



# Fixed Attenuator

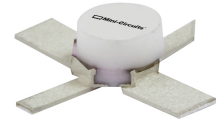
50Ω 1 W 15 dB DC to 7 GHz

### FEATURES

- Wideband, DC to 7 GHz
- Excellent VSWR Through Entire Band
- Miniature Size
- Aqueous Washable

### APPLICATIONS

- Power Leveling
- Impedance Match Improvement



Generic photo used for illustration purposes only

CASE STYLE: AF320

#### +RoHS Compliant

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

### ELECTRICAL SPECIFICATIONS AT +25°C

Parameter	Condition (GHz)	Min.	Typ.	Max.	Unit
Frequency Range		DC		7	GHz
Attenuation, Nominal			15±0.6		dB
Attenuation, Flatness <sup>1</sup>	DC - 1			0.5	dB
	DC - 2.5			0.7	
	DC - 7			2.4	
VSWR	DC - 1			1.3	:1
	DC - 2.5			1.4	
	DC - 7			1.5	
Input Power <sup>2</sup>				1.0	W

1. Flatness = variation over band divided by 2.

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

### ABSOLUTE MAXIMUM RATINGS

Parameter	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.



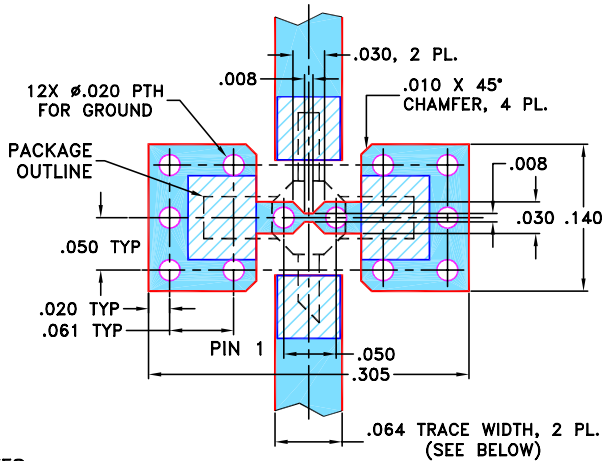
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### PIN CONNECTIONS

INPUT	1
OUTPUT	3
GROUND	2,4

DEMO BOARD MCL P/N: TB-319  
SUGGESTED PCB LAYOUT (PL-208)

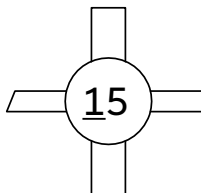


#### NOTES:

- 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.
- BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

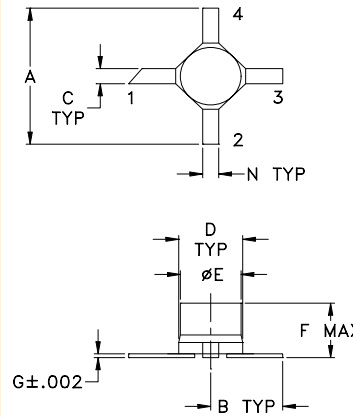
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
- DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

### PRODUCT MARKING

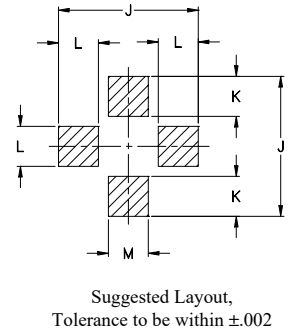


Marking may contain other features or characters for internal lot control

### OUTLINE DRAWING



### PCB Land Pattern



### 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

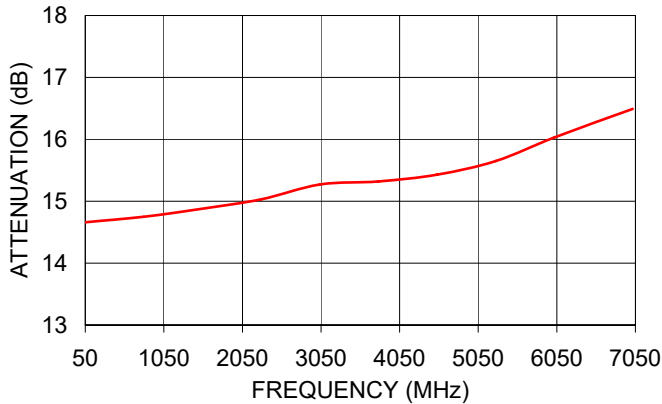
### TAPE & REEL INFORMATION: F26



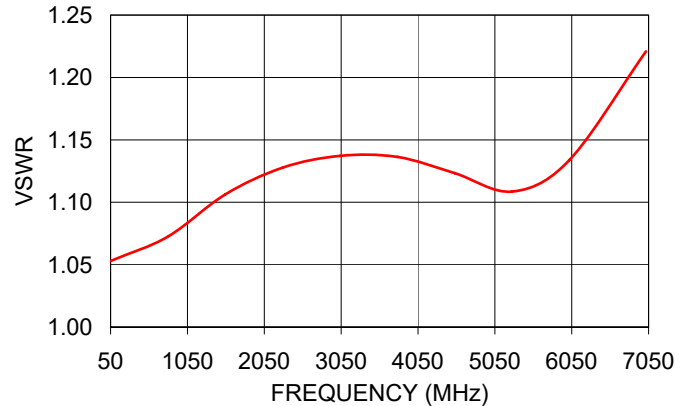
### TYPICAL PERFORMANCE DATA AND CHARTS

Frequency (MHz)	Attenuation (dB)	VSWR (:1)
50.00	14.66	1.05
796.25	14.75	1.07
1542.50	14.88	1.11
2288.75	15.03	1.13
3035.00	15.27	1.14
3781.25	15.32	1.14
4527.50	15.43	1.12
5273.75	15.65	1.11
6020.00	16.03	1.13
7015.00	16.49	1.22

PAT-15+  
ATTENUATION



PAT-15+  
VSWR



#### 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-Circuits' applicable established test performance criteria and measurement instructions.
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