MANGANESE ZINC FERRITES

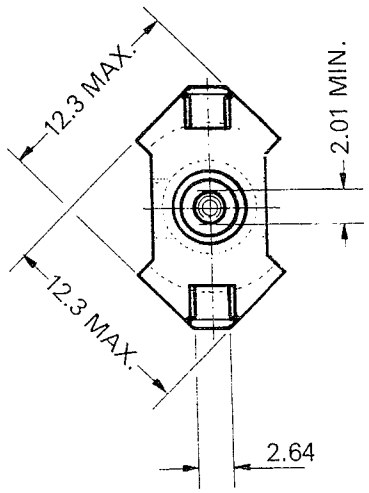
GRADE			T6	T4	T3	● T2	● T1	Q5	Q7	Q3	P	L2	S1
Optimum frequency range for high Q	kHz	Min							1	1	1		100
		Max							300	200	200		2000
Initial permeability		mean	10000	6000	4700	4000	3000	2500	2000	2000	2000	3000	750
		Tol %	±30	±20	±20	+30−10	±20	±20	±20	±30	±30	±20	±30
Max. residual plus eddy current loss factor $\frac{\text{Tan}\,\delta_r + F}{\mu_i}$	10^{-6}	10 kHz						3.5		1.5			
		30 kHz						5.0	1.6	2.5	5.0		
		100 kHz		40	40	30	15	12.0	2.5	5.0	12.0	15.0	8.0
		300 kHz								20.0	30.0		10.0
		1 MHz											30.0
Max. hysteresis coeff. η_B	100 kHz $mT^{-1} \times 10^{-6}$		0.9	0.9	0.9	0.8	1.59	1.59	0.6	1.11	1.50	2.0	1.91
Temp factor of initial permeability (+25 to +55°C)	ppm/°C	Min	0.5	0.5	0	0	0	0	0.4	0.5	0		0
		Max	2	2	2	3.0	2.5	2.0	1.0	1.5	2.0		2.5
Max disaccommodation factor	$\times 10^{-6}$		7.5	7.5	7.5	10	10	10	3	5	10		12
Min curie temperature	°C		130	130	130	100	145	150	150	150	120	200	200
Typical saturation flux density	mT		380	380	420	360	360	360	350	360	350	500	350
Power loss at 200 mT in kW/m³	50 kHz	25°C			192							192	768
		100°C			384							336	840
	100 kHz	25°C			528							600	912
		100°C			816							960	1152
Available core shapes			POT RM RING	POT RM RING	POT RM RING			POT E	POT RM	POT RM	RING	POT E BLOCK RM RING	POT RM RING
Colour code for rings			Pale Blue	Pale Green	Beige	White	Orange				Red	Lilac	Yellow

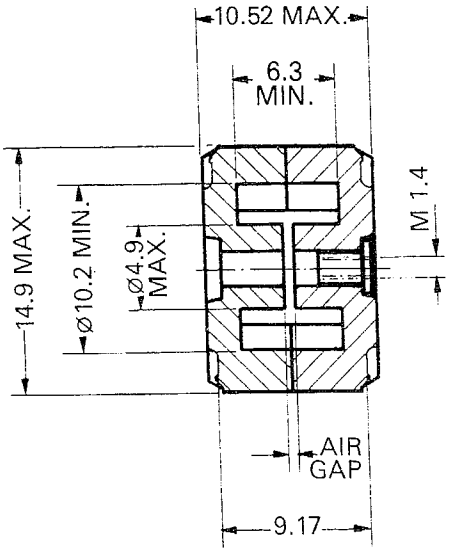
● Obsolete grades

RM5
MM 805

CORE DIMENSIONS (mm)

Complying with IEC 431
DIN 41980





CORE PAIR WEIGHT 2.8g approx.

MAGNETIC CHARACTERISTICS

		With hole	*Without hole*	
Core constant	ℓ_e/A_e	1.02	0.9	mm^{-1}
Effective length	ℓ_e	21.4	22.2	mm
Effective area	A_e	21.2	24.7	mm^2
Effective volume	V_e	454	550	mm^3

ORDERING CODES

Core pairs:

With threaded insert	MM 805/ A_L /grade
Without threaded insert	MX 805/A_L or T/grade
With solid centre boss	MZ 805/A_L or T/grade
	T = transformer
	A_L = inductance factor

To order transformer cores as single pieces replace MX 805/T/## by MM 805/1/##

STANDARD RANGE OF CORES

With air gap

Ferrite Grade	A_L no adj	Tol on A_L ±%	Eff Perm μ_e	tan δ § (max) $\times 10^{-3}$	Appr Gap mm	Temp Coef 25-55°C ppm/°C	η_i * (max)	Std Adj Code MM..	ORDERING CODE
S1	40	3	32.5	1.09	0.60	0—81	0.57	805-4	MM 805/40/S1
	63	3	51.1	1.71	0.40	0—128	1.13	805-4	MM 805/63/S1
	100	3	81.2	2.72	0.20	0—203	2.25	805-4	MM 805/100/S1
Q3	100	3	81.2	0.49	0.20	41—122	1.35	805-4	MM 805/100/Q3
	160	3	130	0.78	0.12	65—195	2.75	805-3	MM 805/160/Q3
	250	3	203	1.22	0.06	101—304	5.36	805-3	MM 805/250/Q3
	315	3	256	1.53	0.03	128—383	7.57	805-5	MM 805/315/Q3
L2	100	3	71.6	—	0.20	—	1.83	—	MZ 805/100/L2
	160	3	115	—	0.12	—	3.73	—	MZ 805/160/L2
	250	3	179	—	0.06	—	7.24	—	MZ 805/250/L2
	315	3	226	—	0.03	—	10.3	—	MZ 805/315/L2

§tan δ_{r+F} measured at 100kHz for Q3, 1MHz for S1
*η_i measured at 10kHz (1 to 3 mT)

Without air gap

Ferrite Grade	A_L (min)	Tol on A_L %	Minimum Eff Perm μ_e		η_i* (max)	ORDERING CODE	
			Hole	No hole		Hole	No hole
Q5	1280	min	1039	—	88.6	MX 805/T/Q5	—
L2	1920	+60	—	1074	106.4	—	MZ 805/T/L2
T3	2500	+50	2029	1791	137	MX 805/T/T3	MZ 805/T/T3
T4	3850	+50	3125	2757	262	MX 805/T/T4	MZ 805/T/T4
T6	4200	+70	3409	3008	298	MX 805/T/T6	MZ 805/T/T6

Test conditions for A_L measurement	N (turns)	Wire dia (mm)	f (kHz)	I mA
Gapped cores	200	0.17 Grade 2	1	0.05
Ungapped cores	43	0.30 Grade 2	1	0.05

SEI