

Performance Specification

Model	Marking	V _{max} (V dc)	I _{max} (A)	I _{hold} @25°C (A)	I _{trip} @25°C (A)	P _d Typ. (W)	Maximum Time To Trip		Resistance	
							Current (A)	Time (Sec)	R _{i min} (Ω)	R _{1max} (Ω)
JSMD0603-035L	D	6.0	50	0.35	0.7	0.9	8.0	0.1	0.15	1.0
JSMD0603-050L	D	6.0	50.0	0.5	1.0	0.9	8.0	0.6	0.07	0.4
JSMD0603-075L	D	6.0	50.0	0.75	1.5	1.0	8.0	1.0	0.04	0.2
JSMD0603-100L	B	6.0	50.0	1.0	2.0	1.0	8.0	2.0	0.025	0.12
JSMD0603-125L	B	6.0	50.0	1.25	2.5	1.0	8.0	3.0	0.02	0.1
JSMD0603-150L	C	6.0	50.0	1.5	3.0	1.0	8.0	4.0	0.017	0.08
JSMD0603-175L	C	6.0	50.0	1.75	3.5	1.0	8.0	5.0	0.015	0.07
JSMD0603-200L	C	6.0	50.0	2.0	4.0	1.0	8.0	5.0	0.012	0.06
JSMD0603-260L	E	6.0	50.0	2.6	5.2	1.0	8.0	5.0	0.01	0.05
JSMD0603-300L	E	6.0	50.0	3.0	6.0	1.0	8.0	5.0	0.008	0.04

V_{max} = Maximum operating voltage device can withstand without damage at rated current (I_{max}).

I_{max} = Maximum fault current device can withstand without damage at rated voltage (V_{max}).

I_{hold} = Hold Current. Maximum current device will not trip in 25°C still air.

I_{trip} = Trip Current. Minimum current at which the device will always trip in 25°C still air.

P_d = Power dissipation when device is in the tripped state in 25°C still air environment at rated voltage.

R_{i min/max} = Minimum/Maximum device resistance prior to tripping at 25°C.



R_{1max} = Maximum device resistance is measured one hour post reflow.

CAUTION : Operation beyond the specified ratings may result in damage and possible arcing and flame.

Environmental Specifications

Test	Conditions	Resistance change
Passive aging	+85°C, 1000 hrs.	±5% typical
Humidity aging	+85°C, 85% R.H. , 168 hours	±5% typical
Thermal shock	+85°C to -40°C, 20 times	±33% typical
Resistance to solvent	MIL-STD-202, Method 215	No change
Vibration	MIL-STD-202, Method 201	No change
Ambient operating conditions : - 40 °C to +85 °C		
Maximum surface temperature of the device in the tripped state is 125 °C		

Agency Approval and Environmental Compliance

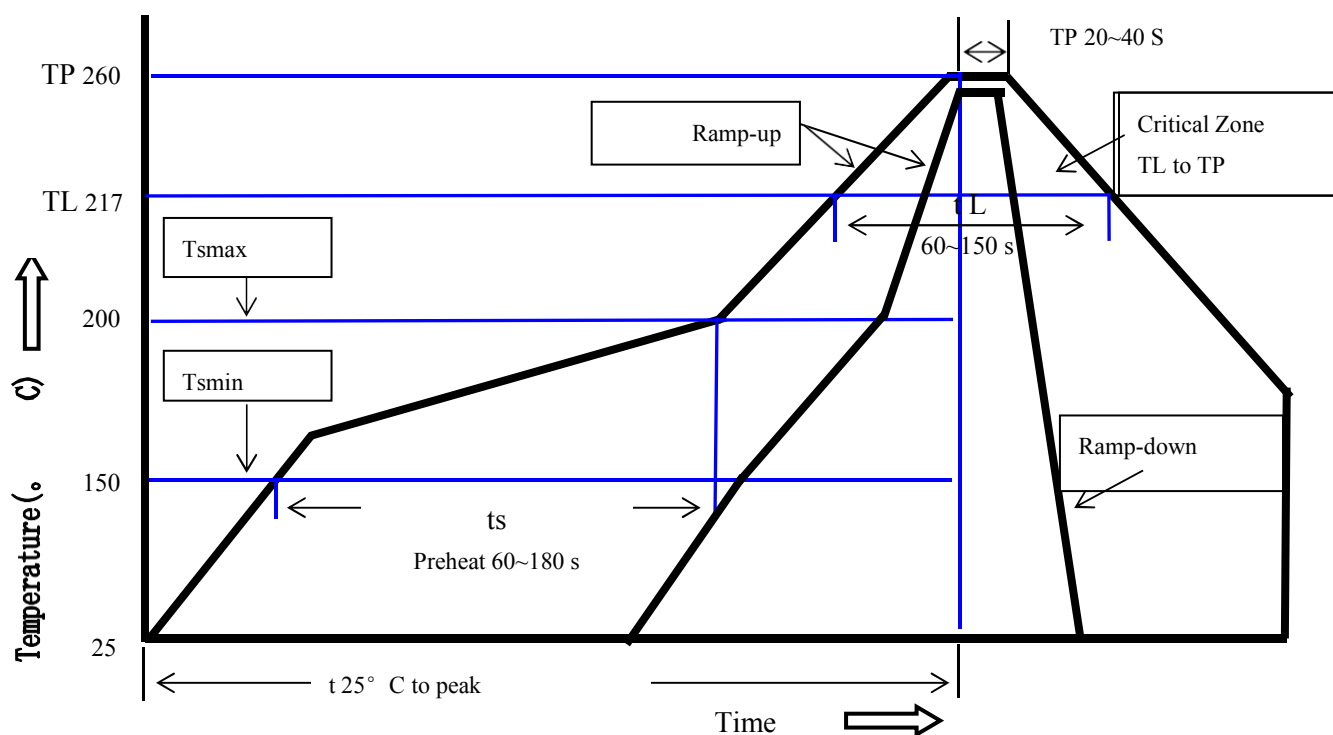
Agency	File Number	Regulation	Standard
UL	E486890		2011/65/EU
TUV	pending		EN14582

Thermal Derating Chart

Recommended Hold Current(A) at Ambient Temperature(°C)

Model	Ambient Operation Temperature								
	-40°C	-20°C	0°C	25°C	40°C	50°C	60°C	70°C	85°C
JSMD0603-035L	0.46	0.4	0.37	0.35	0.29	0.25	0.24	0.2	0.14
JSMD0603-050L	0.66	0.57	0.53	0.5	0.41	0.36	0.34	0.29	0.2
JSMD0603-075L	0.99	0.86	0.79	0.75	0.62	0.54	0.51	0.43	0.3
JSMD0603-100L	1.31	1.14	1.06	1.0	0.83	0.71	0.69	0.57	0.4
JSMD0603-125L	1.64	1.43	1.32	1.25	1.04	0.89	0.86	0.71	0.5
JSMD0603-150L	1.97	1.71	1.59	1.5	1.24	1.07	1.03	0.86	0.6
JSMD0603-175L	2.3	2.0	1.85	1.75	1.45	1.25	1.2	1.0	0.7
JSMD0603-200L	2.63	2.29	2.11	2.0	1.66	1.43	1.37	1.14	0.8
JSMD0603-260L	3.42	2.97	2.75	2.6	2.15	1.86	1.78	1.49	1.04
JSMD0603-300L	3.94	3.43	3.17	3.0	2.49	2.14	2.06	1.71	1.2

Soldering Parameters



Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate(Ts max to T p)	3°C/second max.
Preheat	
-Temperature Min(Ts min)	150°C
-Temperature Max(Ts max)	200°C
-Time(Ts min to Ts max)	60~180 seconds
Time maintained above:	
-Temperature(TL)	217°C
-Time(tL)	60~150 seconds
Peak Temperature(Tp)	260°C
Ramp-Down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max
Storage Condition	0°C~35°C, ≤70%RH

Recommended reflow methods: IR, vapor phase oven, hot air oven, N2 environment for lead-free

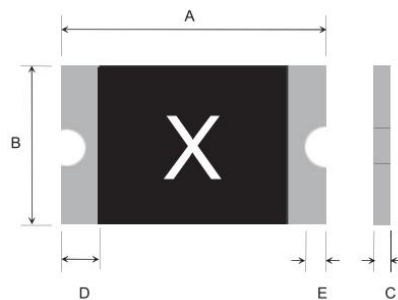
Recommended maximum paste thickness is 0.25mm

Devices can be cleaned using standard industry methods and solvents.

Note 1: All temperature refer to topside of the package, measured on the package body surface.

Note 2: If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

Physical Dimensions(mm.)



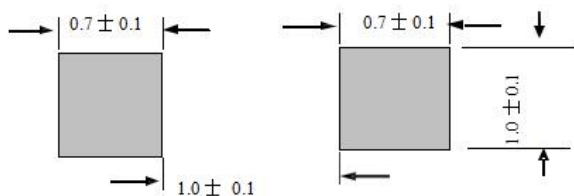
Model	A		B		C		D	E
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Min.
JSMD0603-035L	1.45	1.85	0.65	1.05	0.3	0.7	0.15	0.1
JSMD0603-050L	1.45	1.85	0.65	1.05	0.3	0.7	0.15	0.1
JSMD0603-075L	1.45	1.85	0.65	1.05	0.3	0.7	0.15	0.1
JSMD0603-100L	1.45	1.85	0.65	1.05	0.4	1.0	0.15	0.1
JSMD0603-125L	1.45	1.85	0.65	1.05	0.4	1.0	0.15	0.1
JSMD0603-150L	1.45	1.85	0.65	1.05	0.5	1.2	0.15	0.1
JSMD0603-175L	1.45	1.85	0.65	1.05	0.5	1.2	0.15	0.1
JSMD0603-200L	1.45	1.85	0.65	1.05	0.7	1.4	0.15	0.1
JSMD0603-260L	1.45	1.85	0.65	1.05	0.7	1.4	0.15	0.1
JSMD0603-300L	1.45	1.85	0.65	1.05	0.7	1.4	0.15	0.1

Termination Pad Characteristics

Terminal pad materials: Tin-plated Nickel-Copper

Terminal pad solder ability: Meets EIA specification RS186-9E and ANSI/J-STD-002 Category 3

Recommended Pad Layout (mm.)



Packaging Quantity

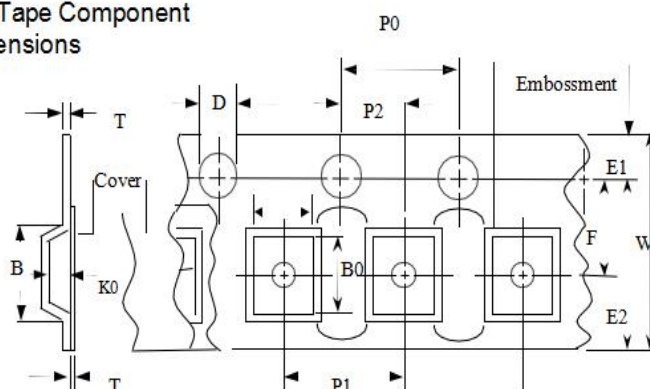
Tape & reel packaging per EIA481-1

Part Number	Quantity
JSMD 0603 LoR Series	5,000 pcs/reel

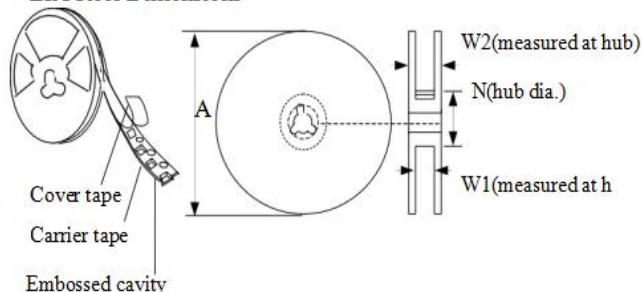
Tape And Reel Specifications (mm)

Governing Specifications	EIA 481-1
W	8.0 ± 0.2
P0	4.0 ± 0.10
P1	4.0 ± 0.10
P2	2.0 ± 0.05
A0	1.05 ± 0.10
B0	1.85 ± 0.10
D0	1.55 ± 0.10
F	3.5 ± 0.05
E1	1.75 ± 0.10
E2min.	6.25
T	0.75
T1max.	0.1
K0	0.74/0.95 ± 0.1
Leader min.	390
Trailer min.	160
Reel Dimensions	
A max.	178
N min.	60
W1	9.0 ± 0.5
W2	12.0 ± 0.05

EIA Tape Component Dimensions



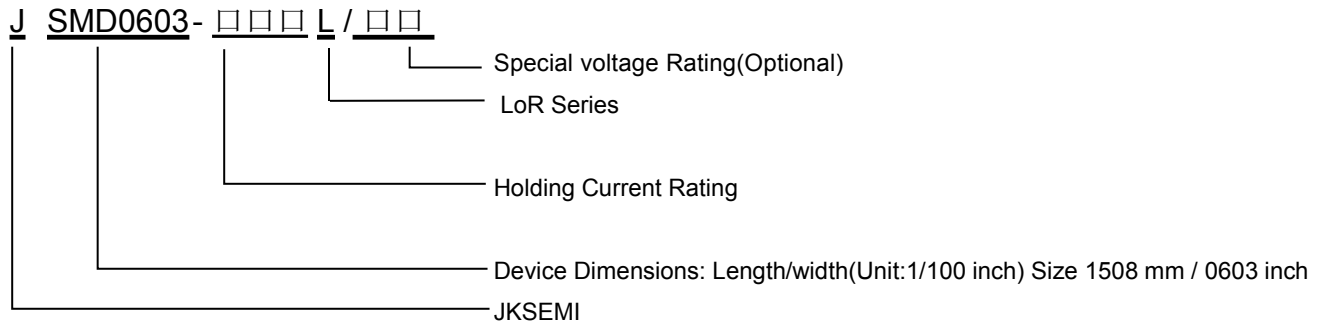
EIA Reel Dimensions



Storage And Handling

- Storage conditions: 35°C max, 70% R.H.
- Devices may not meet specified performance if storage conditions are exceeded.

Part Number System



Cross Reference

JKSEMI	Cross Reference				
	Littelfuse	Bourns/Multifuse®	Polytronics /EVERFUSE®	Wayon	TLC
JSMD0603-035L	-	MF-FSML035/8	-	LP-TSML035/6	TLC-FSML035
JSMD0603-050L	0603L050SL/6	MF-FSML050/6	SMD0603P050SLR/6	LP-TSML050/6	TLC-FSML050/6
JSMD0603-075L	0603L075SL/6	MF-FSML075/6	SMD0603P075SLR/6	LP-TSML075/6	TLC-FSML075/6
JSMD0603-100L	0603L100SL/6	MF-FSML100/6	SMD0603P100SLR/6	LP-TSML100/6	TLC-FSML100/6
JSMD0603-125L	-	MF-FSML125/6	-	LP-TSML125/6	TLC-FSML125/6
JSMD0603-150L	0603L150SL/6	MF-FSML150/6	SMD0603P150SLR/6	LP-TSML150/6	TLC-FSML150/6
JSMD0603-175L	0603L175SL/6	MF-FSML175/6	SMD0603P175SLR/6	LP-TSML175/6	TLC-FSML175/6
JSMD0603-200L	0603L200SL/6	MF-FSML200/6	SMD0603P200SLR/6	LP-TSML200/6	TLC-FSML200/6
JSMD0603-260L	-	MF-FSML260/6	-	LP-TSML260/6	TLC-FSML260/6
JSMD0603-300L	-	MF-FSML300/6	SMD0603P300SLR/6	LP-TSML300/6	TLC-FSML300/6

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