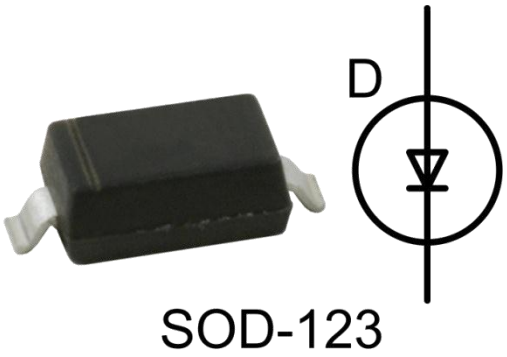
Spike Clamped Diode



General Features

- Silicon Epitaxial Planar Diode
- Highly Uniform V_{BR} (±7%) guaranteed by Specification
- Highly Uniform Current Distribution
- RoHS Compliant & Halogen Free

General Description

This novel diode, manufactured by ARK proprietary silicon process and structure, is featured with both highly uniform breakdown voltage (V_{BR}). It is suitable for the snubber circuit in various AC/DC power conversions system. The device can effectively relax the electrical stress on system and therefore improve reliability.

Applications

- Voltage Clamped circuit

Ordering Information

Part Number	Package	Marking
SCD120S	SOD-123	D12S

Absolute Maximum Ratings

T_A=25℃ unless otherwise specified

Symbol	Parameter	Value	Unit
P_{tot}	Power dissipation @ T_A=25℃	0.5	W
	Power dissipation @ T_L=85℃	2.0	W
P_{ZSM}	Non-repetitive peak pulse power dissipation	300	W

Thermal Characteristics

T_A=25℃ unless otherwise specified

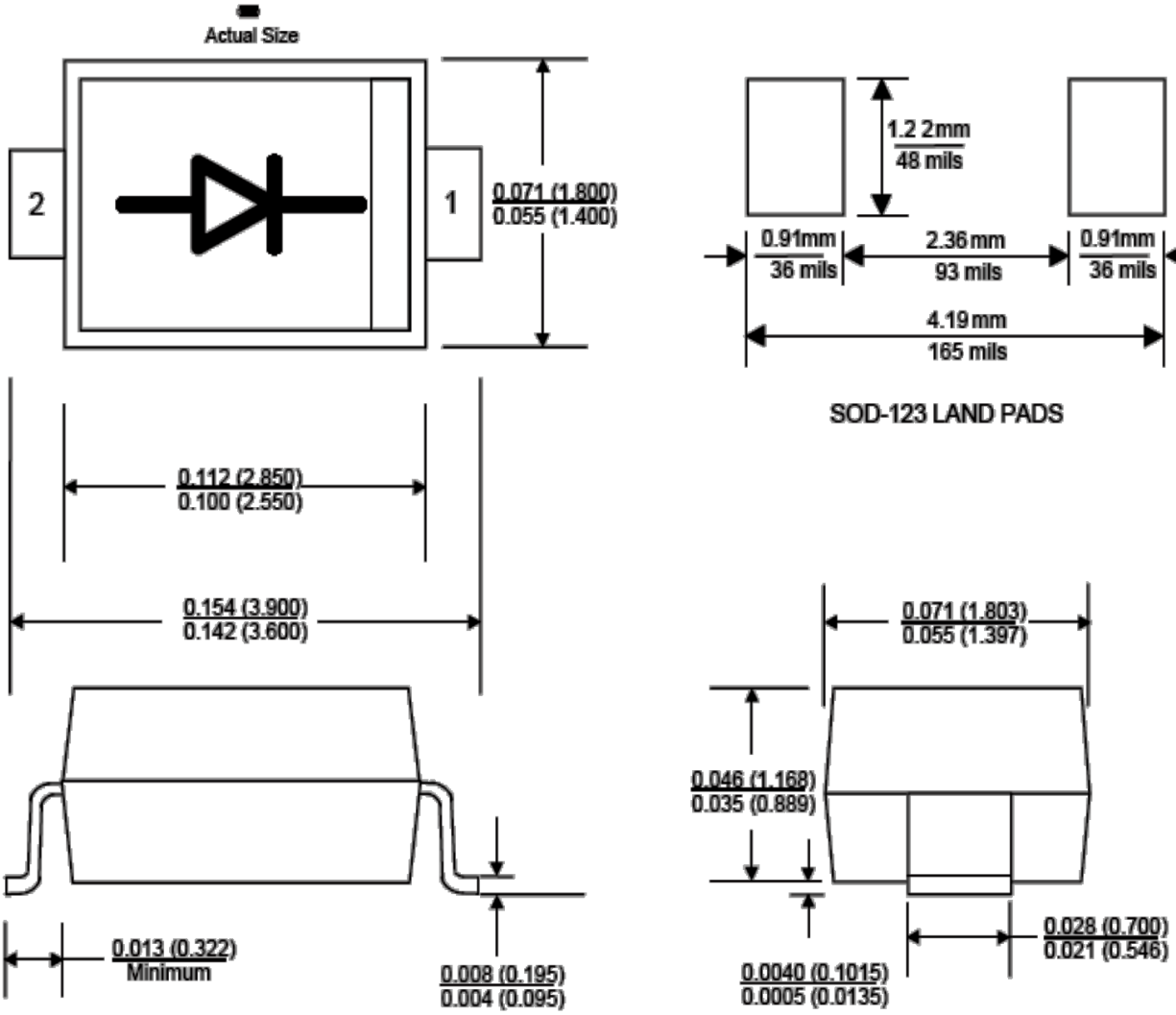
Symbol	Parameter	Value	Unit
R_{thJA}	Junction-to-Ambient thermal resistance	300	K/W
T_j	Junction temperature	175	℃
T_{stg}	Storage temperature range	-65 to +175	℃

Electrical Characteristics

T_A =25℃ unless otherwise specified

Symbol	Parameter	Min.	Typ.	Max.	Unit	Test Conditions
V_F	Forward Voltage	--	--	1.2	V	I_F=10mA
I_R	Reverse Current	--	--	25	nA	V_R=25V
		--	--	100	nA	V_R=96V
V_R	Reverse Breakdown Voltage	112	120	128	V	I_R = 2mA~5mA
$\triangle V_R/\triangle T_J$	Breakdown Voltage Temperature coefficient	--	1.2	--	V/℃	Reference to T_A=25℃
t_{rr}	Reverse recovery time	--	63	--	ns	I_F=100mA di/dt =10A/μs V_R=6V
Qrr	Reverse recovery charge	--	21	--	nC	
Irrm	Peak reverse recovery current	--	670	--	mA	

Package Dimensions



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