

HIGH CURRENT MOLDED POWER INDUCTOR

P7638 Family

Features

- Lead free (Pb-free)
- RoHS compliant
- Very low DC resistance
- Very high current rating
- Low profile
- Flat top for pick & place
- Shielded

Applications

- Energy storage choke for
- DC/DC Converters
 - VRM modules
 - POL Converters

DESCRIPTION

The P7638 family comprises of very high current shielded power choke coil in low profile size.

The products self-leaded construction consist of ferrite core and helical coil from enamel-coated copper flat wire.

The range covers inductance values from 0.5 μ H to 3.9 μ H, and provides compact solutions for high power applications with saturation currents ranging between 12 A to 30 A.

The P7638 family is compliant with RoHS Directive 2002/95/EC and suitable for lead-free and conventior placement and reflow.



P7638

SPECIFICATIONS

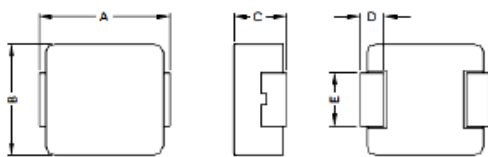
ELECTRICAL

Part No.	Inductance (μ H) L_0	I_{sat} (A) Typ.	DCR (m Ω) 25°C	Height (mm)
P7638-1235-R10YF	0,10	84,00	0,36	3,30
P7638-1235-R15YF	0,15	75,00	0,40	3,30
P7638-1235-R22MF	0,22	65,00	0,70	3,30
P7638-1235-R33MF	0,33	62,00	0,85	3,30
P7638-1235-R47MF	0,47	55,00	1,20	3,30
P7638-1235-R60MF	0,60	51,00	1,50	3,30
P7638-1235-R68MF	0,68	49,00	1,90	3,30
P7638-1235-R82MF	0,82	44,00	2,20	3,30
P7638-1235-1R0MF	1,00	40,00	2,70	3,30
P7638-1235-1R5MF	1,50	35,00	4,80	3,30
P7638-1235-1R8MF	1,80	30,00	5,20	3,30
P7638-1235-2R2MF	2,20	29,00	6,30	3,30
P7638-1235-3R3MF	3,30	27,00	11,00	3,30
P7638-1235-4R7MF	4,70	24,00	15,30	3,30
P7638-1235-5R6MF	5,60	19,00	18,00	3,30
P7638-1235-6R8MF	6,80	18,00	20,00	3,30
P7638-1235-8R2MF	8,20	16,00	23,00	3,30
P7638-1235-100MF	10,00	14,00	29,00	3,30

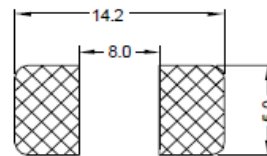
Notes:

- a) Test Freq. : 100KHz/ 1V
- b) Ambient Temp. : 25°C
- c) Operating Temp. : -40°C to +125°C
- d) Storage Temp. : -10°C to +40°C
- e) Humidity Range. : 50~60% RH (Product without taping)
- f) Heat Rated Current (I_{rms}) will cause the coil temperature rise approximately Δt of 40°C. (keep 1min)
- g) Saturation Current (I_{sat} 1) will cause L₀ to drop 20% typical. (keep quickly)
- h) Part Temperature (Ambient+Temp.Rise): Should not exceed 125°C under worst case operating conditions.

CONSTRUCTION



Recommended PC Board Pattern



A	B	C	D	E
13,50±0,5	12,50±0,3	3,3±0,2	2,3±0,3	4,7±0,3

Unit: mm

MARKING

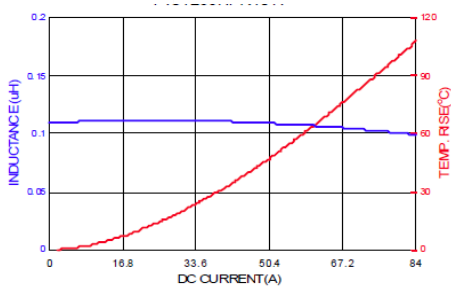
- Manufacturer
- Product Code (Height code + Inductance code)
- Manufacturing Date Code

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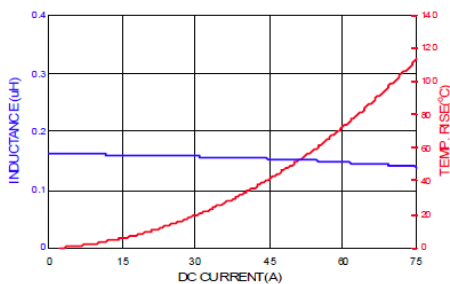
SPECIFICATIONS

CHARACTERISTIC CURVES

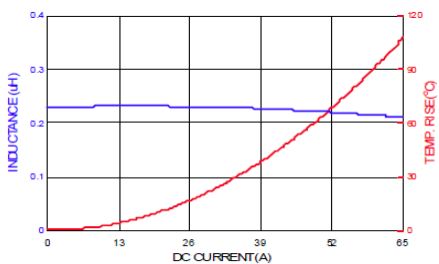
P7638-1235-R10YF



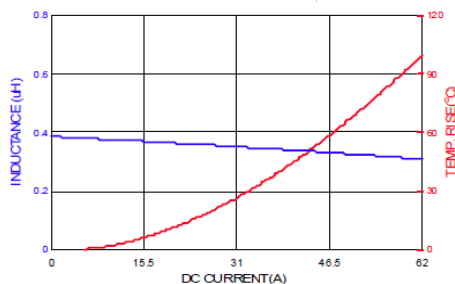
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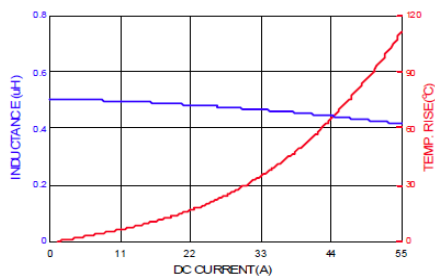
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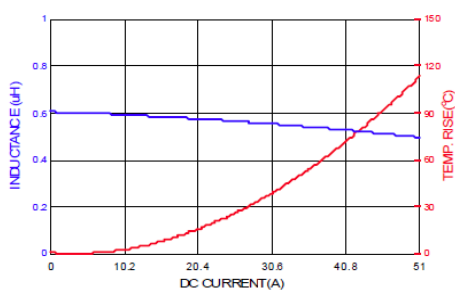
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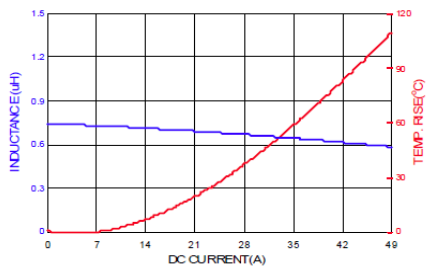
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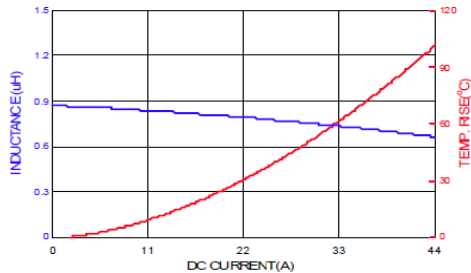
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P7638-1235-R68MF



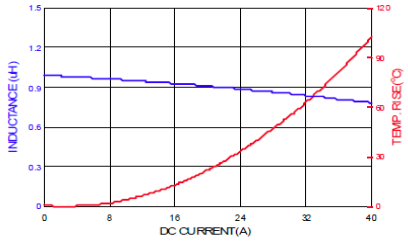
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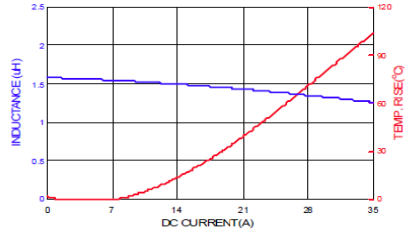
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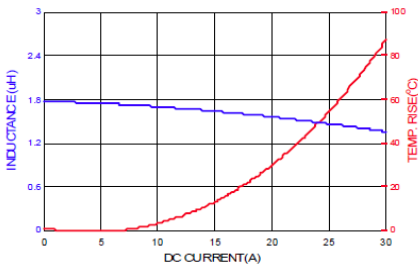
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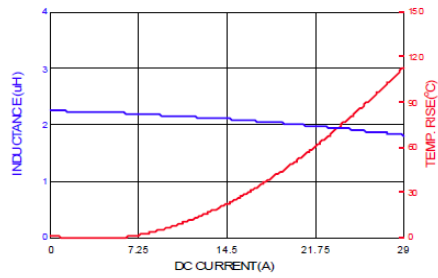
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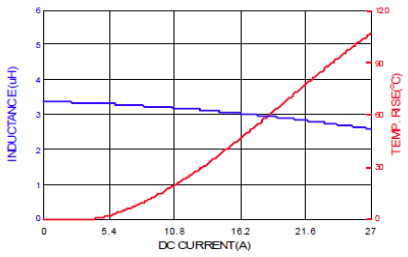
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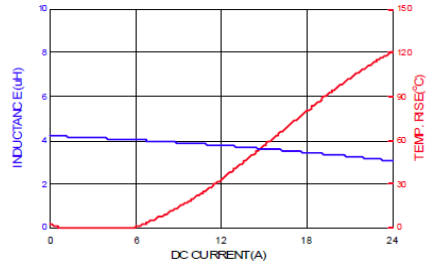
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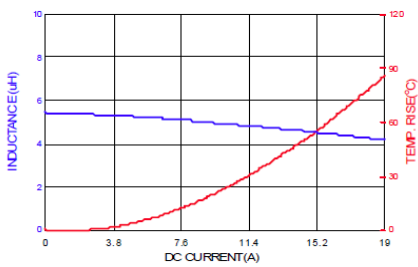
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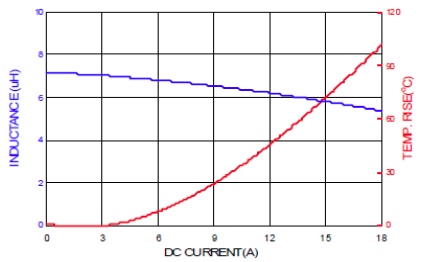
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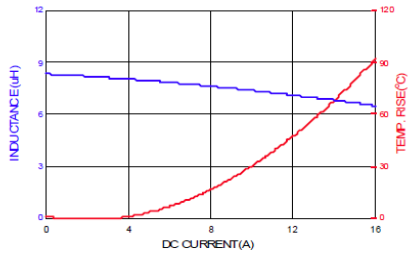
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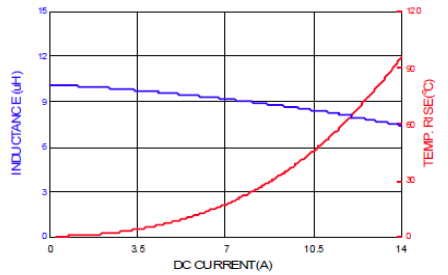
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P7638-1235-8R2MF



P7638-1235-100MF



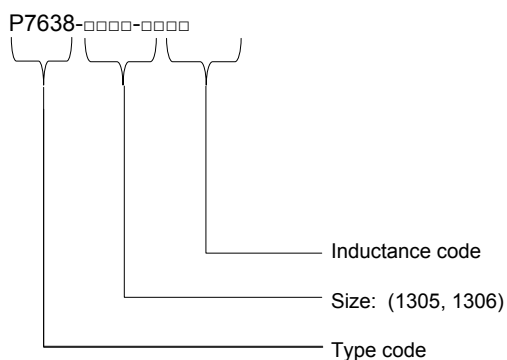
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CHARACTERISTIC CURVES

- a) The inductance vs. current and temperature characteristic curves presented are typical values
- b) The inductance vs. current curves are generated by measuring inductors at 25 °C ambient temperature.
- c) Temperature rise is measured at an ambient temperature of 25°C. A current is applied for 8 minutes and temperature is measured when the point of the components temperature is stable using an infrared thermometer directed at the bottom surface of the component. No forced air cooling is applied.
- d) Temperature response need to be verified in specific applications and can only be carried out by the customer

ORDERING CODE



NOTES:
Units are packed in tape and reel



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