## Decade Divider, Single-In-Line Thin Film Resistor Networks (Standard) <br> FEATURES



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.

## SCHEMATIC

5 Decades


- Low voltage coefficient < 0.02 ppm/V
- Low noise index <-30 dB
- High stability 0.01 \% on ratio ( 1000 h at Pn at complant $+70^{\circ} \mathrm{C}$ )
- Standard

TYPICAL PERFORMANCE


6 Decades


| STANDARD ELECTRICAL SPECIFICATIONS |  |  |  |
| :---: | :---: | :---: | :---: |
| TEST |  | SPECIFICATIONS | CONDITIONS |
| MATERIAL |  | PASSIVATED NICHROM |  |
| Resistance range |  | $100 \Omega$ to $10 \mathrm{M} \Omega$ |  |
| TCR | Tracking | $<2.5 \mathrm{ppm} /{ }^{\circ} \mathrm{C}$ | Except for 100R ( $5 \mathrm{ppm} /{ }^{\circ} \mathrm{C}$ ) |
|  | Absolute | $<25 \mathrm{ppm} /{ }^{\circ} \mathrm{C}$ | ( $0^{\circ} \mathrm{C}$ to $+70^{\circ} \mathrm{C}$ ) |
| Toleracne | Ratio | $\mathrm{A}= \pm 0.05 \%, \mathrm{~B}= \pm 0.1 \%, \mathrm{C}=$ |  |
|  | Absolute | $\pm 0.1$ \% | $\left(0^{\circ} \mathrm{C}\right.$ to $\left.+70^{\circ} \mathrm{C}\right)$ |
| Power rating | Resistor | 0.1 W |  |
|  | Package | 0.6 W | $\left(0^{\circ} \mathrm{C}\right.$ to $\left.+70^{\circ} \mathrm{C}\right)$ |
| Stability | $\Delta$ R Ratio | 0.01 \% typical | 1000 h at $+70^{\circ} \mathrm{C}$ at Pn |
| Voltage coefficient |  | < $0.02 \mathrm{ppm} / \mathrm{V}$ |  |
| Working voltage |  | 1200 V |  |
| Operating temperature range |  | $0^{\circ} \mathrm{C} ;+70^{\circ} \mathrm{C}$ |  |
| Storage temperature range |  | $-55^{\circ} \mathrm{C}$ to $+155^{\circ} \mathrm{C}$ |  |
| Noise |  | $<-30 \mathrm{~dB}$ typical |  |
| Thermal EMF |  | $0.1 \mu \mathrm{~V} /{ }^{\circ} \mathrm{C}$ |  |
| Shelf life stability (Ratio) |  | 50 ppm | 1 year |

## DIMENSIONS

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



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## MECHANICAL SPECIFICATIONS

| Resistive material | Nichrome |
| :--- | :---: |
| Coating | Fluidized epoxy |
| Terminals | Tin/silver on copper alloy |
| Substrate material | Alumina |
| Marking resistance to solvents | Laser marking |

## GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: CNS471A6


Historical Part Number example: CNS 471 A 6 e2

## Disclaimer

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