PTC Resettable Fuse
High Temperature Type

MPTS1210-H

MERITEK

FEATURE

- Operation Temperature Range: -40ºC to 125ºC
- 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

RoHS

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	125ºC High temperature series	Operation Temperature: -40ºC to 125ºC

ELECTRICAL CHARACTERISTICS AT 23ºC

Part Number	Hold Current	Trip Current	Rated Voltage	Max Current	Typical Power	Max Time to Trip		Resistance	
						Current	Time	R_{MIN}	$R1_{MAX}$
	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 23ºC still air.
Trip Current	I_T	Trip current-minimum current at which the device will always trip at 23ºC 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 23ºC still air environment.
Device Resistance	R_{MIN}	Minimum device resistance at 23ºC prior to tripping.
	$R1_{MAX}$	Maximum device resistance at 23ºC measured 1 hour after tripping or reflow soldering of 260ºC for 20 seconds.

Note: Termination pad materials: Pure Tin

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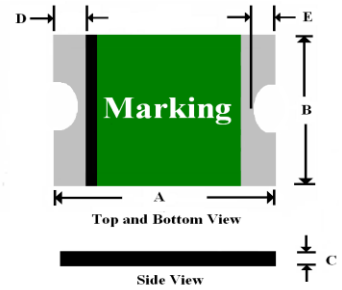
DIMENSIONS



MPTS1210

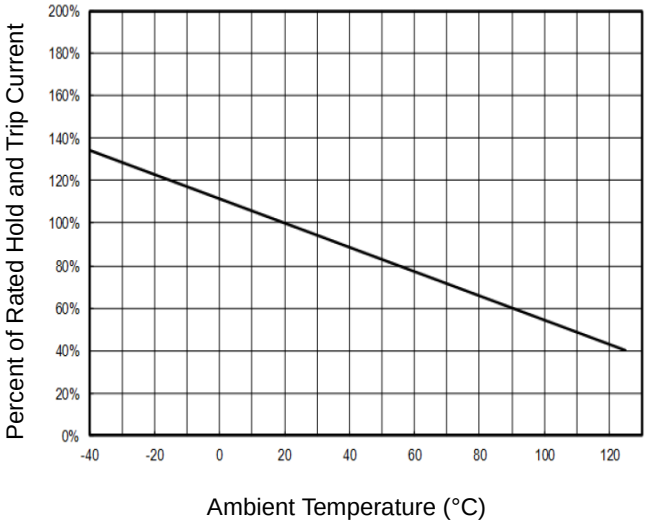
Part Series	A (mm)		B (mm)		C (mm)		D (mm)		E (mm)	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
MPTS1210-H	3.00	3.43	2.35	2.80	0.35	1.10	0.25	0.75	0.10	0.45

SOLDERING PAD SPECIFACTION

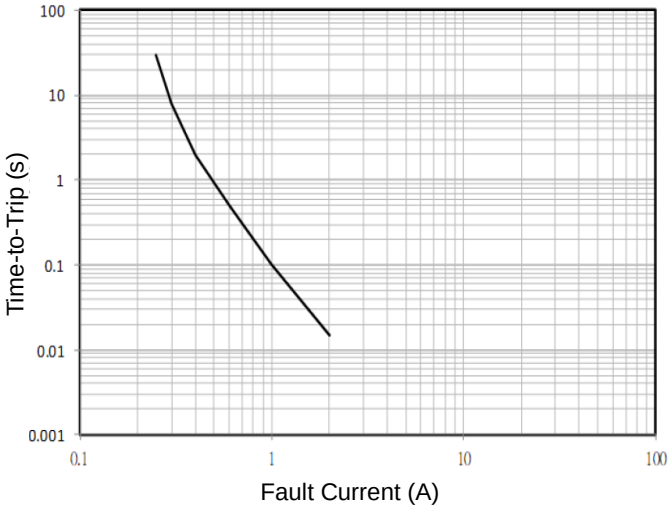
Size	A (mm)	B (mm)	C (mm)
1210	2.00	1.00	2.80

CHARACTERISTIC CURVE

Thermal Derating Curve



Typical Time-To-Trip At 23°C



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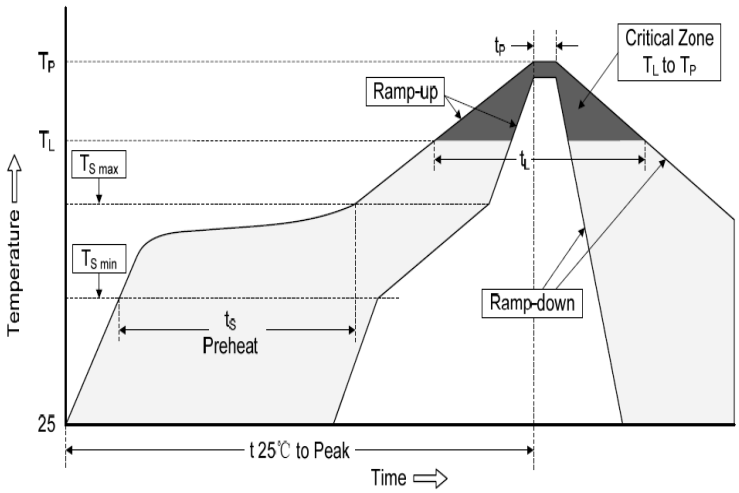
RECOMMENDED SOLDERING PROFILES

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 (Temperature) (T_L) 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)		$260^{+/-0.5}$ °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 : < 30ºC / 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.