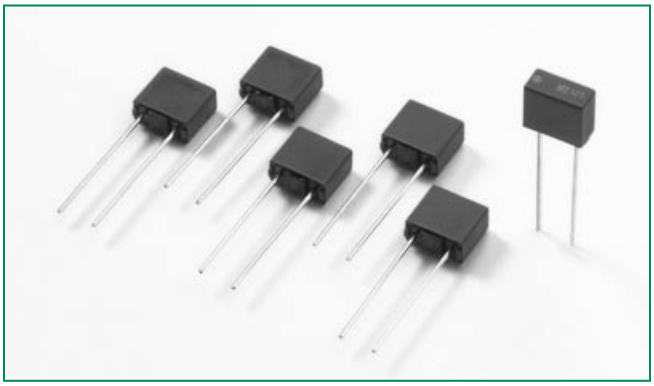
398 Series, TE5®, Modul Protector® Fuse



Description

The 398 Series are TE5® short circuit protector, medium time-Lag type, 65V rated fuses.

Features

- Reduced PCB space requirements
- Highly defined cut-off times
- Low internal resistance
- Irreversible physical separation
- Flame resistant encapsulated casing
- Available from 125mA to 4A
- Halogen free

Agency Approvals

Agency	Agency File Number	Ampere Range
c UL us	E67006	125mA - 4A

Applications

- Miscroprocessor protection

Electrical Characteristics

% of Ampere Rating	Opening Time
300	10 Seconds, **Max.**

Electrical Characteristics

Amp Code	Rated Current	Marking Code*	Voltage Rating	Breaking Capacity	Cold Resistance 0.1 x I_N typ. (mΩ)	Power Disspation 1.0 x I_N max. (mW)	Melting Integral 10 x I_N typ. (A^2s)	Agency Approvals c UL us
0125	125mA	MP13	65V	50A / 65 VAC/DC 50-60 Hz cosφ=1.0	900	50	0.0093	x
0250	250mA	MP25	65V		355	50	0.045	x
0315	315mA	MP32	65V		260	60	0.081	x
0400	400mA	MP40	65V		186	75	0.18	x
0500	500mA	MP50	65V		155	90	0.2	x
0630	630mA	MP63	65V		115	120	0.37	x
0800	800mA	MP80	65V		85	140	0.64	x
1100	1.00A	MP100	65V		65	170	1.1	x
1125	1.25A	MP125	65V		48	210	2.3	x
1160	1.60A	MP160	65V		34	320	4.5	x
1200	2.00A	MP200	65V		26	425	7.8	x
1250	2.50A	MP250	65V		21	550	13	x
1315	3.15A	MP315	65V		16	650	23	x
1400	4.00A	MP400	65V		12	1000	40	x

* Physical Marking on top of the device

Note: 1.00 means the number one with two decimal places. 1,000 means the number one thousand.

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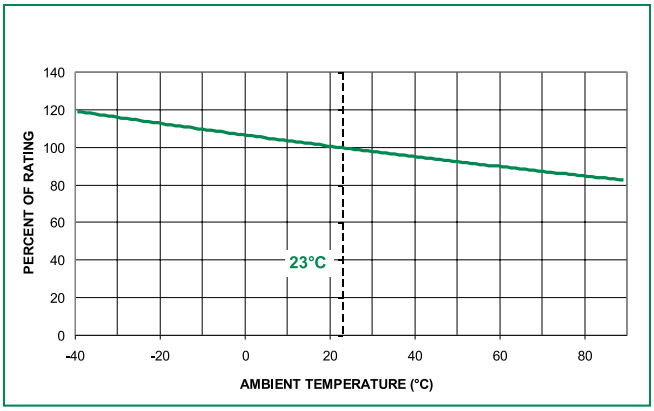
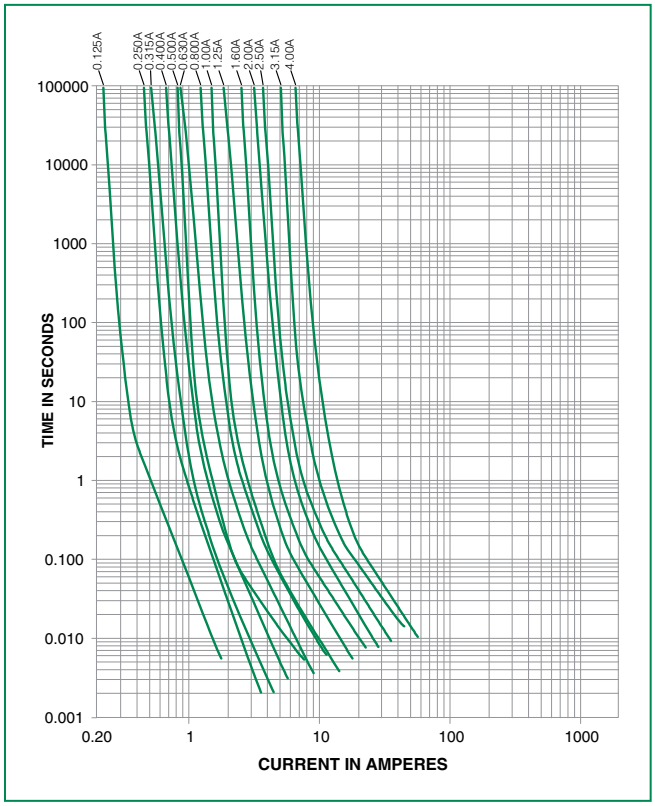
Please refer to www.littelfuse.com/series/398.html for current information.

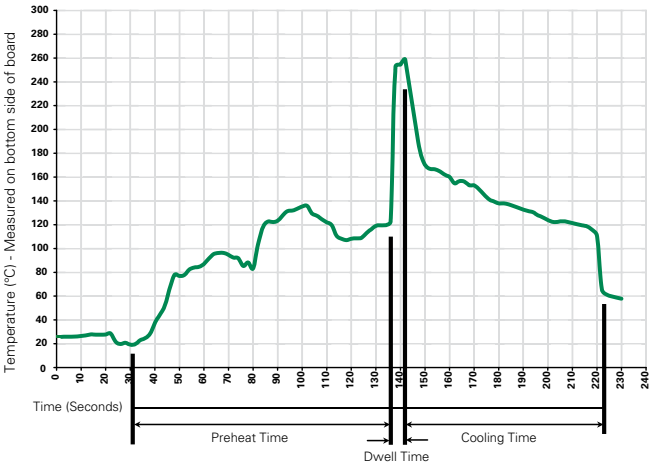
Temperature Rerating Curve



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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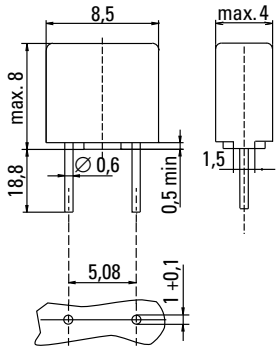
Product Characteristics

Materials	Base/Cap: Brown Thermoplastic Polyamide PA 6.6, UL 94V-0 Round Pins: Copper, Tin-plated
Lead Pull Strength	10N (EN 60068-2-21)
Solderability	260°C, ≤ 3s. (Wave) 350°C, ≤ 1s. (Soldering Iron)
Soldering Heat Resistance	260°C, 10s. (IEC 60068-2-20) 350°C, 3s. (Soldering Iron)

Operating Temperature	-40°C to +85°C (consider de-rating)
Climatic Category	-40°C to +85°C/21 days (EN 60068-1,-2-1,-2-2,-78)
Stock Conditions	+10°C to +60°C RH, ≤ 75% yearly average, without dew, maximum value for 30 days-95%
Vibration Resistance	24 cycles at 15 min. each (EN 60068-6) 10 - 60 Hz at 0.75 mm amplitude 60 - 2000 Hz at 10 g acceleration

Dimensions



Holes in PCB
Dimensions (mm)

Part Numbering System

398 xxxx 000

Series

Amp. Code
Refer to Amp Code column of
Electrical Characteristic Table

Packaging Code
000 Tape/Ammopack (1,400 pcs.)

Packaging

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code	Reel Size
398 Series				
Tape & Ammopack	N/A	1,400	000	N/A

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