

### Features

- Glass Passivated Chip
- 2000W Peak Pulse Power Capability with a 10/1000 us Waveform
- Low Inductance
- For Bidirectional Devices Add "C" To The Suffix of The Part Number: i.e.SMB20J20CA for 5% Tolerance
- Halogen Free. "Green" Device (Note 1)
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant (Note 2) ("P" Suffix Designates RoHS Compliant. See Ordering Information)

### Mechanical Data

- Terminals: Solderable Per MIL-STD-750, Method 2026
- Polarity: Color Band Denotes Positive End (cathode) Except Bidirectiona

### Maximum Ratings

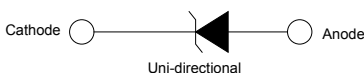
- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C

### Electrical Characteristics @ 25°C Unless Otherwise Specified

Peak Pulse Power Surge Current on 10/1000µs Waveform	$I_{PP}$	See the Table	Note 3
Peak Pulse Power Dissipation	$P_{PP}$	2000W	Note 3
Power Dissipation on infinite heat sink	$P_D$	5.0W	$T_L = 75^\circ\text{C}$
Peak forward surge current	$I_{FSM}$	100A	Note 4
Maximum instantaneous forward voltage at 25A for unidirectional only	$V_F$	5.0V	

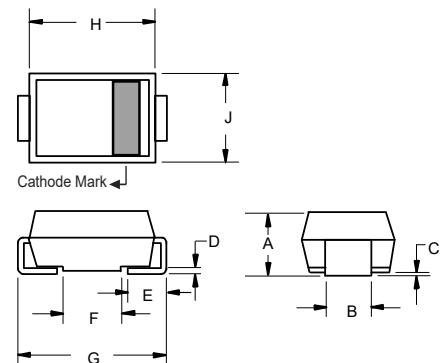
- Notes: 1.Halogen free "Green"products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.  
 2.High Temperature Solder Exemption Applied, see EU Directive Annex 7a.  
 3.Non-repetitive current pulse, per Fig.3 and derated above  $T_A=25^\circ\text{C}$  per Fig.4  
 4.Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle =4 pulses per minute maximum.

#### Pin Configuration:



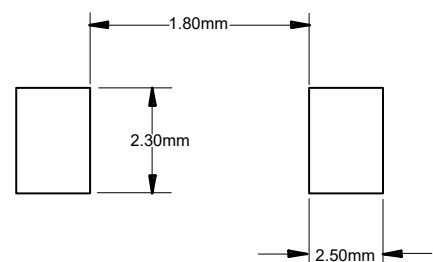
## 2000 Watt TVS 20 to 58 Volts

### SMB (DO-214AA) (LEAD FRAME)



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.079	0.103	2.00	2.62	
B	0.075	0.087	1.91	2.21	
C	0.002	0.008	0.05	0.20	
D	0.006	0.012	0.15	0.31	
E	0.030	0.060	0.76	1.52	
F	0.065	0.091	1.65	2.32	
G	0.200	0.220	5.08	5.59	
H	0.160	0.191	4.06	4.85	
J	0.130	0.155	3.30	3.94	

#### Suggested Solder Pad Layout



**Electrical Characteristics @ 25°C Unless Otherwise Specified**

MCC Part Number		Breakdown Voltage $V_{BR}$ @ $I_T$			Maximum Reverse Leakage $I_R$ @ $V_{RWM}$ ( $\mu A$ )	Working Peak Reverse Voltage $V_{RWM}$ (V)	Maximum Reverse Surge Current $I_{PP}$ (A)	Maximum Clamping Voltage $V_C$ @ $I_{PP}$ (V)	Device Marking Code	
Uni	Bi	Min (V)	Max (V)	$I_T$ (mA)					Uni	Bi
SMB20J20A	SMB20J20CA	22.20	24.50	1	1.0	20.0	61.73	32.4	20LV	20BV
SMB20J22A	SMB20J22CA	24.40	26.90	1	1.0	22.0	56.33	35.5	20LX	20BX
SMB20J24A	SMB20J24CA	26.70	29.50	1	1.0	24.0	51.41	38.9	20LZ	20BZ
SMB20J26A	SMB20J26CA	28.90	31.90	1	1.0	26.0	47.51	42.1	20ME	20CE
SMB20J28A	SMB20J28CA	31.10	34.40	1	1.0	28.0	44.05	45.4	20MG	20CG
SMB20J30A	SMB20J30CA	33.30	36.80	1	1.0	30.0	41.32	48.4	20MK	20CK
SMB20J33A	SMB20J33CA	36.70	40.60	1	1.0	33.0	37.52	53.3	20MM	20CM
SMB20J36A	SMB20J36CA	40.00	44.20	1	1.0	36.0	34.43	58.1	20MP	20CP
SMB20J40A	SMB20J40CA	44.40	49.10	1	1.0	40.0	31.01	64.5	20MR	20CR
SMB20J43A	SMB20J43CA	47.80	52.80	1	1.0	43.0	28.81	69.4	20MT	20CT
SMB20J45A	SMB20J45CA	50.00	55.30	1	1.0	45.0	27.51	72.7	20MV	20CV
SMB20J48A	SMB20J48CA	53.30	58.90	1	1.0	48.0	25.84	77.4	20MX	20CX
SMB20J51A	SMB20J51CA	56.70	62.70	1	1.0	51.0	24.27	82.4	20MZ	20CZ
SMB20J54A	SMB20J54CA	60.00	66.30	1	1.0	54.0	22.96	87.1	20NE	20DE
SMB20J58A	SMB20J58CA	64.40	71.20	1	1.0	58.0	21.37	93.6	20NG	20DG

1. Add suffix ' CA ' after part number to specify Bi-directional devices

**Curve Characteristics**

FIG1: Peak Pulse Power Rating Curve

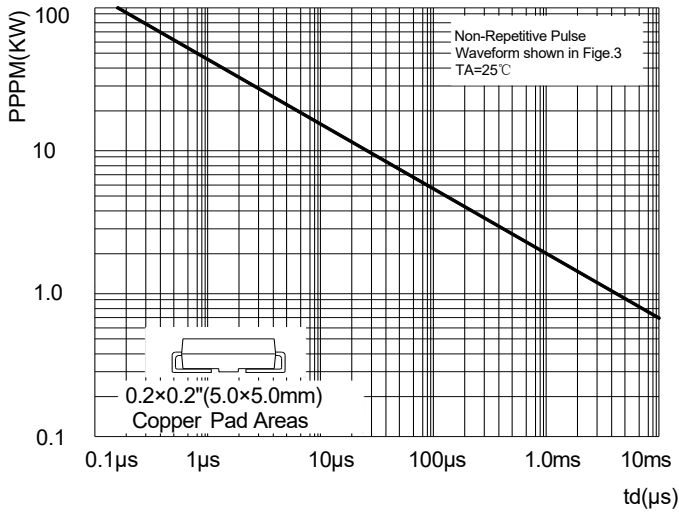


FIG2: Maximum Non-Repetitive Surge Current

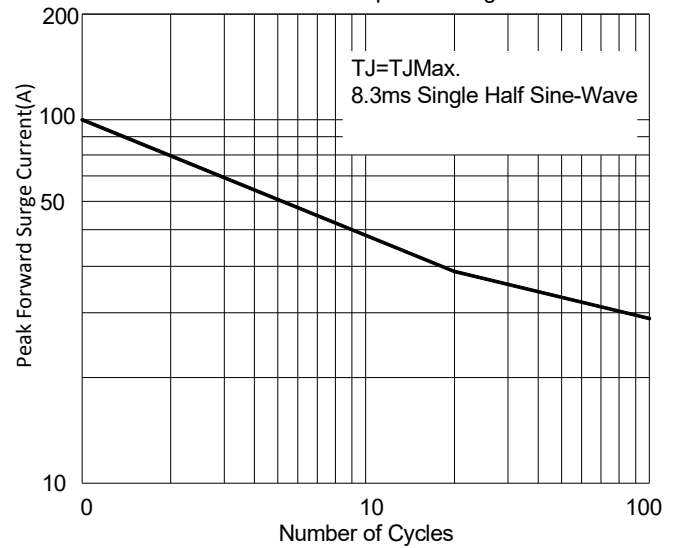


Fig. 3 - Pulse Waveform

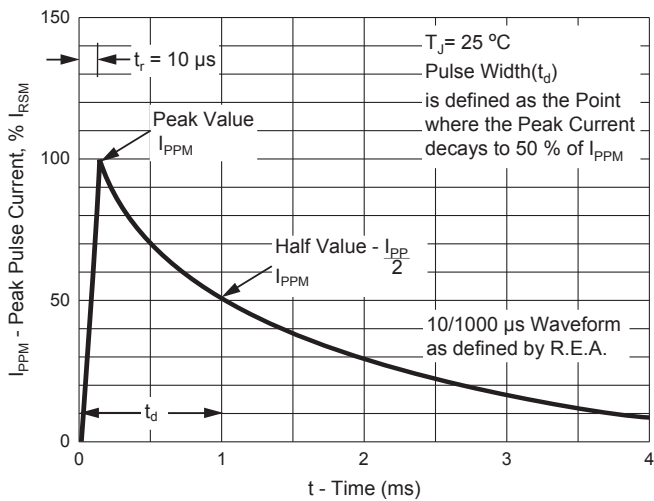
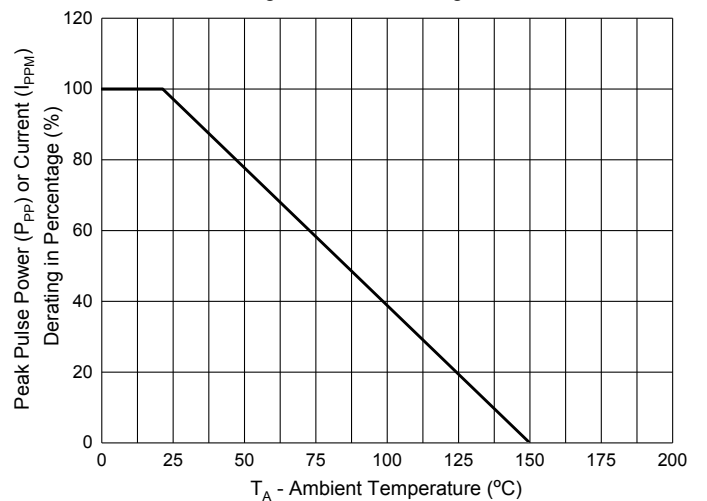


Fig. 4 - Pulse Derating Curve



### Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:3Kpcs/Reel

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