

### 1. PART NO. EXPRESSION :

PDC0703100MZ F

www.datasheet4u.com (a)

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

(a) Series code

(b) Dimension code

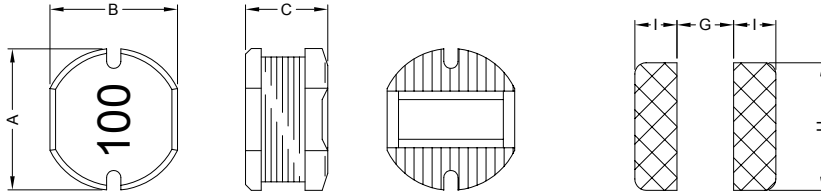
(c) Inductance code : 100 = 10uH

(d) Tolerance code : K = ±10%, M = ±20%

(e) X, Y, Z : Standard part

(f) F : Lead Free

### 2. CONFIGURATION & DIMENSIONS :

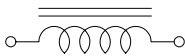


PCB Pattern

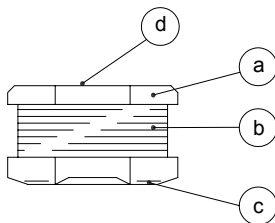
Unit : mm

| A       | B       | C       | G         | H         | I         |
|---------|---------|---------|-----------|-----------|-----------|
| 7.8±0.3 | 7.0±0.3 | 3.5±0.5 | 2.00 Ref. | 7.50 Ref. | 3.00 Ref. |

### 3. SCHEMATIC :



### 4. MATERIALS :



(a) Core : DR 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. |
|---------------|--------------------------|---------------------------|-----------------------------|--------------------|
| PDC0703100MZF | 10 $\pm$ 20%             | 2.52M                     | 0.0803                      | 1.44               |
| PDC0703120MZF | 12 $\pm$ 20%             | 2.52M                     | 0.0897                      | 1.39               |
| PDC0703150MZF | 15 $\pm$ 20%             | 2.52M                     | 0.104                       | 1.24               |
| PDC0703180MZF | 18 $\pm$ 20%             | 2.52M                     | 0.111                       | 1.12               |
| PDC0703220MZF | 22 $\pm$ 20%             | 2.52M                     | 0.129                       | 1.07               |
| PDC0703270MZF | 27 $\pm$ 20%             | 2.52M                     | 0.153                       | 0.94               |
| PDC0703330MZF | 33 $\pm$ 20%             | 2.52M                     | 0.170                       | 0.85               |
| PDC0703390MZF | 39 $\pm$ 20%             | 2.52M                     | 0.217                       | 0.74               |
| PDC0703470MZF | 47 $\pm$ 20%             | 2.52M                     | 0.252                       | 0.68               |
| PDC0703560KZF | 56 $\pm$ 10%             | 2.52M                     | 0.282                       | 0.64               |
| PDC0703680KZF | 68 $\pm$ 10%             | 2.52M                     | 0.332                       | 0.59               |
| PDC0703820KZF | 82 $\pm$ 10%             | 2.52M                     | 0.406                       | 0.54               |
| PDC0703101KZF | 100 $\pm$ 10%            | 1V / 1K                   | 0.481                       | 0.51               |
| PDC0703121KZF | 120 $\pm$ 10%            | 1V / 1K                   | 0.536                       | 0.49               |
| PDC0703151KZF | 150 $\pm$ 10%            | 1V / 1K                   | 0.755                       | 0.40               |
| PDC0703181KZF | 180 $\pm$ 10%            | 1V / 1K                   | 1.022                       | 0.36               |
| PDC0703221KZF | 220 $\pm$ 10%            | 1V / 1K                   | 1.200                       | 0.31               |
| PDC0703271KZF | 270 $\pm$ 10%            | 1V / 1K                   | 1.306                       | 0.29               |
| PDC0703331KZF | 330 $\pm$ 10%            | 1V / 1K                   | 1.495                       | 0.28               |

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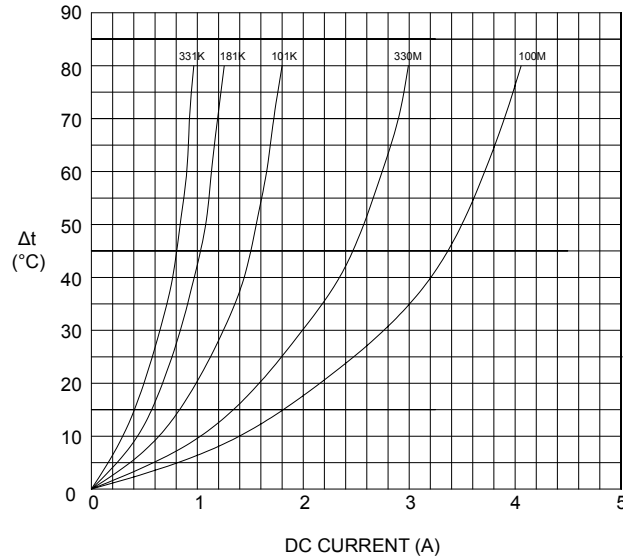
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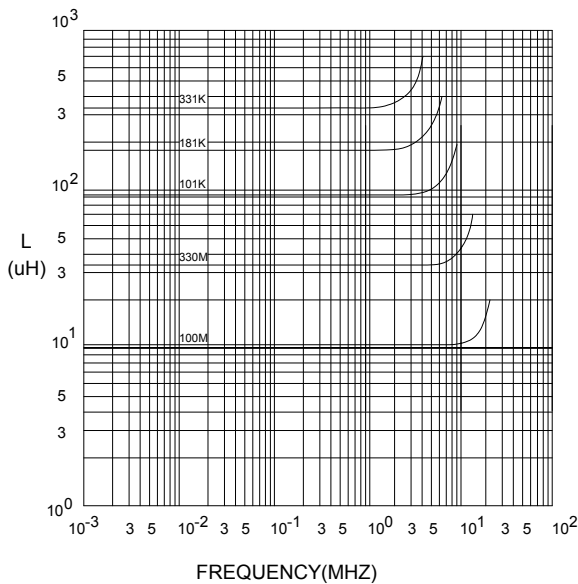
## 7. CHARACTERISTICS CURVES :

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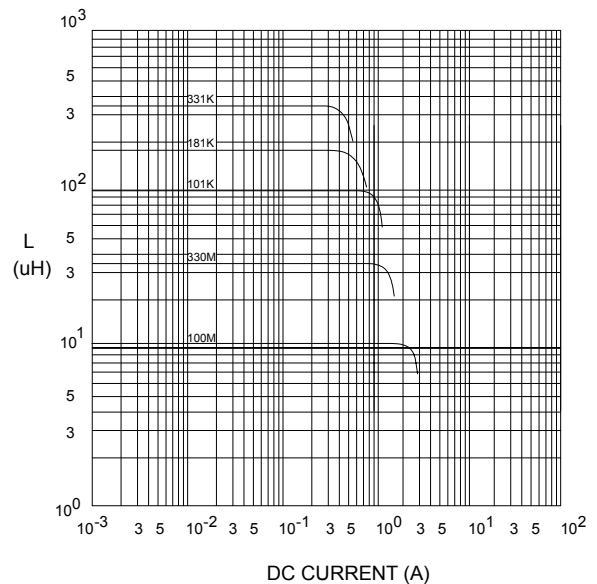
@ TEMP. RISE VS. DC SUPERPOSITION RESPONSE CURVE



@ INDUCTANCE VS. FREQUENCY RESPONSE CURVE



@ INDUCTANCE VS. DC SUPERPOSITION RESPONSE CURVE



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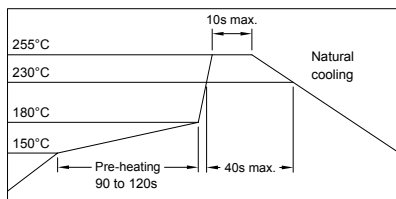
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PG. 3

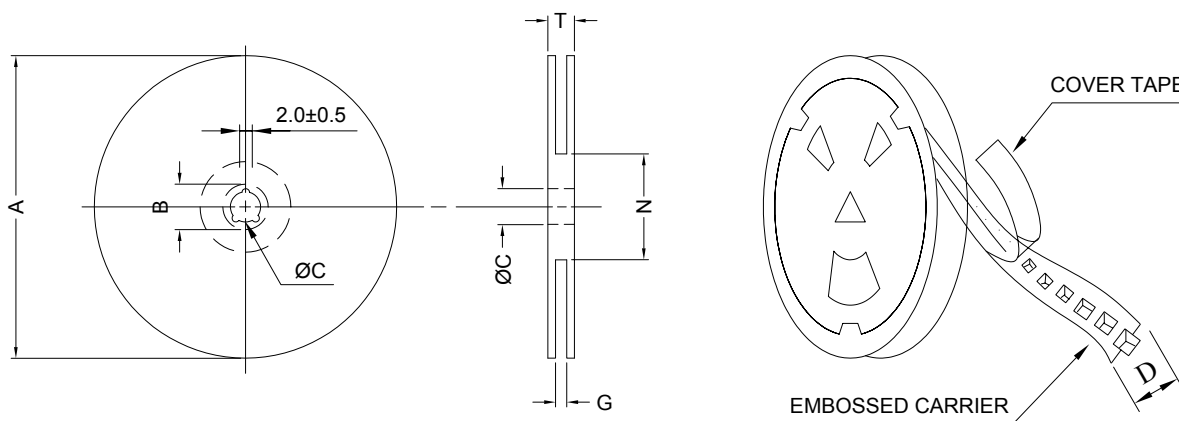
### RECOMMENDED SOLDERING CONDITIONS REFLOW SOLDERINGS



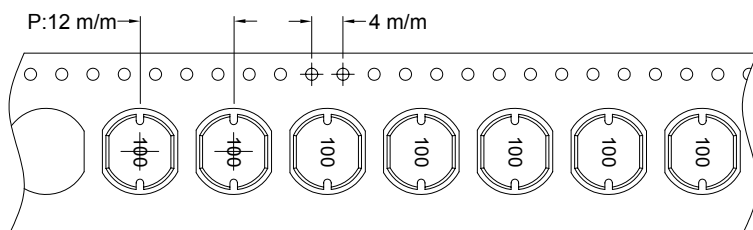
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### 8. PACKAGING INFORMATION :

#### ( 1 ) CONFIGURATION



\* CARRIER TAPE WIDTH : D



#### ( 2 ) DIMENSIONS

Unit:m/m

| STYLE | A   | B      | C      | D  | G                | N                | T    |
|-------|-----|--------|--------|----|------------------|------------------|------|
| 13-16 | 330 | 21±0.8 | 13±0.5 | 16 | 18 <sup>+0</sup> | 50 <sup>-0</sup> | 22.4 |

#### ( 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)    |
| PDC0703 | 1000         | 950       | 13 - 16 | 6000           | 9.2       | 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%                                  | ROOM TEMP. → -25±2°C<br>15 MINUTES → 30 MINUTES<br><br>ROOM TEMP. → 85±2°C<br>15 MINUTES → 30 MINUTES<br><br>TOTAL : 50 CYCLES                      |
| 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        | TI             |
| Mtl Dsg  | BC                             | TC                       | Type        |                |
| 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            |
| <b>Marking: Company name and material designation or marked designation on package or reel, and Recognized Component Mark.</b> |                                |                          |             |                |
| See General Information Preceding These Recognitions   |                                |                          |             |                |
| 1/3/2001   | Underwriters Laboratories Inc. |                          | Card 1 of 2 |                |



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