

Low Rho FSMD0402 Series



Application

All high-density boards

Product Features

Small surface mountable, Solid state, Faster time to trip than standard SMD devices, Lower resistance than standard SMD devices



Operation Current

0.10A~0.50A

Maximum Voltage

6V_{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)

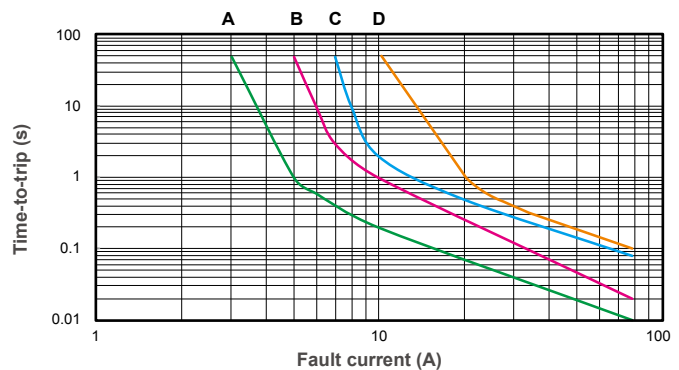
Part Number	Hold Current	Trip Current	Rated Voltage	Max. Current	Typ. Power	Max. Time to trip		Resistance	
						Current	Time	R _{MIN}	R _{1 MAX}
						I _H , A	I _T , A	V _{MAX} , V _{DC}	I _{MAX} , A
FSMD010-0402RZ	0.10	0.30	6	100	0.5	0.5	1.0	0.150	2.000
FSMD020-0402RZ	0.20	0.50	6	100	0.5	1.0	1.0	0.100	1.250
FSMD035-0402RZ	0.35	0.70	6	100	0.5	8.0	0.1	0.050	0.700
FSMD050-0402RZ	0.50	1.00	6	100	0.5	8.0	0.1	0.040	0.400

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%	77%	69%	61%	50%

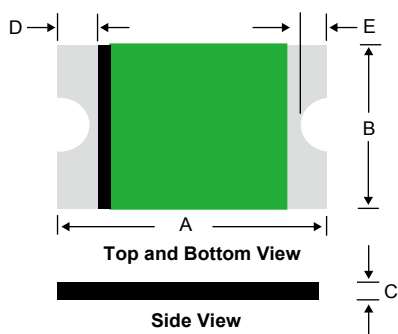
Typical Time-To-Trip at 23°C

- A = FSMD010-0402RZ
- B = FSMD020-0402RZ
- C = FSMD035-0402RZ
- D = FSMD050-0402RZ



VII - Low Rho PPTC

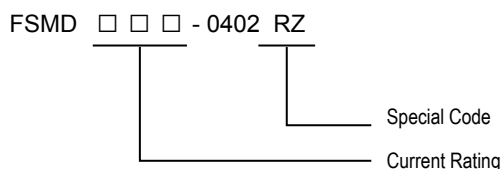
Low Rho FSMD0402 Product Dimensions (mm)



Part Number	A		B		C		D		E	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
FSMD010-0402RZ	0.85	1.15	0.35	0.65	0.30	0.60	0.10	0.45	0.05	0.40
FSMD020-0402RZ	0.85	1.15	0.35	0.65	0.30	0.60	0.10	0.45	0.05	0.40
FSMD035-0402RZ	0.85	1.15	0.35	0.65	0.30	0.60	0.10	0.45	0.05	0.40
FSMD050-0402RZ	0.85	1.15	0.35	0.65	0.30	0.60	0.10	0.45	0.05	0.40

*For Reflow Soldering Profile information, please refer to P.69 “ IX APPENDIX - SMD PRODUCT SOLDER REFLOW RECOMMENDATIONS ”

Part Numbering System



Package Information

Part Number	Standard Package
FSMD010-0402RZ~ FSMD050-0402RZ	: 10K 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.
- Avoid PPTC devices being exposed to prolonged high temperature and/or high humidity storage environment such as 85°C and/or 85RH% which could diminish PPTC's performance.