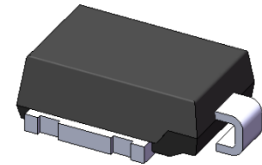


6600W, 14 - 60V Transient Voltage Suppressors

Features

- AEC-Q101 qualified TVS product
- 6.6KW surge capability at 10/1000 μ s waveform
- Tj 175°C high temperature performance
- Low leakage current
- Excellent clamping capability
- MSL level 1, per J-STD-020
- Halogen free and RoHS compliant



DO-218

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}	6600	W
Peak power dissipation with a 10/10000us waveform	P _{PPM}	5200	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°C	P _D	8	W
Maximum instantaneous forward voltage at 100A(<i>Note 1</i>)	V _F	1.8	V
Peak forward surge current, 8.3ms single half-sine wave(<i>Note 1</i>)	I _{FSM}	700	A
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +175	°C

Thermal-Mechanical Specifications (T_A=25°C 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 IT (mA)	Stand off Voltage VWM (V)	Maximum reverse leakage at VWM ID (μA)	Maximum Peak Pulse Current IPPM (A)	Maximum Clamping Voltage at IPPM VC(V)
		UNI	BI	Min	Max					
ATVS8K14A	ATVS8K14CA	TVS8K14A	TVS8K14C	15.6	17.2	5	14	10	284	23.2
ATVS8K15A	ATVS8K15CA	TVS8K15A	TVS8K15C	16.7	18.5	5	15	10	270	24.4
ATVS8K16A	ATVS8K16CA	TVS8K16A	TVS8K16C	17.8	19.7	5	16	10	254	26
ATVS8K17A	ATVS8K17CA	TVS8K17A	TVS8K17C	18.9	20.9	5	17	10	239	27.6
ATVS8K18A	ATVS8K18CA	TVS8K18A	TVS8K18C	20	22.1	5	18	10	226	29.2
ATVS8K20A	ATVS8K20CA	TVS8K20A	TVS8K20C	22.2	24.5	5	20	10	204	32.4
ATVS8K22A	ATVS8K22CA	TVS8K22A	TVS8K22C	24.4	26.9	5	22	10	186	35.5
ATVS8K24A	ATVS8K24CA	TVS8K24A	TVS8K24C	26.7	29.5	5	24	10	170	38.9
ATVS8K26A	ATVS8K26CA	TVS8K26A	TVS8K26C	28.9	31.9	5	26	10	157	42.1
ATVS8K28A	ATVS8K28CA	TVS8K28A	TVS8K28C	31.1	34.4	5	28	10	145	45.4
ATVS8K30A	ATVS8K30CA	TVS8K30A	TVS8K30C	33.3	36.8	5	30	10	136	48.4
ATVS8K33A	ATVS8K33CA	TVS8K33A	TVS8K33C	36.7	40.6	5	33	10	124	53.3
ATVS8K36A	ATVS8K36CA	TVS8K36A	TVS8K36C	40	44.2	5	36	10	114	58.1
ATVS8K40A	ATVS8K40CA	TVS8K40A	TVS8K40C	44.4	49.1	5	40	10	102	64.5
ATVS8K43A	ATVS8K43CA	TVS8K43A	TVS8K43C	47.8	52.8	5	43	10	95.1	69.4
ATVS8K45A	ATVS8K45CA	TVS8K45A	TVS8K45C	50.0	55.3	5	45	10	90.8	72.7
ATVS8K48A	ATVS8K48CA	TVS8K48A	TVS8K48C	53.3	58.9	5	48	10	85.3	77.4
ATVS8K51A	ATVS8K51CA	TVS8K51A	TVS8K51C	56.7	62.7	5	51	10	80.1	82.4
ATVS8K54A	ATVS8K54CA	TVS8K54A	TVS8K54C	60.0	66.3	5	54	10	75.8	87.1
ATVS8K58A	ATVS8K58CA	TVS8K58A	TVS8K58C	64.4	71.2	5	58	10	70.5	93.6
ATVS8K60A	ATVS8K60CA	TVS8K60A	TVS8K60C	66.7	73.7	5	60	10	68.2	96.8

Note 1: Uni-directional

Ratings and Characteristics Curves (T_A = 25°C unless otherwise noted)

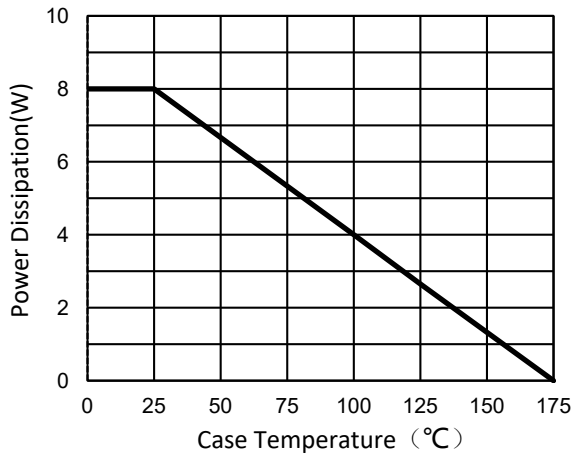


Fig.1 – Power Derating Curve

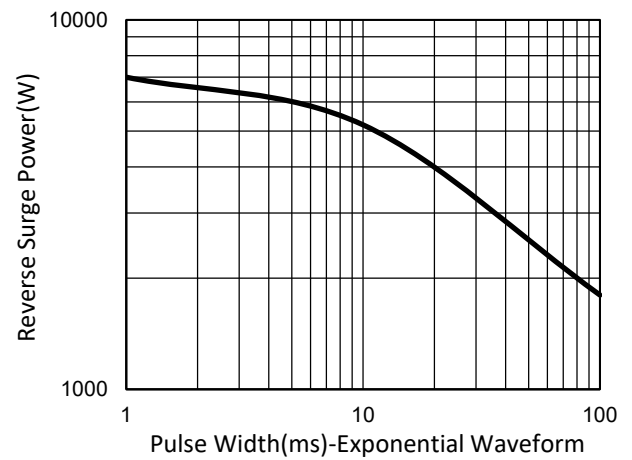


Fig.2 – Reverse Power Capability

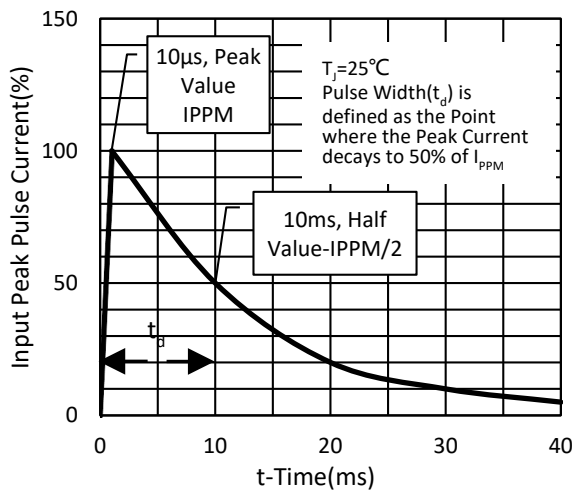


Fig.3 – Pulse Waveform

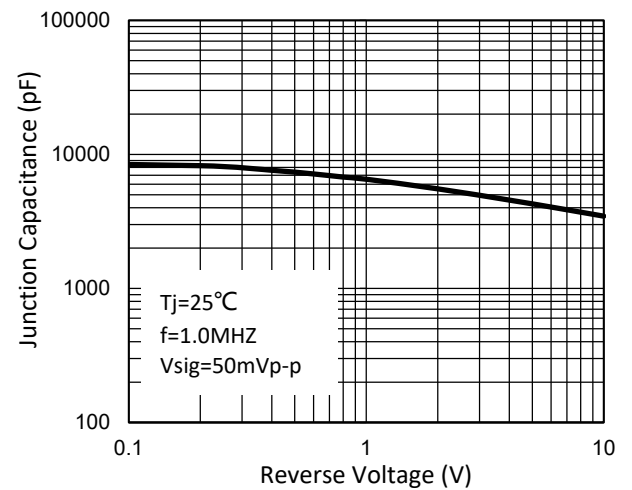
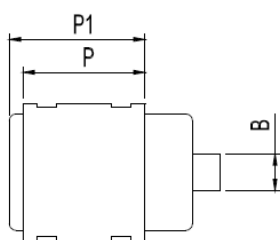
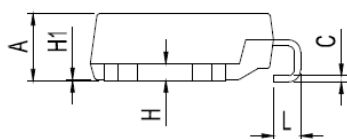
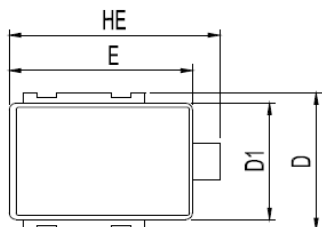


Fig.4 – Typical Junction Capacitance

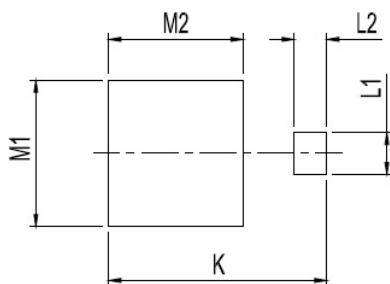
Package Outline Dimensions

in inches (millimeters)



Polarity: Heatsink is anode

Footprint (reference)



DO-218				
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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