



SURFACE MOUNT

RF Transformer

ADT1.5-122+



50Ω 20 to 1200 MHz

FEATURES

- Excellent return loss, 19 dB typ. in 1 dB bandwidth
- Good amplitude unbalance, .25 dB typ. and phase unbalance, 1.0 deg. typ in 1dB bandwidth
- Good insertion loss flatness from 50 MHz to 850 MHz
- Aqueous washable
- Protected under US patent 6,133,525



Generic photo used for illustration purposes only

CASE STYLE: CD542

+RoHS Compliant

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

APPLICATIONS

- Impedance matching
- Balanced amplifier
- Cable TV

ELECTRICAL SPECIFICATIONS AT 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Units
Impedance Ratio (Secondary/Primary)			1.5		
Frequency Range		20		1200	MHz
Insertion Loss*	—	—	3	—	dB
	20-1200	—	2	—	
	50-1000	—	1	—	
Amplitude Unbalance	20-1200	—	.35	—	dB
	50-1000	—	.25	—	
Phase Unbalance	20-1200	—	1.2	—	Degree
	50-1000	—	1.0	—	

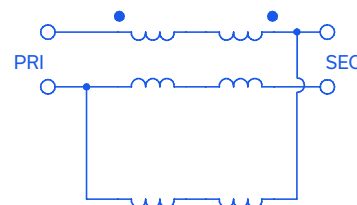
* Insertion Loss is referenced to mid-band loss, 1 dB typ.

MAXIMUM RATINGS

Parameter	Ratings
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	0.5W
DC Current	30mA

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

CONFIGURATION K





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Mini-Circuits

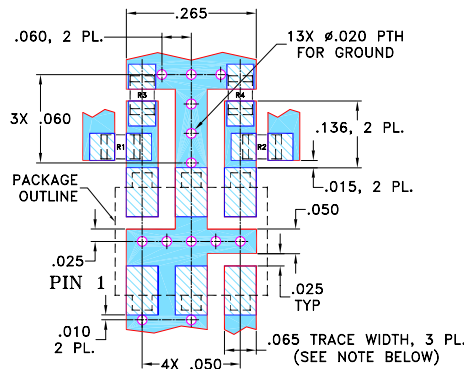
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PIN CONNECTIONS

PRIMARY DOT, 50Ω unbalanced	3
PRIMARY	1 & 2 connect to GND
SECONDARY DOT, 75Ω balanced	4
SECONDARY, 75Ω balanced	6
NOT USED	5

PRODUCT MARKING: N/A

DEMOBOARD MCL P/N: TB-375
SUGGESTED PCB LAYOUT (PL-257)

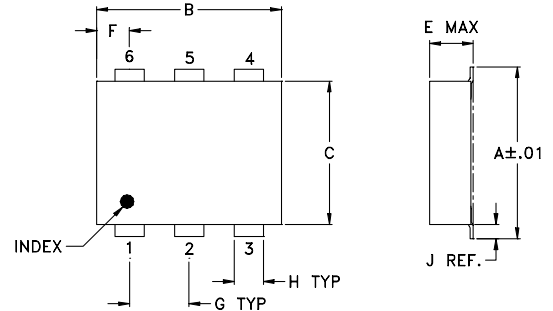


RESISTORS R1-R2: 24.9 Ohm, 0805 SIZE
 RESISTORS R3-R4: 75.0 Ohm, 0805 SIZE

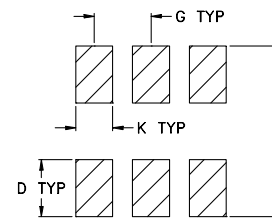
- NOTE:** 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.030" ± 0.002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
 2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
- DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

OUTLINE DRAWING



PBC Land Pattern



Suggested Layout
 Tolerance to be within ±.002

OUTLINE DIMENSIONS (Inches mm)

A	B	C	D	E	F	G
.272	.310	.220	.100	.112	.055	.100
6.91	7.87	5.59	2.54	2.84	1.40	2.54
H	J	K	L			wt
.030	.026	.065	.300			grams
0.76	0.66	1.65	7.62			0.20

TAPE & REEL INFORMATION: F34



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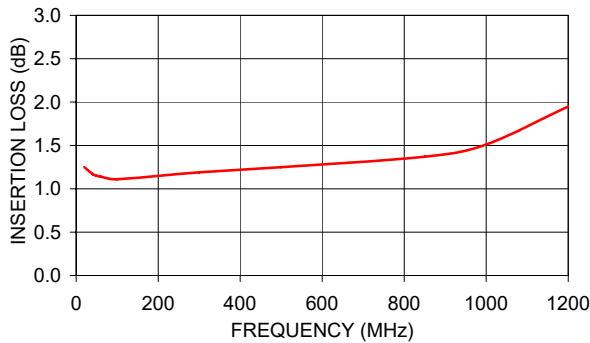
Mini-Circuits

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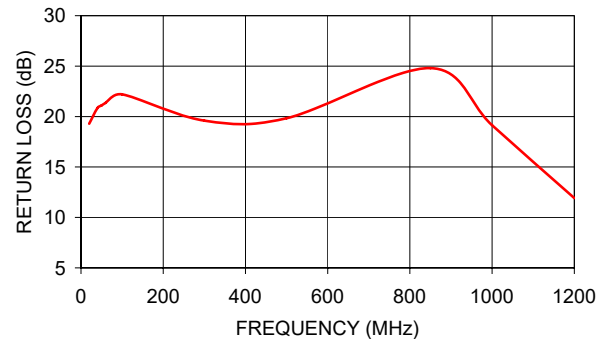
TYPICAL PERFORMANCE DATA

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	Amplitude Unbalance (dB)	Phase Unbalance (deg)
20.00	1.25	19.29	0.01	0.70
40.00	1.17	20.85	0.11	0.53
50.00	1.15	21.10	0.11	0.21
60.00	1.14	21.36	0.07	0.03
100.00	1.11	22.20	0.03	1.13
300.00	1.19	19.59	0.01	1.23
500.00	1.25	19.83	0.21	2.15
850.00	1.37	24.80	0.56	0.69
1000.00	1.51	19.14	0.76	1.45
1200.00	1.95	11.92	0.95	5.56

ADT1.5-122+
INSERTION LOSS



ADT1.5-122+
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

