



MGBR20V50C

Preliminary

DIODE

DUAL MOS GATED BARRIER RECTIFIER

■ DESCRIPTION

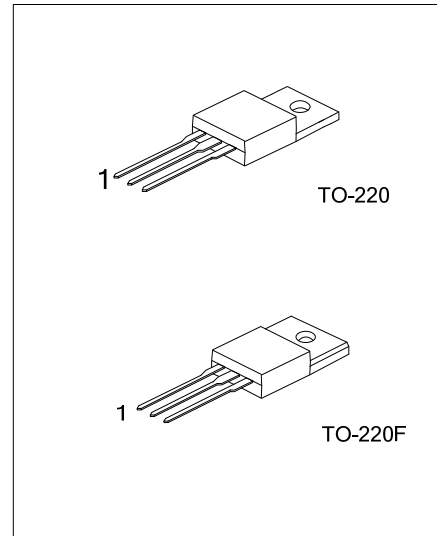
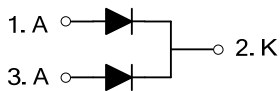
The UTC **MGBR20V50C** is a dual mos gated barrier rectifiers, it uses UTC's advanced technology to provide customers with low forward voltage drop and high switching speed, etc.

The UTC **MGBR20V50C** suitable for supply applications.

■ 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	
MGBR20V50CL-TA3-T	MGBR20V50CG-TA3-T	TO-220	A	K	A	Tube
MGBR20V50CL-TF3-T	MGBR20V50CG-TF3-T	TO-220F	A	K	A	Tube

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

<p>MGBR20V50CL-TA3-T</p>	<p>(1) T: Tube</p> <p>(2) TA3: TO-220, TF3: TO-220F</p> <p>(3) L: Lead Free, G: Halogen Free</p>
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■ MARKING INFORMATION

PACKAGE	MARKING
<p>TO-220 TO-220F</p>	<p>Lot Code →</p> <p>→ Data Code</p> <p>1</p>

■ ABSOLUTE MAXIMUM RATINGS (PER LEG) (T_A=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 _{RM}	50	V
Working Peak Reverse Voltage		V _{RWM}	50	V
Peak Repetitive Reverse Voltage		V _{RRM}	50	V
Average Rectified Forward Current (Rated VR-20Khz Square Wave) - 50% Duty Cycle	Per Leg	I _O	10	A
	Total		20	A
Peak Forward Surge Current - 1/2 60hz		I _{FSM}	150	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/μS
Operating Junction Temperature		T _J	-65~+150	°C
Storage Junction Temperature		T _{STG}	-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 _{JC}	2	°C/W

■ ELECTRICAL CHARACTERISTICS (PER LEG) (T_A=25°C unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage (Note 1)	V _{(BR)R}	I _R =0.50mA	50			V
Forward Voltage	V _{FM}	I _F =10A, T _J =25°C			0.55	V
		I _F =10A, T _J =125°C			0.50	V
Reverse Current (Note 1)	I _{RM}	V _R =50V, T _J =25°C			500	μA
		V _R =50V, T _J =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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