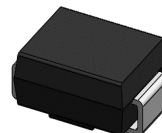


600W, 8.2 - 250V Transient Voltage Suppressors

Features

- Very fast response time
- Glass passivated junction
- Moisture sensitivity: level 1, per J-STD-020
- Available in unidirectional and bidirectional
- Plastic package has underwriters Laboratory Flammability Classification 94V-0
- Halogen-free according to IEC 61249-2-21 definition
- 600 W peak pulse power capability with a 10/1000 μ s waveform
- AEC-Q101 qualified



SMB (DO-214AA)

Applications

- SMPS
- Adapters
- Monitor

Absolute Maximum Ratings (TA=25°C unless otherwise noted)

Parameter	Symbol	Ratings	Unit
Peak power dissipation with a 10/1000 μ s waveform	P _{PPM}	600	W
Peak pulse current with a 10/1000 μ s waveform	I _{PPM}	See Next Table	A
Power dissipation, on infinite heat sink at T _L =75°C	P _D	3.75	W
Peak forward surge current, 8.3ms single half-sine wave	I _{FSM}	100	A
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150	°C

Thermal-Mechanical Specifications (TA=25°C unless otherwise noted)

Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	R _{thJA}	85	°C /W
Thermal Resistance, Junction to Case	R _{thJC}	15	°C /W
Thermal Resistance, Junction to Lead	R _{thJL}	20	°C /W

Electrical Characteristics (TA = 25 °C unless otherwise noted)

Part Number (Uni)	Part Number (Bi)	Marking		Breakdown Voltage VBR (V)		Test Current I _T (mA)	Stand off Voltage V _{WM} (V)	Maximum reverse leakage at V _{WM} I _D (μA)	Maximum Peak Pulse Current I _{ppM} (A)	Maximum Clamping Voltage at I _{PPM} V _C (V)
		UNI	BI							
				Min	Max					
AP6SMB8.2A	AP6SMB8.2CA	A8V2A	A8V2C	7.79	8.61	10	7.02	200	49.6	12.1
AP6SMB9.1A	AP6SMB9.1CA	A9V1A	A9V1C	8.65	9.55	1.0	7.78	50	44.8	13.4
AP6SMB10A	AP6SMB10CA	A10A	A10C	9.50	10.5 0	1.0	8.55	10	41.4	14.5
AP6SMB11A	AP6SMB11CA	A11A	A11C	10.5	11.6	1.0	9.40	5.0	38.5	15.6
AP6SMB12A	AP6SMB12CA	A12A	A12C	11.4	12.6	1.0	10.2	5.0	35.9	16.7
AP6SMB13A	AP6SMB13CA	A13A	A13C	12.4	13.7	1.0	11.1	5.0	33.0	18.2
AP6SMB15A	AP6SMB15CA	A15A	A15C	14.3	15.8	1.0	12.8	1.0	28.3	21.2
AP6SMB16A	AP6SMB16CA	A16A	A16C	15.2	16.8	1.0	13.6	1.0	26.7	22.5
AP6SMB18A	AP6SMB18CA	A18A	A18C	17.1	18.9	1.0	15.3	1.0	23.8	25.2
AP6SMB20A	AP6SMB20CA	A20A	A20C	19.0	21.0	1.0	17.1	1.0	21.7	27.7
AP6SMB22A	AP6SMB22CA	A22A	A22C	20.9	23.1	1.0	18.8	1.0	19.6	30.6
AP6SMB24A	AP6SMB24CA	A24A	A24C	22.8	25.2	1.0	20.5	1.0	18.1	33.2
AP6SMB27A	AP6SMB27CA	A27A	A27C	25.7	28.4	1.0	23.1	1.0	16.0	37.5
AP6SMB30A	AP6SMB30CA	A30A	A30C	28.5	31.5	1.0	25.6	1.0	14.5	41.4
AP6SMB33A	AP6SMB33CA	A33A	A33C	31.4	34.7	1.0	28.2	1.0	13.1	45.7
AP6SMB36A	AP6SMB36CA	A36A	A36C	34.2	37.8	1.0	30.8	1.0	12.0	49.9
AP6SMB39A	AP6SMB39CA	A39A	A39C	37.1	41.0	1.0	33.3	1.0	11.1	53.9
AP6SMB43A	AP6SMB43CA	A43A	A43C	40.9	45.2	1.0	36.8	1.0	10.1	59.3
AP6SMB47A	AP6SMB47CA	A47A	A47C	44.7	49.4	1.0	40.2	1.0	9.3	64.8
AP6SMB51A	AP6SMB51CA	A51A	A51C	48.5	53.6	1.0	43.6	1.0	8.6	70.1
AP6SMB56A	AP6SMB56CA	A56A	A56C	53.2	58.8	1.0	47.8	1.0	7.8	77.0
AP6SMB62A	AP6SMB62CA	A62A	A62C	58.9	65.1	1.0	53.0	1.0	7.1	85.0
AP6SMB68A	AP6SMB68CA	A68A	A68C	64.6	71.4	1.0	58.1	1.0	6.5	92.0
AP6SMB75A	AP6SMB75CA	A75A	A75C	71.3	78.8	1.0	64.1	1.0	5.8	103
AP6SMB82A	AP6SMB82CA	A82A	A82C	77.9	86.1	1.0	70.1	1.0	5.3	113
AP6SMB91A	AP6SMB91CA	A91A	A91C	86.5	95.5	1.0	77.8	1.0	4.8	125
AP6SMB100A	AP6SMB100CA	A100A	A100C	95	105	1.0	85.5	1.0	4.4	137
AP6SMB110A	AP6SMB110CA	A110A	A110C	105	116	1.0	94.0	1.0	3.9	152
AP6SMB120A	AP6SMB120CA	A120A	A120C	114	126	1.0	102	1.0	3.6	165
AP6SMB130A	AP6SMB130CA	A130A	A130C	124	137	1.0	111	1.0	3.4	179
AP6SMB150A	AP6SMB150CA	A150A	A150C	143	158	1.0	128	1.0	2.9	207
AP6SMB160A	AP6SMB160CA	A160A	A160C	152	168	1.0	136	1.0	2.7	219
AP6SMB170A	AP6SMB170CA	A170A	A170C	162	179	1.0	145	1.0	2.6	234
AP6SMB180A	AP6SMB180CA	A180A	A180C	171	189	1.0	154	1.0	2.4	246

Electrical Characteristics (TA = 25 °C unless otherwise noted)

Part Number (Uni)	Part Number (Bi)	Marking		Breakdown Voltage VBR (V)		Test Current I _T (mA)	Stand off Voltage V _{WM} (V)	Maximum reverse leakage at V _{WM} I _D (μA)	Maximum Peak Pulse Current I _{ppM} (A)	Maximum Clamping Voltage at I _{ppM} V _C (V)
		UNI	BI							
				Min	Max					
AP6SMB200A	AP6SMB200CA	A200A	A200C	190	210	1.0	171	1.0	2.2	274
AP6SMB220A	AP6SMB220CA	A220A	A220C	209	231	1.0	185	1.0	1.9	328
AP6SMB250A	AP6SMB250CA	A250A	A250C	237	263	1.0	214	1.0	1.8	344

Note:

1. Mounted on copper pad area of 0.2x0.2" (5.0 x 5.0mm) to each terminal.

Ratings and Characteristics Curves (T_A = 25°C unless otherwise noted)

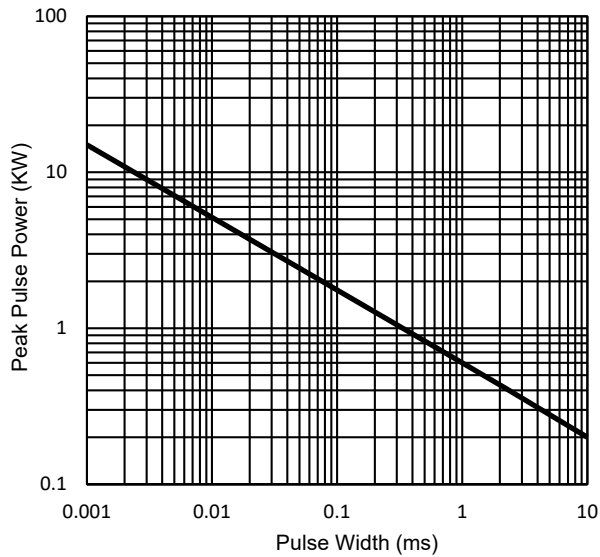


Fig.1 -Peak Pulse Power Derating Curve

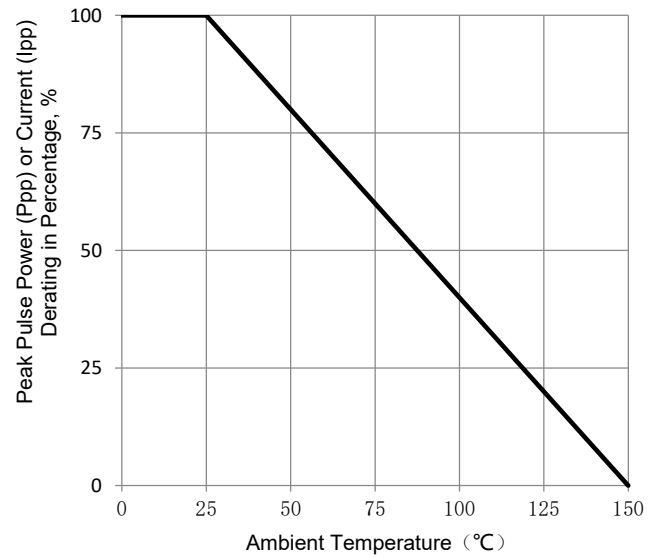


Fig.2 - Maximum Non-Repetitive Surge Current

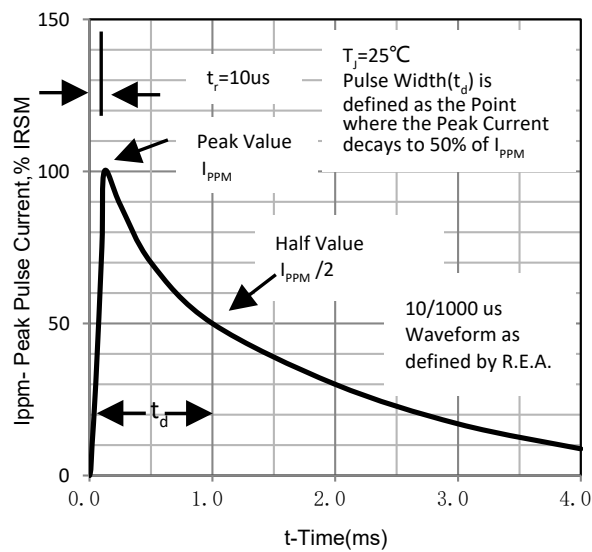


Fig.3 - Typical Forward Voltage Characteristics

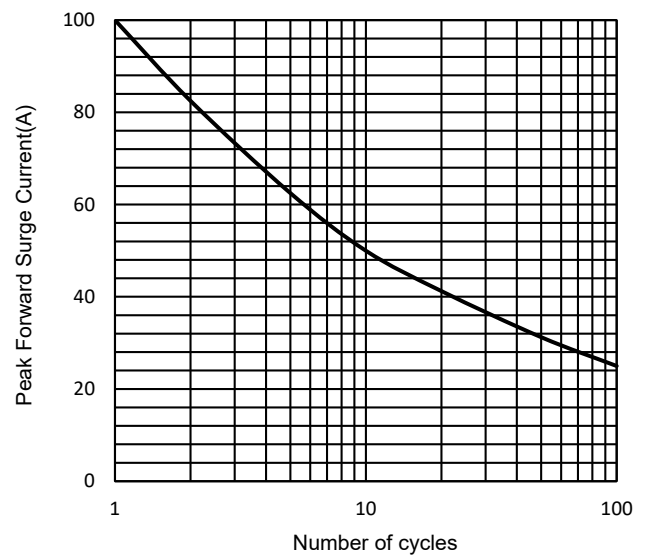
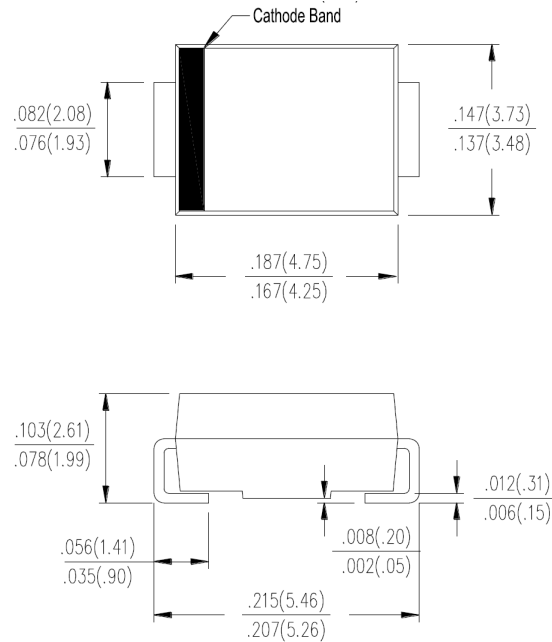


Fig.4 - Typical Reverse Current Characteristics

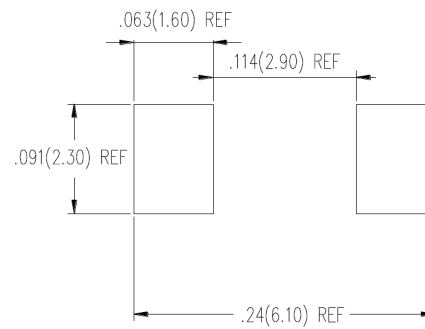
Package Outline Dimensions

in inches (millimeters)

SMB (DO-214AA)



Mounting Pad Layout



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