

## FEATURES

- | Low Forward Voltage Drop

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- | Flat Lead SOD-523 Small Outline Plastic Package

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- | Surface Device Type Mounting

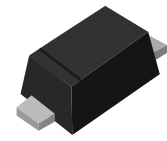
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- | Green EMC

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- | Band Indicates Cathode

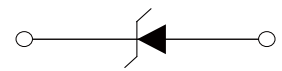
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SOD-523



Marking



Schematic Symbol

## APPLICATIONS

- | Low Current Rectification and High Speed Switching

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## APPROVALS

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

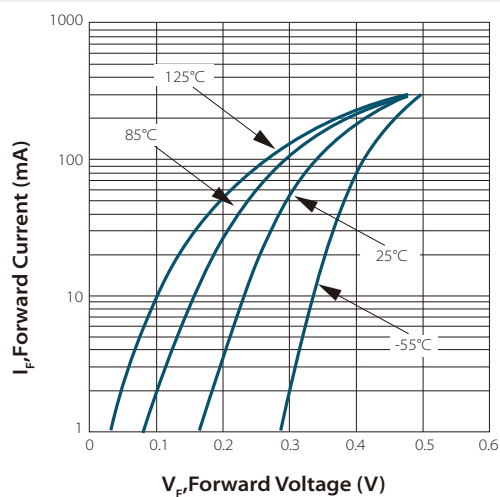
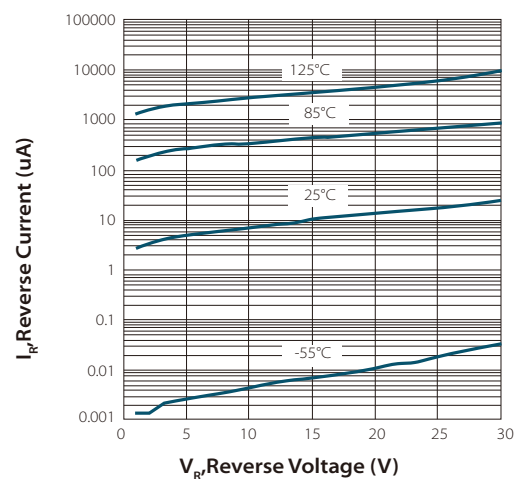
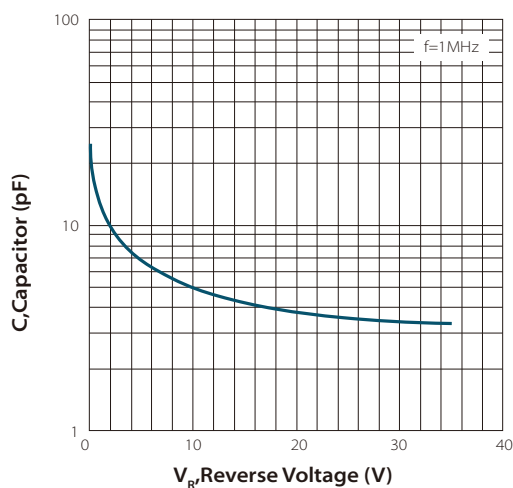
## MAXIMUM RATINGS (T<sub>A</sub> = 25°C )

Parameter	Symbol	Value	Unit
Reverse voltage	V <sub>R</sub>	30	V
Mean Rectifying current	I <sub>F(AV)</sub>	200	mA
Peak forward surge current 8.3 ms single half sine-wave	I <sub>FSM</sub>	1	A
Power Dissipation	P <sub>D</sub>	150	mW
Operating junction range	T <sub>J</sub>	125	°C
storage temperature range	T <sub>STG</sub>	-55 to 150	°C

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

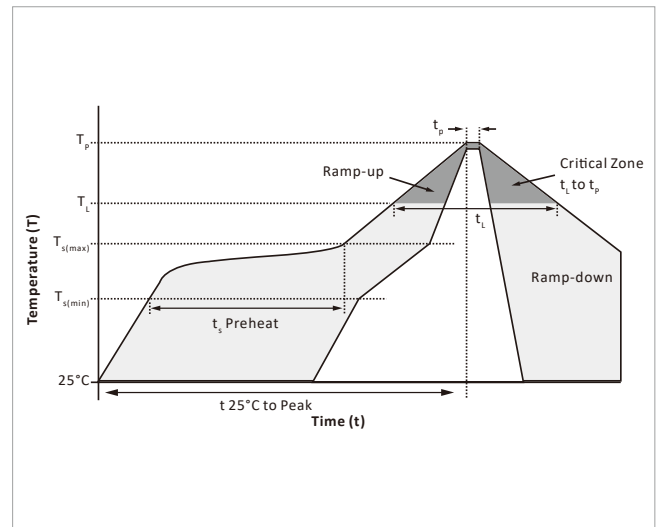
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward voltage	$V_F$	$I_F=200\text{mA}$			0.5	V
Reverse Leakage Current	$I_R$	$V_R=10\text{V}$			30	$\mu\text{A}$
Breakdown Voltage	$V_B$	$I_R=1\text{mA}$	30			V

## CHARACTERISTIC CURVES

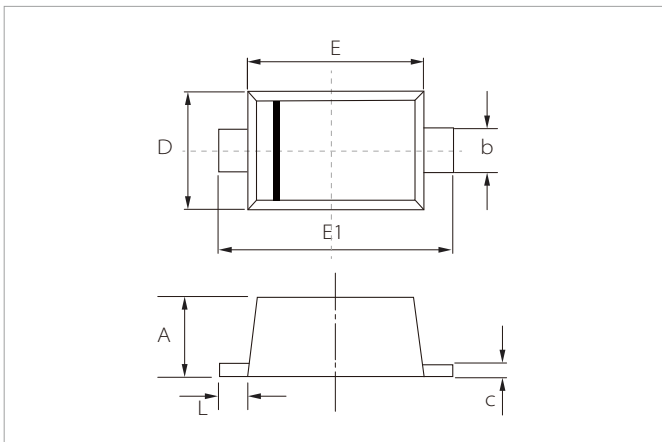
**Fig.1 Forward Characteristics**

**Fig.2 Reverse Characteristics**

**Fig.3 Capacitor 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) ( $t_p$ )	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

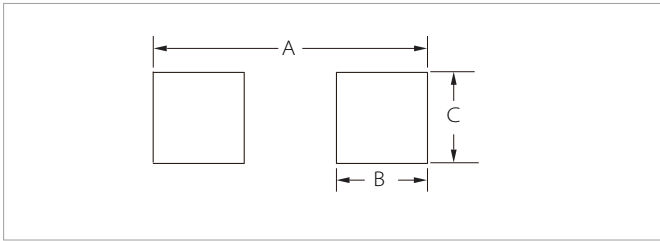


## SOD-523 PACKAGE INFORMATION



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.	Min.
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
SRB521S-30	SOD-523	3000PCS	7"

To find your local partner within Semiwell's website : [www.semiwell.com.cn](http://www.semiwell.com.cn)

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