

Metal Film Resistors, Industrial, ± 1 % Tolerance



FEATURES

- Dual power rating:
 $P_{70} = 0.25 \text{ W}$ with 0.5 % stability
 $P_{70} = 0.50 \text{ W}$ with 1.0 % stability
- Temperature coefficient: $\pm 100 \text{ ppm/K}$
- Superior electrical performance
- Flame retardant epoxy conformal coating (red brown color)
- Standard 5 band color code marking for ease of identification after mounting
- Tape and reel packaging for automatic insertion (52.4 mm inside tape spacing per EIA-296-E)
- Lead (Pb)-free solder contacts
- Pure tin plating provides compatibility with lead (Pb)-free and lead containing soldering processes
- Compliant to RoHS directive 2002/95/EC



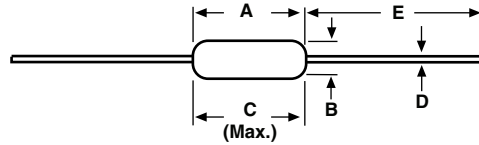
RoHS
COMPLIANT

| STANDARD ELECTRICAL SPECIFICATIONS | | | | | | |
|------------------------------------|------------------------------------|--|-------------------------------------|----------------|---------------------------------|----------|
| PRODUCT | RATED DISSIPATION P_{70} W | LIMITING ELEMENT VOLTAGE MAX. V_{\equiv} | TEMPERATURE COEFFICIENT ppm/K | TOLERANCE % | RESISTANCE RANGE Ω | E-SERIES |
| CCF55 | 0.25/0.5 | 250 | ± 100 | ± 1 | 10 Ω to 3.01 M Ω | E96 |

| TECHNICAL SPECIFICATIONS | | |
|------------------------------------|--------------------|----------------|
| PARAMETER | UNIT | CCF55 |
| Rated Dissipation, P_{70} | W | 0.25/0.5 |
| Maximum Working Voltage, U_{max} | V_{\equiv} | ≤ 250 |
| Insulation Voltage (1 Min) | V_{eff} | 500 |
| Dielectric Strength | V_{AC} | 450 |
| Insulation Resistance | Ω | $\geq 10^{11}$ |
| Operating Temperature Range | $^{\circ}\text{C}$ | - 65 to + 165 |
| Terminal Strength (Pull Test) | lb | 2 |
| Weight | g | 0.35 max. |

| PART NUMBER AND PRODUCT DESCRIPTION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|----------------|-------------------------|---|---|---|---|---|---|---|---|---|---|--|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|
| Part Number: CCF55301RFKE36 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1" style="width:100%; text-align:center;"> <tr> <td>C</td><td>C</td><td>F</td><td>5</td><td>5</td><td>3</td><td>0</td><td>1</td><td>R</td><td>F</td><td>K</td><td>E</td><td>3</td><td>6</td><td></td><td></td><td></td> </tr> </table> | | | | | | | | | | | | | | | | | C | C | F | 5 | 5 | 3 | 0 | 1 | R | F | K | E | 3 | 6 | | | |
| C | C | F | 5 | 5 | 3 | 0 | 1 | R | F | K | E | 3 | 6 | | | | | | | | | | | | | | | | | | | | |
| PRODUCT | RESISTANCE VALUE | TOLERANCE CODE | TEMPERATURE COEFFICIENT | PACKAGING | SPECIAL | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCF55 | R = Decimal K = Thousand M = Million 10R0 = 10 Ω 680K = 680 k Ω 1M00 = 1.0 M Ω | F = $\pm 1 \%$ | K = 100 ppm/K | E36 = Lead (Pb)-free CCF55 = T/R (5000 pieces) | Blank = Standard (dash number) (up to 3 digits) From 1 to 999 as applicable | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

DIMENSIONS in inches (millimeters)

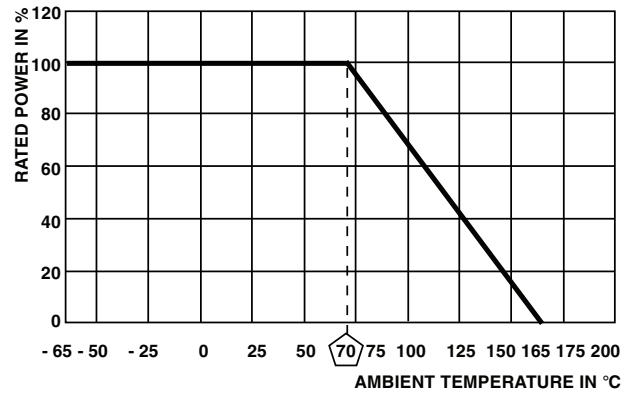


| PRODUCT | A | B | C (Max.) | D | E |
|---------|--|--|-----------------|--|---|
| CCF55 | 0.245 \pm 0.020 (6.22 \pm 0.51) | 0.090 \pm 0.008 (2.29 \pm 0.20) | 0.265 (6.73) | 0.023 \pm 0.002 (0.60 \pm 0.05) | 1.100 \pm 0.040 (27.94 \pm 1.02) |

RESISTANCE VALUES

Vishay CCF55 is available in the standard 96 resistance values per decade. Values are obtained from the following decade table by multiplying by powers of 10. As an example: 30.1 can represent 30.1 Ω , 301 Ω , 3.01 k Ω , 30.1 k Ω or 301 k Ω .

| | | | | | |
|------|------|------|------|------|------|
| 10.0 | 14.7 | 21.5 | 31.6 | 46.4 | 68.1 |
| 10.2 | 15.0 | 22.1 | 32.4 | 47.5 | 69.8 |
| 10.5 | 15.4 | 22.6 | 33.2 | 48.7 | 71.5 |
| 10.7 | 15.8 | 23.2 | 34.0 | 49.9 | 73.2 |
| 11.0 | 16.2 | 23.7 | 34.8 | 51.1 | 75.0 |
| 11.3 | 16.5 | 24.3 | 35.7 | 52.3 | 76.8 |
| 11.5 | 16.9 | 24.9 | 36.5 | 53.6 | 78.7 |
| 11.8 | 17.4 | 25.5 | 37.4 | 54.9 | 80.6 |
| 12.1 | 17.8 | 26.1 | 38.3 | 56.2 | 82.5 |
| 12.4 | 18.2 | 26.7 | 39.2 | 57.6 | 84.5 |
| 12.7 | 18.7 | 27.4 | 40.2 | 59.0 | 86.6 |
| 13.0 | 19.1 | 28.0 | 41.2 | 60.4 | 88.7 |
| 13.3 | 19.6 | 28.7 | 42.2 | 61.9 | 90.9 |
| 13.7 | 20.0 | 29.4 | 43.2 | 63.4 | 93.1 |
| 14.0 | 20.5 | 30.1 | 44.2 | 64.9 | 95.3 |
| 14.3 | 21.0 | 30.9 | 45.3 | 66.5 | 97.6 |



DERATING

MARKING

The nominal resistance and tolerance are marked on the resistor using five colored bands in accordance with IEC 60062, marking codes for resistors and capacitors.

PERFORMANCE

| RATED DISSIPATION, P_{70} | | |
|---------------------------------|--------------------|--------------------|
| CCF55 | 1/4 W | 1/2 W |
| TEST ⁽¹⁾ | MAXIMUM ΔR | MAXIMUM ΔR |
| Thermal Shock | $\pm 0.5\%$ | - |
| Short Time Overload | $\pm 0.5\%$ | - |
| Low Temperature Operation | $\pm 0.5\%$ | - |
| Moisture Resistance | $\pm 1.5\%$ | - |
| Resistance to Soldering Heat | $\pm 0.5\%$ | - |
| Shock/Bump | $\pm 0.5\%$ | - |
| Vibration | $\pm 0.5\%$ | - |
| Life | $\pm 0.5\%$ | $\pm 1.0\%$ |
| Terminal Strength | $\pm 0.2\%$ | - |
| Dielectric Withstanding Voltage | $\pm 0.5\%$ | - |

Note

⁽¹⁾ Test specifications as per IEC 60115-1



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