

Features

- Small footprint size (0805) and low profile for space-constrained mobile applications
- Ultra-low resistance
- Symmetrical design
- Surface mount packaging for automated assembly
- RoHS compliant* and halogen free**
- Agency recognition:



This MF-PSML series is currently available, although [not recommended for new designs](#). The enhanced [MF-PSML/X Series](#) is recommended for new designs.

MF-PSML Series - Low Ohmic PTC Resettable Fuses

Electrical Characteristics

Model	V _{max}	I _{max}	I _{hold}	I _{trip}	Resistance		Max. Time to Trip		Tripped Power Dissipation	Agency Recognition	
			at 23 °C		at 23 °C Ohms		at 23 °C		at 23 °C Watts	cUL	TÜV
	Volts	Amps	Amps		R _{Min}	R _{1Max}	Amps	Seconds	Typ.	E174545	R50302873
MF-PSML075	6	50	0.75	1.5	0.020	0.300	8.0	0.2	0.6	✓	✓
MF-PSML110	6	50	1.10	1.8	0.0175	0.130	8.0	0.3	0.6	✓	✓
MF-PSML150	6	50	1.50	3.0	0.015	0.065	8.0	0.5	0.6	✓	✓
MF-PSML175	6	50	1.75	3.5	0.005	0.055	8.0	0.6	0.6	✓	✓
MF-PSML200	6	50	2.00	4.0	0.005	0.045	8.0	1.0	0.6	✓	✓
MF-PSML260	6	50	2.60	5.0	0.003	0.035	8.0	4.0	0.6	✓	✓
MF-PSML300	6	50	3.00	6.0	0.003	0.030	8.0	5.0	0.6	✓	✓
MF-PSML350	6	50	3.50	7.0	0.003	0.025	8.0	5.0	0.6	✓	✓

Environmental Characteristics

Item	Condition	Criteria
Operating Temperature	-40 °C to +85 °C	
Storage Condition	Before Opening	+40 °C max. / 70 % R.H. max.
	After Opening	+40 °C max. / 10 % R.H. max.
Floor Condition After Opening	Consumption within 4 weeks at floor condition +30 °C max. / 60 % RH max.	
Passive Aging	+85 °C, 1000 hours	±10 % typical resistance change
Humidity Aging	+85 °C, 85 % R.H. 100 hours	±15 % typical resistance change
Thermal Shock	-40 °C to +85 °C, 20 times	±30 % typical resistance change
Solvent Resistance	MIL-STD-202, Method 215	No change (marking still legible)
Vibration	MIL-STD-883C, Method 2007.1 Condition A	No change (R _{min} < R < R _{1max})
Moisture Sensitivity Level (MSL)	See Note	
ESD Classification	Class 6 (per AEC-Q200-2, HBM)	

Test Procedures and Requirements

Item	Test Condition	Accept/Reject Criteria
Visual/Mechanical	Verify dimensions and materials	Per MF physical description
Resistance	In still air @ 23 °C	R _{min} ≤ R ≤ R _{max}
Time to Trip	At specified current, V _{max} , 23 °C, still air	T ≤ max. time to trip (seconds)
Hold Current	30 min. at I _{hold} , still air	No trip
Trip Cycle Life	V _{max} , I _{max} , 100 cycles	No arcing or burning
Trip Endurance	V _{max} , I _{max} , 48 hours	No arcing or burning
Solderability	245 °C ±5 °C, 5 seconds	95 % min. coverage



WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

* RoHS Directive 2015/863, Mar 31, 2015 and Annex.

**Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.

Applications

- USB port protection - USB 2.0, 3.0 & OTG
- HDMI 1.4 Source protection
- PC motherboards - Plug & Play protection
- Mobile phones - Battery & port protection
- PDAs / digital cameras
- Bluetooth® earphone power protection
- Game console port protection

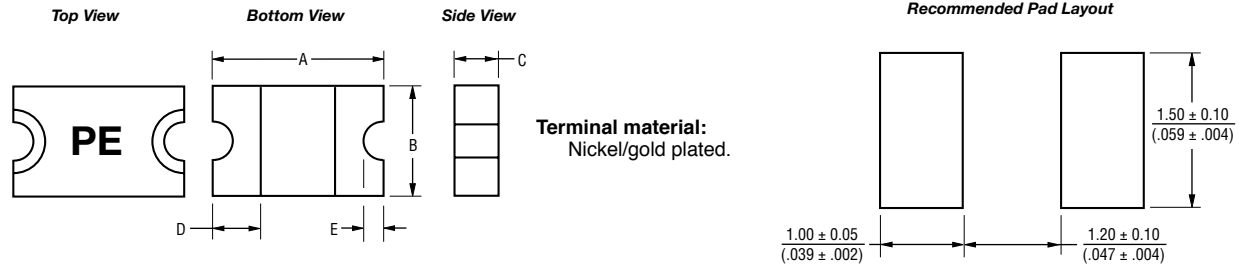
MF-PSML Series - Low Ohmic PTC Resettable Fuses

BOURNS®

Product Dimensions

Model	A		B		C		D	E	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Min.	Max.
MF-PSML075	$\frac{2.00}{(0.079)}$	$\frac{2.30}{(0.091)}$	$\frac{1.20}{(0.047)}$	$\frac{1.50}{(0.059)}$	$\frac{0.30}{(0.012)}$	$\frac{0.60}{(0.024)}$	$\frac{0.20}{(0.008)}$	$\frac{0.05}{(0.002)}$	$\frac{0.45}{(0.018)}$
MF-PSML110									
MF-PSML150									
MF-PSML175									
MF-PSML200									
MF-PSML260	$\frac{2.00}{(0.079)}$	$\frac{2.30}{(0.091)}$	$\frac{1.20}{(0.047)}$	$\frac{1.50}{(0.059)}$	$\frac{0.45}{(0.018)}$	$\frac{0.85}{(0.033)}$	$\frac{0.20}{(0.008)}$	$\frac{0.05}{(0.002)}$	$\frac{0.45}{(0.018)}$
MF-PSML300									
MF-PSML350									

DIMENSIONS: $\frac{\text{MM}}{(\text{INCHES})}$



Packaging Specifications

MF-PSML075~MF-PSML200 = 6000 pcs. per reel
MF-PSML260~MF-PSML350 = 4500 pcs. per reel

Thermal Derating Table - I_{hold} (Amps)

Model	Ambient Operating Temperature								
	-40 °C	-20 °C	0 °C	23 °C	40 °C	50 °C	60 °C	70 °C	85 °C
MF-PSML075	1.24	1.07	0.94	0.75	0.62	0.54	0.47	0.37	0.23
MF-PSML110	1.93	1.65	1.37	1.10	0.83	0.69	0.55	0.41	0.31
MF-PSML150	2.37	2.07	1.80	1.50	1.25	1.08	0.93	0.74	0.50
MF-PSML175	2.57	2.33	2.07	1.75	1.49	1.36	1.24	1.00	0.91
MF-PSML200	2.94	2.66	2.36	2.00	1.70	1.55	1.42	1.14	1.04
MF-PSML260	3.82	3.46	3.07	2.60	2.21	2.02	1.85	1.48	1.35
MF-PSML300	4.41	3.99	3.54	3.00	2.55	2.33	2.13	1.71	1.56
MF-PSML350	5.51	4.66	4.13	3.50	2.98	2.71	2.49	2.00	1.82

Specifications are subject to change without notice.

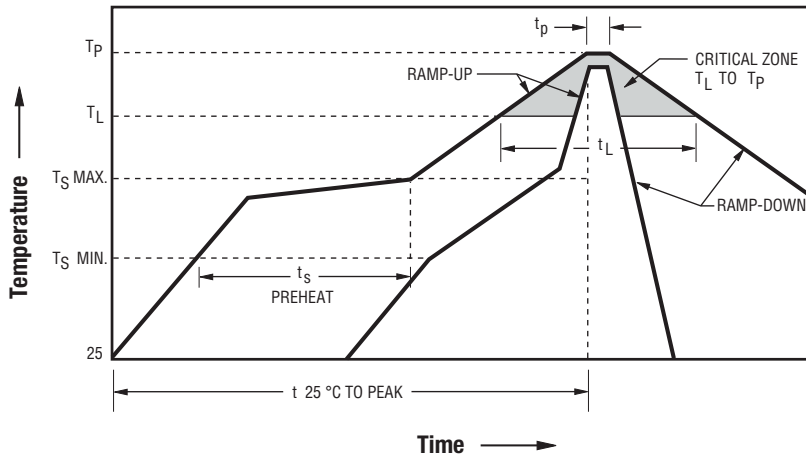
Users should verify actual device performance in their specific applications.

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Solder Reflow Recommendations



Notes:

- MF-PSML models are intended for reflow soldering (including but not limited to heating plate, hot air, IR, nitrogen, and vapor phase).
- Wave soldering is permissible only if the device is on the top of the PCB, opposite the heat source.
- Hand soldering is not recommended for these devices.
- All temperatures refer to the topside of the device, measured on the device body surface.
- If reflow temperatures exceed the recommended profile, devices may not meet the published specifications.
- Compatible with Pb and Pb-free solder reflow profiles.
- Excess solder may cause a short circuit.
- Please refer to the [Multifuse® Polymer PTC Resettable Fuse Soldering Recommendations](#) for more details.

Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate ($T_{s_{max}}$ to T_p)	3 °C / second max.
PREHEAT:	
Temperature Min. ($T_{s_{min}}$)	150 °C
Temperature Max. ($T_{s_{max}}$)	200 °C
Time ($T_{s_{min}}$ to $T_{s_{max}}$) (ts)	60~180 seconds
TIME MAINTAINED ABOVE:	
Temperature (T_L)	217 °C
Time (t_L)	60~150 seconds
Peak Temperature (T_p)	260 °C
Time within 5 °C of Actual Peak Temperature (t_p)	20~40 seconds
Ramp-Down Rate	6 °C / second max.
Time 25 °C to Peak Temperature	8 minutes max.

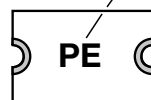
How to Order

MF - PSML 075 - 2

Multifuse® Product Designator _____
 Series _____
 PSML = 0805 Surface Mount Component
 Hold Current, Ihold _____
 075 - 350 (0.75 Amps - 3.50 Amps)
 Packaging _____
 -2 = Tape and Reel
 Packaged per EIA-481

Typical Part Marking

Represents total content. Layout may vary.



PART IDENTIFICATION:
 MF-PSML075 = PD
 MF-PSML110 = PE
 MF-PSML150 = PG
 MF-PSML175 = PH
 MF-PSML200 = PJ
 MF-PSML260 = PN
 MF-PSML300 = PP
 MF-PSML350 = PS

BIWEEKLY DATE CODE WILL APPEAR ON THE PACKAGING LABEL:
 WEEK 1 AND 2 = A
 WEEK 51 AND 52 = Z



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