Material properties (continued)

Preferred application			Broadband transformers		
Material			T 38	T 42[3)]	T 46[3)]
Base material			MnZn	MnZn	MnZn
	Symbol	Unit			
Initial permeability (T = 25 °C)	μ_i		10000 ± 30 %	12000 ± 30 %	15000 ± 30 %
Meas. field strength Flux density (near saturation) (f = 10 kHz)	H B_S (25 °C) B_S (100 °C)	A/m mT mT	1200 380 240	1200 400 250	1200 400 240
Coercive field strength (f = 10 kHz)	H_c (25 °C) H_c (100 °C)	A/m A/m	9 6	7 6	7 6
Optimum frequency range		MHz	— —	— —	— —
Relative loss factor at f_{min} at f_{max}	$\tan \delta/\mu_i$	10^{-6} 10^{-6}	— —	— —	— —
Hysteresis material constant	η_B	10^{-6}/mT	< 1,4	< 1,4	< 2,0
Curie temperature	T_C	°C	> 130	> 130	> 130
Relative temperature coefficient at 25 ... 55 °C at 5 ... 20 °C	α_F	10^{-6}/K	 — —	 — —	 — —
Mean value of α_F at 25 ... 55 °C		10^{-6}/K	– 0,4	– 0,3	– 0,6
Density (typical values)		kg/m^3	4900	4950	5000
Disaccommodation factor at 25 °C	DF	10^{-6}	—	—	—
Resistivity	ρ	Ωm	0,1	0,1	0,01
Core shapes			RM, P, EP, ER, E, Ring	RM, EP	Ring
Other material properties (graphs) see page			72	74	76

3) Material values defined on the basis of small ring cores (≤ R10)