



TGBR10U80

DIODE

TRENCH MOS SCHOTTKY BARRIER RECTIFIER

DESCRIPTION

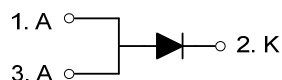
The UTC **TGBR10U80** is a trench mos schottky barrier rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop and high current capability, etc.

The UTC **TGBR10U80** 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



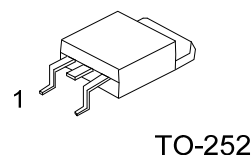
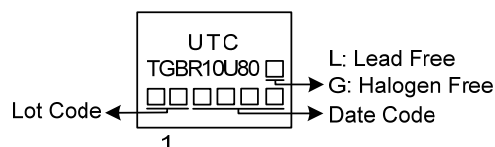
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
TGBR10U80L-TN3-R	TGBR10U80G-TN3-R	TO-252	A	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

TGBR10U80G-TN3-R	(1)Packing Type	(1) R: Tape Reel
	(2)Package Type	(2) TN3: TO-252
	(3)Green Package	(3) G: Halogen Free and Lead Free, L: Lead Free

MARKING



TO-252

■ 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}	80	V
Working Peak Reverse Voltage	V_{RWM}	80	V
Peak Repetitive Reverse Voltage	V_{RRM}	80	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}	150	A
Operating Junction Temperature	T_J	+125	$^{\circ}\text{C}$
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 (PER LEG)

PARAMETER	SYMBOL	RATINGS	UNIT
Typical Thermal Resistance	θ_{JC}	6	$^{\circ}\text{C}/\text{W}$

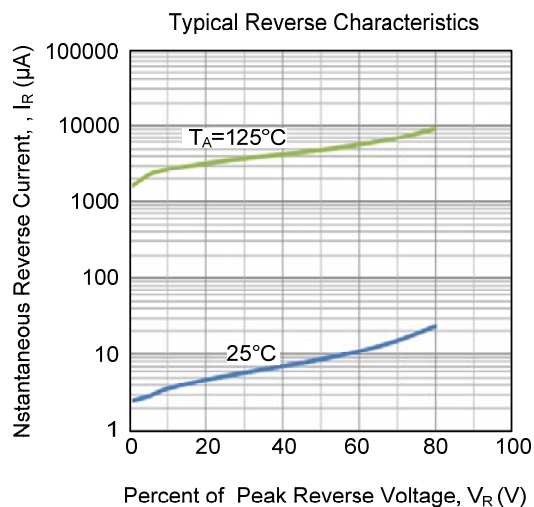
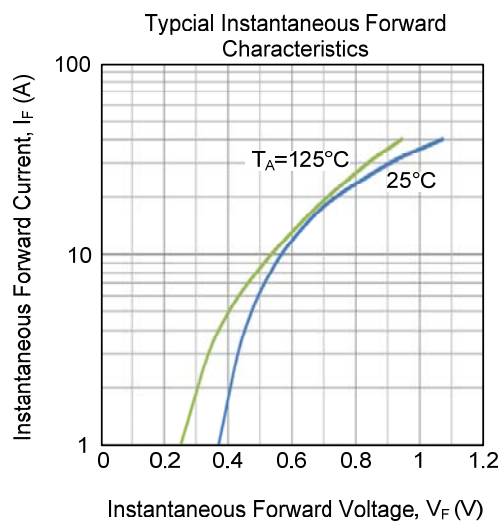
Note: FR-4 PCB, 2 oz Copper. Minimum recommended pad layout.

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R=0.1\text{mA}$	80	90		V
Forward Voltage Drop	V_{FM}	$I_F=5\text{A}, T_C=25^{\circ}\text{C}$		0.47		V
		$I_F=5\text{A}, T_C=125^{\circ}\text{C}$		0.4		V
		$I_F=10\text{A}, T_C=25^{\circ}\text{C}$		0.57		V
		$I_F=10\text{A}, T_C=125^{\circ}\text{C}$		0.54		V
		$I_F=20\text{A}, T_C=25^{\circ}\text{C}$		0.74	0.82	V
		$I_F=20\text{A}, T_C=125^{\circ}\text{C}$		0.71	0.78	V
Leakage Current	I_{RM}	$V_R=80\text{V}, T_C=25^{\circ}\text{C}$		20	300	μA
		$V_R=80\text{V}, T_C=125^{\circ}\text{C}$		9	45	mA

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

■ TYPICAL CHARACTERISTICS



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