



Mini-Circuits

SURFACE MOUNT

RF Transformer

50/12.5Ω 2 to 1100 MHz

TC4-11+

Upgraded Version*
TC4-11X+

*Addition of Top Hat® Feature Benefits

- Allows Faster Pick-and-Place
- Enables Visual Identification Marking



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

FEATURES

- Wideband, 2 to 1100 MHz
- Good Return Loss
- Impedance Matching
- Step-Down Autotransformer
- Plastic Base with Leads
- Aqueous Washable

APPLICATIONS

- Cellular

ELECTRICAL SPECIFICATIONS AT +25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Impedance Ratio (Primary/Secondary)			50/12.5		Ohms
Frequency Range		2		1100	MHz
Insertion Loss ¹	2-1100		2.0		dB
	5-700		1.0		

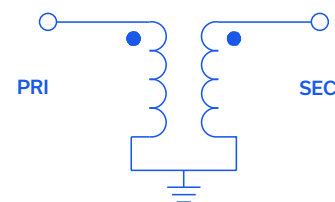
1. Insertion Loss is referenced to mid-band loss, 0.4 dB typ.
Step down, 50Ω primary, 5.2 pF across secondary.

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. D



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ECO-027705
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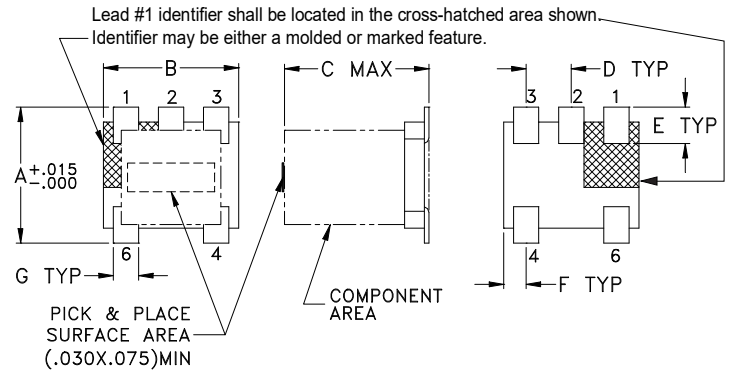
PIN CONNECTIONS

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

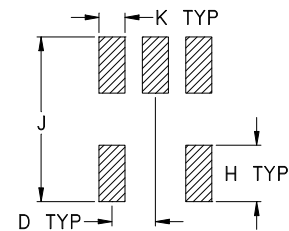
PRODUCT MARKING: N/A

DEMO BOARD MCL P/N: TB-TC4-11+

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	.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



SURFACE MOUNT

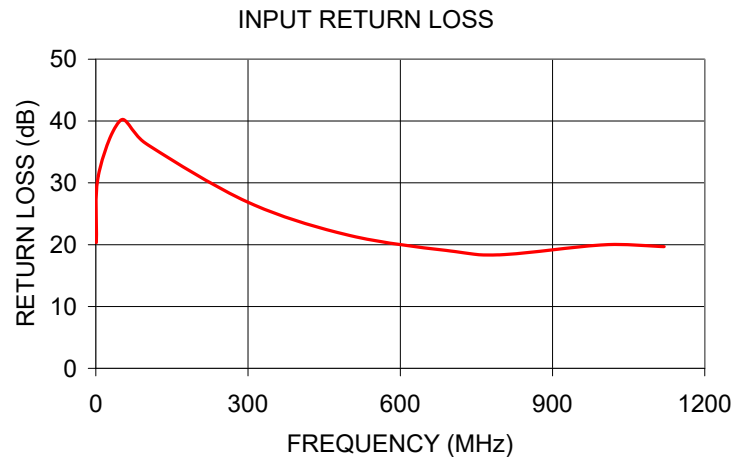
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TYPICAL PERFORMANCE DATA

FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)
1	0.63	20.35
5	0.36	31.19
50	0.37	40.18
100	0.39	36.30
300	0.43	26.86
500	0.53	21.49
700	0.64	18.96
800	0.71	18.37
1000	0.89	19.97
1120	1.10	19.69



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

