

Surface Mount Transient Voltage Suppressor Rectifiers

Reverse Voltage 11.0 ~ 200 V

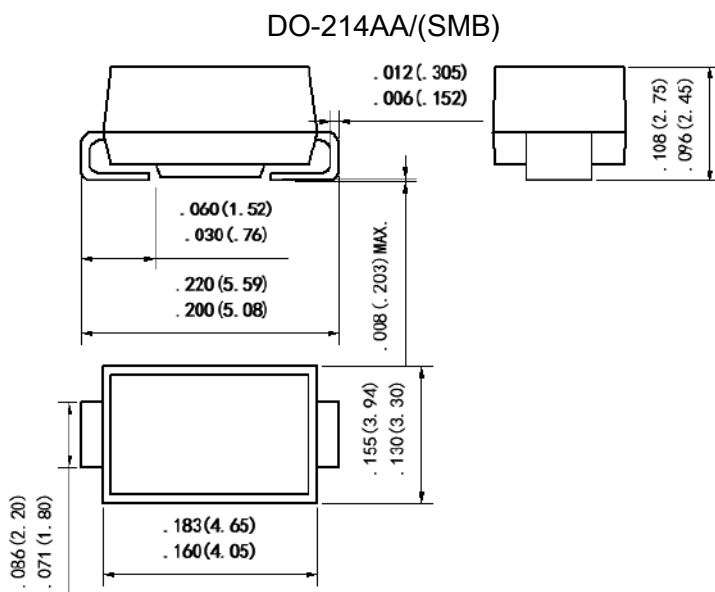
3000 Watt Peak Pulse Power

Features:

- Glass passivated chip
- 3000 W peak pulse power capability with a 10/1000 us waveform, repetitive rate (duty cycle):0.01 %
- Excellent clamping capability
- Low reverse leakage
- Very fast response time
- Lead and body according with RoHS standard

Mechanical Data:

- Case: DO-214AA/(SMB) Molded plastic
- Lead: Solderable per MIL-STD-750, method 2026
- Epoxy: UL 94V-0 rate flame retardant
- Polarity: Color band denotes cathode end except Bipolar
- Mounting position: Any



Unit: inch (mm)

Maximum Ratings & Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	Value	Unit
Peak power dissipation with a 10/1000 us waveform ⁽¹⁾	P _{PP}	3000	W
Peak pulse current with a 10/1000 us waveform ⁽¹⁾	I _{PP}	See Next Table	A
Power dissipation on infinite heatsink at TL = 75 °C	P _D	6.5	W
Peak forward surge current, 8.3 ms single half sinewave unidirectional only ⁽²⁾	I _{FSM}	300	A
Maximum instantaneous forward voltage at 100 A for unidirectional only ⁽³⁾	V _F	7.0/13.0	V
Storage temperature range	T _{STG}	-55 to +175	°C
Operating junction	T _J	-55 to +175	°C

Note:

- 1)Non-repetitive current pulse per Fig.5 and derated above TA= 25 °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 ;
- 3)V_F<7.0V for devices of V_{BR}<100V and V_F<13.0V for devices of V_{BR}>101V.

Part Number		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage V_{BR} @ I_T		Test Current	Max. Clamping Voltage @ I_{PP}	Max. Peak Pulse Current	Max. Reverse Leakage @ V_{RWM}
UNI-POLAR	BI-POLAR	UNI	BI	$V_{RWM}(V)$	Min.(V)	Max.(V)	$I_T(mA)$	$V_{C MAX.}(V)$	$I_{PP}(A)$	$I_R(\mu A)$
SMB30J11A	SMB30J11CA	PDZ	DDZ	11.0	12.20	13.50	1	18.2	164.8	800
SMB30J12A	SMB30J12CA	PEE	DEE	12.0	13.30	14.70	1	19.9	150.8	800
SMB30J13A	SMB30J13CA	PEG	DEG	13.0	14.40	15.90	1	21.5	139.5	500
SMB30J14A	SMB30J14CA	PEK	DEK	14.0	15.60	17.20	1	23.2	129.3	200
SMB30J15A	SMB30J15CA	PEM	DEM	15.0	16.70	18.50	1	24.4	123.0	200
SMB30J16A	SMB30J16CA	PEP	DEP	16.0	17.80	19.70	1	26.0	115.4	100
SMB30J17A	SMB30J17CA	PER	DER	17.0	18.90	20.90	1	27.6	108.7	50
SMB30J18A	SMB30J18CA	PET	DET	18.0	20.00	22.10	1	29.2	102.7	20
SMB30J20A	SMB30J20CA	PEV	DEV	20.0	22.20	24.50	1	32.4	92.6	10
SMB30J22A	SMB30J22CA	PEX	DEX	22.0	24.40	26.90	1	35.5	84.5	5
SMB30J24A	SMB30J24CA	PEZ	DEZ	24.0	26.70	29.50	1	38.9	77.1	5
SMB30J26A	SMB30J26CA	PFE	DFE	26.0	28.90	31.90	1	42.1	71.3	5
SMB30J28A	SMB30J28CA	PFG	DFG	28.0	31.10	34.40	1	45.4	66.1	5
SMB30J30A	SMB30J30CA	PFK	DFK	30.0	33.50	36.80	1	48.4	62.0	5
SMB30J33A	SMB30J33CA	PFM	DFM	33.0	36.70	40.60	1	53.3	56.3	5
SMB30J36A	SMB30J36CA	PFP	DFP	36.0	40.00	44.20	1	58.1	51.6	5
SMB30J40A	SMB30J40CA	PFR	DFR	40.0	44.40	49.10	1	64.5	46.5	5
SMB30J43A	SMB30J43CA	PFT	DFT	43.0	47.80	52.80	1	69.4	43.2	5
SMB30J45A	SMB30J45CA	PFV	DFV	45.0	50.00	55.30	1	72.7	41.3	5
SMB30J48A	SMB30J48CA	PFX	DFX	48.0	53.30	58.90	1	77.4	38.8	5
SMB30J51A	SMB30J51CA	PFZ	DFZ	51.0	56.70	62.70	1	82.4	36.4	5
SMB30J54A	SMB30J54CA	PGE	DGE	54.0	60.00	66.30	1	87.1	34.4	5
SMB30J58A	SMB30J58CA	PGG	DGG	58.0	64.40	71.20	1	93.6	32.1	5
SMB30J60A	SMB30J60CA	PGK	DGK	60.0	66.70	73.70	1	96.8	31.0	5
SMB30J64A	SMB30J64CA	PGM	DGM	64.0	71.10	78.60	1	103.0	29.1	5
SMB30J70A	SMB30J70CA	PGP	DGP	70.0	77.80	86.00	1	113.0	26.5	5
SMB30J75A	SMB30J75CA	PGR	DGR	75.0	83.30	92.10	1	121.0	24.8	5
SMB30J78A	SMB30J78CA	PGT	DGT	78.0	86.70	95.80	1	126.0	23.8	5
SMB30J85A	SMB30J85CA	PGV	DGV	85.0	94.4	104.0	1	137.0	21.9	5
SMB30J90A	SMB30J90CA	PGX	DGX	90.0	100.0	111.0	1	146.0	20.5	5
SMB30J100A	SMB30J100CA	PGZ	DGZ	100.0	111.0	123.0	1	162.0	18.5	5
SMB30J110A	SMB30J110CA	PHE	DHE	110.0	122.0	135.0	1	177.0	16.9	5
SMB30J120A	SMB30J120CA	PHG	DHG	120.0	133.0	147.0	1	193.0	15.5	5
SMB30J130A	SMB30J130CA	PHK	DHK	130.0	144.0	159.0	1	209.0	14.4	5
SMB30J150A	SMB30J150CA	PHM	DHM	150.0	167.0	185.0	1	243.0	12.3	5

Part Number		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage $V_{BR} @ I_T$		Test Current	Max. Clamping Voltage @ I_{PP}	Max. Peak Pulse Current	Max. Reverse Leakage @ V_{RWM}
UNI-POLAR	BI-POLAR	UNI	BI	$V_{RWM}(V)$	Min.(V)	Max.(V)	$I_T(mA)$	$V_{C MAX.}(V)$	$I_{PP}(A)$	$I_R(\mu A)$
SMB30J160A	SMB30J160CA	PHP	DHP	160.0	178.0	197.0	1	259.0	11.6	1
SMB30J170A	SMB30J170CA	PHR	DHR	170.0	189.0	209.0	1	275.0	10.9	1
SMB30J180A	SMB30J180CA	PHT	DHT	180.0	201.0	222.0	1	292.0	10.3	1
SMB30J190A	SMB30J190CA	PHV	DHV	190.0	209.0	243.0	1	308.0	9.7	1
SMB30J200A	SMB30J200CA	PHX	DHX	200.0	224.0	247.0	1	324.0	9.3	1

Ratings and Characteristics Curves (TA=25°C unless otherwise noted)

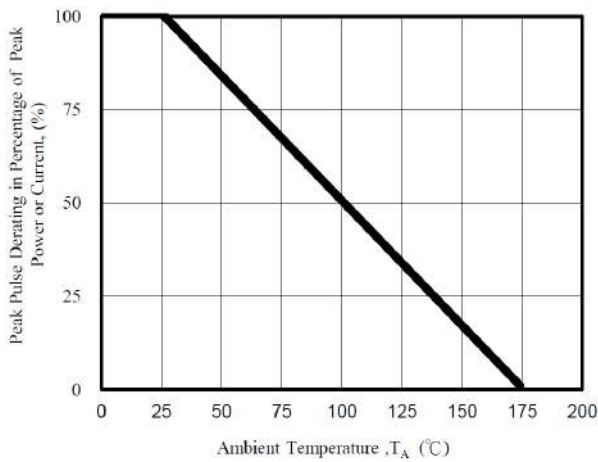


Fig. 1 - Pulse Derating Curve

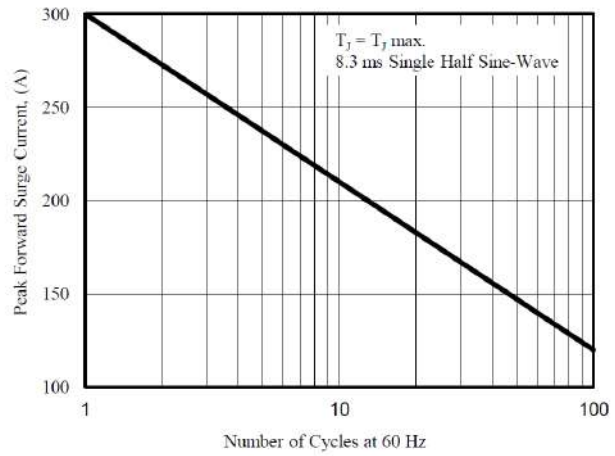


Fig. 2 - Maximum Non-Repetitive Surge Current

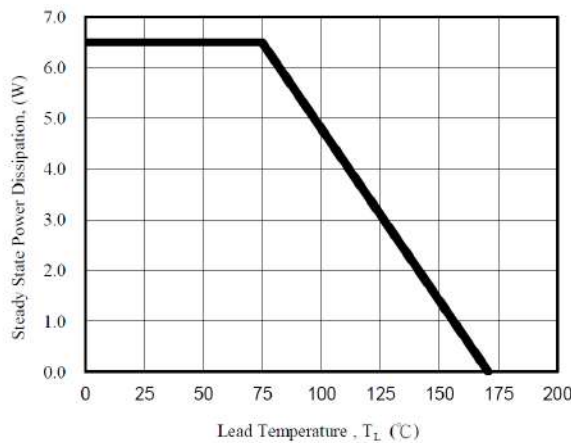


Fig. 3 - Steady State Power Derating Curve

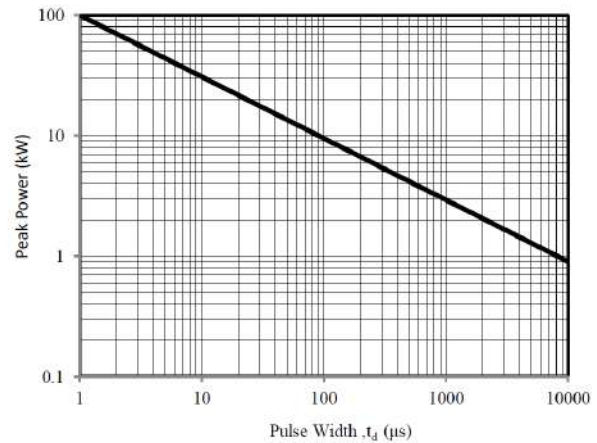


Fig. 4 - Peak Pulse Power Rating Curve

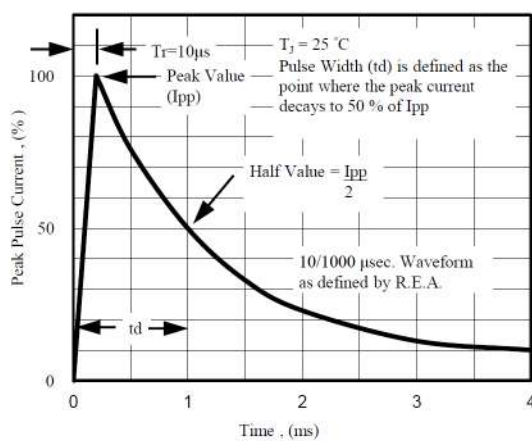


Fig. 5 - Pulse Waveform

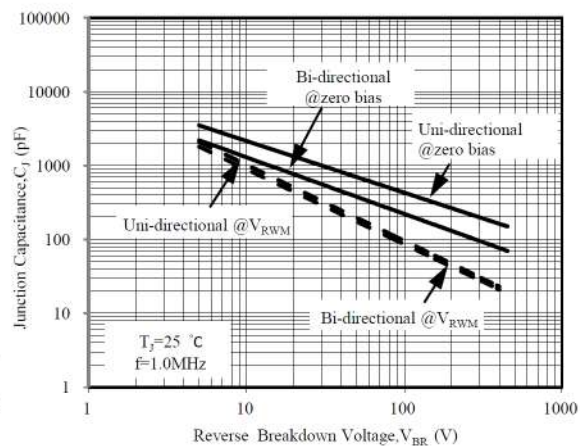


Fig. 6 - Typical Junction Capacitance