

Materials - Nickel Zinc

Parameter	Symbol	Standard Conditions of Test	Unit	FF1	F53	F19	F19A	F52	FA1	F24	F14	F16	F01 ^P	F25 ^P	F21 ^P	F28 ^P	F31 ^P	F29 ^P				
Initial Permeability (nominal)	μ_i	B<0.1mT 10kHz 25°C	-	1500 +20%	1050 +20%	1000 +20%	900 +20%	850 +20%	370 +20%	350 +20%	220 +20%	125 +20%	120 +20%	50 +20%	40 +20%	30 +20%	15 +20%	12 +20%				
Saturation Flux Density (typical)	B_{sat}	H=796 A/m = 10 Oe Static 25°C	mT	230	210	260	355	210	310	350	350	340	280	-	240	-	220	-				
Remanent Flux Density (typical)	B_r	H→0 (from near Saturation) 10kHz 25°C	mT	175	130	165	190	130	217	200	270	165	190	-	155	-	135	-				
Coercivity (typical)	H_c	B→0 (from near Saturation) 10kHz 25°C	A/m	30	50	53	20	50	60	65	172	200	30	-	1200	-	1600	-				
Loss Factor (maximum)	$\frac{\tan \delta_{(r+e)}}{\mu}$	B<0.1mT 25°C	10 ⁶	100kHz	140	26	-	-	26	-	-	-	-	-	-	-	-	-	-			
				400kHz	-	-	-	-	-	65	-	-	-	-	-	-	-	-	-	-	-	
				500kHz	-	-	130	100	-	-	-	-	40	-	-	-	-	-	-	-	-	-
				1MHz	-	-	350	200	-	-	-	-	42	60	-	50	-	-	-	-	-	-
				2MHz	-	-	-	-	-	-	-	-	50	-	45	50	50	-	-	-	-	-
				3MHz	-	-	-	-	-	-	-	-	-	-	-	55	50	-	-	-	-	-
				5MHz	-	-	-	-	-	-	-	-	-	-	65	-	65	55	-	-	-	-
				10MHz	-	-	-	-	-	-	-	-	-	-	100	-	75	65	80	-	100	-
				15MHz	-	-	-	-	-	-	-	-	-	-	-	-	100	75	-	-	-	-
				20MHz	-	-	-	-	-	-	-	-	-	-	-	-	125	100	-	-	-	-
				40MHz	-	-	-	-	-	-	-	-	-	-	-	-	300	125	-	225	-	-
100MHz	-	-	-	-	-	-	-	-	-	-	-	-	-	300	250	-	200	-				
200MHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1000	-				
Temperature Factor	$\frac{\Delta \mu}{\mu^2 \Delta T}$	B<0.1mT 10kHz +25°C to 55°C	10 ⁻⁶ / °C	-	-	3 to 6.5	3 to 6.5	-	-	-	12 to 30	20 to 50	-	10 to 15	-	30	-	50				
Curie Temperature (minimum)	θ_c	B<0.1mT 10kHz	°C	80	100	120	160	100	180	240	270	270	300	450	300	500	400	500				
Resistivity (typical)	ρ	1 V/cm 25°C	ohm-cm	10 ⁸	10 ⁶	10 ⁴	10 ⁵	10 ⁶	-	10 ⁵	10 ⁵	10 ⁵	10 ⁷	10 ⁵	10 ⁶	10 ⁵	10 ⁴	10 ⁵				

^P Perminvar ferrites undergo irreversible changes to their electrical characteristics if subjected to strong magnetic fields or mechanical shock. The changes include an increase in permeability and loss factor. The increase in loss factor is especially pronounced at high frequency.

Data is derived from measurements on toroidal cores. These values can not be directly transferred to products of another shape and size. The product-related data can be taken only from the relevant product specifications.