



## PRODUCT IDENTIFICATION

|      |      |         |            |      |
|------|------|---------|------------|------|
| JRPI | 0603 | PV      | - 3R3      | M    |
| Type | Size | Control | Inductance |      |
|      |      |         |            | Tol. |

## FEATURES

1. Shielded construction.
2. Capable of corresponding high frequency.
3. Low loss realized with low DCR.
4. High performance (Isat) realized by metal dust core.
5. Ultra low buzz noise, due to composite construction.
6. 100% Lead(Pb)-Free and RoHS compliant.
7. High reliability -Reliability test complied to AEC-Q200
8. Operating temperature -55~+155°C  
(Including self - temperature rise)

## APPLICATIONS

1. DC/DC converters in distributed power systems.
2. DC/DC converter for Field Programmable Gate Array(FPGA).
3. Battery powered devices.
4. Thin type on-board power supply module for exchanger.
5. VRM for server.
6. High current, low profile POL converters.
7. PDA/notebook/desktop/server and battery powered devices.

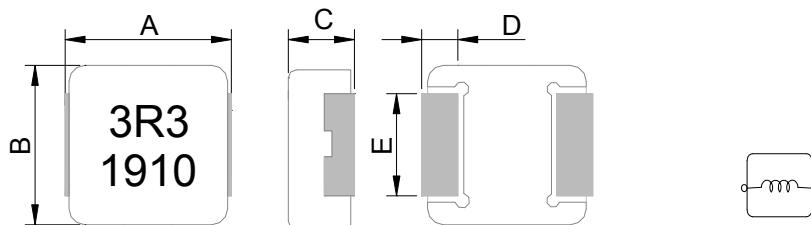
## Marking and Date code:

Marking ex:3.3(μH) → 3R3

Date code

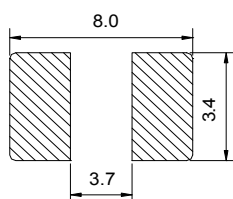
19 10 → year and weekly

## DIMENSIONS (mm)



印字:黑色3R3及D/C 1910 (19年,10週期)(依實際生產日期而定)

## Recommend PC Board Pattern



Note:

1. The above PCB layout reference only.
2. Recommend solder paste thickness at 0.12mm and above.

| Part No.    | Size (mm) |           |           |           |           |
|-------------|-----------|-----------|-----------|-----------|-----------|
|             | A         | B         | C         | D         | E         |
| JRPI 0603PV | 7.1 ± 0.3 | 6.6 ± 0.2 | 2.8 ± 0.2 | 1.6 ± 0.3 | 3.0 ± 0.2 |

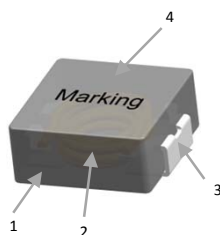
## SERIES LIST

| No. | Part No.         | L          | TOL. | RDC  |      | Isat |      | Irms |      |
|-----|------------------|------------|------|------|------|------|------|------|------|
|     |                  | ( $\mu$ H) | (%)  | Typ. | Max. | Typ. | Max. | Typ. | Max. |
| 1   | JRPI 0603PV-R10N | 0.10       | ±30  | 1.1  | 1.3  | 45.0 | 40.0 | 35.0 | 30.0 |
| 2   | JRPI 0603PV-R15N | 0.15       | ±30  | 1.7  | 2.1  | 40.0 | 36.0 | 30.0 | 25.0 |
| 3   | JRPI 0603PV-R22M | 0.22       | ±20  | 2.0  | 2.5  | 34.0 | 32.0 | 23.0 | 21.0 |
| 4   | JRPI 0603PV-R24M | 0.24       | ±20  | 2.2  | 2.7  | 28.0 | 24.0 | 22.5 | 20.5 |
| 5   | JRPI 0603PV-R33M | 0.33       | ±20  | 2.8  | 3.4  | 25.0 | 22.0 | 21.0 | 20.0 |
| 6   | JRPI 0603PV-R36M | 0.36       | ±20  | 3.3  | 3.9  | 24.0 | 21.0 | 20.0 | 18.0 |
| 7   | JRPI 0603PV-R47M | 0.47       | ±20  | 3.4  | 4.0  | 20.0 | 18.0 | 18.0 | 16.0 |
| 8   | JRPI 0603PV-R56M | 0.56       | ±20  | 3.9  | 4.5  | 18.0 | 16.0 | 16.5 | 15.0 |
| 9   | JRPI 0603PV-R68M | 0.68       | ±20  | 4.7  | 5.3  | 17.0 | 15.0 | 16.0 | 14.5 |
| 10  | JRPI 0603PV-R82M | 0.82       | ±20  | 5.4  | 6.0  | 16.0 | 14.0 | 14.0 | 13.0 |
| 11  | JRPI 0603PV-1R0M | 1.00       | ±20  | 6.7  | 7.4  | 15.0 | 13.5 | 12.0 | 11.0 |
| 12  | JRPI 0603PV-1R2M | 1.20       | ±20  | 7.7  | 9.5  | 14.0 | 12.5 | 10.0 | 9.5  |
| 13  | JRPI 0603PV-1R5M | 1.50       | ±20  | 10.2 | 12.1 | 14.0 | 12.0 | 10.0 | 9.0  |
| 14  | JRPI 0603PV-1R8M | 1.80       | ±20  | 10.9 | 13.0 | 12.0 | 10.0 | 9.0  | 8.0  |
| 15  | JRPI 0603PV-2R2M | 2.20       | ±20  | 13.5 | 15.0 | 10.0 | 9.0  | 8.0  | 7.5  |
| 16  | JRPI 0603PV-2R7M | 2.70       | ±20  | 17.3 | 20.0 | 9.8  | 8.8  | 7.2  | 7.0  |
| 17  | JRPI 0603PV-3R3M | 3.30       | ±20  | 19.0 | 22.0 | 9.5  | 8.5  | 6.5  | 6.0  |
| 18  | JRPI 0603PV-4R7M | 4.70       | ±30  | 28.0 | 33.0 | 6.5  | 5.5  | 5.5  | 5.0  |
| 19  | JRPI 0603PV-5R6M | 5.60       | ±20  | 39.0 | 42.0 | 6.0  | 5.2  | 5.5  | 5.0  |
| 20  | JRPI 0603PV-6R8M | 6.80       | ±20  | 43.0 | 50.0 | 6.0  | 5.0  | 4.5  | 4.2  |
| 21  | JRPI 0603PV-8R2M | 8.20       | ±20  | 54.0 | 60.0 | 6.0  | 4.7  | 4.5  | 4.0  |
| 22  | JRPI 0603PV-100M | 10.0       | ±20  | 62.0 | 68.0 | 5.5  | 4.5  | 4.0  | 3.5  |
| 23  | JRPI 0603PV-150M | 15.0       | ±20  | 110  | 140  | 4.5  | 4.0  | 3.0  | 2.5  |
| 24  | JRPI 0603PV-220M | 22.0       | ±20  | 150  | 190  | 3.0  | 2.5  | 2.5  | 2.0  |
| 25  | JRPI 0603PV-330M | 33.0       | ±20  | 215  | 258  | 2.5  | 2.0  | 2.1  | 1.8  |

Note:

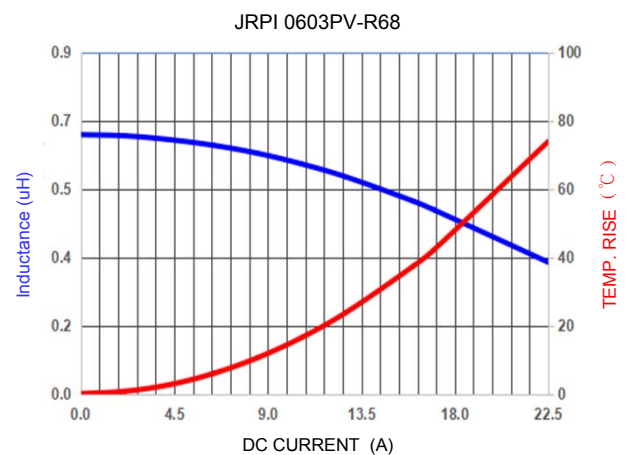
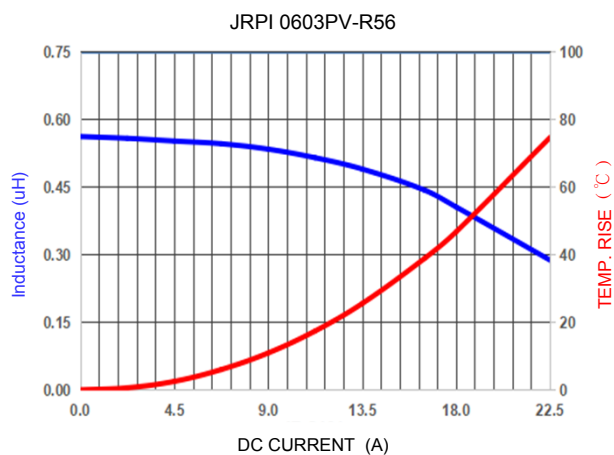
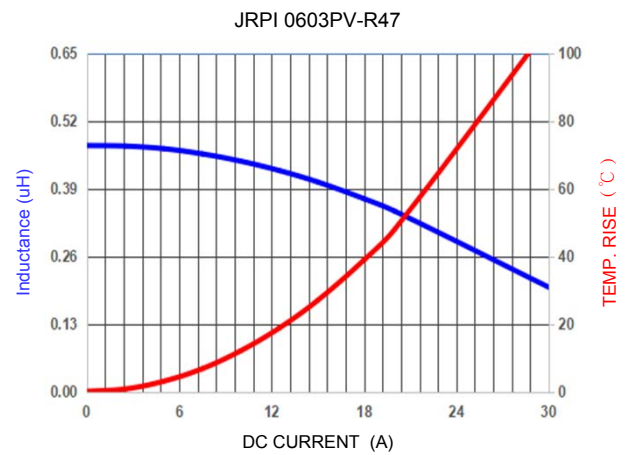
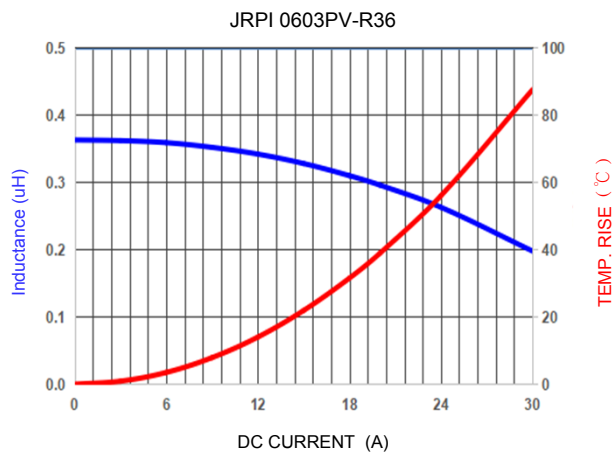
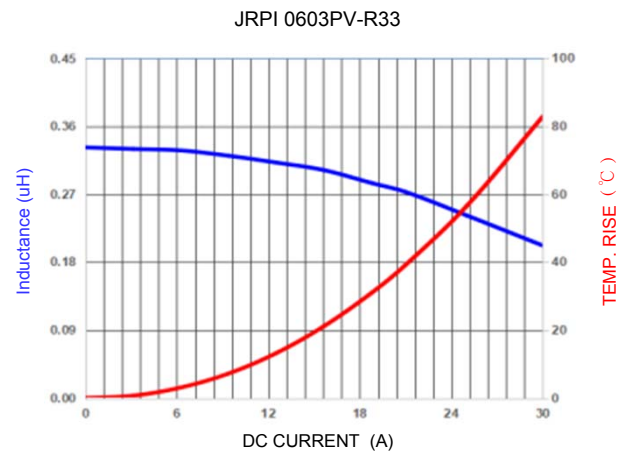
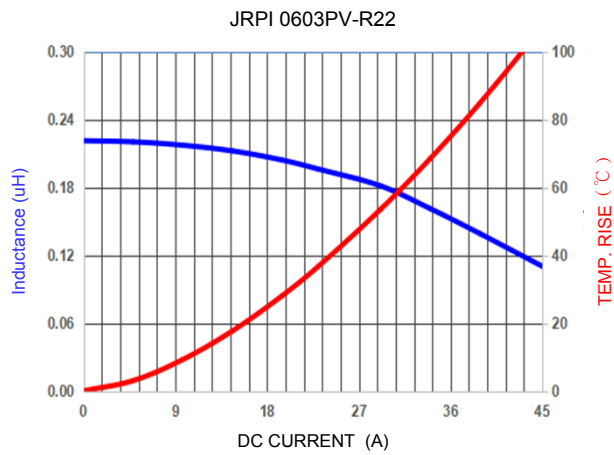
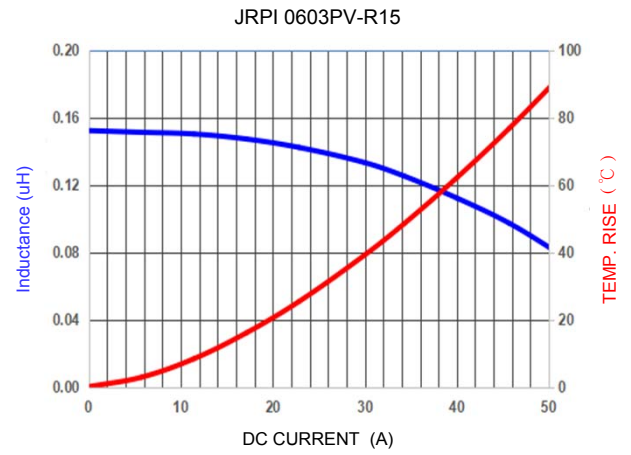
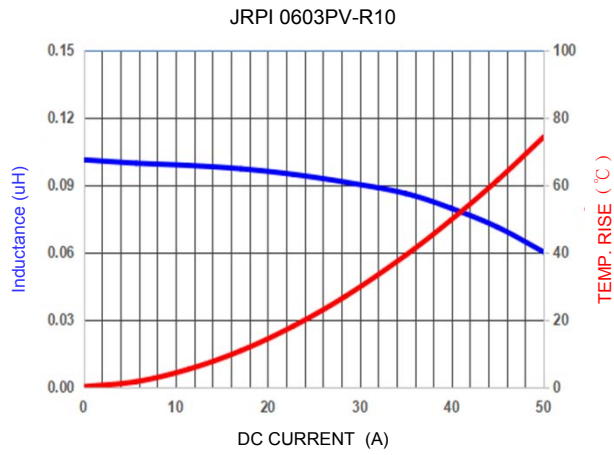
1. Test Frequency: 100KHz /1V
2. All test data referenced to 25°C ambient
3. Saturation Current (Isat) will cause L0 to drop approximately 30%.
4. Heat Rated Current (Irms) will cause the coil temperature rise approximately  $\Delta T$  of 40°C
5. The part temperature (ambient + temp rise) should not exceed 155°C under worst case operating conditions.  
Circuit design, component, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.
6. Special inquiries besides the above common used types can be met on your requirement.

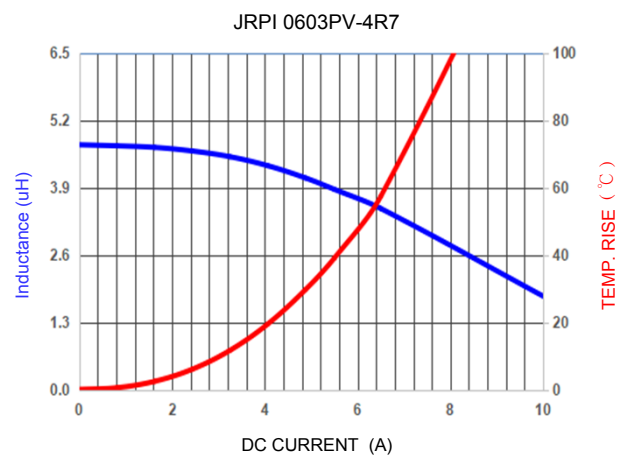
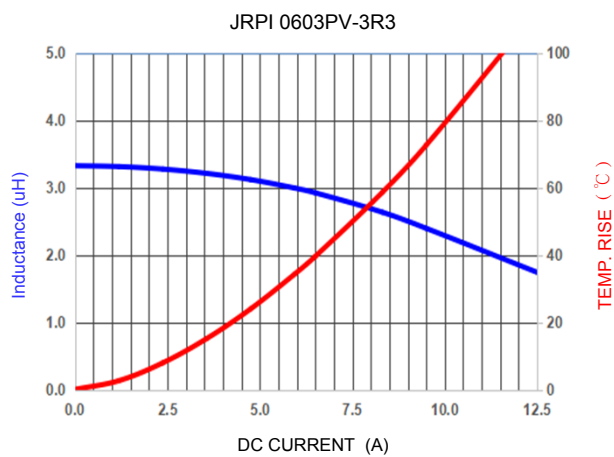
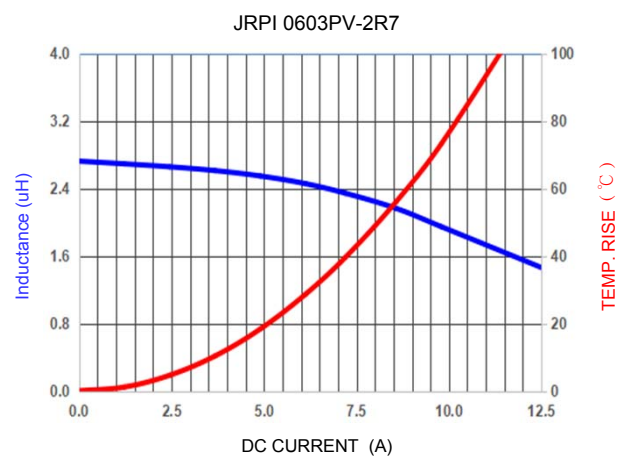
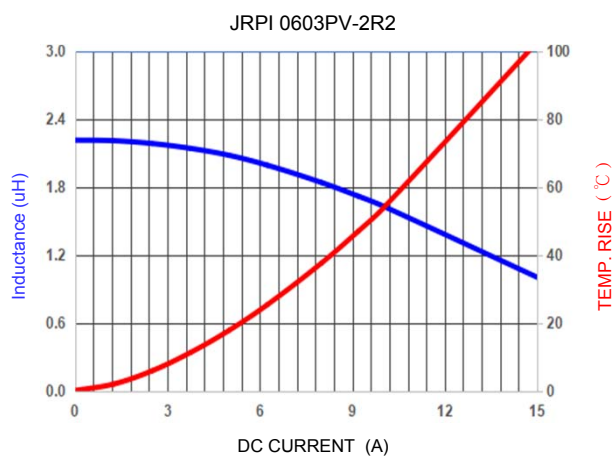
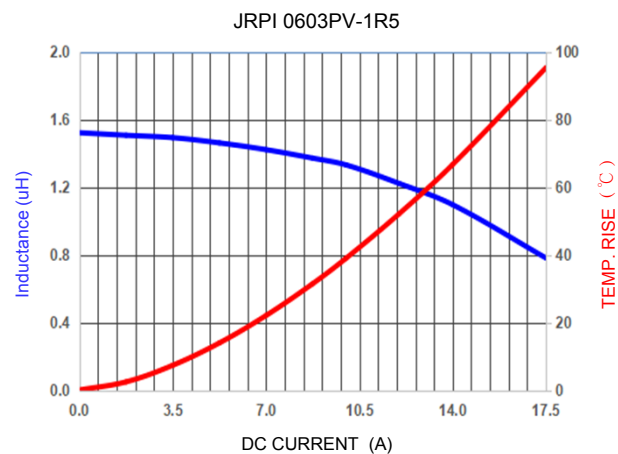
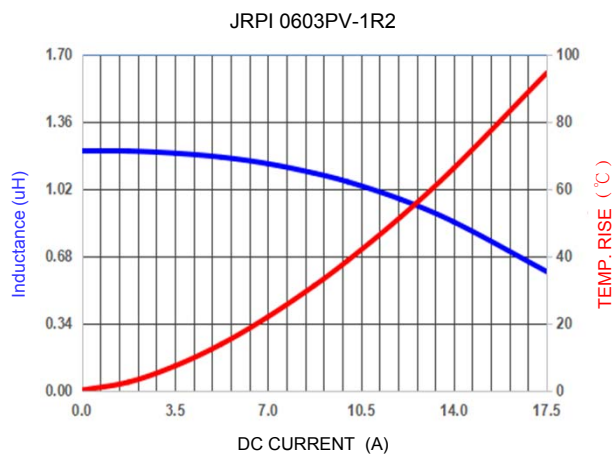
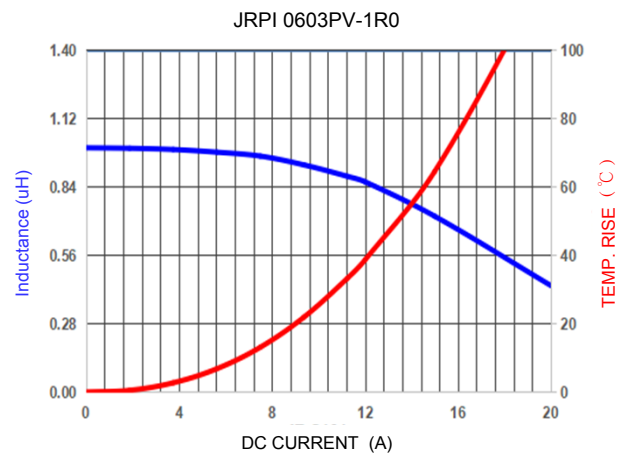
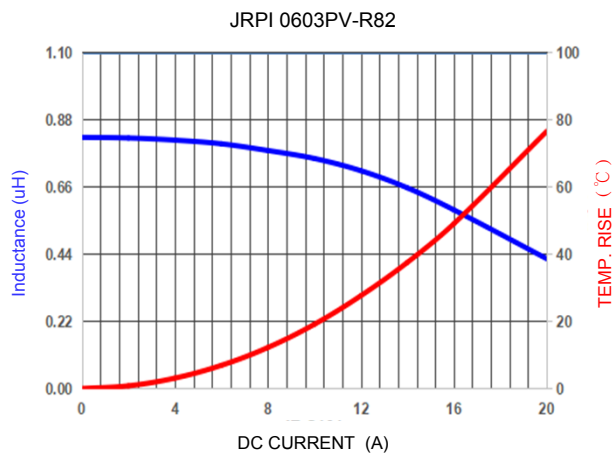
## Materials

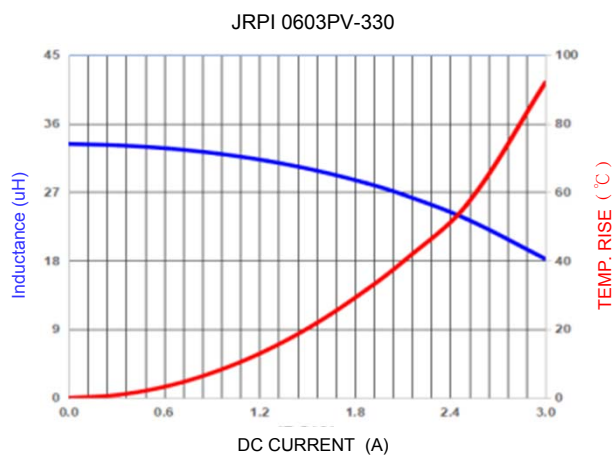
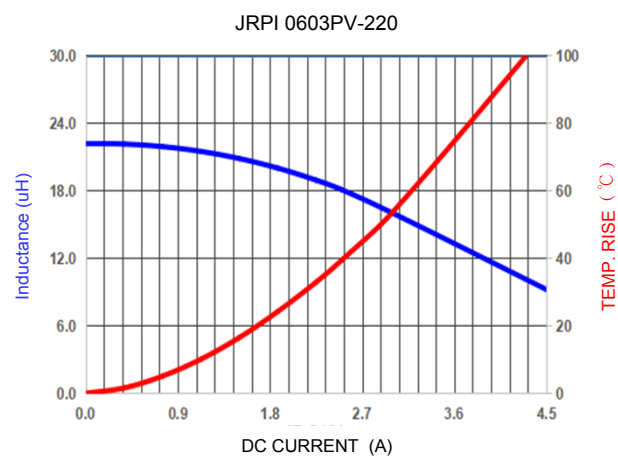
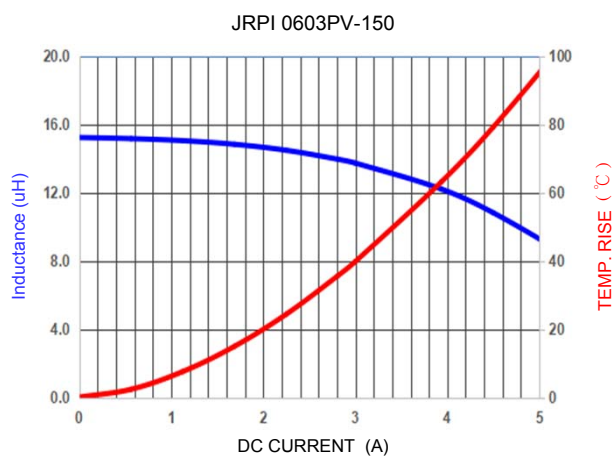
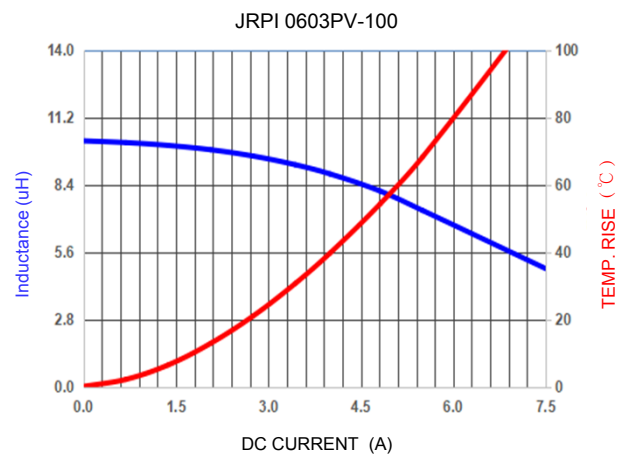
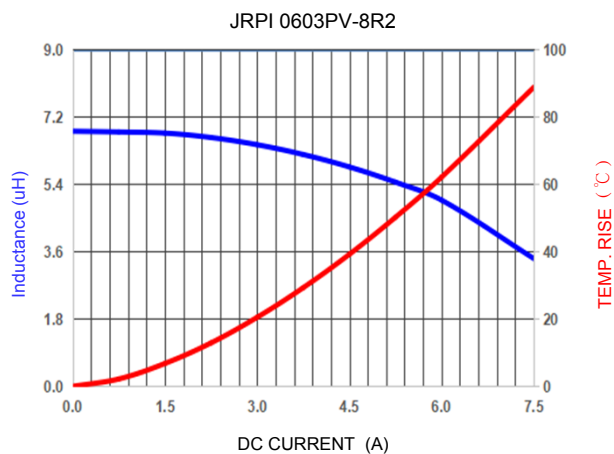
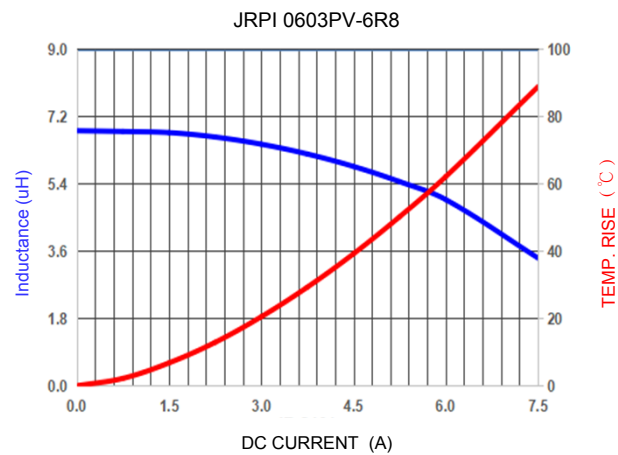
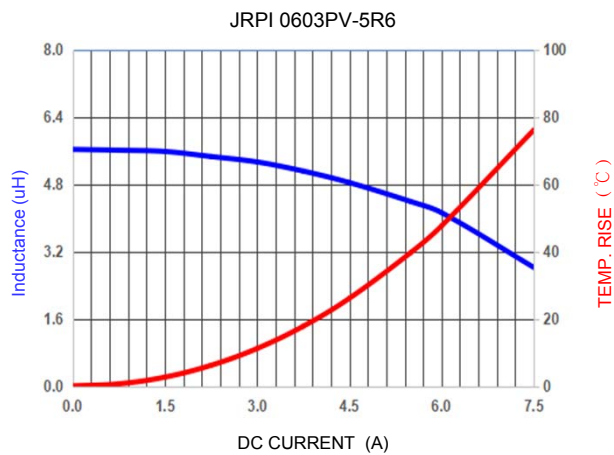


| NO | Items | Materials                            |
|----|-------|--------------------------------------|
| 1  | Core  | Alloy Powder                         |
| 2  | Wire  | Polyester Wire or equivalent.        |
| 3  | Clip  | 100% Pb free solder(Ni+Sn---Plating) |
| 4  | Ink   | Halogen-free ketone                  |

## Typical Performance Curves

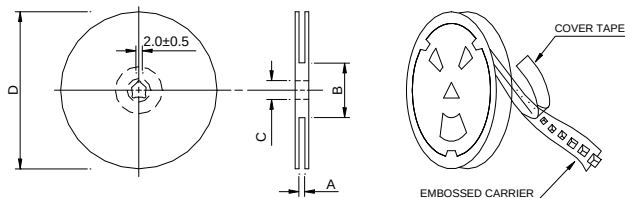






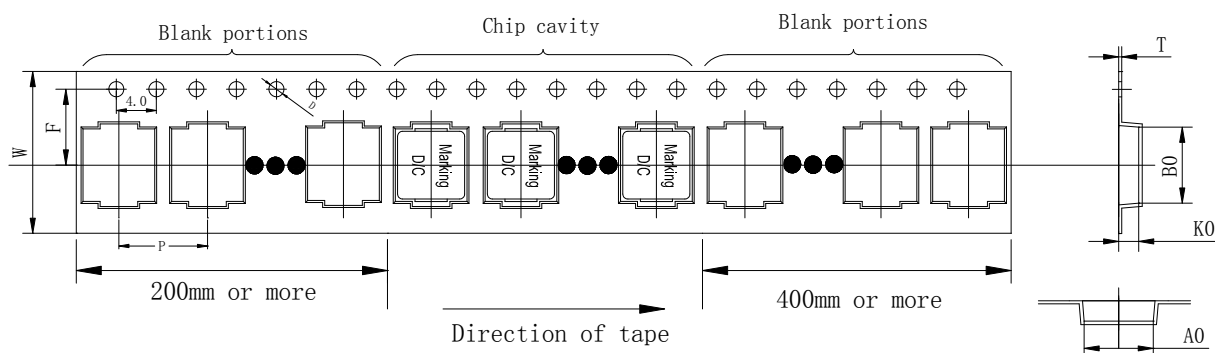
## Packaging Information

### • Reel Dimension



| Type     | A(mm)     | B(mm) | C(mm)       | D(mm) |
|----------|-----------|-------|-------------|-------|
| 13"x16mm | 16.4+2/-0 | 100±2 | 13+0.5/-0.2 | 330   |

### • Tape Dimension



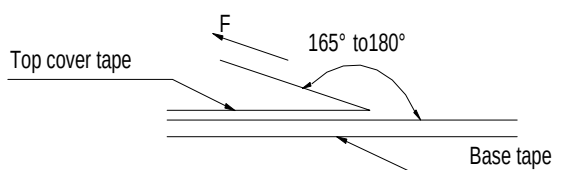
| Ao(mm)  | Bo(mm)  | Ko(mm)  | P(mm)  | W(mm)  | F(mm)   | t(mm)     | D(mm)   |
|---------|---------|---------|--------|--------|---------|-----------|---------|
| 7.0±0.1 | 7.7±0.1 | 3.3±0.1 | 12±0.1 | 16±0.3 | 7.5±0.1 | 0.35±0.05 | 1.5±0.1 |

### • Packaging Quantity

| Size        | Reel | Inner box | Carton |
|-------------|------|-----------|--------|
| JRPI 0603PV | 1000 | 2000      | 8000   |

### • Tearing Off Force

The force for tearing off cover tape is 10 to 130 grams in the arrow direction under the following conditions (referenced ANSI/EIA-481-C-2003 of 4.11 standard)



| Room Temp.<br>(°C) | Room Humidity<br>(%) | Room atm<br>(hPa) | Tearing Speed<br>mm/min |
|--------------------|----------------------|-------------------|-------------------------|
| 5~35               | 45~85                | 860~1060          | 300                     |

## ■ Application Notice

- Storage Conditions(component level)

To maintain the solderability of terminal electrodes:

1. Products meet IPC/JEDEC J-STD-020D standard-MSL, level 1.
2. Temperature and humidity conditions: Less than 40°C and 60% RH.
3. Recommended products should be used within 12 months form the time of delivery.
4. The packaging material should be kept where no chlorine or sulfur exists in the air.

- Transportation

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