

# Miniature Plastic Fixed Attenuator

50Ω 0.5W 20dB DC to 8000 MHz

## GAT-20+



CASE STYLE: FG873  
PRICE: \$2.35 ea. QTY (10-49)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

### 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

### Features

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

### Applications

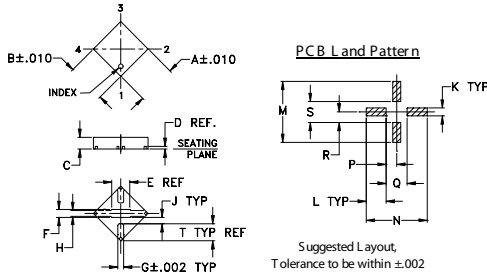
- cellular
- PCS
- communications
- radar
- defense

### Electrical Specifications at 25°C

FREQ. RANGE (MHz)	ATTENUATION (dB) Flatness			VSWR (:1)			MAX. INPUT POWER <sup>1</sup> (W)			
	DC-1 GHz Typ.	1-5 GHz Typ.	5-8 GHz Typ.	DC-1 GHz Typ.	1-5 GHz Typ.	5-8 GHz Typ.				
$f_L$ - $f_U$	Nom.									
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

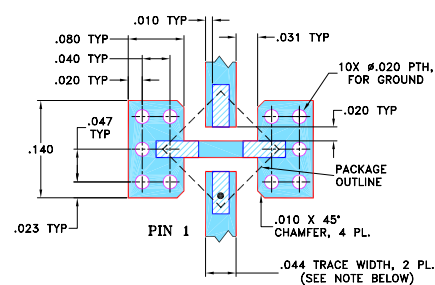
### Outline Drawing



### 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		

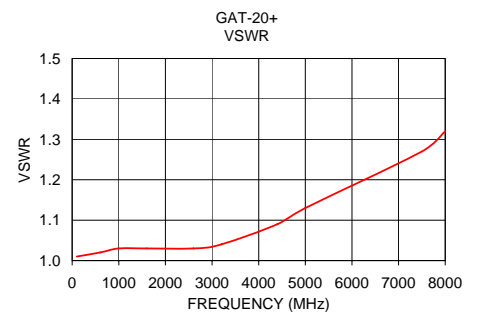
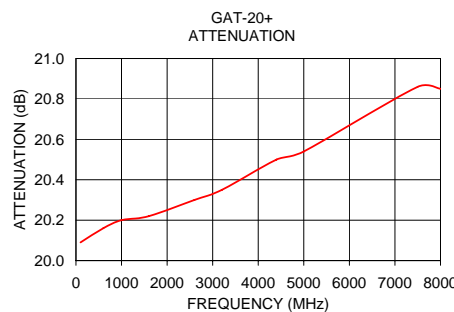
### Demo Board MCL P/N: TB-154 Suggested PCB Layout (PL-126)



- 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

### 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



**Mini-Circuits®**  
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For detailed performance specs & shopping online see web site

**Notes:** 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet 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](http://www.minicircuits.com/MCLStore/terms.jsp).

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