LV POWER SUPPLY
GATE DRIVER ISOLATED POWER SUPPLY
HS TEMP SENSORS
MOTOR TEMP SENSOR
OIL PUMP LINBUS
LINBUS ON USART4
CURRENT SENSORS
Power for this is derived from HV via Viper16
V1 OI board uses a DCDC from the main 12V line
TODO:
1. Signal PRECHARGE_OUT - not connected
2. Signal DCSW_OUT - not connected
Digital Inputs
OVERCURRENT AND IGBT FAULT DETECT
STM32F103VCT6 MOTOR/SYSTEM CONTROL CPU
DC BUS DISCH AND VOLTAGE MEASURE
GATE DRIVER INTERFACE
CAN BUS
RESOLVER AND EXCITER AMP
THROTTLE INPUTS
CONNECTORS
MOUNTING HOLES
Going to take a guess that VN17 diode is a 600V 1A
fast recovery. Going with : MURA160T3G as is an onsemi part.
An STTH112A is used on the STGAP eval board.
2H2 on the same eval board is a STPS3L40-Y
3A 40V schottky. Will try a SS34.
No Info on G1 so trying a B5819WS.
No info on JV so trying a B5819WS.
No info on the depletion mode N MOS so trying a BSS169.
Gate Driver, Phase B
Gate Driver, Phase C
Gate Driver, Phase A
Legend:
VH_HS_A - Positive power supply for HV section, High Side, Phase A
VL_HS_A - Negative power supply for HV section, High Side, Phase A
VH_LS_A - Positive power supply for HV section, Low Side, Phase C
VH_HS_B - Positive power supply for HV section, High Side, Phase B
VL_HS_B - Negative power supply for HV section, High Side, Phase B
VH_LS_B - Positive power supply for HV section, Low Side, Phase C
VH_HS_C - Positive power supply for HV section, High Side, Phase C
VL_HS_C - Negative power supply for HV section, High Side, Phase C
VH_LS_C - Positive power supply for HV section, Low Side, Phase C
VH_LS - Positive power supply for HV section, Low Side
VL_LS - Negative power supply for HV section, Low Side
PWMA_HI - Gate command input, Phase A, Positive
PWMA_LO - Gate command input, Phase A, Negative
PWMB_HI - Gate command input, Phase B, Positive
PWMB_LO - Gate command input, Phase B, Negative
PWMC_HI - Gate command input, Phase C, Positive
PWMC_LO - Gate command input, Phase C, Negative
D.Maguire
A.Kustusch
EVBMW.COM, OPENINVERTER.ORG
Sheet: /
File: M3DU_BoardV2.kicad_sch
Title: M3DU Logic Board
Size: A0
Date: 2024-08-27
Rev: V1
KiCad E.D.A. 9.0.1
Id: 1/1