

Features

- Shielded construction
- Carbonyl powder core
- High saturation current
- Low radiation
- Low buzz noise
- RoHS compliant* and halogen free**

SRP1038CC Series - Shielded Power Inductors

Electrical Specifications @ 25 °C

Bourns Part No.	Inductance @ 100 kHz / 1 V		Q Min.	SRF (MHz) Typ.	DCR (mΩ) Typ.	DCR (mΩ) Max.	Irms (A) Typ.	Isat (A) Typ.	Terminal Type
	L (µH)	Tol. %							
SRP1038CC-R10Y	0.10	30	10	170	0.32	0.38	53	85	Non-Lead Frame
SRP1038CC-R15M	0.15	20	10	160	0.5	0.6	45	80	
SRP1038CC-R20Y	0.20	30	10	155	0.8	1.0	40	75	
SRP1038CC-R22M	0.22	20	10	155	0.8	1.0	40	75	
SRP1038CC-R30M	0.30	20	15	110	1.0	1.2	38	70	
SRP1038CC-R33M	0.33	20	15	108	1.0	1.2	38	70	
SRP1038CC-R36M	0.36	20	15	105	1.05	1.2	36	60	
SRP1038CC-R47M	0.47	20	15	72	1.3	1.5	31	48	
SRP1038CC-R68M	0.68	20	15	60	2.3	2.7	24	45	
SRP1038CC-1R0M	1.00	20	15	47	3.5	4	20	39	Lead Frame
SRP1038CC-1R5M	1.50	20	20	30	4.7	5.3	18	35	
SRP1038CC-2R2M	2.20	20	20	25	6.5	7.2	15	27	
SRP1038CC-3R3M	3.30	20	20	18	10.8	11.8	14	22	
SRP1038CC-4R7M	4.70	20	20	16	14.5	15.5	13	20	
SRP1038CC-5R6M	5.60	20	20	15	18	19.3	12	16	
SRP1038CC-6R8M	6.80	20	20	13	19	23.3	10	15	
SRP1038CC-8R2M	8.20	20	20	12	20	22.5	9	13.5	
SRP1038CC-100M	10.00	20	20	10	29	32	8.5	12.5	
SRP1038CC-150M	15.00	20	20	9	40	45	6.3	10	
SRP1038CC-220M	22.00	20	20	8	62	74	5.2	7.5	
SRP1038CC-270M	27.00	20	20	7	80	96	4.5	6.5	
SRP1038CC-330M	33.00	20	20	6	94	112	4	6	
SRP1038CC-470M	47.00	20	20	5	145	167	3.2	5	

Additional Information

Click these links for more information:

PRODUCT SELECTOR | TECHNICAL LIBRARY | INVENTORY | SAMPLES | CONTACT

General Specifications

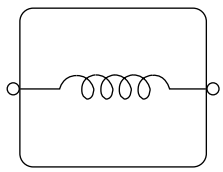
Operating Temperature
..... -40 °C to +125 °C
(Temperature rise included)
Storage Temperature (Component)
..... -40 °C to +125 °C
Temperature Rise .....40 °C at rated I_{rms}[1]
Rated Current
..... Inductance drops 30 % at I_{sat}
Moisture Sensitivity Level.....1
ESD Classification (HBM).....N/A

[1]Circuit design, component, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

Materials

Core.....Carbonyl powder
Wire .....Enameled copper
Terminal Finish ..... Sn
Packaging..... 500 pcs. per 13-inch reel

Electrical Schematic



How to Order

SRP1038CC - R10Y

Model
Value Code (see table)

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

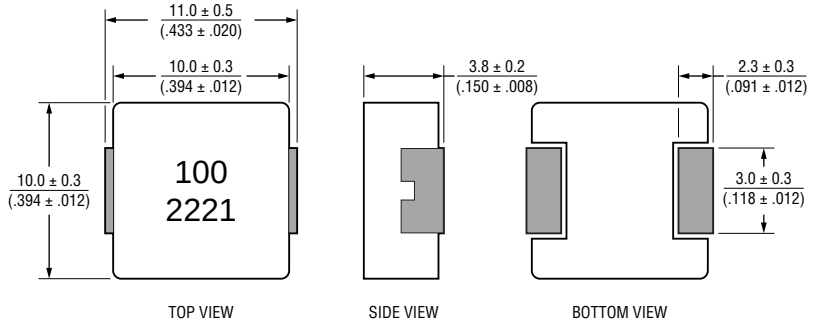
* RoHS Directive 2015/863, Mar 31, 2015 and Annex.
** Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

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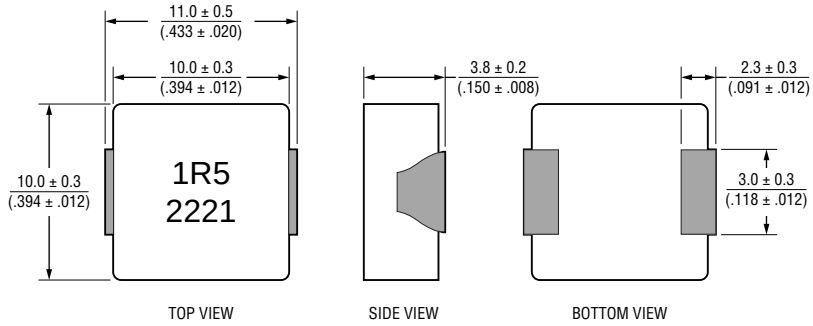
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Product Dimensions

Lead Frame Terminal

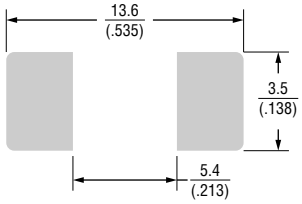


Non-Lead Frame Terminal



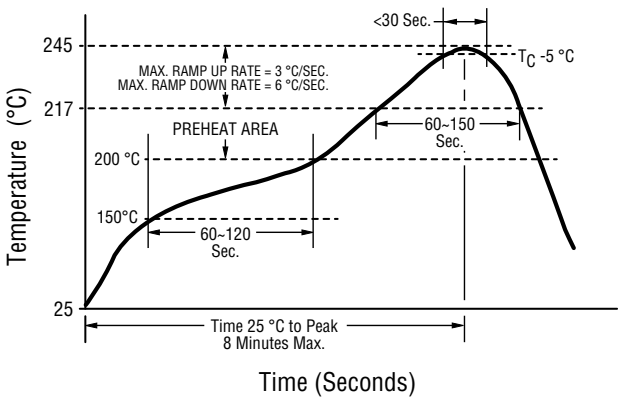
DIMENSIONS: MM / (INCHES)

Recommended Layout



DIMENSIONS: MM / (INCHES)

Soldering Profile



REFLOW TIMES: 3 TIMES MAX.

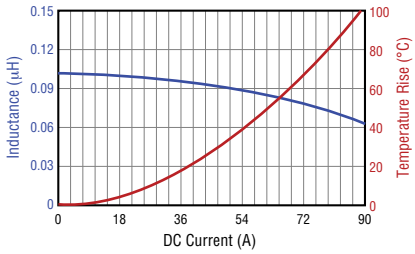
Profile Feature	Pb Free Assembly
Preheat - Temperature Min. (T_{smin}) - Temperature Max. (T_{smax}) - Time(t_s) from T_{smin} to T_{smax}	 150 °C 200 °C 60-120 seconds
Ramp-up Rate (T_L to T_p)	3 °C/second max.
Liquidous temperature (T_L) Time (t_L) maintained above T_L	217 °C 60-150 seconds
Peak package body temperature (T_p)	245 °C
Time within 5 °C of Actual Peak Temperature (t_p)	<30 seconds
Ramp-Down Rate (T_p to T_L)	6 °C/second max.
Time 25 °C to Peak Temperature	8 minutes max.

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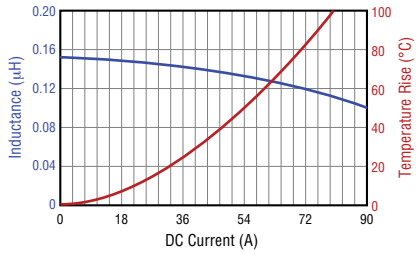
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L vs. IDC and Temperature vs. IDC Curves

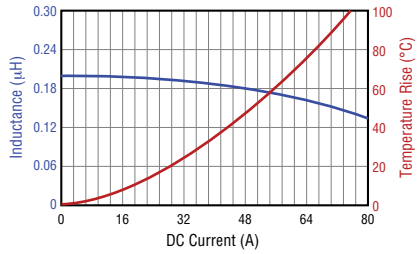
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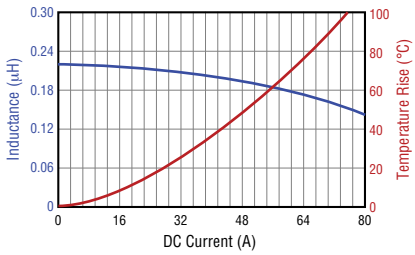
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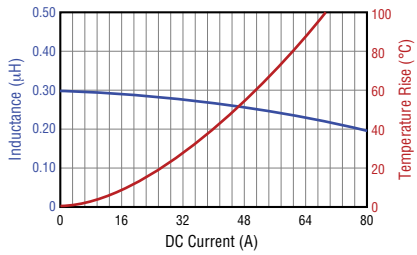
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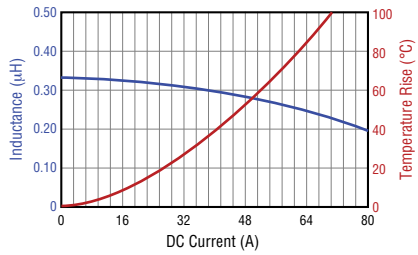
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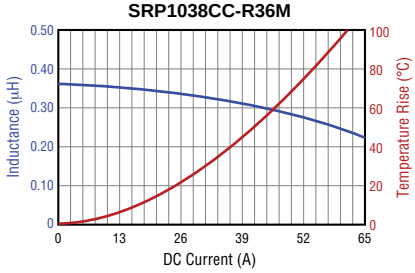
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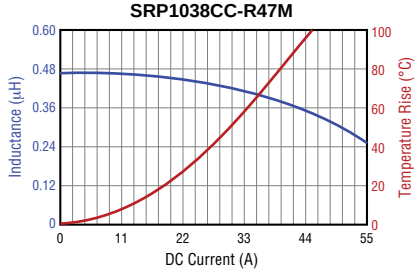
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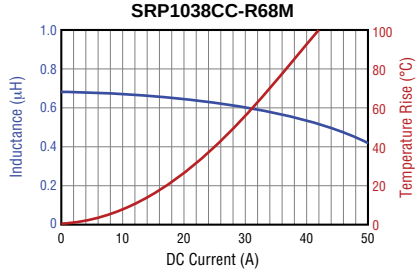
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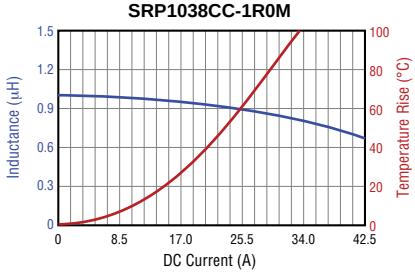
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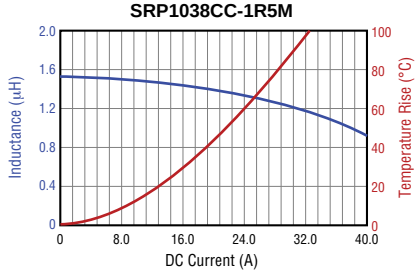
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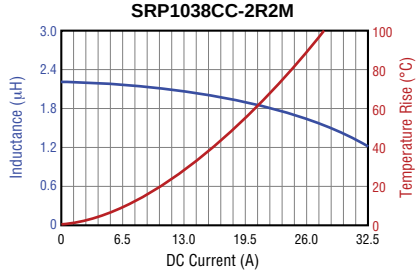
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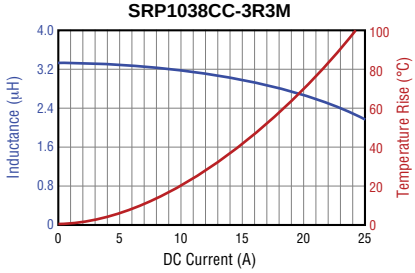
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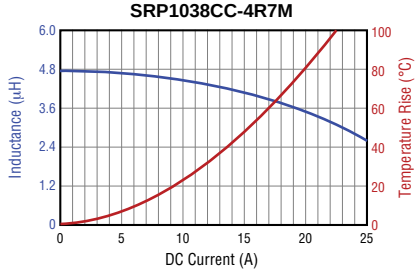
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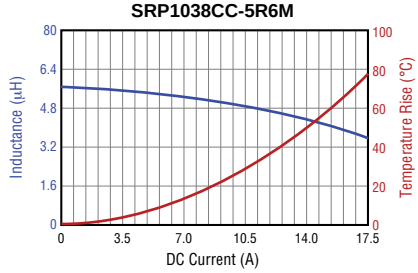
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SRP1038CC-4R7M



SRP1038CC-5R6M

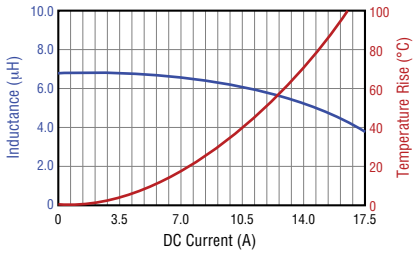


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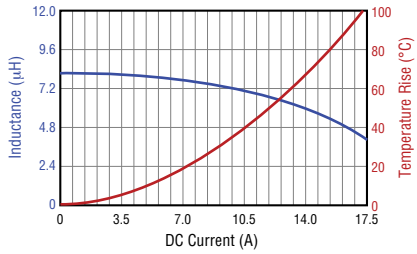
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L vs. IDC and Temperature vs. IDC Curves (continued)

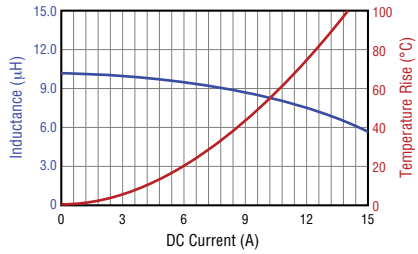
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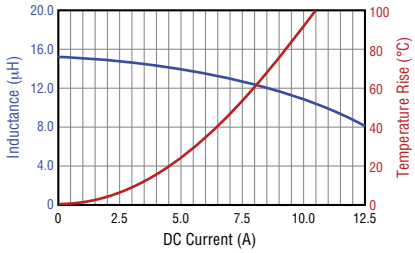
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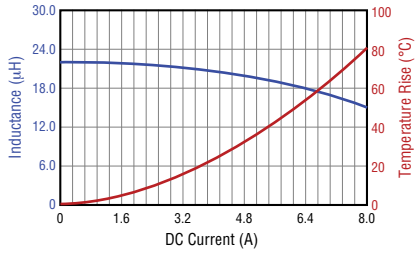
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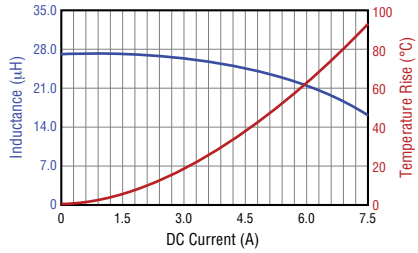
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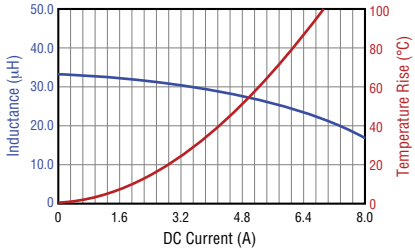
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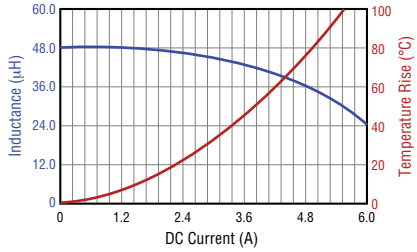
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SRP1038CC-330M



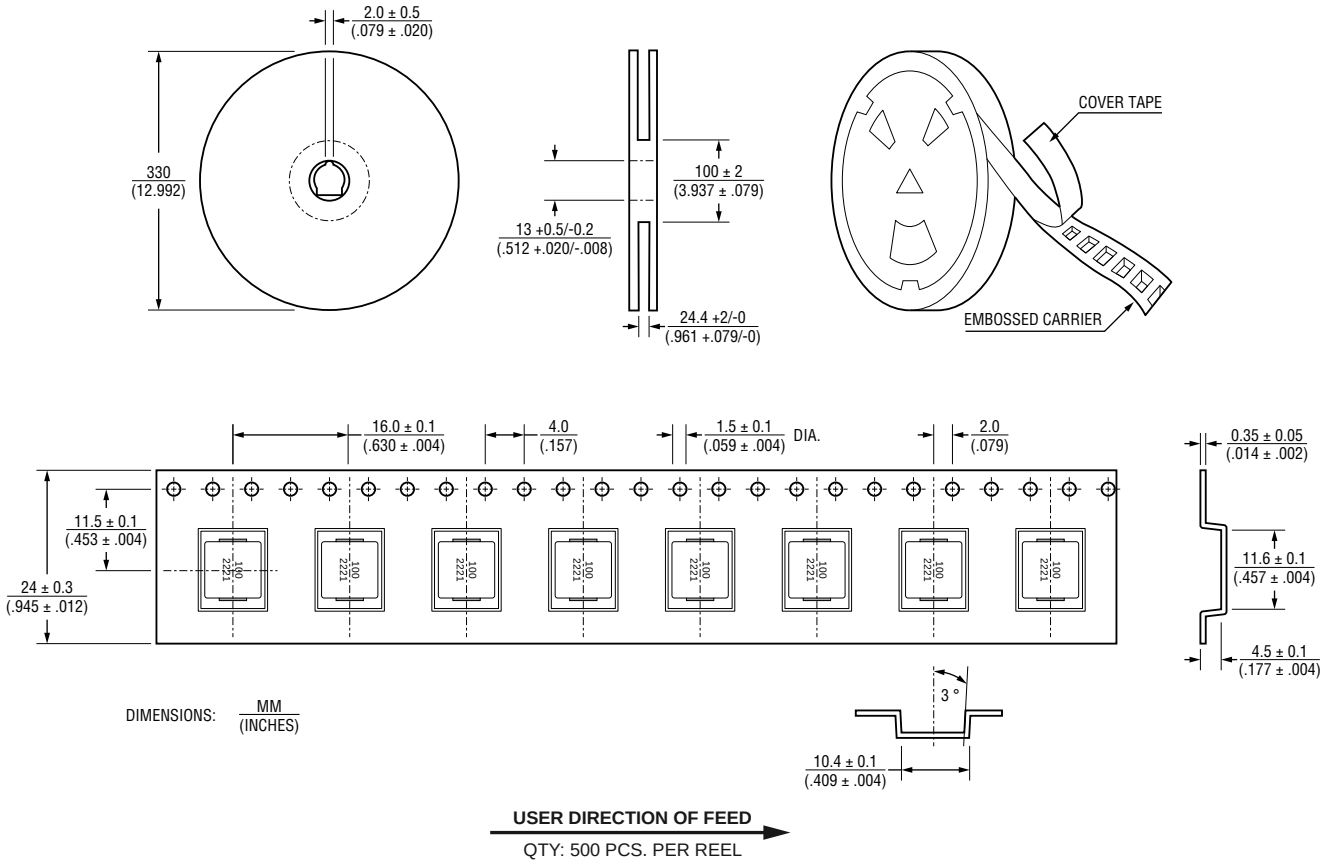
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Packaging Specifications



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