

Axial Lead & Cartridge Fuses

5x20 mm > Time-Lag > 215SP Series

215SP Series, 5x20 mm, Time-Lag Fuse



Description

5x20mm Time-Lag surge withstanding ceramic body cartridge fuse designed to IEC specification

Features

- Designed to International (IEC) Standards for use globally
- Meets the IEC 60127-2, Sheet 5 specification for Time-Lag Fuses
- RoHS compliant and Pb-free

Applications

Used as supplementary protection in appliance or utilization equipment to provide individual protection for components or internal circuits.

Agency Approvals

AGENCY	AGENCY FILE NUMBER	AMPERE RANGE
	NBK080205-E10480B NBK250702-E10480F	1A – 5A 6.3A – 10A
	CQC10012041490	1A – 6.3A
	SU05001-2011B SU05001-10001 SU05001-10002	1A – 2.5A 3.15A – 6.3A 8A
	E10480	1A – 10A
	29862	1A – 10A
	40013521	1 – 10A
	J50248091	10A
	N/A	1A – 10A

Electrical Characteristics for Series

% of Ampere Rating	Ampere Rating	Opening Time
210%	1A - 3.15A	30 minutes, Maximum
	4A - 6.3A	30 minutes, Maximum
	8A - 10A	30 minutes, Maximum
275%	1A - 3.15A	.75 sec. Min.; 80 secs. Max.
	4A - 6.3A	.75 sec. Min.; 80 secs. Max.
	8A - 10A	.75 sec. Min.; 80 secs. Max.
400%	1A - 3.15A	.095 sec. Min.; 5 secs. Max.
	4A - 6.3A	.150 sec. Min.; 5 secs. Max.
	8A - 10A	.150 sec. Min.; 5 secs. Max.
1000%	1A - 3.15A	.010 sec. Min.; .150 secs. Max.
	4A - 6.3A	.010 sec. Min.; .150 secs. Max.
	8A - 10A	.010 sec. Min.; .150 secs. Max.

Electrical Characteristic Specifications by Item

Amp Code	Amp Rating	Voltage Rating	Interrupting Rating	Nominal Resistance Cold Ohms (Ohms)	Nominal Melting I ^{2t} (A ² sec)	Maximum Voltage Drop at Rated Current (mV)	Maximum Power Dissipation at 1.5I _n (W)	Agency Approvals							
001	1	250	1500 A @ 250 VAC	0.1515	1.52000	350	2.5	x	x	x	x	x	x	x	x
1.25	1.25	250		0.1074	3.20000	300	2.5	x	x	x	x	x	x	x	x
01.6	1.6	250		0.0707	6.83000	200	2.5	x	x	x	x	x	x	x	x
002	2	250		0.0566	11.68000	190	2.5	x	x	x	x	x	x	x	x
02.5	2.5	250		0.0386	22.29000	180	2.5	x	x	x	x	x	x	x	x
3.15	3.15	250		0.0283	43.25500	140	4	x	x	x	x	x	x	x	x
004	4	250		0.0185	46.96000	100	4	x	x	x	x	x	x	x	x
005	5	250		0.0153	66.09500	100	4	x	x	x	x	x	x	x	x
06.3	6.3	250		0.0108	128.75000	100	4	x	x	x	x	x	x	x	x
008	8	250		0.0092	209.88000	100	4	x		x	x	x	x		x
010	10	250		0.0066	333.56500	100	4	x			x	x	x	x	x

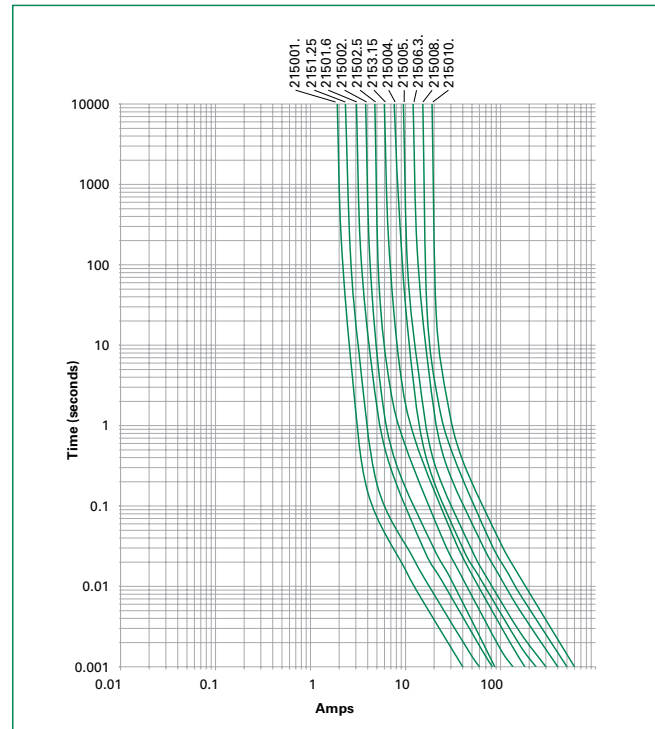
I^{2t} test at 10x rated current

Temperature Re-rating Curve



Note:
Rerating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

Average Time Current Curves



Soldering Parameters - Wave Soldering



Recommended Process Parameters:

Wave Parameter	Lead-Free Recommendation
Preheat: (Depends on Flux Activation Temperature)	(Typical Industry Recommendation)
Temperature Minimum:	100°C
Temperature Maximum:	150°C
Preheat Time:	60-180 seconds
Solder Pot Temperature:	260°C Maximum
Solder Dwell Time:	2-5 seconds

Recommended Hand-Solder Parameters:

Solder Iron Temperature: 350°C +/- 5°C
Heating Time: 5 seconds max.

Note: These devices are not recommended for IR or Convection Reflow process.

Different values of A and B available, please contact the Littelfuse sales representative in your region:



For the pigtailed fuse, please follow the recommendations below for axial lead forming and mounting into PCB:

Lead forming:

The distance C between cap flat surface and axial lead shall be greater than 1.0 mm.

PCB mounting:

The distance between PCB and fuse cap is recommended to be a minimum of 1.5 mm.

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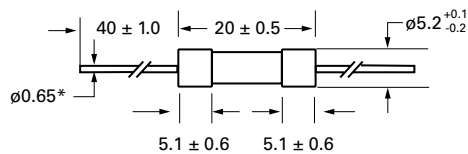
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Product Characteristics

Materials	Body: Ceramic Cap: Nickel-plated Brass Leads: Tin-plated Copper
Terminal Strength	MIL-STD-202, Method 211, Test Condition A
Solderability	MIL-STD-202 Method 208
Product Marking	Cap 1: Brand logo, current and voltage ratings Cap 2: Agency approval marks

Operating Temperature	-55°C to +125°C
Thermal Shock	MIL-STD-202, Method 107, Test Condition B (5 cycles, -65°C to +125°C)
Vibration	MIL-STD-202, Method 201
Humidity	MIL-STD-202, Method 103, Test Condition A (High RH (95%) and elevated temp (40°C) for 240 hours)
Salt Spray	MIL-STD-202, Method 101, Test Condition B

Dimensions



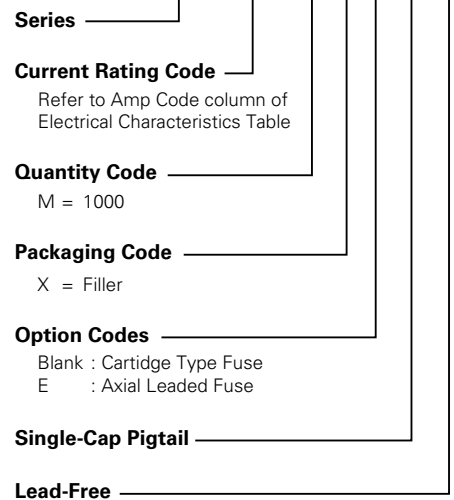
All dimensions in mm

Notes:

* Ratings 8A and 10A have 0.8 ± 0.05 diameter lead.

Part Numbering System

0215 xxxx M X E SP P



Packaging

Packaging Option	Packaging Specification	Quantity	Packaging Code	Reel Size
215SP Series				
Bulk	N/A	1000	MXE	N/A

Additional Information



Datasheet



Resources



Samples