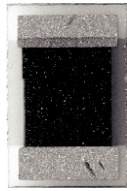


Thin Film 0304 Size Resistor on Alumina



Product may not be to scale

The CC6- series single-value resistor chips offer a small size, low shunt capacitance and solder pad option. The CC6- nichrome resistors material offers excellent stability.

The CC6- resistors are manufactured using Vishay Electro-Films (EFI) sophisticated thin film equipment and manufacturing technology. The CC6- resistors are 100 % electrically tested and visually inspected to MIL-STD-883, method 2032 class H or K.

FEATURES

- Wire bondable
- Chip size: 0.030" x 0.045"
- Case: 0304
- Resistance range: 20 Ω to 59 k Ω
- Alumina substrate
- Low stray capacitance: < 0.2 pF
- Resistor material: Nichrome
- Resistor passivation coat optional
- Tolerances to 0.05 %
- Solder pad optional
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912


RoHS*
Available

HALOGEN FREE
Available

GREEN
(5-2008)
Available

Note

* This datasheet provides information about parts that are RoHS-compliant and/or parts that are non-RoHS-compliant. For example, parts with lead (Pb) terminations are not RoHS-compliant. Please see the information/tables in this datasheet for details.

APPLICATIONS

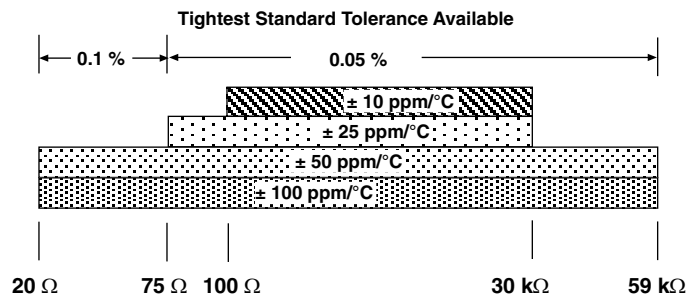
Vishay EFI CC6- chip resistors provide excellent high-frequency response and are ideally suited for prototyping.

Typical application areas are:

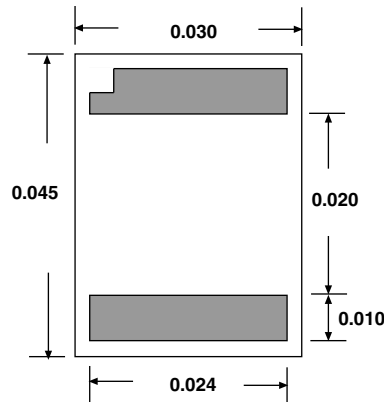
- Amplifiers
- Oscillators
- Attenuators
- Couplers
- Filters

Recommended for hermetic applications where die is not exposed to moisture.

| TEMPERATURE COEFFICIENT OF RESISTANCE, VALUES, AND TOLERANCES | | |
|---|--|-------------------|
| PARAMETER | VALUE | UNIT |
| Total Resistance Range | 20 to 59K | Ω |
| Standard Tolerances | ± 0.05 , ± 0.1 | % |
| TCR | ± 10 , ± 25 , ± 50 , ± 100 | ppm/ $^{\circ}$ C |



| STANDARD ELECTRICAL SPECIFICATIONS | | |
|---|------------------------------|--------------|
| PARAMETER | VALUE | UNIT |
| Noise, MIL-STD-202, Method 308 | - 20 typ. | dB |
| Moisture Resistance, MIL-STD-202, Method 106 - Hermetic Applications | ± 0.2 max. $\Delta R/R$ | % |
| Stability, 1000 h, + 125 $^{\circ}$ C, 65 mW | ± 0.1 max. $\Delta R/R$ | % |
| Operating Temperature Range | - 55 to + 125 | $^{\circ}$ C |
| Thermal Shock, MIL-STD-202, Method 107, Test Condition F | ± 0.25 max. $\Delta R/R$ | % |
| High Temperature Exposure, + 150 $^{\circ}$ C, 100 h | ± 0.1 max. $\Delta R/R$ | % |
| Dielectric Voltage Breakdown | 400 | V |
| Insulation Resistance | 10^{12} min. | Ω |
| Operating Voltage | 100 max. | V |
| DC Power Rating at + 125 $^{\circ}$ C (Derated to zero at + 150 $^{\circ}$ C) | 0.065 max. | W |
| 5 x Rated Power Short-Time Overload, + 25 $^{\circ}$ C, 5 s | ± 0.25 max. $\Delta R/R$ | % |

DIMENSIONS in inches

SCHEMATIC


| MECHANICAL SPECIFICATIONS | |
|---------------------------|---|
| PARAMETER | VALUE |
| Chip Size | 0.030" x 0.045" ± 0.003" (0.762 mm x 1.143 mm ± 0.076 mm) |
| Chip Thickness | 0.010" ± 0.002" (0.25 mm ± 0.05 mm) |
| Chip Substrate Material | 99.6 % alumina, 2 μ" to 4 μ" finish |
| Resistor Material | Nichrome |
| Bonding Pad Size | 0.010" x 0.024" (0.254 mm x 0.61 mm) minimum |
| Number of Pads | 2 |
| Pad Material | 25 kÅ minimum gold standard |
| Backing | None |

| GLOBAL PART NUMBER INFORMATION | | | | | | | | | | | | | | | | |
|--|--|--|---|--|--|---|----------------------------------|--|--|----------|----------|----------|----------|----------|----------|----------|
| Global Part Number: CC6-12500KKSSNHWS | | | | | | | | | | | | | | | | |
| Global Part Number Description: CC6- 1.25K 10 % 100 ppm/°C Std SnPb None H WS | | | | | | | | | | | | | | | | |
| C | C | 6 | - | 1 | 2 | 5 | 0 | 0 | K | K | S | S | N | H | W | S |
| MODEL | RESISTANCE | RESISTANCE MULTIPLIER CODE | TOL. CODE (%) | TCR (ppm/°C) | TRIM STYLE | TERMINATION | BACK METAL | VISUAL CLASS | PACKAGING CODE | | | | | | | |
| CC6- | First 4 digits are significant figures of resistance | B = 0.01 A = 0.1 0 = 1 1 = 10 | A = 0.05 B = 0.1 C = 0.25 D = 0.5 F = 1.0 G = 2.0 J = 5.0 K = 10.0 | E = ± 25 C = ± 50 K = ± 100 | E = Edg S = Std U = Usr | G = Au S = SnPb A = Al T = Lead (Pb)-free (e1) | G = Au N = None | H = Class H K = Class K | WS = Waffle pack 100 min., 1 mult TS = Tape and reel 100 min., 1 mult | | | | | | | |



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