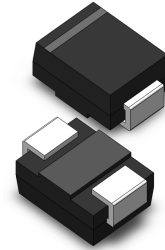


VOLTAGE RANGE: 5.0 - 440 V
POWER: 600Watts

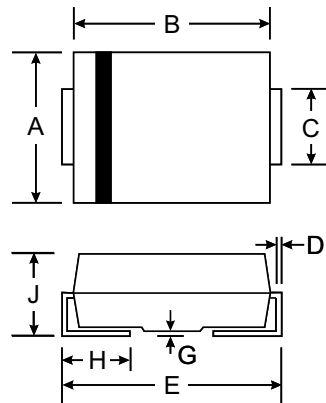
Features

- Glass Passivated Die Construction
- Uni- and Bi-Directional Versions Available
- Excellent Clamping Capability
- Fast Response Time
- Plastic Material: UL Flammability Classification Rating 94V-0



Mechanical Data

- Case: DO-214AA(SMB), Transfer Molded Epoxy
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity Indicator: Cathode Band
(Note: Bi-directional devices have no polarity indicator.)
- Weight: 0.093 grams (approx.)



SMB(DO-214AA)		
Dim	Min	Max
A	3.30	3.94
B	4.06	4.70
C	1.91	2.21
D	0.15	0.31
E	5.00	5.59
G	0.10	0.20
H	0.76	1.52
J	2.00	2.62
All Dimensions in mm		



Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation (Non repetitive current pulse derated above T _A = 25°C) (Note 1)	P _{PK}	600	W
Peak Forward Surge Current, 8.3ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) (Notes 1, 2, & 3)	I _{FSM}	100	A
Instantaneous Forward Voltage @ I _{PP} = 35A (Notes 1, 2, & 3)	V _F	V _{BR} <100V: 3.5 V _{BR} ≥100V: 5.0	V V
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

- Notes:
1. Valid provided that terminals are kept at ambient temperature.
 2. Measured with 8.3ms single half sine-wave. Duty cycle = 4 pulses per minute maximum.
 3. Unidirectional units only.



TYPE		Marking		Reverse Stand-Off Voltage	Breakdown Voltage Min. @I _T	Breakdown Voltage Max. @ I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
(Uni)	(Bi)	(Uni)	(Bi)	V _{RWM} (V)	V _{BR MIN} (V)	V _{BR MAX} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
1SMB5.0	1SMB5.0C	KD	AD	5.0	6.40	7.55	10	9.6	62.5	800.0
1SMB5.0A	1SMB5.0CA	KE	AE	5.0	6.40	7.25	10	9.2	65.2	800.0
1SMBJ6.0	1SMB6.0C	KF	AF	6.0	6.67	8.45	10	11.4	52.6	800.0
1SMB6.0A	1SMB6.0CA	KG	AG	6.0	6.67	7.67	10	10.3	58.3	800.0
1SMB6.5	1SMB6.5C	KH	AH	6.5	7.22	9.14	10	12.3	48.8	500.0
1SMB6.5A	1SMB6.5CA	KK	AK	6.5	7.22	8.30	10	11.2	53.6	500.0
1SMB7.0	1SMB7.0C	KL	AL	7.0	7.78	9.86	10	13.3	45.1	200.0
1SMB7.0A	1SMB7.0CA	KM	AM	7.0	7.78	8.95	10	12.0	50.0	200.0
1SMB7.5	1SMB7.5C	KN	AN	7.5	8.33	10.67	1.0	14.3	42.0	100.0
1SMB7.5A	1SMB7.5CA	KP	AP	7.5	8.33	9.58	1.0	12.9	46.5	100.0
1SMB8.0	1SMB8.0C	KQ	AQ	8.0	8.89	11.3	1.0	15.0	40.0	50.0
1SMB8.0A	1SMB8.0CA	KR	AR	8.0	8.89	10.23	1.0	13.6	44.1	50.0
1SMB8.5	1SMB8.5C	KS	AS	8.5	9.44	11.92	1.0	15.9	37.7	20.0
1SMB8.5A	1SMB8.5CA	KT	AT	8.5	9.44	10.82	1.0	14.4	41.7	20.0
1SMB9.0	1SMB9.0C	KU	AU	9.0	10.0	12.6	1.0	16.9	35.5	10.0
1SMB9.0A	1SMB9.0CA	KV	AV	9.0	10.0	11.5	1.0	15.4	39.0	10.0
1SMB10	1SMB10C	KW	AW	10	11.1	14.1	1.0	18.8	31.9	5.0
1SMB10A	1SMB10CA	KX	AX	10	11.1	12.8	1.0	17.0	35.3	5.0
1SMB11	1SMB11C	KY	AY	11	12.2	15.4	1.0	20.1	29.9	5.0
1SMB11A	1SMB11CA	KZ	AZ	11	12.2	14.0	1.0	18.2	33.0	5.0
1SMB12	1SMB12C	LD	BD	12	13.3	16.9	1.0	22.0	27.3	5.0
1SMB12A	1SMB12CA	LE	BE	12	13.3	15.3	1.0	19.9	30.2	5.0
1SMB13	1SMB13C	LF	BF	13	14.4	18.2	1.0	23.8	25.2	5.0
1SMB13A	1SMB13CA	LG	BG	13	14.4	16.5	1.0	21.5	27.9	5.0
1SMB14	1SMB14C	LH	BH	14	15.6	19.8	1.0	25.8	23.3	5.0
1SMB14A	1SMB14CA	LK	BK	14	15.6	17.9	1.0	23.2	25.9	5.0
1SMB15	1SMB15C	LL	BL	15	16.7	21.1	1.0	26.9	22.3	5.0
1SMB15A	1SMB15CA	LM	BM	15	16.7	19.2	1.0	24.4	24.6	5.0
1SMB16	1SMB16C	LN	BN	16	17.8	22.6	1.0	28.8	20.8	5.0
1SMB16A	1SMB16CA	LP	BP	16	17.8	20.5	1.0	26.0	23.1	5.0
1SMB17	1SMB17C	LQ	BQ	17	18.9	23.9	1.0	30.5	19.7	5.0
1SMB17A	1SMB17CA	LR	BR	17	18.9	21.7	1.0	27.6	21.7	5.0
1SMB18	1SMB18C	LS	BS	18	20.0	25.3	1.0	32.2	18.6	5.0
1SMB18A	1SMB18CA	LT	BT	18	20.0	23.3	1.0	29.2	20.5	5.0
1SMB20	1SMB20C	LU	BU	20	22.2	28.1	1.0	35.8	16.8	5.0
1SMB20A	1SMB20CA	LV	BV	20	22.2	25.5	1.0	32.4	18.5	5.0
1SMB22	1SMB22C	LW	BW	22	24.4	30.9	1.0	39.4	15.2	5.0
1SMB22A	1SMB22CA	LX	BX	22	24.4	28.0	1.0	35.5	16.9	5.0

Note:

- (1) V_{BR} measured after I_T applied for 300 μs., I_T = square wave pulse or equivalent.
- (2) Surge Current Waveform per Figure 5 and Derate per Figure 1
- (3) A Transient suppressor is normally selected according to the reverse " Stand-off Voltage " (V_{RWM}) which should be equal to or greater then the D.C. or continuous peak operating voltage level.

TYPE		Marking		Reverse Stand-Off Voltage	Breakdown Voltage Min. @I _T	Breakdown Voltage Max. @ I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
(Uni)	(Bi)	(Uni)	(Bi)	V _{RWM} (V)	V _{BR MIN} (V)	V _{BR MAX} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
1SMB24	1SMB24C	LY	BY	24	26.7	33.8	1.0	43.0	14.0	5.0
1SMB24A	1SMB24CA	LZ	BZ	24	26.7	30.7	1.0	38.9	15.4	5.0
1SMB26	1SMB26C	MD	CD	26	28.9	36.6	1.0	46.6	12.9	5.0
1SMB26A	1SMB26CA	ME	CE	26	28.9	33.2	1.0	42.1	14.3	5.0
1SMB28	1SMB28C	MF	CF	28	31.1	39.4	1.0	50.0	12.0	5.0
1SMB28A	1SMB28CA	MG	CG	28	31.1	35.8	1.0	45.4	13.2	5.0
1SMB30	1SMB30C	MH	CH	30	33.3	42.2	1.0	53.5	11.2	5.0
1SMB30A	1SMB30CA	MK	CK	30	33.3	38.3	1.0	48.4	12.4	5.0
1SMB33	1SMB33C	ML	CL	33	36.7	46.5	1.0	59.0	10.2	5.0
1SMB33A	1SMB33CA	MM	CM	33	36.7	42.2	1.0	53.3	11.3	5.0
1SMB36	1SMB36C	MN	CN	36	40.0	50.7	1.0	64.3	9.3	5.0
1SMB36A	1SMB36CA	MP	CP	36	40.0	46.0	1.0	58.1	10.3	5.0
1SMB40	1SMB40C	MQ	CQ	40	44.4	56.3	1.0	71.4	8.4	5.0
1SMB40A	1SMB40CA	MR	CR	40	44.4	51.1	1.0	64.5	9.3	5.0
1SMB43	1SMB43C	MS	CS	43	47.8	60.5	1.0	76.7	7.8	5.0
1SMB43A	1SMB43CA	MT	CT	43	47.8	54.9	1.0	69.4	8.6	5.0
1SMB45	1SMB45C	MU	CU	45	50.0	63.3	1.0	80.3	7.5	5.0
1SMB45A	1SMB45CA	MV	CV	45	50.0	57.5	1.0	72.7	8.3	5.0
1SMB48	1SMB48C	MW	CW	48	53.3	67.5	1.0	85.5	7.0	5.0
1SMB48A	1SMB48CA	MX	CX	48	53.3	61.3	1.0	77.4	7.8	5.0
1SMB51	1SMB51C	MY	CY	51	56.7	71.8	1.0	91.1	6.6	5.0
1SMB51A	1SMB51CA	MZ	CZ	51	56.7	65.2	1.0	82.4	7.3	5.0
1SMB54	1SMB54C	ND	DD	54	60.0	76.0	1.0	96.3	6.2	5.0
1SMB54A	1SMB54CA	NE	DE	54	60.0	69.0	1.0	87.1	6.9	5.0
1SMB58	1SMB58C	NF	DF	58	64.4	81.6	1.0	103	5.8	5.0
1SMB58A	1SMB58CA	NG	DG	58	64.4	74.1	1.0	93.6	6.4	5.0
1SMB60	1SMB60C	NH	DH	60	66.7	84.5	1.0	107	5.6	5.0
1SMB60A	1SMB60CA	NK	DK	60	66.7	76.7	1.0	96.8	6.2	5.0
1SMB64	1SMB64C	NL	DL	64	71.1	90.1	1.0	114	5.3	5.0
1SMB64A	1SMB64CA	NM	DM	64	71.1	81.8	1.0	103	5.8	5.0
1SMB70	1SMB70C	NN	DN	70	77.8	98.6	1.0	125	4.8	5.0
1SMB70A	1SMB70CA	NP	DP	70	77.8	89.5	1.0	113	5.3	5.0
1SMB75	1SMB75C	NQ	DQ	75	83.0	105.7	1.0	134	4.5	5.0
1SMB75A	1SMB75CA	NR	DR	75	83.0	95.8	1.0	121	5.0	5.0
1SMB78	1SMB78C	NS	DS	78	86.0	109.8	1.0	139	4.3	5.0
1SMB78A	1SMB78CA	NT	DT	78	86.0	99.7	1.0	126	4.8	5.0
1SMB85	1SMB85C	NU	DU	85	94.0	119.2	1.0	151	4.0	5.0
1SMB85A	1SMB85CA	NV	DV	85	94.0	108.2	1.0	137	4.4	5.0
1SMB90	1SMB90C	NW	DW	90	100	126.5	1.0	160	3.8	5.0

TYPE		Marking		Reverse Stand-Off Voltage	Breakdown Voltage Min. @I _T	Breakdown Voltage Max. @ I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
(Uni)	(Bi)	(Uni)	(Bi)	V _{RWM} (V)	V _{BR MIN} (V)	V _{BR MAX} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (μ A)
1SMB90A	1SMB90CA	NX	DX	90	100	115.5	1.0	146	4.1	5.0
1SMB100	1SMB100C	NY	DY	100	111	141.0	1.0	179	3.4	5.0
1SMB100A	1SMB100CA	NZ	DZ	100	111	128.0	1.0	162	3.7	5.0
1SMB110	1SMB110C	PD	ED	110	122	154.5	1.0	196	3.1	5.0
1SMB110A	1SMB110CA	PE	EE	100	122	140.5	1.0	177	3.4	5.0
1SMB120	1SMB120C	PF	EF	120	133	169.0	1.0	214	2.8	5.0
1SMB120A	1SMB120CA	PG	EG	120	133	153.0	1.0	193	3.1	5.0
1SMB130	1SMB130C	PH	EH	130	144	182.5	1.0	231	2.6	5.0
1SMB130A	1SMB130CA	PK	EK	130	144	165.5	1.0	209	2.9	5.0
1SMB150	1SMB150C	PL	EL	150	167	211.5	1.0	268	2.2	5.0
1SMB150A	1SMB150CA	PM	EM	150	167	192.5	1.0	243	2.5	5.0
1SMB160	1SMB160C	PN	EN	160	178	226.0	1.0	287	2.1	5.0
1SMB160A	1SMB160CA	PP	EP	160	178	205.0	1.0	259	2.3	5.0
1SMB170	1SMB170C	PQ	EQ	170	189	239.5	1.0	304	2.0	5.0
1SMB170A	1SMB170CA	PR	ER	170	189	217.5	1.0	275	2.2	5.0
1SMB180	1SMB180C	PS	ES	180	200	253.8	1.0	321	1.9	5.0
1SMB180A	1SMB180CA	PT	ET	180	200	230.4	1.0	290	2.1	5.0
1SMB190	1SMB190C	PU	EU	190	211	267.9	1.0	339	1.8	5.0
1SMB190A	1SMB190CA	PV	EV	190	211	243.2	1.0	306	2.0	5.0
1SMB200	1SMB200C	PW	EW	200	222	282.0	1.0	356	1.7	5.0
1SMB200A	1SMB200CA	PX	EX	200	222	256.0	1.0	322	1.9	5.0
1SMB210	1SMB210C	PY	EY	210	233	296.1	1.0	375	1.6	5.0
1SMB210A	1SMB210CA	PZ	EZ	210	233	268.8	1.0	339	1.8	5.0
1SMB220	1SMB220C	QD	FD	220	244	310.2	1.0	392	1.5	5.0
1SMB220A	1SMB220CA	QE	FE	220	244	281.6	1.0	355	1.7	5.0
1SMB250	1SMB250C	QF	FF	250	278	342.5	1.0	447	1.3	5.0
1SMB250A	1SMB250CA	QG	FG	250	278	309.0	1.0	403	1.5	5.0
1SMB300	1SMB300C	QH	FH	300	333	411.0	1.0	535	1.1	5.0
1SMB300A	1SMB300CA	QK	FK	300	333	371.0	1.0	484	1.2	5.0
1SMB350	1SMB350C	QL	FL	350	389	479.5	1.0	624	1.0	5.0
1SMB350A	1SMB350CA	QM	FM	350	389	432.0	1.0	565	1.1	5.0
1SMB400	1SMB400C	QN	FN	400	444	548.0	1.0	687	0.9	5.0
1SMB400A	1SMB400CA	QP	FP	400	444	494.0	1.0	645	0.9	5.0
1SMB440	1SMB440C	QQ	FQ	440	489	602.8	1.0	786	0.8	5.0
1SMB440A	1SMB440CA	QR	FR	440	489	543.0	1.0	710	0.8	5.0

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

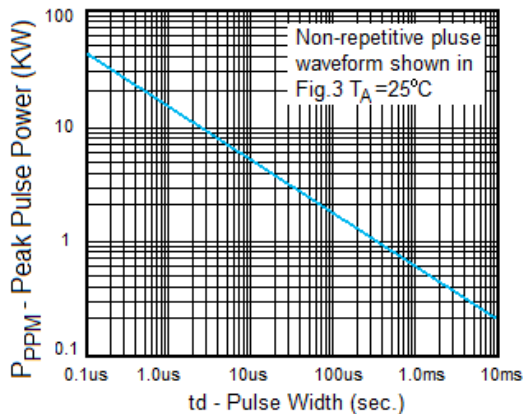


Fig. 1 Peak Pulse Power Rating

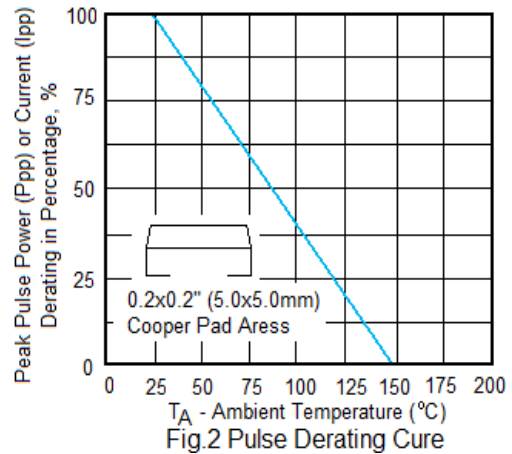


Fig. 2 Pulse Derating Curve

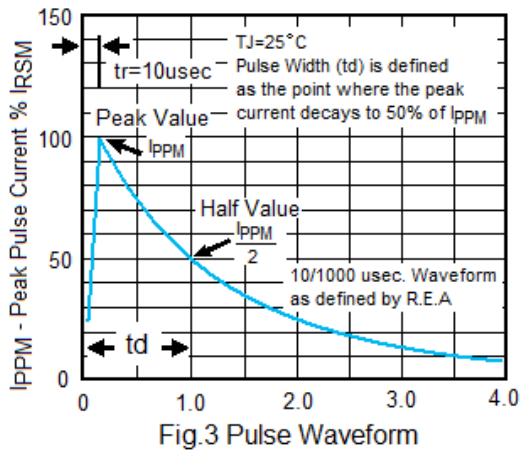


Fig. 3 Pulse Waveform

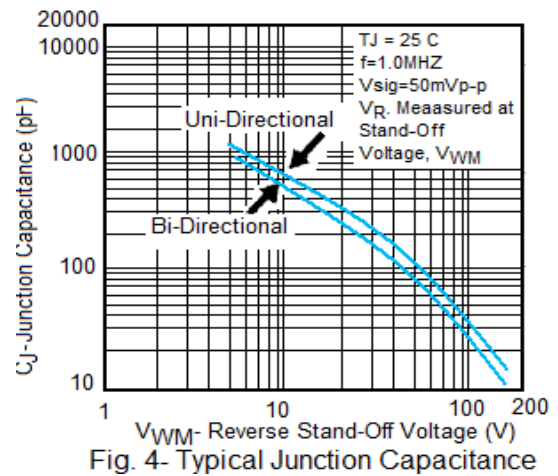


Fig. 4- Typical Junction Capacitance