

Magnetic Sheets for RFID Flexield

Magnetic suppression sheet

IRL/IRJ/IFL series

Ferrite plate

IBF series

Issue date: July 2010

All specifications are subject to change without notice.

[•] 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.



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

IRLG5	AB	Н	20	Х	10	Х	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 MAGNETIC SUPPRESSION SHEET

Type	High performance		Flame retardant		Thield to	Thick type		Thin type		Thin type	
(Features/Application)	підп ре	High performance		THICK LY	Thick type		High performance		High permeability		
Material name	IRLG5		IRJ04		IRL02	IRL02 IF		IFL04		IFL12	
Operating temperature range (°C)	-40 to -	+85	-40 to +85		-40 to -	-40 to +85		-40 to +85		-40 to +85	
Initial permeability µ' typ.	50		40		25	25		45		125	
[at 13.56MHz] μ" typ.	0.9		1.0			0.4	0.4 1.3		50		
Resistivity(Ω /square) min.	10K		1M		1M	1M		10K		100K	
Thermal conductivity (W/m • K)	1.5		1.5		1.4	1.4		1.5		1.5	
Standard sheet dimensions (mm)	300×20	0	300×200		200×20	200×200		300×200		300×200	
Standard sheet thickness (mm)	0.25	0.5	0.1	0.25	0.5	1	2	0.05	0.1	0.05	0.1
Standard sheet weight (g)	54	108	22	54	108	130	260	9	19	9	19
Standard adhesive tape layer	0.03	0.03	0.01	0.03	0.03	0.17	0.17	0.01	0.01	0.01	0.01
thickness (mm)	0.03	0.03	0.01	0.03	0.03	0.17	0.17	0.01	0.01	0.01	0.01
Compatible with rolls	_		<u> </u>		_		✓		✓		
Density (g/cm ³)	3.6		3.6		3.2		3.1		3.1		
Flame retardant	_		UL94V-0		_	_		_		_	
Environment	RoHS of Haloge	directive n-free	RoHS directive		RoHS directive Halogen-free			RoHS directive Halogen-free		RoHS directive Halogen-free	

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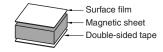
FERRITE PLATE

Type	High perr	neability	High permeability		
(Features/Application)	Low dissi	pation	High suppression		
Material name	IBF10		IBF20		
Operating temperature range (°C)	-40 to +8	5	-40 to +85		
Initial permeability*1 µ' typ.	105		210		
[at 13.56MHz] µ" typ.	4 70				
Resistivity(Ω/square) min.*2	1G		1G		
Standard sheet dimensions (mm)	115×115		115×115		
Standard sheet thickness (mm)*3	0.16	0.24	0.16	0.24	
Standard sheet weight (g)	7.9	13.3	7.9	13.3	
Environment	RoHS dir	ective	RoHS directive		

^{*1} Initial permeability is the value from the magnetic layer.

 $^{^{\}ast 3}$ Thickness and weight include the surface film and double-sided tape.

Standard sheet thickr	D	imensions in mm		
Туре	IBF10		IBF20	
Surface film	0.03	0.03	0.03	0.03
Magnetic sheet	0.10	0.18	0.10	0.18
Double-sided tape	0.03	0.03	0.03	0.03



^{*2} Surface resistivity is the value from the surface of the PET layer.

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