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# **UGU8A THRU UGU8K**

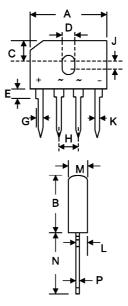
### 8.0A ULTR-FASTGLASS PASSIVATED BRIDGE RECTIFIER

## FEATURES

- \* Glass Passivated Die Construction
- \* Low Forward Voltage Drop
- \* High Current Capability
- \* High Reliability
- \* High Surge Current Capability
- \* High-Switching Speed 100 Nanosecond Recovery Time

#### **MECHANICAL DATA**

- \* Case: Molded Plastic
- \* Epoxy: UL94V-O rate flame retardant
- \* Terminals : Plated Leads Solderable Per MIL-STD-202 Method 208
- \* Polarity : As Marking on Body
- \* Mounting Position: Any
- \* Weight: 4.0 gram (approx.)
- \* Marking: Type Number



| UBU      |       |       |  |  |  |  |
|----------|-------|-------|--|--|--|--|
| Dim      | Min   | Max   |  |  |  |  |
| Α        | 21.80 | 22.30 |  |  |  |  |
| В        | 18.30 | 18.80 |  |  |  |  |
| С        | 7.40  | 7.90  |  |  |  |  |
| D        | 3.50  | 4.10  |  |  |  |  |
| E        | 1.52  | 2.03  |  |  |  |  |
| G        | 2.16  | 2.54  |  |  |  |  |
| Н        | 4.83  | 5.33  |  |  |  |  |
| J        | 1.65  | 2.16  |  |  |  |  |
| К        | 1.65  | 2.03  |  |  |  |  |
| L        | 0.76  | 1.02  |  |  |  |  |
| М        | 3.30  | 3.56  |  |  |  |  |
| Ν        | 17.50 | 18.00 |  |  |  |  |
| Р        | 0.46  | 0.56  |  |  |  |  |
| Unit :mm |       |       |  |  |  |  |

## MAXIMUM RATINGS AND ELECTRICAL CHARATERISTICS

- \* Rating at 25 ambient temperature unless otherwise specified
- \* Single phase, half wave. 60Hz, resistive or inductive load. \* For capacitive load derate current bh 20 %

| Characteristic  | Symbol   | UGU8A       | UGU8B | UGU8D | UGU8G | UGU8J | UGU8K | Unit             |
|---|--|-------------|-------|-------|-------|-------|-------|------------------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                        | V <sub>RRM</sub><br>V <sub>RWM</sub><br>V <sub>R</sub> | 50          | 100   | 200   | 400   | 600   | 800   | V                |
| RMS Reverse Voltage   |  | 35          | 70    | 140   | 280   | 420   | 560   | V                |
| Average Rectifier Forward Current @ $T_c$ =100<br>@ $T_A$ =45   | I <sub>O(AV)</sub>                                     | 8.0<br>6.0  |       |       |       |       |       | A                |
| Non-Repetitive Peak Surge Current<br>8.3 ms Single half sine-wave superimposed on<br>rated load               | I <sub>FSM</sub>                                       | 200         |       |       |       |       |       | A                |
| Forward Voltage (per element) (I <sub>F</sub> =4.0 Amp)   | $V_{FM}$   | 1.0         |       |       |       |       |       | V                |
| Peak Reverse Current<br>(Rated DC Voltage, T <sub>C</sub> = 25 )<br>(Rated DC Voltage, T <sub>C</sub> = 100 ) |  | 5.0<br>500  |       |       |       |       |       | uA               |
| I <sup>2</sup> t Rating for Fusing( t<8.35MS)   |  | 166         |       |       |       |       |       | A <sup>2</sup> s |
| Typical Thermal Resistance (per leg)(note 1)  | $R_{\theta  jA}$                                       | 18          |       |       |       |       |       | k/W              |
| Typical Thermal Resistance (per leg)(note 2)  | $R_{\theta  jc}$                                       | 3.0         |       |       |       |       |       | k/W              |
| Reverse Recovery Time ( $I_F = 0.5 \text{ A}, I_R = 1.0$ , $I_{rr} = 0.25 \text{ A}$ )                        |  | 100         |       |       |       |       |       | ns               |
| Operating and Storage Temperature Range   |  | -65 to +150 |       |       |       |       |       |                  |

Note: 1.Thermal resistance junction to ambient, mounted on PCB at 9.5mm lead length with 12 mm<sup>2</sup> copper pads. 2.Thermal resistance junction to case, mounted on 7.5×7.5×0.3 cm thick AL plate.

# UGU8A thru UGU8K

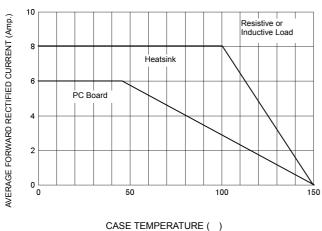
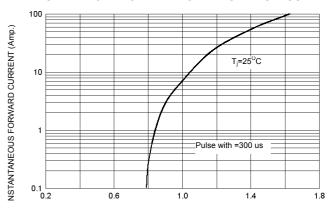


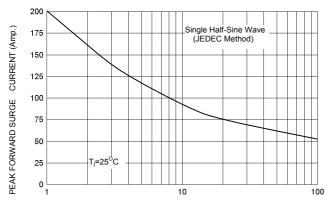
FIG-1 FORWARD CURRENT DERATING CURVE

#### FIG-2 TYPICAL FORWARD CHARACTERISITICS



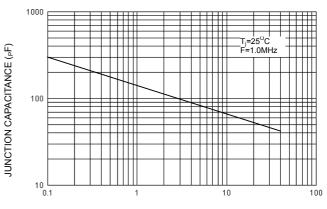
FORWARD VOLTAGE (Volts)

FIG-3 PEAK FORWARD SURGE CURRENT



NUMBER OF CYCLES AT 60 Hz

FIG-4 TYPICAL JUNCTION CAPACITANCE



REVERSE VOLTAGE (Volts)



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