



MBR1060C

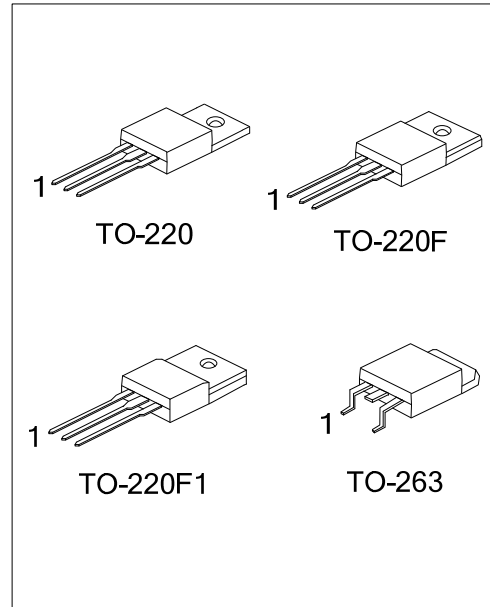
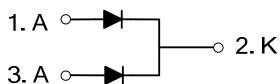
DIODE

10A SCHOTTKY BARRIER RECTIFIER DIODES

FEATURES

- * Schottky Barrier Chip
- * Guard Ring Die Construction for Transient Protection
- * Low Power Loss, High Efficiency
- * High Surge Capability
- * High Current Capability and Low Forward Voltage Drop
- * For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications

SYMBOL



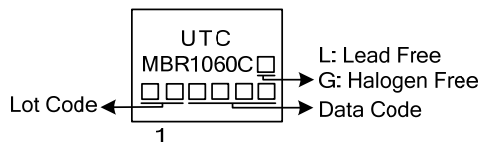
ORDERING INFORMATION

| Ordering Number | | Package | Pin Assignment | | | Packing |
|-----------------|-----------------|----------|----------------|---|---|-----------|
| Lead Free | Halogen Free | | 1 | 2 | 3 | |
| MBR1060CL-TA3-T | MBR1060CG-TA3-T | TO-220 | A | K | A | Tube |
| MBR1060CL-TF3-T | MBR1060CG-TF3-T | TO-220F | A | K | A | Tube |
| MBR1060CL-TF1-T | MBR1060CG-TF1-T | TO-220F1 | A | K | A | Tube |
| MBR1060CL-TQ2-T | MBR1060CG-TQ2-T | TO-263 | A | K | A | Tube |
| MBR1060CL-TQ2-R | MBR1060CG-TQ2-R | TO-263 | A | K | A | Tape Reel |

Note: Pin Assignment: A: Anode K: Cathode

| | |
|---|---|
| <p>MBR1060CL-TA3-T</p> <p>(1) Packing Type (2) Package Type (3) Green Package</p> | <p>(1) T: Tube, R: Tape Reel (2) TA3: TO-220, TF3: TO-220F, TF1: TO-220F1 TQ2: TO-263 (3) L: Lead Free, G: Halogen Free and Lead Free</p> |
|---|---|

MARKING



■ ABSOLUTE MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$, unless otherwise specified)

| PARAMETER | | SYMBOL | RATINGS | UNIT |
|--|---------|--------------|------------|--------------------|
| Maximum Repetitive Peak Reverse Voltage | | V_{RRM} | 60 | V |
| Maximum DC Blocking Voltage | | V_R | 60 | V |
| Working Peak Reverse Voltage | | V_{RWM} | 60 | V |
| Maximum PMS Reverse Voltage | | $V_{R(RMS)}$ | 42 | V |
| Average Forward Rectified Output Current ($T_C=105^{\circ}\text{C}$) | Per Leg | I_O | 5 | A |
| | Total | | 10 | |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single Half-Sine-Wave | | I_{FSM} | 125 | A |
| Typical Junction Capacitance (Note 4) | | C_J | 150 | pF |
| Operating Temperature | | T_J | -55 ~ +150 | $^{\circ}\text{C}$ |
| Storage Temperature | | T_{STG} | -55 ~ +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

| PARAMETER | | SYMBOL | RATINGS | UNIT |
|---------------------|------------------|---------------|---------|----------------------|
| Junction to Ambient | | θ_{JA} | 60 | $^{\circ}\text{C/W}$ |
| Junction to Case | TO-220/TO-263 | θ_{JC} | 3 | $^{\circ}\text{C/W}$ |
| | TO-220F/TO-220F1 | | 5 | $^{\circ}\text{C/W}$ |

■ ELECTRICAL CHARACTERISTICS

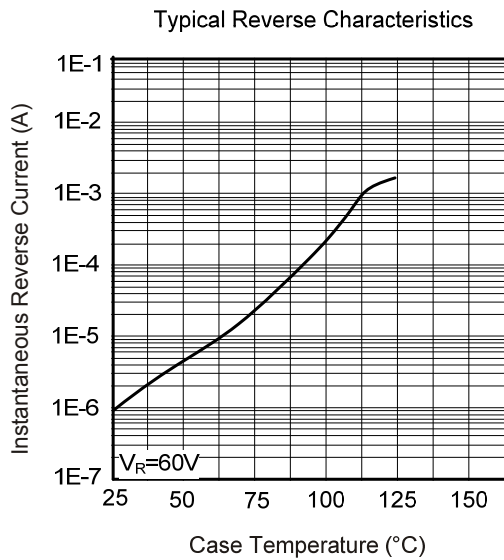
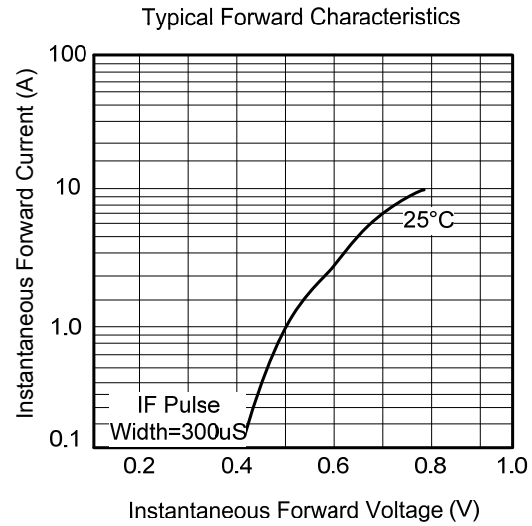
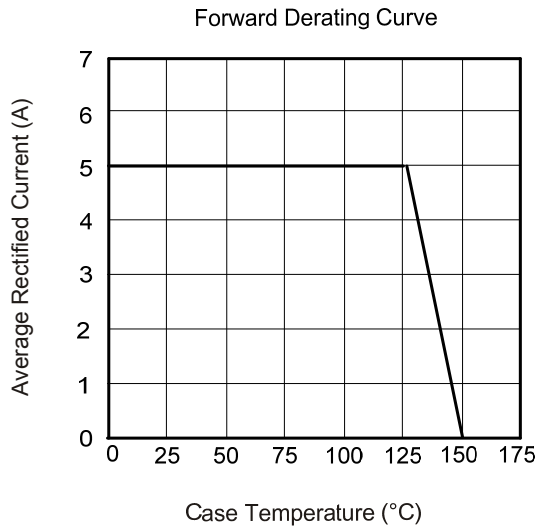
| PARAMETER | SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|---|--------|---|-----|-----|------|---------------|
| Instantaneous Forward Voltage Drop (Note 2) | V_F | $I_F=5\text{A}, T_C=25^{\circ}\text{C}$ | | | 0.80 | V |
| | | $I_F=5\text{A}, T_C=125^{\circ}\text{C}$ | | | 0.70 | V |
| | | $I_F=10\text{A}, T_C=25^{\circ}\text{C}$ | | | 0.95 | V |
| | | $I_F=10\text{A}, T_C=125^{\circ}\text{C}$ | | | 0.90 | V |
| Instantaneous Reverse Current (Note 2) | I_R | Rated DC Voltage, $T_C=25^{\circ}\text{C}$ | | | 100 | μA |
| | | Rated DC Voltage, $T_C=125^{\circ}\text{C}$ | | | 15 | mA |

Notes: 1. $2.0\mu\text{s}$ Pulse Width, $f = 1.0\text{ KHz}$.

2. Pulse Test: Pulse Width = $300\mu\text{s}$, Duty Cycle $\leq 2.0\%$.

3. Applied $V_R = 4.0\text{V}$ and $f = 1.0\text{MHz}$.

■ TYPICAL CHARACTERISTICS



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