

SuperDiode – Plastic-Encapsulate Schottky Barrier Diode

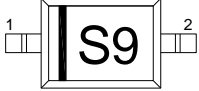

1. Features

- High current capability
- Low forward voltage drop
- Power dissipation of 200mW

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
Peak repetitive reverse voltage	V_{RRM}	100	V
Forward continuous current	I_F	150	mA
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	$R_{\theta JA}$	500	°C/W
Peak forward surge current @ $t_p=1\mu s$	I_{FSM}	750	mA
Maximum average forward rectified current	I_{FRM}	350	mA

Valid provided that electrodes are kept at ambient temperature

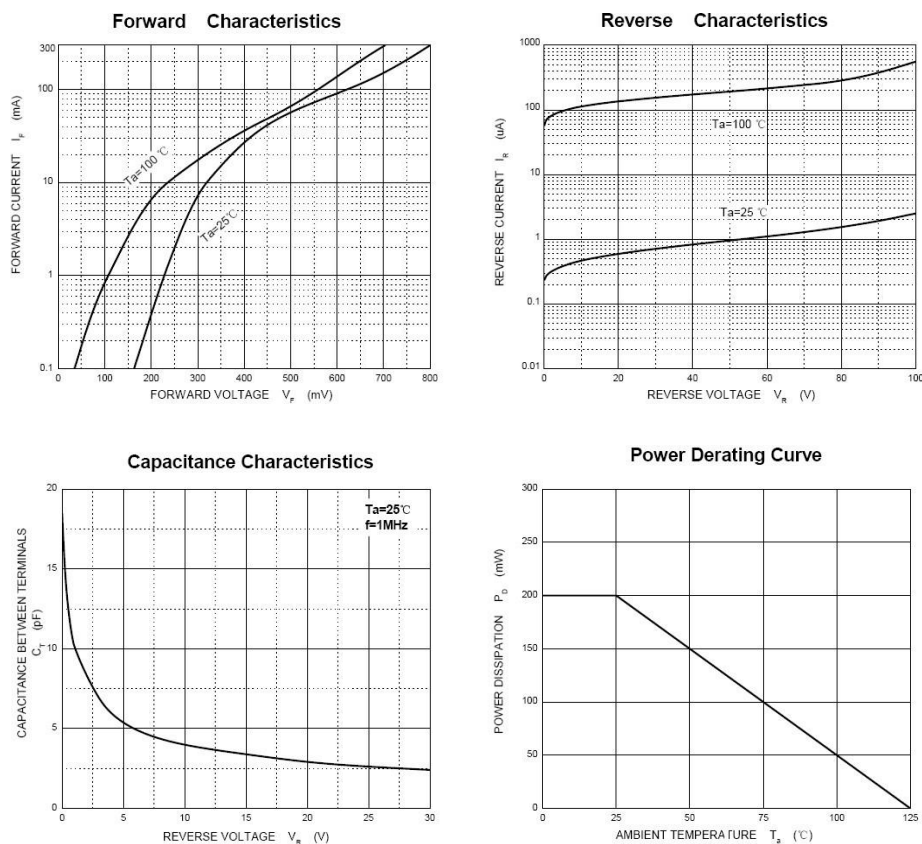
Electrical Characteristics (At TA = 25°C unless otherwise specified)

Symbols	Parameter	Test Condition	Limits		Unit
			Min	Max	
V_{RB}	Reverse Breakdown Voltage	$I_R=100\mu A$	100		V
I_R	Reverse Leakage Current	$V_R=1.5V$		0.3	uA
		$V_R=10V$		0.5	
		$V_R=50V$		1.0	
		$V_R=75V$		2.0	
V_F	Forward Voltage (Note2)	$I_F=0.1mA$		0.25	V
		$I_F=10mA$		0.45	
		$I_F=250mA$		1.00	
C_T	Junction Capacitance	$V_R=0V, f=1MHz$		20	pF
		$V_R=1.0V, f=1MHz$		12	

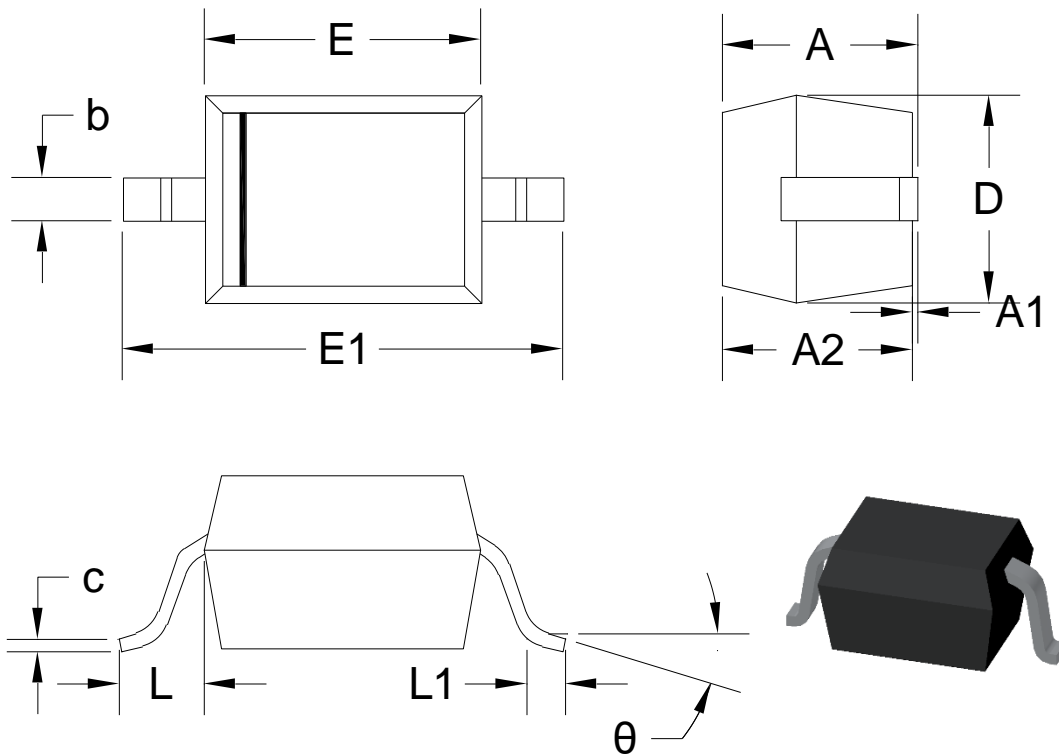
Note1: Part mounted on FR-4 board with recommended pad layout.

Note2: Short duration pulse test used to minimize self-heating effect.

5. Typical Characteristic

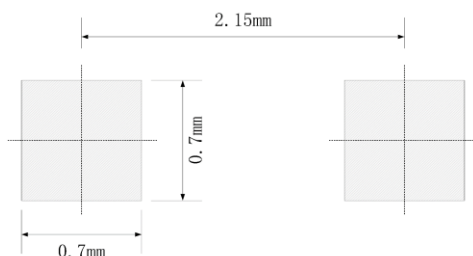


6. Dimension and Patterns (SOD-323)



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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