**Product Characteristics**

- **Resistance Range**: 10 ohms to 2.2 megohms
- **Maximum Operating Voltage**: 50 V
- **Temperature Coefficient of Resistance**: ±100 ppm/°C below 50 °C, ±250 ppm/°C above 50 °C
- **TCR Tracking**: 50 ppm/°C max. for values > 500 Ω, 100 ppm/°C for values ≤ 500 Ω
- **Thermal Shock**: ±0.25 %
- **Moisture Resistance**: ±0.50 %

**Environmental Characteristics**

- **Resistance Tolerance**: ±5 %
- **Resistance Code**: *00 = ±0.5 % (100 ohms - 1 megohm)
- **±100 ppm/°C for values ≥ 500 Ω, ±200 ppm/°C for values < 500 Ω
- **Dielectric Withstanding Voltage**: 10,000 megohms min.
- **Insulation Resistance**: 10,000 megohms min.
- **Operating Temperature**: -55 °C to +125 °C
- **Packaging**: Standard EIA package compatible with Lead Solderability
- **RoHS Compliant**: *LF = RoHS compliant
- **Lead Solderability**: Meet requirements
- **Dielectric Withstanding Voltage**: 200 VRMS
- **Insulation Resistance**: -55 °C to +125 °C

**Physical Characteristics**

- **Flammability**: Conforms to UL94V-0
- **Lead Frame Material**: Copper, solder coated
- **Body Material**: Thermoplastic
- **Width**: 4800P: 1.60 watts
- **4818P: 1.44 watts
- **4816P: 1.28 watts
- **4814P: 1.12 watts
- **4820P: 1.60 watts

**How To Order**

- **Model**: 48 16 P - 1 - 103
- **Number of Pins**: 48
- **Electrical Configuration**: 3 = Dual Terminator*, 2 = Bussed*, 1 or 4 = Isolated*
- **Resistance Code**: First 2 digits are significant, third digit represents the number of nines to follow.
- **Resistance Tolerance**: Blank = ±0.2 % (see “Resistance Tolerance” on next page for resistance range)
- **Governing dimensions**: in metric. Dimensions in parentheses are inches and are approximate.

**Recommended Land Pattern**

For Standard Values Used in Capacitors, Inductors, and Resistors, click here.

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4800P Series - Thick Film Surface Mounted Medium Body

Isolated Resistors (1 and 4 Circuits)
Model 4814P-1
Model 4816P-1 (Shown)
Model 4818P-1
Model 4820P-1

Bussed Resistors (2 Circuit)
Model 4814P-2
Model 4816P-2 (Shown)
Model 4818P-2
Model 4820P-2

Dual Terminator (3 Circuit)
Model 4814P-3
Model 4816P-3 (Shown)
Model 4818P-3
Model 4820P-3

Resistance Tolerance
10 ohms to 49 ohms .......... ±1 ohm
50 ohms to 2.2 megohms ....... ±2 %

Power Rating per Resistor
1 Circuit at 70 °C .................. 0.160 watt
4 Circuit at 70 °C .................. 0.160 watt

Resistance Tolerance
10 ohms to 49 ohms .......... ±1 ohm
50 ohms to 2.2 megohms ....... ±2 %

Power Rating per Resistor
2 Circuit at 70 °C .................. 0.080 watt

Resistance Tolerance
Below 100 ohms ................. ±2 ohms
100 ohms to 2.2 megohms ....... ±2 %

Power Rating per Resistor
3 Circuit at 70 °C .................. 0.080 watt

Popular Resistance Values (1, 4 and 2 Circuits)**

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<td>180</td>
<td>181</td>
<td>1,800</td>
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<td>15,000</td>
<td>153</td>
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<td>1,000,000</td>
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* Add "F" after resistance code for ±1 % tolerance available from 100 Ω through 1M Ω, or add "D" after resistance code for ±0.5 % tolerance available from 100 Ω through 1M Ω.
Part number suffix examples: -103 = 10K Ω, ±2 %; -103F = 10K Ω, ±1 %; -103D = 10K Ω, ±0.5 %

** Non-standard values available, within resistance range.

For information on specific applications, download Bourns’ application notes:
- DRAM Applications
- Dual Terminator Resistor Networks
- R/2R Ladder Networks
- SCSI Applications

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**Surface Mount Ordering Guide**

**Electrical Configuration** | **Circuit Codes** | **Examples**
---|---|---
Isolated | 1 | T01 | 4816P-1-101
Bussed | 2 | T02 | 4816P-1-101
Dual Terminated | 3 | T03 | 4816P-T01-101
Adj. Isolated | 4 | T04 | 4816P-1-101

*4816P-X-RC: To specify package type, replace “X” with appropriate “Circuit Code”.

**Specifications are subject to change without notice.**

Users should verify actual device performance in their specific applications.

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