

**BOURNS®**

### Features

- Formerly J. W. Miller® model
- Available in E12 series
- Small design of only 9.8 mm maximum diameter
- RoHS compliant\*

### Applications

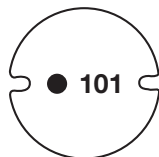
- Input/output of DC/DC converters
- Power supplies for:
  - Portable communication equipment
  - Camcorders
  - LCD TVs
  - Car radios

## PM105 Series - SMD Power Inductor

### Electrical Specifications

| Bourns Part No. | Inductance 1 kHz |        | Q Ref. | Test Frequency (MHz) | SRF Min. (MHz) | RDC (Ω) | I rms Max. (A) | I sat Typ. (A) |
|-----------------|------------------|--------|--------|----------------------|----------------|---------|----------------|----------------|
|                 | (μH)             | Tol. % |        |                      |                |         |                |                |
| PM105-100M-RC   | 10               | ± 20   | 30     | 2.52                 | 21             | 0.060   | 2.60           | 5.10           |
| PM105-120M-RC   | 12               | ± 20   | 30     | 2.52                 | 20             | 0.070   | 2.45           | 4.50           |
| PM105-150M-RC   | 15               | ± 20   | 30     | 2.52                 | 16             | 0.080   | 2.25           | 4.00           |
| PM105-180M-RC   | 18               | ± 20   | 30     | 2.52                 | 15             | 0.090   | 2.15           | 3.80           |
| PM105-220M-RC   | 22               | ± 20   | 25     | 2.52                 | 13             | 0.10    | 1.95           | 3.50           |
| PM105-270K-RC   | 27               | ± 10   | 25     | 2.52                 | 11             | 0.11    | 1.75           | 3.40           |
| PM105-330K-RC   | 33               | ± 10   | 25     | 2.52                 | 10             | 0.12    | 1.50           | 2.90           |
| PM105-390K-RC   | 39               | ± 10   | 20     | 2.52                 | 9.0            | 0.14    | 1.35           | 2.60           |
| PM105-470K-RC   | 47               | ± 10   | 20     | 2.52                 | 8.0            | 0.17    | 1.25           | 2.30           |
| PM105-560K-RC   | 56               | ± 10   | 20     | 2.52                 | 7.5            | 0.19    | 1.15           | 2.10           |
| PM105-680K-RC   | 68               | ± 10   | 15     | 2.52                 | 7.0            | 0.22    | 1.10           | 2.00           |
| PM105-820K-RC   | 82               | ± 10   | 15     | 2.52                 | 6.0            | 0.25    | 1.00           | 1.90           |
| PM105-101K-RC   | 100              | ± 10   | 15     | 0.796                | 5.2            | 0.35    | 0.97           | 1.70           |
| PM105-121K-RC   | 120              | ± 10   | 15     | 0.796                | 5.0            | 0.40    | 0.89           | 1.50           |
| PM105-151K-RC   | 150              | ± 10   | 15     | 0.796                | 4.5            | 0.47    | 0.78           | 1.40           |
| PM105-181K-RC   | 180              | ± 10   | 12     | 0.796                | 4.0            | 0.63    | 0.72           | 1.30           |
| PM105-221K-RC   | 220              | ± 10   | 12     | 0.796                | 3.8            | 0.73    | 0.66           | 1.10           |
| PM105-271K-RC   | 270              | ± 10   | 12     | 0.796                | 3.5            | 0.97    | 0.57           | 1.00           |
| PM105-331K-RC   | 330              | ± 10   | 12     | 0.796                | 3.2            | 1.15    | 0.52           | 0.85           |
| PM105-391K-RC   | 390              | ± 10   | 12     | 0.796                | 3.0            | 1.30    | 0.48           | 0.80           |
| PM105-471K-RC   | 470              | ± 10   | 12     | 0.796                | 2.5            | 1.48    | 0.42           | 0.80           |
| PM105-561K-RC   | 560              | ± 10   | 12     | 0.796                | 2.3            | 1.90    | 0.33           | 0.66           |
| PM105-681K-RC   | 680              | ± 10   | 12     | 0.796                | 2.1            | 2.25    | 0.28           | 0.65           |
| PM105-821K-RC   | 820              | ± 10   | 10     | 0.796                | 2.0            | 2.55    | 0.24           | 0.56           |

### Typical Part Marking



### Electrical Schematic



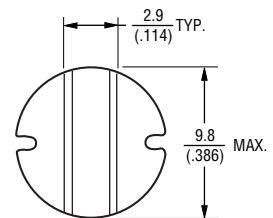
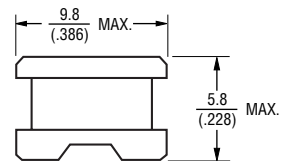
### General Specifications

Test Frequency ..... 1 KHz  
 Test Voltage ..... 1 V  
 Reflow Soldering .. 230 °C, 50 sec. max.  
 Operating Temperature  
 ..... -40 °C to +125 °C  
 (Temperature rise included)  
 Storage Temperature .. -40 °C to +125 °C  
 Resistance to Soldering Heat  
 ..... 260 °C for 5 sec.

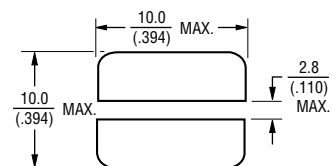
### Materials

Core ..... Ferrite DR core  
 Wire ..... Enameled copper wire  
 Terminal ..... Ag/Ni/Sn  
 Rated Current  
 ..... Ind. drop 10 % typ. at Isat  
 Temperature Rise  
 ..... 40°C max. at rated Irms  
 Packaging ..... 500 pcs. per reel

### Product Dimensions



### Recommended Layout



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

\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011. Specifications are subject to change without notice. Customers should verify actual device performance in their specific applications.

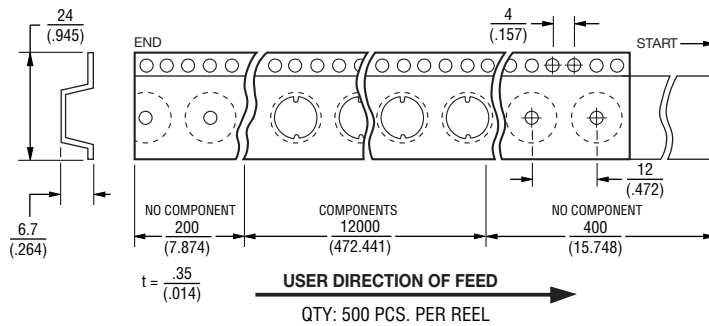
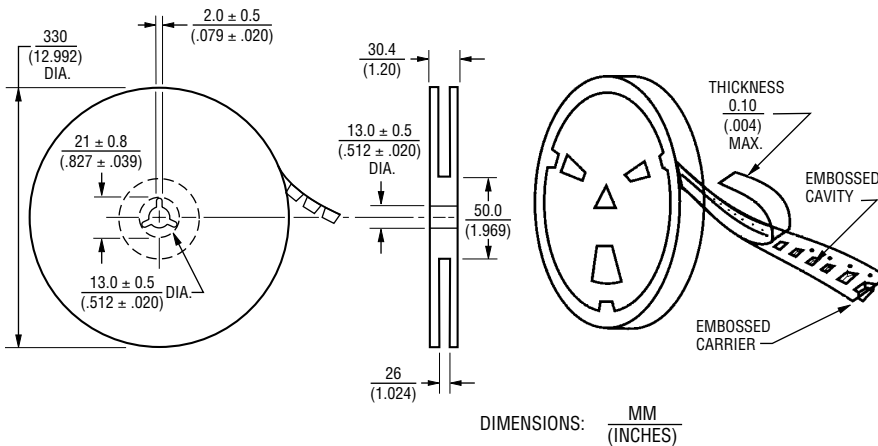
# PM105 Series - SMD Power Inductor

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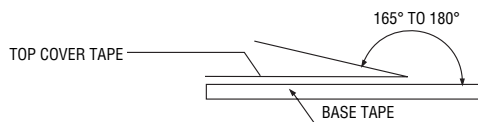
## Packaging Specifications

## Materials

Paper  
Plastics



## Strength of Cover Tape



The force for tearing off cover tape is 10 to 130 grams in the arrow direction.

REV. 05/12

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