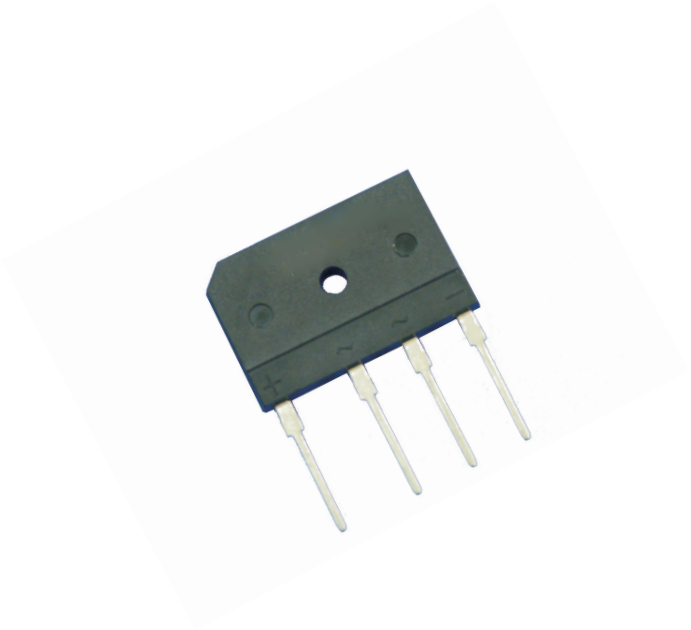
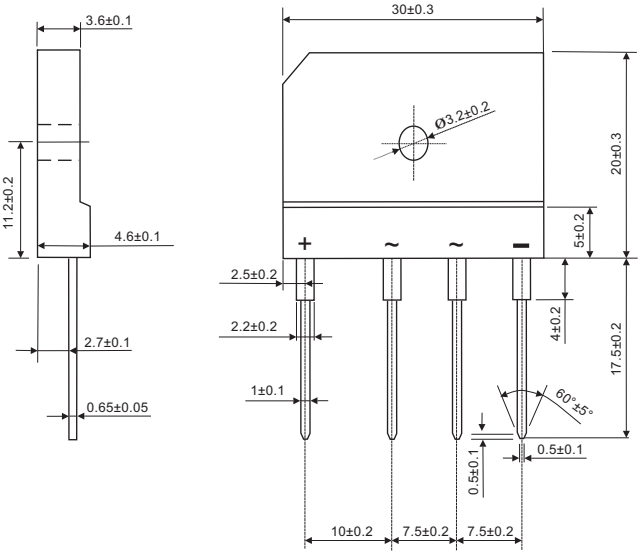
Glass Passivated Single-Phase Bridge Rectifier, 20A

GBJ2004 Thru GBJ2012

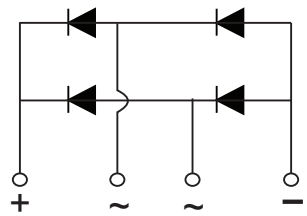




All dimensions in millimeters

FEATURES

- UL recognition file number E320098
- Typical IR less than 2.0 μA
- High surge current capability
- Low thermal resistance
- Compliant to RoHS
- Isolation voltage up to 2500V



TYPICAL APPLICATIONS

General purpose use in AC/DC bridge full wave rectification for big power supply, field supply for DC motor, industrial automation applications.

PRIMARY CHARACTERRISTICS	
$I_{F(AV)}$	20A
V_{RRM}	400V to 1200V
I_{FSM}	300A
I_R	5 μA
V_F	1.10V
$T_{J\ max.}$	150°C

ADVANTAGE

- International standard package
  Epoxy meets UL 94 V-O flammability rating
- Small volume, light weight
- Small thermal resistance
- High heat-conduction rate
- Low temperature rise
- High temperature soldering guaranteed : 260°C/10 second, 2.3kg tension force
- Weight: 6.5g (0.23 ozs)

MAJOR RATINGS AND CHARACTERISTICS (T_A = 25°C unless otherwise noted)							
PARAMETER	SYMBOL	GBJ20					UNIT
		04	06	08	10	12	
Maximum repetitive peak reverse voltage	V_{RRM}	400	600	800	1000	1200	V
Peak reverse non-repetitive voltage	V_{RSM}	500	700	900	1100	1300	V
Maximum DC blocking voltage	V_{DC}	400	600	800	1000	1200	V
Maximum average forward rectified output current, T_c = 85°C	$I_{F(AV)}$	20					A
Peak forward surge current single sine-wave superimposed on rated load	I_{FSM}	300					A
Rating (non-repetitive, for t greater than 1 ms and less than 8.3 ms) for fusing	I^2t	374					A^2s
RMS isolation voltage from case to leads	V_{ISO}	2500					V
Operating junction storage temperature range	T_J	-40 to 150					°C
Storage temperature range	T_{STG}	-40 to 150					°C

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)								
PARAMETER	TEST CONDITIONS	SYMBOL	GBJ20					UNIT
			04	06	08	10	12	
Maximum instantaneous forward drop per diode	I_F = 10A	V_F	1.10					V
Maximum reverse DC current at rated DC blocking voltage per diod	T_A = 25°C	I_R	5					μA
	T_A = 150°C		500					

THERMAL AND MECHANICAC (T_A = 25°C unless otherwise noted)								
PARAMETER	TEST CONDITIONS	SYMBOL	GBJ20					UNIT
			04	06	08	10	12	
Typical thermal resistance junction to case	Single-side heat dissipation, sine half wave	$R_{\theta JC}$ (1)	1.0					°C/W
Mounting torque 10 % to heatsink M3	A mounting compound is recommended and the torque should be rechecked after a period of 3 hours to allow for the spread of the compound.		0.8					Nm
Approximate weight			6.5					g

Notes

(1) With heatsink, single side heat dissipation, half sine wave.

Device code

GBJ	20	10
①	②	③

1 - Product type : "GBJ" Package,1Ø Bridge

2 - $I_{F(AV)}$ rating : "20" for 20A

3 - Voltage code : code x 100 = V_{RRM}

Fig.1 Derating curve for output rectified current

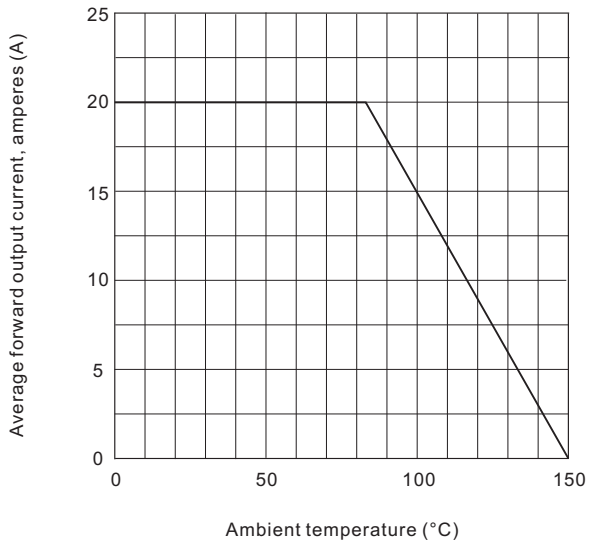


Fig.2 Maximum non-repetitive peak forward surge current per bridge element

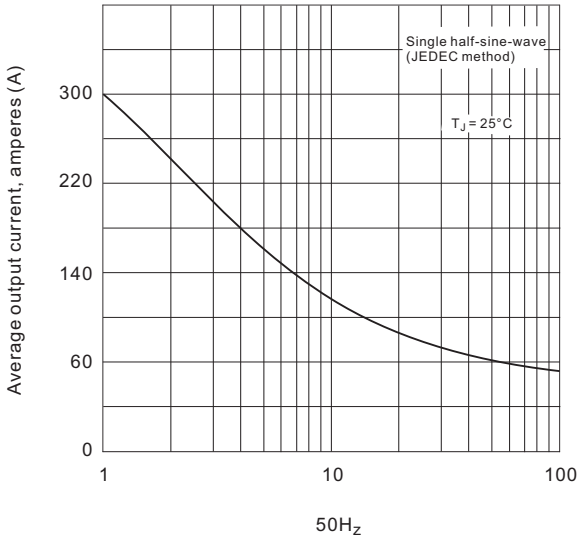


Fig.3 Typical reverse characteristics per bridge element

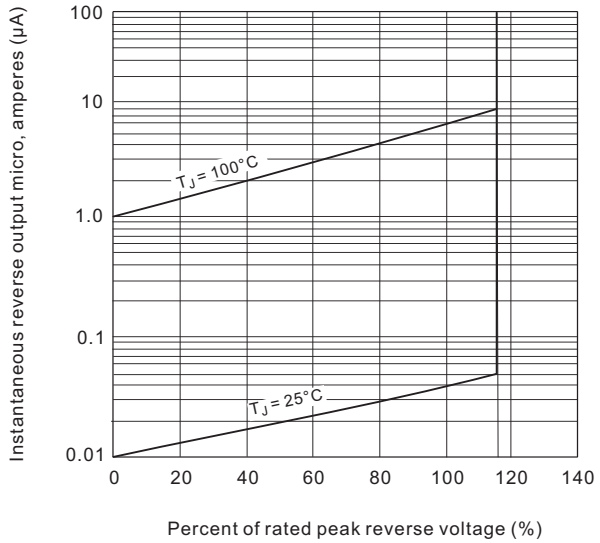


Fig.4 Typical forward characteristics per bridge element

