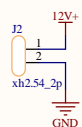


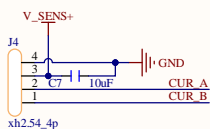
POWER_CONNECTOR



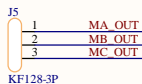
12V_OUT_CONNECTOR



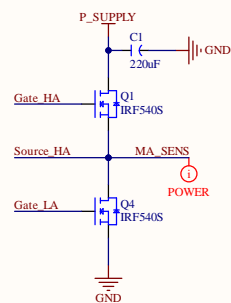
SIGNAL_CONNECTOR



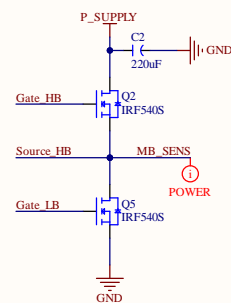
CURRENT_SENS_CONNECTOR



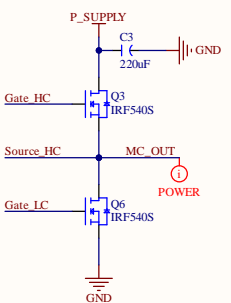
MOTOR_CONNECTOR



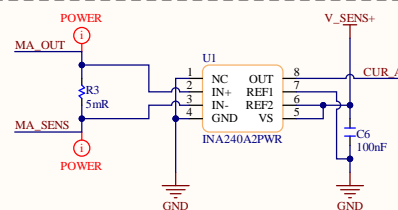
HALF_BRIDGE_A



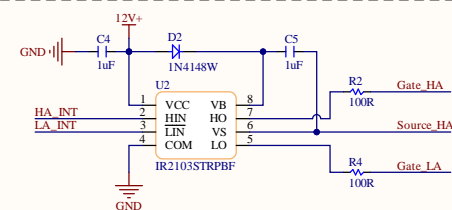
HALF_BRIDGE_B



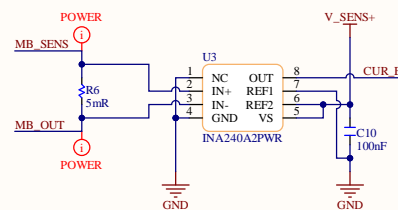
HALF_BRIDGE_C



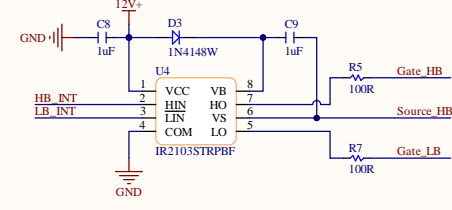
CURRENT_SENSE_A



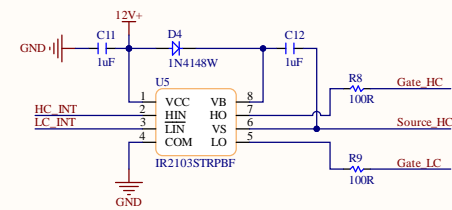
HALF_BRIDGE_DRIVER_A



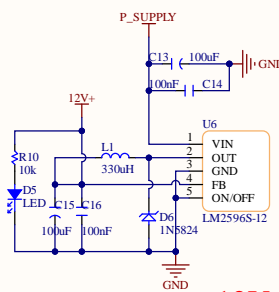
CURRENT_SENSE_B



HALF_BRIDGE_DRIVER_B



HALF_BRIDGE_DRIVER_C



12V_BUCK

Title		
Size A3	Number	Revision
Date: 7/04/2025	Sheet of	
File: E:\QC\BID\CU\Driver_BID\CSchDoc	Drawn By:	

Comment	Description	Designator	Footprint	LibRef	Quantity
220uF	220uF 35V ±20% SMD,D6xL10.5mm Aluminum Electrolytic Capacitors - SMD ROHS	C1, C2, C3	CAPAE9583X105M	VT1V221M-CRF10	3
1uF	50V 1uF X7R ±5% 1206 Multilayer Ceramic Capacitors MLCC - SMD/SMT ROHS	C4, C5, C8, C9, C11, C12	CAPC3216X18M	CC1206JXX7R9BB105	6
100nF	50V 100nF X7R ±5% 1206 Multilayer Ceramic Capacitors MLCC - SMD/SMT ROHS	C6, C10, C14, C16	CAPC3216X18M	CC1206JRX7R9BB104	4
10uF	25V 10uF X7R ±10% 1206 Multilayer Ceramic Capacitors MLCC - SMD/SMT ROHS	C7	CAPC3216X18M	CC1206KXX7R8BB106	1
100uF	100uF 35V ±20% SMD,D6.3xL7.7mm Aluminum Electrolytic Capacitors - SMD ROHS	C13, C15	CAPAE7466X77M	VT1V101M-CRE77	2
LED	SMD LED 1206	D1, D5	LEDC3216X120N	LED_1206	2
1N4148W	75V Independent Type 1.25V@150mA 8ns 150mA SOD-123 Switching Diodes ROHS	D2, D3, D4	SODFL370X135-2M	1N4148W	3
1N5824	40V Independent Type 550mV@5A 5A SMA(DO-214AC) Schottky Diodes ROHS	D6	D10M5Q25X22M	SS54	1
KF128-5.0-2P	1x2P 24A - 40°C→105°C 250V Green 12-22 Straight 5mm 2.5 1 2 Plugin,P=5mm Screw Terminal Blocks ROHS	J1	KF128-2P	KF128-5.0-2P	1
xh2.54_2p		J2	xh2.54_2p	xh2.54_2p	1
xh2.54_6p		J3	xh2.54_6p	xh2.54_6p	1
xh2.54_4p		J4	xh2.54_4p	xh2.54_4p	1
KF128-3P	1x3P 24A - 40°C→105°C 250V Green 12-22 Straight 5mm 2.5 1 3 Plugin,P=5mm Screw Terminal Blocks ROHS	J5	KF128-3P	KF128-5.0-3P	1
330uH	1.2A 330uH ±20% SMD-4P,12x12mm Power Inductors ROHS	L1	INDP120120X80M	CDRH127/LDNP-331MC	1
IRF540S	Power Field-Effect Transistor, 28A I(D), 100V, 0.077ohm, 1- Element, N-channel, Silicon, Metal-oxide Semiconductor FET, TO-263AB	Q1, Q2, Q3, Q4, Q5, Q6	DPAK254P1524X483-3M	IRF540S	6
10k	250mW Thick Film Resistors 200V ±100ppm/°C ±1% 10kΩ 1206 Chip Resistor - Surface Mount ROHS	R1, R10	RESC3116X06M	RC1206FR-0710KL	2
100R	250mW Thick Film Resistors 200V ±100ppm/°C ±1% 100Ω 1206 Chip Resistor - Surface Mount ROHS	R2, R4, R5, R7, R8, R9	RESC3116X06M	RC1206FR-07100RL	6
5mR	2W 0.5mΩ Patch Current Sensing Resistors ±400ppm/°C ±1% 2512 Current Sense Resistors / Shunt Resistors ROHS	R3, R6	RESC6432X07M	WSL2512L5000FEA18	2
INA240A2PWR	4V-80V 400kHz Single channel TSSOP 8 Current Sense Amplifiers ROHS	U1, U3	TSOP65P640X120-8M	INA240A2PWR	2
IR2103STRPBF	Half Bridge 2.130mA 100ns 50ns 10V-20V 270mA SOIC-8 Gate Drivers ROHS	U2, U4, U5	SOIC127P600X175-8M	IR2103STRPBF	3
LM2596S-12	Step-down type Fixed 12V 4.5V-40V 3A TO-263-SL DC-DC Converters ROHS	U6	DPAK170P1435X470-6M	LM2596S-12	1