

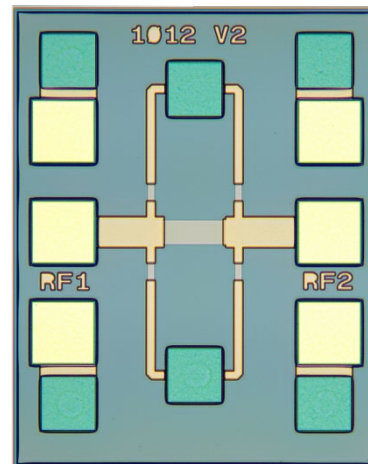


### Features

- Ultra broadband single channel attenuator
- Frequency Range: DC-50 / 60 / 65GHz
- Attenuation 0, 1, 2...10,15, 20, 30dB value
- Power Handling: 27dBm
- 50Ω Input and Output Impedance
- Return Loss: 18dB
- Chip Size: 0.566 x 0.706 x 0.1mm
- RoHS & REACH Compliant

### Typical Applications

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



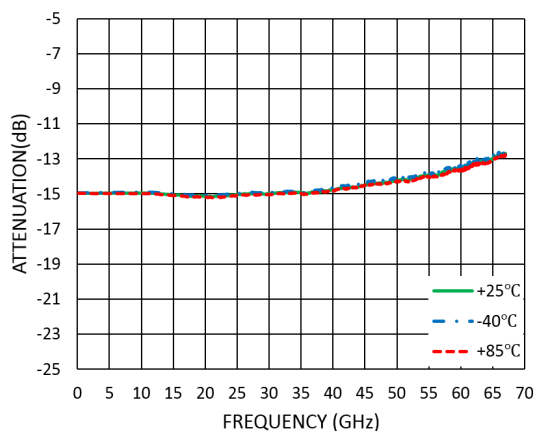
### Electrical Specifications

TA = +25°C

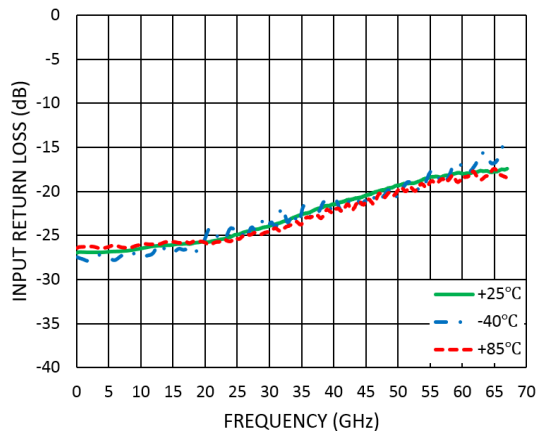
Part Number	Type	Frequency (GHz)	Attenuation (dB)	Power Handling (dBm)	Attenuation Flatness (dB)	Return Loss (dB)
MFA1001	Fixed Attenuator	DC-50	0	27	±0.3	15
MFA1002	Fixed Attenuator	DC-65	1	27	±0.5	10
MFA1003	Fixed Attenuator	DC-60	2	27	±0.3	10
MFA1004	Fixed Attenuator	DC-60	3	27	±0.3	10
MFA1005	Fixed Attenuator	DC-65	4	27	±0.3	10
MFA1006	Fixed Attenuator	DC-65	5	27	±0.3	15
MFA1007	Fixed Attenuator	DC-50	6	27	±0.3	15
MFA1008	Fixed Attenuator	DC-50	7	27	±0.5	15
MFA1009	Fixed Attenuator	DC-50	8	27	±0.5	15
MFA1010	Fixed Attenuator	DC-60	9	27	±0.5	15
MFA1011	Fixed Attenuator	DC-65	10	27	±1.0	18
MFA1012	Fixed Attenuator	DC-65	15	27	±1.0	18
MFA1013	Fixed Attenuator	DC-65	20	27	±0.4	12
MFA1014	Fixed Attenuator	DC-65	30	27	±1.5	10



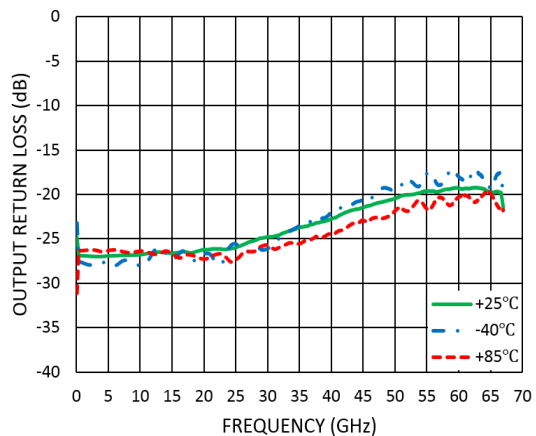
### Attenuation vs. Frequency

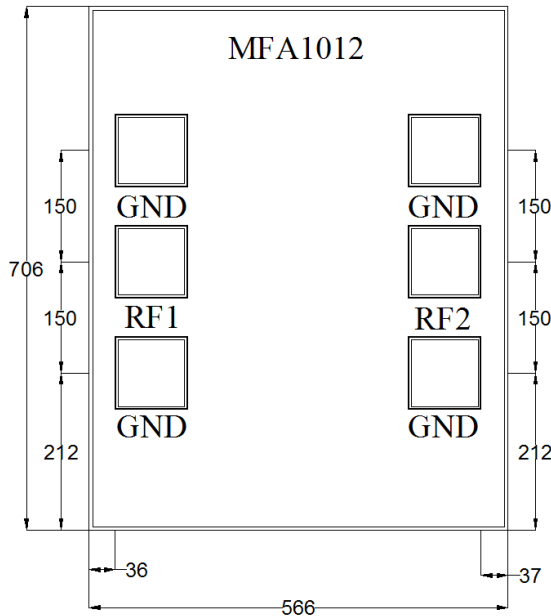


### Input Return Loss vs. Frequency



### Output Return Loss vs. Frequency



**Outline Drawing:**All Dimensions in  $\mu\text{m}$ 

No	Function	Description
1	RF 1	RF Signal Input. This pad is ac-coupled and matched to 50 $\Omega$ .
2	RF 2	RF Signal Output. This pad is ac-coupled and matched to 50 $\Omega$ .
3	Die Bottom	Die bottom must be connected to RF/ DC ground.

**Notes:**

1. Die thickness: 100 $\mu\text{m}$
2. Typical bond pad is 90\*90  $\mu\text{m}^2$
3. Bond pad metalization: Gold
4. Backside metalization: Gold
5. No connection required for unlabeled bond pads

**Maximum Ratings:**

1. Maximum input power: +30dBm
2. Operating temperature: -55°C to +120°C
3. Storage temperature: -65°C to +150°C

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