

### 1. PART NO. EXPRESSION :

PDC03021R0MZ F

(a) (b) (c) (d)(e)(f)

(a) Series code

(b) Dimension code

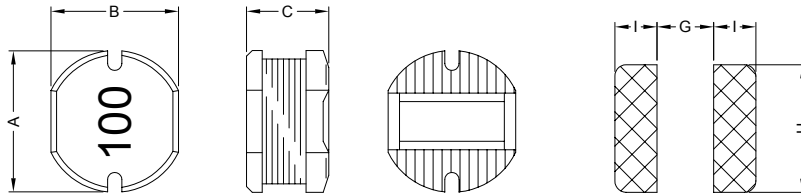
(c) Inductance code : 1R0 = 1.0uH

(d) Tolerance code : M =  $\pm 20\%$

(e) X, Y, Z : Standard part

(f) F : Lead Free

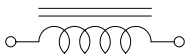
### 2. CONFIGURATION & DIMENSIONS :



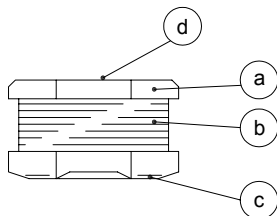
PCB Pattern

| A             | B             | C             | G         | H         | I         |
|---------------|---------------|---------------|-----------|-----------|-----------|
| 3.5 $\pm$ 0.3 | 3.0 $\pm$ 0.3 | 2.2 $\pm$ 0.3 | 0.80 Ref. | 3.50 Ref. | 1.60 Ref. |

### 3. SCHEMATIC :



### 4. MATERIALS :



(a) Core : DRT Ferrite Core

(b) Wire : Enamelled Copper Wire

(c) Terminal : Ag+Cu+Ni+Sn

(d) Ink : Bon Margue

### 5. GENERAL SPECIFICATION :

- a) Temp. rise : 40°C Max.
- b) Rated current : Base on temp. rise &  $\Delta L/L0A = 10\%$  Max.
- c) Storage temp. : -40°C to +125°C
- d) Operating temp. : -40°C to +85°C
- e) Resistance to solder heat : 260°C.10 secs



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## 6. ELECTRICAL CHARACTERISTICS :

| Part No.      | Inductance<br>( $\mu$ H) | Test<br>Frequency<br>(Hz) | RDC<br>( $\Omega$ )<br>Max. | IDC<br>(A)<br>Max. |
|---------------|--------------------------|---------------------------|-----------------------------|--------------------|
| PDC03021R0MZF | 1.0 $\pm$ 20%            | 1V / 7.96M                | 0.055                       | 2.50               |
| PDC03021R4MZF | 1.4 $\pm$ 20%            | 1V / 7.96M                | 0.060                       | 2.00               |
| PDC03021R8MZF | 1.8 $\pm$ 20%            | 1V / 7.96M                | 0.070                       | 1.90               |
| PDC03022R2MZF | 2.2 $\pm$ 20%            | 1V / 7.96M                | 0.090                       | 1.70               |
| PDC03022R7MZF | 2.7 $\pm$ 20%            | 1V / 7.96M                | 0.100                       | 1.60               |
| PDC03023R3MZF | 3.3 $\pm$ 20%            | 1V / 7.96M                | 0.130                       | 1.30               |
| PDC03023R9MZF | 3.9 $\pm$ 20%            | 1V / 7.96M                | 0.150                       | 1.20               |
| PDC03024R7MZF | 4.7 $\pm$ 20%            | 1V / 7.96M                | 0.180                       | 1.10               |
| PDC03025R6MZF | 5.6 $\pm$ 20%            | 1V / 7.96M                | 0.210                       | 1.00               |
| PDC03026R8MZF | 6.8 $\pm$ 20%            | 1V / 7.96M                | 0.230                       | 0.95               |
| PDC03028R2MZF | 8.2 $\pm$ 20%            | 1V / 7.96M                | 0.310                       | 0.90               |
| PDC0302100MZF | 10.0 $\pm$ 20%           | 1V / 2.52M                | 0.350                       | 0.80               |
| PDC0302120MZF | 12.0 $\pm$ 20%           | 1V / 2.52M                | 0.390                       | 0.70               |
| PDC0302150MZF | 15.0 $\pm$ 20%           | 1V / 2.52M                | 0.540                       | 0.65               |
| PDC0302180MZF | 18.0 $\pm$ 20%           | 1V / 2.52M                | 0.620                       | 0.60               |
| PDC0302220MZF | 22.0 $\pm$ 20%           | 1V / 2.52M                | 0.720                       | 0.55               |
| PDC0302270MZF | 27.0 $\pm$ 20%           | 1V / 2.52M                | 0.820                       | 0.50               |
| PDC0302330MZF | 33.0 $\pm$ 20%           | 1V / 2.52M                | 1.100                       | 0.45               |
| PDC0302390MZF | 39.0 $\pm$ 20%           | 1V / 2.52M                | 1.200                       | 0.40               |
| PDC0302470MZF | 47.0 $\pm$ 20%           | 1V / 2.52M                | 1.600                       | 0.38               |



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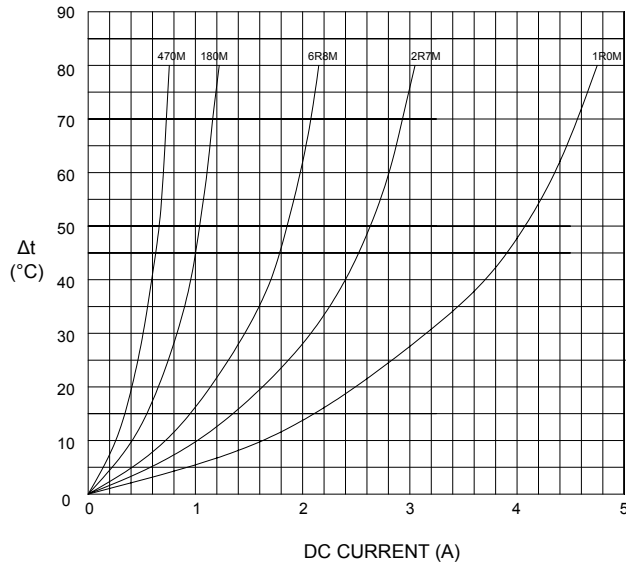
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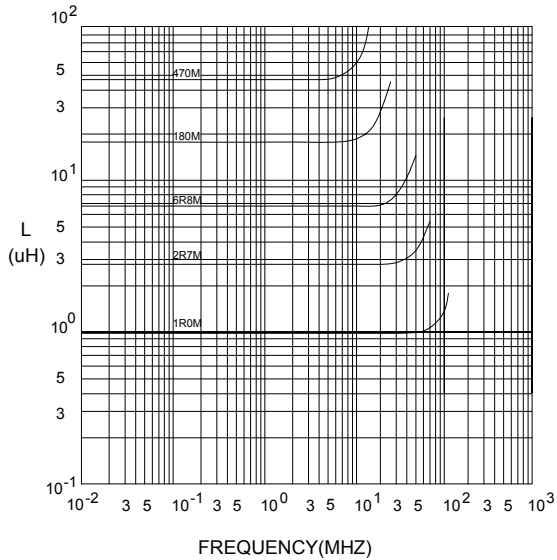
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## 7. CHARACTERISTICS CURVES :

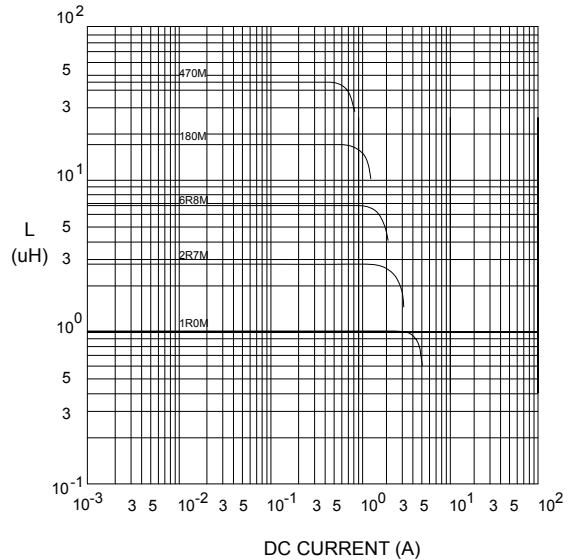
@ TEMP. RISE VS. DC SUPERPOSITION RESPONSE CURVE



@ INDUCTANCE VS. FREQUENCY RESPONSE CURVE



@ INDUCTANCE VS. DC SUPERPOSITION RESPONSE CURVE



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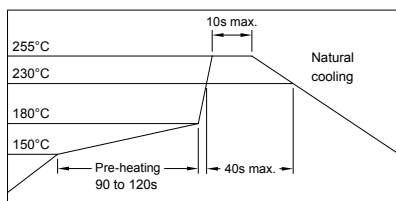
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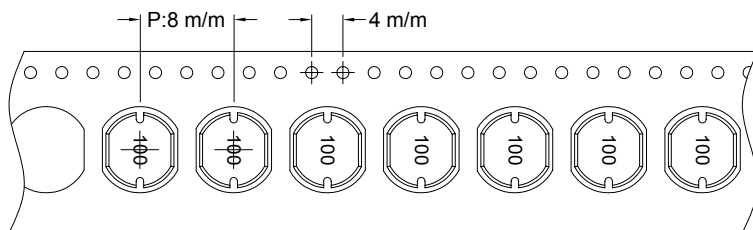
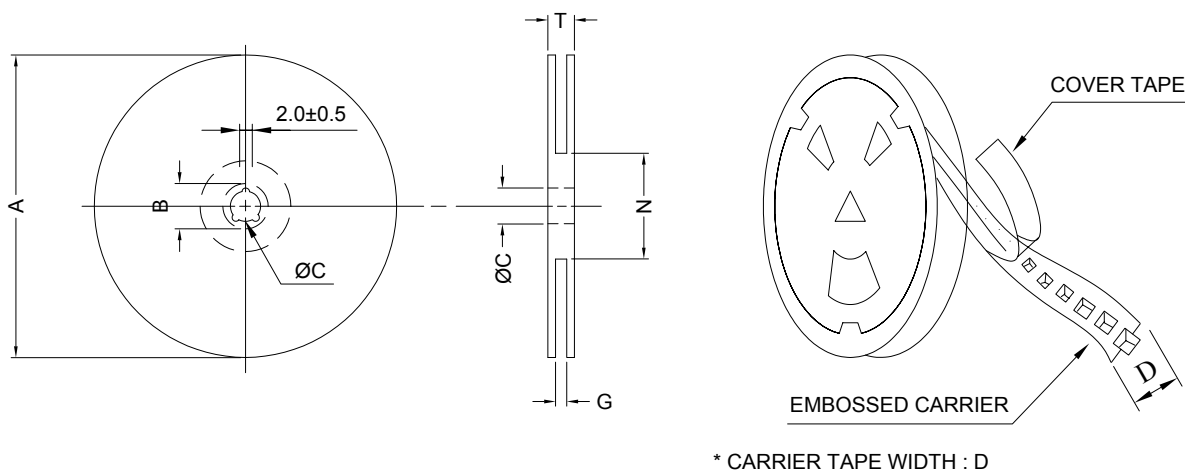
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### RECOMMENDED SOLDERING CONDITIONS REFLOW SOLDERINGS



### 8. PACKAGING INFORMATION :

#### ( 1 ) CONFIGURATION



#### ( 2 ) DIMENSIONS

Unit:m/m

| STYLE   | A   | B      | C      | D  | G                | N                | T    |
|---------|-----|--------|--------|----|------------------|------------------|------|
| 13 - 12 | 330 | 21±0.8 | 13±0.5 | 12 | 14 <sup>+0</sup> | 50 <sup>-0</sup> | 18.4 |

#### ( 3 ) Q'TY & G.W. PER PACKAGE

| SERIES  | INNER : REEL |           |         | OUTER : CARTON |           |              |
|---------|--------------|-----------|---------|----------------|-----------|--------------|
|         | Q'TY (PCS)   | G.W. (gw) | STYLE   | Q'TY (PCS)     | G.W. (Kg) | SIZE (cm)    |
| PDC0302 | 3,000        | 780       | 13 - 12 | 24,000         | 9.80      | 40 x 40 x 24 |



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### 9. RELIABILITY AND TEST CONDITION :

| TEST ITEM                                 | SPECIFICATION   | TEST CONDITION  |            |   |         |            |  |            |            |   |        |            |  |            |
|---|---|---|------------|---|---------|------------|--|------------|------------|---|--------|------------|--|------------|
| SOLDERABILITY                             | MORE THAN 90% OF THE TERMINAL ELECTRODE SHALL BE COVERED WITH FRESH SOLDER. | PREHEAT : 125±25°C FOR 60 SECONDS<br>SOLDER : 99%Sn/0.3%Ag/0.7%Cu OR EQUIVALENT<br>SOLDER TEMP. : 245±5°C<br>FLUX : ROSIN<br>DIP TIME : 4±1 SECONDS   |            |   |         |            |  |            |            |   |        |            |  |            |
| THERMAL SHOCK TEST<br><br>( TEMP. CYCLE ) | INDUCTANCE SHALL NOT CHANGE MORE THAN ±20%                                  | <table border="0"> <tr> <td>ROOM TEMP.</td> <td>→</td> <td>-25±2°C</td> </tr> <tr> <td>15 MINUTES</td> <td></td> <td>30 MINUTES</td> </tr> <tr> <td>ROOM TEMP.</td> <td>→</td> <td>85±2°C</td> </tr> <tr> <td>15 MINUTES</td> <td></td> <td>30 MINUTES</td> </tr> </table> <p>TOTAL : 50 CYCLES</p> | ROOM TEMP. | → | -25±2°C | 15 MINUTES |  | 30 MINUTES | ROOM TEMP. | → | 85±2°C | 15 MINUTES |  | 30 MINUTES |
| ROOM TEMP.                                | →   | -25±2°C   |            |   |         |            |  |            |            |   |        |            |  |            |
| 15 MINUTES                                |   | 30 MINUTES  |            |   |         |            |  |            |            |   |        |            |  |            |
| ROOM TEMP.                                | →   | 85±2°C  |            |   |         |            |  |            |            |   |        |            |  |            |
| 15 MINUTES                                |   | 30 MINUTES  |            |   |         |            |  |            |            |   |        |            |  |            |
| HUMIDITY RESISTANCE TEST                  |   | TEMPERATURE : 40±2°C<br>HUMIDITY : 90 ~ 95%<br>APPLIED CURRENT : PER SPEC.<br>TIME : 500 HOURS  |            |   |         |            |  |            |            |   |        |            |  |            |
| HIGH TEMP. RESISTANCE TEST                |   | TEMPERATURE : 85±2°C<br>APPLIED CURRENT : PER SPEC.<br>TIME : 500 HOURS   |            |   |         |            |  |            |            |   |        |            |  |            |

### 10. UL CARD :

|   |                         |                          |         |                |
|---|-------------------------|--------------------------|---------|----------------|
| <b>OBMW2</b>  |                         | <b>November 30, 2000</b> |         |                |
| <b>Magnet Wire - Component</b>                                      |                         |                          |         |                |
| <b>PACIFIC ELECTRIC WIRE &amp; CABLE (SHENZHEN) CO LTD</b>          |                         |                          |         | <b>E201757</b> |
| 607 BAOLONG INDUSTRIAL ESTATE LONGGANG, SHENZHEN<br>GUANGDONG CHINA |                         |                          |         |                |
|   | Coating Type            |                          | ANSI    |                |
| Mtl Dsg   | BC                      | TC                       | Type    | TI             |
| UEW/U   | Polyurethane            | —                        | —       | 130            |
| PEW/U   | Polyester               | —                        | MW5-C   | 155°C          |
| PEWH/U  | Modified Polyester      | —                        | MW30-C  | 180            |
| PEW-NY/U  | Polyester               | Polyamide                | MW24-C  | 155            |
| HAL/U   | Polyester(Amide)(Imide) | Polyamideimide           | MW35,73 | 200            |
| UEW-NY/U  | Polyurethane            | Polyamide                | MW80-C  | 155            |
|   |                         |                          | MW28-C  | 130            |

Marking: Company name and material designation or marked designation on package or reel, and Recognized Component Mark.

See General Information Preceding These Recognitions

1/3/2001                      Underwriters Laboratories Inc.                      Card 1 of 2



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