



MGBR20S50C

Preliminary

DIODE

DUAL MOS GATED BARRIER RECTIFIER

■ DESCRIPTION

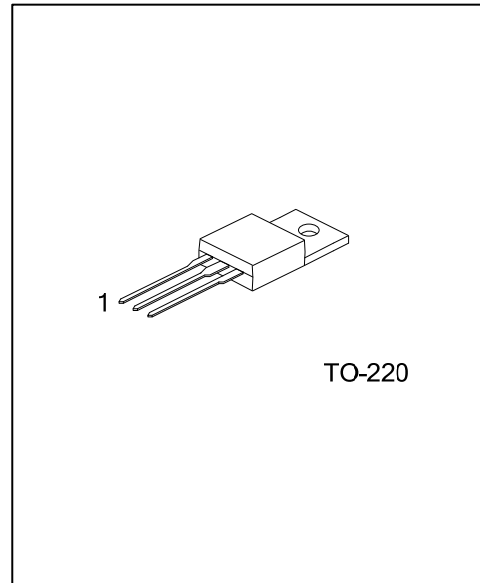
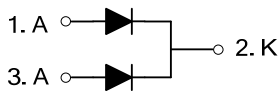
The UTC **MGBR20S50C** is a dual mos gated barrier rectifiers, it uses UTC's advanced technology to provide customers with low forward voltage drop and high switching speed, etc.

The UTC **MGBR20S50C** suitable for supply applications.

■ FEATURES

- * Super low forward voltage drop
- * High switching speed

■ SYMBOL



■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR20S50CL-TA3-T	MGBR20S50CG-TA3-T	TO-220	A	K	A	Tube

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

<p>MGBR20S50CL-TA3-T</p>	<p>(1) Packing Type (1) T: Tube</p> <p>(2) Package Type (2) TA3: TO-220</p> <p>(3) Lead Free (3) L: Lead Free, G: Halogen Free</p>
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■ 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 V_R -20Khz Square Wave) - 50% Duty Cycle	Per Leg	I_O	10	A
	Total		20	A
Peak Forward Surge Current - 1/2 60hz		I_{FSM}	180	A
Peak Repetitive Reverse Surge Current (2uS-1Khz)		I_{RRM}	2	A
Maximum Rate of Voltage Change (at Rated V_R)		dv/dt	10000	V/ μ S
Operating Junction Temperature		T_J	-65~+150	$^\circ\text{C}$
Storage Junction 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

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Case	θ_{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	V_{FM}	$I_F=10\text{A}, T_J=25^\circ\text{C}$			0.50	V
		$I_F=10\text{A}, T_J=125^\circ\text{C}$			0.45	V
Reverse Current (Note 1)	I_{RM}	$V_R=50\text{V}, T_J=25^\circ\text{C}$			500	μA
		$V_R=50\text{V}, T_J=125^\circ\text{C}$			100	mA

Notes: 1. Short duration pulse test used to minimize self-heating effect.
2. Thermal resistance junction to case mounted on heatsink.

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