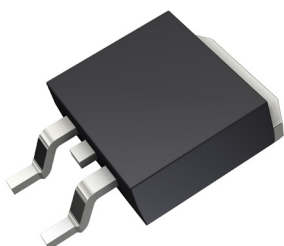


# Schottky Barrier Rectifier

## V<sub>RRM</sub> 100 Volts, 20A

multicomp<sup>PRO</sup>

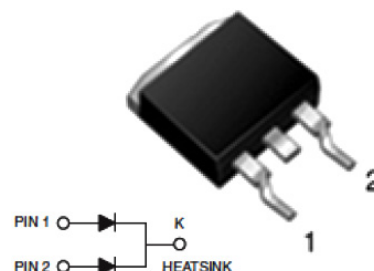
RoHS  
Compliant



### Features

- Metal of silicon rectifier
- Majority used for carrier conduction
- Trench Schottky Technology
- Low power loss, high efficiency
- High current capability, low VF
- High surge capacity
- Lead free
- Meet UL flammability classification 94V-0
- Case style: TO-263AB
- Weight: 0.08 ounces, 2.24 grams

TO-263AB



### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

| Characteristics                                                                          | Symbol            | Values      | Unit |
|------------------------------------------------------------------------------------------|-------------------|-------------|------|
| Max. Recurrent Peak Reverse Voltage                                                      | V <sub>RRM</sub>  | 100         | V    |
| Max. RMS Voltage                                                                         | V <sub>RMS</sub>  | 70          |      |
| Max. DC Blocking Voltage                                                                 | V <sub>DC</sub>   | 100         |      |
| Max. Average Forward Rectified Current (See Fig. 1)                                      | I <sub>(AV)</sub> | 20          | A    |
| Max. Average Forward Rectified Current ( Per Leg )                                       |                   | 10          |      |
| Peak Forward Surge Current<br>8.3ms Single Half Sine-Wave<br>Super Imposed on Rated Load | I <sub>FSM</sub>  | 140         |      |
| Peak repetitive reverse current at tp = 2 μs, 1kHz                                       | I <sub>RRM</sub>  | 1           |      |
| Operating Temperature Range                                                              | T <sub>J</sub>    | -55 to +150 | °C   |
| Storage Temperature Range                                                                | T <sub>STG</sub>  | -55 to +175 |      |

### Electrical Characteristics

| Parameter / Conditions                                                                                                                                                              | Symbol          | Typ.                        | Max.                        | Unit |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------------------|-----------------------------|------|
| Breakdown voltage per diode                                                                                                                                                         | V <sub>BR</sub> | 110 (minimum)               | -                           | V    |
| Instantaneous forward voltage per diode (Note1)<br>IF=5A @ T <sub>J</sub> =25°C<br>IF=5A @ T <sub>J</sub> =125°C<br>IF=10A @ T <sub>J</sub> =25°C<br>IF=10A @ T <sub>J</sub> =125°C | V <sub>F</sub>  | 0.54<br>0.5<br>0.67<br>0.62 | 0.6<br>0.54<br>0.75<br>0.68 |      |
| Maximum DC Reverse Current @ T <sub>J</sub> = 25°C<br>at Rated DC Blocking Voltage @T <sub>J</sub> = 125°C                                                                          |                 | 135<br>45                   |                             |      |
| Typical Junction Capacitance (Note 2)                                                                                                                                               | C <sub>J</sub>  | 437                         |                             |      |
|                                                                                                                                                                                     |                 |                             |                             |      |

### Thermal Characteristics

|                                       |                  |     |      |
|---------------------------------------|------------------|-----|------|
| Thermal Resistance Per Diode (Note 3) | R <sub>θJC</sub> | 3.5 | °C/W |
|---------------------------------------|------------------|-----|------|

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# Schottky Barrier Rectifier

## V<sub>RRM</sub> 100 Volts, 20A

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### Notes:

1. 300µs pulse width, 2% duty cycle.
2. Measured at 1MHz and applied reverse voltage of 5V DC.
3. Thermal resistance junction to case.

## Rating and Characteristic Curves

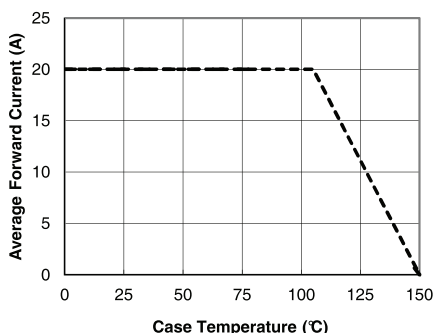


Figure 1. Forward Current Derating Curve

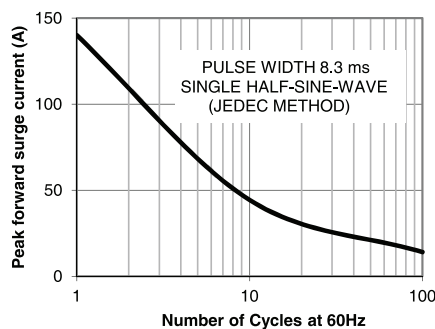


Figure 2. Maximum NON-Repetitive

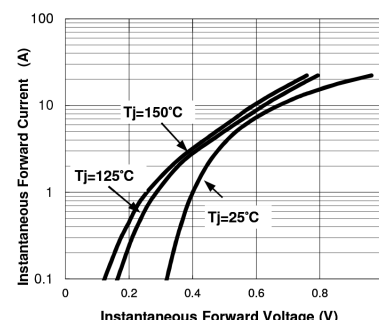


Figure 3. Typical Instantaneous Forward Characteristics Per Leg

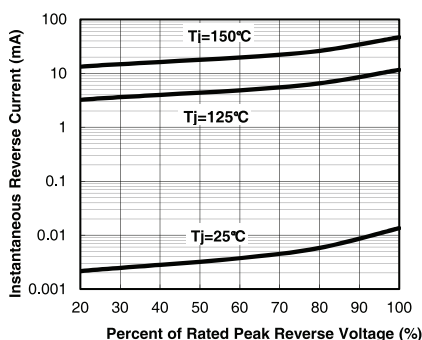


Figure 4. Typical Reverse Characteristics

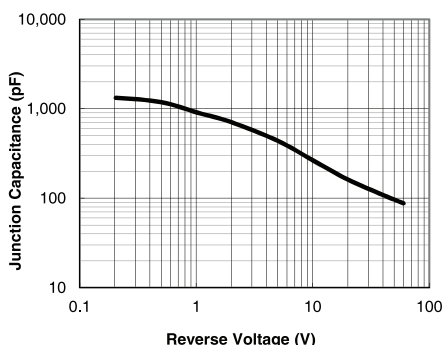


Figure 5. Typical Junction Capacitance

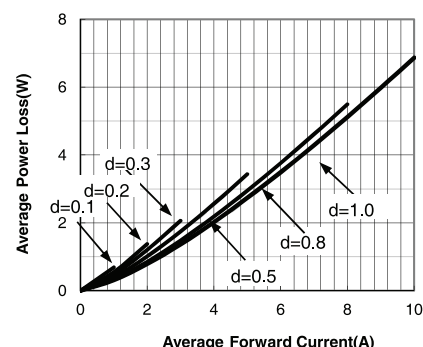
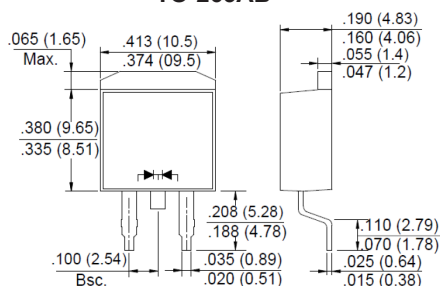


Figure 6. Forward Power Loss Characteristics

### TO-263AB



Dimensions : Inches (Millimetres)

### Part Number Table

| Description                                   | Part Number |
|-----------------------------------------------|-------------|
| Schottky Rectifier, Dual, 100V, 20A, TO-263AB | MP001027    |

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