



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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200mA, 30V Low VF SMD Schottky Barrier Diode

FEATURES

- Low capacitance
- Low forward voltage drop
- Moisture sensitivity level: level 1, per J-STD-020
- Compliant to RoHS directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21

APPLICATIONS

- Adapters
- For switching power supply
- Low stored charge
- Inverter

MECHANICAL DATA

- Case: SOD-523F
- Molding compound meets UL 94 V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 1A whisker test
- Polarity: Indicated by cathode band
- Weight: 1.68 ± 0.5 mg

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
I_F	200	mA
V_{RRM}	30	V
I_{FSM}	1	A
V_F at $I_F=200mA$	0.6	V
T_J Max.	125	°C
Package	SOD-523F	
Configuration	Single die	



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)			
PARAMETER	SYMBOL	RB520S-30	UNIT
Marking code on the device		B	
Power dissipation	P_D	200	mW
Repetitive peak reverse voltage	V_{RRM}	30	V
Forward current	I_F	200	mA
Non-repetitive peak forward surge current @ $t = 8.3ms$	I_{FSM}	1	A
Junction temperature range	T_J	-55 to +125	°C
Storage temperature range	T_{STG}	-55 to +125	°C

THERMAL PERFORMANCE			
PARAMETER	SYMBOL	TYP	UNIT
Junction-to-ambient thermal resistance	$R_{\theta JA}$	500	°C/W

ELECTRICAL SPECIFICATIONS ($T_A = 25^\circ\text{C}$ unless otherwise noted)					
PARAMETER	CONDITIONS	SYMBOL	MIN	MAX	UNIT
Forward voltage per diode ⁽¹⁾	$I_F = 200\text{mA}$, $T_J = 25^\circ\text{C}$	V_F	-	0.6	V
Reverse breakdown voltage	$I_R = 500 \mu\text{A}$	$V_{(BR)}$	30	-	V
Reverse current ⁽²⁾	$V_R = 10\text{V}$, $T_J = 25^\circ\text{C}$	I_R	-	1	μA

Notes:

1. Pulse test with $PW=0.3 \text{ ms}$
2. Pulse test with $PW=30 \text{ ms}$

ORDERING INFORMATION		
PART NO.	PACKAGE	PACKING
RB520S-30 RKG	SOD-523F	3K / 7" Reel
RB520S-30 RK	SOD-523F	3K / 7" Reel
RB520S-30 RSG	SOD-523F	8K / 7" Reel
RB520S-30 RS	SOD-523F	8K / 7" Reel

CHARACTERISTICS CURVES

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

Fig. 1 Total Capacitance

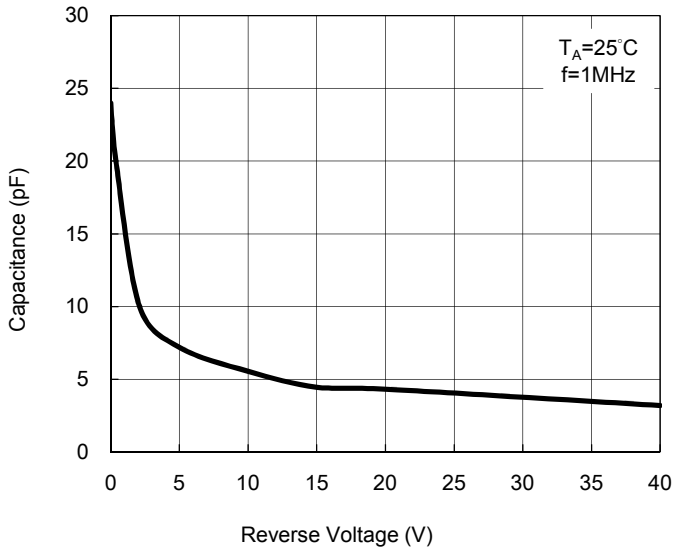


Fig. 2 Forward Voltage VS. Ambient

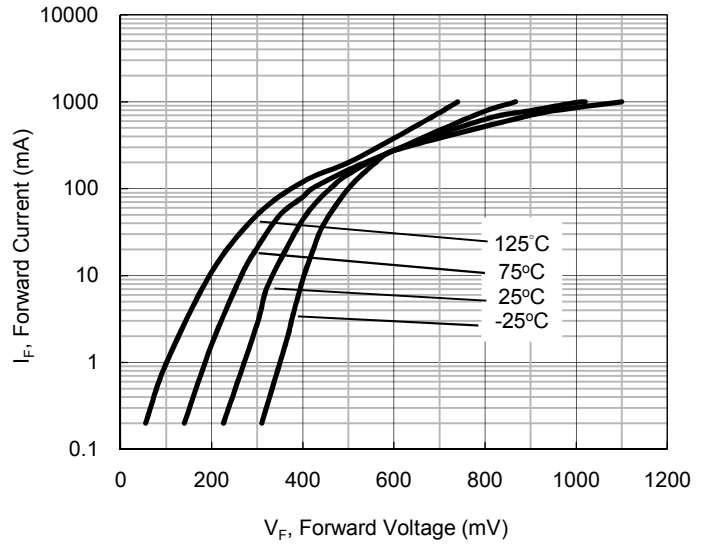
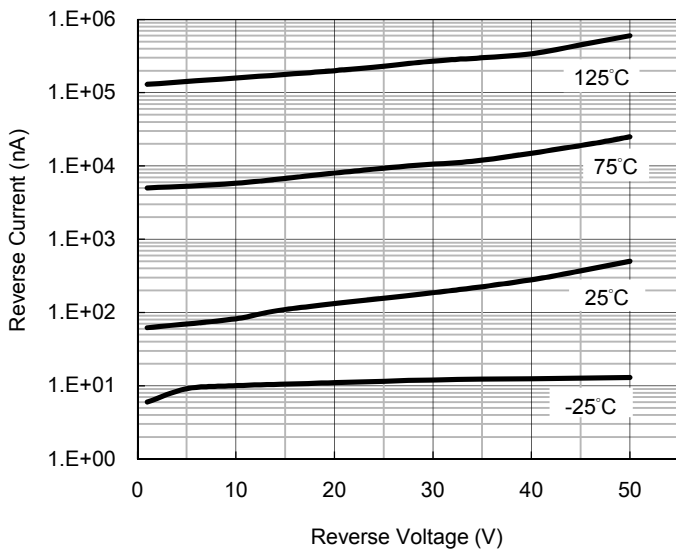
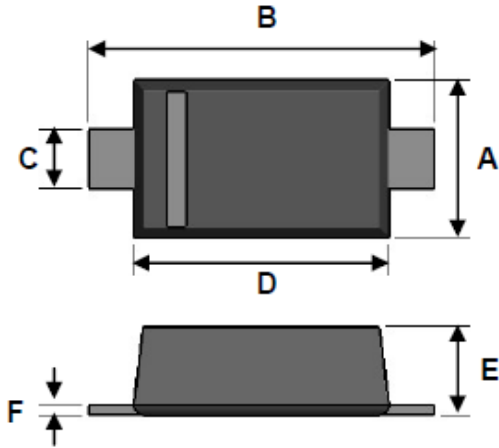


Fig. 3 Reverse Current VS. Reverse Voltage



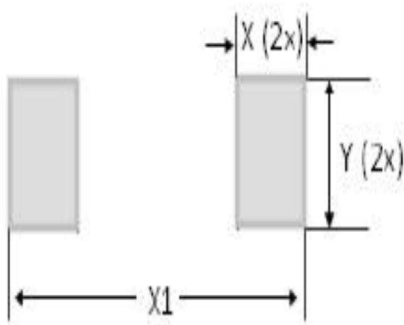
PACKAGE OUTLINE DIMENSION

SOD-523F



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	0.70	0.90	0.028	0.035
B	1.50	1.70	0.059	0.067
C	0.25	0.40	0.010	0.016
D	1.10	1.30	0.043	0.051
E	0.50	0.77	0.020	0.030
F	0.07	0.20	0.003	0.008

SUGGEST PAD LAYOUT



DIM.	Unit (mm)	Unit (inch)
	Typ.	Typ.
X	0.60	0.024
X1	2.30	0.091
Y	0.80	0.031

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