

Features:

- Robust all metal structure
- Low resistance values
- Higher current ratings than most jumpers
- RoHS compliant, REACH compliant, lead free, and halogen free
- Sizes 0402, 0603, and 0805 are AEC-Q200 compliant



Electrical Specifications			
Type/Code	Max. Rating Current (A)	Max Overload Current (A)	Max. Resistance (Ω)
MCJ0201	8	12	0.001
MCJ0402 ^(*)	20	31.62	0.0005
MCJ0603 ^(*)	26	41.07	0.0002
MCJ0805 ^(*)	70.7	141.4	0.0002
MCJ1206	70.7	141.4	0.0002
MCJ2512	122	244.0	0.0002

(*) Sizes 0402, 0603, and 0805 are AEC-Q200 compliant.

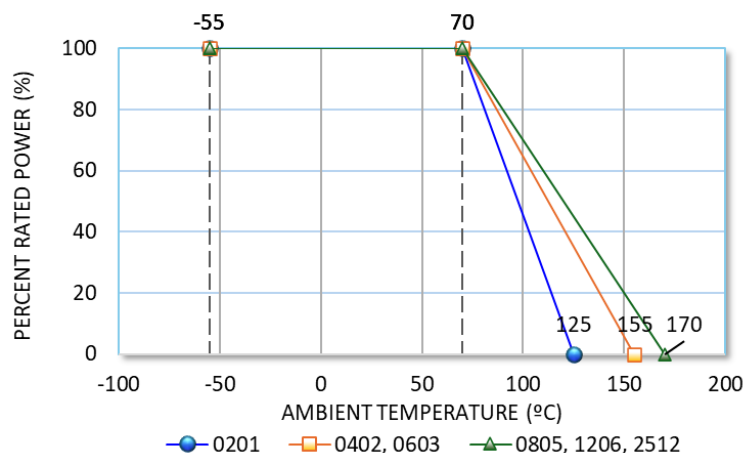
Mechanical Specifications (Sizes 0201 to 0805)					
Type/Code	L	W	H	T2	Unit
MCJ0201	0.024 ± 0.006 0.60 ± 0.15	0.012 ± 0.006 0.30 ± 0.15	0.010 ± 0.004 0.25 ± 0.10	0.006 ± 0.004 0.15 ± 0.10	inches mm
MCJ0402	0.039 ± 0.008 1.00 ± 0.20	0.020 ± 0.008 0.50 ± 0.20	0.014 ± 0.008 0.35 ± 0.20	0.008 ± 0.006 0.20 ± 0.15	inches mm
MCJ0603	0.063 ± 0.010 1.60 ± 0.25	0.031 ± 0.010 0.80 ± 0.25	0.014 ± 0.010 0.35 ± 0.25	0.014 ± 0.008 0.35 ± 0.20	inches mm
MCJ0805	0.081 ± 0.010 2.05 ± 0.25	0.051 ± 0.012 1.30 ± 0.30	0.018 ± 0.008 0.45 ± 0.20	0.016 ± 0.008 0.40 ± 0.20	inches mm

Mechanical Specifications (Sizes 1206 and 2512)

The diagram illustrates the mechanical specifications for MCJ series resistors. It shows two views: a top view and a side view. The top view shows a rectangular component with dimensions L (length) and W (width). The side view shows the component's profile with dimensions H (height) and T2 (thickness). The text 'OR' is placed between the two views, indicating that the component can be either a standard resistor or a surface-mount resistor. The dimensions T1 and T2 are also indicated, representing the thickness of the component at the mounting points.

Type/Code	L	W	H	T1	T2	Unit
MCJ1206	0.126 ± 0.010 3.20 ± 0.25	0.065 ± 0.010 1.65 ± 0.25	0.026 ± 0.010 0.65 ± 0.25	0.020 ± 0.010 0.51 ± 0.25	0.020 ± 0.010 0.51 ± 0.25	inches mm
MCJ2512	0.250 ± 0.010 6.35 ± 0.25	0.120 ± 0.010 3.05 ± 0.25	0.026 ± 0.010 0.65 ± 0.25	0.045 ± 0.010 1.15 ± 0.25	0.043 ± 0.010 1.10 ± 0.25	inches mm

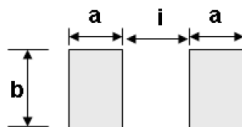
Power Derating Curve:



Performance Characteristics

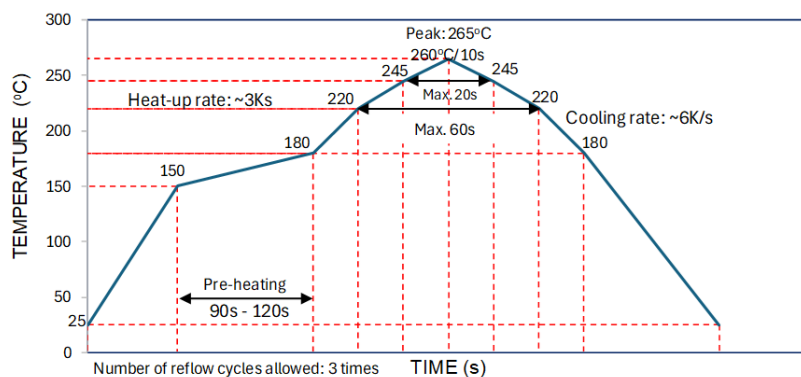
Test	Test Method	Test Condition	Test Specification
Short Time Overload	JIS-C-5201-1 4.13 IEC-60115-1 4.13	Max overload current for 5 seconds	<Rmax
High Temperature Exposure	JIS-C-5201-1 4.25 IEC 60068-2-2	Size 0201: at 125°C for 1000 hours Sizes 0402 and 0603: at 155°C for 1000 hours Sizes 0805, 1206, 2512: at 170°C for 1000 hours	<Rmax
Low Temperature Storage	JIS-C-5201-1 4.23.4 IEC60115-1 4.23.4	At -55°C for 1000 hours	<Rmax
Resistance to Soldering Heat	JIS-C-5201-1 4.18 IEC-60115-1 4.18	260 ± 5°C for 10 seconds	<Rmax
Load Life (Endurance)	JIS-C-5201-1 4.25 IEC-60115-1 4.25.1	70 ± 2°C, RCWV or Max. Working Voltage whichever is less for 1000 hours with 1.5 hours "ON" and 0.5 hour "OFF"	<Rmax

Recommended Pad Layout



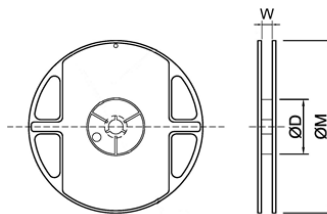
Type/Code	a	b	i	Unit
MCJ0201	0.008 0.20	0.013 0.33	0.010 0.25	inches mm
MCJ0402	0.024 0.60	0.024 0.60	0.016 0.40	inches mm
MCJ0603	0.051 1.30	0.036 0.92	0.024 0.60	inches mm
MCJ0805	0.039 1.00	0.071 1.80	0.039 1.00	inches mm
MCJ1206	0.057 1.46	0.085 2.15	0.066 1.68	inches mm
MCJ2512	0.091 2.30	0.145 3.68	0.124 3.15	inches mm

Solder Reflow Temperature Condition



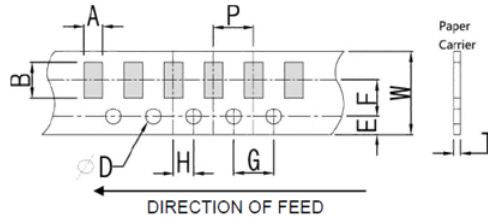
Rework temperature (hot air equipment): 350°C, 3~5 seconds
Recommended reflow methods: IR, vapor phase oven, hot air oven
If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

Reel Specifications



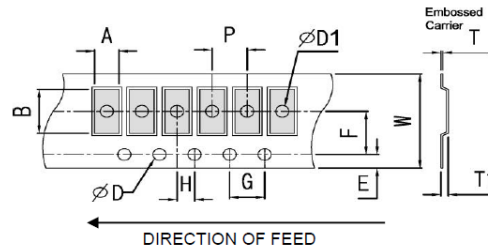
Type/Code	ØD	W	ØM	Unit
MCJ0201	2.362 ± 0.079 60.00 ± 2.00	0.354 ± 0.020 9.00 ± 0.50	7.008 ± 0.197 178.00 ± 5.00	inches mm
MCJ0402	2.362 ± 0.079 60.00 ± 2.00	0.354 ± 0.020 9.00 ± 0.50	7.008 ± 0.197 178.00 ± 5.00	inches mm
MCJ0603	2.362 ± 0.079 60.00 ± 2.00	0.354 ± 0.020 9.00 ± 0.50	7.008 ± 0.197 178.00 ± 5.00	inches mm
MCJ0805	2.362 ± 0.079 60.00 ± 2.00	0.472 ± 0.020 12.00 ± 0.50	7.008 ± 0.197 178.00 ± 5.00	inches mm
MCJ1206	2.362 ± 0.079 60.00 ± 2.00	0.472 ± 0.020 12.00 ± 0.50	7.008 ± 0.197 178.00 ± 5.00	inches mm
MCJ2512	2.362 ± 0.079 60.00 ± 2.00	0.638 ± 0.020 16.20 ± 0.50	7.008 ± 0.197 178.00 ± 5.00	inches mm

Taping Specifications - Paper Tape



Type/Code	A	B	E	F	W	Unit
MCJ0201	0.016 ± 0.008 0.40 ± 0.20	0.028 ± 0.008 0.70 ± 0.20	0.069 ± 0.004 1.75 ± 0.10	0.138 ± 0.004 3.50 ± 0.10	0.315 ± 0.012 8.00 ± 0.30	inches mm
MCJ0402	0.026 ± 0.008 0.65 ± 0.20	0.043 ± 0.008 1.10 ± 0.20	0.069 ± 0.004 1.75 ± 0.10	0.138 ± 0.004 3.50 ± 0.10	0.315 ± 0.012 8.00 ± 0.30	inches mm
MCJ0603	0.039 ± 0.008 0.98 ± 0.20	0.073 ± 0.008 1.85 ± 0.20	0.069 ± 0.004 1.75 ± 0.10	0.138 ± 0.004 3.50 ± 0.10	0.315 ± 0.012 8.00 ± 0.30	inches mm
Type/Code	G	P	H	D	T	Unit
MCJ0201	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.004 2.00 ± 0.10	0.079 ± 0.004 2.00 ± 0.10	0.059 +0.004/-0.00 1.50 +0.10/-0.00	0.018 ± 0.002 0.45 ± 0.05	inches mm
MCJ0402	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.004 2.00 ± 0.10	0.079 ± 0.004 2.00 ± 0.10	0.059 +0.004/-0.00 1.50 +0.10/-0.00	0.017 ± 0.002 0.42 ± 0.05	inches mm
MCJ0603	0.157 ± 0.004 4.00 ± 0.10	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.004 2.00 ± 0.10	0.059 +0.004/-0.00 1.50 +0.10/-0.00	0.023 ± 0.004 0.58 ± 0.10	inches mm

Taping Specifications - Plastic Tape



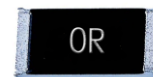
Type/Code	A	B	E	F	W	P	Unit
MCJ0805	0.067 ± 0.004 1.70 ± 0.10	0.096 ± 0.004 2.45 ± 0.10	0.069 ± 0.004 1.75 ± 0.10	0.138 ± 0.004 3.50 ± 0.10	0.315 ± 0.012 8.00 ± 0.30	0.157 ± 0.004 4.00 ± 0.10	inches mm
MCJ1206	0.080 ± 0.004 2.03 ± 0.10	0.140 ± 0.004 3.55 ± 0.10	0.069 ± 0.004 1.75 ± 0.10	0.138 ± 0.004 3.50 ± 0.10	0.315 ± 0.012 8.00 ± 0.30	0.157 ± 0.004 4.00 ± 0.10	inches mm
MCJ2512	0.138 ± 0.004 3.50 ± 0.10	0.266 ± 0.004 6.75 ± 0.10	0.069 ± 0.004 1.75 ± 0.10	0.217 ± 0.004 5.50 ± 0.10	0.472 ± 0.012 12.00 ± 0.30	0.157 ± 0.004 4.00 ± 0.10	inches mm
Type/Code	G	H	ØD	ØD1	T	T1	Unit
MCJ0805	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.004 2.00 ± 0.10	0.059 +0.004/-0.00 1.50 +0.10/-0.00	0.039 ± 0.004 1.00 ± 0.10	0.008 ± 0.002 0.20 ± 0.05	0.022 ± 0.010 0.55 ± 0.25	inches mm
MCJ1206	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.004 2.00 ± 0.10	0.059 +0.004/-0.00 1.50 +0.10/-0.00	0.039 ± 0.004 1.00 ± 0.10	0.008 ± 0.002 0.20 ± 0.05	0.033 ± 0.004 0.85 ± 0.10	inches mm
MCJ2512	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.004 2.00 ± 0.10	0.059 +0.004/-0.00 1.50 +0.10/-0.00	0.061 ± 0.004 1.55 ± 0.10	0.008 ± 0.002 0.20 ± 0.05	0.035 ± 0.004 0.90 ± 0.10	inches mm

Part Marking Instructions

1. Sizes 0201, 0402, 0603, and 0805 are unmarked.
2. Sizes 1206, and 2512 are marked "0R".



no marking



0R marking

RoHS Compliance

Stackpole Electronics has joined the worldwide effort to reduce the amount of lead in electronic components and to meet the various regulatory requirements now prevalent, such as the European Union's directive regarding "Restrictions on Hazardous Substances" (RoHS 3). As part of this ongoing program, we periodically update this document with the status regarding the availability of our compliant components. All our standard part numbers are compliant to EU Directive 2011/65/EU of the European Parliament as amended by Directive (EU) 2015/863/EU as regards the list of restricted substances.

RoHS Compliance Status

Standard Product Series	Description	Package / Termination Type	Standard Series RoHS Compliant	Lead-Free Termination Composition
MCJ	Metal Element High Current Jumper	SMD	Yes	100% Matte Sn over Ni

"Conflict Metals" Commitment

We at Stackpole Electronics, Inc. are joined with our industry in opposing the use of metals mined in the "conflict region" of the eastern Democratic Republic of the Congo (DRC) in our products. Recognizing that the supply chain for metals used in the electronics industry is very complex, we work closely with our own suppliers to verify to the extent possible that the materials and products we supply do not contain metals sourced from this conflict region. As such, we are in compliance with the requirements of Dodd-Frank Act regarding Conflict Minerals.

Compliance to "REACH"

We certify that all passive components supplied by Stackpole Electronics, Inc. are SVHC (Substances of Very High Concern) free and compliant with the requirements of EU Directive 1907/2006/EC, "The Registration, Evaluation, Authorization and Restriction of Chemicals", otherwise referred to as REACH. Contact us for complete list of REACH Substance Candidate List.

Environmental Policy

It is the policy of Stackpole Electronics, Inc. (SEI) to protect the environment in all localities in which we operate. We continually strive to improve our effect on the environment. We observe all applicable laws and regulations regarding the protection of our environment and all requests related to the environment to which we have agreed. We are committed to the prevention of all forms of pollution.

How to Order

M	C	J	0	6	0	3	Z	T	0	R	0	0	
Product Series			Size		Tolerance			Packaging				Resistance Value	
MCJ			Size	A	Code	Size	Max Value (Ω)	Code	Description	Size	Quantity	Four characters with the multiplier used as the decimal holder.	
			0201	8	Z	0201	0.001	T	7" Reel Paper Tape	0201, 0402	10000	0 ohm = 0R00	
			0402	20		0402	0.0005			0603	5000		
			0603	26		0603	0.0002		7" Reel Plastic Tape	0805, 1206	5000		
			0805	70.7		0805				2512	4000		
			1206	70.7		1206							
			2512	122		2512							