



U30D40D

Preliminary

FAST RECOVERY EPITAXIAL DIODE

**SWITCHMODE DUAL
ULTRAFAST POWER RECTIFIER**

■ DESCRIPTION

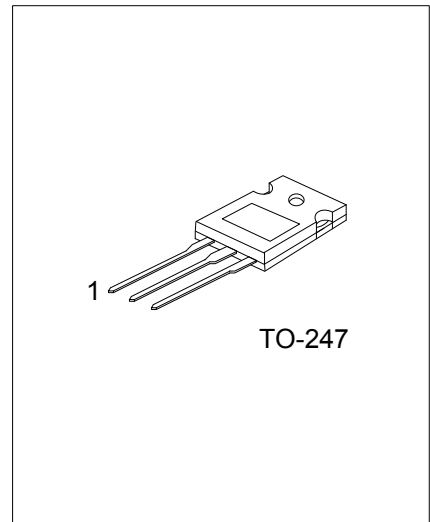
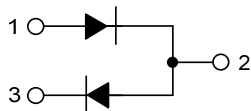
The UTC **U30D40D** is a switchmode dual ultrafast power rectifier, it uses UTC's advanced technology to provide customers with high current capability, low forward voltage drop and high switching speed, etc.

The UTC **U30D40D** is suitable for switching power supplies, inverters and as free wheeling diodes, etc.

■ FEATURES

- * Low forward voltage drop
- * High switching speed
- * High current capability
- * High surge capacity
- * Low power loss

■ SYMBOL

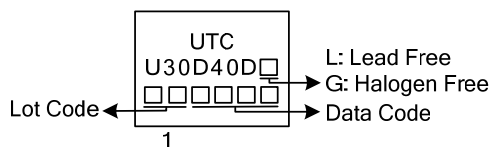


■ ORDERING INFORMATION

| Ordering Number | | Package | Packing |
|-----------------|----------------|---------|---------|
| Lead Free | Halogen Free | | |
| U30D40DL-T47-T | U30D40DG-T47-T | TO-247 | Tube |

| | |
|--|--|
| <p>U30D40DL-T47-T</p> <p>(1) Packing Type (2) Package Type (3) Green Package</p> | <p>(1) T: Tube (2) T47: TO-247 (3) L: Lead Free, G: Halogen Free and Lead Free</p> |
|--|--|

■ MARKING



■ ABSOLUTE MAXIMUM RATINGS

| PARAMETER | | SYMBOL | RATINGS | UNIT |
|--|------------------|--------------|----------|------------------|
| DC Blocking Voltage | | V_R | 400 | V |
| Working Peak Reverse Voltage | | V_{RWM} | 400 | V |
| Peak Repetitive Reverse Voltage | | V_{RRM} | 400 | V |
| RMS Reverse Voltage | | $V_{R(RMS)}$ | 280 | V |
| Average Rectified Forward Current $T_C=125^\circ\text{C}$ | Per Leg | $I_{F(AV)}$ | 15 | A |
| | Per Total Device | | 30 | A |
| Peak Repetitive Forward Current (Rate V_R , Square Wave, 20kHz, $T_C=125^\circ\text{C}$) | | I_{FM} | 30 | A |
| Non-Repetitive Peak Surge Current (Surge Applied at Rate Load Conditions Halfwave, Single Phase, 60Hz) | | I_{FSM} | 250 | A |
| Junction Temperature | | T_J | -65~+150 | $^\circ\text{C}$ |
| Storage Temperature | | T_{STG} | -65~+150 | $^\circ\text{C}$ |

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS

| PARAMETER | SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|--------------------------------|----------|--|-----|-----|------|---------------|
| Instantaneous Forward Voltage | V_F | $I_F=15\text{A}$, $T_C=25^\circ\text{C}$ | | | 1.30 | V |
| | | $I_F=15\text{A}$, $T_C=100^\circ\text{C}$ | | | 1.16 | V |
| Instantaneous Reverse Current | I_R | Rated DC Voltage, $T_C=25^\circ\text{C}$ | | | 10 | μA |
| | | Rated DC Voltage, $T_C=125^\circ\text{C}$ | | | 700 | μA |
| Reverse Recovery Time (Note 2) | T_{rr} | | | | 50 | ns |
| Junction Capacitance (Note 1) | C_J | | | 150 | | pF |

Notes: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

2. Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{rr}=0.25\text{A}$.

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