



# Material Characteristics - **AK** series

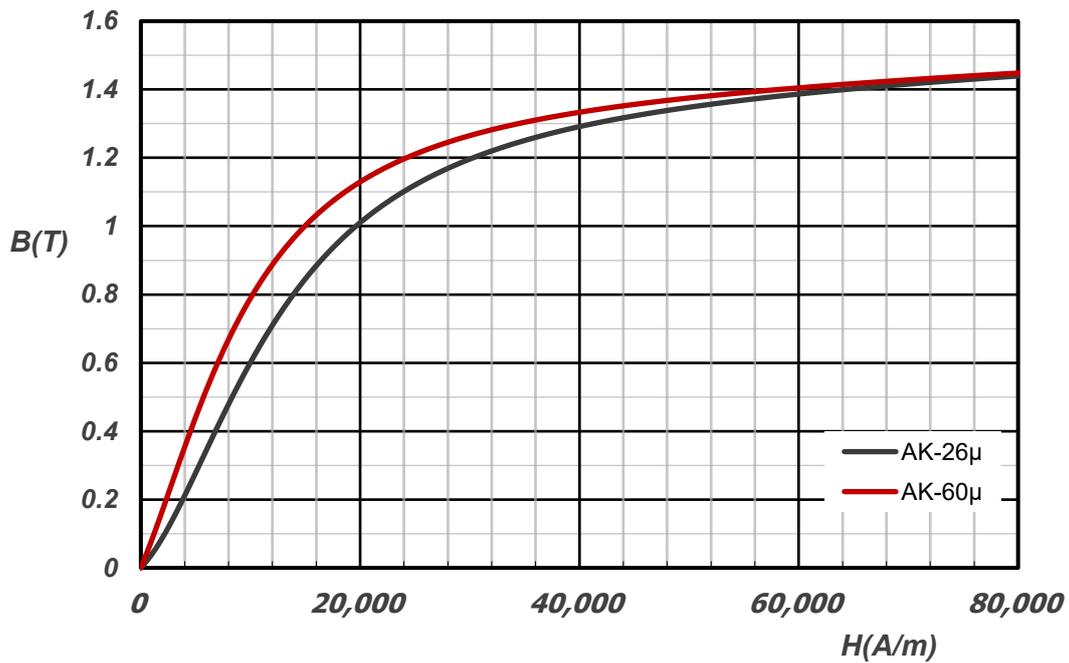
## Features

- ◆ High saturation characteristics
- ◆ High C/P value
- ◆ Excellent DC-bias performance

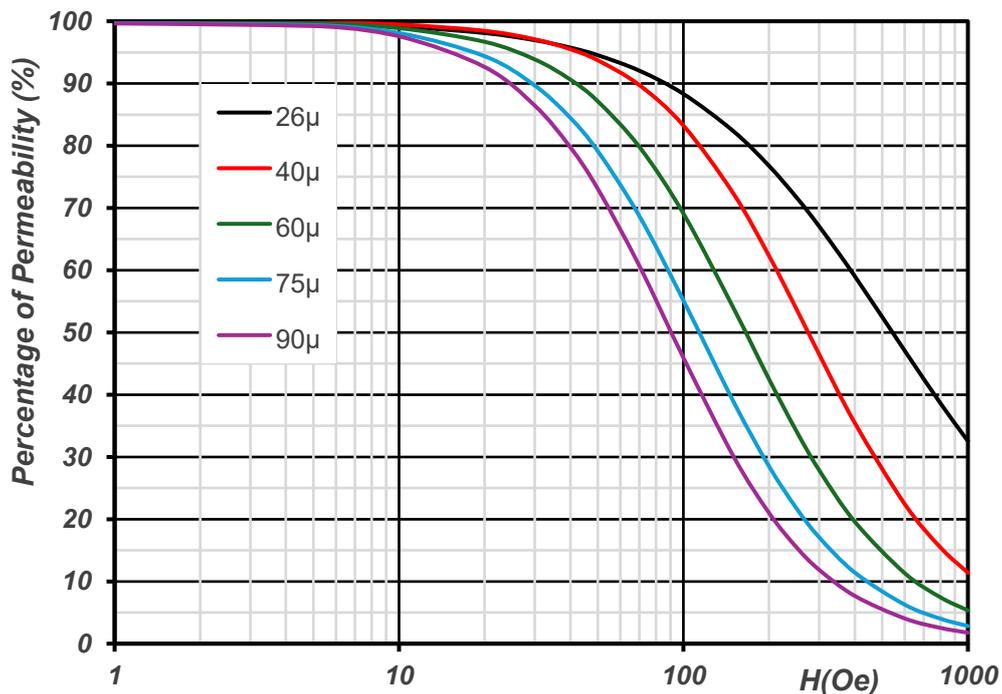
## Applications

- ◆ Industrial power supply
- ◆ PV inverter
- ◆ <40kHz power applications

### Saturation Flux Density vs Magnetic Field



### Percent Initial Permeability vs DC Magnetizing Force





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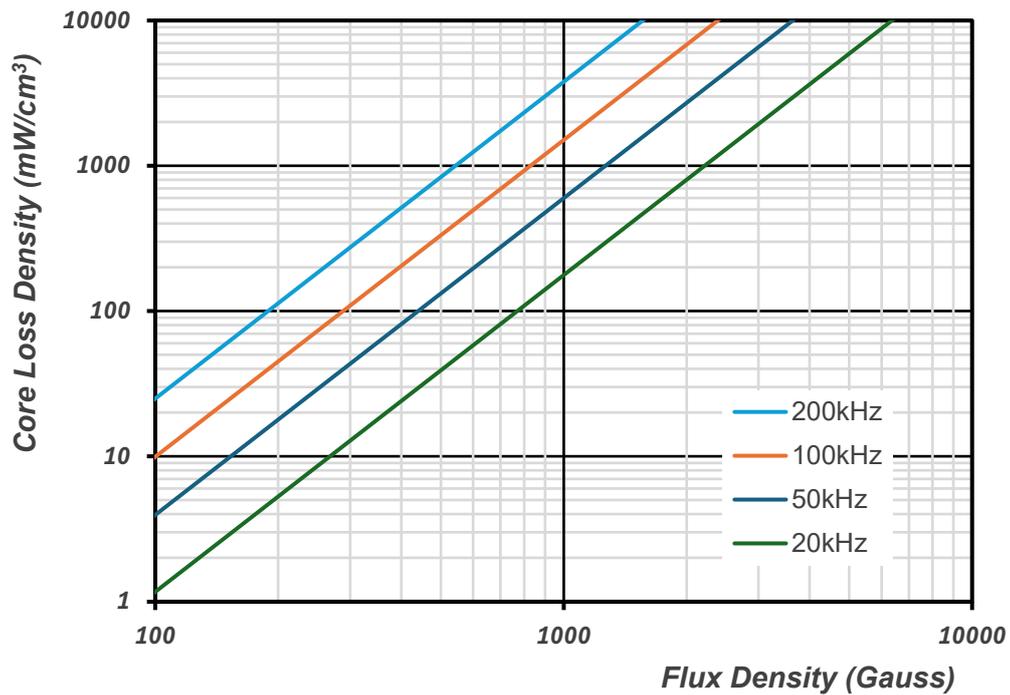
The curve fitting process gives rise to the following core loss density  $P_v$  (mW/cm<sup>3</sup>) equation :

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

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

$\mu_e$	$C_m$	x	y
26 & 40	3.294	1.33	2.18
60 & 75 90	1.415	1.55	2.35

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



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

