Surface Mount Auto Surge Suppressor
Working Peak Reverse Voltage - 22 to 60 Volts
9000 Watt Peak Pulse Power

Features

- Glass passivated chip
- 9000 W peak pulse power capability with a 10/1000μs waveform, repetitive rate (dutycycle):0.01 %
- Meet AEC-Q101 requirement
- Low leakage
- Excellent clamping capability
- Very fast response time
- RoHS compliant

Mechanical Data

- Plastic package DO-218AB/SOD-BLOCK
- Epoxy: UL 94V-0 rate flame retardant
- Polarity: Heatsink is anode

Maximum Ratings(T_A=25℃ unless otherwise noted)

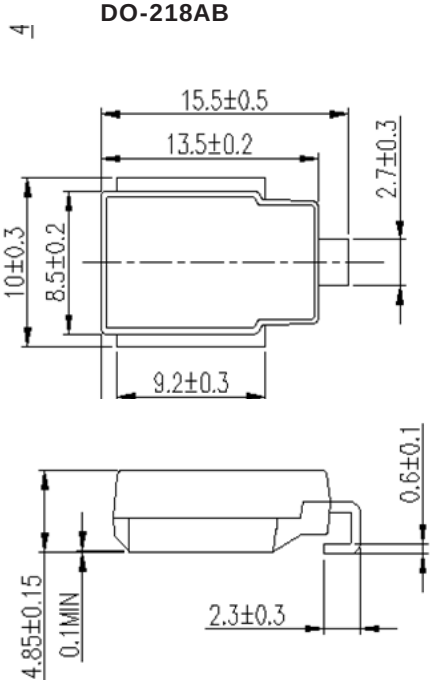
RATING	SYMBOL	VALUE	UNITS
Peak power dissipation with a 10/1000μs waveform(Note 1)	P_{PP}	9000	Watts
Peak pulse current wih a 10/1000μs waveform(Note 1)	I_{PP}	SEE TABLE 1	Amps
Power dissipation on infinite heatsink at TL = 25℃	P_D	8.0	Watts
Peak Forward Surge Current,8.3ms Single Half Sine-Wave	I_{FSM}	700	Amps
Operating junction and storage temperature range	T_J , T_{STG}	−55 to +175	℃

Notes :

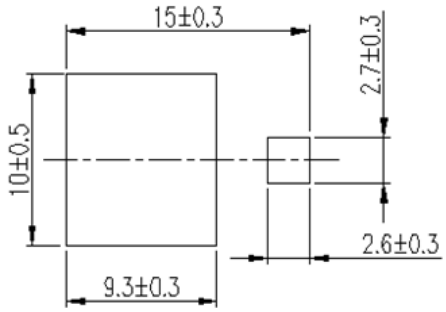
1.Non-repetitive current pulse , per Fig. 2 and derated above TA = 25℃ per Fig. 1.

Dimensions (DO-218AB)

DO-218AB



Recommended Mounting Pad Layout



Dimensions inmillimeters

Electrical Characteristics

ASE PartNumber		Working Peak Reverse Voltage	Breakdown Voltage V_{BR}@I_T			Max. Reverse Leakage I_R @V_{RWM}	Max. I_R @V_{RWM} T_J=175℃	Max. Clamping Voltage Vc @Ipp 10/1000μs	
UNI-Polar	BI-Polar	V_{RWM}(V)	V_{BR}(V)Min.	V_{BR}(V)Max.	I_T(mA)	I_R(μA)	I_R(μA)	Vc(V)	Ipp(A)
ASE22A	ASE22CA	22.0	24.4	26.9	5.0	10	150	35.5	253.5
ASE24A	ASE24CA	24.0	26.7	29.5	5.0	10	150	38.9	231.4
ASE26A	ASE26CA	26.0	28.9	31.9	5.0	10	150	42.1	213.8
ASE28A	ASE28CA	28.0	31.1	34.4	5.0	10	150	45.4	198.3
ASE30A	ASE30CA	30.0	33.3	36.8	5.0	10	150	48.4	186.0
ASE33A	ASE33CA	33.0	36.7	40.6	5.0	10	150	53.3	168.8
ASE36A	ASE36CA	36.0	40.0	44.2	5.0	10	150	58.1	154.9
ASE40A	ASE40CA	40.0	44.4	49.1	5.0	10	150	64.5	139.6
ASE43A	ASE43CA	43.0	47.8	52.8	5.0	10	150	69.4	129.9
ASE60A	ASE60CA	60.0	66.7	73.7	5.0	10	150	96.8	93.0

IEC Compatibility

ISO16750 2 Test A Test Waveform								
ASE Part Number		12V system	24V system	Resistance				
		100V@400ms	202V@350ms	0.5Ω	1Ω	2Ω	4Ω	8Ω
ASE22A	ASE22CA	√		?	√	√	√	√
ASE24A	ASE24CA	√		?	√	√	√	√
ASE26A	ASE26CA	√		?	√	√	√	√
ASE28A	ASE28CA	√		?	√	√	√	√
ASE30A	ASE30CA	√		?	√	√	√	√
ASE33A	ASE33CA		√		×	?	√	√
ASE36A	ASE36CA		√		×	?	√	√
ASE40A	ASE40CA		√		×	?	√	√
ASE43A	ASE43CA		√		×	?	√	√
ASE60A	ASE60CA		√		×	?	√	√

Notes :

? :The test results would be different depending on the specific circuit parameters or test environment

x :Failed

Ratings and Characteristic Curves (TA=25℃ unless otherwise noted)

Fig.1 Power Derating Cure

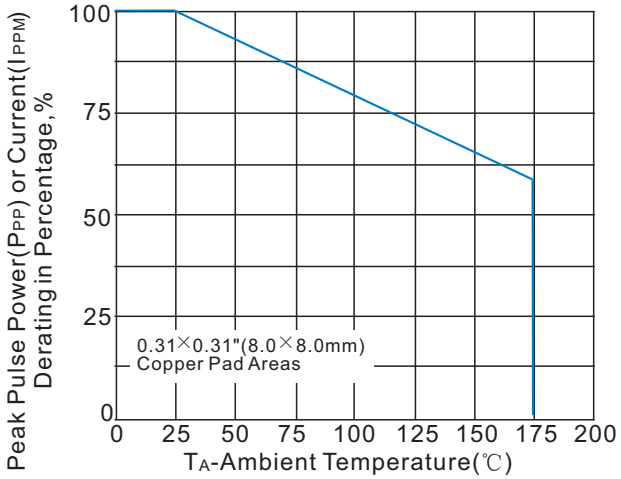


Fig.2 Pulse Waveform

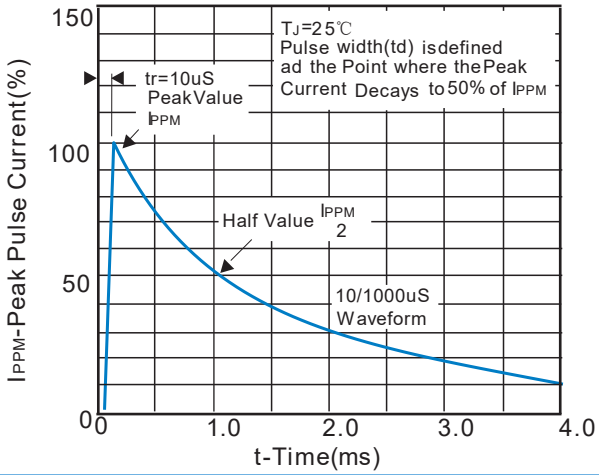


Fig.3 Steady State Power Derating Curve

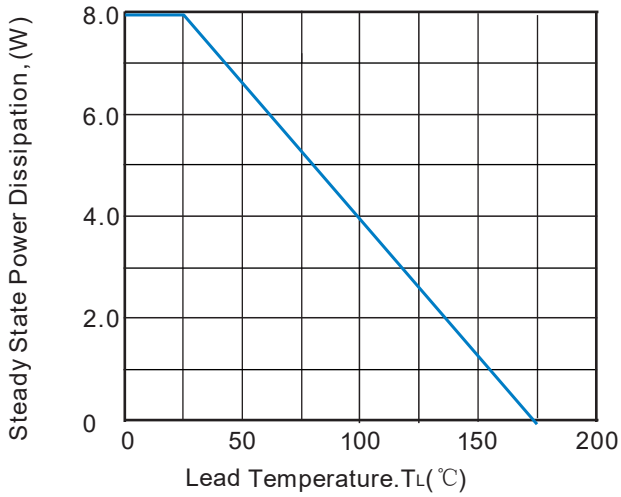
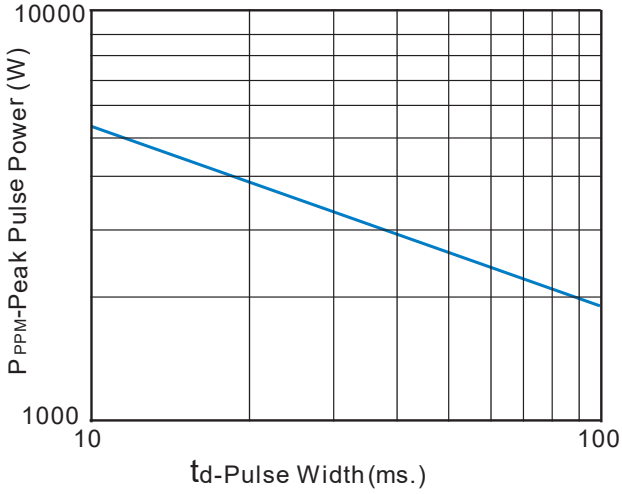


Fig.4 Peak Pulse Power Rating Cure

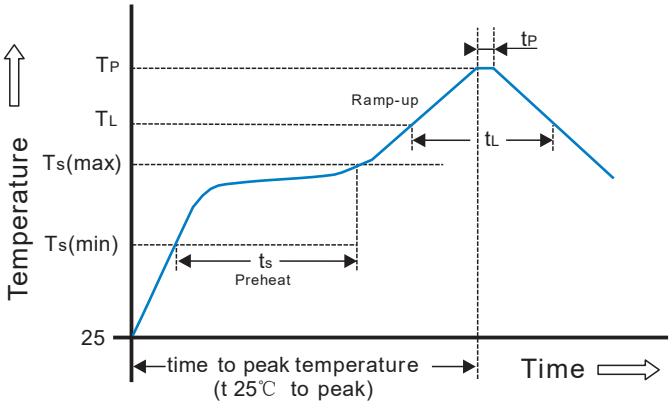


Recommended Soldering Conditions

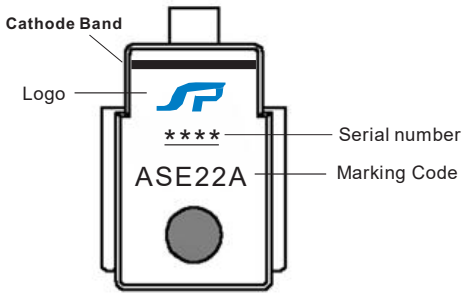
Recommended Conditions

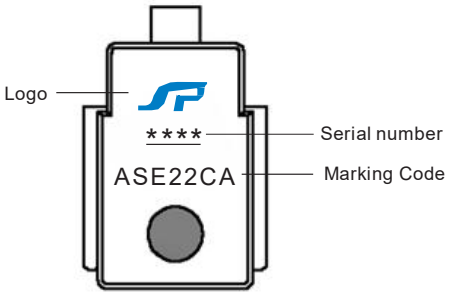
IR Reflow Condition		
Pre Heat	Temperature Min($T_{s(min)}$)	150℃
	Temperature Max($T_{s(max)}$)	200℃
	Time(Min to Max)(t_s)	60-180secs
Ramp up rate(150-200℃)		3℃/sec.Max.
Reflow	Temperature(T_L)(Liquidus)	220℃. Min.
	Temperature(t_L)	60-150secs
	Peak Temp(T_P)	245℃
Ramp up rate(220-200℃)		3℃/sec.Max.
Time within actual Peak Temp(t_P)		10-30 secs
Ramp-down Rate		3℃/sec.Max.
Time 25℃ to Peak Temp(T_P)		6 min.Max.
Do not exceed		245℃

Reflow Soldering



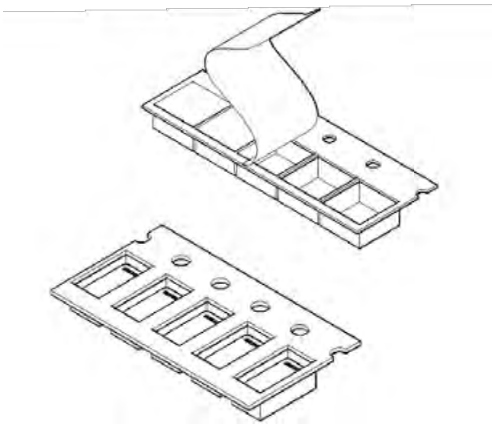
Marking Code

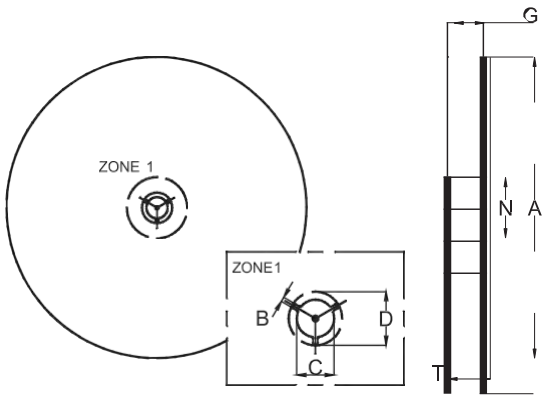




Tape And Reel Specification

Symbol	Ea Per Reel	REEL DIA (mm)	Industry Standard
ASE***	750	330	EIA RS-481





Tape Size	A Max.	B Min.	C	D Min.	N Min.	G Max.	T Max.
24(0.945)	330±2.0 (13.0±0.079)	1.5(0.059)	13.0±0.50 (0.51±0.002)	20.2(0.795)	50(1.97)	26.4(1.039)	30.4(1.197)