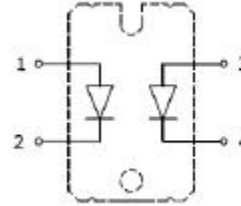


**PRELIMINARY DATASHEET**
**Parallel Fast Recovery 2X60A 600V,  
 Epitaxial Diodes in Isolated SOT227 Package**
**APPLICATIONS**

- Switch mode power supplies (SMPS) rectifiers
- Uninterruptible power supplies (UPS)
- Ultrasonic cleaners and welders
- Inductive heating and melting
- Ultrasonic cleaners and welders
- Power factor correction (PFC) circuits
- Inversion welder
- Converter and chopper


**FEATURES**

- Ultrafast recovery time
- Soft recovery characteristics
- Low recovery loss
- Low forward voltage
- High surge current capability
- Low leakage current
- Pb-free finished; **RoHS compliant**


**MAXIMUM RATINGS (per Diode), at  $T_j = 25^\circ\text{C}$ , unless otherwise specified**

| Parameter   | Symbol         | Value       | Units            |
|---|----------------|-------------|------------------|
| Repetitive peak reverse voltage   | $V_{RRM}$      | 600         | V                |
| Average forward current<br>$T_c = 85^\circ\text{C}$   | $I_{F(AV)}$    | 60          | A                |
| Surge non-repetitive forward current<br>$T_j = 45^\circ\text{C}$ , $t_p = 10\text{ms}$ , 50Hz, Sine | $I_{FSM}$      | 600         |                  |
| Operating junction and storage temperature  | $T_j, T_{stg}$ | -40... +150 | $^\circ\text{C}$ |

**Thermal and Isolation Characteristics**

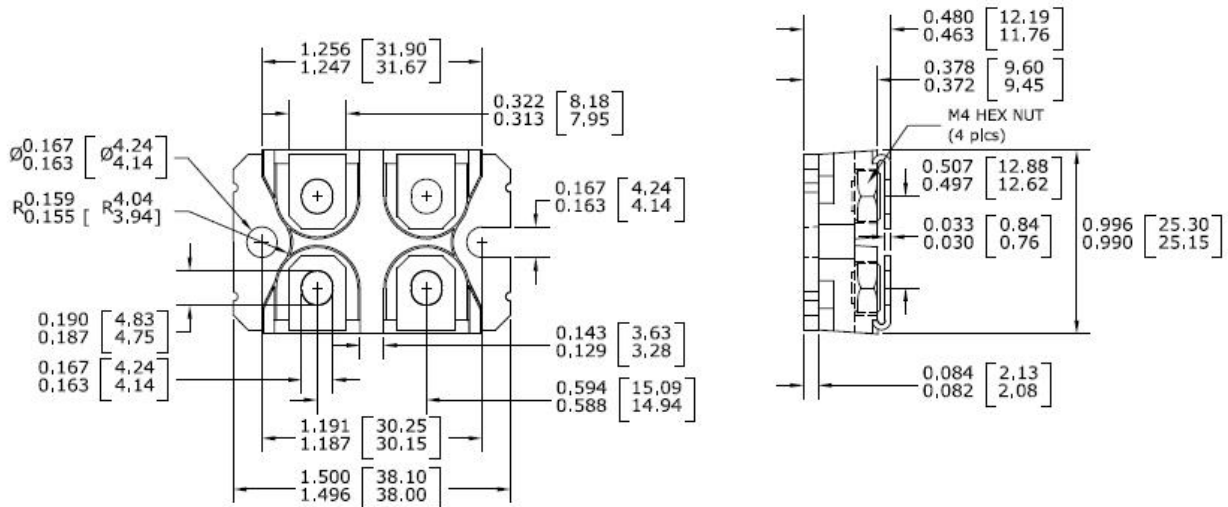
| Parameter  | Symbol     | Max. Value | Units                     |
|--|------------|------------|---------------------------|
| <b>Characteristics</b>   |            |            |                           |
| Thermal resistance, junction to case, per Diode  | $R_{thJC}$ | 0.65       | $^\circ\text{C}/\text{W}$ |
| Isolation voltage, RMS (measured between terminals and mounting base, 50-60 Hz, for 1-3 seconds) | $V_{iso}$  | 3000       | V                         |

**Electrical Characteristics (per Diode), at  $T_j = 25^\circ\text{C}$ , unless otherwise specified**

| Parameter   | Symbol | Value |            |            | Unit          |
|---|--------|-------|------------|------------|---------------|
|   |        | Min.  | Typ.       | Max.       |               |
| <b>Static Characteristics</b>   |        |       |            |            |               |
| Reverse leakage current<br>$V_R = 600\text{V}$<br>$V_R = 600\text{V}$ , $T_j = 125^\circ\text{C}$ | $I_R$  | -     | -          | 250<br>500 | $\mu\text{A}$ |
| Forward voltage drop<br>$I_F = 60\text{A}$<br>$I_F = 60\text{A}$ , $T_j = 125^\circ\text{C}$      | $V_F$  | -     | 1.3<br>1.1 | 1.8<br>-   | V             |

**Electrical Characteristics (per Diode),** at  $T_j = 25^\circ\text{C}$ , unless otherwise specified

| Parameter  | Symbol    | Value |                 |      | Unit |
|--|-----------|-------|-----------------|------|------|
|  |           | Min.  | Typ.            | Max. |      |
| <b>Dynamic Characteristics</b>   |           |       |                 |      |      |
| Reverse recovery time<br>$V_R = 30\text{V}$ , $I_F = 1\text{A}$ , $di_F/dt = -200\text{A}/\mu\text{s}$<br>$V_R = 300\text{V}$ , $I_F = 60\text{A}$ , $di_F/dt = -200\text{A}/\mu\text{s}$<br>$V_R = 300\text{V}$ , $I_F = 60\text{A}$ , $di_F/dt = -200\text{A}/\mu\text{s}$ , $T_j = 125^\circ\text{C}$ | $t_{rr}$  | -     | 40<br>85<br>220 | -    | ns   |
| Maximum reverse recovery current<br>$V_R = 300\text{V}$ , $I_F = 60\text{A}$ , $di_F/dt = -200\text{A}/\mu\text{s}$<br>$V_R = 300\text{V}$ , $I_F = 60\text{A}$ , $di_F/dt = -200\text{A}/\mu\text{s}$ , $T_j = 125^\circ\text{C}$   | $I_{rrm}$ | -     | 11<br>22        | -    | A    |

**Package Outline Drawing**

**Disclaimer**

These specifications may not be considered as a guarantee of components characteristics. Components have to be tested depending on intended application as adjustments may be necessary. The use of **iQXPRZ Power Inc.** components in life support appliances and systems are subject to written approval of **iQXPRZ Power Inc.**