



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 Network 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 |

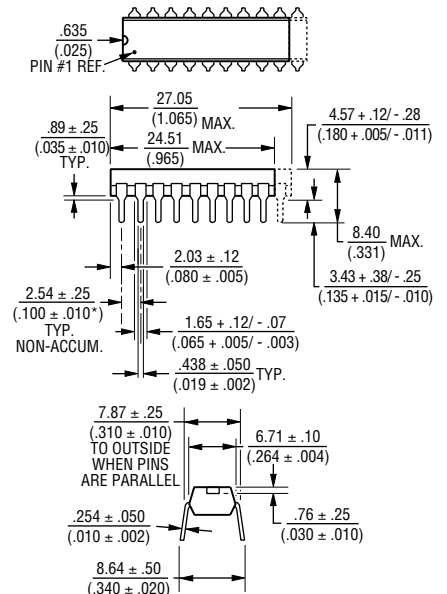
For Standard Values Used in Capacitors, Inductors, and Resistors, [click here](#).

Product Dimensions

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 and RoHS Recast 2011/65/EU June 8, 2011. Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

601 Series - RC Network 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

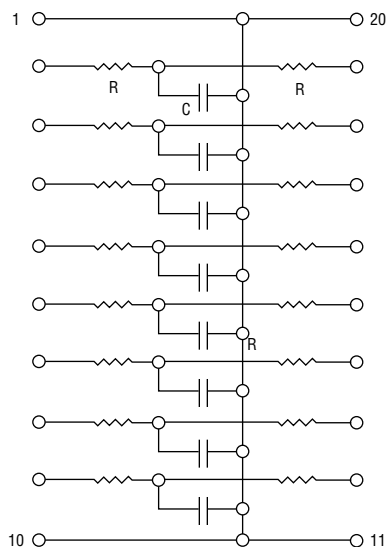
Attenuation vs. Frequency
 Model 4120R-601-250/201
 Model 4420P-601-250/201
 200pF - 3dB @ 21 MHz



○ indicates - 3dB rolloff frequency (f_c)

Typical Circuit

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



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

How To Order EMI/RFI Filter Networks



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

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

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. 09/14

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Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Bourns:

[4120R-601-101/201](#) [4420P-601-470/500](#) [4420P-601-250/201](#) [4120R-601-250/201](#) [4420P-601-270/101](#) [4420P-601-101/201](#) [4120R-601-250/201LF](#) [4420P-601-470/201](#) [4420P-601-101/101](#) [4420P-601-250/500](#) [4420P-601-820/201](#) [4420P-601-270/201](#) [4420P-601-470/570](#) [4420P-601-470/101](#) [4420P-601-101/181](#) [4420P-601-500/500](#) [4420P-601-250/101](#) [4420P-601-100/101](#) [4420P-601-270/500](#) [4420P-601-470/181](#) [4420P-601-270/550](#) [4420P-601-250/251](#) [4420P-601-270/181](#) [4120R-601-101/201L](#) [4420P-601-250/181](#) [4420P-601-250/500L](#) [4420P-601-820/201L](#) [4420P-601-101/101L](#) [4120R-601-470/101L](#) [4420P-601-101/201L](#) [4420P-601-470/201L](#) [4118R-601-101/201L](#) [4420P-601-250/201L](#) [4420P-2-103](#)