

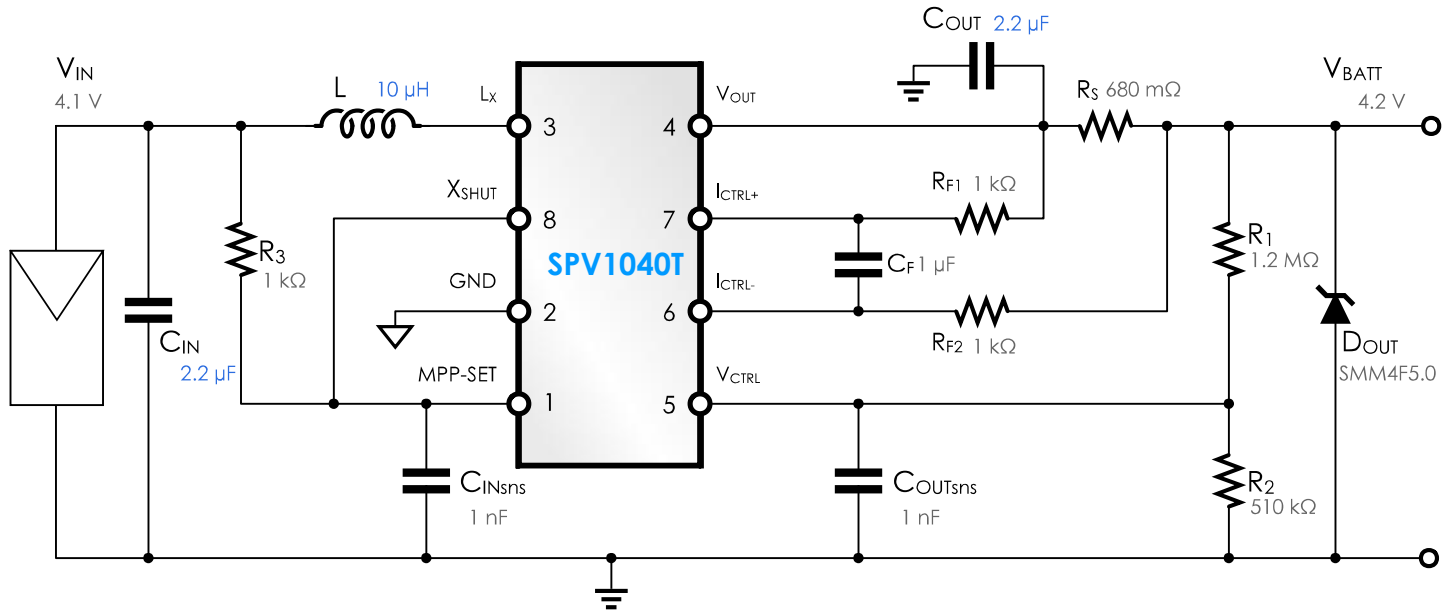
IC: SPV1040T - TSSOP 8

Input: 4.1 V (20 % ripple)

Output: 4.2 V (10 % ripple) - 70 mA max

Panel:
V_{mp}: 4.1 V - **V_{oc}:** 5 V

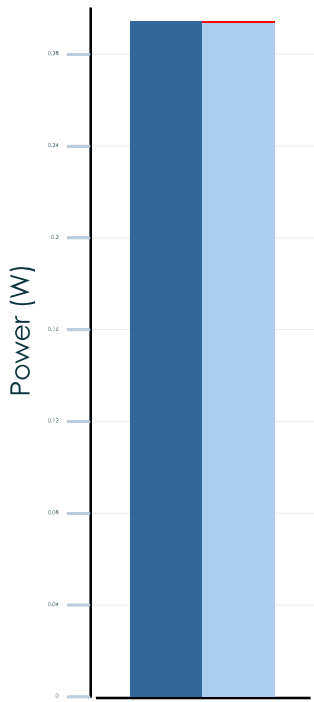
I_{mp}: 80 mA - **I_{sc}:** 100 mA

System Operating Condition: **Solar irradiance:** 10000 % (I_{in} = 80 mA) - **T_a:** 25.0 °C


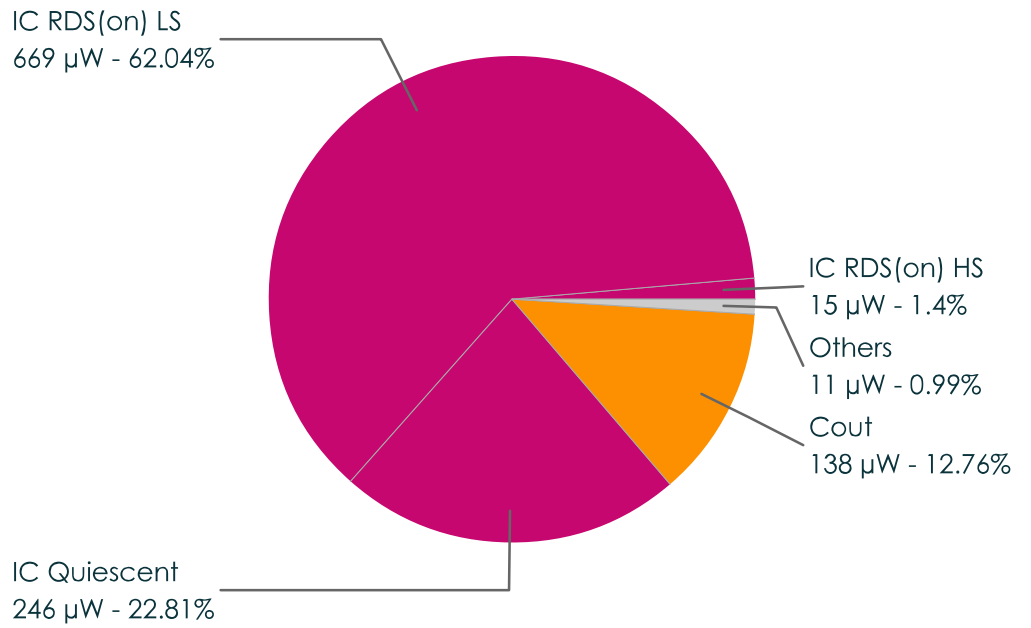
Bill of Materials

Type	Reference	Value	Description
IC	IC	SPV1040T	SPV1040T - TSSOP 8
Inductor	L	10 µH	3.3 A - Panasonic - ELLATV100M
Capacitor	Cout	2.2 µF	10 V - 10% - muRata - GRM21BR71A225KA01L
Capacitor	Cin	2.2 µF	6.3 V - 10% - muRata - GRM185R60J225KE26D
PV Panel	Panel	4.1 V, 80 mA	
Resistor	RS	680 mΩ	680 mΩ
Resistor	RF1	1 kΩ	1 kΩ
Resistor	RF2	1 kΩ	1 kΩ
Capacitor	CF	1 µF	1 µF
Resistor	R3	1 kΩ	1 kΩ
Capacitor	CinSNS	1 nF	1 nF - Voltage rating > 5.2 V
Resistor	R1	1.2 MΩ	1.2 MΩ
Resistor	R2	510 kΩ	510 kΩ
Capacitor	CoutSNS	1 nF	1 nF - Voltage rating > 5.2 V
Diode	Dout	SMM4F5.0	Vbr: 6.8 V , Vcl: 9.2 V - STMicroelectronics

Power Losses



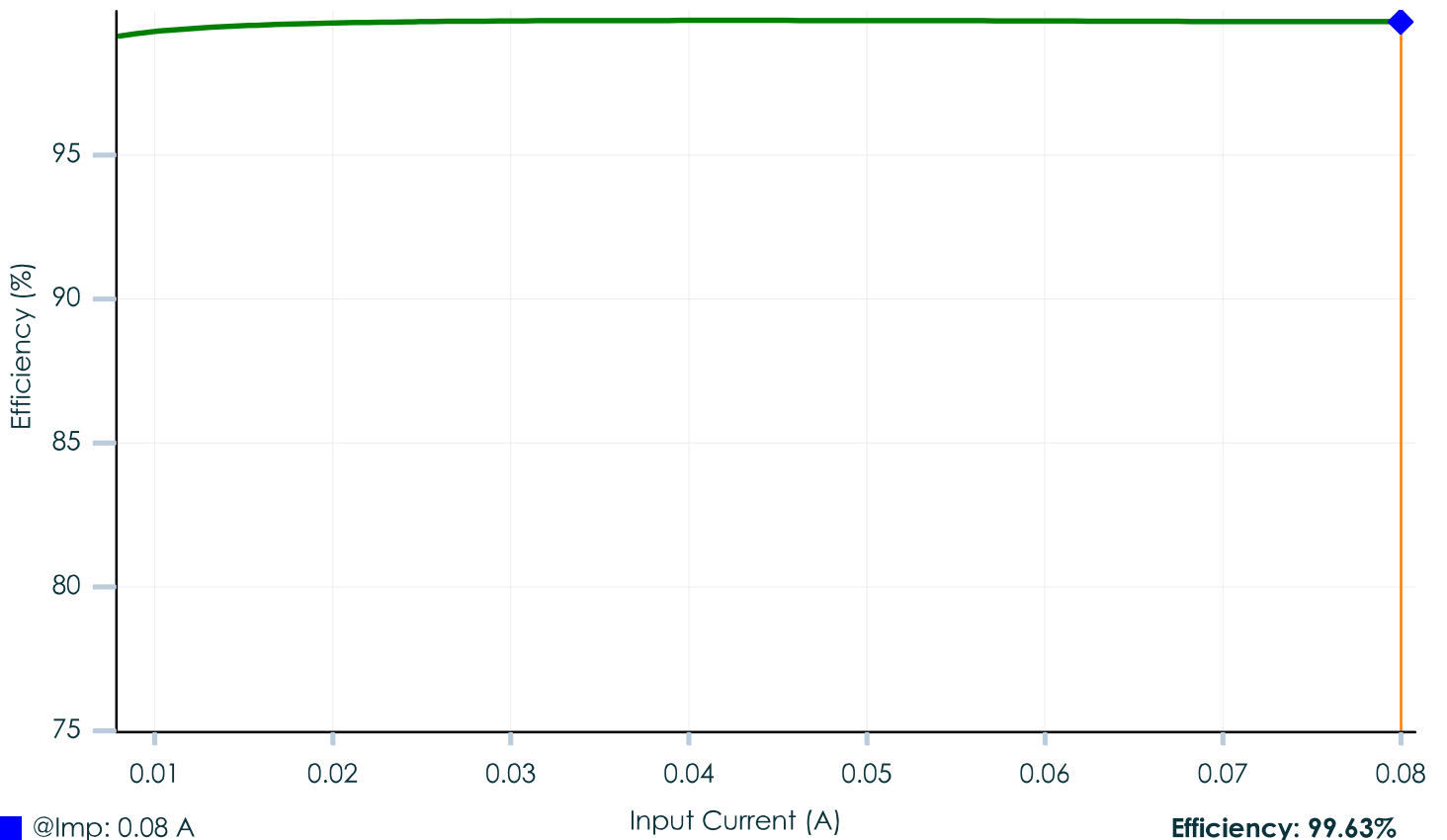
Losses Details



■ Pin: 0.29 W ■ Pout: 293.38 mW
■ Plosses: 1.08 mW - 0.37%

Efficiency: 99.63% ΔT_j : 126 m°C

Efficiency



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CV vs CC

