.25
S-79Z	20/10/5/2.5	Isolation	16/8/4	69	.7	40-20,000	1000	Z	2 ⁵ / ₁₆	2 ⁷ / ₈	1 ³ / ₄	2 ³ / ₈		3/16	1
S-72Z	20/10/5/2.5	Autoformer	16/8/4	56.5	.5	40-20,000	1000	Z	2 ⁵ / ₁₆	2 ⁷ / ₈	1 ³ / ₄	2 ³ / ₈		3/16	1
S-46A	20/10/5/2.5	Autoformer	16/8/4	88.7	.82	30-15,000	1000	A	3 ³ / ₁₆	2 ²¹ / ₃₂	3 ³ / ₈	2	2 ⁷ / ₁₆	3/8 x 3/16	4
S-43Z	30/20/10/5	Isolation	16/8/4	40	1.0	40-20,000	1500	Z	2 ⁵ / ₁₆	2 ⁷ / ₈	1 ³ / ₄	2 ³ / ₈		3/16	1.6
S-44Z	50/40/25/15	Isolation	16/8/4	25	1.5	40-20,000	1500	Z	2 ⁵ / ₁₆	2 ⁷ / ₈	2	2 ³ / ₈		3/16	1.5

OUTPUT / 25 volt line to voice coil

Type No.	Output Watts	Type	Secondary Impedance	D. C. Resistance Primary Secondary		Freq. Resp. ± 3DB	RMS Test Voltage	Case Type	Case Dimension H W D			Mounting Dimension MW MD		Mtg. Hole Size	Max. Unit Wt. Lbs.
S-131X	2/1/.5	Isolation	8/4	63	.67	50-20,000	1500	X	1 ³ / ₈	2 ³ / ₈	1 ³ / ₈	2		3/16	.45
S-132X	5/2.5/1.25/.625	Isolation	16/8/4	37.6	.76	30-20,000	1500	X	1 ⁵ / ₈	2 ¹³ / ₁₆	1 ⁵ / ₈	2 ³ / ₈		3/16	.8
S-133Z	10/5/2.5/1.25	Isolation	16/8/4	12.5	.66	20-20,000	1500	Z	2 ²³ / ₃₂	3 ¹ / ₈	2	2 ¹³ / ₁₆		3/16	1.6

MATCHING / 25 or 70.7 volt line

Type No.	Output Watts	Matching Impedance Primary Secondary		D. C. Resistance Primary Secondary		Freq. Resp. ± 3DB	RMS Test Voltage	Case Type	Case Dimension H W D			Mounting Dimension MW MD		Mtg. Hole Size	Max. Unit Wt. Lbs.
S-130Z	10	62.5 CT (25V. to 70V.) 500 CT (70V. to 25V.)	500 CT 62.5 CT	11	94	20-15,000	1500	Z	2 ⁵ / ₁₆	2 ⁷ / ₈	1 ³ / ₄	2 ³ / ₈		3/16	1
S-129Z	30	20.8 CT (25V. to 70V.) 166 CT (70V. to 25V.)	166 CT 20.8 CT	1.9	16.9	20-15,000	1500	Z	3 ³ / ₃₂	3 ⁵ / ₈	2 ¹ / ₄	3 ³ / ₈		3/16	2.3

CT for Center Tap. ▲ Discontinued item, available until stock depleted.

AUDIO TRANSFORMERS



COMMERCIAL GRADE

DRIVER

Type No.	Power Output Watts	Application	Matching Impedance		Overall Turns Ratio	Freq. Resp. $\pm 3\text{DB}$	RMS Test Volts	Case Type	Connections	Case Dimension			Mounting Dimension		Mtg. Hole Size	Max. Unit Wt. Lbs.
			Primary	Secondary						H	W	D	MW	MD		
A-81X	.5	Driver-Plate to Single or P.P. Grids	15,000 15 MA D.C.	8500 CT	1.33:1	300-3000	1000	X	Leads	1 $\frac{1}{8}$	2 $\frac{1}{8}$	1 $\frac{1}{4}$	1 $\frac{3}{4}$		$\frac{3}{16}$	.21
A-83X	2.5	Driver-Plate to Single or P.P. Grids	7000 40 MA D.C.	15,800 CT	1:1.5	70-7000	1000	X	Leads	1 $\frac{5}{8}$	2 $\frac{1}{8}$	1 $\frac{1}{2}$	2 $\frac{3}{8}$		$\frac{3}{16}$	.6
A-85X	5	Driver-Plate to Class B P.P. Grids	7000 40 MA D.C.	4000 CT	1.33:1	50-10,000	1000	X	Leads	1 $\frac{5}{8}$	3 $\frac{5}{8}$	1 $\frac{3}{4}$	2 $\frac{1}{8}$		$\frac{3}{16}$	1
A-89A	15	Univ. Driver-P.P. Plates to AB or B Grids	4K/8K 100 MA D.C. Per Side	4.4K/8.8K Split Winding	1:1.1	50-10,000	1500	A	Leads	3 $\frac{3}{8}$	2 $\frac{1}{32}$	2 $\frac{5}{8}$	2	1 $\frac{1}{16}$	$\frac{3}{8} \times \frac{3}{16}$	3.5
A-91A	30	Univ. Drive P.P. Plates to AB or B Grids	4K/8K 160 MA DC Per Side	4.3K/8.6K Split Winding	1:1.065	50-10,000	1500	A	Leads	3 $\frac{1}{32}$	2 $\frac{1}{32}$	3 $\frac{3}{8}$	2 $\frac{1}{4}$	2 $\frac{1}{4}$	$\frac{3}{8} \times \frac{3}{16}$	6
TY-61X	.5	Transistor Driver	100 100 MA D.C.	100 CT	1:1	50-10,000	1000	X	Leads	1 $\frac{5}{8}$	2 $\frac{1}{8}$	1 $\frac{1}{2}$	2 $\frac{3}{8}$		$\frac{3}{16}$	.6

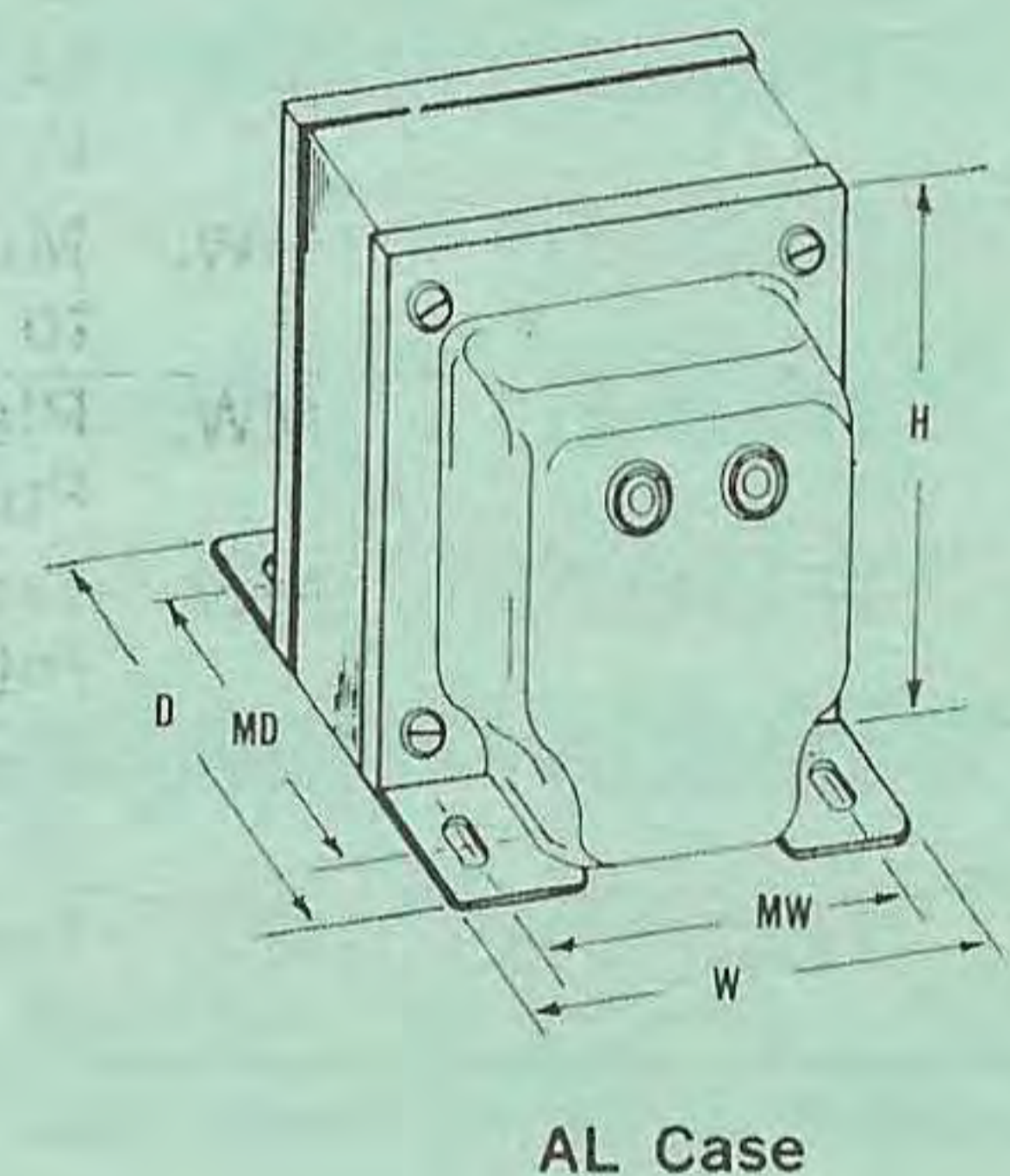
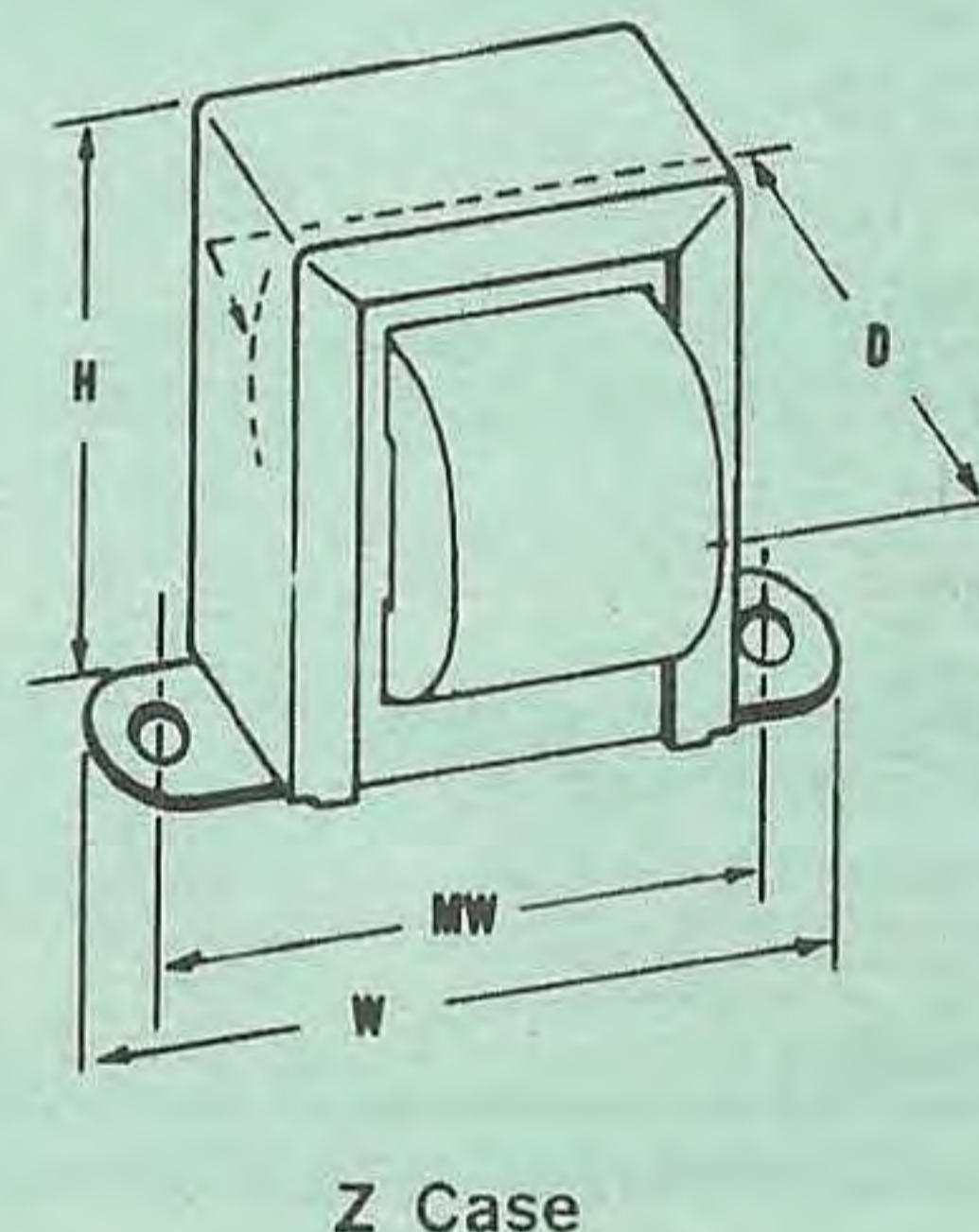
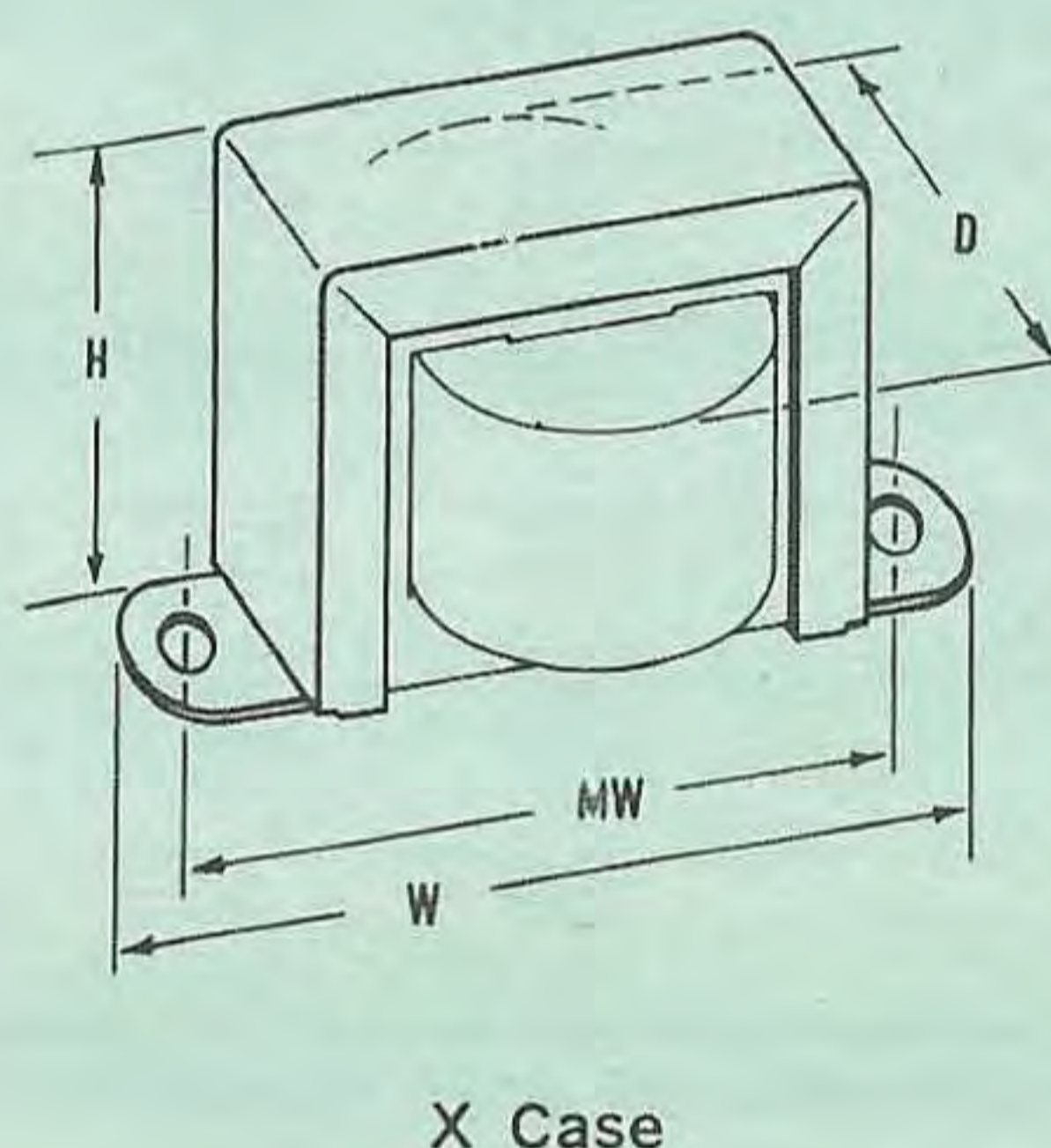
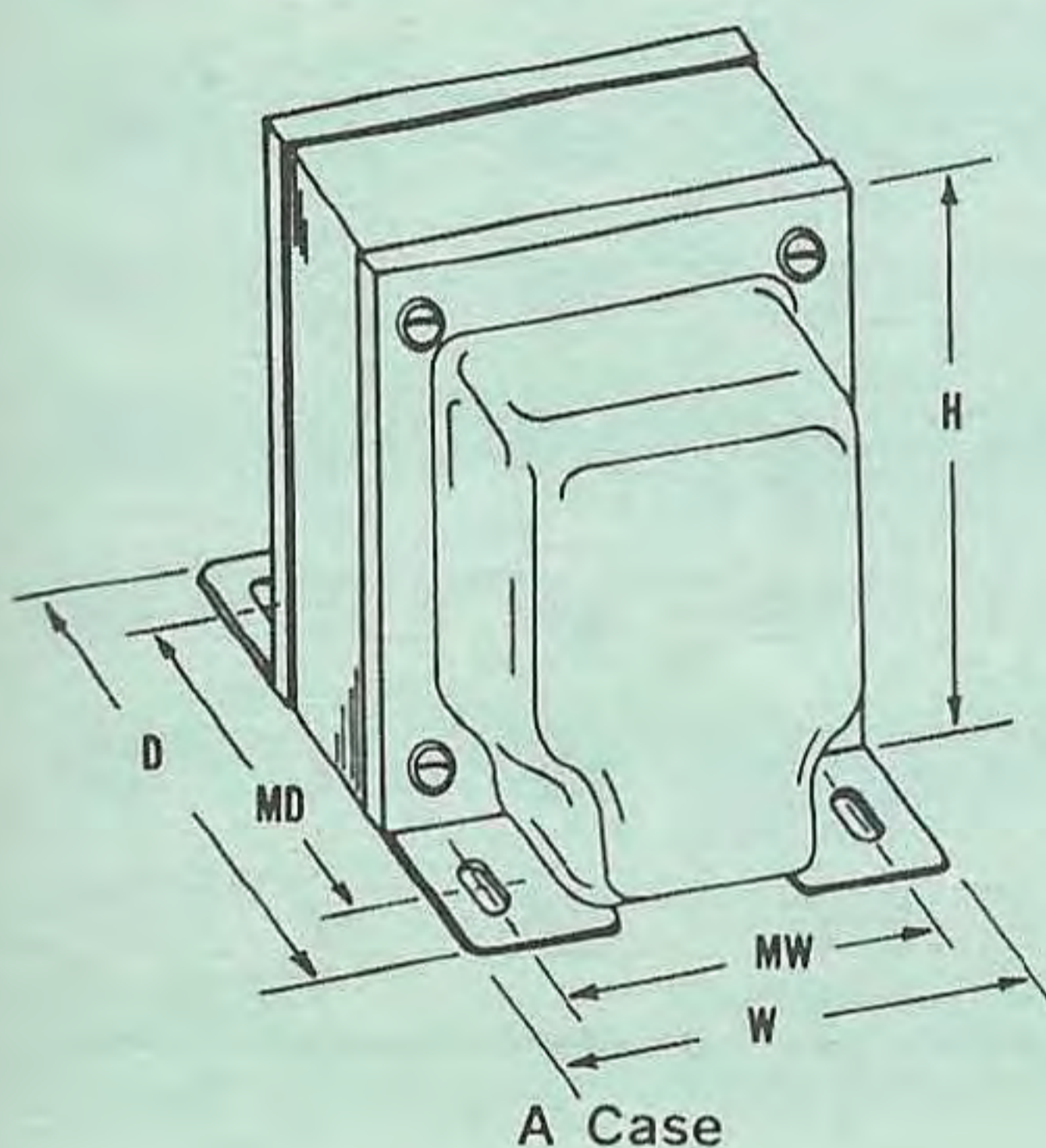
MODULATION / tube to rf load

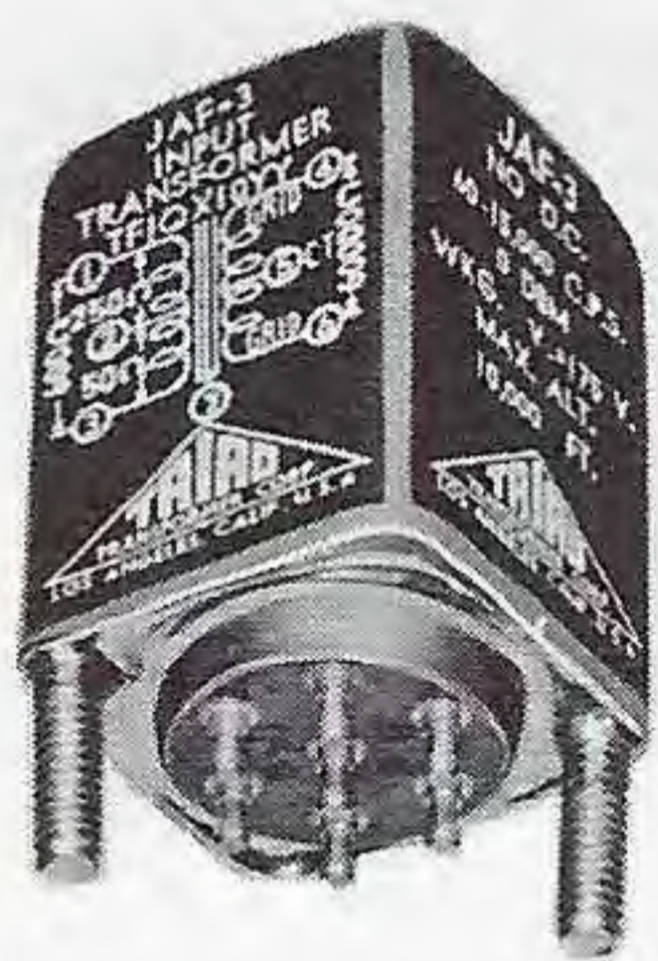
Type No.	Output Watts	Application	Matching Impedance		DC Resistance		Sec. D.C. MA	Over-All Turns Ratio	RMS Test Voltage	Case Type	Connections or Lead Holes Used	Case Dimension			Mounting Dimension		Max. Unit Wt. Lbs.
			Primary	Secondary	Primary	Secondary						H	W	D	MW	MD	
M-1X	5	10,000 CT 5 MA Unbal.	10,000 CT	5K/8K/ 10K	710	965	50	1:1	1000	X	Leads	1 $\frac{1}{8}$	2 $\frac{1}{8}$	1 $\frac{1}{4}$	1 $\frac{3}{4}$		.45
TY-65Z	10	32 CT 575 MA	32 CT	3K/4K/ 6K/	2	275	100	1:13.7	1500	Z	Leads	2 $\frac{1}{8}$	2 $\frac{7}{8}$	2	2 $\frac{3}{8}$		1.3
M-4Z	10	5000 Autoformer	5000	6750 4 (VC)	3600	1.9	100 Total	1:1.16	2000	Z	Leads	1 $\frac{5}{8}$	2 $\frac{3}{8}$	1 $\frac{5}{8}$	2		.67
M-3X	20	10,000 CT 10 MA Unbal.	10,000 CT	3K/5K/8K	523	471	100	1:11:1	1500	X	Leads	2 $\frac{3}{32}$	3 $\frac{1}{16}$	2	3 $\frac{1}{8}$		1.6
M-6X	20	10,000 CT 10 MA Unbal.	10,000 CT	3K/5K/8K 4 (VC)	523	471	100	1:11:1	2000	X	Leads	2 $\frac{3}{32}$	3 $\frac{1}{16}$	2	3 $\frac{1}{8}$		1.6
M-15A	30	4K to 20K Universal	4K to 20K	4K to 20K	212	248	150	1:1.9	1500	A	Leads-2	3 $\frac{1}{2}$	2 $\frac{1}{32}$	3 $\frac{1}{4}$	2 $\frac{1}{4}$	2 $\frac{1}{8}$	3
▲TY-66A	40	6 CT 5A	6 CT	3K/4K/6K	.16	81	200	1:31.7	3000	A	Leads-2	3 $\frac{1}{8}$	3 $\frac{3}{32}$	3 $\frac{3}{8}$	2 $\frac{1}{2}$	2 $\frac{1}{4}$	4.5
M-7AL	60	4250 CT	4250 CT	3K/5K/8K	90	120	200	1:1.37	3500	AL	Leads-2 [○]	4 $\frac{1}{4}$	3 $\frac{1}{32}$	3 $\frac{3}{8}$	2 $\frac{3}{4}$	2 $\frac{3}{4}$	6.5
M-16AL	60	4K to 20K Universal	4K to 20K	4K to 20K	180	225	180	1:1.19	3000	AL	Leads-2 [○]	3 $\frac{3}{8}$	3 $\frac{3}{32}$	3 $\frac{3}{8}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$	5.5
M-8AL	80	4K to 20K Universal	4K to 20K	4K to 20K	152	181	200	1:1.19	4000	AL	Leads-2 [○]	4 $\frac{1}{4}$	3 $\frac{1}{32}$	4 $\frac{3}{8}$	2 $\frac{3}{4}$	3 $\frac{1}{4}$	8
▲M-12AL	125	4K to 20K Universal	4K to 20K	4K to 20K	91	103	300	1:1.19	4000	AL	Leads-2 [○]	4 $\frac{3}{8}$	3 $\frac{1}{16}$	4 $\frac{3}{8}$	3	3 $\frac{5}{8}$	12

SPECIAL TRANSCEIVER / voice frequencies

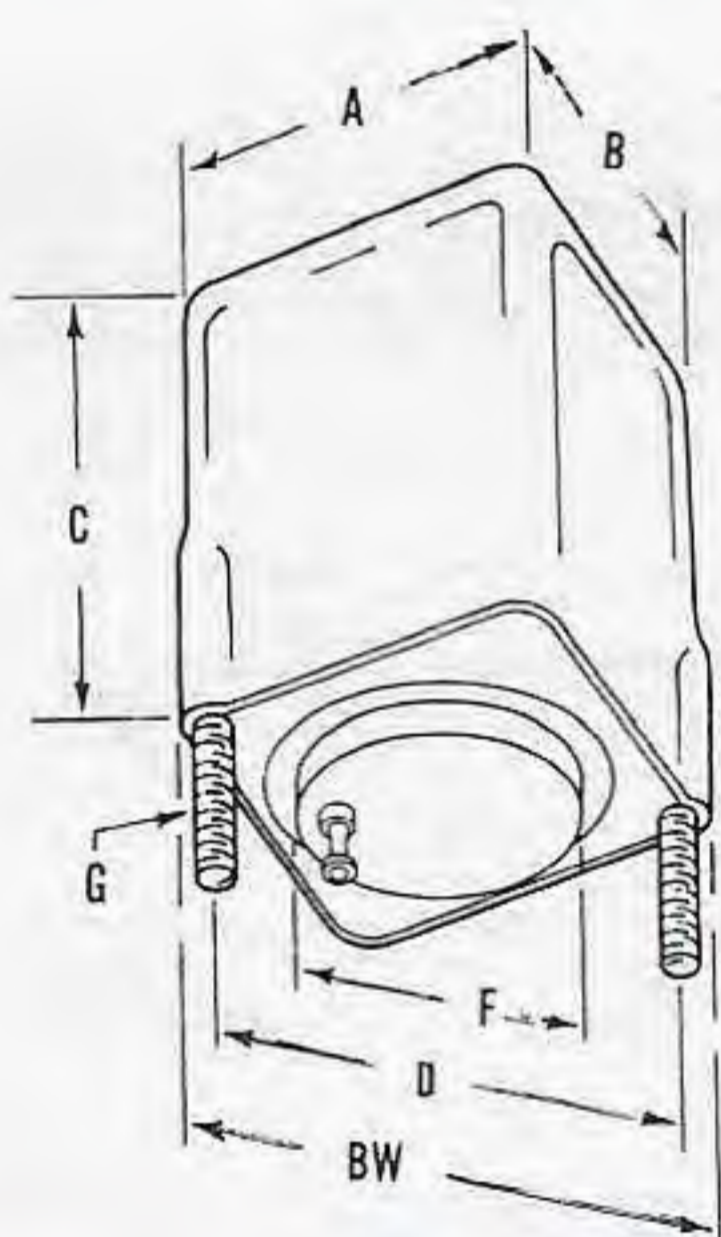
Type No.	Output Watts	Application	Matching Impedance		DC Resistance		Overall Turns Ratio	Freq. Resp. $\pm 3\text{DB}$	RMS Test Voltage	Case Type	Connections or Lead Holes Used	Case Dimension			Mounting Dimension		Mtg. Hole Size	Max. Unit Wt. Lbs.
			Primary	Secondary	Primary	Secondary						H	W	D	MW	MD		
A-21X	.75	Mike or Plate to Grid (2 Primaries)	100 10,000	100,000	3 340	1300	1:31.5 1:3	200-20,000	500	X	Leads	1 $\frac{1}{8}$	2 $\frac{1}{8}$	1 $\frac{1}{4}$	1 $\frac{3}{4}$		$\frac{3}{16}$	.21
A-23X	1	Tube to Line or Phones (2 Secondaries)	10,000	2000 50	675 5.1	300	2.26:1 14.1:1	200-20,000	1000	X	Leads	1 $\frac{3}{8}$	2 $\frac{3}{8}$	1 $\frac{3}{8}$	2		$\frac{3}{16}$	.45

○ Plate leads out side of case. CT for Center Tap. ▲ Discontinued item, available until stock depleted.





JAF SERIES

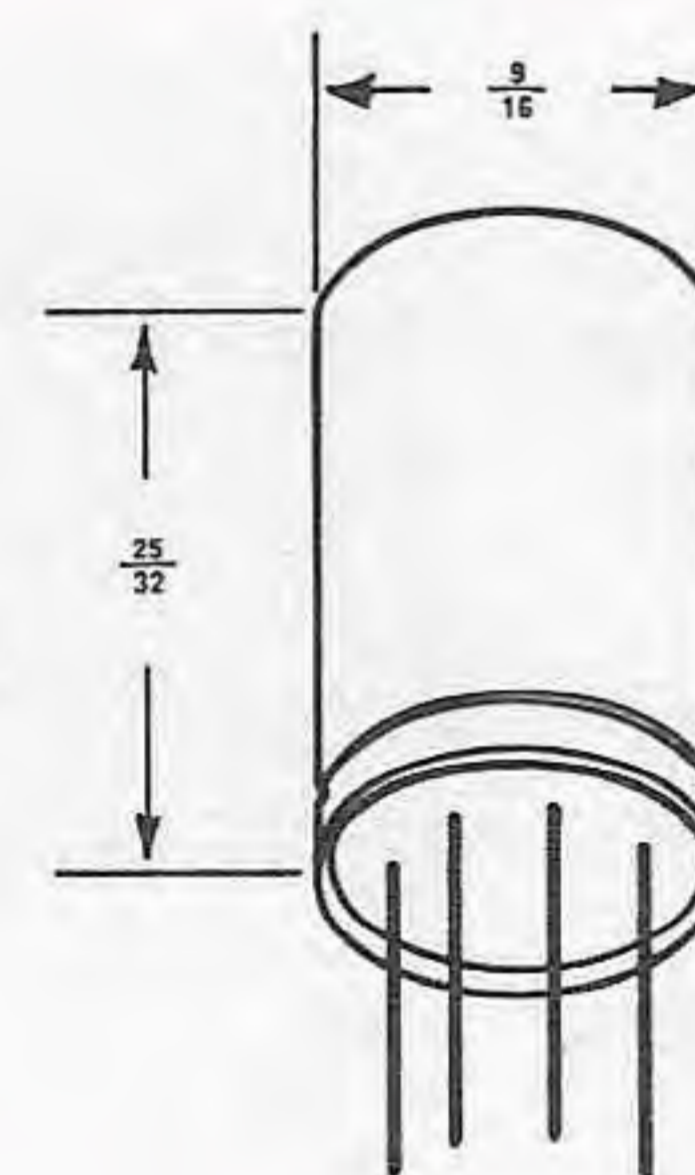


AF CASE

	AF	AG	AH-2	AJ-2	JZ*†
A	5/16	1	1 1/16	1 5/8	5/16 dia.
B	5/16	1	1 1/16	1 5/8	Round
*†Bw	1 1/4	1 3/32	1 11/32		
C	1 3/32	1 3/8	1 3/4	2 3/8	2 5/32
D	*27/32	*1 1/32	*1 11/32	*1 5/8	
F	5/8	3/4	7/8	7/8	
G	4-40	6-32	6-32	6-32	
Unit Wt.	2 1/2 max.	2 1/2 oz.	5 1/4 oz.	11 oz.	.5 oz.

*Not in conformance with MIL-T-27A
†Not in conformance with MIL-T-27

JZ CASE



Type No.	Mil. Type Number	Power Output	Application	Matching Impedance		D.C. Resistance		Overall Turns Ratio	Frequency Response ± 3 DB	RMS Test Voltage	Magnetic Shielding	F. Dim. Inch	Case	Max. Unit Wt. Lbs.
				Primary	Secondary	Pri-ary	Sec-ondary							
JAF-1‡	TF1QX10YY	1MW.	Line or Mike to Grid	600/250/50	50,000	100	3180	1:9.16	60-15,000	500	45 DB	5/16	AF	.1
JAF-2‡	TF1QX10YY	1MW.	Line or Mike to Grid	600/250/50	250,000	48	3600	1:20.6	100-15,000	500	45 DB	5/16	AF	.1
JAF-3	TF1QX10YY	1MW.	Line or Mike to Sgl. or P.P. Grids	600/250/50	60,000 CT	125	3600	1:10	60-15,000	500	45 DB	5/16	AF	.1
JAF-5‡	TF1QX10YY	1MW.	Mike to Voice Coil to Grid	30/12/4	50,000	6	3500	1:39.7	50-15,000	500	45 DB	5/16	AF	.1
JAF-11	TF1QX10YY	10MW.	Plate to Grid	15,000	50,000	1100	2860	1:1.81	60-15,000	500	45 DB	5/16	AF	.1
JAF-12	TF1QX10YY	10MW.	Plate to Sgl. or P.P. Grids	15,000	60,000 CT	1350	2700	1:2	60-15,000	500	45 DB	5/16	AF	.1
JAF-13	TF1QX15YY	10MW.	Plate to Sgl. or P.P. Grids	15,000 3 MA. D.C.	95,000 CT	1330	3330	1:2.5	350-7,000	500	45 DB	5/16	AF	.1
JAF-14‡	TF1QX10YY	1MW.	Line to Grid	200	500,000	63	4900	1:50	300-3,000	500	45 DB	5/16	AF	.1
JAF-15	TF1QX10YY	10MW.	Plate to Grid	15,000	1 Megohm	370	4450	1:8.2	350-5,000	500	45 DB	5/16	AF	.1
JAF-21	TF1QX16YY	10MW.	Plate to Line	15,000	600/250/50	1330	58	4.98:1	60-15,000	500	45 DB	5/16	AF	.1
JAF-22	TF1QX13YY	10MW.	Plate to Line	15,000 3 MA. D.C.	600/250/50	1330	58.8	4.98:1	350-7,000	500	45 DB	5/16	AF	.1
JAF-23	TF1QX16YY	10MW.	Sgl. or P.P. Plates to Line	20,000 CT	600/250/50	2000	70	5.76:1	60-15,000	500	45 DB	5/16	AF	.1
JAF-24	TF1QX13YY	10MW.	Plate or Transistor to Transistor	10,000 CT 2 MA. D.C.	2000 CT	1000	200	2.24:1	50-20,000	500	45 DB	5/16	AF	.1
JAF-25	TF1QX13YY	10MW.	Transistor to Transistor or Line	12,000 CT 2 MA. D.C.	600 CT/150§	1350	70	4.47:1	50-15,000	500	45 DB	5/16	AF	.1
▲JAF-26	TF1QX13YY	20MW.	Transistor to Line or Transistor	50,000 CT .5 MA. D.C.	600 CT/150§	2500	70	9.1:1	50-20,000	500	45 DB	5/16	AF	.1
JAF-31‡	TF1QX16YY	10MW.	Line to Line	600/250/50	600/250/50	55	80	1:1	60-15,000	500	45 DB	5/16	AF	.1
JAF-32	TF1QX13YY	20MW.	Transistor to Transistor or Line	1500 CT 2 MA. D.C.	600 CT/150§	150	60	1.58:1	50-20,000	500	45 DB	5/16	AF	.1
JAF-33‡	TF1QX21YY	10MW.	Line to Line Hi Imp. Isolation	5,000 CT	5000 CT	1500	2200	1:1	60-15,000	500	45 DB	5/16	AF	.1
JAF-34	TF1QX17YY	20MW.	Transistor or Line to Transistor or Line	500 CT 2 MA. D.C.	500 CT/125§	45	50	1:1.03	50-20,000	500	45 DB	5/16	AF	.1
▲JAF-35	TF1QX17YY	10MW.	Transistor or Line to Transistor	600 CT 1 MA. D.C.	2000 CT/500§	68	200	1:1.7	50-20,000	500	45 DB	5/16	AF	.1
JAF-101	TF1QX20YY		Coupling Reactor	50 Henries .75 MA. D.C.		4000	-	-	-	500	45 DB	5/16	AF	.1
JAF-102	TF1QX20YY		Coupling Reactor	6 HY. or 3 MA. D.C.	4 HY. 6 MA. D.C.	295	-	-	-	500	45 DB	5/16	AF	.1

SUB-MINIATURE AUDIO

Type No.	Mil. Type Number	Power Output	Application	Matching Impedance		D.C. Resistance		Overall Turns Ratio	Frequency Response ± 3 DB	RMS Test Voltage	Case	Max. Unit Wt. Lbs.
				Primary	Secondary	Pri-ary	Sec-ondary					
JZ-1	TF1QX10YY	1MW.	Line or Mike to Grid	600/250/50	60,000	350	4100	1:10	70-20,000	500	JZ	.03
JZ-5	TF1QX10YY	1MW.	Mike or Voice Coil to Grid	30/12/4	50,000	11.5	3800	1:40.5	70-20,000	500	JZ	.03
JZ-7	TF1QX16YY	1MW.	Mike or Voice Coil to Transistor	30/12/4	1000	12	480	1:5.73	40-20,000	500	JZ	.03
JZ-13	TF1QX15YY	1MW.	Plate to Single or Push-Pull Grids	15,000 1 MA. D.C.	135,000 CT	1150	4400	1:3	70-15,000	500	JZ	.03
JZ-15	TF1QX15YY	1MW.	Transistor Interstage	20,000 .5 MA. D.C.	1200/600/ 100	2700	350	4.08:1	70-15,000	500	JZ	.03
JZ-25	TF1QX13YY	1MW.	Plate or Transistor to Transistor or Line	10,000 1 MA. D.C.	200	1500	120	7.05:1	70-20,000	500	JZ	.03
JZ-26	TF1QX21YY	1MW.	Transistor to Line or Transistor	1000 5 MA. D.C.	50	355	20	4.5:1	100-10,000	500	JZ	.03

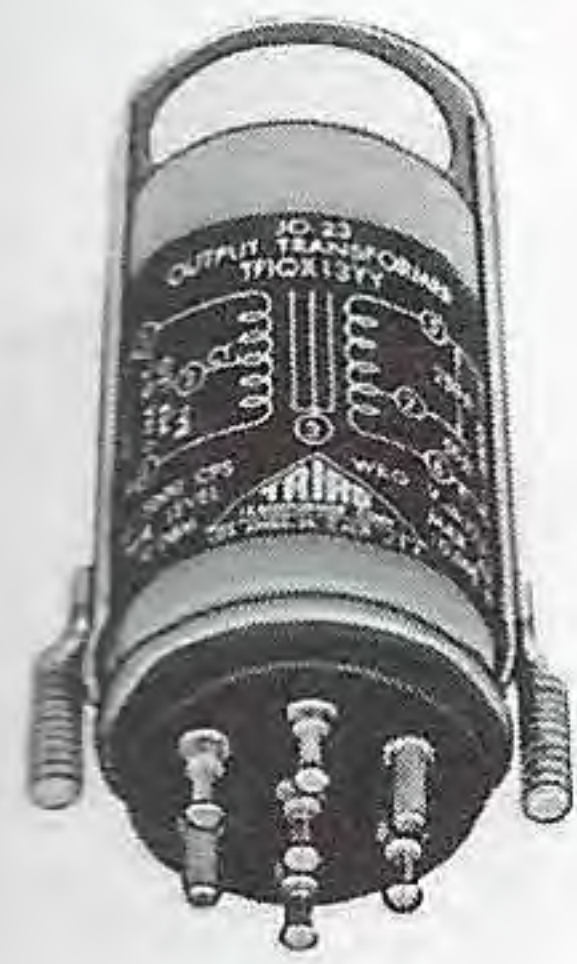
‡ Static shield. CT for Center Tap. § Split winding. ▲ Discontinued item, available until stock depleted.

AUDIO TRANSFORMERS

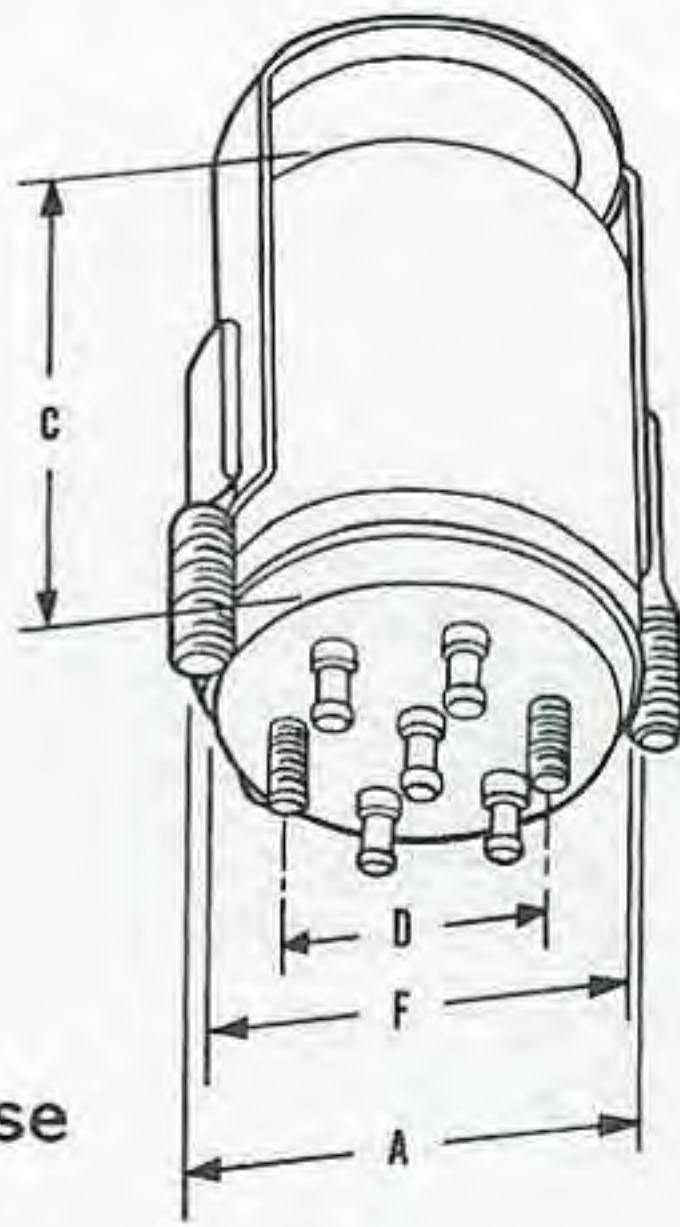
Designed and Constructed to meet MIL-T-27B



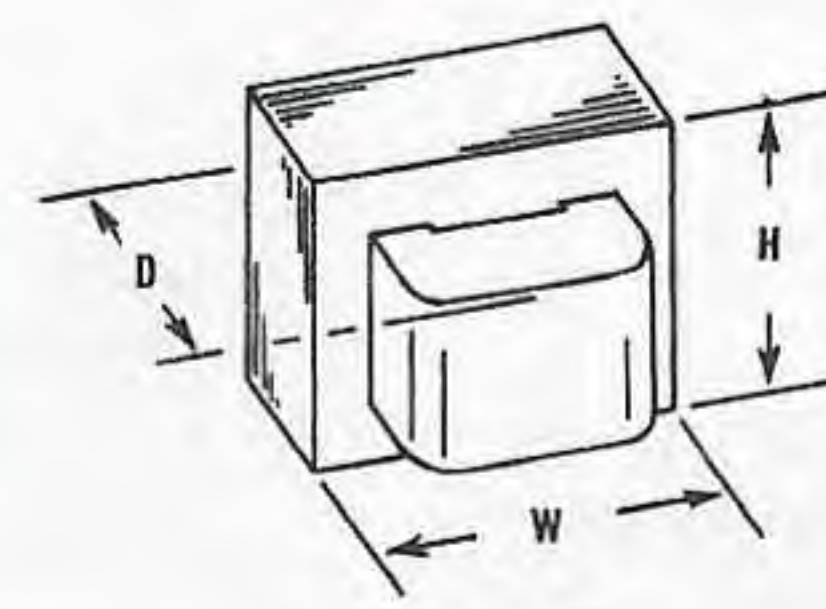
MILITARY GRADE



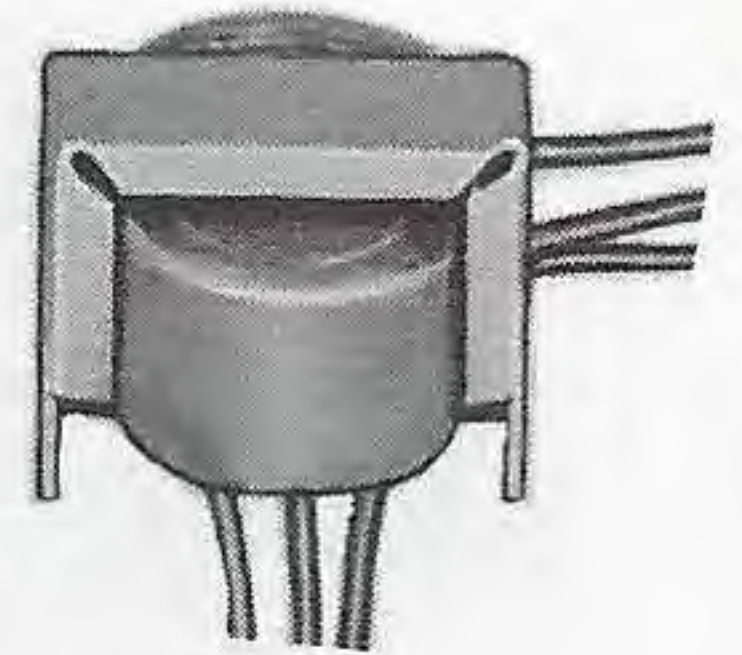
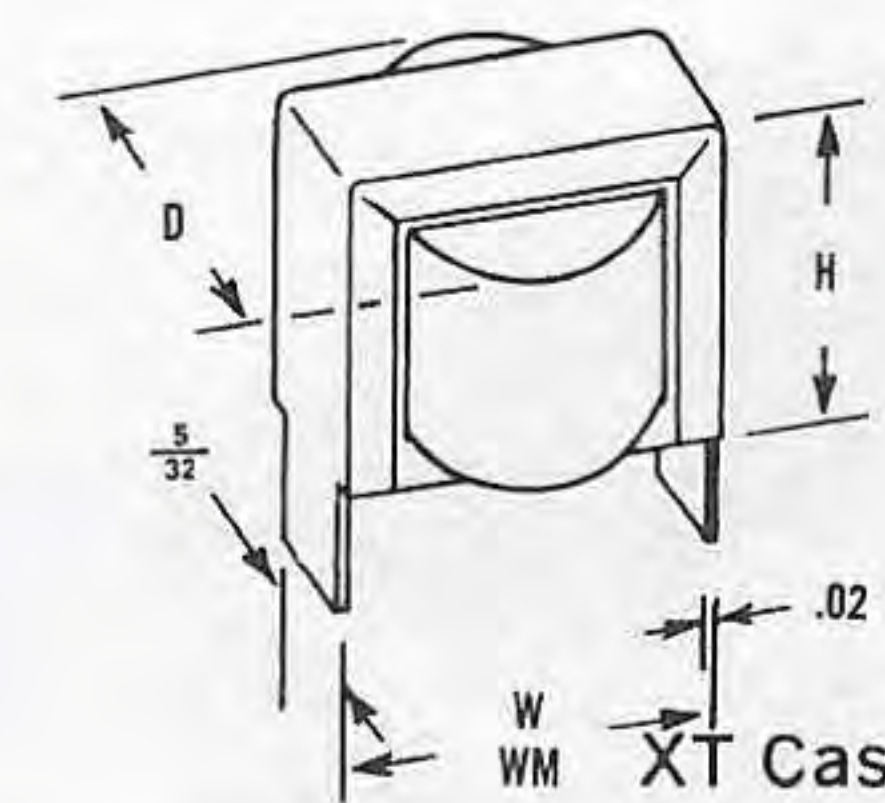
JO Case



	JOA	JOB
A	1 $\frac{5}{16}$ dia.	1 $\frac{5}{16}$ dia.
B	Round	Round
C	1 $\frac{1}{2}$	1 $\frac{25}{32}$
D	$\frac{9}{16}$	$\frac{9}{16}$
F	$\frac{7}{8}$	$\frac{7}{8}$
Unit Wt.	2 oz.	2 $\frac{1}{2}$ oz.



TZ Core & Coil only



JO SERIES

Type No.	Mil. Type Number	Power Output	Application	Matching Impedance		D.C. Resistance		Overall Turns Ratio	Frequency Response ± 3 DB	RMS Test Voltage	Magnetic Shielding	F. Dim. Inches		Max. Unit Wt. Lbs.
				Primary	Secondary	Primary	Sec. ondary					Min.	Case	
JO-1‡	TF1QX10YY	1MW.	Line or Mike to Grid	600/250/50	50,000	100	3180	1:9.16	60-15,000	500	45 DB	$\frac{7}{8}$	JOA	.17
JO-2‡	TF1QX10YY	1MW.	Line or Mike to Grid	600/250/50	250,000	48	3600	1:20.6	100-8,000	500	45 DB	$\frac{7}{8}$	JOA	.17
JO-3	TF1QX10YY	1MW.	Line or Mike to Single or P.P. Grids	600/250/50	60,000 CT	125	3600	1:10	60-15,000	500	45 DB	$\frac{7}{8}$	JOA	.17
JO-5‡	TF1QX10YY	1MW.	Mike or Voice Coil to Grid	30/12/4	50,000	6	3500	1:39.7	50-12,000	500	45 DB	$\frac{7}{8}$	JOA	.17
JO-11	TF1QX10YY	10MW.	Plate to Grid	15,000 0 MA D.C.	60,000	1100	2860	1:2	50-15,000	500	45 DB	$\frac{7}{8}$	JOB	.17
JO-12	TF1QX10YY	10MW.	Plate to Single or Push-Pull Grids	15,000 0 MA D.C.	60,000 CT	1350	2700	1:2	50-15,000	500	45 DB	$\frac{7}{8}$	JOB	.17
JO-13	TF1QX15YY	10MW.	Plate to Single or P.P. Grids	15,000 3 MA D.C.	95,000 CT	1330	3330	1:2.3	300-7,000	500	45 DB	$\frac{7}{8}$	JOB	.17
JO-21	TF1QX16YY	10MW.	Plate to Line	15,000 0 MA D.C.	600/250/50	1330	58	4.98:1	50-15,000	500	45 DB	$\frac{7}{8}$	JOB	.17
JO-22	TF1QX13YY	10MW.	Plate to Line	15,000 3 MA D.C.	600/250/50	1330	58	5:1	300-7,000	500	45 DB	$\frac{7}{8}$	JOB	.17
JO-23	TF1QX13YY	10MW.	Single or P.P. Plates to Line	20,000 CT 0 MA D.C.	600/250/50	2000	70	5.76:1	50-15,000	500	45 DB	$\frac{7}{8}$	JOB	.17
JO-31‡	TF1QX16YY	10MW.	Line to Line	600/250/50	600/250/50	55	80	1:1	50-15,000	500	45 DB	$\frac{7}{8}$	JOB	.17
JO-101	TF1QX20YY	-	Coupling Reactor	50 HY 2 MA D.C.	-	3400	-	-	-	500	45 DB	$\frac{7}{8}$	JOB	.17

SUB-MINIATURE AUDIO / open frame

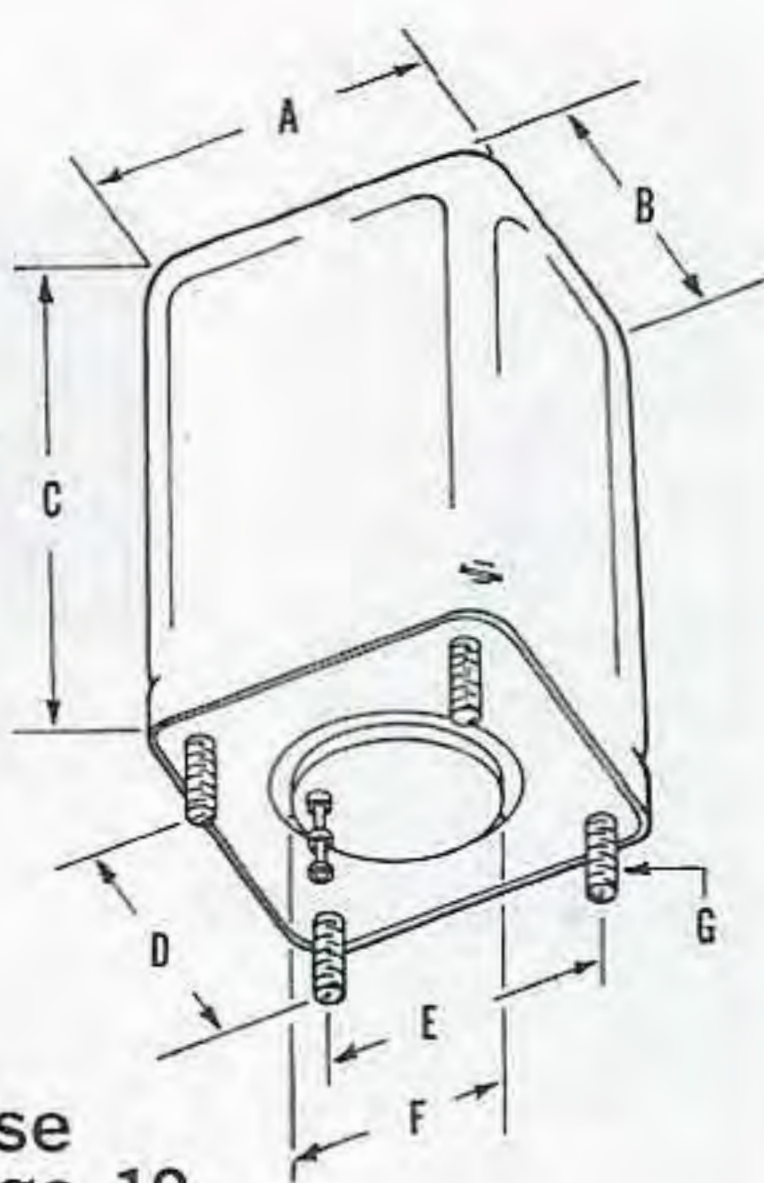
Type No.	Power Output	Application	Matching Impedance		D.C. Resistance		Overall Turns Ratio	Frequency Response ± 3 DB	RMS Test Volts	Case Type	Connections	Case Dimension			Mounting Dimension MW	Max. Unit Wt. Lbs.
			Primary	Secondary	Pri- mary	Sec- ondary						H	W	D		
TZ-1	1MW.	Input-Line or Mike to Grid	600/250/50	60,000	350	4100	1:10	70-20,000	500	TZ	Leads	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{7}{16}$		.015
TZ-2XT	1MW.	Line or Mike to Grid	200 CT	200,000	35	5000	1:31.6	100-20,000	500	XT	Leads	$\frac{7}{16}$	$\frac{1}{32}$	$\frac{7}{16}$	$\frac{1}{32}$	.015
TZ-5	1MW.	Input-Mike or V.C. to Grid	30/12/4	50,000	6	3500	1:40.5	70-20,000	500	TZ	Leads	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{7}{16}$		.015
TZ-7	1MW.	Input-Mike or V.C. to Transistor	30/12/4	1000	5	480	1:5.73	40-20,000	500	TZ	Leads	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{7}{16}$		.015
TZ-13	1MW.	Interstage-Plate to Single or P.P. Grids	15,000 1 MA. D.C.	135,000 CT	985	4400	1:3	70-15,000	500	TZ	Leads	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{7}{16}$		.015
TZ-15	1MW.	Transistor Interstage	20,000 .5 MA. D.C.	1200/600/100	2700	350	4.08:1	70-15,000	500	TZ	Leads	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{7}{16}$		.015
TZ-24XT	1MW.	Plate or Transistor to Line or Transistor	25,000 CT .5 MA. D.C.	500 CT	2000	60	7.1:1	100-15,000	500	XT	Leads	$\frac{7}{16}$	$\frac{1}{32}$	$\frac{7}{16}$	$\frac{1}{32}$	.015
TZ-17XT	1MW.	Plate or Transistor to Transistor	10,000 CT	2000 CT	1000	250	2.24:1	70-15,000	500	XT	Leads	$\frac{7}{16}$	$\frac{1}{32}$	$\frac{7}{16}$	$\frac{1}{32}$	.015
▲TZ-29XT	1MW.	Transistor Isolation High Impedance	10,000 CT 1 MA. D.C.	10,000 CT	1100	1400	1:1	100-20,000	500	XT	Leads	$\frac{7}{16}$	$\frac{1}{32}$	$\frac{7}{16}$	$\frac{1}{32}$	.015
TZ-25	1MW.	Output-Plate to Line	10,000 1 MA. D.C.	200	1500	120	7.05:1	70-20,000	500	TZ	Leads	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{7}{16}$		.015
TZ-32XT	10MW.	Transistor to Line or Transistor	1500 CT 2.5 MA. D.C.	600 CT/150§	160	65	1.58:1	70-20,000	500	XT	Leads	$\frac{7}{16}$	$\frac{1}{32}$	$\frac{7}{16}$	$\frac{1}{32}$	.015
TY-27XT	10MW.	Output-Single or P.P. to Line	500 CT 2 MA. D.C.	500 CT	37.5	51.5	1:1	300-15,000	500	XT	Leads	$\frac{1}{2}$	$\frac{9}{16}$	$\frac{1}{2}$	$\frac{9}{16}$	.025
TY-28XT	10MW.	Output-Single or P.P. to Line	500 CT 2 MA. D.C.	200 CT	38.2	25	1.58:1	300-15,000	500	XT	Leads	$\frac{1}{2}$	$\frac{9}{16}$	$\frac{1}{2}$	$\frac{9}{16}$	.025
TZ-26	1MW.	Transistor Output	1000 5 MA. D.C.	50	355	20	4.5:1	100-10,000	500	TZ	Leads	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{7}{16}$		.015
TZ-28	1MW.	Transistor Input	600	50	94.5	11	3.47:1	40-60,000	500	TZ	Leads	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{7}{16}$		.015
TZ-103XT	-	Coupling Reactor	4 Hy. or 1 Hy.	-	400	-	-	-	500	XT	Leads	$\frac{7}{16}$	$\frac{1}{32}$	$\frac{7}{16}$	$\frac{1}{32}$	.015

§ Split winding. CT for Center Tap. ‡ Static shield. ▲ Discontinued item, available until stock depleted.

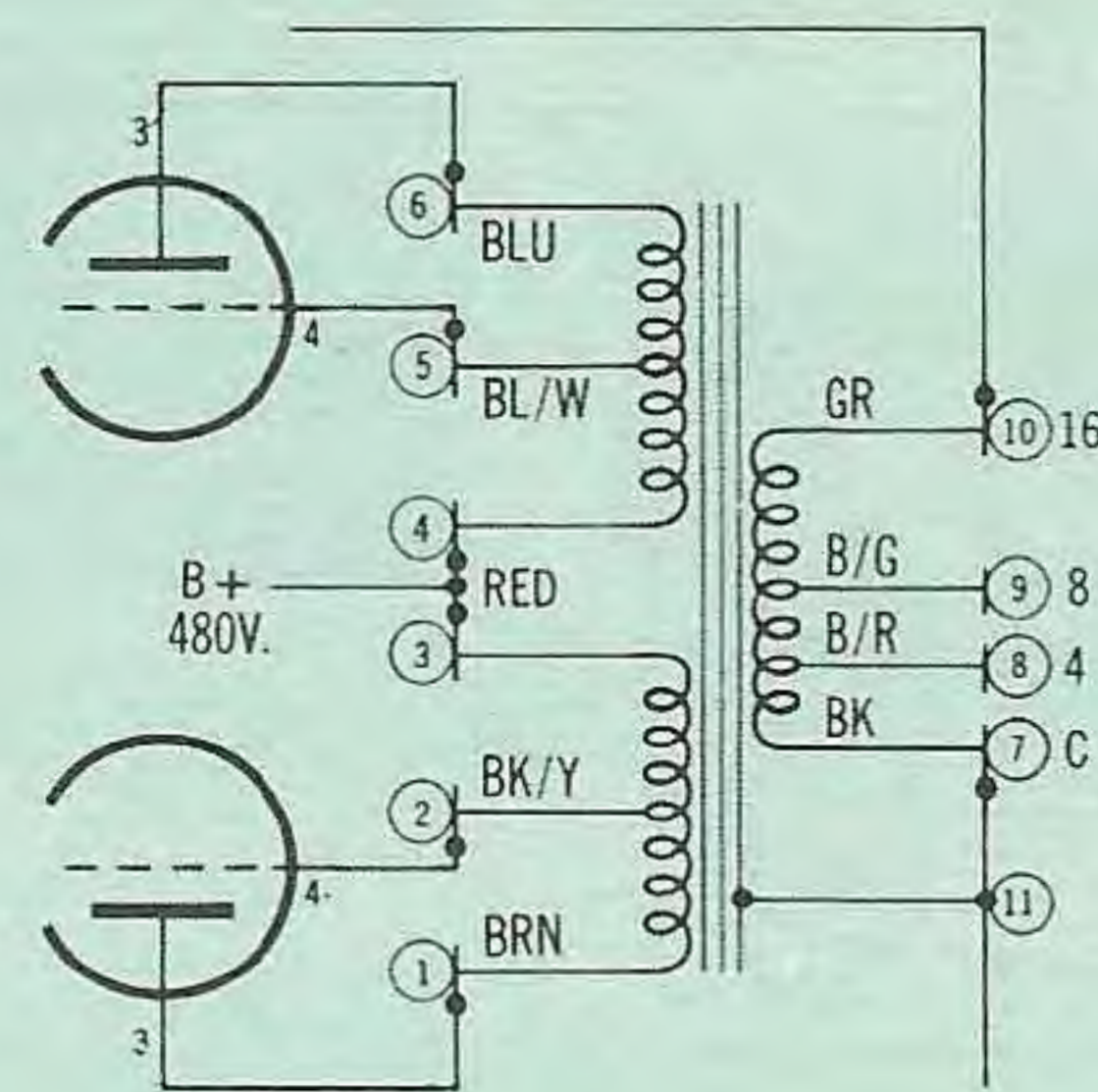


HS
HSM

HS and HSM Case
See case chart, page 19



SCREEN TAPPED ARRANGEMENT SHOWN, MAY BE USED TO INCREASE POWER. FREQUENCY RESPONSE AND DISTORTION REMAIN APPROXIMATELY THE SAME AS FOR TRIODE CIRCUIT.



GP Case

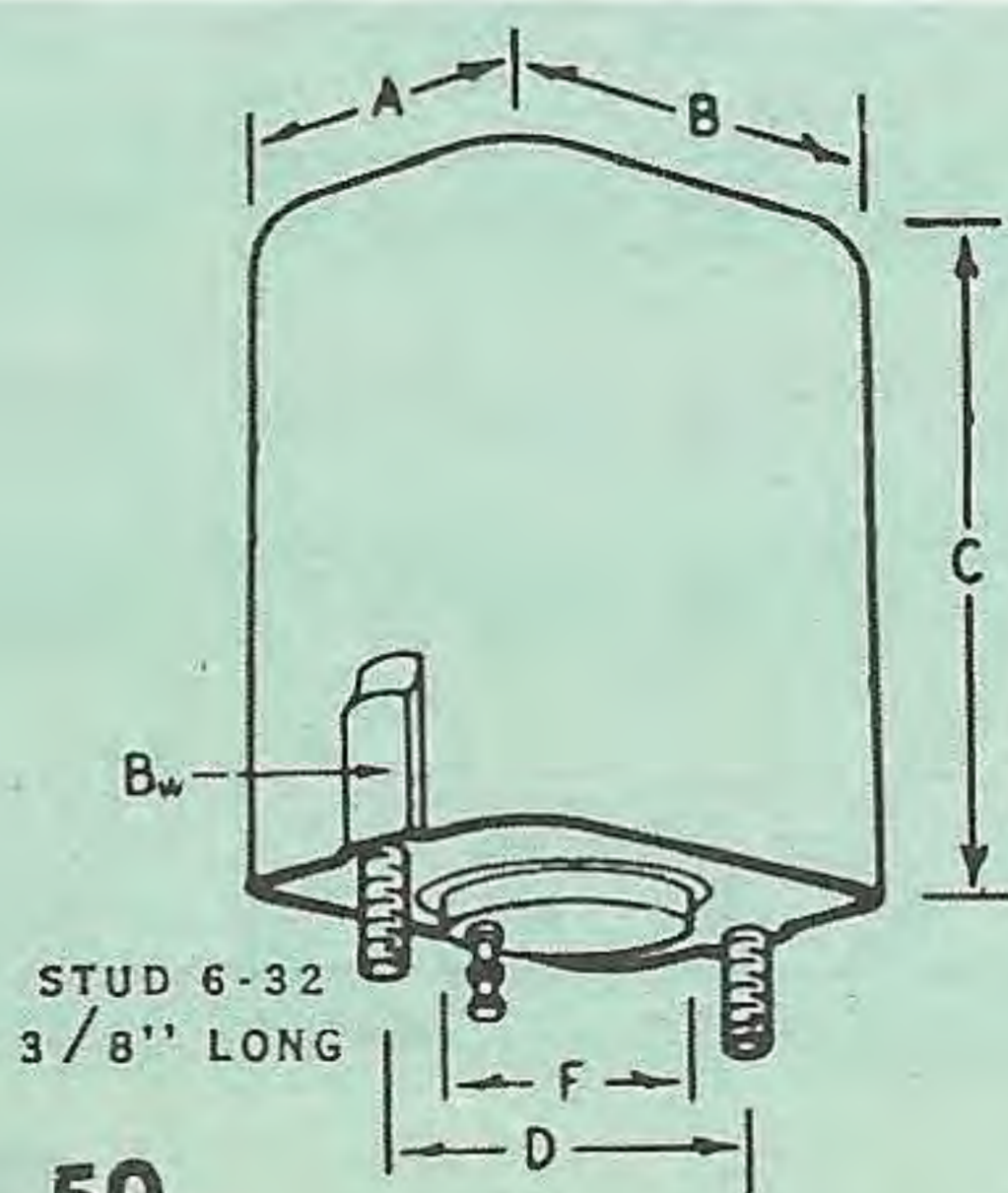
HIGH FIDELITY OUTPUT / high level / to line or voice coil

Type No.	Mil Type Number	Output Watts	Application	Matching Impedance		Primary Ma. D.C.		D.C. Resistance		Overall Turns Ratio	Freq. Resp. ± 3 DB	RMS Test Voltage	F Dim. Inch	Mil Case Type	Max. Unit Wt. Lbs.
				Primary	Secondary	P.P. Single	Total	Pri-ary	Sec-ondary						
HSM-79	TF4RX13FA	5	Sgl or P.P. Plates to Voice Coil	20,000 CT / 5000 \$\$\$	16/8/4	40	20	1800	1.25	35.4:1	40-20,000	Pri. 2000 Sec. 1500	1 3/8	FA	2
HSM-80	TF4RX13FA	5	Sgl or P.P. Plates to Line	20,000 CT / 5000 \$\$\$	600 CT / 250 CT / 150/62.5	40	20	1800	30	5.75:1	40-20,000	Pri. 2000 Sec. 1500	1 3/8	FA	2
HSM-81	TF4RX13JB	15	P.p. 6V6's, etc. to V.C.	8000 CT \$\$\$	16/8/4	100		420	.75	22.3:1	7-50,000	1500	1 3/8	JB	5.12
▲HSM-82	TF4RX13JB	15	As above—to line	8000 CT \$\$\$	500/250/125	100		360	30	3.6:1	7-50,000	1500	1 3/8	JB	5.12
HSM-181	TF4RX13JB	15	P.p. 6V6's, 2A3's, EL84's, etc. to V.C.	8000 CT ■ or 2000 CT \$\$\$	16/8/4	100		420	1.75	22.3:1	7-50,000	1500	1 3/8	JB	5
▲HSM-182	TF4RX13JB	15	As above—to line	8000 CT ■ or 2000 CT \$\$\$	500/250/125	100		360	30	3.6:1	7-50,000	1500	1 3/8	JB	5
HSM-84	TF4RX13JB	20	P.p. 2A3's, 6B4's, 6L6's, etc. to V.C.	5000 CT \$\$\$	16/8/4	160		204	.75	17.15:1	15-30,000	1500	1 3/8	JB	5
HSM-85R	TF4RX13JB	20	As above—to line	5000 CT \$\$\$	500/250/125	160		284	21	3.17:1	7-50,000	1500	1 3/8	JB	5
HSM-184	TF1RX13KB	25	P.p. 7189A	8000 CT ■	16/8/4 \$\$\$	200		245	.63	22.2:1	10-50,000	1500	1 3/8	KB	7.5
HSM-189	TF1RX13KB	25	P.p. KT-66's, 807's, etc.—for Williamson circuit	10,000 CT ■ or 2500 CT \$\$\$	16/8/4	200		280	.9	24.8:1	7-50,000	Pri. 2000 Sec. 1500	1 3/8	KB	7.12
HSM-190	TF1RX13KB	25	As above—to line	10,000 CT ■ or 2500 CT \$\$\$	500/250/125	200		280	14.3	4.45:1	7-50,000	Pri. 2000 Sec. 1500	1 3/8	KB	7.5
▲HSM-186	TF1RX13KB	25	5881, 6L6, 807, etc. for Williamson circuit	6600 CT ■ or 1650 CT \$\$\$	16/8/4	160		245	.69	20:1	7-50,000	Pri. 2000 Sec. 1500	1 3/8	KB	7
HSM-187	TF1RX13KB	25	As above—to line	6600 CT ■ or 1650 CT \$\$\$	500/250/125	160		252	13.4	3.7:1	7-50,000	Pri. 2000 Sec. 1500	1 3/8	KB	7.5
▲HSM-91	TF1RX13LA	50	P.p. parallel 2A3's, 6L6's, etc. to V.C.	2500 CT or 625 \$\$\$	16/8/4	320		110	.5	12.62:1	7-50,000	2000	1 3/8	LA	10
HSM-94	TF1RX13LA	55	P.p. par. 6L6's to V.C.	4500 CT \$\$\$	16/8/4	360		138	.46	17.5:1	7-50,000	2000	1 3/8	LA	11.1
HSM-95	TF1RX13LA	55	As above—to line	4500 CT \$\$\$	500/250/125	360		138	14	3:1	7-50,000	2000	1 3/8	LA	11.3
▲HS-97	TF1RX13YY	125	P.p. 845's to line	6600 CT or 1650 \$\$\$	500/250/125	480		154	7.9	3.6:1	15-30,000	Pri. 5000 Sec. 1500	Special GP-15°	GP-15° 26.25	

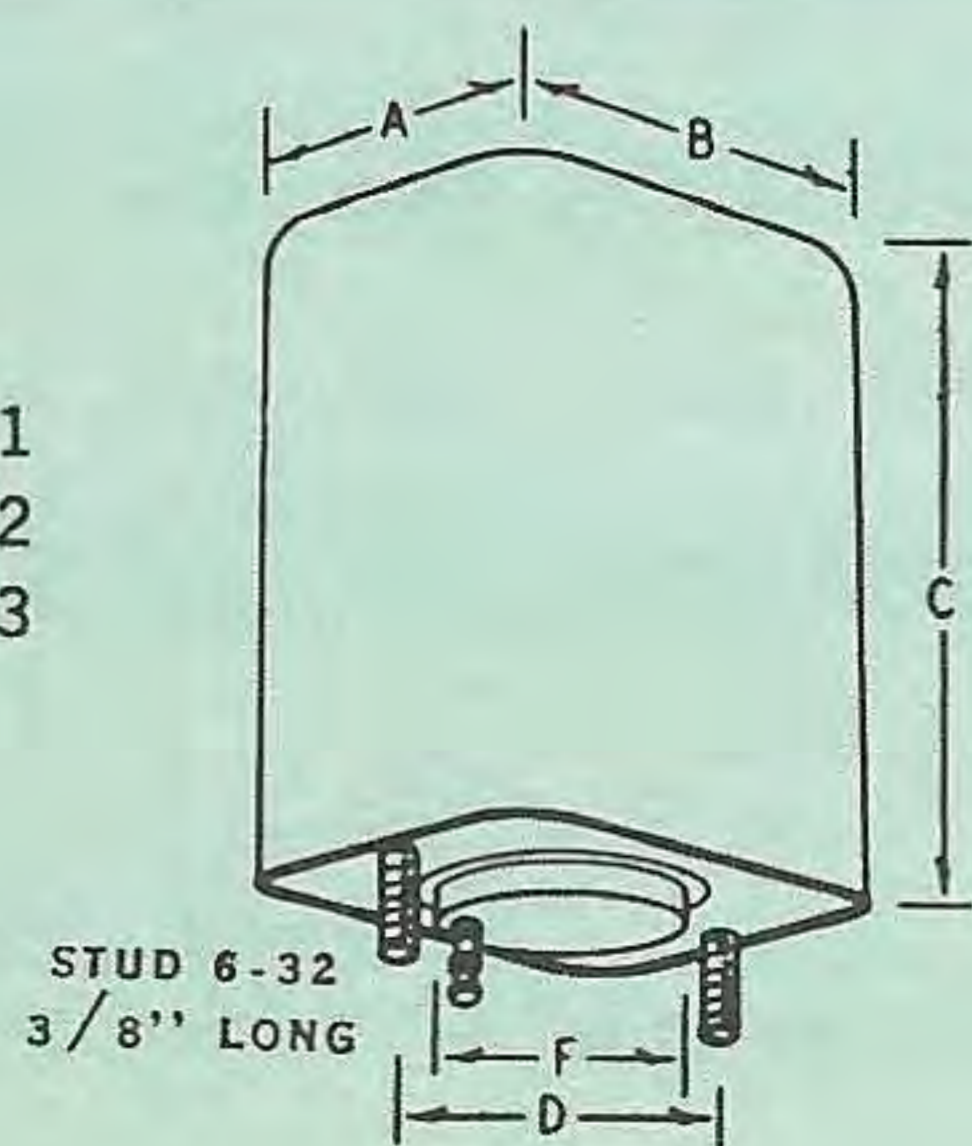
POWER OUTPUT / to line or voice coil

Type No.	Mil. Type Number	Power Output	Application	Matching Impedance		DC Resistance		Overall Turns Ratio	Freq. Resp. ± 3 DB	RMS Test Voltage	F. Dim. Inches	Case	Max. Unit Wt. Lbs.
				Primary	Secondary	Primary	Secondary						
HS-71	TF1QX13YY	2W	Plate to Line	10,000 10 MA DC	600 CT / 150\$\$\$	800	46	4.1:1	150-15,000	1000	2 3/32	AH-2 ■ ■	.4
HS-73	TF1RX13YY	5W	Plate to Line or Voice Coil	5000 40 MA DC	500/250/16/8/4	273	40	3.15:1	70-15,000	1500	7/8	AJ-2 ■ ■	.75
HS-75	TF4RX13EB	10W	Single or P.P. Plates to Line or V.C.	10,000 CT 50 MA DC	500/250/16/8/4	325	13.8	4.48:1	100-25,000	1500	7/8	EB	1.12
HS-77	TF4RX13GA	25W	Single or P.P. Plates to Line or V.C.	9000 CT 120 MA DC	500/250/16/8/4	157	9.1	4.24:1	70-20,000	2000	1 3/8	GA	3.12

▲ Discontinued item available until stock depleted. \$\$\$ Split winding. CT for Center Tap. ■ Williamson type circuit may be used. Taps on primary for proper screen operation. ■ ■ See case chart, page 48. ° GP-15 dimensions 4 3/4" x 5 7/8" x 6 5/8" high. Mounting centers 3 3/4" x 4 7/8".



GP-1
GP-2
GP-3



GP-4
GP-5

SHIELDING

- P-1 — One nickel alloy high permeability shield — 45db. reduction in pickup.
- P-3 — Two nickel alloy shields interleaved with one heavy copper shading ring — 70db. reduction in pickup.
- P-5 — Three nickel alloy shields interleaved with two heavy copper shading rings — 90db. reduction in pickup.

	GP-1	GP-2	GP-3	GP-4	GP-5
A	7/8	1 1/16	1 1/4	1 7/16	1 5/8
B	1 1/16	1 1/4	1 1/16	1 3/4	2
BW	1 1/16	1 11/32	1 21/32		
C	1 11/16	2 1/4	2 3/8	2 1/2	2 3/4
D	1 3/32	1 3/16	1 15/32	1 1/2	1 1/2
F	3/4	3/4	1 1/16	1 1/16	1 1/16
Wt.	3 oz.	5 1/2 oz.	8 oz.	12 oz.	17 oz.

AUDIO TRANSFORMERS

Designed and Constructed to meet MIL-T-27B



MILITARY GRADE

LOW LEVEL AUDIO INPUT

Type No.	Mil. Type Number	Power Output	Application	Matching Impedance		DC Resistance		Overall Turns Ratio	Frequency Response ± 3 DB	RMS Test Voltage	Magnetic Shielding	F. Dim. Inch	Case	Max. Unit Wt. Lbs.
				Primary	Secondary	Pri-ary	Sec-ondary							
HS-1‡	TF1QX10YY	10MW.	Universal-Line or Mike to Grid	600 Ω /250 Ω /150/62.5	77,000	70	3640	1:11.3	20-20,000	500	90 DB P-5	$\frac{7}{8}$	GP-4	.75
HS-11‡	TF1QX10YY	10MW.	Universal-Line or Mike to Grid	600 Ω /250 Ω /150/62.5	77,000	70	3640	1:11.3	20-20,000	500	45 DB P-1	$\frac{23}{32}$	GP-2	.5
▲HS-3‡	TF1QX10YY	10MW.	Universal-Line or Mike to Sgl. or P.P. Grids	600 Ω /250 Ω /150/62.5	117,600 CT	70	4160	1:14	20-20,000	500	90 DB P-5	$\frac{7}{8}$	GP-5	1
HS-4‡	TF1QX10YY	10MW.	Universal-Line or Mike to Sgl. or P.P. Grids	600 Ω /250 Ω /150/62.5	117,600 CT	70	4160	1:14	20-20,000	500	70 DB P-3	$\frac{7}{8}$	GP-4	.65
▲HS-14‡	TF1QX10YY	10MW.	Universal-Line or Mike to Sgl. or P.P. Grids	600 Ω /250 Ω /150/62.5	117,600 CT	70	4160	1:14	20-20,000	500	45 DB P-1	$\frac{7}{8}$	GP-3	.5
HS-15‡	TF1QX10YY	100MW.	Universal-Line or Mike to Sgl. or P.P. Grids	600 Ω /250 Ω /150/62.5 (10 MA. D.C.)	38,400 CT Ω	100	6150	1:8	30-20,000	500	70 DB P-3	$\frac{7}{8}$	GP-5	1.25
HS-5	TF1QX10YY	1MW.	Dynamic Mike to Grid	30	127,500	4.1	4860	1:65.2	40-12,000	500	90 DB P-5	$\frac{7}{8}$	GP-4	.7

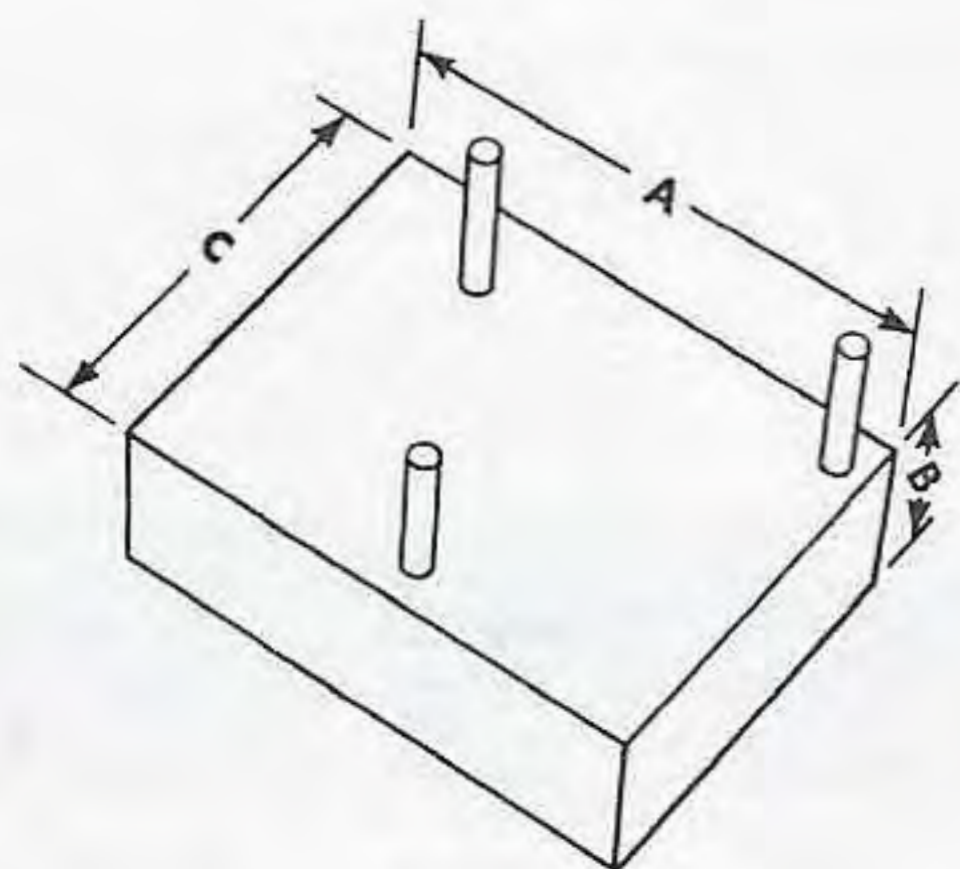
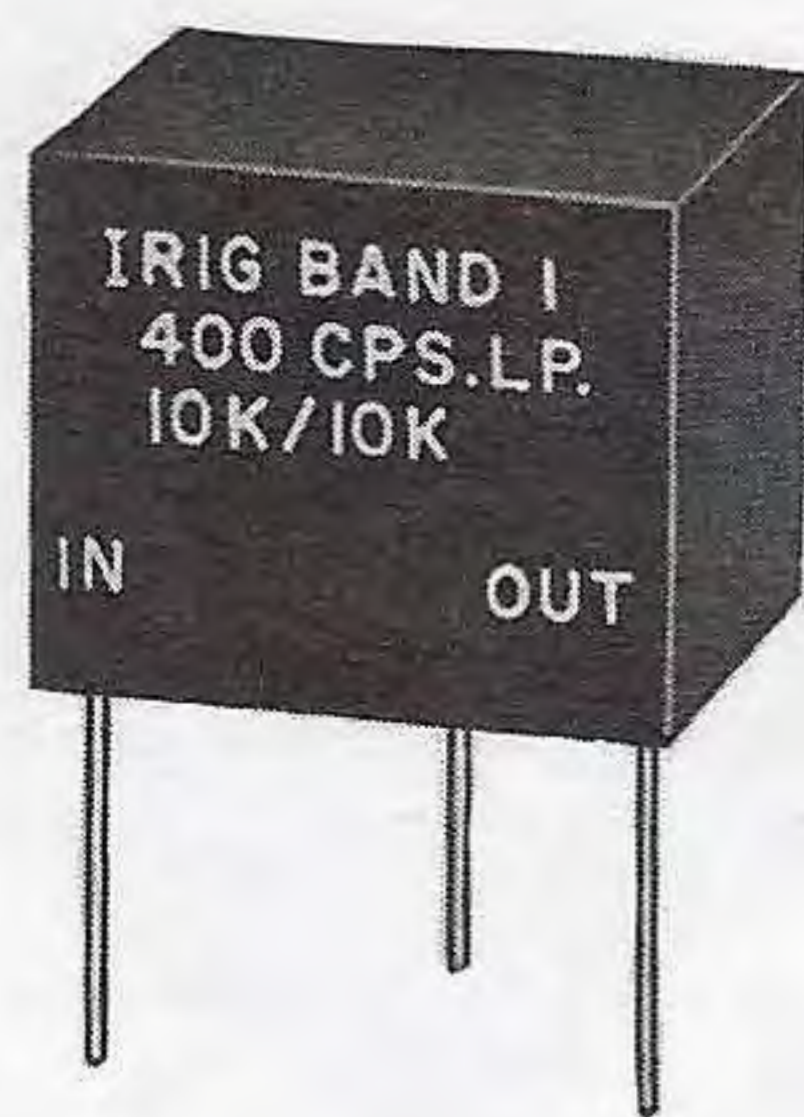
LOW LEVEL AUDIO INTERSTAGE

Type No.	Mil. Type Number	Power Output	Application	Matching Impedance		DC Resistance		Overall Turns Ratio	Frequency Response ± 3 DB	RMS Test Voltage	Magnetic Shielding	F. Dim. Inch	Case	Max. Unit Wt. Lbs.
				Primary	Secondary	Pri-ary	Sec-ondary							
HS-23	TF1QX10YY	40MW.	Sgl. Plate to Sgl. Grid	15,000	110,000	1610	4320	1:2.7	20-20,000	1500	70 DB P-3	$\frac{7}{8}$	GP-4	.65
HS-25	TF1QX10YY	75MW.	Sgl. Plate to Sgl. or P.P. Grid	15,000	111,000 CT Ω \$\$\$	1115	6100	1:2.72	20-20,000	500	45 DB P-1	$\frac{7}{8}$	GP-4	.65
HS-35	TF1QX10YY	26MW.	Sgl. Plate to Sgl. or P.P. Grid	15,000	111,000 CT Ω \$\$\$	1440	3940	1:2.72	20-20,000	500	45 DB P-1	$\frac{23}{32}$	GP-2	.35
HS-27	TF1QX15YY	130MW.	Sgl. or P.P. Plates to Sgl. or P.P. Grid	20,000 CT Ω /5000	60,000 CT Ω /15,000	1700	6420	1:1.72	20-20,000	1000	45 DB P-1	$\frac{7}{8}$	GP-4	.72
HS-29	TF1QX10YY	20MW.	Sgl. or P.P. Plates to Sgl. or P.P. Grids	20,000 CT Ω /5000	80,000 CT Ω /20,000	2000	4000	1:2	20-20,000	500	90 DB P-5	$\frac{7}{8}$	GP-4	.7
HSM-31	TF4RX19FA	3W.	Sgl. or P.P. Plates to Sgl. or P.P. Grids	20,000 CT Ω /5000	20,000 CT Ω /5000 CT	2060	950	1:1	20-20,000	1500	-	1 $\frac{3}{8}$	FA ■■	2
HS-32	TF1QX15YY	200MW.	Sgl. Plate to Sgl. or P.P. Grids	15,000 (6 MA. D.C.)	60,000 CT Ω /15,000	5000	10,000	1:2	20-15,000	1000	45 DB P-1	$\frac{7}{8}$	GP-5	1.13

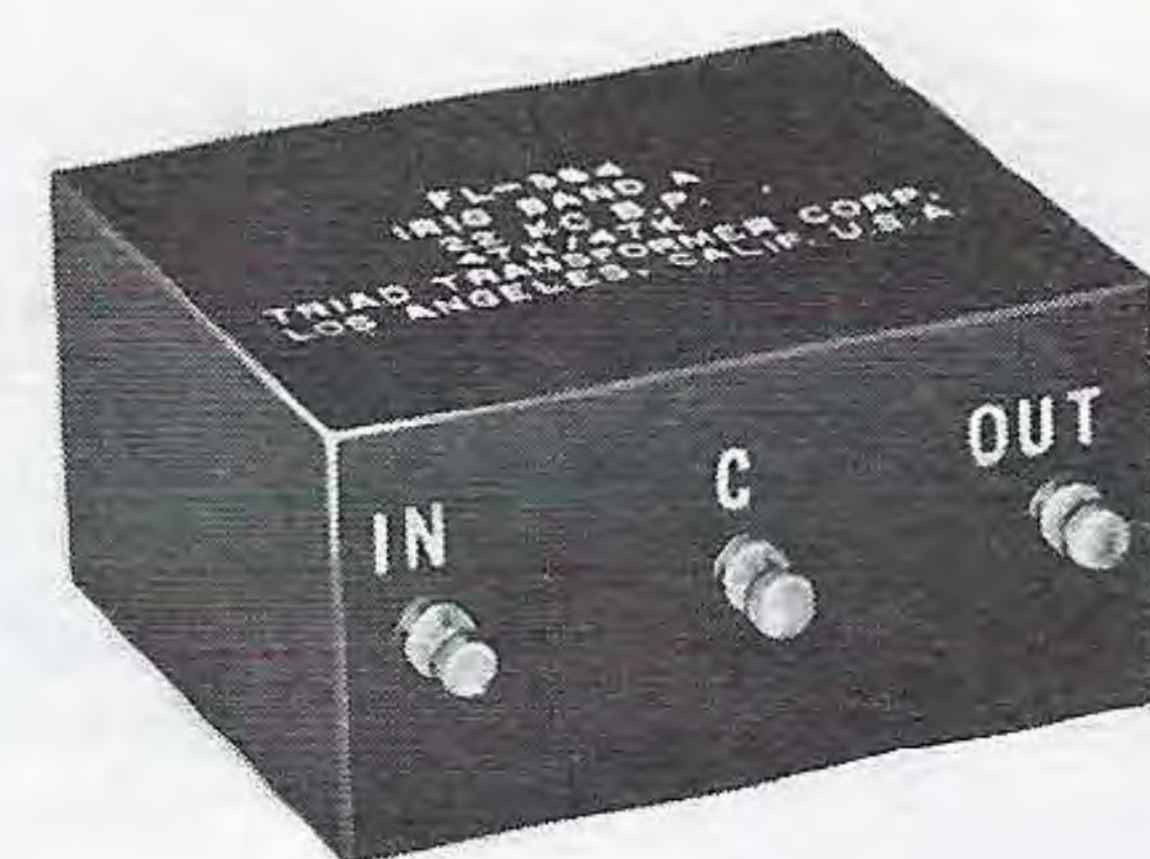
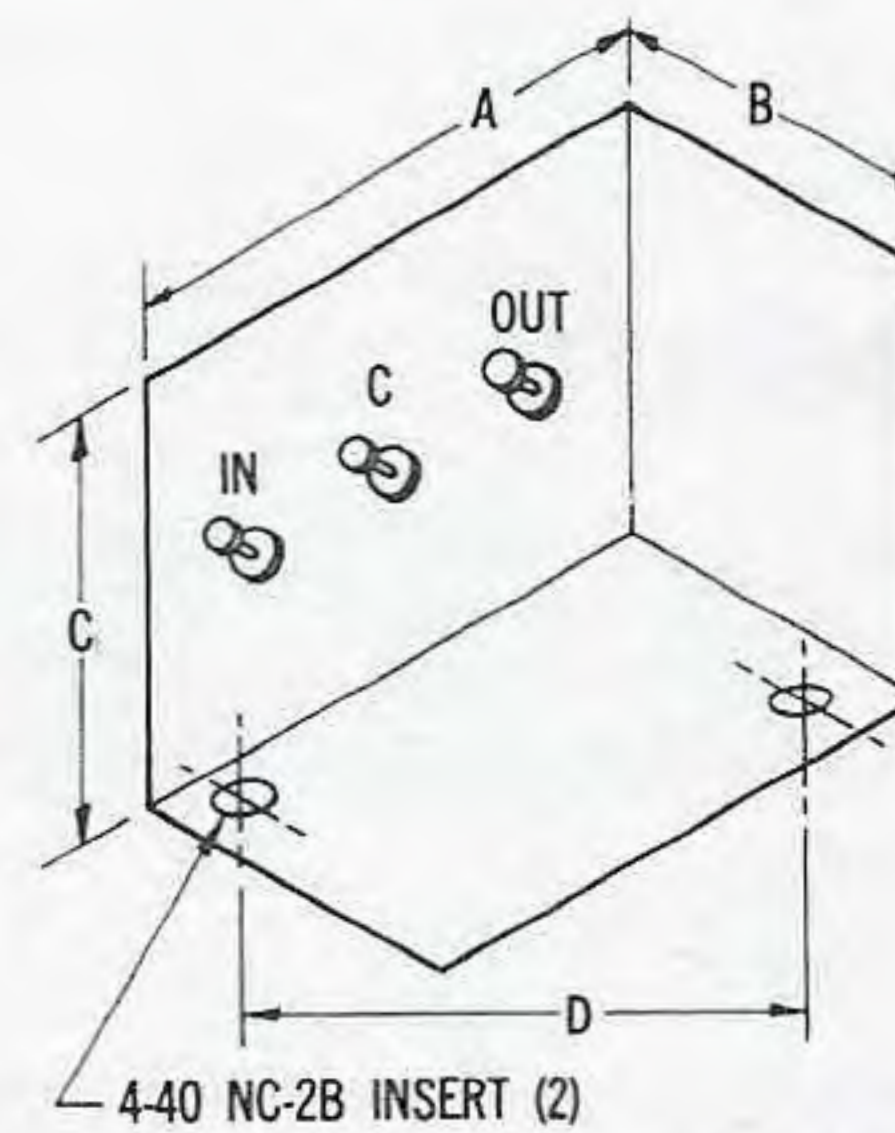
LOW LEVEL AUDIO OUTPUT / mixing, matching & bridging

Type No.	Mil. Type Number	Power Output	Application	Matching Impedance		DC Resistance		Overall Turns Ratio	Frequency Response ± 3 DB	RMS Test Voltage	Magnetic Shielding	F. Dim. Inch	Case	Max. Unit Wt. Lbs.
				Primary	Secondary	Pri-ary	Sec-ondary							
HS-50	TF1QX16YY	400MW.	Sgl. Plate to Line	15,000	600 Ω /250 Ω /150/62.5	1020	52.6	5:1	20-20,000	500	70 DB P-3	$\frac{7}{8}$	GP-4	.75
HS-60	TF1QX16YY	20MW.	Sgl. Plate to Line	15,000	600 Ω /250 Ω /150/62.5	900	45	5:1	20-20,000	500	45 DB P-1	$\frac{23}{32}$	GP-2	.4
HS-61	TF1QX13YY	200MW.	Sgl. Plate to Line	15,000 (5 MA. D.C.)	600 Ω /250 Ω /150/62.5	2200	80	5:1	40-15,000	1000	45 DB P-1	$\frac{7}{8}$	GP-5	1.25
HS-52	TF1QX13YY	400MW.	P.P. Plates to Line	20,000 CT Ω /5000	600 Ω /250 Ω /150/62.5	815	30	5.6:1	20-20,000	1000	45 DB P-1	$\frac{7}{8}$	GP-4	.85
HS-54	TF1QX13YY	10MW.	Bridging or P.P. Plates to Line	20,000 CT Ω /5000	600 Ω /250 Ω /150/62.5	1300	50	5.78:1	20-20,000	500	90 DB P-5	$\frac{7}{8}$	GP-4	.75
HS-56V‡	TF1VX16YY	100MW.	Line to Line	600 Ω /250 Ω /150/62.5	600 Ω /250 Ω /150/62.5	60	60	1:1	10-30,000	500	70 DB P-3	$\frac{7}{8}$	GP-4	.75
HS-66‡	TF1QX16YY	100MW.	Line to Line	600 Ω /250 Ω /150/62.5	600 Ω /250 Ω /150/62.5	60	60	1:1	10-30,000	500	45 DB P-1	$\frac{7}{8}$	GP-3	.6
HS-58‡	TF1QX16YY	50MW.	Line to Line Balanced resistance and Capacitance	600 Ω /250 Ω /150/62.5	600 Ω /250 Ω /150/62.5	31.3	37.3	1:1	20-20,000	500	115 DB P-3H	$\frac{7}{8}$	GP-5	1.25

CT for Center Tap. § Balanced two windings. §§ Balanced parallel windings. ■■ See case chart, page 19. ‡ Static shield. \$\$\$ Split Winding.
 ▲ Discontinued item, available until stock depleted.



FL-404 through FL-421



FL-384 through FL-388

SUBMINIATURE TELEMETERING FILTERS

All units are epoxy molded and manufactured to MIL-F-18327B. Straight pin terminals of 22-gauge nickel alloy are spaced in multiples of 1/10 inch for standard printed circuit use.

low pass/IRIG channels 1 through 11

Source and load impedance, 10,000 ohms. Insertion loss at reference frequency (f_0) is less than 2.5 db. Attenuation at cut-off frequency ($1.075 f_0$) is less than 1 db. At frequencies above $1.85 f_0$ the attenuation is over 45 db.

Type No.	IRIG Channel	Center Frequency	Maximum Dimensions		
			A	B	C
FL-404	1	400 cps	0.947	0.75	0.760
FL-405	2	560 cps	0.947	0.75	0.760
FL-406	3	730 cps	0.947	0.75	0.760
FL-407	4	960 cps	0.947	0.75	0.760
FL-408	5	1300 cps	0.947	0.75	0.760
FL-409	6	1700 cps	0.947	0.75	0.760
FL-410	7	2300 cps	0.947	0.75	0.760
FL-411	8	3000 cps	0.947	0.75	0.760
FL-412	9	3900 cps	0.947	0.75	0.760
FL-413	10	5400 cps	0.947	0.75	0.760
FL-414	11	7350 cps	0.947	0.75	0.760

band pass/IRIG channels 11 through 18

Source and load impedance, 10,000 ohms. Insertion loss at center frequency (f_0) is less than 2.5 db. The total amplitude variation in the pass band ($f_0 \pm 7.5\%$) is less than 0.5 db. At $1.85 f_0$ and $0.54 f_0$ the attenuation is more than 30 db. At frequencies above $2.78 f_0$ and at frequencies below $0.36 f_0$ the attenuation is more than 45 db.

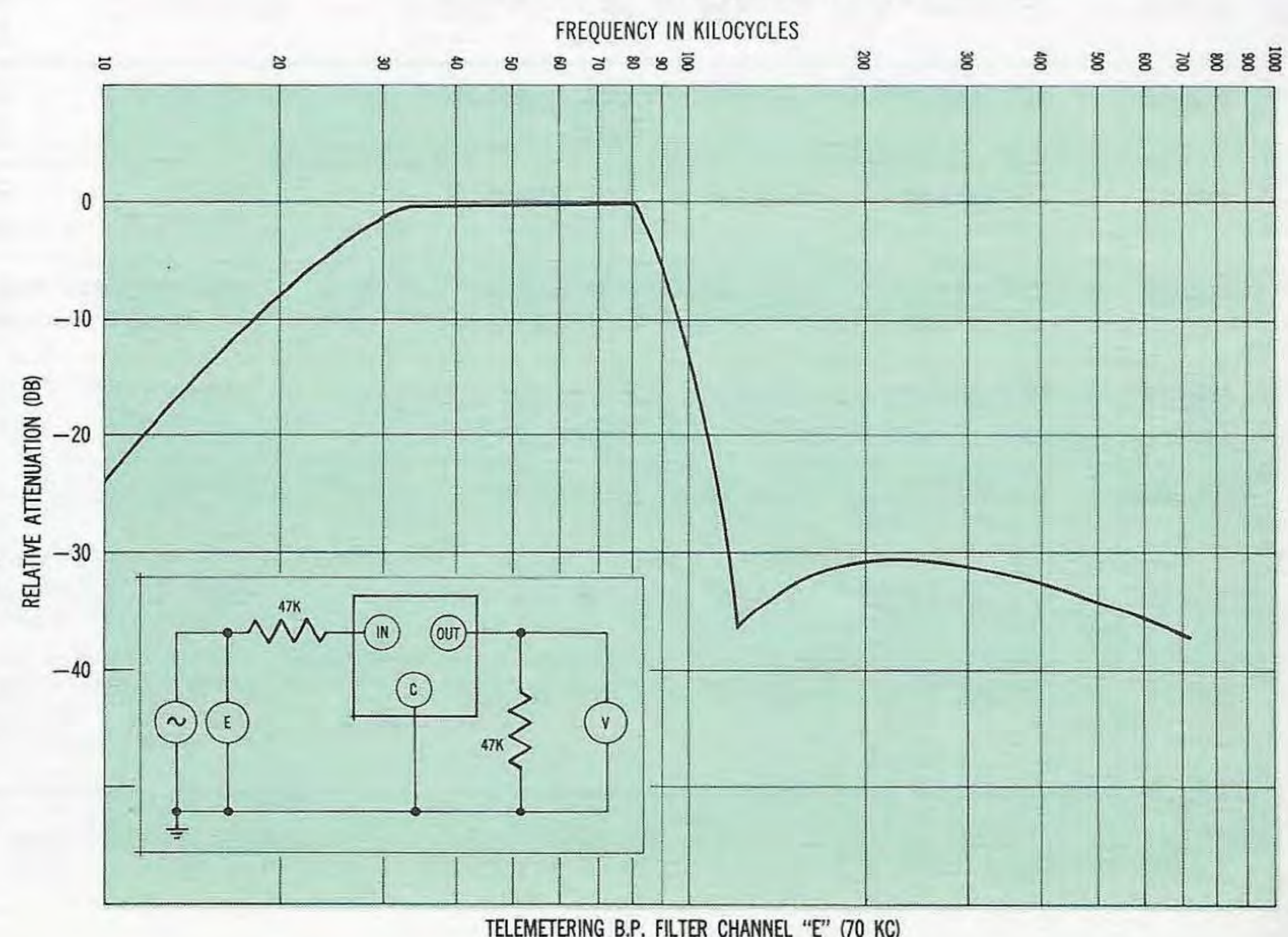
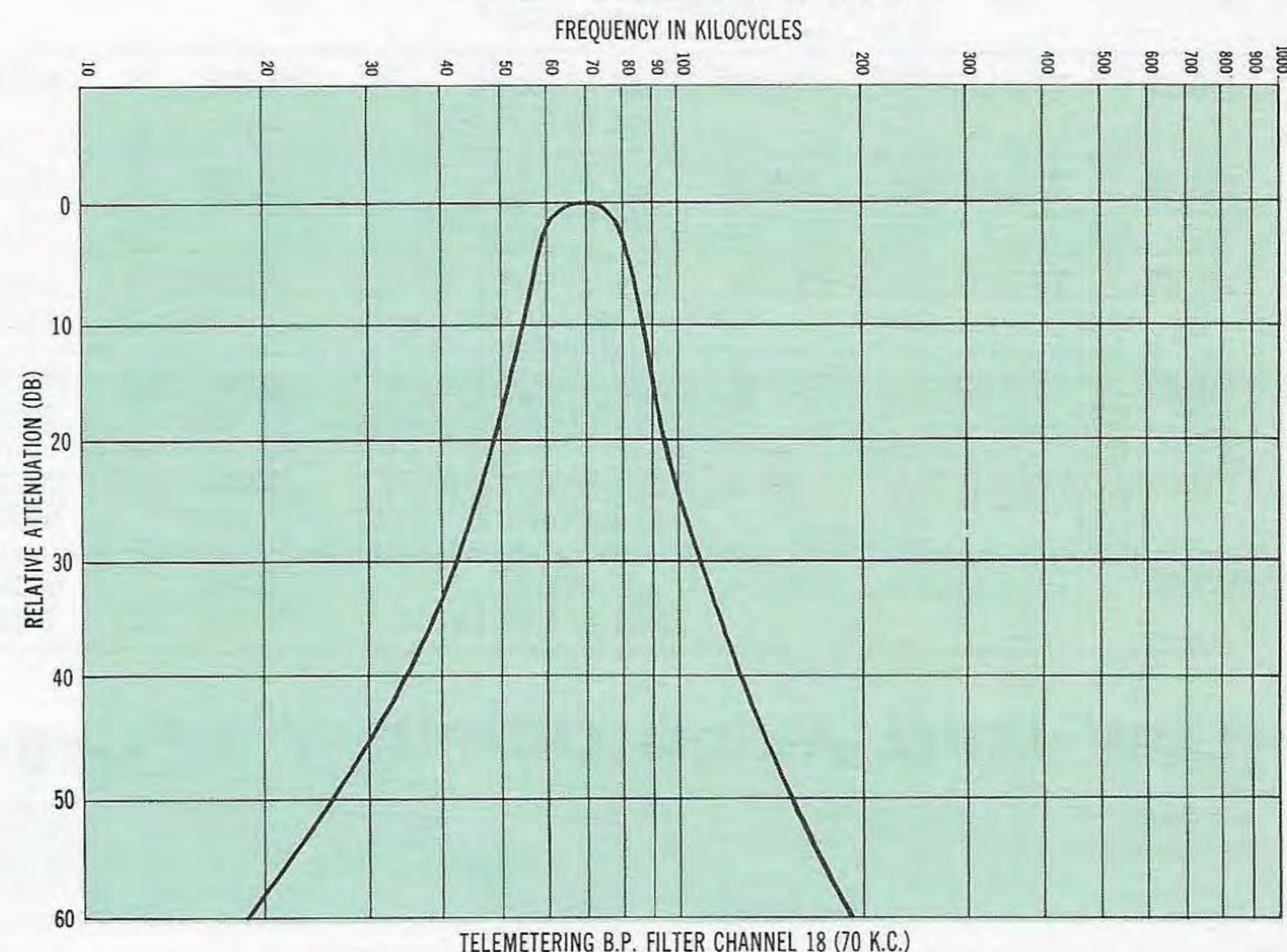
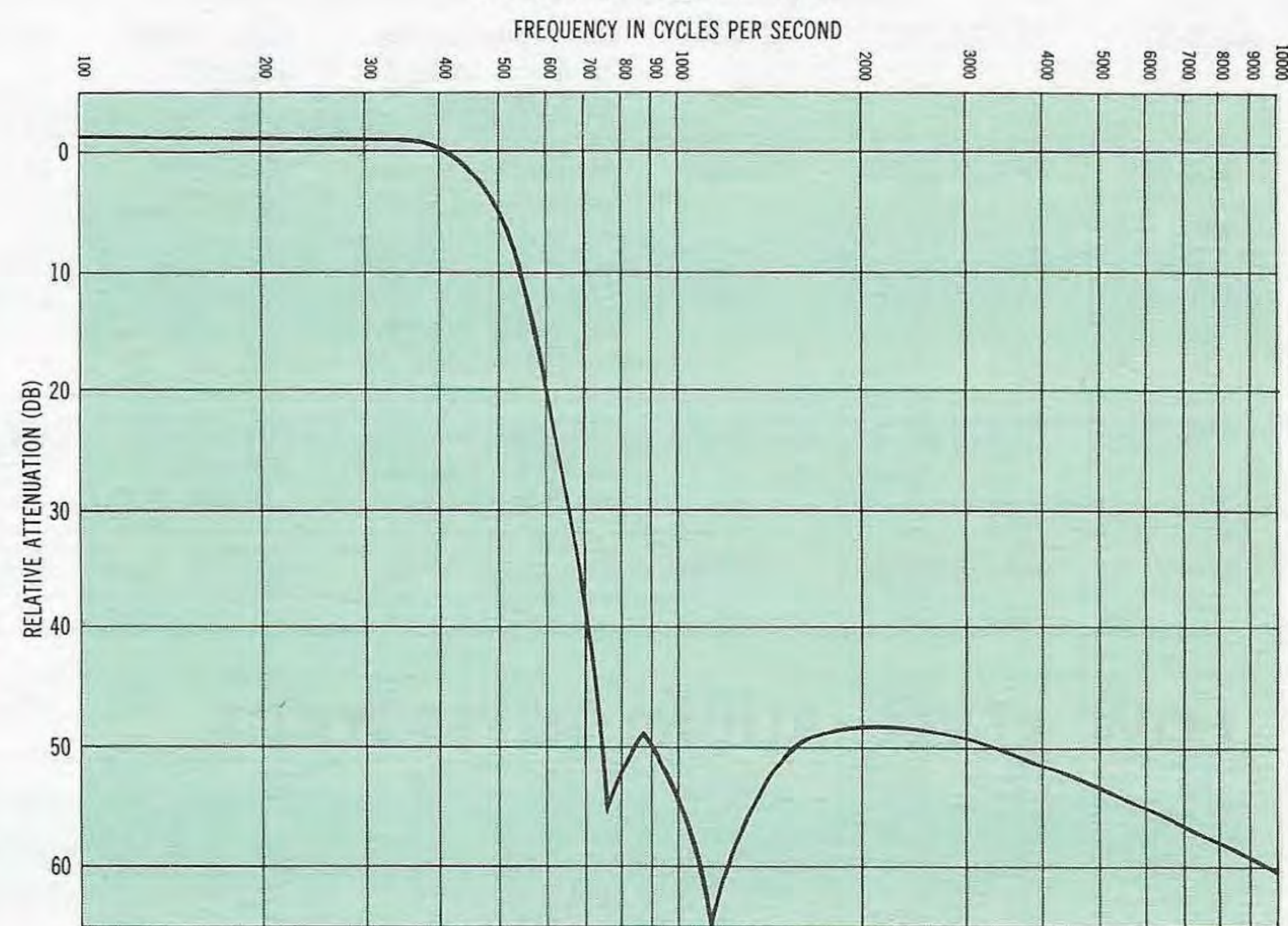
Type No.	IRIG Channel	Center Frequency	Maximum Dimensions		
			A	B	C
FL-415	12	10.5 KC	0.947	0.480	0.760
FL-416	13	14.5 KC	0.947	0.480	0.760
FL-417	14	22 KC	0.947	0.480	0.760
FL-418	15	30 KC	0.947	0.480	0.760
FL-419	16	40 KC	0.947	0.480	0.760
FL-420	17	52.5 KC	0.947	0.480	0.760
FL-421	18	70 KC	0.947	0.480	0.760

MINIATURE BAND PASS FILTERS

IRIG channels A through E

All filters are epoxy molded and manufactured to MIL-F-18327B. Source and load impedance, 47 K Ω . Insertion loss at center frequency (f_0) is less than 3 db. Attenuation in pass band ($f_0 \pm 15\%$) is less than 1 db. At frequencies below $0.15 \times f_0$ the attenuation is over 20 db. At frequencies above $2 \times f_0$ the attenuation is over 30 db.

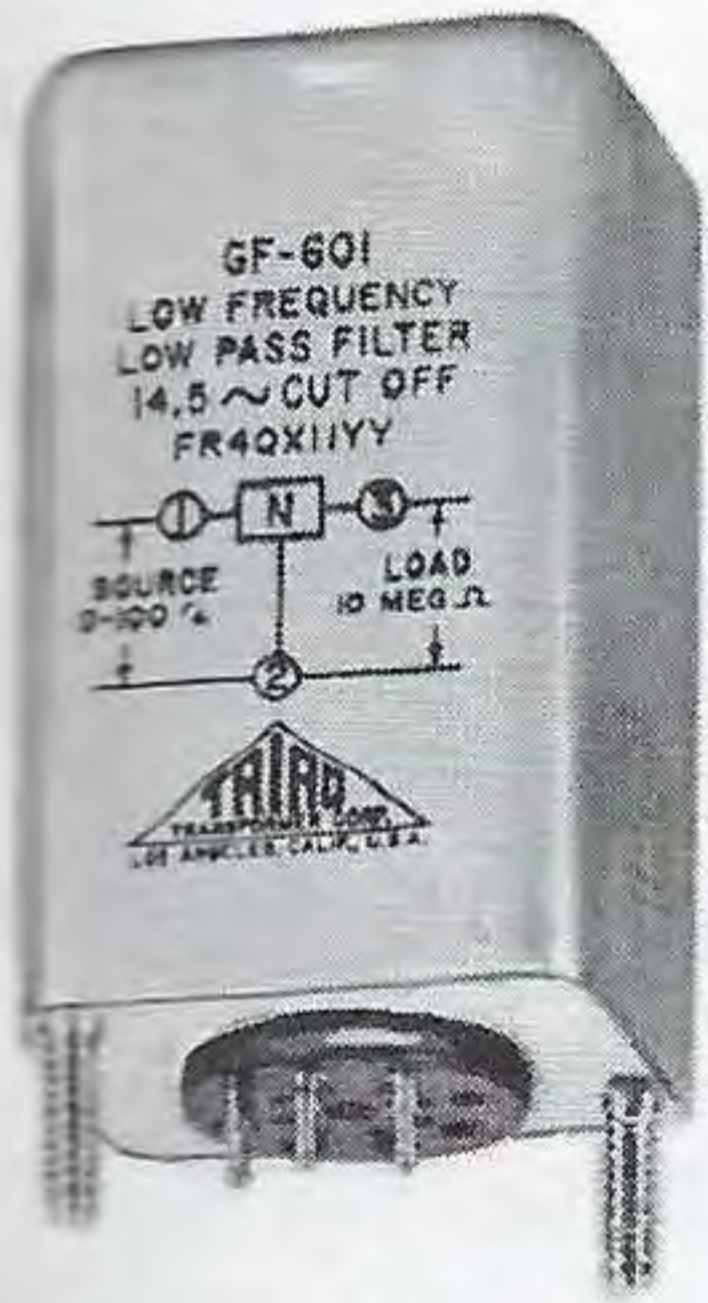
Type No.	IRIG Channel	Center Frequency	Maximum Dimensions			
			A	B	C	D
FL-384	A	22 KC	1.562	1.375	.75	1.375
FL-385	B	30 KC	1.562	1.375	.75	1.375
FL-386	C	40 KC	1.562	1.375	.75	1.375
FL-387	D	52.5 KC	1.562	1.375	.75	1.375
FL-388	E	70 KC	1.562	1.375	.75	1.375



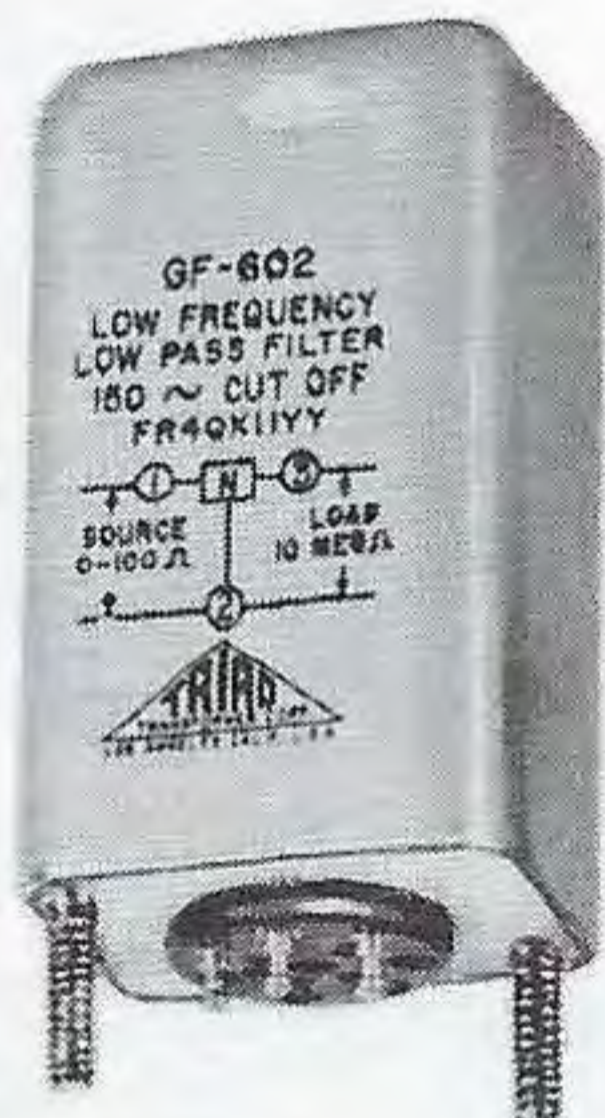
ELECTRIC WAVE FILTERS



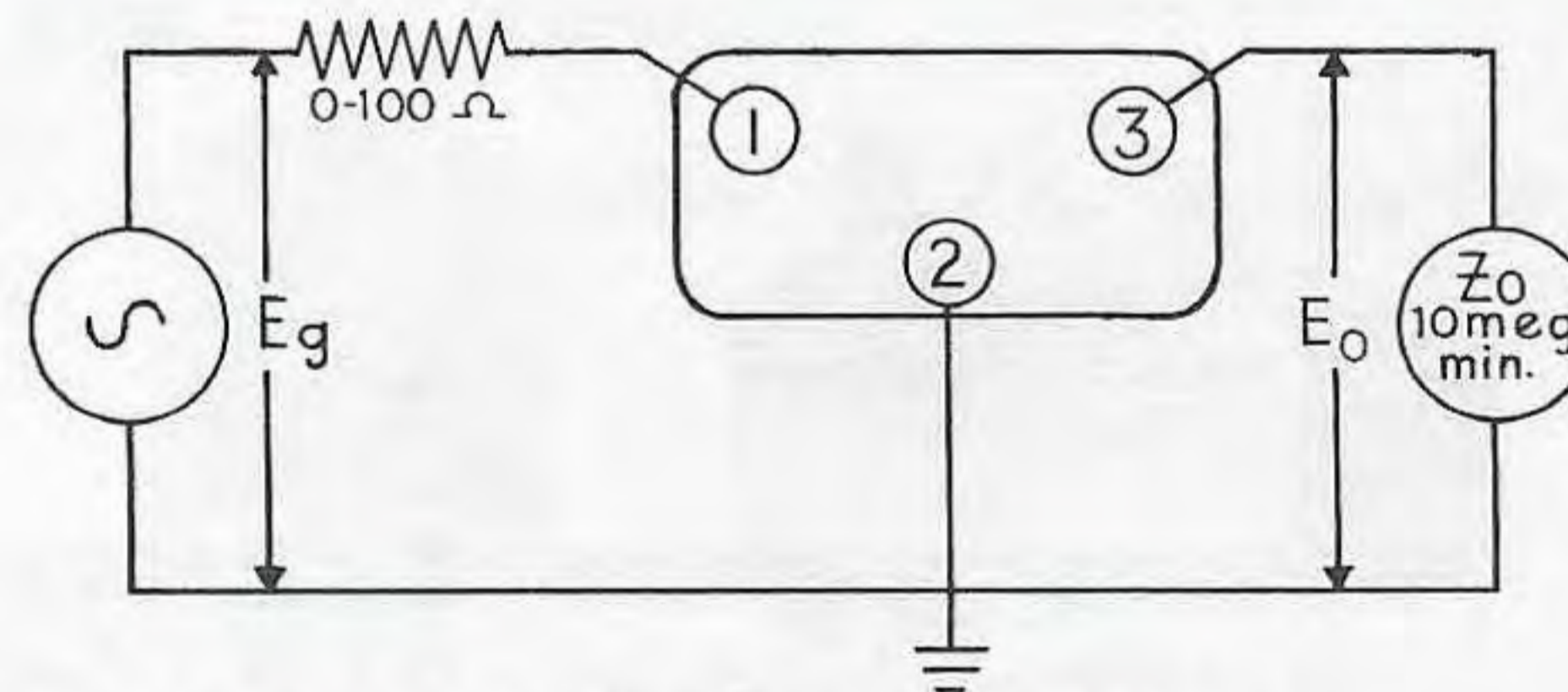
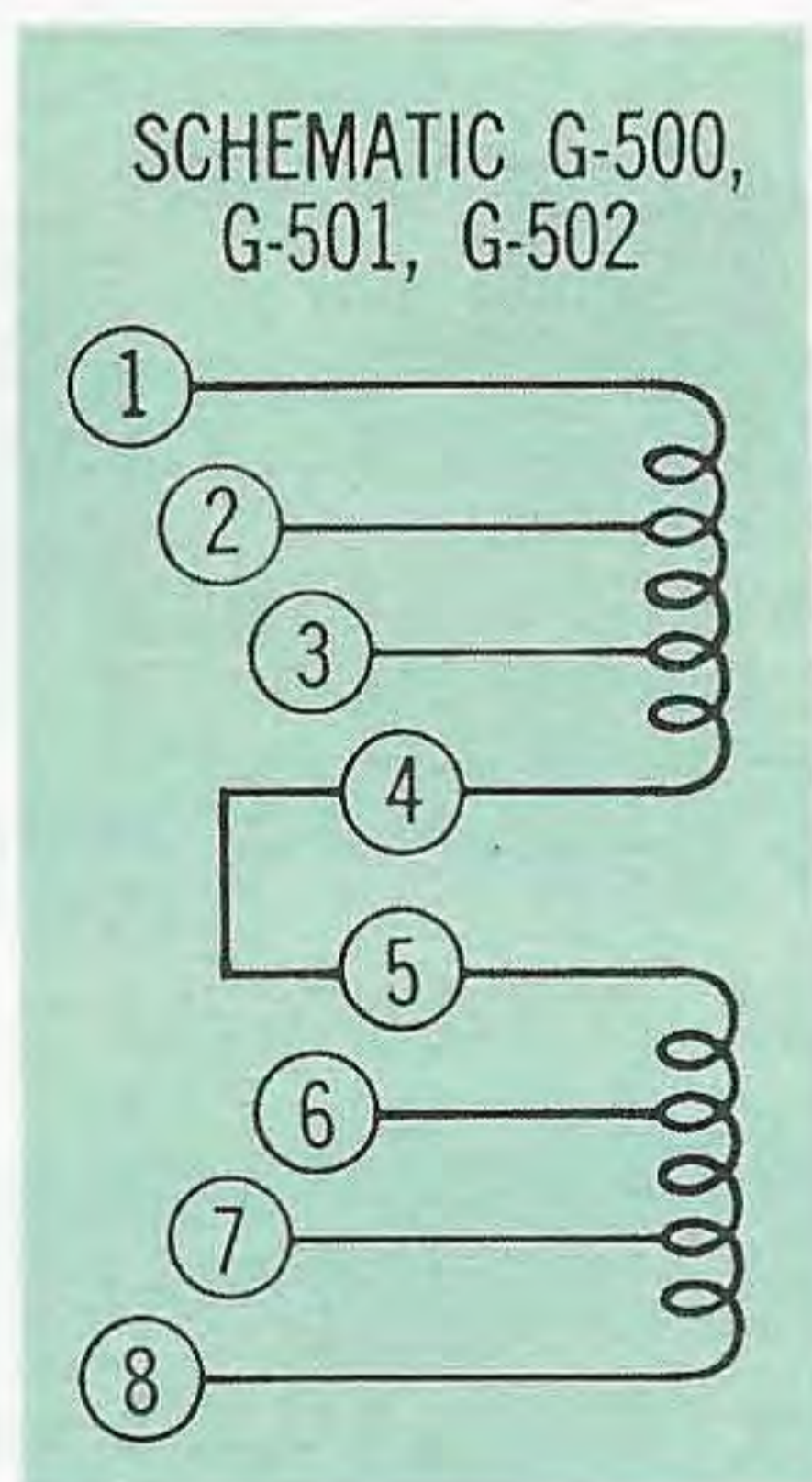
**MILITARY
GRADE**



GF-601



GF-602



LOW PASS FILTER TESTS

Triad GF-series low pass filters are tested in the circuit shown above. E_g is held constant. E_o obtained at reference frequency is used as zero db. Specific requirements are as follows:

- GF-600:** (1) Maintain 0 db. at reference frequency of 1.5 cps.
(2) —3 db. at 7.5 cps. or greater.
(3) —18 db. at 19 cps. or less.
(4) —36 db. at 38 cps. or less.
- GF-601:** (1) Maintain 0 db. at reference frequency of 3 cps.
(2) —3 db. at 14.5 cps. or greater.
(3) —25 db. at 29 cps. or less.
(4) —50 db. at 58 cps. or less.
- GF-602:** (1) Maintain 0 db. at reference frequency of 10 cps.
(2) —3 db. at 150 cps. or greater.
(3) —18 db. at 310 cps. or less.
(4) —36 db. at 620 cps. or less.

LOW FREQUENCY LOW PASS FILTERS

GF-600 Series low pass filters are high-accuracy filters covering the frequency range from 7.5 CPS to 150 CPS.

This series features: Reduced size, low insertion loss and excellent temperature stability over wide temperature range.

Type No.	Input Impedance in Ohms	Output Impedance in Ohms	F_c (CPS) (≤ 3 db)	Attenuation		Max. Input Level	Stray Fields Shield	Case and Mounting	Weight
				0.5 (f_c)	Per Octave				
GF-600	0 TO 100 Ω	10 MEG. OHMS	7.5 CPS	≤ 0.5 db	≥ 16 db	3.5 V	P1-H	GP-2L*	5 1/4 OZ.
GF-601	0 TO 100 Ω	10 MEG. OHMS	14.5 CPS	≤ 0.5 db	≥ 25 db	3.5 V	P1-H	GP-2L*	5 1/4 OZ.
GF-602	0 TO 100 Ω	10 MEG. OHMS	150 CPS	≤ 0.5 db	≥ 16 db	3.5 V	P1-H	GP-1G*	3.4 OZ.

* See pages 35 and 36 for dimensions.

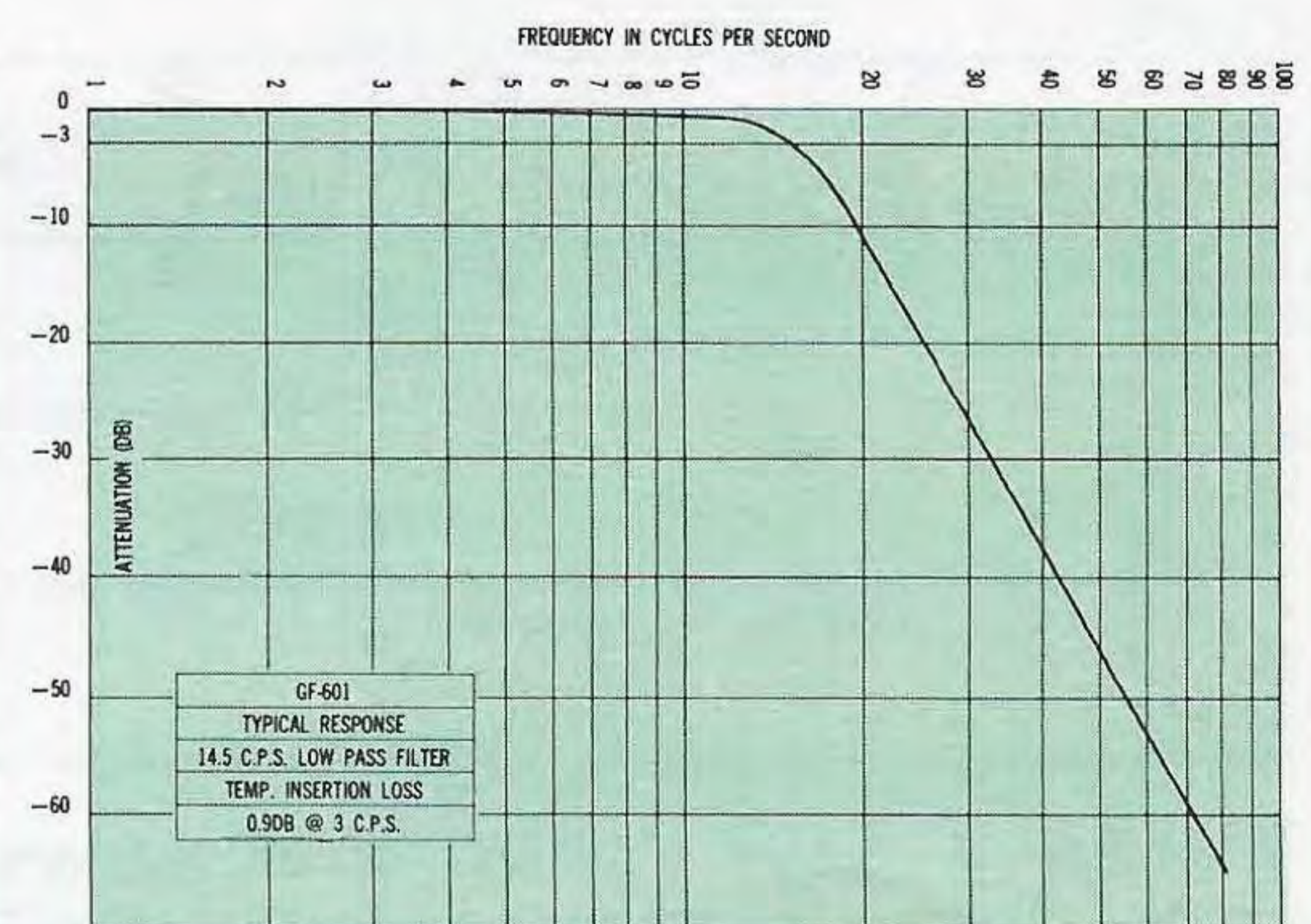
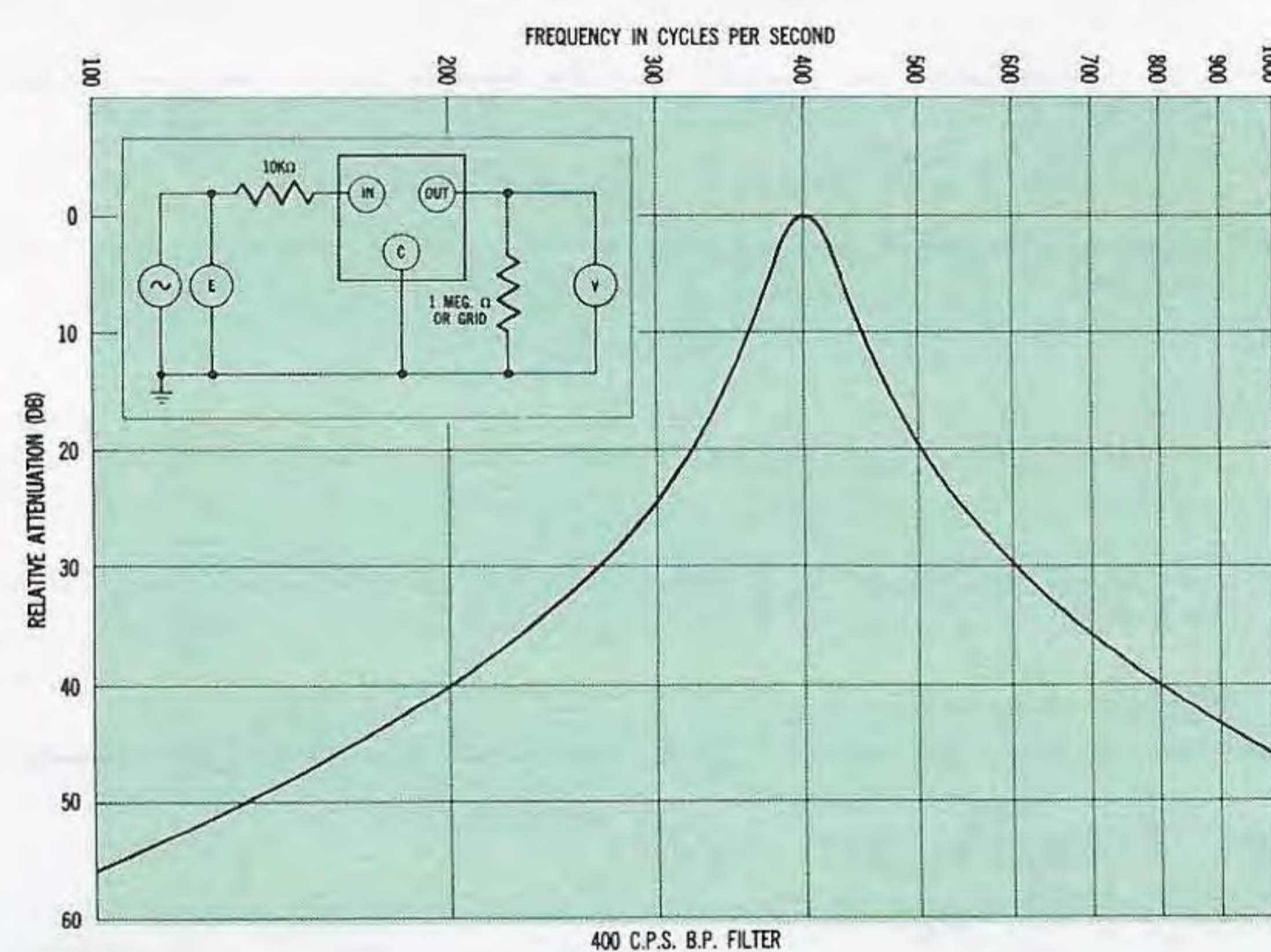


400 CPS BAND PASS FILTER

Cat. No. FL-381

Source impedance, 10K ohms; load impedance, 1M ohms; 400 cps voltage gain, 2:1.

Filter is hermetically sealed in a Mumetal case (45 db magnetic shielding). Dimensions, 1 1/16 x 1 3/4 x 1 5/8 high. Mounting centers, 3/4 x 1 1/4. Typical frequency response shown at right.

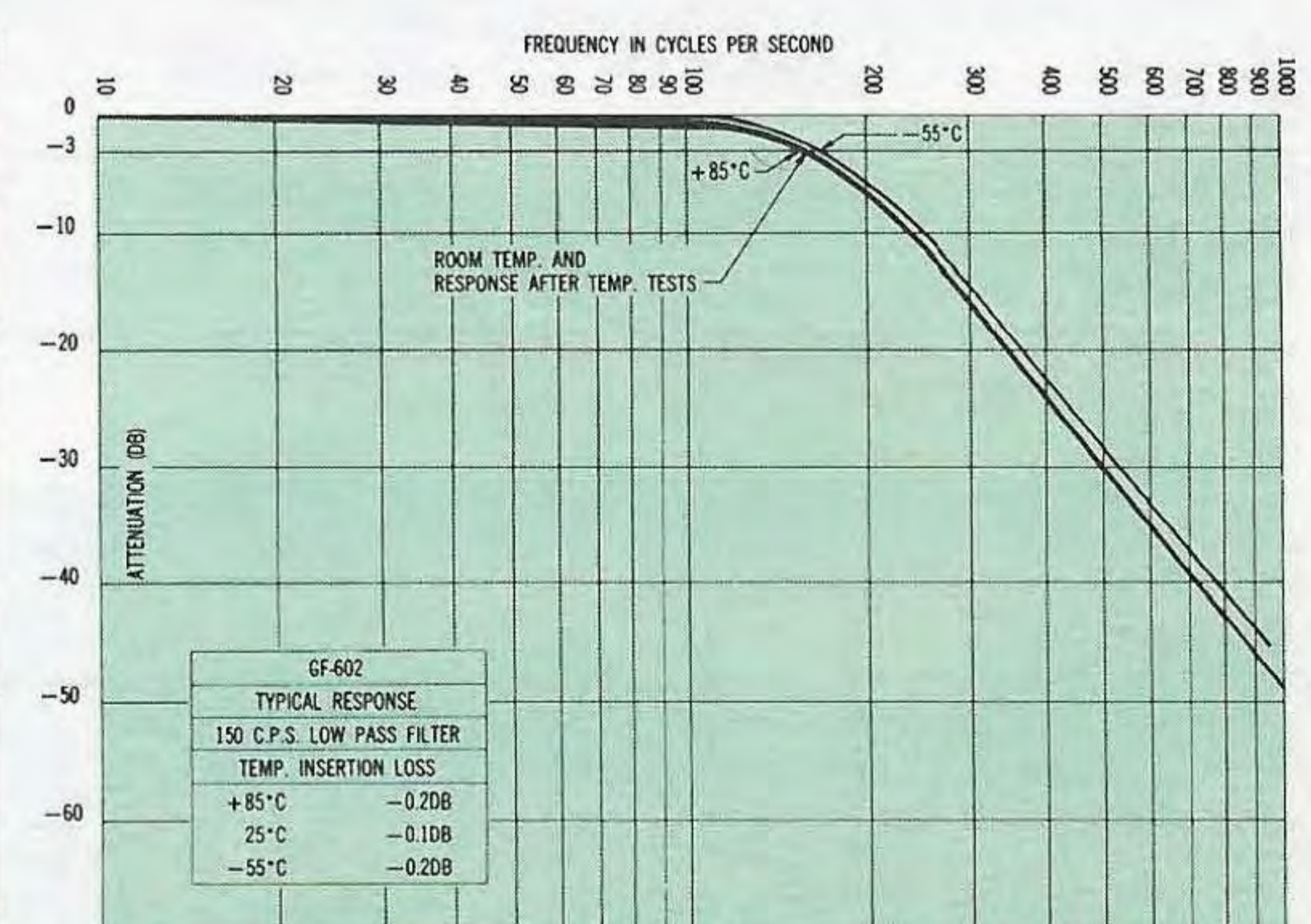
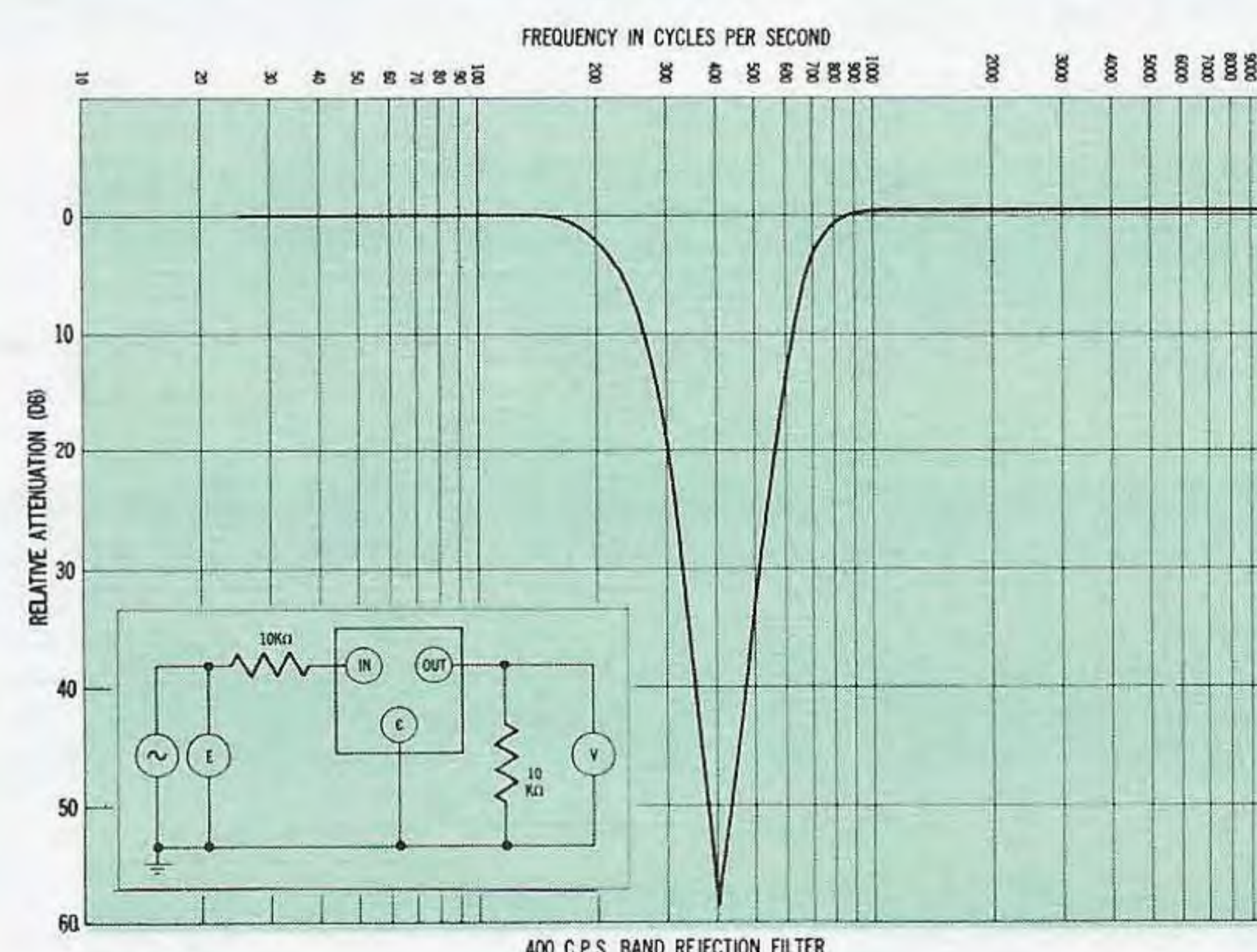


400 CPS BAND REJECT FILTER

Cat. No. FL-389

Source and load impedance is 10K Ω .

Filter is hermetically sealed in a MIL-T-27B EA case. See page 19 for dimensions. Typical frequency response shown at right.





PL-4, PL-5



PL-20, PL-21



PL-6



PL-80P



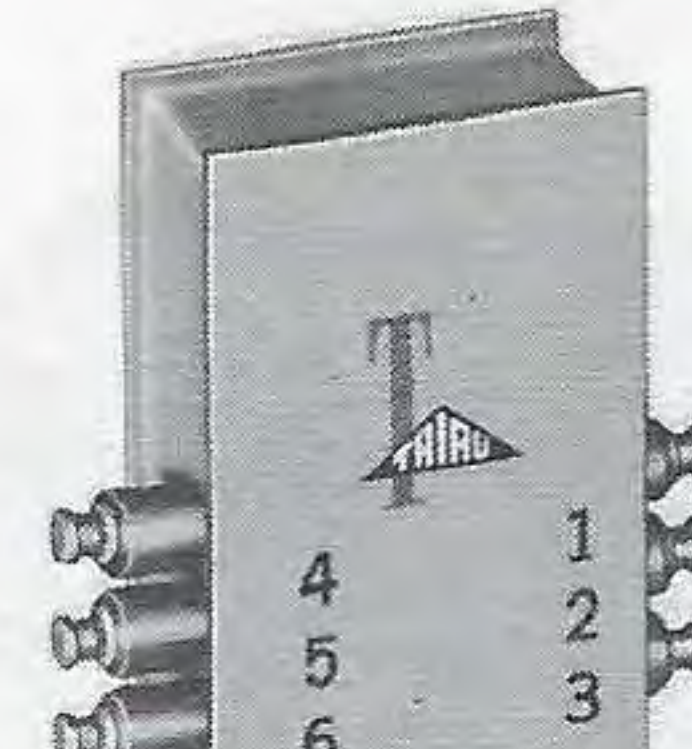
PL-80H



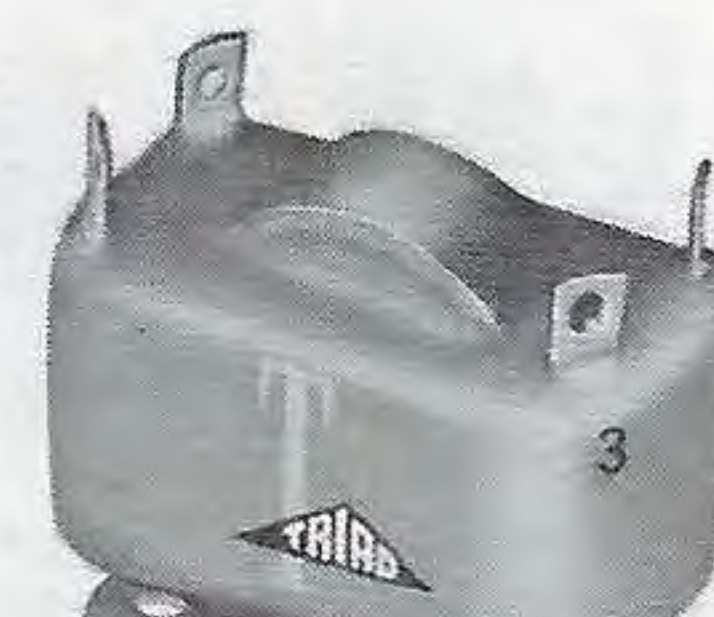
PL-30 through
PL-34



PL-10
Trigger Coil



PL-139H



PL-139E

TRIGGER—PHOTOFLASH transformers

Type No.	Application	Turns Ratio	Primary Inductance	Leakage Inductance	D.C. Resistance Primary	D.C. Resistance Secondary	Output Volts or Volt-μ Sec Rating	Dimensions Dia.	Length	Ht.	Weight Oz.
PL-10	PHOTOFLASH	1:30	2 μH	1 μH	.2	115	6-8KV	1/2	3/4		1/2
PL-11	PHOTOFLASH	1:30	15 μH	1.5 μH	.2	115	10-12KV	1/2	3/4		1/2
PL-20	SCR TRIGGER	1:1	200 μH	8 μH	1.5	1.5	2000 VμSec	5/8	3/4		1
PL-21	SCR TRIGGER	1:1:1	200 μH	8 μH	1.5	1.5	2000 VμSec	5/8	3/4		1
PL-30	SCR TRIGGER	1:1:1	7.5 μH	90 μH	2.5	2.5	130 VμSec	.562	.562	.450	1/2
PL-31	SCR TRIGGER	1:1	7.5 μH	90 μH	2.5	2.5	130 VμSec	.562	.562	.450	1/2
PL-32	SCR TRIGGER	2:1	7.5 μH	100 μH	2.5	1.8	130 VμSec	.562	.562	.450	1/2
PL-33	SCR TRIGGER	2:1:1	7.5 μH	100 μH	2.5	1.2	130 VμSec	.562	.562	.450	1/2
PL-34	SCR TRIGGER	5:1	7.5 μH	115 μH	2.5	1.3	130 VμSec	.562	.562	.450	1/2

VR-30Z For photoflash applications from 115V-60 cycle line or 4 volt-180 cy. vibrator to 350V RMS @ 14 ma.

H 2 11/16 W 3 1/8 D 2 1/8 MW 2 13/16 1 1/2 lbs.

PULSE / blocking oscillator type

Type No.	Pulse Voltage per Winding	Pulse Duration—μ Sec.	Maximum Duty Ratio	Load Impedance—Ohms	Case Dimensions H	D
PL-4	100-100	.54 to .66	.01	500	5/8	1 3/32
PL-5	100-100-100	.36 to .54	.01	2000	1 1/16	1 1/2
PL-6	100-100-100	.36 to .54	.01	2000	3/4	1 1/16

PULSE / high speed low power / ferrite toroidal core

Type No.	Turns Ratio	Pulse Width μ Sec.	Rise Time μ Sec.	Repetition Rate	Suggested Load Ohms	Output Volts	Primary Inductance	Leakage Inductance	Utrad or Utah Equivalent	Figure
PL-80H	1-1	.07	.03	1-2 Mc	200	15	125 μH	12 μH	X80H	10
PL-80E									X80E	13
▲ PL-81H	2-1	.07	.03	1-2 Mc	200	20	65 μH	15 μH	X81H	10
▲ PL-81P									X81P	9
▲ PL-81E									X81E	13
▲ PL-82H	3-1	.08	.03	1-2 Mc	100	15	160 μH	15 μH	X82H	10
▲ PL-82P									X82P	9
▲ PL-82E									X82E	13
PL-83H	4-1	.08	.03	1-2 Mc	100	15	180 μH	20 μH	X83H	10
PL-83P									X83P	9
▲ PL-83E									X83E	13
PL-84H	5-1	.08	.03	1-2 Mc	100	15	200 μH	2 μH	X84H	10
▲ PL-84P									X84P	9
PL-84E									X84E	13

PULSE / low speed low power / silicon core

Type No.	Mil. Type	Pulse Voltage per Winding	Pulse Duration—μ Sec.	Maximum Duty Ratio	Load Impedance—Ohms	DC Resistance			Utrad or Utah Equivalent	Figure No. or Case
▲ PL-124E	TF1QX36YY	300-300-300	.6 to 5	.002	150	1	2	3	X-124F	Fig. 4
PL-124H									X-124H-2	Fig. 5
▲ PL-140E	TF1QX36YY	100-400-100	.6 to 5	.002	175	2.05	9.2	2.5	X-140F	Fig. 4
PL-140H									X-140H-2	Fig. 5
PL-140M									X-140H-6	AG ■■
PL-139E	TF1QX36YY	100-100	.3 to 1.5	.002	250	2.05	2.3		X-139F	Fig. 4
PL-139H									X-139H-2	Fig. 5
PL-139M									X-139H-6	AF ■■
PL-146E	TF1QX36YY	300-300	.6 to 5	.002	250	4.1	4.6		X-146F	Fig. 4
PL-146H									X-146H-2	Fig. 5
PL-146M									X-146H-6	AG ■■

▲ Discontinued item, available until stock depleted. ■■ See case chart, page 48. ➡ New item.

(7) PINS .040 DIA. PINS TO MATE WITH A 7 PIN MINIATURE TUBE SOCKET

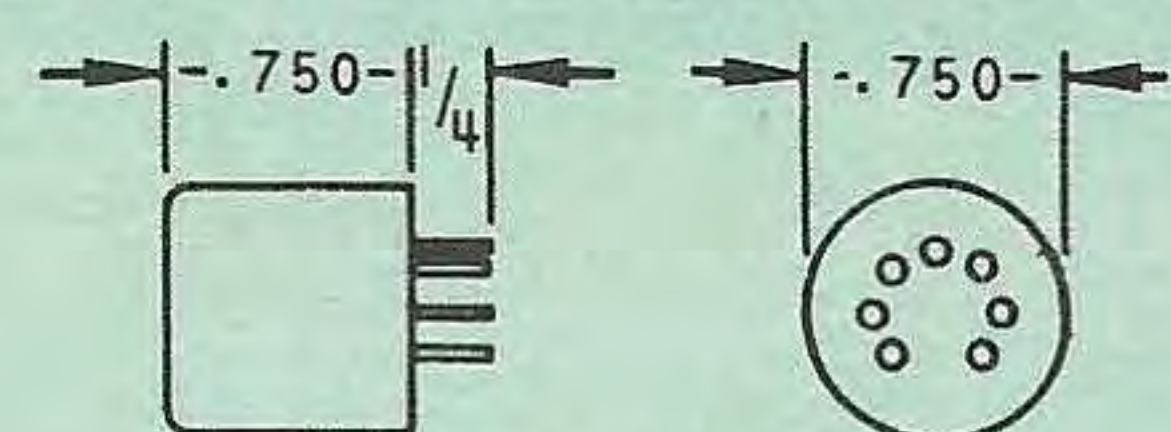


Figure 9

NO. 20 AWG (.032) TINNED SOLID LEADS

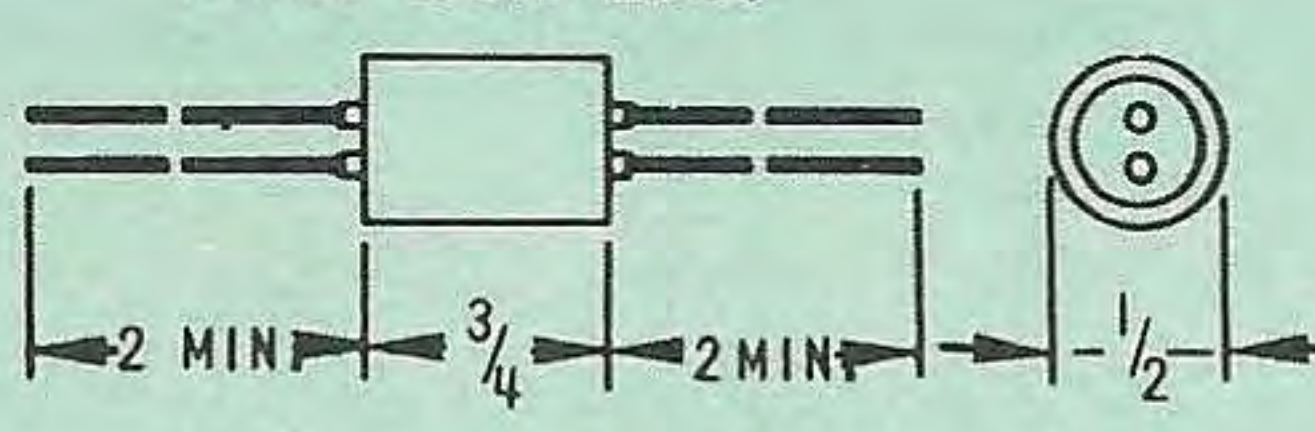


Figure 10

NO. 22 AWG (.026) TINNED SOLID LEADS



Figure 13

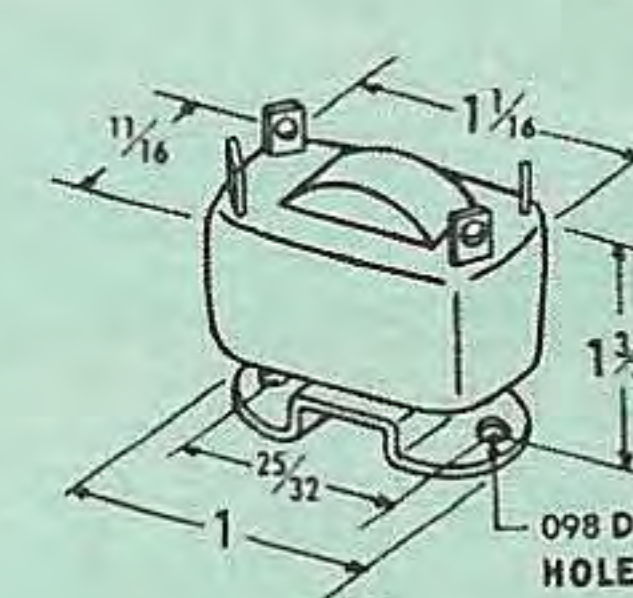


Figure 4

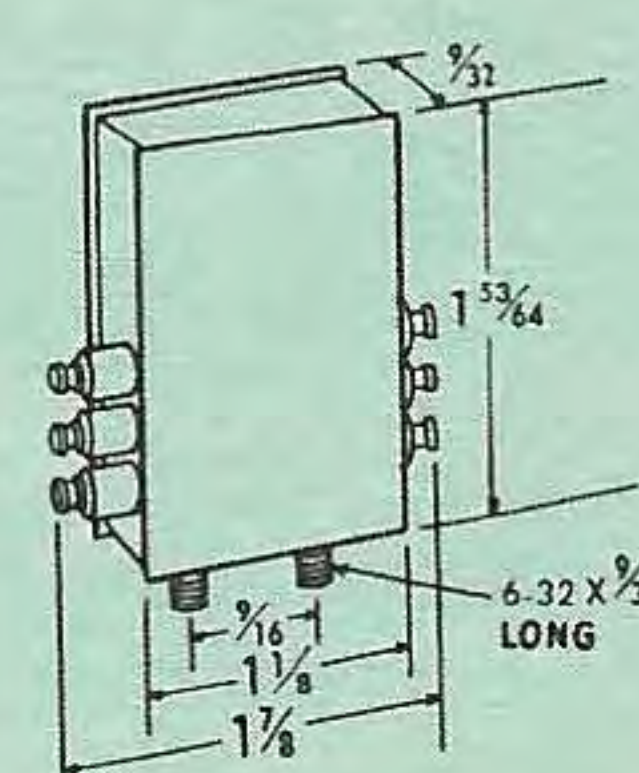


Figure 5

SALES REPRESENTATIVES



WORLD-WIDE DISTRIBUTION

(1) Triad-Utrad Distributor (2) Triad-Utrad OEM (3) Warehouse

ARIZONA, Phoenix 85006

(1) (2) Shefler-Kahn Co. Inc.
2017 N. 7th St., P.O. Box 1587
(602) 258-7893

ARKANSAS, El Dorado 71730

(1) (2) Dick Bellew Sales Co. Inc.
P.O. Box 1825
(501) 863-8325

CALIFORNIA, Venice 90291

(1) (2) (3) Triad-Utrad
4055 Redwood Ave.
(213) 390-3571

CALIFORNIA, No. Hollywood 91603

(1) Replacement line only
Jack Carter Associates
11200 Chandler Blvd.
(213) 980-3450

CALIFORNIA, Redwood City 94063

(1) Logan Sales Co.
463 Brewster Avenue
(415) 369-6726

CALIFORNIA, Mountain View 94040

(2) Quad Rep., Inc.
943 Stierlin Road
(408) 964-3532

COLORADO, Denver 80222

(1) (2) McCloud & Raymond Co.
2151 South Grape Street
(303) 756-1589

FLORIDA, Clearwater 33518

(2) Burgin-Kreh Florida, Inc.
P.O. Box 5146
(813) 531-8801

FLORIDA, Orlando 32804

(1) Murphy & Cota
712 West Vassar Avenue
(305) 424-2407

FLORIDA, Pompano Beach 33061

(2) Burgin-Kreh Florida, Inc.
P.O. Box 1799
(305) 942-0774

GEORGIA, Atlanta 30324

(1) Murphy & Cota
500 Plasamour Drive
(404) 875-2525

ILLINOIS, LaGrange Park 60525

(Cook County only)
(1) (2) Harry Bertsch
530 N. Waiola Ave.
(312) 354-8272

ILLINOIS, Northfield 60093

(1) (2) Such & Associates, Inc.
540 Frontage Road
(312) 446-8934

INDIANA, Fort Wayne 46802

(1) Burton F. Homsher Co.
418 E. Berry St.
(219) 432-1164

INDIANA, Huntington 46750

(2) Triad-Utrad
305 N. Briant St.
(219) 356-7100

IOWA, Des Moines 50310

(1) (2) Thomas L. Dowell, Inc.
4127-27th St.
(515) 255-6580

KANSAS, Overland Park 66204

(1) (2) Thomas L. Dowell, Inc.
7208 W. 80th St.
(913) 649-6069

LOUISIANA, Metairie 70002

(1) (2) Dick Bellew Sales Co. Inc.
3017-18th St., Apt. 3D
(504) 833-6496

MARYLAND, Towson 21204

(1) (2) Burgin-Kreh Associates, Inc.
1600 White Oak Ave.
(301) 661-1120

MASSACHUSETTS, Bedford 01730

(1) (2) Dan Greene Organization, Inc.
P.O. Box 290
(617) 275-6400

MICHIGAN, Detroit 48236

(1) (2) Jack M. Thorpe Co.
640 Hidden Lane
(313) 884-4360

MINNESOTA, Minneapolis 55405

(1) Clark R. Gibb Co.
1311 W. 25th St.
(612) 377-1200

MINNESOTA, St. Paul 55104

(2) Mesa Company
1821 University Ave.
(612) 645-8676

MISSISSIPPI, Meridian 39301

(2) Chas. R. Herron, Jr.
P.O. Box 3008
(601) 482-1878

MISSOURI, St. Louis 63128

(1) (2) Thos. L. Dowell, Inc.
4753 Titan Court
(314) 892-2859

N.J., Englewood Cliffs 07632

(2) Talcomp, Inc.
19 Sylvan Ave.
(201) 947-5038

NEW JERSEY, Moorestown 08057

(1) (2) L. Adezio Sales Co.
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(609) 665-6007

NEW MEXICO, Albuquerque 87108

(1) (2) Shefler-Kahn Co. Inc.
408 San Mateo Blvd., P.O. Box 8342
(505) 265-7077

NEW YORK, N. Syracuse 13212

(1) (2) Advanced Components
P.O. Box 248, S. Bay Rd.
(315) 699-2671

NEW YORK, Rockville Centre 11571

(1) Willgold Electronic Sales Corp.
100 N. Village Ave.,
(516) 764-4022

NORTH CAROLINA,

Burlington 27215

(1) E. P. Ester
1557 Granville St.
(919) 228-9670

OHIO, Cincinnati 45238

(1) (2) Frank E. Kahsar Sales
5229A Glenway Avenue
(513) 471-9011

OHIO, Hudson 44236

(1) (2) Frank Kahsar Sales
47 W. Case Drive
(216) 653-6808

PENNSYLVANIA, Pittsburgh 15235

(1) Trymac Co.
201 Penn Center Blvd.
(412) 823-8400

TEXAS, Dallas 75235

(2) Ammon & Champion Co.
3300 W. Mockingbird
(214) 357-8441

TEXAS, Richardson 75080

(1) (3) Branum Sales, Inc.
747 Sherman St.
(214) AD1-6148

WASHINGTON, Seattle 98119

(1) (2) Jas. J. Backer Co.
221 W. Galer St., P.O. Box 9327
(206) 285-1300

CANADA, Scarborough, Ont.

(1) (2) Lake Engineering Co. Ltd.
123 Manville Road
(416) 751-5980

CANADA, Vancouver 9, B. C.

(1) Electrotec Marketers, Ltd.
1624 W. Third Ave.
Regent 6-6377

EXPORT

(1) (2) Litton Precision Products
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