



## TGBR5S100

Preliminary

DIODE

### TRENCH MOS SCHOTTKY BARRIER RECTIFIER


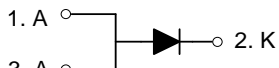
#### DESCRIPTION

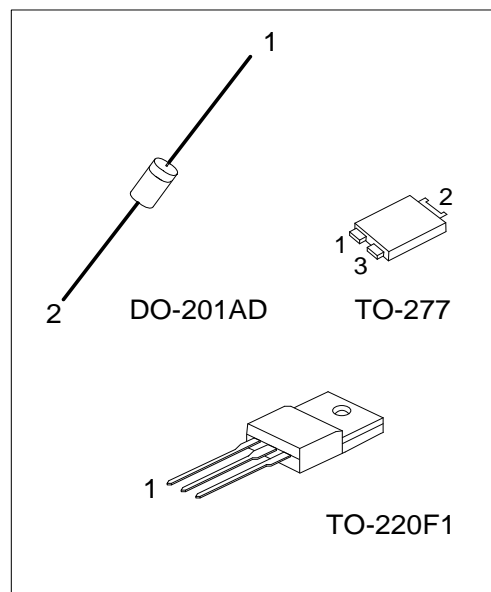
The UTC **TGBR5S100** is a trench mos schottky barrier rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop and high switching speed, etc.

#### FEATURES

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

#### SYMBOL

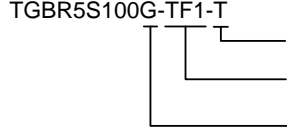
DO-201AD	TO-220F1 / TO-277
	



#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
TGBR5S100L-TF1-T	TGBR5S100G-TF1-T	TO-220F1	A	K	A	Tube
TGBR5S100L-T27-T	TGBR5S100G-T27-T	TO-277	A	K	A	Tape Reel
TGBR5S100L-Z21D-B	TGBR5S100G-Z21D-B	DO-201AD	K	A	-	Tape Box
TGBR5S100L-Z21D-R	TGBR5S100G-Z21D-R	DO-201AD	K	A	-	Tape Reel
TGBR5S100L-Z21D-K	TGBR5S100G-Z21D-K	DO-201AD	K	A	-	Bulk

Note: Pin Assignment: A: Anode K: Cathode

	<p>(1) Packing Type</p> <p>(2) Package Type</p> <p>(3) Green Package</p>	<p>(1) T: Tube, B: Tape Box, R: Tape Reel, K: Bulk</p> <p>(2) TF1: TO-220F1, T27: TO-277, Z21D: DO-201AD</p> <p>(3) G: Halogen Free and Lead Free, L: Lead Free</p>
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# MARKING

PACKAGE	MARKING
TO-220F1	<p>UTC TGBR5S100</p> <p>Lot Code → → → → → Date Code</p> <p>1</p> <p>L: Lead Free G: Halogen Free</p>
TO-277	<p>UTC TGBR5S100</p> <p>Lot Code → → → → → Date Code</p> <p>L: Lead Free G: Halogen Free</p>
DO-201AD	<p>Cathode Band for uni-directional Only</p> <p>TGBR5S100</p> <p>→ → → → Date Code</p> <p>L: Lead Free G: Halogen Free</p>

# ■ 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>	100	V
Working Peak Reverse Voltage	V <sub>RWM</sub>	100	V
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	100	V
Average Rectified Output Current	I <sub>O</sub>	5	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	150	A
Operating Junction Temperature	T <sub>J</sub>	-65 ~ +150	°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 CHARACTERISTICS (PER LEG)

PARAMETER	SYMBOL	RATINGS	UNIT
Typical Thermal Resistance	TO-220F1	4	°C/W
	TO-277	4 (Note)	°C/W
	DO-201AD	22	°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> =0.5mA	100			V
Forward Voltage Drop	V <sub>FM</sub>	I <sub>F</sub> =1A, T <sub>J</sub> =25°C		0.41		V
		I <sub>F</sub> =1A, T <sub>J</sub> =125°C		0.31		V
		I <sub>F</sub> =3A, T <sub>J</sub> =25°C		0.50		V
		I <sub>F</sub> =3A, T <sub>J</sub> =125°C		0.45		V
		I <sub>F</sub> =5A, T <sub>J</sub> =25°C		0.58	0.60	V
		I <sub>F</sub> =5A, T <sub>J</sub> =125°C		0.51	0.55	V
Leakage Current	I <sub>RM</sub>	V <sub>R</sub> =100V, T <sub>J</sub> =25°C		15	300	μA
		V <sub>R</sub> =100V, T <sub>J</sub> =125°C		8	30	mA

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

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