Notes  $1-C7,\,C14$  are low leakage tantalums, all others standard 0603 MLCC  $2-R9,\,R10$  are metal film 1% or better,  $R7,\,R8$  are 1% or better, all others standard 0603 3- Guard ring trace should encircle high impedance trace on top side and have a copper fill on bot side under high impedence trace 4-J1 is a BNC type connector, impedence not specified ADC +3.3V +3.3V U1 LTC2473  $\begin{cases} R1 \\ 4.7k \end{cases} \begin{cases} R2 \\ 4.7k \end{cases}$ REFOUT VCC R3 1k COMP PROBE\_V\_OUT SCL\_ISO SCL IN+ VREF SDA\_ISO -///-SDA IN-8 REF-A0 3 R4 **Analog Front End** 1k GND GND C1 C2 C3 C4 0.1uF 10uF 0.1uF Trace is a guard ring GNDS GNDS U2 J1 L PH\_PROBE LMP7721 GNDS +3.30  $\bigcirc$  1 PROBE\_V\_OUT NC Isolation 0.1uF +3.3V VDD VDD GNDS GNDS U3 ADM3260  $\stackrel{\textstyle >}{\underset{}}\stackrel{\textstyle >}{\underset{}}{\underset{}}\stackrel{\textstyle >}{\underset{}}\stackrel{\textstyle >}{\underset{}}{\underset{}}\stackrel{\textstyle >}{\underset{}}\stackrel{\textstyle >}{\underset{}}\stackrel{\textstyle >}{\underset{}}\stackrel{\textstyle >}{\underset{}}\stackrel{\textstyle >}{\underset{}}{\underset{}}\stackrel{\textstyle >}{\underset{}}\stackrel{\textstyle >}{\underset{}}\stackrel{\textstyle >}{\underset{}}\stackrel{\textstyle >}{\underset{}}\stackrel{\textstyle >}{\underset{}}\stackrel{\textstyle >$ **VDDISO** VIN VISO VDDP U4 LMP7721 SCL\_ISO\_ SCL1 SCL<sub>2</sub> SCL SDA SDA VREF SDA\_ISO\_ +3.3V SDA1 SDA J2 VCC QWIIC SDA2 VSEL GND C11 C12 + C13 C13 10uF + C9 C10 R7 16.9k GNDISO GNDISO GNDISO GNDISO GNDP GNDP GNDP ₹ R8 VDD GND C14 0.1uF GNDS GNDS GNDS GNDS GNDS GND GND GND VISO = 1.23V \* ((16.9k + 10k)/10k)VISO = 3.3087V+3.37 GNDS U5 MCP1501 ₹89 10k VDD SHDN VREF svcguy GND 2.2uF Sheet: / ₹R10 10k File: phMeter.sch Title: phMeter  $\rightarrow$ Size: A4 Date: 2021-06-07 Rev: B0 GNDS GNDS KiCad E.D.A. kicad (5.1.10)-1 ld: 1/1