

SM5SA-AM Series

Product Name	ESD TVS (Transient Voltage Suppressor)
Series	SM5SA-AM Series
Package Size	DO-218



SM5SA-AM Series Engineering Specification

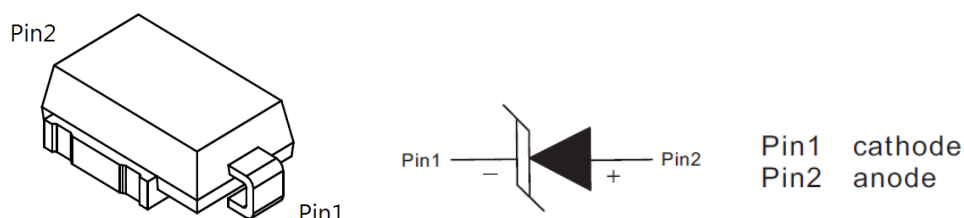
1. Features

- 3600 watts peak pulse power
- Junction passivation optimized design passivated anisotropic rectifier technology
- Low leakage current
- Low forward voltage drop
- High surge capability
- Qualified to AEC-Q101 standards for high reliability
- Meet ISO 7637-2 5a/5b and ISO 16750 load dump test (varied by test condition)

2. Mechanical Date

- Case: JEDEC DO-218 Molded plastic
- Lead: Solderable per MIL-STD-750, method 2026
- Molding compound: UL94V-0
- Polarity: Heatsink is anode

3. Pinning Information



4. Maximum Ratings @Ta=25°C unless otherwise noted

Parameter	Symbol	Value	Unit
Peak power dissipation with a 10/1000μs waveform ⁽¹⁾	P _{PP}	3600	W
Peak power dissipation with a 10/10,000μs waveform	P _{PP}	2800	W
Peak pulse current with a 10/1000μs waveform ⁽¹⁾	I _{PP}	See Next Table	A
Power dissipation on infinite heatsink at T _L = 25 °C	P _D	5.0	W
Peak forward surge current, 8.3 ms single half sine-wave	I _{FSM}	500	A
Operating junction and storage temperature range	T _J , T _{STG}	- 55 to +175	°C

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

5. Electrical characteristics

Part Number (Uni)	Breakdown Voltage VBR @IT			Maximum Reverse Leakage I _R @V _{RWM} (uA)	Maximum I _R @V _{RWM} T _J =175 (uA)	Working Peak Reverse Voltage V _{RWM} (V)	Maximum Reverse Surge Current I _{PP} (A)	Maximum Clamping Voltage V _C @I _{PP} (V)	Marking Code
	Min (V)	Max (V)	IT (mA)						
SM5S10A-AM	11.1	12.3	5.0	15	250	10	212	17.0	SM5S10A
SM5S11A-AM	12.2	13.5	5.0	10	150	11	198	18.2	SM5S11A
SM5S12A-AM	13.3	14.7	5.0	10	150	12	181	19.9	SM5S12A
SM5S13A-AM	14.4	15.9	5.0	10	150	13	167	21.5	SM5S13A
SM5S14A-AM	15.6	17.2	5.0	10	150	14	155	23.2	SM5S14A
SM5S15A-AM	16.7	18.5	5.0	10	150	15	148	24.4	SM5S15A
SM5S16A-AM	17.8	19.7	5.0	10	150	16	138	26.0	SM5S16A
SM5S17A-AM	18.9	20.9	5.0	10	150	17	130	27.6	SM5S17A
SM5S18A-AM	20.0	22.1	5.0	10	150	18	123	29.2	SM5S18A
SM5S20A-AM	22.2	24.5	5.0	10	150	20	111	32.4	SM5S20A
SM5S22A-AM	24.4	26.9	5.0	10	150	22	101	35.5	SM5S22A
SM5S24A-AM	26.7	29.5	5.0	10	150	24	93	38.9	SM5S24A
SM5S26A-AM	28.9	31.9	5.0	10	150	26	86	42.1	SM5S26A
SM5S28A-AM	31.1	34.4	5.0	10	150	28	79	45.4	SM5S28A
SM5S30A-AM	33.3	36.8	5.0	10	150	30	74	48.4	SM5S30A
SM5S33A-AM	36.7	40.6	5.0	10	150	33	68	53.3	SM5S33A
SM5S36A-AM	40.0	44.2	5.0	10	150	36	62	58.1	SM5S36A
SM5S40A-AM	44.4	49.1	5.0	10	150	40	56	64.5	SM5S40A
SM5S43A-AM	47.8	52.8	5.0	10	150	43	52	69.4	SM5S43A

(1) Surge current waveform is defined at 10/1000us waveform

(2) For all types maximum VF=2.0V at IF=100A measured on 8.3ms single half sine-wave or equivalent square wave, duty cycle=4 pulses

6. Typical Characteristics

Fig. 1 - Pulse Derating Curve

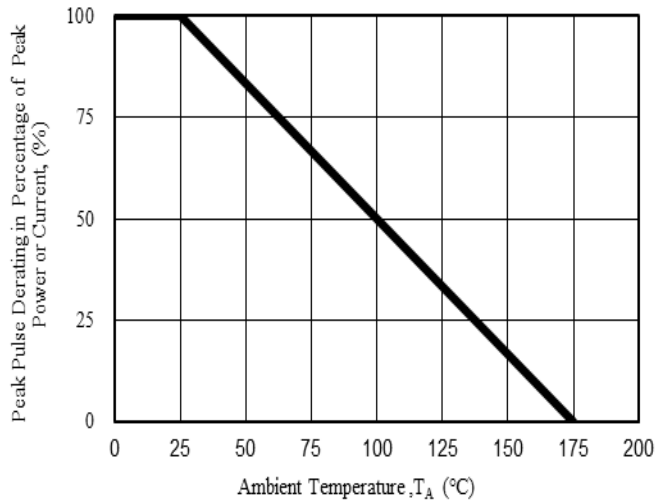


Fig. 2 - Maximum Non-Repetitive Surge Current

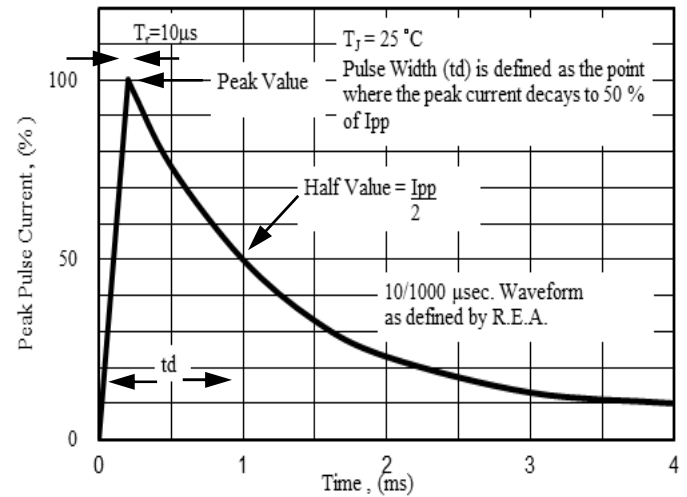


Fig. 3 - Steady State Power Derating Curve

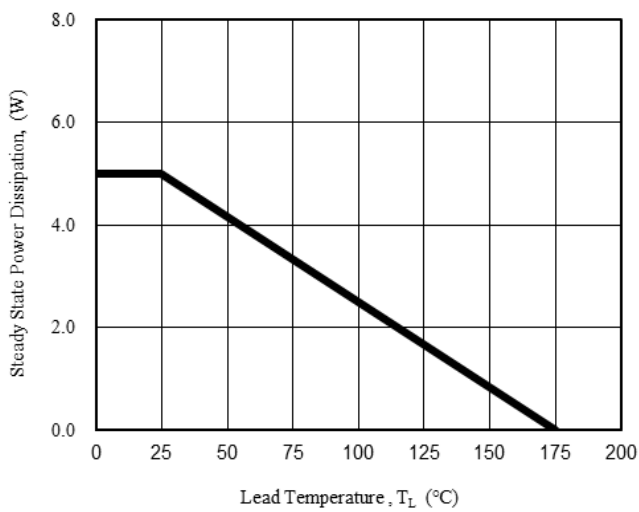


Fig. 4 - Peak Pulse Power Rating Curve

