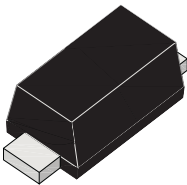





300 W Surface Mount Transient Voltage Suppressor

<p>SOD123W</p> 	<p>Voltage 6.8 V to 176 V (Uni)</p>	<p>Power 300 W /ms</p>	
	<p>FEATURES</p> <ul style="list-style-type: none"> Low profile package Ideal for automated placement 300 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 		   RoHS COMPLIANT
	<p>MECHANICAL DATA</p> <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. 		
	<p>TYPICAL APPLICATIONS</p> <p>Used in sensitive electronics protection against voltage transients induced by inductive load switching and lighting on ICs, MOSFET, signal lines of sensor units for consumer, computer, industrial, automotive and telecommunication.</p>		

Maximun Ratings and Electrical Characteristics at 25°C

P_{PPM}	Peak Pulse Power Dissipation with 10/1000 μ s exponential pulse	300 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-T_{STG}	Operating Junction and Storage Temperature Range	- 65 to + 150 °C

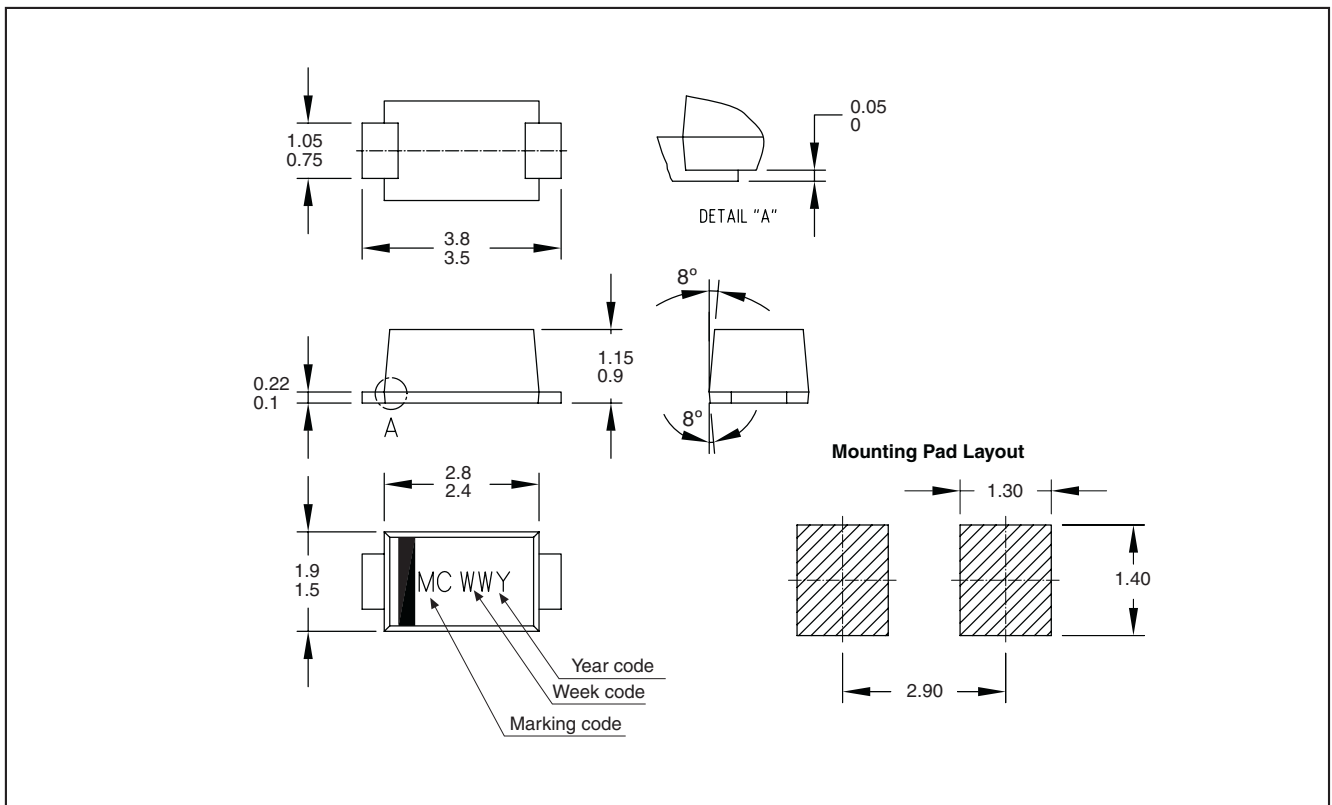
Note: 1. Mounted on 0.31 x 0.31" (8.0 x 8.0 mm) copper pads to each terminal

300 W Surface Mount Transient Voltage Suppressor

Ordering information

PREFERRED P/N	PACKAGE CODE	DELIVERY MODE	BASE QUANTITY	UNIT WEIGHT (g)
TPSMW33A TRTB	TRTB	13" diameter tape and reel	10,000	0.0165
TPSMW33A HE3 TRTB	TRTB	13" diameter tape and reel	10,000	0.0165

Package Outline Dimensions: (mm) SOD123W



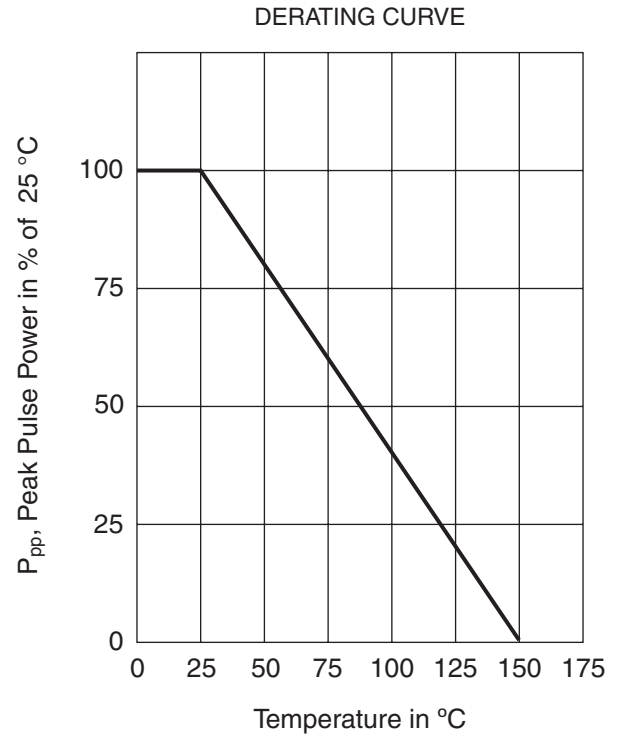
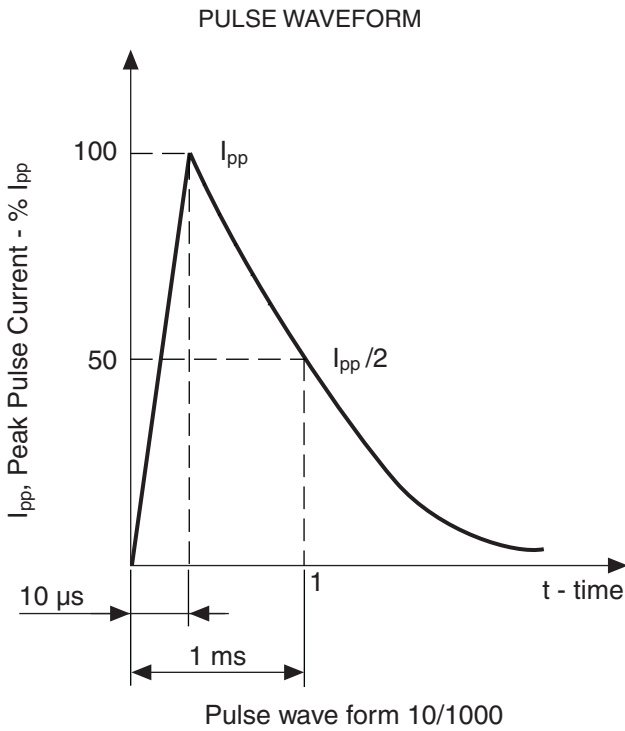
300 W Surface Mount Transient Voltage Suppressor

Type		Maximum Reverse Leakage Current		(1) Breakdown Voltage			I_R	$T_j = 150^\circ\text{C}$ Maximum Reverse Leakage at V_{RM}	Max. Clamping Voltage	
		I_{RM} at	V_{RM}	V_{BR} at					V_{CL} at	I_{pp}
Unidirectional	Marking Code	(μA)	(V)	Min.	Nom.	Max.	(mA)	(μA)	(V)	(A)
TPSMW6V8A	4A	500	5.80	6.45	6.8	7.14	10	1000	10.5	30.0
TPSMW7V5A	4B	250	6.40	7.13	7.5	7.88	10	500	11.3	26.6
TPSMW8V2A	4C	100	7.02	7.79	8.2	8.61	10	200	12.1	24.8
TPSMW9V1A	4D	25	7.78	8.65	9.1	9.55	1	50	13.4	22.4
TPSMW10A	4E	5	8.55	9.50	10	10.5	1	20	14.5	20.7
TPSMW11A	4F	2	9.40	10.5	11	11.6	1	5.0	15.6	19.3
TPSMW12A	4G	2	10.2	11.4	12	12.6	1	5.0	16.7	18.0
TPSMW13A	4H	2	11.1	12.4	13	13.7	1	5.0	18.2	16.5
TPSMW15A	4I	1	12.8	14.3	15	15.8	1	5.0	21.2	14.2
TPSMW16A	4J	1	13.6	15.2	16	16.8	1	5.0	22.5	13.4
TPSMW18A	4K	1	15.3	17.1	18	18.9	1	5.0	25.5	11.8
TPSMW20A	4L	1	17.1	19.0	20	21.0	1	5.0	27.7	10.9
TPSMW22A	4M	1	18.8	20.9	22	23.1	1	5.0	30.6	9.9
TPSMW24A	4N	1	20.5	22.8	24	25.2	1	5.0	33.2	9.1
TPSMW27A	4O	1	23.1	25.7	27	28.4	1	5.0	37.5	8.0
TPSMW30A	4P	1	25.6	28.5	30	31.5	1	5.0	41.4	7.3
TPSMW33A	4Q	1	28.2	31.4	33	34.7	1	5.0	45.7	6.6
TPSMW36A	4S	1	30.8	34.2	36	37.8	1	5.0	49.9	6.1
TPSMW39A	4T	1	33.3	37.1	39	41.0	1	5.0	53.9	5.6
TPSMW43A	4U	1	36.8	40.9	43	45.2	1	5.0	59.3	5.1
TPSMW62A	4V	1	53	58.8	62	65.1	1	5.0	85	3.6
TPSMW176A	5X	1	150	167	176	185	1	5.0	243	1.2

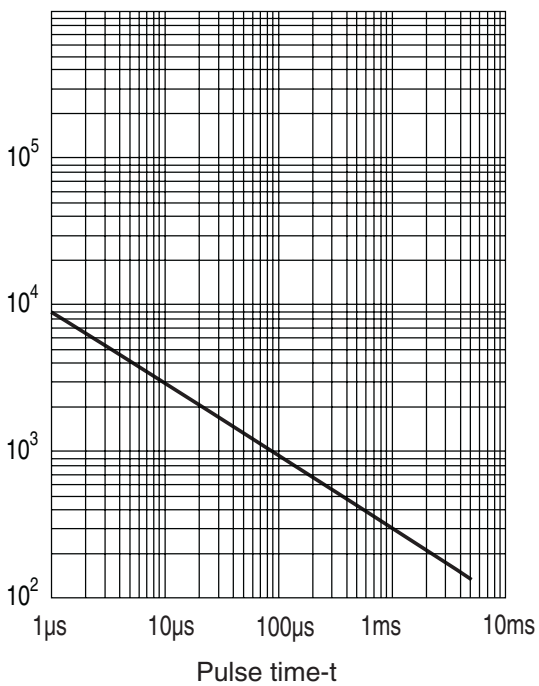
(1) Tested with pulses.
Pulse test: $t_p \leq 50 \text{ ms}$; $\delta < 2\%$

300 W Surface Mount Transient Voltage Suppressor

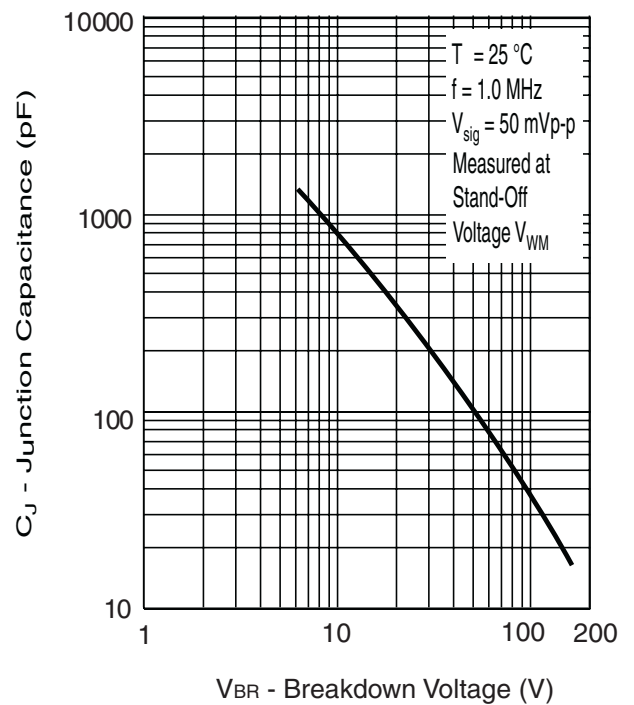
Ratings and Characteristics (Ta 25 °C unless otherwise noted)



PEAK PULSE POWER RATING CURVE



TYPICAL JUNCTION CAPACITANCE



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

Date	Revision	Description of Changes
29-Apr-2013	0	Original Data Sheet
13-Oct-2014	1	Add New reference
21-Jan-2016	2	Add New reference

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