



THE DATASHEET OF GN1K



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	

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

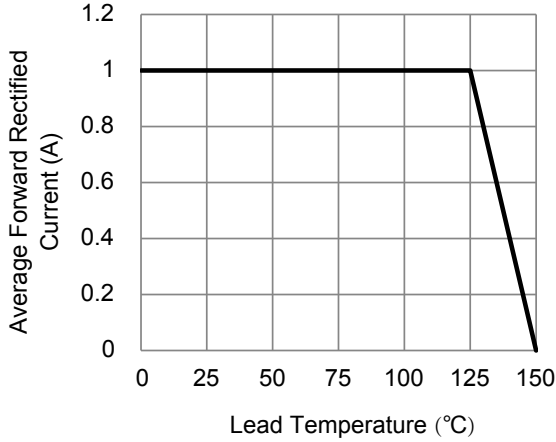


Figure 1. Forward Current Derating Curve

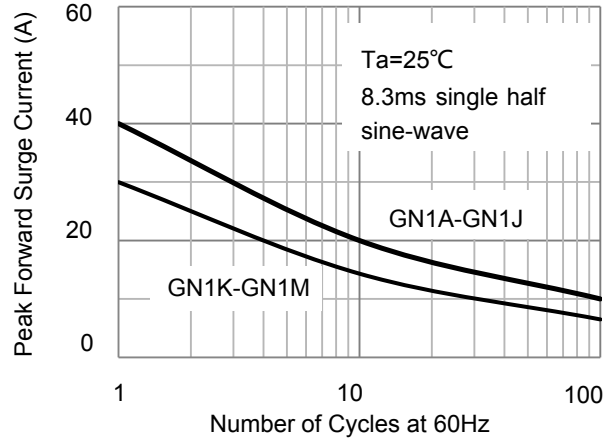


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

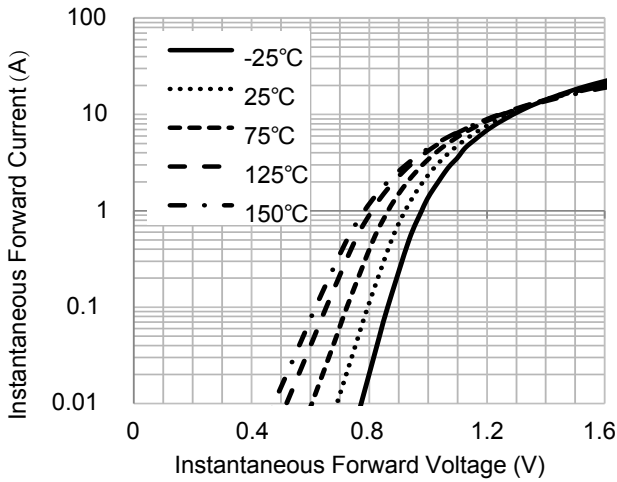


Figure 3. Typical Instantaneous Forward Characteristics

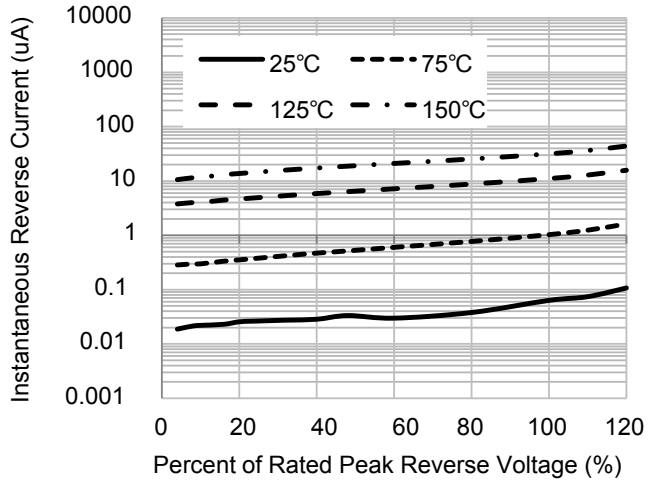


Figure 4. Typical Reverse Leakage Characteristics

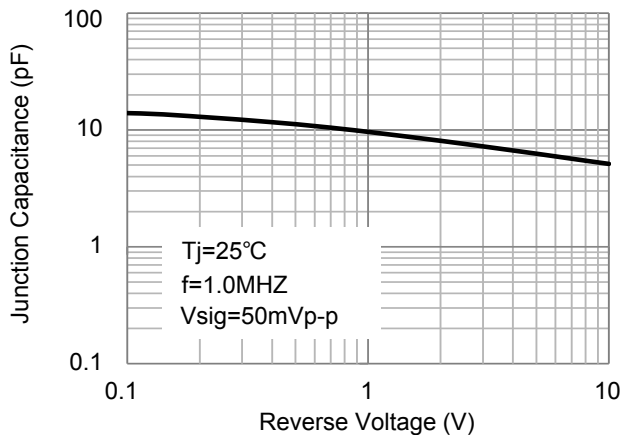
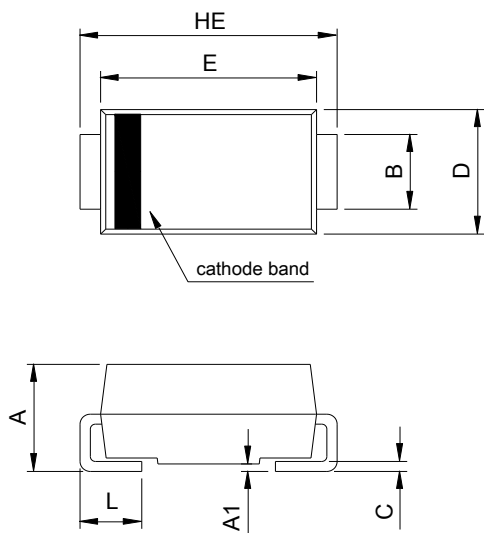


Figure 5. Typical Junction Capacitance

GN1A thru GN1M

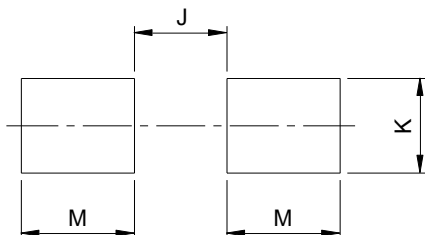
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Package Outline Dimensions DO-214AC (SMA)



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

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