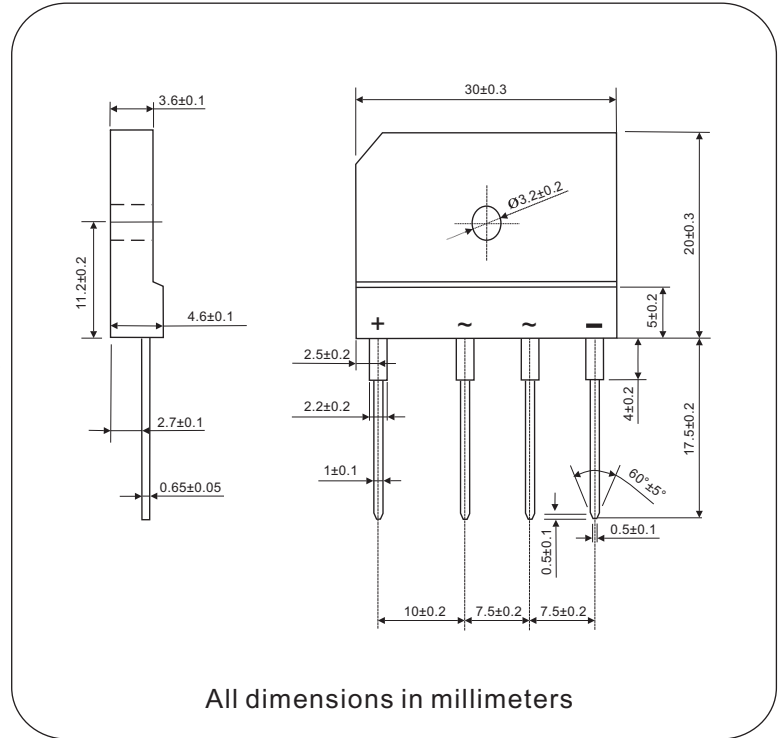
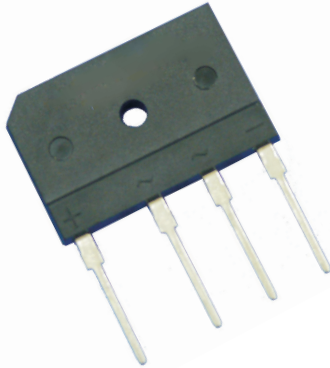


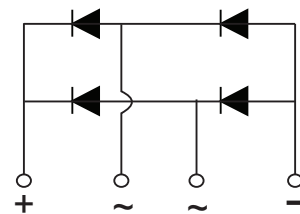
# Glass Passivated Single-Phase Bridge Rectifier, 30A

## GBJ3004 Thru GBJ3012



### FEATURES

- UL recognition file number E320098
- Typical IR less than 2.0  $\mu$ A
- 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.

### 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	
$I_{F(AV)}$	30A
$V_{RRM}$	400V to 1200V
$I_{FSM}$	400A
$I_R$	5 $\mu$ A
$V_F$	1.10V
$T_{Jmax.}$	150°C

## Nell High Power Products

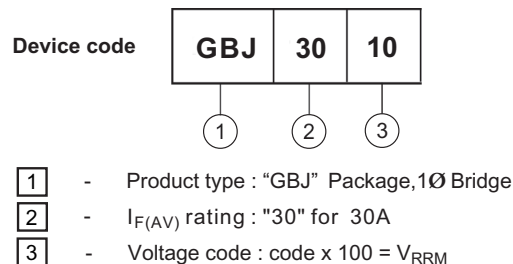
MAJOR RATINGS AND CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise noted)							
PARAMETER	SYMBOL	GBJ30					UNIT
		04	06	08	10	12	
Maximum repetitive peak reverse voltage	$V_{RRM}$	400	600	800	1000	1200	V
Peak reverse non-repetitive voltage	$V_{RSM}$	500	700	900	1100	1300	V
Maximum DC blocking voltage	$V_{DC}$	400	600	800	1000	1200	V
Maximum average forward rectified output current, $T_c = 85^\circ\text{C}$	$I_{F(AV)}$	30					A
Peak forward surge current single sine-wave superimposed on rated load	$I_{FSM}$	400					A
Rating (non-repetitive, for t greater than 1 ms and less than 8.3 ms) for fusing	$I^2t$	664					A <sup>2</sup> 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	GBJ30					UNIT
			04	06	08	10	12	
Maximum instantaneous forward drop per diode	$I_F = 15\text{A}$	$V_F$	1.10					V
Maximum reverse DC current at rated DC blocking voltage per diode	$T_A = 25^\circ\text{C}$	$I_R$	5					$\mu\text{A}$
	$T_A = 150^\circ\text{C}$		500					

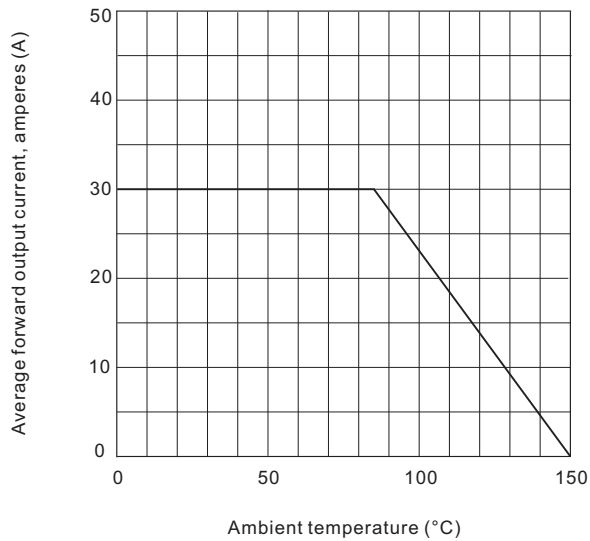
THERMAL AND MECHANICAL ( $T_A = 25^\circ\text{C}$ unless otherwise noted)								
PARAMETER	TEST CONDITIONS	SYMBOL	GBJ30					UNIT
			04	06	08	10	12	
Typical thermal resistance junction to case	Single-side heat dissipation, sine half wave	$R_{\theta JC}^{(1)}$	1.0					$^\circ\text{C}/\text{W}$
Mounting torque to heatsink M3 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					Nm
Approximate weight			6.5					g

**Notes**

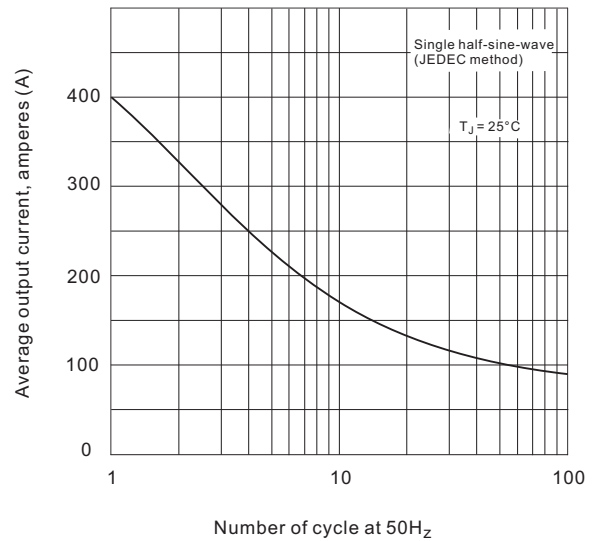
(1) With heatsink, single side heat dissipation, half sine wave.



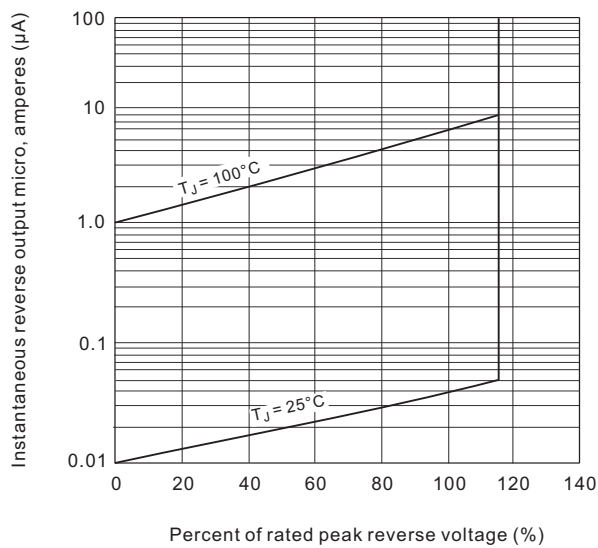
**Fig.1 Derating curve for output rectified current**



**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**

