GOOD-ARK SEMICONDUCTOR

GSL310B

Surface Mount Schottky Rectifier
Reverse Voltage 100V Forward Current 3A

Features

- Ideal for automated placement
- Low forward voltage drop
- Low leakage current
- Meets environmental standard MIL-S-19500D
- Moisture sensitivity: level 1, per J-STD-020
- Solder dip 275°C, 10s
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC

RoHS COMPLIANT

DO-214AA (SMB)

Applications

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

Mechanical Data

- Case: DO-214AA, molded epoxy body, epoxy meets UL 94V-0 flammability rating
- Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD22B-106
- Polarity: Laser band denotes cathode band

Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

Parameter	Symbol	GSL310B	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Maximum RMS Voltage	V_{RMS}	70	V
Maximum DC Blocking Voltage	V_{DC}	100	V
Maximum Average Forward Rectified Current @ T_L (See Fig.1)	$I_{F(AV)}$	3.0	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	80	A
Maximum Thermal Resistance from Junction to Ambient[1]	$R_{\theta JA}$	72	°C/W
Maximum Thermal Resistance from Junction to Terminal[2]	$R_{\theta JT}$	22	
Typical Thermal Resistance from Junction to Case	$R_{\theta JC}$	37	
Operating Junction Temperature Range	T_J	-55 to +150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

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

Parameter	Symbol	Test Condition	GSL310B	Unit
Maximum Instantaneous Forward Voltage	V_F	I_F=3A	0.75	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	T_A=25°C	0.15	mA
Typical Junction Capacitance	C_J	4.0V, 1MHz	220	pF

Notes:

1. Thermal resistance from junction to ambient, 0.276x0.276 inch (7.0x7.0mm) copper pads to each terminal.
2. Thermal resistance from junction to terminal, 0.276x0.276 inch (7.0x7.0mm) copper pads to each terminal.

Ratings and Characteristics Curves (T_A=25°C unless otherwise noted)

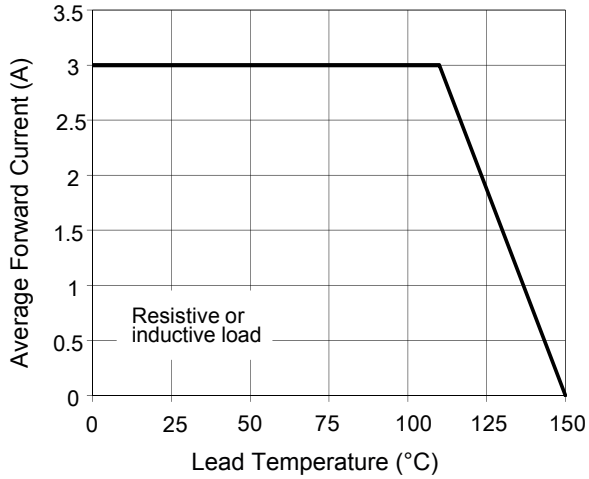

Figure 1. Forward Current Derating Curve

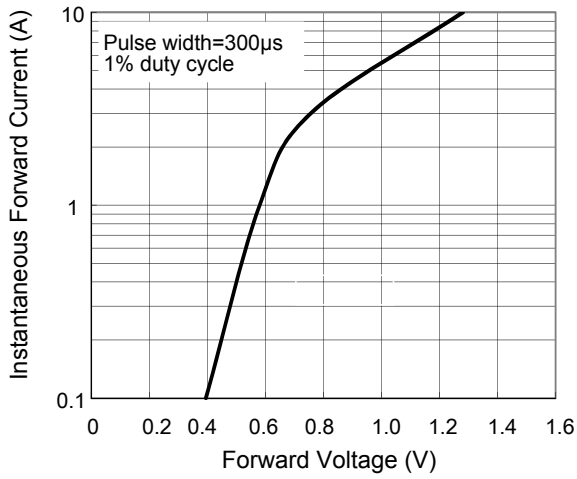

Figure 2. Typical Forward Characteristics

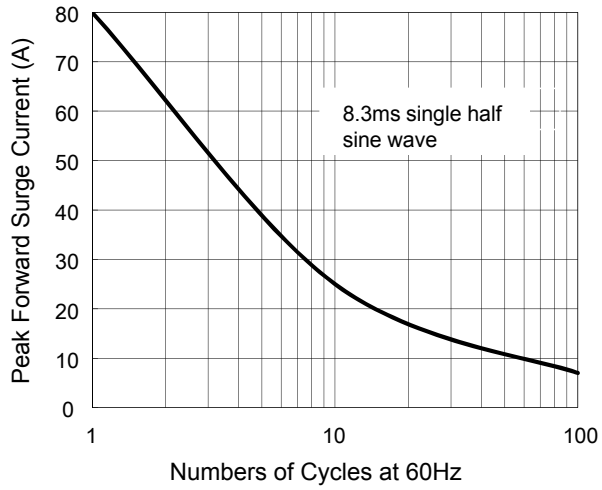

Figure 3. Maximum Non-Repetitive Peak Surge Current

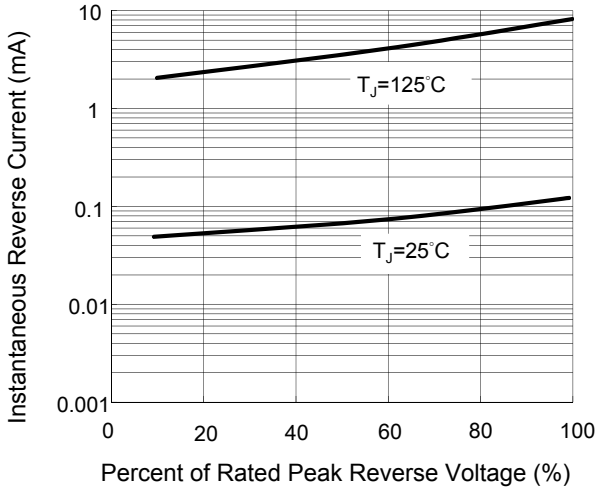

Figure 4. Typical Reverse Characteristics

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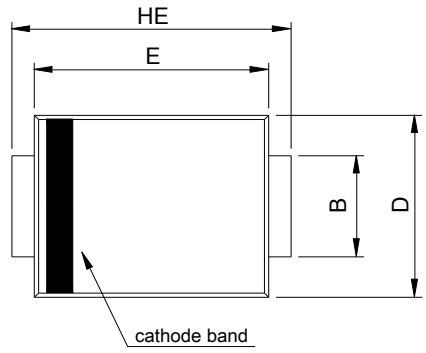
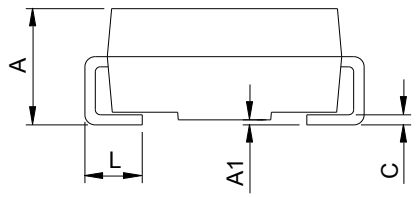
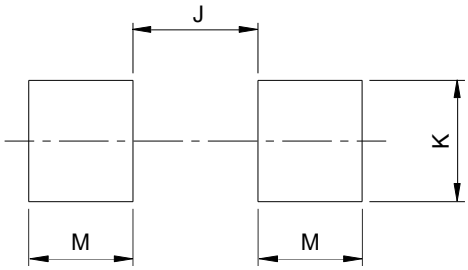
Package Outline Dimensions (SMB)





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	1.95	2.20	0.077	0.087
C	0.15	0.31	0.006	0.012
D	3.30	3.95	0.130	0.156
E	4.06	4.60	0.160	0.181
HE	5.10	5.60	0.201	0.220
L	0.76	1.60	0.030	0.063

Recommended Pad Layout



SMB 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	-

Order Information

Device	Package	Marking	Carrier	Quantity
GSL310B	SMB	SL310B	Tape & Reel	3,000 pcs / Reel