

Type MJS

Lightning Surge Withstand Fuse

5 x 15mm Glass Tube
RoHS 6 Compliant

HF Pb MJS Series, 5 x 15mm Lightning Surge Withstand Fuse



Description

MJS fuses have been used for Tip and Ring protection in telecommunication circuits. And they continue to be used in legacy designs. However, with advent of new issues of IEC/UL 60950 and Telcordia GR-1089 (Issue 3), MJS fuses may no longer meet all test requirements, depending on the end product circuit design. It is recommended that Types RJS and SMP be evaluated for all new telecommunication applications.

Electrical Characteristics (UL / CSA STD.248-14)

Testing current	Blow Time	
	Minimum	Maximum
100%	4 hrs.	N/A
135%	N/A	1 hr
200%	3 sec	20 sec
500%	100 msec	1.5 sec
1000%	30 msec	300 msec

Features

- Meet UL and CSA standard 248-14
- Wide operating temperature range
- Bulk and Tape & Reel packing available
- RoHS6 compliant
- Halogen Free
- Leadfree

Applications





Provide individual protection for components or internal circuits.

- Power Supplies
- Battery Charger
- Monitor
- Adapter
- Telecom Protection

LEAD FREE = 

HALOGEN FREE = 

Safety Agency Approvals

SAFETY AGENCY	SAFETY AGENCY CERTIFICATE NUMBER	AMPERE RANGE / VOLT @ I.R.ABILITY
	E20624	100mA - 7A / 125V AC @10,000A
	LR39772	100mA - 7A / 250V AC @200A
	JET 1037-31003-1011	1A - 5A / 125V AC @500A
		100mA - 7A / 125V AC @10,000A 100mA - 7A / 250V AC @200A

Specifications subject to change without notice

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MJS May 2012D

Electrical Specifications

Catalog Number	Ampere Rating	Typical Cold Resistance (ohm)	Volt-drop @100% In (Volt) Max.	Voltage Rating (V)	Interrupting Rating	Melting I ² T <10 m Sec (A ² Sec)	Melting I ² T @ 10 In (A ² Sec)	Peak Surge Current (Amp)		Maximum Power Dissipation (W)	Agency Approvals			
								(Fig A) 25 Pulses 10uS x 1000uS	(Fig B) 50 Pulses 10uS x 560uS		UL US	SFA	PS E	CE
MJS 100-R	100mA	12.5	1.88	125	100mA - 7A / 125V AC @10,000A 100mA - 7A / 250V AC @200A	0.068	0.088	4.5	6.0	0.22	Y	Y		Y
MJS 125-R	125mA	7.8	1.44	125		0.107	0.138	5.6	7.5	0.24	Y	Y		Y
MJS 150-R	150mA	5.3	1.17	125		0.167	0.216	6.8	9	0.27	Y	Y		Y
MJS 200-R	200mA	3.7	1.02	125		0.26	0.34	9	12	0.30	Y	Y		Y
MJS 250-R	250mA	2.27	0.89	125		0.41	0.53	12	16	0.34	Y	Y		Y
MJS 300-R	300mA	1.57	0.78	125		0.60	0.83	15	17	0.36	Y	Y		Y
MJS 350-R	350mA	1.10	0.72	125		0.8	1.0	18	24	0.40	Y	Y		Y
MJS 400-R	400mA	0.875	0.67	125		1.0	1.3	20	27	0.42	Y	Y		Y
MJS 500-R	500mA	0.630	0.59	125		1.6	2.0	26	35	0.47	Y	Y		Y
MJS 600-R	600mA	0.440	0.53	125		2.2	2.3	29	33	0.49	Y	Y		Y
MJS 700-R	700mA	0.341	0.49	125		3.0	4.0	38	50	0.54	Y	Y		Y
MJS 750-R	750mA	0.326	0.48	125		3.0	4.0	38	50	0.55	Y	Y		Y
MJS 800-R	800mA	0.250	0.42	125		5.0	7.0	50	66	0.60	Y	Y		Y
MJS 1-R	1A	0.195	0.39	125		5.9	7.8	56	75	0.64	Y	Y	Y	Y
MJS 1.25-R	1.25A	0.130	0.34	125		9.3	12	75	100	0.71	Y	Y	Y	Y
MJS 1.5-R	1.5A	0.100	0.29	125		15	19	94	125	0.80	Y	Y	Y	Y
MJS 2-R	2A	0.061	0.26	125		23	30	120	160	0.89	Y	Y	Y	Y
MJS 2.5-R	2.5A	0.046	0.22	125		35	47	150	200	0.99	Y	Y	Y	Y
MJS 3-R	3A	0.037	0.19	125		55	73	195	260	1.10	Y	Y	Y	Y
MJS 3.5-R	3.5A	0.029	0.18	125		69	91	225	300	1.16	Y	Y	Y	Y
MJS 4-R	4A	0.024	0.17	125		86	114	255	340	1.22	Y	Y	Y	Y
MJS 5-R	5A	0.019	0.15	125	135	179	330	440	1.36	Y	Y	Y	Y	
MJS 6-R	6A	0.015	0.13	125	211	279	428	570	1.51	Y	Y		Y	
MJS 7-R	7A	0.012	0.12	125	263	350	488	650	1.60	Y	Y		Y	

Consult manufacturer for other ratings

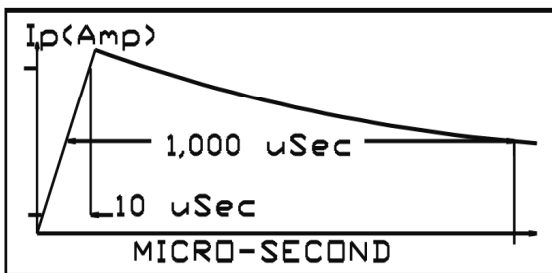


FIG A

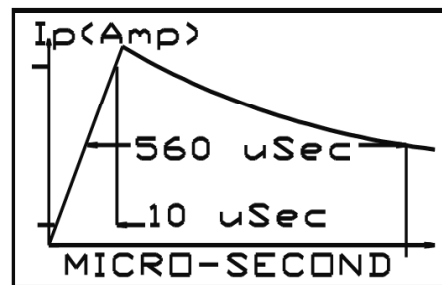


FIG B

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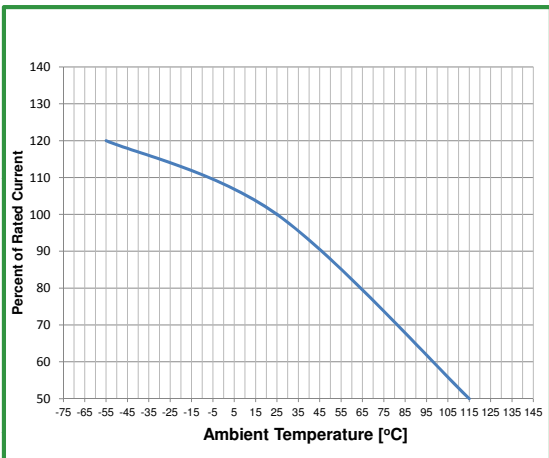
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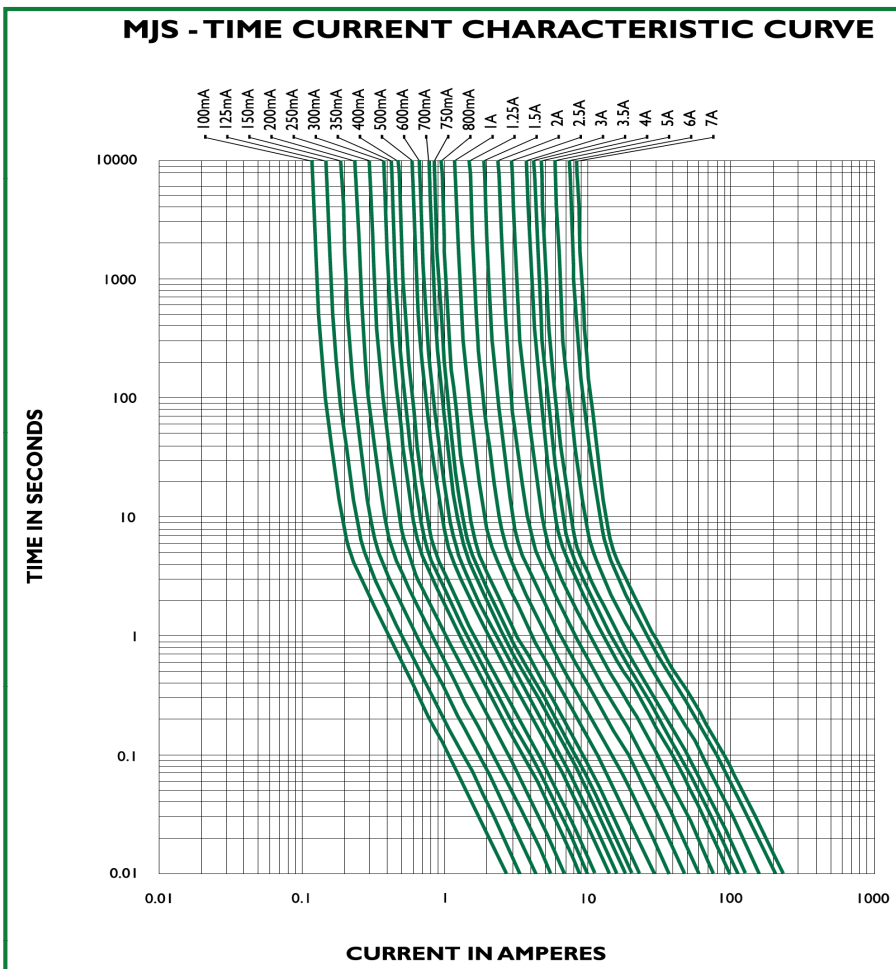
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MJS May2012C

Temperature Derating Curve

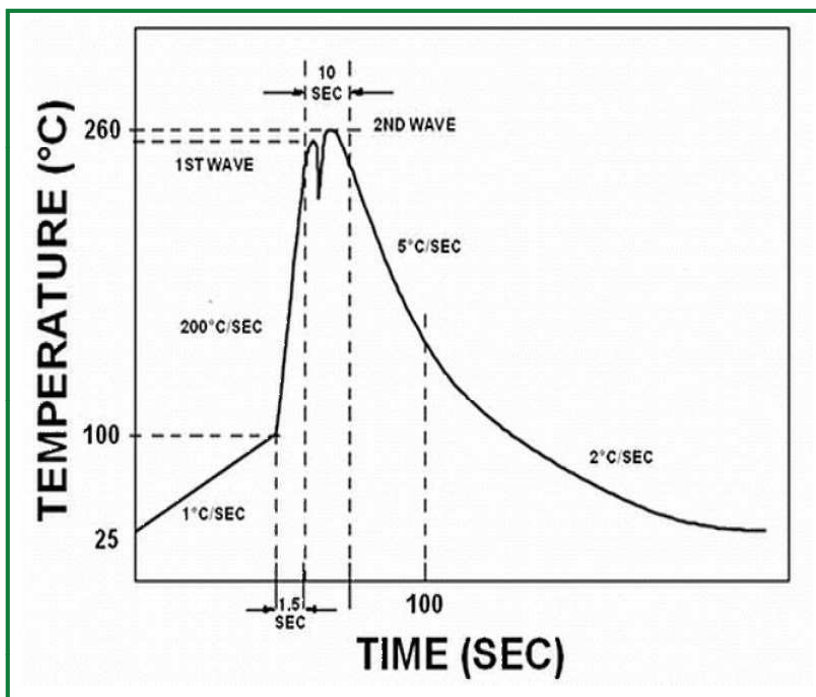


Average Time Current Curve



Soldering Parameters

Lead-free Wave Soldering Profile	
Wave Soldering Parameter	
Average ramp-up rate	200°C / second
Heating rate during preheat	typical 1 - 2 °C / second Max. 4°C/ second
Final preheat temperature	within 125°C of soldering temperature
Peak temperature T _p	260°C
Time within +0 °C / -5°C of actual peak temperature	10 seconds
Ramp-down rate	5 °C / second max.



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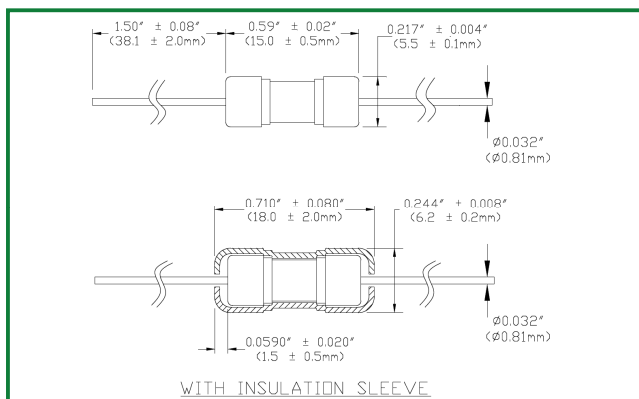
Physical Specifications

Materials	Body : Glass
	Cap : Nickel Plated Brass Caps
	Leads: Matte Tin Plated Copper, Diameter 0.032"
Marking	On Fuse:
	"bel", "MJS", "Current Rating", "Voltage Rating",
	"Appropriate Safety Logos", " (RoHS 6 compliant)
	On label:
	"bel", "MJS", "Current Rating", "Voltage Rating", "Interrupting Rating", "Appropriate Safety Logos" and " (China RoHS compliant).

Environmental Specifications

Shock Resistance	MIL-STD-202G, Method 213B, Test Condition I (100 G's peak for 6 milliseconds; Sawtooth Waveform)
Vibration Resistance	MIL-STD-202G, Method 201A (10-55 Hz, 0.06 inch, total excursion).
Salt Spray Resistance	MIL-STD-202G, Method 101E, Test condition B (48 hrs).
Insulation Resistance	MIL-STD-202G, Method 302, Test Condition A (After Opening) 10,000 ohms minimum.
Solderability	MIL-STD-202G, Method 208H
Resistance to solder Heat	MIL-STD-202G Method 210F, Test Condition B. (260+/-5°C, 10+/-1 sec)
Thermal Shock	MIL-STD-202G, Method 107G, Test Condition B (-65°C to +125°C).
Operating Temperature	-55°C to +125°C
Terminal Strength	IEC-68-2-21

Mechanical Dimensions



* Diameter lead 0.032" for all ratings

Ordering Information

	0653 R XXXX - X X
FUSE TYPE	0653
R	R = RoHS Compliant
AMPERE RATING	Refer to fuse FGNO explanation table
PIGTAIL CODE	1 = Standard (axial leaded) 4 = Axial leaded with insulation sleeve
QUANTITY & PACKAGING CODE	1 = 500 pcs / Bulk bag / box, Pigtail Type Fuse 2 = 1500 pcs / Reel, Tape and Reel

Specifications subject to change without notice

Packaging

Packaging Option	Packaging Specification	Quantity	Packaging Code	Inside Tape Spacing
Bulk (Pigtail Type)	N/A	500	11	N/A
Bulk (Pigtail Type) with Insulation Sleeve	N/A	500	41	N/A
Tape & Reel, 10 mm Pitch	EIA-296-F	1500	12	53
Tape & Reel with Insulation Sleeve, 10 mm Pitch	EIA-296-F	1500	42	53

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