**CS Series**

**Features**

Easy replacement of vitreous enamel resistors with no cost increase and no performance loss. The whole assembly is coated with multi-layer silicone coating to give maximum wire protection form -55°C to +350°C. Performance improvement is obtained by close tolerance, very low temperature coefficient and excellent stability in operation under severe environmental conditions.

High level reliability due to ceramic core chemically inert and centerless ground for uniformity, selected wire element and completely welded construction terminal to terminal.

---

**Specifications**

**Electrical Specifications**

- **Ohmic Values**
  - E24 Series. For out of range or not standard ohmic values, consult ATE Technical Dept.
- **Tolerance**
  - Standard 5%. Available on request up to 1% (for values >R047).
- **Temperature Coefficient**
  - Typical values: ±100 to ±30 ppm from R10 to Rmax
  - Consult factory for special applications
- **Dielectric Strength**
  - 500 Vdc 2CS to 6CS
  - 700 Vdc 7CS to 12CS
- **Insulation Resistance**
  - 1000 MΩmin. 100 MΩmin after moisture test
- **Sovraccarico**
  - 5s at 10 times rated power
  - 5s at 5 times rated power 2CS and 3CS
- **Non Inductive**
  - Models of equivalent physical and electrical specifications are also available with non-inductive Ayrton-Perry winding

**Mechanical Specifications**

- **Terminal Strength**
  - 10 lb. pull test.
- **Solderability**
  - Continuous, satisfactory coverage when tested in accordance to MIL-PRF-26 H.

**Materials**

- **Core**
  - Ceramic steatite or alumina centerless ground
- **Resistive Element**
  - Copper-nickel alloy or nickel-chrome alloy with specific temperature coefficient
- **End Caps**
  - Stainless steel
- **Coating**
  - Special high temperature silicone
- **Standard Terminals**
  - LF tinned copper or LF tinned copperweld
  - Point of measure: L + 20mm

**Derating**

These resistors can be used in a temperature range form -55°C to +350°C. To use these components in applications with working temp. higher +25°C You have to make a power reduction with linear derating from nominal power to zero at 350°C.

---

**Wirewound Resistors Silicone Coated 2W to 15W**

**Specifications Table**

<table>
<thead>
<tr>
<th>Type</th>
<th>ATE Type</th>
<th>MIL PRF 26H Type</th>
<th>Rated Power (W)</th>
<th>Resistance Range (Ohm)</th>
<th>Voltage Limit (V)</th>
<th>Temperature Rise (°C/W)</th>
<th>Weight (g)</th>
<th>Dimensions (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2CS</td>
<td>RW69V</td>
<td>-</td>
<td>0.01 - 5K</td>
<td>130</td>
<td>91</td>
<td>1.2</td>
<td>5±0.5</td>
<td>12±0.8, 0.8</td>
</tr>
<tr>
<td>3CS</td>
<td>-</td>
<td>4</td>
<td>0.01 - 10K</td>
<td>200</td>
<td>74</td>
<td>1.8</td>
<td>6±0.5</td>
<td>13±0.8, 0.8</td>
</tr>
<tr>
<td>5CS</td>
<td>RW74U</td>
<td>6</td>
<td>0.01 - 24K</td>
<td>380</td>
<td>52</td>
<td>3.2</td>
<td>8±0.5</td>
<td>22±1.6, 0.8</td>
</tr>
<tr>
<td>6CS</td>
<td>RW67V</td>
<td>7</td>
<td>0.01 - 27K</td>
<td>435</td>
<td>45</td>
<td>3.8</td>
<td>8±0.5</td>
<td>25±1.6, 0.8</td>
</tr>
<tr>
<td>7CS</td>
<td>RW55V</td>
<td>10</td>
<td>0.01 - 47K</td>
<td>685</td>
<td>30</td>
<td>7</td>
<td>9.5±0.5</td>
<td>35±1.6, 0.9</td>
</tr>
<tr>
<td>10CS</td>
<td>RW68V</td>
<td>13</td>
<td>0.01 - 68K</td>
<td>940</td>
<td>24</td>
<td>9</td>
<td>9.5±0.5</td>
<td>46±1.6, 0.9</td>
</tr>
<tr>
<td>12CS</td>
<td>RW56V</td>
<td>15</td>
<td>0.01 - 82K</td>
<td>1100</td>
<td>21</td>
<td>10</td>
<td>9.5±0.5</td>
<td>57±1.6, 0.9</td>
</tr>
</tbody>
</table>

**Diagram**

![Diagram of wirewound resistor](image)