



Features:

- Compact design to save board space-0603 footprint.
- Small size results in very fast time to react to fault events.



- Low profile.
- Halogen free.

Applications:

USB port protection. PC motherboards - Plug and Play protection. Mobile phones - Battery and port protection. PDAs/digital cameras. Automotive electronic control modules. Game console port protection. HDMI ports.

Electrical Characteristics

Maximum	Maximum Amperes (I)	I _{hold}	l _{trip}	Resistance		Maximum Time To Trip		Tripped Power Dissipation		
Volts (V)		Amperes at 23°C		Ohms at 23°C		AmperesSecondsat 23°Cat 23°C		Watts at 23°C	Part Number	
		Hold	Trip	R Minimum	R ₁ Maximum			Typical		
9		0.20	0.50	0.550	3.500	1.00	0.60		MF-FSMF020X	
6	40	0.35	0.75	0.200	1.400	8.00 0.10	0.5	MF-FSMF035X		
		0.50	1.00	0.100	0.800		0.10		MF-FSMF050X***	

***UL approval pending.

Environmental Characteristics

Operating Temperature Maximum Device Surface Temperature in Tripped State Passive Aging Humidity Aging Thermal Shock Solvent Resistance Vibration : -40°C to +85°C.

- : 125°C.
- : +85°C, 1000 hours.... \pm 5% typical resistance change.
- : +85°C, 85% R.H. 1000 hours.... ±5% typical resistance change.
- : +85°C to -40°C, 20 times.... \pm 10% typical resistance change.
- : MIL-STD-202, Method 215.... No change.
- : MIL-STD-883C, Method 2007.1...., No change Condition A



Dimensions : Millimetres

Fast Acting PTC Resettable Fuse

SMD - Case Style 0603



Test Procedures and Requirements for Model MF-FSMF Series

Test	Test Conditions
Visual/Mech	Verify dimensions and materials
Resistance	In still air at 23°C
Time to Trip	At specified current, V maximum, 23°C
Hold Current	30 minimum at I hold
Trip Cycle Life	V maximum, I maximum, 100 cycles
Trip Endurance	V maximum, 48 hours
Solderability	ANSI/J-STD-002

Accept/Reject Criteria Per MF physical description R minimum $\leq R \leq R1$ maximum T \leq maximum time to trip (seconds) No trip No arcing or burning No arcing or burning 95% minimum coverage

Thermal Derating Chart - I_{hold} (Amperes)

Model	Ambient Operating Temperature								
Woder	-40°C	-20°C	0°C	23°C	40°C	50°C	60°C	70°C	85°C
MF-FSMF020X	0.27	0.25	0.23	0.20	0.17	0.14	0.12	0.10	0.07
MF-FSMF035X	0.47	0.41	0.38	0.35	0.29	0.26	0.24	0.20	0.14
MF-FSMF050X	0.67	0.59	0.54	0.50	0.41	0.37	0.34	0.29	0.20

Dimensions: Millimetres

Product Dimensions

Model		4	E	3	(D	
Model	Minimum Maximum		Minimum	Minimum Maximum		Minimum Maximum	
MF-FSMF020X					0 30 (0 012)	0.65 (0.026)	
MF-FSMF035X	1.45 (0.057)	1.85 (0.073)	0.65 (0.026)	1.05 (0.041)	0.00 (0.012)	0.03 (0.020)	0.20 (0.008)
MF-FSMF050X					0.65 (0.026)	1.00 (0.039)	

Dimensions: Millimetres (Inches)

Top View

Bottom View





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Fast Acting PTC Resettable Fuse SMD - Case Style 0603



Terminal material Termination pad solderability: Standard Au finish **Recommended Storage**

- : Nickel/gold plated.
- : Meets ANSI/J-STD-002 Category 2.
- : 40°C maximum/70% RH maximum.
- Solder Reflow Recommendations



Notes:

MF-FSMF models cannot be wave soldered. Please contact Mulitcomp for hand soldering recommendations. If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements. Compatible with Pb and Pb-free solder reflow profiles.



Fast Acting PTC Resettable Fuse SMD - Case Style 0603



Typical Time to Trip at 23°C



The Time to Trip curves represent typical performance of a device in a simulated application environment. Actual performance in specific customer applications may differ from these values due to the influence of other variables.

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Part Number Table

Description	Part Number		
	MF-FSMF020X		
MF-FSMF Series - PTC Resettable Fuse	MF-FSMF035X		
	MF-FSMF050X		

Part Number Explanation:



Multifuse® Product: Designator.Series: FSMF = 0603 Surface Mount Component.Hold Current, I Hold: 020 to 050 (0.20 to 0.50 Amperes).

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