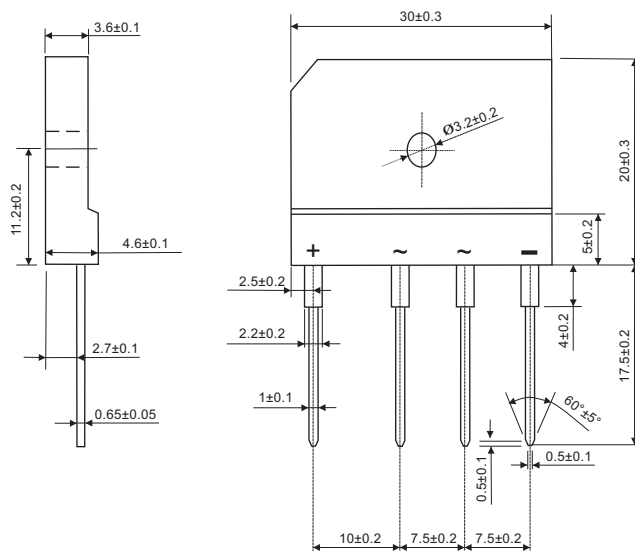
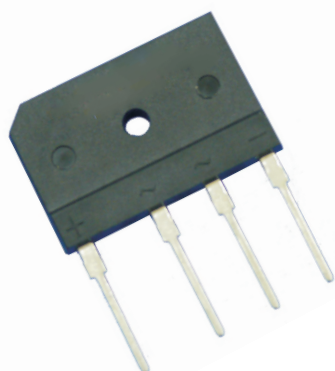


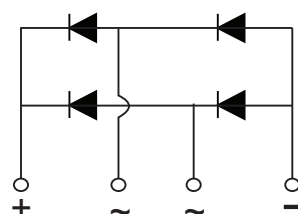
Avalanche Glass Passivated Single-Phase Bridge Rectifier 25A/600V



All dimensions in millimeters

FEATURES

- UL recognition file number E320098
- Typical IR less than 1.0 μ 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

| | |
|-------------|---------------|
| $I_{F(AV)}$ | 25A |
| V_{RRM} | 650V to 1000V |
| I_{FSM} | 400A |
| I_R | 1.0 μ A |
| V_F | 0.92V Max |
| $T_{Jmax.}$ | 150°C |

| MAJOR RATINGS AND CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted) | | | |
|--|-------------|------------|----------------------|
| PARAMETER | SYMBOL | GBJ2506A | 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, $T_c = 105^\circ\text{C}$ | $I_{F(AV)}$ | 25 | 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 | 800 | A^2s |
| 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°C unless otherwise noted) | | | | | |
|---|------------------------|----------------|----------|------|------|
| PARAMETER | TEST CONDITIONS | SYMBOL | GBJ2506A | | UNIT |
| | | | TYP. | MAX. | |
| Instantaneous forward drop per diode | I _F = 12.5A | V _F | 0.89 | 0.92 | V |
| Maximum reverse DC current at rated DC blocking voltage per diod | T _A = 25°C | I _R | 0.2 | 2.0 | μA |
| | T _A = 125°C | | 150 | | |

| THERMAL AND MECHANICAL ($T_A = 25^\circ\text{C}$ unless otherwise noted) | | | | |
|---|--|-----------------------|----------|--------------------|
| PARAMETER | TEST CONDITIONS | SYMBOL | GBJ2506A | UNIT |
| Typical thermal resistance junction to case | Single-side heat dissipation, sine half wave | $R_{\theta JC}^{(1)}$ | 0.8 | $^\circ\text{C/W}$ |
| 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

| | | | | |
|-------------|------------|-----------|-----------|----------|
| Device code | GBJ | 25 | 06 | 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 - "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

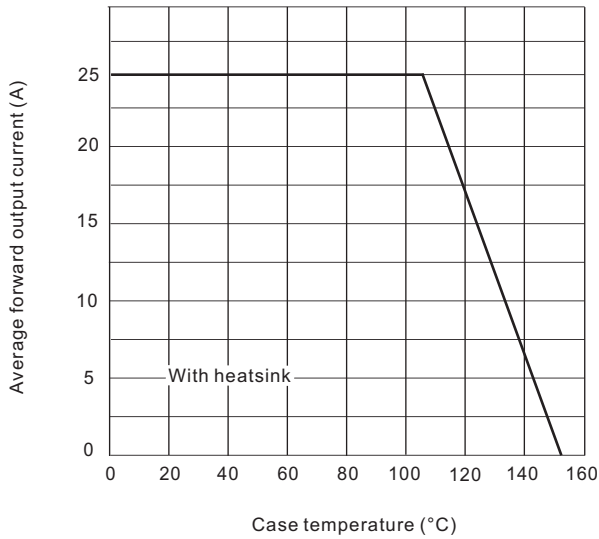


Fig.2 Maximum non-repetitive peak forward surge current per bridge element

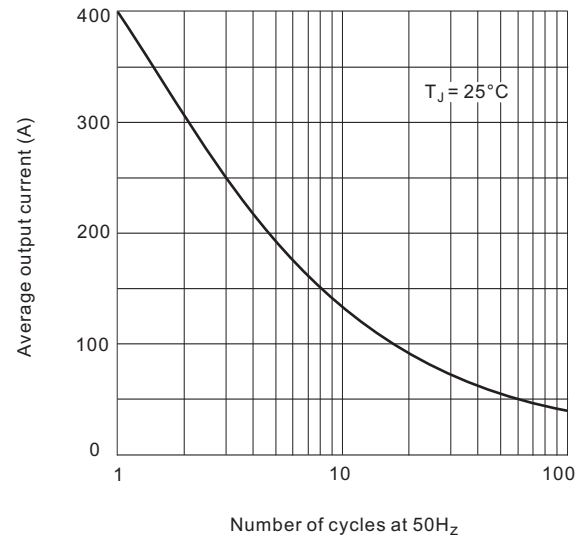


Fig.3 Typical reverse characteristics per bridge element

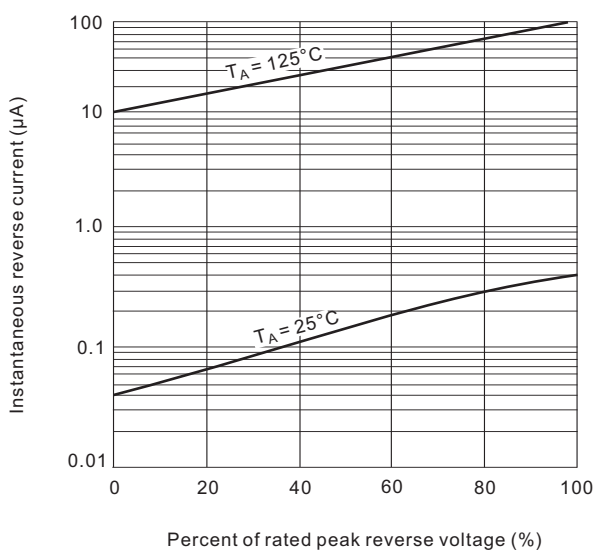


Fig.4 Typical forward characteristics per bridge element

