

PTC Resettable Fuse High Temperature Type

MPTS1210-H

MERITEK

FEATURE

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



PART NUMBERING SYSTEM

MPTS 1210L 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	1210L	1210L: EIA 1210	WxL: 3.4x2.8mm
(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 _{MIN}	R _{1MAX}
	I _H , A	I _T , A	V _{MAX} , V _{DC}	I _{MAX} , A	P _d , W	A	Sec	Ω	Ω
MPTS1210L02032H	0.20	0.60	32	10	0.9	8.00	0.02	0.80	5.00

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

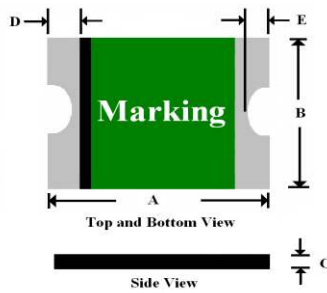
Note: Termination pad materials: Pure Tin

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DIMENSIONS

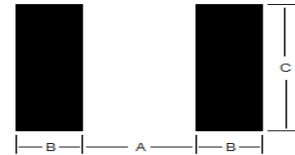


MPTS1210

Part Series	A (mm)		B (mm)		C (mm)		D (mm)		E (mm)	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
MPTS1210-H	3.00	3.43	2.35	2.80	0.35	1.10	0.25	0.75	0.10	0.45

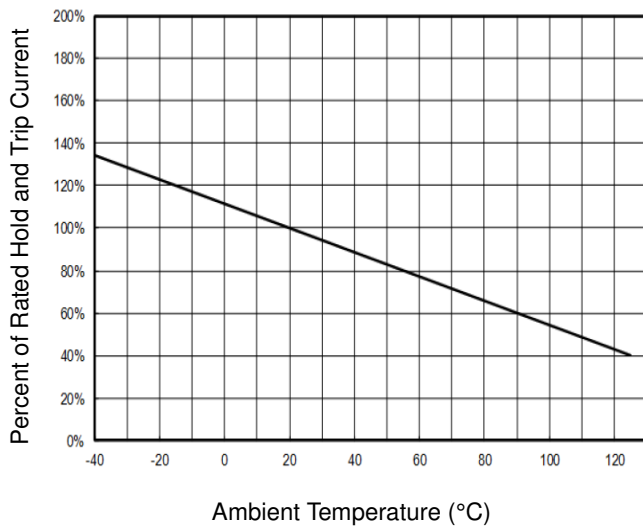
SOLDERING PAD SPECIFICATION

Size	A (mm)	B (mm)	C (mm)
1210	2.00	1.00	2.80

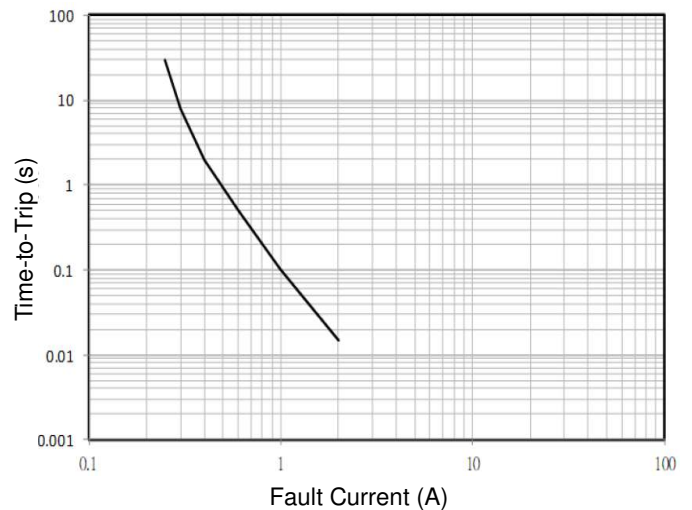


CHARACTERISTIC CURVE

Thermal Derating Curve



Typical Time-To-Trip At 23°C



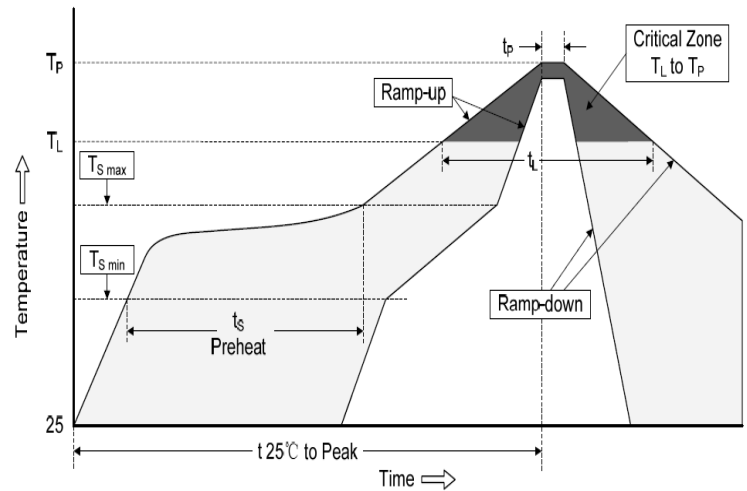
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RECOMMENDED SOLDERING PROFILES

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		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 ^{+/-0.5} °C
Time within 5°C of actual peak		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.