

# Transient Voltage Suppressors 5000W DO-214AB AEC-Q101

5.0SMCJ36A-A

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)
- 36V 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



## MAXIMUM RATINGS

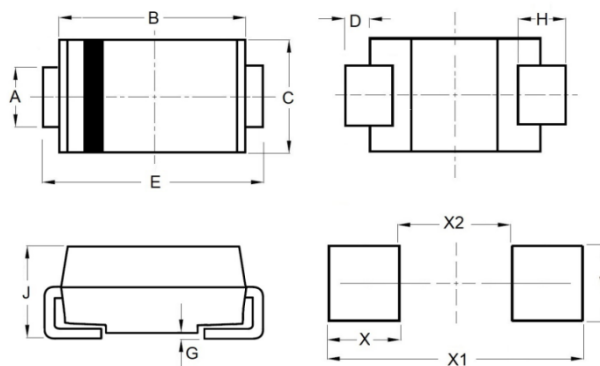
Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation On 10/1000 $\mu\text{s}$ Waveform	$P_{PPM}$	5000	W
Peak Pulse Current On 10/1000 $\mu\text{s}$ Waveform	$I_{PPM}$	See Table	A
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed On Rated Load	$I_{FSM}$	300	A
Operating Junction And Storage Temperature Range	$T_J, T_{STG}$	-55 to +150	$^{\circ}\text{C}$
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	110	$^{\circ}\text{C/W}$

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. 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	



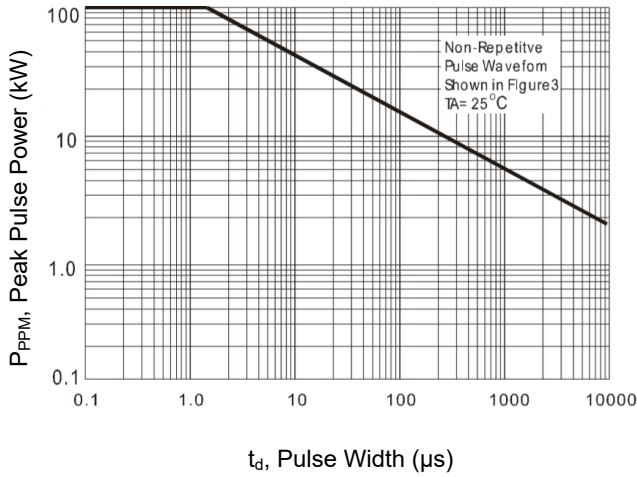
## ELECTRICAL CHARACTERISTICS

Part Number	Working Reverse Voltage	Reverse Breakdown Voltage		Test Current	Max Reverse Leakage Current	Max Clamping Voltage	Reverse Surge Current
		$V_{BR\text{Min}}(\text{V})$	$V_{BR\text{Max}}(\text{V})$				
Uni-Polar	$V_{RWM}(\text{V})$	$V_{BR\text{Min}}(\text{V})$	$V_{BR\text{Max}}(\text{V})$	$I_T(\text{mA})$	$I_R(\mu\text{A}) @ V_{RWM}$	$V_C(\text{V}) @ I_{PP}$	$I_{PP}(\text{A}) \text{ Max}$
5.0SMCJ36A-A	36	40	46	1	3	58.1	86.1

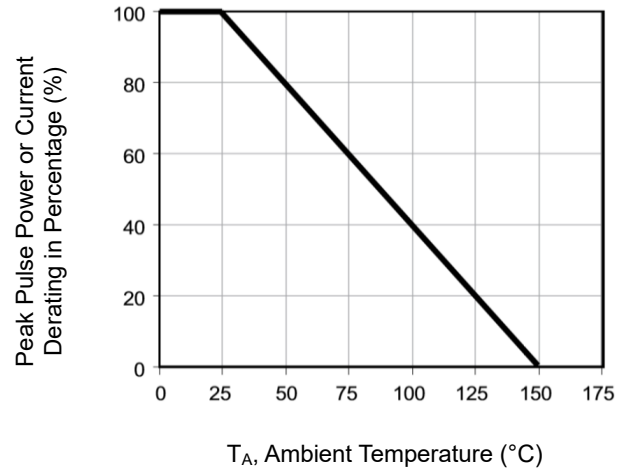
Note:  $T_A = 25^{\circ}\text{C}$  ambient temperature unless otherwise specified.

## CHARACTERISTIC CURVES

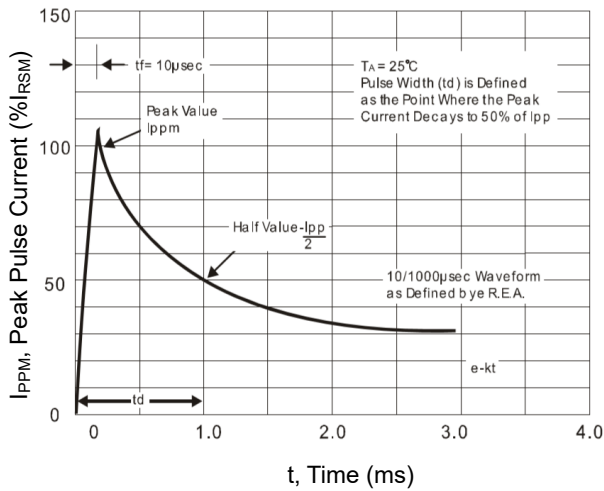
Peak Pulse Power Rating Curve



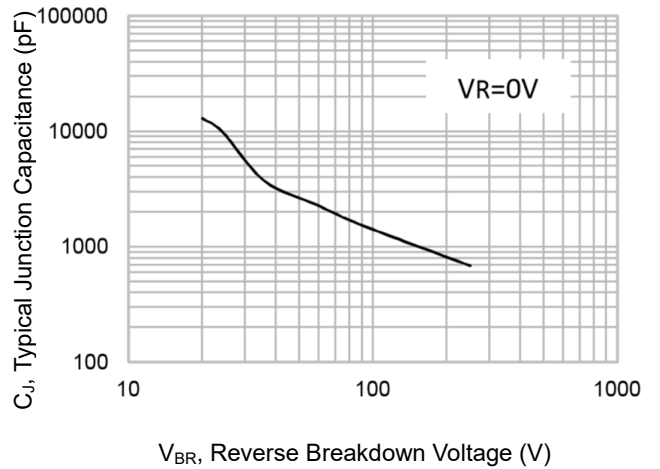
Pulse Derating Curve



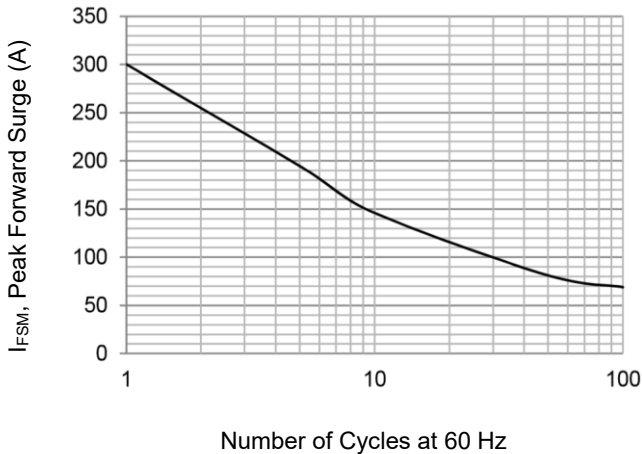
$t_d$ , Pulse Width ( $\mu s$ )  
Pulse Waveform



$T_A$ , Ambient Temperature ( $^\circ C$ )  
Typical Junction Capacitance



Max Non-Repetitive Peak Forward Surge Current



\*Specifications subject to change without notice.