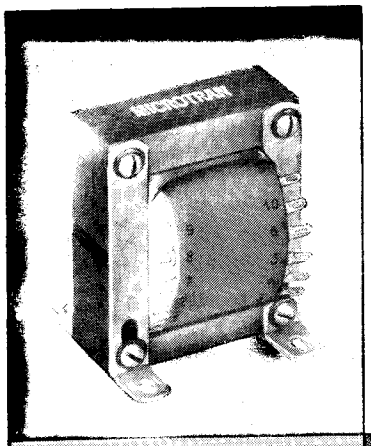
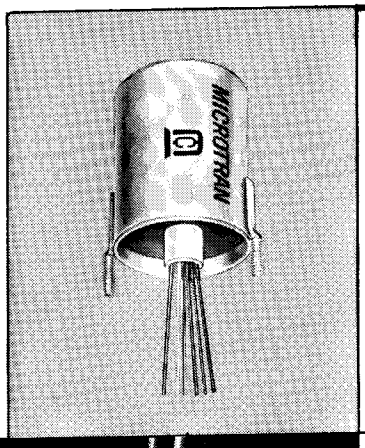
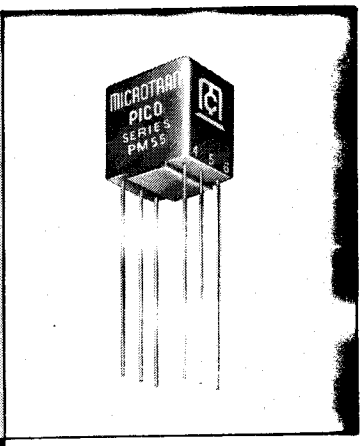
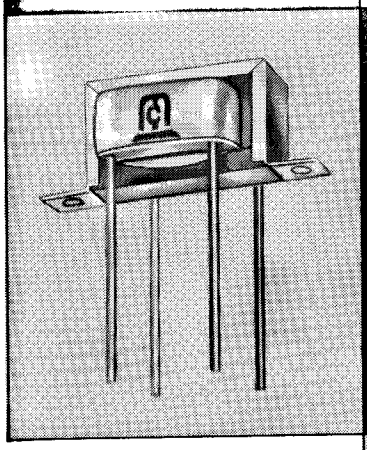
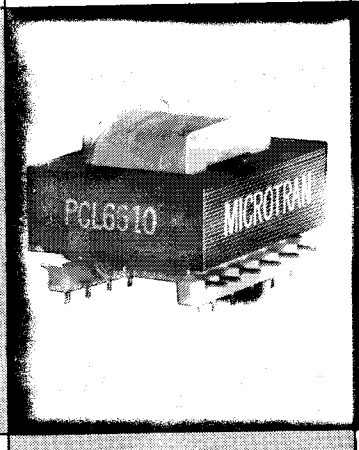
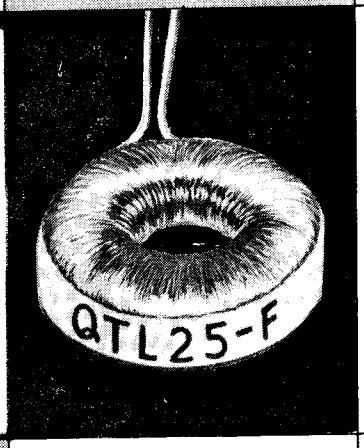


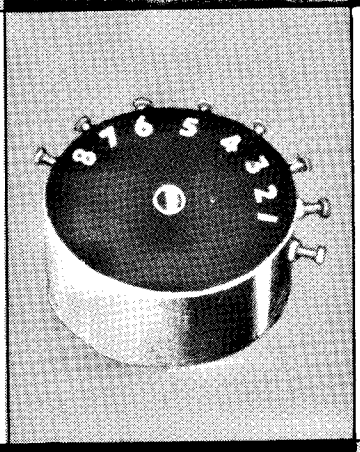




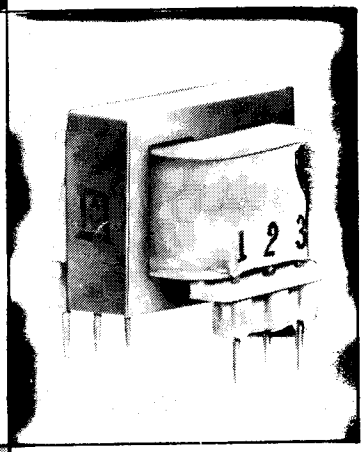


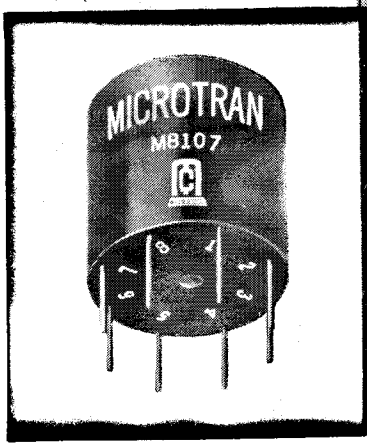


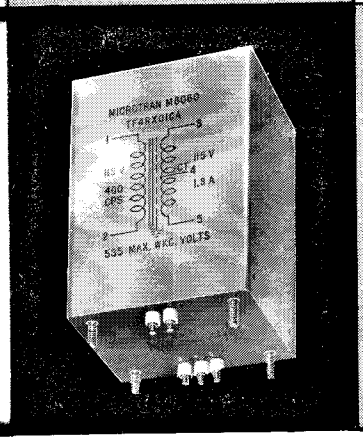




AUDIO
POWER
COMMERCIAL
INDUSTRIAL
MILITARY
AEROSPACE







MICROTRAN
TRANSFORMERS

PRICE
$1.00

CATALOG
#741

MICROTRAN

INDEX

TRANSFORMERS

REFERENCE INFORMATION AND TECHNICAL DATA

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

MICROTRAN maintains a warehouse stock of all catalog transformers. This provides immediate availability for your design requirements. From breadboard to prototype, from pilot to production run—Microtran catalog, custom design and built to order transformers are your assurance of quality, performance and on-time production schedules. Catalog items are available off-the-shelf from stocking distributors listed on page 31.

NET PRICE LIST

PRICES, MECHANICAL CONSTRUCTION OR ELECTRICAL CHARACTERISTICS SUBJECT TO MODIFICATION WITHOUT NOTICE — EFFECTIVE 7/1/74

Part Number	Page No.	Net Price 1-9 Pcs.
DCM1-PC	12	4.95
DCM2-PC	12	5.10
DCM3-PC	12	4.80
DCM4-PC	12	4.95
DCM5-PC	12	4.95
DCM6-PC	12	4.80
DCM7-PC	12	5.25
DCM8-PC	12	4.50
DCM9-PC	12	4.50
DCM10-PC	12	4.80
DCM11-PC	12	4.50
DCM12-PC	12	4.80
DCM13-PC	12	4.35
DCM14-PC	12	4.20
DCM18-PC	12	5.25
DCM19-PC	12	4.80
DCM20-PC	12	4.05
DCM21-PC	12	4.05
DCM22-PC	12	4.05
DCM51-PC	12	3.60
DCM52-PC	12	3.30
DCM53-PC	12	3.15
HD-11-AD	30	Δ 4.25
HD-11M	30	Δ39.95
HD-15	30	Δ13.99
HD-20	30	Δ75.00
HD-25	30	Δ165.00
HD-35M	30	Δ32.00
HD-40M	30	Δ 7.49
HM-90	30	Δ11.95
HP-61	30	Δ 6.15
HP-70	30	Δ10.50
M1-A	10	10.65
M1-AG	10	12.60
M1-CM†	10	*15.45
M1-FB	10	7.05
M1-H	10	11.55
M1-M	10	10.80
M1-P	10	12.00
M1-S	10, 12	14.25
M2-A	10	11.25
M2-AG	10	13.50
M2-CM†	10	*15.90
M2-FB	10	7.50
M2-H	10	12.30
M2-M	10	11.10
M2-P	10	12.45
M3-A	10	10.20
M3-AG	10	11.40
M3-CM†	10	*15.15
M3-FB	10	6.75
M3-H	10	10.50
M3-M	10	10.65
M3-P	10	11.70
M3-PC	10	6.75
M4-A	10	9.15
M4-AG	10	10.20
M4-CM†	10	*13.35
M4-FB	10	6.00
M4-H	10	9.60
M4-M	10	9.45
M4-P	10	10.95
M4-PC	10	6.00
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M5-AG	10	9.30
M5-CM†	10	*13.35
M5-FB	10	5.70
M5-H	10	9.00
M5-M	10	9.30
M5-P	10	10.65
M5-PC	10	5.70
M6-A	10	10.20
M6-AG	10	10.95
M6-CM†	10	*13.20
M6-FB	10	6.30
M6-H	10	10.05
M6-M	10	10.35
M6-P	10	11.25
M6-PC	10	6.30
M7-A	10	10.20
M7-AG	10	10.65
M7-CM†	10	*15.15
M7-FB	10	6.00
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M7-M	10	10.65
M7-P	10	10.95
M7-PC	10	6.00
M8-A	10	10.65
M8-AG	10	12.45
M8-CM†	10	*16.20
M8-FB	10	6.90
M8-H	10	11.40
M8-M	10	11.25
M8-P	10	11.85
M9-A	10	10.65
M9-AG	10	12.15
M9-CM†	10	*16.20
M9-FB	10	6.60
M9-H	10	11.10
M9-M	10	11.25
M9-P	10	11.55
M10-A	10	11.40
M10-AG	10	13.35
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M10-FB	10	7.35
M10-H	10	12.15
M10-M	10	11.85
M10-P	10	10.35
M11-A	10	10.65
M11-AG	10	12.60
M11-CM†	10	*16.35
M11-FB	10	7.05
M11-H	10	11.55
M11-M	10	10.80
M11-P	10	12.00
M12-A	10	10.05
M12-AG	10	11.85
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M12-FB	10	5.85
M12-H	10	10.50
M12-M	10	10.80
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M13-P	10	9.60
M13-PC	10	4.65
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M14-H	10	10.50
M14-M	10	11.10
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M15-AG	10	10.20
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M15-FB	10	5.85
M15-H	10	9.90
M15-M	10	10.50
M15-P	10	10.80
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M1550	25	134.70
M1551	25	39.60
M1552	25	11.85
M1553	25	17.25
M1554	25	64.80
M1555	25	23.55
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M1557	25	54.75
M1558	25	33.60
M1559	25	27.60
M8018	23	22.80
M8019	23	26.10
M8020	23	32.10
M8021	23	31.50
M8022	24	33.00
M8023	24	37.80
M8024	24	31.80
M8025	12	16.50
M8026	12	16.50
M8027	12	12.30
M8030	12	19.50
M8031	12	20.40
M8032	12	18.45
M8033	12	18.45
M8034†	21	*34.20
M8035†	21	*34.20
M8036†	21	*32.10
M8038	23	21.30
M8039	23	19.65
M8041	23	13.95
M8042	24	17.25
M8043	24	22.80
M8044	24	29.10
M8045	24	25.50
M8046	24	39.60
M8050	21	7.35
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M8052	12	15.60
M8053	12	15.60
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M8074	21	6.30
M8075	23	9.75
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M8077	23	31.80
M8078	24	38.70
M8079	23	31.50
M8080	23	17.25
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M8083	23	21.30
M8084	23	16.50
M8085	23	36.30
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M8088	24	26.40
M8089	24	17.55
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M8094	24	14.10
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M8098	24	11.25
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M8102	24	24.60
M8103	24	28.50
M8104	24	24.90
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M8106	23	18.30
M8107	23	18.75
M8108	23	18.45
M8109	23	18.90
M8110	23	18.60
M8111	23	19.05
M8112	12	15.00
M8113	21	34.20
M8114	21	33.00
M8115	21	23.55
M8116	21	34.20
M8117	21	23.55
M8118	21	33.00
M8120	21	9.15
M8121	21	7.80
M8122	21	19.65
M8132	21	21.30
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M8149	21	8.10
M8151	24	25.65
M8152	24	17.40
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M8199	24	5.40
M8200	24	6.75
M8201	24	7.35
M8202	24	11.70
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M8205	24	19.65
M8222	25	13.20
M8223	25	18.90
M8224	25	15.75
M8242	25	7.65
M8243	25	9.00
M8244	25	12.00
M8245	25	9.60
M8246	25	19.65
M8247	25	17.40
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M8256	25	15.45
M8278	25	20.70
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M8290	25	8.70
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M8296	25	13.80
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M8526†	12	*16.65
M8552†	12	*17.10
M8553†	12	*16.50
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MM1-M	8	8.55
MM2-CM†	8	*11.25
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MM2-H	8	9.90
MM2-M	8	8.70
MM3-CM†	8	*10.95
MM3-FB	8	5.85
MM3-H	8	9.45
MM3-M	8	8.40
MM4-CM†	8	*10.80
MM4-FB	8	5.55
MM4-H	8	9.15
MM4-M	8	8.25
MM5-CM†	8	*10.50
MM5-FB	8	5.55
MM5-H	8	8.85
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MM6-M	8	8.40
MM7-CM†	8	*9.90
MM7-FB	8	5.40
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MM7-M	8	7.65
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MMT1-M	8	8.55
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MMT3-M	8	8.70
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MMT4-H	8	9.90
MMT4-M	8	9.75
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MMT5-FB	8	4.80
MMT5-H	8	8.40
MMT5-M	8	9.15
MMT7-CM†	8	*12.45
MMT7-FB	8	5.10
MMT7-H	8	9.00
MMT7-M	8	9.60
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MMT8-FB	8	5.70
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MMT9-M	8	8.85
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MMT17-M	8	9.30
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MMT21-M	8	9.75
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MMT30-M	8	9.60
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MMT31-M	8	9.45
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MMT33-M	8	9.75
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MT1-AG	10	8.70
MT1-CM†	10	*14.10
MT1-FB	10	4.65
MT1-H	10	8.25
MT1-M	10	9.00
MT1-P	10	9.60
MT1-PC	10	4.65
MT2-A	10	9.00
MT2-AG	10	10.80
MT2-CM†	10	*15.45
MT2-FB	10	5.25
MT2-H	10	9.75
MT2-M	10	9.90
MT2-P	10	10.20
MT3-A	10	8.70
MT3-AG	10	9.30
MT3-CM†	10	*15.00
MT3-FB	10	4.95
MT3-H	10	8.40
MT3-M	10	9.60
MT3-P	10	9.90
MT3-PC	10	4.95
MT5-A	10	8.70
MT5-AG	10	9.30
MT5-CM†	10	*15.00
MT5-FB	10	4.95
MT5-H	10	8.40
MT5-M	10	9.60
MT5-P	10	9.90
MT5-PC	10	4.95
MT6-A	10	9.45
MT6-AG	10	10.35
MT6-CM†	10	*15.15
MT6-FB	10	5.70
MT6-H	10	9.60
MT6-M	10	9.75
MT6-P	10	10.65
MT6-PC	10	5.70
MT7-A	10	8.85
MT7-AG	10	9.90
MT7-CM†	10	*15.15
MT7-FB	10	5.25
MT7-H	10	9.15
MT7-M	10	9.75
MT7-P	10	10.20
MT8-A	10	9.60
MT8-AG	10	10.80
MT8-CM†	10	*15.45
MT8-FB	10	5.70
MT8-H	10	9.90
MT8-M	10	9.90
MT8-P	10	10.65
MT8-PC	10	5.70
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MT9-AG	10	10.35
MT9-CM†	10	*15.45
MT9-FB	10	5.25
MT9-H	10	9.45
MT9-M	10	9.90
MT9-P	10	10.20
MT9-PC	10	5.25
MT10-A	10	8.70
MT10-AG	10	9.30
MT10-CM†	10	*15.00
MT10-FB	10	4.65
MT10-H	10	8.40

*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.

MICROTRAN

Part Number	Page No.	Net Price 1-9 Pcs.
MT10-M	10	9.60
MT10-P	10	9.60
MT11-A	10	9.00
MT11-AG	10	10.35
MT11-CM†	10	*15.45
MT11-FB	10	5.25
MT11-H	10	9.45
MT11-M	10	9.90
MT11-P	10	10.20
MT11-PC	10	5.25
MT12-A	10	8.70
MT12-AG	10	9.30
MT12-CM†	10	*15.00
MT12-FB	10	4.05
MT12-H	10	8.40
MT12-M	10	9.60
MT12-P	10	9.00
MT12-PC	10	4.05
MT13-A	10	8.85
MT13-AG	10	9.45
MT13-CM†	10	*15.15
MT13-FB	10	4.50
MT13-H	10	8.55
MT13-M	10	9.75
MT13-P	10	9.45
MT14-A	10	8.10
MT14-AG	10	8.70
MT14-CM†	10	*13.95
MT14-FB	10	4.05
MT14-H	10	7.80
MT14-M	10	9.00
MT14-P	10	9.00
MT14-PC	10	4.05
MT15-A	10	8.70
MT15-AG	10	9.30
MT15-CM†	10	*15.00
MT15-FB	10	4.35
MT15-H	10	8.40
MT15-M	10	9.60
MT15-P	10	9.30
MT18-A	10	9.60
MT18-AG	10	10.80
MT18-CM†	10	*15.45
MT18-FB	10	5.70
MT18-H	10	9.90
MT18-M	10	9.90
MT18-P	10	10.65
MT20-A	10	9.75
MT20-AG	10	11.25
MT20-CM†	10	*15.90
MT20-FB	10	5.70
MT20-H	10	10.20
MT20-M	10	10.20
MT20-P	10	10.65
MT21-A	10	9.15
MT21-AG	10	11.25
MT21-CM†	10	*15.75
MT21-FB	10	5.70
MT21-H	10	10.20
MT21-M	10	10.05
MT21-P	10	10.65
MT21-PC	10	6.30
MT22-A	10	9.90
MT22-AG	10	11.55
MT22-CM†	10	*15.75
MT22-FB	10	6.00
MT22-H	10	10.50
MT22-M	10	10.05
MT22-P	10	10.95
MT23-A	10	8.70
MT23-AG	10	9.30
MT23-CM†	10	*15.00
MT23-FB	10	4.35
MT23-H	10	8.40
MT23-M	10	9.60
MT23-P	10	9.30
MT23-PC	10	4.35
MT24-A	10	8.70
MT24-AG	10	9.30
MT24-CM†	10	*15.00
MT24-FB	10	4.35
MT24-H	10	8.40
MT24-M	10	9.60
MT24-P	10	9.30
MT24-PC	10	4.35
MT25-A	10	9.60
MT25-AG	10	10.35
MT25-CM†	10	*15.45
MT25-FB	10	5.25
MT25-H	10	9.45
MT25-M	10	9.90
MT25-P	10	10.20
MT25-PC	10	5.25
MT26-A	10	8.85
MT26-AG	10	10.35
MT26-CM†	10	*15.15
MT26-FB	10	5.25
MT26-H	10	9.45
MT26-M	10	10.65
MT26-P	10	10.20
MT26-PC	10	5.25
MT29-A	10	8.70
MT29-AG	10	9.30
MT29-CM†	10	*15.00
MT29-FB	10	4.35
MT29-H	10	8.40
MT29-M	10	9.60
MT29-P	10	9.30
MT29-PC	10	4.35
MT30-A	10	8.70
MT30-AG	10	9.30
MT30-CM†	10	*15.00
MT30-FB	10	4.35
MT30-H	10	8.40
MT30-M	10	9.60
MT30-P	10	9.30
MT30-PC	10	4.35
MT33-A	10	10.20
MT33-AG	10	12.00
MT33-CM†	10	*15.90
MT33-FB	10	6.00
MT33-H	10	10.80
MT33-M	10	10.20
MT33-P	10	10.95
MT33-PC	10	6.60
MT34-A	10	10.05
MT34-AG	10	11.85
MT34-CM†	10	*16.05
MT34-FB	10	5.85
MT34-H	10	10.65
MT34-M	10	10.35
MT34-P	10	10.80
MT35-A	10	10.80
MT35-AG	10	12.60
MT35-CM†	10	*16.60
MT35-FB	10	6.60
MT35-H	10	11.40
MT35-M	10	10.95
MT35-P	10	11.55
MT35-PC	10	7.20
PC2506	26	7.35
PC2512	26	7.65
PC2524	26	7.80
PC2528	26	7.80
PC2608	26	7.80
PC2616	26	7.95
PC2624	26	7.95
PC2628	26	7.95
PC2632	26	8.10
PC2708	26	7.80
PC2712	26	7.80
PC2715	26	7.95
PC2716	26	7.95
PC2724	26	8.10
PC2728	26	8.10
PC2732	26	8.25
PC4304	23	4.35
PC4312	23	4.50
PC4316	23	4.50
PC4320	23	4.65
PC4408	23	4.50
PC4412	23	4.50
PC4416	23	4.65
PC4424	23	4.65
PC4428	23	4.80
PC4432	23	4.95
PC6205	27	7.65
PC6210	27	7.65
PC6211	27	7.65
PC6214	27	7.65
PC6505	27	6.45
PC6506	26	6.15
PC6510	27	6.45
PC6511	27	6.45
PC6512	26	6.45
PC6514	27	6.45
PC6524	26	6.45
PC6528	26	6.60
PC6605	27	6.60
PC6608	26	6.30
PC6610	27	6.60
PC6611	27	6.60
PC6614	27	6.60
PC6616	26	6.45
PC6624	26	6.45
PC6628	26	6.45
PC6632	26	6.45
PC6705	27	6.60
PC6708	26	6.15
PC6710	27	6.60
PC6711	27	6.60
PC6712	26	6.15
PC6714	27	6.60
PC6715	26	6.15
PC6716	26	6.15
PC6724	26	6.30
PC6728	26	6.30
PC6732	26	6.30
PC6905	27	8.10
PC6910	27	8.10
PC6911	27	8.10
PC6914	27	8.10
PCL6605	27	8.40
PCL6610	27	8.40
PCL6611	27	8.40
PCL6614	27	8.40
PCL6630	27	8.70
PCL6631	27	8.70
PCT6230	27	8.05
PCT6530	27	6.90
PCT6531	27	6.90
PCT6630	27	6.90
PCT6631	27	6.90
PCT6730	27	7.05
PCT6731	27	7.05
PCT6930	27	8.55
PCT6931	27	8.55
PM3-M	6	12.30
PM5-M	6	11.40
PM7-M	6	12.00
PM9-M	6	12.00
PM11-M	6	11.40
PM13-M	6	11.40
PM15-F	6	5.70
PM15-M	6	10.50
PM17-M	6	10.95
PM19-M	6	11.25
PM21-M	6	11.70
PM23-M	6	11.25
PM25-M	6	11.55
PM27-F	6	5.55
PM27-M	6	10.20
PM29-M	6	11.10
PM31-F	6	7.05
PM31-M	6	10.65
PM33-F	6	5.25
PM33-M	6	10.50
PM34-F	6	5.85
PM34-M	6	10.80
PM35-F	6	5.40
PM35-M	6	10.05
PM36-F	6	6.45
PM36-M	6	11.10
PM37-F	6	4.95
PM37-M	6	10.35
PM38-F	6	5.40
PM38-M	6	10.95
PM39-F	6	4.50
PM39-M	6	9.00
PM40-F	6	4.35
PM40-M	6	8.55
PM41-F	6	4.05
PM41-M	6	8.10
PM90	6	1.20
QEL1-M	15	9.45
QEL2-M	15	9.45
QEL5-M	15	9.90
QEL10-M	15	10.35
QEL15-M	15	10.50
QEL25-M	15	10.65
QEL50-M	15	11.10
QEL100-M	15	11.25
QEM05-M	15	10.65
QEM1-M	15	10.65
QEM2-M	15	10.95
QEM5-M	15	11.40
QEM10-M	15	11.70
QEM15-M	15	11.85
QEM25-M	15	12.15
QEM50-M	15	12.30
QGL5-F	16	5.10
QGL5-H†	16	*10.95
QGL5-HC†	16	*10.95
QGL5-M	16	8.40
QGL10-F	16	5.25
QGL10-H†	16	*11.25
QGL10-HC†	16	*11.25
QGL10-M	16	8.55
QGL15-F	16	5.40
QGL15-H†	16	*11.40
QGL15-HC†	16	*11.40
QGL15-M	16	8.70
QGL30-F	16	5.55
QGL30-H†	16	*11.55
QGL30-HC†	16	*11.55
QGL30-M	16	8.85
QGL50-F	16	5.70
QGL50-H†	16	*11.70
QGL50-HC†	16	*11.70
QGL50-M	16	9.00
QGL100-F	16	5.85
QGL100-H†	16	*12.00
QGL100-HC†	16	*12.00
QGL100-M	16	9.45
QGL250-F	16	6.60
QGL250-H†	16	*12.45
QGL250-HC†	16	*12.45
QGL250-M	16	9.90
QGL500-F	16	7.05
QGL500-H†	16	*12.90
QGL500-HC†	16	*12.90
QGL500-M	16	10.35
QGL1000-F	16	8.55
QGL1000-H†	16	*14.40
QGL1000-HC†	16	*14.40
QGL1000-M	16	11.85
QGL1500-F	16	10.50
QGL1500-H†	16	*16.50
QGL1500-HC†	16	*16.50
QGL1500-M	16	13.95
QGM1-F	16	5.40
QGM1-H†	16	*10.80
QGM1-HC†	16	*10.80
QGM1-M	16	8.70
QGM2-F	16	5.55
QGM2-H†	16	*10.95
QGM2-HC†	16	*10.95
QGM2-M	16	8.85
QGM5-F	16	5.85
QGM5-H†	16	*11.25
QGM5-HC†	16	*11.25
QGM5-M	16	9.15
QGM10-F	16	6.00
QGM10-H†	16	*11.40
QGM10-HC†	16	*11.40
QGM10-M	16	9.30
QGM15-F	16	6.15
QGM15-H†	16	*11.55
QGM15-HC†	16	*11.55
QGM15-M	16	9.45
QGM25-F	16	6.45
QGM25-H†	16	*11.70
QGM25-HC†	16	*11.70
QGM25-M	16	9.75
QGM50-F	16	6.75
QGM50-H†	16	*12.00
QGM50-HC†	16	*12.00
QGM50-M	16	10.05
QGM100-F	16	7.35
QGM100-H†	16	*12.90
QGM100-HC†	16	*12.90
QGM100-M	16	10.35
QIL3-F	17	4.20
QIL3-H	17	8.55
QIL3-M	17	7.05
QIL5-F	17	4.20
QIL5-H	17	8.55
QIL5-M	17	7.05
QIL10-F	17	4.20
QIL10-H	17	8.55
QIL10-M	17	7.05
QIL15-F	17	4.20
QIL15-H	17	8.55
QIL15-M	17	7.20
QIL25-F	17	4.35
QIL25-H	17	8.85
QIL25-M	17	7.20
QIL50-F	17	4.35
QIL50-H	17	9.00
QIL50-M	17	7.35
QIL100-F	17	4.50
QIL100-H	17	9.60
QIL100-M	17	7.65
QIL150-F	17	4.95
QIL150-H	17	9.75
QIL150-M	17	7.80
QIL250-F	17	5.10
QIL250-H	17	9.75
QIL250-M	17	8.25
QIL500-F	17	5.85
QIL500-H	17	10.65
QIL500-M	17	9.00
QIL1000-F	17	6.75
QIL1000-H	17	11.55
QIL1000-M	17	9.90
QIL1500-F	17	8.40
QIL1500-H	17	13.20
QIL1500-M	17	11.55
QIL2500-F	17	9.90
QIL2500-H	17	14.70
QIL2500-M	17	13.20
QKL5-F	18	4.35
QKL5-H	18	7.65
QKL5-M	18	6.90
QKL10-F	18	4.50
QKL10-H	18	7.80
QKL10-M	18	6.90
QKL15-F	18	4.80
QKL15-H	18	7.95
QKL15-M	18	6.90
QKL25-F	18	4.95
QKL25-H	18	8.10
QKL25-M	18	7.05
QKL50-F	18	4.95
QKL50-H	18	8.40
QKL50-M	18	7.05
QKL100-F	18	5.10
QKL100-H	18	9.00
QKL100-M	18	7.50
QKL150-F	18	5.25
QKL150-H	18	9.15
QKL150-M	18	7.65
QKL250-F	18	5.25
QKL250-H	18	9.45
QKL250-M	18	7.80
QKL500-F	18	5.40
QKL500-H	18	9.75
QKL500-M	18	7.95
QKL1000-F	18	5.55
QKL1000-H	18	10.20
QKL1000-M	18	8.40
QKL1500-F	18	5.70
QKL1500-H	18	10.65
QKL1500-M	18	8.55
QKL2500-F	18	6.30
QKL2500-H	18	10.95
QKL2500-M	18	8.70
QKL5000-F	18	7.05
QKL5000-H	18	12.00
QKL5000-M	18	9.60
QKL10000-F	18	7.80
QKL10000-H	18	13.35
QKL10000-M	18	10.95
QKM2-F	18	5.10
QKM2-H	18	8.70
QKM2-M	18	7.50
QKM5-F	18	5.25
QKM5-H	18	8.85
QKM5-M	18	7.50
QKM10-F	18	5.25
QKM10-H	18	9.00
QKM10-M	18	7.65
QKM25-F	18	5.40
QKM25-H	18	9.30
QKM25-M	18	7.80
QKM50-F	18	5.55
QKM50-H	18	9.45
QKM50-M	18	7.95
QKM100-F	18	5.70
QKM100-H	18	9.45
QKM100-M	18	8.10
QKM250-F	18	5.85
QKM250-H	18	9.75
QKM250-M	18	8.40
QKM500-F	18	6.15
QKM500-H	18	10.05
QKM500-M	18	8.70
QKM1000-F	18	6.45
QKM1000-H	18	11.10
QKM1000-M	18	9.90
QPL25-F	19	6.90
QPL25-H	19	15.75
QPL25-M	19	12.15
QPL50-F	19	7.05
QPL50-H	19	15.90
QPL50-M	19	12.30
QPL100-F	19	7.20
QPL100-H	19	16.05
QPL100-M	19	12.45
QPL250-F	19	7.35
QPL250-H	19	16.20
QPL250-M	19	12.60
QPL500-F	19	7.50
QPL500-H	19	16.35
QPL500-M	19	12.75
QPL1000-F	19	7.80
QPL1000-H	19	16.65
QPL1000-M	19	13.20
QPL1500-F	19	8.10
QPL1500-H	19	16.95
QPL1500-M	19	13.35
QPL2500-F	19	8.70
QPL2500-H	19	17.25
QPL2500-M	19	13.65
QPL5000-F	19	9.45
QPL5000-H	19	17.70
QPL5000-M	19	14.10
QPL7500-F	19	10.05
QPL7500-H	19	18.15
QPL7500-M	19	14.55
QPL10000-F	19	11.10
QPL10000-H	19	18.45
QPL10000-M	19	14.85
QPL15000-F	19	12.00
QPL15000-H	19	19.80
QPL15000-M	19	15.60
QPL25000-F	19	13.05
QPL25000-H	19	21.60
QPL25000-M	19	17.40
QTL25-F	19	11.85
QTL25-H	19	18.90
QTL25-M	19	14.55
QTL50-F	19	12.00
QTL50-H	19	19.20
QTL50-M	19	14.70
QTL100-F	19	12.45
QTL100-H	19	19.50
QTL100-M	19	15.00
QTL150-F	19	12.90
QTL150-H	19	19.95
QTL150-M	19	15.75
QTL250-F	19	13.20
QTL250-H	19	20.25
QTL250-M	19	16.05
QTL500-F	19	13.50
QTL500-H	19	20.55
QTL500-M	19	16.05
QTL1000-F	19	13.50
QTL1000-H	19	20.85
QTL1000-M	19	13.95
QTL1500-F	19	13.65
QTL1500-H	19	21.15
QTL1500-M	19	16.35
QTL2500-F	19	14.40
QTL2500-H	19	21.90
QTL2500-M	19	17.10
QTL5000-F	19	14.40
QTL5000-H	19	22.80
QTL5000-M	19	17.25
QTL10000-F	19	15.75
QTL10000-H	19	23.25
QTL10000-M	19	18.60
QTL15000-F	19	16.80
QTL15000-H	19	24.15
QTL15000-M	19	19.80
QTL25000-F	19	18.00
QTL25000-H	19	25.20
QTL25000-M	19	21.15
QTL50000-F	19	25.20
QTL50000-H	19	33.00
QTL50000-M	19	27.75
S101-S	13	11.40
S101-SP	13	F.Q.
S105-S	13	13.20
S105-SP	13	F.Q.
S107-S	13	13.95
S107-SP	13	F.Q.
S118-S	13	11.70
S118-SP	13	F.Q.
S126-S	13	10.95
S126-SP	13	F.Q.
S130-S	13	11.85
S130-SP	13	F.Q.
S100-FB	13	.21
SM1-AF	9	10.65
SM1-CM†	9	*11.70
SM1-FB	9	6.45
SM1-H	9	10.05
SM1-M	9	9.90
SM2-AF	9	10.50
SM2-CM†	9	*11.70
SM2-FB	9	6.30
SM2-H	9	9.60
SM2-M	9	9.90
SM3-AF	9	9.90
SM3-CM†	9	*11.70
SM3-FB	9	5.70
SM3-H	9	9.30
SM3-M	9	9.90
SM4-AF	9	10.20
SM4-CM†	9	*11.70
SM4-FB	9	6.00
SM4-H	9	9.60
SM4-M	9	9.90
SM5-AF	9	9.00
SM5-CM†	9	*10.95
SM5-FB	9	5.25
SM5-H	9	8.55
SM5-M	9	9.30
SM6-AF	9	10.50
SM6-CM†	9	*11.70
SM6-FB	9	6.30
SM6-H	9	8.10
SM6-M	9	9.90
SMT1-AF	9	9.15

NOTE: Items with - FBR suffix (i.e. PC6608-FBR) not stocked. Available on short order in 1-49 quantity, add $10.00 lot set up charge. F.Q.: Contact factory for quote.

Part Number	Page No.	Net Price 1-9 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 16⅔%, 100-249 Net Less 33⅓%. 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	$.64	$.38	$.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:

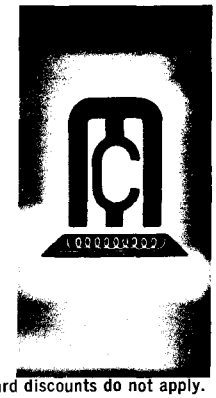
Increase unit price by $.10, or a minimum of $25.00 per scheduled shipment, to cover documentation cost.

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 F.S.C.: 00348

Part Number	Page No.	Net Price 1-9 Pcs.
UM27-M	7	7.80
UM28-F	7	3.75
UM28-M	7	6.60
UM29-F	7	5.25
UM29-M	7	8.25
UM30-F	7	3.60
UM30-M	7	6.30
UM31-F	7	5.55
UM31-M	7	10.35
UM32-F	7	5.40
UM32-M	7	8.40
UM33-F	7	5.25
UM33-M	7	8.25
UM34-F	7	5.55
UM34-M	7	10.35
UM35-F	7	5.70
UM35-M	7	10.95
UM36-F	7	5.55
UM36-M	7	10.95
UM37-F	7	5.25
UM37-M	7	8.85
UM39-F	7	5.25
UM39-M	7	8.55
UM90	7	1.35
VM1-FPB	7	4.20
VM1-M	7	7.20
VM2-FPB	7	5.70
VM2-M	7	8.70
VM3-FPB	7	5.10
VM3-M	7	8.10
VM4-FPB	7	5.70
VM4-M	7	8.70
VM5-FPB	7	5.25
VM5-M	7	8.25
VM6-FPB	7	5.85
VM6-M	7	8.85
VM7-FPB	7	4.20
VM7-M	7	7.50
VM8-FPB	7	4.35
VM8-M	7	7.50
VM9-FPB	7	4.35
VM9-M	7	7.50
VM10-FPB	7	5.25
VM10-M	7	8.40
VM11-FPB	7	4.05
VM11-M	7	6.90
VM12-FPB	7	5.10
VM12-M	7	8.10
VM13-FPB	7	5.25
VM13-M	7	8.40
VM14-FPB	7	4.95
VM14-M	7	8.25
VM15-FPB	7	6.00
VM15-M	7	9.75
VM16-FPB	7	4.50
VM16-M	7	8.25
VM17-FPB	7	5.85
VM17-M	7	8.70
VM90	7	1.95



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

†Not stocked. Available on short order.

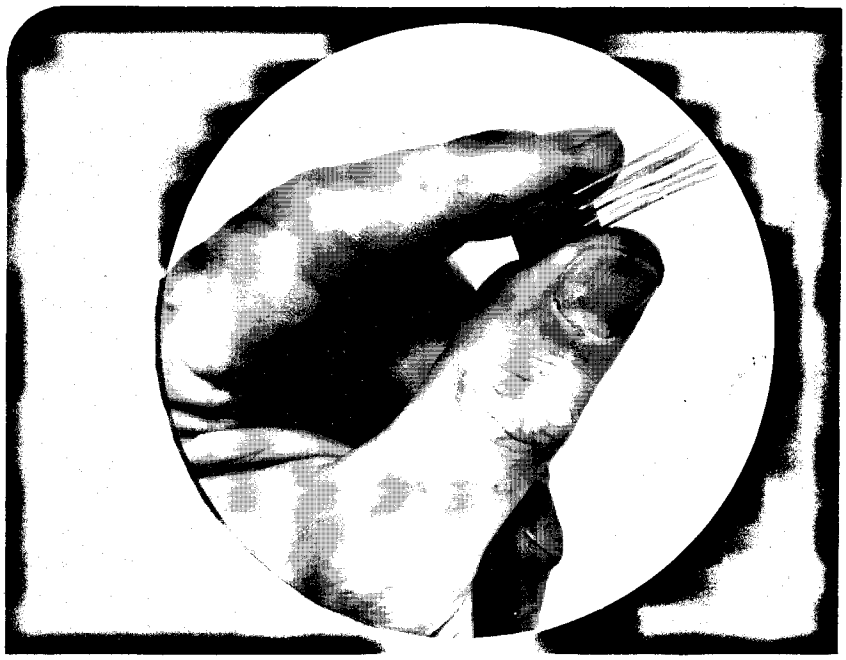
△Standard discounts do not apply.

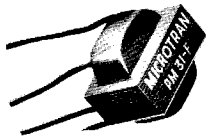
MICROTRAN

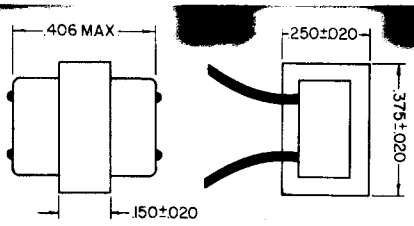
PICO MINIATURE TRANSFORMERS

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

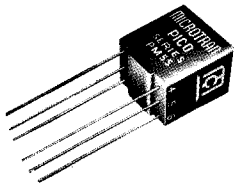
PICO MINIATURE TRANSFORMERS — PM SERIES

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.



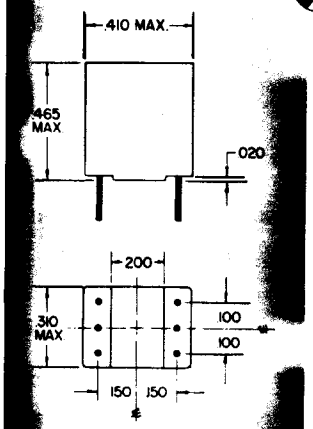
MOLDED PM-M

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

Gold plated high strength nickel alloy leads .020 x ¾" 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.

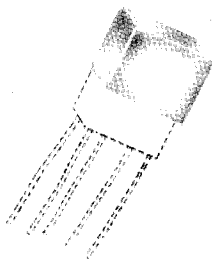


PM-M MAGNETIC SHIELD

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.



MICROTRAN

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.

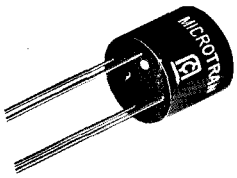
ULTRA-MINIATURE TRANSFORMERS — UM Series

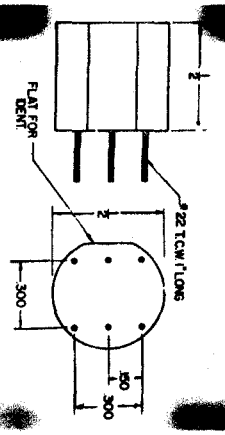
Frequency Response ± 2 db 300 to 10,000 Hz
Measured at level stated for 300 Hz

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.



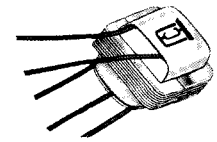


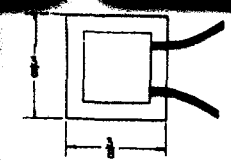
MOLDED UM-M
ULTRA MINIATURE SERIES

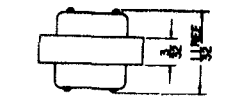
To order add -M to Part Number, i.e. UM 22-M. Weight .14 oz.

MIL DESIGNATION
TF5RX †† ZZ

††See Family Designation in Chart.







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

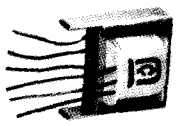
††See Family Designation in Chart.

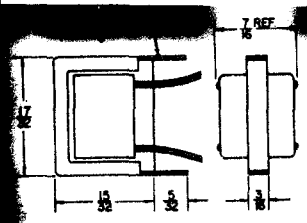
VERI-MINIATURE TRANSFORMERS — VM Series

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.





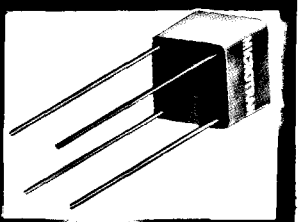
PLUG-IN TAB MOUNTED CHANNEL VM-FPB
VERI-MINIATURE SERIES

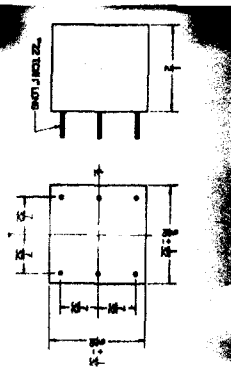
To order add -FPB to Part Number, i.e. VM2-FPB. Weight .2 oz. 4" color coded leads.

MIL DESIGNATION
TF6RX †† ZZ

††See Family Designation in Chart.

Available on special order without channel as VM-F, 7/16" x 7/16" x ½". Wt. 16 oz.





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.

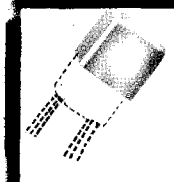
MAGNETIC SHIELDS

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

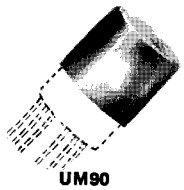
Dimensions

	L	W	H*	D
UM90			5/16	19/32
VM90	5/8	5/8	17/32	

*Overall height with can cemented in place.



VM90



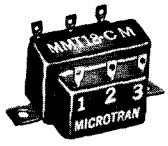
UM90

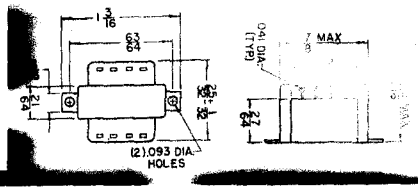
MICROTRAN

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.





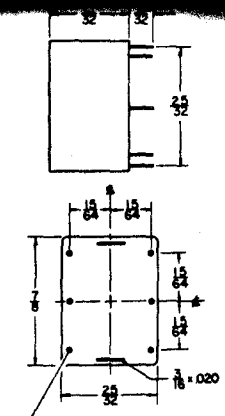
CONTOUR MOLDED MM-CM

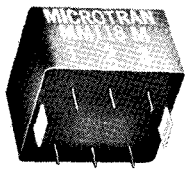
Special Order Only

Designed for chassis mounting with solder terminals on top of transformer. Epoxy contour molding provides greatest resistance to extremes of ambient in smallest possible package. Weight ½ 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 ½ oz.

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

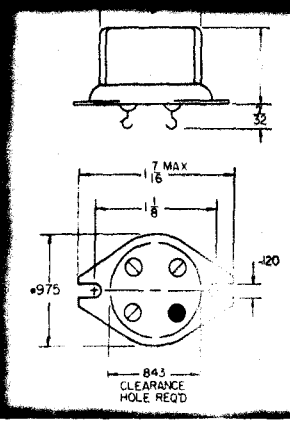
MIL DESIGNATION TF5RX††ZZ
††See Family Designation in Chart

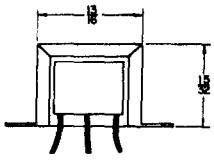
HERMETIC MM-H

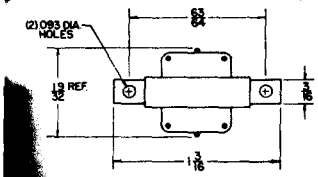
Grey Enamel Finish. High Compression Glass Terminals. Weight ¾ oz.

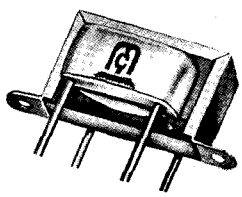
To order add -H to Part Number. i.e. MM2-H. MMT3-H.

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, $\frac{25}{32}$" mounting centers on Special Order.

Available without channel as type MM-F ¾ x $\frac{7}{16}$ x $\frac{19}{32}$. Wt. .38 oz. on Special Order.

MIL DESIGNATION TF6RX††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, interstage, output, isolation and other impedance matching requirements.

Part No.	Primary Impedance	Secondary Impedance	Pri. D.C. Unbalance 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. Unbalance 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

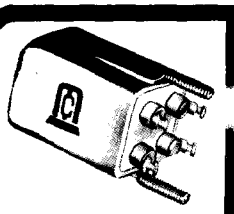
*Add either -H, -M, -CM, or -FB to Part No. to designate construction. See Photos.

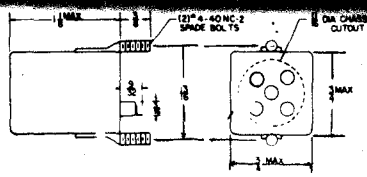
MICROTRAN

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.



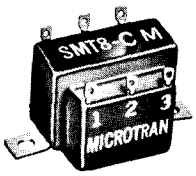


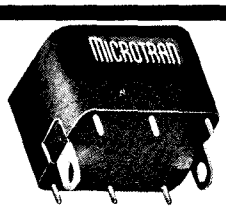
MIL CASE SM-AF

Gray Enamel Finish. Weight 1¼ 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, SM3-AF.

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

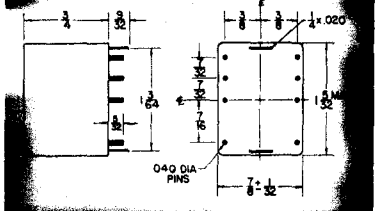




SUB-MINIATURE TRANSFORMERS
SM Series

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. Unbalance 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

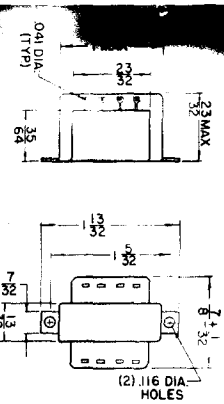


MOLDED SM-M

Designed for plug-in printed circuit applications. Cast Epoxy Resin provides highest resistance to extremes of ambient. Weight 1½ oz.

To order add -M to Part Number. i.e. SM5-M, SMT5-M.

MIL DESIGNATION TF5RX††ZZ
††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 1¼ oz.

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

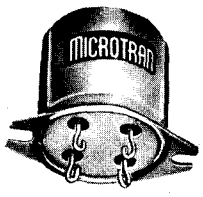
MIL DESIGNATION TF5RX††ZZ
††See Family Designation in Chart

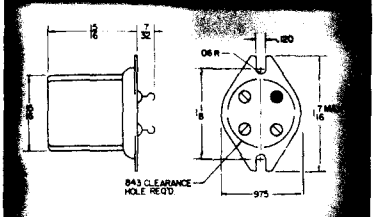
SUB-MINIATURE TRANSFORMERS
SMT Series

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. Unbalance 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.



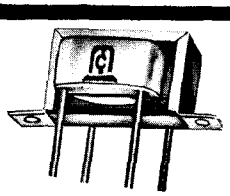


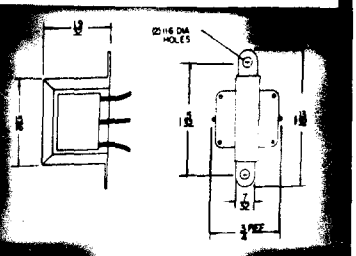
HERMETIC SM-H

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 ¾ oz. Leads #28 PVC 4" long.

Available with plug-in tab mounted channel as type SM-FPB 2⅝₂ mtg. centers **on Special Order.**

Available without mounting channel as type SM-F 5/16 x 7/8 x ¾. Weight .67 oz. **on Special Order.**

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

MICROTRAN

MINIATURE AUDIO
MINIATURE TRANSISTOR TRANSFORMERS

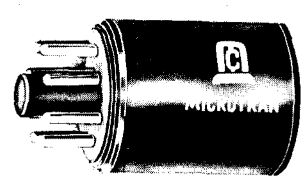
This group of transformers is often referred to as "the designers series." It offers an extensive range of open frame, hermetically sealed, plug-in, printed circuit, contour molded and plug-in molded construction.

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

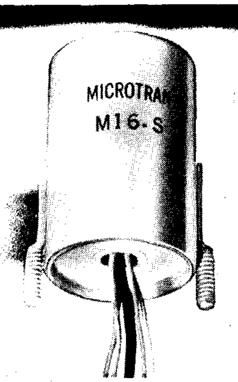
25 DB magnetic shield. 2 clearance holes on 1⅙ centers to match aluminum cased M-A can mounting.



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 1⅜₂". Height above mtg. surface 1¹⁵⁄₃₂".

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 1⅙". Height 1¹⁵⁄₃₂". Mtg. Centers, 1⅙". Wt. 3 oz. 6-32 x ⅜" 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
MI-S	Same as MI above—with dual nickel alloy shield					
• M2-(*)	50/250/600 C.T.	50,000 C.T.	0	5	20-20,000	10
M14-(*)	200	½ 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.					

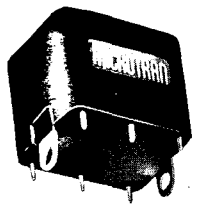
*Add either -AG -H, -CM, -P, -PC, -A, -S, or -FB to Part No. to designate construction. See photos.
• These items not available in -PC construction.

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

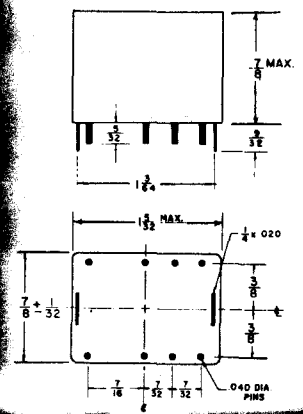


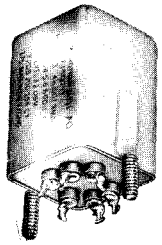
MOLDED M-M

Designed for plug-in printed circuit applications. Cast Epoxy resin provides highest resistance to extremes of ambient. Weight 1¾ oz.

To order add -M to Part No. i.e. M2-M, MT3-M.

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



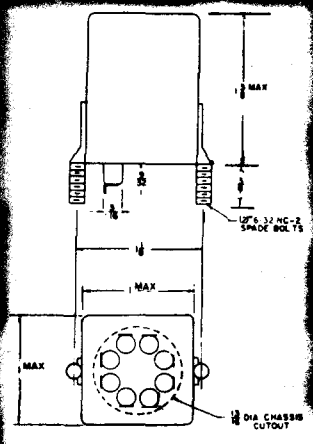


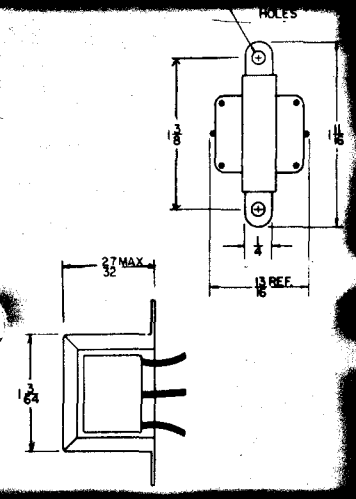
MIL CASE M-AG

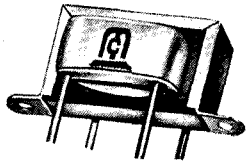
Grey Enamel Finish. Weight 2⅜ oz. Supplied with compression sealed ceramic terminals in MIL-T-27B AG case (modified).

To order add -AG to Part Number, i.e. M2-AG, MT3-AG.

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







OPEN FRAME WITH CHANNEL M-FB

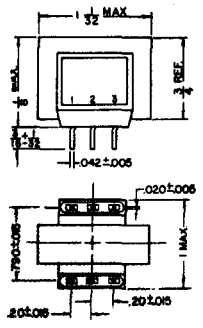
Weight 1.13 oz. To order add -FB to Part No. i.e. MT3-FB, M1-FB From stock. Leads 4" long. #28 PVC

Special Order

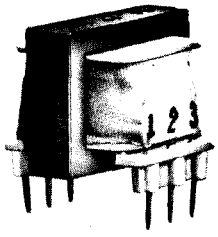
Available with plug-in tab channel, 1½ mounting centers as Type M-FPB.

Available without channel as type M-F ¾x1x1⅜₆. Wt. 1 oz.

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



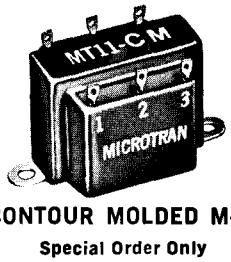
MT21-PC, MT33-PC, MT35-PC have 8—.025 x .015 pins on .150 centers.



OPEN FRAME PRINTED CIRCUIT M-PC

Weight 1.2 oz. To order add -PC to part number, i.e. MT3-PC, M3-PC.

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



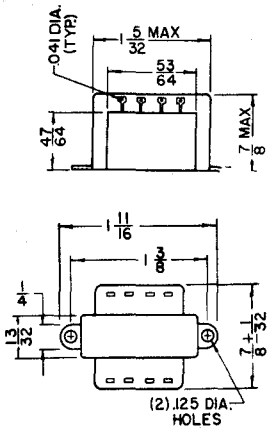
CONTOUR MOLDED M-CM

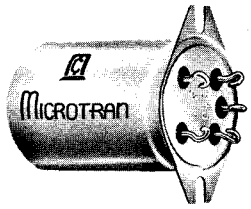
Special Order Only

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. Wt 1¼ oz.

To order add -CM to part number, i.e. M2-CM, MT3-CM.

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



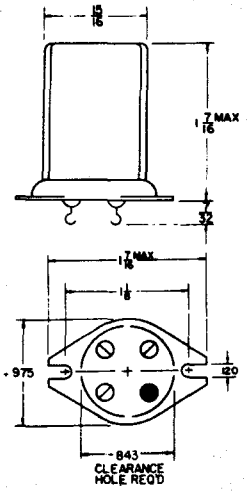


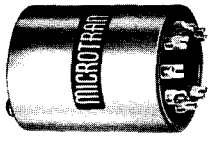
HERMETIC M-H

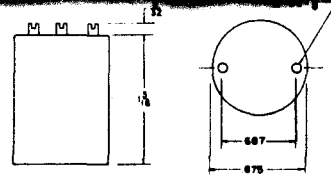
Grey Enamel Finish. Weight 1¼ oz. High Compression Glass Terminals. To order add -H to Part Number, i.e. M2-H, MT3-H, from stock.

.120 holes instead of slots, available **Special Order Only**.

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







ALUMINUM CASED M-A

Supplied with 2-56 screws. Weight 1.25 oz.

To order add -A to Part Number, i.e. MT3-A, M1-A.

MIL DESIGNATION TF3RX †† YY
††See Family Designation in Chart

MICROTRAN

DECI-MINIATURE—FOR PRINTED CIRCUITS—

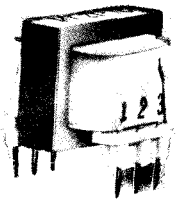
LOW LEVEL INPUT TRANSFORMERS

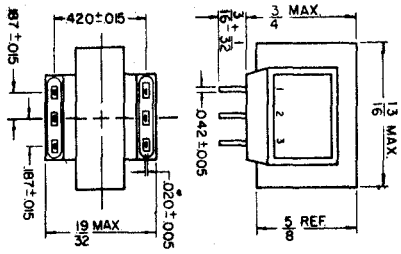
DECI-MINIATURE TRANSFORMERS—DCM SERIES

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.		75Ω 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 Full Pri. To Full Sec.	½ Pri. To Full Sec.	Ind. of Full Pri. @ .5V. 60 Hz	Imped. of Full Pri. @ .5V. 60 Hz	D.C. Resistance Full Pri.	Sec.	Fig.
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.

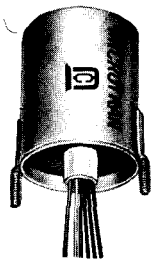


Fig. B: TRIPLE MU-METAL CASE, 6-32 x ⅜" mounting studs on 1½" centers. Weight 5 oz. 1⅜"D x 1 25/32"H.

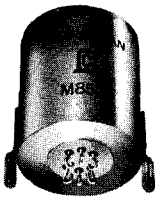


Fig. BB: HERMETICALLY SEALED to meet MIL-T-27. Triple mu metal case, high compression glass terminals, 6-32 x ⅜" mounting studs on 1½" centers; 1" dia. cut out for terminals. Weight: 5 oz.

SHIELDED PLUG-IN
Octal Type
M8030-1 have 8 pins
M8023-3 have 9 pins.
Matches many amplifiers.

SHIELDED CASED
Mounting Centers 1 3/16" 6-32 x ⅜" stunds.

IN-LINE MICROPHONE
Single Mu-Metal shield, electrostatic shield, 20" shielded cable is to be terminated with desired connector.

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	2¾	1 3/16 x 7/8	2	D
M8030*	200/50 C.T.	50,000	65	+5	20-20,000	2⅛	1⅛ D.	6	C
M8031	600 C.T./150	50,000	65	+5	30-20,000	2⅛	1⅛ D.	6	C
M8032†	250 C.T.	50,000	65	+5	20-20,000	2⅛	1⅛ D.	6	C
M8033†	50 C.T.	50,000	65	+5	20-20,000	2⅛	1⅛ D.	6	C
M1-S	50/250 C.T./ 600 C.T.	50,000	65	+5	20-20,000	1 17/32	1⅛ 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.

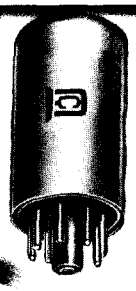


Fig. C

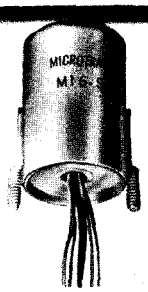


Fig. M-S

Fig. D

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 Primary	Secondary	Typical Open Circuit Primary Impedance @ 50Hz†	Frequency Response‡	Fig.	Replaces Beyer P/N
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.

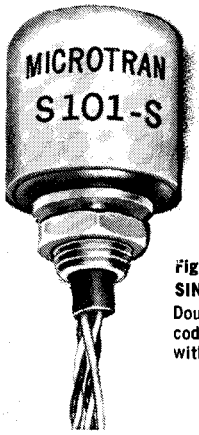


Fig. -S
SINGLE THREADED STUD MOUNTING
Double Mu-metal shielding. 3" color coded leads. 3/16"D. stud provided with nut. 5/8"D x 13/16"H.

Fig. -SP
PRINTED CIRCUIT MOUNTED
Double Mu-metal shielded. 3/4"D x 1 1/16"H. 7-.040 pins 1/8"H.

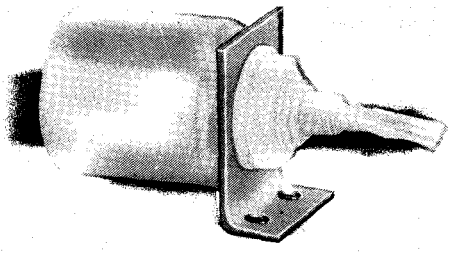


Fig. -FB
RIGHT ANGLE MOUNTING BRACKET
For low profile horizontal mounting of -S series stud mounted transformers. Supplied with two #2-56x 1/4" self tapping screws. M.C. 3/8".

MICROTRAN

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.

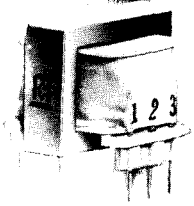
Available on special order with other ratings and construction.

DIMENSIONS

SIZE SERIES	Fig.	A	B	C	D	E	F	G	WT. OZ.
T1000	1	3/4	7/16	§	.484	.235‡	19/32	.040*	.4
T2000	1	49/64	23/32	§	.420	.187‡	11/16	.041	.5
T3000	1	1 1/64	27/32	§	.781	.200	61/64	.041	1.2
T4000	1	1 15/32	1 3/16	1 13/64	1.00	.312‡	1 5/32	.041	3.5
T6000	2	1 61/64	1 41/64	1 11/16	1.30	.400	1 15/32	.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.



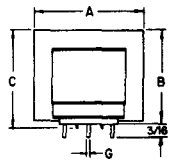
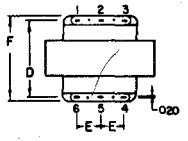
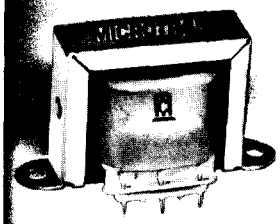


FIGURE 1
Plug-in printed circuit construction. Vacuum varnish impregnated.





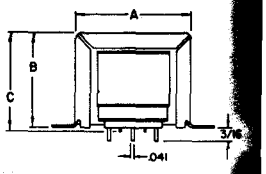
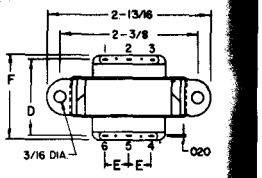
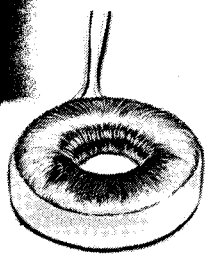


FIGURE 2
Plug-in printed circuit construction with mounting channel. Vacuum varnish impregnated.





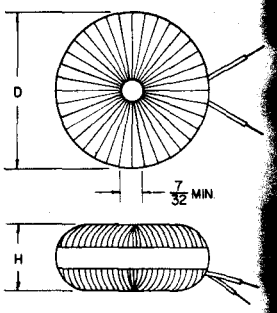


FIGURE 3
High-Q Toroid. Microcrystalline wax impregnated. Supplied with 4" #28 leads.

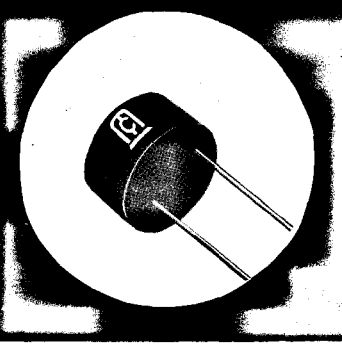
Size Series	D	H	Wt. Oz.
T7400	1	13/32	3/4
T8400	1 1/4	5/8	2

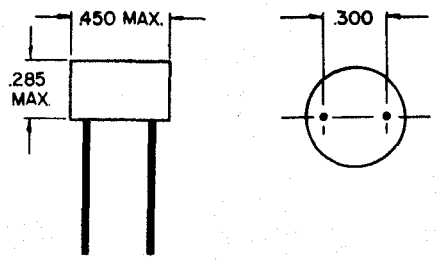
REQUEST ENGINEERING APPLICATION BULLETIN F232

MICROTRAN

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 ± 1% inductance tolerance.





MOLDED
QEL-M QEM-M

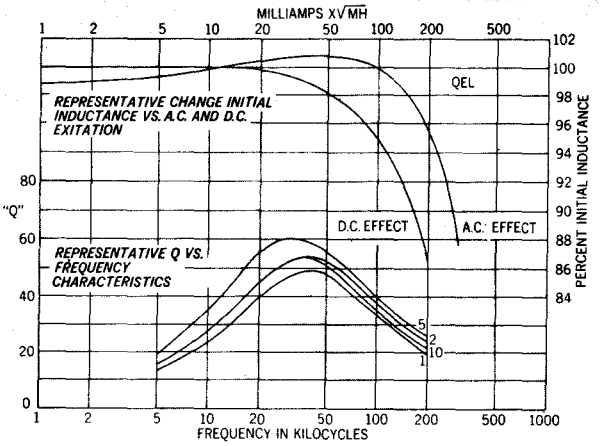
Molded in high temperature epoxy resin. Leads .020" x 2" gold plated nickel alloy. Weight .02 oz.

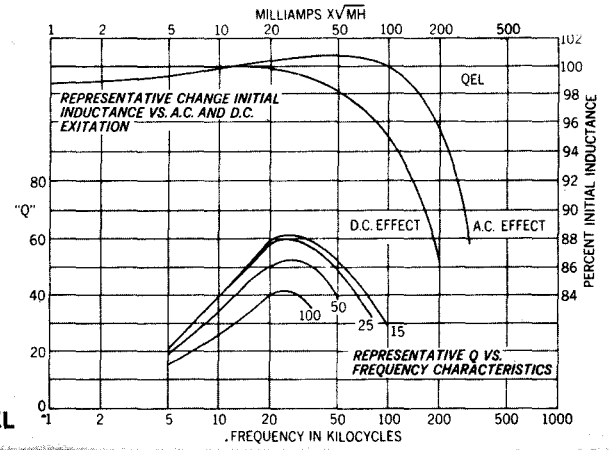
To order, add -M to Part Number, i.e., QEL5-M, QEM10-M.

TOROIDAL INDUCTOR—QEL Series

Frequency Range 1 KHZ to 300 KHZ — Accuracy ±2%

Part No.	Inductance	Typical DCR	Typical Distributed Capacity μμF
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



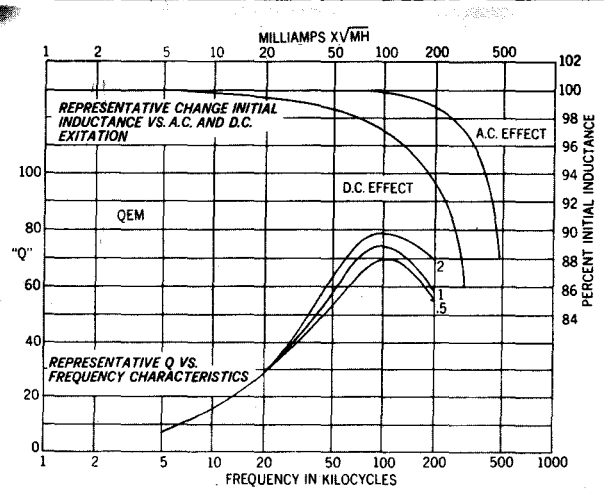


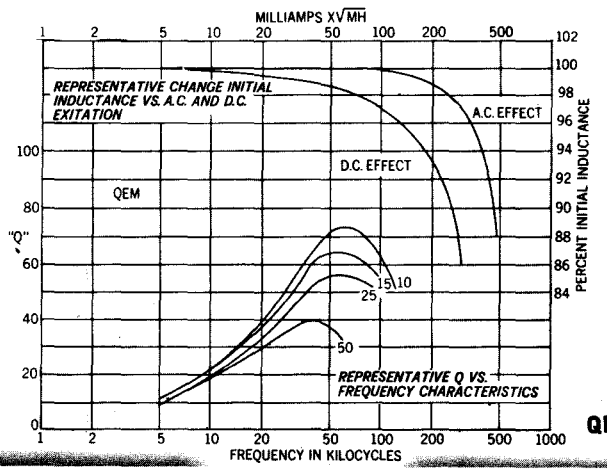
QEL

TOROIDAL INDUCTOR—QEM Series

Frequency Range 3 KHZ to 500 KHZ — Accuracy ±2%

Part No.	Inductance	Typical DCR	Typical Distributed Capacity μμF
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



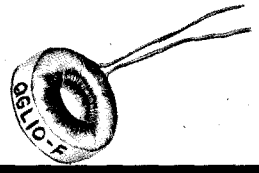


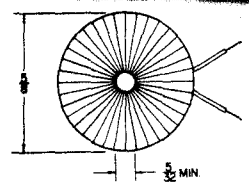
QEM

MICROTRAN

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 ± 1% or better inductance tolerances and stabilized cores.

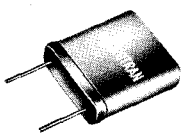




OPEN FRAME QG-F

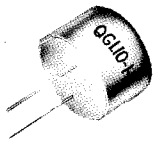
Microcrystaline wax dipped. Supplied with 4" #28 plastic leads. Wt. ¼ oz. To order add -F to part number, i.e. QGL10-F, QGM25-F.

SPECIAL ORDER ONLY



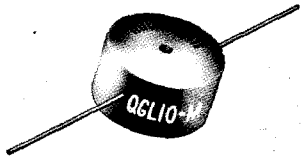
Hermetic Crystal Can, 23/32 x 11/32 x 49/64 hi. Leads .031. Weight ½ oz.

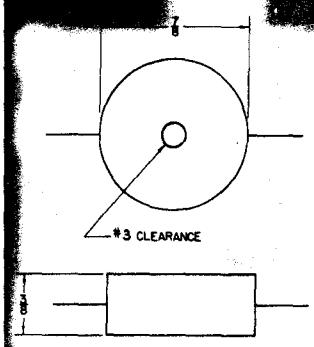
To order add -HC to part number, i.e. QGL10-HC, QGM25-HC.



Hermetically Sealed, 11/16 D. x 13/32 hi. Mounting tabs 3/32 wide x 3/16. Leads .031 x 2". Weight ½ 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 ½ oz.

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

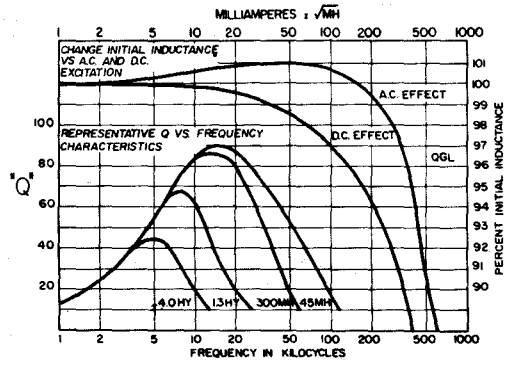
TOROIDAL INDUCTOR—QGL Series

Frequency Range to 20 KHZ — Accuracy ±2%

Available on special order with specific inductance values from 1.0 Mh through 4.0 Hy.

Part No.	Inductance	Typical DCRΩ	Typical Distributed Capacity μμF
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

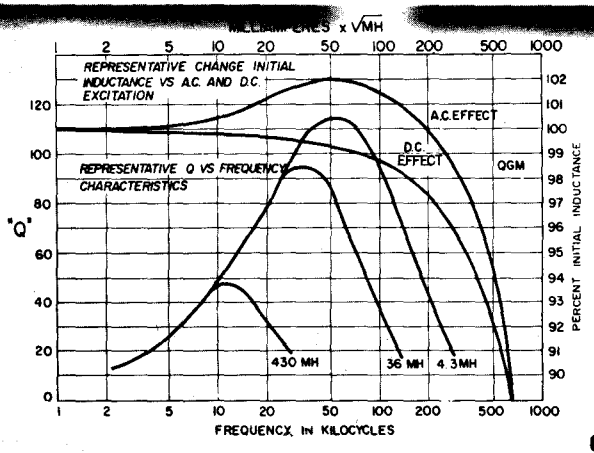
TOROIDAL INDUCTOR—QGM Series

Frequency Range 2 KHZ to 100 KHZ — Accuracy ±2%

Series available to 500 Mh on special order.

Part No.	Inductance	Typical DCRΩ	Typical Distributed Capacity μμF
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.

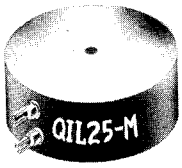


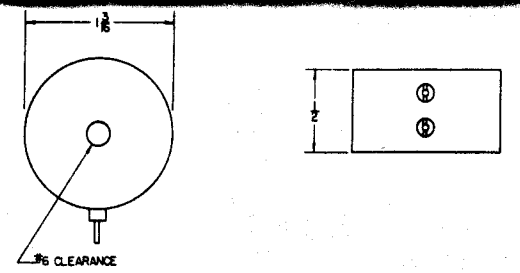
QGM

MICROTRAN

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 ±1% or better inductance tolerances and stabilized cores.



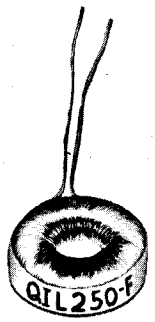


MOLDED QI-M

Molded in high temperature Epoxy. Silver plated terminals.

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

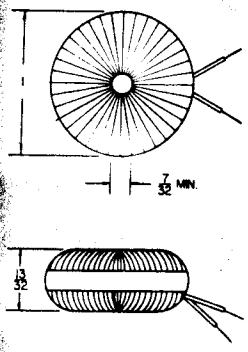
On special order threaded insert is available in place of clearance hole.

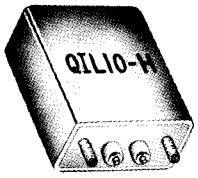


OPEN FRAME QI-F

Microcrystalline wax dipped. Supplied with 4" #28 plastic leads. Weight ¾ oz.

To order add -F to part number, i.e. QIL250-F.



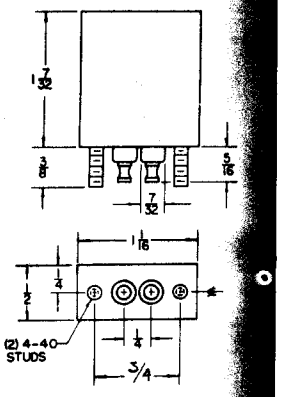


HERMETIC QI-H

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.



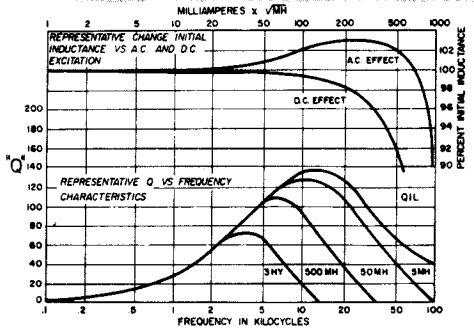
TOROIDAL INDUCTOR — QIL Series

Frequency Range to 20 KHZ — Accuracy ± 2%

Available on special order with specific inductance values through 7.0 Hy.

Part No.	Inductance	Typical DCRΩ	Typical Distributed Capacity μμF
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.

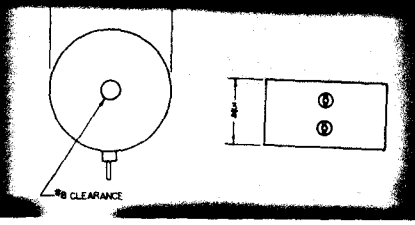


QIL

MICROTRAN

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 ±1% or better inductance tolerances and stabilized cores.

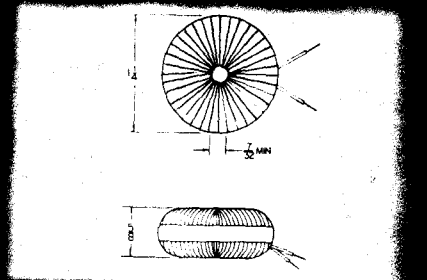


MOLDED QK-M

Molded in high temperature epoxy resin. Silver plated terminals.

To order add -M to part number, i.e. QKL10-M, QKM25-M. Weight 3¾ oz.

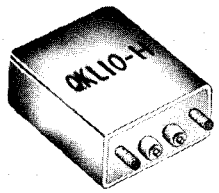
On special order threaded insert is available in place of clearance hole.

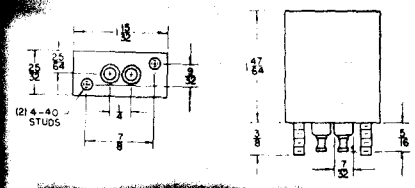


OPEN FRAME QK-F

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 topart number, i.e. QKL10-H, QKM25-H. Weight 3¾ oz.

On Special Order available with inserts in place of studs.

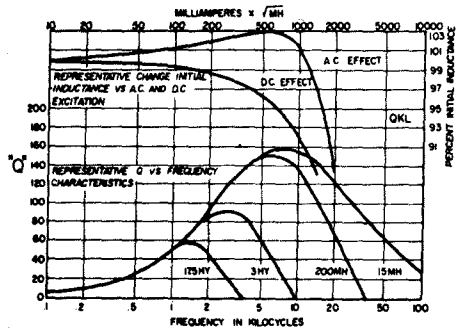
TOROIDAL INDUCTOR — QKL Series

Frequency Range to 10 KHZ — Accuracy ±2%

Available on special order with specific inductance values to 17.5 Hy.

Part No.	Inductance	Typical DCRΩ	Typical Distributed Capacity μμF
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

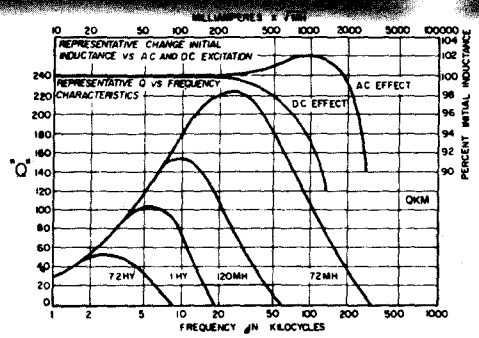
TOROIDAL INDUCTOR — QKM Series

Frequency Range 5 to 50 KHZ — Accuracy ±2%

Available on special order with specific inductance values to 1000 Mh.

Part No.	Inductance	Typical DCRΩ	Typical Distributed Capacity μμF
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.

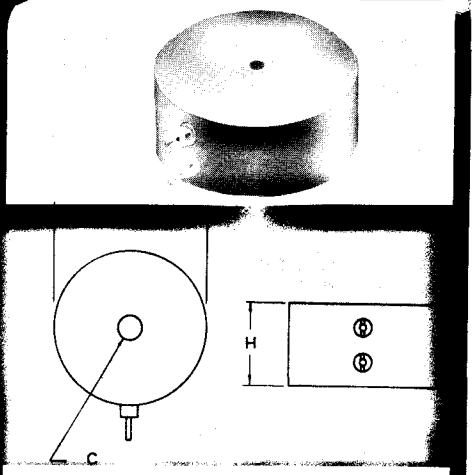


QKM

MICROTRAN

HIGH-Q TOROIDAL INDUCTORS

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



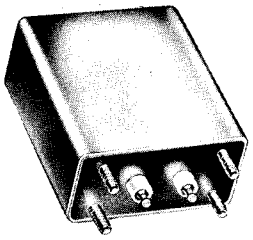
MOLDED – M

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.

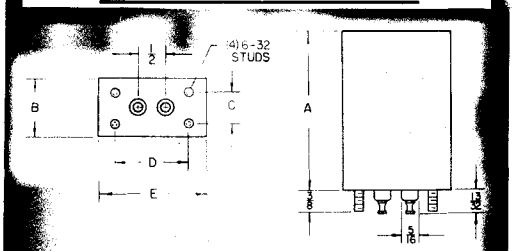
MODEL	D	H	C	WGT.
QPL-M	2"	1"	#10	6 oz.
QTL-M	2⅞"	1⅜"	#10	14 oz.

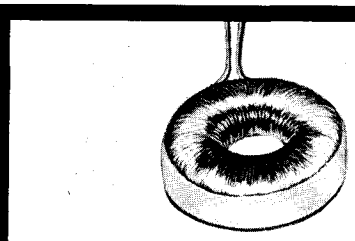


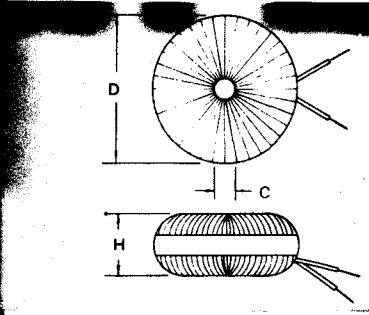
HERMETIC – H

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

Series	Dimensions A	B	C	D	E	Wt. Oz.
QPL-H	2 3/32	1 1/16	1/16	1 5/16	1 15/16	9½
QTL-H	2 13/16	1 5/16	1/16	2 1/4	2 5/16	16







OPEN-FRAME – F

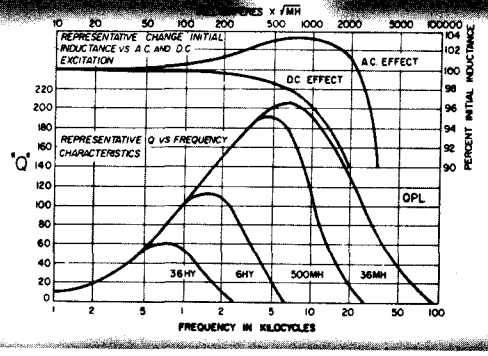
Microcrystalline wax dipped, 4" #24 Leads. To order add -F to part number, i.e., QPL25-F, QTL25-F.

MODEL	D	H	C	WGT.
QPL-F	1 15/16"	⅞"	1/32 min.	5 oz.
QTL-F	2 1/16"	1"	⅜ min.	9 oz.

TOROIDAL INDUCTOR – QPL Series

Frequency Range to 10 KHZ — Accuracy ±2%

Part No.	Inductance	Typical DCRΩ	Typical Distributed Capacity μμF
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



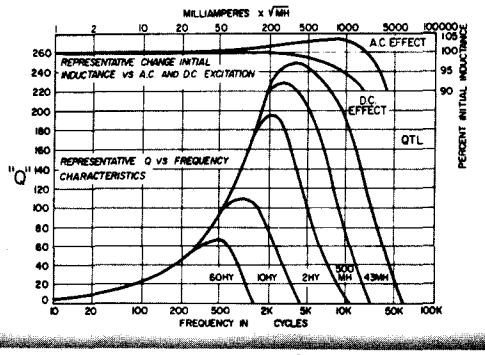
QPL

TOROIDAL INDUCTOR – QTL Series

Frequency Range to 15 KHZ — Accuracy ±2%

Part No.	Inductance	Typical DCRΩ	Typical Distributed Capacity μμF
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.



QTL

MICROTRAN

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

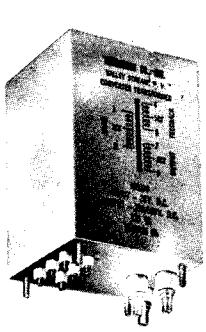


FIG. A

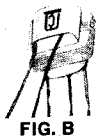


FIG. B

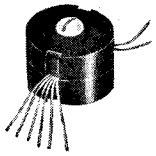


FIG. H

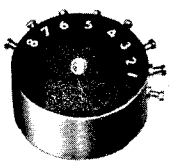


FIG. C

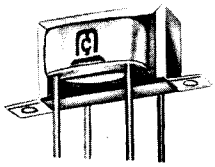


FIG. D

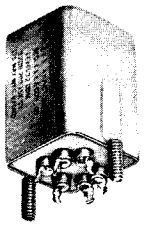


FIG. E

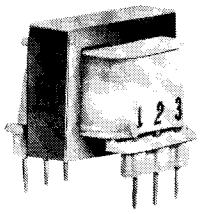


FIG. F

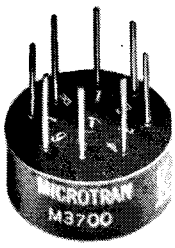
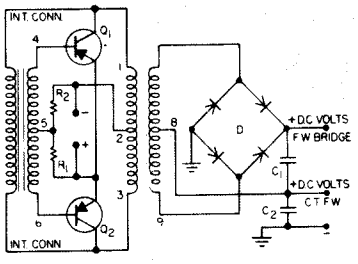
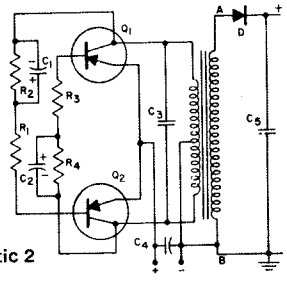


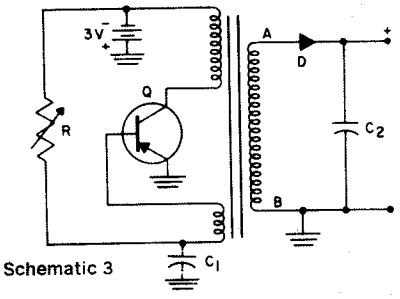
FIG. G

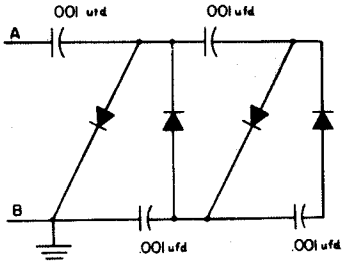
TYPICAL D.C.-D.C. CONVERTER TRANSFORMER CIRCUITS



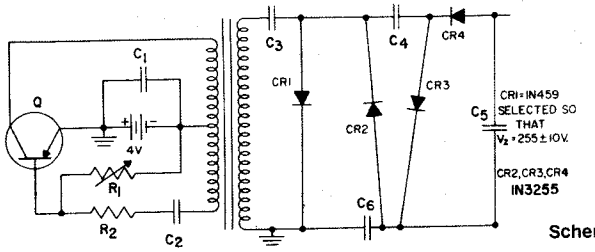
Schematic 1


Schematic 2

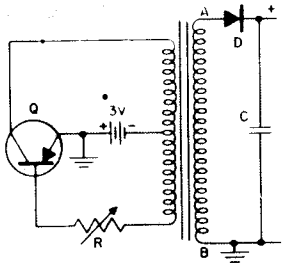

Schematic 3

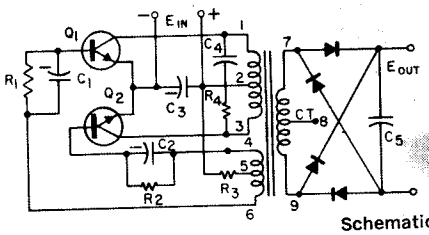


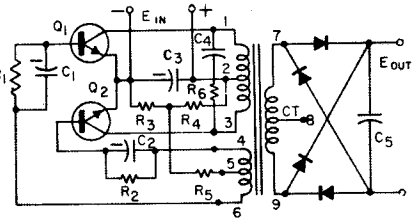
Schematic 4

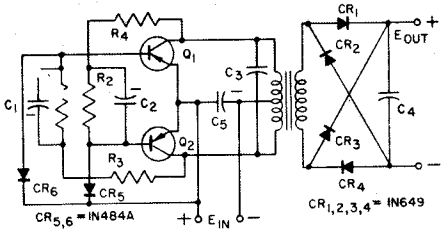


Schematic 5

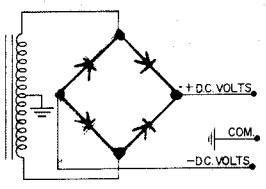

Schematic 6


Schematic 7

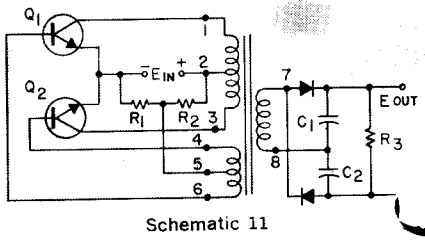

Schematic 8



Schematic 9



Schematic 10


Schematic 11

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 ▲ Output	D.C. Input Volts	D.C. OUTPUT** BRIDGE Volts	BRIDGE MA	C.T. FULL WAVE Volts	C.T. FULL WAVE MA	Switch Frequency Hz approx.	Schematic No.	Typical Transistor	DIMENSIONS D	W	H	Mtg. MD	Centers MW	Type of Construction	Fig. No.	Approx. Weight Oz.
NEW	M8149	25 mw	3	1000*	25 μA	—	—	400	3	2N670	1 1/64	61/64	27/32	—	—	Plug-In Printed Circuit	F	1.25
	M8050	25 mw	3	1000*	25 μA	—	—	400	3	2N670	1 1/16	13/16	27/32	1 3/8	—	Laminated —Open Frame	D	1.25
	M8051	25 mw	3	1000*	25 μA	—	—	400	3	2N670	1	1	1 3/8	1 1/8	—	Laminated —MIL Case AG	E	2.4
25 mw to 190 mw HIGH VOLTAGE LOW POWER MINIATURE DESIGN	M8073	25 mw	4	425-500*	50 μA	—	—	50-3K†	5	2N1305	3/8	3/8	3/8	—	—	Laminated —Open Frame	B	.1
	M8074	50 mw	3	535*	90 μA	—	—	400	6	2N414	1 1/16	13/16	27/32	1 3/8	—	Laminated —Open Frame	D	1.25
	M8072	190 mw	2.7	480*	400 μA	—	—	800	2	2N1307	1 1/16	13/16	27/32	1 3/8	—	Laminated —Open Frame	D	1.25
	M8120	190 mw	28	480*	400 μA	—	—	3.5K	9	2N4355	1 1/16	13/16	27/32	1 3/8	—	Laminated —Open Frame	D	1.25
NEW 3 VA DISPLAYS NIXIE-PANAPLEX SP-300/SP-700	M8121	3	5	190	15	—	—	20K	11	2N6121	5/16 D x 1 1/32 H — ‡					Pot Core — Open Frame	H	.3
5 VA HIGH VOLTAGE LOW PROFILE ENCAPSULATED	M8115	5	13.8	±250 or 500■	10	250	20	6K	8	2N3054	1 1/4 D x 3/4 H — .140 Cl. Hole					Toroid— Encapsulated	C	1.1
	M8117	5	28	±250 or 500■	10	250	20	6K	7	2N3054	1 1/4 D x 3/4 H — .140 Cl. Hole					Toroid— Encapsulated	C	1.1
NEW	M8122	5	5	∓15 or 30	175	15	350	20K	7	2N3055	1 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	± 15 or 30■	1000	15	2000	20K	7	2N3055	1 1/4 D x 3/4 H — .140 Cl. Hole					Toroid— Encapsulated	C	1.1
	M8133	30	28	± 15 or 30■	1000	15	2000	20K	7	2N3055	1 1/4 D x 3/4 H — .140 Cl. Hole					Toroid— Encapsulated	C	1.1
40 VA HIGH VOLTAGE HERMETIC	M8036	40	13.6	±225 or 450■	90	225	155	800	1	2N442	2 5/16	2 1/16	3 1/8	1 1/16	1 7/16	Laminated— MIL Case FA	A	1 1/4 lbs.
50 VA MEDIUM POWER LOW PROFILE ENCAPSULATED	M8113	50	13.8	± 14 or 28■	1750	14	3500	2.5K	7	2N3055	2 1/8 D x 1 1/4 H — .170 Cl. Hole					Toroid— Encapsulated	C	6
	M8114	50	28	± 14 or 28■	1750	14	3500	2.5K	7	2N3055	2 1/8 D x 1 1/4 H — .170 Cl. Hole					Toroid— Encapsulated	C	6
	M8116	50	13.8	± 35 or 70■	700	35	1400	2.5K	7	2N3055	2 1/8 D x 1 1/4 H — .170 Cl. Hole					Toroid— Encapsulated	C	6
	M8118	50	28	± 35 or 70■	700	35	1400	2.5K	7	2N3055	2 1/8 D x 1 1/4 H — .170 Cl. Hole					Toroid— Encapsulated	C	6
125 VA HIGH VOLTAGE HIGH POWER HERMETIC	M8035	125	13.6	±250 or 500■	250	250	420	800	1	2N442	2 3/4	2 3/8	3 13/16	2 1/8	1 3/4	Laminated— MIL Case GA	A	2 1/4 lbs.
	M8034	125	28	±250 or 500■	250	250	420	800	1	2N174	2 3/4	2 3/8	3 13/16	2 1/8	1 3/4	Laminated— MIL Case GA	A	2 1/4 lbs.

‡ Supplied with 4-40 nylon mtg. screw and nut in center hole.

▲ Full wave and C.T. loads may be simultaneously drawn, but for continuous duty, total V.A. output should not be exceeded.

■ 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.

MICROTRAN

INTERPRETATION OF TYPE DESIGNATION PER MIL-T-27

TF 4 R X 01 FA 001

Type of Component:
TF — Transformer

Grade:
4 Hermetic Metal Cased
5 Sealed Encapsulated
6 Open Frame Impregnated

Class: (Ambient + Rise)
(Ambient Must be Specified)
Q 85°C. Operating
R 105°C. Operating
S 130°C. Operating
V 155°C. Operating
T 170°C. Operating
U 170°C. + (As Specified)

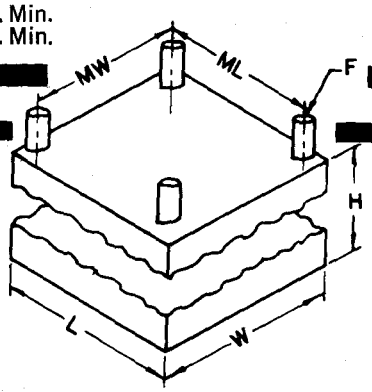
Life Expectancy
X 10,000 Hrs. Min.
Y 2,500 Hrs. Min.

Family (Circuit Application)
01 Pwr. Transf.—Unrect. Loads
02 Pwr. Transf.—Rect. Loads
03 Pwr. Transf.—Rect. and Unrect. Loads
04 Power Inductor
See MIL-T-27 for Listing

Case and Mounting Dimensions
See MIL-T-27 for Case Size and Mtg.

Identification
Serial number assigned only to MS units

STANDARD MIL-T-27 CASES



Case Symbol	—Case Dimensions— L	W	H	—Mounting Dimensions— ML	MW	F
AF	3/4	3/4	1 1/8	*1 3/16	—	4-40x3/8
AG	1	1	1 3/8	*1 1/8	—	6-32x3/8
AH	1 5/16	1 5/16	1 1/4	S:1 1/4	—	6-32x3/8
AJ	1 5/8	1 5/8	2 3/8	1 3/16	1 3/16	6-32x3/8
EA	1 13/16	1 13/16	2 3/4	1 3/8	1 1/4	6-32x3/8
EB	1 13/16	1 13/16	2 7/16	1 3/8	1 1/4	6-32x3/8
FA	2 5/16	2 1/16	3 1/8	1 11/16	1 7/16	6-32x3/8
FB	2 5/16	2 1/16	2 1/2	1 11/16	1 7/16	6-32x3/8
GA	2 3/4	2 3/8	3 13/16	2 1/8	1 3/4	6-32x3/8
GB	2 3/4	2 3/8	2 13/16	2 1/8	1 3/4	6-32x3/8
HA	3 1/16	2 5/8	4 1/4	2 15/64	1 55/64	8-32x3/8
HB	3 1/16	2 5/8	3 3/16	2 15/64	1 55/64	8-32x3/8
JA	3 3/16	3 1/16	4 7/8	2 5/8	2 1/8	8-32x3/8
JB	3 3/16	3 1/16	3 7/8	2 5/8	2 1/8	8-32x3/8
KA	3 15/16	3 3/8	5 1/4	3	2 7/16	10-32x1/2
KB	3 15/16	3 3/8	4 5/16	3	2 7/16	10-32x1/2
LA	4 5/16	3 11/16	5 5/16	3 5/16	2 11/16	10-32x1/2
LB	4 5/16	3 11/16	4 1/2	3 5/16	2 11/16	10-32x1/2
MA	4 11/16	4	6	3 11/16	3	1/4-20x5/8
MB	4 11/16	4	4 15/16	3 11/16	3	1/4-20x5/8
NA	5 1/16	4 5/16	6 13/16	4 1/16	3 5/16	1/4-20x5/8
NB	5 1/16	4 5/16	5 1/2	4 1/16	3 5/16	1/4-20x5/8
OA	5 1/2	4 1/2	6 3/4	3 3/4	3	1/4-20x5/8

*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 —1/8 for cases AF, AG, AH, and AJ; +0 to —3/16 for all other cases.

3. Tolerances on dimensions ML and MW are ±1/64 for cases AJ to JB inclusive; ±1/32 for cases KA to LB, inclusive; and ±3/64 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.

EQUIVALENCY CHARTS

DECIMAL	°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		

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

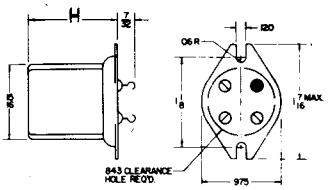
400 Hz POWER SUPPLY TRANSFORMERS

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 1/16", M8069 — 1 5/16", M8058, M8075, M8081, M8082 — 1 7/16".

MIL DESIGNATION TF4RX01YY

TOROIDAL MOLDED—FIG. C

Molded with ½" pins for printed circuit applications.
MIL Designation: TF5SX01xx

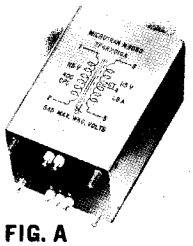


FIG. A

FIG. B

FIG. C

400 Hz POWER SUPPLY TRANSFORMERS

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

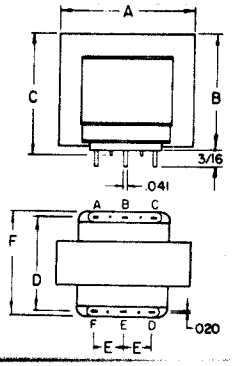
Part No.	Secondary A.C. Volts	Secondary RMS Amps.	Rectifier Circuit C.T. Full Wave D.C. Volts**	Rectifier Circuit F.W. Bridge D.C. Volts**	Fig. A Mil Case XX
M8063†	2.85 2.85	.045 .045	1.5-(series)	3	YY Fig. B
M8064†	6.3 C.T.	.6	1.9	3.8	AH
M8075†	6.3 C.T.	.3	1.9	3.8	YY Fig. B
M8076†	12.6 C.T.	.3	4.7	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	.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

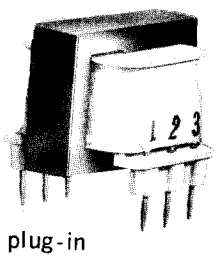
**DC Output V for resistive or inductive rectifier loads. Output V based on approx. 1V drop per rectifier. †Primary 115 Volts only

400 Hz 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	61/64	1.2

† Do not have standoff

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	Dimensions Height	Nominal Weight oz
M8106	28 C.T.	320	9	1 5/32	1 1/8	2
M8107	28 C.T.	710	20	1 1/2	1 1/4	4
M8108	56 C.T.	160	9	1 5/32	1 1/8	2
M8109	56 C.T.	356	20	1 1/2	1 1/4	4
M8110	115 C.T.	78	9	1 5/32	1 1/8	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.

MICROTRAN

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.

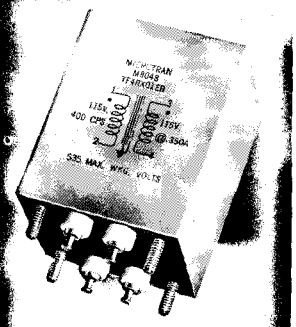
FULL TERMINAL ARRANGEMENTS AND COLOR CODE DESIGNATIONS SUPPLIED WITH EACH UNIT.

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.



60 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	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 12.6 C.T.	2.0 2.0	10.5(series)	21(series)	JB
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.

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

6 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. 12.6 C.T. 12.6	.030 .25 .25	3.5 3.15 3.15	EA
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.

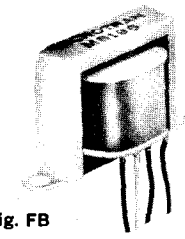


Fig. FB

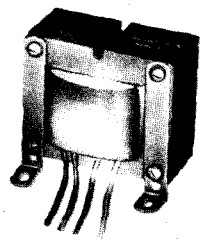


Fig. K

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 Inductance Henrys	Series Connected D.C. Amps	Series Connected D.C.R. Ohms	Parallel Connected Inductance Henrys	Parallel Connected D.C. Amps	Parallel Connected D.C.R. Ohms	Fig. A MIL Case xx	OPEN FRAME DIMENSIONS L	W	H	Mtg. Centers	Fig.	Part No.
M8098	3.5	.050	200	.875	.10	50	AH	2 1/16	1 1/16	1 3/16	1 1/4	FB	M8198
M8099	1.0	.15	65	.25	.30	16	AJ	2 3/8	1 1/4	1 1/2	2	FB	M8199
M8100	.5	.3	30	.125	.6	7.5	EB	2 13/16	1 3/8	1 5/8	2 3/8	FB	M8200
M8101	.32	.6	16	.08	1.2	4	FB	3 1/4	1 5/8	1 13/16	2 13/16	FB	M8201
M8102	.2	1.0	4	.05	2.0	1	JA	3 3/8	2 3/8	3 3/32	2 13/16x2 1/8	K	M8202
M8103	.07	2.5	.84	.0175	5.0	.21	JA	3 1/4	2 7/8	3 15/32	3 1/16x2 1/2	K	M8203
M8104	.022	4.0	.4	.0055	8.0	.1	JA	3 3/8	2 3/4	3 3/32	2 13/16x2 1/2	K	M8204
M8105	.022	5.0	.2	.0055	10.0	.05	KA	4 1/2	3 1/8	4 1/32	3 1/4x2 1/2	K	M8205

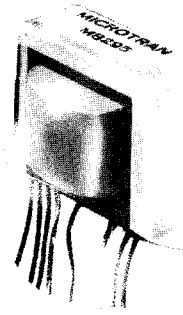


Figure FB

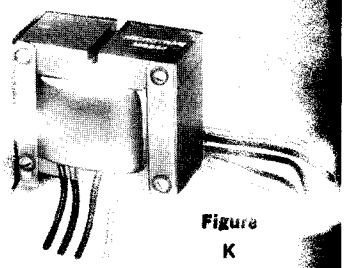


Figure K

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	Secondary RMS Amperes	Rectifier Circuit C.T. Full Wave D.C. Volts**	Rectifier Circuit F.W. Bridge D.C. Volts**	Dimensions L	Dimensions W	Dimensions H	Mounting Centers	Figure
M8242	6.3 C.T.	.6	1.9	3.8	2⅜	1⅜	1½	2	FB
M8243	6.3 C.T.	2.0	1.9	3.8	3¼	1⅝	1 15/16	2 13/16	FB
M8286	6.3 C.T.	6.0	1.9	3.8	3 11/16	2⅛	2¼	3⅛	FB
M8287	12.6 C.T.	3.0	4.7	9.4	3 11/16	2⅛	2¼	3⅛	FB
M8247†	12. 12.	4.0 4.0	9.9(series)	19.8(series)	4⅛	3⅛	3¾	3 7/16 x 2½	K
M8244	12.6 C.T. 12.6	2.0 2.0	10.5 (series)	(21 (series)	3⅜	2⅞	3 3/32	2 13/16 x 2½	K
M8222	18.5 C.T.	3.0	7.4	14.8	3⅜	2½	3 3/32	2 13/16 x 2⅛	K
M8288	26 C.T.	2.5	10.8	21.6	3	2¼	2¾	2½ x 2⅜	K
M8245	28 C.T.	.6	11.7	23.4	3¼	2⅛	1 15/16	2 13/16	FB
M8255	30 C.T.	2.5	12.5	25	3¾	2¾	3 15/32	3⅛ x 2¼	K
M8223	35 C.T.	3.0	14.5	29	4⅛	3	3¾	3 7/16 x 2⅜	K
M8289	40 C.T.	.1	17	34	2⅜	1⅜	1½	2	FB
M8290	40 C.T.	.3	17	34	2 13/16	1⅝	1⅝	2⅜	FB
M8291	40 C.T.	.75	17	34	3 11/16	2⅛	2¼	3⅛	FB
M8246	49 C.T.	2.5	21	42	4½	3¼	4 1/32	3¾ x 2½	K
M8224	70 C.T.	1.0	30	60	3¾	2¾	3 15/32	3⅛ x 2¼	K
M8256	80 C.T.	.6	35	70	3	2⅝	2¾	2½ x 2⅜	K

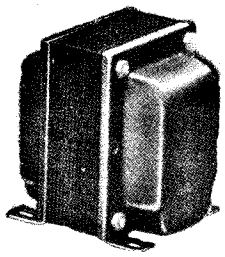
†Secondary may be connected in series to provide 24V @ 4.0 amperes or parallel for 12V @ 8.0 amperes.
**D.C. Output for resistive or inductive loads. Output volts based on approx. 1 v. drop per rectifier.

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 L	DIMENSIONS W	DIMENSIONS H	Mtg. Ctrs.	Weight
M1552	80 Watt capacity	3 23/32	2½	2 9/32	3⅛	3.5 lbs.
M1556	100 Watt capacity	3⅛	2⅞	3½	1¾ x 2¼	4 lbs.
M1553	150 Watt capacity	3¼	2⅞	3½	2¼ x 2⅜	5 lbs.
M1555	250 Watt capacity	3⅞	3¼	3⅞	2 11/16 x 2½	6 lbs.
M1559	350 Watt capacity	3¼	3⅞	4⅝	2 1/16 x 3	7 lbs.
M1558	500 Watt capacity	4⅛	3⅞	4⅝	3 1/16 x 3	12 lbs.
M1551	750 Watt capacity	5½	4½	5⅜	3¼ x 3½	16 lbs.
M1557	1000 Watt capacity	7	4½	5⅜	5¼ x 3½	25 lbs.
M1554	1500 Watt capacity	8	4½	5⅜	6¼ x 3½	29 lbs.
*M1550	2000 Watt capacity	8½	4⅜	6	6 5/16 x 3 7/16	37 lbs.

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



VERTICAL END BELL

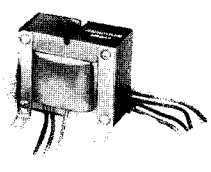


Figure K

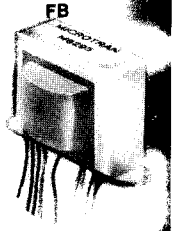


Figure FB

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	Dimensions L	Dimensions W	Dimensions H	Mounting Centers	Figure
M8294	115	115 C.T.	.0085	1	2⅛	1⅛	1 3/16	1¾	FB
M8295	115	115 C.T. 12.6 C.T. 12.6	.030 .25 .25	3.5 3.15 3.15	2 13/16	1⅛	1⅝	2⅜	FB
M8251	115	115 C.T.	.13	15	3¼	1⅝	1 15/16	2 13/16	FB
M8296*	115	115 C.T.	.35	40	4	2¼	2 5/16	3 5/16	FB
M8278*	115	115 C.T.	.9	100	3¾	3¼	3 15/32	3⅛ x 2¼	K

*Primary 105/115/125 Volts.

MICROTRAN

PLUG-IN PRINTED CIRCUIT POWER TRANSFORMERS

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

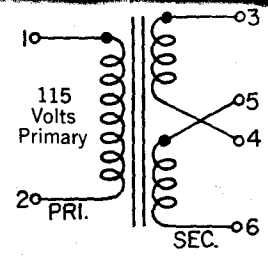
- **Compact Design For Miniaturized Solid State Circuitry**
- **Precision Spaced Molded-In Terminals**

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.

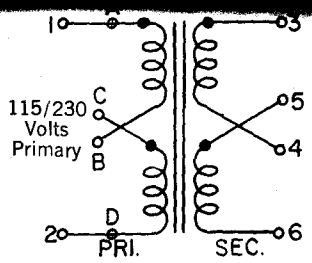
Dual secondaries may be parallel connected to obtain twice the current, or series connected to give twice the voltage of one winding.

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

115V. Primary		115/230V. Primary		Secondary			
				Parallel Connected		Series Connected	
Part No.	Fig.	Part No.	Fig.	AC Volts	RMS Amps	AC Volts	RMS Amps
SERIES PC6500/PC2500				**1½ 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				**4½ 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 @ 020A and 12.6V @ .150A			
SERIES PC6700/PC2700				**7½ 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

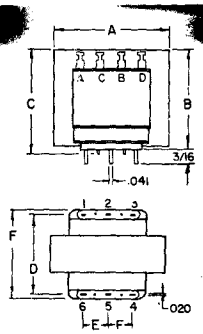


PC2000 Series

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



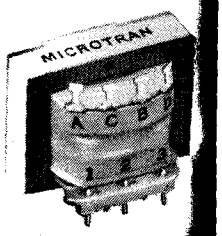
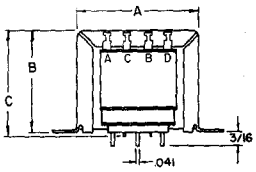
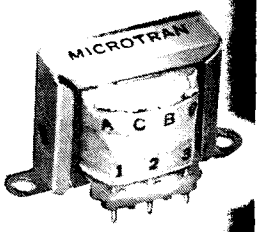


FIG. A

PC2600/PC2700 Series





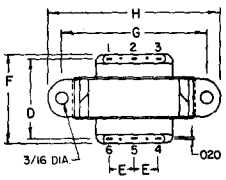
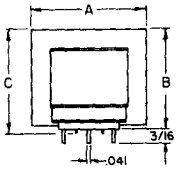
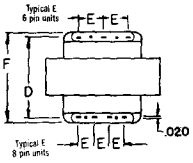


FIG. B

PC6500 Series — 6 Pins
PCT6500 Series — 8 Pins





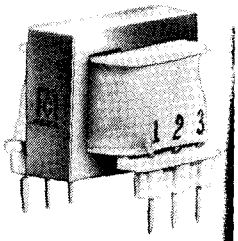
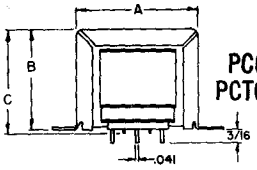
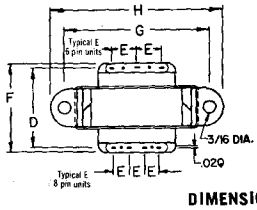


FIG. C

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





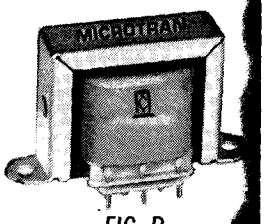


FIG. D

DIMENSIONS

Series	Fig.	A	B	C	D	E 6-Pin	E 8-Pin	F	G	H	Wt. Oz.
PC6200/PCT6200	E	1 1/64	27/32	†	1.274	—	.150	1 3/8	—	—	2.3
PC2500	A	1 25/64	1 11/64	1 13/64	1.00	.312	—	1 5/32	—	—	3.2
PC6500/PCT6500	C	1 25/64	1 11/64	1 13/64	1.00	.312	.200	1 5/32	—	—	3.2
PC2600	B	1 45/64	1 25/64	1 7/16	1.10	.400	—	1 1/4	2	2 3/8	6.5
PC6600/PCT6600	D	1 45/64	1 25/64	1 7/16	1.10	.400	.250	1 1/4	2	2 3/8	6.5
PCL6600	F	1 53/64	1 13/32	1 3/16	—	Send For Pin Layout		—	—	—	6.6
PC2700	B	1 61/64	1 41/64	1 11/16	1.30	.400	—	1 15/32	2 3/8	2 13/16	9.5
PC6700/PCT6700	D	1 61/64	1 41/64	1 11/16	1.30	.400	.250	1 15/32	2 3/8	2 13/16	9.5
PC6900/PCT6900	E	1 41/64	1 17/32	1 25/64	2.10	.400	.250	2 1/4	*	—	12.0

*PC6900-FB mtg. bracket avail. on spec. ordor; four 5/32" holes on 1 3/8 X 2" ctrs.
†Do not have standoff.

PLUG-IN PRINTED CIRCUIT POWER TRANSFORMERS

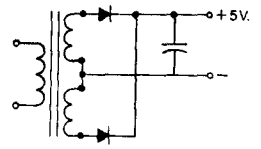
For Logic and OP AMP Power Supplies

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

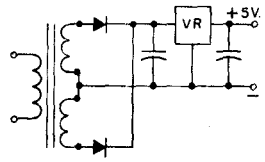
For construction of low cost, miniaturized, regulated and unregulated DC power supplies for latest solid-state digital and linear circuitry. Permits packaging flexibility unobtainable with prepackaged power supplies. Low-profile, miniaturized construction permits close stacking of PC boards. Precision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



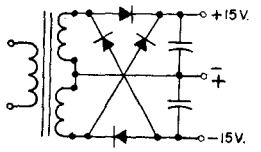
SCHEMATIC #2 REGULATED

Part No.	SECONDARY				DC OUTPUT			
	Parallel Connected		Series Connected					
	AC Volts	RMS Amps	AC Volts	RMS Amps	C.T. F.W. DC Volts	Current mA DC	Schematic No.	Fig. No.
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

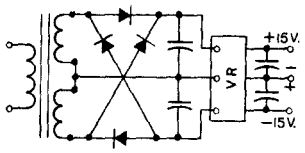
** +8.5 D.C. output volts for input to +5V. IC Voltage Regulator, see schematic 2.

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



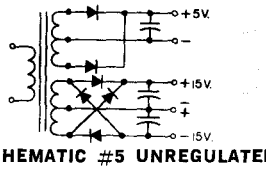
SCHEMATIC #4 REGULATED

Part No.	SECONDARY				DC OUTPUT			
	Parallel Connected		Series Connected					
	AC Volts	RMS Amps	AC Volts	RMS Amps	C.T. F.W. DC Volts	Current mA DC	Schematic No.	Fig. No.
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

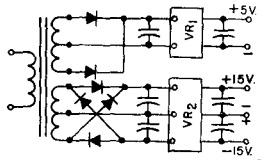
** ±20 D.C. output volts for input to ±15V. output IC Voltage Regulator, see schematic 4.

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	12	5	E
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

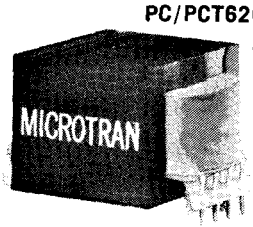
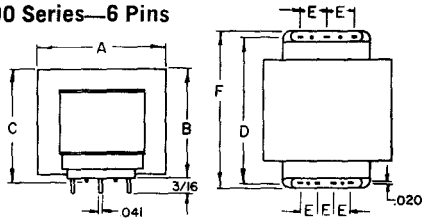


FIG. E



PCL6600 Series

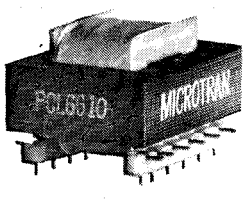
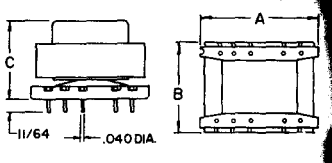


FIG. F



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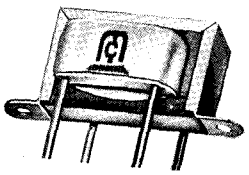

Figure FB
Open Frame Channel Mtd.

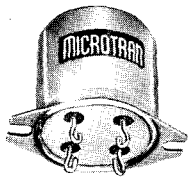

Figure H
Miniature Hermetic

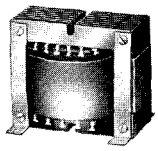

Figure K
Open Frame with Lugs

Fig. QM
Molded Toroid

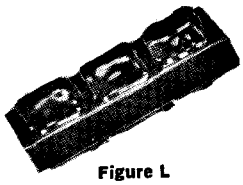

Figure L
3 ϕ Encapsulated

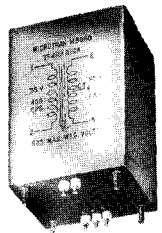

Figure MIL
Hermetic MIL-T-27B Case

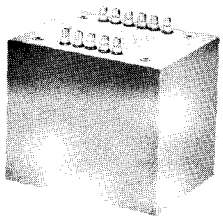

Figure Q
Hermetic with Inserts

400Hz POWER SUPPLY TRANSFORMERS

For Silicon Rectifier Circuitry and Filament Applications
PRIMARY 115 VOLTS

Part No.	Secondary A.C. Volts	R.M.S. Amps	Test Volts R.M.S.	Dimensions L	W	H	Mounting Centers	Figure
M3144	1	3	1000	1	1	1⅜	1⅛	AG
M3054*	5	7.5	1000	2⅜	2⅛	3⅛	1 11/16x1⅞	MIL-FA
M3463	6.3C.T.	2.0	500	1⅝	1⅝	2⅜	1⅜x1⅜	MIL-AJ
M2810	6.3C.T./6.3C.T.#	2.0/2.0	100	1 13/16	1 13/16	2¾	1⅜x1¼	MIL-EA
M2906	6.3C.T.	5.0	1000	2¼	1¾	2	1⅞x1 9/32	R
M2611	6.3C.T./6.3C.T.#	2.0/10.0	100	3 1/16	2⅝	4¼	2 19/64x1 55/64	Q
M4282*†	6.3C.T.	10.0	2500	2⅜	2⅛	3⅛	1 11/16x1⅞	MIL-FA
M4076††	6.3	20.0	2000	3⅜	3 1/16	3⅞	2⅝x2⅛	MIL-JB
M5242	12.6	0.05	500	1	1	1⅜	¾ Diag.	MIL-AG
M4042	12.6	0.25	1000	1 5/16	1 5/16	1¾	1¼	MIL-AH
M2830	12.6C.T./12.6C.T.#	5.0/5.0	500	3 1/16	3 1/16	4⅞	2⅝x2⅛	MIL-JA
M5518	14/16/18	0.3	1000	1⅝	1⅝	2⅜	1⅜x1⅜	MIL-AJ
M2661	14/16/18	0.3	1000	2⅜	1⅜	1½	2	FB
M2954**	24.2	10.0	1500	3 15/16	3⅜	5¼	3x2 1/16	MIL-KA
M4017	26C.T./6.3C.T.#	0.1/1.7	1000	1 13/16	1½	1½	1½	FB
M3142	26	6.5	1500	3 1/16	3 1/16	4⅞	2⅝x2⅛	MIL-JA
M2880**	32	5.5	500	3 15/16	3⅜	5¼	3x2 1/16	MIL-KA
M5663	48.5C.T.	1.3	500	2¾	2⅜	2 13/16	2⅛x1¾	MIL-GB
M2494	70	0.01	500	1 3/64	13/16	2/32	1 3/64	FPB
M6097	78	0.1	500	1 5/16	1 5/16	1¾	1¼	MIL-AH
M5664*	82C.T.	2.2	500	2¾	2⅜	3 13/16	2⅛x1¾	MIL-GA
M3302	90C.T./6.3.#	.07/0.3	500	1	⅞	¾		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	Dimensions L	W	H	Mounting Centers	Figure
M5605	250	115△	21Y	4	3	2 13/32	2⅛x1¼	W
M5031	40	115△	26.8Y	2¾	1¼	1⅞		L
M3050	40	115Y	26.8Y	2¼	1¼	1⅞		F
M5030	100	115△	208Y	3⅜	1¼	2¾	2x1⅛	L
M1359	400	199Y	115Y	4 3/16	2¾	4 3/16	2½x2⅛	L
M6933	390	200△	30△	4¼	3	4	3 5/16x2⅛	MIL
M2445	22	208Y	115△	2 5/16	1⅞	2¾	1⅜x1¼	MIL
M3102	100	208Y	115Y	6⅜	1⅞	2 5/16	5⅝	FB
M4576	235	208Y	135△	3 13/16	2	5¼	3x1⅞	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 11/16	13/16	2/32	1⅜	FB
M2978	12	2	850	500	17/32	7/16	15/32	17/32	FPB
FR-1	25	10	600	2,000	1 5/16	1 5/16	1¼	1¼	MIL-AH
M3973	35/20	10/20	350	1,000	2 5/16	2 1/16	2½	1 11/16x1 7/16	MIL-FB
FR-2	60	10	230	2,000	2 5/16	2 1/16	3⅛	1 11/16x1 7/16	MIL-FA
M2490	85	15	300	2,500	2 1/16	2 5/16	3 1/32	1 13/16x1 11/16	V
FR-3	120	8	150	2,000	3 1/16	2⅝	4¼	2 19/64x1 55/64	MIL-HA
M4286	125/70	7/13	210	2,500	2¾	2⅜	2 13/16	2⅛x1¾	MIL-GB
FR-4	155	8	90.	2,000	3 1/16	3 1/16	4⅞	2⅝x2⅛	MIL-JA
M2174	320/20	4/20	85	2,000	4 5/16	3 11/16	5 5/16	3 5/16x2 1/16	MIL-LA
M2243	500	2	30	1,500	3 15/16	3⅜	5¼	3x2 1/16	MIL-KA
M2278	1A	0.05	2	500	2 5/16	2 1/16	3⅛	1 11/16x1 7/16	MIL-FA
M2909	1.75A	0.016	0.5	500	2¼	2⅜	3 13/16	2⅛x1¾	MIL-GA
M6917	3000	0.4	0.1	500	1½D	—	⅞	.193D	QM
M2473	25A	0.005	0.032	500	5⅛	4¼	6⅝	4⅛x3 1/16	MIL

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60 Hz 3 PHASE POWER TRANSFORMERS

Part No.	V.A. Capacity	Input Volts Line to Line	Output Volts Line to Line	Dimensions L	W	H	Mounting Centers	Figure
M2476	75	208 Y	5 △	2⅝	2½	5⅞	1⅞x1¹³⁄₁₆	W
M3136	280	208 △	208 Y	9½	4	4¾	2⅝x6½	W
M5125	550	208 Y	18.5 △	7¼	3⅞	5⅝	3½x3¼	L
M2475	1,650	208 Y	22 △	11⅞	6¾	6¾	6⅞x3¾	W
M4344	1,800	208 △	208 Y	11⅞	6¾	6¾	6⅞x4	W

60 Hz POWER SUPPLY TRANSFORMERS

For Silicon Rectifier Circuitry and Filament Applications
PRIMARY 115 VOLTS

Part No.	Secondary A.C. Volts	Secondary R.M.S. Amps	Test Volts R.M.S.	Dimensions L	W	H	Mounting Centers	Figure
M1606	2.5	.01	500	¹⁵⁄₁₆ D		1⅞	1⅛	H
M1070	5.0	4.0	1,500	2¹⁵⁄₁₆	2⅛	3⅛	1¹¹⁄₁₆x1⅞	MIL-FA
M2245	5.0C.T.	6.0	6,600	3⅜	3⅛	4⅞	2⅝x2⅛	MIL-JA
M4881	6	0.150	500	2⅛	1⅛	1⅜	1¾	FB
M2934	6.3	0.6	1,500	2⅜	1⅜	1½	2	FB
M2229	6.3C.T./6.3C.T.#	0.6	1,000	3¼	1¹³⁄₁₆	1¹⁵⁄₁₆	2¹³⁄₁₆	FB
M2258*	6.3	1.2	1,000		1½	1⅝	2⅜	FB
M2551	6.3	2.0	1,500	3¼	1⅝	1¹⁵⁄₁₆	2¹³⁄₁₆	FB
M3242	6.3	2.5	4,500	2⅝	2⅛	3⅛	1¹¹⁄₁₆x1⅞	MIL-FA
M2166	6.3/6.3C.T.#	4.0/.06	3,500	3⅜	3⅛	3⅞	2⅝x2⅛	MIL-JB
M3711††	6.3C.T./6.3C.T.#	6.0/6.0	2,500	3⅜	3⅛	4⅞	2⅝x2⅛	MIL-JA
M2309*	6.3C.T.	20.0	2,500	3¾	3⅜	4½	3x2⅜	K
M2228	12.6	65.0	1,500	7½	7	7	5x4	Q
M1395*	24.0	1.0	1,500	2¾	2⅜	3¹³⁄₁₆	2⅛x1¾	MIL-GA
M4981	24	4.5	500	3¾	2¾	3½	2½x2¼	K
M2530	25.0/25.0#	.23/.23	1,000	2¾	2⅜	2¹³⁄₁₆	2⅛x1¾	MIL-GB
M3673†	26.5	2.5	1,500	4⅝	3	5⅝	3⅝x2¹¹⁄₁₆	MIL-LA
M3135	29.0/6.3	.350/.6	1,000	2¼	2	1⅞		F
M6554	31.5C.T.	.3	500	2¹³⁄₁₆	1¹³⁄₃₂	1	2⅜	FPC
M2808	34.0	15.0	500	7½	6½	5	6¾x4⅝	MIL
M6634	36.0C.T.	.2	500	2¹³⁄₁₆	1¹³⁄₃₂	1¹¹⁄₁₆	2⅜	FPC
M2531	40.0/40.0#	.4/.4	1,000	3¹⁄₁₆	2⅝	3⅜	2¹⁹⁄₆₄x1⁵⁵⁄₆₄	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	Dimensions L	W	H	Mounting Centers	Figure
M2862	6.3	6.3	0.32	2⅛	1⅛	1⅜	1¾	FB
M6348*†	26.8	26.8	0.23	1²³⁄₆₄	1⅜₂	1¹³⁄₆₄	—	MPC
M2901	115	115	6.0	2¹¹⁄₁₆	2⅜₂	2¹¹⁄₁₆	2⅜x1½	V
M2294*	105/115/125	118C.T.	90.	3⅞	3⅞	5¹⁵⁄₃₂	2¾x2¾	MIL
M2595	117	117	250.	4½	3¾	3¼	3¾x3	K

* Electrostatic Shielding † 50-60 Hz

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designs to meet your needs!
PROTOTYPES – SHORT RUNS
PRODUCTION RUNS SOLICITED

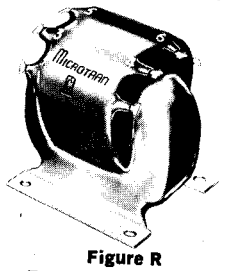


Figure R
Encapsulated Hipersil

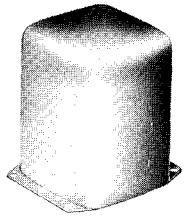


Figure V
Rectangular Case with rectangular flange

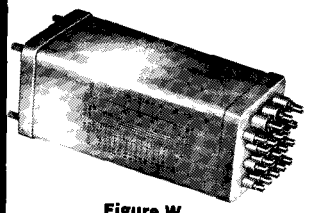


Figure W
Hermetic with Studs opposite terminals

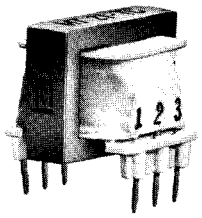


Figure MPC
Open Frame Printed Circuit

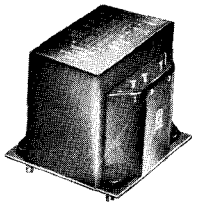


Figure H
Contour Molded

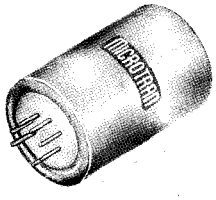


Figure T
Hermetic with Plug In Header

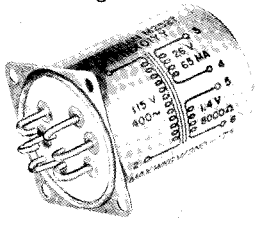
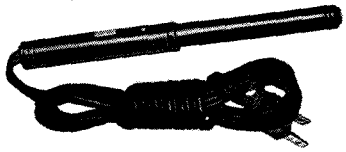


Figure U
Cylindrical with Rectangular Flange

MICROTRAN

MAGNETIC TAPE ERASERS and AUDIO ACCESSORIES

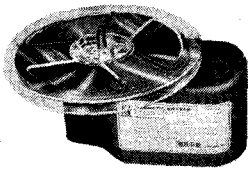


MAGNETIC TAPE EDITING PEN

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 ¼" D.**
- **Size: ⅝" D. x 8" L.**
- **Weight: 6 oz.**



HEAVY DUTY BULK TAPE ERASER

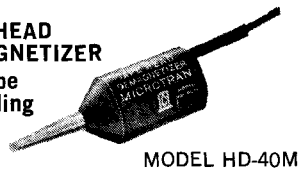
MODEL HD-11M

For bulk erasure of up to ½" magnetic tape and sound film. Ideal for cassettes, cartridges, and reel diameters from 3¼"-10½". High intensity magnetic field restores audio, video and computer tapes to like new condition without rewinding.

- **Erasure 65-90 dB below saturation**
- **Standard ⅜" spindle.**
- **Epoxy molded for ruggedness and longer duty cycle**
- **117V. 50/60 Hz, 5 Amps.**
- **Size: 7"x3½"x3¼" H.**
- **Weight: 9 lbs.**

TAPE HEAD DEMAGNETIZER

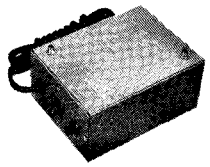
For Tape Recording Heads



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 1¼" Dia. • Weight: 7 ozs. • Removes magnetism • Reduces noise level • Reduces harmonic distortion • Improves signal to noise ratio**

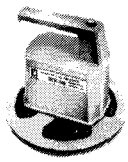


INDUSTRIAL AUDIO/VIDEO COMPUTER BULK TAPE ERASER

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 3¼"-10½". Designed and constructed for heavy industrial use.

- **Erasure 65-90 dB below saturation**
- **Standard ⅜" spindles**
- **Fuse and pilot light**
- **117V. 50/60 Hz, 10 Amps.**
- **Size: 8"x6"x4"H.**
- **Weight: 15 lbs.**

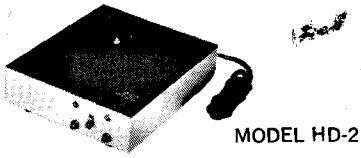


MAGNETIC TAPE ERASER

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: 4⅜"Lx2½"Wx4⅜"H. Wt. 2½ lbs. • 8' Cord with molded plug • Universal unit for any reel size • Demagnetizes heads and guide posts, tools, watches, metal objects, etc. • TAPE RANGE: ¼ and ½ inch • FILM RANGE: 8, 16 and 35mm • 117 volts 50/60Hz, 4 Amps**

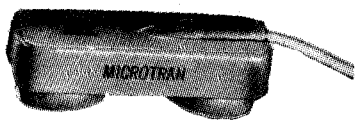


MODEL HD-25

PROFESSIONAL AUDIO/VIDEO COMPUTER BULK TAPE ERASER

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 ⅜" 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.

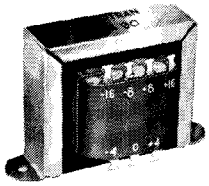
- **Twin Suction Cups**
- **5 Foot Cable**
- **Tinned Leads**
- **Size: 2½"Lx⅞"Wx⅝"H**

MODEL HP-61

TELEPHONE PICK-UP COIL

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

- **Universal design with tinned leads**
- **Black finish with 68" cable**
- **Size ⅝"Dx2½"L—Wt. 1½ oz.**



MODEL HM-90

STEREO CENTER CHANNEL OUTPUT MATCHING TRANSFORMER

Converts Stereo Into Mono Extension

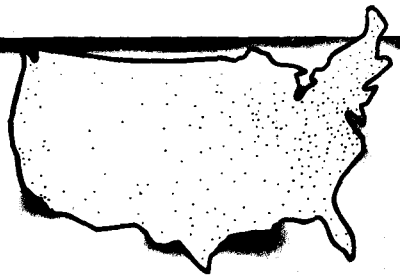
Fills "hole-in-the-middle" when used with 3rd Channel Speaker. Permits any combination of mono or stereo speakers — any impedance rating. Vacuum Varnish — Size 3¾"x2¼"x 2⅝" — 3⅛" M.C.

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

ADAPTER HUB FOR NAB 10½" REELS

Permits use of NAB reels with erasers having ⅜" diameter standard spindle. (*Not illustrated*).

MODEL HD-11-AD Weight: ½ lb.



DELIVERY FROM STOCK
1 THRU 250 PIECES
AT FACTORY OEM PRICES

MICROTRAN D

STATE	CITY	ZIP CODE	DISTRIBUTOR	ADDRESS	TWX. NO.	AREA CODE & PHONE NO.
ALABAMA	Birmingham	35233	MG Electronics & Equip. Co.	3112 6th Ave. S		205-328-4525
	Huntsville	35801	Hall-Mark Electronics	2010 Bob Wallace Ave. SW		205-539-0691
ARIZONA	Phoenix	85009	Moltronics, Inc.	2746 W. Palm Lane	910-951-1512	602-272-7951
CALIFORNIA	Hollywood	90027	Hollywood Radio & Elec.	5250 Hollywood Blvd.		213-466-3181
	San Diego	92111	Moltronics, Inc.	7969 Engineer Rd.	910-335-2015	714-278-5020
	Santa Clara	95050	Moltronics, Inc.	337 Matthew Street	910-338-0036	408-244-7600
	South Gate	90280	Moltronics, Inc.	5610 E. Imperial Hwy.	910-583-1947	213-773-6521
COLORADO	Denver	80210	Electronic Parts Co.	1212 S. Broadway		303-744-1992
	Denver	80222	Newark Electronics	2170 S. Grape St.		303-757-3351
CONNECTICUT	Hamden	06514	Arrow Electronics	295 Treadwell St.		203-248-3801
	Waterbury	06720	Bond Radio Supply	439 W. Main St.		203-753-1184
	Westport	06880	Newark Electronics	25 Sylvan Rd. S		203-226-6921
FLORIDA	Orlando	32809	Hall-Mark Electronics	7233 Lake Ellenor Dr.	810-850-0183	305-855-4020
GEORGIA	Atlanta	30318	Lykes Electronics Corp.	1135 Chattahoochee	810-751-3501	404-355-2223
ILLINOIS	Chicago	60624	Newark Electronics	500 N. Pulaski Rd.	910-221-0268	312-638-4411
INDIANA	Indianapolis	46204	Graham Electronics	133 S. Penn St.		317-634-8486
IOWA	Cedar Rapids	52406	Deeco, Inc.	2500 16th Ave. S.W.	910-525-1332	319-365-7551
	Cedar Rapids	52404	Newark Electronics	1019 First Ave. S.W.		319-362-1171
KANSAS	Lenexa	66215	Hall-Mark Electronics	9006 Rosehill Rd.	910-749-6620	913-888-4747
	Wichita	67201	Radio Supply Co.	115 Laura St.		316-267-5216
MARYLAND	Baltimore	21227	Arrow/Baltimore	5207 E. Drive	710-236-9005	202-737-1700
	Baltimore	21209	Technico	1404 Bare Hills Ave.	710-232-1813	301-828-6416
	Savage	20863	Pyttronic Industries, Inc.	8200 Wellmoor Ct.		301-792-7000
MASS.	Boston	02107	Sager Electrical Supply Co.	172 High St.		617-542-2281
	Waltham	02154	QPL Electronic Distr., Inc.	47 Calvary St.		617-891-0460
MICHIGAN	Oak Park	48237	Newark-Detroit	20700 Hubbell Ave.		313-548-0250
	Wyoming	49508	Newark Electronics	3645 Linden Ave. S.E.		616-241-6681
MINNESOTA	Minneapolis	55413	Newark Electronics	336 Hoover St. N.E.		612-331-6350
MISSOURI	Berkeley	63134	Hall-Mark Electronics	6100 Madison Ave.	910-760-1630	314-521-3800
	Kansas City	64111	Radiolab, Inc.	3604 Main St.		816-561-9935
NEW JERSEY	Moorestown	08057	Arrow/Angus	Pleasant Valley Ave.	710-897-0829	609-235-1900
	Springfield	07081	Federated Purchaser, Inc.	155 U.S. Rte. 22		201-376-8900
NEW MEXICO	Albuquerque	87110	Electronics Parts Co.	2620 Rhode Island N.E.		505-293-6161
NEW YORK (N)	Binghamton	13902	Federal Electronics	Box 1208	510-252-0893	607-748-8211
	Buffalo	14202	Summit Distributors, Inc.	916 Main St.	710-522-1692	716-884-3450
	Rochester	14623	Summit Distributors, Inc.	292 Commerce Dr.		716-334-8110
NEW YORK (S)	Farmingdale	11735	Arrow Electronics	900 Broad Hollow Rd.	510-224-6494	516-694-6800
	Farmingdale	11735	Harrison Electronics	20 Smith St.	510-224-6403	516-293-7979
	Lynbrook	11563	Peerless Radio Corp.	19 Wilbur St.	510-225-8422	516-593-2121
N. CAROLINA	Raleigh	27609	Hall-Mark Electronics	3000 Industrial Dr.	510-928-1831	919-832-4465
OHIO	Cincinnati	45246	Newark Electronics	9799-G Princeton Rd.		513-874-5115
	Cleveland	44125	Pattison Supply Co.	4550 Willow Pkwy.		216-441-3000
	Cleveland	44103	Newark Electronics	2028 E. 46th St.		216-361-4700
	Dayton	45402	John A. Becker Co.	1341 E. 4th St.		513-226-1341
OKLAHOMA	Tulsa	74147	Hall-Mark Electronics	4846 S. 83rd E. Ave.	910-845-2290	918-835-8458
PENNA.	McKeesport	15135	Barno Radio Company	5403 W. Smithfield St.		412-751-5971
TENNESSEE	Nashville	37203	Electra Distributing Co.	1914 W. End Ave.		615-255-8444
TEXAS	Dallas	75231	Hall-Mark Electronics	9333 Forest Lane	910-867-4721	214-AD1-6111
	Houston	77001	Lenert Company	1420 Hutchins		713-225-1465
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
WISCONSIN	Milwaukee	53005	Newark Electronics	3695 N. 126th St.		414-781-2450

FOR CURRENT SOURCE DATA CALL TOLL-FREE 800-645-9200 (in N.Y. STATE CALL COLLECT 516-294-0990)

FACTORY REPRESENTATIVES

STATE	CITY	ZIP CODE	NAME	ADDRESS	TWX. NO.	PHONE NO.
ALABAMA	Gadsden	35902	Frank C. Nickerson Co.	P.O. Box 1504		205-547-7718
ARIZONA	Scottsdale	85253	Fred Schoeffler Assoc., Inc.	7224 N. Lakeside Lane		602-948-3470
ARKANSAS	Gadsden	35902	Frank C. Nickerson Co.	P.O. Box 1504		205-547-7718
CALIF. (N)	Los Altos	94022	Westec Electronics, Inc.	110 First Street	910-370-7956	415-948-8880
CALIF. (S)	Norwalk	90650	Bertrand-Zoolalian	14625 S. Carmenita Rd.	910-583-1426	213-921-9791
CALIF. (S)	San Diego	92111	Bertrand-Zoolalian	7138 Convoy Ct.	910-335-1569	714-560-5832
COLORADO	Denver	80228	Gossard & Associates, Inc.	12159 West Dakota Dr.	910-931-2683	303-985-0602
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
DELAWARE	Baltimore, Md.	21209	J.R. Daniel & Co., Inc.	1404 Bare Hills Ave.	710-232-1813	301-825-3330
FLORIDA (N)	Orlando	32810	Geartner Associates, Inc.	1221 Lee Road		305-299-1000
FLORIDA (S)	Miami Beach	33141	Geartner Associates, Inc.	1125 71st Street		305-861-3661
GEORGIA	Decatur	30033	Frank C. Nickerson Co.	1240 Clairmont Ave.		404-321-4678
IDAHO (S)	Denver, Colorado	80228	Gossard & Associates, Inc.	12159 West Dakota Drive	910-931-2683	303-985-0602
ILLINOIS (S)	Valley Stream, N.Y.	11582	Microtran Company, Inc.	145 E. Mineola Ave.	510-225-8412	516-561-6050
ILLINOIS (N)	Valley Stream, N.Y.	11582	Microtran Company, Inc.	145 E. Mineola Ave.	510-225-8412	516-561-6050
INDIANA	La Fontaine	46940	Kirsch Sales Company	107 N. Wabash Ave.		317-981-2801
IOWA (E)	Shawnee, Kansas	66203	John H. Guernsey Co.	11407 Johnson Dr. Box 3305		913-631-2414
KANSAS	Shawnee	66203	John H. Guernsey Co.	11407 Johnson Dr. Box 3305		913-631-2414
KENTUCKY	La Fontaine, Ind.	46940	Kirsch Sales Co.	107 N. Wabash Ave.		317-981-2801
LOUISIANA	Gadsden, Ala.	35902	Frank C. Nickerson Co.	P.O. Box 1504		205-547-7718
MAINE	Wakefield, Mass.	01880	Measurement Equipment Co.	599 North Ave.	710-348-6717	617-245-4870
MARYLAND	Baltimore	21209	J.R. Daniel & Co., Inc.	1404 Bare Hills Ave.	710-232-1813	301-825-3330
MASS.	Wakefield, Mass.	01880	Measurement Equipment Co.	599 North Ave.	710-348-6717	617-245-4870
MICHIGAN	Valley Stream, N.Y.	11582	Microtran Company, Inc.	145 E. Mineola Ave.	510-225-8412	516-561-6050
MINNESOTA	Valley Stream, N.Y.	11582	Microtran Company, Inc.	145 E. Mineola Ave.	510-225-8412	516-561-6050
MISSISSIPPI	Gadsden, Ala.	35902	Frank C. Nickerson Co.	P.O. Box 1504		205-547-7718
MISSOURI	Shawnee, Kansas	66203	John F. Guernsey Co.	P.O. 3305 11407 Johnson Dr.		913-631-2414
NEBRASKA (E)	Valley Stream, N.Y.	11582	Microtran Company, Inc.	145 E. Mineola Ave.	510-225-8412	516-561-6050
NEBRASKA (W)	Denver, Colorado	80228	Gossard & Associates, Inc.	12159 West Dakota Drive	910-931-2683	303-985-0602
NEVADA (N)	Los Altos, Calif.	94022	Westec Electronics, Inc.	110 First Street	910-370-7956	415-948-8880
NEW HAMP.	Wakefield, Mass.	01880	Measurement Equipment Co.	599 North Ave.	710-348-6717	617-245-4870
N. JERSEY	Englewood Cliffs, N.J.	07632	Ed Glass Associates	120 Sylvan Ave.		212-JU 6-8440
N. JERSEY (S)	Jenkintown, Pa.	19046	Arnold Associates	P.O. Box 1012 The Benjamin Fox Pav.		215-887-7870
NEW MEXICO	Valley Stream, N.Y.	11582	Microtran Company, Inc.	145 E. Mineola Ave.	510-225-8412	516-561-6050
NEW YORK (N)	Valley Stream	11582	Microtran Company, Inc.	145 E. Mineola Ave.	510-225-8412	516-561-6050
NEW YORK (S)	Englewood Cliffs, N.J.	07632	Ed Glass Associates	120 Sylvan Ave.		212-586-8440
N. CAROLINA	Kannapolis	28081	Frank C. Nickerson Co.	P.O. Box 'BB'		704-932-6772
N. DAKOTA	Valley Stream, N.Y.	11582	Microtran Company, Inc.	145 East Mineola Ave.	510-225-8412	516-561-6050
OHIO (N)	Cleveland	44120	John O. Olsen Company	16201 Shaker Boulevard		216-752-5444
OHIO (S)	Cincinnati	45238	John O. Olsen Company	5539 Stokeswood Court		513-922-2176
OKLAHOMA	Grand Prairie, Texas	75050	Howell Sales, Inc.	P.O. Box 747		214-AN 2-5153
OREGON	Seattle, Wash.	98166	Westec Electronics, Inc.	P.O. Box 66521	910-444-2006	206-CH 3-7070
PENNA. (E)	Jenkintown	19046	Arnold Associates	P.O. Box 1012 The Benjamin Fox Pav.		215-887-7870
PENNA. (W)	Pittsburgh	15243	John O. Olsen Company	104 Elatan Drive		412-279-2550
RHODE IS.	Wakefield, Mass.	01880	Measurement Equipment Co.	599 North Ave.	710-348-6717	617-245-4870
S. CAROLINA	Kannapolis, N.C.	28081	Frank C. Nickerson Co.	P.O. Box 'BB'		704-932-6772
S. DAKOTA	Valley Stream, N.Y.	11582	Microtran Company, Inc.	145 E. Mineola Ave.	510-225-8412	516-561-6050
TENNESSEE	Decatur, Ga.	30033	Frank C. Nickerson Co.	1240 Clairmont Ave.		404-321-4678
TEXAS	Grand Prairie	75050	Howell Sales, Inc.	P.O. Box 747		214- AN 2-5153
UTAH	Scottsdale, Ariz.	85253	Fred Schoeffler Assoc., Inc.	7224 N. Lakeside Lane		602-948-3470
VERMONT	Wakefield, Mass.	01880	Measurement Equipment Co.	599 North Ave.	710-348-6717	617-245-4870
VIRGINIA	Baltimore, Md.	21209	J.R. Daniels & Co., Inc.	1404 Bare Hills Ave.	710-232-1813	301-825-3330
WASHINGTON	Seattle	98166	Westec Electronics, Inc.	P.O. Box 66521	910-444-2006	206-CH 3-7070
W. VA. (IND.)	Pittsburgh, Pa.	15243	John O. Olsen Company	104 Elatan Drive		412-279-2550
WISCONSIN (E)	Valley Stream, N.Y.	11582	Microtran Company, Inc.	145 E. Mineola Ave.	510-225-8412	516-561-6050
EXPORT	Valley Stream, N.Y.	11582	Microtran Company, Inc.	145 E. Mineola Ave.	510-225-8412	516-561-6050
ISRAEL	Tel-Aviv		Vectronics Ltd.	P.O. Box 22156	TELEX 32139	458374
UNITED KINGDOM	London NW3	6LB	Scelectron Limited	167 Finchley Road	TELEX 23829	I-328-5571

MICROTRAN Company, Inc.

MAIN OFFICE: 145 E. Mineola Ave., P.O. Box 236, Valley Stream, N.Y. 11582 ■ 516-561-6050 ■ TWX: 510-225-8412

MICROTRAN
Company, Inc.
145 E. MINEOLA AVENUE
VALLEY STREAM
NEW YORK 11582