



## MGBR20V100C

Preliminary

DIODE

### DUAL MOS GATED BARRIER RECTIFIER

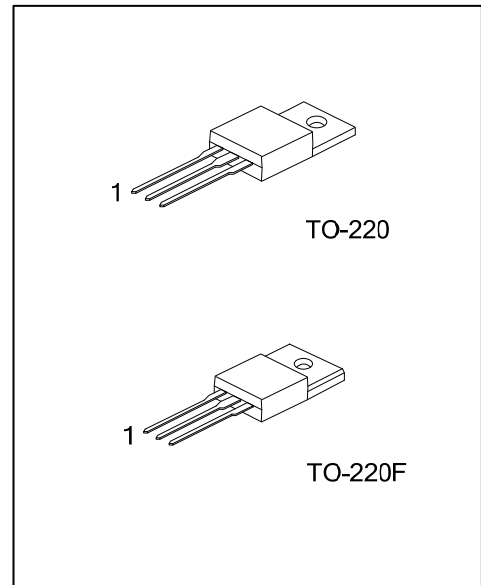
#### DESCRIPTION

The UTC **MGBR20V100C** 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

- \* Very low forward voltage drop
- \* High switching speed

#### SYMBOL



#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR20V100CL-TA3-T	MGBR20V100CG-TA3-T	TO-220	A	K	A	Tube
MGBR20V100CL-TF3-T	MGBR20V100CG-TF3-T	TO-220F	A	K	A	Tube

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

MGBR20V100CL-TA3-T	(1)Packing Type	(1) T: Tube
	(2)Package Type	(2) TA3: TO-220, TF3: TO-220F
	(3)Lead Free	(3) L: Lead Free, G: Halogen Free

■ 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		$I_{FSM}$	180	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	$^{\circ}\text{C}/\text{W}$
Junction to Case	TO-220	$\theta_{JC}$	2	$^{\circ}\text{C}/\text{W}$
	TO-220F		3.31	

■ 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	$V_{FM}$	$I_F=10\text{A}, T_J=25^{\circ}\text{C}$			0.75	V
		$I_F=10\text{A}, T_J=125^{\circ}\text{C}$			0.70	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.

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