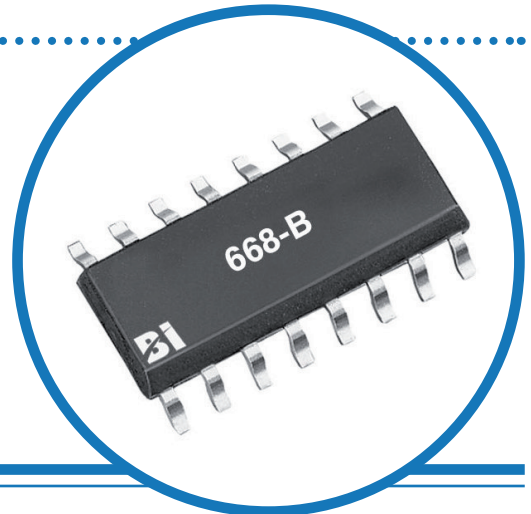


Nichrome Resistor Networks on Ceramic Substrates

Models 664, 667, 668

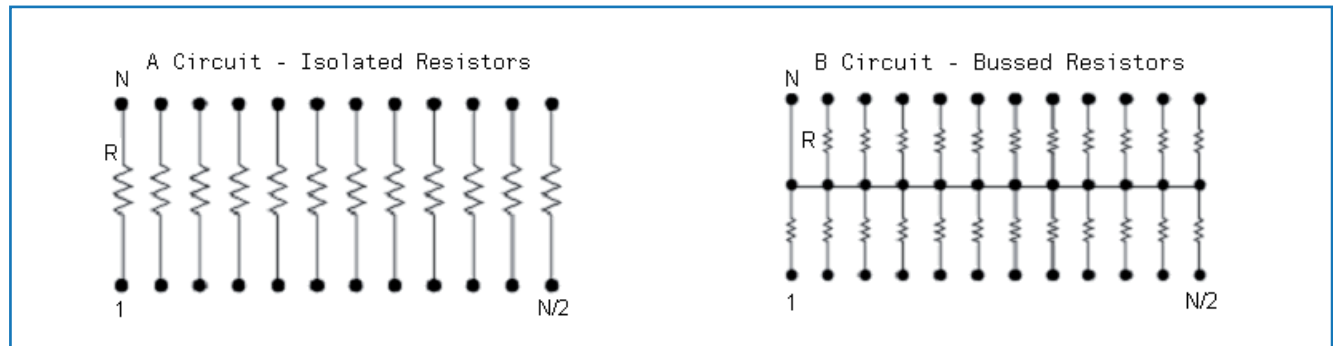
- Isolated and bussed circuits
- Thin film resistor network
- 0.150" SOIC packages
- RoHS compliant



Features

| | |
|---|---|
| Precision Nichrome Resistors on Ceramic | Passivation coating provides protection in humid environments Excellent frequency response Excellent long term resistance stability |
| Industry Standard Packaging | JEDEC 95, MS-012 (SOIC narrow body in 8, 14 and 16 lead pin counts) |
| Ratio Tolerances | < ± 0.05% |
| TCR Tracking Tolerances | < ± 5 ppm/°C |

Schematics



Electrical¹

| | |
|--|---|
| Standard Resistance Range ² | 1K ohms to 100K ohms (Isolated) 1K ohms to 20K ohms (Bussed) |
| TCR | ± 25 ppm/°C |
| TCR Tracking | ± 5 ppm/°C |
| Operating Temperature Range | -55°C to +125°C |
| Interlead Capacitance | < 2pF |
| Insulation Resistance | ≥ 10,000 Megohms |
| Maximum Operating Voltage | 100 Vdc or √ PR |
| Noise, Maximum (MIL-STD-202, Method 308) | -40 dB |
| Resistor Power Rating at 70°C | 0.1 Watts |

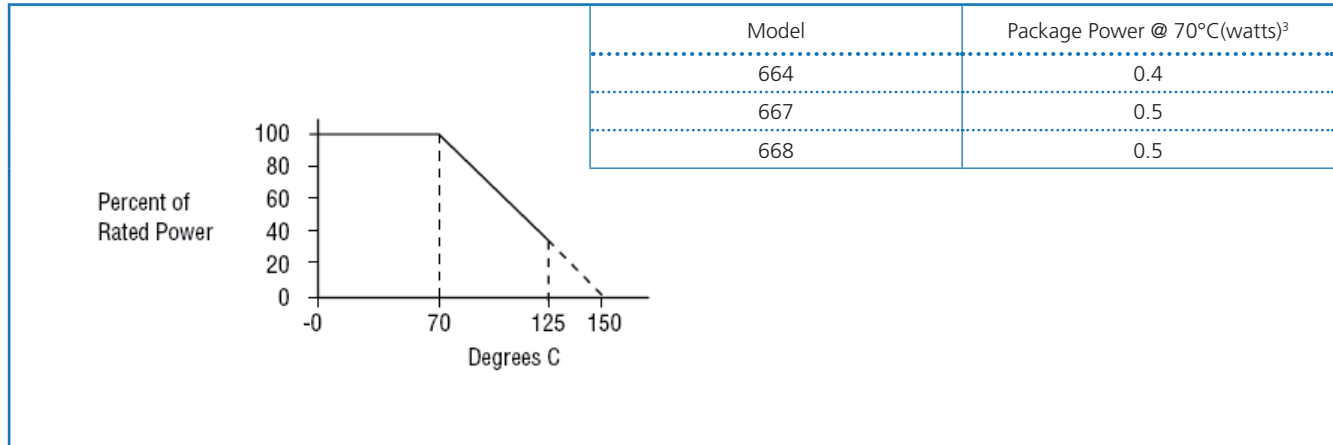
¹ Specifications subject to change without notice.

² E96 codes available.

General Note

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Package Power And Derating Curve



Environmental (Mil-R-83401)

| | |
|---------------------------------------|-------------------------|
| Thermal Shock plus Power Conditioning | ΔR 0.25% |
| Short Time Overload | ΔR 0.1% |
| Terminal Strength | ΔR 0.1% |
| Moisture Resistance | ΔR 0.2% |
| Mechanical Shock | ΔR 0.25% |
| Vibration | ΔR 0.25% |
| Low Temperature Operation | ΔR 0.1% |
| High Temperature Exposure | ΔR 0.1% |
| Load Life, 1,000 Hours | ΔR 0.1% |
| Resistance to Solder Heat | ΔR 0.1% |
| Dielectric Withstanding Voltage | 100V 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 | -65°C to +125°C |

Mechanical

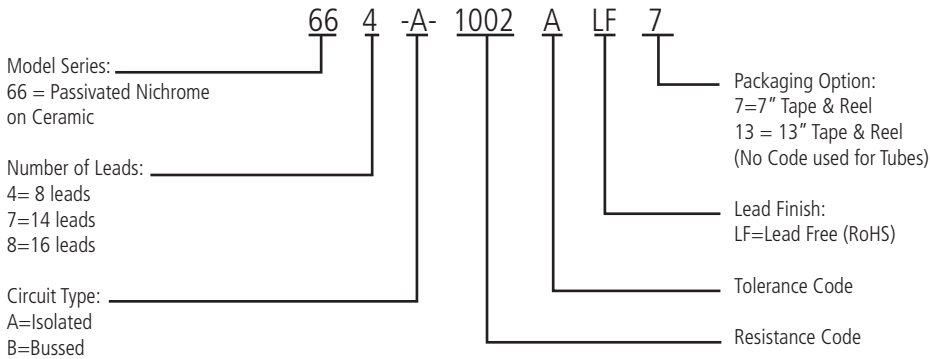
| | |
|--------------------|----------------------|
| Lead Plating | 100 matte Tin (RoHS) |
| Lead Material | Copper Alloy |
| Lead Configuration | Gull Wing |
| Lead Coplanarity | 0.004" (0.102 mm) |
| Substrate Material | Alumina |
| Resistor Material | Passivated Nichrome |
| Body Material | Molded Epoxy |

³ Maximum power per resistor @ 70°C is 100 mW, not to exceed package power

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Ordering Information⁴



Resistance Code⁴

First 3 digits are significant. Fourth digit denotes number of trailing zeros. For values less than 100, use "R" to denote a decimal point. Example, 51 and 10000 ohms are coded as 51R0 and 1002 respectively. Standard values follow E96.

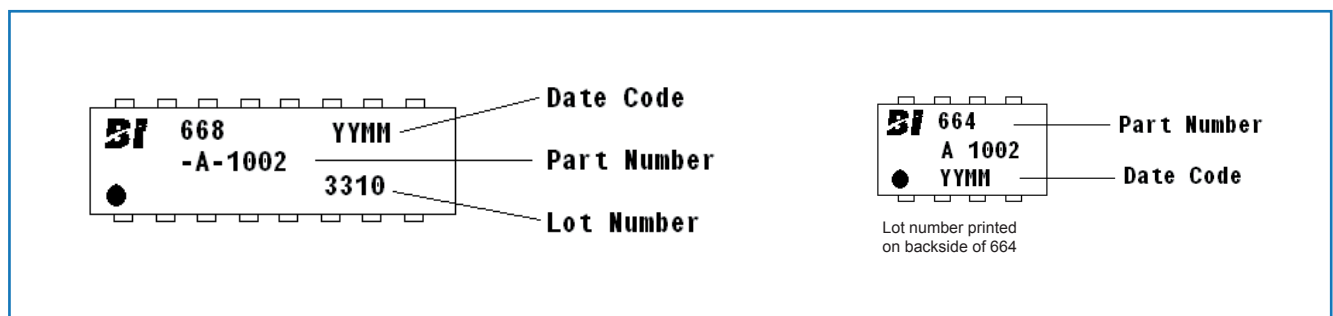
Resistance Tolerance Code

| Accuracy Code at 25°C | A | B | D | F |
|--|--------|-------|-------|-------|
| Absolute Resistance Tolerances (%) | ± 0.1 | ± 0.1 | ± 0.5 | ± 1.0 |
| Ratio Tolerances (R1 Ref) (%) | ± 0.05 | ± 0.1 | ± 0.1 | ± 0.5 |
| Temperature Coefficient of Resistance (ppm/°C) | | | | ±25 |
| Temperature Coefficient of Resistance, Tracking (ppm/°C) | | | | ±5 |

Packaging Options (Unit Count/Package Type)

| Model + Pin count | Tubes | 7" Tape & Reel | 13" Tape & Reel |
|-------------------|-------|----------------|-----------------|
| 664 | 100 | 1000 | 2500 |
| 667 | 50 | 500 | 2500 |
| 668 | 50 | 500 | 2500 |

Typical Marking



⁴ Contact customer service for custom designs and features.

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