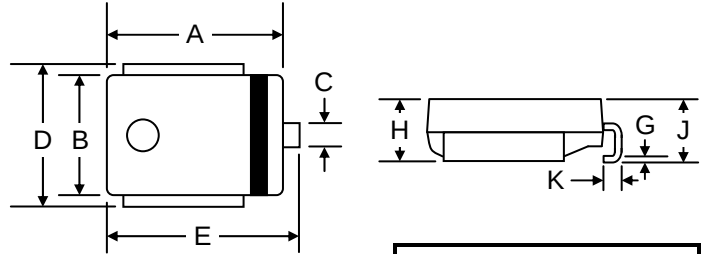


Features

- **AEC-Q101 Qualified**
- **Ideally Suited for Load Dump Protection**
- Glass Passivated Die Construction
- Low Leakage Current
- Low Forward Voltage Drop
- High Surge Capability
- Meets ISO7637-2 and ISO16750-2 Surge Specification
- Plastic Material – UL Flammability 94V-0



Mechanical Data

- Case: DO-218, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Anode to Heatsink
- Weight: 2.73 grams (approx.)
- Marking: Device Code
- **Lead Free: For RoHS / Lead Free Version, Add “-LF” Suffix to Part Number, See Page 5**

DO-218		
Dim	Min	Max
A	13.20	13.80
B	8.20	8.80
C	2.30	3.00
D	9.50	10.00
E	15.00	16.00
G	0.45	0.90
H	4.70	5.25
J	4.70	5.70
K	1.50	2.50
M	8.70	9.30
N	9.70	10.30
All Dimensions in mm		

Maximum Ratings @T_A=25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation (Note 1)	P _{PPM}	6600	W
		5200	
Peak Pulse Current (Note 1)	I _{PPM}	See Table 1	A
Peak Forward Surge Current (Note 2)	I _{FSM}	700	A
Maximum Instantaneous Forward Voltage at I _F = 100A (Note 3)	V _F	1.8	V
Power Dissipation on Infinite Heatsink at T _C = 25°C	P _D	8.0	W
Typical Thermal Resistance, Junction to Case	R _{θJC}	0.9	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +175	°C

Note: 1. Pulse waveform definition per Figure 5 and derated above T_C = 25°C per Figure 1.
 2. Measured on 8.3ms single half sine-wave, duty cycle = 4 pulses per minute maximum.
 3. Measured on a 300μS square pulse width.

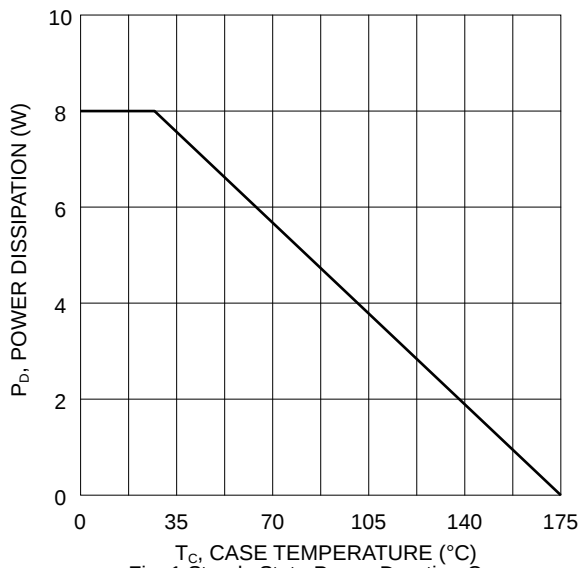


Fig. 1 Steady State Power Derating Curve

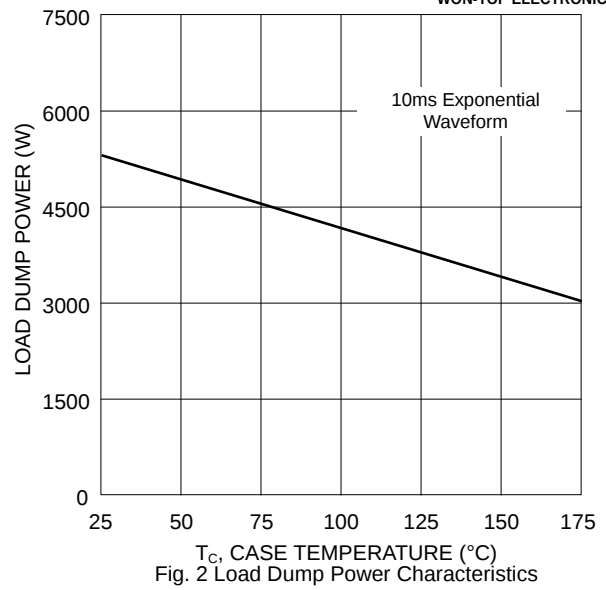


Fig. 2 Load Dump Power Characteristics

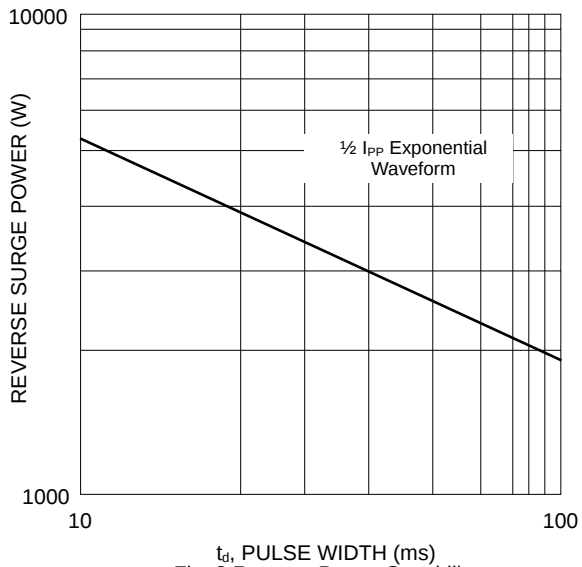


Fig. 3 Reverse Power Capability

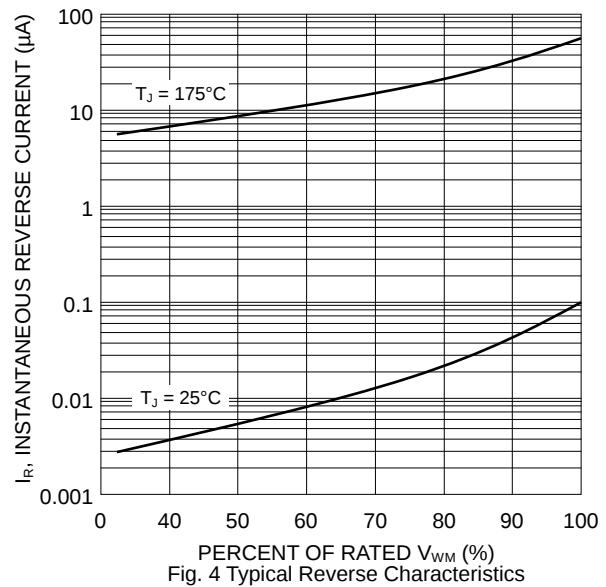


Fig. 4 Typical Reverse Characteristics

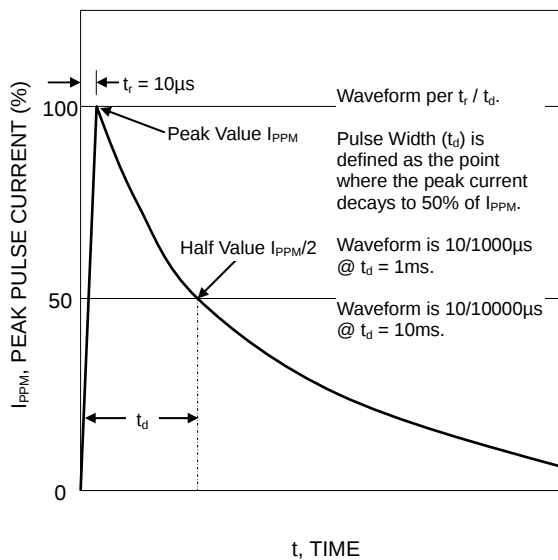


Fig. 5 Pulse Waveform Definition

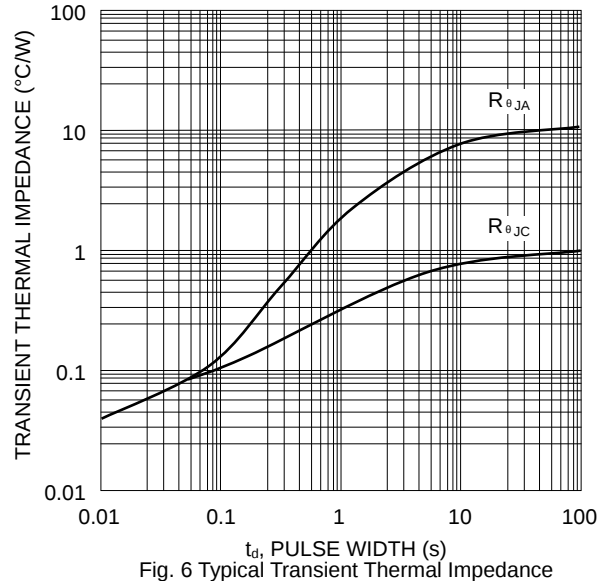


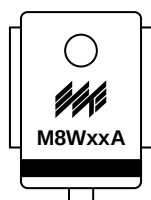
Fig. 6 Typical Transient Thermal Impedance

Electrical Characteristics (@T_A=25°C unless otherwise specified) Table 1

Part Number	Device Marking Code	Breakdown Voltage V _{BR} (V) @ I _T		Test Current I _T (mA)	Reverse Stand-Off Voltage V _{WM} (V)	Max. Reverse Leakage @ V _{WM} T _J = 25°C I _R (μA)	Max. Reverse Leakage @ V _{WM} T _J = 175°C I _R (μA)	Peak Pulse Current ⁽¹⁾ I _{PPM} (A)	Max. Clamping Voltage @ I _{PPM} V _C (V)
		Min.	Max.						
SM8S10A	M8W10A	11.1	12.3	5.0	10	15	250	388	17.0
SM8S11A	M8W11A	12.2	13.5	5.0	11	10	150	363	18.2
SM8S12A	M8W12A	13.3	14.7	5.0	12	10	150	332	19.9
SM8S13A	M8W13A	14.4	15.9	5.0	13	10	150	307	21.5
SM8S14A	M8W14A	15.6	17.2	5.0	14	10	150	284	23.2
SM8S15A	M8W15A	16.7	18.5	5.0	15	10	150	270	24.4
SM8S16A	M8W16A	17.8	19.7	5.0	16	10	150	254	26.0
SM8S17A	M8W17A	18.9	20.9	5.0	17	10	150	239	27.6
SM8S18A	M8W18A	20.0	22.1	5.0	18	10	150	226	29.2
SM8S20A	M8W20A	22.2	24.5	5.0	20	10	150	204	32.4
SM8S22A	M8W22A	24.4	26.9	5.0	22	10	150	186	35.5
SM8S24A	M8W24A	26.7	29.5	5.0	24	10	150	170	38.9
SM8S26A	M8W26A	28.9	31.9	5.0	26	10	150	157	42.1
SM8S28A	M8W28A	31.1	34.4	5.0	28	10	150	145	45.4
SM8S30A	M8W30A	33.3	36.8	5.0	30	10	150	136	48.4
SM8S33A	M8W33A	36.7	40.6	5.0	33	10	150	124	53.3
SM8S36A	M8W36A	40.0	44.2	5.0	36	10	150	114	58.1
SM8S40A	M8W40A	44.4	49.1	5.0	40	10	150	102	64.5
SM8S43A	M8W43A	47.8	52.8	5.0	43	10	150	95.1	69.4

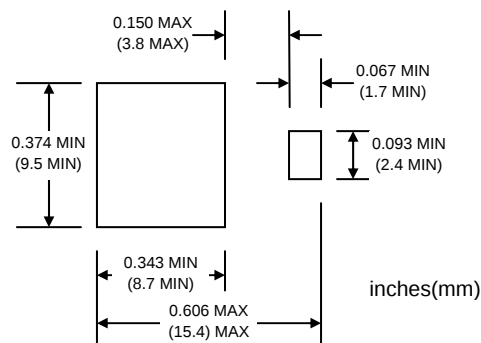
Note: 1. Measured at 10/1000μS surge pulse waveform.

MARKING INFORMATION



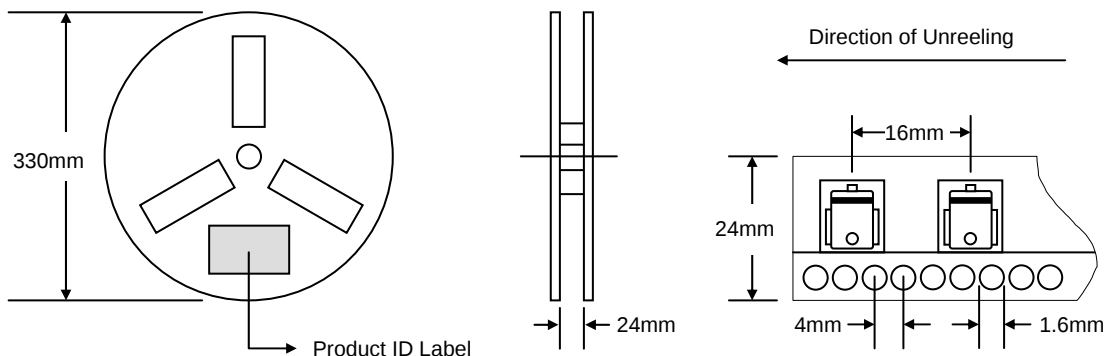
Cathode = Polarity Band
M8WxxA = Device Code, See Table 1

RECOMMENDED FOOTPRINT



PACKAGING INFORMATION

TAPE & REEL



Reel Diameter (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
330	500	360 x 340 x 52	500	382 x 360 x 470	4,000	18.5

Note: 1. Anti-static plastic reel, blue color.
2. Components are packed in accordance with EIA standard 481-1 and 481-2.

ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
SM8SxxA-T3	DO-218	500/Tape & Reel

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order Lead Free version (with Lead Free finish), add “-LF” suffix to part number above. For example, SM8S10A-T3-LF.**

WON-TOP ELECTRONICS and  are registered trademarks of Won-Top Electronics Co., Ltd (WTE). WTE has checked all information carefully and believes it to be correct and accurate. However, WTE cannot assume any responsibility for inaccuracies. Furthermore, this information does not give the purchaser of semiconductor devices any license under patent rights to manufacturer. WTE reserves the right to change any or all information herein without further notice.

WARNING: DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

Won-Top Electronics Co., Ltd.
No. 44 Yu Kang North 3rd Road,
Chine Chen Dist., Kaohsiung 806, Taiwan
Phone: 886-7-822-5408 or 886-7-822-5410
Fax: 886-7-822-5417
Email: sales@wontop.com
Internet: <http://www.wontop.com>

We power your everyday.