



MGBR30V100C

DIODE

DUAL MOS GATED BARRIER RECTIFIER

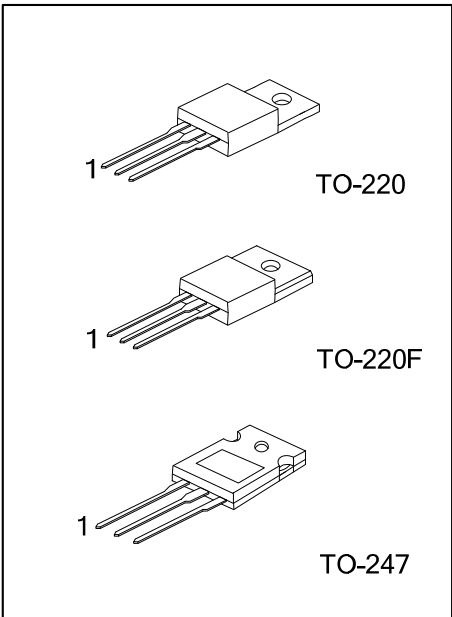
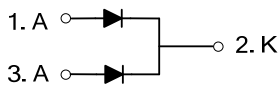
■ DESCRIPTION

The UTC **MGBR30V100C** 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



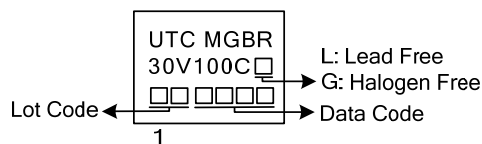
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR30V100CL-TA3-T	MGBR30V100CG-TA3-T	TO-220	A	K	A	Tube
MGBR30V100CL-TF3-T	MGBR30V100CG-TF3-T	TO-220F	A	K	A	Tube
MGBR30V100CL-T47-T	MGBR30V100CG-T47-T	TO-247	A	K	A	Tube

Note: Pin Assignment: A: Anode K: Cathode

<p>MGBR30V100CG-TA3-T</p> <p>(1)Packing Type</p> <p>(2)Package Type</p> <p>(3)Green Package</p>	<p>(1) T: Tube</p> <p>(2) TA3: TO-220, TF3: TO-220F, T47: TO-247</p> <p>(3) G: Halogen Free and Lead Free, L: Lead Free</p>
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■ MARKING



■ 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}	100	V
Working Peak Reverse Voltage		V_{RWM}	100	V
Peak Repetitive Reverse Voltage		V_{RRM}	100	V
Average Rectified Output Current Per Device	Per Leg	I_o	15	A
	Total		30	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load		I_{FSM}	160	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	θ_{JA}	62.5	$^\circ\text{C/W}$
	TO-247		35	$^\circ\text{C/W}$
Junction to Case	TO-220	θ_{JC}	2	$^\circ\text{C/W}$
	TO-220F		3.31	$^\circ\text{C/W}$
	TO-247		1.45	$^\circ\text{C/W}$

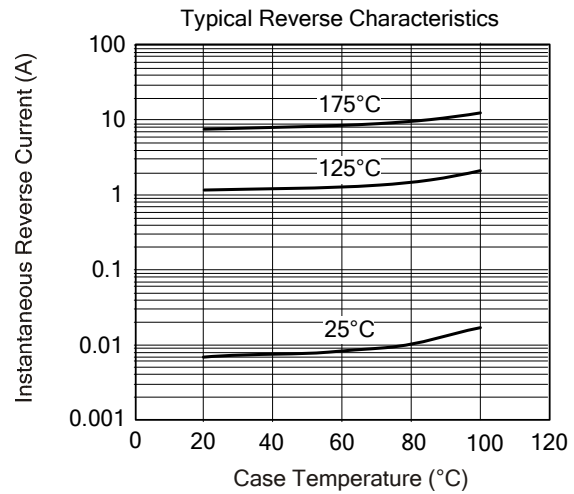
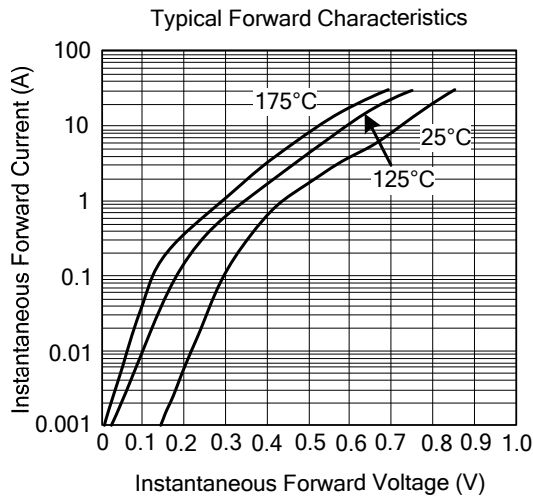
■ ELECTRICAL CHARACTERISTICS (PER LEG) ($T_A=25^\circ\text{C}$ unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage (Note 1)	$V_{(BR)R}$	$I_R=0.50\text{mA}$	100			V
Forward Voltage Drop	V_{FM}	$I_F=5\text{A}, T_J=25^\circ\text{C}$			0.68	V
		$I_F=5\text{A}, T_J=125^\circ\text{C}$			0.56	V
		$I_F=10\text{A}, T_J=25^\circ\text{C}$			0.75	V
		$I_F=10\text{A}, T_J=125^\circ\text{C}$			0.64	V
		$I_F=15\text{A}, T_J=25^\circ\text{C}$			0.80	V
		$I_F=15\text{A}, T_J=125^\circ\text{C}$			0.68	V
Leakage Current (Note 1)	I_{RM}	$V_R=100\text{V}, T_J=25^\circ\text{C}$			200	μA
		$V_R=100\text{V}, T_J=125^\circ\text{C}$			25	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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