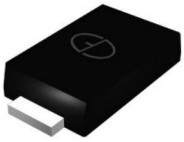
200W,10 - 43V Transient Voltage Suppressors

Features

- Very fast response time
- Glass passivated junction
- Moisture sensitivity: level 1, per J-STD-020
- Plastic package has underwriters Laboratory Flammability Classification 94V-0
- Halogen-free according to IEC 61249-2-21 definition
- 200 W peak pulse power capability with a 10/1000 μs waveform
- AEC-Q101 qualified

RoHS
COMPLIANT



iSGP (SOD-323HE)

Applications

- SMPS
- Adapters
- Monitor

Absolute Maximum Ratings (T_A=25°C unless otherwise noted)

Parameter	Symbol	Ratings	Unit
Peak power dissipation with a 10/1000us waveform	P_{PPM}	200	W
Peak pulse current with a 10/1000us waveform	I_{PPM}	See Next Table	A
Power dissipation, on infinite heat sink at T_L=75℃	P_D	1	W
Peak forward surge current, 8.3ms single half-sine wave	I_{FSM}	15	A
Typical Thermal Resistance , Junction to Ambient	$R_{\theta JA}$	110	℃/W
Typical Thermal Resistance , Junction to Case	$R_{\theta JC}$	40	℃/W
Typical Thermal Resistance , Junction to Lead	$R_{\theta JL}$	70	℃/W
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150	℃

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

Part Number	Marking	Breakdown Voltage VBR (Volts)		Test Current I_T (mA)	Stand off Voltage V_{WM} (Volts)	Maximum reverse leakage at VWM I_D (μA)	Maximum Peak Pulse Current I_{PPM} (A)	Maximum Clamping Voltage at I_{PPM} V_C(Volts)
		Min	Max					
AP2TVS10A	A2JP	11.1	12.3	1.0	10	5.0	11.8	17.0
AP2TVS11A	A2KP	12.2	13.5	1.0	11	5.0	11.0	18.2
AP2TVS12A	A2LP	13.3	14.7	1.0	12	5.0	10.1	19.9
AP2TVS13A	A2MP	14.4	15.9	1.0	13	5.0	9.3	21.5
AP2TVS14A	A2NP	15.6	17.2	1.0	14	5.0	8.6	23.2
AP2TVS15A	A2QP	16.7	18.5	1.0	15	5.0	8.2	24.4
AP2TVS16A	A2RP	17.8	19.7	1.0	16	5.0	7.7	26.0
AP2TVS17A	A2SP	18.9	20.9	1.0	17	5.0	7.3	27.6
AP2TVS18A	A2TP	20.0	22.1	1.0	18	5.0	6.9	29.2
AP2TVS20A	A2UP	22.2	24.5	1.0	20	5.0	6.2	32.4
AP2TVS22A	A2VP	24.4	26.9	1.0	22	5.0	5.6	35.5
AP2TVS24A	A2WP	26.7	29.5	1.0	24	5.0	5.1	38.9
AP2TVS26A	A2XP	28.9	31.9	1.0	26	5.0	4.8	42.1
AP2TVS28A	A2YP	31.1	34.4	1.0	28	5.0	4.4	45.4
AP2TVS30A	A2ZP	33.3	36.8	1.0	30	5.0	4.1	48.4
AP2TVS33A	A2DR	36.7	40.6	1.0	33	5.0	3.8	53.3
AP2TVS36A	A2ER	40.0	44.4	1.0	36	5.0	3.4	58.1
AP2TVS40A	A2FR	44.4	49.1	1.0	40	5.0	3.1	64.5
AP2TVS43A	A2GR	47.8	52.8	1.0	43	5.0	2.9	69.4

Note：

1. The thermal resistance from junction to ambient, case or lead, mounted on P.C.B with 5×5mm copper pads

Ratings and Characteristics Curves

(TA = 25℃ unless otherwise noted)

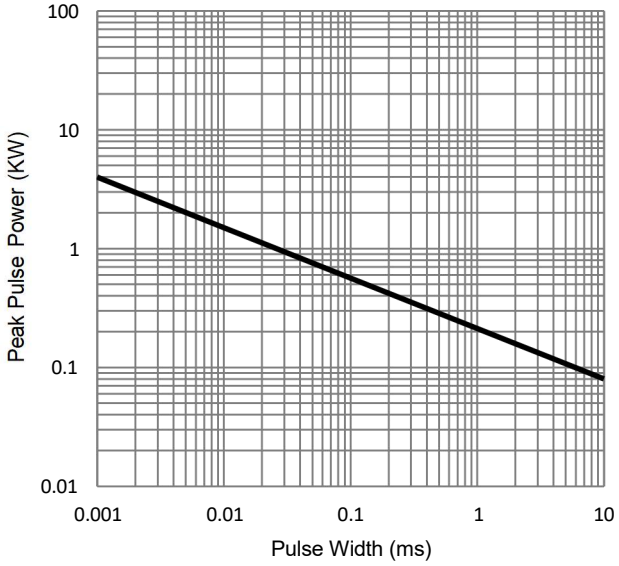


Fig.1 –Peak Pulse Power Derating Curve

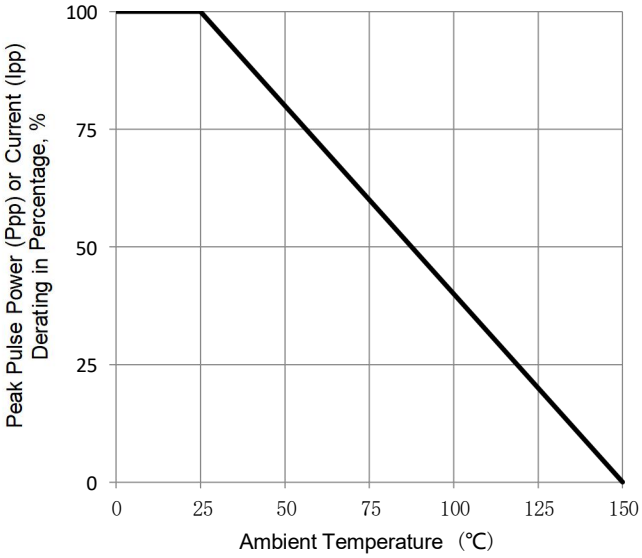


Fig.2 – Pulse Power vs Ambient Temperature

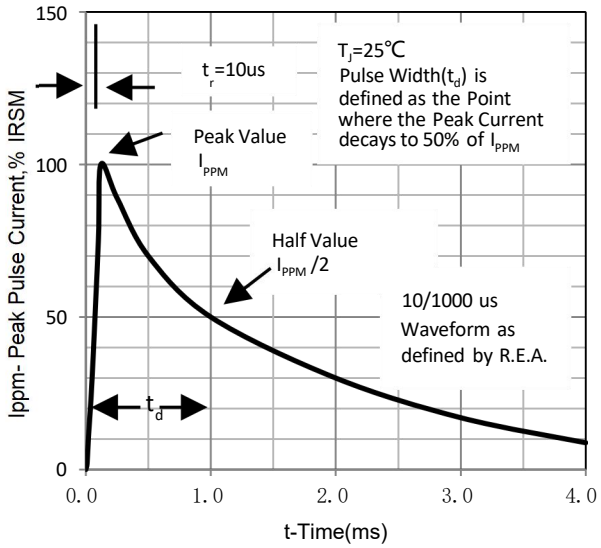


Fig.3 – Pulse Waveform

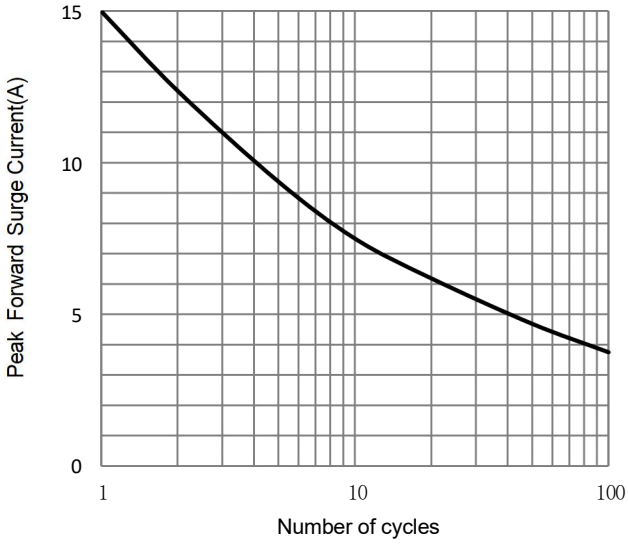
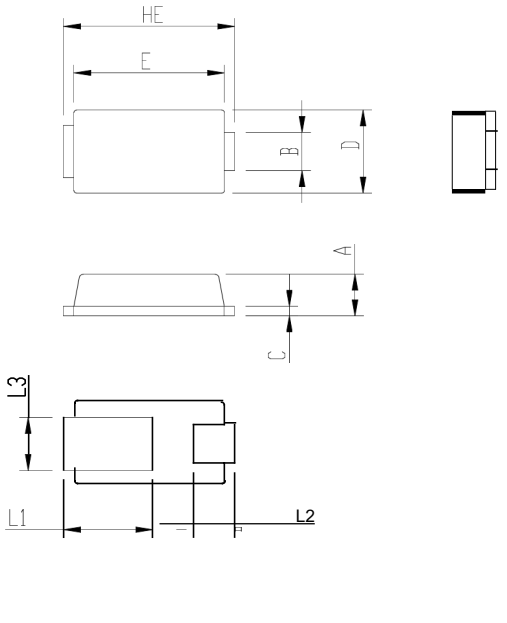


Fig.4 – Maximum Non-Repetitive Surge Current

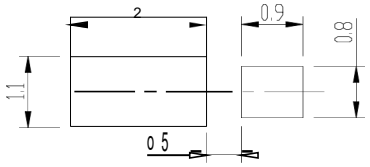
Package Outline Dimensions

in inches (millimeters)

iSGP (SOD-323HE)



iSGP (SOD-323HE)		
	MIN	MAX
A	0.60	0.73
B	0.55	0.75
C	0.10	0.25
D	1.20	1.40
E	2.10	2.30
HE	2.30	2.70
L1	1.10	1.50
L2	0.40	0.75
L3	0.75	1.00



Revision History

Document Version	Date of release	Description of changes
Rev.A	2023.06.15	Released Datasheet
Rev.B	2023.10.23	Modify document format
Rev.C	2025.08.22	Modify marking code

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.