HIGH DIODE

BAT54X

RoHS COMPLIANT

HALOGEN FREE

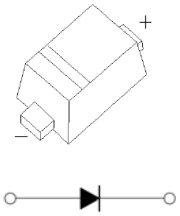
SOD-523 Plastic-Encapsulate Diodes

Schottky Barrier Diode

FEATURES

- Extremely Fast Switching Speed
- Low Forward Voltage

SOD-523



MARKING: JV

JV=Device code

The marking bar indicates the cathode

Maximum Ratings @Ta=25℃

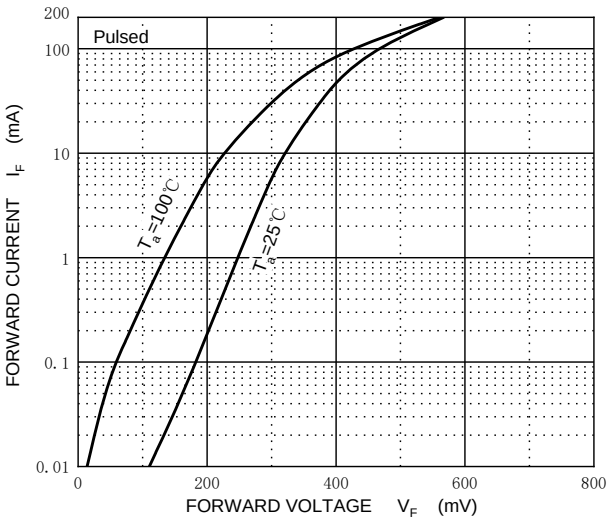
Parameter	Symbol	Limit	Unit
Non-repetitive peak reverse voltage	V_{RM}	30	V
DC blocking voltage	V_R	21	V
Average rectified output current	I_O	100	mA
Forward continuous current	I_F	200	mA
Repetitive peak forward current	I_{FRM}	300	mA
Non-repetitive Peak Forward surge current @t=8.3ms	I_{FSM}	600	mA
Power dissipation	Pd	150	mW
Thermal resistance junction to ambient	$R_{\theta JA}$	667	℃/W
Operating Junction Temperature Range	T_J	-40 ~ +125	℃
Storage Temperature Range	T_{STG}	-55 ~ +150	℃

Electrical Characteristics @Ta=25℃

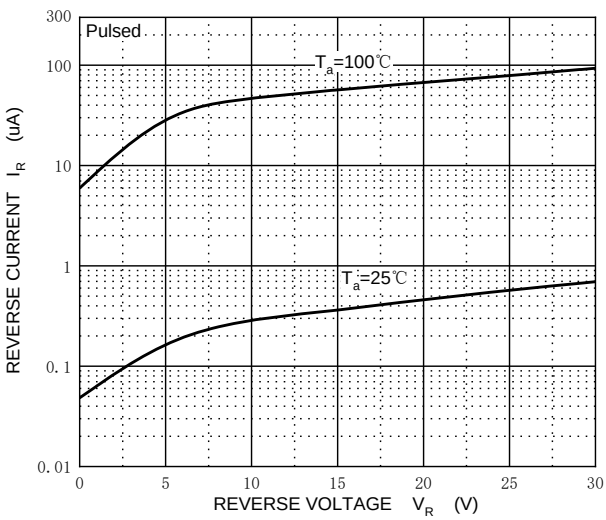
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse breakdown voltage	$V_{(BR)}$	I_R=100μA	30			V
Forward voltage	V_{F1}	I_F=0.1mA			240	mV
	V_{F2}	I_F=1.0mA			320	mV
	V_{F3}	I_F=10mA			400	mV
	V_{F4}	I_F=30mA			500	mV
	V_{F5}	I_F=100mA			1000	mV
Reverse current	I_R	V_R=25V			2.0	uA
Reverse recovery time	t_{rr}	I_F=10mA, I_R=10mA to 1mA , R_L=100 Ω			5.0	ns
Capacitance between terminals	C_T	V_R=1V,f=1MHz			10	pF

Typical Characteristics

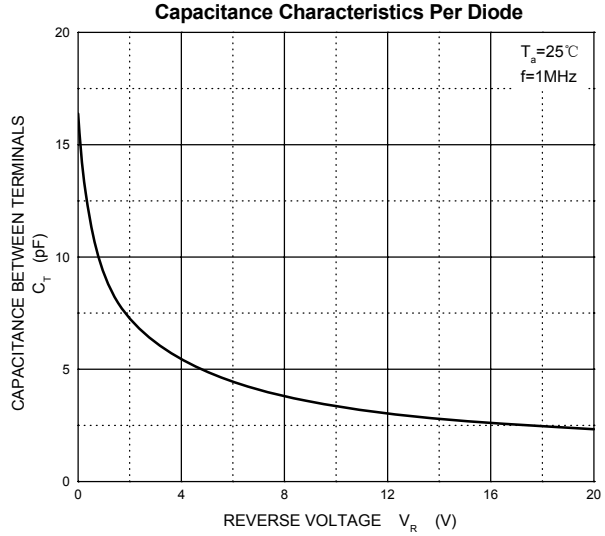
Forward Characteristics



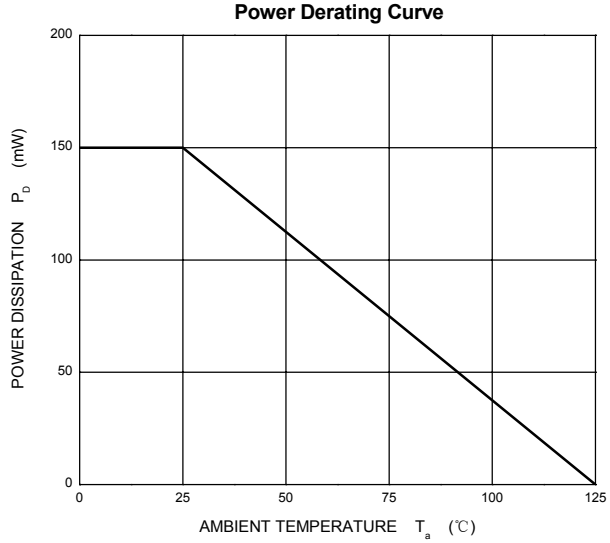
Reverse Characteristics



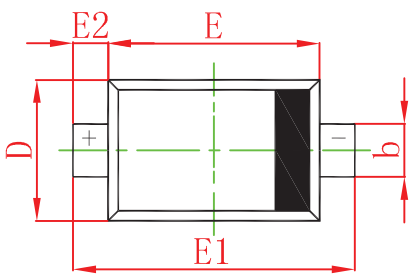
Capacitance Characteristics Per Diode

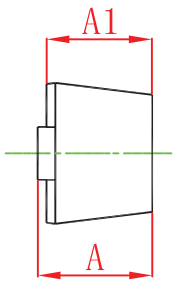


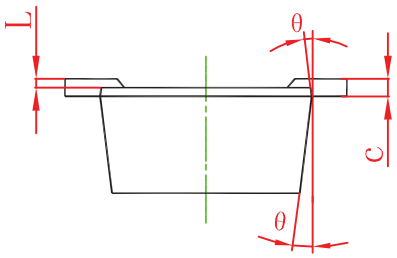
Power Derating Curve



SOD-523 Package Outline Dimensions

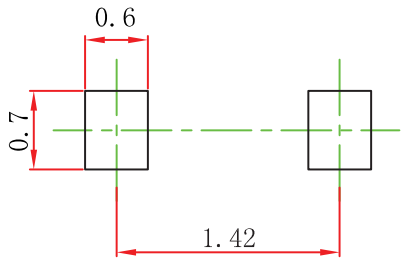






Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.510	0.770	0.020	0.031
A1	0.500	0.700	0.020	0.028
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	0.750	0.850	0.030	0.033
E	1.100	1.300	0.043	0.051
E1	1.500	1.700	0.059	0.067
E2	0.200 REF		0.008 REF	
L	0.010	0.070	0.001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

SOD-523 Suggested Pad Layout



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