

Miniature Ceramic Fixed Attenuator

50Ω 1W 9dB DC to 7000 MHz

PAT-9+



CASE STYLE: AF320
PRICE: \$2.95 ea. QTY (20)

+RoHS Compliant

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



Available Tape and Reel
at no extra cost

Reel Size Devices/Reel
7" 20, 50, 100, 200, 500, 1000, 2000, 3000

Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Permanent damage may occur if any of these limits are exceeded.	

Pin Connections

INPUT	1
OUTPUT	3
GROUND	2,4

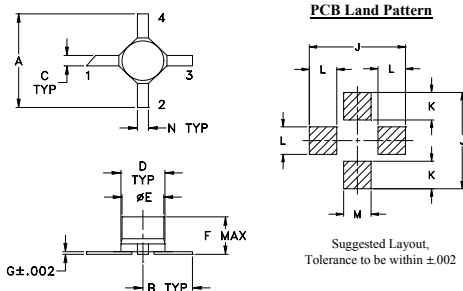
Features

- wideband, DC to 7000 MHz
- excellent VSWR, through entire band
- miniature size
- aqueous washable

Applications

- power leveling
- impedance match improvement

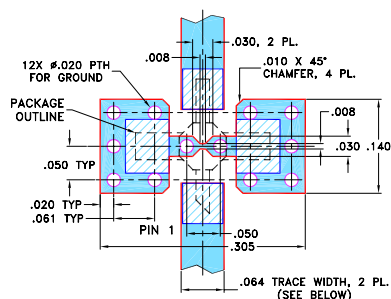
Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.200	.100	.020	.070	.068	.057	.005
5.08	2.54	0.51	1.78	1.73	1.45	0.13
H	J	K	L	M	N	wt
--	.230	.065	.060	.080	.040	grams
--	5.84	1.65	1.52	2.03	1.02	0.04

Demo Board MCL P/N: TB-319 Suggested PCB Layout (PL-208)



NOTES:

1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B 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 PCB IS CONTINUOUS GROUND PLANE.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
 DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

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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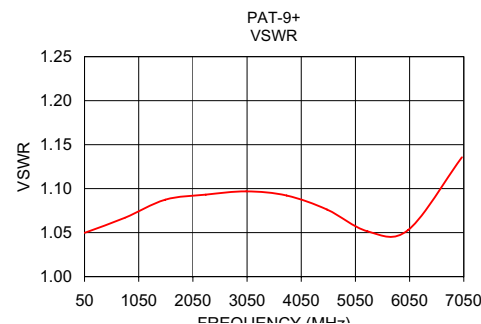
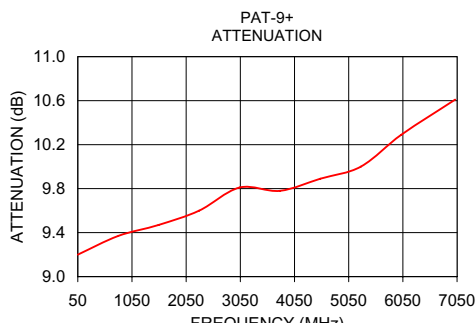
Electrical Specifications at 25°C

FREQ. RANGE (MHz)	ATTENUATION (dB)			VSWR (:1) Max.			MAX. INPUT POWER (W)
	Flatness, Max.	DC-1 GHz	DC-2.5 GHz	DC-f _u GHz	DC-1 GHz	DC-2.5 GHz	
f _L -f _u	Norm.						
DC-7000	9±0.4	0.4	0.6	1.7	1.3	1.4	1.5

1. RF power at 25°C case temperature: 1 Watt. Derate linearly to 0.1 Watt at 100°C.

Typical Performance Data

Frequency (MHz)	Attenuation (dB)	VSWR (:1)
50.00	9.20	1.05
796.25	9.37	1.07
1542.50	9.47	1.09
2288.75	9.60	1.09
3035.00	9.81	1.10
3781.25	9.78	1.09
4527.50	9.89	1.08
5273.75	10.00	1.05
6020.00	10.29	1.05
7015.00	10.61	1.14



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