

SPECIFICATION FOR APPROVAL

Customer :	_____
Customer P/N:	_____
Drawing No :	C3X2300786
Quantity :	0 Pcs.
Date :	_____
Chilisin P/N :	APCP00070746330M8I

Automotive Grade Inductor

Halogen Free
RoHS Compliant
REACH Compliant
Lead Free Solders
AEC-Q200

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Drawn by
Jay

Checked by
Marco

Approved by
Vincent

APCP00070746 Series Specification

AEC-Q200

1 Scope: This specification applies to the Pb Free high current type SMD inductors

2 Part Numbering:

A PCP 00 070746 330 M 8I

① ② ③ ④ ⑤ ⑥ ⑦

- ① Grade Code
- ② Product Code
- ③ Control Code
- ④ Dimensions Code
- ⑤ Inductance Code
- ⑥ Tolerance Code
- ⑦ Inner Control Code

3 Rating:

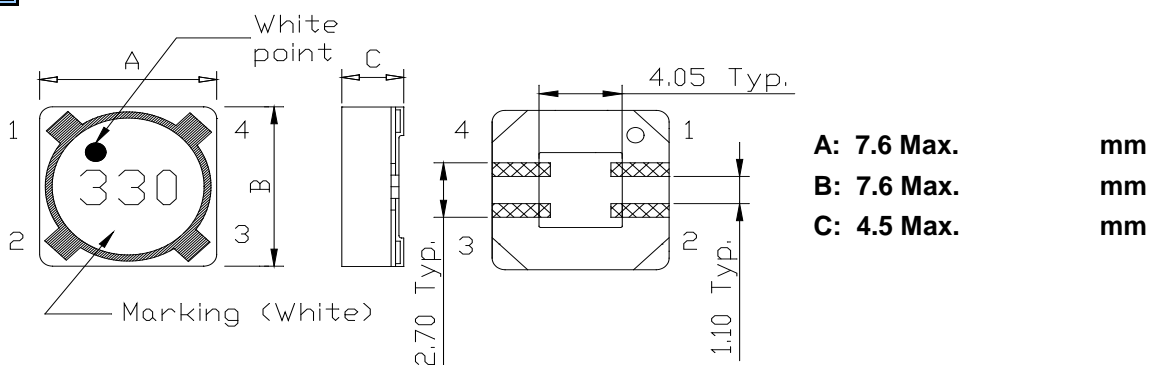
(3)-1 Operate temperature range $-40^{\circ}\text{C} \sim +165^{\circ}\text{C}$
(Including self temp. rise)

(3)-2 Storage temperature range $-40^{\circ}\text{C} \sim +165^{\circ}\text{C}$
(For after the circuit board is mounted)

4 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

5 Configuration and Dimensions:

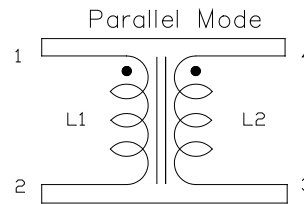
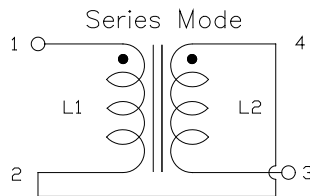
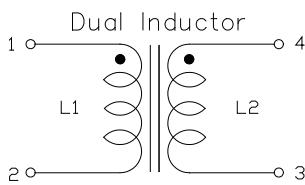


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6 Electrical Characteristics:

Part No.	Inductance L1,2(μH)	Parallel Ratings (1-2) // (4-3)				Series Ratings (1-3) short(2-4)				Marking
		OCL	Resistance	Rated DC Current		OCL	Resistance	Rated DC Current		
		(μH)±20%	RDC(Ω) Typ.	Isat(A)	Irms(A)	(μH)±20%	RDC(Ω) Typ.	Isat(A)	Irms(A)	
APCP00070746330M8I	33	33.01	0.143	1.730	1.410	132.0	0.574	0.870	0.702	330

SCHEMATIC



NOTE: tolerance M=±20%

1. Test Frequency : 100kHz,0.25V
2. Dual:L1(1-2) ,L2(4-3) Parallel:(1-2)//(4-3) Series:(1-3) Short(2-4)
3. Isat : Based on inductance change ($\Delta L/L_0$: drop 30% Typ.) @ ambient Temperature : 25°C
4. I rms : Based on temperature rise (ΔT : 40°C Typ.)
5. Turns Ratio(1-2):(4-3) 1:1

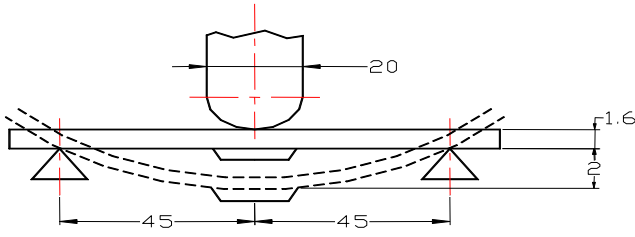
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ELECTRICAL

TEST ITEM	SPECIFICATION	TEST DETAILS
Temperature characteristics	$\Delta L/L20^{\circ}C \leq \pm 10\%$ 0 ~ 2000 ppm/ $^{\circ}C$	The test shall be performed after the sample has stabilized in an ambient temperature of -20 to +85 $^{\circ}C$, and the value calculated based on the value applicable in a normal temperature and normal humidity shall be $\Delta L/L20^{\circ}C \leq \pm 10\%$.

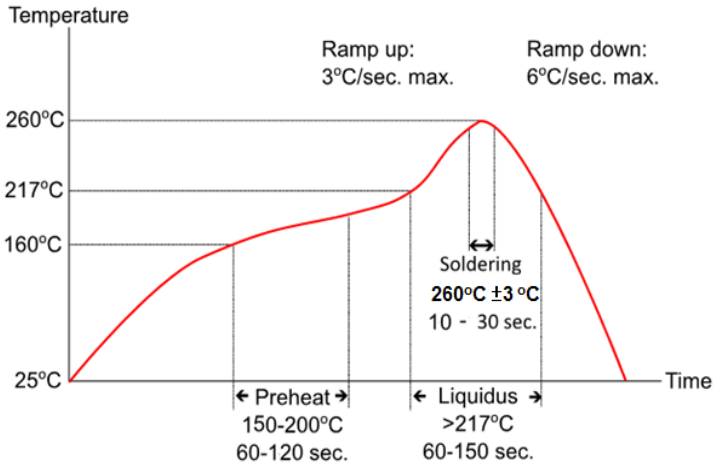
MECHANICAL

TEST ITEM	SPECIFICATION	TEST DETAILS
Substrate bending	$\Delta L/L_0 \leq \pm 5\%$ There shall be no mechanical damage or electrical damage.	The sample shall be soldered onto the printed circuit board in figure 1 and a load applied until the figure in the arrow direction is made approximately 2mm. 60 sec minimum holding time. Refer to AEC-Q200-005 
Flammability	There shall be no other damage or problems.	Burning stops within 10 seconds on a vertical specimen; drips of particles allowed as long as they are not inflamed.
Terminal Strength	There shall be no other damage or problems.	With the component mounted on a PCB obtained from the Supplier with the device to be tested, apply a 17.7 N (1.8 Kg) force to the side of a device being tested. This force shall be applied for 60 +1 seconds.
Mechanical Shock	$\Delta L/L_0 \leq \pm 5\%$ There shall be no mechanical damage.	100g's/6ms/Half-sine/12.3ft/sec

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MECHANICAL

TEST ITEM	SPECIFICATION	
Vibration	$\Delta L/L_0 \leq \pm 5\%$ There shall be no mechanical damage.	The sample shall be soldered onto the printed circuit board and when a vibration having an amplitude of 1.52mm and a frequency of from 10 to 55Hz/1 minute repeated should be applied to the 3 directions (X,Y,Z) for 2 hours each. (A total of 6 hours)
Solderability	New solder More than 90%	Flux (rosin, isopropyl alcohol{JIS-K-1522}) shall be coated over the whole of the sample before hard, the sample shall then be preheated for about 2 minutes in a temperature of 130~150°C and after it has been immersed to a depth 0.5mm below for 3±0.2 seconds fully in molten solder M705 with a temperature of 245±5°C. More than 90% of the electrode sections shall be covered with new solder smoothly when the sample is taken out of the solder bath.
Resistance to Soldering heat (reflow soldering)	There shall be no damage or problems.	<p style="text-align: center;">Temperature profile of reflow soldering</p>  <p>The specimen shall be passed through the reflow oven with the condition shown in the above profile for 1 time.</p> <p>The specimen shall be stored at standard atmospheric conditions for 1 hour, after which the measurement shall be made.</p>

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ENVIRONMENT CHARACTERISTICS

TEST ITEM	SPECIFICATION	
High temperature storage	$\Delta L/Lo \leq \pm 5\%$ There shall be no mechanical damage.	1000hrs.at rated operating temperature (e.g. 125°C part can be stored for 1000hrs.@ 125°C.Same applies for 105°C and 85°C. Unpowered. Measurement at 24±4 hours after test conclusion.
Temperature Cycling	$\Delta L/Lo \leq \pm 5\%$ There shall be no other damage of problems	1000cycles (-40°C to +125°C).Note: If 85°C part or 105°C part the 1000cycles will be at that temperature. Measurement at 24±4hours after test conclusion. 30min maximum dwell time at each temperature extreme.1min. maximum transition time.
Operational Life	$\Delta L/Lo \leq \pm 5\%$ There shall be no mechanical damage.	1000hrs. @105°C. If 85°C or 125°C part will be Tested at that temperature. Measurement at 24±4 hours after test conclusion
Biased Humidity	$\Delta L/Lo \leq \pm 5\%$ There shall be no mechanical damage.	1000hours 85°C/85%RH. Unpowered.Measurement at 24±4hours after test conclusion.

Test conditions :

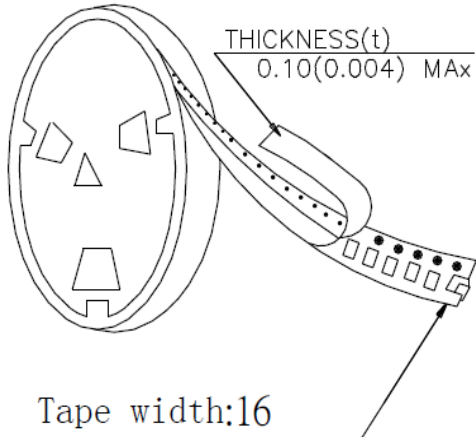
The sample shall be reflow soldered onto the printed circuit board in every test.

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7 Packaging:

7.1 Packaging -Cover Tape

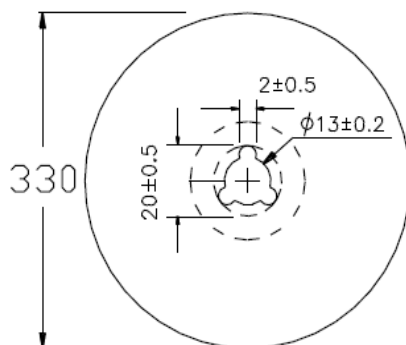


7.2 Packaging Quantity

TYPE	PCS/REEL
APCP00070746	1000

7.3 Reel Dimensions

Unit : mm

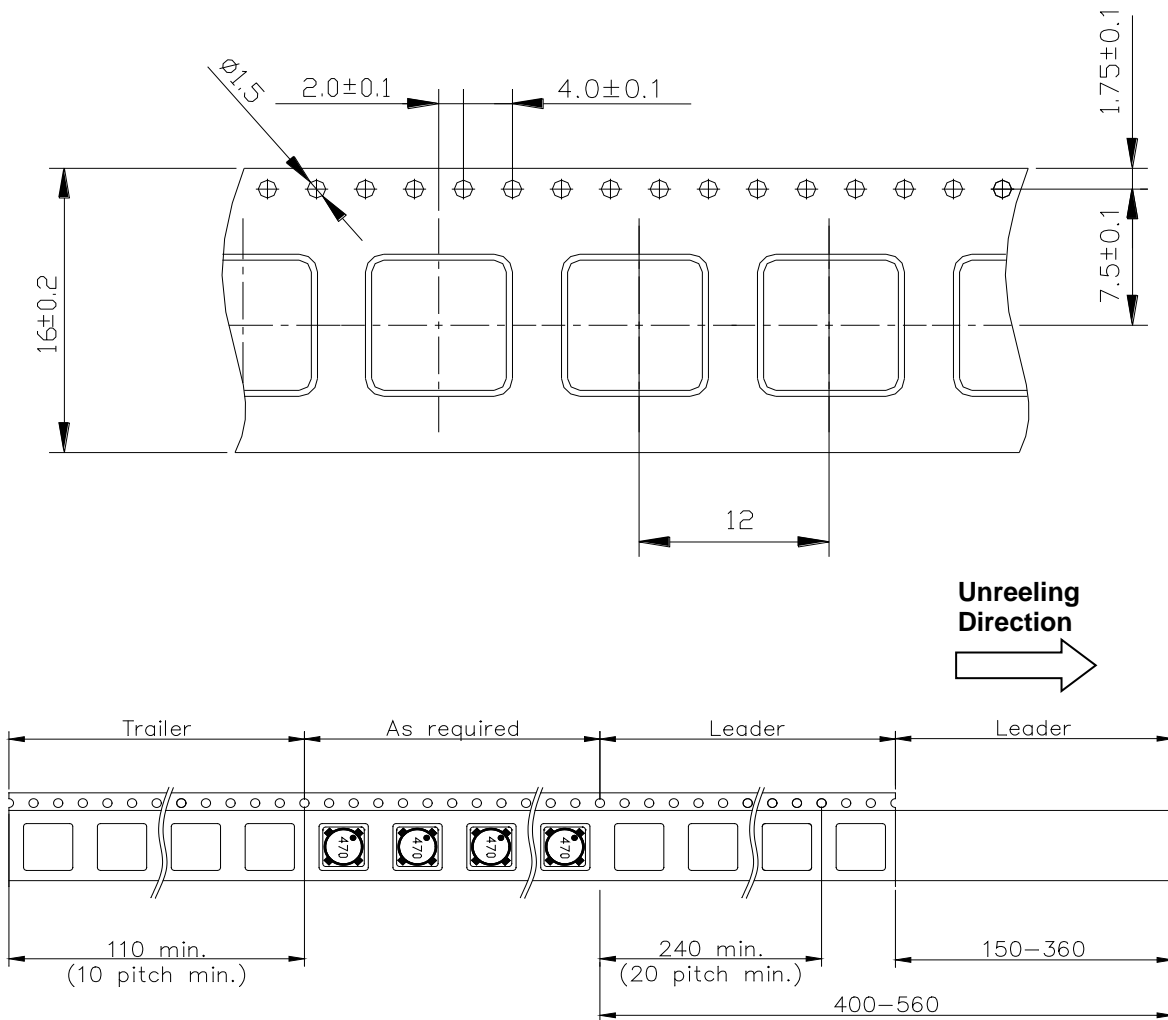


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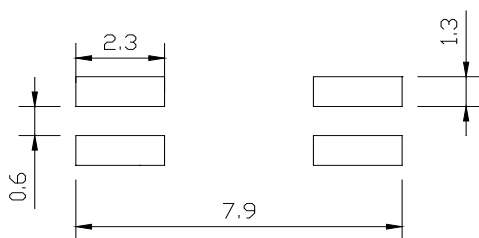
7 Packaging:

7.4 Tape Dimensions in mm



8 Recommended Land Pattern:

(STANDARD PATTERN) Unit : mm



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9 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 or 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.

7. Suggestion

On customer side this product series need to be fixed by the glue after IR reflow.

Please refer to below example photo:



Glue

单击下面可查看定价，库存，交付和生命周期等信息

[>>CHILISIN\(奇力新\)](#)