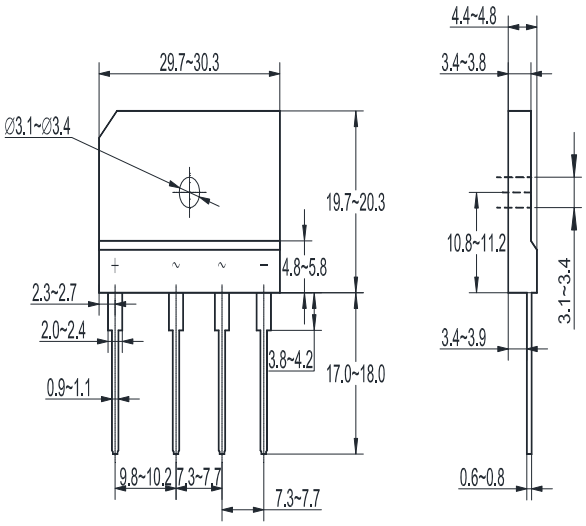
GBJ15005 THRU GBJ1510-HAF

GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER
REVERSE VOLTAGE: 50 to 1000 V
FORWARD CURRENT: 15 A

Features
- Glass passivated chip junction
- Ideal for printed circuit board
- Low reverse leakage current
- Low forward voltage drop
- High surge current capability
- Halogen and Antimony Free(HAF), RoHS compliant

Mechanical data
- Case:Molded plastic, GBJ
- Epoxy: UL 94V-0 rate flame retardant
- Mounting Position: Any

GBJ



Dimensions in inches and (millimeters)

Absolute Maximum Ratings and Characteristics
Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbols	GBJ 15005	GBJ 1501	GBJ 1502	GBJ 1504	GBJ 1506	GBJ 1508	GBJ 1510	Units
Maximum Recurrent 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 with Heatsink at T_C = 100 °C	$I_{(AV)}$	15							A
Peak Forward Surge Current, 8.3 ms Single Half-Sine -Wave superimposed on rated load (JEDEC Method)	I_{FSM}	220							A
Current Squared Time at 1 ms ≤ t ≤ 8.3 ms	I^2t	200							A^2S
Maximum Forward Voltage at 7.5 A DC	V_F	1.1							V
Maximum Reverse Current at T_A = 25 °C at Rated DC Blocking Voltage T_A = 125 °C	I_R	10 500							μA
Typical Thermal Resistance, without heatsink	$R_{\theta JA}$	22							°C/W
Typical Thermal Resistance, with heatsink	$R_{\theta JC}$	1.5							°C/W
Operating and Storage Temperature Range	T_J, T_{Stg}	- 55 to + 150							°C

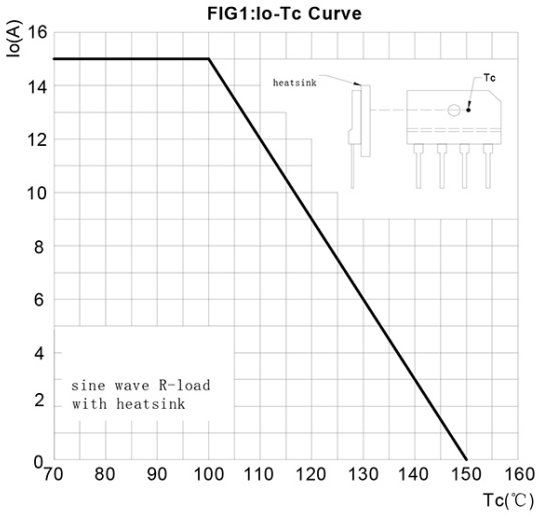


FIG1:Io-Tc Curve
Io(A)
16
14
12
10
8
6
4
2
0
70
80
90
100
110
120
130
140
150
160
Tc(℃)
heatsink
Tc
sine wave R-load
with heatsink

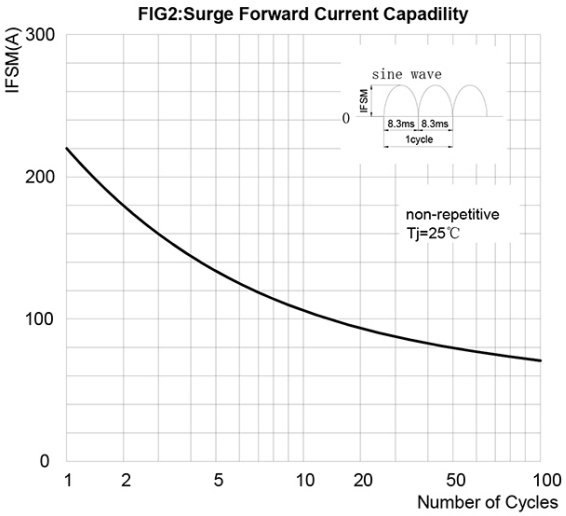


FIG2:Surge Forward Current Capadility
IFSM(A)
300
200
100
0
1
2
5
10
20
50
100
Number of Cycles
sine wave
IFSM
0
8.3ms
8.3ms
1cycle
non-repetitive
Tj=25℃

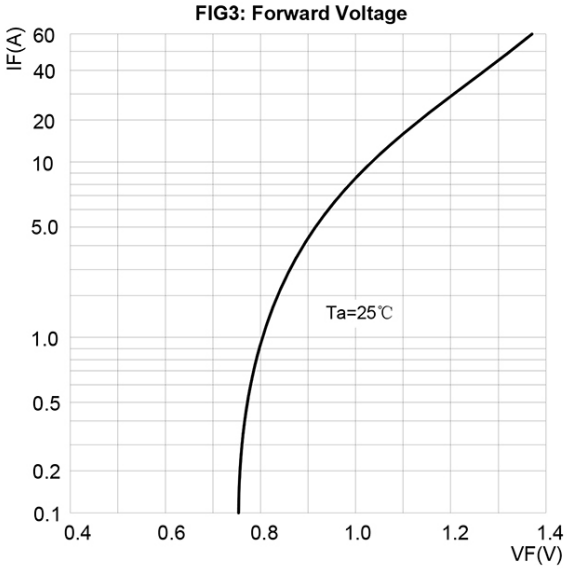


FIG3: Forward Voltage
IF(A)
60
40
20
10
5.0
1.0
0.5
0.2
0.1
0.4
0.6
0.8
1.0
1.2
1.4
VF(V)
Ta=25℃

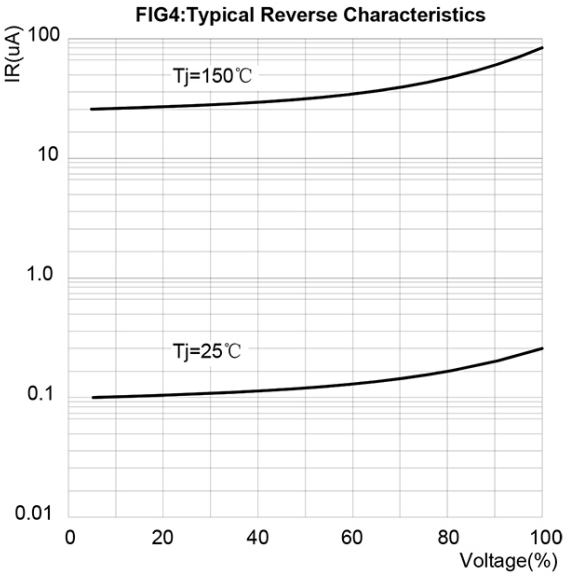


FIG4:Typical Reverse Characteristics
IR(uA)
100
10
1.0
0.1
0.01
0
20
40
60
80
100
Voltage(%)
Tj=150℃
Tj=25℃