



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

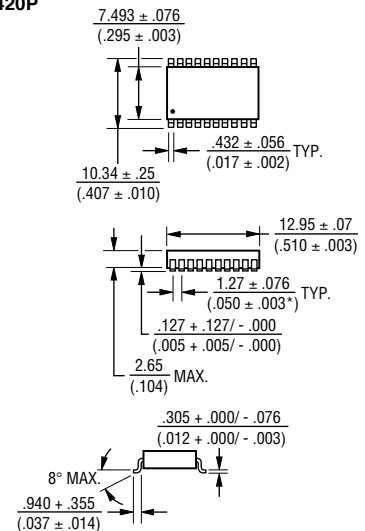
	ΔR MAXIMUM
Thermal Shock	±0.5 %
Resistance to Solder Heat	±0.5 %
Terminal Strength	±0.5 %

Mechanical Specifications

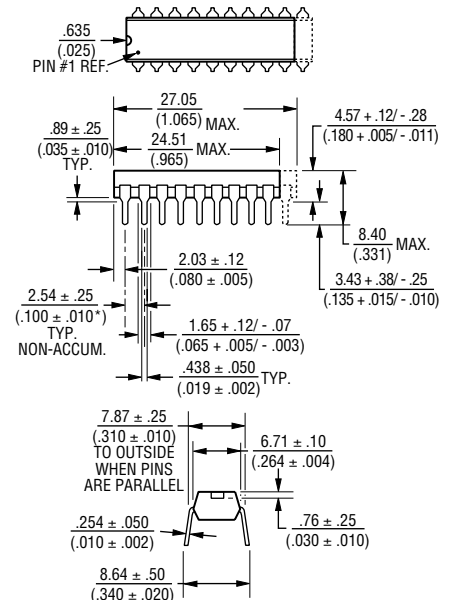
Flammability	Conforms to UL94 V-0
Leadframe	Copper, solder coated
Body Material	Epoxy/Novolac
Lead Solderability	Meet requirements of MIL-STD-202 Method 208

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.

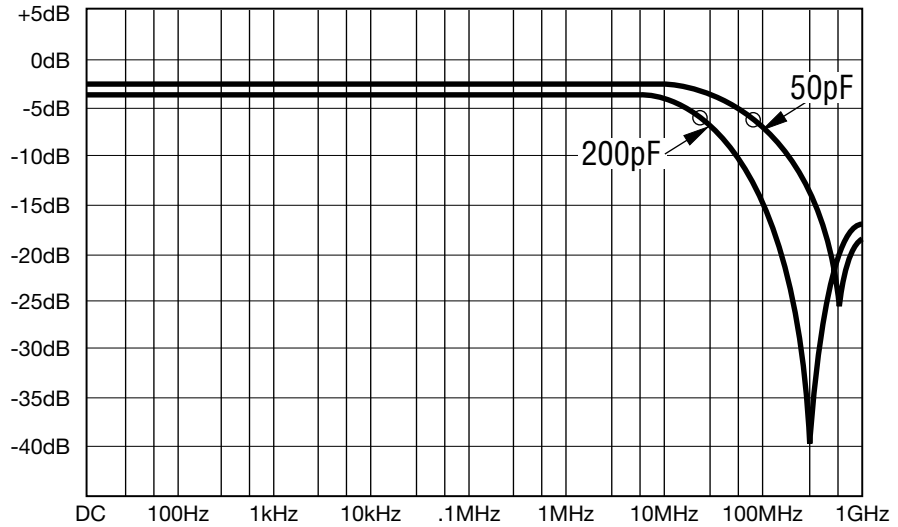
601 Series - RC Networks T-Filters

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

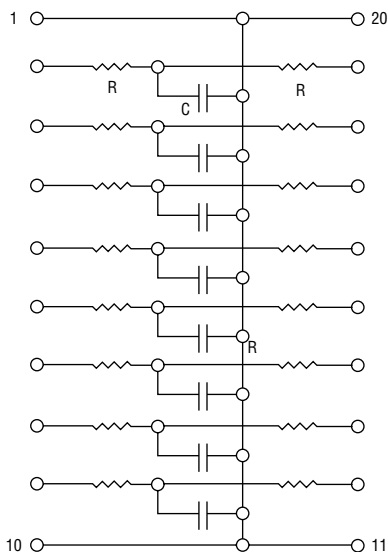


○ indicates - 3dB rolloff frequency (f_c)

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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