



MGBR20V300C

Preliminary

DIODE

DUAL MOS GATED BARRIER RECTIFIER

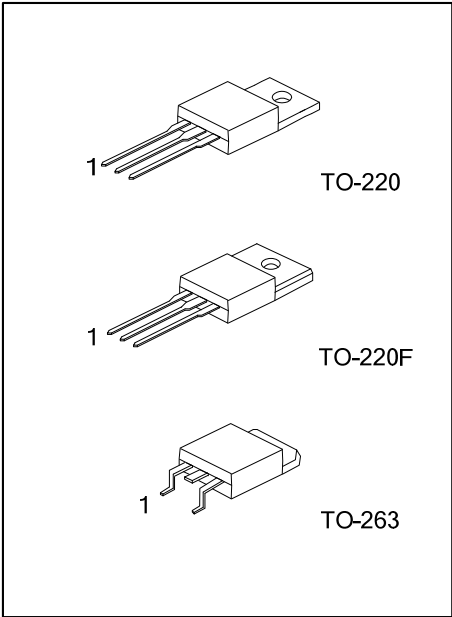
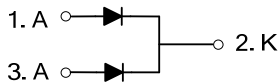
■ DESCRIPTION

The UTC **MGBR20V300C** 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



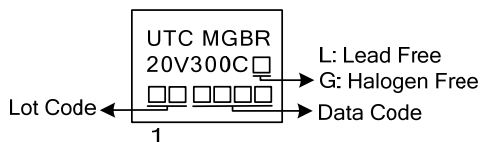
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR20V300CL-TA3-T	MGBR20V300CG-TA3-T	TO-220	A	K	A	Tube
MGBR20V300CL-TF3-T	MGBR20V300CG-TF3-T	TO-220F	A	K	A	Tube
MGBR20V300CL-TQ2-T	MGBR20V300CG-TQ2-T	TO-263	A	K	A	Tube
MGBR20V300CL-TQ2-R	MGBR20V300CG-TQ2-R	TO-263	A	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

<p>MGBR20V300CL-TA3-T</p>	<p>(1) T: Tube, R: Tape Reel</p> <p>(2) TA3: TO-220, TF3: TO-220F, TQ2: TO-263</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}	300	V
Working Peak Reverse Voltage		V _{RWM}	300	V
Peak Repetitive Reverse Voltage		V _{RPM}	300	V
Average Rectified Output Current Per Device	Per Leg	I _O	10	A
	Total		20	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load		I _{FSM}	180	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 (PER LEG)

PARAMETER		SYMBOL	RATINGS	UNIT
Typical Thermal Resistance	TO-220	θ _{JC}	2	°C/W
	TO-220F		4	
	TO-263		3	

■ ELECTRICAL CHARACTERISTICS (PER LEG) (T_A=25°C unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	V _{(BR)R}	I _R =0.50mA	300			V
Forward Voltage Drop	V _{FM}	I _F =10A, T _J =25°C			0.87	V
		I _F =10A, T _J =125°C			0.74	V
Leakage Current	I _{RM}	V _R =300V, T _J =25°C			100	μA
		V _R =300V, T _J =125°C			30	mA

Notes: 1. Pulse Test: Pulse width ≤ 300μs, Duty cycle ≤ 2%.

2. Device mounted on additional heatsink 2 inch × 2 inch Al board.

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