

## SuperDiode – SOD-323 Fast Switching Diode


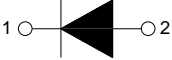
### 1. Features

- Fast switching device ( $T_{rr} < 4ns$ )
- Power dissipation of 200mW
- High stability and high reliability
- Low reverse leakage

### 2. Mechanical Data

- SOD-323 Small Outline Plastic Package
- Polarity: Color band denotes cathode end
- Mounting Position: Any

### 3. Marking and Circuit

Marking	Circuit
	

### 4. Specification

#### Absolute Maximum Rating & Thermal Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

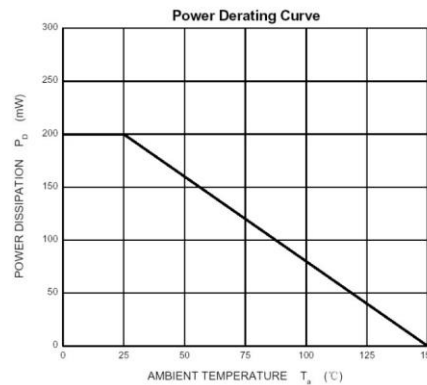
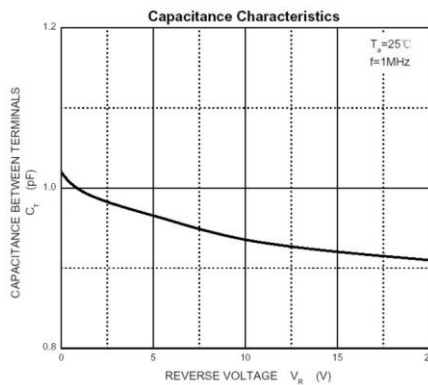
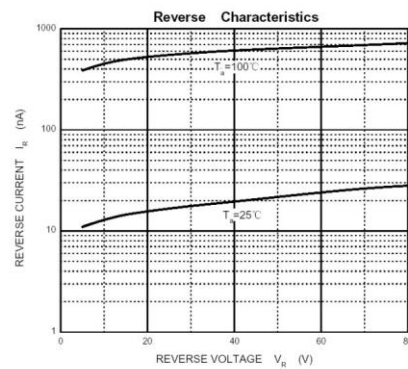
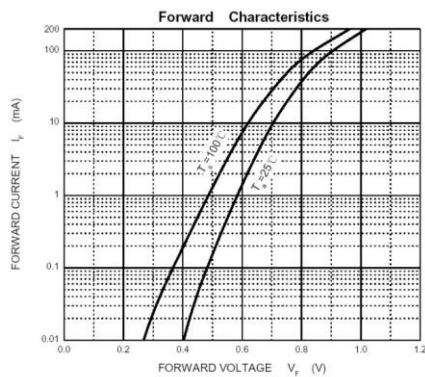
Parameters	Symbol	Value	Unit
Reverse Voltage	$V_R$	75	V
Peak Reverse Voltage	$V_{RM}$	100	V
Power Dissipation	$P_D$	200	mW
Operating junction temperature	$T_J$	125	°C
Storage temperature range	$T_S$	-55~150	°C
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	625	°C/W
Working Inverse Voltage	$W_{IV}$	75	V
Average Rectified Current	$I_o$	150	mA
Non-repetitive Peak Forward Current	$I_{FM}$	300	mA
Peak Forward Surge Current @ $t_p=1\mu s$	$I_{FSM}$	2.0	A

Valid provided that electrodes are kept at ambient temperature

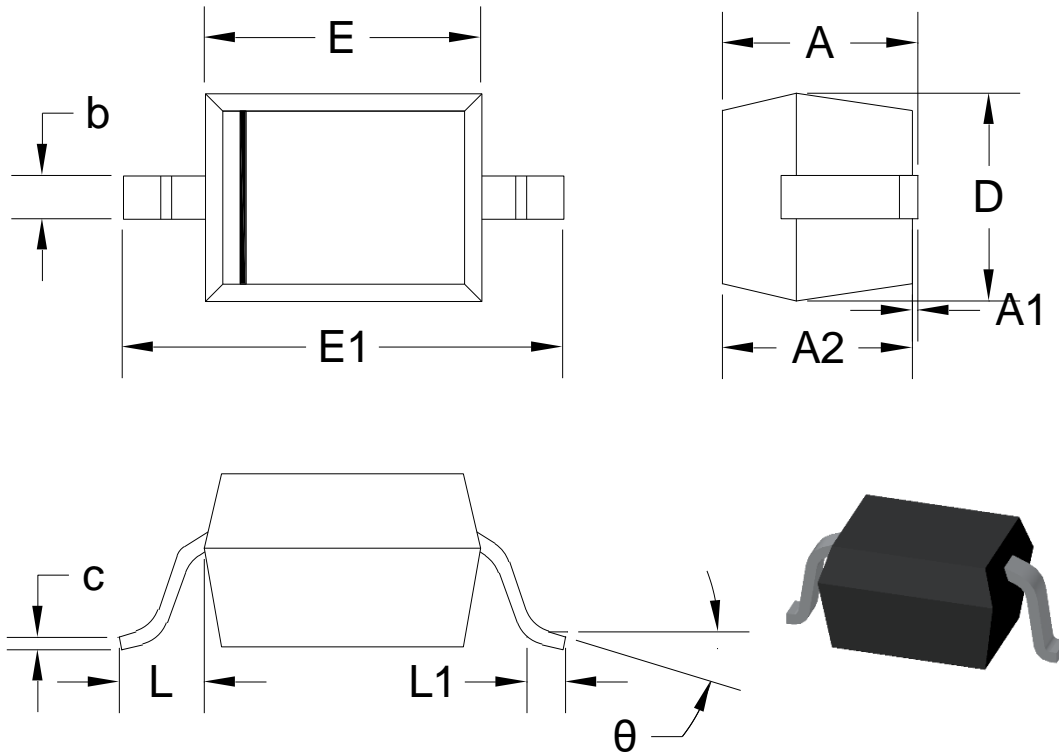
Electrical Characteristics (At TA = 25°C unless otherwise specified)

Symbols	Parameter	Test Condition	Limits		Unit
			Min	Max	
V <sub>RB</sub>	Reverse Breakdown Voltage	I <sub>R</sub> =100uA	100		V
		I <sub>R</sub> =5uA	75		
I <sub>R</sub>	Reverse Leakage Current	V <sub>R</sub> =20V		25	nA
		V <sub>R</sub> =75		1	uA
V <sub>F</sub>	Forward Voltage	I <sub>F</sub> =1.0mA		0.715	V
		I <sub>F</sub> =10mA		0.855	
		I <sub>F</sub> =50mA		1.00	
		I <sub>F</sub> =150mA		1.25	
T <sub>RR</sub>	Reverse Recovery Time	I <sub>F</sub> = I <sub>R</sub> =10mA		4	ns
		R <sub>L</sub> =100Ω			
		I <sub>RR</sub> =0.1 X I <sub>R</sub>			
C <sub>T</sub>	Junction Capacitance	V <sub>R</sub> =0V, f=1MHZ		2	pF

5. Typical Characteristic

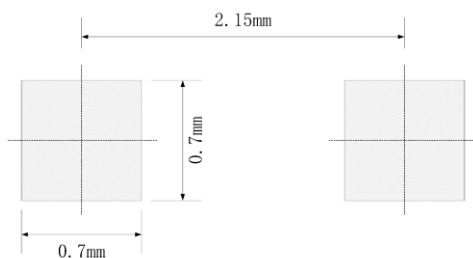


6. Dimension and Patterns (SOD-323)



Units: mm

Symbol	Min.	Max.	Symbol	Min.	Max.
A		1.000	E	1.600	1.800
A1	0.000	0.100	E1	2.550	2.750
A2	0.800	0.900	L	0.475REF	
b	0.250	0.350	L1	0.250	0.400
c	0.080	0.150	theta	0°	8°
D	1.200	1.400			



Note:

1. Controlling dimension: in millimeters
2. General tolerance:  $\pm 0.05\text{mm}$
3. The pad layout is for reference only
4. Unit: mm

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