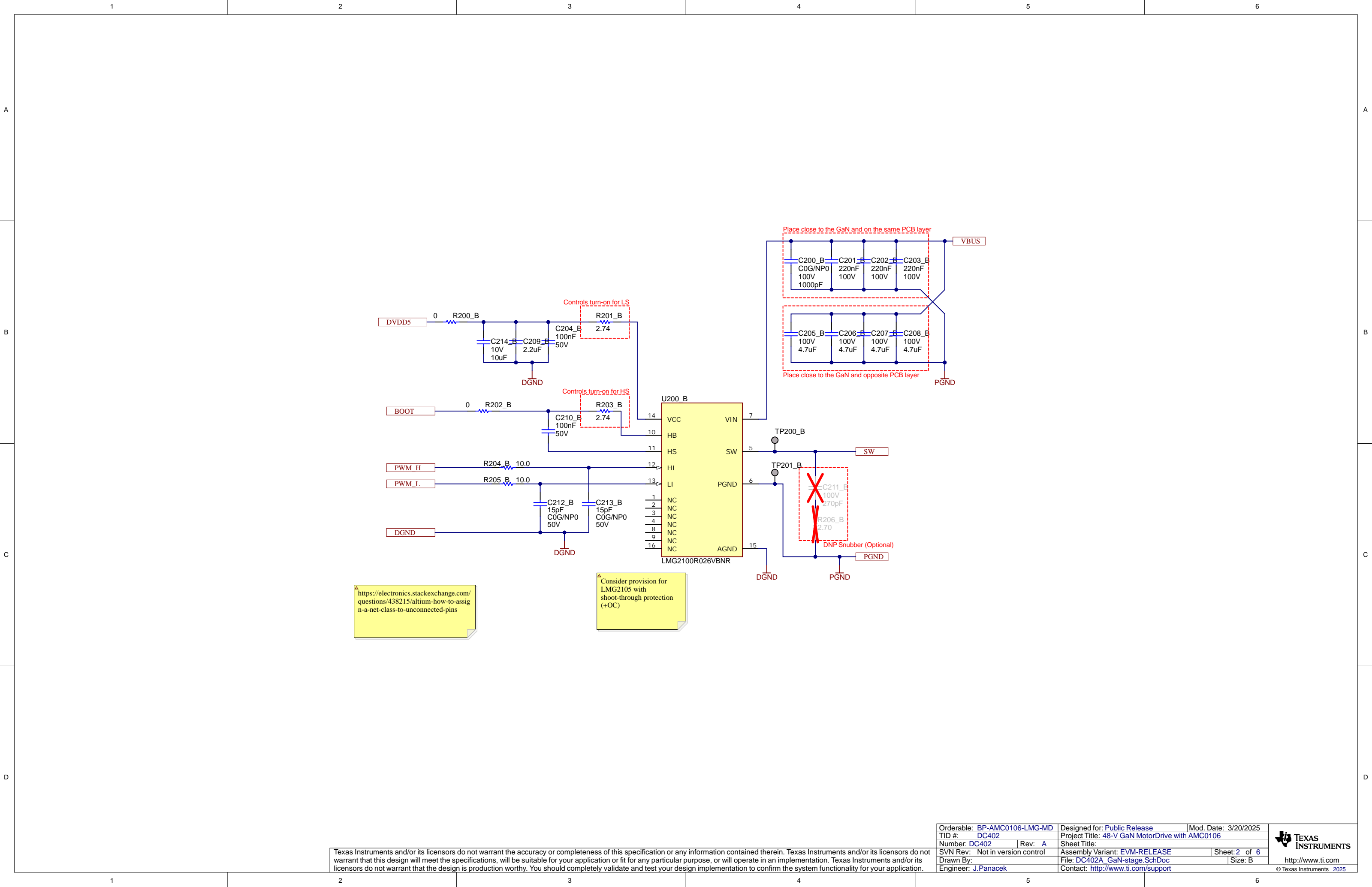


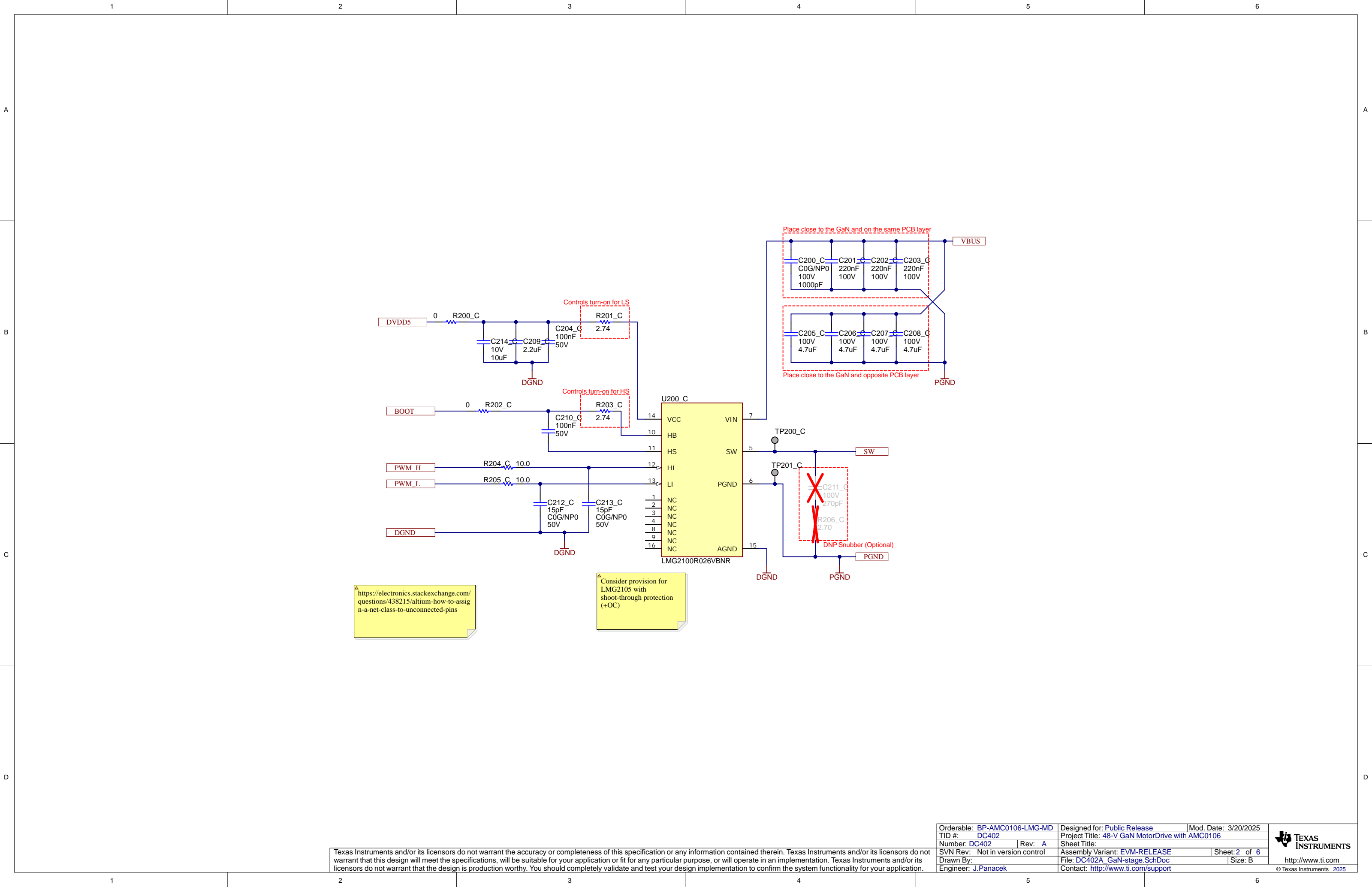
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Orderable: BP-AMC0106-LMG-MD	Designed for: Public Release	Mod. Date: 3/20/2025
TID #: DC402	Project Title: 48-V GaN MotorDrive with AMC0106	
Number: DC402	Rev: A	Sheet Title:
SVN Rev: Not in version control	Assembly Variant: EVM-RELEASE	Sheet: 2 of 6
Drawn By:	File: DC402A_GaN-stage.SchDoc	Size: B
Engineer: J.Panacek	Contact: http://www.ti.com/support	



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TID #: DC402	Project Title: 48-V GaN MotorDrive with AMC0106	
Number: DC402	Rev: A	Sheet Title:
SVN Rev: Not in version control	Assembly Variant: EVM-RELEASE	Sheet: 2 of 6
Drawn By:	File: DC402A_GaN-stage.SchDoc	Size: B
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TID #: DC402	Project Title: 48-V GaN MotorDrive with AMC0106	
Number: DC402	Rev: A	Sheet Title:
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Drawn By:	File: DC402A_GaN-stage.SchDoc	Size: B
Engineer: J.Panacek	Contact: http://www.ti.com/support	



PCB Number: DC402  
PCB Rev: A



LBL300  
PCB Label  
THT-14-423-10  
Size: 0.65" x 0.20 "

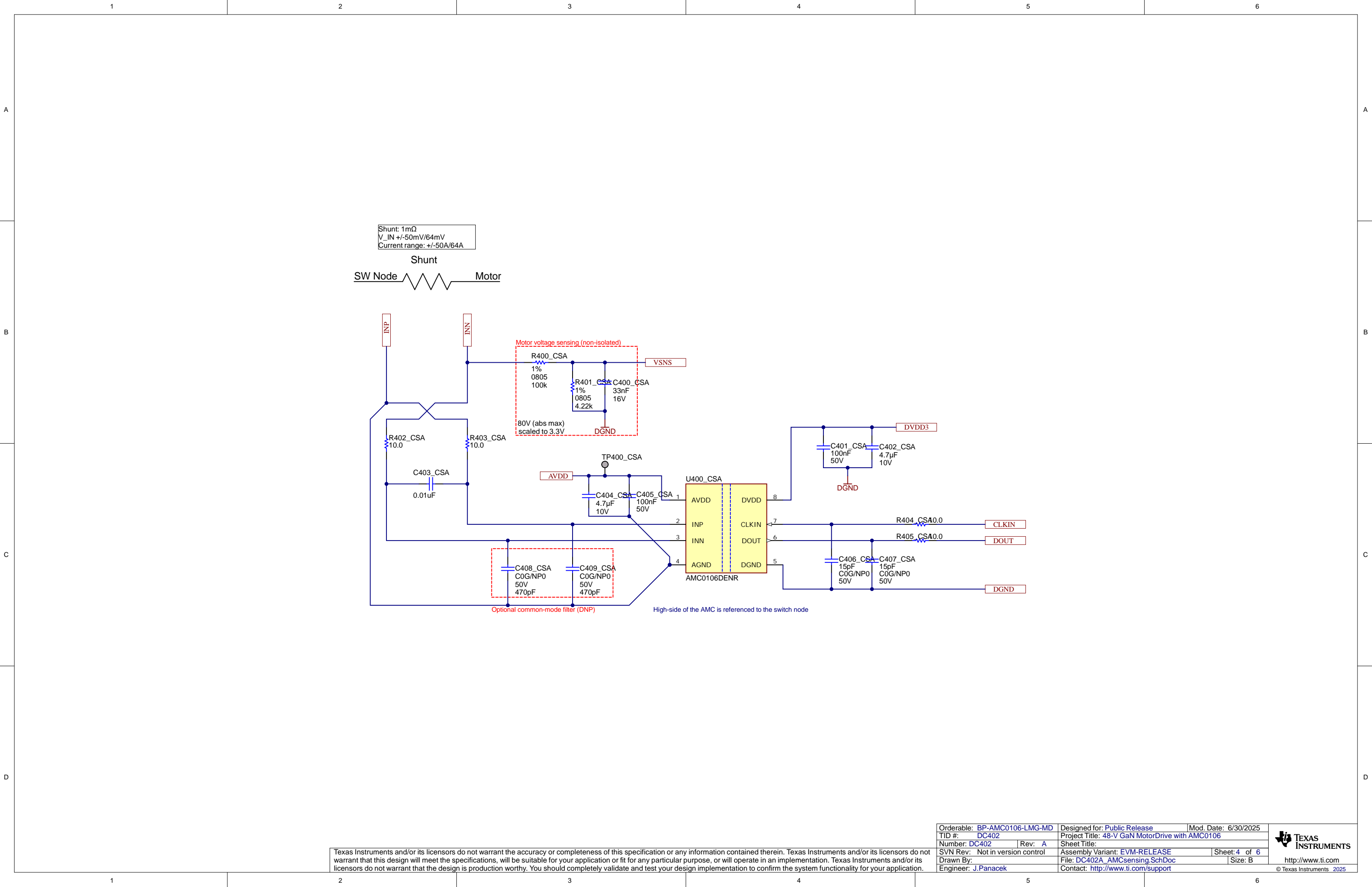
ZZ300  
Label Assembly Note  
This Assembly Note is for PCB labels only

ZZ301  
Assembly Note  
These assemblies are ESD sensitive, ESD precautions shall be observed.

ZZ302  
Assembly Note  
These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.

ZZ303  
Assembly Note  
These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.





Shunt: 1mΩ  
V\_IN +/-50mV/64mV  
Current range: +/-50A/64A

Shunt  
SW Node Motor

Motor voltage sensing (non-isolated)

R400\_CSA  
1%  
0805  
100k  
R401\_CSA  
1%  
0805  
4.22k  
C400\_CSA  
33nF  
16V  
80V (abs max)  
scaled to 3.3V  
DGND

VSNS

TP400\_CSA  
C404\_CSA  
4.7μF  
10V  
C405\_CSA  
100nF  
50V  
AVDD

U400\_CSA  
1  
2  
3  
4  
AVDD  
INN  
AGND  
AMC0106DENR

DVDD  
CLKIN  
DOUT  
DGND

DVDD3

C401\_CSA  
100nF  
50V  
C402\_CSA  
4.7μF  
10V  
DGND

R404\_CSA0.0  
CLKIN

R405\_CSA0.0  
DOUT

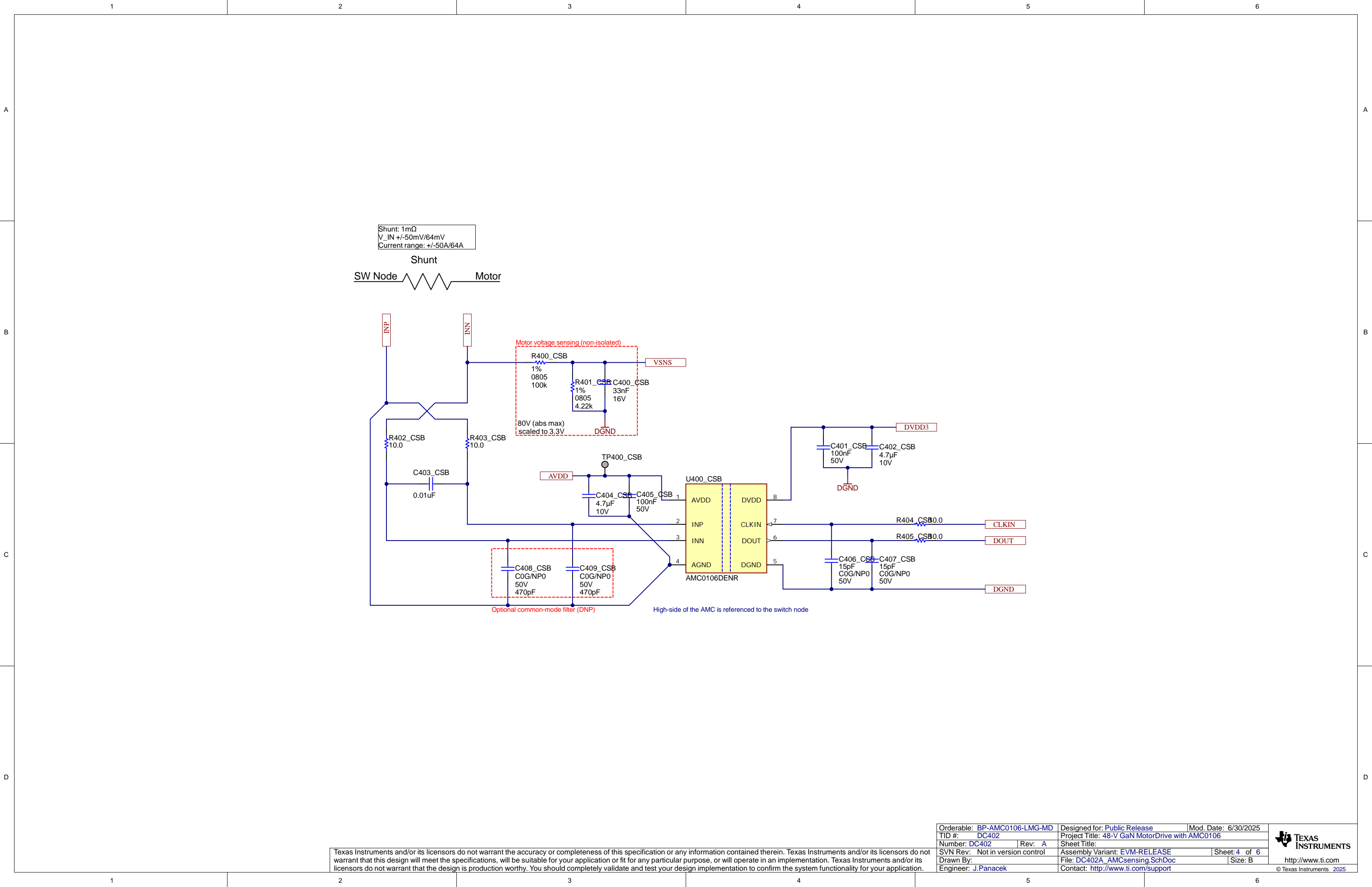
C406\_CSA  
15pF  
C0G/NP0  
50V  
C407\_CSA  
15pF  
C0G/NP0  
50V  
DGND

Optional common-mode filter (DNP)

High-side of the AMC is referenced to the switch node

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Orderable: BP-AMC0106-LMG-MD	Designed for: Public Release	Mod. Date: 6/30/2025
TID #: DC402	Project Title: 48-V GaN MotorDrive with AMC0106	
Number: DC402	Rev: A	Sheet Title:
SVN Rev: Not in version control	Assembly Variant: EVM-RELEASE	Sheet: 4 of 6
Drawn By:	File: DC402A_AMCsensing.SchDoc	Size: B
Engineer: J.Panacek	Contact: http://www.ti.com/support	



Shunt: 1mΩ  
V\_IN +/-50mV/64mV  
Current range: +/-50A/64A

Shunt  
SW Node Motor

Motor voltage sensing (non-isolated)

R400\_CSB  
1%  
0805  
100k  
R401\_CSB  
1%  
0805  
4.22k  
C400\_CSB  
33nF  
16V  
DGND

80V (abs max)  
scaled to 3.3V

TP400\_CSB

AVDD

C404\_CSB  
4.7μF  
10V  
C405\_CSB  
100nF  
50V

U400\_CSB

AVDD  
INP  
INN  
AGND  
AMC0106DENR  
DVDD  
CLKIN  
DOUT  
DGND

DVDD3

C401\_CSB  
100nF  
50V  
C402\_CSB  
4.7μF  
10V  
DGND

R404\_CSB  
0.0

CLKIN

R405\_CSB  
0.0

DOUT

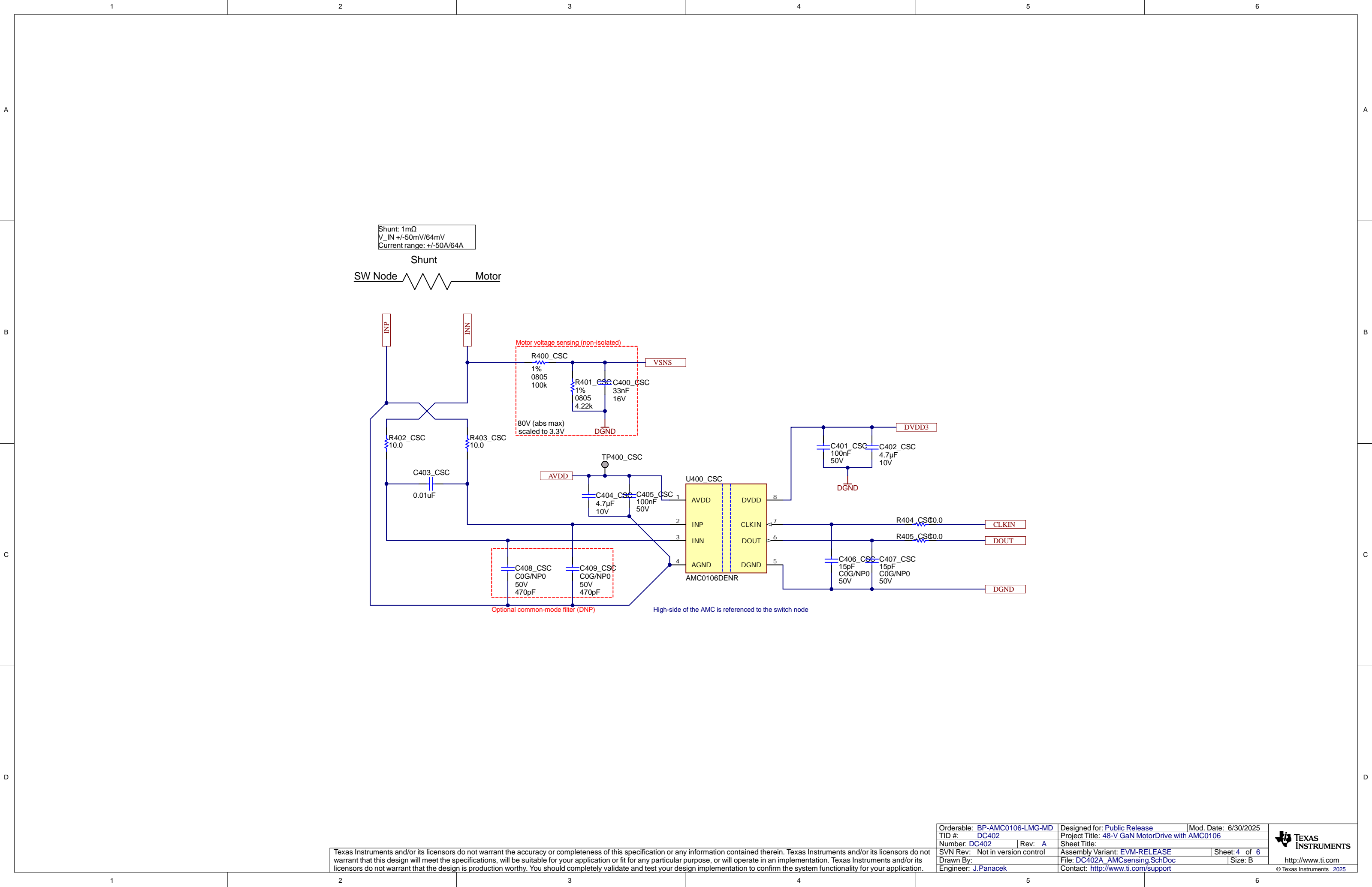
C408\_CSB  
C0G/NP0  
50V  
470pF  
C409\_CSB  
C0G/NP0  
50V  
470pF

Optional common-mode filter (DNP)

High-side of the AMC is referenced to the switch node

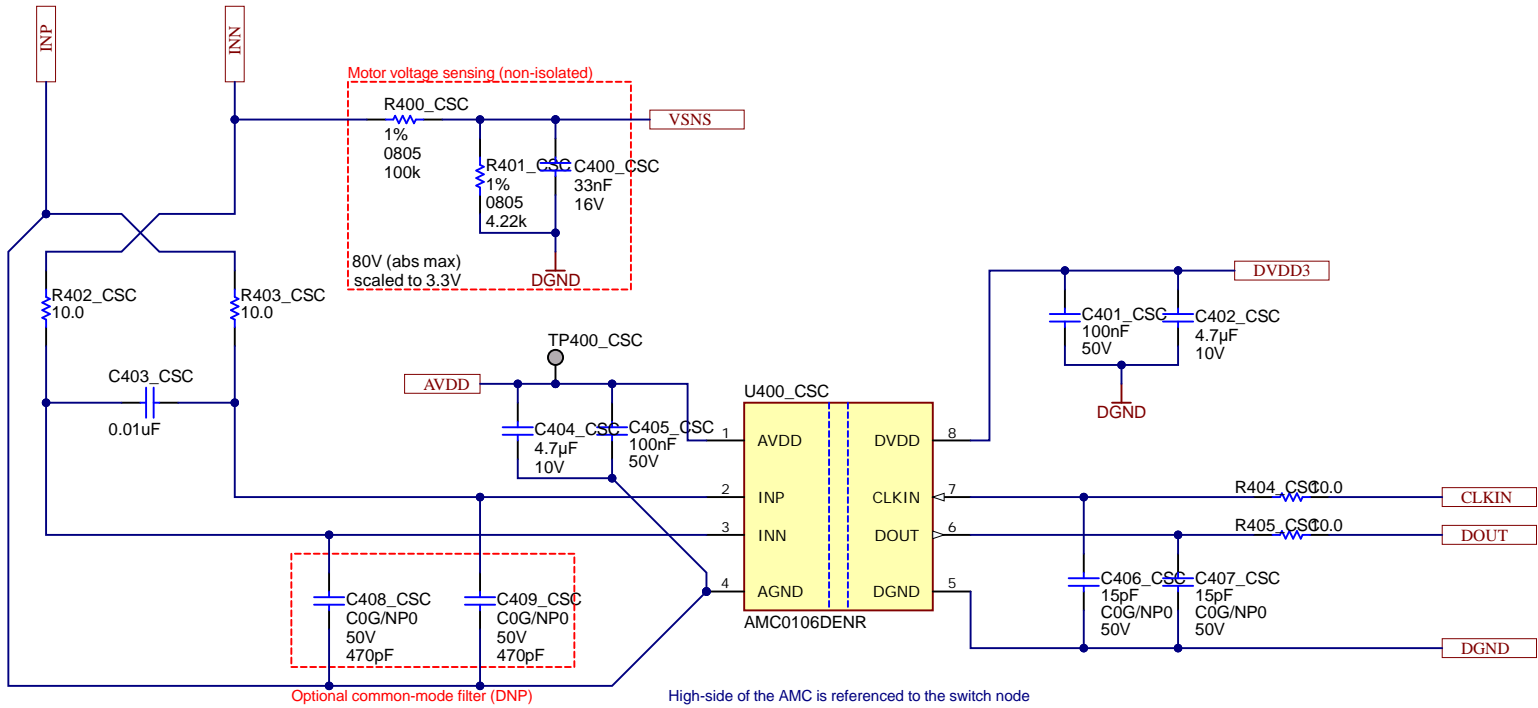
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TID #: DC402	Project Title: 48-V GaN MotorDrive with AMC0106	
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Drawn By:	File: DC402A_AMCsensing.SchDoc	Size: B
Engineer: J.Panacek	Contact: http://www.ti.com/support	



Shunt: 1mΩ  
V\_IN +/-50mV/64mV  
Current range: +/-50A/64A

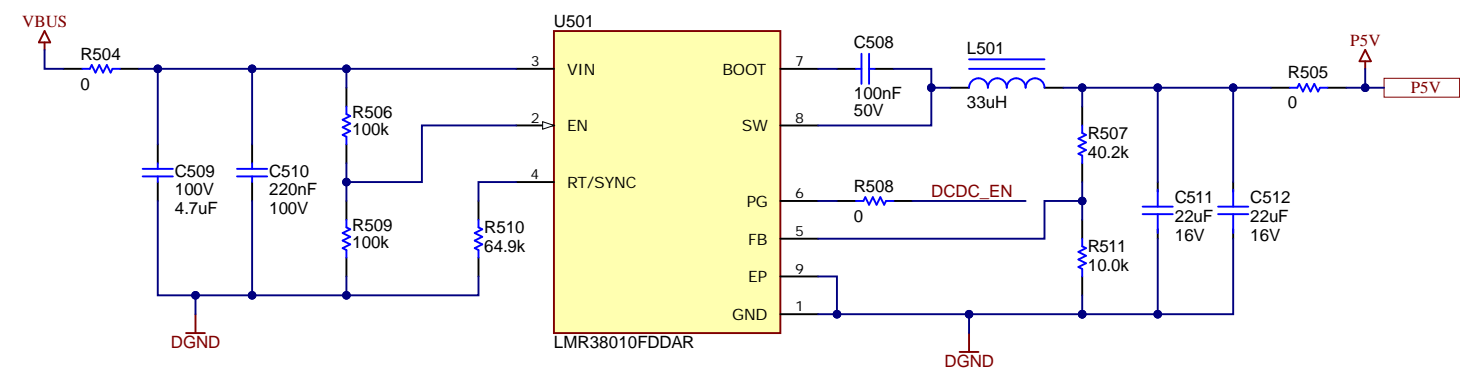
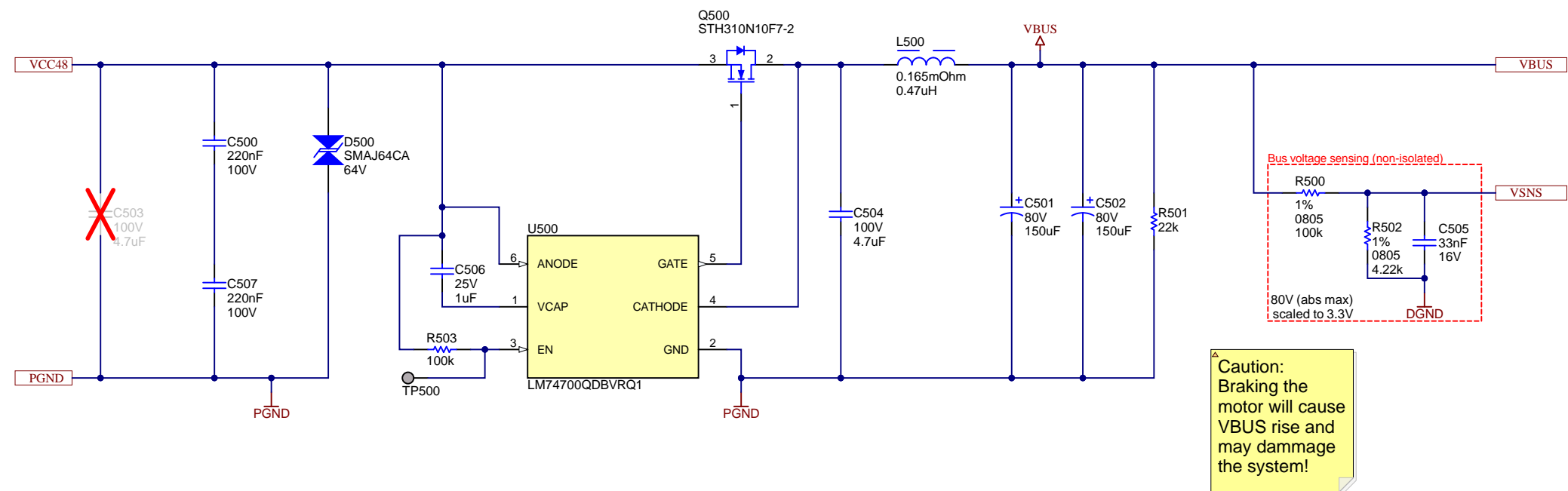
Shunt  
SW Node Motor



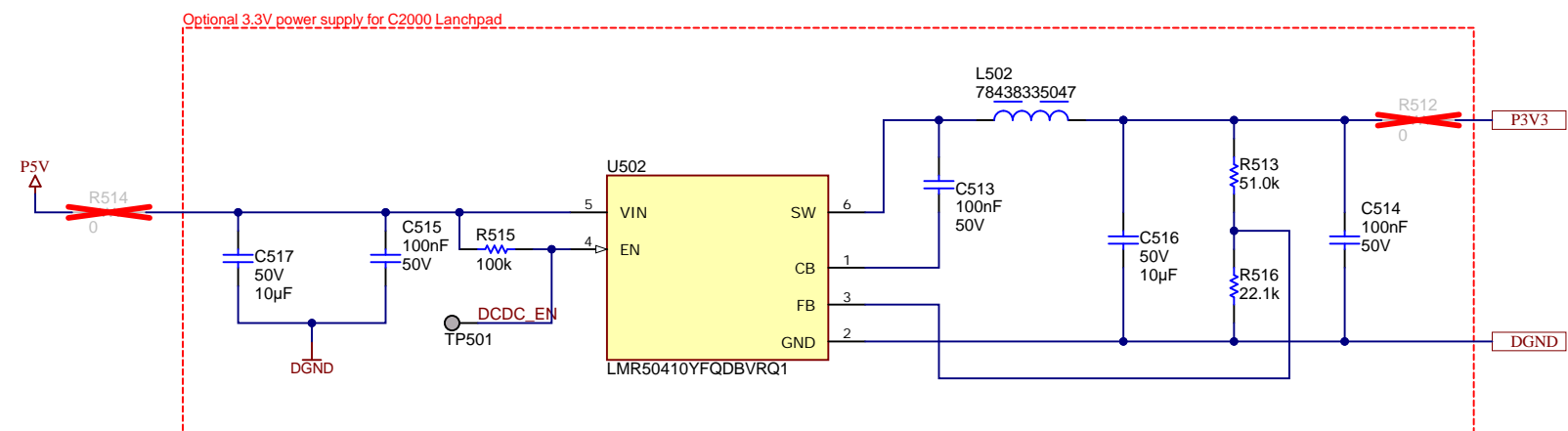
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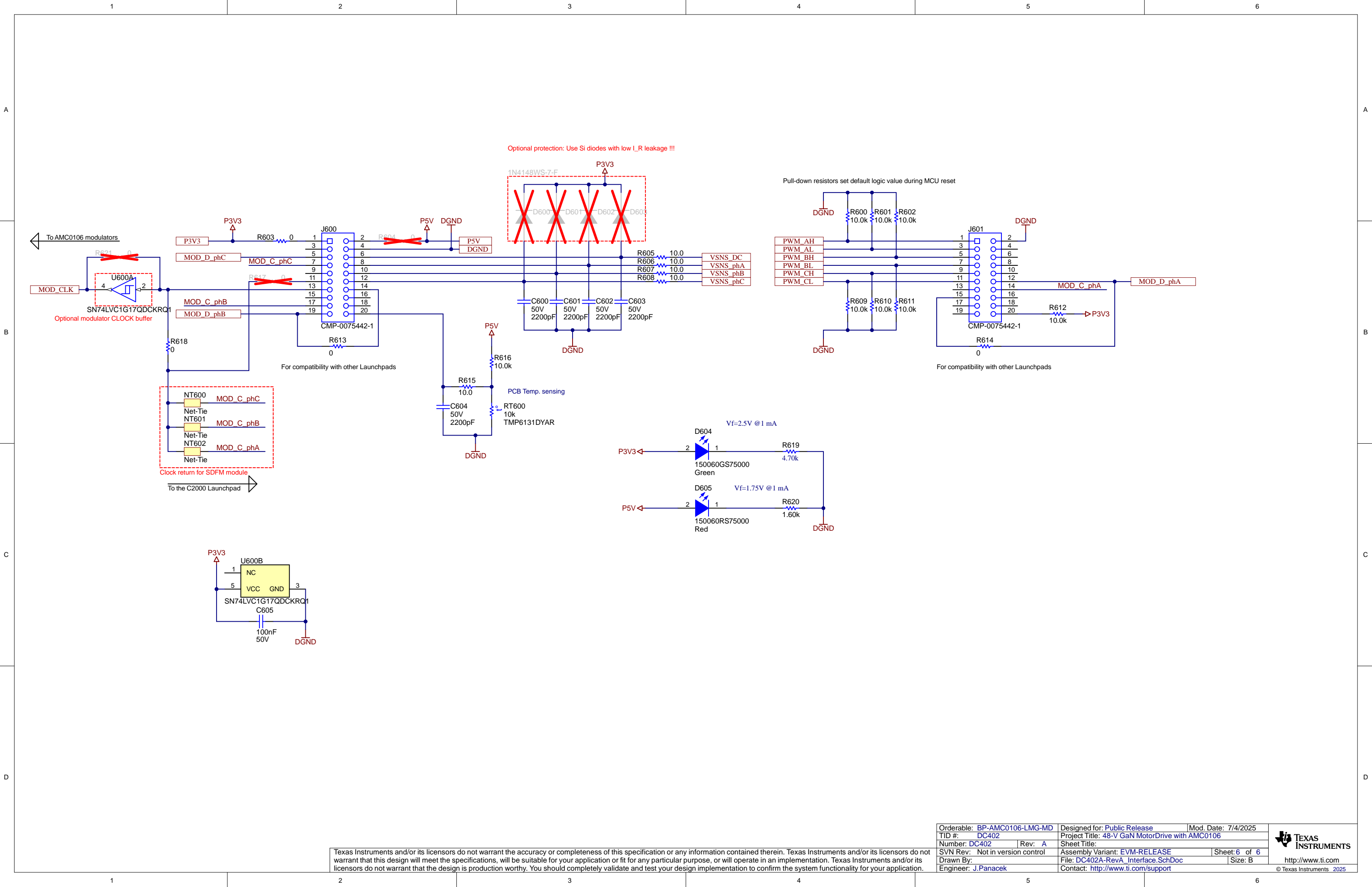
Orderable: BP-AMC0106-LMG-MD	Designed for: Public Release	Mod. Date: 6/30/2025
TID #: DC402	Project Title: 48-V GaN MotorDrive with AMC0106	
Number: DC402	Rev: A	Sheet Title:
SVN Rev: Not in version control	Assembly Variant: EVM-RELEASE	Sheet: 4 of 6
Drawn By:	File: DC402A_AMCsensing.SchDoc	Size: B
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Note: 0-ohm resistors allow for disconnecting power when supplied externally





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Orderable: BP-AMC0106-LMG-MD	Designed for: Public Release	Mod. Date: 7/4/2025
TID #: DC402	Project Title: 48-V GaN MotorDrive with AMC0106	
Number: DC402	Rev: A	Sheet Title:
SVN Rev: Not in version control	Assembly Variant: EVM-RELEASE	Sheet: 6 of 6
Drawn By:	File: DC402A-RevA_Interface.SchDoc	Size: B
Engineer: J.Panacek	Contact: http://www.ti.com/support	