

5×20 mm > Time-Lag > 835 Series

# 835 Series, 5×20 mm, Time-Lag Fuse



#### **Agency Approvals**

Agency	Agency File Number	Ampere Range			
$\triangle$	A R50282025 5A-8				
S	SU05001-14001 SU05001-14002	5A-6.3A 8A			
<b>()</b>	CQC14012115993 8A				
	2014010207723515	5A-6.3A			
c <b>SL</b> <sup>®</sup> us	E10480	5A-8A			
Cartridge: NBK080205-E10480A NBK250702-E10480E Leaded: NBK080205-E10480B NBK250702-E10480F		5A 6.3A-8A 5A 6.3A-8A			

# **Transient Surge Ratings**

Surge Wave Form			Ampere Rating	
8/20µs ²	1,500A	12	5A-8A	

Notes:

 Transient surge ratings are provided for reference only and may not represent surge withstand capability in the end application. Factors including, but not limited to, series impedance, mounting, and wiring may affect surge withstand capability.

2. In accordance with IEC 60060-1, front time = 8µs and time to half-value = 20µs

### Description

The 835 Series is a 5x20mm time-lag, ceramic body AC fuse with higher I<sup>2</sup>t, high interrupting rating, and 1.5kA surge withstand capability. This series fuse provides enhanced over-current protection and surge withstand capability, ideal for LED/LCDTVs, digital display systems, and digital signage type of display applications. It is RoHS compliant and 100% Pb-Free.

#### Features

- Higher I<sup>2</sup>t and 1.5kA Surge Withstand Capability
- Meet the IEC 60127-2, sheet 5 specifications for Time-Lag Fuses
- High breaking capacity
  R
- Operating temperature range from -55°C to 125°C
- RoHS compliant and Lead-free

## Applications

- LED/LCD TVs
- Digital Display Systems
- White Goods
- Power Supply Units
- Digital Signage

### **Electrical Characteristics for Series**

% of Ampere Rating	Ampere Rating	Opening Time		
150%	5A- 6.3A	60 minutes, Minimum		
150 %	8A	30 minutes, Minimum		
210%		30 minutes, Maximum		
275%	5A- 8A	.75 sec. Min.; 80 secs. Max.		
400%	JA- 8A	.150 sec. Min.; 5 secs. Max.		
1000%		.010 sec. Min.; .150 sec. Max.		

# **Additional Information**







For recommended fuse accessories for this product series, see '<u>Recommended Accessories</u>' section.

Resources

#### **Electrical Characteristic Specifications by Item**

Amp Amp Voltage Rating In Code Rating (V)				Nominal Melting	Agency Approvals						
	Interrupting Rating		l²t (A² sec)	$\triangle$	K		<b>00</b>	c <b>FL</b> <sup>°</sup> us	PSE		
005.	5	250		0.0155	155	х	х	x		х	х
06.3	6.3		1500A@250VAC	0.0118	300	х	х	x		х	х
008.	8			0.0092	230	х	х		х	х	х

I²t tested at 10x rated current



# **Axial Lead & Cartridge Fuses**

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#### **Temperature Rerating Curve**



### **Product Characteristics**

	Body: Ceramic			
Materials	Cap: Nickel-plated Brass			
	Leads: Tin-plated Copper			
Terminal Strength	MIL-STD-202, Method 211, Test Condition A			
Solderability	IEC 60068-2-20, Method 1 (235°C)			
Product Marking	Cap 1: Brand logo, current and voltage ratings Cap 2: Agency approval markings			
Packaging	Packed 1000 pieces on bulk			
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 relative humidity (95%) and elevated temperature (40°C) for 240 hours			
Salt Spray	MIL-STD-202, Method 101, Test Condition B			

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#### 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 DwellTime:	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.



# **Axial Lead & Cartridge Fuses**

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#### **Dimensions**



\*Ratings above 6.3A have 0.8±0.05mm diameter lead

All dimensions in mm

#### **Part Numbering System**



F : Axial Lead Fuse

P: Lead-free

## Packaging

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code	Reel Size			
835 Series							
Bulk	N/A	1000	MX	N/A			
Bulk	N/A	1000	MXE	N/A			
Bulk (Color Coding & forming)	N/A	1000	MXK	N/A			

#### **Recommended Accessories** Max Max Accessory Series Description Application Application Туре . Voltage Amperage 345\_ISF Panel Mount Shock-Safe Fuseholder 10 Holder <u>345</u> Shock-Safe Fuseholder with PC Mount, Solder Mount and Panel Mount options 20 PC Mount Shock-Safe Miniature Fuseholder 830 16 <u>520</u> Metric OMNI-BLOK® Fuse Block 10 Block PC Mount Miniature Fuse Block 250 6.3 646 <u>658</u> Surface Mount Miniature Fuse Block 10 <u>520\_W</u> PC Mount Miniature Fuse Clip 6.3 Clip PC Board Mount Fuse Clip 10 <u>111</u> <u>445</u> PC Board Mount Fuse Clip 10

Notes: 1. Do not use in applications above rating.

Please refer to fuseholder data sheet for specific re-rating information.
 Please contact factory for applications greater than the max voltage and amperage shown.