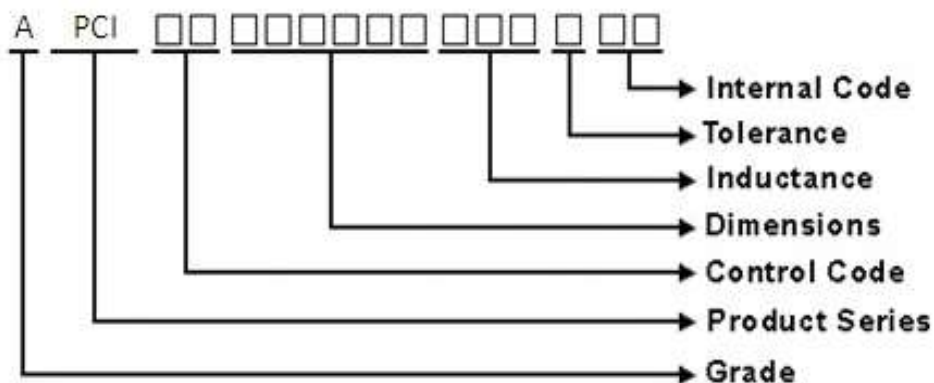


APCI00121280 Series Specification

AEC-Q200

1 Scope: This specification applies to SMD Shielded Power Choke

2 Part Numbering:



3 Rating:

Operating Temperature: $-40^{\circ}\text{C} \sim 155^{\circ}\text{C}$ (Including self - temperature rise)

Storage Temperature: $-40^{\circ}\text{C} \sim 105^{\circ}\text{C}$

4 Marking:



Ex Marking : ●150

Marking color : White

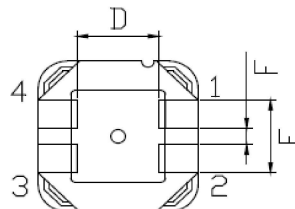
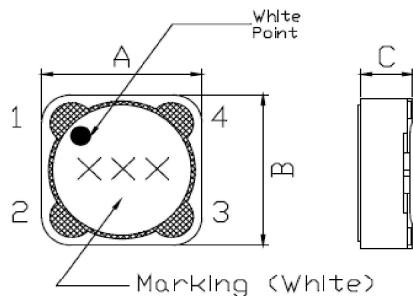
5 Standard Testing Condition

| | 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 |

APCI00121280 Series Specification

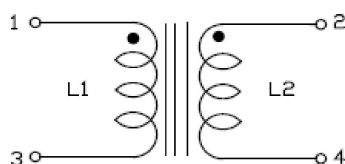
AEC-Q200

6 Configuration and Dimensions:

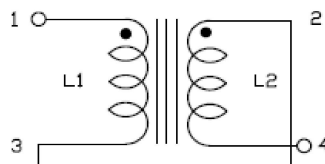


| | | |
|----|-----------|----|
| A: | 12.0± 0.5 | mm |
| B: | 12.0± 0.5 | mm |
| C: | 8.1 Max. | mm |
| D: | 5.7 Typ. | mm |
| E: | 5.0 Typ. | mm |
| F: | 1.6 Typ. | mm |

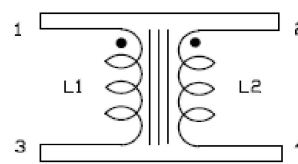
Dual Inductor



Series Mode



Parallel Mode



7 Electrical Characteristics:

| Part No. | Inductance | Test Freq. | Parallel Ratings | | | | Series Ratings | | | | Tolerance | Marking |
|--------------------|------------|--------------|------------------|----------|------|------|----------------|----------|------|------|-----------|---------|
| | (uH) | | OCL | RDC | Isat | Irms | OCL | RDC | Isat | Irms | | |
| APCI00121280150MB2 | 15 | 100kHz,0.25V | (uH)±20% | (mΩ)Max. | (A) | (A) | (uH)±20% | (mΩ)Max. | (A) | (A) | M | ●150 |

NOTE: □-tolerance M=±20%

1.Operating temperature range -40℃ ~ 155℃ (Including self - temperature rise)

2.Parallel:(1,2-3,4) Series:(1-4)tie(2-3)

3.IDC: Base on inductance change (ΔL/L0 : drop 30% Typ.)@ambient temp.25℃

4.Irms: Base on temperature rise (ΔT : 40℃ TYP.)

5.Turns Ratio(1-3):(2-4) 1:1

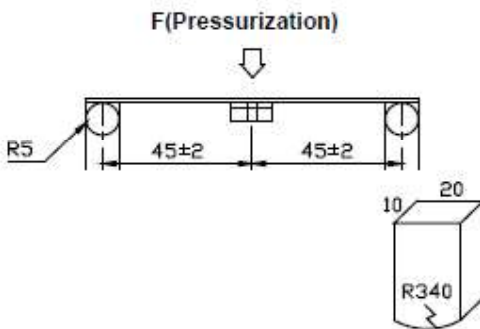
APCI00121280 Series Specification

AEC-Q200

ELECTRICAL

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

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 3mm. 60 sec minimum holding time. PCB dimension shall the page 7/9  PRESSURE ROD figure-1 |
| 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 |



APCI00121280 Series Specification

AEC-Q200

MECHANICAL

| TEST ITEM | SPECIFICATION | |
|---|---|---|
| Vibration | $\Delta L/L_0 \leq \pm 5\%$ There shall be no mechanical damage. | 5g's for 20 minutes, 12 cycles each of 3 orientations. Test from 10-2000 Hz. |
| 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℃ and after it has been immersed to a depth 0.5mm below for 3±1 seconds fully in molten solder M705 with a temperature of 245±5℃. 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>Temperature profile of reflow soldering</p> <p>Solder temperature : 260 ±5℃ Dip time: 10 ±1 seconds The chip shall not crack. More than 75% of the terminal electrode shall be covered with solder.</p> |



ISO 9001 & ISO 14001 & TS16949 **CHILISIN ELECTRONICS CORP.**

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ENVIROMENT CHARACTERISTICS

| TEST ITEM | SPECIFICATION | |
|--------------------------|---|---|
| High temperature storage | $\Delta L/L_0 \leq \pm 5\%$ There shall be no mechanical damage. | 1000hrs.at rated operating temperature (e.g. 155°C part can be stored for 1000hrs.@ 155°C.Same applies for 125°C and 105°C. Unpowered. Measurement at 24±4 hours after test conclusion. |
| Temperature Cycling | $\Delta L/L_0 \leq \pm 5\%$ There shall be no other damage of problems | 1000cycles (-40°C to +155°C).Note: If 105°C part or 125°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 | $\Delta L/L_0 \leq \pm 5\%$ There shall be no mechanical damage. | 1000hrs. @155°C. If 105°C or 125°C part will be Tested at that temperature. Measurement at 24±4 hours after test conclusion |
| Biased Humidity | $\Delta L/L_0 \leq \pm 5\%$ There shall be no mechanical damage. | 1000hours 85°C/85%RH. Unpowered.Measurement at 24±4hours after test conclusion. |

Test conditions :

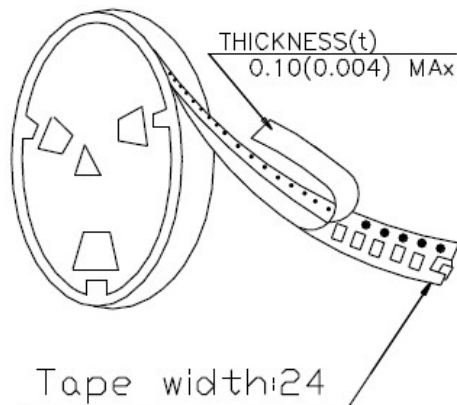
The sample shall be reflow soldered onto the printed circuit board in every test.

APCI00121280 Series Specification

AEC-Q200

8 Packaging:

8.1 Packaging -Cover Tape

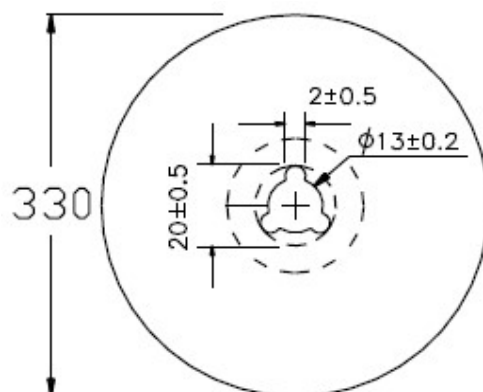


8.2 Packaging Quantity

| TYPE | PCS/REEL |
|--------|----------|
| 121280 | 500 |

8.3 Reel Dimensions

Unit : mm

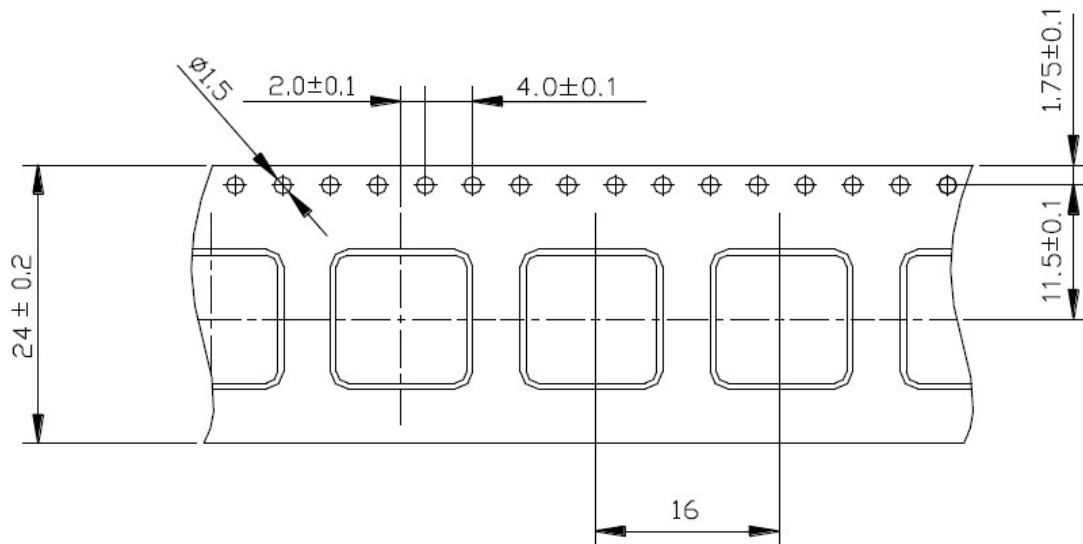


APCI00121280 Series Specification

AEC-Q200

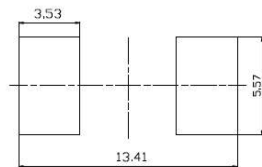
8 Packaging:

8.4 Tape Dimensions in mm

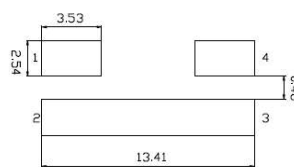


9 Recommended Land Pattern:

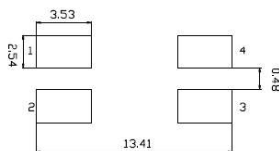
(STANDARD PATTERN)



Parallel Mode



Series Mode



Dual Inductor Mode

10 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.