

**Performance Features:**

- Frequency range: DC-50GHz
- Attenuation range: 0/1/2/3/4/5/6/7/8/9/10dB
- Fluctuation of insertion loss: 0.4dB
- Input/output voltage standing wave ratio: 1.4/1.4
- Chip size: 0.60mm×0.60mm×0.1mm

**Product Description:**

The CW-AT50 is a GaAs MMIC fixed attenuator with excellent performance. The chip covers the DC-50GHz band range, attenuation range is optional, plug-in loss fluctuation is less than 0.4dB, input-output voltage standing wave ratio is less than 1.4.

**Electrical parameters:** ( $T_A=25^{\circ}\text{C}$ )

Indicators		Minimum	Typical value	Maximum value	Units
Frequency range		DC-50			GHz
Amount of attenuation	0dB	0	0	0.5	dB
	1dB	0.8	1	1.3	dB
	2dB	2	2	2.4	dB
	3dB	3	3	3.4	dB
	4dB	4	4	4.4	dB
	5dB	5	5	5.4	dB
	6dB	6	6	6.4	dB
	7dB	7	7	7.4	dB
	8dB	8	8	8.4	dB
	9dB	9	9	9.4	dB
	10dB	10	10	10.3	dB
Enter the standing wave ratio		-	1.2	1.4	-
Output standing wave ratio		-	1.2	1.4	-

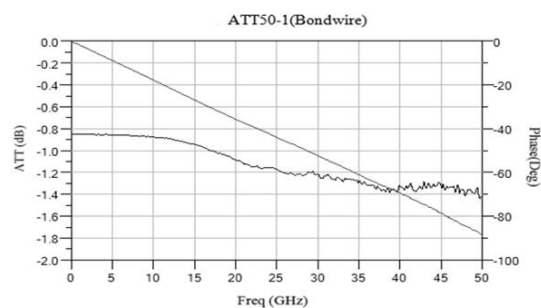
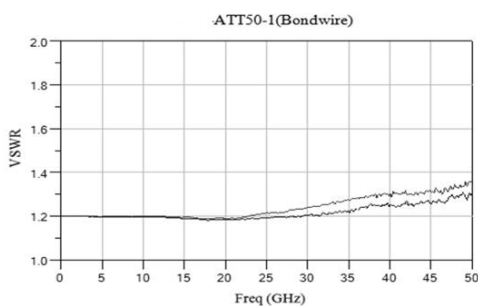
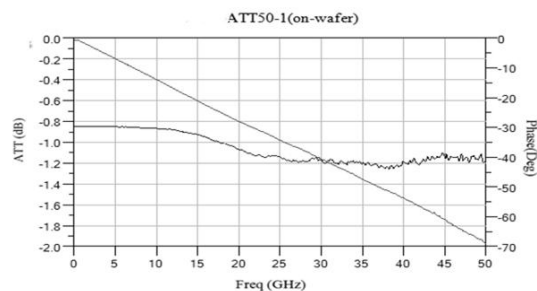
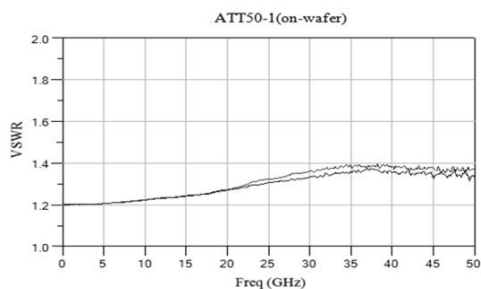
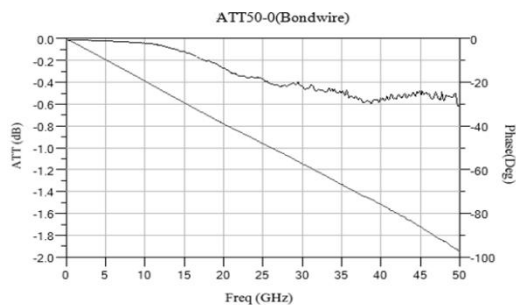
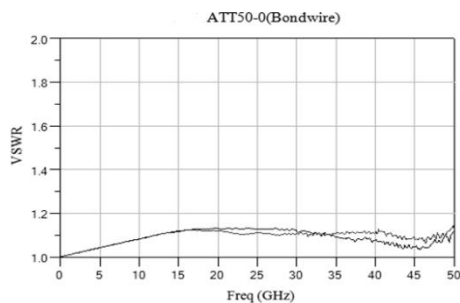
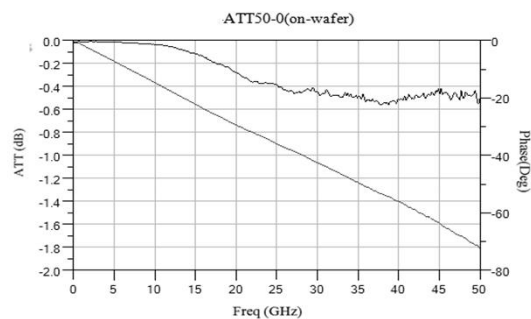
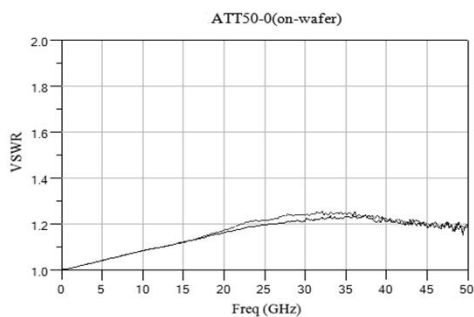
**Use limit parameters:** (Exceeding any of the above maximum limits risks permanent damage.)

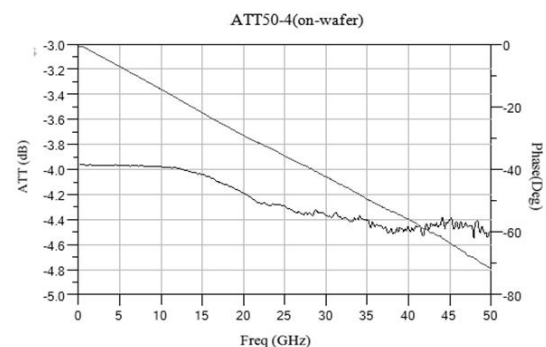
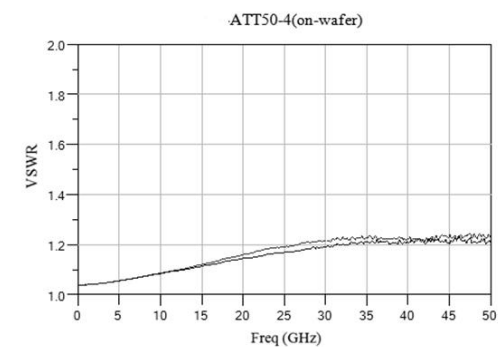
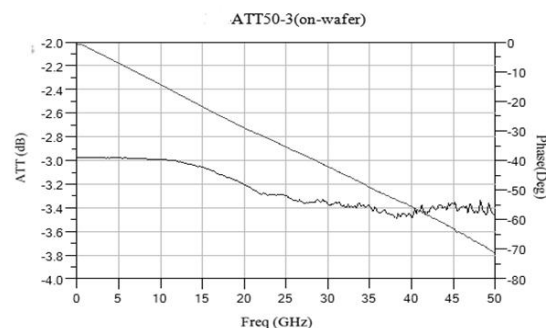
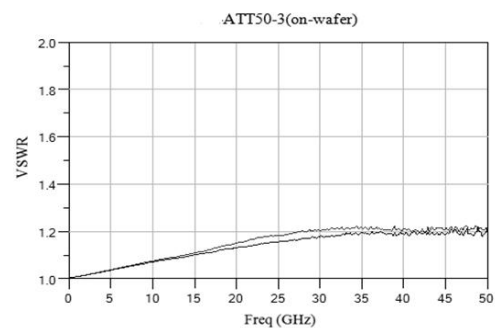
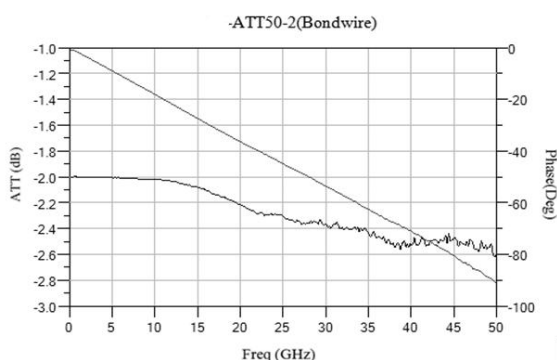
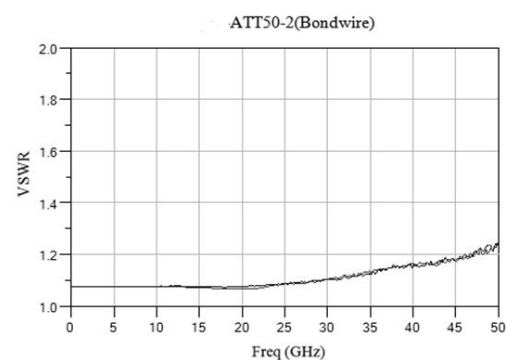
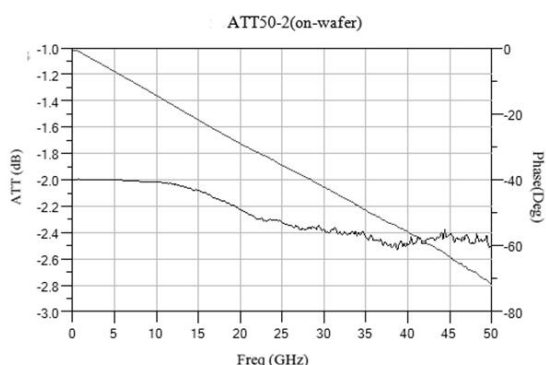
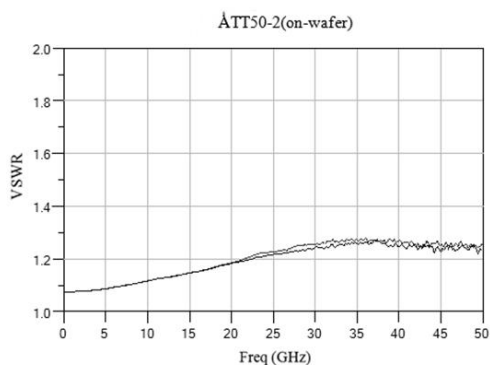
Maximum input power	27 dBm
Storage temperature	-65°C-150°C
Service temperature	-55°C-125°C

## Typical curve:

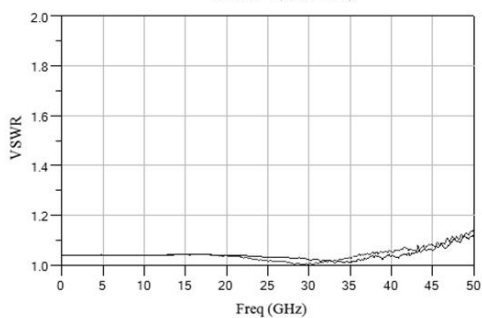
Input-output standing wave ratio

insertion loss

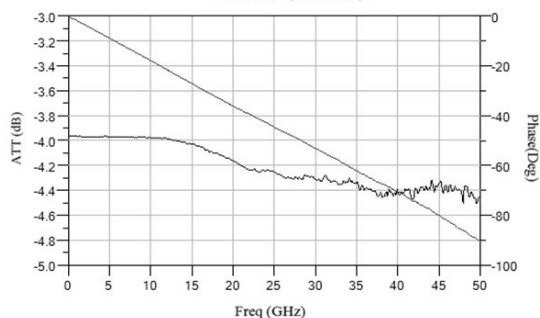




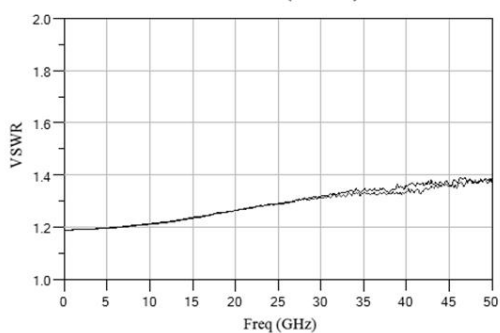
ATT50-4(Bondwire)



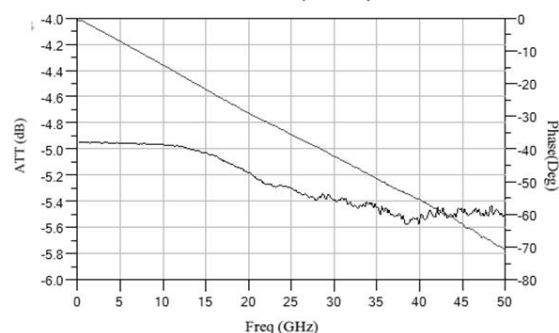
ATT50-4(Bondwire)



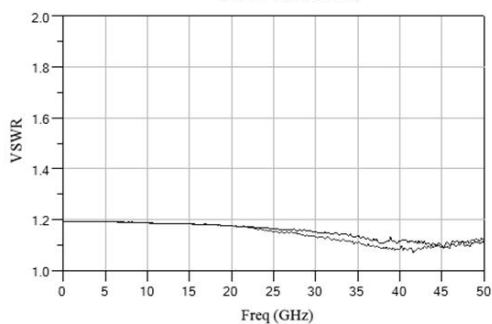
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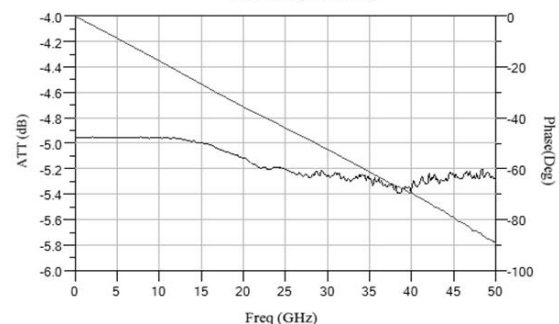
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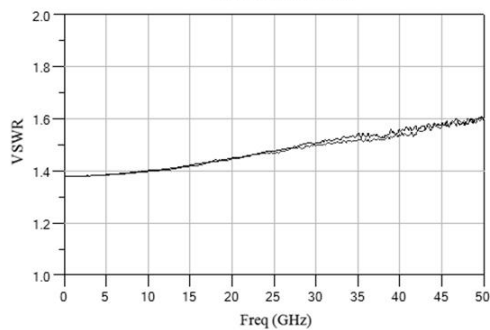
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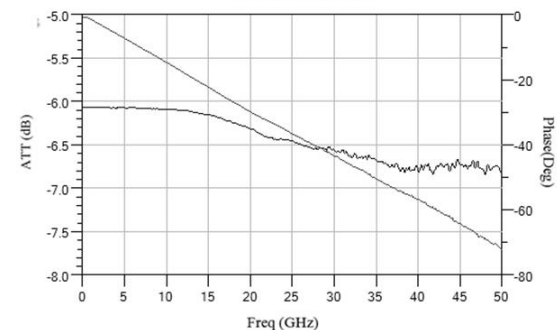
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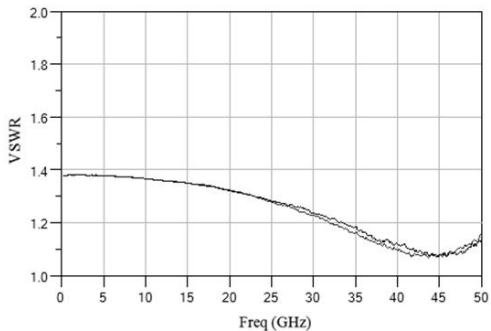
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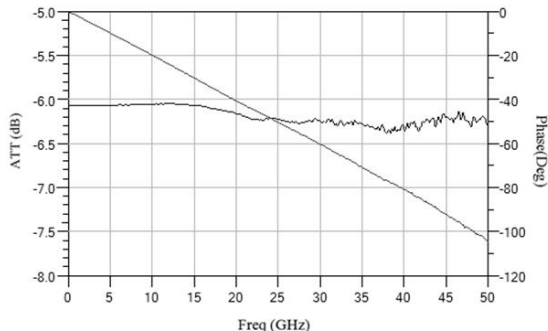
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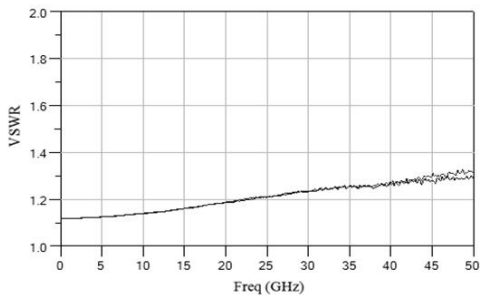
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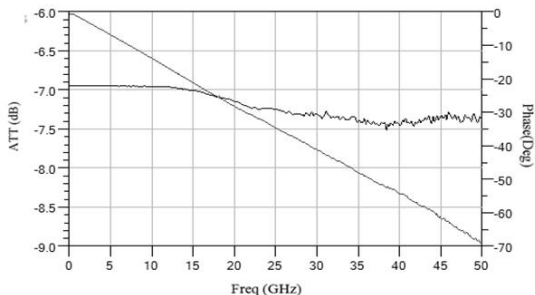
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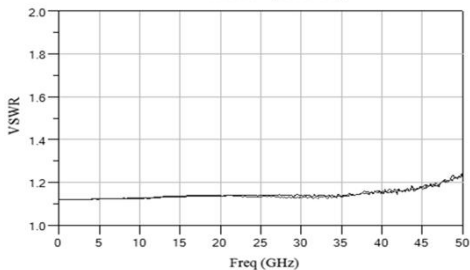
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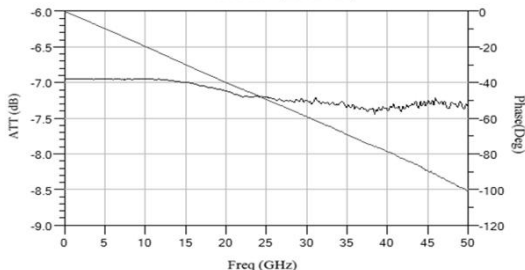
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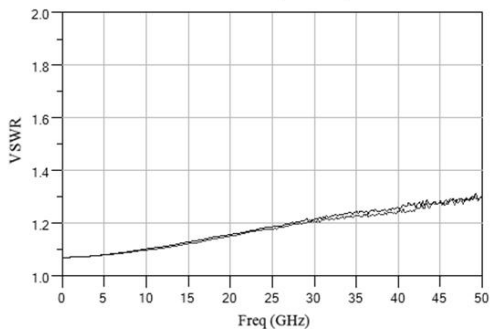
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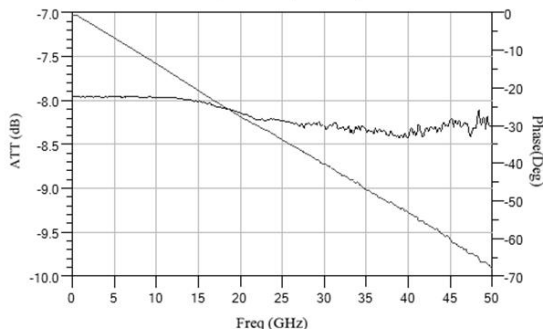
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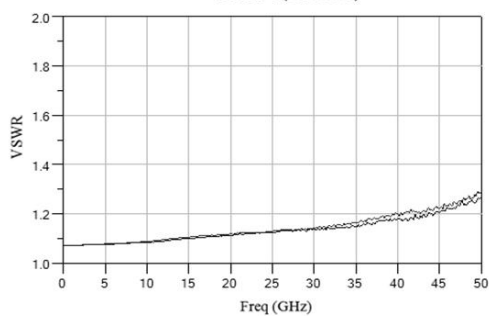
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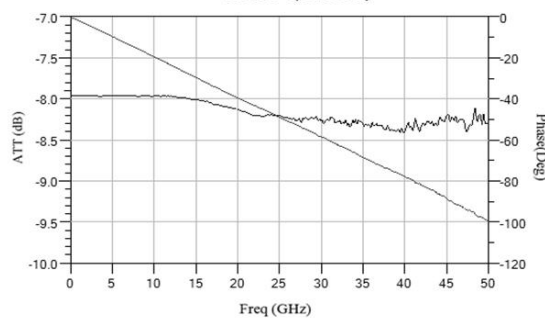
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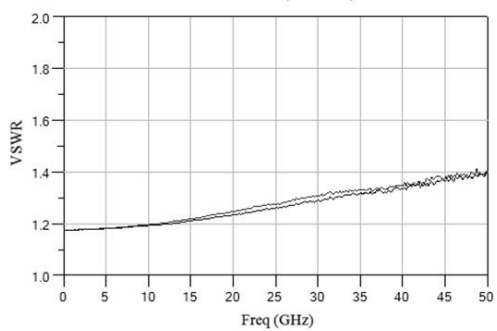
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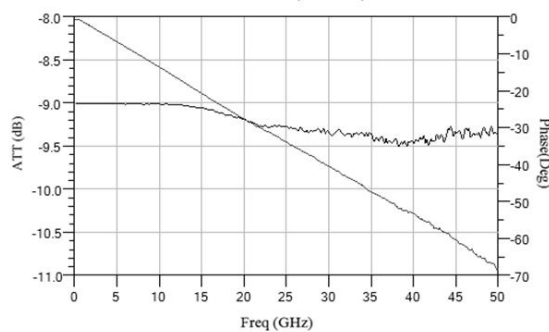
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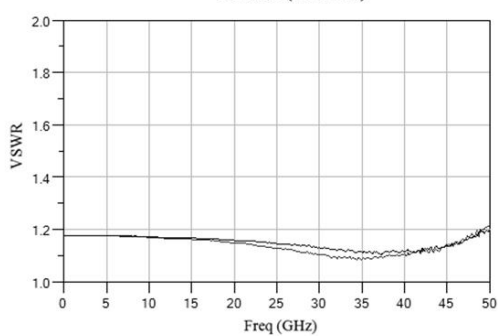
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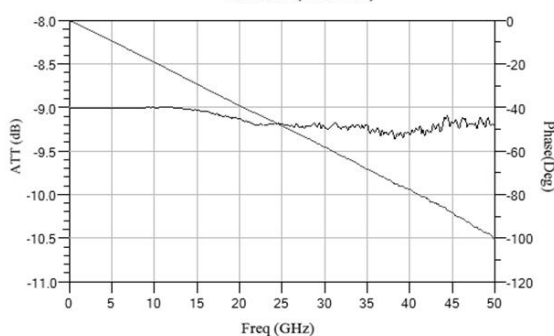
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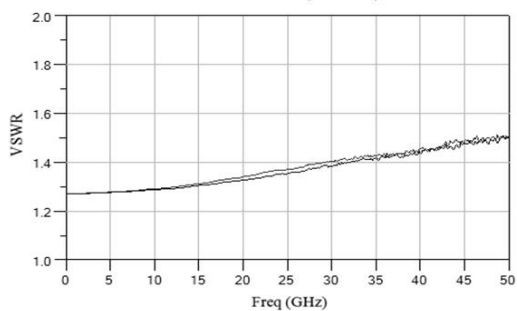
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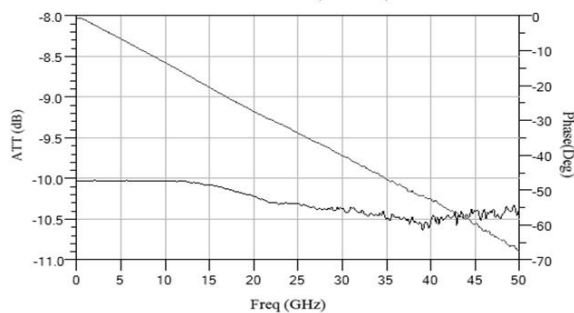
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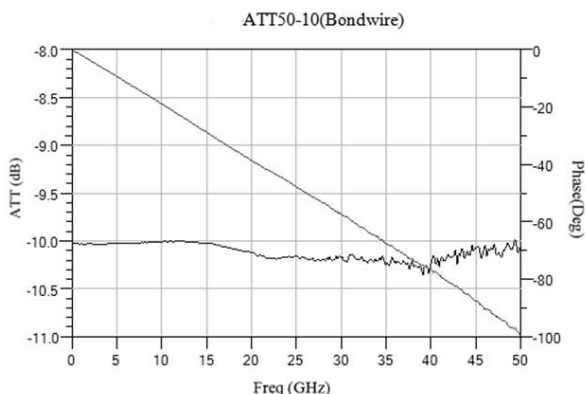
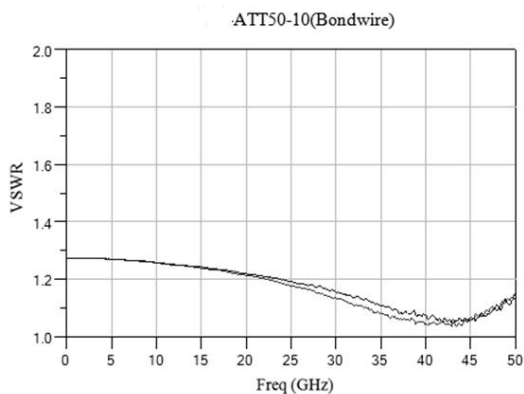


ATT50-10(on-wafer)

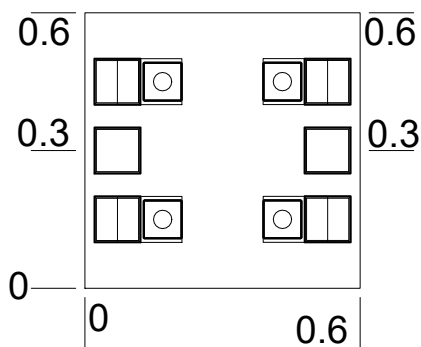


ATT50-10(on-wafer)

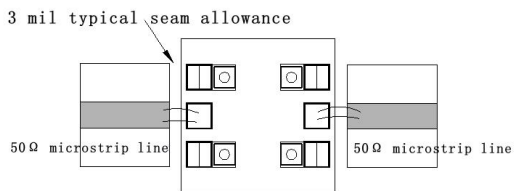




Size diagram: (unit mm)



Suggested assembly drawing:



**Instructions:**

**Storage:** The chip must be placed in a container with electrostatic protection and stored in a nitrogen environment.

**Cleaning treatment:** The bare chip must be operated and used in a purified environment. It is forbidden to use liquid cleaning agent to clean the chip.

**Electrostatic protection:** Strictly comply with the ESD protection requirements to avoid electrostatic damage to the components.

**General operation:** Use vacuum chuck or precision pointed tweezers to pick up the chip. Avoid touching the surface of the chip with tools or fingers during handling.

**Mounting operation:** The chip can be installed using AuSn solder eutectic welding or conductive adhesive bonding process. The mounting surface must be clean and flat.

**Bonding operation:** Input and output with 2 (recommended diameter of 25um gold wire) bonding wire, bonding wire length less than 250um is optimal. It is recommended to use the smallest possible ultrasonic energy. Bonding begins at the pressure point on the chip and ends at the package (or substrate).