

RF-Absorber HW-9000

GBA

Product Highlights

- Soft and resilient
- Thickness range: 0.5 – 5mm, tolerance in 10% of the thickness
- Thermally conductive and RF absorbing, two functions in one material
- Naturally tacky, PSA is not necessary
- Flame rating: UL94 V-0

Product application

- Communication equipment
- Automotive electronics
- Medical instrument
- Radar
- 5G antenna

Descriptions

The HW9000-series thermally conductive absorbers have dual functions of wave absorption and thermal conduction. They are composite materials made of polymer and various wave absorbing fillers and additives. The product can achieve low interface thermal resistance and absorb electromagnetic waves at low pressure and has good electrical insulation and environmental stability.

HW9000-series, like the use of thermal pads, is placed between the heat source/electromagnetic wave radiation source and the heat sink to conduct heat conduction while absorbing electromagnetic waves. This product is especially suitable for the application of optical transceiver in the telecommunication industry.

SPECIFICATIONS TABLE

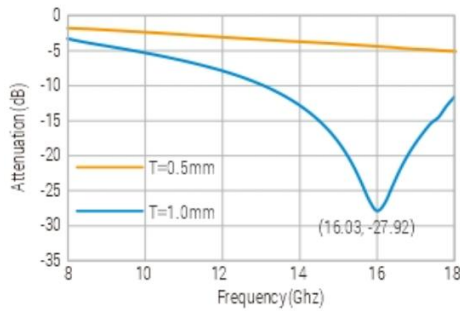
Parameters	Test Method	Units of Measure	HW9010	HW9010AD	HW9030	HW9040	HW9060
Color	–	–	Gray	Gray	Gray	Gray	Gray
Substrate	–	–	Silicone	Silicone	Silicone	Silicone	Silicone
Filler	–	–	Carbonyl Iron & Oxidized Aluminum				
Hardness	ASTM 2240	Shore OO	45+/-5	55	50+/-5	50+/-5	55+/-5
Density	ASTM D792	g/cm ³	4	4.2	3.6	4.2	3.8
Operating Temperature	ASTM D1329	°C	-45~+200	-45~+200	-45~+200	-45~+200	-45~+200
Volume Resistance	MIL-DTL-83528C	Ohm-cm	≥10 ⁹	≥10 ⁹	≥10 ⁹	≥10 ⁹	≥10 ⁹
Breakdown Voltage	ASTM D149	KV	4.5	4.5	4.5	4.5	4.5
Flammability	UL94	–	V-0	V-0	V-0	V-0	V-0
Thermal Conductivity	ASTM D5470	W/m·K	1.8	1.5	3.2	4	6.0±0.6
Thermal Tresistance vs Compression Pressure @20psi	°C-in ² /w		0.89	1.16	0.4	0.37	0.28

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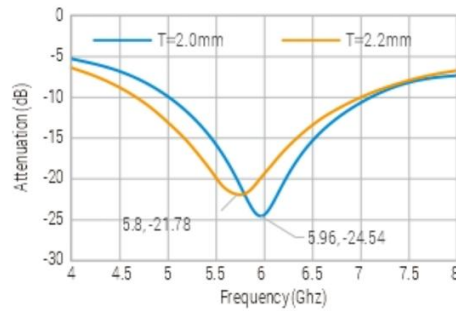
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Performance curves

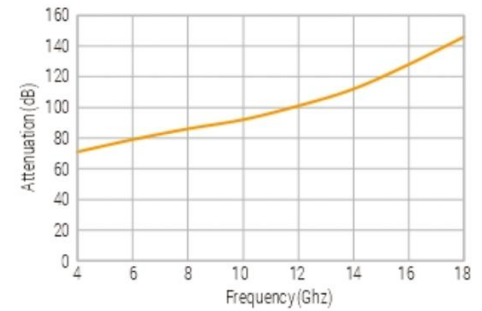
HW9010 Reflection Loss Curve



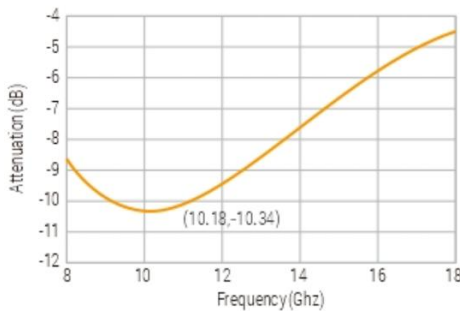
HW9010 Reflection Loss Curve



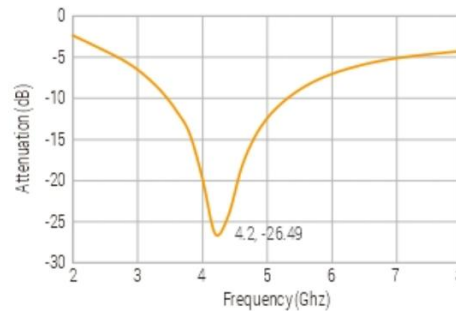
HW9010 Insertion Loss (DB/CM)(75~110GHz)



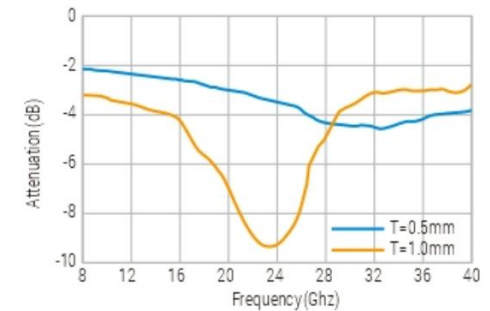
HW9010AD Reflection Loss Curve T=1mm



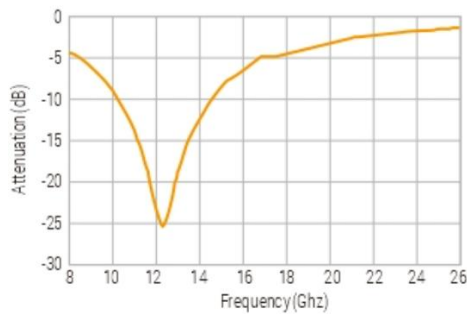
HW9010AD Reflection Loss Curve T=2.2mm



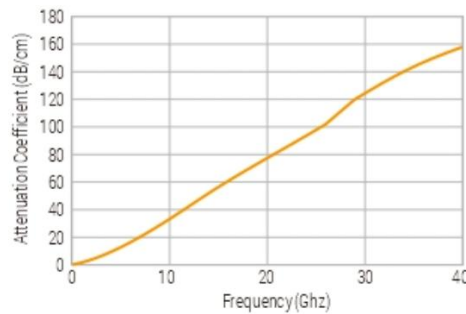
HW9060 Reflection Loss Curve T=1mm



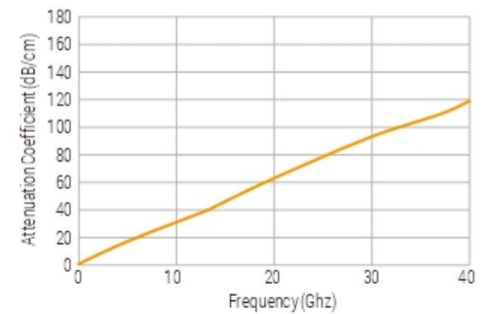
HW9030 Reflection Loss Curve T=1mm



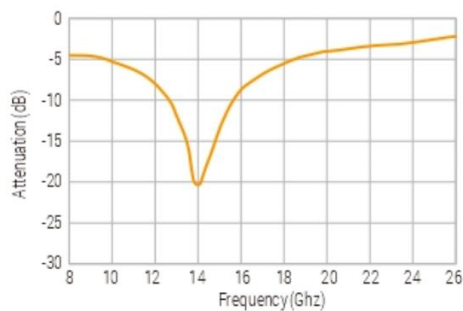
HW9030 Attenuation Coefficient (2~40GHz)



HW9060 Attenuation Coefficient (2~40GHz)



HW9040 Reflection Loss Curve T=1mm



HW9040 Attenuation Coefficient (2~40GHz)

