



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

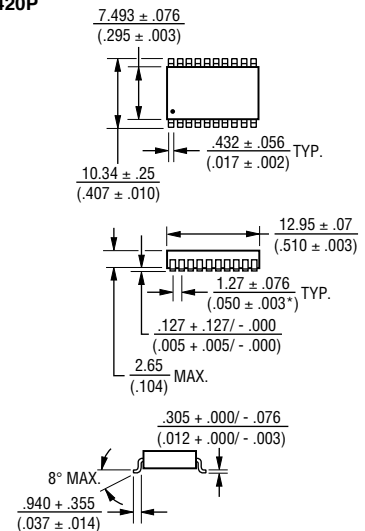
| | |
|---------------------------|------------|
| | ΔR MAXIMUM |
| Thermal Shock | ±0.5 % |
| Resistance to Solder Heat | ±0.5 % |
| Terminal Strength | ±0.5 % |

Mechanical Specifications

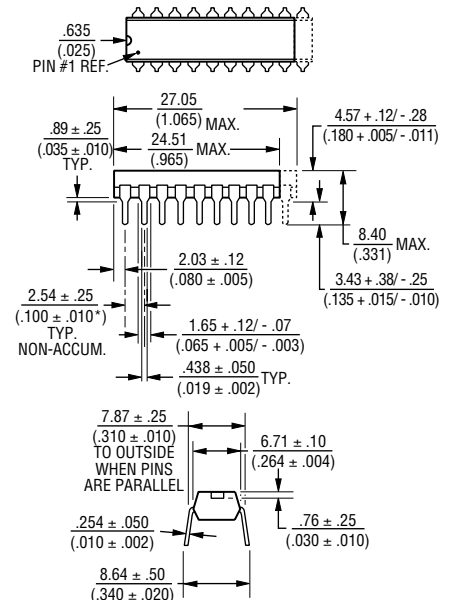
| | |
|--------------------|---|
| Flammability | Conforms to UL94 V-0 |
| Leadframe | Copper, solder coated |
| Body Material | Epoxy/Novolac |
| Lead Solderability | Meet requirements of MIL-STD-202 Method 208 |

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.

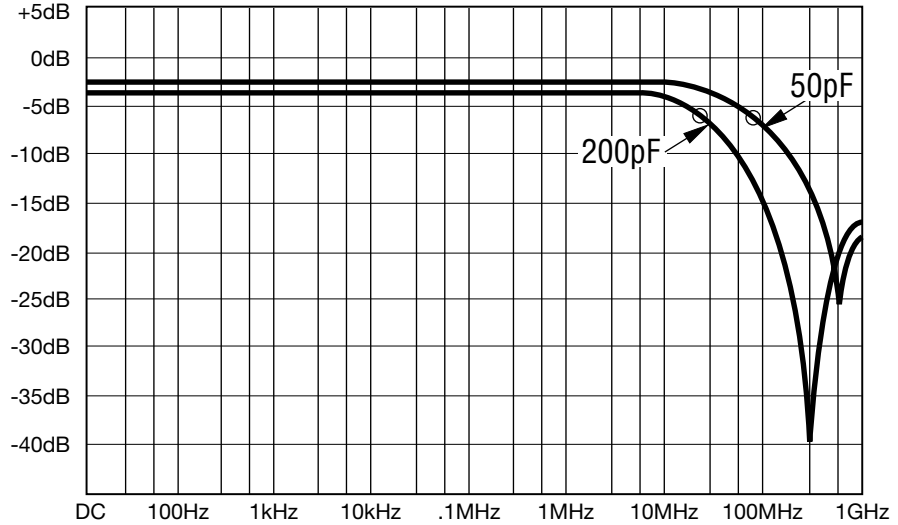
601 Series - RC Networks T-Filters



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

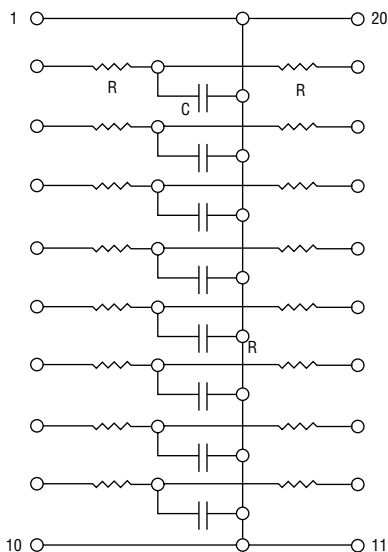


O indicates - 3dB rolloff frequency (f_c)

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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