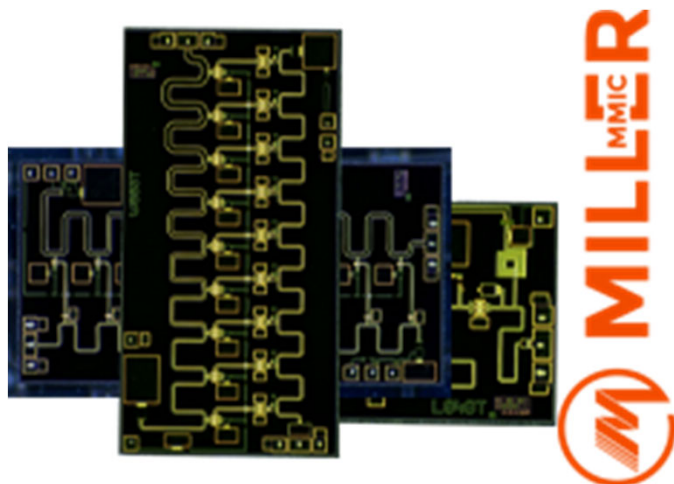


**Features**

- Ultra broadband multi-channel RF attenuator
- Configurable attenuation value by bonding
- Frequency Range: DC - 20GHz
- Attenuation Values: 0 / 0.5 / 1 / 1.5 / 2dB
- Power Handling: 27dBm
- 50Ω Input and Output Impedance
- Return Loss: 20dB
- Bare Die (QFN 3x3mm Available)
- RoHS & REACH Compliant

**Typical Applications**

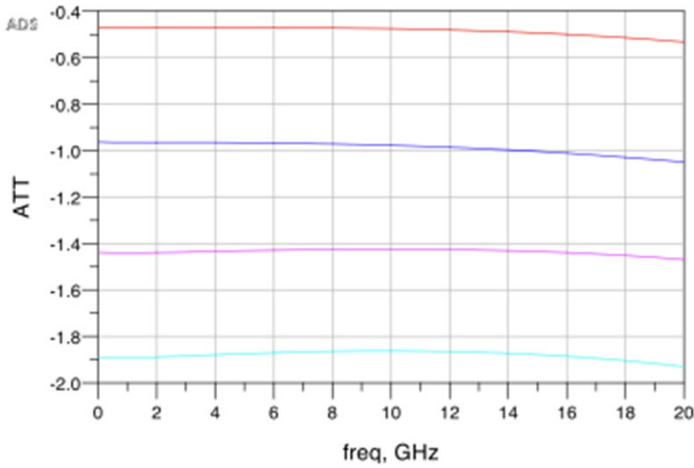
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- General Purpose



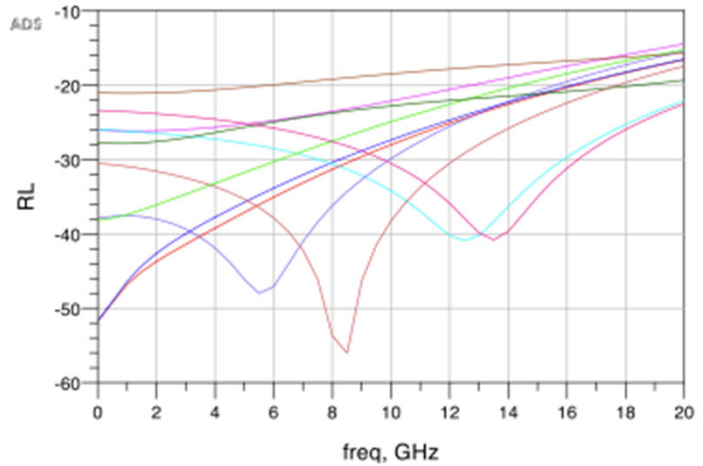
Part Number	Type	Frequency (GHz)	Attenuator (dB)	Power (dBm)	Return Loss (dB)
MFA1029	Multi-Channel Configurable Attenuation	DC-20	0	27	20
			0.25		
			0.5		
			1		



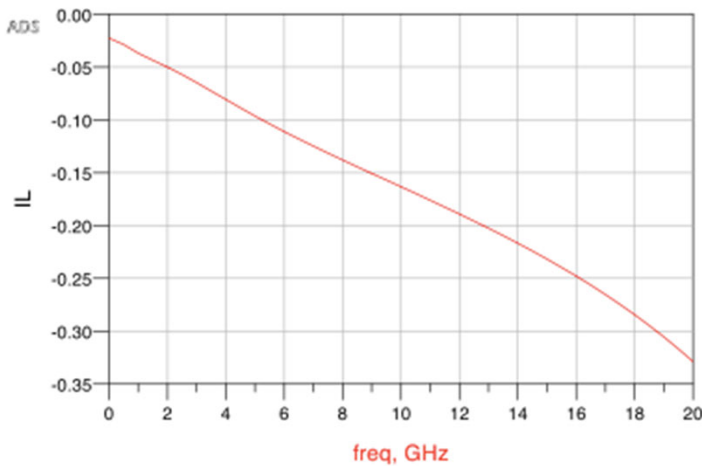
### Attenuation vs. Frequency



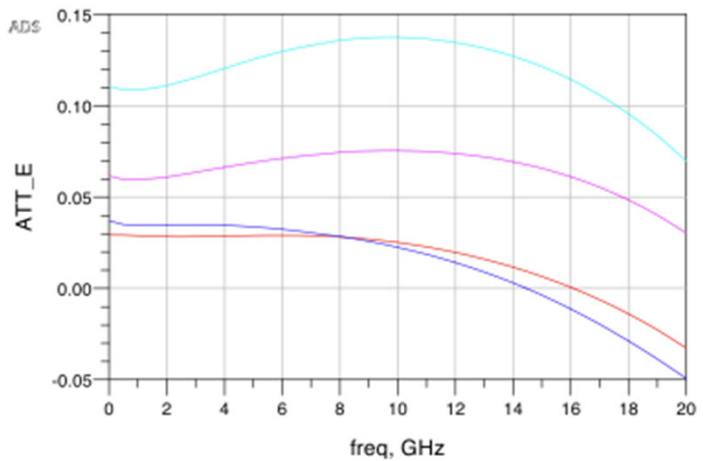
### Return Loss vs. Frequency



### Insertion Loss vs. Frequency



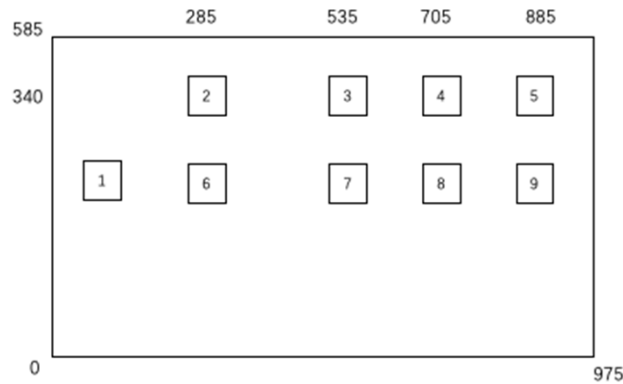
### Attenuation Error vs. Frequency





### Outline Drawing:

All Dimensions in  $\mu\text{m}$



Pad	Function	Description
1	RF IN	RF signal input terminal; DC blocking capacitor required.
5, 9	RF OUT	RF signal output terminal; DC blocking capacitor required.
2, 3, 4, 6, 7, 8	Att.	See Att. table.
Die Bottom	GND	Die bottom must be connected to RF/DC ground.

#### Notes:

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

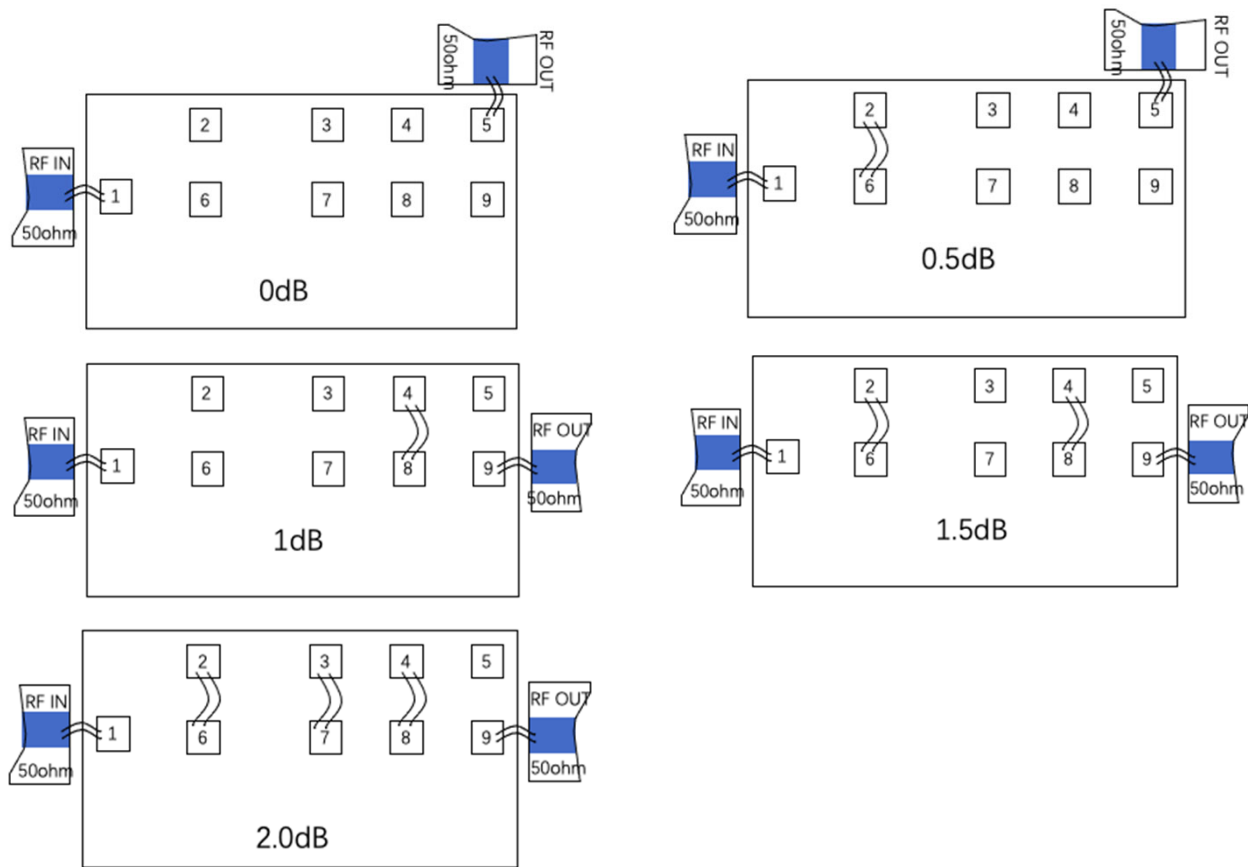
#### Maximum Ratings:

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



## Wire Bond Table

Value		Bonding Mode		
		Input Pad	Connecting pad	Output Pad
Att.	0	1	-	5
	0.5	1	2&6	5
	1.0	1	4&8	9
	1.5	1	2&6, 4&8	9
	2.0	1	2&6, 4&8, 3&7	9



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