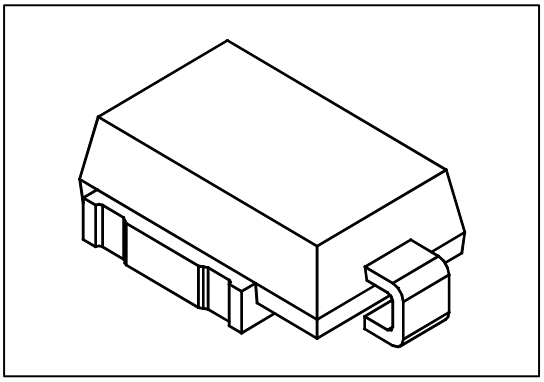
Working Voltage: 14 to 36 V

Peak Pulse Power: 3600 W

Features

- Glass passivated chip
- 3600 W peak pulse power capability with a 10/1000 μs waveform, repetitive rate (duty cycle):0.01 %
- Meets ISO7637-2 5a surge specification
- Meet AEC-Q101 requirement
- Low leakage
- Uni-directional polarity
- Excellent clamping capability
- Very fast response time
- RoHS compliant



DO-218AB

Mechanical Data

- Case: DO-218AB
- Epoxy: UL 94V-0 rate flame retardant
- Polarity: Heatsink is anode

Maximum Ratings(T_A=25℃ unless otherwise noted)

Parameter	Symbol	Value	UNIT
Peak power dissipation with a 10/1000μs waveform(1)	P_{PP}	3600	W
Peak power dissipation with a 10/10,000μs waveform	P_{PP}	2800	W
Peak pulse current wih a 10/1000μs waveform(1)	I_{PP}	See Next Table	A
Power dissipation on infinite heatsink at T_L = 25 °C	P_D	5.0	W
Peak forward surge current 8.3 ms single half sine-	I_{FSM}	500	A
Operating junction and storage temperature range	T_J, T_{STG}	–55 to +175	°C

Note:

(1)Non-repetitive current pulse per Fig.2 and derated above T_A= 25 °C per Fig.1

Ratings and Characteristics Curves (T_A=25℃ unless otherwise noted)

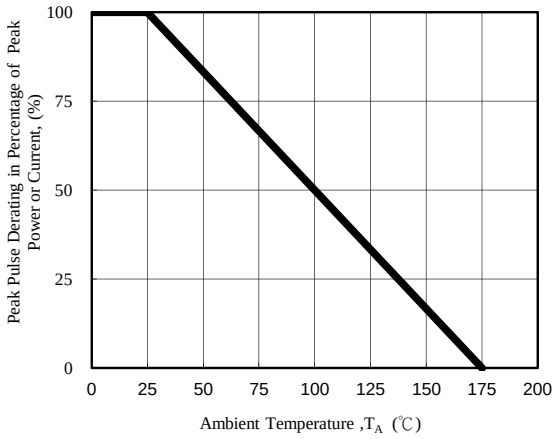


Fig. 1 - Pulse Derating Curve

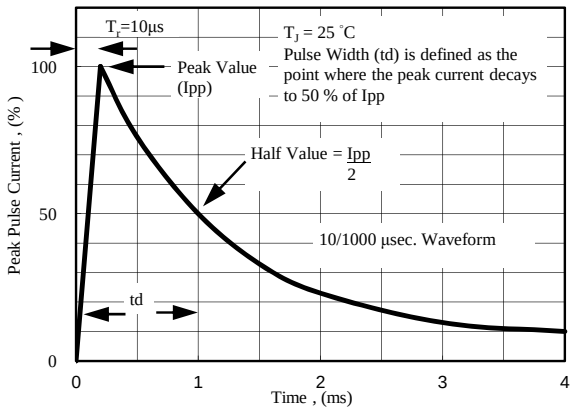


Fig. 2 - Pulse Waveform

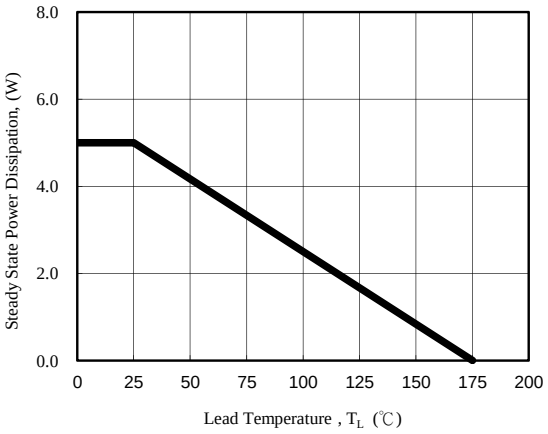


Fig. 3 - Steady State Power Derating Curve

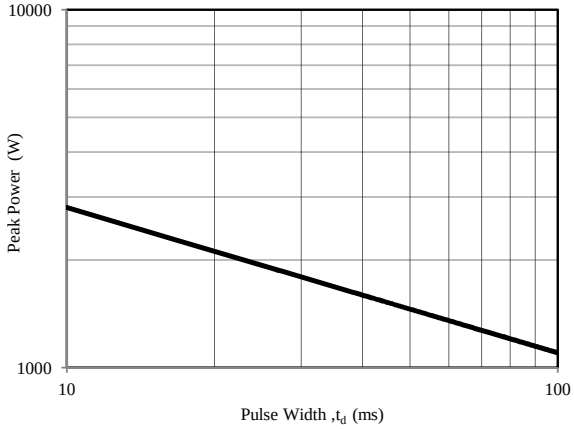
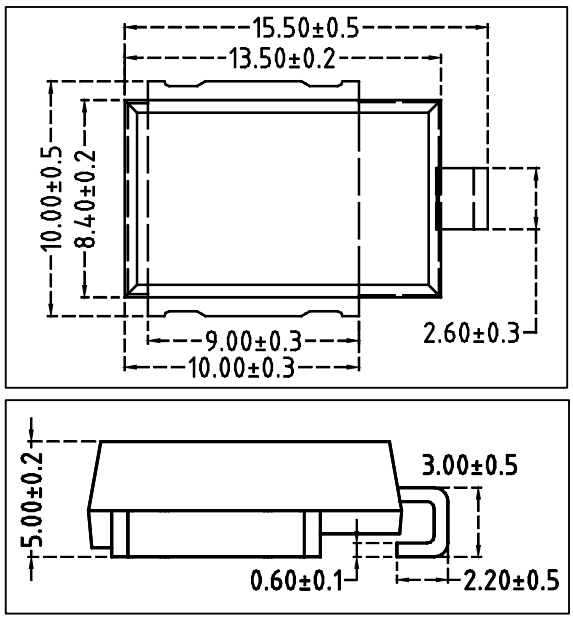
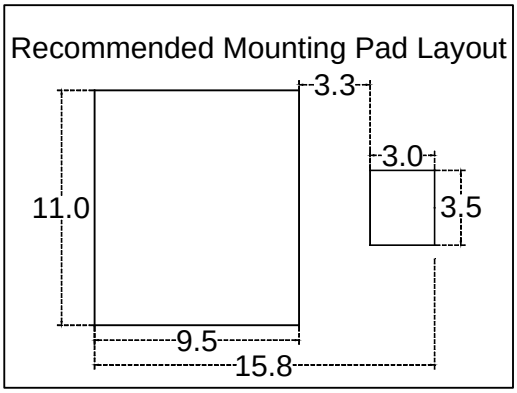


Fig. 4 - Peak Pulse Power Rating Curve

PACKAGE OUTLINE DIMENSIONS(millimeters)



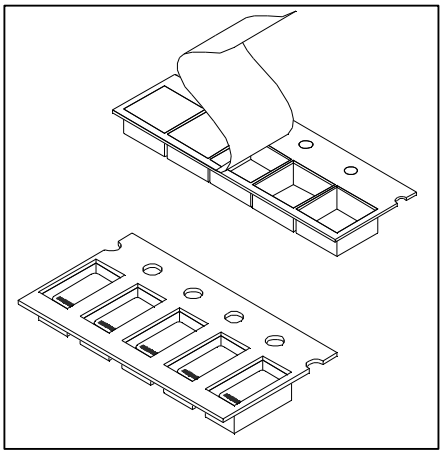


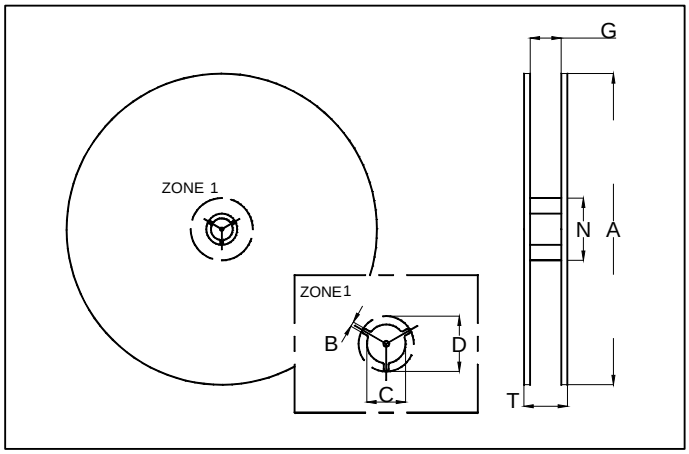
Electrical Characteristics(T_A=25℃ unless otherwise noted)

Part Number (Uni)	Breakdown Voltage V_{BR} @I_T			Maximum Reverse Leakage I_R @V_{RWM} (uA)	Maximum I_R @V_{RWM} T_J=175 (uA)	Working Peak Reverse Voltage V_{RWM} (V)	Maximum Reverse Surge Current I_{PP} (A) (1)	Maximum Clamping Voltage V_C@I_{PP} (V)
	Min (V)	Max (V)	I_T (mA)					
TSM5Z14A	15.60	17.20	5	10	150	14	155.0	23.2
TSM5Z15A	16.70	18.50	5	10	150	15	148.0	24.4
TSM5Z16A	17.80	19.70	5	10	150	16	138.0	26.0
TSM5Z17A	18.90	20.90	5	10	150	17	130.0	27.6
TSM5Z18A	20.00	22.10	5	10	150	18	123.0	29.2
TSM5Z20A	22.20	24.50	5	10	150	20	111.0	32.4
TSM5Z22A	24.40	26.90	5	10	150	22	101.0	35.5
TSM5Z24A	26.70	29.50	5	10	150	24	93.0	38.9
TSM5Z26A	28.90	31.90	5	10	150	26	86.0	42.1
TSM5Z28A	31.10	34.40	5	10	150	28	79.0	45.4
TSM5Z30A	33.30	36.80	5	10	150	30	74.0	48.4
TSM5Z33A	36.70	40.60	5	10	150	33	68.0	53.3
TSM5Z36A	40.00	44.20	5	10	150	36	62.0	58.1

NOTE: Surge current waveform is defined at 10/1000uS waveform

SURFACE MOUNT TAPE AND REEL PACKAGING





DIMENSIONS in millimeters (inches)

TAPE SIZE	A MAX.	B MIN.	C	D MIN.	N MIN.	G MAX.	T MAX.
24 mm (0.945)	330 ± 2.0 (13.0 ± 0.079) 178 ± 2.0 (7.0 ± 0.079)	1.5 (0.059)	13.5 ± 0.50 (0.53 ± 0.02)	20.2 (0.795)	50 (1.97)	26.4 (1.039)	30.4 (1.197)

Recommended Soldering Parameters

IR-Reflow Condition			
Pre Heat	Temp. min	150	℃
	Temp. max	200	℃
	Time(min to max)	60-180	sec
Ramp up rate (150-200℃)		<3	℃/sec

Reflow	Liquidus Temp.	>220	℃
	Peak Temp.	255-260	℃
	Time(Liq. to Peak)	60-150	sec
Ramp up rate (220-200℃)		<3	℃/sec
Time within actual peak temp.		10-30	sec

Ramp down Rate	<5	℃/sec
Time(25℃ to Peak temp.)	<6	min
Do not exceed	280	℃