

#### **MINIATURE SURFACE MOUNT**

## Fixed Attenuator

LAT-4+

50Ω 0.5 W 4 dB DC to 2.5 GHz

#### **FEATURES**

- · Wideband, DC to 2.5 GHz
- Excellent VSWR Through Entire Band
- Miniature Size, SOT143 Package
- Aqueous Washable

#### **APPLICATIONS**

- Cellular
- PCS
- ISM
- VHF/UHF



Generic photo used for illustration purposes only

CASE STYLE: MMM168

+RoHS Compliant

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

#### **ELECTRICAL SPECIFICATIONS AT +25°C**

Parameter	Condition (GHz)	Min.	Тур.	Max.	Unit
Frequency Range		DC		2.5	GHz
Attenuation, Nominal			4±0.3		dB
	DC - 0.5			0.3	
Attenuation, Flatness <sup>1</sup>	DC - 1			0.4	dB
	DC - 2.5			0.7	
	DC - 0.5			1.2	
VSWR	DC - 1			1.3	:1
	DC - 2.5			1.5	
Input Power <sup>2</sup>				0.5	W

<sup>1.</sup> Flatness = variation over band divided by 2.

#### **ABSOLUTE MAXIMUM RATINGS**

Parameter	Ratings			
Operating Temperature	-55°C to +85°C			
Storage Temperature	-55°C to +100°C			

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

REV. G ECO-024218 LAT-4+ MCL NY 250113



<sup>2.</sup> RF power at +25°C case temperature: 1/2 Watt. Derate linearly to 0.2 Watt at +85°C.



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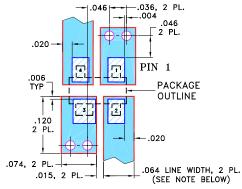
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#### **PAD CONNECTIONS**

INPUT	4
OUTPUT	2
GROUND	1,3

### **DEMO BOARD MCL P/N:** TB-39 **SUGGESTED PCB LAYOUT** (PL-225)



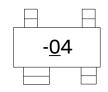
NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030"  $\pm$  .002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED. 2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER

MASK OVER BARE COPPER)

DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

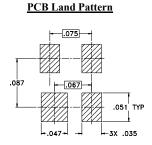
#### **PRODUCT MARKING**



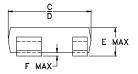
Marking may contain other features or characters for internal lot control

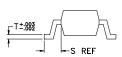
#### **OUTLINE DRAWING**

# 



Suggested Layout, Tolerance to be within ±.002





#### OUTLINE DIMENSIONS (Inch )

Α	В	С	D	Ε	F	G	Н	J	K
.045	.055	.105	.120	.047	.005	.083	.104	.070	.080
1.14	1.40	2.67	3.05	1.19	0.13	2.11	2.64	1.78	2.03
L	M	N	Р	Q	R	S	Т		wt
_		N .030	-			_	-	ç	wt grams

#### **TAPE & REEL INFORMATION: F8**



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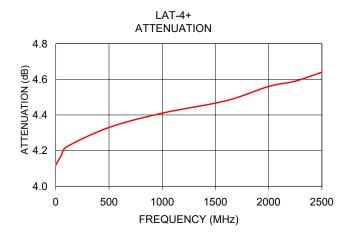
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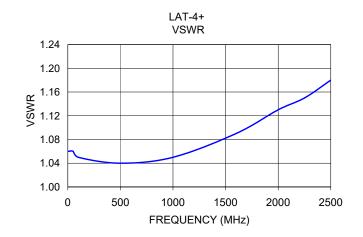
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#### **TYPICAL PERFORMANCE DATA AND CHARTS**

Frequency (MHz)	Attenuation (dB)	VSWR (:1)
1.00	4.12	1.06
10.00	4.13	1.06
50.00	4.17	1.06
100.00	4.22	1.05
500.00	4.33	1.04
1000.00	4.41	1.05
1600.00	4.48	1.09
2000.00	4.56	1.13
2250.00	4.59	1.15
2500.00	4.64	1.18





#### 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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