

SD101AWS - SD101CWS

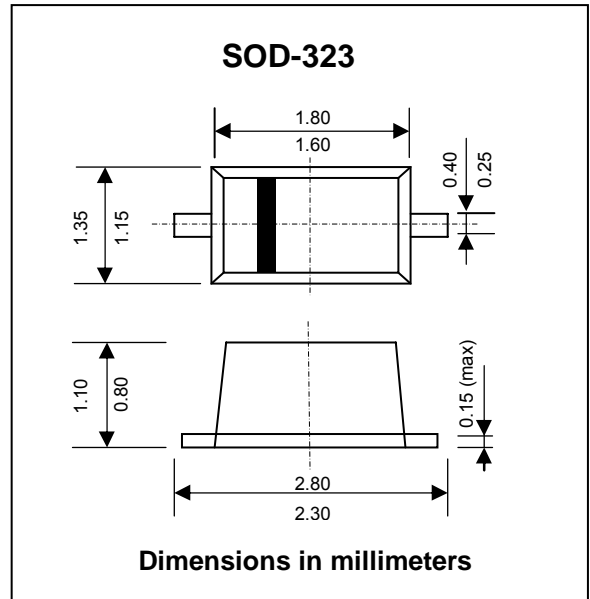
SCHOTTKY BARRIER DIODES

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.
- * These diodes are also available in the MiniMELF case with type designations LL101A thru LL101C.
- * **Pb / RoHS Free**

MECHANICAL DATA :

- * Case : SOD-323 plastic Case
- * Weight : approx. 0.004 g
- * SD101AWS Marking Code : SJ
- * SD101BWS Marking Code : SK
- * SD101CWS Marking Code : SL



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

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	SD101AWS	60	V
	SD101BWS	50	
	SD101CWS	40	
Maximum Single Cycle Surge 10 μs Square Wave	I _{FSM}	2	A
Power Dissipation (Infinite Heat Sink)	P _{tot}	150 ⁽¹⁾	mW
Thermal Resistance Junction to Ambient Air	R _{θJA}	650 ⁽¹⁾	°C/W
Junction Temperature	T _J	125 ⁽¹⁾	°C
Storage temperature range	T _{STG}	-55 to + 150	°C

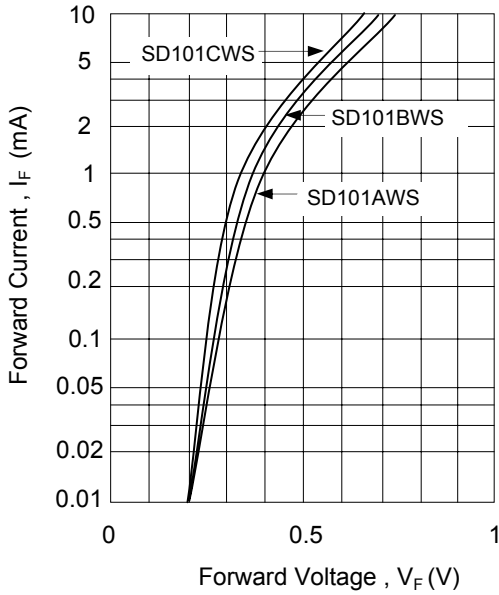
Electrical Characteristics (T_J = 25 °C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit	
Reverse Breakdown Voltage	SD101AWS	I _R = 10 μA	60	-	-	V	
	SD101BWS		50	-	-		
	SD101CWS		40	-	-		
Reverse Current	SD101AWS	V _R = 50 V	-	-	200	nA	
	SD101BWS	V _R = 40 V	-	-	200		
	SD101CWS	V _R = 30 V	-	-	200		
Forward Voltage Drop	SD101AWS	I _F = 1mA	-	-	0.41	V	
	SD101BWS		-	-	0.40		
	SD101CWS		-	-	0.39		
	SD101AWS		I _F = 15mA	-	-		1.00
	SD101BWS			-	-		0.95
	SD101CWS			-	-		0.90
Junction Capacitance	SD101AWS	V _R = 0 V, f = 1 MHz	-	-	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	

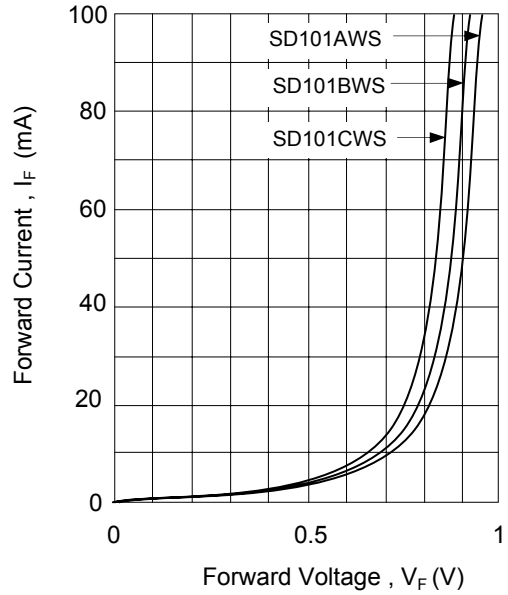
Note: (1) Valid provided that electrodes are kept at ambient temperature.

RATING AND CHARACTERISTIC CURVES (SD101AWS - SD101CWS)

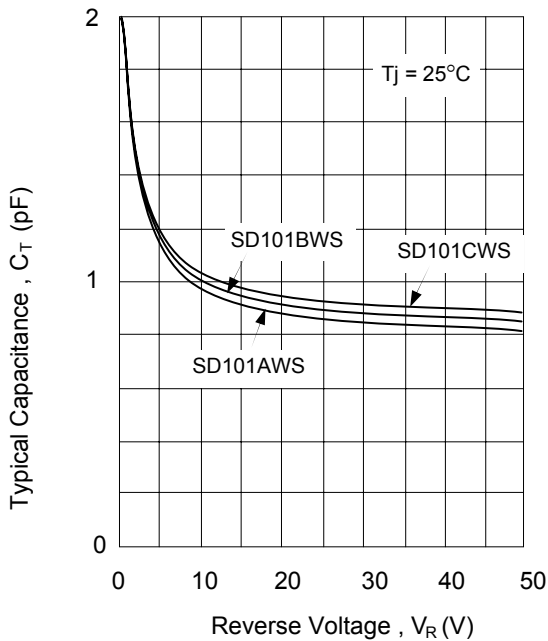
Typical variation of forward current vs. forward voltage for primary conduction through the schottky barrier



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



Typical capacitance curve as a function of reverse Voltage



Typical variation of reverse current at various temperatures

