



SURFACE MOUNT

# RF Transformer

## ADT16-6T+

Mini-Circuits

50Ω

0.1 to 70 MHz

### FEATURES

- Excellent return loss, 16 dB typ. in 1 dB bandwidth
- Excellent amplitude unbalance, 0.05 dB typ.
- Excellent phase unbalance, 1 deg. typ. in 1 dB bandwidth
- Aqueous washable
- Protected under US patent 6,133,525



Generic photo used for illustration purposes only

CASE STYLE: CD637

### +RoHS Compliant

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

### APPLICATIONS

- Impedance matching
- Baluns

### ELECTRICAL SPECIFICATIONS AT 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Units
Impedance Ratio (Secondary/Primary)			16		
Frequency Range		0.1		70	MHz
Insertion Loss*	0.1-70	—	3	—	dB
	0.18-45	—	2	—	
	0.30-33	—	1	—	
Amplitude Unbalance	0.30-33	—	0.05	—	dB
	0.18-45	—	0.1	—	
Phase Unbalance	0.30-33	—	1	—	Degree
	0.18-45	—	2	—	

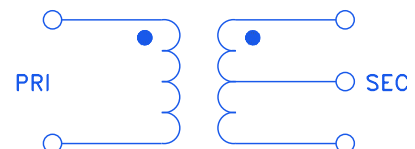
\* Insertion Loss is referenced to mid-band loss, 0.3 dB typ.

### 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.

### CONFIGURATION A





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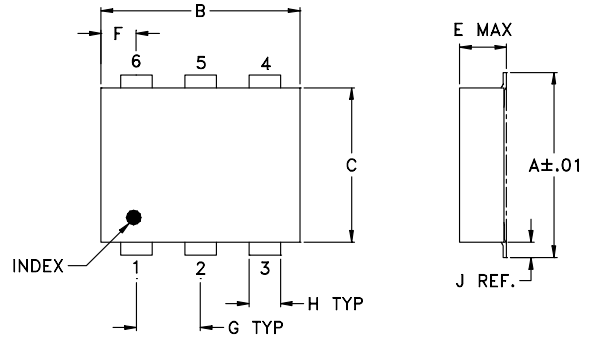
### PIN CONNECTIONS

PRIMARY DOT	3
PRIMARY	1
SECONDARY DOT	4
SECONDARY	6
SECONDARY CT	5
NOT USED	2

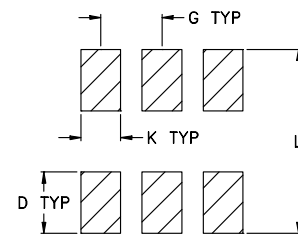
**PRODUCT MARKING:** N/A

**DEMOBOARD MCL P/N:** TB-430

### OUTLINE DRAWING



### PBC Land Pattern



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

### OUTLINE DIMENSIONS (Inches/mm)

A	B	C	D	E	F	G
.272	.310	.220	.100	.206	.055	.100
6.91	7.87	5.59	2.54	5.23	1.40	2.54
H	J	K	L			wt
.030	.026	.065	.300			grams
0.76	0.66	1.65	7.62			0.40

**TAPE & REEL INFORMATION:** F46



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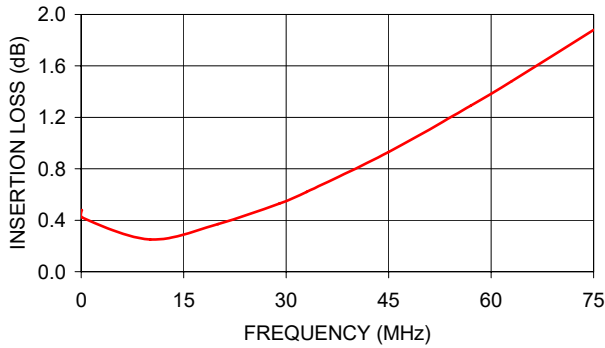
50Ω

0.1 to 70 MHz

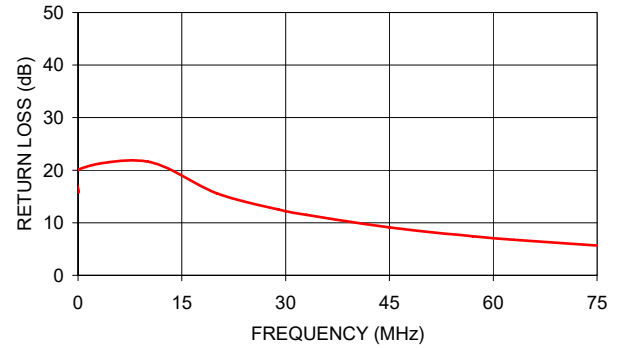
### TYPICAL PERFORMANCE DATA

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	Amplitude Unbalance (dB)	Phase Unbalance (deg)
0.10	0.48	15.80	0.01	0.00
0.18	0.42	20.18	0.01	0.05
10.11	0.25	21.64	0.01	0.41
20.04	0.37	15.61	0.01	0.08
29.00	0.53	12.52	0.04	1.07
33.00	0.62	11.49	0.06	1.24
45.00	0.93	9.10	0.12	1.71
57.00	1.29	7.41	0.21	2.19
63.00	1.48	6.74	0.27	2.45
75.00	1.88	5.66	0.40	3.05

INSERTION LOSS



INPUT RETURN LOSS



#### 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)

