

For information on specific applications,  
download Bourns' application notes:

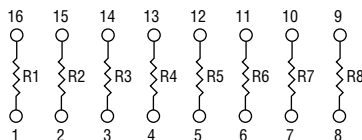
- [DRAM Applications](#)
- [Dual Terminator Resistor Networks](#)
- [R/2R Ladder Networks](#)
- [SCSI Applications](#)

## 4800P Series - Thick Film Surface Mount Medium Body

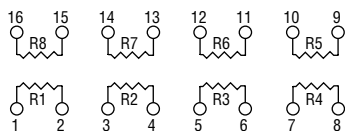
**BOURNS®**

### Isolated Resistors (1 and 4 Circuits)

**Model 4814P-1**  
**Model 4816P-1 (Shown)**  
**Model 4818P-1**  
**Model 4820P-1**



**Model 4816P-4 (Shown)**  
**Model 4820P-4**



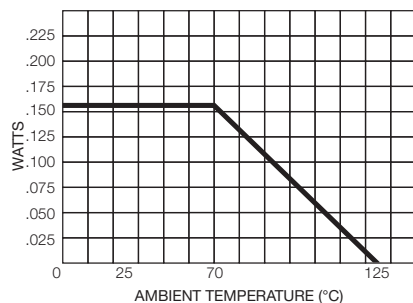
#### Resistance Tolerance

10 ohms to 49 ohms.....  $\pm 1$  ohm  
50 ohms to 2.2 megohms.....  $\pm 2$  %\*

#### Power Rating per Resistor

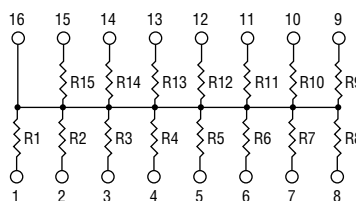
1 Circuit at 70 °C ..... 0.160 watt  
4 Circuit at 70 °C ..... 0.160 watt

### Resistor Power Temp. Derating Curve



### Bussed Resistors (2 Circuit)

**Model 4814P-2**  
**Model 4816P-2 (Shown)**  
**Model 4818P-2**  
**Model 4820P-2**



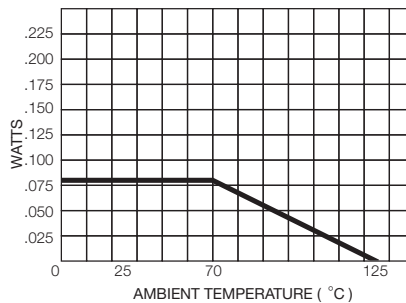
#### Resistance Tolerance

10 ohms to 49 ohms.....  $\pm 1$  ohm  
50 ohms to 2.2 megohms.....  $\pm 2$  %\*

#### Power Rating per Resistor

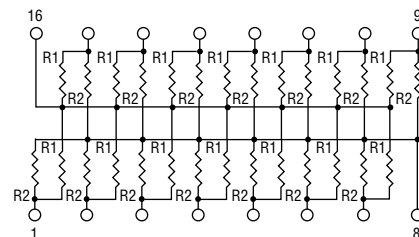
2 Circuit at 70 °C ..... 0.080 watt

### Resistor Power Temp. Derating Curve



### Dual Terminator (3 Circuit)

**Model 4814P-3**  
**Model 4816P-3 (Shown)**  
**Model 4818P-3**  
**Model 4820P-3**



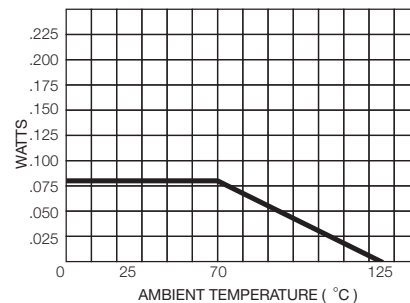
#### Resistance Tolerance

Below 100 ohms .....  $\pm 2$  ohms  
100 ohms to 2.2 megohms.....  $\pm 2$  %\*

#### Power Rating per Resistor

3 Circuit at 70 °C ..... 0.080 watt

### Resistor Power Temp. Derating Curve



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

| Ohms | Code | Ohms  | Code | Ohms   | Code | Ohms    | Code | Ohms      | Code |
|------|------|-------|------|--------|------|---------|------|-----------|------|
| 10   | 100  | 180   | 181  | 1,800  | 182  | 15,000  | 153  | 120,000   | 124  |
| 22   | 220  | 220   | 221  | 2,000  | 202  | 18,000  | 183  | 150,000   | 154  |
| 27   | 270  | 270   | 271  | 2,200  | 222  | 20,000  | 203  | 180,000   | 184  |
| 33   | 330  | 330   | 331  | 2,700  | 272  | 22,000  | 223  | 220,000   | 224  |
| 39   | 390  | 390   | 391  | 3,300  | 332  | 27,000  | 273  | 270,000   | 274  |
| 47   | 470  | 470   | 471  | 3,900  | 392  | 33,000  | 333  | 330,000   | 334  |
| 56   | 560  | 560   | 561  | 4,700  | 472  | 39,000  | 393  | 390,000   | 394  |
| 68   | 680  | 680   | 681  | 5,600  | 562  | 47,000  | 473  | 470,000   | 474  |
| 82   | 820  | 820   | 821  | 6,800  | 682  | 56,000  | 563  | 560,000   | 564  |
| 100  | 101  | 1,000 | 102  | 8,200  | 822  | 68,000  | 683  | 680,000   | 684  |
| 120  | 121  | 1,200 | 122  | 10,000 | 103  | 82,000  | 823  | 820,000   | 824  |
| 150  | 151  | 1,500 | 152  | 12,000 | 123  | 100,000 | 104  | 1,000,000 | 105  |

### Popular Resistance Values (3 Circuit)\*\*

| Resistance     |                |                |                |
|----------------|----------------|----------------|----------------|
| Ohms           |                | Code           |                |
| R <sub>1</sub> | R <sub>2</sub> | R <sub>1</sub> | R <sub>2</sub> |
| 160            | 240            | 161            | 241            |
| 180            | 390            | 181            | 391            |
| 220            | 270            | 221            | 271            |
| 220            | 330            | 221            | 331            |
| 330            | 390            | 331            | 391            |
| 330            | 470            | 331            | 471            |
| 3,000          | 6,200          | 302            | 622            |

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\* Add "F" after resistance code for  $\pm 1$  % tolerance available from 100  $\Omega$  through 1M  $\Omega$ , or add "D" after resistance code for  $\pm 0.5$  % tolerance available from 100  $\Omega$  through 1M  $\Omega$ .  
Part number suffix examples: -103 = 10K  $\Omega$ ,  $\pm 2$  %; -103F = 10K  $\Omega$ ,  $\pm 1$  %; -103D = 10K  $\Omega$ ,  $\pm 0.5$  %

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

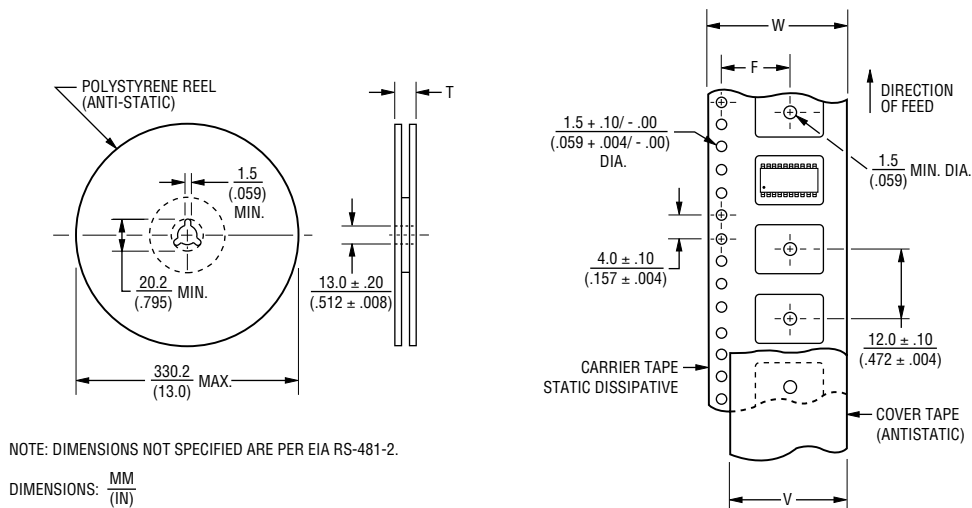
Specifications are subject to change without notice.  
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.  
Users should verify actual device performance in their specific applications.

# Surface Mount Ordering Guide

**BOURNS®**

| Electrical Configuration | *Circuit Codes |       | Examples                                |
|--------------------------|----------------|-------|-----------------------------------------|
|                          | Tape & Reel    | Tubes |                                         |
| Isolated                 | 1              | T01   | 4816P-1-101                             |
| Bussed                   | 2              | T02   | Isolated Circuit in Tape & Reel Package |
| Dual Terminated          | 3              | T03   | 4816P-T01-101                           |
| Adj. Isolated            | 4              | T04   | Isolated Circuit in Slide Tube Package  |

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



| Model | Standard Quantity per Reel | Carrier Tape Width (W)                 | Cover Tape Width (W)       | Reel Width (T)              | Pocket Center (F)                      |
|-------|----------------------------|----------------------------------------|----------------------------|-----------------------------|----------------------------------------|
| 4814P | 2,000                      | $\frac{24.0 \pm .30}{(.945 \pm .012)}$ | $\frac{21.0}{(.827)}$ NOM. | $\frac{30.4}{(1.197)}$ MAX. | $\frac{11.5 \pm .10}{(.453 \pm .004)}$ |
| 4816P |                            |                                        |                            |                             |                                        |
| 4818P |                            |                                        |                            |                             |                                        |
| 4820P |                            |                                        |                            |                             |                                        |

Leader Length = 500 min. } Empty Component Pockets  
 Trailer Length = 500 mm min. } Sealed with Cover Tape

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