Fe-based Amorphous Strip

Amorphous strip is a new soft magnetic material. It is produced through the advanced technology of rapid solidification of molten metal at a cooling rate of about a million °C/sec. During this process the metal is rapidly quenched as a form of strip with $27\pm 2\mu$ m thickness, and the micro-structure of the alloy is the amorphous due to the high quenching rate.

Fe-based amorphous strip has many advantages, such as high permeability, high saturate induction, high electrical resistivity, high density, low core loss and good stability. It can replace the materials of silicon steel, permalloy and ferrite. It is widely used in electronics products that high accuracy and good stability are the most required.





Application

- Amorphous C core, E core, blocked core
- Constant inductor core, PFC inductor core
- Mid-frequency transformer core, distribution transformer core

Electromagnetic shielding foil

Prodin

۲ Raw materials of amorphous powder core

Prodin Ferrite S.L.

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Performance Index

Item	Performance (Reference)	Item	Performance (Reference)		
Bs (T) Saturate Induction	1.56	λs Magnetostriction	27×10 ⁻⁶		
Tc (°C) Curie Temperature	400	ρ (g/cm³) Density	7.18		
Tx (°C) Crystallization Temperature	515	(μΩ•cm) Resistivity	130		
Hv Hardness	960	Hc (A/m) Coercivity	<4		
(μm) Thickness	27±2	K Core filling coefficient	0.87		
μ' @1kHz(Gs/Oe) Permeability	245-5000	P16kHz/37mT (W/kg) Core loss	1.0		

	J	1K101	250	27	2
P/N Description	J-Slitting Strip	Amorphous Model	(mm) Width	(μ Thickness	(μm) Thickness Tolerance

。 Description: J1K101-250-272, amorphous slitting strip 1K101, width is 25.0mm, thickness is 27

±2μm.

Common Strip Width											

Width (mm)	3.0	3.2	4.5	5	6	6.5	8	10	15	20	25	30
Width (mm)	35	40	45	50	55	60	70	80	90	100	110	120

1.- Note:

Strip thickness is $27\pm 2\mu m$, Max width is 120mm.

2、Other customized size strip is available.

3. Normative reference: 《GB/T 19345.1-2017》 Amorphous and Nanocrystalline alloys Part 1: Fe-based amorphous soft magnetic alloy strip. Amorphous grade 1K101 is equivalent to GB/T 19345.1-2017 category S-type strip.

4、Strip performance of 1K101 is equivalent to Hitachi 2605SA-1.