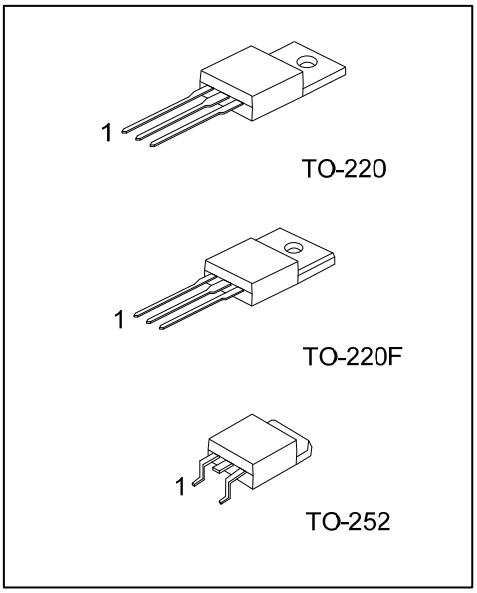
TGBR20S100C

DIODE

DUAL TRENCH MOS SCHOTTKY BARRIER RECTIFIER



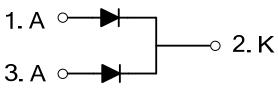
■ DESCRIPTION

The UTC **TGBR20S100C** 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.

■ FEATURES

* Super low forward voltage drop
* High switching speed

■ SYMBOL



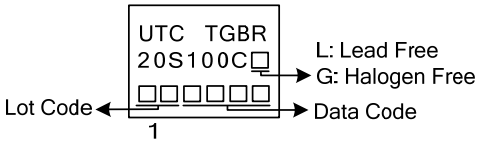
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
TGBR20S100CL-TA3-T	TGBR20S100CG-TA3-T	TO-220	A	K	A	Tube
TGBR20S100CL-TF3-T	TGBR20S100CG-TF3-T	TO-220F	A	K	A	Tube
TGBR20S100CL-TN3-R	TGBR20S100CG-TN3-R	TO-252	A	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

TGBR20S100CG-TA3-T (1)Packing Type (2)Package Type (3)Green Package	(1) T: Tube, R: Tape Reel (2) TA3: TO-220, TF3: TO-220F, TN3: TO-252 (3) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING



■ ABSOLUTE MAXIMUM RATINGS (PER LEG) (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}	100	V
Working Peak Reverse Voltage		V_{RWM}	100	V
Peak Repetitive Reverse Voltage		V_{RRM}	100	V
Average Rectified Output Current Per Device	Per Leg	I_O	10	A
	Total		20	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load		I_{FSM}	130	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		4	°C/W
	TO-252		2.5 (Note)	°C/W

Note: Device mounted on FR-4 substrate PC board, 2oz copper, with 1inch square copper plate.

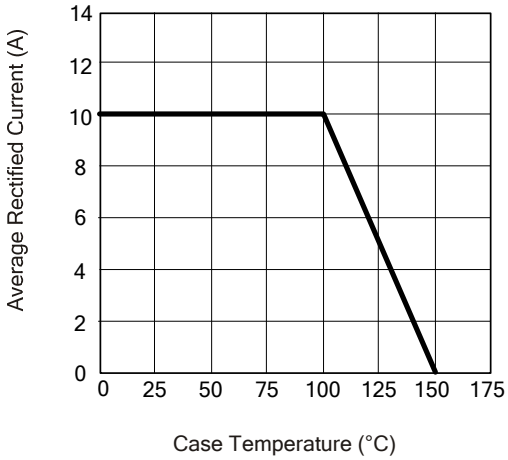
■ ELECTRICAL CHARACTERISTICS (PER LEG) (T_A =25°C unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	$V_{(BR)R}$	I_R=0.50mA	100			V
Forward Voltage Drop	V_{FM}	I_F=3A, T_J=25°C		0.47		V
		I_F=3A, T_J=125°C		0.42		V
		I_F=5A, T_J=25°C		0.54		V
		I_F=5A, T_J=125°C		0.50		V
		I_F=10A, T_J=25°C		0.68	0.71	V
		I_F=10A, T_J=125°C		0.60	0.64	V
Leakage Current	I_{RM}	V_R=100V, T_J=25°C		10	100	μA
		V_R=100V, T_J=125°C		5	40	mA

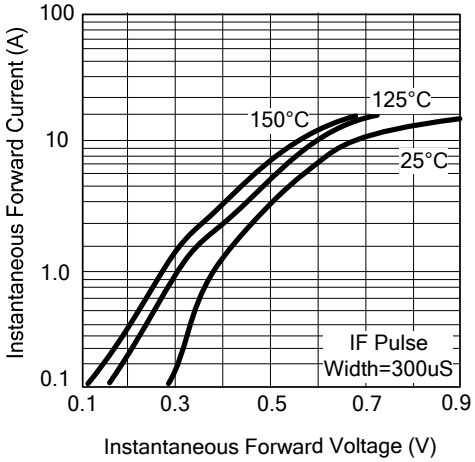
Note: Pulse Test: Pulse width ≤ 300μs, Duty cycle ≤ 2%.

■ TYPICAL CHARACTERISTICS (PER LEG)

Forward Derating Curve



Typical Forward Characteristics



Typical Reverse Characteristics