



SURFACE MOUNT

# RF Transformer

## TC4-11+

TC4-11X+  
Upgraded Version\*

50Ω 2 to 1100 MHz

- \*Addition of Top Hat® feature Benefits
  - Allows faster pick-and-place
  - Enables visual identification marking

### FEATURES

- Wideband, 2 to 1100 MHz
- Good return loss
- Impedance matching
- Step-down autotransformer
- 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

- Cellular

### ELECTRICAL SPECIFICATIONS AT 25°C

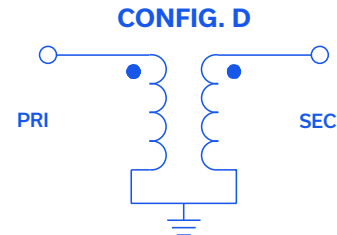
Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Impedance Ratio (primary / secondary)			12.5/50		
Frequency Range		2		1100	MHz
Insertion Loss*	—		3.0		dB
	2-1100		2.0		
	5-700		1.0		

\* Insertion Loss is referenced to mid-band loss, 0.4 dB typ.  
Step down, 50 ohm primary, 5.2 pF across secondary

### MAXIMUM RATINGS

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

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



REV. F  
ECO-017642  
TC4-11+  
MCL NY  
230427



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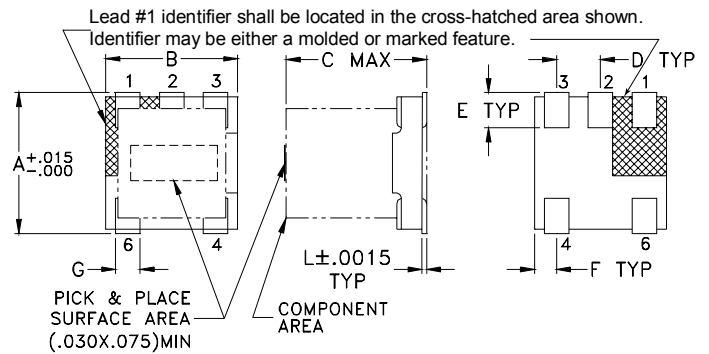
50Ω 2 to 1100 MHz

### PIN CONNECTIONS

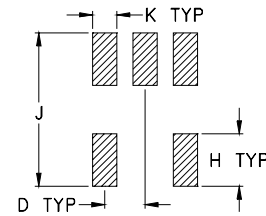
PRIMARY DOT	6
PRIMARY	3
SECONDARY DOT	1
SECONDARY	3

**PRODUCT MARKING:** NA

### OUTLINE DRAWING



### PCB Land Pattern



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

### 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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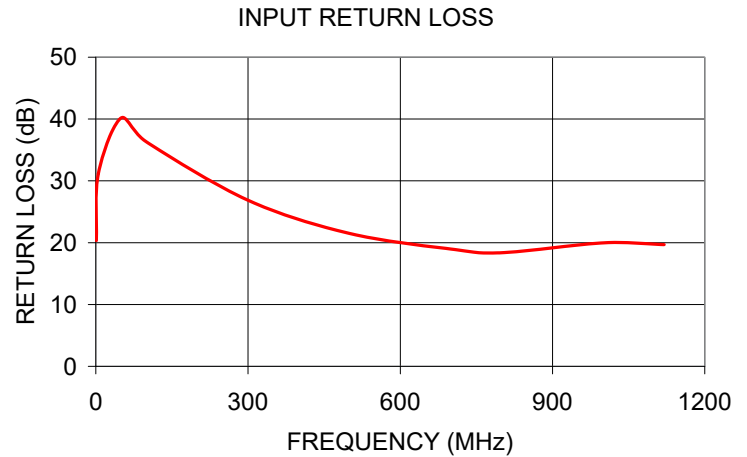
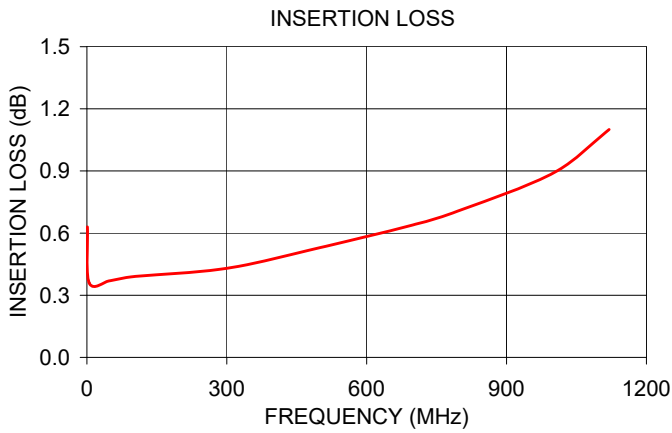
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### TYPICAL PERFORMANCE DATA

FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)
1.00	0.63	20.35
5.00	0.36	31.19
50.00	0.37	40.18
100.00	0.39	36.30
300.00	0.43	26.86
500.00	0.53	21.49
700.00	0.64	18.96
800.00	0.71	18.37
1000.00	0.89	19.97
1120.00	1.10	19.69



#### 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)

