

**SUPER FAST RECOVERY DIODES**

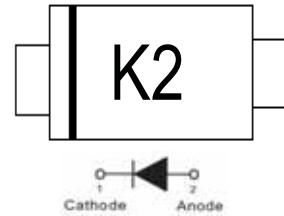
**Features**

- \* Low forward voltage drop
- \* Deal for automated placement
- \* Low power loss, high efficiency
- \* High surge current capability

**Mechanical Data**

- \* Case: SOD-323 Package
- \* Terminals: Solderable per MIL-STD-750, Method 2026
- \* Halogen-free
- \* Marking:K2

**SOD-323**



**Maximum Ratings and Thermal Characteristics** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	200	V
Maximum Rms Voltage	$V_{RMS}$	140	V
Maximum Dc Blocking Voltage	$V_{DC}$	200	V
Maximum Average Forward Current	$I_{F(AV)}$	0.5	A
Peak Forward Surge Current: 8.3 ms Single Half Sine-Wave Superimposed On Rated Load	$I_{FSM}$	10	A
Typical Current Squared Time	$I^2t$	0.415	$A^2s$
Typical Junction Capacitance Measured at 1 MHZ And Applied $V_R = 4\text{ V}$	$C_J$	21	pF
Typical Thermal Resistance	$R_{\theta JA}^{(1)}$	650	$^\circ\text{C/W}$
	$R_{\theta JC}^{(1)}$	230	
Maximum Reverse Recovery Time (Note 1)	$T_{rr}$	25	nS
Operating Junction Temperature Range	$T_J$	-55~150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55~150	$^\circ\text{C}$

NOTES :1.Test Conditions:  $I_F = 0.5\text{A}$ ,  $I_R = -1.0\text{A}$ ,  $I_{RR} = -0.25\text{A}$ .

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

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	$V_F$	$I_F = 0.1\text{ A}, T_J = 25^\circ\text{C}$	-	0.59	-	V
		$I_F = 0.25\text{ A}, T_J = 25^\circ\text{C}$	-	0.7	-	
		$I_F = 0.5\text{ A}, T_J = 25^\circ\text{C}$	-	-	0.85	
		$I_F = 0.1\text{ A}, T_J = 125^\circ\text{C}$	-	0.48	-	
		$I_F = 0.25\text{ A}, T_J = 125^\circ\text{C}$	-	0.57	-	
		$I_F = 0.5\text{ A}, T_J = 125^\circ\text{C}$	-	0.64	-	
Reverse Current	$I_R^{(3)}$	$V_R = 200\text{ V}, T_J = 25^\circ\text{C}$	-	1	2	uA
		$V_R = 200\text{ V}, T_J = 125^\circ\text{C}$	-	80	-	

NOTES:

1. Mounted on a FR4 PCB, single-sided copper, mini pad
2. Mounted on a FR4 PCB, single-sided copper, with  $100\text{ cm}^2$  copper pad area
3. Short duration pulse test used to minimize self-heating effect

## RATING AND CHARACTERISTICS CURVES (05S200WS)

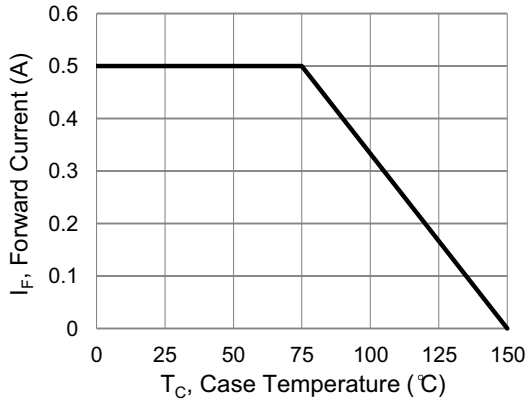


Fig.1 Forward Current Derating Curve

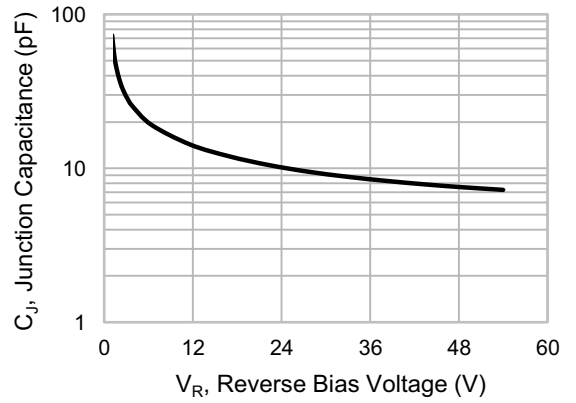


Fig.2 Typical Junction Capacitance

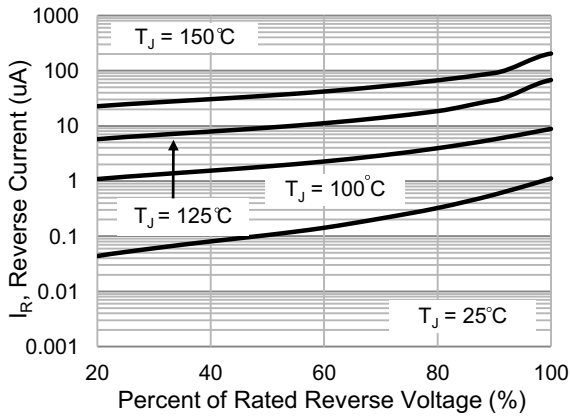


Fig.3 Typical Reverse Characteristics

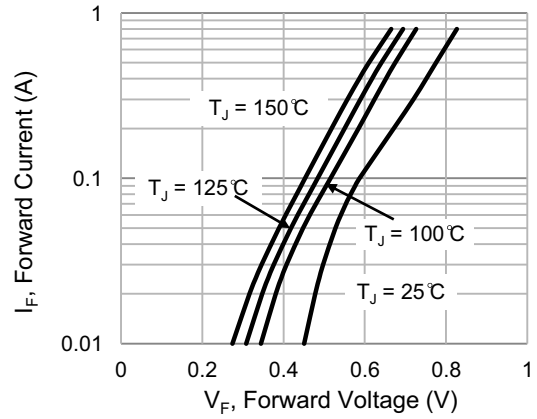


Fig.4 Typical Forward Characteristics

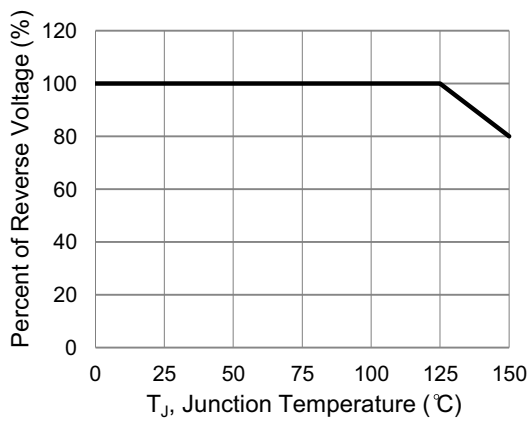
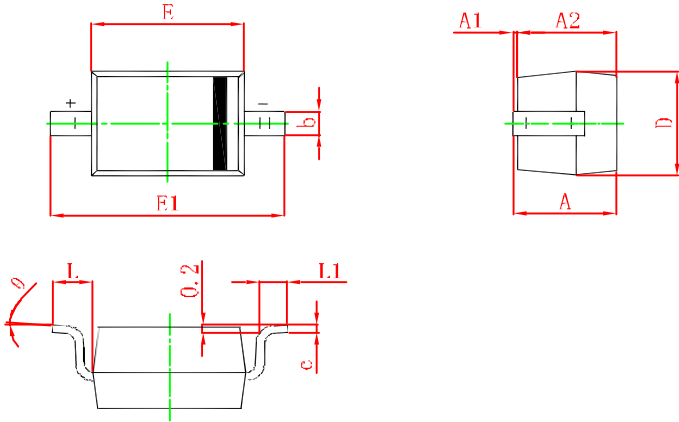


Fig.5 Operating Temperature Derating Curve

**SOD-323 PACKAGE OUTLINE**

Plastic surface mounted package

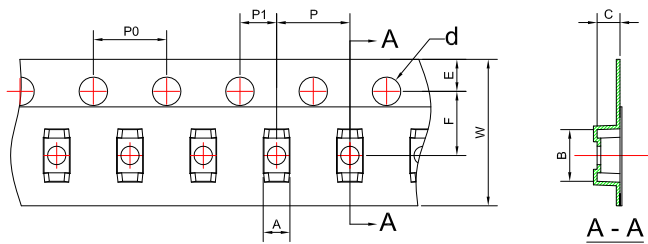
**SOD-323**



Symbol	Min.(mm)	Max.(mm)
A		1.000
A1	0.000	0.100
A2	0.800	0.900
b	0.250	0.350
c	0.080	0.150
D	1.200	1.400
E	1.600	1.800
E1	2.500	2.700
L	0.475REF	
L1	0.250	0.400
$\theta$	0°	8°

# SOD-323 Tape and Reel

## SOD-323 Embossed Carrier Tape

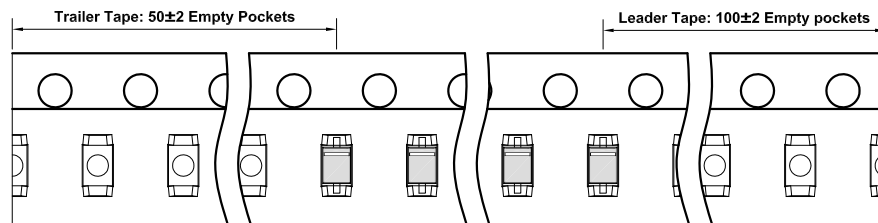


## Packaging Description:

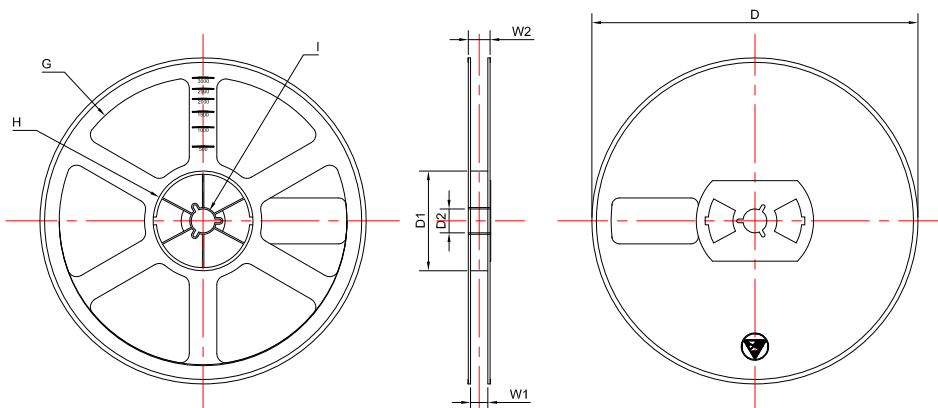
SOD-323 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. The reels are blue in color and made of recyclable plastic.

Dimensions are in millimeter										
Pkg Type	A	B	C	d	E	F	P0	P	P1	W
SOD-323	1.46	2.90	1.25	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00
(Tolerance)	±0.05	±0.05	±0.05	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	+0.3/-0.1

## SOD-323 Tape Leader and Trailer



## SOD-323 Reel



Unit: mm

Reel Option	D	D1	D2	G	H	I	W1	W2
7" Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30
Tolerance	±2	±1	±1	±1	±1	±1	±1	±1

## Packaging Quantity

Reel	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)
3,000	7 inch	45,000	210*208*203	180,000	440*440*230

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