Flexible, EMI noise suppression ferrite tiles

- Thin, sintered ferrite with higher loss and more flexibility
- Excellent performance in suppressing broadband noise
- Effective reduction in RFID-to-metal interference in systems at 13.56MHz
- Increased wireless charging performance at 6.78 MHz

### Specifications

<table>
<thead>
<tr>
<th>Part Number</th>
<th>FFSX-H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ferrite Size (mm)</td>
<td>50 x 60 tile*</td>
</tr>
<tr>
<td>PET Film Size (mm)</td>
<td>51.5 x 61.5</td>
</tr>
<tr>
<td>Ferrite Thickness (mm)</td>
<td>0.1, 0.2, 0.3</td>
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<tr>
<td>PSA Thickness (mm)</td>
<td>0.03</td>
</tr>
<tr>
<td>PET Film Thickness (mm)</td>
<td>0.08</td>
</tr>
<tr>
<td>Total Thickness (mm)</td>
<td>0.21, 0.31, 0.41</td>
</tr>
<tr>
<td>Operating Temperature (°C)</td>
<td>-40 ~ +85</td>
</tr>
</tbody>
</table>

*Custom size available upon request

### Properties

- **Permeability**
  - 13.56MHz
  - Permeability $\mu'$ and $\mu''$

### Application

**How to apply FFSX-H for RFID malfunction**

Contact-less IC card system

- Degraded communication due to interference from metal plate
- Communication performance is improved by adding FFSX-H

### Dimensions

- **Antenna**
  - Size (mm): 31 x 41 (inner diameter)
  - Number of turns: 3
  - Gap between antennas: 3 mm
  - Gap to metal plate: 1 mm

- **Magnetic Specimen**
  - Size (mm): 50 x 60
  - Number of turns: 0 mm (contact)
  - Thickness (mm): FFS-X-H: 0.3mm, MG-09A: 0.5mm

### Test Specification

- Network Analyzer: Advantest R37548

### Notes

- All statements, specifications, properties, technical information, and recommendations herein are based on tests; however, the accuracy and completeness are not guaranteed and are subject to change without notice due to product improvement and specification change. This statement is made in lieu of all warranties, expressed or implied, including the implied warranties of marketability, and fitness for purpose. KITAGAWA INDUSTRIES America, Inc. obligation under this warranty shall be limited to replacement of product that proves to be defective. Prior to use, the user shall determine the suitability of the product for its intended use, and the user assumes all risk and liability whatsoever in connection therewith. KITAGAWA INDUSTRIES America, Inc. shall have no liability for any injury, loss, or damage arising out of the use of or the inability to use the products. No statement or recommendation contained herein shall have any force or effect unless in an agreement signed by officers of seller and manufacturer.

- Volume resistivity stated on our EMI absorber flyer is meant for noise control parameters, where the absorber is considered a conductor, but not for insulation performance. Care should be taken when using absorbers. KITAGAWA INDUSTRIES America, Inc. makes no guarantees as to electrical resistivity values and accepts no liability due to short circuits where EMI absorbers are used directly on a PC Board or areas near high voltage such as for power. The products are designed for EMI noise reduction for electronics. This is not recommended for applications involving human life or extremely high accuracy. Prior to using the products in production, please verify their performance or adhesive strength of PSA for long term use. Avoid applying any external stress such as bending or high amounts of tension. Note when the absorber products are cut, bent, or pulled, there may be a possibility of creating cracks. For storage, keep products in a cool, dry, well-ventilated area at room temperature and avoid high temperatures, humidity, and direct sunlight.

- Please contact the sales department at KITAGAWA INDUSTRIES America, Inc. for the use of our products prior to selecting the parts for your application.

Please request for detailed product specification data prior to purchase.