ECCOSORB® MF-PPS

Thermoplastic, Injection Moldable Absorber





HIGH TEMPERATURE, MAGNETICALLY LOADED ABSORBER

Rigid, magnetically loaded, injection moldable load absorber. Typically used as attenuators and terminations in microwave transmission lines such as for waveguide, coaxial or stripline applications. Other applications include phase shifters in phased array antennas and board level absorber covers that result in EMI reduction through combination of absorption and shielding. Available in two grades or loading levels: MF-PPS-120 and MF-PPS-124. These grades pass UL94 V0 requirements.

FEATURES AND BENEFITS

- Thermoplastic polymer amenable to injection molding processes
- Injection molding is ideal for complex shapes and high volume applications - results in lower part cost
- High service temperature of polymer is amenable to solder reflow processes
- Environmentally friendly and meets RoHs and REACH requirement
- Passes UL94 V0 testing
- Low outgassing - < 1.00% TML and <0.10% CVCM

MARKETS

- Telecom infrastructure and wireless networks
- Satellite communications
- Automotive radar
- Military electronics
- Industrial instrumentation
- Medical

TYPICAL PROPERTIES	ECCOSORB MF-PPS
Density (g/cc)	4.48-4.66
Tensile Strength (psi)	8,000
Hardness (Shore D)	92
Max Service Temperature (°C)	210
Surface Resistivity (Ohm/Square)	10^{11}
Water Absorption (%)	<0.01%
Thermal Conductivity (W/m-K)	1.2
Dielectric Breakdown (Volt/mil)	6.2

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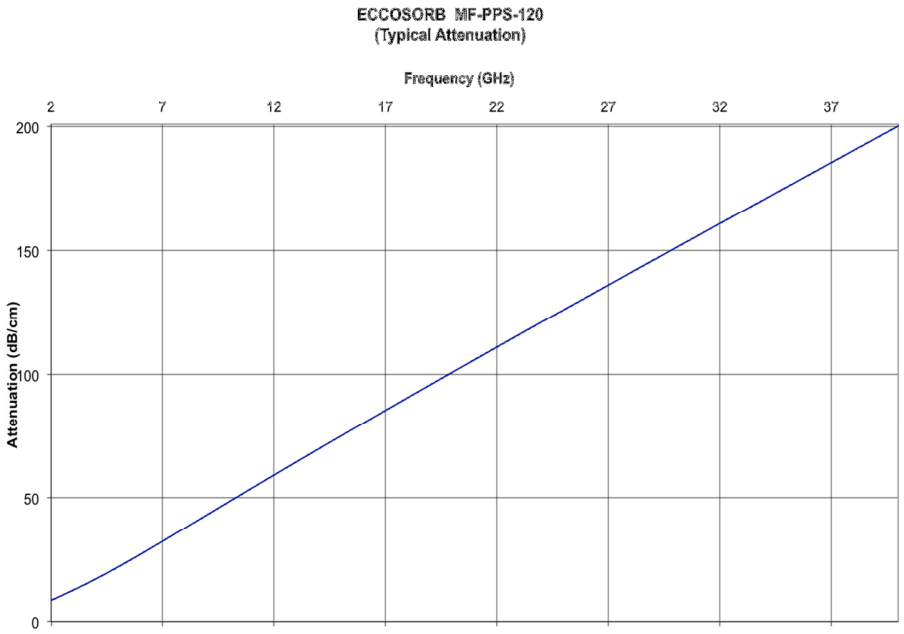
MATERIAL CHARACTERISTICS AND RELATED PRODUCTS

Rigid, magnetically loaded absorbers have cost advantage in high volume applications or for complex shapes that would otherwise be cost prohibitive as machined parts. Thermoplastic injection molded absorbers generally have low shrinkage (<0.3%). When part is complex in shape, lower MOQs can be economical to produce. DXF-drawing files are needed for optimization of mold design.

Eccosorb MF-PPS has equivalent magnetic and dielectric properties to comparably loaded thermoset absorbers in the Eccosorb MF, MF500F and MFS product lines. See graph below for attenuation properties of MF-PPS as a function of frequency.



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