Type RJS

Telecom - Power Cross Protection & Ballast Protection

HF Pb RJS Series — RoHS 6 Compliant

Description

RJS Fuses are primarily intended for use in telecommunication circuit applications requiring low current protection with high surge tolerance. They are typically used to replace heat coil type devices. They are designed to be placed between the line input and the surge arresting components (mov. gas tube, zenor diode, air gaps, etc.)

These fuses will withstand transient surge currents generated by lighting in accordance with the attached table.

RJS fuses guard protected circuitry against sustained overload or short circuit conditions. Such sustained overloads may be generated by accidental contact between utility cables and phone lines (power line cross).

RJS Fuse are primarily designed for use in telecommunications circuits which require compliance with the test requirements specified in UL/IEC 1950 / 60950 and Telcordia GR 1089, Issue 3.

Features

- Radial lead surge resistant slow blow fuse
- Meet UL 60950 power cross requirements
- Designed for compliance with Telcordia GR-1089-CORE
- Designed to serve the requirements of a wide range of telecommunication and networking equipment.
- RoHS 6 compliant
- Halogent Free
- Leadfree

Applications

- Fax machines
- Answering machines
- Telecommunication circuit
- Ballast protection

LEAD FREE = Pb

HALOGEN FREE = HF

Physical Specifications

Materials	Body : Glass
	Leads : Matte Tin Plated Copper, Diameter 0.032''
Marking	On Fuse :
	"bel", "RJS", "Current Rating", "Voltage Rating",
	"Appropriate Safety Logos", " ✔ "(RoHS 6 compliant)
	On Label :
	"bel", "RJS", "Current Rating", "Voltage Rating", "Interrupting Rating", "Appropriate Safety Logos" and " ", " e "(China RoHS compliant).

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

Safety Agency Approvals

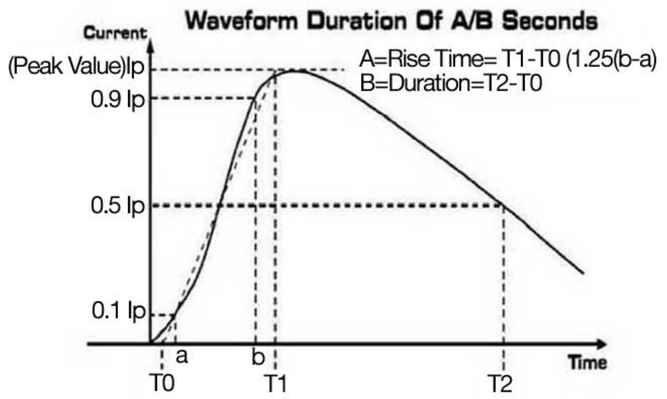
SAFETY AGENCY	SAFETY AGENCY CERTIFICATE NUMBER	POWER FACTOR	VOLTAGE RATING (V)	AMPERE RANGE / VOLT @ I.R. ABILITY*	INTENDED APPLICATION
c UL us	E20624	0.7-0.8	100mA-5A/ 600V AC	100mA-5A/125V AC @10,000A	General Purpose
		0.7-0.8		100mA-5A/250V AC @200A	Primary Protection
SA	LR39772	Resistive		100mA-5A/350V AC @100A	Ballast Protection
		Resistive		100mA-5A/600V AC @60A	Telecom Protection
		Resistive		100mA-5A/600V AC @100A	General Purpose Telecom Protection

* I.R. = INTERRUPTING RATING = SHORT CIRCUIT RATING (AMPS)

Power Cross (Telecom) Rating (Fuse Rated 0.1 - 1.5A)

Overload Current	Voltage	Clearing Time Limit
135% Fuse Rating	600V	Less than 1 hour
200% Fuse Rating	600V	Less than 20 seconds
2.2A	600V	Less than 10 minutes
7A	600V	Less than 1 second
40A	600V	Less than 50 msec
60A	600V	Less than 20 msec

Double - exponential Impulse Waveform



Specifications subject to change without notice

bel POWER SOLUTIONS & PROTECTION
a bel group

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Environmental Specifications

Shock Resistance	MIL-STD-202G, Method 213B, Test Condition 1 (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 ^{O}C,10+/-1 sec)
Thermal Shock	MIL-STD-202G, Method 107G, Test Condition B (-65 ^{O}C to +125 ^{O}C)
Operating Temperature	-55 ^{O}C to +125 ^{O}C
Terminal Strength	IEC-68-2-21

Electrical Specifications

Catalog Number	Ampere Rating	Typical Cold Resistance (ohm)	Volt-drop @100% In (Volt) max.	Voltage and Interrupting Ratings	Melting I²T <10m Sec (A² Sec)	Melting I²T @10 In (A² Sec)	Peak Surage Current (Amp) 50 Pulses 1,000V 10uS x 1000uS	Maximum Power Dissipation (W)	Agency Approvals	
									c UL us	CSA
RJS 100-R	100mA	17.5	2.76	See Table of Safety Approvals on Page 1 for Voltage and associated Interrupting Ratings	0.09	0.11	6	0.41	Y	Y
RJS 125-R	125mA	11.5	2.30		0.13	0.17	8	0.43	Y	Y
RJS 160-R	160mA	7.10	2.01		0.21	0.26	10	0.46	Y	Y
RJS 200-R	200mA	4.94	1.56		0.33	0.41	13	0.49	Y	Y
RJS 250-R	250mA	3.20	1.26		0.51	0.64	16	0.53	Y	Y
RJS 300-R	300mA	2.16	1.16		0.8	1.0	20	0.56	Y	Y
RJS 350-R	350mA	1.77	1.10		1.0	1.3	24	0.58	Y	Y
RJS 400-R	400mA	1.48	0.91		1.2	1.6	29	0.60	Y	Y
RJS 500-R	500mA	0.82	0.65		1.9	2.4	36	0.64	Y	Y
RJS 600-R	600mA	0.62	0.59		3.0	3.8	46	0.68	Y	Y
RJS 700-R	700mA	0.50	0.58		3.8	4.8	54	0.70	Y	Y
RJS 750-R	750mA	0.435	0.55		4.3	5.5	58	0.71	Y	Y
RJS 1-R	1A	0.248	0.39		7.4	9.3	80	0.77	Y	Y
RJS 1.25-R	1.25A	0.166	0.33		12	15	100	0.82	Y	Y
RJS 1.5-R	1.5A	0.121	0.29		17	21	120	0.86	Y	Y
RJS 2-R	2A	0.080	0.26		28	36	155	0.93	Y	Y
RJS 2.5-R	2.5A	0.056	0.24		44	56	190	0.99	Y	Y
RJS 3-R	3A	0.043	0.22		69	87	230	1.06	Y	Y
RJS 4-R	4A	0.027	0.18		108	136	300	1.13	Y	Y
RJS 5-R	5A	0.020	0.16		169	212	370	1.20	Y	Y

Consult manufacturer for other ratings

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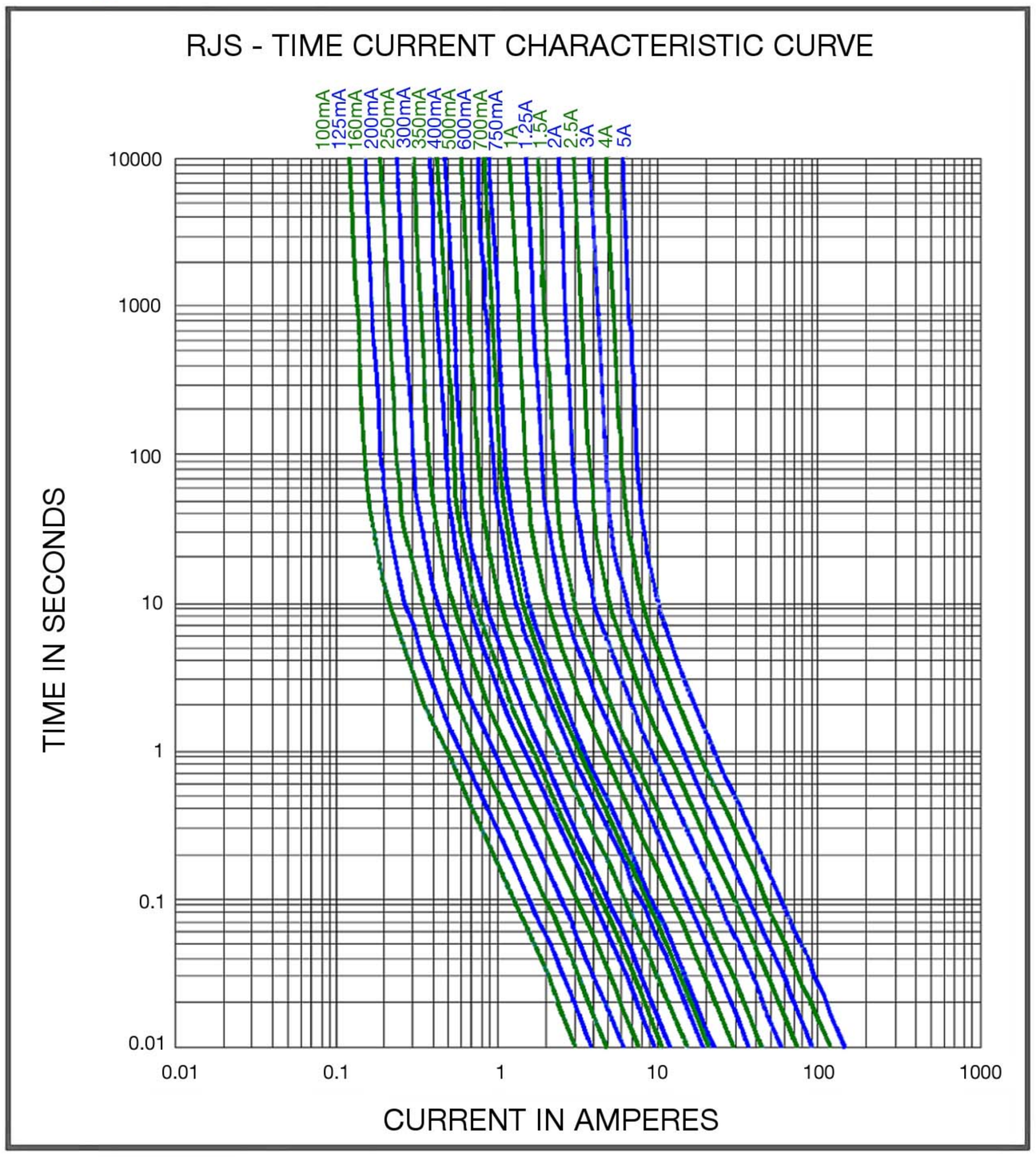
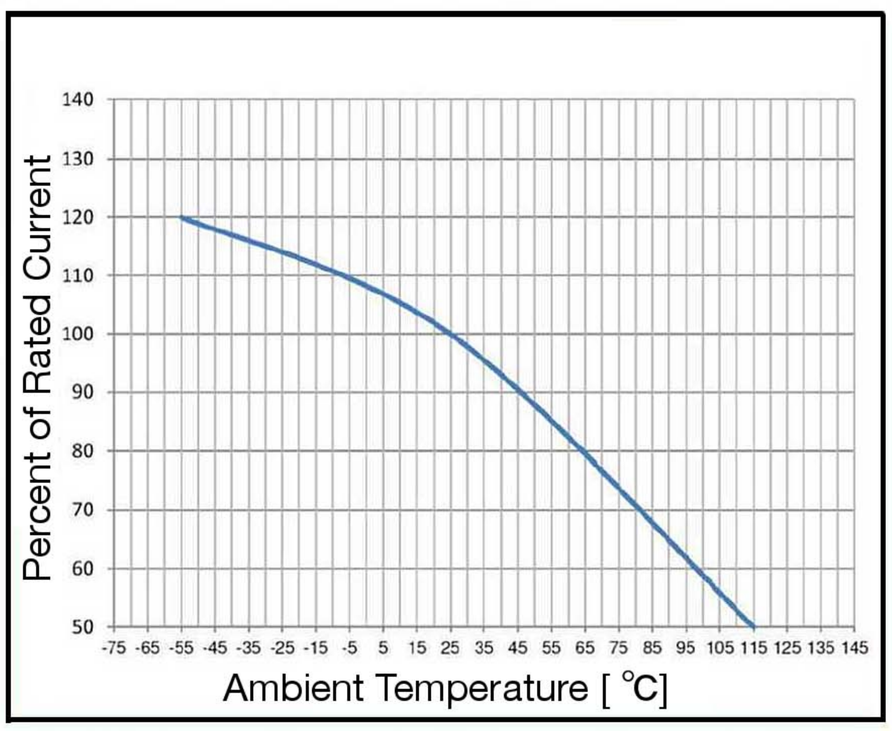
Average Time Current Curve

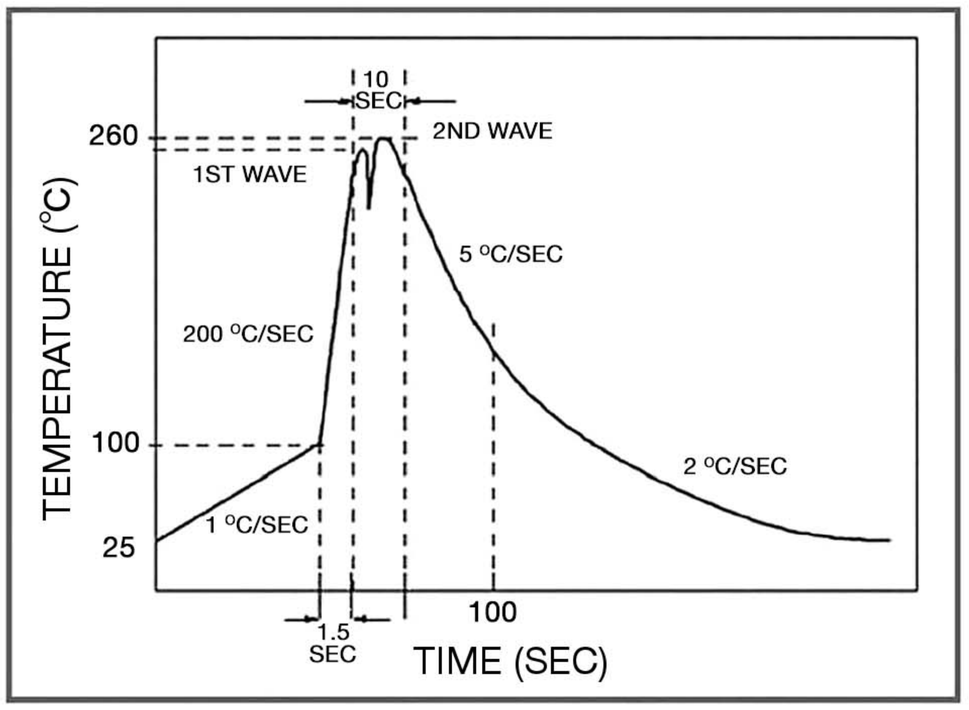


Temperature Derating Curve



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 Tp	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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Fuse FGNO Explanation
06XX X [XXXX] X XX, [XXXX]=Ampere Rating

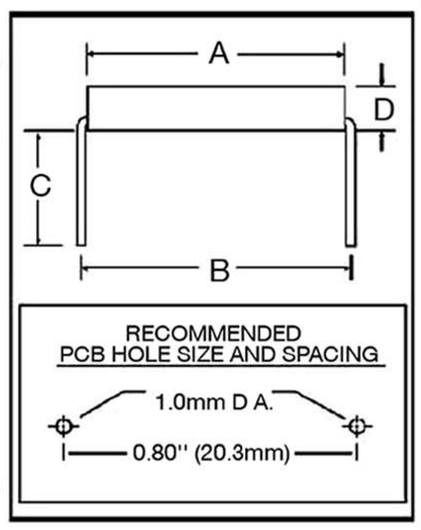
Fraction	Decimal	Milliamps	Bel FGNO[XXXX]
1/32	0.032	32	0032
1/25	.040	40	0040
1/20	.050	50	0050
1/16	.063	63	0063
8/100	.080	80	0080
1/10	.100	100	0100
1/8	.125	125	0125
15/100	.150	150	0150
	.160	160	0160
2/10	.200	200	0200
1/4	.250	250	0250
3/10	.300	300	0300
	.315	315	0315
3/8	.375	375	0375
4/10	.400	400	0400
1/2	.500	500	0500
6/10	.600	600	0600
	.630	630	0630
7/10	.700	700	0700
3/4	.750	750	0750
8/10	.800	800	0800

Fraction	Decimal	Amps	Bel FGNO[XXXX]
	1.0	1	1000
1-1/4	1.25	1.25	1250
1-1/2	1.50	1.5	1500
	1.60	1.6	1600
	2.0	2	2000
2-1/4	2.25	2.25	2250
2-1/2	2.5	2.5	2500
	3.0	3	3000
	3.15	3.15	3150
3-1/2	3.5	3.5	3500
	4.0	4	4000
	5.0	5	5000
	6.0	6	6000
	6.3	6.3	6300
	7.0	7	7000
7-1/2	7.5	7.5	7500
	8.0	8	8000
		10	9100
		12	9120
		15	9150
		20	9200
		25	9250
		30	9300

Mechanical Dimensions

	Standard Lead	Short Lead	
A	0.76''+/-0.01'' (19.3+/-0.2mm)	0.76''+/-0.01'' (19.3+/-0.2mm)	
B	0.80''+/-0.05 (20.3+/-1.27mm)	0.80''+/-0.05 (20.3+/-1.27mm)	
C	0.4'' Typical (10.0mm)	0.134''+/-0.01'' (3.4+/-0.25mm)	0.11''+/-0.01'' (2.8+/-0.25mm)
D	0.18'' max (4.6mm)	0.18'' max (4.6mm)	

*Diameter lead 0.032'' for all ratings



Ordering Information

0643 R XXXX — X X

FUSE TYPE
0643
R = RoHS Compliant
AMPERE RATING
Refer to fuse FGNO explanation table
LEAD LENGTH / PACKAGING
0 = Std length, 0.400In., 2K/Box
1 = Short length, 0.11 In., 500/Box
2 = Short length, 0.134 In., 500/Box
LEAD LENGTH / PACKAGING
2 = 0.800 INCH

Packaging

Packaging Option	Packaging Specification	Quantity	Packaging Code	Inside Tape Spacing
Bulk (Short lead-0.11''+/-0.01'')	N/A	500	12	N/A
Bulk (Short lead-0.134''+/-0.01'')	N/A	500	22	N/A
Bulk (Standard lead)	N/A	2000	02	N/A

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