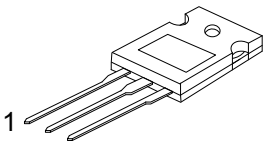
U30D40D **Preliminary** ***FAST RECOVERY EPITAXIAL DIODE***

SWITCHMODE DUAL ULTRAFAST POWER RECTIFIER



TO-247

■ DESCRIPTION

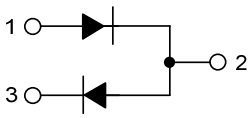
The UTC **U30D40D** is a switchmode dual ultrafast power rectifier, it uses UTC's advanced technology to provide customers with high current capability, low forward voltage drop and high switching speed, etc.

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

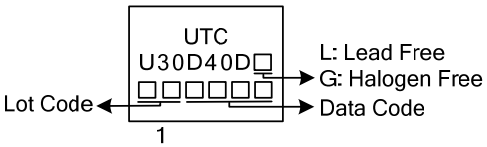
U30D40DL-T47-T

(1)Packing Type — (1) T: Tube

(2)Package Type — (2) T47: TO-247

(3)Green Package — (3) L: Lead Free, G: Halogen Free and Lead Free

■ 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°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°C)		I_{FM}	30	A
Non-Repetitive Peak Surge Current (Surge Applied at Rate Load Conditions Halfware, Single Phase, 60Hz)		I_{FSM}	250	A
Junction Temperature		T_J	-65~+150	°C
Storage Temperature		T_{STG}	-65~+150	°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=15A, T_C=25°C			1.30	V
		I_F=15A, T_C=100°C			1.16	V
Instantaneous Reverse Current	I_R	Rated DC Voltage, T_C=25°C			10	μA
		Rated DC Voltage, T_C=125°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=0.5A, I_R=1A, Irr=0.25A.