



TGBR20V45C

Preliminary

DIODE

DUAL TRENCH MOS SCHOTTKY BARRIER RECTIFIER

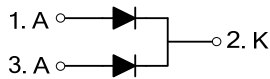
DESCRIPTION

The UTC **TGBR20V45C** is a dual trench mos schottky barrier rectifier, it uses UTC's advanced technology to provide customers with high current capability, low forward voltage and high switching speed, etc.

FEATURES

- * Very low forward voltage
- * High switching speed
- * High current capability

SYMBOL



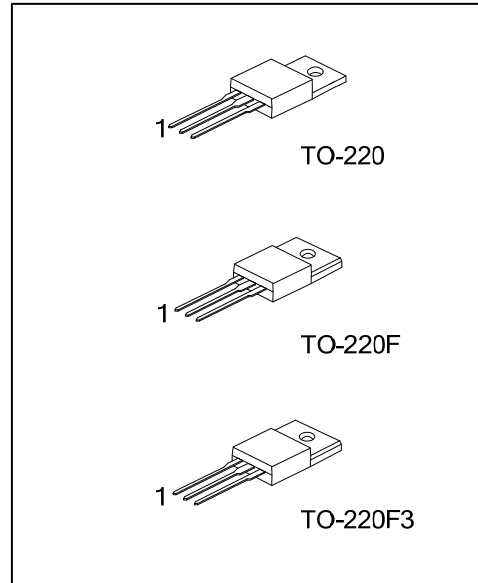
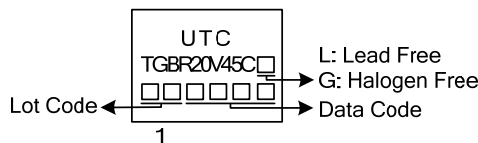
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
TGBR20V45CL-TA3-T	TGBR20V45CG-TA3-T	TO-220	A	K	A	Tube
TGBR20V45CL-TF3-T	TGBR20V45CG-TF3-T	TO-220F	A	K	A	Tube
TGBR20V45CL-TF3T-T	TGBR20V45CG-TF3T-T	TO-220F3	A	K	A	Tube

Note: Pin Assignment: A: Anode K: Cathode

<p>TGBR20V45CL-TA3-T</p> <ul style="list-style-type: none"> (1) Packing Type (2) Package Type (3) Green Package 	<ul style="list-style-type: none"> (1) T: Tube (2) TA3: TO-220, TF3: TO-220F, TF3T: TO-220F3 (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}	45	V
Working Peak Reverse Voltage		V_{RWM}	45	V
Peak Repetitive Reverse Voltage		V_{RRM}	45	V
Average Rectified Forward Current (Rated VR-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
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	θ_{JC}	2	$^{\circ}\text{C}/\text{W}$
	TO-220F		4	$^{\circ}\text{C}/\text{W}$
	TO-220F3			

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R=0.45\text{mA}$	45			V
Forward Voltage Drop	V_{FM}	$I_F=10\text{A}, T_J=25^{\circ}\text{C}$			0.57	V
		$I_F=10\text{A}, T_J=125^{\circ}\text{C}$			0.52	V
Leakage Current	I_{RM}	$V_R=45\text{V}, T_J=25^{\circ}\text{C}$			500	μA
		$V_R=45\text{V}, T_J=125^{\circ}\text{C}$			100	mA

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

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