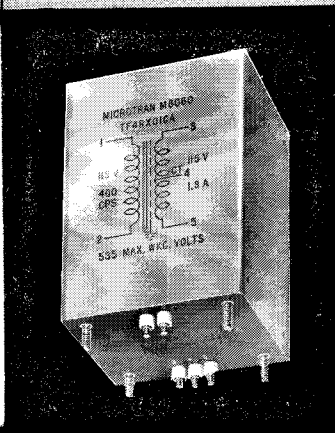
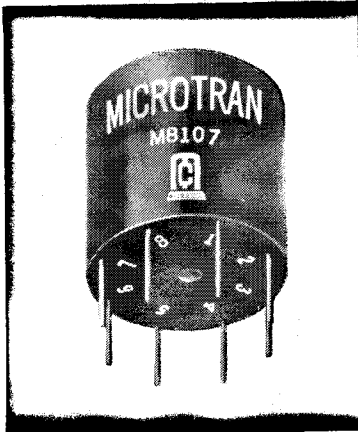
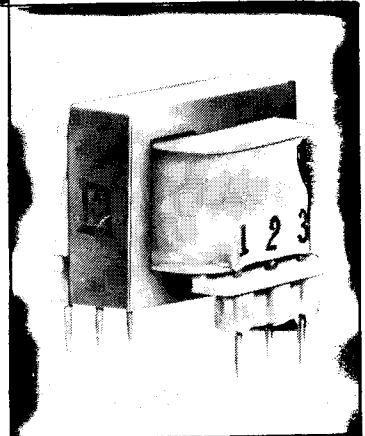


AUDIO
POWER
COMMERCIAL
INDUSTRIAL
MILITARY
AEROSPACE



MICROTRAN TRANSFORMERS

PRICE
\$1.00

CATALOG
#741

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FROM STOCK

—FOR IMMEDIATE DELIVERY

QUALIFICATION APPROVAL

Many MICROTRAN transformers are listed on qualified products list—QPL-27, MICROTRAN has received DESC approval for Grades 4 and 5 through Class T.

MILITARY SPECIFICATIONS

MICROTRAN manufactures to Military specifications and can supply units to meet MIL-T-27. In-plant environmental testing assures prompt contract completion. A government inspector is assigned to our plant.

QUALITY CONTROL PROCEDURES

A formal quality control procedure assures up graded reliability. MICROTRAN Quality Control Manual assures compliance with MIL-Q-9858 and NASA NPC 200-3. A periodic instrument calibration program is in effect.

PRODUCTION TESTING PROCEDURES

100% electrical and environmental tests are made in accordance with the purchaser's specifications and the performance characteristics required. Bridge type testing circuits, being readily adaptable to limit testing, are used for this type of operation, as they have a high inherent accuracy and a high productive rate.

ELECTRICAL AND ENVIRONMENTAL TESTS PERFORMED

Continuity and Resistance	Insertion Loss
Inductance	Exciting Current
Polarity of Windings	Measurement of Q
Insulation Resistance	Corona
Dielectric Breakdown	Magnetic Shielding
Ratio of Windings	Temperature Rise
Leakage Inductance	Salt Water Immersion
Distributed Capacity	Humidity
Frequency Response	Thermal Shock
Interlayer Insulation	Shock and Vibration
Phase Shift	End Performance Tests



Part Number	Page No. 1-9	Net Price Pcs.
SMT1-CM†	9	*9.30
SMT1-FB	9	4.95
SMT1-H	9	8.55
SMT1-M	9	8.40
SMT3-AF	9	10.05
SMT3-CM†	9	*10.20
SMT3-FB	9	5.85
SMT3-H	9	9.45
SMT3-M	9	9.00
SMT4-CM†	9	*10.65
SMT4-FB	9	6.60
SMT4-H	9	10.80
SMT4-M	9	9.60
SMT5-AF	9	9.90
SMT5-CM†	9	*9.90
SMT5-FB	9	5.70
SMT5-H	9	9.30
SMT5-M	9	8.85
SMT7-AF	9	10.65
SMT7-CM†	9	*10.35
SMT7-FB	9	6.00
SMT7-H	9	9.90
SMT7-M	9	9.30
SMT8-CM†	9	*10.65
SMT8-FB	9	6.60
SMT8-H	9	10.80
SMT8-M	9	9.60
SMT9-CM†	9	*9.75
SMT9-FB	9	5.70
SMT9-H	9	9.90
SMT9-M	9	8.70
SMT10-AF	9	9.90
SMT10-CM†	9	*9.75
SMT10-FB	9	5.70
SMT10-H	9	9.30
SMT10-M	9	8.70
SMT12-AF	9	9.15
SMT12-CM†	9	*9.30
SMT12-FB	9	4.95
SMT12-H	9	8.55
SMT12-M	9	8.40
SMT13-AF	9	9.75
SMT13-CM†	9	*9.60
SMT13-FB	9	5.10
SMT13-H	9	9.00
SMT13-M	9	8.55
SMT16-AF	9	10.80
SMT16-CM†	9	*10.35
SMT16-FB	9	6.15
SMT16-H	9	10.05
SMT16-M	9	9.30
SMT17-CM†	9	*10.50
SMT17-FB	9	6.30
SMT17-H	9	10.50
SMT17-M	9	9.45
SMT18-CM†	9	*10.65
SMT18-FB	9	6.45
SMT18-H	9	10.65
SMT18-M	9	9.60
SMT19-AF	9	10.50
SMT19-CM†	9	*10.35
SMT19-FB	9	5.85
SMT19-H	9	9.75
SMT19-M	9	9.30
SMT26-CM†	9	*10.20
SMT26-FB	9	5.55
SMT26-H	9	9.75
SMT26-M	9	9.00
SMT36-CM†	9	*10.80
SMT36-FB	9	6.45
SMT36-H	9	10.95
SMT36-M	9	9.75
T1104	14	5.10
T2104	14	4.65
T2106	14	4.95
T2108	14	4.65
T2110	14	4.95
T2220	14	5.25
T2316	14	4.80
T3220	14	6.15
T4415	14	4.80
T6112	14	11.85
T7410	14	6.75
T8410	14	5.55
UM21-F	7	6.00
UM21-M	7	9.45
UM22-F	7	5.10
UM22-M	7	9.00
UM23-F	7	5.25
UM23-M	7	9.15
UM24-F	7	4.50
UM24-M	7	7.35
UM25-F	7	4.50
UM25-M	7	7.35
UM26-F	7	4.50
UM26-M	7	7.35
UM27-F	7	4.80

Standard Sales Policy Information

QUANTITY PRICING SCHEDULE:

1-9 Net, 10-49 Net Less 10%, 50-99 Net Less 16 $\frac{2}{3}$ %, 100-249 Net Less 33 $\frac{1}{3}$ %. Contact factory for quantities over 249 pieces.

STANDARD CATALOG ITEMS:

Order from Authorized Distributors for immediate delivery at factory prices through 249 pieces. For larger quantities, contact factory for quotation.

FACTORY TERMS OF SALE:

Net 30 F.O.B. Valley Stream, N.Y.

FACTORY MINIMUM BILLING:

\$35.00 net, exclusive of transportation charges, \$5.00 small order handling charge if below minimum billing.

SPECIAL MARKING OF CATALOG ITEMS:

If customer part number is to be added to standard marking information, add to regular O.E.M. price of standard catalog item the following amount:

1 pc.	2-4 pcs.	5-9 pcs.	10-24 pcs.	25-49 pcs.	50-99 pcs.	100-249 pcs.
\$12.65	\$6.40	\$2.65	\$1.39	\$0.64	\$0.38	\$0.23

For any other type of special marking or larger quantities, contact factory for quotation.

SPECIAL ORDER ITEMS:

Transformers shown as "Special Order Only" are not normally stocked but may be ordered from Authorized Distributors. The following special order types not shown in the INDUSTRIAL O.E.M. NET PRICE LIST, are priced below:

Price of -FPB type is same as equivalent -FB type (i.e. MT1-FPB is same price as MT1-FB).

Price of -F type (i.e. MT1-F) is price of -FB type (i.e. MT1-FB) less the following amounts: Quantity 1-9—\$.15; 10-49—\$.14; 50-99—\$.13; 100-249—\$.10. For all other "SPECIAL ORDER" items not priced, contact factory for price and delivery.

CUSTOM TRANSFORMERS:

Contact factory for price and delivery.

PRICING—SCHEDULED DELIVERIES:

Published or quoted quantity price bracket is only applicable to those quantities scheduled by customer for delivery within a given 60 day period.

ASSORTING POLICY:

Units may not be intermixed for quantity prices. Quantity price bracket is applicable to shipments scheduled within 60 days.

GOVERNMENT SOURCE INSPECTION:

Increase unit price by \$.10, or a minimum of \$25.00 per scheduled shipment, to cover documentation cost.

PLACE OF ACCEPTANCE:

Factory orders are valid only when accepted by MICROTRAN'S written acknowledgment at its offices in Valley Stream, New York. The contract shall be construed in accordance with New York State law.

D C No. 789052

D-U-N-S 203-7224

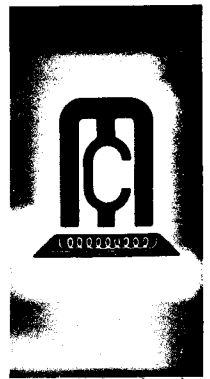
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Part Number	Page No. 1-9	Net Price Pcs.	Part Number	Page No. 1-9	Net Price Pcs.	Part Number	Page No. 1-9	Net Price Pcs.	Part Number	Page No. 1-9	Net Price Pcs.
UM27-M	7	7.80	UM35-F	7	5.70	VM4-FPB	7	5.70	VM11-M	7	6.90
UM28-F	7	3.75	UM35-M	7	10.95	VM4-M	7	8.70	VM12-FPB	7	5.10
UM28-M	7	6.60	UM36-F	7	5.55	VM5-FPB	7	5.25	VM12-M	7	8.10
UM29-F	7	5.25	UM36-M	7	10.95	VM5-M	7	8.25	VM13-FPB	7	5.25
UM29-M	7	8.25	UM37-F	7	5.25	VM6-FPB	7	5.85	VM13-M	7	8.40
UM30-F	7	3.60	UM37-M	7	8.85	VM6-M	7	8.85	VM14-FPB	7	4.95
UM30-M	7	6.30	UM39-F	7	5.25	VM7-FPB	7	4.20	VM14-M	7	8.25
UM31-F	7	5.55	UM39-M	7	8.55	VM7-M	7	7.50	VM15-FPB	7	6.00
UM31-M	7	10.35	UM90	7	1.35	VM8-FPB	7	4.35	VM15-M	7	9.75
UM32-F	7	5.40	VM1-FPB	7	4.20	VM8-M	7	7.50	VM16-FPB	7	4.50
UM32-M	7	8.40	VM1-M	7	7.20	VM9-FPB	7	4.35	VM16-M	7	8.25
UM33-F	7	5.25	VM2-FPB	7	5.70	VM9-M	7	7.50	VM17-FPB	7	5.85
UM33-M	7	8.25	VM2-M	7	8.70	VM10-FPB	7	5.25	VM17-M	7	8.70
UM34-F	7	5.55	VM3-FPB	7	5.10	VM10-M	7	8.40	VM19	7	1.95
UM34-M	7	10.35	VM3-M	7	8.10	VM11-FPB	7	4.05			

*Not stocked. Available on short order. In 1-249 quantity, add \$25.00 lot set-up charge.

†Not stocked. Available on short order.

△Standard discounts do not apply.

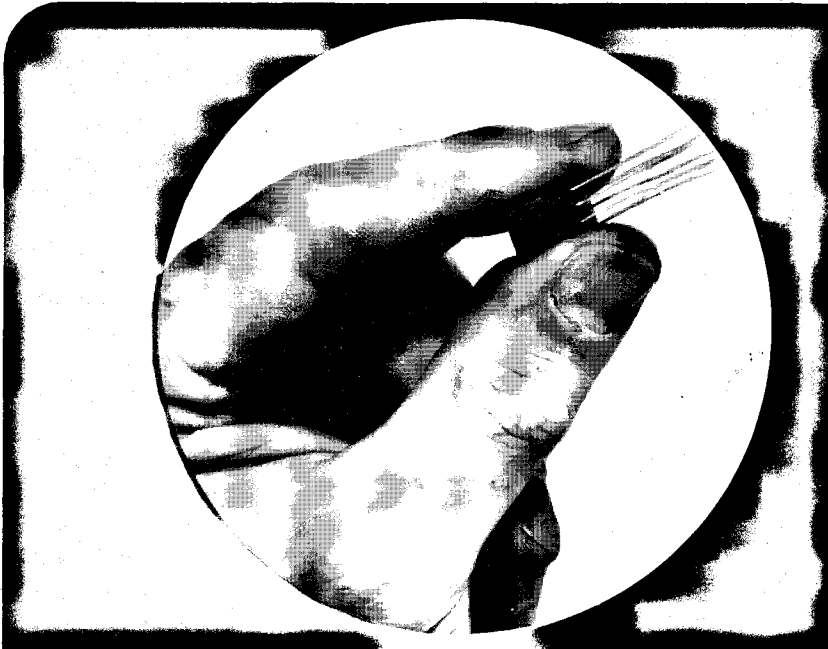




PICO MINIATURE TRANSFORMERS

Pico Miniature Transformers — PM Series — are designed to provide maximum utilization of space in miniaturized printed circuit board applications. .10 grid dimensions conform to P.C. design standards. Installation of these units is accomplished without the additional use of brackets or clips. Manufactured in accordance with the requirements of MIL-T-27.

FULL TERMINAL ARRANGEMENTS AND COLOR CODE DESIGNATIONS SUPPLIED WITH EACH UNIT.



OPEN FRAME PM-F

Pico Miniature size. 4 inch #30 Plastic leads color coded. Thorough resin impregnation and baking assures reliable life. To order add -F to part number, i.e. PM33-F. Weight .05 oz.

MIL DESIGNATION TF6RX†† ZZ
††See Family Designation in Chart

PICO MINIATURE TRANSFORMERS — PM SERIES

Frequency Response ± 2 db 300 Hz to 100 KHz†

These units can be used as input, interstage, output, isolation and other impedance requirements. Primary and secondary windings may be interchanged to obtain required impedance matching. Note: This will result in slightly different impedance ratios than shown.

Part No.	Primary Impedance	Secondary Impedance	Unbal. Pri. DC Ma	Pri. D.C.R.	Sec. D.C.R.	Power Level MW.	†† Family
PM37-(*)	120 C.T.	3.2	10	16	0.75	50	17
PM38-(*)	300 C.T.	600	7	41	98	50	17
PM35-(*)	500	50	3	60	8	50	17
PM36-(*)	500	500/125 Split	3	72	85	50	17
PM34-(*)	600 C.T.	600 C.T.	3	75	105	50	17
PM33-(*)	1,500 C.T.	600	3	170	95	50	12
PM31-(*)	2,500	2,500 C.T.	1	250	325	50	12
● PM29(*)	10,000 C.T.	500 C.T.	1	1050	80	50	12
PM27(*)	10,000	1,200	0.5	1050	280	50	12
● PM23(*)	10,000 C.T.	1,200 C.T.	1	1050	280	50	12
● PM25(*)	10,000	1200/300 Split	0.5	1050	280	50	12
● PM19(*)	10,000 C.T.	2,000 C.T.	1	1000	300	50	12
● PM21(*)	10,000	2000/500 Split	0.5	1000	300	50	12
● PM17(*)	10,000 C.T.	10,000 C.T.	1	1000	1300	50	12
PM15(*)	25,000	1,000	0.25	1700	110	40	12
● PM11(*)	25,000 C.T.	1,000 C.T.	0.5	1700	110	40	12
● PM13(*)	25,000	1000/250 Split	0.25	1700	110	40	12
● PM7(*)	50,000 C.T.	1,000 C.T.	0	3300	75	10	16
● PM9(*)	50,000	1000/250 Split	0	3300	75	10	16
● PM5(*)	200,000	1,000	0	5300	110	10	16
● PM3(*)	200,000 C.T.	1,000 C.T.	0	5300	110	10	16
PM41-(*)	Audio Choke	.3 Hy.	4	43			20
PM40-(*)	Audio Choke	3.5 Hy.	2	700			20
PM39-(*)	Audio Choke	6 hy.	2	1800			20

PM90 Magnetic Shield Mu-Metal slip-on can for PM-M series. 20db shielding.

● These items not available in open frame construction.
*Add either -F, -M to Part No. See photos figures PM-M & PM-F.
Power levels shown are for 15% max. distortion, PM35-20%, PM37-25%.
Frequency response measured as stated power level above.
†PM3 & PM5—45KHZ.

MOLDED PM-M

Epoxy molded for long life and suitability for printed circuit applications.

Gold plated high strength nickel alloy leads .020 x 3/4" for reliable soldered joints and high-density welded lead packaging. Weight .1 oz. To order add -M to part number, i.e. PM12-M, PM29-M.

MIL DESIGNATION TF5RX†† ZZ
††See Family Designation in Chart.

PM-M MAGNETIC SHIELD

Magnetic Shield PM90 Designed To Slip On PM-M Series

To be cemented in place. Overall dimensions with shield in place: .365" x .465" x .500" high.



VERI & ULTRA MINIATURE TRANSFORMERS

The miniaturized design of this series offers a relatively high power level for condensed module and printed circuit packaging. The entire series is available in open frame and molded construction, thus making it adaptable to many design requirements. Manufactured in accordance with of MIL-T-27.

FULL TERMINAL ARRANGEMENTS AND COLOR CODE DESIGNATIONS SUPPLIED WITH EACH UNIT.

ULTRA-MINIATURE TRANSFORMERS — UM Series

Frequency Response ± 2 db 300 to 10,000 Hz
Measured at level stated for 300 Hz

These units can be used as input, interstage, output, isolation and other impedance requirements. Primarily and secondary windings may be interchanged to obtain required impedance matching. Note: This will result in slightly different impedance ratios than shown.

Part No.	Primary Impedance	Secondary Impedance	Unbal. Pri DC Ma	Pri D.C.R.	Sec. D.C.R.	Level @ 300 Hz	Level @ 1 KHz	†† Family
UM26-(*)	400	11	3	35	1.5	15mw	500mw	17
UM27-(*)	400 C.T.	11	6	35	1.5	15mw	500mw	17
UM25-(*)	400	50	3	35	5	15mw	500mw	17
UM29-(*)	600 C.T.	600 C.T.	7	45	60	5mw	400mw	21
UM24-(*)	1,000	50	3	65	10	5mw	500mw	17
UM33-(*)	1,000 C.T.	600	6	80	65	5mw	500mw	17
UM32-(*)	1,500 C.T.	600	5	135	65	5mw	500mw	13
UM39-(*)	2,500 C.T.	600 C.T.	2	250	50	5mw	500mw	13
UM34-(*)	10,000 C.T.	600 C.T.	2	850	40	5mw	500mw	13
UM31-(*)	10,000 C.T.	1,200 C.T.	2	850	120	5mw	500mw	21
UM37-(*)	10,000	2,000 C.T.	1	850	200	5mw	500mw	13
UM35-(*)	15,000 C.T.	15,000 C.T.	1	930	1210	5mw	300mw	15
UM36-(*)	20,000 C.T.	800 C.T.	.5	1100	80	5mw	500mw	13
UM22-(*)	20,000	1,000	0.5	1100	100	5mw	300mw	13
UM23-(*)	20,000	1,200 C.T.	0.5	1100	110	5mw	300mw	13
UM21-(*)	100,000	1,000	0	1900	135	5mw	70mw	16
UM30-(*)	Choke			1.5 hy (0 dc)	0.7hy (2ma)	100	20	
UM28-(*)	Choke			10 hy (0 dc)	8hy (0.5ma)	650	20	
UM90	Magnetic Shield Mu-Metal slip-on can for UM-M Series. 20 db shielding.							

*Add either -F, or -M to Part No. to designate construction. See Photos. Power levels shown are for 7½% maximum distortion.

VERI-MINIATURE TRANSFORMERS — VM Series

Frequency Response ± 2 db 200 to 10,000 Hz

Part No.	Primary Impedance	Secondary Impedance	Unbal. Pri DC Ma	Pri D.C.R.	Sec. D.C.R.	Level MW.	†† Family
VM1-(*)	50	600	5.5	7	90	15	21
VM7-(*)	500	3.4	3.5	50	.5	15	21
VM16-(*)	500 C.T.	250 C.T.	7.5	50	25	15	17
VM14-(*)	600 C.T.	600 C.T.	7.0	50	65	15	17
VM8-(*)	1250	3.4	2.0	135	.5	15	21
VM9-(*)	1250	50	2.0	135	6.5	15	21
VM10-(*)	2,500	2,500 C.T.	1.5	225	215	3	21
VM17-(*)	10,000 C.T.	5,000 C.T.	0	400	300	5	17
VM12-(*)	20,000	1,000	.16	625	85	5	21
VM13-(*)	20,000	1,000 C.T.	.16	625	85	5	21
VM3-(*)	25,000	600	.15	720	45	2.5	21
VM5-(*)	50,000	600	.1	830	55	5	21
VM15-(*)	50,000 C.T.	50,000 C.T.	0	2000	2600	5	15
VM6-(*)	100,000	1,200 C.T.	.07	2000	150	5	21
VM2-(*)	200,000	600	.05	3000	110	2.5	21
VM4-(*)	200,000	1200	.035	3100	165	5	21
VM11-(*)	Choke	20 hy. (Oma)	12 hy. (.5ma)	1000			21
VM90	Magnetic Shield Mu-Metal slip-on can for VM-M Series. 20 db shielding.						

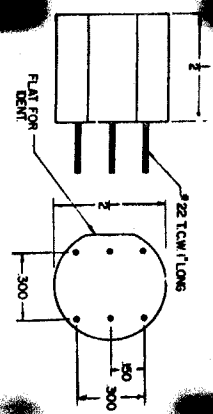
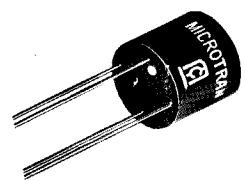
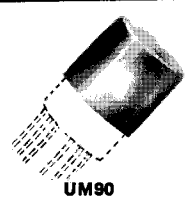
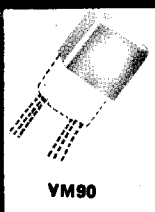
*Add either -FPB, or -M to Part No. to designate construction. See Photos.

MAGNETIC SHIELDS

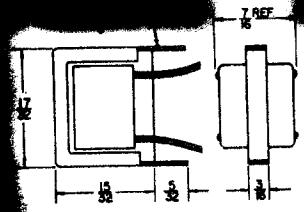
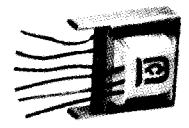
Magnetic Shields Designed to Slip On UM-M and VM-M Series

	Dimensions			
	L	W	H*	D
UM90			¼"	1⅜"
VM90	⅝"	⅝"	1⅜"	

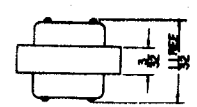
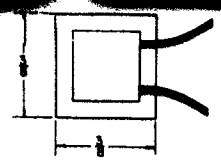
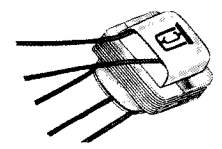
*Overall height with can cemented in place.



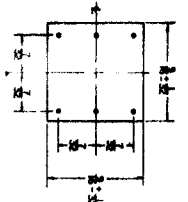
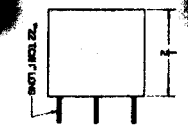
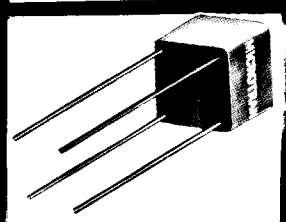
MOLDED UM-M
ULTRA MINIATURE SERIES
To order add -M to Part Number, i.e. UM 22-M. Weight .14 oz.
MIL DESIGNATION
TF5RX †† ZZ
††See Family Designation in Chart.



PLUG-IN TAB MOUNTED CHANNEL VM-FPB
VERI-MINIATURE SERIES
To order add -FPB to Part Number, i.e. VM2-FPB. Weight .2 oz. 4" color coded leads.
MIL DESIGNATION
TF6RX †† ZZ
††See Family Designation in Chart.
Available on special order without channel as VM-F, ⅜" x ⅜" x ½". Wt. 16 oz.



OPEN FRAME UM-F
ULTRA MINIATURE SERIES
To order add -F to Part Number, i.e. UM 22-F. Weight .08 oz. 4" color coded leads.
MIL DESIGNATION
TF6RX †† ZZ
††See Family Designation in Chart.



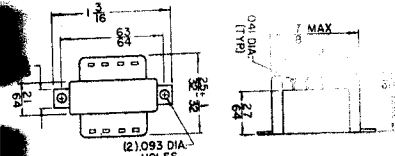
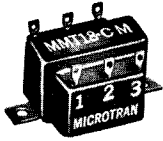
MOLDED VM-M
VERI-MINIATURE SERIES
Epoxy molded. Wt. .25 oz.
To order add -M to Part Number, i.e. VM2-M, VM9-M.
MIL DESIGNATION
TF5RX †† ZZ
††See Family Designation in Chart.

MICROTRAN

MICRO MINIATURE TRANSFORMERS

The low profile design of this series makes them ideal for use on plug-in printed circuit boards. They are highly suitable where sandwich design requires minimal spacing between modules. Available in a variety of open frame, hermetically sealed, and molded constructions, all units are manufactured in accordance with the requirements of MIL-T-27.

FULL TERMINAL ARRANGEMENTS AND COLOR CODE DESIGNATIONS SUPPLIED WITH EACH UNIT.



CONTOUR MOLDED MM-CM

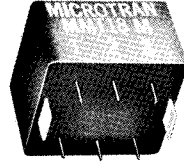
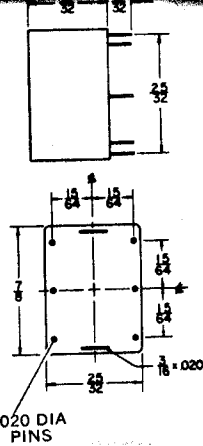
Special Order Only

Designed for chassis mounting with solder terminals on top of transformer. Epoxy contour molding provides greatest resistance to extremes of ambient in small-

est possible package. Weight 1/2 oz.

To order add -CM to part number, i.e. MM2-CM, MMT1-CM.

MIL DESIGNATION TF5RX+ZZ ††See Family Designation in Chart



MOLDED MM-M

Designed for plug-in printed circuit applications. Cast Epoxy resin provides highest resistance to extremes of ambient. Weight 1/2 oz.

To order add -M to Part Number. i.e. MM2-M, MMT2-M.

MIL DESIGNATION TF5RX+ZZ ††See Family Designation in Chart

MICRO-MINIATURE TRANSFORMERS MM Series

Primary and secondary windings may be interchanged to obtain required impedance matching • Note: This will result in slightly different impedance ratios than shown • These units can be used as input, inter-stage, output, isolation and other impedance matching requirements.

Part No.	Primary Impedance	Secondary Impedance	Pri. D.C. Unbal-ance Ma.	Oper. Level DBM	Freq. Response ± 2 db.	†† Family
MM1-*	200/50	250,000/62,500	0	4	200-10,000	10
MM3-*	10,000	200	3	20	150-10,000	13
MM2-*	10,000	90,000	0	4	150-10,000	10
MM4-*	30,000	50	1	20	150-10,000	13
MM7-*	30,000	1,200	0.5	20	200-10,000	13
MM6-*	100,000	60	0.5	20	250-10,000	13
MM5-*	Reactor 50 HY at 1 MIL. D.C.	4,700 ohms D.C Res.				20

MICRO-MINIATURE SERIES - MMT Series

Part No.	Primary Impedance	Secondary Impedance	Pri. D.C. Unbal-ance Ma.	Oper. Level DBM	Freq. Response ± 2 db.	†† Family
MMT1-*	600	600	8	22	200-15,000	17
MMT26-*	600 C.T.	600 C.T.	16	22	200-15,000	17
MMT33-*	600 C.T.	600/150 split	16	22	200-15,000	17
MMT9-*	600 C.T.	1,200 C.T.	16	22	200-15,000	17
MMT32-*	600 C.T.	1200/300 split	16	22	200-15,000	17
MMT12-*	2,000	3.4	5	28	200-15,000	13
MMT31-*	2,000 C.T.	500 C.T.	10	28	200-15,000	13
MMT19-*	2,500	2,500 C.T.	2	23	200-15,000	13
MMT13-*	4,000 C.T.	3.4	5	28	200-15,000	13
MMT11-*	4,000 C.T.	600 C.T.	5	28	200-15,000	12
MMT21-*	4,000 C.T.	600/150 split	5	28	200-15,000	13
MMT25-*	7,500 C.T.	600 C.T.	4	22	200-15,000	13
MMT30-*	7,500 C.T.	1,200 C.T.	4	22	200-15,000	13
MMT35-*	10,000 C.T.	150/37.5 split	2	20	200-15,000	13
MMT17-*	10,000 C.T.	200 C.T.	6	20	200-15,000	13
MMT16-*	10,000	1,500 C.T.	1	20	200-15,000	13
MMT28-*	10,000 C.T.	1,500 C.T.	2	20	200-15,000	13
MMT29-*	10,000 C.T.	10,000 C.T.	2	20	200-15,000	13
MMT10-*	25,000	600	1	20	200-15,000	13
MMT27-*	25,000 C.T.	600 C.T.	2	20	200-15,000	13
MMT7-*	25,000	1,200 C.T.	1	20	200-15,000	13
MMT18-*	25,000 C.T.	1,200 C.T.	2	20	200-15,000	13
MMT5-*	50,000	6	1	20	200-15,000	13
MMT3-*	50,000	600	0.7	20	200-15,000	13
MMT4-*	50,000 C.T.	600 C.T.	1.4	20	200-15,000	13
MMT8-*	50,000 C.T.	1,200 C.T.	1.4	20	200-15,000	13

*Add either -H, -M, -CM, or -FB to Part No. to designate construction. See Photos.

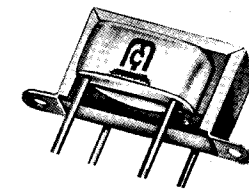
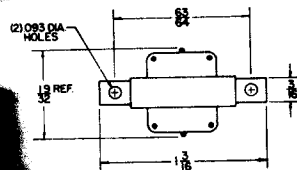
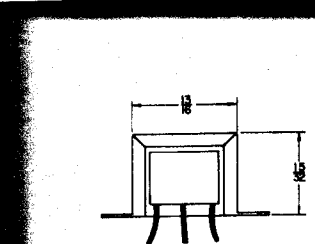
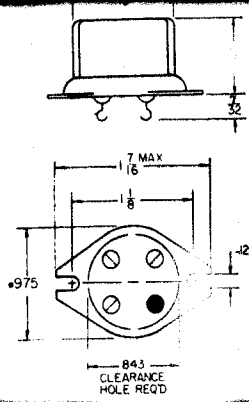


HERMETIC MM-H

Grey Enamel Finish. High Compression Glass Terminals. Weight 1/4 oz.

To order add -H to Part Number. i.e. MM2-H, MMT3-H.

MIL DESIGNATION TF4RX+YY ††See Family Designation in Chart



OPEN FRAME WITH CHANNEL MM-FB

To order add -FB to Part No. i.e. MMT3-FB, MM1-FB. Leads #28 PVC 4" long.

Available with plug-in tab mounted channel as type MM-FPB, 3/16" mounting centers on Special Order.

Available without channel as type MM-F 3/4 x 3/4 x 1/2. Wt. .38 oz. on Special Order.

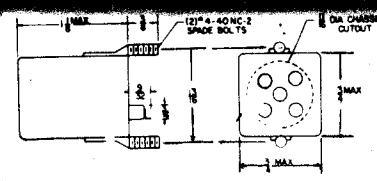
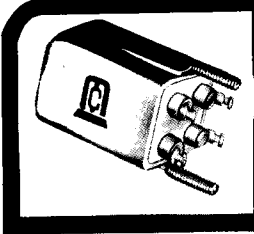
MIL DESIGNATION TF6RX+ZZ ††See Family Designation in Chart

MICROTRAN

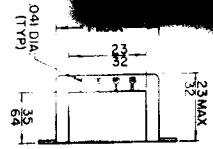
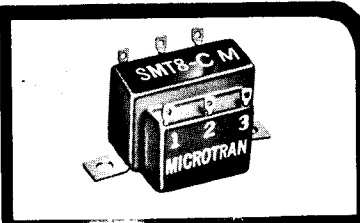
SUB MINIATURE TRANSFORMERS

A variety of compact, low silhouette, constructions makes this series ideal for use in designs requiring maximum space utilization. Your mechanical and environmental considerations can be easily filled with the broad choice of open frame, hermetically sealed and molded constructions. All units in this series are manufactured in accordance with the requirements of MIL-T-27.

FULL TERMINAL ARRANGEMENTS AND COLOR CODE DESIGNATIONS SUPPLIED WITH EACH UNIT.



MIL CASE SM-AF
 Gray Enamel Finish. Weight 1 1/4 oz. Supplied with compression sealed ceramic terminals in MIL-T-27B-AF modified case.
 To order add -AF to Part Number. i.e. SM2-AF, SMT3-AF.
MIL DESIGNATION TF4RX+YY
 ††See Family Designation in Chart

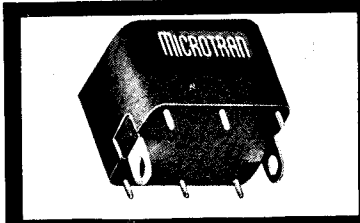


CONTOUR MOLDED SM-CM Special Order Only

Designed for chassis mounting with solder terminals on top of transformer. Epoxy contour molding provides greatest resistance to extremes of ambient in smallest possible package. Weight 1 1/4 oz.

To order add -CM to part number, i.e. SM5-CM, SMT5-CM.

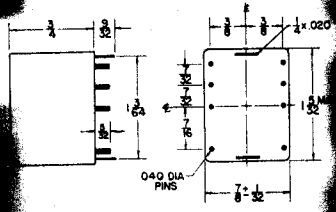
MIL DESIGNATION TF5RX+ZZ
 ††See Family Designation in Chart



SUB-MINIATURE TRANSFORMERS SM Series

Primary and secondary windings may be interchanged to obtain required impedance matching • Note: This will result in slightly different impedance ratios than shown • These units can be used as input, interstage, output, isolation and other impedance matching requirements.

Part No.	Primary Impedance	Secondary Impedance	Pri. D.C. Unbal-ance Ma.	Oper. Level DBM	Freq. Response ±2 db.	†† Family
SM1-(*)	200/50	250,000/62,500	0	6	80-10,000	10
SM3-(*)	10,000	200	3	21	150-10,000	13
SM2-(*)	10,000	90,000	0	8	100-10,000	10
SM4-(*)	30,000	50	1	21	150-10,000	13
SM6-(*)	100,000	60	0.5	21	150-10,000	13
SM5-(*)	Reactor 50 HY at 1 MIL. D.C.			3,000 ohms. D.C. Res.		20



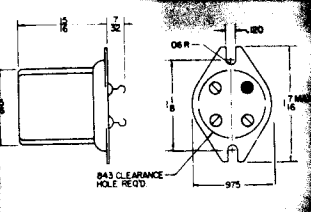
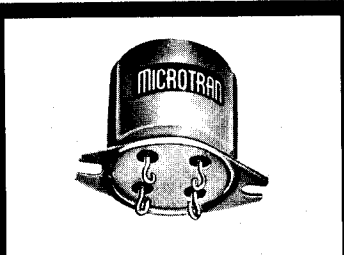
MOLDED SM-M
 Designed for plug-in printed circuit applications. Cast Epoxy Resin provides highest resistance to extremes of ambient. Weight 1 1/2 oz.
 To order add -M to Part Number. i.e. SM5-M, SMT5-M.
MIL DESIGNATION TF5RX+ZZ
 ††See Family Designation in Chart

SUB-MINIATURE TRANSFORMERS SMT Series

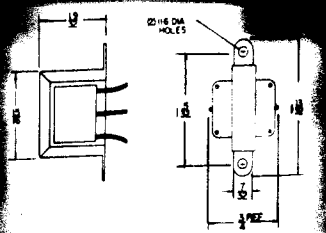
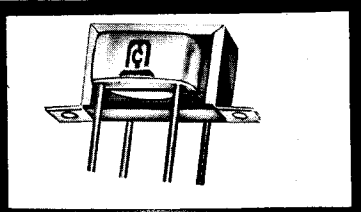
Primary and secondary windings may be interchanged to obtain required impedance matching • Note: This will result in slightly different impedance ratios than shown • These units can be used as input, interstage, output, isolation and other impedance matching requirements.

Part No.	Primary Impedance	Secondary Impedance	Pri. D.C. Unbal-ance Ma.	Oper. Level DBM	Freq. Response ±2 db.	Family ††
SMT1-(*)	600	600	9	23	200-15,000	17
•SMT26-(*)	600 C.T.	600 C.T.	18	23	200-15,000	17
•SMT9-(*)	600 C.T.	1,200 C.T.	18	23	200-15,000	17
SMT12-(*)	2,000	3.4	5	30	200-15,000	13
SMT19-(*)	2,500	2,500 C.T.	5	26	200-15,000	13
•SMT36-(*)	2,500 C.T.	2,500/625 split	10	26	200-15,000	13
SMT13-(*)	4,000 C.T.	3.4	5	30	200-15,000	13
•SMT17-(*)	10,000 C.T.	200 C.T.	6	20	200-15,000	13
SMT16-(*)	10,000	1,500 C.T.	1	23	200-15,000	13
SMT10-(*)	25,000	600	2	20	200-15,000	13
SMT7-(*)	25,000	1,200 C.T.	1.5	20	200-15,000	13
•SMT18-(*)	25,000 C.T.	1,200 C.T.	3	20	200-15,000	13
SMT5-(*)	50,000	6	1	20	300-15,000	13
SMT3-(*)	50,000	600	1	20	300-15,000	13
•SMT4-(*)	50,000 C.T.	600 C.T.	2	20	200-15,000	13
•SMT8-(*)	50,000 C.T.	1,200 C.T.	2	20	200-15,000	13

•Add either -AF, -H, -M, -CM, or -FB to Part No. to designate construction. See photos.
 •These items not available in -AF case.



HERMETIC SM-H
 Grey Enamel Finish. Weight 1 oz. High Compression Glass Terminals.
 To order add -H to Part Number. i.e. SM2-H, SMT3-H.
MIL DESIGNATION TF4RX+YY
 ††See Family Designation in Chart



OPEN FRAME WITH CHANNEL SM-FB

To order add -FB to Part Number. i.e. SMT3-FB, SM1-FB. Weight 3/4 oz. Leads #28 PVC 4" long.

Available with plug-in tab mounted channel as type SM-FPB 3/2 mtg. centers on Special Order.

Available without mounting channel as type SM-F 3/8 x 1/8 x 1/4. Weight .67 oz. on Special Order.

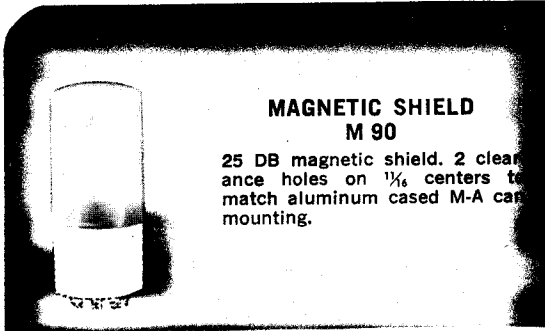
MIL DESIGNATION TF6RX +ZZ
 ††See Family Designation in Chart

MINIATURE AUDIO TRANSFORMERS

This group of transformers is often referred to as "the designers series." It offers an extensive range of open frame, hermetically sealed, plug-in, printed circuit, contour molded and plug-in molded construction.

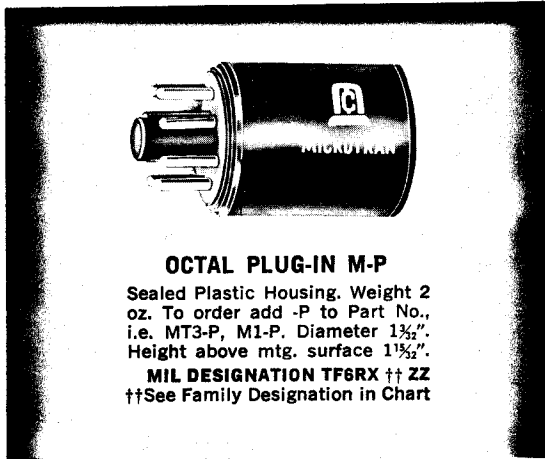
In this series, MICROTRAN offers the widest spectrum of electrical and mechanical specifications. ALL TRANSFORMERS LISTED ARE AVAILABLE IN THE CONSTRUCTIONS ILLUSTRATED. All units are manufactured in accordance with the requirements of MIL-T-27.

FULL TERMINAL ARRANGEMENTS AND COLOR CODE DESIGNATIONS SUPPLIED WITH EACH UNIT.



MAGNETIC SHIELD M 90

25 DB magnetic shield. 2 clearance holes on 1/8" centers to match aluminum cased M-A can mounting.



OCTAL PLUG-IN M-P

Sealed Plastic Housing. Weight 2 oz. To order add -P to Part No., i.e. MT3-P, M1-P. Diameter 1 3/8". Height above mtg. surface 1 1/2".

MIL DESIGNATION TF6RX †† ZZ ††See Family Designation in Chart



SHIELDED M-S

Special Order Only

Double High Nickel Alloy Magnetic Shielded Version of M and MT Series. 65 db Shielding For Minimum Hum Pick-Up.

Diameter 1 1/8". Height 1 1/2". Mtg. Centers, 1 3/8". Wt. 3 oz. 6-32 x 3/8" studs. Leads #28 PVC 4" long.

MIL DESIGNATION TF6RX †† ZZ

††See Family Designation in Chart To order add -S to Part No. i.e. M1-S.

MINIATURE AUDIO TRANSFORMERS - M Series

All items shown in charts below are available in any of the mechanical packages shown on pages 8 & 9 • These units can be used as input, interstage, output, isolation and other impedance matching applications • Primary and secondary windings may be interchanged to obtain required impedance matching • Note: This will result in slightly different impedance ratios than shown.

Part No.*	Primary Impedance	Secondary Impedance	Pri. D.C. Unbalance Ma.	Operating Level DBM	Frequency Response ±2 db.	†† Family
M3-(*)	7.5/30	50,000	0	5	20-20,000	10
● M12-(*)	50/250 C.T.	50/250/600 C.T.	0	8	20-20,000	16
● M1-(*)	50/250/600 C.T.	50,000	0	5	20-20,000	10
M1-S Same as M1 above—with dual nickel alloy shield						
● M2-(*)	50/250/600 C.T.	50,000 C.T.	0	5	20-20,000	10
M14-(*)	200	1/2 Megohm	0	9	80-3,000	10
M15-(*)	10,000	1 Megohm	0	11	100-2,500	10
● M8-(*)	15,000	50/250/600 C.T.	0	8	20-20,000	16
● M9-(*)	15,000	50/250/600 C.T.	4	21	150-20,000	13
M4-(*)	15,000	60,000	0	6	20-15,000	10
M5-(*)	15,000	60,000	4	14	200-20,000	15
M6-(*)	15,000	95,000 C.T.	0	5	20-15,000	10
M7-(*)	15,000	95,000 C.T.	4	11	200-20,000	15
● M10-(*)	30,000 C.T.	50/250/600 C.T.	0	8	30-50,000	16
● M11-(*)	50,000	50/250/600 C.T.	0	5	20-20,000	16
M13-(*)	Reactor	300 hy. 0 d.c.	50 hy. @ 3 ma.		6000 Ω D.C.R.	20
M90 Magnetic Shield Mu-Metal slip on can for MA Series. 25 db shielding.						

*Add either -AG -H, -CM, -P, -PC, -A, -S, or -FB to Part No. to designate construction. See photos.

● These items not available in -PC construction.

MINIATURE TRANSFORMERS - MT Series

These units can be used as input, interstage, output, isolation and other impedance matching applications • Primary and secondary windings may be interchanged to obtain required impedance matching • Note: This may result in slightly different impedance ratios than shown.

Part No.*	Primary Impedance	Secondary Impedance	Pri. D.C. Unbalance Ma.	Operating Level DBM	Frequency Response ±2 db.	†† Family
● MT2-(*)	100	10 C.T./40 C.T.	100	27	200-20,000	17
MT30-(*)	250 C.T.	500	10	30	200-15,000	17
MT23-(*)	250 C.T.	1000	10	30	200-15,000	17
MT14-(*)	400	10	50	25	200-20,000	17
● MT15-(*)	500 C.T.	210	30	27	300-20,000	17
MT1-(*)	600	600	10	23	200-15,000	17
‡MT35(*)	600	600 C.T. & 600 C.T.	0	5	40-20,000	16
MT26-(*)	600 C.T.	600 C.T.	20	23	200-15,000	17
MT9-(*)	600 C.T.	1,200 C.T.	4	23	200-15,000	17
MT33-(*)	600/150 Split	600/150 Split	20	23	200-20,000	17
● MT22-(*)	600/150 Split	1,200 C.T.	4	23	200-15,000	17
MT29-(*)	1600 C.T.	450	15	30	200-15,000	13
MT12-(*)	2,000	3.4	10	32	200-15,000	13
MT24-(*)	2,500	600 C.T.	10	32	200-15,000	13
● MT13-(*)	4,000 C.T.	3.4	3	32	200-15,000	13
MT11-(*)	4,000 C.T.	600 C.T.	3	32	200-15,000	13
MT21-(*)	4,000 C.T.	600/150 Split	3	32	200-15,000	13
MT25-(*)	7,500 C.T.	600 C.T.	8	32	200-15,000	12
● MT34-(*)	10,000/2500 Split	2000/500 Split	4	20	200-20,000	13
● MT10-(*)	25,000	600	3	22	200-15,000	13
● MT7-(*)	25,000	1,200 C.T.	3	22	200-15,000	13
● MT18-(*)	25,000 C.T.	1,200 C.T.	6	22	200-15,000	13
MT5-(*)	50,000	6	3	20	300-15,000	13
MT3-(*)	50,000	600	3	20	300-15,000	13
MT8-(*)	50,000 C.T.	1,200 C.T.	3	20	300-15,000	13
● MT20-(*)	50,000 C.T.	1200/300 Split	3	20	300-15,000	13
MT6-(*)	100,000	1,200 C.T.	1.4	17	200-15,000	13

*Add either -AG -H, -M, -CM, -P, -PC, -A, or -FB to part No. to designate construction. See photos.

● These items not available in -PC construction.

‡For telephone line coupling or hybrid telephone line

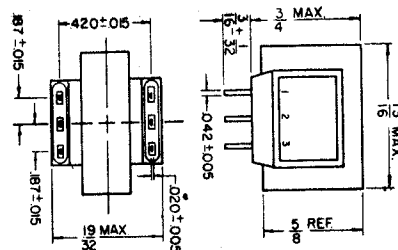
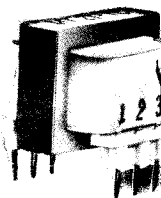
**DECI-MINIATURE — FOR PRINTED CIRCUITS —
LOW LEVEL INPUT TRANSFORMERS**

DECI-MINIATURE TRANSFORMERS—DCM SERIES

Frequency Response 200-15,000 Hz + 2db

These units can be used as input, interstage, output, isolation and other impedance requirements. Primary and secondary windings may be inter-changed to obtain required impedance matching. Note: This will result in slightly different impedance ratios than shown.

Part No.	Primary Impedance	Secondary Impedance	Pri. D.C. Unbalance Ma.	Operating Level DBM
DCM1-PC	25000 C.T.	1200 C.T.	2	18
DCM2-PC	15000 C.T.	15000 C.T.	3	19
DCM3-PC	15000 C.T.	600 C.T.	3	19
DCM4-PC	10000 C.T.	5000 C.T.	4	20
DCM5-PC	10000	2500/625 Split	2	20
DCM6-PC	10000 C.T.	1500 C.T.	4	20
DCM7-PC	5000 C.T.	80,000 C.T.	6	15
DCM8-PC	4000 C.T.	1200 C.T.	6	20
DCM9-PC	4000 C.T.	600 C.T.	6	20
DCM10-PC	4000	600/150 Split	3	20
DCM11-PC	2500 C.T.	2500 C.T.	8	20
DCM12-PC	2500	2500/625 Split	4	20
DCM13-PC	2500 C.T.	625 C.T.	8	20
DCM14-PC	2500 C.T.	200 C.T.	8	20
DCM18-PC	600 C.T.	50,000 C.T.	16	20
DCM19-PC	600	8000/2000 Split	8	20
DCM20-PC	600 C.T.	200 C.T.	16	20
DCM21-PC	600 C.T.	600 C.T.	16	20
DCM22-PC	250 C.T.	600 C.T.	25	20
DCM51-PC	Choke	10 hy @ 0 ma d.c.	5 hy @ 3 ma d.c.	300 Ω DCR
DCM52-PC	Choke	5 hy @ 0 ma d.c.	2 hy @ 5 ma d.c.	155 Ω DCR
DCM53-PC	Choke	2.5 hy @ 0 ma d.c.	1 hy @ 7 ma d.c.	75 Ω DCR



DECI-MINIATURE DCM-SERIES

New Industrial/Commercial grade miniature printed circuit transformers. Rigid terminals provide fixed mounting centers usually found in expensive molded transformers. Weight .5 oz.

LOW LEVEL CHOPPER INPUT TRANSFORMERS

Used in Servo, measuring, and coupling circuits as an Input Transformer for low level amplifiers. Efficiently transfers 30 to 500 C.P.S. transducer or thermocouple signals to instrument amplifiers at signal levels from .5 Mu V to .5V. Low hum pick up assured by three Mu-Metal shields. High permeability core provides high efficiency and low distortion. Resin potted to minimize magnetostrictive microphonics. Electrostatic shield brought out to external ground connection to eliminate chassis currents.

Request Engineering Application Bulletin F184

Part Number	Turn Ratio		Ind. of Full Pri. @ .5V. 60 Hz	Imped. of Full Pri. @ .5V. 60 Hz	D.C. Resistance Full Pri. Sec.	Fig.
	Full Pri. To Full Sec.	1/2 Pri. To Full Sec.				
M8025	1:7.7	1:15.4	17.5 HY.	6,600	365 4140	B
M8026	1:3.2	1:6.4	60 HY.	22,500	455 3500	B
M8052	1:4.53	1:9.06	90 HY.	34,000	760 5220	B
M8053 *	1:0.5	1:1	140 HY.	53,000	920 653	B
M8112	1:0.5	1:1	450 HY.	80,000	2300 1600	B
M8525	1:7.7	1:15.4	17.5 HY.	6,600	365 4140	BB
M8526	1:3.2	1:6.4	60 HY.	22,500	455 3500	BB
M8552	1:4.53	1:9.06	90 HY.	34,000	760 5220	BB
M8553 *	1:0.5	1:1	140 HY.	53,000	920 653	BB

*Secondary is center tapped.

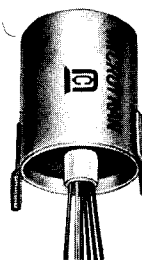


Fig. B: TRIPLE MU-METAL CASE, 6-32 x 3/8" mounting studs on 1 1/2" centers. Weight 5 oz. 1 3/8" D x 1 1/2" H.



Fig. BB: HERMETICALLY SEALED to meet MIL-T-27. Triple mu metal case, high compression glass terminals, 6-32 x 3/8" mounting studs on 1 1/2" centers; 1" dia. cut out for terminals. Weight: 5 oz.

SHIELDED PLUG-IN
Octal Type

M8030-1 have 8 pins
M8023-3 have 9 pins.
Matches many amplifiers.

SHIELDED CASED
Mounting Centers 1 3/4"
6-32 x 3/8" studs.

IN-LINE MICROPHONE

Single Mu-Metal shield, electrostatic shield, 20' shielded cable is to be terminated with desired connector.

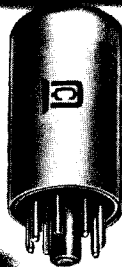


Fig. C

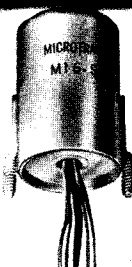


Fig. M-S



Fig. D

LOW LEVEL MICROPHONE INPUT TRANSFORMERS

These Broadcast fidelity input transformers are double mu-metal shielded.

Part Number	Pri. Imp.	Sec. Imp.	Magn. Shldg	Level DBM	Freq. Resp. ± 2db.	H	D	W	Fig.
M8027	200	40,000	25	+5	50-20,000	2 1/4"	1 3/8" x 1/2"	2	D
M8030*	200/50 C.T.	50,000	65	+5	20-20,000	2 1/2"	1 1/2" D.	6	C
M8031	600 C.T./150	50,000	65	+5	30-20,000	2 1/2"	1 1/2" D.	6	C
M8032†	250 C.T.	50,000	65	+5	20-20,000	2 1/2"	1 1/2" D.	6	C
M8033†	50 C.T.	50,000	65	+5	20-20,000	2 1/2"	1 1/2" D.	6	C
M1-S	50/250 C.T./ 600 C.T.	50,000	65	+5	20-20,000	1 1/2"	1 1/2" D.	3	M-S

*M8030 is designed as a replacement for Ampex No. 1733-1.
†M8032 and M8033 mates with sockets on many RCA amplifiers.

MICROPHONE / TRANSDUCER INPUT TRANSFORMERS

FOR: PROFESSIONAL SOUND STUDIOS—BROADCAST MIXING CONSOLES—CONTROL AND INSTRUMENT AMPLIFIERS

EQUIVALENT TO IMPORTED EUROPEAN STUDIO GRADE TRANSFORMERS

Additional Ratings Available On Special Order

FEATURES:

- **WIDE BANDWIDTH—BROAD FREQUENCY RESPONSE:**
Provided by special gapless lamination construction.
- **EXTREMELY LOW DISTORTION:**
Provided by high nickel alloy magnetic core material.
- **NEGLIGIBLE HUM PICK UP:**
Due to nested Mu-metal shields and unique gapless core construction.
- **SUBMINIATURE SIZE:**
Permits close spacing to adjacent circuitry.
- **EASE OF MOUNTING AND ORIENTATION:**
Single stud mounting of S100-S series permits rotation for minimum hum pick up.
- **POLARIZING VOLTAGE FOR CONDENSER MICROPHONES:**
Primaries with split windings or center tap permit simplex +48V. powering or +9 to +12V. parallel or simplex powering arrangement.
- **LOW MICROPHONICS:**
Resin potted to minimize magnetostrictive microphonics normally experienced in low level circuitry.
- **ELECTROSTATIC SHIELDING:**
Electrostatic shield brought out to external ground connection eliminates chassis currents.

LOW LEVEL INPUT TRANSFORMERS

Power level range up to +0 dBm. Other impedance ratios available on special order—contact factory.

Part Number	Nominal Turns Ratio Pri:Sec	Nominal Impedance Ratio		Typical Open Circuit Primary Impedance @ 50Hz †	Frequency Response ‡	Fig.	Replaces Beyer P/N	
		Primary	Secondary					
S101-S	1:20	12.5 **	5,000	100	30-20,000Hz ±.5dB	-S	TR-BV35704	
S101-SP*	1:20	12.5 **	5,000	100	30-20,000Hz ±.5dB	-SP	STR-BV37704	
S105-S	1:15	200	45,000	2,000	30-20,000Hz ±.5dB	-S	TR-145/BV35570	
S105-SP*	1:15	200	45,000	2,000	30-20,000Hz ±.5dB	-SP	STR-145/BV37570	
S107-S	1:15	200/50 split	45,000	2,000	30-20,000Hz ±.5dB	-S	TR-145/BV35545	
S107-SP*	1:15	200/50 split	45,000	2,000	30-20,000Hz ±.5dB	-SP	STR-145/BV37545	
S118-S	1.5	200/50 split	5,000	2,000	30-20,000Hz ±.5dB	-S	TR-145/BV35802	
S118-SP*	1.5	200/50 split	5,000	2,000	30-20,000Hz ±.5dB	-SP	STR-145/BV37802	
S126-S	1:1	600 C.T.	600	3,750	30-20,000Hz ±.5dB	-S	TR-145/BV35508	
S126-SP*	1:1	600 C.T.	600	3,750	30-20,000Hz ±.5dB	-SP	STR-145/BV37508	
S130-S	1:1	10,000	10,000	100,000	30-20,000Hz ±.5dB	-S	TR-145/BV35590	
S130-SP*	1:1	10,000	10,000	100,000	30-20,000Hz ±.5dB	-SP	STR-145/BV37590	
S100-FB	Right angle mounting bracket for S100-S series.						-FB	

† Designed for optional bridging termination use to provide additional 6dB output voltage gain.
‡ Frequency response measured with source equal to nominal primary impedance and with unloaded secondary except 100K load on S105 and S107 series.
* Special order only. Contact factory. **Designed to couple record head to F.E.T. input.

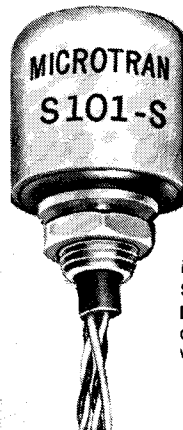


Fig. -S
SINGLE THREADED STUD MOUNTING
Double Mu-metal shielding. 3" color coded leads. 3/16"D. stud provided with nut. 5/16"D x 1/8"H.



Fig. -SP
PRINTED CIRCUIT MOUNTING
Double Mu-metal shielded. 3/16"D x 1 1/16"H. 7-.040 pins. 1/8"H.

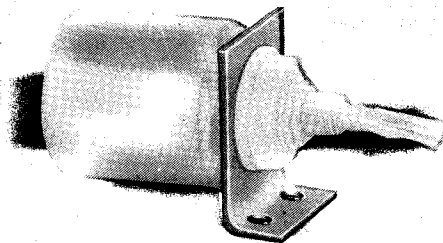


Fig. -FB
RIGHT ANGLE MOUNTING BRACKET
For low profile horizontal mounting of -S series stud mounted transformers. Supplied with two #2-56x 1/4" self tapping screws. M.C. 3/4".

TELEPHONE COUPLING TRANSFORMERS

FOR INTERCONNECT OF VOICE/DATA MODEM TERMINALS TO TELEPHONE LINES

Designed to meet Telephone Company requirements for Data and Voice Access Arrangements

Provides line isolation and matching — Prevents line imbalance
Permits Optimum use of Voice-Grade Telephone Lines for Broadband Data Signals

Wide Dynamic signal level capability — Low distortion

- **Frequency Response:** 300-3500 Hz ± 0.5 dB
- **Level:** -45 dBm to +7 dBm
- **Longitudinal Balance:** 45 dB Min.
- **Distortion:** 0.5% Max.
- **Impedance Matching:** ± 10% over entire frequency range
- **Return Loss:** 26 dB Min.

Part No.	Application	Primary Impedance	Secondary Impedance	Fig. No.
T1104	Coupling	600	600	1
T2104	Coupling	600	600	1
T2106	Coupling	600 C.T.	600 C.T.	1
T2108	Coupling	600	900	1
T2110	Coupling*	900	900	1
T6112	Coupling*	600	900, 600 @ 60 mA D. C.	2
T2220	Hybrid‡	600	600/600	1
T3220	Hybrid‡	600	600/600	1
T2316	Bridging	4000	600	1
T4415	Holding Coil	2.0 hy @60 mA, 1.3 hy @ 100 mA D.C. 180Ω		1
T7410	Holding Coil	1.0 hy @0 mA, 0.8 hy @ 25 mA D.C., 225Ω		3
T8410	Holding Coil	1.0 hy @0 mA, 0.8 hy @ 40 mA D.C., 113Ω		3

‡ 2 required for Hybrid Operation, Trans-Hybrid loss 45 db typical.

* Electrostatic Shield.

Available on special order with other ratings and construction.

DIMENSIONS

SIZE SERIES	Fig.	A	B	C	D	E	F	G	WT. OZ.
T1000	1	3/4	3/16	§	.484	.235‡	1/32	.040*	.4
T2000	1	4/4	2/2	§	.420	.187‡	1/16	.041	.5
T3000	1	1 1/4	2/2	§	.781	.200	6/64	.041	1.2
T4000	1	1 1/2	1 1/16	1 1/4	1.00	.312‡	1/32	.041	3.5
T6000	2	1 3/4	1 1/4	1 1/16	1.30	.400	1 1/32	.041	9.5

§ Do not have standoff.

*Round pins .040" dia.

‡ Pin location 2 and 5 not used on T1104, T2104, T2108, T2316, and T4415, pin spacing is 2E.

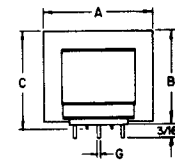


FIGURE 1
Plug-in printed circuit construction. Vacuum varnish impregnated.

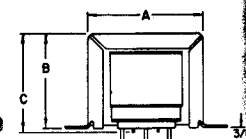
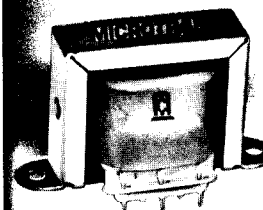
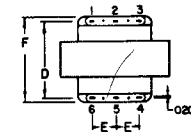


FIGURE 2
Plug-in printed circuit construction with mounting channel. Vacuum varnish impregnated.

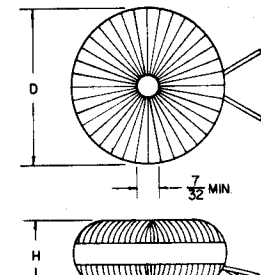
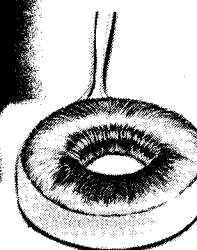
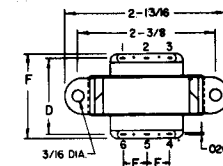


FIGURE 3
High-Q Toroid. Microcrystalline wax impregnated. Supplied with 4" #28 leads.

Size Series	D	H	Wt. Oz.
T7400	1	1 1/2	3/4
T8400	1 1/4	5/8	2

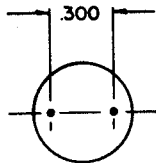
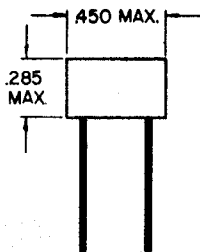
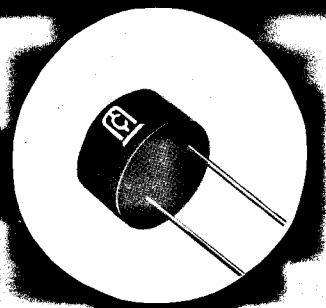


REQUEST ENGINEERING APPLICATION BULLETIN F232



ULTRA MINIATURE TOROIDAL INDUCTORS

Affords new application opportunities in high density packaging. Ultra miniaturized with low height design. Exceptionally high "Q" and wide frequency range. Available on special order with $\pm 1\%$ inductance tolerance.



MOLDED QEL-M QEM-M

Molded in high temperature epoxy resin. Leads .020" x 2" gold plated nickel alloy. Weight .02 oz.

To order, add -M to Part Number, i.e., QEL5-M, QEM10-M.

TOROIDAL INDUCTOR—QEL Series

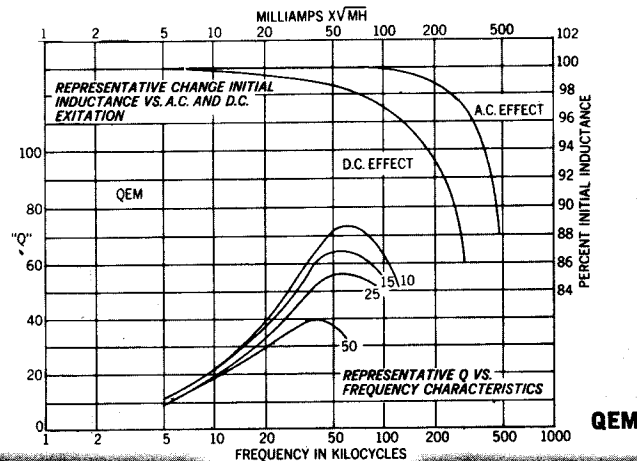
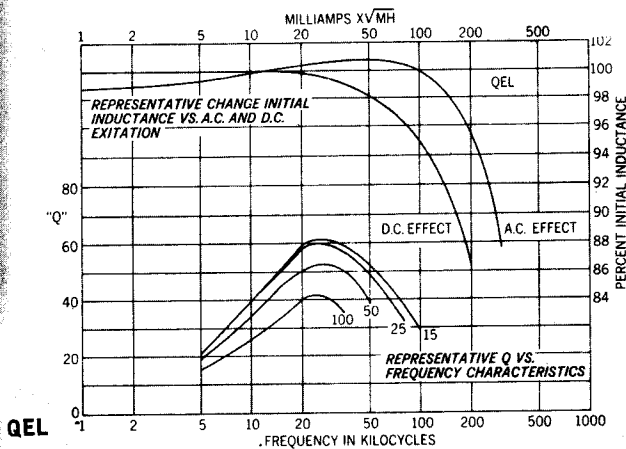
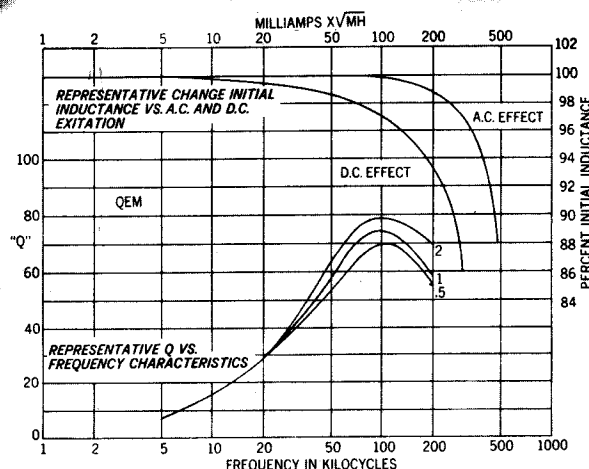
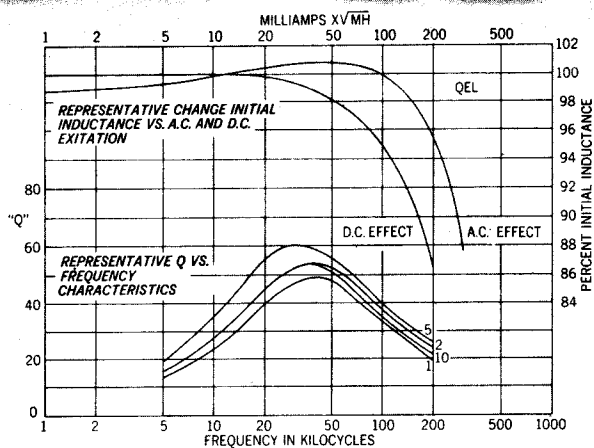
Frequency Range 1 KHZ to 300 KHZ — Accuracy $\pm 2\%$

Part No.	Inductance	Typical DCR	Typical Distributed Capacity $\mu\mu F$
QEL1-M	1 Mhy.	2.1	25
QEL2-M	2	3.6	30
QEL5-M	5	7.3	35
QEL10-M	10	15.8	45
QEL15-M	15	20	45
QEL25-M	25	32	50
QEL50-M	50	69	50
QEL100-M	100	185	70

TOROIDAL INDUCTOR—QEM Series

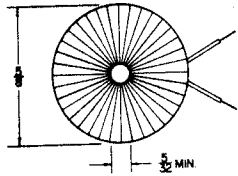
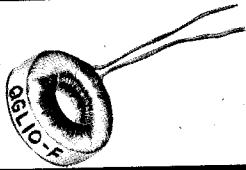
Frequency Range 3 KHZ to 500 KHZ — Accuracy $\pm 2\%$

Part No.	Inductance	Typical DCR	Typical Distributed Capacity $\mu\mu F$
QEM05-M	0.5 Mhy.	2.1	20
QEM1-M	1	3.8	30
QEM2-M	2	6.2	35
QEM5-M	5	15.9	45
QEM10-M	10	19	50
QEM15-M	15	42	55
QEM25-M	25	88	60
QEM50-M	50	193	70



MICRO-MINIATURE TOROIDAL INDUCTORS

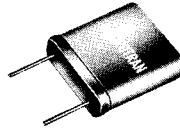
Used in extreme miniaturized missile-type applications and provides an optimum combination of small size and high "Q." Available on special order with $\pm 1\%$ or better inductance tolerances and stabilized cores.



OPEN FRAME QG-F

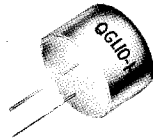
Microcrystalline wax dipped. Supplied with 4" #28 plastic leads. Wt. $\frac{1}{4}$ oz. To order add -F to part number, i.e. QGL10-F, QGM25-F.

SPECIAL ORDER ONLY



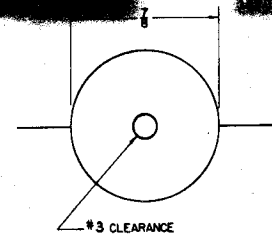
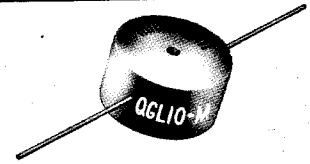
Hermetic Crystal Can, $\frac{3}{32} \times \frac{1}{32} \times \frac{3}{16}$ hi. Leads .031. Weight $\frac{1}{2}$ oz.

To order add -HC to part number, i.e. QGL10-HC, QGM25-HC.



Hermetically Sealed, $\frac{1}{16}$ D. x $\frac{1}{32}$ hi. Mounting tabs $\frac{3}{32}$ wide x $\frac{3}{16}$. Leads .031 x 2". Weight $\frac{1}{2}$ oz.

To order add -H to part number, i.e. QGL10-H.



MOLDED QG-M

Molded in High Temperature Epoxy Resin. Pigtail leads may be bent down for plug-in printed circuit applications. Leads .020"x2" gold plated nickel alloy Weight $\frac{1}{2}$ oz.

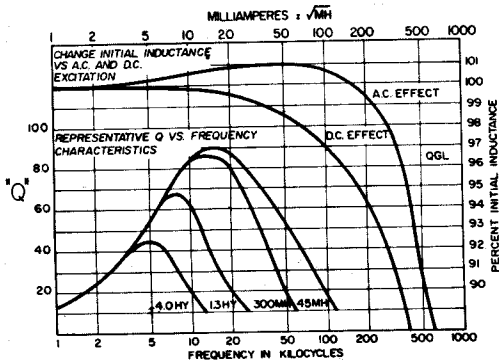
To order add -M to part number, i.e. QGL10-M, QGM25-M.

TOROIDAL INDUCTOR—QGL Series

Frequency Range to 20 KHZ — Accuracy $\pm 2\%$
Available on special order with specific inductance values from 1.0 Mh through 4.0 Hy.

Part No.	Inductance	Typical DCR Ω	Typical Distributed Capacity $\mu\mu\text{F}$
QGL5-(*)	5 Mhy.	2.5	30
QGL10-(*)	10	5	33
QGL15-(*)	15	8	34
QGL30-(*)	30	17	37
QGL50-(*)	50	28	40
QGL100-(*)	100	50	42
QGL250-(*)	250	130	46
QGL500-(*)	500	290	48
QGL1000-(*)	1.00 Hy.	530	51
QGL1500-(*)	1.50	825	53

*Add either -M or -F to Part No. to designate construction. See Photos.



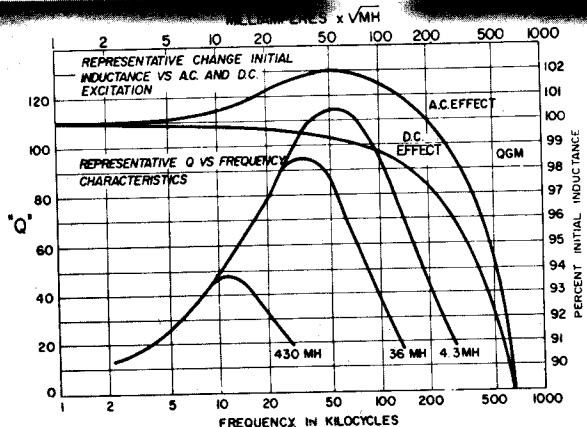
QGL

TOROIDAL INDUCTOR—QGM Series

Frequency Range 2 KHZ to 100 KHZ — Accuracy $\pm 2\%$
Series available to 500 Mh on special order.

Part No.	Inductance	Typical DCR Ω	Typical Distributed Capacity $\mu\mu\text{F}$
QGM1-(*)	1 Mhy.	1.4	22
QGM2-(*)	2	2.5	25
QGM5-(*)	5	6	28
QGM10-(*)	10	12	31
QGM15-(*)	15	18	32
QGM25-(*)	25	30	35
QGM50-(*)	50	52	37
QGM100-(*)	100	115	39

*Add either -M or -F to Part No. to designate construction. See Photos.

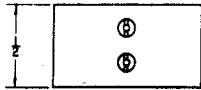
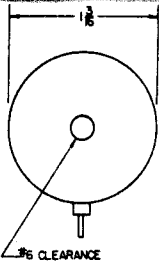
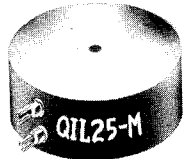


QGM



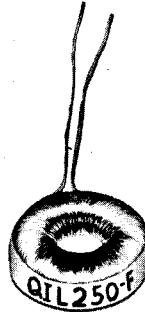
SUB-MINIATURE TOROIDAL INDUCTOR

The excellent "Q" characteristics of this series make it ideal for the size and weight requirements of portable airborne equipment. This series is available on special order with $\pm 1\%$ or better inductance tolerances and stabilized cores.



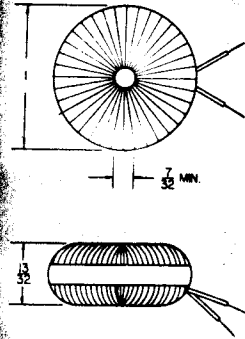
MOLDED QI-M

Molded in high temperature Epoxy. Silver plated terminals.
To order add -M to part number, i.e. QIL10-M, QIL25-M. Weight 1½ oz.
On special order threaded insert is available in place of clearance hole.



OPEN FRAME QI-F

Microcrystalline wax dipped. Supplied with 4" #28 plastic leads. Weight ¾ oz.
To order add -F to part number, i.e. QIL250-F.

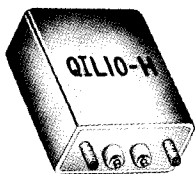


TOROIDAL INDUCTOR — QIL Series

Frequency Range to 20 KHZ — Accuracy $\pm 2\%$
Available on special order with specific inductance values through 7.0 Hy.

Part No.	Inductance	Typical DCR Ω	Typical Distributed Capacity $\mu\mu\text{F}$
QIL3-(*)	3 Mhy.	.73	36
QIL5-(*)	5	1.1	38
QIL10-(*)	10	2.1	40
QIL15-(*)	15	3.3	42
QIL25-(*)	25	5.3	45
QIL50-(*)	50	11	47
QIL100-(*)	100	22	49
QIL150-(*)	150	34	50
QIL250-(*)	250	55	53
QIL500-(*)	500	95	55
QIL1000-(*)	1.00 Hy.	210	57
QIL1500-(*)	1.50	335	59
QIL2500-(*)	2.50	550	61

*Add either -M, -H, or -F to Part No. to designate construction. See Photos.

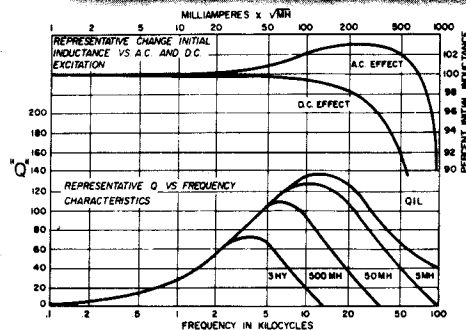
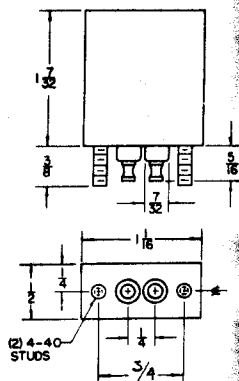


HERMETIC QI-H

Hermetically sealed in metal case. Teflon terminals assure permanent seal at temperature extremes.

To order add -H to part number, i.e. QIL10-H, QIL25-H. Weight 1½ oz.

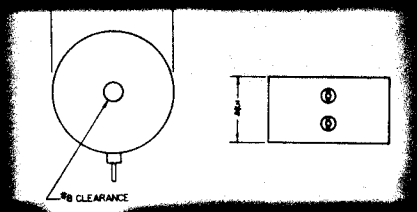
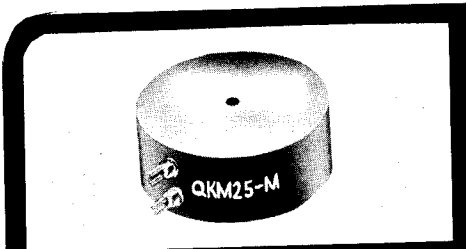
On special order available with inserts in place of studs.



QIL

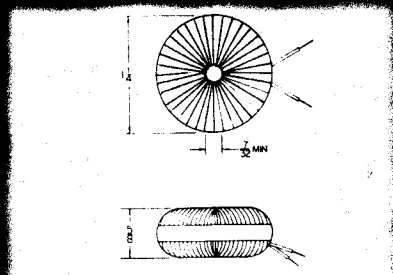
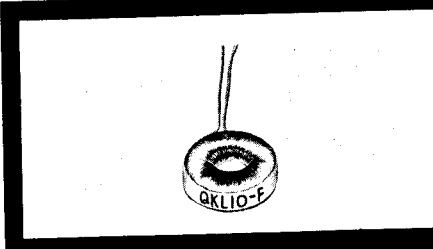
MINIATURE TOROIDAL INDUCTOR

Their characteristics permit high "Q", power level, and stability in a unit with reasonable size and weight. Both series available on special order with $\pm 1\%$ or better inductance tolerances and stabilized cores.



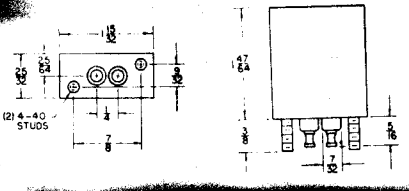
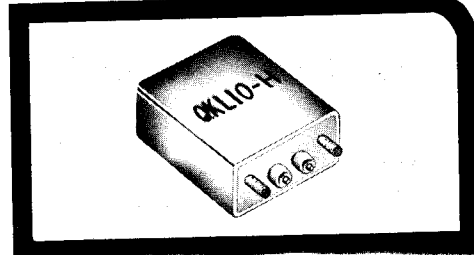
MOLDED QK-M

Molded in high temperature epoxy resin. Silver plated terminals.
To order add -M to part number, i.e. QKL10-M, QKM25-M. Weight 3 $\frac{3}{4}$ oz.
On special order threaded insert is available in place of clearance hole.



OPEN FRAME QK-F

Microcrystalline wax dipped. Supplied with 4" #28 plastic leads.
To order add -F to part number, i.e. QKL10-F, QKM25-F. Weight 2 oz.



HERMETIC QK-H

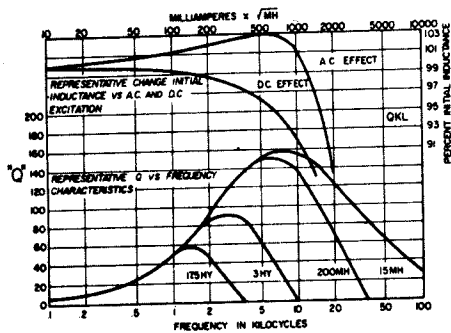
Hermetically sealed in metal case. Teflon terminals assure permanent seal at temperature extremes.
To order add -H to part number, i.e. QKL10-H, QKM25-H. Weight 3 $\frac{3}{4}$ oz.
On Special Order available with inserts in place of studs.

TOROIDAL INDUCTOR — QKL Series

Frequency Range to 10 KHZ — Accuracy $\pm 2\%$
Available on special order with specific inductance values to 17.5 Hy.

Part No.	Inductance	Typical DCR Ω	Typical Distributed Capacity $\mu\mu\text{F}$
QKL5-(*)	5 Mhy.	.62	60
QKL10-(*)	10	1.1	66
QKL15-(*)	15	1.7	68
QKL25-(*)	25	2.8	72
QKL50-(*)	50	6	76
QKL100-(*)	100	11	81
QKL150-(*)	150	17	83
QKL250-(*)	250	28	87
QKL500-(*)	500	63	91
QKL1000-(*)	1.00 Hy.	110	96
QKL1500-(*)	1.50	175	98
QKL2500-(*)	2.50	275	103
QKL5000-(*)	5.00	645	106
QKL10,000-(*)	10.00	1175	112

*Add either -M, -H, or -F to Part No. to designate construction. See Photos.



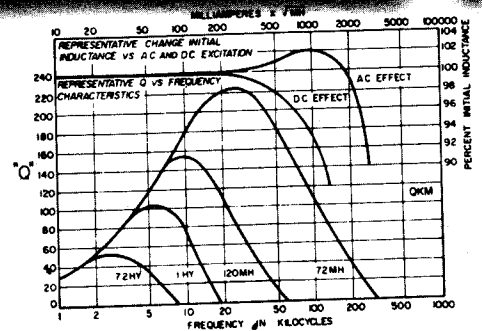
QKL

TOROIDAL INDUCTOR — QKM Series

Frequency Range 5 to 50 KHZ — Accuracy $\pm 2\%$
Available on special order with specific inductance values to 1000 Mh.

Part No.	Inductance	Typical DCR Ω	Typical Distributed Capacity $\mu\mu\text{F}$
QKM2-(*)	2 Mhy.	.45	52
QKM5-(*)	5	1.1	58
QKM10-(*)	10	2.5	62
QKM25-(*)	25	6.5	70
QKM50-(*)	50	11	74
QKM100-(*)	100	25	79
QKM250-(*)	250	65	87
QKM500-(*)	500	115	92
QKM1000-(*)	1.00 Hy.	250	97

*Add either -M, -H, or -F to Part No. to designate construction. See Photos.

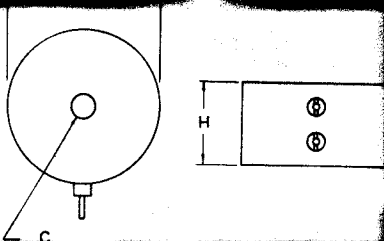
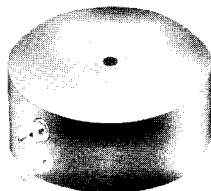


QKM



HIGH-Q TOROIDAL INDUCTORS

Permits construction with high power ratings and sharp frequency characteristics. This series is available on special order with $\pm 1\%$ or better inductance tolerances and stabilized cores. Available on special order with specific inductance values to 75 Hy.



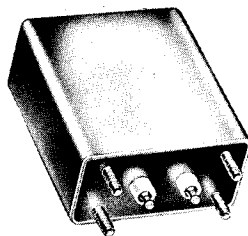
MOLDED - M

Molded in high temperature epoxy resin. Silver plated terminals.

To order add -M to part number, i.e., QPL25-M, QTL25-M.

On special order threaded insert is available in place of clearance hole.

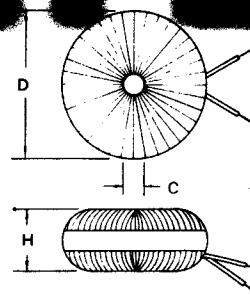
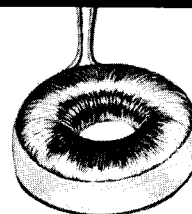
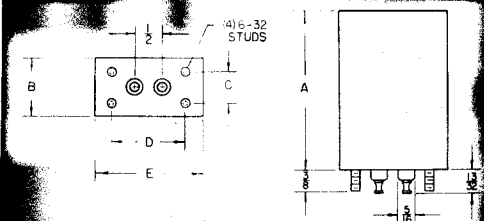
MODEL	D	H	C	WGT.
QPL-M	2"	1"	#10	6 oz.
QTL-M	2 7/8"	1 3/8"	#10	14 oz.



HERMETIC - H

Hermetically sealed in metal case. Teflon terminals assure permanent seal at temperature extremes.

Series	Dimensions					Wt. Oz.
	A	B	C	D	E	
QPL-H	2 1/2"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	9 1/2
QTL-H	2 1/8"	1 1/8"	1 1/8"	2 1/4"	2 1/8"	16



OPEN-FRAME - F

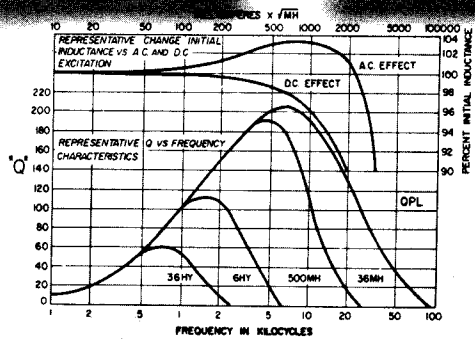
Microcrystalline wax dipped, 4" #24 Leads. To order add -F to part number, i.e., QPL25-F, QTL25-F.

MODEL	D	H	C	WGT.
QPL-F	1 1/8"	7/8"	1 1/2 min.	5 oz.
QTL-F	2 1/8"	1"	3/8 min.	9 oz.

TOROIDAL INDUCTOR - QPL Series

Frequency Range to 10 KHZ - Accuracy $\pm 2\%$

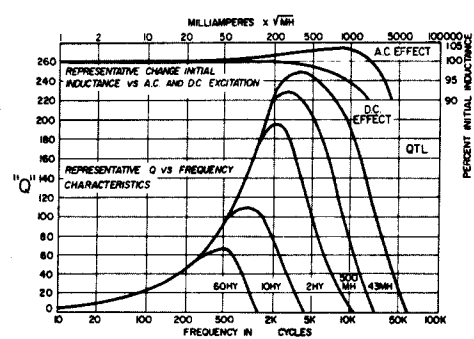
Part No.	Inductance	Typical DCR Ω	Typical Distributed Capacity $\mu\mu\text{F}$
QPL25-(*)	25 Mhy.	1.5	100
QPL50-(*)	50	2.5	105
QPL100-(*)	100	6	110
QPL250-(*)	250	15	115
QPL500-(*)	500	25	120
QPL1000-(*)	1.00 Hy	60	125
QPL1500-(*)	1.50	90	130
QPL2500-(*)	2.50	150	133
QPL5000-(*)	5.00	350	138
QPL7500-(*)	7.50	525	140
QPL10,000-(*)	10.00	600	142
QPL15,000-(*)	15.00	900	146
QPL25,000-(*)	25.00	1500	150



TOROIDAL INDUCTOR - QTL Series

Frequency Range to 15 KHZ - Accuracy $\pm 2\%$

Part No.	Inductance	Typical DCR Ω	Typical Distributed Capacity $\mu\mu\text{F}$
QTL25-(*)	25 Mhy.	.85	127
QTL50-(*)	50	1.5	136
QTL100-(*)	100	2.8	144
QTL150-(*)	150	3.9	149
QTL250-(*)	250	7	156
QTL500-(*)	500	15	164
QTL1000-(*)	1.00 Hy.	27	173
QTL1500-(*)	1.50	40	177
QTL2500-(*)	2.50	70	184
QTL5000-(*)	5.00	140	192
QTL10,000-(*)	10.00	270	200
QTL15,000-(*)	15.00	430	205
QTL25,000-(*)	25.00	850	212
QTL50,000-(*)	50.00	1500	221



*Add either -M,-H, or -F to Part No. to designate construction See Photos.

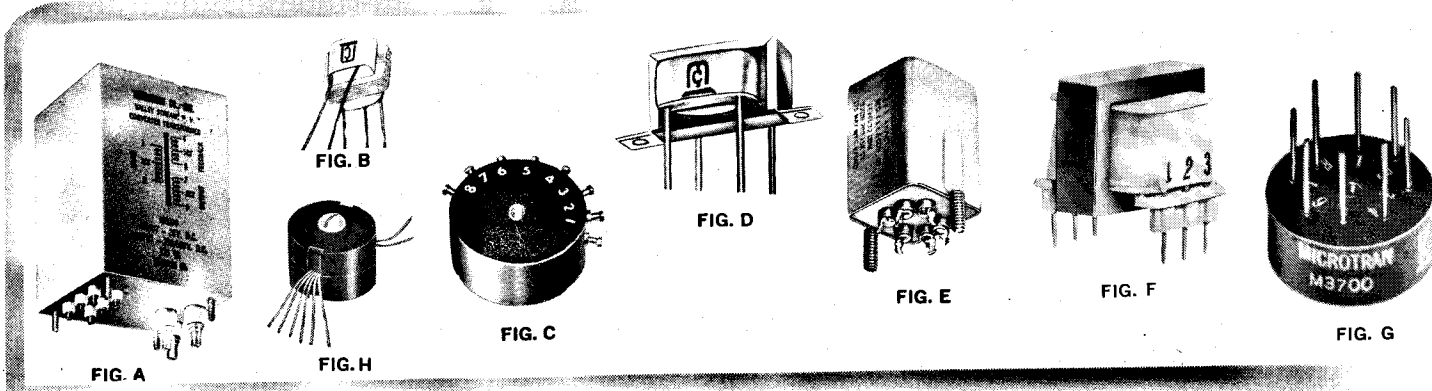


D.C. to D.C. CONVERTER TRANSFORMERS

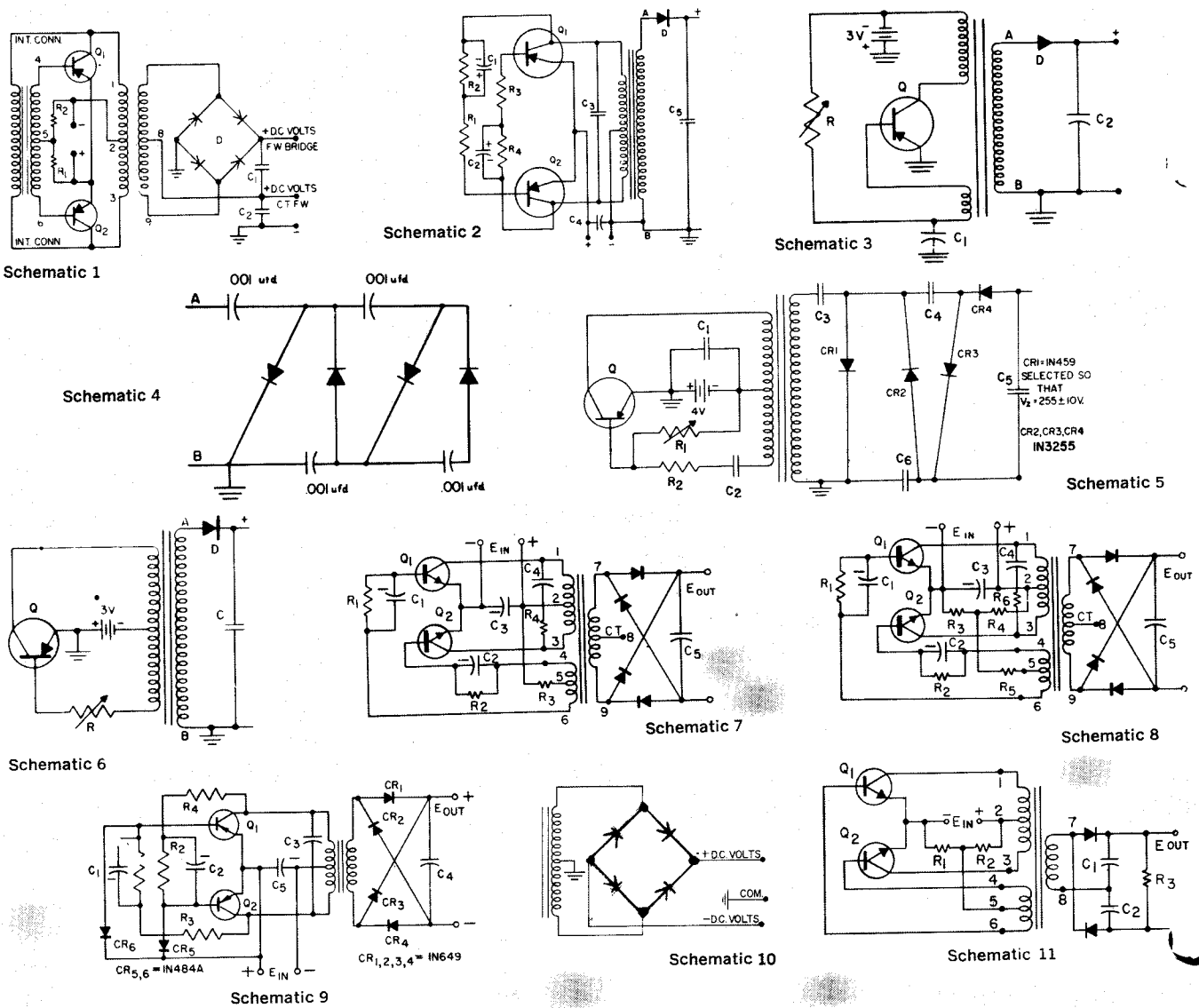
APPLICATIONS:

- Portable Radiation Monitors • Infra-Red Detectors • Op-Amp Power Supplies
- D.C. Isolation • Geodetic-Oceanographic-Medical Equipment
- Mobile Equipment • High Intensity Flashers • D.C. Supply for Modular Equipment

A BROAD SELECTION OF RATINGS AND DESIGNS TO FILL YOUR CIRCUIT REQUIREMENTS



TYPICAL D.C.-D.C. CONVERTER TRANSFORMER CIRCUITS



ALL TRANSFORMERS ARE SUPPLIED WITH ENGINEERING BULLETIN, LISTING COMPONENT VALUES



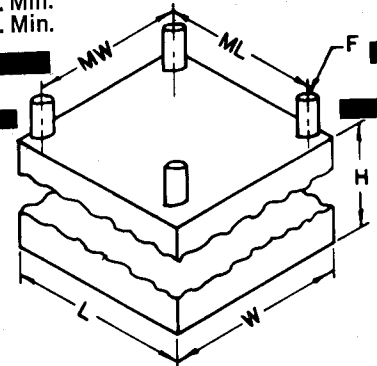
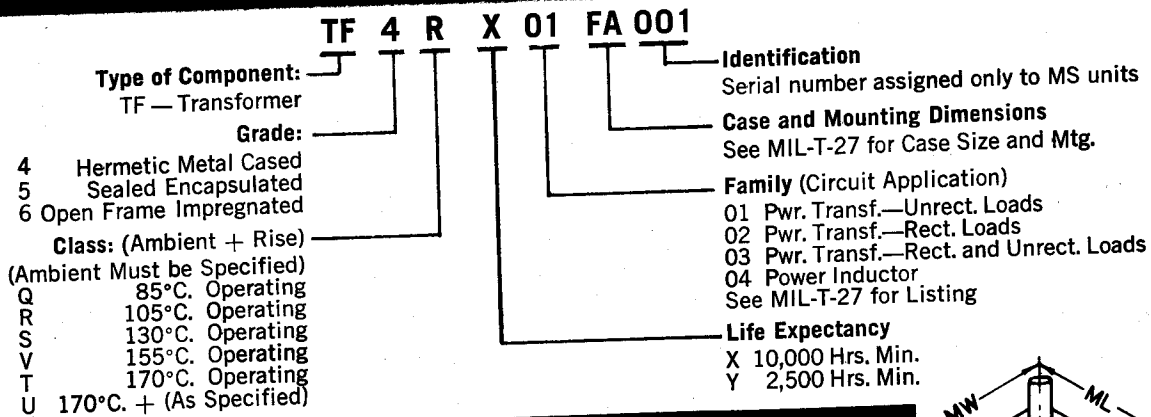
D.C. to D.C. CONVERTER TRANSFORMERS

SELECT THE UNIT THAT MEETS YOUR POWER AND SIZE REQUIREMENTS	Catalog Number	Total VA Δ Output	D.C. Input Volts	D.C. OUTPUT**				Switch Frequency Hz approx.	Schematic No.	Typical Transistor	DIMENSIONS					Type of Construction	Fig No.	Approx. Weight Oz.
				BRIDGE		C.T. FULL WAVE					D	W	H	Mtg. MD	Centers MW			
				Volts	MA	Volts	MA											
NEW 25 mw to 190 mw HIGH VOLTAGE LOW POWER MINIATURE DESIGN	M8149	25 mw	3	1000*	25 μ A	—	—	400	3	2N670	1 $\frac{1}{4}$	1 $\frac{1}{4}$	2 $\frac{3}{32}$	—	—	Plug-In Printed Circuit	F	1.25
	M8050	25 mw	3	1000*	25 μ A	—	—	400	3	2N670	1 $\frac{1}{16}$	1 $\frac{1}{16}$	2 $\frac{3}{32}$	1 $\frac{1}{8}$	—	Laminated—Open Frame	D	1.25
	M8051	25 mw	3	1000*	25 μ A	—	—	400	3	2N670	1	1	1 $\frac{3}{8}$	1 $\frac{1}{8}$	—	Laminated—MIL Case AG	E	2.4
	M8073	25 mw	4	425-500*	50 μ A	—	—	50-3K†	5	2N1305	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{3}{8}$	—	—	Laminated—Open Frame	B	.1
	M8074	50 mw	3	535*	90 μ A	—	—	400	6	2N414	1 $\frac{1}{16}$	1 $\frac{1}{16}$	2 $\frac{3}{32}$	1 $\frac{1}{8}$	—	Laminated—Open Frame	D	1.25
	M8072	190 mw	2.7	480*	400 μ A	—	—	800	2	2N1307	1 $\frac{1}{16}$	1 $\frac{1}{16}$	2 $\frac{3}{32}$	1 $\frac{1}{8}$	—	Laminated—Open Frame	D	1.25
	M8120	190 mw	28	480*	400 μ A	—	—	3.5K	9	2N4355	1 $\frac{1}{16}$	1 $\frac{1}{16}$	2 $\frac{3}{32}$	1 $\frac{1}{8}$	—	Laminated—Open Frame	D	1.25
NEW 3 VA DISPLAYS NIXIE-PANAPLEX SP-300/SP-700	M8121	3	5	190	15	—	—	20K	11	2N6121	3/8 D x 1/2 H — ‡				Pot Core — Open Frame	H	.3	
5 VA HIGH VOLTAGE LOW PROFILE ENCAPSULATED	M8115	5	13.8	\pm 250 or 500 \blacksquare	10	250	20	6K	8	2N3054	1/4 D x 3/4 H — .140 Cl. Hole				Toroid—Encapsulated	C	1.1	
	M8117	5	28	\pm 250 or 500 \blacksquare	10	250	20	6K	7	2N3054	1/4 D x 3/4 H — .140 Cl. Hole				Toroid—Encapsulated	C	1.1	
NEW	M8122	5	5	\pm 15 or 30 \blacksquare	175	15	350	20K	7	2N3055	1/4 D x 3/4 H — .140 Cl. Hole				Molded Toroid Plug-In	G	1.1	
30 VA HIGH SWITCHING FREQUENCY LOW PROFILE ENCAPSULATED	M8132	30	13.8	\pm 15 or 30 \blacksquare	1000	15	2000	20K	7	2N3055	1/4 D x 3/4 H — .140 Cl. Hole				Toroid—Encapsulated	C	1.1	
	M8133	30	28	\pm 15 or 30 \blacksquare	1000	15	2000	20K	7	2N3055	1/4 D x 3/4 H — .140 Cl. Hole				Toroid—Encapsulated	C	1.1	
40 VA HIGH VOLTAGE HERMETIC	M8036	40	13.6	\pm 225 or 450 \blacksquare	90	225	155	800	1	2N442	2 $\frac{3}{8}$	2 $\frac{3}{8}$	3 $\frac{1}{8}$	1 $\frac{1}{8}$	1 $\frac{1}{8}$	Laminated—MIL Case FA	A	1 $\frac{1}{2}$ lbs.
50 VA MEDIUM POWER LOW PROFILE ENCAPSULATED	M8113	50	13.8	\pm 14 or 28 \blacksquare	1750	14	3500	2.5K	7	2N3055	2 $\frac{1}{2}$ D x 1 $\frac{1}{4}$ H — .170 Cl. Hole				Toroid—Encapsulated	C	6	
	M8114	50	28	\pm 14 or 28 \blacksquare	1750	14	3500	2.5K	7	2N3055	2 $\frac{1}{2}$ D x 1 $\frac{1}{4}$ H — .170 Cl. Hole				Toroid—Encapsulated	C	6	
	M8116	50	13.8	\pm 35 or 70 \blacksquare	700	35	1400	2.5K	7	2N3055	2 $\frac{1}{2}$ D x 1 $\frac{1}{4}$ H — .170 Cl. Hole				Toroid—Encapsulated	C	6	
	M8118	50	28	\pm 35 or 70 \blacksquare	700	35	1400	2.5K	7	2N3055	2 $\frac{1}{2}$ D x 1 $\frac{1}{4}$ H — .170 Cl. Hole				Toroid—Encapsulated	C	6	
125 VA HIGH VOLTAGE HIGH POWER HERMETIC	M8035	125	13.6	\pm 250 or 500 \blacksquare	250	250	420	800	1	2N442	2 $\frac{3}{8}$	2 $\frac{3}{8}$	3 $\frac{1}{8}$	2 $\frac{1}{8}$	1 $\frac{1}{8}$	Laminated—MIL Case GA	A	2 $\frac{1}{2}$ lbs.
	M8034	125	28	\pm 250 or 500 \blacksquare	250	250	420	800	1	2N174	2 $\frac{3}{8}$	2 $\frac{3}{8}$	3 $\frac{1}{8}$	2 $\frac{1}{8}$	1 $\frac{1}{8}$	Laminated—MIL Case GA	A	2 $\frac{1}{2}$ lbs.

‡ Supplied with 4-40 nylon mtg. screw and nut in center hole.
 Δ Full wave and C.T. loads may be simultaneously drawn, but for continuous duty, total V.A. output should not be exceeded.
 \blacksquare For positive and negative voltage supply as utilized in op-amp and similar circuitry, use secondary circuit #10.
 * Output when used with schematic indicated. ** Based on approximately 1 volt drop per rectifier. † Frequency depends on load and bias conditions.



INTERPRETATION OF TYPE DESIGNATION PER MIL-T-27



STANDARD MIL-T-27 CASES

EQUIVALENCY CHARTS

DECIMAL	TEMPERATURE		POWER	
	°F	°C	dbm	Power
1/64 — .0156	662	350	—30	1.0μw.
1/32 — .0313	392	200	—20	10.0
1/16 — .0625	374	190	—10	100
3/32 — .0938	356	180	—6	250
1/8 — .1250	338	170	—5	320
5/32 — .1563	320	160	—4	400
3/16 — .1875	311	155	—3	500
7/32 — .2188	302	150	—2	630
1/4 — .2500	284	140	—1	794
9/32 — .2813	266	130	0	1.0mw
5/16 — .3125	257	125	1	1.3
11/32 — .3438	248	120	2	1.6
3/8 — .3750	221	105	3	2.0
13/32 — .4063	212	100	4	2.5
7/16 — .4375	194	90	5	3.2
15/32 — .4688	185	85	6	4.0
1/2 — .5000	176	80	10	10.0
17/32 — .5313	158	70	15	31.6
9/16 — .5625	149	65	20	100
19/32 — .5938	140	60	25	320
5/8 — .6250	131	55	30	1.0 watt
21/32 — .6563	122	50	35	3.2
11/16 — .6875	104	40	40	10
23/32 — .7188	95	35	45	32
3/4 — .7500	86	30	50	100
25/32 — .7813	77	25	60	1000
13/16 — .8125	68	20	70	10KW
27/32 — .8438	50	10	80	100KW
7/8 — .8750	32	0	90	1000KW
29/32 — .9063	+14	—10	100	10 Meg. W
15/16 — .9375	—4	—20		
31/32 — .9688	—40	—40		
1 — 1.000	—67	—55		
	—85	—65		

dbm - 10log $\frac{P}{1mw}$

Case Symbol	—Case Dimensions—			—Mounting Dimensions—		
	L	W	H	ML	MW	F
AF	3/4	3/4	1 1/8	*1 1/8	—	4-40x3/8
AG	1	1	1 1/8	*1 1/8	—	6-32x3/8
AH	1 1/8	1 1/8	1 1/4	S:1 1/4	—	6-32x3/8
AJ	1 1/8	1 1/8	2 3/8	1 1/8	1 1/4	6-32x3/8
EA	1 1/8	1 1/8	2 3/8	1 1/8	1 1/4	6-32x3/8
EB	1 1/8	1 1/8	2 3/8	1 1/8	1 1/4	6-32x3/8
FA	2 3/8	2 3/8	3 3/8	1 1/8	1 1/8	6-32x3/8
FB	2 3/8	2 3/8	2 1/2	1 1/8	1 1/8	6-32x3/8
GA	2 3/8	2 3/8	3 3/8	2 3/8	1 1/4	6-32x3/8
GB	2 3/8	2 3/8	2 3/8	2 3/8	1 1/4	6-32x3/8
HA	3 3/8	2 3/8	4 1/4	2 1/8	1 5/8	8-32x3/8
HB	3 3/8	2 3/8	3 3/8	2 1/8	1 5/8	8-32x3/8
JA	3 3/8	3 3/8	4 3/8	2 3/8	2 3/8	8-32x3/8
JB	3 3/8	3 3/8	3 3/8	2 3/8	2 3/8	8-32x3/8
KA	3 3/8	3 3/8	5 1/4	3	2 3/8	10-32x1/2
KB	3 3/8	3 3/8	4 3/8	3	2 3/8	10-32x1/2
LA	4 3/8	3 1/8	5 3/8	3 3/8	2 1/8	10-32x1/2
LB	4 3/8	3 1/8	4 1/2	3 3/8	2 1/8	10-32x1/2
MA	4 1/8	4	6	3 1/8	3	1/4-20x3/8
MB	4 1/8	4	4 1/8	3 1/8	3	1/4-20x3/8
NA	5 1/8	4 3/8	6 1/8	4 3/8	3 3/8	1/4-20x3/8
NB	5 1/8	4 3/8	5 1/2	4 3/8	3 3/8	1/4-20x3/8
OA	5 1/2	4 1/2	6 3/4	3 3/4	3	1/4-20x3/8

*Not in conformance with MIL-T-27 S: Two studs in a diagonal.

YY—All metal cases not included above or with non-standard mounting centers. ZZ—Open type & encapsulated units.

1. Tolerances on dimensions L and W are +0 to -1/16 for cases AF, AG, AH and AJ; +0 to -1/8 for all other cases.
2. Tolerances on dimension H are +0 to -1/16 for cases AF, AG, AH, and AJ; +0 to -1/8 for all other cases.
3. Tolerances on dimensions ML and MW are ±1/16 for cases AJ to JB inclusive; ±1/8 for cases KA to LB, inclusive; and ±3/16 for cases MA to OA, inclusive. When mounting studs or holes for inserts are used, they shall be symmetrically located.
4. Screw-stud lengths are from mounting surface and have a length tolerance of ±1/16 on studs 1/2" long or less & ±1/8 on studs over 1/2" L.

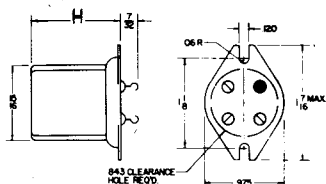
400 Hz POWER SUPPLY TRANSFORMERS

On special order certain units may be obtained in alternate constructions such as Epoxy molded, or open frame. Also available with modified electrical specifications.

FULL TERMINAL ARRANGEMENTS AND COLOR CODE DESIGNATIONS SUPPLIED WITH EACH UNIT.

HERMETICALLY SEALED—FIG. A

Per MIL-T-27
MIL Designation: TF4RX01xx



HERMETIC—FIG. B

Height (H) for M8063 — 1/16",
M8069 — 1/8", M8058, M8075,
M8081, M8082 — 1/4".
MIL DESIGNATION TF4RX01YY

TOROIDAL MOLDED—FIG. C

Molded with 1/2" pins for printed circuit applications.
MIL Designation: TF5SX01xx

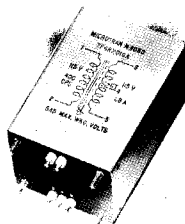


FIG. A



FIG. B

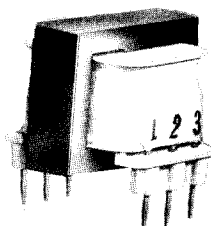
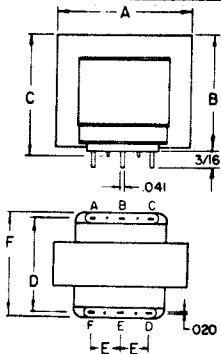


FIG. C

400 Hz PLUG-IN P.C. POWER

Compact design for miniature solid state circuitry. Precision spaced molded-in terminals for power supplies, control equipment, instrument and similar applications. — Dual secondaries may be connected in series or parallel for varied voltage and current requirements. 115 V Primary.

Catalog No.	Secondary Parallel	Secondary Series
PC4304	3.15V @ .1A	6.3V CT @ .05A
PC4312	12.6V @ .026A	25.2V CT @ .013A
PC4316	28V @ .012A	56V CT @ .006A
PC4320	35V @ .01A	70V CT @ .005A
PC4408	6.3V @ 0.60A	12.6V CT @ .30A
PC4412	12.6V @ 0.30A	25.2V CT @ .15A
PC4416	28V @ 0.14A	56V CT @ .07A
PC4424	40V @ 0.10A	80V CT @ .05A
PC4428	58V @ .066A	116V CT @ .033A
PC4432	115V @ .010A, 12.6V @ .150A	



plug-in printed circuit

DIMENSIONS

SERIES	A	B	C	D	E	F	WT. OZ.
PC4300	49/64	23/32	†	.420	.187	1 1/16	.5
PC4400	1 1/64	27/32	†	.781	.200	6 1/64	1.2

† Do not have standoff

400 Hz POWER SUPPLY TRANSFORMERS

For Silicon Rectifier Circuitry, and Filament Applications
Primary 105/115/125 Volts MIL Designation: TF4RX01XX

Part No.	Secondary A.C. Volts	RMS Amps.	Rectifier C.T. Full Wave D.C. Volts**	Circuit F.W. Bridge D.C. Volts**	Fig. A Mil Case XX
M8063†	2.85 2.85	.045 .045	1.5 (series)	3	YY Fig. B
M8064†	6.3 C.T.	.6	1.9	3.8	AH
M8075†	6.3 C.T.	.3	1.9	3.8	YY Fig. B
M8076†	12.6 C.T.	.3	4.7	9.4	AH
M8039	12.6 12.6 C.T.	.8 .8	10.5 (series)	21 (series)	AJ
M8077	12.6 12.6 C.T.	2 2	10.5 (series)	21 (series)	FA
M8038	12.6 12.6 12.6 C.T.	.3 .3 .3	16 (series)	32 (series)	AJ
M8018	18.5 C.T.	1	7.4	14.8	EA
M8019	18.5 C.T.	3	7.4	14.8	FA
M8065	26 C.T.	1.5	10.8	21.6	EA
M8066	26 C.T.	3	10.7	21.5	FA
M8079	26 C.T.	4	10.8	21.6	HA
M8067	30 C.T.	1.5	12.5	25	FB
M8020	35 C.T.	3	14.5	29	GA
M8068	40 C.T.	.2	17	34	AJ
M8041†	50 C.T.	.25	21.5	43	AH
M8080	50 C.T.	.20	21.5	43	AJ
M8069†	60 C.T.	.003	26	52	YY Fig. B
M8070†	65 C.T.	.170	28.4	56.8	AH
M8081†	65 C.T.	.030	28.4	56.8	YY Fig. B
M8021	70 C.T.	1	30	60	FA
M8071	80 C.T.	.90	35	70	FA

**DC Output V for resistive or inductive rectifier loads. Output V based on approx. 1V drop per rectifier. †Primary 115 Volts only

400 Hz TOROIDAL POWER TRANSFORMERS

Toroidal cores permit smaller height and package and greater efficiency. Size and savings up to 30%. Epoxy molded. Printed circuit pins can be bent for chassis mounting. Low phase shift. See Fig. C for illustration.

For Applications Requiring Minimum Size and Weight
Primary 115 Volts MIL Designation: TF5SX01ZZ

Part No.	Secondary Volts	Secondary Current ma	V.A.	Dimensions OD	Height	Nominal Weight oz
M8106	28 C.T.	320	9	1 1/2	1 1/4	2
M8107	28 C.T.	710	20	1 1/2	1 1/4	4
M8108	56 C.T.	160	9	1 3/4	1 1/4	2
M8109	56 C.T.	356	20	1 1/2	1 1/4	4
M8110	115 C.T.	78	9	1 3/4	1 1/4	2
M8111	115 C.T.	170	20	1 1/2	1 1/4	4

.170 Clearance Hole for #8 Screw

400 Hz ISOLATION POWER TRANSFORMERS

Center Tap Permits Use In Either F.W. Bridge or F.W.C.T. Circuitry
Electrostatic Shielding MIL Designation: TF4RX01XX

Part No.	Input Voltage	Output Voltage	Current RMS Amps	V.A. Rating	Fig. A Mil Case xx
M8082	26	12.6 C.T. 12.6	.15 .15	1.9 1.9	YY (Fig. B)
M8058	115	115 C.T.	.017	2	YY (Fig. B)
M8083	115	115 C.T. 12.6 C.T. 12.6	.030 .25 .25	10 Total	AJ
M8084	115	115 C.T.	.12	14	AJ
M8059	115	115 C.T.	.35	40	EB
M8085	115	115 C.T.	.7	80	FA
M8060	115	115 C.T.	1.3	150	GA
M8061*	115	115 C.T.	2.6	300	JA
M8062*	115	115 C.T.	4.4	500	KA

*Primary 105/115/125 volts.



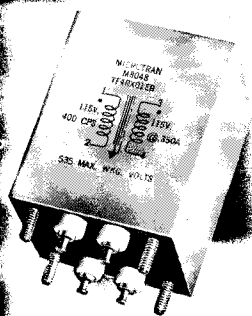
60 Hz POWER SUPPLY TRANSFORMERS

Designed for solid state and low voltage applications. All units shown are hermetically sealed and manufactured in accordance with the requirements of MIL-T-27.
FULL TERMINAL ARRANGEMENTS AND COLOR CODE DESIGNATIONS SUPPLIED WITH EACH UNIT.

HERMETICALLY SEALED

Per MIL-T-27
 MIL Designation:
TF4RX01xx

See Page 25 for MIL Case Dimensions. Also available in open frame construction, see page 18.



METHOD OF APPROXIMATING SECONDARY AC CURRENT REQUIREMENTS

Since transformers may be used in many possible configurations, the current ratings shown above are AC-RMS secondary winding currents. When selecting the "Secondary Amp" rating, the conversion chart shown below may be helpful. For exact values of secondary current requirements; use curves prepared by O.H. SHADE "Proc of IRE 7/43 Analysis of Rectifier Operation."

Rectifier Type	Filter Type	Approx. Secondary RMS Current
Full Wave Center-Tap	Choke Input	.7 times DC current
Full Wave Center-Tap	Capacitor Input	1.2 times DC current
Full Wave Bridge	Choke Input	Equal to DC current
Full Wave Bridge	Capacitor Input	1.8 times DC current

60 Hz POWER SUPPLY TRANSFORMERS

For Silicon Rectifier Circuitry, and Filament Applications
 Primary 105/115/125 Volts MIL Designation: TF4RX01xx

Part No.	A.C. Volts	Secondary RMS Amperes	Rectifier Current C.T. Full Wave D.C. Volts**	F.W. Bridge D.C. Volts**	Fig. A MIL Case xx
M8042	6.3 C.T.	.6	1.9	3.8	AJ
M8043	6.3 C.T.	2.0	1.9	3.8	FB
M8086	6.3 C.T.	6.0	1.9	3.8	GA
M8087	12.6 C.T.	3.0	4.7	9.4	GA
M8044	12.6	2.0	10.5(series)	21(series)	JB
	12.6 C.T.	2.0			
M8022	18.5 C.T.	3.0	7.4	14.8	JB
M8088	26 C.T.	2.5	10.8	21.6	HA
M8152	28 C.T.	.15	11.7	23.4	AJ
M8045	28 C.T.	.6	11.7	23.4	FA
M8055	30 C.T.	2.5	12.5	25	JA
M8023	35 C.T.	3.0	14.5	29	KA
M8089	40 C.T.	.1	17	34	-AJ
M8090	40 C.T.	.3	17	34	EA
M8091	40 C.T.	.75	17	34	GB
M8046	49 C.T.	2.5	21	42	LA
M8024	70 C.T.	1.0	30	60	JA
M8056	80 C.T.	.6	35	70	HA

**D.C. Output for resistive or inductive loads. Output volts based on approx. 1 v. drop per rectifier.

ION/POWER TRANSFORMERS

Center Tap Permits Use In Either F.W. Bridge Or F.W.C.T. Circuitry
 Electrostatic Shielding
 MIL Designation TF4X01xx

Part No.	Input Voltage	Output Voltage	Current RMS Amps	V.A. Rating	Fig. A MIL Case xx
M8094	115	115 C.T.	.0085	1	AH
M8095	115	115 C.T.	.030	3.5	EA
		12.6 C.T.	.25	3.15	
		12.6	.25	3.15	
M8151	115	115 C.T.	.13	15	FA
M8096*	115	115 C.T.	.35	40	GA
M8078*	115	115 C.T.	.9	100	KA

*Primary 105/115/125 Volts.

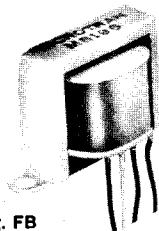


Fig. FB

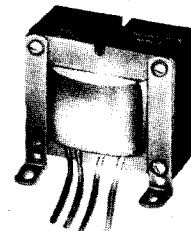


Fig. K

FILTER INDUCTORS

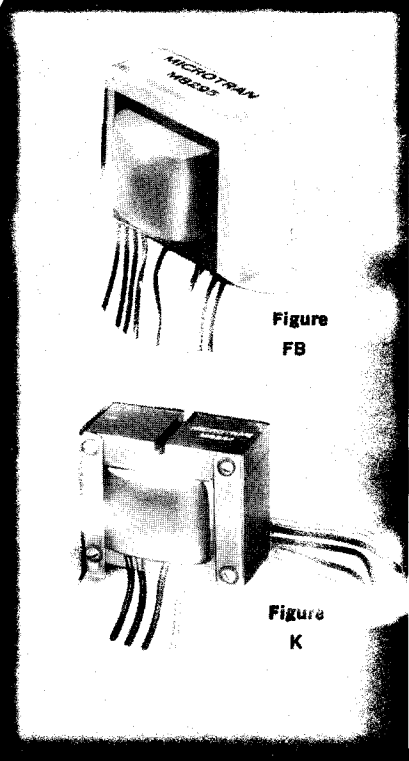
1500 Test Volt—May be connected in series or parallel for inductive requirements. Part numbers listed on left are hermetically sealed per MIL Designation TF4RX04XX. Part numbers listed on right are open frame construction.

HERMETIC Part No.	Series Connected			Parallel Connected			Fig. A MIL Case xx	OPEN FRAME DIMENSIONS				Part No.	
	Inductance Henrys	D.C. Amps	D.C.R. Ohms	Inductance Henrys	D.C. Amps	D.C.R. Ohms		L	W	H	Mtg. Centers		
M8098	3.5	.050	200	.875	.10	50	AH	2 1/2	1 1/4	1 3/4	1 3/4	FB	M8198
M8099	1.0	.15	65	.25	.30	16	AJ	2 1/2	1 1/4	1 1/2	2	FB	M8199
M8100	.5	.3	30	.125	.6	7.5	EB	2 1/2	1 1/4	1 1/4	2 1/2	FB	M8200
M8101	.32	.6	16	.08	1.2	4	FB	3 1/4	1 1/4	1 1/4	2 1/2	FB	M8201
M8102	.2	1.0	4	.05	2.0	1	JA	3 1/4	2 1/4	3 1/2	2 1/4 x 2 1/4	K	M8202
M8103	.07	2.5	.84	.0175	5.0	.21	JA	3 1/4	2 1/4	3 1/2	3 1/4 x 2 1/4	K	M8203
M8104	.022	4.0	.4	.0055	8.0	.1	JA	3 1/4	2 1/4	3 1/2	2 1/4 x 2 1/4	K	M8204
M8105	.022	5.0	.2	.0055	10.0	.05	KA	4 1/2	3 1/4	4 1/2	3 1/4 x 2 1/4	K	M8205

MICROTRAN

60 Hz CONTROL AND POWER SUPPLY TRANSFORMERS

For Relays, Silicon Rectifiers Circuitry, and Filament Application Primary 105/115/125 Volts



Part No.	Secondary A.C. Volts	RMS Amperes	Rectifier Circuit		L	Dimensions		Mounting Centers	Figure
			C.T. Full Wave D.C. Volts**	F.W. Bridge D.C. Volts**		W	H		
M8242	6.3 C.T.	.6	1.9	3.8	2 $\frac{3}{8}$	1 $\frac{1}{8}$	1 $\frac{1}{2}$	2	FB
M8243	6.3 C.T.	2.0	1.9	3.8	3 $\frac{1}{4}$	1 $\frac{1}{8}$	1 $\frac{1}{8}$	2 $\frac{1}{8}$	FB
M8286	6.3 C.T.	6.0	1.9	3.8	3 $\frac{1}{8}$	2 $\frac{1}{8}$	2 $\frac{1}{4}$	3 $\frac{1}{8}$	FB
M8287	12.6 C.T.	3.0	4.7	9.4	3 $\frac{1}{8}$	2 $\frac{1}{8}$	2 $\frac{1}{4}$	3 $\frac{1}{8}$	FB
M8247†	12. 12.	4.0 4.0	9.9(series)	19.8(series)	4 $\frac{1}{8}$	3 $\frac{1}{8}$	3 $\frac{1}{4}$	3 $\frac{1}{8}$ x 2 $\frac{1}{2}$	K
M8244	12.6 C.T. 12.6	2.0 2.0	10.5 (series)	(21 (series)	3 $\frac{1}{8}$	2 $\frac{1}{8}$	3 $\frac{1}{2}$	2 $\frac{1}{8}$ x 2 $\frac{1}{2}$	K
M8222	18.5 C.T.	3.0	7.4	14.8	3 $\frac{3}{8}$	2 $\frac{1}{2}$	3 $\frac{3}{2}$	2 $\frac{1}{8}$ x 2 $\frac{1}{8}$	K
M8288	26 C.T.	2.5	10.8	21.6	3	2 $\frac{1}{4}$	2 $\frac{1}{4}$	2 $\frac{1}{2}$ x 2 $\frac{3}{8}$	K
M8245	28 C.T.	.6	11.7	23.4	3 $\frac{1}{4}$	2 $\frac{1}{8}$	1 $\frac{1}{8}$	2 $\frac{1}{8}$	FB
M8255	30 C.T.	2.5	12.5	25	3 $\frac{1}{4}$	2 $\frac{1}{4}$	3 $\frac{1}{2}$	3 $\frac{1}{8}$ x 2 $\frac{1}{4}$	K
M8223	35 C.T.	3.0	14.5	29	4 $\frac{1}{8}$	3	3 $\frac{1}{4}$	3 $\frac{1}{8}$ x 2 $\frac{3}{8}$	K
M8289	40 C.T.	.1	17	34	2 $\frac{3}{8}$	1 $\frac{1}{8}$	1 $\frac{1}{2}$	2	FB
M8290	40 C.T.	.3	17	34	2 $\frac{1}{8}$	1 $\frac{1}{8}$	1 $\frac{1}{8}$	2 $\frac{3}{8}$	FB
M8291	40 C.T.	.75	17	34	3 $\frac{1}{8}$	2 $\frac{1}{8}$	2 $\frac{1}{4}$	3 $\frac{1}{8}$	FB
M8246	49 C.T.	2.5	21	42	4 $\frac{1}{2}$	3 $\frac{1}{4}$	4 $\frac{1}{2}$	3 $\frac{1}{4}$ x 2 $\frac{1}{2}$	K
M8224	70 C.T.	1.0	30	60	3 $\frac{1}{4}$	2 $\frac{3}{4}$	3 $\frac{1}{2}$	3 $\frac{1}{8}$ x 2 $\frac{1}{4}$	K
M8256	80 C.T.	.6	35	70	3	2 $\frac{3}{8}$	2 $\frac{1}{4}$	2 $\frac{1}{2}$ x 2 $\frac{3}{8}$	K

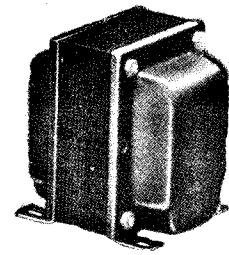
†Secondary may be connected in series to provide 24V @ 4.0 amperes or parallel for 12V @ 8.0 amperes. **D.C. Output for resistive or inductive loads. Output volts based on approx. 1 v. drop per rectifier.

50-60 Hz STEP DOWN AUTO TRANSFORMERS

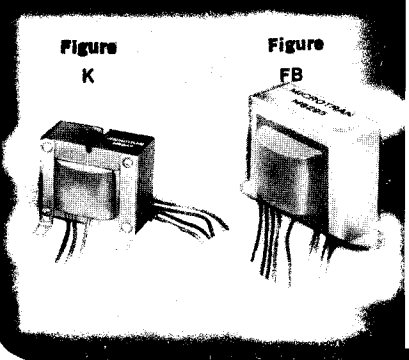
240/220V. to 120/110V. 50/60 cycle. Equipped with secondary standard receptacle. 6' U.L. approved line cord. Baked Enamel Finish.

Part No.	Application	DIMENSIONS			Mtg. Ctrs.	Weight
		L	W	H		
M1552	80 Watt capacity	3 $\frac{3}{32}$	2 $\frac{1}{2}$	2 $\frac{3}{32}$	3 $\frac{1}{8}$	3.5 lbs.
M1556	100 Watt capacity	3 $\frac{1}{8}$	2 $\frac{3}{8}$	3 $\frac{1}{2}$	1 $\frac{1}{4}$ x 2 $\frac{1}{4}$	4 lbs.
M1553	150 Watt capacity	3 $\frac{1}{4}$	2 $\frac{3}{8}$	3 $\frac{1}{2}$	2 $\frac{1}{4}$ x 2 $\frac{3}{8}$	5 lbs.
M1555	250 Watt capacity	3 $\frac{3}{8}$	3 $\frac{1}{4}$	3 $\frac{3}{8}$	2 $\frac{1}{8}$ x 2 $\frac{1}{2}$	6 lbs.
M1559	350 Watt capacity	3 $\frac{1}{2}$	3 $\frac{3}{8}$	4 $\frac{1}{8}$	2 $\frac{1}{8}$ x 3	7 lbs.
M1558	500 Watt capacity	4 $\frac{1}{8}$	3 $\frac{3}{8}$	4 $\frac{1}{8}$	3 $\frac{1}{8}$ x 3	12 lbs.
M1551	750 Watt capacity	5 $\frac{1}{2}$	4 $\frac{1}{2}$	5 $\frac{3}{8}$	3 $\frac{1}{4}$ x 3 $\frac{1}{2}$	16 lbs.
M1557	1000 Watt capacity	7	4 $\frac{1}{2}$	5 $\frac{3}{8}$	5 $\frac{1}{4}$ x 3 $\frac{1}{2}$	25 lbs.
M1554	1500 Watt capacity	8	4 $\frac{1}{2}$	5 $\frac{3}{8}$	6 $\frac{1}{4}$ x 3 $\frac{1}{2}$	29 lbs.
*M1550	2000 Watt capacity	8 $\frac{1}{2}$	4 $\frac{3}{8}$	6	6 $\frac{1}{8}$ x 3 $\frac{3}{8}$	37 lbs.

*Secondary supplied with 1 foot #14-2 wire stripped cable.



VERTICAL END BELL



60 Hz ISOLATION and POWER TRANSFORMERS

Center Tap Permits Use in Either F.W. Bridge Or F.W.C.T. Circuitry Electrostatic Shielding

Part No.	Input Voltage	Output Voltage	Current RMS Amps	V.A. Rating	L	Dimensions W	H	Mounting Centers	Figure
M8294	115	115 C.T.	.0085	1	2 $\frac{1}{8}$	1 $\frac{1}{8}$	1 $\frac{1}{8}$	1 $\frac{1}{8}$	FB
M8295	115	115 C.T. 12.6 C.T. 12.6	.030 .25 .25	3.5 3.15 3.15	2 $\frac{1}{8}$	1 $\frac{1}{8}$	1 $\frac{1}{8}$	2 $\frac{1}{8}$	FB
M8281	115	115 C.T.	.13	15	3 $\frac{1}{4}$	1 $\frac{1}{8}$	1 $\frac{1}{8}$	2 $\frac{1}{8}$	FB
M8296*	115	115 C.T.	.35	40	4	2 $\frac{1}{4}$	2 $\frac{1}{8}$	3 $\frac{1}{8}$	FB
M8278*	115	115 C.T.	.9	100	3 $\frac{1}{4}$	3 $\frac{1}{4}$	3 $\frac{1}{2}$	3 $\frac{1}{8}$ x 2 $\frac{1}{4}$	K

*Primary 105/115/125 Volts.



PLUG-IN PRINTED CIRCUIT POWER TRANSFORMERS

115V And 115/230V 50/60 Hz Primary

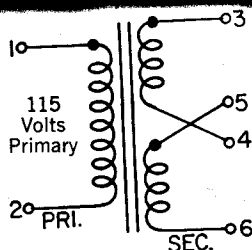
- Compact Design For Miniaturized Solid State Circuitry
- Precision Spaced Molded-In Terminals

For applications such as power supplies, instruments, and control equipment. Constructed per MIL-T-27 Grade 6 Class R. Class S available on special order.

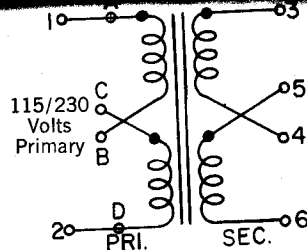
Dual secondaries may be parallel connected to obtain twice the current, or series connected to give twice the voltage of one winding.

Lugs on PC2000 series provide for 115/230V. primary voltage options without changes in PC board.

115V. Primary		115/230V. Primary		Secondary				
Part No.	Fig.	Part No.	Fig.	Parallel Connected		Series Connected		
				AC Volts	RMS Amps	AC Volts	RMS Amps	
SERIES PC6500/PC2500								
1 1/2 Watt Series								
PC6506	C	PC2506	A	6.3	.250	(Single Secondary)		
PC6512	C	PC2512	A	12.6	.120	25.2 CT	.060	
PC6524	C	PC2524	A	40.0	.040	80.0 CT	.020	
PC6528	C	PC2528	A	58.0	.026	116.0 CT	.013	
SERIES PC6600/PC2500								
4 1/2 Watt Series								
PC6608	D	PC2608	B	6.3	.700	12.6 CT	.350	
PC6616	D	PC2616	B	28.0	.156	56.0 CT	.078	
PC6624	D	PC2624	B	40.0	.110	80.0 CT	.055	
PC6628	D	PC2628	B	58.0	.066	116.0 CT	.033	
PC6632	D	PC2632	B	115.0V @ 0.20A and 12.6V @ .150A				
SERIES PC6700/PC2700								
7 1/2 Watt Series								
PC6708	D	PC2708	B	6.3	1.200	12.6 CT	.600	
PC6712	D	PC2712	B	12.6	.600	25.2 CT	.300	
PC6715	D	PC2715	B	20.0	.370	40.0 CT	.185	
PC6716	D	PC2716	B	28.0	.270	56.0 CT	.135	
PC6724	D	PC2724	B	40.0	.180	80.0 CT	.090	
PC6728	D	PC2728	B	58.0	.130	116.0 CT	.065	
PC6732	D	PC2732	B	115.0V @ .025A and 12.6V @ .250A				



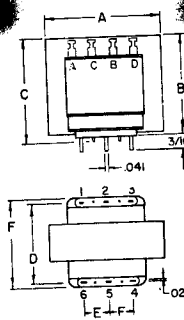
PC6000 Series



PC2000 Series

Series PC6500/PCT6500 (FIG. C) may also be used for point to point wiring by cementing the transformer with the terminals opposite mounting surface.

Series PC6600/PCT6600 and PC6700/PCT6700 (FIG. B) may also be supplied for point to point wiring on special order with terminals opposite mounting surface. To order, add -FBR to P/N, ie PC6604-FBR and add \$10.00 lot set-up charge.



PC2500 Series

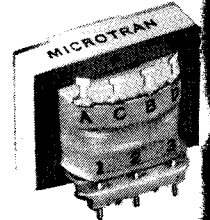
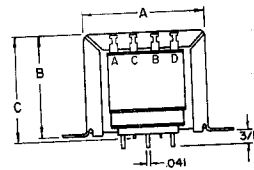


FIG. A



PC2600/PC2700 Series

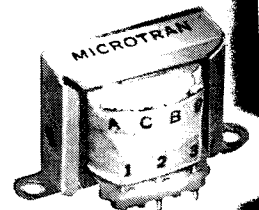
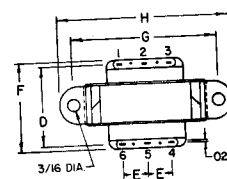


FIG. B



PC6500 Series — 6 Pins
PCT6500 Series — 8 Pins

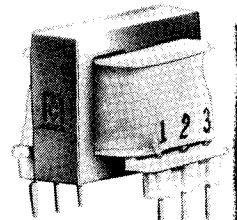
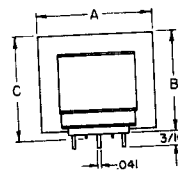


FIG. C



PC6600 & PC6700 Series — 6 Pins
PCT6600 & PCT6700 Series — 8 Pins

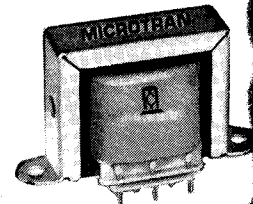
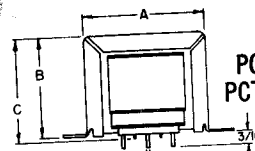


FIG. D

Series	Fig.	A	B	C	D	E	6-Pin	8-Pin	F	G	H	Wt. Oz.
PC6200/PCT6200	E	1 1/4	2 1/2	1	1.274	.150	1 3/8	—	—	—	—	2.3
PC2500	A	1 3/4	1 3/4	1 3/4	1.00	.312	—	1 3/2	—	—	—	3.2
PC6500/PCT6500	C	1 3/4	1 3/4	1 3/4	1.00	.200	1 3/2	—	—	—	—	3.2
PC2600	B	1 3/4	1 3/4	1 3/4	1.10	.400	—	1 1/2	2	2 3/4	—	6.5
PC6600/PCT6600	D	1 3/4	1 3/4	1 3/4	1.10	.400	.250	1 1/2	2	2 3/4	—	6.5
PCL6600	F	1 3/4	1 3/2	1 3/4	—	—	Send For Pin Layout		—	—	—	6.6
PC2700	B	1 3/4	1 3/4	1 3/4	1.30	.400	—	1 3/2	2 3/8	2 3/4	—	9.5
PC6700/PCT6700	D	1 3/4	1 3/4	1 3/4	1.30	.400	.250	1 3/2	2 3/8	2 3/4	—	9.5
PC6900/PCT6900	E	1 3/4	1 3/2	1 3/4	2.10	.400	.250	2 1/4	*	—	—	12.0

*PC6900-FB mtg. bracket avail. on spec. order; four 3/32" holes on 1 3/8" X 2" cutrs. †Do not have standoff.

DIMENSIONS

PLUG-IN PRINTED CIRCUIT POWER TRANSFORMERS

For Logic and OP AMP Power Supplies

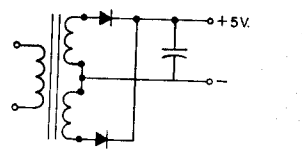
NEW

PLUG-IN PRINTED CIRCUIT POWER TRANSFORMERS FOR +5V, AND ±15V, DC POWER SUPPLIES

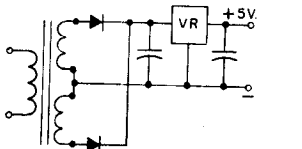
For construction of low cost, miniaturized, regulated and unregulated DC power supplies for latest solid-state digital and linear circuitry. Permits packaging flexibility unobtainable with prepackaged power supplies. Low-profile, miniaturized construction permits close stacking of PC boards. Precision spaced molded-in terminals.

TRANSFORMERS FOR +5V DC UNREGULATED AND REGULATED POWER SUPPLIES

*All primaries 115V 50/60 Hz except PCL6605 and PCL6610 which have 115/230V 50/60 Hz primaries.



SCHEMATIC #1 UNREGULATED



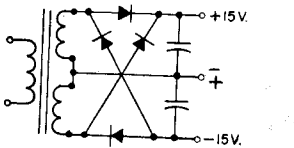
SCHEMATIC #2 REGULATED

Part No.	SECONDARY				DC OUTPUT			Fig. No.
	Parallel Connected		Series Connected		C.T. F.W. DC Volts	Current mA DC	Schematic No.	
	AC Volts	RMS Amps	AC Volts	RMS Amps				
PC6205	4.50	0.18	9.0 C.T.	0.09	+5	75	1	E
PC6505	4.50	0.36	9.0 C.T.	0.18	+5	150	1	C
PC6605	4.50	1.10	9.0 C.T.	0.55	+5	450	1	D
PCL6605*	4.50	1.10	9.0 C.T.	0.55	+5	450	1	F
PC6705	4.50	2.00	9.0 C.T.	1.00	+5	825	1	D
PC6905	4.50	5.00	9.0 C.T.	2.50	+5	2000	1	E
PC6210	7.75	0.12	15.5 C.T.	0.06	+8.5**	50	2	E
PC6510	7.75	0.22	15.5 C.T.	0.11	+8.5**	90	2	C
PC6610	7.75	0.64	15.5 C.T.	0.32	+8.5**	265	2	D
PCL6610*	7.75	0.64	15.5 C.T.	0.32	+8.5**	265	2	F
PC6710	7.75	1.20	15.5 C.T.	0.60	+8.5**	500	2	D
PC6910	7.75	3.10	15.5 C.T.	1.55	+8.5**	1300	2	E

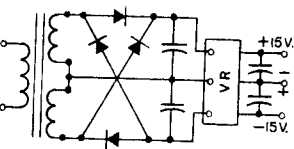
** +8.5 D.C. output volts for input to +5V. IC Voltage Regulator, see schematic 2.

TRANSFORMERS FOR ±15V DC DUAL OUTPUT UNREGULATED AND REGULATED POWER SUPPLIES

*All primaries 115V 50/60 Hz except PCL6611 and PCL6614 which have 115/230V 50/60 Hz primaries.



SCHEMATIC #3 UNREGULATED



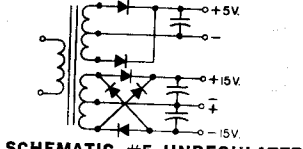
SCHEMATIC #4 REGULATED

Part No.	SECONDARY				DC OUTPUT			Fig. No.
	Parallel Connected		Series Connected		C.T. F.W. DC Volts	Current mA DC	Schematic No.	
	AC Volts	RMS Amps	AC Volts	RMS Amps				
PC6211	12.0	0.07	24.0 C.T.	0.035	±15	22	3	E
PC6511	12.0	0.13	24.0 C.T.	0.065	±15	40	3	C
PC6611	12.0	0.40	24.0 C.T.	0.200	±15	120	3	D
PCL6611*	12.0	0.40	24.0 C.T.	0.200	±15	120	3	F
PC6711	12.0	0.76	24.0 C.T.	0.380	±15	220	3	D
PC6911	12.0	1.90	24.0 C.T.	0.950	±15	550	3	E
PC6214	16.0	0.05	32.0 C.T.	0.025	±20**	15	4	E
PC6514	16.0	0.10	32.0 C.T.	0.050	±20**	30	4	C
PC6614	16.0	0.30	32.0 C.T.	0.150	±20**	90	4	D
PCL6614*	16.0	0.30	32.0 C.T.	0.150	±20**	90	4	F
PC6714	16.0	0.56	32.0 C.T.	0.280	±20**	165	4	D
PC6914	16.0	1.40	32.0 C.T.	0.700	±20**	410	4	E

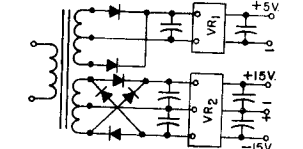
** ±20 D.C. output volts for input to ±15V. output IC Voltage Regulator, see schematic 4.

TRANSFORMERS FOR +5V AND ±15V DC TRIPLE OUTPUT UNREGULATED AND REGULATED POWER SUPPLIES

*All primaries 115V 50/60 Hz except PCL6630 and PCL6631 which have 115/230V 50/60 Hz primaries.



SCHEMATIC #5 UNREGULATED



SCHEMATIC #6 REGULATED

Part No.	Secondary #1		Secondary #2		DC Output #1		DC Output #2		Schematic No.	Fig. No.
	AC Volts	RMS Amps	AC Volts	RMS Amps	C.T. F.W. DC Volts	Cur. mA DC	C.T. F.W. DC Volts	Cur. mA DC		
	PCT6230	9.0 C.T.	0.048	24.0 C.T.	0.020	+5	40	±15		
PCT6530	9.0 C.T.	0.072	24.0 C.T.	0.032	+5	60	±15	20	5	C
PCT6630	9.0 C.T.	0.240	24.0 C.T.	0.080	+5	200	±15	50	5	D
PCL6630*	9.0 C.T.	0.240	24.0 C.T.	0.080	+5	200	±15	50	5	F
PCT6730	9.0 C.T.	0.480	24.0 C.T.	0.160	+5	400	±15	100	5	D
PCT6930	9.0 C.T.	1.200	24.0 C.T.	0.440	+5	1000	±15	275	5	E
PCT6531	15.5 C.T.	0.048	32.0 C.T.	0.020	+8.5**	40	±20**	12	6	C
PCT6631*	15.5 C.T.	0.140	32.0 C.T.	0.058	+8.5**	115	±20**	35	6	D
PCL6631*	15.5 C.T.	0.140	32.0 C.T.	0.058	+8.5**	115	±20**	35	6	F
PCT6731	15.5 C.T.	0.300	32.0 C.T.	0.100	+8.5**	250	±20**	60	6	D
PCT6931	15.5 C.T.	0.690	32.0 C.T.	0.298	+8.5**	575	±20**	175	6	E

** +8.5 and ±20 D.C. output volts are for inputs to +5V. and ±15V. IC Voltage Regulators, see schematic 6.

ALL TRANSFORMERS ARE SUPPLIED WITH ENGINEERING BULLETIN LISTING SUGGESTED COMPONENTS

Bulletin provides typical schematics and suggested components for low-cost, miniaturized, unregulated and regulated power supplies. Regulated units have short circuit, thermal overload and overvoltage protection, and have the following typical specifications: Input 105-125V; Output Voltage ±1V; Load and Line Regulation .1% each; Ripple 1mV RMS.

PC/PCT6200 & PCT6900 Series—8 Pins

PC6900 Series—6 Pins

PCL6600 Series

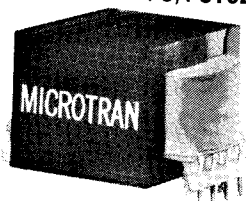


FIG. E

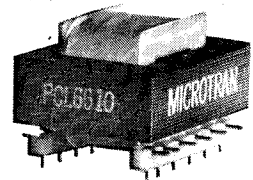
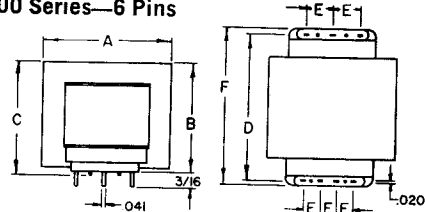
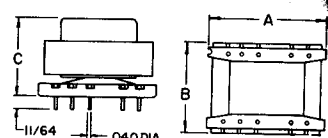


FIG. F



MICROTRAN

CUSTOM DESIGNS FROM OUR FILES

Our designs, with complete specifications assure quick delivery. The transformers listed have been selected from MICROTRAN'S extensive design files. They are not stocked but can be manufactured as shown or modified to meet your electrical or mechanical requirements. All transformers listed are subject to quotation of price and delivery schedule.

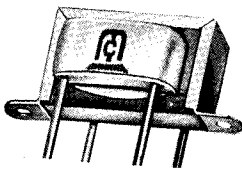


Figure FB
Open Frame Channel Mtd.

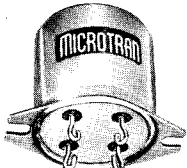


Figure H
Miniature Hermetic

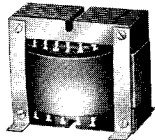


Figure K
Open Frame with Lugs



Fig. QM
Molded Toroid

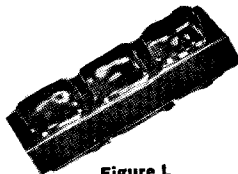


Figure L
3 φ Encapsulated

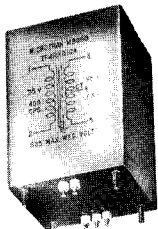


Figure MIL
Hermetic MIL-T-27B Case

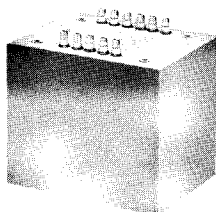


Figure Q
Hermetic with Inserts

400Hz POWER SUPPLY TRANSFORMERS

For Silicon Rectifier Circuitry and Filament Applications
PRIMARY 115 VOLTS

Part No.	A.C. Volts	Secondary R.M.S. Amps	Test Volts R.M.S.	L	Dimensions W	H	Mounting Centers	Figure
M3144	1	3	1000	1	1	1 3/8	1 1/8	AG
M3054*	5	7.5	1000	2 1/8	2 1/8	3 1/8	1 1/8 x 1 1/8	MIL-FA
M3463	6.3C.T.	2.0	500	1 1/8	1 1/8	2 1/8	1 1/8 x 1 1/8	MIL-AJ
M2810	6.3C.T./6.3C.T.#	2.0/2.0	100	1 1/8	1 1/8	2 1/8	1 1/8 x 1 1/8	MIL-EA
M2906	6.3C.T.	5.0	1000	2 1/4	1 1/4	2	1 1/8 x 1 1/2	R
M2611	6.3C.T./6.3C.T.#	2.0/10.0	100	3 1/8	2 1/8	4 1/4	2 1/8 x 1 5/8	Q
M4282†	6.3C.T.	10.0	2500	2 1/8	2 1/8	3 1/8	1 1/8 x 1 1/8	MIL-FA
M4076††	6.3	20.0	2000	3 1/8	3 1/8	3 1/8	2 3/8 x 2 1/8	MIL-JB
M5242	12.6	0.05	500	1	1	1 1/8	1/2 Diag.	MIL-AG
M4042	12.6	0.25	1000	1 1/8	1 1/8	1 1/8	1 1/8	MIL-AH
M2830	12.6C.T./12.6C.T.#	5.0/5.0	500	3 1/8	3 1/8	4 1/8	2 1/8 x 2 1/8	MIL-JA
M5518	14/16/18	0.3	1000	1 1/8	1 1/8	2 1/8	1 1/8 x 1 1/8	MIL-AJ
M2661	14/16/18	0.3	1000	2 1/8	1 1/8	1 1/2	2	FB
M2954**	24.2	10.0	1500	3 1/8	3 1/8	5 1/4	3 x 2 1/8	MIL-KA
M4017	26C.T./6.3C.T.#	0.1/1.7	1000	1 1/8	1 1/2	1 1/2	1 1/2	FB
M3142	26	6.5	1500	3 1/8	3 1/8	4 1/8	2 1/8 x 2 1/8	MIL-JA
M2880**	32	5.5	500	3 1/8	3 1/8	5 1/4	3 x 2 1/8	MIL-KA
M5663	48.5C.T.	1.3	500	2 1/4	2 1/4	2 1/8	2 1/8 x 1 1/8	MIL-GB
M2494	70	0.01	500	1 1/4	1 1/8	1 1/2	1 1/4	FPB
M6097	78	0.1	500	1 1/8	1 1/8	1 1/8	1 1/8	MIL-AH
M5664*	82C.T.	2.2	500	2 1/4	2 1/4	3 1/8	2 1/8 x 1 1/8	MIL-GA
M3302	90C.T./6.3.#	.07/0.3	500	1	1/2	1/2		F

* 105/115/125 Primary Volts ** 110/115/120 Primary Volts † MS 16472 †† MS 16402 # Separate Wdgs.

400 HZ 3 PHASE POWER TRANSFORMERS

Part No.	V.A. Capacity	Input Volts Line to Line	Output Volts Line to Line	L	Dimensions W	H	Mounting Centers	Figure
M5605	250	115Δ	21Y	4	3	2 1/2	2 1/8 x 1 1/4	W
M5031	40	115Δ	26.8Y	2 1/4	1 1/4	1 1/8		L
M3050	40	115Y	26.8Y	2 1/4	1 1/4	1 1/8		F
M5030	100	115Δ	208Y	3 1/8	1 1/4	2 1/8	2 x 1 1/8	L
M1359	400	199Y	115Y	4 1/8	2 1/4	4 1/8	2 1/2 x 2 1/8	L
M6933	390	200Δ	30Δ	4 1/4	3	4	3 1/8 x 2 1/8	MIL
M2445	22	208Y	115Δ	2 1/8	1 1/8	2 1/4	1 1/8 x 1 1/4	MIL
M3102	100	208Y	115Y	6 1/8	1 1/8	2 1/8	5 1/8	FB
M4576	235	208Y	135Δ	3 1/8	2	5 1/4	3 x 1 1/8	L

FILTER REACTORS—SWITCHING INDUCTORS

Part No.	Current D.C. Ma.	Inductance Henries	D.C.R. Ohms	Test Volts	Dimensions L	W	H	Mounting Centers	Figure
M3254	10	8	400	500	1 1/8	1 1/8	2 1/2	1 1/8	FB
M2978	12	2	850	500	1 1/2	1/2	1 1/2	1 1/2	FPB
FR-1	25	10	600	2,000	1 1/8	1 1/8	1 1/4	1 1/4	MIL-AH
M3973	35/20	10/20	350	1,000	2 1/8	2 1/8	2 1/2	1 1/8 x 1 1/8	MIL-FB
FR-2	60	10	230	2,000	2 1/8	2 1/8	3 1/8	1 1/8 x 1 1/8	MIL-FA
M2490	85	15	300	2,500	2 1/8	2 1/8	3 1/2	1 1/8 x 1 1/8	V
FR-3	120	8	150	2,000	3 1/8	2 1/8	4 1/4	2 1/8 x 1 1/8	MIL-HA
M4286	125/70	7/13	210	2,500	2 1/4	2 1/4	2 1/8	2 1/8 x 1 1/4	MIL-GB
FR-4	155	8	90	2,000	3 1/8	3 1/8	4 1/8	2 1/8 x 2 1/8	MIL-JA
M2174	320/20	4/20	85	2,000	4 1/8	3 1/8	5 1/8	3 1/8 x 2 1/8	MIL-LA
M2243	500	2	30	1,500	3 1/8	3 1/8	5 1/4	3 x 2 1/8	MIL-KA
M2278	1A	0.05	2	500	2 1/8	2 1/8	3 1/8	1 1/8 x 1 1/8	MIL-FA
M2909	1.75A	0.016	0.5	500	2 1/4	2 1/8	3 1/8	2 1/8 x 1 1/4	MIL-GA
M6917	3000	0.4	0.1	500	1 1/2D	—	7/8	.193D	QM
M2473	25A	0.005	0.032	500	5 1/8	4 1/4	6 1/8	4 1/8 x 3 1/8	MIL

MORE CUSTOM DESIGNS FROM OUR FILES

60 Hz 3 PHASE POWER TRANSFORMERS

Part No.	V.A. Capacity	Input Volts Line to Line	Output Volts Line to Line	L	Dimensions W	H	Mounting Centers	Figure
M2476	75	208 Y	5 Δ	2 $\frac{1}{2}$	2 $\frac{1}{2}$	5 $\frac{1}{2}$	1 $\frac{1}{2}$ x1 $\frac{1}{2}$	W
M3136	280	208 Δ	208 Y	9 $\frac{1}{2}$	4	4 $\frac{1}{4}$	2 $\frac{1}{2}$ x6 $\frac{1}{2}$	W
M5125	550	208 Y	18.5 Δ	7 $\frac{1}{4}$	3 $\frac{3}{8}$	5 $\frac{1}{8}$	3 $\frac{1}{2}$ x3 $\frac{1}{4}$	L
M2475	1,650	208 Y	22 Δ	11 $\frac{1}{8}$	6 $\frac{3}{4}$	6 $\frac{3}{4}$	6 $\frac{1}{2}$ x3 $\frac{1}{4}$	W
M4344	1,800	208 Δ	208 Y	11 $\frac{1}{8}$	6 $\frac{3}{4}$	6 $\frac{3}{4}$	6 $\frac{1}{2}$ x4	W

60 Hz POWER SUPPLY TRANSFORMERS

For Silicon Rectifier Circuitry and Filament Applications
PRIMARY 115 VOLTS

Part No.	A.C. Volts	Secondary R.M.S. Amps	Test Volts R.M.S.	L	Dimensions W	H	Mounting Centers	Figure
M1606	2.5	.01	500	1 $\frac{1}{2}$ D		1 $\frac{1}{2}$	1 $\frac{1}{2}$	H
M1070	5.0	4.0	1,500	2 $\frac{1}{2}$	2 $\frac{1}{2}$	3 $\frac{1}{8}$	1 $\frac{1}{2}$ x1 $\frac{1}{2}$	MIL-FA
M2245	5.0C.T.	6.0	6,600	3 $\frac{1}{8}$	3 $\frac{1}{8}$	4 $\frac{1}{8}$	2 $\frac{1}{2}$ x2 $\frac{1}{2}$	MIL-JA
M4881	6	0.150	500	2 $\frac{1}{4}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{1}{4}$	FB
M2934	6.3	0.6	1,500	2 $\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	2	FB
M2229	6.3C.T./6.3C.T.#	0.6	1,000	3 $\frac{1}{4}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	2 $\frac{1}{2}$	FB
M2258*	6.3	1.2	1,000	1 $\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	2 $\frac{1}{2}$	FB
M2551	6.3	2.0	1,500	3 $\frac{1}{4}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	2 $\frac{1}{2}$	FB
M3242	6.3	2.5	4,500	2 $\frac{1}{2}$	2 $\frac{1}{2}$	3 $\frac{1}{8}$	1 $\frac{1}{2}$ x1 $\frac{1}{2}$	MIL-FA
M2166	6.3/6.3C.T.#	4.0/.06	3,500	3 $\frac{1}{8}$	3 $\frac{1}{8}$	3 $\frac{1}{8}$	2 $\frac{1}{2}$ x2 $\frac{1}{2}$	MIL-JB
M3711††	6.3C.T./6.3C.T.#	6.0/6.0	2,500	3 $\frac{1}{8}$	3 $\frac{1}{8}$	4 $\frac{1}{8}$	2 $\frac{1}{2}$ x2 $\frac{1}{2}$	MIL-JA
M2309*	6.3C.T.	20.0	2,500	3 $\frac{1}{4}$	3 $\frac{1}{2}$	4 $\frac{1}{2}$	3x2 $\frac{1}{2}$	K
M2228	12.6	65.0	1,500	7 $\frac{1}{2}$	7	7	5x4	Q
M1395*	24.0	1.0	1,500	2 $\frac{1}{4}$	2 $\frac{1}{2}$	3 $\frac{1}{2}$	2 $\frac{1}{2}$ x1 $\frac{1}{2}$	MIL-GA
M4981	24	4.5	500	3 $\frac{1}{4}$	2 $\frac{1}{4}$	3 $\frac{1}{2}$	2 $\frac{1}{2}$ x2 $\frac{1}{4}$	K
M2530	25.0/25.0#	.23/.23	1,000	2 $\frac{1}{4}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$ x1 $\frac{1}{2}$	MIL-GB
M3673†	26.5	2.5	1,500	4 $\frac{1}{8}$	3	5 $\frac{1}{8}$	3 $\frac{1}{2}$ x2 $\frac{1}{2}$	MIL-LA
M3135	29.0/6.3	.350/.6	1,000	2 $\frac{1}{4}$	2	1 $\frac{1}{8}$		F
M6554	31.5C.T.	.3	500	2 $\frac{1}{2}$	1 $\frac{1}{2}$	1	2 $\frac{1}{2}$	FPC
M2808	34.0	15.0	500	7 $\frac{1}{2}$	6 $\frac{1}{2}$	5	6 $\frac{1}{2}$ x4 $\frac{1}{2}$	MIL
M6634	36.0C.T.	.2	500	2 $\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	2 $\frac{1}{2}$	FPC
M2531	40.0/40.0#	.4/.4	1,000	3 $\frac{1}{8}$	2 $\frac{1}{2}$	3 $\frac{1}{8}$	2 $\frac{1}{2}$ x1 $\frac{1}{2}$	MIL-HB

*117V Primary **120V Primary †105/115/125V Primary ††105/115/210/220V Primary # Separate Winding

60 Hz ISOLATION TRANSFORMER

Part No.	Input Voltage	Output Voltage	V.A. Rating	L	Dimensions W	H	Mounting Centers	Figure
M2862	6.3	6.3	0.32	2 $\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{1}{4}$	FB
M6348*†	26.8	26.8	0.23	1 $\frac{3}{4}$	1 $\frac{1}{2}$	1 $\frac{1}{4}$	—	MPC
M2901	115	115	6.0	2 $\frac{1}{2}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$ x1 $\frac{1}{2}$	V
M2294*	105/115/125	118C.T.	90.	3 $\frac{1}{8}$	3 $\frac{1}{8}$	5 $\frac{1}{2}$	2 $\frac{1}{2}$ x2 $\frac{1}{2}$	MIL
M2595	117	117	250.	4 $\frac{1}{2}$	3 $\frac{1}{4}$	3 $\frac{1}{4}$	3 $\frac{1}{4}$ x3	K

* Electrostatic Shielding † 50-60 Hz

CUSTOM TRANSFORMERS
designs to meet your needs!
PROTOTYPES - SHORT RUNS
PRODUCTION RUNS SOLICITED

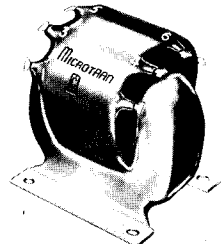


Figure R Encapsulated Hipersil

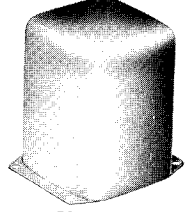


Figure V Rectangular Case with rectangular flange

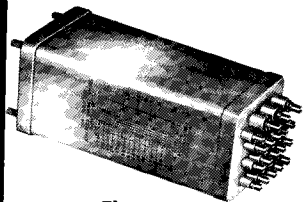


Figure W Hermetic with Studs opposite terminals

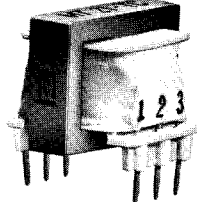


Figure MPC Open Frame Printed Circuit

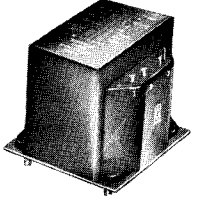


Figure II Contour Molded

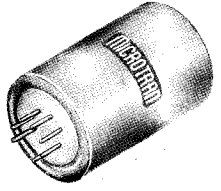


Figure T Hermetic with Plug In Header

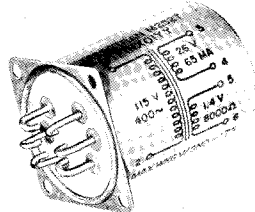
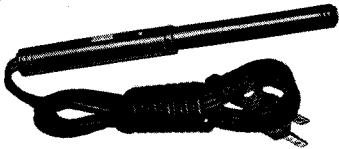


Figure U Cylindrical with Rectangular Flange

MAGNETIC TAPE ERASERS and AUDIO ACCESSORIES

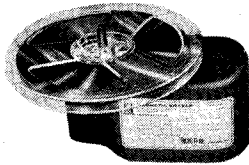


MAGNETIC TAPE EDITING PEN

MODEL HD-35M

For erasing small areas of sound and video from magnetic tape or film. Syllables, program material, and errors may be removed. Press to operate switch.

- 115V. 50/60 Hz at 10 Watts
- Active tip area 1/4" D.
- Size: 5/8" D. x 8" L.
- Weight: 6 oz.



HEAVY DUTY BULK TAPE ERASER

MODEL HD-11M

For bulk erasure of up to 1/2" magnetic tape and sound film. Ideal for cassettes, cartridges, and reel diameters from 3 1/4"-10 1/2". High intensity magnetic field restores audio, video and computer tapes to like new condition without rewinding.

- Erasure 65-90 dB below saturation
- Standard 3/8" spindle.
- Epoxy molded for ruggedness and longer duty cycle
- 117V. 50/60 Hz, 5 Amps.
- Size: 7"x3 1/2"x3 1/4" H.
- Weight: 9 lbs.

TAPE HEAD DEMAGNETIZER

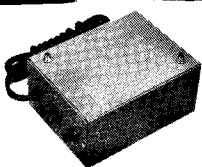
For Tape Recording Heads



MODEL HD-40M

Neutralizes residual permanent (DC) Magnetism in recording head. Heavy duty AC electromagnet with extended pole piece for easy access. Clears up noise and harmonic distortion caused by magnetized heads.

- Insures high frequency response
- Reduces hum at tape head
- Special finish on pole piece prevents marring heads
- RATING: 117 volts AC, 1 AMP.
- FINISH: High impact molded
- SIZE: 4" Long x 1 1/4" Dia. • Weight: 7 ozs.
- Removes magnetism • Reduces noise level • Reduces harmonic distortion
- Improves signal to noise ratio



INDUSTRIAL AUDIO/VIDEO COMPUTER BULK TAPE ERASER

MODEL HD-20

For bulk erasure of magnetic tape up to 1" wide and magnetic sound film up to 35mm. Ideal for cassettes, cartridges, and reel diameters from 3 1/4"-10 1/2". Designed and constructed for heavy industrial use.

- Erasure 65-90 dB below saturation
- Standard 3/8" spindles
- Fuse and pilot light
- 117V. 50/60 Hz, 10 Amps.
- Size: 8"x6"x4"H.
- Weight: 15 lbs.



MAGNETIC TAPE ERASER

MODEL HD-15

A compact tape demagnetizer. Erases recorded signals and noise without rewinding. For cassettes, cartridges and reels. Restores tape and sound film to like new condition. Removes background noise below level of new tapes or sound film. Ideal for cassette erasure.

- High impact plastic case
- SIZE: 4 3/8" L x 2 1/2" W x 4 3/8" H. Wt. 2 1/2 lbs.
- 8' Cord with molded plug
- Universal unit for any reel size
- Demagnetizes heads and guide posts, tools, watches, metal objects, etc.
- TAPE RANGE: 1/4 and 1/2 inch
- FILM RANGE: 8, 16 and 35mm
- 117 volts 50/60Hz, 4 Amps



PROFESSIONAL AUDIO/VIDEO COMPUTER BULK TAPE ERASER

MODEL HD-25

For bulk erasure of magnetic tapes up to 2" wide on reels up to 17" diameter and magnetic sound film up to 35mm. For cassettes, cartridges and reels. Designed and constructed for heavy duty professional use. Double fuses and pilot lights for safety.

- Erasure 65-90 dB below saturation
- Standard 3/8" spindle
- 6 foot, 3-conductor line cord
- 115V. 50/60 Hz, 20 Amps.
- Size: 14"x12"x4"H.
- Weight: 33 lbs.



MODEL HP-70
HUM BUCKING TELEPHONE PICKUP COIL

Delivers clean, clear signal. Eliminates hum found with conventional pickup coils. Hi-impact grey plastic. Weight 2 oz.

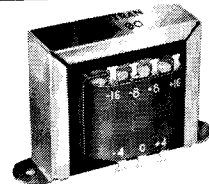
- Twin Suction Cups
- 5 Foot Cable
- Tinned Leads
- Size: 2 1/2" L x 7/8" W x 5/8" H



MODEL HP-61
TELEPHONE PICK-UP COIL

For recorder or direct feed into amplifier—Use as probe for locating hum. Universalized pickup level.

- Universal design with tinned leads
- Black finish with 68" cable
- Size 5/8" D x 2 1/2" L—Wt. 1 1/2 oz.



MODEL HM-90
STEREO CENTER CHANNEL OUTPUT MATCHING TRANSFORMER
Converts Stereo Into Mono Extension

Fills "hole-in-the-middle" when used with 3rd Channel Speaker. Permits any combination of mono or stereo speakers — any impedance rating. Vacuum Varnish — Size 3 3/4"x2 1/4"x2 3/8"—3 1/4" M.C.

- 30 W.
- 40-20KHz
- Less than one db Loss on Most hookups
- Weight 2 lbs.

ADAPTER HUB FOR NAB 10 1/2" REELS

Permits use of NAB reels with erasers having 3/8" diameter standard spindle. (Not illustrated).
MODEL HD-11-AD Weight: 1/2 lb.



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CALIFORNIA	Hollywood	90027	Hollywood Radio & Elec. Moltronics, Inc. Moltronics, Inc. Moltronics, Inc.	5250 Hollywood Blvd.		213-466-3181	
	San Diego	92111		7969 Engineer Rd.		910-335-2015	714-278-5020
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	Waterbury	06720		439 W. Main St.		203-753-1184	
	Westport	06880		25 Sylvan Rd. S		203-226-6921	
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ILLINOIS	Chicago	60624	Newark Electronics	500 N. Pulaski Rd.	910-221-0268	312-638-4411	
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	Cedar Rapids	52404		1019 First Ave. S.W.		319-362-1171	
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	Wichita	67201		115 Laura St.		316-267-5216	
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	Savage	20863		8200 Wellmoor Ct.			301-792-7000
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MISSOURI	Berkeley	63134	Hall-Mark Electronics Radiolab, Inc.	6100 Madison Ave.	910-760-1630	314-521-3800	
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	Rochester	14623		292 Commerce Dr.			716-334-8110
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	Farmingdale	11735		20 Smith St.		510-224-6403	516-293-7979
	Lynbrook	11563		19 Wilbur St.		510-225-8422	516-593-2121
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	Cleveland	44125		4550 Willow Pkwy.		216-441-3000	
	Cleveland	44103		2028 E. 46th St.		216-361-4700	
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UTAH	Salt Lake City	84115	Newark Electronics	2540 S. 300 W.		801-486-1048	
WASHINGTON	Seattle	98018	Sterling Electronics	5608 6th Ave. S.		206-762-9100	
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CALIF. (S)	San Diego	92111	Bertrand-Zoolalian	7138 Convoct Ct.	910-335-1569	714-560-5832
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CONN. (SW)	Englewood Cliffs, N.J.	07632	Ed Glass Associates	120 Sylvan Avenue		212-JU 6-8440
CONN.	Wakefield, Mass.	01880	Measurement Equipment Co.	599 North Ave.	710-348-6717	617-245-4870
D.C.	Baltimore, Md.	21209	J.R. Daniel & Co., Inc.	1404 Bare Hills Ave.	710-232-1813	301-825-3330
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