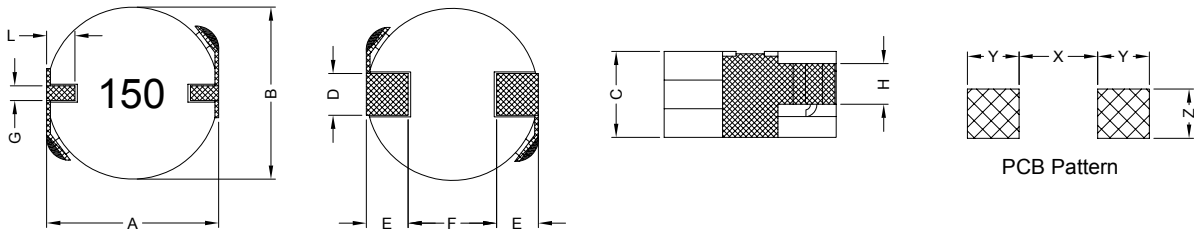


### 1. PART NO. EXPRESSION :

PDC0735C-3R3MF  
 (a) (b) (c) (d) (e)(f)

- (a) Series code
- (b) Dimension code
- (c) Type code
- (d) Inductance code : 3R3 = 3.3uH
- (e) Tolerance code : M = ±20%
- (f) F : Lead Free

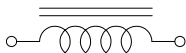
### 2. CONFIGURATION & DIMENSIONS :



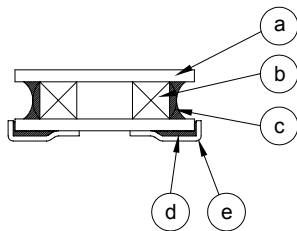
Unit : mm

| A       | B        | C        | D         | E         | F         |
|---------|----------|----------|-----------|-----------|-----------|
| 7.0±0.5 | 7.0±0.5  | 3.5 Max. | 1.7±0.2   | 1.7±0.2   | 3.6±0.5   |
| G       | H        | L        | X         | Y         | Z         |
| 0.6±0.2 | 1.65±0.2 | 1.15±0.2 | 3.20 Ref. | 2.10 Ref. | 2.00 Ref. |

### 3. SCHEMATIC :



### 4. MATERIALS :



- (a) Core : Ferrite Core
- (b) Wire : Enamelled Copper Wire
- (c) Adhesive : Epoxy
- (d) Adhesive : Epoxy
- (e) Clip : Tin Clip



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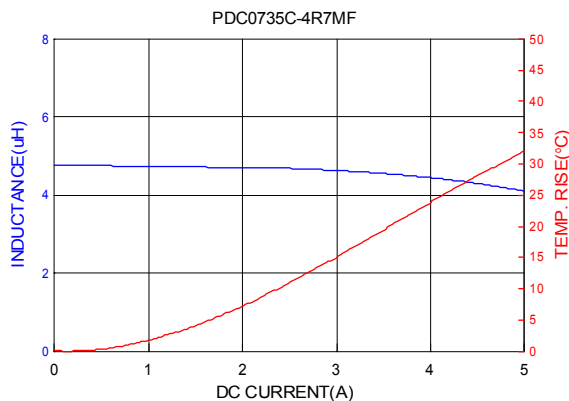
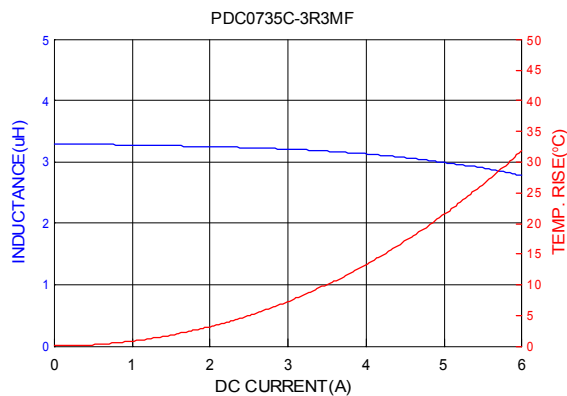
### 5. GENERAL SPECIFICATION :

- a) Test Frequency : 100KHz/0.25Vdc & 1KHz/0.25Vdc
- b) Ambient Temp. : 20°C
- c) Irms(A) : Will cause coil temperature to rise  $\Delta T \leq 40^\circ\text{C}$
- d) Isat(A) : Will cause  $L_0$  to drop approximately 20%
- e) Operating temp. : -20°C to +85°C ( include self-temp. rise )

### 6. ELECTRICAL CHARACTERISTICS :

| Part No.       | Inductance ( $\mu\text{H}$ ) | Test Frequency ( Hz ) | DCR ( $\text{m}\Omega$ ) $\pm 20\%$ | Irms ( A ) Max. | Isat ( A ) Max. |
|----------------|------------------------------|-----------------------|-------------------------------------|-----------------|-----------------|
| PDC0735C-3R3MF | 3.3 $\pm 20\%$               | 100K/0.25V            | 21                                  | 5.00            | 6.00            |
| PDC0735C-4R7MF | 4.7 $\pm 20\%$               | 100K/0.25V            | 25                                  | 4.00            | 5.00            |
| PDC0735C-100MF | 10 $\pm 20\%$                | 100K/0.25V            | 50                                  | 2.50            | 3.20            |
| PDC0735C-150MF | 15 $\pm 20\%$                | 100K/0.25V            | 71                                  | 1.80            | 2.10            |
| PDC0735C-330MF | 33 $\pm 20\%$                | 100K/0.25V            | 160                                 | 1.20            | 1.80            |
| PDC0735C-101MF | 100 $\pm 20\%$               | 100K/0.25V            | 450                                 | 0.75            | 0.90            |
| PDC0735C-331MF | 330 $\pm 20\%$               | 100K/0.25V            | 1500                                | 0.40            | 0.45            |
| PDC0735C-102MF | 1000 $\pm 20\%$              | 1K/0.25V              | 4300                                | 0.13            | 0.15            |

### 7. CHARACTERISTICS CURVES :



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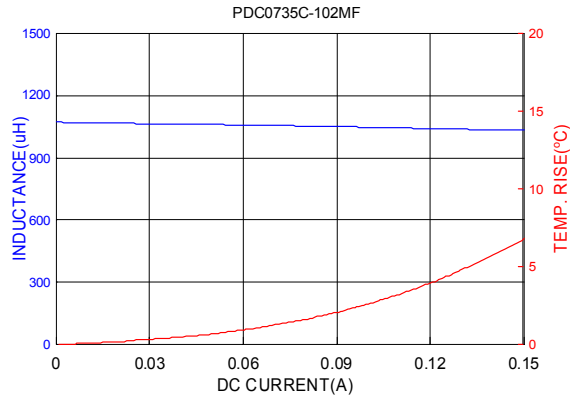
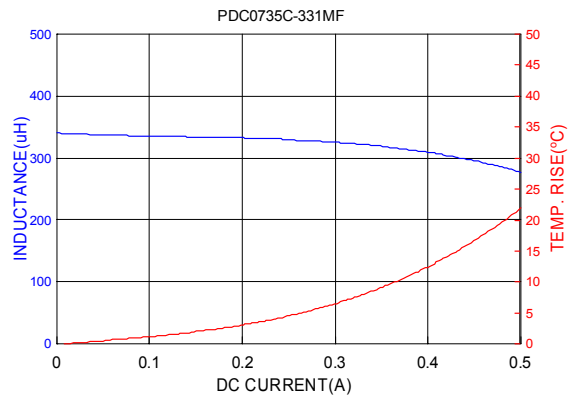
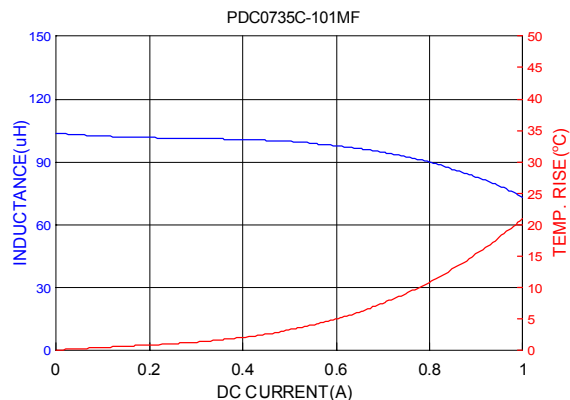
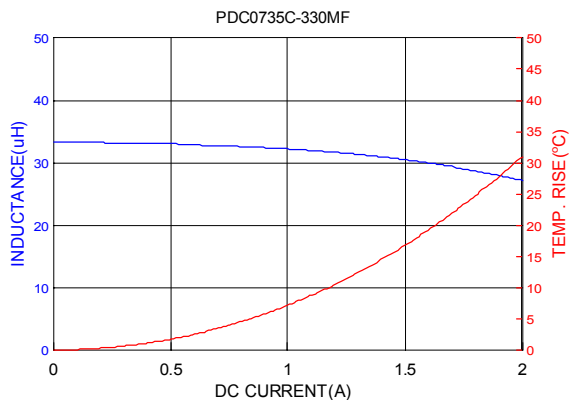
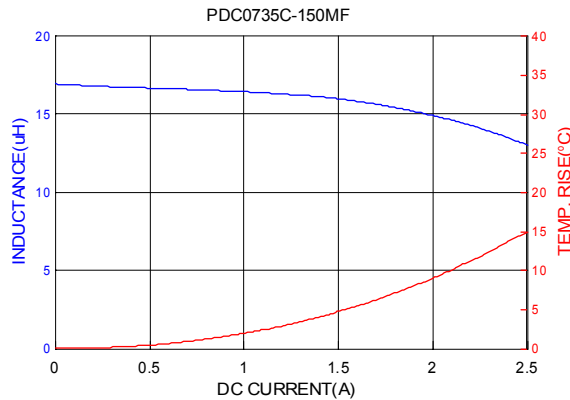
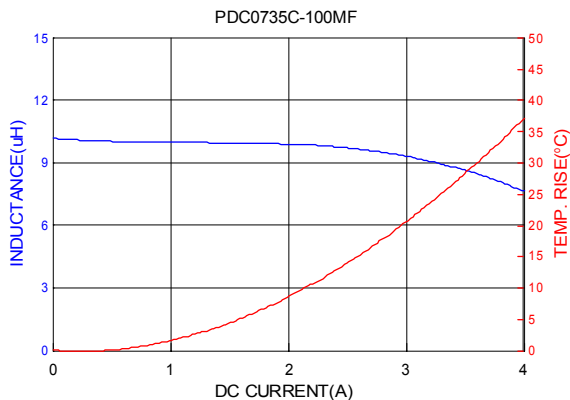
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7. CHARACTERISTICS CURVES :



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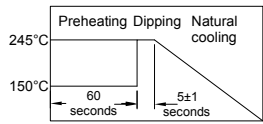
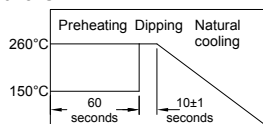
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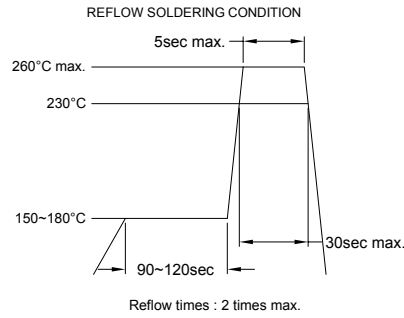
**8. ELECTRICAL CHARACTERISTICS :**

| ITEM                              | JUDGEMENT STANDARD   | TEST CONDITION   |      |                  |              |   |       |    |   |      |          |   |       |    |   |      |
|-----------------------------------|--|--|------|------------------|--------------|---|-------|----|---|------|----------|---|-------|----|---|------|
| Mechanical Performance Test       |  |  |      |                  |              |   |       |    |   |      |          |   |       |    |   |      |
| Solderability Test                | More than 90% of the terminal electrode should be covered with solder.   | Preheat : 150°C, 60sec.<br>Solder : lead free (recommend)<br>Solder Temperature : 245±5°C<br>Flux for lead free : rosin<br>Dip Time : 5±1sec.<br>   |      |                  |              |   |       |    |   |      |          |   |       |    |   |      |
| Solder Heat Resistance            | 1. Appearance : No damage<br>2. Inductance change : Within ±10% of initial value   | Preheat : 150°C<br>Preheat time : 1 min<br>Solder Temperature : 260±5°C<br>Dip Time : 10±1sec.<br><br>Measure at room temperature after placing for 24 hrs.   |      |                  |              |   |       |    |   |      |          |   |       |    |   |      |
| Reliability Test                  |  |  |      |                  |              |   |       |    |   |      |          |   |       |    |   |      |
| Humidity Resistance               | 1. Appearance : No damage<br>2. All electrical and mechanical parameters within tolerance  | Temperature : 40±2°C<br>Humidity : 90% to 95%<br>Applied Current : Rated Current<br>Time : 500±12 hours<br>Component should be stabilized at normal condition for 24±2 hours before test.  |      |                  |              |   |       |    |   |      |          |   |       |    |   |      |
| High Temperature Life Test        | 1. Appearance : No damage<br>2. All electrical and mechanical parameters within tolerance  | Temperature : 85±3°C<br>Time : 500+24/-0 hrs<br>Component should be stabilized at normal condition for 24±2 hours before test.   |      |                  |              |   |       |    |   |      |          |   |       |    |   |      |
| Low Temperature Life Test         |  | Temperature : -40±3°C<br>Time : 500+24/-0 hrs<br>Component should be stabilized at normal condition for 24±2 hours before test.  |      |                  |              |   |       |    |   |      |          |   |       |    |   |      |
| Temperature Cycle (Thermal Shock) |  | Conditions of 1 cycle.<br><table border="1" data-bbox="917 1321 1284 1467"> <thead> <tr> <th>Step</th> <th>Temperature (°C)</th> <th>Times (min.)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-40±3</td> <td>30</td> </tr> <tr> <td>2</td> <td>25±2</td> <td>Within 3</td> </tr> <tr> <td>3</td> <td>+85±3</td> <td>30</td> </tr> <tr> <td>4</td> <td>25±2</td> <td>Within 3</td> </tr> </tbody> </table><br>Total : 10 cycles<br>Component should be stabilized at normal condition for 24±2 hours before test. | Step | Temperature (°C) | Times (min.) | 1 | -40±3 | 30 | 2 | 25±2 | Within 3 | 3 | +85±3 | 30 | 4 | 25±2 |
| Step                              | Temperature (°C)   | Times (min.)   |      |                  |              |   |       |    |   |      |          |   |       |    |   |      |
| 1                                 | -40±3  | 30   |      |                  |              |   |       |    |   |      |          |   |       |    |   |      |
| 2                                 | 25±2   | Within 3   |      |                  |              |   |       |    |   |      |          |   |       |    |   |      |
| 3                                 | +85±3  | 30   |      |                  |              |   |       |    |   |      |          |   |       |    |   |      |
| 4                                 | 25±2   | Within 3   |      |                  |              |   |       |    |   |      |          |   |       |    |   |      |
| Drop                              | Drop 10 times on a concrete floor from a height of 1m.   | No mechanical damage<br>All electrical and mechanical parameters within tolerance  |      |                  |              |   |       |    |   |      |          |   |       |    |   |      |
| Electrical Characteristics Test   |  |  |      |                  |              |   |       |    |   |      |          |   |       |    |   |      |
| Heat Rated Current (Irms)         | Idc(Irms) @ Δ ≤ 45°C<br>a. ΔT is the component surface temperature rise scope in room temperature, the test component surface temperature increase not more than 45°C<br>b. Body should not be damaged | 1. Ambient temp : 25°C with inhibitive ventilation condition:<br>2. Applied Current : DC Current, the current shall be step by step increase to the load component.  |      |                  |              |   |       |    |   |      |          |   |       |    |   |      |
| Saturation Current (Isat)         | Isat @ L ≥ 70% L0<br>L : test inductance with DC current<br>L0 : the initial inductance without DC current   | 1. Ambient temp : 25°C<br>2. Applied Current : DC Current, the current shall be step by step increase to the load component.   |      |                  |              |   |       |    |   |      |          |   |       |    |   |      |

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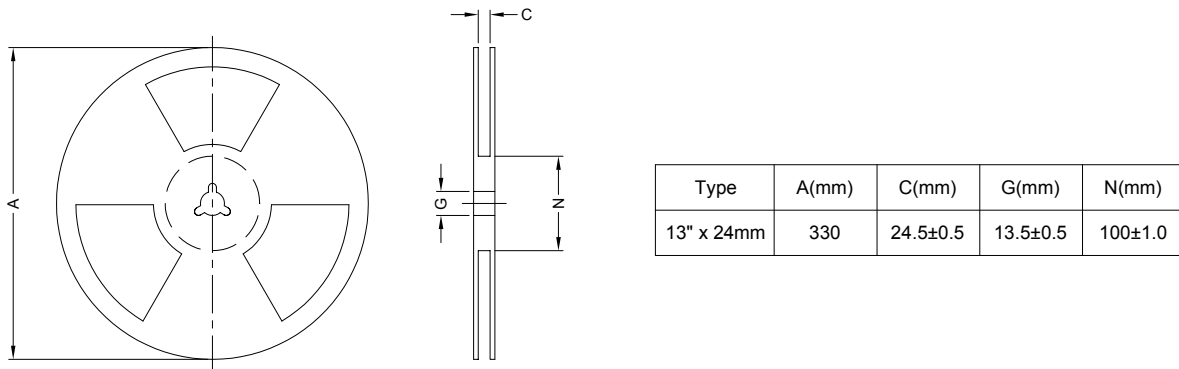
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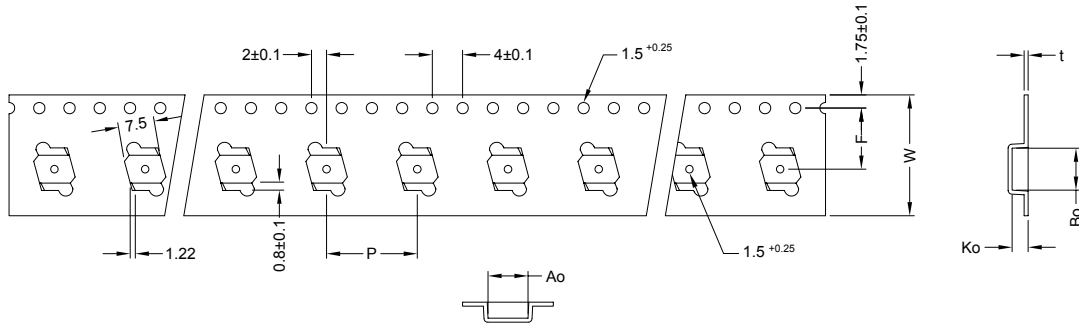


9. PACKAGING INFORMATION :

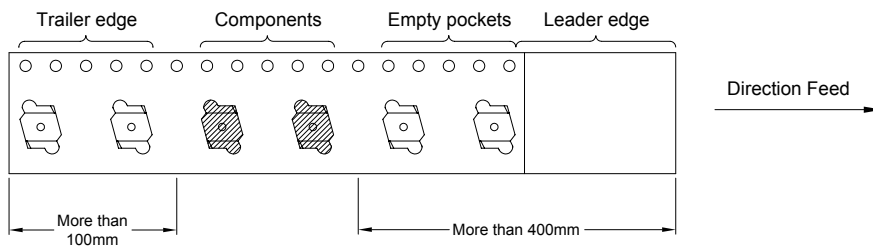
9-1. Reel Dimension



9-2. Tape Dimension / 12mm



| Series   | Ao(mm)   | Bo(mm)   | Ko(mm)  | P(mm)    | W(mm)  | F(mm)    | t(mm)    |
|----------|----------|----------|---------|----------|--------|----------|----------|
| PDC0735C | 7.65±0.1 | 7.65±0.1 | 3.6±0.1 | 12.0±0.1 | 24±0.3 | 11.5±0.1 | 0.4±0.05 |



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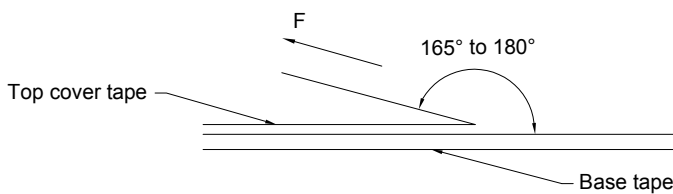
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### 9-3. Packaging Quantity

|             |          |
|-------------|----------|
| Size        | PDC0735C |
| Chip / Reel | 1000     |
| Inner Box   | 2000     |
| Carton      | 8000     |

### 9-4. Tearing Off Force



The force for tearing off cover tape is 10 to 125 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

#### 1. Storage Conditions :

To maintain the solderability of terminal electrodes :

- Temperature and humidity conditions : Less than 40°C and 70% RH.
- Recommended products should be used within 6 months from the time of delivery.
- The packaging material should be kept where no chlorine or sulfur exists in the air.

#### 2. Transportation :

- Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
- The use of tweezers or vacuum pick up is strongly recommended for individual components.
- Bulk handling should ensure that abrasion and mechanical shock are minimized.



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