

top hat™
Surface Mount
RF Transformer

50Ω 10 to 4000 MHz

TCM2-43X+



CASE STYLE: DB1627
PRICE: \$3.29 QTY. (20)

+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
13"	1000, 2000

Maximum Ratings

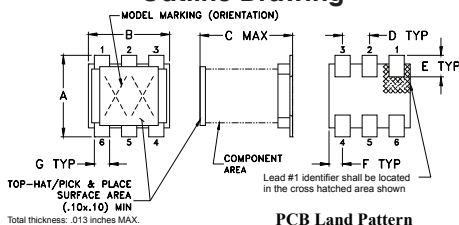
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	0.4W
DC Current	30mA

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

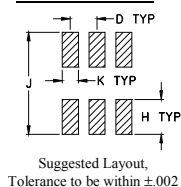
Pin Connections

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

Outline Drawing



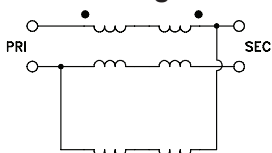
PCB Land Pattern



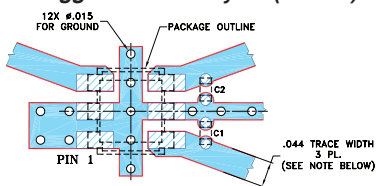
Outline Dimensions (inch/mm)

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

Config. K



Demo Board MCL P/N: TB-676+ Suggested PCB Layout (PL-380)



COMPONENT	SIZE
C1, C2	0402

- NOTES: 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.
3. CHIP COMPONENT FOOT PRINTS SHOWN FOR REFERENCE. FOR COMPONENT VALUES REFER TO TB-676+.

- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
- DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Features

- wide bandwidth 10 to 4000 MHz
- balanced transmission line
- excellent return loss
- aqueous washable

Applications

- PCS
- wideband push-pull amplifiers
- cellular

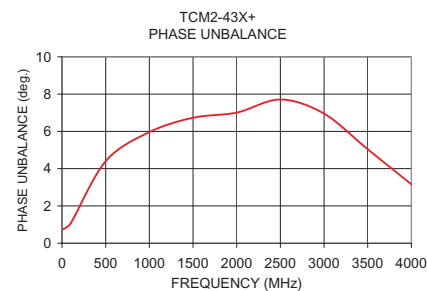
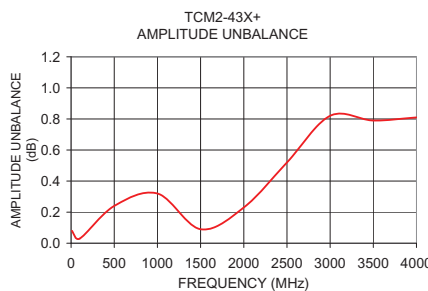
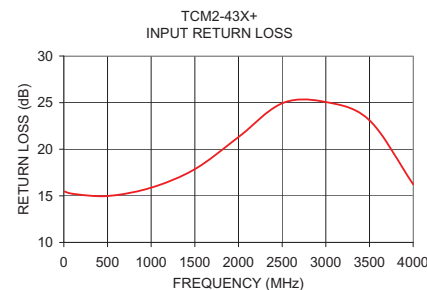
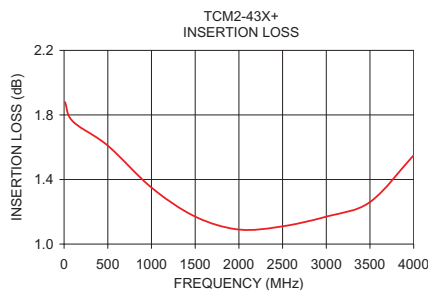
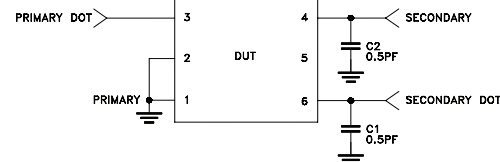
Electrical Specifications at 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Impedance Ratio (secondary/primary)			2		
Frequency Range		10		4000	MHz
Insertion Loss	10-4000	—	1.3	3.0	dB
Amplitude Unbalance	10-4000	—	0.5	—	dB
Phase Unbalance	10-4000	—	7	—	Degree

Typical Performance Data

FREQ. (MHz)	INS. LOSS (dB)	INPUT R. LOSS (dB)	AMP. UNBAL. (dB)	PHASE UNBAL. (deg.)
10	1.88	15.46	0.08	0.74
100	1.76	15.22	0.03	1.07
500	1.61	14.98	0.24	4.40
1000	1.35	15.87	0.32	5.96
1500	1.17	17.86	0.09	6.73
2000	1.09	21.30	0.23	7.01
2500	1.11	24.93	0.52	7.71
3000	1.17	25.06	0.82	6.95
3500	1.26	23.10	0.79	5.04
4000	1.55	16.24	0.81	3.16

Electrical Schematic



Mini-Circuits®
ISO 9001 ISO 14001 AS 9100 CERTIFIED
IF/RF MICROWAVE COMPONENTS

For detailed performance specs & shipping online see web site

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at minicircuits.com

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet 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/MCLStore/terms.jsp.

REV. OR
M138156
TCM2-43X+
ED-14833/3
DJ/CP/AM
130213
Page 2 of 2