



## FAST SWITCHING DIODE

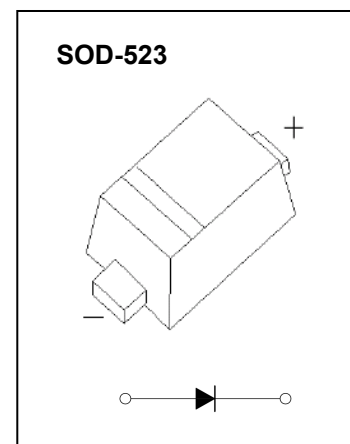
## FEATURES

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

## MARKING: T5



The marking bar indicates the cathode  
Solid dot = Green molding compound device,  
if none, the normal device.



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

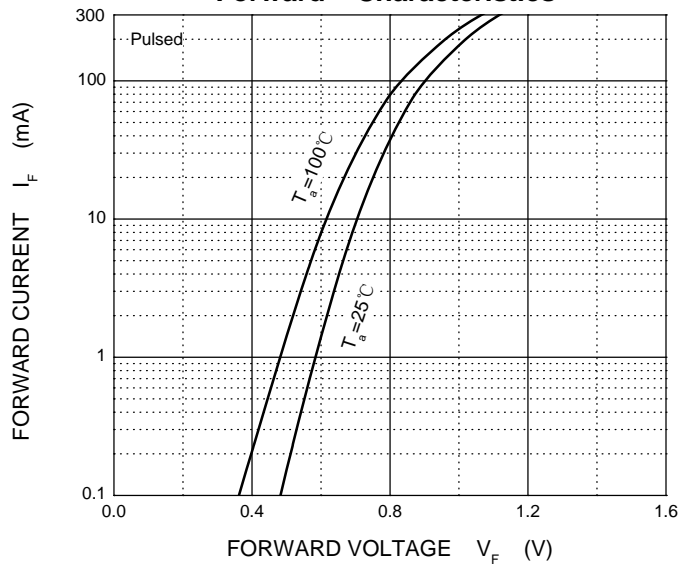
Parameter	Symbol	Limit	Unit
Non-Repetitive Peak Reverse Voltage	$V_{RM}$	100	V
Peak Repetitive Peak Reverse Voltage	$V_{RRM}$	75	V
Working Peak Reverse Voltage	$V_{RWM}$		
DC Blocking Voltage	$V_R$		
RMS Reverse Voltage	$V_{R(RMS)}$	53	V
Forward Continuous Current	$I_{FM}$	500	mA
Average Rectified Output 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 CHARACTERISTICS(T<sub>a</sub>=25°C unless otherwise specified)

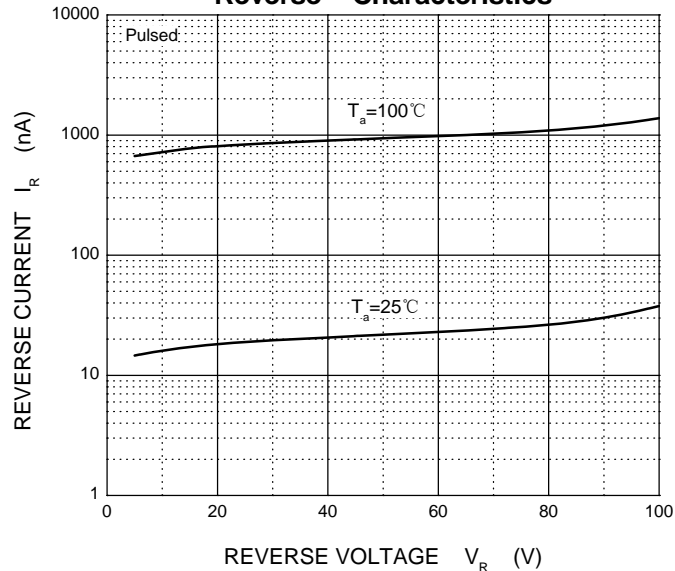
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)1}$	$I_R=5\mu A$	75			V
Reverse voltage	$V_{(BR)2}$	$I_R=100\mu A$	100			V
Reverse current	$I_R$	$V_R=75V$			1	$\mu A$
		$V_R=20V$			25	nA
Forward voltage	$V_F$	$I_F=5mA$			0.715	V
		$I_F=10mA$			0.855	V
		$I_F=100mA$			1	V
		$I_F=150mA$			1.25	V
Total capacitance	$C_{tot}$	$V_R=0V, f=1MHz$			4	pF
Reverse recovery time	$t_{rr}$	$I_F=I_R=10mA, I_{rr}=0.1 \cdot I_R, R_L=100\Omega$			4	ns

## Typical Characteristics

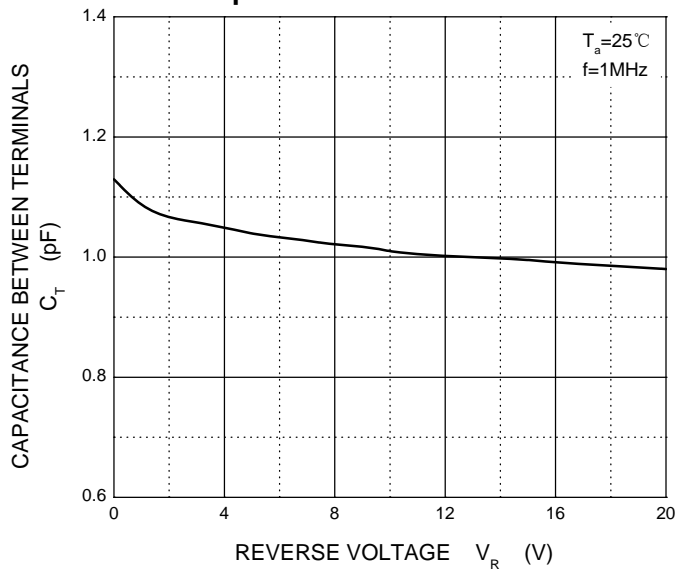
### Forward Characteristics



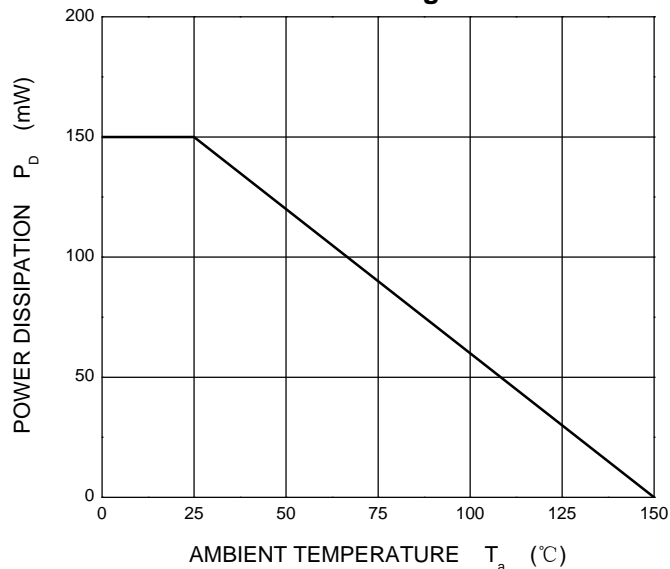
### Reverse Characteristics



### Capacitance Characteristics

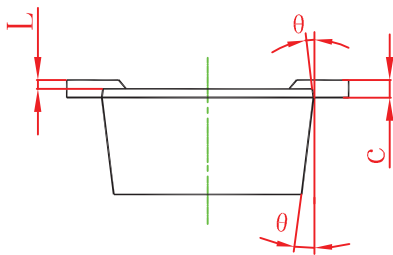
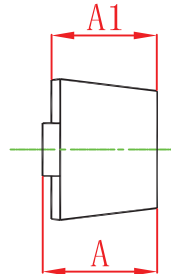
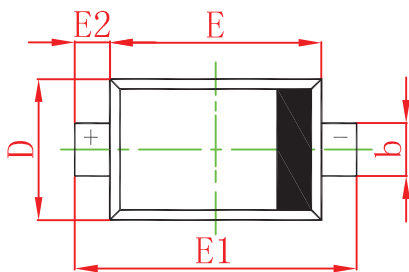


### Power Derating Curve



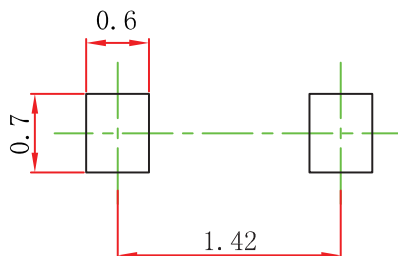


## SOD-523 Package Outline Dimensions



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
θ	7° REF		7° REF	

## SOD-523 Suggested Pad Layout



Note:

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