

1. PART NO. EXPRESSION :

PDC3015C-1R6YF
 (a) (b) (c) (d) (e)(f)

(a) Series code

(b) Dimension code

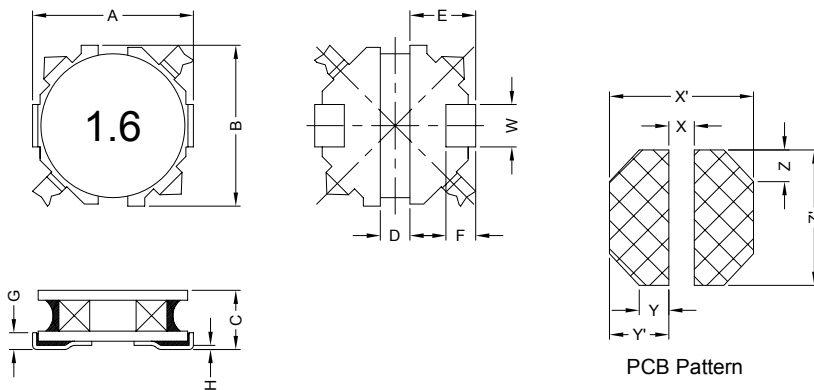
(c) Type code

(d) Inductance code : 1R6 = 1.6uH

(e) Tolerance code : M = ±20%, Y = ±30%

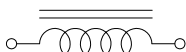
(f) F : Lead Free

2. CONFIGURATION & DIMENSIONS :

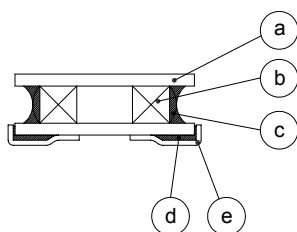


| A | B | C | D | E | F | G | H |
|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 3.00±0.2 | 3.00±0.2 | 1.50 Max. | 0.80 Max. | 1.10 Max. | 0.40 Typ. | 0.30 Typ. | 0.10 Typ. |
| W | X' | X | Y' | Y | Z' | Z | |
| 1.0 Typ. | 3.40±0.1 | 0.60±0.1 | 1.40±0.1 | 0.70±0.1 | 3.20±0.1 | 0.75±0.1 | |

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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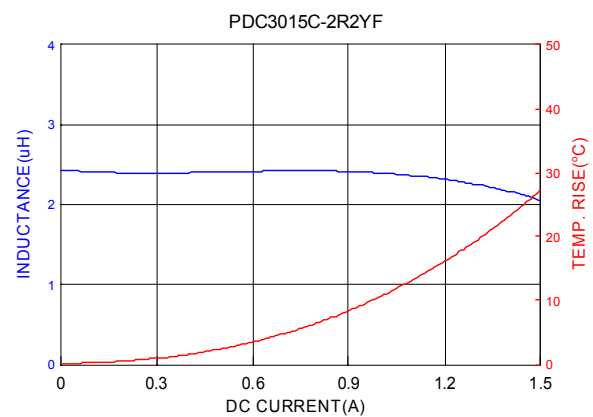
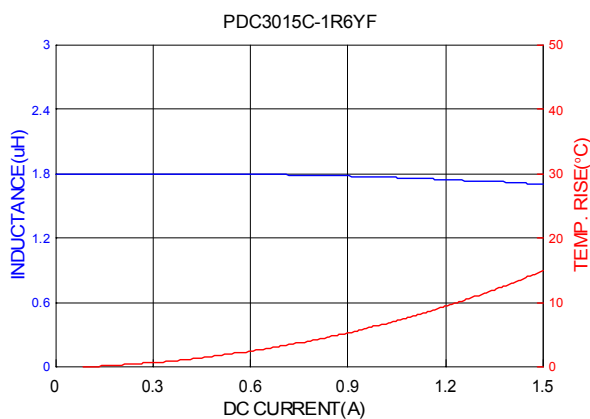
5. GENERAL SPECIFICATION :

- a) Test Frequency : 100KHz/0.3Vdc
- b) Ambient Temp. : 25°C
- c) Idc(A) : Will cause L_o to drop by 30% and coil temp. rise $\Delta T \leq 45^\circ\text{C}$
- d) Operating temp. : -40°C to +105°C (include self-temp. rise)
- e) Storage temp. : -40°C to +85°C

6. ELECTRICAL CHARACTERISTICS :

| Part No. | Inductance (μH) | Test Frequency (Hz) | DCR (Ω) $\pm 20\%$ | IDC (A) Max. |
|----------------|------------------------------|-----------------------|-----------------------------|----------------|
| PDC3015C-1R6YF | 1.6 $\pm 30\%$ | 0.3V/100K | 0.065 | 1.50 |
| PDC3015C-2R2YF | 2.2 $\pm 30\%$ | 0.3V/100K | 0.082 | 1.30 |
| PDC3015C-3R3YF | 3.3 $\pm 30\%$ | 0.3V/100K | 0.110 | 1.00 |
| PDC3015C-4R7YF | 4.7 $\pm 30\%$ | 0.3V/100K | 0.160 | 0.86 |
| PDC3015C-6R8YF | 6.8 $\pm 30\%$ | 0.3V/100K | 0.220 | 0.80 |
| PDC3015C-100MF | 10 $\pm 20\%$ | 0.3V/100K | 0.280 | 0.70 |
| PDC3015C-220MF | 22 $\pm 20\%$ | 0.3V/100K | 0.800 | 0.46 |

6. ELECTRICAL CHARACTERISTICS :



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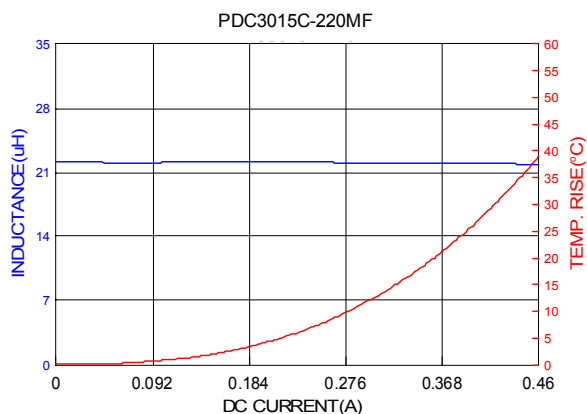
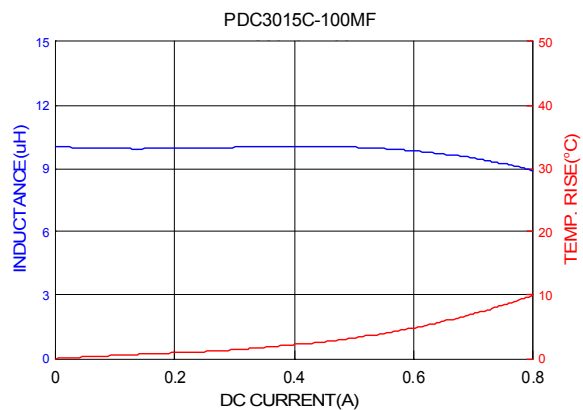
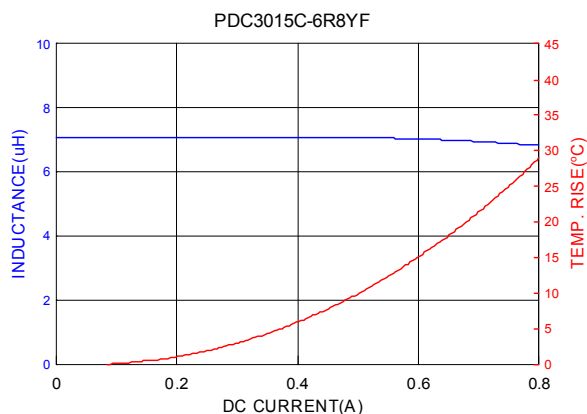
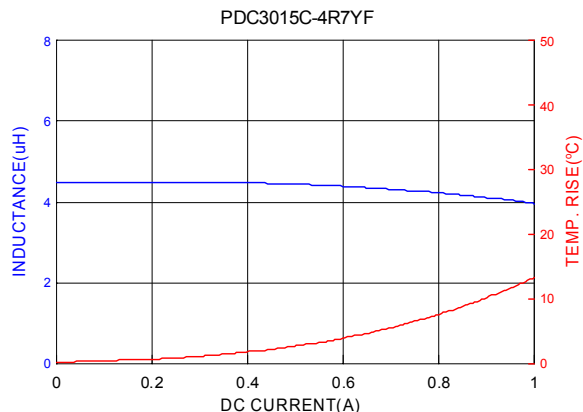
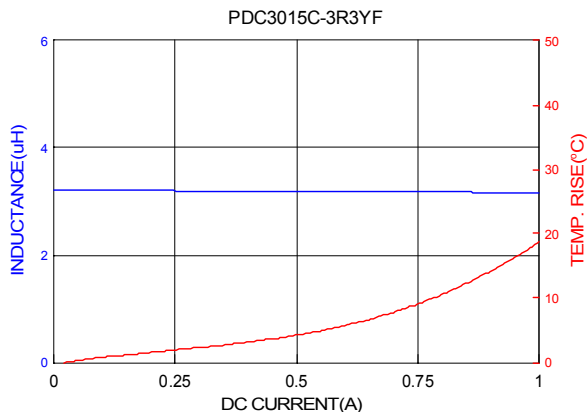
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7. CHARACTERISTICS CURVES :

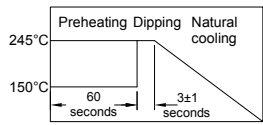
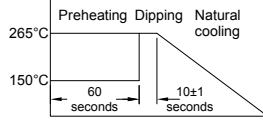


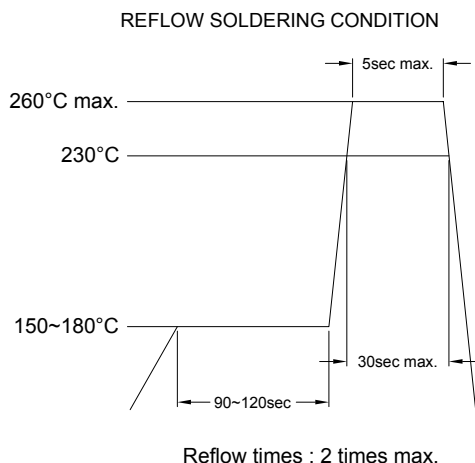
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8. ELECTRICAL CHARACTERISTICS :

| ITEM | PERFORMANCE | TEST CONDITION | | | | | | | | | | | | | | | |
|----------------------------------|---|---|------|------------------|--------------|---|-------|------|---|------------|----|---|--------|------|---|------------|----|
| Mechanical Performance Test | | | | | | | | | | | | | | | | | |
| Solderability Test | More than 90% of the terminal electrode should be covered with solder. | Preheat : 150°C, 60sec. Solder : DD930C Solder Temperature : 245±5°C Flux for lead free : rosin Dip Time : 3±1sec.  | | | | | | | | | | | | | | | |
| Solder Heat Resistance | 1. Appearance : No significant abnormality 2. Inductance change : Within ±10% | Preheat : 150°C, 60sec. Solder : DD930C Solder Temperature : 265±5°C Dip Time : 10±1sec.  | | | | | | | | | | | | | | | |
| Reliability Test | | | | | | | | | | | | | | | | | |
| Thermal Shock | 1. Appearance : No damage 2. Inductance change : Within ±10% of initial value Measured : 50 times | Conditions of 1 cycle. <table border="1" data-bbox="917 929 1284 1064"> <thead> <tr> <th>Step</th> <th>Temperature (°C)</th> <th>Times (min.)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-40±2</td> <td>30±3</td> </tr> <tr> <td>2</td> <td>Room temp.</td> <td>15</td> </tr> <tr> <td>3</td> <td>+105±2</td> <td>30±3</td> </tr> <tr> <td>4</td> <td>Room temp.</td> <td>15</td> </tr> </tbody> </table> Total : 50 cycles | Step | Temperature (°C) | Times (min.) | 1 | -40±2 | 30±3 | 2 | Room temp. | 15 | 3 | +105±2 | 30±3 | 4 | Room temp. | 15 |
| Step | Temperature (°C) | Times (min.) | | | | | | | | | | | | | | | |
| 1 | -40±2 | 30±3 | | | | | | | | | | | | | | | |
| 2 | Room temp. | 15 | | | | | | | | | | | | | | | |
| 3 | +105±2 | 30±3 | | | | | | | | | | | | | | | |
| 4 | Room temp. | 15 | | | | | | | | | | | | | | | |
| Humidity Resistance | 1. Appearance : No damage 2. Inductance change : Within ±10% of initial value | Temperature : 40±2°C Humidity : 90% to 95% Applied Current : Rated Current Time : 500 hours | | | | | | | | | | | | | | | |
| High Temperature Resistance Test | 1. Appearance : No damage 2. Inductance change : Within ±15% of initial value | Temperature : 105±2°C Time : 500 hrs Applied Current : Rated Current | | | | | | | | | | | | | | | |



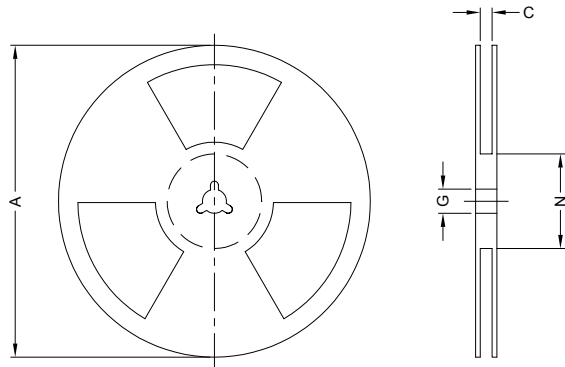
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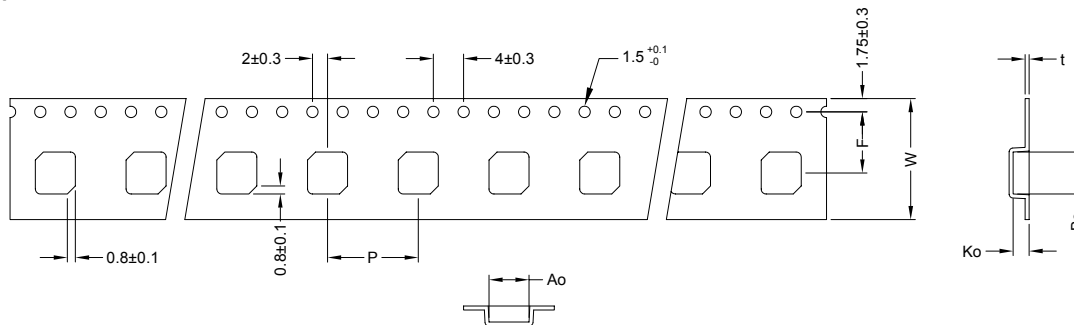
9. PACKAGING INFORMATION :

9-1. Reel Dimension

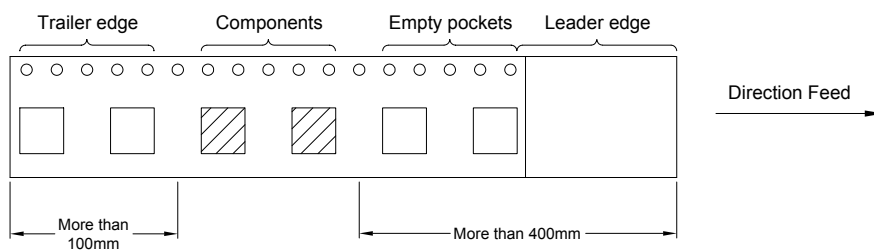


| Type | A(mm) | C(mm) | G(mm) | N(mm) |
|------------|-------|----------|----------|---------|
| 13" x 12mm | 330 | 12.5±0.5 | 13.0±0.5 | 100±1.0 |

9-2 Tape Dimension / 12mm



| Series | Ao(mm) | Bo(mm) | Ko(mm) | P(mm) | W(mm) | F(mm) | t(mm) |
|----------|---------|---------|---------|---------|--------|---------|---------|
| PDC3015C | 3.5±0.1 | 3.5±0.1 | 1.7±0.1 | 8.0±0.3 | 12±0.3 | 5.5±0.3 | 0.4±0.1 |



9-3. Packaging Quantity

| | |
|-------------|----------|
| Size | PDC3015C |
| Chip / Reel | 3000 |
| Inner Box | 12000 |
| Carton | 48000 |

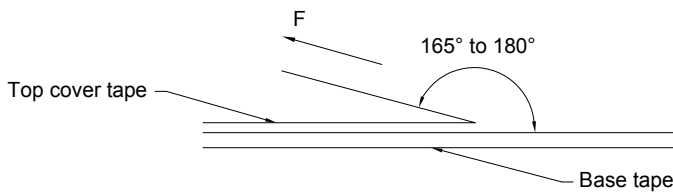


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9-4. Tearing Off Force



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 :

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

2. Transportation :

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



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