



## Features

- Cost effective R-C construction
- Insulation resistance testing for reliability
- Molded surface mount or DIP packaging
- Compatible with automatic assembly equipment
- Custom value capability

- RoHS compliant version available ("L" part number suffix)

For information on EMI/RFI Filters, download Bourns' EMI/RFI Filters Application Note.

## 601 Series - RC Networks T-Filters

### General Description

Continual advances in digital IC technology are creating stringent demands on EMI/RFI levels in equipment.

EMI/RFI low pass filters are required in personal computers, data terminals, test equipment and process controllers for high frequency suppression into or out of electronic equipment.

### Electrical Specifications - Resistors

|                                       |                    |
|---------------------------------------|--------------------|
| Standard Resistance Range*            | 10 ohms - 100 ohms |
| Series Resistance Tolerance           | ±10 %              |
| Temperature Coefficient of Resistance | ±300 ppm/°C        |
| Operating Voltage                     | 25 volts maximum   |
| Operating Temperatures                | +10 °C to +85 °C   |

\*Other Resistance Values Available, 10 ohms - 1 megohm

### Electrical Specifications - Capacitors

|                              |                        |
|------------------------------|------------------------|
| Standard Capacitance Range   | 50 pF to 200 pF        |
| Capacitance Tolerance        | ±30 %                  |
| Temperature Characteristic   | Z5U                    |
| Operating Temperatures       | +10 °C to +85 °C       |
| Voltage Rating               | 25 volts               |
| Dielectric Withstand Voltage | 2.5 x rated voltage    |
| Insulation Resistance        | 10,000 megohms minimum |

### Environmental Specifications - Resistors

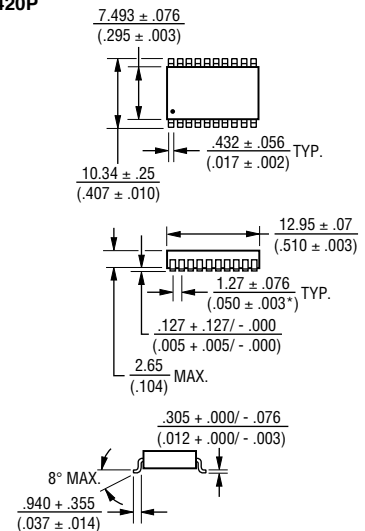
|                           |            |
|---------------------------|------------|
|                           | ΔR MAXIMUM |
| Thermal Shock             | ±0.5 %     |
| Resistance to Solder Heat | ±0.5 %     |
| Terminal Strength         | ±0.5 %     |

### Mechanical Specifications

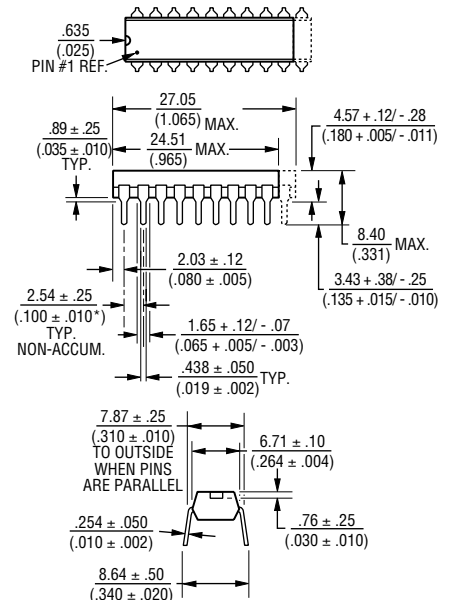
|                    |   |
|--------------------|---|
| Flammability       | Conforms to UL94 V-0                        |
| Leadframe          | Copper, solder coated                       |
| Body Material      | Epoxy/Novolac                               |
| Lead Solderability | Meet requirements of MIL-STD-202 Method 208 |

For Standard Values Used in Capacitors, Inductors, and Resistors, [click here](#).

### 4420P



### 4118R AND 4120R



Governing dimensions are metric. Dimensions in parentheses are inches and are approximate.

\*Terminal centerline to centerline measurements made at point of emergence of the lead from the body.

\*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.

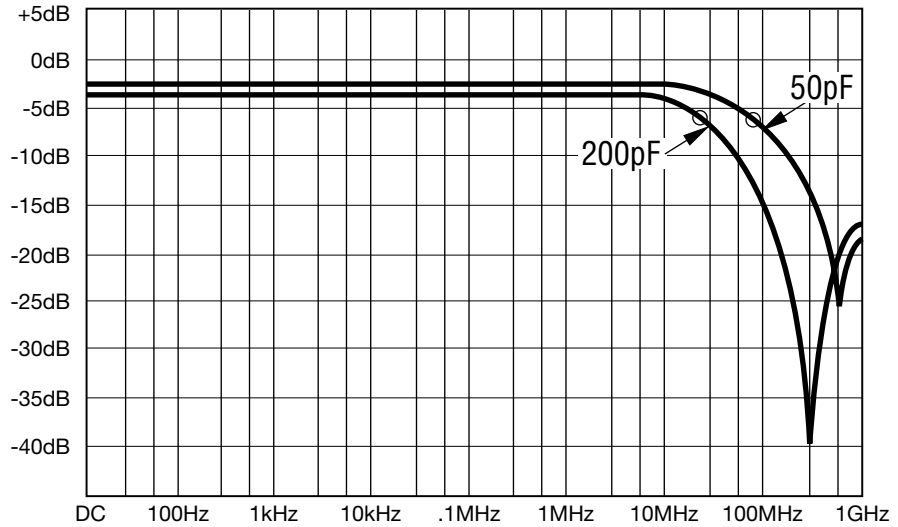
# 601 Series - RC Networks T-Filters

**BOURNS®**

## Attenuation Vs. Frequency - Typical Capacitor Values With R= 25 Ohms

Attenuation vs. Frequency  
 Model 4120R-601-250/500  
 Model 4420-601-250/500  
 50pF - 3dB @ 84 MHz

Attenuation vs. Frequency  
 Model 4120R-601-250/201  
 Model 4420P-601-250/201  
 200pF - 3dB @ 21 MHz

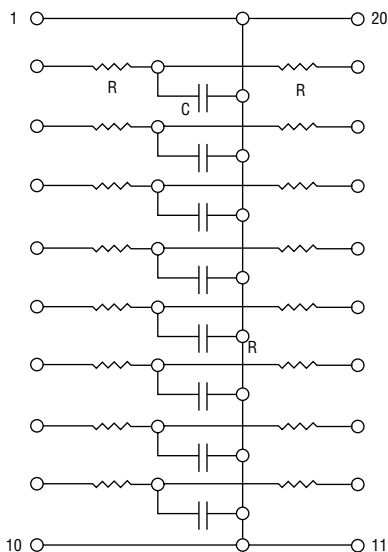


○ indicates - 3dB rolloff frequency ( $f_c$ )

These low-pass filters are ideal for installation between I/O drivers and RS 232 connectors.

### Typical Circuit

4120R-601-RC/CC  
 4420R-601-RC/CC



### How To Order EMI/RFI Filter Networks

44 20 P - 601 - RC/CC

Model (44 = SMD SOIC Pkg)  
 (41 = Molded DIP)

Number of Pins

Physical Configuration  
 P = Surface Mount Device (SMD)  
 R = Molded DIP

Terminations  
 L = RoHS compliant (tin-plated)  
 Blank = Tin-lead plated

Resistance/Capacitance Code  
 • First 2 digits are significant  
 • Third digit represents the number of zeros to follow

Electrical Configuration

Insert RC/CC Code from table below to form part number.

| RC  | R    | CC  | C     |
|-----|------|-----|-------|
| 250 | 25Ω  | 500 | 50pF  |
| 270 | 27Ω  | 101 | 100pF |
| 470 | 47Ω  | 181 | 180pF |
| 820 | 82Ω  | 201 | 200pF |
| 101 | 100Ω |     |       |

CONSULT FACTORY FOR VALUES NOT LISTED

### Packages Available

4420P-601-\*RC/CC-SMD  
 4120R-601-\*RC/CC-DIP  
 4118R-601-\*RC/CC-DIP

\*First two digits are significant. Third digit represents the number of zeros to follow.

Seven circuits in an 18-pin package.  
 Eight circuits in a 20-pin package.

REV. 09/07

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