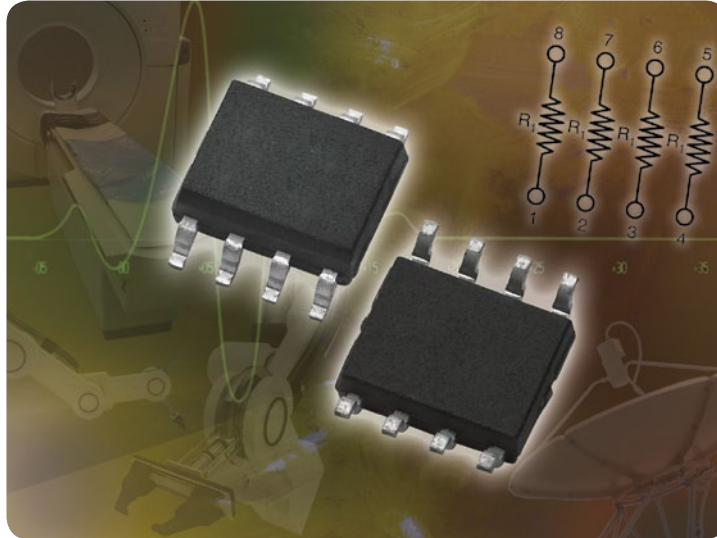


Molded, 50 Mil Pitch, Dual-in-Line Resistor, Surface-Mount Thin Film Network



KEY BENEFITS

- Wide resistance range available: 33 Ω to 500 k Ω
- Close ratio tolerance: 0.05 %
- Tight TCR tracking: ± 5 ppm/ $^{\circ}\text{C}$
- Ratio stability characteristics: $\Delta R \pm 0.015$ % at 2000 h and + 70 $^{\circ}\text{C}$
- Standard narrow-body SOIC gullwing surface-mount molded package

APPLICATIONS

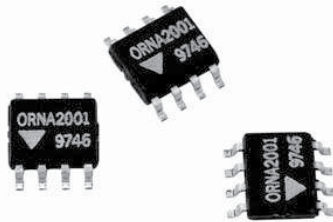
- Industrial applications
- Medical instrumentation and imaging
- Process controls

RESOURCES

- Datasheet: ORN - <http://www.vishay.com/doc?60005>
- For technical questions contact thinfilm@vishay.com

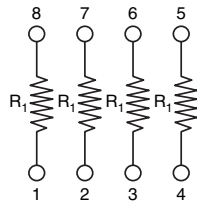


Molded, 50 Mil Pitch, Dual-in-Line Resistor, Surface-Mount Thin Film Network


Actual Size

ORN series resistor networks feature four isolated resistors with standard 50 mil pitch lead spacing. The networks feature close TCR tracking and tight ratio tolerance and are ideally suited for unity gain operational amplifier circuitry. The standard resistance offering listed are available for immediate delivery.

SCHEMATIC



FEATURES

- 0.068" (1.73 mm) maximum seated height
- Rugged molded case construction with no internal solder
- Low temperature coefficient (± 25 ppm/ $^{\circ}\text{C}$)
- JEDEC MS-012 STD variation AA package
- Compliant to RoHS Directive 2002/95/EC
- Halogen-free according to IEC 61249-2-21 definition



RoHS*
COMPLIANT
HALOGEN
FREE

Note

* Pb containing terminations are not RoHS compliant, exemptions may apply

TYPICAL PERFORMANCE

| TCR | ABSOLUTE | TRACKING |
|------|----------|----------|
| | 25 | 5 |
| TOL. | ABSOLUTE | RATIO |
| | 0.1 | 0.05 |

STANDARD RESISTANCE OFFERING ($R_1 =$)

| | |
|-----------------|----------------|
| 49.9 Ω | 10 k Ω |
| 100 Ω | 20 k Ω |
| 500 Ω | 50 k Ω |
| 1 k Ω | 100 k Ω |
| 2 k Ω | 200 k Ω |
| 4.99 k Ω | 500 k Ω |
| 5 k Ω | |

Note

- Consult factory for additional values and schematics

| STANDARD ELECTRICAL SPECIFICATIONS | | |
|------------------------------------|---------------------------------------------------|---------------------------------------------------|
| TEST | SPECIFICATIONS | CONDITIONS |
| Material | Passivated nichrome | - |
| Pin/Lead Number | 8 | - |
| Resistance Range | 33 Ω to 500 k Ω per resistor | - |
| TCR: Absolute | ± 25 ppm/ $^{\circ}\text{C}$ | -55 $^{\circ}\text{C}$ to +125 $^{\circ}\text{C}$ |
| TCR: Tracking | ± 5 ppm/ $^{\circ}\text{C}$ | -55 $^{\circ}\text{C}$ to +125 $^{\circ}\text{C}$ |
| Tolerance: Absolute | ± 0.05 % to ± 1.0 % | +25 $^{\circ}\text{C}$ |
| Tolerance: Ratio | ± 0.01 % to ± 0.5 % | +25 $^{\circ}\text{C}$ |
| Power Rating: Resistor | 100 mW | Maximum at +70 $^{\circ}\text{C}$ |
| Power Rating: Package | 400 mW | Maximum at +70 $^{\circ}\text{C}$ |
| Stability: Absolute | $\Delta R \pm 0.05$ % | 2000 h at +70 $^{\circ}\text{C}$ |
| Stability: Ratio | $\Delta R \pm 0.015$ % | 2000 h at +70 $^{\circ}\text{C}$ |
| Voltage Coefficient | 0.1 ppm/V (typical) | - |
| Working Voltage | 100 V max. not to exceed $\sqrt{P \times R}$ | - |
| Operating Temperature Range | -55 $^{\circ}\text{C}$ to +125 $^{\circ}\text{C}$ | - |
| Storage Temperature Range | -55 $^{\circ}\text{C}$ to +150 $^{\circ}\text{C}$ | - |
| Noise | < -30 dB | - |
| Thermal EMF | 0.08 $\mu\text{V}/^{\circ}\text{C}$ | - |
| Shelf Life Stability: Absolute | $\Delta R \pm 0.01$ % | 1 year at +25 $^{\circ}\text{C}$ |
| Shelf Life Stability: Ratio | $\Delta R \pm 0.002$ % | 1 year at +25 $^{\circ}\text{C}$ |

Revision 02-Sep-11