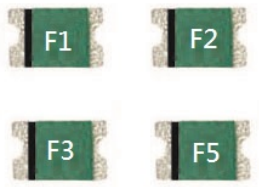
Resettable PPTC Fuse



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	RoHS HF Halogen Free
TÜV	In Process	

XMD0805 Series — Surface Mount Devices

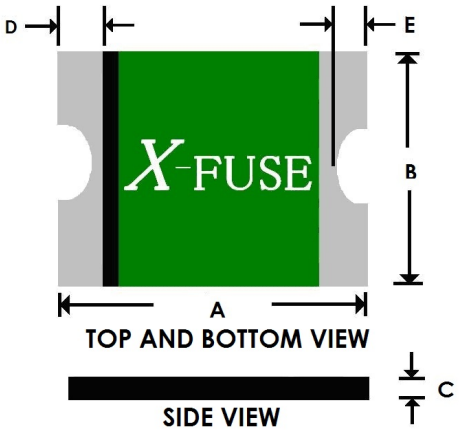
Electrical Characteristics

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
XMD0805-010	0.10	0.30	1.50/0.50	100	15	0.5	0.700	6.000
XMD0805-020	0.20	0.50	0.02/8.00	100	9	0.5	0.400	3.500
XMD0805-035	0.35	0.75	0.20/8.00	100	6	0.5	0.250	1.200
XMD0805-050	0.50	1.00	0.10/8.00	100	6	0.5	0.150	0.850
XMD0805-050-9	0.50	1.00	0.10/8.00	100	9	0.5	0.150	0.850
XMD0805-075	0.75	1.50	0.20/8.00	100	6	0.6	0.090	0.350
XMD0805-100	1.00	1.95	0.30/8.00	100	6	0.6	0.060	0.210

I_H=Hold current-maximum current at which the device will not trip at 23℃ still air.
I_T=Trip current-minimum current at which the device will always trip at 23℃ 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℃ still air environment.
R_{MIN}=Minimum device resistance at 23℃.
$R1_{MAX}$=Maximum device resistance at 23℃, 1 hour after tripping .

Product Dimensions (Millimeter)

Part Number	A		B		C		D		E	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
XMD0805-010	2.00	2.30	1.20	1.50	0.30	1.00	0.20	0.60	0.10	0.45
XMD0805-020	2.00	2.30	1.20	1.50	0.30	1.00	0.20	0.60	0.10	0.45
XMD0805-035	2.00	2.30	1.20	1.50	0.25	0.75	0.20	0.60	0.10	0.45
XMD0805-050	2.00	2.30	1.20	1.50	0.40	0.90	0.20	0.60	0.10	0.45
XMD0805-050-9	2.00	2.30	1.20	1.50	0.40	0.90	0.20	0.60	0.10	0.45
XMD0805-075	2.00	2.30	1.20	1.50	0.55	1.25	0.20	0.60	0.10	0.45
XMD0805-100	2.00	2.30	1.20	1.50	0.75	1.80	0.20	0.60	0.10	0.45

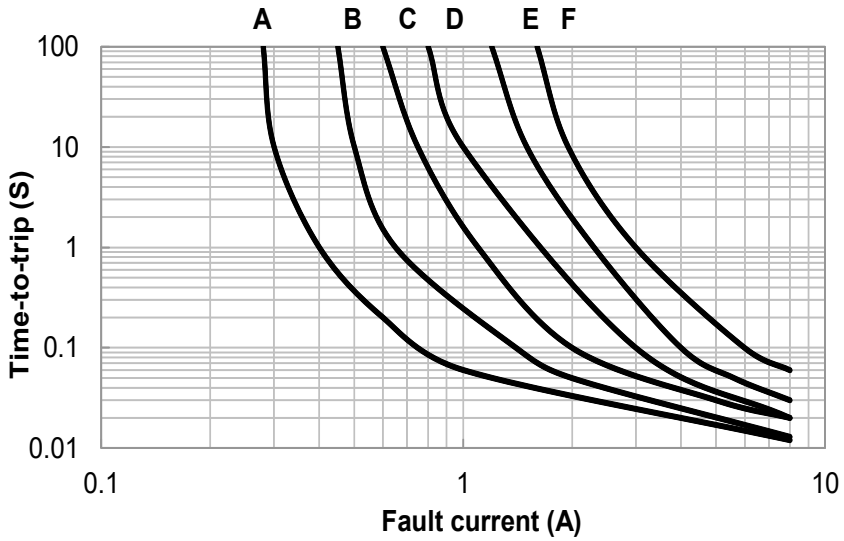


Thermal Derating Chart-I_H (A)

Part Number	Maximum ambient operating Temperature(℃)									
	-40	-20	0	23	30	40	50	60	70	85
XMD0805-010	0.15	0.13	0.12	0.10	0.09	0.08	0.08	0.07	0.06	0.05
XMD0805-020	0.29	0.26	0.23	0.20	0.18	0.17	0.15	0.14	0.12	0.11
XMD0805-035	0.51	0.46	0.41	0.35	0.32	0.29	0.27	0.24	0.21	0.19
XMD0805-050	0.73	0.65	0.58	0.50	0.46	0.42	0.38	0.35	0.31	0.27
XMD0805-050-9	0.73	0.65	0.58	0.50	0.46	0.42	0.38	0.35	0.31	0.27
XMD0805-075	1.09	0.98	0.87	0.75	0.68	0.63	0.57	0.52	0.46	0.40
XMD0805-100	1.45	1.30	1.16	1.00	0.91	0.84	0.76	0.69	0.61	0.53

Typical Time-To-Trip at 23℃

A = XMD0805-010
B = XMD0805-020
C = XMD0805-035
D = XMD0805-050
XMD0805-050-9
E = XMD0805-075
F = XMD0805-100



Marking System

Part Number	Location A	Location B
XMD0805-010	F1	A
XMD0805-020	F2	B
XMD0805-035	F3	C
XMD0805-050	F5	D
XMD0805-050-9	FA	-
XMD0805-075	F7	E
XMD0805-100	F0	F

Note: Marking on product may either be F1,F2,F3,F5,F7,F0 or A,B,C,D,E,F depending on its process location.

Package Information

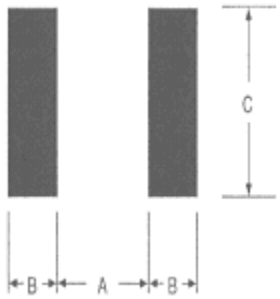
Tape & Reel:

XMD0805-010~XMD0805-035 ----------4000pcs per reel

XMD0805-050~XMD0805-100 ----------3000pcs per reel

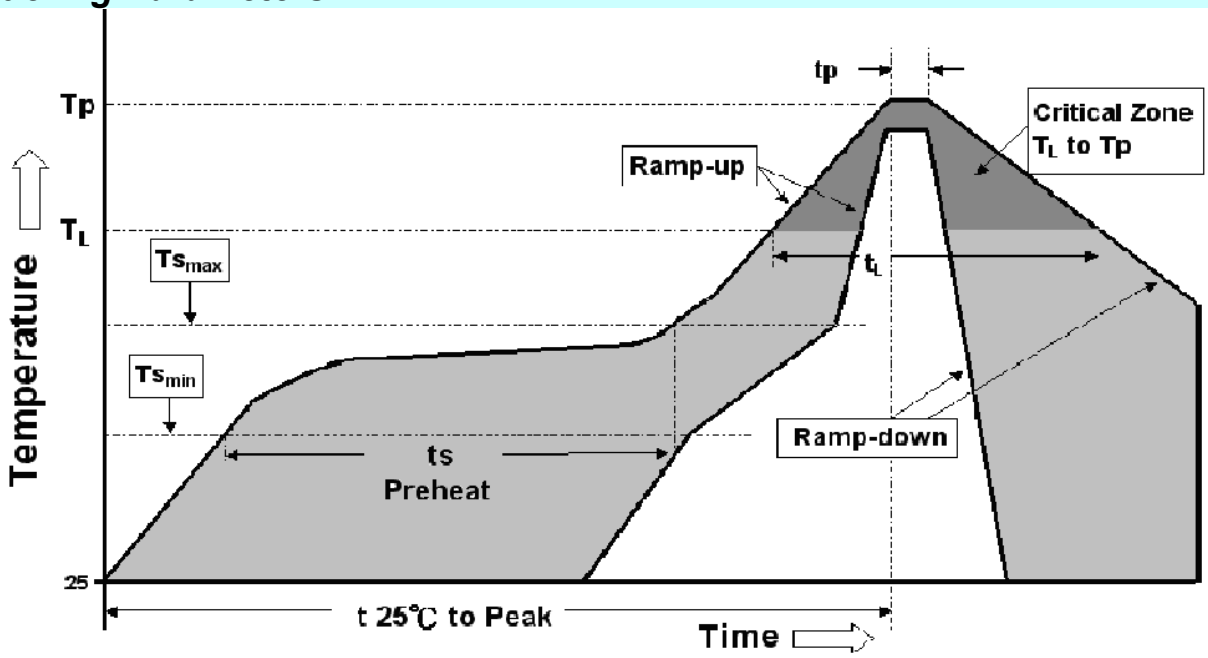
Pad Layouts

The dimension in the table below provide the recommended pad layout for each XMD0805 device



Pad dimensions (millimeters)			
Device	A Nominal	B Nominal	C Nominal
XMD0805 series	1.20	1.00	1.50

Soldering Parameters



Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate (Tsmax to Tp)	3 ℃/second max.
Preheat : -Temperature Min (Tsmin) -Temperature Max (Tsmax) -Time (tsmin to tsmax)	 150 ℃ 200 ℃ 60-180 seconds
Time maintained above: -Temperature(T_L) -Time (t_L)	 217 ℃ 60-150 seconds
Peak/Classification Temperature(Tp)	260 ℃
Time within 5℃ of actual Peak : Temperature (tp)	 20-40 seconds
Ramp-Down Rate :	6 ℃/second max.
Time 25 ℃ 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℃ / 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.