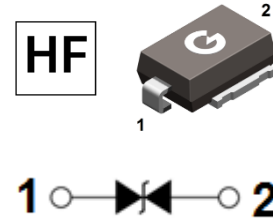


Transient Voltage Suppressor

TSM8S Series

Features

- Ideally suited for load dump protection
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Integrally molded heatsink provides a very low thermal resistance for maximum heat dissipation
- Low leakage current at $T_J = 175^{\circ}\text{C}$
- High temperature soldering guaranteed: $260^{\circ}\text{C} / 10\text{s}$ at terminals
- Low forward voltage drop
- RoHS compliant with Halogen-free
- Qualified to AEC-Q101 Standards



Mechanical Data

- Case: DO-218AB molded plastic
- Terminals: Plated, solderable per MIL-STD-750, Method 2026

Maximum Ratings (@ $T_A = 25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak pulse power dissipation with 10/1000 μs waveform	P_{PPM}	6600	W
10/10,000 μs waveform		5200	
Steady state power dissipation	P_D	8.0	W
Peak pulse current with a 10/1000 μs waveform ⁽¹⁾	I_{PPM}	see E. Characteristics	A
Typical thermal resistance junction to ambient	$R_{\theta JA}$	12	$^{\circ}\text{C/W}$
Typical thermal resistance junction to case	$R_{\theta JC}$	0.9	$^{\circ}\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-55 ~ +175	$^{\circ}\text{C}$

Notes^{*1}: Non-repetitive current pulse derated above $T_A = 25^{\circ}\text{C}$

Transient Voltage Suppressor

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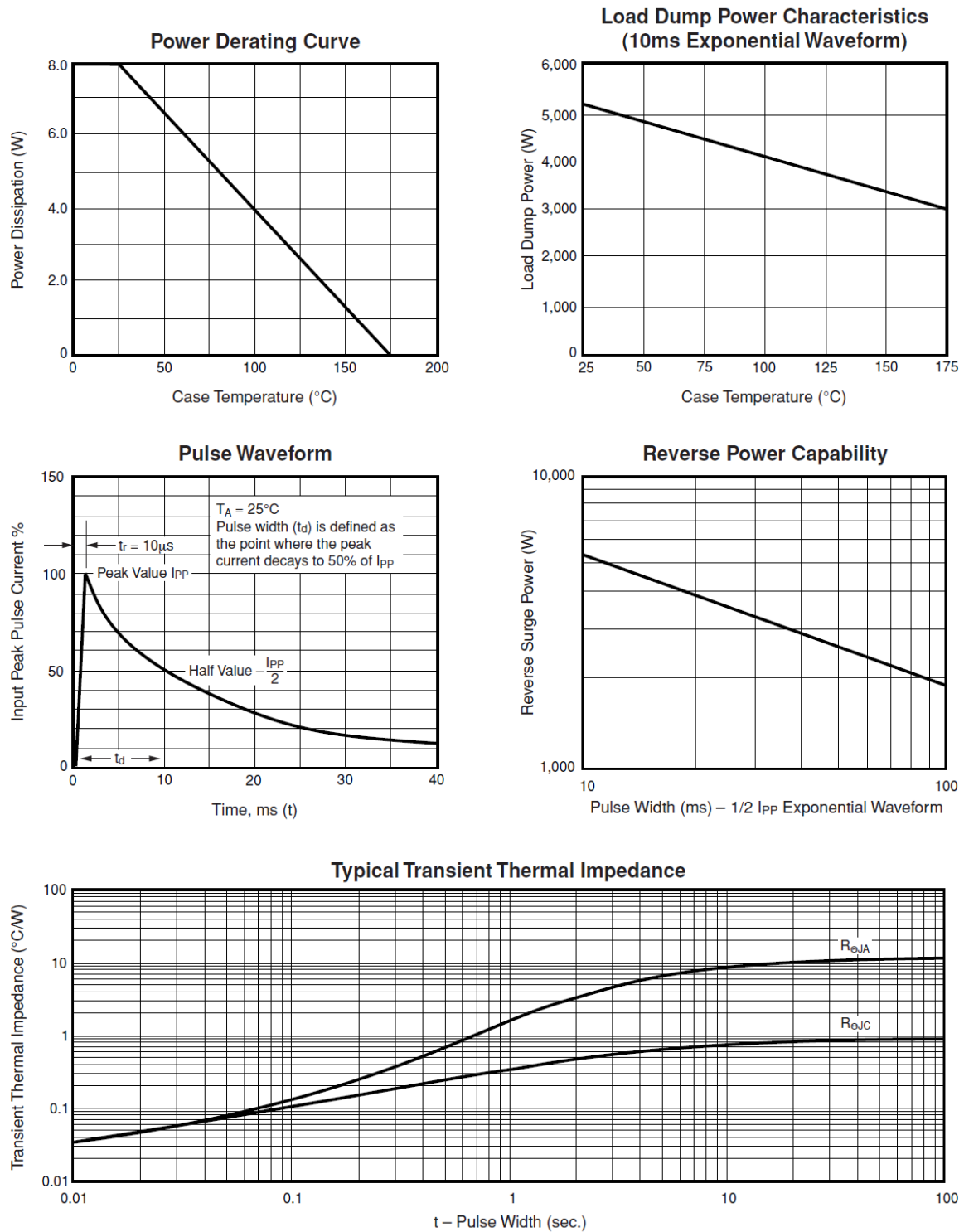
Electrical Characteristics (@T_A = 25°C unless otherwise specified)

Device Type	Breakdown Voltage V _(BR) (V)		Test Current I _T (mA)	Stand-off Voltage V _{WM} (V)	Maximum Reverse Leakage at V _{WM} I _D (μA)	Maximum Reverse Leakage at V _{WM} T _c = 175°C I _D (μA)	Max. Peak Pulse Current at 10/1000μs Waveform (A)	Maximum Clamping Voltage at I _{PPM} V _C (V)
	Min	Max						
TSM8S10CA	11.1	12.3	5	10	15	250	388	17
TSM8S11CA	12.2	13.5	5	11	10	150	363	18.2
TSM8S12CA	13.3	14.7	5	12	10	150	332	19.9
TSM8S13CA	14.4	15.9	5	13	10	150	307	21.5
TSM8S14CA	15.6	17.2	5	14	10	150	284	23.2
TSM8S15CA	16.7	18.5	5	15	10	150	270	24.4
TSM8S16CA	17.8	19.7	5	16	10	150	254	26
TSM8S17CA	18.9	20.9	5	17	10	150	239	27.6
TSM8S18CA	20	22.1	5	18	10	150	226	29.2
TSM8S20CA	22.2	24.5	5	20	10	150	204	32.4
TSM8S22CA	24.4	26.9	5	22	10	150	186	35.5
TSM8S24CA	26.7	29.5	5	24	10	150	170	38.9
TSM8S26CA	28.9	31.9	5	26	10	150	157	42.1
TSM8S28CA	31.1	34.4	5	28	10	150	145	45.4
TSM8S30CA	33.3	36.8	5	30	10	150	136	48.4
TSM8S33CA	36.7	40.6	5	33	10	150	124	53.3
TSM8S36CA	40	44.2	5	36	10	150	114	58.1
TSM8S40CA	44.4	49.1	5	40	10	150	102	64.5
TSM8S43CA	47.8	52.8	5	43	10	150	95.1	69.4

Transient Voltage Suppressor

TSM8S Series

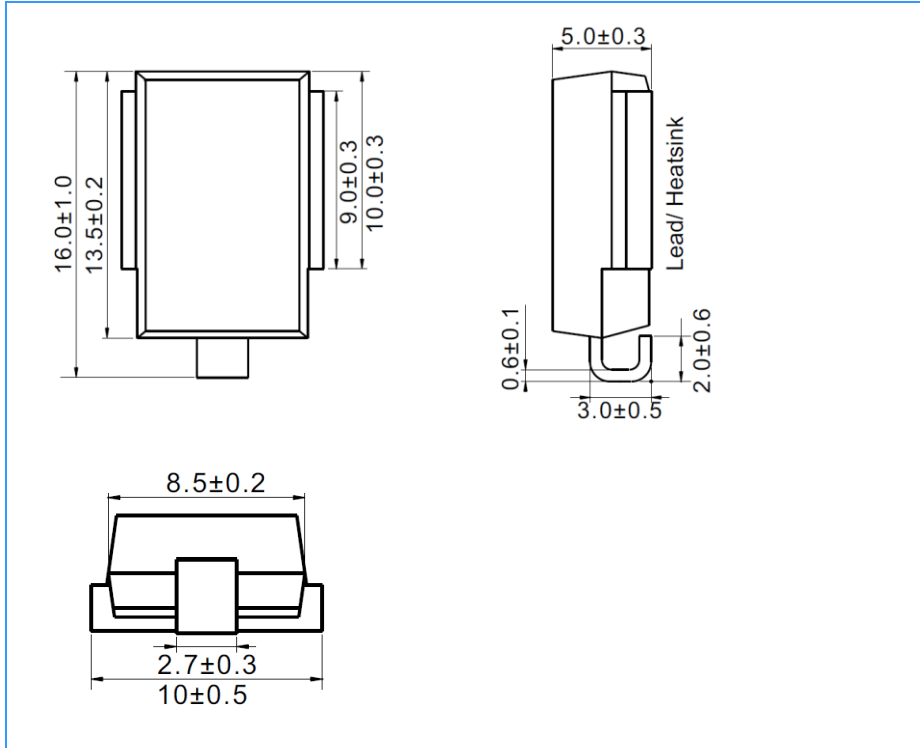
Ratings and Characteristics Curves (@ $T_A=25^{\circ}\text{C}$ unless otherwise noted)



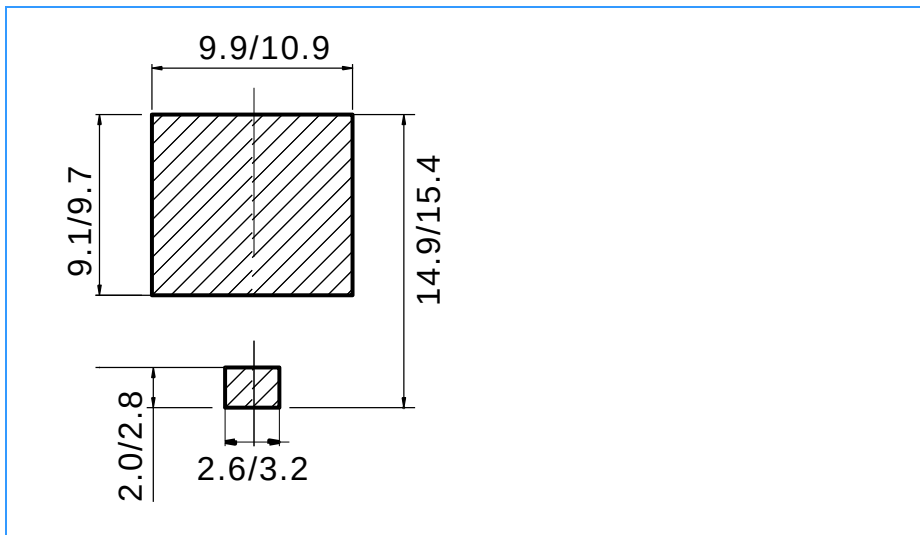
Transient Voltage Suppressor

TSM8S Series

Package Outline Dimensions (unit: mm)



Mounting Pad Layout (unit: mm)



Ordering Information

Part Number	Package
TSM8S Series	DO-218AB