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Lab 3 Section: Tue. P10-11

Description: Resistive Circuits

Section 3.5.1 Resistor Ladders

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| Table 1: Node Voltages LTSpice Resistor Ladders | |
| Node | Voltage (V) |
| A | 4.404 V |
| B | 3.135 V |
| C | 1.865 V |
| D | 0.596 V |

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Table 1: Result of running a DC operating point simulation to generate the node voltages at nodes A, B, C, and D in the resistor ladder. Design based on Figure 3.5.

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| Table 2: Node Voltages Circuit Build Resistor Ladders | |
| Node | Voltage (V) |
| A | 4.375 V |
| B | 3.096 V |
| C | 1.839 V |
| D | 0.589 V |

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Table 2: The voltage result of the physical circuit at nodes A, B, C, and D in the resistor ladder. Design based on Figure 3.5.

Section 3.5.2 R-2R Ladder

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| Table 3: Node Voltages LTSpice R-2R Ladder | |
| V0, V1 (V) | Voltage (V) |
| 0 V, 0 V | 0 V |
| 5 V, 0 V | 2.462 V |
| 0 V, 5 V | 1.269 V |
| 5 V, 5 V | 3.731 V |



Table 3: Result of running a DC operating point simulation to generate the node voltages at nodes Vout in the R-2R Ladder. Design based on Figure 3.6.

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| Table 4: Node Voltages Circuit Build R-2R Ladder | |
| V0, V1 (V) | Voltage (V) |
| 0 V, 0 V | 0 V |
| 5 V, 0 V | 2.474 V |
| 0 V, 5 V | 1.260 V |
| 5 V, 5 V | 3.729 V |

Table 4: The voltage result of the physical circuit at node Vout in the R-2R Ladder. Design based on Figure 3.6.