

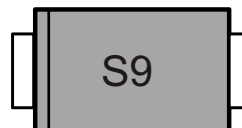
FEATURES

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

MECHANICAL DATA

- * Case: Molded plastic
- * Lead: Axial leads, solderable per MIL-STD-750, method 2026
- * Polarity: Polarity symbols marked on case

VOLTAGE RANGE
100 Volts
CURRENT
0.15Ampere



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Maximum Ratings @Ta=25°C

Parameter	Symbol	Limit	Unit
Peak repetitive peak reverse voltage	V_{RRM}	100	V
Working peak reverse voltage	V_{RWM}		
Forward continuous current	I_F	150	mA
Repetitive peak forward current (Note 1) @ $t_p < 1.0s$, Duty Cycle < 50%	I_{FRM}	350	mA
Non-repetitive Peak Forward surge current @ $t = 8.3ms$	I_{FSM}	750	mA
Power dissipation	P_D	500	mW
Thermal resistance junction to ambient air	$R_{\theta JA}$	200	°C/W
Junction temperature	T_J	125	°C
Storage temperature	T_{STG}	-55~+150	°C

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

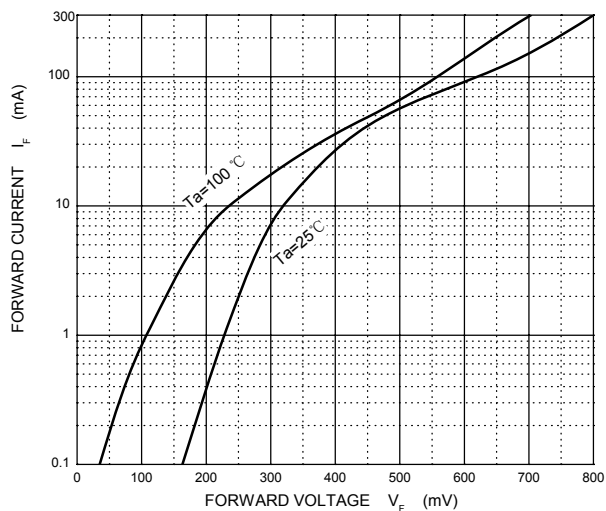
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse breakdown voltage(Note 2)	V_R	$I_R = 100\mu A$	100			V
Reverse voltage leakage current	I_R	$V_{R1} = 1.5V$			0.3	μA
		$V_{R2} = 10V$			0.5	
		$V_{R3} = 50V$			1	
		$V_{R4} = 75V$			2	
Forward voltage(Note 2)	V_F	$I_{F1} = 0.1mA$			0.25	V
		$I_{F2} = 10mA$			0.45	
		$I_{F3} = 250mA$			1	
Diode capacitance	C_T	$V_R = 0, f = 1MHz$		20		pF
		$V_R = 1V, f = 1MHz$		12		

Notes: 1. Part mounted on FR-4 board with recommended pad layout.

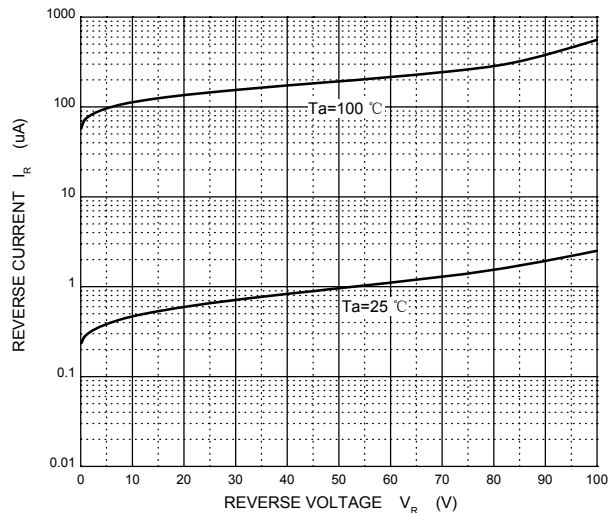
2. Short duration pulse test used to minimize self-heating effect.

RATING AND CHARACTERISTIC CURVES

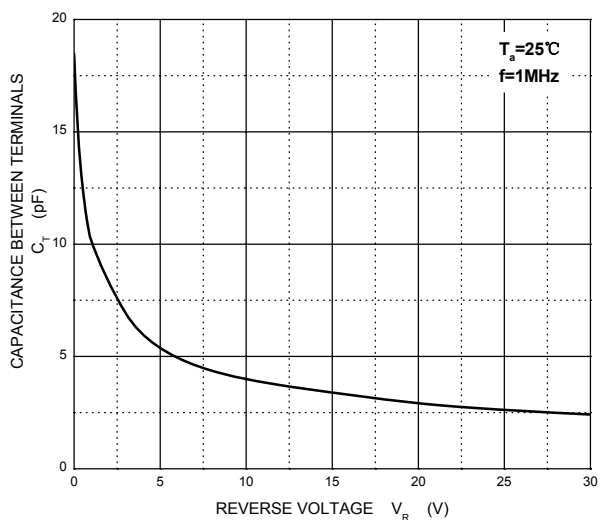
Forward Characteristics



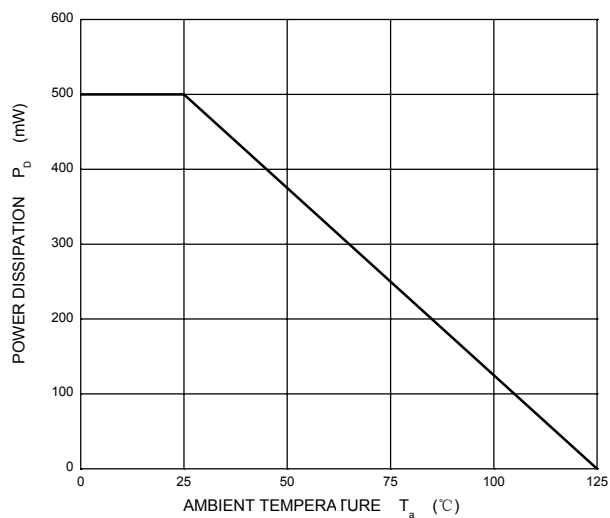
Reverse Characteristics



Capacitance Characteristics

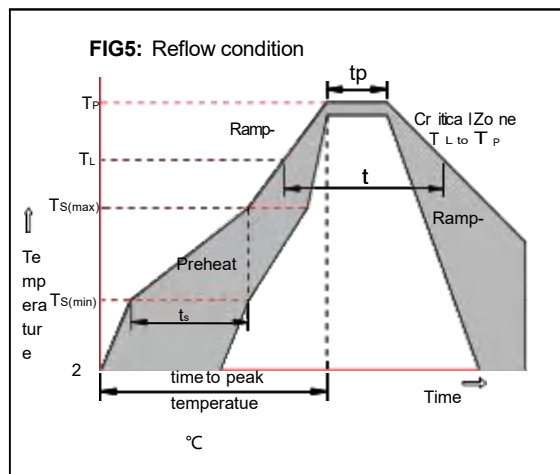


Power Derating Curve



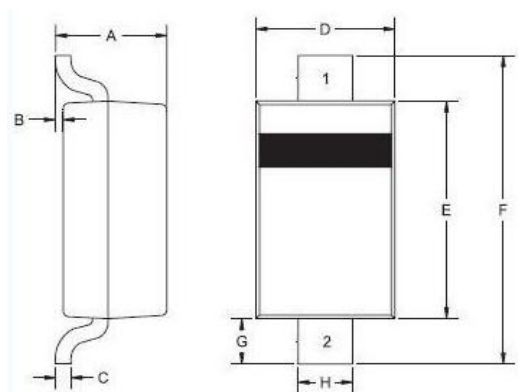
Soldering parameters

Reflow Condition		Pb-Free assembly (see as below)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150 °C
	-Temperature Max($T_{s(max)}$)	+200 °C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3 °C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3 °C/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217 °C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_P)		+260(+0/-5) °C
Time within 5 °C of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6 °C/sec. Max
Time 25 °C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260 °C

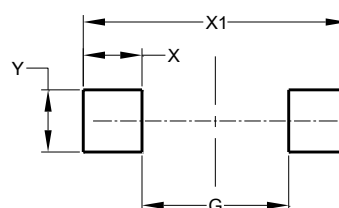


Package Dimensions & Suggested Pad Layout

SOD123

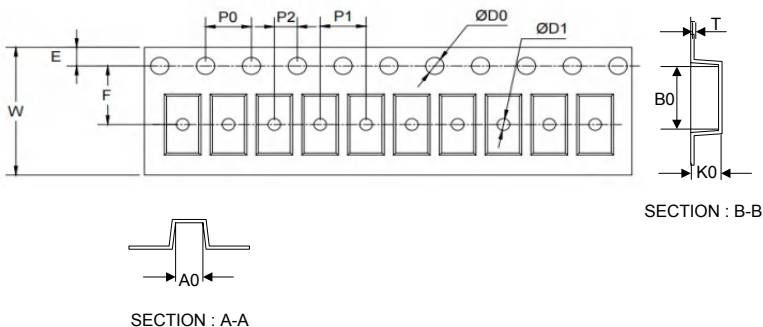
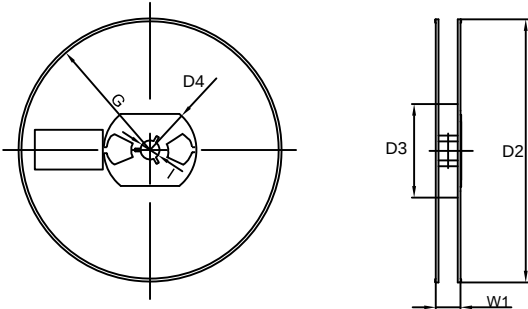


SOD123		
Dim	Min	Max
A	0.95	1.35
B	0.00	0.12
C	-	0.20
D	1.40	1.80
E	2.50	2.80
F	3.60	3.90
G	0.40	-
H	0.50	0.70
All Dimensions in mm		



Dimensions	Value (in mm)
G	2.20
X	1.20
X1	4.60
Y	1.20

Tape & rell specification

Tape		Symbol	Dimension (mm)
		P0	4.00±0.20
		P1	4.00±0.20
		P2	2.00±0.20
		D0	1.55±0.10
		D1	1.00±0.20
		E	1.75±0.20
		F	3.60±0.20
		W	8.00±0.40
		A0	2.30±0.40
		B0	4.00±0.40
		K0	1.50±0.40
		T	0.23±0.10
		D2	177.0±3.0
		D3	55Min.
7" Reel		D4	R24.0±3.0
		G	R82.0±3.0
		I	13.0±2.0
		W1	11.0±3.0
		Quantity: 3000PCS	