



SURFACE MOUNT

# RF Transformer

## TC2-1TG2+

50Ω 3 to 300 MHz

### FEATURES

- Suitable for Tin/Lead and RoHS Solder Systems
- Good Return Loss
- Excellent Amplitude Unbalance (0.5 dB Typ.) and Phase Unbalance (4 Deg. Typ.) in 1 dB Bandwidth
- Aqueous Washable



Generic photo used for illustration purposes only

CASE STYLE: AT224-3

### +RoHS Compliant

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

### APPLICATIONS

- Impedance Matching
- Balanced to Unbalanced Transformation
- Push-Pull Amplifier

### ELECTRICAL SPECIFICATIONS AT +25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Impedance Ratio (Secondary/Primary)			2		
Frequency Range		3		300	MHz
Insertion Loss <sup>1</sup>	-		3		dB
	3-300		2		
Amplitude Unbalance	3-300		1		
Phase Unbalance	3-300		0.5		dB
			4		Degree

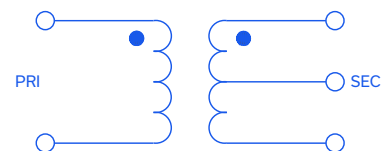
1. Insertion Loss is referenced to mid-band loss, 0.4 dB typ.

### 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.

### CONFIG. A



REV. B  
 ECO-015303  
 TC2-1TG2+  
 ED-6119  
 MCL NY  
 251110





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**Mini-Circuits**

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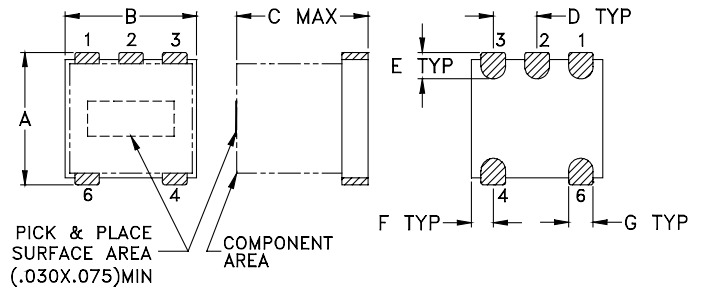
### PIN CONNECTIONS

PRIMARY DOT	6
PRIMARY	4
SECONDARY DOT	1
SECONDARY	3
SECONDARY CT	2

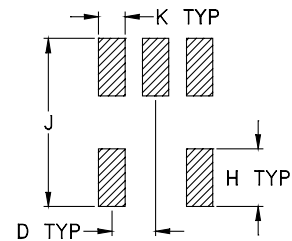
**PRODUCT MARKING:** NA

**DEMO BOARD MCL P/N:** TB-TC2-1TG2+

### OUTLINE DRAWING



### PCB Land Pattern



Suggested Layout,  
Tolerance to be within  $\pm .002$  in

### OUTLINE DIMENSIONS (Inch/mm)

A	B	C	D	E	F
.150	.150	.150	.050	.030	.025
3.81	3.81	3.81	1.27	0.76	0.64
G	H	J	K		wt
.028	.065	.190	.030		grams
0.71	1.65	4.83	0.76		0.10

**TAPE & REEL INFORMATION:** F17



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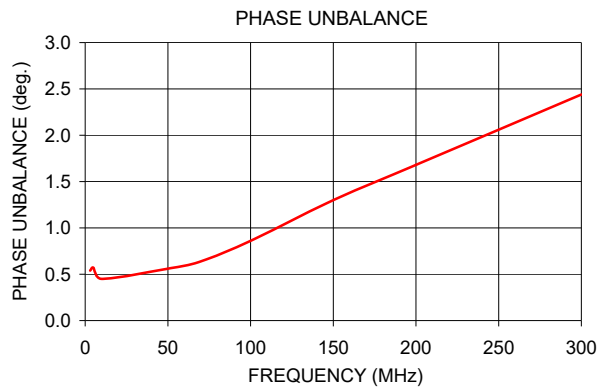
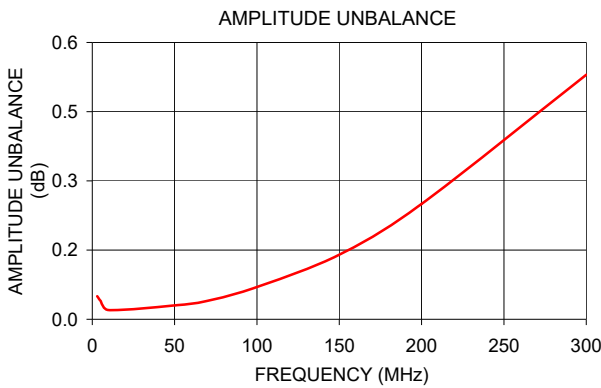
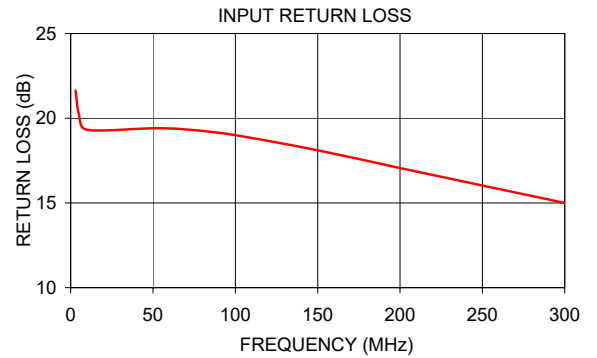
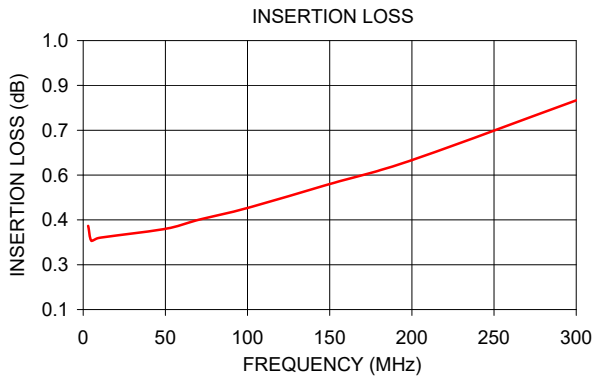
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### TYPICAL PERFORMANCE DATA

FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)	AMPLITUDE UNBALANCE (dB)	PHASE UNBALANCE (Deg.)
3	0.38	21.63	0.05	0.54
5	0.33	20.24	0.04	0.57
10	0.34	19.32	0.02	0.45
50	0.37	19.41	0.03	0.56
70	0.40	19.34	0.04	0.64
100	0.44	19.00	0.07	0.86
150	0.52	18.11	0.14	1.30
200	0.60	17.06	0.25	1.68
300	0.80	15.00	0.53	2.44



#### 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](http://www.minicircuits.com/terms/viewterm.html)

