

# Specification for Approval

**Date:** 2019/06/15

**Customer :** 深圳市 ( ) 有限公司

**ChanDa P/N:** HPC(全尺寸)-Series

**CUSTOMER P/N:** \_\_\_\_\_

**DESCRIPTION:** \_\_\_\_\_

**QUANTITY :** ( ) PCS

<b>REMARK:</b>		
Customer Approval Feedback		

■ **深圳市成达宝藏电子有限公司**

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**R&D Center**

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# On-Board Type Hi-Current Power Inductors

## Ultra High Current Power Inductors HPC Series

SMD Type Ultra High Current Power Inductor.

贴片式大电流功率电感



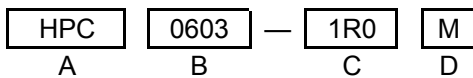
### ■ Features

- Lowest height in this package footprint.
- Shielded construction.
- Lowest DCR/ $\mu\text{H}$ , in this package size.
- Handles high transient current spikes without saturation.
- Ultra low buzz noise, due to composite construction.
- The products contain no lead and also support lead-free soldering.

### ■ Applications

Excellent for power line DC-DC conversion applications used in power switching, personal computers and other handheld electronic equipment.

### ■ Part Numbering



### ● 特征

- 同尺寸高度最低。
- 屏蔽式电感结构。
- 同尺寸直流阻抗最低
- 可确保耐电流电感值降幅平缓。
- 一体式结构可防止噪音。
- 产品无铅适合无铅焊锡。

### ● 应用

适用于电源供应器、个人电脑和其它掌上型电子设备中电源线路直流对直流整流应用。

A:Series

B:Dimension

C:Inductance

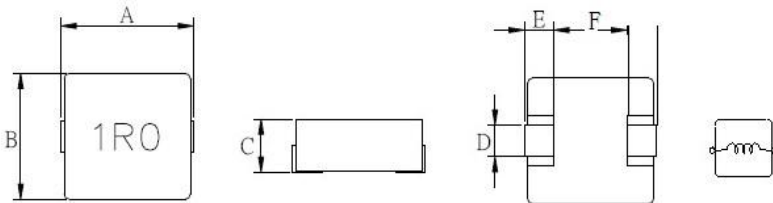
D:Inductance Tolerance

A×C

1R0=1.0 $\mu\text{H}$

M=±20%

### ■ Dimensions



Chip size					
Series	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)
HPC 2510	2.5	2	1	2	0.6
HPC 2512	2.5	2	1.2	2	0.6
HPC 0402	4.4	4.2	2	1.5	0.8
HPC 0502	5.4	5.2	2	2.2	1.2
HPC 0503	5.4	5.2	3	2.2	1.2
HPC 0603	7.3	6.6	3	3	1.6
HPC 0605	7.6	6.6	5	3	1.8
HPC 1004	11	10	4	3	2
HPC 1203	13.2	12.8	3.5	3.5	2.5
HPC 1205	13.2	12.8	5	3.5	2.5
HPC 1265	13.2	12.8	6.5	3.5	2.5
HPC 1707	18.2	17.3	7	11	2.4

### ■ Packaging Quantity

Size	HPC2510	HPC2512	HPC0402	HPC0502	HPC0503	HPC0603	HPC0605	HPC1004	HPC1203	HPC1205	HPC1265	HPC1707
Quantity/Reel	3000PCS	3000PCS	3000PCS	2000PCS	2000PCS	1000PCS	1000PCS	800PCS	1000PCS	500PCS	500PCS	300PCS

**HPC2510-Series**

Part Number	Inductance	DCR (mΩ) Max	I rms (A) Typ.	I sat (A) Typ.
	L0(μH±20%)@1MHz/1v			
HPC2510-R33M	0.33	26	4.0	5.3
HPC2510-R47M	0.47	41	3.1	4.5
HPC2510-R68M	0.68	45	3.0	4.3
HPC2510-1R0M	1.0	65	2.5	3.5
HPC2510-1R5M	1.5	95	2.0	3.0
HPC2510-2R2M	2.2	156	1.5	1.9
HPC2510-4R7M	4.7	300	1.1	1.3

**HPC2512-Series**

Part Number	Inductance	DCR (mΩ) Max	I rms (A) Typ.	I sat (A) Typ.
	L0(μH±20%)@1MHz/1v			
HPC2512-R33M	0.33	17	4.95	5.8
HPC2512-R47M	0.47	28	4.0	5.0
HPC2512-R68M	0.68	43	3.5	4.5
HPC2512-1R0M	1.0	55	2.7	3.8
HPC2512-2R2M	2.2	105	2.0	2.5
HPC2512-3R3M	3.3	144	1.55	2.0
HPC2512-4R7M	4.7	240	1.45	1.7
HPC2512-6R8M	6.8	330	1.20	1.7
HPC2512-100M	10	460	0.85	1.0

- Note:
1. Test frequency:L:1MHz/1V.
  2. Isat:Based on inductance change( $\Delta L/L0 \leq -30\%$ )@ambient temp.25°C
  3. I rms:Based on temperature rise ( $\Delta T:40^{\circ}C$ .)Max

**HPC0402-Series**

Part Number	Inductance	DCR (mΩ)		I rms (A) Typ.	I sat (A) Typ.
	L0(μH±20%)@100KHz/1V0A	Typical	Maximum		
HPC0402-R22M	0.22	6	6.6	9.0	12.5
HPC0402-R33M	0.33	9.6	13	8.0	12
HPC0402-R47M	0.47	12.5	14	7.0	9.5
HPC0402-R56M	0.56	14	16	6.5	10
HPC0402-R68M	0.68	16	18	6.0	9.0
HPC0402-1R0M	1.0	24	27	4.5	7.0
HPC0402-1R5M	1.5	38	46	4.0	6.0
HPC0402-2R2M	2.2	52	58	3.0	5.0
HPC0402-3R3M	3.3	74	87	2.5	4.0
HPC0402-4R7M	4.7	98	110	2.0	3.5
HPC0402-5R6M	5.6	105	115	1.8	3.0
HPC0402-6R8M	6.8	160	175	1.5	2.5
HPC0402-100M	10	256	282	1.2	2.2

- Note:
1. Test frequency : L : 100KHz /1.0V.
  2. All test data referenced to 25°C ambient.
  3. Heat Rated Current (I rms) will cause the coil temperature rise approximately  $\Delta t$  of 40°C
  4. Saturation Current (Isat) will cause L0 to drop 30% typical.
  5. Special inquiries besides the above common used types can be met on your requirement.

**HPC0502-Series**

Part Number	Inductance	DCR (mΩ)		I rms (A) Typ.	I sat (A) Typ.
	L0(μH±20%)@100KHz/1V0A	Typical	Maximum		
HPC0502-R47M	0.47	7.6	8.5	10	16
HPC0502-R56M	0.56	8	10	9.5	15.5
HPC0502-R68M	0.68	12	14	8	13
HPC0502-1R0M	1.0	15	18	7.5	10
HPC0502-1R2M	1.2	17	20	6.5	9.5
HPC0502-1R5M	1.5	23	28	5.5	9.0
HPC0502-2R2M	2.2	30	35	4.7	7.0
HPC0502-3R3M	3.3	45	52	4.5	5.5
HPC0502-4R7M	4.7	70	81	3.2	4.5
HPC0502-6R8M	6.8	103	125	2.6	3.6
HPC0502-8R2M	8.2	131	145	2.4	3.5
HPC0502-100M	10	139	154	2.3	3.3

**HPC0503-Series**

Part Number	Inductance	DCR (mΩ)		I rms (A) Typ.	I sat (A) Typ.
	L0(μH±20%)@100KHz/1V0A	Typical	Maximum		
HPC0503-R20M	0.2	3.5	3.9	18	14.5
HPC0503-R47M	0.47	7.4	8.5	13.5	12
HPC0503-R68M	0.68	11	12	8.5	14
HPC0503-1R0M	1.0	13	14	7.0	11
HPC0503-1R5M	1.5	20	25	6.0	8.5
HPC0503-2R2M	2.2	25	29	5.5	7.5
HPC0503-3R3M	3.3	32	38	5.0	6.0
HPC0503-4R7M	4.7	50	60	3.5	5.0
HPC0503-6R8M	6.8	75	90	3.0	4.0
HPC0503-100M	10	110	125	2.5	3.5

**Note:**

1. Test frequency : L : 100KHz /1.0V.
2. All test data referenced to 25°C ambient.
3. Heat Rated Current (I<sub>rms</sub>) will cause the coil temperature rise approximately Δt of 40°C
4. Saturation Current (I<sub>sat</sub>) will cause L0 to drop 30% typical.
5. Special inquiries besides the above common used types can be met on your requirement.

**HPC0603-Series**

Part Number	Inductance	DCR (mΩ)		I rms (A) Typ.	I sat (A) Typ.
	L0(μH±20%)@100KHz/1V0A	Typical	Maximum		
HPC 0603-R22M	0.22	1.9	2.2	25	33
HPC 0603-R33M	0.33	3.6	4	20	30
HPC 0603-R47M	0.47	4.3	5	17	26
HPC 0603-R68M	0.68	5.3	6	15	25
HPC 0603-1R0M	1.0	9.3	11	11	22
HPC 0603-1R5M	1.5	13.8	16	9	18
HPC 0603-2R2M	2.2	17.6	20	8.1	15
HPC 0603-3R3M	3.3	27.5	30	6.5	13
HPC 0603-4R7M	4.7	35.8	40	5.5	9.0
HPC 0603-6R8M	6.8	55.4	63	4.5	7.5
HPC 0603-8R2M	8.2	64.8	74	4.0	7.0
HPC 0603-100M	10	81.3	92	3.5	5.5
HPC 0603-150M	15	118.2	135	3.0	4.5
HPC 0603-220M	22	135.0	150	2.7	3.5

**HPC0605-Series**

Part Number	Inductance	DCR (mΩ)		I rms (A) Typ.	I sat (A) Typ.
	L0(μH±20%)@100KHz/1V0A	Typical	Maximum		
HPC 0605-R33M	0.33	2.5	3.0	25	32
HPC 0605-R47M	0.47	3.5	3.9	22	30
HPC 0605-R68M	0.68	4.0	4.5	18	24
HPC 0605-1R0M	1.0	6.1	6.5	15	20
HPC 0605-1R5M	1.5	8.5	9.5	11.5	14
HPC 0605-2R2M	2.2	11.5	13.0	10	13
HPC 0605-3R3M	3.3	14.3	19.0	8.0	11
HPC 0605-4R7M	4.7	25.0	29.0	6.5	10
HPC 0605-6R8M	6.8	29.5	34.0	6.0	7.5
HPC 0605-100M	10	58.2	66.0	4.5	7.0
HPC 0605-150M	15	85.0	100.0	3.4	6.0
HPC 0605-220M	22	107.0	120.0	3.0	4.5
HPC 0605-330M	33	143.0	160.0	2.5	3.6
HPC 0605-470M	47	203.0	220.0	2.3	3.0
HPC 0605-680M	68	233.0	260.0	2.0	3.0
HPC 0605-101M	100	319.0	340.0	1.6	2.6

**Note:**

1. Test frequency : L : 100KHz /1.0V.
2. All test data referenced to 25°C ambient.
3. Heat Rated Current (I rms) will cause the coil temperature rise approximately Δt of 40°C
4. Saturation Current (I sat) will cause L0 to drop 30% typical.
5. Special inquiries besides the above common used types can be met on your requirement.

**HPC1004-Series**

Part Number	Inductance	DCR (mΩ)		I rms (A) Typ.	I sat (A) Typ.
	L0(μH±20%)@100KHz/1V0A	Typical	Maximum		
HPC 1004-R33M	0.33	1.0	1.2	32	45
HPC 1004-R47M	0.47	1.6	1.8	26	42
HPC 1004-R68M	0.68	2.3	2.7	22	40
HPC 1004-1R0M	1.0	3.2	3.7	19	28
HPC 1004-1R5M	1.5	4.5	5.2	16	22
HPC 1004-2R2M	2.2	7.2	8.3	12.5	21
HPC 1004-3R3M	3.3	9.5	11	11	20
HPC 1004-4R7M	4.7	15.2	17.5	9.0	18
HPC 1004-6R8M	6.8	21.9	25	7.5	14
HPC 1004 -100M	10	27.4	31	6.5	11
HPC 1004 -150M	15	48.7	56	4.8	9.5
HPC 1004 -220M	22	69.7	80	4.0	8.0
HPC 1004 -330M	33	109.7	125	3.2	6.0
HPC 1004 -470M	47	138.2	160	2.8	5.2
HPC 1004 -680M	68	229.0	260	2.1	4.4
HPC 1004 -101M	100	339.7	380	1.7	3.8

**HPC1203-Series**

Part Number	Inductance	DCR (mΩ)		I rms (A) Typ.	I sat (A) Typ.
	L0(μH±20%)@100KHz/1V0A	Typical	Maximum		
HPC 1203-R10M	0.10	0.64	0.9	45	60
HPC 1203-R22M	0.22	1.0	1.2	40	50
HPC 1203-R33M	0.33	1.2	1.5	37	48
HPC 1203-R47M	0.47	1.6	2.0	33	44
HPC 1203-R68M	0.68	2.2	2.6	29	38
HPC 1203-1R0M	1.0	2.8	3.4	25.5	36
HPC 1203-2R2M	2.2	6.5	8	16.5	26
HPC 1203-3R3M	3.3	9.0	11	14	22
HPC 1203-4R7M	4.7	11.9	14	12	18.5
HPC 1203-6R8M	6.8	16.4	19	10.5	15.5
HPC 1203-100M	10	30.3	35	7.5	12
HPC 1203-220M	22	65.8	76	5.0	8.0
HPC 1203-330M	33	103.9	120	3.8	6.5
HPC 1203-470M	47	131.3	150	3.3	5.0
HPC 1203-680M	68	186.8	215	2.7	4.5

**Note:**

1. Test frequency : L : 100KHz /1.0V.
2. All test data referenced to 25°C ambient.
3. Heat Rated Current (I rms) will cause the coil temperature rise approximately Δt of 40°C
4. Saturation Current (I sat) will cause L0 to drop 30% typical.
5. Special inquiries besides the above common used types can be met on your requirement.

**HPC1205-Series**

Part Number	Inductance	DCR (mΩ)		Heat Rating	Saturation
	L0(μH±20%)@100KHz/1V0A	Typical	Maximum	IDC(A)	Isat(A)
HPC 1205-R33M	0.33	0.93	1.2	40	74
HPC 1205-R47M	0.47	1.1	1.4	38	68
HPC 1205-R68M	0.68	1.3	1.6	37	63
HPC 1205-1R0M	1.0	2.1	2.5	29	49
HPC 1205-1R5M	1.5	3.1	3.6	24.5	44
HPC 1205-2R2M	2.2	4.1	4.8	21	33
HPC 1205-3R3M	3.3	5.4	6.3	18.5	27
HPC 1205-4R7M	4.7	9.2	10.5	14	23
HPC 1205-6R8M	6.8	14.1	17	11	19
HPC 1205-100M	10	19.0	22	9.5	16.5
HPC 1205-150M	15	32.8	38	7.0	13.5
HPC 1205-220M	22	44.8	52	6.0	9.5
HPC 1205-330M	33	63.9	74	5.0	8.0
HPC 1205-470M	47	95.3	110	4.0	7.0
HPC 1205-680M	68	144.2	165	3.3	6.0

**HPC1265-Series**

Part Number	Inductance	DCR (mΩ)		I rms (A)	I sat (A)
	L0(μH±20%)@100KHz/1V0A	Typical	Maximum	Typ.	Typ.
HPC 1265-R68M	0.68	1.1	1.4	38	60
HPC 1265-1R0M	1.0	1.6	2.0	34	50
HPC 1265-2R2M	2.2	3.6	4.3	22	40
HPC 1265-3R3M	3.3	4.8	5.7	19	27
HPC 1265-4R7M	4.7	6.1	7.2	17	24
HPC 1265-6R8M	6.8	9.1	11	14	21
HPC 1265-100M	10	15.0	18	11	17
HPC 1265-150M	15	28.6	36	8.0	11
HPC 1265-220M	22	32.7	38	7.0	10.5
HPC 1265-330M	33	46.5	53	6.0	8.5
HPC 1265-470M	47	63.1	72	5.0	7.5
HPC 1265-680M	68	105.1	120	3.8	6.0
HPC 1265-101M	100	150.4	170	3.0	5.0

**Note:**

1. Test frequency : L : 100KHz /1.0V.
2. All test data referenced to 25°C ambient.
3. Heat Rated Current (I rms) will cause the coil temperature rise approximately Δt of 40°C
4. Saturation Current (Isat) will cause L0 to drop 30% typical.
5. Special inquiries besides the above common used types can be met on your requirement.

**HPC1707-Series**

Part Number	Inductance	DCR (mΩ)		I rms (A)	I sat (A)
	L0(μH±20%)@100KHz/1V0A	Typical	Maximum	Typ.	Typ.
HPC1707-R82M	0.82	0.98	1.08	56.5	45
HPC1707-1R0M	1	1.21	1.27	55.5	32
HPC1707-1R5M	1.5	1.54	1.62	48	31
HPC1707-2R2M	2.2	1.85	1.98	43.5	28
HPC1707-3R3M	3.3	2.79	2.93	35	27
HPC1707-4R7M	4.7	3.98	4.18	30	21
HPC1707-5R6M	5.6	4.23	4.44	28	21
HPC1707-6R8M	6.8	5.86	6.15	22.5	18.5
HPC1707-8R2M	8.2	7.71	8.1	21	18
HPC1707-100M	10	8.89	9.33	19	17
HPC1707-150M	15	13.7	14.4	14	12
HPC1707-220M	22	20	21	12	9.5
HPC1707-330M	33	35.1	37	10.7	9.0
HPC1707-470M	47	40.7	42.7	8.7	8.6
HPC1707-560M	56	55	57.8	7.2	4.2
HPC1707-680M	68	72.1	75.7	6.1	4.5
HPC1707-820M	82	87.3	91.7	5.5	4.5
HPC1707-101M	100	105	110	5.0	4.0

**Note:**

1. Test frequency : L : 100KHz /1.0V.
2. All test data referenced to 25°C ambient.
3. Heat Rated Current (I<sub>rms</sub>) will cause the coil temperature rise approximately Δt of 40°C
4. Saturation Current (I<sub>sat</sub>) will cause L0 to drop 30% typical.
5. Special inquiries besides the above common used types can be met on your requirement.