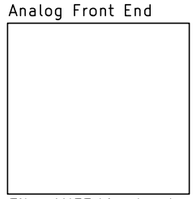
Analog Front End



File: ANFE.kicad_sch

KEEP GNDA, GNDD SEPARATED!

AAFiltPos
AAFiltNeg
R10 10k
R9 10k
R15 10k
R16 10k
U6A OPA4830
U6B OPA4830
U8A OPA4830
U8B OPA4830
U7A LT1819
U7B LT1819
R13 1k
R14 1k
R6 1k
R5 1k
R18 1k
R20 1k
R21 1k
R22 1k
R12 10k
R11 10k
R17 10k
R23 10k
GNDA
R1 24R9
R2 24R9
R3 24R9
R4 24R9
C1 33pF
C2 33pF
U1 LTC2311
AIN+
AIN−
CMOS/LVDS
VDD
REFOUT
REFIN
SDO+
SDO−
SCK−
SCK+
CNV
OVDD
GND
C4 100uF
C6 100nF
C12 1uF
C9 10uF
C7
C3 100uF
C5 100nF
C10 1uF
C11 10uF
C8
DAC1DO
DAC1SCK
CNV
DAC2DO
DAC2SCK
U10A OPA350
U9A OPA350
R7 10K
R8 10K
C27 4u7
C26 100nF
U3 REF02Z
VOUT
TRIM
VIN
TEMP
C13 100nF
C14 100nF
C18 220uF
5VREF
L3 L_Small
+12V
C20 C_Small
U5 LD1117S50−TR
VDD
C15 100nF
C21 10uF
Keep GNDD separated from GNDA
Join GNDD and GNDA in star connection away from ADCs
U4 LD1117S25−TR
2V5
C16 100nF
C17 10uF
GNDD
U13B OPA2277−EP
U13A OPA2277−EP
R19 50R
C34 1uF
U12 REF02Z
C28 100nF
C29 220uF
+12V_FILTERED
L1 L_Small
C32 C_Small
+5V
U7C LT1819
U11B OPA350
U6C OPA4830
U13C OPA2277−EP
C22 100n
C23 100u
C24 100n
C25 100u
C30 100n
C31 100u
C33 100n