

Transient Voltage Suppressors 600W DO-214AC

SMA6J Series

MERITEK

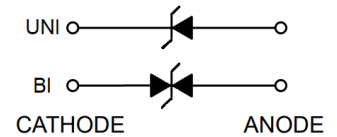
FEATURE

- 600W Peak Pulse Power (10/1000 μ s), Repetitive rate: 0.01%
- 5.0V to 58V Reverse Voltage
- Excellent Clamping Capability
- Glass Passivated Chip
- Low Leakage
- UL Flammability Classification Rating: 94V-0



MECHANICAL DATA

- Case: DO-214AC, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Color Band Denotes Cathode End Except Bipolar



MAXIMUM RATINGS

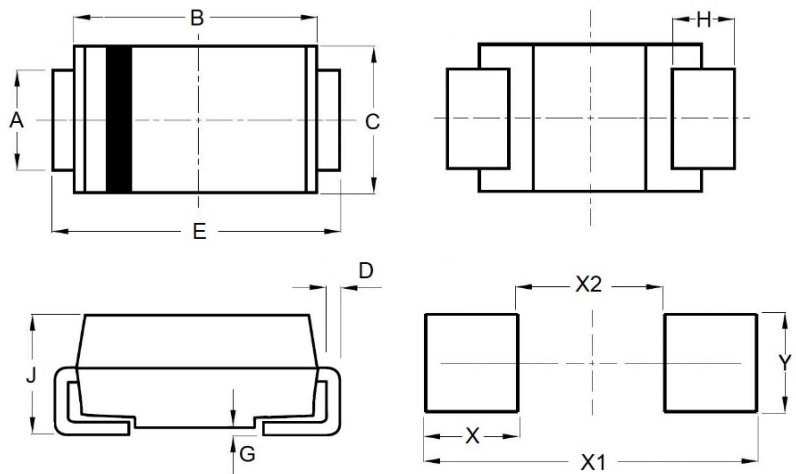
Parameter	Symbol	Value	Unit
Peak Power Dissipation With A 10/1000 μ s Waveform	P_{PPM}	600	W
Peak Pulse Current With A 10/1000 μ s Waveform	I_{PPM}	see next table	A
Power Dissipation On Infinite Heatsink At $T_L = 75^\circ\text{C}$	P_D	3.0	W
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	60	A
Maximum Instantaneous Forward Voltage at 25A, For Unidirectional Only	V_F	3.5	V
Operating Junction And Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

Note:

1. $T_A = 25^\circ\text{C}$ Ambient temperature unless otherwise specified.
2. Non-repetitive current pulse per Fig.5 and derated above $T_A = 25^\circ\text{C}$
3. Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

DIMENSIONS- DO-214(SMA)

Item	Min (mm)	Max (mm)
A	1.23	1.63
B	4.10	4.55
C	2.51	2.76
D	0.15	0.30
E	4.87	5.22
G	0.02	0.20
H	0.75	1.51
J	1.96	2.26
X	2.07	
X1	5.80	
X2	1.66	
Y	2.06	



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ELECTRICAL CHARACTERISTICS

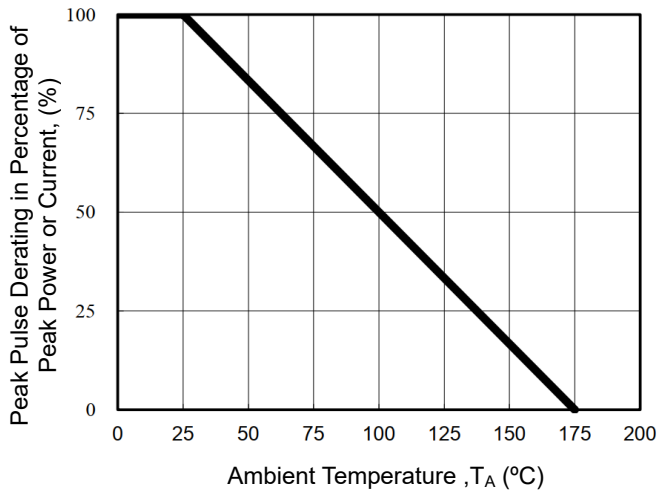
Part Number		Working Reverse Voltage	Reverse Breakdown Voltage		Test Current	Max Reverse Leakage Current	Max Clamping Voltage	Reverse Surge Current
Uni-Polar	Bi-Polar	V_{RWM} (V)	V_{BR} (V) Min	V_{BR} (V) Max	I_T (mA)	I_R (μ A) @ V_{RWM}	V_C (V) @ I_{PP}	I_{PP} (A) Max
SMA6J5.0A	--	5.0	6.40	7.00	10	800	9.2	65.2
SMA6J6.0A	SMA6J6.0CA	6.0	6.67	7.37	10	800	10.3	58.3
SMA6J6.5A	SMA6J6.5CA	6.5	7.22	7.98	10	500	11.2	53.6
SMA6J7.0A	SMA6J7.0CA	7.0	7.78	8.60	10	200	12.0	50.0
SMA6J7.5A	SMA6J7.5CA	7.5	8.33	9.21	1	100	12.9	46.5
SMA6J8.0A	SMA6J8.0CA	8.0	8.89	9.83	1	50	13.6	44.1
SMA6J8.5A	SMA6J8.5CA	8.5	9.44	10.40	1	10	14.4	41.7
SMA6J9.0A	SMA6J9.0CA	9.0	10.00	11.10	1	5.0	15.4	39.0
SMA6J10A	SMA6J10CA	10.0	11.10	12.30	1	1.0	17.0	35.3
SMA6J11A	SMA6J11CA	11.0	12.20	13.50	1	1.0	18.2	33.0
SMA6J12A	SMA6J12CA	12.0	13.30	14.70	1	1.0	19.9	30.2
SMA6J13A	SMA6J13CA	13.0	14.40	15.90	1	1.0	21.5	27.9
SMA6J14A	SMA6J14CA	14.0	15.60	17.20	1	1.0	23.2	25.9
SMA6J15A	SMA6J15CA	15.0	16.70	18.50	1	1.0	24.4	24.6
SMA6J16A	SMA6J16CA	16.0	17.80	19.70	1	1.0	26.0	23.1
SMA6J17A	SMA6J17CA	17.0	18.90	20.90	1	1.0	27.6	21.7
SMA6J18A	SMA6J18CA	18.0	20.00	22.10	1	1.0	29.2	20.5
SMA6J19A	SMA6J19CA	19.0	21.10	23.30	1	1.0	30.8	19.5
SMA6J20A	SMA6J20CA	20.0	22.20	24.50	1	1.0	32.4	18.5
SMA6J22A	SMA6J22CA	22.0	24.40	26.90	1	1.0	35.5	16.9
SMA6J24A	SMA6J24CA	24.0	26.70	29.50	1	1.0	38.9	15.4
SMA6J26A	SMA6J26CA	26.0	28.90	31.90	1	1.0	42.1	14.3
SMA6J28A	SMA6J28CA	28.0	31.10	34.40	1	1.0	45.4	13.2
SMA6J30A	SMA6J30CA	30.0	33.30	36.80	1	1.0	48.4	12.4
SMA6J33A	SMA6J33CA	33.0	36.70	40.60	1	1.0	53.3	11.3
SMA6J36A	SMA6J36CA	36.0	40.00	44.20	1	1.0	58.1	10.3
SMA6J40A	SMA6J40CA	40.0	44.40	49.10	1	1.0	64.5	9.30
SMA6J43A	SMA6J43CA	43.0	47.80	52.80	1	1.0	69.4	8.65
SMA6J45A	SMA6J45CA	45.0	50.00	55.30	1	1.0	72.7	8.25
SMA6J48A	SMA6J48CA	48.0	53.30	58.90	1	1.0	77.4	7.75
SMA6J51A	SMA6J51CA	51.0	56.70	62.70	1	1.0	82.4	7.28
SMA6J54A	SMA6J54CA	54.0	60.00	66.30	1	1.0	87.1	6.89
SMA6J58A	SMA6J58CA	58.0	64.40	71.20	1	1.0	93.6	6.41

Note:

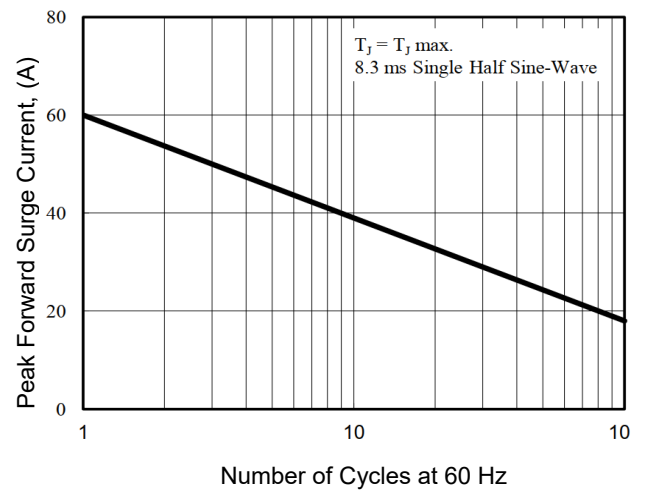
1. $T_A = 25^\circ\text{C}$ Ambient temperature unless otherwise specified.
2. Suffix 'A' denotes 5% tolerance device. Without 'A' denotes 10% tolerance device.
3. Add suffix 'C' or 'CA' after part number to specify Bi-directional devices.
4. For Bi-Directional devices having V_R of 10 volts and under, the I_R limit is double.

CHARACTERISTIC CURVES

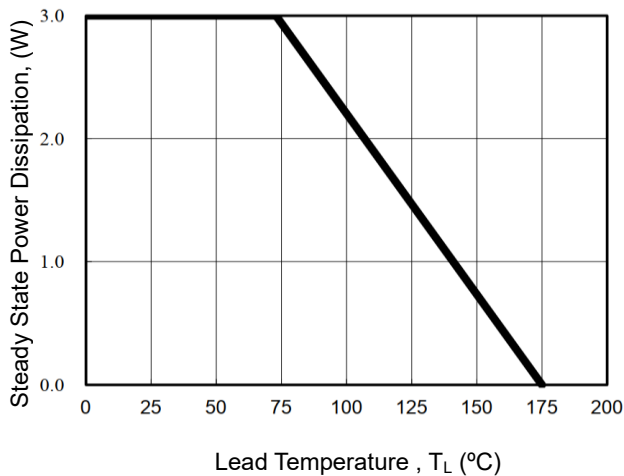
Pulse Derating Curve



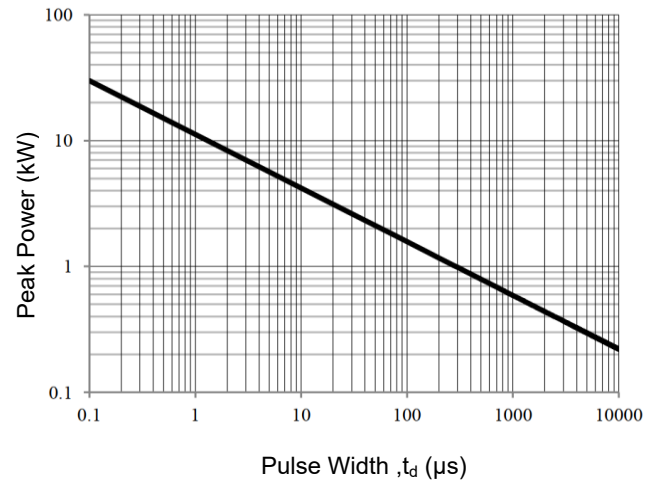
Maximum Non-Repetitive Surge Current



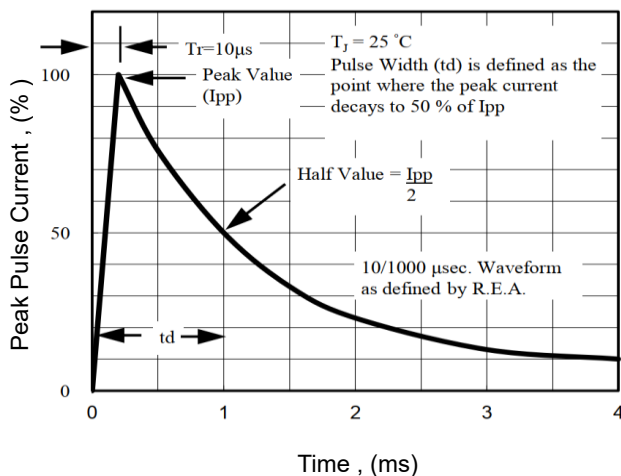
Steady State Power Derating Curve



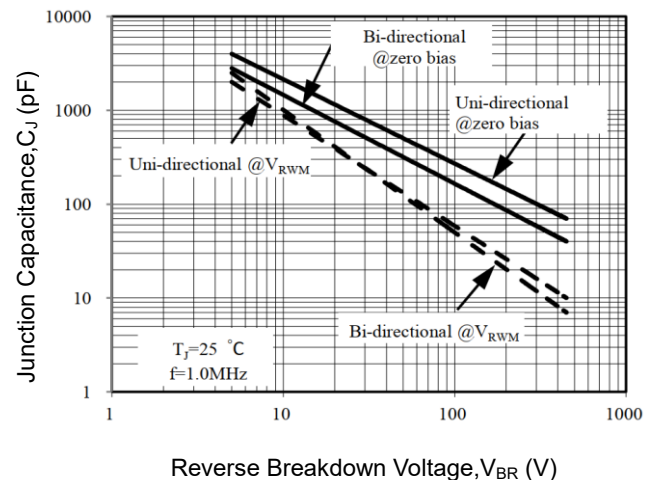
Peak Pulse Power Rating Curve



Pulse Waveform



Typical Junction Capacitance



*Specifications subject to change without notice.