

### Surface Mount Schottky Barrier Rectifier Voltage 200V Current 15 Amperes

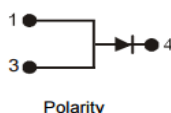
#### FEATURES AND BENEFITS

- Low power loss, high efficiency operation
- Low forward voltage drop
- Fast switching capability
- High forward surge capability
- Excellent High Temperature Stability

#### MECHANICAL DATA

- Epoxy : UL94 V-0 rated flame retardant
- Case: TO-252 Package
- Terminals: Matte Tin annealed over copper
- Weight: Approximated 1.4 grams

| Primary Characteristic                    |       |
|-------------------------------------------|-------|
| $I_O$                                     | 15A   |
| $V_{RRM}$                                 | 200V  |
| $I_{FSM}$                                 | 180A  |
| $V_F$ Typical=3A, $T_J=125^\circ\text{C}$ | 0.45V |
| $T_{Jmax}$                                | 185°C |



| Maximum Ratings (TA=25°C unless otherwise specified)                                               |           |       |      |
|----------------------------------------------------------------------------------------------------|-----------|-------|------|
| Characteristics                                                                                    | Symbol    | Value | Unit |
| Peak Repetitive Reverse Voltage                                                                    | $V_{RRM}$ | 200   | V    |
| Working Peak Reverse Voltage                                                                       | $V_{RWM}$ | 200   | V    |
| DC Blocking Voltage                                                                                | $V_{DC}$  | 200   | V    |
| RMS Reverse Voltage                                                                                | $V_{RMS}$ | 140   | V    |
| Average Forward Rectified Current (per diode)                                                      | $I_O$     | 15    | Amps |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | $I_{FSM}$ | 180   | Amps |

| Electrical Characteristics (TA=25°C unless otherwise specified ) |         |          |        |      |      |      |
|------------------------------------------------------------------|---------|----------|--------|------|------|------|
| Characteristics                                                  |         |          | Symbol | Typ. | Max. | Unit |
| Forward Voltage Drop <sup>(1)</sup>                              | IF=3A   | Ta=25°C  | $V_F$  | 0.60 | 0.64 | V    |
|                                                                  | IF=15A  | Ta=25°C  | $V_F$  | 0.84 | 0.89 | V    |
|                                                                  | IF=3A   | Ta=125°C | $V_F$  | 0.45 | 0.49 | V    |
|                                                                  | IF=15A  | Ta=125°C | $V_F$  | 0.70 | 0.74 | V    |
| Reverse Current <sup>(2)</sup>                                   | VR=200V | Ta=25°C  | $I_R$  | 5    | 15   | μA   |
|                                                                  | VR=200V | Ta=125°C | $I_R$  | 3    | 10   | mA   |

| THERMAL CHARACTERISTICS (TA=25°C unless otherwise noted) |           |             |      |
|----------------------------------------------------------|-----------|-------------|------|
| Characteristics                                          | Symbol    | Value       | Unit |
| Operating Temperature Range ( in DC Mode)                | $T_J$     | -65 to +185 | °C   |
| Storage Temperature Range                                | $T_{STG}$ | -65 to +150 | °C   |

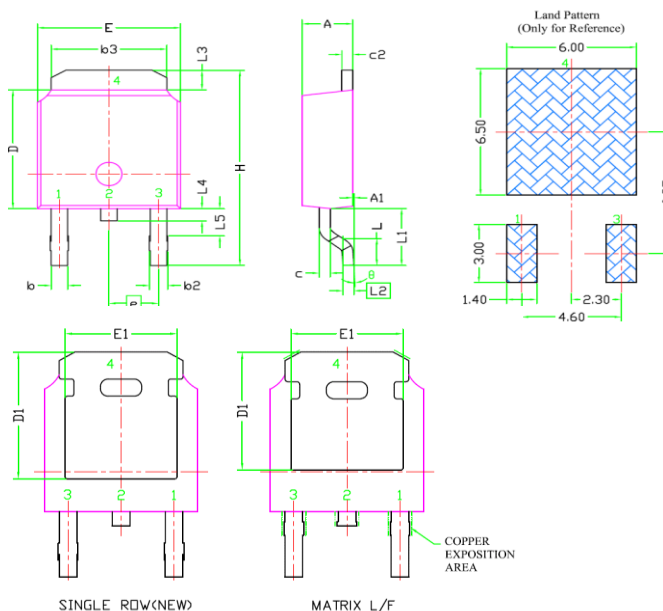
Notes (1): Pulse test: 300μs pulse width, 1% duty cycle.

Notes (2): Pulse width ≤ 40ms

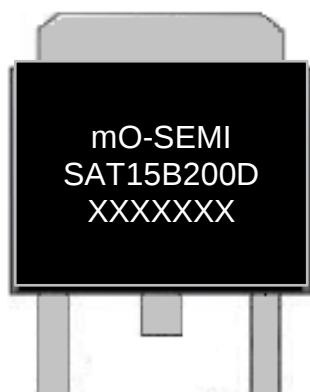
Notes (3): FR-4 PCB, 2oz copper. Minimum recommended pad layout

### Package Outline Dimensions (in millimeters)

| TO-252 |             |       |        |       |
|--------|-------------|-------|--------|-------|
| SYMBOL | Dimensions  |       |        |       |
|        | Millimeters |       | Inches |       |
|        | Min         | Max   | Min    | Max   |
| E      | 6.40        | 6.73  | 0.252  | 0.265 |
| L      | 1.40        | 1.77  | 0.055  | 0.070 |
| L1     | 2.743 REF   |       |        |       |
| L2     | 0.508 BSC   |       |        |       |
| L3     | 0.89        | 1.27  | 0.035  | 0.050 |
| L4     | 0.64        | 1.01  | 0.025  | 0.040 |
| L5     | -           | -     | -      | -     |
| D      | 6.00        | 6.22  | 0.236  | 0.245 |
| H      | 9.40        | 10.40 | 0.370  | 0.409 |
| b      | 0.64        | 0.88  | 0.025  | 0.035 |
| b2     | 0.77        | 1.14  | 0.030  | 0.045 |
| b3     | 5.20        | 5.46  | 0.205  | 0.215 |
| e      | 2.286 BSC   |       |        |       |
| A      | 2.20        | 2.38  | 0.087  | 0.094 |
| A1     | 0.00        | 0.13  | 0.000  | 0.005 |
| c      | 0.46        | 0.60  | 0.018  | 0.024 |
| c2     | 0.46        | 0.58  | 0.018  | 0.023 |
| D1     | 5.21        | -     | 0.205  | -     |
| E1     | 4.40        | -     | 0.173  | -     |
| θ      | 0°          | 10°   | 0°     | 10°   |



### Marking Information



mO-SEMI  
SAT15B200  
XXXXXXX  
D=TO-252

=Series Name  
=Part Number Marking Code  
=Product Tracking Code  
=Single TO-252