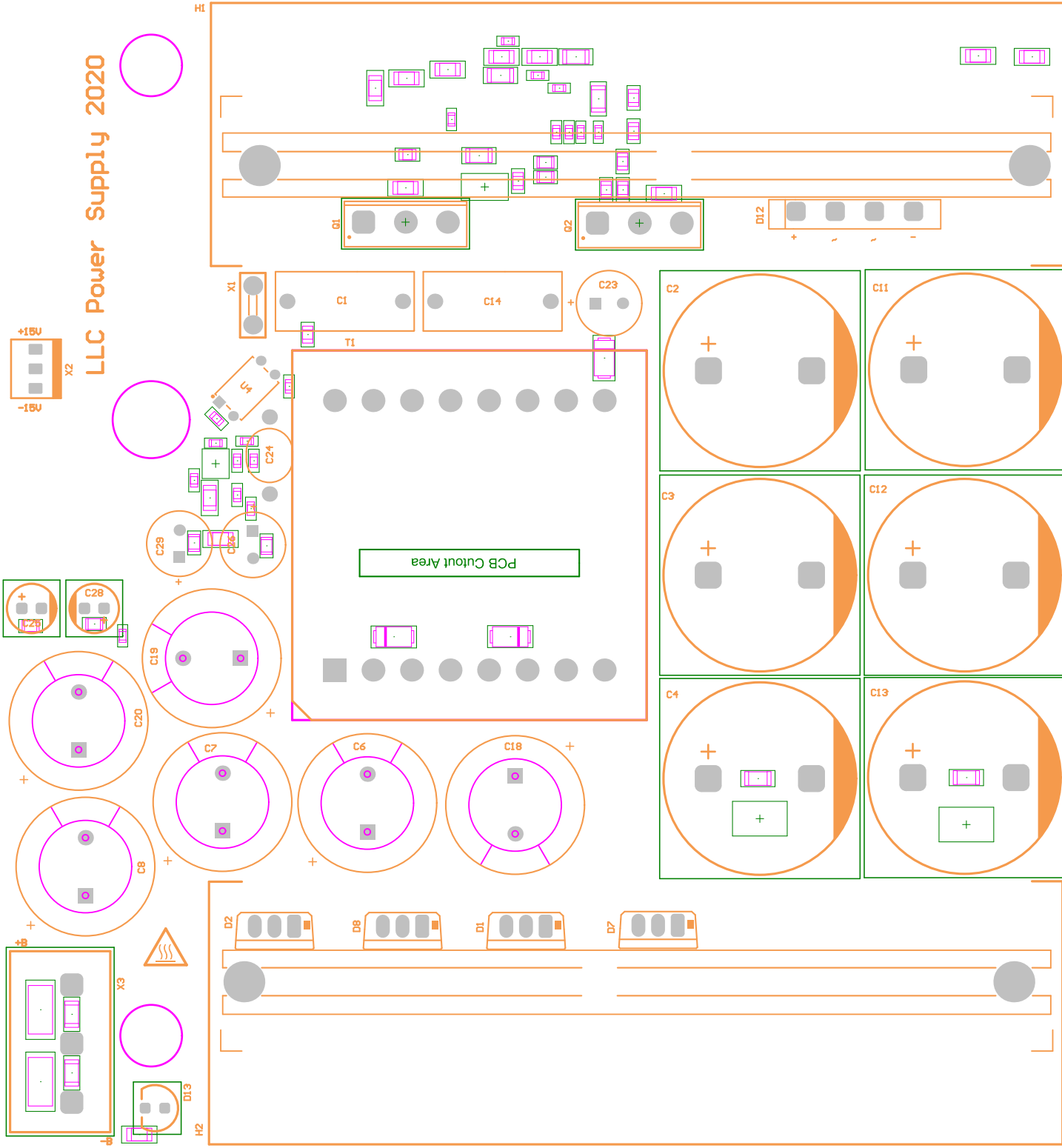
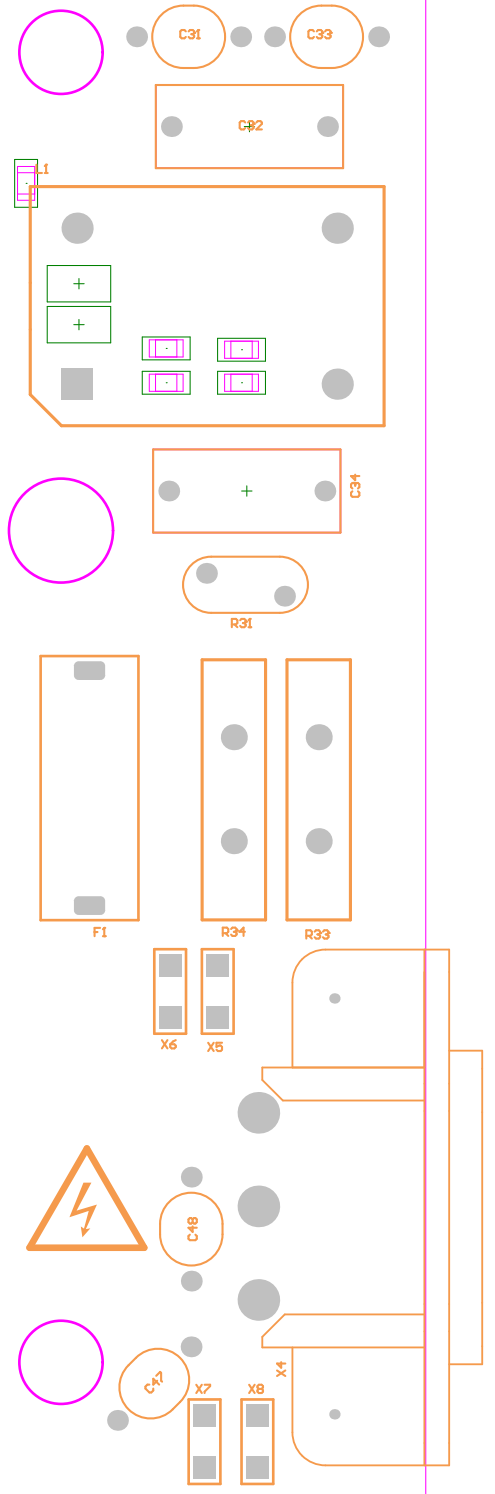


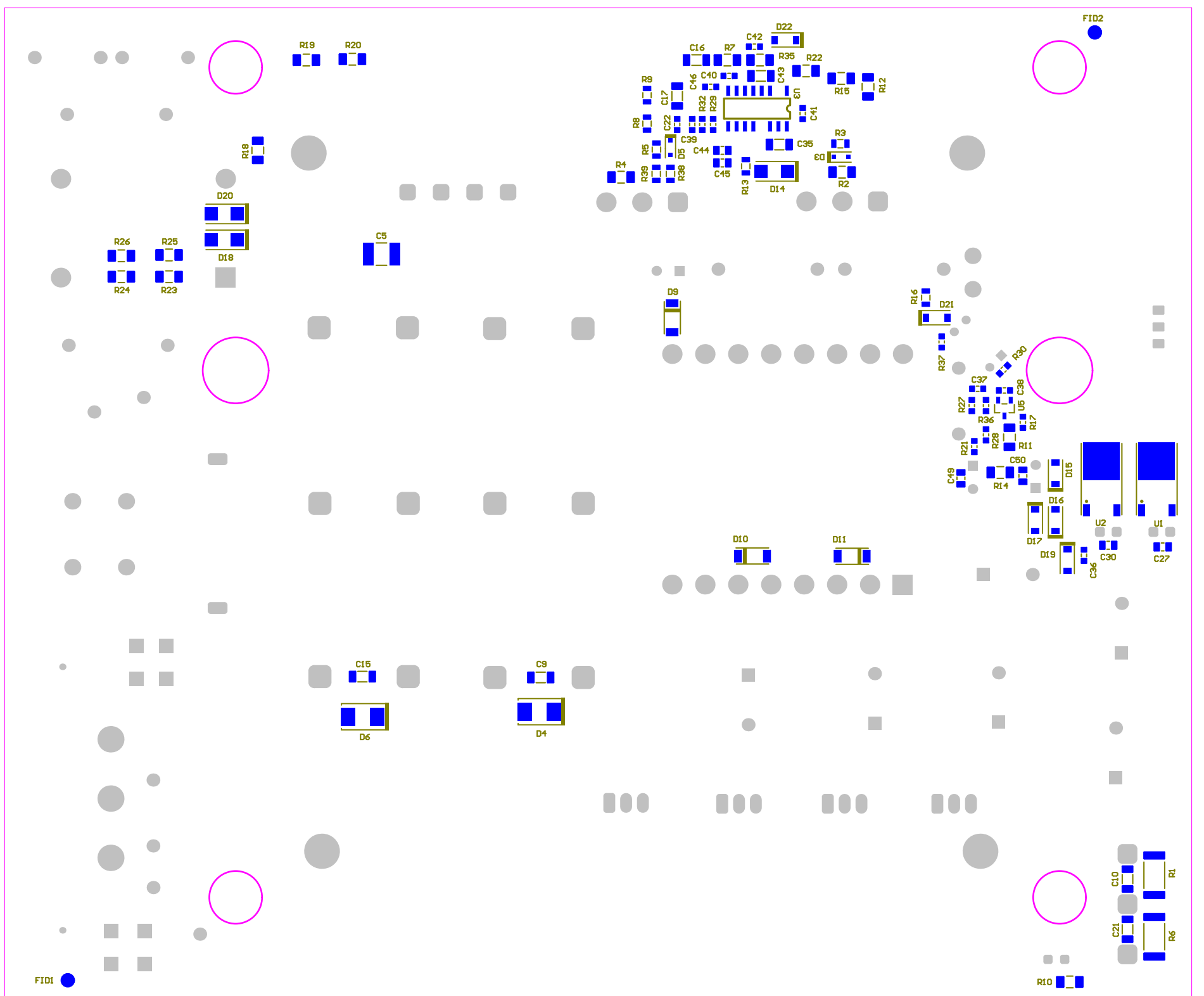
Designator	Comment	Description	Footprint	Quantity
C1, C14	100nF 630V	CAP FILM, 0.1 µF, 630 V, +/-5%, TH	CAP FILM 100nF 630V	2
C2, C3, C4, C11, C12, C13	560µF 200V	CAP ALUM 25x40	CAP EL 25x40 mm	6
C5	0.47µF 500V	CAP CER 1812	CAPSM1812	1
C6, C7, C8, C18, C19, C20	2200µF 50V	CAP ALUM 560UF 20% 200V RADIAL	CAP EL 18x40	6
C9, C15	100nF 250V	CAP CER 1206	CAPC3216K100N	2
C10, C21	10µF 50V	CAP CER 1206	CAPC3216K100N	2
C16	150µF 630V	CAP CER 1206	CAPC3216K100N	1
C17	82nF 630V	CAP CER 1206	CAPC3216K100N	1
C22	10nF 50V	CAP CER 0603	CAPC1608K90N	1
C23, C26, C29	330µF 35V	CAP ALUM 8x20	CAP EL 8x20	3
C24, C31, C33, C47, C48	AY2222M	AY2222M35VSUS63L7 CAP, CERM, 2200 pF, 300 V, +/- 20%, Y5U, AEC-Q200 Grade 1, D9, 5x15mm	CAP CER Y1	5
C25, C28	100µF 25V	CAP ALUM 6.3x11	CAP EL 6.3x11 mm	2
C27, C30	100nF 50V	CAP CER 0805	CAPC2012K135N	2
C32, C34	470 nF	890324025039CS WCAP-FTX2 Film Capacitors, 18x8x14mm, 275V AC, 470 nF	CAP X2 470nF 275Vac	2
C35, C43	4.7µF 35V	CAP CER 1206	CAPC3216K100N	2
C36, C39	100nF 50V	CAP CER 0603	CAPC1608K90N	2
C37	470µF 50V	CAP CER 0603	CAPC1608K90N	1
C38	DNP	CAP CER 0603	CAPC1608K90N	1
C40, C41	1nF 100V	CAP CER 0603	CAPC1608K90N	2
C42	220µF 50V	CAP CER 0603	CAPC1608K90N	1
C44, C45	10µF 16V	CAP CER 0805	CAPC2012K135N	2
C46	4.7µF 50V	CAP CER 0603	CAPC1608K90N	1
C49, C50	470nF 50V	CAP CER 0805	CAPC2012K135N	2
D1, D2, D7, D8	SBR20150CTFP	Diode, Schottky, 150 V, 20 A	TO-220FP	4
D3, D5	MMDL914-TP	Diode, Switching, 100 V, 0.2 A, SOD-323	SOD-323	2
D4, D6	P6SMB220A-E3/52	TVS Diodes - Transient Voltage Suppressors 600W 220V Unidirect	SMB	2
D9, D10, D11	PMEG6020EP,115	PMEG6020EP Schottky 60V 2 A	SOD128	3
D12	GBUBJ-BP	Diode, Switching-Bridge, 420 V, 8 A, TH	GBU	1
D13	LED 5mm Red	LED 5mm Red	LED 5mm Red	1
D14, D18, D20	MURA160T3G	Diode, Ultrafast, 600V, 1A, SMA	SMA	3
D15, D16, D17	DDZ9709-7	DDZ9709-7 (2A) 500 mW	SOD-123	3
D19, D21	DNP	DDZ9699-7 (12V) 500 mW DDZ9691-7 (6V) 500 mW	SOD-123	2
D22	DDZ9684-7	DDZ9685-7 (3V) 500 mW	SOD-123	1
F1	8A 250V	Fuse 5x20mm	Fuse Holder 5x20 mm	1
FID1, FID2	Fiducial	Fiducial mark. There is nothing to buy or mount.	Fiducial10-20	2
H1, H2	SK514-100SA	HEATSINK VERT MAX CLIP, BLACK,	HEATSINK_SK514-100SA	2
L1	744825320	CMC 12MH 10A 2LN TH	Common Mode Choke - 7448051012	1
Q1, Q2	NTHL190M65S3HF	N-Channel Power MOSFET	TO-247	2
R1, R6	22K	RES 2512	RES:6332K70N	2
R2, R4	10K	RES 1206	RES:3216K70N	2
R3, R5	10R	RES 0805	RES:2012K70N	2
R7	150R	RES 1206	RES:3216K70N	1
R8	30K	RES 0805	RES:2012K70N	1
R9	10K	RES 0805	RES:2012K70N	1
R10	47K	RES 1206	RES:3216K70N	1
R11, R35	DNP	RES 1206	RES:3216K70N	2
R12, R15, R22	1M	RES 1206	RES:3216K70N	3
R13	2R2	RES 0805	RES:2012K70N	1
R14	10R	RES 1206	RES:3216K70N	1
R16	DNP	RES 0805	RES:2012K70N	1
R17	4k8	RES 0603	RES:1608K55N	1
R18, R19, R20	1K65	RES 1206	RES:3216K70N	3
R21	51R	RES 0603	RES:1608K55N	1
R23, R24, R25, R26	1M0	RES 1206	RES:3216K70N	4
R27	806K	RES 0603	RES:1608K55N	1
R28	270K	RES 0603	RES:1608K55N	1
R29	DNP	RES 0603	RES:1608K55N	1
R30	1K	RES 0603	RES:1608K55N	1
R31	S10K275E2	Varistor 275V RMS 10MM Radial, TH	VAR_S10K275E2	1
R32	300K	RES 0603	RES:1608K55N	1
R33, R34		NTC 10 OHM 21mm	NTC-EPCOS	2
R36	8K2	RES 0603	RES:1608K55N	1
R37	0R	RES 0603	RES:1608K55N	1
R38, R39	0R	RES 0805	RES:2012K70N	2
T1	EE44 8 - 8	Transformer 16-pin THT	ETD44 8-8	1
U1	LM78M15	Positive Voltage Regulator	TO-252	1
U2	LM79M15	Negative Voltage Regulator	TO-252	1
U3	UCC25630-2DBR	LLC Resonant Controller With High Voltage Start Up Enabling Low Standby Power, DDB0014A (SOIC-14)	SOP-16-2	1
U4	V0618A	Optocoupler, 5.3 kV, 50-600% CTR, TH	DIP-4	1
U5	TL431AIDBZR	Adjustable Precision Shunt Regulator, 34 ppm / degC, 100 mA, -40 to 85 degC, 3-pin SOT-23 (DRZ), Green (RoHS & no Sb/Br)	SOT23-3	1
X1		Pin Shorting, Pin Spacing 5.08mm, TH	Jumper THT	1
X2	KK Male 3 Ways	KK Male 3 Ways pitch 2.54 mm	KK Male 3 Ways pitch 2.54 mm	1
X3	Terminal Block 3 Ways	Terminal Block 3 Ways pitch 2.52	Terminal Block with 3 ways	1
X4		AC Receptacle, 10A 250VAC	AC Connector	1
X5, X6, X7, X8	Terminal 6.3 mm	Terminal 6.3 mm	Terminal 6.3 mm	4

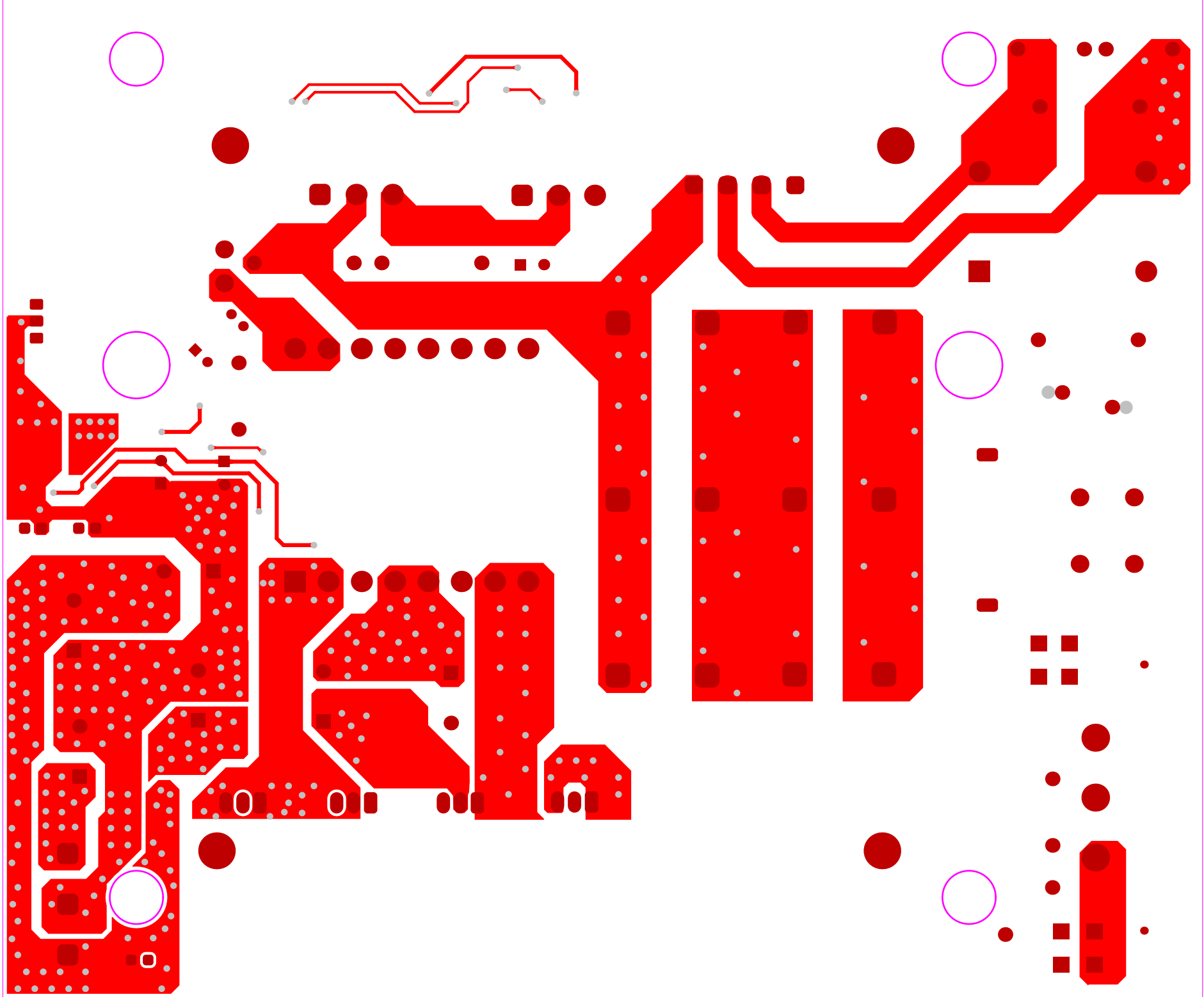
# LLC Power Supply 2020

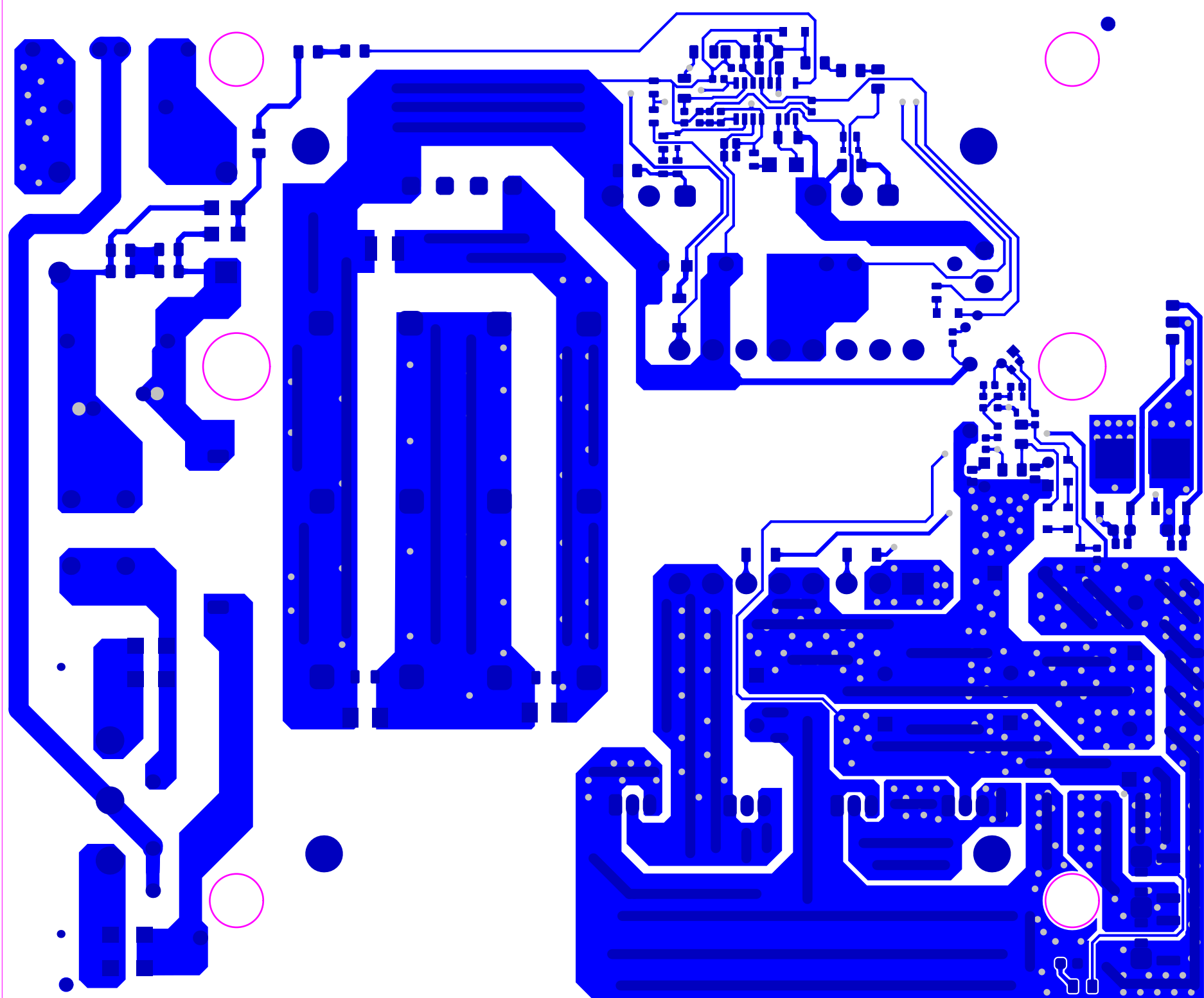


## C. Spanholi 2020


















# Board Stack Report

Stack Up		Layer Stack			
Layer	Board Layer Stack	Name	Material	Thickness	Constant
1		Top Paste			
2		Top Overlay			
3		Top Solder	Solder Resist	0,010mm	3,5
4		Top Layer	Copper	0,036mm	
5		Dielectric 1	FR-4	0,320mm	4,8
6		Bottom Layer	Copper	0,036mm	
7		Bottom Solder	Solder Resist	0,010mm	3,5
8		Bottom Overlay			
9		Bottom Paste			
	Height : 0,411mm				