

## Trench MOS Barrier Schottky Rectifier

**DO-201AD**  
**TSA10L120**



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

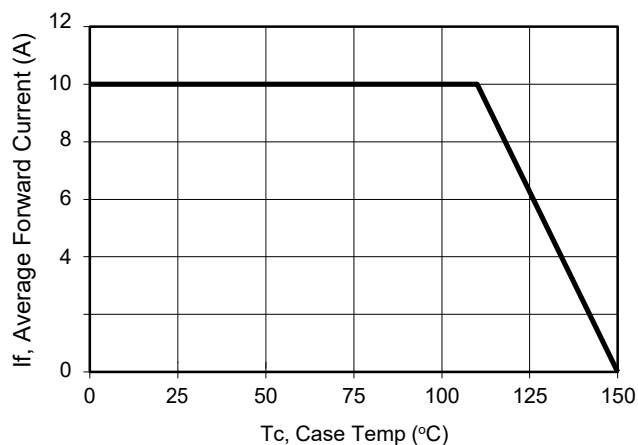
| Parameter                                                                                     |          | Symbol   | Limit       |      | Unit |
|-----------------------------------------------------------------------------------------------|----------|----------|-------------|------|------|
| Maximum repetitive peak reverse voltage                                                       |          | VRRM     | 120         |      | V    |
| Maximum average forward rectified current                                                     |          | IF(AV)   | 10          |      | 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 | -50 to +150 |      | °C   |
| Typical thermal resistance per leg                                                            | DO-201AD | RθJC     | 22          |      | °C/W |
| Instantaneous forward voltage per diode                                                       |          |          | TYP.        | MAX. | V    |
|                                                                                               | IF=3A    | TJ=25°C  | 0.49        | 0.55 |      |
|                                                                                               | IF=3A    | TJ=125°C | 0.44        | -    |      |
|                                                                                               | IF=10A   | TJ=25°C  | 0.70        | 0.75 |      |
|                                                                                               | IF=10A   | TJ=125°C | 0.65        | -    |      |
| Instantaneous reverse current per diode at rated reverse voltage                              |          | TJ=25°C  | -           | 50   | uA   |
|                                                                                               |          | TJ=125°C | 5           | 10   | mA   |

Notes:

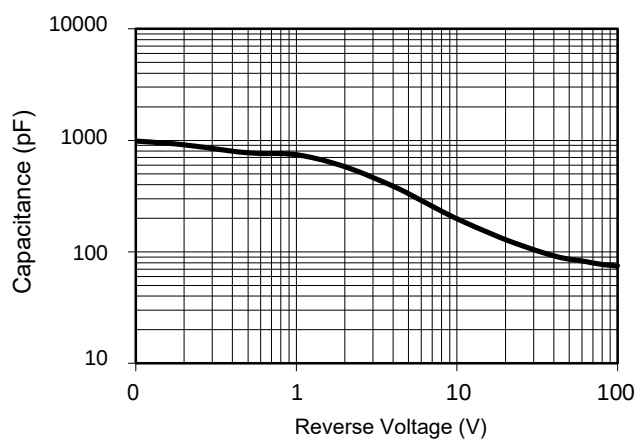
(1) Pulse test: 300 μs pulse width, 1 % duty cycle

(2) Pulse test: Pulse width ≤ 40 ms

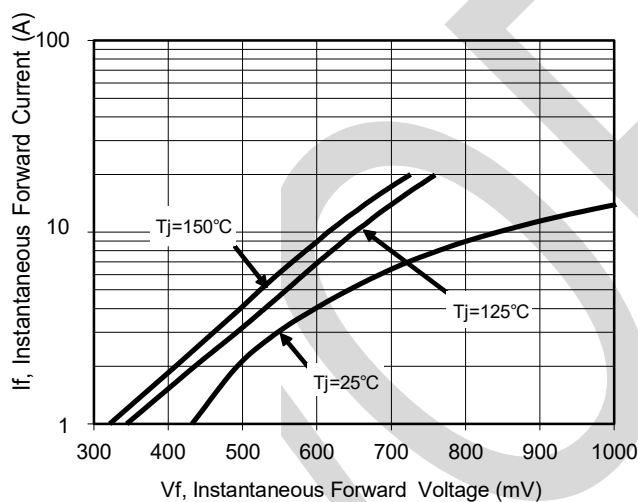
## RATINGS AND CHARACTERISTICS CURVES (TA = 25 °C unless otherwise noted)



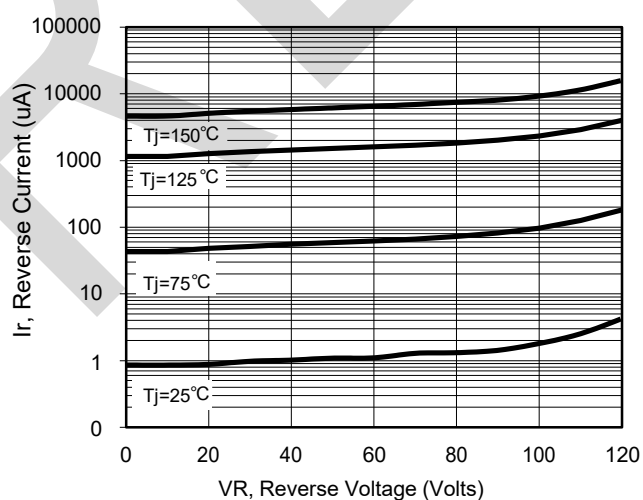
Current Derating, Case



Typical Junction Capacitance



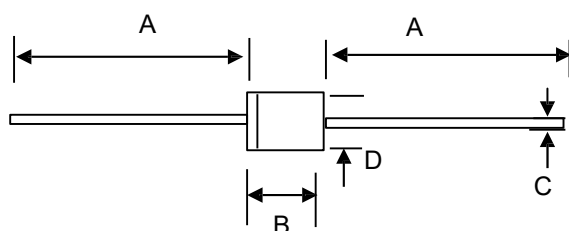
Typical Forward Voltage



Typical Reverse Current

## PACKAGE OUTLINE DIMENSIONS

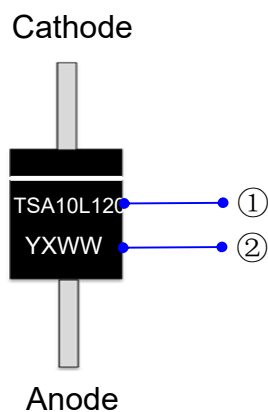
### DO-201AD



### DO-201AD mechanical data

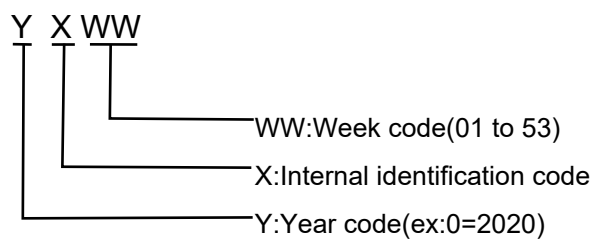
| UNIT |     | A       | B      | C     | D      |
|------|-----|---------|--------|-------|--------|
| mm   | max | 26.5    | 9.5    | 1.4   | 5.3    |
|      | min | 24.5    | 7.3    | 1.1   | 4.8    |
| mil  | max | 1043.30 | 374.01 | 55.12 | 208.67 |
|      | min | 946.57  | 287.40 | 39.37 | 188.97 |

## Marking Information



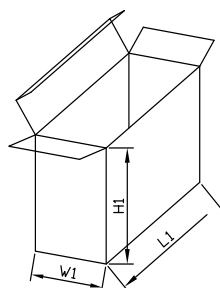
①Product model : TSA10L120

②PDC information :

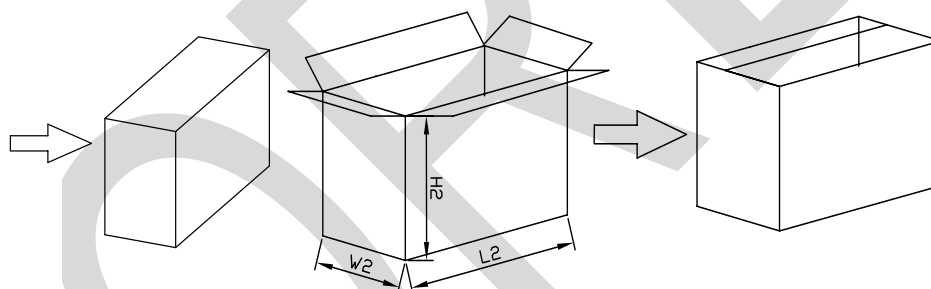


## Packaging Information

1.Inside Box



2.Outside Box



## Packaging Information

| NO   | UNIT      | Inside Box                                 |    |     | Outside Box                        |     |     |
|------|-----------|--------------------------------------------|----|-----|------------------------------------|-----|-----|
| Size | mm        | L1                                         | W1 | H1  | L2                                 | W2  | H2  |
|      |           | 255                                        | 75 | 145 | 415                                | 280 | 320 |
| QTY  | PCS       | Smallest package,1000PCS/carton            |    |     | 10,000PCS/carton,10 boxes in total |     |     |
| Note | Tolerance | ≤20mm,±3mm; 21-100mm,±5mm; 101-500mm,±10mm |    |     |                                    |     |     |