

Preferred Device

# High-Speed Switching Diode

- High-Speed Switching Applications
- Lead Finish: 100% Matte Sn (Tin)
- Qualified Maximum Reflow Temperature: 260°C
- Extremely Small SOD-523 Package

## MAXIMUM RATINGS (T<sub>A</sub> = 25°C)

| Rating                     | Symbol                 | Max | Unit |
|----------------------------|------------------------|-----|------|
| Reverse Voltage            | V <sub>R</sub>         | 100 | V    |
| Forward Current            | I <sub>F</sub>         | 200 | mAdc |
| Peak Forward Surge Current | I <sub>FM(surge)</sub> | 500 | mAdc |

## THERMAL CHARACTERISTICS

| Characteristic  | Symbol                            | Max         | Unit        |
|---|-----------------------------------|-------------|-------------|
| Total Device Dissipation<br>FR-5 Board (Note 1)<br>T <sub>A</sub> = 25°C<br>Derate above 25°C | P <sub>D</sub>                    | 200<br>1.57 | mW<br>mW/°C |
| Thermal Resistance<br>Junction-to-Ambient   | R <sub>θJA</sub>                  | 625         | °C/W        |
| Junction and Storage Temperature  | T <sub>J</sub> , T <sub>stg</sub> | 150         | °C          |

1. FR-4 @ Minimum Pad

## ELECTRICAL CHARACTERISTICS

| Characteristic | Symbol | Min | Max | Unit |
|----------------|--------|-----|-----|------|
|----------------|--------|-----|-----|------|

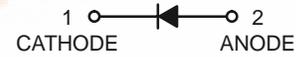
## OFF CHARACTERISTICS

|  |                 |   |     |      |
|--|-----------------|---|-----|------|
| Reverse Voltage Leakage Current<br>(V <sub>R</sub> = 80 Vdc)         | I <sub>R</sub>  | - | 0.1 | μAdc |
| Diode Capacitance<br>(V <sub>R</sub> = 0.5 V, f = 1.0 MHz)           | C <sub>D</sub>  | - | 3.0 | pF   |
| Forward Recovery Voltage<br>(I <sub>F</sub> = 100 mAdc)              | V <sub>F</sub>  | - | 1.2 | Vdc  |
| Reverse Recovery Time<br>(I <sub>F</sub> = I <sub>R</sub> = 10 mAdc) | t <sub>rr</sub> | - | 4.0 | ns   |



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SOD-523  
CASE 502  
PLASTIC

## MARKING DIAGRAM



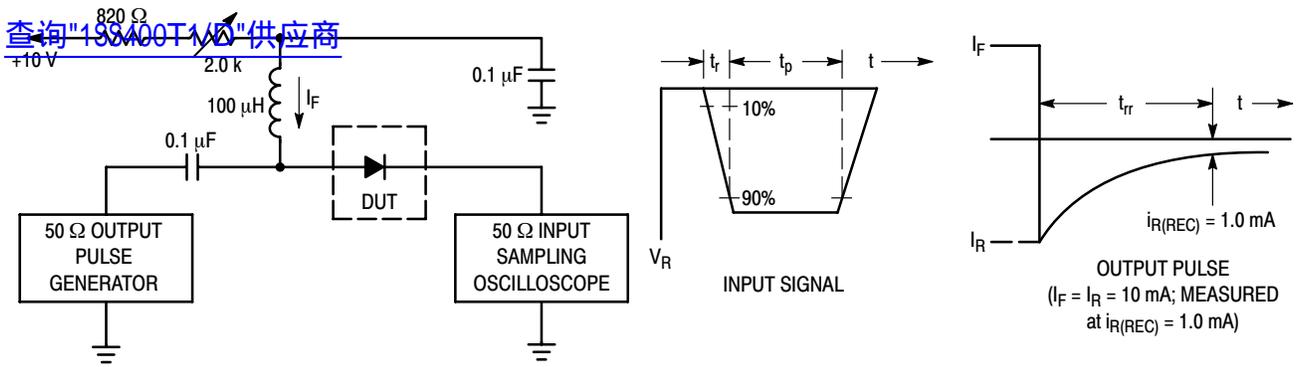
A = Specific Device Code  
d = Date Code

## ORDERING INFORMATION

| Device   | Package | Shipping                       |
|----------|---------|--------------------------------|
| 1SS400T1 | SOD-523 | 4 mm pitch<br>3000/Tape & Reel |

Preferred devices are recommended choices for future use and best overall value.

# 1SS400T1



- Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current ( $I_F$ ) of 10 mA.  
 2. Input pulse is adjusted so  $I_{R(\text{peak})}$  is equal to 10 mA.  
 3.  $t_p \gg t_{rr}$

Figure 1. Recovery Time Equivalent Test Circuit

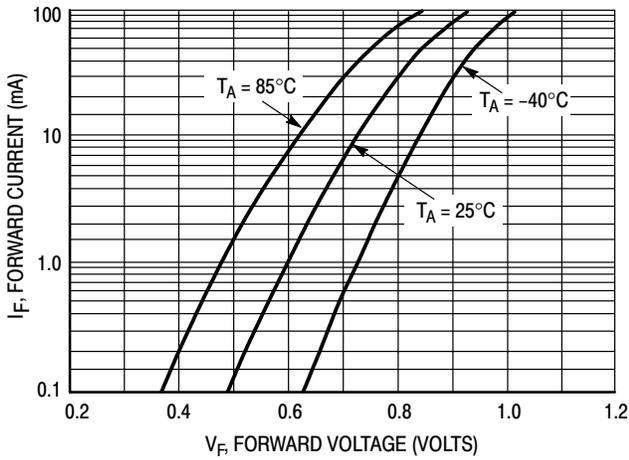


Figure 2. Forward Voltage

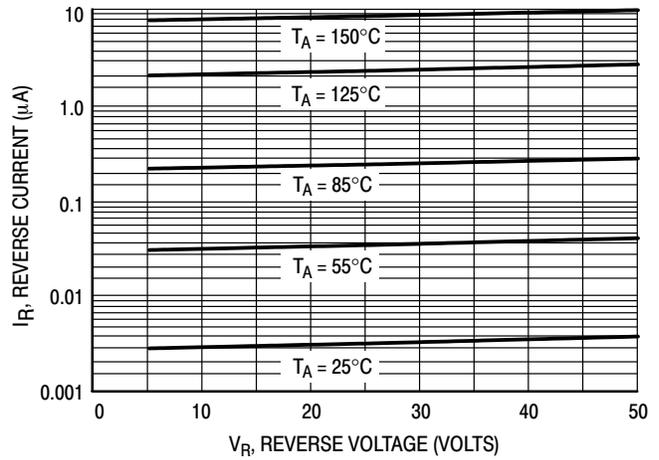


Figure 3. Leakage Current

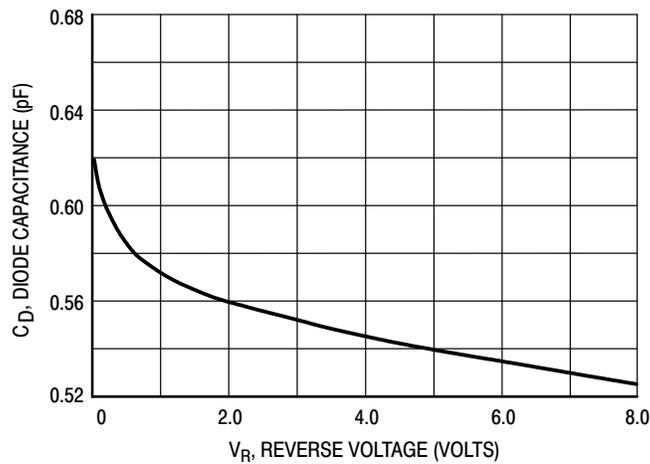


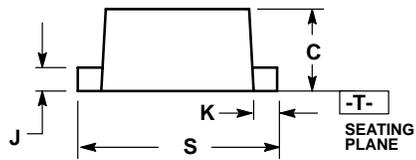
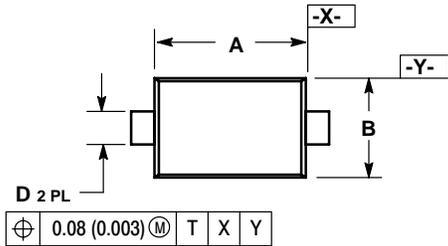
Figure 4. Capacitance

# 1SS400T1

[查询"1SS400T1/D"供应商](#)

## PACKAGE DIMENSIONS

SOD-523  
CASE 502-01  
ISSUE O



NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETER.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.

| DIM | MILLIMETERS |      |      | INCHES |        |        |
|-----|-------------|------|------|--------|--------|--------|
|     | MIN         | NOM  | MAX  | MIN    | NOM    | MAX    |
| A   | 1.10        | 1.20 | 1.30 | 0.043  | 0.047  | 0.051  |
| B   | 0.70        | 0.80 | 0.90 | 0.028  | 0.032  | 0.035  |
| C   | 0.50        | 0.60 | 0.70 | 0.020  | 0.024  | 0.028  |
| D   | 0.25        | 0.30 | 0.35 | 0.010  | 0.012  | 0.014  |
| J   | 0.07        | 0.14 | 0.20 | 0.0028 | 0.0055 | 0.0079 |
| K   | 0.15        | 0.20 | 0.25 | 0.006  | 0.008  | 0.010  |
| S   | 1.50        | 1.60 | 1.70 | 0.059  | 0.063  | 0.067  |

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