

BERZIET UNIVERSITY

FACULTY OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING

ENEE 3102

Electronics Laboratory

Experiment.7 Prelab

**Power Amplifiers**

Abdallateef Wahdan
ID:1183005

Supervised by:

Dr. Mohammad Jehad Al JuBeh

Teacher assistance:

Bilal Ismail

2021/8/3

**I. THE CLASSES OF POWER AMPLIFIER.**



**When Vsin=2 Vp-p**

**1)When the set = 1 , The output is :**

****

**This class of power is class B, The output voltage in the active region for a half wave.**

**2)When the set=0.25 , The output is:**

****

**This class of power is class A, The output is wave is complete and shifted by 180 degree.**

**2)When the set=0 , The output is:**

****

**This class of power is class A-B amplifier, the transistor is in active region between (180 – 360) degree.**

**II. PUSH-PULL AMPLIFIER.**

****

**When the set = 0.09 , Current=0.**

**The output is**

****

**When the Vsin=0.5 VP-P,The output:**

****

**When the set=0.1 , Current <10mA**

**The output:
**

|  |  |  |
| --- | --- | --- |
| **Output** | **Output Voltage** | **Load** |
| **Power(mW)** | **(volts)** | **Resistor****(Ω)** |
| **RMS** | **Peak-to-peak** |
| 1062.15u | 0.583 | 1.65 | **320** |
| 1113.75u | 0.495 | 1.402 | **220** |
| 1024.43u | 0.392 | 1.108 | **150** |
| 1267.36u | 0.356 | 1.008 | **100** |
| 627.01u | 0.208 | 0.588 | **69** |
| 474.32u | 0.154 | 0.437 | **50** |
| 99u | 0.064 | 0.1815 | **41** |

**III. COMPLEMENTARY PUSH-PULL AMPLIFIER.**

**When RL=1k**



**When RL=100**

****