



## TGBR10V100

Preliminary

DIODE

### TRENCH MOS SCHOTTKY BARRIER RECTIFIER

#### DESCRIPTION

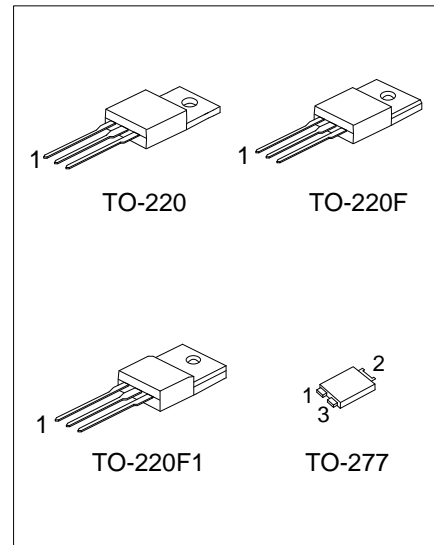
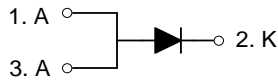
The UTC **TGBR10V100** is a trench mos schottky barrier rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop and high current capability, etc.

The UTC **TGBR10V100** suitable for free wheeling, high frequency inverters, polarity protection, and low voltage.

#### FEATURES

- \* Very 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	
TGBR10V100L-TA3-T	TGBR10V100G-TA3-T	TO-220	A	K	A	Tube
TGBR10V100L-TF1-T	TGBR10V100G-TF1-T	TO-220F1	A	K	A	Tube
TGBR10V100L-TF3-T	TGBR10V100G-TF3-T	TO-220F	A	K	A	Tube
TGBR10V100L-T27-T	TGBR10V100G-T27-T	TO-277	A	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

<p>TGBR10V100G-TA3-T</p> <p>(1)Packing Type (2)Package Type (3)Green Package</p>	<p>(1) T: Tube, R: Tape Reel (2) TA3: TO-220, TF1: TO-220F1, TF3: TO-220F, T27: TO-277 (3) G: Halogen Free and Lead Free, L: Lead Free</p>
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#### MARKING

TO-220 / TO-220F / TO-220F1	TO-277

### ■ 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 (Note 1)		V <sub>RM</sub>	100	V
Working Peak Reverse Voltage		V <sub>RWM</sub>	100	V
Peak Repetitive Reverse Voltage		V <sub>RPM</sub>	100	V
Average Rectified Output Current	T <sub>C</sub> =125°C	I <sub>O</sub>	10	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
Junction to Ambient		θ <sub>JA</sub>	62.5	°C/W
Junction to Case	TO-220	θ <sub>JC</sub>	2	°C/W
	TO-220F		3.31	
	TO-220F1			
	TO-277		4 (Note)	

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

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage (Note 1)	V <sub>(BR)R</sub>	I <sub>R</sub> =0.50mA	100			V
Forward Voltage Drop	V <sub>FM</sub>	I <sub>F</sub> =10A, T <sub>C</sub> =25°C			0.75	V
		I <sub>F</sub> =10A, T <sub>C</sub> =125°C			0.60	V
Peak Reverse Current at Rated DC Blocking Voltage (Note 1)	I <sub>RM</sub>	V <sub>R</sub> =100V, T <sub>C</sub> =25°C			100	μA
		V <sub>R</sub> =100V, T <sub>C</sub> =125°C			6	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 100cm<sup>2</sup> copper pad area.

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