

# Transient Voltage Suppressors 5000W DO-214AB

5.0SMDJ-E series

MERITEK

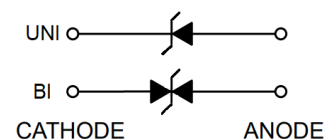
## FEATURE

- IEC 61000-4-2 ESD:  $\pm 30\text{kV}$  (Air),  $\pm 30\text{kV}$  (Contact)
- 5000W Peak Pulse Power (10/1000 $\mu\text{s}$  Waveform), Repetitive Rate:0.01%
- 11V to 170V Standoff Voltage
- Fast Response Time
- Excellent Clamping Capability
- Glass Passivated Junction
- UL Flammability Classification Rating: 94V-0
- UL Safety Approved Certification No: E223045



## MECHANICAL DATA

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



## MAXIMUM RATINGS



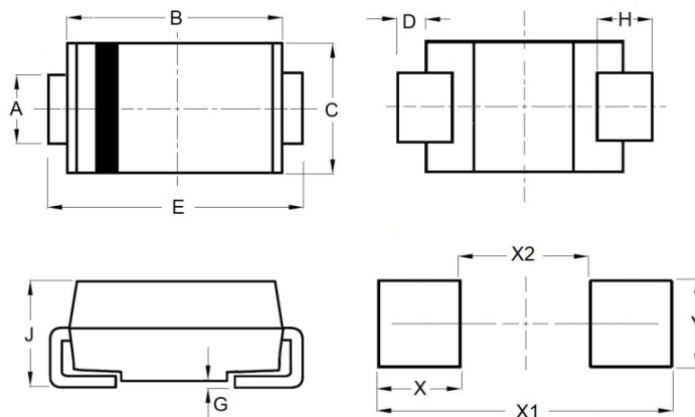
Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation On 10/1000 $\mu\text{s}$ Waveform	$P_{PPM}$	5000	W
Peak Pulse Current On 10/1000 $\mu\text{s}$ Waveform	$I_{PPM}$	See Table	A
Power Dissipation on infinite Heatsink at $T_L = 50^\circ\text{C}$	$P_D$	6.5	W
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed On Rated Load	$I_{FSM}$	300	A
Operating Junction And Storage Temperature Range	$T_J, T_{STG}$	-55 to +150	$^\circ\text{C}$
Typical Thermal Resistance Junction to Lead	$R_{\theta JL}$	15	$^\circ\text{C/W}$
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	75	$^\circ\text{C/W}$

Note:

1.  $T_A = 25^\circ\text{C}$  ambient temperature unless otherwise specified.
2. Non-repetitive current pulse, and derated above  $T_A = 25^\circ\text{C}$ .
3. Measured 8.3ms single half sine-wave, or equivalent square wave, Duty cycle = 4 pulses per minute maximum.
4. Mounted on 8X8mm copper pads to each terminal

## DIMENSIONS

DO-214AB	Min (mm)	Max (mm)
A	2.90	3.20
B	6.60	7.11
C	5.59	6.22
D	0.15	0.30
E	7.75	8.13
G	--	0.203
H	0.76	1.52
J	2.20	2.80
X	3.03	
X1	9.90	
X2	3.84	
Y	3.82	



## ELECTRICAL CHARACTERISTICS

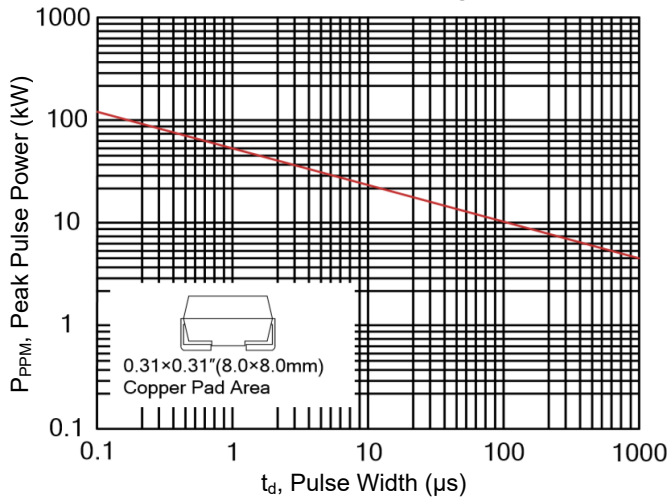
Part Number		Working Reverse Voltage	Reverse Breakdown Voltage		Test Current	Max Reverse Leakage Current	Max Clamping Voltage	Reverse Surge Current
Uni-Polar	Bi-Polar	$V_{RWM}$ (V)	$V_{BR}$ (V) Min	$V_{BR}$ (V)Max	$I_T$ (mA)	$I_R$ (uA) @ $V_{RWM}$	$V_C$ (V) @ $I_{PP}$	$I_{PP}$ (A) Max
5.0SMDJ11A-E	5.0SMDJ11CA-E	11	12.2	13.5	10	800	18.2	275
5.0SMDJ12A-E	5.0SMDJ12CA-E	12	13.3	14.7	10	800	19.9	252
5.0SMDJ13A-E	5.0SMDJ13CA-E	13	14.4	15.9	10	500	21.5	233
5.0SMDJ14A-E	5.0SMDJ14CA-E	14	15.6	17.2	10	200	23.2	216
5.0SMDJ15A-E	5.0SMDJ15CA-E	15	16.7	18.5	1	100	24.4	205
5.0SMDJ16A-E	5.0SMDJ16CA-E	16	17.8	19.7	1	50	26	193
5.0SMDJ17A-E	5.0SMDJ17CA-E	17	18.9	20.9	1	20	27.6	181
5.0SMDJ18A-E	5.0SMDJ18CA-E	18	20.0	22.1	1	10	29.2	172
5.0SMDJ20A-E	5.0SMDJ20CA-E	20	22.2	24.5	1	5	32.4	155
5.0SMDJ22A-E	5.0SMDJ22CA-E	22	24.4	26.9	1	5	35.5	141
5.0SMDJ24A-E	5.0SMDJ24CA-E	24	26.7	29.5	1	5	38.9	129
5.0SMDJ26A-E	5.0SMDJ26CA-E	26	28.9	31.9	1	5	42.1	119
5.0SMDJ28A-E	5.0SMDJ28CA-E	28	31.1	34.4	1	5	45.4	110
5.0SMDJ30A-E	5.0SMDJ30CA-E	30	33.3	36.8	1	5	48.4	103
5.0SMDJ33A-E	5.0SMDJ33CA-E	33	36.7	40.6	1	5	53.3	93.9
5.0SMDJ36A-E	5.0SMDJ36CA-E	36	40.0	44.2	1	5	58.1	86.1
5.0SMDJ40A-E	5.0SMDJ40CA-E	40	44.4	49.1	1	5	64.5	77.6
5.0SMDJ43A-E	5.0SMDJ43CA-E	43	47.8	52.8	1	5	69.4	72.1
5.0SMDJ45A-E	5.0SMDJ45CA-E	45	50.0	55.3	1	5	72.7	68.8
5.0SMDJ48A-E	5.0SMDJ48CA-E	48	53.3	58.9	1	5	77.4	64.7
5.0SMDJ51A-E	5.0SMDJ51CA-E	51	56.7	62.7	1	5	82.4	60.7
5.0SMDJ54A-E	5.0SMDJ54CA-E	54	60.0	66.3	1	5	87.1	57.5
5.0SMDJ58A-E	5.0SMDJ58CA-E	58	64.4	71.2	1	5	93.6	53.5
5.0SMDJ60A-E	5.0SMDJ60CA-E	60	66.7	73.7	1	5	96.8	51.7
5.0SMDJ64A-E	5.0SMDJ64CA-E	64	71.1	78.6	1	5	103	48.6
5.0SMDJ70A-E	5.0SMDJ70CA-E	70	77.8	86.0	1	5	113	44.3
5.0SMDJ75A-E	5.0SMDJ75CA-E	75	83.3	92.1	1	5	121	41.4
5.0SMDJ78A-E	5.0SMDJ78CA-E	78	86.7	95.8	1	5	126	39.7
5.0SMDJ85A-E	5.0SMDJ85CA-E	85	94.4	104	1	5	137	36.5
5.0SMDJ90A-E	5.0SMDJ90CA-E	90	100	111	1	5	146	34.3
5.0SMDJ100A-E	5.0SMDJ100CA-E	100	111	123	1	5	162	30.9
5.0SMDJ110A-E	5.0SMDJ110CA-E	110	122	135	1	5	177	28.3
5.0SMDJ120A-E	5.0SMDJ120CA-E	120	133	147	1	5	193	26
5.0SMDJ130A-E	5.0SMDJ130CA-E	130	144	159	1	5	209	24
5.0SMDJ150A-E	5.0SMDJ150CA-E	150	167	185	1	5	243	20.6
5.0SMDJ160A-E	5.0SMDJ160CA-E	160	178	197	1	5	259	19.3
5.0SMDJ170A-E	5.0SMDJ170CA-E	170	189	209	1	5	275	18.2

Note:

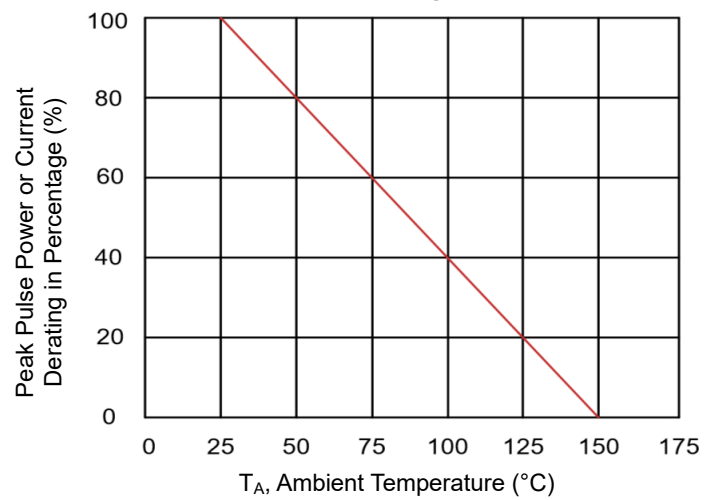
- $T_A = 25^\circ\text{C}$  ambient temperature unless otherwise specified.
- Add suffix 'C' or 'CA' after part number to specify Bi-directional devices

## CHARACTERISTIC CURVES

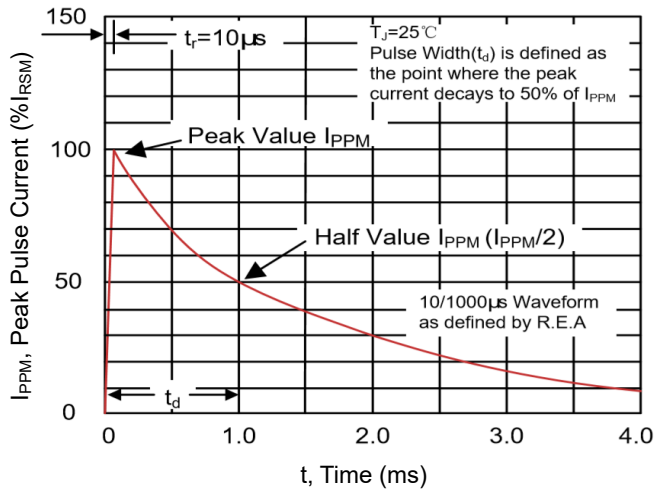
Peak Pulse Power Rating Curve



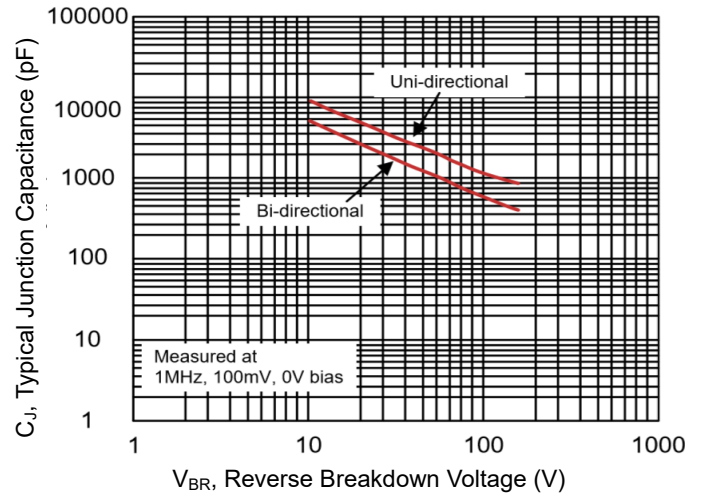
Pulse Derating Curve



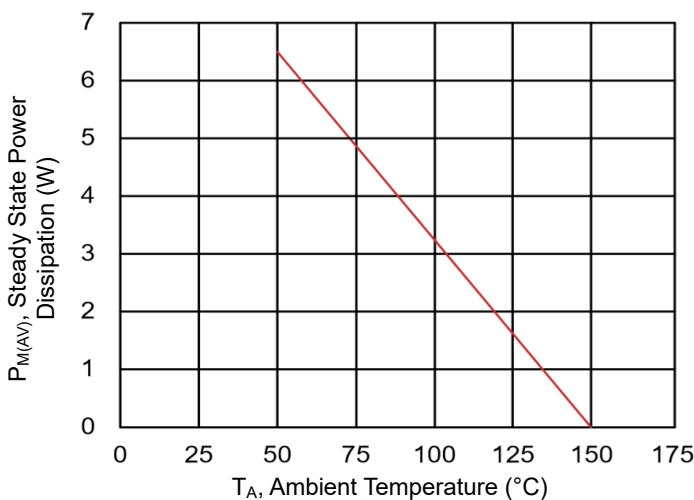
Pulse Waveform



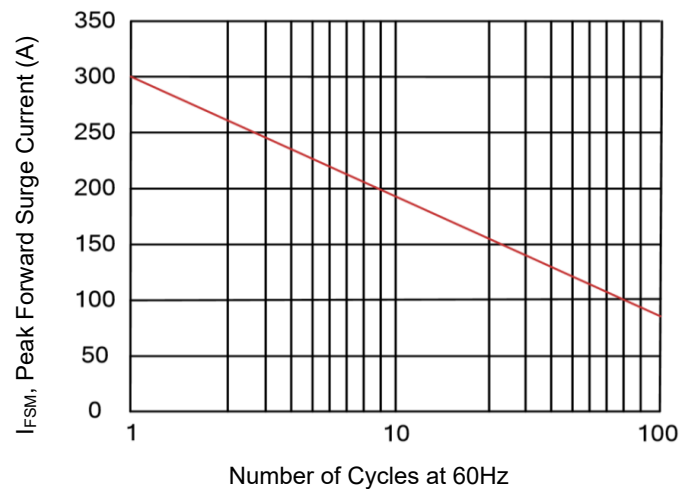
Typical Junction Capacitance



Steady State Power Dissipation Derating Curve



Maximum Non-Repetitive Forward Surge Current Uni-Directional Only



\*Specifications subject to change without notice.