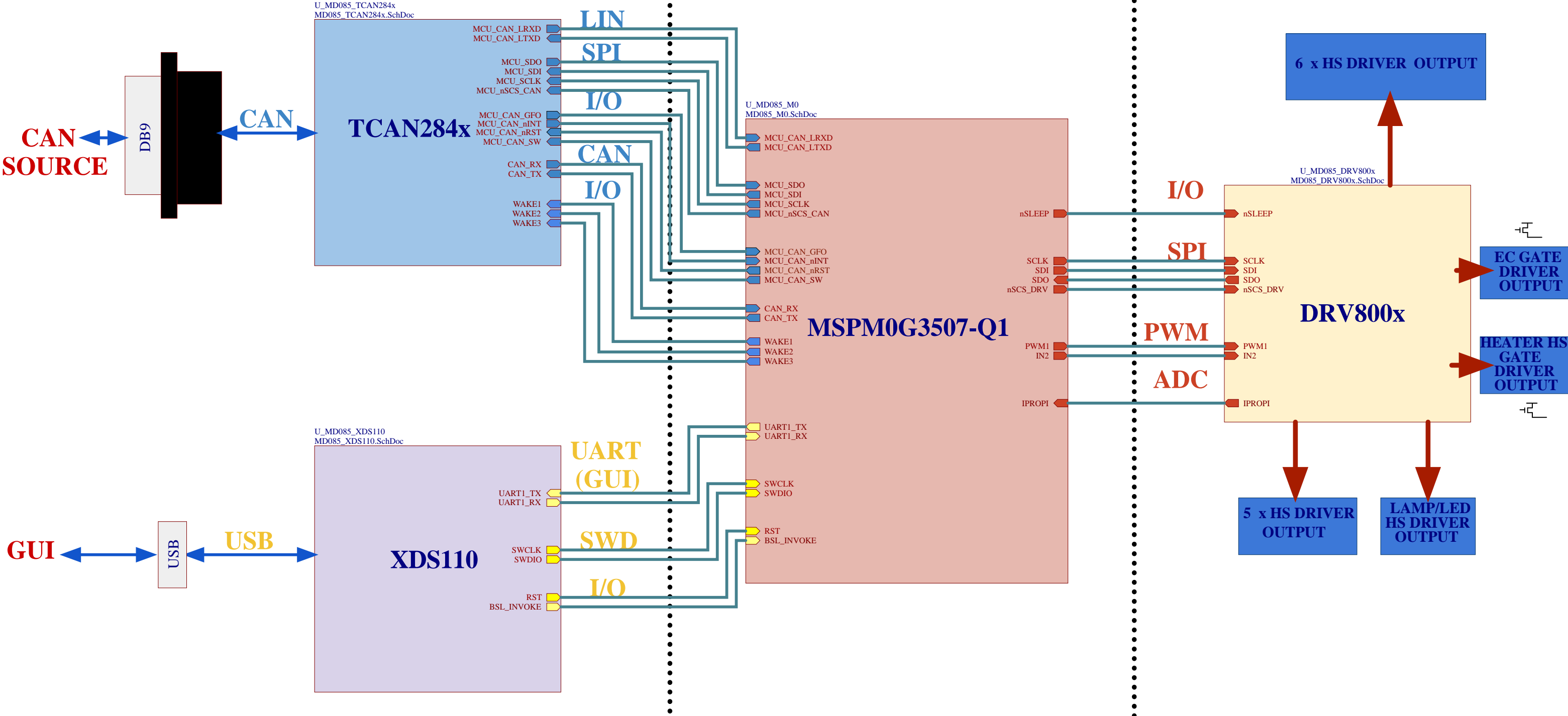


DRV800x-Q1 TOP LEVEL SCHEMATIC

INTERFACE/ DEBUGGER

PROCESSING

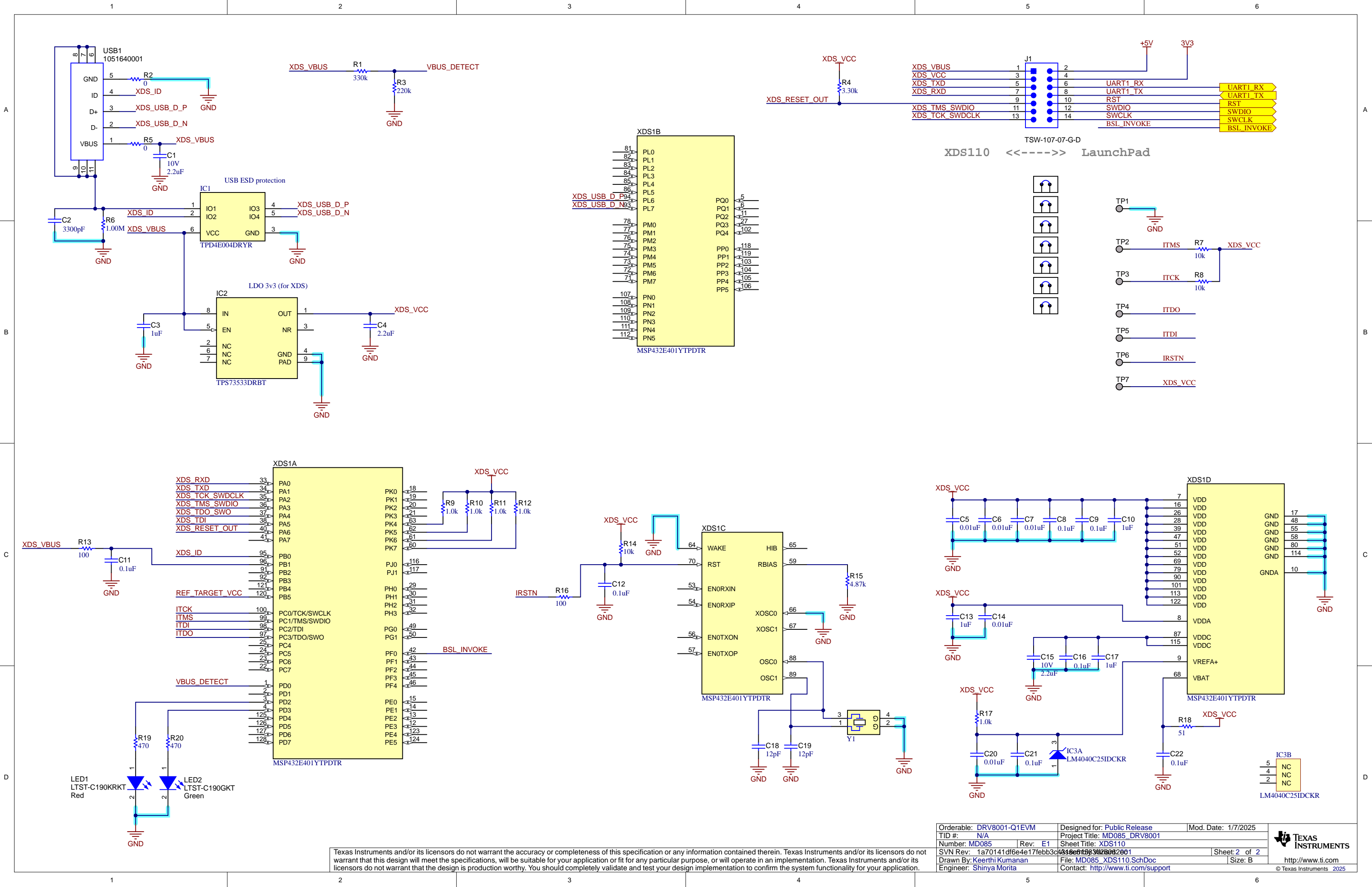
DRIVER + OUTPUTS



U_MD085_Hardware
MD085_Hardware.SchDoc

Texas Instruments and/or its licensors do not warrant the accuracy or completeness of this specification or any information contained therein. Texas Instruments and/or its licensors do not warrant that this design will meet the specifications, will be suitable for your application or fit for any particular purpose, or will operate in an implementation. Texas Instruments and/or its licensors do not warrant that the design is production worthy. You should completely validate and test your design implementation to confirm the system functionality for your application.

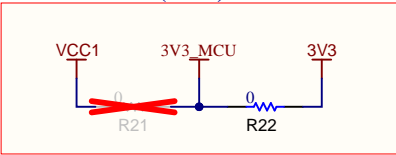
Orderable: DRV8001-Q1EVM	Designed for: Public Release	Mod. Date: 1/7/2025
TID #: N/A	Project Title: MD085_DRV8001	
Number: MD085	Rev: E1	Sheet Title: TOP LEVEL SCHEMATIC
SVN Rev:	Assembly Variant: 001	Sheet: 1 of 3
Drawn By: Keerthi Kumanan	File: MD085_DRV800x_Top_Level.SchDoc	Size: B
Engineer: Shinya Morita	Contact: http://www.ti.com/support	



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Orderable: DRV8001-Q1EVM	Designed for: Public Release	Mod. Date: 1/7/2025
TID #: N/A	Project Title: MD085_DRV8001	
Number: MD085	Rev: E1	Sheet Title: XDS110
SVN Rev: 1a70141df6e4e17fbb3c43e6b1503420012001		Sheet: 2 of 2
Drawn By: Keerthi Kumanan	File: MD085_XDS110.SchDoc	Size: B
Engineer: Shinya Morita	Contact: http://www.ti.com/support	

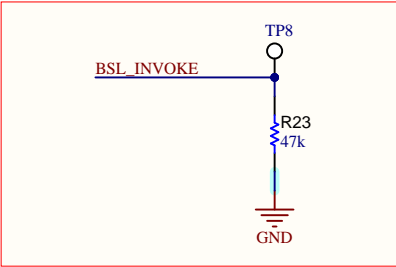
MCU POWER (VDD) SELECTION



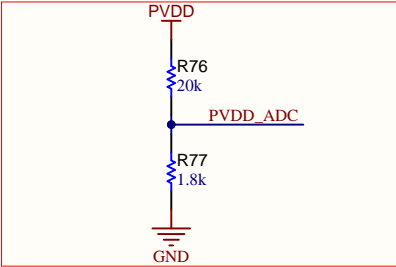
NOTE:
VCC1 is 3.3V source from CAN transceiver TCAN284x

3.3V is from a 3.3 V LDO. The input to the LDO is the 5 V from the USB line.

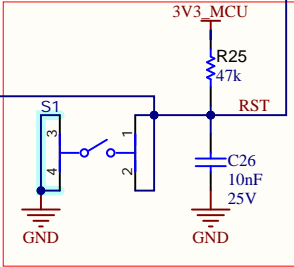
BSL INVOKE



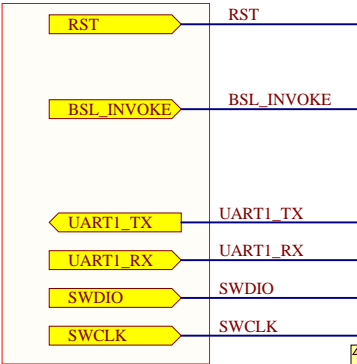
PVDD MONITORING



RESET BUTTON

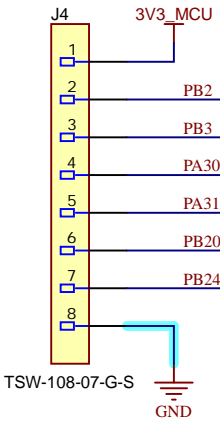
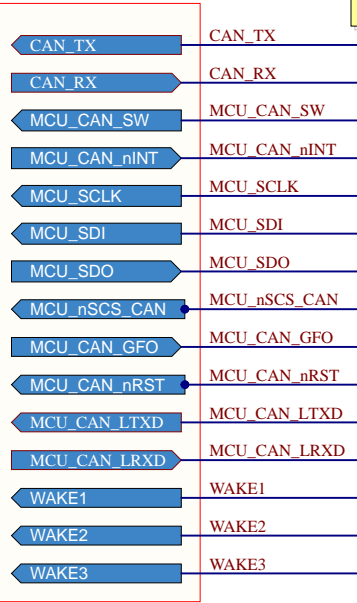


Debugger	Pin
UART1_TX	PB4
UART1_RX	PB5
SWDIO	PA19
SWCLK	PA20
RST	nRST

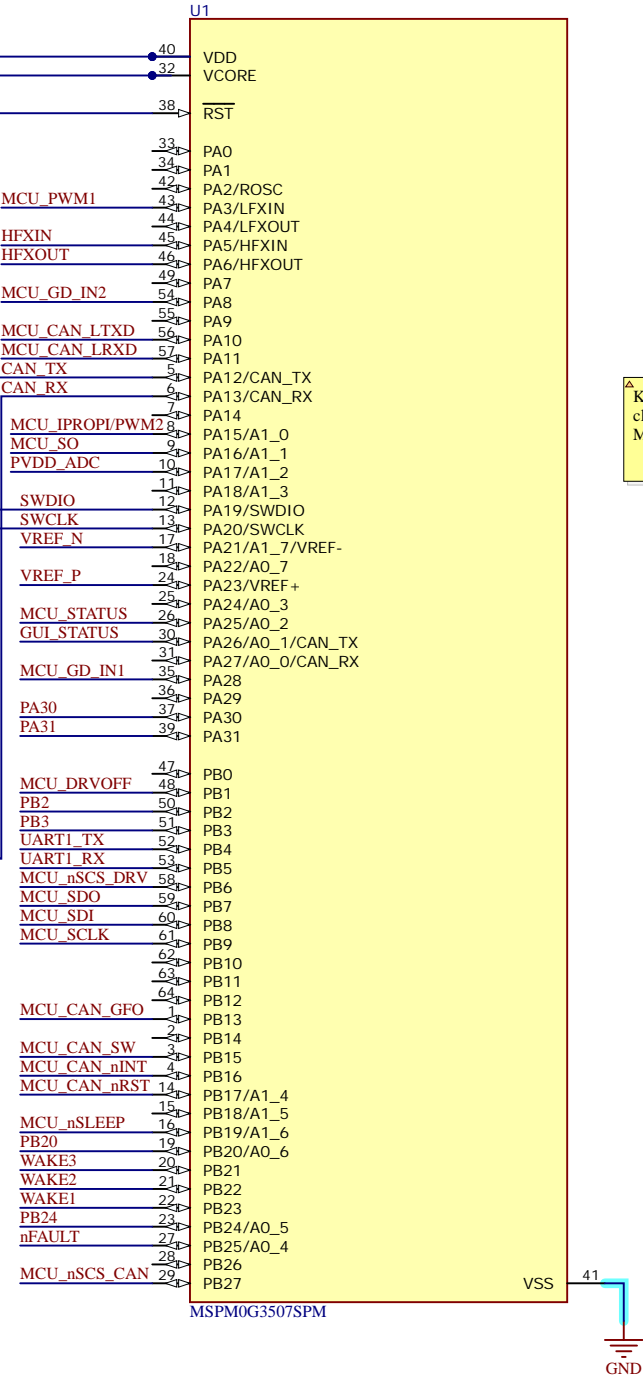


NOTE on UART:
TX/RX signals are with respect to the M0.

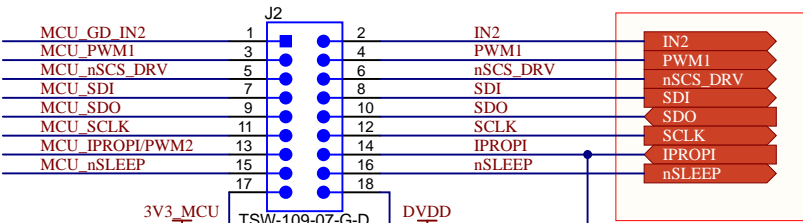
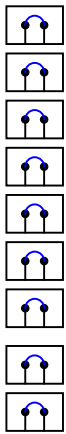
XDS110 <-----> M0



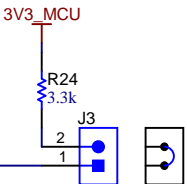
MSPM0G3507-Q1



DRV800x Control Signals	M0 Peripheral	Pin
MCU_GD_IN1	TIMA0_C3	PA28
MCU_IPROPI/PWM2	TIMA0_C2/A1_0	PA15
MCU_PWM1	TIMA0_C1	PA3
MCU_nSCS_DRV	SPI1_CS0	PB6
MCU_SDI	SPI1_PICO	PB8
MCU_SDO	SPI1_POCI	PB7
MCU_SCLK	SPI1_SCK	PB9
MCU_GD_IN2	TIMA0_C0	PA8
MCU_SO	A1_1	PA16
MCU_DRVOFF	GPIO	PB1
MCU_nSLEEP	GPIO	PB19

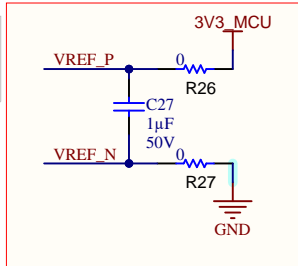


M0 <-----> DRV800x

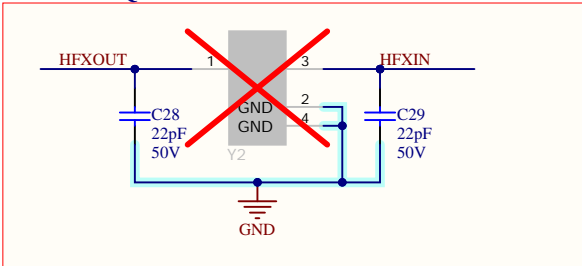


EXTERNAL REFERENCE

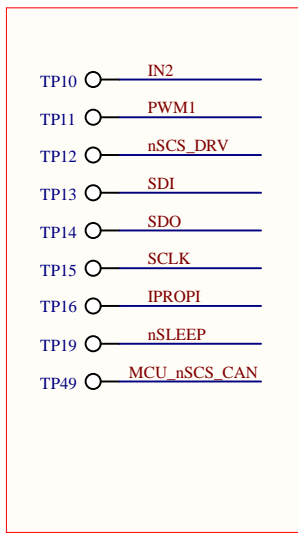
Keep C27 close to the MCU



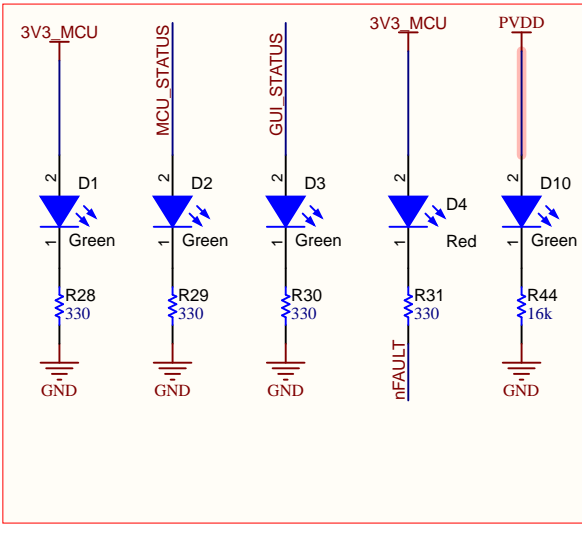
HIGH FREQUENCY CRYSTAL



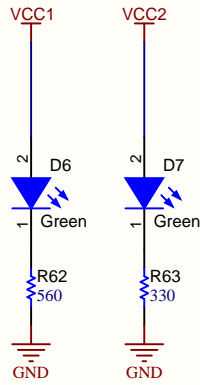
TESTPOINTS



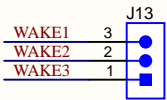
STATUS LEDS



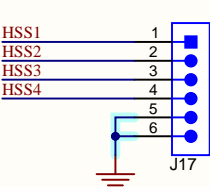
STATUS LEDs



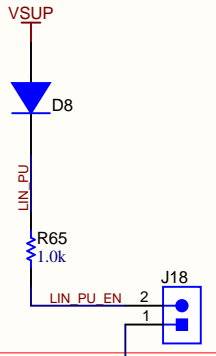
WAKE INPUTS



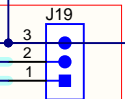
CAN HIGH-SIDE DRIVERS



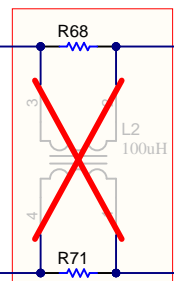
LIN
COMMANDER MODE



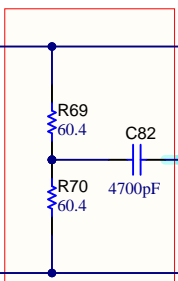
LIN
MONITOR



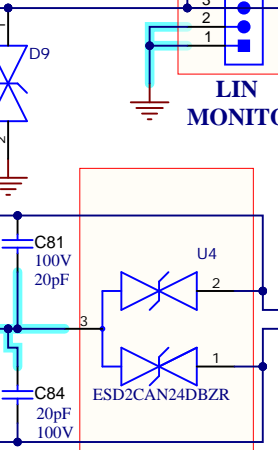
COMMON MODE
CHOKE



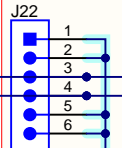
SPLIT
TERMINATION



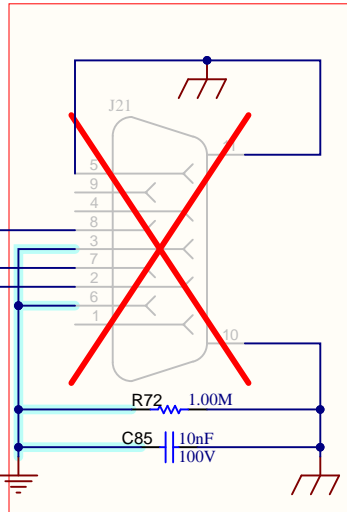
TVS
DIODES



CAN
MONITOR



DB9 CONNECTOR



M0 <-----> TCAN284x

H1
SJ-5303 (CLEAR)

H2
SJ-5303 (CLEAR)

H3
SJ-5303 (CLEAR)

H4
SJ-5303 (CLEAR)

FID1

FID2

FID3

PCB Number: MD085

PCB Rev: E1

PCB
LOGO

Texas Instruments



PCB
LOGO

FCC disclaimer

PCB
LOGO

WEEE logo



PCB
LOGO

CAUTION. READ USER GUIDE BEFORE USE

LBL1

PCB Label

THT-14-423-10

Size: 0.65" x 0.20 "

ZZ1

Label Assembly Note

This Assembly Note is for PCB labels only

Variant/Label Table	
Variant	Label Text
001	DRV8000-Q1EVM

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.

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Orderable: DRV8001-Q1EVM		Designed for: Public Release	Mod. Date: 1/7/2025
TID #: N/A		Project Title: MD085_DRV8001	
Number: MD085	Rev: E1	Sheet Title: HARDWARE	
SVN Rev: 1a70141df6e4e17febb3c43e61583428012001		Sheet: 6 of 2	
Drawn By: Keerthi Kumanan		File: MD085_Hardware.SchDoc	Size: B
Engineer: Shinya Morita		Contact: http://www.ti.com/support	