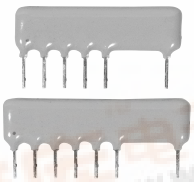
# CNS 471

Vishay Thin Film

## Decade Divider, Single-In-Line
## Thin Film Resistor Networks (Standard)



Actual Size

Using these integrated thin film networks instead of discrete resistor sets, designers gain several advantages: smaller size, better overall tracking, greater reliability, and lower cost.

### FEATURES

- Low Voltage Coefficient
- Low Noise Index
- High Stability
- Standard

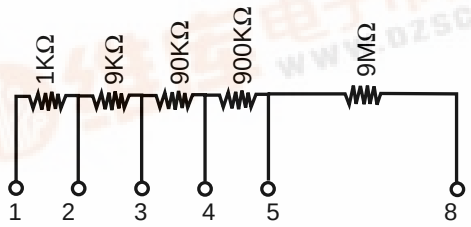
### TYPICAL PERFORMANCE

| | ABS | TRACKING |
|---|---|---|
| TCR | <25 | <2.5 |
| TOL | 0.1 | 0.03 |

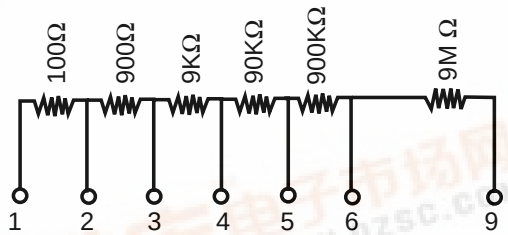
THROUGH HOLE

### SCHEMATIC

5 Decades




6 Decades




### STANDARD ELECTRICAL SPECIFICATIONS

| TEST | | SPECIFICATIONS | CONDITIONS |
|---|---|---|---|
| MATERIAL | | PASSIVATED NICHROME | |
| Resistance Range | | 100Ω to 10MΩ | |
| TCR: | Tracking | < 2.5ppm/°C | Except for 100R (5ppm/°C) |
| | Absolute | < 25ppm/°C | (- 40°C to + 125°C) |
| Tolerance: | Ratio | A = ± 0.05% B = ± 0.1% Q = ± 0.03% | |
| | Absolute | ± 0.1 % | |
| Power Rating: | Resistor | 0.1 Watt | |
| | Package | 0.6 Watt | |
| Stability: | ΔR Ratio | 0.01 % | 1000 hrs. @ + 70°C |
| Voltage Coefficient | | < 0.002ppm/Volt | |
| Working Voltage | | 1200 Volts | |
| Operating Temperature Range | | - 55°C to + 125°C | |
| Storage Temperature Range | | - 55°C to + 155°C | |
| Noise | | < - 30dB Typical | |
| Thermal EMF | | 0.1μV/°C | |
| Shelf Life Stability | | 50ppm | 1 year |

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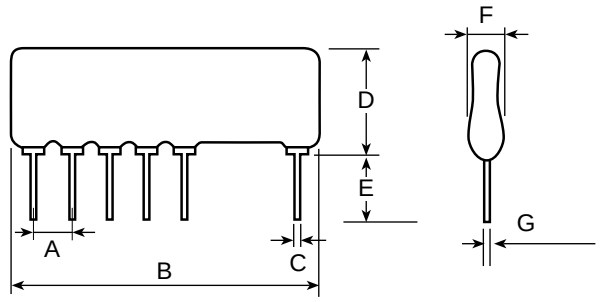
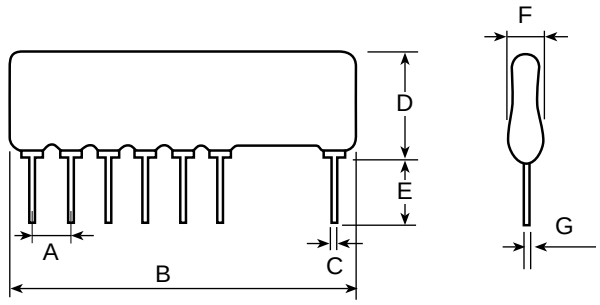
## DIMENSIONS in inches and millimeters

**5 Decades**




| DIMENSION | INCHES | MILLIMETERS |
|---|---|---|
| A | 0.100 | 2.54 |
| B | 0.830 | 21.08 |
| C | 0.020 | 0.51 |
| D | 0.275 | 7 Max. |
| E | 0.125 | 3.17 |
| F | 0.100 | 2.54 Max. |
| G | 0.010 | 0.25 |

**6 Decades**




| DIMENSION | INCHES | MILLIMETERS |
|---|---|---|
| A | 0.100 | 2.54 |
| B | 0.925 | 23.50 |
| C | 0.020 | 0.51 |
| D | 0.275 | 7 Max. |
| E | 0.125 | 3.17 Min. |
| F | 0.100 | 2.54 |
| G | 0.010 | 0.25 |

THROUGH HOLE

## MECHANIICAL SPECIFICATIONS

| | |
|---|---|
| Resistive Material | Nichrome |
| Body | Conformally coated alumina |
| Terminals | Copper |
| Substrate Material | Alumina |
| Lead Coplanarity | NA |
| Marking Resistance to Solvents | Laser Marking |

## How to Order

| Series | Model | Tolerance | | | Number of Decades |
|---|---|---|---|---|---|
| **CNS** | **471** | **Q** | | | **5** |
| | | Absolute | Ratio | | **5** |
| | | 0.1 | 0.1 | **B** | **6** |
| | | 0.1 | 0.05 | **A** | |
| | | 0.1 | 0.03 | **Q** | |

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