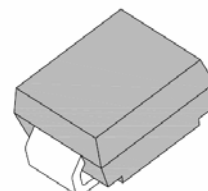


600W Surface Mount Transient Voltage Suppressor

Features

- Breakdown voltage from 6.8 to 250 volts
- Low inductance, excellent clamping capability
- Repetition rate(duty cycle): 0.01%
- Fast response time: typically less than 1.0ps from 0v to VBR
- For unidirectional types
- Typical IR less than 1 μ A above 10V
- High temperature soldering guaranteed:250°C/10 seconds at terminals
- This series is UL recognized under component index. File number E315008
- RoHS Compliant

SMB



Mechanical Data

Case:	JEDEC DO-214AA (SMB) molded plastic over glass passivated junction
Epoxy:	Meets UL 94V-0 flammability rating
Terminals:	Solder plated, solderable per MIL-STD-750, Method 2026
Polarity:	Color band denoted positive end (cathode) except Bi-directional
Mounting position:	Any
Weight:	0.003 ounces, 0.093 gram

Maximum Ratings ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Symbol	Description	Value	Unit	Conditions
PPPM	Peak Pulse Power Dissipation on 10/1000 us waveform	Minimum 600	W	Non-repetitive current pulse, per FIG.3 and derated above TA=25° C per FIG.2
IPPM	Peak Pulse current on 10/1000 us waveform	See Table	A	Non-repetitive current pulse
IFSM	Peak Forward Surge Current	100	A	8.3ms single half sine-wave superimposed on rated load, (JEDEC Method) (Note 1,2)
TJ,TSTG	Operating Junction and Storage Temperature Range	-55 to 150	° C	

- Note:** 1. Mounted on 5.0mm x 5.0mm (0.03mm thick) copper pads to each terminal
 2. 8.3ms single half sine-wave, or equivalent square wave, Duty cycle= 4 pulses per minutes maximum.

600W Surface Mount Transient Voltage Suppressor

P6SMBJ6.8A~250CA

Electrical Characteristics ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Part NO.		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage @ Test Current.			Max. Clamping Voltage @ IPPM	Max. Peak Pulse Current	Max. Reverse Leakage Current @ V _{WM}
					V _{BR}		I _T (mA)			
Uni-Polar	Bi-Polar	Uni	Bi	V _{WM} (V)	Min.	Max.			V _C (V)	IPP (A)
P6SMBJ6.8A	P6SMBJ6.8CA	6V8A	6V8C	5.8	6.45	7.14	10	10.5	58.1	1000/2000
P6SMBJ7.5A	P6SMBJ7.5CA	7V5A	7V5C	6.4	7.13	7.88		11.3	54.0	500/1000
P6SMBJ8.2A	P6SMBJ8.2CA	8V2A	8V2C	7.02	7.79	8.61		12.1	50.4	200/400
P6SMBJ9.1A	P6SMBJ9.1CA	9V1A	9V1C	7.78	8.65	9.55	1	13.4	45.5	50/100
P6SMBJ10A	P6SMBJ10CA	10A	10C	8.55	9.5	10.5	1	14.5	42.1	10/20
P6SMBJ11A	P6SMBJ11CA	11A	11C	9.4	10.5	11.6	1	15.6	39.1	5/10
P6SMBJ12A	P6SMBJ12CA	12A	12C	10.2	11.4	12.6	1	16.7	36.5	5/10
P6SMBJ13A	P6SMBJ13CA	13A	13C	11.1	12.4	13.7	1	18.2	33.5	5
P6SMBJ15A	P6SMBJ15CA	15A	15C	12.8	14.3	15.8	1	21.2	28.8	5
P6SMBJ16A	P6SMBJ16CA	16A	16C	13.6	15.2	16.8	1	22.5	27.1	5
P6SMBJ18A	P6SMBJ18CA	18A	18C	15.3	17.1	18.9	1	25.5	24.2	5
P6SMBJ20A	P6SMBJ20CA	20A	20C	17.1	19	21	1	27.7	22.0	5
P6SMBJ22A	P6SMBJ22CA	22A	22C	18.8	20.9	23.1	1	30.6	19.9	5
P6SMBJ24A	P6SMBJ24CA	24A	24C	20.5	22.8	25.2	1	33.2	18.4	5
P6SMBJ27A	P6SMBJ27CA	27A	27C	23.1	25.7	28.4	1	37.5	16.3	5
P6SMBJ30A	P6SMBJ30CA	30A	30C	25.6	28.5	31.5	1	41.4	14.7	5
P6SMBJ33A	P6SMBJ33CA	33A	33C	28.2	31.4	34.7	1	45.7	13.3	5
P6SMBJ36A	P6SMBJ36CA	36A	36C	30.8	34.2	37.8	1	49.9	12.2	5
P6SMBJ39A	P6SMBJ39CA	39A	39C	33.3	37.1	41	1	53.9	11.3	5
P6SMBJ43A	P6SMBJ43CA	43A	43C	36.8	40.9	45.2	1	59.3	10.3	5
P6SMBJ47A	P6SMBJ47CA	47A	47C	40.2	44.7	49.4	1	64.8	9.4	5
P6SMBJ51A	P6SMBJ51CA	51A	51C	43.6	48.5	53.6	1	70.1	8.7	5
P6SMBJ56A	P6SMBJ56CA	56A	56C	47.8	53.2	58.8	1	77	7.9	5
P6SMBJ62A	P6SMBJ62CA	62A	62C	53	58.9	65.1	1	85	7.2	5
P6SMBJ68A	P6SMBJ68CA	68A	68C	58.1	64.6	71.4	1	92	6.6	5
P6SMBJ75A	P6SMBJ75CA	75A	75C	64.1	71.3	78.8	1	103	5.9	5
P6SMBJ82A	P6SMBJ82CA	82A	82C	70.1	77.9	86.1	1	113	5.4	5
P6SMBJ91A	P6SMBJ91CA	91A	91C	77.8	86.5	95.5	1	125	4.9	5
P6SMBJ100A	P6SMBJ100CA	100A	100C	85.5	95	105	1	137	4.5	5
P6SMBJ110A	P6SMBJ110CA	110A	110C	94	105	116	1	152	4.0	5
P6SMBJ120A	P6SMBJ120CA	120A	120C	102	114	126	1	165	3.7	5
P6SMBJ130A	P6SMBJ130CA	130A	130C	111	124	137	1	179	3.4	5

600W Surface Mount Transient Voltage Suppressor

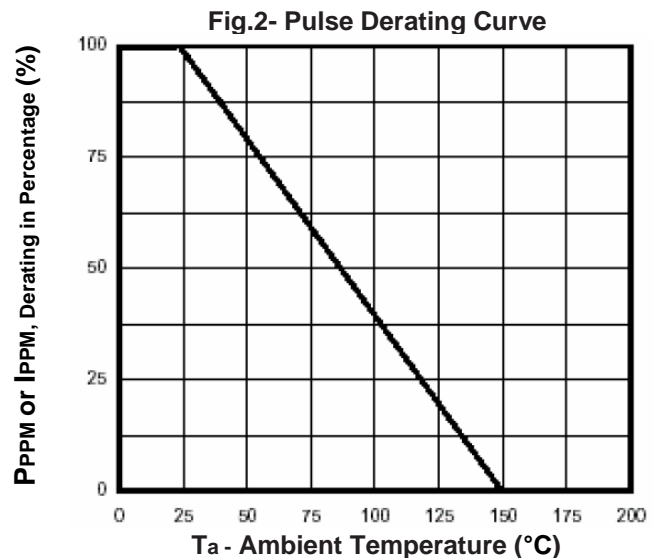
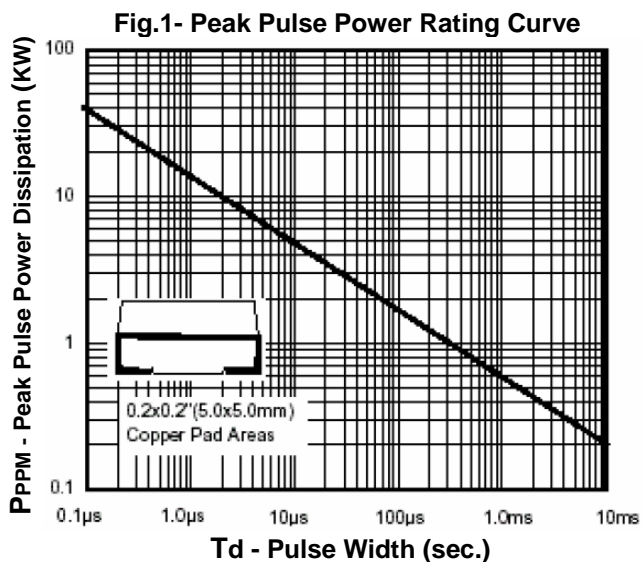
P6SMBJ6.8A~250CA

Electrical Characteristics ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Part NO.		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage @ Test Current.			Max. Clamping Voltage @ IPPM	Max. Peak Pulse Current	Max. Reverse Leakage Current @ V_{WM}
					V_{BR}		I_T (mA)			
Uni-Polar	Bi-Polar	Uni	Bi	V_{WM} (V)	Min.	Max.		V_C (V)	IPPM (A)	I_D (μ A)
P6SMBJ150A	P6SMBJ150CA	150A	150C	128	143	158	1	207	2.9	5
P6SMBJ160A	P6SMBJ160CA	160A	160C	136	152	168	1	219	2.8	5
P6SMBJ170A	P6SMBJ170CA	170A	170C	145	162	179	1	234	2.6	5
P6SMBJ180A	P6SMBJ180CA	180A	180C	154	171	189	1	246	2.5	5
P6SMBJ200A	P6SMBJ200CA	200A	200C	171	190	210	1	274	2.2	5
P6SMBJ220A	P6SMBJ220CA	220A	220C	185	209	231	1	328	1.9	5
P6SMBJ250A	P6SMBJ250CA	250A	250C	214	237	263	1	344	1.8	5

Note: For bi-directional type having V_{WM} of 10V and less, the I_D limit is double.

Typical Characteristics Curves



600W Surface Mount Transient Voltage Suppressor

P6SMBJ6.8A~250CA

Fig.3- Pulse Waveform

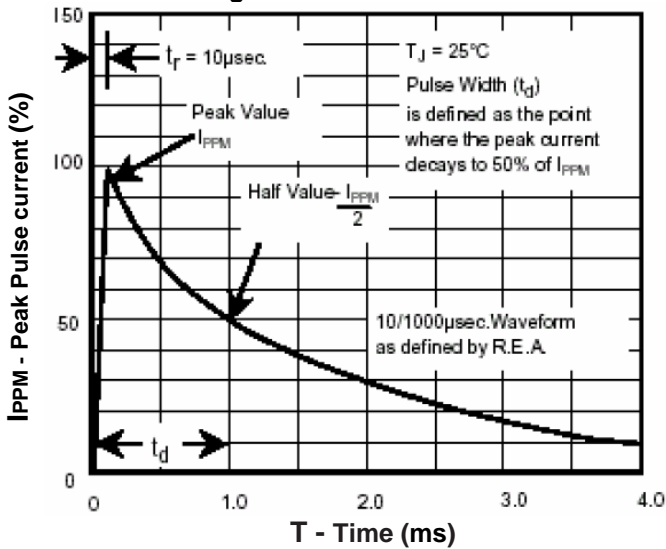


Fig.4 - Max. Non-Repetitive Forward Surge Current

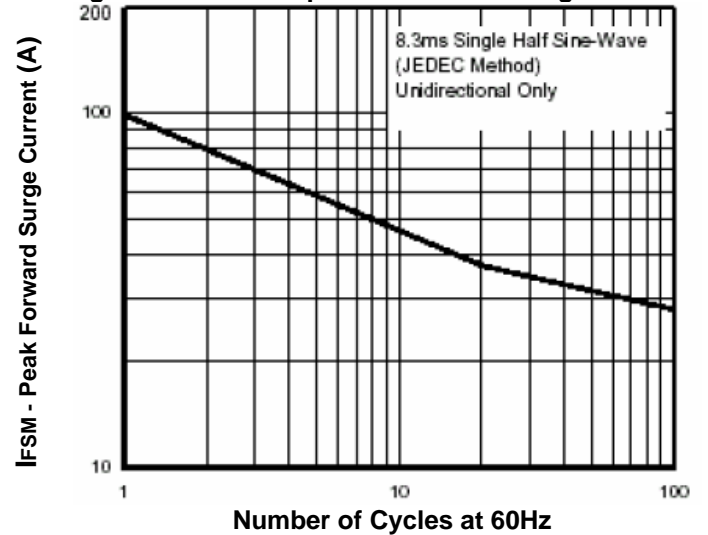


Fig.5- Steady State Power Derating Curve

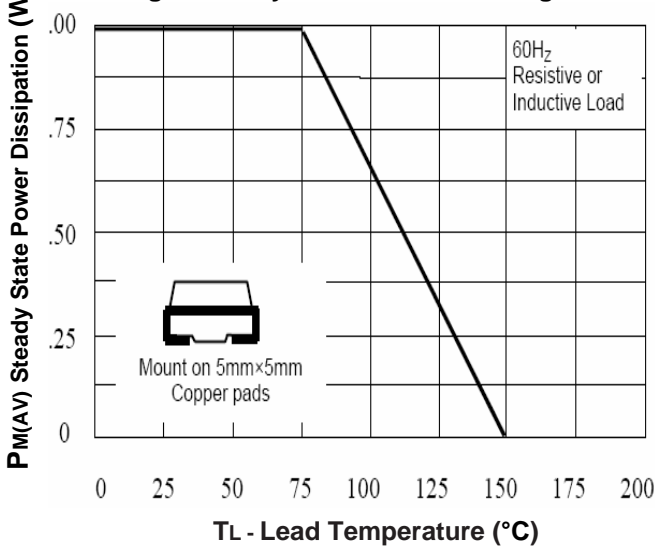
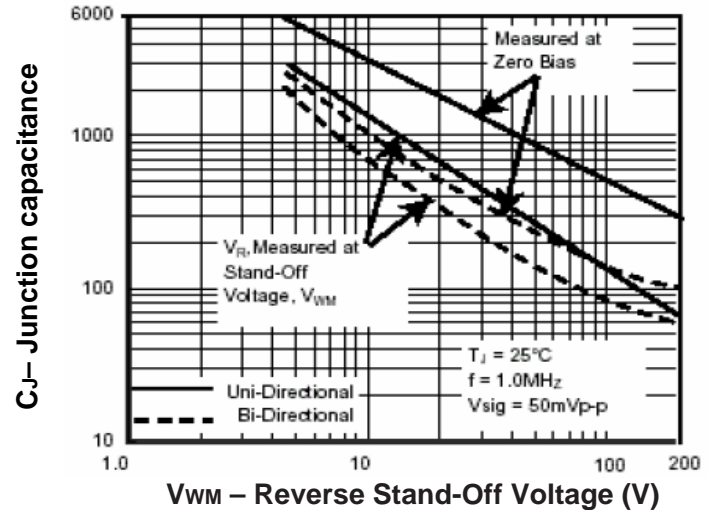


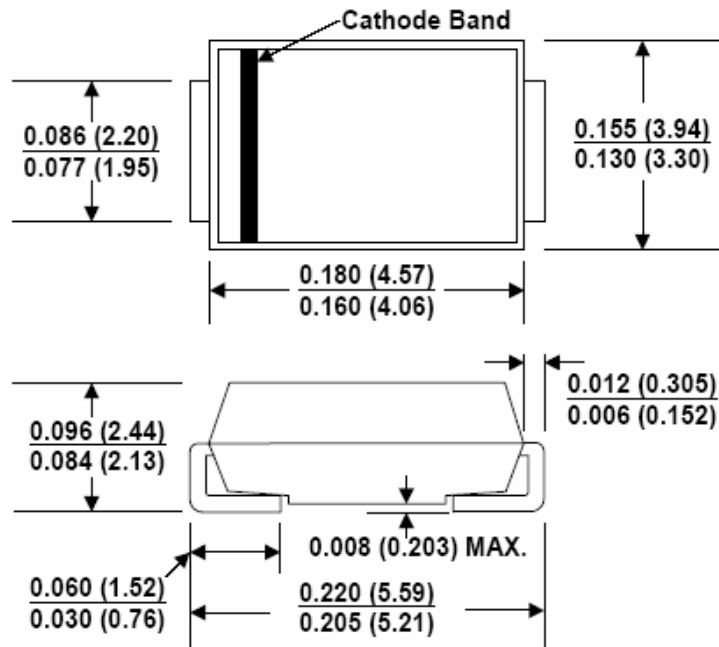
Fig.6- Typical Junction Capacitance



600W Surface Mount Transient Voltage Suppressor

P6SMBJ6.8A~250CA

Dimensions in inches (mm)



SMB

600W Surface Mount Transient Voltage Suppressor

P6SMBJ6.8A~250CA

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