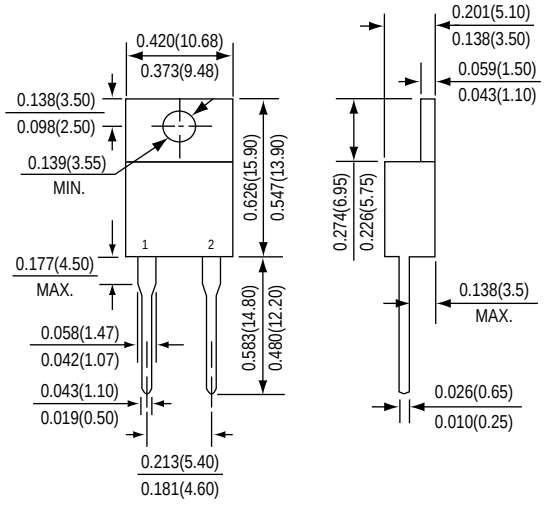
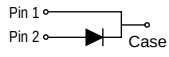
# UGZ6DTH THRU UGZ6JTH
## ULTRAFAST EFFICIENT RECTIFIERS

*Reverse Voltage - 200 to 600 Volts* *Forward Current - 6 Amperes*

PATENTED

**TO-220AC**




*Dimensions in inches and (millimeters)

SUPEREX II™

## FEATURES

* GPRC (Glass Passivated Rectifier Chip) inside
* Glass passivated cavity-free junction
* Halogen-free type
* Compliance to RoHS product
* Ultrafast recovery time for high efficiency
* Low forward voltage, high current capability
* Low leakage current
* High surge current capability
* Plastic Material-UL Recognition Flammability Classification 94V-0

## MECHANICAL DATA

**Case :** JEDEC TO-220AC molded plastic body
**Terminals :** Plated Leads, solderable per MIL-STD-750, Method 2026
**Polarity :** Molded on body
**Mounting Position :** Any
**Weight :** 2.24 grams(Approximately)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

| *Ratings at 25 °C ambient temperature unless otherwise specified.* | *SYMBOLS* | ***UGZ6DTH*** | ***UGZ6GTH*** | ***UGZ6JTH*** | *UNITS* |
|---|---|---|---|---|---|
| Maximum repetitive peak reverse voltage | $V_{RRM}$ | 200 | 400 | 600 | Volts |
| Working peak reverse voltage | $V_{RWM}$ | 200 | 400 | 600 | |
| Maximum RMS voltage | $V_{RMS}$ | 140 | 280 | 420 | |
| Maximum DC blocking voltage | $V_{DC}$ | 200 | 400 | 600 | |
| Maximum average forward rectified current See Fig. 1 | $I_{(AV)}$ | 6 | | | Amps |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 90 | | | Amps |
| Maximum instantaneous forward voltage $I_F$ = 6 A, $T_A$=25℃ | $V_F$ | 1.10 | 1.30 | 1.70 | Volts |
| Maximum DC reverse current at rated DC blocking voltage @$T_A$=25℃ | $I_R$ | 5 | | | uA |
| Maximum reverse recovery time (NOTE 3) | trr | 35 | | | nS |
| Typical junction capacitance (Note 1) | $C_J$ | 60 | | | pF |
| Typical thermal resistance (Note 2) | $R_{\theta JC}$ | 3.8 | | | ℃ / W |
| Operating temperature range | $T_J$ | -50 to +150 | | | ℃ |
| Storage temperature range | $T_{STG}$ | -65 to +175 | | | ℃ |

Note : 1. Measured at 1.0MHz and applied reverse voltage of 4.0V.
2. Thermal resistance junction to case.
3. Reverse recovery test condition : $I_F$ 0.5A, $I_R$=1.0A, Irr=0.25A

# RATINGS AND CHARACTERISTIC CURVES UGZ6DTH THUR UGZ6JTH

FIG.1 - FORWARD CURRENT DERATING CURVE

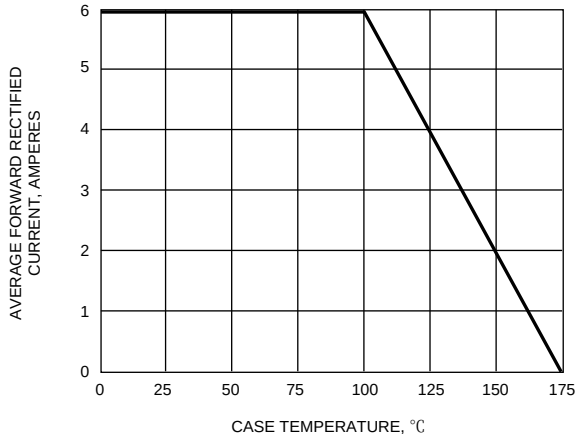



FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

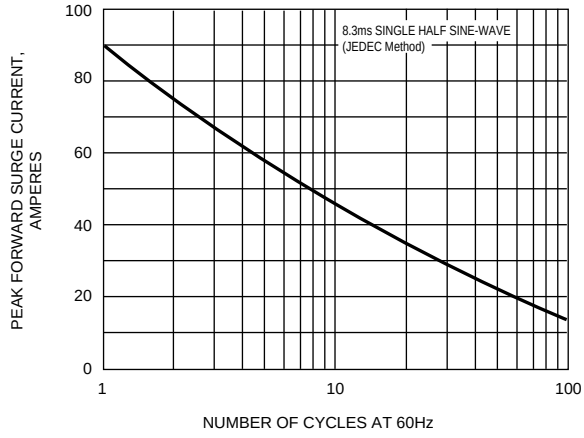



FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

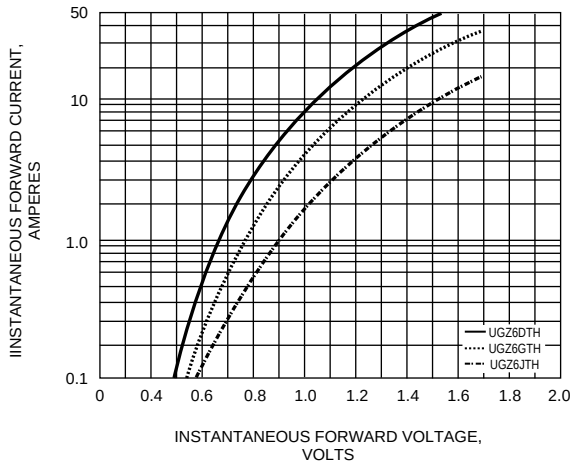



FIG.4 - TYPICAL REVERSE CHARACTERISTICS

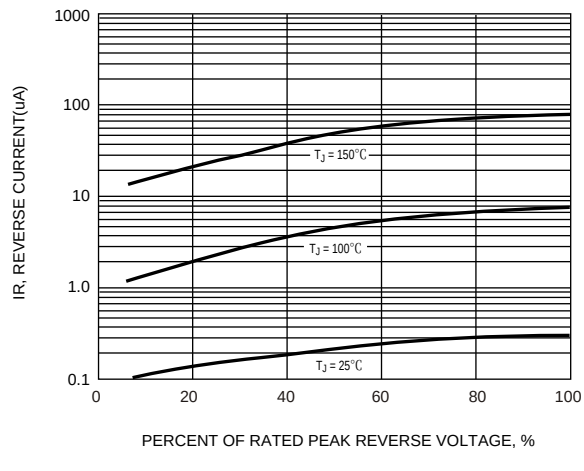



FIG.5 - TYPICAL JUNCTION CAPACITANCE