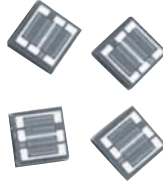


Wirebondable Dual Value Thin Film Chip Resistor Networks, Center Tap (High Ohmic Value)



Actual Size

LINKS TO ADDITIONAL RESOURCES



Chromium silicon thin film is very well suited to produce high density and high ohmic value resistor chips. Performances and sizes are greatly improved compared to thick film counterparts. The center tap configuration offers a greater flexibility for hybrid layout design.

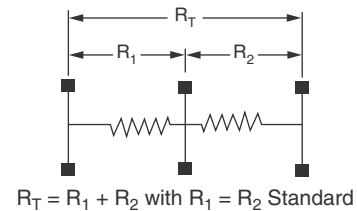
FEATURES

- Center tap feature
- Small size 30 mil x 30 mil
- Very high ohmic values (up to 10 MΩ)
- Aluminum terminations
- Wirebondable
- Good stability 0.1 % (2000 h, rated power, at +70 °C)
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE
GREEN
(5-2008)

SCHEMATIC



STANDARD ELECTRICAL SPECIFICATIONS

| MODEL | SIZE | RESISTANCE RANGE ⁽¹⁾ Ω | POWER RATING $P_{70\text{ °C}}$ W | ABSOLUTE TOLERANCE ± % | RATIO TOLERANCE ± % | ABSOLUTE TCR ⁽²⁾ ± ppm/°C | RATIO TCR ± ppm/°C |
|-------|------|--------------------------------------|---|---------------------------|------------------------|---|-----------------------|
| CS 33 | 0303 | 10K to 10M | 0.125 | 0.5, 1, 2 | 0.5 | 50, 100 | 5 |

Notes

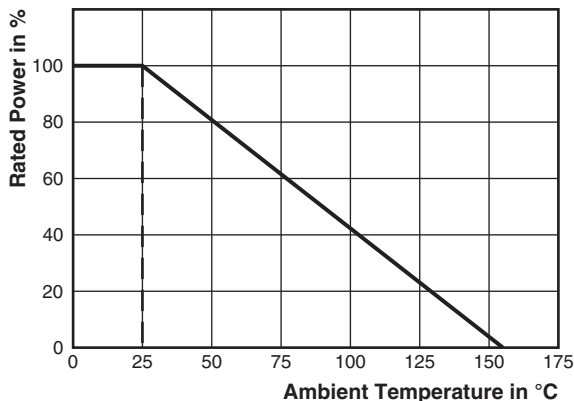
⁽¹⁾ ($R_T = R_1 + R_2$)

⁽²⁾ ± 100 ppm/°C, ± 50 ppm/°C on request at -55 °C to +155 °C

PERFORMANCES

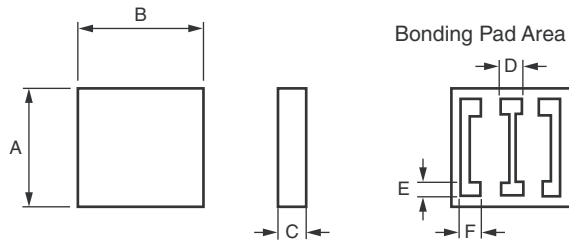
| TEST | SPECIFICATIONS | CONDITIONS |
|----------------------|---|---------------------------------------|
| Ohmic value: ratio | 1/1 standard (unequal values: please consult) | |
| Stability | ± 0.1 % typical, ± 0.2 maximum | 2000 h at +70 °C under P _n |
| Voltage coefficient | 0.1 ppm/V | |
| Limiting voltage | 100 V _{DC} on R _T | |
| Noise | < -20 dB typical | MIL-STD-202 method 308 |
| Thermal EMF | < 0.01 μV/°C | |
| Shelf life stability | 200 ppm | 1 year at +25 °C |

DERATING



CLIMATIC SPECIFICATIONS

| | |
|-----------------------------|-------------------|
| Operating temperature range | -55 °C to +155 °C |
| Storage temperature range | -55 °C to +155 °C |

DIMENSIONS


| DIMENSION | INCHES | MILLIMETERS |
|-----------|---------------|--------------|
| A | 0.033 ± 0.004 | 0.855 ± 0.10 |
| B | 0.033 ± 0.004 | 0.855 ± 0.10 |
| C | 0.01 to 0.015 | 0.25 to 0.40 |
| D | 0.006 | 0.15 |
| E | 0.004 | 0.10 |
| F | 0.006 | 0.15 |

| MECHANICAL SPECIFICATIONS | |
|---------------------------|--|
| Resistive element | Chromium silicon |
| Passivation | Silicone nitride |
| Substrate material | Silicon (consult Vishay for Al ₂ O ₃) |
| Bonding pads | Aluminum |

| GLOBAL PART NUMBER INFORMATION | | | | | | | | | | | | | | | | | |
|--|-----------------------|---|---|---|-----------------------|----------------|---|------------------|-----------------------------|---|---|---|--|---|---|---|---|
| New Global Part Numbering: CS33-100KF1MD0099 | | | | | | | | | | | | | | | | | |
| C | S | 3 | 3 | - | 1 | 0 | 0 | K | F | 1 | M | D | | 0 | 0 | 9 | 9 |
| GLOBAL MODEL | R ₁ VALUE | ABS. TOLERANCE | | | R ₂ VALUE | RAT. TOLERANCE | | TERMINATIONS | OPTION | | | | | | | | |
| | Decimal R, K, or M | D = ± 0.5 % F = ± 1.0 % G = ± 2.0 % | | | Decimal R, K, or M | D = ± 0.5 % | | Blank = aluminum | Leave blank if no option | | | | | | | | |



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