



# SNS COLLEGE OF ENGINEERING

Kurumbapalayam (Po), Coimbatore – 641 107

**An Autonomous Institution**

Accredited by NBA – AICTE and Accredited by NAAC – UGC with 'A' Grade  
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

**DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING**

**COURSE NAME : 19EE101-BASIC ELECTRICAL & ELECTRONICS ENGINEERING**

I YEAR /I SEMESTER MCT

Unit 4: Analog Electronics

Topic : Zener Diode



# ZENER DIODE



Symbol

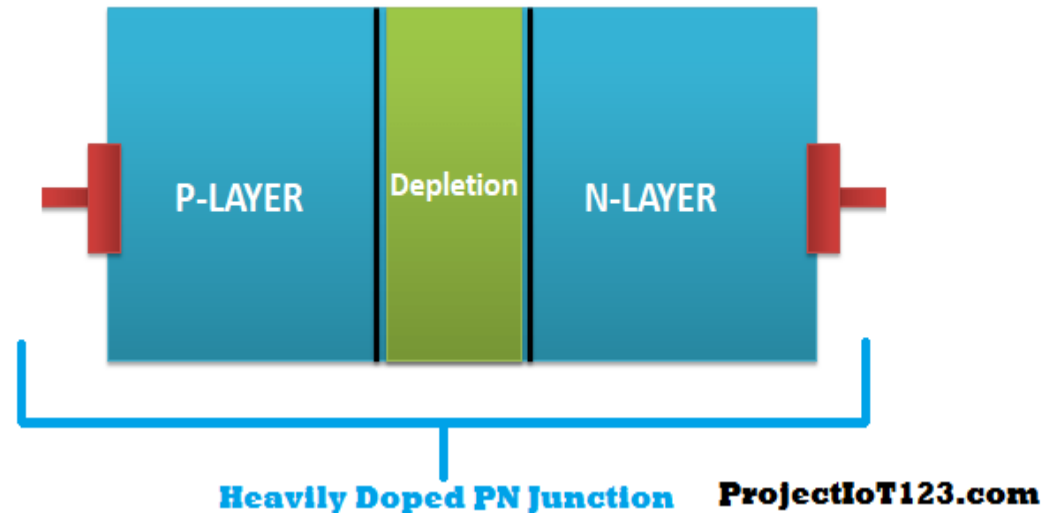




# ZENER DIODE

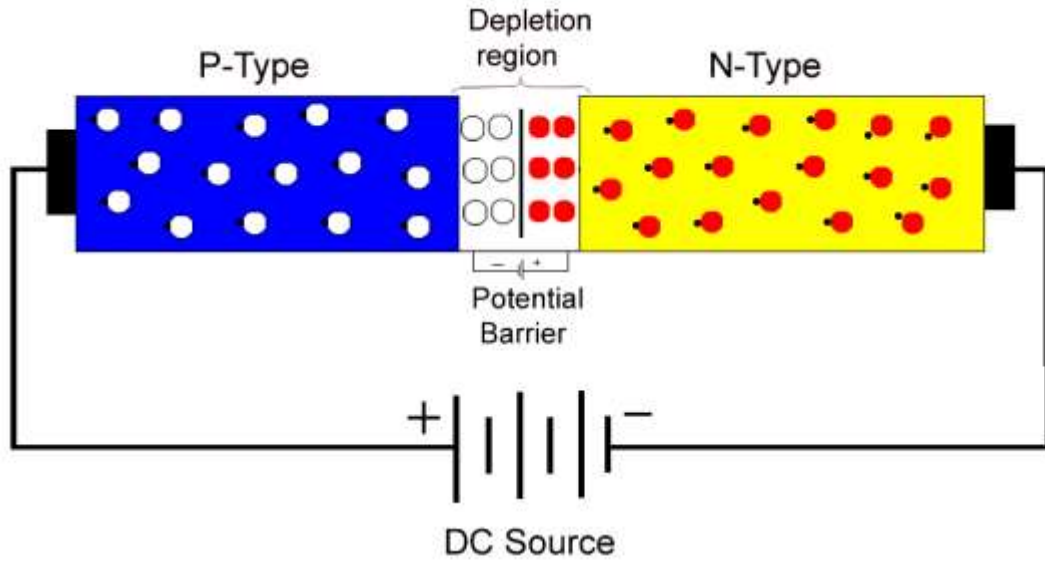
Zener diode is basically like an ordinary PN junction diode but normally operated in reverse biased condition. But ordinary PN junction diode connected in reverse biased condition is not used as Zener diode practically.

A Zener diode is a specially designed, highly doped PN junction diode.



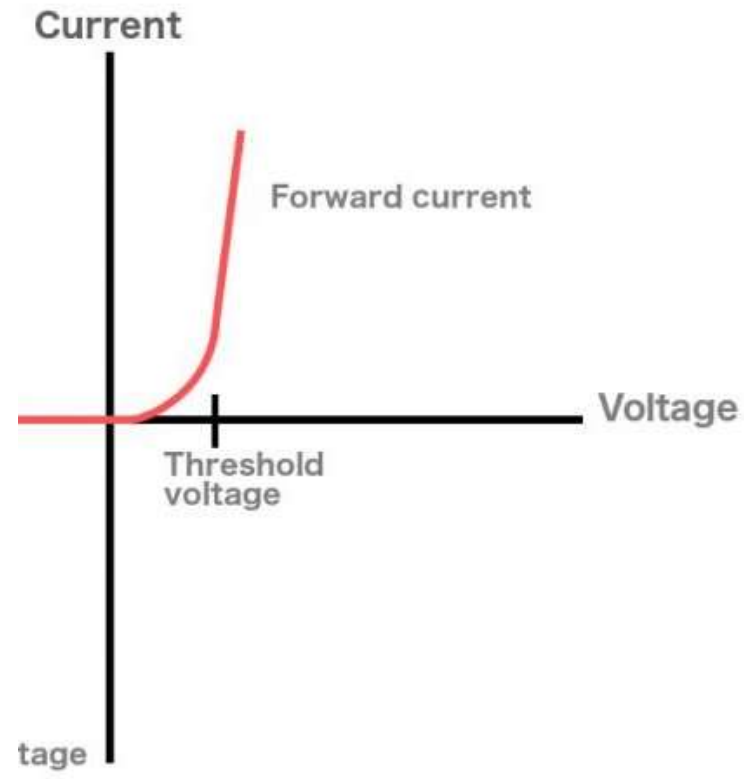


# ZENER DIODE-FORWARD BIAS



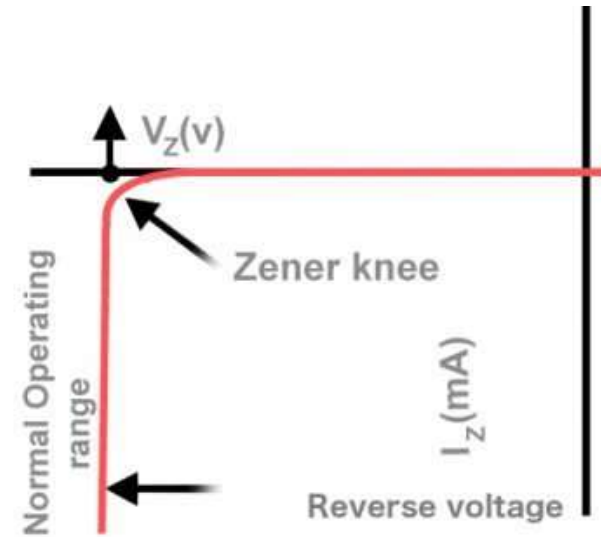
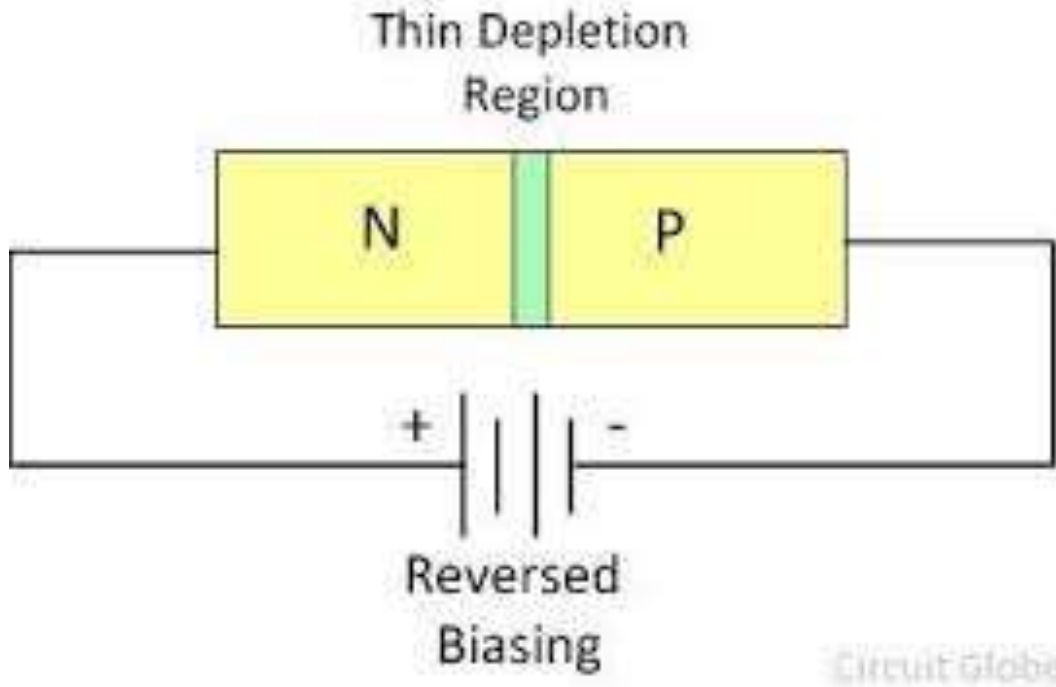
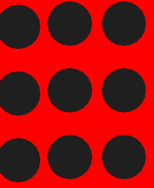
Holes ○                      Electrons ●  
Free Electrons •              Free Holes •

**Forward Biasing**



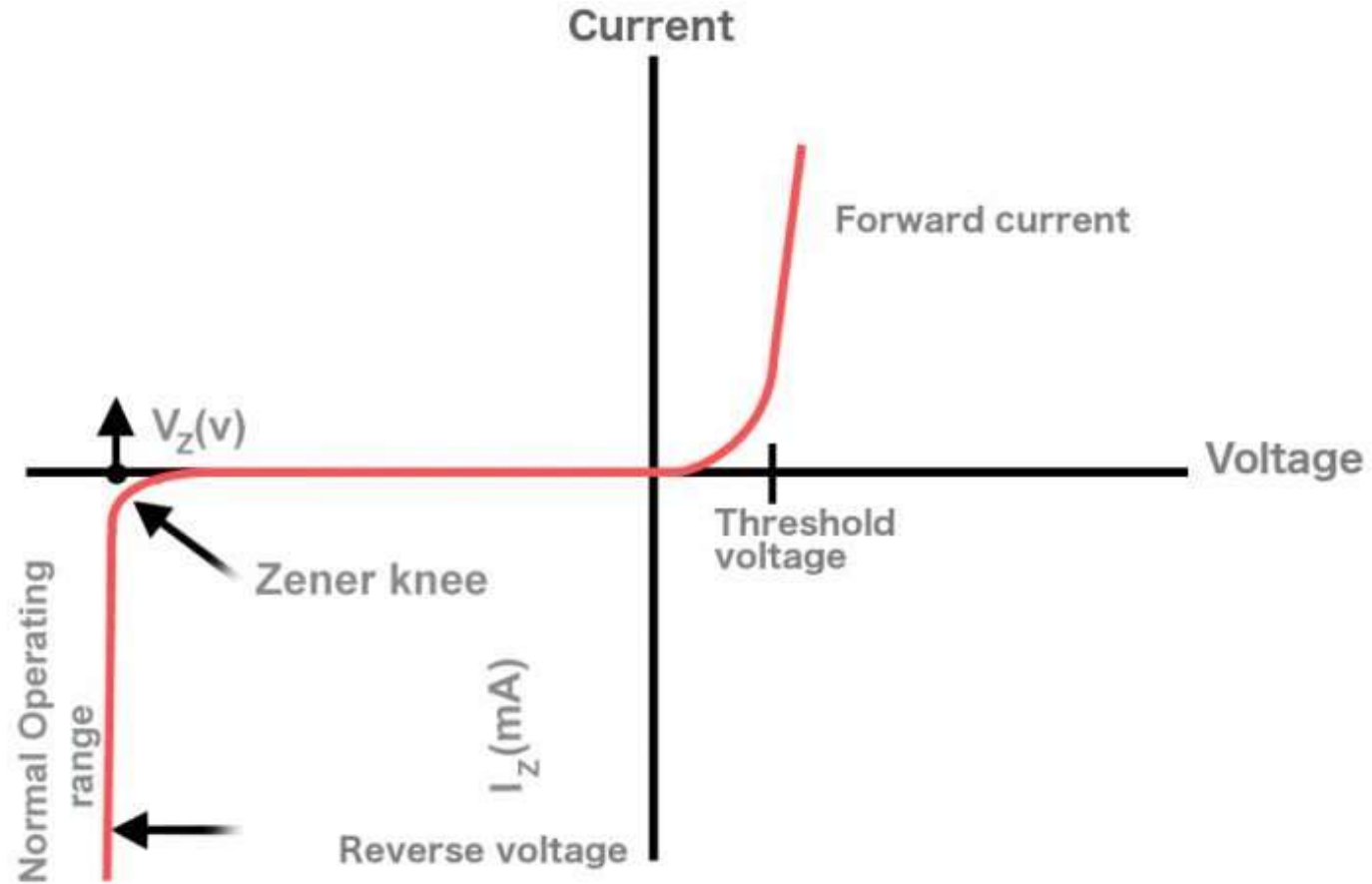


# ZENER DIODE



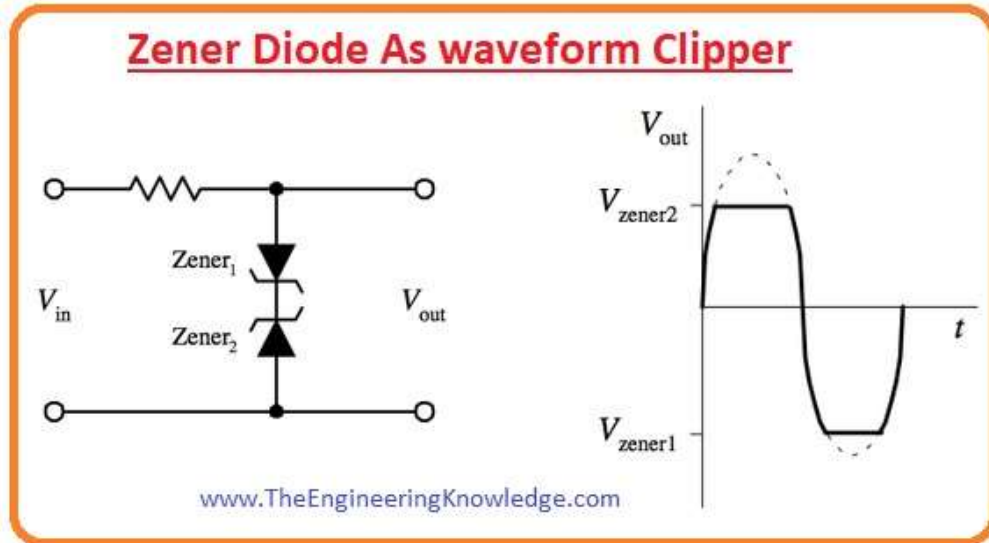


# ZENER DIODE- VI CHARACTERISTICS





# APPLICATIONS



Voltage Regulator



# REFERENCES

1. Muthusubramanian R, Salivahanan S, “Basic Electrical and Electronics Engineering”, Tata McGraw Hill Publishers, (2009) - UNIT I – V
2. Bhattacharya. S.K, “Basic Electrical and Electronics Engineering”, Pearson Education , (2017) – UNIT I – IV
3. Mehta V K, Mehta Rohit, “Principles of Electrical Engineering and Electronics”, S.Chand & Company Ltd, (2010)- UNIT I and II
4. Mehta V K, Mehta Rohit, “Principles of Electronics”, S.Chand & Company Ltd, (2005)- UNIT IV and V

## THANK YOU