



## MGBR15L50C

Preliminary

DIODE

### DUAL MOS GATED BARRIER RECTIFIER

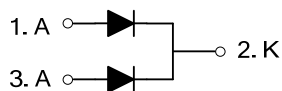
#### DESCRIPTION

The UTC **MGBR15L50C** 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

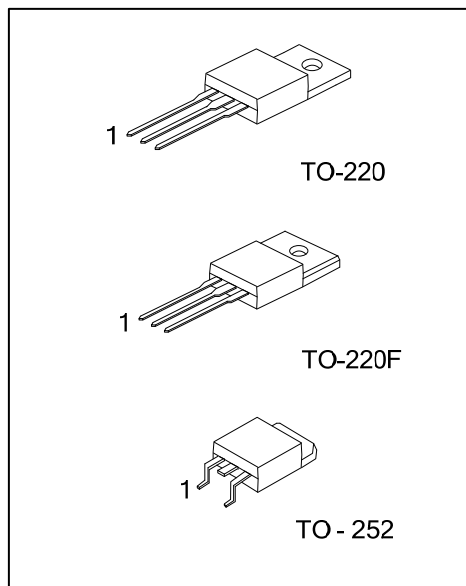
Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR15L50CL-TA3-T	MGBR15L50CG-TA3-T	TO-220	A	K	A	Tube
MGBR15L50CL-TF3-T	MGBR15L50CG-TF3-T	TO-220F	A	K	A	Tube
MGBR15L50CL-TN3-R	MGBR15L50CG-TN3-R	TO-252	A	K	A	Tape Reel

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

<p>MGBR15L50CL-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, TF3: TO-220F, TN3: TO-252</p> <p>(3) L: Lead Free, G: Halogen Free and Lead Free</p>
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#### MARKING

TO-220 / TO-220F	TO-252
<p>UTC MGBR15L50C</p> <p>Lot Code</p> <p>1</p> <p>L: Lead Free</p> <p>G: Halogen Free</p> <p>Data Code</p>	<p>UTC MGBR15L50C</p> <p>Lot Code</p> <p>1</p> <p>L: Lead Free</p> <p>G: Halogen Free</p> <p>Data Code</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		$V_{RM}$	50	V
Working Peak Reverse Voltage		$V_{RWM}$	50	V
Peak Repetitive Reverse Voltage		$V_{RRM}$	50	V
Average Rectified Forward Current (Rated VR-20KHz Square Wave) – 50% duty cycle	Per Leg	$I_O$	7.5	A
	Total		15	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load		$I_{FSM}$	180	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/TO-220F	$\theta_{JA}$	62.5	$^{\circ}\text{C/W}$
	TO-252		110	
Junction to Case	TO-220	$\theta_{JC}$	2	$^{\circ}\text{C/W}$
	TO-220F		3.31	
	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	$V_{(BR)R}$	$I_R=0.50\text{mA}$	50			V
Forward Voltage Drop	$V_{FM}$	$I_F=7.5\text{A}$ , $T_J=25^{\circ}\text{C}$			0.61	V
		$I_F=7.5\text{A}$ , $T_J=125^{\circ}\text{C}$			0.56	V
Leakage Current	$I_{RM}$	$V_R=50\text{V}$ , $T_J=25^{\circ}\text{C}$			300	$\mu\text{A}$
		$V_R=50\text{V}$ , $T_J=125^{\circ}\text{C}$			40	mA

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

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