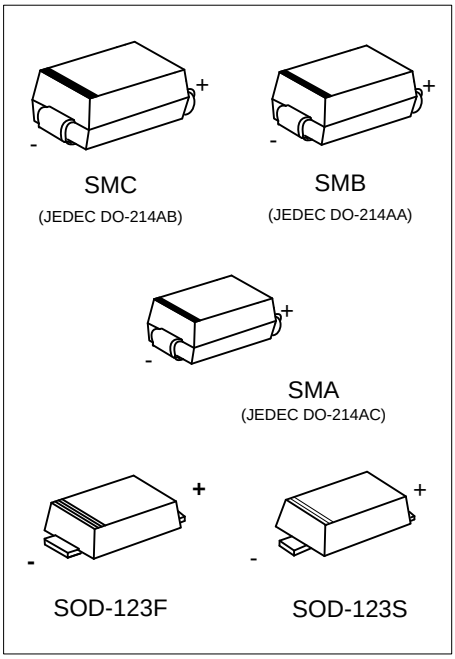
# 2.0A SCHOTTKY BARRIER RECTIFIER




## ■ DESCRIPTION

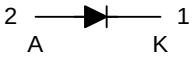
The UTC **MBR2100** is a schottky barrier rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop, high current capability and high efficiency, etc.

The UTC **MBR2100** is suitable for free wheeling, high frequency inverters, polarity protection application.

## ■ FEATURES

* Low forward voltage drop
* High efficiency
* High surge capability

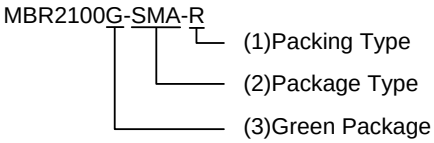
## ■ SYMBOL




## ■ ORDERING INFORMATION

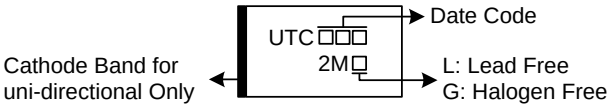
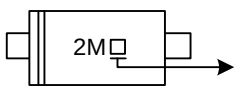
| Ordering Number | | Package | Pin Assignment | | Packing |
|---|---|---|---|---|---|
| Lead Free | Halogen Free | | 1 | 2 | |
| MBR2100L-SMA-R | MBR2100G-SMA-R | SMA | K | A | Tape Reel |
| MBR2100L-SMB-R | MBR2100G-SMB-R | SMB | K | A | Tape Reel |
| MBR2100L-SMC-R | MBR2100G-SMC-R | SMC | K | A | Tape Reel |
| MBR2100L-CA2F-R | MBR2100G-CA2F-R | SOD-123F | K | A | Tape Reel |
| MBR2100L-CA2S-R | MBR2100G-CA2S-R | SOD-123S | K | A | Tape Reel |

Note: Pin assignment: K: Cathode A: Anode




(1) R: Tape Reel
(2) SMA: SMA, SMB: SMB, SMC: SMC
CA2F: SOD-123F, CA2S: SOD-123S,
(3) G: Halogen Free and Lead Free, L: Lead Free

## ■ MARKING

| SMA / SMB / SMC | SOD-123F / SOD-123S |
|---|---|
|  |  |



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## ■ ABSOLUTE MAXIMUM RATINGS ($T_A$=25°C unless otherwise specified)

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.

| PARAMETER | SYMBOL | RATINGS | UNIT |
|---|---|---|---|
| DC Blocking Voltage | $V_{RM}$ | 100 | V |
| Working Peak Reverse Voltage | $V_{RWM}$ | 100 | V |
| Repetitive Peak Reverse Voltage | $V_{RRM}$ | 100 | V |
| Average Rectified Output Current | $I_O$ | 2.0 | A |
| Non-Repetitive Peak Forward Surge Current: 8.3ms Single Half Sine-Wave Superimposed on Rated Load | $I_{FSM}$ | 40 | 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 DATA (Note)

| PARAMETER | | SYMBOL | RATINGS | UNIT |
|---|---|---|---|---|
| Typical Thermal Resistance | SMA | $\theta_{JL}$ | 32 | °C/W |
| | SMB | | 20 | °C/W |
| | SMC | | 11 | °C/W |
| | SOD-123F<br>SOD-123S | | 25 | °C/W |

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

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

| PARAMETER | SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|---|---|---|---|---|---|---|
| Forward Voltage Drop (Note 3) | $V_F$ | $I_F$=2.0A $T_J$=25°C | | | 0.79 | V |
| | | $I_F$=2.0A, $T_J$=125°C | | | 0.69 | V |
| Peak Reverse Current at Rated DC Blocking Voltage | $I_R$ | $T_J$=25°C, $V_R$=100V | | | 100 | μA |
| | | $T_J$=125°C, $V_R$=100V | | | 10 | mA |

Notes: 1. Measured at ambient temperature at a distance of 9.5mm from the case.
2. Minimum Pad Area.
3. Pulse test: 300μs pulse width, duty cycle 2%.

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