



## MGBR10S60C

DIODE

### DUAL MOS BARRIER RECTIFIER

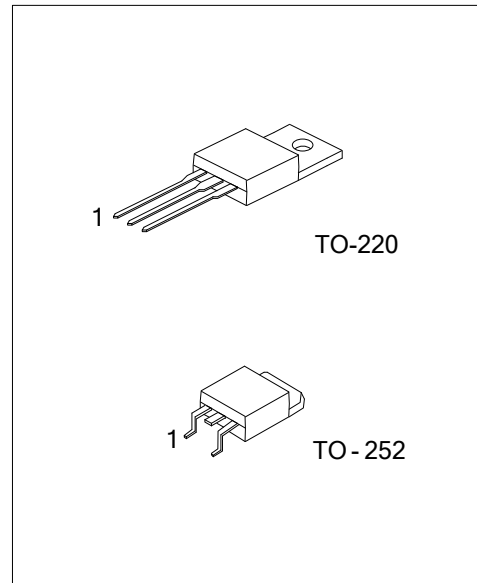
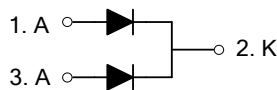
#### DESCRIPTION

The UTC **MGBR10S60C** 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

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

#### SYMBOL



#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR10S60CL-TA3-T	MGBR10S60CG-TA3-T	TO-220	A	K	A	Tube
MGBR10S60CL-TN3-R	MGBR10S60CG-TN3-R	TO-252	A	K	A	Tape Reel

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

<p>MGBR10S60CG-TA3-T</p> <p>(1) Packing Type</p> <p>(2) Package Type</p> <p>(3) Green Package</p>	<p>(1) T: Tube, R: Tape Reel</p> <p>(2) TA3: TO-220, TN3: TO-252</p> <p>(3) G: Halogen Free and Lead Free, L: Lead Free</p>
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#### MARKING

TO-220	TO-252
<p>UTC MGBR10S60C</p> <p>Lot Code ← [ ] → Date Code</p> <p>1</p> <p>L: Lead Free G: Halogen Free</p>	<p>UTC MGBR 10S60C</p> <p>Lot Code ← [ ] → Date Code</p> <p>1</p> <p>L: Lead Free G: Halogen Free</p>

### ■ 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		$V_{RM}$	60	V
Working Peak Reverse Voltage		$V_{RWM}$	60	V
Peak Repetitive Reverse Voltage		$V_{RRM}$	60	V
Average Rectified Forward Current (Rated VR-20KHz Square Wave) – 50% duty cycle	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		$I_{FSM}$	150	A
Peak Repetitive Reverse Surge Current (2 $\mu$ S-1kHz)		$I_{RRM}$	2	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 CHARACTERISTICS (PER LEG)

PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Ambient	TO-220	$\theta_{JA}$	62.5	$^{\circ}\text{C/W}$
	TO-252		110	
Junction to Case	TO-220	$\theta_{JC}$	2	$^{\circ}\text{C/W}$
	TO-252		2.5	

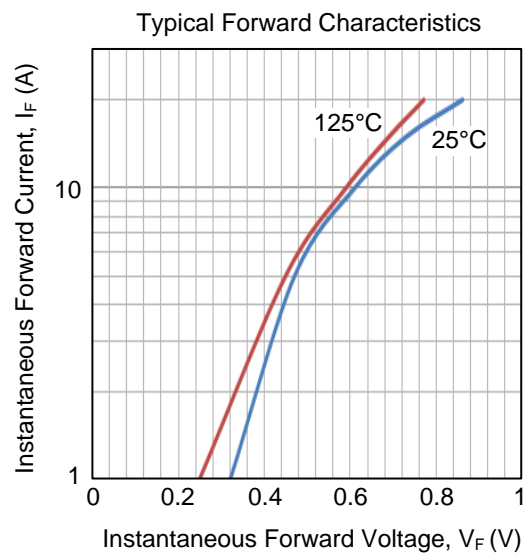
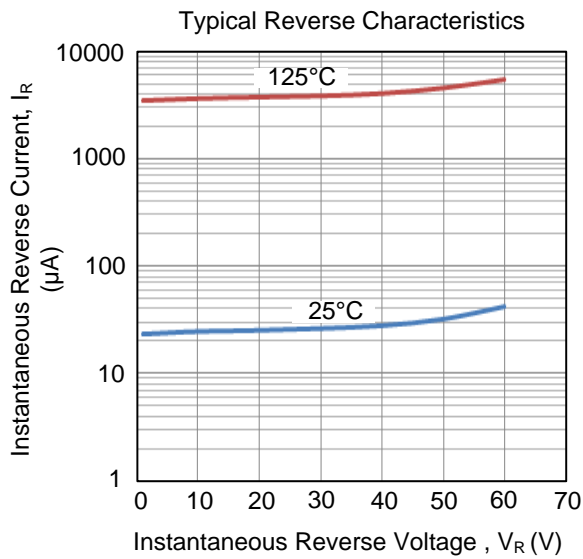
### ■ ELECTRICAL CHARACTERISTICS ( $T_A=25^{\circ}\text{C}$ , unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage (Note 1)	$V_{(BR)R}$	$I_R=0.60\text{mA}$	60			V
Forward Voltage Drop	$V_{FM}$	$I_F=5\text{A}, T_J=25^{\circ}\text{C}$			0.53	V
		$I_F=5\text{A}, T_J=125^{\circ}\text{C}$			0.48	V
Leakage Current (Note 1)	$I_{RM}$	$V_R=60\text{V}, T_J=25^{\circ}\text{C}$			500	$\mu\text{A}$
		$V_R=60\text{V}, T_J=125^{\circ}\text{C}$			50	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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