

Schottky Diodes: Principle, Applications and State of the Art

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Contents

1	Introduction and Application	1
1.1	Introduction to Schottky Diodes	1
1.2	Application in power converters	1
2	Principle of Working	2
2.1	Equilibrium Conditions	2
2.2	Under Forward Bias	2
2.3	Under reverse bias	2
2.4	Schottky Barrier Height Reduction	2
2.5	Fermi Level Pinning	2
3	State of the Art Applications and Fabrication	3
3.1	Power applications	3
3.2	High frequency applications	3
3.3	Fabrication	3

1 Introduction and Application

1.1 Introduction to Schottky Diodes

1.2 Application in power converters

1.2.1 Rectifiers

1.2.2 DC-DC converters

1.2.3 Inverters

2 Principle of Working

2.1 Equilibrium Conditions

2.2 Under Forward Bias

2.3 Under reverse bias

2.4 Schottky Barrier Height Reduction

2.5 Fermi Level Pinning

3 State of the Art Applications and Fabrication

3.1 Power applications

3.2 High frequency applications

3.3 Fabrication