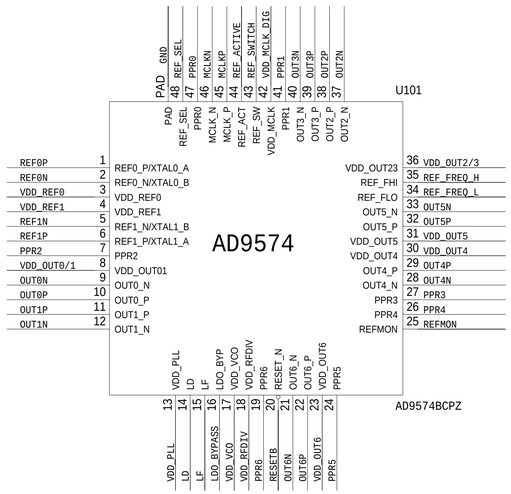
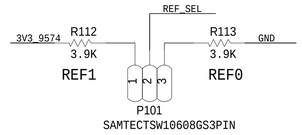
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



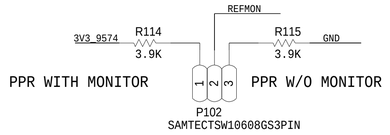
CURRENT ESTIMATION:180 MA

REF IN SELECT



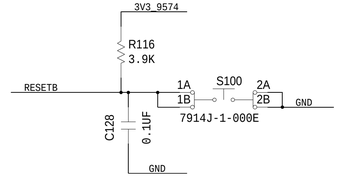
DEFAULT: CONNECT PIN2 AND PIN3

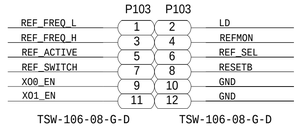
REF MONITOR SELECT



DEFAULT: CONNECT PIN2 AND PIN3

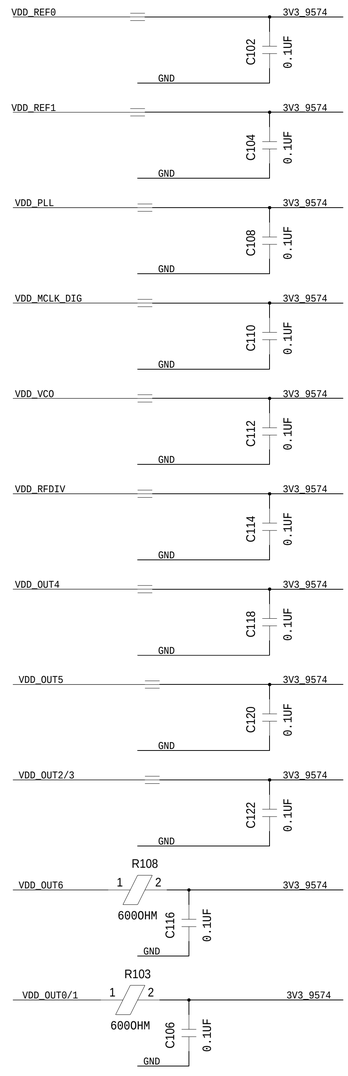
RESETB





THIS CONNECTOR IS USED FOR DEBUGGING
AND ENABLE OR DISABLE XO OF REF_IN
XO IS DISABLED WHEN CONNECTED WITH GND

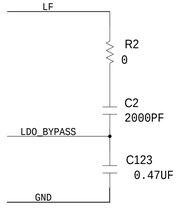
DEFAULT DISABLE: CONNECT XO0_EN AND XO1_EN WITH GND



REPLACING R103 AND R108 WITH 600OHM OR LARGER FERRIT BEAD
CAN SUPPRESS THE SPUR OF CMOS OUPTUTS MORE THAN 10DB

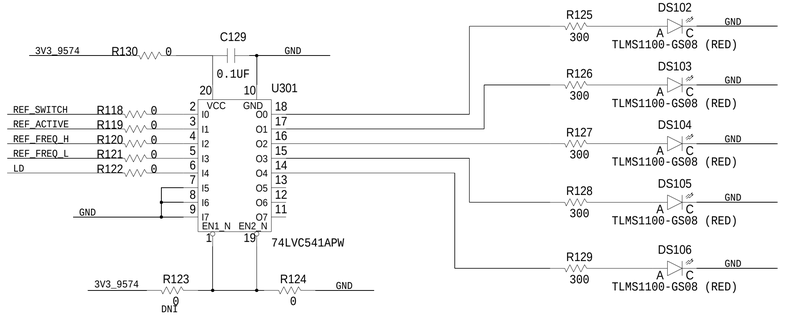
IT'S BETTER TO PLACE THE POWER SUPPLY VIA BEFORE BYPASS CAP AND PART

EXTERNAL LPF CIRCUITS



PLEASE PLACE CLOSE TO THE PART

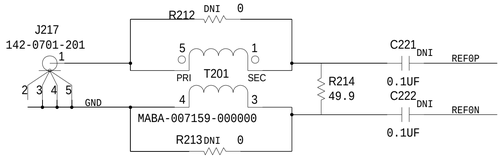
PPR1=0,2,4, C2=1NF, R2=0OHM
PPR1=1,3,5, C2=2NF, R2=0OHM
PPR1=6,7, C2=2NF, R2=4.75KOHM



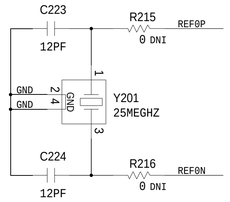
ANALOG DEVICES	SCHEMATIC		
	HW TYPE : Customer Evaluation Product(s): AD9574 Customer Board : N/A		
THIS DRAWING IS THE PROPERTY OF ANALOG DEVICES INC. IT IS NOT TO BE REPRODUCED OR COPIED, IN WHOLE OR IN PART, OR USED IN FURNISHING INFORMATION TO OTHERS, OR FOR ANY OTHER PURPOSE DETRIMENTAL TO THE INTERESTS OF ANALOG DEVICES. THE EQUIPMENT SHOWN HEREIN MAY BE PROTECTED BY PATENTS OWNED OR CONTROLLED BY OWNED ANALOG DEVICES.	DESIGN VIEW <DESIGN_VIEW>	DRAWING NO. 02_036355	REV A
	PTD ENGINEER Liang Xu	SIZE D / SCALE 1:1	SHEET 1 OF 4

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

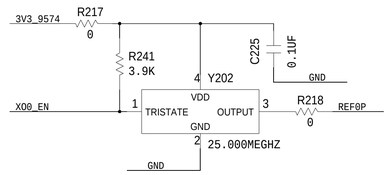
REF0/XTAL0 INPUT



EXTERNAL SMA INPUT



XTAL INPUT

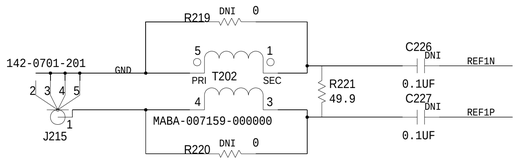


STANDARD XO INPUT

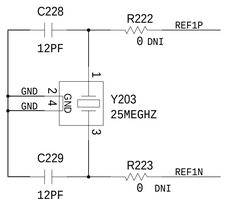
DEFAULT: XO INPUT
FOR DIFFERENTIAL INPUT: REMOVE R215,R216,SOLDER DOWN C221,C222
FOR 3.3V CMOS INPUT: REMOVE R215,R216,R214,T201. SOLDER DOWN R212,R213
SOLDER DOWN C221,C222 WITH 0OHM RESISTORS
FOR 1.8V CMOS INPUT: REMOVE R215,R216,R214,T201. SOLDER DOWN R212,R213
SOLDER DOWN C211,C222
FOR XTAL INPUT: REMOVE R217,R218. SOLDER DOWN R215,R216

PLEASE DO USE HIGH PERFORMACE XO FOR REFERENCE INPUT!

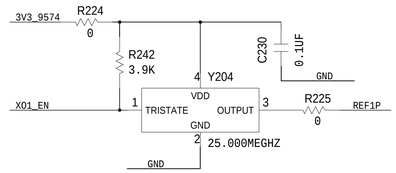
REF1/XTAL1 INPUT



EXTERNAL SMA INPUT



XTAL INPUT

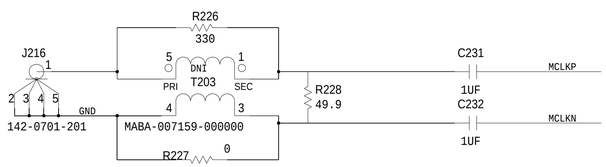


STANDARD XO INPUT

DEFAULT: XO INPUT
FOR DIFFERENTIAL INPUT: REMOVE R222,R223,SOLDER DOWN C226,C227
FOR 3.3V CMOS INPUT: REMOVE R222,R223,R221,T202. SOLDER DOWN R219,R220
SOLDER DOWN C226,C227 WITH 0OHM RESISTOR
FOR 1.8V CMOS INPUT: REMOVE R222,R223,R221,T202. SOLDER DOWN R219,R220
SOLDER DOWN C226,C227
FOR XTAL INPUT: REMOVE R224,R225. SOLDER DOWN R222,R223

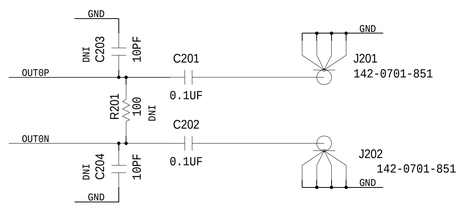
PLEASE DO USE HIGH PERFORMACE XO FOR REFERENCE INPUT!

MONITOR CLOCK INPUT

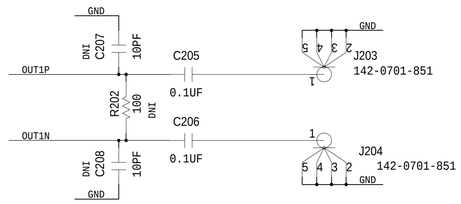


DEFAULT: 3.3V CMOS INPUT
FOR BETTER OUTPUT PERFORMANCE, WHEN MONITOR CLOCK IS 3.3V CMOS INPUT.
PLEASE CONFIGURE THE MONITOR INPUT FORMAT WITH DIFFERENTIAL MODE (PPR6)
FOR DIFFERENTIAL INPUT: REMOVE R226,R227,SOLDER DOWN T203

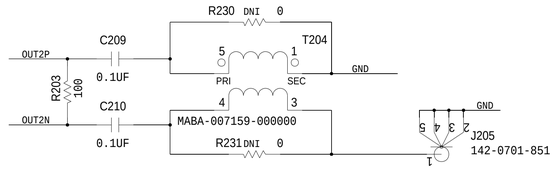
CLOCK OUTPUTS



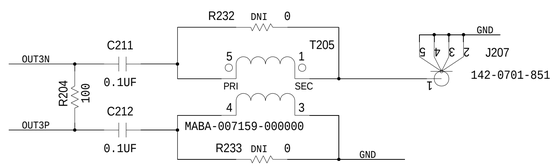
OUT0:(25M/50M),(19.44M/38.88M)
3.3V CMOS/HSTL/OD



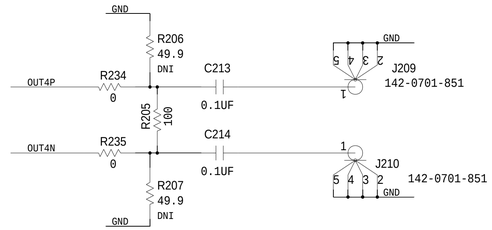
OUT1:(25M),(19.44M)
3.3V CMOS/HSTL/OD



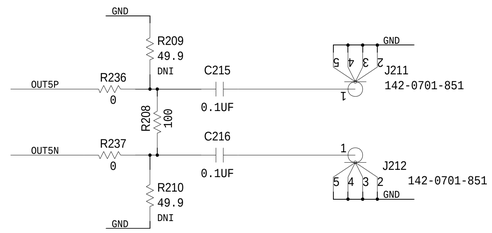
OUT2:(156.25M),(155.52M),(160M);HSTL



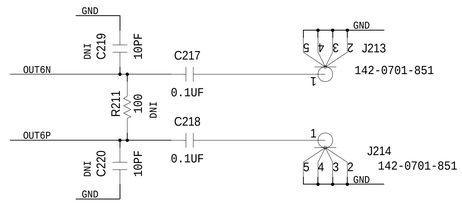
OUT3:(156.25M),(155.52M),(160M);HSTL



OUT4:(125M/100M),(77.76M/38.88M)
(312.5M/125M),(160M/80M)
LVDS/HCSL/HSTL



OUT5:(125M/100M),(77.76M/38.88M)
(312.5M/125M),(160M/80M)
LVDS/HCSL/HSTL



OUT6:(33.3M),(66.6M),(133.3M)
LVDS/3.3V CMOS/1.8V CMOS/OD

ANALOG DEVICES

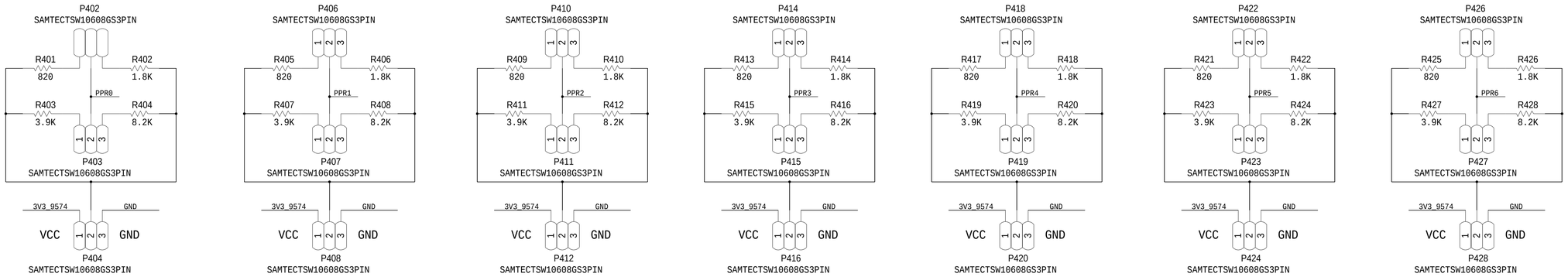
SCHEMATIC

HW TYPE : Customer Evaluation
Product(s): AD9574 Customer Board
: N/A

DESIGN VIEW	DRAWING NO.	REV
<DESIGN_VIEW>	02_036355	A
PTD ENGINEER	SIZE / SCALE	SHEET 2 OF 4
Liang Xu	D / 1:1	

PPR CONTROL SECTION

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



PPR STATE TABLE								
PPR STATE	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
RESISTANCE	820	1.8K	3.9K	8.2K	820	1.8K	3.9K	8.2K
TERMINUS	GND	GND	GND	GND	VCC	VCC	VCC	VCC

PPR0 --- REFERENCE INPUT OPTIONS

PPR0 REF INPUT FORMAT SELECTION								
STATE	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
REF INPUT FORMAT	3.3V CMOS	XTAL	XTAL	XTAL	Differential	XTAL	XTAL	XTAL

PPR1 --- FREQUENCY TRANSLATION OPTIONS

PPR1 FREQUENCY TRANSLATION GROUP SELECTION & OUT2/OUT3 OUTPUT FREQUENCY								
STATE	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
GROUP	Fref=25M; Fvco=2.5G; Fref x2 OFF; OUT2=OUT3= 156.25M/HSTL	Fref=25M; Fvco=2.5G; Fref x2 ON; OUT2=OUT3= 156.25M/HSTL	Fref=25M; Fvco=2.5G; Fref x2 OFF; OUT2=OUT3= 156.25M/HSTL	Fref=25M; Fvco=2.5G; Fref x2 ON; OUT2=OUT3= 156.25M/HSTL	Fref=19.44M; Fvco=2.488G; Fref x2 OFF; OUT2=OUT3= 155.52M/HSTL	Fref=19.44M; Fvco=2.488G; Fref x2 ON; OUT2=OUT3= 155.52M/HSTL	Fref=25M; Fvco=2.56G; Fref x2 OFF; OUT2=OUT3= 160M/HSTL	Fref=25M; Fvco=2.56G; Fref x2 ON; OUT2=OUT3= 160M/HSTL
GROUP NUM.	GROUP NUM. 1		GROUP NUM. 2		GROUP NUM. 3		GROUP NUM. 4	

PPR2 --- OUT0 AND OUT1 OPTIONS

PPR2 OUT0/OUT1 FREQUENCY AND FORMAT SELECTION								
STATE	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
OUT0 FREQ	Fref	Fref x2	Fref x2	Fref	N/A	Fref	Fref x2	Fref
OUT0 FORMAT	HSTL	HSTL	3.3V CMOS	3.3V CMOS	OD	3.3V CMOS	HSTL	HSTL
OUT1 FREQ	Fref	Fref	Fref	Fref	N/A	N/A	N/A	N/A
OUT1 FORMAT	HSTL	HSTL	3.3V CMOS	3.3V CMOS	OD	OD	OD	OD

PPR5 --- REFERENCE MONITOR THRESHOLD OPTIONS

PPR5 REFERENCE MONITOR ERROR WINDOW RANGE SELECTION								
STATE	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
ERROR WINDOW	[-25ppm, +25ppm]		[-10ppm, +10ppm]		[-50ppm, +50ppm]		[-100ppm, +100ppm]	

PPR6 --- MCLK INPUT OPTIONS

PPR6 MONITOR CLK INPUT FREQUENCY AND FORMAT SELECTION								
STATE	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
MCLK INPUT FREQ	19.44M	19.44M	8K	8K	38.88M	25M	10M	10M
MCLK INPUT FORMAT	Differential	3.3V CMOS	3.3V CMOS	Differential	Differential	Differential	3.3V CMOS	Differential

DEFAULT:PPR0=0,PPR1=1,PPR2=3,PPR3=0,PPR4=1,PPR5=6,PPR6=4

PPR3 --- OUT4 AND OUT5 OPTIONS

PPR3 OUT4/OUT5 FREQUENCY AND FORMAT SELECTION @ PPR1 = GROUP NUM. 1								
STATE	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
OUT4 FREQ	100M	100M	100M	125M	125M	100M	100M	N/A
OUT4 FORMAT	HSTL	HCSL	HCSL	LVDS	HSTL	LVDS	HSTL	OD
OUT5 FREQ	125M	100M	125M	125M	125M	100M	100M	N/A
OUT5 FORMAT	HSTL	HCSL	HSTL	LVDS	HSTL	HCSL	HSTL	OD
PPR3 OUT4/OUT5 FREQUENCY AND FORMAT SELECTION @ PPR1 = GROUP NUM. 2								
STATE	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
OUT4 FREQ	312.5M	312.5M	312.5M	312.5M	312.5M	312.5M	312.5M	125M
OUT4 FORMAT	HSTL	LVDS	HCSL	HSTL	LVDS	HCSL	LVDS	HCSL
OUT5 FREQ	312.5M	312.5M	312.5M	125M	125M	125M	125M	125M
OUT5 FORMAT	HSTL	LVDS	HCSL	HSTL	LVDS	HCSL	HSTL	HCSL
PPR3 OUT4/OUT5 FREQUENCY AND FORMAT SELECTION @ PPR1 = GROUP NUM. 3								
STATE	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
OUT4 FREQ	38.88M	38.88M	38.88M	38.88M	77.76M	77.76M	N/A	N/A
OUT4 FORMAT	HSTL	LVDS	LVDS	HSTL	HSTL	LVDS	OD	OD
OUT5 FREQ	77.76M	77.76M	38.88M	38.88M	77.76M	77.76M	38.88M	N/A
OUT5 FORMAT	HSTL	LVDS	LVDS	HSTL	HSTL	LVDS	HSTL	OD
PPR3 OUT4/OUT5 FREQUENCY AND FORMAT SELECTION @ PPR1 = GROUP NUM. 4								
STATE	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
OUT4 FREQ	80M	80M	80M	N/A	80M	80M	N/A	N/A
OUT4 FORMAT	HSTL	LVDS	LVDS	OD	LVDS	HSTL	OD	OD
OUT5 FREQ	80M	80M	160M	80M	80M	160M	160M	N/A
OUT5 FORMAT	HSTL	HSTL	LVDS	HSTL	LVDS	HSTL	HSTL	OD

PPR4 --- OUT6 OPTIONS

PPR4 OUT6 FREQUENCY AND FORMAT SELECTION @ PPR1 = GROUP NUM. 1								
STATE	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
OUT6 FREQ	N/A	133M	133M	133M	66M	66M	66M	33M
OUT6 FORMAT	OD	3.3V CMOS	1.8V CMOS	LVDS	LVDS	3.3V CMOS	1.8V CMOS	3.3V CMOS
PPR4 OUT6 FREQUENCY AND FORMAT SELECTION @ PPR1 = GROUP NUM. 2,3,4								
STATE	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
OUT6 FREQ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
OUT6 FORMAT	OD	OD	OD	OD	OD	OD	OD	OD

ANALOG DEVICES

SCHEMATIC

HW TYPE : Customer Evaluation
Product(s): AD9574 Customer Board
: N/A

DESIGN VIEW <DESIGN_VIEW>	DRAWING NO. 02_036355		REV A
PTD ENGINEER Liang Xu	SIZE D	SCALE 1:1	SHEET 3 OF 4

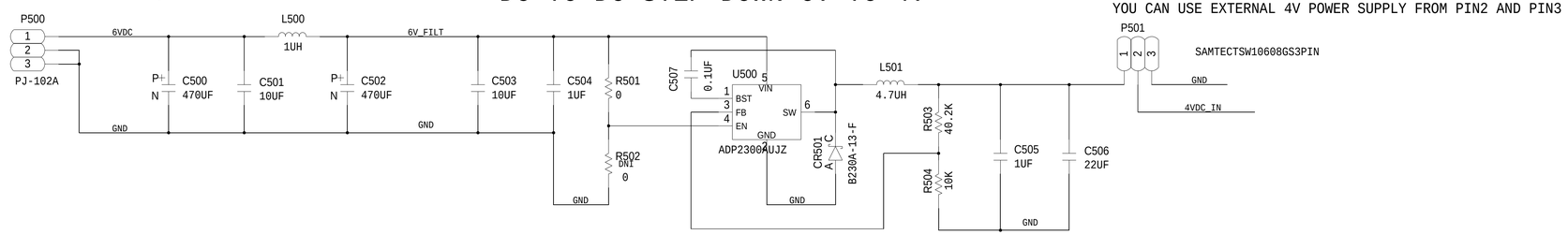
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

POWER SUPPLY SECTION

6V EXTERNAL POWER

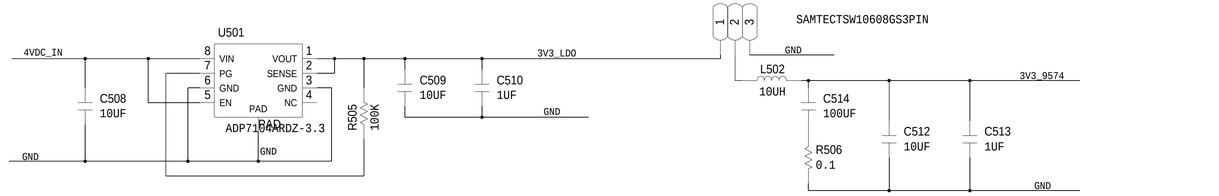
DC TO DC STEP DOWN 6V TO 4V

DEFAULT CONNECT PIN1 AND PIN2
YOU CAN USE EXTERNAL 4V POWER SUPPLY FROM PIN2 AND PIN3



3.3V REGULATOR FOR AD9574

DEFAULT CONNECT PIN1 AND PIN2
YOU CAN USE EXTERNAL 3.3V POWER SUPPLY FROM PIN2 AND PIN3



NOTE: AD9574 HAS INTERNAL LDOS, SO 3.3V DC/DC POWER SUPPLY CAN BE DIRECTLY USED FOR AD9574
IT'S BETTER TO USE A LC FILTER TO SUPPRESS THE SWITCH FREQUENCY OF DC/DC POWER SUPPLY.

ANALOG DEVICES

SCHEMATIC

HW TYPE : Customer Evaluation
Product(s): AD9574 Customer Board
: N/A

DESIGN VIEW	DRAWING NO.	REV
<DESIGN_VIEW>	02_036355	A

PTD ENGINEER	SIZE	SCALE	SHEET
Liang Xu	D	1:1	4 OF 4