

FEATURES

Extremely Fast Switching Speed

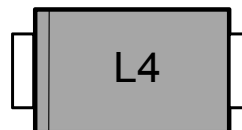
Low Forward Voltage

VOLTAGE RANGE

30 Volts

CURRENT

0.2 Ampere



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

Electrical Characteristics @Ta=25°C

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse breakdown voltage	$V_{(BR)}$	$I_R=100\mu A$	30			V
Forward voltage	V_{F1}	$I_F=0.1mA$			240	mV
	V_{F2}	$I_F=1.0mA$			320	mV
	V_{F3}	$I_F=10mA$			400	mV
	V_{F4}	$I_F=30mA$			500	mV
	V_{F5}	$I_F=100mA$			1000	mV
Reverse current	I_R	$V_R=25V$			2.0	μA
Reverse recovery time	t_{rr}	$I_F=10mA$, $I_R=10mA$ to $1mA$, $R_L=100\Omega$			5.0	ns
Capacitance between terminals	C_T	$V_R=1V, f=1MHz$			10	pF

RATING AND CHARACTERISTIC CURVES

FIG.1-Forward Characteristics

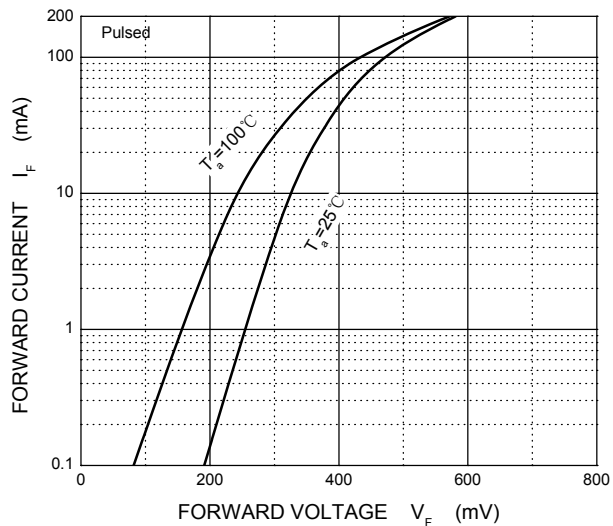


FIG.2-TYPICAL FORWARD CHARACTERISTICS

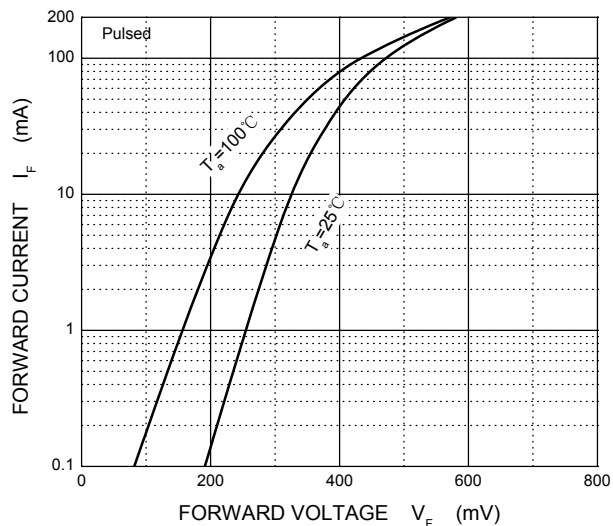


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

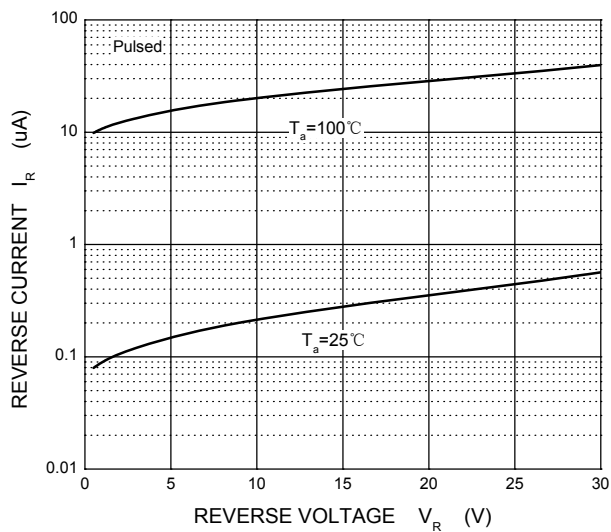
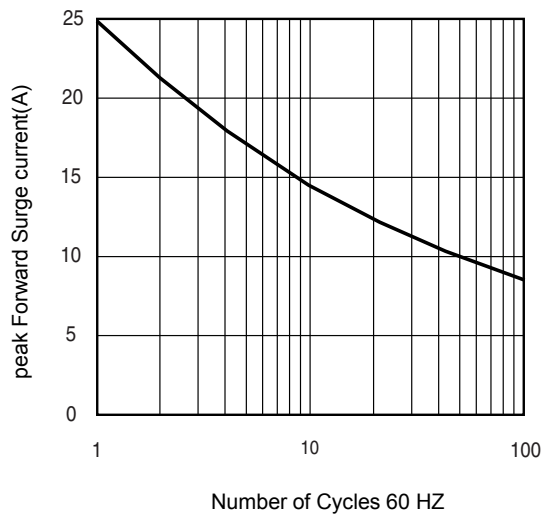
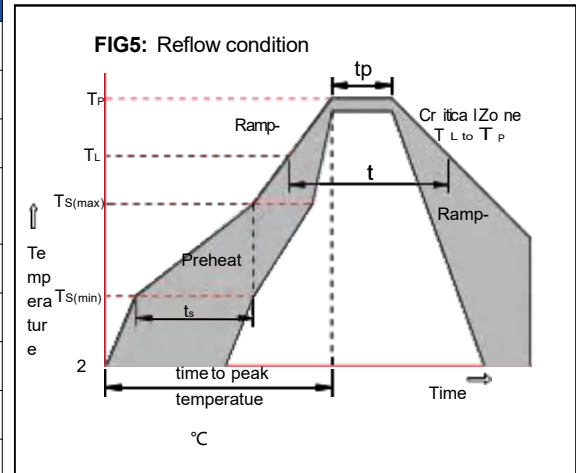


FIG.4-Power Derating Curve



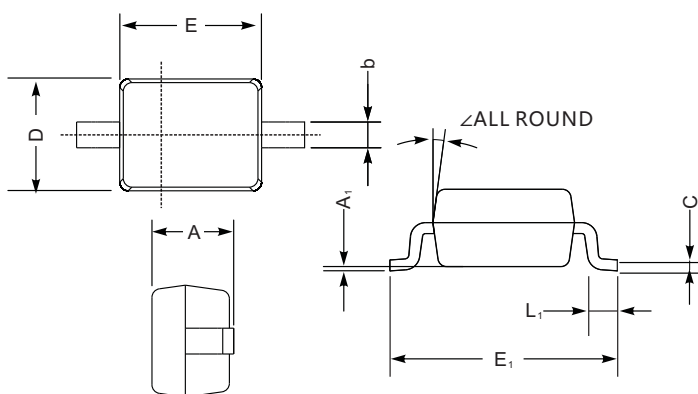
Soldering parameters

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



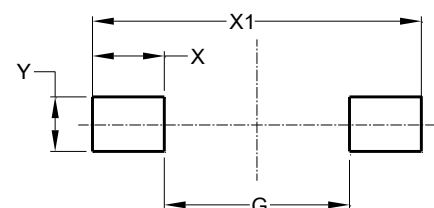
Package Dimensions & Suggested Pad Layout

SOD323



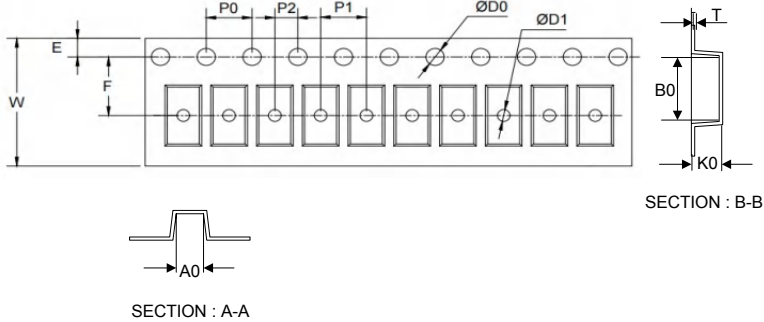
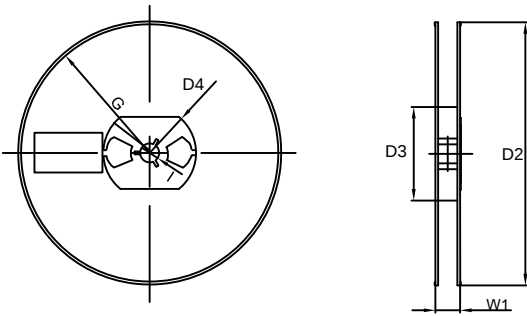
SOD-323 mechanical data

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
7" Reel		G	R82.0±2.0
		I	13.0±2.0
		W1	10.20±3.0
		Quantity: 3000PCS	