FEATURES

- Low Forward Voltage Drop
- Extremely Small SOD-323 Package
- Surface Device Type Mounting
- Green EMC
- Band Indicates Cathode
- Meet AEC-Q101 Requirements



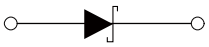
SOD-323



Marking

APPLICATION

- Low voltage rectification
- Reverse polarity protection
- Low power consumption applications



Schematic Symbol

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

MAXIMUM RATINGS (T_A=25°C)

Parameter	Symbol	Value	Unit
Maximum repetitive reverse voltage	V_{RRM}	40	V
Maximum DC blocking reverse voltage	V_R	40	V
Average Forward Current	$I_{F(AV)}$	2	A
Peak Forward Surge Current (At 8.3ms single half sine-wave)	I_{FSM}	20	A
Junction Temperature Range	T_J	-50 to +125	°C
Storage Temperature Range	T_{STG}	-50 to +150	°C

ELECTRICAL CHARACTERISTICS(T_A=25°C)

Parameter		Symbol	Min.	Typ.	Max.	Unit
Breakdown Voltage	I_R=0.1mA	V_{BR}	40			V
Reverse Leakage Current	V_R=40V	I_R			80	μA
Forward Voltage	I_F=1A	V_F		0.37	0.42	V
	I_F=2A				0.50	
Junction Capacitance	V_R=0V,f = 1MHz	C_J		340	400	pF

CHARACTERISTIC CURVES

Fig.1 Typical Forward Current Derating Curve

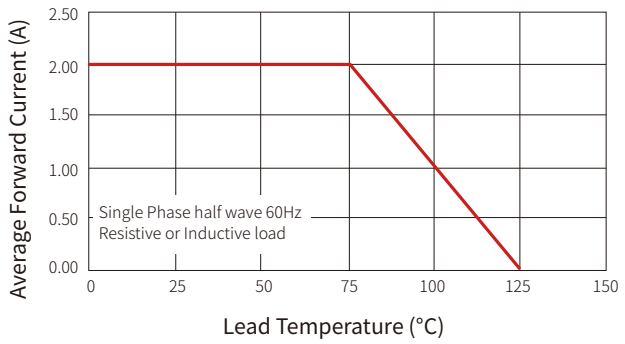


Fig.2 Total Capacitance vs.Rererse Voltage

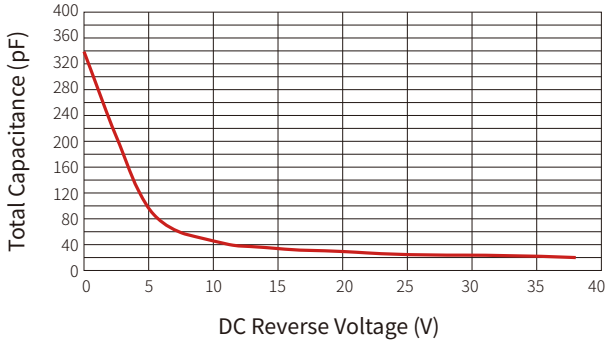


Fig.3 Typical Instantaneous Forward Characteristics

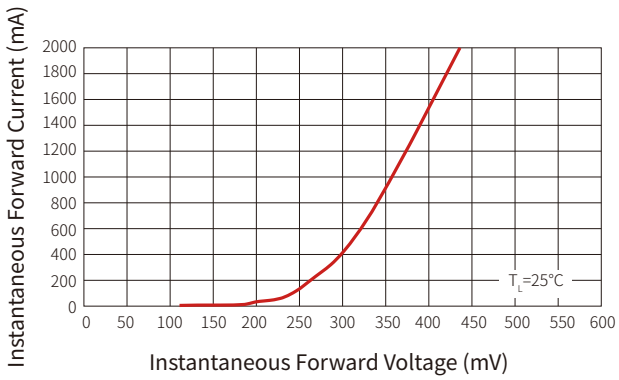


Fig.4 Typical Reverse Characteristics

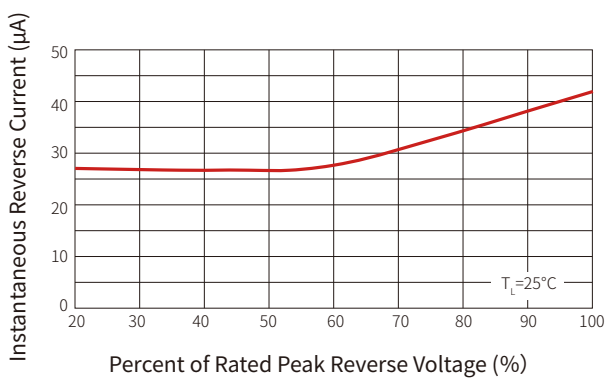
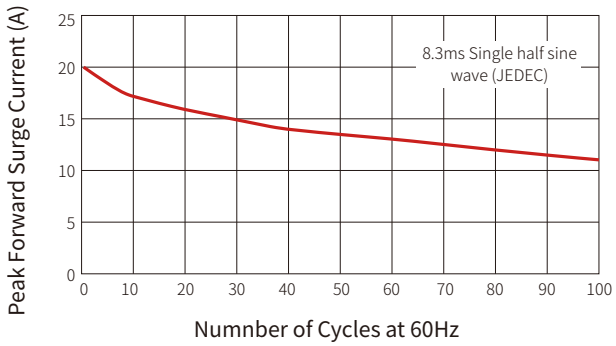
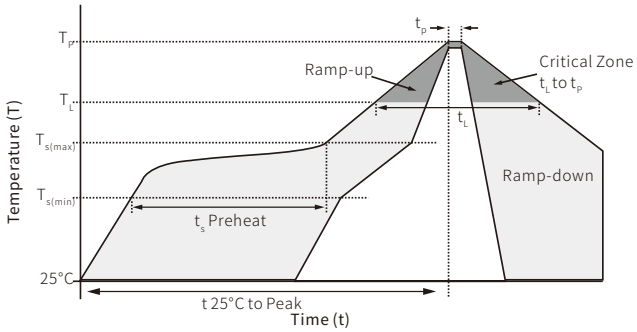


Fig.5 Max. Non-repetitive Forward Surge Current

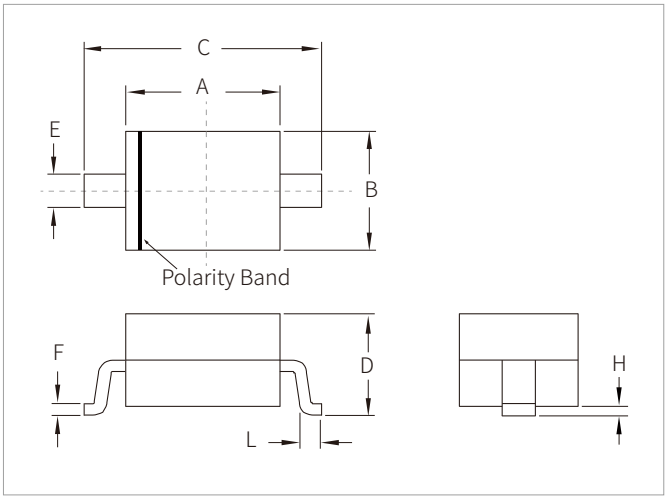


SOLDERING PARAMETERS

Reflow Condition		Lead–free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak		3°C/second max
$T_{S(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_P)		260°C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_P)		8 minutes max.
Do not exceed		260°C

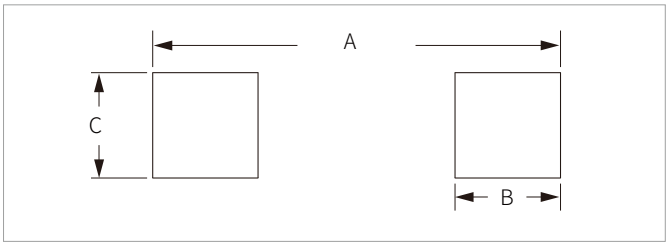


SOD-323 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min	Max	Min	Max
A	1.60	1.90	0.063	0.075
B	1.15	1.45	0.045	0.057
C	2.35	2.70	0.093	0.106
D	0.80	1.10	0.031	0.042
E	0.25	0.40	0.010	0.016
F	0.10	0.20	0.004	0.008
H	-	0.10	-	0.004
L	0.20	-	0.008	-

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min	Max	Min	Max
A	2.87	3.12	0.113	0.123
B	0.66	0.91	0.026	0.036
C	0.66	0.91	0.026	0.036

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
RB10U40WSQ	SOD-323	3000PCS	7”

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