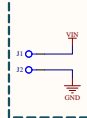


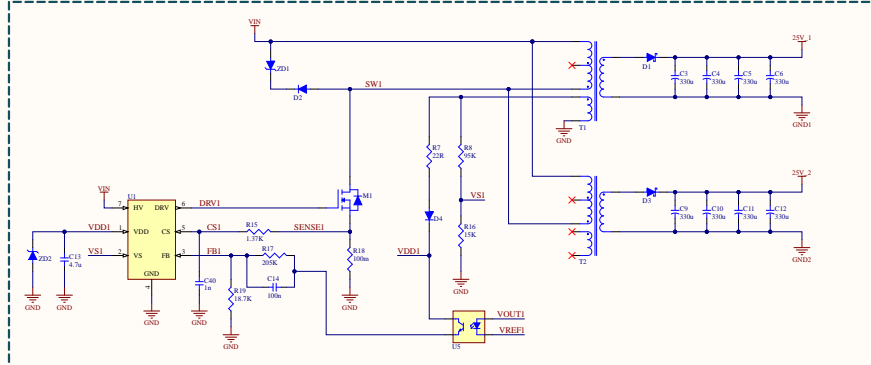
## INPUT



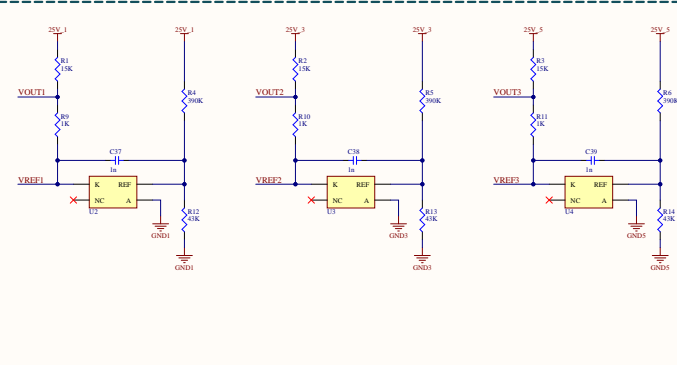
## Flyback Converter

VIN: 100 - 480V  
VOUT: 25V  
Imax: 2.5A (per port)  
Switching Frequency: 69KHz

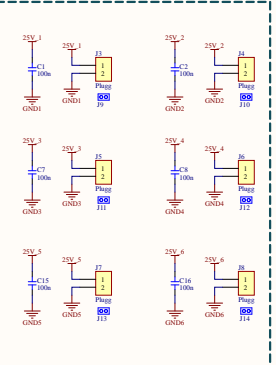
## +25V isolated supplies 1&2



## Feedback Circuits



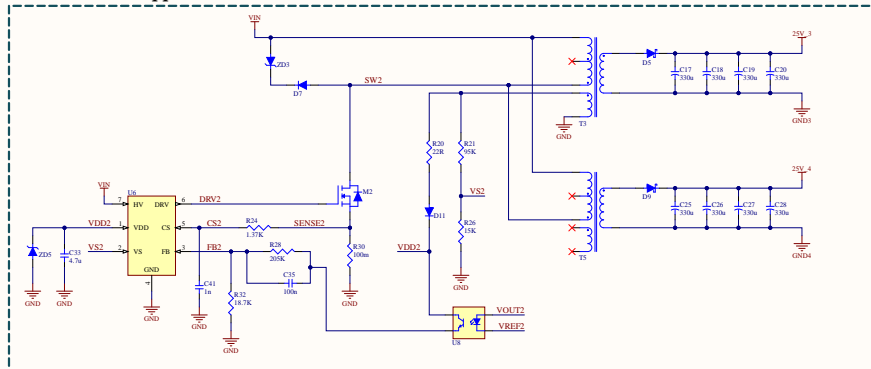
## OUTPUT PORTs



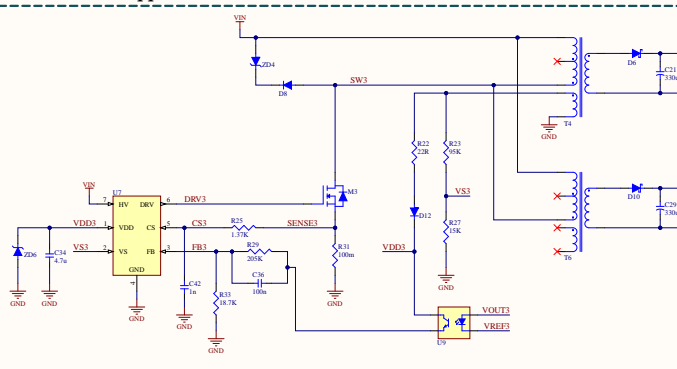
## MHs



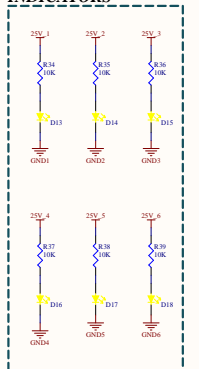
## +25V isolated supplies 3&4



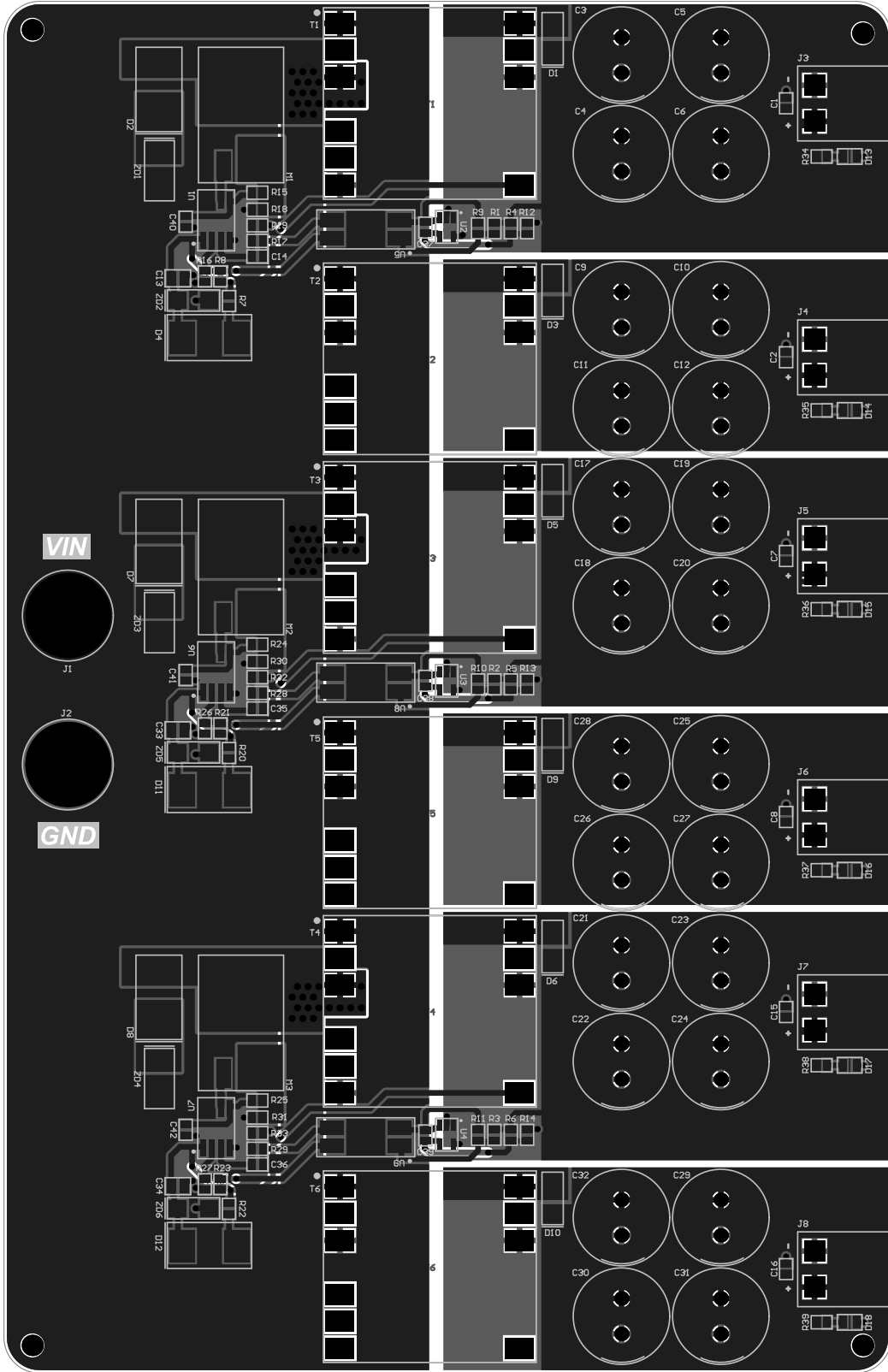
## +25V isolated supplies 5&6



## INDICATORS



Title: 25V 2.5A Flyback Converter		
Rev: A2	Number:	Revision:
Date: 11/05/2024	Drawn by:	Checked by:
File: D:\Bosch\25V 2.5A Flyback converter\25V 2.5A Flyback Converter		



Comment	Description	Designator	Footprint	LibRef	Quantity
100n	50V 100nF X7R±10% 0603 Multilayer Ceramic Capacitors MLCC - 3M03MT RCHS	C1, C2, C7, C8, C14, C15, C16, C36, C36	0805-CAP	Cap 100nF	9
330u	330uF 100V P49x21x46.26mm Aluminum Electrolytic Capacitors - Leaded RCHS	C3, C4, C5, C6, C9, C10, C11, C12, C17, C18, C19, C20, C21, C22, C23, C24, C25, C26, C27, C28, C29, C30, C31, C32	Electrolytic Capacitor D13PSHES	Electrolytic Cap 330u	24
4.7u	50V 4.7uF X7R±10% 0805 Multilayer Ceramic Capacitors MLCC - 3M03MT RCHS	C13, C33, C34	0805-CAP	Cap 4.7uF	3
1n	50V 1nF X7R±10% 0603 Multilayer Ceramic Capacitors MLCC - 3M03MT RCHS	C37, C38, C39, C40, C41, C42	0803-CAP	Cap 1nF	6
Schottky Diode	100V Independent Type 805mV SMD SMA(DO-214AC) Schottky Diodes RCHS	D1, D3, D5, D6, D6, D10	SMA(DO-214AC)	Schottky Diode	6
Fast Diode	1.7V 0805mm Independent Type 8A 1kV SMC Fast Recovery / High Efficiency Diodes RCHS	D2, D4, D7, D8, D11, D12	SMCdiode	Fast Diode	6
Yellow LED	2-Yellow temp- 30°C~+60°C, Positive post White 120° 80mil 0805 Light Emitting Diodes LED RCHS	D13, D14, D15, D16, D17, D18	yellowled	Yellow LED	6
Banana Connector Red	Terminal Red Banana Connectors / Alligator Clips RCHS	J1	Banana Connector Red	Banana Connector Red	1
Banana Connector Black	Terminal Black Banana Connectors / Alligator Clips RCHS	J2	Banana Connector Black	Banana Connector Black	1
Plugg	2.5mm 1.50mm 1x2P Green Board Edge Receptacle- Over Plugs P4xLx5.08mm Pluggable System Terminal Block	J3, J4, J5, J6, J7, J8	Pluggable Terminal Block 2	Pluggable Recepta 2P	6
650V 20A MOSFET	650V 20A 150mΩ 128W 5.5V TO-263 MOSFETs RCHS	M1, M2, M3	TO-263	650V 20A MOSFET	3
15K	100mW Thick Film Resistors 75V ±100ppm/°C ±1% 15K 0603 Chip Resistor - Surface Mount RCHS	R1, R2, R3, R16, R26, R27	0803-RES	Resistor 15K	6
300K	100mW Thick Film Resistors 75V ±100ppm/°C ±1% 300K 0603 Chip Resistor - Surface Mount RCHS	R4, R5, R6	0803-RES	Resistor 300K	3
22R	100mW Thick Film Resistors 75V ±100ppm/°C ±1% 220 0603 Chip Resistor - Surface Mount RCHS	R7, R20, R22	0803-RES	Resistor 22R	3
99K	100mW Thick Film Resistors 75V ±100ppm/°C ±1% 99K 0603 Chip Resistor - Surface Mount RCHS	R8, R21, R23	0803-RES	Resistor 99K	3
1K	100mW Thick Film Resistors 75V ±100ppm/°C ±1% 1K 0603 Chip Resistor - Surface Mount RCHS	R9, R10, R11	0803-RES	Resistor 1K	3
43K	100mW Thick Film Resistors 75V ±100ppm/°C ±1% 43K 0603 Chip Resistor - Surface Mount RCHS	R12, R13, R14	0803-RES	Resistor 43K	3
1.37K	100mW Thick Film Resistors 75V ±100ppm/°C ±1% 1.37K 0603 Chip Resistor - Surface Mount RCHS	R15, R24, R25	0803-RES	Resistor 1.37K	3
205K	100mW Thick Film Resistors 75V ±100ppm/°C ±1% 205K 0603 Chip Resistor - Surface Mount RCHS	R17, R28, R29	0803-RES	Resistor 205K	3
100m	100mW Thick Film Resistors 75V ±100ppm/°C ±1% 100m 0603 Chip Resistor - Surface Mount RCHS	R18, R30, R31	0803-RES	Resistor 100mhm	3
18.7K	100mW Thick Film Resistors 75V ±100ppm/°C ±1% 18.7K 0603 Chip Resistor - Surface Mount RCHS	R19, R32, R33	0803-RES	Resistor 18.7K	3
10K	100mW Thick Film Resistors 75V ±100ppm/°C ±1% 10K 0603 Chip Resistor - Surface Mount RCHS	R34, R35, R36, R37, R38, R39	0803-RES	Resistor 10K	6
750340068	Power Transformers MD-CLT LCC28740 230uH 40W	T1, T2, T3, T4, T5, T6	29.2x30.35 Transformer	Switching Transformer	6
UCC28710DR	170Pin 100kHz 9V~35V/30C 7 AC-DC Controllers and Regulators RCHS	U1, U6, U7	SOIC-7	UCC28710DR Flyback Controller	3
TL431DBVR	2.495V~38V ±2.2% 100mA Adjustable SOT 23-5 Voltage Reference RCHS	U2, U3, U4	SOT-23-5	Adjustable Voltage reference	3
Optocoupler	80V 5kV/50mA 400mV/50mA 3mA/1 5V/1.15V DC 3MΩ-4P Transistor, Photodiode Output Optoisolators RCHS	U5, U8, U9	3MΩ-4P Optocoupler	Optocoupler	3
Zener Diode 120V	Independent Type 114V-120V/3W/120V 5MB Zener Diodes RCHS	ZD1, ZD3, ZD4	5MB Zener diode	Zener Diode 120V	3
Zener Diode 24V	Independent Type 22.8V-26V/1W/24V 5MW(DO-214AC) Zener Diodes RCHS	ZD2, ZD5, ZD6	SMA(DO-214AC)	Zener Diode 24V	3