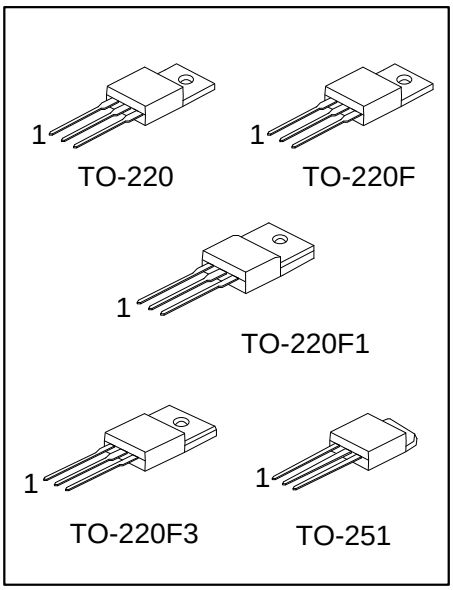
TGBR20V45C

DIODE

DUAL TRENCH MOS SCHOTTKY BARRIER RECTIFIER



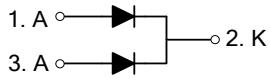
■ DESCRIPTION

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

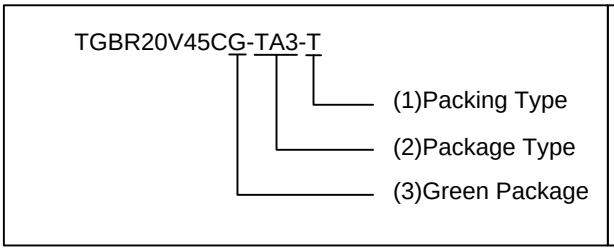
■ SYMBOL



■ ORDERING INFORMATION

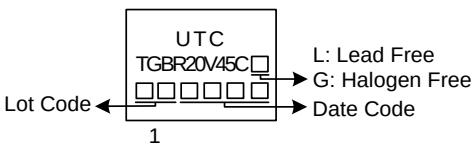
Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
TGBR20V45CL-TA3-T	TGBR20V45CG-TA3-T	TO-220	A	K	A	Tube
TGBR20V45CL-TF3-T	TGBR20V45CG-TF3-T	TO-220F	A	K	A	Tube
TGBR20V45CL-TF1-T	TGBR20V45CG-TF1-T	TO-220F1	A	K	A	Tube
TGBR20V45CL-TF3T-T	TGBR20V45CG-TF3T-T	TO-220F3	A	K	A	Tube
TGBR20V45CL-TM3-T	TGBR20V45CG-TM3-T	TO-251	A	K	A	Tube

Note: Pin Assignment: A: Anode K: Cathode



(1) T: Tube
(2) TA3: TO-220, TF1: TO-220F1, TF3: TO-220F
TF3T: TO-220F3, TM3: TO-251
(3) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING



■ ABSOLUTE MAXIMUM RATINGS (T_A=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_{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	°C
Storage Temperature		T_{STG}	-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-220	θ_{JC}	2	°C/W
	TO-220F TO-220F1 TO-220F3		4	°C/W
	TO-251		6	°C/W

■ ELECTRICAL CHARACTERISTICS (PER LEG) (T_A=25°C unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	$V_{(BR)R}$	I_R=0.45mA	45			V
Forward Voltage Drop	V_{FM}	I_F=10A, T_J=25°C			0.57	V
		I_F=10A, T_J=150°C			0.52	V
Leakage Current	I_{RM}	V_R=45V, T_J=25°C			500	μA
		V_R=45V, T_J=150°C			100	mA

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

■ TYPICAL CHARACTERISTICS