

RoHS  **477 Series, 5 x 20 mm, Time-Lag (Slo-Blo®) Fuse**







Description

400Vdc/500Vac rated, 5x20mm, time-lag, surge withstand ceramic body cartridge fuse.

Features

- Designed to International (IEC) Standards for use globally
- Available in cartridge and axial lead form
- Follow the IEC 60127-2, Sheet 5 specification for time-lag fuses
- RoHS compliant and lead-free

Agency Approvals

Agency	Agency File Number	Ampere Range
	Cartridge Certificates: NBK250702-E10480 C NBK250702-E10480 E NBK100408-JP1021A	1A – 5A 6.3A – 12A 16A
	Leaded Certificates: NBK250702-E10480 B & D NBK250702-E10480 F NBK100408-JP1021B	1A – 5A 6.3A -12A 16A
	Cartridge File: No.806815 Leaded File: No.811247	500mA-8A 500mA-8A
	Recognised File: E10480	500mA – 16A(500VAC) 500mA – 16A(400VDC)
		500mA – 16A

Applications

High energy and power efficient applications.

Electrical Characteristics for Series

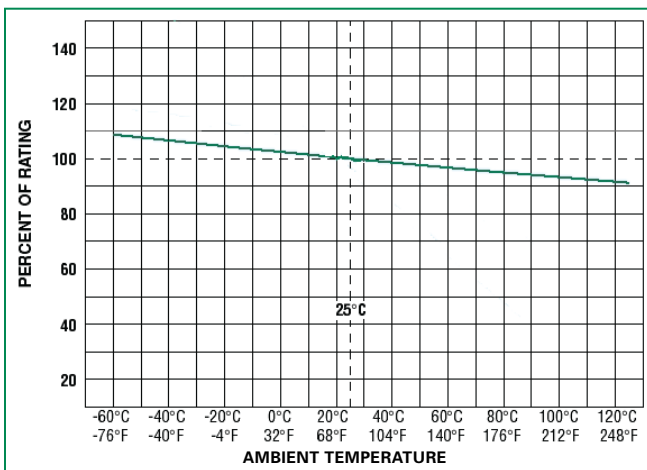
% of Ampere Rating	Ampere Rating	Opening Time
150%	.5 – .8	60 minutes, Minimum
	1 – 3.15	60 minutes, Minimum
	4 – 6.3	60 minutes, Minimum
210%	8 – 16	30 minutes, Minimum
	.5 – .8	30 minutes, Maximum
	1 – 3.15	30 minutes, Maximum
275%	4 – 6.3	30 minutes, Maximum
	8 – 16	30 minutes, Maximum
	.5 – .8	.25 sec., Min.; 80 sec., Max.
400%	1 – 3.15	.75 sec., Min.; 80 sec., Max.
	4 – 6.3	.75 sec., Min.; 80 sec., Max.
	8 – 16	.75 sec., Min.; 80 sec., Max.
1000%	.5 – .8	.05 sec., Min.; 5 sec., Max.
	1 – 3.15	.095 sec., Min.; 5 sec., Max.
	4 – 6.3	.15 sec., Min.; 5 sec., Max.
1000%	8 – 16	.15 sec., Min.; 5 sec., Max.
	.5 – .8	.005 sec., Min.; .15 sec., Max.
	1 – 3.15	.01 sec., Min.; .15 sec., Max.
1000%	4 – 6.3	.01 sec., Min.; .15 sec., Max.
	8 – 16	.01 sec., Min.; .15 sec., Max.

477 Series

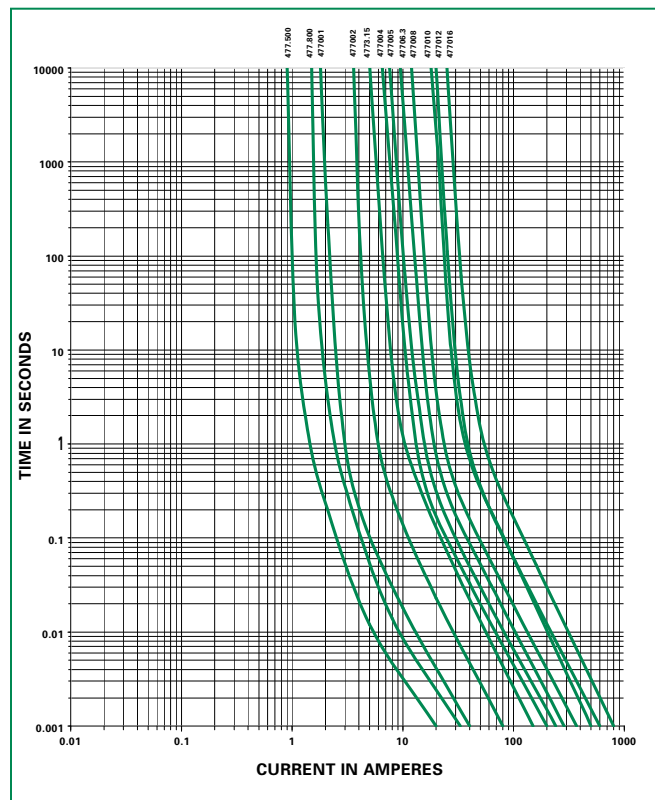
Electrical Characteristics Specifications by Item

Amp Code	Amp Rating (A)	Max Voltage Rating (V)		Interrupting Rating	Nominal Cold Resistance (Ohms)	Nominal Melting I²T (A²Sec.)	Agency Approvals			
		AC	DC				PS	UL	CS	
.500	0.5	500	400	100A@500VAC 1500A@400VDC	1055.900	0.300		X	X	
.800	0.8	500	400		430.000	0.909		X	X	
001.	1	500	400		139.400	1.800	X	X	X	
002.	2	500	400		55.200	9.120	X	X	X	
3.15	3.15	500	400		27.700	50.109	X	X	X	
004.	4	500	400	100A@500VAC 500A@400VDC	17.200	52.480	X	X	X	
005.	5	500	400		13.700	76.500	X	X	X	
06.3	6.3	500	400		10.970	121.451	X	X	X	
008.	8	500	400		8.305	203.520	X	X	X	
010.	10	500	400		4.950	610.000	X	X		
012.	12	500	400		4.730	576.000	X	X		
016.	16	500	400		100A@500VAC 400A@400VDC	3.100	1331.200	X	X	

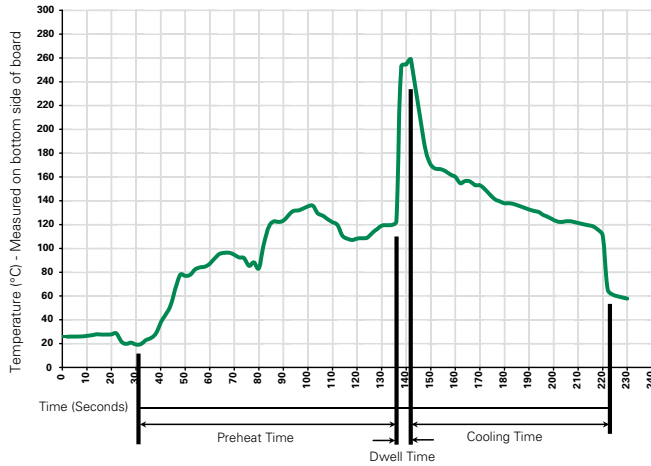
Temperature Derating Curve



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.

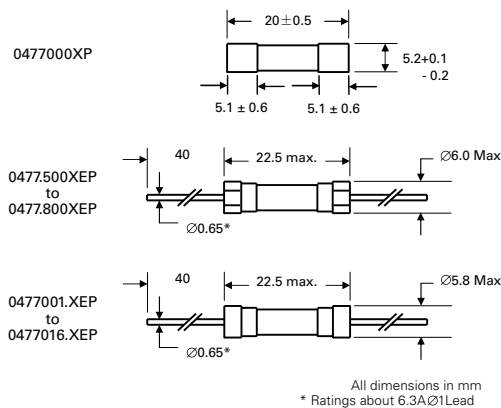
Note: These devices are not recommended for IR or Convection Reflow process.

Product Characteristics

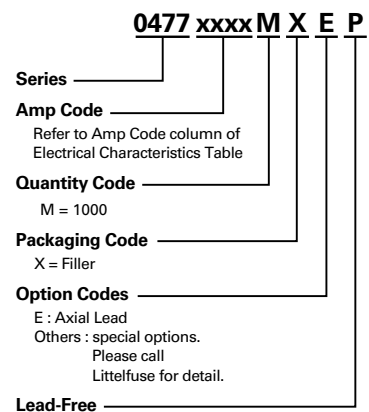
Material	Body: Ceramic Cap: Nickel-plated brass Leads: Tin-plated Copper
Terminal Strength	MIL-STD-202G, Method 211A, Test Condition A
Solderability	Reference IEC 60127 Second Edition 2003-01 Annex A
Product Marking	Cap 1: Brand logo, current and voltage rating Cap 2: Series and agency approval markings
Packaging	Available in Bulk (M=1000 pcs/pkg)

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

Dimensions



Part Numbering System



Packaging

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code	Reel Size
477 Series				
Bulk	N/A	1000	MX	N/A
Bulk	N/A	1000	MXE	N/A