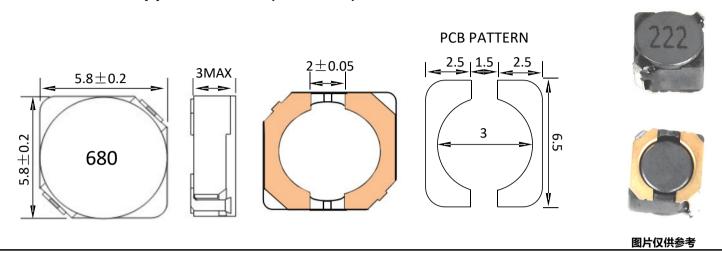


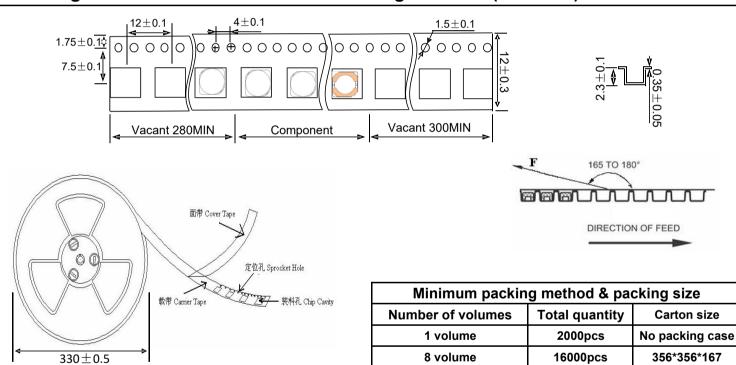
# KSE-CD5D28NP-680NC

# **Power Inductors**

# Dimension & Appearance (Unit:mm)



# Packing method and dimension and Printing Direction(Unit:mm)



#### Material list

| Item | Material Name      | Material Spec                 |  |
|------|--------------------|-------------------------------|--|
| 1    | Magnetic materials | DR5.6*2.7 B2.0 F1.7           |  |
| 2    | Magnetic materials | RI5.7*2.45*4.7                |  |
| 3    | Enameled wire      | 2UEW 180°C                    |  |
| 4    | Tin                | Environment-friendly unleaded |  |
| 5    | The packing way    | Concave plastic belt pc       |  |
| 6    | The packing way    | Plastic disc                  |  |
| 7    | Ероху              | G500                          |  |
| 8    | Ероху              | JL700                         |  |
| 9    | Terminal           | C-03005-B4H-P3-20             |  |
| 10   |                    |                               |  |

12 volume

24000pcs

358\*358\*252





# **Power Inductors**

# Electrical characteristic

L: 68±20% AT 100 (KHz) 0.25 V

DCR: 410 (m $\Omega$ )MAX AT 25  $^{\circ}$ C

IDC: 0.5 (A)MAX AT 100 (KHz) 0.25 V

|           | Inductance &Tolerance | Test Freq | Test Vol | DC Resistance Max | Rated DC Current |
|-----------|-----------------------|-----------|----------|-------------------|------------------|
|           | (UH)                  | (KHz)     | (V)      | (mΩ)MAX           | (A)MAX           |
| Testing   | 68±20%                | 100       | 0.25     | 410               | 0.5              |
| Standards | 0022070               | .00       | 0.20     | 0                 | (≥80% Ls)        |
| 1         | 67.7                  | 100       | 0.25     | 315.4             | OK               |
| 2         | 65.1                  | 100       | 0.25     | 314.9             | OK               |
| 3         | 64.5                  | 100       | 0.25     | 316.2             | OK               |
| 4         | 66.0                  | 100       | 0.25     | 315.8             | OK               |
| 5         | 65.9                  | 100       | 0.25     | 315.7             | OK               |
| 6         | 63.8                  | 100       | 0.25     | 315.8             | OK               |
| 7         | 66.2                  | 100       | 0.25     | 316.0             | OK               |
| 8         | 69.9                  | 100       | 0.25     | 314.7             | ОК               |
| 9         | 69.8                  | 100       | 0.25     | 314.6             | OK               |
| 10        | 64.6                  | 100       | 0.25     | 315.9             | OK               |
| Х         | 66.3                  |           |          | 315.5             |                  |



# KSE-CD5D28NP-680NC

# **Power Inductors**

# Reliability Testing Ltems

| No. | Items                             | Requirements   | Test Methods and Remarks   |  |
|-----|-----------------------------------|--|--|--|
| 1   | Operting<br>Temperature Range     | -40°C <b>~</b> +125°C  | Including self-heating temperature rise.   |  |
| 2   | Soldering Resistance              | 1.No visible mechanical damage     2.liductance change:within ±10%   | Dip pads in flux and dip in solder pot (96.5sn/3.0Ag/0.5Cu) at 260±5℃ for 10±1 seconds   |  |
| 3   | Solderability                     | 90%or more of electrode area shall be coated by new solder   | Dip pads in flux and dip in solder pot (96.5sn/3.0Ag/0.5Cu) at 260±5℃ for 5±1 seconds  |  |
| 4   | Insulation Resistance             | ≥100MΩ   | 100V DC between inductor coil and core for 60 seconds  |  |
| 5   | Component Adhesion<br>(Push test) | ≥2.0kgf  | Inductors shall be subjected to 260±5℃ for 20±5sec Soldering in the base whit 0.3mm solder.And then aplomb electrode wayplus tax 2.0kgf for ten seconds. |  |
| 6   | Over loading                      | 1.There shall be no case deformation or change in appearance  2.The electrical characteristics of inductor to meet the requirements of spec. | Apply twice as rated current for five minutes between inductor terminals,direct current error ±2%  |  |
| 7   | Temperature change                | 1.There shall be no case deformation or change in appearance     2.Inductance shall not change more than ±10%.                               | +125℃ 1 hour←→-40℃ 1 hour 5<br>Cycles,Inductors are to be tested after 1<br>hour at room temperature   |  |
| 8   | High temperature                  | 1.There shall be no case deformation or change in appearance     2.Inductance shall not change more than ±10%.                               | Inductors shall be subjected to+105±5℃ for 96±2 hour,Inductors are to be tested after one hour at room temperature                                       |  |
| 9   | Low temperature                   | 1.There shall be no case deformation or change in appearance  2.Inductance shall not change more than ±10%.                                  | Inductors shall be subjected to-40±5℃ for 96±2 hour,Inductors are to be tested after one hour at room temperature  |  |
| 10  | Life                              | 1.There shall be no case deformation or change in appearance  2.Inductance shall not change more than ±10%.                                  | Inductors shall be store at+125±5℃ for 1000 hours with rated current applide, Normal temperature test  |  |



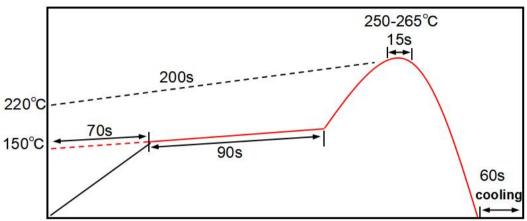
### **Power Inductors**

#### Recommend Soldering Conditions

Applicable soldering process to the products is reflow soldering.

#### **Soldering Profile**

#### (1) Reflow Soldering Profile



#### (2) Soldering Iron

Reworking with Sodering Iron must preheating at 150°C for 1 minute is required, and do not directly touch the core with the tip of the soldering iron. The reworking soldering conditions are as follows:

- ① Temperature of soldering iron tip: 350°C;
- 2 Soldering iron power output: 30W max.
- ③ Diameter of soldering iron end: 1.0mm max.
- 4 Soldering time: within 3 sec.



# Storage Requirements

### (1)Storage Period

To maintain the solderability of terminal electrodes and to keep the packing material in good condition, product should be used within 6 months from the time of delivery. And the solderability of products electrodes may decrease as time passes, so in case of storage over 6 months, slderability shall be checked before actual usage.

### (2) Storage Conditions

(1) Store products in a warehouse in compliance with the following condition:

Temperature: - 10 to +40°C Humidity: 30~70%RH

- (2) Do not subject products to rapid changes in temperature and humidity.
- (3) Do not store the products in chemical atmosphere such as one containing sulfurous acid gas or alkaline gas, that will causes poor solderability and corrosion of inductors.
- (4) Do not store products in bulk packaging to prevent collision among inductors which causes core wire breakage.chipping and
  - (5) Store products on pallets to protect from humidity, dust, etc.
  - (6) Avoid heat shock, vibration, direct sunlight, etc.