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

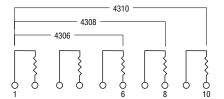
- DRAM Applications
- Dual Terminator Resistor Networks
- R/2R Ladder Networks
- SCSI Applications

# 4300R Series - Thick Film Molded SIPs

## 

### **Isolated Resistors (102 Circuit)**

Model 4306R-102-RC (6 Pin) Model 4308R-102-RC (8 Pin) Model 4310R-102-RC (10 Pin)



These models incorporate 3, 4 or 5 isolated thick-film resistors of equal value, each connected between two pins.

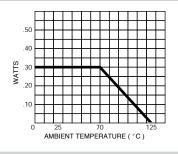
#### **Resistance Tolerance**

| 10 ohms to 49 ohms   | ±1 ohm |
|----------------------|--------|
| 50 ohms to 5 megohms | ±2 %*  |
| Above 5 megohms      |        |

## **Power Rating per Resistor**

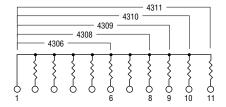
At 70 °C ...... 0.30 watt

## **Power Temperature Derating Curve**



## **Bussed Resistors (101 Circuit)**

Model 4306R-101-RC (6 Pin) Model 4308R-101-RC (8 Pin) Model 4309R-101-RC (9 Pin) Model 4310R-101-RC (10 Pin) Model 4311R-101-RC (11 Pin)



These models incorporate 5, 7, 8, 9 or 10 thick-film resistors of equal value, each connected between a separate

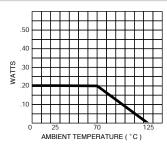
### **Resistance Tolerance**

| 10 ohms to 49 ohms   | ±1 ohm |
|----------------------|--------|
| 50 ohms to 5 megohms | ±2 %*  |
| Above 5 megohms      | ±5 %   |

## **Power Rating per Resistor**

At 70 °C ...... 0.20 watt

## **Power Temperature Derating Curve**



#### Popular Resistance Values (101, 102 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  |

Add "F" after resistance code for  $\pm 1$  % tolerance available from 100  $\Omega$  through 1M  $\Omega$ , or add "D" after resistance code for ±0.5 % tolerance available from 100  $\Omega$  through 1M  $\Omega$ .

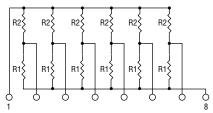
#### **Dual Terminator (104 Circuit)**

Model 4306R-104-R1/R2

Model 4308R-104-R1/R2 (shown)

Model 4309R-104-R1/R2 Model 4310R-104-R1/R2

Model 4311R-104-R1/R2



4308R-104 (shown above) is an 8-pin configuration and terminates 6 lines. Pins 1 and 8 are common for ground and power, respectively. Twelve thick-film resistors are paired in series between the common lines (pins 1 and 8).

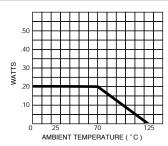
### **Resistance Tolerance**

| Below 100 ohms        | ±2 ohms |
|-----------------------|---------|
| 100 ohms to 5 megohms | ±2 %*   |
| Above 5 megohms       |         |

#### **Power Rating per Resistor**

At 70 °C ...... 0.20 watt

## **Power Temperature Derating Curve**



#### Popular Resistance Values (104 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            |  |

Part number suffix examples:  $-103 = 10 \text{K } \Omega, \pm 2 \%; -103 \text{F} = 10 \text{K } \Omega, \pm 1 \%; -103 \text{D} = 10 \text{K } \Omega, \pm 0.5 \%$ 

<sup>\*\*</sup> Non-standard values available, within resistance range.

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