

SOD-523



MARKING:SD

FEATURES

- | Low Forward Voltage Drop
- | Guard Ring Construction for Transient Protection
- | High Conductance
- | Also Available in Lead Free Version

Maximum Ratings @Ta=25°C

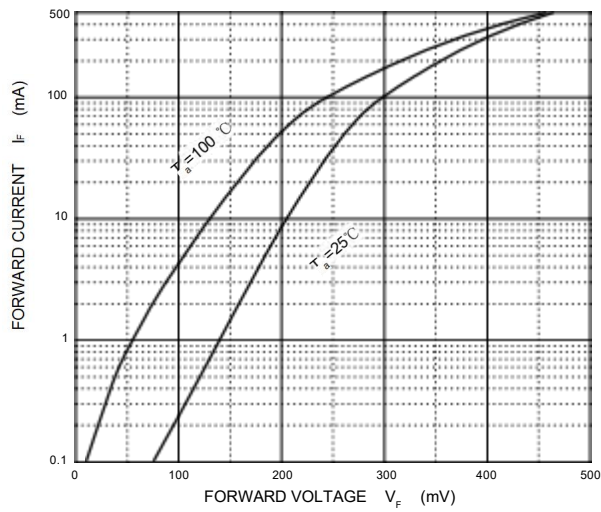
Parameter	Symbol	Value	Unit
Peak repetitive peak reverse voltage	V_{RRM}	20	V
Working peak reverse voltage	V_{RWM}		
DC blocking voltage	V_R		
RMS reverse voltage reverse voltage (DC)	$V_{R(RMS)}$	14	V
Average rectified output current	I_o	0.5	A
Non-repetitive Peak Forward Surge Current @t=8.3ms	I_{FSM}	5.5	A
Power dissipation	P_D	150	mW
Thermal resistance junction to ambient	$R_{\theta JA}$	667	°C/W
Operating Junction Temperature Range	T_j	-40 ~ +125	°C
Storage Temperature Range	T_{STG}	-55 ~ +150	°C

Electrical Characteristics @Ta=25°C

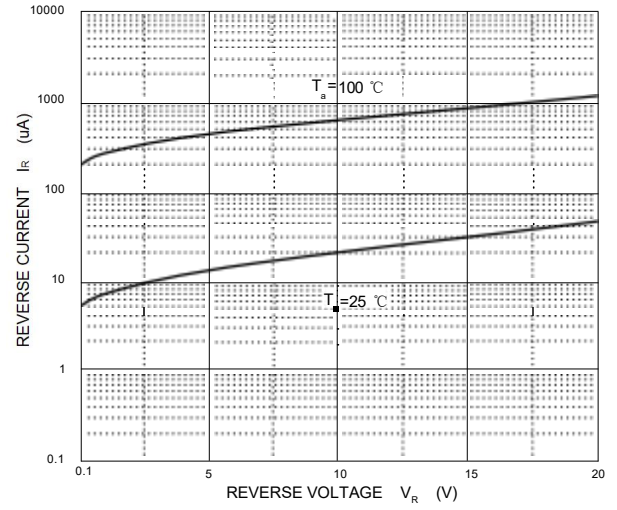
Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Minimum reverse b-reakdown voltage	$V_{(BR)}$	20			V	$I_R=250\mu A$
Forward voltage	V_{F1}			180	mV	$I_F=0.1mA$
	V_{F2}			240		$I_F=1mA$
	V_{F3}			290		$I_F=10mA$
	V_{F4}			380	mV	$I_F=100mA$
	V_{F5}			600		$I_F=500mA$
Reverse current	I_R			50	μA	$V_R=10V$
Capacitance between terminals	C_T			30	pF	$V_R=1V, f=1MHz$

Typical Characteristics

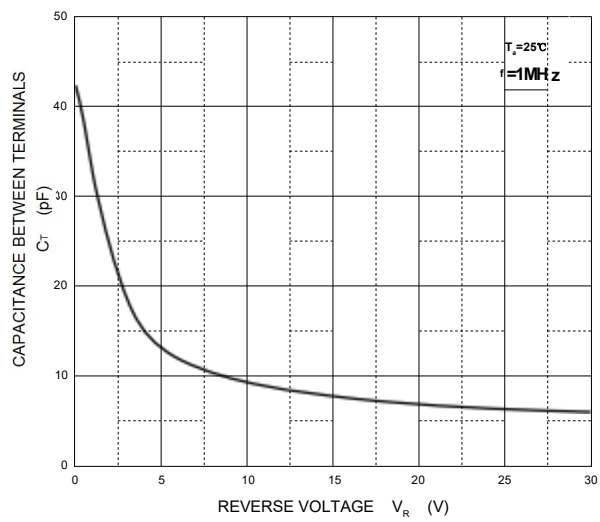
Forward Characteristics



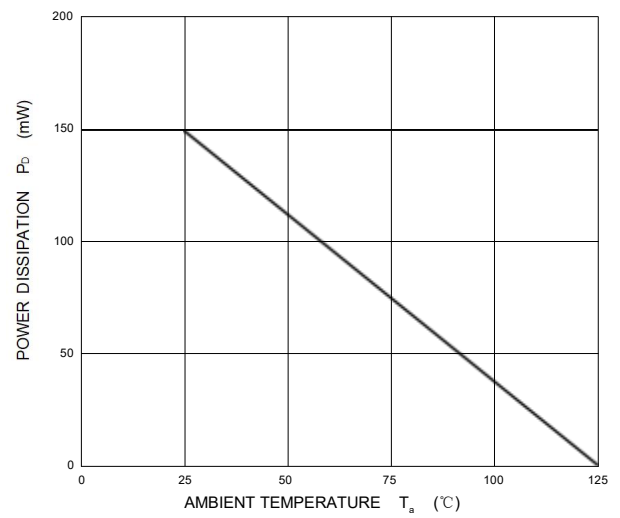
Reverse Characteristics



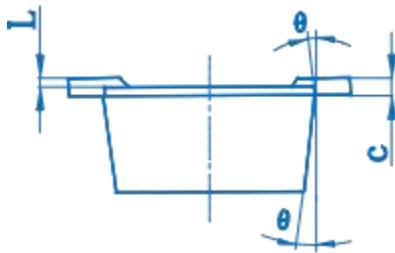
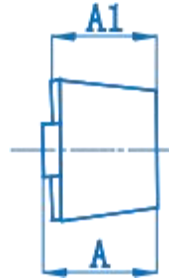
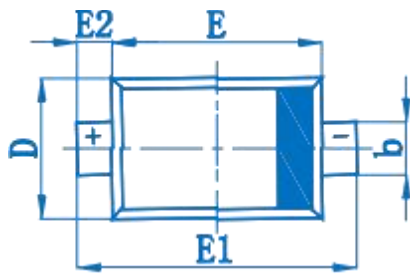
Capacitance Characteristics



Power Derating Curve

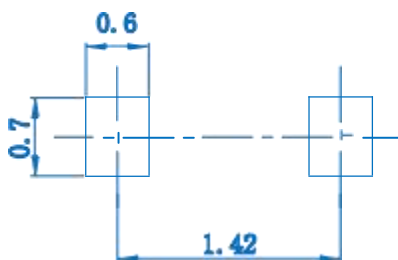


SOD-523 Package Outline Dimensions



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.