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I - Box

CONVERSION TO AGILE SYSTEM				ADEEB KHAIR	29-08-2010	1E	E-008547		
REPLACE U24, U36, TO MC512832805				LIRAN VIGDOR	09-12-2004	1D	E20040084		
DESCRIPTION				APPR.	DATE	REV	CHANGE	ORD.	
	NAME	DATE	EQUIPMENT	ASSEMBLY NAME					
DESIGNER	LIRAN VIGDOR	01-03-2003	Cardiac CT	No.					
CHECKER	AVI BEN-ARI	01-03-2003							
APPROVAL	BENNY PORAT	01-03-2003							
			NAME						
			I-Box card						
			DRAWING No.						
PHILIPS MEDICAL SYSTEMS TECHNOLOGIES LTD.			455014501011[E]				REV.	SCALE	SIZE
			SHEET 01 OF 18				1:1	A3	
CONTENTS PROPERTY OF PHILIPS MEDICAL SYSTEMS TECHNOLOGIES LTD. NO UNAUTHORIZED USE PERMITTED.									

SLIRANV/72050011

5/01/2003, 10:06:57

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CONNECTORS

A_CANRX0 CPM_A_CANRX0
A_CANTX0 CPM_A_CANTX0

FPGA_ECG_ECG_SYNC FPGA_ECG_ECG_SYNC
FPGA_PHS_HTP FPGA_PHS_HTP
FPGA_XRAY_ON FPGA_XRAY_ON
FPGA_ECG_TRIGGER_IN1 FPGA_ECG_TRIGGER_IN1
FPGA_SPARE_RELAY FPGA_SPARE_RELAY
FPGA_INJECTOR_STOP_RELAY FPGA_INJECTOR_STOP_RELAY
FPGA_INJECTOR_INIT_RELAY FPGA_INJECTOR_INIT_RELAY

FPGA_UART_A(2:0) FPGA_UART_A(2:0)
FPGA_SPARE0_SINGLE_OUT FPGA_SPARE0_SINGLE_OUT
FPGA_SPARE1_SINGLE_OUT FPGA_SPARE1_SINGLE_OUT

FPGA_SPARE0_DIFF_OUT FPGA_SPARE0_DIFF_OUT
FPGA_SPARE1_DIFF_OUT FPGA_SPARE1_DIFF_OUT

FPGA_UART_INTA FPGA_UART_INTA
FPGA_UART_INTB FPGA_UART_INTB
FPGA_UART_INTC FPGA_UART_INTC
FPGA_UART_INTD FPGA_UART_INTD
FPGA_SPARE_RELAY_OPEN FPGA_SPARE_RELAY_OPEN
FPGA_INJECTOR_INIT_OPEN FPGA_INJECTOR_INIT_OPEN
FPGA_INJECTOR_STOP_OPEN FPGA_INJECTOR_STOP_OPEN
FPGA_SPARE0_DIFF_IN FPGA_SPARE0_DIFF_IN
FPGA_SPARE1_DIFF_IN FPGA_SPARE1_DIFF_IN
FPGA_INJECTOR_TRIGGER_RELAY FPGA_INJECTOR_TRIGGER_RELAY
FPGA_SPARE0_SINGLE_IN FPGA_SPARE0_SINGLE_IN
FPGA_SPARE1_SINGLE_IN FPGA_SPARE1_SINGLE_IN

FPGA_UART_D(7:0) FPGA_UART_D(7:0)
FPGA_UART_CSA# FPGA_UART_CSA#
FPGA_UART_CSB# FPGA_UART_CSB#
FPGA_UART_CSC# FPGA_UART_CSC#
FPGA_UART_CSD# FPGA_UART_CSD#
FPGA_UART_IOR# FPGA_UART_IOR#
FPGA_UART_IOW# FPGA_UART_IOW#
FPGA_UART_RESET FPGA_UART_RESET
FPGA_UART_CLK FPGA_UART_CLK
DIAGNOSTIC(11:0) DIAGNOSTIC(11:0)
FPGA_GHOST_DIFF_OUT0 FPGA_GHOST_DIFF_OUT0
FPGA_GHOST_DIFF_OUT1 FPGA_GHOST_DIFF_OUT1
FPGA_GHOST_DIFF_IN0 FPGA_GHOST_DIFF_IN0
FPGA_GHOST_DIFF_IN1 FPGA_GHOST_DIFF_IN1

USB_RxD0
USB_TxD0

USB-
USB+

CONN_5V
5V_GND

CPM_TxD1
CPM_RxD1
USB_TxD1
USB_RxD1

ECG_ANALOG_ECG_SIGNAL_POS ECG_ANALOG_ECG_SIGNAL_POS
ECG_ANALOG_ECG_SIGNAL_NEG ECG_ANALOG_ECG_SIGNAL_NEG
PULMO_ANALOG_IN_DIFF_POS PULMO_ANALOG_IN_DIFF_POS
PULMO_ANALOG_IN_DIFF_NEG PULMO_ANALOG_IN_DIFF_NEG
SPARE_ANALOG_IN_DIFF_POS SPARE_ANALOG_IN_DIFF_POS
SPARE_ANALOG_IN_DIFF_NEG SPARE_ANALOG_IN_DIFF_NEG
SPARE0_ANALOG_IN_SINGLE SPARE0_ANALOG_IN_SINGLE
SPARE1_ANALOG_IN_SINGLE SPARE1_ANALOG_IN_SINGLE
SPARE0_ANALOG_IN_SINGLE_GND SPARE0_ANALOG_IN_SINGLE_GND
SPARE1_ANALOG_IN_SINGLE_GND SPARE1_ANALOG_IN_SINGLE_GND

FPGA_CPM_SPARE_5(1:0) FPGA_CPM_SPARE_5(1:0)
FPGA_CPM_SPARE(1:0) FPGA_CPM_SPARE(1:0)

PAGES : 8-13

FPGA

CLKOUT_24MHZ FPGA_24MHZ
JTAG_TDI JTAG_TDI
FPGA_40MHZ FPGA_40MHZ
FPGA_CPLD_TDI FPGA_CPLD_TDI

CPM_LIVE CPM_LIVE
CPM_A(23:2) CPM_A(23:2)
FPGA_CPM_S_RESET# FPGA_CPM_S_RESET#
FPGA_CPM_TS FPGA_CPM_TS
FPGA_CPM_OE# FPGA_CPM_OE#
CPM_D(31:0) CPM_D(31:0)
FPGA_CPM_SPARE(3:2) FPGA_CPM_SPARE(3:2)
FPGA_CPM_RD_WR# FPGA_CPM_RD_WR#
FPGA_CPM_CS# FPGA_CPM_CS#
FPGA_CPM_BE(3:0) FPGA_CPM_BE(3:0)
FPGA_CPM_RESET# FPGA_CPM_RESET#
FPGA_CPM_IRQ3# FPGA_CPM_IRQ3#
FPGA_CPM_IRQ1# FPGA_CPM_IRQ1#
FPGA_CPM_TA FPGA_CPM_TA
FPGA_CPM_IRQ5# FPGA_CPM_IRQ5#
FPGA_CPM_IRQ7# FPGA_CPM_IRQ7#

FPGA_CPM_SPARE(1:0) FPGA_CPM_SPARE(1:0)

FPGA_PROGRAM FPGA_PROGRAM
FPGA_DONE FPGA_DONE

FPGA_USB_S_RESET# USB_PWR_RESET
RESET#
FPGA_USB_RDY(4:0) FPGA_USB_RDY(4:0)
FPGA_USB_DATA(7:0) FPGA_USB_DATA(7:0)
FPGA_USB_SPARE(3:0) FPGA_USB_SPARE(3:0)
FPGA_USB_BKPT
FPGA_USB_CTL
FPGA_USB_RD_WR#
FPGA_USB_TS
FPGA_USB_ADDR(7:0) FPGA_USB_ADDR(7:0)
FPGA_CPLD_SPARE(3:0) FPGA_CPLD_SPARE(3:0)

FPGA_USB_TA
FPGA_USB_INT1#
FPGA_USB_INT0#

FPGA_ADC_INT# FPGA_ADC_INT#
FPGA_ADC_DATA(11:0) FPGA_ADC_DATA(11:0)
FPGA_ADC_RD# FPGA_ADC_RD#
FPGA_ADC_WR# FPGA_ADC_WR#
FPGA_ADC_CS# FPGA_ADC_CS#
FPGA_ADC_CLK FPGA_ADC_CLK

PAGES : 14-16

CLK_40MHZ CPM_CLK
CPM_TxD1 CPM_TxD1
CPM_RxD1 CPM_RxD1
CPM_A_CANRX0 CPM_A_CANRX0
CPM_A_CANTX0 CPM_A_CANTX0
FPGA_CPM_SPARE_5(1:0) FPGA_CPM_SPARE_5(1:0)

CPM
ANALOG_IN_0 ANALOG_IN_0
ANALOG_IN_1 ANALOG_IN_1
ANALOG_IN_2 ANALOG_IN_2
ANALOG_IN_3 ANALOG_IN_3
ANALOG_IN_4 ANALOG_IN_4
ANALOG_IN_5 ANALOG_IN_5

USB_TxD1
USB_RxD1

PAGES : 5

FPGA_PROGRAM
FPGA_DONE

FPGA_USB_S_RESET#
RESET#
FPGA_USB_RDY(4:0)
FPGA_USB_DATA(7:0)
FPGA_USB_SPARE(3:0)
FPGA_USB_BKPT
FPGA_USB_CTL
FPGA_USB_RD_WR#
FPGA_USB_TS
FPGA_USB_ADDR(7:0)
FPGA_CPLD_SPARE(3:0)

FPGA_CPLD_TDI
FPGA_USB_TA
FPGA_USB_INT1#
FPGA_USB_INT0#
USB_RxD0

PAGES : 3,4

ANALOG_IN_0 ANALOG_IN_0
ANALOG_IN_1 ANALOG_IN_1
ANALOG_IN_2 ANALOG_IN_2
ANALOG_IN_3 ANALOG_IN_3
ANALOG_IN_4 ANALOG_IN_4
ANALOG_IN_5 ANALOG_IN_5
FPGA_ADC_INT#
FPGA_ADC_DATA(11:0)
FPGA_ADC_RD#
FPGA_ADC_WR#
FPGA_ADC_CS#
FPGA_ADC_CLK

ANALOG

ECG_ANALOG_ECG_SIGNAL_POS ECG_ANALOG_ECG_SIGNAL_POS
ECG_ANALOG_ECG_SIGNAL_NEG ECG_ANALOG_ECG_SIGNAL_NEG
PULMO_ANALOG_IN_DIFF_POS PULMO_ANALOG_IN_DIFF_POS
PULMO_ANALOG_IN_DIFF_NEG PULMO_ANALOG_IN_DIFF_NEG
SPARE_ANALOG_IN_DIFF_POS SPARE_ANALOG_IN_DIFF_POS
SPARE_ANALOG_IN_DIFF_NEG SPARE_ANALOG_IN_DIFF_NEG
SPARE0_ANALOG_IN_SINGLE SPARE0_ANALOG_IN_SINGLE
SPARE1_ANALOG_IN_SINGLE SPARE1_ANALOG_IN_SINGLE
SPARE0_ANALOG_IN_SINGLE_GND SPARE0_ANALOG_IN_SINGLE_GND
SPARE1_ANALOG_IN_SINGLE_GND SPARE1_ANALOG_IN_SINGLE_GND

PAGES : 6,7

PWR JTAG & CLK
CLKOUT_24MHZ
CPM_CLK
USB_TDI
USB_TMS
USB_TCK
JTAG_TDO
CONN_5V
5V_GND
FPGA_24MHZ
CPLD_24MHZ
CLK_24M_DBG
EPROM_TCK
EPROM_TMS
FPGA_TMS
USB_TDo
CPLD_TMS
FPGA_TCK
CPLD_TCK
JTAG_TDI
FPGA_40MHZ
FPGA_40MHZ

PAGES:17,18

USB

USB+
USB-

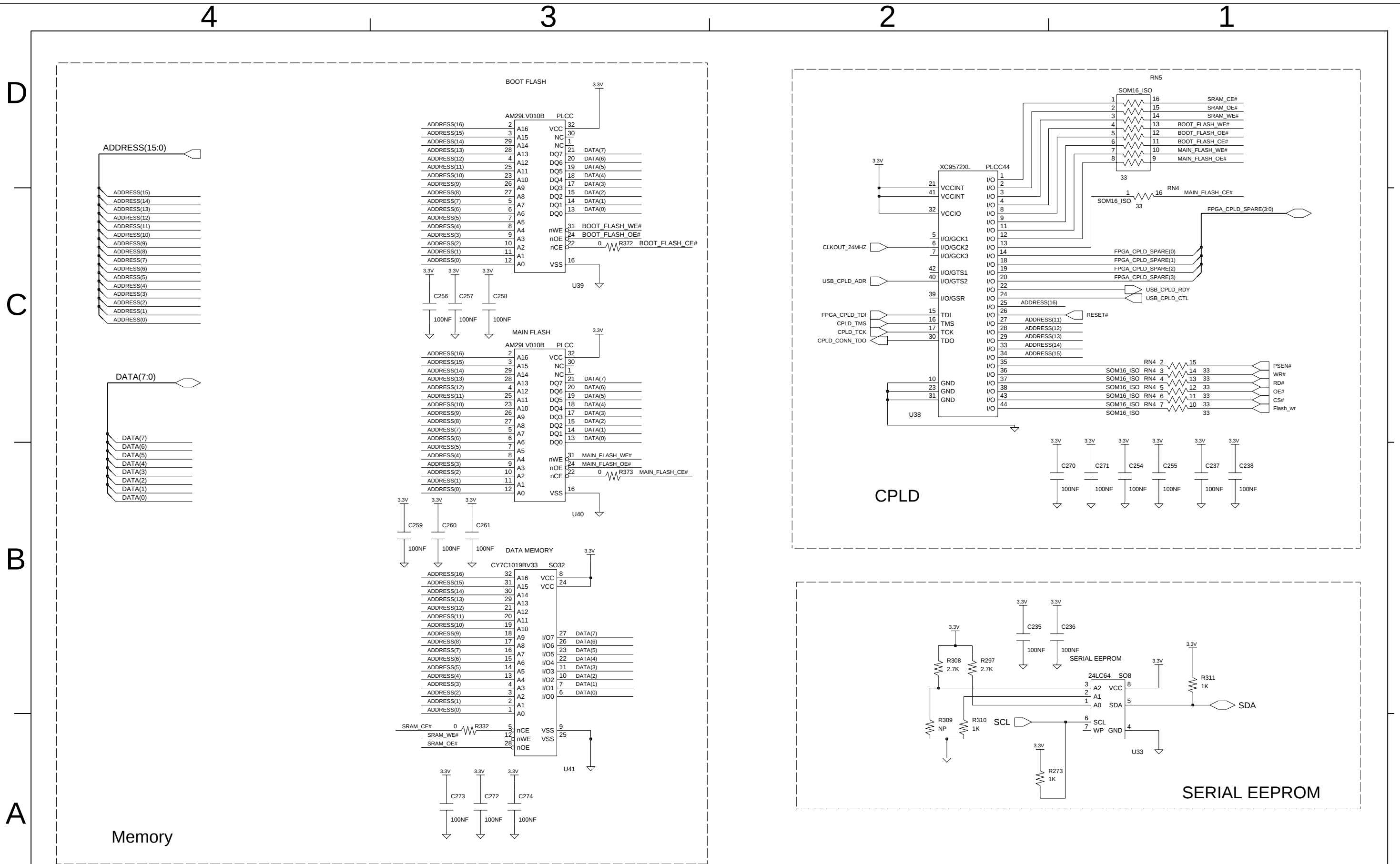
JTAG_TDO
USB_TCK
USB_TMS
CPLD_TMS
CPLD_TCK
USB_TDo
USB_TDI

CLKOUT_24MHZ
CPLD_24MHZ
CLK_24M_DBG

PAGES : 3,4

PHILIPS MEDICAL SYSTEMS TECHNOLOGIES LTD.
P.O.B 325 MATAM HAIFA
ISRAEL 31004

NAME
Block Diagram
DWG. No.
455014501011
SHEET 02 OF 18

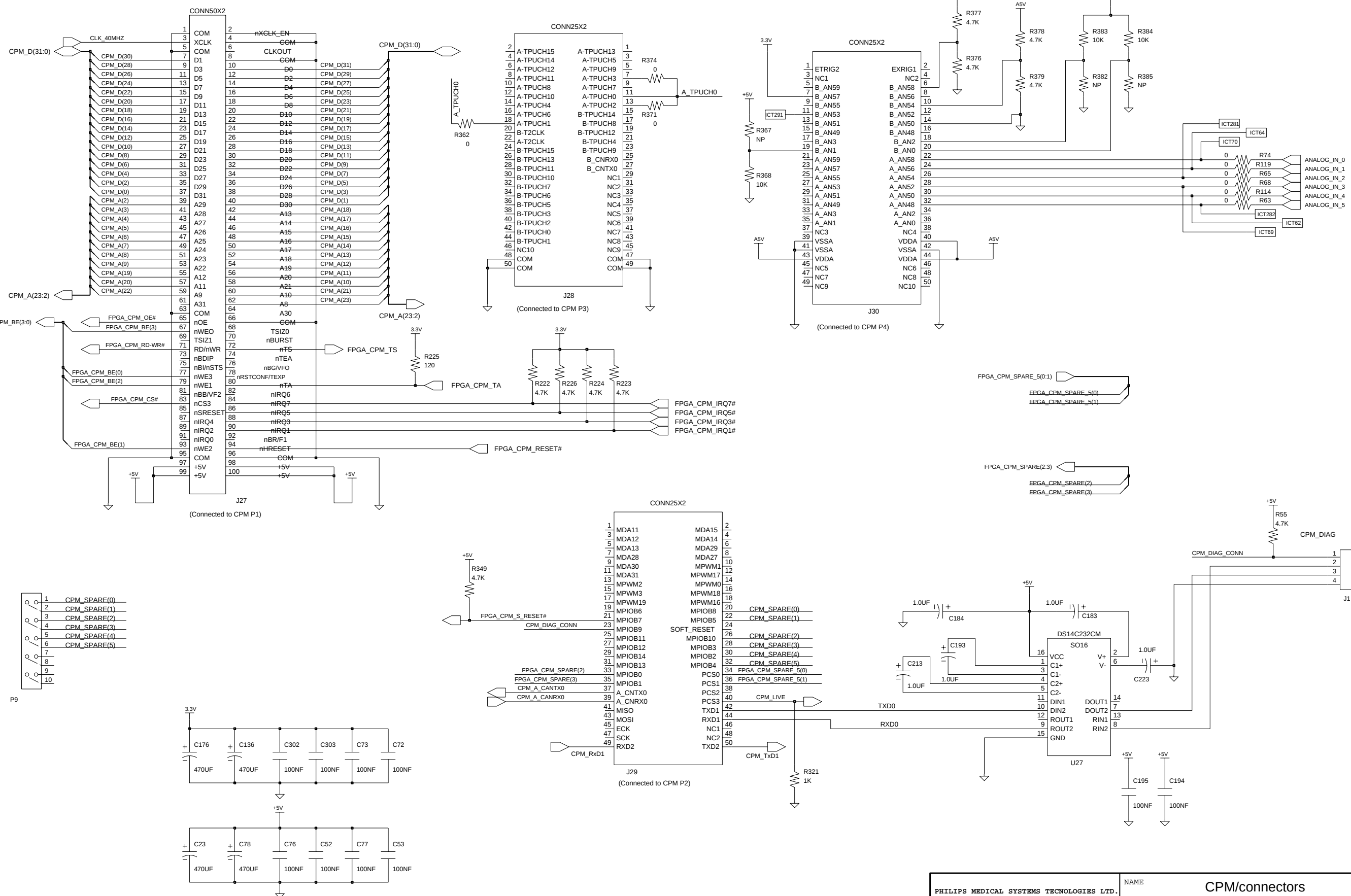


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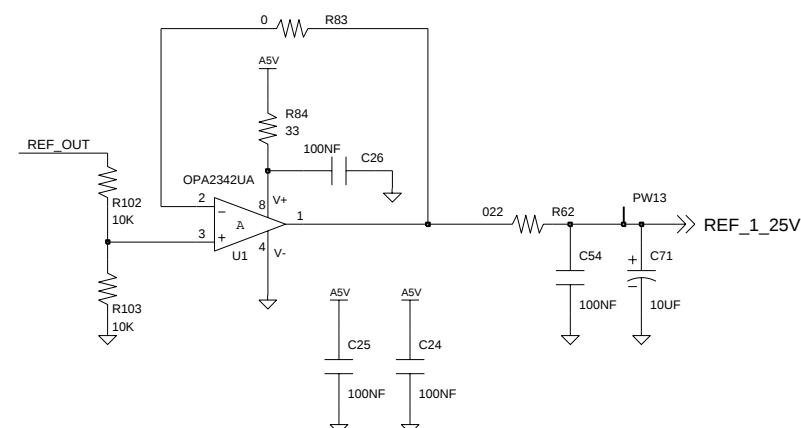
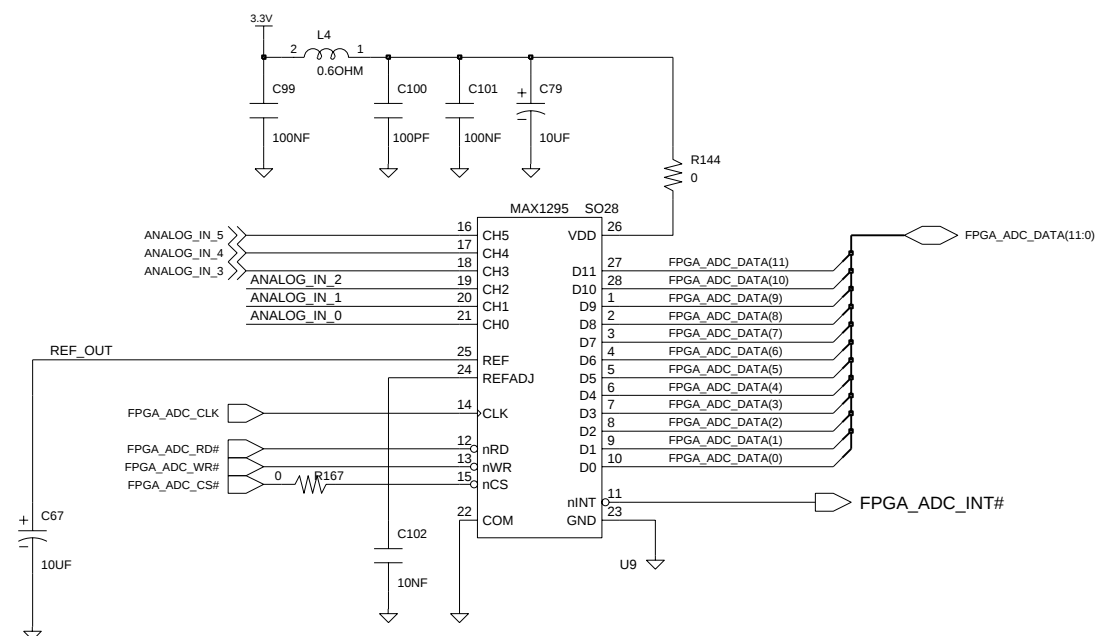
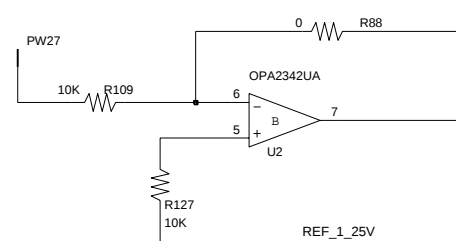
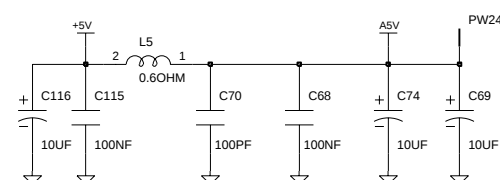
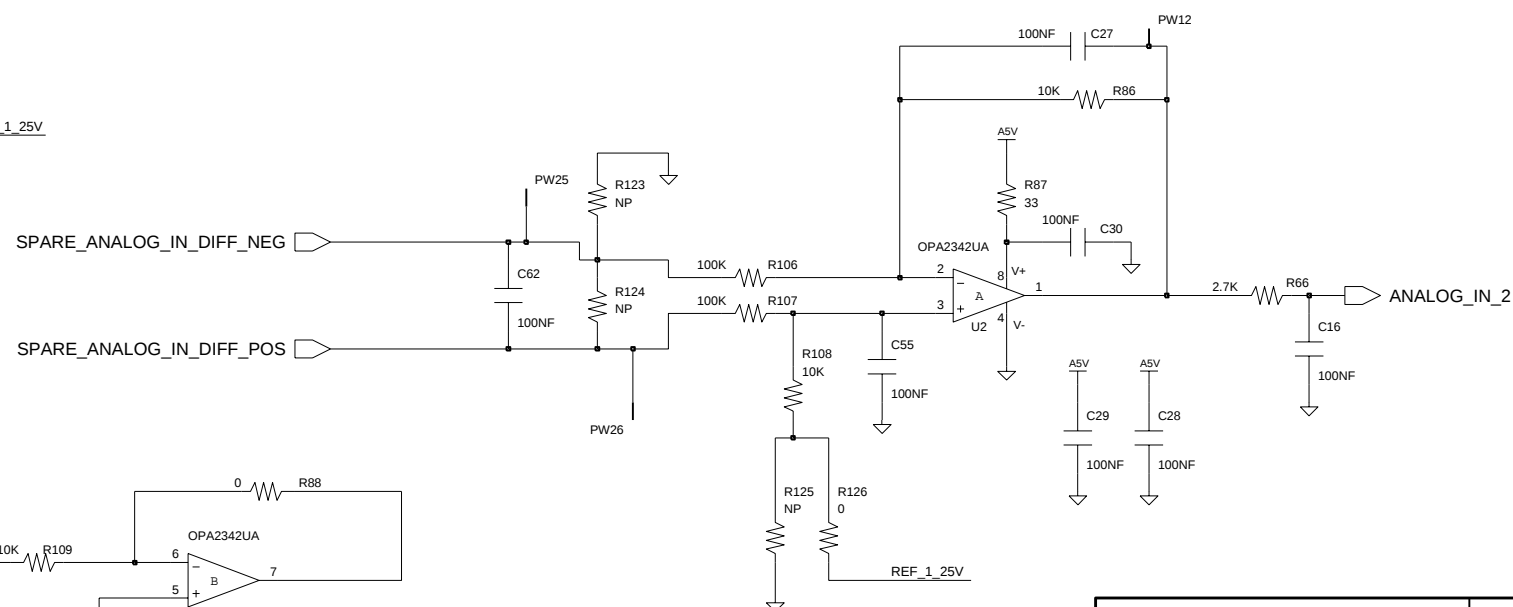
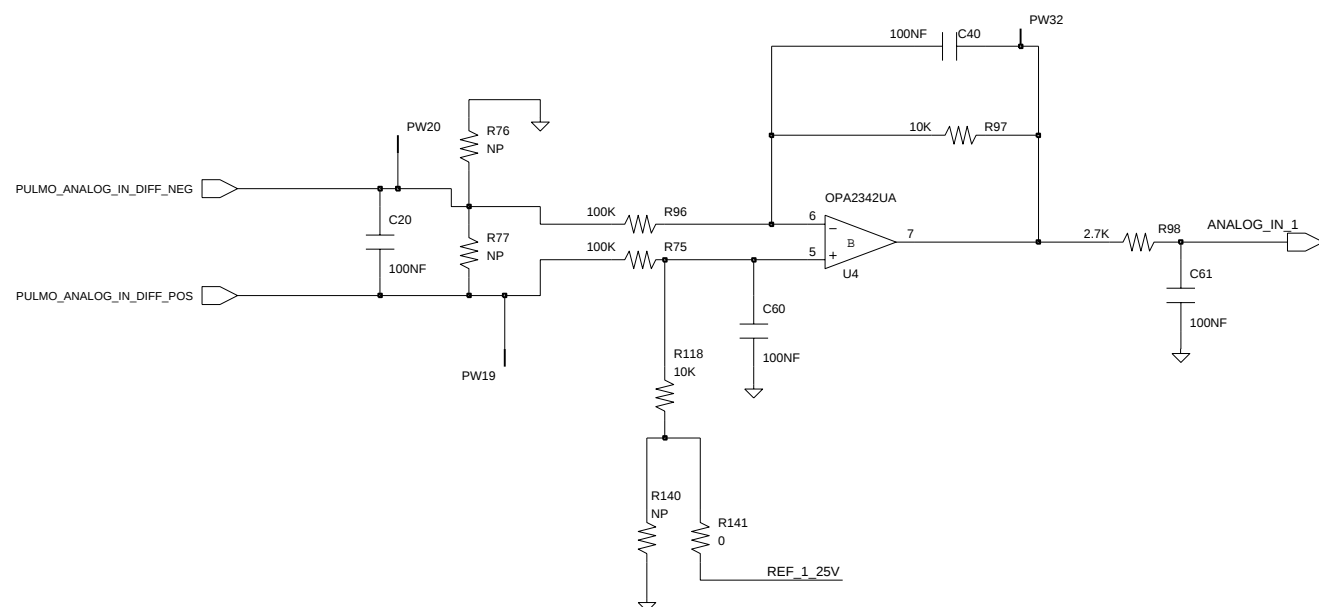
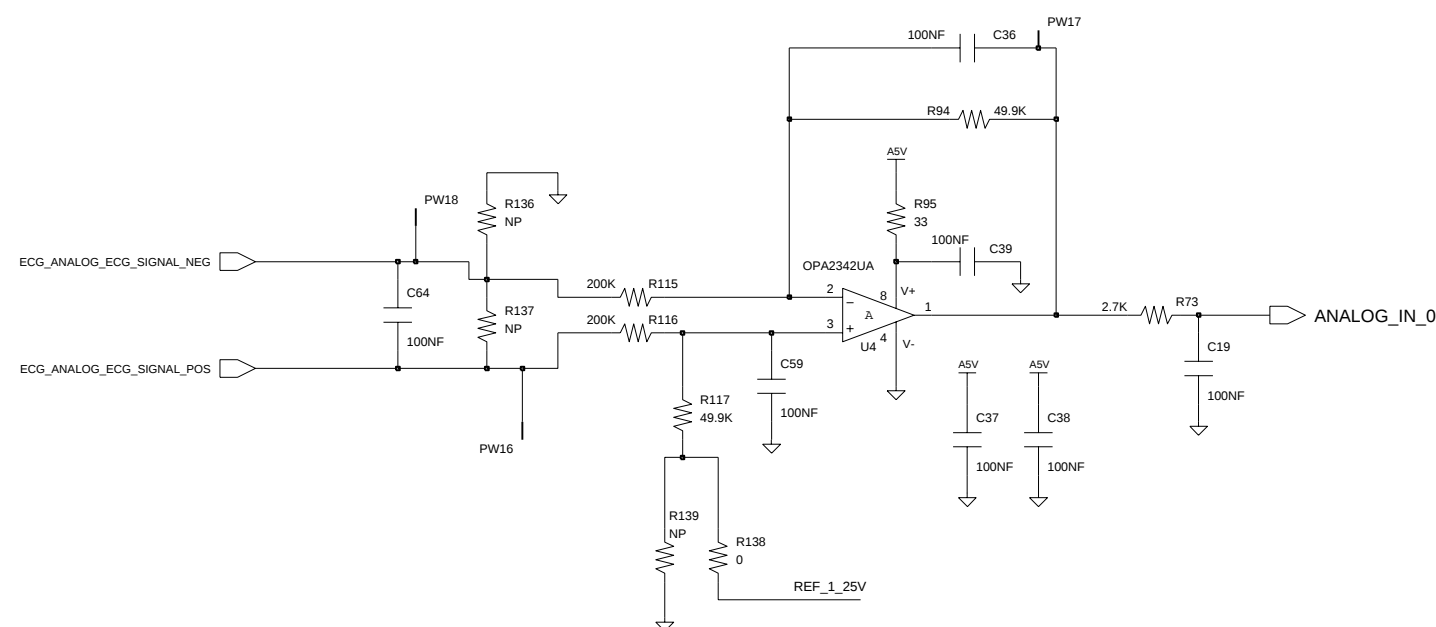


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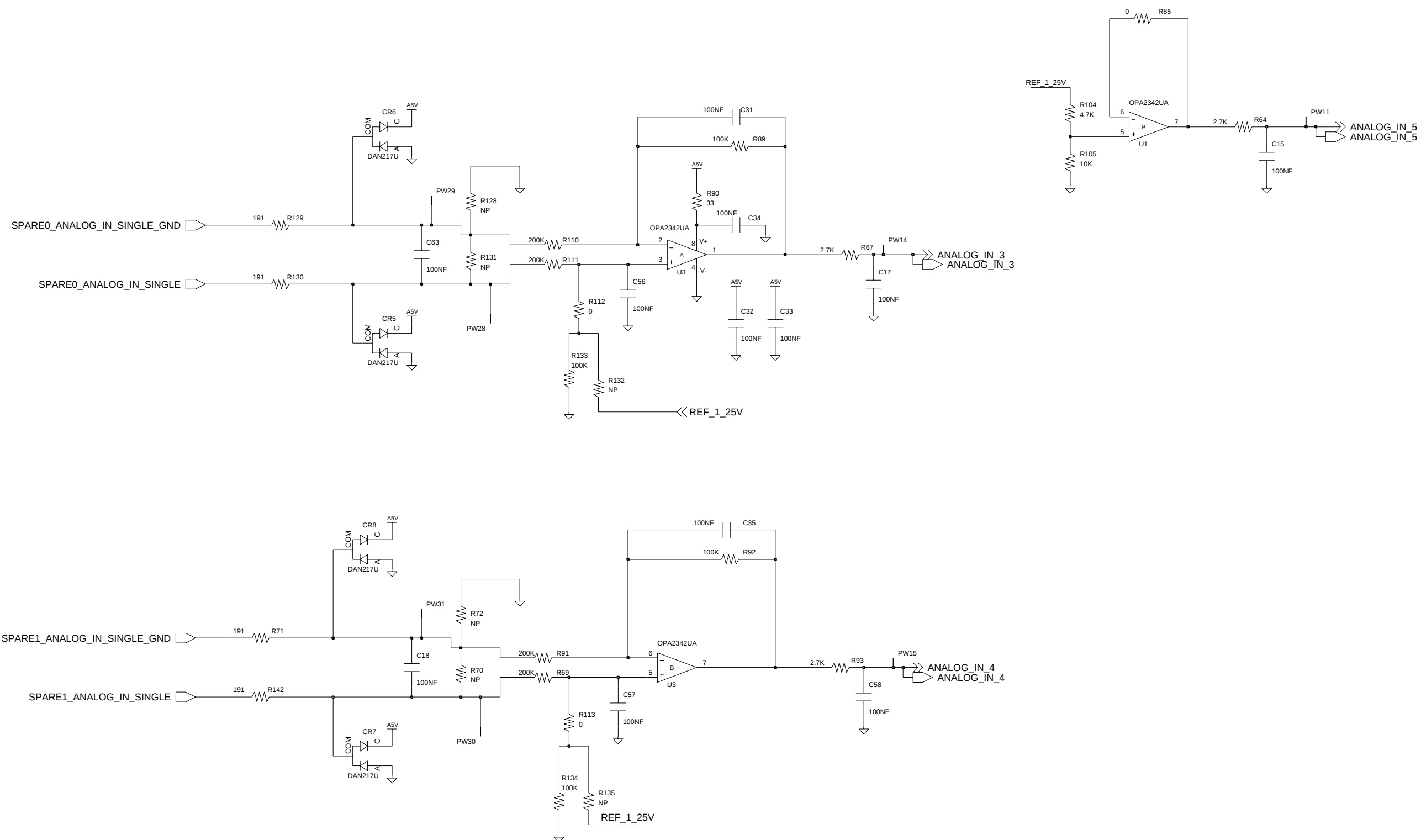
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	DWG. No.	455014501011
	SHEET 06 OF 18	

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PHILIPS MEDICAL SYSTEMS TECHNOLOGIES LTD. P.O.B 325 MATAM HAIFA ISRAEL 31004	NAME	ANALOG/single_analog_drivers
	DWG. No.	455014501011
	SHEET 07 OF 18	

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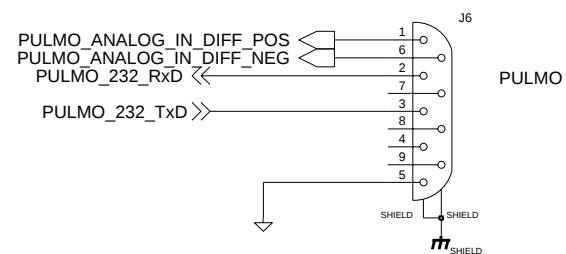
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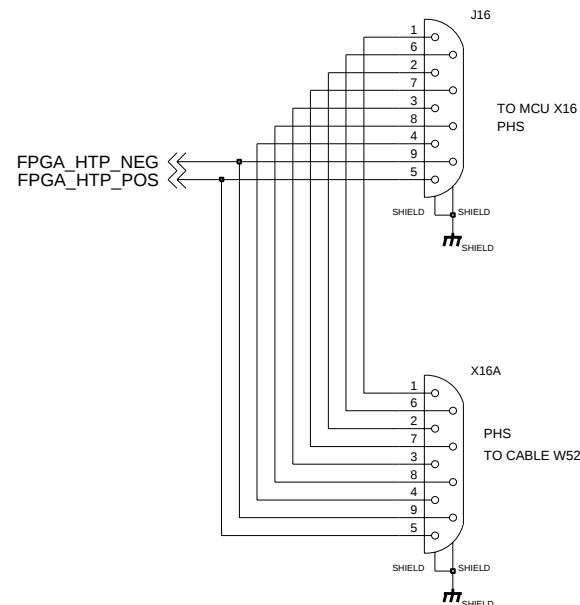
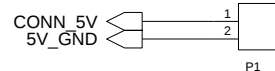
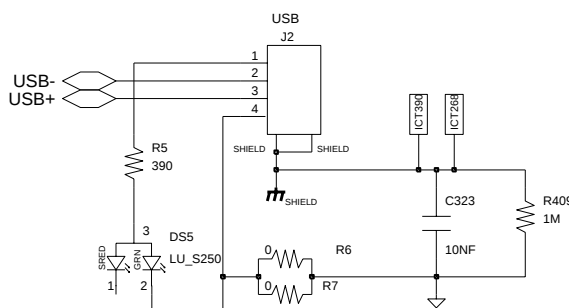
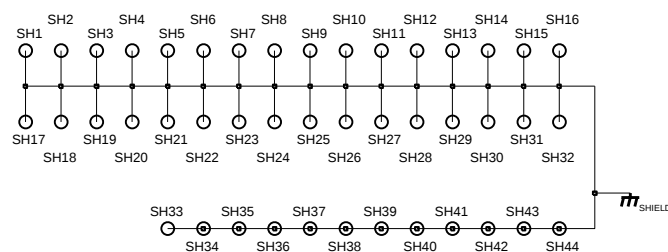
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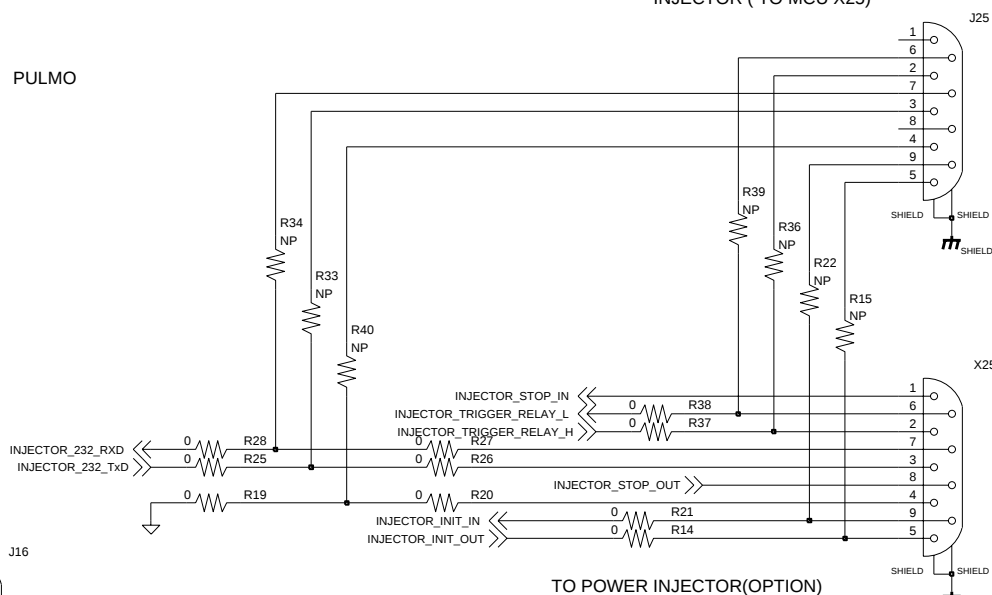


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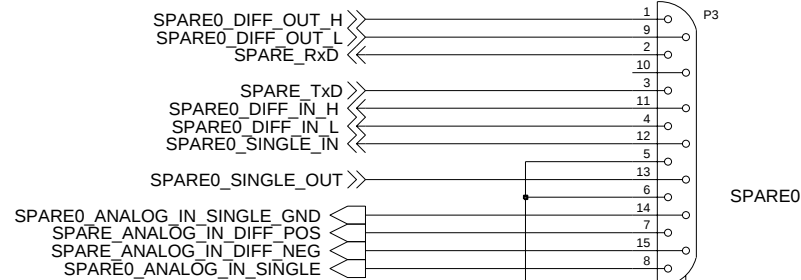
PULMO

TO MCU X16
PHSX16A
PHS
TO CABLE W52

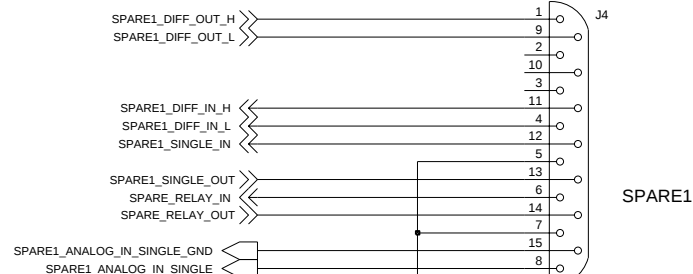
INJECTOR (TO MCU X25)



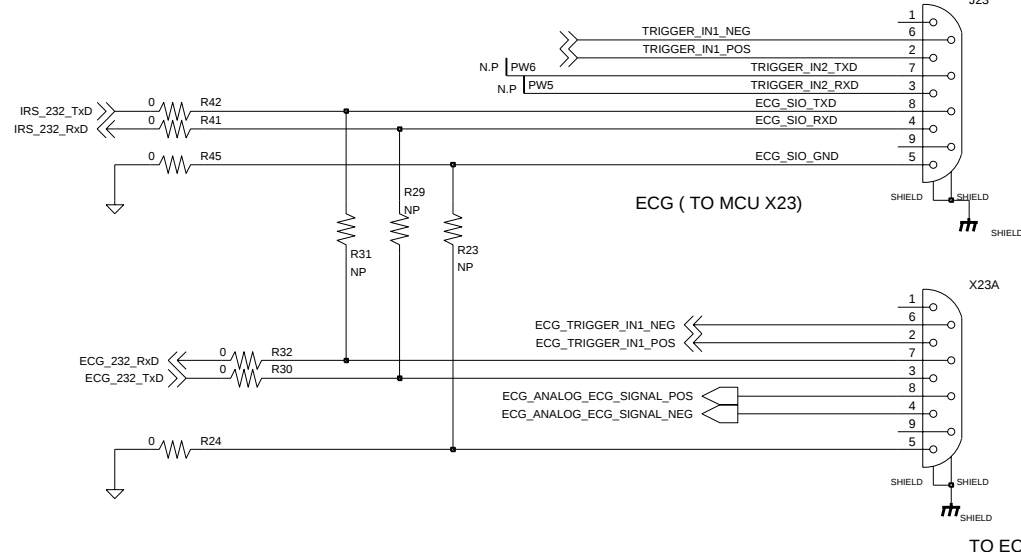
TO POWER INJECTOR(OPTION)



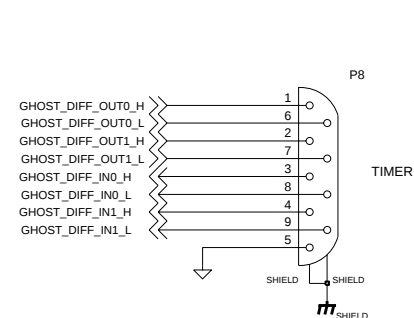
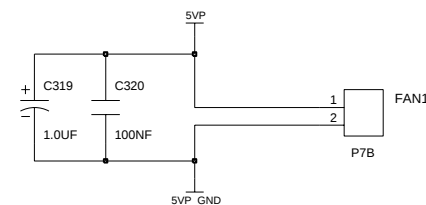
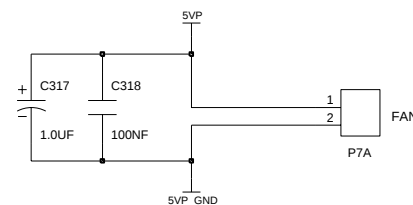
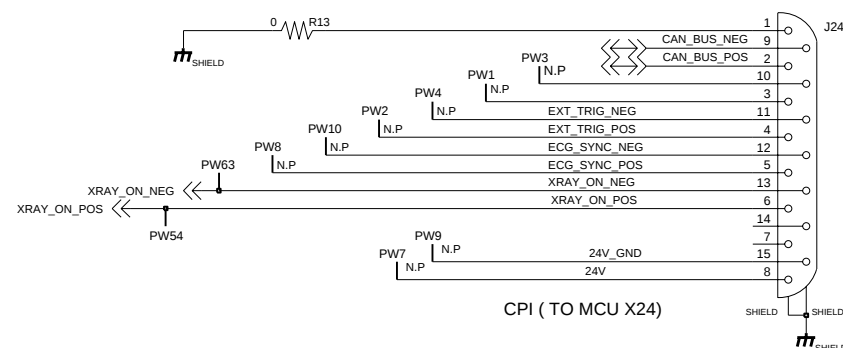
SPARE0



SPARE1



TO ECG MONITOR



PHILIPS MEDICAL SYSTEMS TECHNOLOGIES LTD. P.O.B 325 MATAM HAIFA ISRAEL 31004	NAME CONNECTORS/Connectors DWG. No. 455014501011 SHEET 08 OF 18
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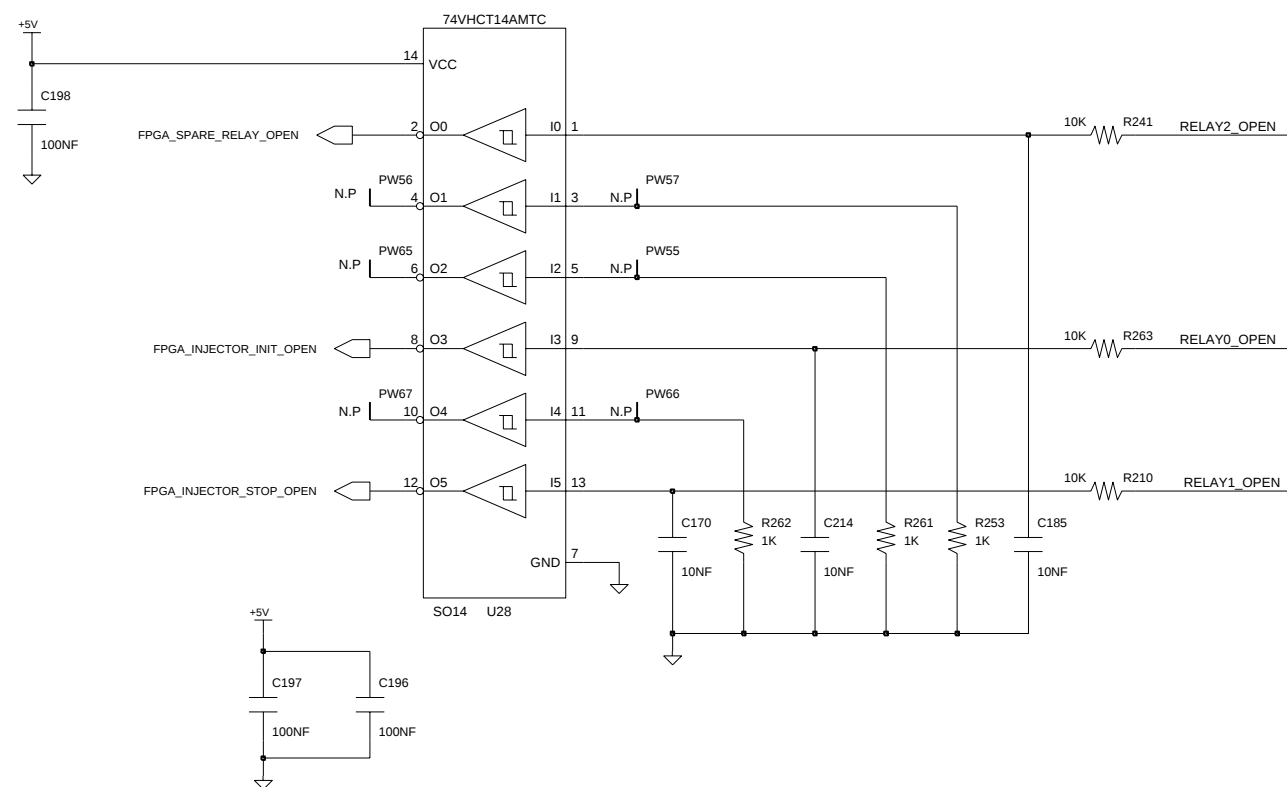
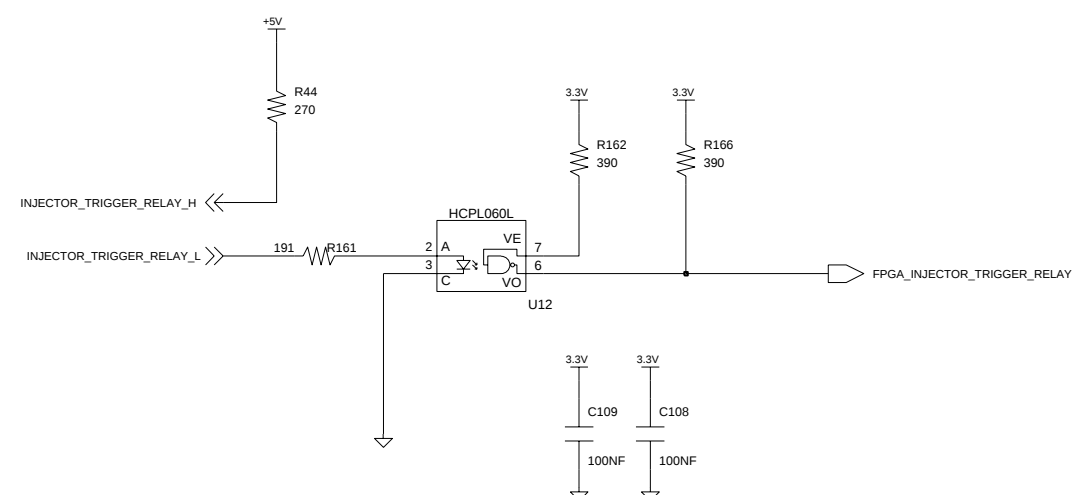
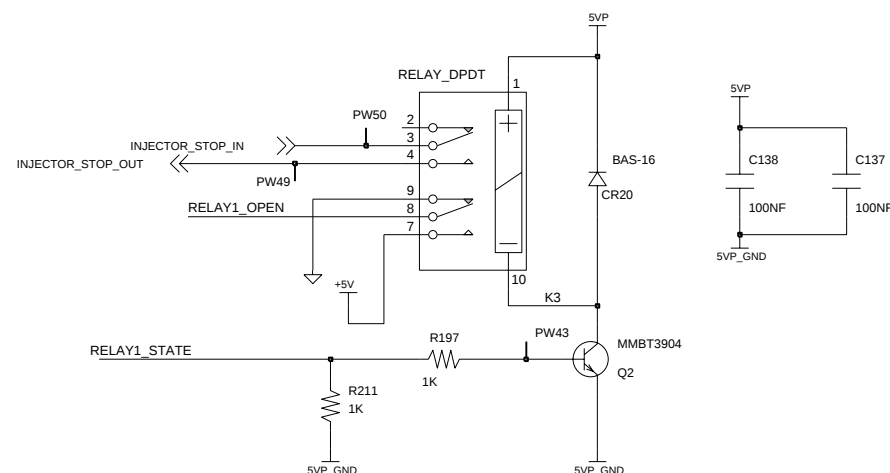
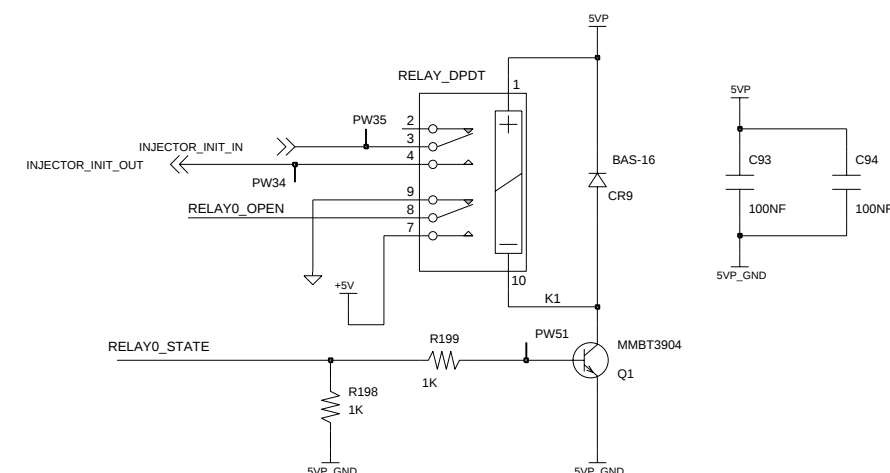
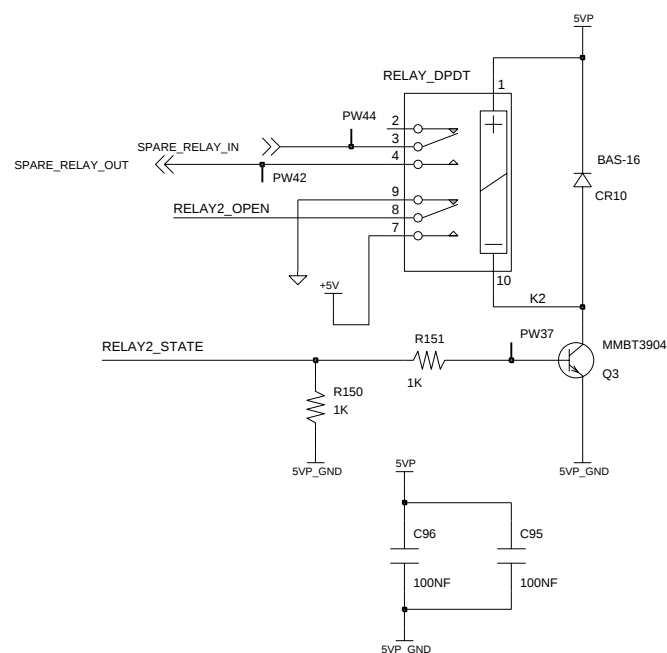
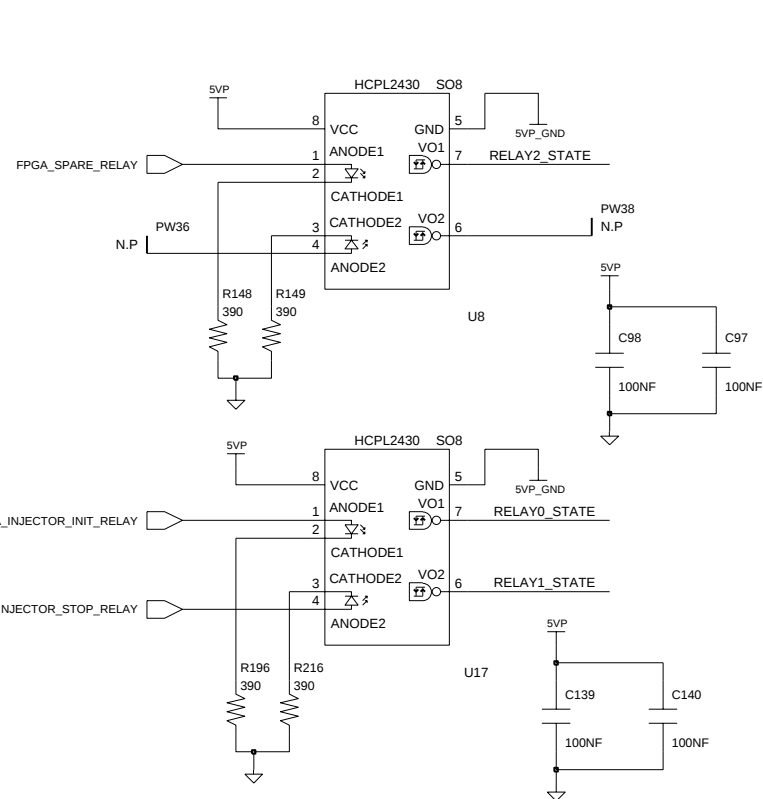
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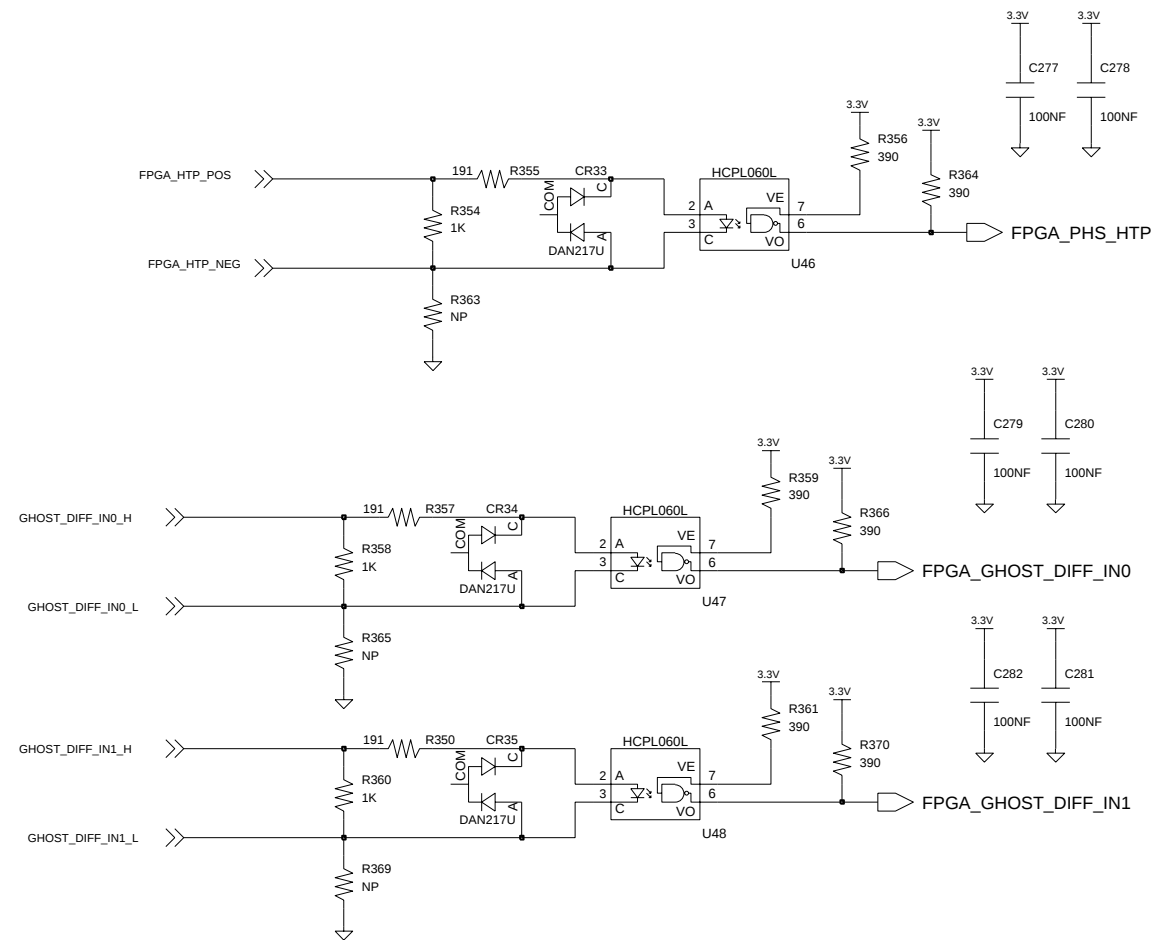
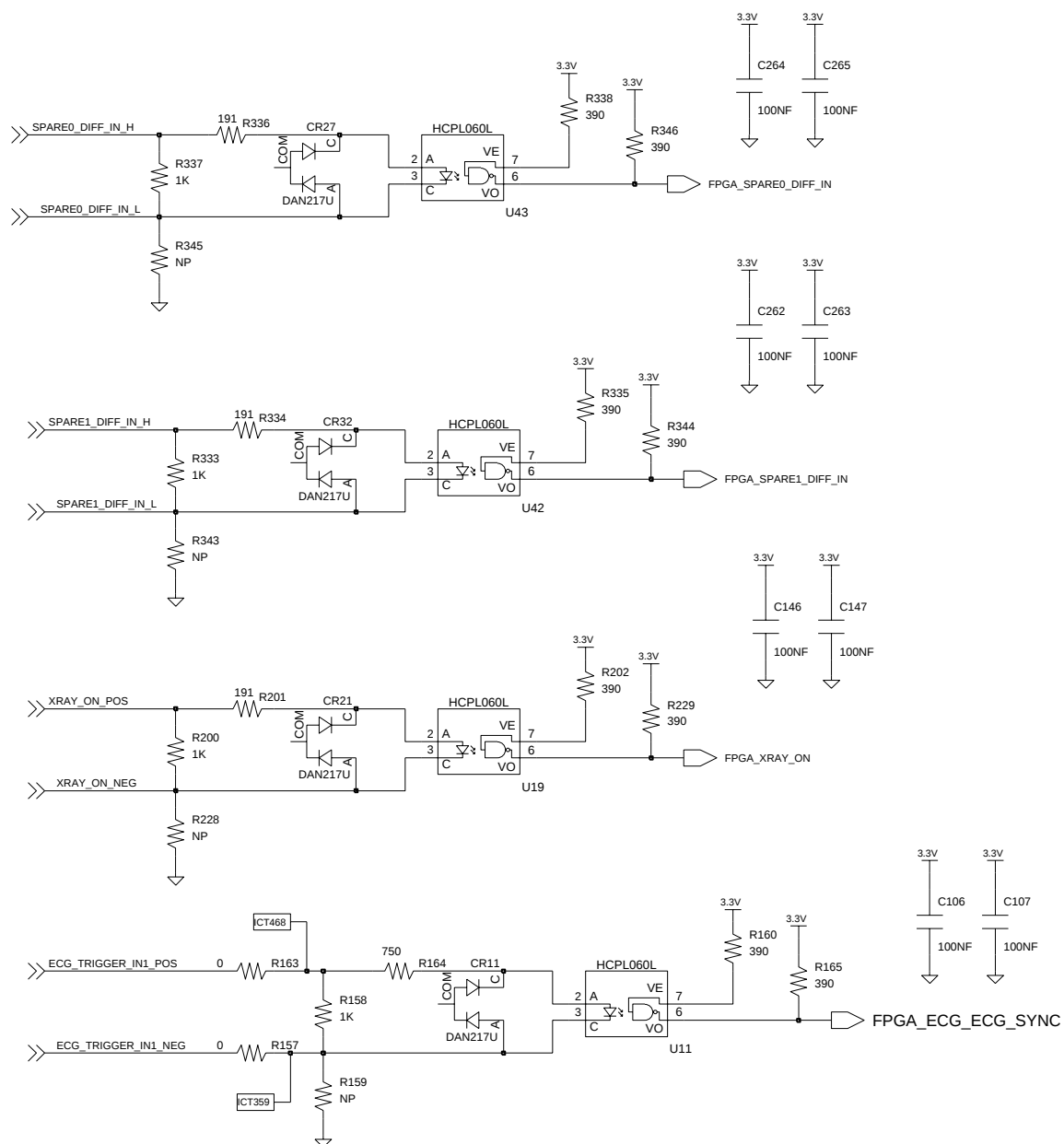
PHILIPS MEDICAL SYSTEMS TECHNOLOGIES LTD. P.O.B 325 MATAM HAIFA ISRAEL 31004	NAME	CONNECTORS/drivers_2
	DWG. No.	455014501011
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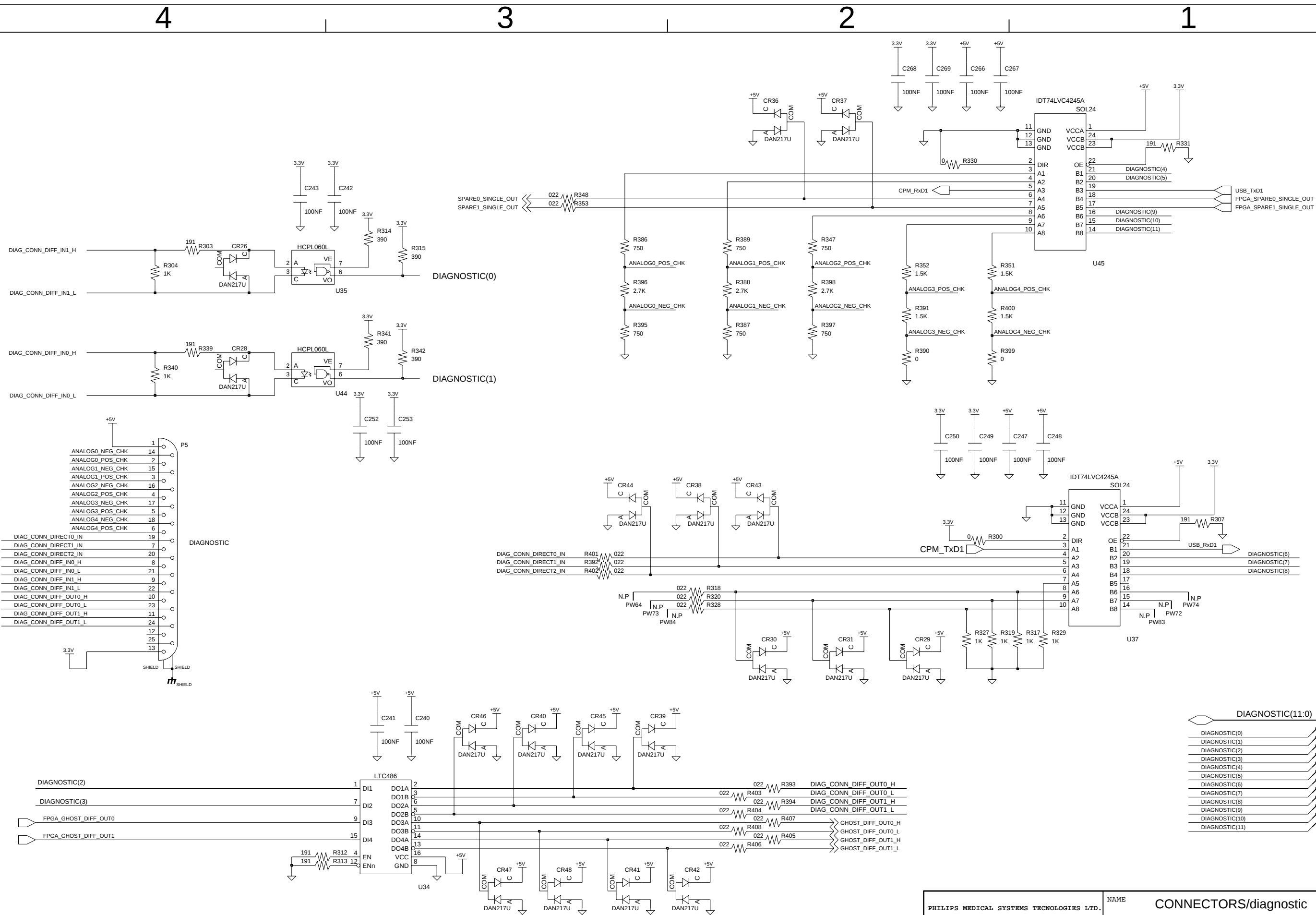
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	DWG. No.	455014501011
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PHILIPS MEDICAL SYSTEMS TECHNOLOGIES LTD. P.O.B 325 MATAM HAIFA ISRAEL 31004	NAME	CONNECTORS/diagnostic
	DWG. No.	455014501011
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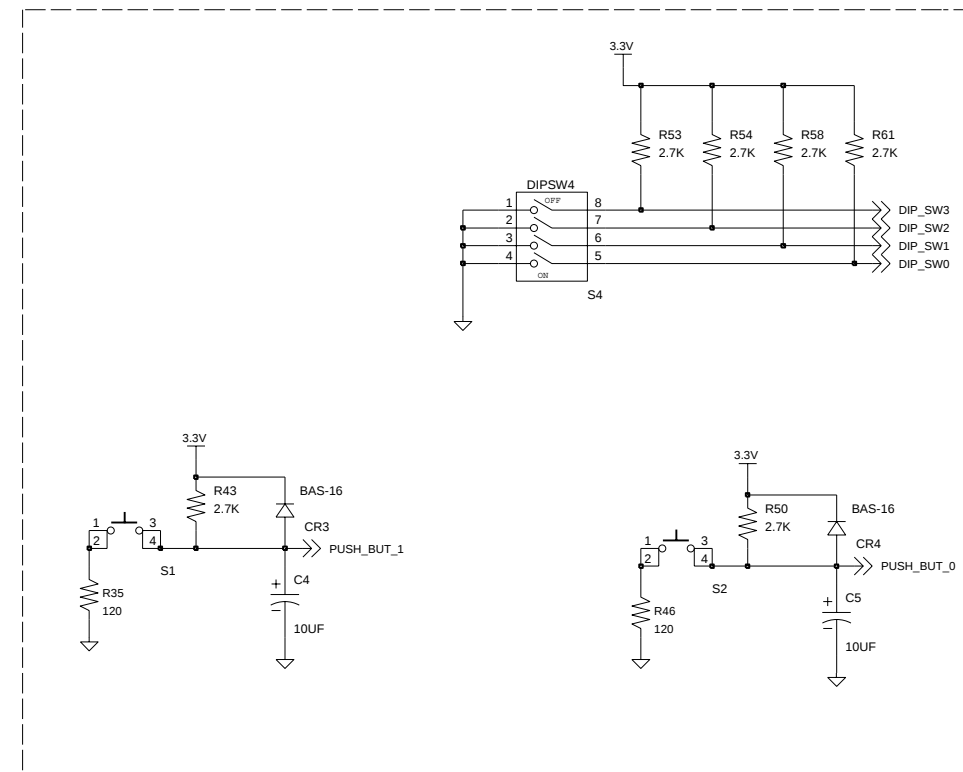
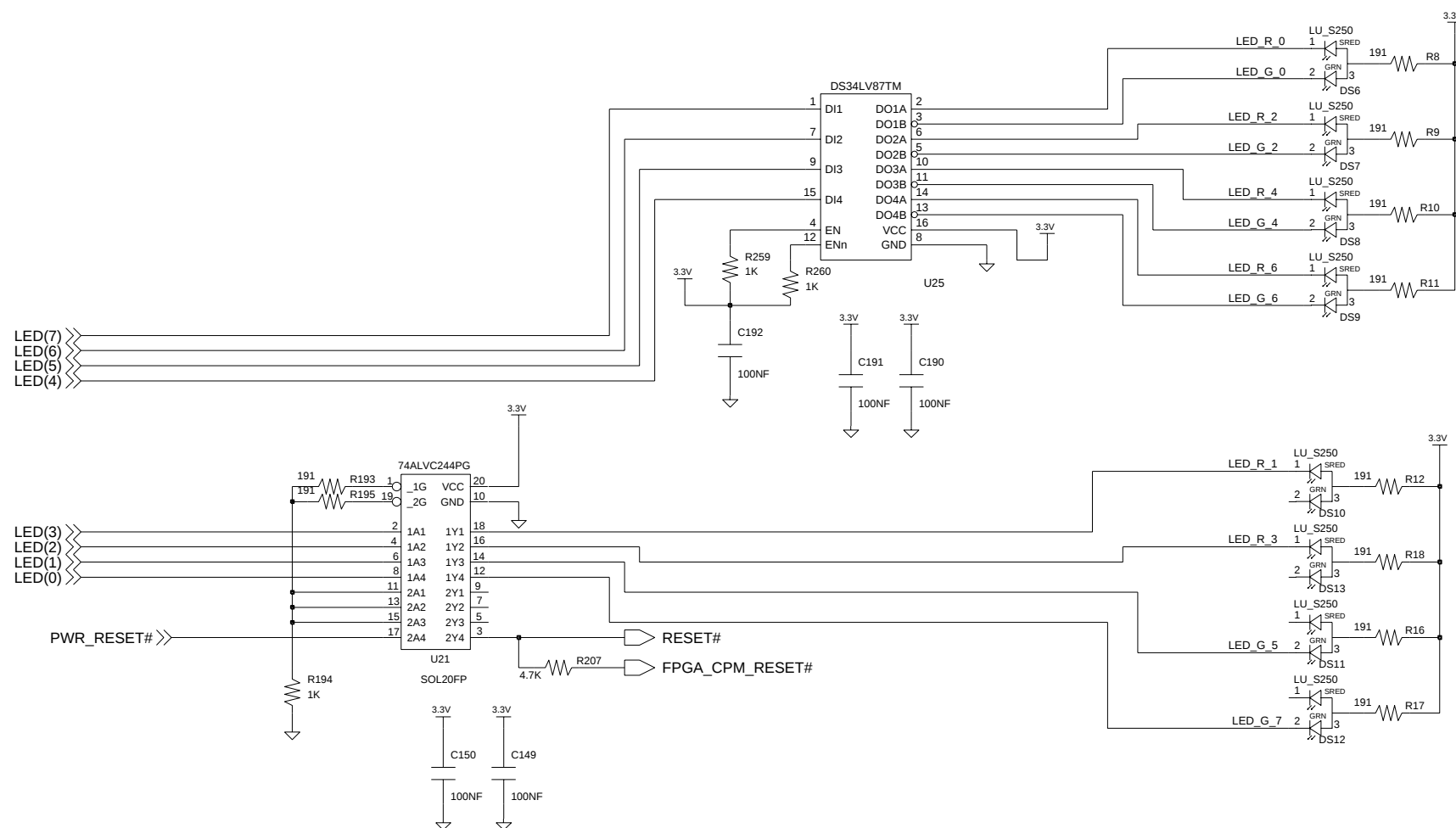
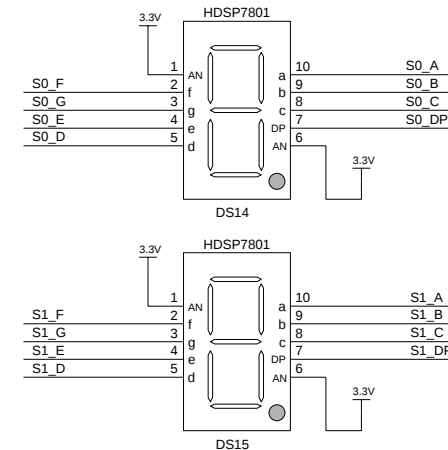
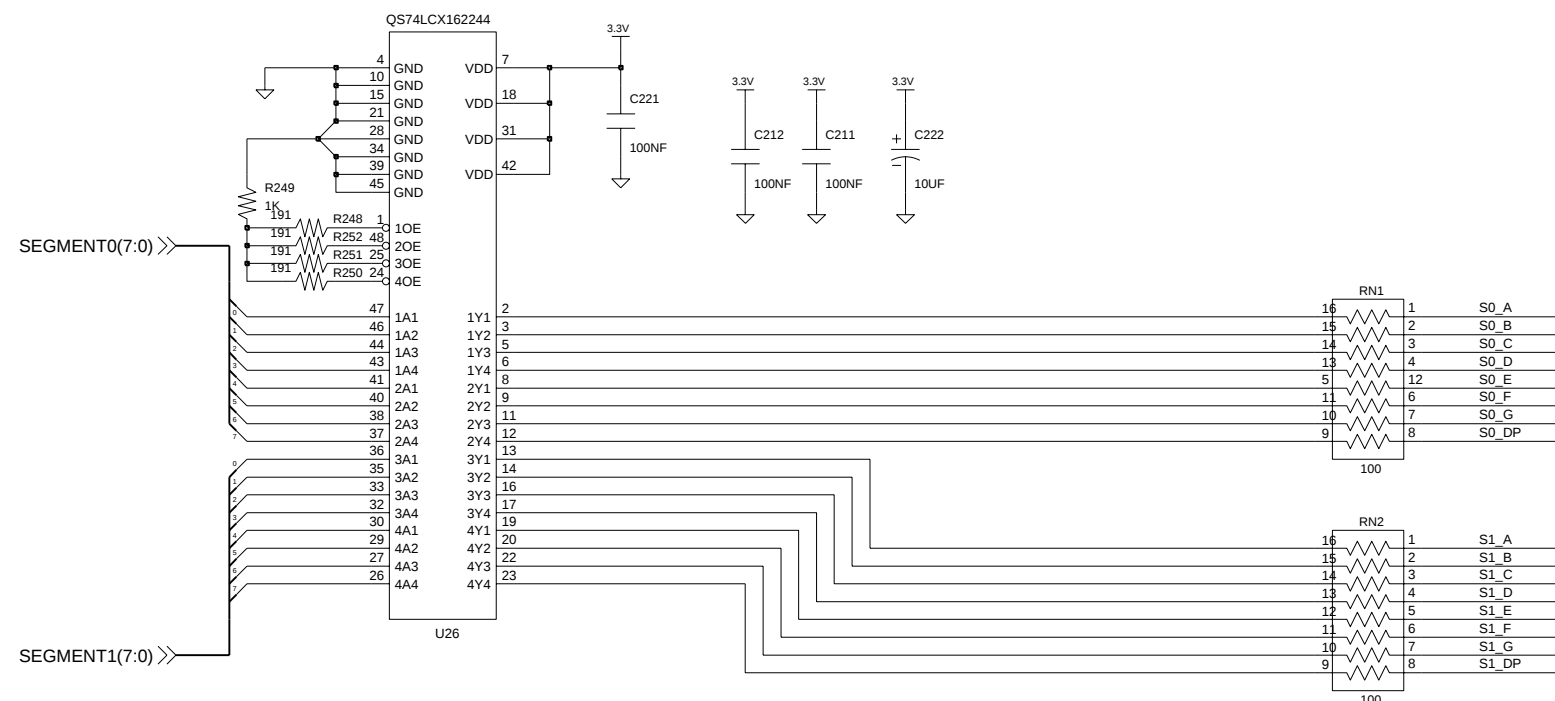
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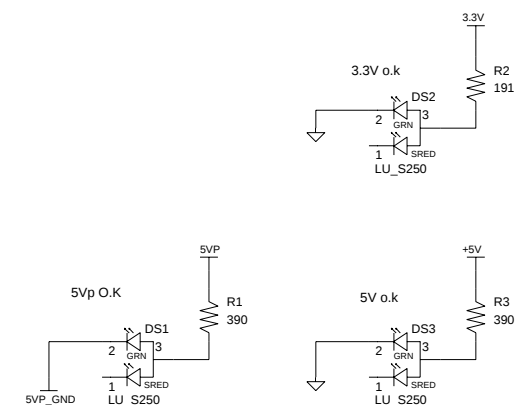
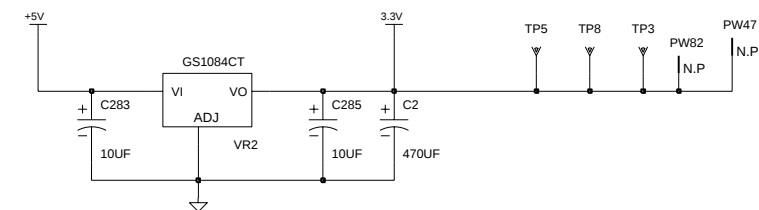
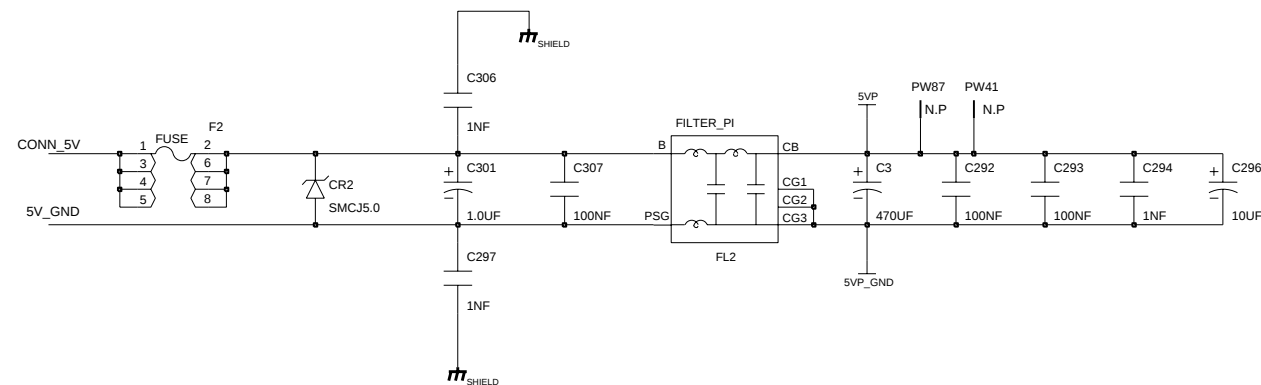
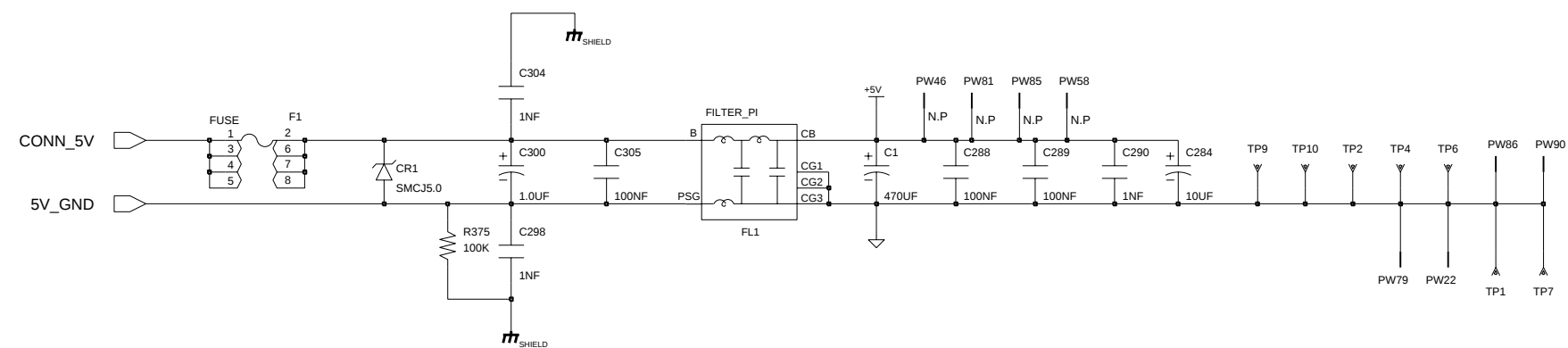
PHILIPS MEDICAL SYSTEMS TECHNOLOGIES LTD. P.O.B 325 MATAM HAIFA ISRAEL 31004	NAME	FPGA/leds_&_7Seg
	DWG. No.	455014501011
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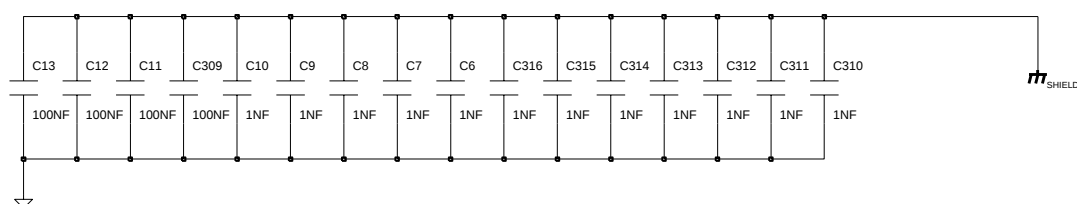


PWR SUPPLY

+5V FOR USE IN ALL DIGITAL CIRCUIT

5VP FOR USE IN FANS AND RELAYS

A5V FOR USE IN ANALOG CIRCUITS



PHILIPS MEDICAL SYSTEMS TECHNOLOGIES LTD. P.O.B 325 MATAM HAIFA ISRAEL 31004	NAME	PWR_JTAG_&_CLK/pwr_supply
	DWG. No.	455014501011
	SHEET	17 OF 18

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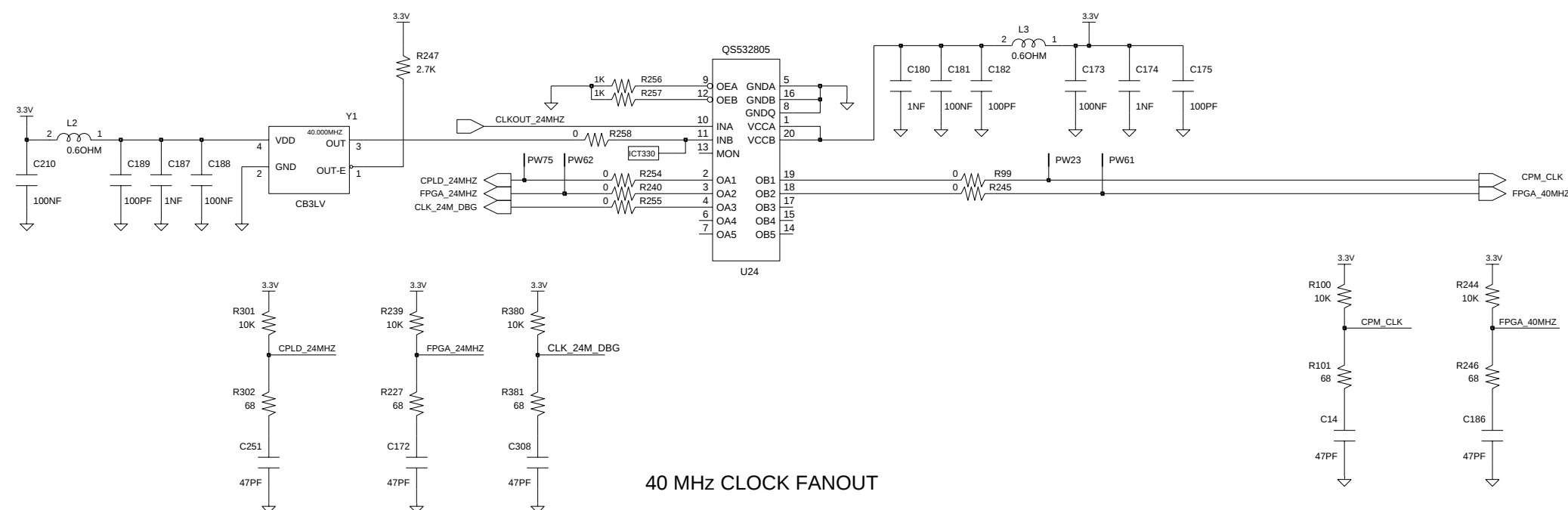
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Clock



JTAG

