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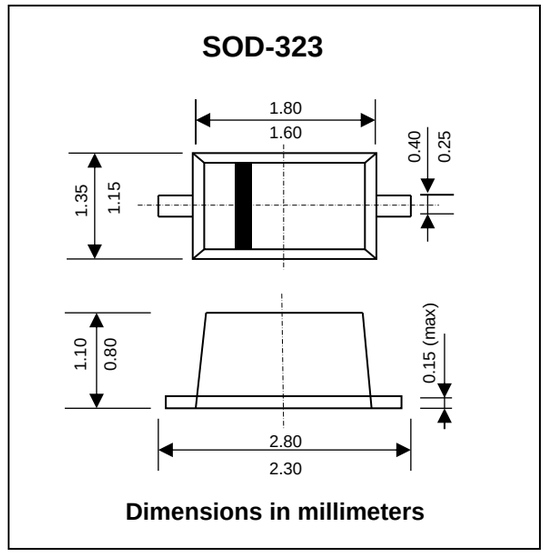
SD103AWS - SD103CWS

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 : S4
* SD103CWS Marking Code : S4

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

Parameter		Symbol	Value	Unit
Repetitive Peak Reverse Voltage	SD103AWS	V_{RRM}	40	V
	SD103BWS		30	
	SD103CWS		20	
Average Forward Rectified Current		$I_{F(AV)}$	350	mA
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		$R_{\theta JA}$	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)

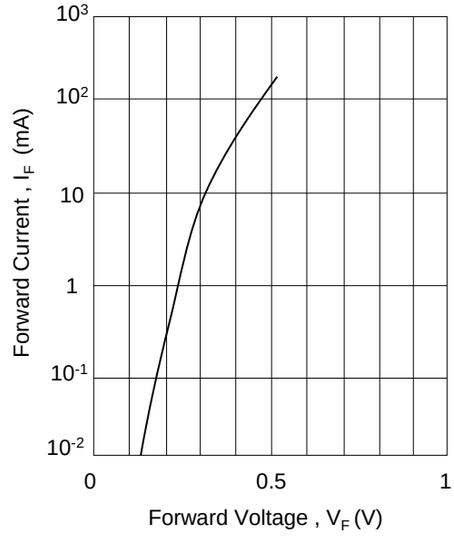
Parameter		Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Current	SD103AWS	I_R	V_R = 30 V	-	-	5	µA
	SD103BWS		V_R = 20 V	-	-	5	
	SD103CWS		V_R = 10 V	-	-	5	
Forward Voltage Drop		V_F	I_F = 20mA	-	-	0.37	V
			I_F = 200mA	-	-	0.60	
Junction Capacitance		Ctot	V_R = 0 V, f = 1MHz	-	50	-	pF
Reverse Recovery Time		Trr	$I_F = I_R$ = 50mA to 200mA recover to 0.1I_R	-	10	-	ns

Note:

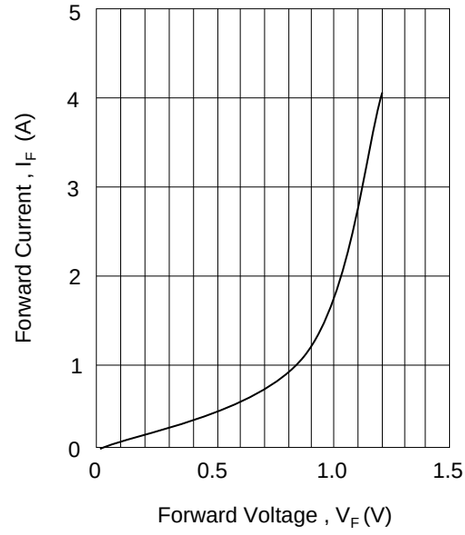
(1) Valid provided that electrodes are kept at ambient temperature.

RATING AND CHARACTERISTIC CURVES (SD103AWS - SD103CWS)

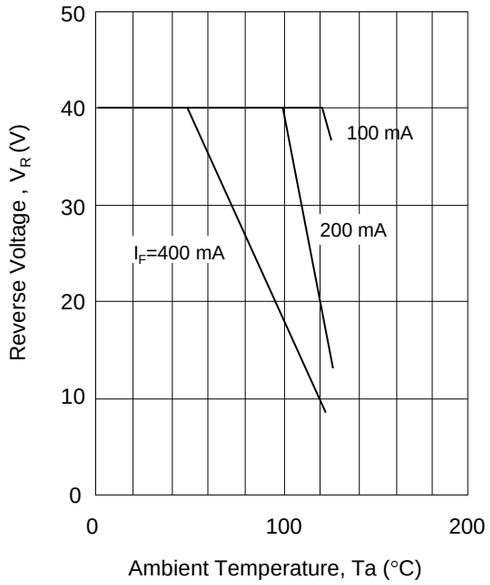
Typical variation of forward current vs. forward voltage for primary conduction through the schottky barrier



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



Blocking voltage deration versus temperature at various average forward currents



Typical variation of reverse current at various temperatures