



## TGBR20V100

Preliminary

DIODE

### TRENCH MOS SCHOTTKY BARRIER RECTIFIER

#### DESCRIPTION

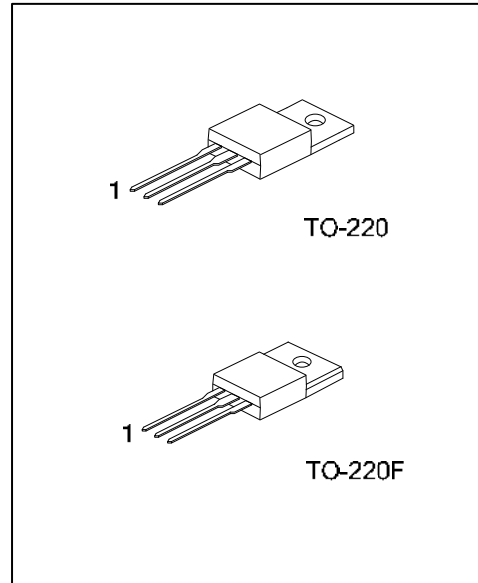
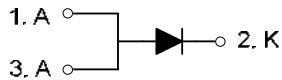
The UTC **TGBR20V100** is a trench mos schottky barrier rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop and high current capability, etc.

The UTC **TGBR20V100** 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



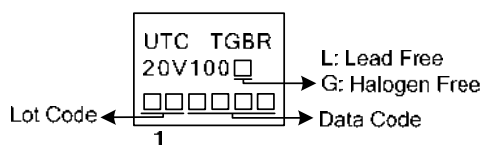
#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
TGBR20V100L-TA3-T	TGBR20V100G-TA3-T	TO-220	A	K	A	Tube
TGBR20V100L-TF3-T	TGBR20V100G-TF3-T	TO-220F	A	K	A	Tube

Note: Pin Assignment: A: Anode K: Cathode

<p>TGBR20V100L-TA3-T</p> <p>(1) Packing Type</p> <p>(2) Package Type</p> <p>(3) Green Package</p>	<p>(1) T: Tube</p> <p>(2) TA3: TO-220, TF3: TO-220F</p> <p>(3) L: Lead Free, G: Halogen Free and Lead Free</p>
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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 (Note 1)	$V_{RM}$	100	V
Working Peak Reverse Voltage	$V_{RWM}$	100	V
Peak Repetitive Reverse Voltage	$V_{RRM}$	100	V
Average Rectified Output Current	$I_O$	20	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	$I_{FSM}$	250	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
Typical Thermal Resistance	TO-220	2	$^\circ\text{C}/\text{W}$
	TO-220F	4	$^\circ\text{C}/\text{W}$

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R=0.50\text{mA}$	100			V
Forward Voltage Drop	$V_{FM}$	$I_F=20\text{A}, T_C=25^\circ\text{C}$			0.79	V
		$I_F=20\text{A}, T_C=125^\circ\text{C}$			0.74	V
Leakage Current	$I_{RM}$	$V_R=100\text{V}, T_C=25^\circ\text{C}$			100	$\mu\text{A}$
		$V_R=100\text{V}, T_C=125^\circ\text{C}$			20	mA

Note: Pulse Test: Pulse width  $\leq 300\mu\text{s}$ , Duty cycle  $\leq 2\%$ .

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