

**UMUR820**

Preliminary

DIODE**SWITCHMODE POWER
RECTIFIERS****■ DESCRIPTION**

The UTC **UMUR820** is a switchmode power rectifiers, it uses UTC's advanced technology to provide customers with low forward voltage and low leakage current, etc.

The UTC **UMUR820** is suitable for free inverters and switching power supplies, etc.

■ FEATURES

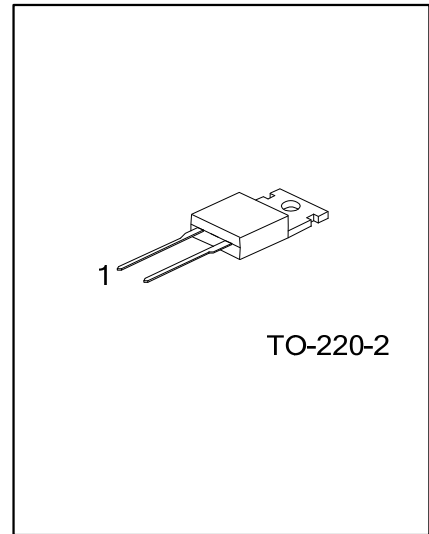
- * Low forward voltage
- * Low leakage current

■ SYMBOL**■ ORDERING INFORMATION**

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
UMUR820L-TA2-T	UMUR820G-TA2-T	TO-220-2	K	A	NC	Tube

Note: Pin Assignment: A: Anode, K: Cathode

UMUR820L-TA2-T (1)Packing Type (2)Package Type (3)Halogen Free	(1) T: Tube (2) TA2: TO-220-2 (3) L: Lead Free, G: Halogen Free
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■ ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	RATINGS	UNIT
DC Blocking Voltage	V_R	200	V
Working Peak Reverse Voltage	V_{RWM}	200	V
Peak Repetitive Reverse Voltage	V_{RRM}	200	V
Average Rectified Forward Current Per Total Device, (Rated V_R), $T_C=150^{\circ}\text{C}$	$I_{F(AV)}$	8.0	A
Peak Repetitive Forward Current (Rated V_R , Square Wave, 20kHz), $T_C=150^{\circ}\text{C}$	I_{FM}	16	A
Non-Repetitive Peak Surge Current (Surge Applied at Rated Load Conditions Halfwave, Single Phase, 60Hz)	I_{FSM}	100	A
Operating Junction Temperature	T_J	-65~+175	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-65~+175	$^{\circ}\text{C}$

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.

■ THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ_{JA}	73	$^{\circ}\text{C/W}$
Junction to Case	θ_{JC}	3.0	$^{\circ}\text{C/W}$

■ ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Instantaneous Forward Voltage (Note 1)	V_F	$I_F=8.0\text{A}$, $T_C=25^{\circ}\text{C}$			0.975	V
		$I_F=8.0\text{A}$, $T_C=150^{\circ}\text{C}$			0.895	V
Instantaneous Reverse Current (Note 1)	I_R	Rated DC Voltage, $T_J=25^{\circ}\text{C}$			5.0	μA
		Rated DC Voltage, $T_J=150^{\circ}\text{C}$			250	μA
Reverse Recovery Time	t_{RR}	$I_F=1.0\text{A}$, $di/dt=50\text{A}/\mu\text{s}$			58	ns
		$I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{REC}=0.25\text{A}$			53	ns

Note: Pulse Test: Pulse Width=300 μs , Duty Cycle $\leq 2.0\%$.

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