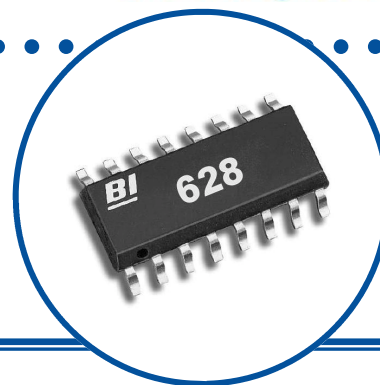


# MODELS 627, 628

## 627, 628 Series

- .220" Small Outline
- Dual-In-Line
- Thick Film
- Surface Mount
- Resistor Networks
- RoHS Compliant



## ELECTRICAL

|                                                 |                                                |
|-------------------------------------------------|------------------------------------------------|
| Standard Resistance Range, Ohms                 | 10 to 1Meg (Plus "0" Ohm Jumper)               |
| Standard Resistance Tolerance, at 25°C          | ±2%(<33Ω = ±1 Ohm)<br>(Optional: F Tol. = ±1%) |
| Operating Temperature Range                     | -55°C to +125°C                                |
| Temperature Coefficient of Resistance           | ±100ppm/°C (<100Ω = ±250ppm/°C)                |
| Temperature Coefficient of Resistance, Tracking | ±50ppm/°C                                      |
| Maximum Operating Voltage                       | 50Vdc or √PR                                   |
| Insulation Resistance                           | ≥10,000 Megohms                                |

## ENVIRONMENTAL

|                                                                            |                         |
|----------------------------------------------------------------------------|-------------------------|
| Thermal Shock plus Power Conditioning                                      | ΔR 0.70%                |
| Short Time Overload                                                        | ΔR 0.25%                |
| Moisture Resistance                                                        | ΔR 0.50%                |
| Mechanical Shock                                                           | ΔR 0.25%                |
| Vibration                                                                  | ΔR 0.25%                |
| Low Temperature Operation                                                  | ΔR 0.25%                |
| High Temperature Exposure                                                  | ΔR 0.50%                |
| Load Life, 2000 Hours (≤330Ω = ±0.5 Ohm)                                   | ΔR 0.50%                |
| Resistance to Solder Heat (Total Immersion in solder at 280°C for 10 sec.) | ΔR 0.25%                |
| Dielectric Withstanding Voltage                                            | 200V for 1 minute       |
| Temperature Exposure, Maximum                                              | 215°C for 3 minutes     |
| Marking Permanency                                                         | MIL-STD-202, Method 215 |
| Lead Solderability                                                         | MIL-STD-202, Method 208 |
| Flammability                                                               | UL-94V-0 Rated          |
| Storage Temperature Range                                                  | -55°C to +150°C         |

### General Note

BI Technologies reserves the right to make changes in product specification without notice or liability

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**BI technologies**

A subsidiary of TT electronics plc  
 627, 628 Series Issue Nov 2008

# MODELS 627, 628

## MECHANICAL

|                    |                      |
|--------------------|----------------------|
| Lead Material      | 96-96.5%Sn, 3.5-4%Ag |
| Lead Configuration | Gull Wing            |
| Lead Coplanarity   | ±0.002 in. (0.051mm) |
| Substrate Material | Alumina              |
| Resistor Material  | Cermet               |
| Body Material      | Epoxy                |

## STANDARD RESISTANCE VALUES, OHMS

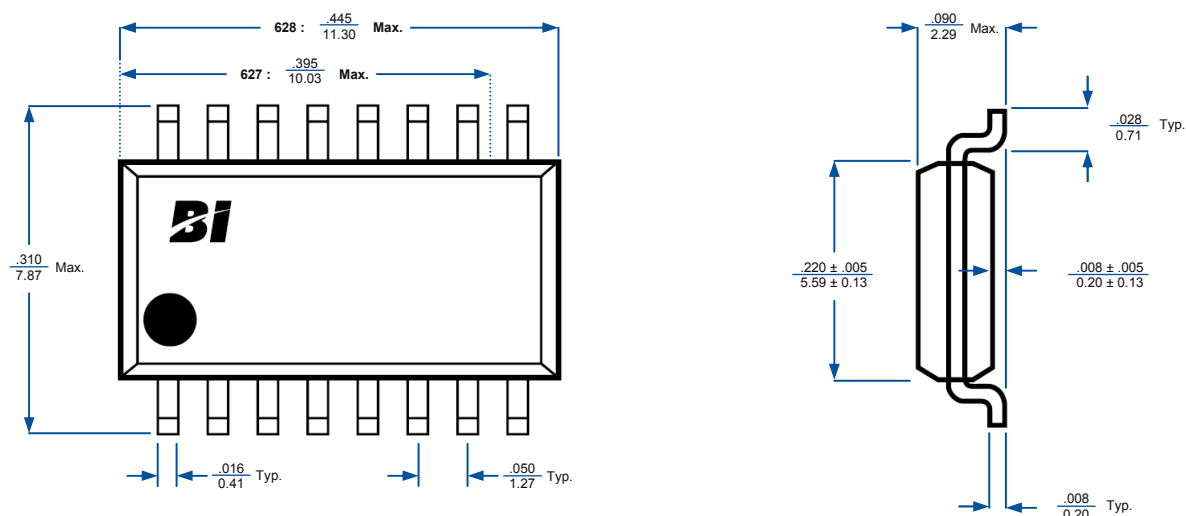
| A Circuit (Isolated Resistors)                             |            |             |            |             |            |
|------------------------------------------------------------|------------|-------------|------------|-------------|------------|
| Bold type represents stock standard values for 'A' Circuit |            |             |            |             |            |
| Ohms                                                       | Code       | Ohms        | Code       | Ohms        | Code       |
| <b>22</b>                                                  | <b>220</b> | 1.2K        | 122        | 39K         | 393        |
| <b>33</b>                                                  | <b>330</b> | 1.5K        | 152        | <b>47K</b>  | <b>473</b> |
| 39                                                         | 390        | 1.8K        | 182        | 56K         | 563        |
| 47                                                         | 470        | 2K          | 202        | 68K         | 683        |
| 56                                                         | 560        | 2.2K        | 222        | 82K         | 823        |
| 68                                                         | 680        | 2.7K        | 272        | <b>100K</b> | <b>104</b> |
| 82                                                         | 820        | 3.3K        | 332        | 120K        | 124        |
| <b>100</b>                                                 | <b>101</b> | 3.9K        | 392        | 150K        | 154        |
| 120                                                        | 121        | <b>4.7K</b> | <b>472</b> | 180K        | 184        |
| 150                                                        | 151        | 5.6K        | 562        | 220K        | 224        |
| 180                                                        | 181        | 6.8K        | 682        | 270K        | 274        |
| <b>220</b>                                                 | <b>221</b> | 8.2K        | 822        | 330K        | 334        |
| 270                                                        | 271        | <b>10K</b>  | <b>103</b> | 390K        | 394        |
| <b>330</b>                                                 | <b>331</b> | 12K         | 123        | 470K        | 474        |
| 390                                                        | 391        | 15K         | 153        | 560K        | 564        |
| <b>470</b>                                                 | <b>471</b> | 18K         | 183        | 680K        | 684        |
| 560                                                        | 561        | 20K         | 203        | 820K        | 824        |
| 680                                                        | 681        | 22K         | 223        | 1 Meg       | 105        |
| 820                                                        | 821        | 27K         | 273        |             |            |
| <b>1K</b>                                                  | <b>102</b> | 33K         | 333        |             |            |

| B Circuit (Bussed Resistors)                               |            |             |            |             |            |
|------------------------------------------------------------|------------|-------------|------------|-------------|------------|
| Bold type represents stock standard values for 'B' Circuit |            |             |            |             |            |
| Ohms                                                       | Code       | Ohms        | Code       | Ohms        | Code       |
| 22                                                         | 220        | 1.2K        | 122        | 39K         | 393        |
| 33                                                         | 330        | <b>1.5K</b> | <b>152</b> | <b>47K</b>  | <b>473</b> |
| 39                                                         | 390        | 1.8K        | 182        | 56K         | 563        |
| 47                                                         | 470        | 2K          | 202        | 68K         | 683        |
| 56                                                         | 560        | <b>2.2K</b> | <b>222</b> | 82K         | 823        |
| 68                                                         | 680        | <b>2.7K</b> | <b>272</b> | <b>100K</b> | <b>104</b> |
| 82                                                         | 820        | 3.3K        | 332        | 120K        | 124        |
| <b>100</b>                                                 | <b>101</b> | 3.9K        | 392        | 150K        | 154        |
| 120                                                        | 121        | <b>4.7K</b> | <b>472</b> | 180K        | 184        |
| 150                                                        | 151        | 5.6K        | 562        | 220K        | 224        |
| 180                                                        | 181        | 6.8K        | 682        | 270K        | 274        |
| 220                                                        | 221        | 8.2K        | 822        | 330K        | 334        |
| 270                                                        | 271        | <b>10K</b>  | <b>103</b> | 390K        | 394        |
| 330                                                        | 331        | 12K         | 123        | <b>470K</b> | <b>474</b> |
| <b>390</b>                                                 | <b>391</b> | 15K         | 153        | 560K        | 564        |
| 470                                                        | 471        | 18K         | 183        | 680K        | 684        |
| 560                                                        | 561        | 20K         | 203        | 820K        | 824        |
| 680                                                        | 681        | <b>22K</b>  | <b>223</b> | 1 Meg       | 105        |
| 820                                                        | 821        | 27K         | 273        |             |            |
| <b>1K</b>                                                  | <b>102</b> | 33K         | 333        |             |            |

| J Circuit (Dual Terminators) |              |         |              |              |         |
|------------------------------|--------------|---------|--------------|--------------|---------|
| Ohms (R1/R2)                 | Code (R1/R2) | Marking | Ohms (R1/R2) | Code (R1/R2) | Marking |
| 120/120                      | 121/121      | 45      | 330/470      | 331/471      | 10      |
| 150/150                      | 151/151      | 40      | 390/390      | 391/391      | 42      |
| 180/300                      | 181/301      | 31      | 470/470      | 471/471      | 43      |
| 220/220                      | 221/221      | 39      | 1K/3.3K      | 102/332      | 35      |
| 220/330                      | 221/331      | 08      | 3K/6.2K      | 302/662      | 13      |
| 270/270                      | 271/271      | 41      | 6.8K/22K     | 682/223      | 29      |
| 330/390                      | 331/391      | 09      |              |              |         |

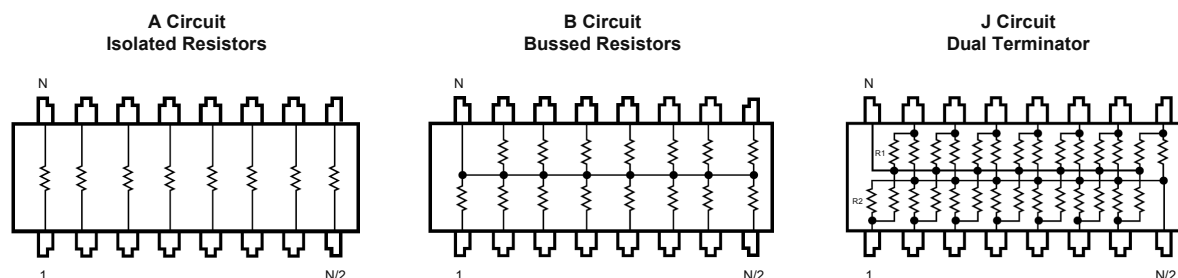
# MODELS 627, 628

## OUTLINE DIMENSIONS (Inch/mm)



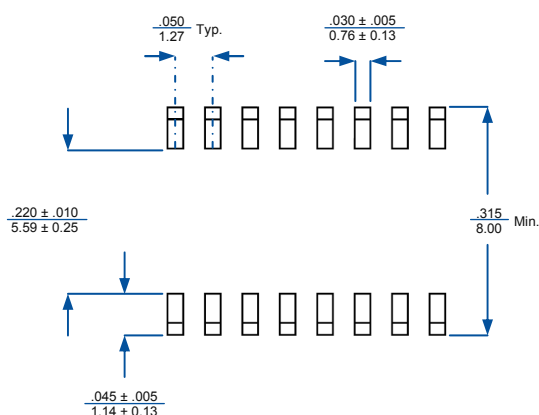
Note: Maximum allowable mold excursion = 0.006"

## SCHEMATICS



Note: Model 628: N = 16 Leads, Model 627: N = 14 Leads

## SOLDER PAD LAYOUT (Inch/mm)



# MODELS 627, 628

## TYPICAL PART MARKING

| Part Number: | Part Marking: |
|--------------|---------------|
| 628A330      | 8A330         |
| 628A331      | 8A331         |
| 628J221/331  | 8J08          |

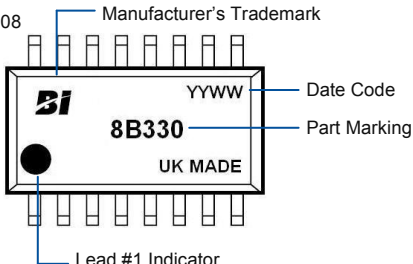
  


Diagram labels: Manufacturer's Trademark, Date Code, Part Marking, Lead #1 Indicator.

## POWER DISSIPATION, WATTS AT 70°C

| — Resistor (Per Circuit) — |         |      |      |      |
|----------------------------|---------|------|------|------|
| Model                      | Package | A    | B    | J    |
| 627                        | 1.28    | 0.32 | 0.16 | 0.16 |
| 628                        | 1.28    | 0.32 | 0.16 | 0.16 |

## PACKAGING

### Standard: Tape & Reel

Conforms to requirements of EIA-481.

All units orientated with lead #1 to the left of direction of feed.

|       |          |   |                              |
|-------|----------|---|------------------------------|
| Tape: | Width    | = | 24mm                         |
|       | Pocket   | = | Embossed Plastic, Antistatic |
|       | Pitch    | = | 12mm                         |
| Reel: | Diameter | = | 13" (300mm) Maximum          |
|       | Capacity | = | 2,000 Units                  |

### Option: Magazines

Conforms to EIA and JEDEC standards.

All units orientated with lead #1 to the same side.

|                    |   |          |
|--------------------|---|----------|
| Magazine: Capacity | = | 50 Units |
|--------------------|---|----------|

# MODELS 627, 628

## APPLICABLE DOCUMENTS

MIL-R-914 - Resistor Networks, Fixed, Film, Surface Mount Established Reliability General Specifications

MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes

MIL-STD-202 - Test Methods for Electronics and Electrical Component Parts

EIA-481 - Carrier Taping of Surface Mount Components for Automatic Handling

EIA-PDP-100 - SOGN-0002 Outline Dimensions

## ORDERING INFORMATION

|                     | 62 | 8 | J | 331 | / | 471 | F | TR4 |                                                                  |
|---------------------|----|---|---|-----|---|-----|---|-----|------------------------------------------------------------------|
| Model Series        |    |   |   |     |   |     |   |     | Standard Tape & Reel Packaging:<br>(No code used for magazines.) |
| Number of Leads:    |    |   |   |     |   |     |   |     | Tolerance Code:<br>F = $\pm 1\%$<br>(No code used for 2% Std.)   |
| 7 = 14 Leads        |    |   |   |     |   |     |   |     |                                                                  |
| 8 = 16 Leads        |    |   |   |     |   |     |   |     |                                                                  |
| Circuit Type:       |    |   |   |     |   |     |   |     | R2 Resistance Code:<br>(Add for J Circuit only.)                 |
| A = Isolated        |    |   |   |     |   |     |   |     |                                                                  |
| B = Bussed          |    |   |   |     |   |     |   |     |                                                                  |
| J = Dual Terminator |    |   |   |     |   |     |   |     | Resistance Code:                                                 |

**E12 & E24 Series:** First two digits are significant.  
Last digit denotes number of trailing zeros.

**E96 Series:** First three digits are significant.  
Last digit denotes number of trailing zeros.