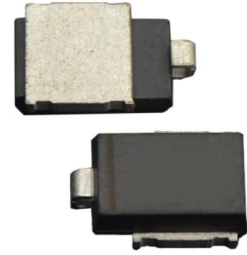
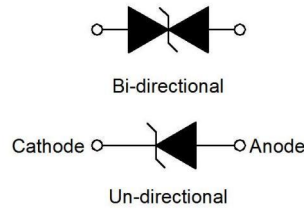


6600W Transient Voltage Suppressor SM8S Series

Parameter	Value	Unit
P_{PP}	6600	W
$PM(AV)$ (TL =75°C)	8	W
T_j	-55 to +175	°C



DO-218AB

FEATURES

- Available in uni/bi-directional polarity.
- Low forward voltage drop & Low leakage current.High surge capability.
- Junction passivation optimized design passivated anisotropic rectifier technology.
- $T_j = 175\text{ °C}$ capability suitable for high reliability and automotive requirement.
- Meets ISO7637-2 surge specification (varied by test condition).

APPLICATIONS

- I/O Interface.
- Power lines
- Automotive and Telecommunication Industrial Electronics

MAXIMUM RATED VALUES (at $T_j = 25\text{ °C}$, unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak pulse power dissipation on 10/1000 μ s waveform	PPP	6600	W
Steady state power dissipation at TL=75°C	PM(AV)	8	W
Peak Forward Surge Current,8.3ms Single Half Sine-Wave Superimposed on Rated Load,(JEDEC Method)	I_{FSM}	700	A
Operating junction temperature range Storage temperature range	T_j, T_{stg}	-55 to +175	°C

ELECTRICAL CHARACTERISTICS (at $T_j = 25\text{ °C}$ unless otherwise specified)

Part Number		VR	IR@VR	VBR@IT		IT	VC@IPP	IPP①
Uni-Polar	Bi-Polar	V	μ A	min(V)	max(V)	mA	max(V)	A
SM8S16A	SM8S16CA	16.0	10	17.80	19.70	5	26.0	254.0

SM8S17A	SM8S17CA	17.0	10	18.90	20.90	5	27.6	239.0
SM8S18A	SM8S18CA	18.0	10	20.00	22.10	5	29.2	226.0
SM8S20A	SM8S20CA	20.0	10	22.20	24.50	5	32.4	204.0
SM8S22A	SM8S22CA	22.0	10	24.40	26.90	5	35.5	186.0
SM8S24A	SM8S24CA	24.0	10	26.70	29.50	5	38.9	170.0
SM8S26A	SM8S26CA	26.0	10	28.90	31.90	5	42.1	157.0
SM8S28A	SM8S28CA	28.0	10	31.10	34.40	5	45.4	145.0
SM8S30A	SM8S30CA	30.0	10	33.30	36.80	5	48.4	136.0
SM8S33A	SM8S33CA	33.0	10	36.70	40.6	5	53.3	124.0
SM8S36A	SM8S36CA	36.0	10	40.00	44.2	5	58.1	114.0
SM8S40A	SM8S40CA	40.0	10	44.40	49.1	5	64.5	102.0
SM8S43A	SM8S43CA	43.0	10	47.80	52.8	5	69.4	95.0
SM8S85A	SM8S85CA	85.0	10	87	93	5	137	48.0

Notes:

Surge wave form: 10/1000 μ s

VR: Stand-off Voltage -- Maximum voltage that can be applied

VBR: Breakdown Voltage

VC: Clamping Voltage -- Peak voltage measured across the suppressor at a specified Ipp

IR: Reverse Leakage Current

TYPICAL CHARACTERISTICS CURVES

Fig1: V-i cure characteristics

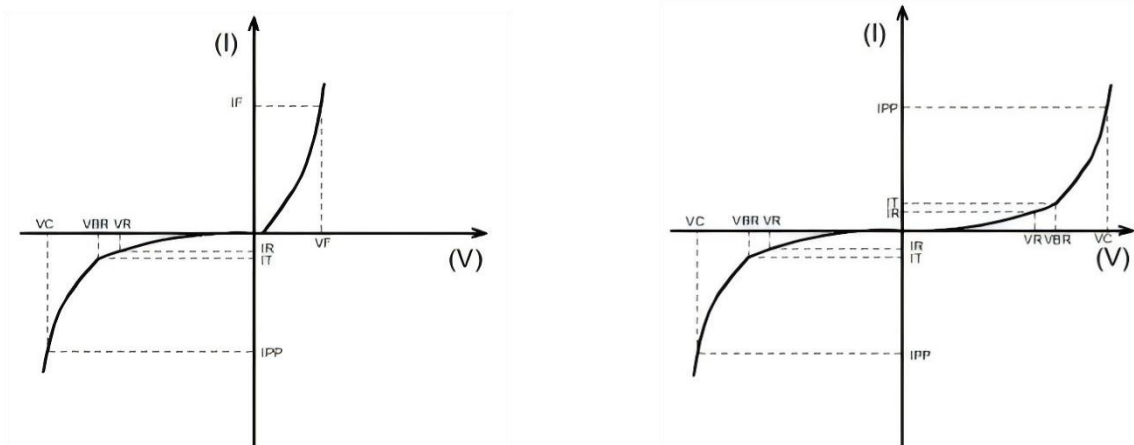


Fig2:Pulse derating curve

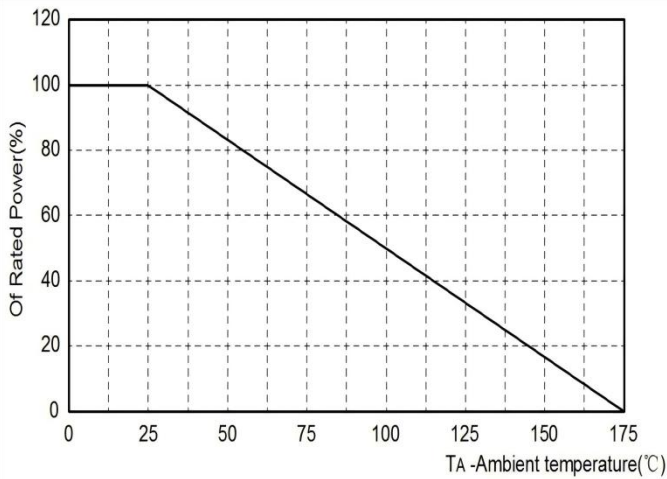


Fig3: Pulse waveform

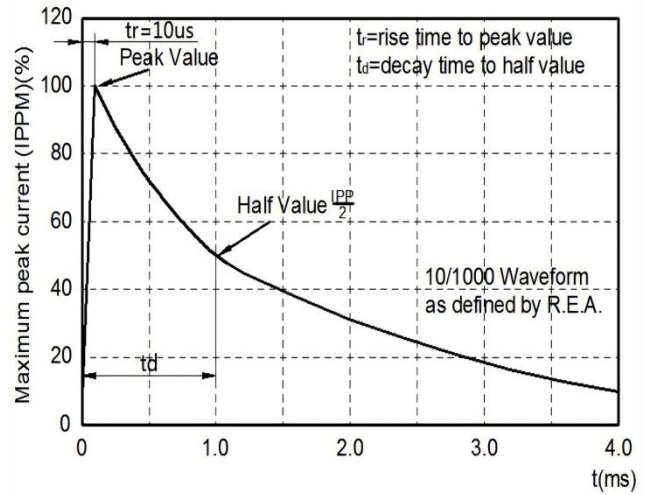


Fig4 : Peak Pulse Power Rating Curve

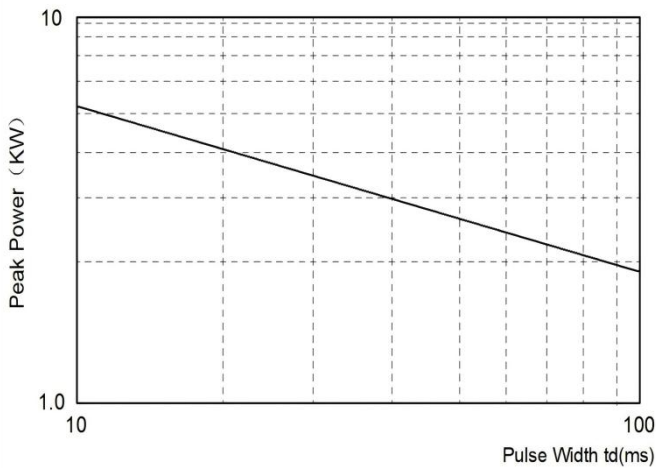
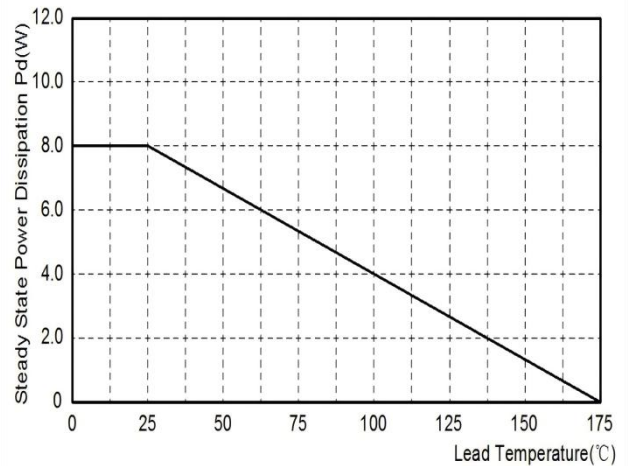
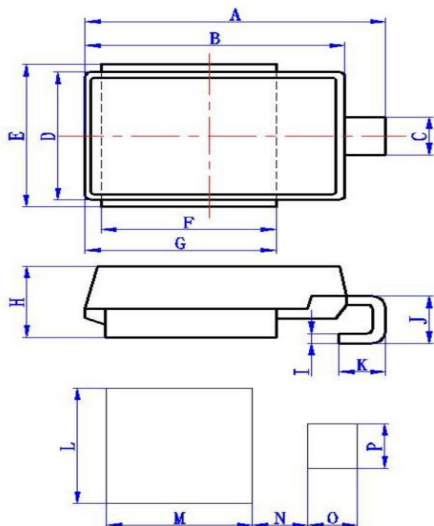


Fig5:Steady State Power Dissipation

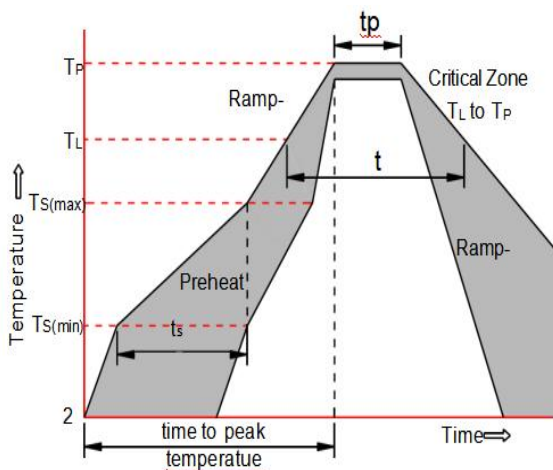


PACKAGE OUTLINES



Ref. (mm)	Millimeters	
	Min.	Max.
A	15	16
B	13.3	13.7
C	2.4	3.0
D	8.3	8.7
E	9.5	10.5
F	8.7	9.3
G	9.7	10.3
H	4.7	5.0
I	0.5	0.7
J	2.5	3.5
K	1.5	2.5
L	10	10.5
M	10.0	10.5
N	3.2	3.8
O	1.7	2.4
P	2.4	3.0

SOLDERING PARAMETERS



Reflow Condition		Pb-Free assembly (see as below)
Pre Heat	-Temperature Min (Ts(min))	+150°C
	-Temperature Max(Ts(max))	+200°C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (TL) to peak)		3°C/sec. Max
Ts(max) to TL - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(TL)(Liquid us)	+217°C
	-Temperature(tL)	60-150 secs.
Peak Temp (Tp)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (tp)		30 secs. Max
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp (TP)		8 min. Max
Do not exceed		+260°C

NOTICE

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- 1) Comply with applicable safety standards in designing a secure system architecture;
- 2) Implement redundancy, fire-prevention measures, and malfunction prevention protocols;
- 3) Mitigate risks of accidents, fires, or societal damages resulting from product use.
- 4) Designers must ensure Hypersemi products operate strictly within specified parameters defined in the latest product specifications.