



MGBR20L100

Preliminary

DIODE

**MOS GATED BARRIER
RECTIFIER**

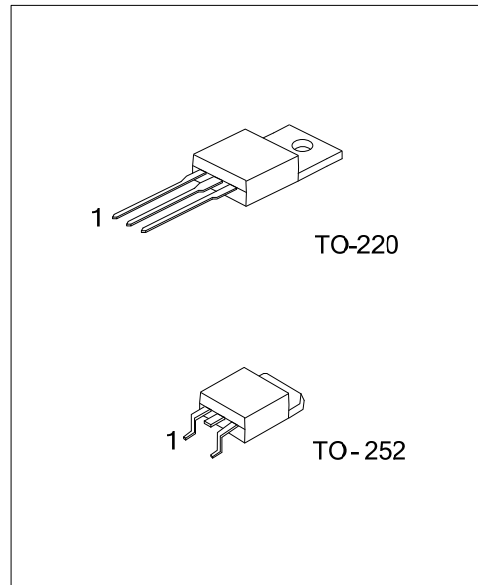
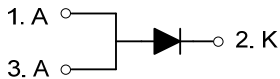
■ DESCRIPTION

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



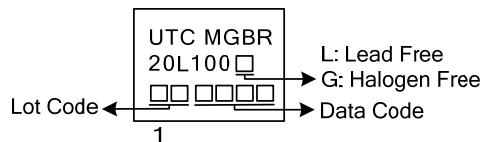
■ ORDERING INFORMATION

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-TN3-R	MGBR20L100G-TN3-R	TO-252	A	K	A	Tape Reel

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

<p>MGBR20L100L-TA3-T</p>	<p>(1) T: Tube, R: Tape Reel</p> <p>(2) TA3: TO-220, TN3: TO-252</p> <p>(3) L: Lead Free, G: Halogen Free and Lead Free</p>
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■ MARKING



■ ABSOLUTE MAXIMUM RATINGS (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}	100	V
Working Peak Reverse Voltage	V _{RWM}	100	V
Repetitive Peak Reverse Voltage	V _{RRM}	100	V
RMS Reverse Voltage	V _{R(RMS)}	80	V
Average Rectified Output Current	I _O	20	A
T _C =140°C			
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	250	A
Operating Junction Temperature	T _J	-65~+150	°C
Storage 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 (Note 3)

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ _{JA}	65	°C/W
Junction to Case	θ _{JC}	1.4	°C/W

■ ELECTRICAL CHARACTERISTICS (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 =0.5mA	100			V
Forward Voltage Drop	V _{FM}	I _F =20A, T _J =25°C			0.80	V
		I _F =20A, T _J =125°C			0.75	V
Leakage Current (Note 1)	I _{RM}	V _R =100V, T _J =25°C			300	μA
		V _R =100V, T _J =125°C			30	mA

Notes: 1. Short duration pulse test used to minimize self-heating effect.

2. Thermal resistance junction to case mounted on heatsink.

3. Mounted on an FR4 PCB, single-sided copper, with 100 cm² copper pad area.

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