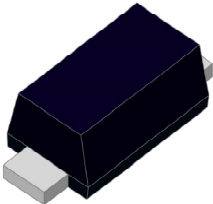


400 W Surface Mount Transient Voltage Suppressor

SOD123W 	Voltage	Power
	6.8 V to 82 V (Uni)	400 W / ms
	FEATURE <ul style="list-style-type: none"> • Low profile package • Ideal for automated placement • 400 W peak pulse power capability with a 10/1000 μs waveform, repetitive rate (duty cycle): 0.01 % • Excellent clamping capability • Very fast response time • Low incremental surge resistance • Solder dip 260 °C, 10s • AEC-Q101 qualified • Component in accordance to RoHS 2011/65/EU and WEEE 2002/96/EC • Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C 	
	MECHANICAL DATA <ul style="list-style-type: none"> • Case: SOD123W. Epoxy meets UL 94V-0 flammability rating. • Polarity: For unidirectional types color band denotes cathode end. • Terminals: Matte tin plated leads, solderable per MIL-STD-750 Method 2026, J-STD-002 and JESD22-B102. Consumer grade, meets JESD 201 class 1A whisker test. • HE3 suffix for high reliability grade, meets JESD 201 class 2 whisker test. 	



RoHS
COMPLIANT

Maximum Ratings and Electrical Characteristics at 25 °C

P_{PPM}	Peak Pulse Power Dissipation with 10/1000 μ s exponential pulse	400 W
I_{FSM}	Peak Forward Surge Current 8.3 ms. (Jedec Method) (Note 1)	40 A
V_F	Max. Forward Voltage Drop at $I_F = 25$ A	3.5 V
T_j	Operating Temperature Range $V_{BR} \leq 43$ V $V_{BR} > 43$ V	- 65 to + 175 °C
		- 65 to + 150 °C
T_{stg}	Storage Temperature Range	- 65 to + 175 °C
$R_{th(j-a)}$	Typical Thermal Resistance Junction to Ambient Air	75 °C/W
$R_{th(j-l)}$	Typical Thermal Resistance Junction to Lead	15 °C/W

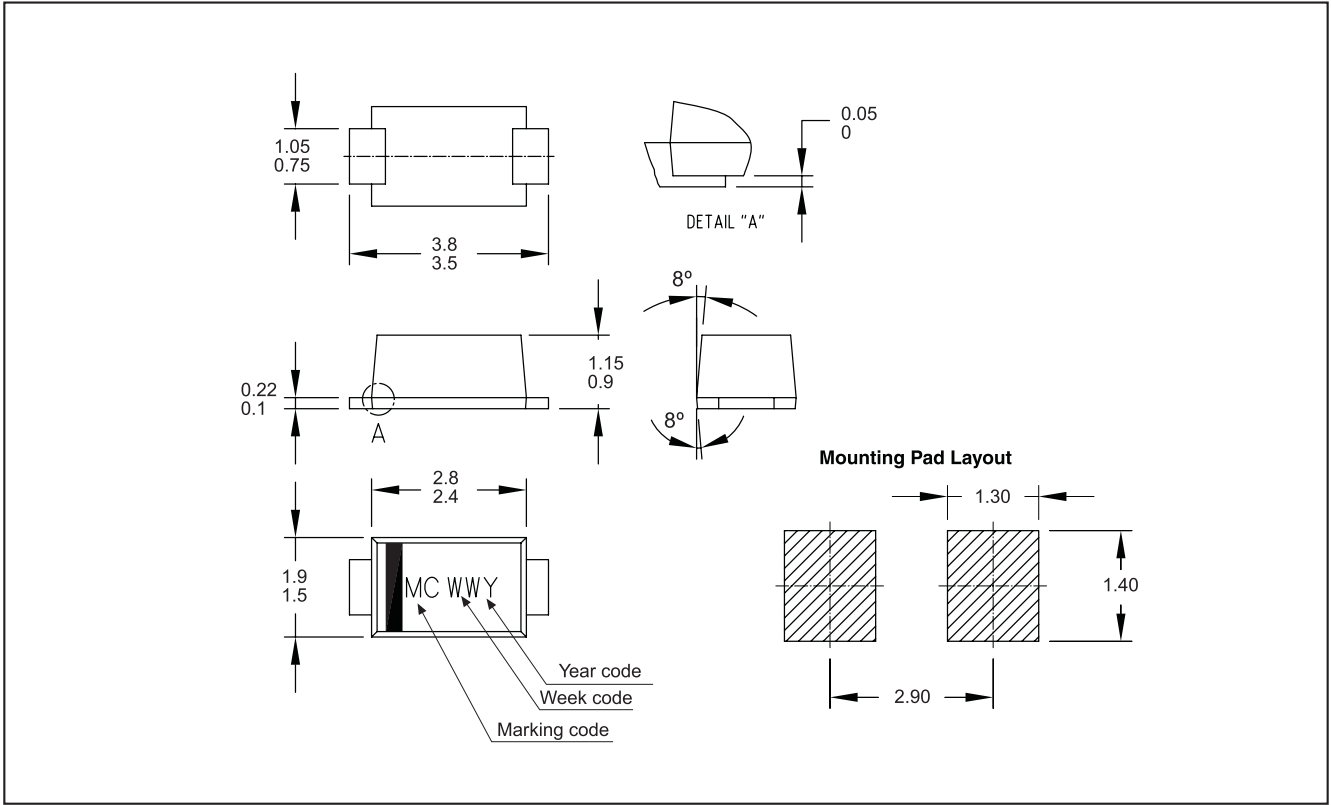
Note: 1. Mounted on 0.31 x 0.31" (8.0 x 8.0 mm) copper pads to each terminal

400 W Surface Mount Transient Voltage Suppressor

Ordering information

PREFERRED P/N	PACKAGE CODE	DELIVERY MODE	BASE QUANTITY	UNIT WEIGHT (g)
P4SMW33A TRTB	TRTB	13" diameter tape and reel	10,000	0.0165
P4SMW33A HE3 TRTB	TRTB	13" diameter tape and reel	10,000	0.0165

Package Outline Dimensions: (mm) SOD123W



400 W Surface Mount Transient Voltage Suppressor

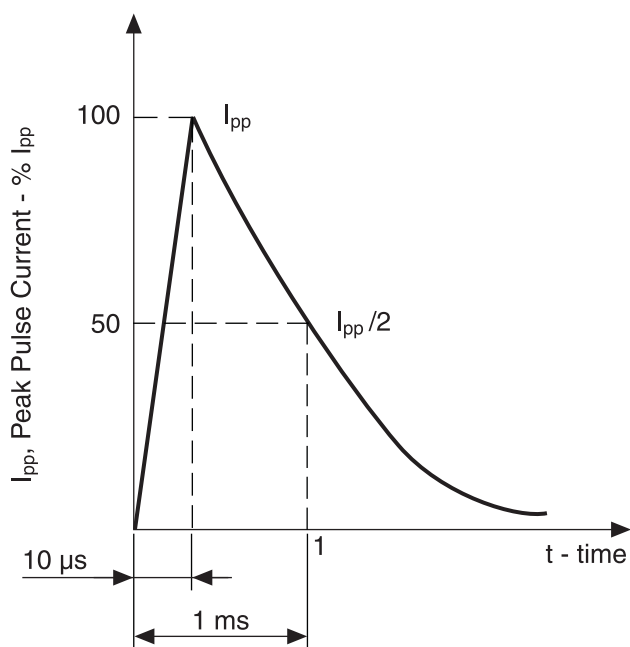
Type		Maximum Reverse Leakage Current I_{RM} at V_{RM}		(1) Breakdown Voltage V_{BR} at (V)			I_R	$T_j = 150^\circ\text{C}$ Maximum Reverse Leakage at V_{RM}	Max. Clamping Voltage V_{CL} at I_{PP} max. 1ms. Expo.	
Unidirectional	Marking Code	(μA)	(V)	Min.	Nom.	Max.	(mA)	(μA)	(V)	(A)
P4SMW6V8A	4A	500	5.80	6.45	6.8	7.14	10	1000	10.5	40
P4SMW7V5A	4B	250	6.40	7.13	7.5	7.88	10	500	11.3	37
P4SMW8V2A	4C	100	7.02	7.79	8.2	8.61	10	200	12.1	35
P4SMW9V1A	4D	25	7.78	8.65	9.1	9.55	1	50	13.4	31
P4SMW10A	4E	5	8.55	9.50	10	10.5	1	20	14.5	29
P4SMW11A	4F	2	9.40	10.5	11	11.6	1	5.0	15.6	27
P4SMW12A	4G	2	10.2	11.4	12	12.6	1	5.0	16.7	25
P4SMW13A	4H	2	11.1	12.4	13	13.7	1	5.0	18.2	23
P4SMW15A	4I	1	12.8	14.3	15	15.8	1	5.0	21.2	20
P4SMW16A	4J	1	13.6	15.2	16	16.8	1	5.0	22.5	19
P4SMW18A	4K	1	15.3	17.1	18	18.9	1	5.0	25.5	17
P4SMW20A	4L	1	17.1	19.0	20	21.0	1	5.0	27.7	15
P4SMW22A	4M	1	18.8	20.9	22	23.1	1	5.0	30.6	14
P4SMW24A	4N	1	20.5	22.8	24	25.2	1	5.0	33.2	13
P4SMW27A	4O	1	23.1	25.7	27	28.4	1	5.0	37.5	11.2
P4SMW30A	4P	1	25.6	28.5	30	31.5	1	5.0	41.4	10
P4SMW33A	4Q	1	28.2	31.4	33	34.7	1	5.0	45.7	9
P4SMW36A	4S	1	30.8	34.2	36	37.8	1	5.0	49.9	8.4
P4SMW39A	4T	1	33.3	37.1	39	41.0	1	5.0	53.9	7.8
P4SMW43A	4U	1	36.8	40.9	43	45.2	1	5.0	59.3	7.1
P4SMW47A	5A	1	40.2	44.7	47	49.4	1	5.0	64.8	6.4
P4SMW51A	5B	1	43.6	48.5	51	53.6	1	5.0	70.1	6.0
P4SMW56A	5C	1	47.8	53.2	56	58.8	1	5.0	77.0	5.5
P4SMW62A	4V	1	53.0	58.9	62	65.1	1	5.0	85.0	5.0
P4SMW68A	5D	1	58.1	64.6	68	71.4	1	5.0	92.0	4.6
P4SMW75A	5E	1	64.1	71.3	75	78.8	1	5.0	103	4.1
P4SMW82A	5F	1	70.1	77.9	82	86.1	1	5.0	113	3.7

(1) Tested with pulses.
Pulse test: $t_p \leq 50 \text{ ms}$; $\delta < 2\%$

400 W Surface Mount Transient Voltage Suppressor

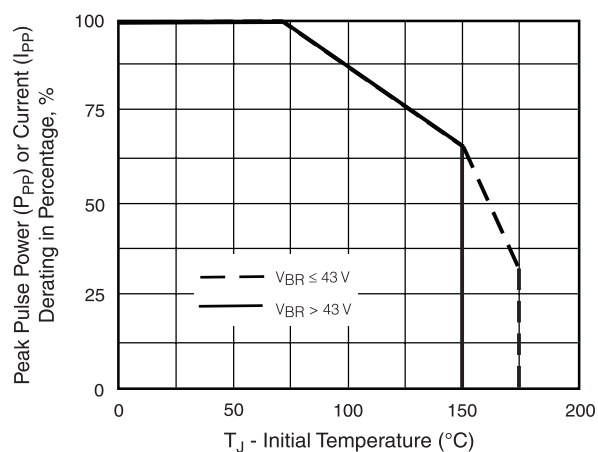
Ratings and Characteristics (Ta 25 °C unless otherwise noted)

PULSE WAVEFORM



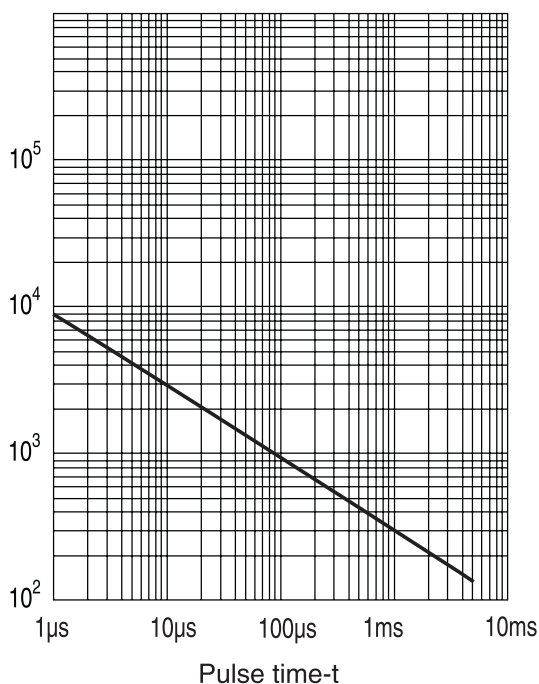
Pulse wave form 10/1000

DERATING CURVE

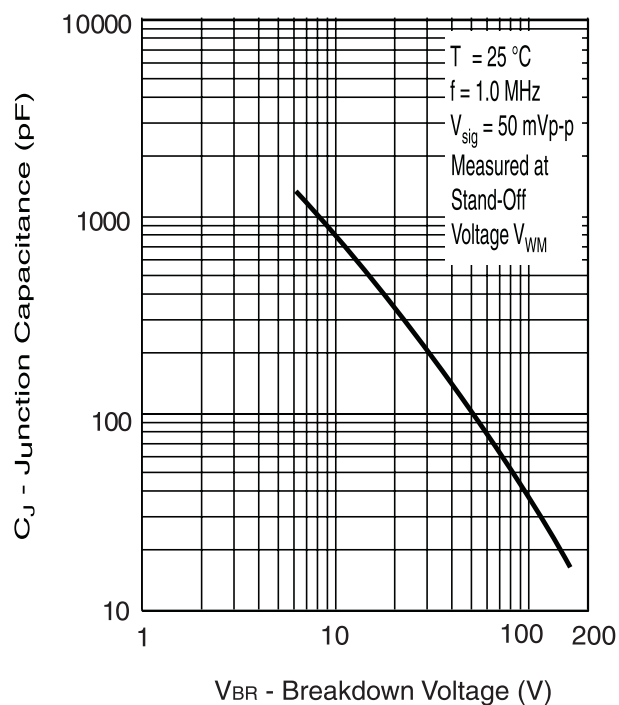


Pulse Power or Current vs. Initial Junction Temperature

PEAK PULSE POWER RATING CURVE



TYPICAL JUNCTION CAPACITANCE



400 W Surface Mount Transient Voltage Suppressor**Revision History**

DATE	REVISION	DESCRIPTION OF CHANGES
20-Apr-2018	0	Original Data Sheet

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