



MGBR40V60C

Preliminary

DIODE

DUAL MOS GATED BARRIER RECTIFIER

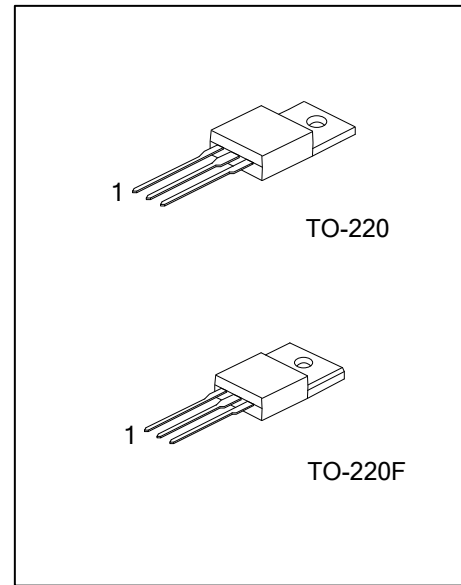
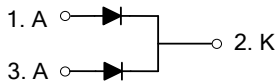
DESCRIPTION

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



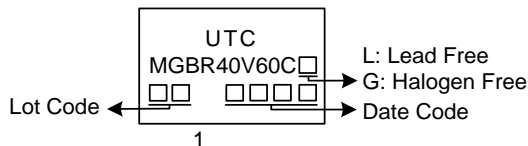
ORDERING INFORMATION

| 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 |
| MGBR40V60CL-TF3-R | MGBR40V60CG-TF3-R | TO-220F | A | K | A | Tube |

Note: Pin Assignment: A: Anode K: Cathode

| | |
|--|--|
| <p>MGBR40V60CG-TA3-T</p> <p>(1)Packing Type</p> <p>(2)Package Type</p> <p>(3)Green Package</p> | <p>(1) T: Tube</p> <p>(2) TA3: TO-220, TF3: TO-220F</p> <p>(3) G: Halogen Free and Lead Free, L: Lead Free</p> |
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MARKING



■ ABSOLUTE MAXIMUM RATINGS (PER LEG) ($T_A=25^\circ\text{C}$ 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 Per Device | Per Leg | I_o | 20 | A |
| | Total | | 40 | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load | | I_{FSM} | 150 | 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 |
|---------------------|---------|---------------|---------|--------------------|
| Junction to Ambient | | θ_{JA} | 62.5 | $^\circ\text{C/W}$ |
| Junction to Case | TO-220 | θ_{JC} | 2 | $^\circ\text{C/W}$ |
| | TO-220F | | 4 | |

■ ELECTRICAL CHARACTERISTICS (PER LEG) ($T_A=25^\circ\text{C}$ 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} | $I_F=20\text{A}, T_J=25^\circ\text{C}$ | | | 0.60 | V |
| | | $I_F=20\text{A}, T_J=125^\circ\text{C}$ | | | 0.55 | V |
| Leakage Current (Note 1) | I_{RM} | $V_R=60\text{V}, T_J=25^\circ\text{C}$ | | | 500 | μA |
| | | $V_R=60\text{V}, T_J=125^\circ\text{C}$ | | | 100 | 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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