



## MGBR10V100C

Preliminary

DIODE

### DUAL MOS GATED BARRIER RECTIFIER

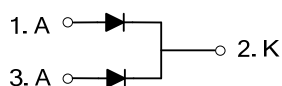
#### DESCRIPTION

The UTC **MGBR10V100C** 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



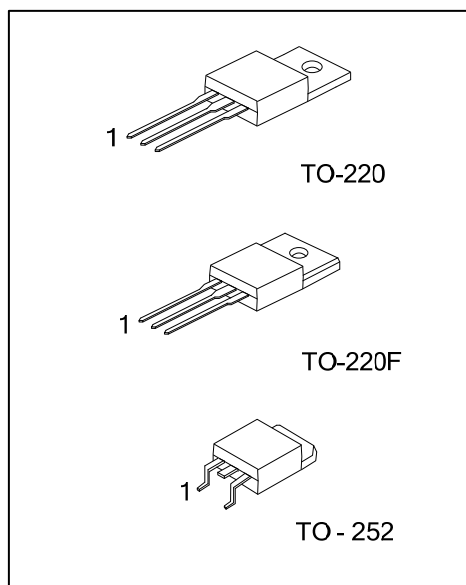
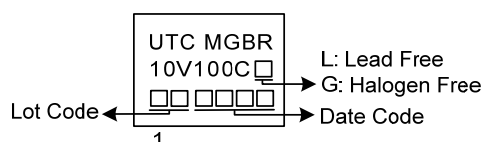
#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR10V100CL-TA3-T	MGBR10V100CG-TA3-T	TO-220	A	K	A	Tube
MGBR10V100CL-TF3-T	MGBR10V100CG-TF3-T	TO-220F	A	K	A	Tube
MGBR10V100CL-TN3-R	MGBR10V100CG-TN3-R	TO-252	A	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

<p>MGBR10V100CG-TA3-T</p> <p>(1) Packing Type (2) Package Type (3) Green Package</p>	<p>(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</p>
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#### 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	5	A
	Total	10	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	$I_{FSM}$	80	A
Operating Junction Temperature	$T_J$	$-65 \sim +150$	$^{\circ}\text{C}$
Storage Temperature	$T_{STG}$	$-65 \sim +150$	$^{\circ}\text{C}$

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 CHARACTERISTICS (PER LEG)

PARAMETER	SYMBOL	RATINGS	UNIT
Typical Thermal Resistance	TO-220	2	$^{\circ}\text{C/W}$
	TO-220F	4	$^{\circ}\text{C/W}$
	TO-252	6	$^{\circ}\text{C/W}$

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R=0.50\text{mA}$	100			V
Forward Voltage Drop	$V_{FM}$	$I_F=1\text{A}, T_J=25^{\circ}\text{C}$		0.53		
		$I_F=1\text{A}, T_J=125^{\circ}\text{C}$		0.43		
		$I_F=3\text{A}, T_J=25^{\circ}\text{C}$		0.69		
		$I_F=3\text{A}, T_J=125^{\circ}\text{C}$		0.54		
		$I_F=5\text{A}, T_J=25^{\circ}\text{C}$		0.73	0.77	V
		$I_F=5\text{A}, T_J=125^{\circ}\text{C}$		0.59	0.70	V
Leakage Current	$I_{RM}$	$V_R=100\text{V}, T_J=25^{\circ}\text{C}$		20	200	$\mu\text{A}$
		$V_R=100\text{V}, T_J=125^{\circ}\text{C}$		2	25	mA

Note: Pulse Test: Pulse width  $\leq 300\mu\text{s}$ , Duty cycle  $\leq 2\%$ .

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