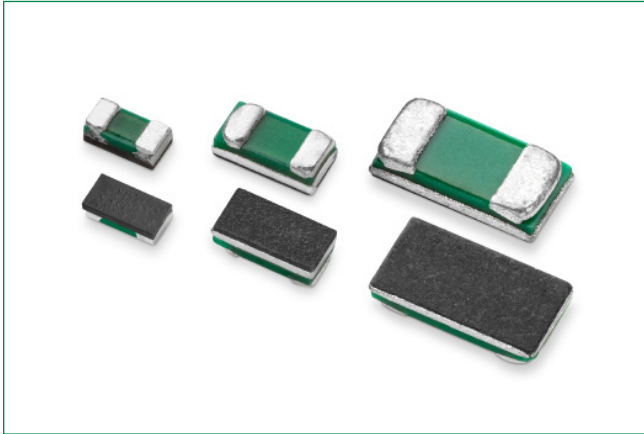


Surface Mount High Current Jumper

WJC Series

HF **RoHS** 

Description

Littelfuse WJC Series is a high-current metal foil jumper chip.

Features & Benefits

- Maximum resistance of 1 mΩ
- Maximum current of 40 A
- Epoxy substrate
- Small size
- High voltage

Application

- Power management
- Low ESL
- Server

Additional Information

[Resources](#)[Accessories](#)[Samples](#)

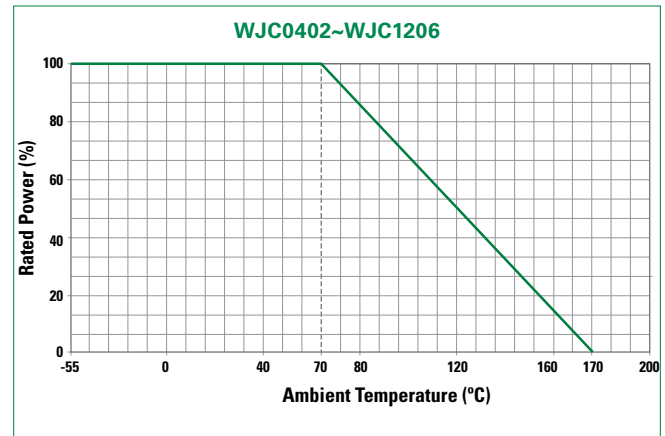
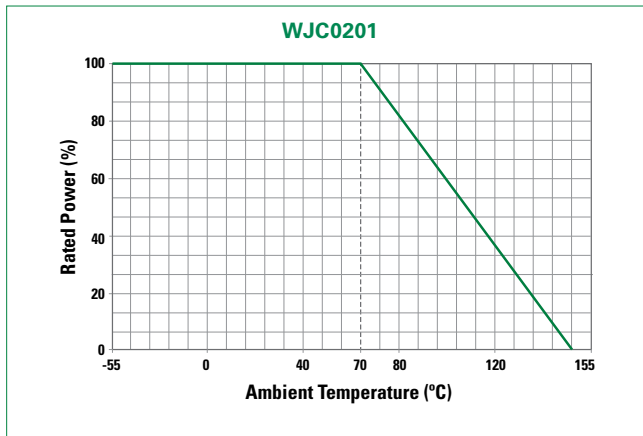
Electrical Specifications

| Part Number | Size | | Resistance Value Max (mΩ) | I _{max} (A) | Standard Package Quantity |
|-----------------|------|------|------------------------------|-------------------------|------------------------------|
| | Inch | mm | | | |
| WJC0201LJUMPFKR | 0201 | 603 | 1 | 8 | 10000 |
| WJC0402LJUMPFKR | 0402 | 1005 | 0.5 | 20 | 10000 |
| WJC0603LJUMPFNR | 0603 | 1608 | 0.2 | 26 | 5000 |
| WJC0805LJUMPFNR | 0805 | 2012 | 0.2 | 35 | 5000 |
| WJC1206LJUMPFNR | 1206 | 3216 | 0.2 | 40 | 5000 |

Surface Mount High Current Jumper

WJC Series

Temperature De-rating Curve



Storage / Environment Conditions

Products should be stored under the following environmental conditions.

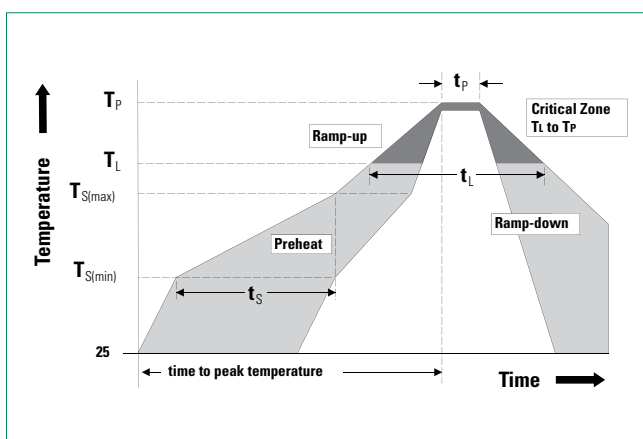
| | |
|------------------------------------|-----------------------------|
| Temperature: | +5 to +35 °C |
| Humidity: | 45 to 85% relative humidity |
| Moisture Sensitivity Level: | 1, J-STD-020 |

Do not keep products in environments where they may be subject to particulate contamination or harmful gases such as sulfuric acid or hydrogen chloride as it may cause oxidization on electrodes, resulting poor solderability.

Products should be stored in a space that does not expose to high temperatures, vibration, or direct sunlight.

Products should be stored in the original airtight packaging until use.

Soldering Parameters—Wave Soldering



| Profile Feature | Pb-Free Assembly |
|---|-----------------------|
| Average Ramp-Up Rate (T_{Smax} to T_P) | 3 °C / second max |
| Preheat | |
| Temperature Minimum (T_{Smin}) | 150 °C |
| Temperature Maximum (T_{Smax}) | 200 °C |
| Time (T_{Smin} to T_{Smax}) | 60–180 seconds |
| Time maintained above | |
| Temperature Minimum (T_L) | 217 °C |
| Time (t_L) | 60–150 seconds |
| Peak Temperature (T_P) | 260 +0 °C |
| Time within 5 °C of Actual Peak Temperature (t_P) | 20–40 seconds |
| Ramp-Down Rate | 6 °C / second Maximum |
| Time 25 °C to Peak Temperature | 8 minutes Maximum |

Surface Mount High Current Jumper

WJC Series

Reliability Specifications

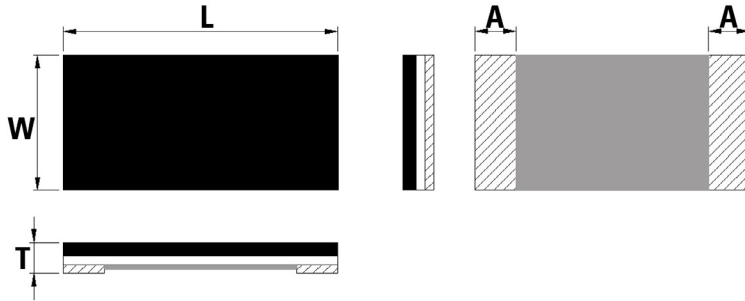
| Test | Procedure | Specifications |
|--------------------------------------|---|--|
| ESD | HBM, 100pF, 1.5k ohms Repetition: 5 times Component Classification: 5C (25KV) | ±1.0% Appearance: Without distinct damage, and the marking shall be legible. |
| Load Life (Operational Life) | Test Temperature: 125°C Applied voltage: rated power (derated Power will be required if temp exceeds the derating point of part) Test Period: 1,000 hours (condition D) | ±1.0% Appearance: Without distinct damage, and the marking shall be legible. |
| Biased Humidity | Test conditions: 85°C and 85% RH 10% of rated power Test Period 1,000 hours | ±1.0% Appearance: Without distinct damage, and the marking shall be legible. |
| Temp. Cycling (Thermal Shock) | Repeat 1,000 cycles as follows: -55°C for 30 minutes 125°C for 30 minutes Transition time of 1 minute max | ±1.0% Appearance: Without distinct damage, and the marking shall be legible. |
| High Temp. Exposure (Storage) | Test Temp 125°C Test Period: 1,000 hours No Electrical Load | ±1.0% Appearance: Without distinct damage, and the marking shall be legible. |
| Resistance to soldering heat | Condition B (Solder dip, no pre-heat) 260°C | ±1.0% Parts must meet initial electrical specs. |
| Resistance to Solvents | 3 minute soak 2-3 ounce force 10 strokes/repetition 3 repetitions | Appearance: Without distinct damage, and the marking shall be legible. |
| Terminal Strength (SMD) | Applied force based on part size | ±1.0% Appearance: Without distinct damage, and the marking shall be legible. |
| Flammability | UL-94 V-0 or V-1 are acceptable Electrical test not required | V-0 burning less than 10 seconds or V-1 burning less than 30 seconds |
| Flame Retardance | Mounted parts subjected to voltages from 9.0 to 32 VDC (current clamped up to 500A) | No Flame when full automotive battery potential is applied. |
| Vibration | Frequency: 10-2,000Hz Acceleration: 5G Test duration: 20 minutes, 12 cycles | ±1.0% Appearance: Without distinct damage, and the marking shall be legible. |
| Mechanical Shock | Force: 100G peak Test duration: 6 ms Half-sine waveform Velocity: 12.3ft/sec | ±1.0% Appearance: Without distinct damage, and the marking shall be legible. |
| Board Flex | 90 mm span between fulcrums 2 mm bend 60 seconds minimum holding time | ±1.0% Appearance: Without distinct damage, and the marking shall be legible. |
| Solderability | Non-activated flux dip: 5-10 seconds SAC solder dip: 5 seconds at 245°C | A new solder shall cover minimum of 95%. |

Surface Mount High Current Jumper

WJC Series

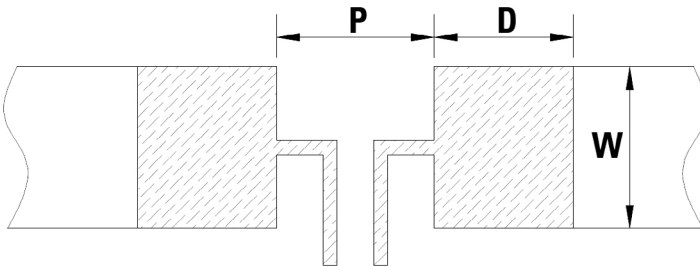
Dimensions

All dimensions in mm



| Part Number | W | L | T | A |
|-------------|-----------|-----------|-----------|-----------|
| WJC0201 | 0.30±0.04 | 0.60±0.03 | 0.25±0.10 | 0.15±0.06 |
| WJC0402 | 0.50±0.20 | 1.00±0.20 | 0.30±0.15 | 0.20±0.15 |
| WJC0603 | 0.80±0.20 | 1.60±0.20 | 0.35±0.20 | 0.35±0.20 |
| WJC0805 | 1.25±0.20 | 2.00±0.20 | 0.40±0.20 | 0.35±0.20 |
| WJC1206 | 1.60±0.20 | 3.20±0.20 | 0.40±0.20 | 0.50±0.20 |

Recommended Land Pattern



| Part Number | P | W | D | Loading |
|-------------|---------|---------|---------|---------|
| WJC0201 | 0.25 mm | 0.33 mm | 0.20 mm | 0.064 W |
| WJC0402 | 0.40 mm | 0.60 mm | 0.60 mm | 0.2 W |
| WJC0603 | 0.60 mm | 0.92 mm | 1.30 mm | 0.135 W |
| WJC0805 | 0.80 mm | 1.44 mm | 1.40 mm | 0.245 W |
| WJC1206 | 1.20 mm | 1.84 mm | 1.80 mm | 0.32 W |

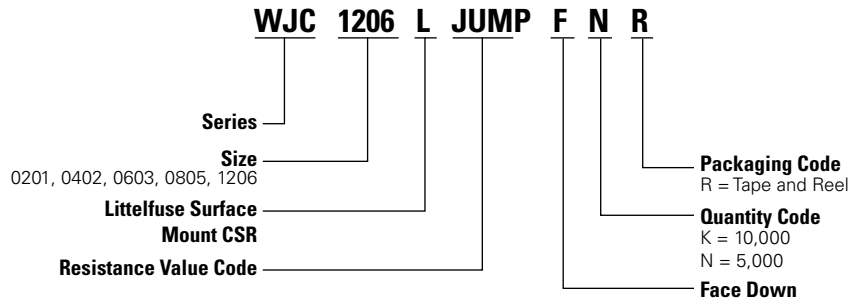
Packaging

| Part Number | Halogen Free | Packaging Option | Quantity | Quantity & Packaging Codes |
|-------------|--------------|------------------|----------|----------------------------|
| WJC0201 | Yes | Tape and Reel | 10000 | KR |
| WJC0402 | Yes | Tape and Reel | 10000 | KR |
| WJC0603 | Yes | Tape and Reel | 5000 | NR |
| WJC0805 | Yes | Tape and Reel | 5000 | NR |
| WJC1206 | Yes | Tape and Reel | 5000 | NR |

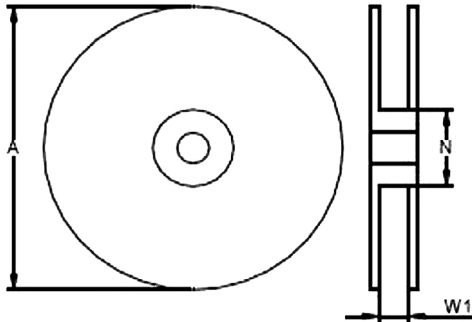
Surface Mount High Current Jumper

WJC Series

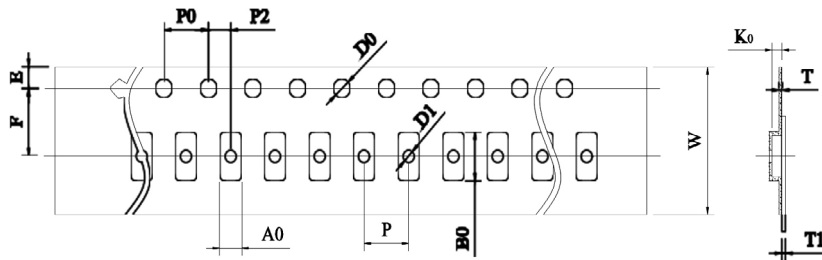
Part Numbering System



Tape and Reel Specifications



| Part Number | A±5 (mm) | N±2 (mm) | W1±1 (mm) |
|-------------|----------|----------|-----------|
| WJC | 178 | 60 | 9.0 |



| Part Number | W | P0 | P | P2 | A0 | B0 | D0 | F | E | T | T1 | K0 |
|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|-----------|
| WJC0201 | 8.00±0.20 | 4.00±0.10 | 2.00±0.10 | 2.00±0.10 | 0.38±0.10 | 0.68±0.10 | 1.50±0.10 | 3.50±0.10 | 1.75±0.10 | 0.45±0.05 | Max. 0.1 | 0.30±0.05 |
| WJC0402 | 8.00±0.30 | 4.00±0.10 | 2.00±0.10 | 2.00±0.10 | 0.65±0.10 | 1.10±0.10 | 1.50±0.10 | 3.50±0.10 | 1.75±0.10 | 0.42±0.05 | / | / |
| WJC0603 | 8.00±0.30 | 4.00±0.10 | 4.00±0.10 | 2.00±0.10 | 0.98±0.10 | 1.85±0.10 | 1.50±0.10 | 3.50±0.10 | 1.75±0.10 | 0.60±0.05 | / | / |
| WJC0805 | 8.00±0.30 | 4.00±0.10 | 4.00±0.10 | 2.00±0.10 | 1.55±0.10 | 2.30±0.10 | 1.50±0.10 | 3.50±0.10 | 1.75±0.10 | 0.60±0.10 | / | / |
| WJC1206 | 8.00±0.30 | 4.00±0.10 | 4.00±0.10 | 2.00±0.10 | 2.05±0.20 | 3.65±0.20 | 1.50±0.10 | 3.50±0.10 | 1.75±0.10 | 0.60±0.10 | / | / |

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