Littelfuse®
Expertise Applied | Answers Delivered

215SP Series, 5×20 mm, Time-Lag Fuse

RoHS (Pb) (PSE) (CQC) KC UL CSA DVE CE △

Description

5×20mm Time-Lag surge withstanding ceramic body cartridge fuse designed to IEC specification

Features

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

Applications

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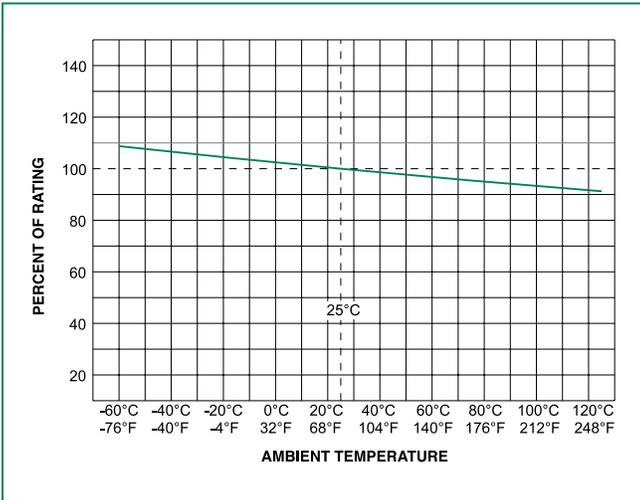
Agency Approvals

AGENCY	AGENCY FILE NUMBER	AMPERE RANGE
(PSE)	NBK080205-E10480B NBK250702-E10480F	1A – 5A 6.3A – 10A
(CQC)	CQC10012041490	1A – 6.3A
KC	SU05001-2011B SU05001-10001 SU05001-10002 SU05001-2012B	1A – 2.5A 3.15A – 6.3A 8A 10A
UL	E10480	1A – 10A
CSA	29862	1A – 10A
DVE	40013521	1A – 8A
△	J50248091	10A
CE	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 I²t (A² sec)	Maximum Voltage Drop at Rated Current (mV)	Maximum Power Dissapation at 1.5In (W)	Agency Approvals							
								(PSE)	(CQC)	KC	UL	CSA	DVE	△	CE
001.	1	250		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	1500 A @ 250 VAC	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
010.	10	250		0.0066	333.56500	100	4	x		x	x	x		x	x

I²t test at 10x rated current

Temperature Re-rating Curve

Average Time Current Curves
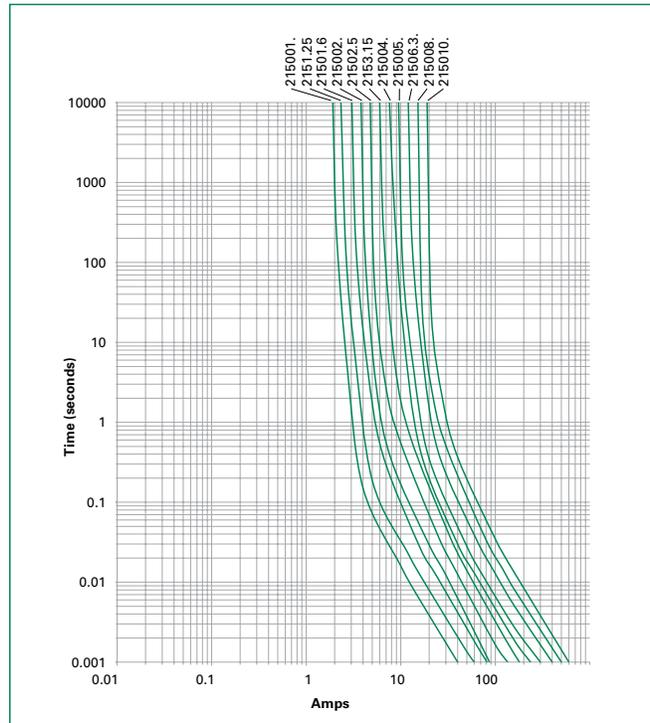
## Soldering Parameters - Wave Soldering
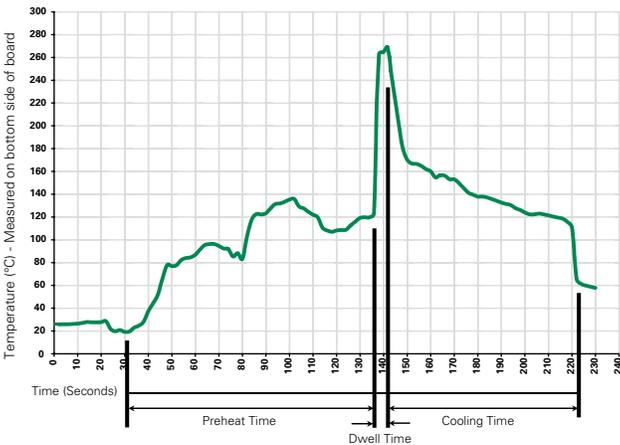
Recommended Process Parameters:

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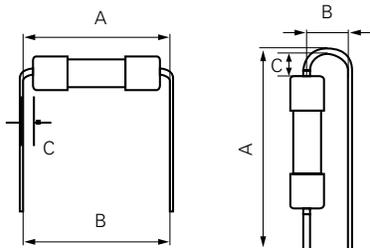
For the pigtailed fuse, please follow the recommendations below for axial lead forming and mounting into PCB:

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.
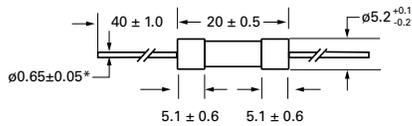
Product Characteristics

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

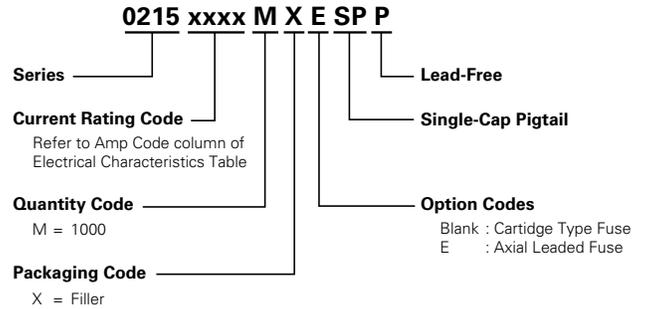| Operating Temperature	–55ºC to +125ºC
Thermal Shock	MIL-STD-202, Method 107, Test Condition B (5 cycles, –65ºC to +125ºC)
Vibration	MIL-STD-202, Method 201
Humidity	MIL-STD-202, Method 103, Test Condition A (High RH (95%) and elevated temp (40ºC) for 240 hours)
Salt Spray	MIL-STD-202, Method 101, Test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

Part Numbering System

0215 xxxx M X E SP P

- **Series**
- **Current Rating Code** — Refer to Amp Code column of Electrical Characteristics Table
- **Quantity Code** — M = 1000
- **Packaging Code** — X = Filler
- **Lead-Free**
- **Single-Cap Pigtail**
- **Option Codes** — Blank : Cartidge Type Fuse / E : Axial Leaded Fuse

Packaging

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

Dimensions

All dimensions in mm

40 ± 1.0   20 ± 0.5   ø5.2 +0.1 -0.2
ø0.65±0.05*
5.1 ± 0.6   5.1 ± 0.6

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

Additional Information

Datasheet   **Resources**   **Samples**

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Littelfuse](#):

  0215001.MXESPP   0215002.MXESPP   0215004.MXESPP   0215005.MXESPP   0215008.MXESPP
021501.6MXESPP   0215010.MXESPP   021502.5MXESPP   021506.3MXESPP   02151.25MXESPP   02153.15MXESPP
  021506.3MXK13SPP   0215005.MXK7SPP   0215001.MXK20SPP   021506.3MXF155SPP   021502.5MXK23SPP
021506.3MXF151SPP   0215002.MXK22SPP   021506.3MXK8SPP   02153.15MXK11SPP   0215008.MXK9SPP
0215008.MXF103SPP   02153.15MXF160SPP   0215005.MXF151SPP   02153.15MXF163SPP   0215005.MXF111SPP
0215010.MXK10SPP   02153.15MXF162SPP   02153.15MXF155SPP   021501.6MXK24SPP   0215004.MXK6SPP
02153.15MXF151SPP   021506.3MXF160SPP   0215005.MXF160SPP   021501.6MRET1SPP   02151.25MRET1SPP
0215001.MRET1SPP   0215010.MRET1SPP   021506.3MXF162SPP   0215002.MRET1SPP   021502.5MRET1SPP
0215008.MRET1SPP   0215004.MRET1SPP   0215005.MXF162SPP   0215004.MXK24P