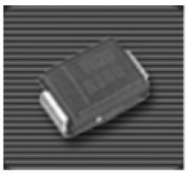
AP6SMB36A and AP6SMB36CA

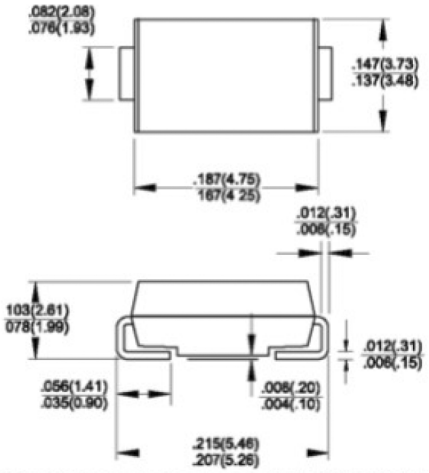
Surface Mount Transient Voltage Suppressors
Peak Pulse Power 600W Stand Off Voltage 30.8V

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated junction
- Low incremental surge resistance, excellent clamping capability
- 600W peak pulse power capability with a 10/1000us wave-form, repetition rate(duty cycle):0.01%
- Very fast response time
- High temperature soldering guaranteed: 250℃/10 seconds at terminals
- AEC-Q101 Qualified



DO-214AA (SMB)



Dimensions in inches and (millimeters)

Mechanical Data

- Cases: JEDEC DO-214AA(SMB J-Bend) molded plastic
- Terminals: Solder plated,solderable per MIL-STD-750, Method 2026
- Polarity: For uni-directional types the band denotes the cathode, Which is positive with respect to the anode under normal TVS operation
- Weight:0.003oz., 0.093 gram

Devices for Bidirectional Application

For bi-directional device, use suffix CA(e.g.AP6SMB36CA).

Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Peak pulse power dissipation with a 10/1000us waveform(1,2)	P_{PPM}	Min.600	W
Peak pulse current with a 10/1000us waveform(1)	I_{PPM}	See Next Table	A
Power dissipation on infinite heatsink, T_A=50℃	$P_{M(AV)}$	5.0	W
Peak forward surge current, 8.3ms single half sine-wave uni-directional only(2)	I_{FSM}	100	A
Typical thermal resistance from junction to ambient(3)	R_{THJA}	100	℃/W
Typical thermal resistance from junction to lead	R_{THJL}	20	℃/W
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150	℃

Notes:1.Non-repetitive current pulse, per Fig.3 and derated above T_A=25℃ per Fig.2

2. Mounted on 0.2*0.2"(5.0*5.0mm) copper pads to each terminal

3. Mounted on minimum recommended pad layout

Electrical Characteristics

Rating at 25℃ ambient temperature unless otherwise specified. V_F=3.5V at I_F=100A(uni-directional only)

Device type	Device marking code		Breakdown voltage $V_{(BR)}$ (Volts)(1)		Test current at I_T(mA)	Stand-off voltage V_{WM}(Volts)	Maximum reverse leakage at V_{WM} I_D(3) (uA)	Maximum peak pulse current I_{PPM}(2)(A)	Maximum clamping voltage at I_{PPM} V_C(Volts)	Maximum temperature coefficient of $V_{(BR)}$ (%/℃)
	UNI	BI	Min.	Max						
AP6SMB36A/CA	A36A	A36C	34.2	37.8	1.0	30.8	1.0	12.0	49.9	0.099

Notes: 1. $V_{(BR)}$ measured after I_T applied for 300us square wave pulse or equivalent

2. Surge current waveform per Fig. 3 and derate per Fig.2

3. For bi-directional types having V_{WM} of 10Volts and less, the I_D limit is doubled.

4. All terms and symbols are consistent with ANSI/IEEE C62.35

Ratings And Characteristic Curves

Fig. 1 – Peak Pulse Power Rating Curve

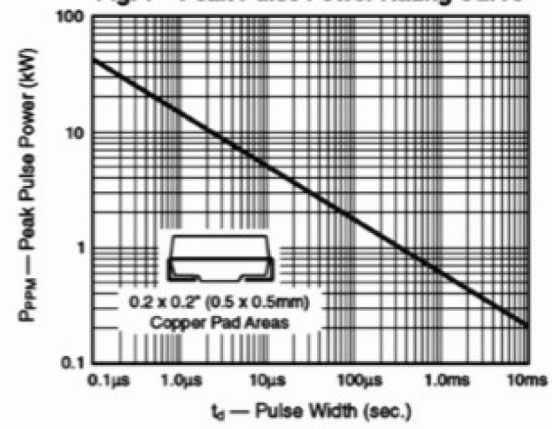


Fig. 2 – Pulse Derating Curve

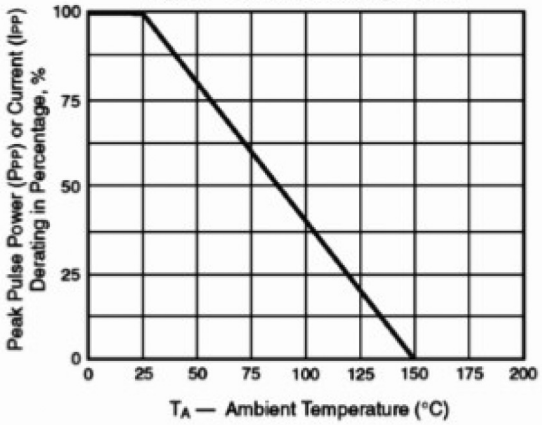


Fig. 3 – Pulse Waveform

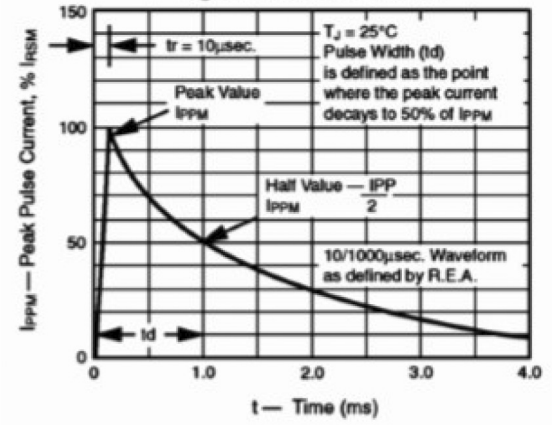


Fig. 4 – Typical Junction Capacitance

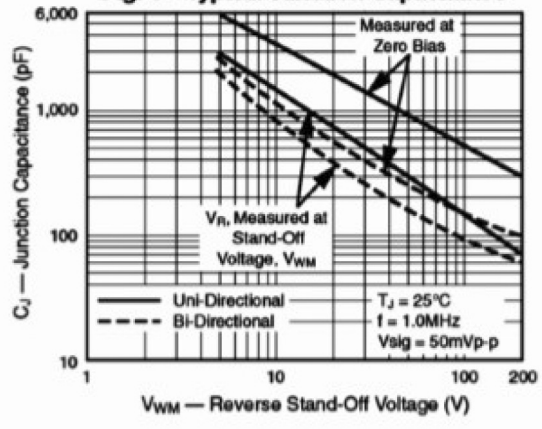


Fig. 5 – Typical Transient Thermal Impedance

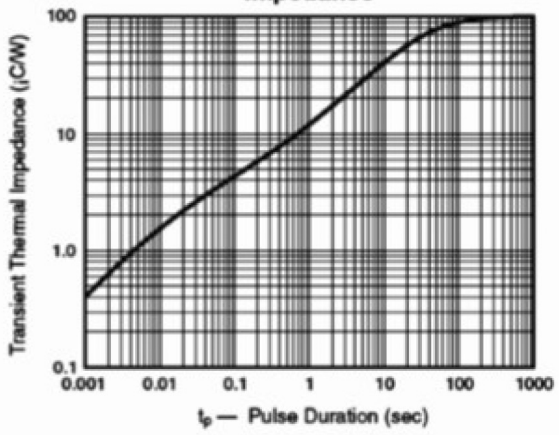


Fig. 6 – Maximum Non-Repetitive Peak Forward Surge Current