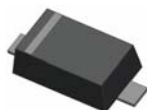


### Small Signal Diode



#### Features

- ✧ Low power loss, high current capability, low  $V_F$
- ✧ Surface device type mounting
- ✧ Moisture sensitivity level 1
- ✧ Matte Tin(Sn) lead finish with Nickel(Ni) underplate
- ✧ Pb free version and RoHS compliant
- ✧ Green compound (Halogen free) with suffix "G" on packing code and prefix "G" on date code

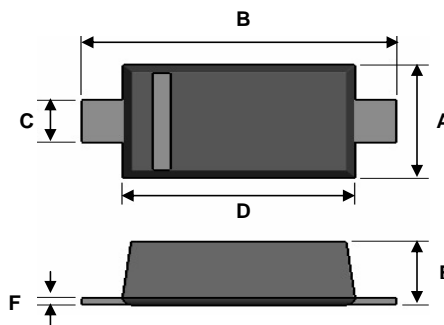
#### Mechanical Data

- ✧ Case : SOD-523F small outline plastic package
- ✧ Terminal: Matte tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ High temperature soldering guaranteed: 260°C/10s
- ✧ Polarity : Indicated by cathode band
- ✧ Weight : 1.68±0.5 mg
- ✧ Marking Code: C

#### Ordering Information

Part No.	Packaging Code	Package	Packing	Marking
RB521S-30	RK	SOD-523F	3K / 7" Reel	C
RB521S-30	RKG	SOD-523F	3K / 7" Reel	C

SOD-523F

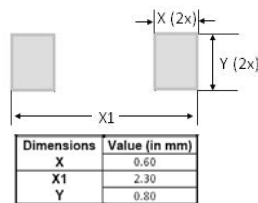


Dimensions	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	0.70	0.90	0.028	0.035
B	1.50	1.70	0.059	0.067
C	0.25	0.40	0.010	0.016
D	1.10	1.30	0.043	0.051
E	0.60	0.70	0.024	0.028
F	0.10	0.14	0.004	0.006

#### Pin Configuration



#### Suggested PAD Layout



#### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

##### Maximum Ratings

Type Number	Symbol	Value	Units
Power Dissipation	$P_D$	200	mW
Repetitive Peak Reverse Voltage	$V_{RRM}$	30	V
Reverse Voltage	$V_R$	30	V
Mean Forward Current @ $T_L=100^\circ\text{C}$ (Lead Temperature)	$I_o$	200	mA
Non-Repetitive Peak Forward Surge Current (Note 1)	$I_{FSM}$	1	A
Thermal Resistance (Junction to Ambient)	$R\theta_{JA}$	500	$^\circ\text{C}/\text{W}$
Junction Temperature	$T_J$	125	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to + 125	$^\circ\text{C}$

Note 1: Test Condition: 8.3ms Single half Sine-Wave Superimposed on Rated Load (JEDEC Method)

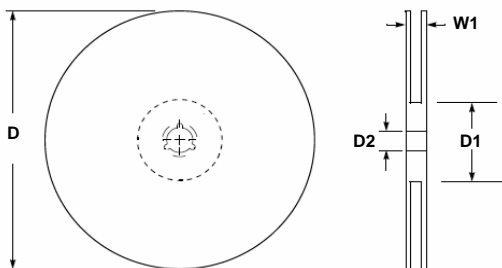
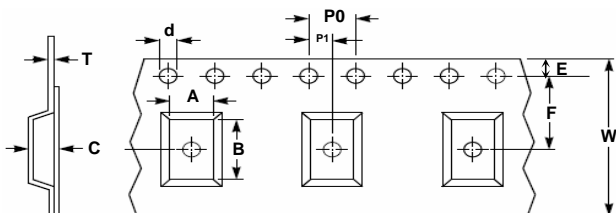
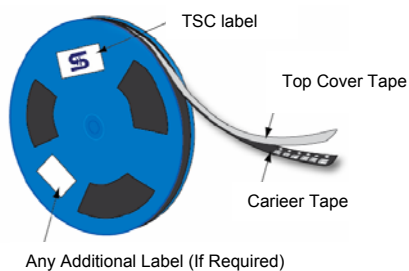
### Small Signal Diode

#### Maximum Ratings

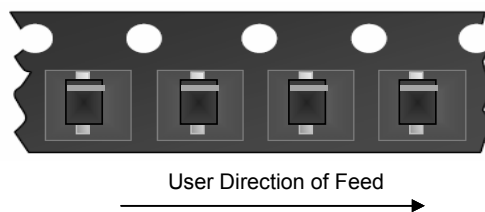
Rating at 25°C ambient temperature unless otherwise specified.

Type Number		Symbol	Min	Max	Units
Reverse Breakdown Voltage	$I_R = 500\mu A$	$V_{(BR)}$	30	-	V
Forward Voltage	$I_F = 200mA$	$V_F$	-	0.50	V
Reverse Leakage Current	$V_R = 10V$	$I_R$	-	30	$\mu A$

#### Carrier & Reel specification

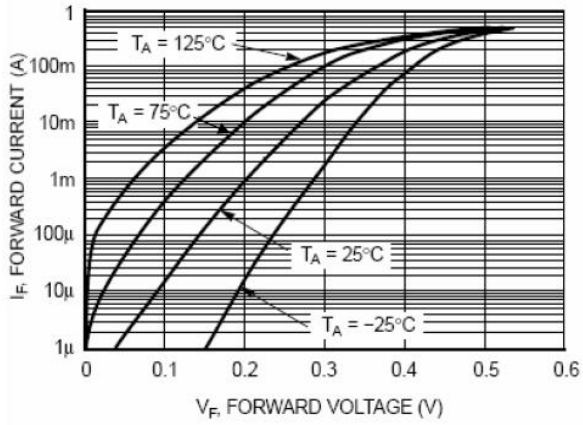


Item	Symbol	Dimension (mm)
Carrier width	A	3.15 ±0.10
Carrier length	B	3.94 ±0.05
Carrier depth	C	1.35 ±0.10
Sprocket hole	d	1.75 ±0.10
Reel outside diameter	D	178 ±1
Reel inner diameter	D1	54.4 ±0.40
Feed hole width	D2	13.0 ±0.20
Sprocket hole position	E	1.75 ±0.10
Punch hole position	F	3.50 ±0.05
Sprocket hole pitch	P0	4.00 ±0.10
Embossment center	P1	2.00 ±0.05
Overall tape thickness	T	0.22 ±0.05
Tape width	W	8.10 ±0.20
Reel width	W1	12.3 ±0.20

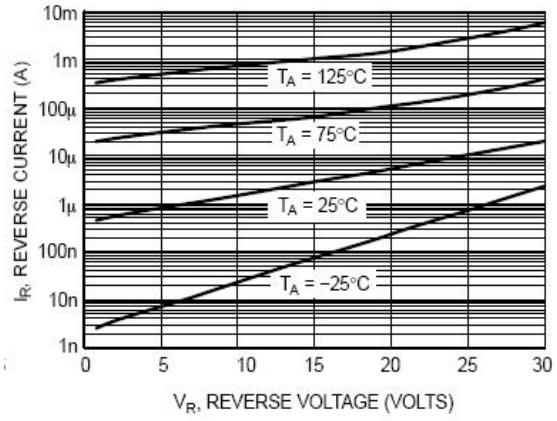


**Small Signal Diode**

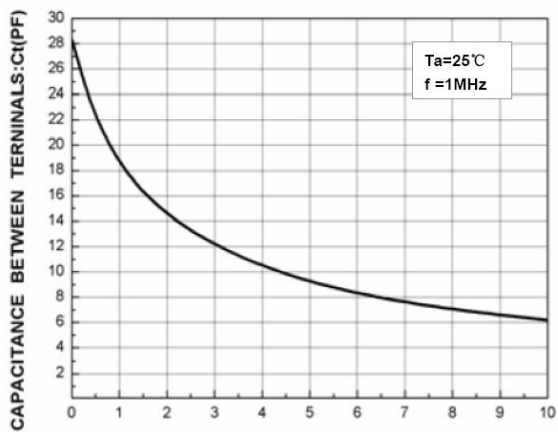
**Rating and Characteristic Curves**



**Figure 1. Forward Characteristics**



**Figure 2. Reverse Characteristics**



REVERSE VOLTAGE :  $V_R$ (V)

**Figure3.Total Capacitance**