

# RF-Absorber TW3000



## Product Highlights:

- **Thin Thickness:** Designed with a compact profile for space-saving applications.
- **Low Surface Density:** Lightweight construction ensures minimal impact on overall device weight.
- **High and Low Temperature Resistance:** Performs effectively across a wide temperature range, ensuring reliability in extreme conditions.
- **Excellent Absorbing Performance:** Highly efficient in absorbing electromagnetic waves and reducing interference.
- **Good Softness:** Flexible and easy to handle, making it suitable for various applications.
- **Strong Adhesive Performance:** Features robust adhesion for secure placement on various surfaces.
- **User-Friendly:** Easy to apply and integrate, offering convenience in usage.

## Product Applications:

- **Handheld Devices:** Ideal for portable electronics, enhancing performance and minimizing interference.
- **Computers:** Provides EMI shielding and noise reduction for stable operation.
- **Digital Cameras:** Ensures clear signal processing by absorbing electromagnetic interference.
- **LED & LCD Displays:** Reduces interference, improving display clarity and performance.
- **High-Resolution Desktops:** Protects sensitive components from electromagnetic disruption, ensuring optimal function.
- **GPS Navigators:** Enhances signal clarity and reduces external interference for reliable navigation.

## Product Descriptions:

The **TW3000 series** is a class of magnetic material designed to reduce electromagnetic interference (EMI) by utilizing a high-loss filler embedded in a resin. The material works by absorbing electromagnetic waves, converting them into thermal energy, and suppressing the multiple reflections of these waves. This helps create a cleaner electromagnetic environment, thereby ensuring the normal operation of electronic products.

## The use of TW3000 series of materials will consequently achieve the following:

- Noise suppression in electronic devices.
- Shielding and protection against interference in sensitive equipment.
- Enhancing electromagnetic compatibility (EMC) in various consumer electronics, industrial equipment, and communication devices.

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Key characteristics of the TW3000 series include:

1. **High-Loss Filler:** The material is infused with a filler that absorbs electromagnetic energy, converting it into heat. This reduces the impact of electromagnetic interference.
2. **Low-Frequency Operation with High Permeability:** It is particularly effective at low frequencies, where it exhibits high permeability, which allows it to efficiently absorb interference at those frequencies.
3. **Halogen-Free and Environmentally Friendly:** The product is designed to be halogen-free, making it safe for the environment and suitable for use in eco-conscious applications.
4. **EMI Shielding:** The material can be used in areas with noise or signal sources, where it can absorb electromagnetic waves or redirect flux in the transmission path, thereby reducing EMI (Electromagnetic Interference) and ensuring stable performance of electronic devices.

SPECIFICATIONS TABLE

Parameter	Test Method	Units of Measure	TW3005	TW3008	TW3015
Color	N/A	N/A	Gray	Gray	Gray
Substrate	N/A	N/A	Polyurethane	Polyurethane	Polyurethane
Filler	N/A	N/A	FeSiAl	FeSiAl	FeSiAl
Permeability $\mu'$	Sj20512-1995 @10MHz	N/A	50	120	150
Permeability $\mu''$		N/A	20	30	40
Hardness	ASTM 2240	Shore A	75	80	80
Density	ASTM D792	g/cm <sup>3</sup>	3	3.3	3.5
Volume Resistance	ASTM D257	ohm-cm	$\geq 10^6$	$\geq 10^6$	$\geq 10^6$
Flammability	UL94	N/A	V-0	V-0	V-0
Operating Temperature	ASTM D1329	°C	-40~+90	-40~+90	-40~+90

