

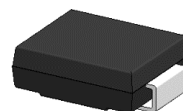
3000W,10 - 170V Transient Voltage Suppressors

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
- 3000 W peak pulse power capability with a 10/1000 μ 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}	3000	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}	250	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	$^{\circ}\text{C}$



A3.0SMCJ10A thru A3.0SMCJ170CA

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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					
A3.0SMCJ10A	A3.0SMCJ10CA	AHDX	AIDX	11.1	12.3	1.0	10	5.0	176.4	17.0
A3.0SMCJ11A	A3.0SMCJ11CA	AHDZ	AIDZ	12.2	13.5	1.0	11	5.0	165.0	18.2
A3.0SMCJ12A	A3.0SMCJ12CA	AHEE	AIEE	13.3	14.7	1.0	12	5.0	150.6	19.9
A3.0SMCJ13A	A3.0SMCJ13CA	AHEG	AIEG	14.4	15.9	1.0	13	5.0	139.4	21.5
A3.0SMCJ14A	A3.0SMCJ14CA	AHEK	AIEK	15.6	17.2	1.0	14	5.0	129.4	23.2
A3.0SMCJ15A	A3.0SMCJ15CA	AHEM	AIEM	16.7	18.5	1.0	15	5.0	123.0	24.4
A3.0SMCJ16A	A3.0SMCJ16CA	AHEP	AIEP	17.8	19.7	1.0	16	5.0	115.4	26.0
A3.0SMCJ17A	A3.0SMCJ17CA	AHER	AIER	18.9	20.9	1.0	17	5.0	106.6	27.6
A3.0SMCJ18A	A3.0SMCJ18CA	AHET	AIET	20.0	22.1	1.0	18	5.0	102.8	29.2
A3.0SMCJ20A	A3.0SMCJ20CA	AHEV	AIEV	22.2	24.5	1.0	20	5.0	92.6	32.4
A3.0SMCJ22A	A3.0SMCJ22CA	AHEX	AIEX	24.4	26.9	1.0	22	5.0	84.4	35.5
A3.0SMCJ24A	A3.0SMCJ24CA	AHEZ	AIEZ	26.7	29.5	1.0	24	5.0	77.2	38.9
A3.0SMCJ26A	A3.0SMCJ26CA	AHFE	AIFE	28.9	31.9	1.0	26	5.0	71.2	42.1
A3.0SMCJ28A	A3.0SMCJ28CA	AHFG	AIFG	31.1	34.4	1.0	28	5.0	66.0	45.4
A3.0SMCJ30A	A3.0SMCJ30CA	AHFK	AIFK	33.3	36.8	1.0	30	5.0	62.0	48.4
A3.0SMCJ33A	A3.0SMCJ33CA	AHFM	AIFM	36.7	40.6	1.0	33	5.0	56.2	53.3
A3.0SMCJ36A	A3.0SMCJ36CA	AHFP	AIFP	40.0	44.4	1.0	36	5.0	51.6	58.1
A3.0SMCJ40A	A3.0SMCJ40CA	AHFR	AIFR	44.4	49.1	1.0	40	5.0	46.4	64.5
A3.0SMCJ43A	A3.0SMCJ43CA	AHFT	AIFT	47.8	52.8	1.0	43	5.0	43.2	69.4
A3.0SMCJ45A	A3.0SMCJ45CA	AHFV	AIFV	50.0	55.3	1.0	45	5.0	41.2	72.7
A3.0SMCJ48A	A3.0SMCJ48CA	AHFX	AIFX	53.3	58.9	1.0	48	5.0	38.8	77.4
A3.0SMCJ51A	A3.0SMCJ51CA	AHFZ	AIFZ	56.7	62.7	1.0	51	5.0	36.4	82.4
A3.0SMCJ54A	A3.0SMCJ54CA	AHGE	AIGE	60.0	66.3	1.0	54	5.0	34.4	87.1
A3.0SMCJ58A	A3.0SMCJ58CA	AHGG	AIGG	64.4	71.2	1.0	58	5.0	32.1	93.6
A3.0SMCJ60A	A3.0SMCJ60CA	AHGK	AIGK	66.7	73.7	1.0	60	5.0	31.0	96.8
A3.0SMCJ64A	A3.0SMCJ64CA	AHGM	AIGM	71.1	78.6	1.0	64	5.0	29.2	103
A3.0SMCJ70A	A3.0SMCJ70CA	AHGP	AIGP	77.8	86.0	1.0	70	5.0	26.8	113
A3.0SMCJ75A	A3.0SMCJ75CA	AHGR	AIGR	83.3	92.1	1.0	75	5.0	24.8	121
A3.0SMCJ78A	A3.0SMCJ78CA	AHGT	AIGT	86.7	95.8	1.0	78	5.0	22.8	126
A3.0SMCJ85A	A3.0SMCJ85CA	AHGV	AIGV	94.4	104	1.0	85	5.0	20.8	137
A3.0SMCJ90A	A3.0SMCJ90CA	AHGX	AIGX	100	111	1.0	90	5.0	20.6	146
A3.0SMCJ100A	A3.0SMCJ100CA	AHGZ	AIGZ	111	123	1.0	100	5.0	18.6	162
A3.0SMCJ110A	A3.0SMCJ110CA	AHHE	AIHE	122	135	1.0	110	5.0	16.8	177
A3.0SMCJ120A	A3.0SMCJ120CA	AHHG	AIHG	133	147	1.0	120	5.0	15.6	193



A3.0SMCJ10A thru A3.0SMCJ170CA

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 VWM I _D (μA)	Maximum Peak Pulse Current I _{PPM} (A)	Maximum Clamping Voltage at I _{PPM} V _C (Volts)
		UNI	BI	Min	Max					
A3.0SMCJ130A	A3.0SMCJ130CA	AHHK	AIHK	144	159	1.0	130	5.0	14.4	209
A3.0SMCJ150A	A3.0SMCJ150CA	AHHM	AIHM	167	185	1.0	150	5.0	12.4	243
A3.0SMCJ160A	A3.0SMCJ160CA	AHHP	AIHP	178	197	1.0	160	5.0	11.6	259
A3.0SMCJ170A	A3.0SMCJ170CA	AHHR	AIHR	189	209	1.0	170	5.0	11.0	275

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)

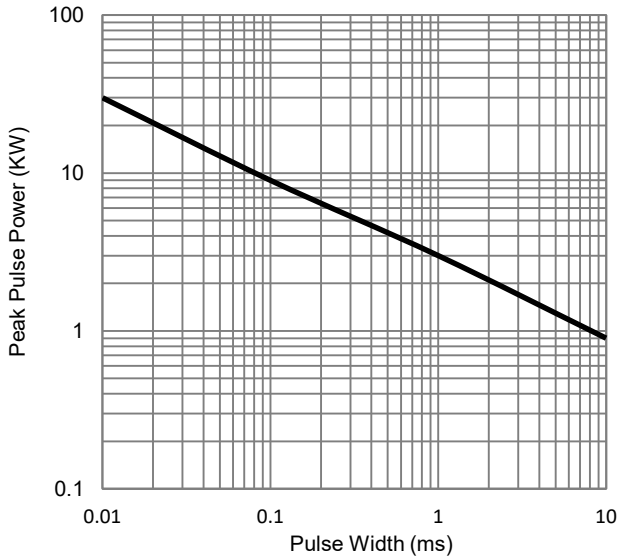


Fig.1 - Peak Pulse Power Derating Curve

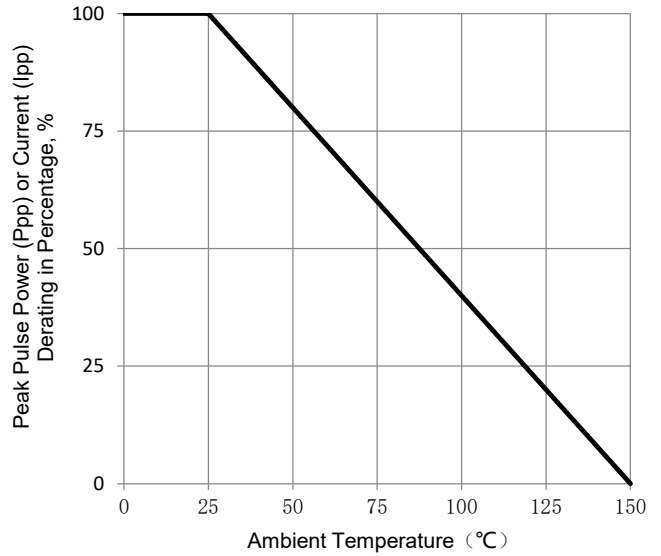


Fig.2 - Pulse Power vs Ambient Temperature

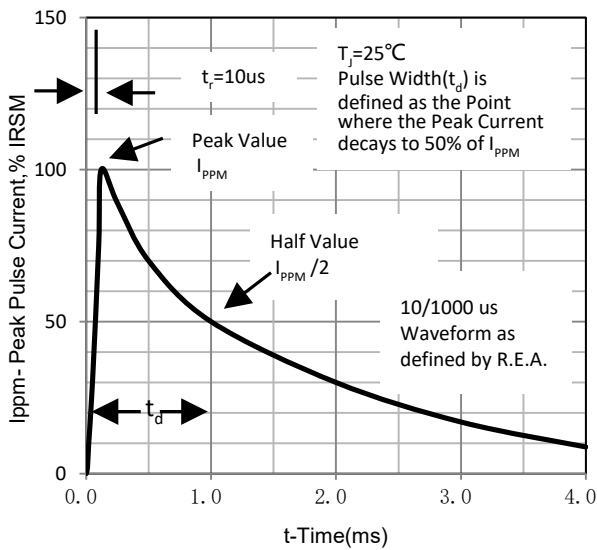


Fig.3 - Pulse Waveform

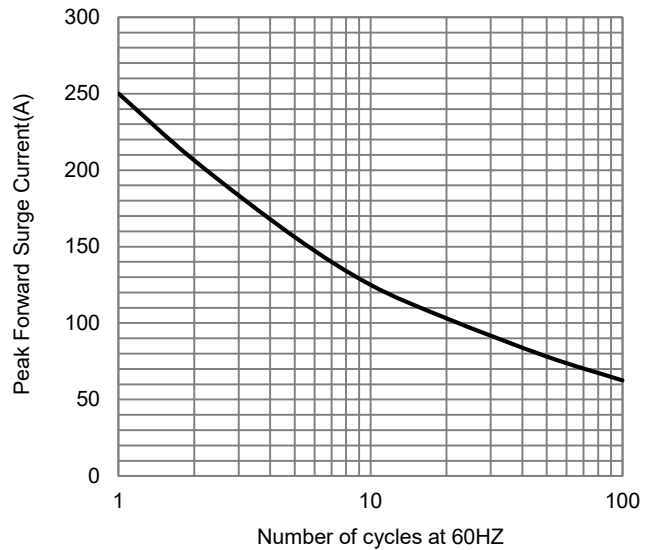
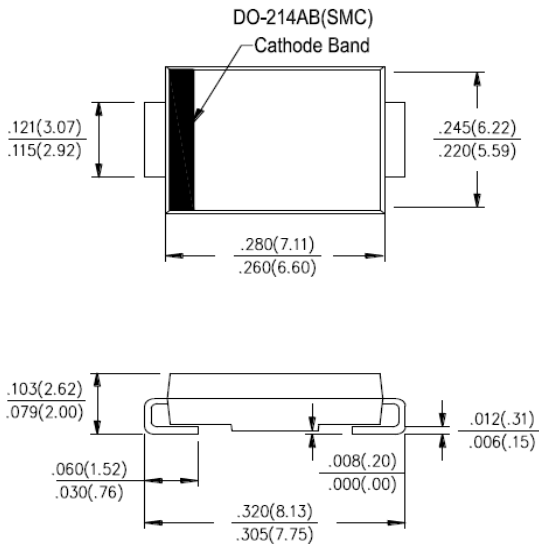


Fig.4 - Maximum Non-Repetitive Surge Current

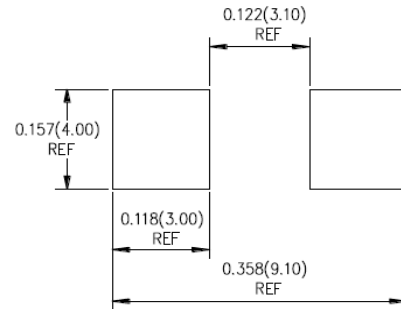
Package Outline Dimensions

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	2023.10.24	Modify document format



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