

TC1-42X+

 50Ω

0.25 to 400 MHz

Features

- plastic base with solder plated leads
- excellent amplitude unbalance, 0.2 dB typ. and phase unbalance, 3 deg. typ. in 1dB bandwidth
- aqueous washable

Generic photo used for illustration purposes only

CASE STYLE: AT1521

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



Applications

- · balanced to unbalanced
- push-pull amplifier

Electrical Specifications at 25°C

Parameter	Frequency (MHz)	Min.	Тур.	Max.	Unit
Impedance Ratio			1		Ohm
Frequency Range		0.25		400	MHz
	0.25 - 400		3.0		
Insertion Loss*	0.35 - 250		2.0		dB
	0.7 - 150		1.0		

 $^{^{\}star}$ Insertion Loss is referenced to mid-band loss, 0.3 dB typ.

Maximum Ratings

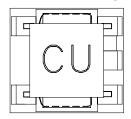
Parameter	Ratings		
Operating Temperature	-40°C to 85°C		
Storage Temperature	-55°C to 100°C		
RF Power	0.25W		
DC Current	30mA		

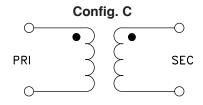
Permanent damage may occur if any of these limits are exceeded.

Pin Connections

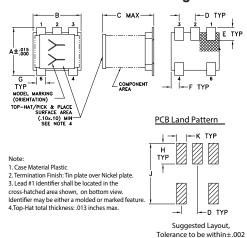
Function	Pin Number
PRIMARY DOT	6
PRIMARY	4
SECONDARY DOT	1
SECONDARY	3
NOT USED	2,5

Product Marking





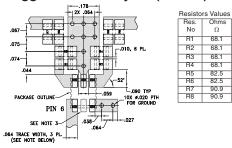
Outline Drawing



Outline Dimensions (inch)

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

Demo Board MCL P/N: TB-77 Suggested PCB Layout (PL-243)



RESISTORS R1-R8: 0805 SIZE

NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS ROASSOB WITH DIELECTRIC THICKNESS .030" ± .002". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED. 2. BOTTOM SIDE OF THE POB IS CONTINUOUS GROUND PLANE. 3. THIS PAD IS NOT REQUIRED FOR ATZ24 CASE STYLES.

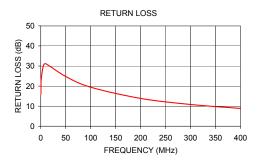
DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Typical Performance Data

FF	REQUENCY I (MHz)	NSERTION LOSS (dB)	INPUT R. LOSS (dB)
	0.25	0.79	15.85
	0.50	0.63	20.29
	1.00	0.52	23.72
	5.00	0.34	29.93
	10.00	0.30	31.13
	50.00	0.37	24.78
	100.00	0.48	19.43
	200.00	0.69	13.85
	300.00	0.95	10.83
	400.00	1.44	8.85





Additional 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/MCLStore/terms.jsp

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