

I. IDENTIFICATION DATA

Thesis title:	Smart MPPT Solar Charger
Author's name:	David Rajchman
Type of thesis :	bachelor
Faculty/Institute:	Faculty of Electrical Engineering (FEE)
Department:	Department of Microelectronics
Thesis reviewer:	Ing. Jiří Svatoň, Ph.D.
Reviewer's department:	FEE, Department of Radioelectronics

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment	ordinarily challenging
<i>How demanding was the assigned project?</i>	
Assignment should be added by the intended power class (e.g., below 1 kW).	

Fulfilment of assignment	fulfilled
<i>How well does the thesis fulfil the assigned task? Have the primary goals been achieved? Which assigned tasks have been incompletely covered, and which parts of the thesis are overextended? Justify your answer.</i>	

Methodology	correct
<i>Comment on the correctness of the approach and/or the solution methods.</i>	

Technical level	C - good.
<i>Is the thesis technically sound? How well did the student employ expertise in the field of his/her field of study? Does the student explain clearly what he/she has done?</i>	
Cons -	
<ul style="list-style-type: none"> - The buck converter IC, LTC4015, has a low maximal input voltage (35 V). It limits system power, solar panels, and battery choice. Power is at least half in comparison with systems in the same class. More time should be dedicated to choosing a more powerful circuit. - Fuse as the output circuit breaker is sufficient but not ideal. - Overall schema (and PCB) documentation in the thesis text is missing. Partial circuit schemas are not sufficient. - Testing was proven; however, it is relatively short (4 days). 	
Pros +	
<ul style="list-style-type: none"> - ESP-IDF and RTOS are used (instead of insufficient Arduino IDE). - According to photographic documentation, the apparatus looks very well. 	

Formal and language level, scope of thesis	B - very good.
<i>Are formalisms and notations used properly? Is the thesis organized in a logical way? Is the thesis sufficiently extensive? Is the thesis well-presented? Is the language clear and understandable? Is the English satisfactory?</i>	
<ul style="list-style-type: none"> - Schematic is missing. - Language, style – OK. 	

Selection of sources, citation correctness	A - excellent.
<i>Does the thesis make adequate reference to earlier work on the topic? Was the selection of sources adequate? Is the student's original work clearly distinguished from earlier work in the field? Do the bibliographic citations meet the standards?</i>	



THESIS REVIEWER'S REPORT

Additional commentary and evaluation (optional)

Comment on the overall quality of the thesis, its novelty and its impact on the field, its strengths and weaknesses, the utility of the solution that is presented, the theoretical/formal level, the student's skillfulness, etc.

III. OVERALL EVALUATION, QUESTIONS FOR THE PRESENTATION AND DEFENSE OF THE THESIS, SUGGESTED GRADE

Due to non-complete documentation (schematic, PCB) in the thesis text, my choice is:

The grade that I award for the thesis is **B - very good**.

Date: [Click here and enter the date](#).

Signature: