**Laboratory Report Cover Sheet
DeVry University
College of Engineering and Information Sciences**

**Course Number:** REET 420

**Professor:**

**Laboratory Number:** 5

**Laboratory Title:**  The Buck Converter

**Submittal Date:** Click here to enter a date.

***Objectives:***

***Results:***

***Conclusions:***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***Team:*** |  |  |  |  |  |
|  | Name |  | Program |  | Signature |
|  |  |  |  |  |  |
|  | Name |  | Program |  | Signature |
|  |  |  |  |  |  |
|  | Name |  | Program |  | Signature |

***Observations/Measurements:***

# The Buck Regulator Schematic

### Paste the diagram of the schematic for your design below:

1. Paste your parts list for your design below:
2. Calculated values for important parameters:

###  *Power provided to regulator =*

### *Current provided to regulator =*

### Inductance of inductor =

### *Power that transistor and diode must dissipate =*

### *Value of output capacitor =*

1. Power to be provided to LM2585 =
2. Current to be provided to LM2585 =
3. Values for the feedback resistors =
4. Junction temperature =

# The Buck Regulator Build and Test

### Paste the Test results below:

2. Test parameters:

### *Output Current =*

### *Voltage Current =*

3. Paste Oscilloscope graph below:

# Questions/Discussion

### Explain fully the operation of the LM2595 Buck Regulator IC

### Explain the concept of ripple current and why it should be minimized in your circuit?

***Grade:***

|  |  |  |
| --- | --- | --- |
| **Deliverable** | **Points Available** | **Points Achieved** |
| Laboratory Cover Sheet | 6 |  |
| Calculations/Measurements | 12 |  |
| Questions | 6 |  |
| **Total Points** | 24 |  |
|  |
| Comments: |