TDK

Noise Suppression Sheets/Magnetic Sheets/ Radio Wave Absorbers Flexield

Conformity to RoHS Directive

FOR RFID MAGNETIC SHEETS IRL, IRJ, IFL, IBF MATERIALS

TDK's Flexield is a highly flexible and shock resistant soft magnetic sheet material consisting of magnetic material and resin.
It is highly effective when used in reader/writers or attached to tags and metal components used in emerging RFID systems based on the 13.56MHz band. With an extensive lineup of products that deliver excellent permeability, Flexield allows designers to match impedance with ease and delivers excellent magnetic convergence.

FEATURES

- They are flexible(not crack).
- They are suited for thin and compact devices.
- Available in a wide range of dimensions and shapes.
- Conforming to RoHS Directive.

APPLICATIONS

- For improving reception performance in RFID reader/writers.
- Integrate IC cards with metal.
- Integrate IC tags with metal.
- Improved antenna reception sensitivity.

PRODUCT IDENTIFICATIONS

IRLG4	AB	H	20	x	10	x	0.25
(1)	(2)	(3)	(4)		(5)		(6)

(1) Material name
(2) Double-sided tape symbol
No symbol: no double-sided tape used
A: double-sided tape (t=0.17)
AB: double-sided tape (t=0.03)
AT: double-sided tape (t=0.01)
(3) Product process symbol
(4) Length(20: 20mm)
(5) Width(10: 10mm)
(6) Thickness(0.25: 0.25mm)

SPECIFICATIONS

STANDARD TYPE

Type(Features/Application)	General		Thick		Unflammable		
Material name	IRLG4		IRL02		IRJ04		
Operating temperature range (°C)	–40 to +85		–40 to +85		–40 to +85		
Initial permeability [at 1MHz]typ.	40		25		40		
Resistivity(Ω/square) min.	10k		1M		1M		
Thermal conductivity (W/m • k)	1.5		1.4		1.5		
Standard sheet dimensions (mm)	300×200		200×200		300×200		
Standard sheet thickness (mm)	0.25	0.5	1	2	0.1	0.25	0.5
Standard sheet weight (g)	53	105	128	256	22	54	108
Density(g/cm^3)	3.5		3.2		3.6		
Flame retardant	—		—		UL94V-0		
Environment	Conformity to RoHS Directive/ Halogen-free		Conformity to RoHS Directive/ Halogen-free		Conformity to RoHS Directive		

THIN TYPE

Type(Features/Application)	Low dissipation	
Material name	IFL04	
Operating temperature range (°C)	–40 to +85	
Initial permeability [at 1MHz]typ.	45	
Resistivity(Ω/square) min.	10k	
Thermal conductivity (W/m • k)	1.5	
Standard sheet dimensions (mm)	300×200	
Standard sheet thickness (mm)	0.05	0.1
Standard sheet weight (g)	9	19
Density(g/cm^3)	3.1	
Flame retardant	—	
Environment	Conformity to RoHS Directive / Halogen-free	

HIGH PERFORMANCE TYPE *NEW*

Type(Features/Application)	High permeability/ Low dissipation	
Material name	IBF10	
Operating temperature range (°C)	–40 to +85	
Initial permeability [at 1MHz]typ.	100	
Resistivity(Ω/square) min.	1G*	
Thermal conductivity (W/m • k)	—	
Standard sheet dimensions (mm)	100×100	
Standard sheet thickness (mm)	0.15	0.26**
Standard sheet weight (g)	6	10**
Density(g/cm^3)	3.7**	
Flame retardant	—	
Environment	Conformity to RoHS Directive	

* Surface film layer value
** Includes surface film and adhesive layers

- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.