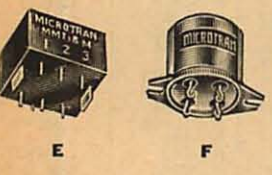
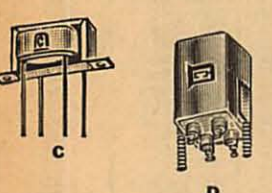
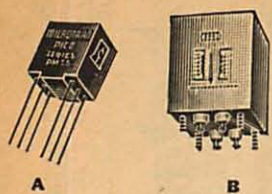


MICROTRAN[®] Miniaturized Transformers

PICO MINIATURE TRANSFORMERS—PM SERIES (FIG. A)

Epoxy molded finish with gold plated leads, 0.020" x 3/4". Frequency Response, ±2 db, 300 cps to 100 kc, except PM3 and PM5, to 45 kc. Power level given for 15% max. distortion, except PM35, 20% and PM37, 25%. Maximum size, .410" x .465" x .310". Weight, 0.1 oz. MIL type TF5RX—ZZ (Insert MIL No. from table).



Microtran No.†	Application	Impedance		Pri. DC DC Ma*	DC Resist., Ohms		Power Level, Mw	MIL No.	Net Each, 1-9*
		Primary	Secondary		Pri.	Sec.			
PM3-M	Input	200K CT	1K CT	0	5300	110	10	16	\$7.65
PM5-M	Input	200K	1K	0	5300	110	10	16	6.60
PM7-M	Interstage	50K CT	1K CT	0	3300	75	10	16	7.50
PM9-M	Interstage	50K	1K/250†	0	3300	75	10	16	8.10
PM11-M	Interstage	25K CT	1K CT	0.5	1700	110	40	12	7.05
PM13-M	Interstage	25K	1K/250†	0.25	1700	110	40	12	7.65
PM15-M	Interstage	25K	1K	0.25	1700	110	40	12	6.15
PM17-M	Isolation	10K CT	10K CT	1	1000	1300	50	12	7.65
PM19-M	Driver	10K CT	2K CT	1	1000	300	50	12	6.75
PM21-M	Driver	10K	2K/500†	0.5	1000	300	50	12	7.35
PM23-M	Driver	10K	1200 CT	1	1050	280	50	12	6.75
PM25-M	Driver	10K	1200/300†	0.5	1050	280	50	12	7.20
PM27-M	Driver	10K	1200	0.5	1050	280	50	12	6.00
PM29-M	Driver	10K CT	500 CT	1	1050	80	50	12	6.75
PM31-M	Isolation	2500	2500 CT	1	250	325	50	12	6.30
PM33-M	Output	1500 CT	600	3	170	95	50	12	6.15
PM35-M	Output	500	50	3	60	8	50	17	5.40
PM37-M	Output	120 CT	3.2	2	16	0.75	50	17	5.70
PM39-M	Audio Choke	6 hys.	.....	10	1800	.....	.....	20	5.40
PM41-M	Audio Choke	.3 hys.	.....	4	43	.....	.....	20	4.65

*Unbalanced. †Split.

DC TO DC CONVERTER TRANSFORMERS

SWITCHING TYPE

Provides improved reliability and efficiency over vibrator and rotary power converters. Approx. 800 cps repetition rate. Full wave and CT loads may be drawn simultaneously, but VA output should not be exceeded for continuous duty. Fig. B drawn MS072, Fig. C.

Microtran No.	In-put VDC	VA Out-put	Transistors Suggested	DC Output				Size, Inches W. x D. x H.	Mtg. Ctrs., In. M L M W	MIL Case	Net Each, 1-9*
				FW V.	Br. Ma	CT V.	CT Ma				
M8034	28	125	Delco 2N174	500	250	250	420	2 3/4 x 2 3/4 x 3 1/2	1 3/4	GA	\$26.70
M8035	13.6	125	Delco 2N442	500	250	250	420	2 3/4 x 2 3/4 x 3 1/2	1 3/4	GA	26.70
M8036	13.6	40	Delco 2N442	450	90	225	155	2 1/4 x 2 1/4 x 3 1/4	1 1/4	FA	24.90
M8072	2.7	190†	Delco 2N1307	480*	400†	.....	.....	1 1/2 x 1 1/2 x 1 1/2	1 3/4	ZZ	5.40

*Output when used with half wave cap. Input filter, 1µa. †Mw.

BLOCKING OSCILLATOR TYPE

Approx. 400 cps repetition rate. Fig. C, except M8051, Fig. D.

Microtran No.	Turns Ratio HV: Coll.: Feedback	Input		Output		Size, Inches W. x D. x H.	Mtg. Ctr., In.	Net Each, 1-9*
		DC V.	DC Ma	DC Volts	DC µa			
M8050	600:12:1	3	20	1000*	25	1 3/4 x 1 1/2 x 1 1/2	1 3/4	\$ 5.55
M8051	600:12:1	3	20	1000*	25	1 3/4 x 1 1/2 x 1 1/2	1 3/4	1.85
M8073	44:1:1	4	2-15†	425-500†	505	7/8 x 1 1/2 x 1 1/2	1 1/4	5.25
M8074	65.5:33:1	3	45	535*	90	1 3/4 x 1 1/2 x 1 1/2	1 3/4	5.10

*When used in blocking oscillator circuit with single cap. Input rectifier. †Varies with load and bias conditions. Frequency varies from 100 to 2800 cps. *Maximum.

MICRO-MINIATURE AUDIO AND TRANSISTOR TRANSFORMERS—MM AND MMT SERIES

MM-M (Fig. E): Molded, for plug-in printed circuit applications. Cast epoxy resin for high resistance to extremes of ambient temperature. MIL Type TF6RX—ZZ (Insert MIL No. from table). Size, 1/4" x 1 1/2" x 1 1/2" with 1/8" pins, .020" dia. Weight, 1/2 oz. MM-H (Fig. F): Hermetically sealed with high compression

glass terminals. Gray enamel finish. MIL Type TF4RX—YY. Size, 1 1/2" dia. x 1 1/2". Weight, 3/4 oz. MM-FB (Fig. C): Open frame with channel. Available with plug-in tab channel or without channel on special order. MIL Type TF6RX—ZZ. Size, 1 1/2" x 1 1/2" x 1 1/2", plus tabs.

Microtran No.†	Application	Impedance		Pri. Unbal. DC Ma	Oper. Level, dbm	Freq. Resp. ±2 db, cps	MIL No.	Net Each, Lots of 1-9*		
		Pri.	Sec.					-FB	-H	-M
MM1-	Input	200/50	250K/62.5K	0	4	200-10K	10	\$4.50	\$7.35	\$8.55
MM2-	Interstage 3:1	10K	90K	0	4	150-10K	10	4.80	7.50	8.70
MM3-	Plate to line	10K	200	3	20	150-10K	13	4.20	7.20	8.40
MM4-	Output	30K	50	1	20	150-10K	13	4.05	7.05	8.25
MM5-	Reactor 50 hys. at 1 mil DC	4.7K ohms	DC Res.	.....	.....	.....	20	4.05	6.90	8.10
MM6-	Output	100K	60	0.5	20	250-10K	13	4.20	7.20	8.40
MM7-	Output	30K	1200	0.5	20	200-10K	13	3.30	6.45	7.65
MM11-	Line to base	600	600	8	22	200-15K	17	3.90	7.35	8.55
MM13-	Coll. to base or line	50K	600	0.7	20	200-15K	13	4.05	7.50	8.70
MM14-	P-p coll. to p-p base	50K CT	600 CT	1.4	20	300-15K	13	4.80	8.55	9.75
MM15-	Coll. to speaker	50K	6	1	20	200-15K	13	4.35	7.95	9.15
MM17-	Coll. to p-p base	25K	1200 CT	1	20	200-15K	13	4.50	8.40	9.60
MM18-	P-p coll. to p-p base	50K CT	1200 CT	1.4	20	200-15K	13	4.65	8.55	9.75
MM19-	Line to p-p base	600 CT	1200 CT	16	22	200-15K	17	4.20	7.65	8.85
MM20-	Coll. to base	25K	600	1	20	200-15K	13	3.45	7.20	8.40
MM21-	P-p coll. to p-p base or line	4K CT	600 CT	5	28	200-15K	12	4.35	7.80	9.00
MM22-	Coll. to speaker	2K	3.4	5	28	200-15K	13	3.90	7.35	8.55
MM23-	Output p-p coll. to speaker	4K CT	3.4	5	28	200-15K	13	4.05	7.50	8.70
MM24-	Coll. to p-p base	10K	1500 CT	1	20	200-15K	13	4.50	8.40	9.60
MM25-	P-p coll. to p-p base	10K CT	200 CT	6	20	200-15K	13	4.50	8.10	9.30
MM26-	P-p coll. to p-p base	25K CT	1200 CT	2	20	200-15K	13	4.65	8.55	9.75
MM27-	Coll. to p-p base	250 CT	250 CT	2	20	200-15K	13	4.05	7.50	8.70
MM28-	P-p coll. to p-p base	4K CT	600/150 Split	4	28	200-15K	13	4.65	8.55	9.75
MM29-	P-p coll. to p-p base	7500 CT	600 CT	4	22	200-15K	13	4.35	7.80	9.00
MM30-	Line to base	600 CT	600 CT	16	22	200-15K	17	4.20	7.65	8.85
MM31-	P-p coll. to p-p base	25K CT	600 CT	2	20	200-15K	13	4.50	8.40	9.60
MM32-	P-p coll. to p-p base	10K CT	1500 CT	2	20	200-15K	13	4.65	8.55	9.75
MM33-	Driver/Isolation	10K CT	10K CT	2	20	200-15K	13	4.65	8.55	9.75
MM34-	P-p coll. to p-p base	7500 CT	1200 CT	4	22	200-15K	13	4.50	8.40	9.60
MM35-	P-p coll. to p-p base	2K CT	500 CT	10	28	200-15K	13	4.35	8.25	9.45
MM36-	Line to p-p base	600 CT	1200/300 Split	16	22	200-15K	17	4.65	8.55	9.75

*SEE FOURTH MICROTRAN PAGE FOR QUANTITY PRICING AND MIL CASE SIZES
†ORDER BY COMPLETE MICROTRAN NUMBER; EXAMPLE MM1-FB.

MICROTRAN® Miniaturized Transformers

ULTRA-MINIATURE TRANSISTOR TRANSFORMERS—UM SERIES

Frequency Response: ± 2 db, 300-10K cps. Leads supplied, 4" #27 color-coded. Power levels given for 7 1/2% max. distortion. **UM-F (Fig. A):** Size, 3/8" x 3/8" x 1 1/2". Weight, 0.08 oz. MIL type TF6RX—ZZ (Insert MIL No. from table). **UM-M (Fig. B):** Size, 1/2" dia. x 1/2", with 1" leads. Weight, 0.14 oz. MIL type TF6RX—ZZ.

Microtran No.†	Application	Impedance		Unbal. Pri., DC Ma	DC Resis., Ohms		Level at 1 kc, mw	MIL No.	Net Each, 1-9*	
		Primary	Sec.		Pri.	Sec.			-F	-M
UM21	Input	100K	1K	0	1900	135	70	16	\$6.00	\$6.60
UM22	Driver	20K	1K	0.5	1100	100	300	13	4.35	5.40
UM23	Driver	20K	1200 CT	0.5	1100	110	300	13	4.65	6.00
UM24	Output	1K	50	3	65	10	500	17	3.90	4.95
UM25	Output	400	50	3	35	5	500	17	3.90	4.95
UM26	Output	400	11	3	35	1.5	500	17	3.90	4.95
UM27	Output	400 CT	11	6	35	1.5	500	17	4.20	5.25
UM28	Choke	10 hy., 0 DC	.....	Shy., 0.5 ma	650	.....	.....	20	3.75	5.25
UM29	Interstage	600 CT	600 CT	7	45	60	400	21	4.65	5.70
UM30	Choke	1.5 hy., 0 DC	.....	1.7hy., 2 ma	100	.....	.....	20	3.60	4.50
UM31	Interstage	10K CT	1200 CT	2	850	120	500	21	4.80	5.85
UM32	Output	1500 CT	600	5	135	65	500	17	4.35	5.40
UM33	Output	1K CT	600	6	80	65	500	17	4.35	5.40
UM34	Driver	10K CT	600 CT	2	850	40	500	13	4.50	5.55
UM35	Isolation	15K CT	15K CT	1	930	1210	300	15	4.95	6.15

VERI-MINIATURE TRANSISTOR TRANSFORMERS—VM SERIES

Frequency Response: ± 2 db, 200-10K cps. Leads supplied, 4" #27 color-coded. Power levels given for 7 1/2% max. distortion. **VM-M (Fig. C):** For plug-in printed circuit applications. Cast Epoxy resin provides high resistance. Size, 1/2" x 1/2" x 1/2". Weight, 0.25 oz. MIL type TF5RX—ZZ (Insert MIL No. from table). **VM-FPB (Fig. D):** Plug-in tab mounted channel. Size, 1 1/2" x 1 1/2" x 1/2". Weight, 0.2 oz. MIL type TF6RX—ZZ.

Micro No.†	Application	Impedance		DCR, Ohms	Level, mw	MIL No.	Net Ea., 1-9*			
		Primary	Secondary				Pri.	Sec.	-FB	-M
VM1	Input	50	600, 1.5 ma	7	90	15	21	\$4.20	\$5.55	
VM2	Input or Intrstg.	200K	600, 1.0 ma	3000	110	5	21	5.70	7.20	
VM3	Interstage	25K	600, 1.0 ma	720	45	5	21	4.50	6.30	
VM4	Input or Intrstg.	200K	1200, .72 ma	3100	165	5	21	5.70	7.20	
VM5	Interstage	50K	600, 1.0 ma	830	55	5	21	4.65	6.60	
VM6	Interstage	100K	1200, .72 ma	2000	150	5	21	5.85	7.35	
VM7	Output	500, 3.5 ma	3.4	50	0.5	15	21	4.20	5.55	
VM8	Output	1250, 2.0 ma	3.4	135	0.5	15	21	4.35	5.70	
VM9	Output	1250, 2.0 ma	50	335	0.5	15	21	4.35	5.70	
VM10	Interstage	2500	2500 CT	215	3	21	21	4.65	6.90	
VM11	Choke	20 hy., 0 ma	12hy., .5ma	1000	21	4.05	5.10
VM12	Interstage	20K	1000, .75 ma	625	85	5	21	4.50	6.30	
VM13	Interstage	20K	1000, .75 ma	625	85	5	21	4.65	6.90	
VM14	Interstage	600, 7ma	600 CT	50	65	15	17	4.50	6.75	
VM15	Isolation	50K CT	50K CT	2000	2600	5	15	6.00	8.40	
VM16	Driver	500, 7.5 ma	250 CT	40	13	15	17	4.50	6.75	

TRANSISTOR DRIVER AND OUTPUT TRANSFORMERS (FIG. E)

Hermetically sealed and magnetically shielded with MIL-T-27A construction. MIL Type TF4RX—(Add MIL No. 17 and Case from table). MIL No. 17, except where noted.

Micro No.	Application	Impedance		Pri. Unb. DC Ma	Level Watts	Freq. Resp. ± 2 db, cps	MIL Case	Net Ea., 1-9*	
		Pri.	Sec.					-F	-M
M8002*	Coll. to p-p base	500	400 CT	18	0.15	200-20K	AJ	\$11.25	
M8003*	Coll. to p-p base	625 CT	100 CT	20	1.5	200-20K	AJ	12.30	
M8004	Coll. to p-p base	5400	600 CT	15	0.075	200-15K	AH#	14.85	
M8005	Coll. to p-p base	7000	320 CT	7	0.040	70-15K	AH#	14.85	
M8006	Coll. to p-p base	10K	6500 CT	0.75	0.005	200-15K	YY#	9.45	
M8008	Coll. to speaker	25	3-4	600	3	200-20K	AJ	11.10	
M8007*	P-p auto transformer	30 CT	3-4	200	2	100-20K	AJ	11.40	
M8009	P-p output to spkr.	48 CT	3.2/8	50	5	200-20K	AJ	11.70	
M8010	P-p coll. to servo	120 CT	1K	40	6	300-15K	AJ	11.55	
M8011	P-p output to spkr.	125 CT	3-4	20	1.5	200-15K	AH	14.55	
M8012*	P-p coll. to servo	140 CT	500	50	6	300-15K	AJ	11.25	
M8013*	P-p output to spkr.	250 CT	3-4	20	0.4	70-15K	AH	14.55	
M8014	P-p output to spkr.	400 CT	11	2	0.25	300-15K	YY	9.15	
M8015	P-p coll. to servo	1600 CT	800	5	2.5	150-20K	AJ	12.00	
M8016	P-p output to spkr.	2500 CT	12	4	0.10	300-15K	YY	9.30	
M8054	P-p output to servo	250 CT	130	20	3	200-15K	AH	14.55	

†CT. *Bi-filar wound to minimize switching transients. #MIL No. 13.

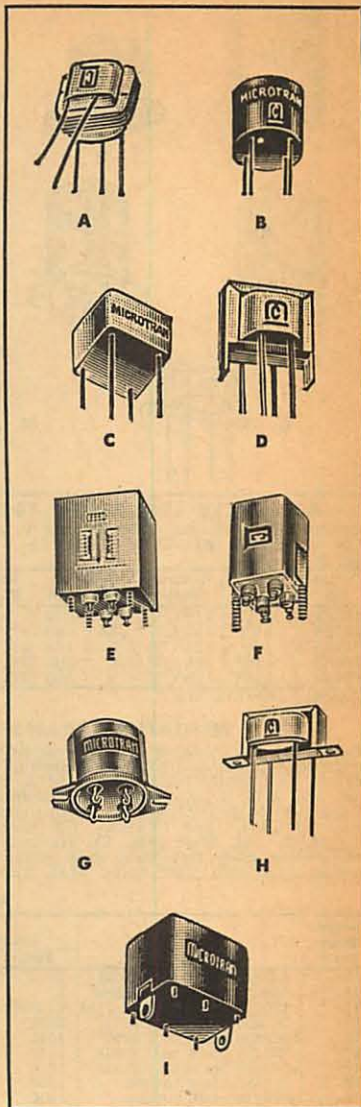
SUBMINIATURE AUDIO AND TRANSISTOR TRANSFORMERS—SM AND SMT SERIES

SM-AF (Fig. F): MIL-T-27A-AF modified case with compression sealed ceramic terminals. Gray enamel finish. MIL Type TF4RX—YY (Insert MIL No. from table). Max. Size, 3/4" x 3/4" x 1 1/4" with two 4-40NC-2 spade mtg. bolts. Weight, 1 1/2 oz. **SM-H (Fig. G):** Hermetically sealed with high compression glass terminals, gray enamel finish. MIL Type TF4RX—YY. Size, 1 1/2"

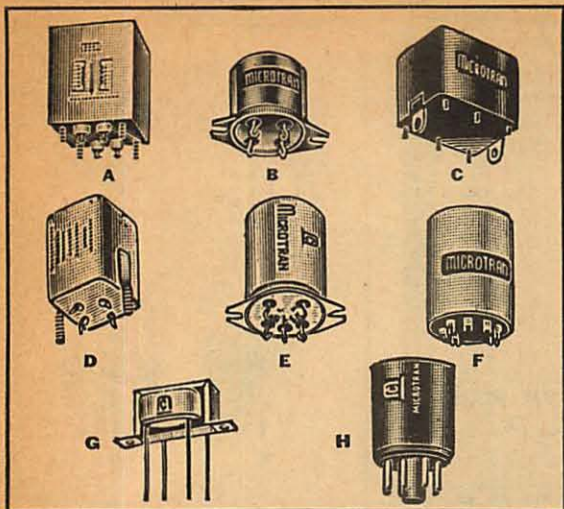
dia. x 1 1/2" h. Weight, 1 oz. **SM-FB (Fig. H):** Open frame with channel. Available with plug-in tab mounted channel or without channel on special order. MIL Type TF6RX—ZZ. Size, 1 1/2" x 1 1/2" x 3/4", plus tabs. Weight, 0.710 oz. **SM-M (Fig. I):** Molded, for plug-in printed circuit applications. MIL Type TF5RX—ZZ. Size, 1 1/2" max. x 3/4" x 3/4". Weight, 1 1/2 oz.

Microtran No.†	Application	Impedance		Pri. Unbal. DC Ma	Oper. Level, dbm	Frequency Resp., ± 2 db, cps	MIL No.	Net Each, Lots of 1-9*			
		Pri.	Sec.					AF	FB	H	M
SM1	Input	200/50	250K/62.5K	0	6	80-10K	10	\$9.00	\$4.35	\$7.20	\$9.00
SM2	Interstage 3:1	10K	90K	0	8	100-10K	10	8.70	3.90	6.90	9.00
SM3	Plate to line	10K	200	3	21	150-10K	13	8.70	3.90	6.90	9.00
SM4	Output	30K	50	1	21	150-10K	13	8.70	3.90	6.90	9.00
SM5	Reactor 50 hy. at 1 mil DC	3K ohms	DC Resis.	.....	.....	.....	20	7.20	3.30	6.30	8.40
SM6	Output	100K	60	0.5	21	150-10K	13	8.70	4.35	7.05	9.00
SMT1	Line to base	600	600	9	23	200-15K	17	6.75	3.90	6.00	7.20
SMT3	Coll. to base or line	50K	600	1	20	300-15K	13	7.35	4.50	6.60	7.80
SMT4	P-p coll. to p-p base	50K CT	600 CT	2	20	200-15K	13	.....	4.95	7.05	8.25
SMT5	Coll. to speaker	50K	6	1	20	300-15K	13	7.20	4.35	6.45	7.65
SMT7	Coll. to p-p base	25K	1200 CT	1.5	20	200-15K	13	7.50	4.65	6.75	7.95
SMT8	P-p coll. to p-p base	50K CT	1200 CT	2	20	200-15K	13	.....	4.95	7.05	8.25
SMT9	Line to p-p Base	600 CT	1200 CT	18	23	200-15K	17	.....	4.20	6.30	7.50
SMT10	Coll. to base	25K	600	2	20	200-15K	13	7.05	4.20	6.30	7.50
SMT12	Output coll. to speaker	2K	3.4	5	30	200-15K	13	6.75	3.90	6.00	7.20
SMT13	Output p-p coll. to speaker	4K CT	3.4	5	30	200-15K	13	6.90	4.05	6.15	7.35
SMT16	Coll. to p-p base	10K	1500 CT	1	23	200-15K	13	7.50	4.65	6.75	7.95
SMT17	P-p coll. to p-p base	10K CT	200 CT	6	20	200-15K	13	.....	4.80	6.90	8.10
SMT18	P-p coll. to p-p base	25K CT	1200 CT	3	20	200-15K	13	.....	4.95	7.05	8.25
SMT19	Coll. to p-p base	2500	2500 CT	2.5	26	200-15K	13	7.50	4.65	6.75	7.95
SMT26	Line to base	600 CT	600 CT	18	23	200-15K	17	.....	4.50	6.60	7.80

*SEE FOURTH PAGE FOR QUANTITY PRICING AND MIL CASE SIZES
†ORDER BY COMPLETE MICROTRAN NO. EXAMPLE, UM21-M



MICROTRAN[®] Miniaturized Transformers



400 CYCLE ISOLATION TRANSFORMERS

Electrostatic shielding. Also for use in either F.W. bridge or F.W. CT circuit. MIL Type TF4RX01—, Fig. A except M8058, Fig. B.

Micro. No.	Input Volts	Output Volts	RMS Amps	VA	Size, inches W. x D. x H.	MIL Case	Net, 1-9*
M8058	115	115 CT	.017	2	1 1/8 dia. x 1 1/8	YY	\$ 9.60
M8059	115	115 CT	.35	40	1 1/8 x 1 1/8 x 2 1/8	EB	14.70
M8060	115	115 CT	1.3	150	2 3/8 x 2 3/8 x 3 1/8	GA	18.45
M8061	115*	115 CT	2.6	300	3 1/8 x 3 1/8 x 4 1/8	JA	24.90
M8062	115*	115 CT	4.4	500	3 3/8 x 3 1/8 x 5 1/8	KA	26.85

*Primary 105/115/125 v.

MINIATURE TRANSISTOR AND AUDIO

M-M (Fig. C): Molded, for plug-in printed circuit use. Cast epoxy resin provides highest resistance to temperature extremes. MIL Type TF6RX—ZZ (Insert MIL No. from table). Max. Size, 1 1/8" x 1 1/8" x 1/8". Weight, 1 1/8 oz. **M-AG (Fig. D):** Enclosed in modified MIL-T-27 AG case with compression sealed ceramic terminals. MIL Type TF6RX—YY. Max. Size, 1" x 1" x 1 1/8". Weight, 2 3/8 oz. **M-H (Fig. E):** Hermetically sealed with high compression glass terminals, gray enamel finish. Available on special order with .120" holes. MIL Type TF4RX—YY. Size, 1 1/8" dia. x 1 1/8" max. Weight, 1 1/8 oz. **M-A (Fig. F):** Aluminum case with 2-56 screws. MIL Type TF6RX—ZZ. Size, .875" dia. x 1 1/8". Weight, 1.25 oz. **M-FB (Fig. G):** Open frame with channel. Available with plug-in tab channel or without channel on special order. MIL Type TF6RX—ZZ. Size, 1 1/8" x 1 1/8" x 1/8" max. plus tabs. Weight, 1.13 oz. **M-P (Fig. H):** Octal plug-in type in sealed plastic housing. MIL Type TF6RX—ZZ. Size, 1 1/8" dia. x 1 1/8". Weight, 2 oz. **M-A-Sh Shield:** 2 db magnetic shield to match Type M-A. Two clearance holes on 1/8" centers.

MINIATURE TRANSISTOR AND AUDIO TRANSFORMERS—MT AND M SERIES

Micro-tran No.	Application	Impedance		Pri. DC Ma*	Oper. Level, dbm	Freq. Resp. ±2 db, cps	MIL No.	Net Each, Lots of 1-9*					
		Pri.	Sec.					-A	-AG	-FB	-H	-M	-P
M1-	Mike or line to 1 grid	±	50K	0	5	20-20K	10	\$ 7.50	\$ 9.30	\$ 4.05	\$ 9.00	\$ 9.90	\$ 8.85
M2-	Mike or line to 2 grids	±	50K CT	0	5	20-20K	10	7.65	10.35	4.20	9.45	10.20	8.85
M3-	Dynamic mike to 1 grid	7.5/30	50K	0	5	20-20K	10	7.50	9.90	3.90	9.00	9.75	8.40
M4-	Single plate to 1 grid	15K	60K	0	6	20-15K	10	6.45	8.55	3.45	7.65	8.55	7.50
M5-	Single plate to 1 grid	15K	60K	4	14	200-20K	15	6.45	8.55	3.45	7.65	8.55	7.50
M6-	Single plate to 2 grids	15K	95K CT	0	5	20-15K	10	7.35	9.45	3.60	8.55	9.45	8.25
M7-	Single plate to 2 grids	15K	95K CT	4	11	200-20K	15	7.35	9.75	3.75	8.85	9.75	8.25
M8-	Single plate to line	15K	±	0	8	20-20K	16	7.65	10.50	3.75	9.60	10.50	8.85
M9-	Single plate to line	15K	±	4	21	150-20K	13	7.65	10.50	3.75	9.60	10.50	8.85
M10-	Push-pull plates to line	30K,	±	0	8	30-50K	16	8.25	10.80	3.90	9.60	10.80	9.00
M11-	Crystal mike to line	50K	±	0	5	20-20K	16	7.65	10.50	3.75	9.30	10.50	8.85
M12-	Mixing and matching	±	±	0	8	20-20K	16	7.50	10.50	3.75	9.30	10.50	9.00
M13-	Reactor	300#	±	0	8	6K ohms DCR	20	6.15	8.25	3.30	7.35	8.25	7.50
M14-	50:1 mike to grid	200	1/2 meg.	0	9	80-3K	10	7.35	9.90	3.90	9.00	10.20	8.85
M15-	10:1 plate to grid	10K	1 meg.	0	11	100-2500	10	7.35	9.30	3.60	8.40	9.30	8.85

MINIATURE TRANSISTOR TRANSFORMERS—MT SERIES

MT-	Application	Pri. Imp.	Sec. Imp.	Pri. DC Ma*	Oper. Level, dbm	Freq. Resp.	MIL No.	-A	-AG	-FB	-H	-M	-P
MT1-	Line to base	600	600	10	23	200-15K	17	\$ 7.20	\$ 8.70	\$ 3.60	\$ 7.80	\$ 9.00	\$ 7.35
MT2-	Coll. to p-p base 2N57	100	10 CT/40 CT	100	27	200-20K	17	8.10	9.60	4.20	8.70	9.90	8.25
MT3-	Coll. to base or line	50K	600	3	20	300-15K	13	7.80	9.30	3.90	8.40	9.60	7.95
MT5-	Coll. to speaker	50K	6	3	20	300-15K	13	7.80	9.30	3.90	8.40	9.60	7.95
MT6-	Coll. to p-p base	100K	1200 CT	1.4	17	200-15K	13	7.95	9.45	4.05	8.55	9.75	8.10
MT7-	Coll. to p-p base	25K	1200 CT	3	22	200-15K	13	7.95	9.45	4.05	8.55	9.75	8.10
MT8-	P-p coll. to p-p base	50K CT	1200 CT	3	20	300-15K	13	8.10	9.60	4.20	8.70	9.90	8.25
MT9-	Line to p-p base	600 CT	1200 CT	4	23	200-15K	17	8.10	9.60	4.20	8.70	9.90	7.80
MT10-	Coll. to base	25K	600	3	22	200-15K	13	7.80	9.30	3.90	8.40	9.60	7.95
MT11-	P-p coll. to p-p base	4K CT	600 CT	3	32	200-15K	13	8.10	9.60	4.20	8.70	9.90	8.25
MT12-	Output coll. to spkr.	2K	3.4	10	32	200-15K	13	7.80	9.30	3.90	8.40	9.60	7.95
MT13-	P-p coll. to spkr.	4K CT	3.4	3	32	200-15K	13	7.95	9.45	4.05	8.55	9.75	8.10
MT14-	Coll. to spkr. 2N179	400	10	50	25	200-20K	13	7.20	8.70	3.60	7.80	9.00	7.35
MT15-	P-p servo output 2N57	500 CT	210	30	27	300-20K	17	7.80	9.30	3.90	8.40	9.60	7.95
MT18-	P-p coll. to p-p base	25K CT	1200 CT	6	22	200-15K	13	8.10	9.60	4.20	8.70	9.90	8.25
MT20-	P-p coll. to p-p base	50K CT	"	3	20	300-15K	13	8.40	9.90	4.50	9.00	10.20	8.55
MT21-	P-p coll. to p-p base	4K CT	"	3	32	200-15K	13	8.25	9.75	4.35	8.85	10.05	8.40
MT22-	Line to p-p base	"	1200 CT	4	23	200-15K	17	8.25	9.75	4.35	8.85	10.05	8.40
MT23-	P-p coll. to servo	250 CT	1000	10	30	200-15K	17	7.80	9.30	3.90	8.40	9.60	7.95
MT24-	Coll. to p-p base	2500	600 CT	10	32	200-15K	17	7.80	9.30	3.90	8.40	9.60	7.95
MT25-	P-p coll. to p-p base	7500 CT	600 CT	8	32	200-15K	12	8.10	9.60	4.20	8.70	9.90	8.25
MT26-	Line to p-p base	600 CT	600 CT	20	23	200-15K	17	7.95	9.45	4.05	8.55	9.75	8.10
MT29-	P-p coll. to servo	1600 CT	450	15	30	200-15K	17	7.80	9.30	3.90	8.40	9.60	7.95
MT30-	P-p coll. to servo	250 CT	500	10	30	200-15K	17	7.80	9.30	3.90	8.40	9.60	7.95
M-A-Sh	Shield can for M-A							1.35					

*Unbalanced. †50/250/600 CT. ‡50/250 CT. §Hy. 0 DC. ¶50 hy. at 3 ma. *1200/300 split. *600/150 split.

★SEE FOURTH PAGE FOR QUANTITY PRICING. †ORDER BY COMPLETE MICROTRAN NUMBER: EXAMPLE M1-A.

POWER SUPPLY TRANSFORMERS

For silicon rectifier circuitry and filament applications. Hermetically sealed. Primary, 105/115/125 v. Output voltage given for resistive or inductive loads, based on approx. 1 v. drop per rectifier. MIL Type TF4RX01— (Add MIL Case Type from table) per MIL-T-27A. Fig. A except M8063 and M8069, Fig. B.

400 CYCLE TYPE

Micro. No.	Secondary		Rect. Cir.	Size, inches W. x D. x H.	MIL Case	Net, 1-9*	
	VAC	RMS					
M8063	2.85	.045 a.	1.5	3	1 1/8 dia. x 1 1/8	YY	\$10.50
	2.85	.045 a.					
M8064	6.3 CT	.8 a.	1.9	3.8	1 1/8 x 1 1/8 x 1 1/8	AH	11.10
M8039	12.6	.6 a.	10.5	21	1 1/8 x 1 1/8 x 2 3/8	AJ	15.15
	12.6 CT	.8 a.					
M8018	18.5 CT	1 a.	7	14	1 1/8 x 1 1/8 x 2 3/8	EA	15.30
M8019	18.5 CT	1.5 a.	7	14	1 1/8 x 2 3/8 x 3 3/8	EA	15.90
M8065	26 CT	3 a.	10.7	21.5	1 1/8 x 1 1/8 x 2 3/8	FA	15.60
M8066	26 CT	3 a.	10.7	21.5	2 1/8 x 2 3/8 x 3 3/8	FA	16.05
M8067	30 CT	3 a.	12.5	25	2 1/8 x 2 3/8 x 3 3/8	FB	15.00
M8020	35 CT	3 a.	14.5	29	2 1/8 x 2 3/8 x 3 3/8	GA	18.00
M8068	40 CT	2.5 a.	21.5	43	1 1/8 x 1 1/8 x 1 1/8	IH	13.20
M8041	50 CT	.25 a.	26	52	1 1/8 dia. x 1 1/8	AY	11.10
M8069	30 CT	.003 a.	26	52	1 1/8 dia. x 1 1/8	AY	9.75
M8070	65 CT	.170 a.	28.4	56.8	1 1/8 x 1 1/8 x 1 1/8	AH	11.25
M8021	70 CT	1 a.	30	60	2 1/8 x 2 3/8 x 3 3/8	FA	16.05
M8071	80 CT	.90 a.	35.2	70.4	2 1/8 x 2 3/8 x 3 3/8	FA	16.20

60 CYCLE TYPE

Micro. No.	Secondary		Rect. Cir.	Size, inches W. x D. x H.	MIL Case	Net, 1-9*	
	VAC	RMS					
M8042	6.3 CT	.6 a.	1.9	3.8	1 1/8 x 1 1/8 x 2 3/8	AJ	\$10.20
M8043	6.3 CT	2 a.	1.9	3.8	2 1/8 x 2 3/8 x 2 3/8	JB	12.00
M8044	12.6 CT	2 a.	10.5	21	3 1/8 x 3 3/8 x 3 3/8	FB	21.60
	12.6 CT	2 a.					
M8022	18.5 CT	3 a.	7	14	3 3/8 x 3 3/8 x 3 3/8	JB	20.25
M8045	28 CT	.6 a.	11.7	23.4	2 1/8 x 2 3/8 x 3 3/8	JA	16.35
M8055	30 CT	2.5 a.	12.5	25	3 3/8 x 3 3/8 x 3 3/8	FA	25.65
M8023	35 CT	3 a.	14.5	29	3 3/8 x 3 3/8 x 3 3/8	KA	26.10
M8046	49 CT	2.5 a.	21	42	3 1/8 x 4 1/8 x 5 1/8	LA	28.20
M8024	70 CT	1 a.	30	60	3 3/8 x 3 3/8 x 4 1/8	JA	25.65
M8056	80 CT	.6 a.	35	70	5 1/8 x 3 3/8 x 4 1/8	HA	16.65
M8057	115 CT	.9 a.	51	102	3 3/8 x 3 3/8 x 5 1/8	KA	25.35

†CT full wave. ‡F.W. bridge. §Pri. 115 v. only.

MICROTRAN® Miniaturized Transformers

LOW LEVEL CHOPPER INPUT TRANSFORMERS (FIG. A)

Efficiently transfers 30-500 cps. Transducer or thermocouple signals to instrument amplifiers. Resin impregnated to minimize mechanical vibration noise signal. Three Mumetal and two copper shields insure low hum pickup. Accurate center taps and external electrostatic shield connection improve low level operation. Signal level range, 0.5 μ V to 0.5 V, 90 db magnetic shielding. Size, 1 $\frac{1}{4}$ " dia. x 1 $\frac{1}{2}$ " h. with two 6-32 x $\frac{3}{8}$ " mtg. studs on 1 $\frac{1}{2}$ " centers. Weight, 4.5 oz.

Microtran No.	Turn Ratio		Full Pri. Hys*	Full Pri. Imped.*	DC Resis.		Net Each, 1-9*
	Full Pri. Full Sec.	1/2 Pri. Full Sec.			Full Pri.	Sec.	
M8025	1:7.7	1:15.4	17.5	6600	365 Ω	4140 Ω	\$13.80
M8026	1:3.2	1:6.4	60	22,500	455 Ω	3500 Ω	13.80
M8052	1:4.53	1:9.06	90	34,000	760 Ω	5220 Ω	14.25
M8053	1:0.5	1:1	140	53,000	920 Ω	653 Ω	13.65

*At 0.5 v., 60 cps.

PLUG-IN INPUT TRANSFORMERS (FIG. B)

Broadcast fidelity type, double Mumetal* shielded. Octal base, except M8032 and M8033, 9-pin. M8030 is designed as a replacement for Ampex No. 1733-1; M8032 and M8033 mate with sockets on many RCA amplifiers. Frequency Response: \pm 2 db, 20-20K. (M8031, \pm 2 db, 30-20K.) Magnetic shielding, 65 db. Level, +5 dbm.

Micro. No.	Impedance		Size, In. H. x Dia.	Wt., Oz.	Net Ea., 1-9*
	Pri.	Sec.			
M8030	200/50 CT	50K	2 $\frac{1}{4}$ x 1 $\frac{1}{2}$ dia.	6	\$13.50
M8031	600 CT /150	50K	2 $\frac{1}{4}$ x 1 $\frac{1}{2}$ dia.	6	13.35
M8032	250 CT	50K	2 $\frac{1}{4}$ x 1 $\frac{1}{2}$ dia.	6	13.05
M8033	50 CT	50K	2 $\frac{1}{4}$ x 1 $\frac{1}{2}$ dia.	6	13.05

*Allegheny Ludlum Steel Corp. trademark.

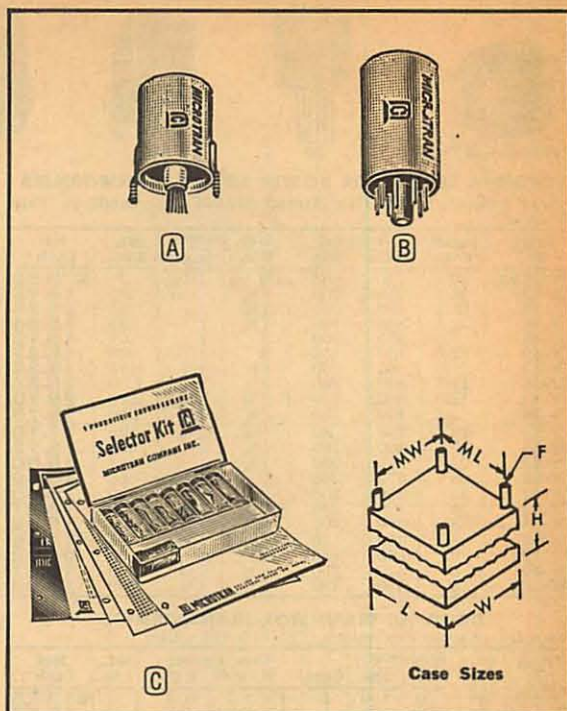
MODEL 400K TRANSISTOR TRANSFORMER SELECTOR KIT (FIG. C)

- IDEAL FOR BREADBOARD CIRCUITRY
- INCLUDES FULL DESIGN DATA

Set of nine transistor transformers covers impedance range of 150 through 200K ohms, matching most new transistor impedance ratings. Sizes range from a $\frac{3}{8}$ " cube to $\frac{3}{4}$ " x $\frac{3}{4}$ " x 1". All units vacuum resin impregnated for long, reliable life and for protection against rough handling. Each type has 4" color-coded leads. Includes full design data: nomographs and circuitry for determining correct impedances for Class A and B transistor amplifiers; power versus dbm chart; terminal connection sheet; guide to MIL-T-27A; cross reference index; outline drawings for later selection of stock items with same electrical ratings in many other mechanical constructions. Each transformer individually boxed in transparent plastic case.

Microtran Model 400K Transistor Transformer Selector Kit - \$2950*
 *Standard quantity discounts do not apply.

MICROTRAN TRANSFORMERS ARE AVAILABLE IN MANY OTHER MECHANICAL AND ELECTRICAL TYPES ON SPECIAL ORDER. WRITE FOR COMPLETE INFORMATION.



STANDARD MIL-T-27A CASE SIZES

Case Type	Size, Inches W. x L. x H.	Mtg. Centers, In.		Stud Type F
		ML	MW	
AF	$\frac{3}{4}$ x $\frac{3}{4}$ x $1\frac{1}{8}$	$1\frac{1}{8}$*	.....	4-40 x $\frac{3}{8}$
AG	1 x 1 x $1\frac{1}{8}$	$1\frac{1}{8}$*	.....	6-32 x $\frac{3}{8}$
AJ	$1\frac{1}{4}$ x $1\frac{1}{4}$ x $1\frac{1}{8}$	$1\frac{1}{4}$†	.....	6-32 x $\frac{3}{8}$
AH	$1\frac{1}{2}$ x $1\frac{1}{2}$ x $1\frac{1}{8}$	$1\frac{1}{2}$*	.....	6-32 x $\frac{3}{8}$
EA	$1\frac{1}{2}$ x $1\frac{1}{2}$ x $2\frac{1}{4}$	$1\frac{1}{2}$ *	$1\frac{1}{4}$	6-32 x $\frac{3}{8}$
EB	$1\frac{1}{2}$ x $1\frac{1}{2}$ x $2\frac{1}{2}$	$1\frac{1}{2}$ *	$1\frac{1}{4}$	6-32 x $\frac{3}{8}$
FA	$2\frac{1}{4}$ x $2\frac{1}{4}$ x $3\frac{1}{8}$	$1\frac{1}{2}$ *	$1\frac{1}{4}$	6-32 x $\frac{3}{8}$
FB	$2\frac{1}{4}$ x $2\frac{1}{4}$ x $2\frac{1}{2}$	$1\frac{1}{2}$ *	$1\frac{1}{4}$	6-32 x $\frac{3}{8}$
GA	$2\frac{3}{8}$ x $2\frac{3}{8}$ x $3\frac{1}{8}$	$2\frac{3}{8}$ *	$1\frac{1}{4}$	6-32 x $\frac{3}{8}$
HA	$2\frac{3}{8}$ x $3\frac{1}{4}$ x $4\frac{1}{4}$	$2\frac{3}{8}$ *	$1\frac{1}{4}$	8-32 x $\frac{3}{8}$
JA	$3\frac{1}{4}$ x $3\frac{1}{4}$ x $4\frac{1}{4}$	$2\frac{3}{8}$ *	$2\frac{1}{4}$	8-32 x $\frac{3}{8}$
JB	$3\frac{1}{4}$ x $3\frac{1}{4}$ x $3\frac{1}{2}$	$2\frac{3}{8}$ *	$2\frac{1}{4}$	8-32 x $\frac{3}{8}$
KA	$3\frac{3}{8}$ x $3\frac{1}{2}$ x $5\frac{1}{4}$	3	$2\frac{1}{4}$	10-32 x $\frac{1}{2}$
LA	$3\frac{1}{2}$ x $4\frac{1}{2}$ x $5\frac{1}{4}$	$3\frac{1}{2}$ *	$2\frac{1}{4}$	10-32 x $\frac{1}{2}$
YY	All metal not included above or with non-std. mtg. ctrs.			
ZZ	Open type and encapsulated.			

*Not in conformance with MIL-T-27A. †Two studs in a diagonal.

*QUANTITY PRICING

Net Each, 1-9	Net Each, Lots of				Net Each, 1-9	Net Each, Lots of				Net Each, 1-9	Net Each, Lots of				
	10-49	50-99	100-249	100-249		10-49	50-99	100-249	100-249		10-49	50-99	100-249	100-249	
\$1.35	\$1.22	\$1.13	\$0.90	\$ 7.65	\$ 6.89	\$ 6.38	\$5.10	\$13.20	\$11.88	\$11.00	\$ 8.80	\$13.20	\$11.88	\$11.00	\$ 8.80
3.30	2.97	2.75	2.20	7.80	7.02	6.50	5.20	13.35	12.01	11.13	8.90	13.35	12.01	11.13	8.90
3.45	3.10	2.88	2.30	7.95	7.15	6.63	5.30	13.50	12.15	11.25	9.00	13.50	12.15	11.25	9.00
3.60	3.24	3.00	2.40	8.10	7.29	6.75	5.40	13.65	12.28	11.38	9.10	13.65	12.28	11.38	9.10
3.75	3.38	3.13	2.50	8.25	7.42	6.88	5.50	13.80	12.42	11.50	9.20	13.80	12.42	11.50	9.20
3.90	3.51	3.25	2.60	8.40	7.56	7.00	5.60	14.25	12.82	11.88	9.50	14.25	12.82	11.88	9.50
4.05	3.64	3.38	2.70	8.55	7.70	7.13	5.70	14.55	13.09	12.13	9.70	14.55	13.09	12.13	9.70
4.20	3.78	3.50	2.80	8.70	7.83	7.25	5.80	14.70	13.23	12.25	9.80	14.70	13.23	12.25	9.80
4.35	3.92	3.63	2.90	8.85	7.97	7.38	5.90	14.85	13.36	12.38	9.90	14.85	13.36	12.38	9.90
4.50	4.05	3.75	3.00	9.00	8.10	7.50	6.00	15.00	13.50	12.50	10.00	15.00	13.50	12.50	10.00
4.65	4.18	3.88	3.10	9.15	8.23	7.63	6.10	15.15	13.63	12.63	10.10	15.15	13.63	12.63	10.10
4.80	4.32	4.00	3.20	9.30	8.37	7.75	6.20	15.30	13.77	12.75	10.20	15.30	13.77	12.75	10.20
4.95	4.45	4.13	3.30	9.45	8.51	7.88	6.30	15.60	14.04	13.00	10.40	15.60	14.04	13.00	10.40
5.10	4.59	4.25	3.40	9.60	8.64	8.00	6.40	15.90	14.31	13.25	10.60	15.90	14.31	13.25	10.60
5.25	4.73	4.38	3.50	9.75	8.76	8.13	6.50	16.05	14.44	13.38	10.70	16.05	14.44	13.38	10.70
5.40	4.86	4.50	3.60	9.90	8.91	8.25	6.60	16.20	14.58	13.50	10.80	16.20	14.58	13.50	10.80
5.55	5.00	4.63	3.70	10.05	9.05	8.38	6.70	16.35	14.71	13.63	10.90	16.35	14.71	13.63	10.90
5.70	5.13	4.75	3.80	10.20	9.18	8.50	6.80	16.65	14.98	13.88	11.10	16.65	14.98	13.88	11.10
5.85	5.27	4.88	3.90	10.35	9.32	8.63	6.90	18.00	16.20	15.00	12.00	18.00	16.20	15.00	12.00
6.00	5.40	5.00	4.00	10.50	9.45	8.75	7.00	18.45	16.60	15.37	12.30	18.45	16.60	15.37	12.30
6.15	5.54	5.13	4.10	10.80	9.72	9.00	7.20	20.25	18.22	16.87	13.50	20.25	18.22	16.87	13.50
6.30	5.67	5.25	4.20	11.10	9.99	9.25	7.40	21.60	19.44	18.00	14.40	21.60	19.44	18.00	14.40
6.45	5.81	5.38	4.30	11.25	10.12	9.38	7.50	24.90	22.41	20.75	16.60	24.90	22.41	20.75	16.60
6.60	5.94	5.50	4.40	11.40	10.26	9.50	7.60	25.35	22.81	21.12	16.90	25.35	22.81	21.12	16.90
6.75	6.08	5.63	4.50	11.55	10.39	9.63	7.70	25.65	23.09	21.38	17.10	25.65	23.09	21.38	17.10
6.90	6.21	5.75	4.60	11.70	10.53	9.75	7.80	26.10	23.49	21.75	17.40	26.10	23.49	21.75	17.40
7.05	6.35	5.88	4.70	11.85	10.66	9.88	7.90	26.70	24.03	22.25	17.80	26.70	24.03	22.25	17.80
7.20	6.48	6.00	4.80	12.00	10.80	10.00	8.00	26.85	24.16	22.38	17.90	26.85	24.16	22.38	17.90
7.35	6.62	6.13	4.90	12.30	11.07	10.25	8.20	28.20	25.38	23.50	18.80	28.20	25.38	23.50	18.80
7.50	6.75	6.25	5.00	13.05	11.74	10.88	8.70								

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