



MGBR15V50

Preliminary

DIODE

MOS GATED BARRIER RECTIFIER

■ DESCRIPTION

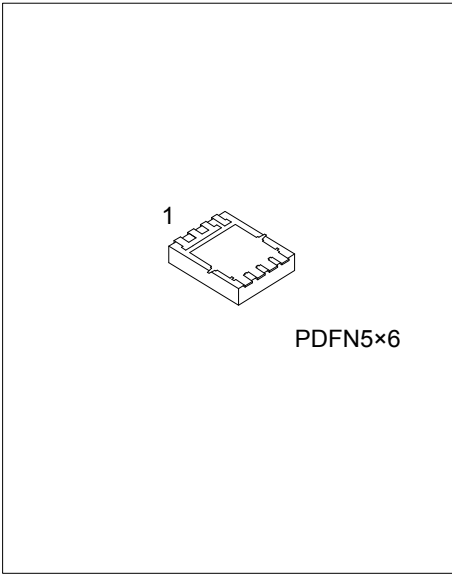
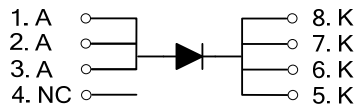
The UTC **MGBR15V50** is a surface mount mos gated barrier rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop and high current capability, etc.

The UTC **MGBR15V50** 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



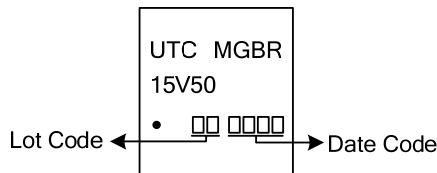
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment								Packing
Lead Free	Halogen Free		1	2	3	4	5	6	7	8	
MGBR15V50L-P5060-R	MGBR15V50G-P5060-R	PDFN5x6	A	A	A	NC	K	K	K	K	Tape Reel

Note: Pin Assignment: A: Anode K: Common Cathode NC: No Comment

<p>MGBR15V50G-P5060-R</p> <p>(1)Packing Type</p> <p>(2)Package Type</p> <p>(3)Green Package</p>	<p>(1) R: Tape Reel</p> <p>(2) P5060: PDFN5x6</p> <p>(3) G: Halogen Free and Lead Free, L: Lead Free</p>
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■ 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}	50	V
Working Peak Reverse Voltage	V_{RWM}	50	V
Peak Repetitive Reverse Voltage	V_{RRM}	50	V
Average Rectified Output Current	I_o	15	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 CHARACTERISTICS (PER LEG)

PARAMETER	SYMBOL	RATINGS	UNIT
Typical Thermal Resistance	θ_{JA}	72	$^\circ\text{C/W}$

Note: FR-4 PCB, 2 oz Copper. Minimum recommended pad layout.

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R=0.50\text{mA}$	50			V
Forward Voltage Drop	V_{FM}	$I_F=15\text{A}, T_J=25^\circ\text{C}$			0.55	V
		$I_F=15\text{A}, T_J=125^\circ\text{C}$			0.50	V
Peak Reverse Current at Rated DC Blocking Voltage	I_{RM}	$V_R=50\text{V}, T_J=25^\circ\text{C}$			500	μA
		$V_R=50\text{V}, T_J=125^\circ\text{C}$			50	mA

Note: Pulse Test: Pulse width $\leq 300\mu\text{s}$, Duty cycle $\leq 2\%$.

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