TAIWAN SEMICONDUCTOR

SD101AW - SD101CW

400mW Schottky Barrier Switching Diode

SOD-123

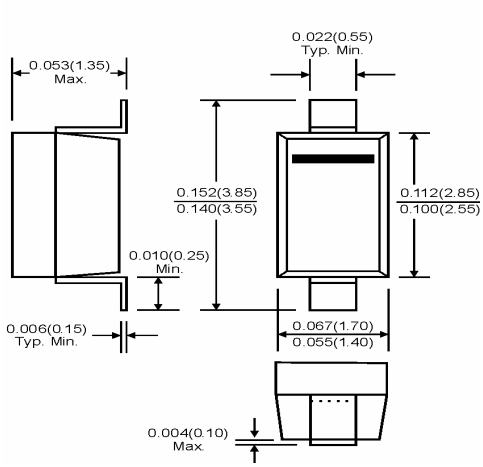
Pb RoHS COMPLIANCE

Features

- ✧ Low forward voltage drop
- ✧ Guard ring construction for transient protection
- ✧ Negligible reverse recovery time

Mechanical Data

- ✧ Case: SOD-123, plastic
- ✧ Polarity: Cathode band
- ✧ Terminals: Solderable per MIIL-STD-202, Method 208
- ✧ Marking: Date Code and Type Code or Date Code only
  Type Code: SD101AW S1
  SD101BW S2
  SD101CW S3
- ✧ Weight: 0.01 grams (approx.)



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Maximum Ratings

Type Number	Symbol	SD101AW	SD101BW	SD101CW	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	60	50	40	V
RMS Reverse Voltage	$V_{R(RMS)}$	42	35	28	V
Forward Continuous Current (Note 1)	I_{FM}	15			mA
Non-repetitive Peak Forward Surge Current @ t ≦ 1.0s @ t = 10uS	I_{FSM}	50 2.0			mA A
Power Dissipation (Note 1)	Pd	400			mW
Thermal Resistance Junction to Ambient Air (Note 1)	$R_{\theta JA}$	300			°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to + 125			°C

Electrical Characteristics

Type Number	Symbol	Min	Max	Units
Reverse Breakdown Voltage (Note 2) SD101AW IR=10uA SD101BW IR=10uA SD101CW IR=10uA	$V_{(BR)}$	60 50 40	-	V
Peak Reverse Current SD101AW VR=50V SD101BW VR=40V SD101CW VR=30V	I_R		200	nA
Forward Voltage Drop SD101AW IF=1.0mA (Note 2) SD101BW IF=1.0mA SD101CW IF=1.0mA SD101AW IF=15mA SD101BW IF=15mA SD101CW IF=15mA	V_F	-	0.41 0.40 0.39 1.00 0.95 090	V
Junction Capacitance VR=0, f=1.0MHz SD101AW SD101BW SD101CW	Cj	-	2.0 2.1 2.2	pF
Reverse Recovery Time IF=IR=5.0Ma Irr=0.1 x IR, RL=100Ω	trr	-	1.0	nS

Notes: 1. Valid Provided that Terminals are Kept at Ambient Temperature.
2. Pulse Test: Pulse width = 300uS, Duty cycle ≦2%..

Version: A07

RATINGS AND CHARACTERISTIC CURVES (SD101AW - SD101CW)

FIG.1- TYPICAL FORWARD CHARACTERISTIC VARATIONS FOR PRIMARY CONDUCTION

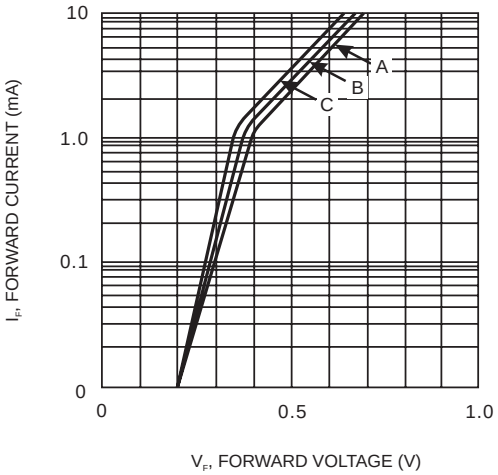


FIG.2- TYP. JUNCTION CAPACITANCE VS REVERSE VOLTAGE