# TSP3L100A

19-NOV-2019

## Trench MOS Barrier Schottky Rectifier

**TSP3L100A**

**SMA**

**Cathode**  **Anode**

### Features

- Advanced trench technology
- Low forward voltage drop
- Low power losses
- High efficiency operation
- Lead Free Finish, RoHS Compliant

### Applications

- DC/DC Converters
- AC/DC Adaptors
- Switching Power Supplies
- Freewheeling Diodes

### Maximum ratings and electrical characteristics (TJ = 25°C unless otherwise noted)

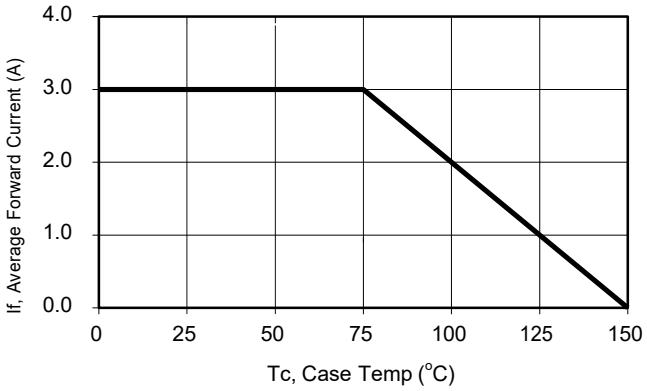
| Parameter | | | Symbol | Limit | | Unit |
|---|---|---|---|---|---|---|
| Maximum repetitive peak reverse voltage | | | VRRM | 100 | | V |
| Maximum average forward rectified current | | | IF(AV) | 3 | | A |
| Peak forward surge current 8.3 ms single half sine- wave superimposed on rated load per diode | | | IFSM | 60 | | A |
| Operating junction and storage temperature range | | | TJ, TSTG | -50 to +150 | | °C |
| Typical thermal resistance per diode (Mounted on FR-4 PCB) | | | RΘJA | 150 | | °C/W |
| Instantaneous forward voltage | | | VF(1) | TYP. | MAX. | |
| | IF=3A | TJ=25°C | | 0.55 | 0.62 | V |
| | IF=3A | TJ=25°C | | 0.49 | - | |
| Instantaneous reverse current per diode at rated reverse voltage | | TJ=25°C | IR(2) | 10 | 50 | uA |
| | | TJ=125°C | | 5 | - | mA |

Notes:

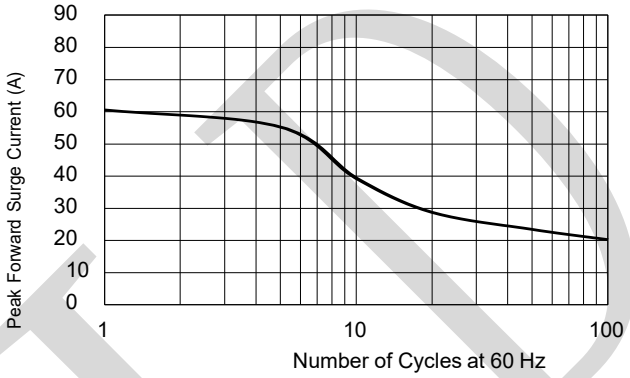
(1) Pulse test: 300 μs pulse width, 1 % duty cycle

(2) Pulse test: Pulse width ≦ 40 ms

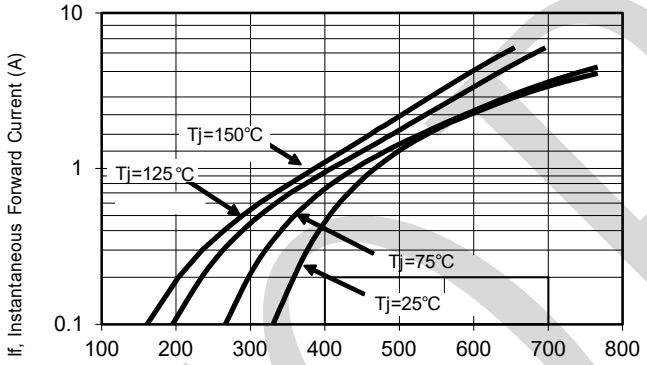
## RATINGS AND CHARACTERISTICS CURVES (TA = 25 °C unless otherwise noted)



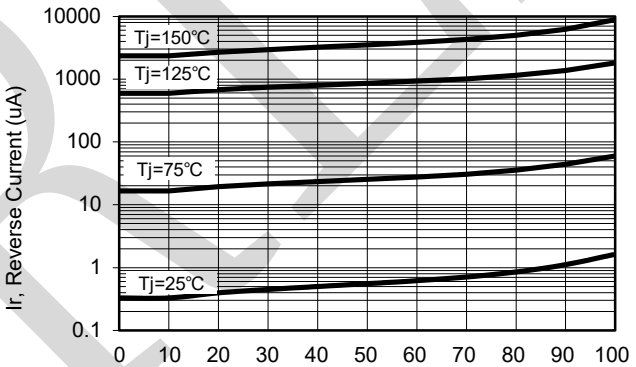

**Current Derating, Case**



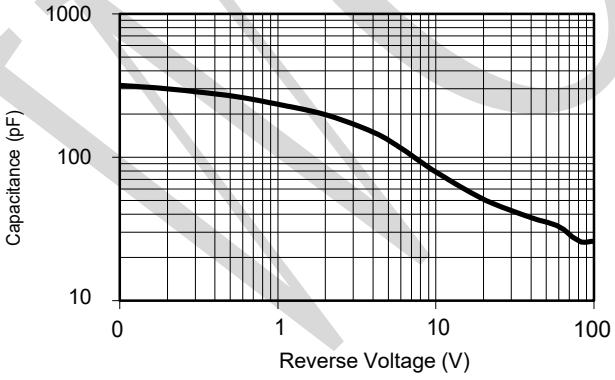

**Maximum Repetitive Surge Current**




**Typical Forward Voltage**



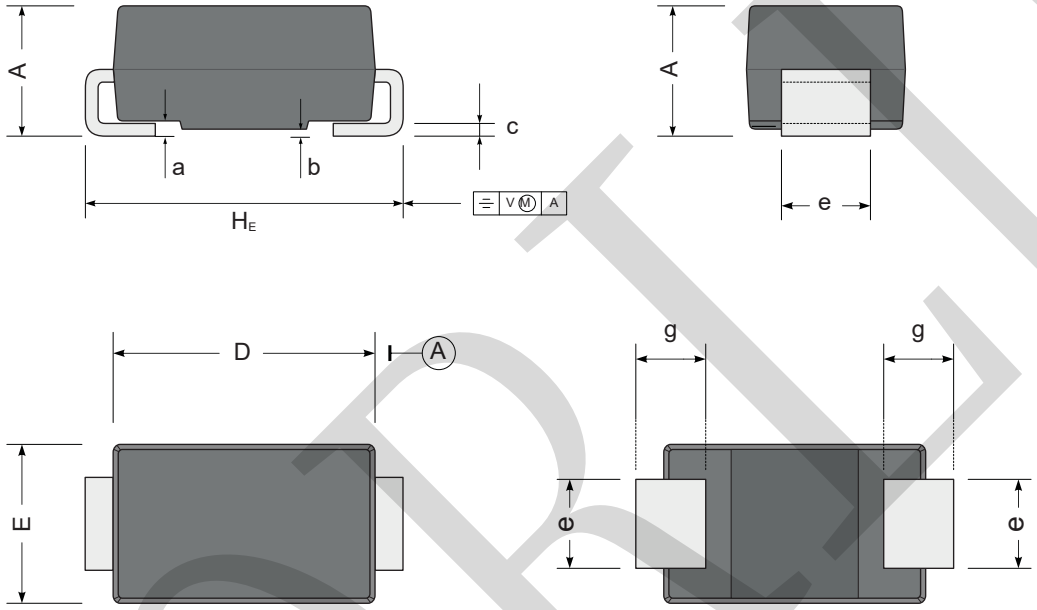

**Typical Reverse Current**




**Typical Junction Capacitance**

## PACKAGE OUTLINE DIMENSIONS

### SMA




| UNIT | | A | D | E | $H_E$ | c | e | g | b | a |
|---|---|---|---|---|---|---|---|---|---|---|
| mm | max | 2.2 | 4.5 | 2.7 | 5.2 | 0.31 | 1.6 | 1.5 | 0.2 | 0.3 |
| | min | 1.9 | 4.0 | 2.3 | 4.7 | 0.15 | 1.3 | 0.9 | 0.05 | |
| mil | max | 87 | 181 | 106 | 205 | 12 | 63 | 59 | 7.9 | 12 |
| | min | 75 | 157 | 91 | 185 | 6 | 51 | 35 | 2 | |