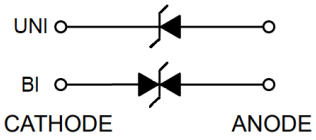
Transient Voltage Suppressors
3000W DO-214AB AEC-Q101

3.0SMCJ-A Series

MERITEK

FEATURE

- ISO10605 330pF/330Ω ESD: ±30kV (Air), ±30kV (Contact)
- 3000W Peak Pulse Power (10/1000μs Waveform)
- 10V to 70V Standoff Voltage
- Fast Response Time
- Excellent Clamping Capability
- Glass Passivated Junction
- UL Flammability Classification Rating 94V-0
- 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

RoHS

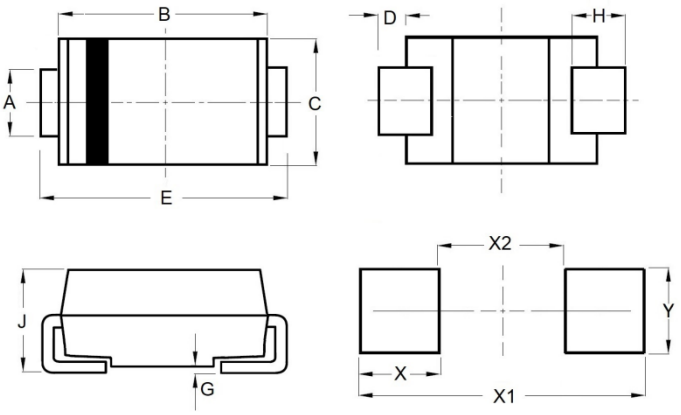
MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation On 10/1000μs Waveform	P_{PPM}	3000	W
Peak Pulse Current On 10/1000μs Waveform	I_{PPM}	See Table	A
Power Dissipation on Infinite Heat Sink At T_L =50°C	P_D	3.3	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 Ambient	$R_{\Theta JA}$	125	°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. A transient suppressor is selected according to the working peak reverse voltage (V_{RWM}), which should be equal to or greater than the DC or continuous peak operating voltage level.

DIMENSIONS

DO-214AB	Min (mm)	Max (mm)
A	2.75	3.25
B	6.60	7.11
C	5.59	6.22
D	0.152	0.305
E	7.75	8.13
G	0.051	0.203
H	0.76	1.52
J	2.00	2.62
X	3.03	
X1	9.90	
X2	3.84	
Y	3.82	



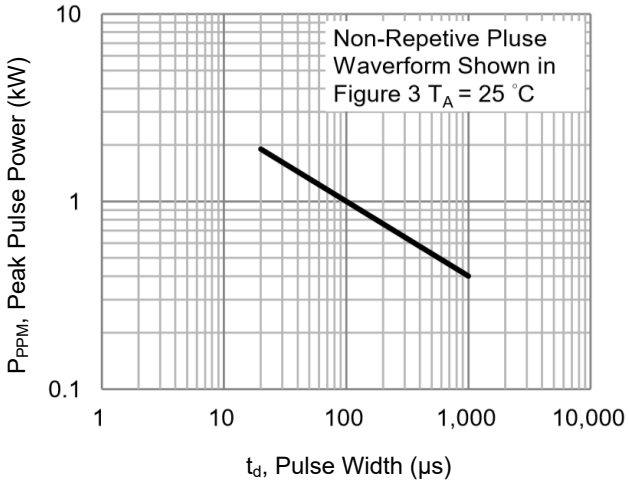
ELECTRICAL CHARACTERISTICS

Part Number		Working Reverse Voltage	Reverse Breakdown Voltage		Test Current	Max Reverse Leakage Current I_R (uA) @ V_{RWM}		Max Clamping Voltage	Reverse Surge Current
Uni-Polar	Bi-Polar	V_{RWM} (V)	V_{BR}Min(V)	V_{BR}Max(V)	IT(mA)	Uni	Bi	V_C (V) @ I_{PP}	I_{PP}(A) Max
3.0SMCJ10A-A	3.0SMCJ10CA-A	10	11.1	12.8	1	3	3	17.0	176.4
3.0SMCJ11A-A	3.0SMCJ11CA-A	11	12.2	14.0	1	3	3	18.2	184.8
3.0SMCJ12A-A	3.0SMCJ12CA-A	12	13.3	15.3	1	3	3	19.9	150.6
3.0SMCJ13A-A	3.0SMCJ13CA-A	13	14.4	16.5	1	3	3	21.5	139.4
3.0SMCJ14A-A	3.0SMCJ14CA-A	14	15.6	17.9	1	3	3	23.2	129.4
3.0SMCJ15A-A	3.0SMCJ15CA-A	15	16.7	19.2	1	3	3	24.4	123.0
3.0SMCJ16A-A	3.0SMCJ16CA-A	16	17.8	20.5	1	3	3	26.0	115.4
3.0SMCJ17A-A	3.0SMCJ17CA-A	17	18.9	21.7	1	3	3	27.6	106.6
3.0SMCJ18A-A	3.0SMCJ18CA-A	18	20.0	23.3	1	3	3	29.2	102.8
3.0SMCJ20A-A	3.0SMCJ20CA-A	20	22.2	25.5	1	3	3	32.4	92.6
3.0SMCJ22A-A	3.0SMCJ22CA-A	22	24.4	28.0	1	3	3	35.5	84.4
3.0SMCJ24A-A	3.0SMCJ24CA-A	24	26.7	30.7	1	3	3	38.9	77.2
3.0SMCJ26A-A	3.0SMCJ26CA-A	26	28.9	33.2	1	3	3	42.1	71.2
3.0SMCJ28A-A	3.0SMCJ28CA-A	28	31.1	35.8	1	3	3	45.4	66.0
3.0SMCJ30A-A	3.0SMCJ30CA-A	30	33.3	38.3	1	3	3	48.4	62.0
3.0SMCJ33A-A	3.0SMCJ33CA-A	33	36.7	42.2	1	3	3	53.3	56.2
3.0SMCJ36A-A	3.0SMCJ36CA-A	36	40.0	46.0	1	3	3	58.1	51.6
3.0SMCJ40A-A	3.0SMCJ40CA-A	40	44.4	51.1	1	3	3	64.5	46.4
3.0SMCJ43A-A	3.0SMCJ43CA-A	43	47.8	54.9	1	3	3	69.4	43.2
3.0SMCJ45A-A	3.0SMCJ45CA-A	45	50.0	57.5	1	3	3	72.7	41.2
3.0SMCJ48A-A	3.0SMCJ48CA-A	48	53.3	61.3	1	3	3	77.4	38.8
3.0SMCJ51A-A	3.0SMCJ51CA-A	51	56.7	65.2	1	3	3	82.4	36.4
3.0SMCJ54A-A	3.0SMCJ54CA-A	54	60.0	69.0	1	3	3	87.1	34.4
3.0SMCJ58A-A	3.0SMCJ58CA-A	58	64.4	74.1	1	3	3	93.6	32.0
3.0SMCJ60A-A	3.0SMCJ60CA-A	60	66.7	76.7	1	3	3	96.8	31.0
3.0SMCJ64A-A	3.0SMCJ64CA-A	64	71.1	81.8	1	3	3	103	29.2
3.0SMCJ70A-A	3.0SMCJ70CA-A	70	77.8	89.5	1	3	3	113	26.6

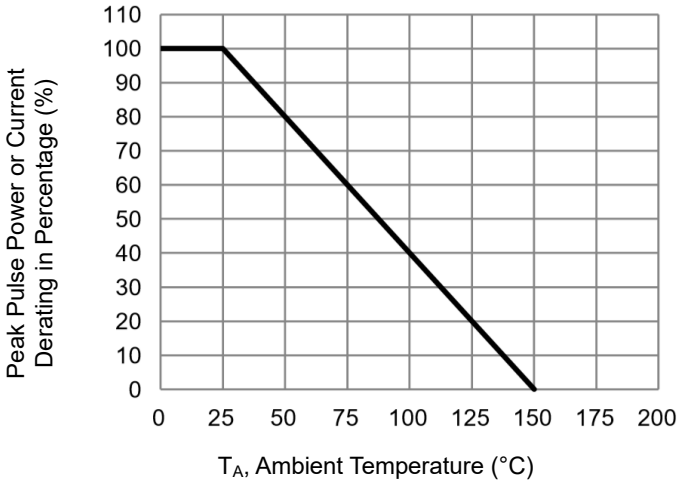
Note: T_A = 25°C ambient temperature unless otherwise specified.

CHARACTERISTIC CURVES

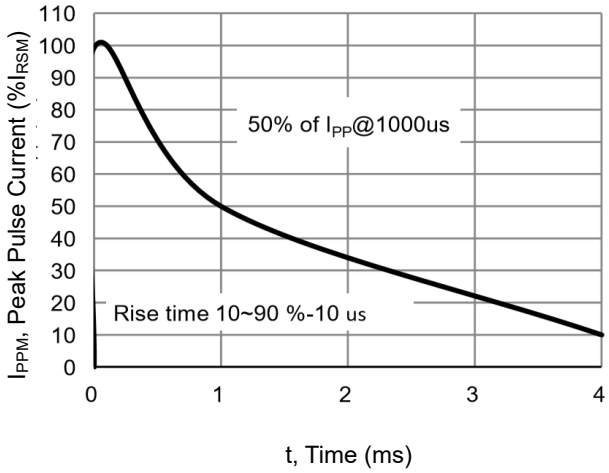
Peak Pulse Power Rating Curve



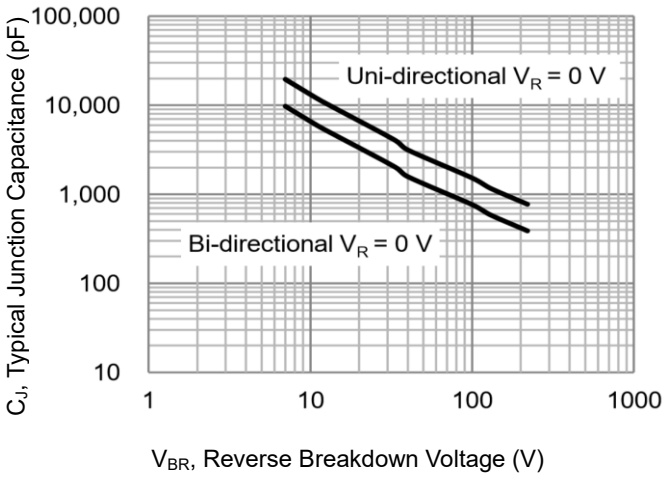
Pulse Derating Curve



10/1000us Pulse Waveform



Typical Junction Capacitance



*Specifications subject to change without notice.