

FEATURES

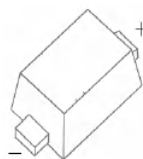
Small Package
Low Reverse Current
Fast Switching Speed
Surface Mount Package Ideally Suited for Automatic Insertion

VOLTAGE RANGE

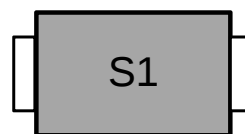
75 Volts

CURRENT

200mA



SOD-523



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

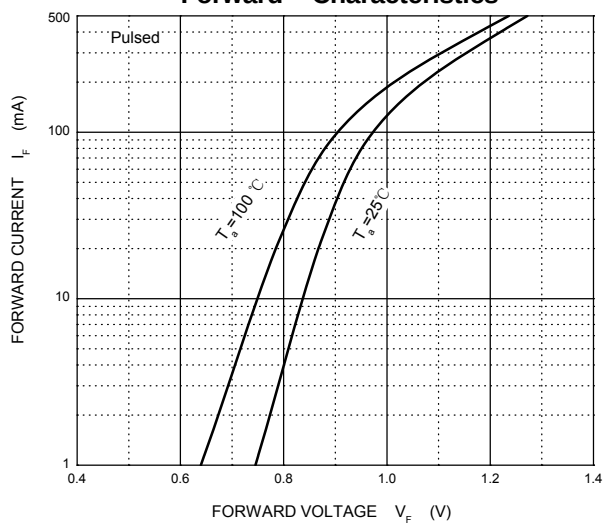
Symbol	Paramete	Value	Unit
V_{RM}	Non-Repetitive Peak Reverse Voltage	100	V
V_{RRM}	Peak Repetitive Reverse Voltage	75	V
V_{RWM}	Working Peak Reverse Voltage		
$V_{R(RMS)}$	RMS Reverse Voltage	53	V
I_O	Average Rectified Output Current	200	mA
I_{FSM}	Non-Rpetitive Peak Forward Surge Current @t=8.3ms	1	A
P_D	Power Dissipation	225	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	556	°C/W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

Characteristics at Ta = 25°C

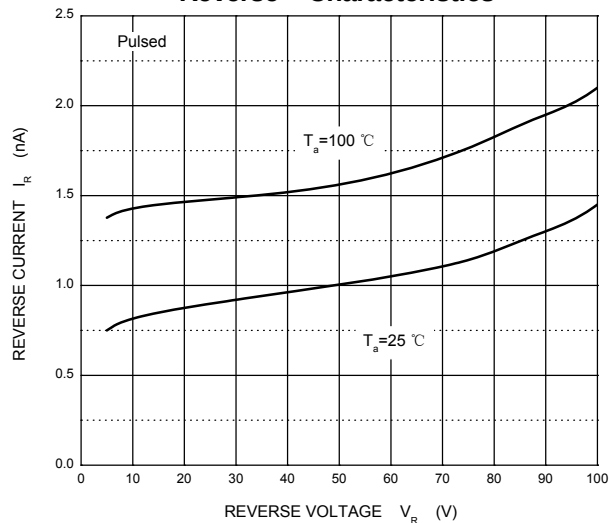
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	$I_R=100\mu A$	75			V
Reverse current	I_R	$V_R=75V$			5	nA
		$V_R=100V$			80	nA
Forward voltage	V_F	$I_F=1mA$			0.9	V
		$I_F=10mA$			1	V
		$I_F=50mA$			1.1	V
		$I_F=150mA$			1.25	V
Total capacitance	C_{tot}	$V_R=0V, f=1MHz$		2		pF
Reverse recovery time	t_{rr}	$I_F=I_R=10mA, I_{rr}=0.1 \cdot I_R$			3	μs

RATING AND CHARACTERISTIC CURVES

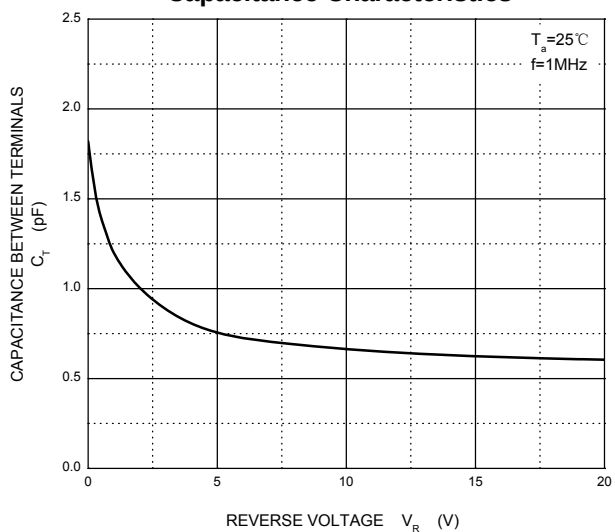
Forward Characteristics



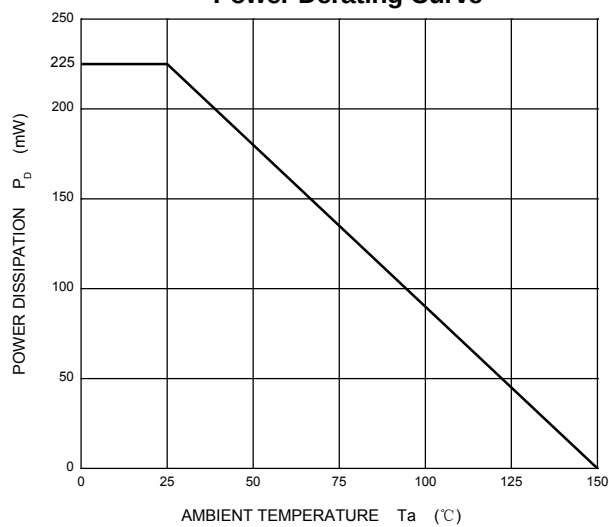
Reverse Characteristics



Capacitance Characteristics

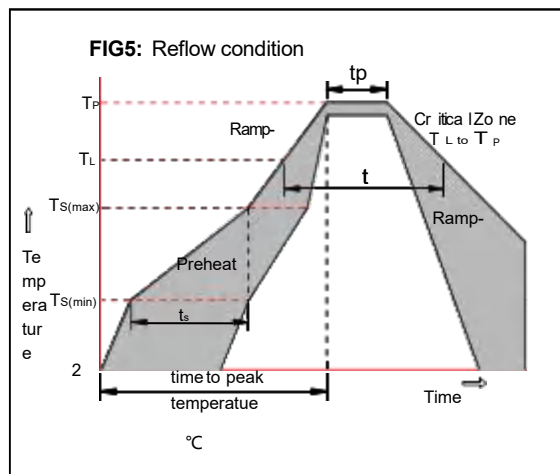


Power Derating Curve



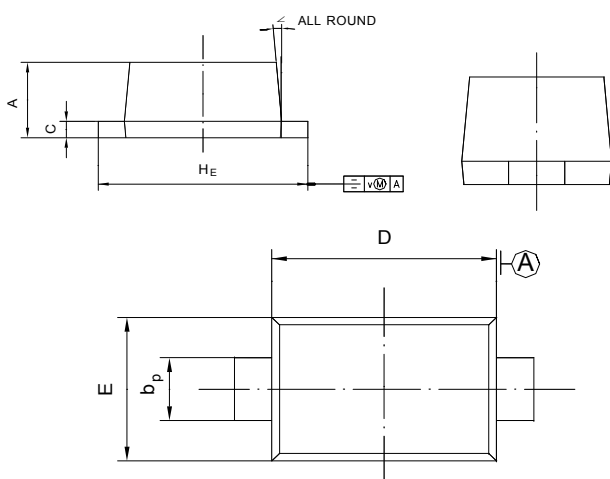
Soldering parameters

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

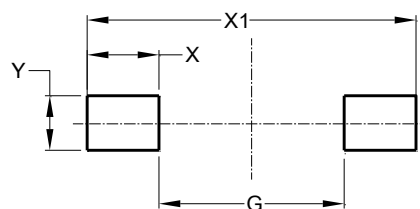


Package Dimensions & Suggested Pad Layout

SOD523



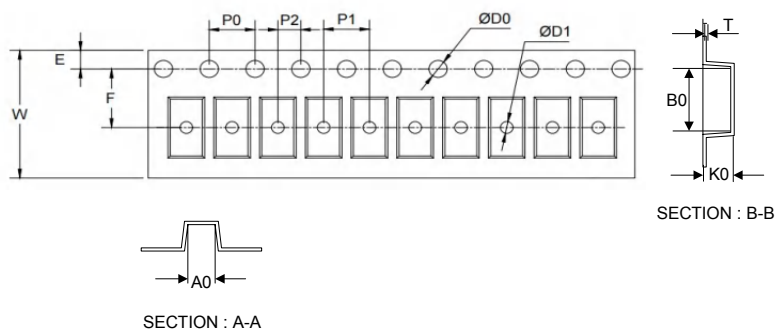
UNIT	A	b _p	C	D	E	H _E	V	∠
mm	0.70 0.50	0.40 0.20	0.14 0.05	1.30 1.10	0.90 0.75	1.70 1.50	0.1	5°



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
Quantity: 3000PCS	

7" Reel

