

# GN1A thru GN1M

Surface Mount Glass Passivated Rectifiers  
 Reverse Voltage 50V to 1000V Forward Current 1A

## Features

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



DO-214AC (SMA)

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

Parameter	Symbol	GN1A	GN1B	GN1D	GN1G	GN1J	GN1K	GN1M	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>	1							A
Peak Forward Surge Current (8.3ms Single Half Sine-Wave Superimposed On Rated Load)	I <sub>FSM</sub>	40					30		A
Typical Thermal Resistance <sup>1</sup>	R <sub>θJA</sub>	68							°C/W
	R <sub>θJL</sub>	10							
Operating Junction Temperature	T <sub>J</sub>	-55 To +150							°C
Storage Temperature	T <sub>STG</sub>	-55 To +150							°C

Notes:

1. Thermal resistance from junction to ambient and junction to lead mounted on FR4 P.C.B. with 0.2 x 0.2" (5.0 x 5.0mm) copper pads.

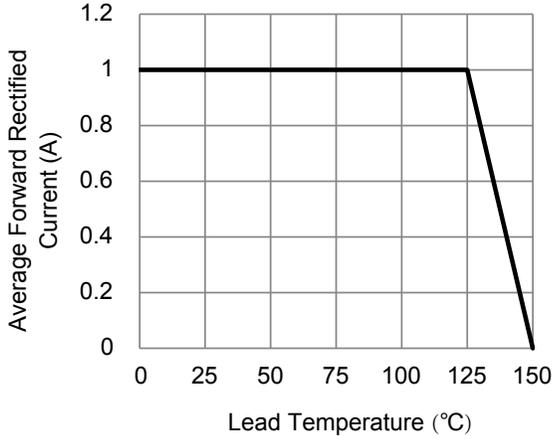
## Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise noted)

Parameter	Symbol	Conditions	GN1A	GN1B	GN1D	GN1G	GN1J	GN1K	GN1M	Unit
Maximum Instantaneous Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =1A	1.0						V	
Maximum DC Reverse Current at Rated DC Blocking Voltage	I <sub>R</sub>	T <sub>A</sub> =25°C	5						μA	
		T <sub>A</sub> =125°C	50							
Typical Reverse Recovery Time	t <sub>rr</sub>	I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>RR</sub> =0.25A	1.8						μS	
Typical Junction Capacitance	C <sub>J</sub>	4.0V, 1MHz	6.7						pF	

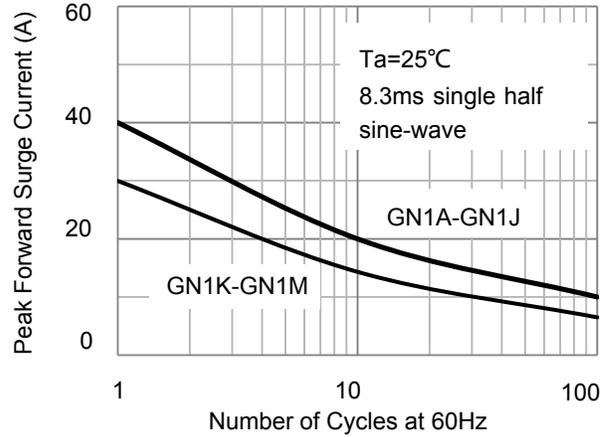
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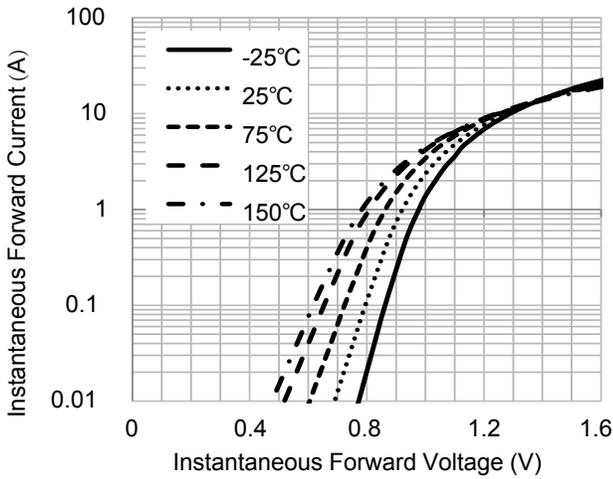
## Ratings and Characteristic Curves ( $T_A=25^\circ\text{C}$ unless otherwise noted)



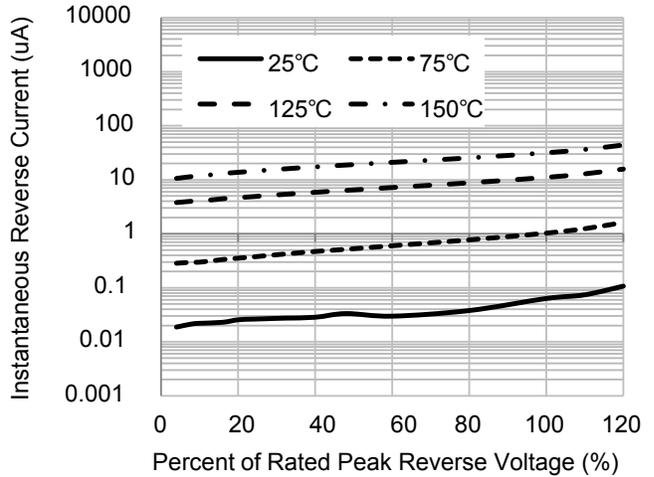
**Figure 1. Forward Current Derating Curve**



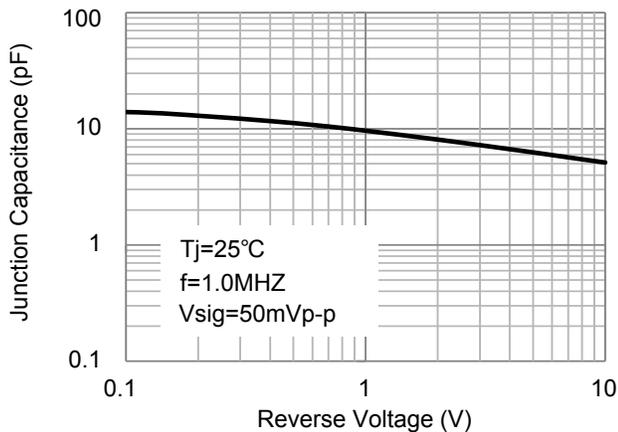
**Figure 2. Maximum Non-Repetitive Peak Forward Surge Current**



**Figure 3. Typical Instantaneous Forward Characteristics**



**Figure 4. Typical Reverse Leakage Characteristics**

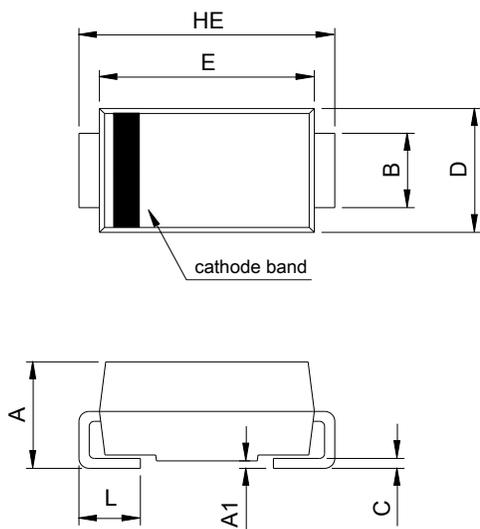


**Figure 5. Typical Junction Capacitance**

# GN1A thru GN1M

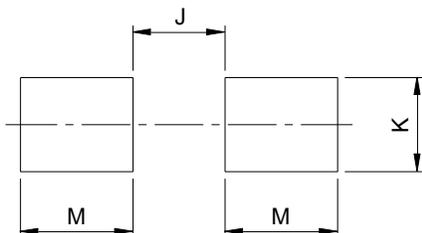
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## Package Outline Dimensions DO-214AC (SMA)



SMA (DO-214AC)				
DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.90	2.30	0.075	0.091
A1	0.00	0.20	0.000	0.008
B	1.25	1.65	0.049	0.065
C	0.15	0.31	0.006	0.012
D	2.35	2.90	0.093	0.114
E	3.99	4.60	0.157	0.181
HE	4.80	5.30	0.189	0.209
L	0.76	1.52	0.030	0.060

## Recommended Pad Layout



Recommended Pad Layout (Reference ONLY)				
DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	-	2.20	-	0.087
K	1.72	-	0.068	-
M	2.00	-	0.079	-

## Ordering information

Device	Package	Marking	Quantity	HSF Status
GN1A	DO-214AC (SMA)	GN1A	7,500pcs / Reel	RoHS Compliant
GN1B	DO-214AC (SMA)	GN1B	7,500pcs / Reel	RoHS Compliant
GN1D	DO-214AC (SMA)	GN1D	7,500pcs / Reel	RoHS Compliant
GN1G	DO-214AC (SMA)	GN1G	7,500pcs / Reel	RoHS Compliant
GN1J	DO-214AC (SMA)	GN1J	7,500pcs / Reel	RoHS Compliant
GN1K	DO-214AC (SMA)	GN1K	7,500pcs / Reel	RoHS Compliant
GN1M	DO-214AC (SMA)	GN1M	7,500pcs / Reel	RoHS Compliant