

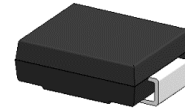
## 8A,50-1000V Standard Rectifiers

### Features

- Low leakage current
- Low forward voltage drop
- Glass passivated chip junction
- Moisture sensitivity: level 1, per J-STD-020
- Halogen-free according to IEC 61249-2-21 definition
- High temperature soldering guaranteed: 260°C/10 seconds



**RoHS**  
COMPLIANT



SMC (DO-214AB)

### Applications

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

Maximum Ratings & Electrical Characteristics (T <sub>A</sub> =25°C unless otherwise noted)									
Parameter	Symbol	GN8A	GN8B	GN8D	GN8G	GN8J	GN8K	GN8M	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	I <sub>F(AV)</sub>	8							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode	I <sub>FSM</sub>	200							A
Operating junction temperature range	T <sub>J</sub>	-55 to +150							°C
Storage temperature range	T <sub>STG</sub>	-55 to +150							°C

Thermal-Mechanical Specifications (T <sub>A</sub> =25°C unless otherwise noted)			
Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	R <sub>θJA</sub>	65	°C/W
Thermal Resistance, Junction to Case	R <sub>θJC</sub>	10	°C/W
Thermal Resistance, Junction to Lead	R <sub>θJL</sub>	15	°C/W

Electrical Specifications ( $T_A=25^{\circ}\text{C}$ unless otherwise noted)										
Parameter	Symbol	Test Conditions	GN8A	GN8B	GN8D	GN8G	GN8J	GN8K	GN8M	Unit
Maximum forward drop voltage	$V_F$	$I_F=8\text{A}$ $T_A=25^{\circ}\text{C}$	1.0						V	
		$I_F=8\text{A}$ $T_A=125^{\circ}\text{C}$	0.9							
Maximum reverse leakage current @ $V_R$	$I_R$	$T_J=25^{\circ}\text{C}$	5						uA	
		$T_J=125^{\circ}\text{C}$	50							
Typical junction capacitance	$C_J$	4.0 V 1 MHz	43						pF	

Note:

1. Mounted on copper pad area of 8.0 x 8.0mm to each terminal.

## Ratings and Characteristics Curves

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

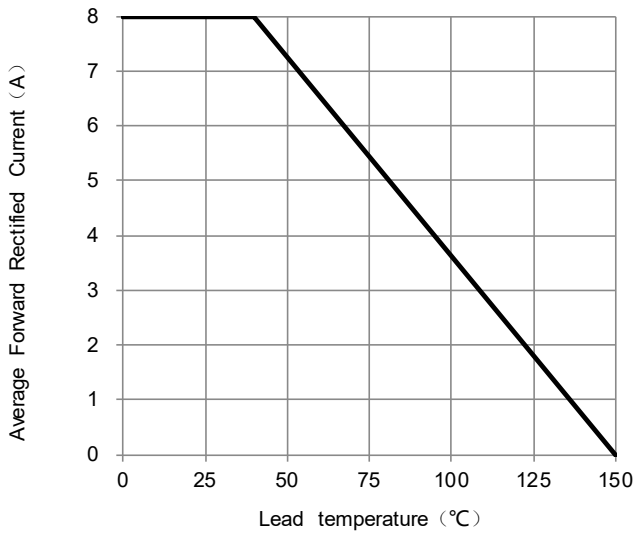


Fig.1 - Forward Current Derating Curve

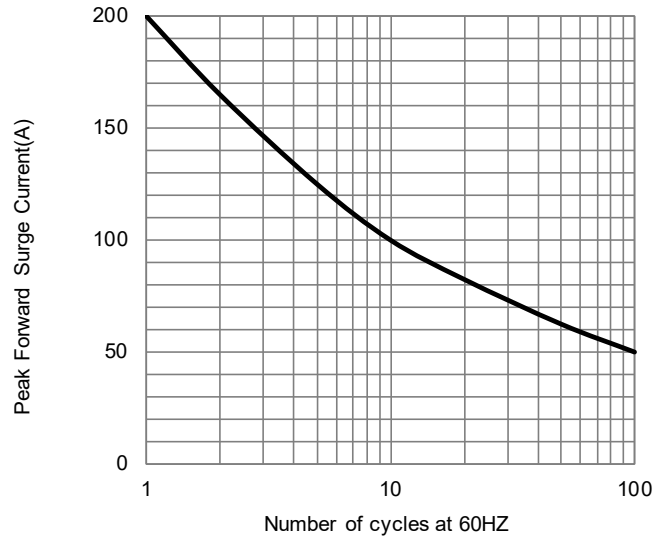


Fig.2 - Maximum Non-Repetitive Surge Current

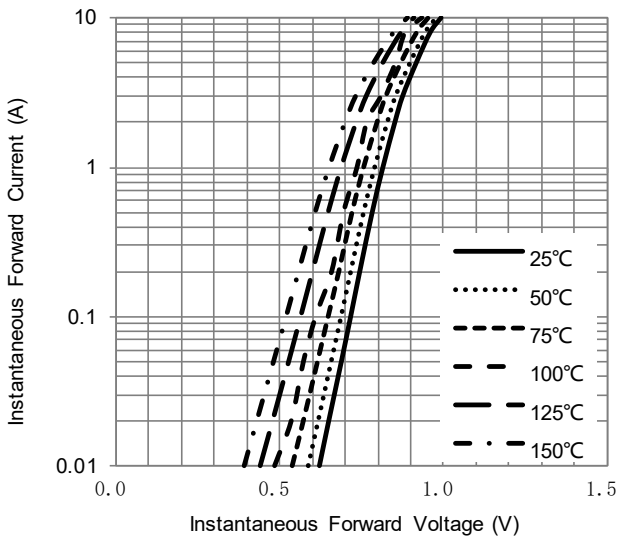


Fig.3 - Typical Forward Voltage Characteristics

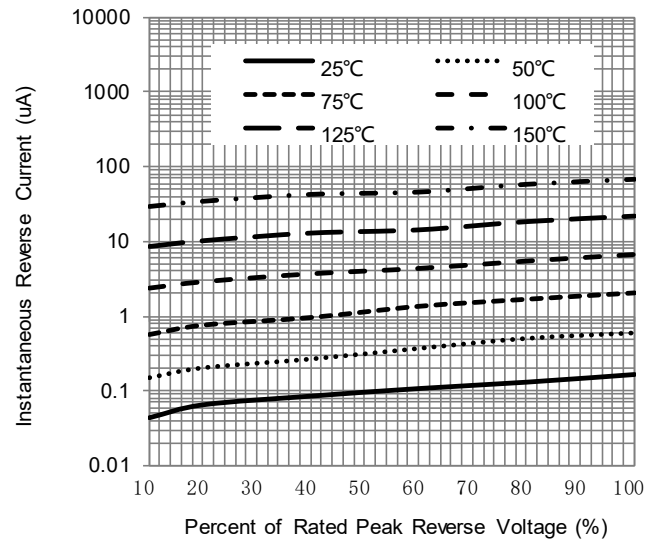


Fig.4 - Typical Reverse Current Characteristics

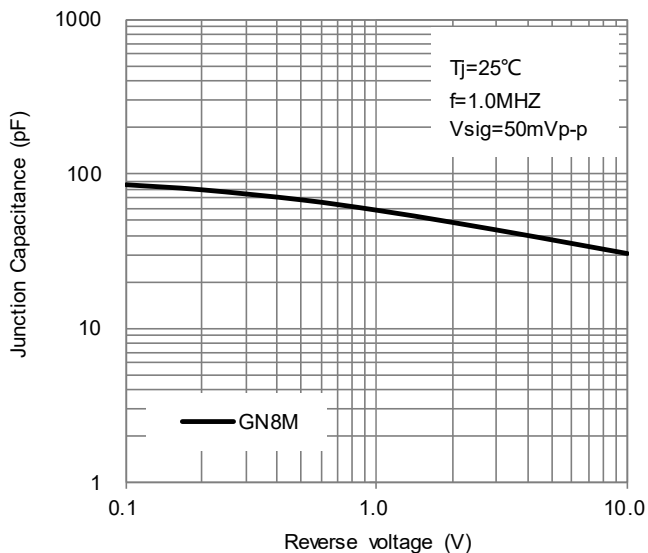
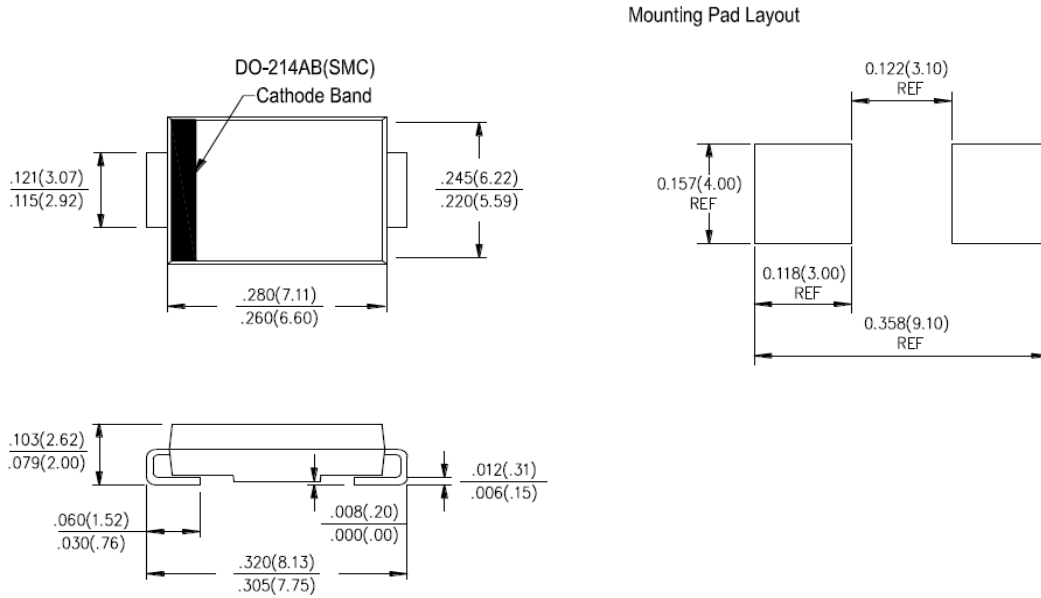


Fig.5 - Typical Junction Capacitance

## Package Outline Dimensions

in inches (millimeters)

### SMC (DO-214AB)



## Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.01	Released Datasheet
Rev.B	2023.10.20	Modify document format
Rev.C	2024.09.09	Modify ratings and characteristics curves

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