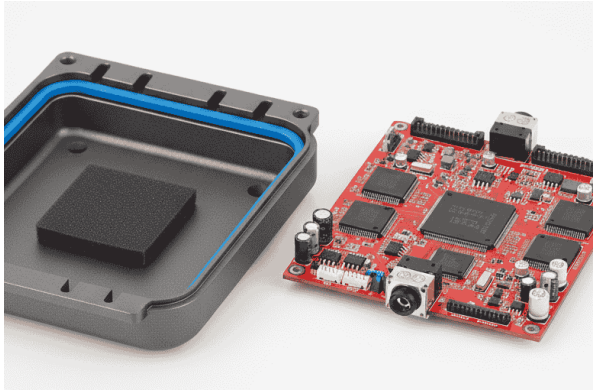


RF-Absorber FW-series

GBA

Product Highlights:

- Low density, high absorption, wide band,
- Single-layer absorbing sponge sheet,
- The insertion loss is realized for a specific frequency,
  and the insertion loss is gradual as the frequency changes.

Product application

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

Foam type wave absorbing materials use the polyurethane foam with open-cell structure as the base materials. Through processes, the material surface is impedance matched with the wave frequency. The optimized cell design enhances the absorber magnetic permeability and reduces the broadband reflection.
Foam absorbers are structurally divided into single-layer and multi-layer products. The main application is to apply around the antenna to provide isolation and reduce side lobe effects. Material can be die-cut to customized mechanical shape to reduce EMI in microwave cavity and can also be used in radomes and test rooms. After weather-resistant process, product can be used outdoors, as tent linings or other scenarios. The insertion loss (Frequency Loss) of a single-layer foam absorber refers to the attenuation of microwave energy when the absorber is inserted in the electromagnetic wave transmission path. During the test, the signal is sent from the transmit antenna and the response is measured at the receive antenna. First measurement is considered as a baseline reference without absorbing material. Then placing the test sample between the antennas for the second measurement for calculation and comparison. The standard insertion loss test conditions are: 45° incident angle, and the polarized electric field is perpendicular to the incident surface. This material design can effectively reduce the impact of reflected signals on the measurement.

SPECIFICATIONS TABLE

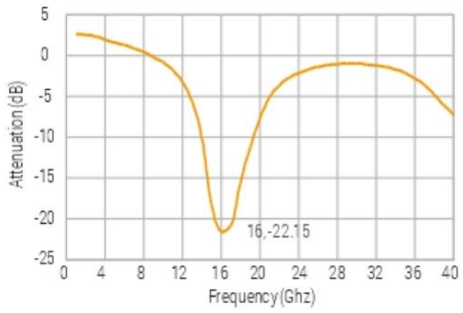
Material Part numbers	Thickness (mm)	Standard Size (mm)	Target Frequency (GHz) & Attenuation (dB)	Operating Temperature (°C)	Foam Structure	Color
FW1126	3.2	500	16.00,-22.15	-55~+120	Single Layer/Fine Cell	Black
FW1157	4	X	14.78,-24.15		Single Layer/Fine Cell	
FW1197	5	500	33.92,-35.08		Single Layer/Fine Cell	
FW1236	6		26.67,-31.35		Single Layer/Fine Cell	
FW1315	8		24.98,-38.90		Single Layer/Fine Cell	
FW1394	10		33.66,-30.04		Single Layer/Fine Cell	
FW1591	15		15.40,-23.24		Single Layer/Fine Cell	
FW2472	12		25.38,-32.32		Multi Layer/Fine Cell	
FW2787	20		38.45,-35.05		Multi Layer/Fine Cell	
FW2866	22		4.78,-32.73		Multi Layer/Fine Cell	
FW2102	28		13.5/36.5,-35.40		Multi Layer/Fine Cell	

RF-Absorber FW-series

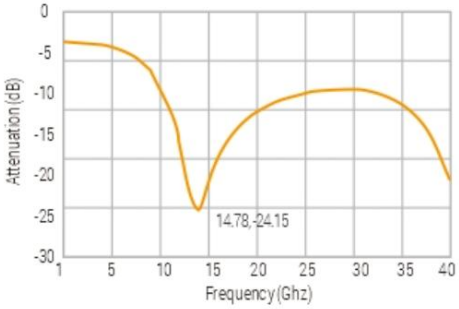
GBA

Performance curves

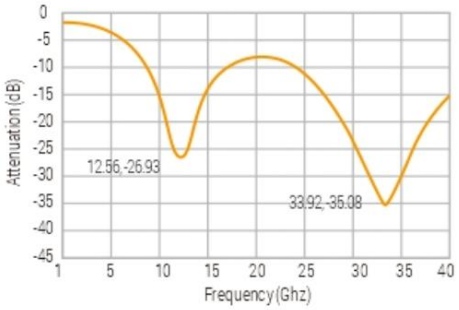
FW1126 Reflection Loss Curve



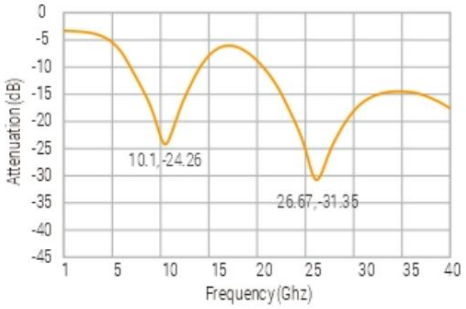
FW1157 Reflection Loss Curve



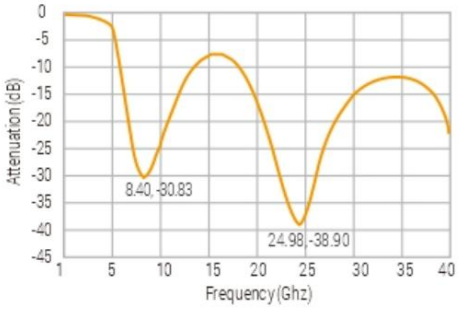
FW1197 Reflection Loss Curve



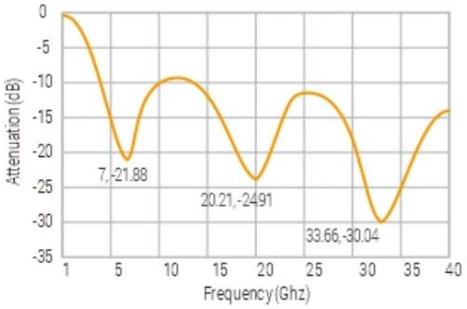
FW1236 Reflection Loss Curve



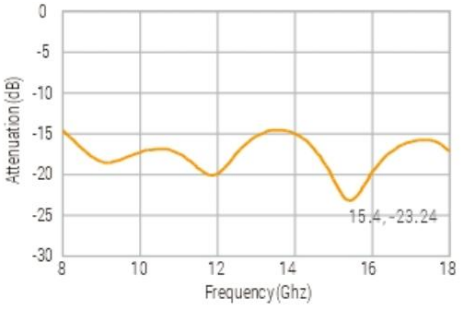
FW1315 Reflection Loss Curve



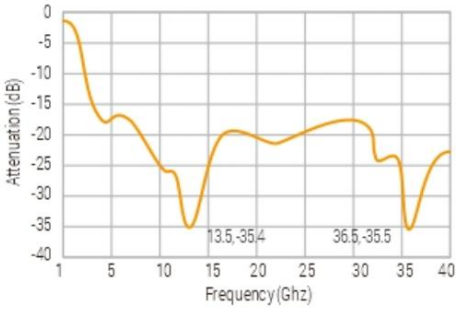
FW1394 Reflection Loss Curve



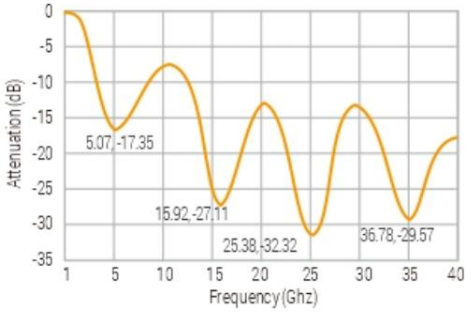
FW1591 Reflection Loss Curve



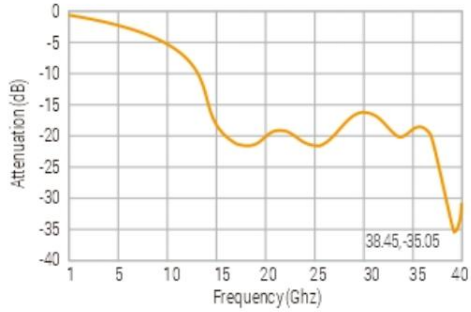
FW2102 Reflection Loss Curve



FW2472 Reflection Loss Curve



FW2787 Reflection Loss Curve



FW2866 Reflection Loss Curve