**Lab - 10 Datasheet**

**Circuit Analysis – I**

|  |  |
| --- | --- |
| Student Name(s) |  |
| Date Lab Performed: |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Peak Value of** | **Peak Value of** | **Phase Difference between** | **Power Factor** | **Leading or Lagging** |
| Calculated (from Prelab) |  |  |  |  |  |
| Experimental (Measured in the Lab) |  |  |  |  |  |
| % Error |  |  |  |  |  |

**Table 1. Frequency = 1 kHz**

**Oscilloscope Screenshot # 1: Frequency = 1 kHz**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Peak Value of** | **Peak Value of** | **Phase Difference between** | **Power Factor** | **Leading or Lagging** |
| Calculated (from Prelab) |  |  |  |  |  |
| Experimental (Measured in the Lab) |  |  |  |  |  |
| % Error |  |  |  |  |  |

**Table 2. Frequency = 2 kHz**

**Oscilloscope Screenshot # 2: Frequency = 2 kHz**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Peak Value of** | **Peak Value of** | **Phase Difference between** | **Power Factor** | **Leading or Lagging** |
| Calculated (from Prelab) |  |  |  |  |  |
| Experimental (Measured in the Lab) |  |  |  |  |  |
| % Error |  |  |  |  |  |

**Table 3. Frequency = 3 kHz**

**Oscilloscope Screenshot # 3: Frequency = 3 kHz**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Peak Value of** | **Peak Value of** | **Phase Difference between** | **Power Factor** | **Leading or Lagging** |
| Calculated (from Prelab) |  |  |  |  |  |
| Experimental (Measured in the Lab) |  |  |  |  |  |
| % Error |  |  |  |  |  |

**Table 4. Frequency = 4 kHz**

**Oscilloscope Screenshot # 4: Frequency = 4 kHz**

**Resonant Frequency:**

Calculated (from prelab) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Measured (using oscilloscope) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Percent Error: \_\_\_\_\_\_\_\_\_\_\_\_\_

**Oscilloscope Screenshot # 5: Resonant Frequency**

**Conclusions:** (min 150 words. Max 300 words)

**Lab-10 Datasheet Submission Requirements**

* Make sure to write a thoughtful conclusion in the **Conclusions** section summarizing your key observations and learnings from this lab. Conclusions should be at least **150 words** long. Conclusions section is worth 5 points (the lab is worth total 100 points – Prelab: 30 pts, Hands-on Lab: 70 pts).
* **File format:** Once this Datasheet is complete, **save/convert** this word file **as a .pdf file** having a filename as: “Lab-10 Datasheet\_FirstName of Student 1\_FirstName of Student 2.pdf”. For example, if name of the two students performing the lab in a group are Tom Cruz and Morgan Freeman, respectively, then the Lab-10 Datasheet file should have the following name: “Lab-10 Datasheet\_Tom\_Morgan.pdf”.
* Check with your lab instructor about specific instructions on how to submit your Lab-10 Datasheet for assessment and grading.