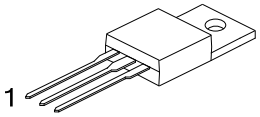
# MGBR40V60C

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

## DUAL MOS GATED BARRIER RECTIFIER




TO-220

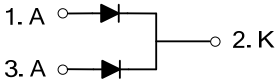
### ■ DESCRIPTION

The UTC **MGBR40V60C** is a dual mos gated barrier rectifiers, it uses UTC's advanced technology to provide customers with low forward voltage drop and high switching speed, etc.

### ■ FEATURES

* Very low forward voltage drop
* High switching speed

### ■ SYMBOL




### ■ ORDERING INFORMATION

| Ordering Number | | Package | Pin Assignment | | | Packing |
|---|---|---|---|---|---|---|
| Lead Free | Halogen Free | | 1 | 2 | 3 | |
| MGBR40V60CL-TA3-T | MGBR40V60CG-TA3-T | TO-220 | A | K | A | Tube |

Note: Pin Assignment: A: Anode, K: Cathode

| | |
|---|---|
| MGBR40V60CL-TA3-T<br>(1)Packing Type<br>(2)Package Type<br>(3)Lead Free | (1) T: Tube<br>(2) TA3: TO-220<br>(3) L: Lead Free, G: Halogen Free |

## ■ ABSOLUTE MAXIMUM RATINGS (PER LEG) ($T_A$=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 | | $V_{RM}$ 60 | | V |
| Working Peak Reverse Voltage | | $V_{RWM}$ 60 | | V |
| Peak Repetitive Reverse Voltage | | $V_{RRM}$ 60 | | V |
| Average Rectified Output Current Per Device | Per Leg | $I_O$ | 20 A | |
| | Total 4 | | 0 | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load | | $I_{FSM}$ 280 | | 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 |
|---|---|---|---|
| Junction to Ambient | $\theta_{JA}$ | 62.5 | °C/W |
| Junction to Case | $\theta_{JC}$ 2 | | °C/W |

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

| PARAMETER | SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|---|---|---|---|---|---|---|
| Reverse Breakdown Voltage (Note 1) | $V_{(BR)R}$ | $I_R$=0.50mA 60 | | | | V |
| Forward Voltage Drop | $V_{FM}$ | $I_F$=20A, $T_J$=25°C | | | 0.60 | V |
| | | $I_F$=20A, $T_J$=125°C | | | 0.55 | V |
| Leakage Current (Note 1) | $I_{RM}$ | $V_R$=60V, $T_J$=25°C | | | 500 | μA |
| | | $V_R$=60V, $T_J$=125°C | | | 100 | mA |

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