



Mini-Circuits

SURFACE MOUNT



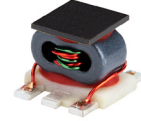
RF Transformer

TCM1-43X-4+

50Ω 10 to 4000 MHz

FEATURES

- Wide Bandwidth 10 to 4000 MHz
- Balanced Transmission Line
- Low Insertion Loss, 1.1 dB Typ.
- Excellent Return Loss
- Aqueous Washable



Generic photo used for illustration purposes only

CASE STYLE: DB1627

+RoHS Compliant

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

APPLICATIONS

- PCS
- Wideband Push-Pull Amplifiers
- Cellular

ELECTRICAL SPECIFICATIONS AT +25°C

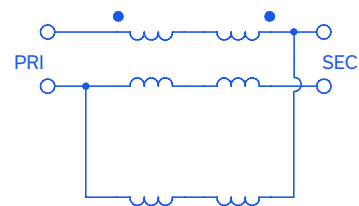
Parameter	Frequency (MHz)	Min.	Typ.	Max.	Units
Impedance Ratio			1		
Frequency Range		10		4000	MHz
Insertion Loss	10 - 4000		1.1	3.0	dB
Amplitude Unbalance	10 - 4000		0.5		dB
Phase Unbalance	10 - 4000		7		Degree

ABSOLUTE MAXIMUM RATINGS

Parameter	Ratings
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C
RF Power	0.4 W
DC Current	30 mA

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

CONFIGURATION K



REV. A
ECO-025163
TCM1-43X-4+
MCL NY
250408





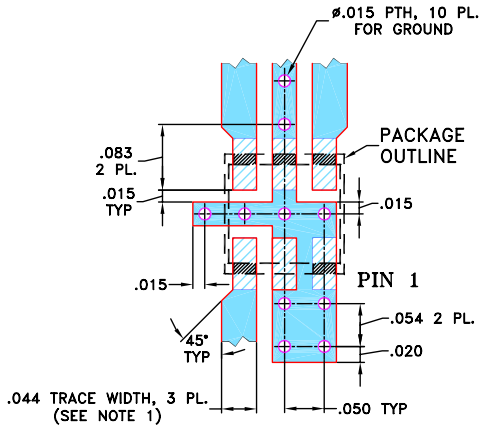
PIN CONNECTIONS*

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

*Pin 1 and 2 must be connected together to form Config. K;
We recommend grounding this side of the primary as shown in PL-364.

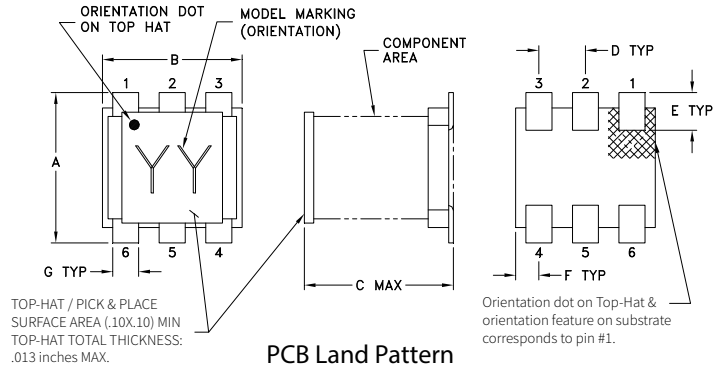
PRODUCT MARKING: GH

DEMOBOARD MCL P/N: TB-TCM1-43X-4+ SUGGESTED PCB LAYOUT (PL-364)

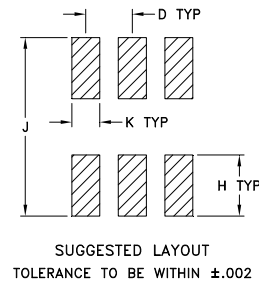


- NOTES:**
- TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .020" ± .0015"; COPPER: 1/2 OZ. ON EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
 - BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)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

OUTLINE DRAWING



PCB Land Pattern



OUTLINE DIMENSIONS (Inches) mm

A	B	C	D	E	F
.160	.150	.160	.050	.040	.025
4.06	3.81	4.06	1.27	1.02	0.64
G	H	J	K		wt
.028	.065	.190	.030		grams
0.71	1.65	4.83	0.76		0.15

TAPE & REEL INFORMATION: F47



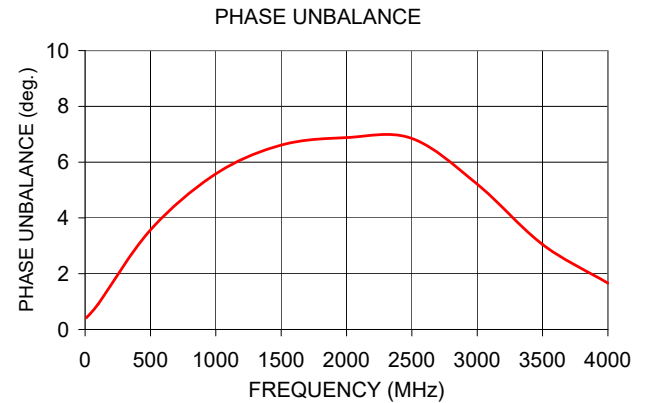
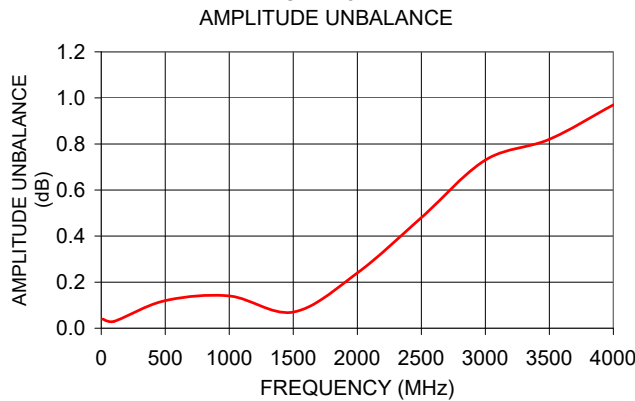
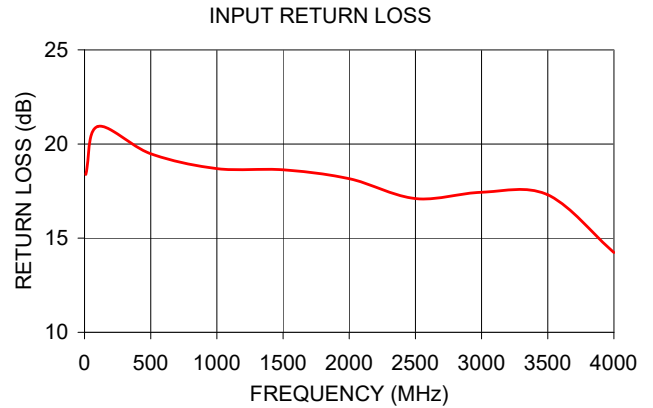
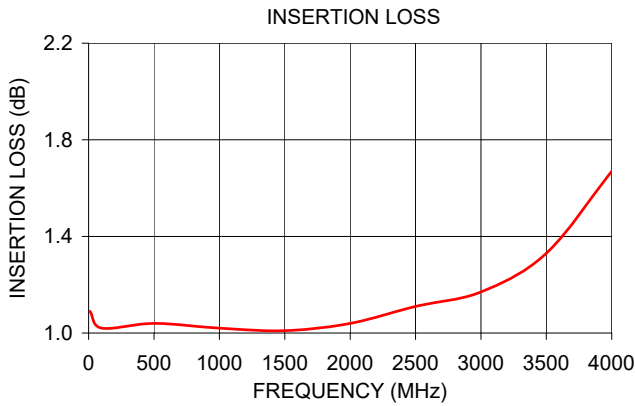
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TYPICAL PERFORMANCE DATA

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	Amplitude Unbalance (dB)	Phase Unbalance (deg)
10	1.09	18.38	0.04	0.42
100	1.02	20.93	0.03	0.91
500	1.04	19.48	0.12	3.57
1000	1.02	18.69	0.14	5.58
1500	1.01	18.63	0.07	6.61
2000	1.04	18.16	0.24	6.88
2500	1.11	17.10	0.48	6.85
3000	1.17	17.44	0.73	5.21
3500	1.33	17.30	0.82	3.05
4000	1.67	14.24	0.97	1.66



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.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the standard. Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/terms/viewterm.html