

BERZIET UNIVERSITY

FACULTY OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING

ENEE 2102

Circuits Laboratory

Experiment.8 Prelab

**AC & DC Power Analysis and Design**

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Part A: DC power measurement



Current:



Power:



|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 10 | 8 | 6 | 4 | 2 | 0 | Vin[V] |
| 10 | 8 | 6 | 4 | 2 | 0 | I[mA] |
| 100 | 64 | 36 | 16 | 4 | 0 | P[mW] |

Part B: Maximum DC power transfer

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**Current**

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**Power**

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|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1.7k | 1.5k | 1.4k | 1.3k | 1.2k | 1.1k | 1k | 700 | 400 | 100 | 0 | RL |
| 1.4 | 1.50 | 1.56 | 1.62 | 1.69 | 1.77 | 1.85 | 2.15 | 2.56 | 3.17 | 3.45 | I[mA] |
| 3.33 | 3.39 | 3.43 | 3.44 | 3.45 | 3.45 | 3.43 | 3.24 | 2.63 | 1.01 | 0 | P[mW] |

**Part C: Power Factor measurement  
  
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**Part E :Maximum average power transfer  
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Maximum power is 13.599mW