



Mini-Circuits®

SURFACE MOUNT 

RF Transformer

TCML1-11X+

50Ω

600 to 1100 MHz

FEATURES

- Wideband, 600 to 1100 MHz
- Balanced transmission line
- Excellent amplitude unbalance. 0.6 dB typ.
- Excellent phase unbalanced, 8 deg typ.
- Plastic base with solder plated leads
- Aqueous washable



Generic photo used for illustration purposes only

CASE STYLE: DB1627

APPLICATIONS

- Cellular
- Baluns
- Impedance matching

+RoHS Compliant

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

ELECTRICAL SPECIFICATIONS AT 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Units
Impedance Ratio		1			Ohm
Frequency Range		600		1100	MHz
Insertion Loss*	600 - 1100	—	2	—	dB
	700 - 1000	—	1	—	

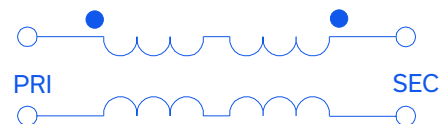
* Insertion Loss is referenced to mid-band loss, 0.4 dB typ.

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 G



REV. C
ECO-013883
TCML1-11X+
IG/CP/AM
220623



www.minicircuits.com P.O. Box 350166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

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50Ω

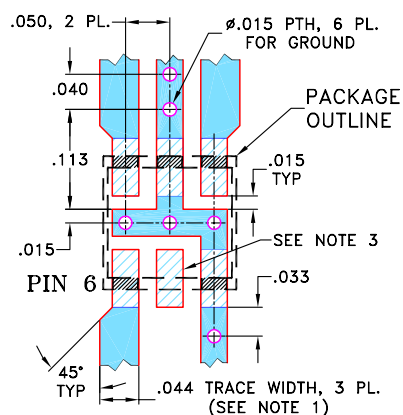
600 to 1100 MHz

PAD CONNECTIONS



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

PRODUCT MARKING: FJ

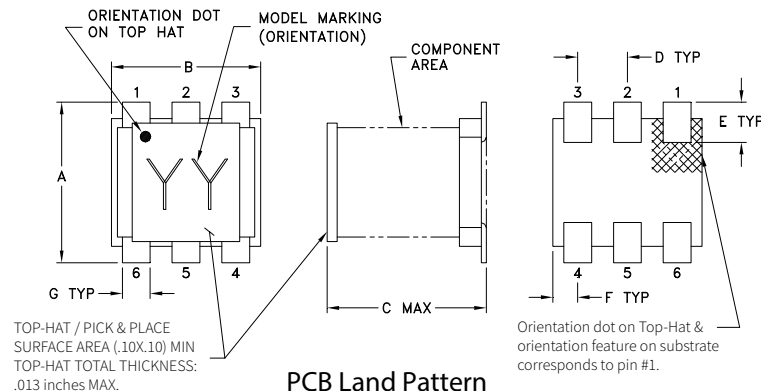
DEMOBOARD MCL P/N: TB-TCML1-11X+
SUGGESTED PCB LAYOUT (PL-244)



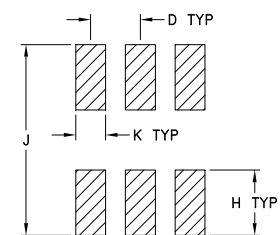
1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .020" ± .0015"; COPPER: 1/2 OZ. ON EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
3. THIS PAD IS NOT REQUIRED FOR AT224 CASE STYLE.

 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 $\pm .002$

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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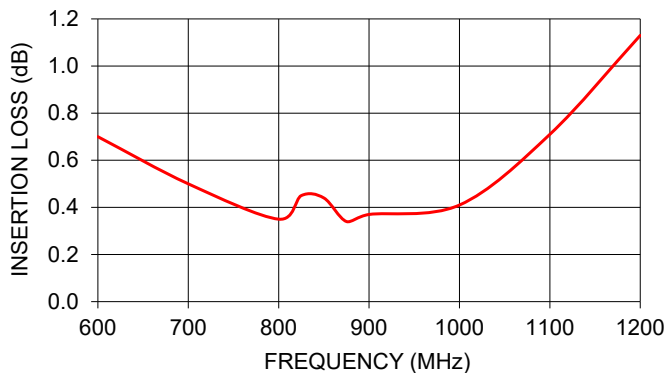
50Ω

600 to 1100 MHz

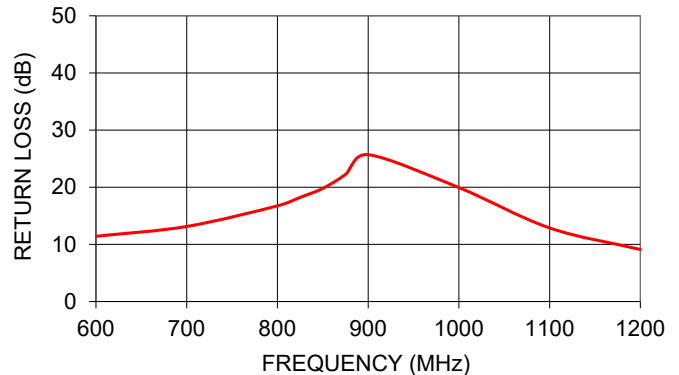
TYPICAL PERFORMANCE DATA

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)
600.00	0.70	11.42
700.00	0.50	13.14
800.00	0.35	16.75
825.00	0.45	18.23
850.00	0.44	19.80
875.00	0.34	22.25
900.00	0.37	25.70
1000.00	0.41	19.94
1100.00	0.71	12.88
1200.00	1.13	9.11

INSERTION LOSS



RETURN LOSS



NOTES

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- 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

