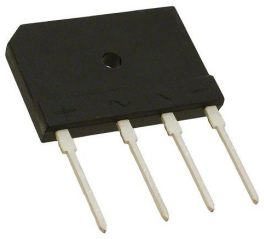
Technical Data
Data Sheet N1754, Rev. A

GBJ25005-GBJ2510

Single-Phase 25.0A Glass Passivated Bridge Rectifier

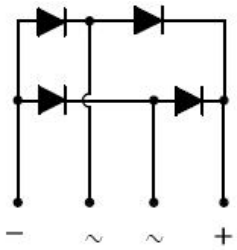


GBJ

Features

- Glass passivated die construction
- Low forward voltage drop
- High current capability
- High surge current capability
- Plastic material-UL flammability 94V-0
- 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	GBJ 25005	GBJ 2501	GBJ 2502	GBJ 2504	GBJ 2506	GBJ 2508	GBJ 2510	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_{DC}	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Average rectified output current (with heatsink)@T_C = 100°C (without heatsink)@T_A = 25°C	$I_{F(AV)}$	25 4							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}	350 280							A
I^2t Rating for Fusing (t < 8.3ms)	I^2t	508							A^2s

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Electrical Characteristics@T_A=25°C unless otherwise specified

Type Number	Symbol	GBJ 25005	GBJ 2501	GBJ 2502	GBJ 2504	GBJ 2506	GBJ 2508	GBJ 2510	Units
Forward Voltage (per element) @I_F =12.5A @I_F =25A	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	110							pF

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

Thermal-Mechanical Specifications:

Type Number	Symbol	GBJ 25005	GBJ 2501	GBJ 2502	GBJ 2504	GBJ 2506	GBJ 2508	GBJ 2510	Units
Typical Thermal Resistance Junction	$R_{\theta JA}$ $R_{\theta JL}$ $R_{\theta JC}$	18 1.5 1							°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150							°C

Note: 1- Measured at 1 MHZ and applied reverse voltage of 4.0 VDC.

Ratings and Characteristics Curves

Fig. 1 Forward Current Derating Curve

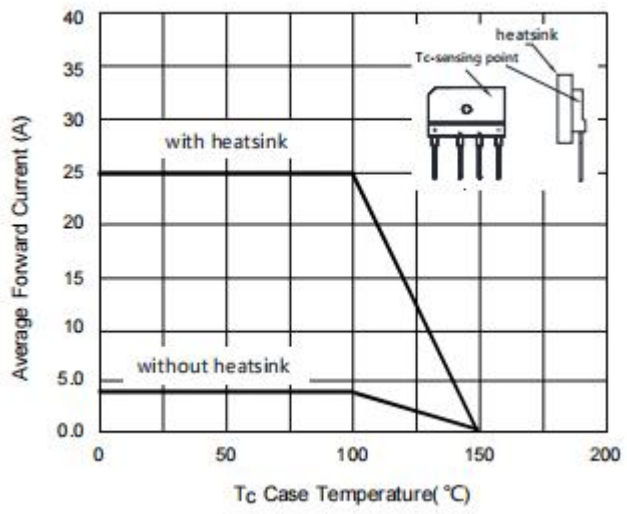

Fig. 2 Typical Forward Characteristics

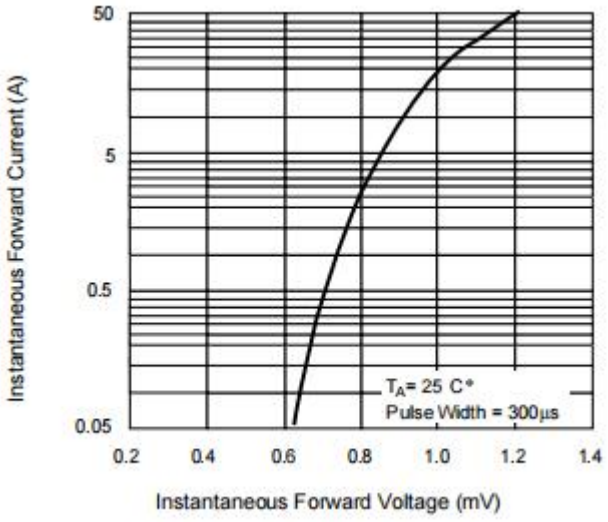

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Fig. 3 Forward Surge Current Capability

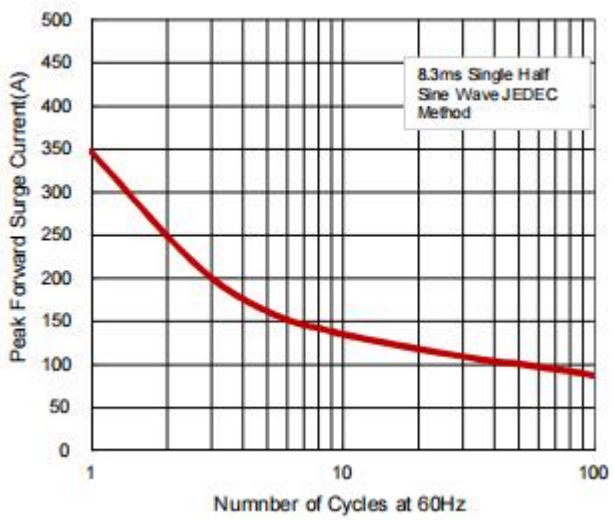
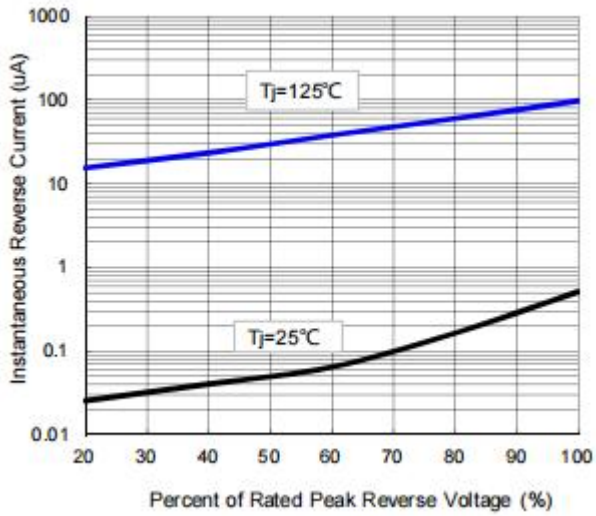


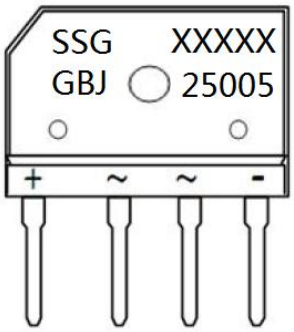
Fig. 4 Typical Reverse Chracteristics



Ordering Information

Device	Package	Plating	Shipping
GBJ25005 THRU GBJ2510	GBJ(Pb-Free)	Pure Sn	15pcs / tube

Marking Diagram



Where XXXXX is YYWWL

SSG	= SSG
YY	= Year
WW	= Week
L	= Lot Number
GBJ25005	= Type Number

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

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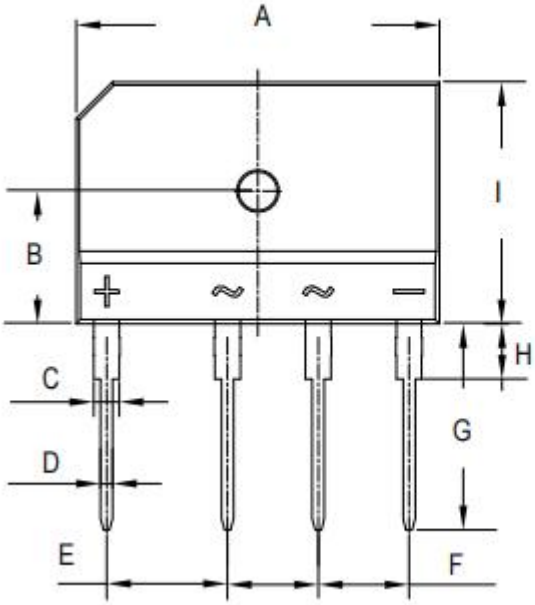
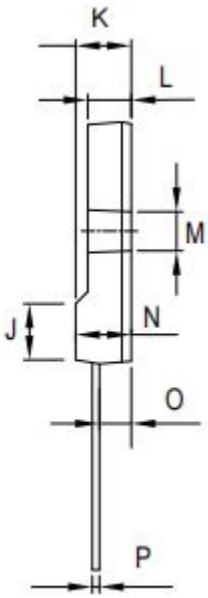
Mechanical Dimensions GBJ (Inches/Millimeters)





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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