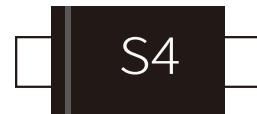


## FEATURES

- | Low Forward Voltage Drop
- | Extremely Small SOD-523 Package
- | Surface Device Type Mounting
- | Green EMC
- | Band Indicates Cathode



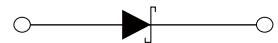
SOD-523



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 ( $T_A=25^\circ\text{C}$ )

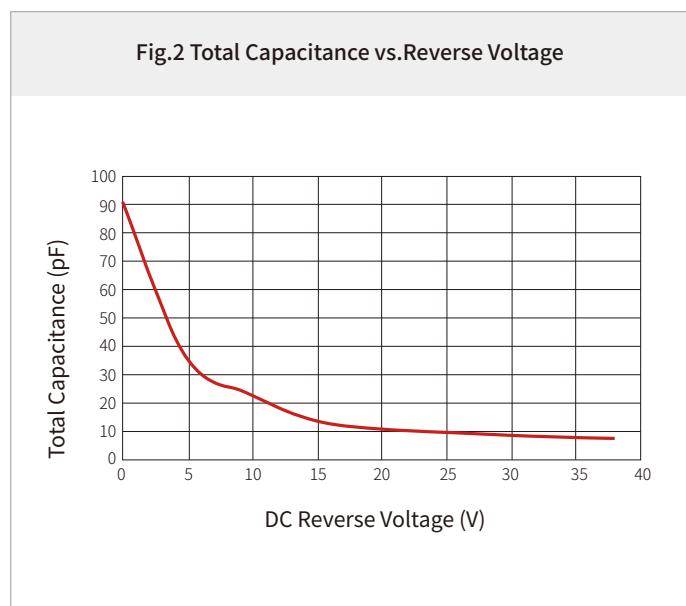
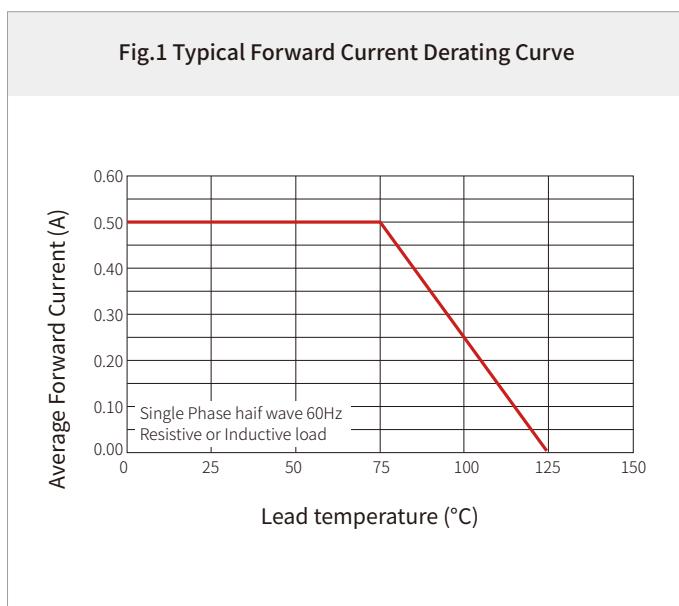
Parameter	Symbol	Value	Unit
Maximum repetitive reverse voltage	$V_{RRM}$	40	V
Maximum DC blocking reverse voltage	$V_R$	40	V
Average Forward Current	$I_{F(AV)}$	500	mA
Peak Forward Surge Current (At 8.3ms single half sine-wave)	$I_{FSM}$	5	A
Operating Junction Range	$T_J$	-55 to 125	°C
Storage Temperature Range	$T_{STG}$	-55 to 150	°C

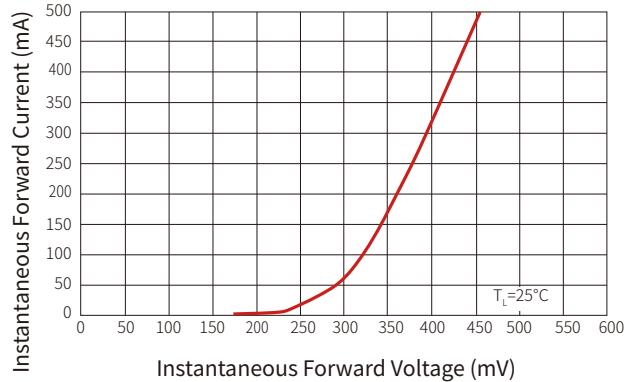
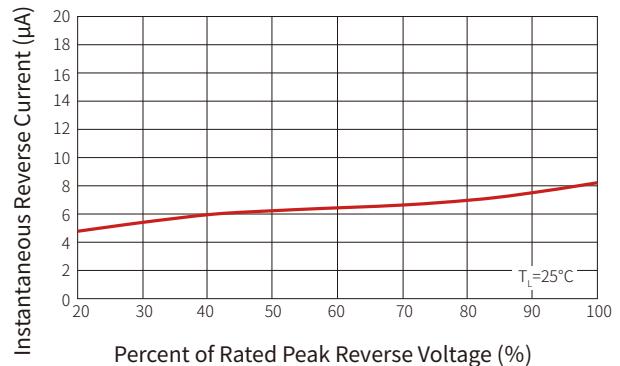
These ratings are limiting values above which the serviceability of the diode may be impaired.

## ELECTRICAL CHARACTERISTICS( $T_A=25^\circ\text{C}$ )

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Forward Voltage	$V_F$	$I_F=100\text{mA}$			0.37	V
		$I_F=500\text{mA}$			0.50	V
Reverse Leakage Current	$I_R$	$V_R=20\text{V}$			50	$\mu\text{A}$
		$V_R=40\text{V}$			80	$\mu\text{A}$
Breakdown Voltage	$V_{BR}$	$I_R=100\mu\text{A}$	40			V
Junction Capacitance	$C_J$	$V_R=5\text{V}, f=1\text{MHz}$		36		pF

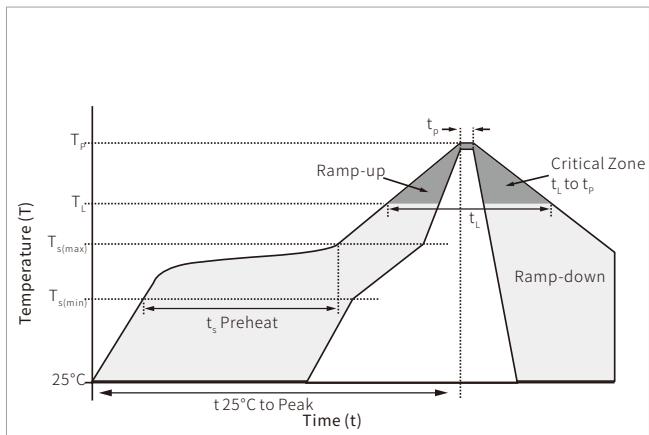
## CHARACTERISTIC CURVES



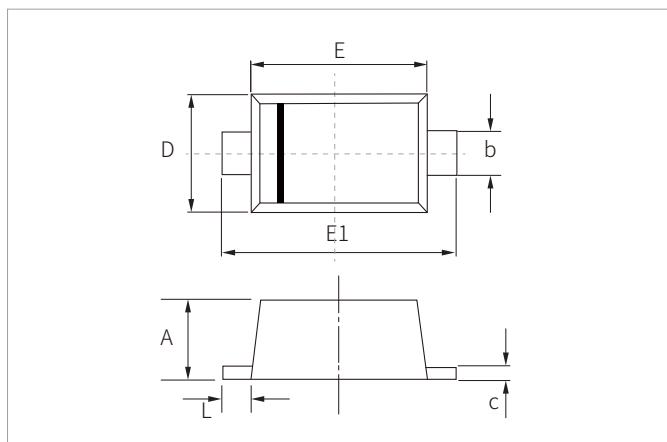
**Fig.3 Typical Instantaneous Forward Characteristics**

**Fig.4 Typical Reverse Characteristics**


## 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

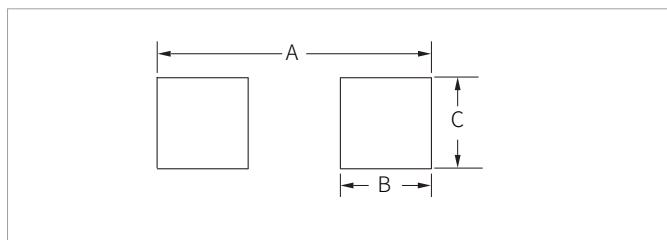


## SOD-523 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.50	0.80	0.020	0.031
b	0.25	0.35	0.010	0.014
c	0.07	0.20	0.003	0.008
D	0.70	0.90	0.028	0.035
E	1.10	1.30	0.043	0.051
E1	1.50	1.70	0.059	0.067
L	0.15	0.25	0.006	0.010

## RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.00		0.0787	
B	0.60		0.0236	
C	0.70		0.0276	

## ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
RB551S-40	SOD-523	3000PCS	7"

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**By QR Code**

Website



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