

## 1N4448X FAST SWITCHING DIODE

SOD-523

### FEATURES

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



### Maximum Ratings and Electrical Characteristics, Single Diode @Ta=25°C

Parameter	Symbol	Limit	Unit
Non-Repetitive Peak Reverse Voltage	$V_{RM}$	100	V
Peak Repetitive Peak Reverse Voltage	$V_{RRM}$	100	V
Working Peak Reverse Voltage	$V_{RWM}$	100	
DC Blocking Voltage	$V_R$	75	
RMS Reverse Voltage	$V_{R(RMS)}$	53	V
Forward Continuous Current	$I_{FM}$	500	mA
Average Rectified Output Current	$I_O$	250	mA
Non-Repetitive Peak Forward Surge Current @t=8.3ms	$I_{FSM}$	2.0	A
Power Dissipation	$P_d$	150	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	833	°C/W
Junction Temperature	$T_j$	150	°C
Storage Temperature	$T_{STG}$	-55~+150	°C

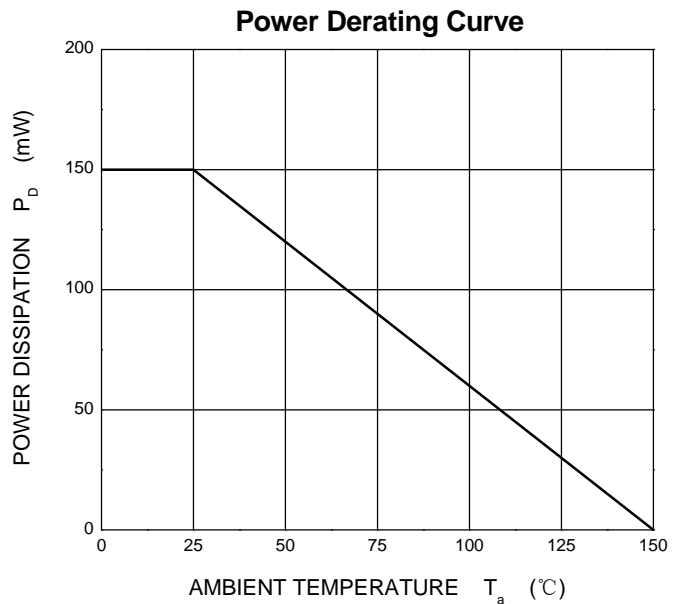
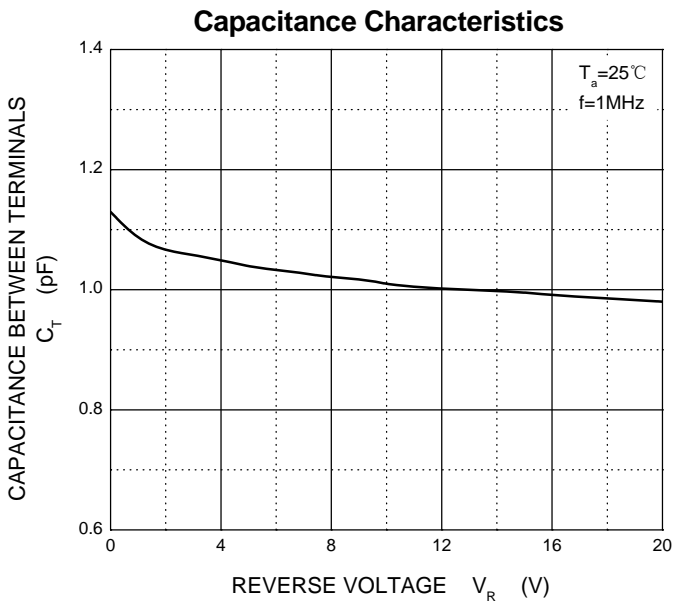
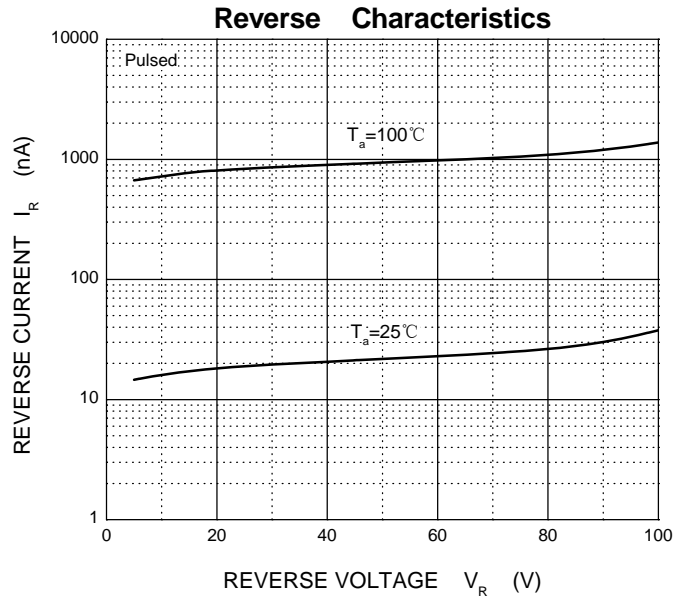
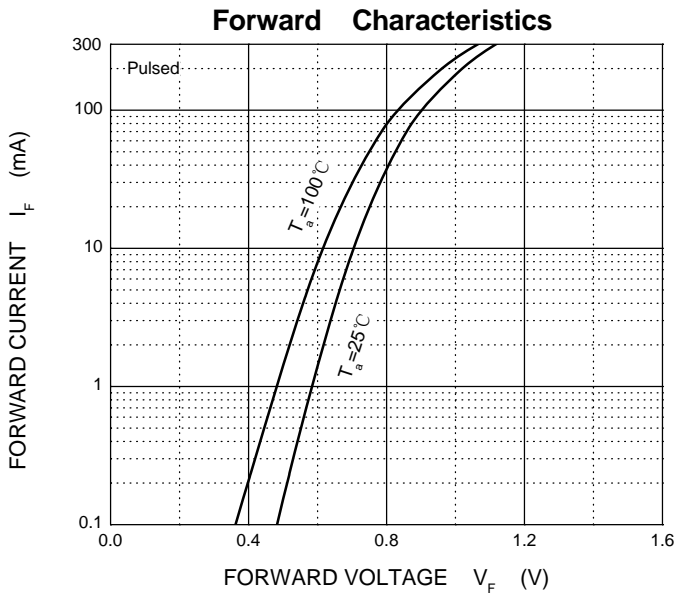
### Electrical Ratings @Ta=25°C

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Reverse breakdown voltage	$V_{(BR)R}$	75			V	$I_R=5\mu A$
	$V_{(BR)R}$	100			V	$I_R=100\mu A$
Forward voltage	$V_{F1}$	0.62		0.72	V	$I_F=5mA$
	$V_{F2}$			1.0	V	$I_F=100mA$
Reverse current	$I_R$			25	nA	$V_R=20V$
Capacitance between terminals	$C_T$			4	pF	$V_R=0V, f=1MHz$
Reverse recovery time	$t_{rr}$			4	ns	$I_F=I_R=10mA$ $I_{rr}=0.1I_R, R_L=100\Omega$



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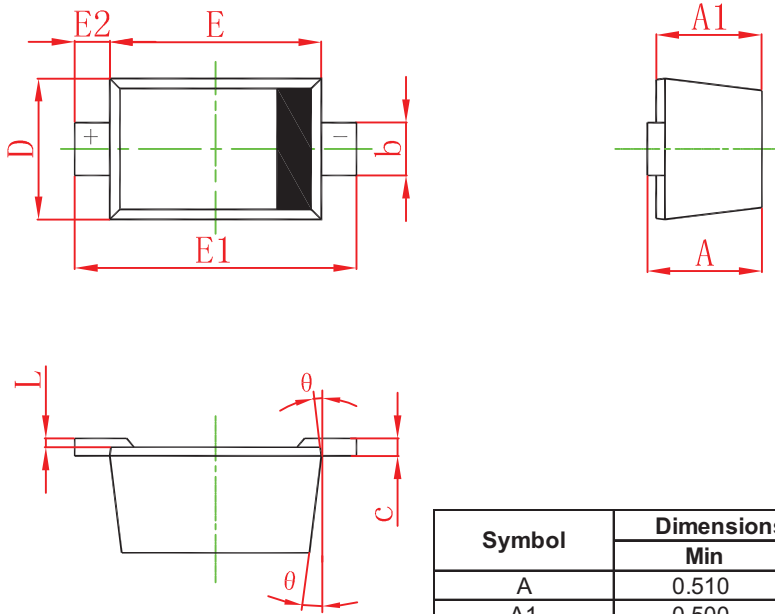
### Typical Characteristics





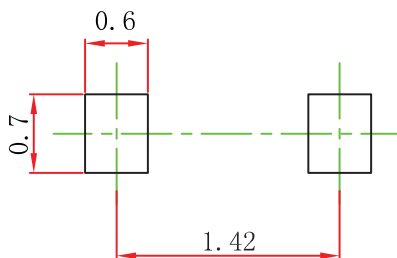
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### SOD-523 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.510	0.770	0.020	0.031
A1	0.500	0.700	0.020	0.028
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	0.750	0.850	0.030	0.033
E	1.100	1.300	0.043	0.051
E1	1.500	1.700	0.059	0.067
E2	0.200 REF		0.008 REF	
L	0.010	0.070	0.001	0.003
theta	7° REF		7° REF	

### SOD-523 Suggested Pad Layout



**Note:**

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