



## MBR545

Preliminary

DIODE

## SCHOTTKY BARRIER RECTIFIER

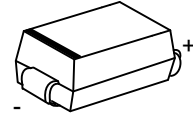
### DESCRIPTION

The UTC **MBR545** 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.

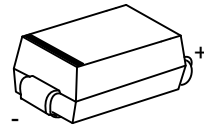
The UTC **MBR545** is suitable for use in free wheeling, high frequency inverters, low voltage and polarity protection applications.

### FEATURES

- \* Low forward voltage drop
- \* High efficiency
- \* Low power loss
- \* High surge capability
- \* High current capability



SMA  
(JEDEC DO-214AC)



SMB  
(JEDEC DO-214AA)

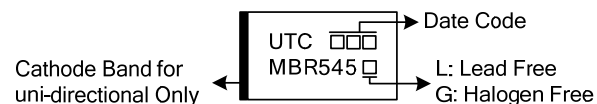
### ORDERING INFORMATION

| Ordering Number |               | Package | Pin Assignment |   | Packing   |
|-----------------|---------------|---------|----------------|---|-----------|
| Lead Free       | Halogen Free  |         | 1              | 2 |           |
| MBR545L-SMA-R   | MBR545G-SMA-R | SMA     | K              | A | Tape Reel |
| MBR545L-SMB-R   | MBR545G-SMB-R | SMB     | K              | A | Tape Reel |

Note: Pin Assignment: A: Anode K: Cathode

|                                                                                      |  |                                                                                                        |
|--------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------|
| <p>MBR545L-SMA-R</p> <p>(1)Packing Type<br/>(2)Package Type<br/>(3)Green Package</p> |  | <p>(1) R: Tape Reel<br/>(2) SMA: SMA, SMB: SMB<br/>(3) L: Lead Free, G: Halogen Free and Lead Free</p> |
|--------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------|

### MARKING



### ■ ABSOLUTE MAXIMUM RATINGS

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                                                                               | $V_{DC}$  | 45       | V    |
| RMS Voltage                                                                                       | $V_{RMS}$ | 31.5     | V    |
| Recurrent Peak Reverse Voltage                                                                    | $V_{RRM}$ | 45       | V    |
| Average Rectified Output Current                                                                  | $I_O$     | 5.0      | 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 | °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 RESISTANCES CHARACTERISTICS

| PARAMETER                    | SYMBOL        | RATINGS | UNIT |
|------------------------------|---------------|---------|------|
| Junction to Ambient (Note 1) | $\theta_{JA}$ | 50      | °C/W |

### ■ ELECTRICAL CHARACTERISTICS

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

| PARAMETER                                            | SYMBOL | TEST CONDITIONS    | MIN | TYP | MAX  | UNIT |
|------------------------------------------------------|--------|--------------------|-----|-----|------|------|
| Forward Voltage Drop (Note 2)                        | $V_F$  | $I_F=5.0A$         |     |     | 0.70 | V    |
| Peak Reverse Current<br>at Rated DC Blocking Voltage | $I_R$  | $T_J=25^{\circ}C$  |     |     | 0.05 | mA   |
|                                                      |        | $T_J=100^{\circ}C$ |     |     | 10   | mA   |

Notes: 1. Minimum Pad Area.  
2. Pulse test: 300μs pulse width, 1% duty cycle.

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