

GROAA thru GROMA

Surface Mount Glass Passivated Fast Recovery Rectifiers
Reverse Voltage 50V to 1000V Forward Current 1.5A

Features

- Glass passivated fast recovery rectifiers
- Ideal for automated placement
- Low forward voltage drop
- High current capability
- Low reverse leakage current
- Solder dip 260 °C, 10s
- Solderability 245°C, 5sec.
- Moisture sensitivity: level 1, per J-STD-020



DO-214AC (SMA)

Applications

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

Maximum Ratings (T_A=25 °C unless otherwise noted)

Parameter	Symbol	GROAA	GROBA	GRODA	GROGA	GROJA	GROKA	GROMA	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)}	1.5							A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed On Rated Load	I _{FSM}	50							A
Storage Temperature Range	T _{STG}	- 55 to + 150							°C
Operating Junction Temperature Range	T _J	- 55 to + 150							°C

Electrical Characteristics (T_A=25 °C unless otherwise noted)

Parameter	Test Conditions	Symbol	GROAA	GROBA	GRODA	GROGA	GROJA	GROKA	GROMA	Unit
Maximum Instantaneous Forward Voltage	1.5A	V _F	1.3							V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _A =25℃	I _R	5							μA
	T _A =125℃	I _R	200							
Maximum Reverse Recovery Time	I _F =0.5A, I _R =1.0A, I _{rr} =0.25A	t _{rr}	150				250	500		nS
Typical Junction Capacitance	4.0 V, 1 MHz	C _J	11							pF
Typical Thermal Resistance ¹	Junction to Ambient	R _{θJA}	55							℃/W
	Junction to Lead	R _{θJL}	18							
	Junction to Case	R _{θJC}	30							

Note:

1. The thermal resistance from junction to lead, mounted on P.C.B with 5×5mm copper pads, 2 OZ, FR4 PCB

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

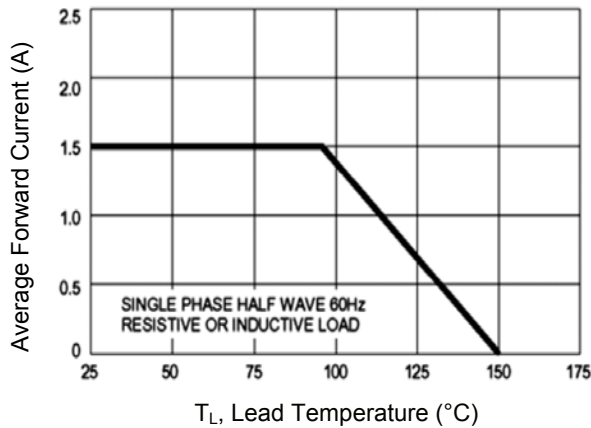


Figure 1. Forward Current Derating Curve

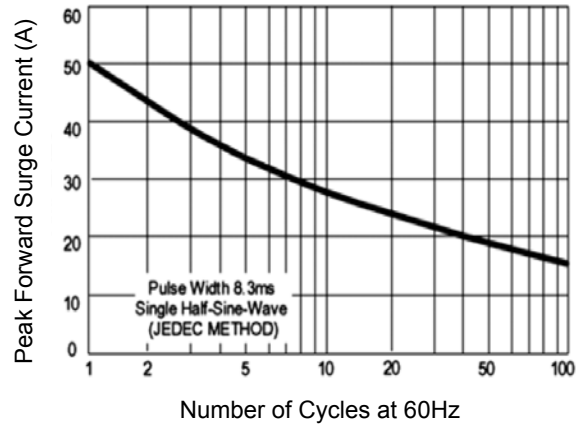


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

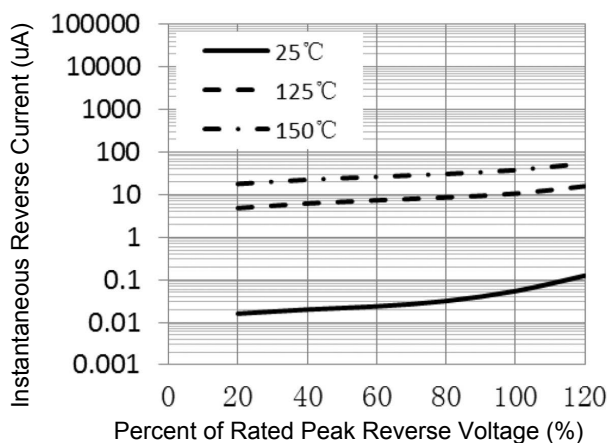


Figure 3. Typical Reverse Characteristics

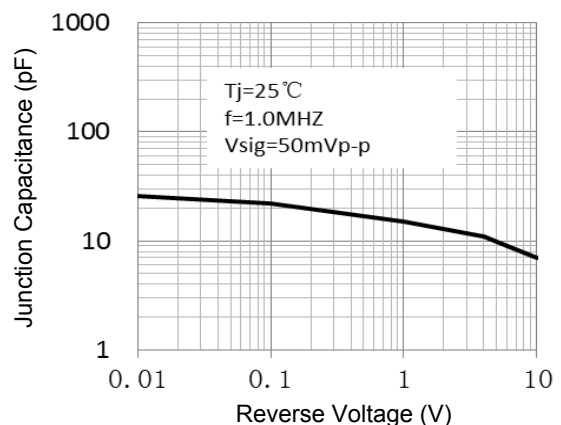


Figure 4. Typical Junction Capacitance

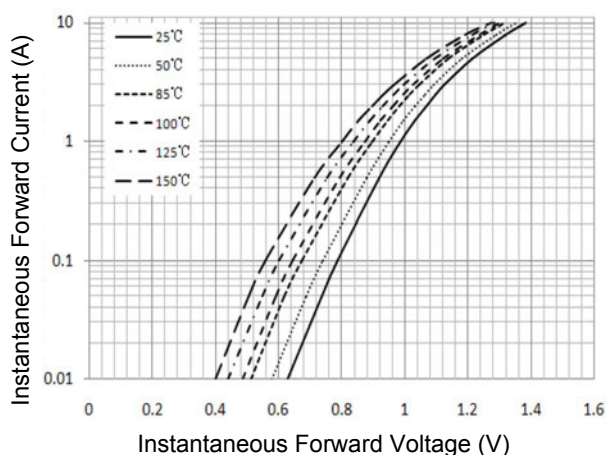
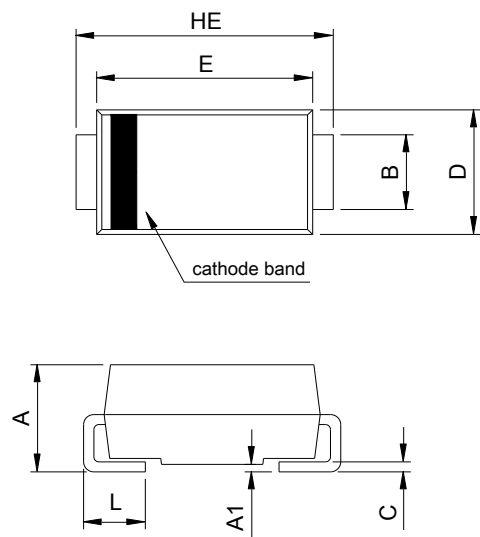


Figure 5. Typical Instantaneous Forward Characteristics

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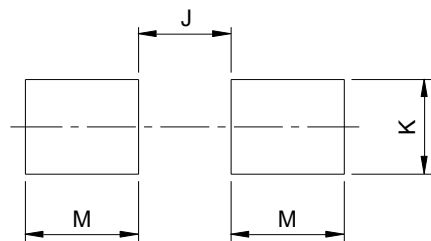
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Package Outline Dimensions DO-214AC (SMA)



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	-