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PRODUCT DATASHEET

Surface Mount Fuse

JFC1032FS FAST ACTING FUSE



Description

The JFC1032FS series fast acting square Surface Mount fuse are designed for high-end cloud computing servers, telecom base station power supplies, blockchain servers, and new energy vehicle battery management systems, RoHS compliant, Halogen Free and lead(Pb) exempts of the requirements of RoHS Directive, with U.S.(UL/CSA) safety agency approvals. Provide board level primary and secondary circuit protection in a wide variety of applications. With excellent inrush current with standing capability, excellent reliability for thermal and mechanic shock, also have a high reliability and stable solder ability, end caps are available in gold/silver plated.

Agency Approvals

AGENCY	AGENCY FILE NUMBER
	J50678215
	E486200

Features

- One time positive disconnect
- Fast acting for excessive current
- High current rating available
- Low temperature derating
- Tape and Reel for automatic placement
- Conflict free metals
- RoHS, REACH compliant and Halogen free material
- Operating temperature: - 55 °C to +125 °C

Applications

- LED lighting
- LCD backlight inverter
- PC server
- Wireless base station
- Digital camera
- Notebook PC
- Portable Devices
- Medical equipment
- Cooling fan system
- White goods
- Industrial equipment
- Battery devices
- Power supply
- Storage system
- Networking devices
- Automotive devices

Electrical Characteristics

Operating Characteristics:

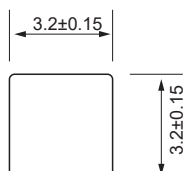
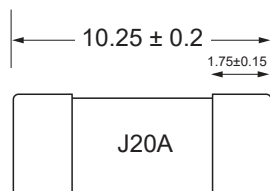
% of Ampere Rating(I_n)	Blowing Time
100%* I_n	4 hours, Min
200%* I_n	120 sec, Max

Performance Specification

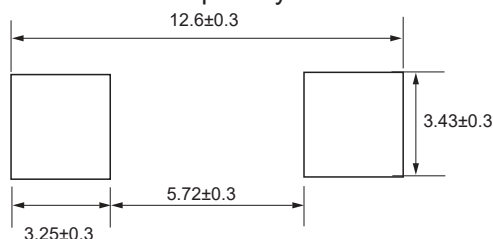
Part Number	Ampere Rating (A)	Max Voltage Rating (V)	Breaking Capacity	Nominal Cold Resistance (mΩ)	Nominal Melting I ² t (A ² S)
JFC1032-0200FS	0.20	600V	35A@600V 100A@350V 150A@250V 150A@125V	920	0.36
JFC1032-0250FS	0.25			860	0.39
JFC1032-0300FS	0.30			809	0.42
JFC1032-0315FS	0.315			768	0.46
JFC1032-0375FS	0.375			710	0.53
JFC1032-0400FS	0.40			665	0.65
JFC1032-0500FS	0.50			450	0.78
JFC1032-0600FS	0.60			400	0.80
JFC1032-0630FS	0.63			360	0.83
JFC1032-0700FS	0.70			200	0.84
JFC1032-0750FS	0.75			190	0.85
JFC1032-0800FS	0.80			180	0.86
JFC1032-1100FS	1.00			145	0.87
JFC1032-1125FS	1.25			113	1.16
JFC1032-1150FS	1.50			69	2.2
JFC1032-1160FS	1.60			65	2.5
JFC1032-1200FS	2.00	250V	50A@400V 100A@350V 150A@250V 150A@125V	50	3.8
JFC1032-1250FS	2.50			45	5.2
JFC1032-1300FS	3.00			36	7.5
JFC1032-1315FS	3.15			33	8.0
JFC1032-1350FS	3.50			29	9.9
JFC1032-1400FS	4.00			23	15.8
JFC1032-1500FS	5.00			18	35
JFC1032-1600FS	6.00			15	55
JFC1032-1630FS	6.30			12.1	65
JFC1032-1700FS	7.00			10.6	70
JFC1032-1800FS	8.00			8.0	82
JFC1032-2100FS	10.0			5.05	91
JFC1032-2150FS	15.0			4.00	203
JFC1032-2200FS	20.0			2.50	360
JFC1032-2250FS	25.0			2.00	563
JFC1032-2300FS	30.0	125V 250V	1KA@32V 500A@72V 300A@125V 100A@250V	1.42	810
JFC1032-2400FS	40.0			1.20	1360
JFC1032-2500FS	50.0			0.98	1946
JFC1032-2600FS	60.0			0.80	2285

Dimensions and Structure

Unit : mm



Recommended pad layout



Material Details

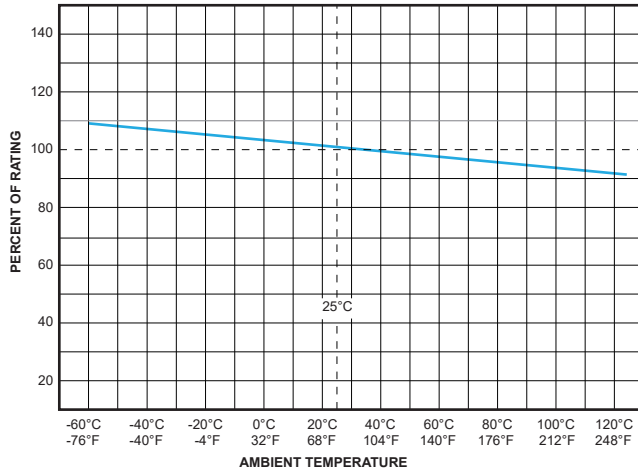
NO.	Part Name	Material
①	End caps	Au Plated Brass Cap
②	Body	Non-Transparent Square Ceramic Tube
③	Fuse element	Cu-Ag/Tin Alloy wire

Product Characteristics

No.	Item	Contain	Reference standard
①	Product Marking	Brand, Ampere Rating	JDTFUSE marking standards
②	Operating Temperature	-55°C to 125°C	55°C to 125°C with proper derating
③	Solderability	T=240°C±5°C, t=3sec±0.5sec, Coverage≥95%	MIL-STD-202, Method 208
④	Redidntance to Soldering Heat	10 sec at 260°C	MIL-STD-202, Method 210, Test Condition B
⑤	Insulating Resistance (after Opncing)	10,000 ohms minimum	MIL-STD-202, Method 302, Test Condition A
⑥	Thermal Shock	5 cycle, -65°C/+125°C, 15minutes at each extreme	MIL-STD-202, Method 107, Test Condition B
⑦	Mechanical Shock	100G's peak for 6 milliseconds, 3cycles	MIL-STD-202, Method 213, Test Condition I
⑧	Vibration	0.03"amplitude, 10-55 Hz in 1min. 2hrs each XYZ=6hrs	MIL-STD-202, Method 201
⑨	Moisture Resistance	10 cycles	MIL-STD-202, Method 106
⑩	Salt Spray	5% salt solution, 48hrs	MIL-STD-202, Method 101, Test Condition B

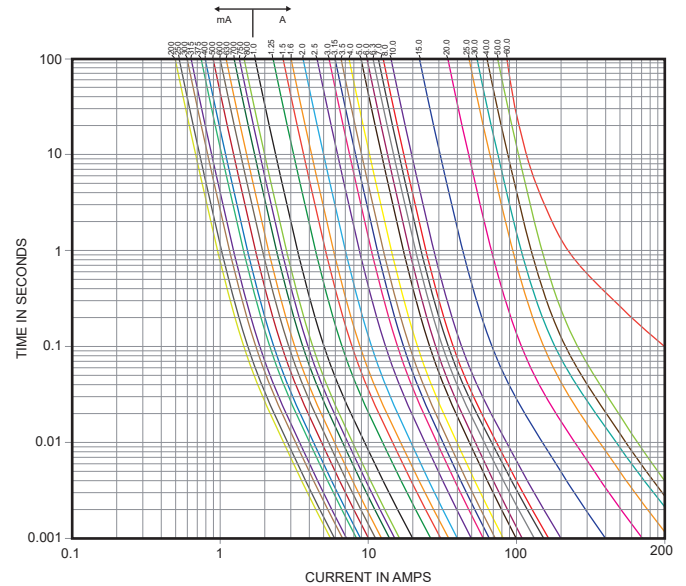
Environmental Characteristic

Temperature Derating Curve

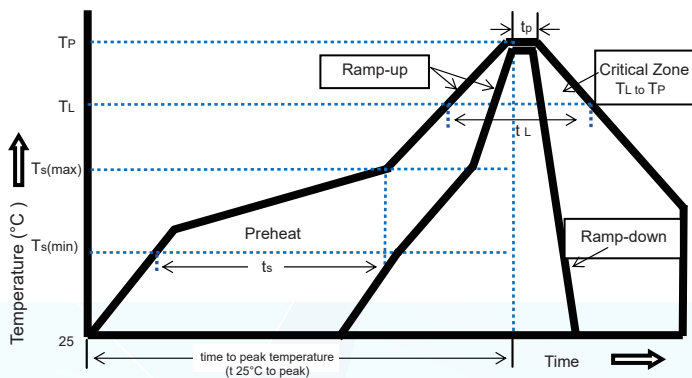


When choosing the fuse's specification, if the operating environmental temperature beyond the scope from 20-30°C, engineer should consider the environmental temperature's affection to fuse.

Average Time-Current Curve



Recommended Soldering Parameters



A.Wave/Reflow Soldering Parameters:

- Solder paste process.
- Solder Pot Temperature: 260°C Max.
- Sold Dwell Time: 5 seconds max.

B.Hand-Solder Parameters:

- Solder Iron Temperature: 300±5°C .
- Heating Time: 1~2s max.

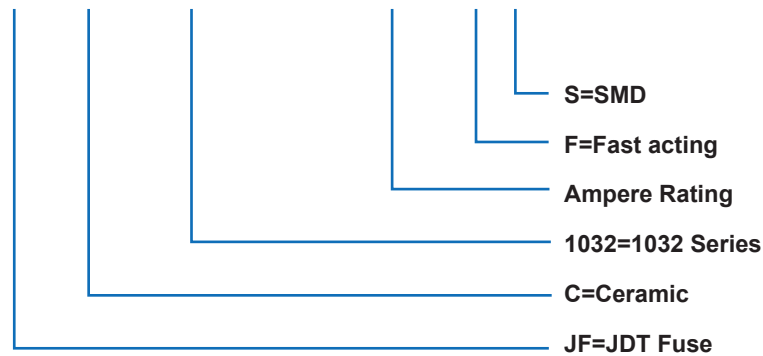
	Reflow Condition	Pb-Free assembly
Pre Heat	Temperature Min Ts(min)	150°C
	Temperature Max Ts(max)	200°C
	Time Min to Max (Ts)	60-120 secs
Reflow	Temperature (TL)(Liquidus)	217°C
	Time Max (TL)	60-90 seconds
Average ramp up rate (Liquidus Temp(TL) to peak)		5°C/s max
Ts(max)to TL-Ramp-up Rate		5°C/s max
Peak Temperature(Tp)		260+0/-5°C
Time within 5°C of actual peak Temperature(tp)		20-40 s
Ramp-down Rate		5°C/s max
Time 5°C of peak Temperature(tp)		8 min max
Do not exceed		260°C

PACKING

NO.	Quantity	Packaging Option
JFC1032FS	2000	24mm tape-and-reel on13 inch(330mm)reel

PART NUMBERING

JF C 1032 - xxxx F S

**OTHERS**

- If in use beyond the requirements of the specifications, must pass through the mutual confirmation !
- If the specification is not appropriate, must through consultation between the two sides and by the company to modify.