

Transient Voltage Suppressor Diode Surface Mount

multicompPRO

**RoHS
Compliant**



Description

This series is designed specifically to protect sensitive electronic equipment from voltage transients induced by lightning and other transient voltage events.

Application

TVS devices are ideal for the protection of I/O Interfaces, Vcc bus and other vulnerable circuits used in telecom, computer, industrial and consumer electronic applications.

Features

- For surface mounted applications
- Low profile package
- 600W Peak pulse power capability at 10/1000 μ s waveform
- Excellent clamping capability
- Typical IR less than 1 μ A when VBR min>12V
- Fast response time: typically less than 1.0ps from 0 Volts to VBR min
- High temperature soldering: 260°C / 10s
- By cathode band denotes uni-directional device, none cathode band denotes bi-directional device
- Reverse Breakdown Voltage - 6.8V to 440V
- Case: SMB (DO-214AA) package
- UL flammability classification rating 94V-0
- Weight: 0.1 grams

Maximum Ratings (@Ta = +25°C, unless otherwise specified.)

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation at TA=25°C by 10/1000 μ s Waveform (Note 1)	P _{PP}	600	W
Power Dissipation on Infinite Heat Sink at TL=50°C	P _{M(AV)}	5	
Peak Forward Surge Current, 8.3ms Single Half Sine Wave (Note 2)	I _{FSM}	80	A
Operating Temperature Range	T _J	-55 to +150	°C
Storage Temperature Range	T _{STG}		

Note:

1. Non-repetitive current pulse, per Fig.4 and derated above T_j (initial) = 25°C per Fig.1
2. For unidirectional units only

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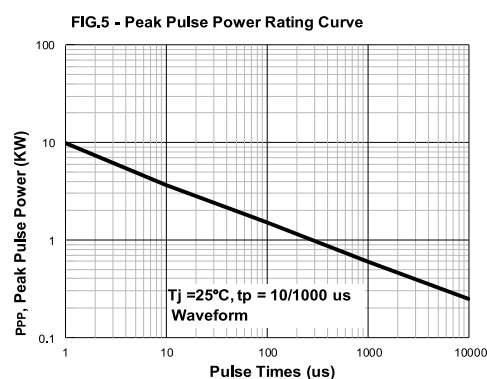
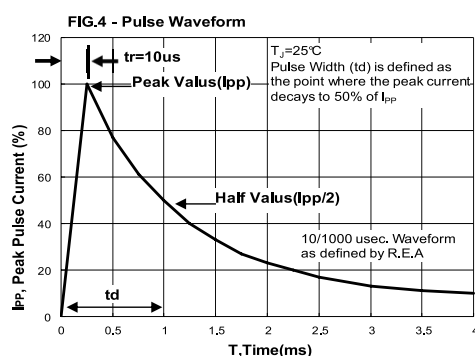
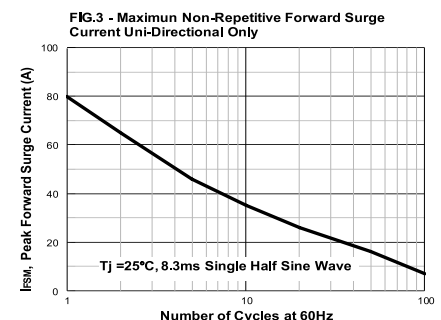
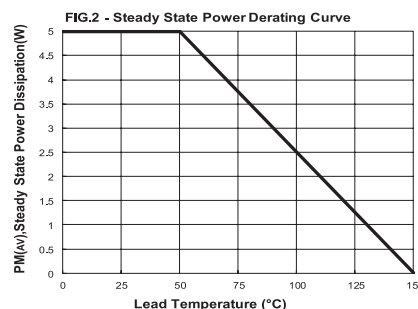
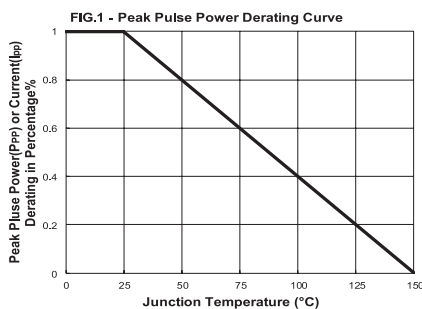
Electrical Characteristics (@TA = 25°C, unless otherwise specified.)

Part Number		Marking Code		Reverse Working Voltage	Reverse Breakdown Voltage VB (V)			Reverse Leakage (Max)	Reverse Clamping Voltage (Max)	Peak Pulse Current (Max)
Uni.	Bi.	Uni.	Bi.	VRWM (V)	Min.	Max.	@ IT(mA)	IR(μA)@VR	Vc(V)@IPP	IPP(A)
P6SMB6.8A	-	P6SMB6.8A	-	5.8	6.45	7.14	10	1000	10.5	57.15
P6SMB15A	-	P6SMB15A	-	12.8	14.3	15.8	1	1	21.2	28.31
P6SMB18A	-	P6SMB18A	-	15.3	17.1	18.9	1	1	25.2	23.81
P6SMB33A	-	P6SMB33A	-	28.2	31.4	34.7	1	1	45.7	13.13
P6SMB36A	P6SMB36CA	P6SMB36A	P6SMB36CA	30.8	34.2	37.8	1	1	49.9	12.03

Note:

1. Suffix "A" denotes 5% tolerance device.
2. Add suffix "CA" after part number to specify bi-directional devices.
3. The IR limit is double for bi-directional devices.

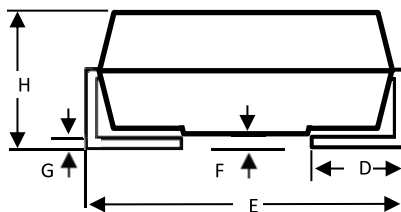
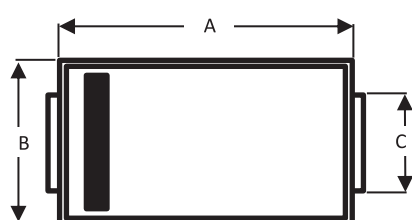
Rating and Characteristic Curves



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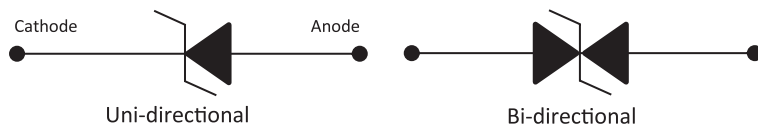
Diagram



Dim.	Min.	Max
A	4.22	4.7
B	3.4	3.94
C	1.9	2.1
D	0.9	1.42
E	5.21	5.59
F	-	0.23
G	0.15	0.25
H	1.95	2.6

SMB (DO-214AA) package

Device Schematic



Part Number Table

Description	Part Number
TVS Diode, Unidirectional, 600W, 25.2V, 23.81A, SMB	P6SMB6.8A
TVS Diode, Unidirectional, 600W, 21.2V, 28.31A, SMB	P6SMB15A
TVS Diode, Unidirectional, 600W, 25.2V, 23.81A, SMB	P6SMB18A
TVS Diode, Unidirectional, 600W, 45.7V, 13.13A, SMB	P6SMB33A
TVS Diode, Unidirectional, 600W, 49.9V, 12.03A, SMB	P6SMB36A
TVS Diode, Bidirectional, 600W, 49.9V, 12.03A, SMB	P6SMB36CA

Dimensions : Millimetres

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