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:

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

Electrical Characteristics

Model	V max. Volts	I max. Amps	I_{hold}	I_{trip}	Resistance		Max. Time To Trip		Tripped Power Dissipation
			Amperes at 23 °C		Ohms at 23 °C		Amperes at 23 °C	Seconds at 23 °C	Watts at 23 °C
			Hold	Trip	$R_{Min.}$	$R_{1Max.}$			Typ.
MF-PSML110	6	50	1.10	1.80	0.0175	0.130	8.00	0.3	0.6
MF-PSML150	6	50	1.50	3.00	0.015	0.065	8.00	0.5	0.6
MF-PSML175	6	50	1.75	3.50	0.005	0.055	8.00	0.6	0.6
MF-PSML200	6	50	2.00	4.00	0.005	0.045	8.00	1.0	0.6
MF-PSML260	6	50	2.60	5.00	0.003	0.035	8.00	4.0	0.6
MF-PSML300	6	50	3.00	6.00	0.003	0.030	8.00	5.0	0.6
MF-PSML350***	6	50	3.50	7.00	0.003	0.025	8.00	5.0	0.6

*** TÜV approval pending.

Environmental Characteristics

Operating Temperature	-40 °C to +85 °C	
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	+85 °C to -40 °C, 20 times	±30 % typical resistance change
Solvent Resistance	MIL-STD-202, Method 215	No change
Vibration	MIL-STD-883C, Method 2007.1, Condition A	No change
Moisture Sensitivity Level (MSL)	Level 1	
ESD Classification - HBM	Class 6	

Test Procedures And Requirements For Model MF-PSML Series

Test	Test Conditions	Accept/Reject Criteria
Visual/Mech.	Verify dimensions and materials	Per MF physical description
Resistance	In still air @ 23 °C	Rmin ≤ R ≤ R1max
Time to Trip	At specified current, Vmax, 23 °C	T ≤ max. time to trip (seconds)
Hold Current	30 min. at Ihold	No trip
Trip Cycle Life	Vmax, Imax, 100 cycles	No arcing or burning
Trip Endurance	Vmax, 48 hours	No arcing or burning
Solderability	ANSI/J-STD-002	95 % min. coverage

UL File Number E174545
http://www.ul.com/ Follow link to Certifications, then UL File No., enter E174545

TÜV Certificate Number ..... R 50171531
http://www.tuvdotcom.com/ Follow link to “other certificates”, enter File No. 50171531

* RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

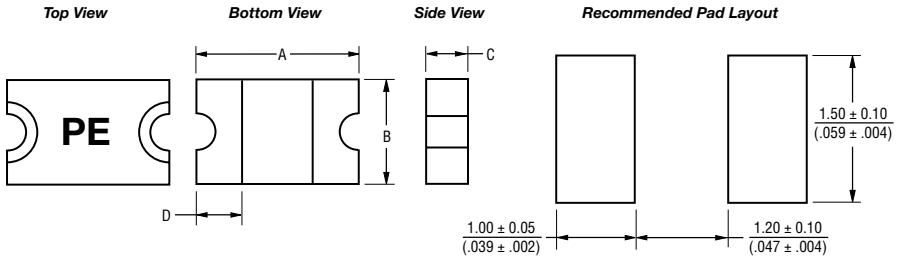
** Bourns considers a product to be “halogen free” if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

Product Dimensions

Model	A		B		C		D
	Min.	Max.	Min.	Max.	Min.	Max.	Min.
MF-PSML110	2.00 (0.079)	2.30 (0.091)	1.20 (0.047)	1.50 (0.059)	0.30 (0.012)	0.60 (0.024)	0.20 (0.008)
MF-PSML150							
MF-PSML175							
MF-PSML200							
MF-PSML260	2.00 (0.079)	2.30 (0.091)	1.20 (0.047)	1.50 (0.059)	0.45 (0.018)	0.80 (0.031)	0.20 (0.008)
MF-PSML300							
MF-PSML350							

Packaging:
MF-PSML110~MF-PSML200 = 6000 pcs. per reel
MF-PSML260~MF-PSML350 = 4500 pcs. per reel

DIMENSIONS: MM (INCHES)



Terminal material:
Nickel/gold plated.

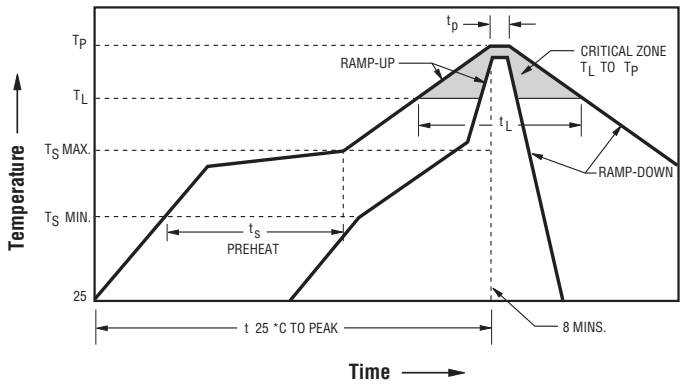
Termination pad solderability:
Standard Au finish:
Meets ANSI/J-STD-002 Category 2.

Recommended Storage:
40 °C max./70 % RH max.

Thermal Derating Chart - 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-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

Solder Reflow Recommendations



Notes:

- MF-PSML models cannot be wave soldered or hand soldered. Please contact Bourns for soldering recommendations.
- All temperatures refer to topside of the package, measured on the package 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, especially during hand soldering. Please refer to the Multifuse® Polymer PTC Soldering Recommendation guidelines.
- Designed for single solder reflow operations.

Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate (TS_{max} to T_p)	3 °C / second max.
PREHEAT: Temperature Min. (TS_{min}) Temperature Max. (TS_{max}) Time (ts_{min} to ts_{max})	 150 °C 200 °C 60~180 seconds
TIME MAINTAINED ABOVE: Temperature (T_L) Time (t_L)	 217 °C 60~150 seconds
Peak / Classification 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 within 25 °C to Peak Temperature	8 minutes max.

How to Order

MF - PSML 110 - 2

Multifuse® Product Designator

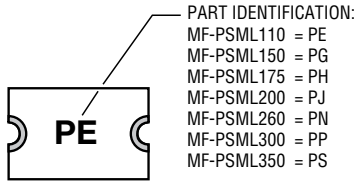
Series
PSML = 0805 Surface Mount Component

Hold Current, Ihold
110 - 350 (1.10 Amps - 3.50 Amps)

Packaging
Packaged per EIA 481-1
-2 = Tape and Reel

Typical Part Marking

Represents total content. Layout may vary.



PART IDENTIFICATION:
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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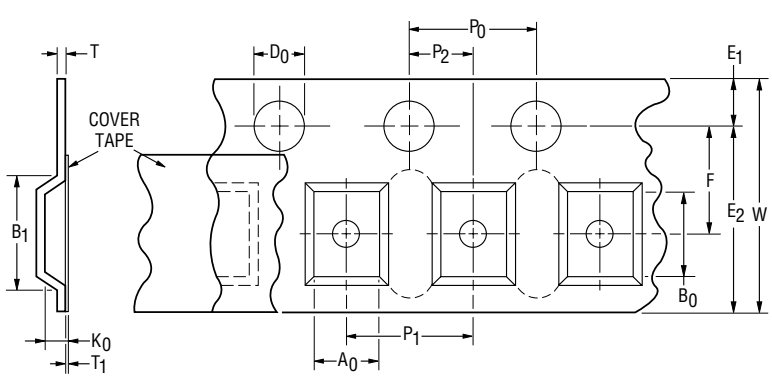
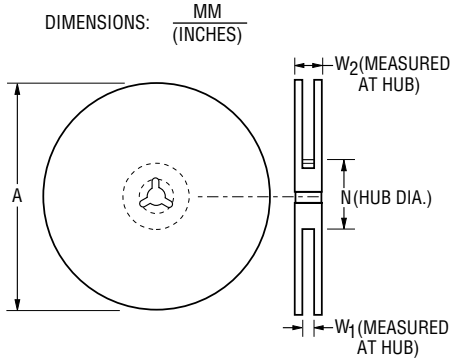
MF-PSML Series Tape and Reel Specifications

BOURNS®

Tape Dimensions	MF-PSML Series per EIA 481-1
W	8.0 ± 0.30 (0.315 ± 0.012)
P_0	4.0 ± 0.10 (0.157 ± 0.004)
P_1	4.0 ± 0.10 (0.157 ± 0.004)
P_2	2.0 ± 0.05 (0.079 ± 0.002)
A_0	1.70 ± 0.10 (0.067 ± 0.004)
B_0	2.45 ± 0.10 (0.096 ± 0.004)
B_1 max.	4.35 (0.171)
D_0	1.5 + 0.10/-0.0 (0.059 + 0.004/-0)
F	3.5 ± 0.05 (0.138 ± 0.002)
E_1	1.75 ± 0.10 (0.069 ± 0.004)
E_2 min.	6.25 (0.246)
T max.	0.6 (0.024)
T_1 max.	0.1 (0.004)
K_0 (MF-PSML110~MF-PSML200)	0.65 ± 0.10 (0.026 ± 0.004)
K_0 (MF-PSML260~MF-PSML350)	0.95 ± 0.10 (0.037 ± 0.004)
Leader min.	390 (15.35)
Trailer min.	160 (6.30)
Reel Dimensions	
A max.	185 (7.28)
N min.	50 (1.97)
W_1	8.4 + 1.5/-0.0 (0.331 + 0.059/-0.0)
W_2 max.	14.4 (0.567)





Specifications are subject to change without notice.
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.
Users should verify actual device performance in their specific applications.