



# Type CHS High Resistance Thick Film Chip Resistors

- High Value Thick Film Resistance Element
- Resistance From 10MΩ to 1TΩ
- Tolerances to ± 1%
- TCR's to ± 25 ppm/°C
- Available Trimmed and Untrimmed
- Sizes; 0402, 0603, 0805, 1206, 1210, 2512, 4020



Riedon's new precision chip resistors use thick film resistance layers, and PtAg contact areas for soldering or conductive glueing. This ensures a highly stable and reliable resistor. Standard measuring voltage is 10V.

## SPECIFICATIONS

| CHS Size                                   |                         | 0402                                | 0603                | 0805                 | 1206                | 1210                 | 2512                 | 4020                    |
|--|-------------------------|-------------------------------------|---------------------|----------------------|---------------------|----------------------|----------------------|-------------------------|
| Power Rating (mW) <sup>(1)</sup>           |                         | 50                                  | 75                  | 125                  | 250                 | 350                  | 600                  | 800                     |
| Working Voltage <i>Trimmed (Untrimmed)</i> |                         | 30 (90)                             | 75 (200)            | 100 (300)            | 200 (600)           | 300 (900)            | 1000(2000)           | 4000(6000)              |
|  |                         | <b>TCR's Available ( ± ppm/°C )</b> |                     |                      |                     |                      |                      |                         |
| <b>Resistance</b>                          | <b>Tolerance (±%) *</b> | <b>VCR ( %/ V )</b>                 |                     |                      |                     |                      |                      |                         |
| 10M - 100M                                 | 0.5% to 20%             | 100, 250<br><0.2%/V                 | 100, 250<br><0.1%/V | 50, 100<br><0.05%/V  | 50, 100<br><0.05%/V | 50, 100<br><0.02%/V  | 50, 100<br><0.02%/V  | 25, 50, 100<br><0.01%/V |
| >100M - 1G                                 | 1% to 20%               | 250, 500<br><0.5%/V                 | 250, 500<br><0.2%/V | 250, 500<br><0.15%/V | 100, 250<br><0.1%/V | 100, 250<br><0.05%/V | 100, 250<br><0.02%/V | 25, 50, 100<br><0.01%/V |
| >1G - 10G                                  | 2% to 30%               | 1000,2000<br><1%/V                  | 500,1000<br><0.5%/V | 500,1000<br><0.5%/V  | 500,1000<br><0.2%/V | 250, 500<br><0.1%/V  | 250, 500<br><0.05%/V | 50, 100<br><0.02%/V     |
| >10G - 100G                                | 5% to 30%               | -                                   | 500,1000<br><1%/V   | 500,1000<br><1%/V    | 500,1000<br><0.5%/V | 250, 500<br><0.2%/V  | 250, 500<br><0.1%/V  | 100, 250<br><0.05%/V    |
| >100G - 1T                                 | 5% to 30%               | -                                   | -                   | 1000,2000<br><2%/V   | 1000,2000<br><1%/V  | 500,1000<br><0.5%/V  | 500,1000<br><0.2%/V  | 250, 500<br><0.1%/V     |

\* Not All Tolerances available in all package size & ohmic value combinations - Consult Factory

<sup>(1)</sup> mW @ 70°C, 0mW @ 125°C

**Temperature Range -** -55°C to 125°C

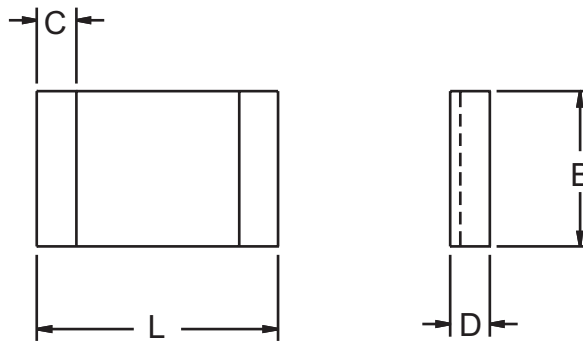
**Climatic Category -** 55/125/56

**Solderability -** 235°C, 5 Seconds

**Max. Soldering Temperature -** 260°C, 10 Seconds

| Long Term Stability     | < 100M $\Omega$ | 100M $\Omega$ - < 1G $\Omega$ | $\geq$ 1G $\Omega$ |
|-------------------------|-----------------|-------------------------------|--------------------|
| Storage 125°C / 1000h   | <1%             | <2%                           | <5%                |
| Maximum Voltage / 1000h | <0.5%           | <1%                           | <2%                |

**DIMENSIONS**



| Size           | L                       | B                      | D                      | C                     |
|----------------|-------------------------|------------------------|------------------------|-----------------------|
| <b>CHS0402</b> | 1.04 $\pm$ 0.05         | 0.5 $\pm$ 0.05         | 0.3 $\pm$ 0.05         | 0.1 $^{+0.1}_{-0.05}$ |
| <b>CHS0603</b> | 1.5 $^{+0.15}_{-0.05}$  | 0.8 $^{+0.15}_{-0.05}$ | 0.4 $^{+0.15}_{-0.05}$ | 0.2 $^{+0.2}_{-0.1}$  |
| <b>CHS0805</b> | 2.0 $^{+0.15}_{-0.05}$  | 1.2 $^{+0.15}_{-0.05}$ | 0.4 $^{+0.15}_{-0.05}$ | 0.3 $^{+0.2}_{-0.1}$  |
| <b>CHS1206</b> | 3.2 $^{+0.15}_{-0.05}$  | 1.5 $^{+0.15}_{-0.05}$ | 0.4 $^{+0.15}_{-0.05}$ | 0.3 $^{+0.2}_{-0.1}$  |
| <b>CHS1210</b> | 3.2 $^{+0.15}_{-0.05}$  | 2.5 $^{+0.20}_{-0.05}$ | 0.5 $^{+0.15}_{-0.05}$ | 0.8 $\pm$ 0.2         |
| <b>CHS2512</b> | 6.3 $^{+0.15}_{-0.05}$  | 3.5 $^{+0.20}_{-0.05}$ | 0.6 $^{+0.15}_{-0.05}$ | 0.9 $\pm$ 0.2         |
| <b>CHS4020</b> | 10.2 $^{+0.15}_{-0.05}$ | 5.1 $^{+0.20}_{-0.05}$ | 0.6 $^{+0.15}_{-0.05}$ | 1.0 $\pm$ 0.2         |

Units: mm per CECC40400

**Packaging:**

Bulk or Tape & Reel per IEC 286-3 / EIA 481-1-A

Tape width 8mm, Reel diameter 180 or 330mm  
 Minimum quantity Bulk, 100 pieces per value  
 Minimum quantity Tape & Reel, 1000 pieces per value

**Ordering information:**

Type/Size - Resistance - Tolerance - TCR - Packaging ( if not Bulk )

Example: **CHS2512 - 10G - 10 - 250 - Tape**  
 ( Note: if no TCR is specified, the highest value will be supplied )