



U30D40D

Preliminary

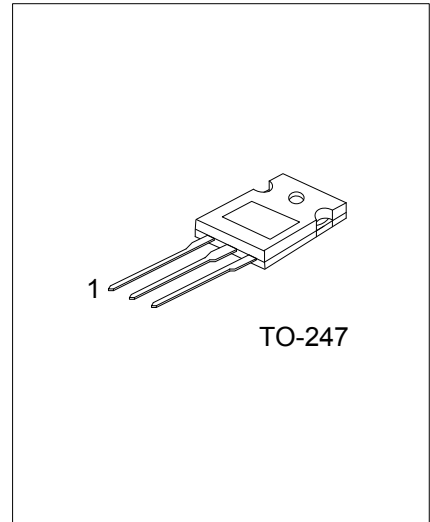
FAST RECOVERY EPITAXIAL DIODE

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.

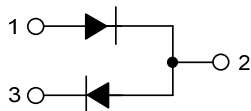
The UTC **U30D40D** is suitable for switching power supplies, inverters and as free wheeling diodes, etc.



FEATURES

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

SYMBOL

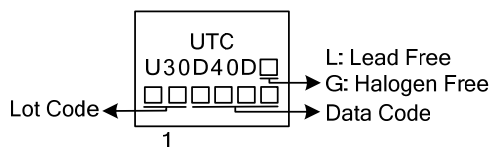


ORDERING INFORMATION

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>
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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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