Features

- 6600 watts Peak Pulse Power
- Response Time is Typically < 1 ns
- Excellent Clamping Capability
- Glass Passivated Junction

Applications

- Power lines
- Automotive and Telecommunication
- Computers &Consumer Electronics
- Industrial Electronics

SM8S32A ----- SURFACE MOUNT TVS Diodes

General Information

VIC offers Transient Voltage Suppressor Diodes for surge and ESD protection applications, in compact chip package DO-218AB size format. The Transient Voltage Suppressor series offers a choice of Working Peak Reverse Voltage from 10 V up to 43 V and BreakdownVoltage up to 55 V.

Typical fast response times are less than 1.0 picoseconds for unidirectional devices and less than 5.0 picoseconds for bidirectional devices from 0 V to Minimum Breakdown Voltage.

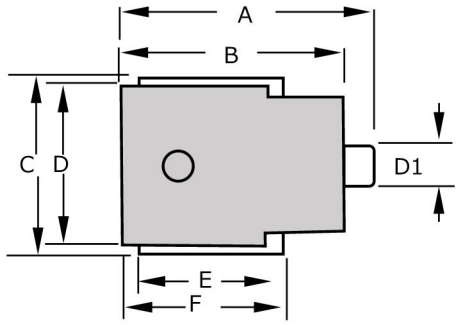
Absolute Maximum Ratings

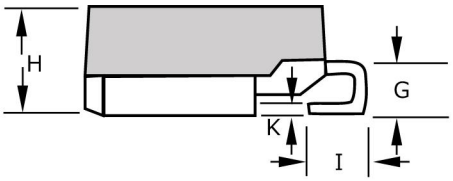
Parameter	Symbol	Value	Unit
Peak pulse power dissipation at 10/1000μs waveform	P_{PK}	6600	W
Peak Forward Surge Current 8.3ms single half sine-wave super	I_{FSM}	700	A
Maximum Operating temperature	T_{OPER}	-55 to +155	℃
Maximum Storage temperature	T_{STG}	-55 to +175	℃
Maximum lead temperature for soldering during 10s	T_L	260	℃

Electrical Characteristics (@ T_A = 25 °C Unless Otherwise Noted)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Units
Reverse Working Voltage	V_{RWM}	Any I/O pin to GND	---	---	32.0	V
Reverse Breakdown Voltage	V_{BR}	Any I/O pin to GND I_T=5mA	35.5	---	39.4	V
Positive Clamping Voltage	V_C	Surge waveform: 10/1000μs	---	---	51.4	V
Reverse Leakage Current	I_L	V_{RWM}=32V ; T=25°C	---	---	5.0	uA
Peak pulse Current	I_{PP}	Surge waveform: 10/1000μs	---	---	128.5	A

Product Dimensions

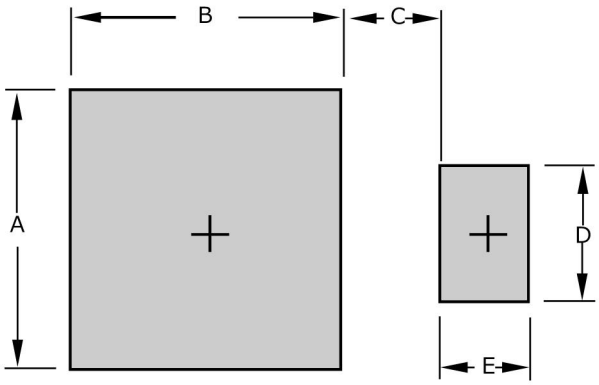




Dimension	DO-218AB
A	15.0-16.0 (0.592-0.628)
B	13.3-13.7 (0.524-0.539)
C	9.50-10.5 (0.374-0.413)
D	8.30-8.70 (0.327-0.342)
D1	2.40-3.00 (0.094-0.118)
E	8.50-9.10 (0.335-0.358)
F	9.50-10.10 (0.374-0.398)
G	2.70-3.70 (0.106-0.146)
H	4.70-5.00 (0.185-0.201)
I	1.50-2.50 (0.059-0.098)
K	0.50-0.70 (0.020-0.028)

DIMENSIONS: MM (INCHES)

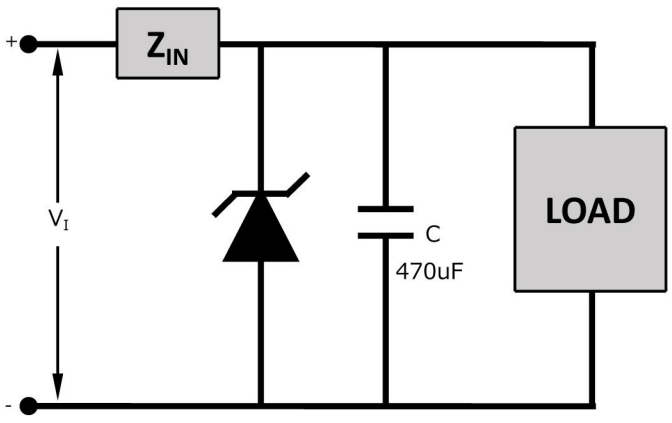
Recommended PCB Footprint



Dimension	DO-218AB
A	10.50 (0.413)
B	9.300 (0.366)
C	3.800 (0.150)
D	3.000 (0.118)
E	2.300 (0.091)

DIMENSIONS: MM (INCHES)

Typical Protection Circuit



Performance Graphs

Figure 1: Peak Pulse Power Rating Curve

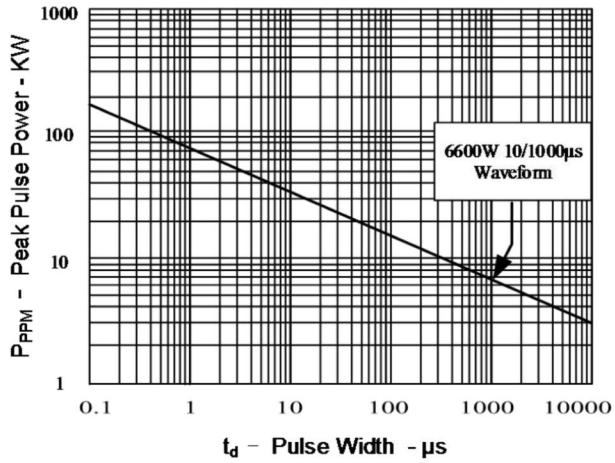


Figure 2: Pulse Derating Curve

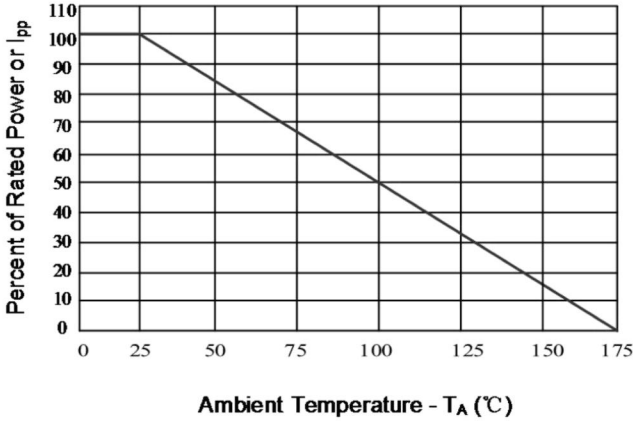


Figure 3: Pulse Waveform

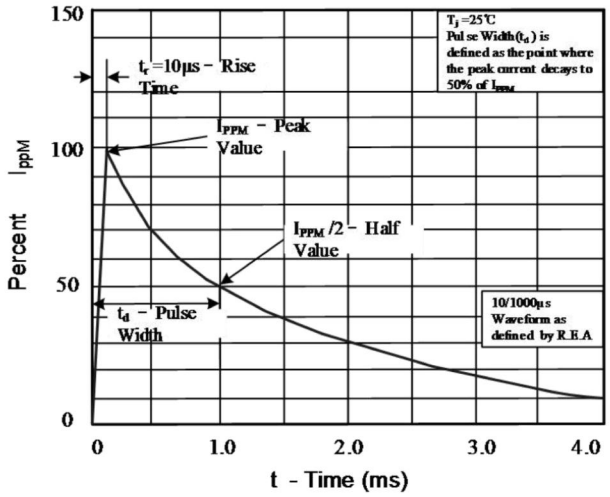


Figure 4: Typical Junction Capacitance

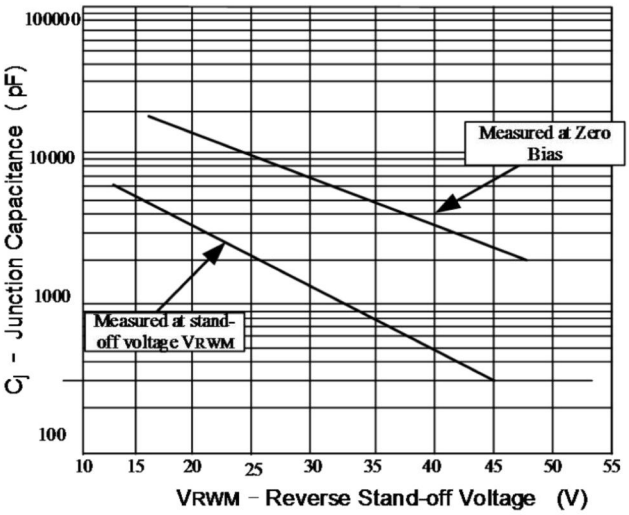


Figure 5: Steady State Power Dissipation Derating Curve

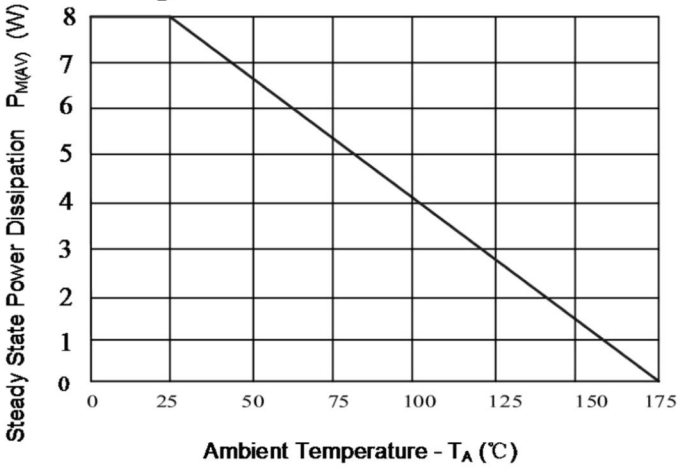
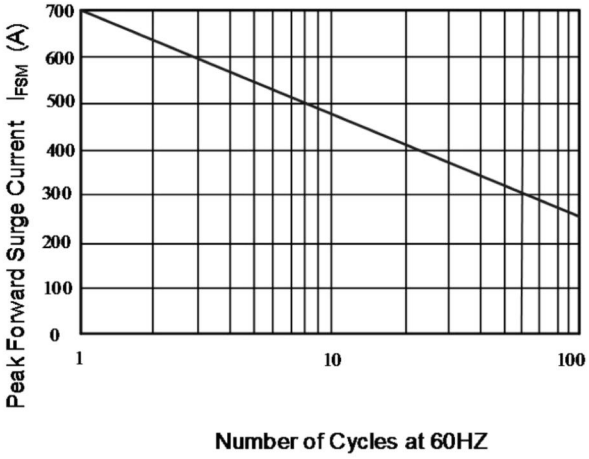
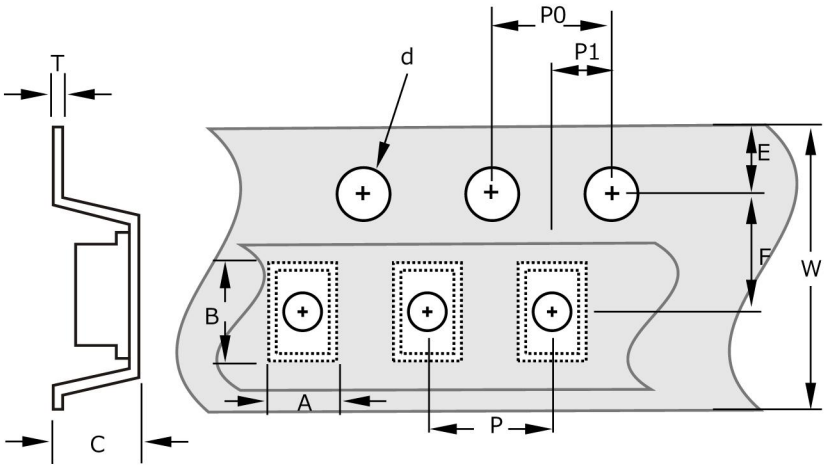


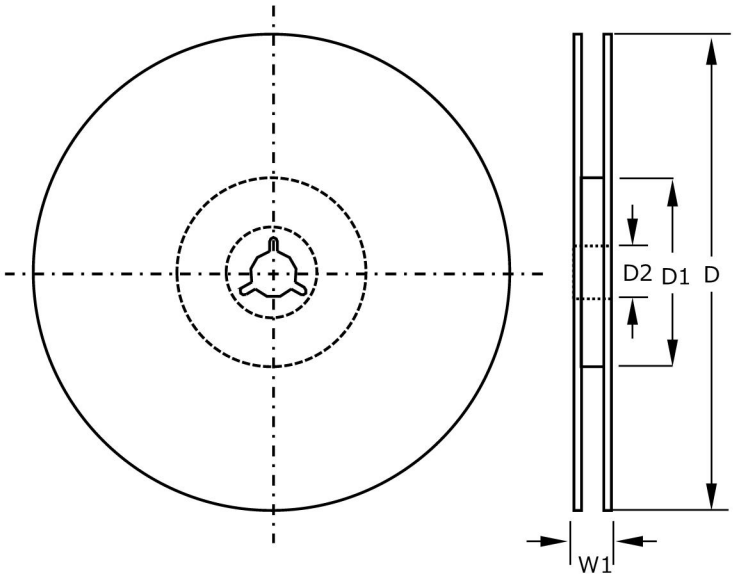
Figure 6: Maximum Non-Repetitive



Packaging Information

Symbol	DO-218AB
A	11.0±0.5 (0.433±0.02)
B	16.0±0.50 (0.630±0.02)
C	5.0±0.50 (0.197±0.02)
d	1.50±0.10 (0.061±0.004)
D	330 (12.992)
D1	50.0 (1.969)
D2	13.0±0.20 (0.512±0.008)
E	1.75±0.10 (0.069±0.004)
F	12.0±0.5 (0.472±0.02)
P	4.00±0.10 (0.157±0.004)
P0	4.00±0.10 (0.157±0.004)
P1	2.00±0.05 (0.079±0.002)
T	0.30±0.10 (0.012±0.004)
W	24.00±0.30 (0.945±0.012)
W1	29.4 (1.16)





DIMENSIONS: MM / (INCHES)

Quantity of products in the taping package

(1) Standard quantity : 750pcs/Reel for the Series.

(2) Shipping quantity is a multiple of standard quantity.

(3) For more information, please contact our local agents.