MSAT-P25

PIN Diode Attenuator Shunt Element

Rev. V1

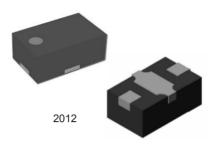
MACOM

Features

- Low Distortion Harmonics @ 85 dBc
- Broadband performance, >10 GHz
- Low Insertion Loss & High Attenuation, 27 dB
- RoHS* Compliant

Description

A broadband, High Linearity medium power shunt PIN Attenuator element $1.9 \times 1.1 \text{ mm}$ DFN package. This device is designed for wireless Telecommunication infrastructure and test instrument applications. It is also suited for other applications in $0.1 \sim 10 \text{ GHz}$ range.



Electrical Specifications: $T_A = +25^{\circ}C$ (measured on evaluation board)

Parameter	Test Conditions	Units	Min.	Тур.	Max.
Breakdown Voltage (V _{BR})	I _R = 10 μA	V	200	—	_
Lifetime (L _T)	I _F = 10 m, I _R = 6 Ma, 10% / 90%	ns	2000	3000	5000
Minimum Series Resistance (R _s)	I = -100 mA, 500 MHz	Ω	_	1.5	2.5
High Series Resistance (R _S)	I = -10 μΑ, 500 MHz	Ω	1200	2200	3000
Low Series Resistance (R _s)	I = -50 mA, 500 MHz I = -50 mA, <10 GHz	Ω	20 28	30 35	40

Absolute Maximum Ratings

Parameter	Absolute Maximum	
Forward Current (I _F)	200 mA	
Reverse Voltage (V _R)	200 V	
Thermal Resistance (θ_{JC})	+20°C/W	
Junction Temperature (T _J)	+175°C	
Storage Temperature (T _{STG})	-65°C to +125°C	
Assembly Temperature (T _{SOLDER})	+260°C	

* Restrictions on Hazardous Substances, European Union Directive 2011/65/EU.

1

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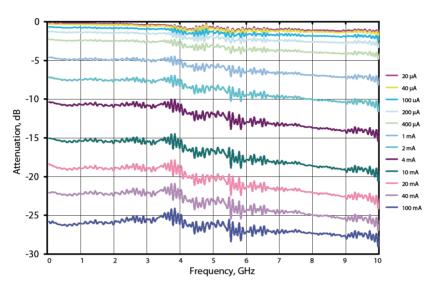
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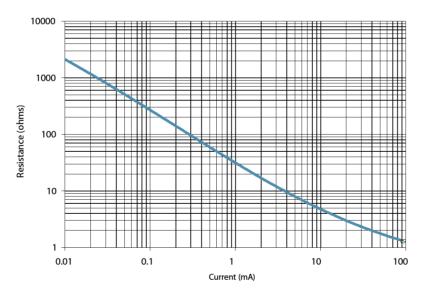
Rev. V1

Performance Curves



Attenuation vs. Current





2

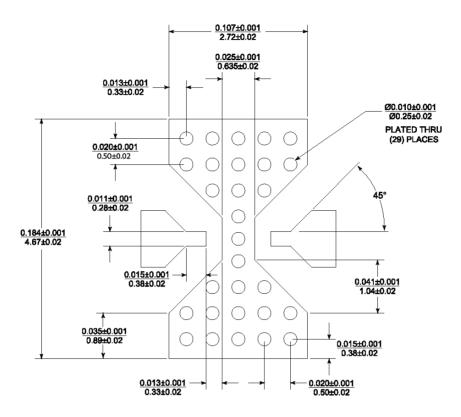
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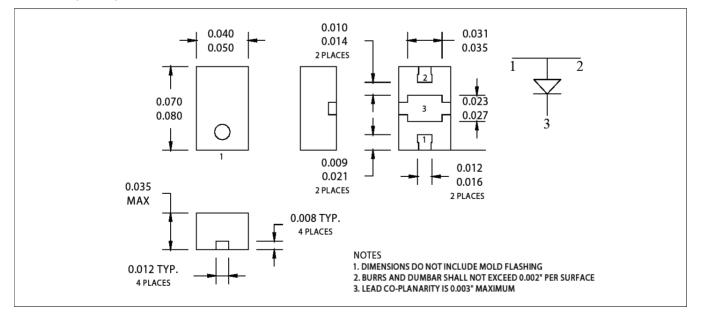
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Rev. V1

PCB Layout



Outline (2012)



3

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