

Resettable PPTC Fuse



Features

- Broadest range of surface mount devices available in the industry
- Faster time to trip than standard surface mount devices
- RoHS Compliant & Halogen Free



Agency Approval and Environmental Compliance

Agency	File Number	Regulation
UL, C-UL	E211981	
TÜV	In Process	

XMD1206 Series

Surface Mount Devices

Electrical Characteristics

Part Number	I_H	I_T	T_{Trip}	I_{MAX}	V_{MAX}	$P_{D Typ}$	R_{MIN}	$R1_{MAX}$
	A	A	sec/A	A	V	W	Ω	Ω
XMD1206-005	0.05	0.15	1.50/0.25	100	60	0.4	3.600	50.000
XMD1206-010	0.10	0.25	1.00/0.50	100	60	0.4	1.600	15.000
XMD1206-012	0.12	0.39	0.20/8.00	100	48	0.6	1.400	6.500
XMD1206-016	0.16	0.45	0.30/8.00	100	48	0.6	1.100	5.000
XMD1206-020	0.20	0.40	0.10/8.00	100	30	0.4	0.600	2.500
XMD1206-025	0.25	0.50	0.08/8.00	100	16	0.6	0.550	2.300
XMD1206-035	0.35	0.75	0.10/8.00	100	16	0.4	0.300	1.200
XMD1206-050	0.50	1.00	0.10/8.00	100	8	0.4	0.150	0.700
XMD1206-050-24	0.50	1.00	0.10/8.00	100	24	0.6	0.150	0.750
XMD1206-075	0.75	1.50	0.20/8.00	100	8	0.6	0.090	0.290
XMD1206-075-16	0.75	1.50	0.20/8.00	100	16	0.6	0.090	0.290
XMD1206-100	1.00	1.80	0.30/8.00	100	6	0.6	0.055	0.210
XMD1206-110	1.10	2.20	0.30/8.00	100	8	0.8	0.040	0.180
XMD1206-150	1.50	3.00	1.00/8.00	100	8	0.8	0.040	0.120
XMD1206-200	2.00	3.50	1.50/8.00	100	6	0.8	0.018	0.080

I_H =Hold current-maximum current at which the device will not trip at 23°C still air.

I_T =Trip current-minimum current at which the device will always trip at 23°C still air.

T_{trip} =Maximum time to trip(s) at assigned current.

I_{MAX} = Maximum fault current device can withstand without damage at rated voltage (V_{MAX}).

V_{MAX} =Maximum voltage device can withstand without damage at its rated current.

$P_{D Typ}$ =Typical power dissipated from device when in tripped state in 23°C still air environment.

R_{MIN} =Minimum device resistance at 23°C.

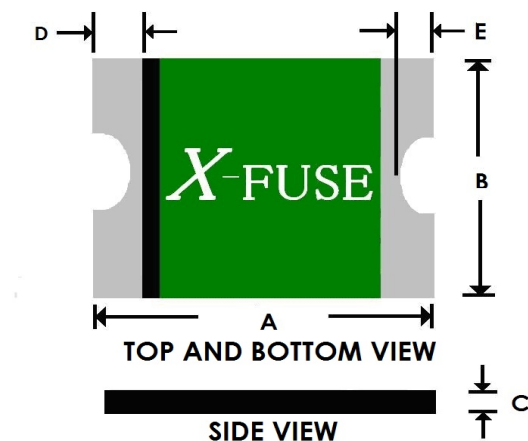
$R1_{MAX}$ =Maximum device resistance at 23°C, 1 hour after tripping.

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Product Dimensions (Millimeter)

Part Number	A		B		C		D		E	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
XMD1206-005	3.00	3.50	1.50	1.80	0.45	0.85	0.10	0.75	0.10	0.45
XMD1206-010	3.00	3.50	1.50	1.80	0.45	0.85	0.10	0.75	0.10	0.45
XMD1206-012	3.00	3.50	1.50	1.80	0.45	0.85	0.10	0.75	0.10	0.45
XMD1206-016	3.00	3.50	1.50	1.80	0.45	0.75	0.10	0.75	0.10	0.45
XMD1206-020	3.00	3.50	1.50	1.80	0.45	0.75	0.10	0.75	0.10	0.45
XMD1206-025	3.00	3.50	1.50	1.80	0.45	0.75	0.10	0.75	0.10	0.45
XMD1206-035	3.00	3.50	1.50	1.80	0.45	0.75	0.10	0.75	0.10	0.45
XMD1206-050	3.00	3.50	1.50	1.80	0.25	0.55	0.10	0.75	0.10	0.45
XMD1206-050-24	3.00	3.50	1.50	1.80	0.90	1.30	0.25	0.75	0.10	0.45
XMD1206-075	3.00	3.50	1.50	1.80	0.45	1.25	0.25	0.75	0.10	0.45
XMD1206-075-16	3.00	3.50	1.50	1.80	0.45	1.25	0.25	0.75	0.10	0.45
XMD1206-100	3.00	3.50	1.50	1.80	0.45	1.00	0.25	0.75	0.10	0.45
XMD1206-110	3.00	3.50	1.50	1.80	0.45	1.00	0.25	0.75	0.10	0.45
XMD1206-150	3.00	3.50	1.50	1.80	0.80	1.40	0.25	0.75	0.10	0.45
XMD1206-200	3.00	3.50	1.50	1.80	0.85	1.60	0.25	0.75	0.10	0.45



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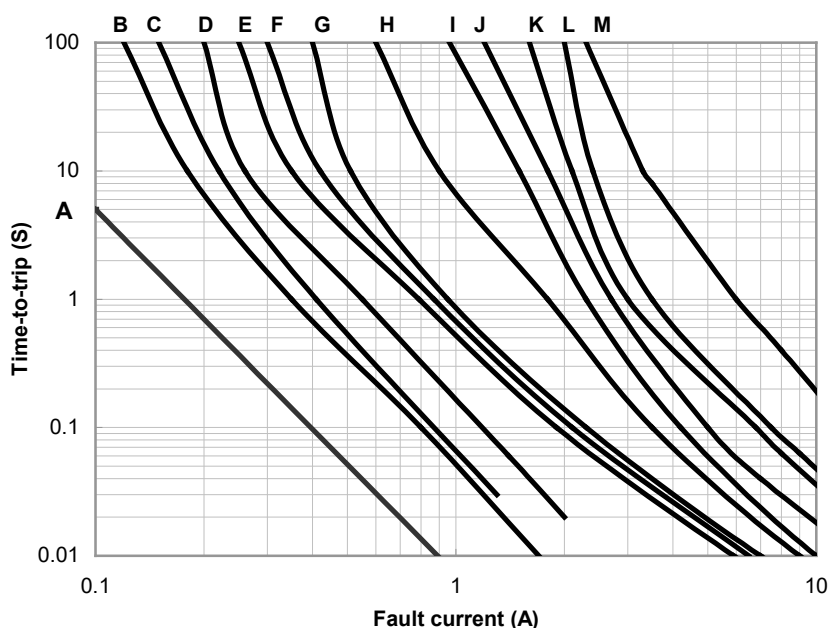


Thermal Derating Chart-I_H (A)

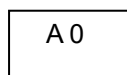
Part Number	Maximum ambient operating Temperature(°C)									
	-40	-20	0	23	30	40	50	60	70	85
XMD1206-005	0.07	0.07	0.06	0.05	0.05	0.04	0.04	0.04	0.03	0.03
XMD1206-010	0.15	0.14	0.12	0.10	0.09	0.09	0.08	0.07	0.07	0.05
XMD1206-012	0.18	0.16	0.14	0.12	0.11	0.11	0.10	0.09	0.08	0.06
XMD1206-016	0.24	0.22	0.19	0.16	0.15	0.14	0.13	0.11	0.11	0.08
XMD1206-020	0.30	0.27	0.23	0.20	0.19	0.18	0.16	0.14	0.13	0.10
XMD1206-025	0.37	0.34	0.29	0.25	0.24	0.22	0.20	0.18	0.17	0.13
XMD1206-035	0.52	0.47	0.41	0.35	0.33	0.31	0.28	0.25	0.23	0.18
XMD1206-050	0.74	0.68	0.59	0.50	0.47	0.44	0.41	0.36	0.33	0.26
XMD1206-050-24	0.74	0.68	0.59	0.50	0.47	0.44	0.41	0.36	0.33	0.26
XMD1206-075	1.09	1.01	0.88	0.75	0.71	0.66	0.61	0.53	0.50	0.39
XMD1206-075-16	1.09	1.01	0.88	0.75	0.71	0.66	0.61	0.53	0.50	0.39
XMD1206-100	1.45	1.35	1.17	1.00	0.94	0.88	0.81	0.71	0.66	0.52
XMD1206-110	1.60	1.49	1.29	1.10	1.03	0.97	0.89	0.78	0.73	0.57
XMD1206-150	2.18	2.03	1.76	1.50	1.41	1.32	1.22	1.07	0.99	0.78
XMD1206-200	2.90	2.70	2.34	2.00	1.88	1.76	1.62	1.42	1.32	1.04

Typical Time-To-Trip at 23 °C

- A = **XMD1206-005**
- B = **XMD1206-010**
- C = **XMD1206-012**
- D = **XMD1206-016**
- E = **XMD1206-020**
- F = **XMD1206-025**
- G = **XMD1206-035**
- H = **XMD1206-050 / XMD1206-050-24**
- I = **XMD1206-075 / XMD1206-075-16**
- J = **XMD1206-100**
- K = **XMD1206-110**
- L = **XMD1206-150**
- M = **XMD1206-200**



Marking System



Example



Part Identification

- | | |
|-------------------------|----------------------------|
| A0 = XMD1206-005 | HA = XMD1206-050-24 |
| B0 = XMD1206-010 | IO = XMD1206-075 |
| C0 = XMD1206-012 | IA = XMD1206-075-16 |
| D0 = XMD1206-016 | JO = XMD1206-100 |
| E0 = XMD1206-020 | K0 = XMD1206-110 |
| F0 = XMD1206-025 | LO = XMD1206-150 |
| G0 = XMD1206-035 | MO = XMD1206-200 |
| H0 = XMD1206-050 | |

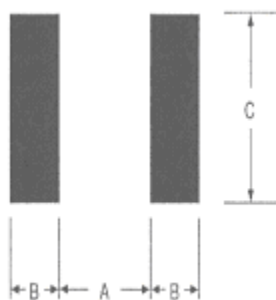
Package Information

Tape & Reel:

- XMD1206-005~XMD1206-025** -----3000pcs per reel
- XMD1206-035~XMD1206-050** -----4000pcs per reel
- XMD1206-075~XMD1206-110** -----3000pcs per reel
- XMD1206-150~XMD1206-200** -----2000pcs per reel
- XMD1206-050-24**、**XMD1206-075-16** -----3000pcs per reel

Pad Layouts

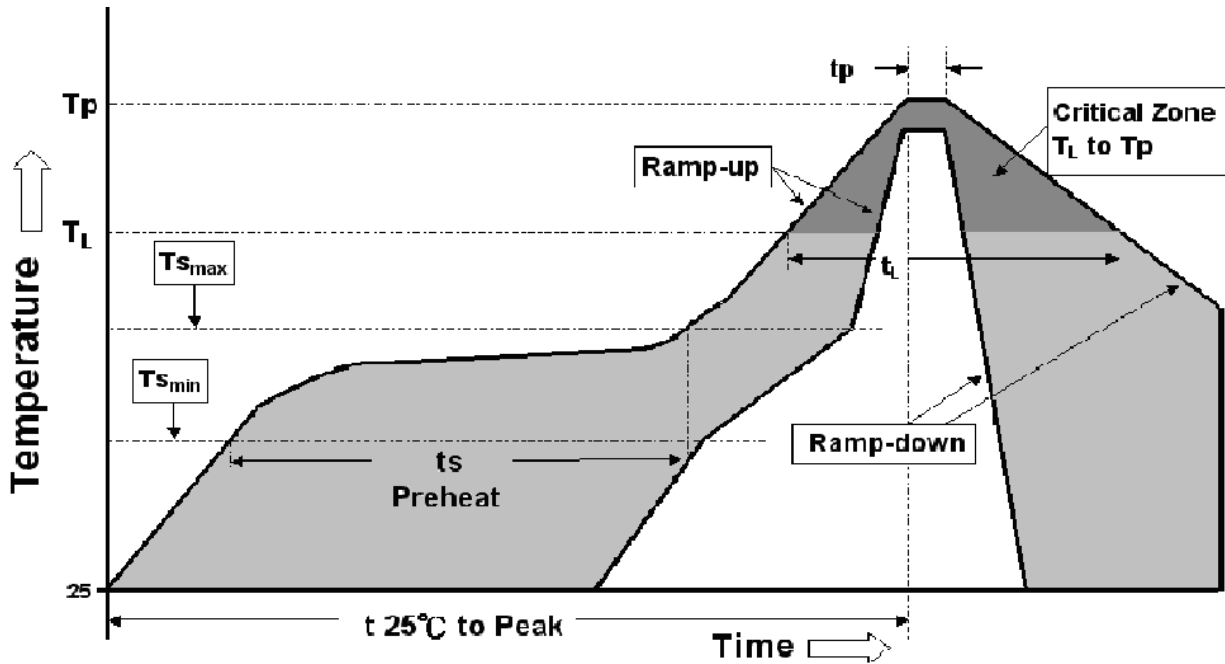
The dimension in the table below provide the recommended pad layout for each **XMD1206** device



Pad dimensions (millimeters)			
Device	A Nominal	B Nominal	C Nominal
XMD1206 series	2.00	1.00	1.90

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Soldering Parameters



Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate (T_{smax} to T_p)	3 °C/second max.
Preheat :	
-Temperature Min (T _{smin})	150 °C
-Temperature Max (T _{smax})	200 °C
-Time (t _{smin} to t _{smax})	60-180 seconds
Time maintained above:	
-Temperature(T _L)	217 °C
-Time (t _L)	60-150 seconds
Peak/Classification Temperature(T_p)	260 °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 Temperature :	8 minutes max.

- Recommended solder paste thickness > 0.25mm.
- Devices cleansing applies standard methods and aqueous solution.
- Use standard industry practices for rework.
- Storage condition : < 30°C / 60%RH

Note 1: All temperatures refer to topside of the package, measured on the package body surface.

Note 2: If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

Note 3: Devices are not designed to be wave soldered to the bottom side of the board.

Caution : Operation beyond the specified maximum ratings or misuse can result in damage and possible electrical arcing and/or flame.

PPTC device are designed for occasional overcurrent protection. Not for continuously overcurrent circumstance and/or prolonged trip are not anticipated.

Keep PPTC device away from chemical solvent contact. Prolonged contact will damage the device performance.