A Product Line of Diodes Incorporated | LITE-ON SEMICONDUCTOR

# UG2006-UG2007(LS)

## ULTRA FAST GLASS PASSIVATED RECTIFIERS

## REVERSE VOLTAGE – 800 to 1000 Volts FORWARD CURRENT – 2.0 Amperes

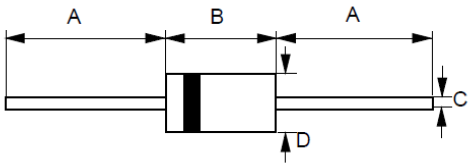
### FEATURES

- Glass passivated chip
- Ultra fast switching for high efficiency
- Low reverse leakage current
- Low forward voltage drop
- High current capability
- Qualified according to AEC-Q101 Rev_C
- Easily cleaned with Freon, Alcohol, Chlorothene and similar solvents
- Plastic material has UL flammability classification 94V-0
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

### MECHANICAL DATA

- Package : JEDEC DO-15 molded plastic
- Polarity : Color band denotes cathode
- Weight : 0.015 ounces, 0.4 grams
- Mounting position : Any

### DO-15




| DO-15 | | |
|---|---|---|
| Dim | Min. | Max. |
| A | 25.4 | - |
| B | 5.80 | 7.60 |
| C | 0.71 ø | 0.86 ø |
| D | 2.60 ø | 3.60 ø |
| All Dimensions in millimeter | | |

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

| PARAMETER | | SYMBOL | UG2006 | UG2007 | UNIT |
|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | | $V_{RRM}$ | 800 | 1000 | V |
| Maximum RMS Voltage | | $V_{RMS}$ | 560 | 700 | V |
| Maximum DC Blocking Voltage | | $V_{DC}$ | 800 | 1000 | V |
| Maximum Average Forward Rectified Current | @$T_A$=55°C | $I_{(AV)}$ | 2.0 | | A |
| Peak Forward Surge Current 8.3ms single half sine-wave super imposed on rated load (JEDEC METHOD) | | $I_{FSM}$ | 60 | | A |
| Maximum forward Voltage at 2.0A DC | | $V_F$ | 1.7 | | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | @$T_J$=25°C<br>@$T_J$=100°C | $I_R$ | 5<br>100 | | uA |
| Maximum Reverse Recovery Time (Note 4) | | $t_{rr}$ | 75 | | ns |
| Typical Junction Capacitance (Note 5) | | $C_T$ | 15 | | pF |
| Typical Thermal Resistance (Note 6) | | $R_{thJA}$<br>$R_{thJL}$<br>$R_{thJC}$ | 45<br>20<br>15 | | °C/W |
| Storage / Operating Temperature Range | | $T_{STG}$ ,$T_J$ | -55 to +150 | | °C |

**Note :**

1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
2. See https://www.diodes.com/quality/lead-free/ for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
4. Test condition of $t_{rr}$: $I_F$=0.5A, $I_R$=1.0A, $I_{rr}$=0.25A.
5. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
6. Thermal Resistance Junction to Ambient, Lead and Case.

**RATING AND CHARACTERISTIC CURVES**
**UG2006-UG2007**

FIG.1 - FORWARD CURRENT DERATING CURVE

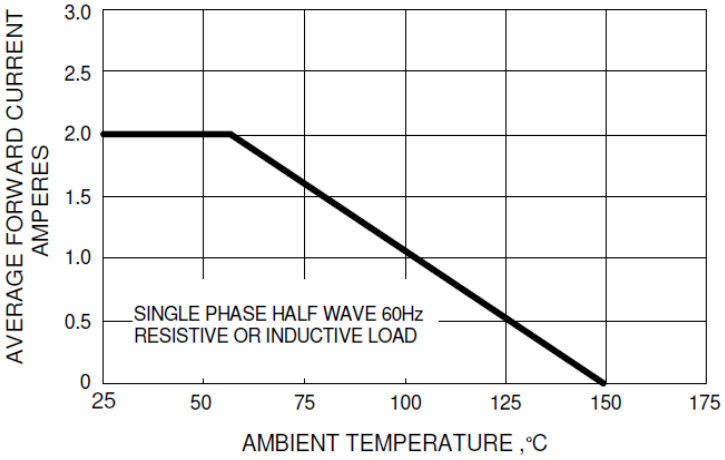



FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

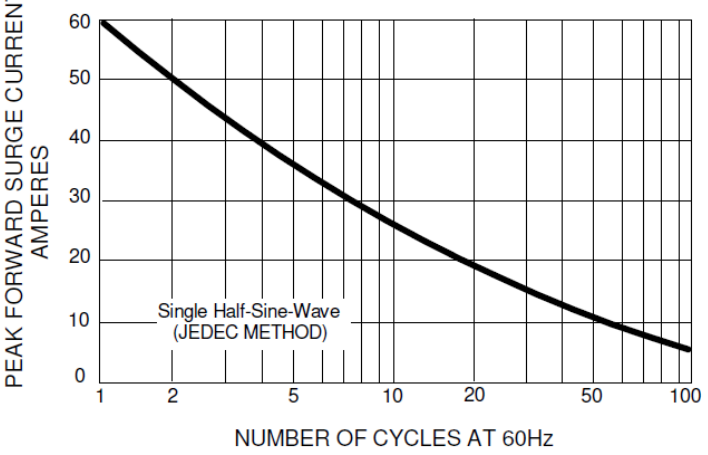



FIG.3 - TYPICAL JUNCTION CAPACITANCE

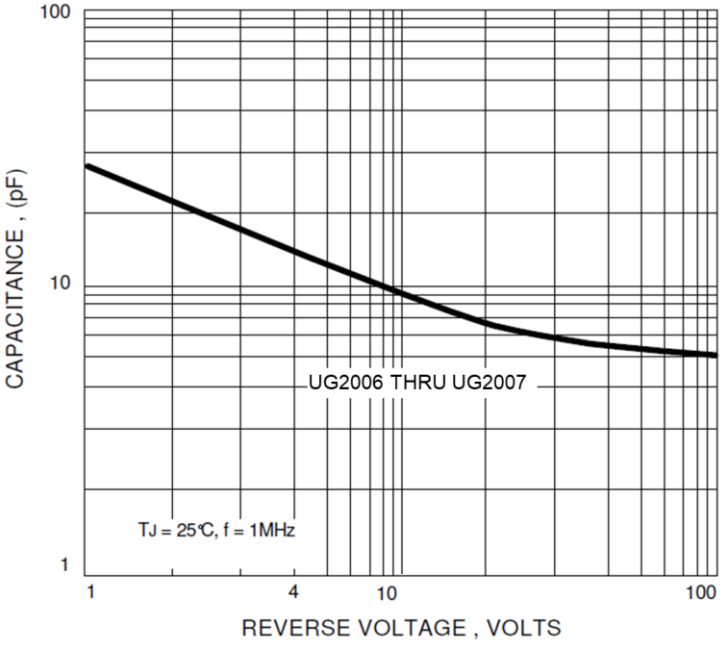
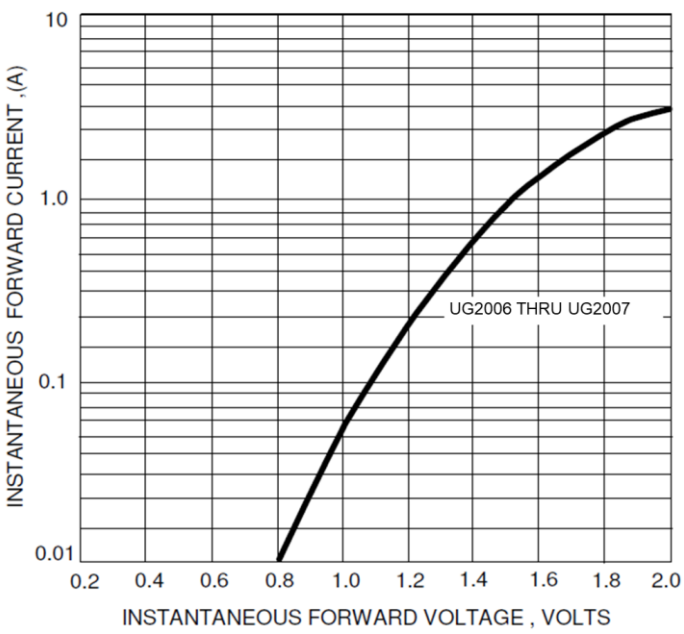


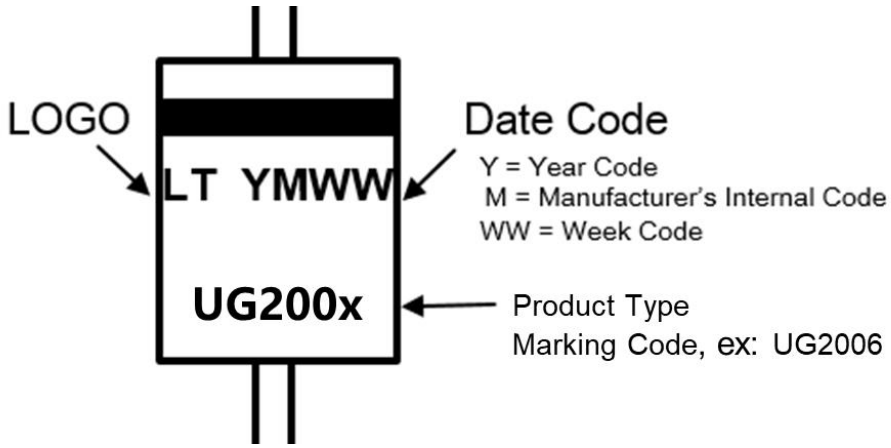

FIG.4 - TYPICAL FORWARD CHARACTERISTICS



## Ordering Information :

| Part Number | Package | Packing | |
|---|---|---|---|
| | | Qty. | Carrier |
| UG2006_HF-A52 | DO-15 | 2000pcs | Ammo 52 |
| UG2007_HF | DO-15 | 4000pcs | Tape & Reel |
| UG2007_HF-A52 | DO-15 | 2000pcs | Ammo 52 |

## Marking Information :



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