

# **MFA1010**

## GaAs MMIC Single Channel Series **Fixed Attenuator DC-40GHz**

### **Features**

- Ultra broadband single channel attenuator •
- Frequency Range: DC 40GHz
- Attenuation 0, 1, 2...10, 15, 20, 30dB value
- 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 ٠
- Military & Space ٠
- **Telecom Infrastructure** •
- **General Purpose** •

Part Number	Туре	Frequency (GHz)	Attenuator (dB)	Power Handling (dBm)	Return Loss (dB)
MFA1001	Fixed Attenuator	DC-40	0	27	20
MFA1002	Fixed Attenuator	DC-40	1	27	20
MFA1003	Fixed Attenuator	DC-40	2	27	20
MFA1004	Fixed Attenuator	DC-40	3	27	20
MFA1005	Fixed Attenuator	DC-40	4	27	20
MFA1006	Fixed Attenuator	DC-40	5	27	20
MFA1007	Fixed Attenuator	DC-40	6	27	20
MFA1008	Fixed Attenuator	DC-40	7	27	20
MFA1009	Fixed Attenuator	DC-40	8	27	20
MFA1010	Fixed Attenuator	DC-40	9	27	20
MFA1011	Fixed Attenuator	DC-40	10	27	20
MFA1012	Fixed Attenuator	DC-40	15	27	20
MFA1013	Fixed Attenuator	DC-40	20	27	20
MFA1014	Fixed Attenuator	DC-40	30	27	20

Miller MMIC Inc.

**MFA101** 



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#### 0 •0 dB -2 -4 1dB -6 ■2dB -8 ■3dB -10 -12 •4dB Insertion Loss(dB) -14 ∙5dB -16 6dB -18 ∙8dB -20 -22 10dB -24 -15dB -26 20dB -28 -30 30dB -32 10 0 20 30 40 50 60 70 Frequency(GHz) Return Loss vs. Frequency @Att=0dB 0 •0 dB 1dB -10 ■2dB ■3dB -20 4dB In/output Return Loss (dB) ∙5dB -30 -6dB 8dB -40

Attenuation vs. Frequency @Att=0dB

10dB -15dB

20dB 30dB

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-50

-60

0

Sales: sales@millermmic.com Technical : support@millermmic.com

10

20

30

40

Frequency (GHz)

50

60

70



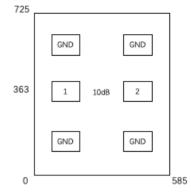
# MFA1010

### GaAs MMIC Single Channel Series Fixed Attenuator DC-40GHz

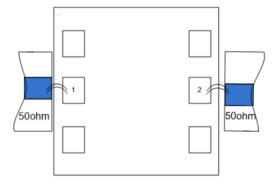
Outline Drawing:

All Dimensions in µm

Pad	Function	Description	
1	RF IN	RF signal input terminal; DC blocking capacitor required.	
2	RF OUT	RF signal output terminal; DC blocking capacitor required.	
Die bottom	GND	Die bottom must be connected to RF/DC ground.	



## **Assembly Drawing**



### Notes:

- 1. Die thickness: 100µm
- 2. Typical bond pad is 100\*100 µm<sup>2</sup>
- 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

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