

Features

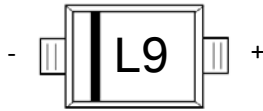
- Extremely Fast Switching Speed
- Low Forward Voltage



SOD-323 top view



Schematic diagram



The marking bar indicates the cathode



Pb-Free



Halogen-Free

Maximum Ratings (Ta=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V_R	DC Blocking Voltage	21	V
V_{RM}	Non-Repetitive Peak Reverse Voltage	30	V
I_O	Average Rectified Output Current	100	mA
I_F	Forward Current	200	mA
I_{FRM}	Repetitive Peak Forward Current	300	mA
I_{FSM}	Non-repetitive Peak Forward Surge Current@t= 8.3ms	600	mA
P_D	Power Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	500	°C/W
T_J	Operating Junction Temperature Range	-40~+125	°C
T_{stg}	Storage Temperature Range	-55~+150	°C

Electrical Characteristics @Ta=25°C

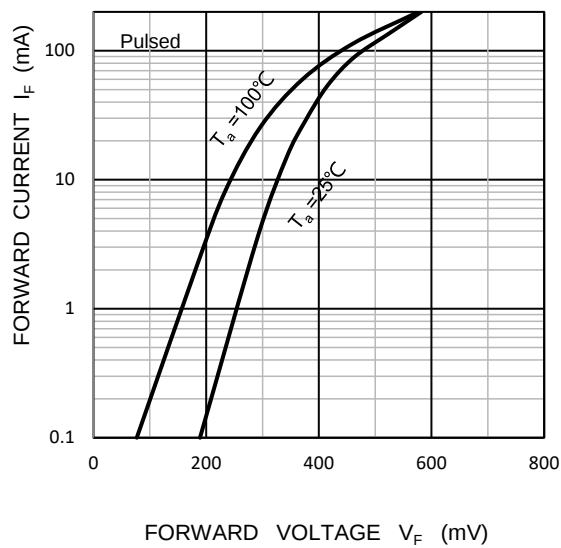
Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)}$	Reverse voltage	$I_R=100\mu A$	30	--	--	V
I_R	Reverse current	$V_R=25V$	--	--	2	μA
V_F	Forward voltage	$I_F=0.1mA$	--	--	240	mV
		$I_F=1mA$	--	--	320	
		$I_F=10mA$	--	--	400	
		$I_F=30mA$	--	--	500	
		$I_F=100mA$	--	--	1000	
C_T	Capacitance between terminals	$V_R=1V, f=1MHZ$	--	--	10	pF
t_{rr}	Reverse recovery time	$I_F=10mA, I_R=10mA$ to 1mA , $R_L=100\Omega$	--	--	5	ns

Ordering Information (Example)

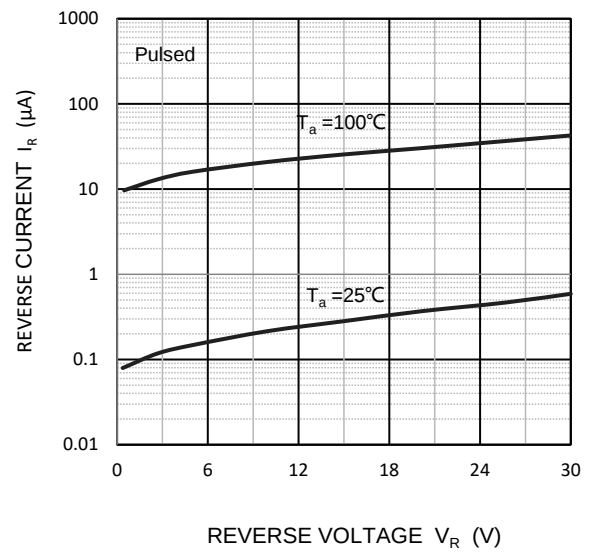
Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
BAT54WS	SOD-323	L9	3,000	45,000	180,000	7"reel

Typical Operating Characteristics

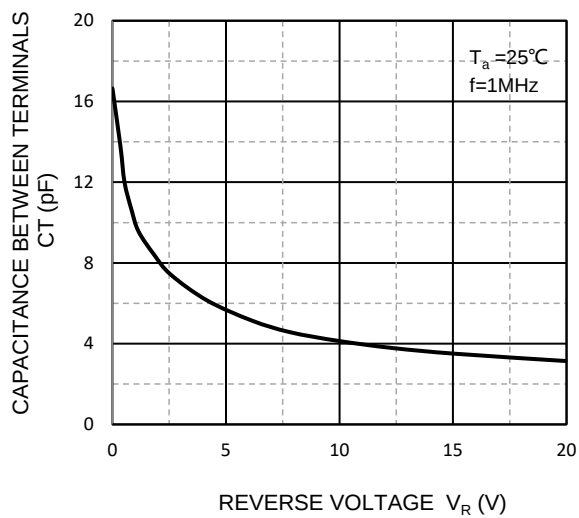
Forward Characteristics



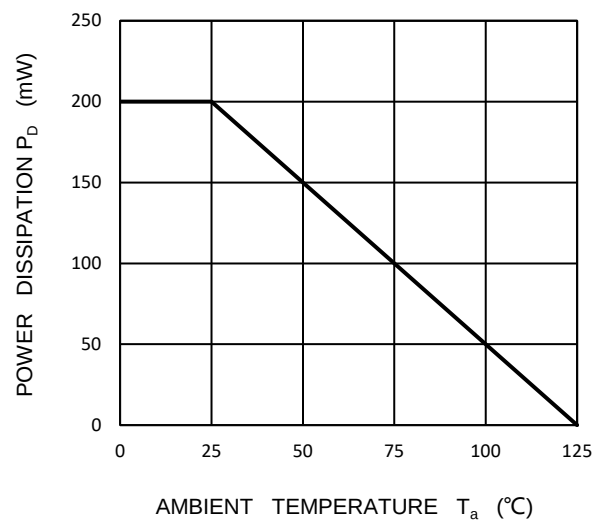
Reverse Characteristics



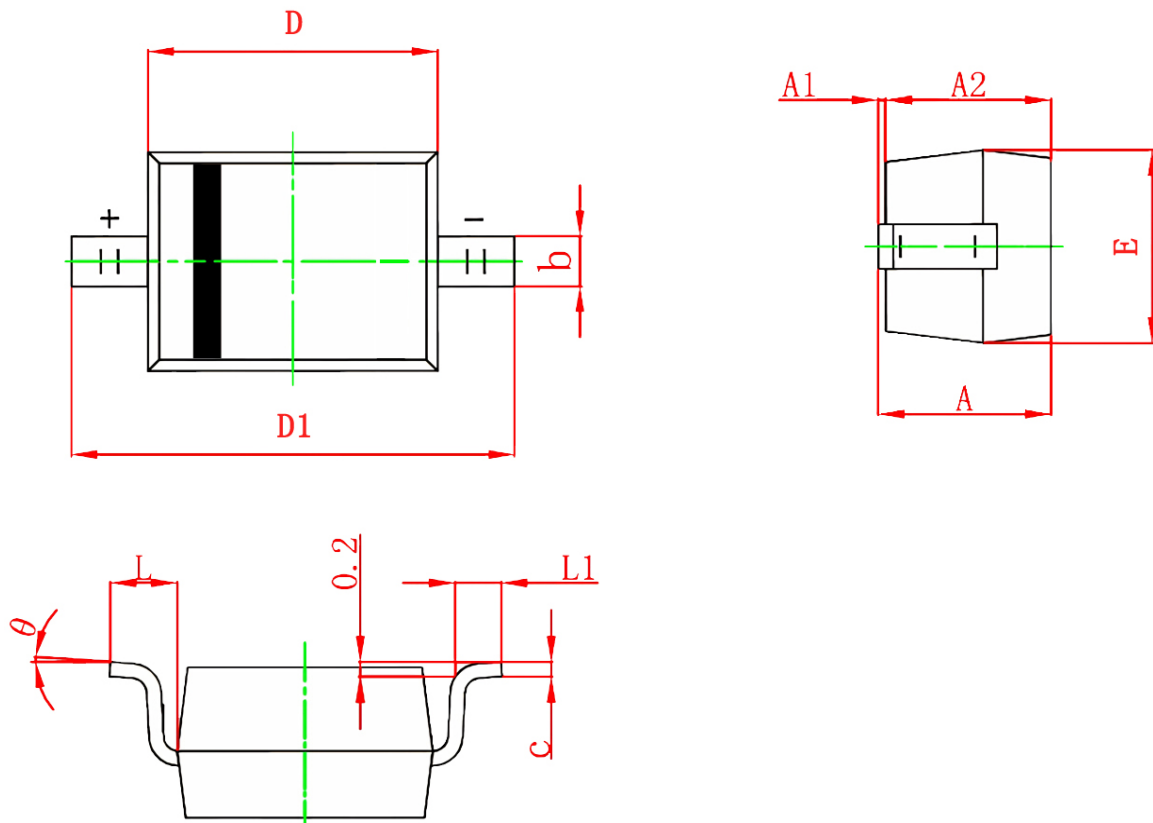
Capacitance Characteristics



Power Derating Curve



SOD-323 Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	-	1.100	-	0.043
A1	0.000	0.100	0.000	0.004
A2	0.800	1.000	0.031	0.039
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	1.600	1.800	0.063	0.071
D1	2.500	2.750	0.098	0.108
E	1.200	1.400	0.047	0.055
L	0.475 REF		0.019 REF	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°