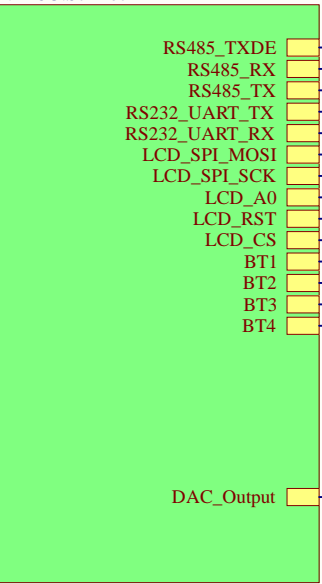


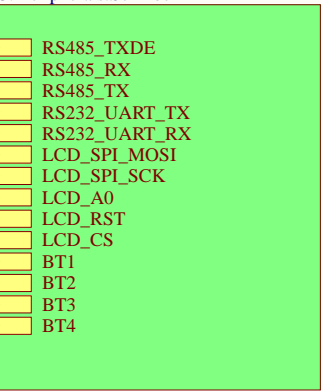
U\_1. Power  
1. Power.SchDoc



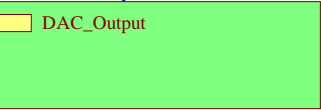
U\_2. MCU  
2. MCU.SchDoc



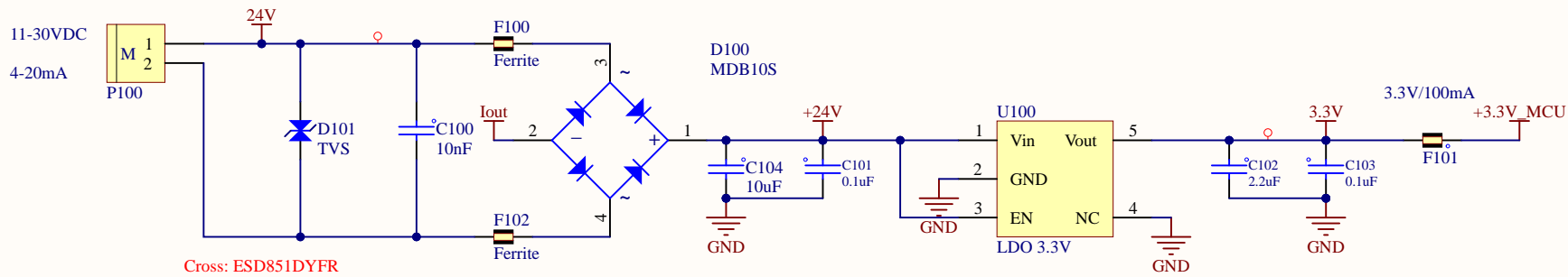
U\_3. Peripherals  
3. Peripherals.SchDoc



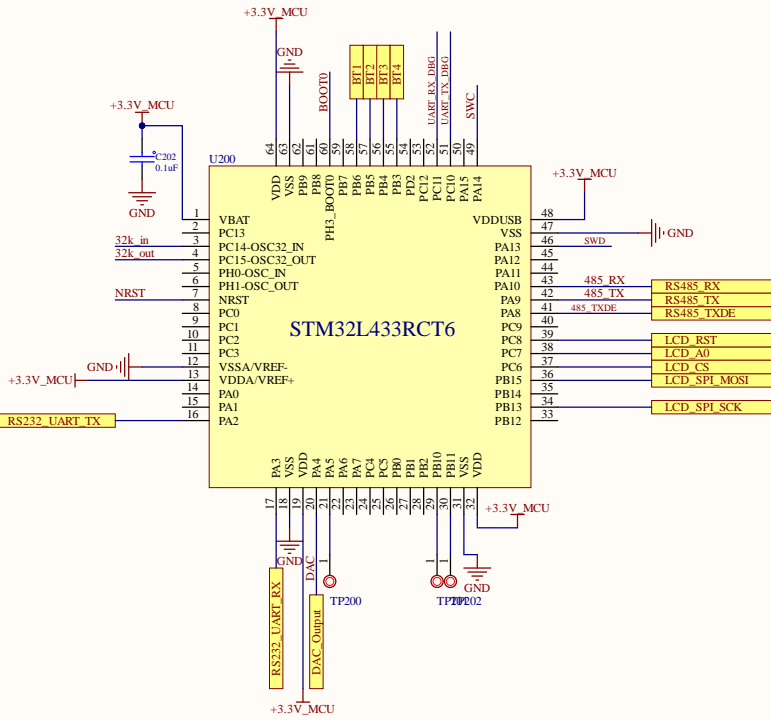
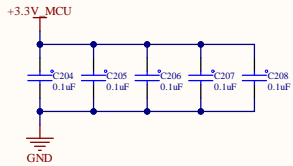
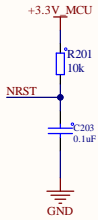
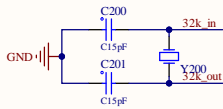
U\_4. 4-20mA\_Output  
4. 4-20mA\_Output.SchDoc



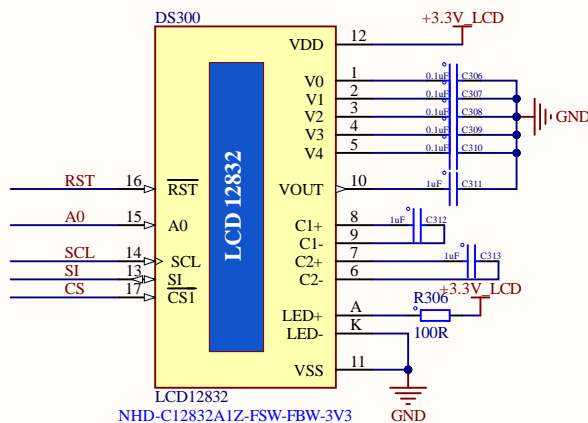
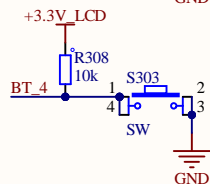
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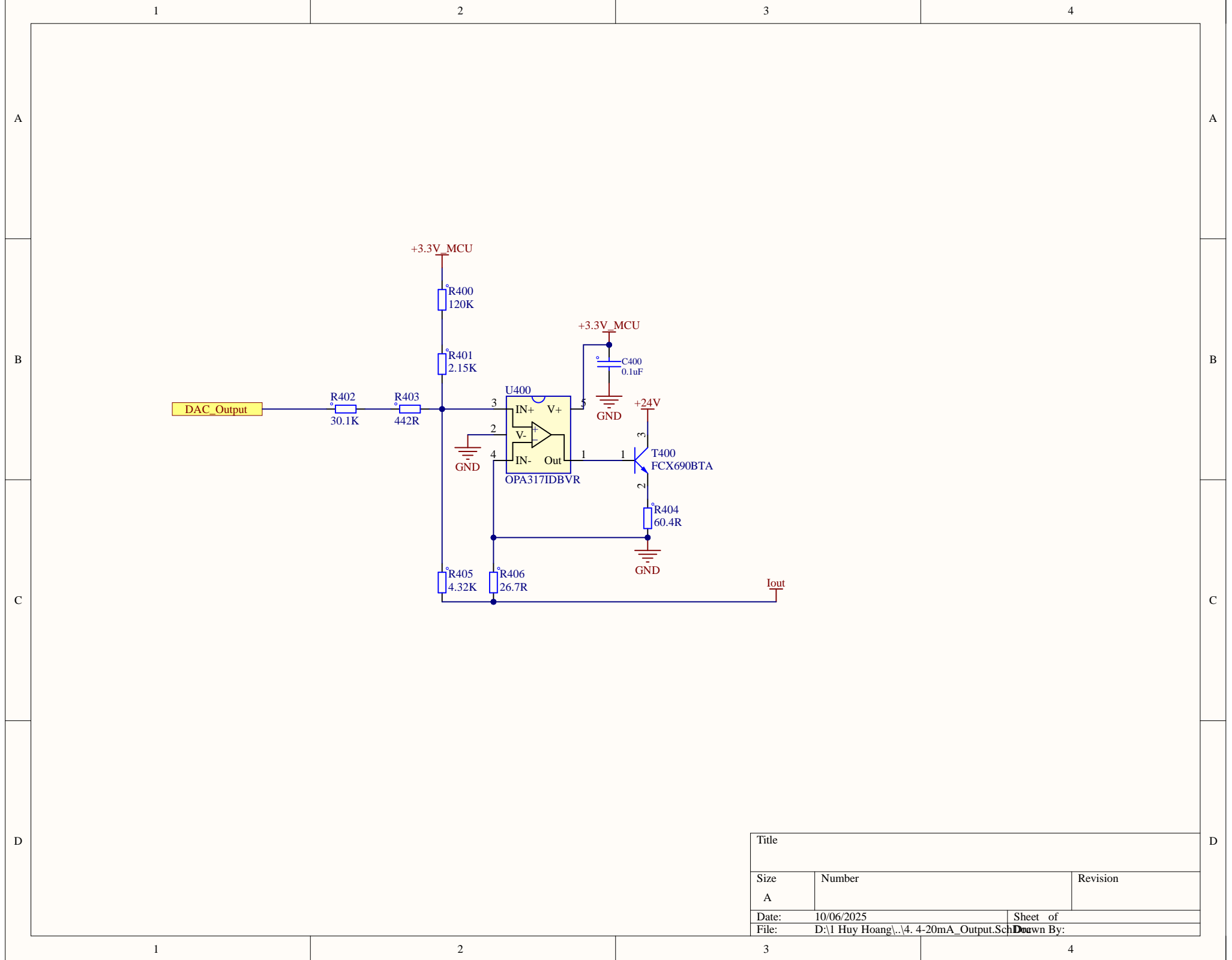


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Title		
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Date:	10/06/2025	Sheet of
File:	D:\1 Huy Hoàng\12. MCU_SchDoc	Drawn By:

4





Comment	Description	Designator	Footprint	Manufacturer Part Number	Quantity
10nF	C Series 0603 10 nF 10V ±10% Tolerance XTR SMT Multilayer Ceramic Capacitor	C100	C0603	C100XK7GA103K05 ROHS	1
0.1uF	Multi Layer Ceramic Capacitor (MLCC) / Cap Ceramic 0.1uF 50V XTR 10% Pad SMD 0603 125uA T-R			0110E104H28HNN C	21
2.2uF	Multilayer Ceramic Capacitors (High dielectric type), 50V, 2.2uF, ±10%, 0603, XTR, RoHS	C102	C0603	EMK107B2225KA T	1
10uF	Ceramic capacitor SMD 1206 10000uF (10uF) /50V XTR K 10%, Samepin) RoHS(2u)	C104	C1206_0K	EL107104H28HNN N1	1
C150F	CLP CTR 150V 100V 1000 0603	C200, C201	C0603	C10603FRNFC08 N105	2
1uF	0603 1 uF 50V ±10% Tolerance XSR Surface Mount Multilayer Ceramic Capacitor	C311, C312, C313	C0603	MMK107B1105KA T	3
MD8105	Diode Rectifier Bridge Single 90V 1A 4-Pin Micro SMD	D100	MD8105	MD8105	1
TVS	Stand-off 25V 400W 40W Bidirectional 36V 500-323130 and Surge Protection (TVS-F550) ROHS	D101	TVS 25V CDS00323 T360C	CDS00323-T360C	1
TVS 3005C-7	3V BIDIRECTIONAL TVS Diode, 200pf., RoHS	D300, D301, D302	S030323 BIDIRECTIONAL	3005C-7	3
CD12822	Chip on Glass Graphic 128x32 Pixels 0.4x0.4, 3u4 f5 7W (-) Transflect 4- Bit / SPI / Resistor Display International N40-C12832A12-F30V F30V-3u1	DS300		LC01_N40-C12832A12 F30V-F30V-3V3	1
Ferrite	Ferrite Beads Power Chip 600Ohm 20% 100mA 2A 4mmOhm DCR 1210 Automotive T/R	F100, F102	13210	FBM0225HMM01 N1	2
FERRITE BEAD 470 OHM 0805	Ferrite Beads Multi- layer 470Ohm 25% 100mA 200mA 190mOhm DCR 0805 Paper T/R	F101, F300	18805	BLM21AG475N1 D	2
Jumper 2	Jumper 2 Pin	J200	H081K1		1
Jump 4.2.34	Jump 4 Pin	J201	H081K1		1
IPC1210	CONN IPC VERT 20PCS SMD SMD	J300, J301	AMP16N04L_3FV125- 20131U		2
W12165100025	Terminal Block, With Wire, 30-12AWG RoHS Compliant Yes (Wurth Elektronik W12165100025)	P100, P300	Medium - Header 2	W12165100025	2
1K	RES SMD 10K OHM 1% 1/10W 0603	R200, R201, R300, R302, R303, R304, R305, R207, R208	R0603	RC0603FR-0710KL	9
120R	Res Thick Film 0603 120 Ohm 1% 0.1W(1/10W) ±100ppm/C Pad SMD T/R	R301	R0603	RC0603FR- 10120RL	1
300R	RES SMD 100 OHM 1% 1/10W 0805	R206	R0805	RMCF0805JT100R	1
120K	Res Thin Film 0603 120K Ohm 0.1% 0.1W ±25ppm/C Molded SMD Punched Carrier T/R	R400	R0603	ERA-3AE1214V	1
2.2 15K	Res Thin Film 0603 2.2 15K Ohm 0.1% 0.1W(1/10W) ±25ppm/C Pad SMD Automotive T/R	R401	R0603	ERA-3AE2151V	1
30 1K	Res Thin Film 0603 30 1K Ohm 0.1% 0.1W(1/10W) ±25ppm/C Pad SMD Automotive T/R	R402	R0603	ERA-3AE3012V	1
402R	Res Thin Film 0603 402 Ohm 0.1% 0.1W(1/10W) ±25ppm/C Pad SMD Automotive T/R	R403	R0603	ERA-3AE402V	1
40 4R	PT 1402 RES 50120 0805 (2012A) ±1% Chip Resistor ±0.1% ±25ppm/C 40.4 Ohm 0.125W 1/10W	R404	R0603	RT0805BR02700RA A	1
4.12K	Res Thin Film 0603 4.12K Ohm 0.1% 1/10W ±25ppm/C Molded SMD Punched Carrier T/R	R405	R0603	ERA-3AE4121V	1
26.7R	Res Precision Thin Film 26.7 Ohm 0.1% 200mW 10ppm/C 3- Pin 0805 SMD T/R	R406	R0603	RC0732A26878TD	1
SW	Switch Tactile N.O. SPST Round Button PC Pins 0.054 120DC 100000 gals 1.27W Thru Hole Bulk	S300, S301, S302, S303	SW-4P-DIP-6x5	PT56-65SL0-2LF5	4
ICX4908TA	Transistor, MPN, 45 V, 2 A, 2 W, SOT-49, 3 Pins, Surface Mount	F400	SOT89-150P410K140- 3N	ICX4908TA	1
TP45V65		TP300, TP301, TP302	TP_45V65		3
TP60V90		TP300, TP301, TP302, TP303	TP_60V90		4
LD0 3.3V	LMC3233 Series 3.3V 100mA Fixed Surface Mount Low Dropout Regulator -SOT-23-5	U100	SOT23_5_L	LMC3233-3.3VMS- TR	1
STM32L439C16	Ultra-low-power with FPU ARM Cortex M4M32L43916uA with 256 Kbytes Flash, LCD, USB	L200	CGP64	STM32L439C16	1
RS485	1/1 Transceiver Half RS422, RS485 & SDR- LSD	L200	SOIC8N_N	SN65HVD02DR	1
MAX3222	MAX3222CDE Low Offset, Rail-to- Rail I/O Operational Amplifier 5-SOT-23- 45 to 32V	L201	0816_M	ADM622E	1
OPA317IDBVR		U400	SOT23_5_L	OPA317IDBVR	1
32.768k	32.768kHz ±20ppm Crystal 12.5pf 70 uOhm 40°C -40°C Surface Mount 3-SMD	P200	Crystal_32.768kHz ±20ppm	AB071-32.768KHZ T	1