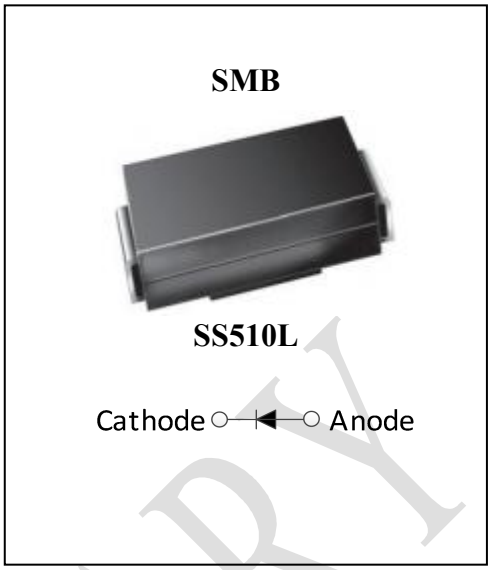
## FEATURES

- Trench Schottky technology
- Lower forward voltage
- Lower power loss,high efficiency
- Softest, fast switching capability
- High surge capability
- Lead Free Finish,ROHS Compliant




## TYPICAL APPLICATIONS

For use in high frequency rectifier of switching mode power supplies, freewheeling diodes, DC/DC converters or polarity protection application

| PRIMIARY CHARACTERISTICS | |
|---|---|
| $IF_{(AV)}$ | 5A |
| $V_{RRM}$ | 100V |
| $I_{FSM}$ | 120A |
| VF | 0.58V |
| $T_{J\,max.}$ | 150℃ |

## Maximum ratings and electrical characteristics

($T_A$ = 25 °C unless otherwise noted)

| Parameter | Description | Test Condition | | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|---|
| $V_{RRM}$ | Maximum repetitive peak reverse voltage | $I_R$ =500μA | | 105 | 117 | — | V |
| $IF_{(AV)}$ | Maximum average forward rectified current | | | — | — | 5 | A |
| $I_{FSM}$ | Maximum Peak forward surge current | 1/2 60hz | | — | — | 120 | A |
| $V_F$ | Static Forward Voltage | $I_F$ = 1A | $T_A$=25℃ | — | 0.41 | 0.45 | V |
| | | $I_F$ = 5A | | — | 0.58 | 0.64 | V |
| | | $I_F$ = 1A | $T_A$=125℃ | — | 0.31 | 0.41 | V |
| | | $I_F$ = 5A | | — | 0.54 | 0.64 | V |
| $I_R$ | Maximum reverse current per diode at working peak reverse voltage | $V_R$ =100V | $T_A$=25℃ | — | 10 | 30 | μA |
| | | | $T_A$=125℃ | — | 5 | 30 | mA |
| $R_{\theta JL}$ | Typical Thermal Resistance | SMB | | 4 | | | ℃/W |
| $T_J$, $T_{STG}$ | Operating and Storage Temperature Range | -55℃ to 150℃ Max | | | | | |

## RATINGS AND CHARACTERISTICS CURVES ($T_A$ = 25 °C unless otherwise noted)

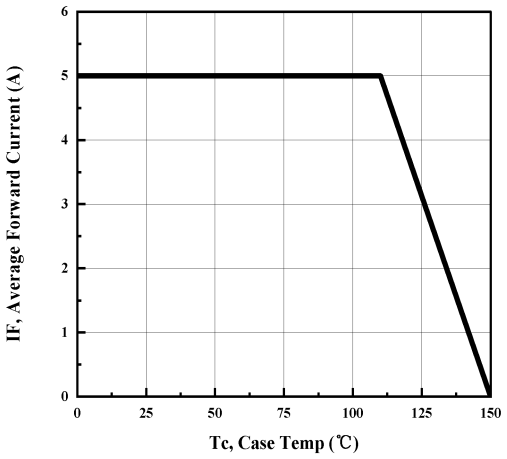



Fig. 1: Forward Current Derating Curve

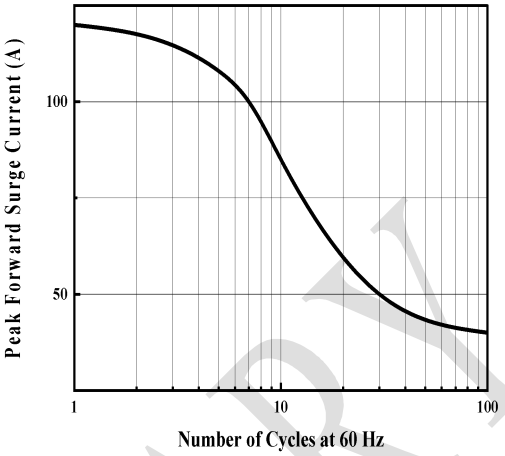



Fig. 2: Maximum Repetitive Surge Current

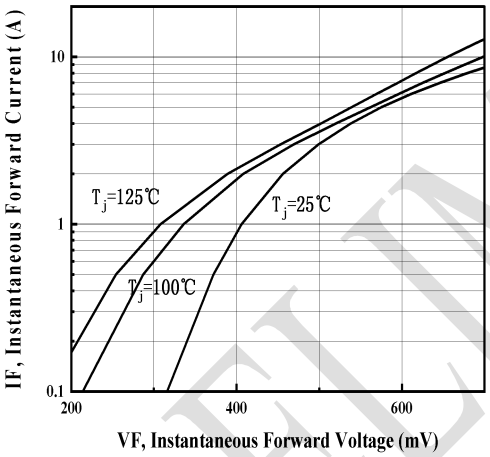



Fig. 3: Typical Forward Voltage

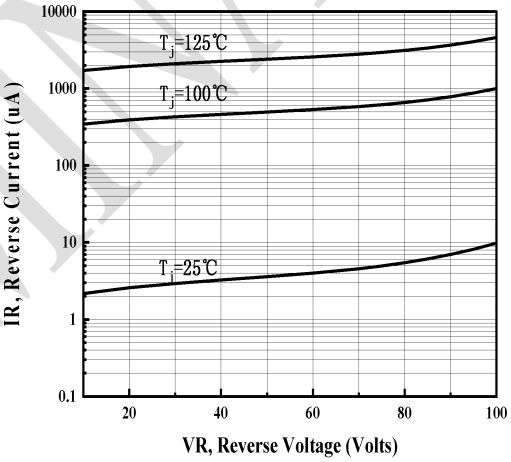



Fig. 4: Typical Reverse Current

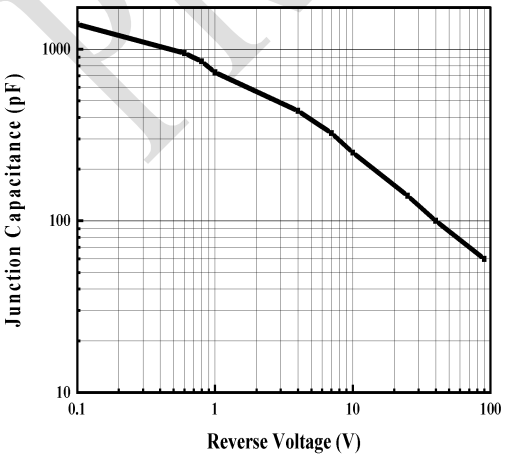
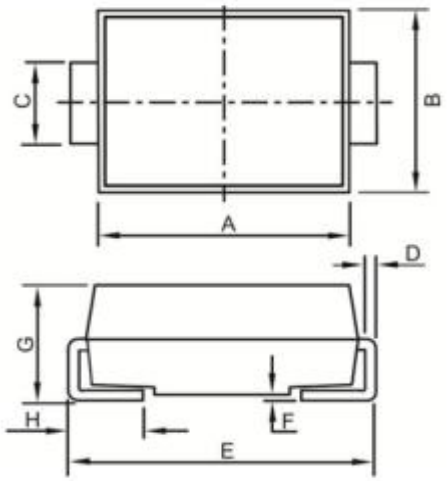



Fig. 5: Typical Junction Capacitance

**PACKAGE OUTLINE DIMENSIONS** in inches (millimeters)




SMB(SS510L)

| SMB(SS510L) | | |
|---|---|---|
| **Dim** | **Min** | **Max** |
| **A** | **4.00** | **4.60** |
| **B** | **2.50** | **2.90** |
| **C** | **1.20** | **1.60** |
| **D** | **0.152** | **0.305** |
| **E** | **4.80** | **5.28** |
| **F** | **0.051** | **0.203** |
| **G** | **2.00** | **2.44** |
| **H** | **0.76** | **1.52** |



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