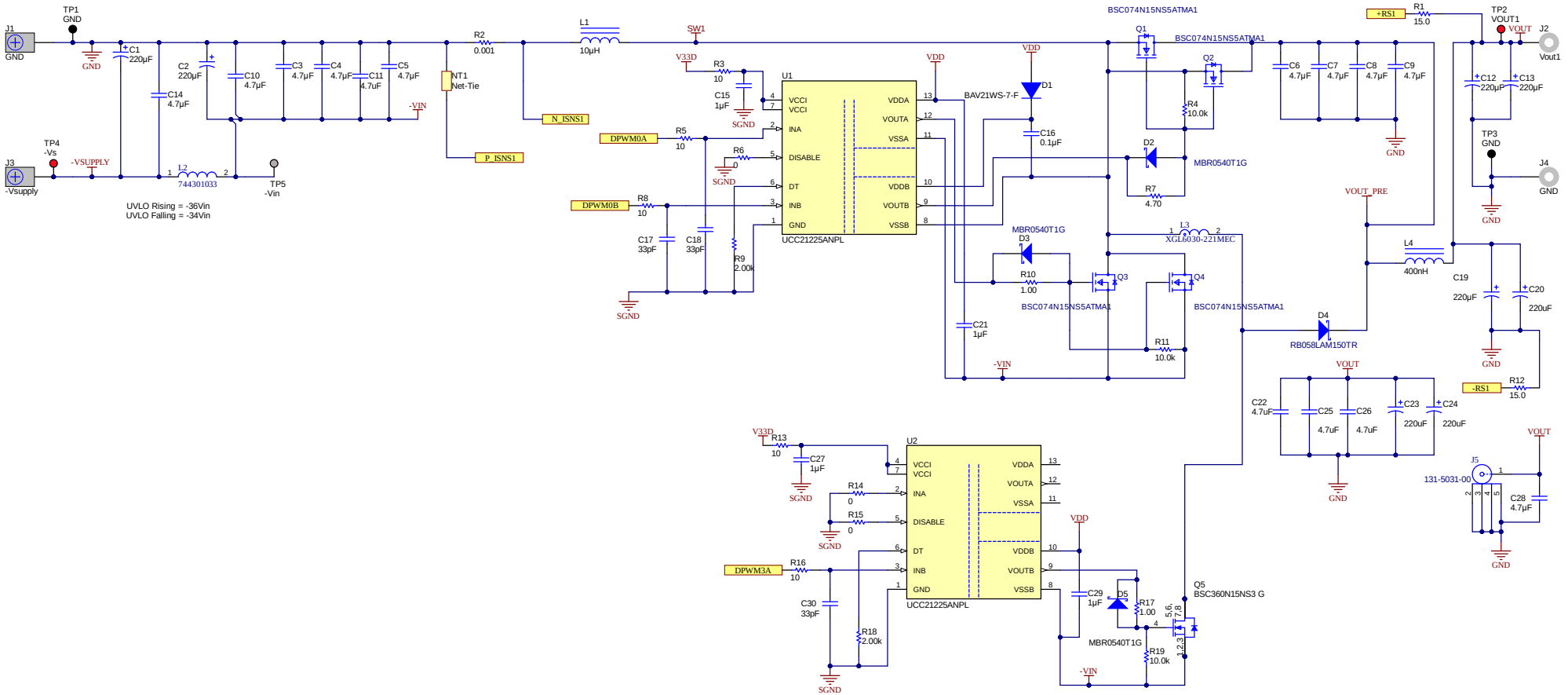
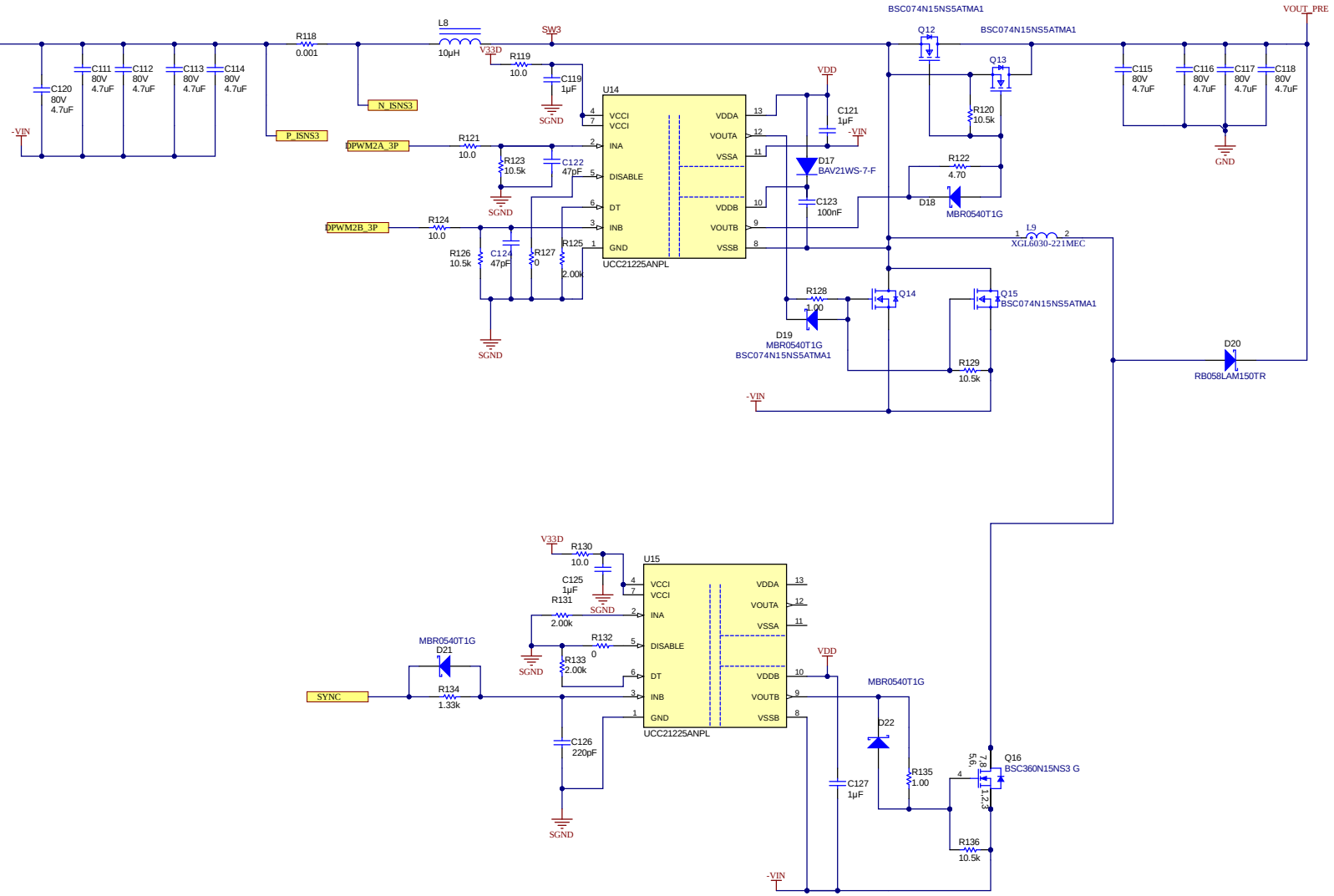
Input Voltage = -36V to -62V

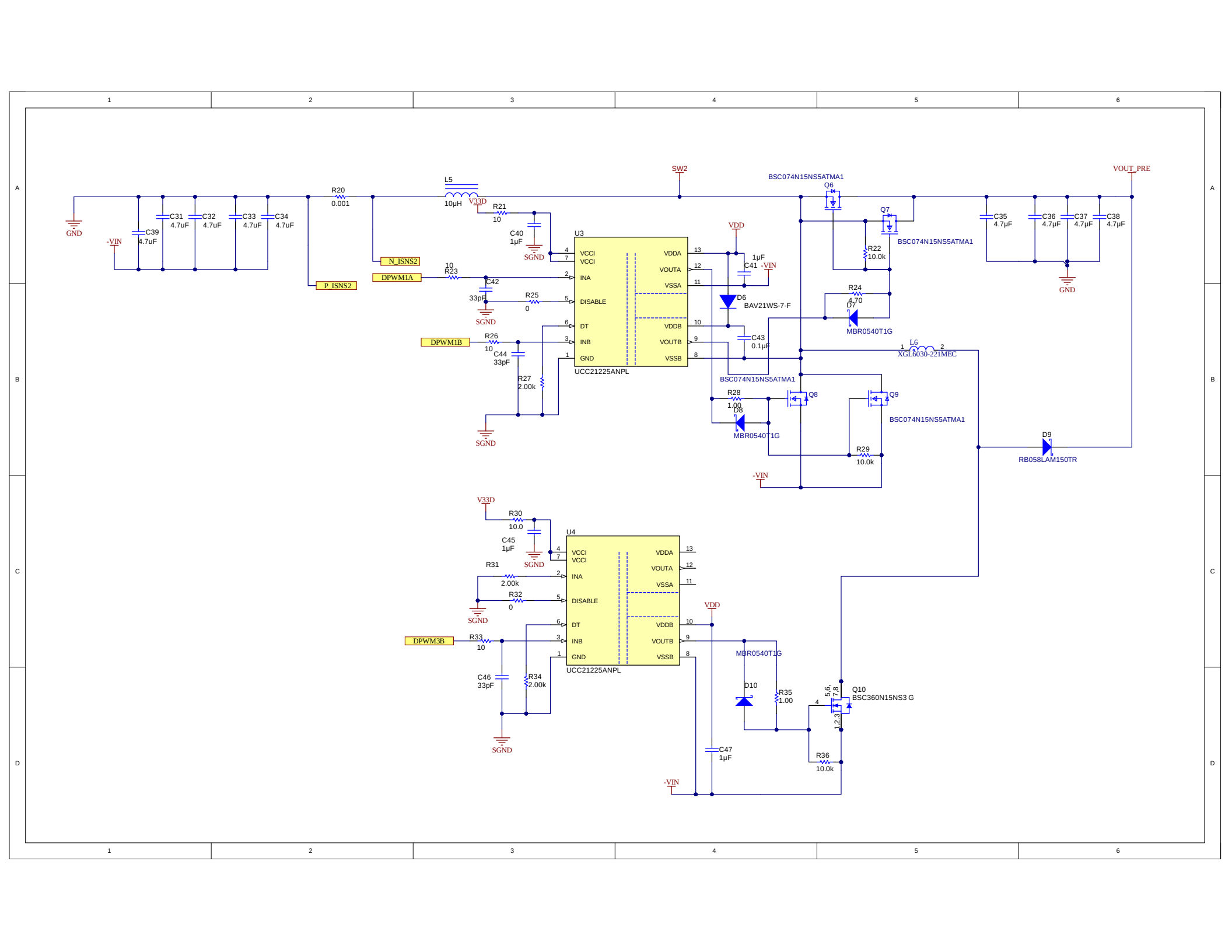
Vout1 = 38V to 52V

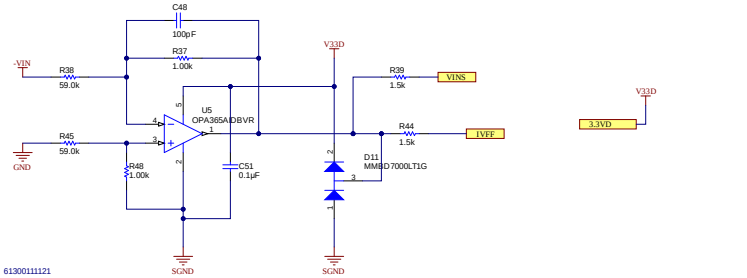


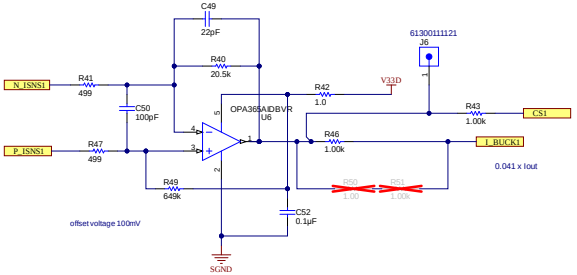
Orderable: ChangeMe!		Designed for: Public Release	Mod. Date: 12/14/2022
TID #: PMP20587		Project Title: UCD3138 Digital Inverting Buck Boost	
Number: PMP20587	Rev: E	Sheet Title:	
SVN Rev: Not in version control		Assembly Variant: 001	Sheet: 1 of 6
Drawn By:		File: PMP20587_REVE_Sheet1.SchDoc	Size: B
Engineer: Sean Xu & Sean Yu		Contact: http://www.ti.com/support	http://www.ti.com



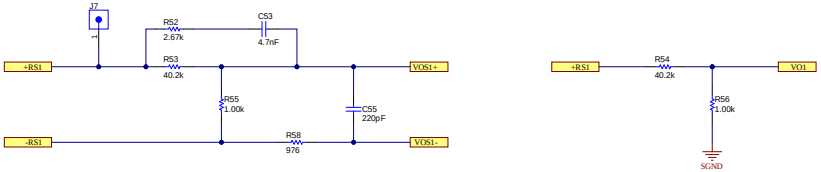
Orderable: ChangeMe!		Designed for: Public Release	Mod. Date: 12/14/2022
TID #: PMP20587		Project Title: UCD3138 Digital Inverting Buck Boost	
Number: PMP20587	Rev: E	Sheet Title:	
SVN Rev: Not in version control		Assembly Variant: 001	Sheet: 2 of 6
Drawn By:		File: PMP20587_REVE_Sheet6.SchDoc	Size: B
Engineer: Sean Xu & Sean Yu		Contact: http://www.ti.com/support	http://www.ti.com

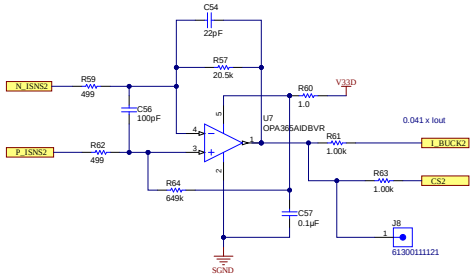

GND
-VIN
C39 4.7uF
C31 4.7uF
C32 4.7uF
C33 4.7uF
C34 4.7uF
R20 0.001
P_ISNS2
N_ISNS2
L5 10µH
V33D
R21 10
C40 1µF
SGND
DPWM1A
R23 10
C42 33pF
R25 0
DPWM1B
R26 10
C44 33pF
R27 2.00k
U3
VCCI
VCCI
INA
DISABLE
DT
INB
GND
VDDA
VOUTA
VSSA
VDDB
VOUTB
VSSB
UCC21225ANPL
SW2
VDD
C41 1µF
D6 BAV21WS-7-F
C43 0.1µF
BSC074N15NS5ATMA1
Q6
Q7
R22 10.0k
R24 4.70
D7 MBR0540T1G
L6 XGL6030-221MEC
R28 1.00
Q8
Q9
D8 MBR0540T1G
R29 10.0k
D9 RB058LAM150TR
VOUT_PRE
C35 4.7uF
C36 4.7uF
C37 4.7uF
C38 4.7uF
V33D
R30 10.0
C45 1µF
R31 2.00k
R32 0
DPWM3B
R33 10
C46 33pF
R34 2.00k
U4
MBR0540T1G
D10
R35 1.00
Q10 BSC360N15NS3 G
C47 1µF
R36 10.0k



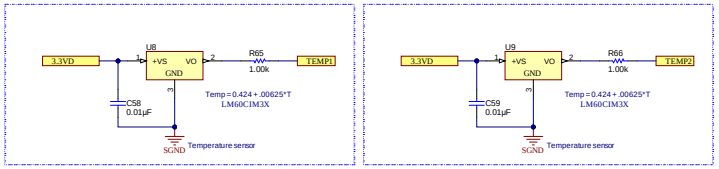


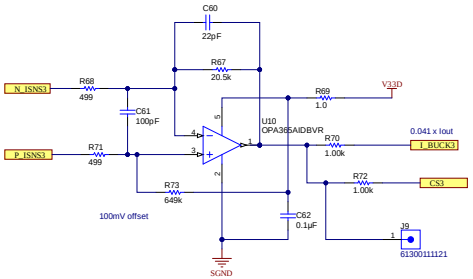
Current Sense Amplifier (Low Offset/ X50)



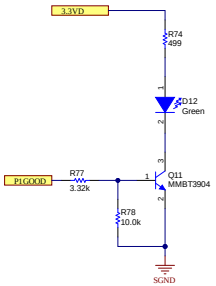


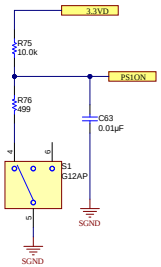
Current Sense Amplifier (Low Offset)



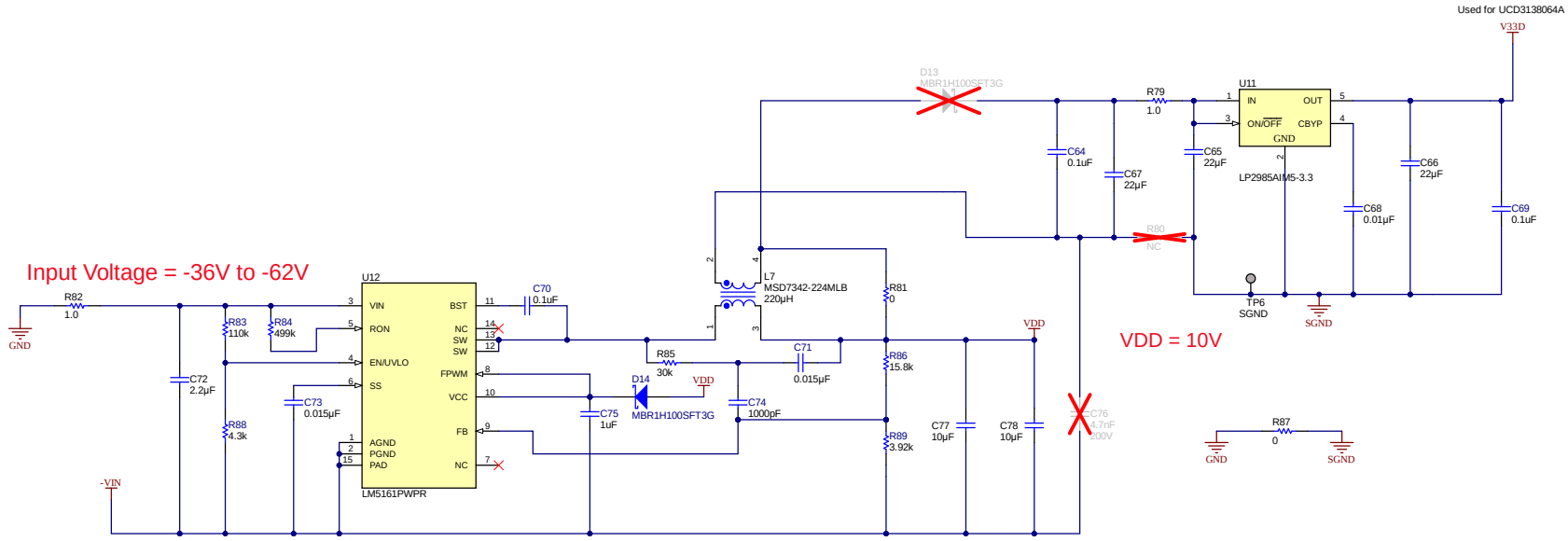


Current Sense Amplifier (Low Offset/ X50)





ON/OFF Manual Switching and noise conditioning



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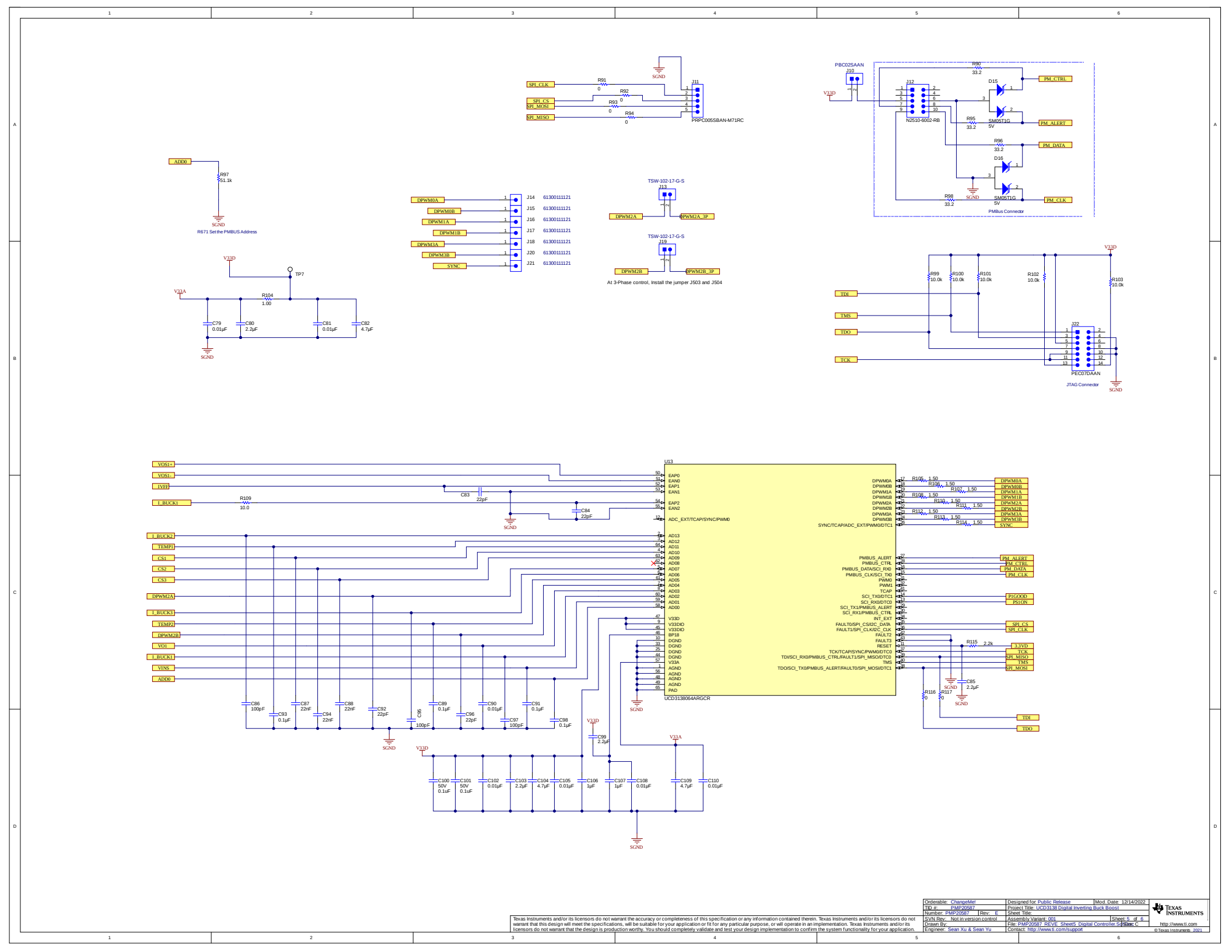
TID #: PMP20587		Project Title: UCD3138 Digital Inverting Buck Boost	
Number: PMP20587	Rev: E	Sheet Title:	
SVN Rev: Not in version control		Assembly Variant: 001	Sheet: 4 of 6
Drawn By:		File: PMP20587_REVE_Sheet4.SchDoc	Size: B
Engineer: Sean Xu & Sean Yu		Contact: http://www.ti.com/support	



Orderable: ChangeMe!	Designed for: Public Release	Mod. Date: 12/14/2022
TID #: PMP20587	Project Title: UCD3138 Digital Inverting Buck Boost	
Number: PMP20587 Rev: E	Sheet Title:	
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 5 of 6
Drawn By:	File: PMP20587_REVE_Sheet5_Digital Controller.SchDoc	Size: C
Engineer: Sean Xu & Sean Yu	Contact: http://www.ti.com/support	

TEXAS INSTRUMENTS
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H1 NY PMS 440 0025 PH

H2 NY PMS 440 0025 PH

H3 NY PMS 440 0025 PH

H4 NY PMS 440 0025 PH

H5 1902C

H6 1902C

H7 1902C

H8 1902C

FID1 FID2 FID3

PCB Number: PMP20587
PCB Rev: E

PCB
LOGO
FCC disclaimer

Variant/Label Table	
Variant	Label Text
001	

ZZ1
Label Assembly Note
This Assembly Note is for PCB labels only

ZZ2
Assembly Note
These assemblies are ESD sensitive, ESD precautions shall be observed.

ZZ3
Assembly Note
These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.

ZZ4
Assembly Note
These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

Orderable: ChangeMe!		Designed for: Public Release	Mod. Date: 12/14/2022
TID #: PMP20587		Project Title: UCD3138 Digital Inverting Buck Boost	
Number: PMP20587	Rev: E	Sheet Title:	
SVN Rev: Not in version control		Assembly Variant: 001	Sheet: 6 of 6
Drawn By:		File: PMP20587_REVE_Hardware.SchDoc	Size: B
Engineer: Sean Xu & Sean Yu		Contact: http://www.ti.com/support	

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