YENYO

SM5S SERIES

Surface Mount Transient Voltage Suppressor

Working Voltage 10 to 43 V
Peak Pulse Power 3600W

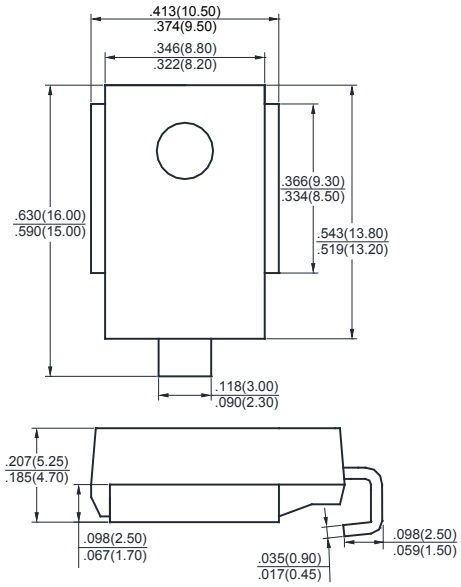
Features

- ✶ AEC-Q101 qualified
- ✶ 3600W peak pulse power capability at 10/1000μs waveform, repetition rate (duty cycles):0.01%
- ✶ High surge capability
- ✶ Low leakage current
- ✶ Low forward voltage drop
- ✶ Excellent clamping capability
- ✶ Very fast response time
- ✶ Halogen free and RoHS compliant
- ✶ Meets ISO7637-2 surge specification

Mechanical Data

- ✶ Case: Molded plastic, DO-218AB
- ✶ Epoxy: UL 94V-0 rate flame retardant
- ✶ Terminals: Solderable per MIL-STD-750, method 2026
- ✶ Polarity: Heatsink is anode

DO-218AB



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND THERMAL CHARACTERISTICS

T_A = 25℃ unless otherwise noted

PARAMETER	SYMBOL	VALUE	UNIT
Peak power dissipation @10/1000 μs waveform @10/10000 μs waveform	P_{PPM}	 3600 2800	W
Peak forward surge current, 8.3 ms single half sine-wave (Note 1)	I_{FSM}	500	A
Power dissipation on infinite heatsink at T_C=25℃ (Fig.1)	P_D	5.0	W
Maximum instantaneous forward voltage at 100A for unidirectional only	V_F	1.8	V
Typical thermal resistance, junction to case	$R_{\theta JC}$	1.0	℃/W
Operating junction and storage temperature range	T_J , T_{STG}	-55 to +175	℃

NOTE : (1) Measured on 8.3ms single half sine wave or equivalent square wave for unidirectional device only, duty cycle=4 per minute maximum

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Electrical Characteristics(T_A=25℃ unless otherwise noted)

Part Number (Uni)	Part Number (Bi)	Breakdown Voltage $V_{BR}@I_T$			Maximum Reverse Leakage $I_R@V_{RWM}$ (μA)	Working Peak Reverse Voltage V_{RWM} (V)	Maximum Reverse Surge Current I_{PP} (A)	Maximum Clamping Voltage $V_C@I_{PP}$ (V)
		Min (V)	Max (V)	I_T (mA)				
SM5S10A	SM5S10CA	11.1	12.3	5	15	10	212	17
SM5S11A	SM5S11CA	12.2	13.5	5	10	11	198	18.2
SM5S12A	SM5S12CA	13.3	14.7	5	10	12	181	19.9
SM5S13A	SM5S13CA	14.4	15.9	5	10	13	167	21.5
SM5S14A	SM5S14CA	15.6	17.2	5	10	14	155	23.2
SM5S15A	SM5S15CA	16.7	18.5	5	10	15	148	24.4
SM5S16A	SM5S16CA	17.8	19.7	5	10	16	138	26
SM5S17A	SM5S17CA	18.9	20.9	5	10	17	130	27.6
SM5S18A	SM5S18CA	20	22.1	5	10	18	123	29.2
SM5S20A	SM5S20CA	22.2	24.5	5	10	20	111	32.4
SM5S22A	SM5S22CA	24.4	26.9	5	10	22	101	35.5
SM5S24A	SM5S24CA	26.7	29.5	5	10	24	93	38.9
SM5S26A	SM5S26CA	28.9	31.9	5	10	26	86	42.1
SM5S28A	SM5S28CA	31.1	34.4	5	10	28	79	45.4
SM5S30A	SM5S30CA	33.3	36.8	5	10	30	74	48.4
SM5S33A	SM5S33CA	36.7	40.6	5	10	33	68	53.3
SM5S36A	SM5S36CA	40	44.2	5	10	36	62	58.1
SM5S40A	SM5S40CA	44.4	49.1	5	10	40	56	64.5
SM5S43A	SM5S43CA	47.8	52.8	5	10	43	52	69.4

RATINGS AND CHARACTERISTICS CURVES SM5S SERIES

Fig.1 - Power Derating Curve

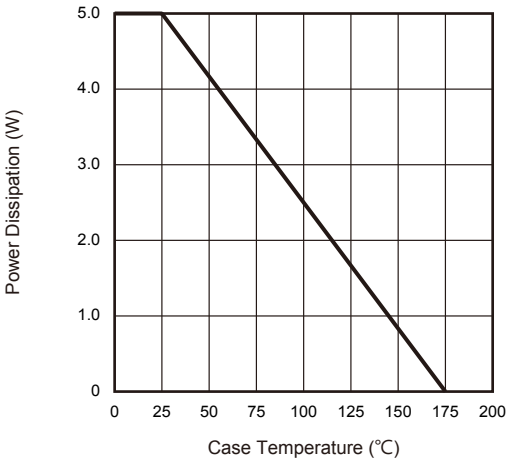

Fig.2 - Load Dump Power Characteristics
(10ms Exponential Waveform)

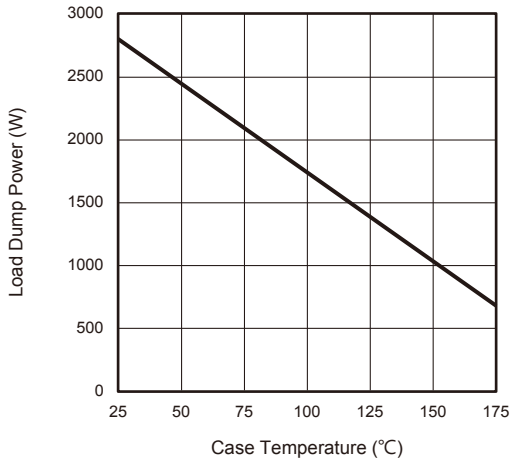

Fig.3 - Pulse Waveform

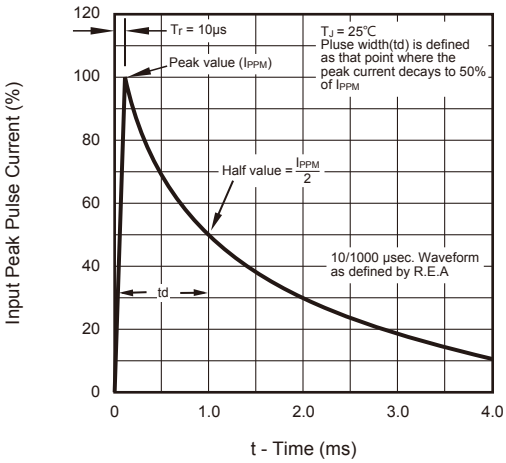

Fig.4 - Reverse Power Capability

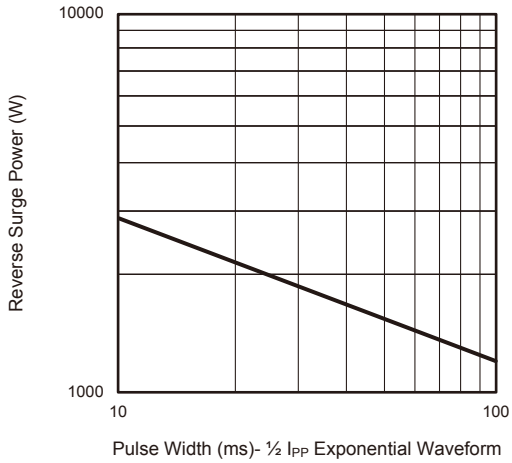

Fig.5 - Typical Transient Thermal Impedance