



## MGBR10L45C

Preliminary

DIODE

### DUAL MOS GATED BARRIER RECTIFIER

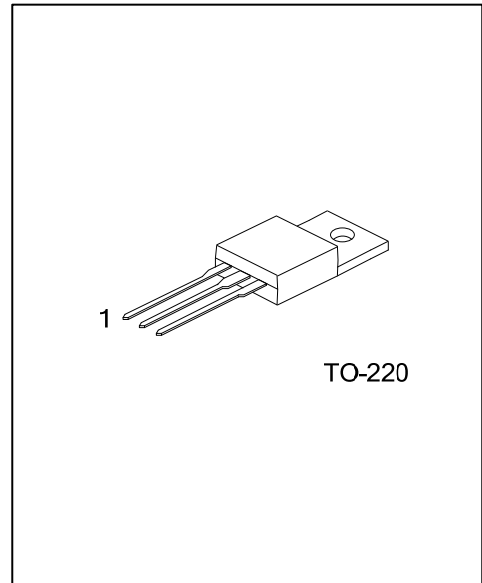
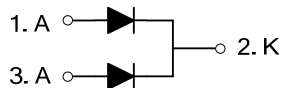
#### DESCRIPTION

The UTC **MGBR10L45C** 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



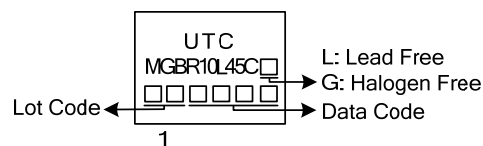
#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR10L45CL-TA3-T	MGBR10L45CG-TA3-T	TO-220	A	K	A	Tube

Note: Pin Assignment: A: Anode K: Cathode

<p>MGBR10L45CL-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</p> <p>(3) L: Lead Free, G: Halogen Free and 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		$V_{RM}$	45	V
Working Peak Reverse Voltage		$V_{RWM}$	45	V
Peak Repetitive Reverse Voltage		$V_{RRM}$	45	V
RMS Reverse Voltage		$V_{R(RMS)}$	32	V
Average Rectified Output Current ( $T_C=140^{\circ}\text{C}$ )	Per Leg	$I_O$	5	A
	Total		10	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load		$I_{FSM}$	90	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 CHARACTERISTICS

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	$\theta_{JA}$	62.5	$^{\circ}\text{C/W}$
Junction to Case	$\theta_{JC}$	2	$^{\circ}\text{C/W}$

■ 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)	$V_{(BR)R}$	$I_R=0.45\text{mA}$	45			V
Forward Voltage Drop	$V_{FM}$	$I_F=5\text{A}$ , $T_J=25^{\circ}\text{C}$			0.55	V
		$I_F=5\text{A}$ , $T_J=125^{\circ}\text{C}$			0.50	V
Leakage Current (Note 1)	$I_{RM}$	$V_R=45\text{V}$ , $T_J=25^{\circ}\text{C}$		50	300	$\mu\text{A}$
		$V_R=45\text{V}$ , $T_J=125^{\circ}\text{C}$		12	30	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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