

Schottky Barrier Diodes

SemiGen's Silicon Schottky Diodes are designed for applications through 40Ghz. The special process technology utilizes various metal schemes to provide excellent performance of Low, Medium, and High Barrier applications. The end result is a low resistance diode with tightly controlled capacitance which allows for optimum performance. Low conversation loss and superior TSS make these diodes ideal for detector / mixer applications with frequency ranges from S band to Ka band as well as modulators, lower power limiters and high speed switches.

Features:

- Multi-junction Chips
- Low 1/F Noise
- Small Junction Capacitance

Applications:

For use in mixers, detectors, doublers, and modulators.

Packages:

Chip, Glass, Ceramic, Beam Lead



Low Barrier Schottky Diodes					
Breakdown Voltage @ 10 μ A MIN (V)	Forward Voltage @ 1 mA MAX (V)	Junction Capacitance @ 0 Vdc 1 Mhz TYP (V)	Series Resistance @ 5 mM TYP (Ohms)	Tangential Signal Sensitivity TYP (dB)	Part Number
3.0	0.250	0.14	20.0	-55	SLB100
3.0	0.280	0.20	20.0	-52	SLB101
3.0	0.300	0.12	20.0	-50	SLB102
3.0	0.320	0.14	20.0	-48	SLB103
3.0	0.250	0.15	20.0	-55	SLB104
3.0	0.280	0.15	20.0	-52	SLB105
3.0	0.300	0.12	20.0	-50	SLB106
3.0	0.320	0.14	20.0	-48	SLB107
3.0	0.250	0.14	20.0	-55	SLB108
3.0	0.280	0.15	20.0	-52	SLB109
3.0	0.300	0.14	20.0	-50	SLB110
3.0	0.320	0.25	20.0	-48	SLB111
4.0	0.250	0.20	20.0	-55	SLB112
4.0	0.280	0.15	20.0	-52	SLB113
4.0	0.300	0.12	20.0	-50	SLB114
4.0	0.320	0.15	0.35	-48	SLB115

Medium Barrier Schottky Diodes					
Breakdown Voltage @ 10 μ A MIN (V)	Forward Voltage @ 1 mA MAX (V)	Junction Capacitance @ 0 Vdc 1 Mhz TYP (V)	Series Resistance @ 5 mA TYP (Ohms)	Tangential Signal Sensitivity TYP (dB)	Part Number
3.0	0.400	0.14	20.0	-52	SMB200
3.0	0.400	0.20	20.0	-50	SMB201
3.0	0.400	0.12	20.0	-48	SMB202
3.0	0.400	0.14	20.0	-45	SMB203
4.0	0.425	0.15	20.0	-52	SMB204
4.0	0.425	0.15	20.0	-50	SMB205
4.0	0.425	0.12	20.0	-48	SMB206
4.0	0.425	0.14	20.0	-45	SMB207
4.0	0.450	0.14	20.0	-52	SMB208
4.0	0.450	0.15	20.0	-50	SMB209
5.0	0.450	0.14	20.0	-48	SMB210
5.0	0.450	0.25	20.0	-45	SMB211
5.0	0.475	0.21	20.0	-52	SMB212
5.0	0.475	0.15	20.0	-50	SMB213
5.0	0.475	0.12	20.0	-48	SMB214
5.0	0.475	0.15	20.0	-45	SMB215

High Barrier Schottky Diodes					
Breakdown Voltage @ 10 μ A MIN (V)	Forward Voltage @ 1 mA TYP (V)	Junction Capacitance @ 0 Vdc 1 Mhz TYP (V)	Series Resistance @ 5 mA TYP (Ohms)	Tangential Signal Sensitivity TYP (dB)	Part Number
5.0	0.500	0.14	25.0	-52	SHB300
5.0	0.500	0.20	25.0	-50	SHB301
5.0	0.500	0.12	25.0	-48	SHB302
5.0	0.500	0.14	25.0	-45	SHB303
5.0	0.525	0.15	25.0	-52	SHB304
5.0	0.525	0.15	25.0	-50	SHB305
5.0	0.525	0.12	25.0	-48	SHB306
5.0	0.525	0.14	25.0	-45	SHB307
6.0	0.550	0.14	25.0	-52	SHB308
6.0	0.550	0.15	25.0	-50	SHB309
6.0	0.550	0.14	25.0	-48	SHB310
6.0	0.550	0.25	25.0	-45	SHB311
6.0	0.600	0.21	25.0	-48	SHB312
6.0	0.600	0.15	25.0	-45	SHB313
6.0	0.600	0.12	25.0	-42	SHB314
6.0	0.600	0.15	25.0	-40	SHB315

Maximum Ratings		
Operating Temperature	Storage Temperature	Power Dissipation @ 25° C
-55° C to +150° C	-65° C to +200° C	250 mW
(derate linearly to zero at 150° C)		