



**MGBR20V60**

Preliminary

**DIODE**

**MOS GATED BARRIER RECTIFIER**

■ DESCRIPTION

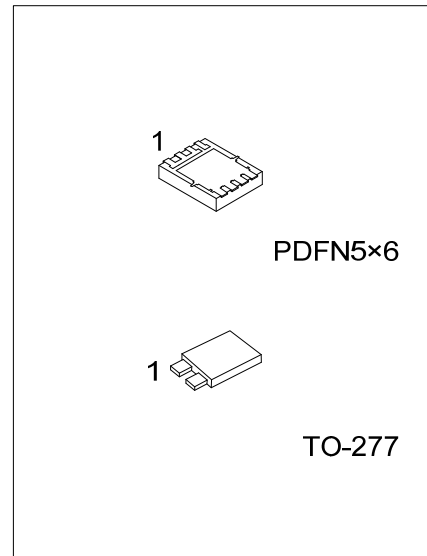
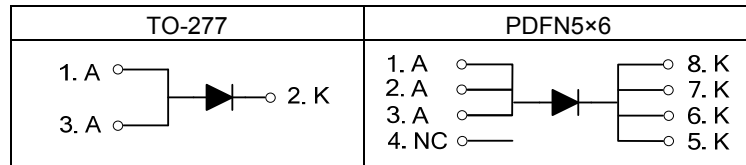
The UTC **MGBR20V60** is a surface mount mos gated barrier rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop and high current capability, etc.

The UTC **MGBR20V60** suitable for free wheeling, high frequency inverters, polarity protection, and low voltage.

■ FEATURES

- \* Very low forward voltage drop
- \* High current capability
- \* High surge capability
- \* High efficiency

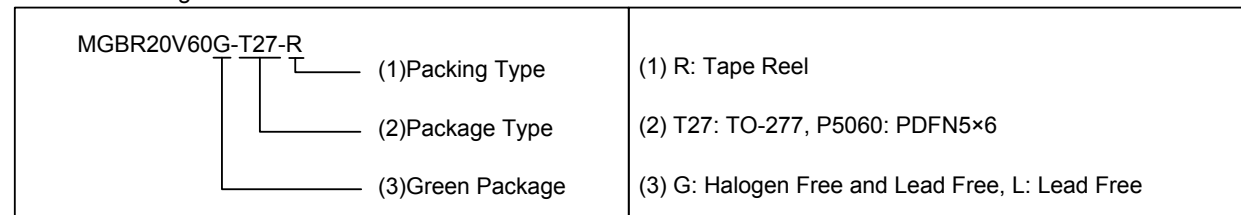
■ SYMBOL



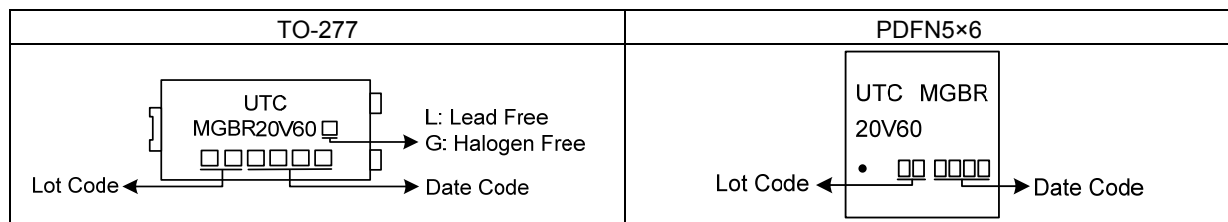
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment								Packing
Lead Free	Halogen Free		1	2	3	4	5	6	7	8	
MGBR20V60L-T27-R	MGBR20V60G-T27-R	TO-277	A	K	A	-	-	-	-	-	Tape Reel
MGBR20V60L-P5060-R	MGBR20V60G-P5060-R	PDFN5×6	A	A	A	NC	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 (Note 1)	$V_{RM}$	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	$I_{FSM}$	200	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 (Note)

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	TO-277	73	$^\circ\text{C}/\text{W}$
	PDFN5x6	72	$^\circ\text{C}/\text{W}$
Junction to Case	TO-277	13	$^\circ\text{C}/\text{W}$
	PDFN5x6	3.4	$^\circ\text{C}/\text{W}$

Note: Mounted on an FR4 PCB, single-sided copper, with 100 cm<sup>2</sup> 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)	$V_{(BR)R}$	$I_R=0.50\text{mA}$	60			V
Forward Voltage Drop	$V_{FM}$	$I_F=20\text{A}, T_C=25^\circ\text{C}$			0.60	V
		$I_F=20\text{A}, T_C=125^\circ\text{C}$			0.55	V
Peak Reverse Current at Rated DC Blocking Voltage (Note 1)	$I_{RM}$	$V_R=60\text{V}, T_C=25^\circ\text{C}$			500	$\mu\text{A}$
		$V_R=60\text{V}, T_C=125^\circ\text{C}$			50	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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