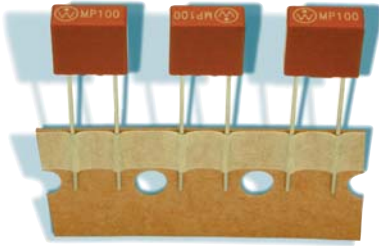
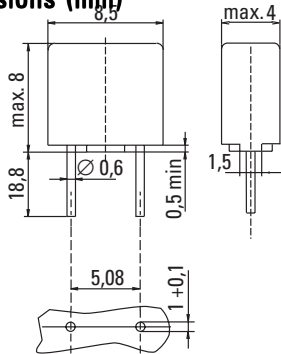


# No. 398 / MP



### Dimensions (mm)



Holes in PCB

## Modul Protector®, 65 V leadfree

For Short Circuit Protection of Sensitive Electronic Components and Assemblies

**Time-Current Characteristic**  
Medium Time Lag (M)

**Approvals**  
cULus Recognized

**Operating Criteria**  
Maximum continuous current:  
 $I_C \geq I_{operating} \max \times F_T$  time lag

Maximum melting integral:  
 $I^2t_{MP} < I^2t_{semiconductor}$  (warm)

Minimum fault current:  
 $I_{Fault} \geq 3 \times I_C$

Maximum fault current:  
 $I_{Fault} \leq 50A$  at 65VAC/DC

### Features

- For worldwide applications
- Reduced PCB space requirements
- Highly defined cut-off times
- Irreversible physical separation
- Low internal resistance
- Flame resistant encapsulated casing

## Specifications

### Packaging

000: Tape/Ammopack (1400 pcs.)

### Materials

Base/Cap: Brown Thermoplastic Polyamide PA 6.6, UL 94 V-0

Round Pins: Copper, Sn plated

### Operating Temperature

-40 °C to +85 °C (consider de-rating)

### Climatic Category

-40 °C/+85 °C/21 days (EN 60068-1,-2-1,-2-2,-78)

### Stock Conditions

+10 °C to +60 °C  
relative humidity  $\leq 75\%$  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

### Lead Pull Strength

10 N (EN 60068-2-21)

### Solderability

260 °C,  $\leq 3$  s (Wave)  
350 °C,  $\leq 3$  s (Soldering iron)

### Soldering Heat Resistance

260°C, 10 sec. (IEC 60068-2-20)

### Marking

Ⓜ, Type

### Unit Weight

0.60 g (approx.)



Permissible continuous operating current is  $\leq 100\%$  at ambient temperature of 23 °C (73.4 °F).

Continous Current $I_C$	Type	Amp Code	Voltage Rating	Fault Current max.	Cold Resistance $0.1 \times I_C$ typ. (mΩ)	Power Dissipation $1.0 \times I_C$ max. (mW)	Melting Integral $10 \times I_C$ typ. (A <sup>2</sup> s)	Approvals cULus
125mA	MP 13	0125	65V		900	50	0.0093	•
250mA	MP 25	0250	65V		355	50	0.045	•
315mA	MP 32	0315	65V		260	60	0.081	•
400mA	MP 40	0400	65V		186	75	0.18	•
500mA	MP 50	0500	65V		155	90	0.2	•
630mA	MP 63	0630	65V	50A/65 V AC/DC	115	120	0.37	•
800mA	MP 80	0800	65V	50-60 Hz	85	140	0.64	•
1.00A	MP100	1100	65V	cos φ=1.0	65	170	1.1	•
1.25A	MP125	1125	65V		48	210	2.3	•
1.60A	MP160	1160	65V		34	320	4.5	•
2.00A	MP200	1200	65V		26	425	7.8	•
2.50A	MP250	1250	65V		21	550	13	•
3.15A	MP315	1315	65V		16	650	23	•
4.00A	MP400	1400	65V		12	1000	40	•

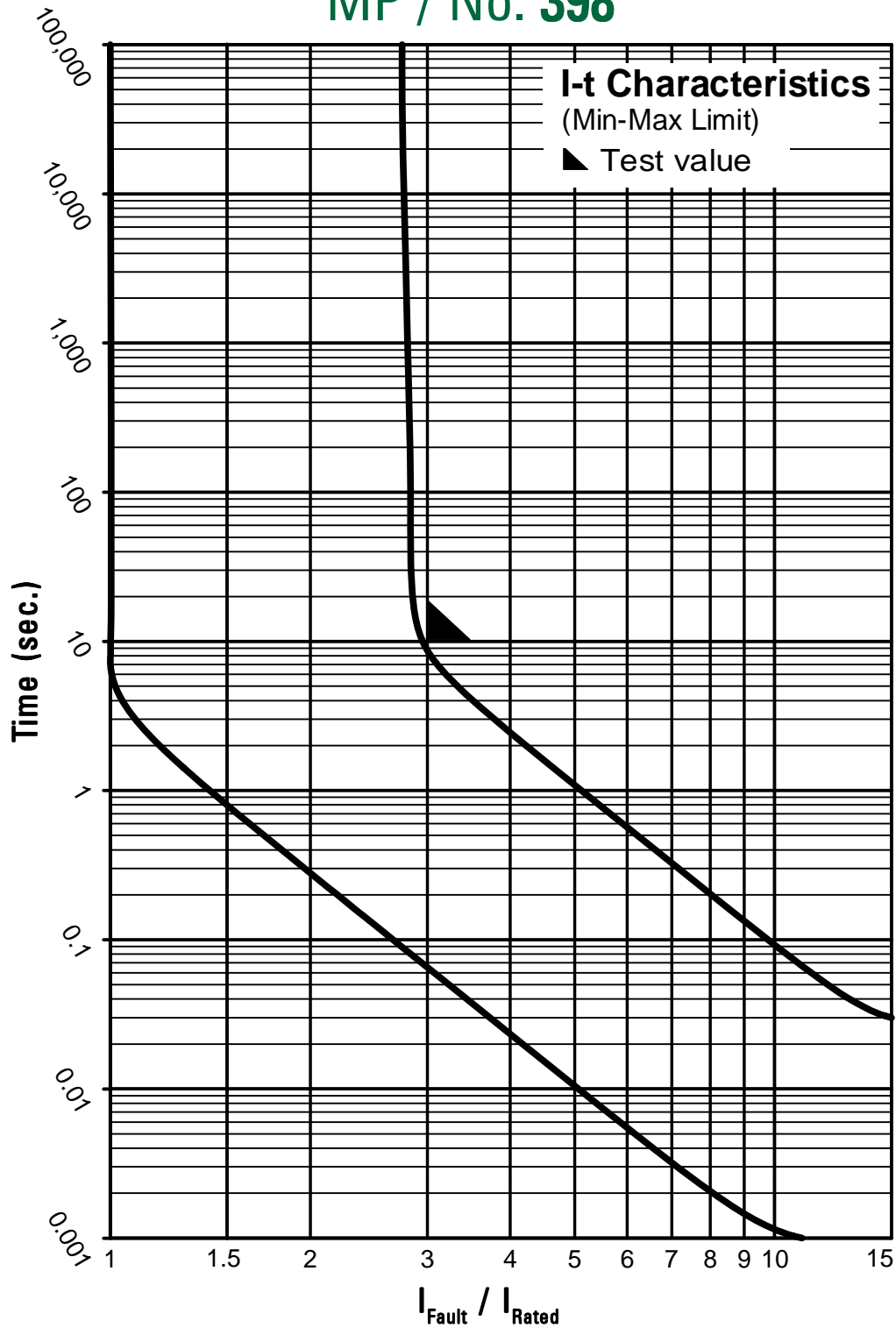
Note: 1.00 means the number one with two decimal places. 1,000 means the number one thousand.

### Order Information

Qty.	Order-Number	Series	Amp Code	Packaging
		398		

Specifications are subject to change without notice

## MP / No. 398



Contact Littelfuse for individual I-t curves