

Transient Voltage Suppressors 1500W DO-214AB

SMCJ-E series

MERITEK

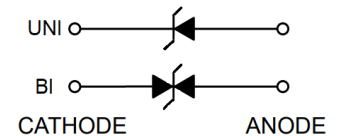
FEATURE

- IEC 61000-4-2 ESD: $\pm 30\text{kV}$ (Air), $\pm 30\text{kV}$ (Contact)
- 1500W Peak Pulse Power (10/1000 μs Waveform), Repetitive Rate:0.01%
- 5.0V to 440V 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

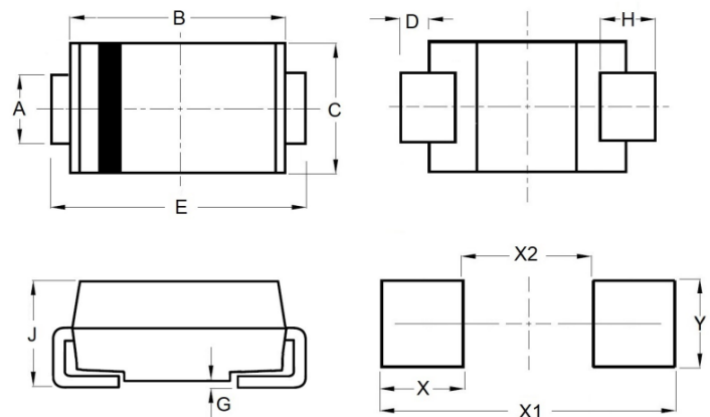
Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation On 10/1000 μs Waveform	P_{PPM}	1500	W
Peak Pulse Current On 10/1000 μs Waveform	I_{PPM}	See Table	A
Power Dissipation on infinite Heatsink at $T_L = 75^\circ\text{C}$	P_D	6.5	W
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed On Rated Load	I_{FSM}	200	A
Operating Junction And Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$
Typical Thermal Resistance Junction to Lead	$R_{\theta\text{JL}}$	15	$^\circ\text{C/W}$
Typical Thermal Resistance Junction to Ambient	$R_{\theta\text{JA}}$	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-214(SMC)	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	



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ELECTRICAL CHARACTERISTICS

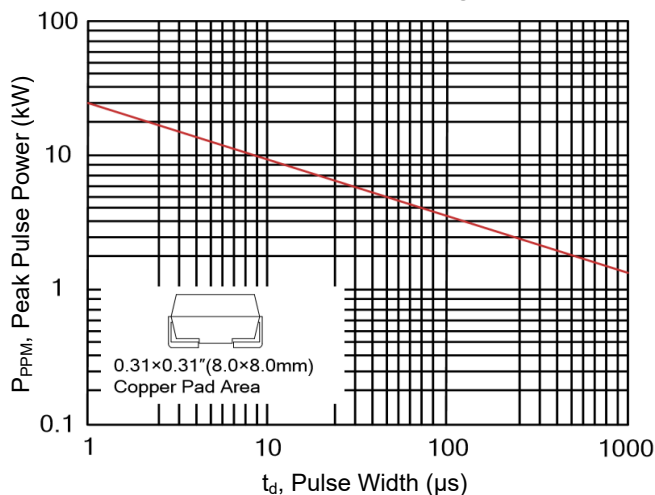
Part Number		Working Reverse Voltage	Reverse Breakdown Voltage		Test Current	Max Reverse Leakage Current	Max Clamping Voltage	Reverse Surge Current
Uni-Polar	Bi-Polar	V_{RWM} (V)	V_{BR} (V) Min	V_{BR} (V) Max	I_T (mA)	I_R (uA) @ V_{RWM}	V_C (V) @ I_{PP}	I_{PP} (A) Max
SMCJ5.0A-E	SMCJ5.0CA-E	5.0	6.40	7.00	10	800	9.2	163.0
SMCJ6.0A-E	SMCJ6.0CA-E	6.0	6.67	7.37	10	800	10.3	145.7
SMCJ6.5A-E	SMCJ6.5CA-E	6.5	7.22	7.98	10	500	11.2	133.9
SMCJ7.0A-E	SMCJ7.0CA-E	7.0	7.78	8.60	10	200	12.0	125.0
SMCJ7.5A-E	SMCJ7.5CA-E	7.5	8.33	9.21	1	100	12.9	116.3
SMCJ8.0A-E	SMCJ8.0CA-E	8.0	8.89	9.83	1	50	13.6	110.3
SMCJ8.5A-E	SMCJ8.5CA-E	8.5	9.44	10.4	1	20	14.4	104.2
SMCJ9.0A-E	SMCJ9.0CA-E	9.0	10.0	11.1	1	10	15.4	97.4
SMCJ10A-E	SMCJ10CA-E	10	11.1	12.3	1	5	17.0	88.3
SMCJ11A-E	SMCJ11CA-E	11	12.2	13.5	1	1	18.2	82.5
SMCJ12A-E	SMCJ12CA-E	12	13.3	14.7	1	1	19.9	75.4
SMCJ13A-E	SMCJ13CA-E	13	14.4	15.9	1	1	21.5	69.8
SMCJ14A-E	SMCJ14CA-E	14	15.6	17.2	1	1	23.2	64.7
SMCJ15A-E	SMCJ15CA-E	15	16.7	18.5	1	1	24.4	61.5
SMCJ16A-E	SMCJ16CA-E	16	17.8	19.7	1	1	26.0	57.7
SMCJ17A-E	SMCJ17CA-E	17	18.9	20.9	1	1	27.6	54.4
SMCJ18A-E	SMCJ18CA-E	18	20.0	22.1	1	1	29.2	51.4
SMCJ20A-E	SMCJ20CA-E	20	22.2	24.5	1	1	32.4	46.3
SMCJ22A-E	SMCJ22CA-E	22	24.4	26.9	1	1	35.5	42.3
SMCJ24A-E	SMCJ24CA-E	24	26.7	29.5	1	1	38.9	38.6
SMCJ26A-E	SMCJ26CA-E	26	28.9	31.9	1	1	42.1	35.7
SMCJ28A-E	SMCJ28CA-E	28	31.1	34.4	1	1	45.4	33.1
SMCJ30A-E	SMCJ30CA-E	30	33.3	36.8	1	1	48.4	31.0
SMCJ33A-E	SMCJ33CA-E	33	36.7	40.6	1	1	53.3	28.2
SMCJ36A-E	SMCJ36CA-E	36	40.0	44.2	1	1	58.1	25.9
SMCJ40A-E	SMCJ40CA-E	40	44.4	49.1	1	1	64.5	23.3
SMCJ43A-E	SMCJ43CA-E	43	47.8	52.8	1	1	69.4	21.7
SMCJ45A-E	SMCJ45CA-E	45	50.0	55.3	1	1	72.7	20.6
SMCJ48A-E	SMCJ48CA-E	48	53.3	58.9	1	1	77.4	19.4
SMCJ51A-E	SMCJ51CA-E	51	56.7	62.7	1	1	82.4	18.2
SMCJ54A-E	SMCJ54CA-E	54	60.0	66.3	1	1	87.1	17.3
SMCJ58A-E	SMCJ58CA-E	58	64.4	71.2	1	1	93.6	16.1
SMCJ60A-E	SMCJ60CA-E	60	66.7	73.7	1	1	96.8	15.5
SMCJ64A-E	SMCJ64CA-E	64	71.1	78.6	1	1	103	14.6
SMCJ70A-E	SMCJ70CA-E	70	77.8	86.0	1	1	113	13.3
SMCJ75A-E	SMCJ75CA-E	75	83.3	92.1	1	1	121	12.4
SMCJ78A-E	SMCJ78CA-E	78	86.7	95.8	1	1	126	11.9
SMCJ85A-E	SMCJ85CA-E	85	94.4	104	1	1	137	11.0
SMCJ90A-E	SMCJ90CA-E	90	100	111	1	1	146	10.3
SMCJ100A-E	SMCJ100CA-E	100	111	123	1	1	162	9.3
SMCJ110A-E	SMCJ110CA-E	110	122	135	1	1	177	8.5
SMCJ120A-E	SMCJ120CA-E	120	133	147	1	1	193	7.8
SMCJ130A-E	SMCJ130CA-E	130	144	159	1	1	209	7.2
SMCJ150A-E	SMCJ150CA-E	150	167	185	1	1	243	6.2
SMCJ160A-E	SMCJ160CA-E	160	178	197	1	1	259	5.8
SMCJ170A-E	SMCJ170CA-E	170	189	209	1	1	275	5.5
SMCJ180A-E	SMCJ180CA-E	180	201	222	1	1	292	5.1
SMCJ190A-E	SMCJ190CA-E	190	211	233	1	1	308	4.8
SMCJ200A-E	SMCJ200CA-E	200	224	247	1	1	324	4.6
SMCJ210A-E	SMCJ210CA-E	210	237	263	1	1	340	4.4
SMCJ220A-E	SMCJ220CA-E	220	246	272	1	1	356	4.2
SMCJ250A-E	SMCJ250CA-E	250	279	309	1	1	405	3.7
SMCJ300A-E	SMCJ300CA-E	300	335	371	1	1	486	3.1
SMCJ350A-E	SMCJ350CA-E	350	391	432	1	1	567	2.6
SMCJ400A-E	SMCJ400CA-E	400	447	494	1	1	648	2.3
SMCJ440A-E	SMCJ440CA-E	440	492	543	1	1	713	2.1

Note:

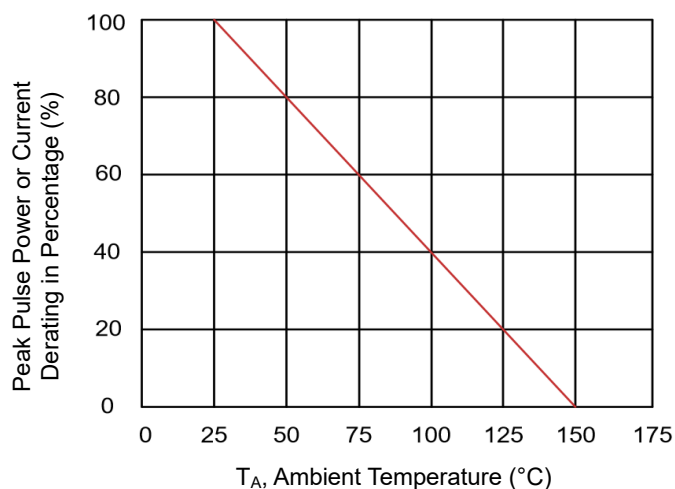
1. $T_A = 25^\circ\text{C}$ ambient temperature unless otherwise specified.
2. Add suffix 'C' or 'CA' after part number to specify Bi-directional devices

CHARACTERISTIC CURVES

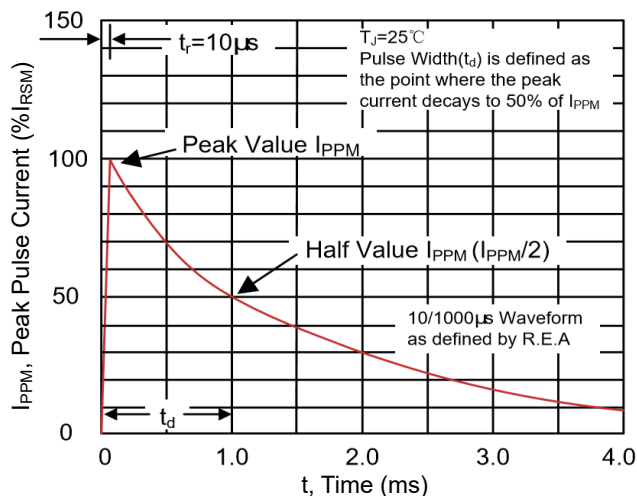
Peak Pulse Power Rating Curve



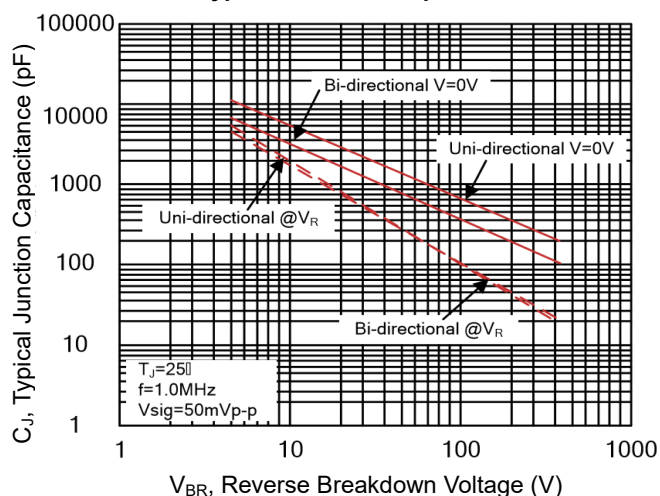
Pulse Derating Curve



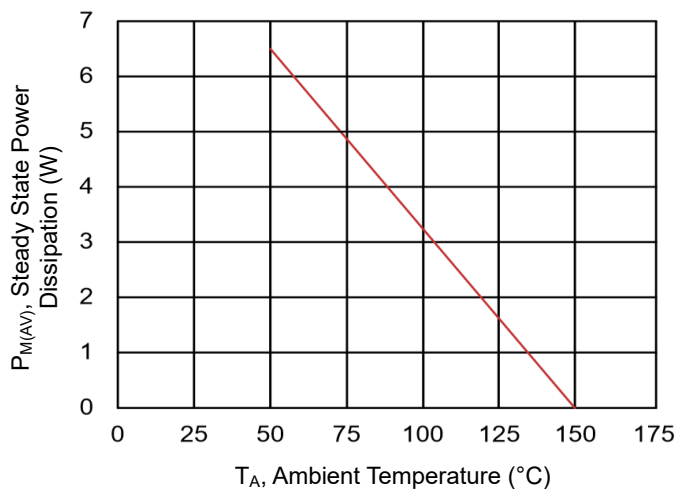
Pulse Waveform



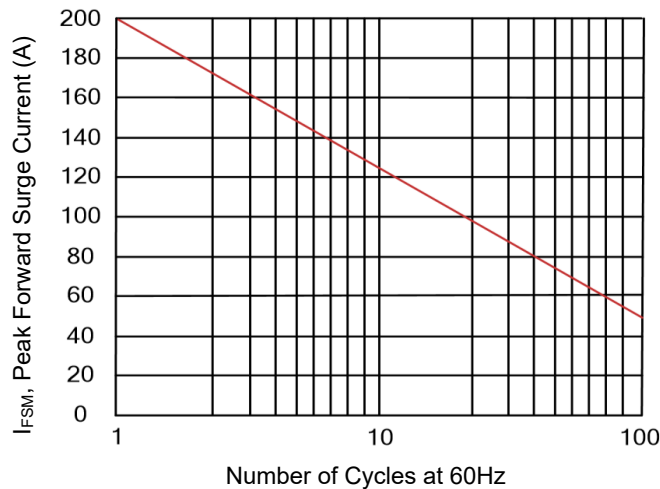
Typical Junction Capacitance



Steady State Power Dissipation Derating Curve



Maximum Non-Repetitive Forward Surge Current Uni-Directional Only



*Specifications subject to change without notice.