

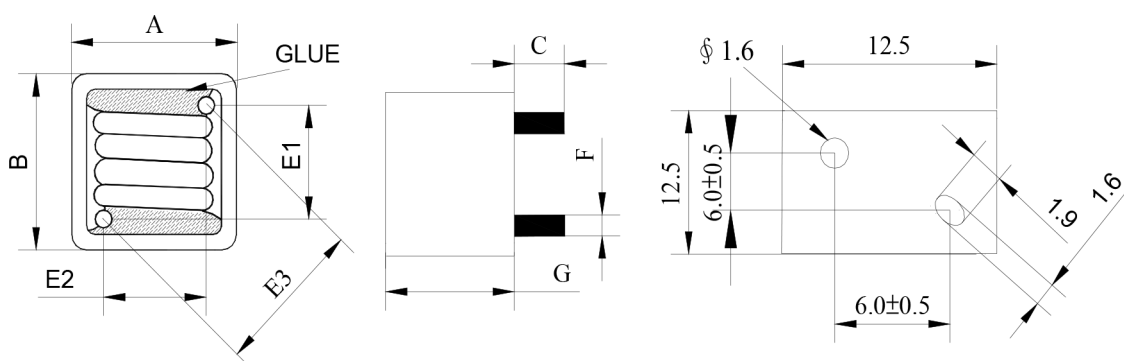
Unshielded Power Inductors - Radial Leaded

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**RoHS
Compliant**



Mechanical Dimensions



Suggest PCB Layout

Part Number	A	B	C	E1	E2	E3	F	G	
MP005780	12 (Max.)		9 (Max.)	6 ±0.5		8.5 ±0.5	Ø1.3 ±0.1	3.5 ±0.5	
MP005781	11.5 ±0.3		8.5 ±0.5	5.4 ±0.5	6.6 ±0.5		Φ1.1 ±0.1		
MP005782	12 (Max.)	12 (Max.)	9 (Max.)	6.7 ±0.5	5.8 ±0.5	8.9 ±0.5	Ø0.9 ±0.1		
MP005783				5.7 ±0.5	6.3 ±0.5	8.5 ±0.5	Ø 1.5±0.1		
MP005784	11.7 (Max.)		8.5 (Max.)	6.4 ±0.5		9 ±0.5	Φ1.3 ±0.1		
MP005785				5.7 ±0.5		8.5 ±0.5	Φ1.5 ±0.1		

Electrical Characteristics

Part Number	L ± Tol	DCR (mΩ)	Isat (A)	Irms (A)	Op. Temp
MP005780	1μH ±20%	1.45 ±8%	40	35	-20°C to 125°C.
MP005781	1.4μH ±15%	2.1 ±7%	50	43	-55°C to +130°C
MP005782	2.5μH ±20%	4.7 ±8%	25	15	-20°C to 125°C.
MP005783	470nH ±15%	0.8 ±8%	50	38	-40°C to 125°C.
MP005784	800nH ±20%	1.3 ±8%	45	31	-25°C to 125°C.
MP005785	470nH ±15%	0.8 ±8%	50	38	-55°C to +130°C

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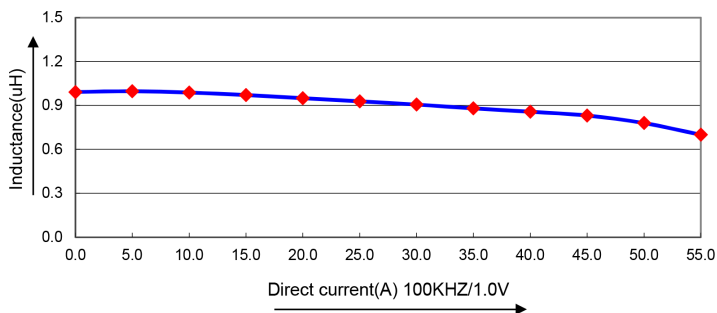
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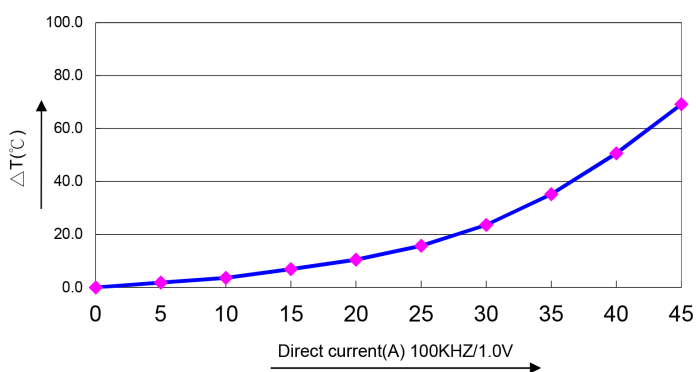
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Test Curve

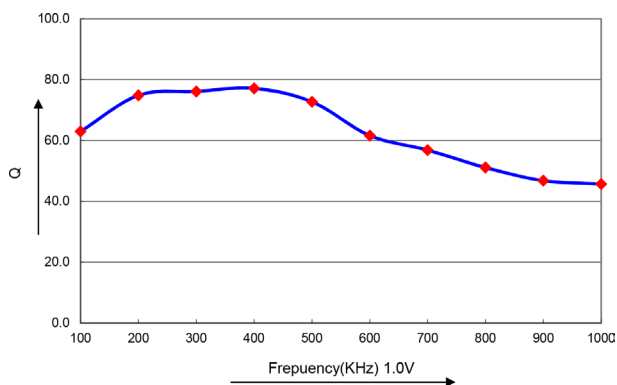
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Direct current(A)	0	5	10	15	20	25	30	35	40	45	50	55
Inductance(uH)	0.99	1	0.99	0.97	0.95	0.93	0.91	0.88	0.86	0.83	0.78	0.7



Direct current (A)	0	5	10	15	20	25	30	35	40	45
temperature (°C)	0	1.8	3.6	6.9	10.5	15.7	23.6	35.2	50.6	69.2



Frequency(KHz)	100	200	300	400	500	600	700	800	900	1000
Quality Factor	63	74.8	76.1	77.1	72.7	61.6	56.8	51.1	46.8	45.7

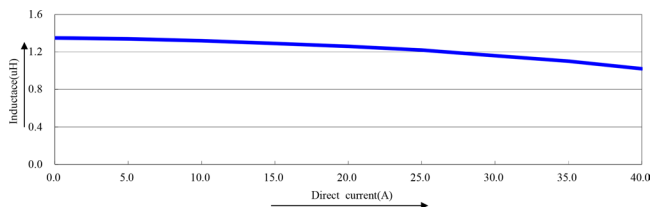
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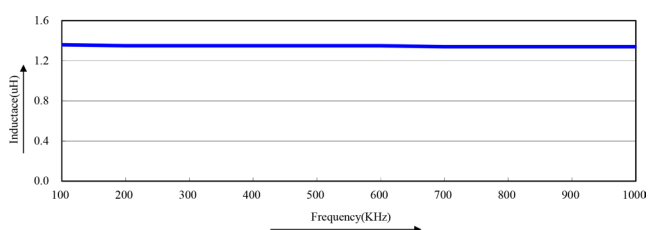
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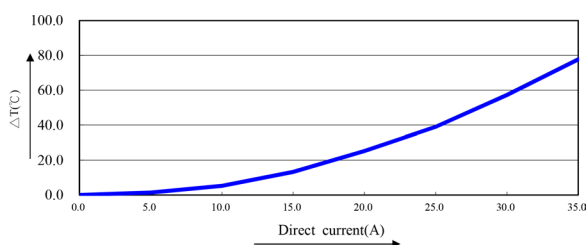
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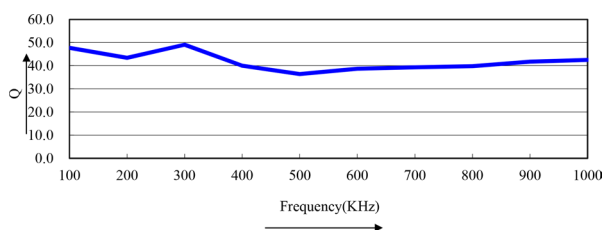
Direct current(A)	0	5	10	15	20	25	30	35	40
Inductance(uH)	1.35	1.34	1.32	1.29	1.26	1.22	1.16	1.1	1.02



Frequency(KHz)	100	200	300	400	500	600	700	800	900	1000
Inductance(uH)	1.36	1.35	1.35	1.35	1.35	1.35	1.34	1.34	1.34	1.34



Direct current(A)	0	5	10	15	20	25	30	35
ΔT(°C)	0	1.4	5.3	13.3	25.2	39	57.3	77.7



Frequency(KHz)	100	200	300	400	500	600	700	800	900	1000
Q	47.7	43.44	49.1	40.02	36.42	38.7	39.3	39.8	41.75	42.55

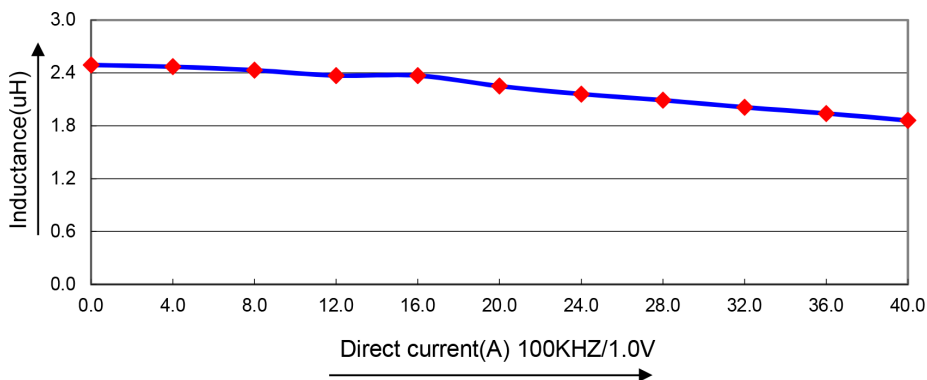
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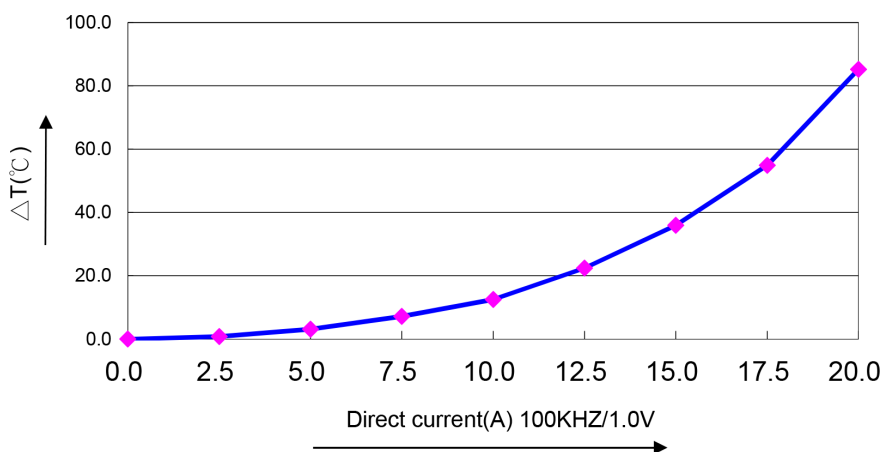
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Direct current(A)	0	4	8	12	16	20	24	32	36	40
Inductance(uH)	2.49	2.47	2.43	2.37	2.37	2.25	2.16	2.01	1.94	1.86

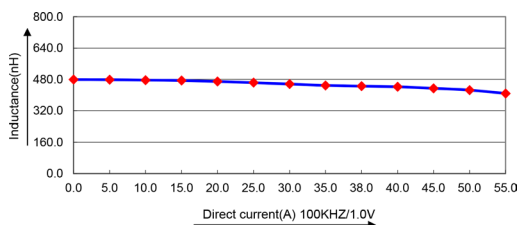


Direct current(A)	0	2.5	5	7.5	10	12.5	15	17.5	20
temperature($^{\circ}C$)	0	0.8	3.1	7.2	12.5	22.4	35.9	-	85.2

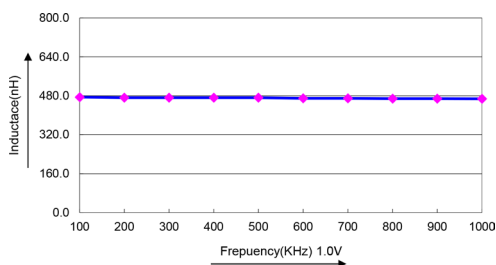
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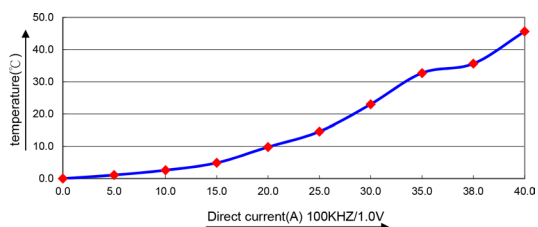
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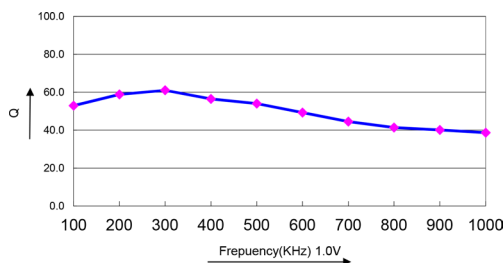
Direct current(A)	0	5	10	15	20	25	30	35	38	40	45	50	55
Inductance(nH)	479	478	476	474	469	463	456	449	445	442	434	425	408



Frequency(KHz)	100	200	300	400	500	600	700	800	900	1000
Inductance(nH)	474	472	472	472	472	469	469	468	468	467



Direct current(A)	0	5	10	15	20	25	30	35	38	40
temperature(°C)	0	1.1	2.6	4.9	9.8	14.6	23	32.7	35.6	45.6

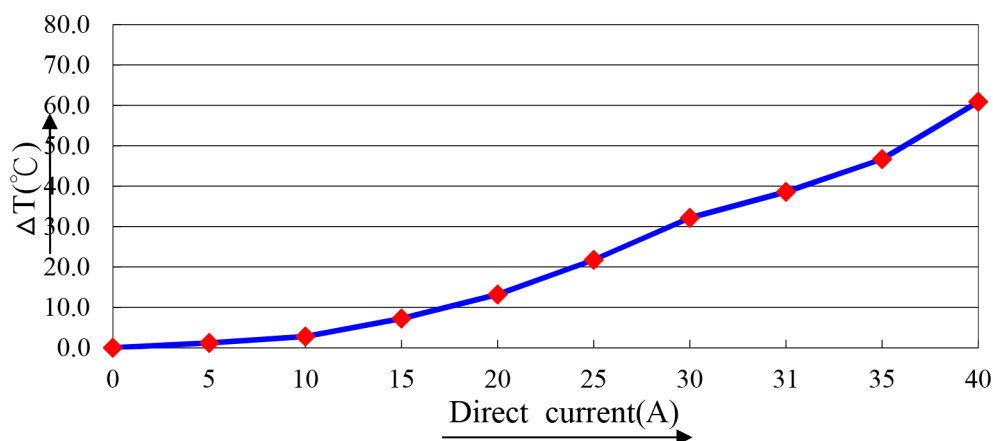
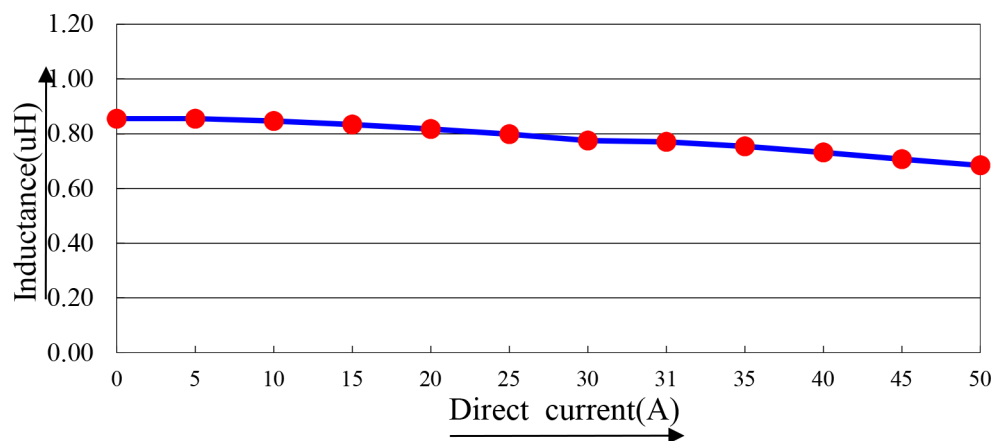


Frequency(KHz)	100	200	300	400	500	600	700	800	900	1000
Quality Factor	52.9	58.8	61	56.5	54	49.3	44.5	41.4	40.1	38.7

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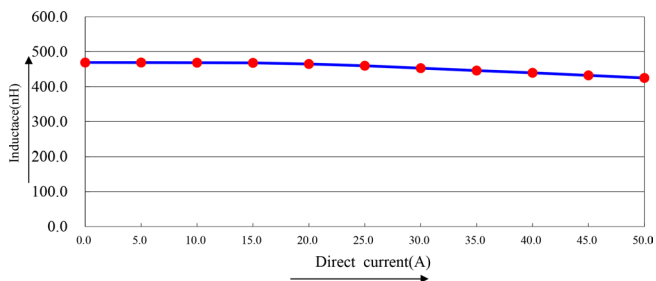
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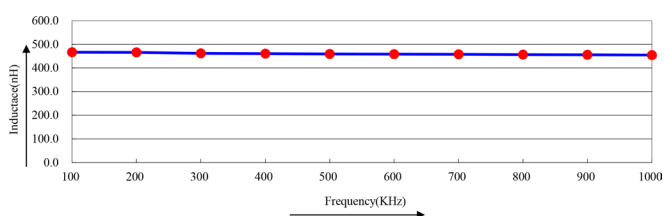
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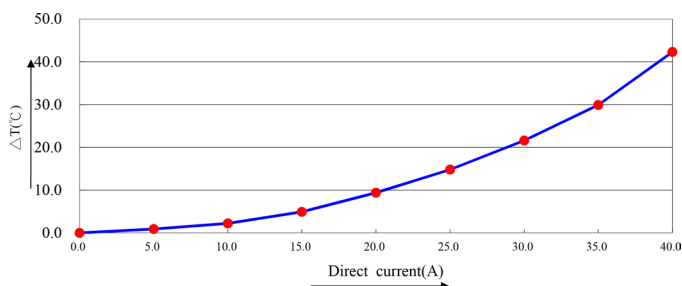
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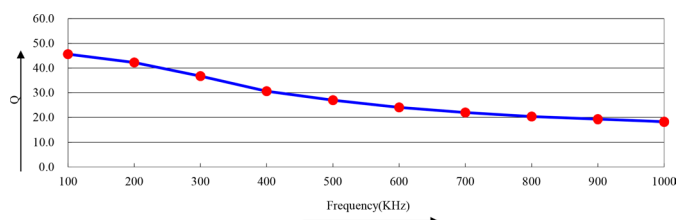
Direct current(A)	0	5	10	15	20	25	30	35	40	45	50
Inductance(nH)	469.04	468.65	468.23	467.98	464.74	459.5	452.85	446.02	439.5	432.2	424.8



Frequency(KHz)	100	200	300	400	500	600	700	800	900	1000
Inductance(nH)	466.9	465.9	462	460.38	459.28	458.55	457.8	456.6	455.8	454.9



Direct current(A)	0	5	10	15	20	25	30	35	40
ΔT(°C)	0	0.9	2.2	4.9	9.4	14.8	21.6	29.9	42.3



Frequency(KHz)	100	200	300	400	500	600	700	800	900	1000
Q	45.62	42.23	36.7	30.59	26.95	24.04	21.97	20.31	19.26	18.25

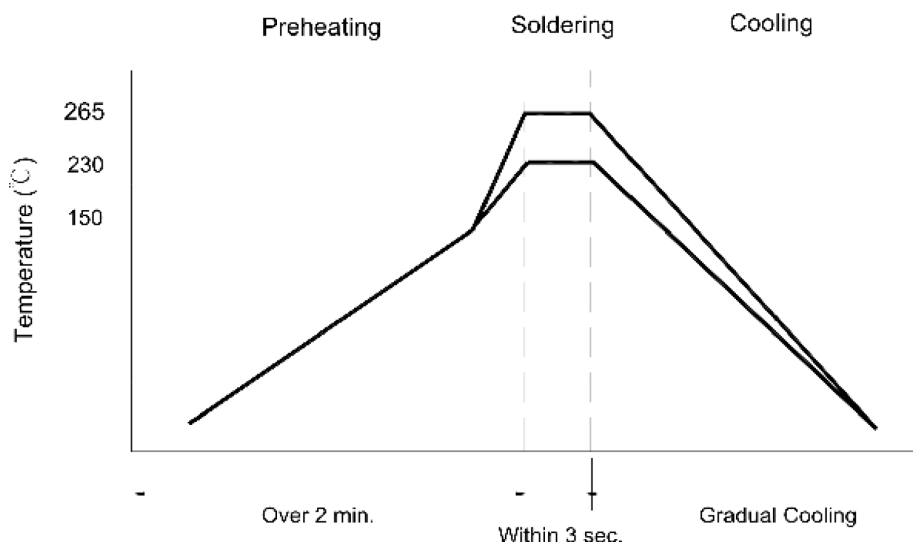
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Wave Soldering Profile



Part Number Table

Description	Part Number
Power Inductor, Unshielded, 1 μ H, 20%, Radial Leaded	MP005780
Power Inductor, Unshielded, 1.4 μ H, 15%, Radial Leaded	MP005781
Power Inductor, Unshielded, 2.5 μ H, 20%, Radial Leaded	MP005782
Power Inductor, Unshielded, 470nH, 15%, Radial Leaded	MP005783
Power Inductor, Unshielded, 800nH, 20%, Radial Leaded	MP005784
Power Inductor, Unshielded, 470nH, 15%, Radial Leaded	MP005785

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