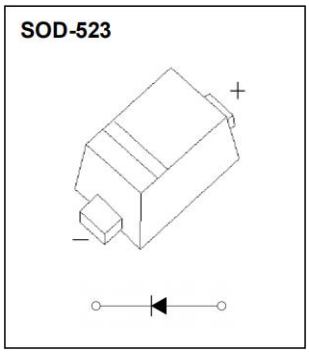



**SOD-523** 贴片塑封二极管
**SOD-523 Plastic-Encapsulate Diodes**

特征 **Features**

- 低正向电压差 Low Forward Voltage Drop
- 用于瞬态保护的保护环结构 Guard Ring Construction for Transient Protection
- 反向恢复时间低 Low Reverse Recovery Time
- 反向电容低Low Reverse Capacitance

机械数据 **Mechanical Data**

- 封装: SOD-523 封装SOD-523 Small Outline Plastic Package
- 极性: 色环端为负极Polarity: Color band denotes cathode end
- 环氧树脂UL 易燃等级Epoxy UL: 94V-0
- 安装位置: 任意 Mounting Position: Any

**MARKING: S̄4**

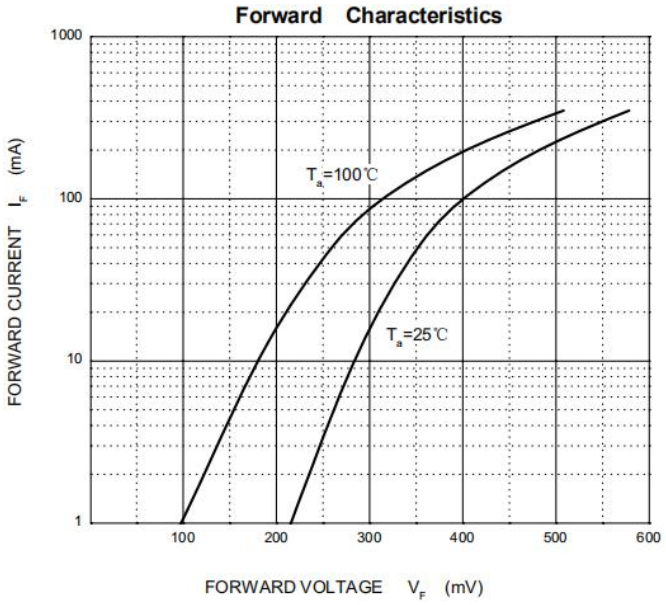

极限值和温度特性(TA = 25℃ 除非另有规定)

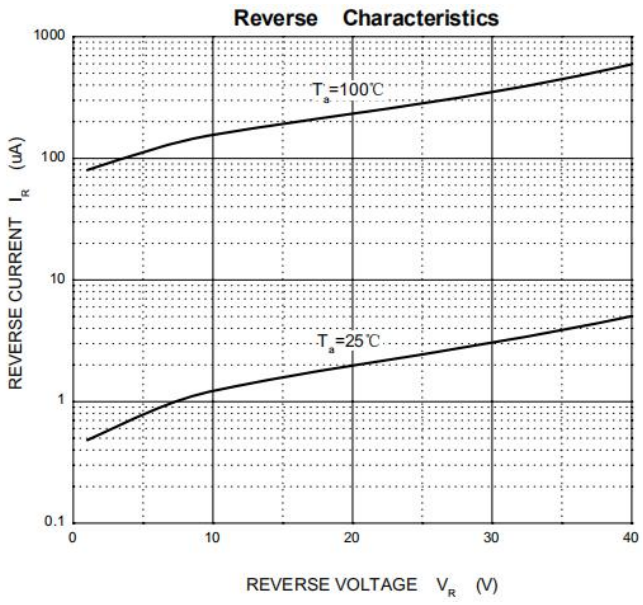
**Maximum Ratings & Thermal Characteristics** (Ratings at 25℃ ambient temperature unless otherwise specified.)

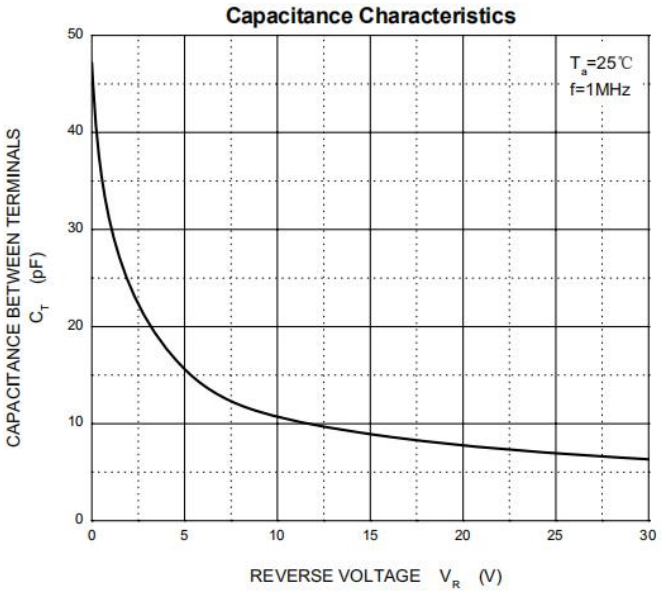
| 参数 Parameters | 符号Symbol | 数值 Value | 单位Unit |
|---|---|---|---|
| 直流阻断电压DC Blocking Voltage | $V_R$ | 40 | V |
| 峰值重复反向电压Peak Repetitive Reverse Voltage | $V_{RRM}$ | | |
| 反向峰值工作电压Working Peak Reverse Voltage | $V_{RWM}$ | | |
| 均方根反向电压RMS Reverse Voltage | $V_{R(RMS)}$ | 28 | V |
| 正向连续电流Forward Continuous Current | $I_{FM}$ | 350 | mA |
| 尖峰正向不重复浪涌电流Non-repetitive Peak Forward Surge Current@t= 8.3ms | $I_{FSM}$ | 2 | A |
| 功率消耗Power Dissipation | Pd | 150 | mW |
| 结温Junction temperature | Tj | 125 | ℃ |
| 存储温度Storage temperature range | $T_{STG}$ | -55-+150 | ℃ |
| 热阻Thermal Resistance from Junction to Ambient | $R_{\theta JA}$ | 667 | ℃/W |

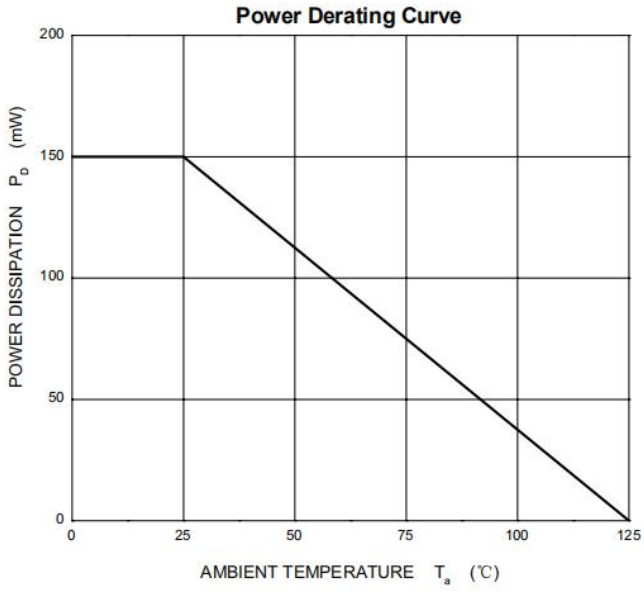
电特性 **Electrical Characteristics** (Ratings at 25℃ ambient temperature unless otherwise specified).

| 符号 **Symbols** | 参数 **Parameter** | 测试条件 **Test Condition** | 界限 **Limits** | | | 单位 **Unit** |
|---|---|---|---|---|---|---|
| | | | **Min** | **Typ** | **Max** | |
| **$V_{(BR)}$** | 反向击穿电压 Reverse Breakdown Voltage | $I_R$=100uA | 40 | | | V |
| **$I_R$** | 反向漏电流 Reverse Current | $V_R$=30V | | | 5 | uA |
| | | $V_R$=20V | | | 2 | |
| | | $V_R$=10V | | | 1 | |
| **$V_F$** | 正向电压 Forward Voltage | $I_F$=1mA | | 0.27 | | V |
| | | $I_F$=5mA | | 0.32 | | |
| | | $I_F$=20mA | | | 0.37 | |
| | | $I_F$=200mA | | | 0.6 | |
| **Trr** | 反向恢复时间 Reverse Recovery Time | $I_F$ = $I_R$ = 200mA, Irr=0.1x$I_R$,$R_L$=100Ω | | 10 | | nS |
| **Ctot** | 端子间电容 Total Capacitance | $V_R$=0V, f=1MHZ | | 50 | | pF |

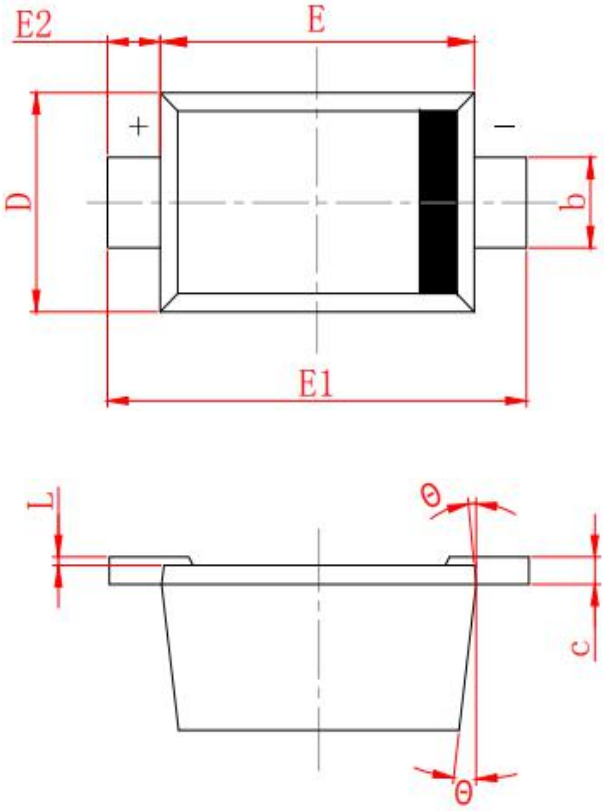

Forward Characteristics
FORWARD CURRENT $I_F$ (mA)
1000
100
10
1
100
200
300
400
500
600
$T_a$=100℃
$T_a$=25℃
FORWARD VOLTAGE $V_F$ (mV)

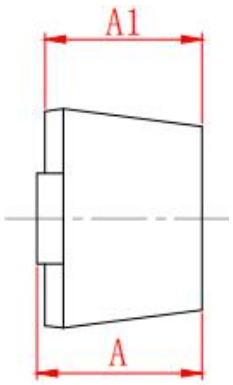

Reverse Characteristics
REVERSE CURRENT $I_R$ (uA)
1000
100
10
1
0.1
0
10
20
30
40
$T_a$=100℃
$T_a$=25℃
REVERSE VOLTAGE $V_R$ (V)


Capacitance Characteristics
CAPACITANCE BETWEEN TERMINALS $C_T$ (pF)
50
40
30
20
10
0
0
5
10
15
20
25
30
$T_a$=25℃
f=1MHz
REVERSE VOLTAGE $V_R$ (V)


Power Derating Curve
POWER DISSIPATION $P_D$ (mW)
200
150
100
50
0
0
25
50
75
100
125
AMBIENT TEMPERATURE $T_a$ (℃)

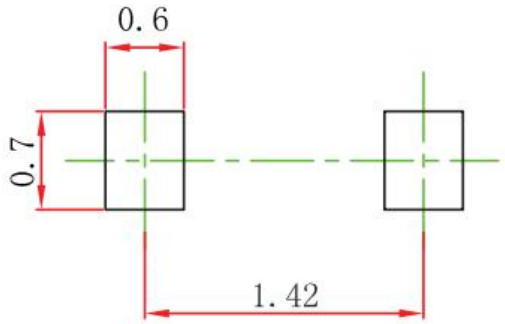
**SOD-523 SOD-523 Package Outline Dimensions**




| SYMBOL | MILLIMETER | |
|---|---|---|
| | MIN | MAX |
| A | 0.530 | 0.730 |
| A1 | 0.500 | 0.700 |
| b | 0.280 | 0.380 |
| c | 0.080 | 0.150 |
| D | 0.750 | 0.850 |
| E | 1.100 | 1.300 |
| E1 | 1.500 | 1.700 |
| E2 | 0.200 REF | |
| L | 0.010 | 0.070 |
| θ | 7° REF | |

**SOD-523 SOD-523 Suggested Pad Layout**




Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.05mm.
3.The pad layout is for reference purposes only.