

Ceramic RF Transformer

New! TCN4-13+
TCN4-13

50Ω 650 to 1250 MHz



Maximum Ratings

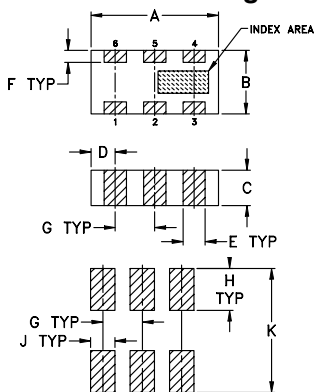
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Input RF Power	5W**

**From 85°C derate linearly to 2.5 W at 100°C

Pin Connections

PRIMARY DOT	4
PRIMARY(GND)	2,5
SECONDARY DOT	1
SECONDARY	6
NOT USED	3

Outline Drawing



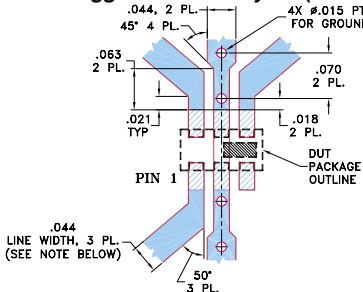
SUGGESTED LAYOUT FOR PCB PATTERN
PATTERN TO BE WITHIN ±.002

TOLERANCE UNLESS OTHERWISE STATED
2 PLACE DECIMALS: ±.01
3 PLACE DECIMALS: ±.005

Outline Dimensions (inch)

A	B	C	D	E	F	
.126	.063	.037	.024	.022	.012	
3.20	1.60	0.94	0.61	0.56	0.30	
G	H	J	K		wt	
.039	.042	.024	.123		grams	
0.99	1.07	0.61	3.12		.020	

Demo Board MCL P/N: TB-287 Suggested PCB Layout (PL-163)



NOTE: TRACE WIDTH IS SHOWN FOR ROGERS RO4350 WITH DIELECTRIC THICKNESS .020 ± .0015. COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

- DENOTES PCB COPPER LAYOUT
- DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

Features

- wideband, 650 to 1250 MHz
- miniature size .12"x.06"x.035
- LTCC construction
- low cost

Applications

- WAN
- TACS
- AMPS
- NAMPS

CASE STYLE: FV1206-1
PRICE: \$ 1.99 ea. QTY (10-49)
\$ 1.69 ea. QTY (100)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

See our web site for RoHS Compliance methodologies and qualifications.

Electrical Specifications (T_{AMB}=25°C)

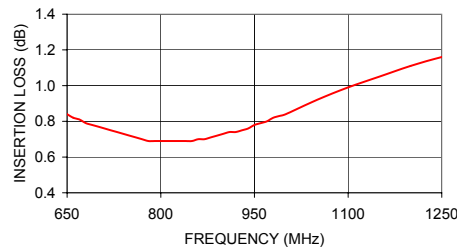
Ω RATIO	FREQUENCY (MHz)	INSERTION* LOSS (dB)	PHASE UNBALANCE (Deg.) Typ.	AMPLITUDE UNBALANCE (dB) Typ.
4	650-1250	1.0	8	0.7
	800-900	0.5	3	0.4

* Insertion Loss is referenced to mid-band loss, 0.7dB

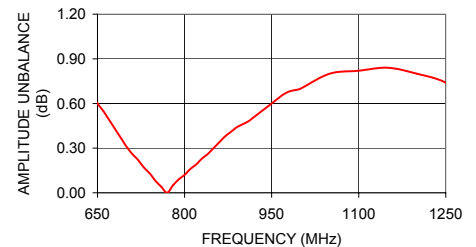
Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)	AMPLITUDE UNBALANCE (dB)	PHASE UNBALANCE (deg.)
650.00	.84	12.07	0.60	1.78
700.00	.77	13.98	0.31	0.02
750.00	.72	16.08	0.08	1.29
800.00	.69	18.57	0.12	1.76
850.00	.69	20.39	0.30	1.91
900.00	.73	20.02	0.46	1.56
950.00	.78	18.26	0.60	0.61
1000.00	.84	16.14	0.70	0.40
1200.00	.11	11.43	0.80	6.71
1250.00	1.16	10.83	0.74	8.33

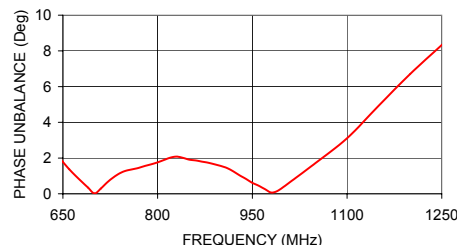
TCN4-13
INSERTION LOSS



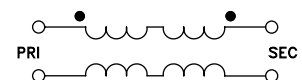
TCN4-13
AMPLITUDE UNBALANCE



TCN4-13
PHASE UNBALANCE



configuration G



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REV. A
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DJ/RS/CP
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