

Features

- SM8LxxA available in Uni-directional polarity only
- SM8LxxCA 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}	8000	W
	with 10/10 000 μ s waveform		6000	
Power dissipation on infinite heatsink at $T_C = 25^\circ\text{C}$ (fig. 1)		P_D	8.5	W
Peak pulse current with 10/1000 μ s waveform		$I_{PPM}^{(1)}$	See next table	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 $T_A = 25^\circ\text{C}$

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)
	MAX.	MIN.						
SM8L10(C)A-Q1	11.1	12.3	5.0	10	10	250	471	17
SM8L11(C)A-Q1	12.2	13.5	5.0	11	10	250	440	18.2
SM8L12(C)A-Q1	13.3	14.7	5.0	12	10	250	402	19.9
SM8L13(C)A-Q1	14.4	15.9	5.0	13	5	150	372	21.5
SM8L14(C)A-Q1	15.6	17.2	5.0	14	5	150	345	23.2
SM8L15(C)A-Q1	16.7	18.5	5.0	15	5	150	328	24.4
SM8L16(C)A-Q1	17.8	19.7	5.0	16	5	150	308	26
SM8L17(C)A-Q1	18.9	20.9	5.0	17	5	150	290	27.6
SM8L18(C)A-Q1	20.0	22.1	5.0	18	5	150	274	29.2
SM8L20(C)A-Q1	22.2	24.5	5.0	20	5	150	247	32.4
SM8L22(C)A-Q1	24.4	26.9	5.0	22	5	150	225	35.5
SM8L24(C)A-Q1	26.7	29.5	5.0	24	5	150	205	38.9
SM8L26(C)A-Q1	28.9	31.9	5.0	26	5	150	190	42.1
SM8L28(C)A-Q1	31.1	34.4	5.0	28	5	150	176	45.4
SM8L30(C)A-Q1	33.3	36.8	5.0	30	5	150	165	48.4
SM8L33(C)A-Q1	36.7	40.6	5.0	33	5	150	150	53.3
SM8L36(C)A-Q1	40.0	44.2	5.0	36	5	150	138	58.1
SM8L40(C)A-Q1	44.4	49.1	5.0	40	5	150	124	64.5
SM8L43(C)A-Q1	47.8	52.8	5.0	43	5	150	115	69.4
SM8L45(C)A-Q1	50.0	55.3	5.0	45	5	150	110	72.7
SM8L48(C)A-Q1	53.3	58.9	5.0	48	5	150	103	77.4
SM8L51(C)A-Q1	56.7	62.7	5.0	51	5	150	97	82.4
SM8L54(C)A-Q1	60.0	66.3	5.0	54	5	150	92	87.1
SM8L58(C)A-Q1	64.4	71.2	5.0	58	5	150	85	93.6
SM8L60(C)A-Q1	66.7	73.7	5.0	60	5	150	83	96.8
SM8L64(C)A-Q1	71.1	78.6	5.0	64	5	150	78	103
SM8L70(C)A-Q1	77.8	86	5.0	70	5	150	71	113
SM8L75(C)A-Q1	83.3	92.1	5.0	75	5	150	66	121
SM8L78(C)A-Q1	86.7	95.8	5.0	78	5	150	63	126
SM8L85(C)A-Q1	94.4	104	5.0	85	5	150	58	137

CHARACTERISTICS (TYPICAL)

Fig. 1 - Peak Pulse Power Derating Curve

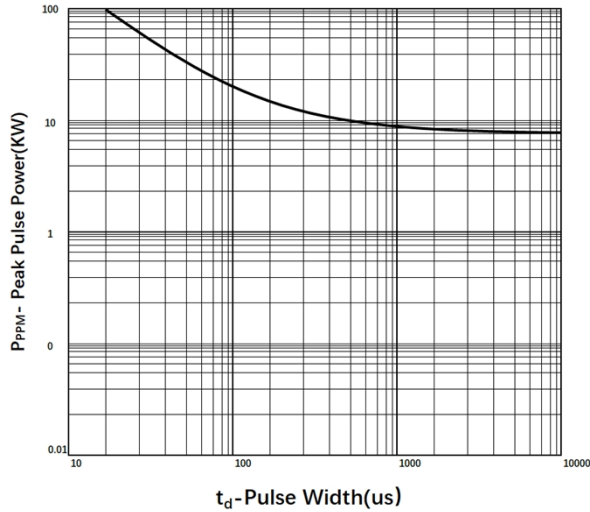


Fig. 2 - Peak Pulse Power or Current vs. Initial Junction Temperature

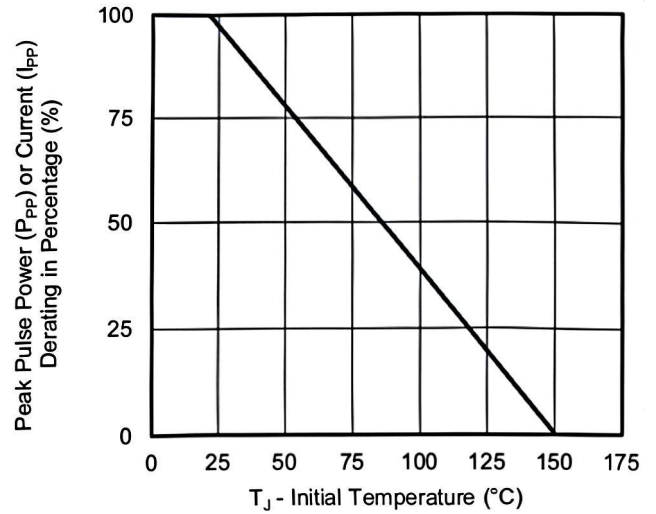


Fig. 3 - Pulse Waveform

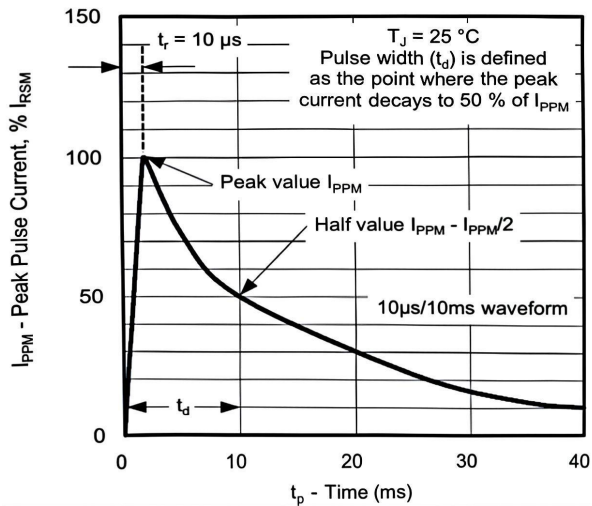
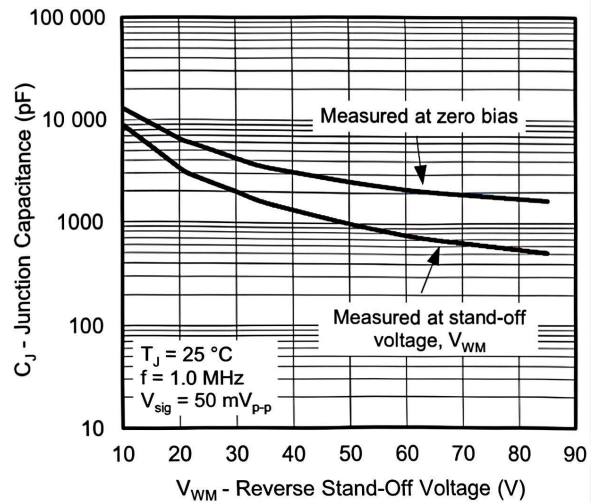
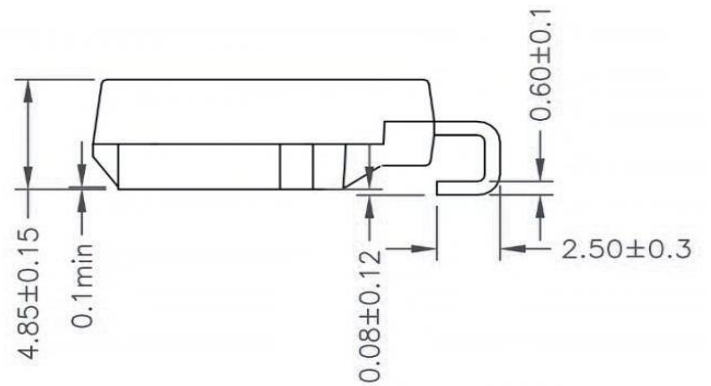
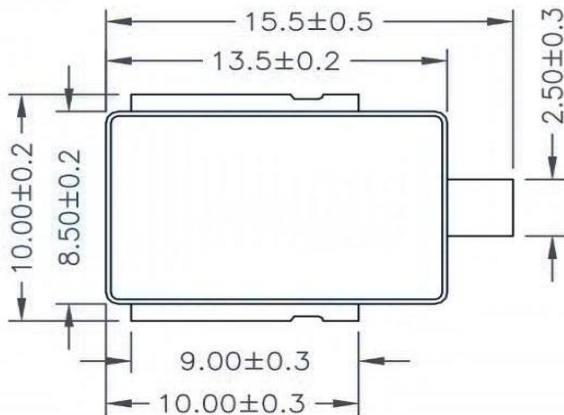


Fig. 4 - Typical Junction Capacitance (VWM)



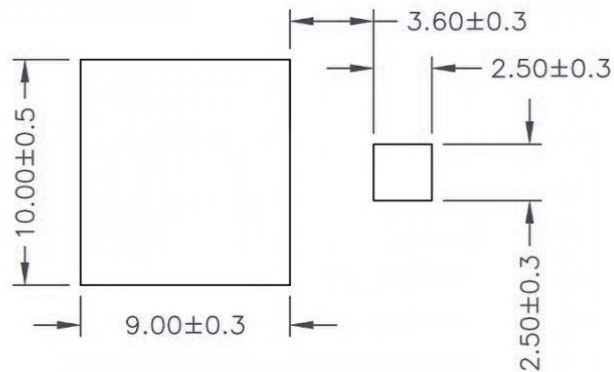
OUTLINE DIMENSIONS

DO-218AB



(millimeters)

MOUNTING PAD LAYOUT



(millimeters)