

FEATURES

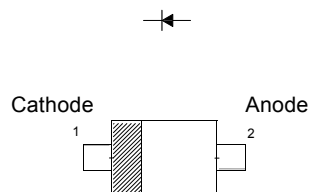
- High-speed switching

VOLTAGE RANGE

100 Volts

CURRENT

0.25A



SOD-323

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Reverse Voltage	V_R	100	V
Continuous Forward Current	I_F	250	mA
Repetitive Peak Forward Current	I_{FRM}	500	mA
Non-Repetitive Peak Forward Current	I_{FSM}	4 1 0.5	A
	$t = 1 \mu s$ $t = 1 ms$ $t = 1 s$		
Total Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	- 65 to + 150	°C

Parameter	Symbol	Max.	Unit
Forward Voltage at $I_F = 1 mA$ at $I_F = 10 mA$ at $I_F = 50 mA$ at $I_F = 150 mA$	V_F	0.715 0.855 1 1.25	V
Reverse Current at $V_R = 25 V$ at $V_R = 75 V$ at $V_R = 25 V, T_J = 150 ^\circ C$ at $V_R = 75 V, T_J = 150 ^\circ C$	I_R	30 1 30 50	nA μA μA μA
Diode Capacitance at $V_R = 0 V, f = 1 MHz$	C_{tot}	1.5	pF
Reverse Recovery Time at $I_F = I_R = 10 mA, I_{rr} = 0.1 \times I_R, R_L = 100 \Omega$	t_{rr}	4	ns

RATING AND CHARACTERISTIC CURVES

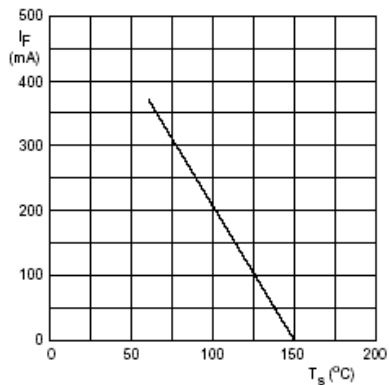
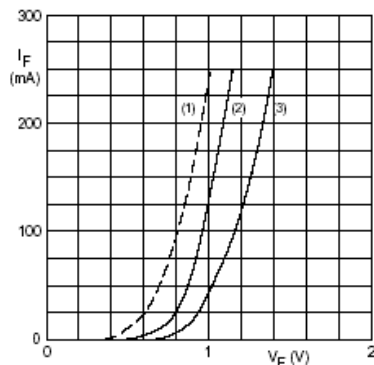
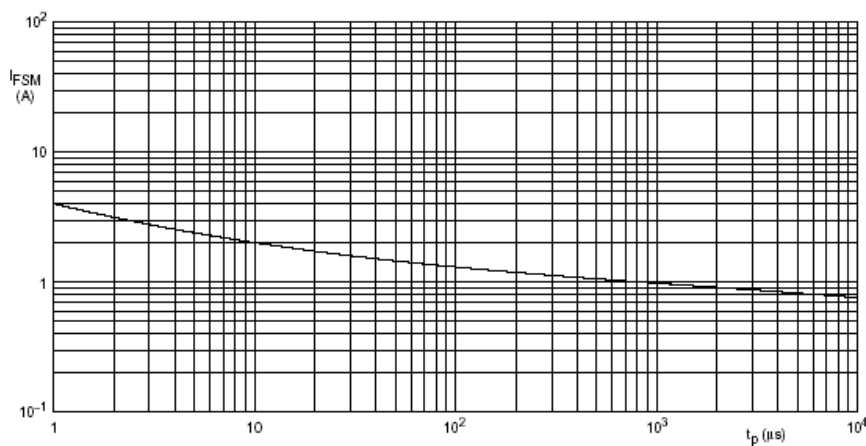


Fig. 1 Maximum permissible continuous forward current as a function of soldering point temperature



(1) $T_j = 150^\circ\text{C}$; typical values.
(2) $T_j = 25^\circ\text{C}$; typical values.
(3) $T_j = 25^\circ\text{C}$; maximum values.

Fig. 2 Forward current as a function of forward voltage



Based on square wave currents.
 $T_j = 25^\circ\text{C}$ prior to surge.

Fig. 3 Maximum permissible non-repetitive peak forward current as a function of pulse duration.

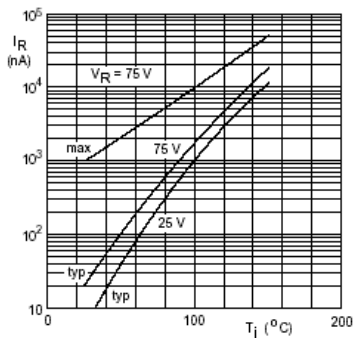
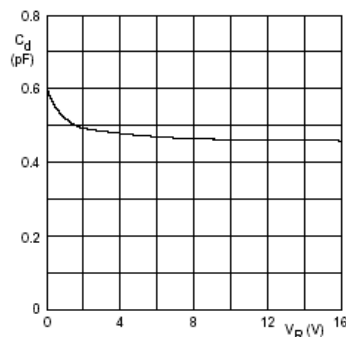


Fig. 4 Reverse current as a function of junction temperature.

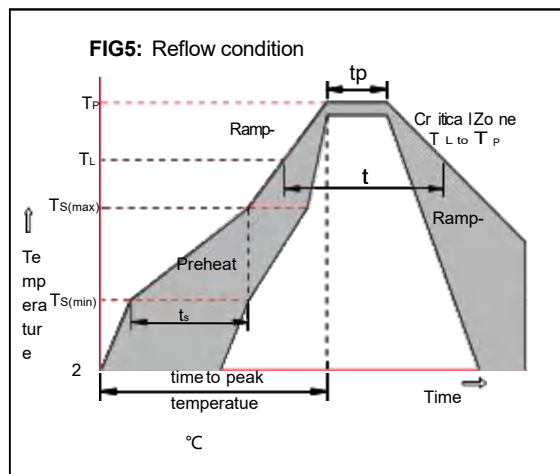


$f = 1\text{ MHz}$; $T_j = 25^\circ\text{C}$.

Fig. 5 Diode capacitance as a function of reverse voltage; typical values.

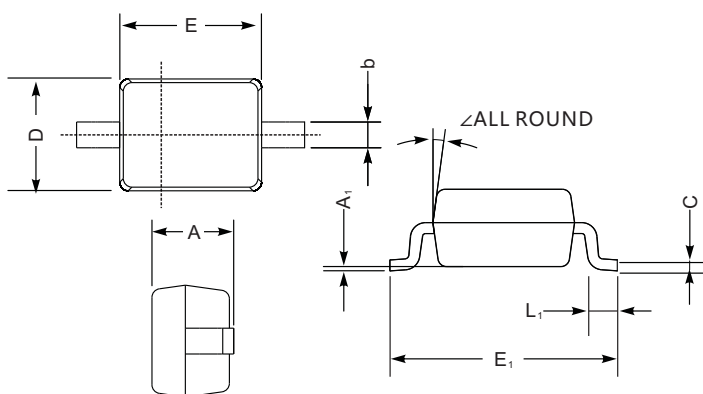
Soldering parameters

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



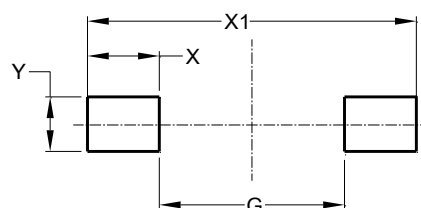
Package Dimensions & Suggested Pad Layout

SOD323



SOD-323 mechanical data

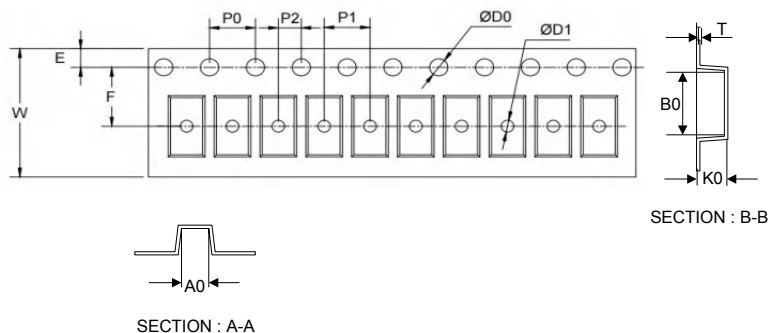
UNIT		A	C	D	E	E ₁	b	L ₁	A ₁	∠
mm	max	1.1	0.15	1.4	1.8	2.75	0.4	0.45	0.2	9°
	min	0.8	0.08	1.2	1.4	2.55	0.25	0.2	—	
mil	max	43	5.9	55	70	108	16	16	8	
	min	32	3.1	47	63	100	9.8	7.9	—	



Dimensions	Value (in mm)
G	1.40
X	1.20
X1	3.80
Y	1.00

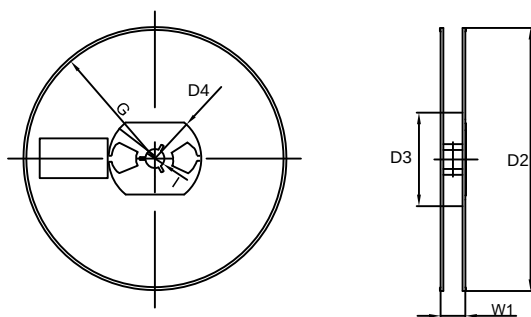
Tape & reel specification

Tape



Symbol	Dimension (mm)
P0	4.00±0.20
P1	4.00±0.20
P2	2.00±0.20
D0	1.55±0.20
D1	1.00±0.20
E	1.55±0.25
F	3.60±0.20
W	8.00±0.20
A0	2.00±0.20
B0	3.25±0.20
K0	1.35±0.20
T	0.23±0.10

7" Reel



Quantity: 3000PCS