

**TGBR5S50**

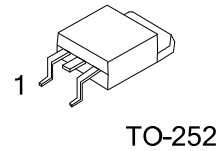
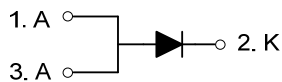
Preliminary

DIODE**TRENCH MOS SCHOTTKY
BARRIER RECTIFIER****DESCRIPTION**

The UTC **TGBR5S50** 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

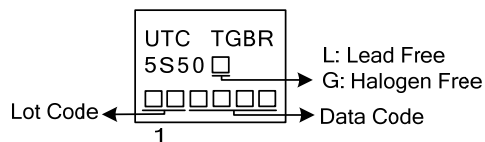
- * Super low forward voltage drop
- * High switching speed

SYMBOL**ORDERING INFORMATION**

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
TGBR5S50L-TN3-R	TGBR5S50G-TN3-R	TO-252	A	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

TGBR5S50L-TN3-R (1) Packing Type (2) Package Type (3) Green Package	(1) R: Tape Reel (2) TN3: TO-252 (3) L: Lead Free, G: Halogen Free and Lead Free
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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}	50	V
Working Peak Reverse Voltage	V_{RWM}	50	V
Peak Repetitive Reverse Voltage	V_{RRM}	50	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	V
Average Rectified Output Current $T_C=140^{\circ}\text{C}$	I_O	5	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	100	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 (Note 3)

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ_{JA}	110	$^{\circ}\text{C}/\text{W}$
Junction to Case	θ_{JC}	6	$^{\circ}\text{C}/\text{W}$

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage (Note 1)	$V_{(BR)R}$	$I_R=0.5\text{mA}$	50			V
Instantaneous Forward Voltage	V_{FM}	$I_F=5\text{A}$, $T_J=25^{\circ}\text{C}$			0.50	V
		$I_F=5\text{A}$, $T_J=125^{\circ}\text{C}$			0.45	V
Leakage Current (Note 1)	I_{RM}	$V_R=50\text{V}$, $T_J=25^{\circ}\text{C}$			500	μA
		$V_R=50\text{V}$, $T_J=125^{\circ}\text{C}$			25	mA

Notes: 1. Short duration pulse test used to minimize self-heating effect.

2. Thermal resistance junction to case mounted on heatsink.

3. Mounted on an FR4 PCB, single-sided copper, with 100cm² copper pad area.

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