Ceramic Balun

RF Transformer

TCW2-63+

50Ω 4900 to 5875 MHz 1:2 Ratio

Features

- wideband, 4900 to 5875 MHz
- low phase unbalance, 4 deg. and amplitude unbalance, 0.3 dB typ.
- miniature size 0603 (1.6x0.8mm)
- LTCC construction
- low cost
- aqueous washable

Applications

- WLAN
- A/D conversion
- WiFi
- Transmitters and receivers
- Radar

Generic photo used for illustration purposes only

CASE STYLE: JC0603C

+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, 4000

Electrical Specifications at 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Impedance Ratio (Secondary/Primary)			2		
Frequency Range		4900		5875	MHz
Insertion Loss[1]	4900 - 5875		1.1	2.0	dB
Amplitude Unbalance	4900 -5 875		0.4	1.5	dB
Phase Unbalance[2]	4900 - 5875		4	15	Degree

1. Reference Demo Board TB-828+
2. Relative to 180°

Maximum Ratings

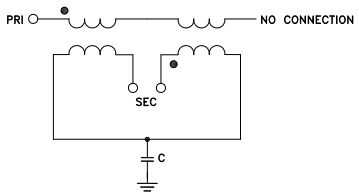
Parameter	Ratings
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power[3]	0.5W

3. Passband rating
Permanent damage may occur if any of these limits are exceeded.

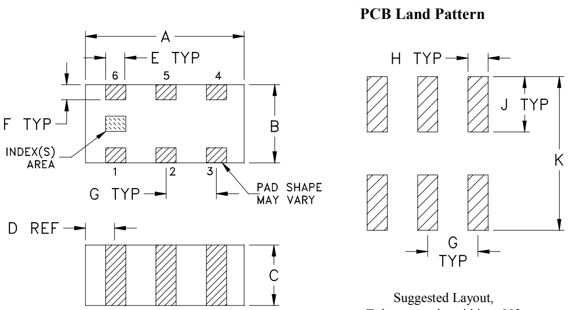
Pad Connections

Function	Pin Number
PRIMARY DOT (Unbalanced Port)	1
GND or DC feed + RF	2
SECONDARY DOT (Balanced)	3
SECONDARY (Balanced)	4
NO CONNECTION	6
GND	5

Configuration R

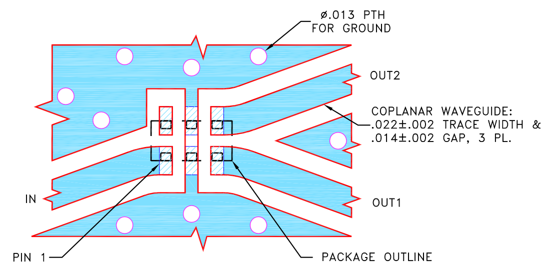


Outline Drawing



Suggested Layout,
Tolerance to be within ±.002

Demo Board MCL P/N: TB-828+
Suggested PCB Layout (PL-513)



1. TRACE WIDTH AND GAP PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .010"±.001". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH AND GAP 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.

Outline Dimensions (inch / mm)

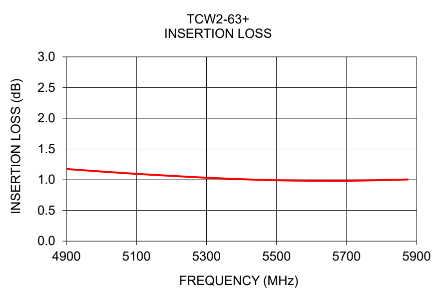
A	B	C	D	E	F
.063	.031	.024	.012	.008	.006
1.60	0.79	0.61	0.30	0.20	0.15

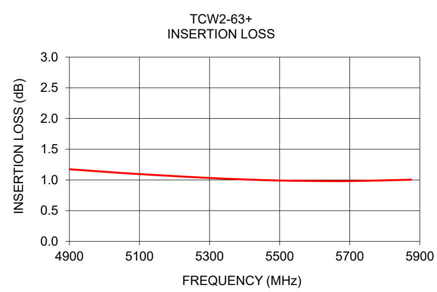
G	H	J	K	wt
.020	.010	.022	.053	grams
0.51	0.25	0.56	1.35	0.005

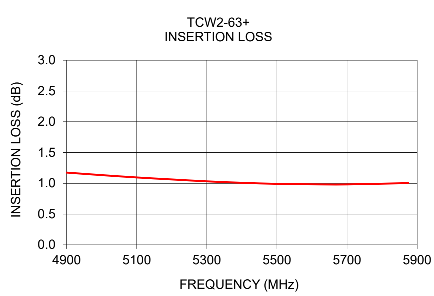
Typical Performance Data[4]

Frequency (MHz)	Insertion Loss (dB)	Input R. Loss (dB)	Amplitude Unbalance (dB)	Phase Unbalance (Deg.)
4900	1.17	12.76	0.08	3.10
5000	1.13	13.57	0.03	2.78
5100	1.10	14.50	0.13	2.49
5200	1.06	15.63	0.21	2.10
5300	1.03	17.03	0.26	1.65
5400	1.01	18.77	0.30	1.11
5500	0.99	20.98	0.31	0.45
5600	0.98	23.58	0.30	0.23
5700	0.98	26.01	0.27	1.03
5875	1.00	23.64	0.15	2.67

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







Additional 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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