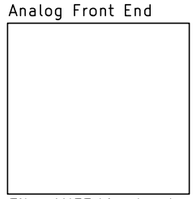
Analog Front End



File: ANFE.kicad_sch

KEEP GNDA, GNDD SEPARATED!

L3
L_Small
+12V
C20
C_Small
GNDA

U3
REF02Z
VOUT
VIN
TEMP
GND
TRIM
C13
100nF
C14
100nF
C18
220uF
5VREF

U5
LD1117S50-TR
VOUT
VIN
ADJ/GND
C15
100nF
C21
10uF
VDD

Keep GNDD separated from GNDA
Join GNDD and GNDA in star connection away from ADCs

U4
LD1117S25-TR
2V5
VOUT
VIN
ADJ/GND
C16
100nF
C17
10uF
GNDD

V_AA_P
R10
10k
U6A
OPA4830
U7A
LT1819
R1
24R9
R13
1k
R14
1k
V_AA_N
R9
10k
U6B
OPA4830
U7B
LT1819
R2
24R9
R6
1k
R5
1k
GNDA
R12
10k
R11
10k

U1
LTC2311
C4
100uF
C6
100nF
C12
1uF
C1
33pF
C9
10uF
AIN+
AIN−
REFOUT
REFIN
SDO+
SDO−
SCK−
SCK+
CNV
OVDD
VDD
CMOS/LVDS
GND
DAC1DO
DAC1SCK
CNV
C7

U10A
OPA350
U9A
OPA350
R7
10K
R8
10K
C27
4u7
C26
100nF

AAFiltPos
R15
10k
AAFiltNeg
R16
10k
R17
10k
R23
10k
U8A
OPA4830
U8B
OPA4830
R18
1k
R20
1k
R21
1k
R22
1k

U1
LTC2311
C3
100uF
C5
100nF
C10
1uF
R3
24R9
R4
24R9
C2
33pF
C11
10uF
DAC2DO
DAC2SCK
C8

KEEP GNDA, GNDD SEPARATED!

U15
LTC2311
C33
100uF
C36
100nF
C42
1uF
C19
33pF
C39
10uF
C37

AAFiltPos
R25
10k
AAFiltNeg
R26
10k
U12A
OPA4830
U12B
OPA4830
U14A
LT1819
U14B
LT1819
R29
1k
R32
1k
R33
1k
R35
1k
R39
24R9
R40
24R9
2V5

+5V
U7C
LT1819
C22
100n
C23
100u
U11B
OPA350
C24
100n
C25
100u
U6C
OPA4830
C30
100n
C31
100u