



## MGBR6L50C

Preliminary

DIODE

### DUAL MOS GATED BARRIER RECTIFIER

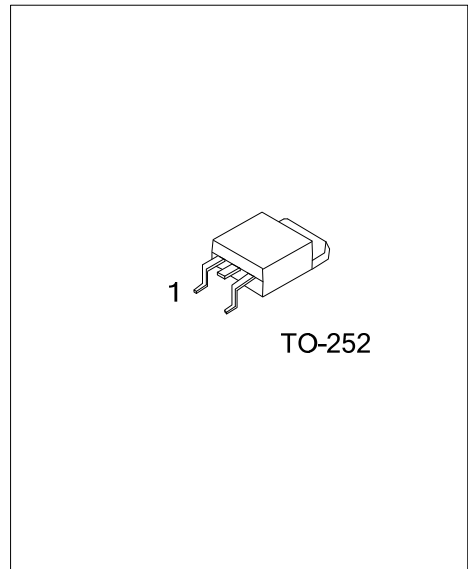
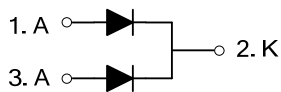
#### DESCRIPTION

The UTC **MGBR6L50C** 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



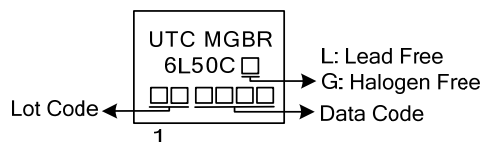
#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR6L50CL-TN3-R	MGBR6L50CG-TN3-R	TO-252	A	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

MGBR6L50CL-TN3-R	(1)Packing Type	(1) R: Tape Reel
	(2)Package Type	(2) TN3: TO-252
	(3)Green Package	(3) L: Lead Free, G: Halogen Free and Lead Free

#### 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		$V_{RM}$	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	$I_o$	3	A
	Total		6	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 ~ +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
Typical Thermal Resistance	$\theta_{JC}$	6	$^{\circ}\text{C}/\text{W}$

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R=0.50\text{mA}$	50			V
Forward Voltage Drop	$V_{FM}$	$I_F=3\text{A}, T_J=25^{\circ}\text{C}$			0.67	V
		$I_F=3\text{A}, T_J=125^{\circ}\text{C}$			0.62	V
Leakage Current	$I_{RM}$	$V_R=50\text{V}, T_J=25^{\circ}\text{C}$			100	$\mu\text{A}$
		$V_R=50\text{V}, T_J=125^{\circ}\text{C}$			15	mA

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

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