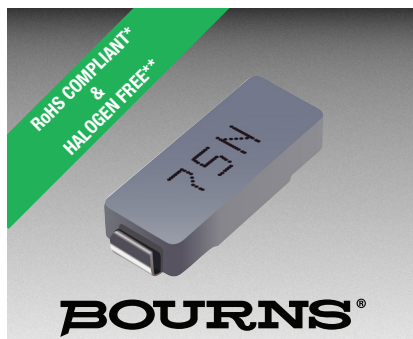




## Features

- Shielded construction – low radiation
- Low buzz noise
- Hot press molding process
- Low profile 2.4 mm max.
- High current
- Low DCR
- RoHS compliant\* and halogen free\*\*

## Applications

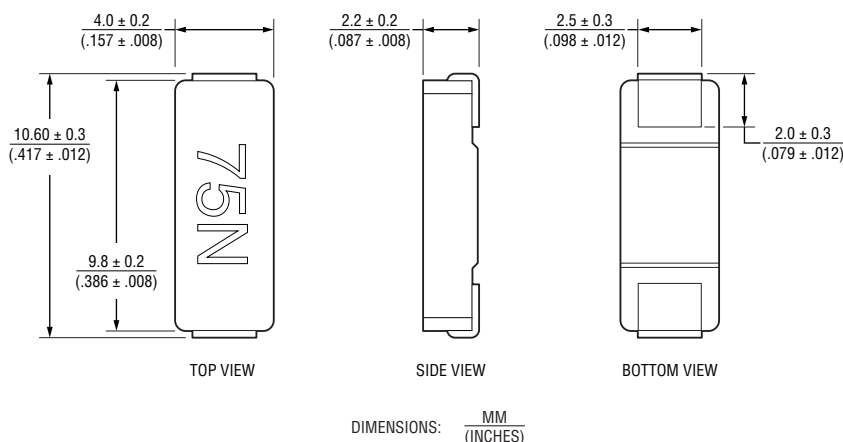
- PoL converters
- Data centers

## SRP1024HMCT Series – Shielded Power Inductors

### Electrical Specifications @ 25 °C

| Bourns<br>Part Number | Inductance<br>@ 100 KHz / 1 V |          | DCR<br>(mΩ)<br>±5 % | Irms<br>(A)<br>Typ. | Isat<br>(A)<br>Typ. |
|-----------------------|-------------------------------|----------|---------------------|---------------------|---------------------|
|                       | L (μH)                        | Tol. (%) |                     |                     |                     |
| SRP1024HMCT-75NM      | 0.075                         | ±20      | 0.4                 | 50.0                | 65.0                |

### Product Dimensions



### Additional Information

Click these links for more information:



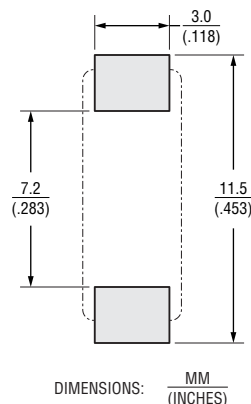
### General Specifications

Operating Temperature ..... -40 °C to +125 °C  
 Storage Temperature ..... -40 °C to +125 °C  
 Temperature Rise ..... 40 °C at rated Irms  
 Rated Current ..... Inductance drops 30 % at Isat  
 Moisture Sensitivity Level ..... 1  
 ESD Classification (HBM) ..... N/A

### Materials

Core ..... Carbonyl core powder  
 Wire ..... Enameled copper  
 Terminal Finish ..... Sn 99.3 / Cu 0.7  
 Packaging ..... 2,500 pcs. per 13-inch reel

### Recommended Layout

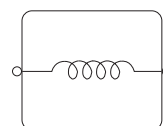


### How to Order

SRP1024HMCT - 75N M

Model \_\_\_\_\_  
 Value Code \_\_\_\_\_  
 Tolerance \_\_\_\_\_  
 M = ±20 %

### Electrical Schematic



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[www.bourns.com](http://www.bourns.com)



**CALIFORNIA WARNING:** Can expose you to lead, a carcinogen and reproductive toxicant.  
 See [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\* RoHS Directive 2015/863, Mar 31, 2015 and Annex.

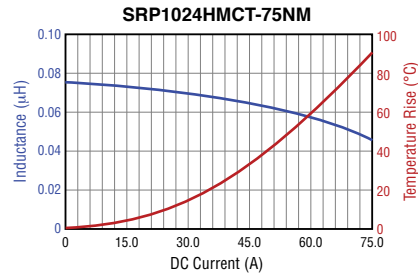
\*\* Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

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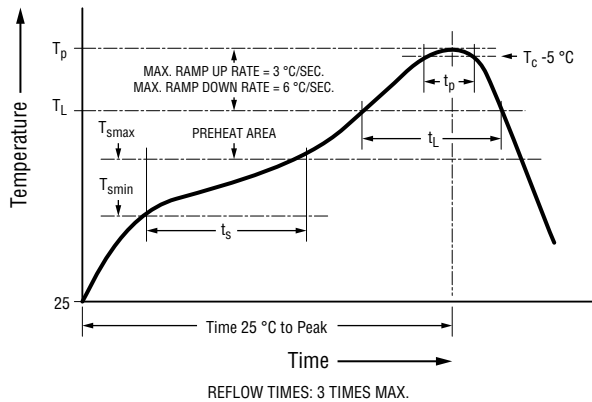
## SRP1024HMCT Series – Shielded Power Inductors

**BOURNS®**

### L vs. I Charts



### Soldering Profile



| Profile Feature                                                                                                                                                                                                                                 | Pb Free Assembly                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| Preheat <ul style="list-style-type: none"> <li>- Temperature Min. (<math>T_{smin}</math>)</li> <li>- Temperature Max. (<math>T_{smax}</math>)</li> <li>- Time (<math>t_s</math>) from <math>T_{smin}</math> to <math>T_{smax}</math></li> </ul> | 150 °C<br>200 °C<br>60-120 seconds |
| Ramp-up Rate ( $T_L$ to $T_p$ )                                                                                                                                                                                                                 | 3 °C/second max.                   |
| Liquidous temperature ( $T_L$ )                                                                                                                                                                                                                 | 217 °C                             |
| Time ( $t_L$ ) maintained above $T_L$                                                                                                                                                                                                           | 60-150 seconds                     |
| Peak package body temperature ( $T_p$ )                                                                                                                                                                                                         | 260 °C                             |
| Time ( $t_p$ ) at $T_c - 5$ °C<br>( $T_p$ should be equal to or less than $T_c$ )                                                                                                                                                               | < 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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Technical drawing of a 75N tape reel showing top, side, and end views with dimensions in mm and inches.

**Top View Dimensions:**

- Overall Diameter:  $330 \pm 0.3$  (12.992  $\pm$  .012)
- Inner Diameter:  $13.5 + 0.5/-0.2$  (.531  $\pm$  .020/-0.008)
- Flange Thickness:  $16.4 + 2/-0$  (.646  $\pm$  .079/-0)
- Flange Width:  $100 \pm 2$  (3.937  $\pm$  .079)

**Side View Dimensions:**

- Overall Width:  $11.4$  (.449) REF.
- Flange Thickness:  $2.7$  (.106) REF.

**End View Dimensions:**

- Overall Length:  $400$  (15.75) MIN.
- Leader Length:  $200$  (7.874) MIN.
- Trailer Length:  $400$  (15.75) MIN.
- Component Length:  $200$  (7.874) MIN.
- Component Width:  $75N$
- Component Thickness:  $1.5 \pm 0.1$  (.059  $\pm$  .004) DIA.
- Component Spacing:  $4.0 \pm 0.1$  (.157  $\pm$  .004)
- Component Width:  $2.0 \pm 0.1$  (.079  $\pm$  .004)
- Component Thickness:  $8.0 \pm 0.1$  (.315  $\pm$  .004)
- Component Spacing:  $1.75 \pm 0.1$  (.069  $\pm$  .004)
- Component Width:  $24.0 \pm 0.3$  (.945  $\pm$  .012)
- Component Thickness:  $11.5 \pm 0.1$  (.453  $\pm$  .004)

**Labels:**

- COVER TAPE
- EMBOSSED CARRIER
- LEADER NO COMPONENT
- COMPONENTS
- TRAILER NO COMPONENT

**Dimensions:** MM (INCHES)

**USER DIRECTION OF FEED**

**QTY: 2,500 PCS PER REEL**

**Dimensions:**  $4.5$  (.177) REF.

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