

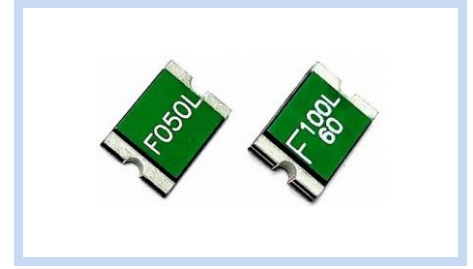
# PTC Resettable Fuse High Temperature type

MPTS1206-H series

**MERITEK**

## FEATURE

- Operation Temperature Range: -40°C to 125°C
- Operating Current: 200mA
- Maximum Voltage: 32VDC
- Excellent for high density applications
- Faster time to trip than standard SMD devices
- UL/cUL safety approved: certification No: E223037
- TUV safety approved: certification No: R50223766



## PART NUMBERING SYSTEM

MPTS   1206L   020   32   H  
(1)            (2)            (3)            (4)            (5)



No	item	Digit	Description	Series Reference
(1)	Product Code	MPTS	Polymer Resettable Fuse Series	Surface Mount Type
(2)	Size Code	1206L	1206L: EIA 1206	WxL: 3.5x1.8mm
(3)	Current Rating	020	020: 0.20A	Hold Current
(4)	Voltage Rating	32	32: 32VDC	Rated DC Voltage, Max
(5)	Series Code	H	125°C High temperature series	Operation Temperature: -40°C to 125°C

## ELECTRICAL CHARACTERISTICS AT 23°C

Part Number	Hold Current	Trip Current	Rated Voltage	Max Current	Typical Power	Max Time to Trip		Resistance	
						Current	Time	R <sub>MIN</sub>	R1 <sub>MAX</sub>
	I <sub>H</sub> , A	I <sub>T</sub> , A	V <sub>MAX</sub> , V <sub>DC</sub>	I <sub>MAX</sub> , A	P <sub>d</sub> , W	A	Sec	Ω	Ω
MPTS1206L02032H	0.20	0.50	30	10	0.9	8.00	0.10	0.60	4.50

Item	Symbol	Characteristics
Hold Current	I <sub>H</sub>	Hold current-maximum current at which the device will not trip at 23°C still air.
Trip Current	I <sub>T</sub>	Trip current-minimum current at which the device will always trip at 23°C still air.
Rated Voltage	V <sub>MAX</sub>	Maximum voltage device can withstand without damage at its rated current (I <sub>MAX</sub> ).
Max Current	I <sub>MAX</sub>	Maximum fault current device can withstand without damage at rated voltage (V <sub>MAX</sub> ).
Typical Power	P <sub>d</sub>	Typical power dissipated by the device when in the tripped state in 23°C still air environment.
Device Resistance	R <sub>MIN</sub>	Minimum device resistance at 23°C prior to tripping.
	R1 <sub>MAX</sub>	Maximum device resistance at 23°C measured 1 hour after tripping or reflow soldering of 260°C for 20 seconds.

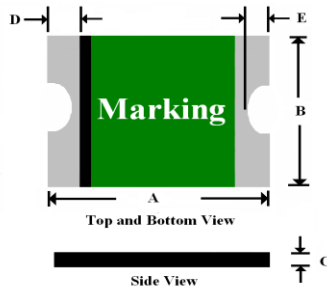
Note: Termination pad materials: Pure Tin

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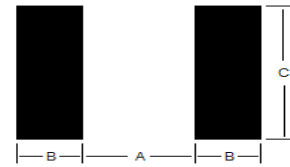
## DIMENSIONS



Part Series	A (mm)		B (mm)		C (mm)		D (mm)		E (mm)	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
MPTS1206-H	3.00	3.50	1.50	1.80	0.30	1.10	0.10	0.75	0.10	0.45

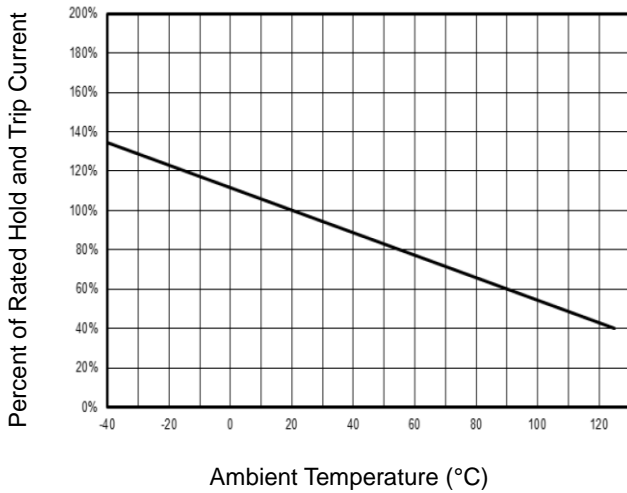
## SOLDERING PAD SPECIFICATION

Size	A (mm)	B (mm)	C (mm)
1206	2.00	1.00	1.90

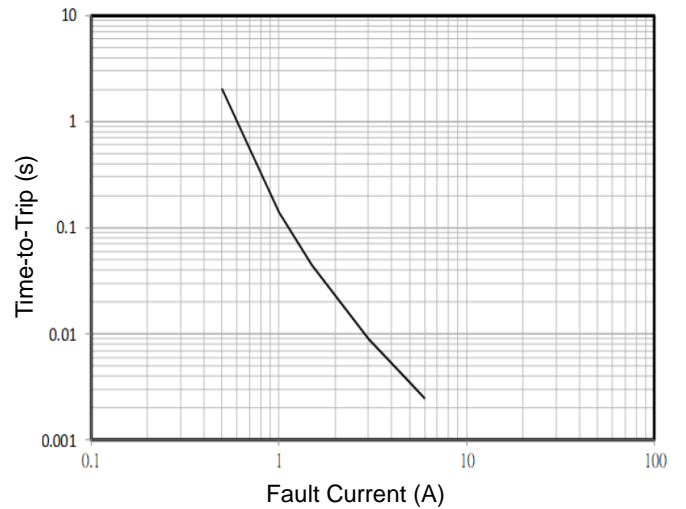


## CHARACTERISTIC CURVE

Thermal Derating Curve



Typical Time-To-Trip At 23°C



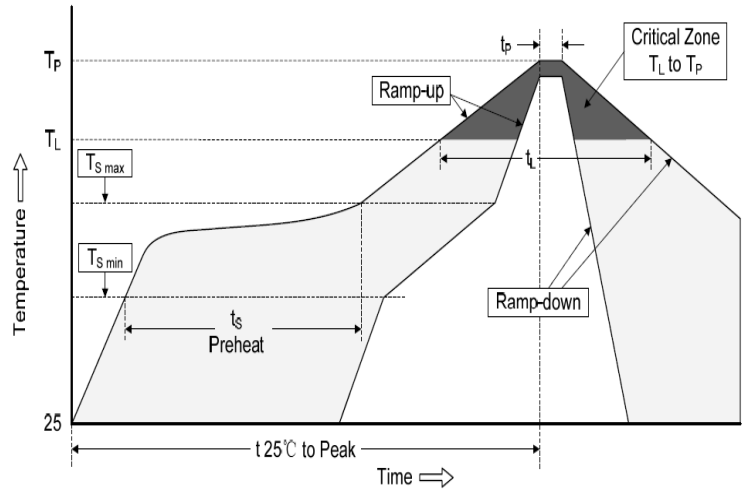
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## RECOMMENDED SOLDERING PROFILES

Reflow Condition		
Pre Heat	Temp. Min $T_{s(min)}$	150°C
	Tempe. Max $T_{s(max)}$	200°C
	Time (min. to max.) ( $t_s$ )	60-180 seconds
Average ramp up rate (Temperature) / (Time) to peak		3°C/second max.
$T_{s(max)}$ to $T_A$ (Ramp-up rate)		3°C/second max.
Reflow	Temp. ( $T_A$ )	217°C
	Time (min. to max.) ( $t_s$ )	60-150 seconds
Peak Temperature ( $T_P$ )		260 <sup>+/-0.5</sup> °C
Time within 5°C of actual peak Temperature ( $t_p$ )		20-40 seconds
Ramp-down Rate		6°C/second max.
Time 25°C to peak Temp. ( $T_P$ )		8 minutes max.



## REWORK RECOMMENDATIONS

### Solder reflow

- Recommended max past thickness > 0.25mm.
- Devices can be cleaned using standard methods and aqueous solvent.
- Rework should utilize standard industry practices.
- Storage Environment : < 30°C / 60%RH

### Caution:

- If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.
- Devices are not designed to be wave soldered to the bottom side of the board.

## WARNING

- Operation beyond the specified maximum ratings or improper use may result in damage and possible electrical arcing and/or flame.
- PPTC device are intended for occasional overcurrent protection. Application for repeated overcurrent condition and/or prolonged trip is not anticipated.
- Avoid contact of PPTC device with chemical solvent. Prolonged contact will damage the device performance

\*Specifications subject to change without notice.