

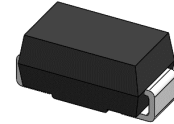
600W,10 - 90V Transient Voltage Suppressors

Features

- Very fast response time
- Glass passivated junction
- Moisture sensitivity: level 1, per J-STD-020
- Available in unidirectional and bidirectional
- Plastic package has underwriters Laboratory Flammability Classification 94V-0
- Halogen-free according to IEC 61249-2-21 definition
- 600W peak pulse power capability with a 10/1000 μ s waveform



RoHS
COMPLIANT



SMA(DO-214AC)

Applications

- SMPS
- Adapters
- Monitor

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

Parameter	Symbol	Ratings	Unit
Peak power dissipation with a 10/1000us waveform	P_{PPM}	600	W
Peak pulse current with a 10/1000us waveform	I_{PPM}	See Next Table	A
Power dissipation, on infinite heat sink at $T_L=75^\circ\text{C}$	P_D	3	W
Peak forward surge current, 8.3ms single half-sine wave	I_{FSM}	50	A
Typical Thermal Resistance , Junction to Ambient	$R_{\theta JA}$	90	$^\circ\text{C/W}$
Typical Thermal Resistance , Junction to Case	$R_{\theta JC}$	20	$^\circ\text{C/W}$
Typical Thermal Resistance , Junction to Lead	$R_{\theta JL}$	25	$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$



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

Part Number (Uni)	Part Number (Bi)	Marking		Breakdown Voltage VBR (Volts)		Test Current I _r (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					
SMA6J11A	SMA6J11CA	KZ	AZ	12.2	13.5	1.0	11	5.0	33.0	18.2
SMA6J12A	SMA6J12CA	LE	BE	13.3	14.7	1.0	12	5.0	30.2	19.9
SMA6J13A	SMA6J13CA	LG	BG	14.4	15.9	1.0	13	1.0	27.9	21.5
SMA6J14A	SMA6J14CA	LK	BK	15.6	17.2	1.0	14	1.0	25.9	23.2
SMA6J15A	SMA6J15CA	LM	BM	16.7	18.5	1.0	15	1.0	24.6	24.4
SMA6J16A	SMA6J16CA	LP	BP	17.8	19.7	1.0	16	1.0	23.1	26.0
SMA6J17A	SMA6J17CA	LR	BR	18.9	20.9	1.0	17	1.0	21.7	27.6
SMA6J18A	SMA6J18CA	LT	BT	20.0	22.1	1.0	18	1.0	20.5	29.2
SMA6J20A	SMA6J20CA	LV	BV	22.2	24.5	1.0	20	1.0	18.5	32.4
SMA6J22A	SMA6J22CA	LX	BX	24.4	26.9	1.0	22	1.0	16.9	35.5
SMA6J24A	SMA6J24CA	LZ	BZ	26.7	29.5	1.0	24	1.0	15.4	38.9
SMA6J26A	SMA6J26CA	ME	CE	28.9	31.9	1.0	26	1.0	14.3	42.1
SMA6J28A	SMA6J28CA	MG	CG	31.1	34.4	1.0	28	1.0	13.2	45.4
SMA6J30A	SMA6J30CA	MK	CK	33.3	36.8	1.0	30	1.0	12.4	48.4
SMA6J33A	SMA6J33CA	MM	CM	36.7	40.6	1.0	33	1.0	11.3	53.3
SMA6J36A	SMA6J36CA	MP	CP	40.0	44.4	1.0	36	1.0	10.3	58.1
SMA6J40A	SMA6J40CA	MR	CR	44.4	49.1	1.0	40	1.0	9.3	64.5
SMA6J43A	SMA6J43CA	MT	CT	47.8	52.8	1.0	43	1.0	8.6	69.4
SMA6J45A	SMA6J45CA	MV	CV	50.0	55.3	1.0	45	1.0	8.3	72.7
SMA6J48A	SMA6J48CA	MX	CX	53.3	58.9	1.0	48	1.0	7.8	77.4
SMA6J51A	SMA6J51CA	MZ	CZ	56.7	62.7	1.0	51	1.0	7.3	82.4
SMA6J54A	SMA6J54CA	NE	DE	60.0	66.3	1.0	54	1.0	6.9	87.1
SMA6J58A	SMA6J58CA	NG	DG	64.4	71.2	1.0	58	1.0	6.4	93.6
SMA6J60A	SMA6J60CA	NK	DK	66.7	73.7	1.0	60	1.0	6.2	96.8
SMA6J64A	SMA6J64CA	NM	DM	71.1	78.6	1.0	64	1.0	5.8	103
SMA6J70A	SMA6J70CA	NP	DP	77.8	86.0	1.0	70	1.0	5.3	113
SMA6J75A	SMA6J75CA	NR	DR	83.3	92.1	1.0	75	1.0	5.0	121
SMA6J78A	SMA6J78CA	RT	DT	86.7	95.8	1.0	78	1.0	4.8	126
SMA6J85A	SMA6J85CA	NV	DV	94.4	104	1.0	85	1.0	4.4	137
SMA6J90A	SMA6J90CA	NX	DX	100	111	1.0	90	1.0	4.1	146

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

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

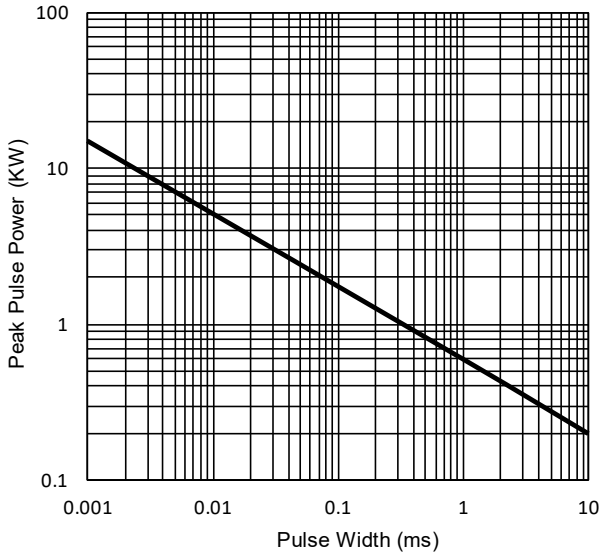


Fig.1 - Peak Pulse Power Derating Curve

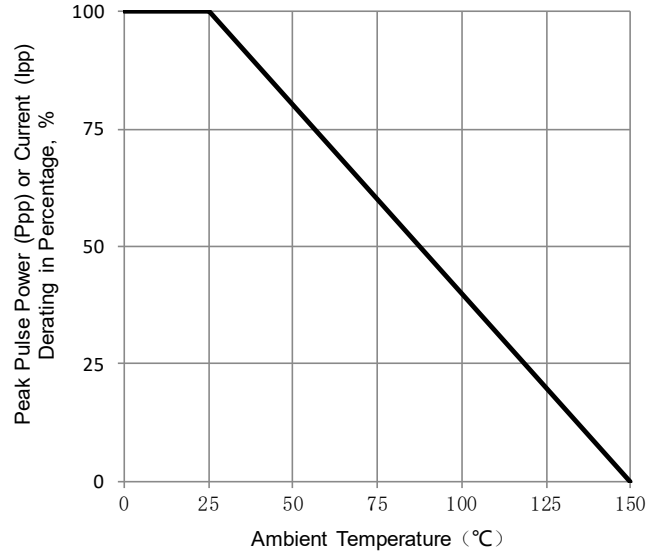


Fig.2 - Pulse Power vs Ambient Temperature

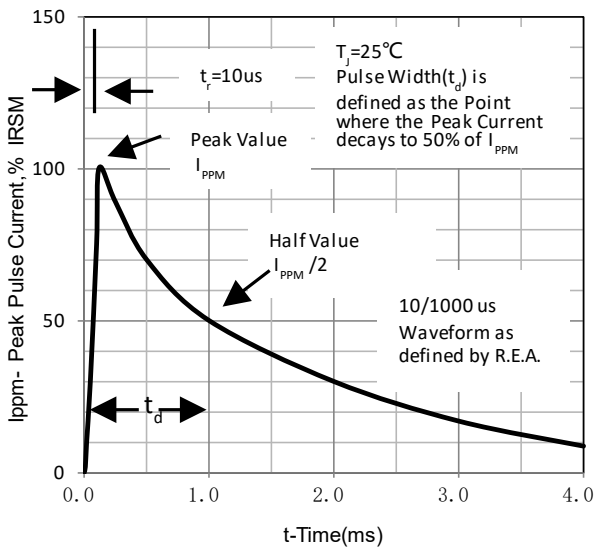


Fig.3 - Pulse Waveform

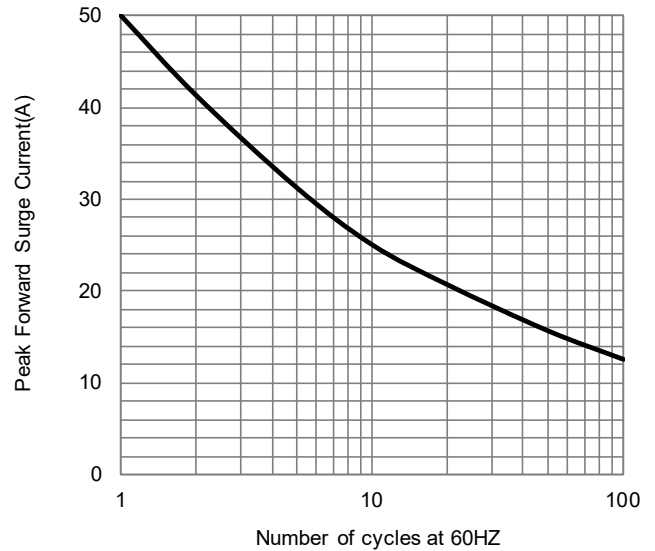
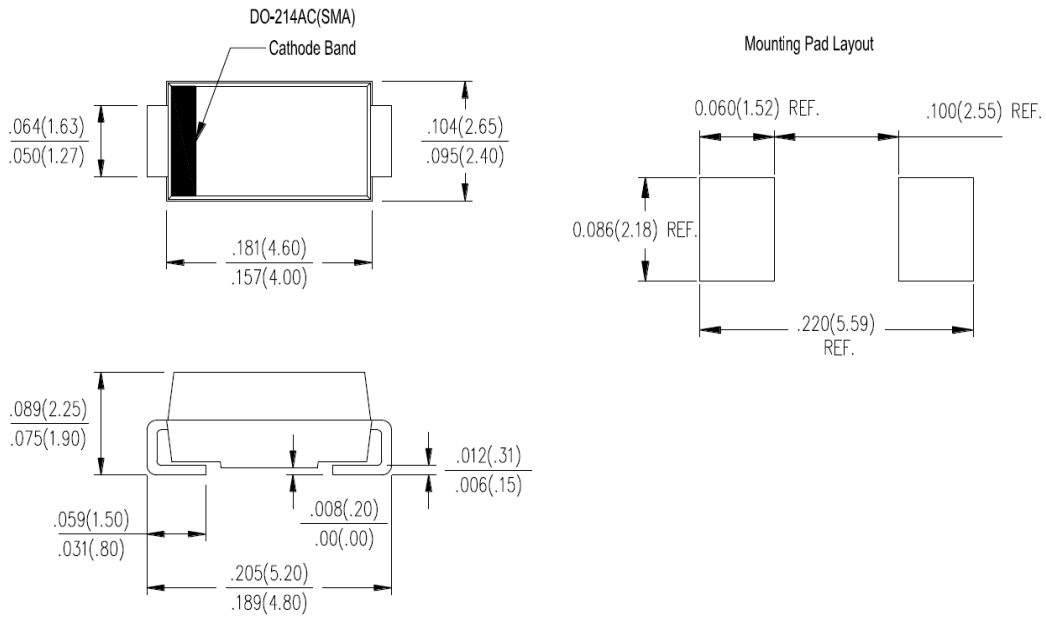


Fig.4 - Maximum Non-Repetitive Surge Current

Package Outline Dimensions

in inches (millimeters)

SMA (DO-214AC)



Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.15	Released Datasheet
Rev.B	2023.10.13	Modify document format
Rev.C	2023.12.18	Update product range

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.