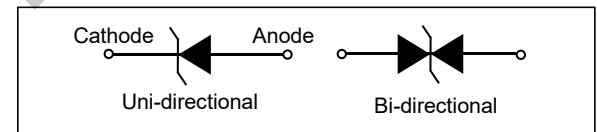
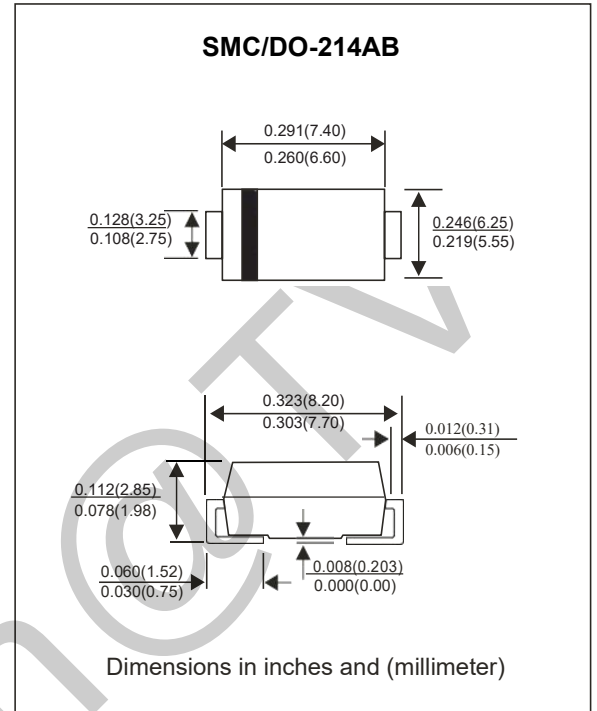


Features

- 5000W peak pulse power capability with a 10/1000 μ s waveform, repetitive rate(duty cycle):0.01%
- Uni and Bidirectional unit
- Low leakage
- Very fast response time
- Excellent clamping capability
- RoHS compliant

Mechanical Data

- Lead: Solderable per MIL-STD-750, method 2026
- Case: Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Polarity: Color band denotes cathode end except Bipolar
- Mounting position: Any



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

Parameter	Symbol	Value	Unit
Peak power dissipation with a 10/1000 μ s waveform ⁽¹⁾	P_{PP}	5000	W
Peak pulse current with a 10/1000 μ s waveform ⁽¹⁾	I_{PP}	See Next Table	A
Power dissipation on infinite heatsink at $T_L = 75^{\circ}\text{C}$	P_D	6.5	W
Peak forward surge current, 8.3 ms single half sine-wave unidirectional only ⁽²⁾	I_{FSM}	300	A
Maximum instantaneous forward voltage at 100A for unidirectional only	V_F	3.5/5.0	V
Operating junction and storage temperature range	T_J, T_{STG}	- 55 to +150	$^{\circ}\text{C}$

Note:

(1)Non-repetitive current pulse per Fig.5 and derated above $T_A= 25^{\circ}\text{C}$ per Fig.1

(2)Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum

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

Fig.1-Pulse Derating Curve

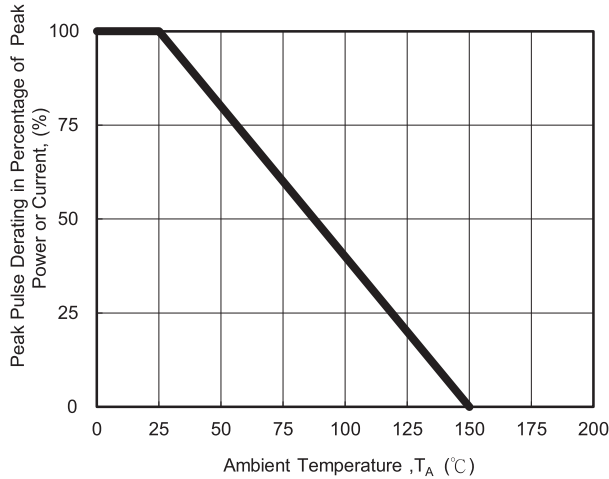


Fig.2-Maximum Non-Repetitive Surge Current

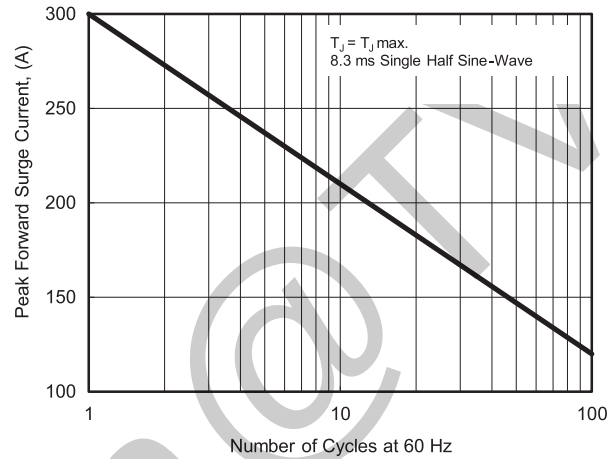


Fig.3-Steady State Power Derating Curve

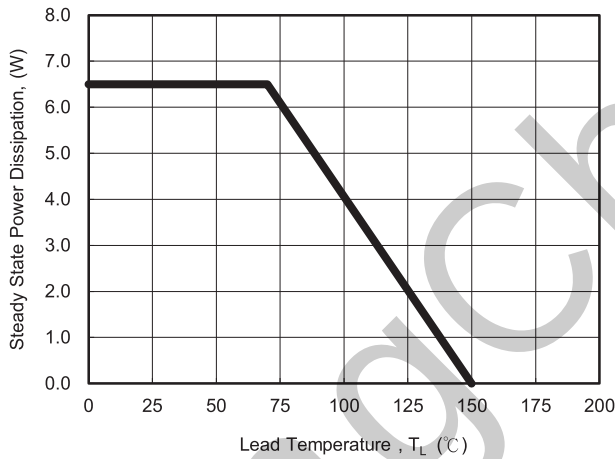


Fig.4-Peak Power Rating Curve

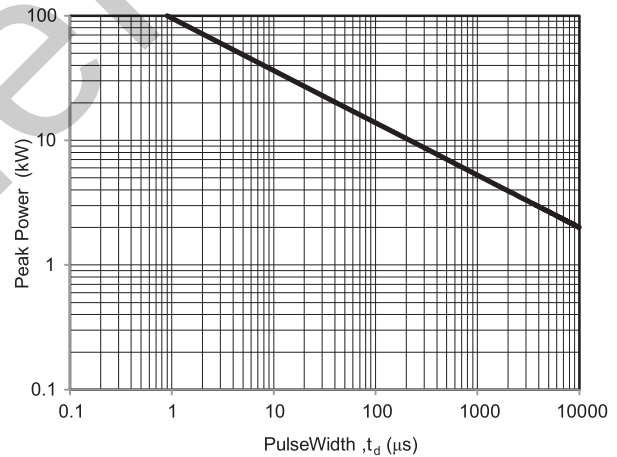


Fig.5-Pulse Waveform

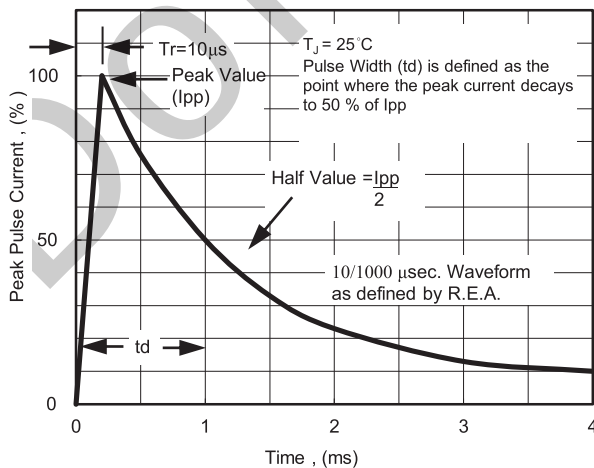
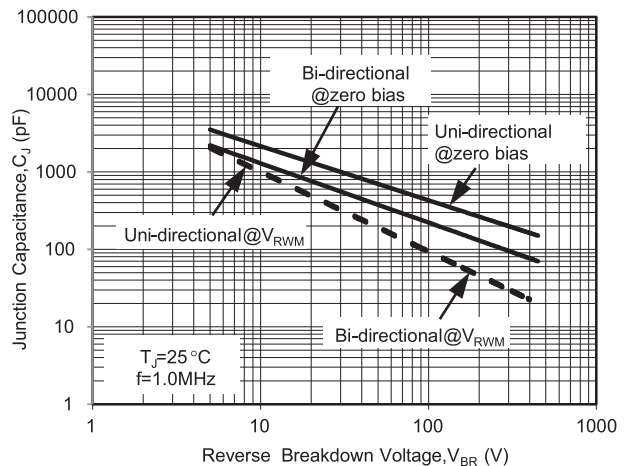


Fig.6-Typical Junction Capacitance

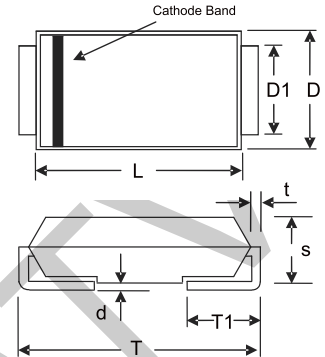


Electrical Characteristics($T_A=25^{\circ}\text{C}$ unless otherwise noted)

PART NUMBER		DEVICE MARKING CODE		REVERSE STAND-OFF VOLTAGE	BREAKDOWN VOLTAGE @IT	TEST CURRENT	MAXIMUM CLAMPING VOLTAGE @IPP	PEAK PULSE CURRENT	REVERSE LEAKAGE @VRWM
Unidirectional	Bidirectional	UNI	BI	VRWM(V)	VBR(V)	IT(mA)	VC(V)	IPP(A)	IR(μA)
5.0SMDJ11A	5.0SMDJ11CA	5PEN	5BEN	11.0	12.20~13.50	10	18.2	275.0	800
5.0SMDJ12A	5.0SMDJ12CA	5PEP	5BEP	12.0	13.30~14.70	10	19.9	252.0	800
5.0SMDJ13A	5.0SMDJ13CA	5PEQ	5BEQ	13.0	14.40~15.90	10	21.5	233.0	500
5.0SMDJ14A	5.0SMDJ14CA	5PER	5BER	14.0	15.60~17.20	10	23.2	216.0	200
5.0SMDJ15A	5.0SMDJ15CA	5PES	5BES	15.0	16.70~18.50	1	24.4	205.0	100
5.0SMDJ16A	5.0SMDJ16CA	5PET	5BET	16.0	17.80~19.70	1	26.0	193.0	50
5.0SMDJ17A	5.0SMDJ17CA	5PEU	5BEU	17.0	18.90~20.90	1	27.6	181.0	20
5.0SMDJ18A	5.0SMDJ18CA	5PEV	5BEV	18.0	20.00~22.10	1	29.2	172.0	10
5.0SMDJ20A	5.0SMDJ20CA	5PEW	5BEW	20.0	22.20~24.50	1	32.4	155.0	5
5.0SMDJ22A	5.0SMDJ22CA	5PEX	5BEX	22.0	24.40~26.90	1	35.5	141.0	5
5.0SMDJ24A	5.0SMDJ24CA	5PEZ	5BEZ	24.0	26.70~29.50	1	38.9	129.0	5
5.0SMDJ26A	5.0SMDJ26CA	5PFE	5BFE	26.0	28.90~31.90	1	42.1	119.0	5
5.0SMDJ28A	5.0SMDJ28CA	5PFG	5BFG	28.0	31.10~34.40	1	45.4	110.0	5
5.0SMDJ30A	5.0SMDJ30CA	5PFK	5BFK	30.0	33.30~36.80	1	48.4	103.0	5
5.0SMDJ33A	5.0SMDJ33CA	5PFM	5BFM	33.0	36.70~40.60	1	53.3	93.9	5
5.0SMDJ36A	5.0SMDJ36CA	5PFP	5BFP	36.0	40.00~44.20	1	58.1	86.1	5
5.0SMDJ40A	5.0SMDJ40CA	5PFR	5BFR	40.0	44.40~49.10	1	64.5	77.6	5
5.0SMDJ43A	5.0SMDJ43CA	5PFT	5BFT	43.0	47.80~52.80	1	69.4	72.1	5
5.0SMDJ45A	5.0SMDJ45CA	5PFV	5BFV	45.0	50.00~55.30	1	72.7	68.8	5
5.0SMDJ48A	5.0SMDJ48CA	5PFX	5BFX	48.0	53.30~58.90	1	77.4	64.7	5
5.0SMDJ51A	5.0SMDJ51CA	5PFZ	5BFZ	51.0	56.70~62.70	1	82.4	60.7	5
5.0SMDJ54A	5.0SMDJ54CA	5PGE	5BGE	54.0	60.00~66.30	1	87.1	57.5	5
5.0SMDJ58A	5.0SMDJ58CA	5PGG	5BGG	58.0	64.40~71.20	1	93.6	53.5	5
5.0SMDJ60A	5.0SMDJ60CA	5PGK	5BGK	60.0	66.70~73.70	1	96.8	51.7	5
5.0SMDJ64A	5.0SMDJ64CA	5PGM	5BGM	64.0	71.10~78.60	1	103.0	48.6	5
5.0SMDJ70A	5.0SMDJ70CA	5PGP	5BGP	70.0	77.80~86.00	1	113.0	44.3	5
5.0SMDJ75A	5.0SMDJ75CA	5PGR	5BGR	75.0	83.30~92.10	1	121.0	41.4	5
5.0SMDJ78A	5.0SMDJ78CA	5PGT	5BGT	78.0	86.70~95.80	1	126.0	39.7	5
5.0SMDJ85A	5.0SMDJ85CA	5PGV	5BGV	85.0	94.40~104.00	1	137.0	36.5	5
5.0SMDJ90A	5.0SMDJ90CA	5PGX	5BGX	90.0	100.00~111.00	1	146.0	34.3	5
5.0SMDJ100A	5.0SMDJ100CA	5PGZ	5BGZ	100.0	111.00~123.00	1	162.0	30.9	5
5.0SMDJ110A	5.0SMDJ110CA	5PHE	5BHE	110.0	122.00~135.00	1	177.0	28.3	5
5.0SMDJ120A	5.0SMDJ120CA	5PHG	5BHG	120.0	133.00~147.00	1	193.0	26.0	5
5.0SMDJ130A	5.0SMDJ130CA	5PHK	5BHK	130.0	144.00~159.00	1	209.0	24.0	5
5.0SMDJ150A	5.0SMDJ150CA	5PHM	5BHM	150.0	167.00~185.00	1	243.0	20.6	5
5.0SMDJ160A	5.0SMDJ160CA	5PHP	5BHB	160.0	178.00~197.00	1	259.0	19.3	5
5.0SMDJ170A	5.0SMDJ170CA	5PHR	5BHR	170.0	189.00~209.00	1	275.0	18.2	5

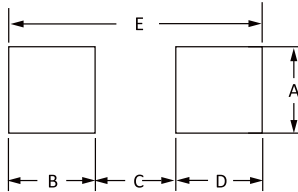
DO-214AB(SMC) Package Dimension

Item	Millimeters		Inches	
	Min.	Max.	Min.	Max.
L	6.60	7.11	0.260	0.280
D	5.59	6.22	0.220	0.245
D1	2.90	3.20	0.114	0.126
T	7.75	8.13	0.305	0.320
T1	0.76	1.52	0.030	0.060
d	-	0.20	-	0.008
s	2.06	2.62	0.079	0.103
t	0.152	0.31	0.006	0.012

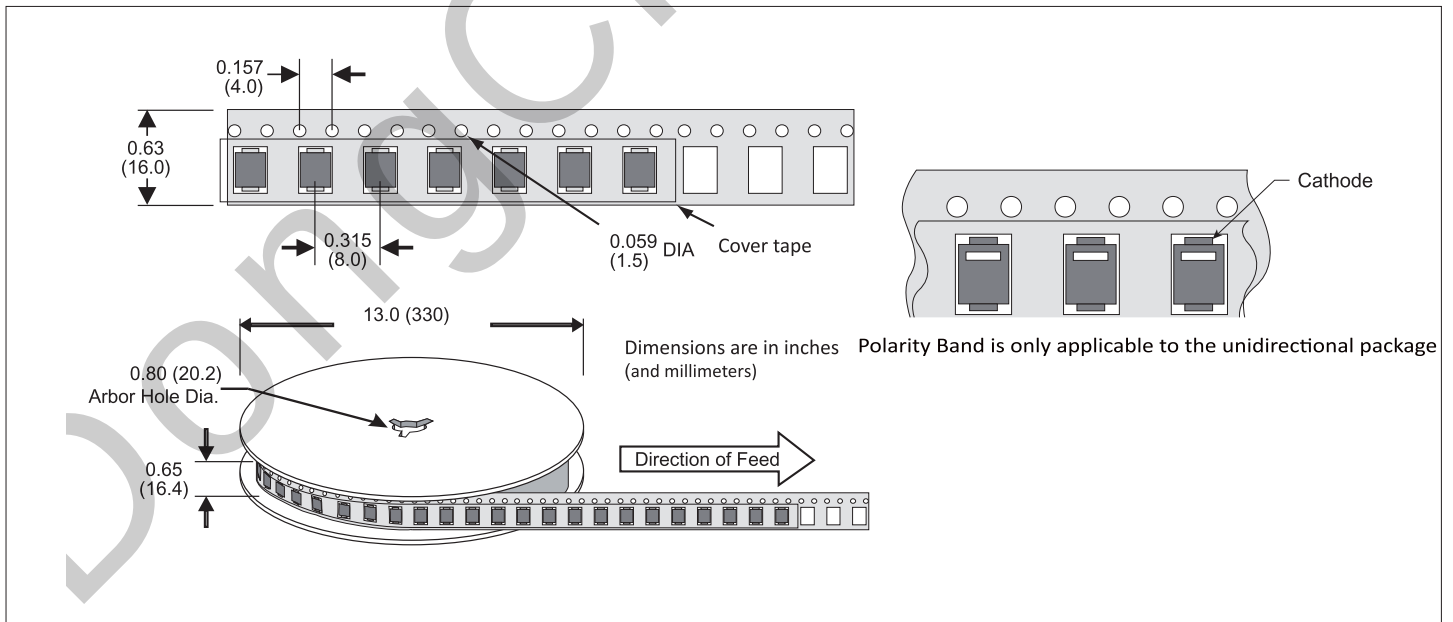


RECOMMENDED PAD LAYOUT DIMENSIONS

Item	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.300	-	0.129	-
B	2.400	-	0.094	-
C	-	4.200	-	0.165
D	2.400	-	0.094	-
E	8.13 REF		0.320 REF	



Tape and Reel Specification



ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
5.0SMDJxx(C)A	DO-214AB(SMC)	3000PCS	13"

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