



## TGBR20V50C

Advance

DIODE

### DUAL TRENCH MOS SCHOTTKY BARRIER RECTIFIER

#### DESCRIPTION

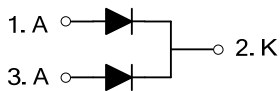
The UTC **TGBR20V50C** is a dual trench mos schottky barrier rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop and high switching speed, etc.

The UTC **TGBR20V50C** suitable for supply applications.

#### FEATURES

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

#### SYMBOL



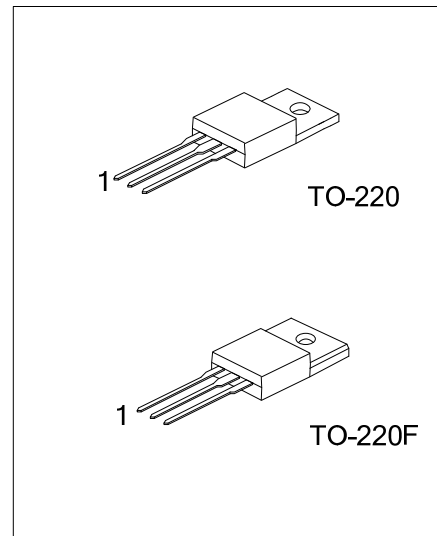
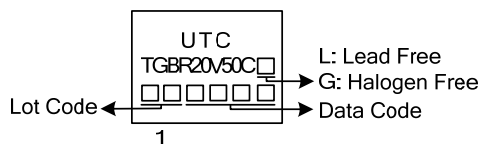
#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
TGBR20V50CL-TA3-T	TGBR20V50CG-TA3-T	TO-220	A	K	A	Tube
TGBR20V50CL-TF3-T	TGBR20V50CG-TF3-T	TO-220F	A	K	A	Tube

Note: Pin Assignment: A: Anode K: Cathode

<p>TGBR20V50CL-TA3-T</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 (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		$V_{RM}$	50	V
Working Peak Reverse Voltage		$V_{RWM}$	50	V
Peak Repetitive Reverse Voltage		$V_{RRM}$	50	V
Average Rectified Forward Current (Rated $V_R$ -20Khz Square Wave) - 50% Duty Cycle	Per Leg	$I_O$	10	A
	Total		20	A
Peak Forward Surge Current - 1/2 60hz		$I_{FSM}$	150	A
Peak Repetitive Reverse Surge Current (2uS-1Khz)		$I_{RRM}$	2	A
Maximum Rate of Voltage Change ( at Rated $V_R$ )		dv/dt	10000	V/ $\mu$ S
Operating Junction Temperature		$T_J$	-65~+150	$^\circ\text{C}$
Storage Junction 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 Ambient		$\theta_{JA}$	62.5	$^\circ\text{C/W}$
Junction to Case	TO-220	$\theta_{JC}$	2	$^\circ\text{C/W}$
	TO-220F		3.31	

■ 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)	$V_{(BR)R}$	$I_R=0.50\text{mA}$	50			V
Forward Voltage	$V_{FM}$	$I_F=10\text{A}, T_J=25^\circ\text{C}$			0.55	V
		$I_F=10\text{A}, T_J=125^\circ\text{C}$			0.50	V
Reverse Current (Note 1)	$I_{RM}$	$V_R=50\text{V}, T_J=25^\circ\text{C}$			500	$\mu\text{A}$
		$V_R=50\text{V}, T_J=125^\circ\text{C}$			100	mA

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

2. Thermal resistance junction to case mounted on heatsink.

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