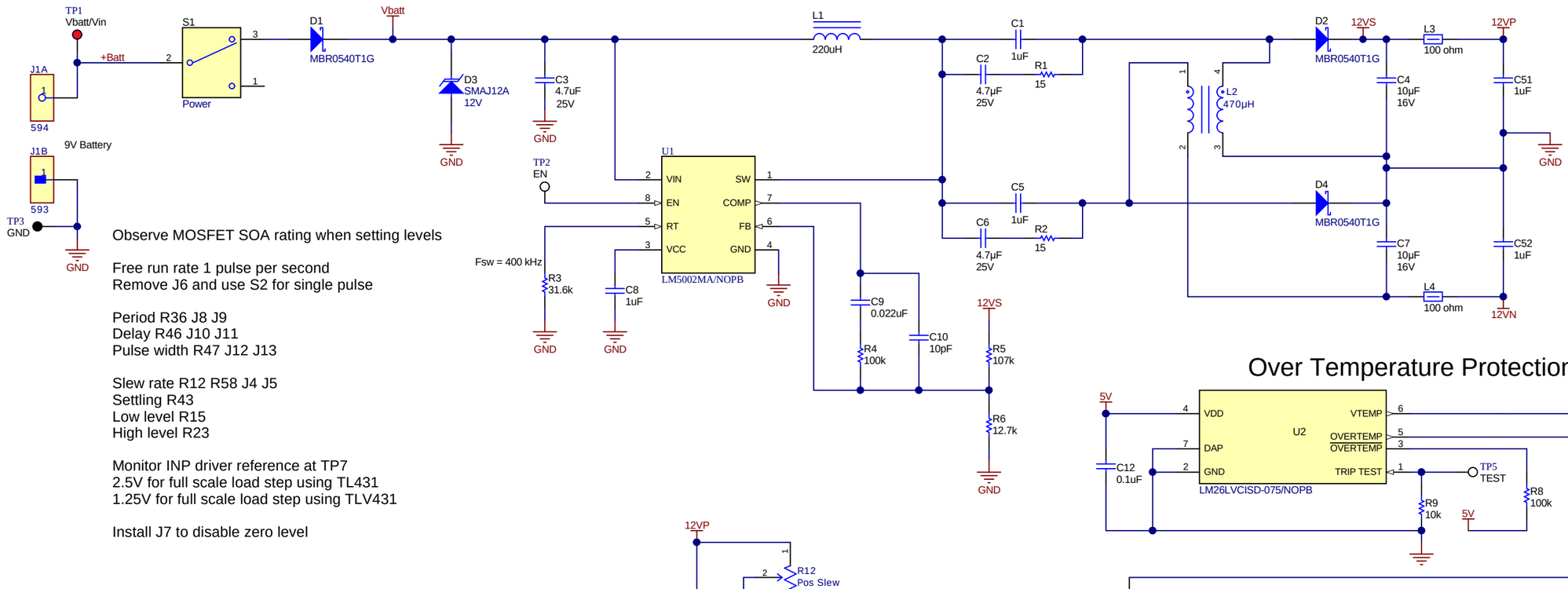
Input Voltage = 6Vin to 12Vin

Dual Output Power Supply



Observe MOSFET SOA rating when setting levels

Free run rate 1 pulse per second
Remove J6 and use S2 for single pulse

Period R36 J8 J9
Delay R46 J10 J11
Pulse width R47 J12 J13

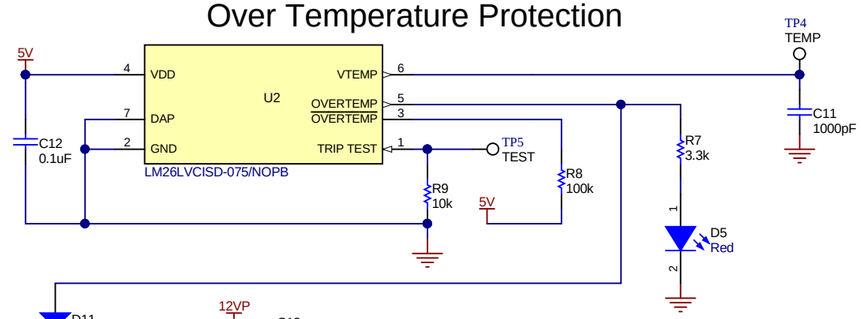
Slew rate R12 R58 J4 J5
Settling R43
Low level R15
High level R23

Monitor INP driver reference at TP7
2.5V for full scale load step using TL431
1.25V for full scale load step using TLV431

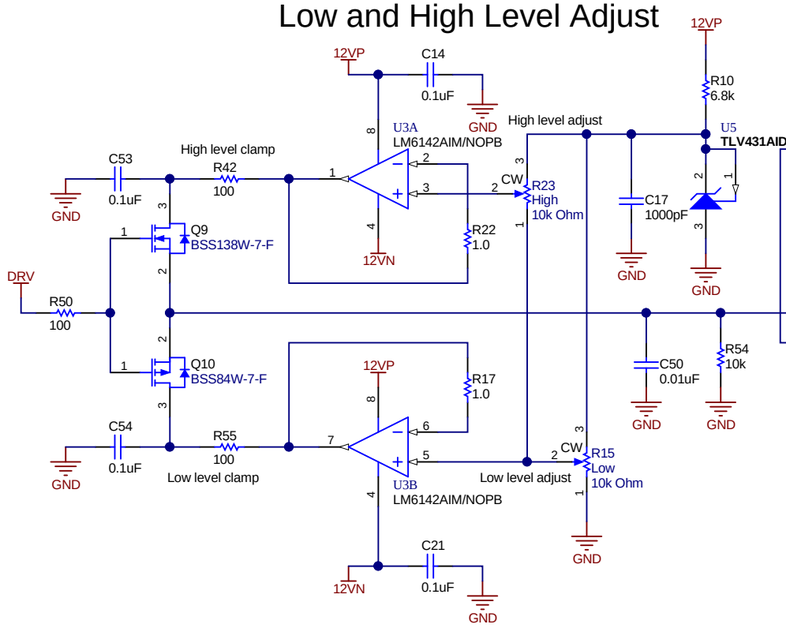
Install J7 to disable zero level

SOA	PSMN008-75B	
DC	3A 75V	11A 20V
10ms	6A 75V	22A 20V
1ms	17A 75V	62A 20V
100us	100A 75V	

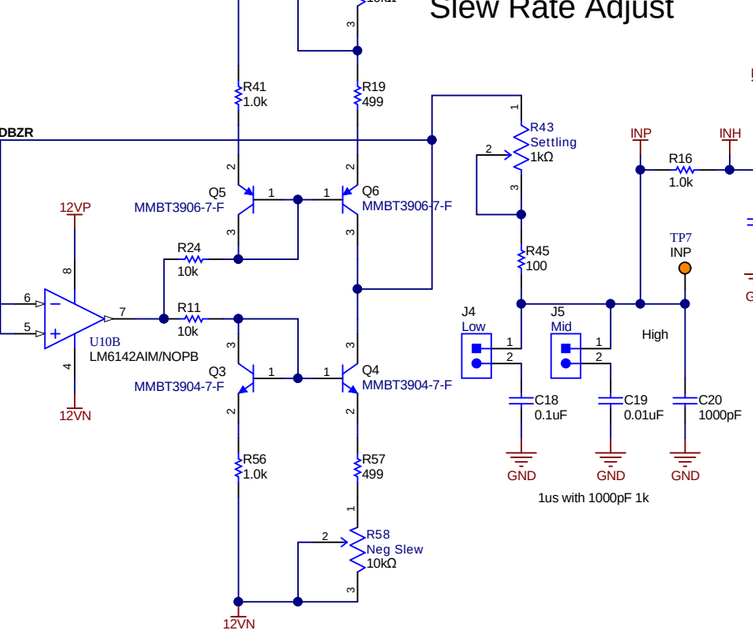
Over Temperature Protection



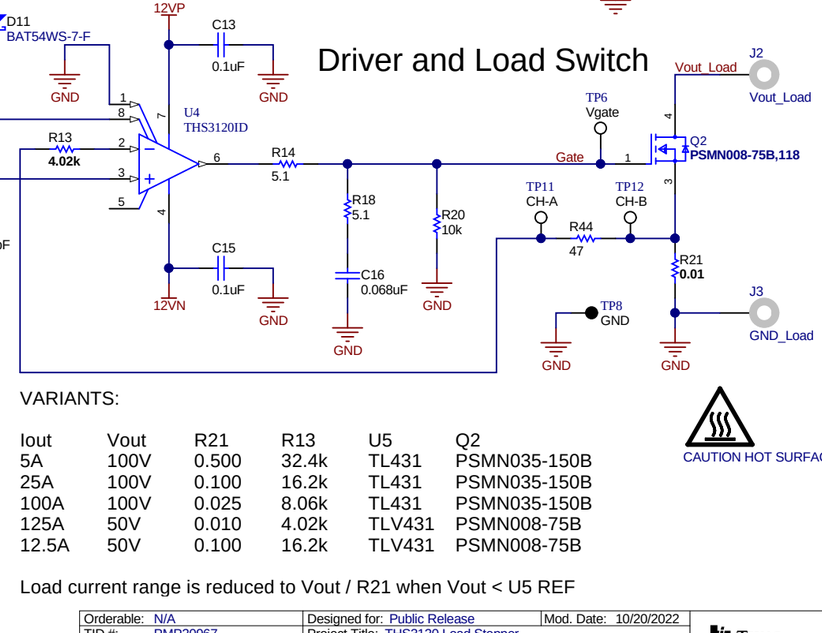
Low and High Level Adjust



Slew Rate Adjust



Driver and Load Switch



VARIANTS:

Iout	Vout	R21	R13	U5	Q2
5A	100V	0.500	32.4k	TL431	PSMN035-150B
25A	100V	0.100	16.2k	TL431	PSMN035-150B
100A	100V	0.025	8.06k	TL431	PSMN035-150B
125A	50V	0.010	4.02k	TLV431	PSMN008-75B
12.5A	50V	0.100	16.2k	TLV431	PSMN008-75B

Load current range is reduced to Vout / R21 when Vout < U5 REF

CAUTION HOT SURFACE

Orderable: N/A	Designed for: Public Release	Mod. Date: 10/20/2022
TID #: PMP20967	Project Title: THS3120 Load Stepper	
Number: PMP20967 Rev: C	Sheet Title:	
SVN Rev: Not in version control	Assembly Variant: 125A 50V	Sheet: 1 of 3
Drawn By:	File: PMP20967C_Sh1.SchDoc	Size: B
Engineer: R. Sheehan	Contact: http://www.ti.com/support	

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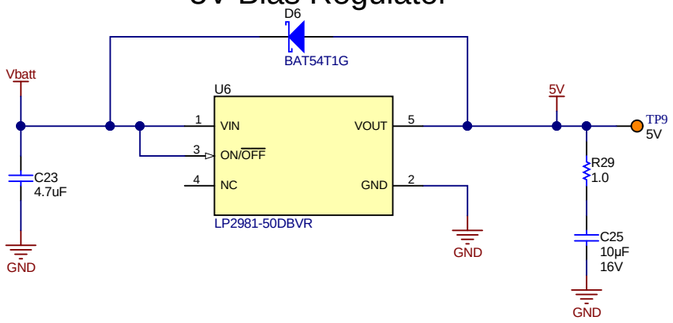
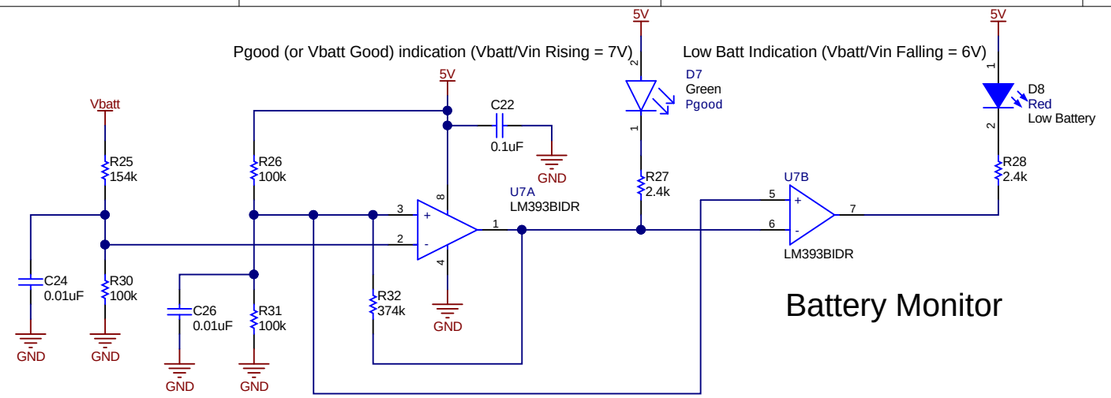
5V Bias Regulator



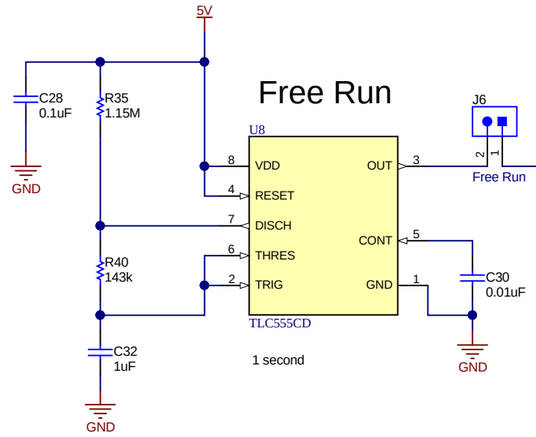
Pgood (or Vbatt Good) indication (Vbatt/Vin Rising = 7V)

Low Batt Indication (Vbatt/Vin Falling = 6V)

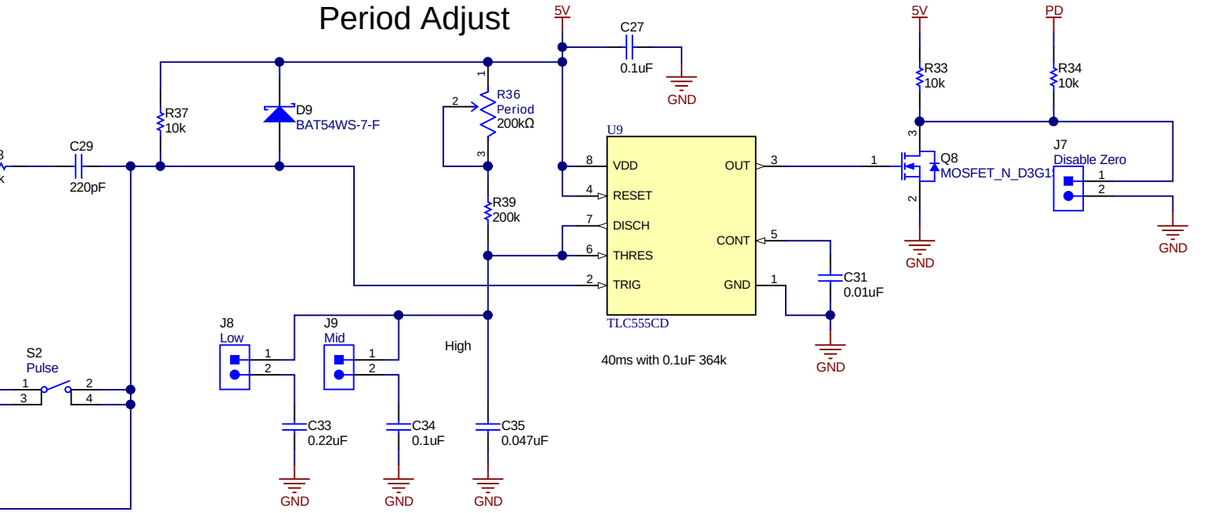


Battery Monitor

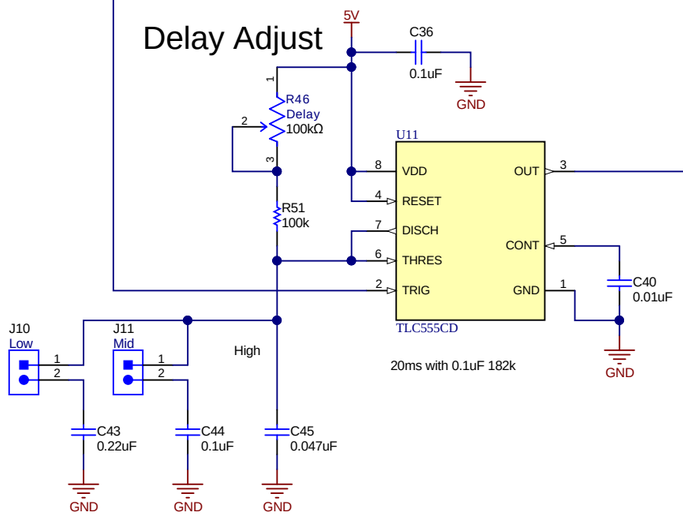
Free Run



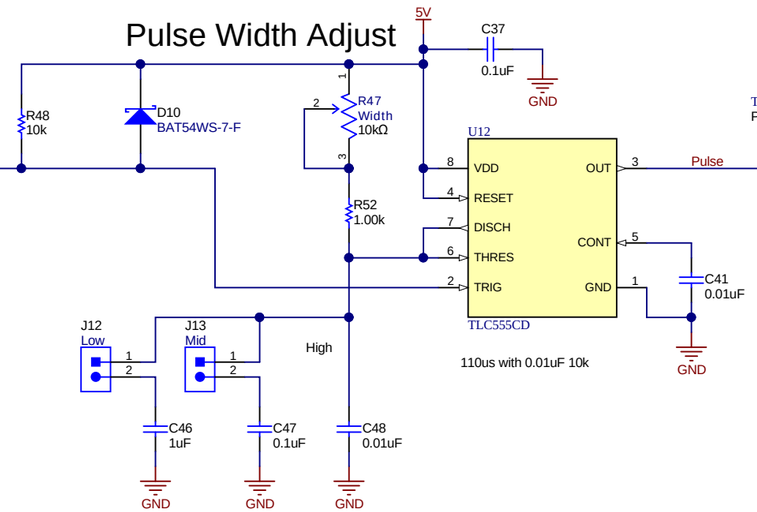
Period Adjust



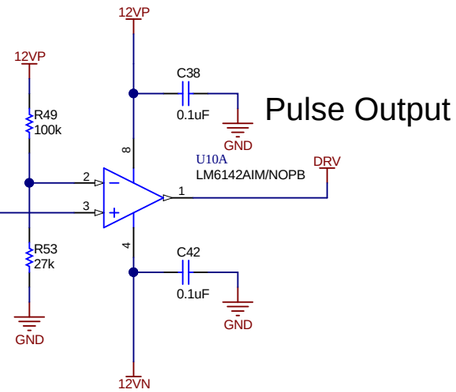
Delay Adjust



Pulse Width Adjust



Pulse Output



Orderable: N/A		Designed for: Public Release	Mod. Date: 10/20/2022
TID #: PMP20967		Project Title: THS3120 Load Stepper	
Number: PMP20967	Rev: C	Sheet Title:	
SVN Rev: Not in version control		Assembly Variant: 125A 50V	Sheet: 2 of 3
Drawn By:		File: PMP20967C_Sh2.SchDoc	Size: B
Engineer: R. Sheehan		Contact: http://www.ti.com/support	

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H1 1
NY PMS 440 0025 PH

H2 1
NY PMS 440 0025 PH

H3 1
NY PMS 440 0025 PH

H4 1
NY PMS 440 0025 PH

H5
Nut

H6
Nut

H7
Nut

H8
Nut

PCB Number: PMP20967
PCB Rev: C

PCB
LOGO
FCC disclaimer

PCB
LOGO
WEEE logo

LBL1
PCB Label
Label

Variant/Label Table	
Variant	Label Text
5A 100V	5A 100V R21 = 0.500 ohm
25A 100V	25A 100V R21 = 0.100 ohm
100A 100V	100A 100V R21 = 0.025 ohm
125A 50V	125A 50V R21 = 0.010 ohm
12.5A 50V	12.5A 50V R21 = 0.100 ohm

Orderable: N/A		Designed for: Public Release	Mod. Date: 10/20/2022
TID #: PMP20967		Project Title: THS3120 Load Stepper	
Number: PMP20967	Rev: C	Sheet Title:	
SVN Rev: Not in version control		Assembly Variant: 125A 50V	Sheet: 3 of 3
Drawn By:		File: PMP20967C_Sh3.SchDoc	Size: B
Engineer: R. Sheehan		Contact: http://www.ti.com/support	

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