

FSMD1206 Series



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

0.05A~2.00A

Maximum Voltage

6V~60V_{DC}



Temperature Range

-40°C to 85°C

Agency Recognition

AGENCY	AGENCY FILE NUMBER
	UL(E211981)
	C-UL(E211981)
	TÜV (R50090556)



SVHC Compliant

Electrical Characteristics (23°C)

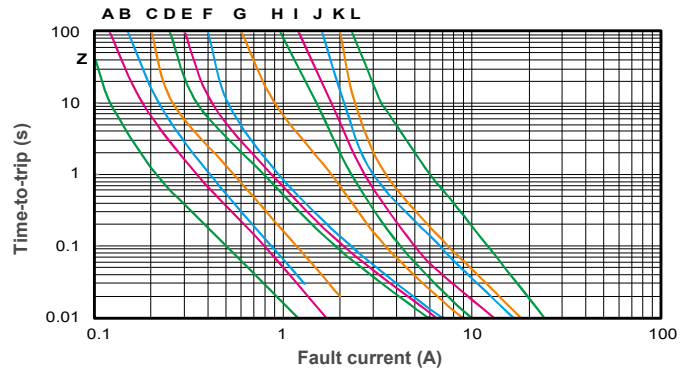
Part Number	Hold Current	Trip Current	Rated Voltage	Max. Current	Typ. Power	Max. Time to trip		Resistance	
						Current	Time	R _{MIN}	R _{1MAX}
	I _H , A	I _T , A	V _{MAX} , V _{DC}	I _{MAX} , A	P _d , W	A	Sec	Ohms	Ohms
FSMD005-1206-R	0.05	0.15	60	100	0.4	0.25	1.50	3.600	50.000
FSMD010-1206-R	0.10	0.25	60	100	0.4	0.50	1.00	1.600	15.000
FSMD012-1206-R	0.12	0.39	48	100	0.5	1.00	0.20	1.400	6.500
FSMD016-1206-R	0.16	0.45	48	100	0.5	1.00	0.30	1.100	5.000
FSMD020-1206-R	0.20	0.40	30	100	0.4	8.00	0.10	0.600	2.500
FSMD025-1206-R	0.25	0.50	16	100	0.6	8.00	0.08	0.550	2.300
FSMD025-24-1206-R	0.25	0.50	24	100	0.6	8.00	0.08	0.550	2.300
FSMD035-1206-R	0.35	0.75	16	100	0.4	8.00	0.10	0.300	1.200
FSMD035-30-1206R	0.35	0.75	30	100	0.6	8.00	0.10	0.300	1.200
FSMD050-1206-R	0.50	1.00	8	100	0.4	8.00	0.10	0.150	0.700
FSMD050-24-1206R	0.50	1.00	24	100	0.6	8.00	0.10	0.150	0.750
FSMD075-1206R	0.75	1.50	8	100	0.6	8.00	0.20	0.090	0.290
FSMD075-16-1206R	0.75	1.50	16	100	0.6	8.00	0.20	0.090	0.290
FSMD100-1206R	1.00	1.80	6	100	0.6	8.00	0.30	0.055	0.210
FSMD110-1206R	1.10	2.20	8	100	0.8	8.00	0.30	0.040	0.180
FSMD110-16-1206R	1.10	2.20	16	100	0.8	8.00	0.30	0.040	0.180
FSMD150-1206R	1.50	3.00	8	100	0.8	8.00	1.00	0.040	0.120
FSMD200-1206R	2.00	3.50	6	100	0.8	8.00	1.50	0.018	0.080

Thermal Derating for PPTC Device at Various Ambient Temperatures

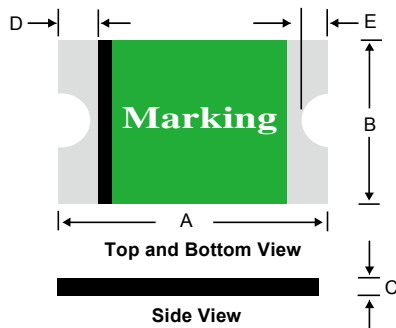
TEMPERATURE	-40°C	-20°C	0°C	23°C	30°C	40°C	50°C	60°C	70°C	85°C
DERATING %	145%	130%	115%	100%	92%	84%	78%	69%	62%	50%

Typical Time-To-Trip at 23°C

Z = FSMD005-1206-R	G = FSMD050-1206-R
A = FSMD010-1206-R	/ FSMD050-24-1206R
B = FSMD012-1206-R	H = FSMD075-1206R
C = FSMD016-1206-R	/ FSMD075-16-1206
D = FSMD020-1206-R	I = FSMD100-1206R
E = FSMD025-1206-R	J = FSMD110-1206R
/ 025-24-1206-R	/ 110-16-1206R
F = FSMD035-1206-R	K = FSMD150-1206R
/ 035-30-1206R	L = FSMD200-1206R



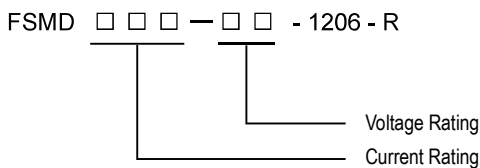
FSMD1206 Product Dimensions (mm)



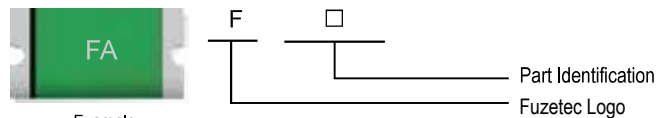
*For Reflow Soldering Profile information, please refer to P.73 "IX APPENDIX - SMD PRODUCT SOLDER REFLOW RECOMMENDATIONS"

Part Number	A		B		C		D		E	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
FSMD005-1206-R	3.00	3.50	1.50	1.80	0.45	0.85	0.10	0.75	0.10	0.45
FSMD010-1206-R	3.00	3.50	1.50	1.80	0.45	0.85	0.10	0.75	0.10	0.45
FSMD012-1206-R	3.00	3.50	1.50	1.80	0.45	0.85	0.10	0.75	0.10	0.45
FSMD016-1206-R	3.00	3.50	1.50	1.80	0.45	0.75	0.10	0.75	0.10	0.45
FSMD020-1206-R	3.00	3.50	1.50	1.80	0.45	0.75	0.10	0.75	0.10	0.45
FSMD025-1206-R	3.00	3.50	1.50	1.80	0.45	0.75	0.10	0.75	0.10	0.45
FSMD025-24-1206-R	3.00	3.50	1.50	1.80	0.45	0.75	0.10	0.75	0.10	0.45
FSMD035-1206-R	3.00	3.50	1.50	1.80	0.30	0.75	0.10	0.75	0.10	0.45
FSMD035-30-1206R	3.00	3.50	1.50	1.80	0.90	1.30	0.25	0.75	0.10	0.45
FSMD050-1206-R	3.00	3.50	1.50	1.80	0.25	0.55	0.10	0.75	0.10	0.45
FSMD050-24-1206R	3.00	3.50	1.50	1.80	0.80	1.20	0.25	0.75	0.10	0.45
FSMD075-1206R	3.00	3.50	1.50	1.80	0.45	1.25	0.25	0.75	0.10	0.45
FSMD075-16-1206R	3.00	3.50	1.50	1.80	0.45	1.25	0.25	0.75	0.10	0.45
FSMD100-1206R	3.00	3.50	1.50	1.80	0.45	1.00	0.25	0.75	0.10	0.45
FSMD110-1206R	3.00	3.50	1.50	1.80	0.45	1.00	0.25	0.75	0.10	0.45
FSMD110-16-1206R	3.00	3.50	1.50	1.80	0.80	1.40	0.25	0.75	0.10	0.45
FSMD150-1206R	3.00	3.50	1.50	1.80	0.80	1.40	0.25	0.75	0.10	0.45
FSMD200-1206R	3.00	3.50	1.50	1.80	0.85	1.60	0.25	0.75	0.10	0.45

Part Numbering System



Part Marking System



Example	
FZ = FSMD005-1206-R	FD = FSMD050-1206-R
FA = FSMD010-1206-R	FN = FSMD050-24-1206R
FJ = FSMD012-1206-R	FE = FSMD075-1206R
FK = FSMD016-1206-R	FO = FSMD075-16-1206R
FB = FSMD020-1206-R	FF = FSMD100-1206R
FL = FSMD025-1206-R	FG = FSMD110-1206R
FP = FSMD025-24-1206-R	FQ = FSMD110-16-1206R
FC = FSMD035-1206-R	FH = FSMD150-1206R
FM = FSMD035-30-1206R	FI = FSMD200-1206R

Package Information

Part Number	Standard Package
FSMD005-1206-R~ FSMD025-24-1206-R	: 3.0K Reel/Tape
FSMD035-1206-R	: 4.0K Reel/Tape
FSMD035-30-1206R	: 3.0K Reel/Tape
FSMD050-1206-R	: 4.0K Reel/Tape
FSMD050-24-1206R~FSMD110-1206R	: 3.0K Reel/Tape
FSMD110-16-1206R~FSMD200-1206R	: 2.0K Reel/Tape

Physical specifications

Termination pad materials	Pure Tin
Soldering characteristics	Meets EIA specification RS 186-9E, ANSI/J-std-002 Category 3

Warning :



- Each product should be carefully evaluated and tested for their suitability of application.
- 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, including some inert material such as silicone based oil, lubricant and etc. Prolonged contact will damage the device performance.
- Additional protection mechanism are strongly recommended to be used in conjunction with the PPTC device for protection against abnormal or failure conditions.
- Avoid use of PPTC device in a constrained space such as potting material, housing and containers where have limited space to accommodate device thermal expansion and/or contraction.

NOTE : All Specifications subject to change without notice.