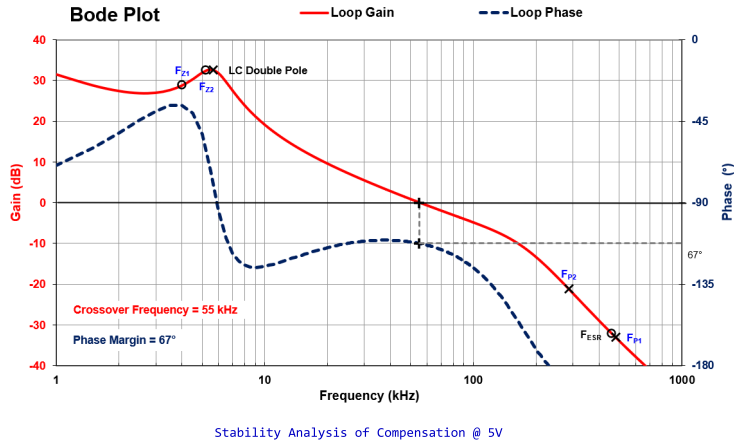
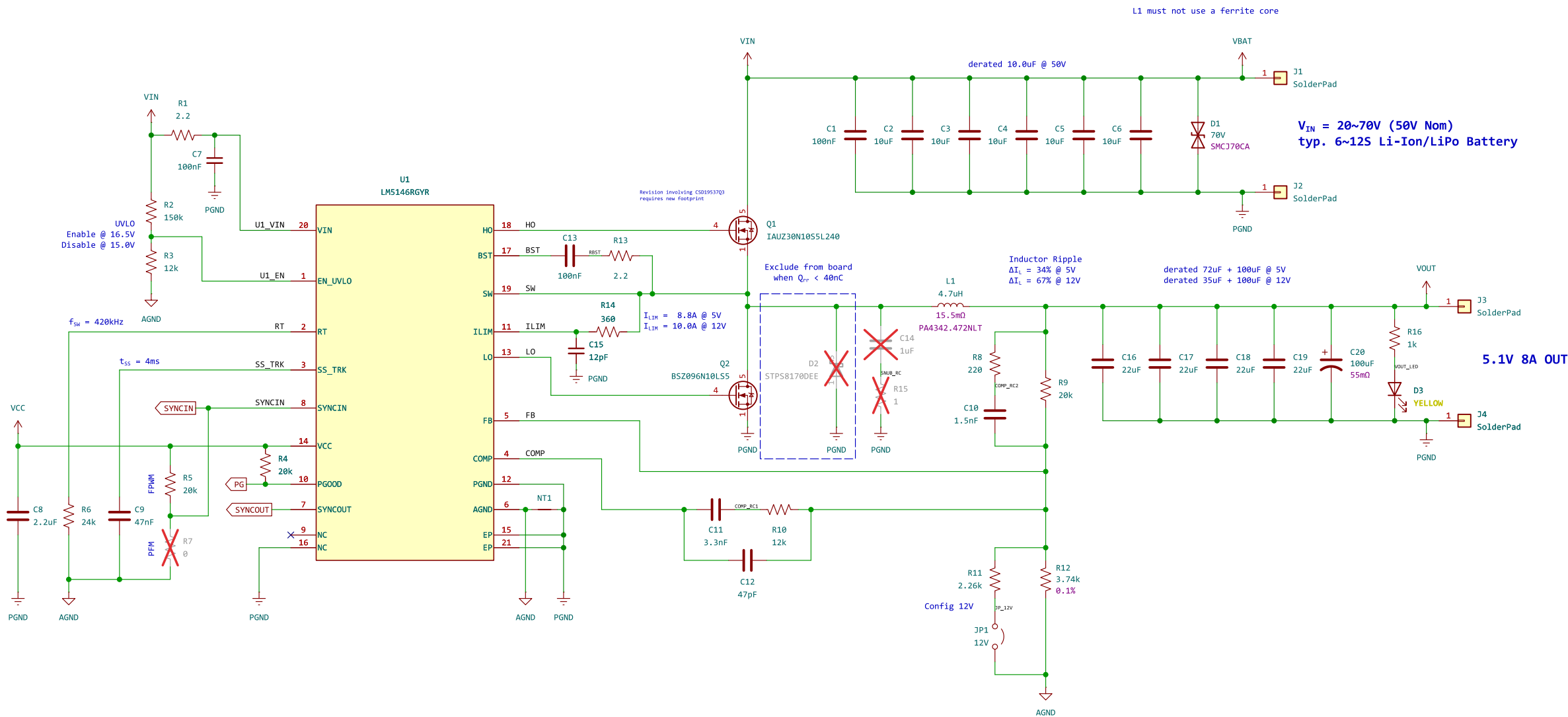


Q1 Alternatives (note $V_{GS} = 7.5V$):

- IAUZ30N10S5L240	100V, $Q_g=8nC$, $R_{DS(on)}=26.0m\Omega$, \$0.5256 USD, SON-8FL 3x3mm low
- CSD19538Q3A	100V, $Q_g=4nC$, $R_{DS(on)}=58m\Omega$, \$0.3715 USD, SON-8 3x3mm
- CSD19537Q3	100V, $Q_g=12nC$, $R_{DS(on)}=13.8m\Omega$, \$0.9603 USD, SON-8 3x3mm
- TPN19008QM	80V, $Q_g=16nC$, $R_{DS(on)}=20.0m\Omega$, \$0.5861 USD, SON-8 3x3mm
- NVTF56H860NL	80V, $Q_g=12nC$, $R_{DS(on)}=20.0m\Omega$, \$0.7595 USD, SON-8 3x3mm low
- NVTF56H850N	80V, $Q_g=19nC$, $R_{DS(on)}=09.5m\Omega$, \$0.6628 USD, SON-8 3x3mm low
- NVTF56H854N	80V, $Q_g=13nC$, $R_{DS(on)}=14.5m\Omega$, \$0.9185 USD, SON-8 3x3mm low
- BSZ110N08NS5	80V, $Q_g=15nC$, $R_{DS(on)}=13.4m\Omega$, \$0.8984 USD, SON-8FL 3x3mm
- BSC117N08NS5	80V, $Q_g=15nC$, $R_{DS(on)}=13.7m\Omega$, \$0.9156 USD, SON-8 5x6mm
- CSD19534Q5A	100V, $Q_g=13nC$, $R_{DS(on)}=14.1m\Omega$, \$0.8039 USD, SON-8 5x6mm
- BSC160N10NS3G	100V, $Q_g=15nC$, $R_{DS(on)}=17.8m\Omega$, \$0.8332 USD, SON-8 5x6mm
- NVMFS040N10MCL	

Q2 Alternatives:

1. BSZ096N10LS5	100V, $Q_g=22nC$, $R_{DS(on)}=9.6m\Omega$, \$1.3702 USD, SON-8FL 3x3mm, 11.0A
2. TPN1200APL	100V, $Q_g=24nC$, $R_{DS(on)}=11.5m\Omega$, \$0.8041 USD, SON-8 3x3mm, 11.0A low
3. BSZ110N08NS5	80V, $Q_g=15nC$, $R_{DS(on)}=13.4m\Omega$, \$0.8984 USD, SON-8FL 3x3mm, 11.0A low-ish
4. BSZ097N10NS5	100V, $Q_g=22nC$, $R_{DS(on)}=9.7m\Omega$, \$1.2293 USD, SON-8FL 3x3mm, 11.0A
5. BSC117N08NS5	80V, $Q_g=12nC$, $R_{DS(on)}=13.7m\Omega$, \$0.9156 USD, SON-8 5x6mm, 19.0A
6. ISC0805NLS	100V, $Q_g=20nC$, $R_{DS(on)}=7.8m\Omega$, \$1.0070 USD, SON-8 5x6mm, 13.0A no stock, EOL
7. BSC0805LS	100V, $Q_g=20nC$, $R_{DS(on)}=7.0m\Omega$, \$0.4368 USD, SON-8 5x6mm, 14.0A EOL
8. BSC098N10NS5	100V, $Q_g=17nC$, $R_{DS(on)}=10.2m\Omega$, \$0.7441 USD, SON-8 5x6mm, 11.0A
9. S1R82ADP	100V, $Q_g=30nC$, $R_{DS(on)}=7.7m\Omega$, \$1.4015 USD, SON-8 5x6mm, 17.6A
10. S1R876ADP	100V, $Q_g=26nC$, $R_{DS(on)}=9.5m\Omega$, \$1.0008 USD, SON-8 5x6mm, 15.2A
- NVMFS015N10MCL, NVMFS021N10MCL, TPH1400ANH, BSZ084N08NS5, BSC072N08NS5, FDM586101 (???)	



PWR_FLAG → VBAT

PWR_FLAG → PGND

PWR_FLAG → VIN

PWR_FLAG → VCC

PWR_FLAG → VOUT

PWR_FLAG → AGND

An independent prototype design for the Super Step Down V3
By Julian Joaquin
UBCO Aerospace Club

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Title: Super Step Down P3A2

Size: A3 Date: 2025-09-30 Rev: B
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