

## FEATURES

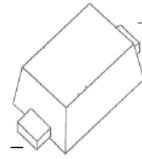
Low Forward Voltage Drop  
SOD523 Micro SMD package  
RoHS compliant / Green EMC  
Matte Tin (Sn) Lead finish  
Cathode Band / Device marking  
Surface Mount Package Ideally Suited  
for Automatic Insertion

## VOLTAGE RANGE

40 Volts

## CURRENT

0.35 A



SOD-523



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	40	V
Reverse Voltage	$V_R$	40	V
Average Forward Rectified Current	$I_{F(AV)}$	350	mA
Non-Repetitive Peak Forward Surge Current at $t = 1$ s	$I_{FSM}$	2	A
Power Dissipation	$P_{tot}$	200	mW
Operating and Storage Temperature Range	$T_j, T_{stg}$	- 65 to + 125	°C

## Characteristics at Ta = 25°C

Parameter	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage at $I_R=10\mu A$	$V_{(BR)R}$	40	-	-	V
Reverse Leakage Current at $V_R=30V$	$I_R$	-	-	5	$\mu A$
Forward Voltage at $I_F=20\text{ mA}$ at $I_F=200\text{ mA}$	$V_F$	-	-	0.37 0.6	V
Total Capacitance at $V_R=0\text{ V}$ , $f=1\text{ MHz}$	$C_T$	-	50	-	pF
Reverse Recovery Time at $I_F=I_R=200\text{ mA}$ , $I_{rr}=0.1 I_R$ , $R_L=100\ \Omega$	$t_{rr}$	-	10	-	ns

RATING AND CHARACTERISTIC CURVES

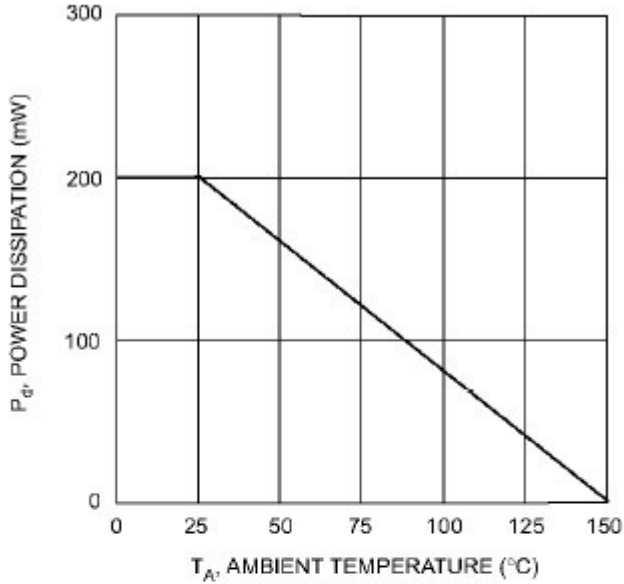


Fig. 1 Power Derating Curve

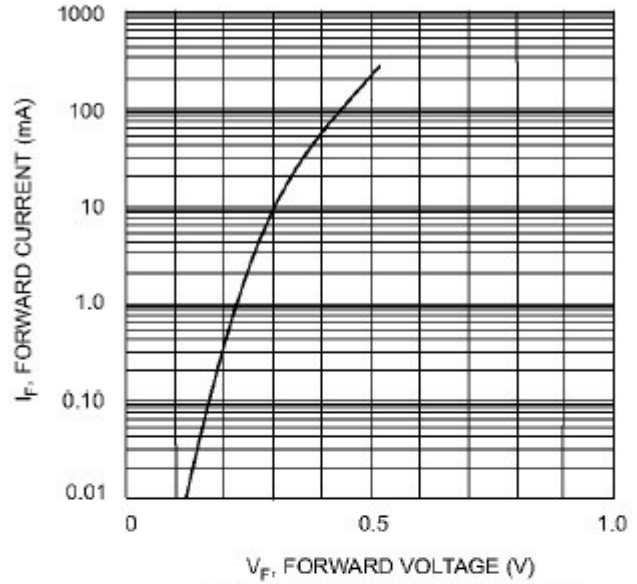


Fig. 2 Typical Forward Characteristics

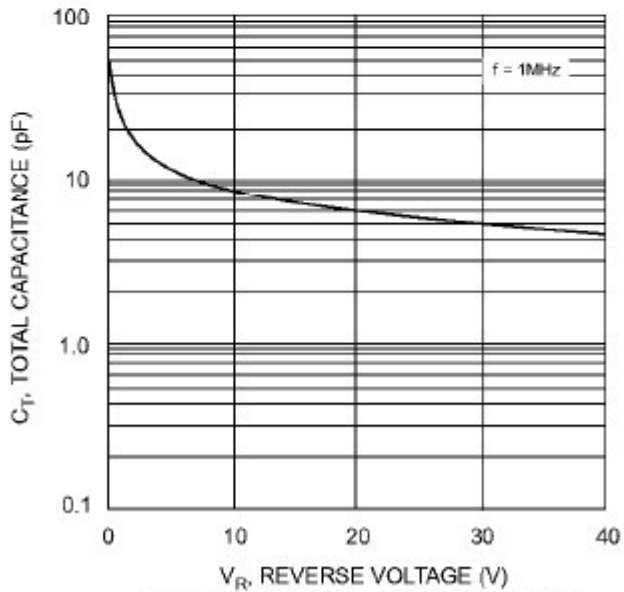


Fig. 3 Total Capacitance vs Reverse Voltage

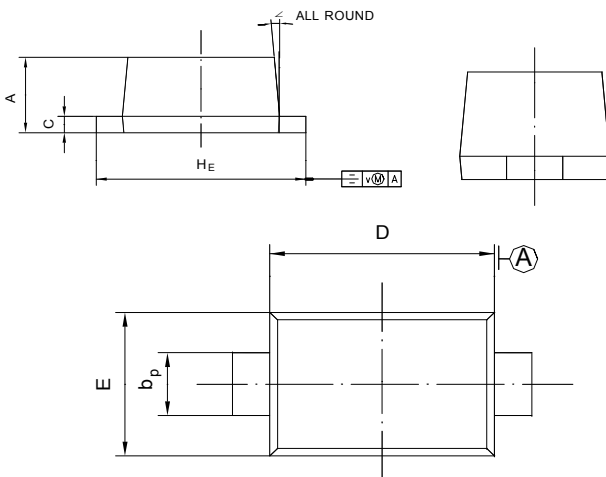
Soldering parameters

Reflow Condition		Pb-Free assembly (see as below)
Pre Heat	-Temperature Min ( $T_{s(min)}$ )	+150°C
	-Temperature Max( $T_{s(max)}$ )	+200°C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp ( $T_L$ ) to peak)		3°C/sec. Max
$T_{s(max)}$ to $T_L$ - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature( $T_L$ )(Liquid us)	+217°C
	-Temperature( $t_L$ )	60-150 secs.
Peak Temp ( $T_P$ )		+260(+0/-5)°C
Time within 5°C of actual Peak Temp ( $t_p$ )		30 secs. Max
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp ( $T_P$ )		8 min. Max
Do not exceed		+260°C

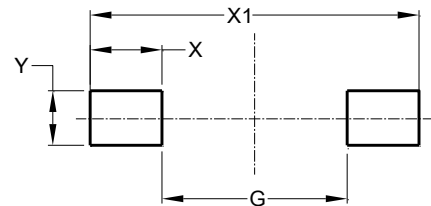


Package Dimensions & Suggested Pad Layout

SOD523



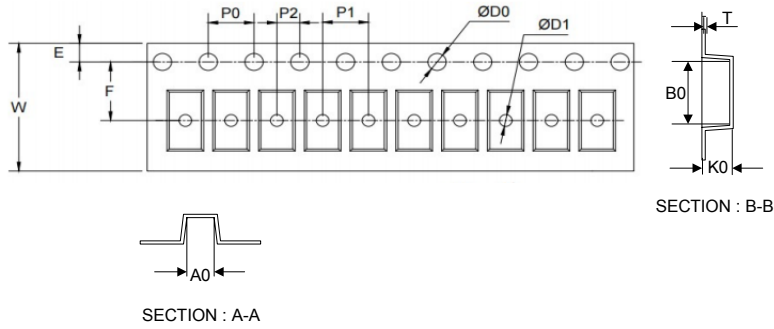
UNIT	A	$b_P$	C	D	E	$H_E$	V	∠
mm	0.70 0.50	0.40 0.20	0.14 0.05	1.30 1.10	0.90 0.75	1.70 1.50	0.1	5°



Dimensions	Value (in mm)
G	0.85
X	0.70
X1	2.25
Y	0.80

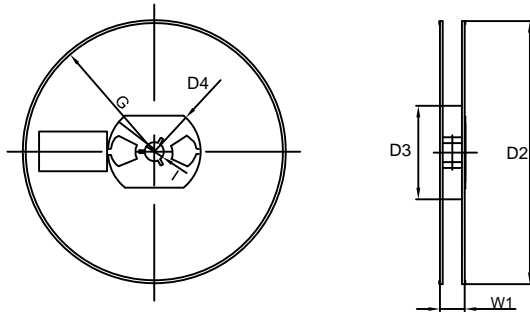
Tape & reel specification

Tape



Symbol	Dimension (mm)
P0	4.00±0.20
P1	2.00±0.20
P2	2.00±0.20
D0	1.55±0.20
D1	0.50±0.20
E	1.55±0.25
F	3.60±0.20
W	8.00±0.20
A0	1.30±0.20
B0	2.35±0.20
K0	0.95±0.20
T	0.20±0.20
D2	177.0±5.0
D3	55Min.
D4	R24.6±2.0
G	R82.0±2.0
I	13.0±2.0
W1	10.20±3.0

7" Reel



Quantity: 3000PCS