

## Performance Specification

Model	V <sub>max</sub> (V dc)	I <sub>max</sub> (A)	I <sub>hold</sub> @25°C (A)	I <sub>trip</sub> @25°C (A)	P <sub>d</sub> Typ. (W)	Maximum Time To Trip		Resistance	
						Current (A)	Time (Sec)	R <sub>i min</sub> (Ω)	R <sub>1max</sub> (Ω)
JSMD1206-150L	6.0	50.0	1.5	3.0	1.2	8.0	5.0	0.01	0.065
JSMD1206-150L/12	12.0	50.0	1.5	3.0	1.2	8.0	5.0	0.01	0.065
JSMD1206-175L	6.0	50.0	1.75	3.5	1.2	8.0	5.0	0.01	0.06
JSMD1206-175L/12	12.0	50.0	1.75	3.5	1.2	8.0	5.0	0.01	0.06
JSMD1206-200L	6.0	50.0	2.0	4.0	1.2	8.0	5.0	0.008	0.04
JSMD1206-200L/12	12.0	50.0	2.0	4.0	1.2	8.0	5.0	0.008	0.04
JSMD1206-260L	6.0	50.0	2.6	5.2	1.2	8.0	5.0	0.004	0.026
JSMD1206-260L/12	12.0	50.0	2.6	5.2	1.2	8.0	5.0	0.004	0.026
JSMD1206-300L	6.0	50.0	3.0	6.0	1.2	8.0	5.0	0.004	0.02
JSMD1206-300L/12	12.0	50.0	3.0	6.0	1.2	8.0	5.0	0.004	0.02
JSMD1206-350L	6.0	50.0	3.5	7.0	1.4	17.5	2.0	0.004	0.018
JSMD1206-350L/12	12.0	50.0	3.5	7.0	1.4	17.5	2.0	0.004	0.018
JSMD1206-380L	6.0	50.0	3.8	7.6	1.4	19.0	2.0	0.004	0.016
JSMD1206-380L/12	12.0	50.0	3.8	7.6	1.4	19.0	2.0	0.004	0.016
JSMD1206-400L	6.0	50.0	4.0	8.0	1.4	20.0	2.0	0.004	0.014
JSMD1206-400L/12	12.0	50.0	4.0	8.0	1.4	20.0	2.0	0.004	0.014
JSMD1206-450L	6.0	50.0	4.5	9.0	1.4	22.5	2.0	0.002	0.012
JSMD1206-450L/12	12.0	50.0	4.5	9.0	1.4	22.5	2.0	0.002	0.012
JSMD1206-500L	6.0	50.0	5.0	10.0	1.4	25.0	2.0	0.002	0.011
JSMD1206-500L/12	12.0	50.0	5.0	10.0	1.4	25.0	2.0	0.002	0.011
JSMD1206-550L	6.0	50.0	5.5	11.0	1.4	27.5	2.0	0.002	0.01
JSMD1206-550L/12	12.0	50.0	5.5	11.0	1.4	27.5	2.0	0.002	0.01
JSMD1206-600L	6.0	50.0	6.0	12.0	1.4	30.0	2.0	0.002	0.009
JSMD1206-600L/12	12.0	50.0	6.0	12.0	1.4	30.0	2.0	0.002	0.009
JSMD1206-650L	6.0	50.0	6.5	13.0	1.4	32.5	2.0	0.001	0.0085
JSMD1206-650L/12	12.0	50.0	6.5	13.0	1.4	32.5	2.0	0.001	0.0085
JSMD1206-700L	6.0	50.0	7.0	14.0	1.4	35.0	2.0	0.001	0.008
JSMD1206-700L/12	12.0	50.0	7.0	14.0	1.4	35.0	2.0	0.001	0.008
JSMD1206-750L	6.0	50.0	7.5	15.0	1.4	37.5	2.0	0.001	0.007
JSMD1206-750L/12	12.0	50.0	7.5	15.0	1.4	37.5	2.0	0.001	0.007

V<sub>max</sub> = Maximum operating voltage device can withstand without damage at rated current (I<sub>max</sub>).

I<sub>max</sub> = Maximum fault current device can withstand without damage at rated voltage (V<sub>max</sub>).

I<sub>hold</sub> = Hold Current. Maximum current device will not trip in 25°C still air.

I<sub>trip</sub> = Trip Current. Minimum current at which the device will always trip in 25°C still air.

P<sub>d</sub> = Power dissipation when device is in the tripped state in 25°C still air environment at rated voltage.

R<sub>i min/max</sub> = Minimum/Maximum device resistance prior to tripping at 25°C.



R<sub>1max</sub> = 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	E217453		<b>2002/95/EC</b>
TUV	pending		<b>EN14582</b>

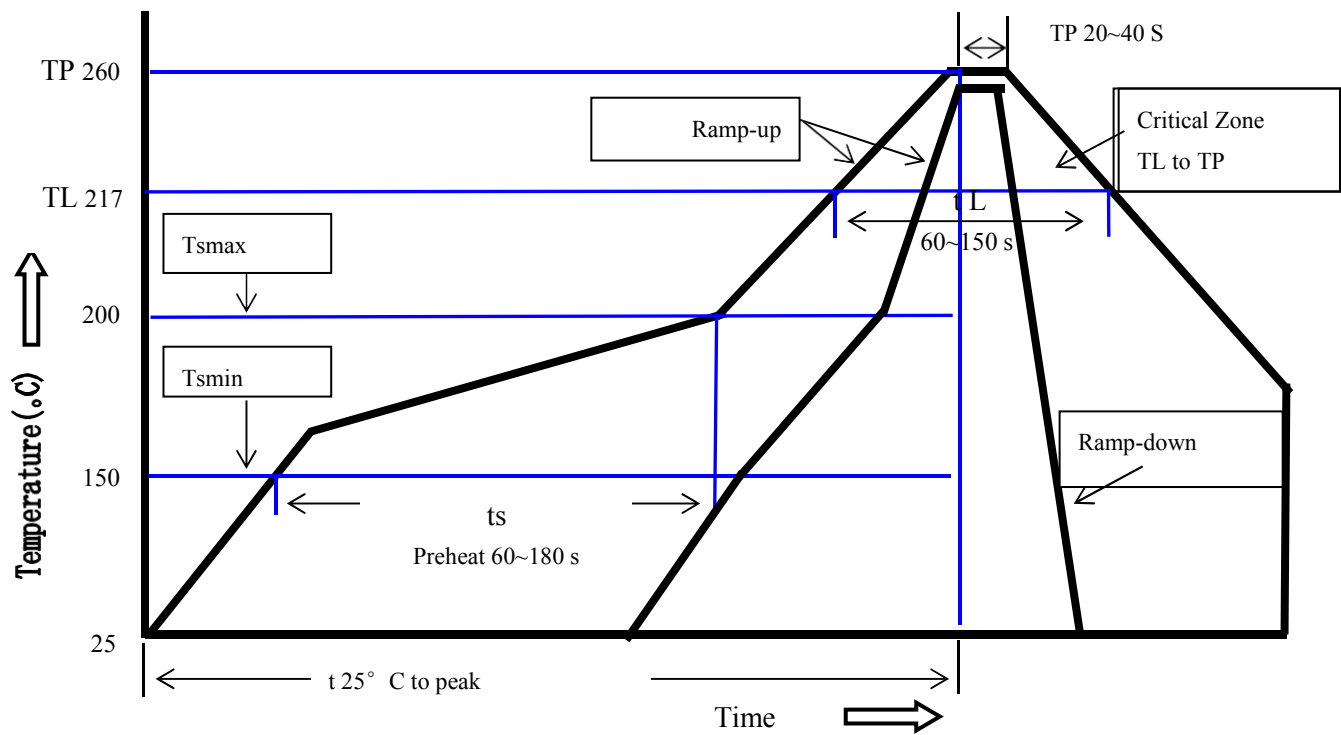
## Thermal Derating Chart

Model	Ambient Operation Temperature								
	-40°C	-20°C	0°C	25°C	40°C	50°C	60°C	70°C	85°C
JSMD1206-150L	2.25	2.0	1.75	1.5	1.33	1.15	1.05	0.93	0.7
JSMD1206-150L/12	2.25	2.0	1.75	1.5	1.33	1.15	1.05	0.93	0.7
JSMD1206-175L	2.55	2.33	2.02	1.75	1.53	1.35	1.23	1.07	0.85
JSMD1206-175L/12	2.55	2.33	2.02	1.75	1.53	1.35	1.23	1.07	0.85
JSMD1206-200L	2.96	2.67	2.32	2.0	1.76	1.55	1.41	1.23	0.96
JSMD1206-200L/12	2.96	2.67	2.32	2.0	1.76	1.55	1.41	1.23	0.96
JSMD1206-260L	3.85	3.47	3.02	2.6	2.29	2.01	1.84	1.59	1.25
JSMD1206-260L/12	3.85	3.47	3.02	2.6	2.29	2.01	1.84	1.59	1.25
JSMD1206-300L	4.44	4.0	3.48	3.0	2.64	2.32	2.12	1.84	1.44
JSMD1206-300L/12	4.44	4.0	3.48	3.0	2.64	2.32	2.12	1.84	1.44
JSMD1206-350L	5.18	4.67	4.06	3.5	3.08	2.71	2.47	2.15	1.68
JSMD1206-350L/12	5.18	4.67	4.06	3.5	3.08	2.71	2.47	2.15	1.68
JSMD1206-380L	5.62	5.07	4.41	3.8	3.34	2.94	2.68	2.33	1.82
JSMD1206-380L/12	5.62	5.07	4.41	3.8	3.34	2.94	2.68	2.33	1.82
JSMD1206-400L	5.92	5.33	4.64	4.0	3.52	3.09	2.83	2.45	1.92
JSMD1206-400L/12	5.92	5.33	4.64	4.0	3.52	3.09	2.83	2.45	1.92
JSMD1206-450L	6.66	6.0	5.22	4.5	3.96	3.48	3.17	2.76	2.16
JSMD1206-450L/12	6.66	6.0	5.22	4.5	3.96	3.48	3.17	2.76	2.16
JSMD1206-500L	7.4	6.67	5.8	5.0	4.4	3.87	3.53	3.07	2.4
JSMD1206-500L/12	7.4	6.67	5.8	5.0	4.4	3.87	3.53	3.07	2.4

JSMD1206-550L	8.14	7.34	6.38	5.5	4.84	4.26	3.88	3.38	2.64
JSMD1206-550L/12	8.14	7.34	6.38	5.5	4.84	4.26	3.88	3.38	2.64
JSMD1206-600L	8.65	7.91	6.93	6.0	5.23	4.45	4.0	3.63	2.85
JSMD1206-600L/12	8.65	7.91	6.93	6.0	5.23	4.45	4.0	3.63	2.85
JSMD1206-650L	9.2	8.45	7.45	6.5	5.6	4.65	4.3	3.89	3.0
JSMD1206-650L/12	9.2	8.45	7.45	6.5	5.6	4.65	4.3	3.89	3.0
JSMD1206-700L	9.84	9.0	7.95	7.0	5.96	4.95	4.5	4.16	3.2
JSMD1206-700L/12	9.84	9.0	7.95	7.0	5.96	4.95	4.5	4.16	3.2
JSMD1206-750L	10.5	9.65	8.5	7.5	6.4	5.3	4.8	4.45	4.42
JSMD1206-750L/12	10.5	9.65	8.5	7.5	6.4	5.3	4.8	4.45	4.42

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

### Soldering Parameters



Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate(Ts max to T p)	3°C/second mac.
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

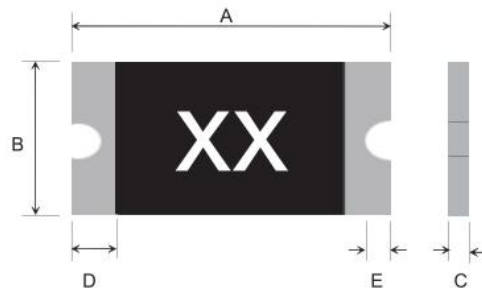
Recommended maximum paste thickness is 0.25mm

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.
JSMD1206-150L	3.0	3.5	1.5	1.8	0.3	0.7	0.25	0.1
JSMD1206-150L/12	3.0	3.5	1.5	1.8	0.3	0.7	0.25	0.1
JSMD1206-175L	3.0	3.5	1.5	1.8	0.3	0.7	0.25	0.1
JSMD1206-175L/12	3.0	3.5	1.5	1.8	0.3	0.7	0.25	0.1
JSMD1206-200L	3.0	3.5	1.5	1.8	0.3	0.7	0.25	0.1
JSMD1206-200L/12	3.0	3.5	1.5	1.8	0.3	0.7	0.25	0.1
JSMD1206-260L	3.0	3.5	1.5	1.8	0.3	0.7	0.25	0.1
JSMD1206-260L/12	3.0	3.5	1.5	1.8	0.3	0.7	0.25	0.1
JSMD1206-300L	3.0	3.5	1.5	1.8	0.3	0.7	0.25	0.1
JSMD1206-300L/12	3.0	3.5	1.5	1.8	0.3	0.7	0.25	0.1

## JSMD 1206 LoR Series Surface Mount PTC Devices

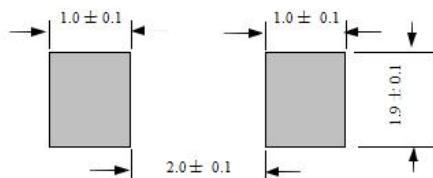
JSMD1206-350L	3.0	3.5	1.5	1.8	0.5	1.1	0.25	0.1
JSMD1206-350L/12	3.0	3.5	1.5	1.8	0.5	1.1	0.25	0.1
JSMD1206-380L	3.0	3.5	1.5	1.8	0.5	1.1	0.25	0.1
JSMD1206-380L/12	3.0	3.5	1.5	1.8	0.5	1.1	0.25	0.1
JSMD1206-400L	3.0	3.5	1.5	1.8	0.5	1.1	0.25	0.1
JSMD1206-400L/12	3.0	3.5	1.5	1.8	0.5	1.1	0.25	0.1
JSMD1206-450L	3.0	3.5	1.5	1.8	0.5	1.1	0.25	0.1
JSMD1206-450L/12	3.0	3.5	1.5	1.8	0.5	1.1	0.25	0.1
JSMD1206-500L	3.0	3.5	1.5	1.8	0.6	1.4	0.25	0.1
JSMD1206-500L/12	3.0	3.5	1.5	1.8	0.6	1.4	0.25	0.1
JSMD1206-550L	3.0	3.5	1.5	1.8	0.6	1.4	0.25	0.1
JSMD1206-550L/12	3.0	3.5	1.5	1.8	0.6	1.4	0.25	0.1
JSMD1206-600L	3.0	3.5	1.5	1.8	0.7	1.4	0.25	0.1
JSMD1206-600L/12	3.0	3.5	1.5	1.8	0.7	1.4	0.25	0.1
JSMD1206-650L	3.0	3.5	1.5	1.8	0.7	1.4	0.25	0.1
JSMD1206-650L/12	3.0	3.5	1.5	1.8	0.7	1.4	0.25	0.1
JSMD1206-700L	3.0	3.5	1.5	1.8	0.7	1.4	0.25	0.1
JSMD1206-700L/12	3.0	3.5	1.5	1.8	0.7	1.4	0.25	0.1
JSMD1206-750L	3.0	3.5	1.5	1.8	0.7	1.4	0.25	0.1
JSMD1206-750L/12	3.0	3.5	1.5	1.8	0.7	1.4	0.25	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

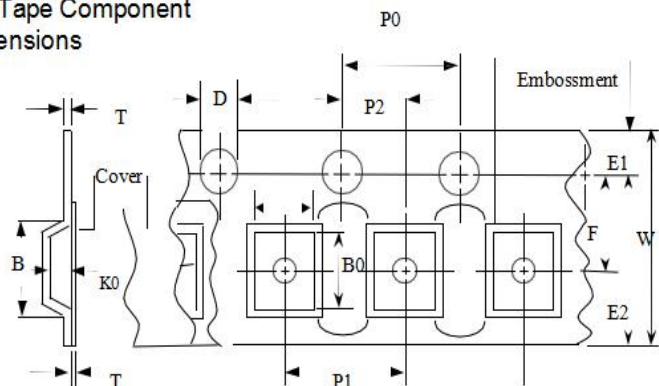
Tape & reel packaging per EIA481-1

Part Number	Quantity
JSMD 1206 LoR Series	5,000 pcs/reel

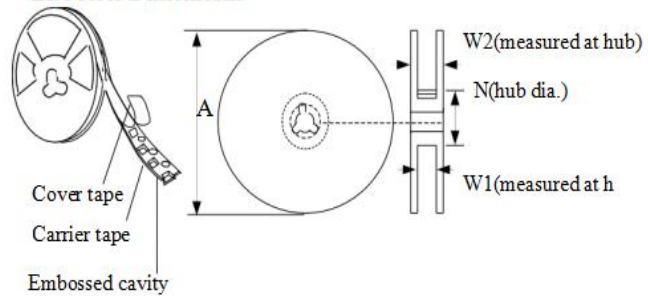
## Tape And Reel Specifications (mm)

Governing Specifications	EIA 481-1
W	$8.15 \pm 0.3$
P0	$4.0 \pm 0.10$
P1	$4.0 \pm 0.10$
P2	$2.0 \pm 0.05$
A0	$1.95 \pm 0.10$
B0	$3.40 \pm 0.10$
B1max	4.35
D0	$1.50 + 0.10, -0$
F	$3.5 \pm 0.05$
E1	$1.75 \pm 0.10$
E2min.	6.25
T	0.6
T1max.	0.1
K0	$1.04 \pm 0.1$
Leader min.	390
Trailer min.	160
Reel Dimensions	
A max.	178
N min.	60
W1	$9.0 \pm 0.5$
W2	$12.6 \pm 0.05$

EIA Tape Component Dimensions



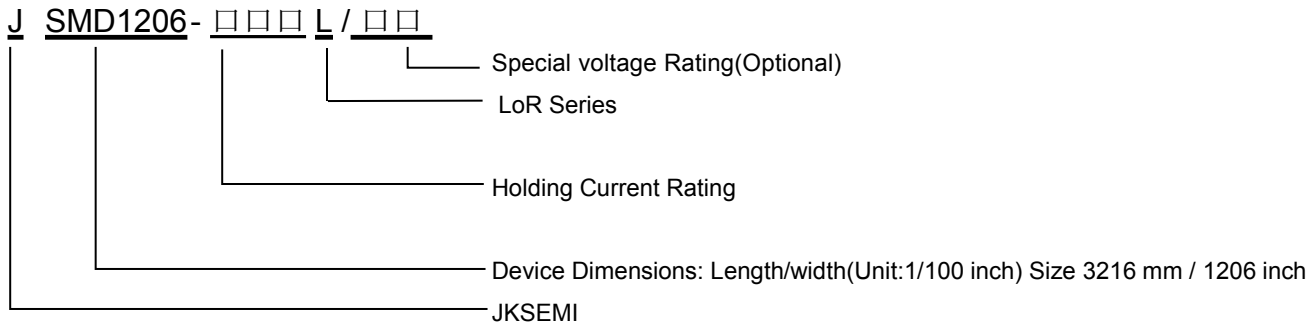
EIA Reel Dimensions



### 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
JSMD1206-150L	1206L150SL/6	MF-NSML150/6	SMD1206P150SLR/6	LP-NSML150/6	TLC-NSML150/6
JSMD1206-150L/12	1206L150/12SL	MF-NSML150/12	SMD1206P150SLR/12	LP-NSML150/12	TLC-NSML150/12
JSMD1206-175L	1206L175/6	MF-NSMF175/6	SMD1206P175SLR/6	LP-NSML175/6	TLC-NSML175/6
JSMD1206-175L/12	-	-	-	LP-NSML175/12	TLC-NSML175/12
JSMD1206-200L	1206L200SL/6	MF-NSMF200/6	SMD1206P200SLR/6	LP-NSML200/6	TLC-NSML200/6
JSMD1206-200L/12	1206L200/8SL	MF-NSML200/12	SMD1206P200SLR/12	LP-NSML200/12	TLC-NSML200/12
JSMD1206-260L	1206L260SL/6	MF-NSML260/6	SMD1206P260SLR/6	LP-NSML260/6	TLC-NSML260/6
JSMD1206-260L/12	-	MF-NSML260/12	SMD1206P260SLR/12	LP-NSML260/12	TLC-NSML260/12
JSMD1206-300L	1206L300SL/6	MF-NSML300/6	SMD1206P300SLRT/6	LP-NSML300/6	TLC-NSML300/6
JSMD1206-300L/12	-	MF-NSML300/12	SMD1206P300SLR/12	LP-NSML300/12	TLC-NSML300/12
JSMD1206-350L	1206L350SLTH/6	MF-NSML350/6	SMD1206P350SLRT/6	LP-NSML350/6	TLC-NSML350/6
JSMD1206-350L/12	-	MF-NSML350/12	SMD1206P350SLR/12	LP-NSML350/12	TLC-NSML350/12
JSMD1206-380L	1206L380SLTH/6	MF-NSML380/6	SMD1206P380SLR/6	LP-NSML380/6	TLC-NSML380/6
JSMD1206-380L/12	-	MF-NSML380/12	-	LP-NSML380/12	TLC-NSML380/12
JSMD1206-400L	1206L400SL/6	MF-NSML400/6	SMD1206P400SUR/6	LP-NSMLH400/6	TLC-NSML400/6
JSMD1206-400L/12	1206L400/12SL	MF-NSML400/12	SMD1206P400SLR/12	LP-NSML400/12	TLC-NSML400/12
JSMD1206-450L	1206L450SL/6	MF-NSML450/6	SMD1206P450SLR/6	LP-NSMLH450/6	TLC-NSML450/6
JSMD1206-450L/12	-	MF-NSML450/12	SMD1206P450SLR/12	LP-NSML450/12	TLC-NSML450/12
JSMD1206-500L	1206L500SL/6	MF-NSML500/6	SMD1206P500SUR/6	LP-NSMLH500/6	TLC-NSML500/6
JSMD1206-500L/12	-	-	SMD1206P500SLR/12	-	TLC-NSML500/12
JSMD1206-550L	-	MF-NSML550/6	SMD1206P550SLR/6	LP-NSMLH550/6	TLC-NSML550/6
JSMD1206-550L/12	-	-	SMD1206P550SLR/12	-	TLC-NSML550/12
JSMD1206-600L	1206L600SL/6	MF-NSML600/6	SMD1206P600SUR/6	LP-NSMLH600/6	TLC-NSML600/6
JSMD1206-600L/12	-	-	SMD1206P600SLR/12	-	TLC-NSML600/12

JSMD1206-650L	1206L650SL/6	MF-NSML650/6	SMD1206P650SLR/6	LP-NSMLH650/6	TLC-NSML650/6
JSMD1206-650L/12	-	-	-	-	TLC-NSML650/12
JSMD1206-700L	1206L700SL/6	MF-NSML700/6	SMD1206P700SLR/6	LP-NSMLH700/6	TLC-NSML700/6
JSMD1206-700L/12	-	-	-	-	TLC-NSML700/12
JSMD1206-750L	1206L750SL/6	-	SMD1206P750SLR/6	LP-NSMLH750/6	TLC-NSML750/6
JSMD1206-750L/12	-	-	-	-	TLC-NSML750/12

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