Universidade do Vale do Itajaí
Computer Engineering
Basic Electronics

Second Lab Assignment for Basic Electronics

Student: Lucas Mateus Gonçalves
Teacher Advisor: Walter Antonio Gontijo

November
2021

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Second Lab Assignment for Basic Electronics presented for the class of the Twelfth of November, 2021.

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Conteúdo

1 Objectives

1.1 1

Data expected to be gathered in lab.

1.2 2

Data expected to be gathered in lab.

1.3 3

Transistor `BC548B`'s $hFe = 200$ to 450.
Data simulated by *Falstad Circuit Simulator*.

1.3.1 $hFe = 200$

V_I	V_B	V_C	V_E	R_{OPER}
0	$51n$	5	0	Corte
5	$640m$	$68m$	0	Ativa

1.3.2 $hFe = 450$

V_I	V_B	V_C	V_E	R_{OPER}
0	$51n$	5	0	Corte
5	$641m$	$67.6m$	0	Ativa

1.4 4

1.4.1 $hFe = 200$

R_C	V_B	V_E	V_C	I_B	I_C	I_E	R_{OPER}
$2.2k$	986.9m	377m	1.243	8.5u	1.7m	1.7m	Ativa
220	986.9m	377m	4.6	8.5u	1.7m	1.7m	Ativa
560	986.9m	377m	4.04	8.5u	1.7m	1.7m	Ativa
680	986.9m	377m	3.839	8.5u	1.7m	1.7m	Ativa

1.4.2 $hFe = 450$

R_C	V_B	V_E	V_C	I_B	I_C	I_E	R_{OPER}
2.2k	1.055	411.5m	602.8m	8.4u	2m	2m	Ativa
220	1.39	762.1m	4.24	7.68u	3.4m	3.4m	Ativa
560	1.39	762.1m	3.06	7.68u	3.4m	3.4m	Ativa
680	1.39	762.1m	2.65	7.68u	3.4m	3.4m	Ativa

1.5 5

Data expected to be gathered in lab.

1.6 6

Data expected to be gathered in lab.

1.7 7

V_B	V_E	V_C	R_{OPER}
1.937	1.335	8.759	Ativa