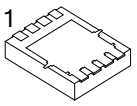
# MGBR15U50

**Preliminary** ***DIODE***

## MOS GATED BARRIER RECTIFIER




DFN-8(5x6)

### ■ DESCRIPTION

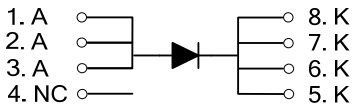
The UTC **MGBR15U50** is a surface mount mos gated barrier rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop and high switching speed etc.

The UTC **MGBR15U50** suitable for supply applications.

### ■ FEATURES

* Ultra low forward voltage drop
* High switching speed

### ■ SYMBOL




### ■ ORDERING INFORMATION

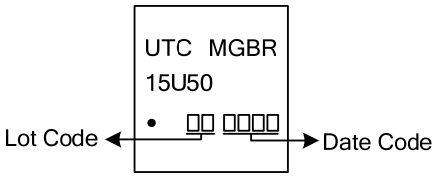
| Ordering Number | Package | Pin Assignment | | | | | | | | Packing |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| MGBR15U50G-K08-5060-R | DFN-8(5×6) | A | A | A | NC | K | K | K | K | Tape Reel |

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

MGBR15U50G-K08-5060-R

| | |
|---|---|
| (1)Packing Type | (1) R: Tape Reel |
| (2)Package Type | (2) K08-5060: DFN-8(5×6) |
| (3)Green Package | (3) G: Halogen Free and Lead Free |

### ■ MARKING



## ■ ABSOLUTE MAXIMUM RATINGS ($T_A$=25°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 | °C |
| Storage Temperature | $T_{STG}$ | -65 ~ +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 |
|---|---|---|---|
| Typical Thermal Resistance | $\theta_{JA}$ | 72 | °C/W |

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

## ■ ELECTRICAL CHARACTERISTICS (PER LEG) ($T_A$ =25°C, unless otherwise specified.)

| PARAMETER | SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|---|---|---|---|---|---|---|
| Reverse Breakdown Voltage | $V_{(BR)R}$ | $I_R$=0.5mA | 50 | | | V |
| Forward Voltage Drop | $V_{FM}$ | $I_F$=15A, $T_J$=25°C | | | 0.45 | V |
| | | $I_F$=15A, $T_J$=125°C | | | 0.41 | V |
| Leakage Current | $I_{RM}$ | $V_R$=50V, $T_J$=25°C | | | 500 | μA |
| | | $V_R$=50V, $T_J$=125°C | | | 25 | mA |

Note: Pulse Test: Pulse width ≤ 300μs, Duty cycle ≤ 2%.