

5.0SMDJ64CA

Surface Mounted Transient Voltage Suppressors

Revision: B

General Description

This SMD diode is for use in protection application circuitry

- I Excellent Clamping Capability
- I Very Fast Response Time
- I Low Reverse Leakage

Features

- I Case: SMC(DO-214AB), molded epoxy body
- I Terminal: Matte tin plated leads
- I Mount Position: Any

Maximum Ratings (T_A=25°C unless otherwise noted)

Parameter	Symbol	Value	Units
Peak Power Dissipation with a 10/1000μs waveform ⁽¹⁾	P _{PP}	5000	W
Peak Pulse Current with a 10/1000μs waveform ⁽¹⁾	I _{PP}	See Next Table	A
Power Dissipation on infinite heatsink at TL = 75°C	P _D	6.5	W
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Unidirectional Only ⁽²⁾	I _{FSM}	300	A
Maximum Instantaneous Forward Voltage at 100A for Unidirectional Only ⁽³⁾	V _F	3.5/5.0	V
Operating Junction and Storage Temperature Range	T _J , T _{STG}	-55 to 150	°C

Note:

- (1) Non-repetitive current pulse per Fig.5 and derated above T_A = 25°C per Fig.1
- (2) Measured on 8.3ms single half sine-wave or equivalent square wave, duty cycle = 4 pulse per minute maximum
- (3) V_F<3.5V for devices of V_{BR}<200V and V_F<5.0A for devices of V_{BR}>201V

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Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Part Number (Uni)	Device Marking			Breakdown Voltage VBR@I _T			Maximum	Working	Maximum	Maximum
	Part Number (Bi)	Code		Min(V)	Max(V)	I _T (mA)	Reverse	Peaking	Reverse	Clamping
		Uni	Bi				Leakage IR @VRWM (μA)	Reverse Voltage VRWM(V)	Surge Current I _{PP} (A)	Voltage VC@I _{PP} (V)
5.0SMDJ64	5.0SMDJ64C	5.0SMDJ64	5.0SMDJ64C	71.10	86.90	1	5	64.0	43.9	114.0
5.0SMDJ64A	5.0SMDJ64CA	5.0SMDJ64A	5.0SMDJ64CA	71.10	78.60	1	5	64.0	48.5	103.0

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Ratings and Characteristics Curves ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

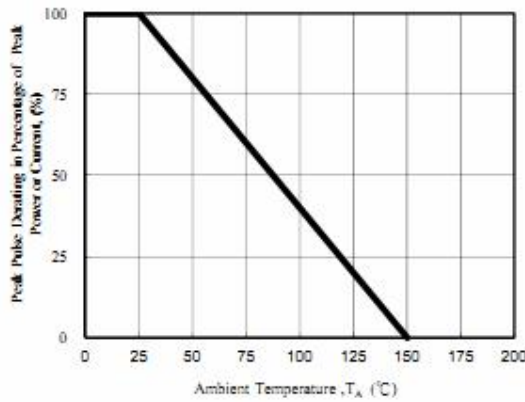


Fig. 1 - Pulse Derating Curve

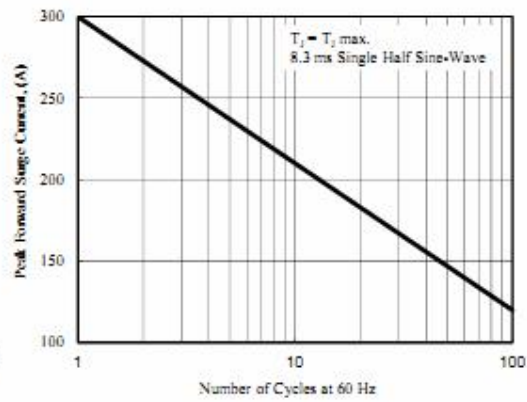


Fig. 2 - Maximum Non-Repetitive Surge Current

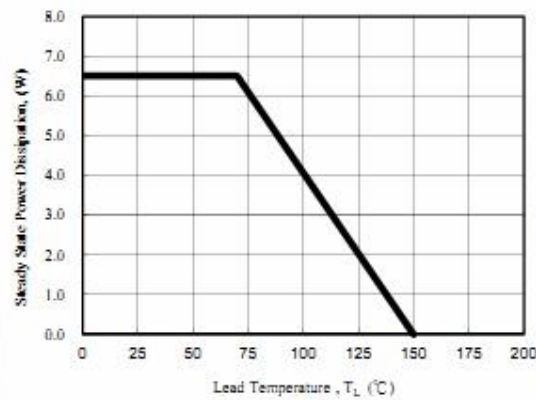


Fig. 3 - Steady State Power Derating Curve

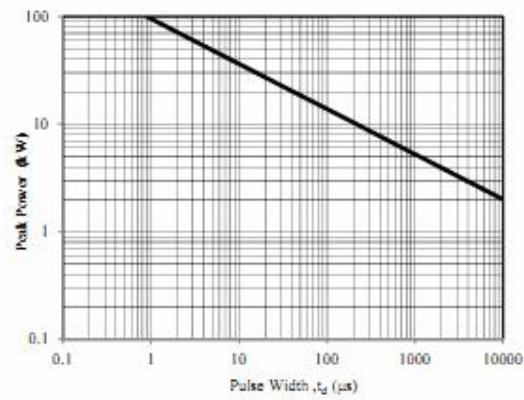


Fig. 4 - Peak Pulse Power Rating Curve

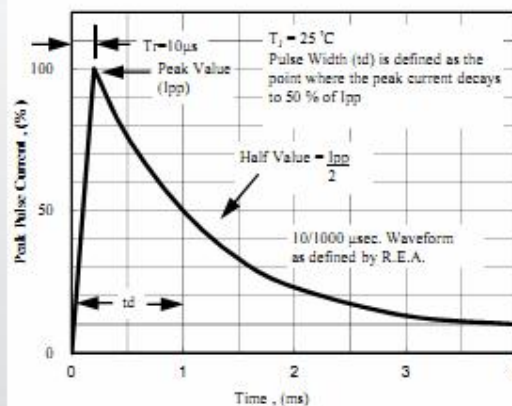


Fig. 5 - Pulse Waveform

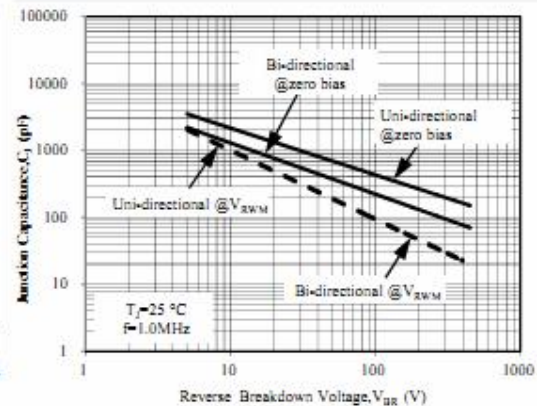
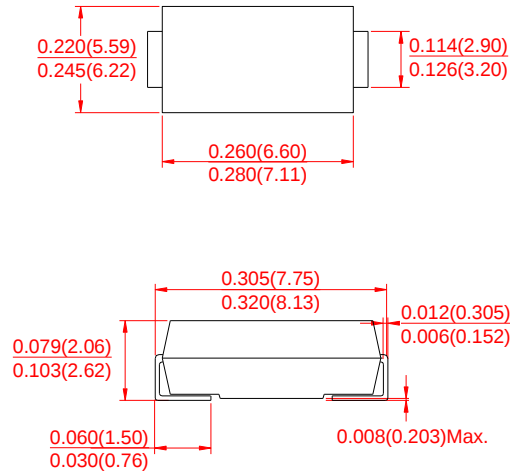


Fig. 6 - Typical Junction Capacitance

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Package Outline Dimensions in inches (millimeters)

SMC(DO-214AB)



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