



## MGBR20L300C

DIODE

### DUAL MOS GATED BARRIER RECTIFIER

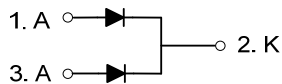
#### DESCRIPTION

The UTC **MGBR20L300C** 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.

#### FEATURES

- \* Low forward voltage drop
- \* High switching speed

#### SYMBOL



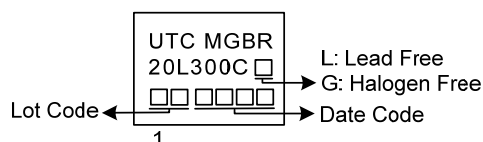
#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR20L300CL-TA3-T	MGBR20L300CG-TA3-T	TO-220	A	K	A	Tube
MGBR20L300CL-TF1-T	MGBR20L300CG-TF1-T	TO-220F1	A	K	A	Tube
MGBR20L300CL-TF3-T	MGBR20L300CG-TF3-T	TO-220F	A	K	A	Tube
MGBR20L300CL-T47-T	MGBR20L300CG-T47-T	TO-247	A	K	A	Tube
MGBR20L300CL-TQ2-T	MGBR20L300CG-TQ2-T	TO-263	A	K	A	Tube
MGBR20L300CL-TQ2-R	MGBR20L300CG-TQ2-R	TO-263	A	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

MGBR20L300CG-TA3-T	(1)Packing Type (2)Package Type (3)Green Package	(1) T: Tube, R: Tape Reel (2) TA3: TO-220, TF1: TO-220F1, TF3: TO-220F T47: TO-247, TQ2: TO-263 (3) G: Halogen Free and Lead Free, L: Lead Free
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#### MARKING



### ■ 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>	300	V
Working Peak Reverse Voltage	V <sub>RWM</sub>	300	V
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	300	V
Average Rectified Output Current Per Device	I <sub>O</sub>	10	A
		20	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	130	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 DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ <sub>JA</sub>	62.5	°C/W
		40	°C/W
		2	°C/W
Junction to Case	θ <sub>JC</sub>	4	°C/W
		2	°C/W
		1.5	°C/W

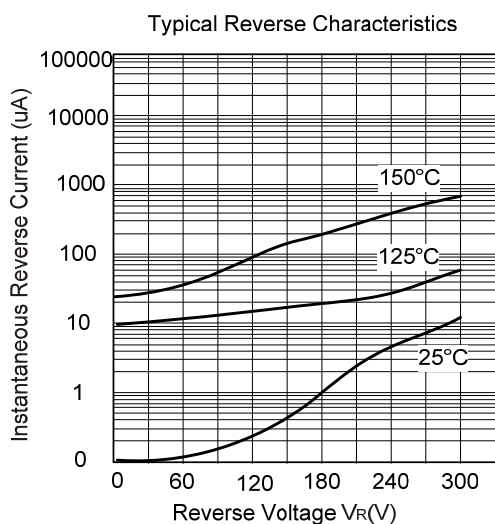
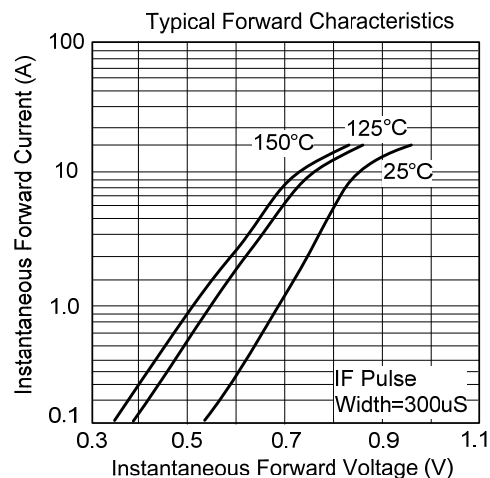
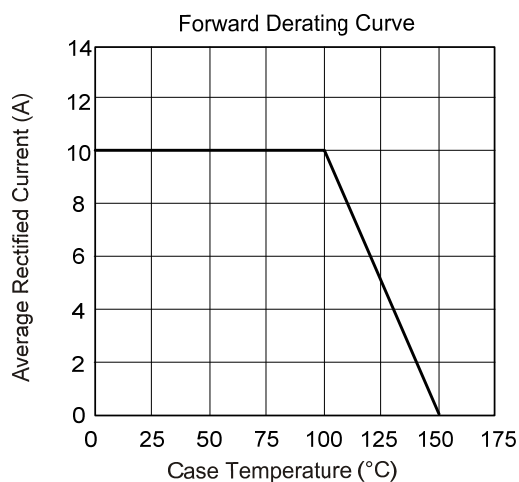
### ■ ELECTRICAL CHARACTERISTICS (PER LEG) (T<sub>A</sub> = 25°C unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage (Note 1)	V <sub>(BR)R</sub>	I <sub>R</sub> =0.50mA	300			V
Forward Voltage Drop	V <sub>FM</sub>	I <sub>F</sub> =10A, T <sub>J</sub> =25°C			0.92	V
		I <sub>F</sub> =10A, T <sub>J</sub> =125°C			0.80	V
Leakage Current (Note 1)	I <sub>RM</sub>	V <sub>R</sub> =300V, T <sub>J</sub> =25°C			100	μA
		V <sub>R</sub> =300V, T <sub>J</sub> =125°C			10	mA

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

2. Thermal resistance junction to case mounted on heatsink.

## ■ TYPICAL CHARACTERISTICS



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