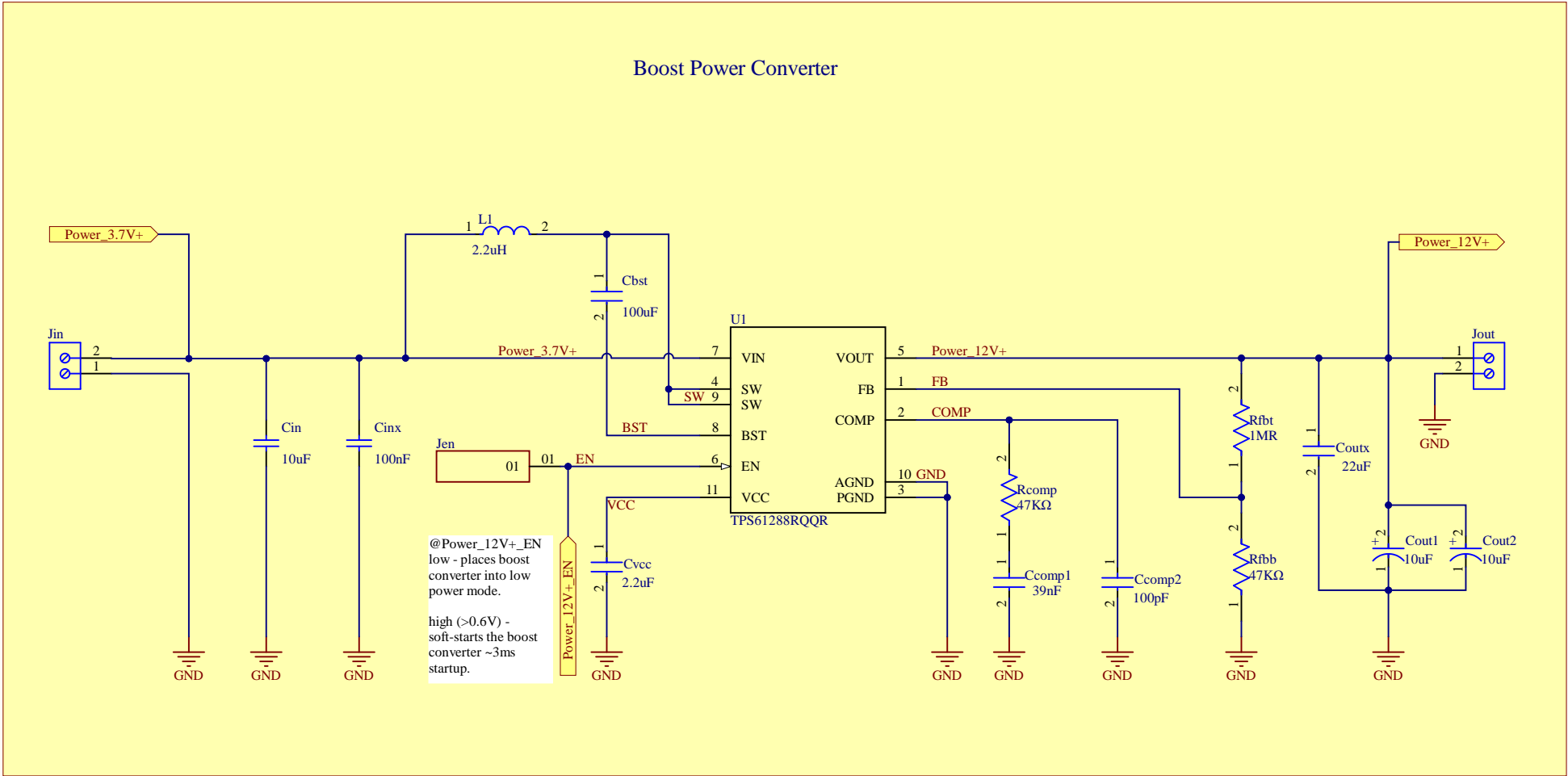
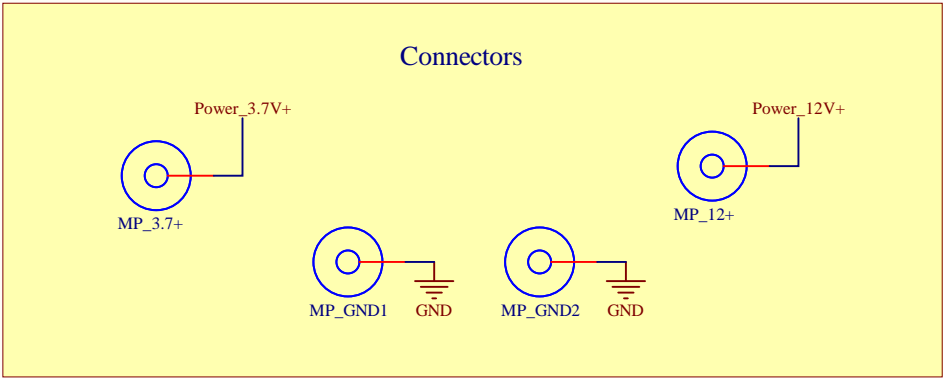


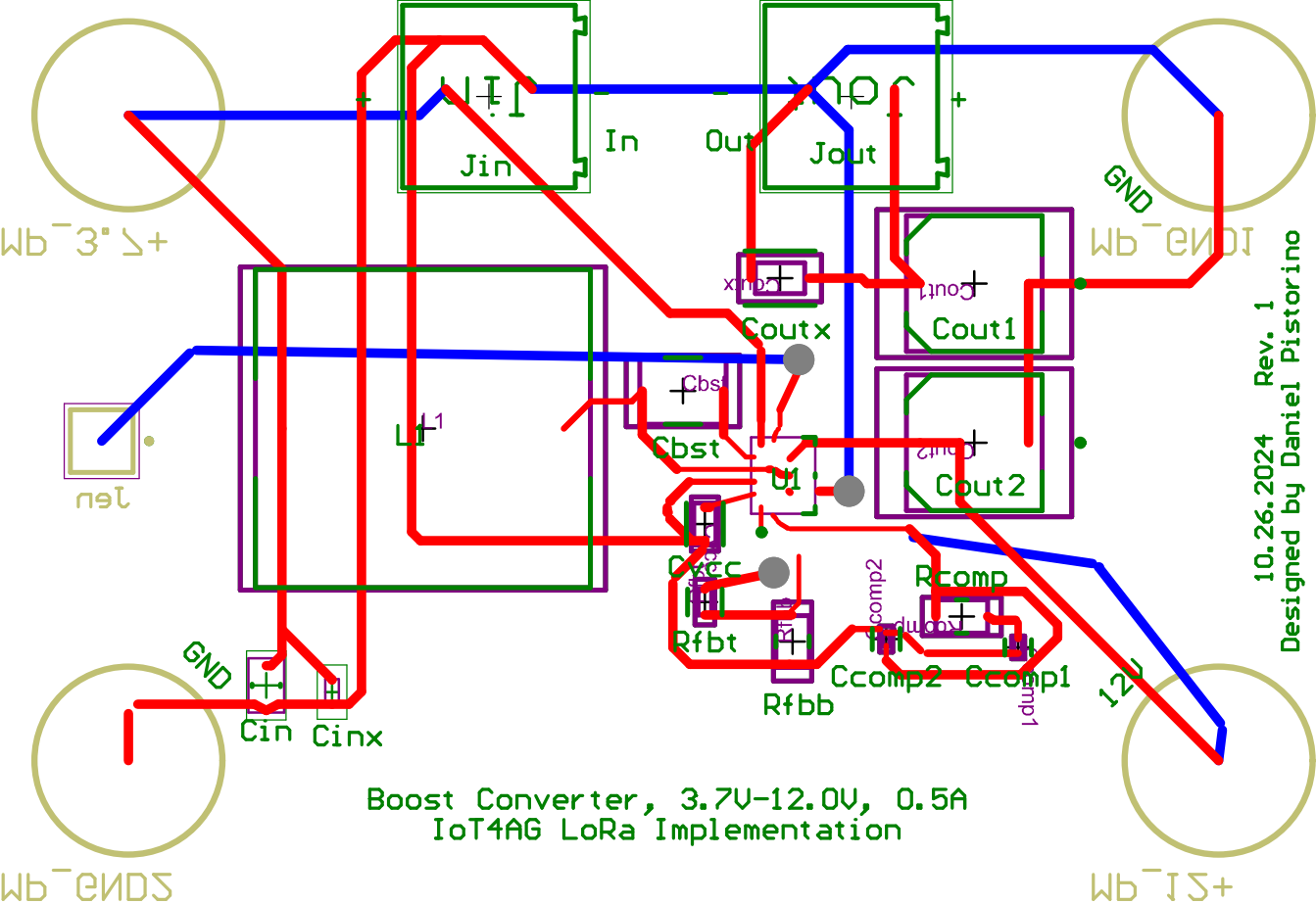
Boost Power Converter

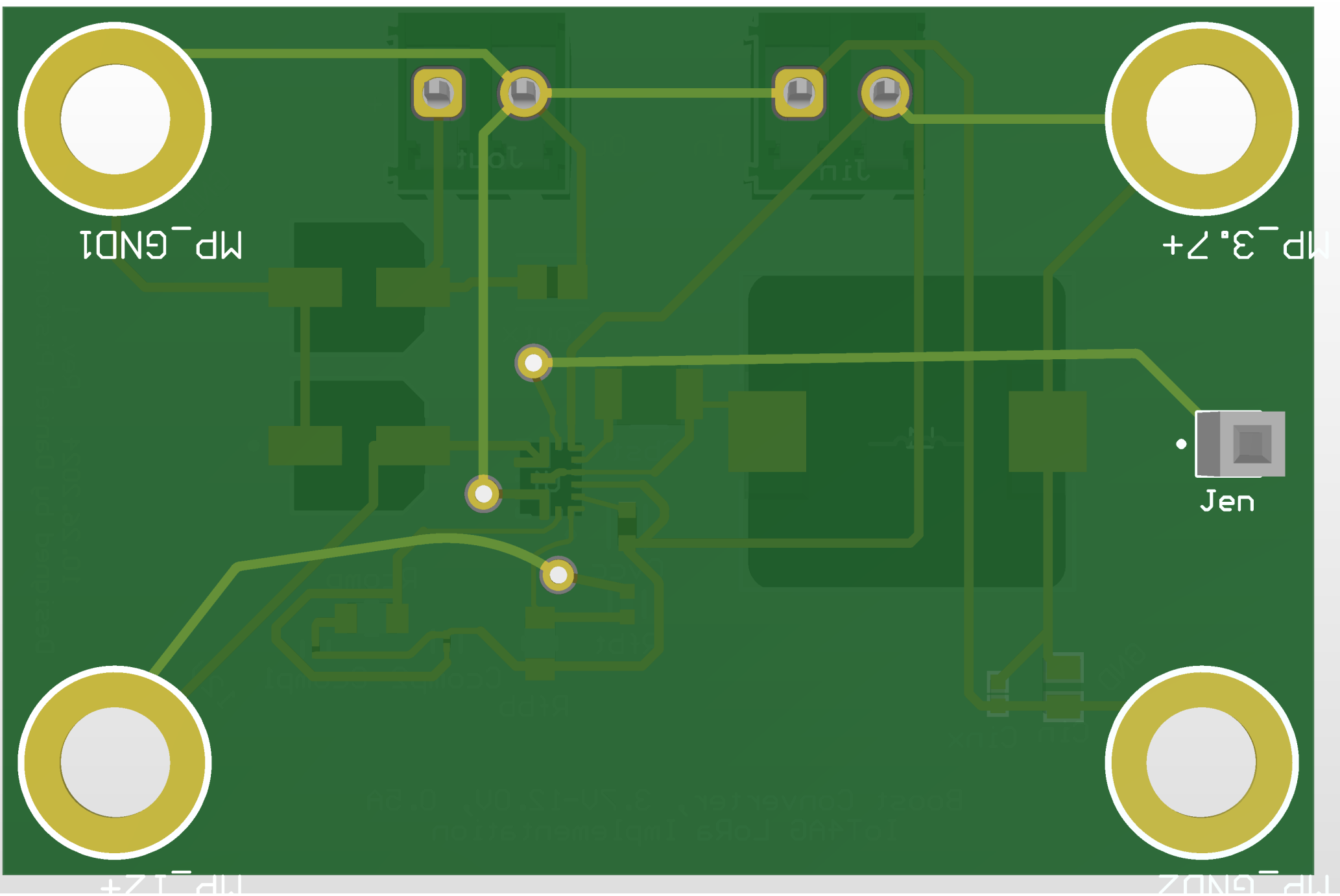


Connectors



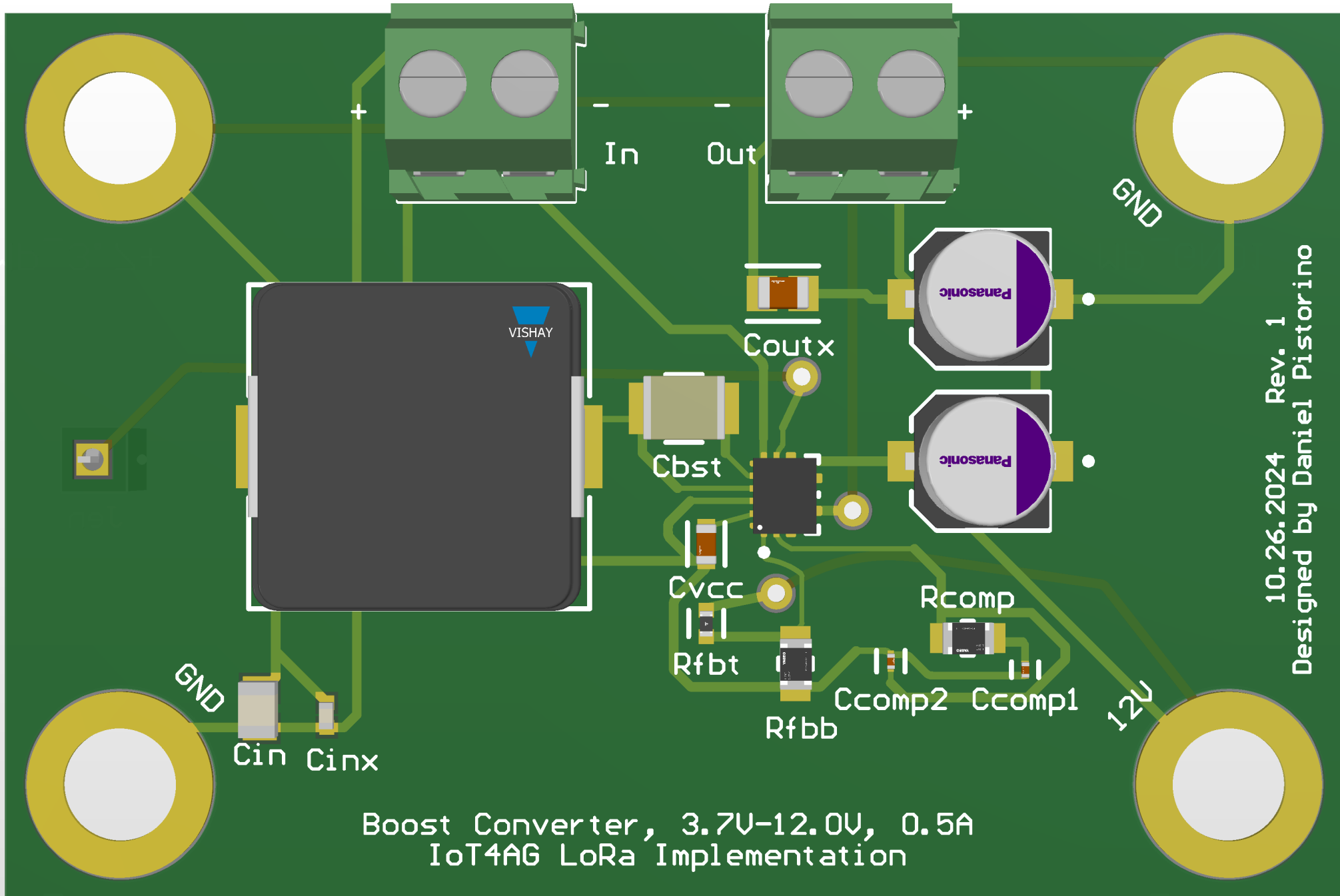
| Title | | |
|--------|--------------------------------|-----------|
| Size | Number | Revision |
| Letter | | |
| Date: | 11/27/2024 | Sheet of |
| File: | C:\Users\...\Node_Power.SchDoc | Drawn By: |

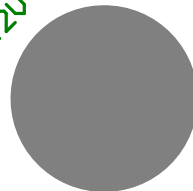
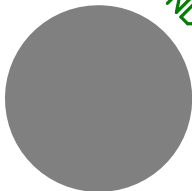
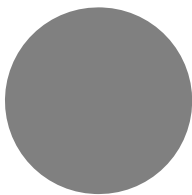




Boost Converter, 3.7V-12.0V, 0.5A
IoT4AG LoRa Implementation

10.26.2024 Rev. 1
Designed by Daniel Pistorino





GND

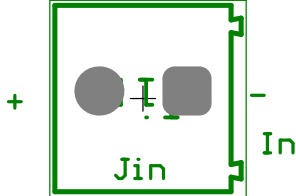
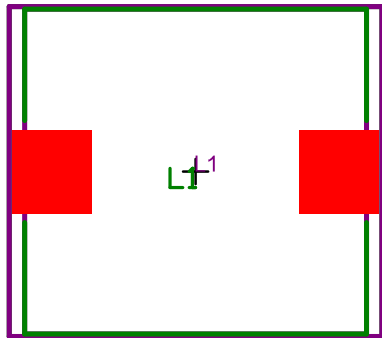


Cin

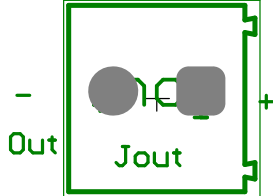


Cinx

Boost Converter, 3.7V-12.0V, 0.5A
IoT4AG LoRa Implementation

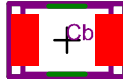


In



Out

GND



Cbst



Coutx



C1



Ccyc

Rfbb



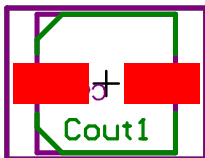
Ccomp2

Ccomp1

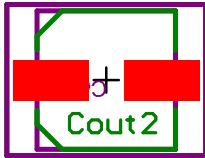


Rcomp

Ccomp1



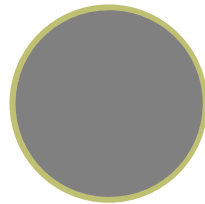
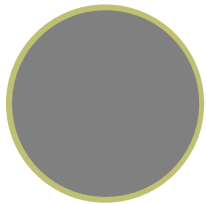
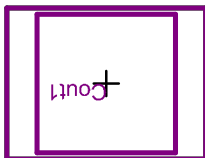
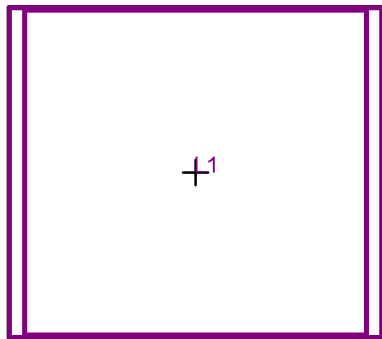
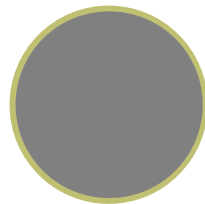
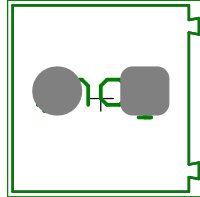
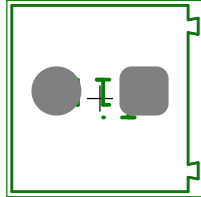
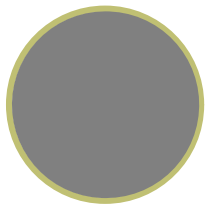
Cout1



Cout2

10.26.2024 Rev. 1
Designed by Daniel Pistorino

12V



Bill of Materials

Altium
2175 Salk Avenue
Suite 200
Carlsbad, CA 92008
USA

Project Title: Bill of Materials for BOM Document [Node_Power.BomDoc]
Project File Name: Node_Power.PrjPcb
Assembly Variant: None

| Part Number | Description | Designator | Manufacture | Manufacture Part Number | Supplier | Supplier Part Number | Supplier Unit Price | Quantity |
|------------------|---|--------------|-------------------|-------------------------|----------|-----------------------|---------------------|----------|
| CMP-2000-05259 | CAP CER 100UF 6.3V X5R 1210 | Cbst | Murata | GRM32ER60J107ME20L | Digikey | 490-3390-6-ND | \$1.85 | 1 |
| CMP-2010-01663 | Chip Multilayer Ceramic Capacitors for General Purpose, 0201, 39000pF, X5R, 15%, 10%, 6.3V | Ccomp1 | Murata | GRM033R60J393KE19D | Mouser | 81-GRM033R60J393KE9D | \$0.10 | 1 |
| CMP-2010-01306 | Chip Multilayer Ceramic Capacitors for General Purpose, 0201, 100pF, C0G, 30ppm/°C, 5%, 25V | Ccomp2 | Murata | GRM0335C1E101JA01D | Digikey | 490-3160-1-ND | \$0.08 | 1 |
| CMP-1036-04916 | CAP 10uF 6.3V ±10% 0805 (2012 Metric) Thickness 1.55mm SMD | Cin | KEMET | C0805C106K9PAC | Mouser | 80-C0805C106K9PAC | \$0.14 | 1 |
| CMP-2008-02013-1 | | Cinx | Vishay | VJ0402G104KXQCW1BC | Digikey | 720-1640-1-ND | \$0.10 | 1 |
| CMP-05428-00106 | Conductive Polymer Aluminum Solid Capacitors (OS-CON) 10uF ±20% 20V | Cout1, Cout2 | Panasonic | 20SVA10M | Digikey | P123684CT-ND | \$0.88 | 2 |
| CMP-2007-03383 | Chip Multilayer Ceramic Capacitors for General Purpose, 0805, 22uF, X7U, +22%/-56%, 20%, 4V | Coutx | Murata | GRM21BE70G226ME51L | Mouser | 81-GRM21BE70G226ME1L | \$0.23 | 1 |
| CMP-2006-02836 | Chip Multilayer Ceramic Capacitors for General Purpose, 0603, 2.2uF, X7R, 15%, 10%, 10V | Cvcc | Murata | GRM188R71A225KE15D | Digikey | 490-4520-1-ND | \$0.14 | 1 |
| BCS-101-L-S-TE | | Jen | Samtec | BCS-101-L-S-TE | Digikey | SAM1011-01-ND | \$0.53 | 1 |
| CMP-1502-02464-2 | | Jin, Jout | Würth Electronics | 6.91214E+11 | Digikey | 732-2747-ND | \$0.79 | 2 |
| CMP-02424-00048 | Commercial Inductors, High Saturation Series 2.2uH 16A 8mΩ 20% | L1 | Vishay Dale | IHLP5050CEER2R2M01 | Mouser | 70-IHLP5050CEER2R2M1 | \$1.32 | 1 |
| CMP-2001-01461 | RES SMD 47K OHM 0.1% 1/8W 0805 | Rcomp, Rfbb | Yageo | RT0805BRD0747KL | Digikey | YAG1907CT-ND | \$0.16 | 2 |
| CMP-2002-08314 | RES Thick Film, 1MΩ, 1%, 0.063W, 100ppm/°C, 0402 | Rfbt | Vishay | CRCW04021M00FKED | Mouser | 71-CRCW0402-1.0M-E3 | \$0.10 | 1 |
| TPS61288RQOR | No Description Available | U1 | Texas Instruments | TPS61288RQOR | Digikey | 296-TPS61288RQORCT-ND | \$5.33 | 1 |
| | | | | | | | \$11.75 | 17 |

| | |
|----------|-------|
| Approved | Notes |
|----------|-------|