

SuperDiode – SOD-323 Fast Switching Diode

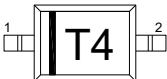

1. Features

- Fast switching device ($T_{rr} < 4\text{ns}$)
- 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.

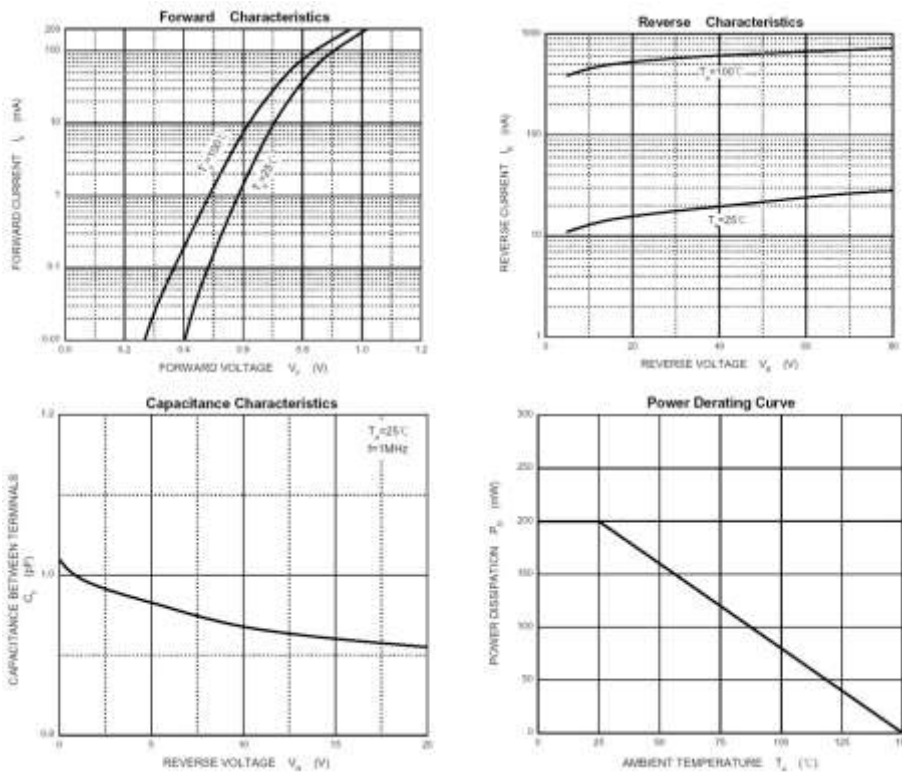
Parameters	Symbol	Value	Unit
Reverse Voltage	V_R	75	V
Peak Reverse Voltage	V_{RM}	100	V
Power Dissipation	P_D	200	mW
Operating junction temperature	T_J	125	°C
Storage temperature range	T_S	-55~150	°C
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	625	°C/W
Working Inverse Voltage	W_{IV}	75	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

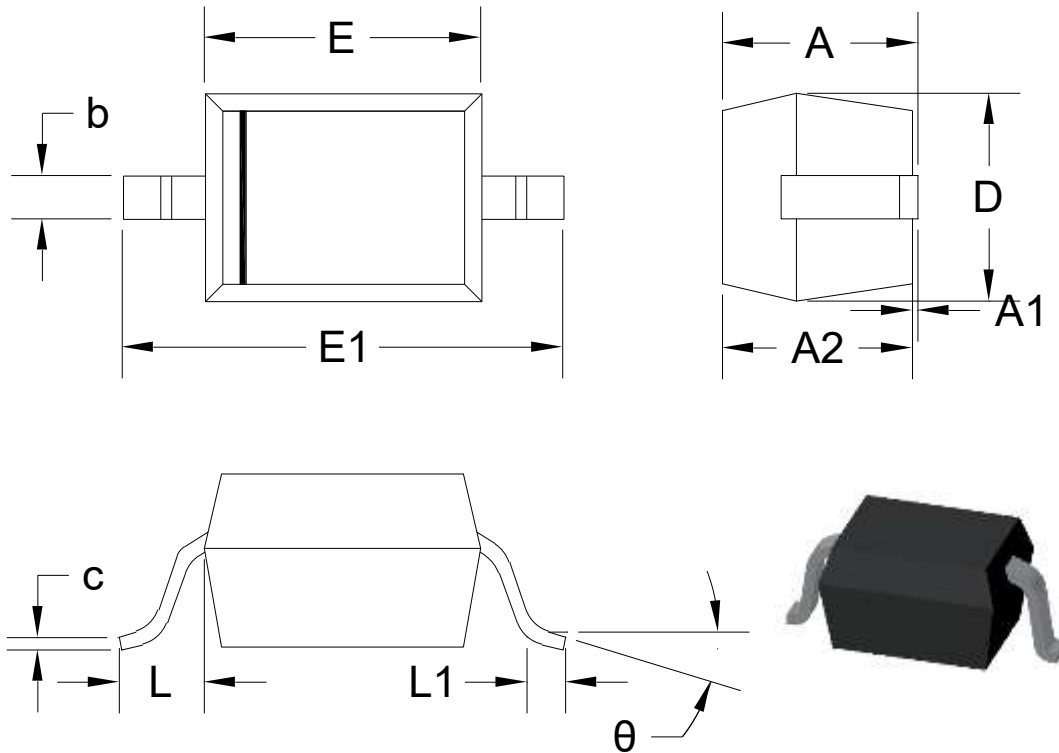
Electrical Characteristics (At TA = 25°C unless otherwise specified)

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

5. Typical Characteristic

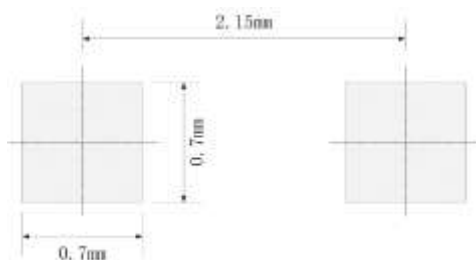


6. Dimension and Patterns (SOD-323)



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	θ	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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