SURFACE MOUNT

RF Transformer

TC4-1W-17LN+

50Ω 100 to 500 MHz

FEATURES

- Wideband, 100 to 500 MHz
- Good return loss
- Plastic base with leads
- Aqueous washable

Generic photo used for illustration purposes only

CASE STYLE: AT224-1

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

APPLICATIONS

- Push-pull amplifier
- Impedance matching

ELECTRICAL SPECIFICATIONS AT +25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Impedance Ratio (Secondary/Primary)			4		Ohm
Frequency Range		100		500	MHz
Insertion Loss*	100-500		1.0		dB
Phase Unbalance	100-500		3		Deg.
Amplitude Unbalance	100-500		1.0		dB
Return Loss	100-500		10		dB

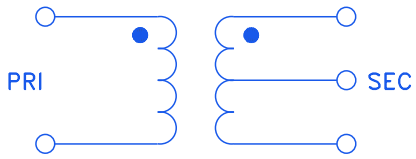
*Insertion Loss is referenced to mid-band loss, 0.6 dB typ.

MAXIMUM RATINGS

Parameter	Ratings
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	0.25W
DC DWV	500V
DC Current (Primary)	0mA
DC Current (Secondary)	150**
Insulation Resistance Pri to Sec	1M Ohms

**Applied through center tap, equal current to secondary dot & secondary.
Permanent damage may occur if any of these limits are exceeded.

CONFIG. A



REV. C
ECO-022020
TC4-1W-17LN+
MCL NY
240606

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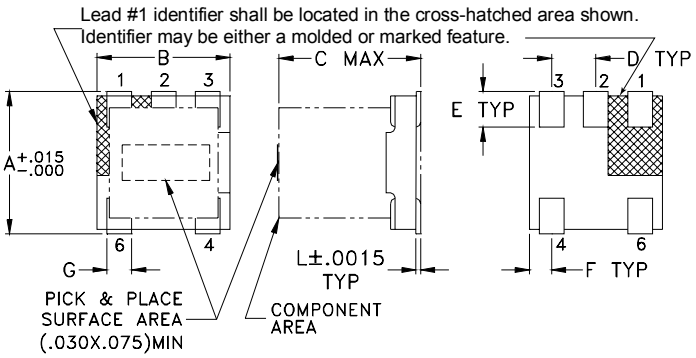
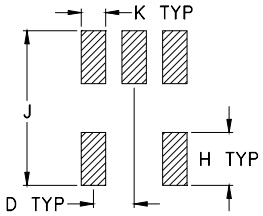
PIN CONNECTIONS

Function	Pin Number
PRIMARY DOT	6
PRIMARY	4
SECONDARY DOT	1
SECONDARY	3
SECONDARY CT	2

OUTLINE DRAWING



PCB Land Pattern

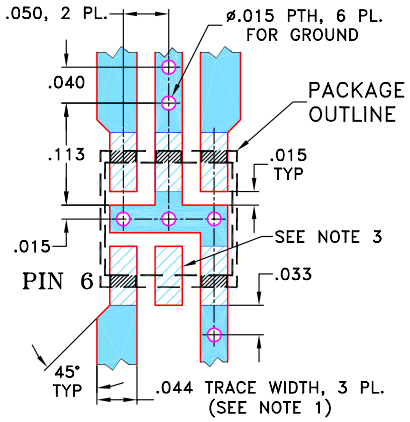


Suggested Layout,
Tolerance to be within ±.002

PRODUCT MARKING: N/A

DEMO BOARD MCL P/N: TB-145

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 DIMENSIONS (Inch / mm)

A	B	C	D	E	F	G	H	J	K	L
.150	.150	.160	.050	.040	.025	.028	.065	.190	.030	.007
3.81	3.81	4.06	1.27	1.02	0.64	0.71	1.65	4.83	0.76	0.18

Weight: 0.15 grams

TAPE & REEL INFORMATION: F17

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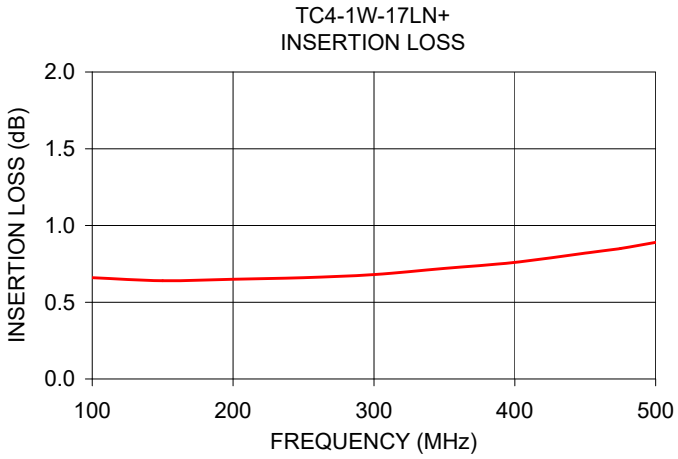
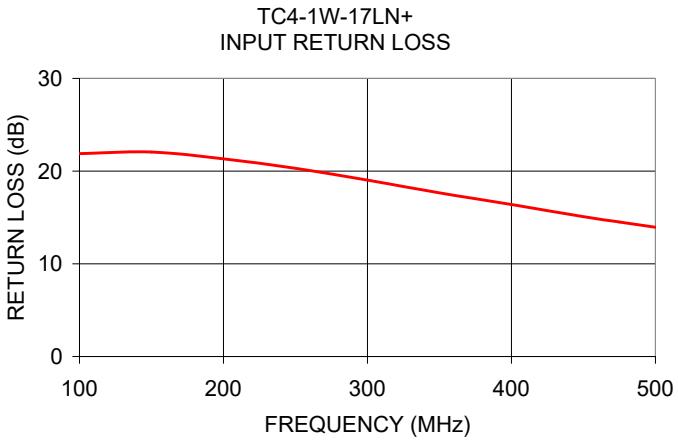
TYPICAL PERFORMANCE DATA

FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)
100.00	0.66	21.89
150.00	0.64	22.06
200.00	0.65	21.32
250.00	0.66	20.30
300.00	0.68	19.03
350.00	0.72	17.66
400.00	0.76	16.40
450.00	0.82	15.09
475.00	0.85	14.51
500.00	0.89	13.95





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