Magnetic material
Fi292

Broad band ferrite

A medium permeability NiZn ferrite for use in broadband EMI-suppression in an frequency range up to 1000 MHz, as well as RF broadband transformers.

Date: February 2018

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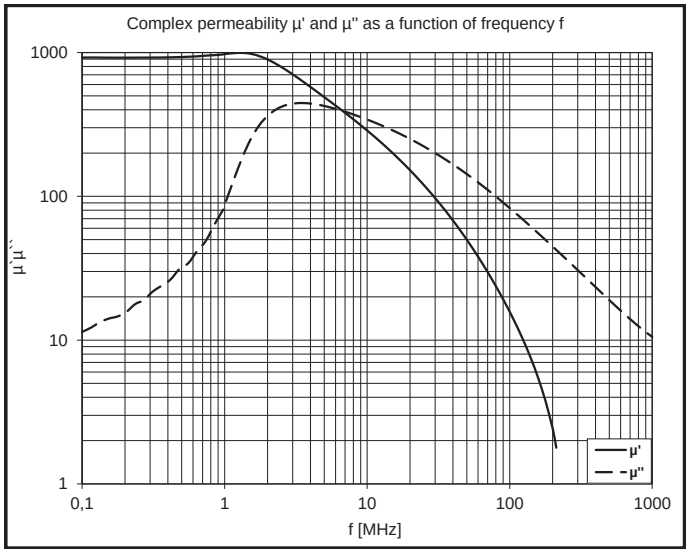
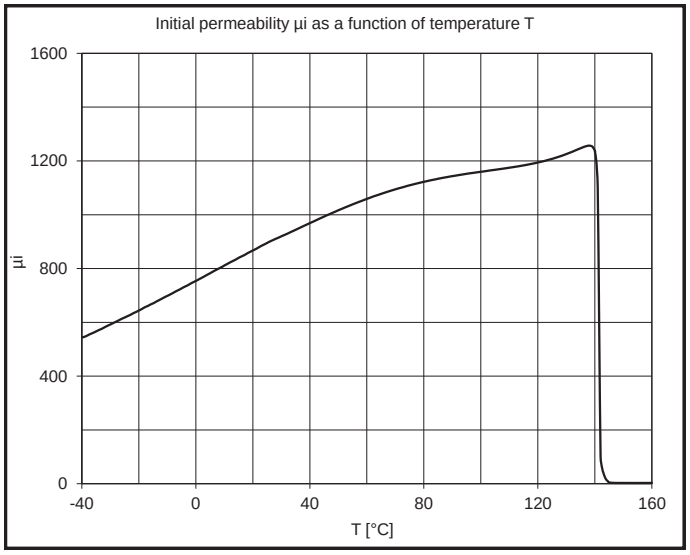
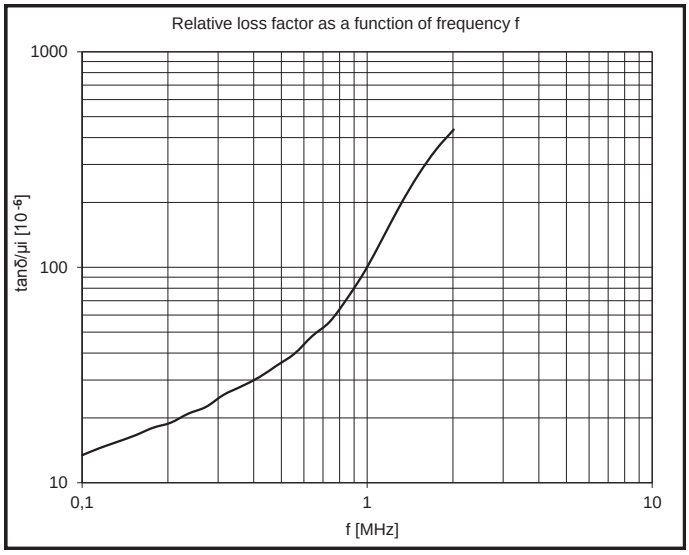
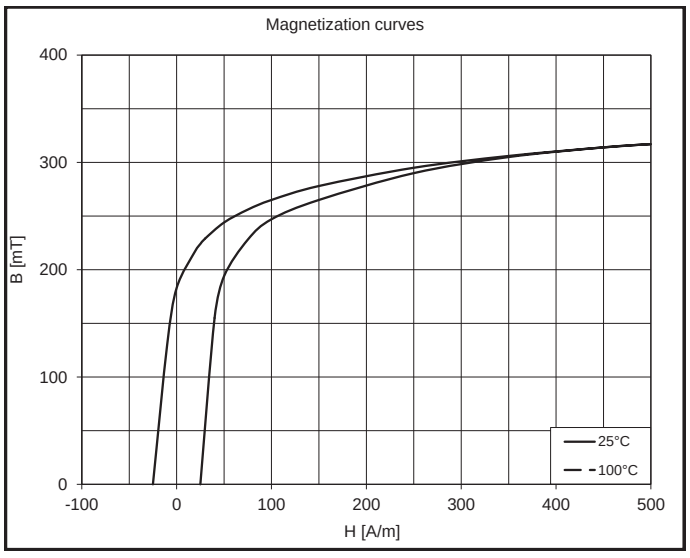
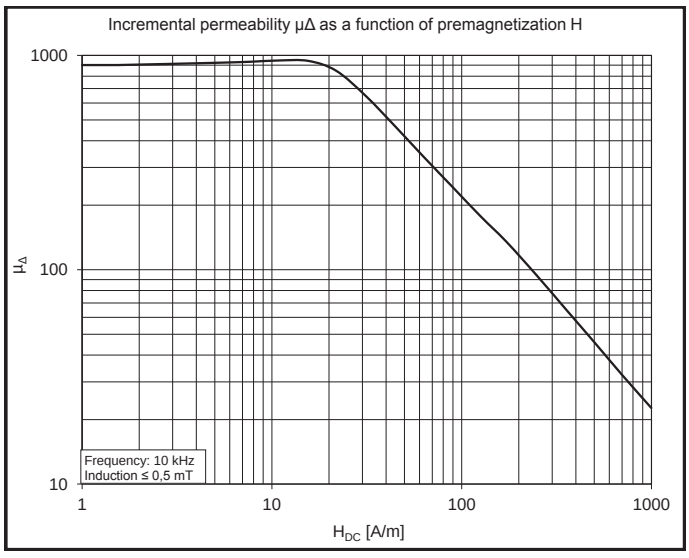
SYMBOL	VALUE	UNIT	CONDITIONS
μ_i	900 ± 20%	1	25°C ; ≤ 10 kHz < 0,5 mT
tanδ / μ_i	< 30	10^{-6}	25°C ; 0.2 MHz < 0,25 mT
ρ	≥ 10^7	Ωm	25°C DC
B	330	mT	25°C ; ≤ 10 kHz 3000 A/m
P_v		mW / cm³	
T_c	140	°C	≤ 10 kHz < 0.25 mT











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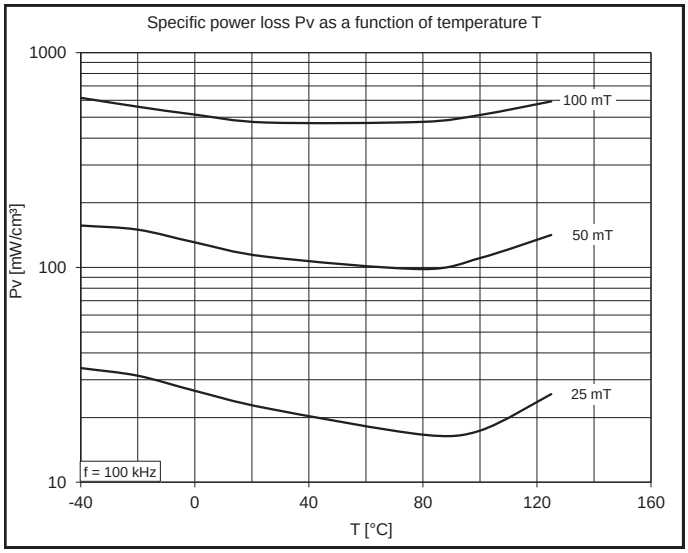

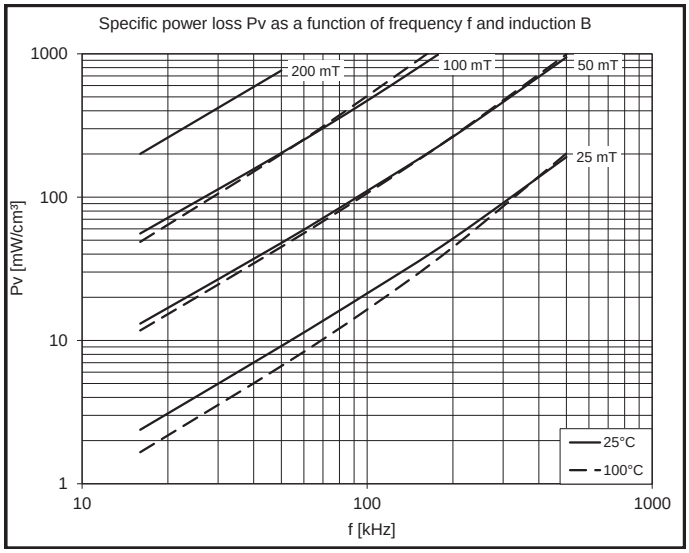

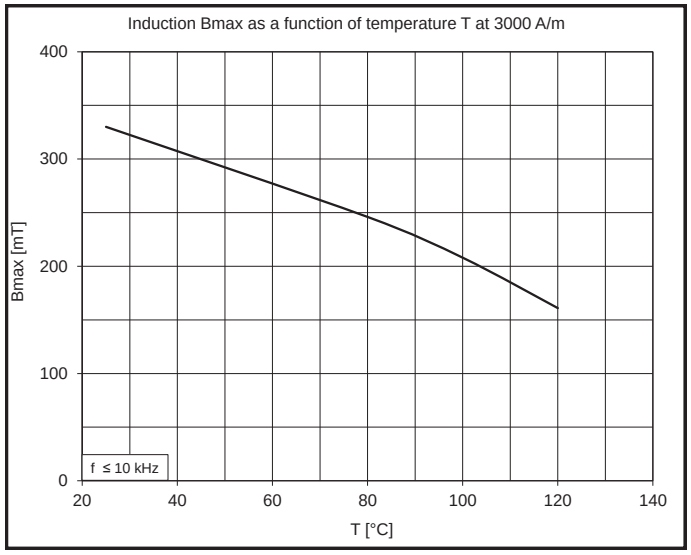

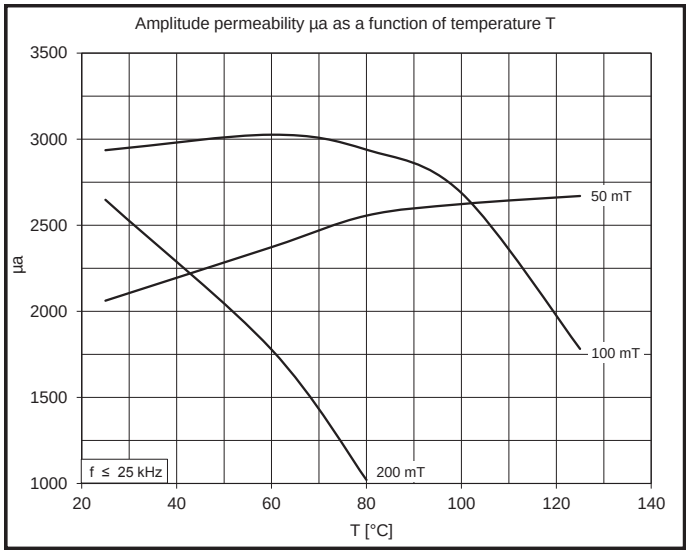

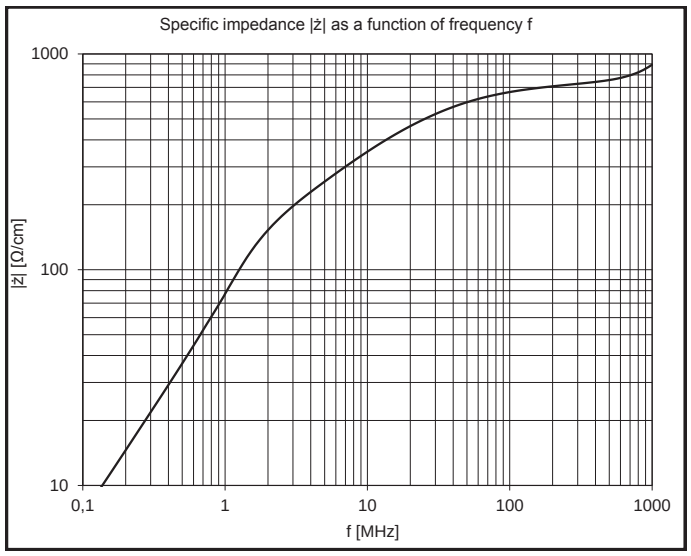

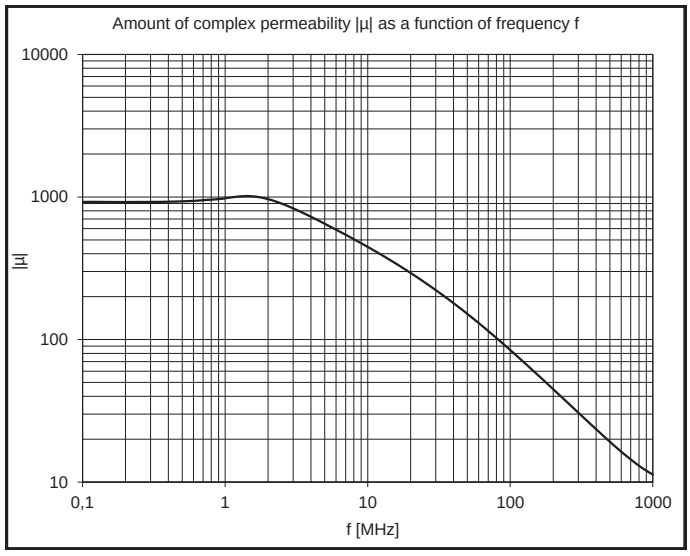

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Cautions and warnings

Measuring conditions

The following datasheet lists typical values which were measured on ring cores. These values cannot be universally applied to all dimensions and core types. The test methods were closely adapted to DIN IEC 60401.

Effects of mechanical stress

Ferrite cores meet mechanical requirements in a wide range of applications. Since ferrites are ceramic materials, one must deal with the respective behaviour.

Ferrite cores are ceramic materials that are sensitive to shock, temperature change or tensile stress. Particularly strong temperature changes and high static or cyclic mechanical loads can lead to cracks or to chipping the ferrite cores.

Effects of cores in combination with their electrical properties

The magnetic properties of magnetic materials can be changed irreversible in high magnetic fields. Stresses in the core affects not only the mechanical but also the magnetic properties. It is apparent that the initial permeability depends on the stress state of the core. The higher the stresses are in the core, the lower is the value for the initial permeability. Thus the embedding medium should have the greatest possible elasticity.

Heating up

Ferrites may run hot during operation at higher flux densities and higher frequencies.

Processing instructions

The beginning of the winding process should be gentle. Otherwise, the flanges can be destroyed.

Too tight winding forces may squeeze the flanges or the tube so that the cores cannot be mounted. The pressure of the winding is able to influence the mechanical and electrical properties of the ferrite core.

Important notes

For all products mentioned in this publication

In this sense, the data given in this publication are only intended to describe the characteristics of our products. They must not be understood as a guaranteed value in the legal sense.

In addition, this publication may contain statements about the suitability of our products for specific applications. We expressly point out that this statement is not binding to the suitability of our products for a particular customer application.

Therefore we want to emphasize that in individual cases a malfunction of electronic components may occurs before the end of their usual life. Endangerment of life or health can be prevented by the application of an appropriate design regarding the customer use. Furthermore other measures taken by a third party in case of occurring failure can avoid a threat .

The warnings, cautions and product-specific instructions need to be observed.

We constantly strive to improve our products. As a result, the products and product specifications described in this publication may change from time to time. We reserve the right to perform corrections and engineering change.

You will understand that we cannot guarantee that the components, applications and procedures shown and described in this publication are always free of third party rights.

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