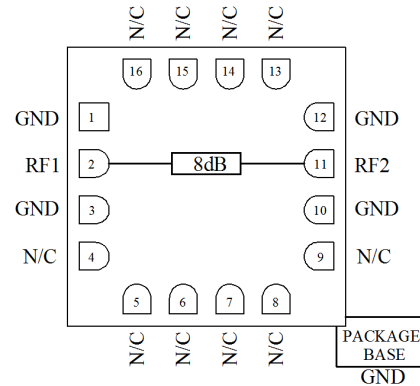


### Features

- Ultra broadband single channel attenuator
- Frequency: DC-25GHz
- Attenuation 0, 1, 2...10,15, 20, 30dB value
- Power Handling: 27dBm
- Return Loss: 15dB
- Input/Output: 50Ω
- Package Size : Ceramic 3 x 3 x 0.7mm

### Functional Block Diagram



### Typical Applications

- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

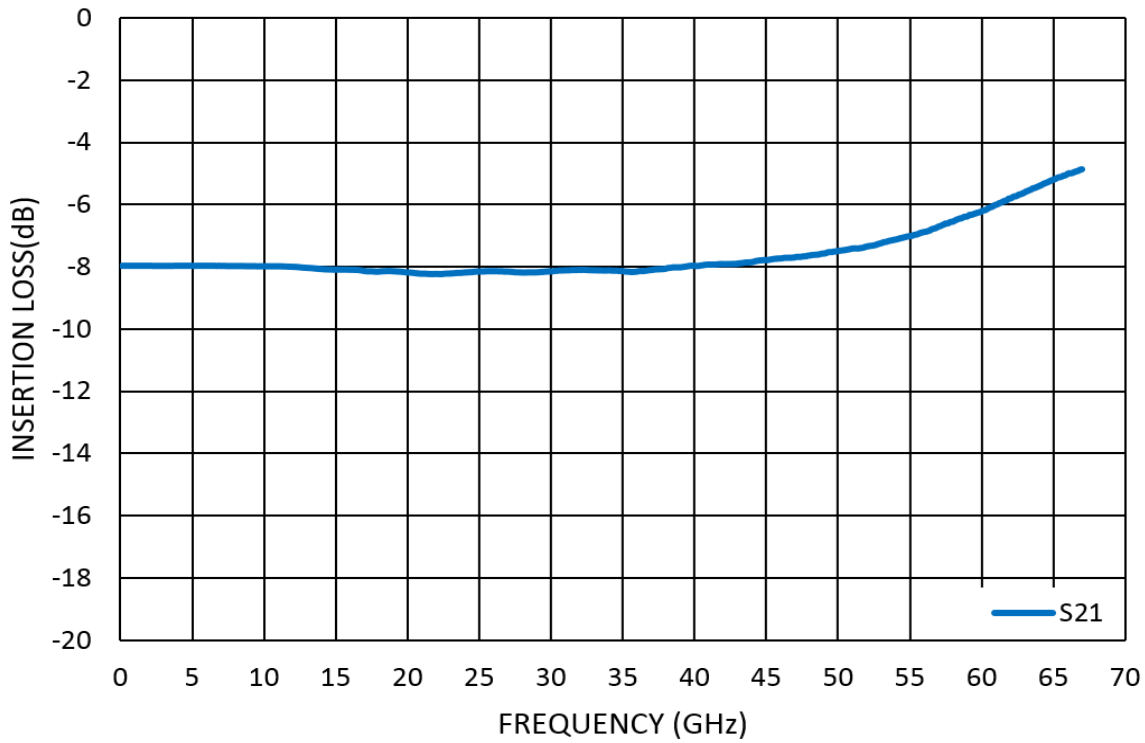
### Electrical Specifications

TA = +25°C

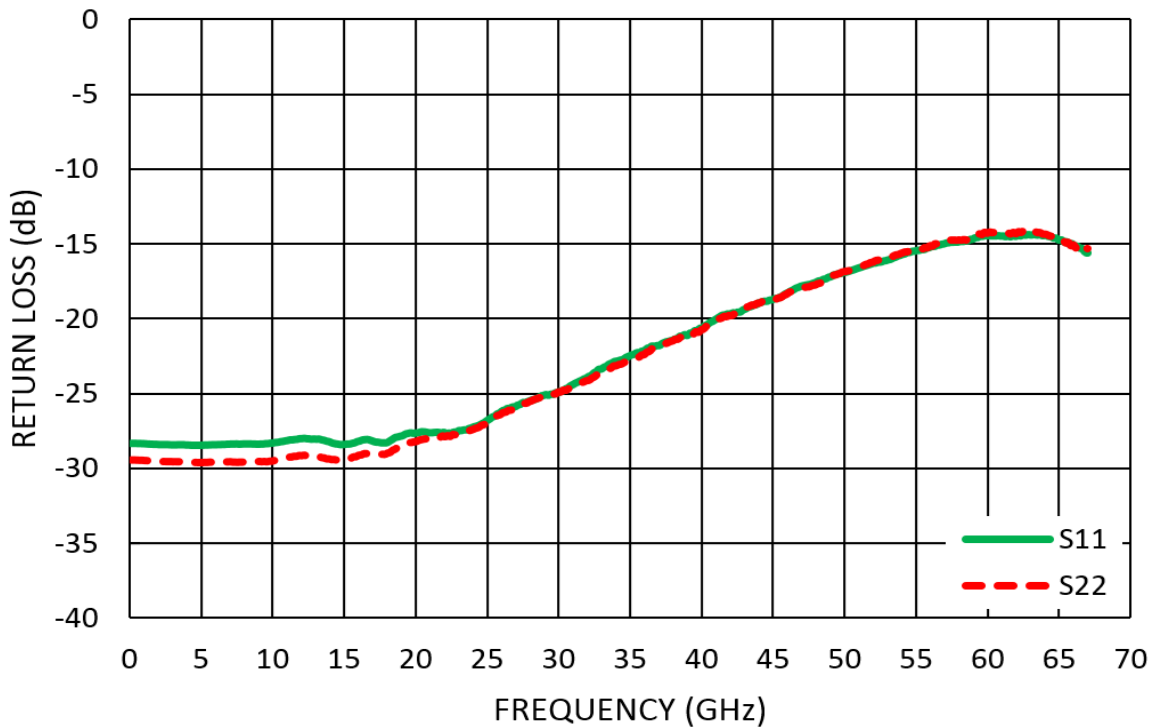
Part Number	Type	Frequency (GHz)	Attenuation (dB)	Power Handling (dBm)	Attenuation Flatness (dB)	Return Loss (dB)
MFA1001Q3A	Fixed Attenuator	DC-25	0	27	±0.3	15
MFA1002Q3A	Fixed Attenuator	DC-25	1	27	±0.5	10
MFA1003Q3A	Fixed Attenuator	DC-25	2	27	±0.3	10
MFA1004Q3A	Fixed Attenuator	DC-25	3	27	±0.3	10
MFA1005Q3A	Fixed Attenuator	DC-25	4	27	±0.3	10
MFA1006Q3A	Fixed Attenuator	DC-25	5	27	±0.3	15
MFA1007Q3A	Fixed Attenuator	DC-25	6	27	±0.3	15
MFA1008Q3A	Fixed Attenuator	DC-25	7	27	±0.5	15
MFA1009Q3A	Fixed Attenuator	DC-25	8	27	±0.5	15
MFA1010Q3A	Fixed Attenuator	DC-25	9	27	±0.5	15
MFA1011Q3A	Fixed Attenuator	DC-25	10	27	±1.0	18
MFA1012Q3A	Fixed Attenuator	DC-25	15	27	±1.0	18
MFA1013Q3A	Fixed Attenuator	DC-25	20	27	±0.4	12
MFA1014Q3A	Fixed Attenuator	DC-25	30	27	±1.5	10



### Attenuation vs. Frequency

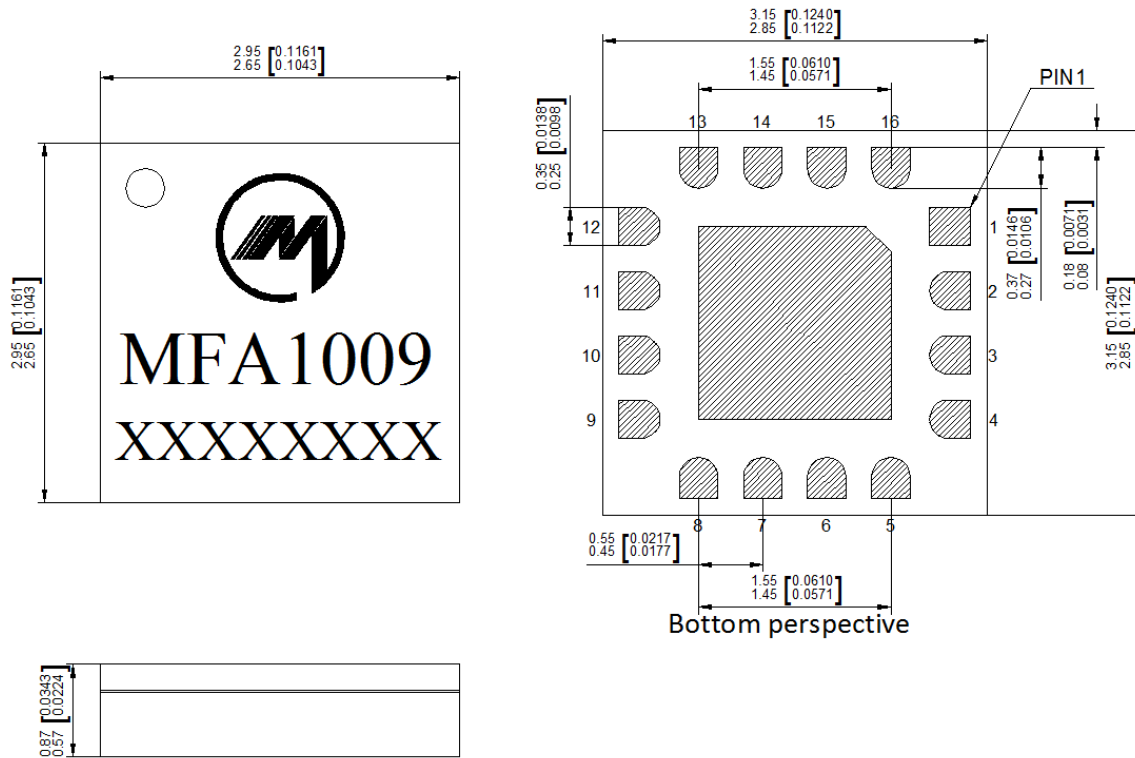


### Return Loss vs. Frequency





**Outline Drawing:**  
All Dimensions in mm[inches]



**Notes:**

1. Package body material : Alumina.
2. Lead and ground paddle plating: Gold flash over nickel.
3. Dimensions are in millimeters(inches).
4. Lead spacing tolerance is non-cumulative.

**Maximum Ratings:**

1. Maximum input power: +27dBm
2. Operating temperature: -55°C to +85°C
3. Storage temperature: -65°C to +150°C

**Pin Descriptions**

No	Function	Description
4,5,6,7,8,9,13,14,15,16	NC	No connection. These pins may be connected to RF ground. Performance will not be affected.
2	RF1	RF Signal Input. This pad is ac-coupled and matched to 50 Ω.
11	RF2	RF Signal Output. This pad is ac-coupled and matched to 50 Ω.
1,3,10,12	GND	These pins & exposed ground paddle must be connected to RF/DC ground
Die Bottom	GND	Package bottom must be connected to RF/DC ground



# MILLER MMIC

V1.0.0

## MFA1009Q3A

Fixed Attenuator Single Channel  
Ceramic QFN 3x3mm DC-25GHz

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MFA1009Q3A

Ceramic QFN 3x3mm Fixed Attenuator DC-25GHz