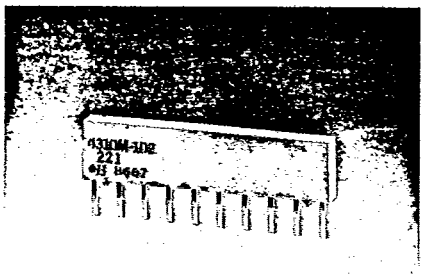
T-62-05



MOLDED SIPs, MEDIUM PROFILE 4, 6, 8, AND 10 PIN

- Medium profile offers increased power handling
- Compatible with automatic insertion equipment
- High temperature design ensures compatibility with all popular board soldering techniques
- Copper leads for excellent heat dissipation

BOURNS

Model 4300M Series

Bussed® Resistor Networks

Electrical Characteristics

Standard Resistance Values .....10 ohms to 10 megohms
Maximum Operating Voltage...100V
Temperature Coefficient of Resistance (TCR).....±100ppm/°C
±250ppm/°C for values less than 50 ohms and greater than 2.2 megohms
Voltage Coefficient.....±100ppm/V typical by decade values
TCR Tracking.....50ppm/°C maximum; equal values
Resistor Tolerance.....See circuits
Operating Temperature .....–55°C to +125°C
Power Rating.....Derate to zero power from +70°C to +125°C

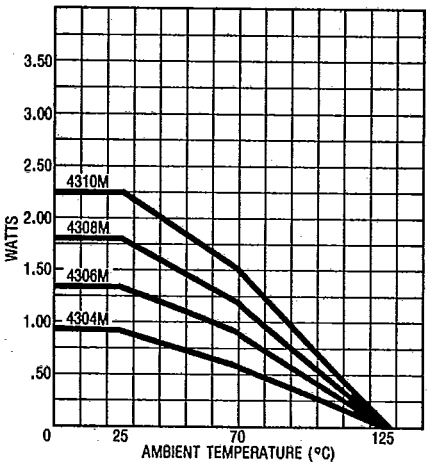
Environmental Characteristics

Tests per MIL-R-83401. ΔR maximum
Short Time Overload.....±0.25%
Load Life.....±1.00%
Mechanical Shock.....±0.25%
Moisture Resistance.....±0.50%
Resistance to Soldering Heat .....±0.25%
Terminal Strength.....±0.25%
Thermal Shock.....±0.25%
Vibration .....±0.25%
Insulation Resistance .....10,000 megohms minimum
Dielectric Withstanding Voltage .....200 VRMS
Lead Solderability & Solvent Resistance .Meet requirements of MIL-R-83401

Physical Characteristics

Flammability..Conforms to UL94V-0
Lead Frame Material .....
Copper (OLIN 194) 90/10 electroplate
Body Material .....Novolac epoxy

PACKAGE POWER TEMPERATURE DERATING CURVE



PACKAGE POWER RATING AT 70°C

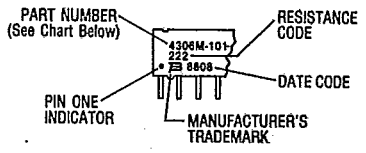
4304M.....0.60 watt
4306M.....0.90 watt
4308M.....1.20 watts
4310M.....1.50 watts

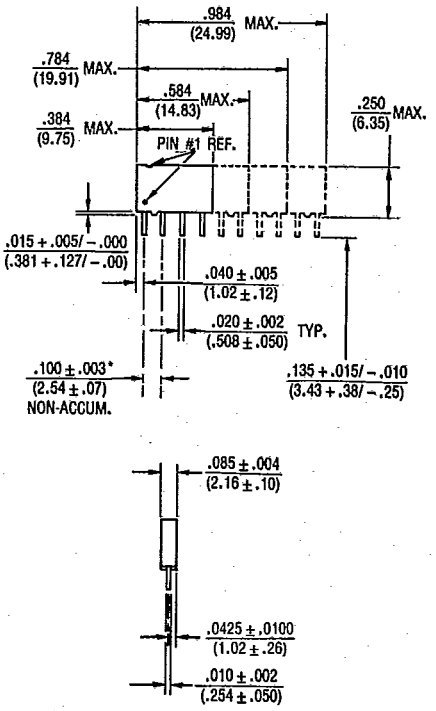
PACKAGE POWER RATING AT 25°C

4304M.....0.90 watt
4306M.....1.35 watts
4308M.....1.80 watts
4310M.....2.25 watts

TYPICAL PART MARKING

Represents total content. Layout may vary.





Governing dimensions are in inches. Dimensions in parentheses are metric (mm) and are approximate.

*Terminal centerline to centerline measurements made at point of emergence of the lead from the body.

HOW TO ORDER MOLDED SIP NETWORKS

43 06 M - 101 - 222

- Model (43 = Molded SIP)
- Number of Pins
- Physical Configuration (M = Medium Profile)
- Electrical Configuration
  - •101 = Bussed
  - •102 = Isolated
  - •104 = Dual Terminator
- Resistance Code
  - •First 2 digits are significant.
  - •Third digit represents the number of zeros to follow.

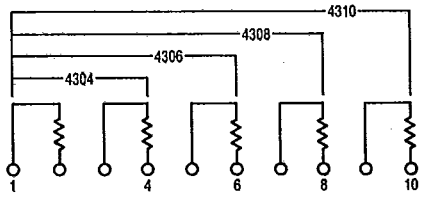
- Superior package integrity to withstand moisture and contamination
- Trifurcated Krimp-Joint™ lead attachment for product reliability and strength
- Gold epoxy provides excellent marking contrast
- Laser marking on contrasting background for permanent identification

Model 4300M Series

Bourns® Resistor Networks

ISOLATED RESISTORS (102 CIRCUIT)

Model 4304M-102-RC (4 Pin)
Model 4306M-102-RC (6 Pin)
Model 4308M-102-RC (8 Pin)
Model 4310M-102-RC (10 Pin)

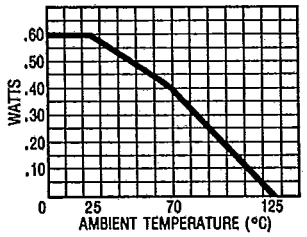


These models incorporate 2, 3, 4 or 5 isolated thick-film resistors of equal value, each connected between two pins.

Resistance Tolerance
10 ohms to 49 ohms.....±1 ohm
50 ohms to 5 megohms.....±2%*
Above 5 megohms.....±5%

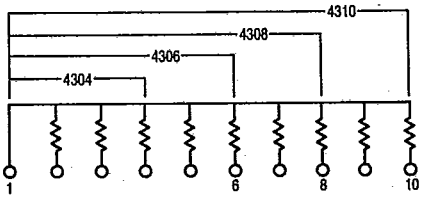
Power Rating per Resistor
At 70°C.....0.40 watt
At 25°C.....0.60 watt

POWER TEMPERATURE DERATING CURVE



BUSSED RESISTORS (101 CIRCUIT)

Model 4304M-101-RC (4 Pin)
Model 4306M-101-RC (6 Pin)
Model 4308M-101-RC (8 Pin)
Model 4310M-101-RC (10 Pin)

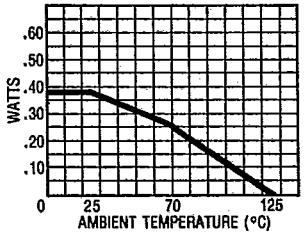


These models incorporate 3, 5, 7 or 9 thick-film resistors of equal value, each connected between a common bus (pin 1) and a separate pin.

Resistance Tolerance
10 ohms to 49 ohms.....±1 ohm
50 ohms to 5 megohms.....±2%*
Above 5 megohms.....±5%

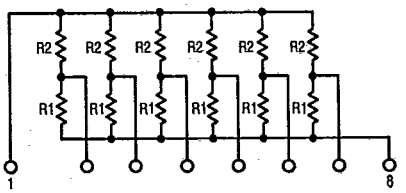
Power Rating per Resistor
At 70°C.....0.25 watt
At 25°C.....0.38 watt

POWER TEMPERATURE DERATING CURVE



DUAL TERMINATOR (104 CIRCUIT)

Model 4304M-104-R1/R2
Model 4306M-104-R1/R2
Model 4308M-104-R1/R2 (shown)
Model 4310M-104-R1/R2

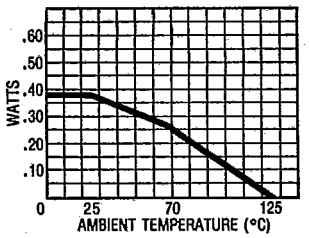


4308M-104 (shown above) is an 8-pin configuration and terminates 6 lines. Pins 1 and 8 are common for ground and power, respectively. Twelve thick-film resistors are paired in series between the common lines (pins 1 and 8).

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

Power Rating per Resistor
At 70°C.....0.25 watt
At 25°C.....0.38 watt

POWER TEMPERATURE DERATING CURVE



STANDARD RESISTANCE VALUES (101, 102 CIRCUITS)

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

STANDARD RESISTANCE VALUES (104 CIRCUITS)

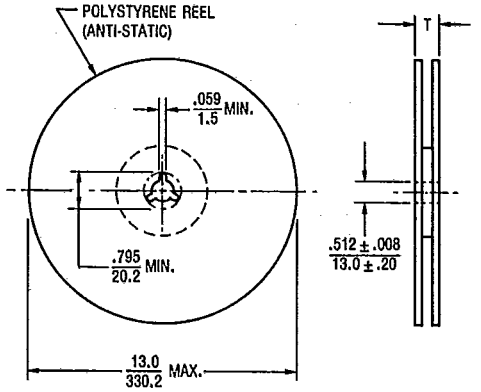
Resistance (Ohms)		Code	
R_1	R_2	R_1	R_2
160	240	161	241
180	390	181	391
220	270	221	271
220	330	221	331
330	390	331	391
330	470	331	471
3,000	6,200	302	622

Specifications are subject to change without notice.
* ±1% tolerance is available by adding suffix code "F" after the resistance code.

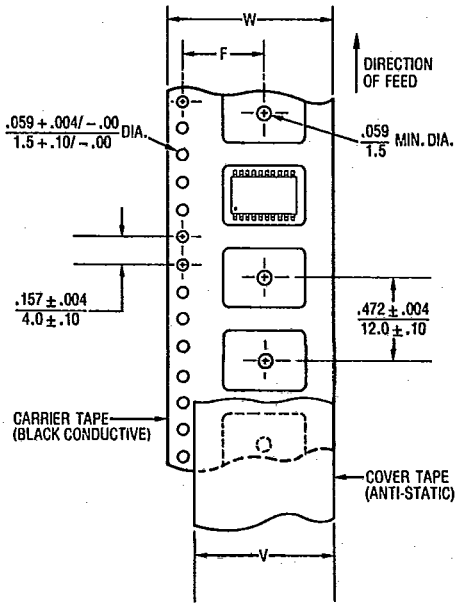
RESISTOR NETWORKS
SURFACE MOUNT
TAPE AND REEL SPECIFICATIONS

Model	Standard Quantity Per Reel	Carrier Tape Width (W)	Cover Tape Width (V)	Reel Width (T)	Pocket Center (F)
4210P 4220P	1,000	.630 ± .012 16.0 ± .30	.524 13.3 NOM.	.882 22.4 MAX.	.295 ± .004 7.5 ± .10
4416P 4416J	1,500				
4814P	2,000				
4420P 4420J	1,500	.945 ± .012 24.0 ± .30	.827 21.0 NOM.	1.43 36.4 MAX.	.453 ± .004 11.5 ± .10
4816P	2,000				

Leader Length = 530 ± 30mm
Trailer Length = 500mm Min.
} Empty Component Pockets Sealed With Cover Tape



INCHES
MM



NOTE: Dimensions not specified are per EIA RS-481.
Governing dimensions are in millimeters.