

SOD-523 Plastic-Encapsulate Diodes

1SS389 Schottky barrier Diode

SOD-523

RoHS
COMPLIANT

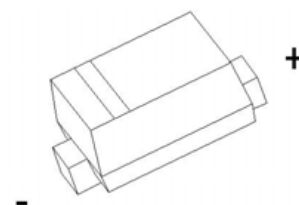
Features

- High Speed
- High Reliability
- Small Package
- Low Forward Voltage

Marking



N=Device code
The marking bar indicates the cathode



Equivalent circuit



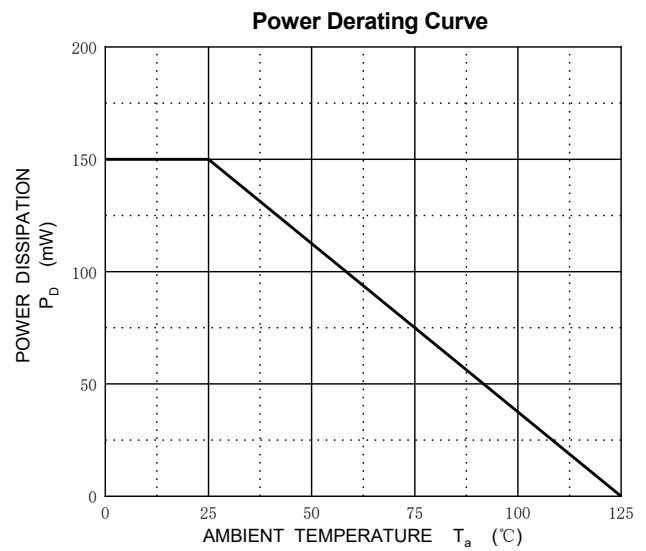
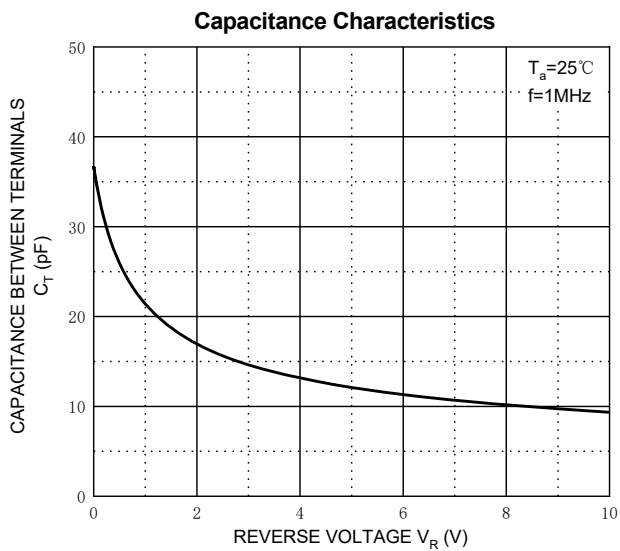
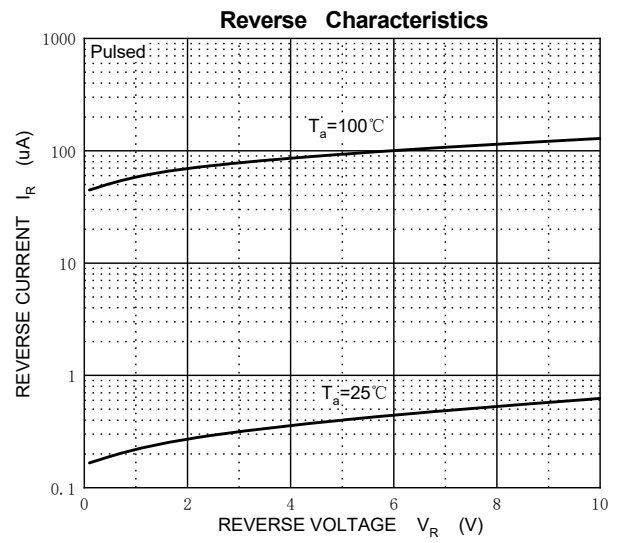
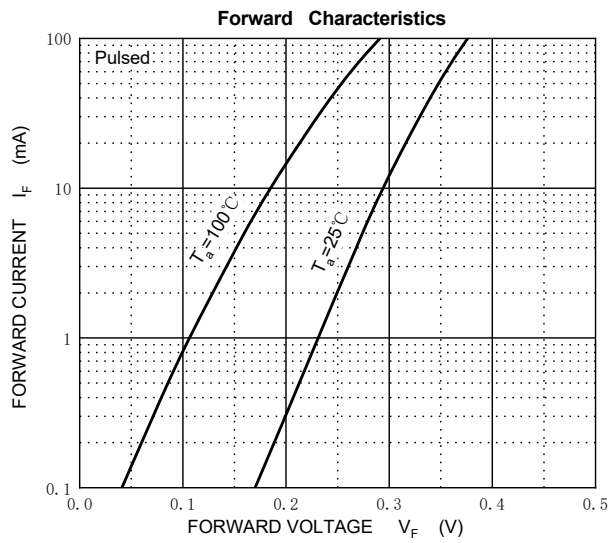
Maximum Ratings ($T_a=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Limit	Unit
DC reverse voltage	V_R	10	V
Continuous Forward Current	I_O	100	mA
Peak Forward Current	I_{FM}	200	mA
Non-repetitive Peak forward surge current @ $t=8.3\text{ms}$	I_{FSM}	1	A
Power dissipation	P_D	150	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	667	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_J	$-40 \sim +125$	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	$-55 \sim +150$	$^\circ\text{C}$

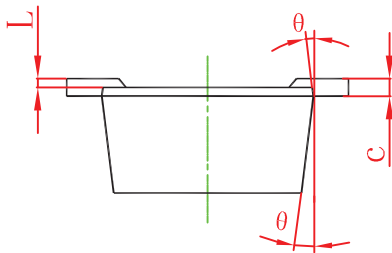
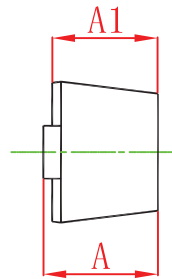
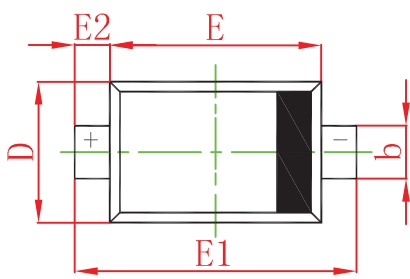
Electrical Characteristics($T_a=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	$I_R=100\mu\text{A}$	10			V
Reverse current	I_R	$V_R=10\text{V}$			20	μA
Forward voltage	V_F	$I_F=1\text{mA}$		0.18		V
		$I_F=5\text{mA}$			0.3	
		$I_F=100\text{mA}$			0.5	
Total capacitance	C_{tot}	$V_R=0\text{V}, f=1\text{MHz}$			40	pF

Typical Characteristics

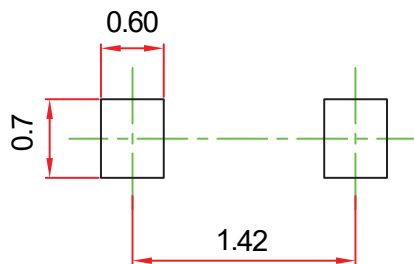


SOD-523 Package Outline Dimensions



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.