POWER SUPPLIES

VOLTAGE INVERTER
LM2664 U2
CAP+ 6
CAP- 3
GND 1
V+ 5
SD 4
OUT 2
C1 10uF
VDD
-RAW
C10 10uF
GNDA

-2.5V Regulator
TPS72325
U1
IN OUT
EN NR
GND
-RAW
C8 2.2uF
VSSA -2.5V
C6 2.2uF C7 10uF
C9 0.01uF
GNDA

+2.5V Regulator
U3 TLV70025DDC
IN OUT
EN GND
VDD
C15 2.2uF
VDDA +2.5V
C16 2.2uF C17 10uF
GNDA

ADS DECOUPLING
VDD
C2 1uF C3 0.1uF
GNDA
VDDA
C4 1uF C5 0.1uF
VSSA
VDDA
C11 1uF C12 0.1uF
GNDA
VDDA
C13 1uF C14 0.1uF
GNDA

ELECTRODE CONNECTOR
P1 CONN_01X10
SRB2 10
1N 9
2N 8
3N 7
4N 6
5N 5
6N 4
7N 3
8N 2
BIAS 1

PROCESSOR CONNECTOR
P2 CONN_01X10
VDD 1
GNDA 2
DRDY 3
MISO 4
SCLK 5
CS 6
RESET 7
MOSI 8
VDD 9
GNDA 10

HARDWARE FILTERS
C18 0.01uF C19 0.01uF
C20 0.01uF C21 0.01uF C22 0.01uF
GNDA
SRB2 R1 2.2k INSRB2
1N R2 2.2k IN1N
2N R3 2.2k IN2N
3N R4 2.2k IN3N
4N R5 2.2k IN4N
5N R6 2.2k IN5N
6N R7 2.2k IN6N
7N R8 2.2k IN7N
8N R9 2.2k IN8N
BIAS R10 2.2k BIAS_DRV
R11 2.2k
C28 0.01uF C29 0.01uF C30 0.01uF
C31 0.01uF C32 0.01uF
GNDA

U4 TPD4E1B06
5N 1 IO1 NC 6 2N
4N 2 IO2 IO4 5
3 GND IO3 4 3N
GNDA

U5 TPD4E1B06
SRB2 1 IO1 NC 6
1N 2 IO2 IO4 5
3 GND IO3 4
GNDA

U7 TPD4E1B06
BIAS 1 IO1 NC 6 6N
8N 2 IO2 IO4 5
3 GND IO3 4 7N
GNDA

ANALOG TO DIGITAL ADS1299
U6 ADS1299
VSSA
C24 1uF C23 0.1uF
_VSSA
GNDA
BIAS_DRV
C25 1uF R6 1M
VDDA VDDA VDD
C26 1uF C27 1uF
GNDA

64 RESERVED
63 BIASOUT
62 BIASIN
61 BIASINV
60 BIASREF
59 AVDD
58 AVSS
57 AVSS
56 AVDD
55 VCAP3
54 AVDD1
53 AVSS1
52 CLKSEL
51 DGND
50 DVDD
49 DGND

1 IN8N
2 VDDA
3 IN7N
4 VDDA
5 IN6N
6 VDDA
7 IN5N
8 VDDA
9 IN4N
10 VDDA
11 IN3N
12 VDDA
13 IN2N
14 VDDA
15 IN1N
16 VDDA

IN8N
IN8P
IN7N
IN7P
IN6N
IN6P
IN5N
IN5P
IN4N
IN4P
IN3N
IN3P
IN2N
IN2P
IN1N
IN1P

DVDD 48 VDD
DRDY 47 DRDY
GPIO4 46
GPIO3 45
GPIO2 44
DOUT 43 MISO
GPIO1 42
DAISY_IN 41 GNDA
SCLK 40 SCLK
CS 39 CS
START 38
CLK 37
RESET 36 RESET
PWDN 35 VDD
DIN 34 MOSI
DGND 33 GNDA

17 INSRB2
18 VDDA
19 _VSSA
20 VDDA
21 _VSSA
22 VDDA
23 _VSSA
24
25
26
27 NC
28 NC
29
30
31 GNDA
32 _VSSA

SRB1
SRB2
AVDD
AVSS
AVDD
AVSS
VREFP
VREFN
VCAP4
NC
NC
VCAP1
VCAP2
RESV1
AVSS

C37 0.1uF C33 10uF
C35 1uF C36 100uF C34 1uF
VSSA

AJ Keller
Push The World LLC
Sheet: /
File: ThinkerAFE.sch
Title: Thinker Analog Front End
Size: A3   Date:
KiCad E.D.A. kicad 4.0.5
Rev: v0.1.0
Id: 1/1