



## Features

- Formerly J.W. Miller® model
- Available in E12 series
- Small diameter of only 5.8 mm maximum
- Profile of 4.8 mm
- RoHS compliant\*

## Applications

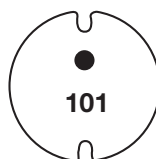
- Input/output of DC/DC converters
- Power supplies for:
  - Portable communication equipment
  - Camcorders
  - LCD TVs
  - Car radios

# PM54 Series - SMD Power Inductor

## Electrical Specifications

| Bourns Part No. | Inductance 1 kHz |          | Q Ref. | Test Frequency (MHz) | SRF Min. (MHz) | RDC ( $\Omega$ ) | Irms Max. (A) | Isat Typ. (A) |
|-----------------|------------------|----------|--------|----------------------|----------------|------------------|---------------|---------------|
|                 | ( $\mu$ H)       | Tol. %   |        |                      |                |                  |               |               |
| PM54-100M-RC    | 10               | $\pm 20$ | 30     | 2.52                 | 23             | 0.10             | 1.45          | 2.00          |
| PM54-120M-RC    | 12               | $\pm 20$ | 30     | 2.52                 | 22             | 0.12             | 1.40          | 1.90          |
| PM54-150M-RC    | 15               | $\pm 20$ | 30     | 2.52                 | 20             | 0.14             | 1.30          | 1.60          |
| PM54-180M-RC    | 18               | $\pm 20$ | 30     | 2.52                 | 18             | 0.15             | 1.25          | 1.50          |
| PM54-220M-RC    | 22               | $\pm 20$ | 30     | 2.52                 | 16             | 0.19             | 1.10          | 1.40          |
| PM54-270M-RC    | 27               | $\pm 15$ | 28     | 2.52                 | 14             | 0.22             | 1.00          | 1.30          |
| PM54-330L-RC    | 33               | $\pm 15$ | 24     | 2.52                 | 13             | 0.25             | 0.88          | 1.10          |
| PM54-390L-RC    | 39               | $\pm 15$ | 24     | 2.52                 | 13             | 0.32             | 0.80          | 1.00          |
| PM54-470L-RC    | 47               | $\pm 15$ | 22     | 2.52                 | 12             | 0.37             | 0.72          | 1.00          |
| PM54-560K-RC    | 56               | $\pm 10$ | 22     | 2.52                 | 11             | 0.42             | 0.68          | 0.90          |
| PM54-680K-RC    | 68               | $\pm 10$ | 22     | 2.52                 | 10             | 0.52             | 0.62          | 0.84          |
| PM54-820K-RC    | 82               | $\pm 10$ | 20     | 2.52                 | 9              | 0.60             | 0.58          | 0.75          |
| PM54-101K-RC    | 100              | $\pm 10$ | 20     | 0.796                | 9              | 0.70             | 0.52          | 0.68          |
| PM54-121K-RC    | 120              | $\pm 10$ | 22     | 0.796                | 7              | 0.93             | 0.48          | 0.60          |
| PM54-151K-RC    | 150              | $\pm 10$ | 20     | 0.796                | 6              | 1.10             | 0.40          | 0.54          |
| PM54-181K-RC    | 180              | $\pm 10$ | 20     | 0.796                | 6              | 1.38             | 0.38          | 0.50          |
| PM54-221K-RC    | 220              | $\pm 10$ | 20     | 0.796                | 6              | 1.57             | 0.35          | 0.44          |

## Typical Part Marking



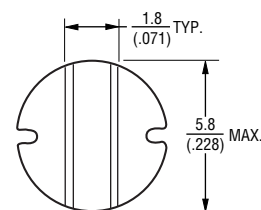
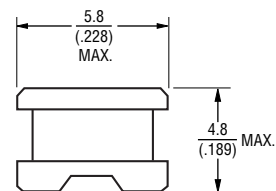
## General Specifications

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.

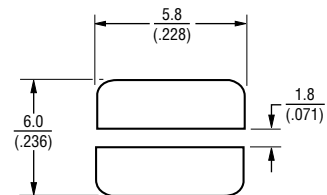
## Materials

Core..... Ferrite DR core  
 Wire ..... Enamelled copper  
 Terminal:..... Ag/Ni/Sn  
 Rated Current  
 ..... Ind. drop 10 % typ. at Isat  
 Temperature Rise  
 ..... 40 °C max. at rated Irms  
 Packaging..... 1500 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.

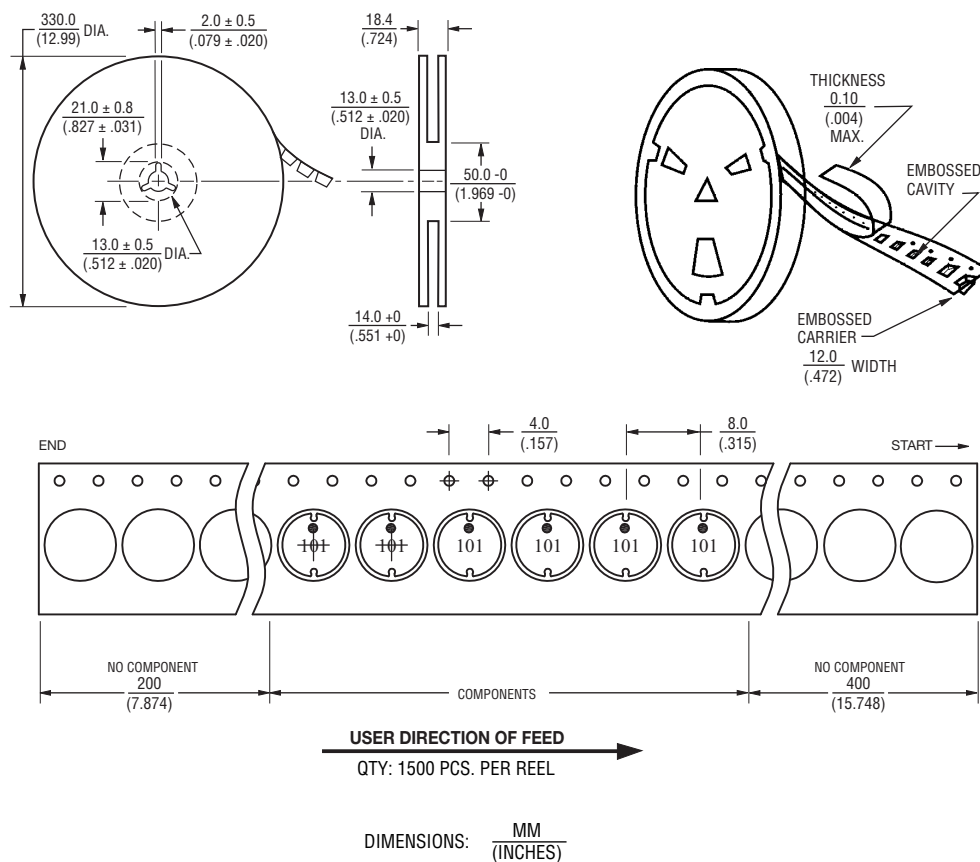
Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

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**BOURNS®**

## Packaging Specifications



REV. 08/15

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