



MGBR20L300

DIODE

MOS GATED BARRIER RECTIFIER

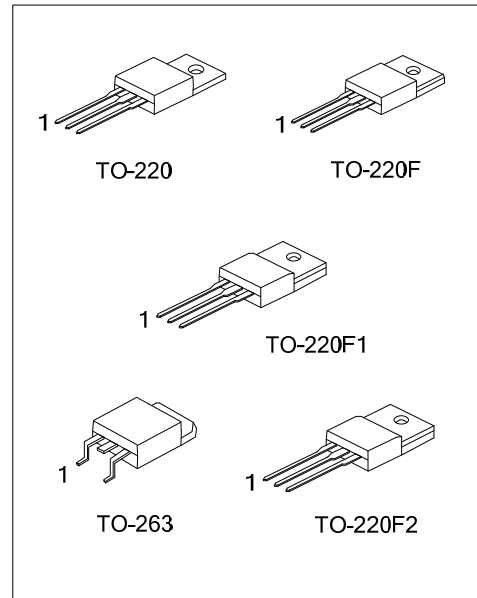
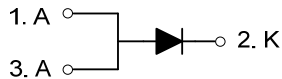
DESCRIPTION

The UTC **MGBR20L300** 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



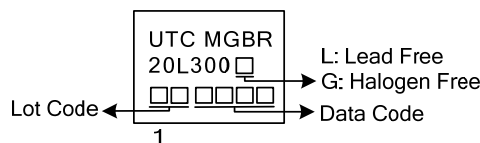
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR20L300L-TA3-T	MGBR20L300G-TA3-T	TO-220	A	K	A	Tube
MGBR20L300L-TF3-T	MGBR20L300G-TF3-T	TO-220F	A	K	A	Tube
MGBR20L300L-TF1-T	MGBR20L300G-TF1-T	TO-220F1	A	K	A	Tube
MGBR20L300L-TF2-T	MGBR20L300G-TF2-T	TO-220F2	A	K	A	Tube
MGBR20L300L-TQ2-T	MGBR20L300G-TQ2-T	TO-263	A	K	A	Tube
MGBR20L300L-TQ2-R	MGBR20L300G-TQ2-R	TO-263	A	K	A	Tape Reel

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

<p>MGBR20L300L-TA3-T</p>	<p>(1) T: Tube, R: Tape Reel (2) TA3: TO-220, TF3: TO-220F, TF1: TO-220F1 TF2: TO-220F2, TQ2: TO-263 (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}	300	V
Working Peak Reverse Voltage		V _{RWM}	300	V
Peak Repetitive Reverse Voltage		V _{RRM}	300	V
Average Rectified Output Current	T _C =140°C	I _O	20	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load		I _{FSM}	235	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)

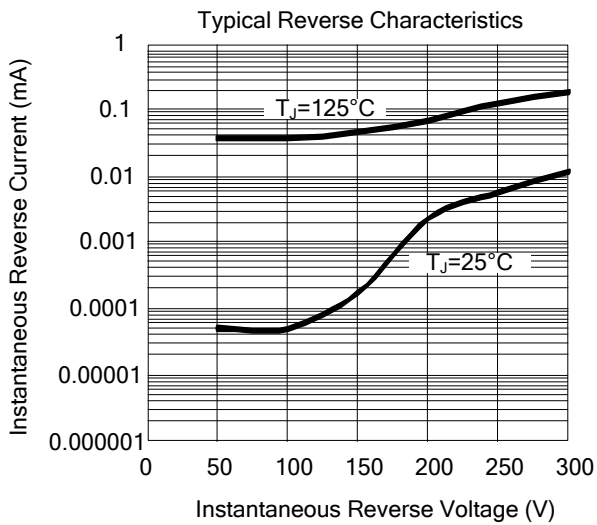
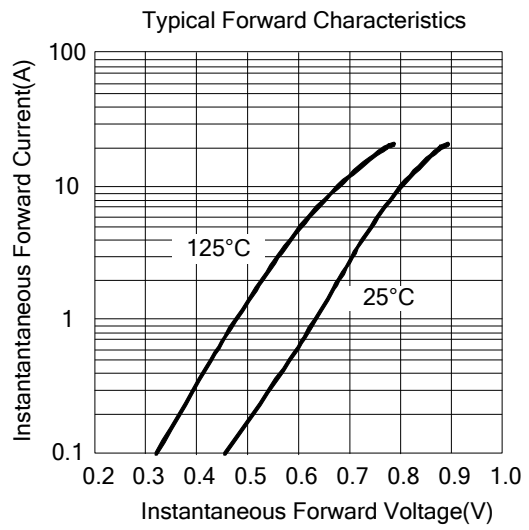
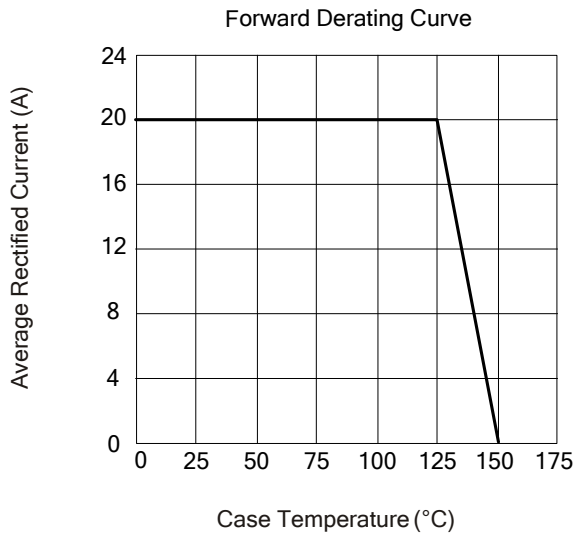
PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Ambient		θ _{JA}	62.5	°C/W
Junction to Case	TO-220/TO-263	θ _{JC}	2	°C/W
	TO-220F/TO-220F1		4	
	TO-220F2			

■ 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	300			V
Forward Voltage Drop	V _{FM}	I _F =20A, T _J =25°C		0.88	0.92	V
		I _F =20A, T _J =125°C		0.80	0.81	V
Leakage Current (Note 1)	I _{RM}	V _R =300V, T _J =25°C			100	μA
		V _R =300V, T _J =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.
 3. Mounted on an FR4 PCB, single-sided copper, with 100 cm² copper pad area.

■ TYPICAL CHARACTERISTICS



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