



## UMUR2040C

DIODE

### SWITCHMODE POWER RECTIFIERS

#### DESCRIPTION

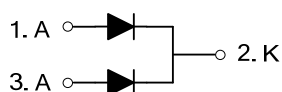
The UTC **UMUR2040C** is a switchmode power rectifier, it uses UTC's advanced technology to provide customers with high voltage capability, low forward drop and low leakage current, etc.

The UTC **UMUR2040C** is suitable for use in switching power supplies, inverters and as free wheeling diodes.

#### FEATURES

- \* Ultrafast and nanosecond recovery time
- \* High voltage capability
- \* Low forward drop
- \* Low leakage current

#### SYMBOL



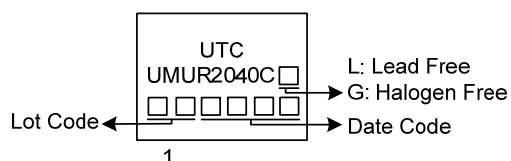
#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
UMUR2040CL-TA3-T	UMUR2040CG-TA3-T	TO-220	A	K	A	Tube
UMUR2040CL-TF3-T	UMUR2040CG-TF3-T	TO-220F	A	K	A	Tube
UMUR2040CL-T3F-T	UMUR2040CG-T3F-T	TO-3PF	A	K	A	Tube

Note: Pin Assignment: A: Anode K: Cathode

<p>UMUR2040CG-TA3-T</p> <p>(1) Packing Type (2) Package Type (3) Green Package</p>	<p>(1) T: Tube (2) TA3: TO-220, TF3: TO-220F, T3F: TO-3PF (3) G: Halogen Free and Lead Free, L: Lead Free</p>
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#### MARKING



## ■ ABSOLUTE MAXIMUM RATINGS

PARAMETER		SYMBOL	RATINGS	UNIT
Repetitive Peak Reverse Voltage		$V_{RRM}$	400	V
Working Peak Reverse Voltage		$V_{RWM}$	400	V
DC Blocking Voltage		$V_R$	400	V
Average Forward Current	$T_C=100^{\circ}\text{C}$	$I_O$	10	A
	Total Device		20	A
Nonrepetitive Peak Surge Current (Surge applied at rated load conditions, halfwave, single phase, 60 Hz)		$I_{FSM}$	105	A
Operating 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.

## ■ THERMAL DATA

PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Case	TO-220	$\theta_{JC}$	2	$^{\circ}\text{C/W}$
	TO-220F		3.4	$^{\circ}\text{C/W}$
	TO-3PF		3	$^{\circ}\text{C/W}$

## ■ ELECTRICAL CHARACTERISTICS

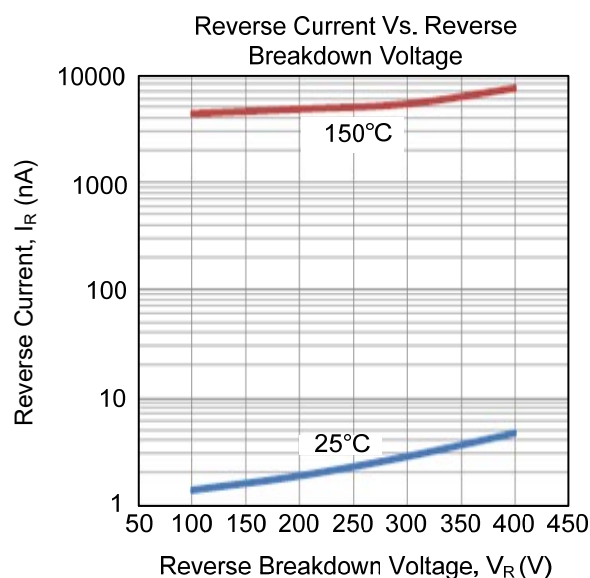
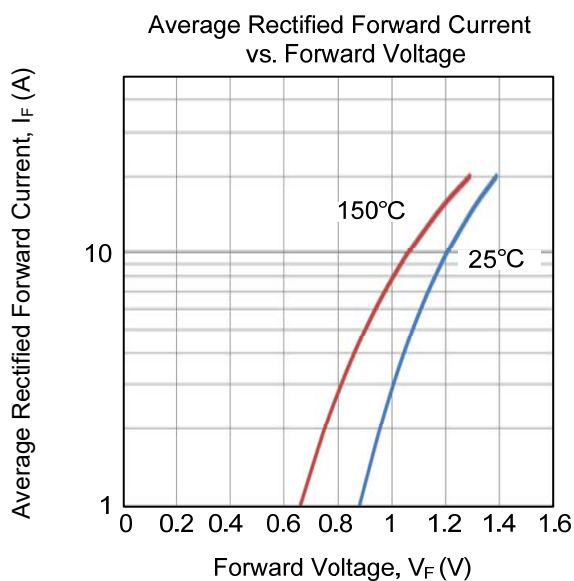
Single phase, half wave, 60Hz, resistive or inductive load.

For capacitance load, derate current by 20%.

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage (Note 1)	$V_{(BR)R}$	$I_R=1\text{mA}$	400			V
Forward Voltage Drop	$V_{FM}$	$I_F=10\text{A}$ , $T_C=25^{\circ}\text{C}$			1.5	V
		$I_F=10\text{A}$ , $T_C=150^{\circ}\text{C}$			1.4	V
Leakage Current (Note 1)	$I_{RM}$	Rated DC voltage, $T_J=150^{\circ}\text{C}$			10	$\mu\text{A}$
		Rated DC voltage, $T_J=25^{\circ}\text{C}$			250	$\mu\text{A}$
Maximum Reverse Recovery Time	$t_{rr}$	$I_F=1.0\text{A}$ , $di/dt=50\text{A}/\mu\text{s}$		46	60	ns

Notes: 1. Short duration pulse test used to minimize self-heating effect.  
2. Thermal resistance junction to case mounted on heatsink.

## ■ TYPICAL CHARACTERISTICS



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