

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_A=25°C unless otherwise specified)

Parameter	Symbol	GN1A	GN1B	GN1D	GN1G	GN1J	GN1K	GN1M	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current	I _{F(AV)}	1							A
Peak Forward Surge Current (8.3ms Single Half Sine-Wave Superimposed On Rated Load)	I _{FSM}	40					30		A
Typical Thermal Resistance ¹	R _{θJA}	68							°C/W
	R _{θJL}	10							
Operating Junction Temperature	T _J	-55 To +150							°C
Storage Temperature	T _{STG}	-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_A=25°C unless otherwise noted)

Parameter	Symbol	Conditions	GN1A	GN1B	GN1D	GN1G	GN1J	GN1K	GN1M	Unit
Maximum Instantaneous Forward Voltage	V _F	I _F =1A					1.0			V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I _R	T _A =25°C					5			μA
		T _A =125°C					50			
Typical Reverse Recovery Time	t _{rr}	I _F =0.5A, I _R =1.0A, I _{RR} =0.25A					1.8			μS
Typical Junction Capacitance	C _J	4.0V, 1MHz					6.7			pF

GN1A thru GN1M

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

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

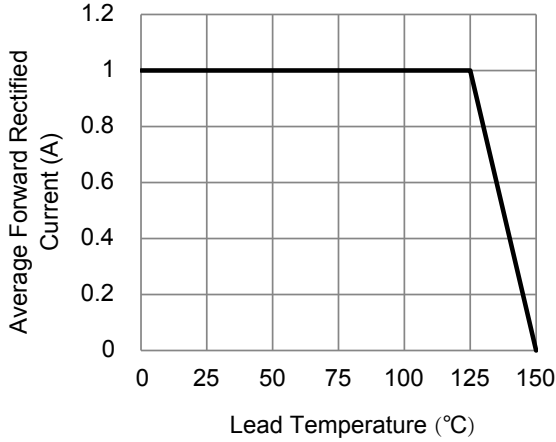


Figure 1. Forward Current Derating Curve

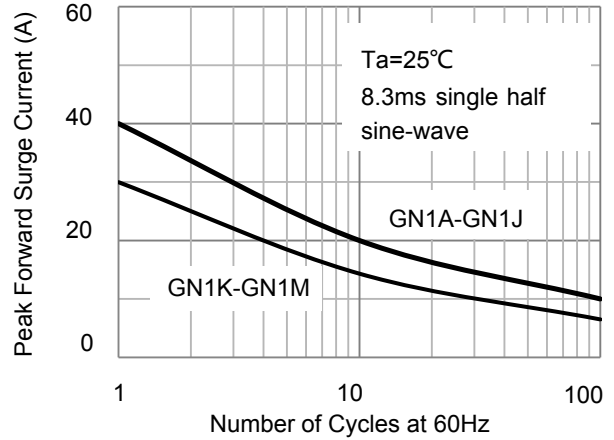


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

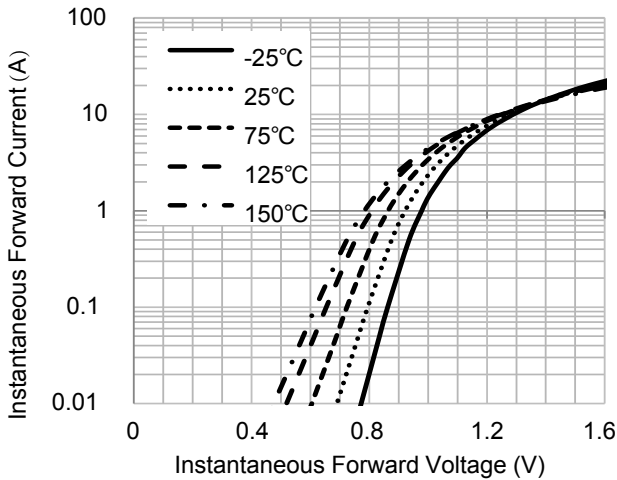


Figure 3. Typical Instantaneous Forward Characteristics

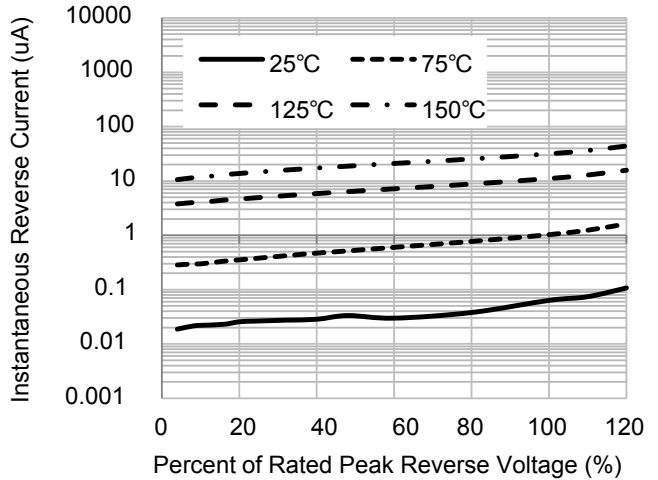


Figure 4. Typical Reverse Leakage Characteristics

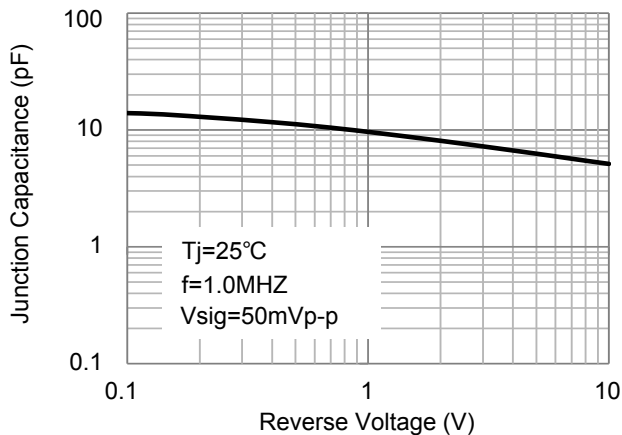
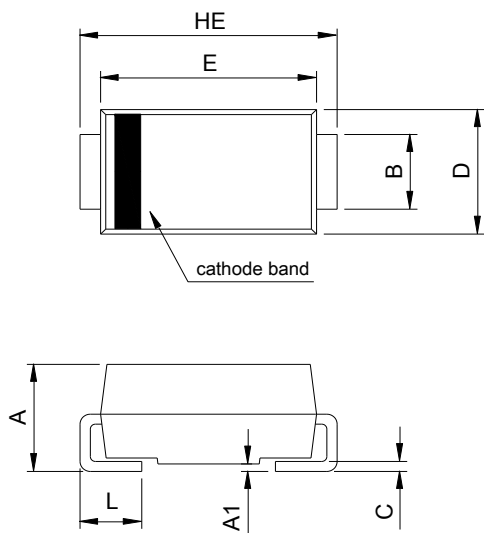


Figure 5. Typical Junction Capacitance

GN1A thru GN1M

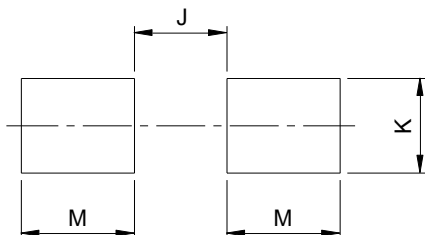
Surface Mount Glass Passivated Rectifiers
 Reverse Voltage 50V to 1000V Forward Current 1A

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