

Features

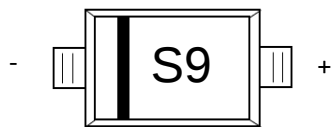
- High breakdown voltage
- Low turn-on voltage
- Guard ring construction for transient protection



SOD-323 top view



Schematic diagram



Marking and pin assignment



Halogen-Free

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

Symbol	Parameter	Value	Unit
V _{RRM}	Peak Repetitive Reverse Voltage	100	V
V _{RWM}	Working Peak Reverse Voltage	100	V
I _F	Forward Continuous Current	150	mA
I _{FRM}	Repetitive peak forward current (Note 1) @ tp < 1.0s, Duty Cycle < 50	350	mA
I _{FSM}	Non-repetitive Peak Forward Surge Current@t= 8.3ms	750	A
P _D	Power Dissipation	200	mW
R _{ΘJA}	Thermal Resistance from Junction to Ambient	500	°C/W
T _J	Operating Junction Temperature Range	-40~+125	°C
T _{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

ELECTRICAL CHARACTERISTICS(T_a=25°C unless otherwise specified)

Symbol	Parameter	Condition	Min	Typ	Max	Unit
V _R	Reverse breakdown voltage（Note 2、3）	I _R = 100μA	100	--	--	V
I _R	Reverse voltage leakage current （Note 2、3）	V _{R1} =1.5V	--	--	0.3	μA
		V _{R2} =10V	--	--	0.5	
		V _{R3} =50V	--	--	1	
		V _{R4} =75V	--	--	2	
I _R T _j =60℃		V _{R1} =1.5V	--	--	12	μA
		V _{R2} =10V	--	--	20	
		V _{R3} =50V	--	--	44	
		V _{R4} =75V	--	--	80	
V _F	Forward voltage	I _{F1} =0.1mA	--	--	0.25	V
		I _{F2} =10mA	--	--	0.45	
		I _{F3} =250mA	--	--	1	
C _{tot}	Total capacitance	V _R =0V,f=1MHz	--	--	20	pF
		V _R =1V,f=1MHz	--	--	12	

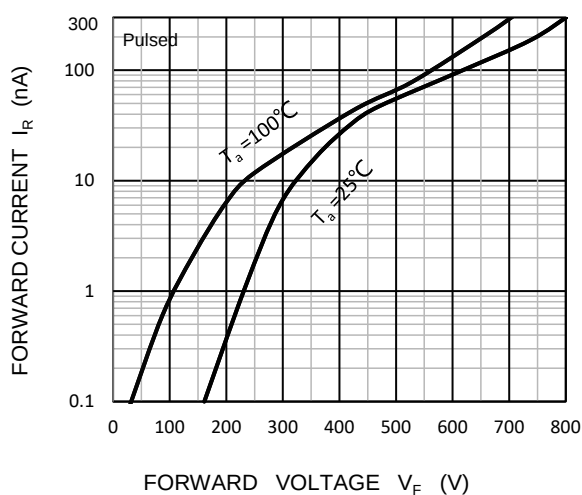
Notes: 1. Part mounted on FR-4 board with recommended pad layout.
 2. Short duration pulse test used to minimize self-heating effect.
 3. pulsed $t_p \leq 300 \mu s$; $\delta \leq 0.02$.

Ordering Information (Example)

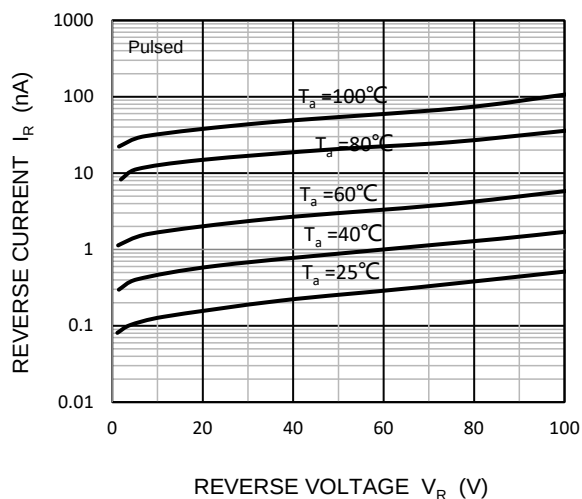
Type	Package	Marking	Minimum	Inner Box	Outer	Delivery
BAT46WS	SOD-323	S9	3,000	45,000	180,000	7"reel

Typical Operating Characteristics

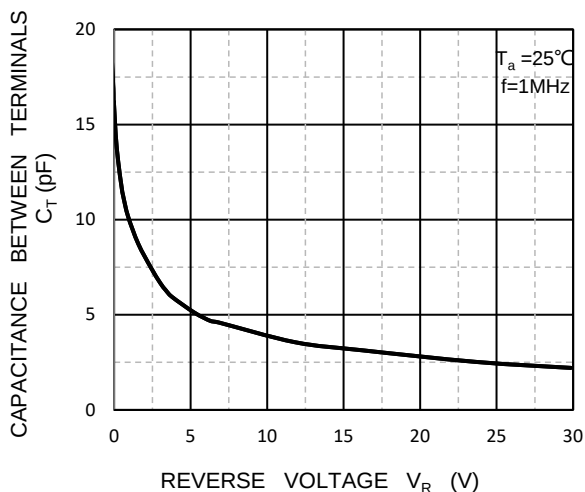
Forward Characteristics



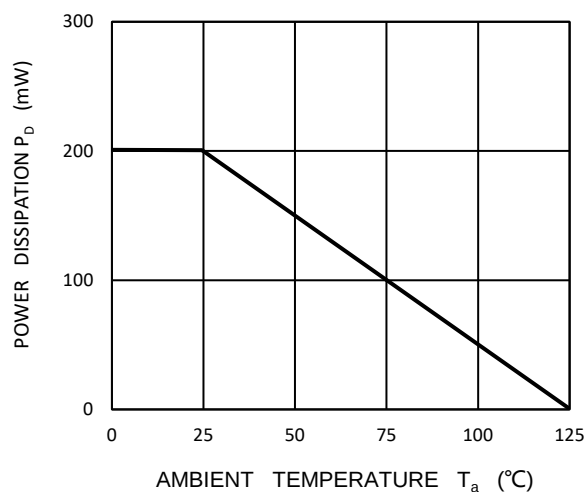
Reverse Characteristics



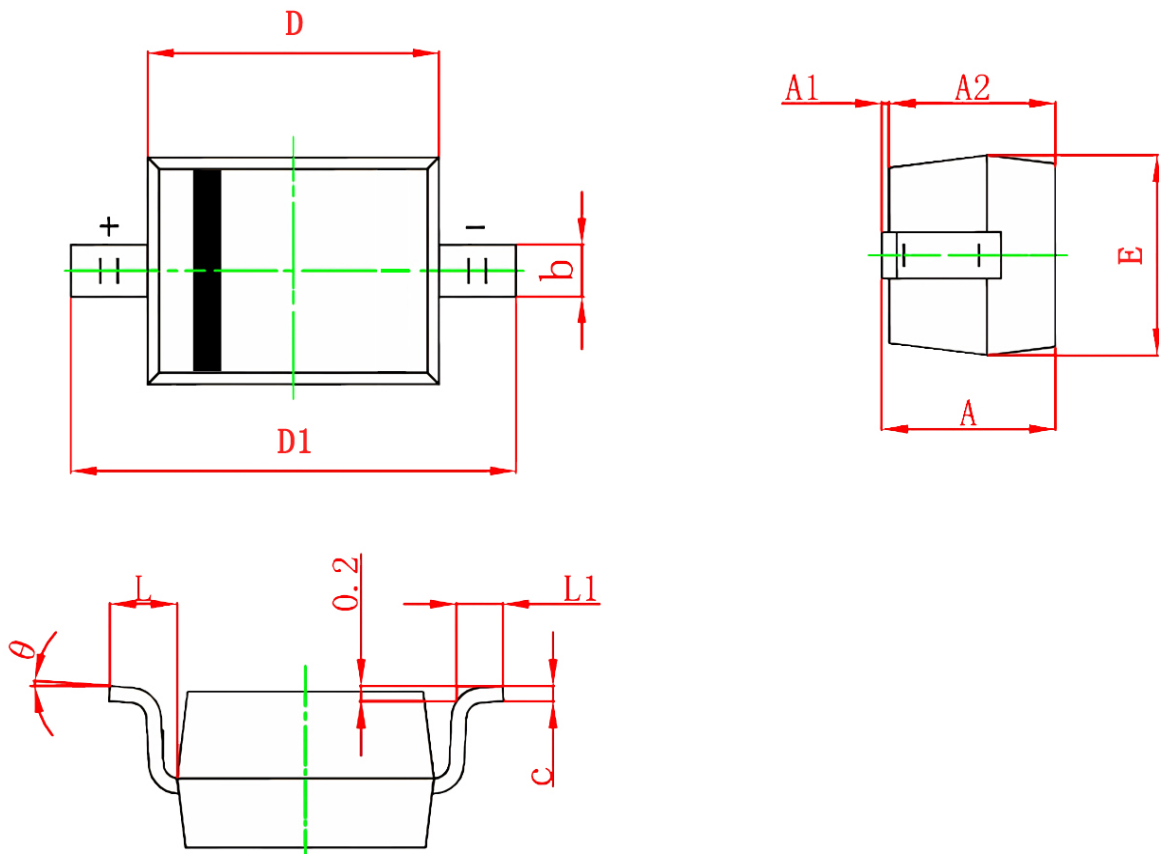
Capacitance Characteristics



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°