

GS2A thru GS2M

Surface Mount General Purpose Rectifiers
 Reverse Voltage 50 to 1000V Forward Current 2A

Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- High forward surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C



DO-214AA(SMB)

Mechanical Data

- Package: DO-214AA (SMB)
- Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Polarity: Cathode line denotes the cathode end



Typical Applications

For use in general purpose rectification of power supplies, inverters, converters, and freewheeling diodes for consumer and telecommunication.

Absolute Maximum Ratings and Electrical Characteristics

(T_A=25°C unless otherwise noted)

Parameter	Symbol	GS2A	GS2B	GS2D	GS2G	GS2J	GS2K	GS2M	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
Average Rectified Output Current @ 60Hz Sine Wave, Resistance Load, T _L (Fig.1)	I _o	2.0							A
Forward Surge Current (Non-repetitive) @ 60Hz Half-sine wave, 1 cycle, T _J =25°C	I _{FSM}	60							A
Forward Surge Current (Non-repetitive) @ 1ms, square wave, 1 cycle, T _J =25°C		100							
Current Squared Time @ 1ms≤t≤8.3ms T _J =25°C	I ² t	14.94							A ² S
Maximum Instantaneous Forward Voltage at I _F =2A	V _F	1.1							V
Maximum DC Reverse Current at rated DC Blocking Voltage	I _R	@ T _J =25°C							uA
		@ T _J =125°C							
Typical Junction Capacitance @ 4V, 1MHz	C _J	12							pF
Typical Thermal Resistance, Junction to Ambient ¹	R _{θJA}	60							°C/W
Typical Thermal Resistance, Junction to Lead ¹	R _{θJL}	20							
Typical Thermal Resistance, Junction to Case ¹	R _{θJC}	15							
Operating Junction and Storage Temperature Range	T _J , T _{STG}	-55 to +150							°C

Notes

1. Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.3" x 0.3" (8.0 mm x 8.0 mm) copper pad areas

Typical Electrical Characteristic Curves

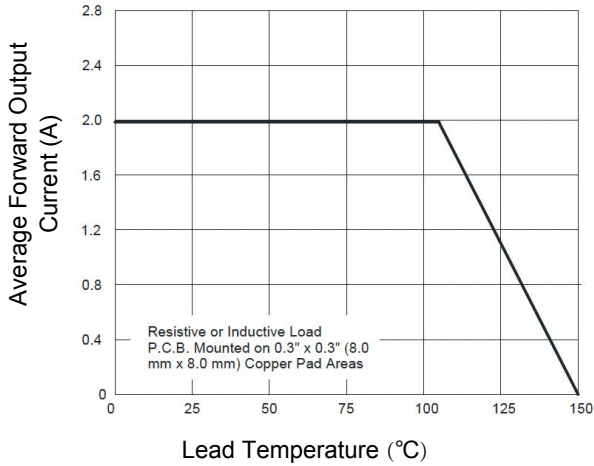


Figure 1. Forward Current Derating Curve

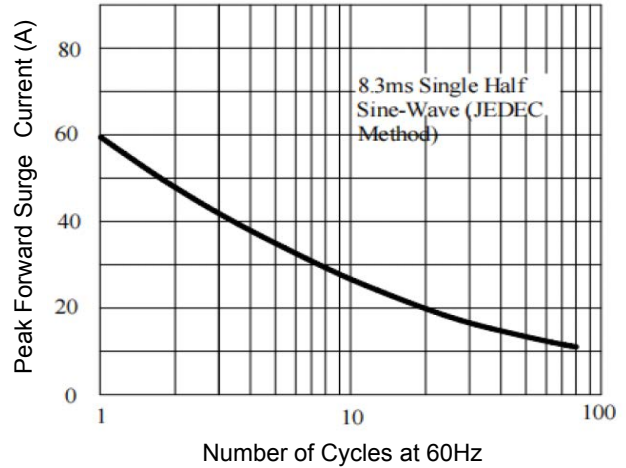


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

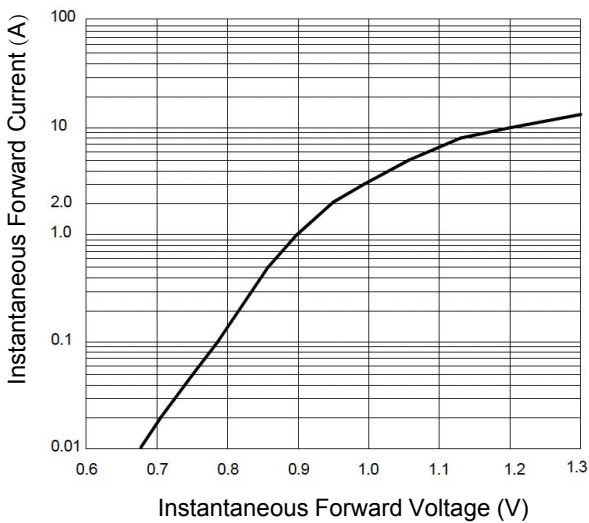


Figure 3. Typical Instantaneous Forward Characteristics

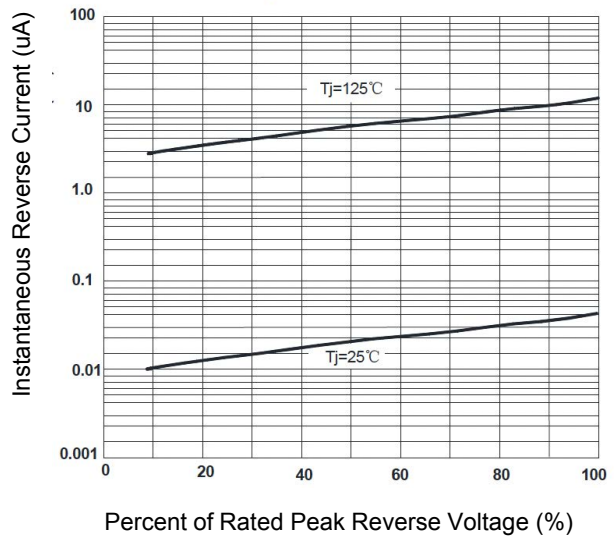
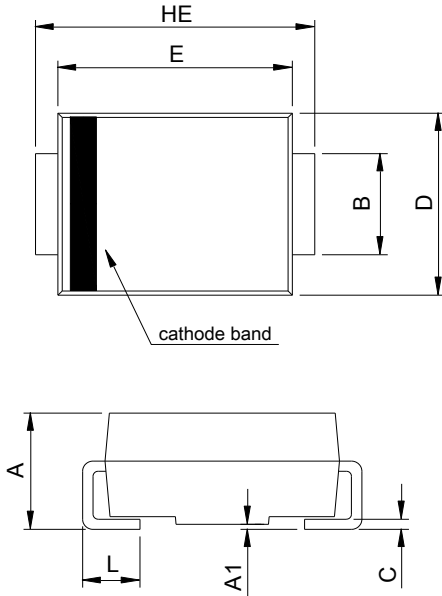


Figure 4. Typical Reverse Leakage Characteristics

GS2A thru GS2M

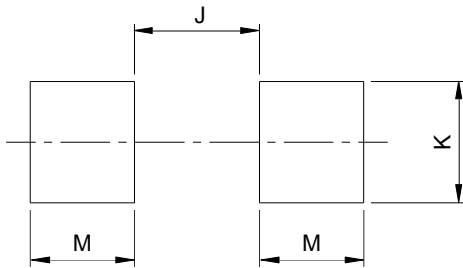
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Package Outline Dimensions DO-214AA (SMB)



SMB (DO-214AA)				
DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.95	2.65	0.077	0.104
A1	0.00	0.20	0.000	0.008
B	1.91	2.20	0.075	0.087
C	0.10	0.31	0.004	0.012
D	3.30	3.95	0.130	0.156
E	4.06	4.90	0.160	0.193
HE	5.00	5.60	0.197	0.220
L	0.76	1.60	0.030	0.063

Recommended Pad Layout



Recommended Pad Layout (Reference ONLY)				
DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	-	2.60	-	0.102
K	2.20	-	0.087	-
M	1.80	-	0.071	-

Ordering information

Device	Package	Marking	Carrier	Quantity
GS2A	SMB	GS2A	Tape & Reel	3,000pcs / Reel
GS2B	SMB	GS2B	Tape & Reel	3,000pcs / Reel
GS2D	SMB	GS2D	Tape & Reel	3,000pcs / Reel
GS2G	SMB	GS2G	Tape & Reel	3,000pcs / Reel
GS2J	SMB	GS2J	Tape & Reel	3,000pcs / Reel
GS2K	SMB	GS2K	Tape & Reel	3,000pcs / Reel
GS2M	SMB	GS2M	Tape & Reel	3,000pcs / Reel

For more information, please contact us at: inquiry@goodarksemi.com