PHYS 382. Electronic Circuits Lab

Name : **university ID No:**

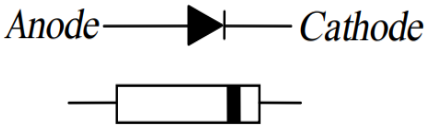
EXP. : I-V characteristic of a p-n junction diode

Objective

-Determine several diode parameters
-To draw the I-V characteristic curve of a p-n junction diode in forward bias and reverse bias
- To understand the behavior of simple diode circuits. .

Principles

The diode is a device formed from a junction of n-type and p-type semiconductor material. The lead connected to the p-type material is called the anode and the lead connected to the n-type material is the cathode. In general, the cathode of a diode is marked by a solid line on the diode (see Figure 1). Figure 1. The symbol for a diode compared to an actual diode package



How are n-type and p-type materials prepared?

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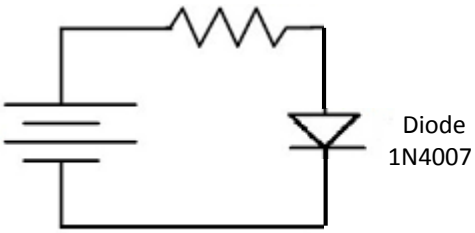
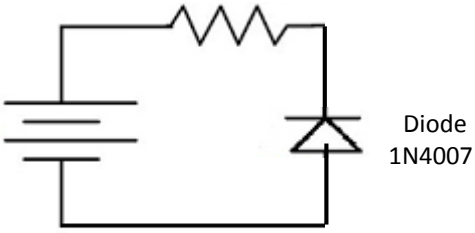
Experiment A: Diode 1N4007



forward



reverse

	forward		reverse	
	V_D	I	V_D	I
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				

<u>Experiment B:</u> Zener Diode

	Reverse 6.2		Reverse 9.1	
	V_D	I	V_D	I
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				

Conclusion

Make a general conclusion about the experiment and the results obtained.

Exp. A

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Exp. B

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draw the forward i-v characteristics of IN 4007diode

draw the reverse i-v characteristics of zener diode 6.2