

P4SMFW Series

Surface Mount Transient Voltage Suppressors

Features

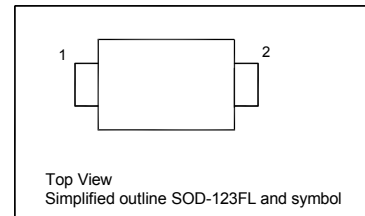
- Excellent clamping capability
- Low incremental surge resistance
- Very fast response time

Mechanical Data

- Polarity: Color band denotes cathode end except Bipolar

PINNING

PIN	DESCRIPTION
1	
2	



Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Power Dissipation with a 10/1000 μs waveform ^{1) 2)}	P_{PPM}	300	W
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method) ²⁾	I_{FSM}	40	A
Instantaneous Forward Voltage(Unidirectional only) at 25 A	V_F	3.5	V
Operating Junction and Storage Temperature Range	T_j, T_{stg}	- 65 to + 150	$^\circ\text{C}$

¹⁾ Non-repetitive current pulse and derated above $T_a = 25^\circ\text{C}$.

²⁾ Mounted on 0.2 x 0.2" (5.0 x 5.0 mm) copper pads to each terminal.

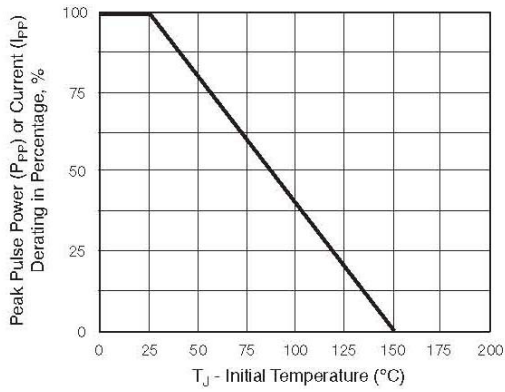
Electrical Characteristics (Rating at $T_a = 25^\circ\text{C}$ unless otherwise specified)

Uni-directional / Bi-directional Type ²⁾	Marking Code	Breakdown Voltage			Stand-off Voltage V_{WM}	Maximum Clamping Voltage V_C at I_{PPM}	Maximum Peak Pulse Current I_{PPM}	Maximum Reverse Current I_R at V_{WM}
		V_{BR}		at I_T ¹⁾				
		Min. (V)	Max. (V)	(mA)	(V)	Max. (V)	(A)	Max. (μA)
P4SMF120CW	ER1	133	163	1	120	214	1.4	1
P4SMF250AW	ES1	237	263	1	214	344	0.87	1
P4SMF300AW	ET1	285	315	1	256	414	0.73	1
P4SMF350AW	EU1	333	368	1	300	482	0.62	1
P4SMF400AW	EV1	380	420	1	342	548	0.55	1
P4SMF440AW	EW1	418	462	1	376	602	0.5	1

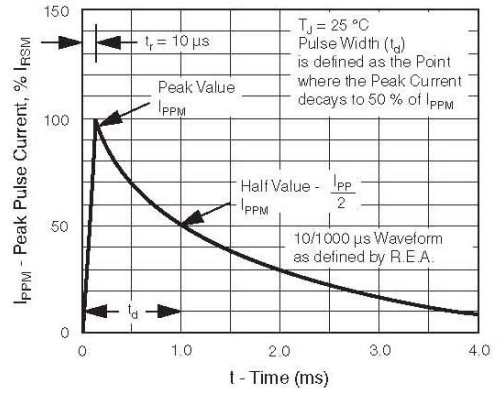
¹⁾ Pulse test: $t_p \leq 50$ ms

²⁾ For Bi-directional use CW or CAW suffix types, the electrical characteristics apply in both directions.

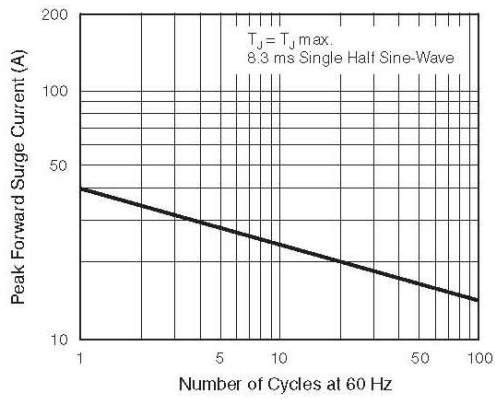
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Pulse Power or Current vs. Initial Junction Temperature



Pulse Waveform



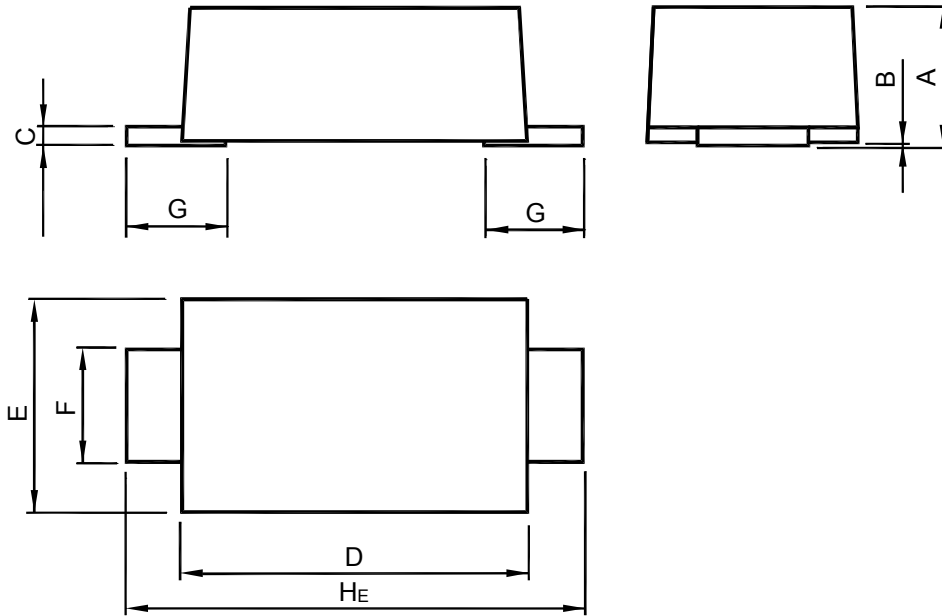
Maximum Non-Repetitive Forward Surge Current

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PACKAGE OUTLINE

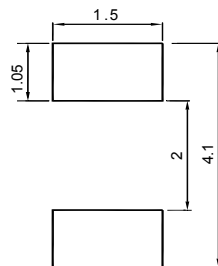
Plastic surface mounted package; 2 leads

SOD-123FL



UNIT	A	B	C	D	E	F	G	H _E
mm	1.08 0.88	0.1 0	0.2 0.1	2.9 2.6	1.9 1.7	1.1 0.8	0.9 0.7	3.9 3.5

Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOD-123FL	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

TOP DYNAMIC

Dated: 07/11/2016 Rev: 05