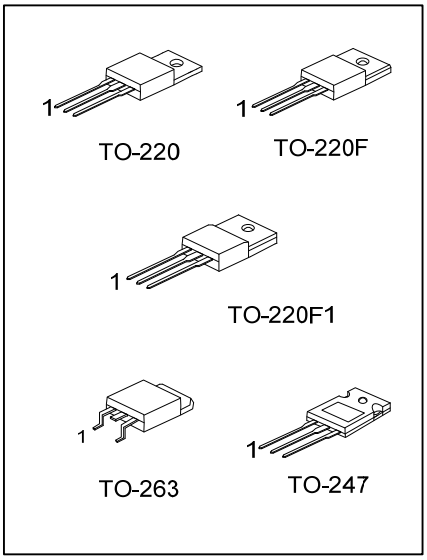
MGBR20L300C

DIODE

DUAL MOS GATED BARRIER RECTIFIER



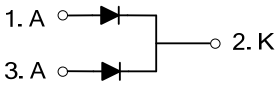
■ DESCRIPTION

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



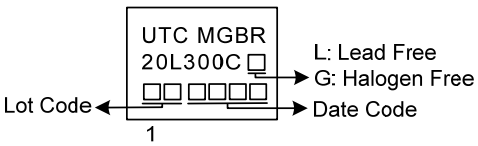
■ ORDERING INFORMATION

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

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

■ MARKING



■ ABSOLUTE MAXIMUM RATINGS (PER LEG) (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 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 DATA

PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Ambient	TO-220/TO-220F TO-220F1	θ_{JA}	62.5	°C/W
	TO-247		40	°C/W
Junction to Case	TO-220	θ_{JC}	2	°C/W
	TO-220F TO-220F1		4	°C/W
	TO-263		2	°C/W
	TO-247		1.5	°C/W

■ ELECTRICAL CHARACTERISTICS (PER LEG) (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=0.50mA	300			V
Forward Voltage Drop	V_{FM}	I_F=10A, T_J=25°C			0.92	V
		I_F=10A, T_J=125°C			0.80	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.

■ TYPICAL CHARACTERISTICS