

Ceramic Balun RF Transformer

50Ω 600 to 1200 MHz

Maximum Ratings

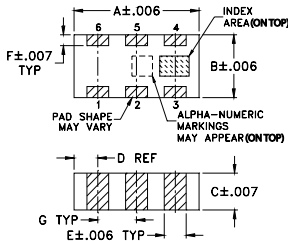
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Input RF Power	3W

Pad Connections

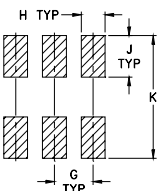
PRIMARY DOT (Unbalanced Port)	5
PRIMARY (GND)	4,6
SECONDARY DOT (Balanced)	3
SECONDARY (Balanced)	1
NO CONNECTION	2

Pads 1,3,4,6 are DC-connected internally

Outline Drawing



PCB Land Pattern

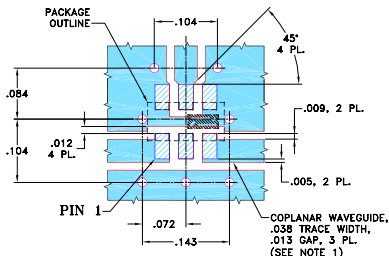


Suggested Layout, Tolerance to be within ±.002

Outline Dimensions (Inch/mm)

A	B	C	D	E	F
.126	.063	.035	.024	.022	.011
3.20	1.60	0.89	0.61	0.56	0.28
G	H	J	K	wt	
.039	.024	.042	.123	grams	
0.99	0.61	1.07	3.12	.020	

Demo Board MCL P/N: TB-417+ Suggested PCB Layout (PL-265)



NOTES:

- COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .020" ± .0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH AND GAP MAY NEED TO BE MODIFIED.
- BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER).
- DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

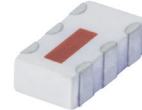
Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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TCN2-122+



Generic photo used for illustration purposes only

CASE STYLE: FV1206-1

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Available Tape and Reel at no extra cost

Reel Size	Devices/Reel
7"	20, 50, 100, 200, 500, 1000, 3000

Features

- wideband, 600 to 1200 MHz
- low phase unbalance, 4 deg. typ. and amplitude unbalance, 0.3 dB typ.
- miniature size, 0.12"x.06"x.037"
- LTCC construction
- low cost
- aqueous washable

Applications

- GSM
- WCDMA
- ISM

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

Ω RATIO (Secondary/Primary)	FREQUENCY (MHz)	INSERTION* LOSS (dB)	PHASE UNBALANCE† (Deg.) Typ.	AMPLITUDE UNBALANCE (dB) Typ.
2	600-1200	1.0	4	0.3

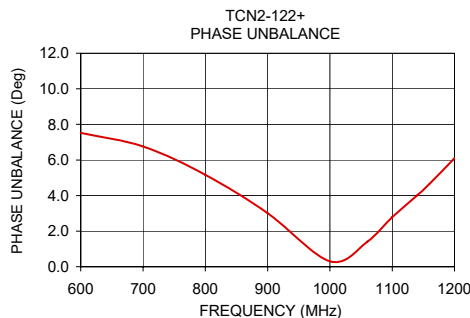
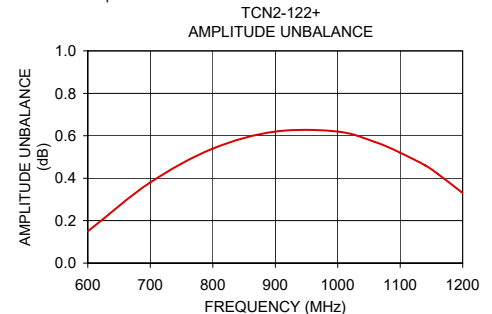
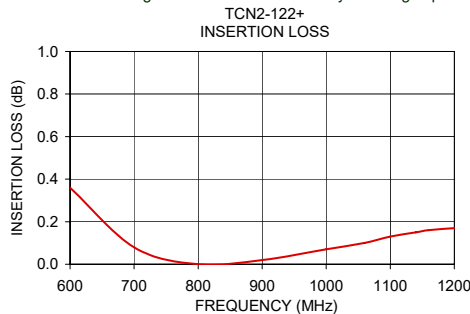
* Insertion Loss is referenced to mid-band loss, 0.7 dB. Reference Demo Board TB-417+

† Relative to 180°

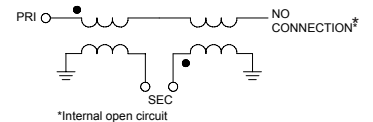
Typical Performance Data at 25°C**

FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)	AMPLITUDE UNBALANCE (dB)	PHASE UNBALANCE (Deg.)
600.00	0.36	11.90	0.15	7.52
700.00	0.08	17.72	0.38	6.76
800.00	0.00	27.57	0.54	5.17
900.00	0.02	27.76	0.62	3.01
1000.00	0.07	21.96	0.62	0.30
1060.00	0.10	20.45	0.57	1.40
1100.00	0.13	19.81	0.52	2.79
1140.00	0.15	19.40	0.46	4.01
1160.00	0.16	19.32	0.42	4.66
1200.00	0.17	19.29	0.33	6.10

** Measured with Agilent E5071B network analyzer using impedance conversion and port extension.



configuration J



REV. D
M160980
TCN2-122+
ED-12817/34B1
RS/CP/AM
170321

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