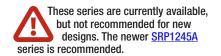


## Features

- Formerly J. W. Miller<sup>®</sup> models
- Shielded construction
- Unit height of 5.9 mm
- Inductance range: 0.22 µH to 10 µH
- Current up to 45 A
- RoHS compliant\*

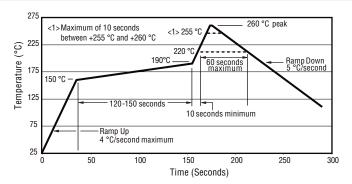


### PM12645S, PM12651S, PM13560S, PM13656S, PM13666S Series -**Shielded Power Inductors**

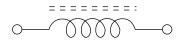
#### **Electrical Specifications**

Bourns Part No.	Inductance L (µH) ±20 %	l rms (A)	l sat (A)	DCR (mΩ) max.
PM12645S-1R2M-RC	1.20	27	49	3.3
PM12645S-1R8M-RC	1.80	21	40	4.7
PM12645S-2R7M-RC	2.70	17	32	7.3
PM12651S-R50M-RC	0.50	36	55	1.5
PM12651S-4R7M-RC	4.70	12	27	15.0
PM12651S-9R0M-RC	9.00	10	18	22.5
PM13560S-6R0M-RC	6.00	9.5	14	10.0
PM13560S-100M-RC	10.0	9	16	25.5
PM13656S-R22M-RC	0.22	45	80	1.0
PM13656S-R50M-RC	0.50	36	55	1.5
PM13666S-1R0M-RC	1.00	29	50	2.5

#### **Soldering Profile**



#### **Electrical Schematic**



WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

\* 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. Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf

#### **General Specifications**

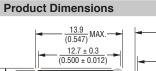
Test Voltage0.25 V Test Frequency
Operating Temperature
-55 °C to +150 °C
(Temperature rise included)
Storage Temperature
55 °C to +150 °C
Resistance to Soldering Heat +260 °C for 10 sec.
Moisture Sensitivity Level
ESD Classification (HBM)N/A
Materials
CoreIron WireEnameled copper

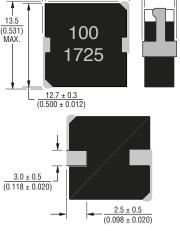
Terminal ..... Cu/Sn Rated Current .... Ind. drops 20 % at I sat Temperature Rise .... 40 °C at rated I rms Packaging...... 500 pcs. per 13-inch reel

5.2

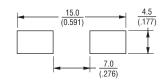
(.205) MAX

5.0 (.197) MAX.





### **Recommended Layout**





# **Applications**

■ Input/output of DC/DC converters

- Power supplies for:
  - · Portable communications equipment
  - · Camcorders
  - LCD TVs

#### PM12645S, PM12651S, PM13560S, PM13656S, PM13666S Series -BOURNS Shielded Power Inductors

#### L vs. I Charts PM12645S-2R7M-RC PM12645S-1R2M-RC PM12645S-1R8M-RC 1.6 60 160 2.4 4.0 140 120 Temperature Rise (°C) Temperature Rise (°C) Temperature Rise (°C) 2.0 3.2 Inductance (µH) Inductance (µH) 20 20 Inductance (µH) 1. 100 1.5 2.4 80 0.8 80 1.2 80 60 1.6 0.8 40 0.4 40 40 0.8 0.4 20 0 0 40 50 24 32 24 32 10 30 0 8 16 40 0 8 16 DC Current (A) DC Current (A) DC Current (A) PM12651S-R50M-RC PM12651S-9R0M-RC PM12651S-4R7M-RC 0.60 10 16 120 108 0.00 0.54 0.48 0.42 0.30 0.30 0.30 0.24 0.18 0.18 75 25 45 45 25 25 25 26 66 25 Temperature Rise (°C) 96 Temperature Rise (°C) Inductance (µH) Inductance (µH) 84 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 72 60 48 36 24 12 0.12 0.06 0 0 18 3 12 15 0 5 10 15 20 25 30 40 45 50 55 60 12 15 20 24 28 DC Current (A) DC Current (A) DC Current (A) PM13560S-6R0M-RC PM13560S-100M-RC 10 100 100 Temperature Rise (°C) emperature Rise (°C) 80 80 70 Inductance (µH) Inductance (µH) 8.0 7.0 60 50 6.0 5.0 4.0 40 40 30 20 20 10 14 0 2.8 5.6 8.4 11.2 12 14 2 10 16 DC Current (A) DC Current (A) PM13656S-R22M-RC PM13656S-R50M-RC 0.4 100 0.60 110 0.54 0.48 0.42 0.36 0.30 0.24 0.18 0.12 Temperature Rise (°C) Temperature Rise (°C) 99 Inductance (µH) 0.32 80 Inductance (µH) 88 77 0.24 60 66 55 44 33 22 0.16 40 0.08 20 0.06 0 0 12 24 36 48 60 10 15 20 25 30 40 45 50 5 55 60 0 DC Current (A) DC Current (A) PM13666S-1R0M-RC 10 femperature Rise (°C) 99 88 77 Inductance (µH) 0. 0. 66 55 44 0.7 0.6 0.5 0.4

Specifications are subject to change without notice.

DC Current (A)

5 10 15 20 25 35 40 45 50 60

Users should verify actual device performance in their specific applications.

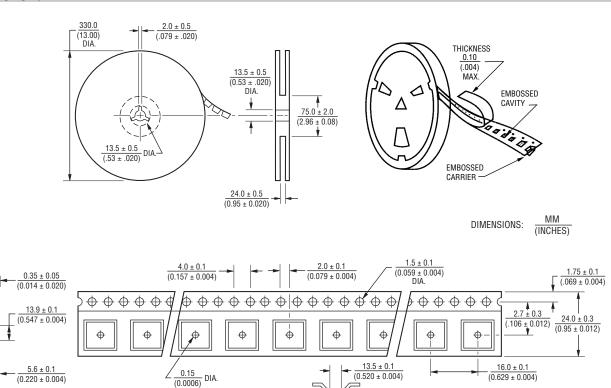
33 22

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## PM12645S, PM12651S, PM13560S, PM13656S, PM13666S Series -**Shielded Power Inductors**

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**Packaging Specifications** 



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