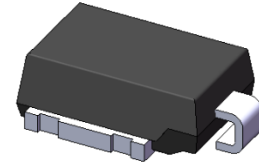


3600W, 14 - 43V Transient Voltage Suppressors

Features

- AEC-Q101 qualified TVS product
- 3.6KW 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}	3600	W
Peak power dissipation with a 10/10000 μ s waveform	P _{PPM}	2800	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	5	W
Maximum instantaneous forward voltage at 100A	V _F	2.0 ⁽¹⁾	V
Peak forward surge current, 8.3ms single half-sine wave	I _{FSM}	500 ⁽¹⁾	A
Typical thermal resistance , junction to case	R _{θJC}	1.0	$^{\circ}$ C/W
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +175	$^{\circ}$ C



ATVS5K14A thru ATVS5K43CA

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					
ATVS5K14A	ATVS5K14CA	14A	14C	15.6	17.2	5	14	10	155	23.2
ATVS5K15A	ATVS5K15CA	15A	15C	16.7	18.5	5	15	10	148	24.4
ATVS5K16A	ATVS5K16CA	16A	16C	17.8	19.7	5	16	10	138	26
ATVS5K17A	ATVS5K17CA	17A	17C	18.9	20.9	5	17	10	130	27.6
ATVS5K18A	ATVS5K18CA	18A	18C	20	22.1	5	18	10	123	29.2
ATVS5K20A	ATVS5K20CA	20A	20C	22.2	24.5	5	20	10	111	32.4
ATVS5K22A	ATVS5K22CA	22A	22C	24.4	26.9	5	22	10	101	35.5
ATVS5K24A	ATVS5K24CA	24A	24C	26.7	29.5	5	24	10	93	38.9
ATVS5K26A	ATVS5K26CA	26A	26C	28.9	31.9	5	26	10	86	42.1
ATVS5K28A	ATVS5K28CA	28A	28C	31.1	34.4	5	28	10	79	45.4
ATVS5K30A	ATVS5K30CA	30A	30C	33.3	36.8	5	30	10	74	48.4
ATVS5K33A	ATVS5K33CA	33A	33C	36.7	40.6	5	33	10	68	53.3
ATVS5K36A	ATVS5K36CA	36A	36C	40	44.2	5	36	10	62	58.1
ATVS5K40A	ATVS5K40CA	40A	40C	44.4	49.1	5	40	10	56	64.5
ATVS5K43A	ATVS5K43CA	43A	43C	47.8	52.8	5	43	10	52	69.4

Note (1): Uni-directional

Ratings and Characteristics Curves

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

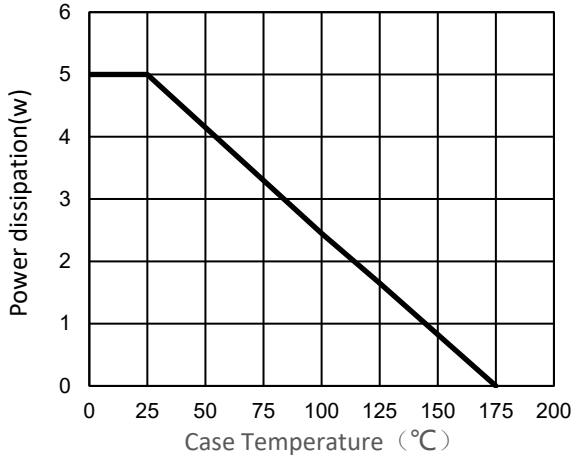


Fig.1 – Power Derating Curve

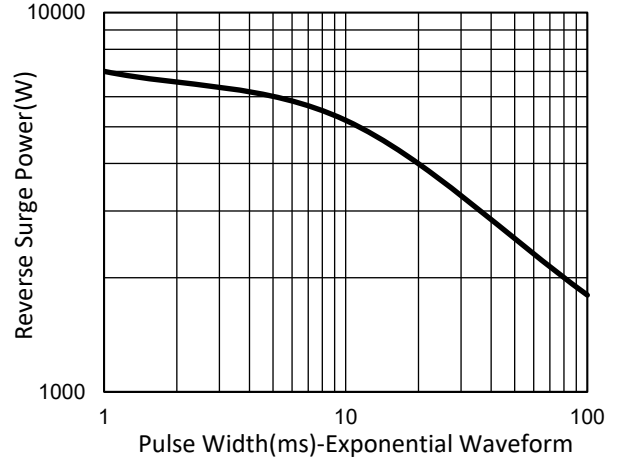


Fig.2 – Reverse Power Capability

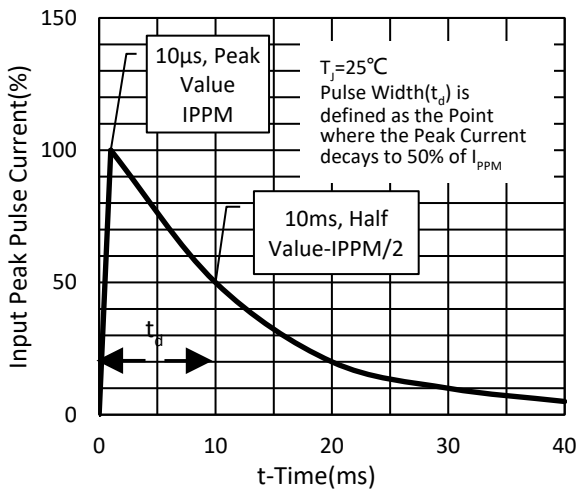


Fig.3 – Pulse Waveform

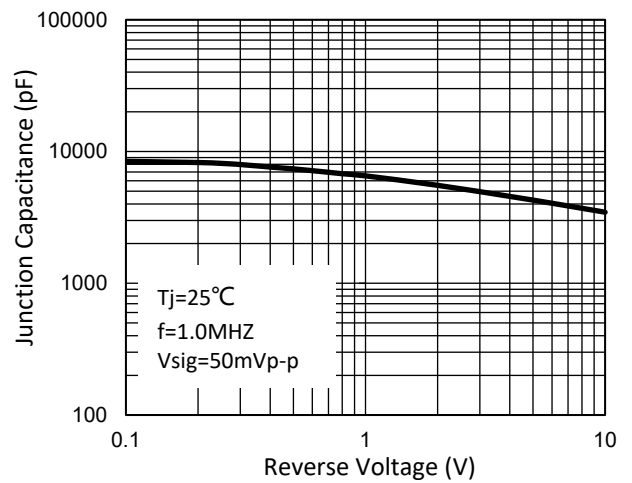
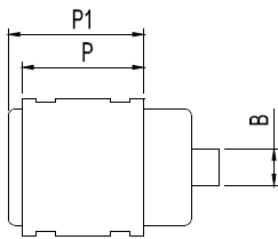
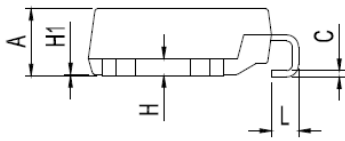
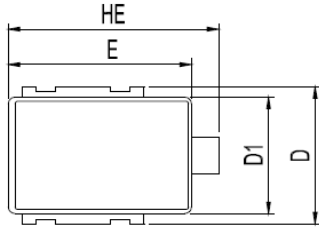


Fig.4 – Typical Junction Capacitance

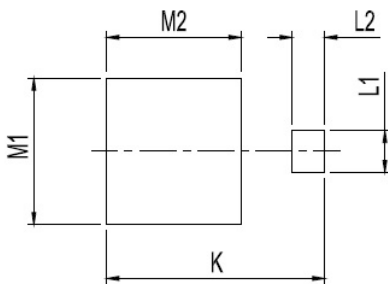
Package Outline Dimensions

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



Disclaimers

These materials are intended as a reference to assist our customers in the selection of the Suzhou Good-Ark product best suited to the customer's application; they do not convey any license under any intellectual property rights, or any other rights, belonging to Suzhou Good-Ark Electronics Co., Ltd. or a third party.

Suzhou Good-Ark Electronics Co., Ltd. assumes no responsibility for any damage, or infringement of any third-party's rights, originating in the use of any product data, diagrams, charts, programs, algorithms, or circuit application examples contained in these materials.

All information contained in these materials, including product data, diagrams, charts, programs and algorithms represents information on products at the time of publication of these materials, and are subject to change by Suzhou Good-Ark Electronics Co., Ltd. without notice due to product improvements or other reasons. It is therefore recommended that customers contact Suzhou Good-Ark Electronics Co., Ltd. or an authorized Suzhou Good-Ark Electronics Co., Ltd. for the latest product information before purchasing a product listed herein. The information described here may contain technical inaccuracies or typographical errors. Suzhou Good-Ark Electronics Co., Ltd. assumes no responsibility for any damage, liability, or other loss rising from these inaccuracies or errors. Please also pay attention to information published by Suzhou Good-Ark Electronics Co., Ltd. by various means, including our website home page.

(<http://www.goodark.com>)

When using any or all of the information contained in these materials, including product data, diagrams, charts, programs, and algorithms, Please be sure to evaluate all information as a total system before making a final decision on the applicability of the information and products. Suzhou Good-Ark Electronics Co., Ltd. assumes no responsibility for any damage, liability or other loss resulting from the information contained herein.

The prior written approval of Suzhou Good-Ark Electronics Co., Ltd. is necessary to reprint or reproduce in whole or in part these materials.

Please contact Suzhou Good-Ark Electronics Co., Ltd. or an authorized distributor for further details on these materials or the products contained herein.