A FEATURES

- High saturation current
- Low loss MnZn ferrite core
- Plastic base improves the bonding between the base and the magnetic core.
- Operating Temperature range from -40°C to +125°C (Including Self-heating)
- 260°C reflow peak temperature qualified

B PART NUMBER SYSTEM

1MG	135	-	100	M	F
❶	❷		❸	❹	❺

❶	Series
1MG	Series Code

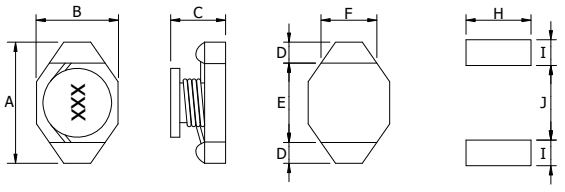
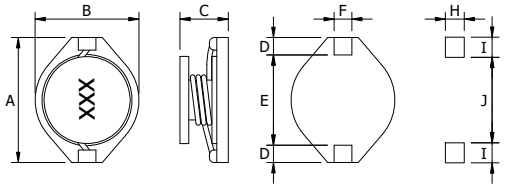
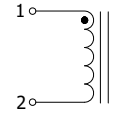
❷	Dimension Code (L*W*H) (mm)	
	63 (6.6×4.5×3.0)	135 (12.7×10.0×5.0)
	187 (18.6×15.3×7.2)	

❸	Inductance Code
e.g.	Calculation
2R2	2.2μH
100	10×10^{0}μH = 10μH
101	10×10^{1}μH = 100μH

❹	Inductance Tolerance
M	±20%
N	±30%

❺	RoHS Compliant

C DRAWINGS AND DIMENSIONS

1MG63	1MG135,1MG187	Schematic
		

XXX = Inductance value

Case Size	Dimensions (mm)								
	A_{max}	B_{max}	C_{max}	$D_{ref.}$	$E_{ref.}$	$F_{ref.}$	$H_{ref.}$	$I_{ref.}$	$J_{ref.}$
1MG63	6.6	4.5	3.0	1.0	4.3	3.05	3.56	1.4	4.06
1MG135	12.7	10.0	5.0	2.4	7.6	2.5	2.8	3.0	7.30
1MG187	18.6	15.3	7.2	2.6	13.1	2.54	2.79	2.92	12.45

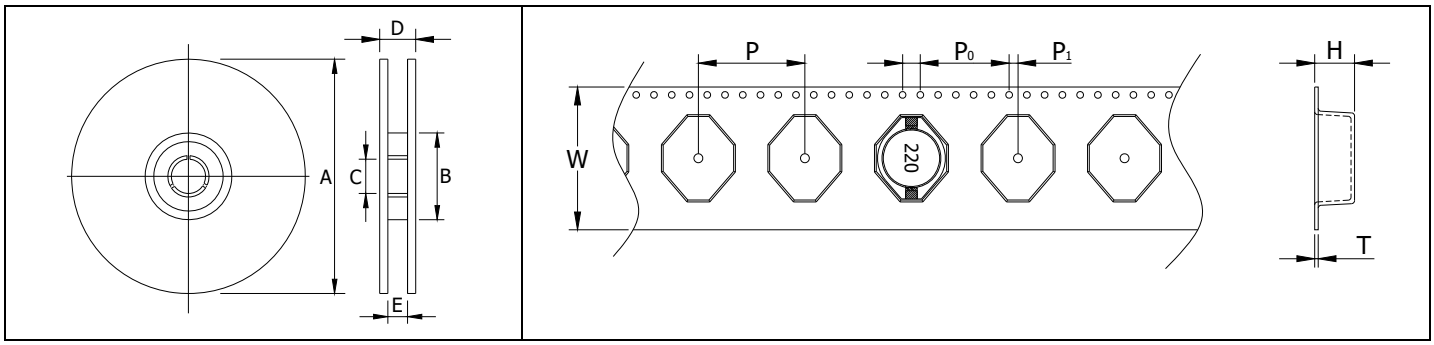
D SPECIFICATIONS

	Inductance[1]		DCR[2]				$SRF_{typ.}$
Part Number	**μH**	**Tolerance**	**Typ.(Ω)**	**Max.(Ω)**	**Irms[3](A)**	**Isat[4](A)**	**MHz**
1MG63-1R0MF	1.0	±20%	0.017	0.050	2.90	2.90	130
1MG63-1R5MF	1.5	±20%	0.020	0.050	2.80	2.90	115
1MG63-2R2MF	2.2	±20%	0.028	0.070	2.40	2.30	90
1MG63-3R3MF	3.3	±20%	0.044	0.080	2.00	2.00	70
1MG63-4R7MF	4.7	±20%	0.063	0.090	1.50	1.50	50
1MG63-6R8MF	6.8	±20%	0.092	0.130	1.40	1.20	45
1MG63-100MF	10	±20%	0.121	0.160	1.20	1.10	35
1MG63-150MF	15	±20%	0.176	0.230	1.10	0.90	30
1MG63-220MF	22	±20%	0.255	0.370	0.80	0.70	20
1MG63-330MF	33	±20%	0.362	0.510	0.60	0.58	15
1MG63-470MF	47	±20%	0.556	0.640	0.50	0.50	14
1MG63-680MF	68	±20%	0.790	0.860	0.40	0.40	11
1MG63-101MF	100	±20%	1.080	1.270	0.30	0.31	9
1MG63-151MF	150	±20%	1.450	2.000	0.25	0.27	6
1MG63-221MF	220	±20%	2.580	3.110	0.20	0.22	6
1MG63-331MF	330	±20%	4.150	5.000	0.16	0.18	5
1MG63-471MF	470	±20%	5.580	6.800	0.16	0.15	4
1MG63-102MF	1000	±20%	11.500	13.800	0.07	0.10	2
1MG135-1R0MF	1.0	±20%	0.004	0.007	8.60	14.25	170
1MG135-1R5MF	1.5	±20%	0.006	0.009	7.20	10.70	120
1MG135-2R5MF	2.5	±20%	0.009	0.012	5.80	10.00	65
1MG135-3R3MF	3.3	±20%	0.011	0.015	5.30	7.00	50
1MG135-4R7MF	4.7	±20%	0.015	0.019	5.00	6.00	45
1MG135-5R6MF	5.6	±20%	0.024	0.032	4.00	6.00	38
1MG135-6R8MF	6.8	±20%	0.026	0.034	3.80	5.10	35
1MG135-8R2MF	8.2	±20%	0.034	0.040	3.20	4.20	32
1MG135-100MF	10	±20%	0.035	0.045	3.30	5.00	25
1MG135-150MF	15	±20%	0.043	0.060	2.90	3.60	23
1MG135-220MF	22	±20%	0.071	0.095	2.60	3.10	18
1MG135-330MF	33	±20%	0.094	0.120	2.30	2.60	15
1MG135-470MF	47	±20%	0.142	0.190	1.80	2.14	12
1MG135-680MF	68	±20%	0.187	0.240	1.60	1.70	10
1MG135-101MF	100	±20%	0.253	0.330	1.40	1.50	8
1MG135-151MF	150	±20%	0.448	0.590	1.00	1.20	6
1MG135-221MF	220	±20%	0.601	0.780	0.90	1.10	5
1MG135-331MF	330	±20%	0.893	1.150	0.70	0.80	4
1MG135-471MF	470	±20%	1.315	1.700	0.60	0.65	4
1MG135-681MF	680	±20%	1.942	2.600	0.50	0.55	3
1MG135-102MF	1000	±20%	2.940	3.900	0.40	0.52	2
1MG187-1R0MF	1.0	±20%	0.005	0.009	8.50	25.00	80
1MG187-2R2MF	2.2	±20%	0.008	0.014	7.10	20.30	45
1MG187-3R3MF	3.3	±20%	0.010	0.018	6.20	15.80	40

Inductance[1]			DCR[2]				SRF$_{typ.}$
Part Number	**μH**	**Tolerance**	**Typ.(Ω)**	**Max.(Ω)**	**Irms[3](A)**	**Isat[4](A)**	**MHz**
1MG187-5R6MF	5.6	±20%	0.012	0.020	5.30	13.10	30
1MG187-100MF	10	±20%	0.021	0.031	4.30	10.00	20
1MG187-150MF	15	±20%	0.030	0.036	4.00	8.00	15
1MG187-220MF	22	±20%	0.043	0.047	3.50	7.00	14
1MG187-330MF	33	±20%	0.060	0.066	3.00	5.50	10
1MG187-470MF	47	±20%	0.076	0.086	2.60	4.50	9
1MG187-680MF	68	±20%	0.110	0.130	2.30	3.60	7
1MG187-101MF	100	±20%	0.141	0.190	1.80	3.40	6
1MG187-151MF	150	±20%	0.210	0.250	1.50	2.70	4
1MG187-221MF	220	±20%	0.326	0.380	1.20	2.40	4
1MG187-331MF	330	±20%	0.431	0.560	1.00	1.90	3
1MG187-471MF	470	±20%	0.633	0.850	0.82	1.60	3
1MG187-681MF	680	±20%	0.954	1.100	0.72	1.30	2
1MG187-102MF	1000	±20%	1.370	1.800	0.56	1.10	2

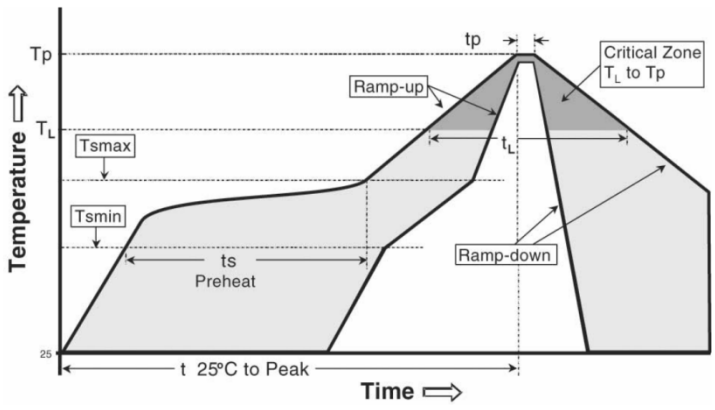
1. Inductance measured @ 100KHz, 0.3V at 25°C temperature.
2. DCR measured @ 25°C.
3. Irms: DC current for an approximate 40°C rise from 20°C ambient temperature.
4. Isat: DC current for approximate 10% roll off at 25°C.
5. Specifications subject to change without notice please check our website for latest information.

E TAPE AND REEL SPECIFICATIONS



Case Size	Parts per Reel	Reel Dimensions(REF)					Tape Dimensions(REF)					
		A	B	C	D	E	W	P	P_0	P1	H	T
1MG63	2500	330	100	13	22.5	17.5	16	8	4	2	3.2	0.5
1MG135	500	330	100	13	30	24.5	24	16	4	2	5.6	0.5
1MG187	250	330	100	13	38.5	33.5	32	20	4	2	7.6	0.5

F RECOMMENDED SOLDER REFLOW PROFILE



Profile Feature	Recommended Conditions
Average ramp-up rate (Tsmax to Tp)	3°C/second max.
Preheat Temperature Min (Ts_{min}) Temperature Max (Ts_{max}) Time (Ts_{min} to Ts_{max})(ts)	 100°C 150°C 60-180 seconds
Time maintained above: Temperature (T_L) Time (t_L)	 217°C 60-150 seconds
Peak Temperature (Tp)	See Table2
Time within 5°C of actual Peak Temperature (tp)[2]	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max

Table 1

Package Thickness	Volume mm³ <350	Volume mm³ 350 - 2000	Volume mm³ >2000
< 1.6mm	260°C	260°C	260°C
1.6mm - 2.5mm	260°C	250°C	245°C
>2.5mm	250°C	245°C	245°C

Table 2

1. The above profiles are based on IPC/JEDEC J-STD-020C.
2. Exceeding these conditions may cause lowered product reliability.