



MGBR20V60C

Preliminary

DIODE

DUAL MOS GATED BARRIER RECTIFIERS

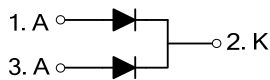
DESCRIPTION

The UTC **MGBR20V60C** 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

- * Very low forward voltage
- * High switching speed
- * High current capability

SYMBOL



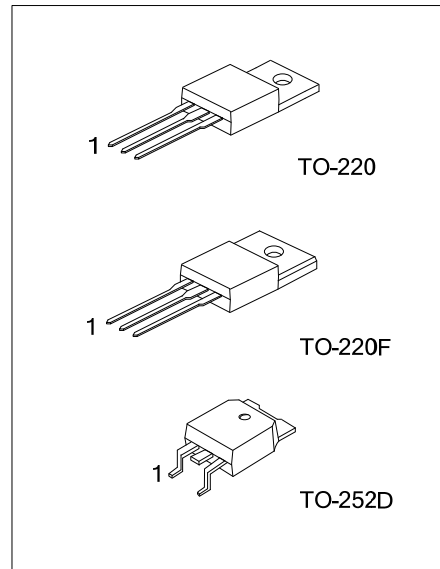
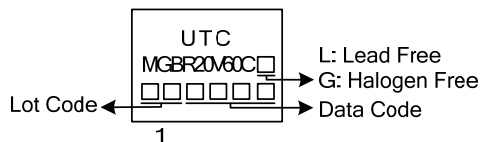
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR20V60CL-TA3-T	MGBR20V60CG-TA3-T	TO-220	A	K	A	Tube
MGBR20V60CL-TF3-T	MGBR20V60CG-TF3-T	TO-220F	A	K	A	Tube
MGBR20V60CL-TND-R	MGBR20V60CG-TND-R	TO-252D	A	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

<p>MGBR20V60CL-TA3-T</p>	<p>(1) T: Tube, R: Tape Reel</p> <p>(2) TA3: TO-220, TF3: TO-220F, TND: TO-252D</p> <p>(3) L: Lead Free, G: Halogen Free and Lead Free</p>
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MARKING



■ ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$ 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
Peak Forward Surge Current		I_{FSM}	180	A
Operating Junction Temperature		T_J	-65~+150	$^\circ\text{C}$
Storage Temperature		T_{STG}	-65~+150	$^\circ\text{C}$

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	θ_{JA}	62.5	$^\circ\text{C/W}$
	TO-252D		2.5	
Junction to Case	TO-220F	θ_{JC}	3.31	$^\circ\text{C/W}$
	TO-220/TO-252D		2	

■ ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT	
Reverse Breakdown Voltage (Note 1)	$V_{(BR)R}$	$I_R=0.60\text{mA}$	60			V	
Instantaneous Forward Voltage	V_{FM}	$I_F=5\text{A}, T_J=25^\circ\text{C}$		0.44		V	
		$I_F=5\text{A}, T_J=125^\circ\text{C}$		0.39		V	
		$I_F=10\text{A}, T_J=25^\circ\text{C}$			0.59		V
		$I_F=10\text{A}, T_J=125^\circ\text{C}$			0.54		V
Instantaneous Reverse Current (Note 1)	I_{RM}	$V_{RM}=60\text{V}, T_J=25^\circ\text{C}$			500	μA	
		$V_{RM}=60\text{V}, T_J=125^\circ\text{C}$			20	mA	

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

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