Radiohat 1.0 PCB notes

ERRATA:

1. R23 and R24 references on Front Silk layer are swapped.
2. F.Paste mask for U10 still has too much solder, especially center pad.
3. F.Paste mask for U3 still placing solder behind gull wings.
4. Need to add notes about unused pins on U10 (Remove from outline?)

BOM:

1. Y1 is now 25 MHz, not 27 MHz as shown on BOM and schematic
2. Si5351 will use different variant with normal address going forward

POSSIBLE ISSUES:

1. The front end gain may be too high again - I'm experiencing a little AM broadcast station bleed through. Consider going back to the 100 ohm input resistors on the receiver
2. For some uses, the narrow front end selectivity is a problem in adding a spectrum display. Consider some compromise values for the integrating capacitors and the op-amp bandwidth limiters in the receiver.
3. The 10 units built vary a bit more than they should in power output. I believe this is due to the component tolerances in the onboard low pass filter. The series resistance of the inductors seems to be a problem. Some of the them seem to have as much as 5 ohms series resistance and it all adds up.

SUGGESTIONS:

1. Update manual with strong warnings - especially about J5, Y1 and U3 changes.
2. Always keep a shorting plug on J5 pins 1 and 2 when they are not actually being used to back-feed the Pi to prevent inadvertent shorts or use.
3. Renumber components?

4. Remove most of F.Silks references. They’ve become illegible
5. Improve F.Fab layout for best readability and external Fab
6. Zero grid and layout reference for Pick and Place
7. Clean up BOM for external Fab
8. Try moving 2.0V Analog Ref back to 2.5V if 3d order products allow it (R1)
9. Consider changing back to 20 pin U11 since 32 pin variant is now nearly unobtainable and the 20 pin one is back in stock in quantity.
10. Better Yet: Switch to **TLV320ADC3100IRGET!**
    THIS CHANGE MIGHT BE POSSIBLE WITH JUST A FOOTPRINT CHANGE.
11. Change to alternate S15351 suppliers and use part with standard base address.
12. Move R35 0 ohm jumper to Si5351 side to allow TP4 to be used as yellow wire point for modifications
13. Add some way to unbalance carrier to experiment with newer digital synthesis and other CW methods