



# 1SS400G

## SURFACE MOUNT SWITCHING DIODE

This device is an extremely fast switching diode housed in the ultra-small SOD-723 package. Ideal for applications

### FEATURES

- Extremely fast reverse recovery time to reduce switching losses
- Very low capacitance for reduced insertion losses
- Reverse voltage rating of 80V
- Also available in lead-free plating (100% matte tin finish)
- In compliance with EU RoHS 2002/95/EC directives

### MECHANICAL DATA

Case: SOD-723, Plastic

Terminals: Solderable per MIL-STD-750, Method 2026

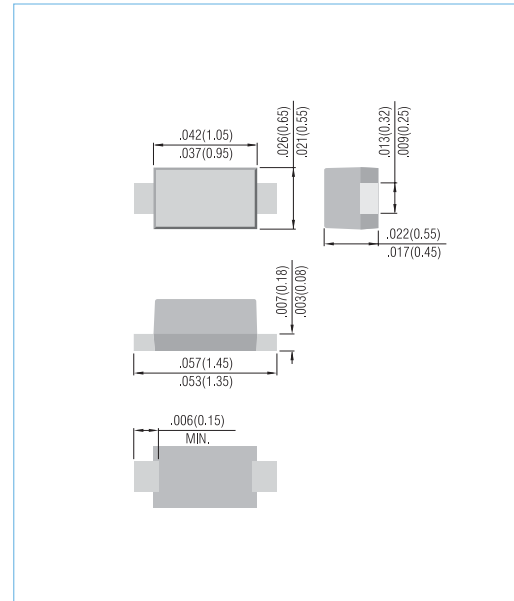
Polarity: See Diagram Below

Approx.Weight : 0.00077 gram

Marking : BE

SOD-723

Unit: inch ( mm )



### MAXIMUM RATINGS $T_J = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED

| PARAMETER   | SYMBOL         | LIMITS     | UNITS            |
|---|----------------|------------|------------------|
| Peak Reverse Voltage  | $V_{RM}$       | 90         | V                |
| Continuous Reverse Voltage  | $V_R$          | 80         | V                |
| Continuous Forward Current  | $I_F$          | 225        | mA               |
| Non-repetitive Peak Forward Current , $t = 0.01\text{ms}$ , Square Wave | $I_{FSM}$      | 2          | A                |
| Total Power Dissipation (Note1)   | $P_{TOT}$      | 200        | mW               |
| Operating Junction and Storage Temperature Range                        | $T_J, T_{STG}$ | -55 to 150 | $^\circ\text{C}$ |

Note 1. FR-5 Board 1.0 x 0.75 x 0.62 in

### THERMAL CHARACTERISTICS

| PARAMETER                               | SYMBOL          | LIMITS | UNITS                       |
|---|-----------------|--------|-----------------------------|
| Thermal Resistance, Junction to Ambient | $R_{\theta JA}$ | 625    | $^\circ\text{C} / \text{W}$ |

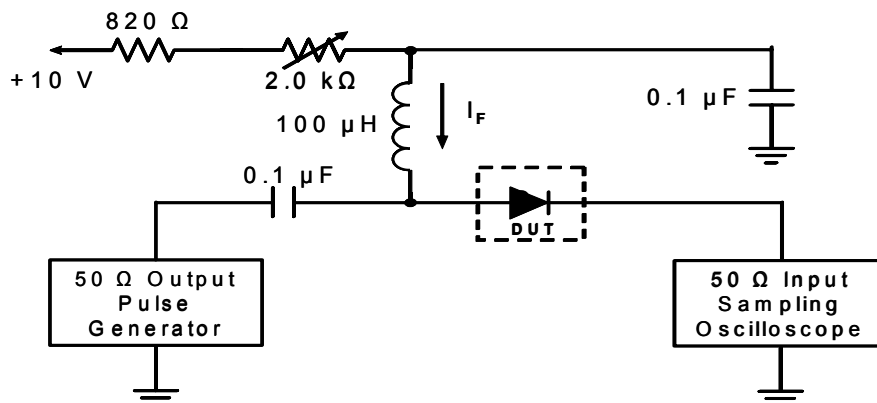


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## ELECTRICAL CHARACTERISTICS $T_J = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED

| PARAMETER                               | SYMBOL   | TEST CONDITIONS  | MIN | TYP | MAX | UNITS         |
|---|----------|--|-----|-----|-----|---------------|
| Forward Voltage (Note 2)                | $V_F$    | $I_F = 100\text{mA}$   | -   | -   | 1   | V             |
| Reverse Leakage Current                 | $I_R$    | $V_R = 80\text{V}$   | -   | -   | 0.1 | $\mu\text{A}$ |
| Junction Capacitance                    | $C_D$    | 0.5Vdc Bias, $f = 1\text{MHz}$   | -   | 0.7 | 3   | pF            |
| Reverse Recovery Time<br>(See Figure 1) | $T_{RR}$ | $I_F = 10\text{mA}$ , $I_R = 10\text{mA}$<br>$R_L = 100\ \Omega$ ;<br>measured at $I_{R\text{rec}} = 1\text{mA}$ | -   | -   | 4.0 | ns            |

Note 2. Short duration pulse test to avoid self-heating effect



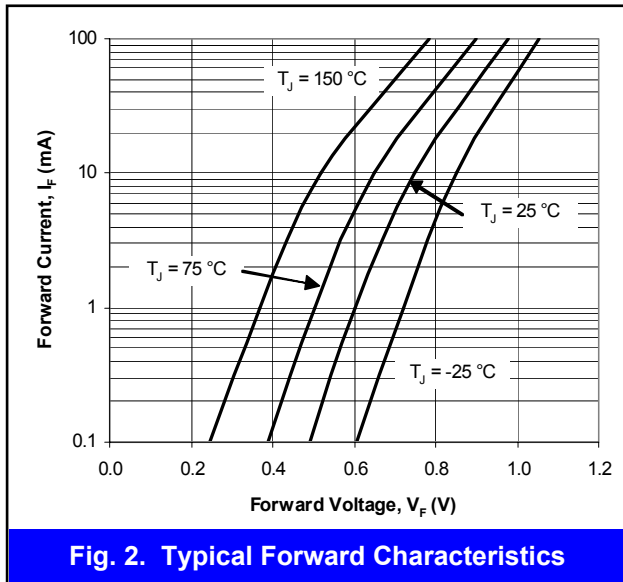
- Notes: 1. A 2.0k $\Omega$  variable resistor adjusted for a forward current ( $I_F$ ) to 10mA  
2. Input pulse is adjusted to  $I_{R(\text{peak})}$  is equal to 10mA

**Figure 1. REVERSE RECOVERY TIME EQUIVALENT TEST CIRCUIT**

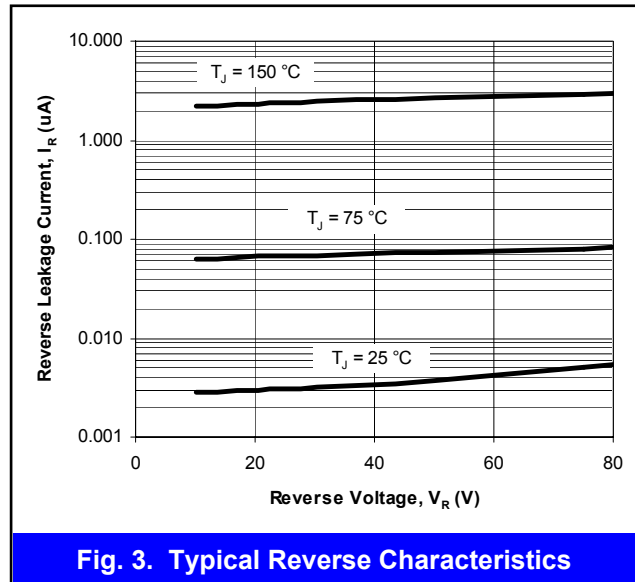


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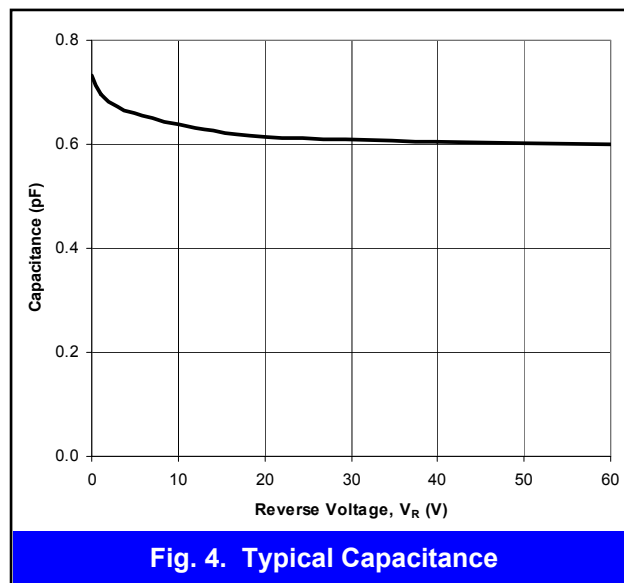
## TYPICAL CHARACTERISTIC CURVES



**Fig. 2. Typical Forward Characteristics**



**Fig. 3. Typical Reverse Characteristics**



**Fig. 4. Typical Capacitance**

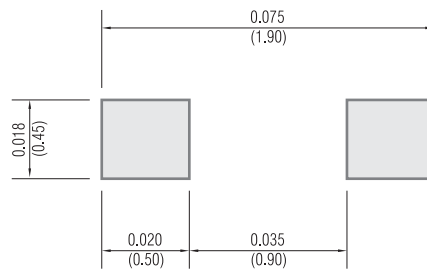


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## MOUNTING PAD LAYOUT

SOD-723

Unit: inch ( mm )



## ORDER INFORMATION

- Packing information

T/R - 8K per 7" plastic Reel

## LEGAL STATEMENT

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