



SPECIFICATION FOR APPROVAL

Customer : 信和達

Customer P/N: _____

Drawing No : _____

Quantity : 0 Pcs. Date : 2018/08/16

Chilisin P/N : ADCD002520122R2MB1

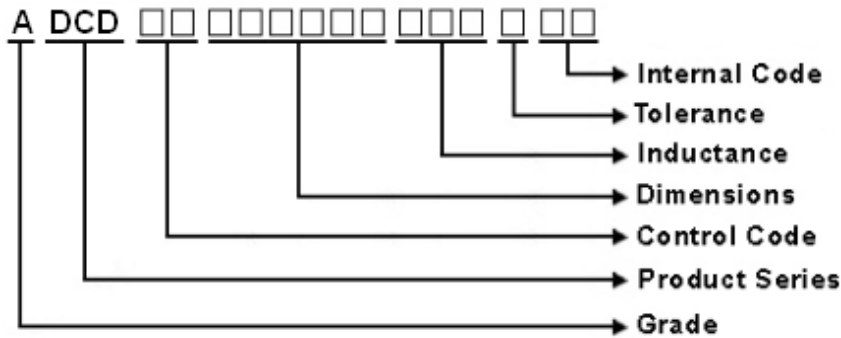
<p>Automotive Grade Inductor</p> <p>Halogen Free RoHS Compliant REACH Compliant Lead Free Solders AEC-Q200</p>		
<p>奇力新電子股份有限公司 Chilisin Electronics Corp No. 29, Alley 301, Tehhsin Rd., Hukou, Hsinchu 303, Taiwan TEL : +886-3- 599-2646 FAX : +886-3- 599-9176 E-mail : sales@chilisin.com http : //www.chilisin.com</p>	<p>東莞奇力新電子(東莞廠)有限公司 Chilisin Electronics (Dongguan) Co., Ltd. No. 78, Puxing Rd., Yuliangwei Administration Area, Qingxi Town, Dongguan City, Guangdong, China TEL : +86-769-8773-0251~3 FAX : +86-769-8773-0232 E-mail : cect@chilisin.com</p>	<p>奇力新電子(越南廠)有限公司 Chilisin Electronics (Vietnam) Limited No 143 - 145, Road No 10, VSIP Hai Phong, Lap Le Commune, Thuy Nguyen Dist, Haiphong City, Vietnam Tel : 84-316 255 688 Fax : 84-316 255 689 E-mail : sales@chilisin.com</p>
<p>Drawn by 張鈺雯 chang.yuwen</p>	<p>Checked by 張鈺雯 chang.yuwen</p>	<p>Approved by 鍾瑞民 jacky.chung</p>

ADCD00252012 Series Specification

AEC-Q200

1 Scope: This specification applies to Alloy Molding power inductors

2 Part Numbering:



3 Rating:

Operating Temperature: - 4 0 °C ~ 1 2 5 °C

Storage Temperature: - 4 0 °C ~ 1 2 5 °C(after PCB)

- 5 °C ~ 3 5 °C, Humidity 4 5 % ~ 8 5 % (before PCB)

4 Marking:

No Marking

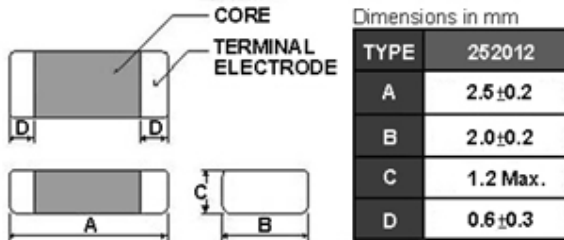
5 Standard Testing Condition

	Unless otherwise specified	In case of doubt
Temperature	Ordinary Temperature(15 to 35°C)	20 to 30°C
Humidity	Ordinary Humidity(25 to 85% RH)	50 to 80 %RH

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6 Configuration and Dimensions:



7 Electrical Characteristics:

Part No.	Inductance (uH)	Tolerance (±%)	Test Freq.	I _{rms} (A) Max.(Typ)	I _{sat} (A) Max.(Typ)	RDC(mΩ) Max.(Typ)
ADCD00252012R2MB1	2.2	20	2MHz,0.2V	2.0(2.4)	2.4(2.6)	91(84)

NOTE:

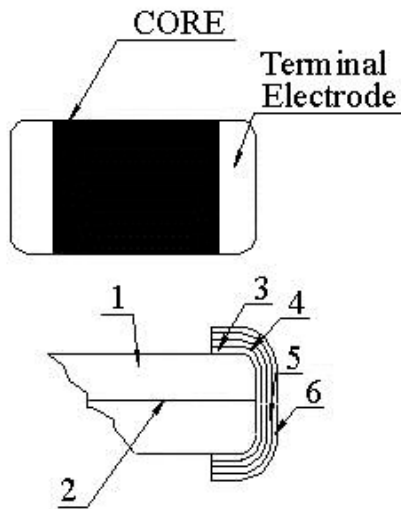
1. Operating temperature range - 40°C ~ 125°C
2. I_{sat} for Inductance drop 30% from its value without current.
3. I_{rms} for a 40°C temperature rise from 25°C ambient.
4. All test data is referenced to 25°C ambient
5. Absolute maximum voltage 20VDC

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8.1 Construction:



8.2 Material List:

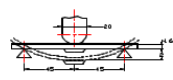
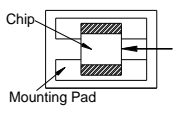
No	Part	Material
1	Core	Metal Powder
2	Wire	Copper wire
3	Sputter/Plating	Cu
4	Silver Electrode	Ag
5	Plating	Ni
6	Plating	Sn

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9 Reliability of molding power inductors

1-1. Mechanical Performance

No	Item	Specification	Test Method
1-1-1	Board Flex	The forces applied on the right conditions must not damage the terminal electrode and the metal body	Refer to AEC-Q200-005 Test device shall be soldered on the substrate Substrate Dimension: 100x40x1.6mm Deflection: 2.0mm Keeping Time: 60sec 
1-1-2	Terminal Strength Test	Appearance: No damage	Refer AEC-Q200-006 Soldered on PCB for testing as fig. Force : 1.8kg Keeping Time: 60 seconds. 
1-1-3	Solder ability	The electrodes shall be at least 95% covered with new solder coating	Refer to J-STD-002 Pre-heating: 150°C, 1min Solder Composition: Sn/Ag3.0/Cu0.5(Pb-Free) Solder Temperature: 245±5°C (Pb-Free) Immersion Time: 4±1sec
1-1-4	Resistance to Soldering Heat	Appearance: No damage Inductance: within ±20% of initial value	Refer to MIL-STD-202 Method 210 Pre-heating: 150°C, 1min Solder Composition: Sn/Ag3.0/Cu0.5(Pb-Free) Solder Temperature: 260±5°C Immersion Time: 10±1sec
1-1-5	Resistance to Solvents	There must be no change in appearance or obliteration of marking.	Inductors must withstand 6 minutes of alcohol or water.
1-1-6	Mechanical Shock	The forces applied on the right conditions must not damage the terminal electrode and the ferrite.	Pulse shape : Half-sine waveform Impact acceleration : 100 g Pulse duration : 6 ms Number of shocks : 18 shocks (3 shocks for each face) Orientation : Bottom, top, left, right, front and rear faces
1-1-7	Vibration	Appearance: No damage Inductance change shall be within ±20%.	Refer MIL-STD-202 Method 204 Vibration waveform: Sine waveform Vibration frequency: 10Hz~2000Hz Vibration acceleration: 5g Sweep rate: 0.764386octave/minute Duration of test: 12 cycles each of 3 orientations, 20 minutes for each cycle Vibration axes: X, Y & Z



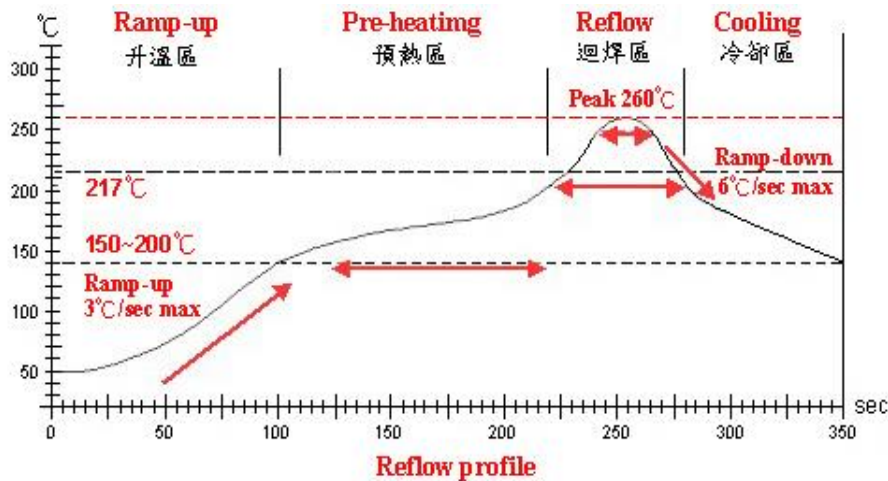
ADCD00252012 Series Specification

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9 Reliability of molding power inductors

1-2.Environmental Performance

No	Item	Specification	Test Method
1-2-1	Temperature Cycle	Appearance: No damage Inductance: within $\pm 30\%$ of initial value	Refer to JESD Method JA-104 Total cycles: 1000 cycles Temperature Cycling Test Conditions : -40 to +125 °C Soak Mode Condition : 30 minutes Measured after exposure in the room condition for 24hrs
1-2-2	Operational Life		Temperature: $125 \pm 2^\circ\text{C}$ Applied Current : Rated Current Time: 1000 ± 24 hrs Measured after exposure in the room condition for 24hrs
1-2-2	Biased Humidity Resistance		Refer to MIL-STD-202 Method 103 Temperature: $85 \pm 2^\circ\text{C}$ Relative Humidity: 85% / Time: 1000hrs Measured after exposure in the room condition for 24hrs
1-2-3	High Temperature Exposure (Storage)		Refer to MIL-STD-202 Method 108 Temperature: $125 \pm 3^\circ\text{C}$ Time: 1000hrs Measured after exposure in the room condition for 24hrs



Lead-Free(LF) 標準溫度分析範圍

Refer to J-STD-020C

管制項目 Item.	升溫區 Ramp-up	預熱區 Pre-heating	迴焊區 Reflow	Peak Temp	冷卻區 Cooling
溫度範圍 Temp. scope	R.T. ~150°C	150°C ~ 200°C	217°C	260±5°C	Peak Temp. ~ 150°C
標準時間 Time spec.	—	60 ~ 180 sec	60 ~ 150sec	20 ~ 40 sec	—
實際時間 Time result	—	75 ~ 100 sec	90 ~ 120sec	20 ~ 35 sec	—

NOTE :

1. Re-flow possible times : within 2 times
2. Nitrogen adopted is recommended while in re-flow

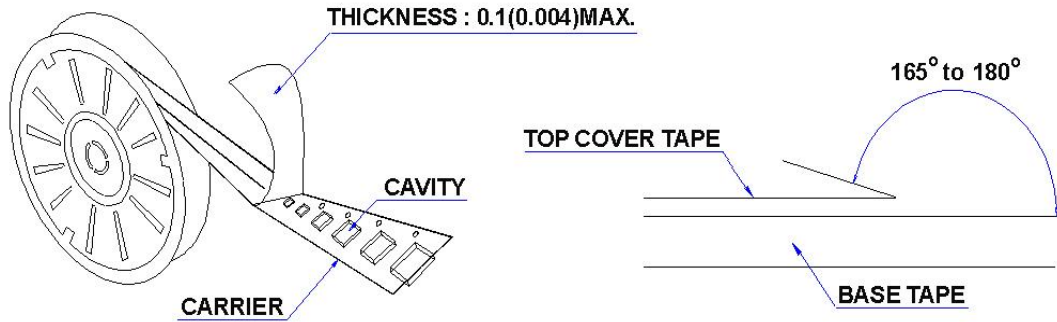
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10 Packaging:

10.1 Packaging -Cover Tape

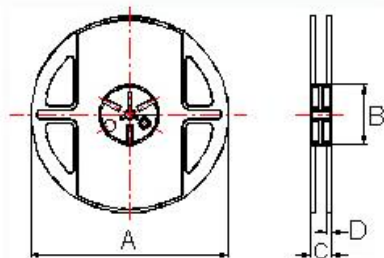
The force for tearing off cover tape is 10 to 100 grams in the arrow direction.



10.2 Packaging Quantity

TYPE	PCS/REEL
252012	3000

10.3 Reel Dimensions



Dimensions in mm

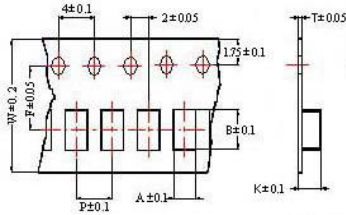
TYPE	A	B	C	D
252012	178	60	12	1.5

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10 Packaging:

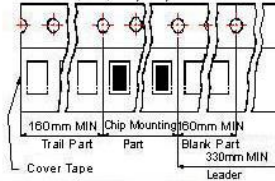
10.4 Tape Dimensions in mm



Tape Material

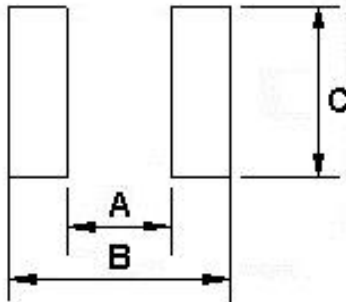
Carrier tape : Polycarbonate

Cover tape : Polyethylene



TYPE	A	B	T	W	P	F	K
252012	2.25	2.8	0.22	8	4	3.5	1.35

11 Recommended Land Pattern:



Dimensions in mm

TYPE	A	B	C
252012	1.2	2.8	2.3

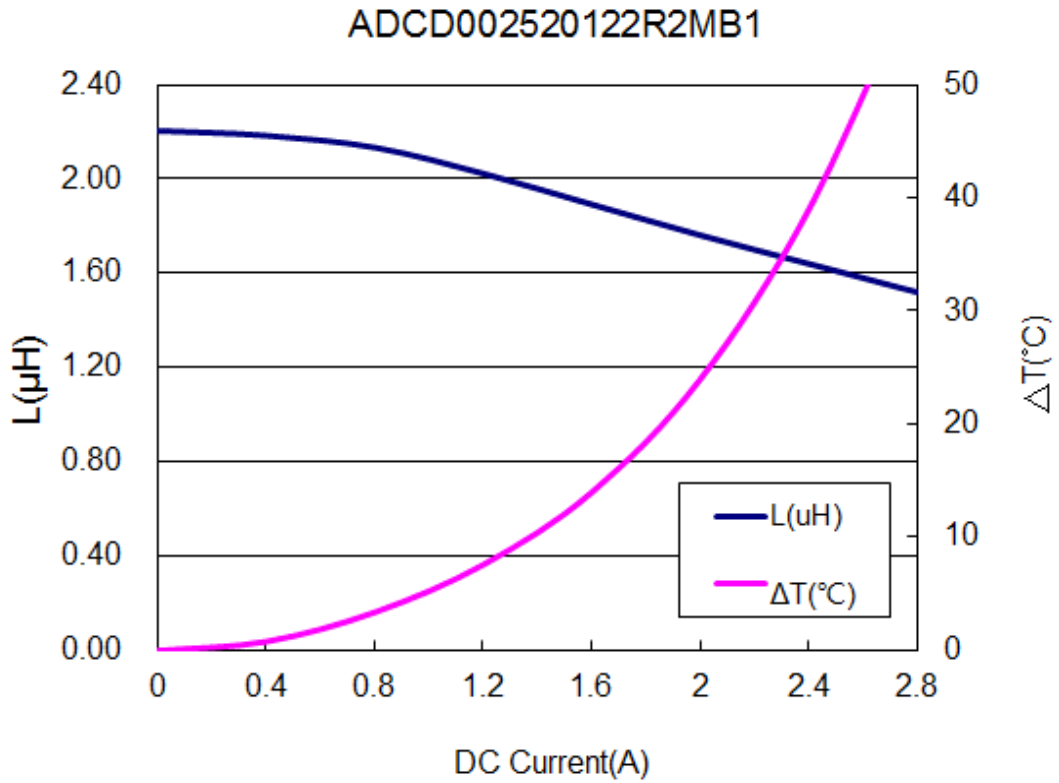
12 Note:

1. Please make sure that your product has been evaluated and confirmed against your specifications when our product is mounted to your product.
2. Do not knock nor drop.
3. All the items and parameters in this product specification have been prescribed on the premise that our product is used for the purpose, under the condition and in the environment agreed upon between you and us. You are requested not to use our product deviating from such agreement.
4. Please keep the distance between transformer/coil and other components (refer to the standard IEC 950)
5. The moisture sensitivity level (MSL) of products is classified as level 1.

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13 Graph:



单击下面可查看定价，库存，交付和生命周期等信息

[>>CHILISIN\(奇力新\)](#)