Miniature Plastic

Fixed Attenuator

GAT-20+

50Ω 0.5W 20dB DC to 8000 MHz

Generic photo used for illustration purposes only

CASE STYLE: FG873

+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
13"	2000, 3000, 4000

Maximum Ratings

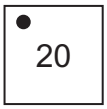
Operating Temperature	-45°C to 85°C
Storage Temperature	-55°C to 100°C

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

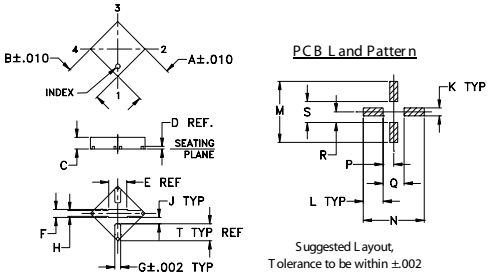
Pin Connections

INPUT	1
OUTPUT	3
GROUND	2,4

Product Marking



Outline Drawing

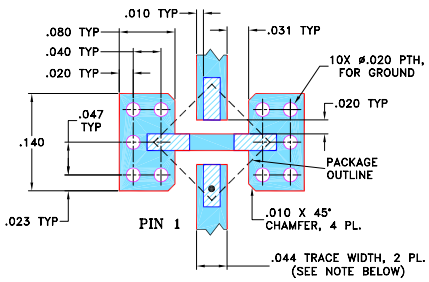


Outline Dimensions (inch / mm)

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:

1. 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.
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

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

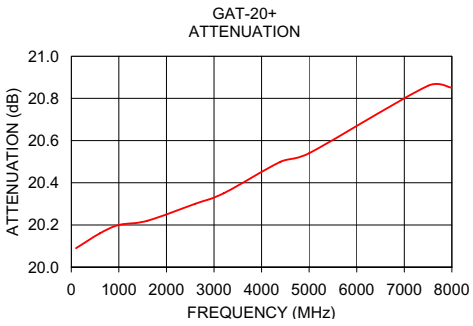
Electrical Specifications at 25°C

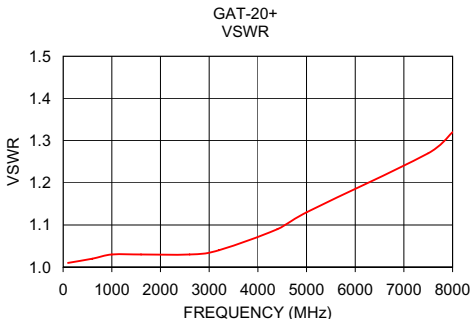
FREQ. RANGE (MHz)	ATTENUATION (dB) Flatness				VSWR (:1)					MAX. INPUT POWER [1] (W)
		DC-1 GHz	1-5 GHz	5-8 GHz	DC-1 GHz		1-5 GHz		5-8 GHz	
f_L-f_U	Nom.	Typ.	Typ.	Typ.	Typ.	Max.	Typ.	Max.	Typ.	
DC-8000	20±0.4	0.15	0.2	0.2	1.05	1.2	1.15	1.3	1.35	0.5

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

Typical Performance Data

Frequency (MHz)	Attenuation (dB)	VSWR (:1)
100.00	20.09	1.01
600.00	20.16	1.02
1000.00	20.20	1.03
1600.00	20.22	1.03
2600.00	20.30	1.03
3200.00	20.35	1.04
4400.00	20.50	1.09
5000.00	20.54	1.13
7500.00	20.86	1.27
8000.00	20.85	1.32





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