

Features

- P_{PP} 600W
- V_{RWM} 5.0V- 440V
- Glass passivated chip

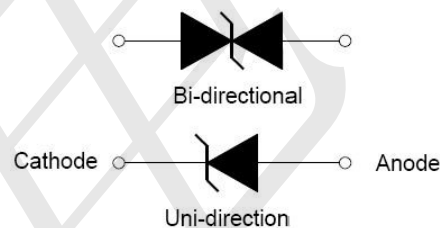
Applications

- Clamping Voltage

Package	Packing Description	Packing Quantity
SMB	Tape/Reel, 13" reel	3000

Dimensions and Pin Configuration

SMB



Maximum Ratings & Thermal Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	Value	Units
Peak Pulse Power Dissipation on 10/1000 us Waveform (Note 1, 2, FIG.1)	P_{PPM}	Min 600	W
Power Dissipation on Infinite Heat Sink at $T_L=50^\circ\text{C}$	P_D	5	W
Peak Pulse Current of on 10/1000us Waveform (Note 1, FIG.3)	I_{PPM}	See Table 1	A
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave (Note 2. 3)	I_{FSM}	100	A
Operating Junction Temperature Range	T_J	-55 to 150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to 150	$^\circ\text{C}$

Notes:

1. Non-repetitive current pulse, per Fig.3 and derated above $T_A=25^\circ\text{C}$ per Fig.2.
2. Mounted on 5.0x5.0mm² (0.03mm thick) Copper Pads to each terminal.
3. Measured on 8.3ms single half sine-wave, or equivalent square wave, for Unidirectional device only.

Part Number		V_R	$I_R@V_R$	$V_{BR}@I_T$		I_T	$V_C@I_{PP}$	$I_{PP}^{①}$
Uni-Polar	Bi-Polar	V	μA	min(V)	max(V)	mA	max(V)	A
SMBJ5.0A	SMBJ5.0CA	5.0	120	6.40	7.00	10	9.2	65.2
SMBJ6.0A	SMBJ6.0CA	6.0	120	6.67	7.37	10	10.3	58.3
SMBJ6.5A	SMBJ6.5CA	6.5	120	7.22	7.98	10	11.2	53.6
SMBJ7.0A	SMBJ7.0CA	7.0	50	7.78	8.60	10	12.0	50.0
SMBJ7.5A	SMBJ7.5CA	7.5	50	8.33	9.21	1	12.9	46.5
SMBJ8.0A	SMBJ8.0CA	8.0	20	8.89	9.83	1	13.6	44.1
SMBJ8.5A	SMBJ8.5CA	8.5	10	9.44	10.40	1	14.4	41.7
SMBJ9.0A	SMBJ9.0CA	9.0	5	10.00	11.10	1	15.4	39.0
SMBJ10A	SMBJ10CA	10	2	11.10	12.30	1	17.0	35.3
SMBJ11A	SMBJ11CA	11	1	12.20	13.50	1	18.2	33.0
SMBJ12A	SMBJ12CA	12	1	13.30	14.70	1	19.9	30.2
SMBJ13A	SMBJ13CA	13	1	14.40	15.90	1	21.5	27.9
SMBJ14A	SMBJ14CA	14	1	15.60	17.20	1	23.2	25.9
SMBJ15A	SMBJ15CA	15	1	16.70	18.50	1	24.4	24.6
SMBJ16A	SMBJ16CA	16	1	17.80	19.70	1	26.0	23.1
SMBJ17A	SMBJ17CA	17	1	18.90	20.90	1	27.6	21.8
SMBJ18A	SMBJ18CA	18	1	20.00	22.10	1	29.2	20.6
SMBJ20A	SMBJ20CA	20	1	22.20	24.50	1	32.4	18.6
SMBJ22A	SMBJ22CA	22	1	24.40	26.90	1	35.5	16.9
SMBJ24A	SMBJ24CA	24	1	26.70	29.50	1	38.9	15.4
SMBJ26A	SMBJ26CA	26	1	28.90	31.90	1	42.1	14.3
SMBJ28A	SMBJ28CA	28	1	31.10	34.40	1	45.4	13.2
SMBJ30A	SMBJ30CA	30	1	33.30	36.80	1	48.4	12.4

Part Number		V_R	$I_R@V_R$	$V_{BR}@I_T$		I_T	$V_C@I_{PP}$	$I_{PP}^{①}$
Uni-Polar	Bi-Polar	V	μA	min(V)	max(V)	mA	max(V)	A
SMBJ33A	SMBJ33CA	33	1	36.70	40.60	1	53.3	11.3
SMBJ36A	SMBJ36CA	36	1	40.00	44.20	1	58.1	10.4
SMBJ40A	SMBJ40CA	40	1	44.40	49.10	1	64.5	9.3
SMBJ43A	SMBJ43CA	43	1	47.80	52.80	1	69.4	8.7
SMBJ45A	SMBJ45CA	45	1	50.00	55.30	1	72.7	8.3
SMBJ48A	SMBJ48CA	48	1	53.30	58.90	1	77.4	7.8
SMBJ51A	SMBJ51CA	51	1	56.70	62.70	1	82.4	7.3
SMBJ54A	SMBJ54CA	54	1	60.00	66.30	1	87.1	6.9
SMBJ58A	SMBJ58CA	58	1	64.40	71.20	1	93.6	6.4
SMBJ60A	SMBJ60CA	60	1	66.70	73.70	1	96.8	6.2
SMBJ64A	SMBJ64CA	64	1	71.10	78.60	1	103.0	5.8
SMBJ70A	SMBJ70CA	70	1	77.80	86.00	1	113.0	5.3
SMBJ75A	SMBJ75CA	75	1	83.30	92.10	1	121.0	5.0
SMBJ78A	SMBJ78CA	78	1	86.70	95.80	1	126.0	4.8
SMBJ85A	SMBJ85CA	85	1	94.40	104.0	1	137.0	4.4
SMBJ90A	SMBJ90CA	90	1	100.0	111.0	1	146.0	4.1
SMBJ100A	SMBJ100CA	100	1	111.0	123.0	1	162.0	3.7
SMBJ110A	SMBJ110CA	110	1	122.0	135.0	1	177.0	3.4
SMBJ120A	SMBJ120CA	120	1	133.0	147.0	1	193.0	3.1
SMBJ130A	SMBJ130CA	130	1	144.0	159.0	1	209.0	2.9
SMBJ150A	SMBJ150CA	150	1	167.0	185.0	1	243.0	2.5
SMBJ160A	SMBJ160CA	160	1	178.0	197.0	1	259.0	2.3
SMBJ170A	SMBJ170CA	170	1	189.0	209.0	1	275.0	2.2
SMBJ180A	SMBJ180CA	180	1	201.0	222.0	1	292.0	2.1
SMBJ190A	SMBJ190CA	190	1	211.0	234.0	1	307.0	2.0
SMBJ200A	SMBJ200CA	200	1	224.0	247.0	1	324.0	1.9
SMBJ210A	SMBJ210CA	210	1	233.0	258.0	1	337.0	1.8
SMBJ220A	SMBJ220CA	220	1	246.0	272.0	1	356.0	1.7
SMBJ250A	SMBJ250CA	250	1	279.0	309.0	1	405.0	1.5
SMBJ300A	SMBJ300CA	300	1	335.0	371.0	1	486.0	1.3

Part Number		V_R	$I_R@V_R$	$V_{BR}@I_T$		I_T	$V_C@I_{PP}$	$I_{PP}^{①}$
Uni-Polar	Bi-Polar	V	μA	min(V)	max(V)	mA	max(V)	A
SMBJ350A	SMBJ350CA	350	1	391.0	432.0	1	567.0	1.1
SMBJ400A	SMBJ400CA	400	1	447.0	494.0	1	648.0	0.9
SMBJ440A	SMBJ440CA	440	1	492.0	543.0	1	713.0	0.8

Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise Specified)

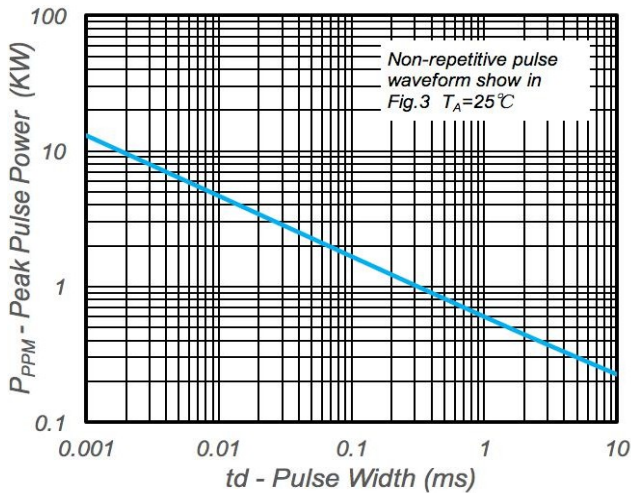


Fig. 1 - Peak Pulse Power Rating

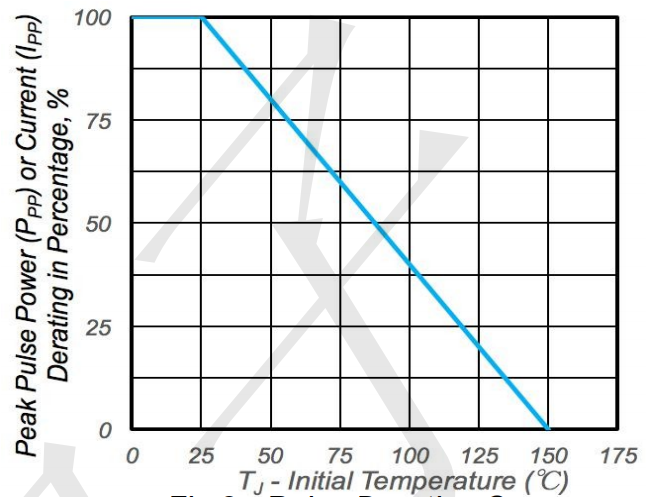


Fig. 2 - Pulse Derating Curve

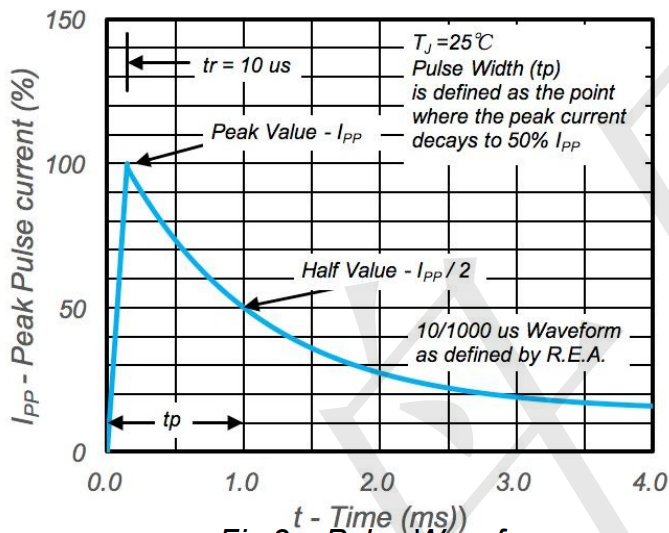


Fig. 3 - Pulse Waveform

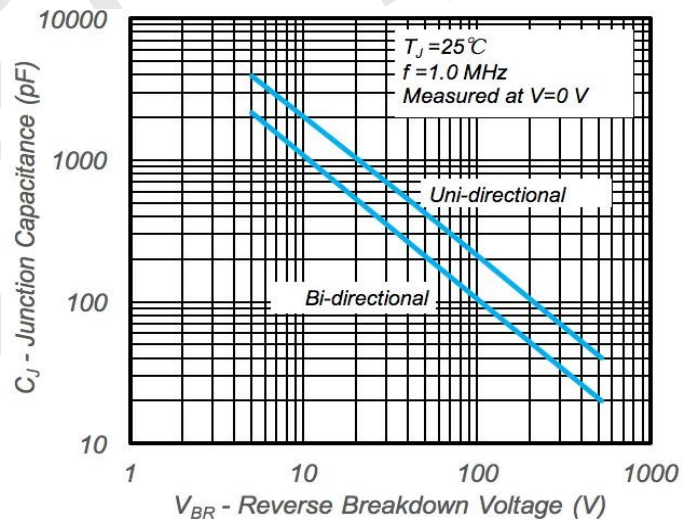


Fig. 4 - Typical Junction Capacitance

Package Outline Dimensions: SMB(DO-214AA)

Dim	Millimeters		Inches	
	Min	Max	Min	Max
L	4.4	4.6	0.173	0.181
D	3.5	3.7	0.138	0.146
D1	1.9	2.1	0.075	0.083
T	5.1	5.48	0.201	0.216
T1	1.0	1.6	0.039	0.063
d	-	0.2	-	0.008
H	2.2	2.45	0.087	0.096
H1	2.15	2.35	0.085	0.093