

SOD-523 Plastic-Encapsulate Diodes

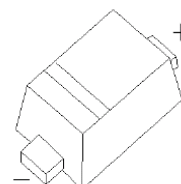
BAT54WT Schottky barrier Diode

SOD-523

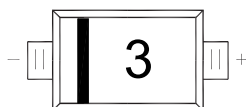
RoHS
COMPLIANT

Features

- Extremely Fast Switching Speed
- Low Forward Voltage



MARKING: 3



3=Device code
The marking bar indicates the cathode

Equivalent circuit



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

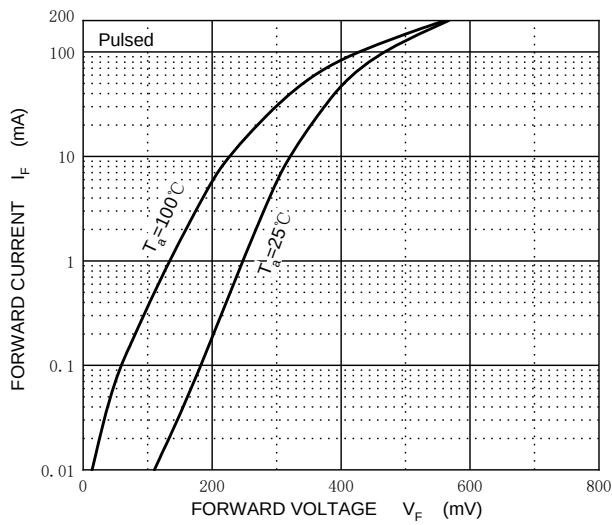
Parameter	Symbol	Limit	Unit
Non-repetitive peak reverse voltage	V_{RM}	30	V
DC blocking voltage	V_R	21	V
Forward continuous current	I_F	200	mA
Repetitive peak forward current	I_{FRM}	300	mA
Non-repetitive Peak forward surge current @ $t=8.3\text{ms}$	I_{FSM}	600	mA
Power dissipation	PD	150	mW
Thermal 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)

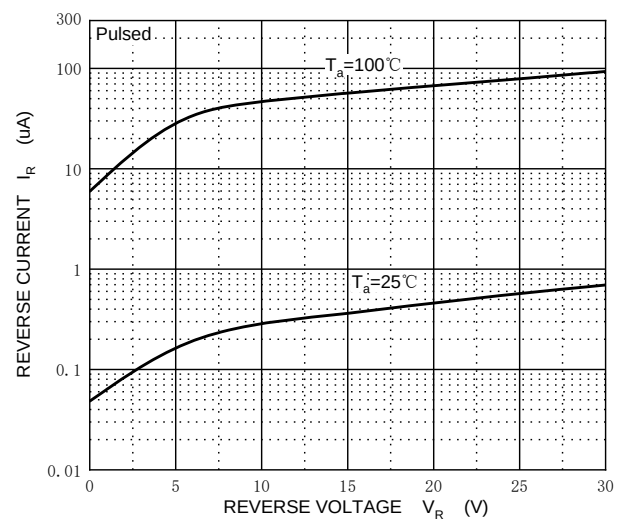
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	$I_R=100\mu\text{A}$	30			V
Reverse current	I_R	$V_R=25\text{V}$			2	μA
Forward voltage	V_F	$I_F=0.1\text{mA}$			240	mV
		$I_F=1\text{mA}$			320	
		$I_F=10\text{mA}$			400	
		$I_F=30\text{mA}$			500	
		$I_F=100\text{mA}$			1000	
Reverse recovery time	t_{rr}	$I_F=10\text{mA}$, $I_R=10\text{mA}$ to 1mA , $R_L=100\Omega$			5.0	nS
Capacitance between terminals	C_T	$V_R=1\text{V}$, $f=1\text{MHz}$			10	pF

Typical Characteristics

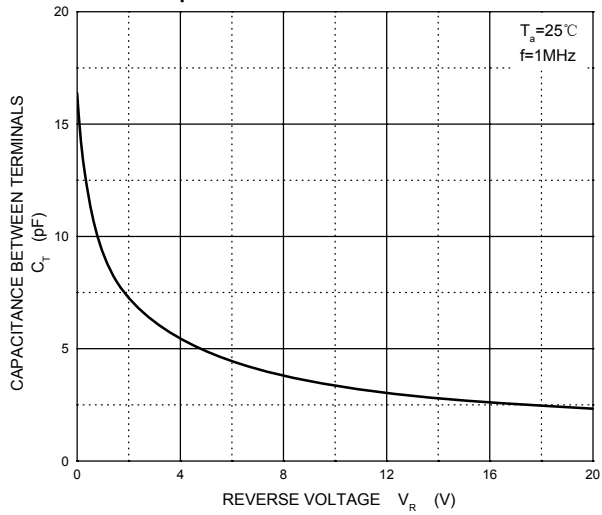
Forward Characteristics



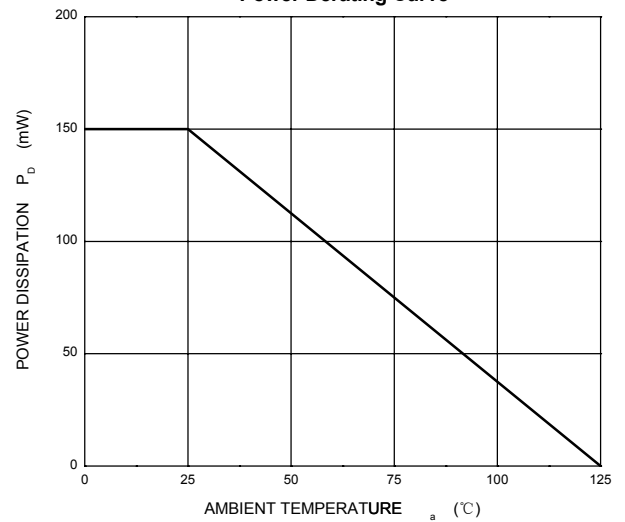
Reverse Characteristics



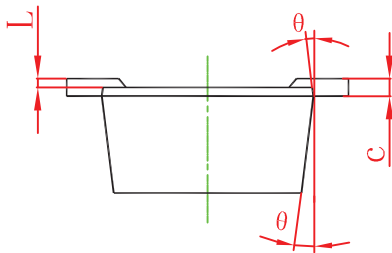
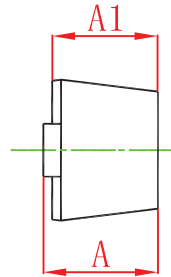
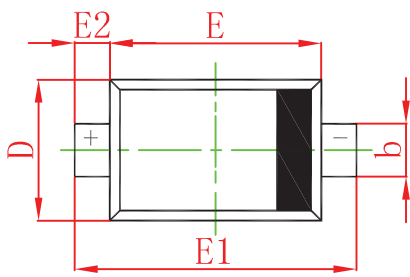
Capacitance Characteristics Per Diode



Power Derating Curve

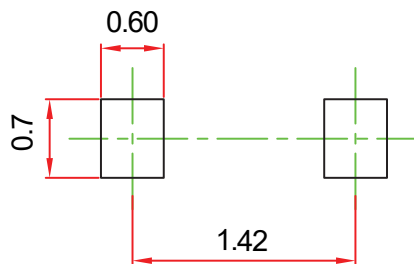


SOD-523 Package Outline Dimensions



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.