

FINEMET®
EMC Components
[Catalog]



FM SHIELD™ MS-F / MS-FR Series
High Permeability, Thin and Flexible Magnetic Shielding Sheet

MS-F / MS-FR series are thin and flexible magnetic shielding sheets made of high permeability FINEMET® FT-3M tapes laminated with PET films.

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Materials Mag!c
Hitachi Metals

1. Features

1. FM SHIELD™ is a magnetic shielding sheet made of high permeability FINEMET® FT-3M ribbon laminated with PET film. The sheets are thin, light weight and flexible, and easy to handle. (Figure 1)
2. FM SHIELD™ have superior magnetic shielding effect especially in frequencies below several 100kHz. (Figure 2)
3. One layer can shield about 100μT. Multiple layers allow shielding strong magnetic field. (Figure 3, 4)
(Shielding effect can vary depending on shape, layers, shielding method, etc.)
4. Having small deterioration in shielding effect by bending, cutting and punching, FM SHIELD™ can be applied on curved surface and cut or punched in various shapes.
5. Long sheet type is suitable for large-scale magnetic shield such as shielding room.

2. Structure

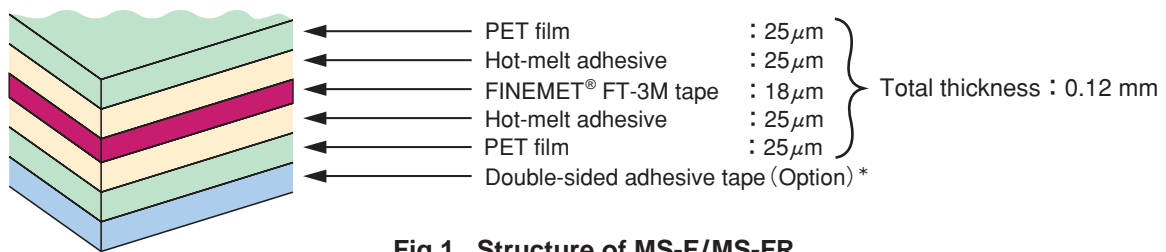


Fig.1 Structure of MS-F/MS-FR

3. Applications

- For suppression of magnetic noise generated from inductors in electronic devices, such as personal computer, mobile phone, DVC, DSC, etc.
- For magnetic shielding of buildings or houses close to power lines or power distribution installation.
- For magnetic shielding of equipments that easily affected by geomagnetic field or fluctuating magnetic field.

Examples



Cylindrical shielding box



Shielding box

4. Specifications

Type		Long sheet	Sheet
Dimensions	Length	100 m	610 mm
	Width	470 mm	460 mm
Product code		F1AH0535	F1AH0607
P/N		MS-FR 470-100M-T0	MS-F SD-460×610-T0
Thickness		0.12 mm	
Magnetic flux density, B ₈₀₀ (DC H=800A/m)		1.23 T	
Maximum permeability, μ _{max} (DC)		70,000	
Operating temperature range		-40~+80 °C	

*Double-sided adhesive tape is available for 610 mm × 460 mm sheet.



For safety and the proper usage, you are requested to approve our product specifications or to transact the approval sheet for product specifications before ordering. This catalog and its contents are subject to change without notice.

5. Shielding Effect

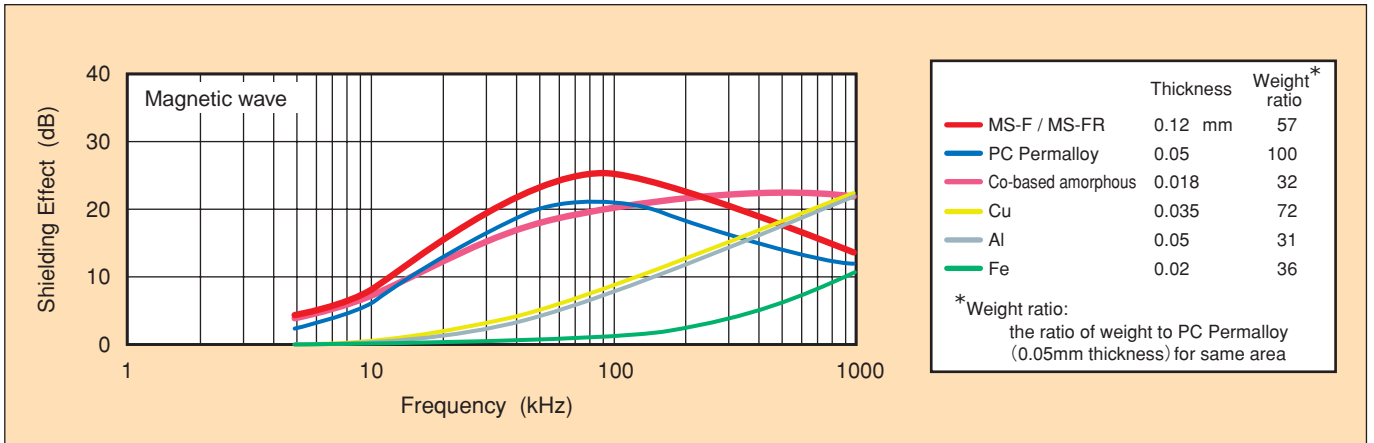


Fig.2 Shielding effect of magnetic wave vs. frequency
(Advantest method : 150×150mm sample)

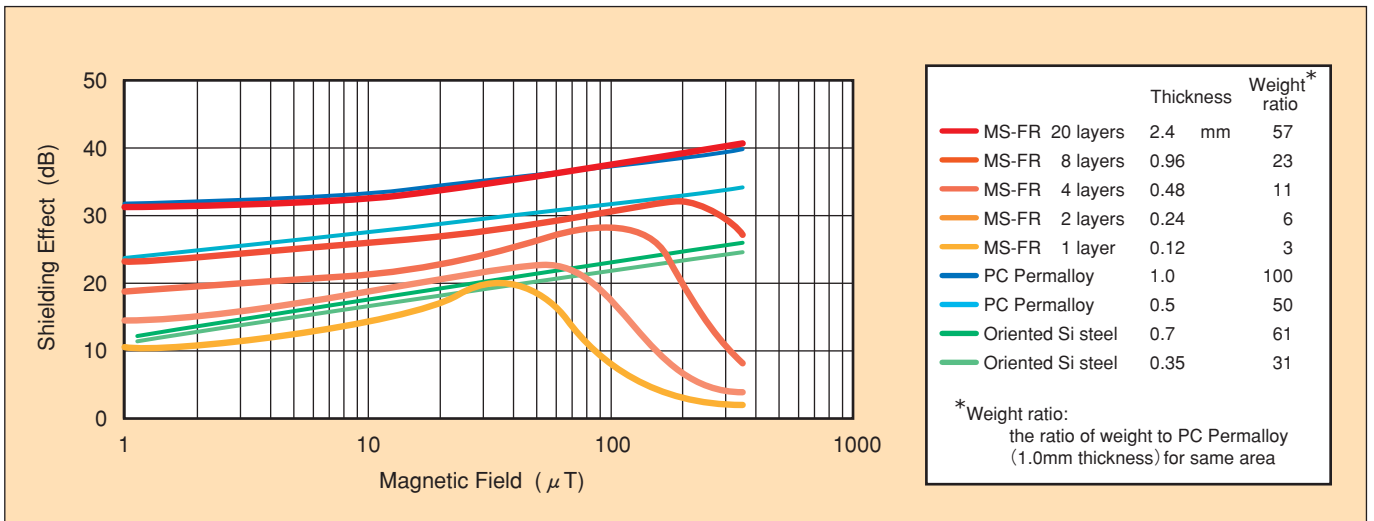


Fig. 3 Shielding effect of magnetic field at 50Hz
(ASTM method : 470×470×470mm shielding box)

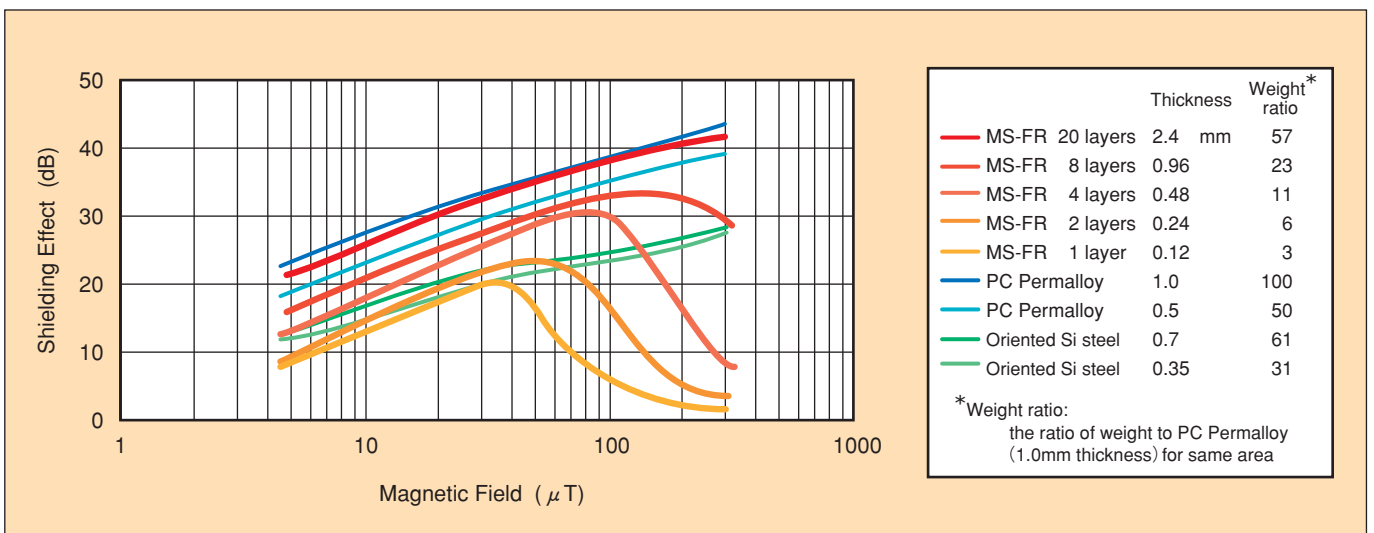


Fig. 4 Shielding effect of DC magnetic field
(ASTM method : 470×470×470mm shielding box)



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