

# Noise Suppression Sheets Flexield

Flexield® is an absorptive electromagnetic shielding material consisting of magnetic material and resin. It suppresses noise radiated from electronic equipment over a wide range of frequencies, offers flexibility in fabrication and delivers particularly excellent performance in high frequency ranges. Flexield® is the ideal sheet-type noise reduction product for mobile devices including notebook PCs, digital cameras and cell phones.

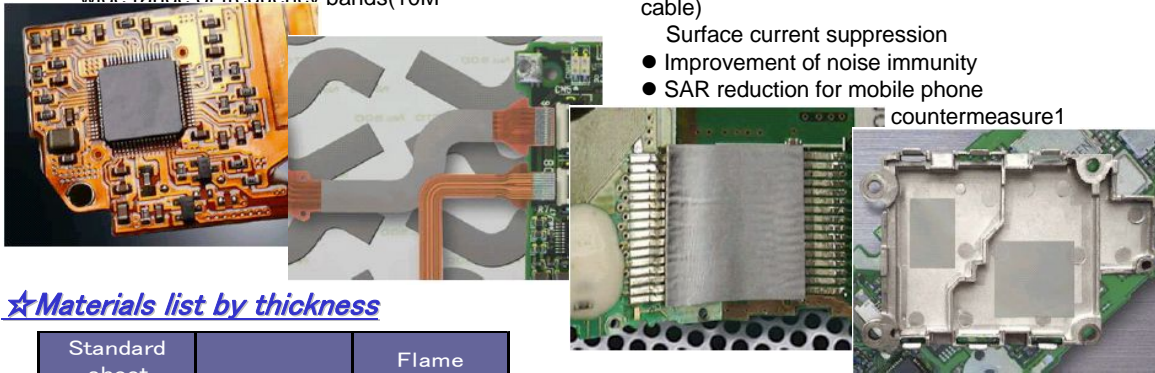
**\* All Product Conforming to RoHS Directive**

### ★Features

- They are flexible (Will not crack).
- They are suited for thin and compact devices.
- Available in a wide range of dimensions and shapes.
- The products in the line-up support a wide range of frequency bands (10M-

### ★Applications 1

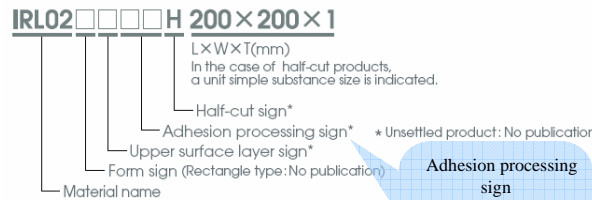
- Electromagnetic noise reduction for electric equipment (especially for mobile equipment)
  - Internal EMI, resonance reduction (mounting inside a shielded box)
    - RF-block
    - Amplifier
  - Radiated noise reduction (Circuit, IC, flat cable)
  - Surface current suppression
- Improvement of noise immunity
- SAR reduction for mobile phone



### ★Materials list by thickness

Standard sheet thickness (mm)	Halogen-free	Flame retardant UL94V-0
0.05	IRL02	
0.1	IRL05	IRJ04
0.25	IRL04	IRJ04
0.5	IRL04	IRJ04
1.0	IRL02	
2.0	IRL02	

### ★Method of naming the products



#### Adhesion processing sign

sign	Thickness
A	0.17mm
AB	0.03mm
AT	0.01mm

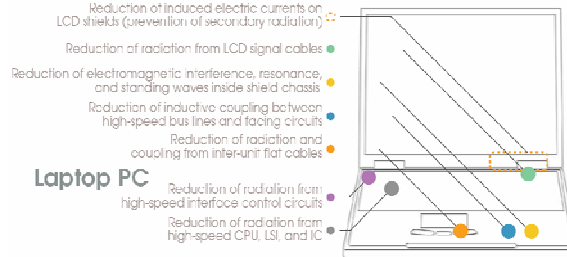
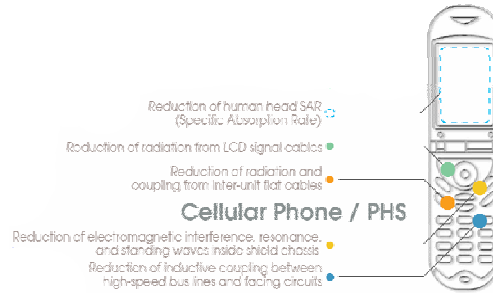
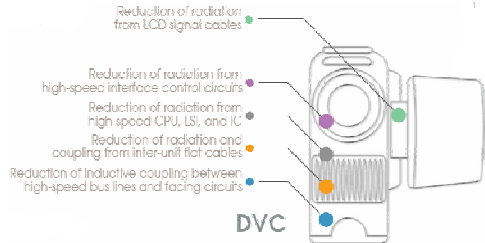
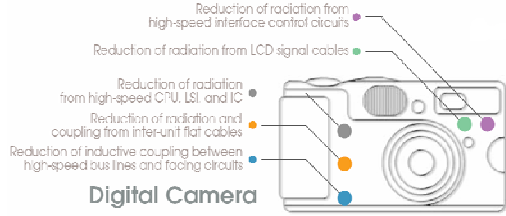
### ★Specifications

	IRL02	IRL04	IRL05	IRJ04
Recommended frequency range	100MHz~10GHz	50MHz~10GHz	10MHz~10GHz	50MHz~10GHz
Operating temperature range (°C)	-40~+85	-40~+85	-40~+85	-40~+85
Initial permeability μi [at 10MHz]	≥20	≥30	≥50	≥35
Resistivity(Ω/□) min.	≥1M	≥10K	≥1G(The magnetic layer/10 <sub>μm</sub> )	≥1M
Environment	Product Conforming to RoHS Directive Halogen-free			Product Conforming to RoHS Directive
Flame retardant	-			UL94V-0
Standard sheet dimensions (mm)	300X200	200X200	300X200	300X200
Standard sheet thickness (mm)	0.05	1, 2	0.25, 0.5	0.1, 0.25, 0.5

- All specifications are subject to change without notice.
- It may not be allowed to export these absorbers due to Export Control regulations.

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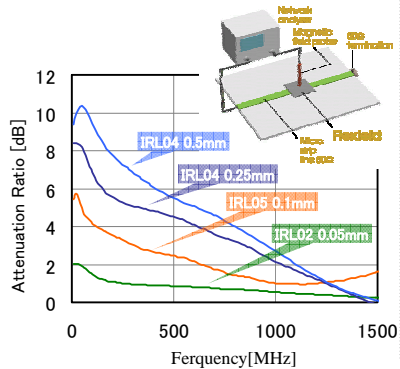
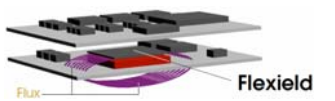
★Applications 2



★Basic characteristics

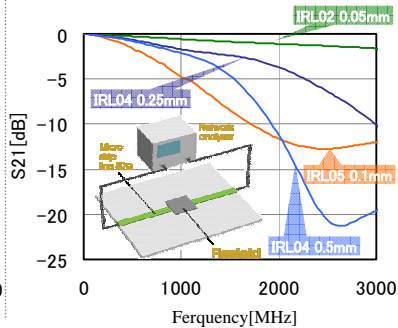
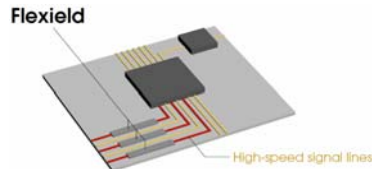
The decoupling effect

Reduces the opposite line of high-frequency magnetic-field elements occurring due to signal lines and Ics inside devices, and reduces inductive coupling of cohesive units



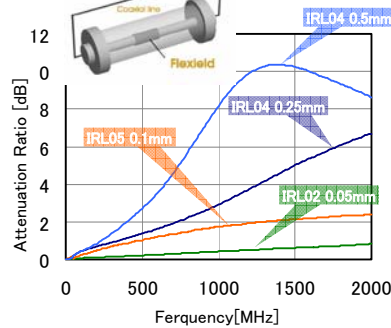
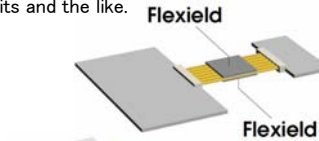
The filter effect

Reduces the effects of high-frequency elements by adding impedance to signal lines



Common-mode electrical current reduction effect

Reduces the common-mode electrical current elements superposed in the flexible cables connecting high-speed circuits and the like.



● Attenuation Ratio [dB] = S21 [dB] without Flexield - S21 [dB] with Flexield

Product information HP <http://www.tdk.co.jp/absorber/>  
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