



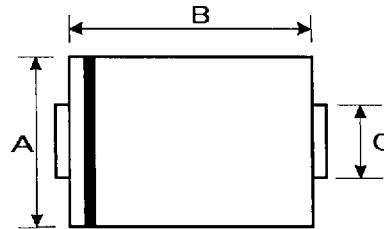
SMB5.0 - SMB170CA SERIES

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSORS

Features

- 600 Watts Peak Pulse Power Dissipation
- 5.0 - 170 V Standoff Voltages
- Constructed with Glass Passivated Die
- Excellent Clamping Capability
- Fast Response Time
- 100% Tested at Rated Peak Pulse Power

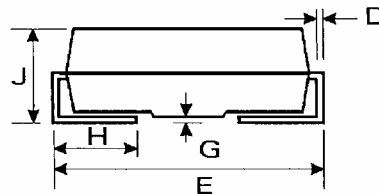
SMB - DO-214AA



DIM	MM
A	3.55 ± 0.12
B	4.51 ± 0.19
C	2.02 ± 0.06
D	0.23 ± 0.08
E	5.12 ± 0.09
G	0.152 ± 0.05
H	1.14 ± 0.12
J	2.35 ± 0.07

Mechanical Data

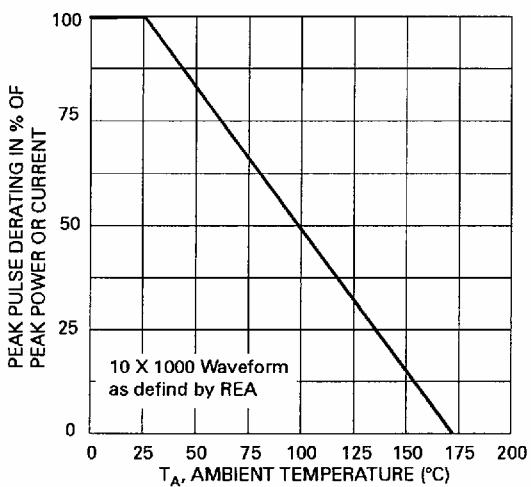
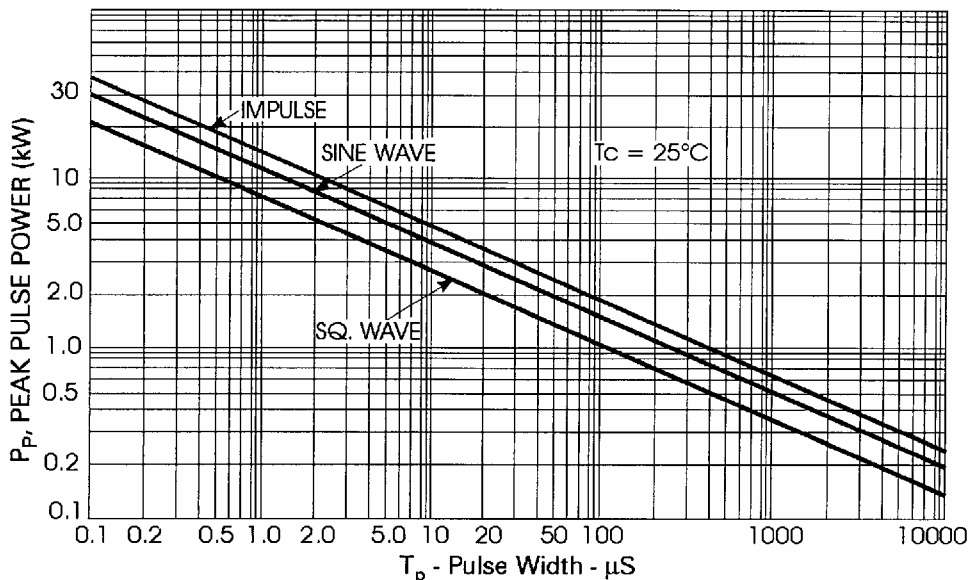
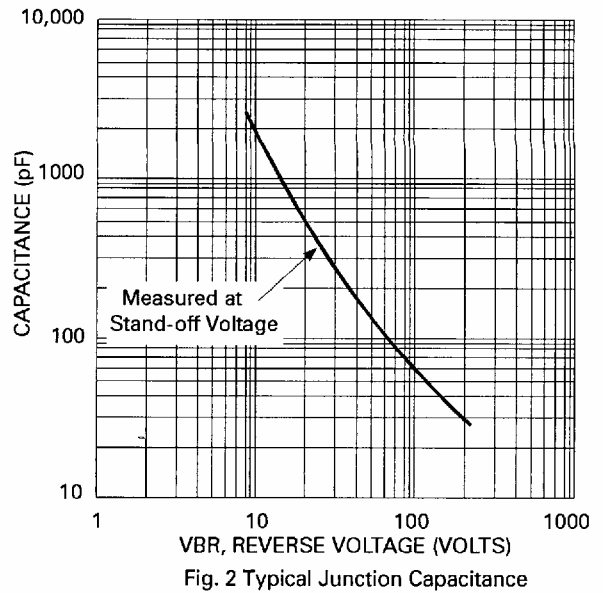
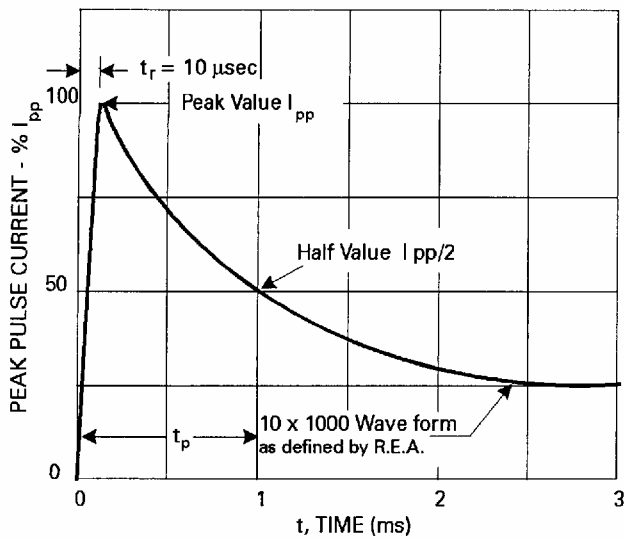
- Case: Transfer Molded Epoxy
- Terminals: Solderable per MIL-STD-202 Method 208
- Marking: Unidirectional - Device Code Number and Cathode Band
Bidirectional - Device Code Only
- Weight: 0.1 gram (approx.)
- Plastic Case Material has U/L Flammability Rating 94V-0



Maximum Ratings

Parameter	Symbol	Value	Unit
Peak Power Dissipation at $T_A = 25^\circ\text{C}$, $T_P = 1$ ms (Non repetitive current pulse, per Figure 1 and derated above $T_A = 25^\circ\text{C}$ per Figure 4) (See Note 1)	P_{pk}	600	W
Peak Forward Surge Current, 8.3 Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) (See Notes 1, 2, & 3)	I_{FSM}	100	A
Max Instantaneous Forward Voltage @ $I_P = 50\text{A}$ (See Notes 1, 2, & 3)	V_F	3.5	v
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +175	$^\circ\text{C}$

- Notes:
1. Mounted on 5.0 mm^2 copper land areas
 2. Measured with 8.3 ms single half sine-wave
Duty cycle = 4 pulses per minute maximum
 3. Unidirectional units only



PART NUMBER	PART NUMBER	REVERSE STANDOFF VOLTAGE	BREAKDOWN VOLTAGE By VOLTS @ I _T (Note 3)			MAX. REVERSE LEAKAGE	MAX. CLAMPING VOLTAGE	MAX. PEAK PULSE CURRENT	MARKING CODE
			V _R (V)	MIN (V)	MAX (V)	I _T (mA)	@ V _R I _R (μA)	@ I _{pp} V _C (V)	
SMB5.0	SMB5.0C	5.0	6.40	7.3	10	1000	9.6	62.5	KD
SMB5.0A	SMB5.0CA	5.0	6.40	7.0	10	1000	9.2	65.2	KE
SMB6.0	SMB6.0C	6.0	6.67	8.15	10	500	11.4	56.6	KF
SMB6.0A	SMB6.0CA	6.0	6.67	7.37	10	500	10.3	58.3	KG
SMB6.5	SMB6.5C	6.5	7.22	8.82	10	500	12.3	48.7	KH
SMB6.5A	SMB6.5CA	6.5	7.22	7.98	10	500	11.2	53.6	KK
SMB7.0	SMB7.0C	7.0	7.78	9.51	10	200	13.3	45.1	KL
SMB7.0A	SMB7.0CA	7.0	7.78	8.60	10	200	12.0	50.0	KM
SMB7.5	SMB7.5C	7.5	8.33	10.2	1	50	14.3	42.0	KN
SMB7.5A	SMB7.5CA	7.5	8.33	9.21	1	50	12.9	46.5	KP
SMB8.0	SMB8.0C	8.0	8.89	10.9	1	10	15.0	40.0	KQ
SMB8.0A	SMB8.0CA	8.0	8.89	9.83	1	10	13.6	44.1	KR
SMB8.5	SMB8.5C	8.5	9.44	11.5	1	10	15.9	37.7	KS
SMB8.5A	SMB8.5CA	8.5	9.44	10.4	1	10	14.4	41.7	KT
SMB9.0	SMB9.0C	9.0	10.0	12.2	1	5	16.9	35.5	KU
SMB9.0A	SMB9.0CA	9.0	10.0	11.1	1	5	15.4	39.0	KV
SMB10	SMB10C	10.0	11.1	13.6	1	5	18.8	31.9	KW
SMB10A	SMB10CA	10.0	11.1	12.3	1	5	17.0	35.3	KX
SMB11	SMB11C	11.0	12.2	14.9	1	5	20.1	29.9	KY
SMB11A	SMB11CA	11.0	12.2	13.5	1	5	18.2	33.0	KZ
SMB12	SMB12C	12.0	13.3	16.3	1	5	22.0	27.3	LD
SMB12A	SMB12CA	12.0	13.3	14.7	1	5	19.9	30.2	LE
SMB13	SMB13C	13.0	14.4	17.6	1	5	23.8	25.2	LF
SMB13A	SMB13CA	13.0	14.4	15.9	1	5	21.5	27.9	LG
SMB14	SMB14C	14.0	15.6	19.1	1	5	25.8	23.3	LH
SMB14A	SMB14CA	14.0	15.6	17.2	1	5	23.2	25.8	LK
SMB15	SMB15C	15.0	16.7	20.4	1	5	26.9	22.3	LL
SMB15A	SMB15CA	15.0	16.7	18.5	1	5	24.4	24.0	LM
SMB16	SMB16C	16.0	17.8	21.8	1	5	28.8	20.8	LN
SMB16A	SMB16CA	16.0	17.8	19.7	1	5	26.0	23.1	LP
SMB17	SMB17C	17.0	18.9	23.1	1	5	30.5	19.7	LQ
SMB17A	SMB17CA	17.0	18.9	20.9	1	5	27.6	21.7	LR
SMB18	SMB18C	18.0	20.0	24.4	1	5	32.2	18.6	LS
SMB18A	SMB18CA	18.0	20.0	22.1	1	5	29.2	20.5	LT
SMB20	SMB20C	20.0	22.2	27.1	1	5	35.8	16.7	LU
SMB20A	SMB20CA	20.0	22.2	24.5	1	5	32.4	18.5	LV
SMB22	SMB22C	22.0	24.4	29.8	1	5	39.4	15.2	LW
SMB22A	SMB22CA	22.0	24.4	26.9	1	5	35.5	16.9	LX
SMB24	SMB24C	24.0	26.7	32.6	1	5	43.0	14.0	LY
SMB24A	SMB24CA	24.0	26.7	29.5	1	5	38.9	15.4	LZ
SMB26	SMB26C	26.0	28.9	35.3	1	5	46.6	12.4	MD
SMB26A	SMB26CA	26.0	28.9	31.9	1	5	42.1	14.2	ME
SMB28	SMB28C	28.0	31.1	38.0	1	5	50.0	12.0	MF
SMB28A	SMB28CA	28.0	31.1	34.4	1	5	45.4	13.2	MG
SMB30	SMB30C	30.0	33.3	40.7	1	5	53.5	11.2	MH
SMB30A	SMB30CA	30.0	33.3	36.8	1	5	48.4	12.4	MK
SMB33	SMB33C	33.0	36.7	44.9	1	5	59.0	10.2	ML
SMB33A	SMB33CA	33.0	36.7	40.6	1	5	53.3	11.3	MM
SMB36	SMB36C	36.0	40.0	48.9	1	5	64.3	9.3	MN
SMB36A	SMB36CA	36.0	40.0	44.2	1	5	58.1	10.3	MP
SMB40	SMB40C	40.0	44.4	54.3	1	5	71.4	8.4	MQ
SMB40A	SMB40CA	40.0	44.4	49.1	1	5	64.5	9.3	MR
SMB43	SMB43C	43.0	47.8	58.4	1	5	76.7	7.8	MS
SMB43A	SMB43CA	43.0	47.8	52.8	1	5	69.4	8.6	MT
SMB45	SMB45C	45.0	50.0	61.1	1	5	80.3	7.5	MU

PART NUMBER	PART NUMBER	REVERSE STANDOFF VOLTAGE	BREAKDOWN VOLTAGE B _v VOLTS @ I _T (Note 3)			MAX. REVERSE LEAKAGE	MAX. CLAMPING VOLTAGE	MAX. PEAK PULSE CURRENT	MARKING CODE
			V _R (V)	MIN (V)	MAX (V)	I _T (mA)	@ V _R I _R (μA)	@ I _{PP} V _C (V)	
(UNI)	(BI)	V _R (V)	MIN (V)	MAX (V)	I _T (mA)	I _R (μA)	V _C (V)	I _{PP} (A)	
SMB45A	SMB45CA	45.0	50.0	55.3	1	5	72.7	8.3	MV
SMB48	SMB48C	48.0	53.3	65.1	1	5	85.5	7.0	MW
SMB48A	SMB48CA	48.0	53.3	58.9	1	5	77.4	7.7	MX
SMB51	SMB51C	51.0	56.7	69.3	1	5	91.1	6.6	MY
SMB51A	SMB51CA	51.0	56.7	62.7	1	5	82.4	7.3	MZ
SMB54	SMB54C	54.0	60.0	73.3	1	5	96.3	6.2	ND
SMB54A	SMB54CA	54.0	60.0	66.3	1	5	87.1	6.9	NE
SMB58	SMB58C	58.0	64.4	78.7	1	5	103	5.8	NF
SMB58A	SMB58CA	58.0	64.4	71.2	1	5	93.6	6.4	NG
SMB60	SMB60C	60.0	66.7	81.5	1	5	107	5.6	NH
SMB60A	SMB60CA	60.0	66.7	73.7	1	5	96.8	6.2	NK
SMB64	SMB64C	64.0	71.1	86.9	1	5	114	5.3	NL
SMB64A	SMB64CA	64.0	71.1	78.6	1	5	103	5.8	NM
SMB70	SMB70C	70.0	77.8	95.1	1	5	125	4.8	NN
SMB70A	SMB70CA	70.0	77.8	86.0	1	5	113	5.3	NP
SMB75	SMB75C	75.0	83.3	102.1	1	5	134	4.5	NQ
SMB75A	SMB75CA	75.0	83.3	92.1	1	5	121	4.9	NR
SMB78	SMB78C	78.0	86.7	106	1	5	139	4.3	NS
SMB78A	SMB78CA	78.0	86.7	95.8	1	5	126	4.7	NT
SMB85	SMB85C	85.0	94.4	115	1	5	151	3.9	NU
SMB85A	SMB85CA	85.0	94.4	104	1	5	137	4.4	NV
SMB90	SMB90C	90.0	100	122	1	5	160	3.8	NW
SMB90A	SMB90CA	90.0	100	111	1	5	146	4.1	NX
SMB100	SMB100C	100	111	136	1	5	179	3.4	NY
SMB100A	SMB100CA	100	111	123	1	5	162	3.7	NZ
SMB110	SMB110C	110	122	149	1	5	196	3.0	PD
SMB110A	SMB110CA	110	122	135	1	5	177	3.4	PE
SMB120	SMB120C	120	133	163	1	5	214	2.8	PF
SMB120A	SMB120CA	120	133	147	1	5	193	3.1	PG
SMB130	SMB130C	130	144	176	1	5	231	2.6	PH
SMB130A	SMB130CA	130	144	159	1	5	209	2.9	PK
SMB150	SMB150C	150	167	204	1	5	268	2.2	PL
SMB150A	SMB150CA	150	167	185	1	5	243	2.5	PM
SMB160	SMB160C	160	178	218	1	5	287	2.1	PN
SMB160A	SMB160CA	160	178	197	1	5	259	2.3	PP
SMB170	SMB170C	170	189	231	1	5	304	2.0	PQ
SMB170A	SMB170CA	170	189	209	1	5	275	2.2	PR

1. Suffix 'C' denotes Bi-directional device. Suffix 'A' denotes 5% tolerance device, no suffix denotes 10% tolerance device.
2. For Bi-directional devices having V_R of 10 volts and under, the I_R limit is doubled
3. B_v measured with I_T current pulse = 300 μsec