



SURFACE MOUNT

# RF Transformer

TC1-15+

50Ω 350 to 1500 MHz

## FEATURES

- Wideband, 350 to 1500 MHz
- Balanced Transmission Line
- Good Return Loss
- Plastic Base with Leads
- Aqueous Washable



Generic photo used for illustration purposes only

CASE STYLE: AT224-1A

### +RoHS Compliant

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

## APPLICATIONS

- PCS
- Cellular
- Impedance Matching
- Balanced Amplifier
- Baluns

## ELECTRICAL SPECIFICATIONS AT +25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Impedance Ratio			1		
Frequency Range		350		1500	MHz
Insertion Loss <sup>1</sup>	350-1500 800-1500		3		dB
			2		
			1		

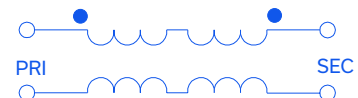
1. Insertion Loss is referenced to mid-band loss, 0.35 dB typ.

## ABSOLUTE MAXIMUM RATINGS

Parameter	Ratings
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C
RF Power	0.25 mW
DC Current	30 mA

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

## CONFIG. G





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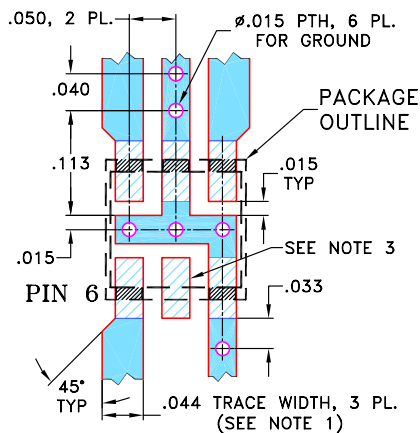
50Ω 350 to 1500 MHz

## PIN CONNECTIONS


Function	Pin Number
PRIMARY DOT	6
PRIMARY	4
SECONDARY DOT	1
SECONDARY	3
NOT USED	2

**PRODUCT MARKING:** N/A

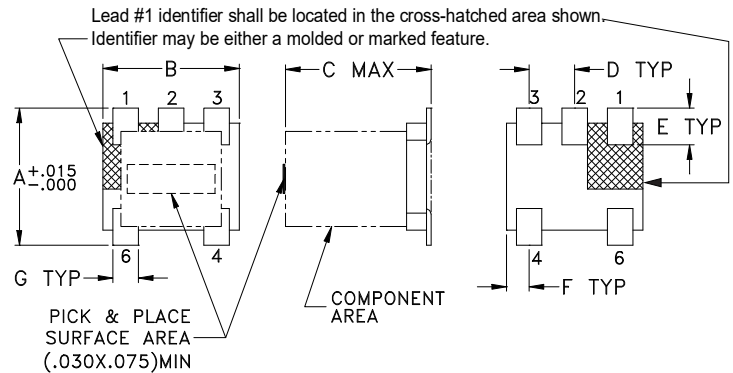
**DEMOBOARD P/N:** TB-TC1-15+  
**SUGGESTED PCB LAYOUT (PL-244)**



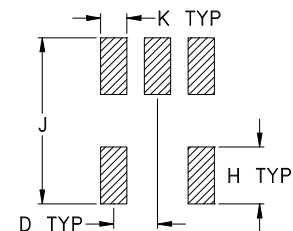
- TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS  $.020'' \pm .0015''$ ; COPPER: 1/2 OZ. ON EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
- BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- THIS PAD IS NOT REQUIRED FOR AT224 CASE STYLE.

 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 (Inch mm)

A	B	C	D	E	F
.150	.150	.160	.050	.040	.025
3.81	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: F17**

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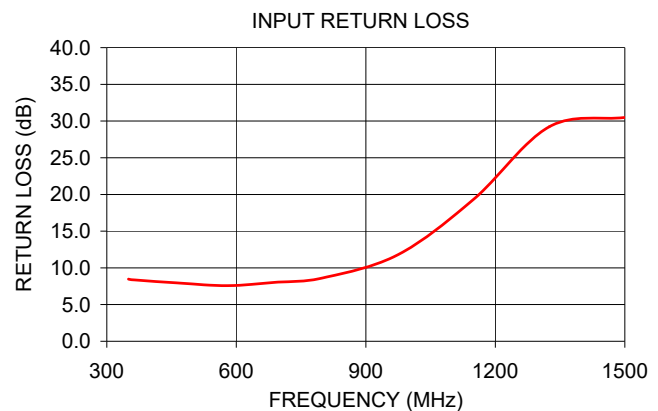
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## TYPICAL PERFORMANCE DATA

FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)
350.00	0.46	8.47
360.00	0.56	8.38
470.00	0.71	7.92
580.00	0.86	7.58
690.00	0.59	8.03
800.00	0.60	8.62
975.00	0.48	11.81
1150.00	0.38	19.36
1325.00	0.43	29.22
1500.00	0.50	30.48



### 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.
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