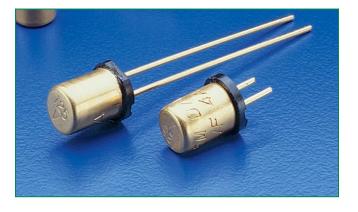


## 262/268/269 Series, MICRO<sup>™</sup> Very Fast-Acting Fuse (High-Reliability)



#### **Agency Approvals**

Agency	Agency File Number	Ampere Range	Series
<b>91</b>	E10480	0.002A - 5A	262 & 268
SP.	29862	0.002A - 5A	262 & 268
QPL	FM07A	0.002A - 5A	269

### Description

The 262/268/269 Series are high–reliability MICRO<sup>™</sup> fuses, with a 125V rating, very fast-acting type with high breaking capacity. The 269 series is listed under the Department of Defense Quality Product List.

#### Features

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• Military grade available

Available from very low

ampere of 0.002A to 5A

- Recognized to UL/CSA/ NMX 248-1 and UL/CSA/ NMX 248-14
- Available in plug-in and radial leaded

### Applications

Protection of electrical, electronic, and communication equipment having printed circuit boards (PCBs) usable in direct current (DC) and alternating current (AC) (up to 400 hertz (Hz)) circuits capable of withstanding and functioning in extreme conditions found in Spacecraft or Military applications as described in MIL-PRF-23419.

### **Electrical Characteristics**

% of Ampere Rating	Ampere Rating	Opening Time
100%	0.002 – 15	4 Hours, Min.
2000/	0.002 - 0.3	5 Seconds, Max.
200%	0.4 - 5	2 Seconds, Max.

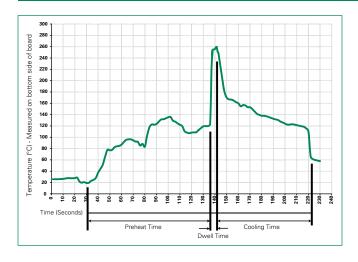
#### **Electrical Characteristics** Agency Approvals Ampere Max **Nominal Cold** Interrupting Amp Code Rating Voltage EV. QPL Rating **Resistance** (Ohms) Ð Rating (V) (A) 2000 0.002 0.002 125 Х Х Х 0.005 0.005 125 280 Х Х Х 0.010 94.0 Х 0.010 125 Х Х 0.015 0.015 125 44.0 Х Х Х 0.031 0.031 125 16.45 Х Х Х 0.050 0.050 125 3.20 Х Х Х 0.062 0.062 125 2 2 5 Х Х Х 0.100 0.100 125 1.17 Χ Х Х 0.125 0.125 125 1.0 Х Х Х 0.200 0.200 125 2.30 Х Х Х 0.250 Х 0 2 5 0 Х 125 1.75 Х 0.300 0.300 125 1.25 Х Х Х 10,000A@125VAC/VDC 0.400 0.400 125 0.227 Х Х Х 0.500 0.167 Х 0.500 125 Х Х 0.600 0.600 125 0.140 Х Х Х 0.700 0.700 125 0.114 Х Χ Х 0.750 0.750 125 0.104 Х Х Х 0.800 0.800 125 0.094 Х Х Х 1.00 001.0 125 0.100 Х Х X 01.5 01.5 125 0.063 Х Х Х 2.00 002.0 125 0.046 Х Х Х 3.00 003.0 125 0.034 Х Х Х 4.00 004.0 125 0.019 Х Х Х 0.018 5.00 005.0 125 Х Х

Please contact Littelfuse for Average Time Current Curve.

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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 Dwell Time:	2-5 seconds	

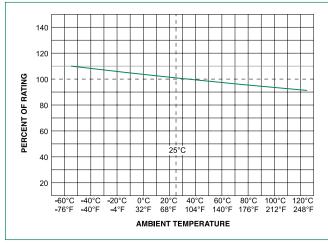
#### **Recommended Hand-Solder Parameters:**

Solder Iron Temperature: 350° C +/- 5°C

Heating Time: 5 seconds max.

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

### **Temperature Re-rating Curve**



Notes: 1. Rerating depicted in this curve is in addition to the standard derating of 25% for

continuous operation.

2. Please contact Littelfuse for average time current curve.

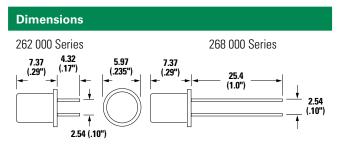


### **Axial Lead & Cartridge Fuses** MICRO<sup>™</sup> > Very Fast-Acting Fuse > 262/268/269 Series

#### **Product Characteristics**

Materials	Gold-Plated Copper Leads, Type II (Fuse cap is also Gold-Plated)	
Weight	262 and 269 Series .36 Grams; 268 Series .48 Grams	
Lead Pull Force	MIL-STD-202, Method 211, Test Condition A (will withstand a 5 lb. axial pull test)	
AQL (Electrical Characteristics)	Certified to 1% AQL	
Sampling	Per MIL-STD-105, Inspection Level II	
Traceability and Identification Records	Controlled by lot number and retained on file for a minimum of three years. Copies of Lot Certification Test data available when requested with order	
Options	Special screening tests, burn-in, etc. can be supplied on special order to meet specific requirements	
Product Marking	262 / 268 Series: Brand logo, current and voltage ratings 269 Series: Brand logo, current and voltage ratings and agency approval mark	
Operating Temperature	-55°C to +125°C	
Shock	(1/500): MILSTD-202, Method 213, Test Condition A (50 G's peak for 11 millisec- onds). (1/200–5): MILSTD-202, Method 213, Test Condition I (100 G's peak for 6 milliseconds)	

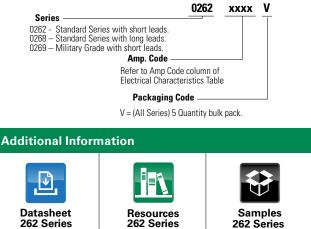
Vibration	MIL-STD-202, Method 201 (10–55 Hz); MIL- STD-202, Method 204, Test Condition C (55–2000 Hz at 10 G's Peak)		
Salt Spray	MIL-STD-202, Method 101, Test Condition B		
Seal Test	MIL-STD-202, Method 112, Test Condition A		
Insulation Resistance (After Opening)	MIL-STD-202, Method 302, Test Condition A (1/2 Megohm minimum)		
Thermal Shock	MIL-STD-202, Method 107, Test Condition B (–65°C to 125°C)		
Moisture Resistance	MILSTD-202, Method 106		
Fuses to MIL SPEC	262 Series is available as FM07A on QPL for MIL-PRF-23419/7. To order, change 262 to 269		



# Packaging

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code
Bulk	N/A	5	V

#### **Part Numbering System**



262 Series



Datasheet

268 Series

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Datasheet

269 Series

Resources 268 Series



Resources 269 Series

Samples 262 Series



Samples 268 Series



Samples 269 Series

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 SS-5F-3.15A-AP
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