

# Ferrite Materials



			INDUCTORS & POWER TRANSFORMERS					EMI/RFI FILTERS & BROADBAND TRANSFORMERS			LINEAR FILTERS & SENSORS			
MATERIAL			L	R	P	F	T	J	W	M	C	E	V	
Initial Permeability	$\mu_i$		750 ±25%	2,300 ±25%	2,500 ±25%	3,000 ±20%	3,000 ±25%	5,000 ±20%	10,000 ±30%	15,000 ±30%	900 ±25%	2,000 ±25%	2,300 ±25%	
Maximum Usable Frequency (50% roll-off)	f	MHz	≤6	≤1.8	≤1.8	≤1.5	≤1.5	≤0.7	≤0.5	≤0.12	≤8	≤3	≤1.5	
Relative Loss Factor $\times 10^{-6}$ 25°C		$\frac{\tan \delta}{\mu_{iAC}}$						≤15 100 kHz	≤7 10 kHz	≤10 10 kHz	≤10 300 kHz	≤3 100 kHz	≤5 100 kHz	
Curie Temperature	$T_c$	°C	>280	>210	>210	>210	>220	>145	>135	>130	>200	>160	>170	
Flux Density @ 1,194 A/m (15 Oe) 25°C	$B_m$ 10 kHz	G mT	5,200 520	4,700 470	4,700 470	4,700 470	5,300 530	4,300 430	3,900 390	4,700 470	3,800 380	3,600 360	4,400 440	
Remanence 25°C	$B_r$	G mT	1,500 150	1,600 160	1,600 160	1,500 150	1,500 150	1,000 100	800 80	2,700 270	1,500 150	700 70	1,500 150	
Power Loss (PL) Sine Wave in mW/cm <sup>3</sup> (typical)	25 kHz 200 mT (2,000 G)	@25°C		90	180	60	80							
		@60°C		65	110	55	75							
		@100°C		60	65	90	70							
		@120°C		65	110	125	75							
	100 kHz 100 mT (1,000 G)	@25°C		87	70	70	65							
		@60°C		64	50	65	57							
		@100°C		58	65	110	55							
		@120°C		64	45	150	58							
	500 kHz 50 mT (500 G)	@25°C	290											
		@60°C	150											
		@100°C	115	175	300		150							
		@120°C	130											
Resistivity	$\rho$	Ω·m	10	5	5	5	5	0.5	0.1	0.5	2	2	1	
Density	$\delta$	g/cm <sup>3</sup>	4.8	4.8	4.8	4.8	4.8	4.8	4.9	5.0	4.7	4.7	4.8	