

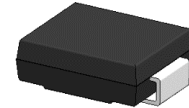
## 5000W, 10 - 58V Transient Voltage Suppressors

### 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  $\mu$ s waveform
- AEC-Q101 qualified



**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	$^\circ\text{C}$



# A5.0SMCJ10A thru A5.0SMCJ58CA

GOOD-ARK Electronics

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

Part Number (Uni)	Part Number (Bi)	Marking		Breakdown Voltage VBR (Volts)		Test Current IT (mA)	Stand off Voltage VWM (Volts)	Maximum reverse leakage at VWM ID (µA)	Maximum Peak Pulse Current IPPM (A)	Maximum Clamping Voltage at IPPM VC(Volts)
		UNI	BI	Min	Max					
A5.0SMCJ10A	A5.0SMCJ10CA	AJDX	AKDX	11.1	12.3	10.0	10	5.0	294.1	17.0
A5.0SMCJ11A	A5.0SMCJ11CA	AJDZ	AKDZ	12.2	13.5	10.0	11	5.0	274.7	18.2
A5.0SMCJ12A	A5.0SMCJ12CA	AJEE	AKEE	13.3	14.7	10.0	12	5.0	252.0	19.9
A5.0SMCJ13A	A5.0SMCJ13CA	AJEG	AKEG	14.4	15.9	10.0	13	5.0	233.0	21.5
A5.0SMCJ14A	A5.0SMCJ14CA	AJEK	AKEK	15.6	17.2	10.0	14	5.0	216.0	23.2
A5.0SMCJ15A	A5.0SMCJ15CA	AJEM	AKEM	16.7	18.5	1.0	15	5.0	205.0	24.4
A5.0SMCJ16A	A5.0SMCJ16CA	AJEP	AKEP	17.8	19.7	1.0	16	5.0	193.0	26.0
A5.0SMCJ17A	A5.0SMCJ17CA	AJER	AKER	18.9	20.9	1.0	17	5.0	181.0	27.6
A5.0SMCJ18A	A5.0SMCJ18CA	AJET	AKET	20.0	22.1	1.0	18	5.0	172.0	29.2
A5.0SMCJ20A	A5.0SMCJ20CA	AJEV	AKEV	22.2	24.5	1.0	20	5.0	155.0	32.4
A5.0SMCJ22A	A5.0SMCJ22CA	AJEX	AKEX	24.4	26.9	1.0	22	5.0	141.0	35.5
A5.0SMCJ24A	A5.0SMCJ24CA	AJEZ	AKEZ	26.7	29.5	1.0	24	5.0	129.0	38.9
A5.0SMCJ26A	A5.0SMCJ26CA	AJFE	AKFE	28.9	31.9	1.0	26	5.0	119.0	42.1
A5.0SMCJ28A	A5.0SMCJ28CA	AJFG	AKFG	31.1	34.4	1.0	28	5.0	110.0	45.4
A5.0SMCJ30A	A5.0SMCJ30CA	AJFK	AKFK	33.3	36.8	1.0	30	5.0	103.0	48.4
A5.0SMCJ33A	A5.0SMCJ33CA	AJFM	AKFM	36.7	40.6	1.0	33	5.0	93.9	53.3
A5.0SMCJ36A	A5.0SMCJ36CA	AJFP	AKFP	40.0	44.4	1.0	36	5.0	86.1	58.1
A5.0SMCJ40A	A5.0SMCJ40CA	AJFR	AKFR	44.4	49.1	1.0	40	5.0	77.6	64.5
A5.0SMCJ43A	A5.0SMCJ43CA	AJFT	AKFT	47.8	52.8	1.0	43	5.0	72.1	69.4
A5.0SMCJ45A	A5.0SMCJ45CA	AJFV	AKFV	50.0	55.3	1.0	45	5.0	68.8	72.7
A5.0SMCJ48A	A5.0SMCJ48CA	AJFX	AKFX	53.3	58.9	1.0	48	5.0	64.6	77.4
A5.0SMCJ51A	A5.0SMCJ51CA	AJFZ	AKFZ	56.7	62.7	1.0	51	5.0	60.7	82.4
A5.0SMCJ54A	A5.0SMCJ54CA	AJGE	AKGE	60.0	66.3	1.0	54	5.0	57.4	87.1
A5.0SMCJ58A	A5.0SMCJ58CA	AJGG	AKGG	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

(TA = 25°C unless otherwise noted)

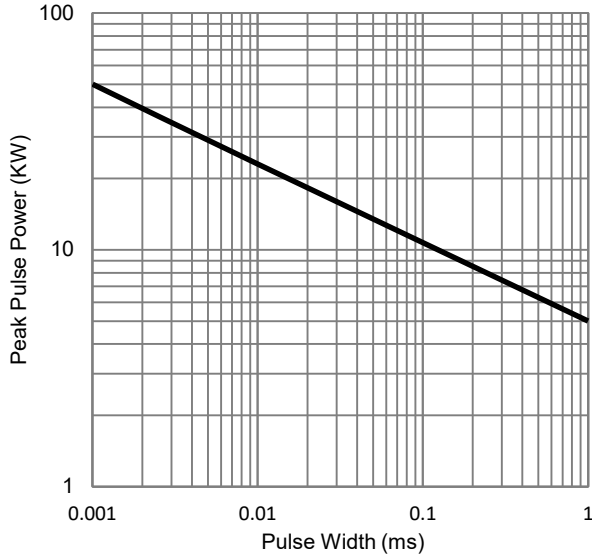


Fig.1 - Peak Pulse Power Derating Curve

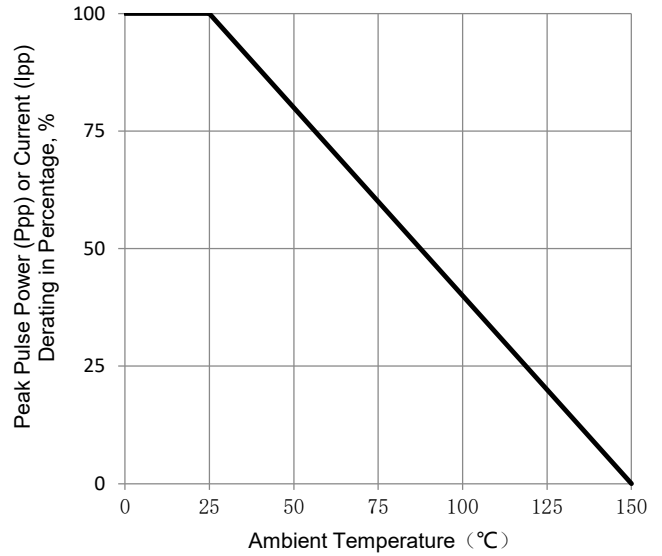


Fig.2 - Pulse Power vs Ambient Temperature

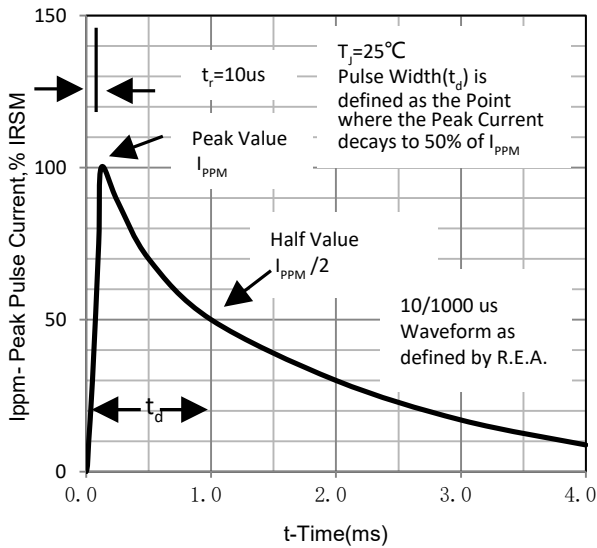


Fig.3 - Pulse Waveform

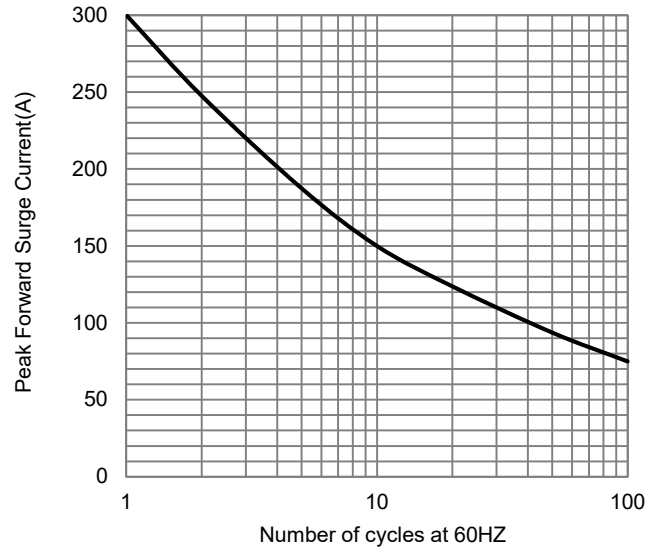
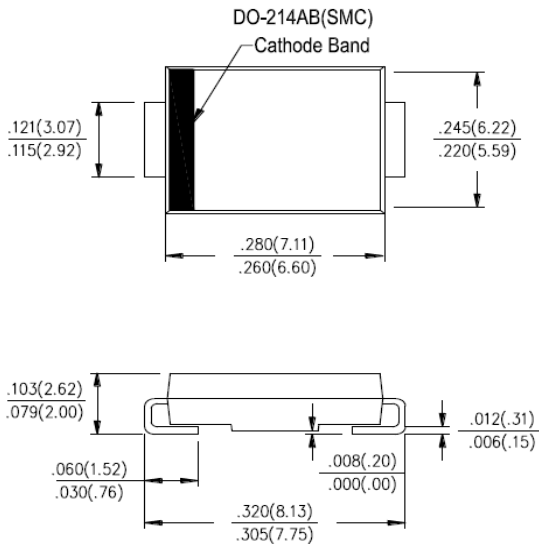


Fig.4 - Maximum Non-Repetitive Surge Current

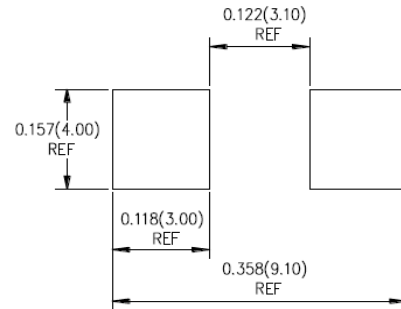
## Package Outline Dimensions

in inches (millimeters)

### SMC (DO-214AB)



Mounting Pad Layout



## Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.08.21	Released Datasheet
Rev.B	2023.10.23	Modify document format



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