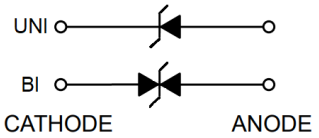
Transient Voltage Suppressors
1500W DO-214AB AEC-Q101

1.5SMC-A series

MERITEK

FEATURE

- IEC 61000-4-2 ESD: ±30kv (Air), ±30kv (Contact)
- 1500W Peak Pulse Power (10/1000μs Waveform), Repetitive Rate:0.01%
- 5.8V to 510V Standoff Voltage
- Excellent Clamping Capability, Fast Response Time
- Glass Passivated Junction
- UL Flammability Classification Rating: 94V-0
- UL Safety Approved Certification No: E223045
- AEC-Q101 Qualified



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

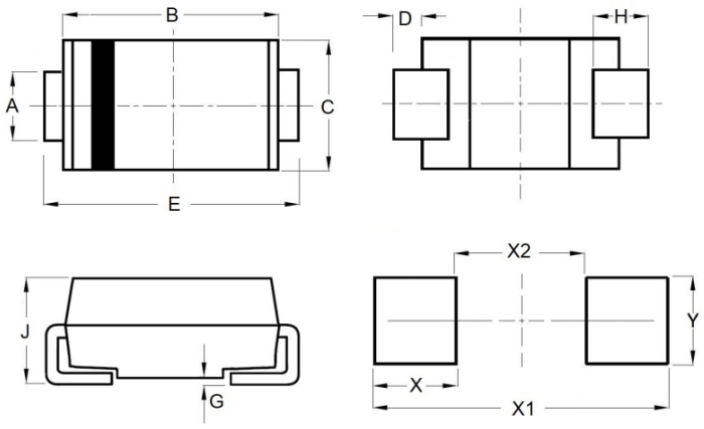
MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation On 10/1000μs Waveform	P_{PPM}	1500	W
Peak Pulse Current On 10/1000μs Waveform	I_{PPM}	See Table	A
Power Dissipation on infinite Heatsink at T_L= 50°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	°C
Typical Thermal Resistance Junction to Lead	$R_{\Theta JL}$	15	°C/W
Typical Thermal Resistance Junction to Ambient	$R_{\Theta JA}$	75	°C/W

Note:
1. T_A = 25°C ambient temperature unless otherwise specified.
2. Non-repetitive current pulse, and derated above T_A = 25°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	



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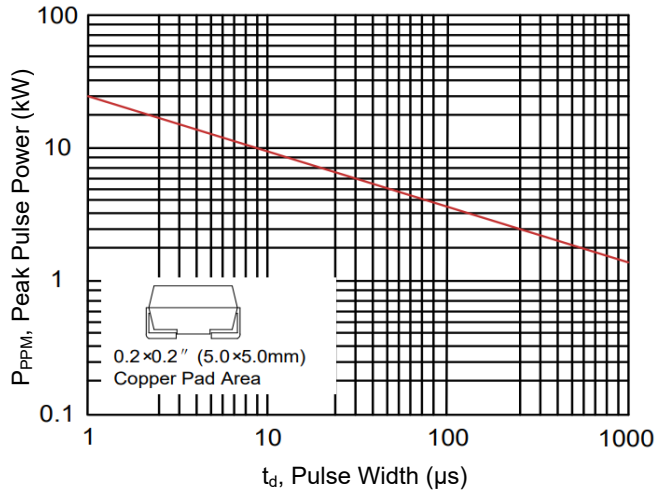
ELECTRICAL CHARACTERISTICS

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	IT(mA)	I_R (uA) @ V_{RWM}	V_C (V) @ I_{PP}	I_{PP}(A) Max
1.5SMC6.8A-A	1.5SMC6.8CA-A	5.80	6.45	7.14	10	1000	10.5	144.8
1.5SMC7.5A-A	1.5SMC7.5CA-A	6.40	7.13	7.88	10	500	11.3	134.5
1.5SMC8.2A-A	1.5SMC8.2CA-A	7.02	7.79	8.61	10	200	12.1	125.6
1.5SMC9.1A-A	1.5SMC9.1CA-A	7.78	8.65	9.55	1	50	13.4	113.4
1.5SMC10A-A	1.5SMC10CA-A	8.55	9.50	10.5	1	10	14.5	104.8
1.5SMC11A-A	1.5SMC11CA-A	9.40	10.5	11.6	1	5	15.6	97.4
1.5SMC12A-A	1.5SMC12CA-A	10.2	11.4	12.6	1	5	16.7	91.0
1.5SMC13A-A	1.5SMC13CA-A	11.1	12.4	13.7	1	1	18.2	83.5
1.5SMC15A-A	1.5SMC15CA-A	12.8	14.3	15.8	1	1	21.2	71.7
1.5SMC16A-A	1.5SMC16CA-A	13.6	15.2	16.8	1	1	22.5	67.6
1.5SMC18A-A	1.5SMC18CA-A	15.3	17.1	18.9	1	1	25.2	60.3
1.5SMC20A-A	1.5SMC20CA-A	17.1	19.0	21.0	1	1	27.7	54.9
1.5SMC22A-A	1.5SMC22CA-A	18.8	20.9	23.1	1	1	30.6	49.7
1.5SMC24A-A	1.5SMC24CA-A	20.5	22.8	25.2	1	1	33.2	45.8
1.5SMC27A-A	1.5SMC27CA-A	23.1	25.7	28.4	1	1	37.5	40.5
1.5SMC30A-A	1.5SMC30CA-A	25.6	28.5	31.5	1	1	41.4	36.7
1.5SMC33A-A	1.5SMC33CA-A	28.2	31.4	34.7	1	1	45.7	33.3
1.5SMC36A-A	1.5SMC36CA-A	30.8	34.2	37.8	1	1	49.9	30.5
1.5SMC39A-A	1.5SMC39CA-A	33.3	37.1	41.0	1	1	53.9	28.2
1.5SMC43A-A	1.5SMC43CA-A	36.8	40.9	45.2	1	1	59.3	25.6
1.5SMC47A-A	1.5SMC47CA-A	40.2	44.7	49.4	1	1	64.8	23.5
1.5SMC51A-A	1.5SMC51CA-A	43.6	48.5	53.6	1	1	70.1	21.7
1.5SMC56A-A	1.5SMC56CA-A	47.8	53.2	58.8	1	1	19.7	77.0
1.5SMC62A-A	1.5SMC62CA-A	53.0	58.9	65.1	1	1	85.0	17.9
1.5SMC68A-A	1.5SMC68CA-A	58.1	64.6	71.4	1	1	92.0	16.5
1.5SMC75A-A	1.5SMC75CA-A	64.1	71.3	78.8	1	1	103	14.8
1.5SMC82A-A	1.5SMC82CA-A	70.1	77.9	86.1	1	1	113	13.5
1.5SMC91A-A	1.5SMC91CA-A	77.8	86.5	95.5	1	1	125	12.2
1.5SMC100A-A	1.5SMC100CA-A	85.5	95.0	105	1	1	137	11.1
1.5SMC110A-A	1.5SMC110CA-A	94.0	105	116	1	1	152	10.0
1.5SMC120A-A	1.5SMC120CA-A	102	114	126	1	1	165	9.2
1.5SMC130A-A	1.5SMC130CA-A	111	124	137	1	1	179	8.5
1.5SMC150A-A	1.5SMC150CA-A	128	143	158	1	1	207	7.3
1.5SMC160A-A	1.5SMC160CA-A	136	152	168	1	1	219	6.9
1.5SMC170A-A	1.5SMC170CA-A	145	162	179	1	1	234	6.5
1.5SMC180A-A	1.5SMC180CA-A	154	171	189	1	1	246	6.2
1.5SMC200A-A	1.5SMC200CA-A	171	190	210	1	1	274	5.5
1.5SMC220A-A	1.5SMC220CA-A	185	209	231	1	1	328	4.6
1.5SMC250A-A	1.5SMC250CA-A	214	237	263	1	1	344	4.4
1.5SMC300A-A	1.5SMC300CA-A	256	285	315	1	1	414	3.7
1.5SMC350A-A	1.5SMC350CA-A	300	332	368	1	1	482	3.2
1.5SMC400A-A	1.5SMC400CA-A	342	380	420	1	1	548	2.8
1.5SMC440A-A	1.5SMC440CA-A	376	418	462	1	1	602	2.5
1.5SMC480A-A	1.5SMC480CA-A	408	456	504	1	1	658	2.3
1.5SMC510A-A	1.5SMC510CA-A	434	485.0	535.0	1	1	698	2.1
1.5SMC530A-A	1.5SMC530CA-A	450	503.5	556.5	1	1	725	2.1
1.5SMC540A-A	1.5SMC540CA-A	459	513.0	567.0	1	1	740	2.0
1.5SMC550A-A	1.5SMC550CA-A	467	522.5	577.5	1	1	760	2.0
1.5SMC600A-A	1.5SMC600CA-A	510	570.0	630.0	1	1	828	1.8

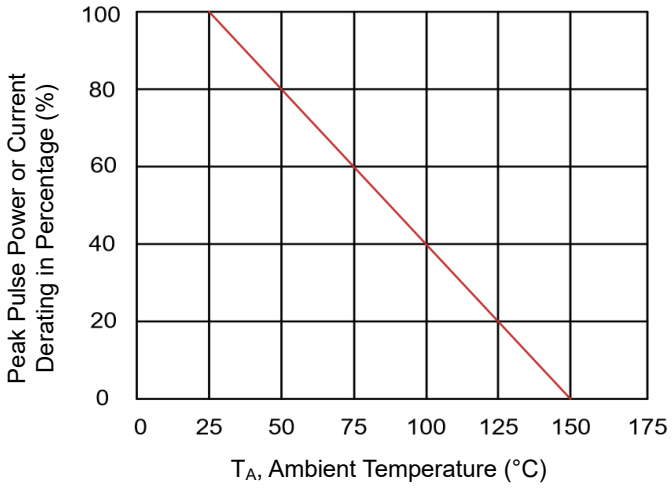
Note:
1. T_A = 25°C ambient temperature unless otherwise specified.
2. Add suffix'C' or 'CA' after part number to specify Bi-directional devices

CHARACTERISTIC CURVES

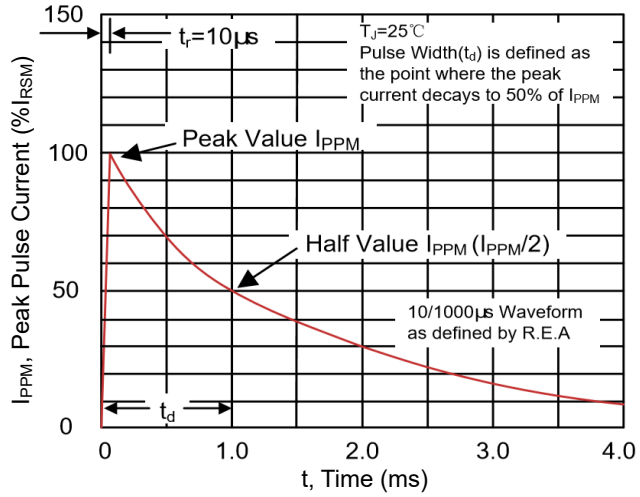
Peak Pulse Power Rating Curve



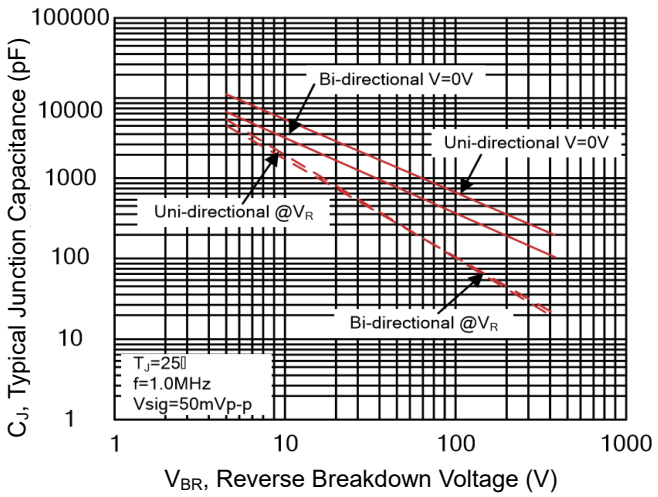
Pulse Derating Curve



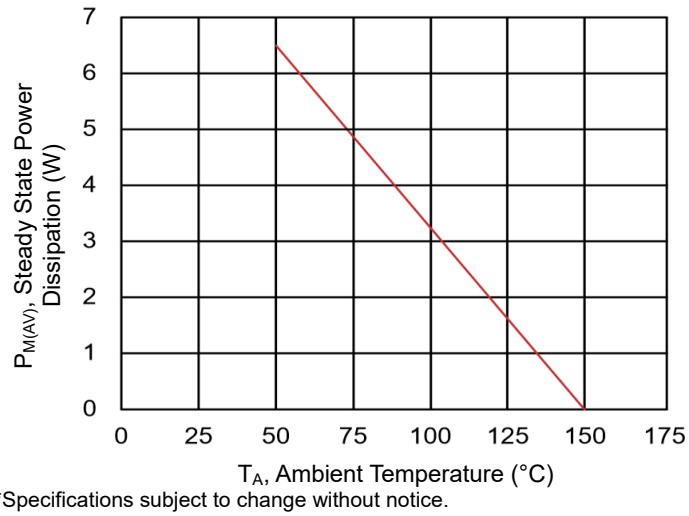
Pulse Waveform



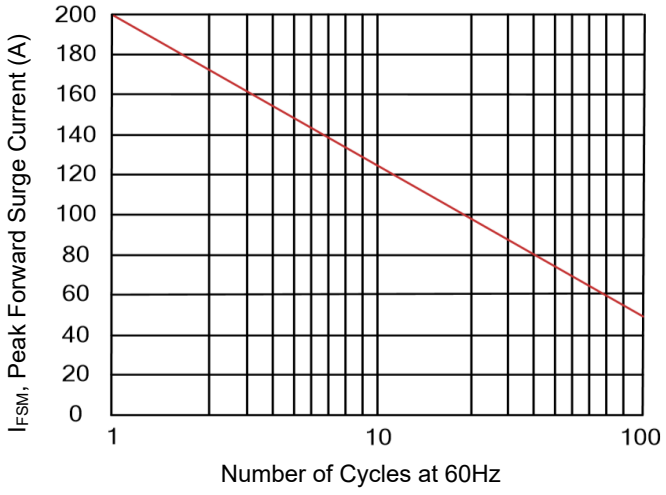
Typical Junction Capacitance



Steady State Power Dissipation Derating Curve



Maximum Non-Repetitive Forward Surge Current Uni-Directional Only



*Specifications subject to change without notice.