



## MGBR20L200C

DIODE

### DUAL MOS GATED BARRIER RECTIFIER

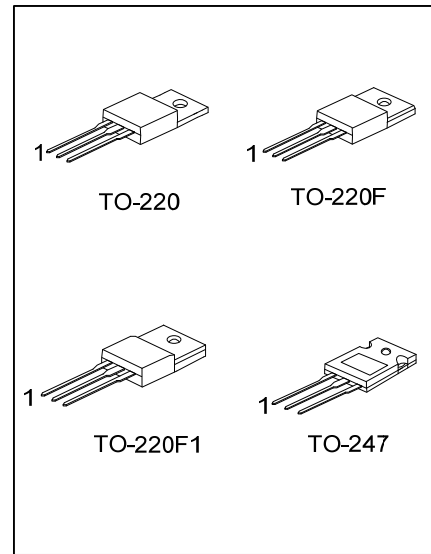
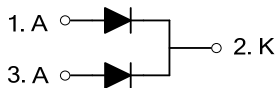
#### DESCRIPTION

The UTC **MGBR20L200C** is a dual mos gated barrier rectifiers,it uses UTC's advanced technology to provide customers with low forward voltage drop and high switching speed, etc.

#### FEATURES

- \* Low forward voltage drop
- \* High switching speed

#### SYMBOL



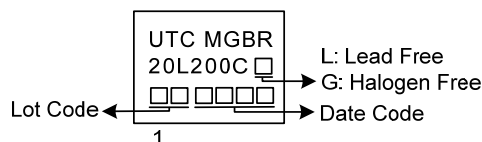
#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR20L200CL-TA3-T	MGBR20L200CG-TA3-T	TO-220	A	K	A	Tube
MGBR20L200CL-TF3-T	MGBR20L200CG-TF3-T	TO-220F	A	K	A	Tube
MGBR20L200CL-TF1-T	MGBR20L200CG-TF1-T	TO-220F1	A	K	A	Tube
MGBR20L200CL-T47-T	MGBR20L200CG-T47-T	TO-247	A	K	A	Tube

Note: Pin Assignment: A: Anode K: Common Cathode

<p>MGBR20L200CG-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, TF1: TO-220F1 T47: TO-247</p> <p>(3) G: Halogen Free and Lead Free, L: 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		$V_{RM}$	200	V
Working Peak Reverse Voltage		$V_{RWM}$	200	V
Peak Repetitive Reverse Voltage		$V_{RRM}$	200	V
Average Rectified Output Current ( $T_C=140^{\circ}\text{C}$ )	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		$I_{FSM}$	180	A
Repetitive Peak Avalanche Power (1 $\mu\text{s}$ , $25^{\circ}\text{C}$ )		$P_{ARM}$	5000	W
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 RESISTANCES CHARACTERISTICS

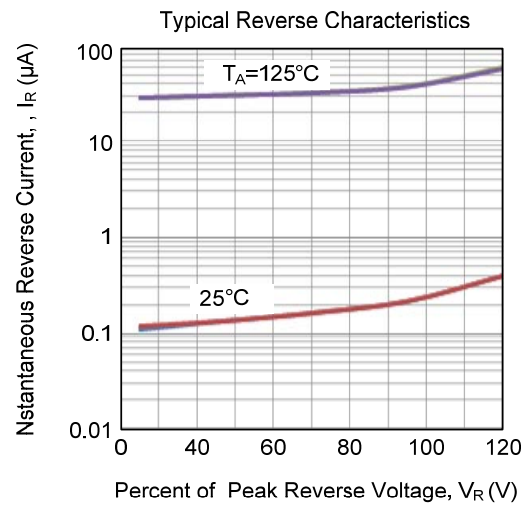
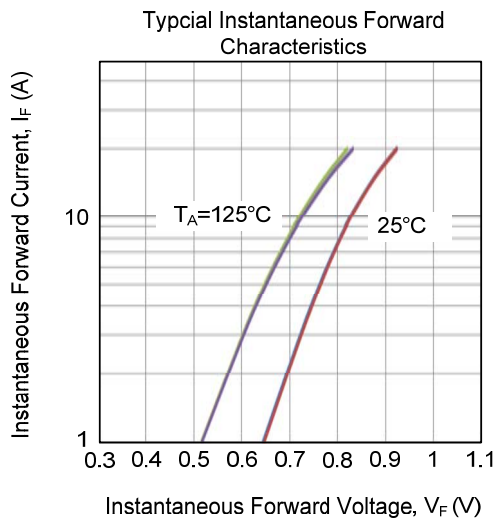
PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Ambient	TO-220/TO-220F	$\theta_{JA}$	62.5	$^{\circ}\text{C/W}$
	TO-220F1			
	TO-247			
Junction to Case	TO-220	$\theta_{JC}$	2	$^{\circ}\text{C/W}$
	TO-220F/TO-220F1			
	TO-247			

■ 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)	$V_{(BR)R}$	$I_R=0.5\text{mA}$	200			V
Instantaneous Forward Voltage Drop	$V_{FM}$	$I_F=10\text{A}$ , $T_J=25^{\circ}\text{C}$			0.86	V
		$I_F=10\text{A}$ , $T_J=125^{\circ}\text{C}$			0.78	V
Leakage Current (Note 1)	$I_{RM}$	$V_R=200\text{V}$ , $T_J=25^{\circ}\text{C}$			100	$\mu\text{A}$
		$V_R=200\text{V}$ , $T_J=125^{\circ}\text{C}$			10	mA

Notes: 1. Short duration pulse test used to minimize self-heating effect.  
2. Thermal resistance junction to case mounted on heatsink.

## ■ TYPICAL CHARACTERISTICS



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