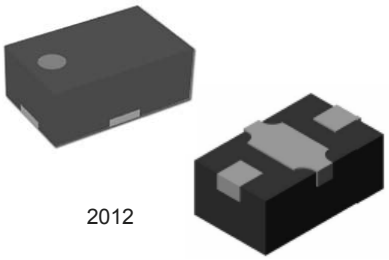
MSAT-P25

PIN Diode Attenuator Shunt Element

Rev. V1

Features

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



2012

Description

A broadband, High Linearity medium power shunt PIN Attenuator element 1.9 x 1.1 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 ~ 10 GHz range.

Electrical Specifications: T_A = +25°C (measured on evaluation board)

Parameter	Test Conditions	Units	Min.	Typ.	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 µA, 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 —

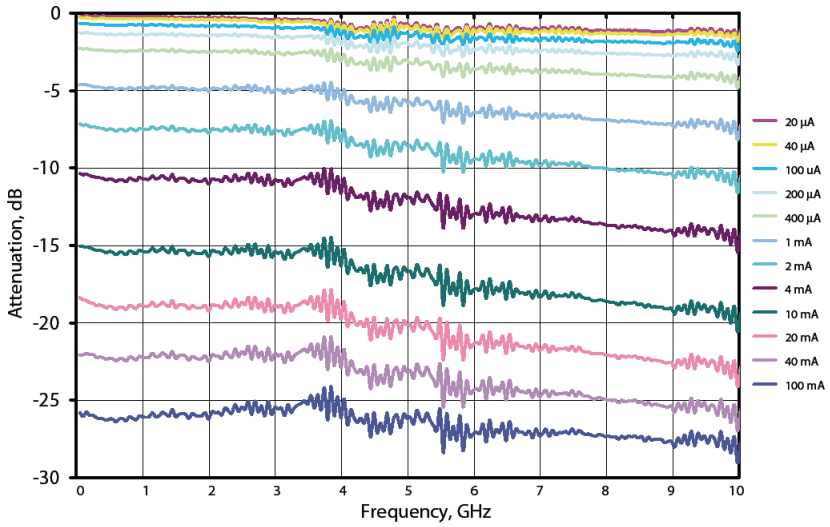
Absolute Maximum Ratings

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

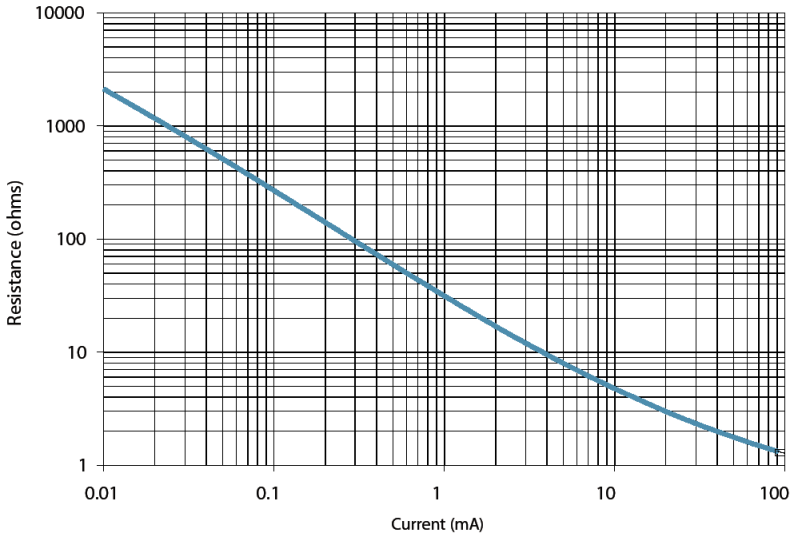
* Restrictions on Hazardous Substances, European Union Directive 2011/65/EU.

Performance Curves

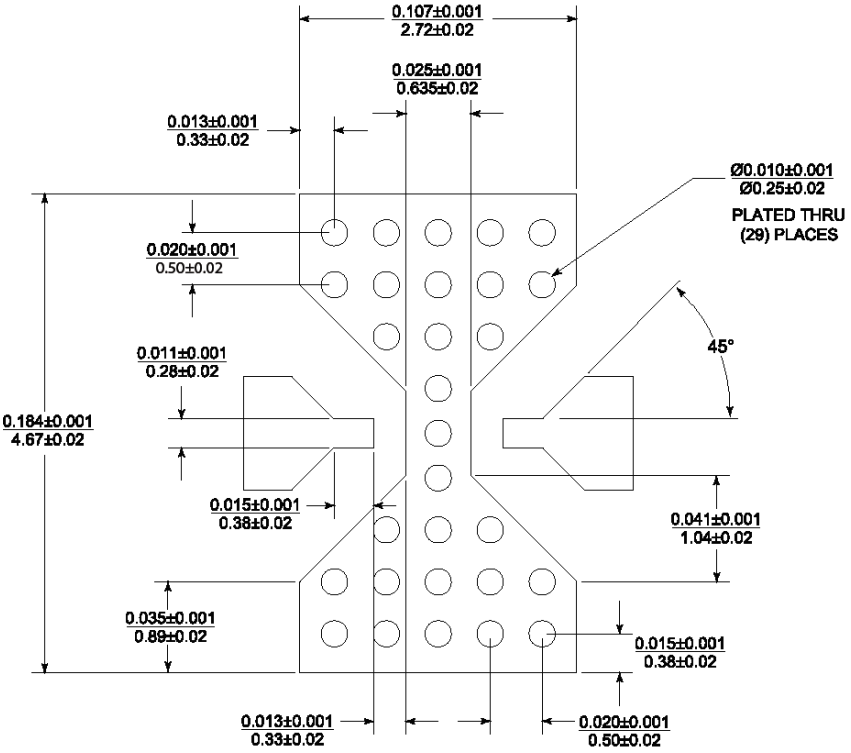
Attenuation vs. Current



Isolation



PCB Layout



Outline (2012)