



MGBR20L200

Preliminary

DIODE

MOS GATED BARRIER RECTIFIER

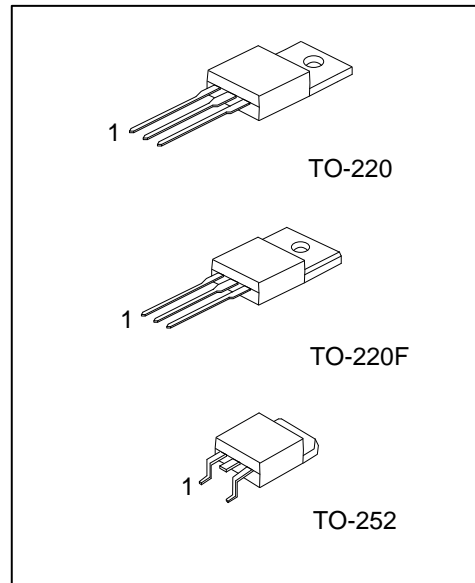
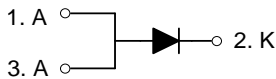
DESCRIPTION

The UTC **MGBR20L200** is a surface mount mos gated barrier rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop and high switching speed, etc.

FEATURES

- * Low forward voltage drop
- * High switching speed

SYMBOL



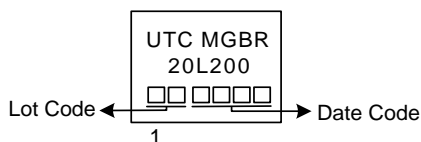
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR20L200L-TA3-T	MGBR20L200G-TA3-T	TO-220	A	K	A	Tube
MGBR20L200L-TF3-T	MGBR20L200G-TF3-T	TO-220F	A	K	A	Tube
MGBR20L200L-TN3-R	MGBR20L200G-TN3-R	TO-252	A	K	A	Tape Reel

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

<p>MGBR20L200G-TA3-T</p>	<p>(1) T: Tube, R: Tape Reel</p> <p>(2) TA3: TO-220, TF3: TO-220F, TN3: TO-252</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}	200	V
Working Peak Reverse Voltage	V_{RWM}	200	V
Peak Repetitive Reverse Voltage	V_{RRM}	200	V
Average Rectified Output Current	I_O	20	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	300	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)

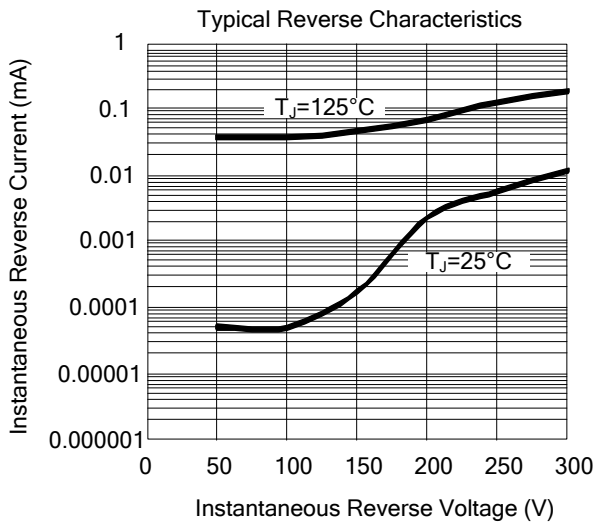
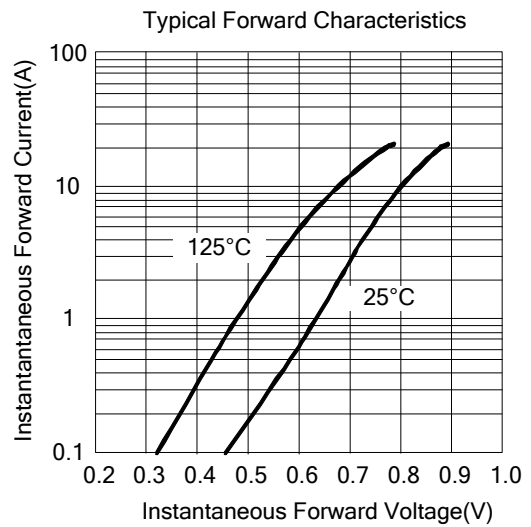
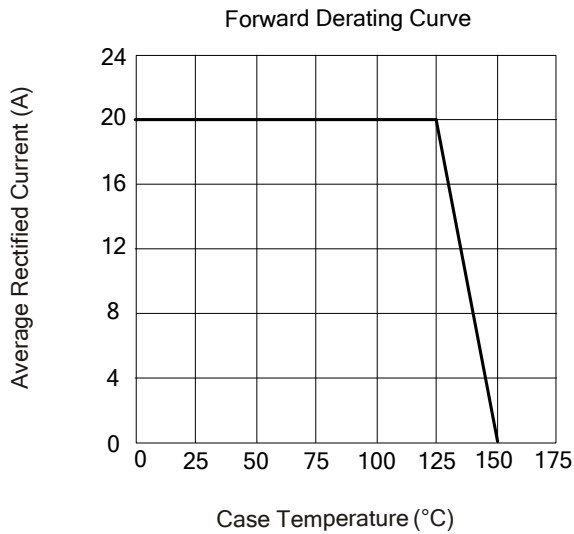
PARAMETER	SYMBOL	RATINGS	UNIT
Typical Thermal Resistance	TO-220	2	$^{\circ}\text{C}/\text{W}$
	TO-220F	4	$^{\circ}\text{C}/\text{W}$
	TO-252	6	$^{\circ}\text{C}/\text{W}$

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R=0.5\text{mA}$	200			V
Forward Voltage Drop	V_{FM}	$I_F=5\text{A}, T_J=25^{\circ}\text{C}$		0.71		V
		$I_F=5\text{A}, T_J=125^{\circ}\text{C}$		0.58		V
		$I_F=10\text{A}, T_J=25^{\circ}\text{C}$		0.75		V
		$I_F=10\text{A}, T_J=125^{\circ}\text{C}$		0.65		V
		$I_F=20\text{A}, T_J=25^{\circ}\text{C}$		0.80	0.90	V
		$I_F=20\text{A}, T_J=125^{\circ}\text{C}$		0.75	0.80	V
Leakage Current	I_{RM}	$V_R=200\text{V}, T_J=25^{\circ}\text{C}$		0.50	100	μA
		$V_R=200\text{V}, T_J=125^{\circ}\text{C}$		0.05	10	mA

Note: Pulse Test: Pulse width $\leq 300\mu\text{s}$, Duty cycle $\leq 2\%$.

■ TYPICAL CHARACTERISTICS



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