

## 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%.

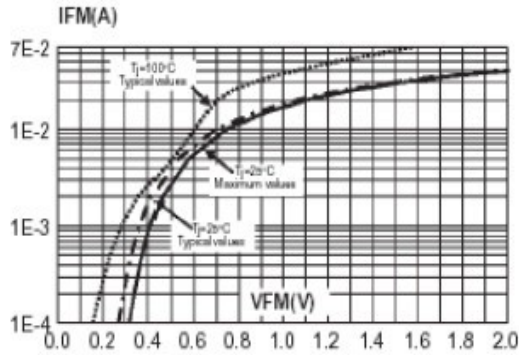
Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	70	V
Continuous Forward Current	$I_F$	70	mA
Surge Non-Repetitive Forward Current (tp = 10 ms)	$I_{FSM}$	1	A
Total Power Dissipation	$P_{tot}$	230	mW
Thermal Resistance Junction to Ambient <sup>1)</sup>	$R_{thJA}$	550	°C/W
Junction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

<sup>1)</sup> Mounted on epoxy board, with recommended pad layout.

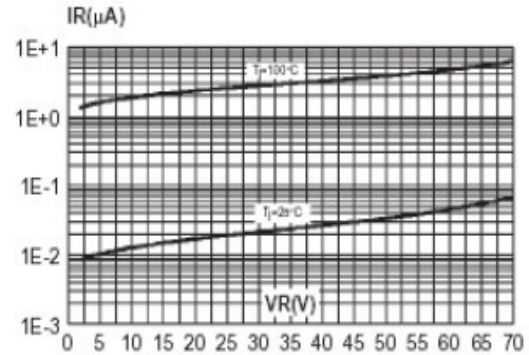
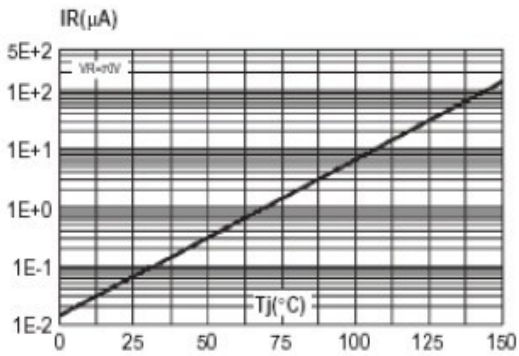
### Characteristics at $T_a = 25\text{ °C}$

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 10\ \mu\text{A}$	$V_{BR}$	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

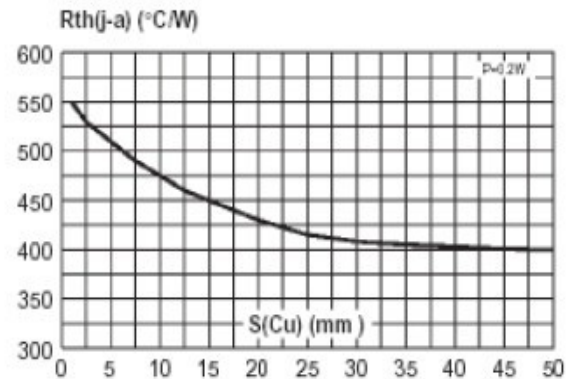
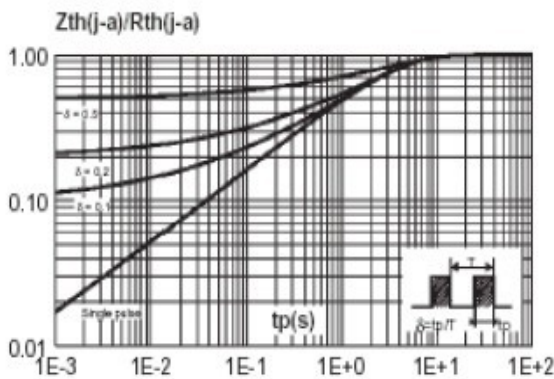
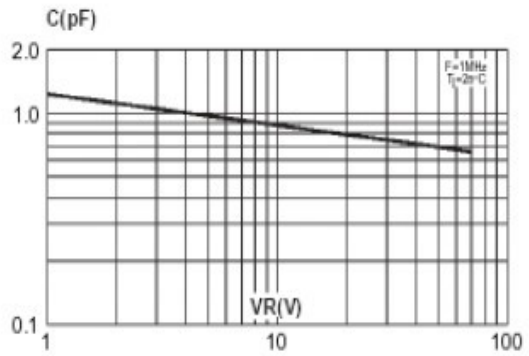
RATING AND CHARACTERISTIC CURVES



Reverse leakage current versus junction temperature (typical values).

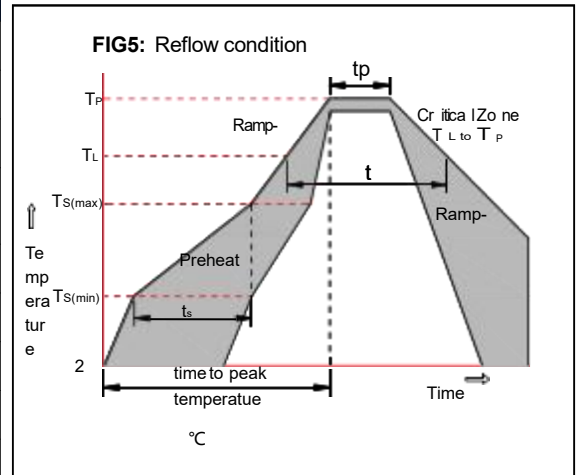


Junction capacitance versus reverse voltage applied (typical values).



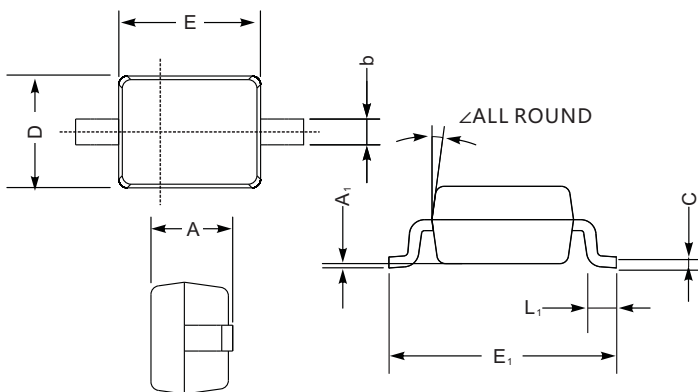
Soldering parameters

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



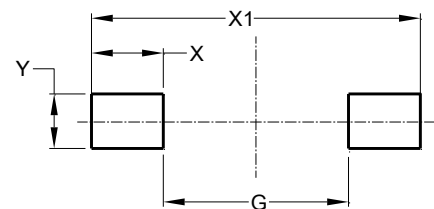
Package Dimensions & Suggested Pad Layout

SOD323



SOD-323 mechanical data

UNIT		A	C	D	E	E <sub>1</sub>	b	L <sub>1</sub>	A <sub>1</sub>	∠
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)
<b>G</b>	1.40
<b>X</b>	1.20
<b>X1</b>	3.80
<b>Y</b>	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		
Quantity: 3000PCS			

7" Reel

