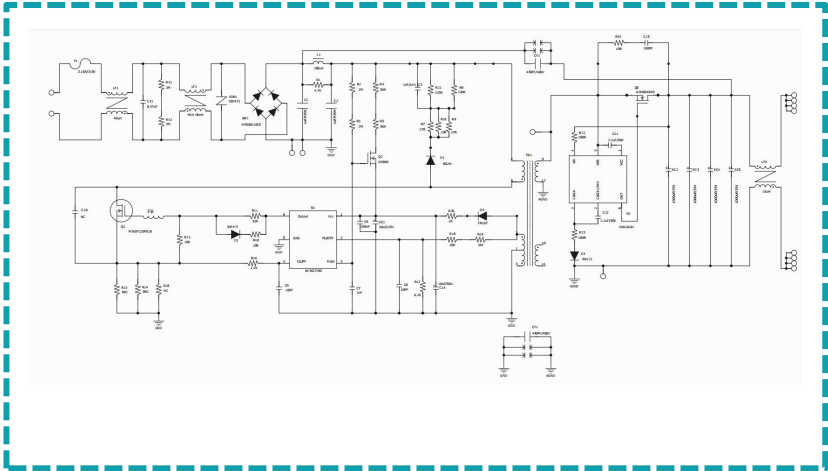


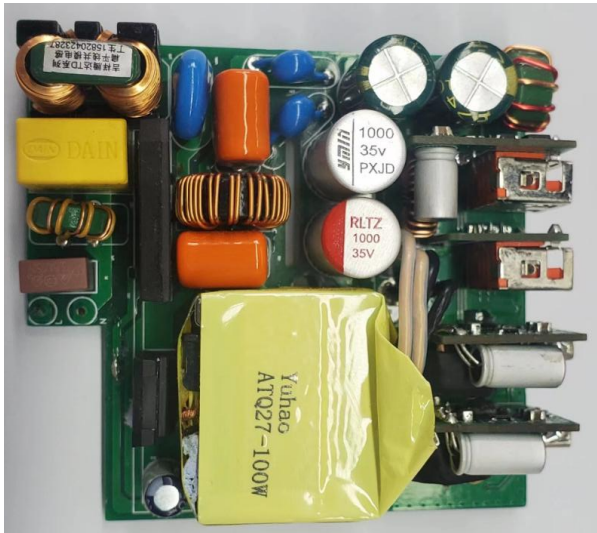
100W-2C2A 单级PFC方案

方案特性：

- 采用微型 SOT-23 封装，支持 140W 的输出功率
- CV 模式 AC 输入电压和负载调节 $< \pm 3\%$
- 在整个 AC 电压范围内， $PF > 0.9$ ， $THD < 20\%$
- 快速启动时间 $< 0.25s$
- 当输入电压为 230VAC，待机功耗 $< 150mW$



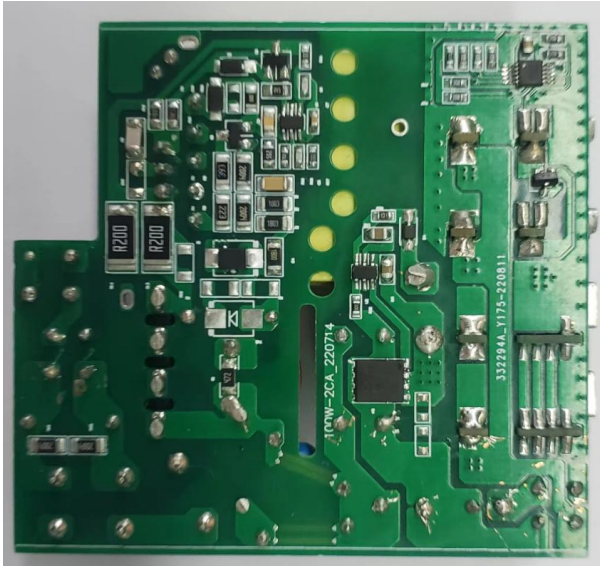
PCB顶层



效率测试

V_{IN} (V_{AC})	P_{IN} (W)	PF	V_{OUT} (V)	I_{OUT} (A)	V_{RIPPLE} (V_{P-P} mV)	P_{OUT} (W)	η (%)
90	18.440	0.96	5.25	3.0	44.00	15.75	85.41
	31.33	0.985	9.29	3.0	56.00	27.88	88.98
	41.00	0.990	12.32	3.0	64.00	36.95	90.12
	50.72	0.992	15.34	3.0	60.00	46.02	90.73
	113.60	0.996	20.52	5.0	72.00	102.60	90.32
115	18.530	0.92	5.26	3.0	48.00	15.78	85.16
	31.30	0.964	9.30	3.0	60.00	27.90	89.14
	40.91	0.976	12.32	3.0	64.00	36.96	90.34
	50.53	0.982	15.34	3.0	58.00	46.02	91.07
	112.23	0.991	20.52	5.0	86.00	102.60	91.42
230	19.130	0.67	5.26	3.0	48.00	15.78	82.49
	31.72	0.770	9.30	3.0	64.00	27.89	87.94
	41.20	0.821	12.32	3.0	66.00	36.96	89.71
	50.64	0.857	15.34	3.0	66.00	46.02	90.88
	111.16	0.942	20.52	5.0	76.00	102.60	92.30
264	19.380	0.59	5.26	3.0	46.00	15.78	81.42
	31.98	0.716	9.30	3.0	62.00	27.90	87.24
	41.45	0.768	12.32	3.0	64.00	36.96	89.17
	50.85	0.807	15.34	3.0	64.00	46.02	90.50
	111.50	0.917	20.52	5.0	80.00	102.60	92.02

PCB底层



100W-2C2A外壳尺寸：

长75mm*宽70mm*高28mm

整体方案：

主控IC: iw3627

同步整流: iw610

初级MOS: SLP65R170M

协议IC: SW3516+SW3516

次级MOS: CRSM100N15N3

功率分配MCU:P3712