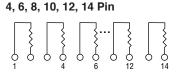
For information on specific applications, download Bourns' application notes:

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

4600X Series - Thick Film Conformal SIPs

Isolated Resistors (102 Circuit) Model 4600X-102-RC



Bussed Resistors (101 Circuit) Model 4600X-101-RC 4 through 14 Pin

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1					14

These models incorporate 2 to 7 isolated thick-film resistors of equal value, each connected between two pins.

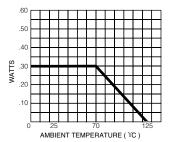
#### **Resistance Tolerance**

10 ohms to 49 ohms±1 oh	m
50 ohms to 5 megohms ±2 %	6*
Above 5 megohms±5	%

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

At 70 °C ..... 0.30 watt

#### **Power Temperature Derating Curve**



These models incorporate 3 to 13 thick-film resistors of equal value, each connected between a common bus (pin 1) and a separate pin.

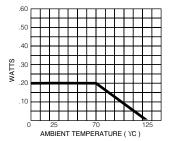
#### **Resistance Tolerance**

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)**

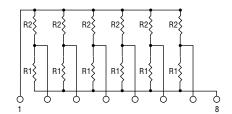
Ohms	Code	Ohms	Code	Ohms	Code	Ohms	Code	Ohms	Code
10	100	180	181	1,800	182	15,000	153	120,000	124
22	220	220	221	2,000	202	18,000	183	150,000	154
27	270	270	271	2,200	222	20,000	203	180,000	184
33	330	330	331	2,700	272	22,000	223	220,000	224
39	390	390	391	3,300	332	27,000	273	270,000	274
47	470	470	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

*  $\pm 1$  % tolerance is available by adding suffix code "F" after the resistance code.

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

# BOURNS®

#### Dual Terminator (104 Circuit) Model 4600X-104-R1/R2 4 through 14 Pin



The 4608X-104 (shown above) is an 8pin configuration and terminates 6 lines. Pins 1 and 8 are common for ground and power, respectively. Twelve thickfilm resistors are paired in series between the common lines (pins 1 and 8).

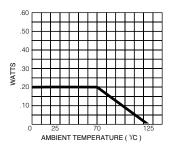
#### **Resistance Tolerance**

Below 100 ohms	. ±2 ohms
100 ohms to 5 megohms	±2 %*
Above 5 megohms	±5 %

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

At	70	°C		0.20 watt
----	----	----	--	-----------

Power Temperature Derating Curve



Popular Resistance Values (104 Circuit)**

Resistance							
Oh	ms	Code					
R ₁	R ₂	R ₁	R ₂				
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				

#### REV. 10/1/20

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4613X-101-681L	F 4612X-102-274LI	4608X-102-184L	4606X-101-562LI	F 4606X-102-562L	F 4608X-101-184LF
4609X-101-394LF	4608X-101-561LF	4608X-102-561LF	4608X-101-101LF	4608X-102-101LF	4605X-101-333LF
4611X-101-332LF	4611X-101-392LF	4612X-101-824LF	4608X-102-181LF	4608X-101-181LF	4608X-102-121LF
4612X-102-824LF	4614X-102-124LF	4608X-101-121LF	4605X-101-393LF	4614X-101-124LF	4605X-102-393LF
4608X-102-151LF	4608X-101-151LF	4610X-101-683LF	4610X-102-683LF	4605X-102-333LF	4614X-102-182LF
4614X-101-182LF	4614X-101-122LF	4614X-102-122LF	4612X-102-822LF	4614X-101-152LF	4612X-101-822LF
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4608X-102-224LF	4606X-101-564LF	4605X-101-272LF	4610X-102-203LF	4611X-101-561LF	4606X-102-564LF
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4604X-102-271LF	4607X-101-151LF	4607X-101-683LF	4604X-102-333LF		