TO：	文 件 编 号	HXA-L56-22(01)
	发 行 日 期	2022 年 01 月 15 日

承 认 规 格 书

种　　类：Wire Wound Molded SMD Power Inductors

系 列 号： HXTC0402A-Series

客户料号：

客 户 承 认 栏	
承 认 日 期	年　　月　　日

（贵司承认后请签署一份返回艾申迪电子，谢谢！）

厦门艾申迪电子有限公司技术质量部

承　认	确　认	作　成
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SMD Power Choke Coil

HXTC0402A-Series

ECN HISTORY LIST

REV	DATE	DESCRIPTION	APPROVED	CHECKED	DRAWN
1.0	22/01/15	新發行	龙梅	梁峰	王亮
備注					

1. Features

1. Soft saturation.
2. High current, low DCR, high efficiency.
3. Very low acoustic noise and very low leakage flux noise.
4. High reliability.
5. 100% Lead (Pb)-Free and RoHS compliant.
6. Operating temperature -55~+125℃(Including self-temperature rise)

Halogen-free

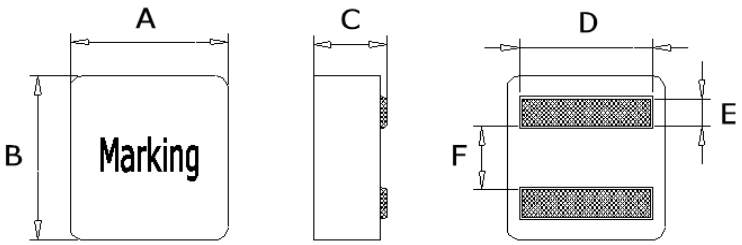
Pb-free

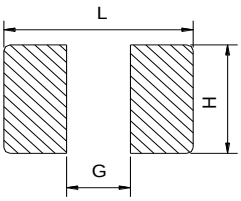
2. Applications

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)	F(mm)
HXTC0402A	4.1±0.2	4.1±0.2	1.9±0.2	3.4±0.2	0.88±0.2	1.6±0.25

L(mm)	G(mm)	H(mm)
3.4	1.4	3.8

4. Part Numbering

HXTC	0402	A	-	1R5	M
A	B	C		D	E

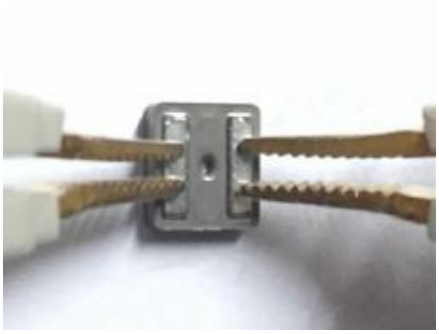
A: Series
B: Dimension — A x C
C: Type
D: Inductance — 1R5=1.5uH
E: Inductance Tolerance — M = ±20%

5. Specification

艾申迪 Part Number	Inductance L0 (uH)±20% @ 0 A	I rms (A) Typ.20℃	I rms (A) Typ.40℃	I sat (A) Max.	I sat (A) Typ.	DCR(mΩ) Max.@25℃
HXTC0402A-R10M	0.1	13.5	18	33	38	2.42
HXTC0402A-R22M	0.22	13.0	16.8	18.8	19.5	4.6
HXTC0402A-R36M	0.36	11	14.5	15	17	6.3
HXTC0402A-R40M	0.4	10	14	13.5	15.5	7.73
HXTC0402A-R47M	0.47	9	12.5	13	14.5	8.58
HXTC0402A-R56M	0.56	8.5	12	12.6	14	9.3
HXTC0402A-R60M	0.6	8.0	11.7	12.3	13.7	9.52
HXTC0402A-R72M	0.72	7.6	10.5	10.6	12	11.6
HXTC0402A-1R0M	1.0	6.8	9.6	8.8	9.6	14.6
HXTC0402A-1R2M	1.2	6.6	9.0	7.8	9	17.9
HXTC0402A-1R5M	1.5	5.8	7.6	7.4	8	23.5
HXTC0402A-1R8M	1.8	5.2	7	7	7.5	28
HXTC0402A-2R2M	2.2	4.6	5.6	6	6.5	38.7

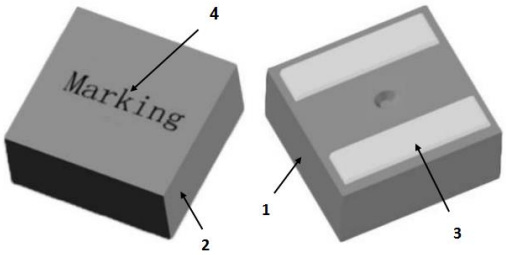
Note:

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 (I rms) will cause the coil temperature rise approximately △t of 40℃ (keep 1min.).
5. Saturation Current (I sat) will cause L0 to drop 30% typical. (Internal control standards at 40% MAX)
6. The part temperature (ambient + temp rise) should not exceed 125℃under worst case operating condition. 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 inquires besides the above common used types can be met on your requirement.
8. Rated operating voltage across inductor) 40V ref.
9. Impulse withstand voltage test were refers to supplier's 100% testing of the shipment. The Impulse withstand voltage is affected by geographical environment, methods, contact detection, instrument model, test times and other reasons. Every time the customer and the supplier do the tests, there may be bad phenomenon, this is a normal, and does not mean that the product is a non-conforming product (and the supplier's test before shipment, the fail product displayed by the instrument will be selected for disposal and will not be shipped to the customer).



DCR Test

6. Material List



NO	Items	Materials
1	Core	Alloy Powder
2	Wire	Polyester Wire or equivalent.
3	Chip	100% Pb free solder
4	Ink	Halogen-free ketone

7. Reliability and Test Condition

Mechanical Reliability		
Item	Specification and Requirement	Test Method
Solderability	1. No case deformation or change in visual 2. New solder coverage More than 95%	1.Preheat：155℃±5℃ ，60S±2S 2.Tin: lead-free. 3.Temperature:240℃±5℃，flux 3.0S±0.5S.
Mechanical shock	1. No case deformation or change in visual 2. △L/Lo≦±10%	1. Acceleration： 100G 2. Pulse time:： 6ms 3. 3 times in each positive and negative direction of 3 mutual perpendicular directions
Mechanical vibration	1. No case deformation or change in visual 2. △L/Lo≦±10%	1. Reflow: 2times 2. Frequency: 10HZ～50HZ～10HZ，20 Min/Cycles 3. Amplitude: 1.52 mm±10% 4. Directions: X,Y,Z 5. Time: 12 cycle / direction
Endurance Reliability		
Item	Specification and Requirement	Test Method
Thermal Shock	Inductance change: Within ± 10% Without distinct damage in visual	1. First -55℃ for 30 minutes，last 125℃ for 30 minutes as 1 cycle. Go through 1000 cycles. 2. Max transfer time is 3 minutes. 3. Measured at room temperature after placing for 24±2 hours
Humidity Resistance	Inductance change: Within ± 10% Without distinct damage in visual	1.Reflow 2 times, 2.85℃±3℃,85%±3%RH,1000 hours 3.Measured at room temperature after placing for 24±2 hours
Low temperature storage	Inductance change: Within ± 10% Without distinct damage in visual	1. Temperature：-55 ± 2℃ 2. Time：1000 hours 3. Measured at room temperature after placing for 24±2 hours
High temperature storage	Inductance change: Within ± 10% Without distinct damage in visual	1. Temperature：+125 ± 2℃ 2. Time：1000 hours 3. Measured at room temperature after placing for 24±2 hours

8. Soldering and Mounting

Recommended Soldering Technologies

(1)Re-flowing Profile

Preheat condition: 150 ~200℃/60~120sec.

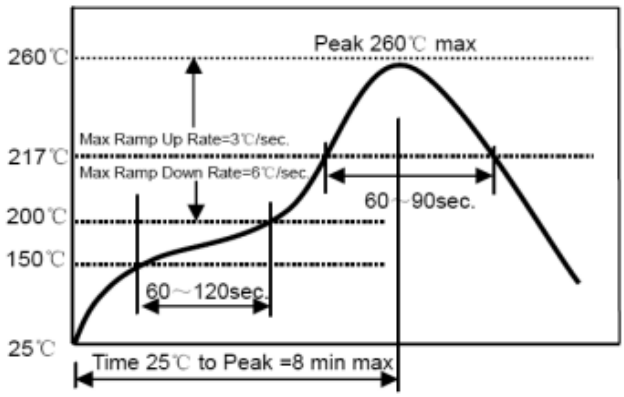
Allowed time above 217℃: 60~90sec.

Peak temp: 260℃

Max time at Peak temp: 10 sec.

Solder paste: Sn/3.0Ag/0.5Cu

Allowed Reflow time: 2x max



(2)Iron Soldering Profile

Iron soldering power: Max. 30W

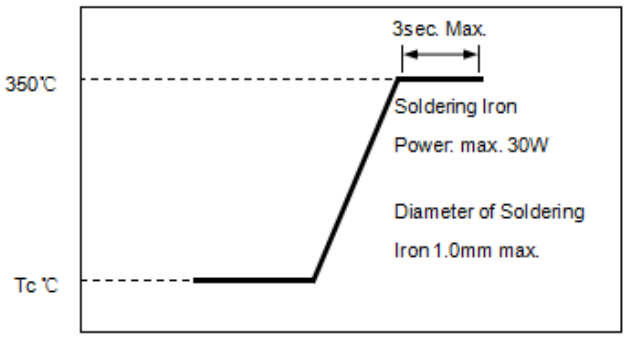
Pre-heating: 150℃/60sec.

Soldering Tip temperature: 350℃ Max.

Soldering time: 3sec. Max.

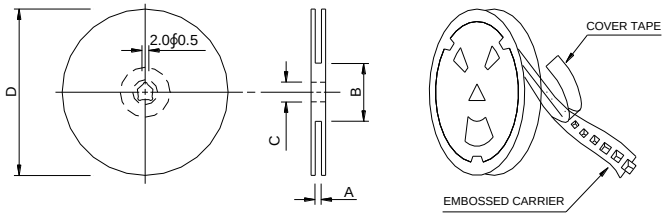
Solder paste: Sn/3.0Ag/0.5Cu

Max.1 times for iron soldering



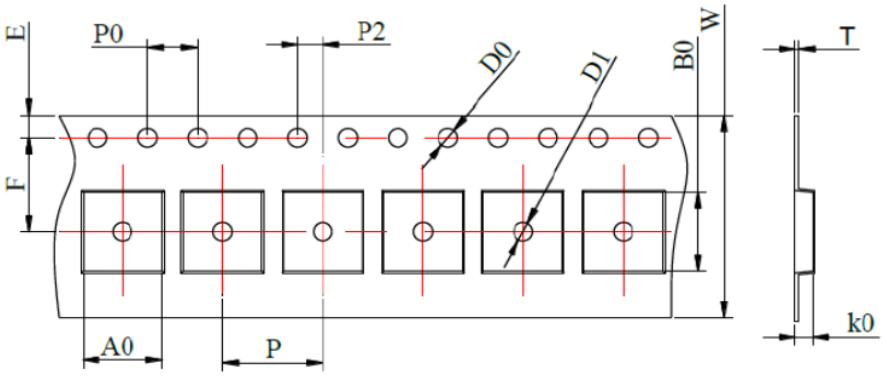
9. Packaging Information

(1) Reel Dimension



Type	A(mm)	B(mm)	C(mm)	D(mm)
13"x12mm	16.8±0.2	97±0.5	13.5±0.5	330+2.0

(2) Tape Dimension

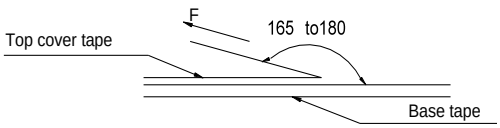


Series	Size	Bo(mm)	Ao(mm)	K0(mm)	P(mm)	W(mm)	F(mm)	T(mm)
HXTC	0402	4.4±0.1	4.4±0.1	2.3±0.1	8.0±0.1	12±0.3	5.5±0.1	0.35±0.05

(3) Packaging Quantity

HXTC	0402
Chip / Reel	3000
Inner box	12000
Carton	48000

(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 (hPa)	Tearing Speed mm/min
5~35	45~85	860~1060	300

Application Notice

- Storage Conditions
  To maintain the solderability of terminal electrodes:
  1. ASDI products meet IPC/JEDEC J-STD-020D standard-MSL, level 1.
  2. Temperature and humidity conditions: Less than 30℃ and 70% RH.
  3. Recommended products should be used within 6 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)