



**MGBR20L100**

Preliminary

**DIODE**

**MOS GATED BARRIER RECTIFIER**

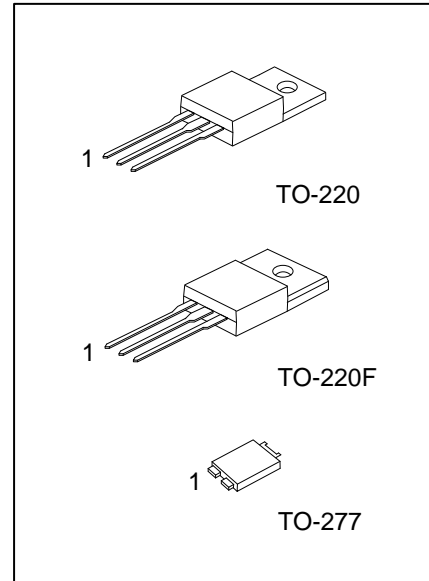
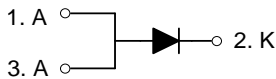
■ **DESCRIPTION**

The UTC **MGBR20L100** 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	
MGBR20L100L-TA3-T	MGBR20L100G-TA3-T	TO-220	A	K	A	Tube
MGBR20L100L-TF3-T	MGBR20L100G-TF3-T	TO-220F	A	K	A	Tube
MGBR20L100L-T27-R	MGBR20L100G-T27-R	TO-277	A	K	A	Tape Reel

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

<p>MGBR20L100G-TA3-T</p> <p>(1) Packing Type</p> <p>(2) Package Type</p> <p>(3) Green Package</p>	<p>(1) T: Tube, R: Tape Reel</p> <p>(2) TA3: TO-220, TF3: TO-220F, T27: TO-277</p> <p>(3) G: Halogen Free and Lead Free, L: Lead Free</p>
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■ **MARKING**

TO-220 / TO-220F	TO-277

### ■ ABSOLUTE MAXIMUM RATINGS (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>	100	V
Working Peak Reverse Voltage	V <sub>RWM</sub>	100	V
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	100	V
Average Rectified Output Current	I <sub>O</sub>	20	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	250	A
Operating Junction Temperature	T <sub>J</sub>	-65 ~ +150	°C
Storage 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 (PER LEG)

PARAMETER	SYMBOL	RATINGS	UNIT
Typical Thermal Resistance	TO-220	2	°C/W
	TO-220F	4	°C/W
	TO-277	15 (Note)	°C/W

Note: Mounted on an FR4 PCB, single-sided copper, with 100 cm<sup>2</sup> copper pad area.

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	V <sub>(BR)R</sub>	I <sub>R</sub> =0.5mA	100			V
Instantaneous Forward Voltage	V <sub>FM</sub>	I <sub>F</sub> =20A, T <sub>J</sub> =25°C			0.90	V
		I <sub>F</sub> =20A, T <sub>J</sub> =125°C			0.75	V
Leakage Current	I <sub>RM</sub>	V <sub>R</sub> =100V, T <sub>J</sub> =25°C			300	μA
		V <sub>R</sub> =100V, T <sub>J</sub> =125°C			30	mA

Note: Pulse Test: Pulse width ≤ 300μs, Duty cycle ≤ 2%.

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