

Small Signal Diode



Features

- ✧Fast switching device($T_r < 4.0nS$)
- ✧Surface device type mounting
- ✧Moisture sensitivity level 1
- ✧Matte Tin(Sn) lead finish
- ✧Pb free version,RoHS compliant
- ✧Green compound (Halogen free) with suffix "G" on packing code and prefix "G" on date code

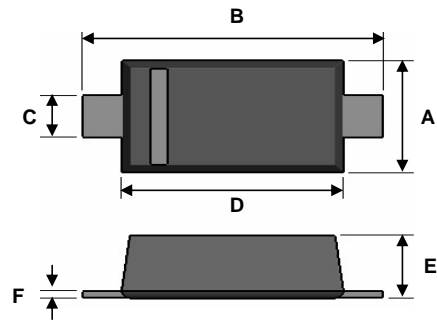
Mechanical Data

- ✧Case : Flat lead SOD-523F small outline plastic package
- ✧Terminal: Matte tin plated, lead free., solderable per MIL-STD-202, Method 208 guaranteed
- ✧High temperature soldering guaranteed: 260 °C/10s
- ✧Polarity : Indicated by cathode band
- ✧Weight : 1.68±0.5 mg
- ✧Marking Code : A

Ordering Information

| Part No. | Packing Code | Package | Packing | Marking |
|----------|--------------|----------|--------------|---------|
| 1SS400 | RK | SOD-523F | 3K / 7" Reel | A |
| 1SS400 | RKG | SOD-523F | 3K / 7" Reel | A |

SOD-523F

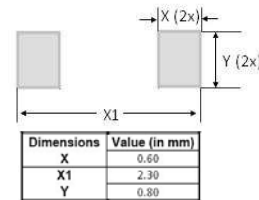


| Dimensions | Unit (mm) | | Unit (inch) | |
|------------|-----------|------|-------------|-------|
| | Min | Max | Min | Max |
| A | 0.70 | 0.90 | 0.028 | 0.035 |
| B | 1.50 | 1.70 | 0.059 | 0.067 |
| C | 0.25 | 0.40 | 0.010 | 0.016 |
| D | 1.10 | 1.30 | 0.043 | 0.051 |
| E | 0.60 | 0.70 | 0.024 | 0.028 |
| F | 0.10 | 0.14 | 0.004 | 0.006 |

Pin Configuration



Suggested PAD Layout



Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Maximum Ratings

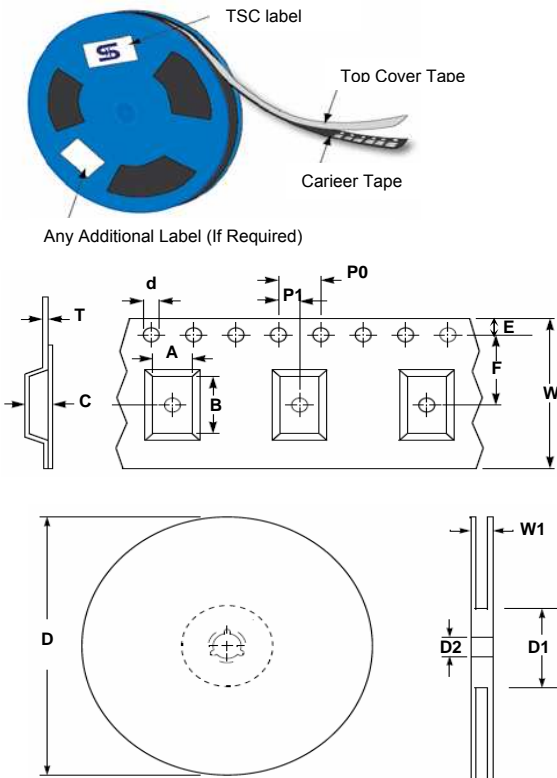
| Type Number | Symbol | Value | Units |
|--|-----------------|--------------|-------|
| Power Dissipation | P_D | 200 | mW |
| Repetitive Peak Reverse Voltage | V_{RRM} | 100 | V |
| Reverse Voltage | V_R | 100 | V |
| Mean Forward Current | I_o | 200 | mA |
| Peak Forward Surge Current | I_{FSM} | 500 | mA |
| Thermal Resistance (Junction to Ambient) | $R_{\theta JA}$ | 625 | °C/W |
| Storage Temperature Range | T_J, T_{STG} | -55 to + 150 | °C |

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Electrical Characteristics

| Type Number | | Symbol | Min | Max | Units |
|-------------------------|--|------------|-----|------|---------|
| Breakdown Voltage | $I_R = 100\mu A$ | $V_{(BR)}$ | 100 | - | V |
| Forward Voltage | $I_F = 100mA$ | V_F | - | 1.20 | V |
| Reverse Leakage Current | $V_R = 80V$ | I_R | - | 0.1 | μA |
| Reverse Recovery Time | $I_F = 10mA$ $V_R = 6V$ $RL = 100\Omega$ | T_{RR} | | 4 | nS |
| Junction Capacitance | $V_R = 0.5V$, $f = 1.0MHz$ | C_J | - | 4.0 | pF |

Tape & Reel specification



| Item | Symbol | Dimension(mm) |
|------------------------|--------|---------------|
| Carrier width | A | 1.7 ± 0.10 |
| Carrier length | B | 3.73 ± 0.10 |
| Carrier depth | C | 1.68 ± 0.10 |
| Sprocket hole | d | 1.5 ± 0.1 |
| Reel outside diameter | D | 178 ± 1 |
| Reel inner diameter | D1 | 55 Min |
| Feed hole width | D2 | 13.0 ± 0.20 |
| Sprocket hole position | E | 1.75 ± 0.10 |
| Punch hole position | F | 3.50 ± 0.05 |
| Sprocket hole pitch | P0 | 4.00 ± 0.10 |
| Embossment center | P1 | 2.00 ± 0.05 |
| Overall tape thickness | T | 0.23 ± 0.05 |
| Tape width | W | 8.00 ± 0.20 |
| Reel width | W1 | 14.4 Max |

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Rating and Characteristic Curves

Fig. 1 Total Capacitance

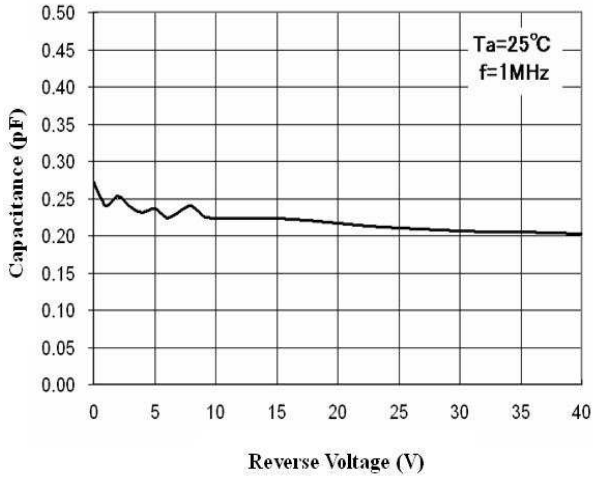


Fig. 2 Forward Voltage vs Ambient

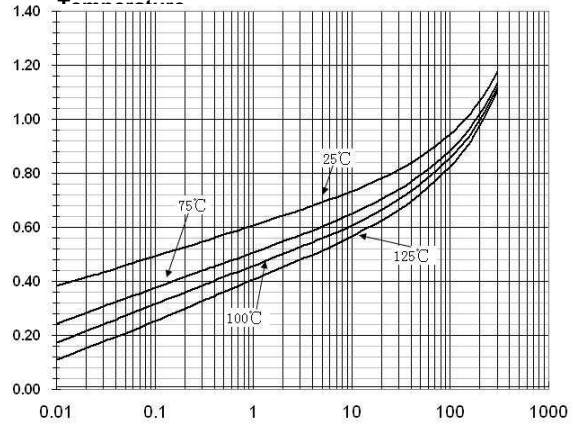


Fig. Power Derating Curve

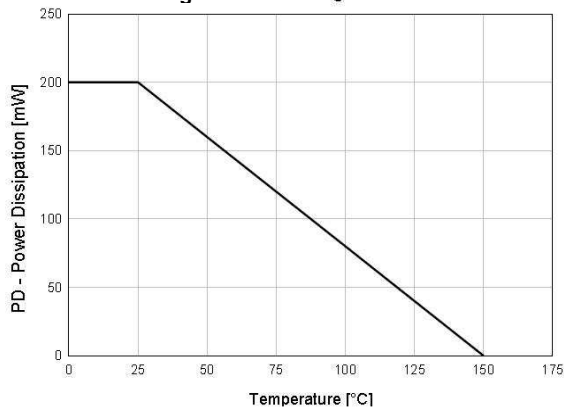


Fig. 4 Reverse Current vs Reverse

