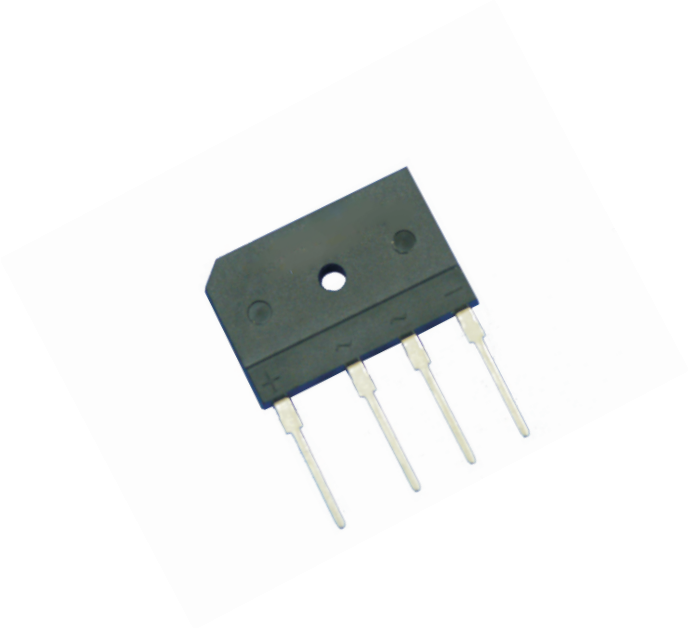
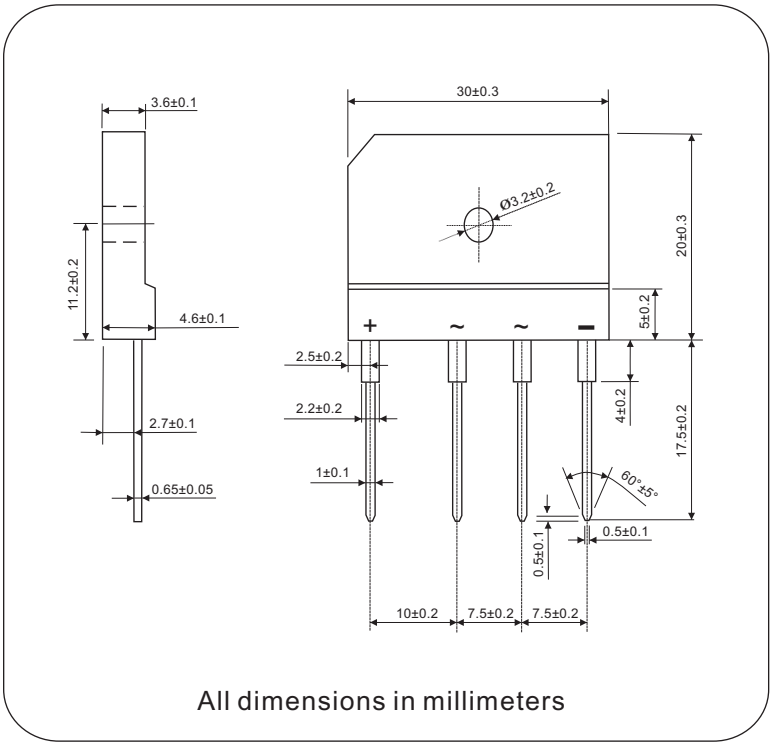
Glass Passivated Single-Phase Bridge Rectifier, 25A

GBJ2504 Thru GBJ2512



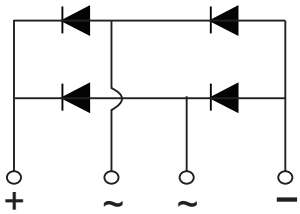


All dimensions in millimeters

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

RoHS COMPLIANT



TYPICAL APPLICATIONS

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

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)

PRIMARY CHARACTERRISTICS	
$I_{F(AV)}$	25A
V_{RRM}	400V to 1200V
I_{FSM}	350A
I_R	5 μA
V_F	1.10V
$T_{J\ max.}$	150°C

MAJOR RATINGS AND CHARACTERISTICS (T_A = 25°C unless otherwise noted)								
PARAMETER	SYMBOL	GBJ25					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	$I_{F(AV)}$	25					A
Peak forward surge current single sine-wave superimposed on rated load	I_{FSM}	350					A
Rating (non-repetitive, for t greater than 1 ms and less than 8.3 ms) for fusing	I^2t	508					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	GBJ25					UNIT
			04	06	08	10	12	
Maximum instantaneous forward drop per diode	I_F = 12.5A	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 MECHANICAL (T_A = 25°C unless otherwise noted)								
PARAMETER	TEST CONDITIONS	SYMBOL	GBJ25					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					N·m
Approximate weight			6.5					g

Notes

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

Ordering Information Tabel

Device code

GBJ	25	10	A
①	②	③	④

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

2 - $I_{F(AV)}$ rating : "25" for 25A

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

4 - None for standard type

"A" for avalanche type, Minimum avalanche breakdown voltage = V_{RRM} + 50V

Maximum avalanche breakdown voltage = V_{RRM} + 500V

GBJ2506A for example, min. avalanche breakdown voltage $V_{(BR)}$ = 650V

max. avalanche breakdown voltage $V_{(BR)}$ = 1100V

Fig.1 Derating curve for output rectified current

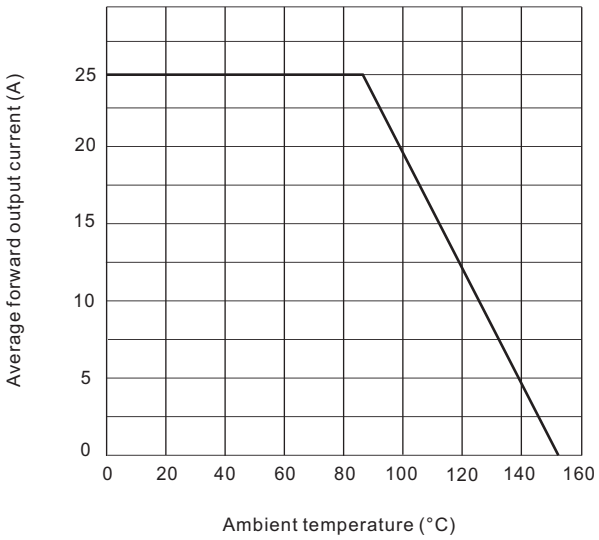


Fig.2 Maximum non-repetitive peak forward surge current per bridge element

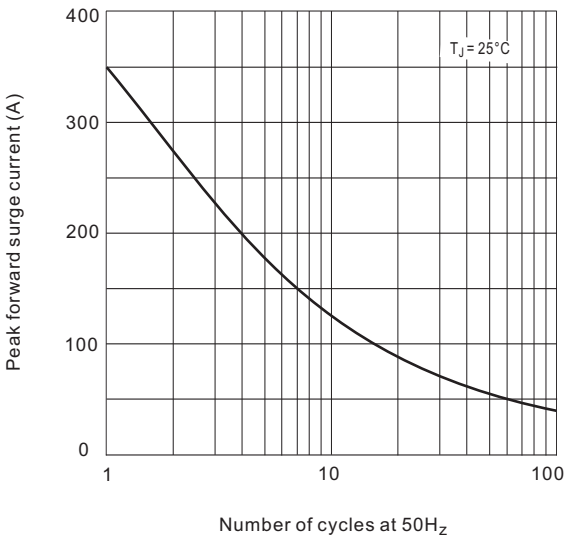


Fig.3 Typical reverse characteristics per bridge element

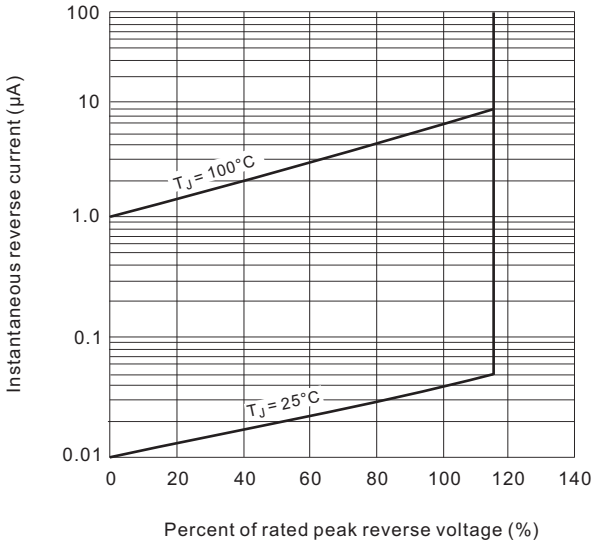


Fig.4 Typical forward characteristics per bridge element