RoHS HF 251/253 Series, PICO® II, Very Fast-Acting Fuse

勝 特 力 材 料 886-3-5753170
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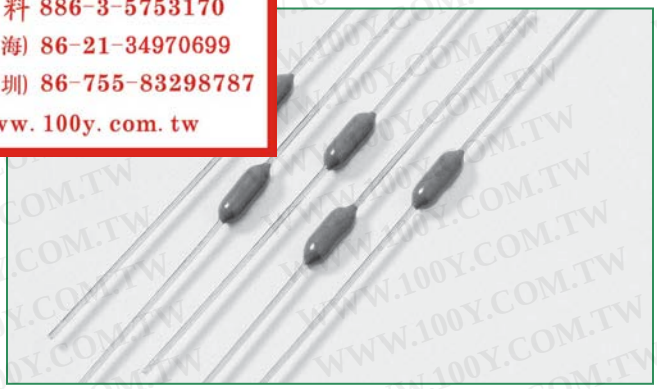
胜特力电子(深圳) 86-755-83298787
Http://www.100y.com.tw



Description

The PICO® II Very Fast-Acting Fuse is designed to meet an extensive array of performance characteristics in a space-saving subminiature package.

Features

- Very fast-acting
- Small size
- Wide current rating range (62mA- 15A)
- RoHS compliant
- Halogen-free available
- Wide operating temperature range
- Low temperature rerating

Applications

Secondary protection for space constrained applications

- Flat–panel display TV
- LCD monitor
- LCD backlight inverter
- Office machines
- Power supply
- Audio/Video system
- Lighting system
- Medical equipment

Agency Approvals

Agency	Agency File Number	Ampere Range
	E10480	62mA - 15A
	LR 29862	62mA - 15A
	JET 1896-31007-1001	1A - 5A
TUV	J50158379	500mA - 10A
QPL	FM10	62mA - 15A
	2009010207366577 – 500mA to 5A Pending – 7A, 10A	500mA, 1A, 2A, 2.5A, 3A, 4A, 5A, 7A, 10A

Electrical Characteristics for Series

% of Ampere Rating	Ampere Rating	Opening Time
100%	62mA - 15A	4 Hours, Min.
200%	62mA - 7A	1 Second, Max.
	10A	3 Seconds, Max.
	12 - 15A	10 Seconds, Max.
275%	500mA, 1A, 2A, 2.5A, 3A, 4A, 5A, 7A, 10A	300 msecs., Max.
400%	500mA, 1A, 2A, 2.5A, 3A, 4A, 5A, 7A, 10A	30 msecs., Max.
1000%	500mA, 1A, 2A, 2.5A, 3A, 4A, 5A, 7A, 10A	4 msecs., Max.

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Electrical Specifications by Item

Ampere Rating (A)	Amp Code	Ordering Number (Std.)	Ordering Number (Mil.)	Max Voltage Rating (V)	Interrupting Rating	Nominal Cold Resistance (Ohms)	Nominal Melting I^2t (A^2 sec)	Nom Voltage Drop (V)	Agency Approvals					
												TUV	QPL	
.062	.062	251.062	253.062	125	300 A @ rated voltage DC 50 A @ rated voltage AC For CCC 7A: 70 A @ rated voltage AC For CCC 10A: 100 A @ rated voltage AC	7.000	0.000113	1.4	x	x			x	
.125	.125	251.125	253.125	125		1.700	0.00174	0.285	x	x			x	
.250	.250	251.250	253.250	125		0.665	0.0116	0.24	x	x			x	
.375	.375	251.375	253.375	125		0.395	0.0296	0.215	x	x			x	
.500	.500	251.500	253.500	125		0.280	0.0598	0.2165	x	x		x	x	x
.630	.630	251.630		125		0.205	0.094	0.188	x	x				
.750	.750	251.750	253.750	125		0.175	0.153	0.176	x	x		x	x	
1.00	001.	251001.	253001.	125		0.128	0.256	0.194	x	x	x	x	x	x
1.25	1.25	2511.25		125		0.100	0.390	0.2	x	x	x			
1.50	01.5	25101.5	25301.5	125		0.0823	0.587	0.21	x	x	x	x	x	
2.00	002.	251002.	253002.	125		0.0473	0.405	0.141	x	x	x	x	x	x
2.50	02.5	25102.5		125		0.0360	0.721	0.132	x	x	x	x		x
3.00	003.	251003.	253003.	125		0.0290	1.19	0.131	x	x	x	x	x	x
3.50	03.5	25103.5		125		0.0240	1.58	0.1205	x	x	x	x		
4.00	004.	251004.	253004.	125		0.0204	2.45	0.114	x	x	x	x	x	x
5.00	005.	251005.	253005.	125		0.0155	4.14	0.11	x	x	x	x	x	x
7.00	007.	251007.	253007.	125		0.0105	10.4	0.102	x	x		x	x	P
10.0	010.	251010.	253010.	125		0.00705	25.5	0.1	x	x		x	x	P
12.0	012.	251012.		32		0.0055	45.2	0.0878	x	x				
15.0	015.	251015.	253015.	32		0.00446	68.8	0.071	x	x			x	

Note: Higher ampere ratings are available. Please contact Littelfuse Technical Support or your Littelfuse products representative for assistance.
P = Pending
For Sand Filled-part 0242.050, please add "S" suffix in the part number

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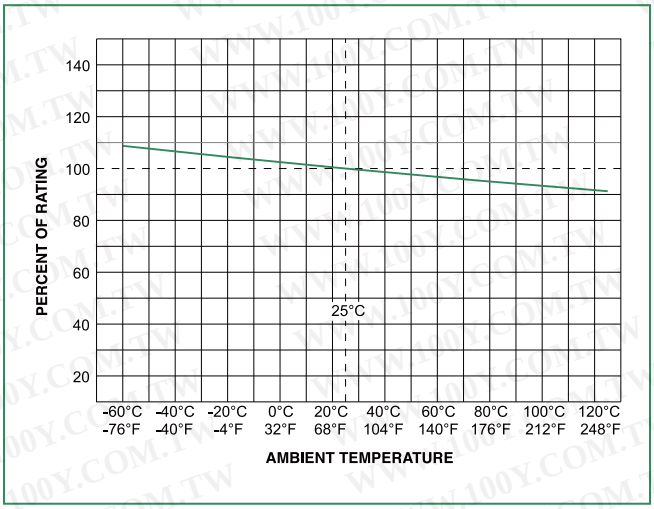
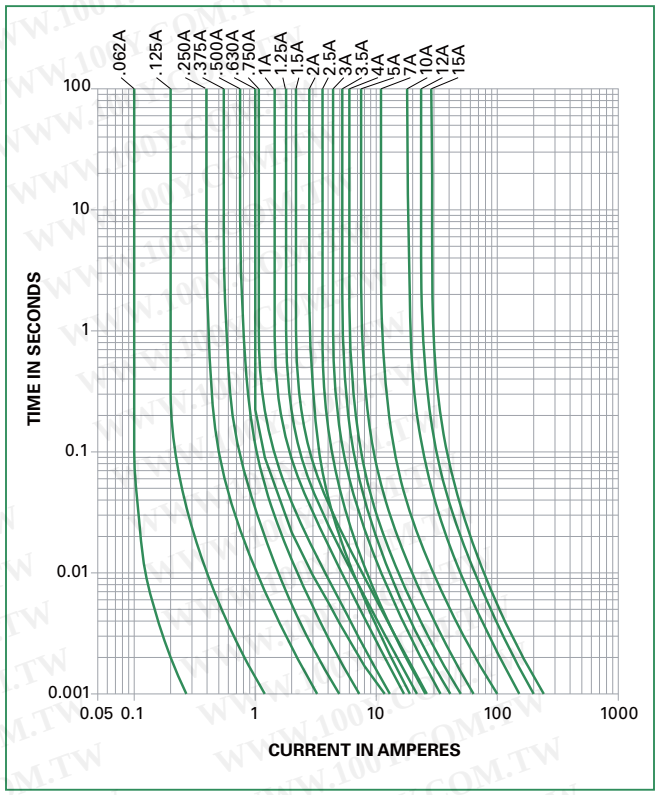
Temperature Rerating Curve



Note:
1. Rerating depicted in this curve is in addition to the standard rerating of 25% for continuous operation.

Average Time Current Curves



Soldering Parameters

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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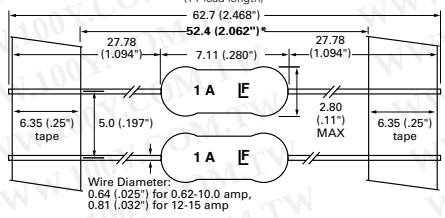
Product Characteristics

Materials	Encapsulated, Epoxy-Coated **Body:** Pure Tin-coated Copper wire leads
Solderability	MIL-STD-202, Method 208
Lead Pull Force	MIL-STD-202, Method 211, Test Condition A (will withstand a 7lbs. axial pull test)
Fuses To MIL SPEC	251/253 Series is available in FM10 on QPL for MIL-PRF-23419. To order, change 251 to 253

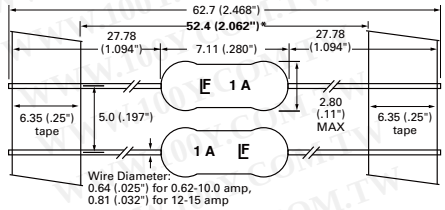
Operating Temperature	–55ºC to +125ºC
Shock	MIL-STD-202, Method 213, Test Condition I (100 G's peak for 6 msecs.)
Vibration	MIL-STD-202, Method 201 (10–55 Hz); Method 204, Test Condition C (55–2000 Hz at 10 G's Peak)
Moisture Resistance	MIL-STD-202, Method 106
Resistance to Soldering Heat	Withstands 60 seconds above 200ºC and up to 260ºC, maximum
Flammability Rating	UL 94V–0

Dimensions

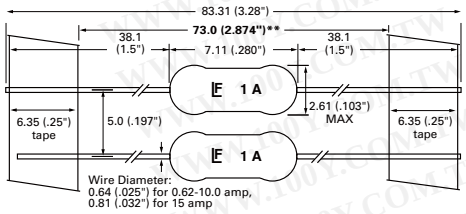
251 Series (RoHS Version) Markings
(T1 lead length)



251 Series (RoHS and Halogen-free Version) Markings
(T1 lead length)



253 Series (RoHS Version) Markings
(T3 lead length)



Part Numbering System

0251 xxxx N R T1 L

Series
251 = Standard type
253 = Military type

Current Rating
Refer to Amp Code column of Electrical Specifications Table

Quantity
N = 5000
P = 2000
M = 1000
H = 100

Type of Packaging
R = Reel
A = Ammo Pack
X = Loose Pack

Lead Length
The default lead length for Ammo pack and Loose pack is now T1 for 251 series, and remains T3 for 253 series, therefore:
T1 = 52.4mm (2.062"), 251 series only*
Blank = 52.4mm (2.062") for 251 series* or 73mm (2.874") for 253 series**

Option Codes
L = RoHS
HF = RoHS and Halogen-free (for 251 Series only)

Packaging

Packaging Option	Packaging Specification	Quantity & Packaging Code
*T1: 52.4mm (2.062") Tape and Reel	EIA 296	Please refer to available quantities above in "Part Numbering System"
**T3: 73mm (2.874') Tape and Reel	EIA 296	

The default lead length for both ammo pack and loose pack is T1 for 251 and is T3 for 253.

Notes: * T1 dimension is defined as the length of the component between the two tapes. The full component length is 62.7mm (2.468"). **T1 length is for 251 series only.**
** T3 dimension is defined as the length of the component between the two tapes. The full component length is 83.3.7mm (3.28"). **T3 length is for 253 series only.**

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