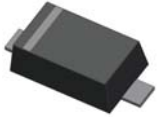


Small Signal Diode



Features

- ✧ Low power loss, high current capability
- ✧ Low V_F , low reverse current
- ✧ Ultra small SMD package
- ✧ Moisture sensitivity level 1
- ✧ 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 : Flat lead 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 : 1.50 mg(approach)
- ✧ Marking Code : J

Ordering Information

Part No.	Package	Packing	Marking
SD103AXG RK	SOD-523F	3K / 7" Reel	J
SD103AXG RKG	SOD-523F	3K / 7" Reel	J

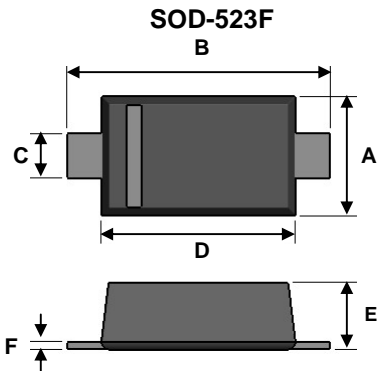
Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Maximum Ratings

Type Number	Symbol	Value	Units
Reverse Voltage	V_R	40	V
Average Forward Current	I_F	200	mA
Repetitive Peak Forward Current, $t_p \leq 1S$	I_{FRM}	300	mA
Non-Repetitive Peak Forward Surge Current, 8.3 ms Single Half Sine-wave.	I_{FSM}	1	A
Thermal Resistance (Junction to Ambient)	$R_{\theta JA}$	625	°C/W
Junction Temperature	T_J	150	°C
Storage Temperature Range	T_J, T_{STG}	-65 ~ 150	°C

Notes: The suggested land pattern dimensions have been provided for reference only, as actual pad layouts may vary depending on application.

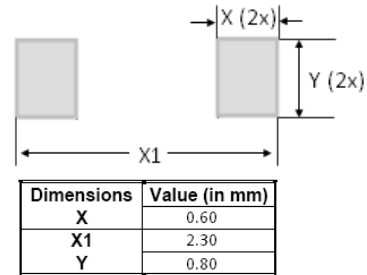


Dimensions	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	0.70	0.90	0.028	0.035
B	1.50	1.70	0.059	0.067
C	0.25	0.40	0.010	0.016
D	1.10	1.30	0.043	0.051
E	0.60	0.70	0.024	0.028
F	0.10	0.14	0.004	0.006

Pin Configuration



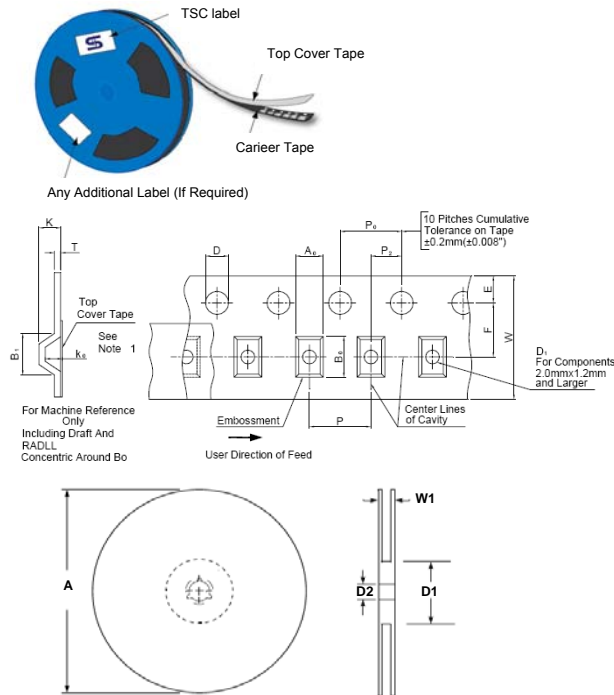
Suggested PAD Layout



Small Signal Diode
Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Type Number		Symbol	Min	Max	Units
Forward Voltage	$I_F = 0.1\text{mA}$	V_F	-	220.00	mV
	$I_F = 1\text{mA}$		-	290.00	mV
	$I_F = 10\text{mA}$		-	360.00	mV
	$I_F = 100\text{mA}$		-	500.00	mV
	$I_F = 200\text{mA}$		-	600.00	mV
Reverse Leakage Current	$V_R = 25\text{V}$	I_R	-	0.5	μA
Junction Capacitance	$V_R = 1\text{V}, f = 1.0\text{MHz}$	C_J	-	20	pF

Tape & Reel specification


Item	Symbol	Dimension(mm)
Carrier depth	K	2.40 Max.
Sprocket hole	D	1.50 ± 0.10
Reel outside diameter	A	178 ± 1
Reel inner diameter	D1	50 Min.
Feed hole width	D2	13.0 ± 0.5
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 ± 0.10
Overall tape thickness	T	0.6 Max.
Tape width	W	8.30 Max.
Reel width	W1	14.4 Max.

Note 1: A0, B0, and K0 are determined by component size. The clearance between the components and the cavity must be within 0.05 mm min. to 0.5 mm max. The component cannot rotate more than 10° within the determined cavity.

Note 2: If B1 exceeds 4.2 mm (0.165") for 8 mm embossed tape, the tape may not feed through all tape feeders.

Small Signal Diode

Rating and Characteristic Curves

FIG 1 Typical Forward Characteristics

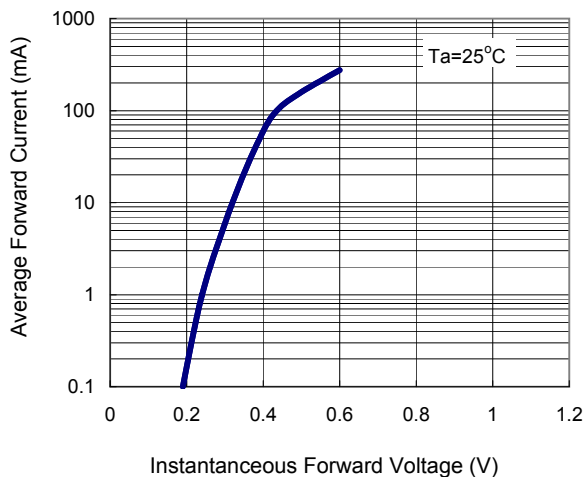


FIG 2 Typical Reverse Characteristics

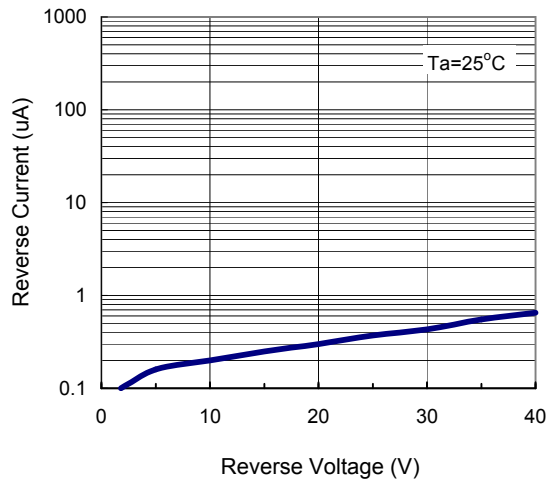


FIG 3 Typical Junction Capacitance

