



MGBR20L60

Preliminary

DIODE

MOS GATED BARRIER RECTIFIER

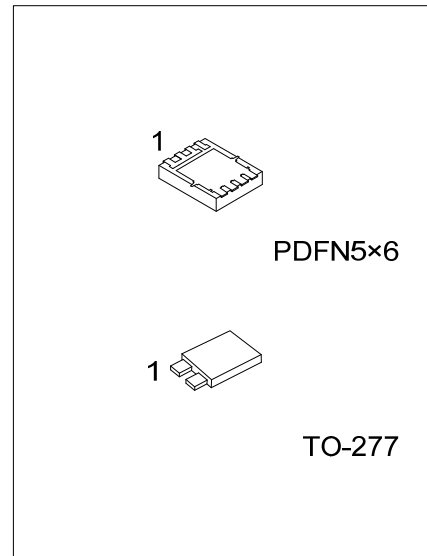
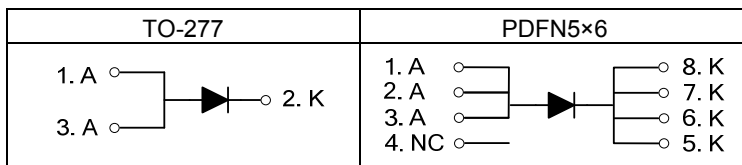
■ DESCRIPTION

The UTC **MGBR20L60** is a surface mount mos gatedbarrier rectifier,it uses UTC's advanced technology to provide customers withlow forward voltage drop and high switching speed, etc.

■ FEATURES

- * Low forward voltage drop
- * High switching speed

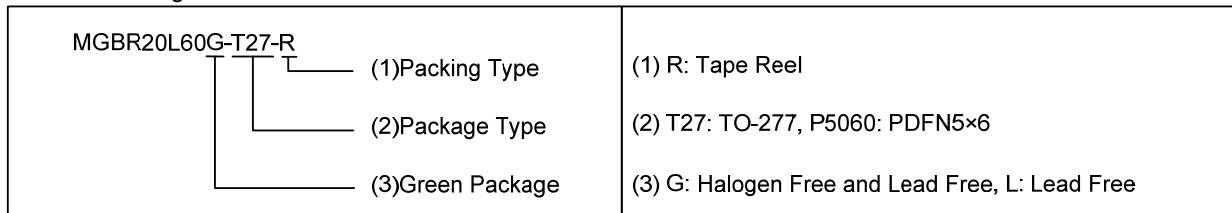
■ SYMBOL



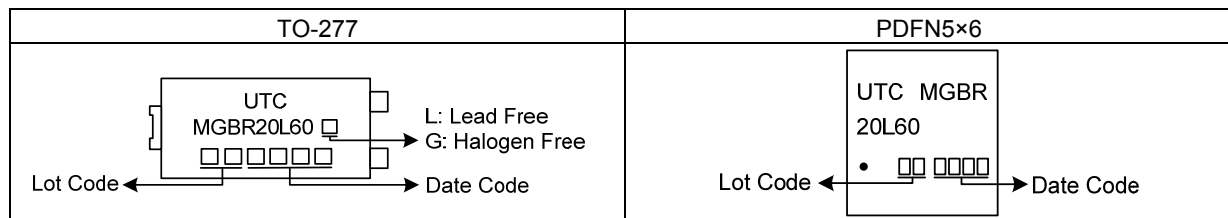
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment								Packing	
Lead Free	Halogen Free		1	2	3	4	5	6	7	8		
MGBR20L60L-T27-R	MGBR20L60G-T27-R	TO-277	A	K	A	-	-	-	-	-	-	Tape Reel
MGBR20L60L-P5060-R	MGBR20L60G-P5060-R	PDFN5×6	A	A	A	NC	K	K	K	K	K	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode



■ MARKING



■ ABSOLUTE MAXIMUM RATINGS($T_A=25^{\circ}\text{C}$, 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}	60	V
Working Peak Reverse Voltage	V_{RWM}	60	V
Peak Repetitive Reverse Voltage	V_{RRM}	60	V
Average Rectified Output Current	I_O	20	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	250	A
Repetitive Peak Avalanche Power (1 μ s, 25 $^{\circ}$ C)	P_{ARM}	5000	W
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 (Note)

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	TO-277	73	$^{\circ}\text{C/W}$
	PDFN5 \times 6	72	$^{\circ}\text{C/W}$
Junction to Case	TO-277	13	$^{\circ}\text{C/W}$
	PDFN5 \times 6	3.4	$^{\circ}\text{C/W}$

Note: Mounted on an FR4 PCB, single-sided copper, with 100 cm² copper pad area.

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage (Note 1)	$V_{(BR)R}$	$I_R=0.5\text{mA}$	60			V
Forward Voltage Drop	V_{FM}	$I_F=20\text{A}, T_J=25^{\circ}\text{C}$			0.65	V
		$I_F=20\text{A}, T_J=125^{\circ}\text{C}$			0.60	V
Leakage Current (Note 1)	I_{RM}	$V_R=60\text{V}, T_J=25^{\circ}\text{C}$		85	300	μA
		$V_R=60\text{V}, T_J=125^{\circ}\text{C}$		12	40	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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