



**THE DATASHEET OF
RCS1005F152CS**

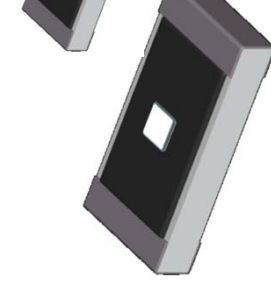


Anti-Sulfur Thick Film Chip Resistors

- 0603(0201), 1005(0402), 1608(0603), 2012(0805), 3216(1206), 3225(1210), 5025(2010), 6432(2512)

■ Features

- Small, thin and lightweight
- High reliability
- Stable in Sulfur Atmosphere (Anti-sulfur)
- Suitable size and package for surface mount assembly
- RoHS Compliant.



■ Part Number System

| RCS | |
|------|---------------------------|
| Type | Anti-Sulfur chip resistor |

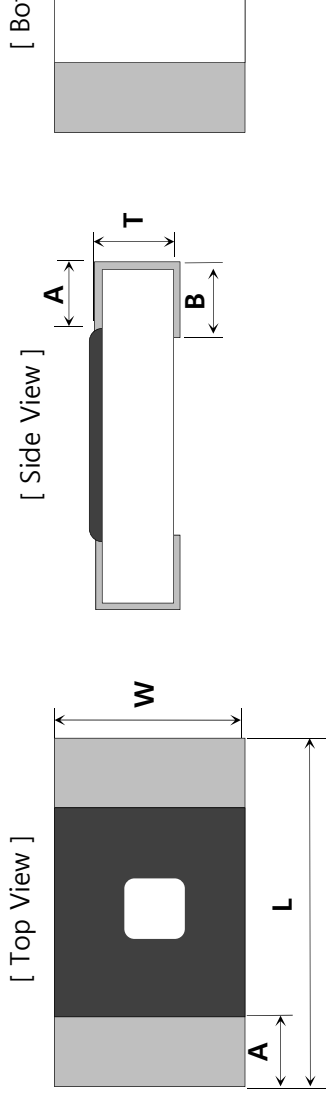
| 1005 | |
|------------------|------------------|
| Size : mm (inch) | |
| 0603 | 0.6×0.3mm (0201) |
| 1005 | 1.0×0.5mm (0402) |
| 1608 | 1.6×0.8mm (0603) |
| 2012 | 2.0×1.2mm (0805) |
| 3216 | 3.2×1.6mm (1206) |
| 3225 | 3.2×2.5mm (1210) |
| 5025 | 5.0×2.5mm (2010) |
| 6432 | 6.4×3.2mm (2512) |

| J | |
|-----------|-----|
| Tolerance | |
| F | ±1% |
| G | ±2% |
| J | ±5% |

* Jumper : 'J'

| 150 | |
|----------------------------------|--|
| Resistance Val | |
| - 3-digit coding S (E-24 series) | |
| - 4-digit coding S (E-96 series) | |
| - Jumper : '00' | |

■ Structure and Dimensions



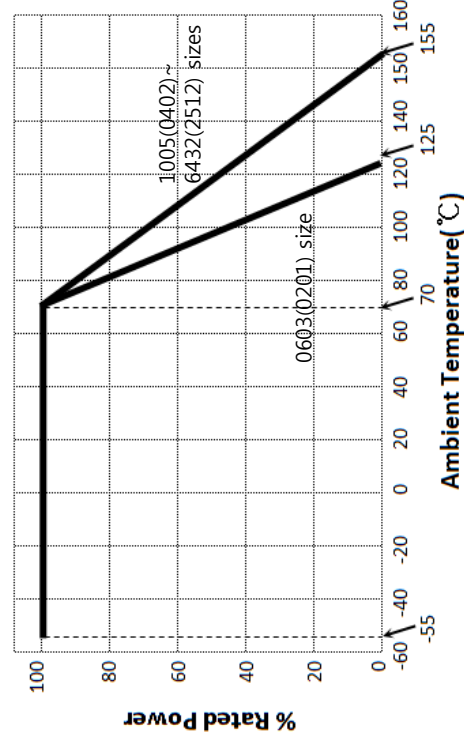
| Size(mil) | L | W | T | A |
|---------------|-----------|-----------|-----------|-----------|
| RCS0603(0201) | 0.60±0.03 | 0.30±0.03 | 0.23±0.03 | 0.15±0.05 |
| RCS1005(0402) | 1.00±0.05 | 0.50±0.05 | 0.35±0.05 | 0.20±0.10 |
| RCS1608(0603) | 1.60±0.10 | 0.80±0.10 | 0.45±0.10 | 0.30±0.20 |
| RCS2012(0805) | 2.00±0.20 | 1.25±0.15 | 0.55±0.10 | 0.40±0.20 |
| RCS3216(1206) | 3.20±0.20 | 1.60±0.15 | 0.55±0.10 | 0.45±0.20 |
| RCS3225(1210) | 3.20±0.20 | 2.55±0.20 | 0.55±0.10 | 0.45±0.20 |
| RCS5025(2010) | 5.00±0.20 | 2.50±0.20 | 0.55±0.10 | 0.60±0.20 |
| RCS6432(2512) | 6.30±0.20 | 3.20±0.20 | 0.55±0.10 | 0.60±0.20 |

■ Applications and Ratings

| Type | Size (mil) | Rated Power [W] | Rated Voltage [V] | Max Working Voltage [V] | Tolerance [%] | Resistance Range [Ω] | T.C. [ppm/°C] |
|---------|------------|-----------------|--|-------------------------|---------------------------|----------------------|---------------------|
| RCS0603 | 0201 | 1/20 | $\sqrt{P \times R}$ P : Rated Power(W) R : Resistance(Ω) | 25 | ±1(F) ±5(J) | 1 ~ 10M | 1~9.9Ω : 10~10MΩ |
| RCS1005 | 0402 | 1/16 | | 50 | ±0.5(D) ±1(F) ±5(J) | 1 ~ 10M | 1~9.9Ω : 10~10MΩ |
| RCS1608 | 0603 | 1/10 | | 50 | | | |
| RCS2012 | 0805 | 1/8 | | 150 | | | |
| RCS3216 | 1206 | 1/4 | | 200 | | | |
| RCS3225 | 1210 | 1/3 | | 200 | | | |
| RCS5025 | 2010 | 2/3 | | 200 | | | |
| RCS6432 | 2512 | 1 | | 200 | | | |

• Please contact our sales representatives or engineers for other specifications

■ Power Derating Curve



■ Jumper Ratings

| Type | Rated Current |
|------------------------------|---------------|
| 0603 | 0.5 |
| 1005, 1608 | 1 |
| 2012, 3216, 3225, 5025, 6432 | 2 |

■ Rated Voltage

$$V = \sqrt{P \times R}$$

E : Rated Voltage
 P : Rated Power
 R : Resistance

■ Standard Soldering Pad Dimensions



| Size (mil) | Reflow Soldering | | |
|---------------|------------------|------|--------|
| | A | B | 2A + B |
| RCS0603(0201) | 0.37 | 0.28 | 1.02 |
| RCS1005(0402) | 0.60 | 0.50 | 1.70 |
| RCS1608(0603) | 0.80 | 0.80 | 2.40 |
| RCS2012(0805) | 0.90 | 1.40 | 3.20 |
| RCS3216(1206) | 1.30 | 1.80 | 4.40 |
| RCS3225(1210) | 1.30 | 1.80 | 4.40 |
| RCS5025(2010) | 1.40 | 3.30 | 6.10 |
| RCS6432(2512) | 1.40 | 4.60 | 7.40 |

■ Performance Characteristics

| ITEM | Requirements Specification | Test (JIS) |
|---------------------------|----------------------------------|--|
| Resistance | Within the specified tolerance | JIS C 5201-1 4.5 |
| Temp. Characteristic | Within the specified T.C.R | JIS C 5201-1 4.8 +20°C → -55°C / + |
| Short time Overload | $\Delta R < \pm 1\% + 0.1\Omega$ | JIS C 5201-1 4.13 Rated Voltage $\times 2.5$ |
| Solderability | Immersed over 95% | JIS C 5201-1 4.17 Rosin Ethanol (25% 245+5/-0°C, 2 \pm 0.5 |
| Resistance to Solder Heat | $\Delta R < \pm 1\% + 0.1\Omega$ | JIS C 5201-1 4.18 260 \pm 5°C, 10 \pm 1 sec |
| Temp. Cycle | $\Delta R < \pm 1\% + 0.1\Omega$ | JIS C 5201-1 4.19 -55°C ↔ +125°C, 1 |
| Moisture Resistance | $\Delta R < \pm 3\% + 0.1\Omega$ | JIS C 5201-1 4.24 40 \pm 2°C, 90~95%RH |
| Load Life | $\Delta R < \pm 3\% + 0.1\Omega$ | JIS C 5201-1 4.25 Rated Voltage, 70 \pm 90mins ON, 30min |
| High Temp. Exposure | $\Delta R < \pm 3\% + 0.1\Omega$ | JIS C 5201-1 4.25.3 155 \pm 2°C, 1,000 ^{+48h} |
| Flower of Sulfur (FOS) | $\Delta R < \pm 1\% + 0.1\Omega$ | 105°C, FoS, 720 ^{+2h} |

※ The reliability test condition can be replaced by the corresponding accelerated test condition.

 Product specifications included in the specifications are effective as of March 01, 2015.

Please be advised that they are standard product specifications for reference only.

We may change, modify or discontinue the product specifications without notice at any time.



So, you need to approve the product specifications before placing an order.

Should you have any question regarding the product specifications,

please contact our sales personnel or application engineers.

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