215SP Series, 5×20 mm, Time-Lag Fuse



Description

The 215SP Series is a 5x20m Time-lag, surge withstanding ceramic body, axial-leaded cartridge fuse designed to IEC specifications.

Features

- High breaking capacity
- RoHS compliant and lead-free
- Meets Standard Sheet 5 of IEC 60127-2 as a Time-Lag fuse

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	Ampire Range
	NBK080205-E10480B NBK250702-E10480F	1A – 5A 6.3A – 10A
	CCC self-declaration No.: 2020970207000048	1A - 10A
	SU05001-2011B SU05001-10001 SU05001-10002 SU05001-2012B	1A – 2.5A 3.15A – 6.3A 8A 10A
	E10480	1A – 10A
	29862	1A – 10A
	40013521	1A – 8A
	J50248091	10A
	N/A	1A – 10A

Additional Information

Datasheet | Resources | Samples

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	0.75 sec. Min.; 80 secs. Max.
	4A - 6.3A	0.75 sec. Min.; 80 secs. Max.
	8A - 10A	0.75 sec. Min.; 80 secs. Max.
400%	1A - 3.15A	0.095 sec. Min.; 5 secs. Max.
	4A - 6.3A	0.150 sec. Min.; 5 secs. Max.
	8A - 10A	0.150 sec. Min.; 5 secs. Max.
1000%	1A - 3.15A	0.010 sec. Min.; .150 secs. Max.
	4A - 6.3A	0.010 sec. Min.; .150 secs. Max.
	8A - 10A	0.010 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 I²t* (A² sec)	Maximum Voltage Drop at Rated Current (mV)	Maximum Power Dissapation at 1.5In (W)	Agency Approvals							
001.	1	250	1500 A @ 250 VAC	0.1515	1.52000	350	2.5	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
01.6	1.6	250		0.0707	6.83000	200	2.5	x	x	x	x	x	x	-	x
002.	2	250		0.0566	11.68000	190	2.5	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
3.15	3.15	250		0.0283	43.25500	140	4	x	x	x	x	x	x	-	x
004.	4	250		0.0185	46.96000	100	4	x	x	x	x	x	x	-	x
005.	5	250		0.0153	66.09500	100	4	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
008.	8	250		0.0092	209.88000	100	4	x	x	x	x	x	x	-	x
010.	10	250		0.0066	333.56500	100	4	x	x	x	x	x	-	x	x

*I2t test at 10x rated current
** Interrupting Rating may differ based on Agency Approval. See Agency Approval certificate for more details.

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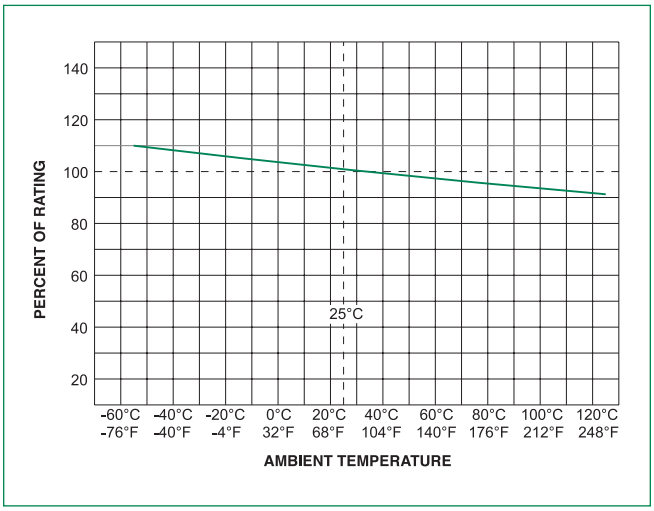
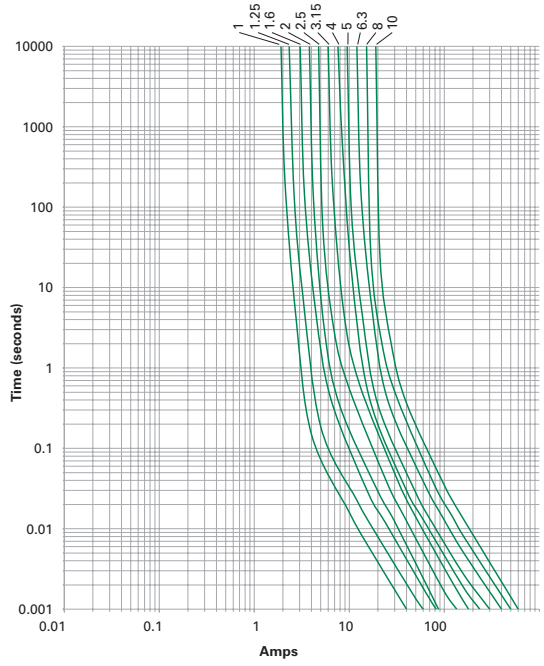
Axial Lead & Cartridge Fuses

5×20 mm > Time-Lag Fuse > 215SP Series

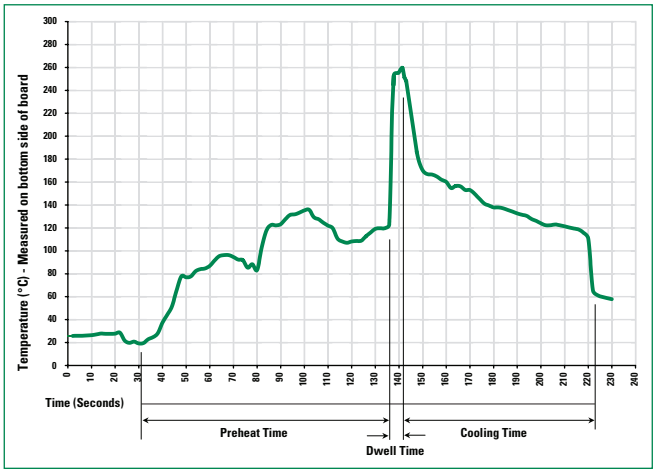
Temperature Re-rating Curve



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

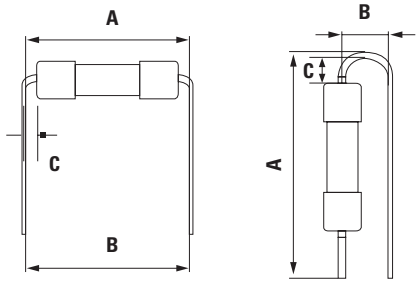
Recommended Hand-Solder Parameters:

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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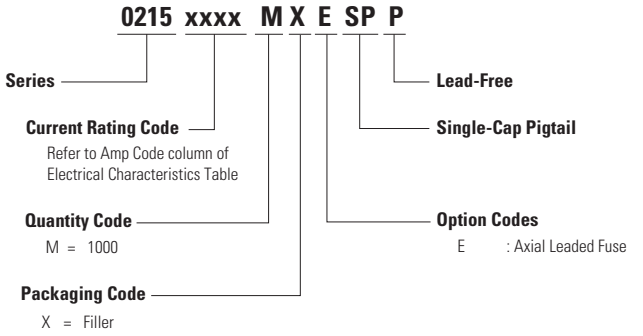
Product Characteristics

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

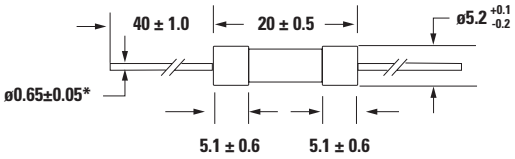
Operating Temperature	–55°C to +125°C
Thermal Shock	MIL-STD-202, Method 107, Test Condition B (5 cycles, –65°C to +125°C)
Vibration	MIL-STD-202, Method 201
Humidity	MIL-STD-202, Method 103, Test Condition A (High RH (95%) and elevated temp (40°C) for 240 hours)
Salt Spray	MIL-STD-202, Method 101, Test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

Part Numbering System



Dimensions

All dimensions in mm



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

Packaging

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

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