

Assignment #2 – 555 Timer PCB Design

Grading Rubric

Schematic and PCB on Altium Designer (50 points)

The following must be included to receive full points:

- A schematic of your 555-timer design from Assignment #1 with:
 - A way for the user to supply power and ground to the circuit
 - A way for the user to access the output waveform of the 555-timer
 - All necessary components for a-stable 555-timer operation
- A Printed Circuit Board (PCB) design if your 555-timer design from Assignment #1 with:
 - Components that match that of your schematic
 - No connectivity issues
 - The board size modified to fit your layout (eliminate unnecessary blank space)
 - No design rule violations (some exceptions like silk to solder mask)

Schematic and /or PCB layout are incomplete and have several major design rule violations and/or major connectivity issues. (0 points)	Schematic and PCB layout are mostly complete, with minor design rule violations and minor connectivity issues. (25 points)	Schematic and PCB layout are complete. There are no design rule violations and no connectivity issues. (50 points)
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Manufacturability (25 points)

The following must be included to receive full points:

- All generated Gerber files following assignment instructions
- A generated BOM containing all components used on PCB

GERBER Files and/or BOM not included in the submission. (0 points)	Incomplete BOM/GERBER files submitted. (15 points)	Complete BOM/GERBER files are submitted. (25 points)
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Report Content / Submission (25 points)

The following must be included to receive full points:

- A PDF with the following items included:
 - A description of your PCB

- Screenshots of your schematic, PCB, report logs showing no connectivity or design rule violations, and your BOM
- A .zip folder containing all your Altium files (schematic, PCB, etc.)
- A second .zip folder containing your Gerber files and BOM

Very little to no description or explanation is added to report. Screenshots of schematic and PCB layout are unreadable or not present. Report log for design rule check not included.	Incorrect/incomplete explanations and descriptions provided. Screenshots of schematic and PCB layout are unreadable. Report log for design rule check is included.	Detailed descriptions and explanations are provided clearly. Screenshots of schematic and PCB Layout are easy to read. Report log for design rule check is included. Both .zip folders included
(0 points)	(15 points)	(25 points)

Late Submission Policy:

All work submitted after the specified date and time deadline will receive a **30% deduction** penalty. An additional 30% deduction will also occur for **every class period that occurs** after the assignment deadline if the late assignment has not yet been submitted.