

### FEATURES

- 1210 size, Surface mount
- Application: All high-density boards
- Operation Current: 50mA ~ 0.750mA
- Maximum Voltage: 8V ~ 60V
- Temperature Range: -40°C to 85°C
- RoHS Compliant

### AGENCY RECOGNITION

- UL (E211981)
- C-UL (E211981)
- TUV (R50090556)

### ELECTRICAL CHARACTERISTICS (23°C)

Part Number	Hold Current	Trip Current	Rated Voltage	Maximum Current	Typical Power	Max Time to Trip		Resistance Tolerance	
						Current	Time	R <sub>MIN</sub>	R <sub>1MAX</sub>
	I <sub>H</sub> , A	I <sub>T</sub> , A	V <sub>MAX</sub> , Vdc	I <sub>MAX</sub> , A	Pd, W	Amp	Sec	OHMS	OHMS
FSMD005-1210	0.05	0.15	60	10	0.6	0.25	1.50	3.60	50.00
FSMD010-1210	0.10	0.25	60	10	0.6	0.50	1.50	1.60	15.00
FSMD020-1210	0.20	0.40	30	10	0.6	8.0	0.02	0.80	5.00
FSMD035-1210	0.35	0.70	16	40	0.6	8.0	0.20	0.32	1.30
FSMD050-1210	0.50	1.00	16	40	0.6	8.0	0.10	0.25	0.90
FSMD075-1210	0.75	1.50	8	40	0.6	8.0	0.10	0.13	0.40

\* Devices with hold current up to 1.5 amps are in development

I<sub>H</sub>=Hold current-maximum current at which the device will not trip at 23°C still air.

I<sub>T</sub>=Trip current-maximum current at which the device will always trip at 23°C still air.

V<sub>MAX</sub>=Maximum voltage device can withstand without damage at its rated current (I<sub>MAX</sub>).

I<sub>MAX</sub>=Maximum fault current device can withstand without damage at rated voltage (V<sub>MAX</sub>).

Pd=Typical power dissipated-type amount of power dissipated by the device when in the tripped state in 23°C still air environment.

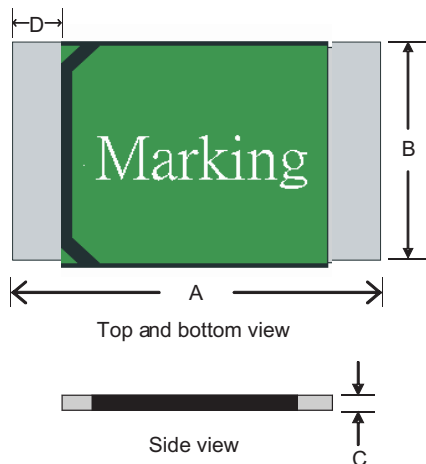
R<sub>MIN</sub>=Minimum device resistance at 23°C prior to tripping.

R<sub>1MAX</sub>=Maximum device resistance at 23°C measured 1 hour post trip.

Termination pad characteristics

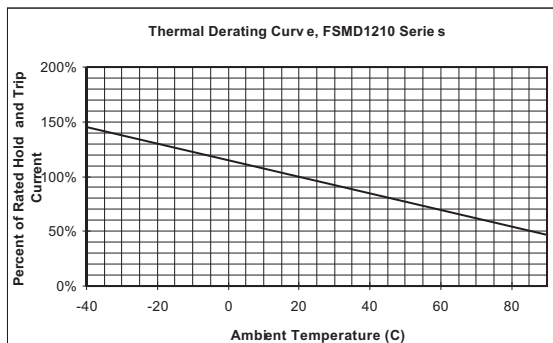
Termination pad materials: Tin-plated copper

### FSMD1210 PRODUCT DIMENSIONS (MILLIMETERS)

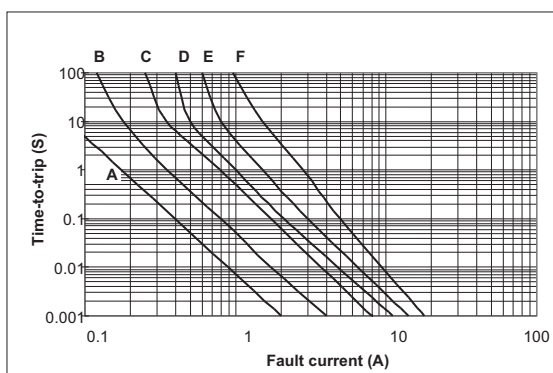


Part Number	A		B		C		D
	Min	Max	Min	Max	Min	Max	Min
FSMD005-1210	3.0	3.43	2.35	2.8	0.60	1.15	0.25
FSMD010-1210	3.0	3.43	2.35	2.8	0.60	1.15	0.25
FSMD020-1210	3.0	3.43	2.35	2.8	0.40	0.85	0.25
FSMD035-1210	3.0	3.43	2.35	2.8	0.40	0.80	0.25
FSMD050-1210	3.0	3.43	2.35	2.8	0.30	0.75	0.25
FSMD075-1210	3.0	3.43	2.35	2.8	0.30	0.70	0.25

■ **THERMAL DERATING CURVE**



■ **TYPICAL TIME-TO-TRIP AT 23°C**

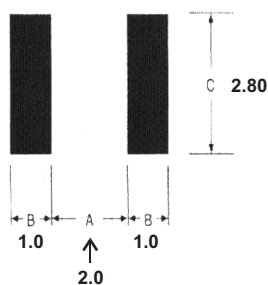


A= FSMD005-1210  
B= FSMD010-1210  
C= FSMD020-1210  
D= FSMD035-1210  
E= FSMD050-1210  
F= FSMD075-1210

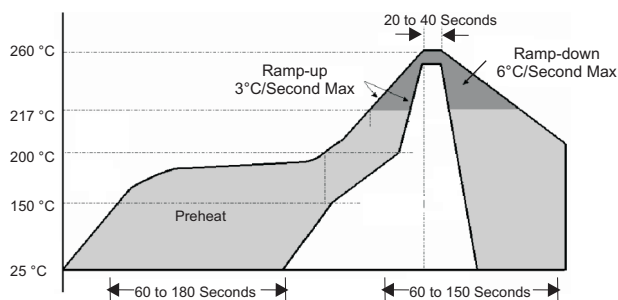
■ **PAD LAYOUTS, SOLDER REFLOW AND REWORK RECOMMENDATIONS**

The dimension in the table below provide the recommended pad layout for each FSMD1210 device

**NOMINAL PAD DIMENSIONS (MILLIMETERS)**



**SOLDER REFLOW**



**Solder Reflow**

Due to "Lead Free" nature, up to 40 seconds dwelling time for the soldering zone is strongly recommended.

1. Recommended reflow methods; IR, vapor phase oven, hot air oven.
2. The FSMD Series are suitable for use with wave-solder application methods. (Top side only)
3. Recommended maximum paste thickness is 0.25mm.
4. Devices can be cleaned by using standard industry methods and solvents.
5. Storage Environment: <30°C / 60%RH

**Caution:**

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

**Rework:**

Use standard industry practices.

**NOTE: All Specification subject to change without notice.**