



**THE DATASHEET OF  
78F120J-RC**





## Features

- Current rating up to 1.2 A
- Dielectric strength: 500 VRMS
- RoHS compliant\*

## Applications

- DC/DC converters
- Power supplies
- General use

# 78F Series Conformal Coated RF Choke

### Electrical Specifications (@ 25 °C)

| Part Number | Value (μH) | Q Min. | Test Frequency (MHz) | SRF (MHz) Min. | DCR (Ω) Max. | IDC (mA) Max. |
|-------------|------------|--------|----------------------|----------------|--------------|---------------|
| 78FR10K-RC  | 0.10 ±10 % | 20     | 25                   | 400            | 0.060        | 1200          |
| 78FR12K-RC  | 0.12 ±10 % | 20     | 25                   | 400            | 0.070        | 1200          |
| 78FR15K-RC  | 0.15 ±10 % | 20     | 25                   | 380            | 0.070        | 1200          |
| 78FR18K-RC  | 0.18 ±10 % | 20     | 25                   | 380            | 0.073        | 1150          |
| 78FR22K-RC  | 0.22 ±10 % | 40     | 25                   | 380            | 0.075        | 1150          |
| 78FR27K-RC  | 0.27 ±10 % | 40     | 25                   | 360            | 0.085        | 1110          |
| 78FR33K-RC  | 0.33 ±10 % | 40     | 25                   | 335            | 0.095        | 1110          |
| 78FR39K-RC  | 0.39 ±10 % | 40     | 25                   | 310            | 0.10         | 1000          |
| 78FR47K-RC  | 0.47 ±10 % | 40     | 25                   | 270            | 0.11         | 1000          |
| 78FR56K-RC  | 0.56 ±10 % | 40     | 25                   | 245            | 0.12         | 950           |
| 78FR68K-RC  | 0.68 ±10 % | 40     | 25                   | 230            | 0.13         | 900           |
| 78FR82K-RC  | 0.82 ±10 % | 40     | 25                   | 200            | 0.14         | 875           |
| 78F1R0K-RC  | 1.0 ±10 %  | 40     | 25                   | 180            | 0.15         | 815           |
| 78F1R2K-RC  | 1.2 ±10 %  | 40     | 7.9                  | 165            | 0.18         | 740           |
| 78F1R5K-RC  | 1.5 ±10 %  | 50     | 7.9                  | 150            | 0.20         | 700           |
| 78F1R8K-RC  | 1.8 ±10 %  | 50     | 7.9                  | 125            | 0.23         | 655           |
| 78F2R2K-RC  | 2.2 ±10 %  | 50     | 7.9                  | 110            | 0.25         | 630           |
| 78F2R7K-RC  | 2.7 ±10 %  | 50     | 7.9                  | 95             | 0.28         | 595           |
| 78F3R3J-RC  | 3.3 ±5 %   | 50     | 7.9                  | 60             | 0.30         | 575           |
| 78F3R9J-RC  | 3.9 ±5 %   | 45     | 7.9                  | 50             | 0.32         | 555           |
| 78F4R7J-RC  | 4.7 ±5 %   | 45     | 7.9                  | 38             | 0.35         | 530           |
| 78F5R6J-RC  | 5.6 ±5 %   | 45     | 7.9                  | 32             | 0.40         | 500           |
| 78F6R8J-RC  | 6.8 ±5 %   | 40     | 7.9                  | 28             | 0.45         | 470           |
| 78F8R2J-RC  | 8.2 ±5 %   | 40     | 7.9                  | 20             | 0.55         | 425           |
| 78F100J-RC  | 10 ±5 %    | 40     | 7.9                  | 18             | 0.75         | 370           |
| 78F120J-RC  | 12 ±5 %    | 45     | 2.5                  | 16             | 0.80         | 350           |
| 78F150J-RC  | 15 ±5 %    | 50     | 2.5                  | 16             | 0.93         | 335           |
| 78F180J-RC  | 18 ±5 %    | 50     | 2.5                  | 15             | 1.00         | 315           |
| 78F220J-RC  | 22 ±5 %    | 50     | 2.5                  | 13             | 1.20         | 285           |
| 78F270J-RC  | 27 ±5 %    | 50     | 2.5                  | 11             | 1.35         | 270           |
| 78F330J-RC  | 33 ±5 %    | 50     | 2.5                  | 10             | 1.50         | 255           |
| 78F390J-RC  | 39 ±5 %    | 50     | 2.5                  | 9.50           | 1.70         | 240           |
| 78F470J-RC  | 47 ±5 %    | 60     | 2.5                  | 8.50           | 2.70         | 205           |
| 78F560J-RC  | 56 ±5 %    | 60     | 2.5                  | 7.50           | 2.95         | 195           |
| 78F680J-RC  | 68 ±5 %    | 60     | 2.5                  | 6.50           | 3.30         | 185           |
| 78F820J-RC  | 82 ±5 %    | 60     | 2.5                  | 6.00           | 3.60         | 175           |
| 78F101J-RC  | 100 ±5 %   | 60     | 2.5                  | 5.50           | 4.10         | 165           |
| 78F121J-RC  | 120 ±5 %   | 60     | 0.79                 | 5.40           | 4.70         | 160           |
| 78F151J-RC  | 150 ±5 %   | 60     | 0.79                 | 4.75           | 5.40         | 150           |
| 78F181J-RC  | 180 ±5 %   | 60     | 0.79                 | 4.35           | 6.00         | 140           |
| 78F221J-RC  | 220 ±5 %   | 60     | 0.79                 | 4.00           | 6.80         | 130           |
| 78F271J-RC  | 270 ±5 %   | 60     | 0.79                 | 3.70           | 7.70         | 120           |
| 78F331J-RC  | 330 ±5 %   | 60     | 0.79                 | 3.40           | 11.1         | 100           |
| 78F391J-RC  | 390 ±5 %   | 60     | 0.79                 | 2.80           | 12.6         | 95            |
| 78F471J-RC  | 470 ±5 %   | 60     | 0.79                 | 2.55           | 14.0         | 90            |
| 78F561J-RC  | 560 ±5 %   | 60     | 0.79                 | 2.35           | 15.5         | 85            |
| 78F681J-RC  | 680 ±5 %   | 60     | 0.79                 | 2.00           | 25.3         | 68            |
| 78F821J-RC  | 820 ±5 %   | 60     | 0.79                 | 1.50           | 27.5         | 65            |
| 78F102J-RC  | 1000 ±5 %  | 60     | 0.79                 | 1.20           | 31.4         | 60            |

### General Specifications

Temperature Rise ..... 35 °C  
 .....at rated current  
 Operating Temperature Range  
 ..... -55 °C to +105 °C  
 (including temperature rise)  
 Storage Temperature Range  
 ..... -55 °C to +105 °C  
 Moisture Sensitivity Level..... 1  
 ESD Classification (HBM)..... N/A

### Materials

Core Material..... Ferrite DR core  
 Wire .....Enamelled copper wire  
 Terminal ..... Cu/Sn  
 Coating.....Epoxy resin  
 Packaging  
 Standard ..... 5000 pcs. per bag  
 Optional..... 5000 pcs. per 14-inch reel

### How to Order

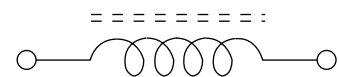
**78F 100 J - RC**

Model \_\_\_\_\_  
 Value Code (see table) \_\_\_\_\_  
 Tolerance Code (see table) \_\_\_\_\_  
 Packaging \_\_\_\_\_  
 Blank = 5,000 pcs./bag  
 -TR = 5,000 pcs./14" reel  
 RoHS Compliant \_\_\_\_\_

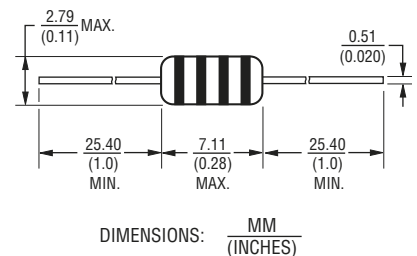
### Examples:

- 78F1R0K-RC = 1.0 mH Model 78F packaged 5,000 pcs. per bag.
- 78F100J-TR-RC = 10 mH Model 78F packaged 5,000 pcs. per reel.

### Electrical Schematic



### Product Dimensions



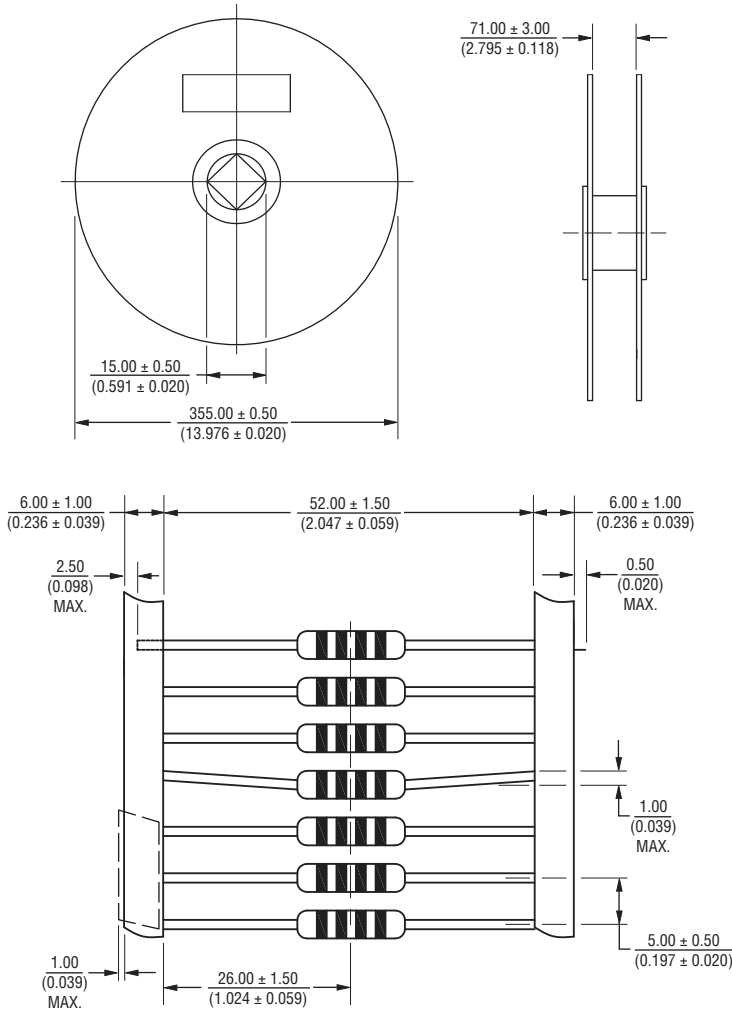
**WARNING Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\*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](http://www.bourns.com/docs/legal/disclaimer.pdf).

# 78F Series Conformal Coated RF Choke

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## Packaging Specifications

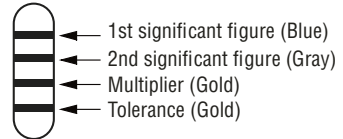


DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

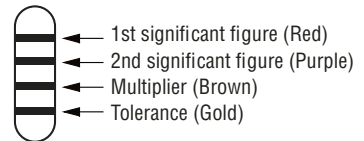
## Typical Part Marking - EIA Color Code

| Color  | 1st & 2nd Significant Figure | Multiplier | Tolerance |
|--------|------------------------------|------------|-----------|
| Silver |                              | 0.01       | ±10 %     |
| Gold   |                              | 0.1        | ±5 %      |
| Black  | 0                            | 1          |           |
| Brown  | 1                            | 10         |           |
| Red    | 2                            | 100        |           |
| Orange | 3                            | 1000       |           |
| Yellow | 4                            |            |           |
| Green  | 5                            |            |           |
| Blue   | 6                            |            |           |
| Violet | 7                            |            |           |
| Gray   | 8                            |            |           |
| White  | 9                            |            |           |

Example for 6.8  $\mu\text{H}$ , ±5 %



Example for 270  $\mu\text{H}$ , ±5 %



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REV. 01/18

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