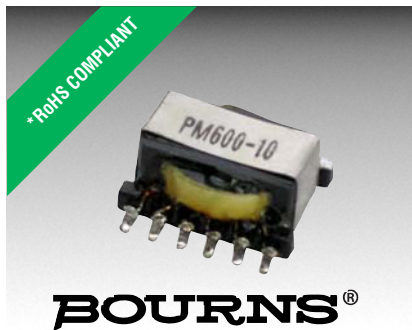




## Features

- Formerly J.W. Miller® model
- Six windings - multiple configurations
- Compact size
- Tape and reel packaging
- RoHS compliant\*

## Applications

- Inductors: Buck-boost, coupled, filtering, common mode
- Transformers: Flyback, push-pull, inverter, gate drive, isolation

## PM600/PM610/PM620 Series - SMD Inductor/Transformer

### Electrical Specifications

| Bourns<br>Part No. | Inductance<br>100 KHz |          | DCR<br>( $\Omega$ )<br>Max. | Isat<br>(A) | Irms<br>(A) | <1> ET (VmS)<br>Based on<br>40 °C Rise<br>(260 KHz) | <1> ET (VmS)<br>Based on<br>Core<br>Saturation |
|--------------------|-----------------------|----------|-----------------------------|-------------|-------------|-----------------------------------------------------|------------------------------------------------|
|                    | ( $\mu$ H)            | Tol. (%) |                             |             |             |                                                     |                                                |
| PM600-01-RC        | 201.6                 | $\pm 30$ | 0.324                       | 0.02        | 0.46        | 16.8                                                | 103.2                                          |
| PM600-02-RC        | 89.6                  | $\pm 30$ | 0.137                       | 0.03        | 0.71        | 11.2                                                | 68.8                                           |
| PM600-03-RC        | 27.4                  | $\pm 10$ | 0.324                       | 0.31        | 0.46        | 16.8                                                | 103.2                                          |
| PM600-04-RC        | 12.2                  | $\pm 10$ | 0.137                       | 0.47        | 0.71        | 11.2                                                | 68.8                                           |
| PM600-05-RC        | 14.7                  | $\pm 10$ | 0.324                       | 0.58        | 0.46        | 16.8                                                | 103.2                                          |
| PM600-06-RC        | 6.5                   | $\pm 10$ | 0.137                       | 0.87        | 0.71        | 11.2                                                | 68.8                                           |
| PM600-07-RC        | 10.9                  | $\pm 10$ | 0.324                       | 0.88        | 0.46        | 16.8                                                | 103.2                                          |
| PM600-08-RC        | 4.9                   | $\pm 10$ | 0.137                       | 1.32        | 0.71        | 11.2                                                | 68.8                                           |
| PM600-09-RC        | 8.5                   | $\pm 10$ | 0.324                       | 1.23        | 0.46        | 16.8                                                | 103.2                                          |
| PM600-10-RC        | 3.8                   | $\pm 10$ | 0.137                       | 1.85        | 0.71        | 11.2                                                | 68.8                                           |
| PM610-01-RC        | 160.0                 | $\pm 30$ | 0.202                       | 0.04        | 0.68        | 21.0                                                | 130                                            |
| PM610-02-RC        | 78.4                  | $\pm 30$ | 0.094                       | 0.06        | 1.00        | 14.7                                                | 91                                             |
| PM610-03-RC        | 21.6                  | $\pm 10$ | 0.202                       | 0.67        | 0.68        | 21.0                                                | 130                                            |
| PM610-04-RC        | 10.6                  | $\pm 10$ | 0.094                       | 0.96        | 1.00        | 14.7                                                | 91                                             |
| PM610-05-RC        | 11.6                  | $\pm 10$ | 0.202                       | 1.30        | 0.68        | 21.0                                                | 130                                            |
| PM610-06-RC        | 5.7                   | $\pm 10$ | 0.094                       | 1.86        | 1.00        | 14.7                                                | 91                                             |
| PM610-07-RC        | 8.3                   | $\pm 10$ | 0.202                       | 2.00        | 0.68        | 21.0                                                | 130                                            |
| PM610-08-RC        | 4.1                   | $\pm 10$ | 0.094                       | 2.86        | 1.00        | 14.7                                                | 91                                             |
| PM610-09-RC        | 6.6                   | $\pm 10$ | 0.202                       | 2.30        | 0.68        | 21.0                                                | 130                                            |
| PM610-10-RC        | 3.2                   | $\pm 10$ | 0.094                       | 3.29        | 1.00        | 14.7                                                | 91                                             |
| PM620-01-RC        | 160.6                 | $\pm 30$ | 0.094                       | 0.03        | 1.28        | 20.8                                                | 130                                            |
| PM620-02-RC        | 77.0                  | $\pm 30$ | 0.065                       | 0.04        | 1.54        | 14.4                                                | 90                                             |
| PM620-03-RC        | 131.8                 | $\pm 20$ | 0.094                       | 0.08        | 1.28        | 20.8                                                | 130                                            |
| PM620-04-RC        | 63.2                  | $\pm 20$ | 0.065                       | 0.12        | 1.54        | 14.4                                                | 90                                             |
| PM620-05-RC        | 23.3                  | $\pm 10$ | 0.094                       | 0.36        | 1.28        | 20.8                                                | 130                                            |
| PM620-06-RC        | 11.2                  | $\pm 10$ | 0.065                       | 0.52        | 1.54        | 14.4                                                | 90                                             |
| PM620-07-RC        | 14.2                  | $\pm 10$ | 0.094                       | 0.76        | 1.28        | 20.8                                                | 130                                            |
| PM620-08-RC        | 6.8                   | $\pm 10$ | 0.065                       | 1.10        | 1.54        | 14.4                                                | 90                                             |
| PM620-09-RC        | 9.3                   | $\pm 10$ | 0.094                       | 1.11        | 1.28        | 20.8                                                | 130                                            |
| PM620-10-RC        | 4.5                   | $\pm 10$ | 0.065                       | 1.60        | 1.54        | 14.4                                                | 90                                             |
| PM620-11-RC        | 7.9                   | $\pm 10$ | 0.094                       | 1.40        | 1.28        | 20.8                                                | 130                                            |
| PM620-12-RC        | 3.8                   | $\pm 10$ | 0.065                       | 2.02        | 1.54        | 14.4                                                | 90                                             |

<1> Single or multi-windings in parallel. ET of multiple winding in series is number of windings times value of ET.

### General Specifications

Rated Current..... Ind. drop of 30 % typ.  
 .....at Isat  
 Temperature Rise ... 40 °C typical at Irms  
 Operating Temperature  
 ..... -40 °C to +105 °C  
 Storage Temperature  
 ..... -40 °C to +105 °C  
 Soldering ..... 245 °C, 5 seconds max.  
 Dielectric Strength ..... 500 Vrms  
 between windings

### Materials

Core..... Ferrite  
 Wire ..... Polyurethane-coated copper  
 Terminal Coating..... Sn-Ag-Cu alloy  
 Packaging  
 PM600 ..... 600 pcs. per 13-inch reel  
 PM610 ..... 300 pcs. per 13-inch reel  
 PM620 ..... 200 pcs. per 13-inch reel

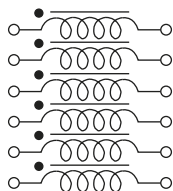


**WARNING Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

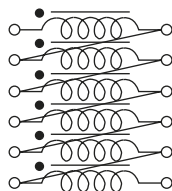
\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.  
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Typical Configurations

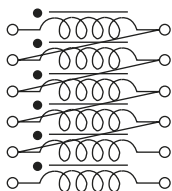
**Inductor:**



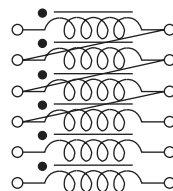
*Basic Diagram*  
Inductance:  $L$   
Current:  $I$



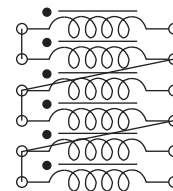
*Figure 1*  
Inductance:  $36 \times L$   
Current:  $I$



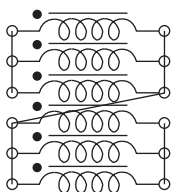
*Figure 2*  
Inductance:  $25 \times L$   
Current:  $I$



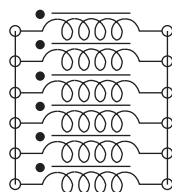
*Figure 3*  
Inductance:  $16 \times L$   
Current:  $I$



*Figure 4*  
Inductance:  $9 \times L$   
Current:  $2 \times I$

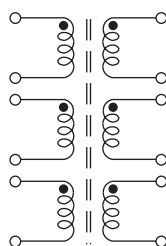


*Figure 5*  
Inductance:  $4 \times L$   
Current:  $3 \times I$

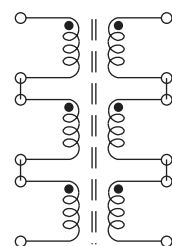


*Figure 6*  
Inductance:  $L$   
Current:  $6 \times I$

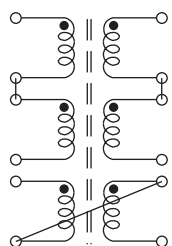
**Transformer:**



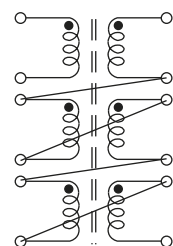
*Basic Diagram*  
Turns Ratio:  
 $1:1:1:1:1:1$



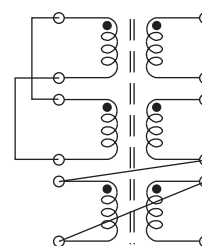
*Figure 1*  
Turns Ratio:  
 $1:1$



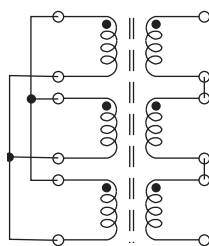
*Figure 2*  
Turns Ratio:  
 $1:1:1$



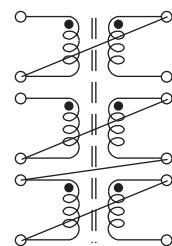
*Figure 3*  
Turns Ratio:  
 $1:5$  or  $5:1$



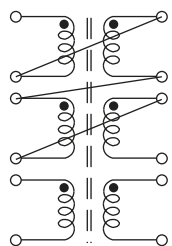
*Figure 4*  
Turns Ratio:  
 $1:4$  or  $4:1$



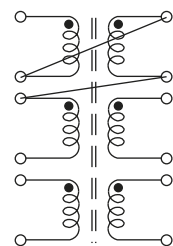
*Figure 5*  
Turns Ratio:  
 $1:3$  or  $3:1$



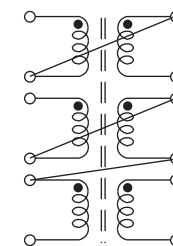
*Figure 6*  
Turns Ratio:  
 $1:2$  or  $2:1$



*Figure 7*  
Turns Ratio:  
 $4:1:1$



*Figure 8*  
Turns Ratio:  
 $3:1:1:1$



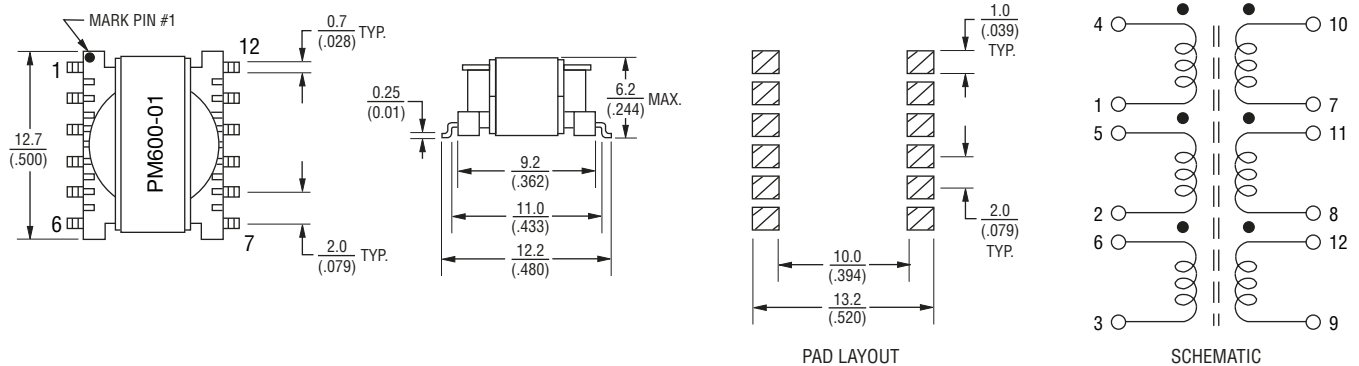
*Figure 9*  
Turns Ratio:  
 $2:3$  or  $3:2$

# PM600/PM610/PM620 Series - SMD Inductor/Transformer

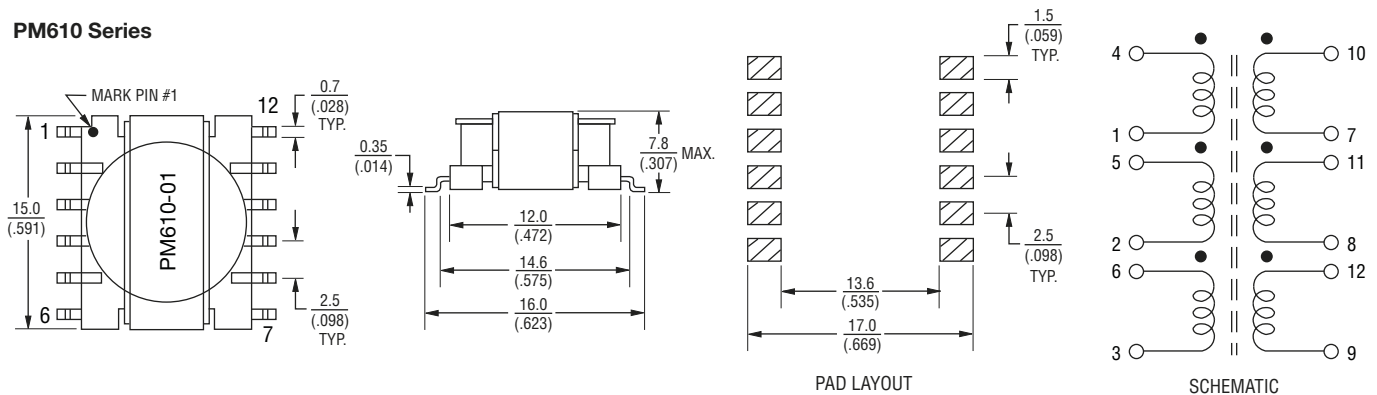
**BOURNS®**

## Product Dimensions

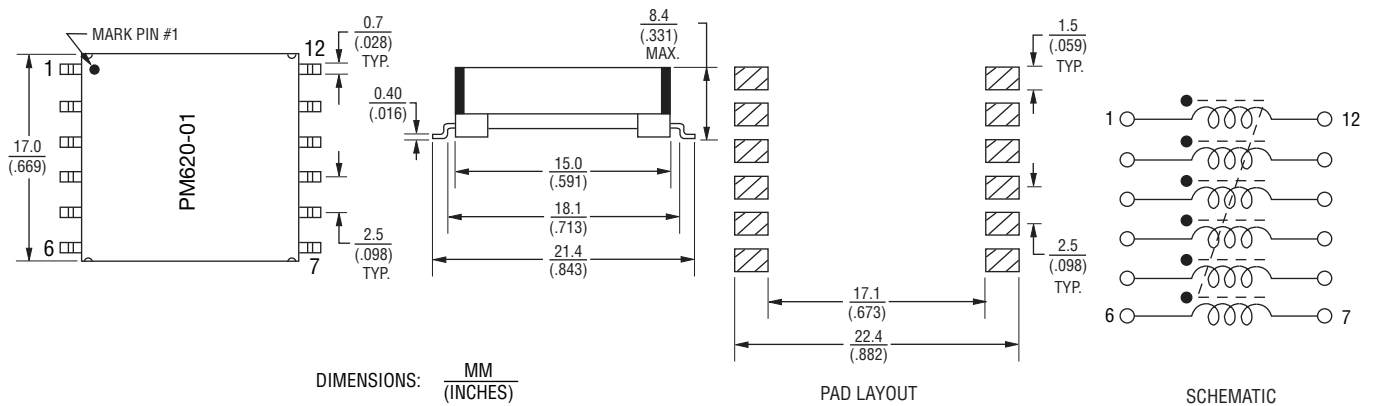
### PM600 Series



### PM610 Series



### PM620 Series



Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

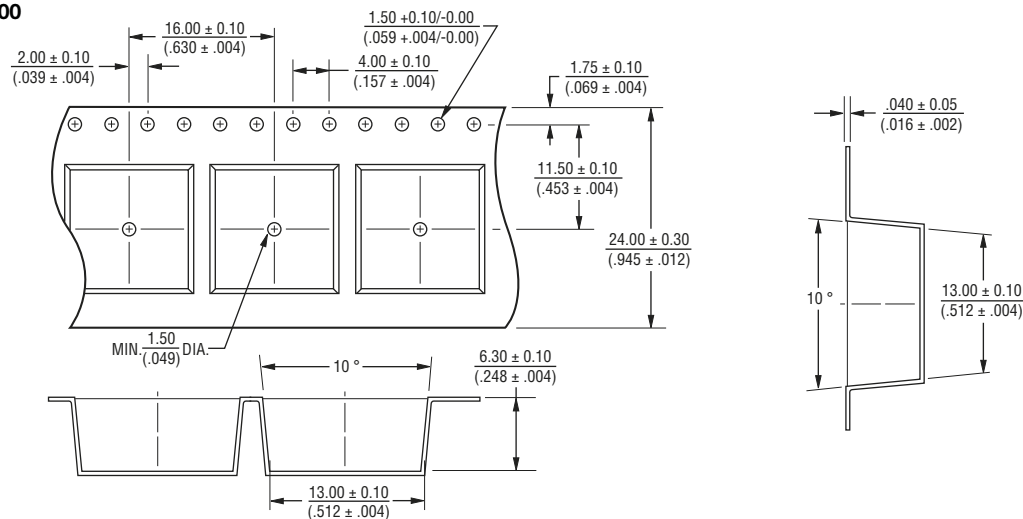
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# PM600/PM610/PM620 Series - SMD Inductor/Transformer

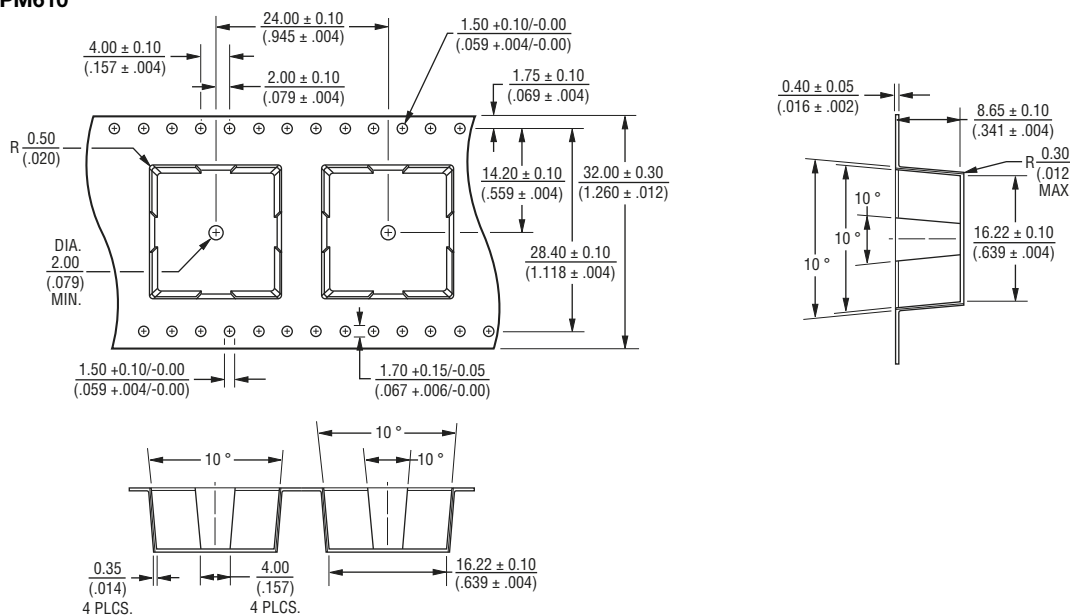
**BOURNS®**

## Packaging Specifications

### PM600



### PM610



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

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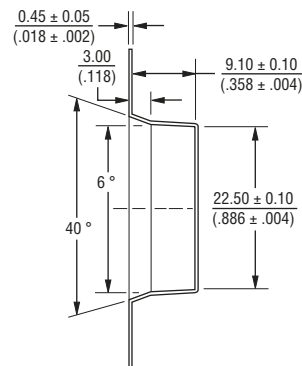
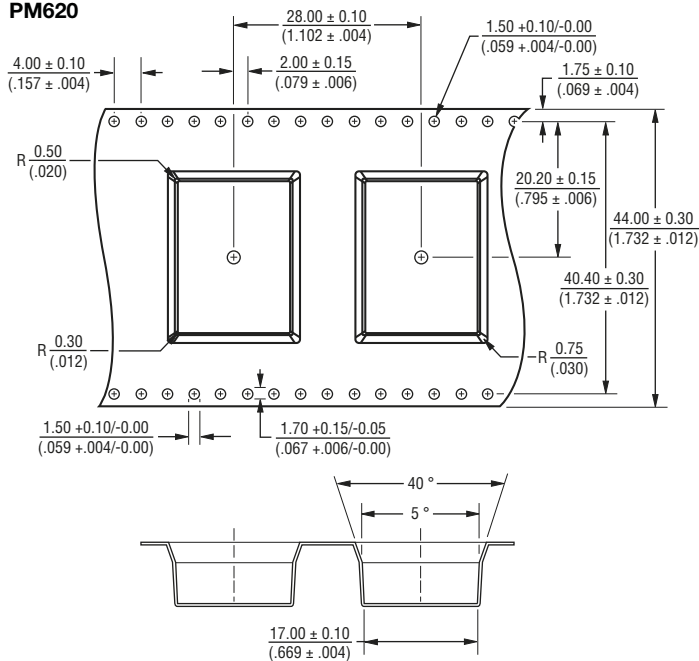
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# PM600/PM610/PM620 Series - SMD Inductor/Transformer

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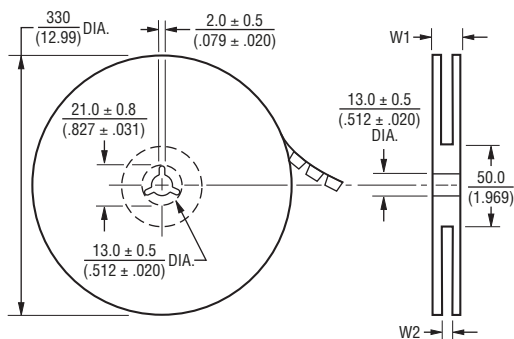
## Packaging Specifications (Continued)

### PM620

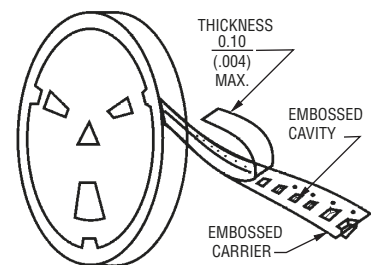


DIMENSIONS:  $\frac{\text{MM}}{(\text{INCHES})}$

<1> Single or multi-windings in parallel. ET of multiple winding in series is number of windings times value of ET.



|       | W1              | W2              |
|-------|-----------------|-----------------|
| PM600 | 30.4<br>(1.197) | 26.0<br>(1.024) |
| PM610 | 38.4<br>(1.512) | 34.0<br>(1.339) |
| PM620 | 50.4<br>(1.984) | 46.0<br>(1.811) |



REV. 06/08

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