

FEATURES

- Low forward voltage drop

VOLTAGE RANGE

70.0 Volts

CURRENT

1.0 Ampere



SOD-323



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified.
Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

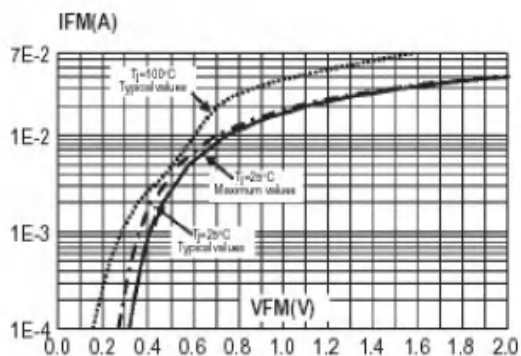
Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	70	V
Continuous Forward Current	I_F	70	mA
Surge Non-Repetitive Forward Current (tp = 10 ms)	I_{FSM}	1	A
Total Power Dissipation	P_{tot}	230	mW
Thermal Resistance Junction to Ambient ¹⁾	R_{thJA}	550	°C/W
Junction Temperature	T_J	150	°C
Storage Temperature Range	T_{stg}	- 65 to + 150	°C

¹⁾ Mounted on epoxy board, with recommended pad layout.

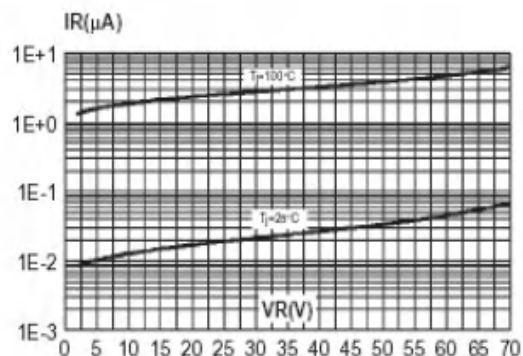
Characteristics at $T_a = 25\text{ °C}$

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 10\text{ }\mu\text{A}$	V_{BR}	70	-	V
Forward Voltage at $I_F = 1\text{ mA}$	V_F	-	410	mV
Reverse Current at $V_R = 50\text{ V}$	I_R	-	100	nA
Diode Capacitance at $V_R = 0\text{ V}$, $f = 1\text{ MHz}$	C_{tot}	-	2	pF

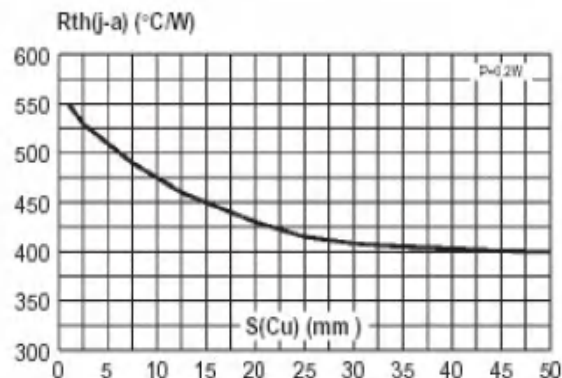
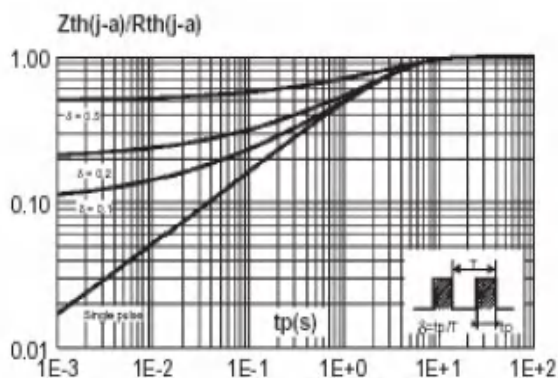
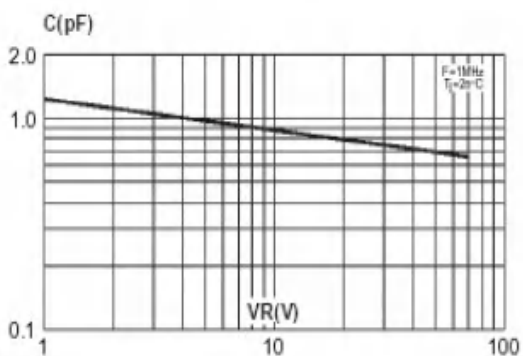
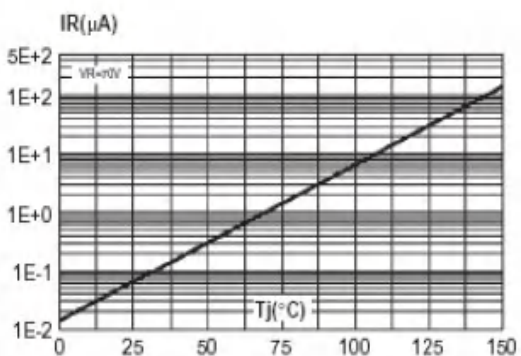
RATING AND CHARACTERISTIC CURVES



Reverse leakage current versus junction temperature (typical values).

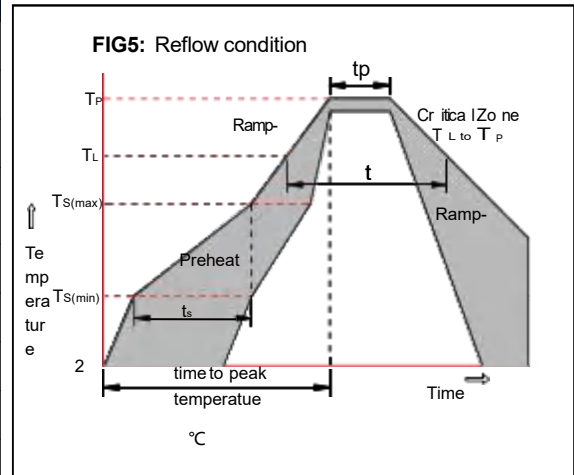


Junction capacitance versus reverse voltage applied (typical values).



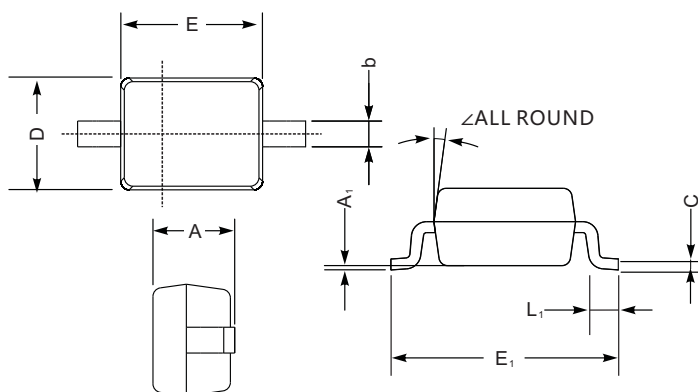
Soldering parameters

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



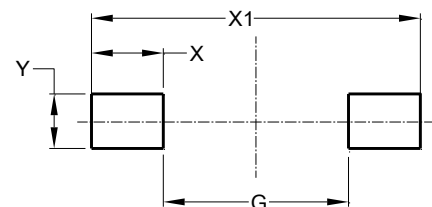
Package Dimensions & Suggested Pad Layout

SOD323



SOD-323 mechanical data

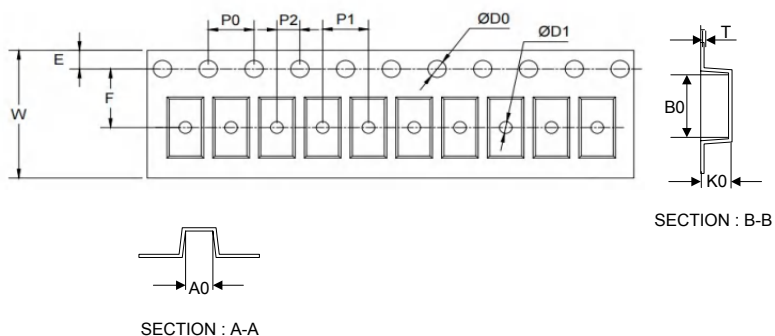
UNIT		A	C	D	E	E ₁	b	L ₁	A ₁	∠
mm	max	1.1	0.15	1.4	1.8	2.75	0.4	0.45	0.2	9°
	min	0.8	0.08	1.2	1.4	2.55	0.25	0.2	—	
mil	max	43	5.9	55	70	108	16	16	8	
	min	32	3.1	47	63	100	9.8	7.9	—	



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

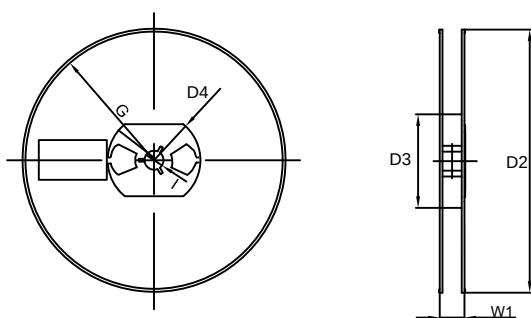
Tape & reel specification

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
D2	177.0±5.0
D3	55Min.
D4	R24.6±2.0
G	R82.0±2.0
I	13.0±2.0
W1	10.20±3.0

7" Reel



Quantity: 3000PCS