



TGBR5U40

Preliminary

DIODE

**TRENCH MOS SCHOTTKY
BARRIER RECTIFIER**

■ DESCRIPTION

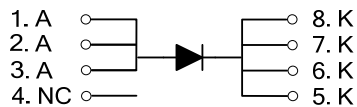
The UTC **TGBR5U40** is a trench mos schottky barrier rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop and high current capability, etc.

The UTC **TGBR5U40** suitable for free wheeling, high frequency inverters, polarity protection, and low voltage.

■ FEATURES

- * Ultra low forward voltage drop
- * High switching speed

■ SYMBOL



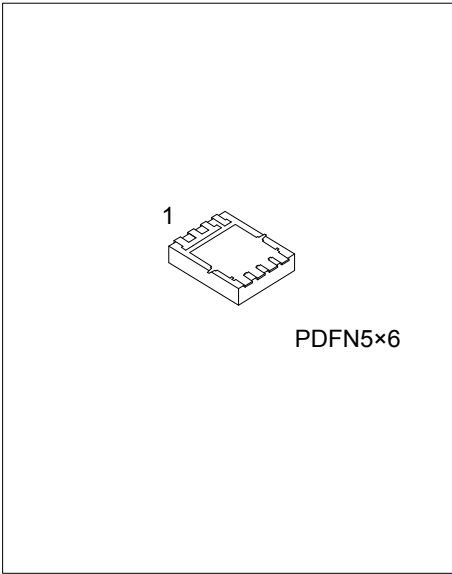
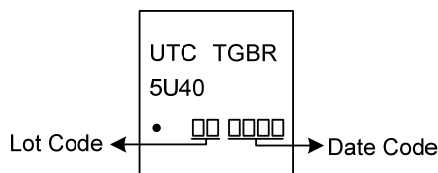
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment					Packing			
Lead Free	Halogen Free		1	2	3	4	5		6	7	8
TGBR5U40L-P5060-R	TGBR5U40G-P5060-R	PDFN5×6	A	A	A	NC	K	K	K	K	Tape Reel

Note: Pin Assignment: A: Anode K: Common Cathode NC: No Comment

<p>TGBR5U40G-P5060-R</p> <p>(1)Packing Type</p> <p>(2)Package Type</p> <p>(3)Green Package</p>	<p>(1) R: Tape Reel</p> <p>(2) P5060: PDFN5×6</p> <p>(3) G: Halogen Free and Lead Free, L: Lead Free</p>
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■ MARKING



■ ABSOLUTE MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$, unless otherwise specified)

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

For capacitance load, derate current by 20%.

PARAMETER	SYMBOL	RATINGS	UNIT
DC Blocking Voltage	V_{RM}	40	V
Working Peak Reverse Voltage	V_{RWM}	40	V
Peak Repetitive Reverse Voltage	V_{RRM}	40	V
Average Rectified Output Current	I_O	5	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	120	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 CHARACTERISTICS (PER LEG)

PARAMETER	SYMBOL	RATINGS	UNIT
Typical Thermal Resistance	θ_{JA}	4.5 (Note)	$^{\circ}\text{C}/\text{W}$

Note: FR-4 PCB, 2 oz Copper. Minimum recommended pad layout.

■ ELECTRICAL CHARACTERISTICS (PER LEG) ($T_A=25^{\circ}\text{C}$, unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R=0.5\text{mA}$	40			V
Forward Voltage Drop	V_{FM}	$I_F=5\text{A}, T_J=25^{\circ}\text{C}$			0.45	V
		$I_F=5\text{A}, T_J=125^{\circ}\text{C}$			0.40	V
Leakage Current	I_{RM}	$V_R=40\text{V}, T_J=25^{\circ}\text{C}$			500	μA
		$V_R=40\text{V}, T_J=125^{\circ}\text{C}$			100	mA

Note: Pulse Test: Pulse width $\leq 300\mu\text{s}$, Duty cycle $\leq 2\%$.

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