



TGBR20S80

DIODE

TRENCH MOS SCHOTTKY BARRIER RECTIFIER

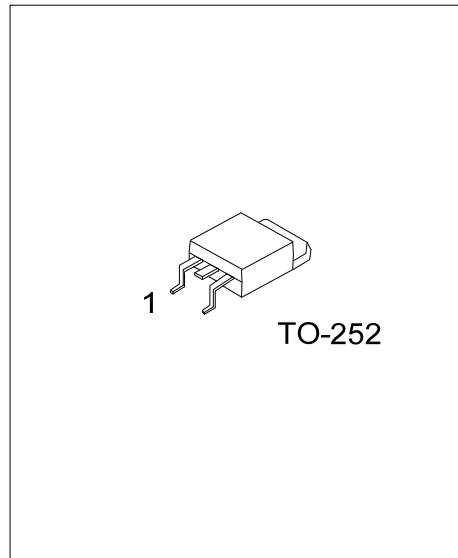
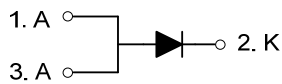
DESCRIPTION

The UTC **TGBR20S80** is a trench mos schottky barrier rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop and high switching speed, etc.

FEATURES

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

SYMBOL



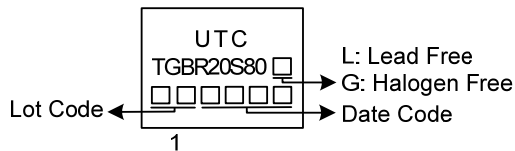
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
TGBR20S80L-TN3-R	TGBR20S80G-TN3-R	TO-252	A	K	A	Tube

Note: Pin Assignment: A: Anode K: Cathode

<p>TGBR20S80G-TN3-R</p> <p>(1) Packing Type (2) Package Type (3) Green Package</p>	<p>(1) R: Tape Reel (2) TN3: TO-252 (3) G: Halogen Free and Lead Free, L: Lead Free</p>
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MARKING



■ ABSOLUTE MAXIMUM RATINGS (PER LEG) ($T_A=25^\circ\text{C}$, 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 Per Device	I_O	20	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
Junction to Case	θ_{JC}	6	$^\circ\text{C/W}$

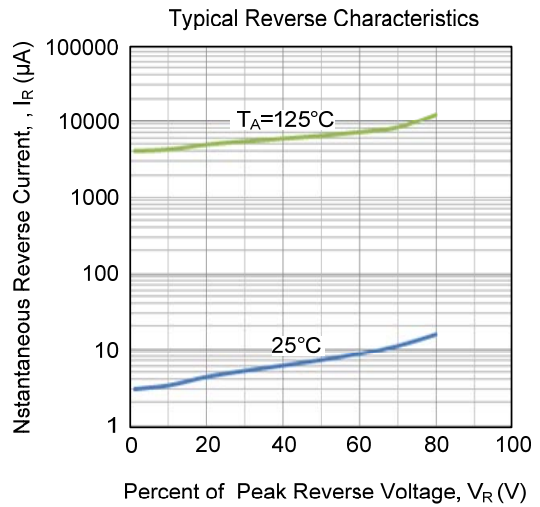
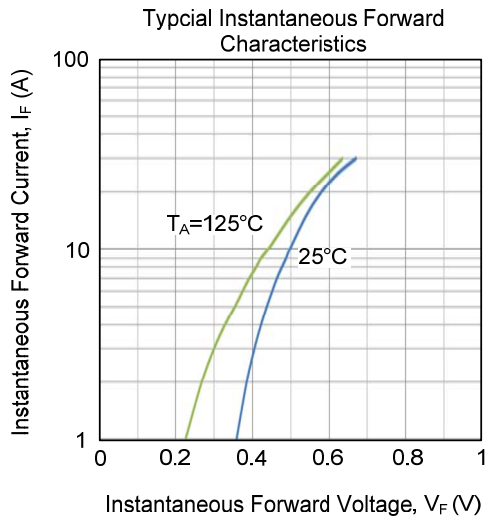
■ ELECTRICAL CHARACTERISTICS (PER LEG) ($T_A=25^\circ\text{C}$, unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage (Note 1)	$V_{(BR)R}$	$I_R=0.50\text{mA}$	80			V
Forward Voltage Drop	V_{FM}	$I_F=5\text{A}, T_J=25^\circ\text{C}$		0.43		V
		$I_F=5\text{A}, T_J=125^\circ\text{C}$		0.38		V
		$I_F=10\text{A}, T_J=25^\circ\text{C}$		0.49		V
		$I_F=10\text{A}, T_J=125^\circ\text{C}$		0.45		V
		$I_F=20\text{A}, T_J=25^\circ\text{C}$		0.58	0.65	V
		$I_F=20\text{A}, T_J=125^\circ\text{C}$		0.55	0.58	V
Leakage Current (Note 1)	I_{RM}	$V_R=80\text{V}, T_J=25^\circ\text{C}$			300	μA
		$V_R=80\text{V}, T_J=125^\circ\text{C}$			45	mA

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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