

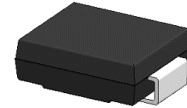
5000W,10 - 58V Transient Voltage Suppressors

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
- 5000 W peak pulse power capability with a 10/1000 μ s waveform



RoHS
COMPLIANT



SMC (DO-214AB)

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}	5000	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	5	W
Peak forward surge current, 8.3ms single half-sine wave	I_{FSM}	300	A
Typical Thermal Resistance , Junction to Ambient	$R_{\theta JA}$	65	$^\circ\text{C/W}$
Typical Thermal Resistance , Junction to Case	$R_{\theta JC}$	10	$^\circ\text{C/W}$
Typical Thermal Resistance , Junction to Lead	$R_{\theta JL}$	15	$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$



5.0SMCJ10A thru 5.0SMCJ58CA

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					
5.0SMCJ11A	5.0SMCJ11CA	JDZ	KDZ	12.2	13.5	10.0	11	5.0	274.7	18.2
5.0SMCJ12A	5.0SMCJ12CA	JEE	KEE	13.3	14.7	10.0	12	5.0	252.0	19.9
5.0SMCJ13A	5.0SMCJ13CA	JEG	KEG	14.4	15.9	10.0	13	5.0	233.0	21.5
5.0SMCJ14A	5.0SMCJ14CA	JEK	KEK	15.6	17.2	10.0	14	5.0	216.0	23.2
5.0SMCJ15A	5.0SMCJ15CA	JEM	KEM	16.7	18.5	1.0	15	5.0	205.0	24.4
5.0SMCJ16A	5.0SMCJ16CA	JEP	KEP	17.8	19.7	1.0	16	5.0	193.0	26.0
5.0SMCJ17A	5.0SMCJ17CA	JER	KER	18.9	20.9	1.0	17	5.0	181.0	27.6
5.0SMCJ18A	5.0SMCJ18CA	JET	KET	20.0	22.1	1.0	18	5.0	172.0	29.2
5.0SMCJ20A	5.0SMCJ20CA	JEV	KEV	22.2	24.5	1.0	20	5.0	155.0	32.4
5.0SMCJ22A	5.0SMCJ22CA	JEX	KEX	24.4	26.9	1.0	22	5.0	141.0	35.5
5.0SMCJ24A	5.0SMCJ24CA	JEZ	KEZ	26.7	29.5	1.0	24	5.0	129.0	38.9
5.0SMCJ26A	5.0SMCJ26CA	JFE	KFE	28.9	31.9	1.0	26	5.0	119.0	42.1
5.0SMCJ28A	5.0SMCJ28CA	JFG	KFG	31.1	34.4	1.0	28	5.0	110.0	45.4
5.0SMCJ30A	5.0SMCJ30CA	JFK	KFK	33.3	36.8	1.0	30	5.0	103.0	48.4
5.0SMCJ33A	5.0SMCJ33CA	JFM	KFM	36.7	40.6	1.0	33	5.0	93.9	53.3
5.0SMCJ36A	5.0SMCJ36CA	JFP	KFP	40.0	44.4	1.0	36	5.0	86.1	58.1
5.0SMCJ40A	5.0SMCJ40CA	JFR	KFR	44.4	49.1	1.0	40	5.0	77.6	64.5
5.0SMCJ43A	5.0SMCJ43CA	JFT	KFT	47.8	52.8	1.0	43	5.0	72.1	69.4
5.0SMCJ45A	5.0SMCJ45CA	JFV	KFV	50.0	55.3	1.0	45	5.0	68.8	72.7
5.0SMCJ48A	5.0SMCJ48CA	JFX	KFX	53.3	58.9	1.0	48	5.0	64.6	77.4
5.0SMCJ51A	5.0SMCJ51CA	JFZ	KFZ	56.7	62.7	1.0	51	5.0	60.7	82.4
5.0SMCJ54A	5.0SMCJ54CA	JGE	KGE	60.0	66.3	1.0	54	5.0	57.4	87.1
5.0SMCJ58A	5.0SMCJ58CA	JGG	KGG	64.4	71.2	1.0	58	5.0	53.5	93.6

Note:

1. The thermal resistance from junction to ambient, case or lead, mounted on P.C.B with 8×8mm copper pads

Ratings and Characteristics Curves

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

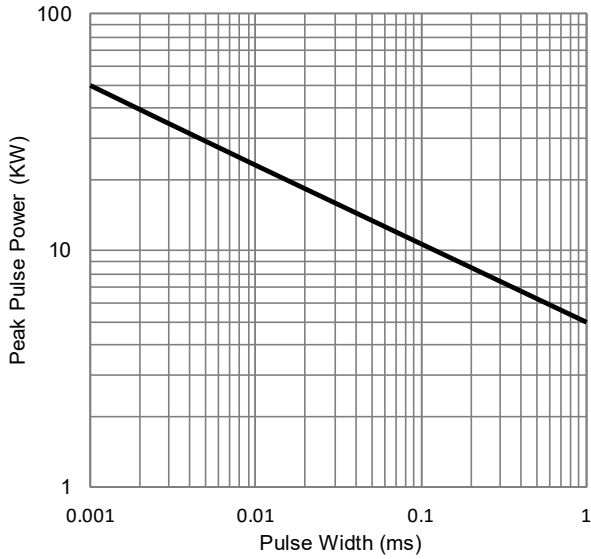


Fig.1 - Peak Pulse Power Derating Curve

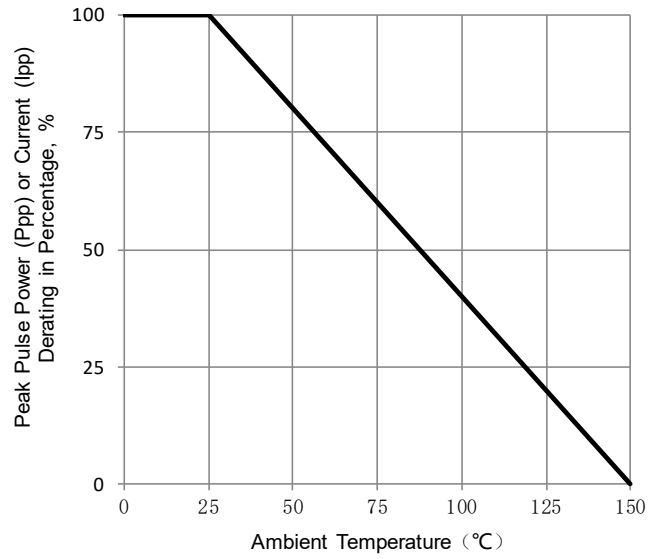


Fig.2 - Pulse Power vs Ambient Temperature

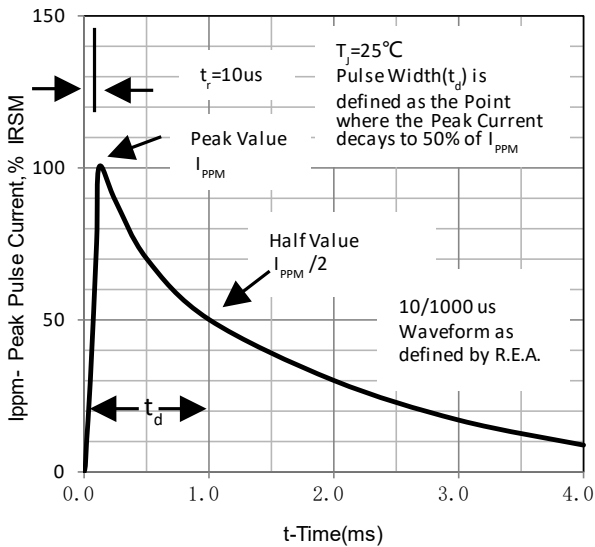


Fig.3 - Pulse Waveform

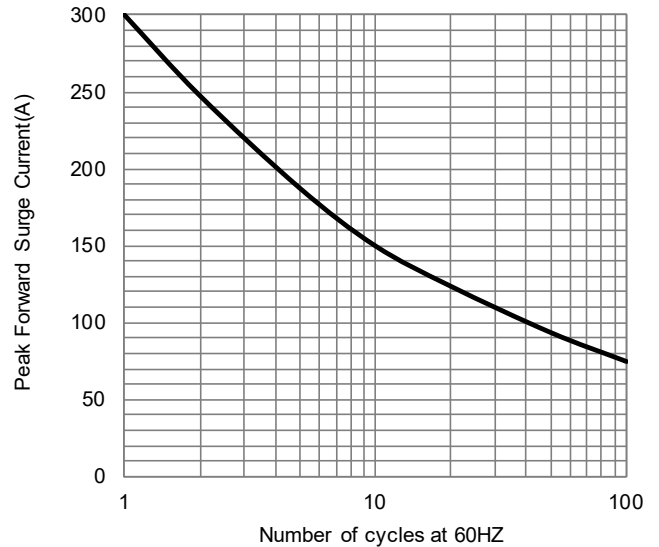
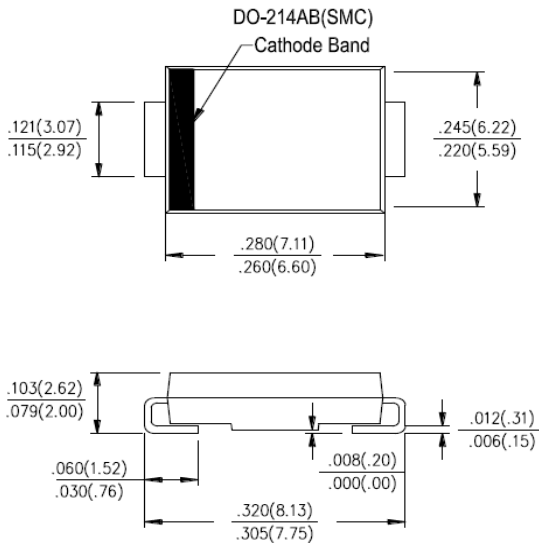


Fig.4 - Maximum Non-Repetitive Surge Current

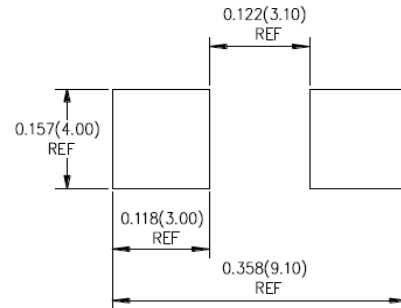
Package Outline Dimensions

in inches (millimeters)

SMC (DO-214AB)



Mounting Pad Layout



Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.15	Released Datasheet
Rev.B	2023.10.23	Modify document format
Rev.C	2023.12.18	Update product range

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