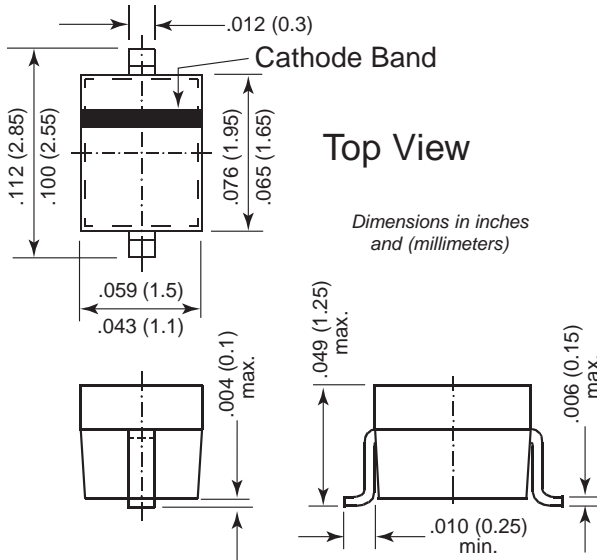




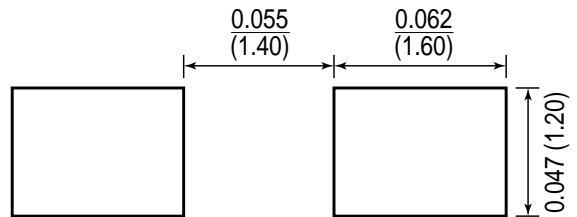
Schottky Diodes



SOD-323



Mounting Pad Layout



Features

- Low turn-on voltage
- Low capacitance
- Ultrafast switching
- Microminiature plastic package
- Single, double, and ring balanced mixer in narrow-band receivers up to 1 GHz.
- Detectors and fast switching up to 1 GHz
- Phase detectors
- Suitable for radios, TV, CTV, and hyper band tuners

Mechanical Data

Case: SOD-323 plastic case

Weight: approximately 0.004g

Marking SD104AWS = S3

Code: SD104BWS = S4

SD104CWS = S5

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	
Continuous Reverse Voltage	SD104AWS SD104BWS SD104CWS	VR	20 15 10	V
Forward Current	I _F	30	mA	
Power Dissipation T _C = 25°C	P _{tot}	150 ⁽¹⁾	mW	
Thermal Resistance Junction to Ambient Air	R _{θJA}	650 ⁽¹⁾	°C/W	
Junction Temperature	T _J	125	°C	
Storage Temperature Range	T _S	-55 to +150	°C	

Note:

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

SD104AWS thru SD104CWS

Vishay Semiconductors
formerly General Semiconductor

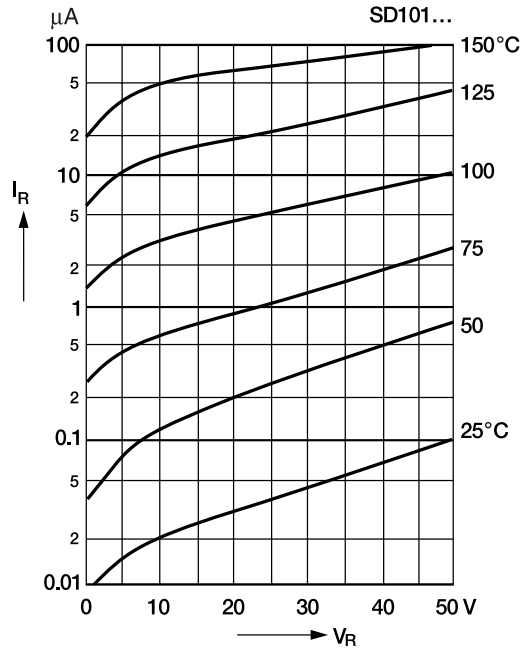


Electrical Characteristics (T_J = 25°C unless otherwise noted)

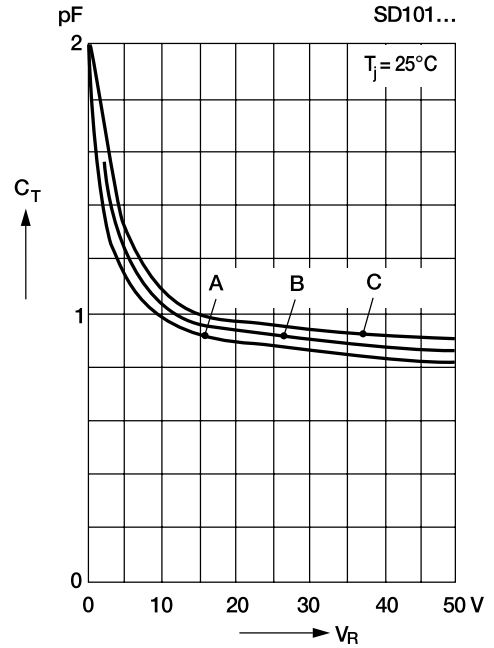
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Breakdown Voltage	SD104AWS	I _R = 10μA	20	—	—	V
	SD104BWS		15	—	—	
	SD104CWS		10	—	—	
Leakage Current	SD104AWS	V _R = 15V	—	—	500	nA
	SD104BWS	V _R = 10V	—	—	500	
	SD104CWS	V _R = 5V	—	—	500	
Forward Voltage Drop	SD104AWS	I _F = 0.1mA	—	—	350	mV
	SD104BWS		—	—	325	
	SD104CWS		—	—	310	
	SD104AWS	I _F = 1.0mA	—	—	450	
	SD104BWS		—	—	425	
	SD104CWS		—	—	400	
SD104AWS	I _F = 10mA	—	—	600		
SD104BWS		—	—	580		
SD104CWS		—	—	565		
Diodes Capacitance	SD104AWS	V _R = 0V f = 1MHz	—	—	0.8	pF
	SD104BWS		—	—	0.9	
	SD104CWS		—	—	1.0	

Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

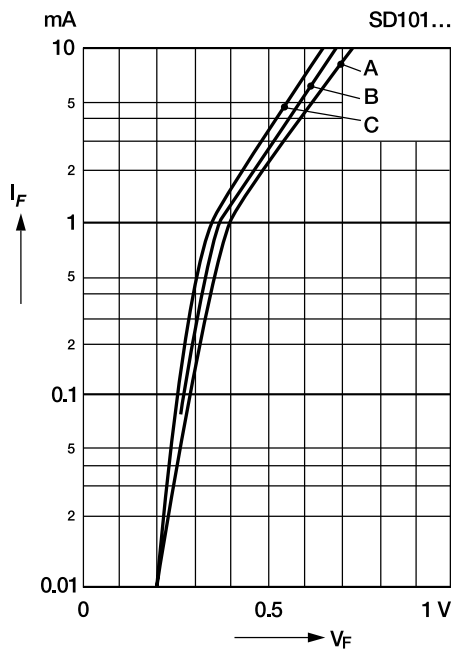
Typical variation of reverse current at various temperatures



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

