



## Features

- Average Rectified Output Current:  $I_O = 500\text{mA}$
- Power Dissipation of 410mW



**SOD-123**



## Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
STPS0540Z	SOD-123	B4	3000

Parameter	Symbol	Limit	Unit
Maximum recurrent peak reverse voltage	$V_{RRM}$	40	V
Maximum RMS voltage	$V_{RMS}$	28	
Mean rectifying current	$I_O$	0.5	A
Non-repetitive Peak forward surge current @ $t=8.3\text{ms}$	$I_{FSM}$	5.5	A
Power Dissipation	$P_d$	410	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	244	$^{\circ}\text{C/W}$
Operating Junction Temperature Range	$T_j$	-40 ~ +125	$^{\circ}\text{C}$
Storage Temperature Range	$T_{stg}$	-55 ~ +150	$^{\circ}\text{C}$

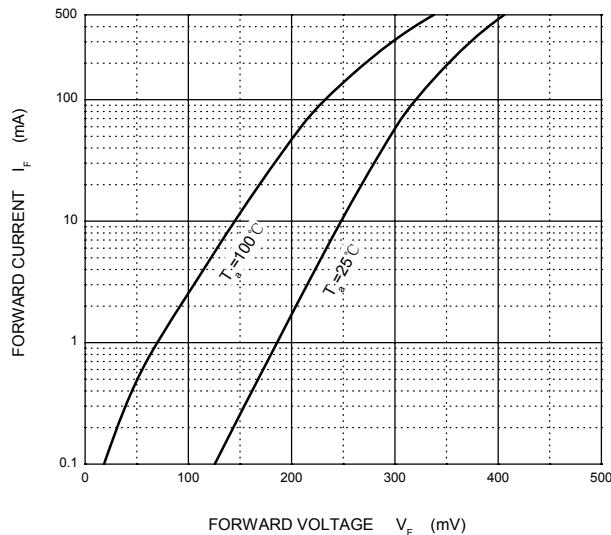
## Electrical Characteristics (Ta=25°C unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	$V_F$			0.55	V	$I_F = 500\text{mA}$
Reverse current	$I_R$			80	$\mu\text{A}$	$V_R = 40\text{V}$
Capacitance between terminals	$C_T$		30		pF	$V_R = 4\text{V}$ , $f = 1\text{MHz}$

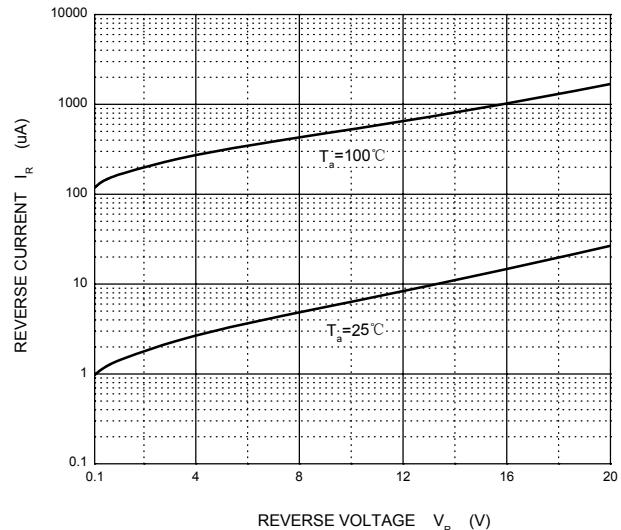


## Typical Characteristics

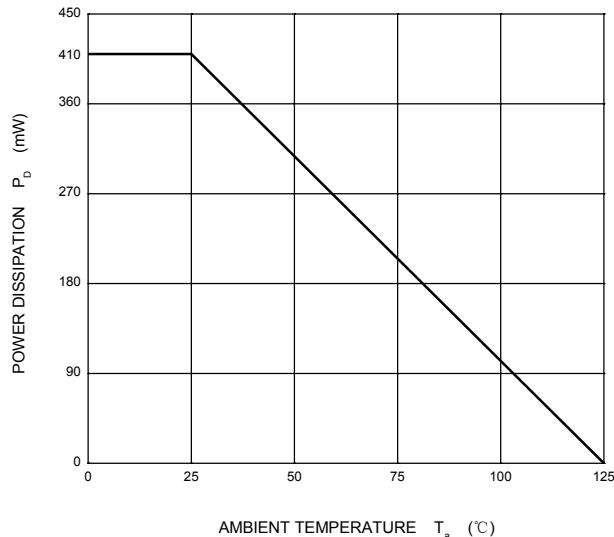
Forward Characteristics



Reverse Characteristics

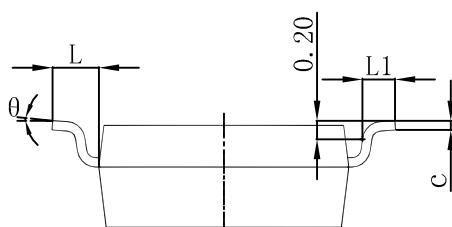
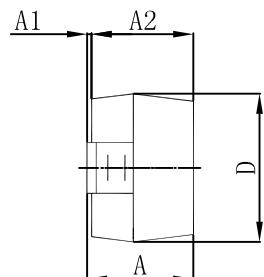
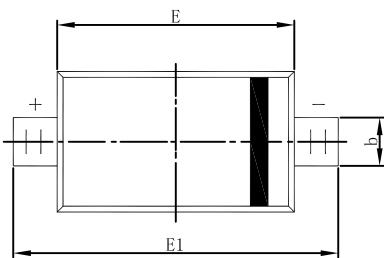


Power Derating Curve

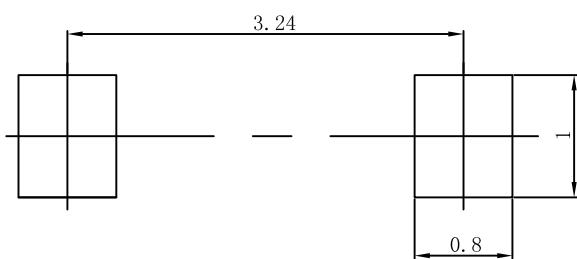




## SOD-123 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	1.500	1.700	0.059	0.067
E	2.600	2.800	0.102	0.110
E1	3.550	3.850	0.140	0.152
L	0.500 REF		0.020 REF	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°



### Note:

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



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