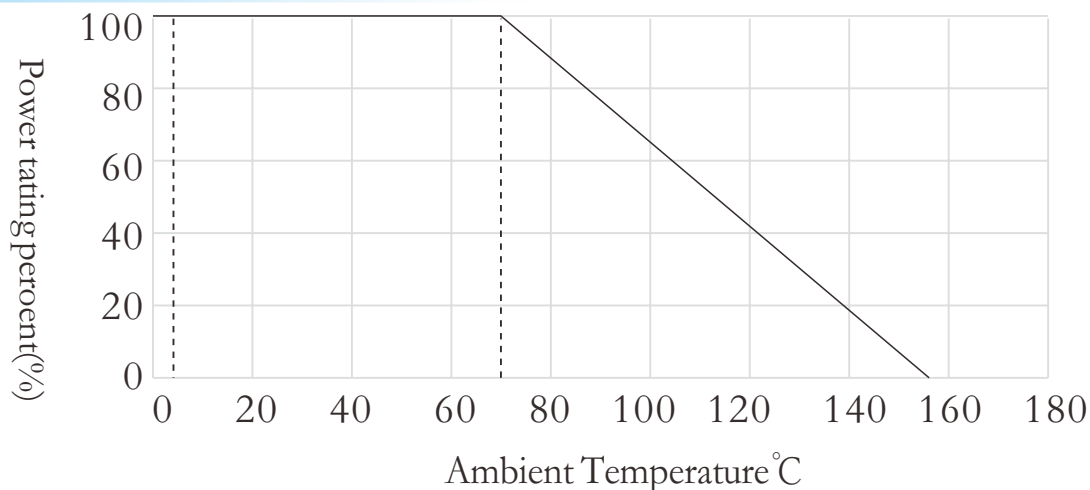


Derating Curve



Standard Electrical Specifications

| Item Type | Power Rating at 70°C | Operating Temp. Range | Max. Operating Voltage | Max. Overload Voltage | Resistance Range | | | | | TCR (PPM/°C) |
|-----------|----------------------|-----------------------|------------------------|-----------------------|------------------|---------|-----------|------------|------|--------------|
| | | | | | ± 0.1% | ± 0.25% | ± 0.5% | ± 1% | ± 5% | |
| 0102 | 1/8W | -55~+55°C | 150V | 300V | 100Ω~56KΩ | | | | | ± 15 |
| | | | | | 100Ω~100KΩ | | | | | ± 25 |
| | | | | | - | | 1Ω~1MΩ | | | ± 50 |
| | | | | | - | | | 0.22Ω~2MΩ | | ± 100 |
| 0204 | 1/4W | -55~+55°C | 200V | 400V | 10Ω~20KΩ | | | | | ± 10 |
| | | | | | 10Ω~300KΩ | | | | | ± 15 |
| | | | | | 10Ω~1MΩ | | | 10Ω~4.7MΩ | | ± 25 |
| | | | | | 10Ω~1MΩ | 10Ω~1MΩ | 0.2Ω~10MΩ | | | ± 50 |
| | | | | | - | | | 0.1Ω~10MΩ | | ± 100 |
| | | | | | 0Ω(<15mΩ) | | | | | - |
| 0207 | 1/2W | -55~+55°C | 300V | 500V | 10Ω~20KΩ) | | | | | ± 10 |
| | | | | | 10Ω~300KΩ) | | | | | ± 15 |
| | | | | | 10Ω~1MΩ) | | | 10Ω~4.7MΩ) | | ± 25 |
| | | | | | 10Ω~1MΩ | 1Ω~1MΩ) | 0.2Ω~10MΩ | | | ± 50 |
| | | | | | - | | | 0.1Ω~10MΩ | | ± 100 |
| | | | | | 0Ω(<15mΩ) | | | | | - |
| | Jumper:2A | | | | 0Ω(<15mΩ) | | | | | - |

High Power Rating Electrical Specifications

| Item Type | Power Rating at 70°C | Operating Temp. Range | Max. Operating Voltage | Max. Overload Voltage | Resistance Range | | | | | TCR (PPM/°C) |
|-----------|----------------------|-----------------------|------------------------|-----------------------|------------------|---------|-----------|-----------|------|--------------|
| | | | | | ± 0.1% | ± 0.25% | ± 0.5% | ± 1% | ± 5% | |
| 0102 | 1/5W | -55~+55°C | 200V | 400V | 100Ω~56KΩ | | | | | ± 15 |
| | | | | | 100Ω~100KΩ | | | | | ± 25 |
| | | | | | - | | 1Ω~1MΩ | | | ± 50 |
| | | | | | - | | | 0.5Ω~2MΩ | | ± 100 |
| 0204 | 2/5W | -55~+55°C | 200V | 400V | 10Ω~100KΩ | | | | | ± 15 |
| | | | | | 10Ω~1MΩ | | | | | ± 25 |
| | | | | | 10Ω~1MΩ | 10Ω~1MΩ | 0.2Ω~10MΩ | | | ± 50 |
| | | | | | - | | | 0.1Ω~10MΩ | | ± 100 |
| 0207 | 1W | -55~+55°C | 350V | 700V | 10Ω~100KΩ | | | | | ± 15 |
| | | | | | 10Ω~1MΩ | | | | | ± 25 |
| | | | | | 10Ω~1MΩ | 1Ω~1MΩ) | 0.2Ω~10MΩ | | | ± 50 |
| | | | | | - | | | 0.1Ω~10MΩ | | ± 100 |

Environmental Characteristics

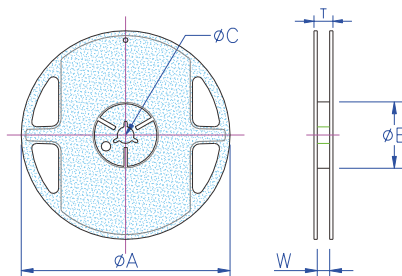
| Item | Requirement | Test Method |
|--|--|---|
| Temperature Coefficient of Resistance (T.C.R.) | As Spec. | -55°C ~ +125°C, 25°C is the reference temperature |
| Short Time Overload | 0204/0207: $\pm (0.15\% + 0.05\Omega)$ 0102: $\pm (0.5\% + 0.05\Omega)$ | RCWV*2.5 or Max. overload voltage for 5 seconds |
| Insulation Resistance | $\geq 10G$ | Max. overload voltage for 1 minute |
| Endurance | 0204/0207: $\pm (0.5\% + 0.05\Omega)$ 0102: $\pm (1.5\% + 0.05\Omega)$ | 70 \pm 2°C, Max. working voltage for 1000 hrs with 1.5 hrs "ON" and 0.5 hrs "OFF" |
| Damp Heat with Load | 0204/0207: $\pm (1.0\% + 0.05\Omega)$ 0102: $\pm (1.5\% + 0.05\Omega)$ | 40 \pm 2°C, 90~95% R.H. Max. working voltage for 1000 hrs with 1.5 hrs "ON" and 0.5 hrs "OFF" |
| Dry Heat | 0204/0207: $\pm (1.0\% + 0.05\Omega)$ 0102: $\pm (1.5\% + 0.05\Omega)$ | at +155°C for 1000 hrs |
| Bending Strength | $\pm (0.5\% + 0.05\Omega)$ | Bending once for 5 seconds with 2mm |
| Solderability | 95% min. coverage | 245 \pm 5°C for 3 seconds |
| Resistance to Soldering Heat | $\pm (0.5\% + 0.05\Omega)$ | 260 \pm 5°C for 10 seconds |
| Voltage Proof | No breakdown or flashover | 1.42 times RCWV (RMS) for 1 minute |
| Leaching | Individual leaching area $\leq 5\%$ Total leaching area $\leq 10\%$ | 260 \pm 5°C for 30 seconds |
| Rapid Change of Temperature | $\pm (0.5\% + 0.05\Omega)$ | -55°C to +125°C, 5 cycles |

- Reference Standards: IEC 60115-1; JIS-C 5201-1
 - Storage Temperature: 25 \pm 3°C; Humidity < 80%RH

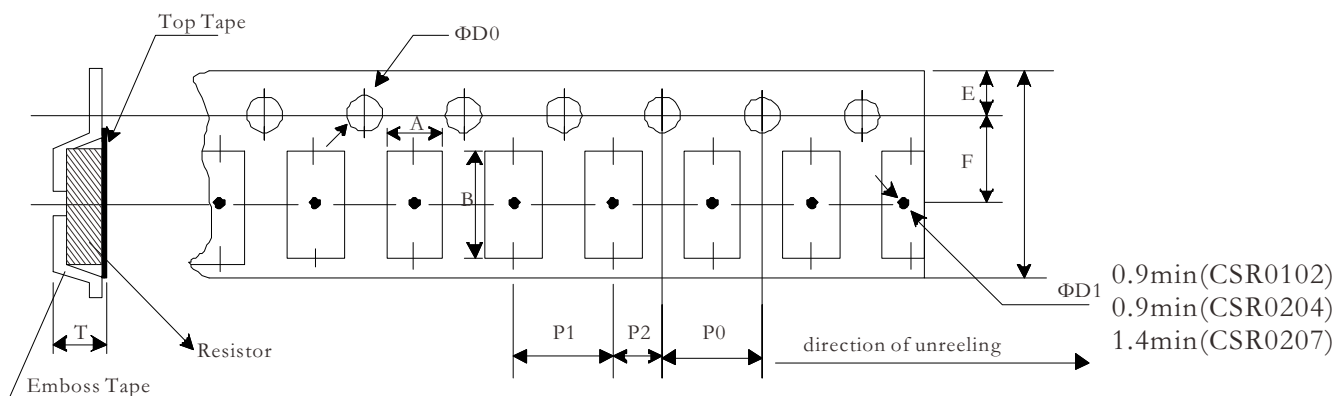
Packaging

Packaging Quantity & Reel Specifications

| Type | ΦA | ΦB | ΦC | W | T | Emboss Plastic Tape (EA) |
|---------|-----------------|----------------|----------------|----------------|----------------|--------------------------|
| CSR0102 | 178.5 \pm 1.5 | 60.0 \pm 1.0 | 13.0 \pm 0.2 | 9.0 \pm 0.5 | 12.5 \pm 0.5 | 3000 |
| CSR0204 | 178.5 \pm 1.5 | 60.0 \pm 1.0 | 13.0 \pm 0.2 | 9.0 \pm 0.5 | 12.5 \pm 0.5 | 3000 |
| CSR0207 | 178.5 \pm 1.5 | 60.0 \pm 1.0 | 13.0 \pm 0.2 | 13.0 \pm 0.5 | 15.5 \pm 0.5 | 2000 |



Emboss Plastic Tape Specifications



Unit: mm

| Type | A | B | W | E | F | P0 | P1 | P2 | $\Phi D0$ | T |
|---------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| CSR0102 | 1.45 \pm 0.10 | 2.25 \pm 0.10 | 8.0 \pm 0.10 | 1.75 \pm 0.10 | 3.50 \pm 0.05 | 4.00 \pm 0.10 | 4.00 \pm 0.10 | 2.00 \pm 0.05 | 1.50 \pm 0.10 | 1.70 \pm 0.10 |
| CSR0204 | 1.60 \pm 0.10 | 3.70 \pm 0.10 | 8.0 \pm 0.10 | 1.75 \pm 0.10 | 3.50 \pm 0.05 | 4.00 \pm 0.10 | 4.00 \pm 0.10 | 2.00 \pm 0.05 | 1.50 \pm 0.10 | 1.87 \pm 0.10 |
| CSR0207 | 2.40 \pm 0.10 | 6.05 \pm 0.10 | 12.0 \pm 0.10 | 1.75 \pm 0.10 | 5.50 \pm 0.05 | 4.00 \pm 0.10 | 4.00 \pm 0.10 | 2.00 \pm 0.05 | 1.50 \pm 0.10 | 2.80 \pm 0.10 |