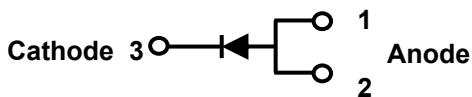


Trench Barrier Schottky Rectifier

TSP15S150SP

TO-277



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_J = 25°C unless otherwise noted)

| Parameter | Symbol | Limit | Unit | | |
|---|----------|-----------------|------|----|------|
| Maximum repetitive peak reverse voltage | VRRM | 150 | V | | |
| Maximum average forward rectified current | IF(AV) | 15 | A | | |
| Peak forward surge current 8.3 ms single half sine- wave superimposed on rated load per diode | IFSM | 180 | A | | |
| Operating junction and storage temperature range | TJ, TSTG | -40 to +150 | °C | | |
| Typical thermal resistance per diode(Mounted on FR-4 PCB) | RθJC | 72 | °C/W | | |
| Instantaneous forward voltage per diode | VF(1) | TYP. | MAX. | V | |
| | | IF=2A TJ=25°C | 0.50 | | 0.55 |
| | | IF=2A TJ=125°C | 0.42 | | - |
| | | IF=15A TJ=25°C | 1.0 | | 1.1 |
| | | IF=15A TJ=125°C | 0.95 | | - |
| Instantaneous reverse current per diode at rated reverse voltage | IR(2) | TJ=25°C | 50 | uA | |
| | | TJ=125°C | 20 | 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)

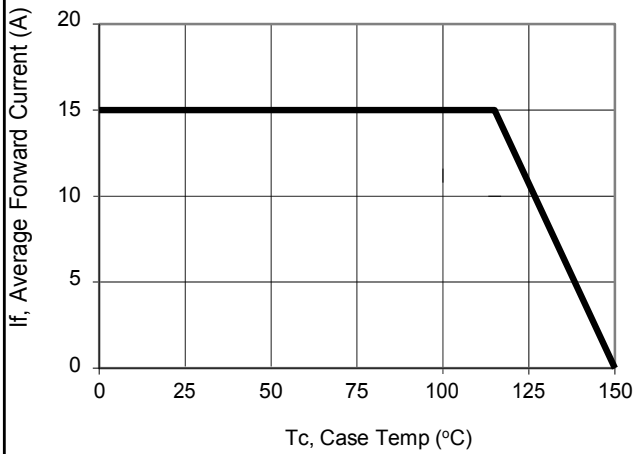


Figure 1: Current Derating, Case

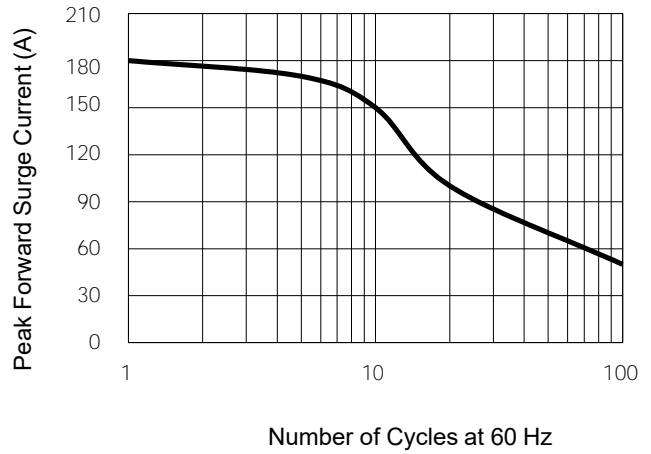


Figure 2: Maximum Repetitive Surge Current

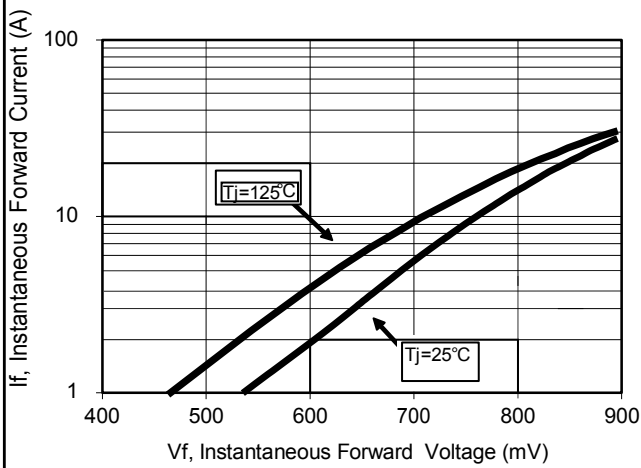


Figure 3: Typical Forward Voltage

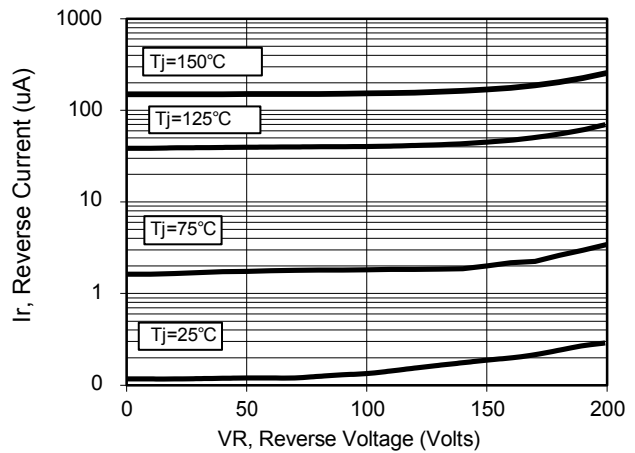
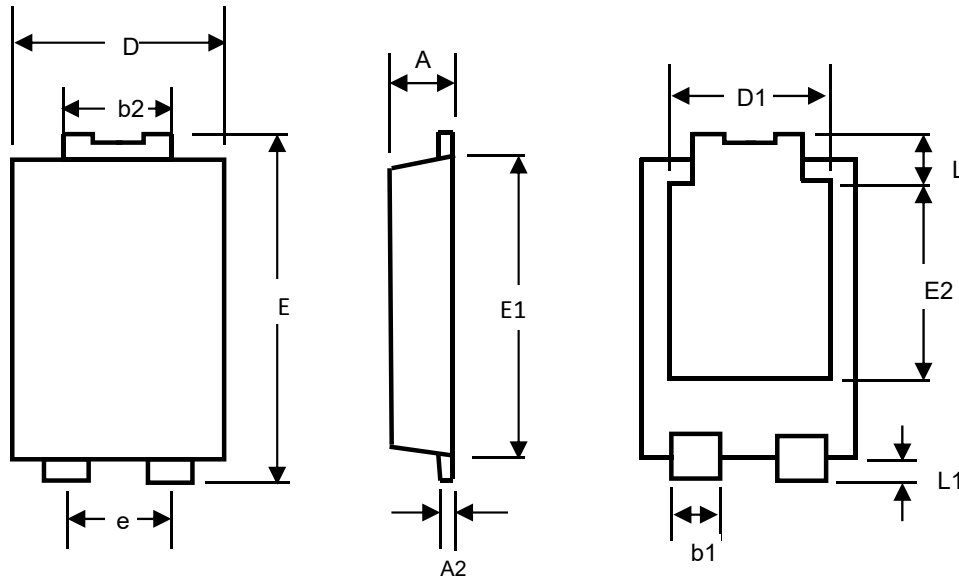


Figure 4: Typical Reverse Current

PACKAGE OUTLINE DIMENSIONS

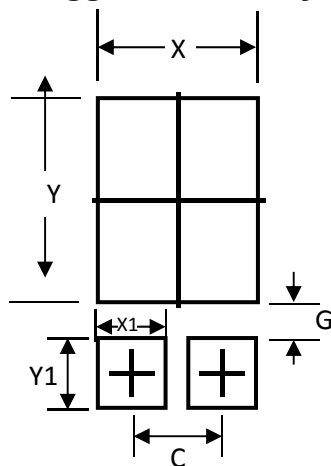
TO-277



TO-277 Mechanical Data

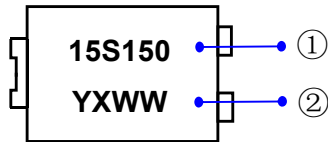
| UNIT | | A | A2 | b1 | b2 | D | D1 | E | E1 | E2 | L | L1 |
|------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| mm | max | 1.3 | 0.4 | 1.0 | 1.9 | 4.3 | 3.05 | 6.6 | 5.75 | 3.55 | 1.0 | 0.7 |
| | min | 1.1 | 0.2 | 0.8 | 1.7 | 3.9 | | 6.4 | 5.3 | | 0.8 | 0.5 |
| mil | max | 51.18 | 15.75 | 39.37 | 74.80 | 169.3 | 120.0 | 259.8 | 226.3 | 139.7 | 39.37 | 27.55 |
| | min | 43.30 | 7.87 | 31.49 | 66.93 | 153.5 | | 252.0 | 208.6 | | 31.49 | 19.69 |

TO-277 Suggested Pad Layout



| UNIT | | C | G | X | X1 | Y | Y1 |
|------|-----|-------|-------|--------|-------|--------|-------|
| mm | min | 1.80 | 0.90 | 3.4 | 1.4 | 4.9 | 1.4 |
| mil | min | 78.86 | 35.43 | 133.86 | 35.43 | 192.91 | 55.12 |

Marking Information



① Product model :TSP15S150SP Referred to as 15S150

② PDC information :

Y X WW

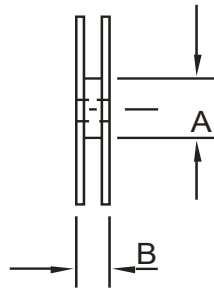
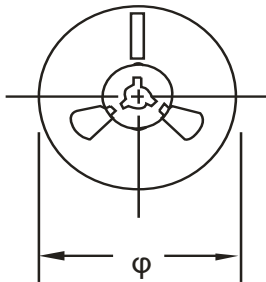
WW:Week code(01 to 53)

X:Internal identification code

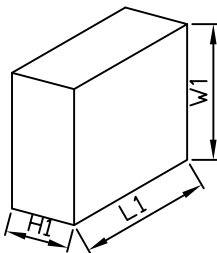
Y:Year code(ex:0=2020)

Packaging Information

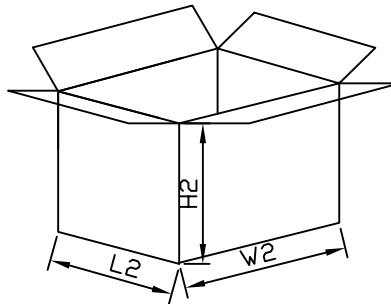
1.Reel Dimensions



2. Inside Box



3. Outside Box



Packaging Information

| NO | UNIT | Reel Dimensions | | | Inside Box | | | Outside Box | | |
|------|--|-------------------------------|----|----|---------------------------|-----|----|-----------------------------------|-----|-----|
| | | φ | A | B | L1 | W1 | H1 | L2 | W2 | H2 |
| Size | mm | 330 | 70 | 15 | 335 | 335 | 43 | 360 | 360 | 360 |
| QTY | PCS | Smallest package,5000PCS/reel | | | 10,000PCS,2 reel in total | | | 80,000PCS/carton,8 boxes in total | | |
| Note | Tolerance ≤20mm,±3mm; 21-100mm,±5mm; 101-500mm,±10mm | | | | | | | | | |