



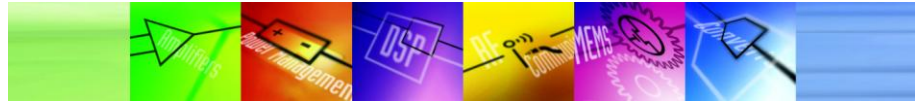
ADV7180 EVALUATION NOTE

***EVAL-ADV7180LFEBZ, EVAL-ADV7180LQEBZ
& EVAL-ADV7180-32EBZ
ADV7180 Video Decoder Evaluation Boards***



ADV7180 EVALUATION NOTE

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Introduction

The ADV7180 is available in four packages, 64-pin LQFP, 48-pin LQFP, 40-pin LFCSP and 32-pin LFCSP. The EVAL-ADV7180LFEBZ employs the 40-pin LFCSP packaged decoder, the EVAL-ADV7180LQEBZ employs the 64-pin LQFP packaged decoder, the EVAL-ADV7180-32EBZ employs the 32-pin LFCSP packaged decoder and the EVAL-ADV7180-48EBZ employs the 48-pin LQFP package. This application note is intended to provide application support for the ADV7180 evaluation boards. This document contains a description of the evaluation kit and the evaluation boards. It also provides details on setup and configuration for evaluation.

Evaluation Kit

Each ADV7180EB evaluation kit consists of the following:

- ADV7180 Evaluation board
- ADV7180 Evaluation Kit CD
- I2C Download cable with USB port connector.
- 7V DC Power Supply Module.

Initial Configuration.

Register Control Software

1. Install the Register Control software from the evaluation CD. (Please refer to the Installation Guide on the evaluation CD for step-by-step instructions.)
2. Once the software is installed, power up the board and connect the USB connector.
3. Start the application (*START>PROGRAM>.ADVREGISTER CONTROL >ADVREGISTER CONTROL 3.56*).

The ADV Register Program Configuration screen appears, as shown in Figure 1

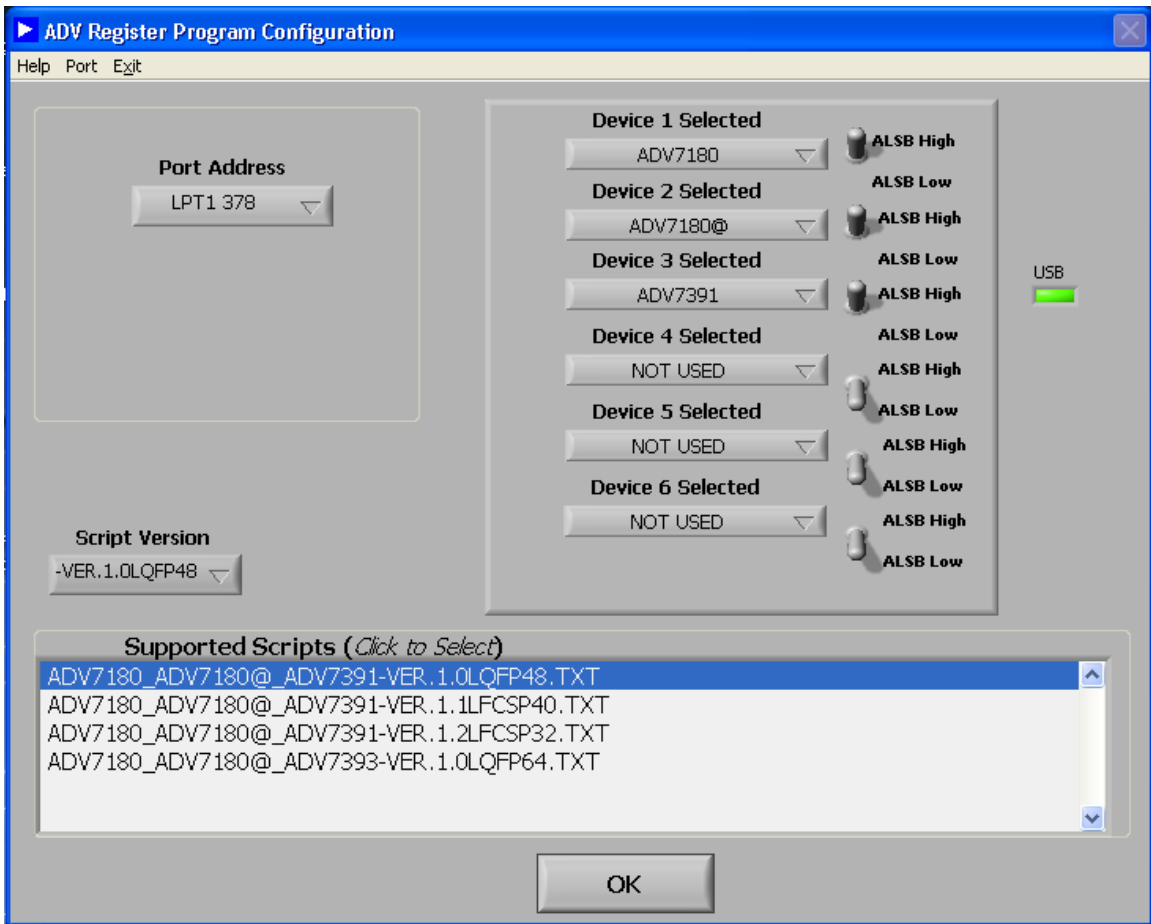
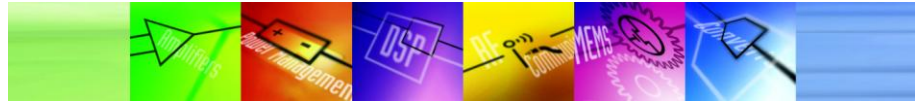


Figure 1. ADV Register Software Configuration.

4. Ensure the options are set, as shown in Figure 1, and click on the OK button. When the register control software starts, it firstly initializes all the selected devices and then loads the reset defaults for each device. I²C control and reset signals are connected to the evaluation board through the USB cable. This cable should be connected to the evaluation board before the application software is started.

Configuring ADV7180 Modes Using Script Files

To enable easy and efficient evaluation, the ADV Register Control software is provided with script files that can be used to program the evaluation board's decoder and encoder into preset configurations. Figure 2 illustrates how a script file can be accessed and selected from the drop down menu



ADV Register Control 3.56

Setting Registers Navigation Special Chip Status Reset devices Options Set Files Hdmi Help

Reload Last Script Ctrl+Q
Print to File Ctrl+P

Scripts Settings
CVBS AUTODETECT CVBS In, YPrPb Out
YC AUTODETECT
YPrPb AUTODETECT

ADV7180 PG1

ADDRESS	REGISTER NAME	VALUE	Device Address
00	INPUT CONTROL	RW (00 hex)	42
01	VIDEO SELECTION	RW (C8 hex)	
02	VIDEO SELECTION 2	RW (04 hex)	
03	OUTPUT CONTROL	RW (0C hex)	
04	EXTENDED OUTPUT CONTROL	RW (45 hex)	
05	PRIMARY MODE	RW (00 hex)	
06	VIDEO STANDARD	RW (02 hex)	
07	AUTODETECT ENABLE	RW (7F hex)	
08	CONTRAST	RW (80 hex)	
0A	BRIGHTNESS	RW (00 hex)	
0B	HUE	RW (00 hex)	
0C	DEFAULT VALUE Y	RW (36 hex)	
0D	DEFAULT VALUE C	RW (7C hex)	
0E	ADI CONTROL	RW (00 hex)	
0F	POWER MANAGEMENT	RW (00 hex)	
10	STATUS 1	RO (4B hex)	
11	IDENT	RO (1E hex)	
12	STATUS 2	RO (00 hex)	
13	STATUS 3	RO (2C hex)	

Script Version: VER.1.0LQFP48

Read Only
Write Only
USB

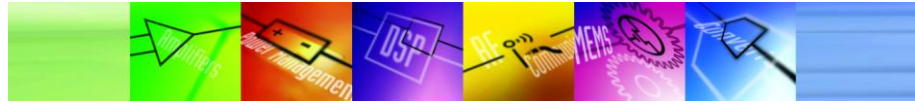
MSB LSB

ENHSPLL BETACAM FFSC ENVSPROC SQPE VID_QUAL1 VID_QUAL0

1 1 0 0 1 0 0 0

C8

Figure 2 Configuration of ADV7180 with ADV Register Control S/W



Board-Level Description.

There is an evaluation board for each package type. The primary features of the boards and their positions are marked in Figure 3, Figure 4 and Figure 5.

Do not connect CVBS, S-Video, YPrPb simultaneously when using the EVAL-ADV7180LFEBZ and the EVAL-ADV7180-32EBZ, as they share the three analog inputs to the decoder.

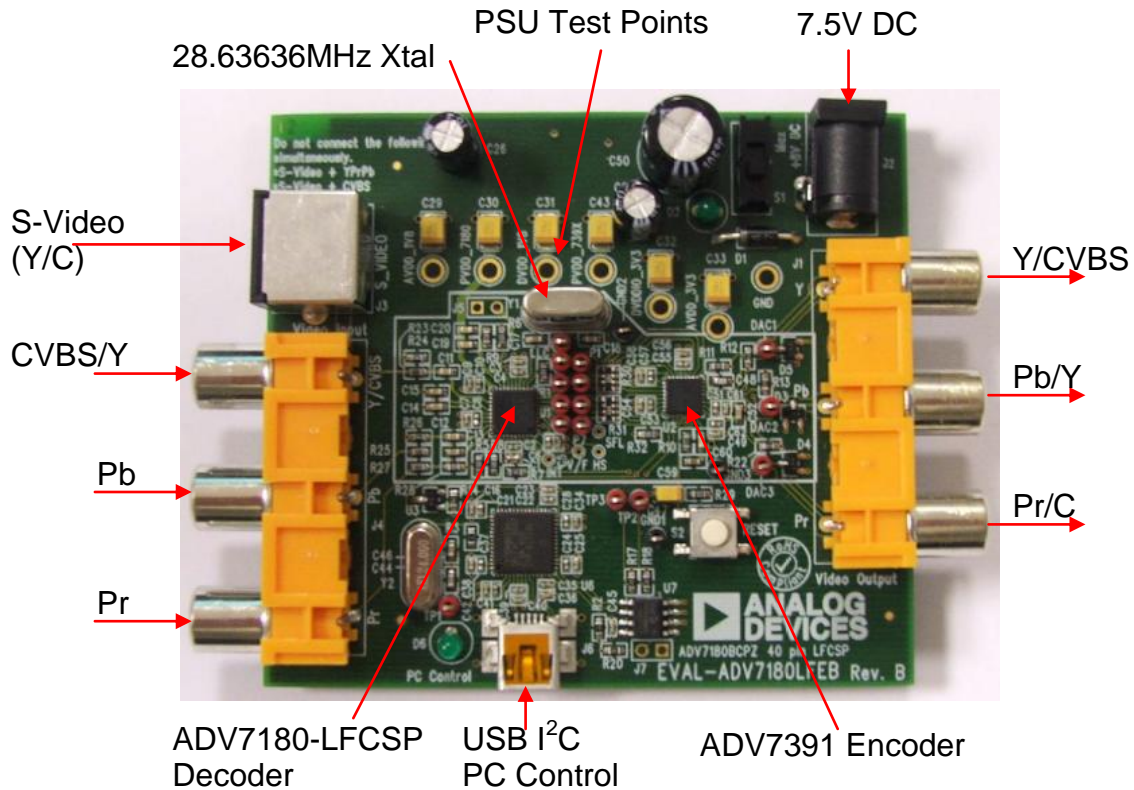


Figure 3 EVAL-ADV7180LFEBZ Evaluation Board

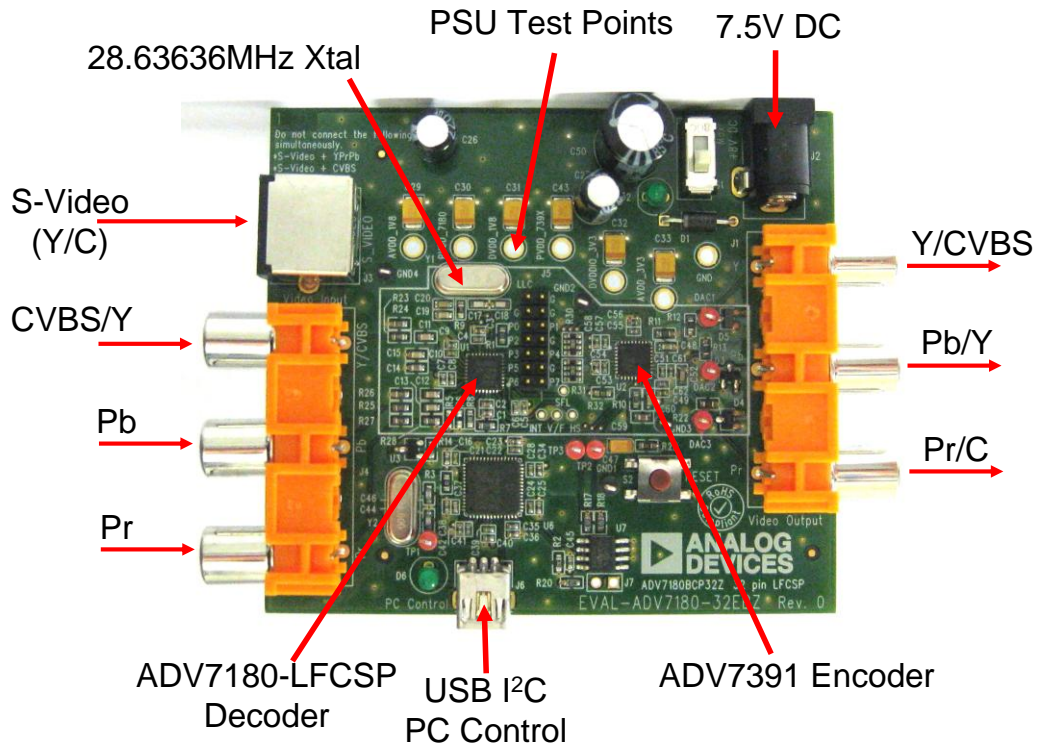
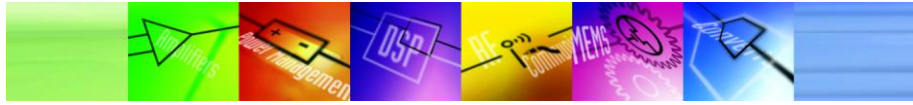


Figure 4 EVAL-ADV7180-32EBZ Evaluation Board

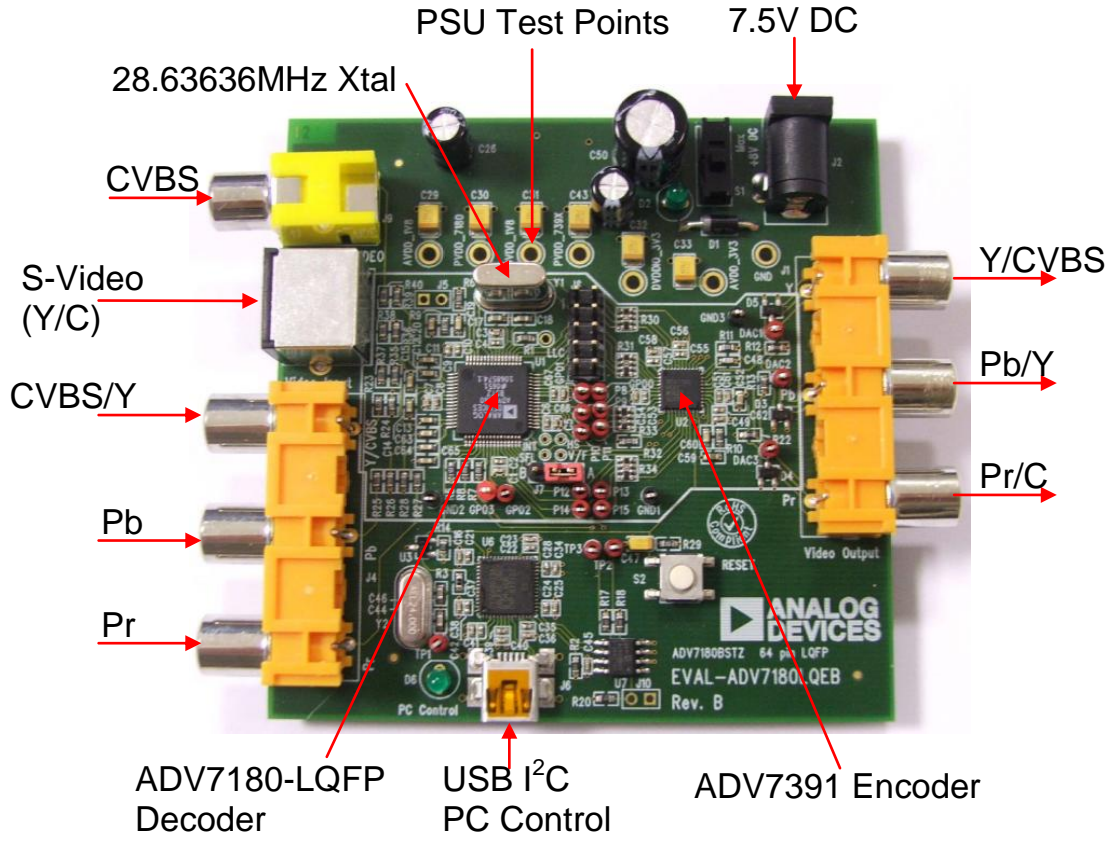
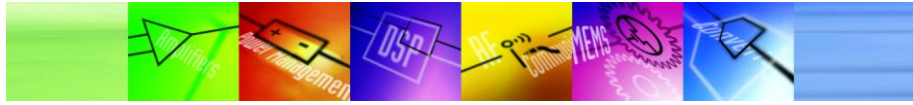
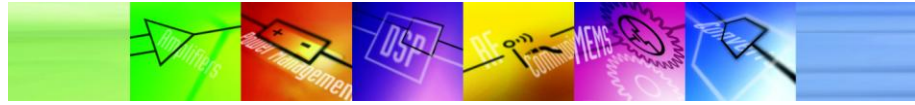


Figure 5 EVAL-ADV7180LQEBZ Evaluation Board



Schematics

This section provides detailed schematic of the ADV7180 evaluation boards. Figure 26 to Figure 49 provides layout information for the boards. Table 1 to Table 4 list the current BOMs.

ADV7180 – 40-pin LFCSP Package

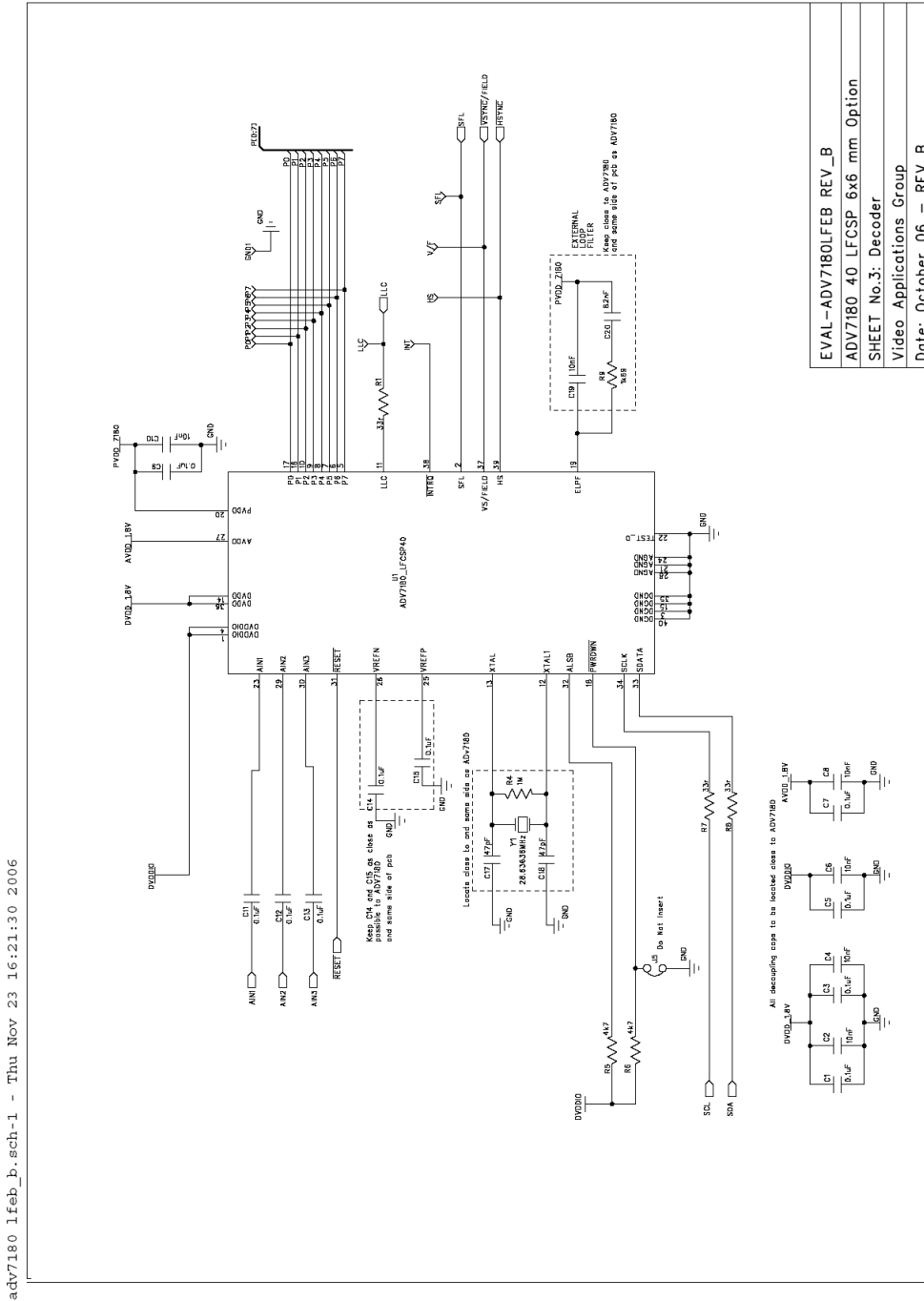
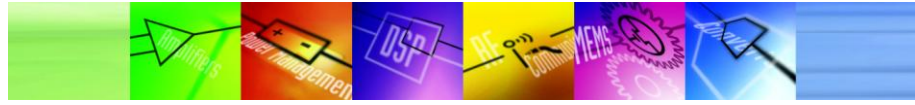


Figure 6 EVAL-ADV7180LFBZ -Decoder Section



adv7180_1feb_b_sch-5 - Thu Nov 23 16:21:32 2006

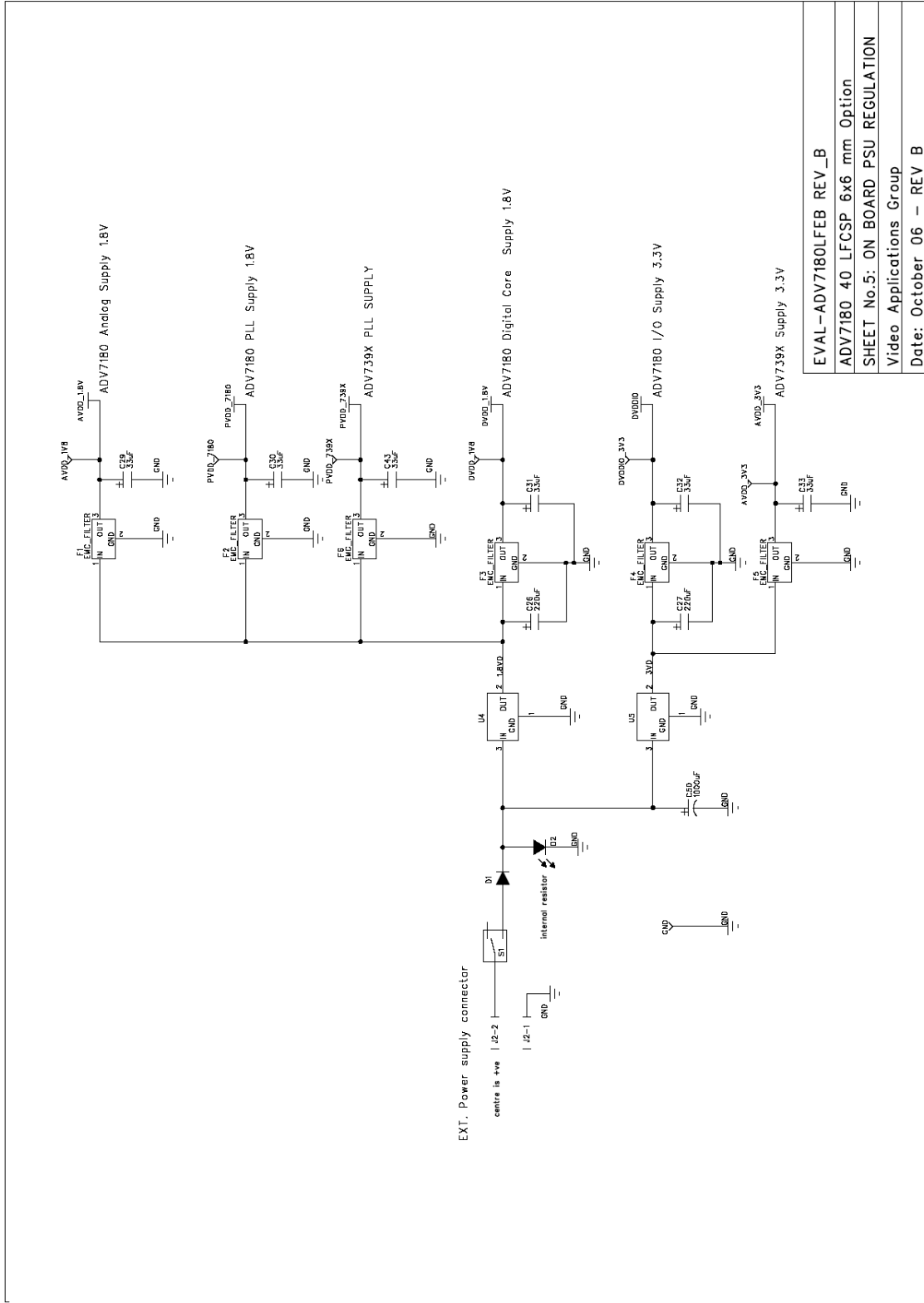
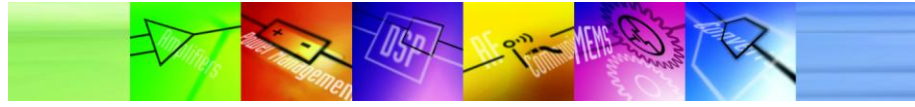
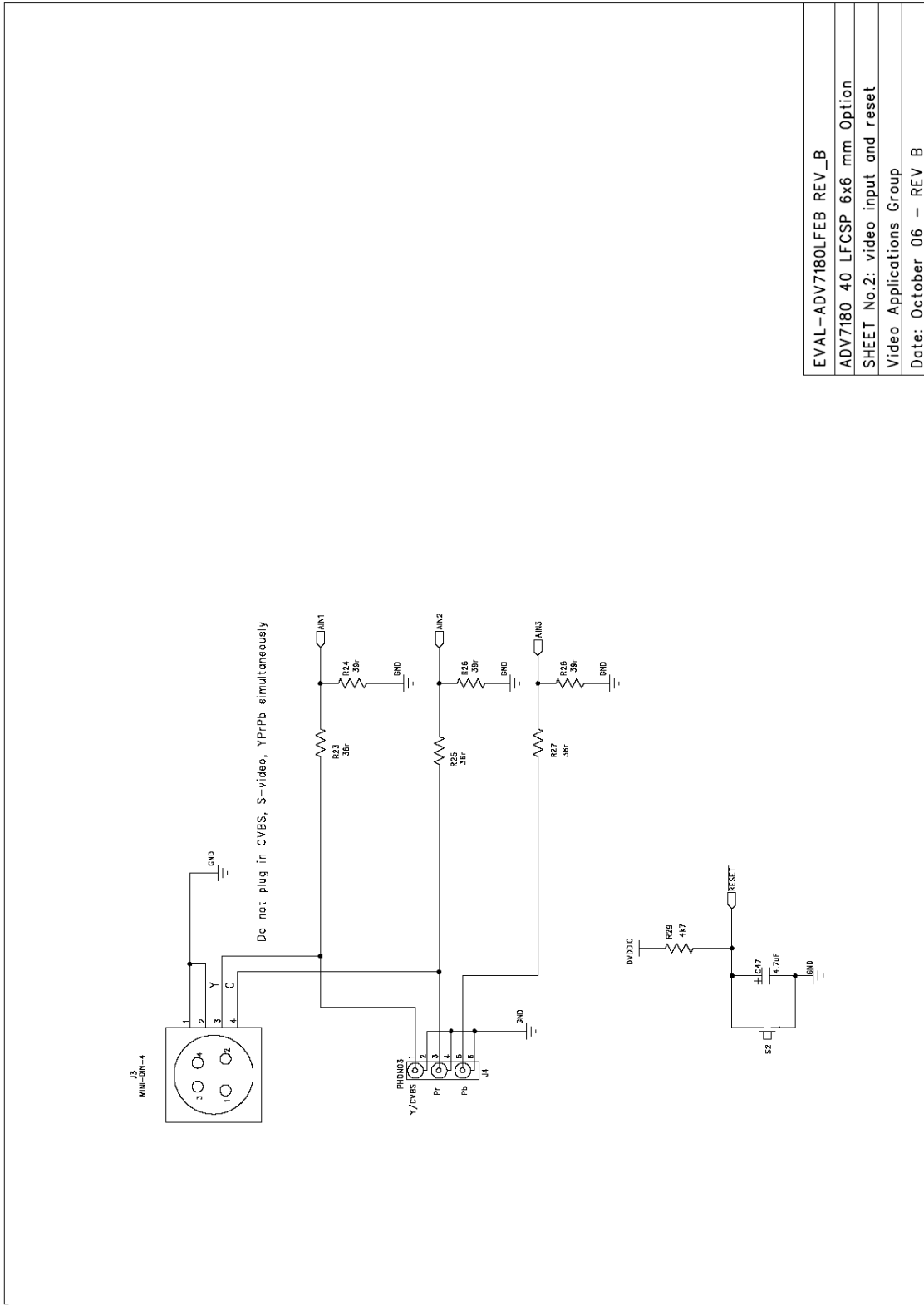


Figure 8 EVAL-ADV7180LFEBZ - PSU Regulation Section

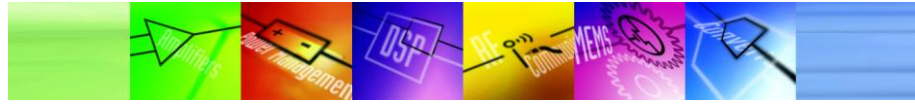


adv7180_1feb_b_sch-4 - Thu Nov 23 16:21:32 2006



EVAL-ADV7180LFEZ REV_B
ADV7180 40 LFCSP 6x6 mm Option
SHEET No.2: video input and reset
Video Applications Group
Date: October 06 - REV B

Figure 9 EVAL-ADV7180LFEZ -Input Section



adv7180_1feb_b_sch-2 - Thu Nov 23 16:21:31 2006

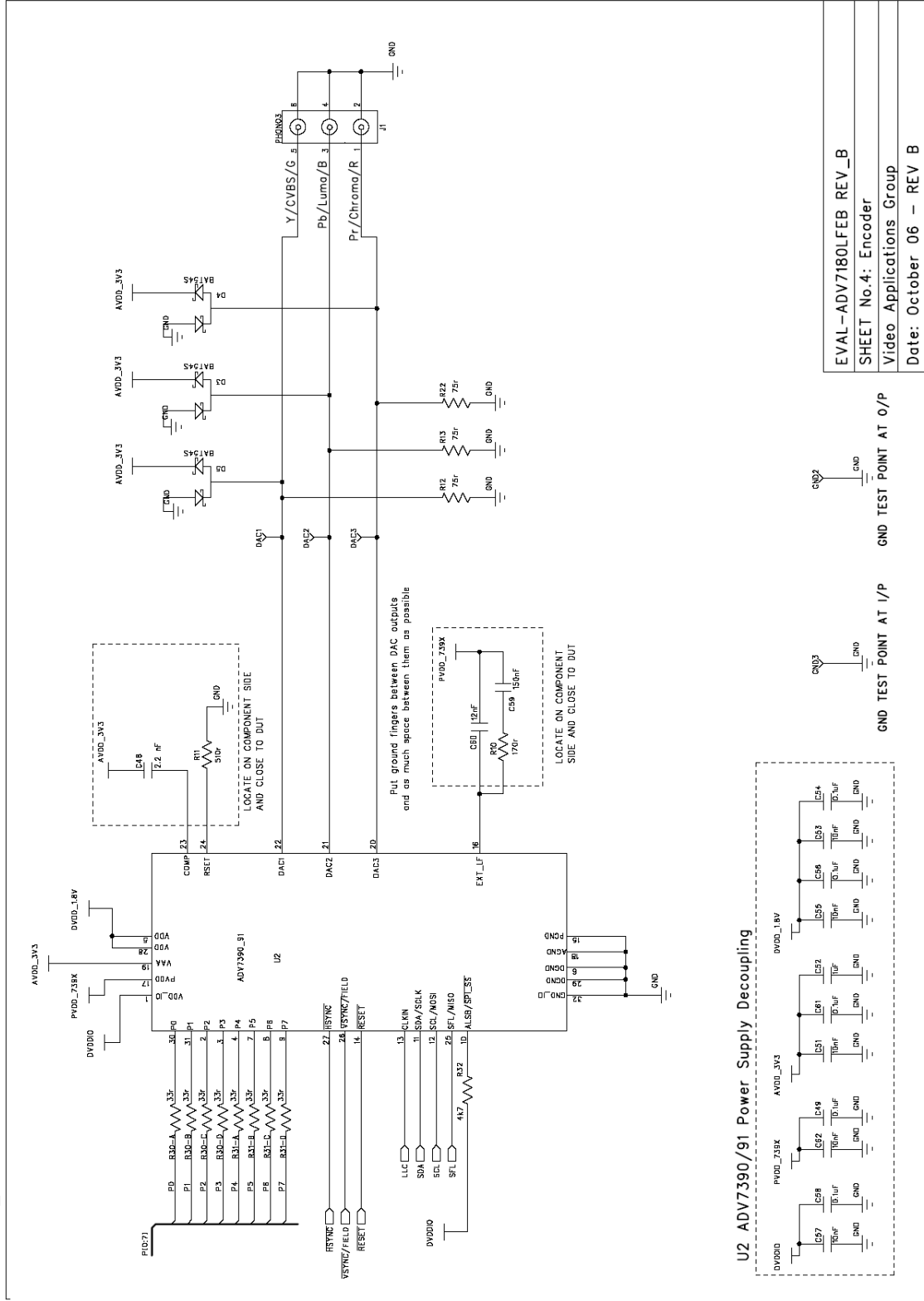
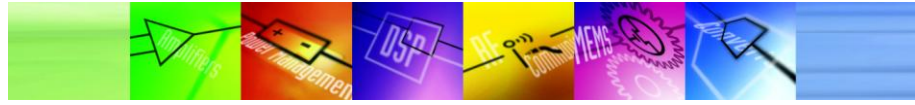
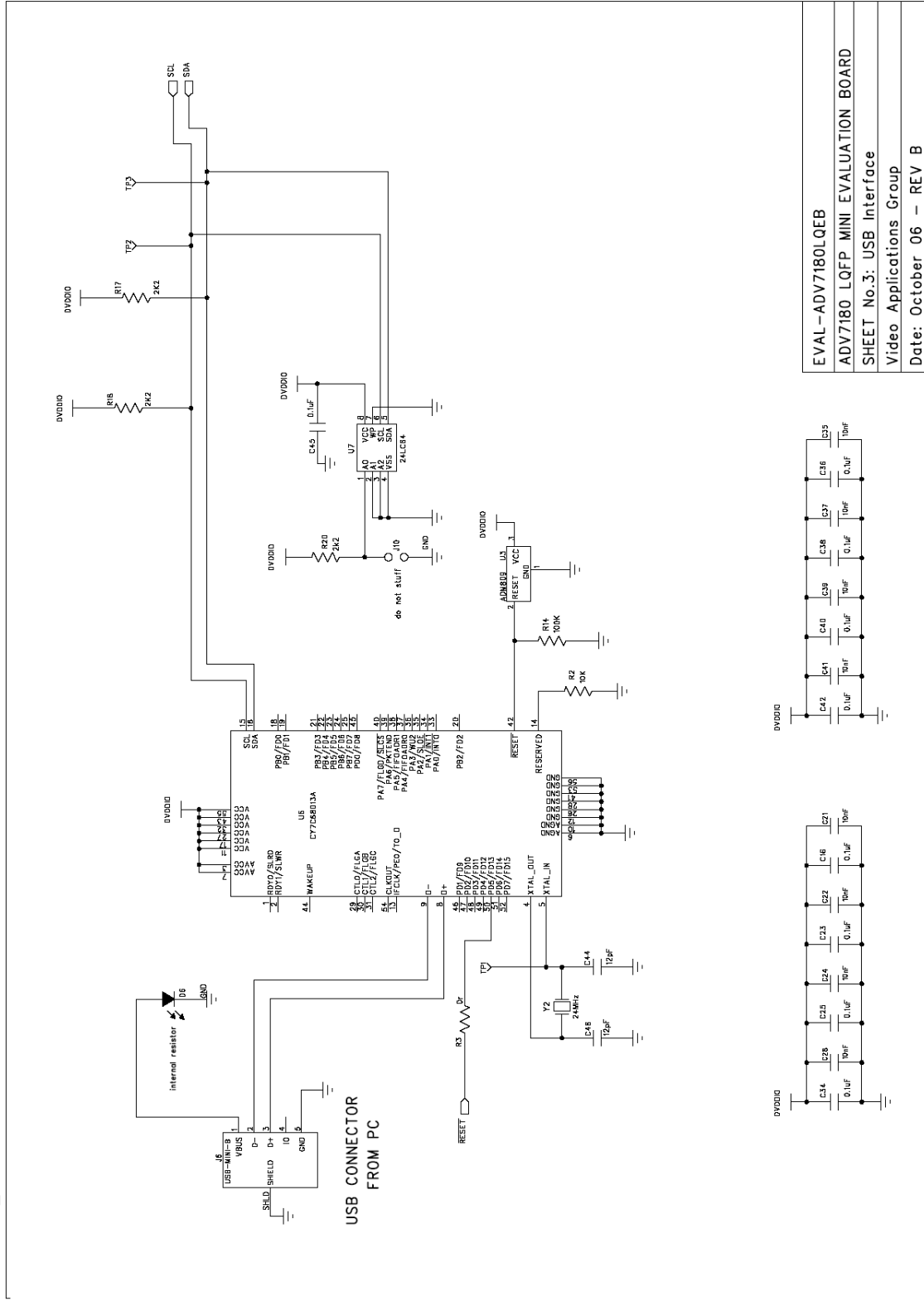


Figure 10 EVAL-ADV7180LFEZ Encoder Section



adv7180_lqeb_b_sch-3 - Thu Nov 23 16:12:00 2006



EVAL - ADV7180LQEB
ADV7180 LQFP MINI EVALUATION BOARD
SHEET No.3: USB Interface
Video Applications Group
Date: October 06 - REV B

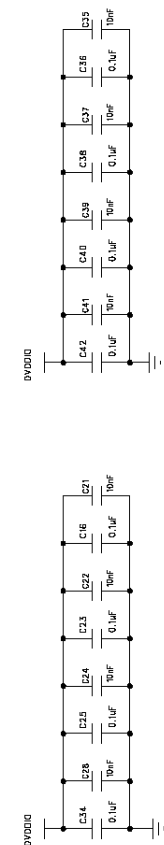
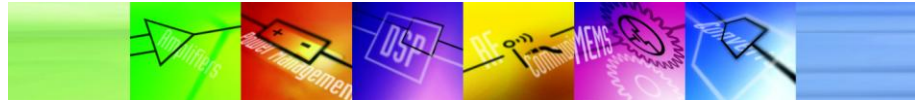
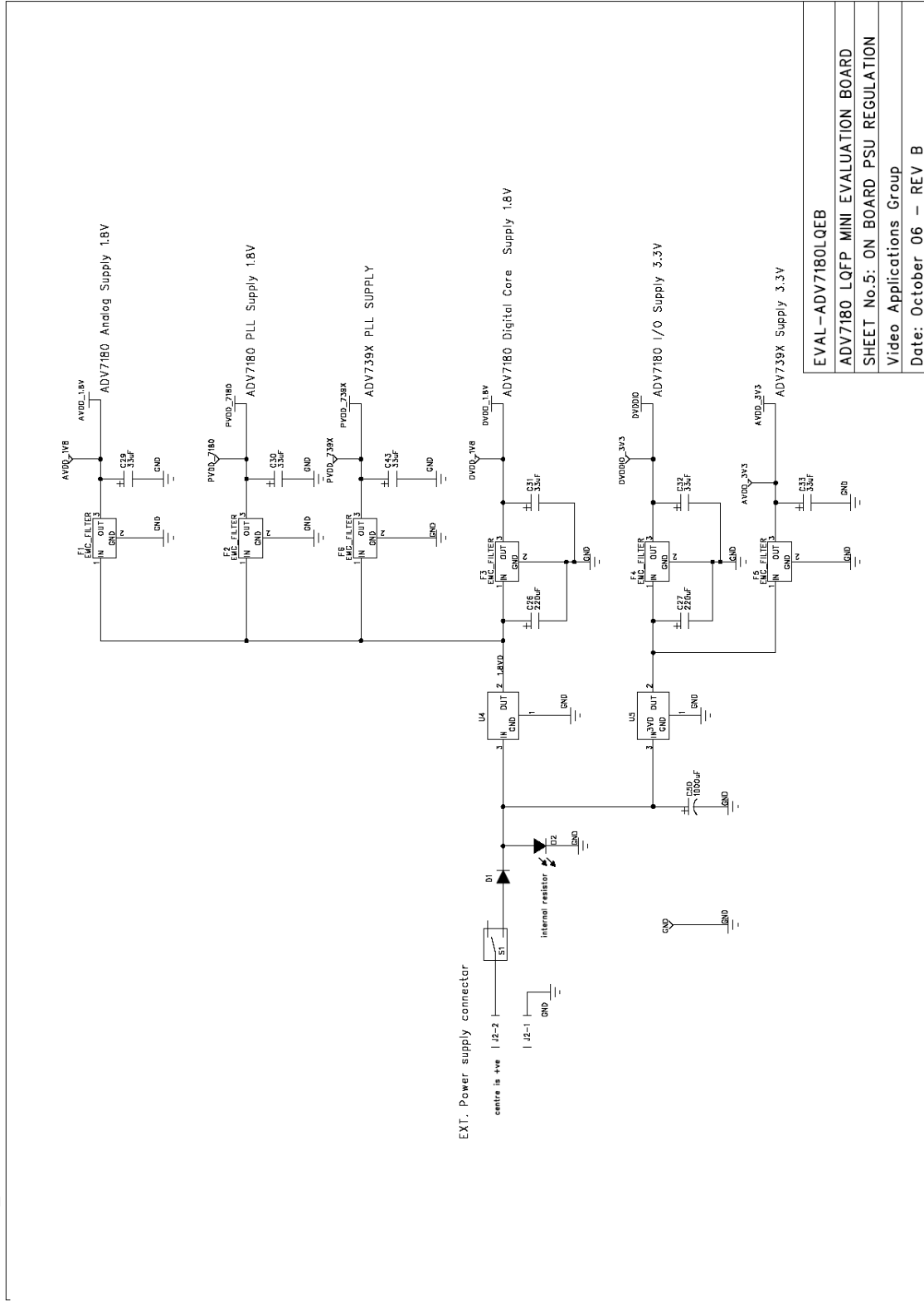


Figure 12 ADV7180 LQFP -PC Interface Section

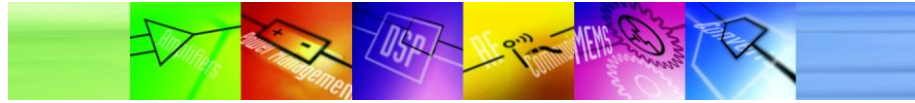


adv7180_lqeb_b_sch-5 - Thu Nov 23 16:12:00 2006

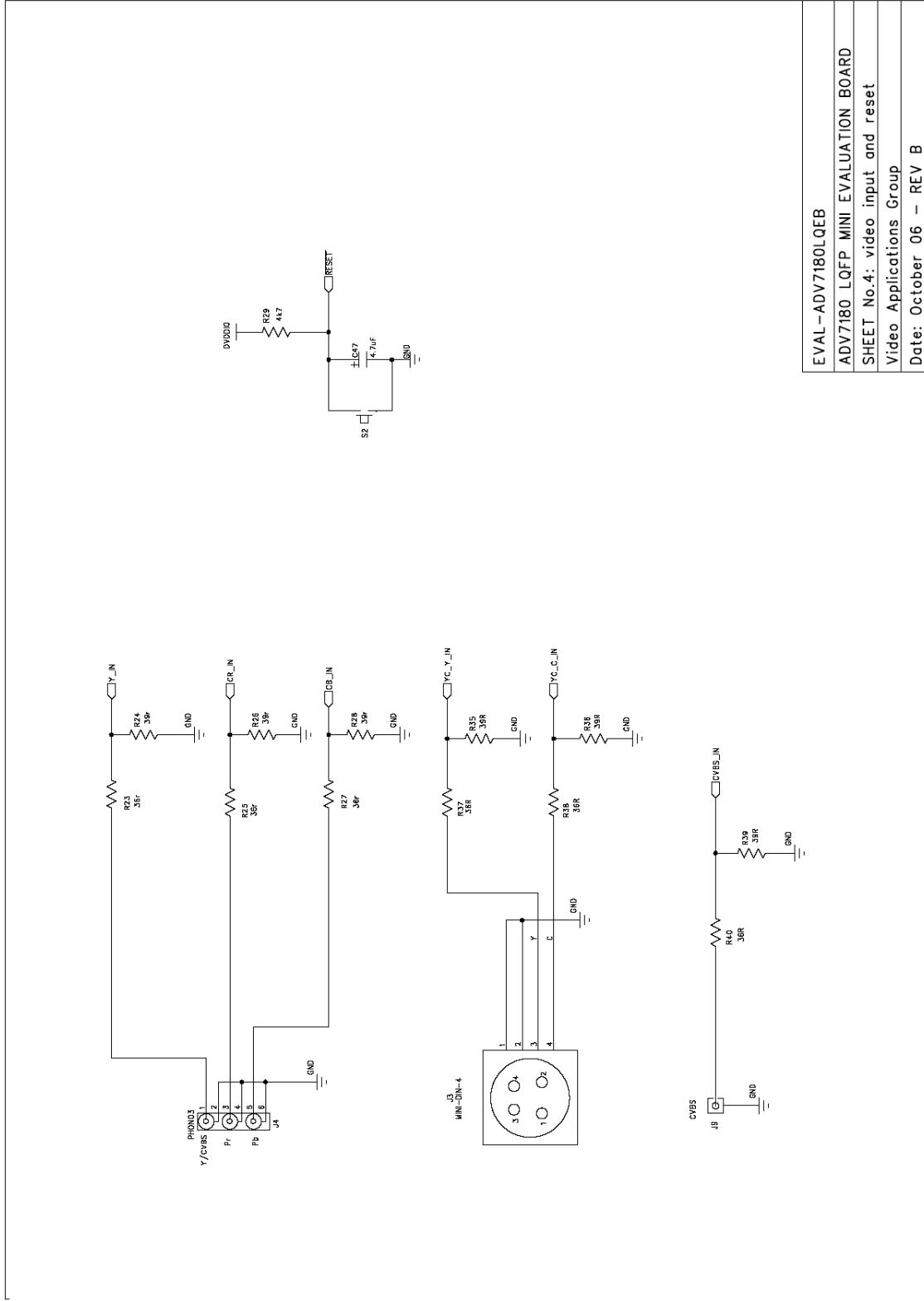


EVAL - ADV7180LQEB
ADV7180 LQFP MINI EVALUATION BOARD
SHEET No.5: ON BOARD PSU REGULATION
Video Applications Group
Date: October 06 - REV B

Figure 13 ADV7180 LQFP-PSU Regulation Section

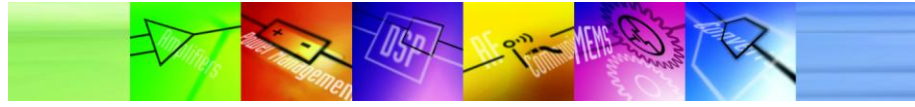


adv7180_lqeb_b_sch-4 - Thu Nov 23 16:12:00 2006

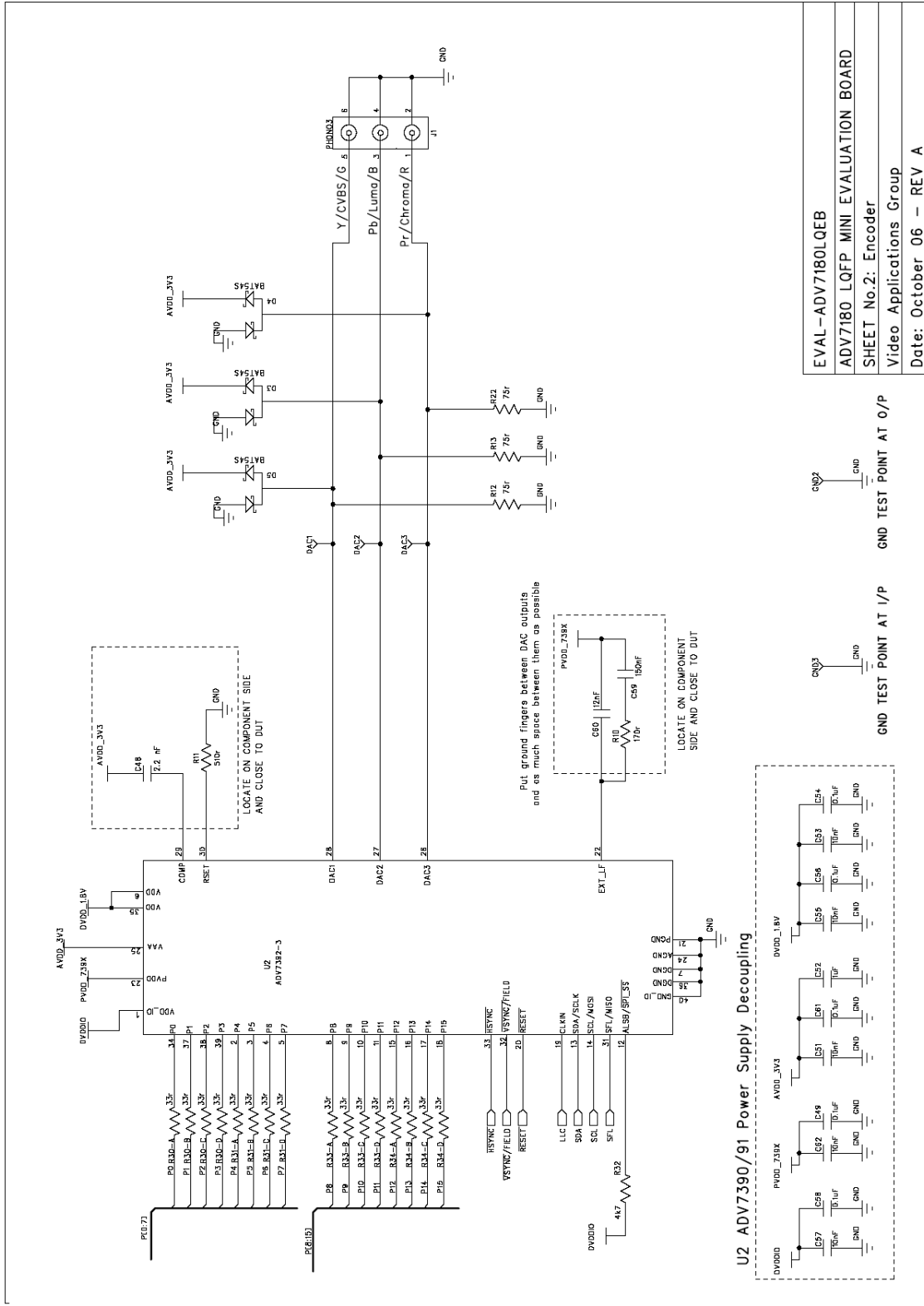


EVAL-ADV7180LQEB
 ADV7180 LQFP MINI EVALUATION BOARD
 SHEET No.4: video input and reset
 Video Applications Group
 Date: October 06 - REV B

Figure 14 ADV7180 LQFP Input Section

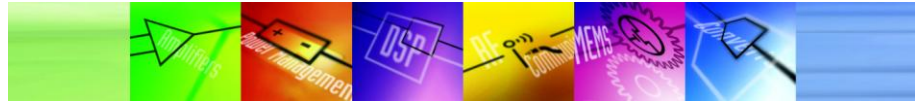


adv7180_lqeb_b_sch-2 - Thu Nov 23 16:12:00 2006



EVAL-ADV7180LQEB
ADV7180 LQFP MINI EVALUATION BOARD
SHEET No.2: Encoder
Video Applications Group
Date: October 06 - REV A

Figure 15 ADV7180 LQFP-Encoder Section



ADV7180 – 32-pin LFCSP Package

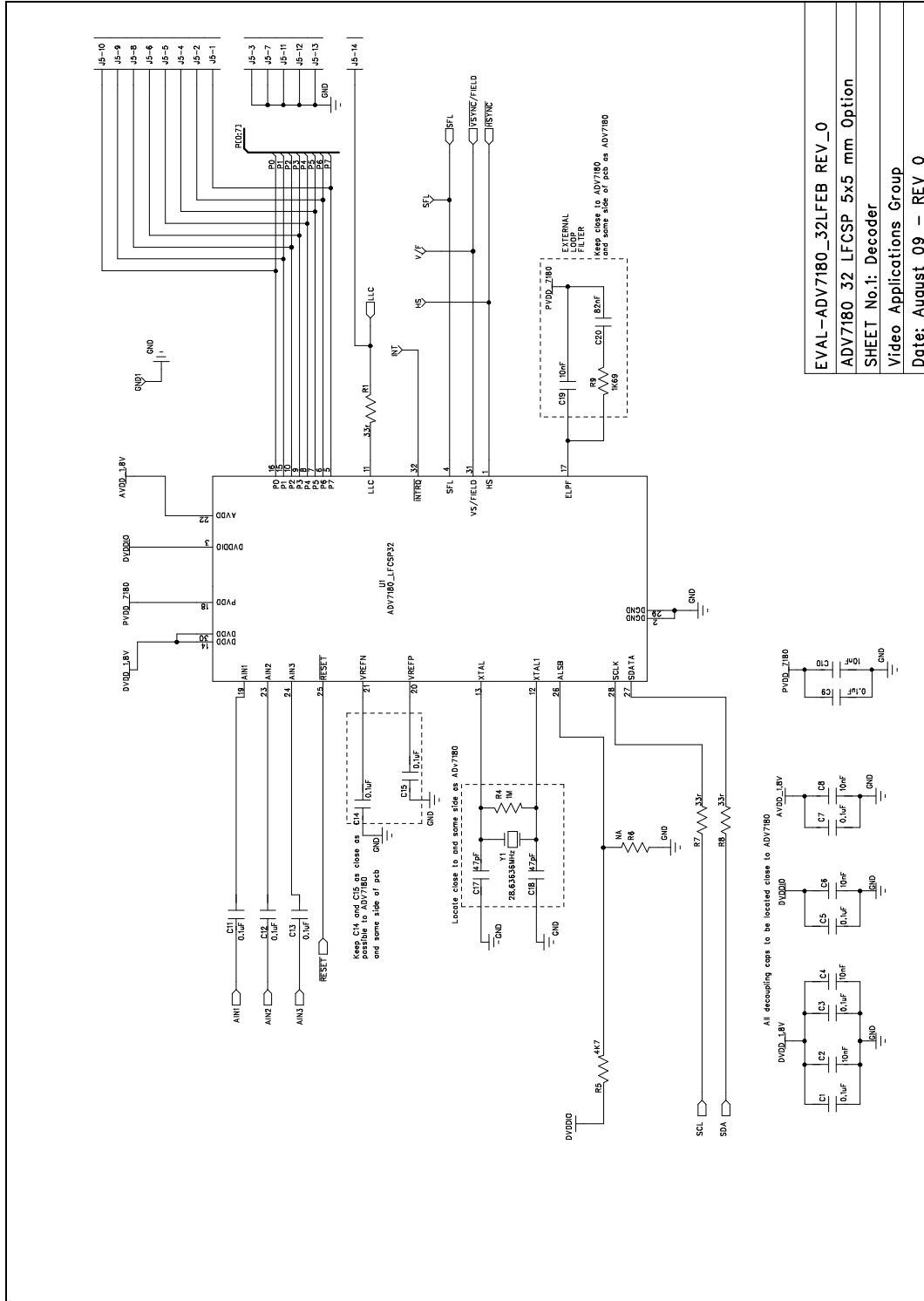


Figure 16 ADV7180 32-pin LFCSP-Decoder Section

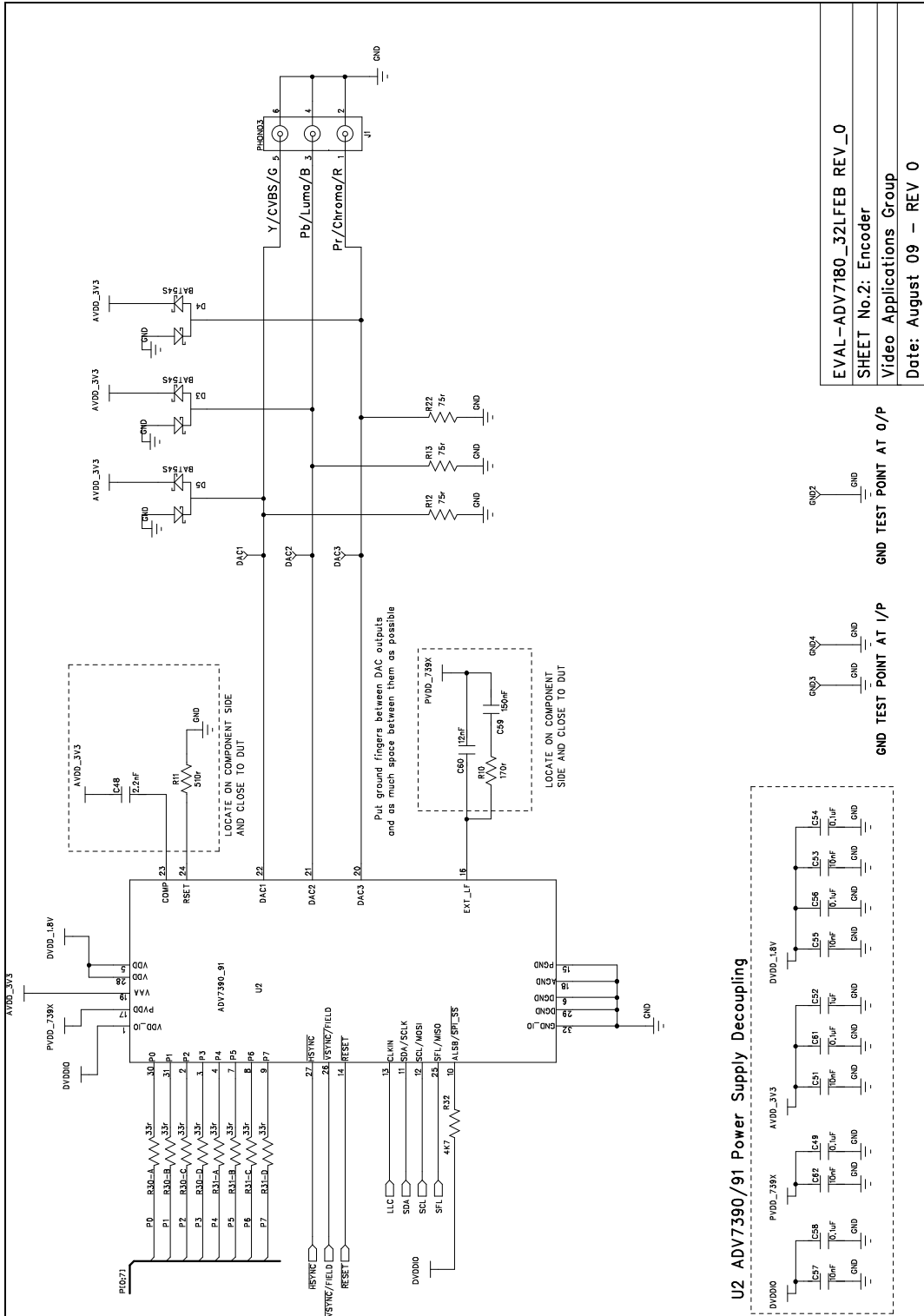
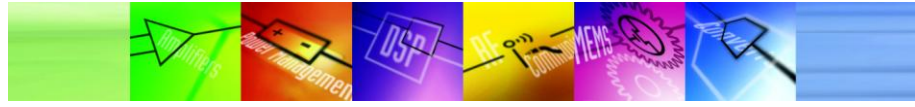


Figure 17 ADV7180 32-pin LFCSP-Encoder Section

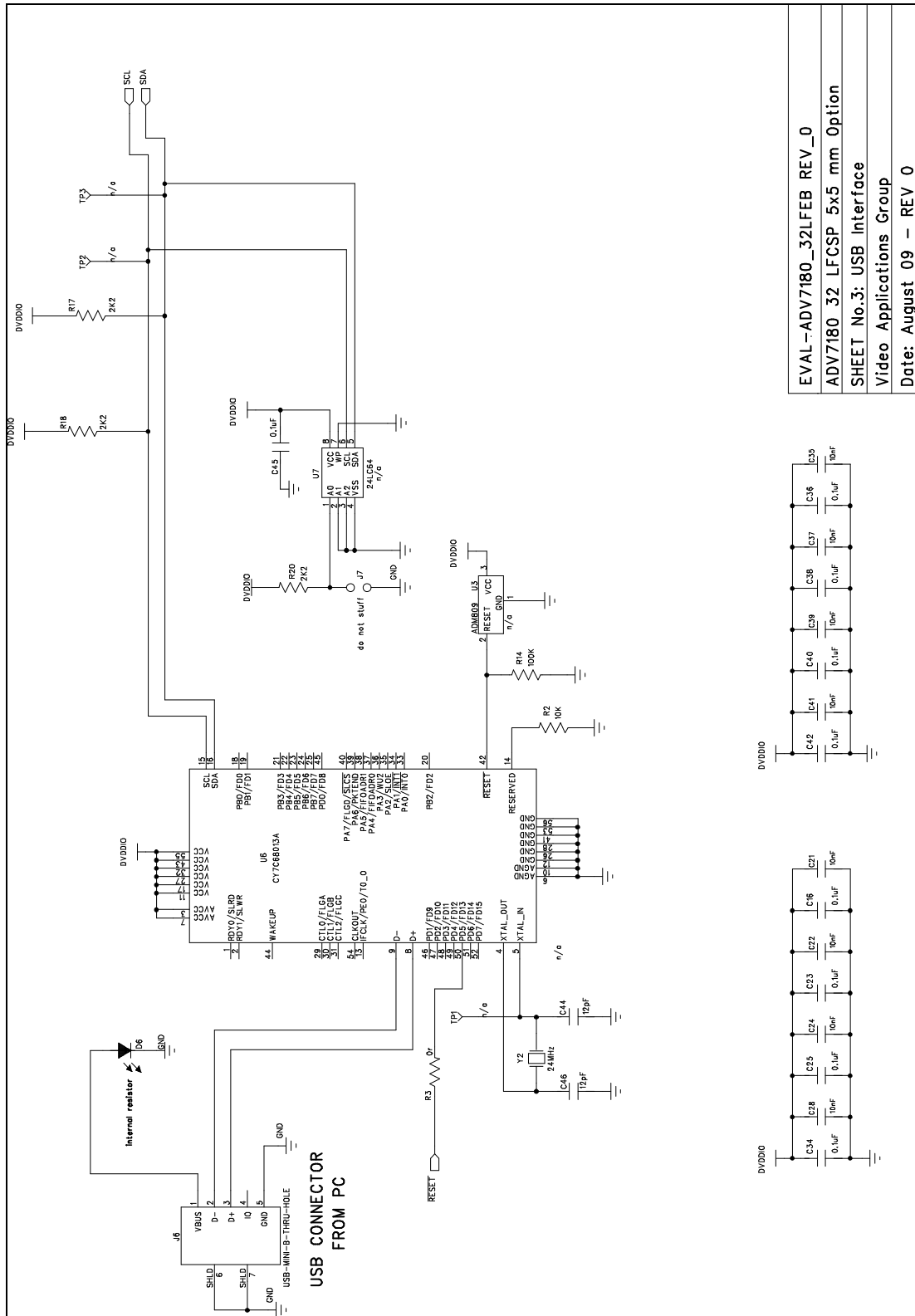
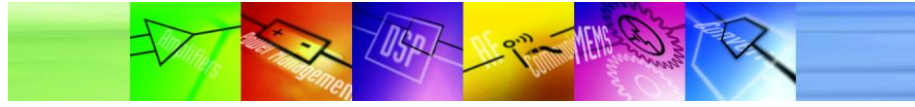
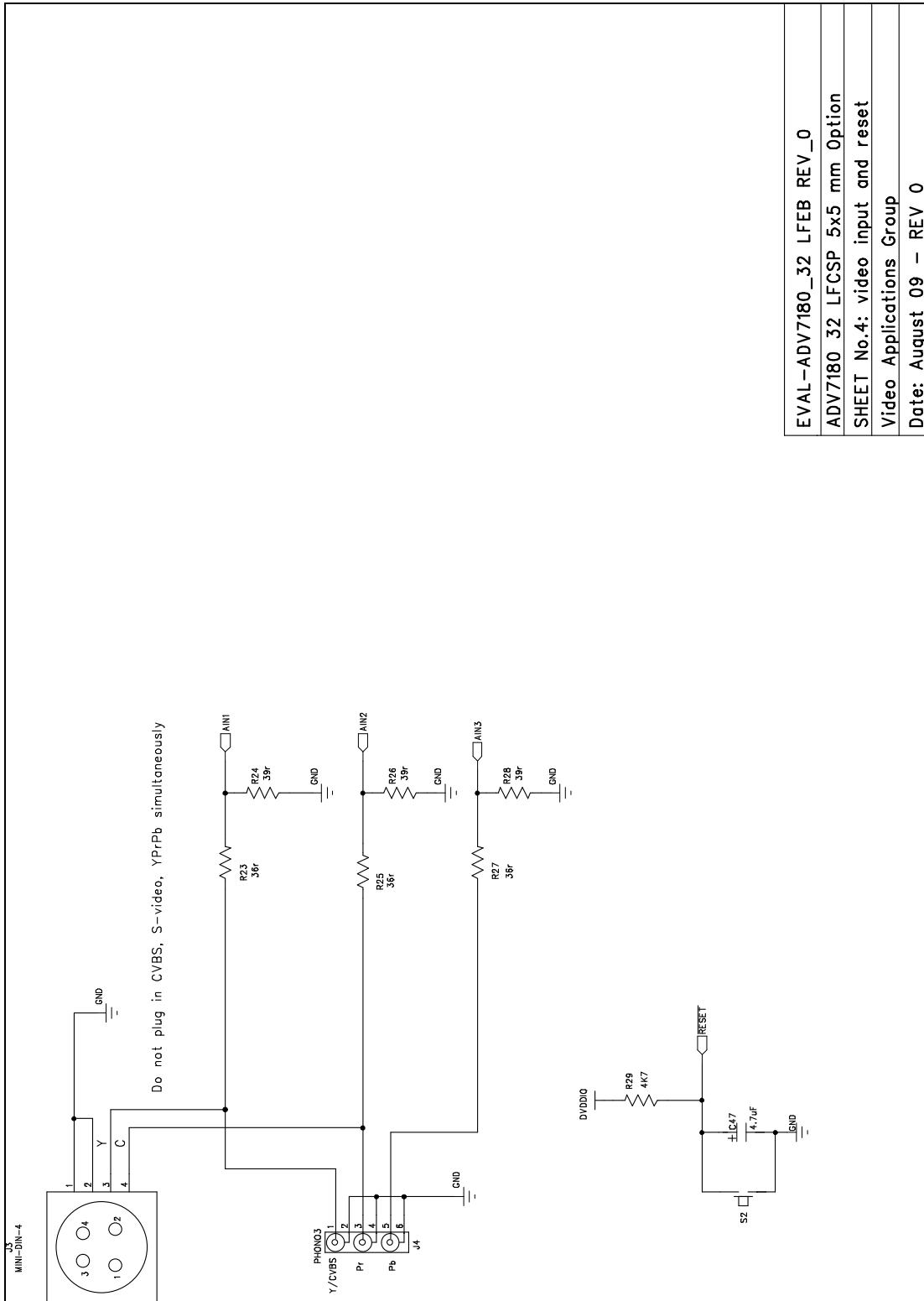
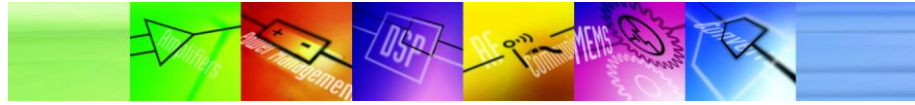


Figure 18 ADV7180 32-pin LFCSP-PC Interface Section



EVAL-ADV7180_32 LFEB REV_0
ADV7180 32 LFCSP 5x5 mm Option
SHEET No.4: video input and reset
Video Applications Group
Date: August 09 – REV 0

Figure 19 ADV7180 32-pin LFCSP-Input Section

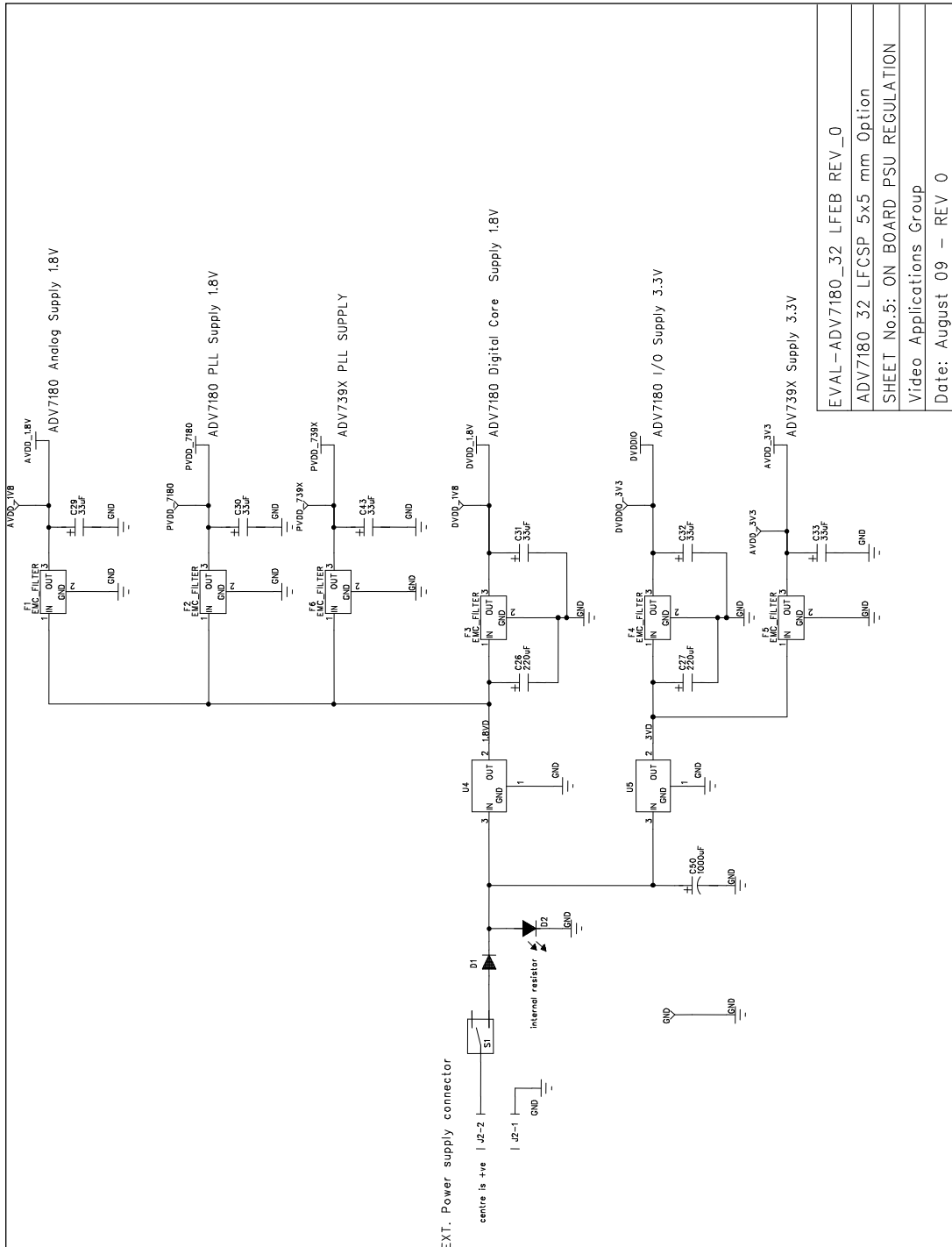
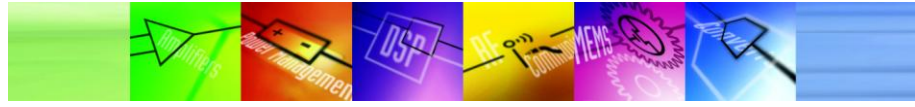
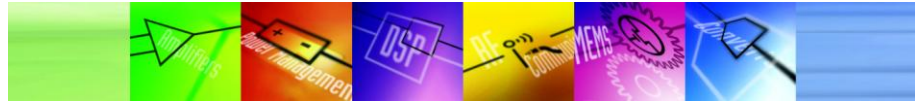


Figure 20 ADV7180 32-pin LFCSP-PSU Regulation Section

EVAL-ADV7180_32 LFEB REV_0
ADV7180 32 LFCSP 5x5 mm Option
SHEET No.5: ON BOARD PSU REGULATION
Video Applications Group
Date: August 09 - REV 0



ADV7180 – 48-pin LQFP Package

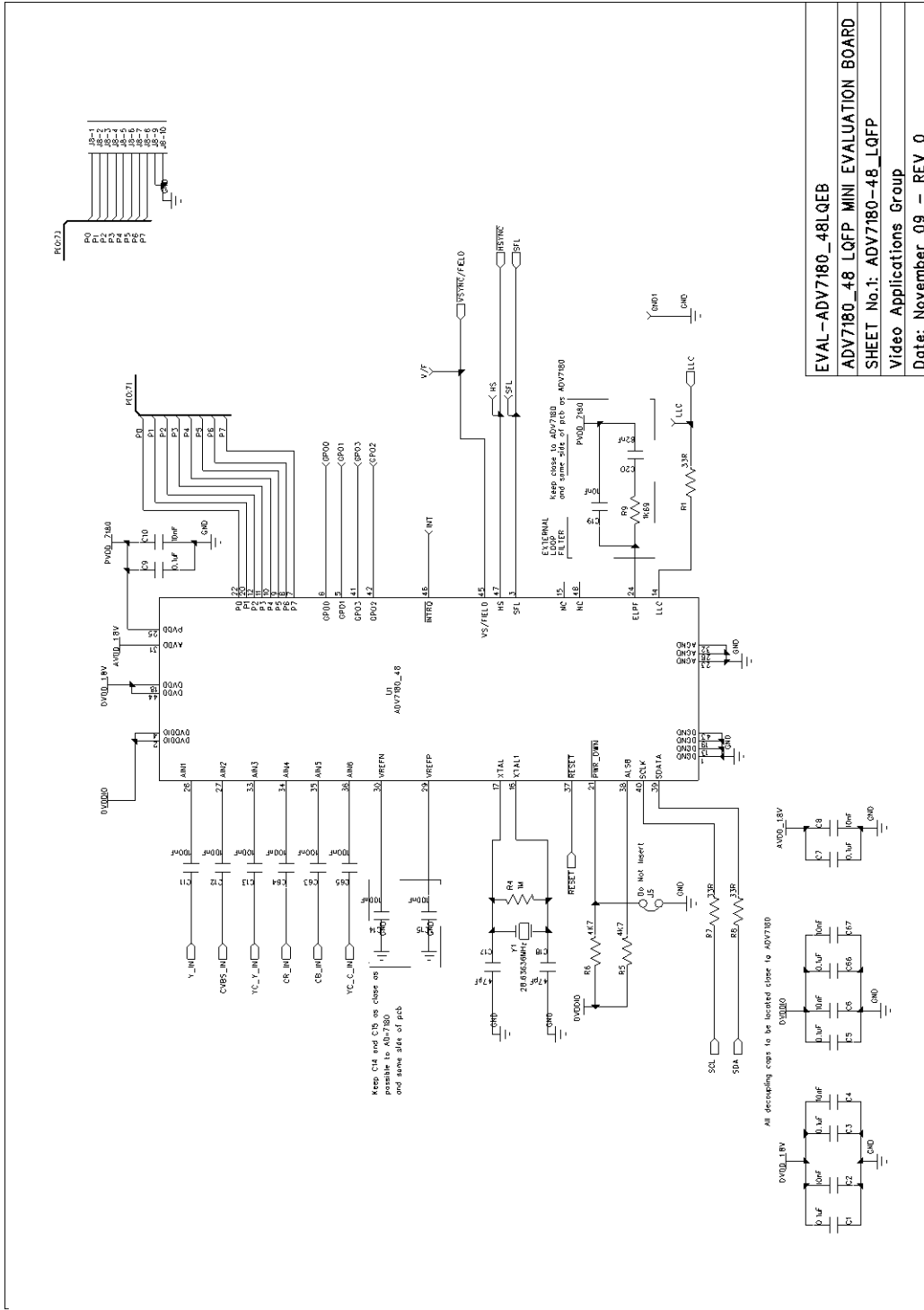
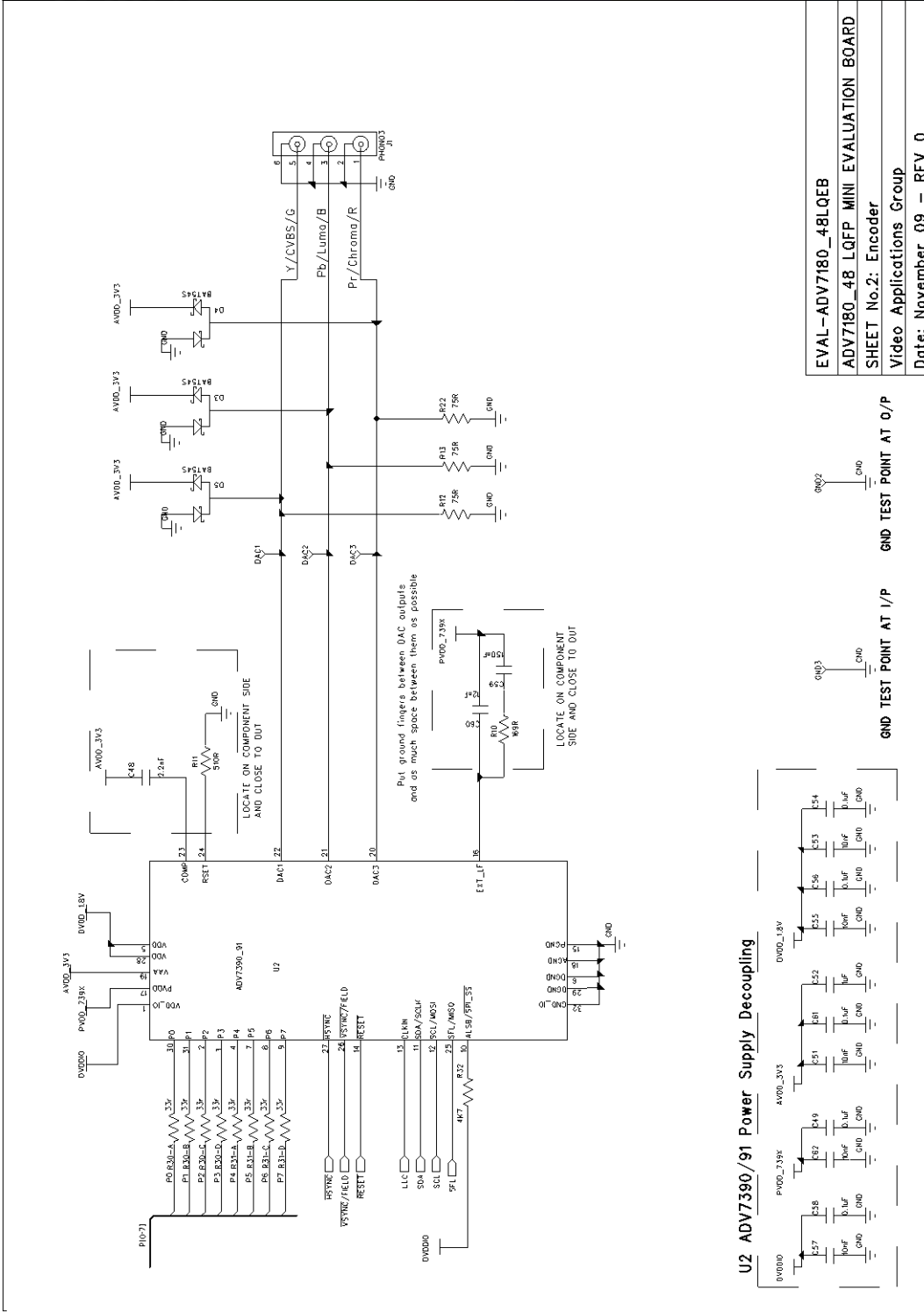


Figure 21 ADV7180 48-lead decoder section

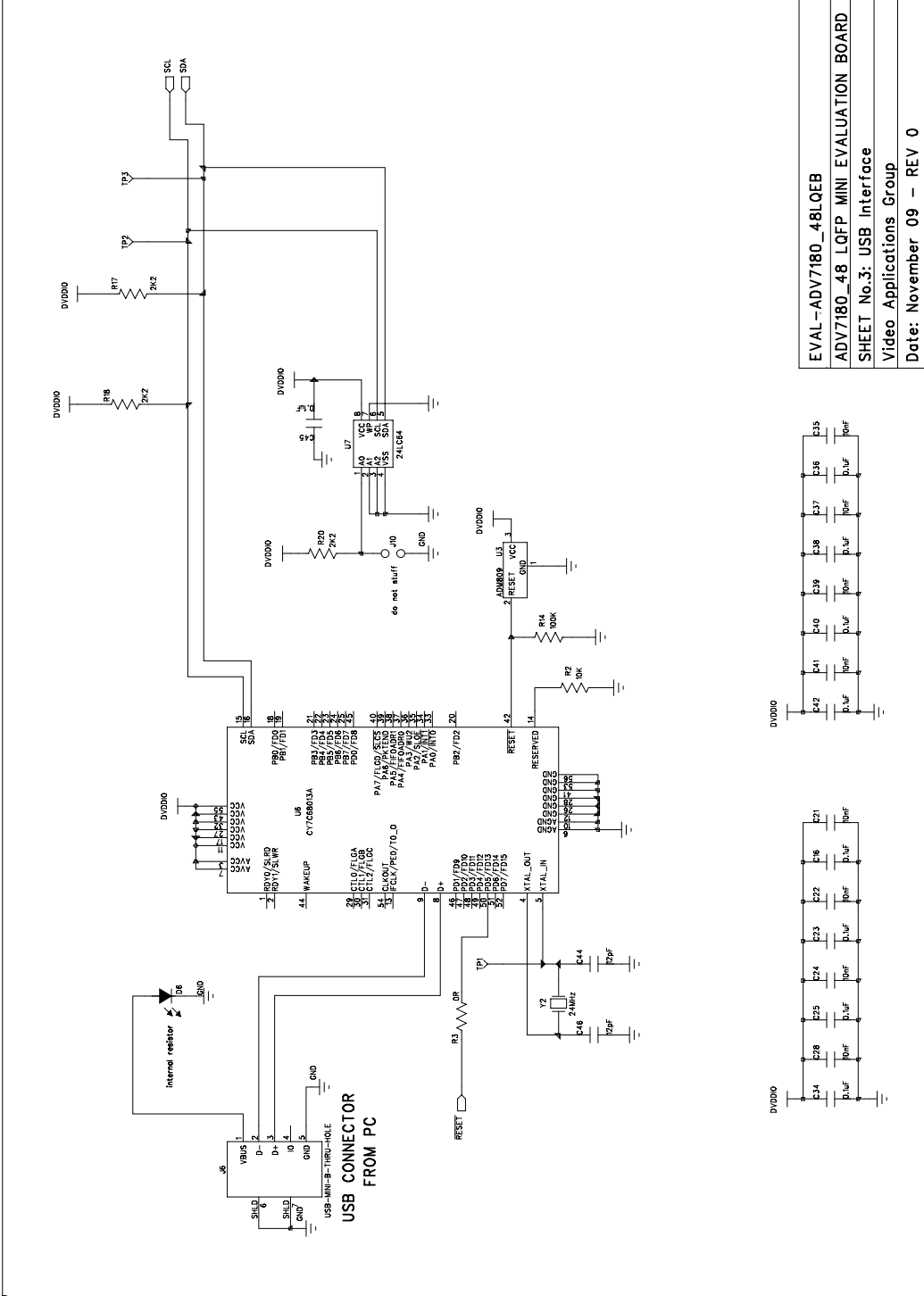
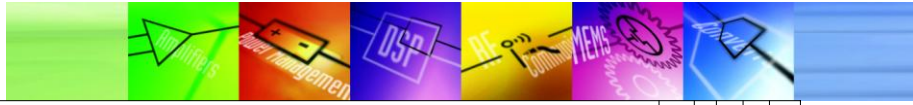


EVAL-ADV7180_48LQEB
 ADV7180_48 LQFP MINI EVALUATION BOARD
 SHEET No.2: Encoder
 Video Applications Group
 Date: November 09 – REV 0

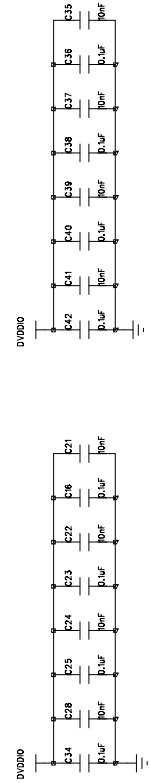
GND TEST POINT AT I/P

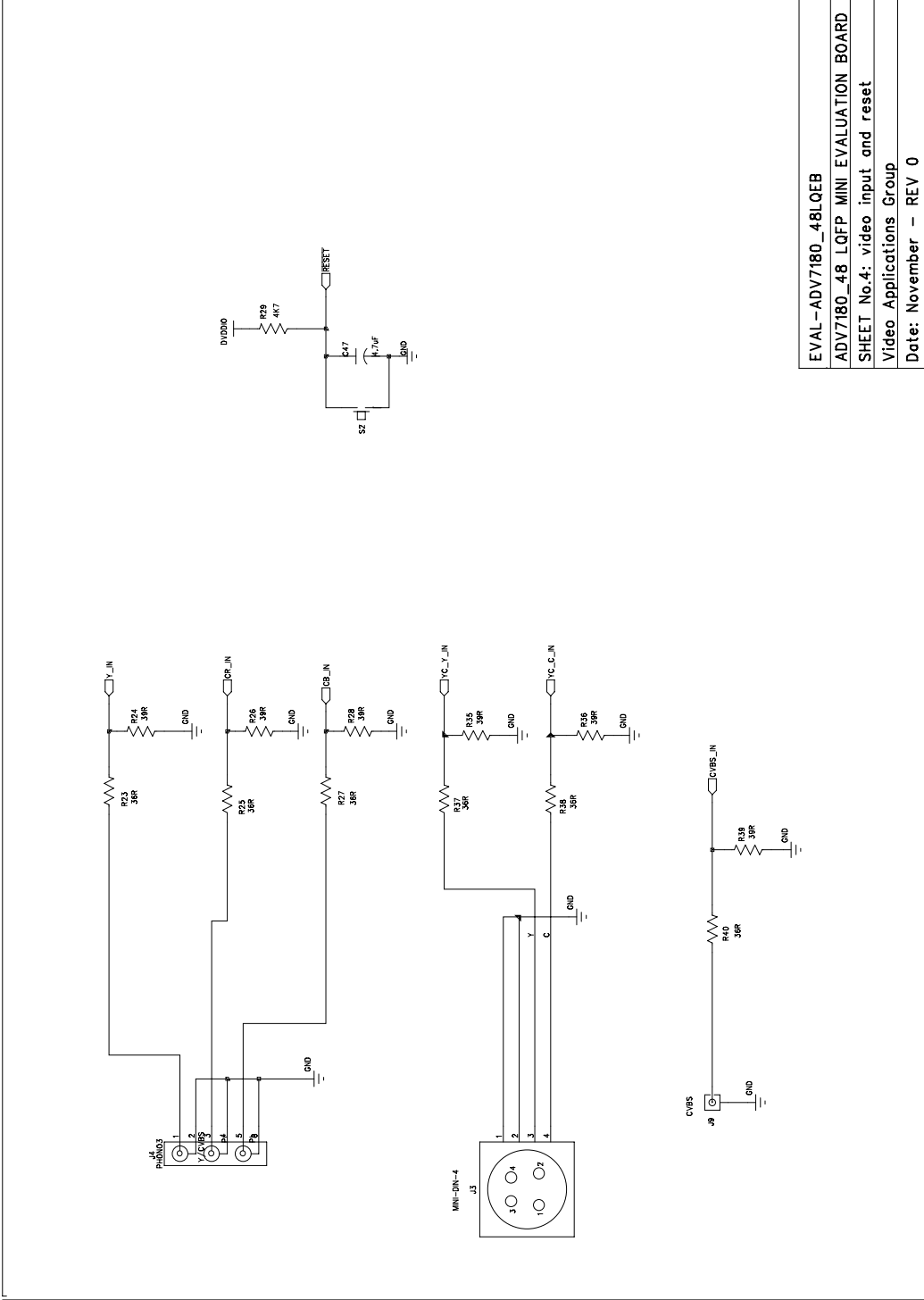
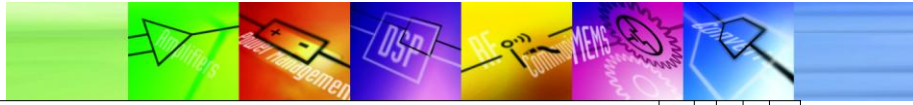
GND TEST POINT AT O/P

Figure 22 ADV7180 48-lead encoder section



EVAL-ADV7180_48LOEB
 ADV7180_48 LQFP MINI EVALUATION BOARD
 SHEET No.3: USB Interface
 Video Applications Group
 Date: November 09 – REV 0





EVAL-ADV7180_48LOEB
 ADV7180_48 LQFP MINI EVALUATION BOARD
 SHEET No.4: video input and reset
 Video Applications Group
 Date: November - REV 0

Figure 24 ADV7180 48-lead input section

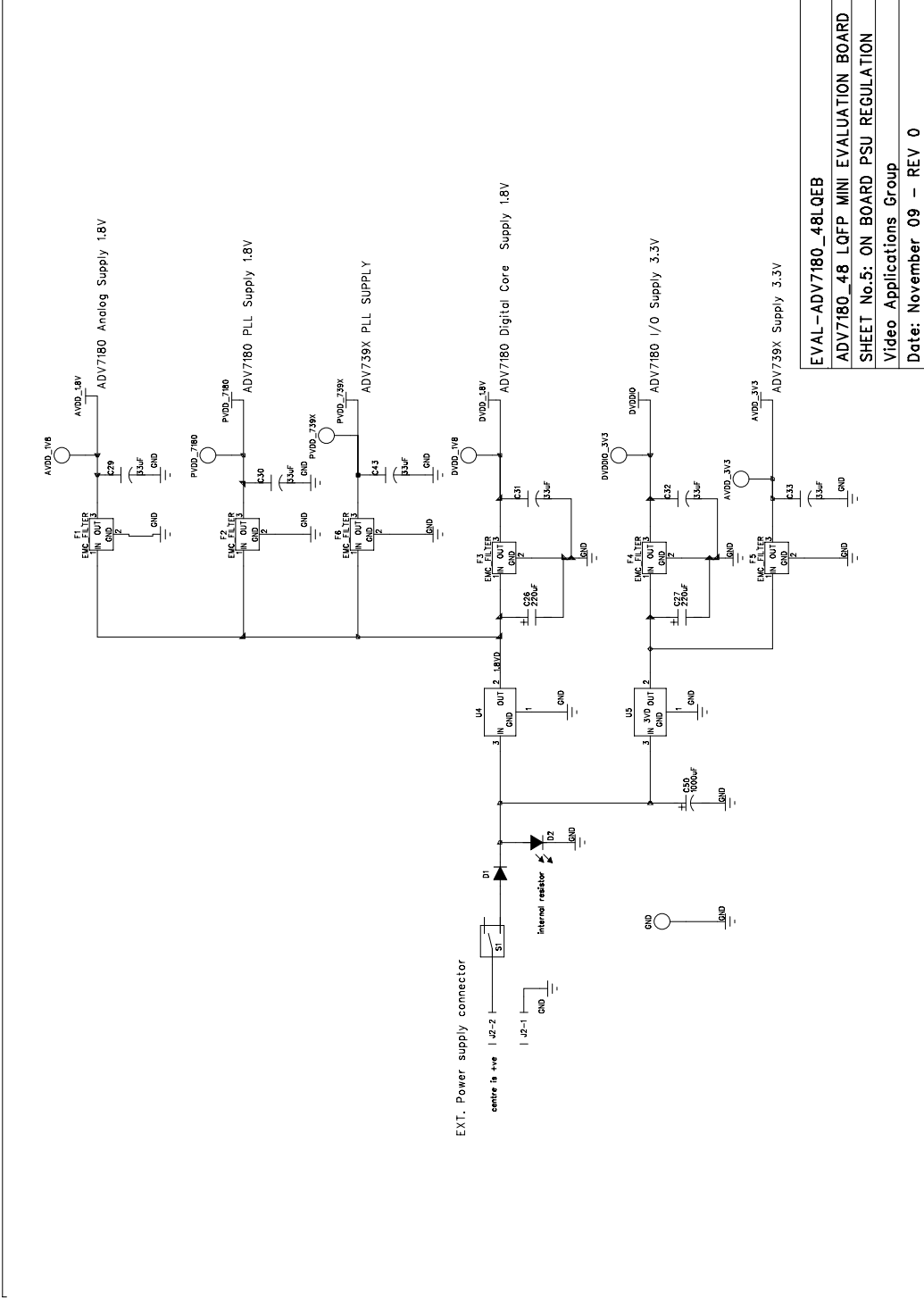
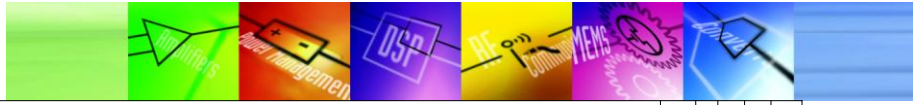
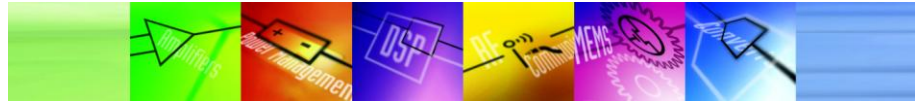
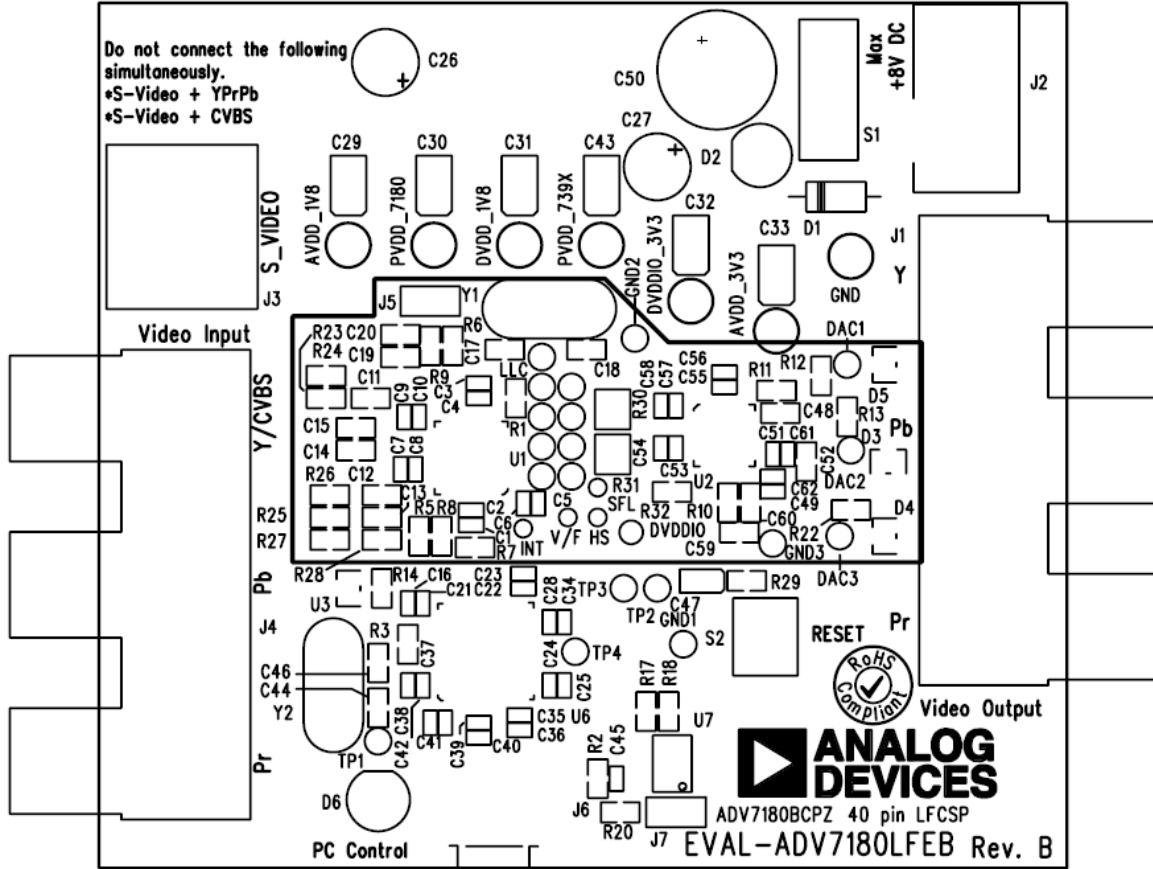


Figure 25ADV7180 48-lead PSU section

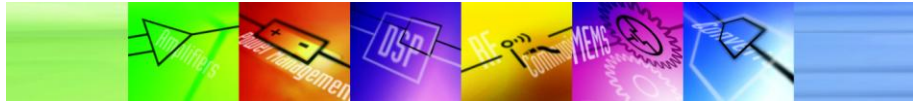


ADV7180 40-pin LFCSP Eval Board Layer Information

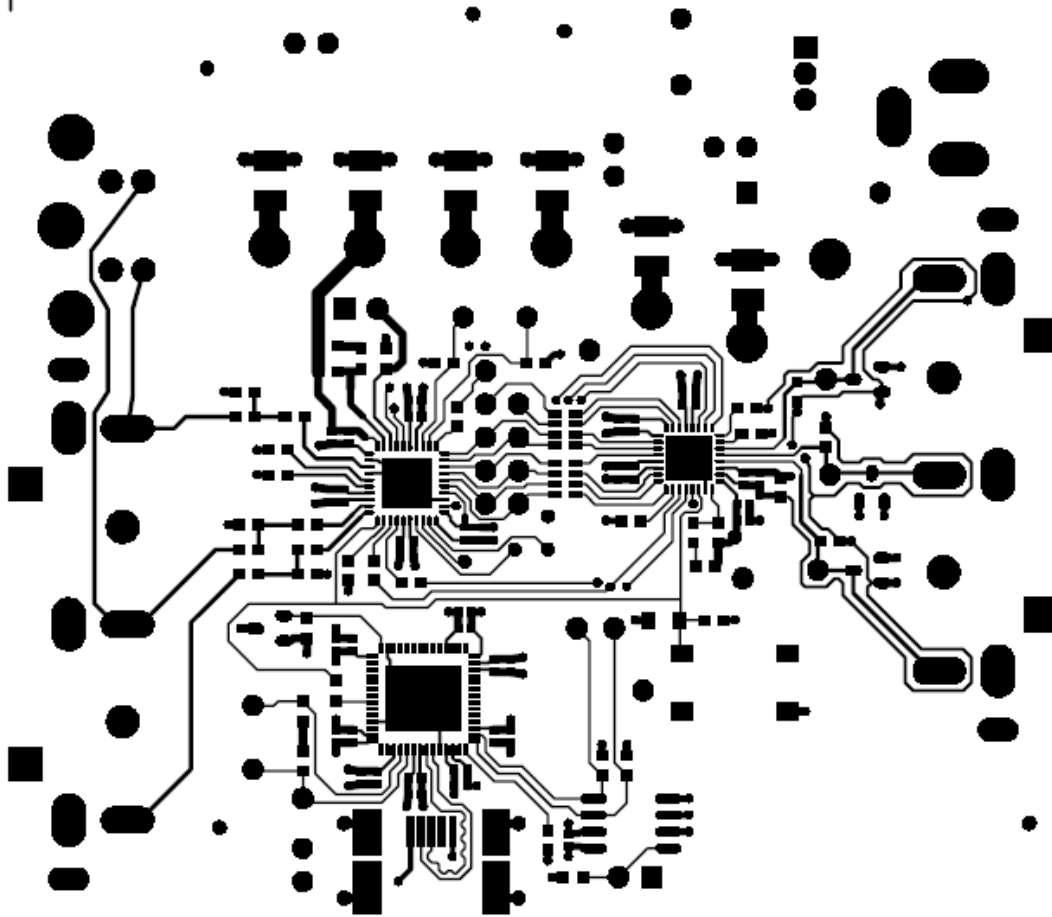


Eval-ADV7180LFEB Eval Board Rev. B (Primary Side View)

Figure 26 ADV7180 40-pin LFCSP Silkscreen

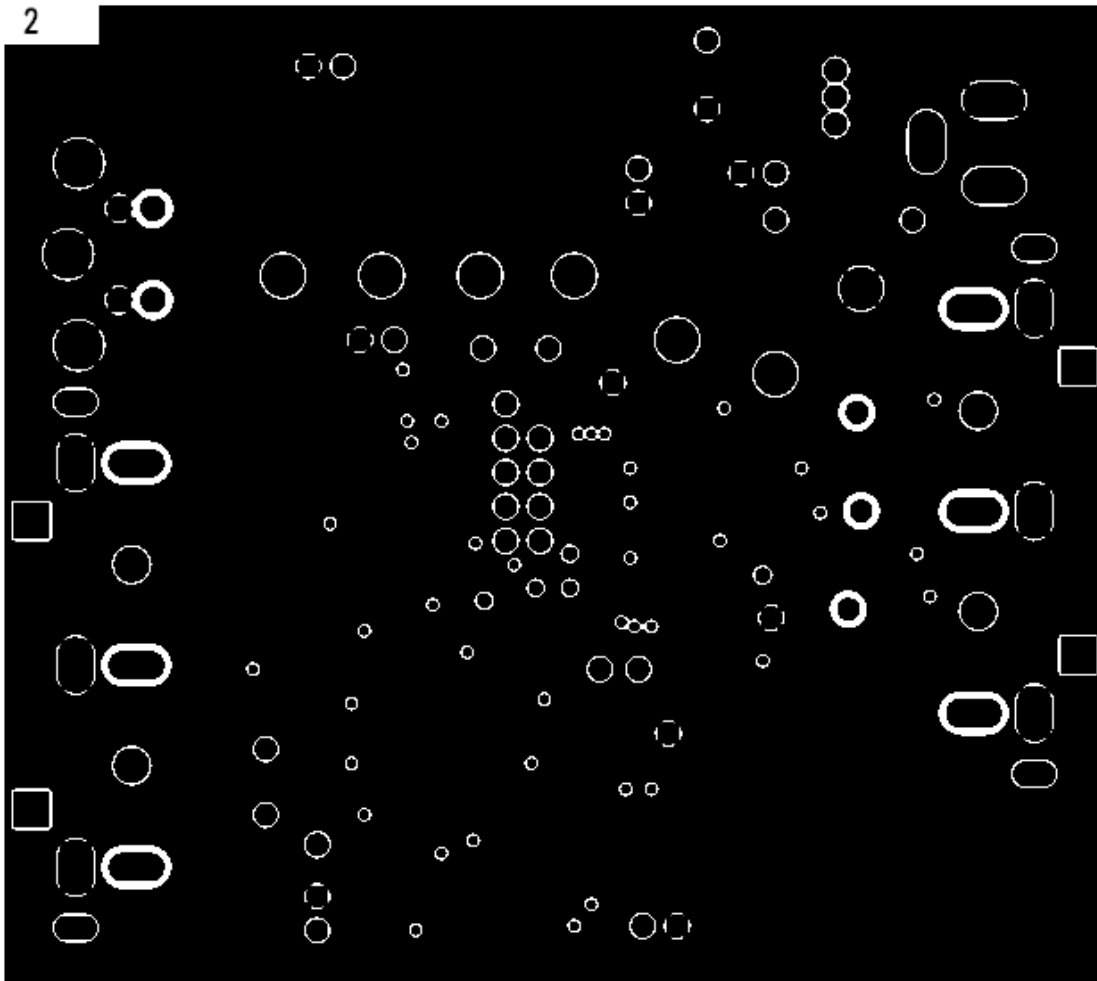
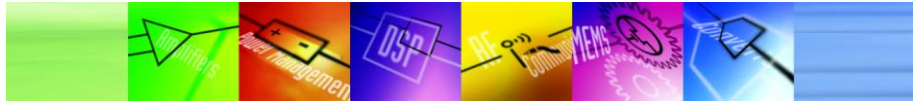


1



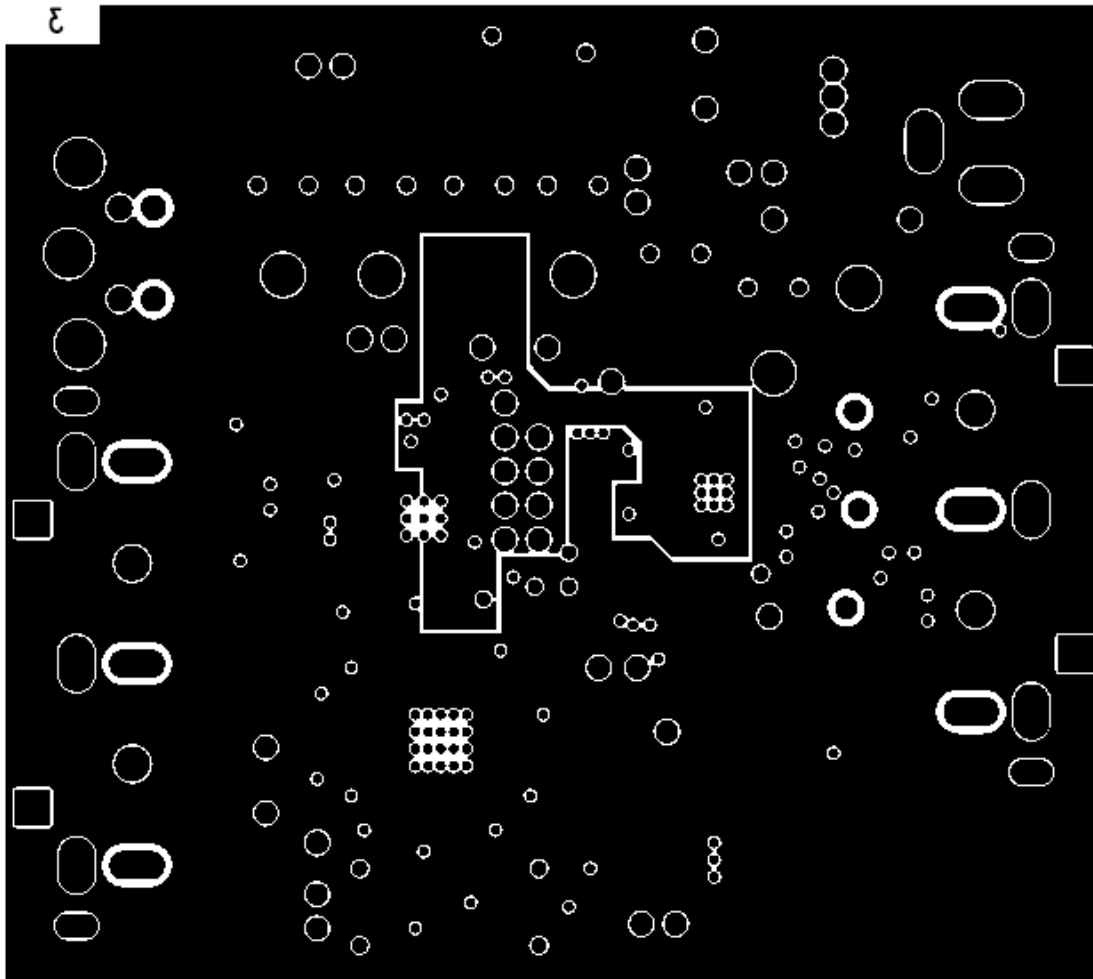
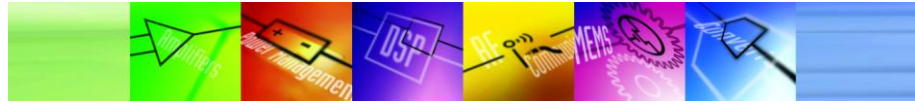
Eval-ADV7180LFEB Eval Board Rev. B (Primary Side View)
Primary Side - Layer 1

Figure 27 ADV7180 40-pin LFCSP Comp Side Layer 1



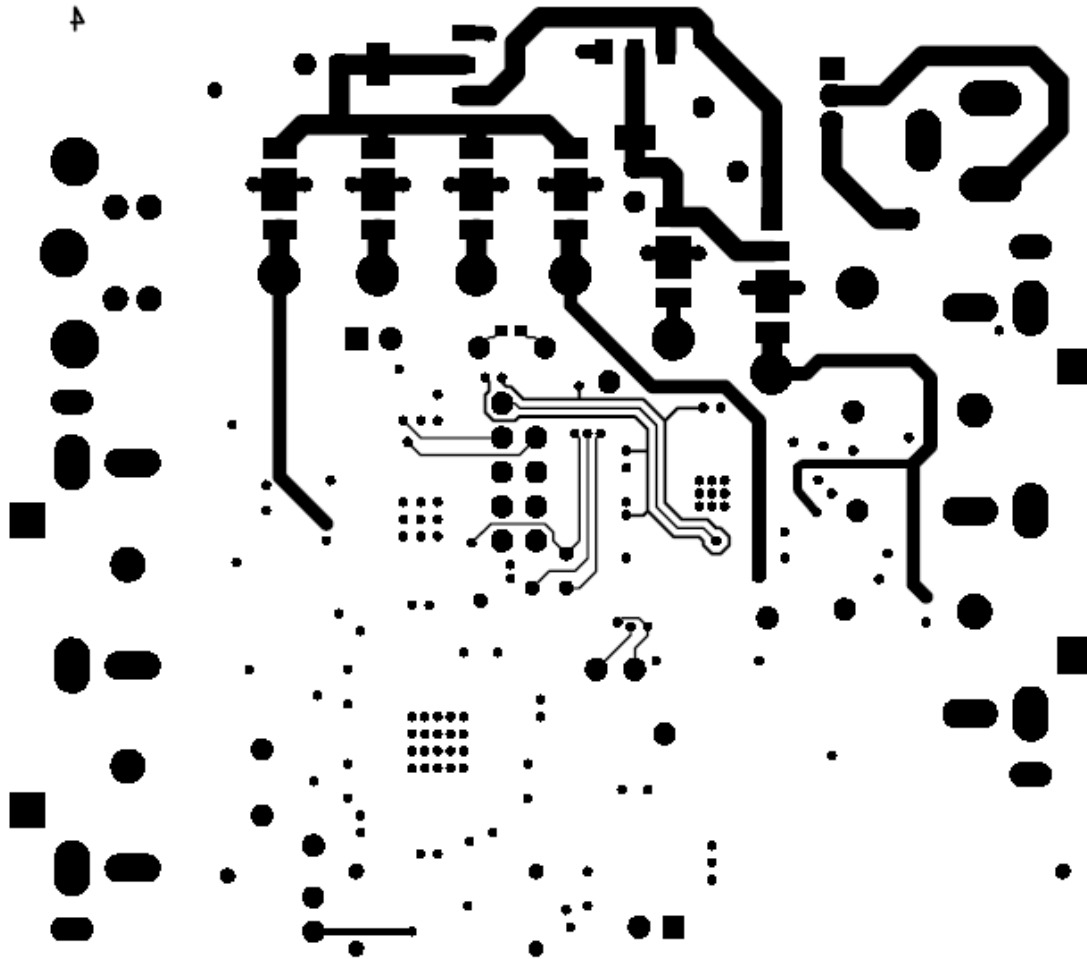
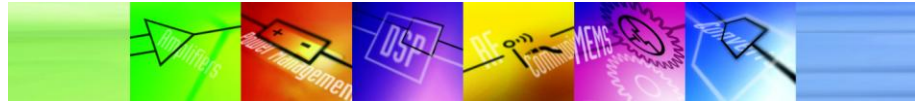
Eval-ADV7180LFEB Eval Board Rev. B (Primary Side View)

Figure 28 ADV7180 40-pin LFCSP - Ground Planes Layer 2



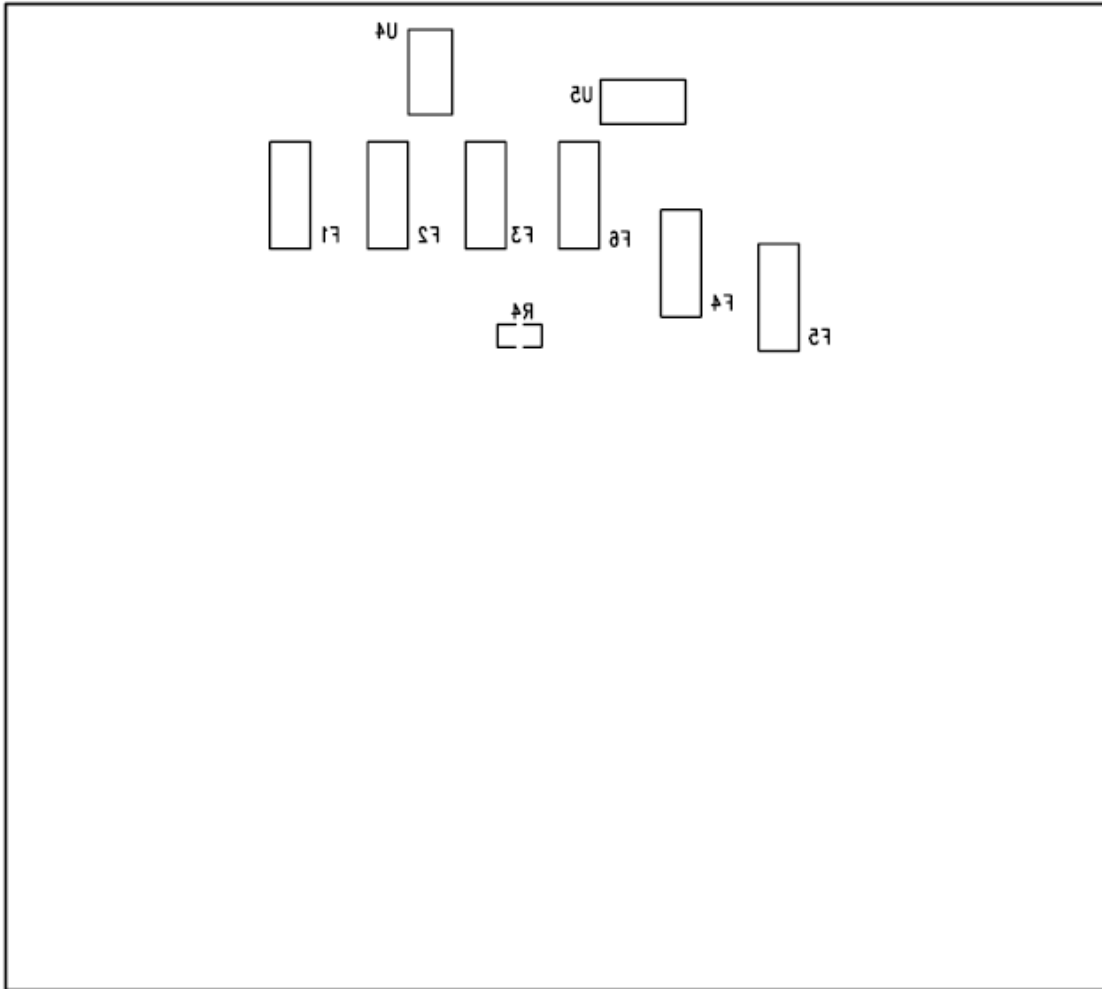
Eval-ADV7180LFEB Eval Board Rev. B (Primary Side View)

Figure 29 ADV7180 40-pin LFCSP Power Planes Layer 3-



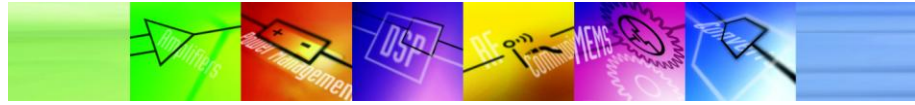
Eval-ADV7180LFEB Eval Board Rev. B (Primary Side View)

Figure 30 ADV7180 40-pin LFCSP Solder Side Layer 4

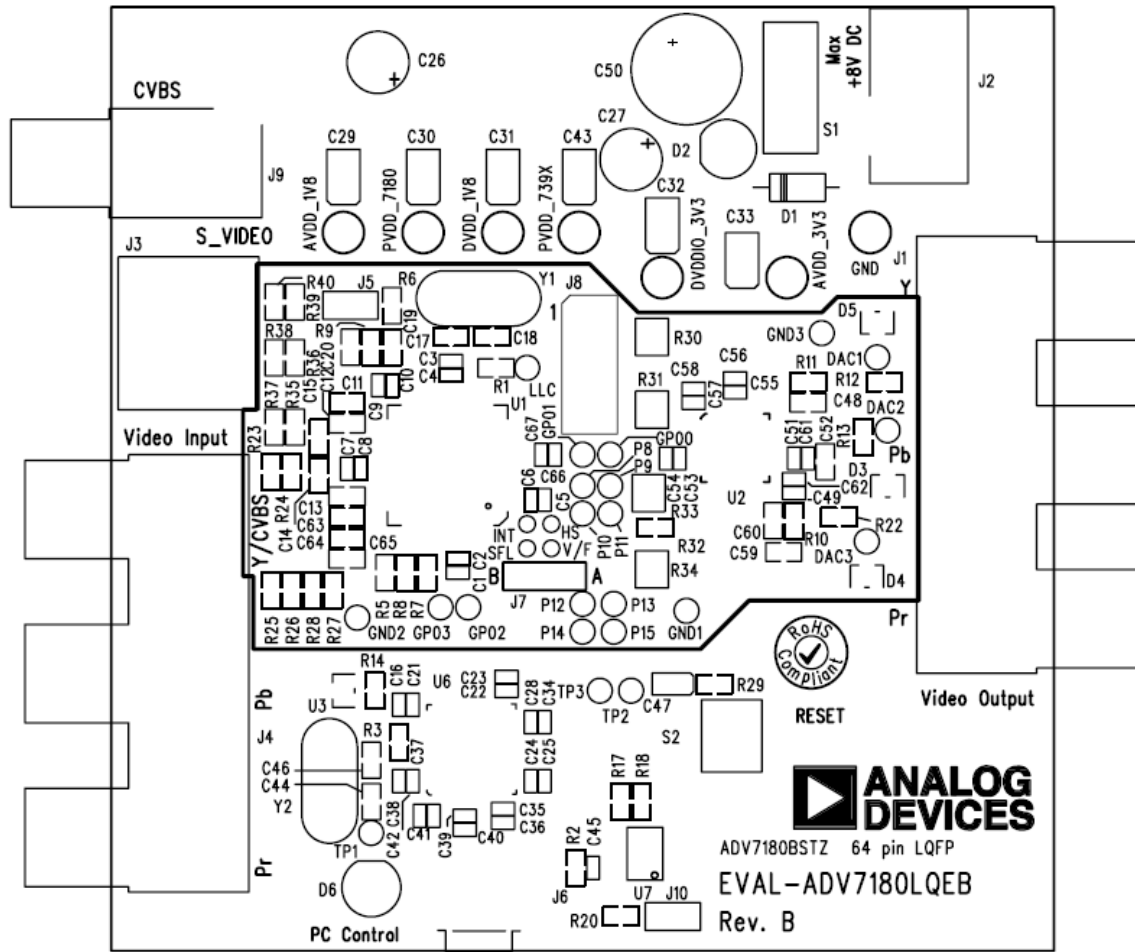


Eval-ADV7180LFEB Eval Board Rev. B (Primary Side View)

Figure 31 ADV7180 40-pin LFCSP Silkscreen Underside of Board

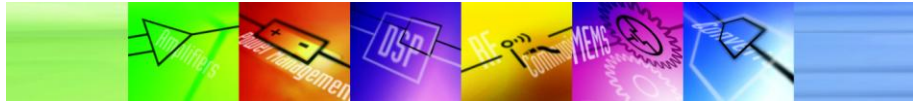


ADV7180 64-pin LQFP Eval Board Layout Information

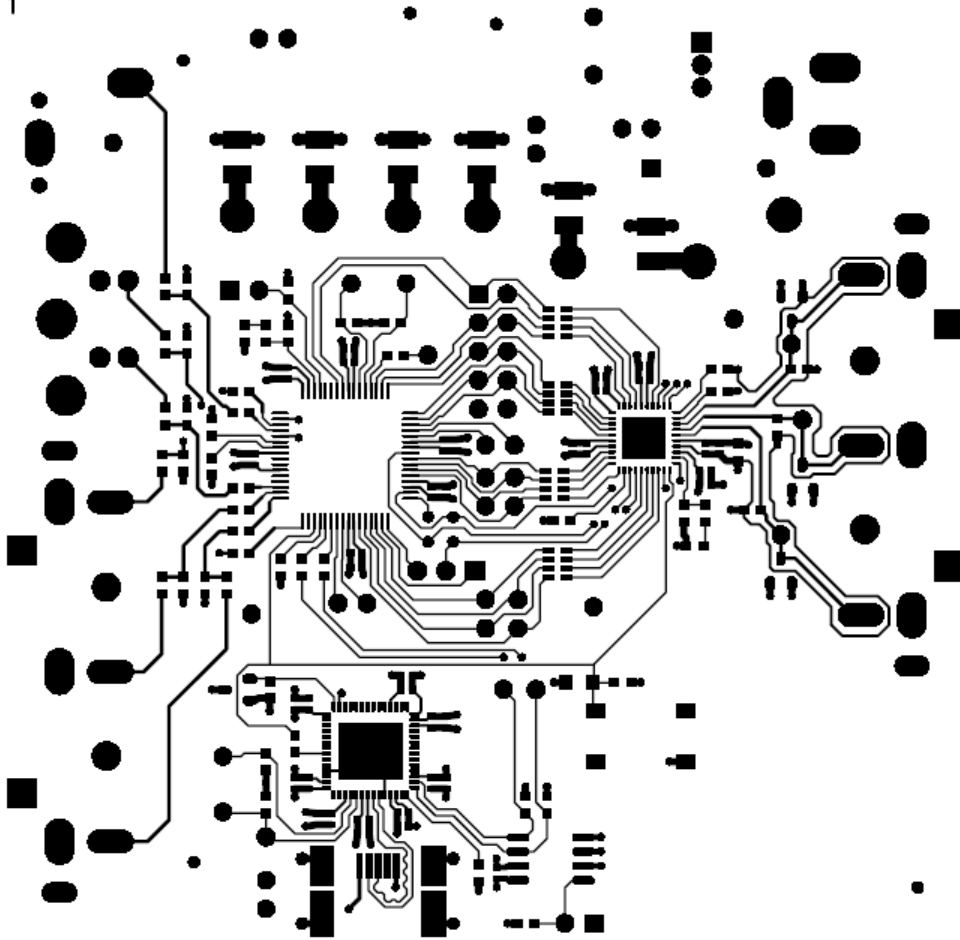


Eval-ADV7180LQEB Rev. B (Primary Side View)

Figure 32 EVAL-ADV7180LQEBZ Silkscreen

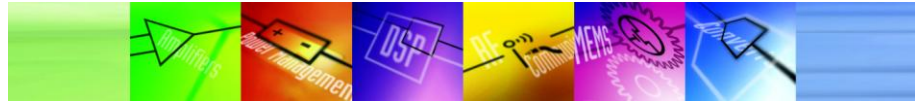


1

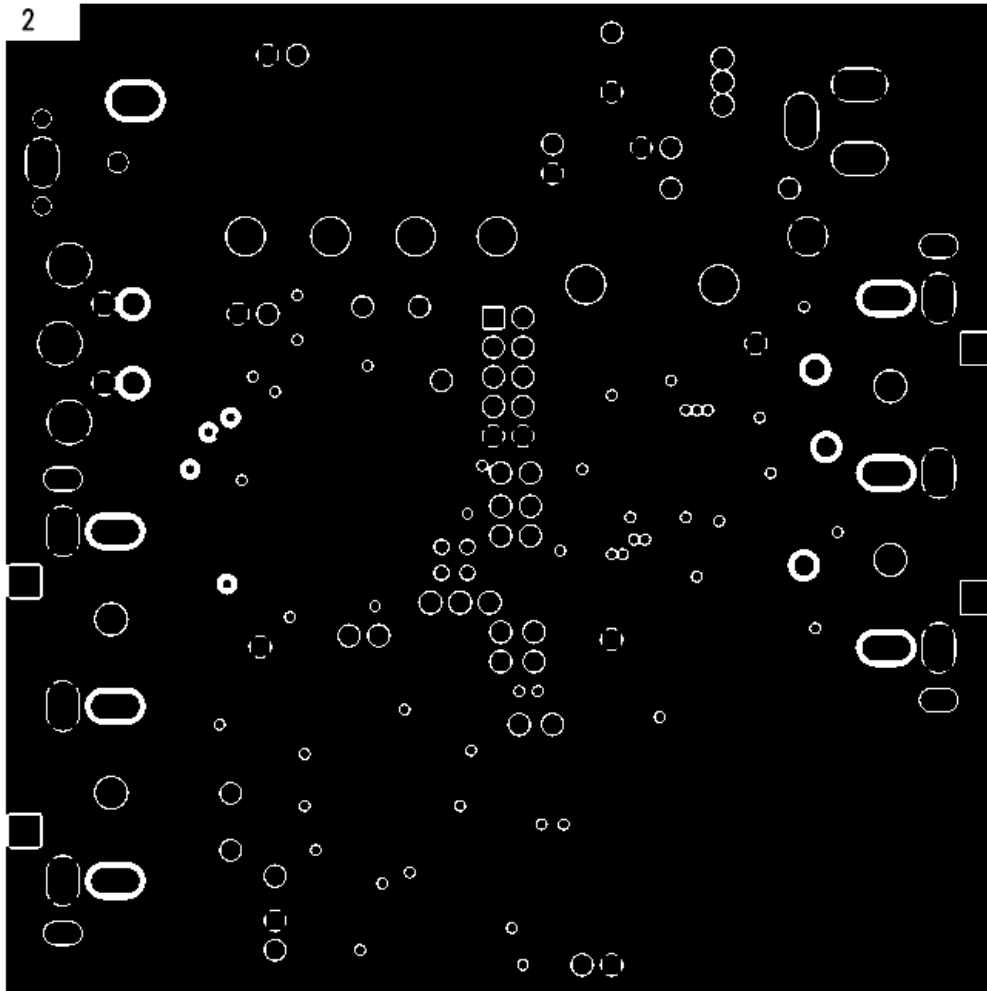


Eval-ADV7180LQEB Rev. B (Primary Side View)
Primary Side - Layer 1

Figure 33 EVAL-ADV7180LQEBZ Comp Side Layer 1

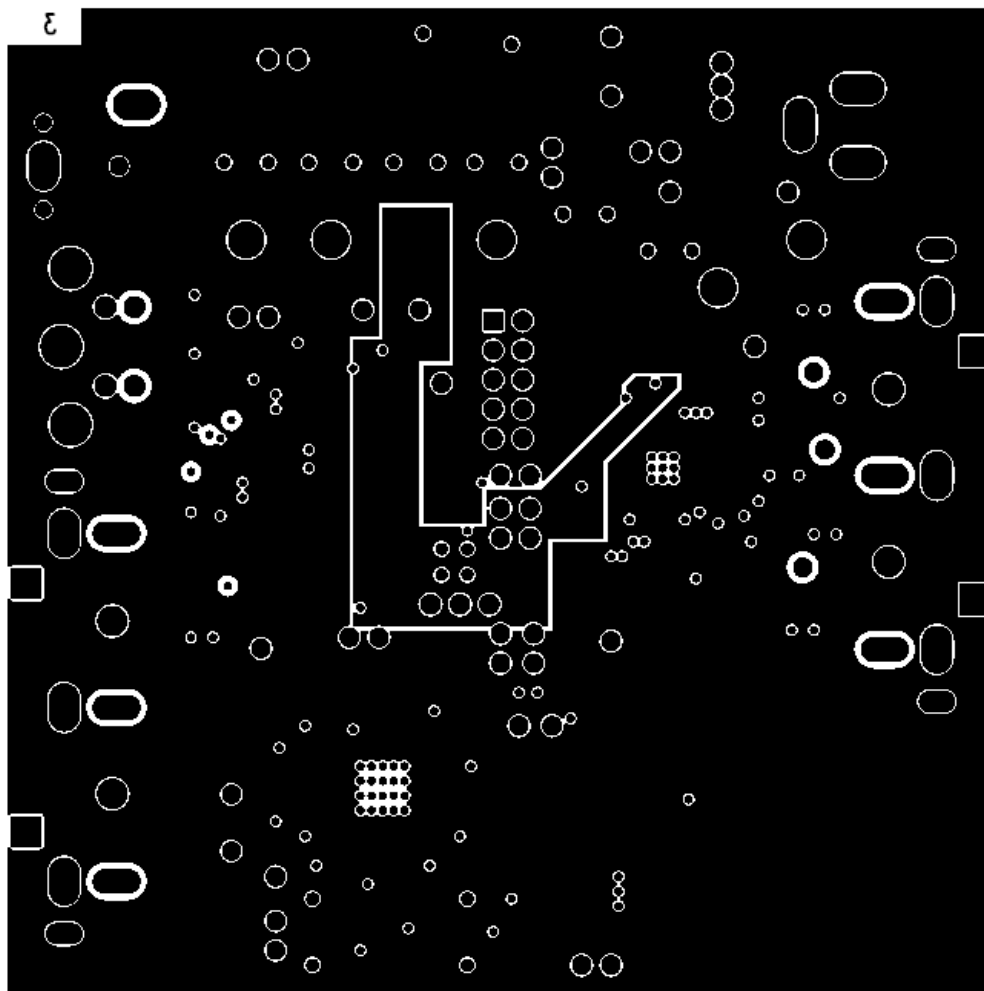
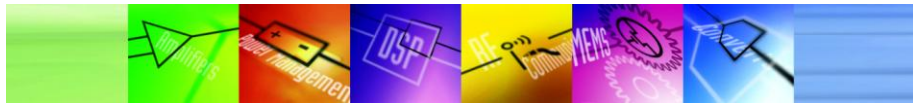


2



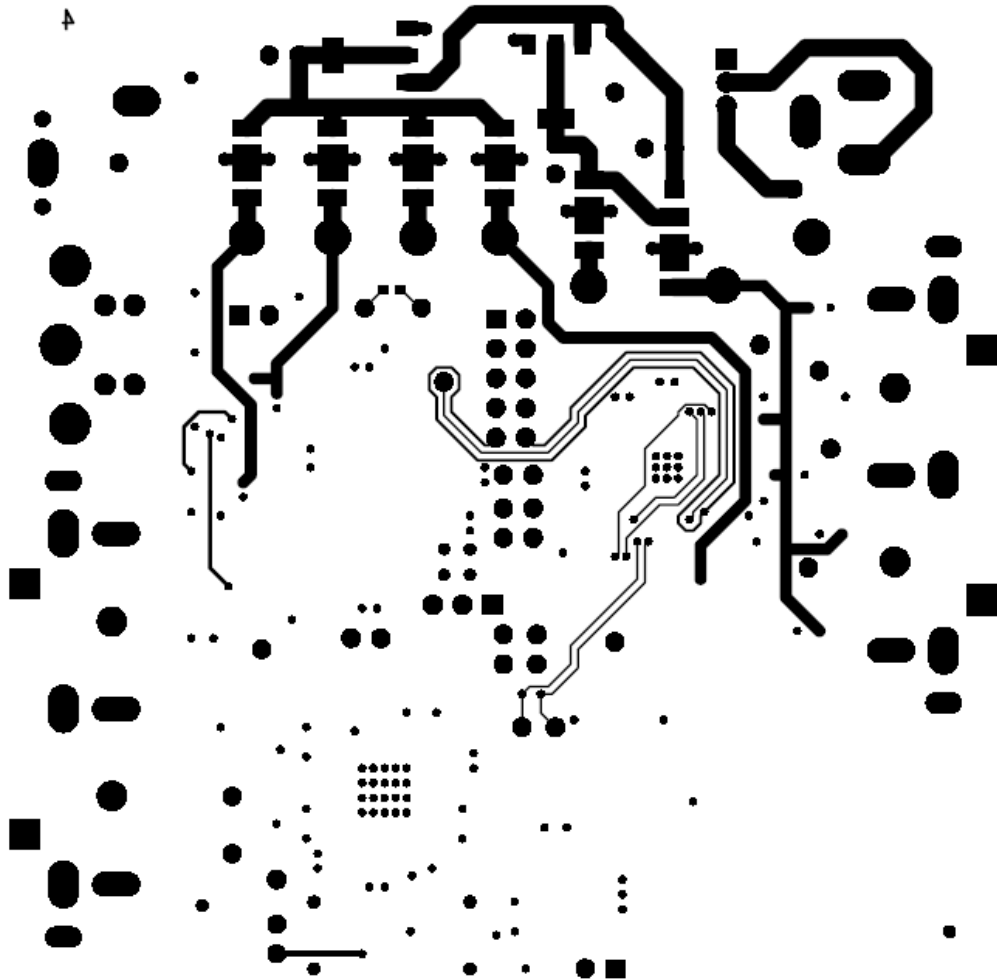
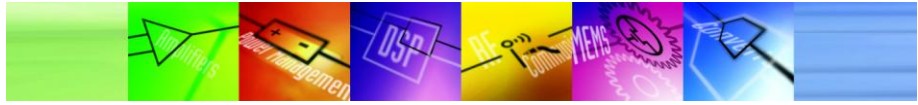
Eval-ADV7180LQEB Rev. B (Primary Side View)

Figure 34 EVAL-ADV7180LQEBZ Ground Planes Layer 2



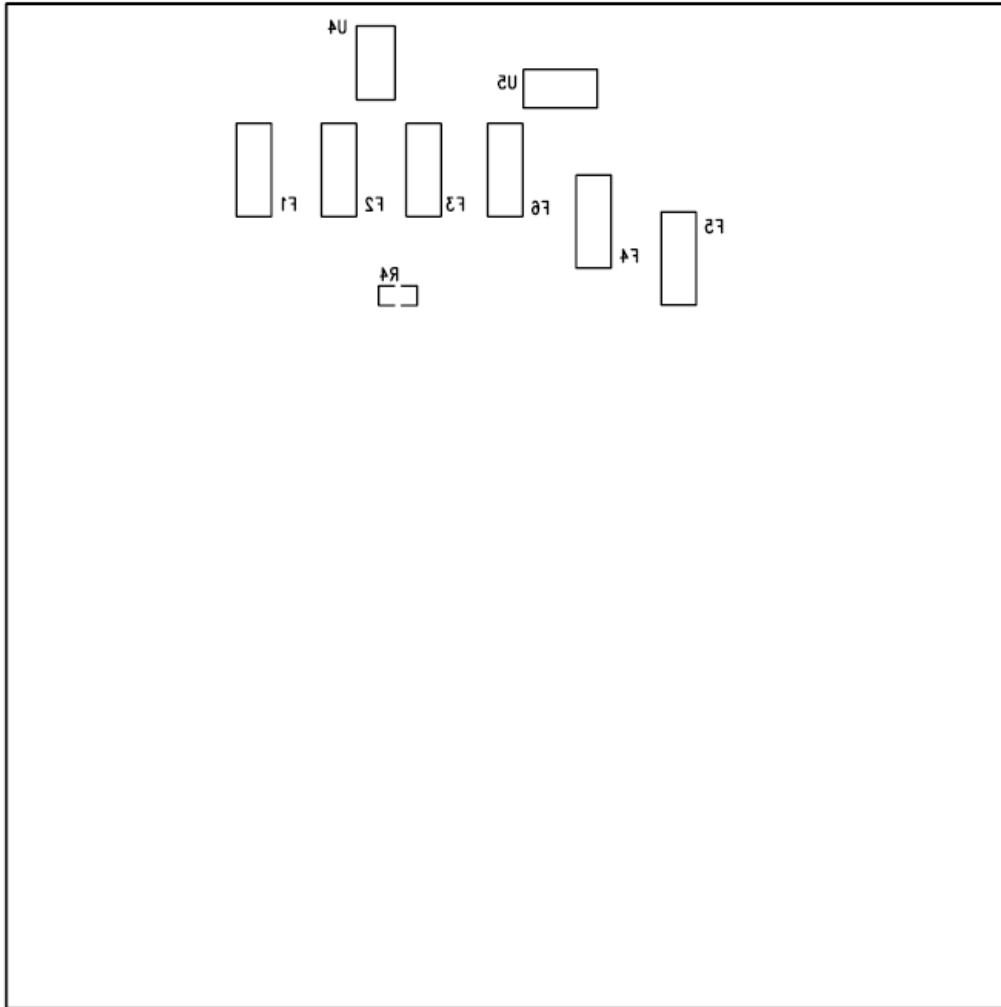
Eval-ADV7180LQEB Rev. B (Primary Side View)

Figure 35 EVAL-ADV7180LQEBZ Power Planes Layer 3



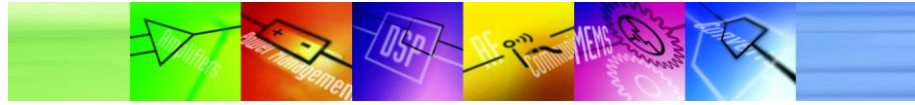
Eval-ADV7180LQEB Rev. B (Primary Side View)

Figure 36 EVAL-ADV7180LQEBZ Solder Side Layer 4

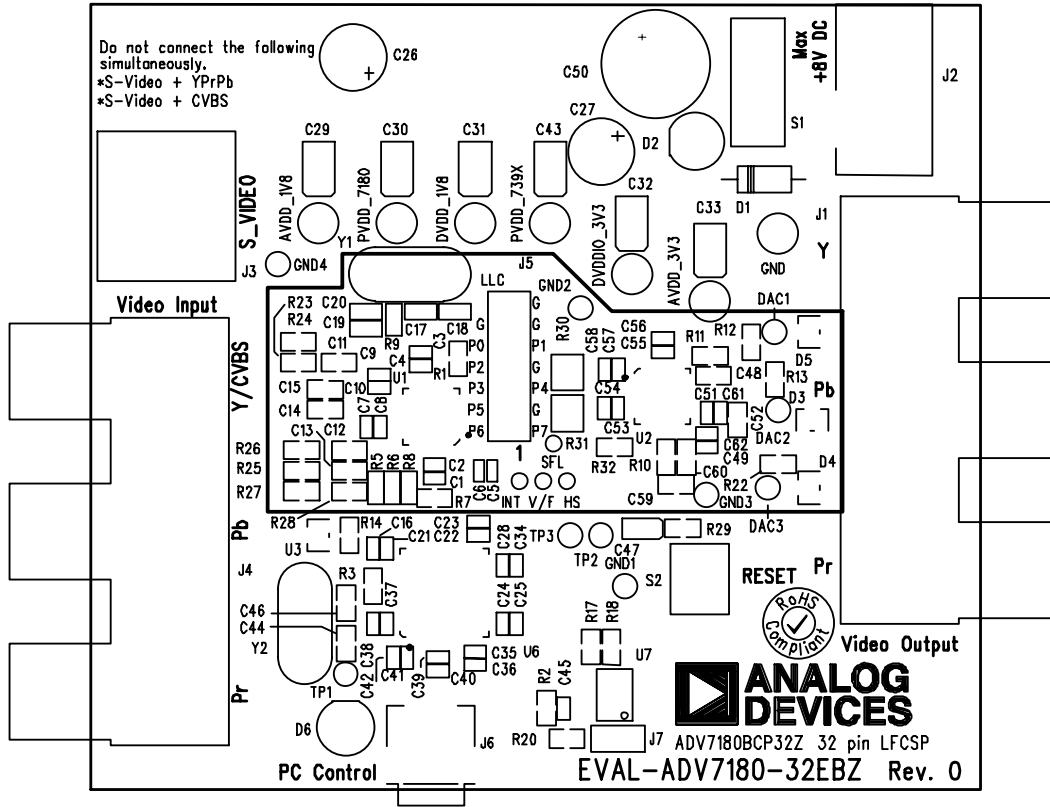


Eval-ADV7180LQEB Rev. B (Primary Side View)

Figure 37 EVAL-ADV7180LQEBZ Silkscreen Underside of board



ADV7180 32-pin LFCSP Eval Board Layer Information

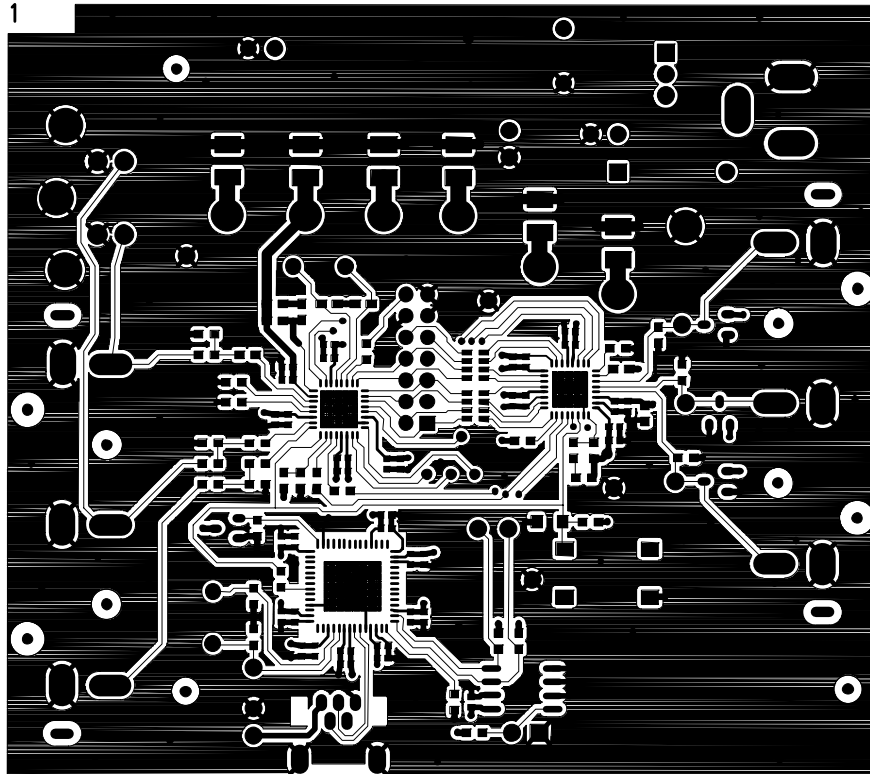
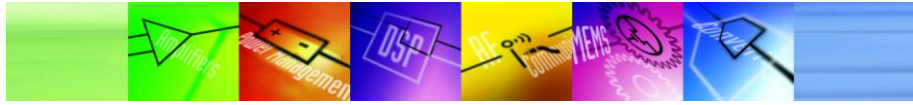


EVAL-ADV7180-32EBZ Eval Board Rev. 0 (Primary Side View)

Silkscreen – Primary Side



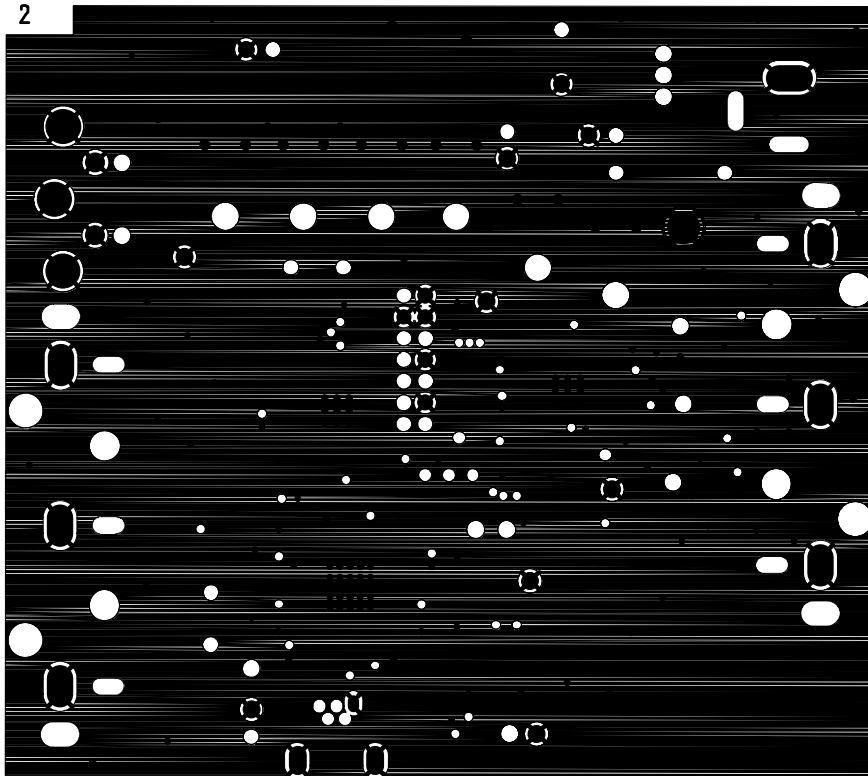
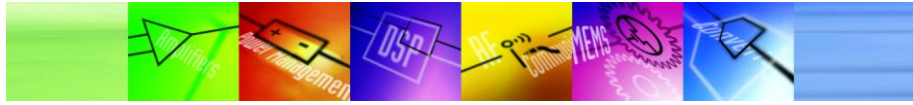
Figure 38 EVAL-ADV7180-32EBZ Silkscreen



EVAL-ADV7180-32EBZ Eval Board Rev. 0 (Primary Side View)
Primary Side - Layer 1



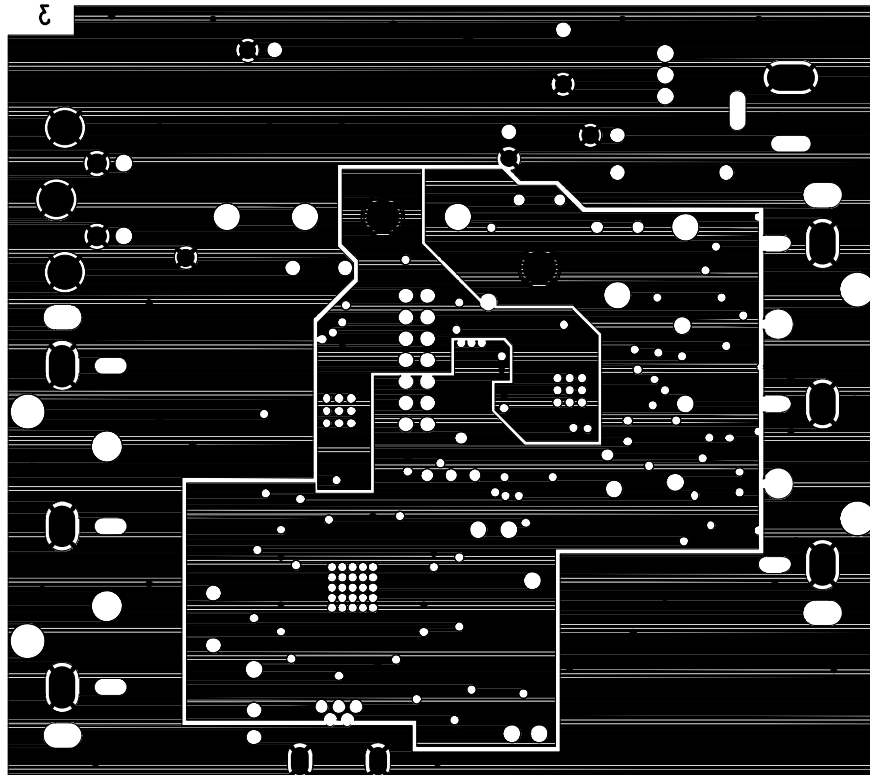
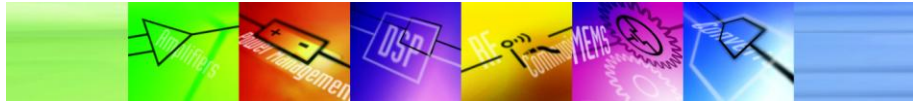
Figure 39 ADV7180 32-pin LFCSP Comp Side Layer 1



EVAL-ADV7180-32EBZ Eval Board Rev. 0 (Primary Side View)
Ground Plane - Layer 2



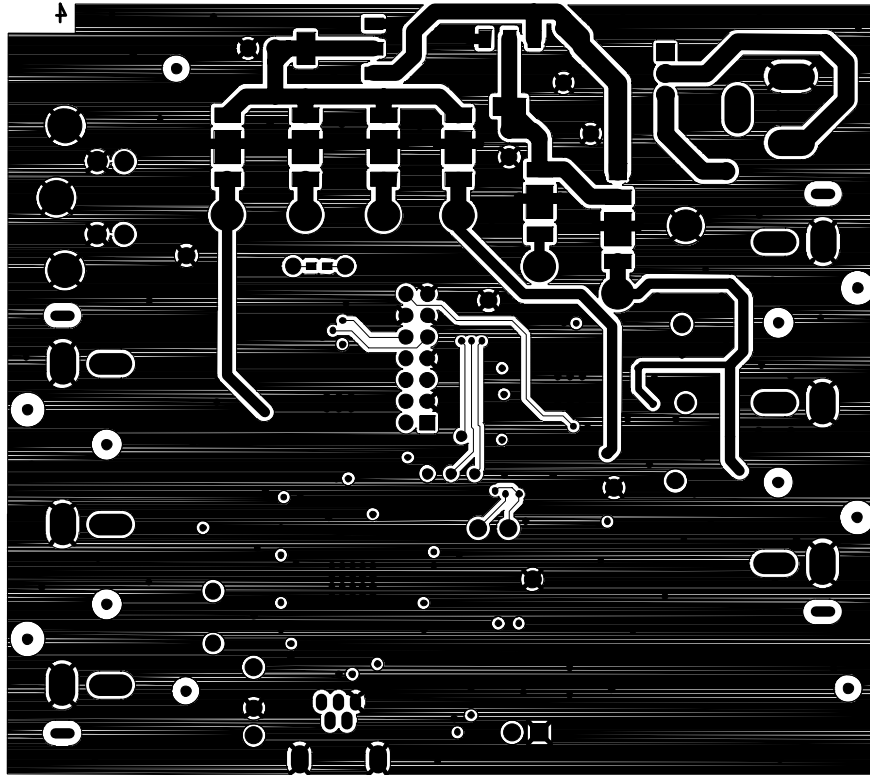
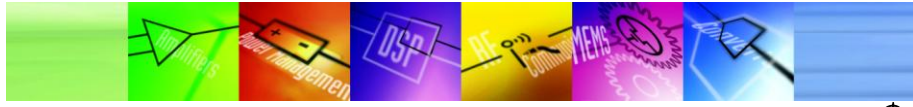
Figure 40 ADV7180 32-pin LFCSP - Ground Planes Layer 2



EVAL-ADV7180-32EBZ Eval Board Rev. 0 (Primary Side View)
Power Plane – Layer 3



Figure 41 ADV7180 32-pin LFCSP Power Planes Layer 3

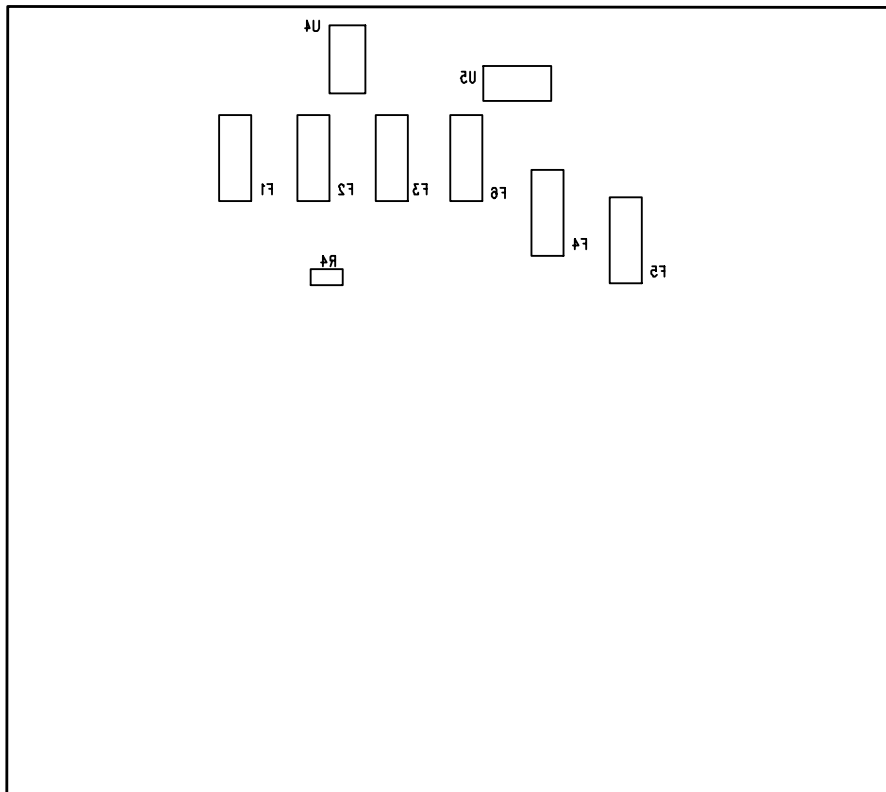
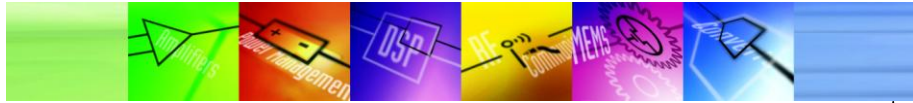


EVAL-ADV7180-32EBZ Eval Board Rev. 0 (Primary Side View)

Secondary Side - Layer 4

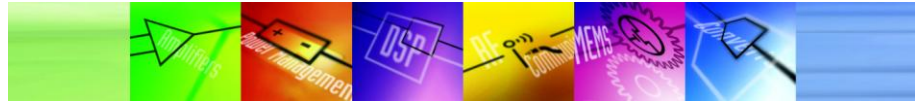


Figure 42 ADV7180 32-pin LFCSP Solder Side Layer 4



EVAL-ADV7180-32EBZ Eval Board Rev. 0 (Primary Side View)
Silkscreen - Secondary Side

Figure 43 ADV7180 32-pin LFCSP Silkscreen Underside of Board



ADV7180 48-pin LQFP Eval Board Layer Information

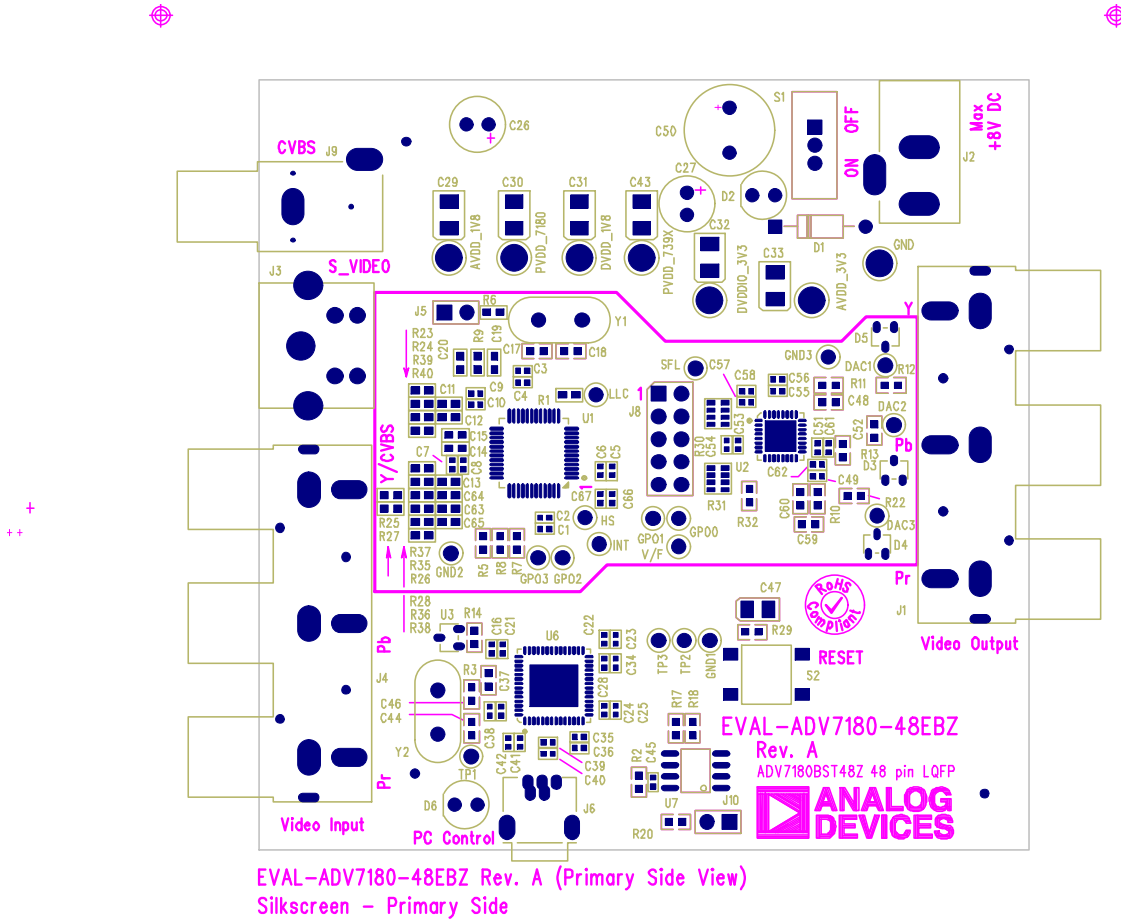
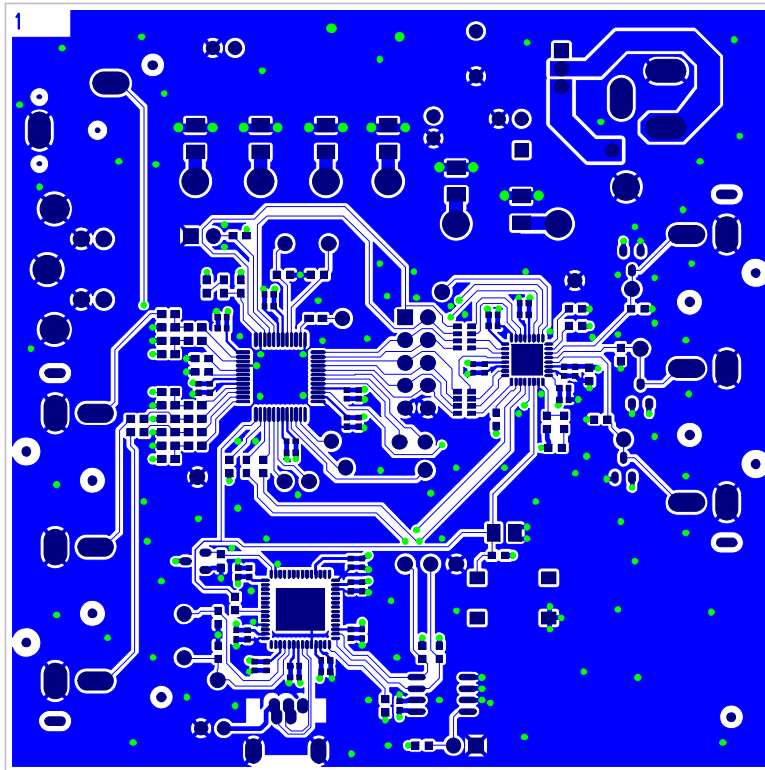
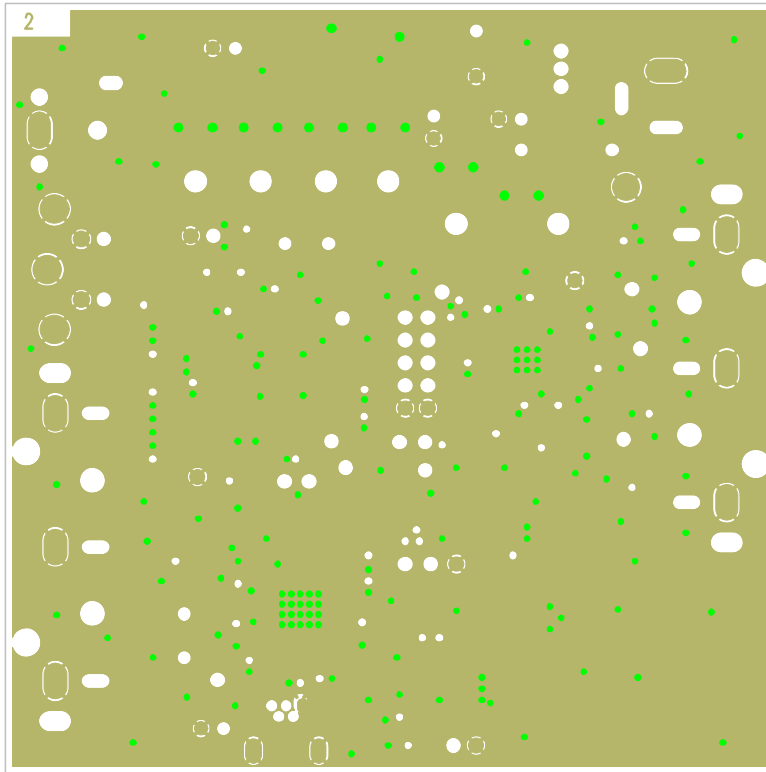
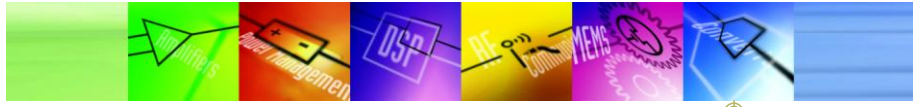


Figure 44 ADV7180 48-lead silkscreen



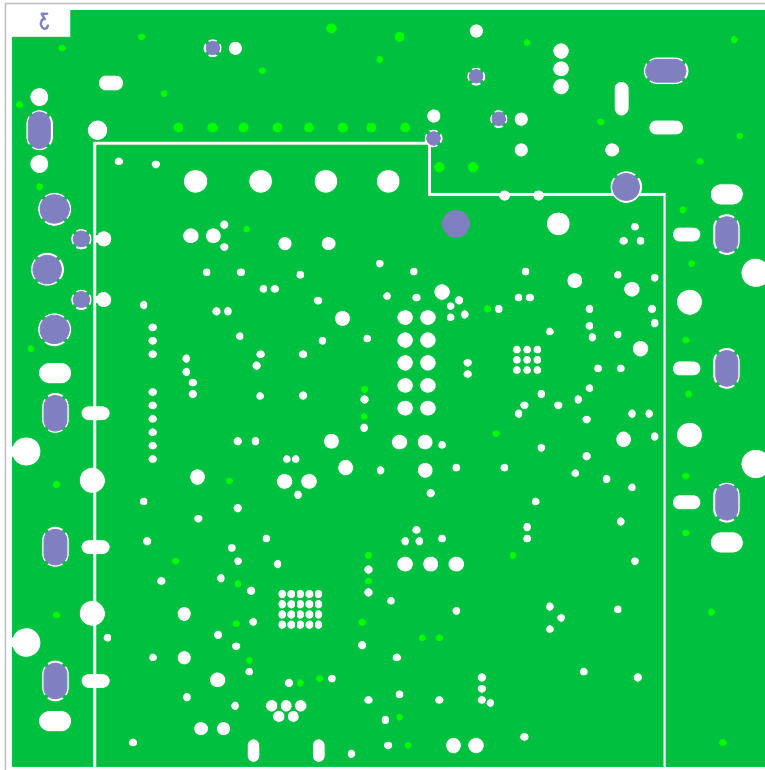
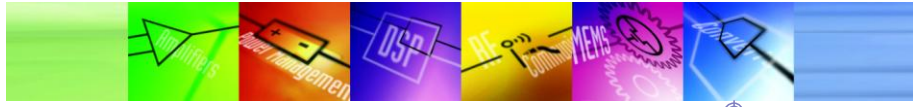
EVAL-ADV7180-48EBZ Rev. A (Primary Side View)
Primary Side - Layer 1

Figure 45 ADV7180 48-lead Layer 1



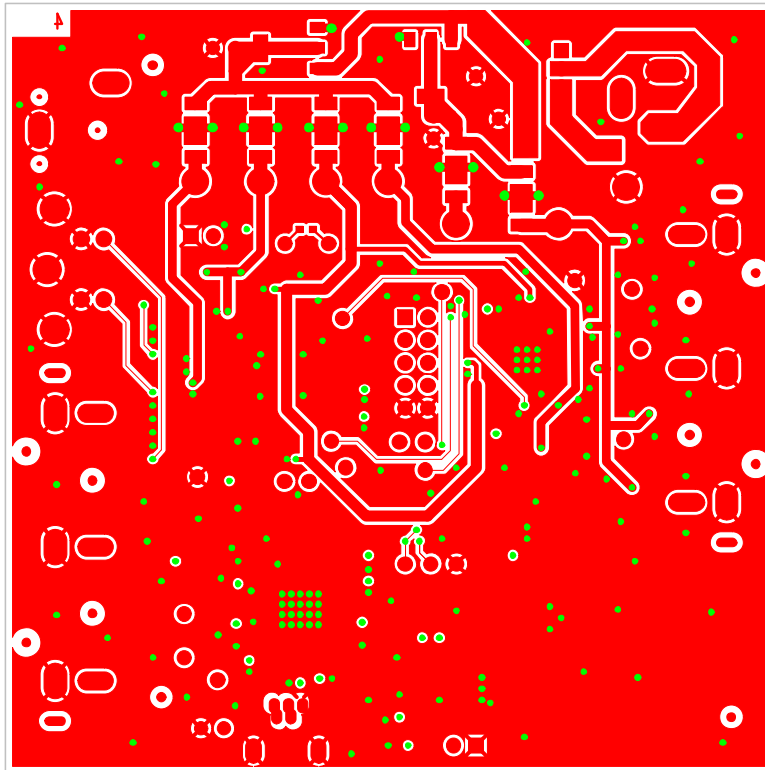
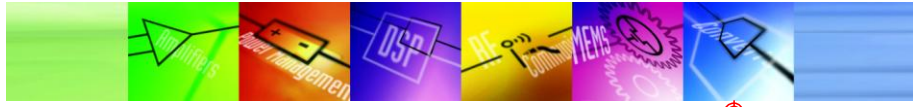
EVAL-ADV7180-48EBZ Rev. A (Primary Side View)
Ground Plane - Layer 2

Figure 46 ADV7180 48-lead Layer 2



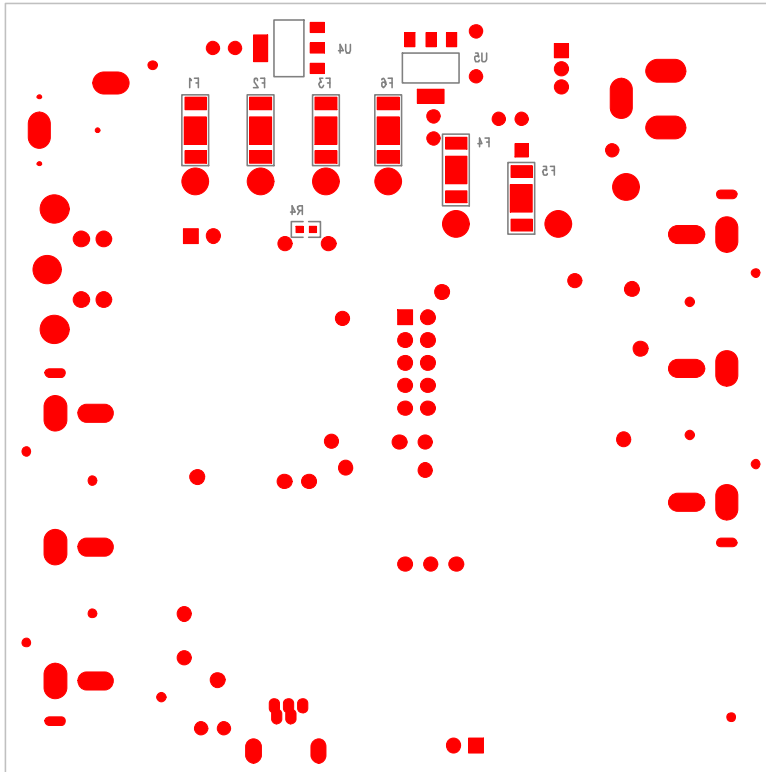
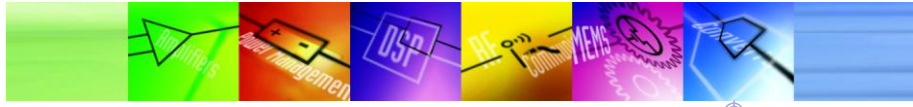
EVAL-ADV7180-48EBZ Rev. A (Primary Side View)
Power Plane - Layer 3

Figure 47 ADV7180 48-lead layer 3



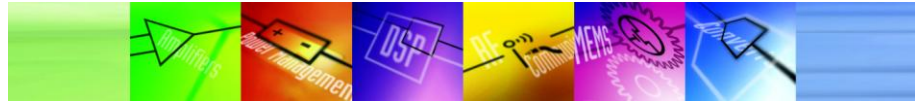
EVAL-ADV7180-48EBZ Rev. A (Primary Side View)
Secondary Side - Layer 4

Figure 48 ADV7180 48-lead Layer 4



EVAL-ADV7180-48EBZ Rev. A (Primary Side View)
Silkscreen - Secondary Side

Figure 49 ADV7180 48-lead Underside silkscreen



BOMs

Table 1 EVAL-ADV7180LQEBZ BOM

Name	Part Type	Value	Tolerance	PCB Decal
AVDD_1V8	TESTPOINT			TESTPOINT-POWER
AVDD_3V3	TESTPOINT			TESTPOINT-POWER
C1	CAP	0.1uF	±10%	C0402
C2	CAP	10nF	±10%	C0402
C3	CAP	0.1uF	±10%	C0402
C4	CAP	10nF	±10%	C0402
C5	CAP	0.1uF	±10%	C0402
C6	CAP	10nF	±10%	C0402
C7	CAP	0.1uF	±10%	C0402
C8	CAP	10nF	±10%	C0402
C9	CAP	0.1uF	±10%	C0402
C10	CAP	10nF	±10%	C0402
C11	CAP	0.1uF	±10%	C0603
C12	CAP	0.1uF	±10%	C0603
C13	CAP	0.1uF	±10%	C0603
C14	CAP	0.1uF	±10%	C0603
C15	CAP	0.1uF	±10%	C0603
C16	CAP	0.1uF	±10%	C0402
C17	CAP	47pF	±5%	C0603
C18	CAP	47pF	±5%	C0603
C19	CAP	10nF	±10%	C0603
C20	CAP	82nF	±10%	C0603
C21	CAP	10nF	±10%	C0402
C22	CAP	10nF	±10%	C0402
C23	CAP	0.1uF	±10%	C0402
C24	CAP	10nF	±10%	C0402
C25	CAP	0.1uF	±10%	C0402
C26	CAP-ELE_RAD	220uF	±20%	DCAPISR21
C27	CAP-ELE_RAD	220uF	±20%	DCAPISR21
C28	CAP	10nF	±10%	C0402
C29	CAP+	33uF	±10%	CAP\TAJ_B
C30	CAP+	33uF	±10%	CAP\TAJ_B
C31	CAP+	33uF	±10%	CAP\TAJ_B
C32	CAP+	33uF	±10%	CAP\TAJ_B
C33	CAP+	33uF	±10%	CAP\TAJ_B
C34	CAP	0.1uF	±10%	C0402
C35	CAP	10nF	±10%	C0402
C36	CAP	0.1uF	±10%	C0402
C37	CAP	10nF	±10%	C0402
C38	CAP	0.1uF	±10%	C0402
C39	CAP	10nF	±10%	C0402



C40	CAP	0.1uF	±10%	C0402
C41	CAP	10nF	±10%	C0402
C42	CAP	0.1uF	±10%	C0402
C43	CAP+	33uF	±10%	CAP\TAJ_B
C44	CAP	12pF	±5%	C0603
C45	CAP	0.1uF	±10%	C0402
C46	CAP	12pF	±5%	C0603
C47	CAP+	4.7uF	±10%	CAP\TAJ_A
C48	CAP	2.2nF	±5%	C0603
C49	CAP	0.1uF	±10%	C0402
C50	CAP+_ELEK	1000uF	±20%	CAP_ELEK_200
C51	CAP	10nF	±10%	C0402
C52	CAP	1uF	±10%	C0603
C53	CAP	10nF	±10%	C0402
C54	CAP	0.1uF	±10%	C0402
C55	CAP	10nF	±10%	C0402
C56	CAP	0.1uF	±10%	C0402
C57	CAP	10nF	±10%	C0402
C58	CAP	0.1uF	±10%	C0402
C59	CAP	150nF	(+80% - 20%)	C0603
C60	CAP	12nF	(10% -5%)	C0603
C61	CAP	0.1uF	±10%	C0402
C62	CAP	10nF	±10%	C0402
C63	CAP	0.1uF	±10%	C0603
C64	CAP	0.1uF	±10%	C0603
C65	CAP	0.1uF	±10%	C0603
C66	CAP	0.1uF	±10%	C0402
C67	CAP	10nF	±10%	C0402
D1	DIODE			DO35
D2	LED			LED
D3	BAT54S			RSOT23
D4	BAT54S			RSOT23
D5	BAT54S			RSOT23
D6	LED			LED
DAC1	TESTPOINT			TESTPOINT
DAC2	TESTPOINT			TESTPOINT
DAC3	TESTPOINT			TESTPOINT
DVDDIO_3V3	TESTPOINT			TESTPOINT-POWER
DVDD_1V8	TESTPOINT			TESTPOINT-POWER
F1	EMC_FILTER	4700pF	(+80%-20%)	EMC_FILTER
F2	EMC_FILTER	4700pF	(+80%-20%)	EMC_FILTER
F3	EMC_FILTER	4700pF	(+80%-20%)	EMC_FILTER
F4	EMC_FILTER	4700pF	(+80%-	EMC_FILTER



			20%)	
F5	EMC_FILTER	4700pF	(+80%-20%)	EMC_FILTER
F6	EMC_FILTER	4700pF	(+80%-20%)	EMC_FILTER
GND	TESTPOINT			TESTPOINT-POWER
GND1	TESTPOINT			TESTPOINT
GND2	TESTPOINT			TESTPOINT
GND3	TESTPOINT			TESTPOINT
GP00	TESTPOINT			TESTPOINT
GP01	TESTPOINT			TESTPOINT
GP02	TESTPOINT			TESTPOINT
GP03	TESTPOINT			TESTPOINT
HS	TESTPOINT			TESTPOINT-SMALL
INT	TESTPOINT			TESTPOINT-SMALL
J1	PHONO3			PHONO3
J2	CON-BARREL			CON\BARREL
J3	MINI-DIN-4			MINI-DIN-4
J4	PHONO3			PHONO3
J5	JUMPER			SIP-2P
J6	USB-MINI-B	n/a		USB-MINI-B
J7	JUMPER2\SIP3			LINK-3P_TEXT_INV
J8	HEADER10			HEADER10
J9	PH-CTP1-114			PH-CTP1-114
J10	JUMPER			SIP-2P
LLC	TESTPOINT			TESTPOINT
P8	TESTPOINT			TESTPOINT
P9	TESTPOINT			TESTPOINT
P10	TESTPOINT			TESTPOINT
P11	TESTPOINT			TESTPOINT
P12	TESTPOINT			TESTPOINT
P13	TESTPOINT			TESTPOINT
P14	TESTPOINT			TESTPOINT
P15	TESTPOINT			TESTPOINT
PVDD_739X	TESTPOINT			TESTPOINT-POWER
PVDD_7180	TESTPOINT			TESTPOINT-POWER
R1	RES	33r	±1%	R0603
R2	RES	10K	±1%	R0603
R3	RES	0r	±1%	R0603
R4	RES	1M	±1%	R0603
R5	RES	4k7	±1%	R0603
R6	RES	4k7	±1%	R0603
R7	RES	33R	±1%	R0603
R8	RES	33R	±1%	R0603



R9	RES	1k69	±1%	R0603
R10	RES	170r	±1%	R0603
R11	RES	510r	±1%	R0603
R12	RES	75r	±1%	R0603
R13	RES	75r	±1%	R0603
R14	RES	100K	±1%	R0603
R17	RES	2k2	±1%	R0603
R18	RES	2k2	±1%	R0603
R20	RES	2k2	±1%	R0603
R22	RES	75r	±1%	R0603
R23	RES	36R	±1%	R0603
R24	RES	39R	±1%	R0603
R25	RES	36R	±1%	R0603
R26	RES	39R	±1%	R0603
R27	RES	36R	±1%	R0603
R28	RES	39R	±1%	R0603
R29	RES	4k7	±1%	R0603
R30	RES_PACK_SMD_4	33r	±5%	RESPACK_EXB38V
R31	RES_PACK_SMD_4	33r	±5%	RESPACK_EXB38V
R32	RES	4k7	±1%	R0603
R33	RES_PACK_SMD_4	33r	±5%	RESPACK_EXB38V
R34	RES_PACK_SMD_4	33r	±5%	RESPACK_EXB38V
R35	RES	39R	±1%	R0603
R36	RES	39R	±1%	R0603
R37	RES	36R	±1%	R0603
R38	RES	36R	±1%	R0603
R39	RES	39R	±1%	R0603
R40	RES	36R	±1%	R0603
S1	SW-SPDT-SLIDE			SW-SPDT-SLIDE
S2	SW-PUSH-SMD			SW_PB_SMD_6MM
SFL	TESTPOINT			TESTPOINT-SMALL
TP1	TESTPOINT	n/a		TESTPOINT
TP2	TESTPOINT	n/a		TESTPOINT
TP3	TESTPOINT	n/a		TESTPOINT
U1	ADV7180			LQFP64
U2	ADV7392-3			LFCSP-40
U3	ADM809	n/a		RSOT23-3
U4	ADP3338-1.8V			SOT223
U5	ADP3338-3.3V			SOT223
U6	CY7C68013A	n/a		LFCSP-56_RP
U7	24LC64	n/a		SO8NB
V/F	TESTPOINT			TESTPOINT-SMALL
Y1	XTAL1	28.63636MHz		HC49
Y2	XTAL1	24MHz		HC49

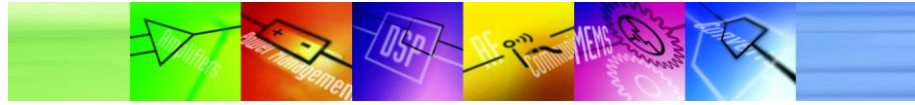


Table 2 EVAL- ADV7180LFEBZ BOM

Name	Part Type	Value	Tolerance	PCB Decal
AVDD_1V8	TESTPOINT			TESTPOINT-POWER
AVDD_3V3	TESTPOINT			TESTPOINT-POWER
C1	CAP	0.1uF	±10%	C0402
C2	CAP	10nF	±10%	C0402
C3	CAP	0.1uF	±10%	C0402
C4	CAP	10nF	±10%	C0402
C5	CAP	0.1uF	±10%	C0402
C6	CAP	10nF	±10%	C0402
C7	CAP	0.1uF	±10%	C0402
C8	CAP	10nF	±10%	C0402
C9	CAP	0.1uF	±10%	C0402
C10	CAP	10nF	±10%	C0402
C11	CAP	0.1uF	±10%	C0603
C12	CAP	0.1uF	±10%	C0603
C13	CAP	0.1uF	±10%	C0603
C14	CAP	0.1uF	±10%	C0603
C15	CAP	0.1uF	±10%	C0603
C16	CAP	0.1uF	±10%	C0402
C17	CAP	47pF	±5%	C0603
C18	CAP	47pF	±5%	C0603
C19	CAP	10nF	±10%	C0603
C20	CAP	82nF	±10%	C0603
C21	CAP	10nF	±10%	C0402
C22	CAP	10nF	±10%	C0402
C23	CAP	0.1uF	±10%	C0402
C24	CAP	10nF	±10%	C0402
C25	CAP	0.1uF	±10%	C0402
C26	CAP-ELE_RAD	220uF	±20%	DCAP\SR21
C27	CAP-ELE_RAD	220uF	±20%	DCAP\SR21
C28	CAP	10nF	±10%	C0402
C29	CAP+	33uF	±10%	CAP\TAJ_B
C30	CAP+	33uF	±10%	CAP\TAJ_B
C31	CAP+	33uF	±10%	CAP\TAJ_B
C32	CAP+	33uF	±10%	CAP\TAJ_B
C33	CAP+	33uF	±10%	CAP\TAJ_B
C34	CAP	0.1uF	±10%	C0402
C35	CAP	10nF	±10%	C0402
C36	CAP	0.1uF	±10%	C0402
C37	CAP	10nF	±10%	C0402
C38	CAP	0.1uF	±10%	C0402
C39	CAP	10nF	±10%	C0402
C40	CAP	0.1uF	±10%	C0402



C41	CAP	10nF	±10%	C0402
C42	CAP	0.1uF	±10%	C0402
C43	CAP+	33uF	±10%	CAP\TAJ_B
C44	CAP	12pF	±5%	C0603
C45	CAP	0.1uF	±10%	C0402
C46	CAP	12pF	±5%	C0603
C47	CAP+	4.7uF	±10%	CAP\TAJ_A
C48	CAP	2.2nF	±5%	C0603
C49	CAP	0.1uF	±10%	C0402
C50	CAP+_ELEK	1000uF	±20%	CAP_ELEK_200
C51	CAP	10nF	±10%	C0402
C52	CAP	1uF	±10%	C0603
C53	CAP	10nF	±10%	C0402
C54	CAP	0.1uF	±10%	C0402
C55	CAP	10nF	±10%	C0402
C56	CAP	0.1uF	±10%	C0402
C57	CAP	10nF	±10%	C0402
C58	CAP	0.1uF	±10%	C0402
C59	CAP	150nF	(+80% - 20%)	C0603
C60	CAP	12nF	(10% -5%)	C0603
C61	CAP	0.1uF	±10%	C0402
C62	CAP	10nF	±10%	C0402
D1	DIODE			DO35
D2	LED			LED
D3	BAT54S			RSOT23
D4	BAT54S			RSOT23
D5	BAT54S			RSOT23
D6	LED			LED
DAC1	TESTPOINT			TESTPOINT
DAC2	TESTPOINT			TESTPOINT
DAC3	TESTPOINT			TESTPOINT
DVDDIO_3V3	TESTPOINT			TESTPOINT-POWER
DVDD_1V8	TESTPOINT			TESTPOINT-POWER
F1	EMC_FILTER	4700pF	(+80%-20%)	EMC_FILTER
F2	EMC_FILTER	4700pF	(+80%-20%)	EMC_FILTER
F3	EMC_FILTER	4700pF	(+80%-20%)	EMC_FILTER
F4	EMC_FILTER	4700pF	(+80%-20%)	EMC_FILTER
F5	EMC_FILTER	4700pF	(+80%-20%)	EMC_FILTER
F6	EMC_FILTER	4700pF	(+80%-20%)	EMC_FILTER
GND	TESTPOINT			TESTPOINT-POWER



GND1	TESTPOINT			TESTPOINT
GND2	TESTPOINT			TESTPOINT
GND3	TESTPOINT			TESTPOINT
HS	TESTPOINT			TESTPOINT-SMALL
INT	TESTPOINT			TESTPOINT-SMALL
J1	PHONO3			PHONO3
J2	CON-BARREL			CON\BARREL
J3	MINI-DIN-4			MINI-DIN-4
J4	PHONO3			PHONO3
J5	JUMPER			SIP-2P
J6	USB-MINI-B	n/a		USB-MINI-B
J7	JUMPER			SIP-2P
LLC	TESTPOINT			TESTPOINT
P0	TESTPOINT			TESTPOINT
P1	TESTPOINT			TESTPOINT
P2	TESTPOINT			TESTPOINT
P3	TESTPOINT			TESTPOINT
P4	TESTPOINT			TESTPOINT
P5	TESTPOINT			TESTPOINT
P6	TESTPOINT			TESTPOINT
P7	TESTPOINT			TESTPOINT
PVDD_739X	TESTPOINT			TESTPOINT-POWER
PVDD_7180	TESTPOINT			TESTPOINT-POWER
R1	RES	33r	±1%	R0603
R2	RES	10K	±1%	R0603
R3	RES	0r	±1%	R0603
R4	RES	1M	±1%	R0603
R5	RES	4k7	±1%	R0603
R6	RES	4k7	±1%	R0603
R7	RES	33R	±1%	R0603
R8	RES	33R	±1%	R0603
R9	RES	1k69	±1%	R0603
R10	RES	170r	±1%	R0603
R11	RES	510r	±1%	R0603
R12	RES	75r	±1%	R0603
R13	RES	75r	±1%	R0603
R14	RES	100K	±1%	R0603
R17	RES	2k2	±1%	R0603
R18	RES	2k2	±1%	R0603
R20	RES	2k2	±1%	R0603
R22	RES	75r	±1%	R0603
R23	RES	36R	±1%	R0603
R24	RES	39R	±1%	R0603
R25	RES	36R	±1%	R0603
R26	RES	39R	±1%	R0603



R27	RES	36R	±1%	R0603
R28	RES	39R	±1%	R0603
R29	RES	4k7	±1%	R0603
R30	RES_PACK_SMD_4	33r	±5%	RESPACK_EXB38V
R31	RES_PACK_SMD_4	33r	±5%	RESPACK_EXB38V
R32	RES	4k7	±1%	R0603
S1	SW-SPDT-SLIDE			SW-SPDT-SLIDE
S2	SW-PUSH-SMD			SW_PB_SMD_6MM
SFL	TESTPOINT			TESTPOINT-SMALL
TP1	TESTPOINT	n/a		TESTPOINT
TP2	TESTPOINT	n/a		TESTPOINT
TP3	TESTPOINT	n/a		TESTPOINT
U1	ADV7180_LFCSP40			LFCSP-40
U2	ADV7390_91			LFCSP-32
U3	ADM809	n/a		RSOT23-3
U4	ADP3338-1.8V			SOT223
U5	ADP3338-3.3V			SOT223
U6	CY7C68013A	n/a		LFCSP-56_RP
U7	24LC64	n/a		SO8NB
V/F	TESTPOINT			TESTPOINT-SMALL
Y1	XTAL1	28.63636MHz		HC49
Y2	XTAL1	24MHz		HC49

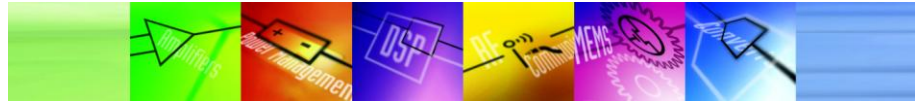


Table 3 EVAL- ADV7180-32EBZ BOM

Name	Part Type	Value	Tolerance	PCB Decal
AVDD_1V8	TESTPOINT			TESTPOINT-POWER
AVDD_3V3	TESTPOINT			TESTPOINT-POWER
C1	CAP	0.1uF	±10%	C0402
C2	CAP	10nF	±10%	C0402
C3	CAP	0.1uF	±10%	C0402
C4	CAP	10nF	±10%	C0402
C5	CAP	0.1uF	±10%	CMI0402
C6	CAP	10nF	±10%	CMI0402
C7	CAP	0.1uF	±10%	C0402
C8	CAP	10nF	±10%	C0402
C9	CAP	0.1uF	±10%	C0402
C10	CAP	10nF	±10%	C0402
C11	CAP	0.1uF	±10%	C0603
C12	CAP	0.1uF	±10%	C0603
C13	CAP	0.1uF	±10%	C0603
C14	CAP	0.1uF	±10%	C0603
C15	CAP	0.1uF	±10%	C0603
C16	CAP	0.1uF	±10%	C0402
C17	CAP	47pF	±5%	CMI0603
C18	CAP	47pF	±5%	CMI0603
C19	CAP	10nF	±10%	CMI0603
C20	CAP	82nF	±10%	CMI0603
C21	CAP	10nF	±10%	C0402
C22	CAP	10nF	±10%	C0402
C23	CAP	0.1uF	±10%	C0402
C24	CAP	10nF	±10%	C0402
C25	CAP	0.1uF	±10%	C0402
C26	CAP-ELE_RAD	220uF	±20%	DCAP\SR21
C27	CAP-ELE_RAD	220uF	±20%	DCAP\SR21
C28	CAP	10nF	±10%	C0402
C29	CAP+	33uF	±10%	CAP\TAJ_B
C30	CAP+	33uF	±10%	CAP\TAJ_B
C31	CAP+	33uF	±10%	CAP\TAJ_B
C32	CAP+	33uF	±10%	CAP\TAJ_B
C33	CAP+	33uF	±10%	CAP\TAJ_B
C34	CAP	0.1uF	±10%	C0402
C35	CAP	10nF	±10%	C0402
C36	CAP	0.1uF	±10%	C0402
C37	CAP	10nF	±10%	C0402
C38	CAP	0.1uF	±10%	C0402
C39	CAP	10nF	±10%	C0402
C40	CAP	0.1uF	±10%	C0402
C41	CAP	10nF	±10%	C0402
C42	CAP	0.1uF	±10%	C0402
C43	CAP+	33uF	±10%	CAP\TAJ_B



C44	CAP	12pF	±5%	C0603
C45	CAP	0.1uF	±10%	C0402
C46	CAP	12pF	±5%	C0603
C47	CAP+	4.7uF	±10%	CAP1TAJ_A
C48	CAP	2.2nF	±5%	C0603
C49	CAP	0.1uF	±10%	C0402
C50	CAP+_ELEK	1000uF	±20%	CAP_ELEK_200
C51	CAP	10nF	±10%	C0402
C52	CAP	1uF	±10%	C0603
C53	CAP	10nF	±10%	C0402
C54	CAP	0.1uF	±10%	C0402
C55	CAP	10nF	±10%	C0402
C56	CAP	0.1uF	±10%	C0402
C57	CAP	10nF	±10%	C0402
C58	CAP	0.1uF	±10%	C0402
C59	CAP	150nF	(+80% - 20%)	C0603
C60	CAP	12nF	(10% -5%)	C0603
C61	CAP	0.1uF	±10%	C0402
C62	CAP	10nF	±10%	C0402
D1	DIODE			DO35
D2	LED			LED
D3	BAT54S			RSOT23
D4	BAT54S			RSOT23
D5	BAT54S			RSOT23
D6	LED			LED
DAC1	TESTPOINT			TESTPOINT
DAC2	TESTPOINT			TESTPOINT
DAC3	TESTPOINT			TESTPOINT
DVDDIO_3V3	TESTPOINT			TESTPOINT-POWER
DVDD_1V8	TESTPOINT			TESTPOINT-POWER
F1	EMC_FILTER	4700pF	(+80%-20%)	EMC_FILTER
F2	EMC_FILTER	4700pF	(+80%-20%)	EMC_FILTER
F3	EMC_FILTER	4700pF	(+80%-20%)	EMC_FILTER
F4	EMC_FILTER	4700pF	(+80%-20%)	EMC_FILTER
F5	EMC_FILTER	4700pF	(+80%-20%)	EMC_FILTER
F6	EMC_FILTER	4700pF	(+80%-20%)	EMC_FILTER
GND	TESTPOINT			TESTPOINT-POWER
GND1	TESTPOINT			TESTPOINT
GND2	TESTPOINT			TESTPOINT
GND3	TESTPOINT			TESTPOINT
GND4	TESTPOINT			TESTPOINT
HS	TESTPOINT			TESTPOINT-SMALL



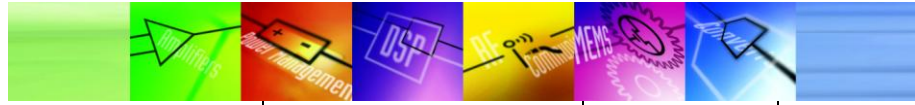
INT	TESTPOINT			TESTPOINT-SMALL
J1	PHONO3			PHONO3
J2	CON-BARREL			CON\BARREL
J3	MINI-DIN-4			MINI-DIN-4
J4	PHONO3			PHONO3
J5	HEADER14			HEADER14-2MM
J6	USB-MINI-B-THRU-HOLE			USB-MINI-B-THRU-HOLE
J7	JUMPER			SIP-2P
PVDD_739X	TESTPOINT			TESTPOINT-POWER
PVDD_7180	TESTPOINT			TESTPOINT-POWER
R1	RES	33r	±1%	R0603
R2	RES	10K	±1%	R0603
R3	RES	0r	±1%	R0603
R4	RES	1M	±1%	RMI0603
R5	RES	4k7	±1%	RMI0603
R6	R0603-NI	NA	n/a	RMI0603
R7	RES	33R	±1%	R0603
R8	RES	33R	±1%	RMI0603
R9	R0603-1K69	1K69	±1%	RMI0603
R10	RES	170r	±1%	R0603
R11	RES	510r	±1%	R0603
R12	RES	75r	±1%	R0603
R13	RES	75r	±1%	R0603
R14	RES	100K	±1%	R0603
R17	RES	2K2	±1%	R0603
R18	RES	2K2	±1%	R0603
R20	RES	2k2	±1%	R0603
R22	RES	75r	±1%	R0603
R23	RES	36R	±1%	R0603
R24	RES	39R	±1%	R0603
R25	RES	36R	±1%	R0603
R26	RES	39R	±1%	R0603
R27	RES	36R	±1%	R0603
R28	RES	39R	±1%	R0603
R29	RES	4k7	±1%	R0603
R30	RES_PACK_SMD_4	33r	±5%	RESPACK_EXB38V
R31	RES_PACK_SMD_4	33r	±5%	RESPACK_EXB38V
R32	RES	4k7	±1%	R0603
S1	SW-SPDT-SLIDE			SW-SPDT-SLIDE
S2	SW-PUSH-SMD			SW_PB_SMD_6MM
SFL	TESTPOINT			TESTPOINT-SMALL
TP1	TESTPOINT	n/a		TESTPOINT
TP2	TESTPOINT	n/a		TESTPOINT
TP3	TESTPOINT	n/a		TESTPOINT
U1	ADV7180_LFCSP32			LFCSP-32_IPC-2
U2	ADV7390_91			LFCSP-32_IPC
U3	ADM809	n/a		RSOT23-3



U4	ADP3338-1.8V			SOT223
U5	ADP3338-3.3V			SOT223
U6	CY7C68013A	n/a		LFCSP-56_IPC-USB
U7	24LC64	n/a		SO8NB
V/F	TESTPOINT			TESTPOINT-SMALL
Y1	XTAL1	28.63636MH z		HC49
Y2	XTAL1	24MHz		HC49

Table 4 EVAL-ADV7180-48EBZ BOM

Reference	PCB Decal	Value	Tolerance
U7	SO8NB		
U3	RSOT23-3		
U4	SOT223		
U5	SOT223		
U1	LQFP-48_IPC		
U2	LFCSP-32_IPC		
D3-5	RSOT23		
C50	CAP_ELEK_200	1000uF	±20%
C26-27	DCAP\SR21	220uF	±20%
C1 C3 C5 C7 C9 C16 C23 C25 C34 C36 C38 C40 C42 C45 C49 C54 C56 C58 C61 C66	C0402	0.1uF	(+80 -20%)
C2 C4 C6 C8 C10 C21-22 C24 C28 C35 C37 C39 C41 C51 C53 C55 C57 C62 C67	C0402	10nF	(+80 -20%)
C11-15 C63-65	CMI0603	100nF	±10%
C19	CMI0603	10nF	±10%
C60	C0603	12nF	±10%
C44 C46	C0603	12pF	±5%
C59	C0603	150nF	±10%
C52	C0603	1uF	±10%
C48	C0603	2.2nF	±10%
C17-18	C0603	47pF	±5%
C20	CMI0603	82nF	±10%
C47	RTAJ_A	4.7uF	±10%
C29-33 C43	RTAJ_B	33uF	±10%
J2	CON\BARREL		
U6	LFCSP-56_IPC-USB		
D1	DO35		
F1-6	EMC_FILTER	4.7nF	(+80 -20%)
J8	HEADER10		
J5 J10	SIP-2P		
D2 D6	LED		
J3	MINI-DIN-4		
J9	PH-CTP1-114		



J1 J4	PHONO3		
R3	R0603	0R	±1%
R14	R0603	100K	±1%
R2	R0603	10K	±1%
R10	R0603	169R	±1%
R9	RMI0603	1K69	±1%
R4	R0603	1M	±1%
R17-18 R20	R0603	2K2	±1%
R1	RMI0603	33R	±1%
R7-8	R0603	33R	±1%
R23 R25 R27 R37-38 R40	RMI0603	36R	±1%
R24 R26 R28 R35-36 R39	RMI0603	39R	±1%
R5 R29 R32	R0603	4K7	±1%
R6	RMI0603	4K7	±1%
R11	R0603	510R	±1%
R12-13 R22	R0603	75R	±1%
R30-31	RESPACK_EXB38V	33r	±5%
S2	SW_PB_SMD_6MM		
S1	SW-SPDT-SLIDE		
GND1-3	TESTPOINT		
DAC1-3 GPO0-3 LLC TP1-3	TESTPOINT		
INT HS SFL V/F	TESTPOINT		
AVDD_1V8 AVDD_3V3 DVDDIO_3V3 DVDD_1V8 GND PVDD_7180 PVDD_739X	TESTPOINT-POWER		
J6	USB-MINI-B-THRU-HOLE		
Y1	HC49	28.63636MHz	
Y2	HC49	24MHz	



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