

**A FEATURES**

- Nearly 30% lower DCR than 1ME series and higher current rating
- Magnetic epoxy shielded construction reduces 30% or more component volume
- Shielded construction reduces leakage flux and EMI
- Metallization on ferrite core results in excellent shock resistance and damage-free durability
- 30% higher current rating than conventional inductors of equal size
- Save PCB real estate and save more power
- Operating Temperature range from -40°C to +125°C (Including Self-heating)
- 260°C reflow peak temperature qualified



**B PART NUMBER SYSTEM**

1ME    3010    -    100    M    E  
 ①            ②                            ③            ④            ⑤

①	Series
1ME	Series Code
③	Inductance Code
e.g.	Calculation
2R2	2.2μH
101	10×10 <sup>1</sup> μH = 100μH
④	Inductance Tolerance
M	±20%
N	±30%

②	Dimension Code (L*W*H) (mm)	
	201610(2.0×1.6×1.0)	252010(2.5×2.0×1.0)
	252012(2.5×2.0×1.2)	3012(3.0×3.0×1.2)
	3015(3.0×3.0×1.5)	4012(4.0×4.0×1.2)
	4018(4.0×4.0×1.8)	8040(8.0×8.0×3.0)

⑤ | RoHS Compliant

**C DRAWINGS AND DIMENSIONS**

<p><b>Fig.A – 1ME20xx, 2520xx</b></p>	<p><b>Fig.B - 1ME30xx,40xx,60xx,80xx</b></p>
<p><b>Schematic</b></p>	

XXX = Inductance value

Case Size	Dimensions (mm)									Fig.
	A	B	C <sub>max</sub>	D	E	F	H <sub>ref.</sub>	I <sub>ref.</sub>	J <sub>ref.</sub>	
1ME201610H	2.0±0.2	1.6±0.2	1.0	1.2±0.2	0.6±0.2	0.8±0.2	1.7	0.7	0.7	A
1ME252010H	2.5±0.1	2.0±0.1	1.0	1.5±0.2	0.8±0.2	0.8±0.2	2.0	0.85	0.8	A
1ME252012H	2.5±0.1	2.0±0.1	1.2	1.5±0.2	0.8±0.2	0.8±0.2	2.0	0.85	0.8	A
1ME3012H	3.0±0.2	3.0±0.2	1.2	2.5±0.2	0.75±0.2	1.5±0.2	2.7	0.8	1.5	B
1ME3015H	3.0±0.2	3.0±0.2	1.5	2.5±0.2	0.75±0.2	1.5±0.2	2.7	0.8	1.5	B
1ME4012H	4.0±0.2	4.0±0.2	1.2	3.3±0.2	0.95±0.2	2.1±0.2	3.7	1.1	1.9	B
1ME4018H	4.0±0.2	4.0±0.2	1.8	3.3±0.2	0.95±0.2	2.1±0.2	3.7	1.1	1.9	B
1ME8040H	8.0±0.3	8.0±0.3	4.0	6.3±0.2	2.00±0.3	4.0±0.2	7.5	2.2	3.8	B

## D SPECIFICATIONS

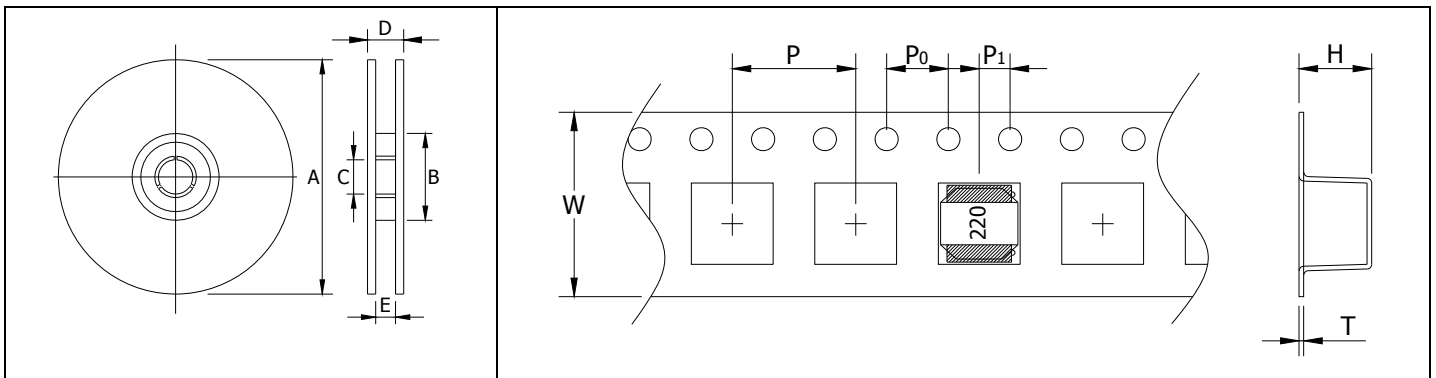
Part Number	Inductance		DCR			
	μH	Tolerance	Typ.(Ω)	Max.(Ω)	Irms(A)	Isat(A)
1ME201610H-R16MF	0.16	±20%	0.026	0.031	3.50	4.80
1ME201610H-R24MF	0.24	±20%	0.033	0.040	3.20	4.10
1ME201610H-R33MF	0.33	±20%	0.033	0.040	3.20	3.10
1ME201610H-R47MF	0.47	±20%	0.049	0.059	2.60	2.85
1ME201610H-R68MF	0.68	±20%	0.063	0.076	2.25	2.45
1ME201610H-1R0MF	1.0	±20%	0.095	0.114	1.60	1.85
1ME201610H-1R5MF	1.5	±20%	0.145	0.174	1.40	1.65
1ME201610H-2R2MF	2.2	±20%	0.220	0.264	1.20	1.45
1ME201610H-3R3MF	3.3	±20%	0.279	0.335	0.98	1.05
1ME201610H-4R7MF	4.7	±20%	0.399	0.479	0.82	0.85
1ME201610H-6R8MF	6.8	±20%	0.680	0.816	0.58	0.70
1ME201610H-100MF	10.0	±20%	0.850	1.020	0.50	0.55
1ME252010H-R24MF	0.24	±20%	0.028	0.034	3.00	4.50
1ME252010H-R33MF	0.33	±20%	0.036	0.043	2.65	4.40
1ME252010H-R47MF	0.47	±20%	0.037	0.044	2.65	3.50
1ME252010H-R68MF	0.68	±20%	0.051	0.061	2.35	3.10
1ME252010H-1R0MF	1.0	±20%	0.067	0.080	2.00	2.45
1ME252010H-1R5MF	1.5	±20%	0.090	0.108	1.70	2.05
1ME252010H-2R2MF	2.2	±20%	0.114	0.137	1.55	1.80
1ME252010H-3R3MF	3.3	±20%	0.170	0.228	1.20	1.40
1ME252010H-4R7MF	4.7	±20%	0.269	0.323	1.00	1.15
1ME252010H-6R8MF	6.8	±20%	0.376	0.451	0.84	0.95
1ME252010H-100MF	10.0	±20%	0.487	0.584	0.74	0.75
1ME252010H-150MF	15.0	±20%	0.795	0.954	0.55	0.65
1ME252010H-220MF	22.0	±20%	1.290	1.548	0.45	0.55
1ME252012H-R16MF	0.16	±20%	0.018	0.022	4.50	7.20
1ME252012H-R24MF	0.24	±20%	0.018	0.022	4.50	4.75
1ME252012H-R33MF	0.33	±20%	0.024	0.029	3.70	4.70
1ME252012H-R47MF	0.47	±20%	0.030	0.036	3.30	4.10
1ME252012H-R68MF	0.68	±20%	0.051	0.061	2.30	3.30
1ME252012H-1R0MF	1.0	±20%	0.037	0.044	2.40	1.90
1ME252012H-1R2MF	1.2	±20%	0.065	0.078	2.10	2.50
1ME252012H-1R5MF	1.5	±20%	0.065	0.078	2.10	2.35
1ME252012H-2R2MF	2.2	±20%	0.080	0.096	1.95	1.95
1ME252012H-3R3MF	3.3	±20%	0.120	0.144	1.50	1.25
1ME252012H-4R7MF	4.7	±20%	0.175	0.210	1.25	1.20
1ME252012H-6R8MF	6.8	±20%	0.300	0.360	1.05	1.00
1ME252012H-100MF	10.0	±20%	0.435	0.522	0.87	0.85
1ME252012H-150MF	15.0	±20%	0.830	1.000	0.63	0.75
1ME252012H-180MF	18.0	±20%	0.830	1.000	0.63	0.65

Part Number	Inductance		DCR			
	$\mu\text{H}$	Tolerance	Typ.( $\Omega$ )	Max.( $\Omega$ )	Irms(A)	Isat(A)
1ME252012H-220MF	22.0	$\pm 20\%$	0.910	1.090	0.60	0.55
1ME252012H-330MF	33.0	$\pm 20\%$	1.530	1.840	0.46	0.40
1ME252012H-470MF	47.0	$\pm 20\%$	1.850	2.220	0.35	0.30
1ME3012H-1R0MF	1.0	$\pm 20\%$	0.032	0.040	2.50	2.50
1ME3012H-2R2MF	2.2	$\pm 20\%$	0.075	0.090	1.60	1.80
1ME3012H-3R3MF	3.3	$\pm 20\%$	0.112	0.134	1.60	1.55
1ME3012H-100MF	10.0	$\pm 20\%$	0.310	0.372	0.80	0.90
1ME3012H-220MF	22.0	$\pm 20\%$	0.700	0.840	0.55	0.60
1ME3015H-R47MF	0.47	$\pm 20\%$	0.018	0.022	3.50	3.00
1ME3015H-1R0MF	1.0	$\pm 20\%$	0.033	0.040	2.50	2.80
1ME3015H-1R5MF	1.5	$\pm 20\%$	0.040	0.048	2.30	2.30
1ME3015H-2R2MF	2.2	$\pm 20\%$	0.050	0.060	2.05	1.70
1ME3015H-3R3MF	3.3	$\pm 20\%$	0.070	0.084	1.70	1.50
1ME3015H-4R7MF	4.7	$\pm 20\%$	0.096	0.115	1.50	1.20
1ME3015H-6R8MF	6.8	$\pm 20\%$	0.120	0.144	1.35	0.90
1ME3015H-100MF	10.0	$\pm 20\%$	0.230	0.276	0.97	0.90
1ME3015H-150MF	15.0	$\pm 20\%$	0.300	0.360	0.84	0.70
1ME3015H-220MF	22.0	$\pm 20\%$	0.450	0.540	0.70	0.60
1ME3015H-330MF	33.0	$\pm 20\%$	0.910	1.090	0.55	0.55
1ME3015H-470MF	47.0	$\pm 20\%$	1.040	1.250	0.50	0.42
1ME4012H-R47NF	0.47	$\pm 30\%$	0.027	0.032	3.20	4.20
1ME4012H-R82NF	0.82	$\pm 30\%$	0.035	0.042	2.90	3.50
1ME4012H-1R0NF	1	$\pm 30\%$	0.042	0.050	2.50	3.30
1ME4012H-1R5NF	1.5	$\pm 30\%$	0.042	0.050	2.50	2.40
1ME4012H-1R8NF	1.8	$\pm 30\%$	0.055	0.660	2.30	2.20
1ME4012H-2R2MF	2.2	$\pm 20\%$	0.055	0.066	2.30	2.20
1ME4012H-2R7MF	2.7	$\pm 20\%$	0.070	0.084	2.00	1.80
1ME4012H-3R3MF	3.3	$\pm 20\%$	0.070	0.084	2.00	1.70
1ME4012H-3R6MF	3.6	$\pm 20\%$	0.075	0.090	2.00	1.60
1ME4012H-4R3MF	4.3	$\pm 20\%$	0.090	0.108	1.80	1.50
1ME4012H-4R7MF	4.7	$\pm 20\%$	0.090	0.108	1.80	1.40
1ME4012H-5R1MF	5.1	$\pm 20\%$	0.110	0.132	1.60	1.40
1ME4012H-5R6MF	5.6	$\pm 20\%$	0.110	0.132	1.60	1.30
1ME4012H-6R8MF	6.8	$\pm 20\%$	0.125	0.150	1.60	1.10
1ME4012H-100MF	10.0	$\pm 20\%$	0.170	0.204	1.30	0.90
1ME4012H-120MF	12.0	$\pm 20\%$	0.260	0.312	1.00	1.00
1ME4012H-150MF	15.0	$\pm 20\%$	0.260	0.312	1.00	0.80
1ME4012H-180MF	18.0	$\pm 20\%$	0.360	0.432	0.90	0.80
1ME4012H-220MF	22.0	$\pm 20\%$	0.380	0.460	0.90	0.65
1ME4012H-270MF	27.0	$\pm 20\%$	0.560	0.672	0.73	0.60
1ME4012H-330MF	33.0	$\pm 20\%$	0.630	0.756	0.68	0.55
1ME4012H-360MF	36.0	$\pm 20\%$	0.630	0.756	0.68	0.50
1ME4012H-390MF	39.0	$\pm 20\%$	0.990	1.188	0.54	0.62
1ME4012H-470MF	47.0	$\pm 20\%$	0.990	1.188	0.54	0.50
1ME4012H-560MF	56.0	$\pm 20\%$	1.100	1.320	0.52	0.45
1ME4012H-680MF	68	$\pm 20\%$	1.500	1.800	0.44	0.45
1ME4012H-820MF	82	$\pm 20\%$	1.700	2.040	0.42	0.38
1ME4012H-101MF	100	$\pm 20\%$	1.700	2.040	0.42	0.31
1ME4018H-1R0NF	1.0	$\pm 30\%$	0.027	0.032	3.70	4.80
1ME4018H-1R5NF	1.5	$\pm 30\%$	0.031	0.037	3.30	4.30
1ME4018H-2R2MF	2.2	$\pm 20\%$	0.042	0.050	2.90	3.40
1ME4018H-3R3MF	3.3	$\pm 20\%$	0.055	0.066	2.50	2.90
1ME4018H-4R7MF	4.7	$\pm 20\%$	0.070	0.084	2.10	2.20
1ME4018H-6R8MF	6.8	$\pm 20\%$	0.098	0.118	1.70	1.80
1ME4018H-100MF	10.0	$\pm 20\%$	0.150	0.180	1.50	1.50
1ME4018H-150MF	15.0	$\pm 20\%$	0.210	0.252	1.20	1.20
1ME4018H-220MF	22.0	$\pm 20\%$	0.290	0.348	1.00	1.10

Part Number	Inductance		DCR		Irms(A)	Isat(A)
	$\mu$ H	Tolerance	Typ.( $\Omega$ )	Max.( $\Omega$ )		
1ME4018H-330MF	33.0	$\pm 20\%$	0.460	0.552	0.82	0.90
1ME4018H-470MF	47.0	$\pm 20\%$	0.620	0.744	0.73	0.70
1ME4018H-680MF	68.0	$\pm 20\%$	0.810	0.972	0.62	0.62
1ME4018H-101MF	100.0	$\pm 20\%$	1.300	1.560	0.47	0.57
1ME4018H-151MF	150.0	$\pm 20\%$	2.600	3.120	0.33	0.47
1ME4018H-221MF	220.0	$\pm 20\%$	3.200	3.840	0.29	0.38
1ME4018H-331MF	330.0	$\pm 20\%$	4.900	5.880	0.23	0.31
1ME8030H-1R0NF	1	$\pm 30\%$	0.009	0.012	7.30	9.00
1ME8030H-1R5NF	1.5	$\pm 30\%$	0.012	0.016	6.20	7.60
1ME8030H-2R2MF	2.2	$\pm 20\%$	0.015	0.020	5.70	6.30
1ME8030H-3R3MF	3.3	$\pm 20\%$	0.019	0.025	5.10	5.10
1ME8030H-4R7MF	4.7	$\pm 20\%$	0.022	0.029	4.70	4.30
1ME8030H-6R8MF	6.8	$\pm 20\%$	0.029	0.038	3.90	3.50
1ME8030H-100MF	10.0	$\pm 20\%$	0.033	0.043	3.70	2.80
1ME8030H-150MF	15.0	$\pm 20\%$	0.060	0.078	2.80	2.40
1ME8030H-220MF	22.0	$\pm 20\%$	0.070	0.091	2.40	2.00
1ME8030H-330MF	33.0	$\pm 20\%$	0.120	0.156	2.10	1.70
1ME8030H-470MF	47.0	$\pm 20\%$	0.170	0.221	1.70	1.40

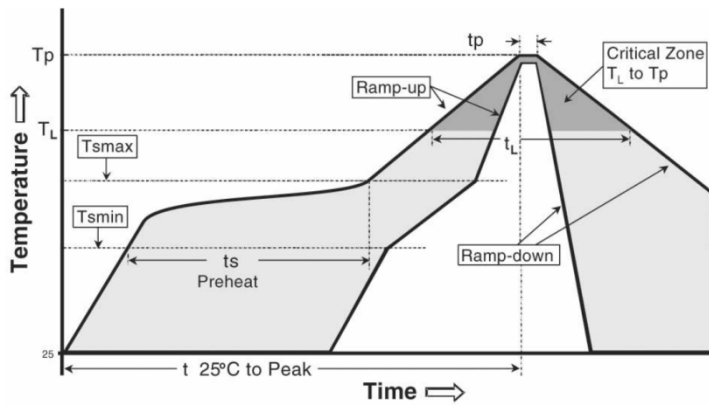
1. Inductance measured @ 100KHz, 0.3V at 25°C temperature.
2. DCR measured @ 25°C.
3. Irms for an approximate 40°C rise from 20°C ambient temperature.
4. Isat for approximate 30% roll off at 25°C.
5. Specifications subject to change without notice please check our website for latest information.

### E TAPE AND REEL SPECIFICATIONS



Case Size	Parts per Reel	Reel Dimensions(REF)					Tape Dimensions(REF)					
		A	B	C	D	E	W	P	P <sub>0</sub>	P <sub>1</sub>	H	T
1ME201610H	2000	178	58	13	13	9.0	8	4	4	2	1.2	0.3
1ME252010H	2000	178	58	13	13	9.0	8	4	4	2	1.2	0.3
1ME252012H	2000	178	58	13	13	9.0	8	4	4	2	1.4	0.3
1ME3012H	2000	178	58	13	13	9.0	8	4	4	2	1.6	0.3
1ME3015H	2000	178	58	13	13	9.0	8	4	4	2	1.9	0.3
1ME4012H	4500	330	100	13	19	12.4	12	8	4	2	1.6	0.3
1ME4018H	3000	330	100	13	19	12.4	12	8	4	2	2.4	0.3
1ME8030H	1500	330	100	13	22	16.4	16	12	4	2	3.4	0.4

**F RECOMMENDED SOLDER REFLOW PROFILE**



Profile Feature	Recommended Conditions
Average ramp-up rate (Tsmax to Tp)	3°C/second max.
Preheat	
Temperature Min (Tsmmin)	100°C
Temperature Max (Tsmmax)	150°C
Time (Tsmmin to Tsmmax)(ts)	60-180 seconds
Time maintained above:	
Temperature (Tl)	217°C
Time (tl)	60-150 seconds
Peak Temperature (Tp)	See Table2
Time within 5°C of actual Peak Temperature (tp) <sup>2</sup>	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 <sup>3</sup> <350	Volume mm <sup>3</sup> 350 - 2000	Volume mm <sup>3</sup> >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.