THE DATASHEET OF

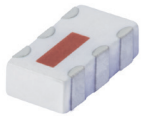
TCN1-10+

Ceramic Balun

RF Transformer

50Ω 680 to 1050 MHz

TCN1-10+



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

Maximum Ratings

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

** Derate linearly to 2.5W at 100°C
Permanent damage may occur if any of these limits are exceeded.

Pin Connections

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

Features

- wideband, 680 to 1050 MHz
- miniature size, 0.12"x.06"x.037"
- LTCC construction
- low cost
- aqueous washable

Applications

- TDMA, CDMA
- GSM
- PDC
- WAN
- TACS
- AMPS, NAMPS

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

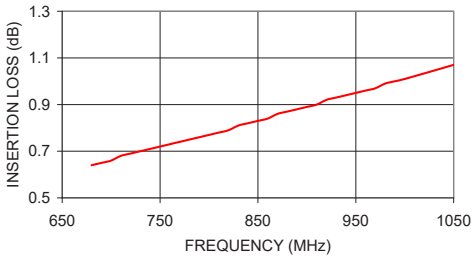
Ω RATIO	FREQUENCY (MHz)	INSERTION* LOSS (dB)	PHASE UNBALANCE † (Deg.) Typ.	AMPLITUDE UNBALANCE (dB) Typ.
1	**680-1050**	**0.9**	**4.0**	**0.7**
	800-900	0.7	1.0	0.25

* Insertion Loss is referenced to mid-band loss, 0.6 dB
† Relative to 180º

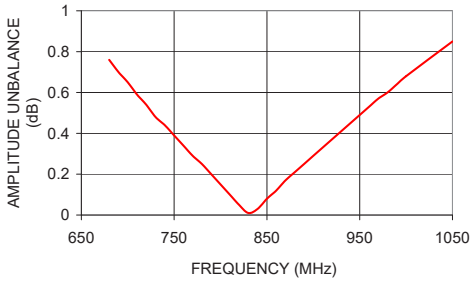
Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)	AMPLITUDE UNBALANCE (dB)	PHASE UNBALANCE (Deg.)
680.00	0.64	14.50	0.76	6.82
700.00	0.66	14.07	0.65	5.94
750.00	0.72	13.10	0.39	3.94
800.00	0.77	12.43	0.15	2.29
850.00	0.83	11.83	0.08	0.97
900.00	0.89	11.36	0.29	0.23
950.00	0.95	10.99	0.49	1.01
990.00	1.00	10.71	0.64	1.48
1000.00	1.01	10.64	0.68	1.54
1050.00	1.07	10.39	0.85	1.78

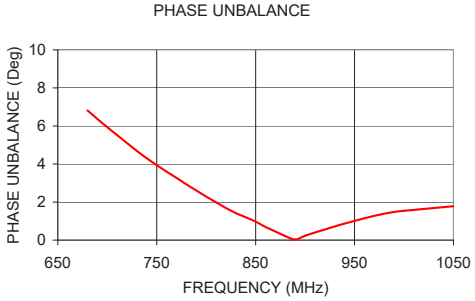
INSERTION LOSS



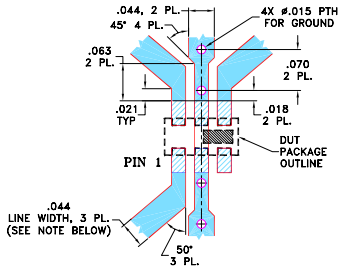
AMPLITUDE UNBALANCE



PHASE UNBALANCE



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

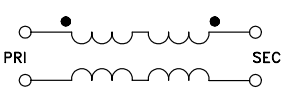


NOTE:
1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .020" ± .0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER).

DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

configuration G



Notes

A. 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.
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