

SMD Power Choke Coil

YPMC 10XX-12XX Series

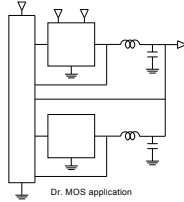
1. Features

1. Carbonyl powder inductor.
2. Compact design.
3. High current · low DCR · high efficiency.
4. Very low acoustic noise and very low leakage flux noise.
5. High reliability.
6. 100% Lead(Pb) & Halogen-Free and RoHS compliant.



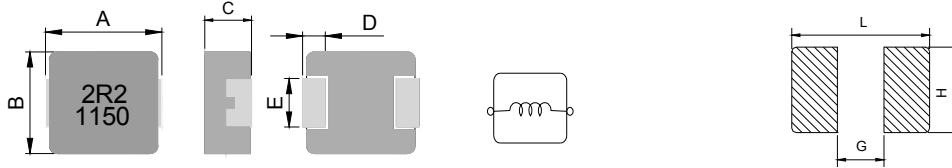
2. Applications

Note PC power system · incl. IMVP-6
DC/DC converter.

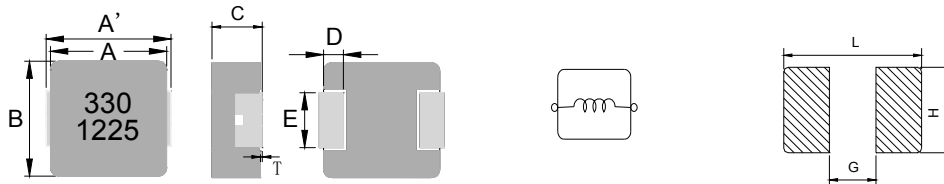


3. Dimensions

Recommend PC Board Pattern

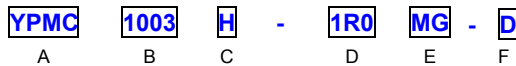


Series	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)	L(mm)	G(mm)	H(mm)
YPMC1004H	11.0±0.5	10.0±0.3	3.8±0.2	2.3±0.3	3.0±0.3	13.6	5.4	3.5
YPMC1003H	11.0±0.5	10.0±0.3	2.8±0.2	2.3±0.3	3.0±0.3	13.6	5.4	3.5
YPMC1005H	11.0±0.5	10.0±0.3	4.8±0.2	2.3±0.3	3.0±0.3	13.6	5.4	3.5
YPMC1203HP	13.5±0.5	12.5±0.3	2.8±0.2	2.3±0.3	4.7±0.3	14.5	8.0	5.0
YPMC1205HP	13.5±0.5	12.5±0.3	4.8±0.2	2.3±0.3	4.7±0.3	14.2	8.0	5.0
YPMC1206HP	13.5±0.5	12.5±0.3	5.7±0.3	2.3±0.3	4.7±0.3	14.2	8.0	5.0
YPMC1235HP	13.5±0.5	12.5±0.3	3.3±0.2	2.3±0.3	4.7±0.3	14.2	8.0	5.0
YPMC1265HP	13.5±0.5	12.5±0.3	6.2±0.3	2.3±0.3	4.7±0.3	14.2	8.0	5.0



Series	A(mm)	A'(mm)	B(mm)	C(mm)	D(mm)	E(mm)	T(mm)	L(mm)	G(mm)	H(mm)
YPMC1707HP	16.9±0.3	17.3±0.4	16.9±0.3	6.7±0.3	2.1±0.3	11.9±0.3	0~+0.25	18.5	12.2	12.5

4. Part Numbering



- A: Series
- B: Dimension
- C: Type
- D: Inductance
- E: Inductance Tolerance
- F: D/C
- BxC
- Carbonyl Powder
- 1R0=1.00uH
- M=±20%, Y=±30%
- 印字:黑色.1R0 及 D/C 1205 (D/C 前二碼是年份,後二碼是週期,依實際生產週期而定)



- A: Series
- B: Dimension
- C: Type
- D: Inductance
- E: Inductance Tolerance
- F: D/C
- BxC
- H: Carbonyl Powder : P: PAD broaden
- 100=10uH
- M=±20%
- 印字:黑色.100 及 D/C 1150 (D/C 前二碼是年份,後二碼是週期,依實際生產週期而定)

5. Specification

Part Number	Inductance L0 (uH) @ 0 A	I rms (A) Typ.	I sat (A) Typ.	DCR (mΩ) Typ. @25°C	DCR (mΩ) Max. @25°C
YPMC1003H-R22YG-D	0.22±30%	30	55	1.1	1.3
YPMC1003H-R36MG-D	0.36±20%	23	40	1.3	1.6
YPMC1003H-R47MG-D	0.47±20%	20	33	2.1	2.5
YPMC1003H-R56MG-D	0.56±20%	16	24	2.6	3.0
YPMC1003H-1R0MG-D	1.00±20%	15	20	4.6	6.0
YPMC1003H-1R5MG-D	1.50±20%	13	20	6.5	7.5
YPMC1003H-2R2MG-D	2.20±20%	12	16	8.0	9.0
YPMC1003H-3R3MG-D	3.30±20%	9	14	14.5	16
YPMC1003H-4R7MG-D	4.70±20%	7	13	20.5	22.5
YPMC1003H-5R6MG-D	5.60±20%	7	12	28	32.5
YPMC1003H-6R8MG-D	6.80±20%	6.5	9.5	30.2	35
YPMC1003H-8R2MG-D	8.20±20%	6	8.5	42	48
YPMC1003H-100MG-D	10.0±20%	5	8	50	55
YPMC1003H-220MG-D	22.0±20%	3	5.5	115	140
YPMC1003H-470MG-D	47.0±20%	2	4	216	260
YPMC1004H-R15MG-D	0.15±20%	43	75	0.5	0.6
YPMC1004H-R22MG-D	0.22±20%	35	60	0.8	1.0
YPMC1004H-R27MG-D	0.27±20%	33	60	0.82	1.0
YPMC1004H-R30MG-D	0.30±20%	32	60	0.94	1.1
YPMC1004H-R36MG-D	0.36±20%	31	60	1.05	1.2
YPMC1004H-R39MG-D	0.39±20%	30	60	1.1	1.3
YPMC1004H-R45MG-D	0.45±20%	29	45	1.3	1.5
YPMC1004H-R47MG-D	0.47±20%	28	43	1.3	1.5
YPMC1004H-R56MG-D	0.56±20%	25	40	1.6	1.8
YPMC1004H-R68MG-D	0.68±20%	22	39	2.4	2.7
YPMC1004H-1R0MG-D	1.00±20%	18	36	3.0	3.3
YPMC1004H-1R5MG-D	1.50±20%	16	33	4.0	4.6
YPMC1004H-2R2MG-D	2.20±20%	12	27	6.5	7.0
YPMC1004H-2R5MG-D	2.50±20%	11.5	23	7.9	8.7
YPMC1004H-3R3MG-D	3.30±20%	11	20	10.8	11.8
YPMC1004H-4R0MG-D	4.00±20%	10.2	18	13	15
YPMC1004H-4R7MG-D	4.70±20%	10	17	15.0	15.5
YPMC1004H-5R6MG-D	5.60±20%	9.0	14	17	19.3
YPMC1004H-6R8MG-D	6.80±20%	8.5	13.5	17.5	23.3
YPMC1004H-8R2MG-D	8.20±20%	8.0	12.5	20	22.5
YPMC1004H-100MG-D	10.0±20%	7.5	12.0	27.0	30
YPMC1004H-150MG-D	15.0±20%	6.25	10	40	45
YPMC1004H-220MG-D	22.0±20%	5.0	7.0	64	74
YPMC1004H-270MG-D	27.0±20%	4.0	6.0	86	100
YPMC1004H-330MG-D	33.0 ±20%	3.5	5.0	92	112
YPMC1004H-680MG-D	68.0 ±20%	2.0	3.0	205	240
YPMC1005H-R30MG-D	0.30±20%	38	65	0.57	0.61
YPMC1005H-1R0MG-D	1.00±20%	22	30	2.8	3.5
YPMC1005H-1R2MG-D	1.20±20%	20	28	2.9	3.5
YPMC1005H-1R3MG-D	1.30±20%	20	28	3.2	3.7
YPMC1005H-1R5MG-D	1.50±20%	19	27	3.5	4.1
YPMC1005H-2R2MG-D	2.20±20%	16	24	5.4	6.0
YPMC1005H-3R3MG-D	3.30±20%	14	22	9.0	10.4
YPMC1005H-100MG-D	10.0±20%	8	13.5	25	29
YPMC1005H-330MG-D	33.0±20%	4.3	7.5	80	92
YPMC1005H-470MG-D	47.0±20%	3.8	6.5	125	145
YPMC1005H-680MG-D	68.0±20%	2.5	4.0	176	205

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Part Number	Inductance L0 (uH) $\pm 20\%$ @ 0 A	I rms (A) typ.	I sat (A) typ.	DCR (m Ω) typ. @25 $^{\circ}$ C	DCR (m Ω) max. @25 $^{\circ}$ C
YPMC1205HP-R33MG-D	0.33 $\pm 20\%$	42	80	0.7	0.9
YPMC1205HP-R47MG-D	0.47 $\pm 20\%$	38	65	0.86	1.1
YPMC1205HP-R56MG-D	0.56 $\pm 20\%$	36	55	1.0	1.5
YPMC1205HP-R68MG-D	0.68 $\pm 20\%$	34	54	1.4	1.7
YPMC1205HP-1R0MG-D	1.00 $\pm 20\%$	29	50	1.85	2.5
YPMC1205HP-1R5MG-D	1.50 $\pm 20\%$	27	48	2.8	3.3
YPMC1205HP-1R8MG-D	1.80 $\pm 20\%$	21	40	4.0	4.9
YPMC1205HP-2R2MG-D	2.20 $\pm 20\%$	20	32	4.2	5.5
YPMC1205HP-3R3MG-D	3.30 $\pm 20\%$	15	32	6.8	9.2
YPMC1205HP-4R7MG-D	4.70 $\pm 20\%$	12	27	11.4	15.0
YPMC1205HP-5R6MG-D	5.60 $\pm 20\%$	11.5	22	12.3	16.5
YPMC1205HP-6R8MG-D	6.80 $\pm 20\%$	11	21	14.5	18.5
YPMC1205HP-8R2MG-D	8.20 $\pm 20\%$	9.5	18	16.8	22.5
YPMC1205HP-100MG-D	10.0 $\pm 20\%$	9.0	16	21.4	25.5
YPMC1205HP-180MG-D	18.0 $\pm 20\%$	7.5	11	40	45
YPMC1235HP-R10YG-D	0.10 $\pm 30\%$	43	84	0.36	0.43
YPMC1235HP-R15YG-D	0.15 $\pm 30\%$	41	75	0.4	0.48
YPMC1235HP-R22MG-D	0.22 $\pm 20\%$	38.5	65	0.7	0.81
YPMC1235HP-R33MG-D	0.33 $\pm 20\%$	36.5	62	0.85	1.0
YPMC1235HP-R45MG-D	0.45 $\pm 20\%$	33	58	1.05	1.5
YPMC1235HP-R47MG-D	0.47 $\pm 20\%$	32	55	1.2	1.8
YPMC1235HP-R60MG-D	0.60 $\pm 20\%$	29	51	1.5	2.2
YPMC1235HP-R68MG-D	0.68 $\pm 20\%$	28	49	1.9	2.5
YPMC1235HP-R82MG-D	0.82 $\pm 20\%$	25	44	2.2	3
YPMC1235HP-1R0MG-D	1.00 $\pm 20\%$	24	40	2.7	3.5
YPMC1235HP-1R5MG-D	1.50 $\pm 20\%$	19	35	4.8	5.5
YPMC1235HP-1R8MG-D	1.80 $\pm 20\%$	17	30	5.2	7
YPMC1235HP-2R2MG-D	2.20 $\pm 20\%$	16	29	6.3	8.0
YPMC1235HP-3R3MG-D	3.30 $\pm 20\%$	12	27	11	13.5
YPMC1235HP-4R7MG-D	4.70 $\pm 20\%$	10	24	15.3	18.5
YPMC1235HP-5R6MG-D	5.60 $\pm 20\%$	9.5	19	18	22
YPMC1235HP-6R8MG-D	6.80 $\pm 20\%$	9	18	20	24
YPMC1235HP-8R2MG-D	8.20 $\pm 20\%$	8.5	16	23	28
YPMC1235HP-100MG-D	10.0 $\pm 20\%$	7	14	29	34
YPMC1235HP-330MG-D	33.0 $\pm 20\%$	3.5	6.0	132	160
YPMC1265HP-R15MG-D	0.15 $\pm 20\%$	55	118	0.49	0.60
YPMC1265HP-R22MG-D	0.22 $\pm 20\%$	53	112	0.47	0.60
YPMC1265HP-R30MG-D	0.30 $\pm 20\%$	48	72	0.6	0.72
YPMC1265HP-R33MG-D	0.33 $\pm 20\%$	46	68	0.65	0.8
YPMC1265HP-R36MG-D	0.36 $\pm 20\%$	45	66	0.7	0.9
YPMC1265HP-R40MG-D	0.40 $\pm 20\%$	44	64	0.7	1.0
YPMC1265HP-R47MG-D	0.47 $\pm 20\%$	41	63	0.9	1.2
YPMC1265HP-R50MG-D	0.50 $\pm 20\%$	40	60	0.92	1.25
YPMC1265HP-R56MG-D	0.56 $\pm 20\%$	37	58	1.05	1.2
YPMC1265HP-R68MG-D	0.68 $\pm 20\%$	35	55	1.25	1.5
YPMC1265HP-R82MG-D	0.82 $\pm 20\%$	33	50	1.5	1.9
YPMC1265HP-1R0MG-D	1.00 $\pm 20\%$	30	48	1.7	2.3
YPMC1265HP-1R5MG-D	1.50 $\pm 20\%$	27	45	2.5	3.0
YPMC1265HP-2R2MG-D	2.20 $\pm 20\%$	22	37	3.8	4.2
YPMC1265HP-3R3MG-D	3.30 $\pm 20\%$	18	30	5.7	6.8
YPMC1265HP-4R7MG-D	4.70 $\pm 20\%$	13.5	28	7.0	8.4
YPMC1265HP-5R6MG-D	5.60 $\pm 20\%$	12.5	23	8.5	10
YPMC1265HP-6R8MG-D	6.80 $\pm 20\%$	11.5	18	9.5	11.5
YPMC1265HP-8R2MG-D	8.20 $\pm 20\%$	10.5	16	12	15.5
YPMC1265HP-130MG-D	13.0 $\pm 20\%$	9	13	21	24
YPMC1265HP-150MG-D	15.0 $\pm 20\%$	9	12.5	23.2	28
YPMC1265HP-220MG-D	22.0 $\pm 20\%$	9	12	32.5	37
YPMC1265HP-470MG-D	47.0 $\pm 20\%$	6.5	9.5	76	90

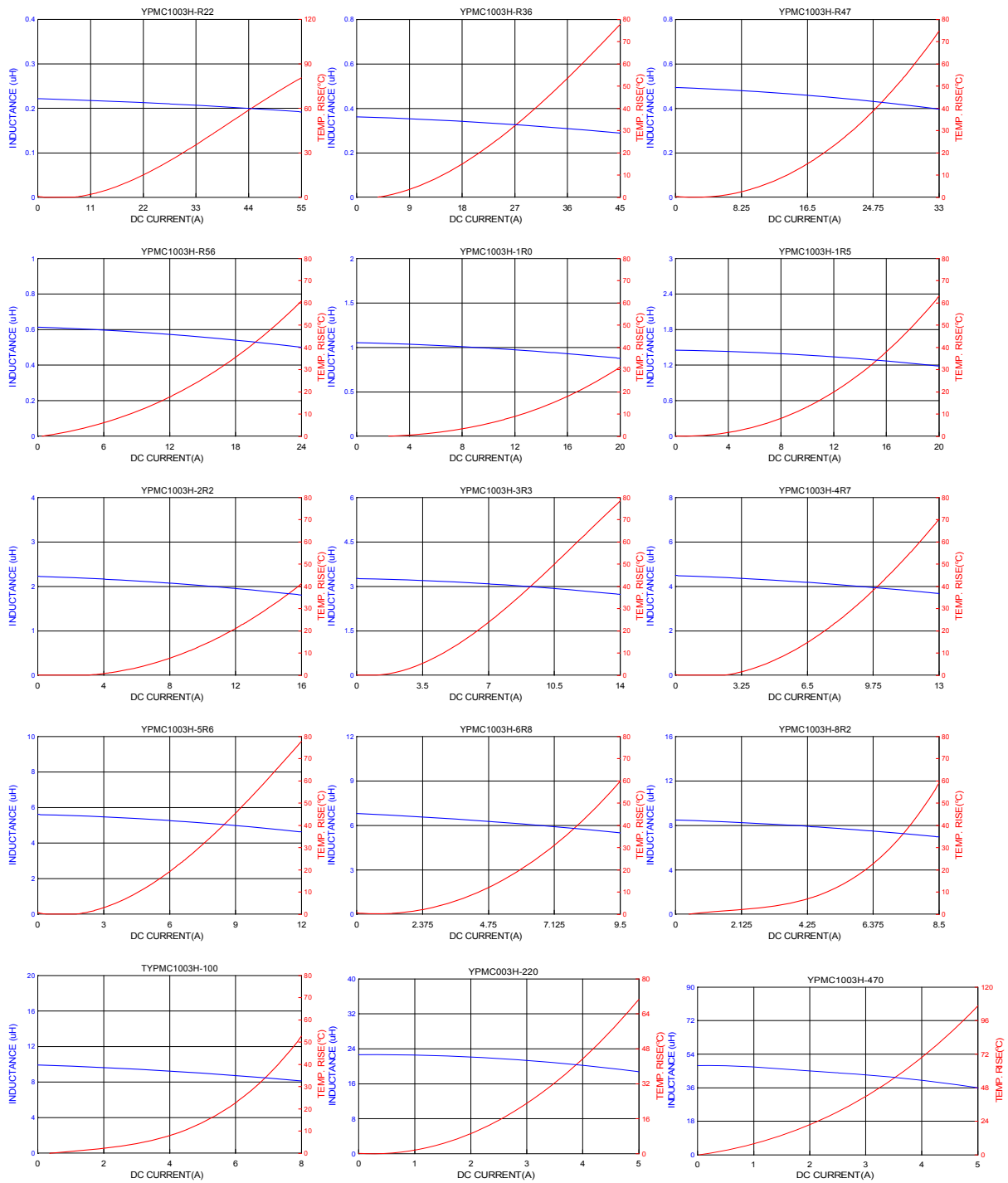
YOSONIC

Part Number	Inductance L0 (uH) @ 0 A	I rms (A) typ.	I sat 1 (A) typ.	I sat 2 (A) typ.	DCR (mΩ) typ. @25°C	DCR (mΩ) max. @25°C
YPMC1206HP-6R8MG-D	6.80±20%	15	19	25	12	13.8
YPMC1206HP-100MG-D	10.0±20%	11	15.5	21	18	20.7
YPMC1206HP-120MG-D	12.0±20%	9.5	13.5	18	20	23
YPMC1206HP-150MG-D	15.0±20%	9.0	13	16	25	29
YPMC1206HP-180MG-D	18.0±20%	8.5	12	15	30	35
YPMC1206HP-220MG-D	22.0±20%	8.0	11	14	34	39.5
YPMC1206HP-270MG-D	27.0±20%	7.0	9.0	13	49	56
YPMC1206HP-330MG-D	33.0±20%	6.0	8.0	12.0	65	75
YPMC1206HP-470MG-D	47.0±20%	5.5	7.0	11.0	80	90
YPMC1206HP-680MG-D	68.0±20%	5.0	6.0	9.0	120	140
YPMC1206HP-101MG-D	100±20%	4.0	5.0	8.0	180	200
YPMC1206HP-121MG-D	120±20%	3.5	4.5	7.0	210	235
YPMC1206HP-151MG-D	150±20%	3.0	4.0	6.0	300	350
YPMC1707HP-2R2MG-D	2.20±20%	43.5	47	62	2.4	2.7
YPMC1707HP-3R3MG-D	3.30±20%	28	45	54	3.5	3.9
YPMC1707HP-4R7MG-D	4.70±20%	25	41	50	4.8	5.5
YPMC1707HP-5R6MG-D	5.60±20%	21	40	45	5.8	7.05
YPMC1707HP-6R8MG-D	6.80±20%	19	32	39	8.4	9.2
YPMC1707HP-8R2MG-D	8.20±20%	18	25	31	9.6	10.8
YPMC1707HP-100MG-D	10.0±20%	16.5	24	29	11.8	13.0
YPMC1707HP-150MG-D	15.0±20%	12.5	23	27	17.8	20.5
YPMC1707HP-220MG-D	22.0±20%	12	18	23	25.1	26.5
YPMC1707HP-330MG-D	33.0±20%	10.7	15	20	38.0	44.0
YPMC1707HP-470MG-D	47.0±20%	8.7	9.5	16	48.0	55.0
YPMC1707HP-101MG-D	100±20%	5.3	6.5	12	102.0	118.0

Note:

1. Test frequency : L : 100KHz /1.0V
2. All test data referenced to 25°C ambient.
3. Testing Instrument : L/Q: HP4284A,CH11025,CH3302,CH1320 ,CH1320S LCR METER / Rdc:CH16502,Agilent33420A MICRO OHMMETER.
4. Heat Rated Current (I rms) will cause the coil temperature rise approximately $\Delta t \leq 40^\circ\text{C}$ (keep 1min.).
5. Saturation Current (Isat 1) will cause L0 to drop $\leq 20\%$ typical. (keep quickly).
Saturation Current (Isat 2) will cause L0 to drop $\leq 30\%$ typical. (keep quickly).
6. The part temperature (ambient + temp rise) should not exceed 125°C under worst case operating conditions.Circuit design,component,PCB trace size and thickness,airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.
7. Special inquiries besides the above common used types can be met on your requirement.

10. Typical Performance Curves



10. Typical Performance Curves

