

MnZn High Permeability Ferrite Material Characteristics

Characteristics	Unit	TL5	TL7	TL10	TL13	TL15
Initial Permeability μ_i		5000 \pm 30%	7000 \pm 30%	10000 \pm 30%	13000 \pm 30%	15000 \pm 30%
Relative temperature coefficient $\alpha_{\mu ir}$ of initial permeability	10 ⁻⁶ /	-0.5 ~ 2.0 (20 ~ 60)	-0.5 ~ 2.0 (20 ~ 60)	-0.5 ~ 1.5 (20 ~ 60)	-0.5 ~ 3 (20 ~ 60)	-0.5 ~ 2.0 (20 ~ 60)
Relative loss factor $\tan\delta/\mu_i$ (10kHz)	10 ⁻⁶ /	< 6.5	< 6.5	< 7.0	< 7.0	< 7.0
Disaccommodation factor D_f [1 to 10 minutes]	$\times 10^{-6}$ /	< 3.0	< 2.5	< 2.0	< 2.0	< 2.0
Saturation magnetic flux density 25 B_s [H=1194A/m]	mT	420	420	400	360	360
Remanence 25 B_r	mT	140	100	90	100	100
Coercivity 25 H_c	A/m	8	7.5	7.2	4.4	4.4
Electrical resistivity ρ	-m	1	0.3	0.15	0.15	0.15
Curie temperature T_c		130	120	120	110	105
Density d	kg/m ³	4.8 \pm 10 ³	4.9 \pm 10 ³	4.9 \pm 10 ³	4.8 \pm 10 ³	4.95 \pm 10 ³

Notes: The values in each column are typical ones, no including special requirements of customers, it should be emphasized in contract if having special requirement.

MnZn EMI little Temperature coefficient wide Temperature range Ferrite Material Characteristics

Characteristics	Unit	TS5	TS7	TS10	TG	TW
Initial Permeability μ_i		$5500 \pm 30\%$	$7500 \pm 30\%$ 2000min,500kHz	$10000 \pm 30\%$	$5000 \pm 30\%$	25 $12000 \pm 30\%$ -20 , 9000
Relative temperature coefficient μ_{ir}	$10^{-6}/$	-0.5 ~ 2.0 (20 ~ 60)	-0.5 ~ 2.0 (20 ~ 60)	-0.5 ~ 2.0 (20 ~ 60)	0 ~ 20 $\pm 12.5\%$ (20 ~ 60 $\pm 12.5\%$)	
Relative loss factor 25 $\tan \delta / \mu_i(10\text{kHz})$	10^{-6}	10 (100kHz)	30 (100kHz)	30 (100kHz)	<3.5 (10kHz)	<8.0 (10kHz)
Disaccommodation factor $D_f[1 \text{ to } 10 \text{ minutes}]$	10^{-6}	<3.0	<2.5	< 2.0	<3.0	<3.0
Saturation magnetic flux density 25 $B_s[H=1194Aa/m]$	mT	410	410	380	400	380
Remanence B_r	mT	70	80	120	65	100
Coercivity H_c	A/m	6.0	6.0	5.0	7.2	4.4
Electrical resistivity	-m	1.0	0.2	0.2	0.15	0.15
Curie temperature T_c		130	125	120	140	110
Density d	kg/m^3	4.8 ± 10^3	4.9 ± 10^3	4.9 ± 10^3	4.8 ± 10^3	4.9 ± 10^3

Notes: The values in each column are typical ones, no including special requirements of customers, it should be emphasized in contract if having special requirement.