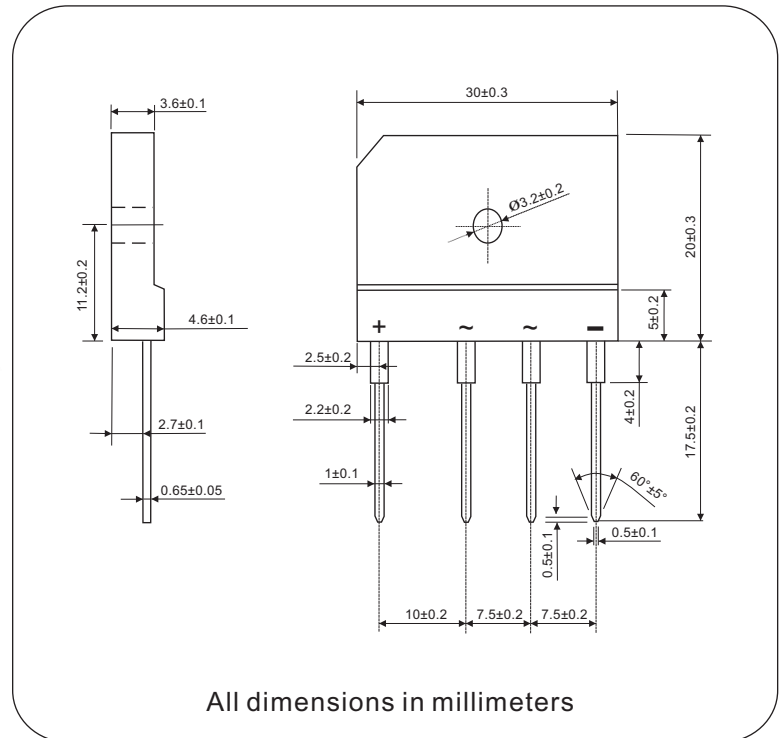
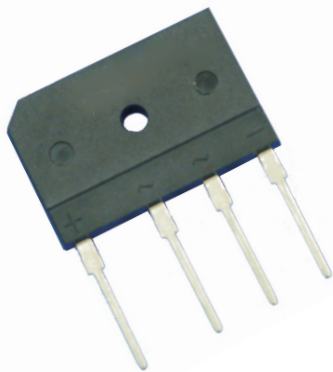
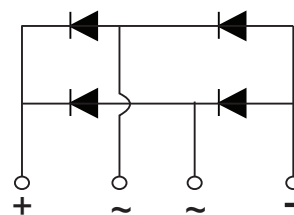


## Avalanche Glass Passivated Single-Phase Bridge Rectifier 15A/600V



### FEATURES

- UL recognition file number E320098
- Typical IR less than 0.50  $\mu$ A
- High surge current capability
- Glass passivated chip junction
- Low forward voltage drop
- Low thermal resistance
- Compliant to RoHS
- Isolation voltage up to 2500V
- Controlled avalanche series



### TYPICAL APPLICATIONS

General purpose use in AC/DC bridge full wave rectification for switching power supply, field supply for DC motor, home appliances, white-goods applications, power supply for Telecom, desktop PC and server switching mode power supply.

### 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 CHARACTERISTICS

$I_{F(AV)}$	15A
$V_{RRM}$	650V to 1100V
$I_{FSM}$	350A
$I_R$	0.20 $\mu$ A, typical
$V_F$	0.92V Max
$T_{Jmax.}$	150°C

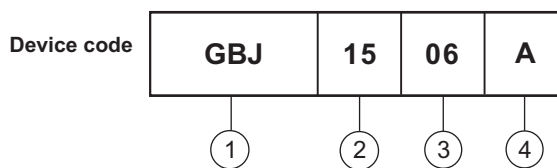
MAJOR RATINGS AND CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise noted)			
PARAMETER	SYMBOL	GBJ1506A	UNIT
Minimum repetitive peak reverse voltage	$V_{RRM}$	600	V
Peak reverse non-repetitive voltage	$V_{RSM}$	700	V
Minimum avalanche breakdown voltage at $10\mu\text{A}$	$V_{BR}$	650	V
Maximum avalanche breakdown voltage at $10\mu\text{A}$	$V_{BR}$	1100	V
Maximum average forward rectified output current, $T_c = 125^\circ\text{C}$	$I_{F(AV)}$	15	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	$\text{A}^2\text{s}$
RMS isolation voltage from case to leads	$V_{ISO}$	2500	V
Operating junction storage temperature range	$T_J$	-40 to 150	$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-40 to 150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise noted)					
PARAMETER	TEST CONDITIONS	SYMBOL	GBJ1506A		UNIT
			TYP.	MAX.	
Instantaneous forward drop per diode	$I_F = 7.5\text{A}$	$V_F$	0.88	0.92	V
Maximum reverse DC current at rated DC blocking voltage per diode	$T_A = 25^\circ\text{C}$	$I_R$	0.2	2.0	$\mu\text{A}$
	$T_A = 125^\circ\text{C}$		50	-	

THERMAL AND MECHANICAL ( $T_A = 25^\circ\text{C}$ unless otherwise noted)				
PARAMETER	TEST CONDITIONS	SYMBOL	GBJ1506A	UNIT
Typical thermal resistance junction to case	Single-side heat dissipation, sine half wave	$R_{\theta JC}^{(1)}$	0.8	$^\circ\text{C}/\text{W}$
Mounting torque to heatsink M3 $\pm 10\%$	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

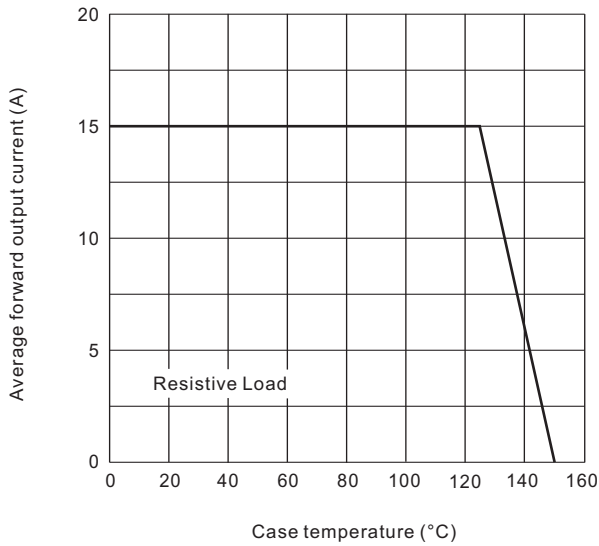
**Notes**

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

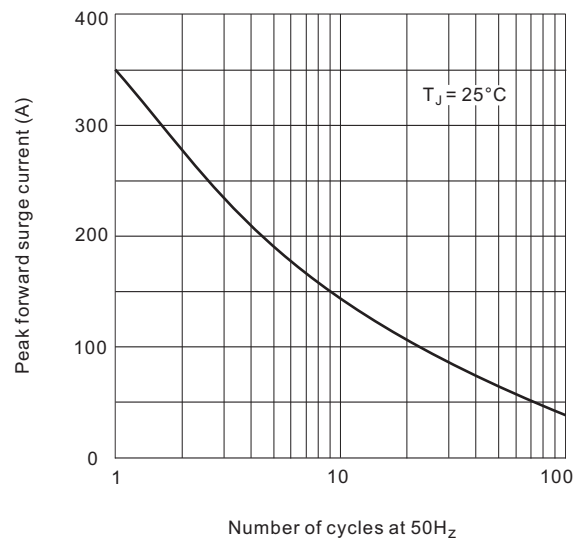
**Ordering Information Tabel**


- ① - Product type : "GBJ" Package, 1Ø Bridge
- ② -  $I_{F(AV)}$  rating : "15" for 15A
- ③ - Voltage code : code x 100 =  $V_{RRM}$
- ④ - "A" for avalanche type, Minimum avalanche breakdown voltage =  $V_{RRM} + 50\text{V}$   
Maximum avalanche breakdown voltage =  $V_{RRM} + 500\text{V}$

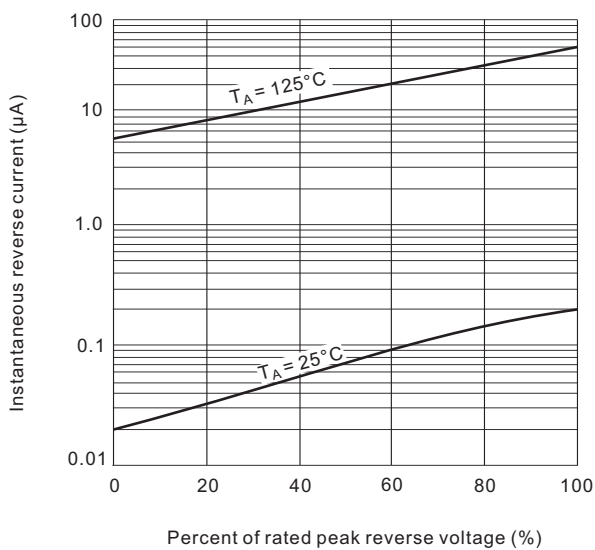
**Fig.1 Derating curve for output rectified current**



**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**

