

4600W Transient Voltage Suppressors

TVS Diodes - 4600W > SM6S 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	PPPM	4600	Watts
Peak Pulse Power Dissipation at TA=25°C by 10x10000µs waveform	PPPM	3600	Watts
Peak pulse current of at 10/1000µs waveform (Note 1, Fig.3)	IPPM	See Table	Amps
Power dissipation on infinite heat Sink at TC=25°C	PD	6	Watts
Peak forward surge current, 8.3 ms single half sine-wave	IFSM	600	Amps
Operating junction and storage temperature range	TJ, TSTG	-55 to +175	°C
Typical thermal resistance, junction to case	RθJL	0.9	°C/W

Notes:

1. Non-repetitive current pulse and derated above TA=25°C p

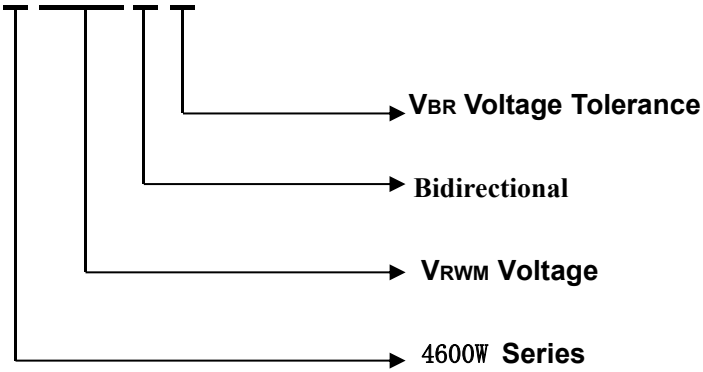
Electrical Characteristics (TA=25°C)




Part Number		V _R	V _{BR} (V)@I _T		I _T	V _C @I _{PP}	I _{PP}	I _R @V _R	I _R @V _R	Delivery Time
Uni-Polar	Bi-polar	V	Min	Max	mA	V	A	μA@25°C	μA@175°C	days
SM6S10A	SM6S10CA	10.0	11.1	12.3	5	17.0	271	15	250	15days
SM6S11A	SM6S11CA	11.0	12.2	13.5	5	18.2	253	10	150	15days
SM6S12A	SM6S12CA	12.0	13.3	14.7	5	19.9	231	10	150	15days
SM6S13A	SM6S13CA	13.0	14.4	15.9	5	21.5	214	10	150	15days
SM6S14A	SM6S14CA	14.0	15.6	17.2	5	23.2	198	10	150	15days
SM6S15A	SM6S15CA	15.0	16.7	18.5	5	24.4	189	10	150	15days
SM6S16A	SM6S16CA	16.0	17.8	19.7	5	26.0	177	10	150	15days
SM6S17A	SM6S17CA	17.0	18.9	20.9	5	27.6	167	10	150	15days
SM6S18A	SM6S18CA	18.0	20.0	22.1	5	29.2	158	10	150	15days
SM6S20A	SM6S20CA	20.0	22.2	24.5	5	32.4	142	10	150	15days
SM6S22A	SM6S22CA	22.0	24.4	26.9	5	35.5	130	10	150	15days
SM6S24A	SM6S24CA	24.0	26.7	29.5	5	38.9	118	10	150	15days
SM6S26A	SM6S26CA	26.0	28.9	31.9	5	42.1	109	10	150	15days
SM6S28A	SM6S28CA	28.0	31.1	34.4	5	45.4	101	10	150	15days
SM6S30A	SM6S30CA	30.0	33.3	36.8	5	48.4	95	10	150	15days
SM6S33A	SM6S33CA	33.0	36.7	40.6	5	53.3	86	10	150	15days
SM6S36A	SM6S36CA	36.0	40.0	44.2	5	58.1	79	10	150	15days

Description of Part Number

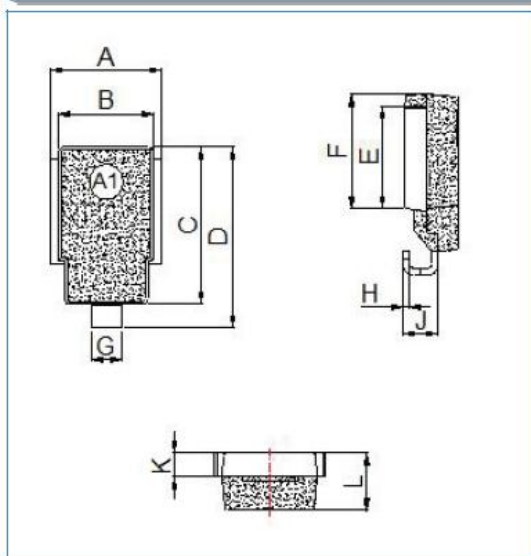
SM6S XXX C A



Packing Options

Package Type	Description	Packing Quantity	Industry Standard
 DO-218AB	Embossed Carrier Reel Pack	500PCS	EIA-RS 481

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

Fig.1 : Power Derating Curve

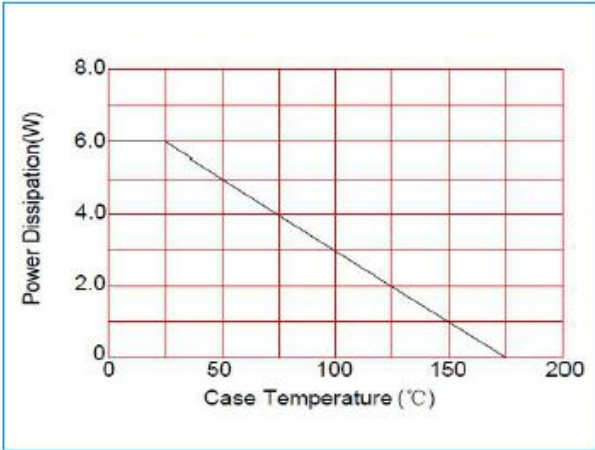


Fig.2 : Pulse Waveform

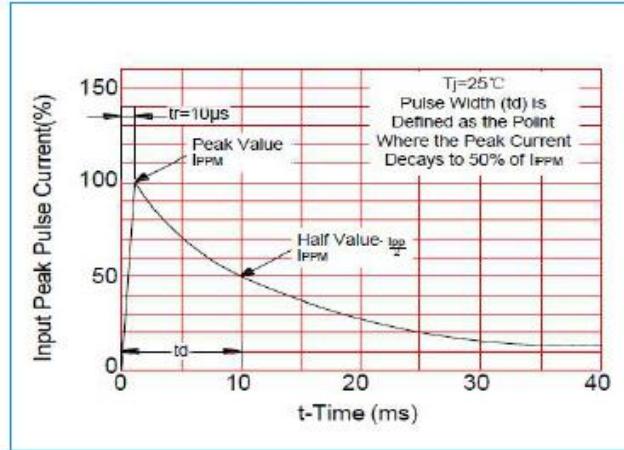


Fig.3 : Load Dump Power Characteristics (10 ms Exponential Waveform)

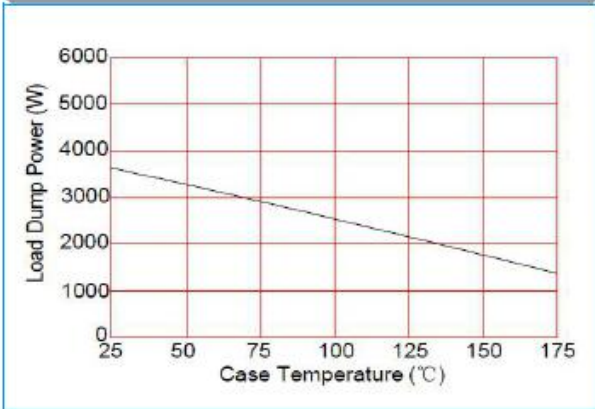


Fig.4 : Reverse Power Capability

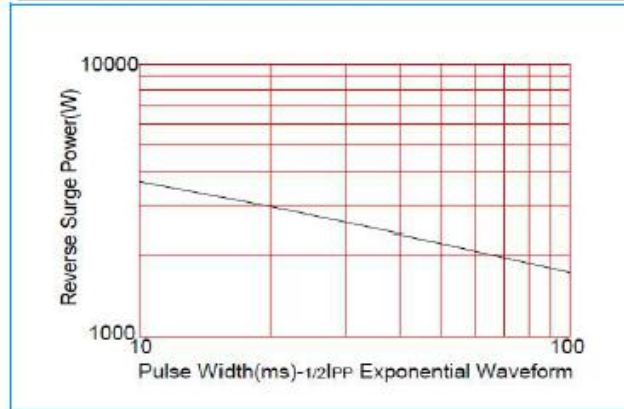


Fig.5 : Typical Transient Thermal Impedance

