



## MGBR20L100C

DIODE

### DUAL MOS GATED BARRIER RECTIFIER

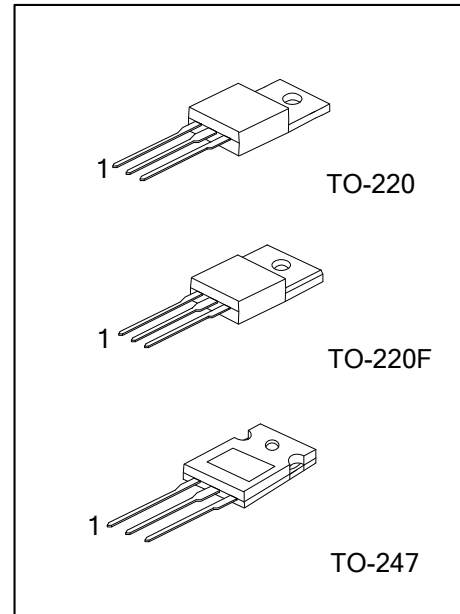
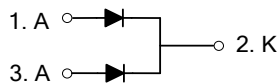
#### DESCRIPTION

The UTC **MGBR20L100C** 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



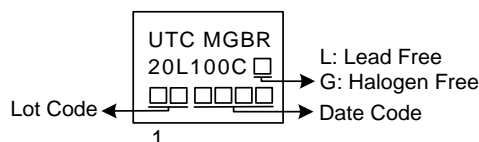
#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR20L100CL-TA3-T	MGBR20L100CG-TA3-T	TO-220	A	K	A	Tube
MGBR20L100CL-TF3-T	MGBR20L100CG-TF3-T	TO-220F	A	K	A	Tube
MGBR20L100CL-T47-T	MGBR20L100CG-T47-T	TO-247	A	K	A	Tube

Note: Pin Assignment: A: Anode K: Cathode

MGBR20L100CG-TA3-T	(1)Packing Type	(1) T: Tube
	(2)Package Type	(2) TA3: TO-220, TF3: TO-220F, T47: TO-247
	(3)Green Package	(3) G: Halogen Free and Lead Free, L: Lead Free

#### 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		$V_{RM}$	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		$I_{FSM}$	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 DATA

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		4	$^\circ\text{C/W}$
	TO-247		1.5	$^\circ\text{C/W}$

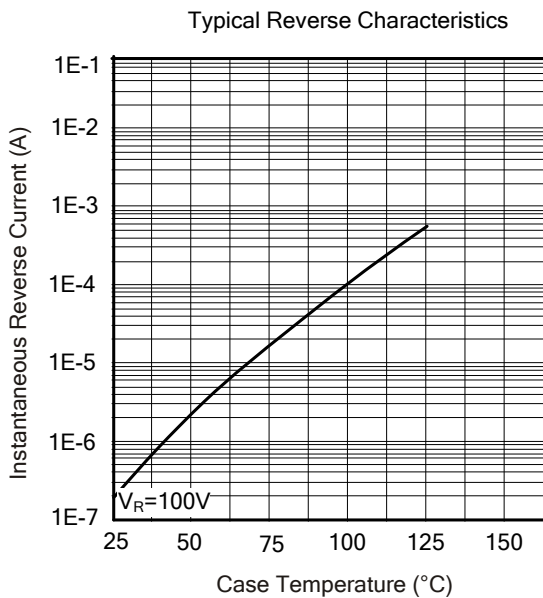
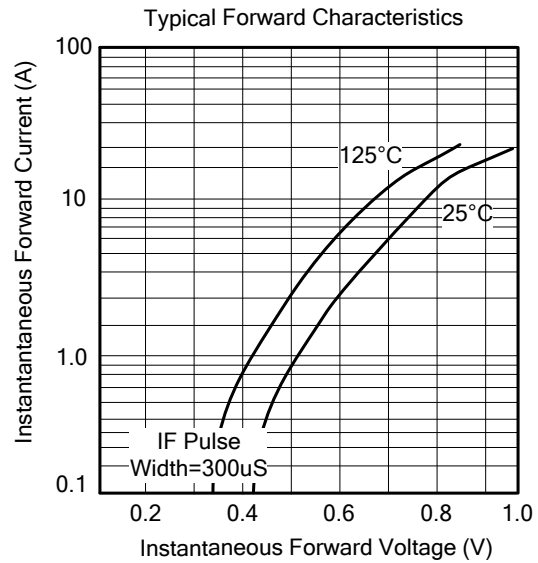
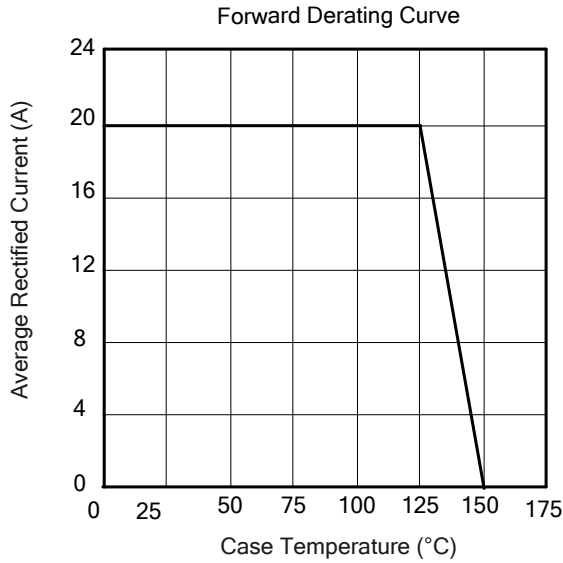
### ■ ELECTRICAL CHARACTERISTICS (PER LEG) ( $T_A=25^\circ\text{C}$ unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage (Note 1)	$V_{(BR)R}$	$I_R=0.50\text{mA}$	100			V
Forward Voltage Drop	$V_{FM}$	$I_F=10\text{A}, T_J=25^\circ\text{C}$			0.82	V
		$I_F=10\text{A}, T_J=125^\circ\text{C}$			0.75	V
Leakage Current (Note 1)	$I_{RM}$	$V_R=100\text{V}, T_J=25^\circ\text{C}$			100	$\mu\text{A}$
		$V_R=100\text{V}, T_J=125^\circ\text{C}$			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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