

SD103AWS - SD103CWS

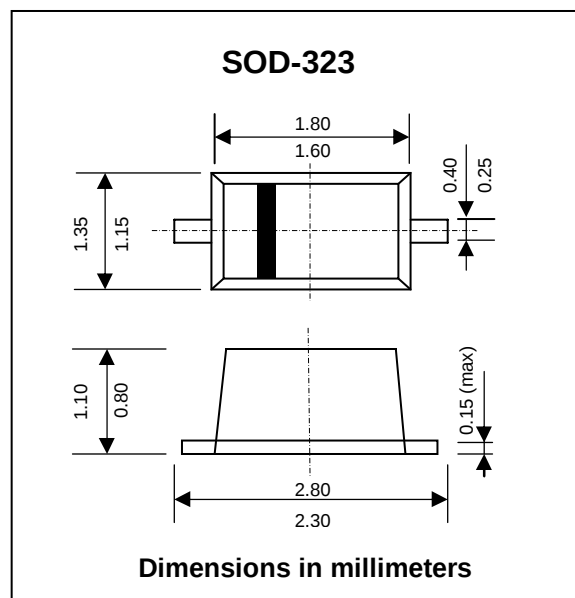
SCHOTTKY BARRIER DIODES

FEATURES :

- * For general purpose applications
- * The SD103 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 LL103A thru LL103C.
- * **Pb / RoHS Free**

MECHANICAL DATA :

- * Case : SOD-323 plastic Case
- * Weight : approx. 0.004 g
- * SD103AWS Marking Code : S4
- * SD103BWS Marking Code : S5
- * SD103CWS Marking Code : S6



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

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	SD103AWS SD103BWS SD103CWS	40 30 20	V
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)

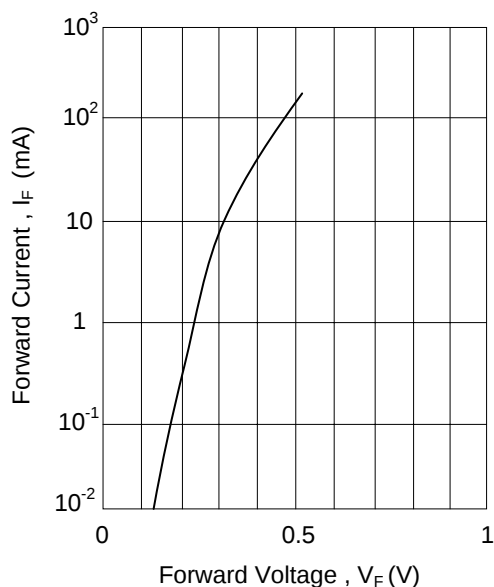
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Current	SD103AWS SD103BWS SD103CWS	I _R	V _R = 30 V V _R = 20 V V _R = 10 V	- - -	5 5 5	μA
Forward Voltage Drop	V _F	I _F = 20mA I _F = 200mA	- -	- -	0.37 0.60	V
Junction Capacitance	C _{tot}	V _R = 0 V, f = 1MHz	-	50	-	pF
Reverse Recovery Time	T _{rr}	I _F = I _R = 50mA to 200mA recover to 0.1I _R	-	10	-	ns

Note:

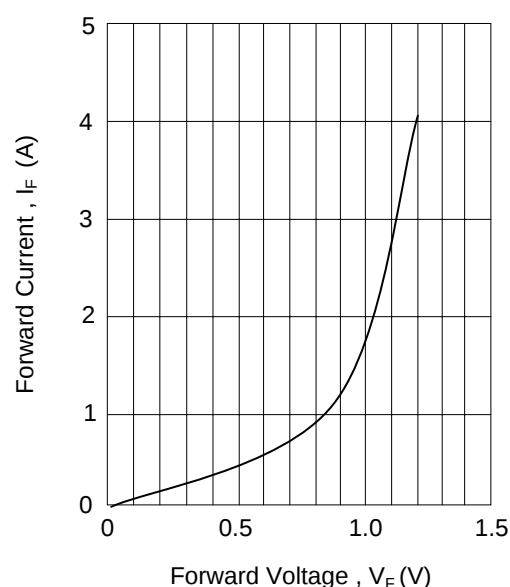
(1) Valid provided that electrodes are kept at ambient temperature.

RATING AND CHARACTERISTIC CURVES (SD103AWS - SD103CWS)

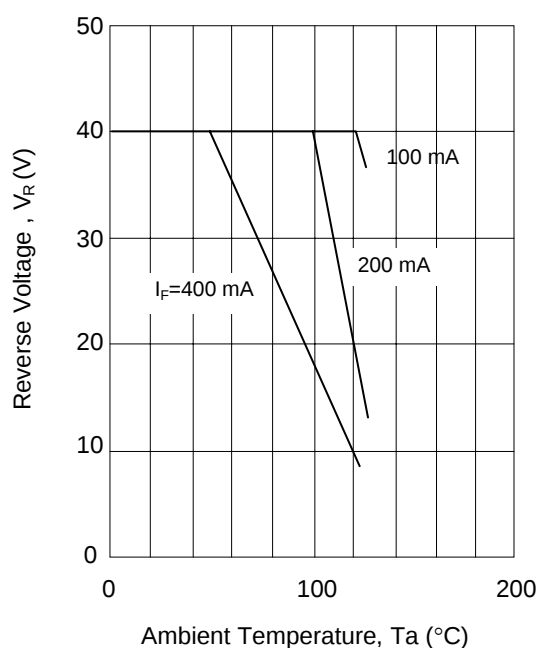
Typical variation of forward current vs. forward voltage for primary conduction through the schottky barrier



Typical high current forward conduction curve
 $t_p = 300ms$, duty cycle = 2%



Blocking voltage deration versus temperature at various average forward currents



Typical variation of reverse current at various temperatures

