A FEATURES

- Shielded Construction with low DCR
- Saturation current rating up to 13.5 Amps
- Inductance ratings from 0.8 to 1000 μH
- Widely applications, highly recommend to use as Buck, Boost, or Forward inductor
- Operating Temperature range from -40°C to +125°C (Including Self-heating)
- 260°C reflow peak temperature qualified

B PART NUMBER SYSTEM

1MF	105	-	100	M	F
❶	❷		❸	❹	❺

❶	Series
1MF	Series Code

❷	Dimension Code (L*W*H) (mm)	
	103 (10.0×10.2×3.0)	104 (10.0×10.2×4.0)
	105 (10.0×10.2×5.0)	

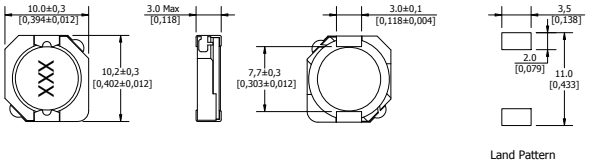
❸	Inductance Code
e.g.	Calculation
2R2	2.2μH
100	10×10^{0}μH = 10μH
101	10×10^{1}μH = 100μH

❹	Inductance Tolerance
K	±10%
M	±20%
N	±30%

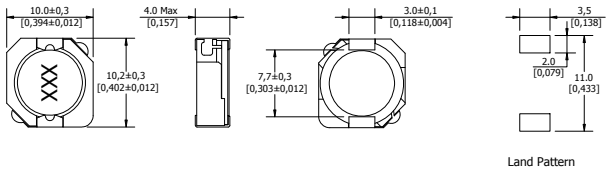
❺	RoHS Compliant

C DRAWINGS AND DIMENSIONS

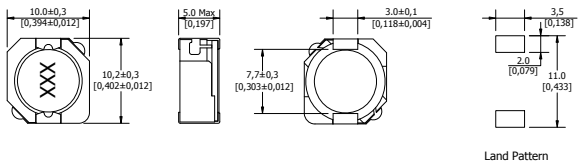
1MF103



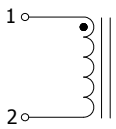
1MF104



1MF105



Schematic



XXX = Inductance value

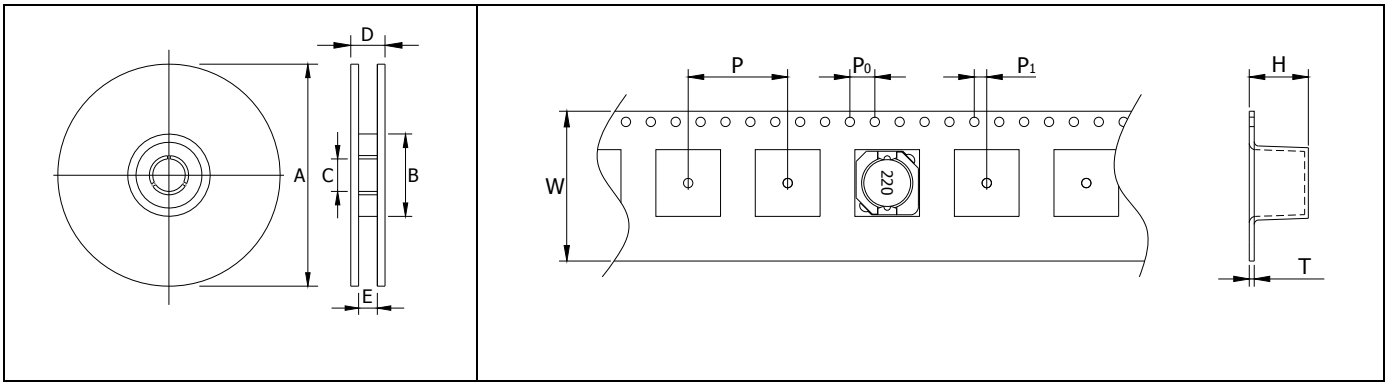
D SPECIFICATIONS

	Inductance[1]		DCR[2]		Irms[3]	Isat[4]
Part Number	μH	Tolerance	Typ.(Ω)	Max.(Ω)	A	A
1MF103-0R8NF	0.8	±30%	0.0044	0.0057	8.30	11.20
1MF103-1R5NF	1.5	±30%	0.0085	0.0110	5.80	8.00
1MF103-2R2NF	2.2	±30%	0.0130	0.0169	5.10	6.70
1MF103-3R3NF	3.3	±30%	0.016	0.021	4.70	5.56
1MF103-4R7NF	4.7	±30%	0.023	0.030	4.00	4.65
1MF103-6R8NF	6.8	±30%	0.027	0.035	3.60	3.84
1MF103-8R2NF	8.2	±30%	0.038	0.050	3.00	3.54
1MF103-100MF	10	±20%	0.045	0.059	2.80	3.18
1MF103-150MF	15	±20%	0.070	0.091	2.05	2.60
1MF103-220MF	22	±20%	0.110	0.143	1.60	2.16
1MF103-330MF	33	±20%	0.155	0.202	1.35	1.74
1MF103-470MF	47	±20%	0.230	0.299	1.20	1.40
1MF103-560MF	56	±20%	0.250	0.325	1.15	1.36
1MF103-680MF	68	±20%	0.330	0.429	0.95	1.22
1MF103-820MF	82	±20%	0.380	0.494	0.80	1.14
1MF103-101MF	100	±20%	0.525	0.683	0.70	1.02
1MF103-121MF	120	±20%	0.580	0.754	0.65	0.89
1MF103-151MF	150	±20%	0.670	0.871	0.51	0.84
1MF104-1R5NF	1.5	±30%	0.0060	0.0081	6.50	10.00
1MF104-2R5NF	2.5	±30%	0.0078	0.0105	6.10	7.50
1MF104-3R8NF	3.8	±30%	0.0096	0.013	5.50	6.00
1MF104-5R2NF	5.2	±30%	0.016	0.022	5.40	5.50
1MF104-7R0NF	7.0	±30%	0.020	0.027	4.50	4.80
1MF104-100MF	10	±20%	0.026	0.035	3.80	4.40
1MF104-120MF	12	±20%	0.034	0.046	3.40	3.70
1MF104-150MF	15	±20%	0.037	0.050	3.10	3.60
1MF104-180MF	18	±20%	0.051	0.069	2.60	3.10
1MF104-220MF	22	±20%	0.054	0.073	2.50	2.90
1MF104-270MF	27	±20%	0.065	0.088	2.30	2.60
1MF104-330MF	33	±20%	0.069	0.093	2.20	2.30
1MF104-390MF	39	±20%	0.094	0.127	2.00	2.20
1MF104-470MF	47	±20%	0.095	0.128	1.90	2.10
1MF104-560MF	56	±20%	0.139	0.188	1.50	1.65
1MF104-680MF	68	±20%	0.158	0.213	1.42	1.50
1MF104-820MF	82	±20%	0.218	0.283	1.30	1.45
1MF104-101MF	100	±20%	0.225	0.304	1.25	1.35
1MF104-121MF	120	±20%	0.278	0.375	1.08	1.20
1MF104-151MF	150	±20%	0.375	0.506	0.85	1.15
1MF104-181MF	180	±20%	0.421	0.568	0.75	1.00
1MF104-221MF	220	±20%	0.560	0.756	0.70	0.92
1MF104-271MF	270	±20%	0.632	0.853	0.55	0.84
1MF104-331MF	330	±20%	0.810	1.090	0.52	0.70
1MF104-471MF	470	±20%	0.924	1.243	0.45	0.65
1MF105-0R8NF	0.8	±30%	0.0033	0.0043	9.50	13.50
1MF105-1R5NF	1.5	±30%	0.0045	0.0058	8.30	10.50
1MF105-2R2NF	2.2	±30%	0.0056	0.0072	7.50	9.25
1MF105-3R3NF	3.3	±30%	0.0080	0.0104	6.50	7.80
1MF105-4R7NF	4.7	±30%	0.0095	0.0123	6.10	6.40
1MF105-6R8NF	6.8	±30%	0.014	0.018	5.40	5.40
1MF105-8R2NF	8.2	±30%	0.016	0.020	5.00	4.85
1MF105-100MF	10	±20%	0.020	0.026	4.50	4.45
1MF105-120MF	12	±20%	0.025	0.033	3.80	4.00
1MF105-150MF	15	±20%	0.032	0.041	3.40	3.60
1MF105-180MF	18	±20%	0.035	0.046	3.10	3.20

Part Number	Inductance[1] µH	Tolerance	DCR[2] Typ.(Ω)	DCR[2] Max.(Ω)	Irms[3] A	Isat[4] A
1MF105-220MF	22	±20%	0.047	0.061	2.90	2.95
1MF105-270MF	27	±20%	0.053	0.069	2.60	2.70
1MF105-330MF	33	±20%	0.065	0.084	2.50	2.40
1MF105-390MF	39	±20%	0.082	0.106	2.25	2.30
1MF105-470MF	47	±20%	0.100	0.130	2.00	2.00
1MF105-560MF	56	±20%	0.115	0.149	1.90	1.90
1MF105-680MF	68	±20%	0.155	0.201	1.60	1.65
1MF105-820MF	82	±20%	0.175	0.227	1.45	1.50
1MF105-101MF	100	±20%	0.195	0.253	1.35	1.35
1MF105-121MF	120	±20%	0.233	0.303	1.18	1.28
1MF105-151MF	150	±20%	0.285	0.370	1.10	1.12
1MF105-181MF	180	±20%	0.322	0.419	1.00	1.04
1MF105-221MF	220	±20%	0.385	0.500	0.94	0.94
1MF105-271MF	270	±20%	0.512	0.672	0.80	0.84
1MF105-331MF	330	±20%	0.625	0.812	0.73	0.75
1MF105-391MF	390	±20%	0.733	0.953	0.70	0.70
1MF105-471MF	470	±20%	0.992	1.289	0.54	0.60
1MF105-561MF	560	±20%	1.100	1.430	0.52	0.54
1MF105-681MF	680	±20%	1.230	1.599	0.51	0.52
1MF105-821MF	820	±20%	1.360	1.768	0.48	0.50
1MF105-102MF	1000	±20%	1.530	1.989	0.42	0.48

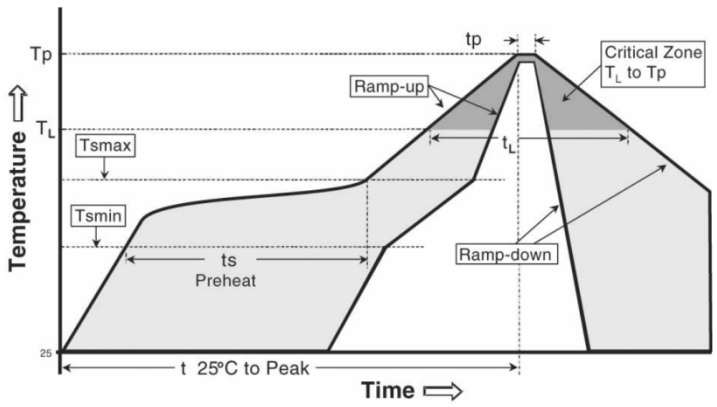
1. Inductance measured @ 100KHz, 0.3V at 25°C temperature.
2. DCR measured @ 25°C.
3. Irms for an approximate 40°C rise from 20°C ambient temperature.
4. Isat for approximate 35% roll off at 25°C.
5. Specifications subject to change without notice please check our website for latest information.

E TAPE AND REEL SPECIFICATIONS



Case Size	Parts per Reel	Reel Dimensions(REF) A	B	C	D	E	Tape Dimensions(REF) W	P	P_0	P1	H	T
1MF103	1000	330	100	13	30	24.5	24	16	4	2	3.2	0.4
1MF104	1000	330	100	13	30	24.5	24	16	4	2	4.2	0.4
1MF105	500	330	100	13	30	24.5	24	16	4	2	5.2	0.4

F RECOMMENDED SOLDERING 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 mm^3 <350	Volume mm^3 350 - 2000	Volume mm^3 >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.