Surface Mount PTC FSMD Series

FUZETEC

Application:

All high-density boards

Product Features:

Small surface mount, Solid state

Faster time to trip than standard SMD devices

Lower resistance than standard SMD devices

Operation Current: 140mA~1.6A

Maximum Voltage: 6V~60V

Temperature Range: -40℃ to 85℃

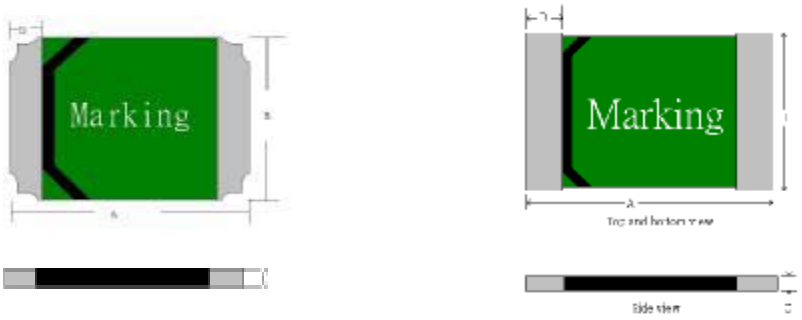
Agency Approvals: UL(E211981),
C-UL＆TUV pending

Electrical Characteristics(23℃)

Part Number	Hold Current	Trip Current	Rated Voltage	Max Current	Typical Power	Max Time to Trip		Resistance Tolerance	
						Current	Time	RMIN	R1MAX
	IH,A	IT,A	VMAX,Vdc	IMAX, A	Pd, W	Amp	Sec	Ω	Ω
FSMD014	0.14	0.30	60	10	0.8	8.0	〈0.02	1.50	6.50
FSMD020	0.20	0.40	30	10	0.8	8.0	0.02	0.80	5.00
FSMD035	0.35	0.70	16	40	0.8	8.0	0.10	0.32	1.50
FSMD050	0.50	1.00	16	40	0.8	8.0	0.15	0.15	1.00
FSMD075	0.75	1.50	16	40	0.8	8.0	0.02	0.11	0.45
FSMD110	1.10	2.20	6	40	0.8	8.0	0.30	0.04	0.21
FSMD160	1.60	3.20	6	40	0.8	8.0	〈0.5	0.03	0.10

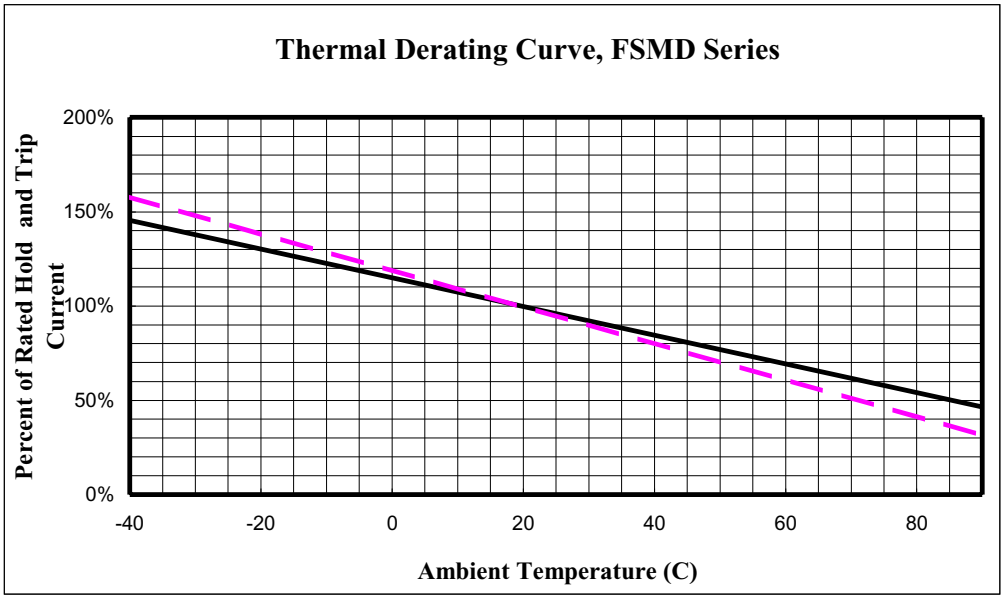
I_H=Hold current-maximum current at which the device will not trip at 23℃still air.
I_T=Trip current-minimum current at which the device will always trip at 23℃ still air.
V_{MAX}=Maximum voltage device can withstand without damage at it rated current.(I max)
I_{MAX}= Maximum fault current device can withstand without damage at rated voltage (V max).
Pd=Typical power dissipated-type amount of power dissipated by the device when in the tripped state in 23℃ still air environment.
R_{MIN}=Minimum device resistance at 23℃ prior to tripping.
$R1_{MAX}$=Maximum device resistance at 23℃ measured 1 hour post trip.
Termination pad characteristics
Termination pad materials : solder-plated copper

FSMD Product Dimensions (Millimeters)



PART NUMBER	A		B		C		D
	Min	Max	Min	Max	Min	Max	Min
FSMD014	4.37	4.73	3.07	3.41	0.7	1.0	0.35
FSMD020	4.37	4.73	3.07	3.41	0.4	0.7	0.35
FSMD035	4.37	4.73	3.07	3.41	0.4	0.7	0.35
FSMD050	4.37	4.73	3.07	3.41	0.4	0.7	0.35
FSMD075	4.37	4.73	3.07	3.41	0.4	0.7	0.35
FSMD110	4.37	4.73	3.07	3.41	0.4	0.7	0.35
FSMD160	4.37	4.73	3.07	3.41	0.4	0.7	0.35

Thermal Derating Curve

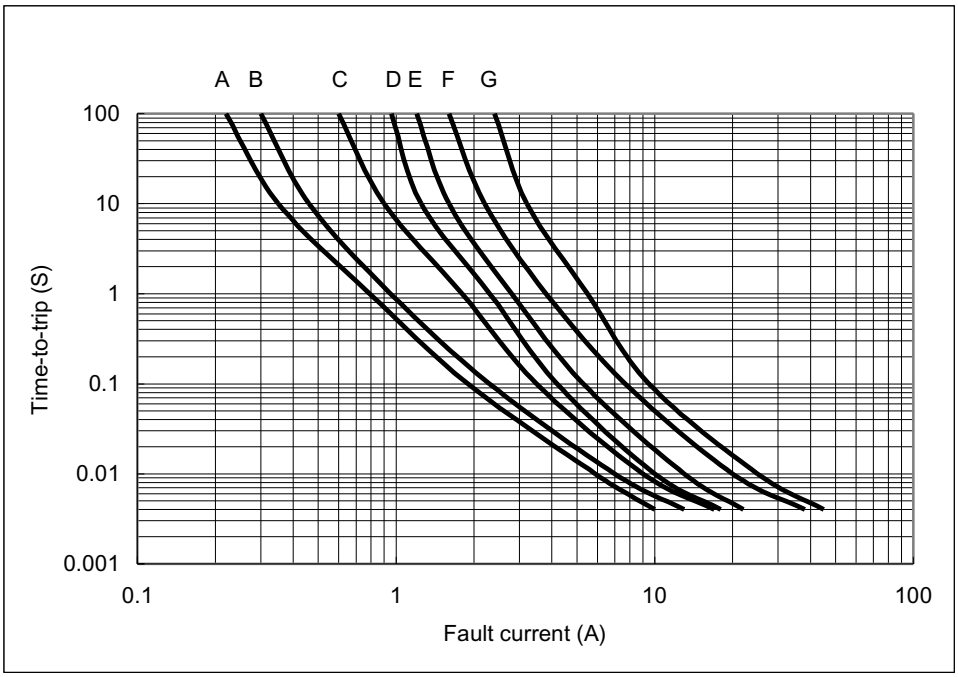


A= FSMD 075, 100 &160

B= FSMD 014, 020, 035 & 050

Typical Time-To-Trip at 23℃

A =FSMD014
B =FSMD020
C =FSMD035
D =FSMD050
E =FSMD075
F =FSMD110
G =FSMD160

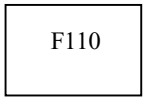


Part Numbering System

FSMD □ □ □

Current rating

Part Marking System



Example

F □ □ □

Part Identification

Fuzetec Logo

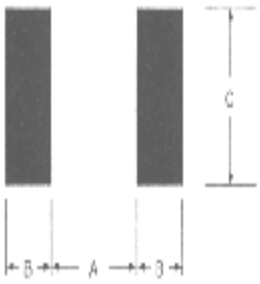
Standard Package

P/N	Pcs /Bag	Reel/Tape
FSMD014	--------	2K
FSMD020	--------	2K
FSMD035	--------	2K
FSMD050	--------	2K

P/N	Pcs /Bag	Reel/Tape
FSMD075	--------	2K
FSMD110	--------	2K
FSMD160	--------	2K

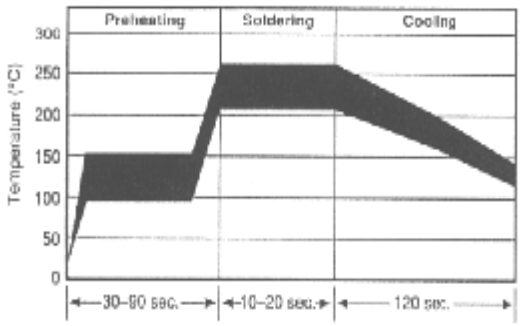
Pad Layouts、Solder Reflow and Rework Recommendations

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



Pad dimensions(millimeters)

Device	A Nominal	B Nominal	C Nominal
FSMD014	3.45	1.78	3.15
FSMD020	3.45	1.78	3.15
FSMD035	3.45	1.78	3.15
FSMD050	3.45	1.78	3.15
FSMD075	3.45	1.78	3.15
FSMD110	3.45	1.78	3.15
FSMD160	3.45	1.78	3.15



Solder reflow

1、Recommended reflow methods; IR , vapor phase oven, hot air oven.

2、The FSMD014、FSMD020、 FSMD035、FSMD050 FSMD075、FSMD110 and FSMD160 devices are suitable for use with wave-solder application methods.

3、Recommended maximum paste thickness is 0.25mm.

4、Devices can be cleaned using standard industry methods and solvents.

CAUTION:

If reflow temperatures exceed the recommended Profile, devices may not meet the performance requirements.

Rework:

Use standard industry practices.