

213 Series

5x20 mm, Time-Lag Fuse



Description

The 213 Series is a 5x20mm time-lag, surge-withstand, glass body cartridge fuse that is designed to IEC specifications.

Features & Benefits

- Conforms to EN/IEC/K/J 60127-1 and EN/IEC/K/J 60127-2
- Available in cartridge and axial lead form
- Meets the IEC 60127-2, Sheet 3 specification for time-Lag fuses
- RoHS compliant and lead-free.
- Recognized to UL/CSA/NMX 248-1 and UL/CSA/NMX 248-14
- Conforms to GB 9364.1 and GB 9364.2
- CE Mark indicates compliance with Low-Voltage and RoHS Directives.

Additional Information



Resources



Accessories



Samples

Applications

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

Electrical Characteristic for Series

% of Ampere Rating	Ampere Rating	Opening Time
150%	All Ratings	60 minutes, Minimum
210%		2 minutes, Maximum
275%		0.6 sec., Min.; 10 sec. Max.
400%		.15 sec., Min.; 3 sec. Max.
1000%		0.02 sec., Min.; 0.3 sec. Max.

Agency Approvals

Agency	Agency File Number	Ampere Range
PS E	Cartridge: NBK090205-E10480A NBK120802-E10480C	1A-5A 6.3A
	Leaded: NBK090205-E10480B NBK120802-E10480D	1A-5A 6.3A
CCC	2020970207000056	0.200A – 6.3A
UL	E10480	
SF	029862	0.200A – 6.3A
S	1914693	
D'E	40015638	
IEC	KM41462	0.200A – 6.3A
CE	SU05001-12002	3.15A-5A
	SU05001-12001	6.3A
CE	N/A	0.200A – 6.3A

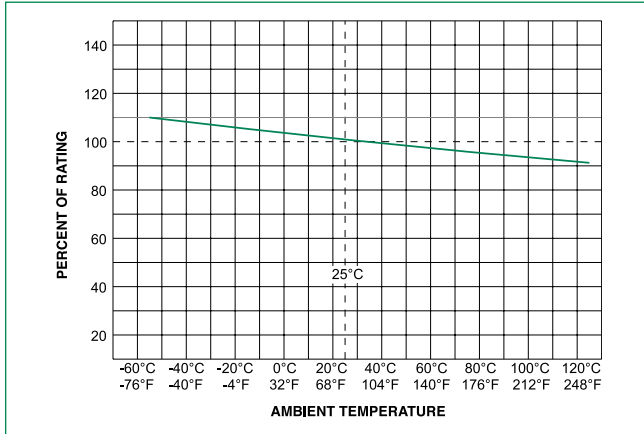
Electrical Characteristic Specifications by Item

Amp Code	Ampere Rating	Voltage Rating (V)	Interrupting Rating	Nominal Cold Resistance (Ohms)	Nominal Melting I ² t (A ² sec)	Maximum Voltage Drop at Rated Current(mV)	Maximum Power Dissipation at 1.5I _n (W)	Agency Approvals								
								PS E	CCC	UL	SF	S	CE	IEC	D'E	
0.2	0.2	250	35A@250Vac	1.6000	0.22500	1500	1.6	x	x	-	x	x	x	x	-	x
0.25	0.25	250		1.0495	0.55500	1300	1.6	x	x	-	x	x	x	x	-	x
0.315	0.315	250		0.8475	1.14000	1100	1.6	x	x	-	x	x	x	x	-	x
0.4	0.4	250		0.5350	1.36000	1000	1.6	x	x	-	x	x	x	x	-	x
0.5	0.5	250		0.3700	2.90500	900	1.6	x	x	-	x	x	x	x	-	x
0.63	0.63	250		0.2750	4.80000	300	1.6	x	x	-	x	x	x	x	-	x
0.8	0.8	250		0.1635	9.42000	250	1.6	x	x	-	x	x	x	x	-	x
1.0	1	250		0.1165	19.20000	150	1.6	x	x	x	x	x	x	x	-	x
1.25	1.25	250		0.0817	27.15000	150	1.6	x	x	x	x	x	x	x	-	x
1.6	1.6	250		0.0551	44.20000	150	1.6	x	x	x	x	x	x	x	-	x
2.0	2	250		0.0452	92.70500	150	1.6	x	x	x	x	x	x	x	-	x
2.5	2.5	250		0.0305	138.00000	120	1.6	x	x	x	x	x	x	x	-	x
3.15	3.15	250		0.0231	202.00000	100	1.6	x	x	x	x	x	x	x	-	x
4.0	4	250		40A@250Vac	0.0170	226.50500	100	1.6	x	x	x	x	x	x	x	x
5.0	5	250		50A@250Vac	0.0116	314.00000	100	1.6	x	x	x	x	x	x	x	x
6.3	6.3	250	63A@250Vac	0.0095	600.00000	100	1.6	x	x	x	x	x	x	x	x	

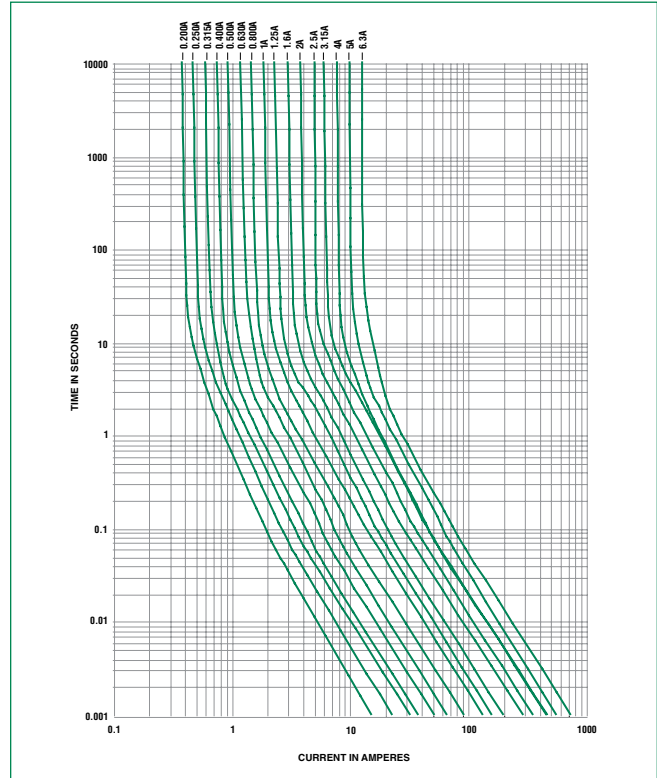
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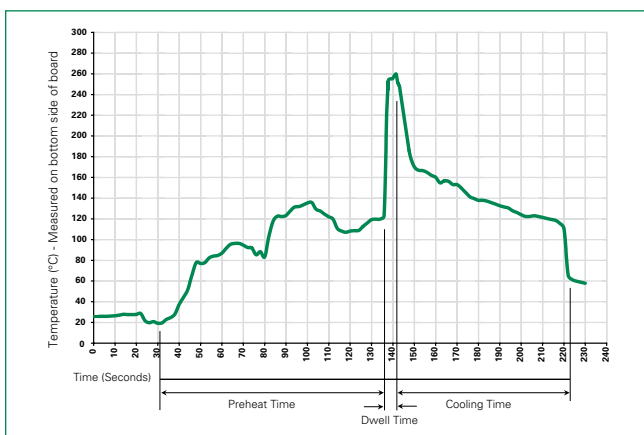
Temperature Re-rating Curve



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.

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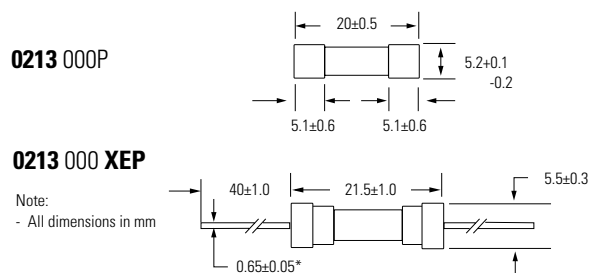
5×20 mm, Time-Lag Fuse

Product Characteristics

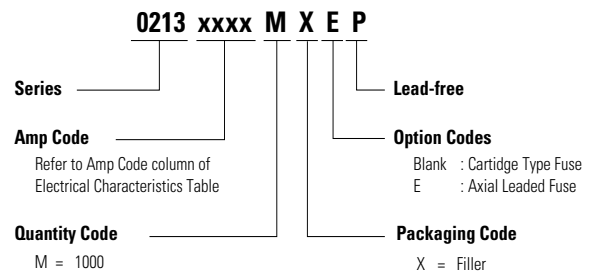
Material	Body: Glass Cap: Nickel-plated brass Leads: Tin-plated Copper
Terminal Strength	MIL-STD-202, Method 211, Test Condition A
Solderability	MIL-STD-202, Method 208
Product Marking	Cap1: Brand logo, current and voltage Cap2: Agency approval marks Series
Packaging	Available in Bulk (M=1000 pcs/pkg) or on Tape/Reel (MRET1=1000 pcs/reel)

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 temperature (40°C) for 240 hours.
Salt Spray	MIL-STD-202, Method 101, Test Condition B

Dimensions



Part Numbering System



Packaging

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code	Taping Width
213 Series				
Bulk	N/A	1000	MX	N/A
Bulk	N/A	1000	MXE	N/A
Reel and Tape	N/A	1000	MRET1	T1=53mm (2.087")
Bulk	N/A	1000	MXG	N/A
Bulk	N/A	1000	MXB	N/A
Bulk	N/A	100	HX	N/A

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