

HUSB339 PD 小板参考设计简介

慧能泰半导体 Hynetek 最新一代的 PD3.0 PPS 芯片 HUSB339 已经进入大批量供货阶段，主要特点如下：

- 中国大陆第一家通过 USB PD3.0 PPS 认证的芯片，TID 62。
- 支持多达五档 FPDO 和二档 APDO。支持 5V ~ 23V 范围内任意设置和组合 FPDO 档位，所有 PDO 的最大电流等级可达 5A。
- 自带 VCONN 电源和 USB 电子标签芯片 (eMarker) 检测，支持最大 5A 、 115W 大功率输出的单芯片 PD 协议方案。
- 支持灵活的双插任意降功率值。
- CC 引脚支持 28V 高压，有效保护 CC 脚与 VBUS 高压短路的风险。
- 支持通过 Type-C 口反复多次烧录。

该评估板是基于慧能泰 PD 协议方案 HUSB339 设计,它支持 18-115W 任意输出功率 PD,下图 4 个引脚 FB 接光耦阴极、GND 接输出滤波电容负极、VIN 接输出滤波电容正极、PDER 支持智能降功率评估.给 PDER 引脚 2-25Vdc 高电平信号可以实现 A+C 或 C+C 智能降功率运用.

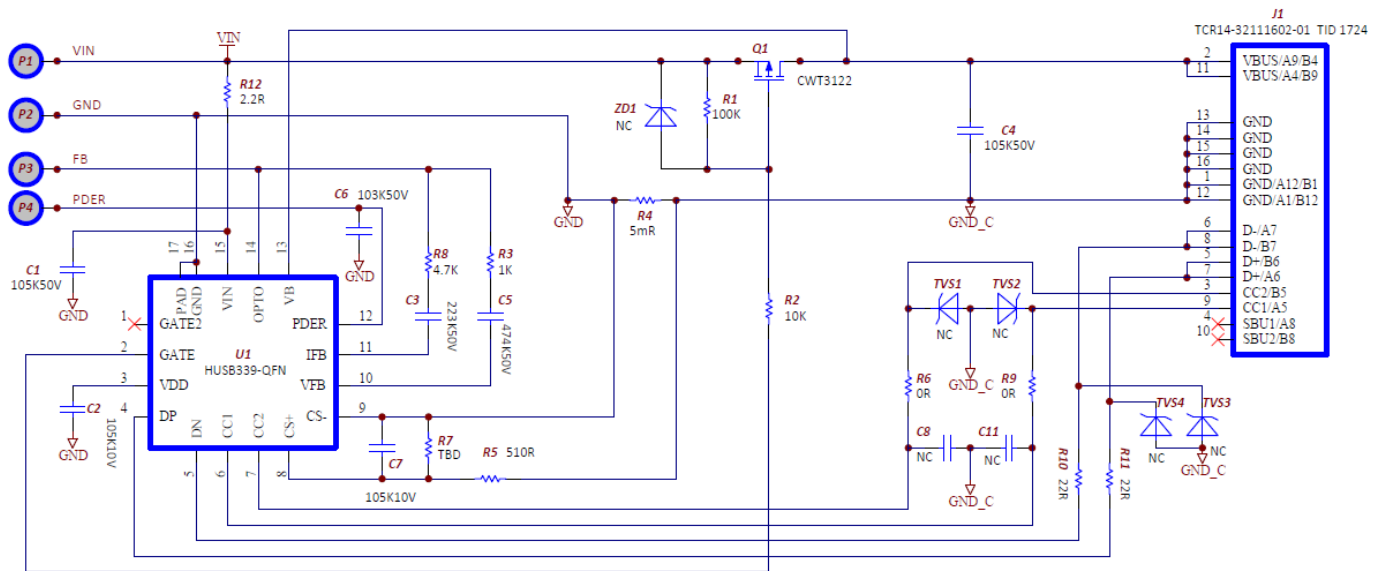


图. 评估板顶视图

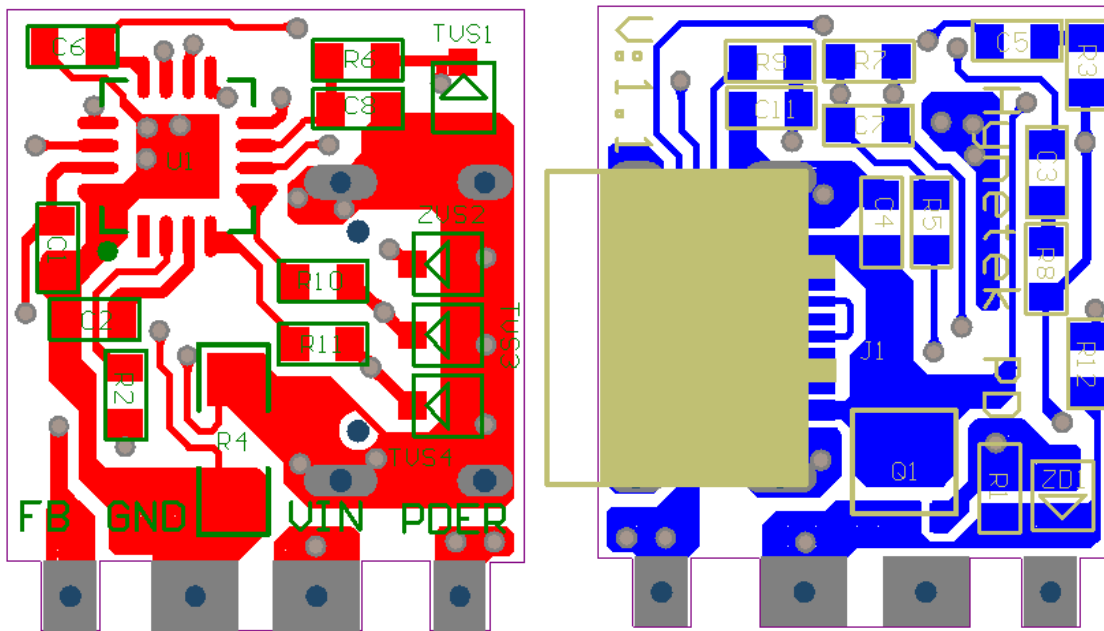


图. 评估板底视图

原理图



PCB LAYOUT



BOM

序号	物料名称	规格描述	位号	数量	备注
插件部分					
1	PCB	18*15*1.2mm/无铅锡板/1oZ/绿油白字/过孔盖油	/	1	
2	连接器	USB-C 12PIN 连接器 TCR14-32111602-01 TID 1724	J1	1	精睿兴业
贴片部分					
3	贴片电阻	0Ω 0603 5%	R6.9	2	
4	贴片电阻	5mΩ 1206 1%	R4	1	
5	贴片电阻	2.2Ω 0603 5%	R12	1	
6	贴片电阻	22Ω 0603 5%	R10.11	2	
7	贴片电阻	510Ω 0603 5%	R5	1	
8	贴片电阻	1KΩ 0603 5%	R3	1	
9	贴片电阻	4.7KΩ 0603 5%	R8	1	
10	贴片电阻	10KΩ 0603 5%	R2	1	
11	贴片电阻	100KΩ 0603 1%	R1	1	
12	贴片电容	103K50V 0603 X7R	C6	1	
13	贴片电容	223K50V 0603 X7R	C3	1	
14	贴片电容	474K50V 0603 X7R	C5	1	
15	贴片电容	105K50V 0603 X7R	C1.2.4.7	4	
16	MOSFET	CWT3122 P-MOS DFN3*3	Q1	1	
17	IC	HUSB339 QFN16	U1	1	Hynetek

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