

# SDB140W

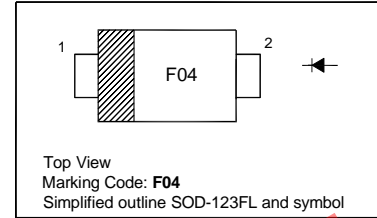
## Surface Mount Schottky Barrier Diode

### Features

- Lower power loss, high efficiency
- High surge capability
- High current capability and low forward voltage drop

### PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1   | Cathode     |
| 2   | Anode       |

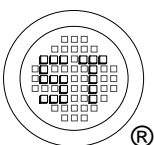


### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

| Parameter   | Symbol      | Value         | Unit             |
|---|-------------|---------------|------------------|
| Repetitive Peak Reverse Voltage                             | $V_{RRM}$   | 40            | V                |
| Non-Repetitive Peak Reverse Voltage                         | $V_{RSM}$   | 40            | V                |
| DC Blocking Voltage   | $V_R$       | 40            | V                |
| Average Forward Rectified Current                           | $I_{F(AV)}$ | 1.1           | A                |
| Non-repetitive Peak Forward Surge Current (at $t = 8.3$ ms) | $I_{FSM}$   | 40            | A                |
| Power Dissipation   | $P_{tot}$   | 556           | mW               |
| Operating Temperature Range                                 | $T_j$       | - 55 to + 125 | $^\circ\text{C}$ |
| Storage Temperature Range                                   | $T_{stg}$   | - 55 to + 150 | $^\circ\text{C}$ |

### Electrical Characteristics ( $T_a = 25^\circ\text{C}$ )

| Parameter  | Symbol      | Min.   | Typ.   | Max.        | Unit          |
|--|-------------|--------|--------|-------------|---------------|
| Forward Voltage<br>at $I_F = 500$ mA<br>at $I_F = 1.1$ A | $V_F$       | -<br>- | -<br>- | 0.51<br>0.6 | V             |
| Reverse Breakdown Voltage<br>at $I_R = 20$ $\mu\text{A}$ | $V_{(BR)R}$ | 40     | -      | -           | V             |
| Reverse Current<br>at $V_R = 40$ V                       | $I_R$       | -      | -      | 20          | $\mu\text{A}$ |
| Total Capacitance<br>at $V_R = 10$ V, $f = 1$ MHz        | $C_T$       | -      | 28     | -           | pF            |



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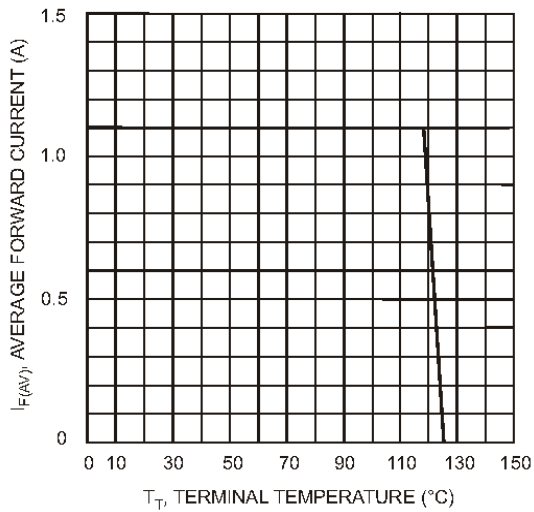


Fig. 1, Forward Current Derating Curve

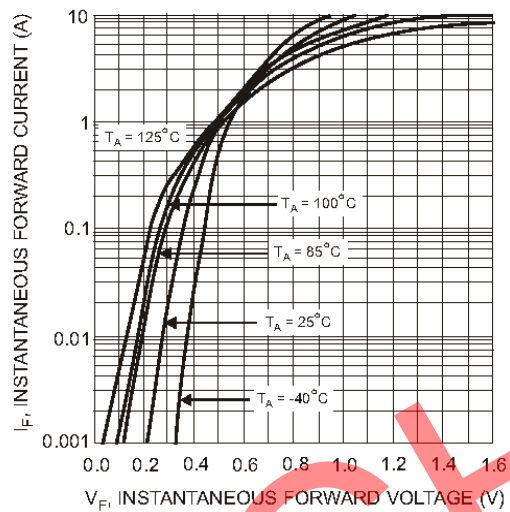


Fig. 2, Typical Forward Characteristics

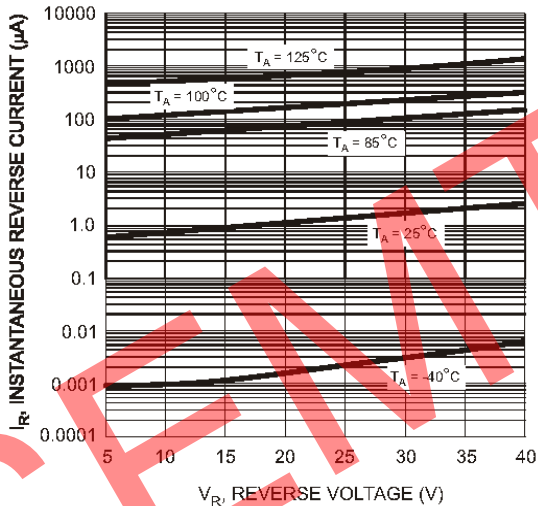


Fig. 3, Typical Pulsed Reverse Characteristics

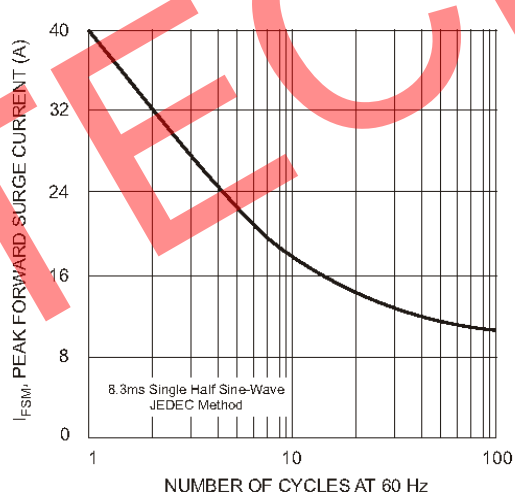
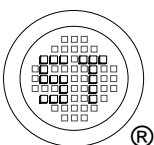


Fig. 4, Maximum Non-Repetitive Peak Forward Surge Current



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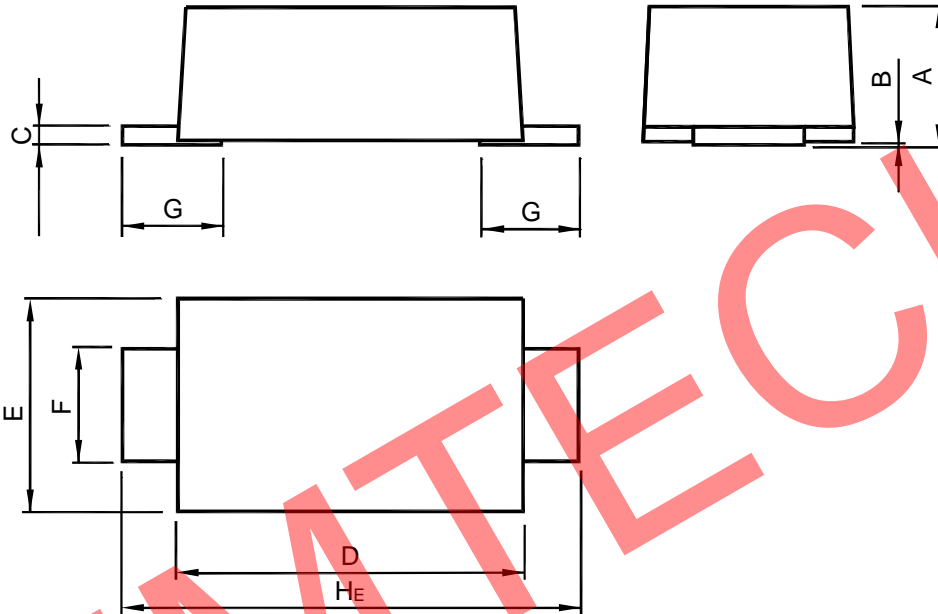


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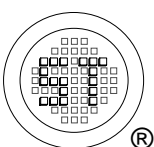
## PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123FL



| UNIT | A    | B   | C   | D   | E   | F   | G   | H <sub>E</sub> |
|------|------|-----|-----|-----|-----|-----|-----|----------------|
| mm   | 1.08 | 0.1 | 0.2 | 2.9 | 1.9 | 1.1 | 0.9 | 3.9            |
|      | 0.88 | 0   | 0.1 | 2.6 | 1.7 | 0.8 | 0.7 | 3.5            |



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