

Miniature Plastic Fixed Attenuator

50Ω 0.5W 9dB DC to 8000 MHz

GAT-9+

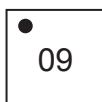
Maximum Ratings

Operating Temperature	-45°C to 85°C
Storage Temperature	-55°C to 100°C
Permanent damage may occur if any of these limits are exceeded.	

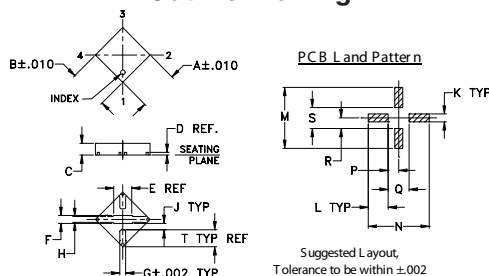
Pin Connections

INPUT	1
OUTPUT	3
GROUND	2,4

Product Marking



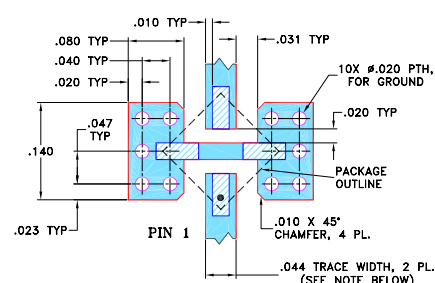
Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	
0.118	0.118	0.035	0.008	0.07	0.024	0.017	0.018	0.021	
3.00	3.00	0.89	0.20	1.78	0.61	0.43	0.46	0.53	
K	L	M	N	P	Q	R	S	T	wt
0.024	0.061	0.186	0.186	0.032	0.064	0.032	0.064	0.05	grams
0.61	1.55	4.72	4.72	0.81	1.63	0.81	1.63	1.27	0.02

Demo Board MCL P/N: TB-154 Suggested PCB Layout (PL-126)



NOTES:

- TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .020" ± .0015"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
- 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

Features

- miniature package MCLP™ 3x3 mm
- specified to 8000 MHz, useable to 10000 MHz
- excellent VSWR, 1:15:1 typ.

Applications

- cellular
- PCS
- communications
- radar
- defense



CASE STYLE: FG873

+RoHS Compliant

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

Reel Size	Devices/Reel
7"	20, 50, 100, 200, 500, 1000
13"	2000, 3000, 4000

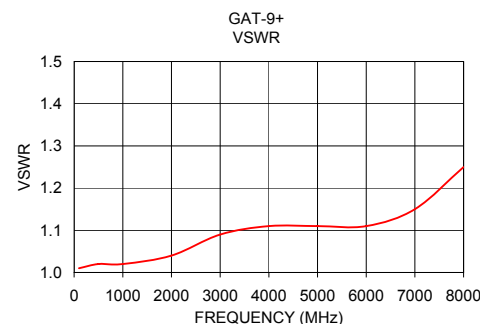
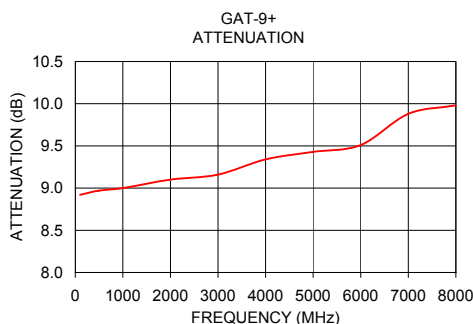
Electrical Specifications at 25°C

FREQ. RANGE (MHz)	ATTENUATION (dB)					VSWR (:1)						MAX. INPUT POWER (W)	
	Flatness												
	DC-1	1-5	5-8	DC-1	1-5	5-8	DC-1	1-5	5-8	DC-1	1-5		5-8
	GHz	GHz	GHz	GHz	GHz	GHz	GHz	GHz	GHz	GHz	GHz		GHz
f_L - f_U	Nom.	Typ.	Typ.	Typ.	Typ.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	
DC-8000	9±0.4	0.1	0.2	0.3		1.05	1.2	1.15	1.3	1.3		0.5	

- RF power at 25°C case temperature: ½Watt. Derate linearly to 0.2 Watt at 85°C.
- Flatness= variation over band divided by 2

Typical Performance Data

Frequency (MHz)	Attenuation (dB)	VSWR (:1)
100.00	8.92	1.01
500.00	8.97	1.02
1000.00	9.00	1.02
2000.00	9.10	1.04
3000.00	9.16	1.09
4000.00	9.34	1.11
5000.00	9.43	1.11
6000.00	9.51	1.11
7000.00	9.88	1.15
8000.00	9.98	1.25



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/MCLStore/terms.jsp



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