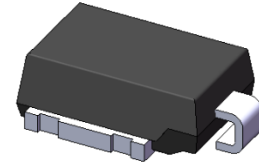


4600W, 10 - 43V Transient Voltage Suppressors

Features

- AEC-Q101 qualified TVS product
- 4.6KW surge capability at 10/1000 μ s waveform
- Tj 175 $^{\circ}$ 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.

Absolute Maximum Ratings (T_A=25 $^{\circ}$ C unless otherwise noted)

Parameter	Symbol	Ratings	Unit
Peak power dissipation with a 10/1000 μ s waveform	P _{PPM}	4600	W
Peak power dissipation with a 10/10000 μ s waveform	P _{PPM}	3600	W
Peak pulse current with a 10/1000 μ s waveform	I _{PPM}	See Next Table	A
Power dissipation, on infinite heat sink at T _c =25 $^{\circ}$ C	P _D	6	W
Maximum instantaneous forward voltage at 100A	V _F	1.9 ⁽¹⁾	V
Peak forward surge current, 8.3ms single half-sine wave	I _{FSM}	600 ⁽¹⁾	A
Typical thermal resistance , junction to case	R _{θJC}	0.95	$^{\circ}$ C/W
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +175	$^{\circ}$ C



ATVS6K10A thru ATVS6K43CA

GOOD-ARK Electronics

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

Part Number (Uni)	Part Number (Bi)	Marking		Breakdown Voltage VBR (Volts)		Test Current I _T (mA)	Stand off Voltage V _{WM} (Volts)	Maximum reverse leakage at V _{WM} I _D (μA)	Maximum Peak Pulse Current I _{PPM} (A)	Maximum Clamping Voltage at I _{PPM} V _C (Volts)
		UNI	BI	Min	Max					
ATVS6K11A	ATVS6K11CA	11A	11C	12.2	13.5	5	11	10	253	18.2
ATVS6K12A	ATVS6K12CA	12A	12C	13.3	14.7	5	12	10	231	19.9
ATVS6K13A	ATVS6K13CA	13A	13C	14.4	15.9	5	13	10	214	21.5
ATVS6K14A	ATVS6K14CA	14A	14C	15.6	17.2	5	14	10	198	23.2
ATVS6K15A	ATVS6K15CA	15A	15C	16.7	18.5	5	15	10	189	24.4
ATVS6K16A	ATVS6K16CA	16A	16C	17.8	19.7	5	16	10	177	26
ATVS6K17A	ATVS6K17CA	17A	17C	18.9	20.9	5	17	10	167	27.6
ATVS6K18A	ATVS6K18CA	18A	18C	20	22.1	5	18	10	158	29.2
ATVS6K20A	ATVS6K20CA	20A	20C	22.2	24.5	5	20	10	142	32.4
ATVS6K22A	ATVS6K22CA	22A	22C	24.4	26.9	5	22	10	130	35.5
ATVS6K24A	ATVS6K24CA	24A	24C	26.7	29.5	5	24	10	118	38.9
ATVS6K26A	ATVS6K26CA	26A	26C	28.9	31.9	5	26	10	109	42.1
ATVS6K28A	ATVS6K28CA	28A	28C	31.1	34.4	5	28	10	101	45.4
ATVS6K30A	ATVS6K30CA	30A	30C	33.3	36.8	5	30	10	95	48.4
ATVS6K33A	ATVS6K33CA	33A	33C	36.7	40.6	5	33	10	86	53.3
ATVS6K36A	ATVS6K36CA	36A	36C	40	44.2	5	36	10	79	58.1
ATVS6K40A	ATVS6K40CA	40A	40C	44.4	49.1	5	40	10	71	64.5
ATVS6K43A	ATVS6K43CA	43A	43C	47.8	52.8	5	43	10	66	69.4

Note (1): Uni-directional

Ratings and Characteristics Curves

($T_A = 25^\circ\text{C}$ unless otherwise noted)

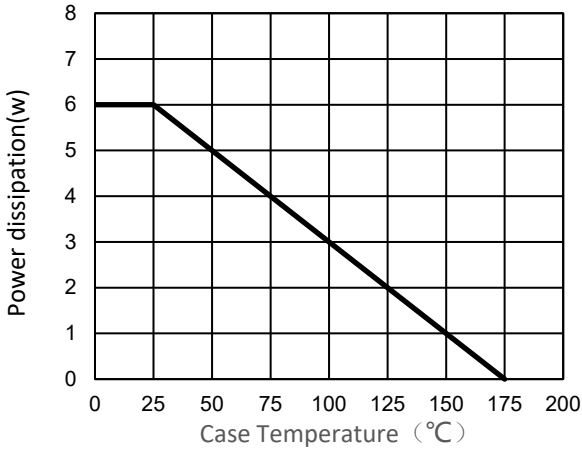


Fig.1 – Power Derating Curve

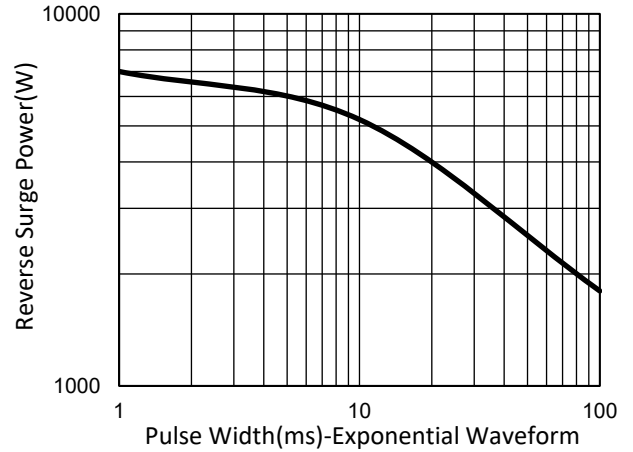


Fig.2 – Reverse Power Capability

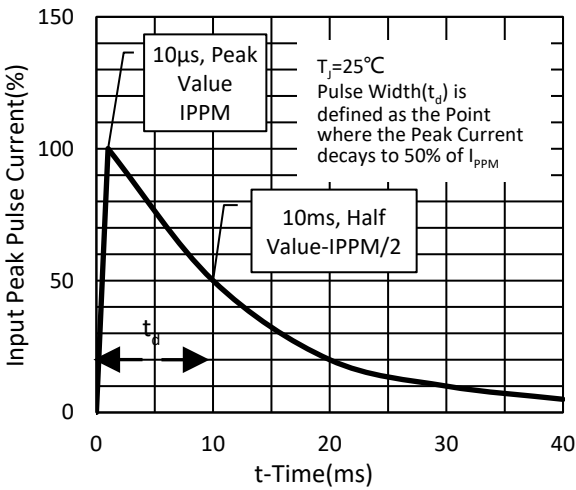


Fig.3 – Pulse Waveform

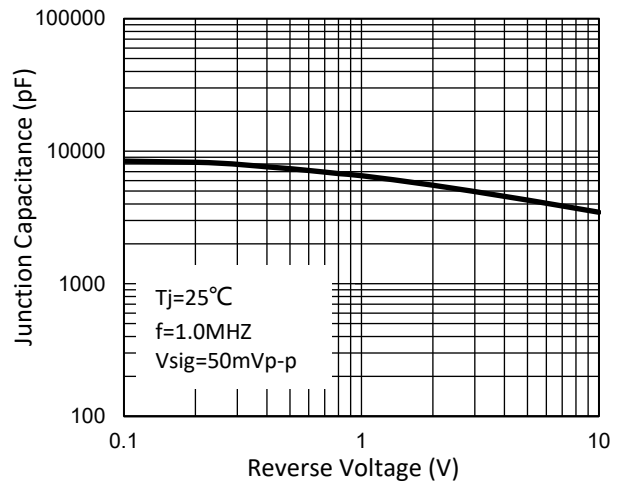
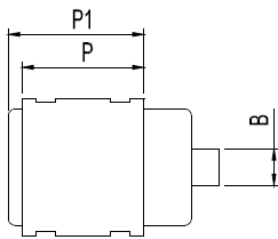
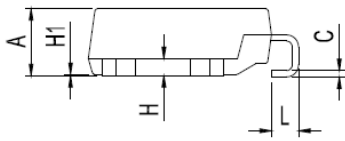
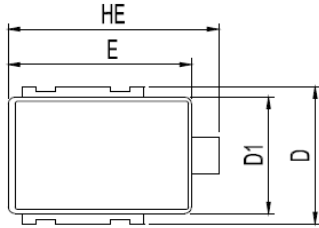


Fig.4 – Typical Junction Capacitance

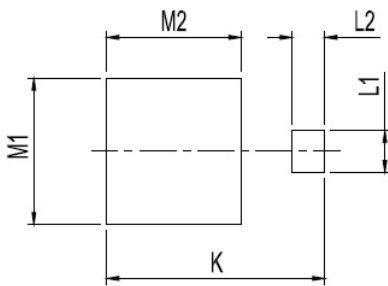
Package Outline Dimensions

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

Revision History

Document Version	Date of release	Discription of changes
Rev.A	2021.06.15	Released Datasheet
Rev.B	2023.08.31	Modify document format



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