

## P6SMBJ68CA

### SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

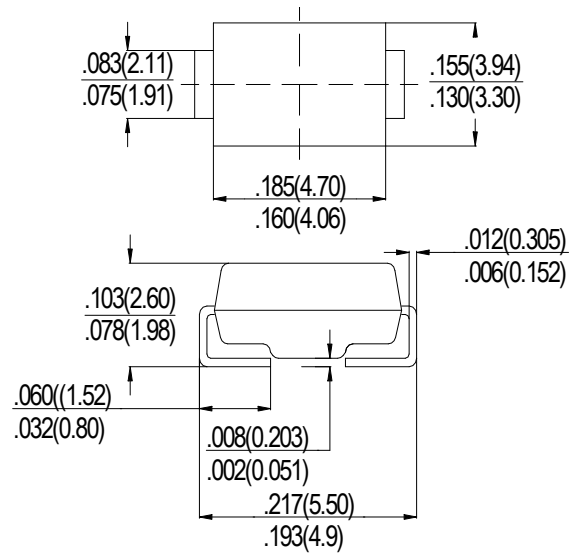
#### FEATURE

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- 600W surge capability at 10×1000us waveform, Duty cycle:0.01%
- Excellent clamping capability
- Low zener impedance
- Fast response time:Typically less then 1.0ps from 0 volts to BV min.
- Typical IR less then 1 μA above 10V
- High temperature soldering guaranteed: 260°C/10 seconds at terminals.

#### MECHANICAL DATA

- Case: Molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Lead: MIL-STD- 202E, Method 208 guaranteed
- Polarity:Color band denotes cathode end
- Packaging: 12mm tape per EIA STD RS-481
- Mounting position: Any

#### SMB (DO-214AA)



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating at 25°C ambient temperature unless otherwise stated)

Type Number	SYM BOL	Value	units
Peak Power Dissipation at Ta=25°C, Tp=1ms (note 1)	$P_{PPM}$	Minimum 600	Watts
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) (note 2,3)	$I_{FSM}$	100	Amps
Storage Temperature	$T_{STG}$	-55 to +150	°C
Operating Junction Temperature	$T_J$	-55 to +150	°C

#### Note:

1. Non-repetitive Current Pulse Per Fig.3 and Derated above Ta=25°C Per Fig.2 .
2. Mounted on 5.0mm<sup>2</sup>(.013mm Thick) Copper Pad to Each Terminal.
3. 8.3ms Single Half Sine-wave or Equivalent Square Wave, Duty Cycle=4 Pulses Per Minutes Maximum.

#### Devices for Bipolar Applications

1. For Bidirectional Use C or CA Suffix for Type P6SMBJ68CA.
2. Electrical Characteristics Apply in Both Directions.

### ELECTRICAL CHARACTERISTICS(25°C unless otherwise noted)

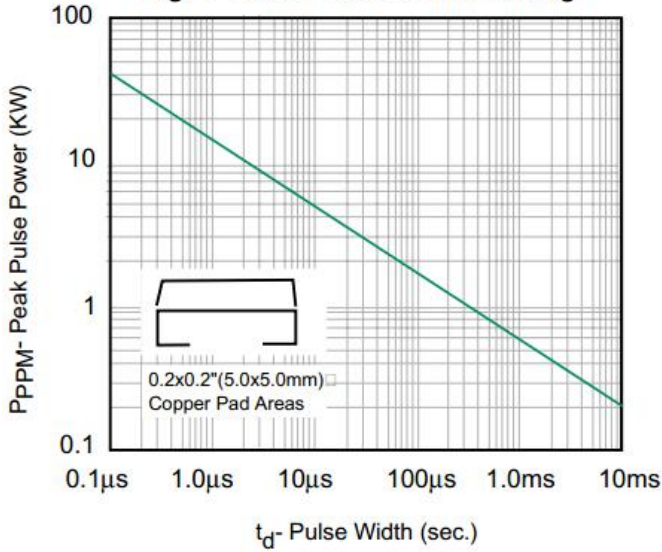
Device (Marking)	Nominal Voltage (volts)	Breakdown Voltage		Test Current @IT(mA)	Stand-Off Voltage VWM (volts)	Maximum Reverse Leakage At VWM ID(μA)(2)	Maximum Peak Pulse Surge Current IPPM (Amps)(3)	Maximum Clamping Voltage at IPPM VC(Volts)
		VBR(volts)(1)						
		Min	Max					
P6SMBJ68CA	68	64.6	71.4	1.0	58.1	5.0	6.8	92

#### Note:

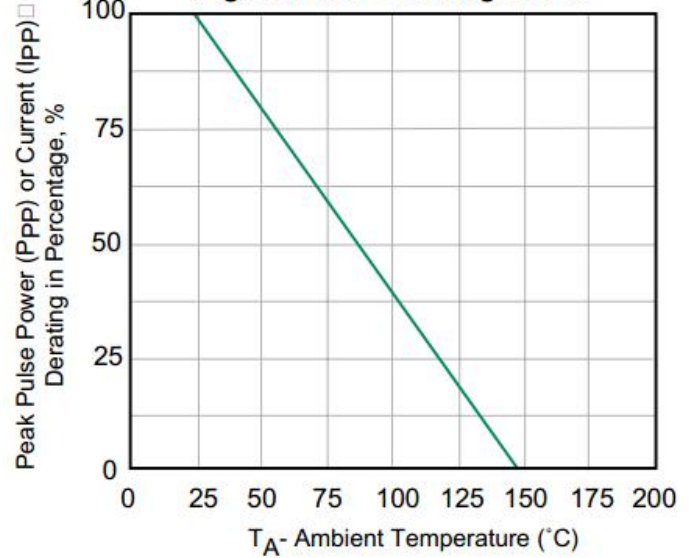
1. VBR measured afert IT applied for 300us, IT=square wave pulse or equivalent.
2. Surge currect waveform per Figure 3 and derate per Figure 2.
4. All terms and symbols are consistent with ANSI/IEEE C62.35.

## RATING AND CHARACTERISTIC CURVES

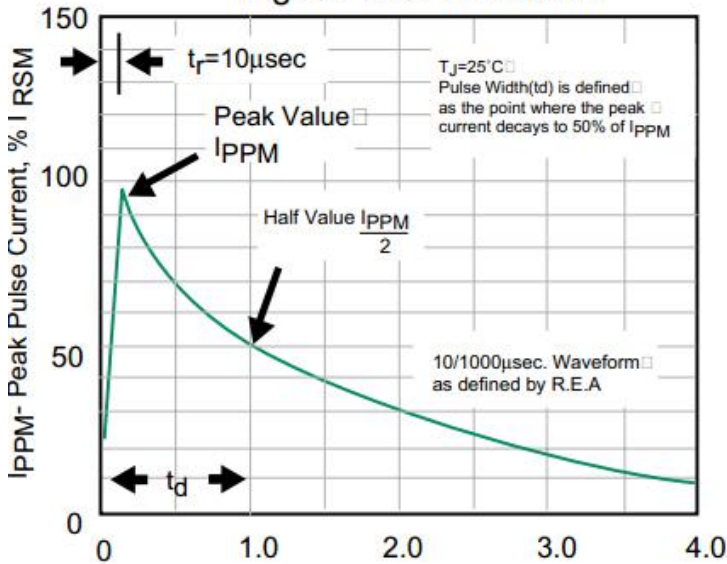
**Fig. 1 Peak Pulse Power Rating**



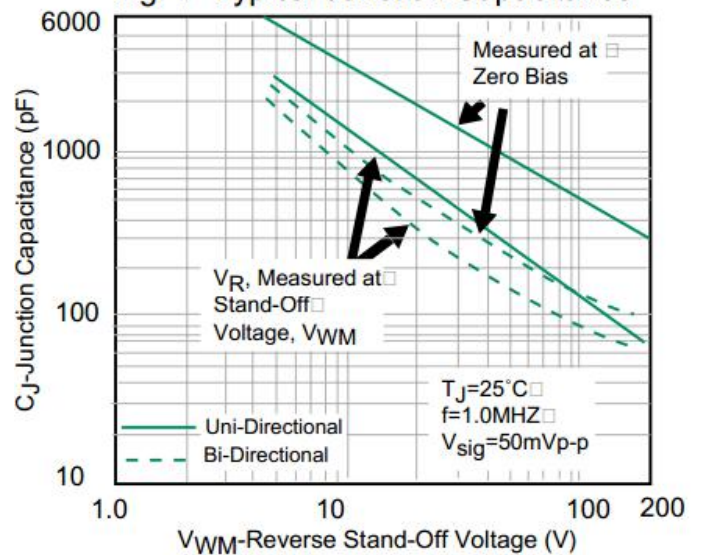
**Fig. 2 Pulse Derating Curve**



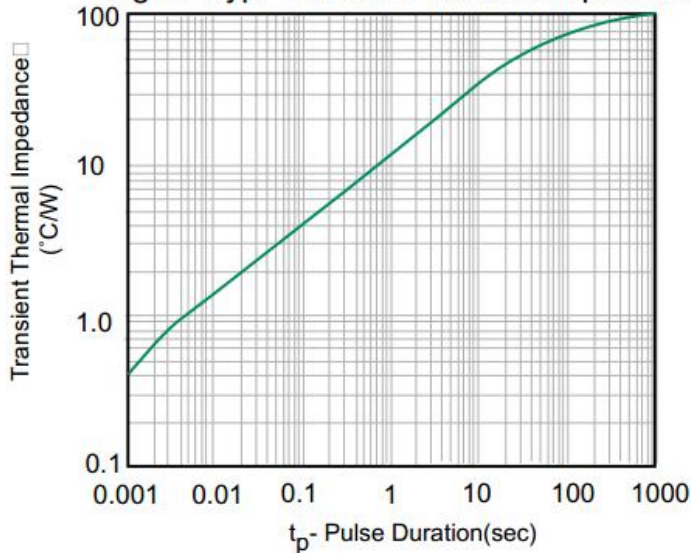
**Fig. 3 Pulse Waveform**



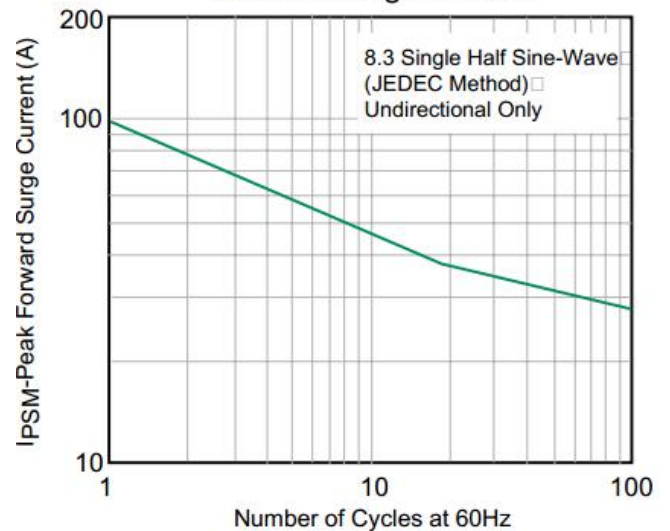
**Fig. 4- Typical Junction Capacitance**



**Fig. 5- Typ. Transient Thermal Impedance**

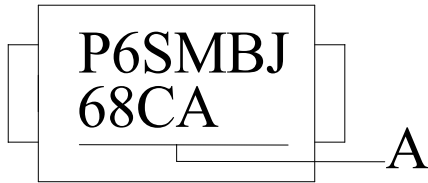


**Fig. 6- Maximum Non-Repetitive Peak Forward Surge Current**



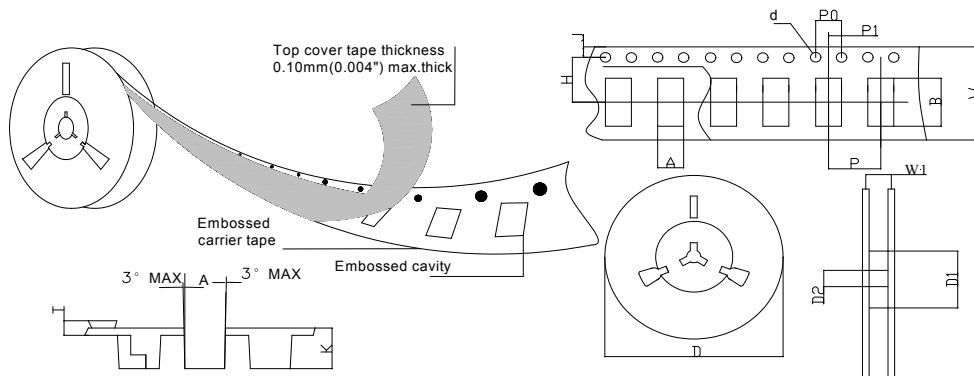
## Marking and packaging illustration

### 1、Marking



SYMBOL	Explanation
A	Product name

### 2、Packaging



SPECIFICATIONS mm(inch)		PACKAGE	
SYMBOL	ITEM	SMB(DO-214AA)	
	Carrier width	A	3.81(0.150)Max
	Carrier length	B	5.41(0.213)Max
	Sprocket hole	d	ø1.55(0.061)Typ
	Reel outer diameter	D	330.0(13.0)Typ
	Reel inner diameter	D1	50.0(1.969)Min
	Feed hole diameter	D2	13.0(0.512)Typ
	Sprocket hole position	J	1.75(0.069)Typ
	Punch hole position	H	5.55(0.219)Typ
	Carrier depth	K	2.45(0.965)Typ
	Punch hole pitch	P	8.00(0.315)Typ
	Sprocket hole pitch	P0	4.00(0.157)Typ
	Embossment center	P1	2.00(0.079)Typ
	Overall tape thickness	T	0.30(0.012)Typ
	Tape width	W	12.0(0.472)Typ
	Reel width	W1	12.4(0.488)Min