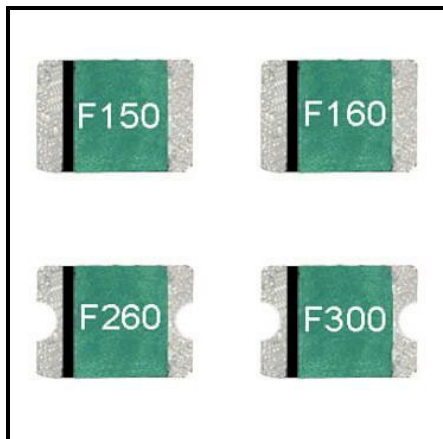


## FSMD1812 Series

**RoHS Compliant &  
Halogen Free**



### 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:** 0.1A~3.0A

**Maximum Voltage:** 6V~60V<sub>DC</sub>

**Temperature Range:** -40°C to 85°C

**Agency Recognition:** UL (E211981)

\*C-UL (E211981)

\*TÜV (50004084/R50090556)

## Electrical Characteristics(23°C)

Part Number	Hold Current	Trip Current	Rated Voltage	Max. Current	Typical Power	Max Time to Trip		Resistance	
						Current	Time	R <sub>MIN</sub>	R1 <sub>MAX</sub>
FSMD010	0.10	0.30	60	10	0.8	8.0	0.020	1.600	15.00
FSMD014	0.14	0.30	60	10	0.8	8.0	0.008	1.200	6.500
FSMD020	0.20	0.40	30	10	0.8	8.0	0.020	0.800	5.000
FSMD035	0.35	0.70	16	40	0.8	8.0	0.100	0.320	1.500
FSMD050	0.50	1.00	16	40	0.8	8.0	0.150	0.150	1.000
FSMD075	0.75	1.50	16	40	0.8	8.0	0.200	0.110	0.450
FSMD075-24R	0.75	1.50	24	40	1.0	8.0	0.200	0.110	0.290
FSMD075-33R	0.75	1.50	33	40	1.0	8.0	0.200	0.110	0.400
FSMD110	1.10	2.20	8	100	0.8	8.0	0.300	0.040	0.210
FSMD110-16	1.10	1.95	16	100	0.8	8.0	0.500	0.040	0.180
FSMD110-24R	1.10	2.20	24	100	1.0	8.0	0.500	0.060	0.200
FSMD125	1.25	2.50	6	40	0.8	8.0	0.400	0.050	0.140
FSMD150	1.50	3.00	8	100	0.8	8.0	0.500	0.040	0.110
FSMD150-12R	1.50	3.00	12	100	1.0	8.0	0.500	0.040	0.110
FSMD150-24R	1.50	3.00	24	100	1.0	8.0	1.500	0.040	0.120
FSMD160	1.60	3.20	8	100	0.8	8.0	0.500	0.030	0.100
FSMD160-12R	1.60	3.20	12	100	1.0	8.0	1.000	0.030	0.100
FSMD160-16R	1.60	3.20	16	100	1.0	8.0	1.000	0.030	0.100
FSMD190RZ	1.90	4.90	6	100	1.0	8.0	5.000	0.003	0.025
FSMD200	2.00	3.50	8	40	0.8	8.0	2.000	0.020	0.070
FSMD200R	2.00	3.50	8	100	1.0	8.0	2.000	0.020	0.070
FSMD260R	2.60	5.00	6	100	1.0	8.0	2.500	0.015	0.047
FSMD260-13R	2.60	5.00	13.2	100	1.3	8.0	5.000	0.015	0.050
FSMD260-16R	2.60	5.00	16	100	1.3	8.0	5.000	0.015	0.050
FSMD300R	3.00	5.00	6	100	1.0	8.0	4.000	0.012	0.040

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-minimum 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 it 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>).

P<sub>d</sub>=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.

R1<sub>MAX</sub>=Maximum resistance of device at 23°C measured 1 hour after tripping or reflow soldering of 260°C for 20 seconds.

Termination pad characteristics

Termination pad materials: Pure Tin

\*Note: FSMD010 TÜV: Pending

FSMD075-24R/33R, FSMD110-24R, FSMD150-12R/24R, FSMD160-12R/16R, FSMD190RZ, FSMD200R, FSMD260R, FSMD260-13R/16R & FSMD300R C-UL Pending.

NOTE : All Specifications subject to change without notice.

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Телефон в Москве +7 (499) 500 94 02;

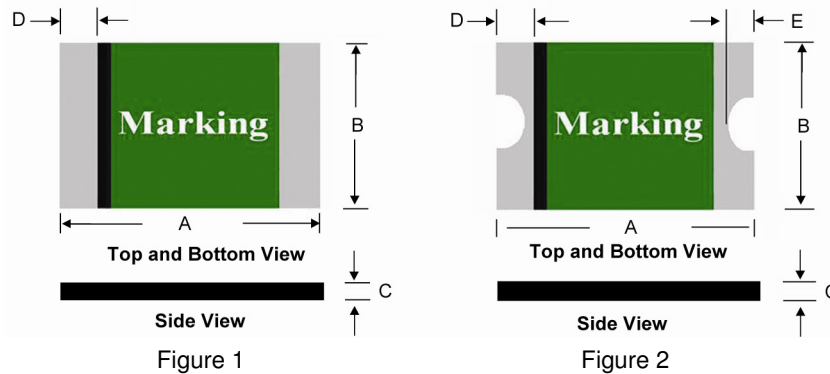
Телефон в Минске +375 (29) 707 79 46;

E-mail: [belterratrans@gmail.com](mailto:belterratrans@gmail.com)

Веб-сайт: <http://belterratrans.com/>

### III - Product – Surface Mount PTC

#### FSMD1812 Product Dimensions (Millimeter)



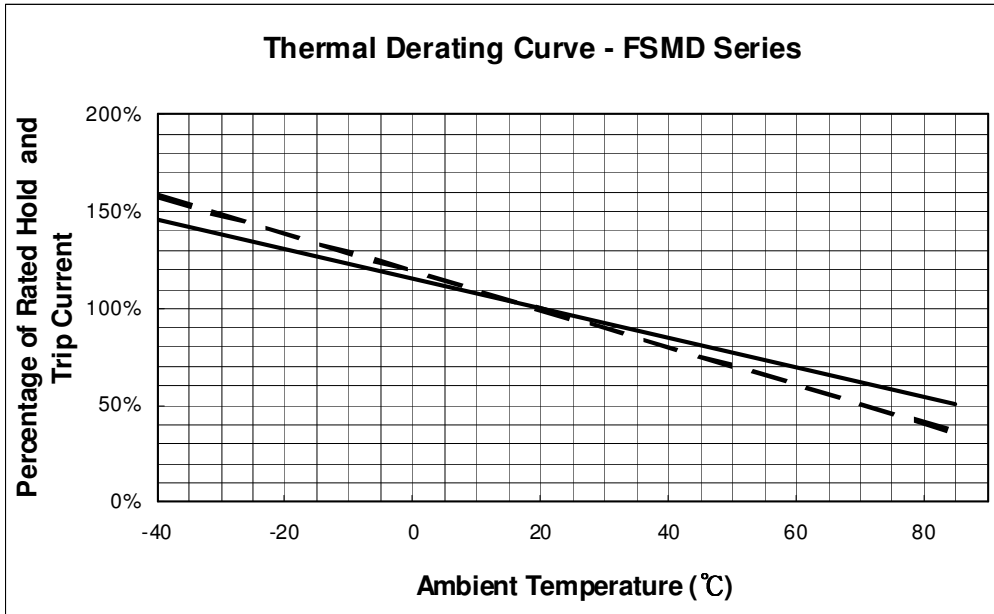
For Reflow Soldering Profile information, please refer to P.90” IV APPENDIX - SMD PRODUCT SOLDER REFLOW RECOMMENDATIONS “

Part Number	Figure	A		B		C		D		E	
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
FSMD010	1	4.37	4.73	3.07	3.41	0.60	0.90	0.30	0.95	-	-
FSMD014	1	4.37	4.73	3.07	3.41	0.60	0.90	0.30	0.95	-	-
FSMD020	1	4.37	4.73	3.07	3.41	0.60	0.90	0.30	0.95	-	-
FSMD035	1	4.37	4.73	3.07	3.41	0.40	0.70	0.30	0.95	-	-
FSMD050	1	4.37	4.73	3.07	3.41	0.35	0.65	0.30	0.95	-	-
FSMD075	1	4.37	4.73	3.07	3.41	0.35	0.65	0.30	0.95	-	-
FSMD075-24R	2	4.37	4.73	3.07	3.41	0.80	1.55	0.25	0.95	0.25	0.65
FSMD075-33R	2	4.37	4.73	3.07	3.41	0.80	1.55	0.25	0.95	0.25	0.65
FSMD110	1	4.37	4.73	3.07	3.41	0.25	0.55	0.30	0.95	-	-
FSMD110-16	1	4.37	4.73	3.07	3.41	0.25	0.90	0.30	0.95	-	-
FSMD110-24R	2	4.37	4.73	3.07	3.41	0.80	1.30	0.25	0.95	0.25	0.65
FSMD125	1	4.37	4.73	3.07	3.41	0.25	0.55	0.30	0.95	-	-
FSMD150	1	4.37	4.73	3.07	3.41	0.25	0.55	0.30	0.95	-	-
FSMD150-12R	2	4.37	4.73	3.07	3.41	0.60	1.10	0.25	0.95	0.25	0.65
FSMD150-24R	2	4.37	4.73	3.07	3.41	0.60	1.55	0.25	0.95	0.25	0.65
FSMD160	1	4.37	4.73	3.07	3.41	0.25	0.90	0.30	0.95	-	-
FSMD160-12R	2	4.37	4.73	3.07	3.41	0.60	1.35	0.25	0.95	0.25	0.65
FSMD160-16R	2	4.37	4.73	3.07	3.41	0.60	1.35	0.25	0.95	0.25	0.65
FSMD190RZ	2	4.37	4.73	3.07	3.41	0.30	0.70	0.25	0.95	0.25	0.65
FSMD200	1	4.37	4.73	3.07	3.41	0.50	0.90	0.30	0.95	-	-
FSMD200R	2	4.37	4.73	3.07	3.41	0.55	1.20	0.25	0.95	0.25	0.65
FSMD260R	2	4.37	4.73	3.07	3.41	0.55	1.20	0.25	0.95	0.25	0.65
FSMD260-13R	2	4.37	4.73	3.07	3.41	0.80	1.55	0.25	0.95	0.25	0.65
FSMD260-16R	2	4.37	4.73	3.07	3.41	0.80	1.55	0.25	0.95	0.25	0.65
FSMD300R	2	4.37	4.73	3.07	3.41	0.80	1.55	0.25	0.95	0.25	0.65

### III - Product – Surface Mount PTC



#### Thermal Derating Curve

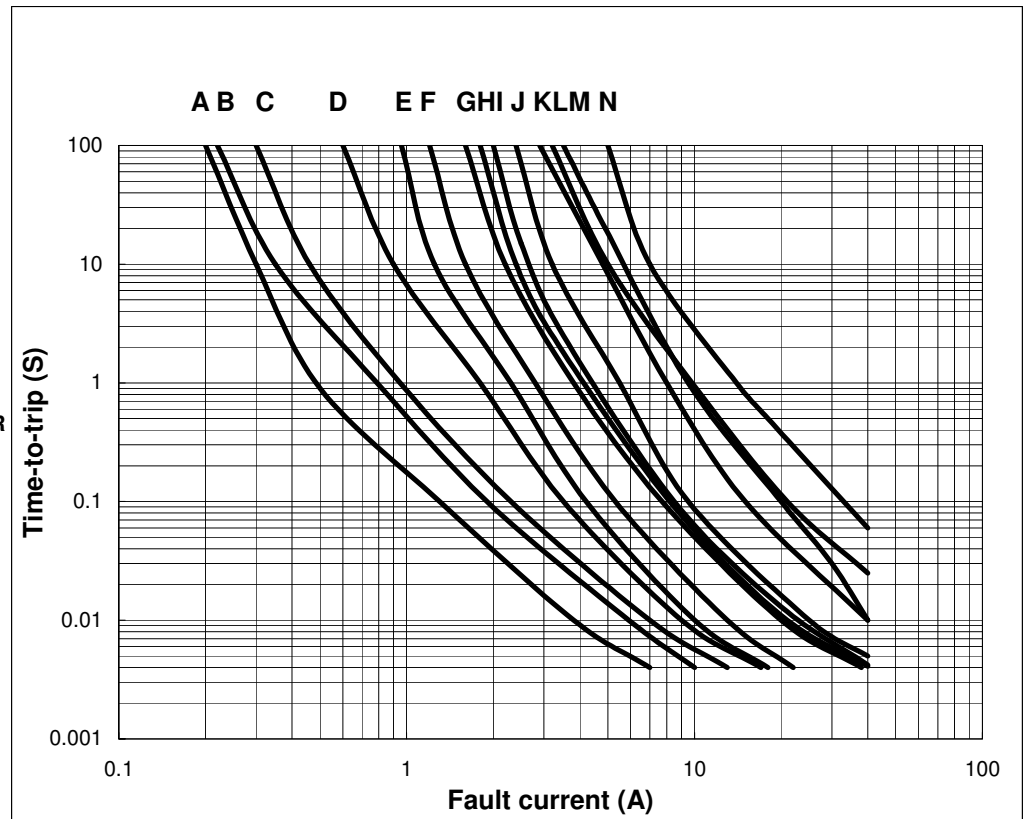


FSMD075, 075-24R, 075-33R, 110, 110-16, 110-24R, 125, 150, 150-12R, 150-24R, 160, 160-12R, 160-16R, 190RZ, 200, 200R, 260R, 260-13R, 260-16R & 300R

FSMD 010, 014, 020, 035, 050

#### Typical Time-To-Trip at 23°C

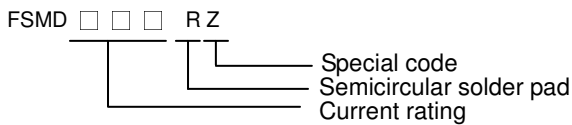
- A = FSMD010
- B = FSMD014
- C = FSMD020
- D = FSMD035
- E = FSMD050
- F = FSMD075/075-24R/075-33R
- G = FSMD110/110-16/110-24R
- H = FSMD125
- I = FSMD150/150-12R/150-24R
- J = FSMD160/160-12R/160-16R
- K = FSMD200/200R
- L = FSMD260R/260-13R/260-16R
- M = FSMD190RZ
- N = FSMD300R



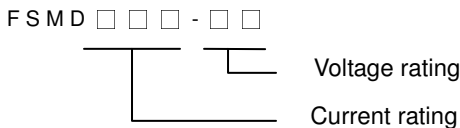
NOTE : All Specifications subject to change without notice.

## Part Numbering System

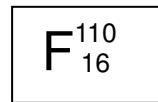
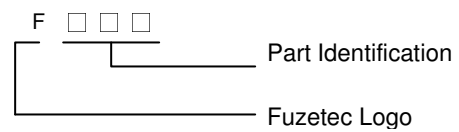
### FSMD014~FSMD300R



### FSMD110-16



## Part Marking System



## Standard Package

P/N	Reel/Tape
FSMD010	2K
FSMD014	2K
FSMD020	2K
FSMD035	2K
FSMD050	2K
FSMD075	2K
FSMD075-24R	1.5K
FSMD075-33R	1.5K
FSMD110	2K
FSMD110-16	2K
FSMD110-24R	1.5K
FSMD125	2K
FSMD150	2K

P/N	Reel/Tape
FSMD150-12R	2K
FSMD150-24R	2K
FSMD160	2K
FSMD160-12R	2K
FSMD160-16R	2K
FSMD190RZ	2K
FSMD200	2K
FSMD200R	2K
FSMD260R	2K
FSMD260-13R	1.5K
FSMD260-16R	1.5K
FSMD300R	1.5K

- 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 are not anticipated.
  - Avoid contact of PPTC device with chemical solvent. Prolonged contact will damage the device performance..

