

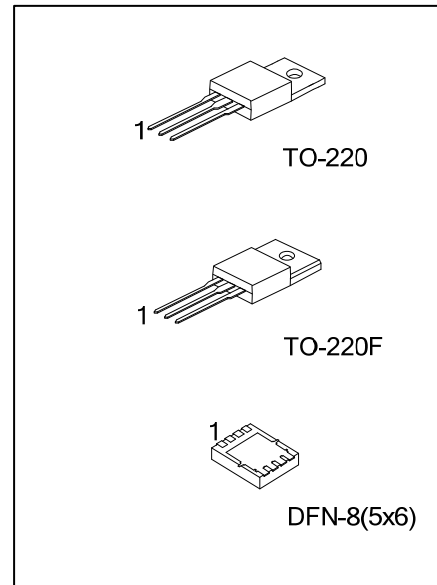


TGBR10U100

Preliminary

DIODE

**TRENCH MOS SCHOTTKY
BARRIER RECTIFIER**



■ DESCRIPTION

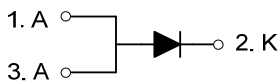
The UTC **TGBR10U100** is a trench mos schottky barrier rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop and high current capability, etc.

The UTC **TGBR10U100** suitable for free wheeling, high frequency inverters, polarity protection, and low voltage.

■ FEATURES

- * Ultra low forward voltage drop
- * High current capability
- * High surge capability
- * High efficiency

■ SYMBOL



■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment								Packing
Lead Free	Halogen Free		1	2	3	4	5	6	7	8	
TGBR10U100L-TA3-R	TGBR10U100G-TA3-R	TO-220	A	K	A	-	-	-	-	-	Tape Reel
TGBR10U100L-TF3-T	TGBR10U100G-TF3-T	TO-220F	A	K	A	-	-	-	-	-	Tape Reel
-	TGBR10U100G-K08-5060-R	DFN-8(5x6)	A	A	A	NC	K	K	K	K	Tape Reel

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

<p>TGBR10U100L-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, K08-5060: DFN-8(5x6) (3) L: Lead Free, G: Halogen Free and Lead Free</p>
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■ MARKING

TO-220 / TO-220F	DFN-8(5x6)
<p>UTC TGBR 10U100□ □□□□□□□□ 1</p> <p>L: Lead Free G: Halogen Free</p> <p>Lot Code ← □□□□□□ → Data Code</p>	<p>UTC TGBR 10U100 • □□□□□□</p> <p>Lot Code ← □□□□□□ → Date Code</p>

■ 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}	100	V
Working Peak Reverse Voltage	V_{RWM}	100	V
Peak Repetitive Reverse Voltage	V_{RRM}	100	V
Average Rectified Output Current	I_O	10	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	200	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	TO-220	2	$^\circ\text{C/W}$
	TO-220F	4	$^\circ\text{C/W}$
	DFN-8(5x6)	72 (Note)	$^\circ\text{C/W}$

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	$V_{(BR)R}$	$I_R=0.50\text{mA}$	100			V
Forward Voltage Drop	V_{FM}	$I_F=10\text{A}, T_C=25^\circ\text{C}$			0.62	V
		$I_F=10\text{A}, T_C=125^\circ\text{C}$			0.57	V
Leakage Current	I_{RM}	$V_R=100\text{V}, T_C=25^\circ\text{C}$			200	μA
		$V_R=100\text{V}, T_C=125^\circ\text{C}$			100	mA

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

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