SMD Power Choke Coil

TMPC0402HP-Series(G)-Z02

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.

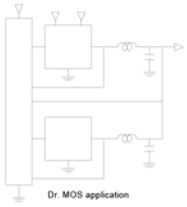
Halogen-free

Pb-free

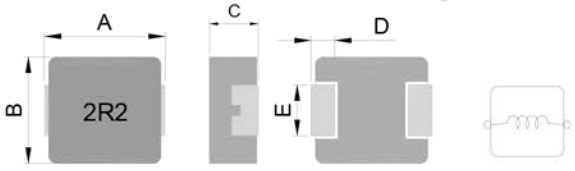
2. Applications

Note PC power system，incl. IMVP-6

DC/DC converter.

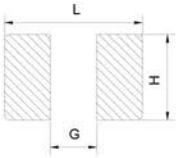


3. Dimensions



Series	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)
TMPC0402HP	4.45±0.25	4.06±0.25	1.8±0.2	0.76±0.30	2.0±0.20

Recommend PC Board Pattern



L(mm)	G(mm)	H(mm)
5.2	2.2	2.4

4. Part Numbering

TMPC	0402	HP	-	2R2	MG	-	Z02
A	B	C		D	E		F

A: Series
B: Dimension — BxC
C: Type — H: Carbonyl powder；P: PAD broaden
D: Inductance — 2R2=2.20uH
E: Inductance Tolerance — M=±20%；Y=±30%
F: Control S/N — 印字:黑色,單向印字

5. Specification

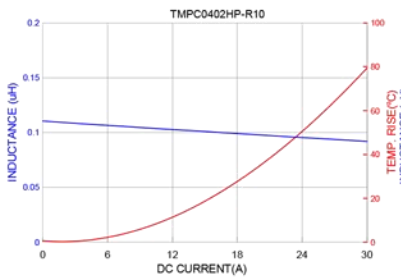
Part Number	Inductance L0 (uH) @ 0 A	I rms (A) typ.	I sat (A) typ.	DCR (mΩ) typ. @25℃	DCR (mΩ) max. @25℃
TMPC0402HP-R10YG-Z02	0.10±30%	12	35	3.2	4.0
TMPC0402HP-R22YG-Z02	0.22±30%	13	24	6.6	7.3
TMPC0402HP-R33MG-Z02	0.33±20%	10	18	7.8	8.6
TMPC0402HP-R47MG-Z02	0.47±20%	8.0	12	11.2	14
TMPC0402HP-R56MG-Z02	0.56±20%	7.3	10	13.5	16
TMPC0402HP-R68MG-Z02	0.68±20%	7	10	16	19
TMPC0402HP-1R0MG-Z02	1.00±20%	5.0	8.5	22	27
TMPC0402HP-1R2MG-Z02	1.20±20%	4.8	7.8	25	30
TMPC0402HP-1R5MG-Z02	1.50±20%	4.5	7.0	34.8	42
TMPC0402HP-2R2MG-Z02	2.20±20%	4.0	6.0	51	61
TMPC0402HP-3R3MG-Z02	3.30±20%	3.5	4.0	69	76
TMPC0402HP-4R7MG-Z02	4.70±20%	2.6	3.5	95	105
TMPC0402HP-5R6MG-Z02	5.60±20%	2.2	3.0	112	125
TMPC0402HP-6R8MG-Z02	6.80±20%	2.1	2.8	150	172
TMPC0402HP-8R2MG-Z02	8.20±20%	2.0	2.5	158	180
TMPC0402HP-100MG-Z02	10.0±20%	1.8	2.3	215	243
TMPC0402HP-150MG-Z02	15.0±20%	1.5	1.9	325	374

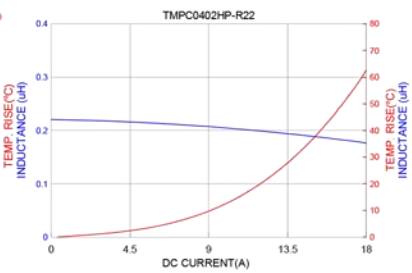
Part Number	Inductance L0 (uH) @ 0 A	I rms (A) typ.	I sat (A) typ.	DCR (mΩ) typ. @25℃	DCR (mΩ) max. @25℃
TMPC0402HP-220MG-Z02	22.0±20%	1.2	1.4	470	500

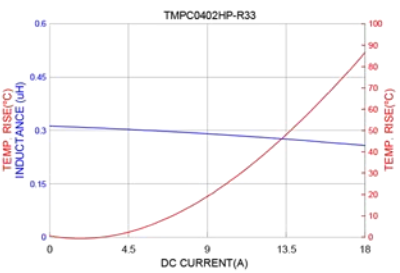
Note:

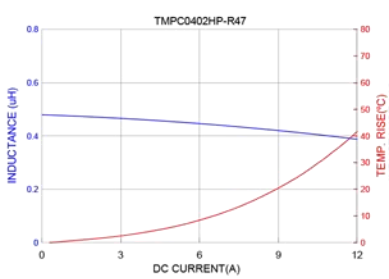
1. Test frequency : L : 100KHz /1.0V
2. All test data referenced to 25℃ ambient.
3. Testing Instrument : L/Q: HP4284A,CH11025,CH3302,CH1320 ,CH1320S LCR METER / Rdc:CH16502,Agilent33420A MICRO OHMMETER.
4. Heat Rated Current (Irms) will cause the coil temperature rise approximately $\Delta t \leqq 40$℃ (keep 1min.).
5. Saturation Current (Isat) will cause L0 to drop ≦ 20% typical. (keep quickly).
6. The part temperature (ambient + temp rise) should not exceed 125℃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.

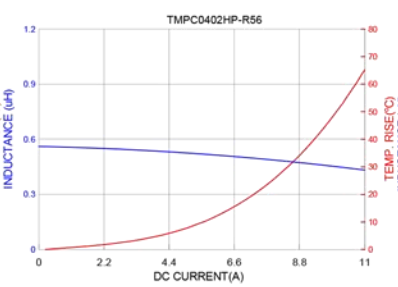
10. Typical Performance Curves

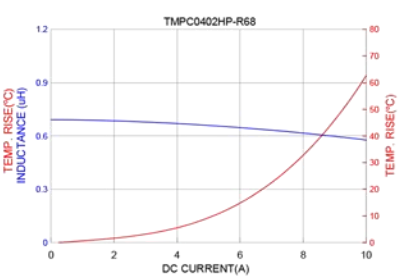


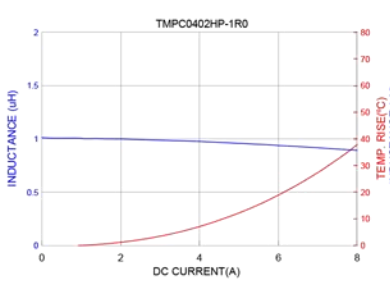


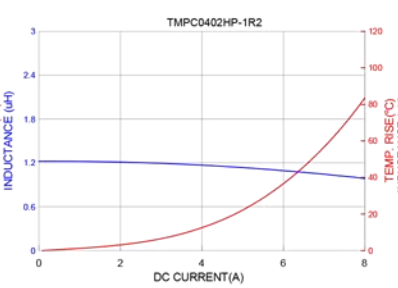


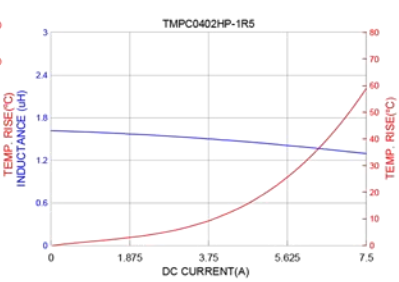


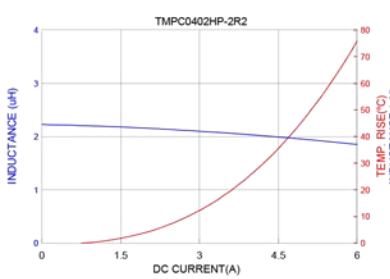


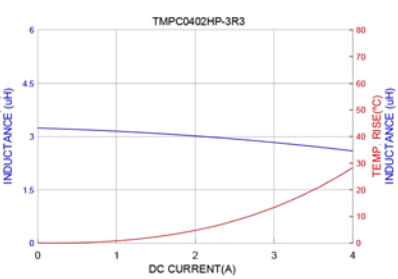


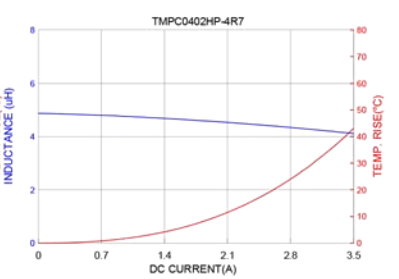


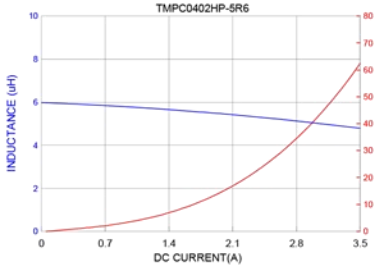


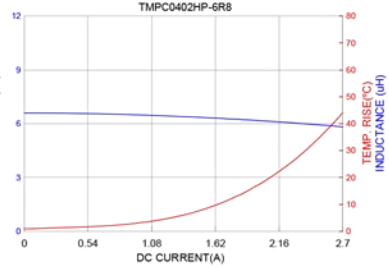


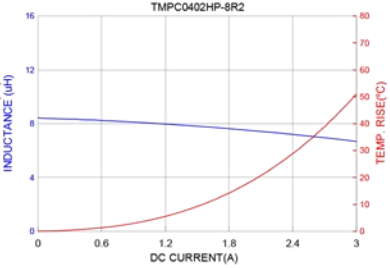


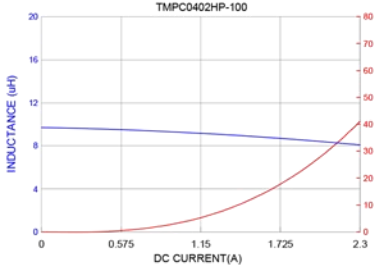





TMPC0402HP-5R6
INDUCTANCE (uH)
TEMP. RISE(°C)
DC CURRENT(A)
0
0.7
1.4
2.1
2.8
3.5
2
4
6
8
10
10
20
30
40
50
60
70
80


TMPC0402HP-6R8
INDUCTANCE (uH)
TEMP. RISE(°C)
DC CURRENT(A)
0
0.54
1.08
1.62
2.16
2.7
3
6
9
12
10
20
30
40
50
60
70
80


TMPC0402HP-8R2
INDUCTANCE (uH)
TEMP. RISE(°C)
DC CURRENT(A)
0
0.6
1.2
1.8
2.4
3
4
8
12
16
10
20
30
40
50
60
70
80


TMPC0402HP-100
INDUCTANCE (uH)
TEMP. RISE(°C)
DC CURRENT(A)
0
0.575
1.15
1.725
2.3
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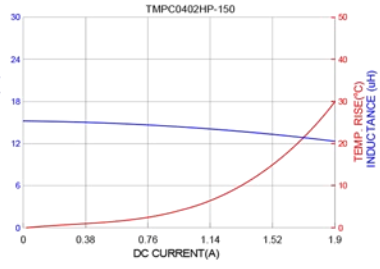
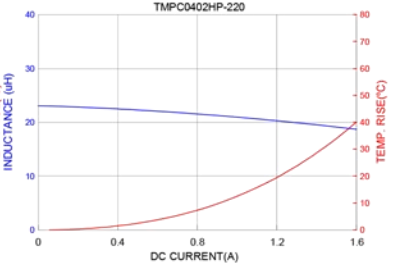
8
12
16
20
10
20
30
40
50
60
70
80


TMPC0402HP-150
INDUCTANCE (uH)
TEMP. RISE(°C)
DC CURRENT(A)
0
0.38
0.76
1.14
1.52
1.9
6
12
18
24
30
10
20
30
40
50


TMPC0402HP-220
INDUCTANCE (uH)
TEMP. RISE(°C)
DC CURRENT(A)
0
0.4
0.8
1.2
1.6
10
20
30
40
10
20
30
40
50
60
70
80

SMD Power Choke Coil

TMPC0412HP-Series(G)-Z02

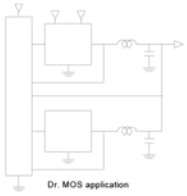
1. Features

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.

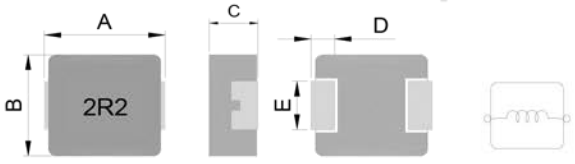
Halogen-free Pb-free

2. Applications

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

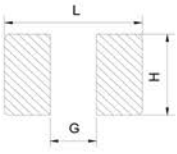


3. Dimensions



Series	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)
TMPC0412HP	4.45±0.25	4.06±0.25	1.0±0.2	0.76±0.30	2.0±0.20

Recommend PC Board Pattern



L(mm)	G(mm)	H(mm)
5.2	2.2	2.3

4. Part Numbering

TMPC	0412	HP	-	2R2	MG	-	Z02
A	B	C		D	E		F

A: Series
B: Dimension — BxC
C: Type — H: Carbonyl powder；P: PAD broaden
D: Inductance — 2R2=2.20uH
E: Inductance Tolerance — M=±20%；Y=±30%
F: Control S/N — 印字:黑色,單向印字

5. Specification

Part Number	Inductance L0 (uH) @ 0 A	I rms (A) typ.	I sat (A) typ.	DCR (mΩ) typ. @25℃	DCR (mΩ) max. @25℃
TMPC0412HP-R10YG-Z02	0.10±30%	11.5	25	4.3	5.5
TMPC0412HP-R22MG-Z02	0.22±20%	8.5	20	6.6	8.0
TMPC0412HP-R47MG-Z02	0.47±20%	6.0	6.5	18	20
TMPC0412HP-1R0MG-Z02	1.00±20%	4.0	6.0	41	47
TMPC0412HP-1R5MG-Z02	1.50±20%	3.0	4.0	55	63.3
TMPC0412HP-2R2MG-Z02	2.20±20%	2.8	3.5	69.2	80
TMPC0412HP-3R3MG-Z02	3.30±20%	2.3	3.0	84	97
TMPC0412HP-4R7MG-Z02	4.70±20%	2.0	2.5	128	145
TMPC0412HP-5R6MG-Z02	5.60±20%	1.7	2.3	180	208
TMPC0412HP-6R8MG-Z02	6.80±20%	1.5	1.7	300	360
TMPC0412HP-8R2MG-Z02	8.20±20%	1.4	1.6	313	376
TMPC0412HP-100MG-Z02	10.0±20%	1.3	1.4	410	463

Note:

1. Test frequency : L : 100KHz /1.0V
2. All test data referenced to 25℃ ambient.
3. Testing Instrument : L/Q: HP4284A,CH11025,CH3302,CH1320 ,CH1320S LCR METER / Rdc:CH16502,Agilent33420A MICRO OHMMETER.
4. Heat Rated Current (Irms) will cause the coil temperature rise approximately $\Delta t \leq 40$℃ (keep 1min.).
5. Saturation Current (Isat) will cause L0 to drop ≤ 20% typical. (keep quickly).
6. The part temperature (ambient + temp rise) should not exceed 125℃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.

6. Typical Performance Curves