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JDT FUSE
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PRODUCT DATASHEET

Surface Mount Fuse

JFC0456TS TIME-LAG FUSE

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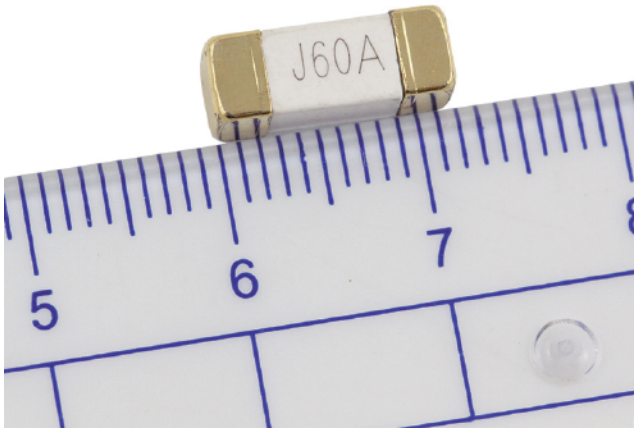


Description

The JFC0456TS series Time-Lag square Surface Mount fuse are designed for high-end cloud computing sercers,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 withstanding 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
	E486200

Features

- Time-Lag
- High current rating available
- Low temperature de-rating
- Tape and Reel for automatic placement
- Small size(10.2mm*3.2mm)
- Wide operating temperature range(-55℃ to 125℃)
- RoHS compliant
- Conflict free metals
- Wide range of current rating available

Electrical Characteristics

- Test Condition:All electrical test is to be conducted with the ambient air at a temperature of 25±5℃.

- Operating Characteristics

% of Ampere Rating(In)	Blowing Time
100%*In	4 hours, Min
250%*In	120 sec, Max

Applications

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

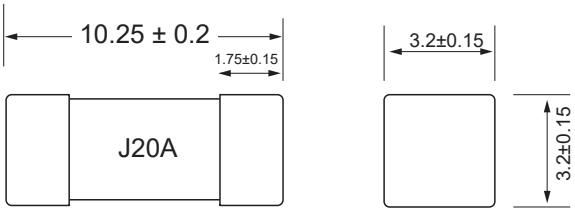
Performance Specification

Part Number	Ampere Rating (A)	Max Voltage Rating (V)	Breaking Capacity	Nominal Cold Resistance (mΩ)	Nominal Melting I²t (A²S)
JFC0456-0200TS	0.20	600VAC/DC	35A@600VAC/DC 100A@350VAC/DC 150A@250VAC/DC 150A@125VAC/DC	911	0.36
JFC0456-0250TS	0.25			774	0.39
JFC0456-0300TS	0.30			728	0.42
JFC0456-0315TS	0.315			691	0.46
JFC0456-0375TS	0.375			639	0.53
JFC0456-0400TS	0.40			598	0.65
JFC0456-0500TS	0.50			552	0.78
JFC0456-0600TS	0.60			515	0.80
JFC0456-0630TS	0.63			460	0.83
JFC0456-0700TS	0.70			257	0.84
JFC0456-0750TS	0.75			184	0.85
JFC0456-0800TS	0.80			165	0.86
JFC0456-1100TS	1.00			69	0.87
JFC0456-1125TS	1.25			71	1.16
JFC0456-1150TS	1.50			63	2.2
JFC0456-1160TS	1.60			55	2.5
JFC0456-1200TS	2.00			46	3.8
JFC0456-1250TS	2.50	250VAC/DC	50A@400VAC/DC 100A@350VAC/DC 150A@250VAC/DC 150A@125VAC/DC	41	5.2
JFC0456-1300TS	3.00			33	7.5
JFC0456-1315TS	3.15			30	8.0
JFC0456-1350TS	3.50			26	9.9
JFC0456-1400TS	4.00			21	15.8
JFC0456-1500TS	5.00			16	35
JFC0456-1600TS	6.00			13	55
JFC0456-1630TS	6.30			10.8	65
JFC0456-1700TS	7.00			9.50	70
JFC0456-2100TS	10.0			7.25	91
JFC0456-2150TS	15.0			4.05	203
JFC0456-2200TS	20.0			2.97	360
JFC0456-2250TS	25.0			2.02	563
JFC0456-2300TS	30.0			1.78	810
JFC0456-2400TS	40.0	125VDC 250VAC	1KA@32VDC 500A@72VDC 300A@125VDC 100A @250VAC	1.08	1360
JFC0456-2500TS	50.0			0.89	1949
JFC0456-2600TS	60.0			0.70	2887
JFC0456-2800TS	80.0			0.50	5270
JFC0456-3100TS	100.0			0.29	8080

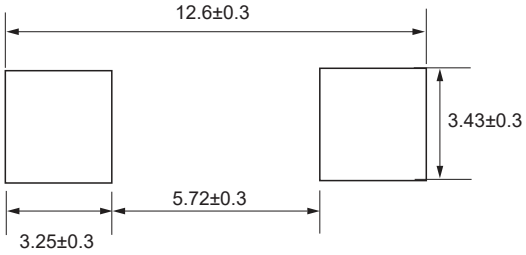
Dimensions and Structure

Unit : mm

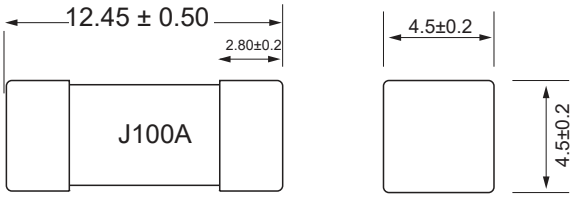
① 0.2-40A:



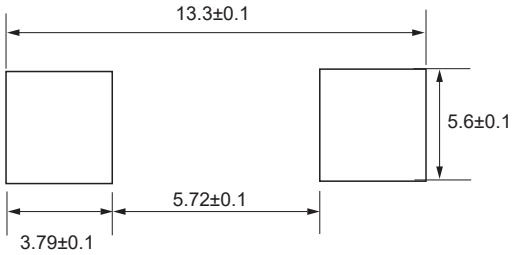
Recommended pad layout



② 50-100A:



Recommended pad layout



Material Details

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

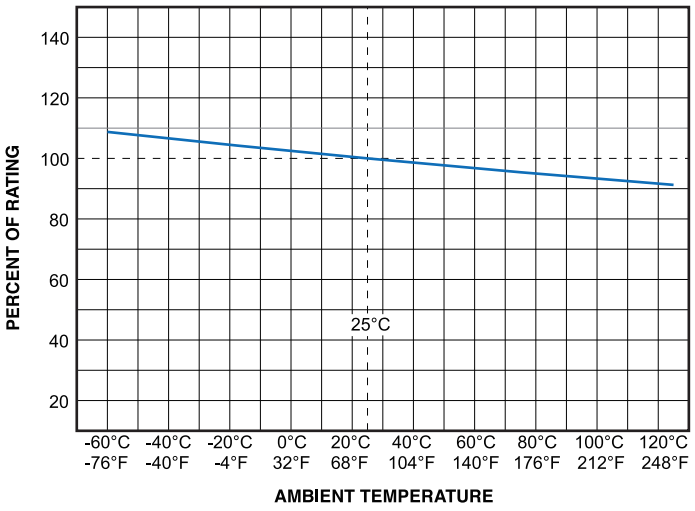
Product Characteristics

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	Redidtance to Soldering Heat	10 sec at 260°C	MIL-STD-202, Method 210,Test Condition B
⑤	Insulating Resistance (after Opcning)	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 millisecinds, 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

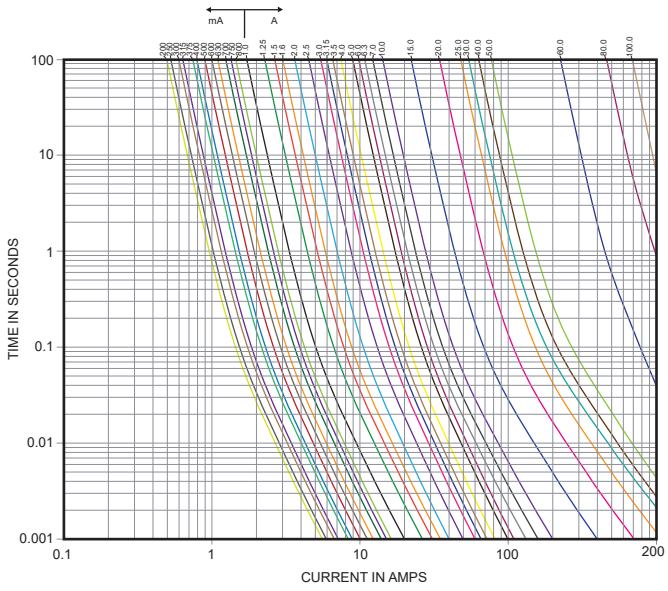
Environmental Characteristic

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.Please refer:Temperature Rerating Curve:

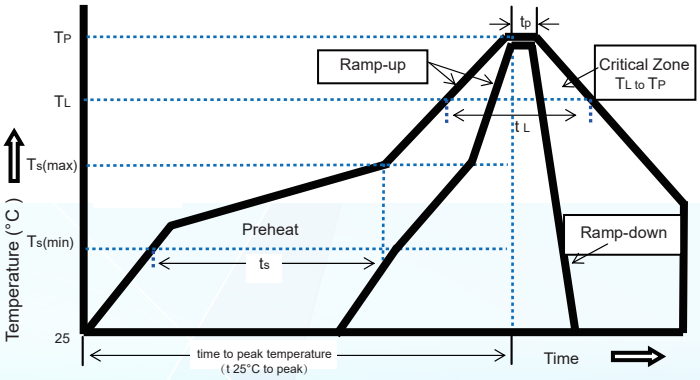
Temperature Rerating Curve



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:

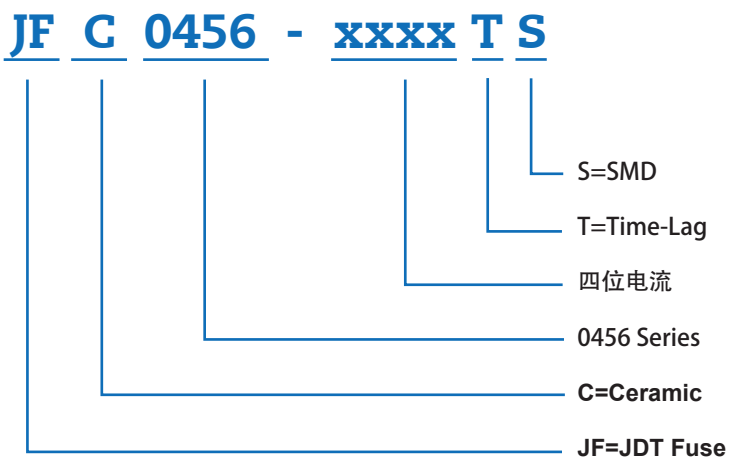
- Solder Iron Temperature：300±5°C .
- Heating Time：1~2s max.

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/seconds max.
Ts(max)to TL-Ramp-up Rate		5°C/seconds max.
Peak Temperature(Tp)		260 + 0/-5°C
Time within 5°C of actual peak Temperature(tp)		20-40 seconds
Ramp-dowm Rate		5°C/seconds max.
Time 5°C ot peak Temperature(tp)		8 minutes max.
Do not exceed		260°C

Packing

No.	Quantity	Packaging Code
JFC0456-0100TS~2400TS	2000	24mm tape-and-reel on a 13 inch (330mm)
JFC0456-2500TS~3100TS	1500	reel per EIA Standard 481)

PART NUMBERING



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.