



## TGBR20U80

DIODE

### TRENCH MOS SCHOTTKY BARRIER RECTIFIER

#### DESCRIPTION

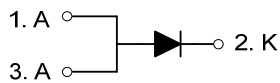
The UTC **TGBR20U80** is a trench mos schottky barrier rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop and high current capability, etc.

The UTC **TGBR20U80** 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



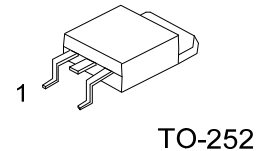
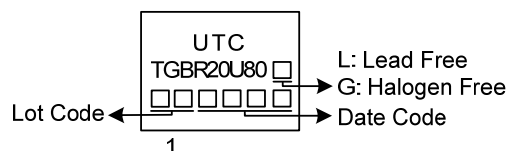
#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
TGBR20U80L-TN3-R	TGBR20U80G-TN3-R	TO-252	A	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

TGBR20U80G-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<sub>A</sub>=25°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 <sub>RM</sub>	80	V
Working Peak Reverse Voltage	V <sub>RWM</sub>	80	V
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	80	V
Average Rectified Output Current	I <sub>O</sub>	20	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	120	A
Operating Junction Temperature	T <sub>J</sub>	+125	°C
Storage Temperature	T <sub>STG</sub>	-65 ~ +150	°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 <sub>JC</sub>	6	°C/W

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

### ■ ELECTRICAL CHARACTERISTICS (PER LEG) (T<sub>A</sub>=25°C unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	V <sub>(BR)R</sub>	I <sub>R</sub> =0.1mA	80			V
Forward Voltage Drop	V <sub>FM</sub>	I <sub>F</sub> =5A, T <sub>C</sub> =25°C		0.42		V
		I <sub>F</sub> =5A, T <sub>C</sub> =125°C		0.36		V
		I <sub>F</sub> =10A, T <sub>C</sub> =25°C		0.47		V
		I <sub>F</sub> =10A, T <sub>C</sub> =125°C		0.45		V
		I <sub>F</sub> =20A, T <sub>C</sub> =25°C		0.55	0.61	V
		I <sub>F</sub> =20A, T <sub>C</sub> =125°C		0.53	0.58	V
Leakage Current	I <sub>RM</sub>	V <sub>R</sub> =80V, T <sub>C</sub> =25°C			300	μA
		V <sub>R</sub> =80V, T <sub>C</sub> =125°C			45	mA

Note: Pulse Test: Pulse width ≤ 300μs, Duty cycle ≤ 2%.

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