SURFACE MOUNT top hat®

RF Transformer

TCM3-1TX+

50Ω 2 to 500 MHz

FEATURES

- Excellent Amplitude Unbalance. 0.3 dB Typ.
- Excellent Phase Unbalance, 2 deg. Typ. in 1 dB Bandwidth
- Plastic Base with Solder Plated Leads
- 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

- Impedance matching

ELECTRICAL SPECIFICATIONS AT +25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Units
Impedance Ratio (Secondary/Primary)			3		Ohm
Frequency Range		2		500	MHz
Insertion Loss*	2-500 5-300		0.4 0.3	2 1	dB

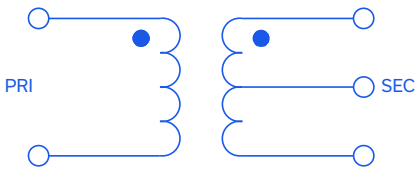
* Insertion Loss is referenced to mid-band loss, 0.5 dB typ.

ABSOLUTE MAXIMUM RATINGS

Parameter	Ratings
Operating Temperature	-20°C to +85°C
Storage Temperature	-55°C to 100°C
RF Power	0.25 W
DC Current	30 mA

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

CONFIGURATION H



REV. A
ECO-025163
TCM3-1TX+
MCL NY
250408

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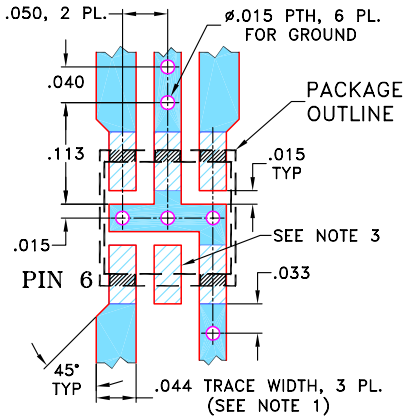
PIN CONNECTIONS

PRIMARY DOT	6
PRIMARY	4
SECONDARY DOT	1
SECONDARY	3
SECONDARY CT	2
NOT USED	5

PRODUCT MARKING: AW

DEMOBOARD MCL P/N: TB-TCM3-1TX+

SUGGESTED PCB LAYOUT (PL-244)

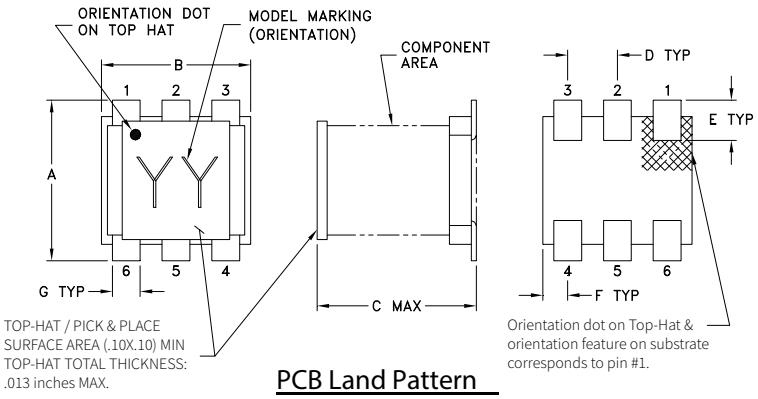


1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .020" ± .0015"; COPPER: 1/2 OZ. ON EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
3. THIS PAD IS NOT REQUIRED FOR AT224 CASE STYLE.

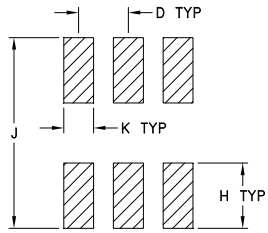
DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

OUTLINE DRAWING



PCB Land Pattern



SUGGESTED LAYOUT
TOLERANCE TO BE WITHIN ±.002

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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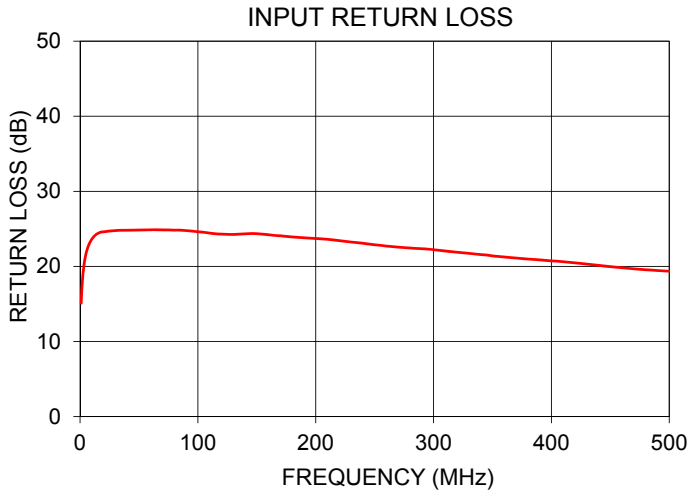
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TYPICAL PERFORMANCE DATA

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)
1	0.68	15.11
2	0.44	18.06
3	0.34	19.73
5	0.24	21.64
10	0.17	23.62
100	0.25	24.61
125	0.27	24.27
150	0.28	24.36
175	0.29	24.00
200	0.31	23.71
225	0.32	23.34
250	0.33	22.89
275	0.34	22.50
300	0.36	22.23
325	0.37	21.81
350	0.38	21.40
375	0.40	21.05
400	0.41	20.74
450	0.45	19.97
500	0.48	19.35





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