



# MGBR10L60C

**DIODE**

## DUAL MOS GATED BARRIER RECTIFIER

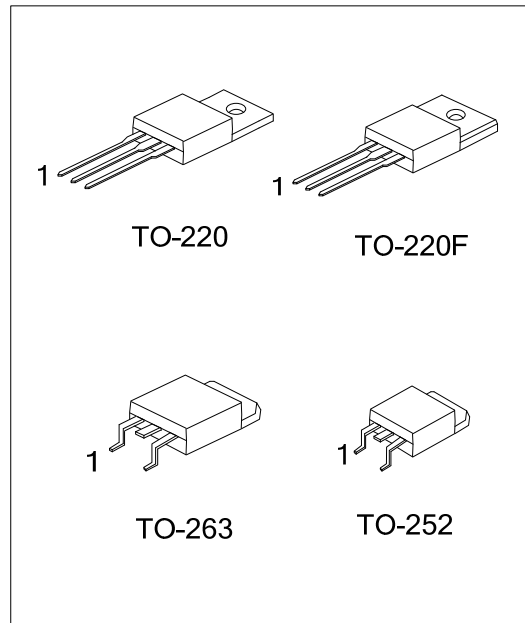
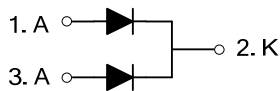
### DESCRIPTION

The UTC **MGBR10L60C** 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	
MGBR10L60CL-TA3-T	MGBR10L60CG-TA3-T	TO-220	A	K	A	Tube
MGBR10L60CL-TF3-T	MGBR10L60CG-TF3-T	TO-220F	A	K	A	Tube
MGBR10L60CL-TN3-R	MGBR10L60CG-TN3-R	TO-252	A	K	A	Tape Reel
MGBR10L60CL-TQ2-T	MGBR10L60CG-TQ2-T	TO-263	A	K	A	Tube
MGBR10L60CL-TQ2-R	MGBR10L60CG-TQ2-R	TO-263	A	K	A	Tape Reel

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

<p>MGBR10L60CL-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 TQ2: TO-263 (3) L: Lead Free, G: Halogen Free and Lead Free</p>
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### MARKING

TO-220 / TO-220F	TO-252 / TO-263

■ ABSOLUTE MAXIMUM RATINGS (PER LEG) (T<sub>A</sub>=25°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 <sub>RM</sub>	60	V
Working Peak Reverse Voltage		V <sub>RWM</sub>	60	V
Peak Repetitive Reverse Voltage		V <sub>RRM</sub>	60	V
Average Rectified Forward Current (Rated VR-20KHz Square Wave) – 50% duty cycle	Per Leg	I <sub>o</sub>	5	A
	Total		10	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load		I <sub>FSM</sub>	120	A
Peak Repetitive Reverse Surge Current (2μS-1kHz)		I <sub>RRM</sub>	2	A
Operating Junction Temperature		T <sub>J</sub>	-65~+150	°C
Storage Temperature		T <sub>STG</sub>	-65~+150	°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)

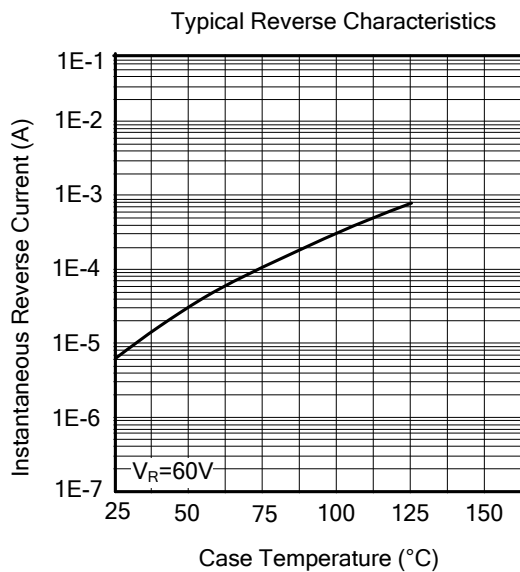
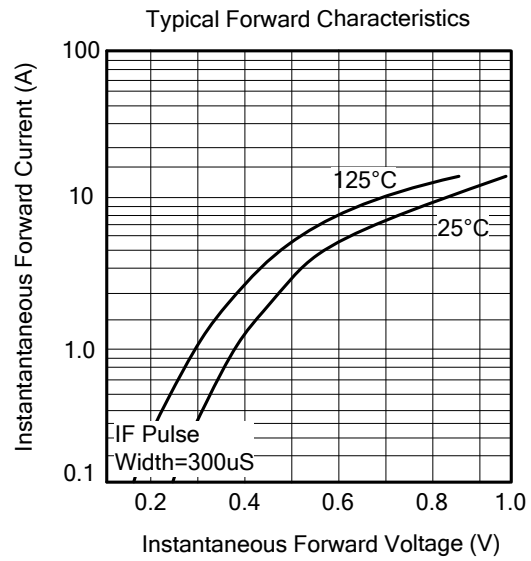
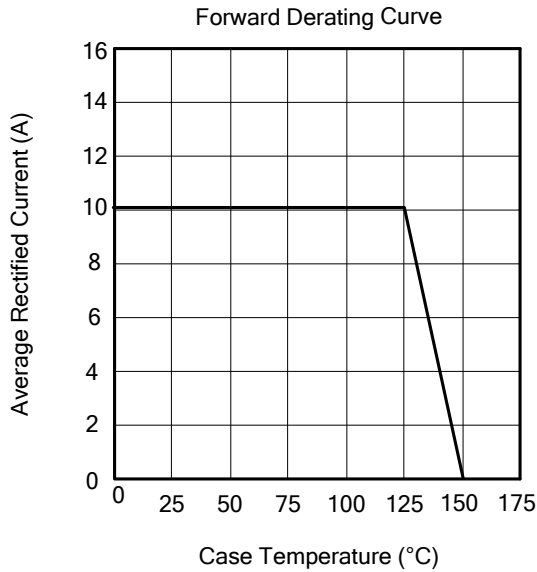
PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Ambient	TO-220/TO-220F	θ <sub>JA</sub>	62.5	°C/W
	TO-252		110	
	TO-263		62.5	
Junction to Case	TO-220	θ <sub>JC</sub>	2	°C/W
	TO-220F		3.31	
	TO-252		2.5	
	TO-263		2	

■ ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C, unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage (Note 1)	V <sub>(BR)R</sub>	I <sub>R</sub> =0.50mA	60			V
Forward Voltage Drop	V <sub>FM</sub>	I <sub>F</sub> =5A, T <sub>J</sub> =25°C			0.63	V
		I <sub>F</sub> =5A, T <sub>J</sub> =125°C			0.58	V
Leakage Current (Note 1)	I <sub>RM</sub>	V <sub>R</sub> =60V, T <sub>J</sub> =25°C		50	300	μA
		V <sub>R</sub> =60V, T <sub>J</sub> =125°C		15	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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