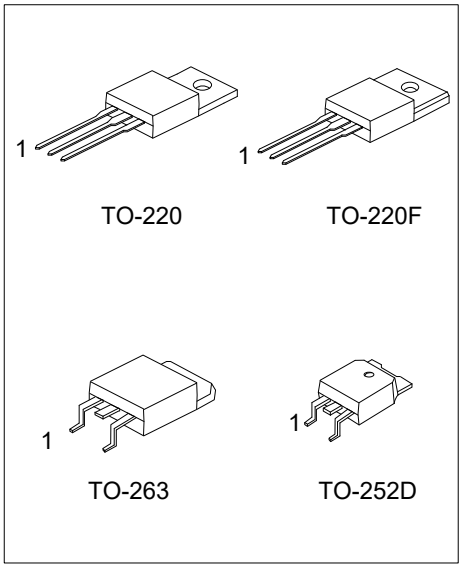
MGBR20U60C **Preliminary** ***DIODE***

DUAL MOS GATED BARRIER RECTIFIERS



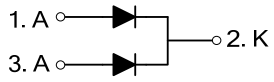
■ DESCRIPTION

The UTC **MGBR20U60C** is a dual mos gated barrier rectifiers, it uses UTC's advanced technology to provide customers with high current capability, low forward voltage and high switching speed, etc.

■ FEATURES

* Ultra low forward voltage
* High switching speed
* High current capability

■ SYMBOL



■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR20U60CL-TA3-T	MGBR20U60CG-TA3-T	TO-220	A	K	A	Tube
MGBR20U60CL-TF3-T	MGBR20U60CG-TF3-T	TO-220F	A	K	A	Tube
MGBR20U60CL-TND-R	MGBR20U60CG-TND-R	TO-252D	A	K	A	Tape Reel
MGBR20U60CL-TQ2-T	MGBR20U60CG-TQ2-T	TO-263	A	K	A	Tube
MGBR20U60CL-TQ2-R	MGBR20U60CG-TQ2-R	TO-263	A	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

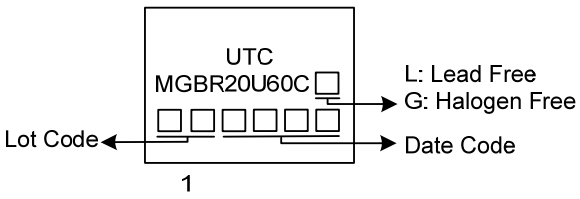
MGBR20U60CG-TA3-T

(1)Packing Type — (1) T: Tube, R: Tape Reel

(2)Package Type — (2) TA3: TO-220, TF3: TO-220F, TND: TO-252D, TQ2: TO-263

(3)Green Package — (3) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING



■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
DC Blocking Voltage		V_{RM}	60	V
Working Peak Reverse Voltage		V_{RWM}	60	V
Peak Repetitive Reverse Voltage		V_{RRM}	60	V
Average Rectified Forward Current	Per Leg	I_O	10	A
	Total		20	A
Operating Junction Temperature		T_J	-40 ~ +150	°C
Storage Temperature		T_{STG}	-40 ~ +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
Junction to Ambient	TO-220/TO-220F TO-263	θ_{JA}	62.5	°C/W
	TO-252D		110	°C/W
Junction to Case	TO-220/TO-263	θ_{JC}	2	°C/W
	TO-220F		3.31	°C/W
	TO-252D		2.5	°C/W

Note: Device mounted on FR-4 substrate PC board, 2oz copper, with 1inch square copper plate.

■ 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=0.60mA	60			V
Instantaneous Forward Voltage	V_{FM}	I_F=5A, T_J=25°C		0.40		V
		I_F=5A, T_J=125°C		0.37		V
		I_F=10A, T_J=25°C			0.49	V
		I_F=10A, T_J=125°C			0.44	V
Instantaneous Reverse Current (Note 1)	I_{RM}	V_{RM}=60V, T_J=25°C			500	μA
		V_{RM}=60V, T_J=125°C			20	mA

Notes: 1. Short duration pulse test used to minimize self-heating effect.
2. Thermal resistance junction to case mounted on heatsink.