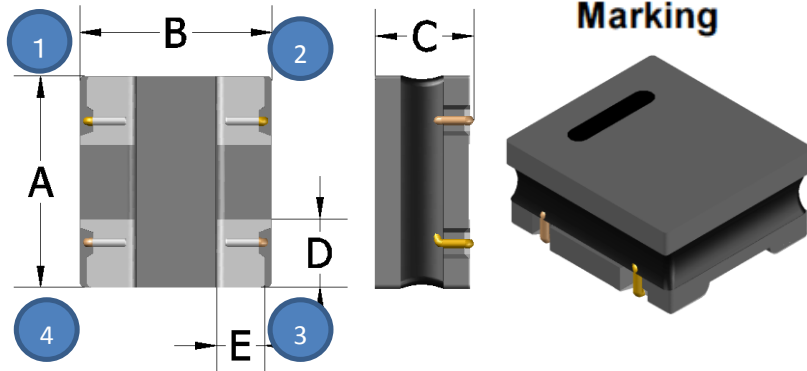


ITEM P/N	PCN5045AI-Series	TEST INSTRUMENT	Agilent4291B / Agilent4338B
PRODUCT	Common Choke Coil For Power Lines	TEST FREQUENCY	100 MHz / 0.5V

PACKING DIMENSIONS (mm)



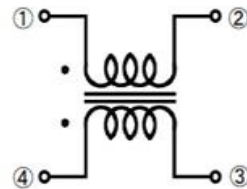
5045	Dimensions
A	5.0 ± 0.3
B	4.5 ± 0.3
C	2.5 Max.
D	1.6 ± 0.3
E	1.4 ± 0.3

EXPLANATION OF PART NUMBERS

1	2	3	4	5	6	7	8	9	10	11	
P	C	N	5	0	4	5AI	-	1	0	2	N
	(1)				(2)				(3)		

- (1) Product name
 (2) Shapes and dimensions
 (3) Impedance 【 at 100MHz】
 101:100Ω

Equivalent Circuits



No polarity

ELECTRICAL CHARACTERISTICS

P/N	Z(Ω)		Rated current	DCR (Ω)	Rated Voltage	Withstand Voltage	Insulation Resistance
	Point1-Point2	point3-point4					
	Impedance		Idc(A)	±40%	Vdc	Vdc	IR
	at 100MHz		[Max]		(V)Typical	(V)Typical	(MΩ)Min.
PCN5045AI-101	100 Typ.		6	0.009	50	125	10
PCN5045AI-251	250 Typ.		5	0.014			
PCN5045AI-501	500 Typ.		4	0.019			
PCN5045AI-102	1000 Typ.		3	0.024			
PCN5045AI-142	1400 Typ.		1.5	0.040			

Operating temperature : -40 to +125°C

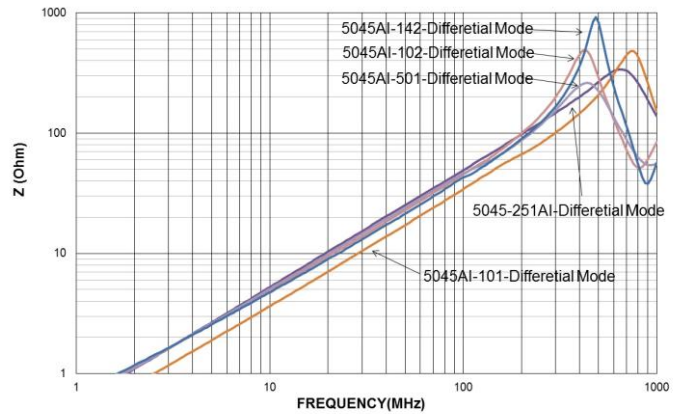
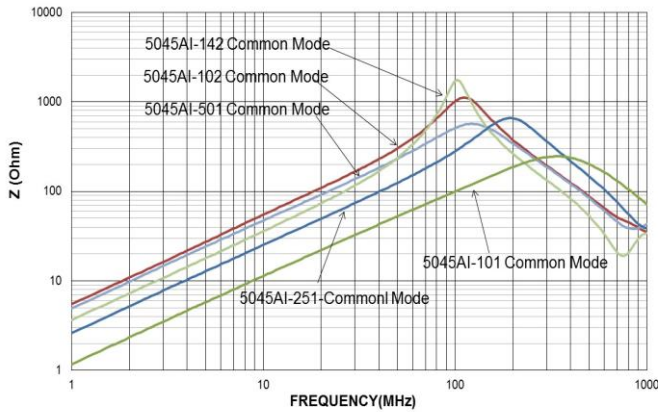
Storage temp. and humidity : -40 to +85°C ,70%RH max

Typical Heat Rating DC Current would cause an approximately ΔT of 40°C

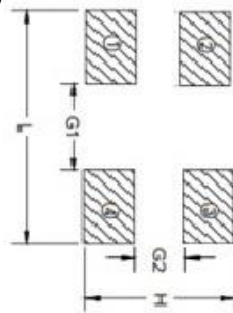
If Use Wave soldering is there will be some risk. Re-flow soldering temperatures below 240 degrees, there will be unwitting risk

Solder standard according to IPC-A-610D 8.2.1 Chip Components - Bottom Only Terminations

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PERFORMANCE CURVES**Recommended Footprint(mm)**

5045	Dimensions
L	5.5 ref.
H	4.6 ref.
G1	2.35 ref.
G2	1.85 ref.

**Electrical Performance**

No.	Item	Specifications	Test Method
1	Impedance (Z) (at 10MHz)	Meet item 3.	Measuring Equipment : 4191A or the equivalents. Measuring Frequency : 10MHz
2	Insulation Resistance (I.R.)		Measuring Equipment : R8340A or the equivalents. Test Voltage : 2times for Rated Voltage Time : within 60 s
3	DC Resistance (Rdc)		Measuring Current : 100 mA max. (In case of doubt in the above mentioned standard condition,measure by 4 terminal method.)
4	Withstanding Voltage	Products shall not be damaged.	Voltage : 125 V(DC) Time : 60 s Charge Current : 1 mA max.

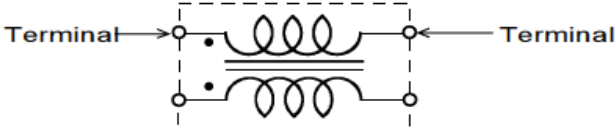
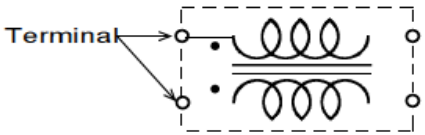
ITEM P/N	PCN5045AI-Series	TEST INSTRUMENT	Agilent4291B / Agilent4338B
PRODUCT	Common Choke Coil For Power Lines	TEST FREQUENCY	100 MHz / 0.5V

Reliability and Test Condition

Test item	Test condition / Test method	Specification
Resistance to soldering heat	Solder: Sn99.5%-Cu0.5% Solder temperature: 260+5/-0°C Equipment : KUNG CHENG 錫爐5" 400° 、RF LCR METER 。 Flux for lead free: Rosin. 9.5% 。 Dip time: 10±0.5sec. Within : 1.5mm 。 Magnification 10X 。 Test the quantity : 30pcs 。	Appearance : Cracking , chipping and any other defects harmful to the characteristics should not be allowed 。 Z: Within ±15% of initial value 。
Solder-ability Test	Preheat: 150°C,60sec. 。 Solder: Sn99.5%-Cu0. 5% 。 Solder temperature: 245±5°C 。 Equipment : KUNG CHENG 錫爐5" 400°C 。	Appearance : More than 95% of the terminal electrode should be covered with solder 。
	Flux for lead free: Rosin. 9.5% 。	
	Dip time: 4±1sec. Within : 19~31mm 。	
	Magnification 50X 。	
	Test the quantity : 50pcs 。	

Terminal to be Tested

When measuring and suppling the voltage, the following terminal is applied.

No.	Item	Terminal to be Tested
1	Impedance (Z) (Measurement Terminal)	
2	DC Resistance (Rdc) (Measurement Terminal)	
3	Insulation Resistance (I.R.) (Measurement Terminal)	
4	Withstanding Voltage (Measurement Terminal)	
5	Humidity Load (Supply Terminal)	
6	Heat Life (Supply Terminal)	

ITEM P/N	PCN5045AI-Series	TEST INSTRUMENT	Agilent4291B / Agilent4338B
PRODUCT	Common Choke Coil For Power Lines	TEST FREQUENCY	100 MHz / 0.5V

Reliability and Test Condition

Test item	Test condition / Test method	Specification
Temperature Cycling Test	-40 +0/-2°C,+ 125 +2/-0°C Kept for 30 minutes each,1000 cycles Transfer Time: 5 minutes Equipment : 高新 TH-1S-C 、 RF LCR METER Test the quantity : 90pcs ◦	Appearance: Cracking, chipping and any other defects harmful to the characteristics should not be allowed ◦ Z: Within ±15% of initial value ◦
Humidity Resistance Test	85~90% R.H.*25~65 +2/-0°C *10 Cycles Equipment : 高新 TH-1S-C 、 RF LCR METER Test the quantity : 90pcs ◦ Rated Current 100%	Appearance: Cracking, chipping and any other defects harmful to the characteristics should not be allowed ◦ Z: Within ±15% of initial value ◦
Thermal Shock Test	CONDITION(Air-to-air) : -40 +0/-2°C,+ 125 +2/-0°C Kept for 15 minutes each,300 cycles, Transfer Time: 20 seconds Equipment : 高新 TH-1S-C 、 RF LCR METER Test the quantity : 90pcs ◦	Appearance: Cracking, chipping and any other defects harmful to the characteristics should not be allowed ◦ Z: Within ±15% of initial value ◦
High Temperature Exposure	125 +0/-2°C *1000±12HRs Equipment : 高新 TH-1S-C 、 RF LCR METER Test the quantity : 90pcs ◦	Appearance: Cracking, chipping and any other defects harmful to the characteristics should not be allowed ◦ Z: Within ±15% of initial value ◦

ITEM P/N	PCN5045AI-Series	TEST INSTRUMENT	Agilent4291B / Agilent4338B
PRODUCT	Common Choke Coil For Power Lines	TEST FREQUENCY	100 MHz / 0.5V

Reliability and Test Condition

Test item	Test condition / Test method	Specification
Biased Humidity Test	85% R.H.*85 +2/-0°C *1000±12HRs Equipment : 高新 TH-1S-C 、 RF LCR METER Test the quantity : 90pcs ◦	Appearance: Cracking, chipping and any other defects harmful to the characteristics should not be allowed ◦ Z: Within ±15% of initial value ◦
Vibration Test	It shall be soldered on substrate Oscillation Frequency: 10~2K ~10Hz for 20 minute ◦ Equipment : Vibration checker ◦ Total Amplitude: 1.52mm±10% ◦ Testing Time : 12 hours(20 minute , 12 cycles each of 3 orientations) Test the quantity : 30pcs ◦	Appearance: Cracking, chipping and any other defects harmful to the characteristics should not be allowed ◦ Z: Within ±15% of initial value ◦

ITEM P/N	PCN5045AI-Series	TEST INSTRUMENT	Agilent4291B / Agilent4338B
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Soldering and Mounting

1. Soldering

Mildly activated rosin fluxes are preferred. terminations are suitable for all wave and re-flow soldering systems. If hand soldering cannot be avoided, the preferred technique is the utilization of hot air soldering tools.

1.1 Solder re-flow:

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

1.2 Soldering Iron(Figure 2):

Products attachment with a soldering iron is discouraged due to the inherent process control limitations. In the case 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 4~5 sec.

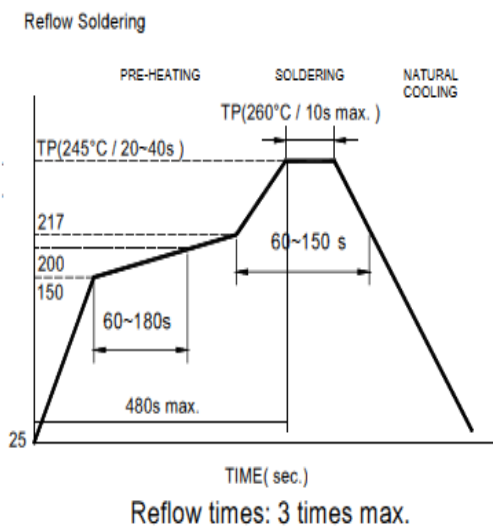


Fig.1

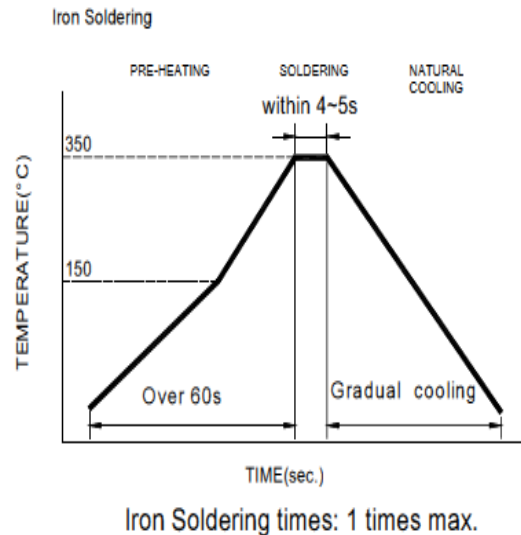
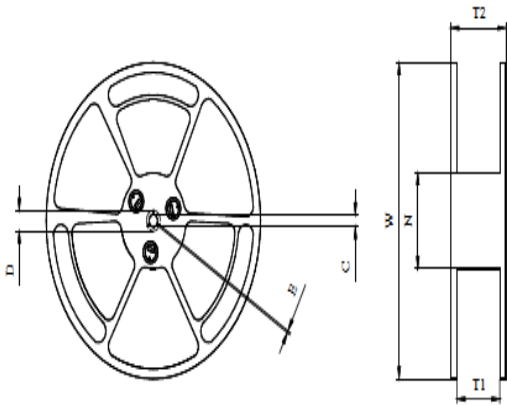
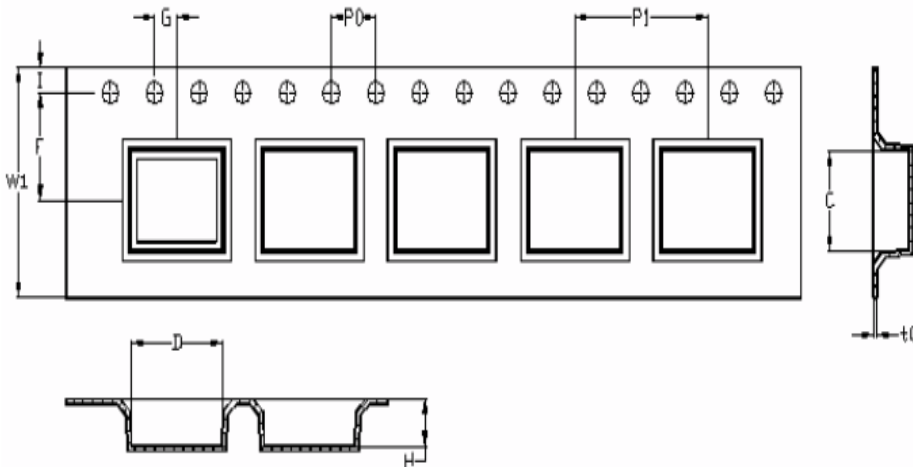


Fig.2

ITEM P/N	PCN5045AI-Series	TEST INSTRUMENT	Agilent4291B / Agilent4338B
PRODUCT	Common Choke Coil For Power Lines	TEST FREQUENCY	100 MHz / 0.5V

Reel Dimension & Tape Dimension

Type	W(mm)	D(mm)	C(mm)	T1(mm)	N(mm)	T2(mm)	E(mm)
φ 330	330±1.5	21.5+0.5/-0	13+0.5-0.2	2.5+0.5/-0	100±1.5	16.9±0.4	2.00±0.5

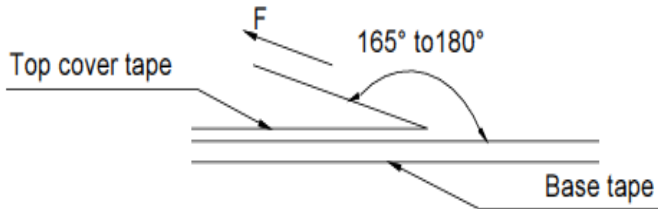


Series	size	W1(mm)	l(mm)	F(mm)	P0(mm)	G(mm)	P1(mm)	C(mm)	t0(mm)	D(mm)	H(mm)
PCN5045A	5045	12.00±0.3	1.75±0.1	5.50±0.1	4.00±0.1	2.00±0.1	8.00±0.1	4.9±0.1	0.35±0.05	5.10±0.1	2.70±0.1

ITEM P/N	PCN5045AI-Series	TEST INSTRUMENT	Agilent4291B / Agilent4338B
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Packaging Information

Chip size	Chip/Reel
PCN5045AI	2500

Tearing Off Force

The force for tearing off cover tape is 15 to 80 grams in the arrow direction under the following conditions.

Room Temp. (°C)	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. 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.