

JR Series

High Power Jumper Chip

The Ohmite JR series high current jumpers are rated up to 100 amps and provides a max resistance range of 0.5m to 0.2m ohms. This minimizes effects on the designed circuit. Five industry sizes are available. The JR series also provides great insulation resistance over 100M ohms.



SERIES SPECIFICATIONS

| Series | Max. Res. (mΩ) | Max. Current (A) | Loading** |
|-------------|----------------|------------------|-----------|
| JR0201X08E | 1.0 | 8 | 0.064W |
| JR0402X20E | 0.5 | 20 | 0.2W |
| JR0603X26E | 0.2 | 26 | 0.135W |
| JR0805X35E | 0.2 | 35 | 0.245W |
| JR1206X40E | 0.2 | 40 | 0.32W |
| JR2512X100E | ≤0.2 | 100 | 2W |

**based on specific pad layout specific current

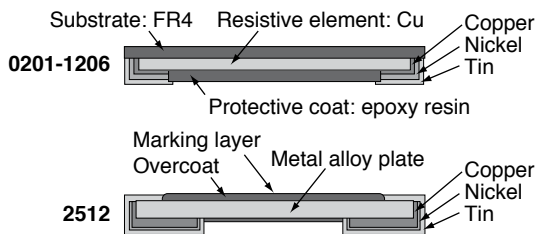
FEATURES

- Six standard sizes - 0201 through 2512
- Max resistance below 0.2m ohms
- Max current handling of 100 amps
- Max derating temperature of 170°C (2512)

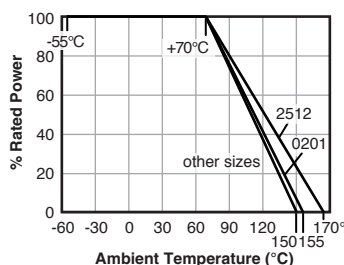
CHARACTERISTICS

| | |
|-------------------|---|
| Insulation res. | 100MΩ |
| Rated amb. temp. | 70°C |
| Oper. temp. range | -55°C~150°C; 2512: -55 +170°C |
| Jumper material | Cu |
| Storage | Temperature : 25±5°C Humidity : 60±20% Airtight in temp. 10°C~40°C, relative humidity 75% can store 2 years. Without dew in temp. 10°C~60°C, relative humidity 95% max. value for 30 days. |

Construction



Derating



PERFORMANCE

0201, 0402, 0603, 0805, 1206

| Test | Procedure | Requirement |
|---------------------------|--|--------------|
| High Temp. Exposure | T = +150 ±2°C; t = 1000h; IEC60115-1 4.25 | <Rmax |
| Low Temp. Storage | T = -55±2°C; t = 1000h; IEC60115-1 4.25 | <Rmax |
| Moisture Load Life | (60°C, 95%RH) Vtest = Vmax; T=60±2°C; RH=95%; t= 90min ON, 30min OFF, 1000h; IEC60115-1 4.25 | <Rmax |
| Thermal Shock | -55°C 30min.; R.T. 3min.; +150°C 30min.; R.T. 3min); 100Cycles; IEC60115-1 4.19 | <Rmax |
| Load Life at 70°C | Vtest = Vmax; T=70 ±2°C; t= 90min ON, 30min OFF, 1000h; IEC60115-1 4.25 | <Rmax |
| Solderability | Dip into solder at T = 245±5°C, t = 3 ±0.5 sec.; IEC60115-1 4.17 | 95% coverage |
| Resistance to Solder Heat | Through Reflow; T= 275 ±5°C, t =20 ±1sec.; IEC60115-1 4.18 | <Rmax |

2512

| Test | Procedure | Requirement |
|----------------------|--|--------------|
| Short time over-load | 4x rated power, 5 sec.; JIS C 5201-1 4.13 | ≤0.2mΩ |
| Temp. cycling | -55°C to 150°C, 1000 cy., 15 min. at each extreme; JIS C 5201-1 4.23.2 | ≤0.2mΩ |
| High Temp. Exposure | 1000 hrs. at 170°C | ≤0.2mΩ |
| Bias humidity | 1000 hrs. at 85°C/85%RH, 10% bias 1.5 hrs. on, 0.5 hrs. off; JIS C 5201-1 4.24 | ≤0.2mΩ |
| Load at rated power | 1000 hrs. at 70°C, 1.5 hrs. on, 0.5 hrs. off; JIS C 5201-1 4.25 | ≤0.2mΩ |
| Solderability | 245 ±5°C, 2 ±0.5 sec.; JIS C 5201-1 4.17 | 95% coverage |

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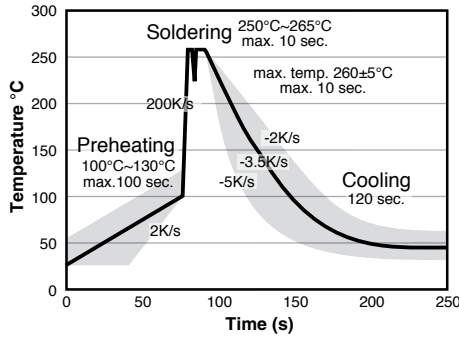
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SOLDERING

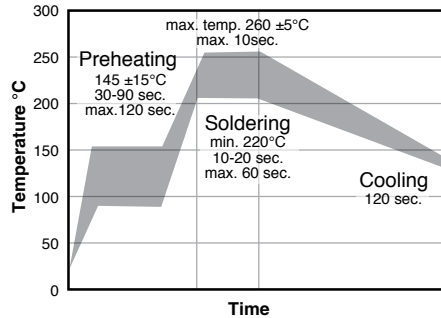
Wave Soldering

Preheating : 100~130°C, max.100 sec.
Soldering: 250~265°C max. 10 sec.
Max. temp.: 260 ±5°C, max. 10 sec.



Reflow Soldering

Preheating: 145 ±15°C, max.120 sec.
Soldering: min. 220°C, max. 60 sec.
Max. temp.: 260±5°C, max. 10sec.

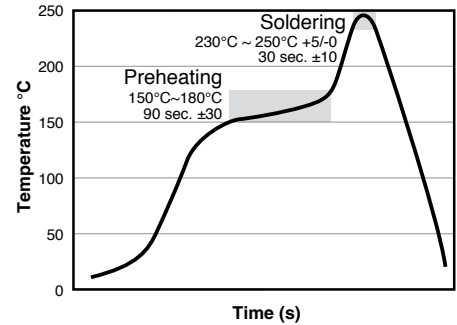


Rework temperature: (hot air equipment) 350°C, 3~5 seconds

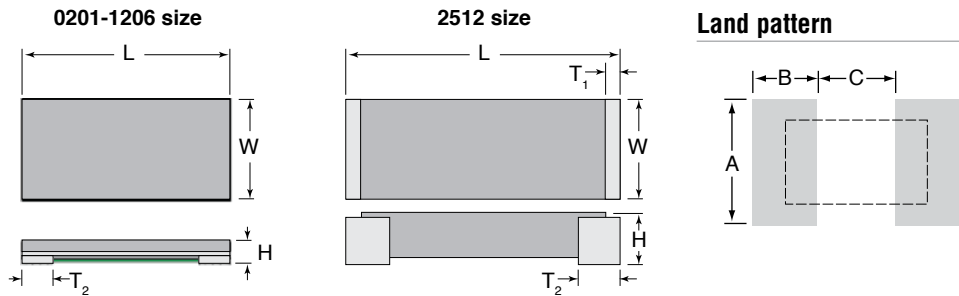
Recommended reflow methods: IR, vapor phase oven, hot air oven. If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

Reflow Soldering: 2512 Size

Preheating: 150°~180°C, max.120 sec.
Soldering: min. 230°C, max. 40 sec.
Max. temp.: 250±5°C, max. 10sec.



DIMENSIONS



| Type | W | L | H | T1 | T2 | A | B | C |
|-------------|------------|------------|------------|----------|------------|------|------|------|
| JR0201X08E | 0.30 ±0.04 | 0.60 ±0.03 | 0.25 ±0.10 | - | 0.15 ±0.06 | 0.33 | 0.20 | 0.25 |
| JR0402X20E | 0.50 ±0.20 | 1.00 ±0.20 | 0.35 ±0.20 | - | 0.20 ±0.15 | 0.60 | 0.60 | 0.40 |
| JR0603X26E | 0.80 ±0.20 | 1.60 ±0.20 | 0.35 ±0.20 | - | 0.35 ±0.20 | 0.92 | 1.30 | 0.60 |
| JR0805X35E | 1.25 ±0.20 | 2.00 ±0.20 | 0.35 ±0.20 | - | 0.35 ±0.20 | 1.44 | 1.40 | 0.80 |
| JR1206X40E | 1.60 ±0.20 | 3.20 ±0.20 | 0.50 ±0.20 | - | 0.50 ±0.20 | 1.84 | 1.80 | 1.20 |
| JR2512X100E | 3.05 ±0.25 | 6.35 ±0.25 | 0.67 ±0.25 | 0 ~ 0.20 | 1.10 ±0.25 | 3.68 | 2.11 | 3.18 |

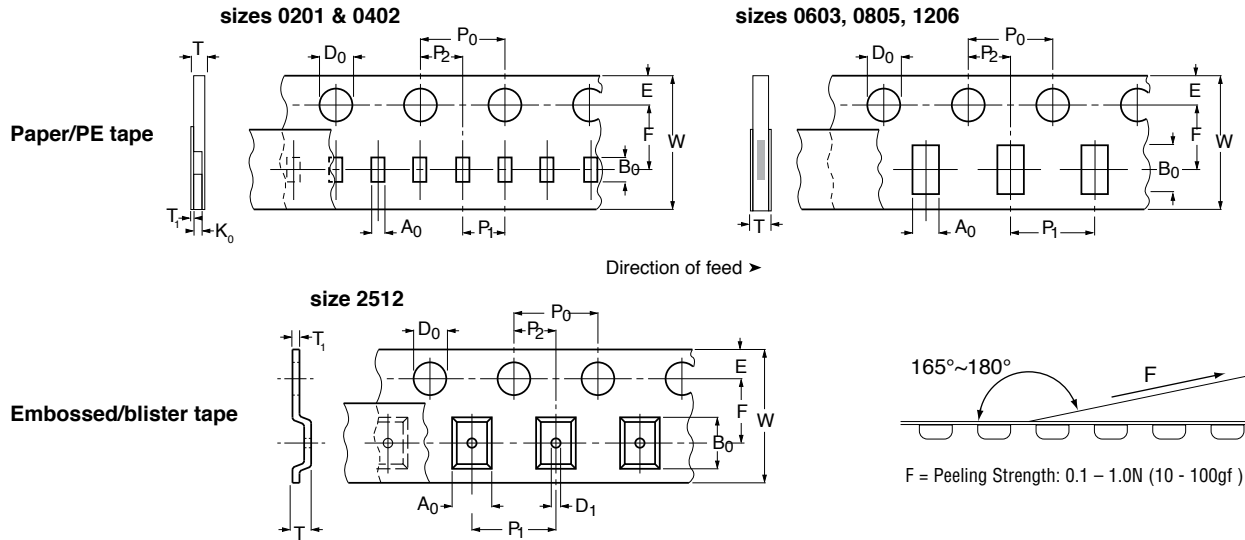
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JR Series

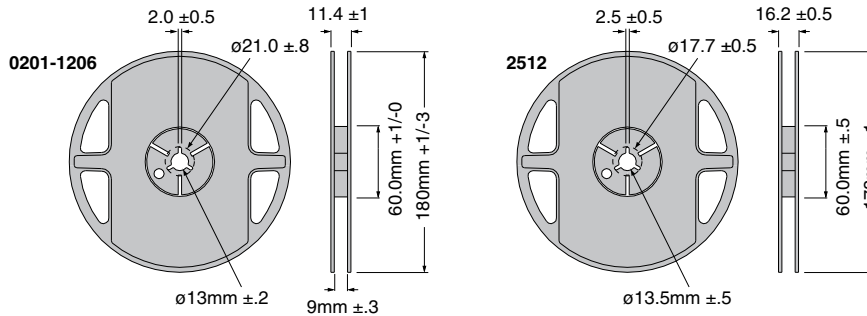
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TAPE AND REEL

(mm)



| Size | W | P0 | P | P2 | A0 | B0 | D0 | D1 | F | E | T | T1 | K0 |
|------|-----------|-----------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|-----------|-----------|
| 0201 | 8.00 ±.30 | 4.00 ±.10 | 2.00 ±.10 | 2.00 ±.10 | 0.38 ±.10 | 0.68 ±.10 | 1.50 ±.10 | - | 3.50 ±.10 | 1.75 ±.10 | 0.45 ±.05 | Max. 0.1 | 0.30 ±.05 |
| 0402 | 8.00 ±.30 | 4.00 ±.10 | 2.00 ±.10 | 2.00 ±.10 | 0.75 ±.20 | 1.25 ±.20 | 1.50 ±.10 | - | 3.50 ±.10 | 1.75 ±.10 | 0.50 ±.05 | Max. 0.1 | 0.40 ±.05 |
| 0603 | 8.00 ±.30 | 4.00 ±.10 | 4.00 ±.10 | 2.00 ±.10 | 1.18 ±.20 | 1.98 ±.20 | 1.50 ±.10 | - | 3.50 ±.10 | 1.75 ±.10 | 0.58 ±.10 | - | - |
| 0805 | 8.00 ±.30 | 4.00 ±.10 | 4.00 ±.10 | 2.00 ±.10 | 1.55 ±.20 | 2.30 ±.20 | 1.50 ±.10 | - | 3.50 ±.10 | 1.75 ±.10 | 0.58 ±.20 | - | - |
| 1206 | 8.00 ±.30 | 4.00 ±.10 | 4.00 ±.10 | 2.00 ±.10 | 2.05 ±.20 | 3.65 ±.20 | 1.50 ±.10 | - | 3.50 ±.10 | 1.75 ±.10 | 0.75 ±.20 | - | - |
| 2512 | 12.0 ±.30 | 4.00 ±.10 | 4.00 ±.10 | 2.00 ±.10 | 3.50 ±.10 | 6.75 ±.10 | 1.50 +1/-0 | 1.55 ±.10 | 5.5 ±.10 | 17.5 ±.10 | 0.90 ±.10 | 0.20 ±.05 | - |



| Size | qty/reel | weight per 1K pc. (g) |
|------|----------|-----------------------|
| 0201 | 10,000 | 100 ±.30 |
| 0402 | 10,000 | 100 ±.30 |
| 0603 | 5,000 | 140 ±.30 |
| 0805 | 5,000 | 160 ±.30 |
| 1206 | 5,000 | 180 ±.30 |
| 2512 | 4,000 | 210 ±.30 |

ORDERING INFORMATION

J R 0 6 0 3 X 2 6 E

Series Size Modifier Current Rating RoHS Compliant

| Part No. | Max. Res. (mΩ) | Max. Current (A) |
|-------------|----------------|------------------|
| JR0201X08E | 1.0 | 8 |
| JR0402X20E | 0.5 | 20 |
| JR0603X26E | 0.2 | 26 |
| JR0805X35E | 0.2 | 35 |
| JR1206X40E | 0.2 | 40 |
| JR2512X100E | ≤0.2 | 100 |