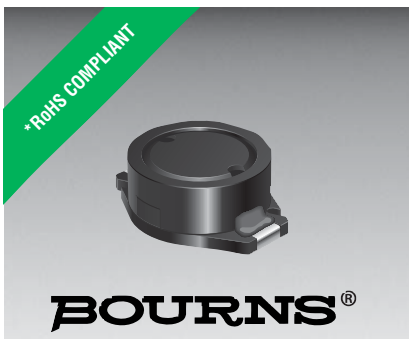




## Features

- Formerly **JW.Miller** model
- Available in E12 series
- Unit height of 6.8 mm
- Current up to 8 A Isat
- Lead free
- RoHS compliant\*

## Applications

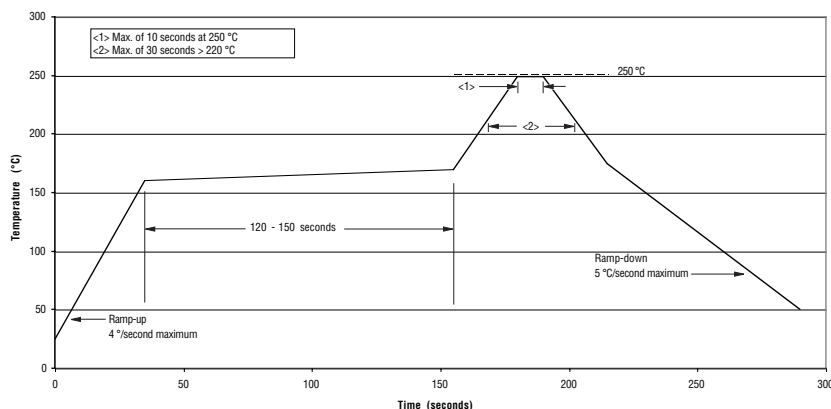
- Input/output of DC/DC converters
- Power supplies for:
  - Portable communication equipment
  - Camcorders
  - LCD TVs
  - Car radios

# PM5022S Series - Shielded Power Inductor

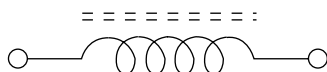
## Electrical Specifications

| Bourns Part No. | Inductance 100 kHz |        | Q Ref. | Test Frequency (MHz) | SRF Typ. (MHz) | RDC -20 % (Ω) | I rms Max. (A) | I sat Typ. (A) |
|-----------------|--------------------|--------|--------|----------------------|----------------|---------------|----------------|----------------|
|                 | (μH)               | Tol. % |        |                      |                |               |                |                |
| PM5022S-100M-RC | 10                 | ± 20   | 56     | 2.52                 | 19.0           | 0.033         | 4.00           | 8.20           |
| PM5022S-150M-RC | 15                 | ± 20   | 53     | 2.52                 | 17.5           | 0.039         | 3.60           | 7.20           |
| PM5022S-220M-RC | 22                 | ± 20   | 51     | 2.52                 | 16.0           | 0.053         | 3.00           | 6.20           |
| PM5022S-330M-RC | 33                 | ± 20   | 44     | 2.52                 | 10.0           | 0.083         | 2.50           | 5.00           |
| PM5022S-470M-RC | 47                 | ± 20   | 40     | 2.52                 | 8.0            | 0.110         | 2.00           | 4.20           |
| PM5022S-680M-RC | 68                 | ± 20   | 37     | 2.52                 | 6.0            | 0.170         | 1.60           | 3.40           |
| PM5022S-101M-RC | 100                | ± 20   | 40     | 0.796                | 4.6            | 0.270         | 1.30           | 2.60           |
| PM5022S-151M-RC | 150                | ± 20   | 39     | 0.796                | 4.3            | 0.400         | 1.05           | 2.30           |
| PM5022S-221M-RC | 220                | ± 20   | 29     | 0.796                | 3.5            | 0.510         | 1.00           | 1.90           |
| PM5022S-331M-RC | 330                | ± 20   | 30     | 0.796                | 3.0            | 0.790         | 0.80           | 1.40           |
| PM5022S-471M-RC | 470                | ± 20   | 27     | 0.796                | 2.4            | 1.000         | 0.64           | 1.30           |
| PM5022S-681M-RC | 680                | ± 20   | 19     | 0.796                | 2.1            | 1.470         | 0.54           | 1.10           |
| PM5022S-102M-RC | 1000               | ± 20   | 46     | 0.796                | 1.5            | 2.160         | 0.45           | 0.90           |

## Soldering Profile



## Electrical Schematic



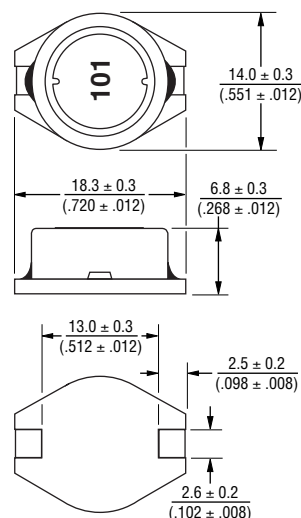
## General Specifications

Test Voltage ..... 0.1 V  
 Reflow soldering..... 250 °C; 10 sec max.  
 (In compliance with JEDEC, J-STD-020C, Table 4-2)  
 Operating Temperature  
 ..... -40 °C to +125 °C  
 (Temperature rise included)  
 Storage Temperature  
 ..... -45 °C to +125 °C  
 Resistance to Soldering Heat  
 ..... 250 °C, 10 sec. max.

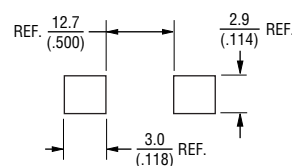
## Materials

Core ..... Ferrite core  
 Wire ..... Enameled copper  
 Base ..... LCP E4008  
 Terminal ..... Cu/Ni/Sn  
 Rated Current  
 ..... Ind. drop 10 % typ. at Isat  
 Temperature Rise  
 ..... 40 °C max. at rated I rms  
 Packaging ..... 250 pcs. per reel

## Product Dimensions



## Recommended Layout



DIMENSIONS:  $\frac{\text{MM}}{(\text{INCHES})}$

\*RoHS Directive 2002/95/EC Jan 27 2003 including Annex.  
 Specifications are subject to change without notice.  
 Customers should verify actual device performance in their specific applications

**BOURNS®**

Technical drawing of a 1000 Series 100 Ohm 1% 1/4W Thick Film Resistor. The drawing includes a top view, a side view, and a detailed view of the resistor element on a carrier.

**Top View Dimensions:**

- Overall diameter:  $330 \pm 0.5$  (12.99)
- Central pad diameter:  $21.0 \pm 0.8$  (.827  $\pm$  .031)
- Mounting tab diameter:  $13.0 \pm 0.5$  (.512  $\pm$  .020)
- Mounting tab width:  $38.4$  (1.512)
- Mounting tab thickness:  $50.0$  (1.969)
- Mounting tab spacing:  $34$  (1.339)

**Side View Dimensions:**

- Thickness:  $0.10$  (.004) MAX.
- EMBOSSED CAVITY
- EMBOSSED CARRIER
- Carrier width:  $32.0$  (1.260)

**Carrier Dimensions:**

- Carrier width:  $32.0$  (1.260)
- Carrier thickness:  $4.0$  (.157)
- Carrier spacing:  $20.0$  (.787)

**Resistor Element Dimensions:**

- Overall length:  $160$  (6.299)
- Overall width:  $390$  (15.354)
- Component length:  $160$  (6.299)
- Component width:  $390$  (15.354)
- Component spacing:  $20.0$  (.787)

**USER DIRECTION OF FEED**

QTY: 250 PCS. PER REEL

DIMENSIONS:  $\frac{\text{MM}}{(\text{INCHES})}$

Specifications are subject to change without notice.  
Customers should verify actual device performance in their specific applications