



## MGBR30V50C

DIODE

### DUAL MOS GATED BARRIER RECTIFIERS

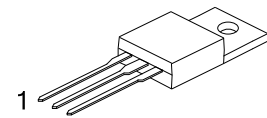
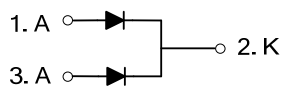
#### DESCRIPTION

The UTC **MGBR30V50C** 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

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

#### SYMBOL



TO-220

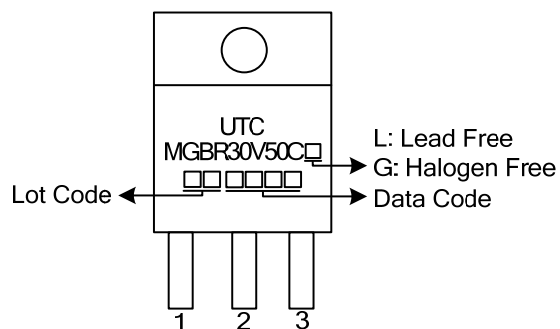
#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR30V50CL-TA3-T	MGBR30V50CG-TA3-T	TO-220	A	K	A	Tube

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

MGBR30V50CL-TA3-T	(1)Packing Type (2)Package Type (3)Lead Free	(1) T: Tube (2) TA3: TO-220 (3) L: Lead Free, G: Halogen Free
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#### MARKING INFORMATION



### ■ 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 Output Current Per Device	Per Leg	15 A	
	Total 3	0	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load		$I_{FSM}$ 250	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)

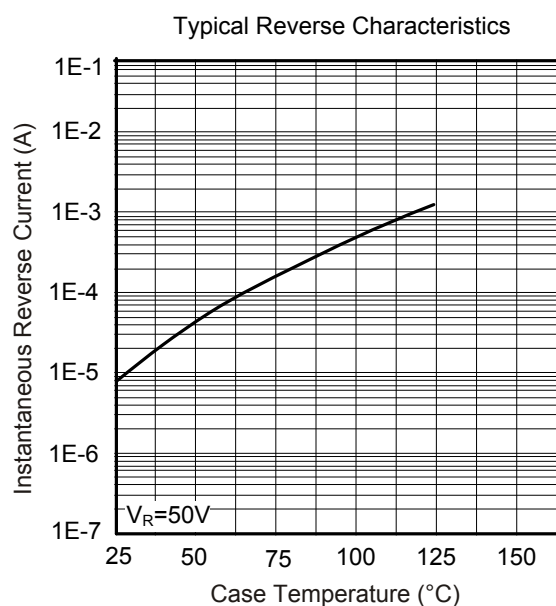
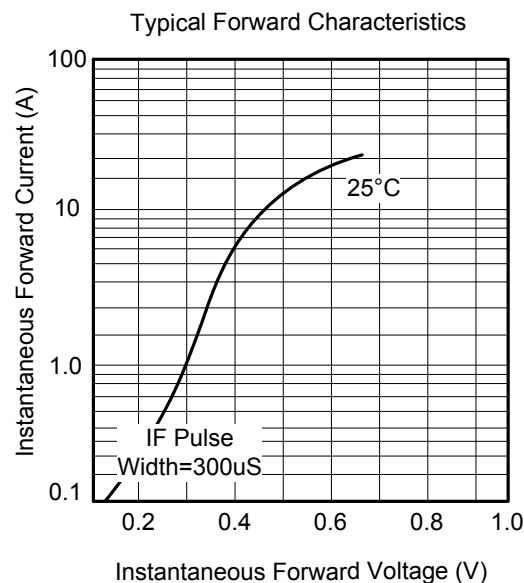
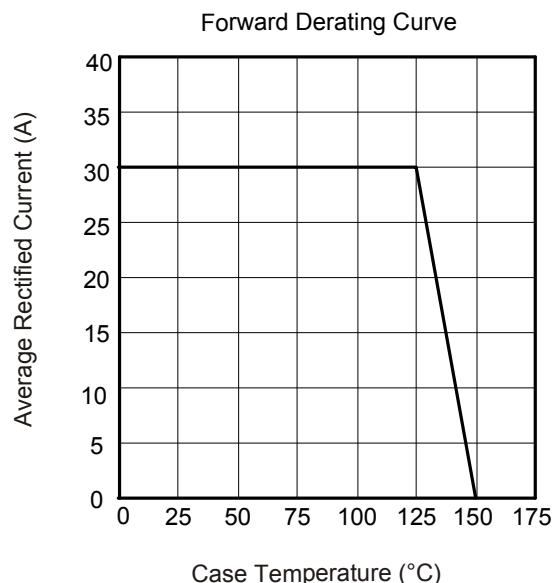
PARAMETER SYMBOL	RATINGS	UNIT
Junction to Case	$\theta_{JC}$ 2	$^{\circ}\text{C}/\text{W}$

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage (Note 1)	$V_{(BR)R}$	$I_R=0.50\text{mA}$ 50				V
Forward Voltage Drop	$V_{FM}$	$I_F=15\text{A}$ , $T_J=25^{\circ}\text{C}$			0.55	V
		$I_F=15\text{A}$ , $T_J=125^{\circ}\text{C}$			0.50	V
Leakage Current (Note 1)	$I_{RM}$	$V_R=50\text{V}$ , $T_J=25^{\circ}\text{C}$			500	$\mu\text{A}$
		$V_R=50\text{V}$ , $T_J=125^{\circ}\text{C}$			100	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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