

Transient Voltage Suppressors

TVS Diodes - 6600W > SM8S Series



Features

- High current transient suppressor
- Glass passivated junction
- Low leakage current
- Excellent Clamping capability.
- 6600w peak pulse power capability and 10/1000uS waveform
- meets ISO7637-2 5A Surge specification
- meets AEC-Q101 requirement.



Package: DO-218AB

Applications

- Auto DC12V Power Supply
- Auto DC24V Power Supply

Electrical Characteristics

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation at TA=25°C by 10x1000µs waveform (Fig.1)(Note 1), (Note 2)	PPPM	6600	Watts
Peak pulse current of at 10/1000µs waveform (Note 1, Fig.3)	IPPM	See Table	Amps
Steady state power dissipation at TA=50°C (Fig.5)	PM(AV)	8	Watts
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load, (JEDEC Method) (Note3, Fig.6)	IFSM	700	Amps
Operating Junction and Storage Temperature Range	TJ, TSTG	-55 to 175	°C
Typical Thermal Resistance Junction to Lead	RθJL	15	°C/W
Typical Thermal Resistance Junction to Ambient	RθJA	75	°C/W

Notes:

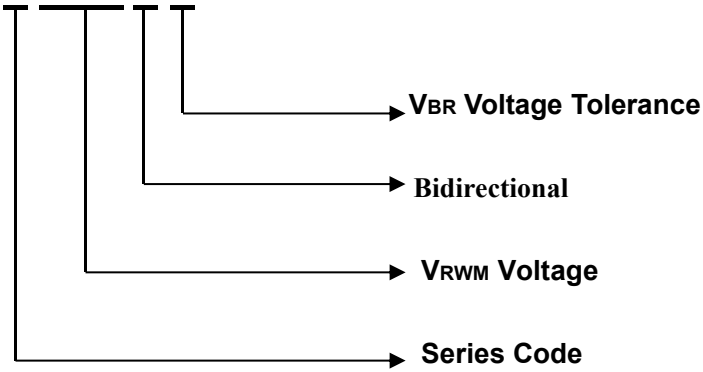
1. Non-repetitive current pulse, per Fig.3 and derated above TA=25°C per Fig. 2.

Electrical Characteristics (TA=25°C)


Part Number		Reverse Stand-Off Voltage	Breakdown Voltage V _{BR} (Volts)@I _T		Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
Unidirectional	Bidirectional	V _{RWM} (V)	Min	Max	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (μA)
SM8S10A	SM8S10CA	10.0	11.1	12.3	5	17.0	388	5
SM8S11A	SM8S11CA	11.0	12.2	13.5	5	18.2	363	5
SM8S12A	SM8S12CA	12.0	13.3	14.7	5	19.9	332	5
SM8S13A	SM8S13CA	13.0	14.4	15.9	5	21.5	307	5
SM8S14A	SM8S14CA	14.0	15.6	17.2	5	23.2	284	5
SM8S15A	SM8S15CA	15.0	16.7	18.5	5	24.4	270	5
SM8S16A	SM8S16CA	16.0	17.8	19.7	5	26.0	253	5
SM8S17A	SM8S17CA	17.0	18.9	20.9	5	27.6	239	5
SM8S18A	SM8S18CA	18.0	20.0	22.1	5	29.2	226	5
SM8S20A	SM8S20CA	20.0	22.2	24.5	5	32.4	204	5
SM8S22A	SM8S22CA	22.0	24.4	26.9	5	35.5	186	5
SM8S24A	SM8S24CA	24.0	26.7	29.5	5	38.9	170	5
SM8S26A	SM8S26CA	26.0	28.9	31.9	5	42.1	157	5
SM8S28A	SM8S28CA	28.0	31.1	34.4	5	45.4	145	5
SM8S30A	SM8S30CA	30.0	33.3	36.8	5	48.4	136	5
SM8S32A	SM8S32CA	32.0	35.5	39.4	5	51.4	128.5	5
SM8S33A	SM8S33CA	33.0	36.7	40.6	5	53.3	124	5
SM8S36A	SM8S36CA	36.0	40.0	44.2	5	58.1	114	5
SM8S40A	SM8S40CA	40.0	44.4	49.1	5	64.5	102	5
SM8S43A	SM8S43CA	43.0	47.8	52.8	5	69.4	95.1	5

Description of Part Number

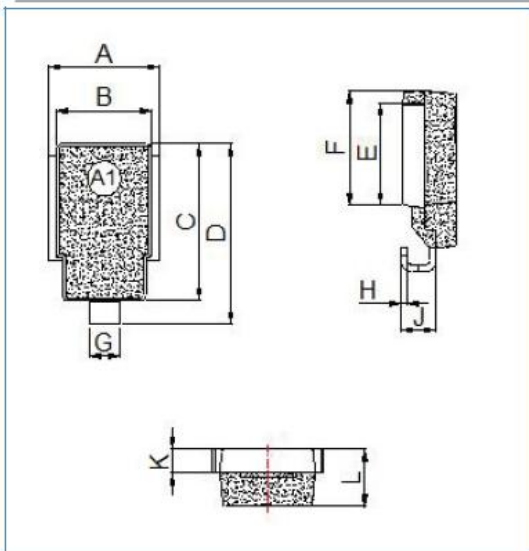
SM8S XXX C A



Packing Options

Package Type	Description	Packing Quantity	Industry Standard
 DO-218AB	Embossed Carrier Reel Pack	750PCS	EIA-481-1

Dimensions - DO-218AB



Ref.	Dimensions			
	Inches		Millimeters	
	Min.	Max.	Min.	Max.
A	0.374	0.413	9.5	10.5
B	0.327	0.342	8.3	8.7
C	0.524	0.539	13.3	13.7
D	0.592	0.628	15.0	16.0
E	0.335	0.358	8.5	9.1
F	0.374	0.398	9.5	10.1
G	0.094	0.118	2.4	3.0
H	0.020	0.028	0.5	0.7
J	0.106	0.146	2.7	3.7
K	0.075	0.083	1.9	2.1
L	0.185	0.201	4.7	5.1

Ratings and Characteristics Curve

Figure 1. Peak Pulse Power Rating Curve

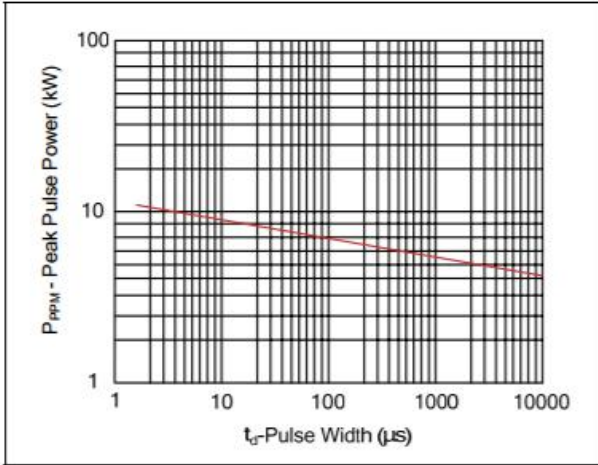


Figure 2. Pulse Derating Curve

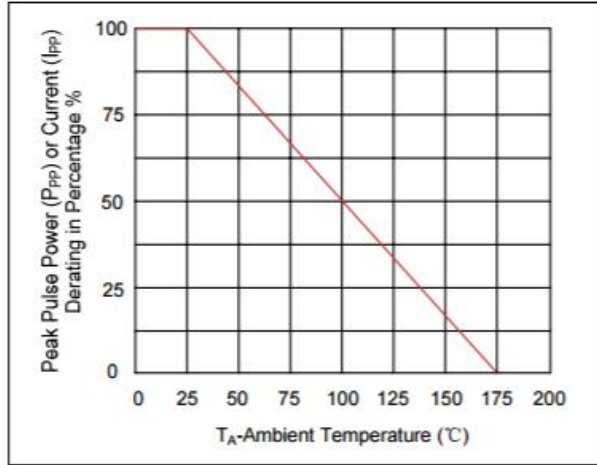


Figure 3. Pulse Waveform

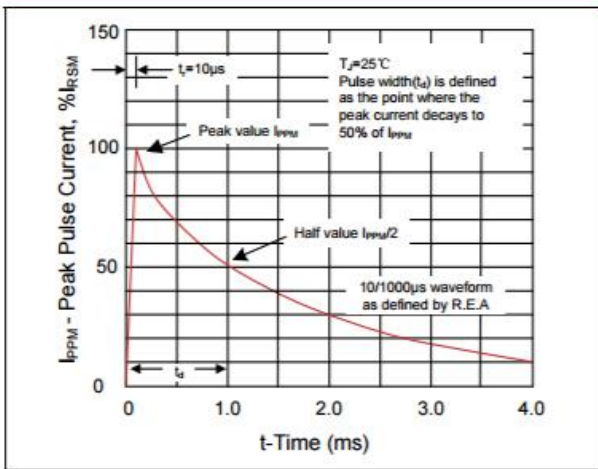
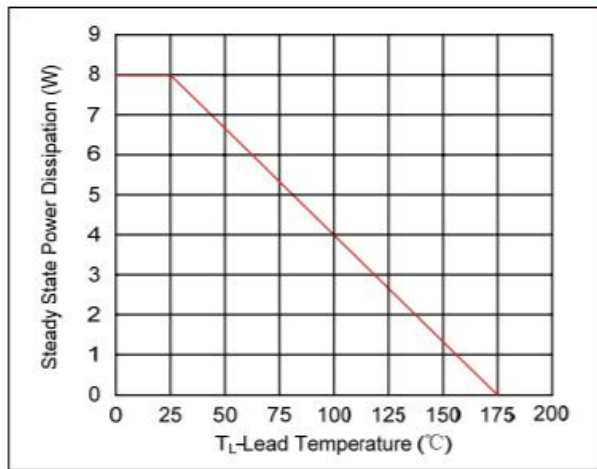


Figure 4. Steady State Power Dissipation Derating Curve



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