

P4SMFAFW Series

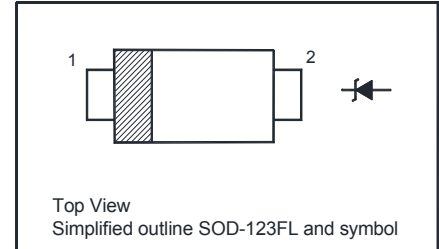
Surface Mount Transient Voltage Suppressors

Features

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

PINNING

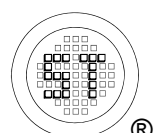
PIN	DESCRIPTION
1	Cathode
2	Anode



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

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation with a 10/1000 μs Waveform	P_{PPM}	400	W
Peak Pulse Current of on 10/1000 μs waveform	I_{PPM}	See Table	A
ESD (IEC 61000-4-2) Air Contact	V_{ESD}	± 30 ± 30	KV
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	50	A
Maximum Thermal Resistance-Junction to Ambient ¹⁾	$R_{\theta JA}$	107	$^\circ\text{C}/\text{W}$
Operating Junction and Storage Temperature Range	T_j, T_{stg}	- 55 to + 150	$^\circ\text{C}$

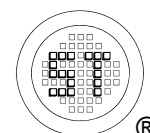
¹⁾ Device mounted on FR-4 substrate PC board, 2oz copper, with 1-inch square copper plate.



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

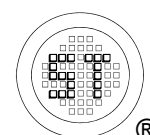
Type	Marking Code	Stand-off Voltage V_{WM} (V)	Breakdown Voltage		Test Current I_T (mA)	Maximum Clamping Voltage (V)	V_C (V) at I_{PPM} Maximum Peak Pulse Current I_{PPM} (A) Maximum Reverse	Leakage I_D (μA) at V_{WM}
			V_{BR} (V) Min. at I_T	V_{BR} (V) Max. at I_T				
P4SMF5.0AFW1	NA1	5	6.4	7	10	9.2	43.5	400
P4SMF6.0AFW	NC1	6	6.67	7.37	10	10.3	38.8	400
P4SMF6.5AFW	ND1	6.5	7.22	7.98	10	11.2	35.7	250
P4SMF7.0AFW	NE1	7	7.78	8.6	10	12	33.3	100
P4SMF7.5AFW	NF1	7.5	8.33	9.21	1	12.9	31	50
P4SMF8.0AFW	NG1	8	8.89	9.83	1	13.6	29.4	25
P4SMF8.5AFW	NH1	8.5	9.44	10.4	1	14.4	27.8	10
P4SMF9.0AFW	NJ1	9	10	11.1	1	15.4	26	5
P4SMF10AFW	NK1	10	11.1	12.3	1	17	23.5	2.5
P4SMF11AFW	NL1	11	12.2	13.5	1	18.2	22	2.5
P4SMF12AFW	NM1	12	13.3	14.7	1	19.9	20.1	2.5
P4SMF13AFW1	NB1	13	14.4	15.9	1	21.5	18.6	1
P4SMF14AFW	NN1	14	15.6	17.2	1	23.2	17.2	1
P4SMF15AFW	NP1	15	16.7	18.5	1	24.4	16.4	1
P4SMF16AFW	NQ1	16	17.8	19.7	1	26	15.4	1
P4SMF17AFW	NR1	17	18.9	20.9	1	27.6	14.5	1
P4SMF18AFW	NS1	18	20	22.1	1	29.2	13.7	1
P4SMF20AFW1	MB1	20	22.2	24.5	1	32.4	12.3	1
P4SMF22AFW	NT1	22	24.4	26.9	1	35.5	11.3	1
P4SMF24AFW	NU1	24	26.7	29.5	1	38.9	10.3	1
P4SMF26AFW	NV1	26	28.9	31.9	1	42.1	9.5	1
P4SMF28AFW	NW1	28	31.1	34.4	1	45.4	8.8	1
P4SMF30AFW	NX1	30	33.3	36.8	1	48.4	8.3	1
P4SMF33AFW	NY1	33	36.7	40.6	1	53.3	7.5	1
P4SMF36AFW1	MA1	36	40	44.2	1	58.1	6.9	1
P4SMF40AFW	NZ1	40	44.4	49.1	1	64.5	6.2	1
P4SMF43AFW	MC1	43	47.8	52.8	1	69.4	5.8	1
P4SMF45AFW	MD1	45	50	55.3	1	72.7	5.5	1
P4SMF48AFW	ME1	48	53.3	58.9	1	77.4	5.2	1
P4SMF51AFW	MF1	51	56.7	62.7	1	82.4	4.9	1
P4SMF54AFW	MG1	54	60	66.3	1	87.1	4.6	1
P4SMF58AFW	MH1	58	64.4	71.2	1	93.6	4.3	1
P4SMF60AFW	MJ1	60	66.7	73.7	1	96.8	4.1	1
P4SMF64AFW	MK1	64	71.1	78.6	1	103	3.9	1
P4SMF70AFW	LK1	70	77.8	86	1	113	3.5	1



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Type	Marking Code	Stand-off Voltage V_{WM} (V)	Breakdown Voltage		Test Current I_T (mA)	Maximum Clamping Voltage (V)	V_C (V) at I_{PPM} Maximum Peak Pulse Current I_{PPM} (A) Maximum Reverse	Leakage I_D (μA) at V_{WM}
			V_{BR} (V) Min. at I_T	V_{BR} (V) Max. at I_T				
P4SMF75AFW	MM1	75	83.3	92.1	1	121	3.3	1
P4SMF78AFW	MN1	78	86.7	95.8	1	126	3.2	1
P4SMF85AFW	MP1	85	94.4	104	1	137	2.9	1
P4SMF90AFW	MQ1	90	100	111	1	146	2.7	1
P4SMF100AFW	MR1	100	111	123	1	162	2.5	1
P4SMF110AFW	MS1	110	122	135	1	177	2.3	1
P4SMF120AFW	MT1	120	133	147	1	193	2.1	1
P4SMF130AFW	MU1	130	144	159	1	209	1.9	1
P4SMF150AFW	MV1	150	167	185	1	243	1.6	1
P4SMF160AFW	MW1	160	178	197	1	259	1.5	1
P4SMF170AFW	MX1	170	189	209	1	275	1.5	1
P4SMF180AFW	MY1	180	201	222	1	292	1.4	1
P4SMF190AFW	MZ1	190	209	243	1	308	1.3	1



P4SMFAFW Series

Electrical Characteristics Curves

Fig 1. Pulse Waveform

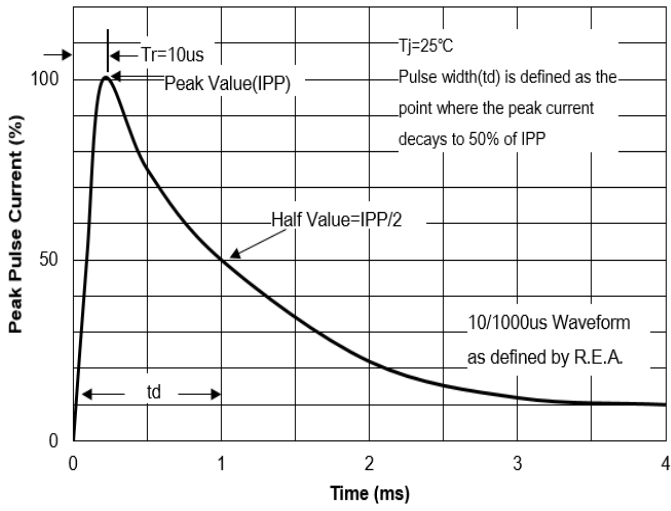
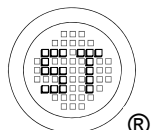
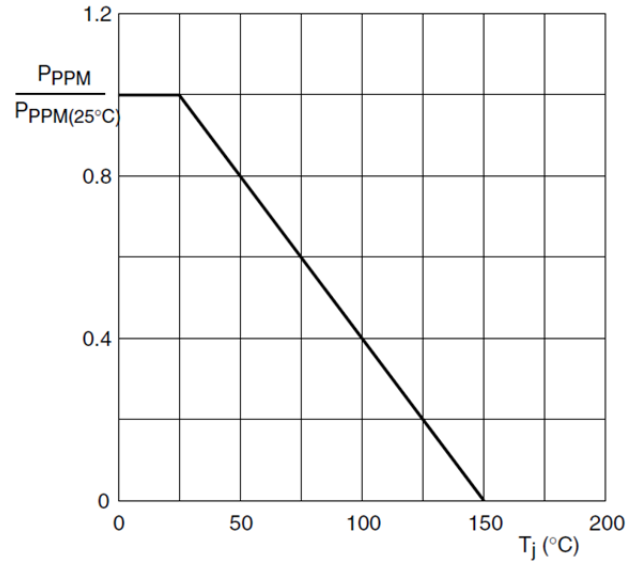


Fig 2. P_{PPM} VS. T_j

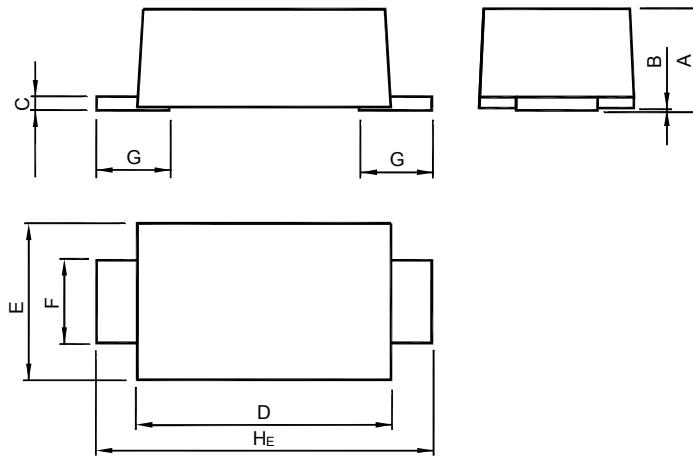


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PACKAGE OUTLINE

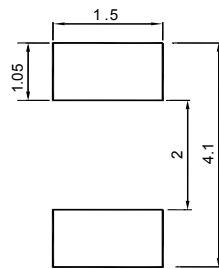
Plastic surface mounted package; 2 leads

SOD-123FL



UNIT	A	B	C	D	E	F	G	H _E
mm	1.08	0.1	0.2	2.9	1.9	1.1	0.85	3.9
	0.88	0	0.1	2.7	1.7	0.8	0.45	3.5

Recommended Soldering Footprint



Packing information

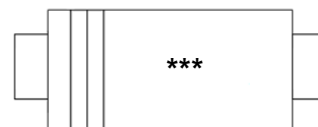
Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOD-123FL	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000
						2,500

Marking information

" *** " = Part No.

" III " = Cathode line

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