

**Features**

- Glass passivated junction chip
- For surface mounted application
- Low forward voltage drop
- Low profile package
- Built-in strain relief, ideal for automated placement
- Fast switching for high efficiency
- High temperature soldering: 260°C/10 seconds at terminals
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0



DO-214AB (SMC)

**Mechanical Data**

- Case: Molded plastic
- Terminals: Solder plated
- Polarity: Indicated by cathode end
- Weight: 0.009 ounce, 0.25gram

**Absolute Maximum Ratings** ( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

Parameter	Symbol	GN30	Unit
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	1200	V
Maximum RMS Voltage	$V_{RMS}$	840	V
Maximum DC Blocking Voltage	$V_{DC}$	1200	V
Maximum Average Forward Rectified Current at $T_L=103^{\circ}\text{C}$	$I_{F(AV)}$	3.0	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) $T_L=75^{\circ}\text{C}$	$I_{FSM}$	100.0	A
Typical Thermal Resistance per Case <sup>1</sup>	$R_{\theta JA}$	47	$^{\circ}\text{C/W}$
	$R_{\theta JI}$	13	
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150	$^{\circ}\text{C}$

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

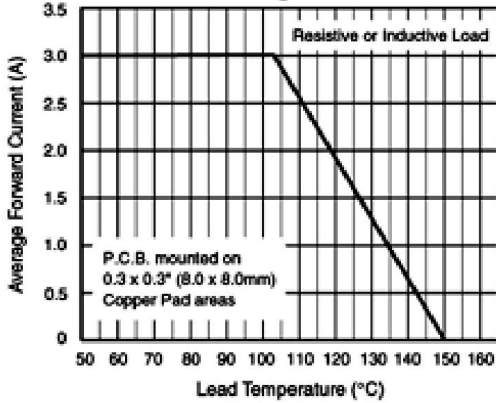
Parameter	Test Conditions	Symbol	GN30	Unit
Maximum Instantaneous Forward Voltage	$I_F=3.0\text{A}$	$V_F$	1.25	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_A=25^{\circ}\text{C}$	$I_R$	10.0	$\mu\text{A}$
	$T_A=125^{\circ}\text{C}$		250	
Typical Reverse Recovery Time	$I_F=0.5\text{A}; I_R=1.0\text{A}; I_{tr}=0.25\text{A}$	$t_{rr}$	1.0	$\mu\text{s}$
Typical Junction Capacitance	4.0V, 1MHz	$C_J$	60	pF

**Notes:**

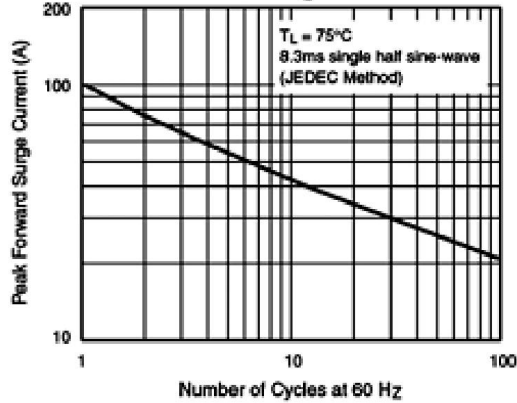
1. Thermal resistance from junction to ambient and from junction to lead frame P.C.B. mounted on 0.3×0.3"(8.0×8.0mm) copper pad areas.

**Typical Characteristics Curves**

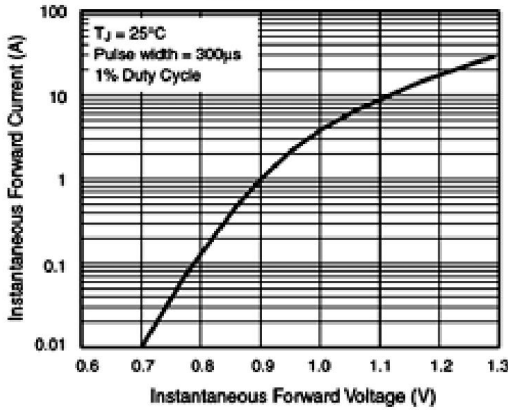
**Fig. 1 - Forward Current Derating Curve**



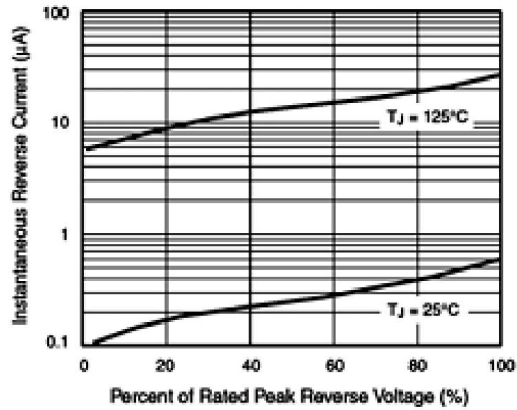
**Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current**



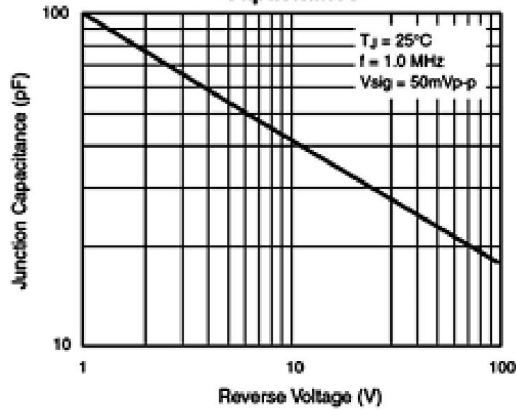
**Fig. 3 - Typical Instantaneous Forward Characteristics**



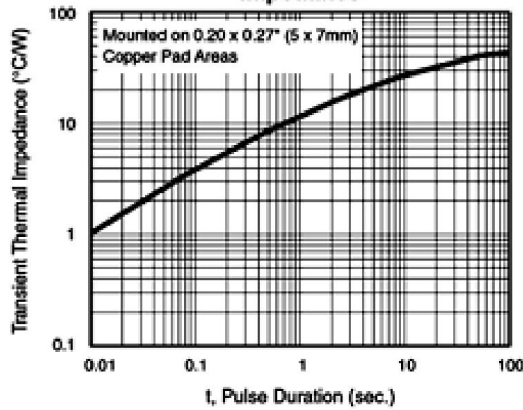
**Fig. 4 - Typical Reverse Characteristics**



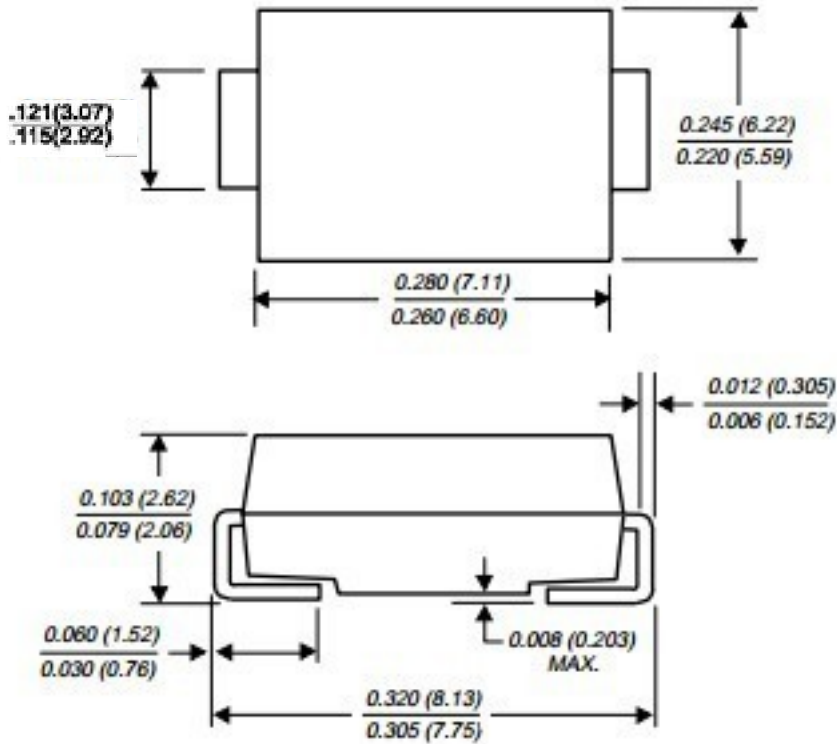
**Fig. 5 - Typical Junction Capacitance**



**Fig. 6 - Typical Transient Thermal Impedance**



**Package outline Dimensions DO-214AB (SMC)**



*Dimensions in inches and (millimeters)*