

## PIN Diode Attenuator Shunt Element

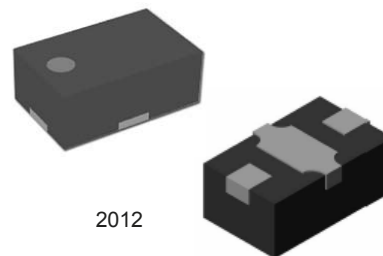
Rev. V1

## Features

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

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

Parameter	Test Conditions	Units	Min.	Typ.	Max.
Breakdown Voltage ( $V_{BR}$ )	$I_R = 10 \mu\text{A}$	V	200	—	—
Lifetime ( $L_T$ )	$I_F = 10 \text{ m}$ , $I_R = 6 \text{ Ma}$ , 10% / 90%	ns	2000	3000	5000
Minimum Series Resistance ( $R_S$ )	$I = -100 \text{ mA}$ , 500 MHz	$\Omega$	—	1.5	2.5
High Series Resistance ( $R_S$ )	$I = -10 \mu\text{A}$ , 500 MHz	$\Omega$	1200	2200	3000
Low Series Resistance ( $R_S$ )	$I = -50 \text{ mA}$ , 500 MHz $I = -50 \text{ mA}$ , <10 GHz	$\Omega$	20 28	30 35	40 —

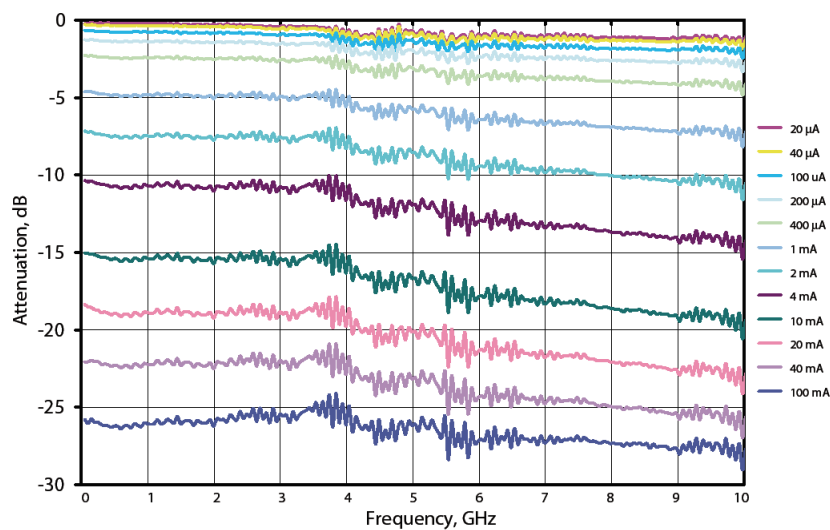
## Absolute Maximum Ratings

Parameter	Absolute Maximum
Forward Current ( $I_F$ )	200 mA
Reverse Voltage ( $V_R$ )	200 V
Thermal Resistance ( $\theta_{JC}$ )	+20°C/W
Junction Temperature ( $T_J$ )	+175°C
Storage Temperature ( $T_{STG}$ )	-65°C to +125°C
Assembly Temperature ( $T_{SOLDER}$ )	+260°C

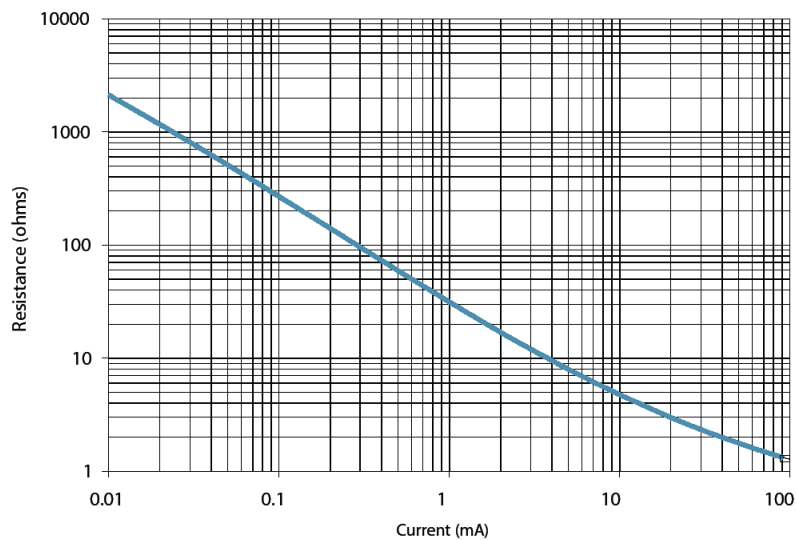
\* Restrictions on Hazardous Substances, European Union Directive 2011/65/EU.

### Performance Curves

*Attenuation vs. Current*



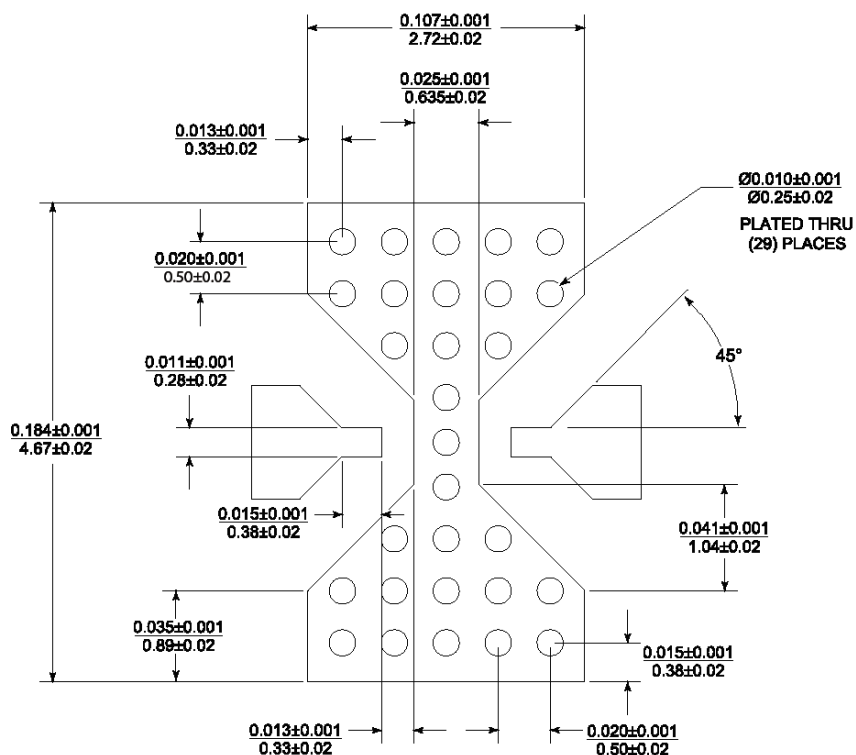
*Isolation*



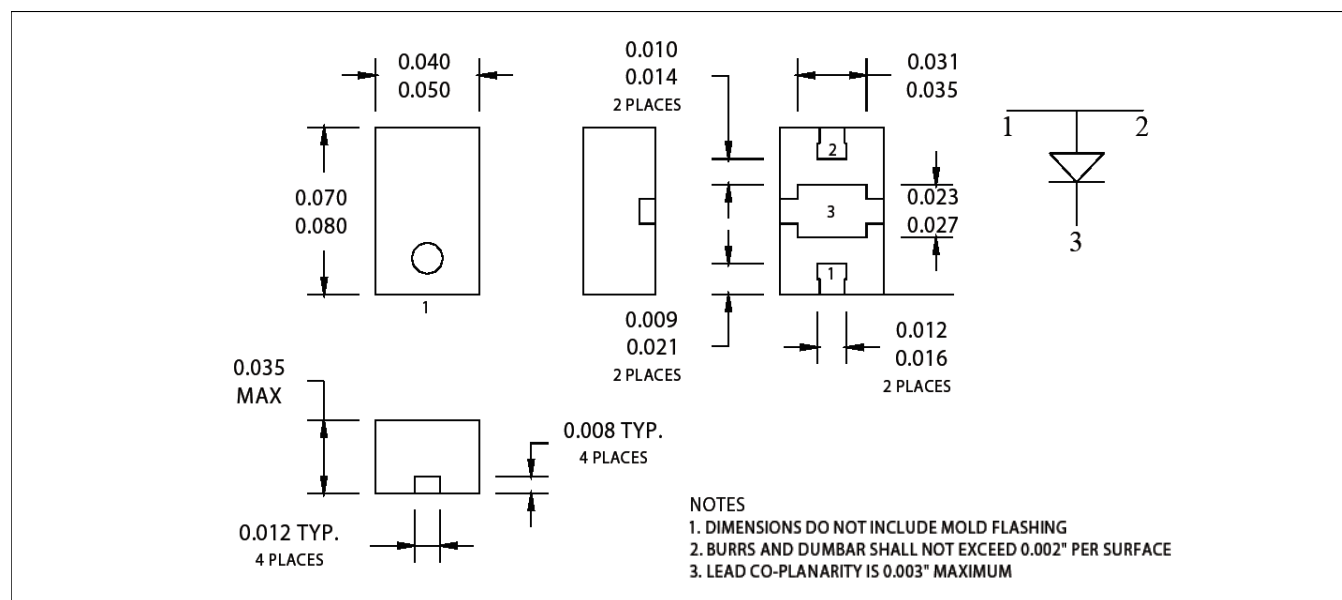
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### PCB Layout



### Outline (2012)



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