



**MGBR20U50C**

Preliminary

**DIODE**

**DUAL MOS GATED BARRIER RECTIFIER**

■ DESCRIPTION

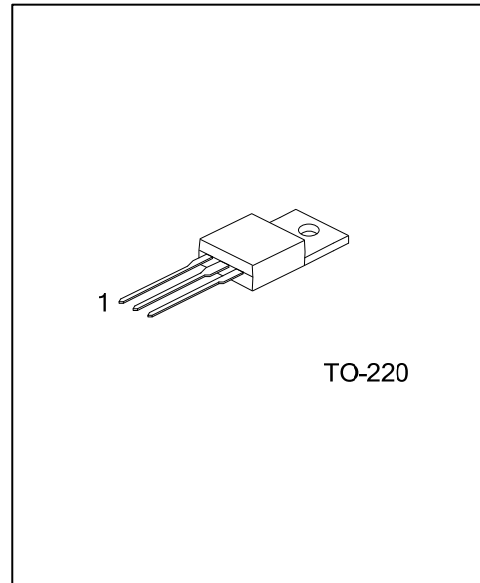
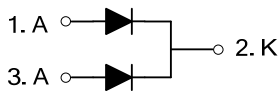
The UTC **MGBR20U50C** is a dual mos gated barrier rectifiers, it uses UTC's advanced technology to provide customers with low forward voltage drop and high switching speed, etc.

The UTC **MGBR20U50C** suitable for supply applications.

■ FEATURES

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

■ SYMBOL



■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR20U50CL-TA3-T	MGBR20U50CG-TA3-T	TO-220	A	K	A	Tube

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

MGBR20U50CL-TA3-T	(1)Packing Type	(1) T: Tube
	(2)Package Type	(2) TA3: TO-220
	(3)Lead Free	(3) L: Lead Free, G: Halogen Free

■ ABSOLUTE MAXIMUM RATINGS (PER LEG) (T<sub>A</sub>=25°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 <sub>RM</sub>	50	V
Working Peak Reverse Voltage		V <sub>RWM</sub>	50	V
Peak Repetitive Reverse Voltage		V <sub>RPM</sub>	50	V
Average Rectified Forward Current (Rated VR-20Khz Square Wave) - 50% Duty Cycle	Per Leg	I <sub>O</sub>	10	A
	Total		20	A
Peak Forward Surge Current - 1/2 60hz		I <sub>FSM</sub>	250	A
Peak Repetitive Reverse Surge Current (2uS-1Khz)		I <sub>RPM</sub>	2	A
Maximum Rate of Voltage Change ( at Rated V <sub>R</sub> )		dv/dt	10000	V/μS
Operating Junction Temperature		T <sub>J</sub>	-65~+150	°C
Storage Junction Temperature		T <sub>STG</sub>	-65~+150	°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 <sub>JC</sub>	2	°C/W

■ ELECTRICAL CHARACTERISTICS (PER LEG) (T<sub>A</sub>=25°C unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage (Note 1)	V <sub>(BR)R</sub>	I <sub>R</sub> =0.50mA	50			V
Forward Voltage	V <sub>FM</sub>	I <sub>F</sub> =10A, T <sub>J</sub> =25°C			0.45	V
		I <sub>F</sub> =10A, T <sub>J</sub> =125°C			0.40	V
Reverse Current (Note 1)	I <sub>RM</sub>	V <sub>R</sub> =50V, T <sub>J</sub> =25°C			500	μA
		V <sub>R</sub> =50V, T <sub>J</sub> =125°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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