

4.High Magnetic Permeability Cores for Pulse Transformer

After suitable heat treatment has been done, cobalt base amorphous material shows excellent magnetic properties. TOSHIBA MATERIALS has developed new high permeability core 'FS Series' with this material.

FS series maintain high initial permeability μ_i especially at the high frequency zone, and are suitable for Pulse Transformers, Noise Filter and Cores for Sensors. High permeability enables electronic parts to be smaller and have higher performance.

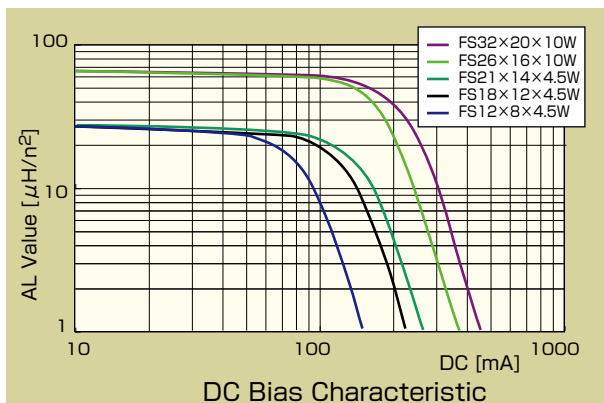
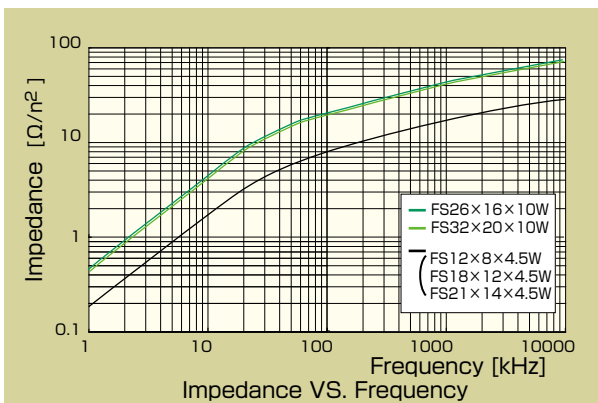
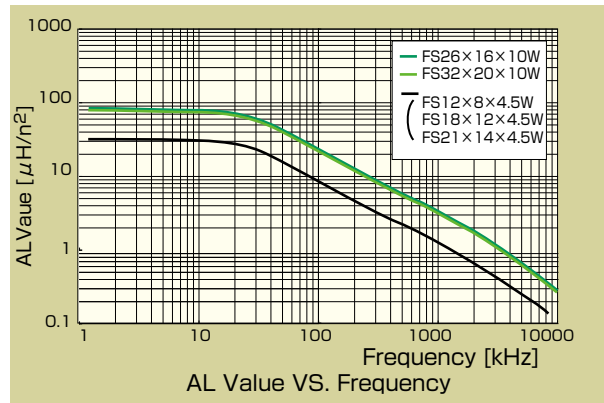
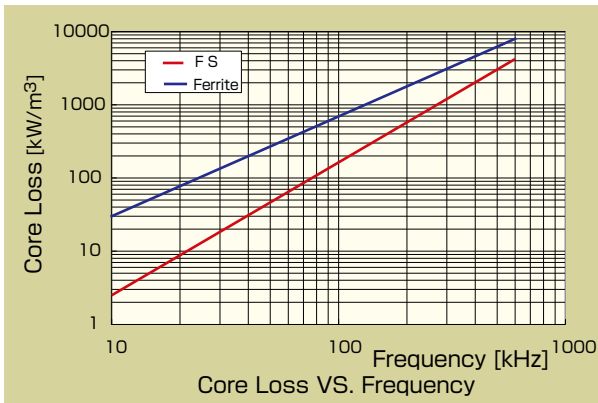
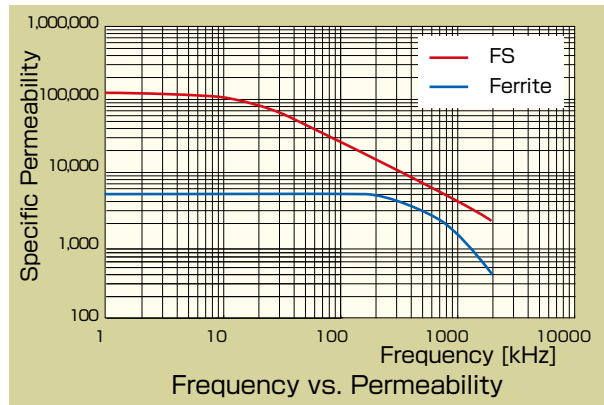
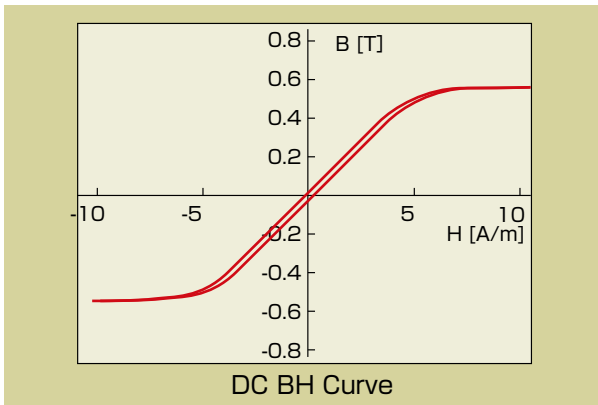
High Permeability : μ_i at 10kHz is 100,000 it changes inductance module smaller and higher performance.

Low Loss : Smaller core loss, higher exchange efficiency, lower self heat of core can be obtained.

Constant Permeability : Small permeability change depending on magnetic field.

Thin and Small Core : Small miniature core enables to mount in a PC-card.

Characteristics (Typical Value)



Standard Specifications

Type No.	Finished Dimensions [mm]			Core Size [mm] * ¹			Effective core cross section Ae [mm ²] * ¹	Mean flux path length Lm [mm] * ¹	AL Value [$\mu\text{H}/\text{n}^2$] * ² * ³	Insulating Cover * ⁴
	O.D.max	I.D.min	H.T.max	O.D.	I.D.	H.T.				
FS12X8X4.5W	14.0	6.6	6.8	12	8	4.5	6.75	31.4	27.0	A
FS18X12X4.5W	20.0	10.6	6.8	18	12	4.5	10.1	47.1	27.0	A
FS21X14X4.5W	23.0	12.6	6.8	21	14	4.5	11.8	55.0	27.0	A
FS26X16X10W	29.5	13.0	13.0	26	16	9.5	35.6	66.0	67.8	B
FS32X20X10W	35.5	17.0	13.0	32	20	9.5	42.8	81.7	65.7	B

Operating temperature has to be less than 85°C (include self rise up)

*1 Reference value *2 Tolerance \pm 30% *3 Measuring Condition : 10kHz,10mA, 1 turn, R.T.

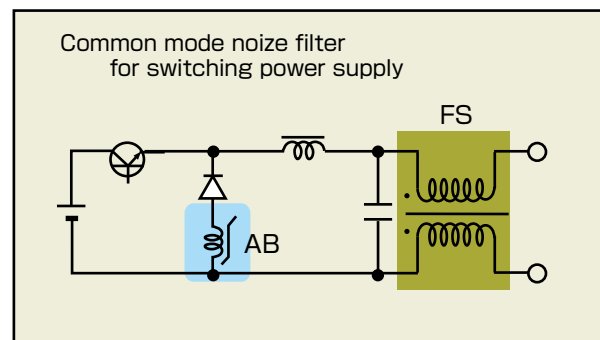
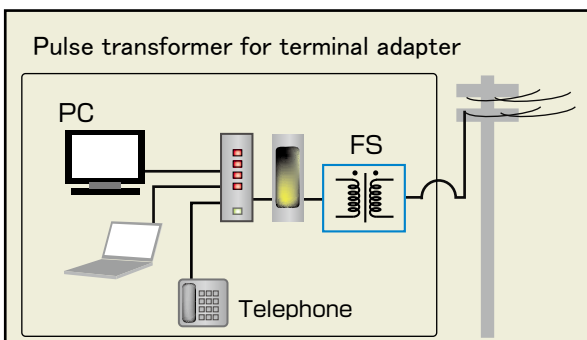
*4 Insulating cover made with UL94V-0 Approved Material.

A: PET, B: PBT

Don't hesitate to ask our sales section about other size items.

Applications

- ☆Magnetic core of pulse transformer
 - Communication instrument
 - Small size, high density assemble
- ☆Magnetic core for common mode noise filter
 - Switching power supply
 - Communication and measuring instrument
- ☆Magnetic core for current transformer



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