

P4SMFH Series

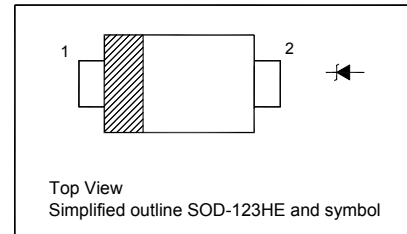
Surface Mount Transient Voltage Suppressors

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 ¹⁾	P_{PPM}	Min. 400	W
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	± 20 ± 20	KV
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method) ²⁾	I_{FSM}	40	A
Maximum Instantaneous Forward Voltage (Unidirectional only) at 25 A	V_F	3.5	V
Operating Junction and Storage Temperature Range	T_j, T_{stg}	- 55 to + 150	$^\circ\text{C}$

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

²⁾ Mounted on copper lead area at 5 mm^2 (0.013 mm thick).

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

Type	Marking Code	Stand-off Voltage V_{WM} (V)	Breakdown Voltage ¹⁾		Test Current I_T (mA)	Maximum Clamping Voltage	V_C (V) at I_{PPM} Maximum Peak Pulse Current I_{PPM} (A) Maximum Reverse	Leakage I_D (μ A) at V_{WM}
			V_{BR} (V) Min. at I_T	V_{BR} (V) Max. at I_T				
P4SMF5.0AH	GA1	5	6.4	7.07	10	9.2	43.5	800
P4SMF6.0AH	GB1	6	6.67	7.37	10	10.3	38.8	800
P4SMF6.5AH	GC1	6.5	7.22	7.98	10	11.2	35.7	500
P4SMF7.0AH	GD1	7	7.78	8.6	10	12	33.3	200
P4SMF7.5AH	GE1	7.5	8.33	9.21	1	12.9	31	100
P4SMF8.0AH	GF1	8	8.89	9.83	1	13.6	29.4	50
P4SMF8.5AH	GG1	8.5	9.44	10.4	1	14.4	27.8	10
P4SMF9.0AH	GH1	9	10	11.1	1	15.4	26	5
P4SMF10AH	GJ1	10	11.1	12.3	1	17	23.5	1
P4SMF11AH	GK1	11	12.2	13.5	1	18.2	22	1
P4SMF12AH	GL1	12	13.3	14.7	1	19.9	20.1	1
P4SMF13AH	GM1	13	14.4	15.9	1	21.5	18.6	1
P4SMF14AH	GN1	14	15.6	17.2	1	23.2	17.2	1
P4SMF15AH	GP1	15	16.7	18.5	1	24.4	16.4	1
P4SMF16AH	GQ1	16	17.8	19.7	1	26	15.4	1
P4SMF17AH	GR1	17	18.9	20.9	1	27.6	14.5	1
P4SMF18AH	GS1	18	20	22.1	1	29.2	13.7	1
P4SMF20AH	GT1	20	22.2	24.5	1	32.4	12.3	1
P4SMF22AH	GU1	22	24.4	26.9	1	35.5	11.3	1
P4SMF24AH	GV1	24	26.7	29.5	1	38.9	10.3	1
P4SMF26AH	GW1	26	28.9	31.9	1	42.1	9.5	1
P4SMF28AH	GX1	28	31.1	34.4	1	45.4	8.8	1
P4SMF30AH	GY1	30	33.3	36.8	1	48.4	8.3	1
P4SMF33AH	GZ1	33	36.7	40.6	1	53.3	7.5	1
P4SMF36AH	HA1	36	40	44.2	1	58.1	6.9	1
P4SMF40AH	HB1	40	44.4	49.1	1	64.5	6.2	1
P4SMF43AH	HC1	43	47.8	52.8	1	69.4	5.8	1
P4SMF45AH	HD1	45	50	55.3	1	72.7	5.5	1
P4SMF48AH	HE1	48	53.3	58.9	1	77.4	5.2	1
P4SMF51AH	HF1	51	56.7	62.7	1	82.4	4.9	1
P4SMF54AH	HG1	54	60	66.3	1	87.1	4.6	1
P4SMF58AH	HH1	58	64.4	71.2	1	93.6	4.3	1
P4SMF60AH	HJ1	60	66.7	73.7	1	96.8	4.1	1
P4SMF64AH	HK1	64	71.1	78.6	1	103	3.9	1
P4SMF70AH	HL1	70	77.8	86	1	113	3.5	1
P4SMF75AH	HM1	75	83.3	92.1	1	121	3.3	1
P4SMF78AH	HN1	78	86.7	95.8	1	126	3.2	1
P4SMF85AH	HP1	85	94.4	104	1	137	2.2	1
P4SMF90AH	HQ1	90	100	111	1	146	2.1	1
P4SMF100AH	HR1	100	111	123	1	162	1.9	1
P4SMF110AH	HS1	110	122	135	1	177	1.7	1
P4SMF120AH	HT1	120	133	147	1	193	1.6	1
P4SMF130AH	HU1	130	144	159	1	209	1.4	1
P4SMF150AH	HV1	150	167	185	1	243	1.2	1
P4SMF160AH	HW1	160	178	197	1	259	1.2	1
P4SMF170AH	HX1	170	189	209	1	275	1.09	1
P4SMF180AH	HY1	180	201	222	1	292	1.4	1
P4SMF188AH	HZ1	188	209	231	1	328	0.91	1

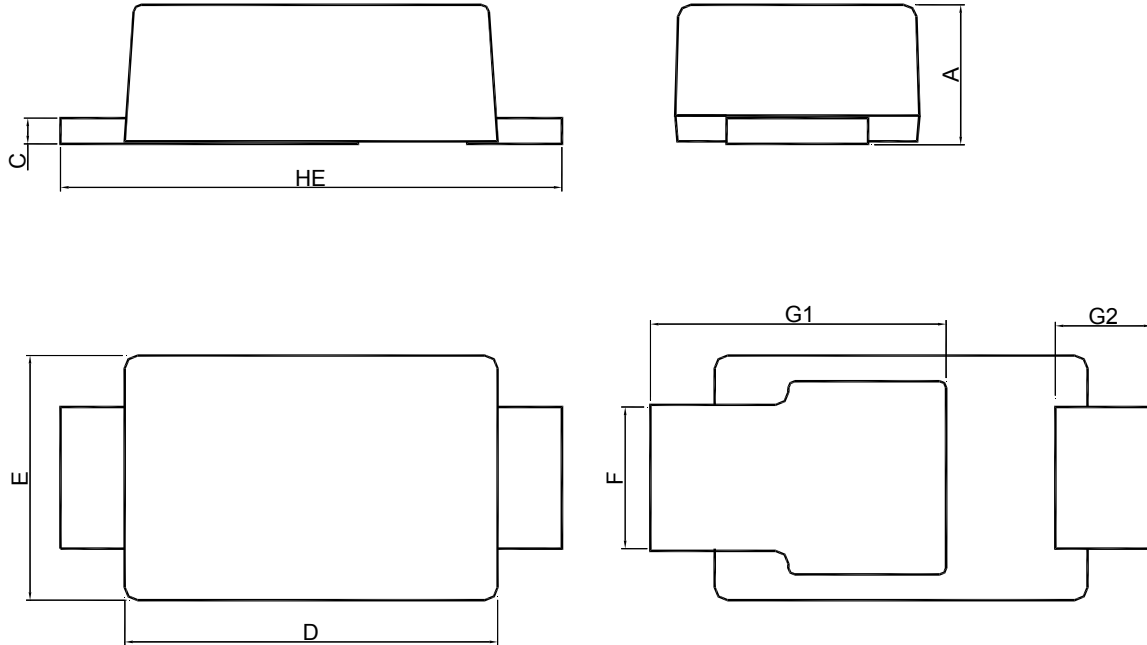
¹⁾ V_{BR} measured after I_T applied for 300 μ s square wave pulse or equivalent.

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PACKAGE OUTLINE

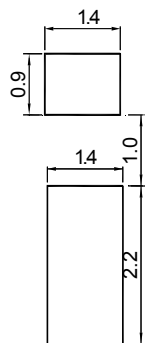
Plastic surface mounted package; 2 leads

SOD-123HE



UNIT	A	C	D	E	F	G1	G2	H _E
mm	1.08 0.88	0.2 0.1	2.9 2.6	1.9 1.7	1.1 0.8	2.3 1.9	0.75 0.55	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-123HE	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000