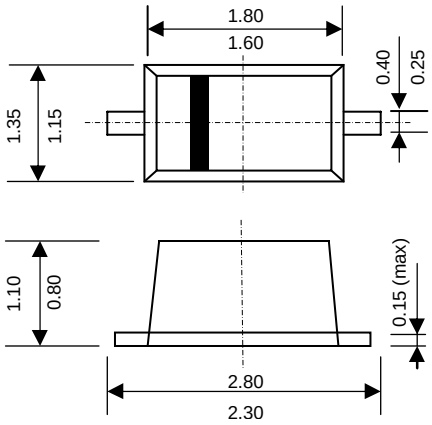
SD103AWS-SD103CWS

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.

SOD-323



Dimensions in millimeters

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
Repetitive Peak Reverse Voltage SD103BWS		30	
Repetitive Peak Reverse Voltage SD103CWS		20	
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)

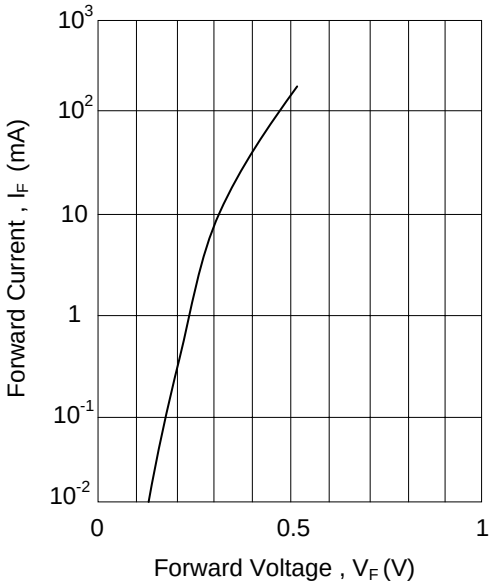
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Current SD103AWS	I_R	V_R = 30 V	-	-	5	μA
Reverse Current SD103BWS		V_R = 20 V	-	-	5	
Reverse Current SD103CWS		V_R = 10 V	-	-	5	
Forward Voltage Drop	V_F	I_F = 20mA	-	-	0.37	V
		I_F = 200mA	-	-	0.60	
Junction Capacitance	Ctot	V_R = 0 V, f = 1MHz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

Note:

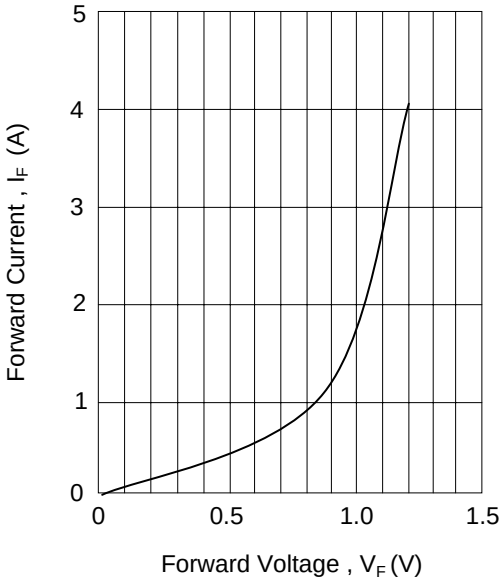
(1) Valid provided that electrodes are kept at ambient temperature.

RATING AND CHARACTERISTIC CURVES (SD103AWS - SD103CWS)

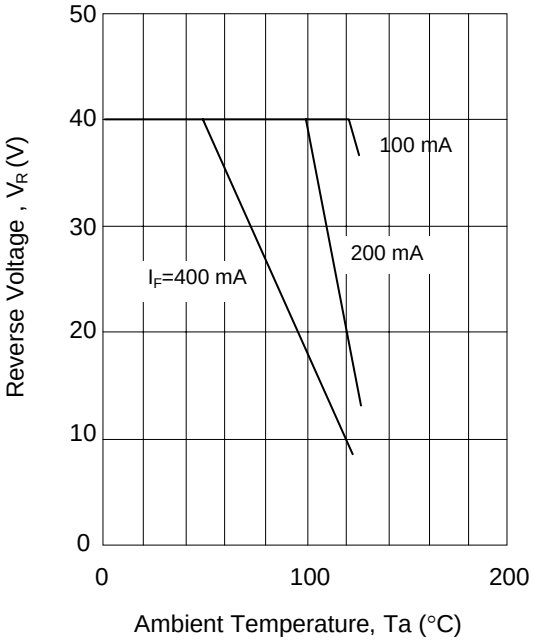
Typical variation of forward current vs. forward voltage for primary conduction through the schottky barrier



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