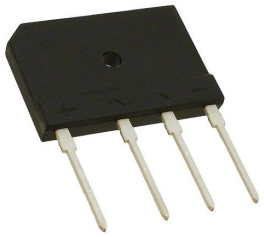
Technical Data
Data Sheet N2302, Rev. -

Automotive Qualified

GBJ610-A

Single-Phase 6.0A Glass Passivated Bridge Rectifier

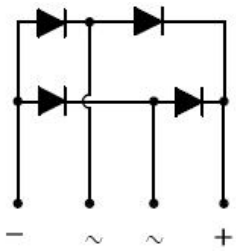


GBJ

Features

- Glass passivated die construction
- Low forward voltage drop
- High current capability
- High surge current capability
- Plastic material-UL flammability 94V-0
- "-A" is an AEC-Q101 qualified device
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



Mechanical Data

- Case: GBJ, Molded plastic
- Terminals: Plated leads solderable per MIL-STD-202, Method 208
- Polarity: as marked on case
- Mounting Position: Any
- Lead Free: For RoHS / Lead Free Version
- Weight: 6.8 grams(approx)

Maximum Ratings @T_A=25°C unless otherwise specified

Type Number	Symbol	GBJ610-A	Units
Marking code		GBJ610	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_{DC}	1000	V
RMS Reverse Voltage	V_{RMS}	700	V
Average forward rectified output current (with heatsink)@T_C = 90°C (without heatsink)@T_A = 25°C	$I_{F(AV)}$	6 3.2	A
Peak Forward Surge Current,8.3ms single half- sine-wave superimposed on rated load (JEDEC method) @T_J = 25°C @T_J = 125°C	I_{FSM}	160 128	A
I^2t Rating for Fusing (t < 8.3ms)	I^2t	106.24	A^2s

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Electrical Characteristics@T_A=25°C unless otherwise specified

Type Number	Symbol	GBJ610-A	Units
Forward Voltage (per element) @I_F =3A @I_F =6A	V_F	1.0 1.1	V
Peak Reverse Current @T_A = 25°C At Rated DC Blocking Voltage @T_A = 125°C	I_{RM}	5 200	μA
Dielectric Strength	V_{ids}	2500	V
The proposed installation torque Max torque	T_{or}	Typ. 5.0 Max 8.0	Kgf.cm
Typical Junction Capacitance(per leg) (Note 1)	C_J	35	pF

* Pulse width < 300 μs, duty cycle < 2%

Thermal-Mechanical Specifications:

Type Number	Symbol	GBJ610-A	Units
Typical Thermal Resistance Junction	$R_{\theta JA}$ $R_{\theta JL}$ $R_{\theta JC}$	24 5 2.5	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	°C

Note: 1Measured at 1.0 MHz and applied reverse voltage of 5.0V D.C.

Ratings and Characteristics Curves

Fig. 1 Forward Current Derating Curve

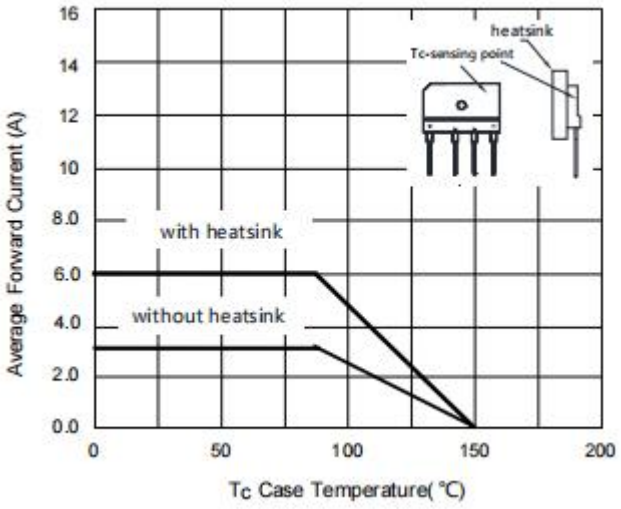


Fig. 2 Typical Forward Characteristics

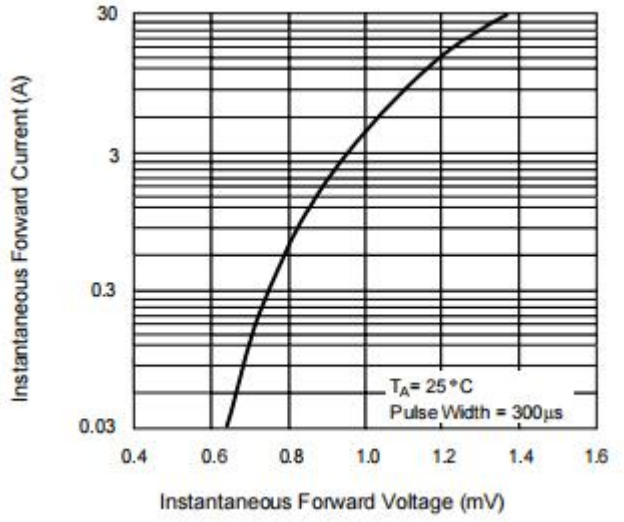


Fig. 3 Forward Surge Current Capability

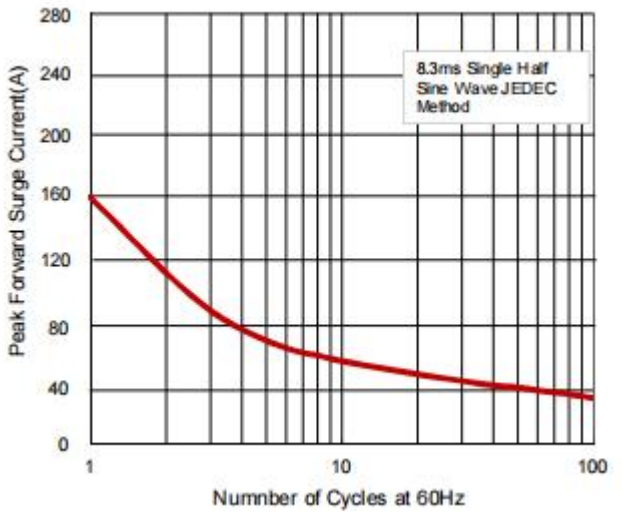
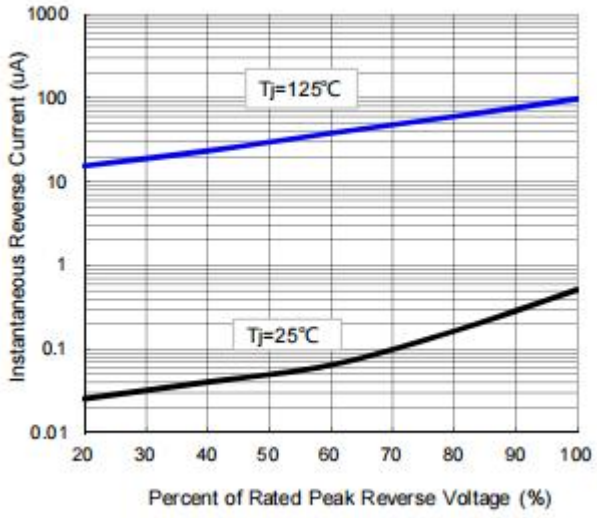


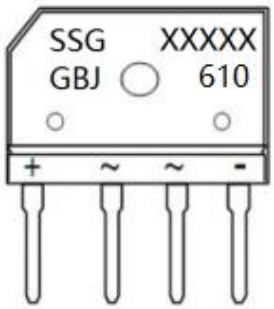
Fig. 4 Typical Reverse Chracteristics



Ordering Information

Device	Package	Plating	Shipping
GBJ610-A	GBJ (Pb-Free)	Pure Sn	15pcs / tube

Marking Diagram



Where XXXXX is YYWWL

SSG	= SSG
YY	= Year
WW	= Week
L	= Lot Number
GBJ610	= Marking code

Cautions: Molding resin
Epoxy resin UL:94V-0

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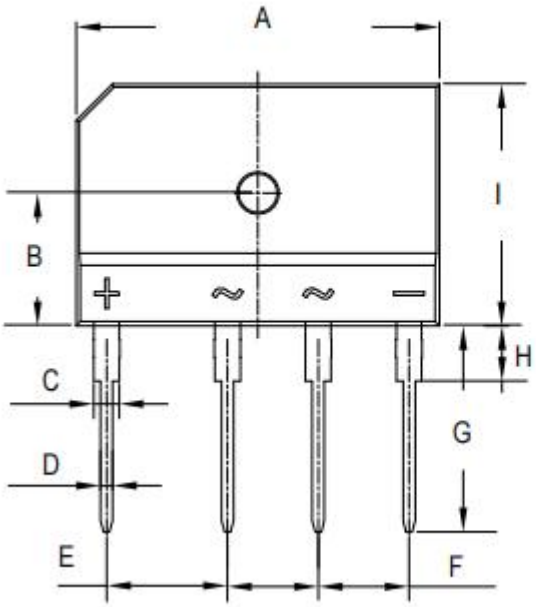
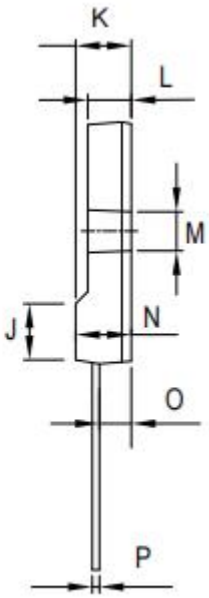
Mechanical Dimensions GBJ (Inches/Millimeters)





Dimensions	Millimeters		Inches	
	Min	Max	Min	Max
A	29.7	30.3	1.169	1.193
B	10.8	11.2	0.425	0.441
C	1.9	2.3	0.075	0.091
D	0.9	1.1	0.035	0.043
E	9.8	10.2	0.386	0.402
F	7.3	7.7	0.287	0.303
G	17.0	18.0	0.699	0.709
H	3.8	4.2	0.150	0.165
I	19.7	20.3	0.776	0.799
J	4.8	5.2	0.189	0.205
K	4.4	4.8	0.173	0.189
L	3.4	3.8	0.134	0.150
M	3.1	3.4	0.122	0.134
N	4.4	4.8	0.173	0.189
O	2.4	2.8	0.094	0.110
P	0.5	0.7	0.020	0.028

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