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PRODUCT DATASHEET

Surface Mount Fuse

JFC2410FS FAST ACTING FUSE



Descriptions

JFC2410FS series are fast acting square Surface Mount fuses are ceramic tube/end cap constructions, 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/nickel plated.

Applications

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

Agency Approvals

AGENCY	AGENCY FILE NUMBER
	E486200

Features

- Fast acting
- RoHS compliant
- Conflict free metals
- Small size (6.1mm*2.5mm)
- Wide range of current rating available
- Wide operating temperature range
- Low temperature de-rating
- Tape and Reel for automatic placement

Electrical Characteristics

- Pre-Arcing Time / Current Characteristics:

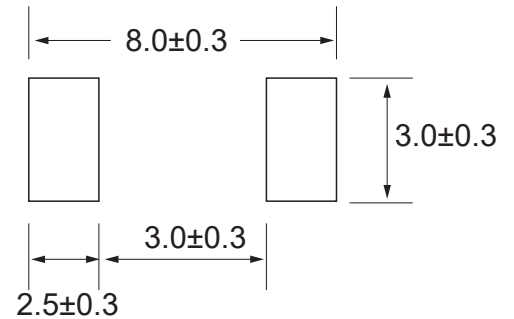
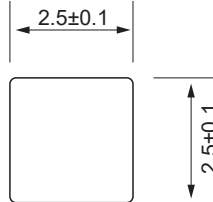
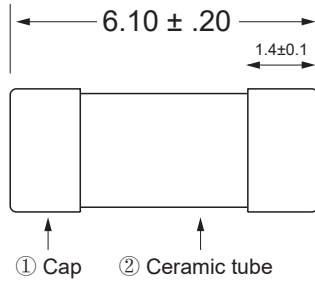
% of Ampere Rating(In)	Opening Time
100%*In	4 hours Min
200%*In	5 sec Max

Performance Specification

Part Number	Rated Current (A)	Max Voltage Rating(V)	Interrupting Rating	Nominal Cold Resistance (mΩ)	Nominal Melting I ² t (A ² sec)
JFC2410-0062FS	0.062	250V	50A@250V 100A@125V	5650	0.00034
JFC2410-0100FS	0.10			3140	0.040
JFC2410-0160FS	0.16			2300	0.058
JFC2410-0200FS	0.20			1650	0.062
JFC2410-0250FS	0.25			1450	0.065
JFC2410-0300FS	0.30			850	0.191
JFC2410-0315FS	0.315			650	0.202
JFC2410-0375FS	0.375			610	0.330
JFC2410-0400FS	0.40			580	0.338
JFC2410-0500FS	0.50			320	0.475
JFC2410-0600FS	0.60			265	0.775
JFC2410-0630FS	0.63			256	0.986
JFC2410-0700FS	0.70			230	2.105
JFC2410-0750FS	0.75			225	2.240
JFC2410-0800FS	0.80			203	2.380
JFC2410-1100FS	1.00			128	3.690
JFC2410-1125FS	1.25			92.0	3.760
JFC2410-1150FS	1.50			85.0	6.765
JFC2410-1160FS	1.60			75.0	6.805
JFC2410-1200FS	2.00			38.0	12.15
JFC2410-1250FS	2.50			35.0	16.025
JFC2410-1300FS	3.00	125V	100A@125V	26.0	21.56
JFC2410-1315FS	3.15			25.0	25.75
JFC2410-1350FS	3.50			2.0	30.05
JFC2410-1400FS	4.00			19.0	43.208
JFC2410-1500FS	5.00			13.0	55.25
JFC2410-1600FS	6.00			11.0	75.245
JFC2410-1630FS	6.30			10.0	93.55
JFC2410-1700FS	7.00			9.0	97.12
JFC2410-1800FS	8.00			7.8	108.75
JFC2410-2100FS	10.0			6.6	118.38
JFC2410-2120FS	12.0	72V	500A@72V	4.5	140.08
JFC2410-2150FS	15.0			3.0	210.68
JFC2410-2160FS	16.0			2.8	215.25
JFC2410-2200FS	20.0			2.0	358.08
JFC2410-2250FS	25.0	63V	500A@63V	1.58	465.17
JFC2410-2300FS	30.0			1.45	989.65
JFC2410-2400FS	40.0			1.20	1050.78

Dimensions and Structure

- Outline Drawing and dimensions (unit : mm)



Recommended pad layout

- Material Details:

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

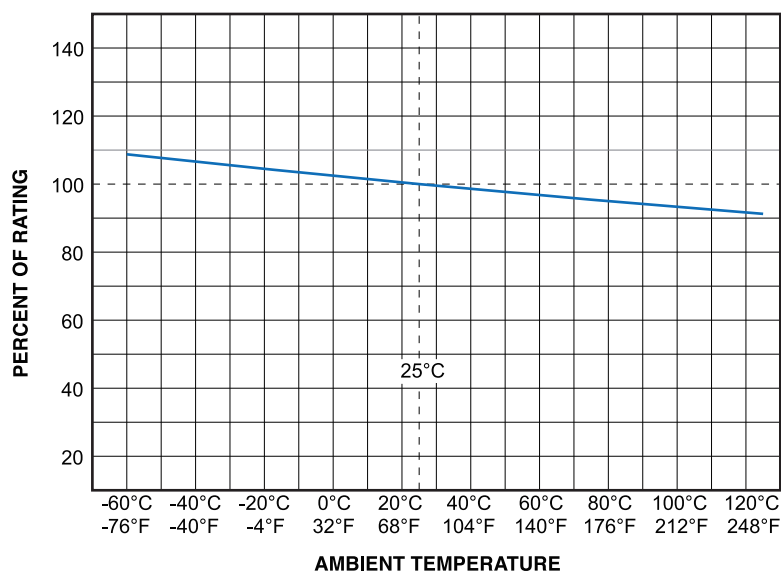
Product Characteristics

No.	Item	Contain	Reference standard
1	Insulation Resistance	10,000 ohms minimum	MIL-STD-202G, Method 302 Test Condition A
2	Solderability	T=240°C±5°C, t=5+0/-0.5s, Cover ≥ 95%	MIL-STD-202G, Method 208H
3	Resistance to Soldering Heat	10 sec at 260°C	MIL-STD-202G, Method 210F Test Condition B
4	Thermal Shock	5 cycles, -65°C to +125°C, 15 minutes @ each extreme	MIL-STD-202G, Method 107G Test Condition B
5	Mechanical Shock	100G's peak for 6 milliseconds, 3 cycles	MIL-STD-202G, Method 213B Test 1
6	Vibration	0.03" amplitude, 10-55 Hz in 1 min. 2hrs each XYZ=6hrs	MIL-STD-202G, Method 201A
7	Moisture Resistance	10 cycles	MIL-STD-202G, Method 106G
8	Salt Spray	5% salt solution, 48hrs	MIL-STD-202G, Method 101E Test Condition B
9	Operating Temperature	-55°C to +125°C	IEC60068-2-1/2

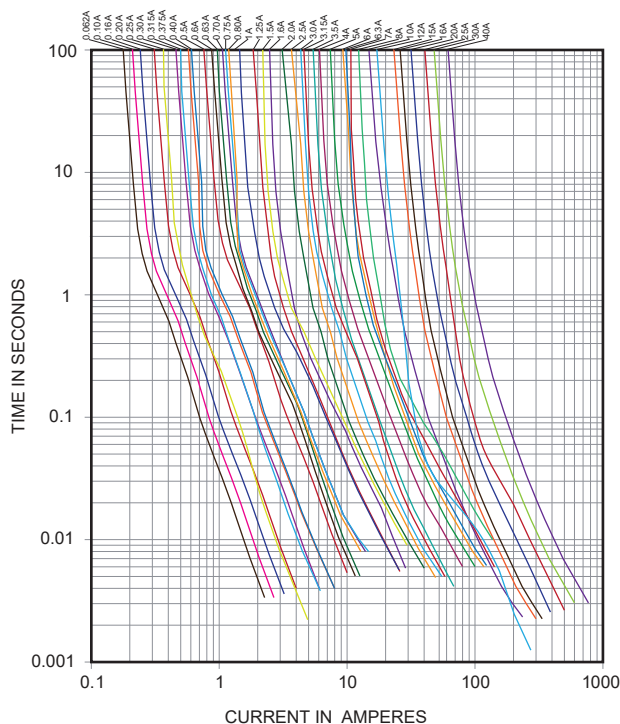
Environmental Characteristic

- Company operating temperature of the environment more than $25\pm 5^{\circ}\text{C}$, in the selection of fuse specifications, it needs to consider the impact of the operating environment of the temperature fuse. Photo: temperature derating curve.

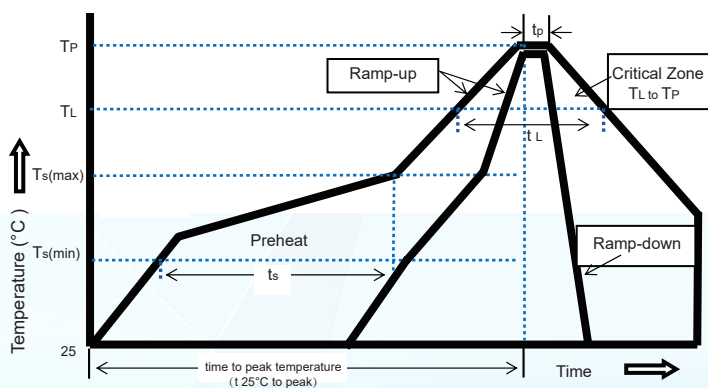
Temperature Derating Curve



Average Time-Current Curve



Recommended Soldering Parameters

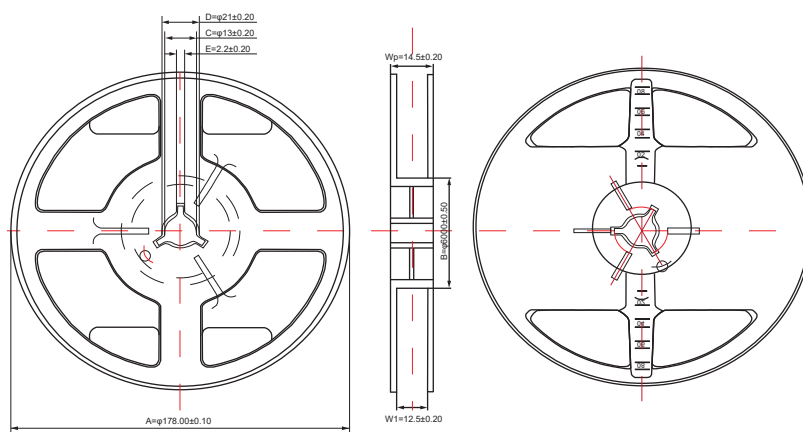


Reflow Condition		Pb-Free assembly
Preheat	Average ramp-up rate($T_{s(\max)}$ to T_P)	$5^{\circ}\text{C}/\text{second max.}$
	Temperature Min ($T_{s(\min)}$)	150°C
	Temperature Max ($T_{s(\max)}$)	200°C
Reflow	Time (Min to Max)(t_s)	60~120 seconds
	Temperature (T_L)	220°C
	Time Max (t_L)	60 seconds
Peak Temperature (T_P)		260°C max
Ramp-down Rate		$5^{\circ}\text{C}/\text{second max}$
Time 25°C to peak Temperature(T_P)		8 minutes max

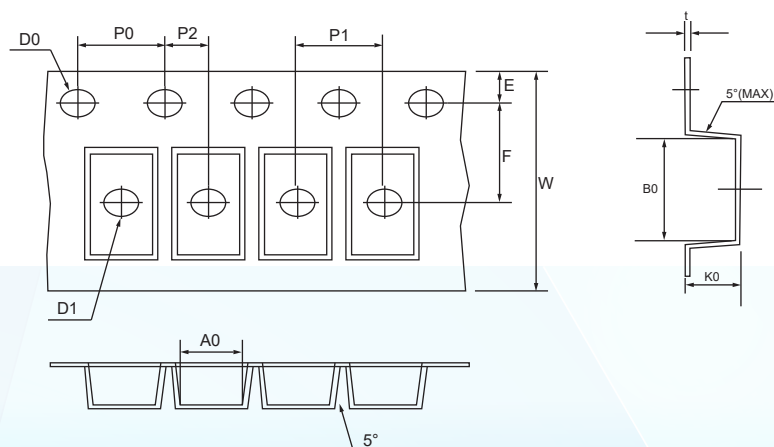
Soldering Method		Parameter
Wave/Reflow solder	Solder paste process	
	Solder Pot Temperature	260°C max
	Solder Dwell Time	5 seconds max
Hand-Solder	Solder Iron Temperature	$300\pm 5^{\circ}\text{C max}$
	Heating Time	1-2 s max

Packing

No.	Quantity &Packaging Code
JFC2410FS	1500 fuses/reel (12mm tape-and-reel on a 7 inch (178mm) reel per EIA Standard 481)

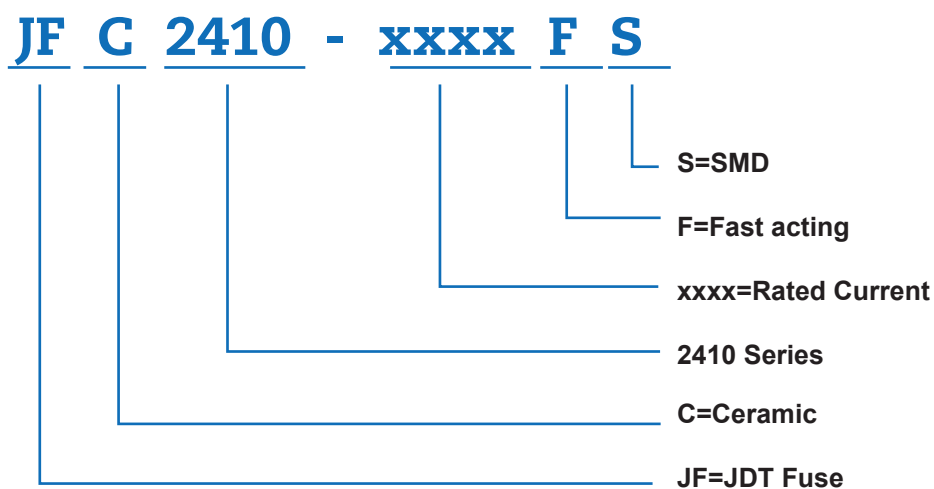


Item	A	B	C	D	E	W1	W2
Spec.(mm)	178±0.10	60±0.50	13±0.20	21±0.20	2.2±0.20	12.5±0.20	14.5±0.20



Item	A0	B0	D0	D1	E	F
Spec.(mm)	2.70±0.10	6.4±0.10	1.5±0.10	1.50±0.25	1.75±0.10	5.50±0.10
Item	K0	P0	P1	P2	W	t
Spec.(mm)	2.70±0.10	4.00±0.10	4.00±0.10	2.0±0.10	12.00±0.15	0.25±0.05

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.
- It could be in conformance with another file which made by our company.