Fabrication Notes

Stackup:

Designed for CircuitHub Std Fab: 4-Layer, 0.6mm

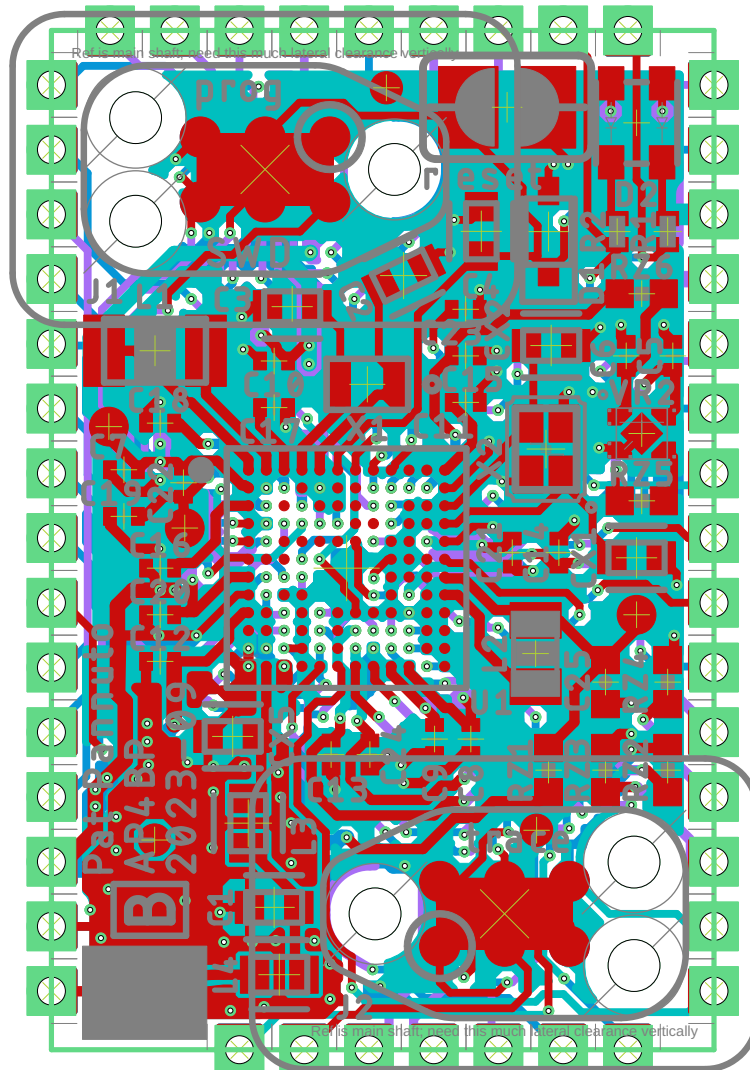| Order	Name	Matrl	Dscrpt	Dielec	Thk(mm)	CuWgt(oz)
1:	Top	Copper	Signal		0.035	1oz
		2116	Prepreg	4.5	0.12	
2:	Route2	Copper	Ground		0.035	1oz
		FR4	Core	4.6	0.23	
3:	Route15	Copper	Pwr/Gnd		0.12	1oz
		2116	Prepreg	4.5	0.12	
4:	Bottom	Copper	Sig/Gnd		0.035	1oz

Impedence Control

One 50Ω trace for 2.4 GHz (Bluetooth)
 – Routed as coplanar wave, params:
   – Conductor Width = 8 mil
   – Conductor Height = 4.725 mil [0.12mm]
   – Er=4.5
   – Modeled Z ≈ 50.1 Ω

Trace U1-L3-L4-S4-P15(Castellation)

XXX IGNORE FOR REV-K ; UNUSED XXX

One 90Ω differential pair USB PHY
 – Routed as edge-coupled external
   – Conductor Width = 6 mil
   – Conductor Spacing = 12 mil
   – Conductor Height = 4.725 mil [0.12mm]
   – Er=4.5
   – Modeled Zdiff ≈ 90.05 Ω

Traces U1-P20,P21(Castellations)

XXX IGNORE FOR REV-K ; UNUSED XXX
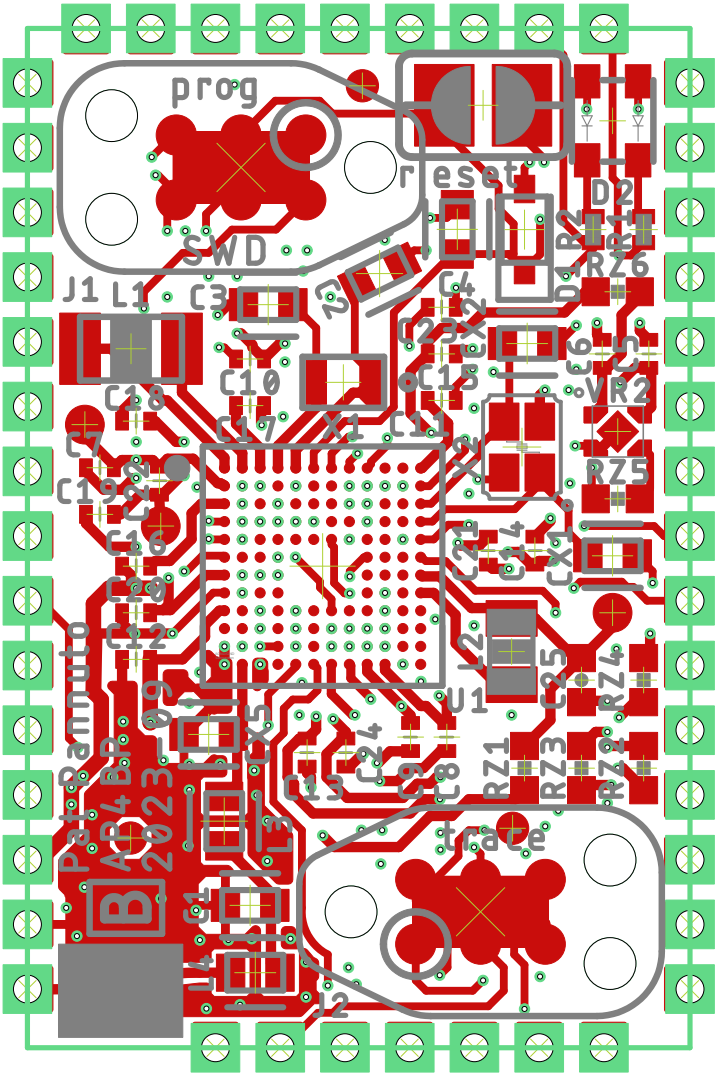
Fabrication Notes

Stackup:

Designed for CircuitHub Std Fab: 4-Layer, 0.6mm

Order	Name	Matrl	Dscrpt	Dielec	Thk(mm)	CuWgt(oz)
1:	Top	Copper	Signal		0.035	1oz
		2116	Prepreg	4.5	0.12	
2:	Route2	Copper	Ground		0.035	1oz
		FR4	Core	4.6	0.23	
3:	Route15	Copper	Pwr/Gnd		0.12	1oz
		2116	Prepreg	4.5	0.12	
4:	Bottom	Copper	Sig/Gnd		0.035	1oz

Impedence Control

One 50Ω trace for 2.4 GHz (Bluetooth)
 - Routed as coplanar wave, params:
   - Conductor Width = 8 mil
   - Conductor Height = 4.725 mil [0.12mm]
   - Er=4.5
   - Modeled Z ∼= 50.1 Ω

Trace U1-L3-L4-S4-P15(Castellation)

prog

reset

SWD

D2

J1 L1

C3

C10

C18

C17

X1

VR2

RZ5

U1

C25

RZ1 RZ3

RZ6

trace

XXX IGNORE FOR REV—K ; UNUSED XXX

One 90Ω differential pair USB PHY
 — Routed as edge—coupled external
    — Conductor Width = 6 mil
    — Conductor Spacing = 12 mil
    — Conductor Height = 4.725 mil [0.12mm]
    — Er=4.5
    — Modeled Zdiff $\simeq$ 90.05 Ω

Traces U1—P20,P21(Castellations)

XXX IGNORE FOR REV—K ; UNUSED XXX