

## Features

- Glass passivated chip junction
- Low leakage current
- Moisture sensitivity: level 1, per J-STD-020
- Solder dip 260°C, 10s
- Halogen-free according to IEC 61249-2-21 definition
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0



DO-214AB(SMC)

## Applications

- For use of general purpose rectification in lighting, cellular phone, portable device, and power supplies.

## Absolute Maximum Ratings (T<sub>A</sub>=25 °C unless otherwise noted)

Parameter	Symbol	GN3A	GN3B	GN3D	GN3G	GN3J	GN3K	GN3M	Unit
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at TL (See Fig.1)	I <sub>F(AV)</sub>	3.0							A
Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	100							A
Rating for Fusing (t<8.3ms)	I <sup>2</sup> t	41.7							A <sup>2</sup> sec
Operating Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to + 150							°C

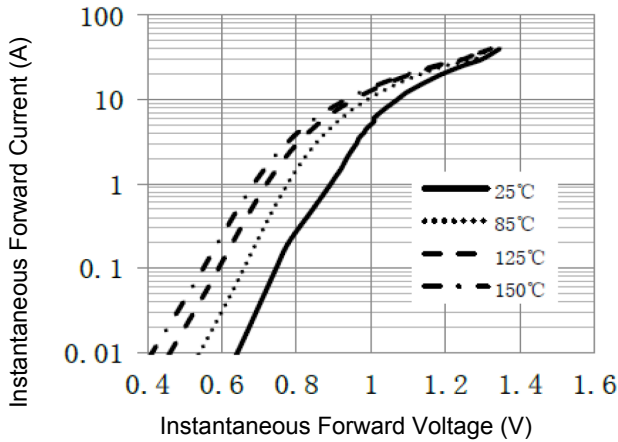
## Electrical Characteristics (T<sub>A</sub>=25 °C unless otherwise noted)

Parameter	Test Conditions	Symbol	GN3A	GN3B	GN3D	GN3G	GN3J	GN3K	GN3M	Unit
Maximum Instantaneous Forward Voltage	I <sub>F</sub> =3A, T <sub>A</sub> =25°C	V <sub>F</sub>	1.15							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	T <sub>A</sub> =25°C	I <sub>R</sub>	10.0							µA
	T <sub>A</sub> =125°C		250							
Typical Junction Capacitance	4.0 V, 1 MHz	C <sub>J</sub>	60							pF
Typical Reverse Recovery Time	I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>rr</sub> =0.25A	t <sub>rr</sub>	1.8							µS
Typical Thermal Resistance <sup>1</sup>	Junction to Ambient	R <sub>θJA</sub>	65							°C/W
	Junction to Case	R <sub>θJC</sub>	10							
	Junction to Lead	R <sub>θJL</sub>	15							

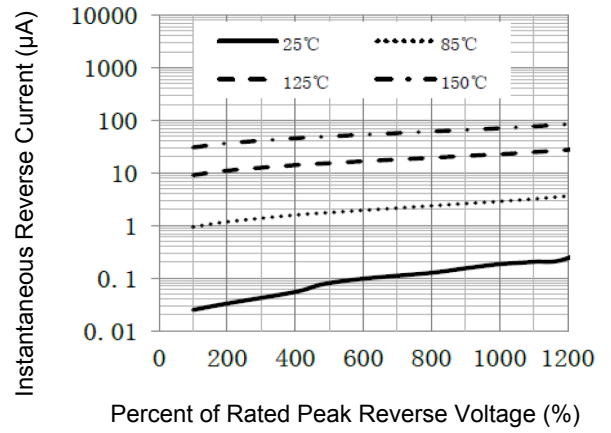
Note:

1. The thermal resistance from junction to ambient, case or lead, mounted on P.C.B with 8.0×8.0mm copper pads, 2 OZ, FR4 PCB

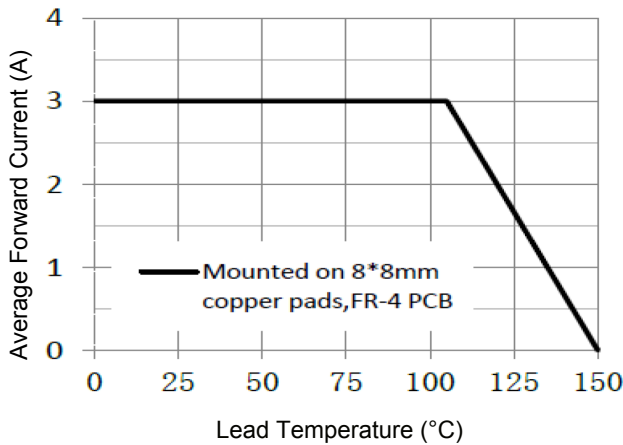
## Ratings and Characteristics Curves ( $T_A=25^\circ\text{C}$ unless otherwise noted)



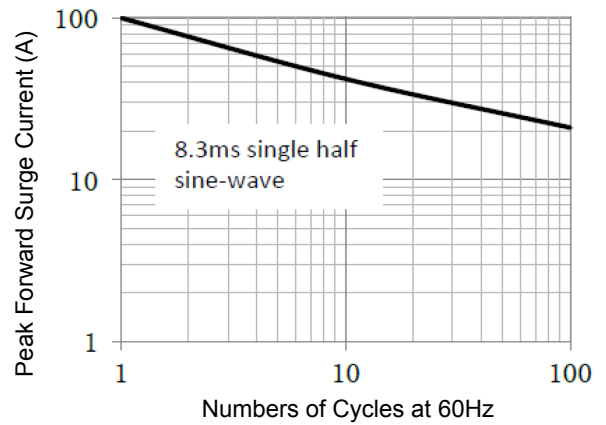
**Figure 1. Typical Instantaneous Forward Characteristics**



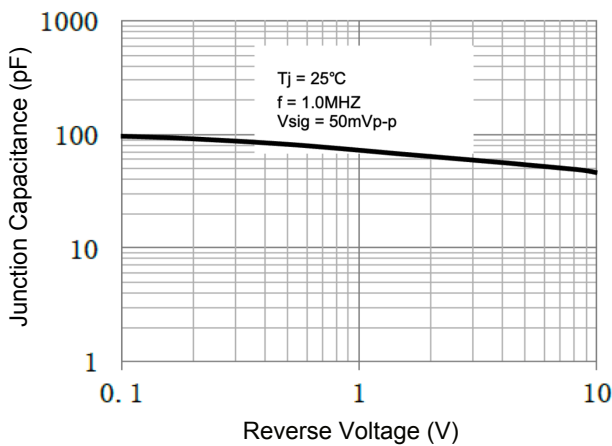
**Figure 2. Typical Reverse Characteristics**



**Figure 3. Forward Current Derating Curve**



**Figure 4. Maximum Non-Repetitive Forward Surge Current**

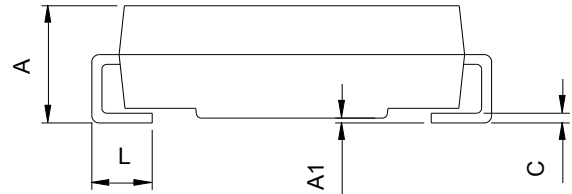
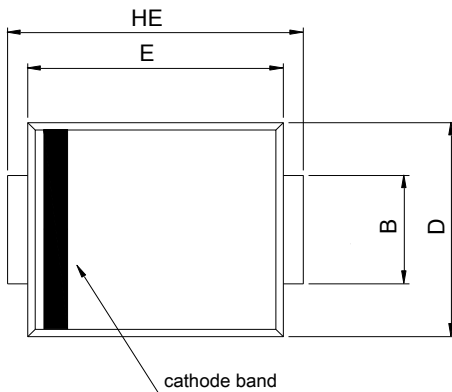


**Figure 5. Typical Junction Capacitance**

# GN3A thru GN3M

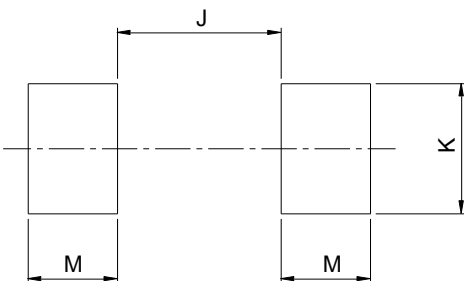
Surface Mount Glass Passivated Standard Rectifiers  
 Reverse Voltage 50V to 1000V Forward Current 3.0A

## Package Outline Dimensions (SMC)



Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min	Max	Min	Max
A	2.00	2.62	0.079	0.103
A1	0.00	0.20	0.000	0.008
B	2.90	3.20	0.114	0.126
C	0.15	0.31	0.006	0.012
D	5.58	6.22	0.220	0.245
E	6.60	7.15	0.260	0.281
HE	7.75	8.15	0.305	0.321
L	0.76	1.60	0.030	0.063

## Recommended Pad Layout



SMC Recommended Pad Layout (Reference ONLY)				
DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	-	4.60	-	0.181
K	3.20	-	0.126	-
M	2.00	-	0.079	-