



### Features

- Formerly *J.W. Miller* model
- Height of 4.0 mm max.
- Current rating up to 3.5 A
- RoHS compliant\*

### Applications

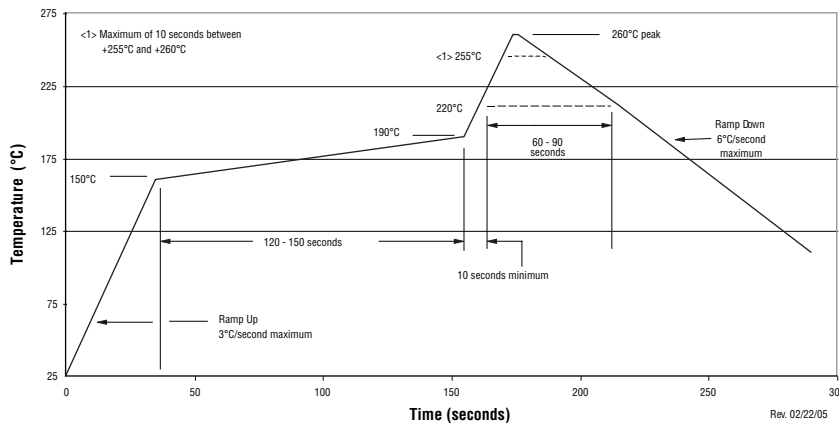
- Input/output of DC/DC converters
- Power supplies for:
  - Portable communication equipment
  - Camcorders
  - LCD TVs
  - Car radios

## PM638S Series - Shielded SMD Power Inductor

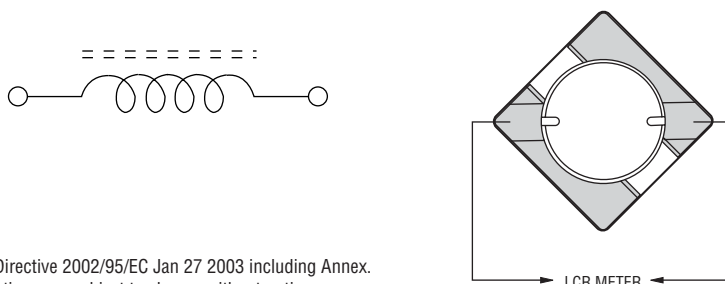
### Electrical Specifications

Bourns Part No.	Inductance 100 kHz		Q Ref.	Test Frequency (MHz)	SRF Typ. (MHz)	DCR Max. (mΩ)	I <sub>rms</sub> (A)	I <sub>sat</sub> (A)
	(μH)	Tol. %						
PM638S-3R3Y-RC	3.3	±30	9.8	7.96	75.9	20	3.50	3.60
PM638S-5R0Y-RC	5.0	±30	8.9	7.96	42.6	24	2.90	2.95
PM638S-6R2Y-RC	6.2	±30	9.0	7.96	42.3	27	2.50	2.60
PM638S-7R4Y-RC	7.4	±30	7.5	7.96	32.9	31	2.30	2.55
PM638S-8R2Y-RC	8.2	±30	7.4	7.96	29.6	34	2.20	2.45
PM638S-8R7Y-RC	8.7	±30	7.3	7.96	27.5	34	2.20	2.35
PM638S-100Y-RC	10	±30	8.8	2.52	24.9	38	2.00	2.05
PM638S-120Y-RC	12	±30	8.3	2.52	17.9	53	1.70	1.95
PM638S-150Y-RC	15	±30	8.6	2.52	18.0	57	1.60	1.90
PM638S-180Y-RC	18	±30	8.0	2.52	13.8	92	1.50	1.70
PM638S-220Y-RC	22	±30	8.8	2.52	13.9	96	1.30	1.60
PM638S-270Y-RC	27	±30	7.7	2.52	12.5	109	1.20	1.30
PM638S-330Y-RC	33	±30	8.6	2.52	12.5	124	1.10	1.20
PM638S-390Y-RC	39	±30	8.3	2.52	11.8	138	1.00	1.10
PM638S-470Y-RC	47	±30	8.5	2.52	10.4	155	0.95	1.00
PM638S-560Y-RC	56	±30	8.2	2.52	8.8	202	0.85	0.90
PM638S-680Y-RC	68	±30	7.4	2.52	7.5	234	0.75	0.87
PM638S-820Y-RC	82	±30	7.6	2.52	7.6	324	0.70	0.75
PM638S-101Y-RC	100	±30	6.7	0.796	6.2	358	0.65	0.68

### Soldering Profile



### Electrical Schematic



\*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

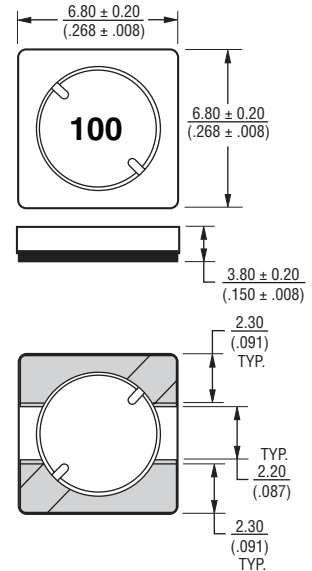
### General Specifications

Test Voltage ..... 0.1 V, 100 KHz  
 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 10 sec.

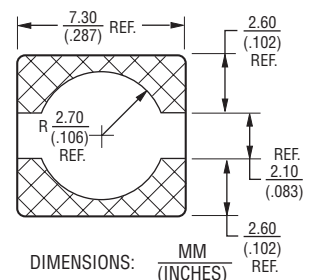
### Materials

Core Material ..... Ferrite  
 Wire ..... Enameled Copper  
 Adhesive ..... Epoxy Resin  
 Terminal ..... Ag/Ni/Sn  
 Rated Current ..... Ind. drop of 35 % typ.  
 at I<sub>sat</sub>  
 Temperature Rise ..... 30 °C typ. at I<sub>rms</sub>  
 Packaging ..... 1000 pcs. per reel

### Product Dimensions



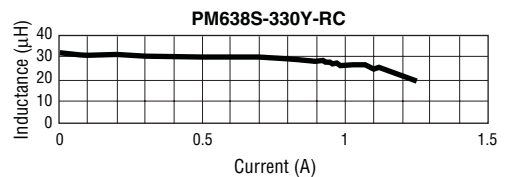
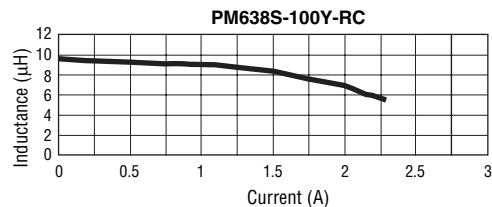
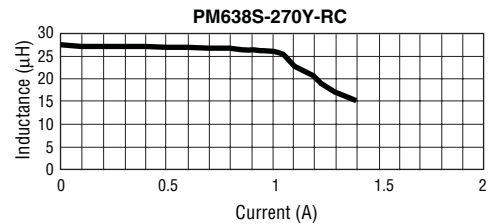
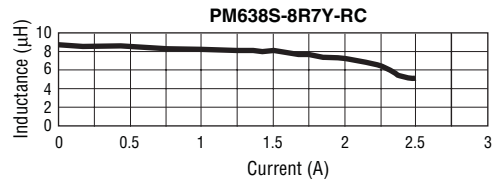
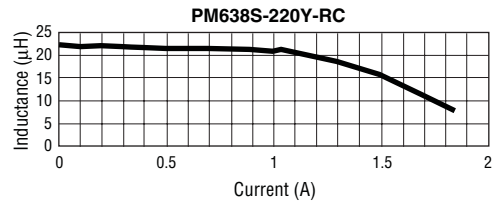
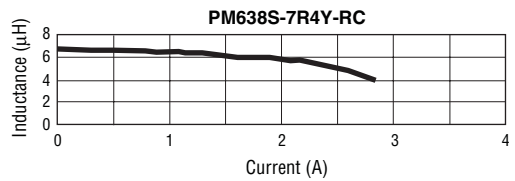
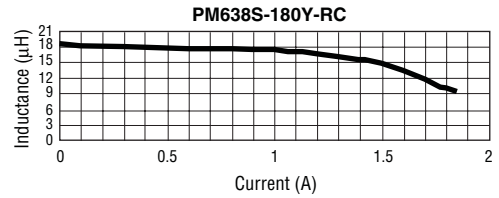
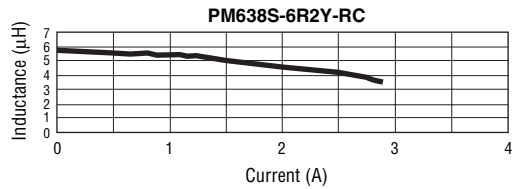
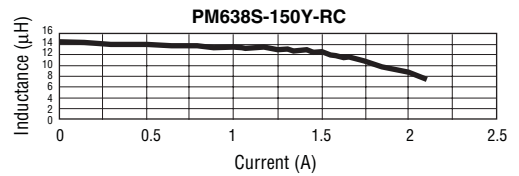
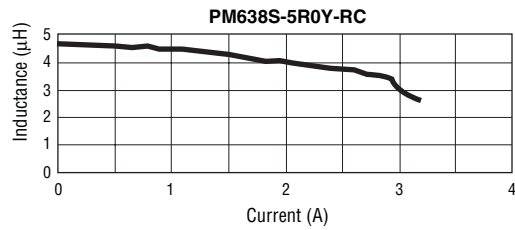
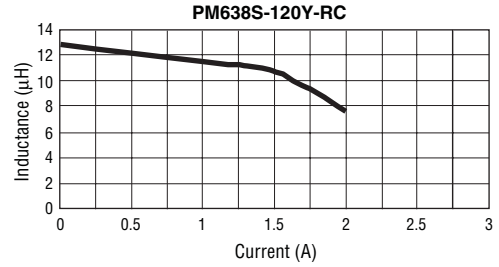
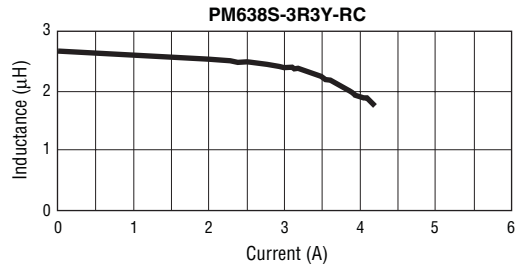
### Recommended Layout



# PM638S Series - Shielded SMD Power Inductor

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## Inductance vs. Current

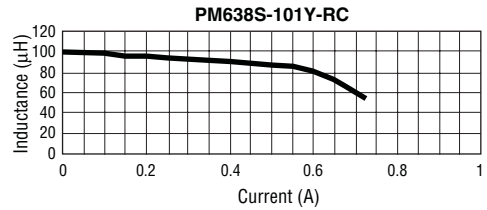
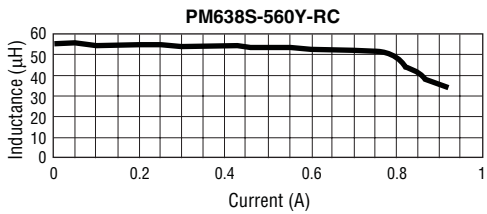
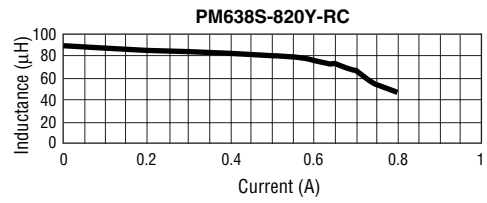
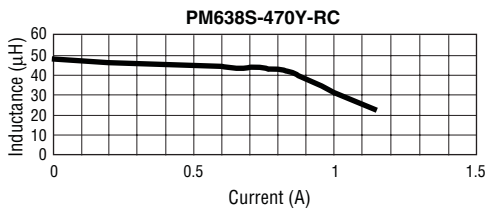
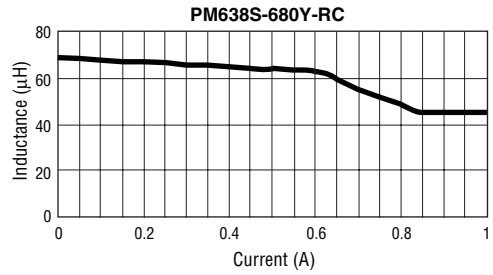
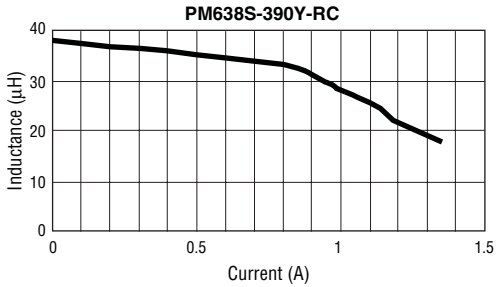


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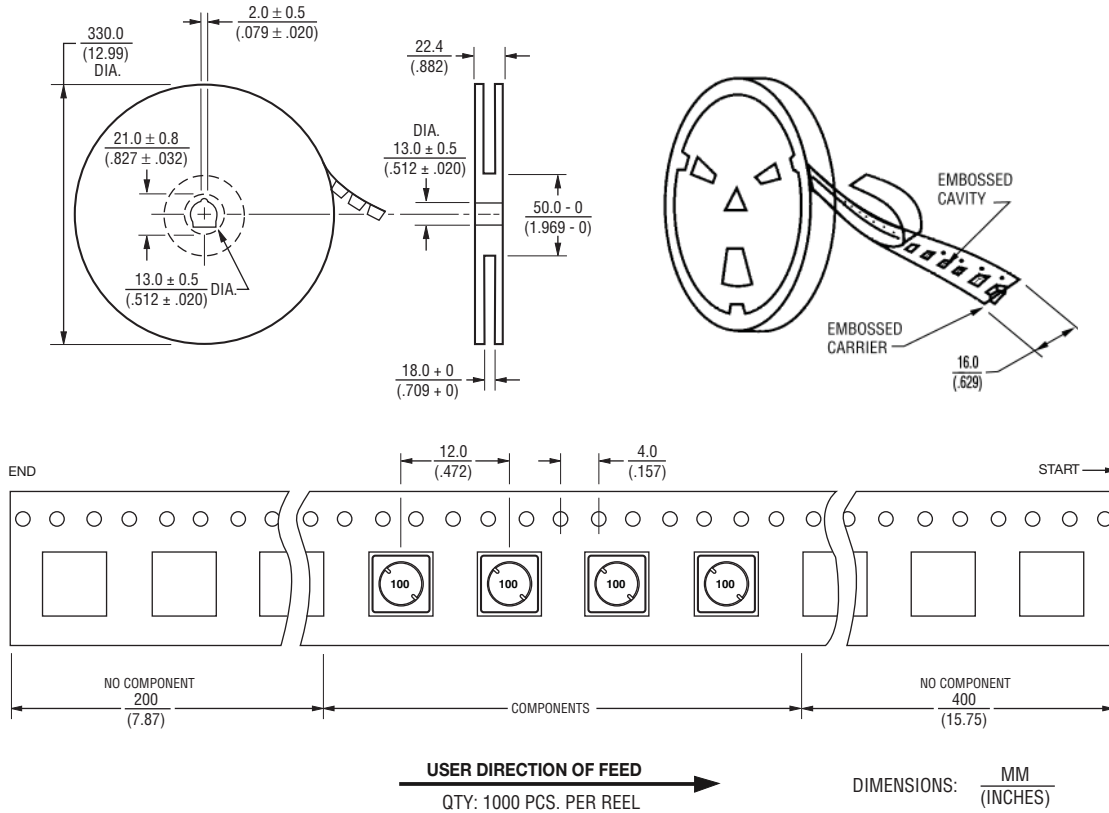
## Inductance vs. Current



# PM638S Series - Shielded SMD Power Inductor

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## Packaging Specifications



REV. 10/08

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