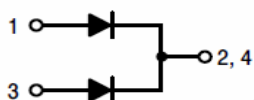
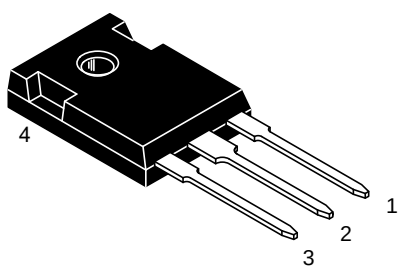


## Trench MOS Barrier Schottky Rectifier

**TO-247S**  
**TSR30V400PTS**



### 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 (T<sub>J</sub> = 25°C unless otherwise noted)

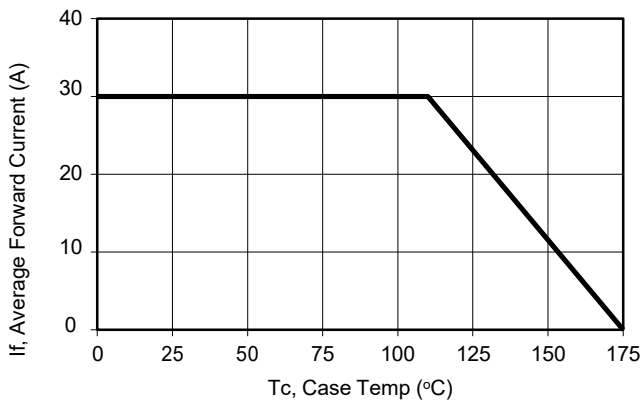
| Parameter                                                                                     |           |          | Symbol   | Limit       |      | Unit |
|-----------------------------------------------------------------------------------------------|-----------|----------|----------|-------------|------|------|
| Maximum repetitive peak reverse voltage                                                       |           |          | VRRM     | 400         |      | V    |
| Maximum average forward rectified current                                                     | device    |          | IF(AV)   | 30          |      | A    |
|                                                                                               | per diode |          |          | 15          |      |      |
| Peak forward surge current 8.3 ms single half sine- wave superimposed on rated load per diode |           |          | IFSM     | 300         |      | A    |
| Operating junction and storage temperature range                                              |           |          | TJ, TSTG | -50 to +175 |      | °C   |
| Typical thermal resistance per leg                                                            |           | TO-247   | RθJC     | 2           |      | °C/W |
| Instantaneous forward voltage per diode                                                       |           |          | VF(1)    | TYP.        | MAX. | V    |
|                                                                                               | IF=3A     | TJ=25°C  |          | 0.75        | 0.80 |      |
|                                                                                               | IF=3A     | TJ=125°C |          | 0.70        | -    |      |
|                                                                                               | IF=15A    | TJ=25°C  |          | 0.86        | 0.91 |      |
|                                                                                               | IF=15A    | TJ=125°C |          | 0.81        | -    |      |
| Instantaneous reverse current per diode at rated reverse voltage                              |           | TJ=25°C  | IR(2)    | 5           | 50   | uA   |
|                                                                                               |           | TJ=125°C |          | 5           | -    | mA   |

Notes:

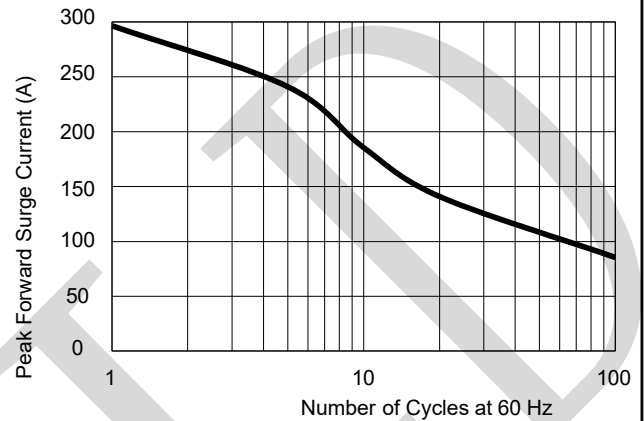
(1) Pulse test: 300 μs pulse width, 1 % duty cycle

(2) Pulse test: Pulse width ≤ 40 ms

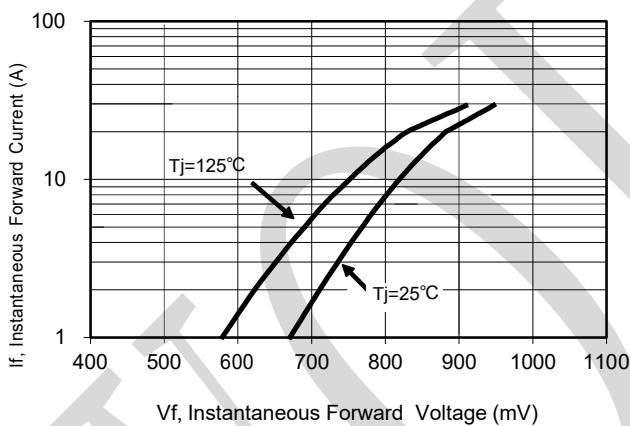
## RATINGS AND CHARACTERISTICS CURVES (TA = 25 °C unless otherwise noted)



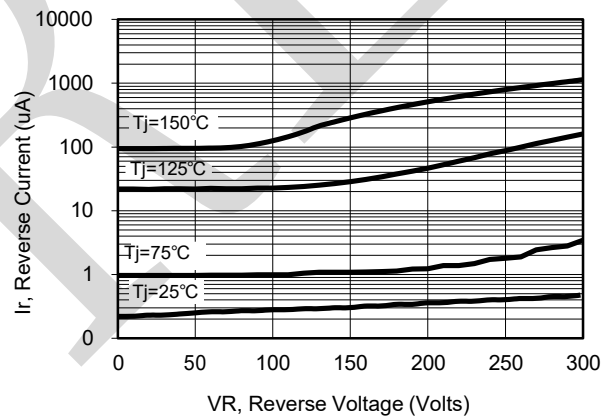
**Current Derating, Case**



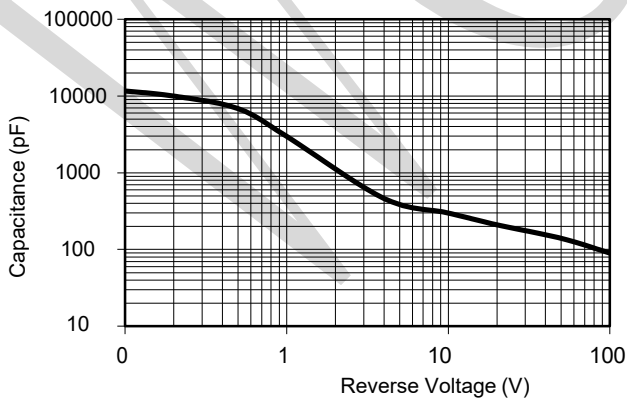
**Maximum Repetitive Surge Current**



**Typical Forward Voltage**



**Typical Reverse Current**

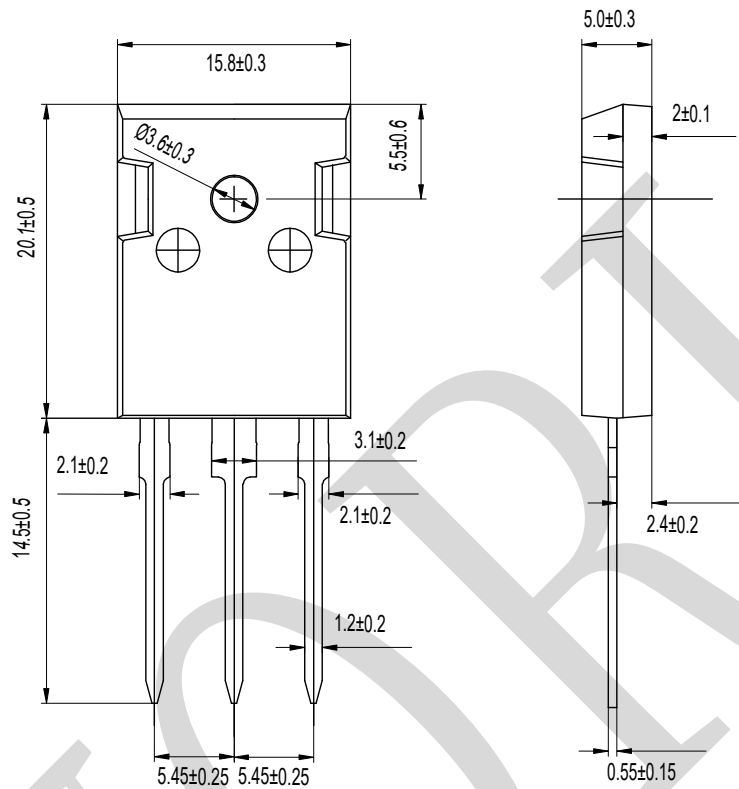


**Typical Junction Capacitance**

## PACKAGE OUTLINE DIMENSIONS

Note:unit: mm

### TO-247S



Dimensions in millimeters