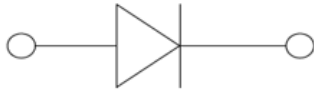


High Speed Switching Diode



SOD323

Features

- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- V_R 75V
- I_{FAV} 150mA
- Part no. with suffix "Q" means AEC-Q101 qualified

Applications

- Extreme fast switches
- Automotive

Mechanical Data

- **Case:** SOD323
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end
- **Marking:** T4

■ Maximum Ratings ($T_a=25^\circ\text{C}$ Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | CONDITIONS | VALUE |
|---------------------------------|------------|------------------|--------------------|-------------|
| Repetitive Peak Reverse Voltage | V_{RRM} | V | | 100 |
| Peak Forward Surge Current | I_{FSM} | A | $t_p=1\mu\text{s}$ | 2 |
| Average Forward Current | I_{FAV} | mA | | 150 |
| Power Dissipation | P_{tot} | mW | | 200 |
| Thermal Resistance | R_{thJA} | K/W | | 625 |
| Maximum Junction Temperature | T_j | $^\circ\text{C}$ | | -55 to +150 |
| Storage Temperature Range | T_{stg} | $^\circ\text{C}$ | | -55 to +150 |

■ Electrical Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | CONDITIONS | MIN | MAX |
|-------------------------------|----------|---------------|---|-----|-----|
| Maximum Forward Voltage | V_F | V | $I_F=10\text{mA}$ | | 1.0 |
| Maximum Reverse Current | I_R | nA | $V_R=20\text{V}$ | | 25 |
| | I_R | μA | $V_R=75\text{V}$ | | 1.0 |
| Minimum Breakdown Voltage | V_R | V | $I_R=1\mu\text{A}$ | 75 | |
| Maximum Diode Capacitance | C_D | pF | $V_R=V_F=0\text{V}$, $f=1\text{MHz}$ | | 4 |
| Maximum Reverse Recovery Time | t_{rr} | ns | $I_F=50\text{mA}$, $I_{rr}=0.1I_R$, $R_L=100\Omega$ | | 4 |



1N4148WSQ

Ordering Information (Example)

| PREFERED P/N | PACKING CODE | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|--------------|--------------|-------------------|----------------------|-------------------------|----------------------------|---------------|
| 1N4148WSQ | F2 | Approximate 0.004 | 3000 | 30000 | 120000 | 7" reel |

Characteristics (Typical)

Fig.1: P_D-T_A

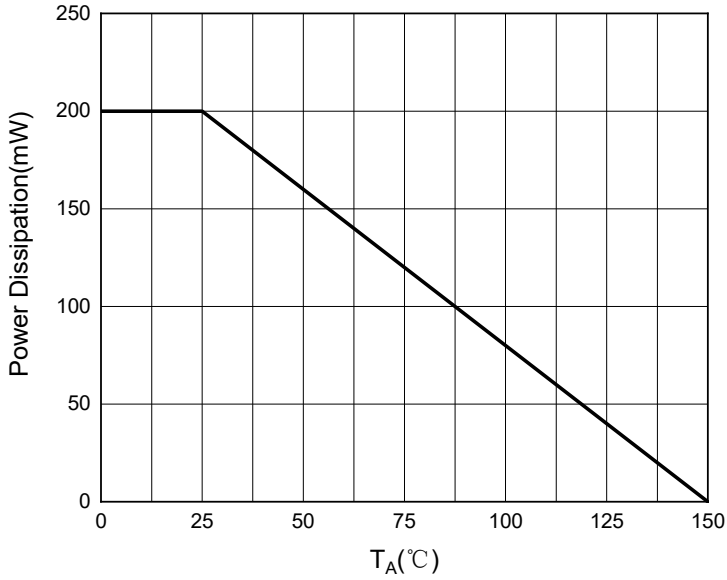


Fig.2: Capacitance Characteristics

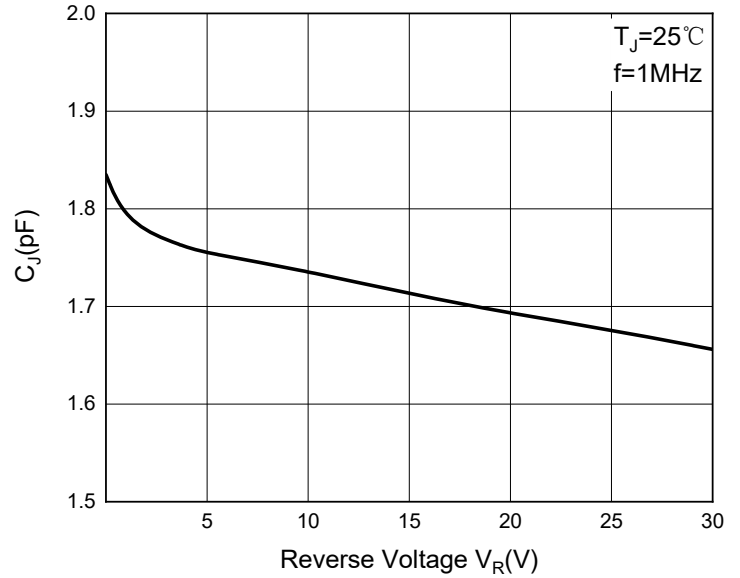


Fig.3: Forward Characteristics

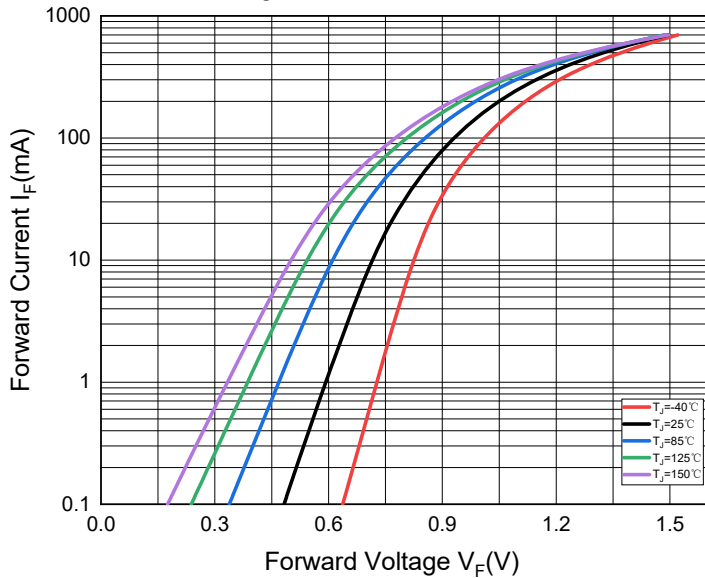
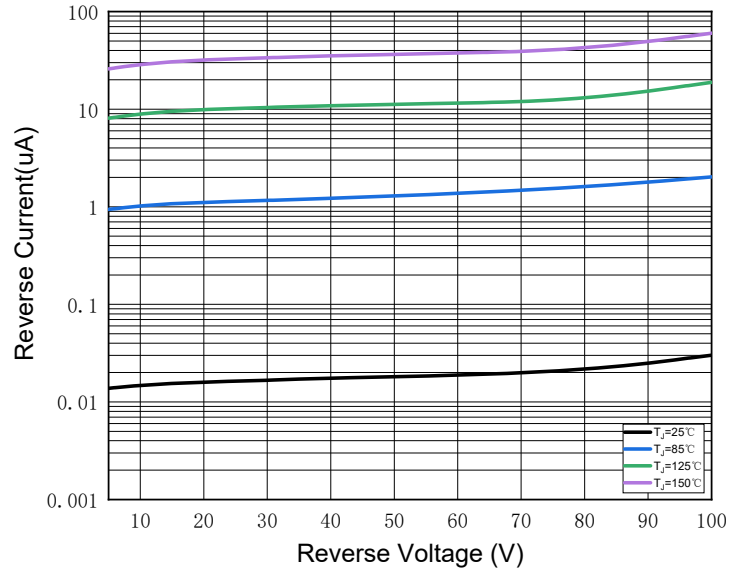


Fig.4: Reverse Characteristics

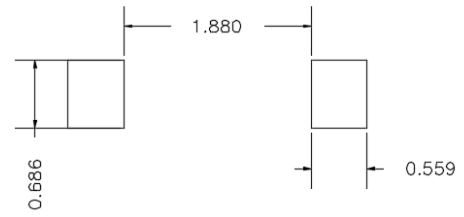
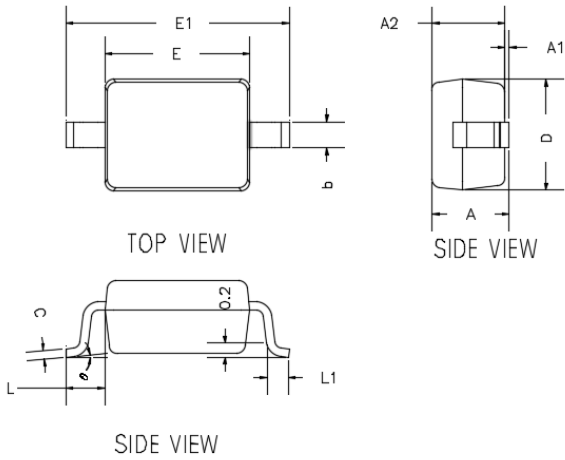




1N4148WSQ

■ Outline Dimensions

SOD-323

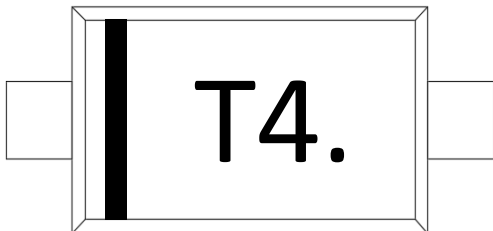


UNIT : mm

SUGGESTED SOLDER PAD LAYOUT

| DIMENSIONS | | | | |
|------------|-----------|--------|----------|--------|
| DIM | INCHES | | MM | |
| | MIN | MAX | MIN | MAX |
| A | --- | 0.0393 | --- | 1.0000 |
| A1 | 0.0000 | 0.0039 | 0.0000 | 0.1000 |
| A2 | 0.0314 | 0.0354 | 0.8000 | 0.9000 |
| b | 0.0098 | 0.0157 | 0.2500 | 0.4000 |
| c | 0.0031 | 0.0059 | 0.0800 | 0.1500 |
| D | 0.0472 | 0.0551 | 1.2000 | 1.4000 |
| E | 0.0629 | 0.0709 | 1.6000 | 1.8000 |
| E1 | 0.0984 | 0.1063 | 2.5000 | 2.7000 |
| L | 0.0187TYP | | 0.475TYP | |
| L1 | 0.0098 | 0.0157 | 0.250 | 0.400 |
| θ | 0° | 8° | 0° | 8° |

■ Marking Information



Note:

1. All marking is at middle of the product body
2. All marking is in laser marking
3. Body color: Black



1N4148WSQ

Disclaimer

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