

# Ferrite for Telecommunication

## High Permeability Material H5C5

This material has accomplished initial permeability( $\mu_i$ ) to 30,000, that is two times of existing best material H5C3, thus it enables transformers to be more compact and thinner. We offer it as toroidal cores for pulse transformers currently, however, the cores for communicating devices such as EP cores and RM cores will be available in the future.

### FEATURES

- Initial permeability( $\mu_i$ )=30,000
- Transformers can be more compact and thinner. In addition, the numbers of winding turn can be reduced.
- Toroidal cores are available. Also shaped cores are programmed.

### APPLICATIONS

- Pulse transformers for LAN devices.
- Common mode chokes for LAN devices.

### MATERIAL CHARACTERISTICS

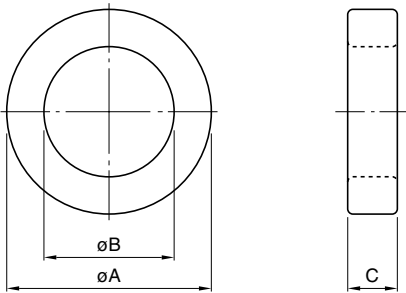
Material	H5C5		
Initial permeability [10kHz, 10mV, 10Truns]	$\mu_i$		30000±30%
Relative loss factor	$\tan\delta/\mu_i$		<15×10 <sup>-6</sup>
Saturation magnetic flux density* [1194A/m]	B <sub>s</sub>	mT	380
Remanent flux density*	B <sub>r</sub>	mT	100
Coercive force*	H <sub>c</sub>	A/m	4.2
Curie temperature*	T <sub>c</sub>	°C	>110
Disaccommodation factor [10 to 100min.]	DF		<2×10 <sup>-6</sup>
Density	d <sub>b</sub>	kg/m <sup>3</sup>	5.0×10 <sup>3</sup> typ.
Resistivity	$\rho_v$	$\Omega \cdot m$	0.15

\* Average value

• The values were obtained with toroidal cores temperature unless otherwise.

• Only toroidal cores from OD: 2.54mm to OD: 6mm.

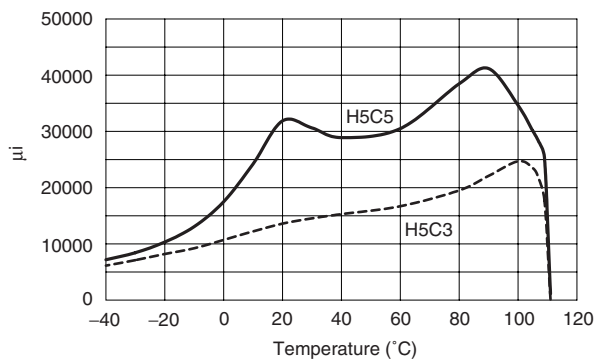
### SHAPES AND DIMENSIONS



Dimensions in mm

	H5C5T3.05×1.27×1.27	H5C5T4×2×2	H5C5T6×1.5×3
øA	3.05±0.2	4.0±0.2	6.0±0.3
øB	1.27±0.2	2.0±0.2	3.0±0.25
C	1.27±0.2	2.0±0.2	1.5±0.2

### INITIAL PERMEABILITY vs. TEMPERATURE CHARACTERISTICS



### INITIAL PERMEABILITY vs. FREQUENCY CHARACTERISTICS

