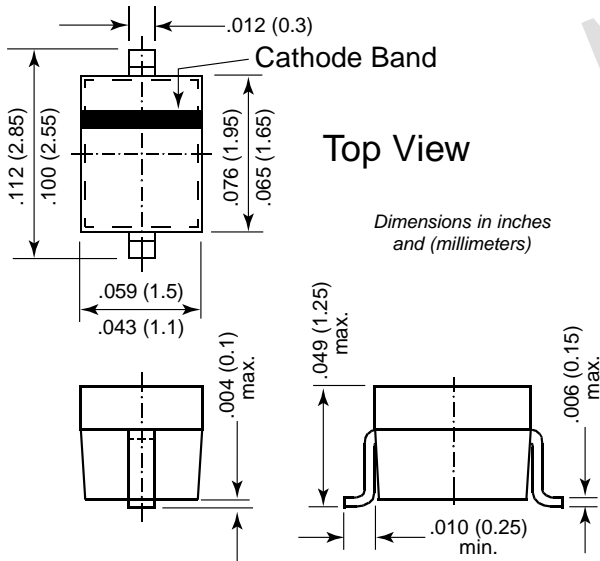


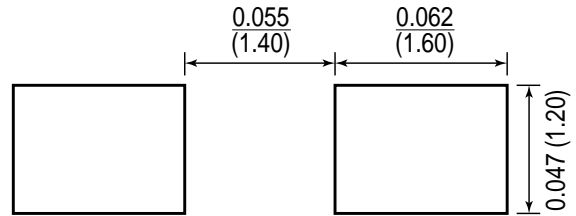


SOD-323

New Product



Mounting Pad Layout



Features

- For general purpose applications.
- The SD101 series is a metal-on-silicon Schottky barrier device which is protected by a PN junction guard ring.
- The low forward voltage drop and fast switching make it ideal for protection of MOS devices, steering, biasing, and coupling diodes for fast switching and low logic level applications.
- This diode is also available in the MiniMELF case with the type designations LL101A to LL101C, the DO-35 case with the type designations SD101A to SD101C and the SOD-123 case with type designations SD101AW to SD101CW.

Mechanical Data

Case: SOD-323 plastic case

Weight: approximately 0.004g

Marking SD101AWS = SA

Code: SD101BWS = SB

SD101CWS = SC

Packaging codes/options:

D5/10K per 13" reel (8mm tape), 30K/box

D6/3K per 7" reel (8mm tape), 30K/box

Maximum Ratings and Thermal Characteristics (T_c = 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Inverse Voltage	SD101AWS SD101BWS SD101CWS	60 50 40	V
Power Dissipation (Infinite Heat Sink)	P _{tot}	150 ⁽¹⁾	mW
Maximum Single Cycle Surge 10μs Square Wave	I _{FSM}	2	A
Thermal Resistance Junction to Ambient Air	R _{θJA}	650 ⁽¹⁾	°C/W
Junction Temperature	T _j	125 ⁽¹⁾	°C
Storage Temperature Range	T _s	-65 to +150	°C

Note:

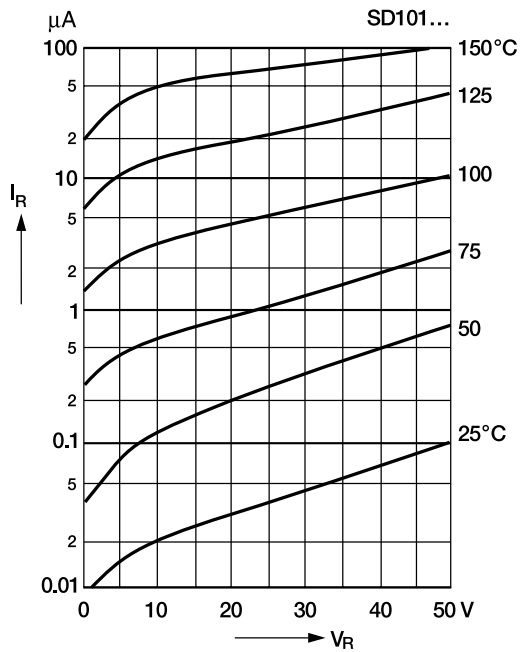
(1) Valid provided that electrodes are kept at ambient temperature

Electrical Characteristics (T_J = 25°C unless otherwise noted)

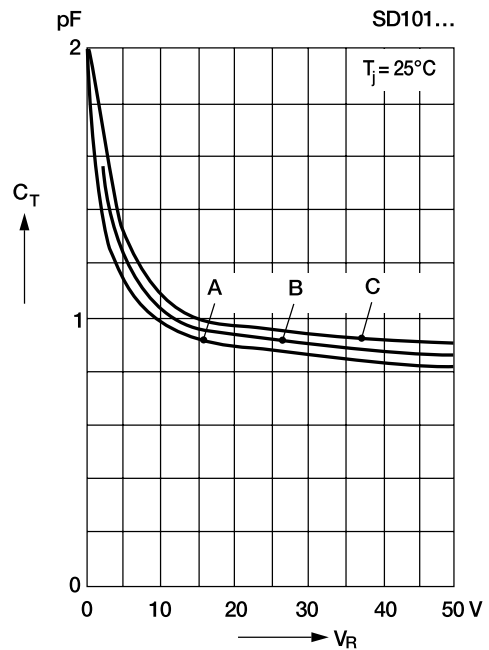
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit	
Reverse Breakdown Voltage	SD101AWS	$I_R = 10\mu A$	60	—	—	V	
	SD101BWS		50	—	—		
	SD101CWS		40	—	—		
Leakage Current	SD101AWS	$V_R = 50V$	—	—	200	nA	
	SD101BWS	$V_R = 40V$	—	—	200		
	SD101CWS	$V_R = 30V$	—	—	200		
Forward Voltage Drop	SD101AWS	$I_F = 1mA$	—	—	0.41	V	
	SD101BWS		—	—	0.40		
	SD101CWS		—	—	0.39		
	SD101AWS	$I_F = 15mA$	—	—	1.0		
	SD101BWS		—	—	0.95		
	SD101CWS		—	—	0.90		
Junction Capacitance	SD101AWS	C_{tot}	$V_R = 0V$ $f = 1MHz$	—	—	2.0	pF
	SD101BWS			—	—	2.1	
	SD101CWS			—	—	2.2	
Reverse Recovery Time	t_{rr}	$I_F = I_R = 5mA$, recover to $0.1I_R$	—	—	1	ns	

Ratings and Characteristic Curves (T_A = 25°C unless otherwise noted)

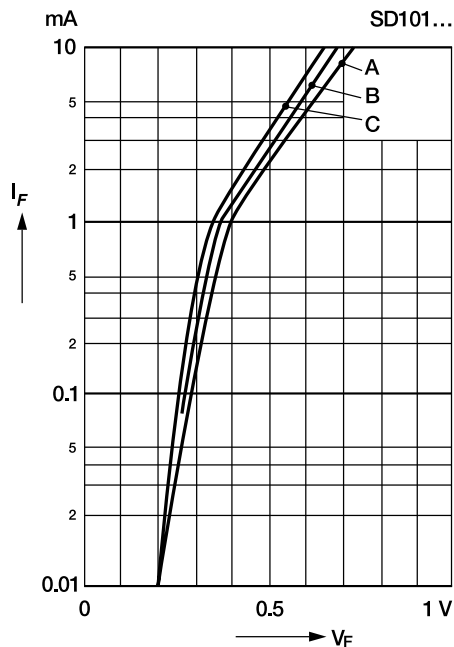
Typical variation of reverse current at various temperatures



Typical capacitance curve as a function of reverse voltage



Typical variation of fwd. current vs. fwd. voltage for primary conduction through the Schottky barrier



Typical forward conduction curve of combination Schottky barrier and PN junction guard ring

