



MGBR20U50C

Preliminary

DIODE

DUAL MOS GATED BARRIER RECTIFIER

DESCRIPTION

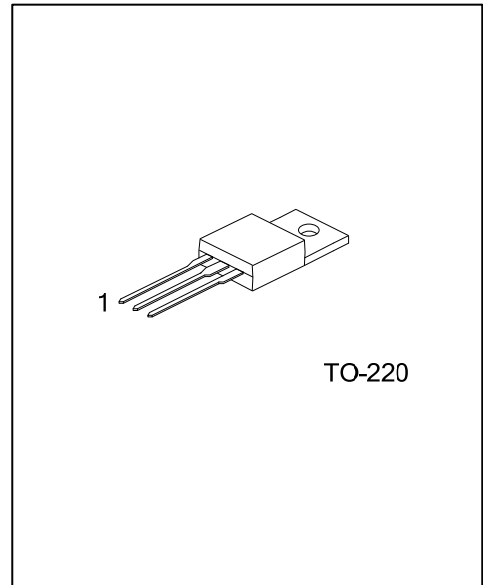
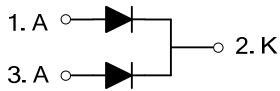
The UTC MGBR20U50C is a dual mos gated barrier rectifiers, it uses UTC's advanced technology to provide customers with low forward voltage drop and high switching speed, etc.

The UTC MGBR20U50C suitable for supply applications.

FEATURES

- * Ultra low forward voltage drop
* High switching speed

SYMBOL



ORDERING INFORMATION

Table with columns: Ordering Number (Lead Free, Halogen Free), Package (TO-220), Pin Assignment (1: A, 2: K, 3: A), Packing (Tube).

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

Table explaining the ordering code MGBR20U50CL-TA3-T: (1) Packing Type (T: Tube), (2) Package Type (TA3: TO-220), (3) Lead Free (L: Lead Free, G: Halogen Free).

■ 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}	250	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}	$I_F=10\text{A}, T_J=25^\circ\text{C}$			0.45	V
		$I_F=10\text{A}, T_J=125^\circ\text{C}$			0.40	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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