



# Material Characteristics - AH series

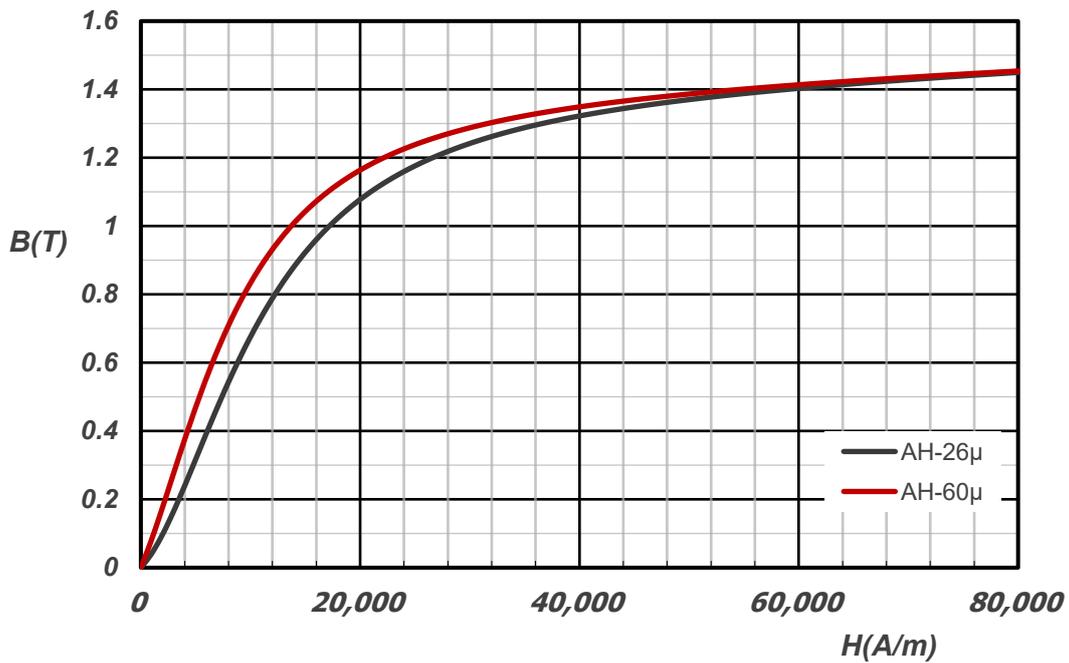
## Features

- ◆ Excellent DC-bias performance
- ◆ Low core loss
- ◆ High energy storage capability

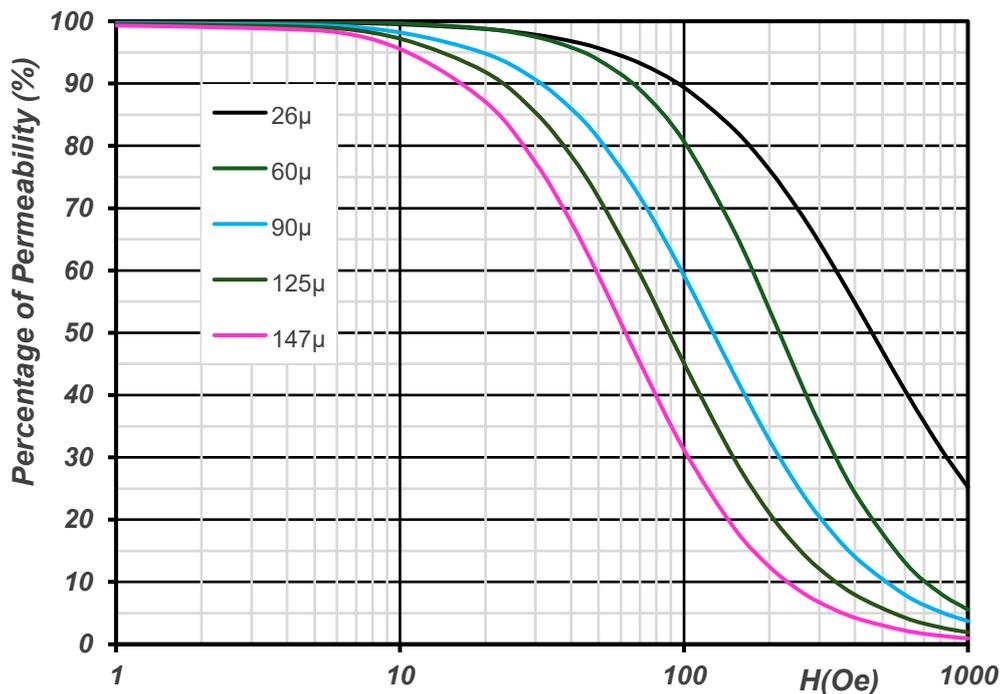
## Applications

- ◆ Server switching power inductors
- ◆ Automotive OBC
- ◆ >50kHz power applications

### Saturation Flux Density vs Magnetic Field



### Percent Initial Permeability vs DC Magnetizing Force





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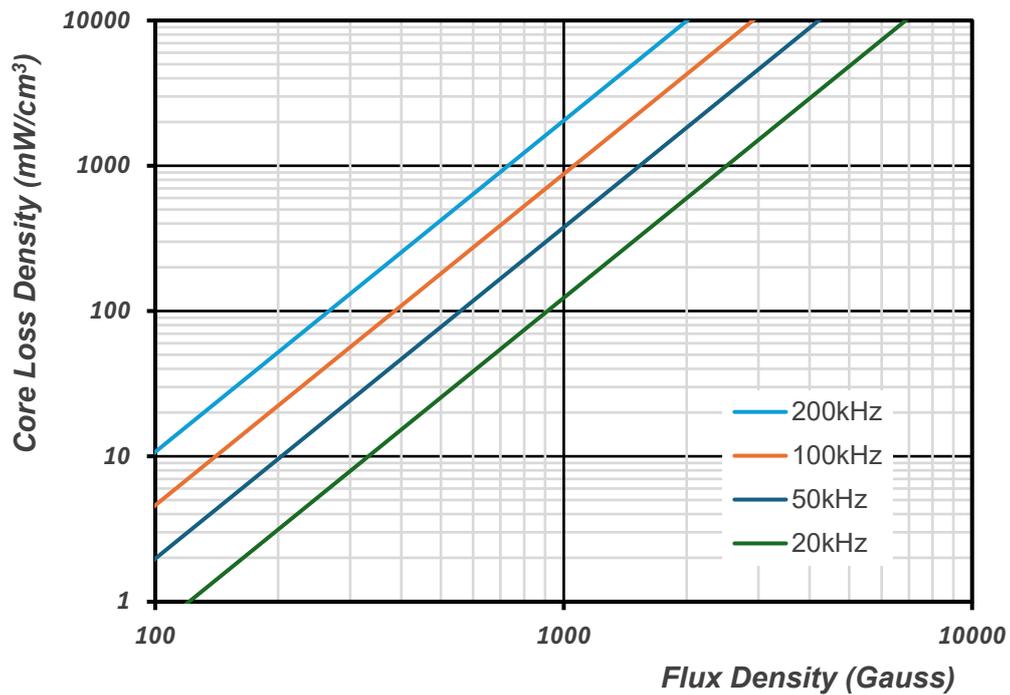
The curve fitting process gives rise to the following core loss density  $P_v$ (mW/cm<sup>3</sup>) equation :

$$P_v(\text{mW/cm}^3) = C_m \cdot f^x \cdot B^y$$

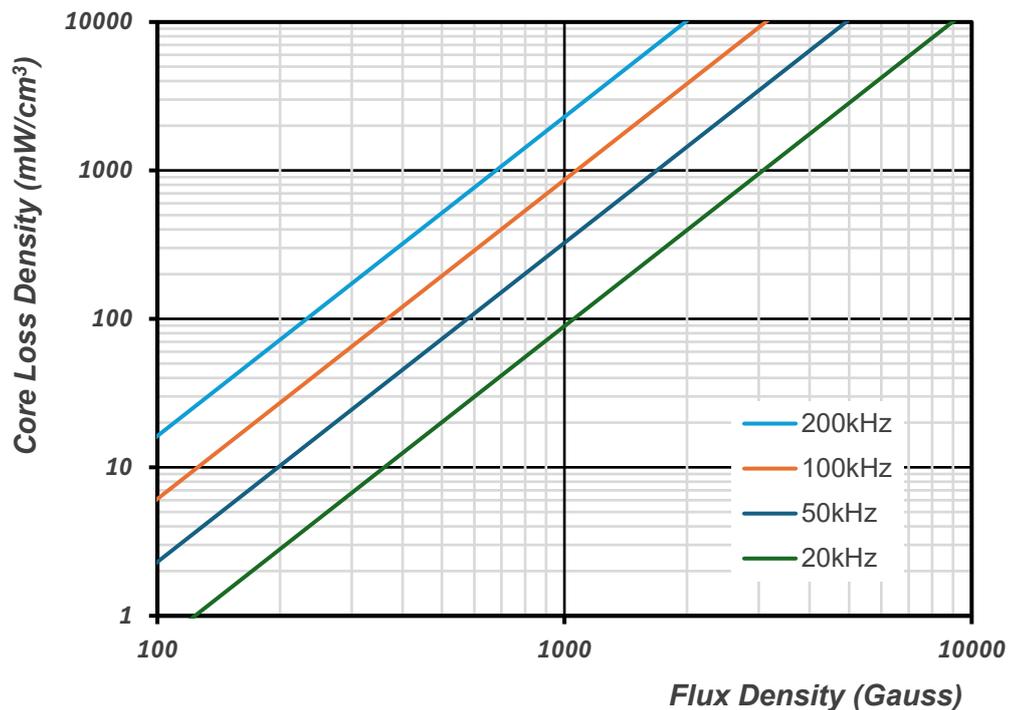
\*frequency(f) unit in kHz and flux density(B) unit in kGauss

$\mu_e$	$C_m$	x	y
26 & 40	3.19	1.22	2.28
60 & 75 90	1.31	1.41	2.15

### Typical Core Loss Curves (26 $\mu$ , 40 $\mu$ )



### Typical Core Loss Curves (60 $\mu$ , 75 $\mu$ , 90 $\mu$ )





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\*frequency(f) unit in kHz and flux density(B) unit in kGauss

$\mu_e$	$C_m$	x	y
125 & 147	1.16	1.41	2.38

