

Features

- SM8SxxA available in Uni-directional polarity only
- SM8SxxCA available in bi-directional polarity only
- Low leakage current
- Low forward voltage drop
- Compliant to Halogen-free
- Suffix "-Q1" for AEC-Q101



DO-218AB

Mechanical Data

- Package: DO-218AB
- Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD 22-B102, HE3 suffix meets JESD 201 class 2 whisker test.
- Polarity: Heatsink is anode.

Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER		SYMBOL	VALUE	UNIT
Peak pulse power dissipation	with 10/1000 μ s waveform	P_{PPM}	6600	W
	with 10/10 000 μ s waveform		5200	
Power dissipation on infinite heatsink at $T_C = 25^\circ\text{C}$ (fig. 1)		P_D	8.0	W
Peak pulse current with 10/1000 μ s waveform		$I_{PPM}^{(1)}$	See next table	A
Peak forward surge current		$I_{FSM}^{(2)}$	700	A
Operating junction and storage temperature range		T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

Note

- (1) Non-repetitive current pulse derated above $T_A = 25^\circ\text{C}$
- (2) Measured on 8.3ms single half sine wave for unidirectional device only.

ELECTRICAL CHARACTERISTICS (T_C = 25 °C unless otherwise noted)

DEVICE TYPE	BREAKDOWN VOLTAGE V _{BR} (V)			TEST CURRENT I _T (mA)	STAND-OFF VOLTAGE V _{WM} (V)	MAXIMUM REVERSE LEAKAGE AT V _{WM} I _D (μA)	MAXIMUM REVERSE LEAKAGE AT V _{WM} T _J = 150 °C I _D (μA)	MAX. PEAK PULSE CURRENT AT 10/1000 μs WAVEFORM (A)	MAXIMUM CLAMPING VOLTAGE AT I _{PPM} V _C (V)
	MIN.	NOM.	MAX.						
SM8S10(C)A-Q1	11.1	11.7	12.3	5.0	10.0	10	250	388	17.0
SM8S11(C)A-Q1	12.2	12.9	13.5	5.0	11.0	10	250	363	18.2
SM8S12(C)A-Q1	13.3	14.0	14.7	5.0	12.0	10	250	332	19.9
SM8S13(C)A-Q1	14.4	15.2	15.9	5.0	13.0	10	150	307	21.5
SM8S14(C)A-Q1	15.6	16.4	17.2	5.0	14.0	10	150	284	23.2
SM8S15(C)A-Q1	16.7	17.6	18.5	5.0	15.0	10	150	270	24.4
SM8S16(C)A-Q1	17.8	18.8	19.7	5.0	16.0	10	150	254	26.0
SM8S17(C)A-Q1	18.9	19.9	20.9	5.0	17.0	10	150	239	27.6
SM8S18(C)A-Q1	20.0	21.1	22.1	5.0	18.0	10	150	226	29.2
SM8S20(C)A-Q1	22.2	23.4	24.5	5.0	20.0	10	150	204	32.4
SM8S22(C)A-Q1	24.4	25.7	26.9	5.0	22.0	10	150	186	35.5
SM8S24(C)A-Q1	26.7	28.1	29.5	5.0	24.0	10	150	170	38.9
SM8S26(C)A-Q1	28.9	30.4	31.9	5.0	26.0	10	150	157	42.1
SM8S28(C)A-Q1	31.1	32.8	34.4	5.0	28.0	10	150	145	45.4
SM8S30(C)A-Q1	33.3	35.1	36.8	5.0	30.0	10	150	136	48.4
SM8S33(C)A-Q1	36.7	38.7	40.6	5.0	33.0	10	150	124	53.3
SM8S36(C)A-Q1	40.0	42.1	44.2	5.0	36.0	10	150	114	58.1
SM8S40(C)A-Q1	44.4	46.8	49.1	5.0	40.0	10	150	102	64.5
SM8S43(C)A-Q1	47.8	50.3	52.8	5.0	43.0	10	150	95	69.4

CHARACTERISTICS (TYPICAL) ($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)

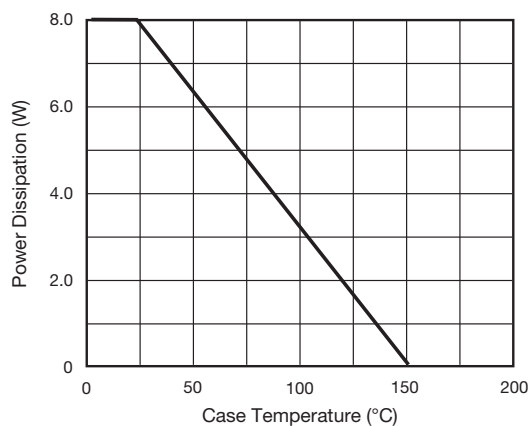


Fig. 1 - Power Derating Curve

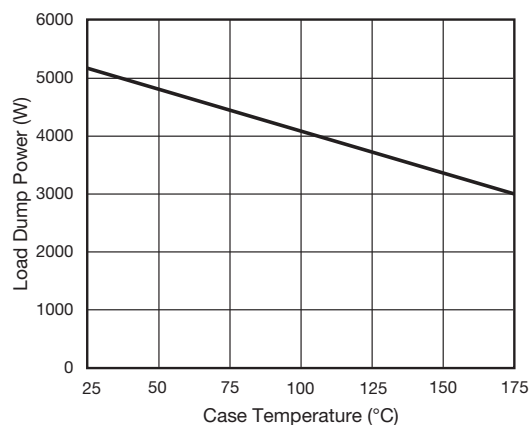


Fig. 2 - Load Dump Power Characteristics
(10 ms Exponential Waveform)

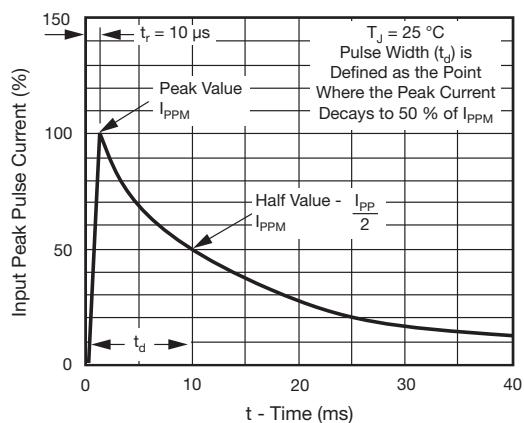


Fig. 3 - Pulse Waveform

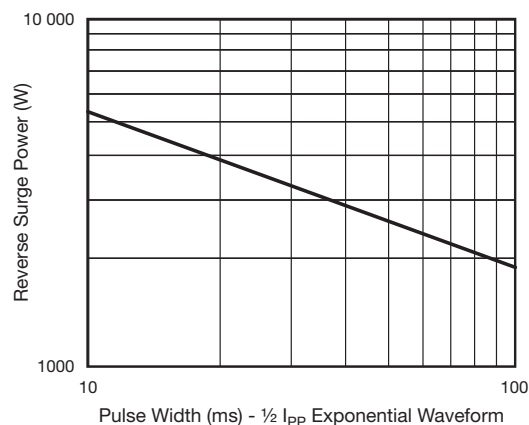
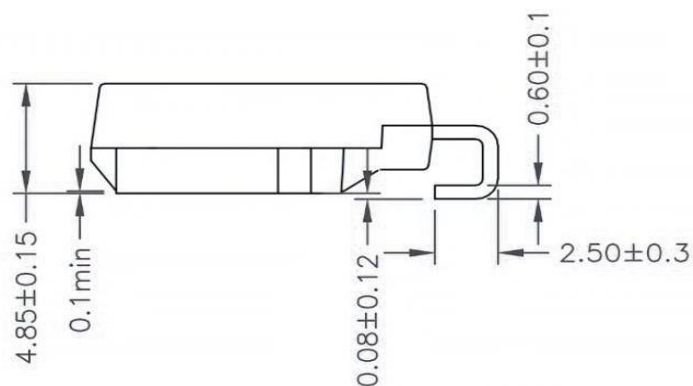
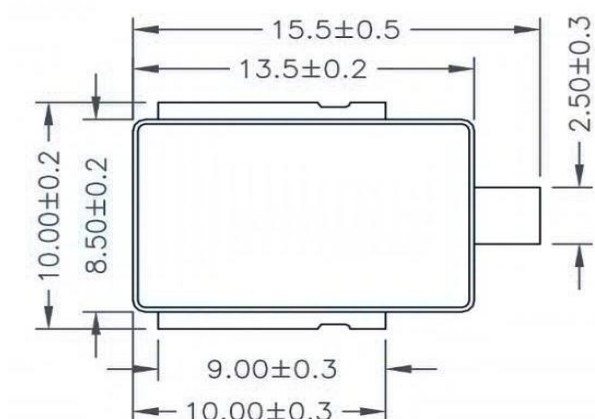


Fig. 4 - Reverse Power Capability

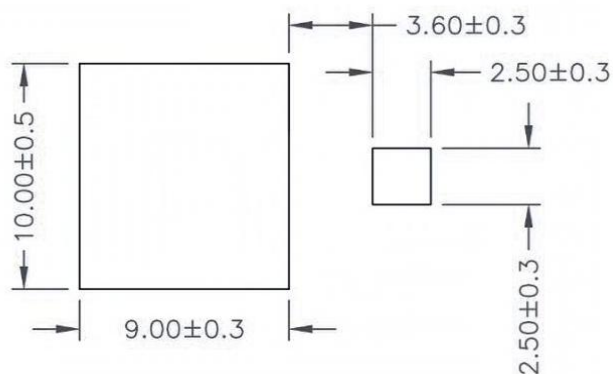
OUTLINE DIMENSIONS

DO-218AB



(millimeters)

MOUNTING PAD LAYOUT



(millimeters)