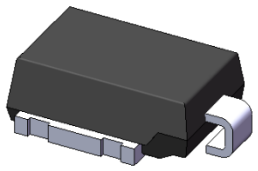
8000W, 20 - 43V Transient Voltage Suppressors

Features

- AEC-Q101 qualified TVS product
- 8KW surge capability at 10/1000μs waveform
- Tj 175℃ high temperature performance
- Low leakage current
- Excellent clamping capability
- MSL level 1, per J-STD-020
- Halogen free and RoHS compliant

RoHS
COMPLIANT



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Applications

- Transient over voltage protection for sensitive electrical parts from load-dump switching and automotive applications.

Absolute Maximum Ratings (T_A=25°C unless otherwise noted)			
Parameter	**Symbol**	**Ratings**	**Unit**
Peak power dissipation with a 10/1000us waveform	P_{PPM}	8000	W
Peak power dissipation with a 10/10000us waveform	P_{PPM}	6000	W
Peak pulse current with a 10/1000us waveform	I_{PPM}	See Next Table	A
Power dissipation, on infinite heat sink at T_c=25℃	P_D	8.5	W
Maximum instantaneous forward voltage at 100A*(Note 1)*	V_F	1.8	V
Peak forward surge current, 8.3ms single half-sine wave*(Note 1)*	I_{FSM}	750	A
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +175	℃

Thermal-Mechanical Specifications (T_A=25℃ unless otherwise noted)			
Parameter	**Symbol**	**Typ**	**Unit**
Thermal Resistance, Junction to Case	R_{thJC}	0.9	°C /W

Electrical Characteristics (TA = 25 °C unless otherwise noted)

Part Number (Uni)	Part Number (Bi)	Marking		Breakdown Voltage VBR (V)		Test Current I_T (mA)	Stand off Voltage V_{WM} (V)	Maximum reverse leakage at VWM I_D (μA)	Maximum Peak Pulse Current I_{ppM} (A)	Maximum Clamping Voltage at I_{PPM} V_C(V)
		UNI	BI	Min	Max					
ATVS8T20A	ATVS8T20CA	20A	20C	22.2	24.5	5	20	10	247	32.4
ATVS8T22A	ATVS8T22CA	22A	22C	24.4	26.9	5	22	10	225	35.5
ATVS8T24A	ATVS8T24CA	24A	24C	26.7	29.5	5	24	10	205	38.9
ATVS8T26A	ATVS8T26CA	26A	26C	28.9	31.9	5	26	10	190	42.1
ATVS8T28A	ATVS8T28CA	28A	28C	31.1	34.4	5	28	10	176	45.4
ATVS8T30A	ATVS8T30CA	30A	30C	33.3	36.8	5	30	10	165	48.4
ATVS8T33A	ATVS8T33CA	33A	33C	36.7	40.6	5	33	10	150	53.3
ATVS8T36A	ATVS8T36CA	36A	36C	40	44.2	5	36	10	138	58.1
ATVS8T40A	ATVS8T40CA	40A	40C	44.4	49.1	5	40	10	124	64.5
ATVS8T43A	ATVS8T43CA	43A	43C	47.8	52.8	5	43	10	115	69.4

Note 1：Uni-directional

Ratings and Characteristics Curves (TA = 25℃ unless otherwise noted)

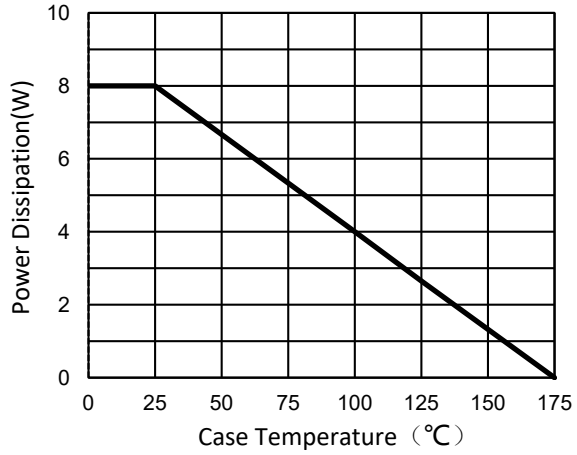


Fig.1 – Power Derating Curve

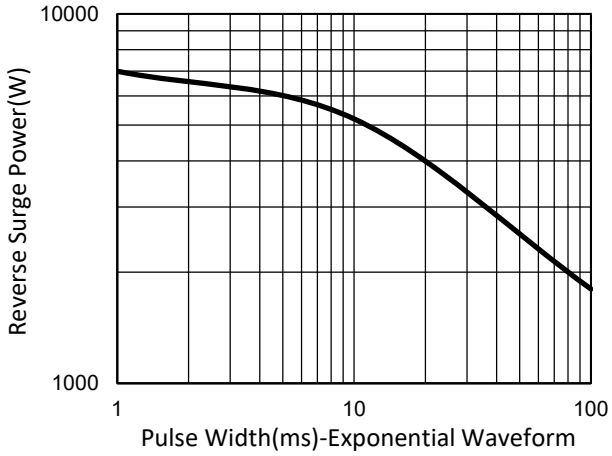


Fig.2 – Reverse Power Capability

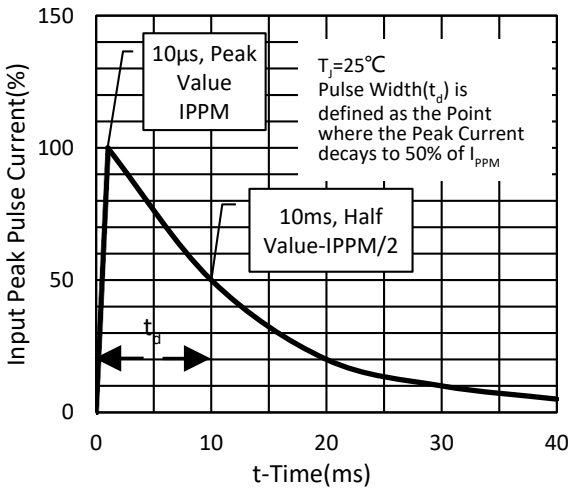


Fig.3 – Pulse Waveform

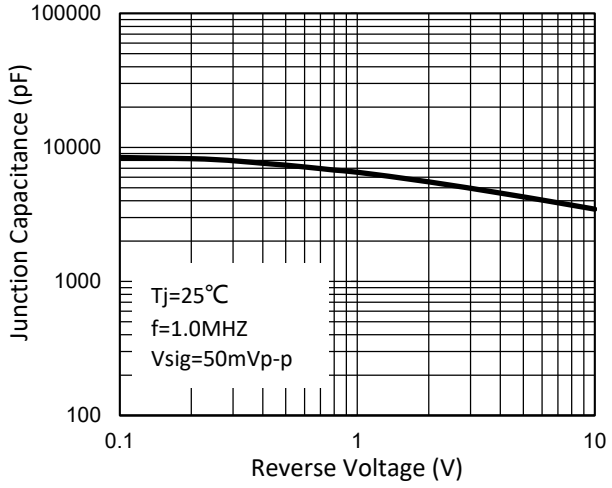
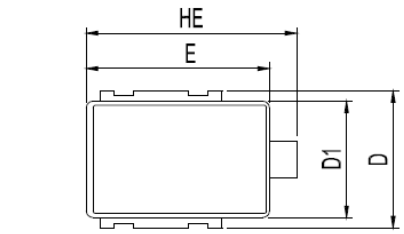
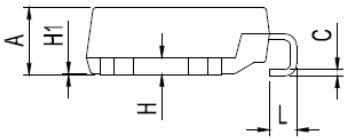


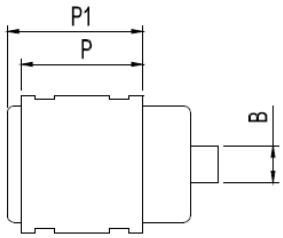
Fig.4 – Typical Junction Capacitance

Package Outline Dimensions

in inches (millimeters)

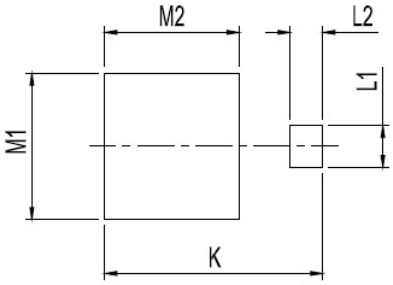






Polarity: Heatsink is anode

Footprint (reference)



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DIM	Millimeters		Inches	
	MIN	MAX	MIN	MAX
A	4.70	5.10	0.185	0.201
B	2.50	2.90	0.098	0.114
C	0.40	0.60	0.016	0.024
D	9.50	10.50	0.374	0.413
D1	8.35	8.65	0.329	0.341
E	13.35	13.65	0.526	0.537
H	1.20	1.50	0.047	0.059
H1	0.10 typ.		0.004 typ.	
HE	15.00	16.00	0.591	0.630
L	1.50	2.50	0.059	0.098
P	8.70	9.30	0.343	0.366
P1	9.70	10.30	0.382	0.406
M1	9.50	10.50	0.374	0.413
M2	8.70	9.30	0.343	0.366
L1	2.40	3.00	0.094	0.118
L2	1.70	2.30	0.067	0.091
K	15.00	16.00	0.591	0.630

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