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# 承认规格书

种 类: <u>SMD Power Choke Coil</u>

系列号: <u>HXPC1265H-Series</u>

客户料号:\_\_\_\_\_

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承认日期		年	月	日

(贵司承认后请签署一份返回华信安电子,谢谢!)

## 厦门华信安电子科技有限公司技术质量部

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## **SMD Power Choke Coil**

**HXPC1265H-Series** 

	ECN HISTORY LIST								
REV	DATE	DESCRIPTION	APPROVED	CHECKED	DRAWN				
1.0	19/12/15	新發行	龙梅	梁峰	王亮				
備									
注									

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#### 1. Features

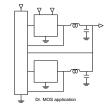
- 1. Magnetic metal powder inductor.
- 2. Compact design.
- 3. High current , low DCR , high efficiency.
- 4. Very low acoustic noise and very low leakage flux noise.
- 5. High reliability.
- 6. 100% Lead(Pb)-Free and RoHS compliant.



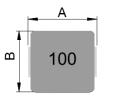


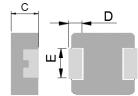
## 2. Applications

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



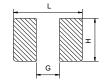
## 3. Dimensions







### **Recommend PC Board Pattern**



L(mm)	G(mm)	H(mm)	
14.5	8.0	5.5	

Series	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)
HXPC1265H	13.45±0.35	12.6±0.3	6.5Max	2.0±0.5	5.0±0.3

## 4. Part Numbering



A: Series

B: Dimension

C: Type M

D: Inductance

Magnetic metal powder 2R2=2.2uH

E: Inductance Tolerance

M=±20%

## 5. Specification

Part Number	Inductance L0 (uH)±20% @ 0 A 100 kHz, 1V	l sat (A) Typ.	I rms (A) Typ.	DCR (mΩ) Max. @25℃
HXPC1265H-4R7M	4.70	24	16	8.5
HXPC1265H-5R6M	5.60	22.5	14	10.5
HXPC1265H-6R8M	6.80	19	13	12
HXPC1265H-8R2M	8.20	16	12	14
HXPC1265H-100M	10.0	15	11	16.5
HXPC1265H-150M	15.0	11	9.5	26
HXPC1265H-220M	22.0	9	8	36
HXPC1265H-330M	33.0	8	6.5	65
HXPC1265H-470M	47.0	6.8	5.5	70
HXPC1265H-680M	68.0	5.2	4.8	120
HXPC1265H-820M	82.0	4.5	4	135
HXPC1265H-101M	100	4	3.5	170

Note:

- 1. All test data is referenced to 25 °C ambient
- 2. Operating temperature range 55 °C to + 125 °C
- 3. Irms (A):DC current (A) that will cause an approximate  $\Delta T$  of 40 °C(reference ambient temperature is 25 °C)
- 4. Isat(A):DC current (A) that will cause L0 to drop approximately 30 %
- 5. The part temperature (ambient + temp rise) should not exceed 125 °C under worst case operating conditions.

Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions

all affect the part temperature. Part temperature should be verified in the end application.

## 6. Material List



NO	Items	Materials
1	Core	Alloy Sponge Powder
2	Wire	Polyurethane copper wire
3	Solder Plating	100% Pb free solder
4	paint	Epoxy resin
5	MARKING	Ink(black)

## 7. Reliability and Test Condition

Item	Performance	Test Condition
Operating temperature	-55~+125℃	
Storage temperature and Humidity range	-55~+125°C,50~60%RH (Product without taping)	
Electrical Performance Tes	st	
Inductance	Refer to standard electrical characteristics list.	HP4284A,CH11025,CH3302,CH1320,CH1320S LCR Meter.
DCR	Neier to standard electrical characteristics list.	CH16502,Agilent33420A Micro-Ohm Meter.
Saturation Current (Isat)	△ L20% typical.	Saturation DC Current (Isat) will cause L0 to drop △ L(%)(keep quickly).
Heat Rated Current (Irms)	Approximately △ T≦ 40°C	Heat Rated Current (Irms) will cause the coil temperature rise ^ T(°C) without core loss.  1.Applied the allowed DC current(keep 1 min.).  2.Temperature measured by digital surface thermometer
Reliability Test		
High Temperature Exposure Test		Temperature:125±2°C. Duration:1000±12hrs. Measured at room temperature after placing for 2 to 3hrs. (MIL-PRF-27) Humidity:85±3%RH.
Biased Humidity Test		Temperature:85±2°C. Duration:1000±12hrs. Measured at room temperature after placing for 2 to 3hrs (AEC-Q200-REV C)
Thermal shock test	Electric specifications should be satisfied	Condition for 1 cycle $ \begin{array}{ll} \text{Step1:-40+0} \ / \ -2 \ ^{\circ}  15\pm 1 \text{ min.} \\ \text{Step2:Room temperature within } \le 0.2 \text{ min.} \\ \text{Step3:+125+2} \ / \ -0 \ ^{\circ}  15\pm 1 \text{min.} \\ \text{Number of cycles:300} \\ \text{Measured at room temperature after placing for 2 to 3 hrs.} \\ \text{(AEC-Q200-REV C)} \end{array} $
Vibration test		Frequency: 10-2000-10Hz for 20 min. Amplitude: Parts mounted within 2" from any secure point. Directions and times: X, Y, Z directions for 20 min. This cycle shall be performed 12 times in each of three mutually perpendicular directions (Total 12hours). (MIL-STD-202 Method 204 D Test condition B)
Reflow test		Pre-heat: 150±5°C  Duration: 5 minutes  Temperature: 260±5°C, 20~40 seconds (IPC/JEDEC J-STD-020C)
Solder test	Terminals should be covered by over 95% solder on visual inspection	After dip into flux , dip into solder 235±5°C , 4±1seconds Flux 、 solder for lead free (ANSI /J-STD-002C Method B)

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### 8. Soldering and Mounting

#### (1) Soldering

Mildly activated rosin fluxes are preferred. The minimum amount of solder can lead to damage from the stresses caused by the difference in coefficients of expansion between solder, chip and substrate. The terminations are suitable for re-flow soldering systems. If hand soldering cannot be avoided, the preferred technique is the utilization of hot air soldering tools.

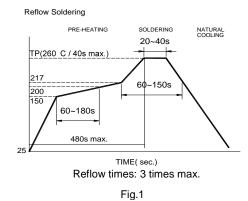
#### (2) Solder re-flow:

Recommended temperature profiles for re-flow soldering in Figure 1.

#### (3) Soldering Iron:

Products attachment with a soldering iron is discouraged due to the inherent process control limitations. In the event that a soldering iron must be employed the following precautions are recommended.

- Preheat circuit and products to 150°C Never contact the ceramic with the iron tip Use a 20 watt soldering iron with tip diameter of 1.0mm
- · 355°C tip temperature (max) · 1.0mm tip diameter (max) · Limit soldering time to 4~5sec.



Iron Soldering

PRE-HEATING SOLDERING NATURAL COOLING

Within 4~5s

150

Over 60s

Gradual cooling

TIME(sec.)

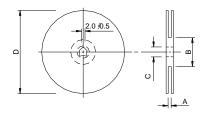
Iron Soldering times: 1 times max.

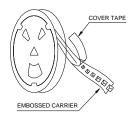
Fig.2

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### 9. Packaging Information

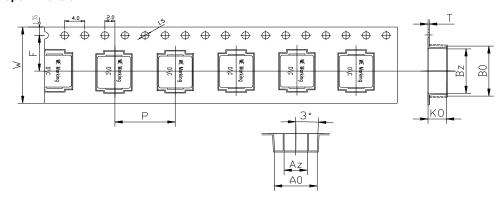
#### (1) Reel Dimension





Type A(mm)		B(mm)	C(mm)	D(mm)
13"x24mm	24.4+2/-0	100±2	13.5±0.5	330

#### (2) Tape Dimension

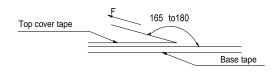


Series	Size	Bo(mm)	Bz(mm)	Ao(mm)	Az(mm)	Ko(mm)	P(mm)	W(mm)	F(mm)	t(mm)
HXPC	1265	14.2±0.1	13.0±0.1	13.0±0.1	7.0±0.1	7.0±0.1	16.0±0.1	24±0.3	11.5±0.1	0.35±0.05

#### (3) Packaging Quantity

НХРС	1265
Chip / Reel	500
Inner box	1000
Carton	4000

#### (4) Tearing Off Force



The force for tearing off cover tape is 10 to 130 grams in the arrow direction under the following conditions(referenced ANSI/EIA-481-C-2003 of 4.11 standard).

Room Temp.	Room Humidity	Room atm	Tearing Speed	
(℃)	(℃) (%)		mm/min	
5~35	45~85	860~1060	300	

#### **Application Notice**

- · Storage Conditions (component level)
  - To maintain the solderability of terminal electrodes:
  - 1. ISND products meet IPC/JEDEC J-STD-020D standard-MSL, level 1.
  - 2. Temperature and humidity conditions: Less than 40°C and 60% RH.
  - 3. Recommended products should be used within 12 months form the time of delivery.
  - 4. The packaging material should be kept where no chlorine or sulfur exists in the air.
- · Transportation
- 1. Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
- 2. The use of tweezers or vacuum pick up is strongly recommended for individual components.
- 3. Bulk handling should ensure that abrasion and mechanical shock are minimized.

## 单击下面可查看定价,库存,交付和生命周期等信息

## >>ISND(华信安)