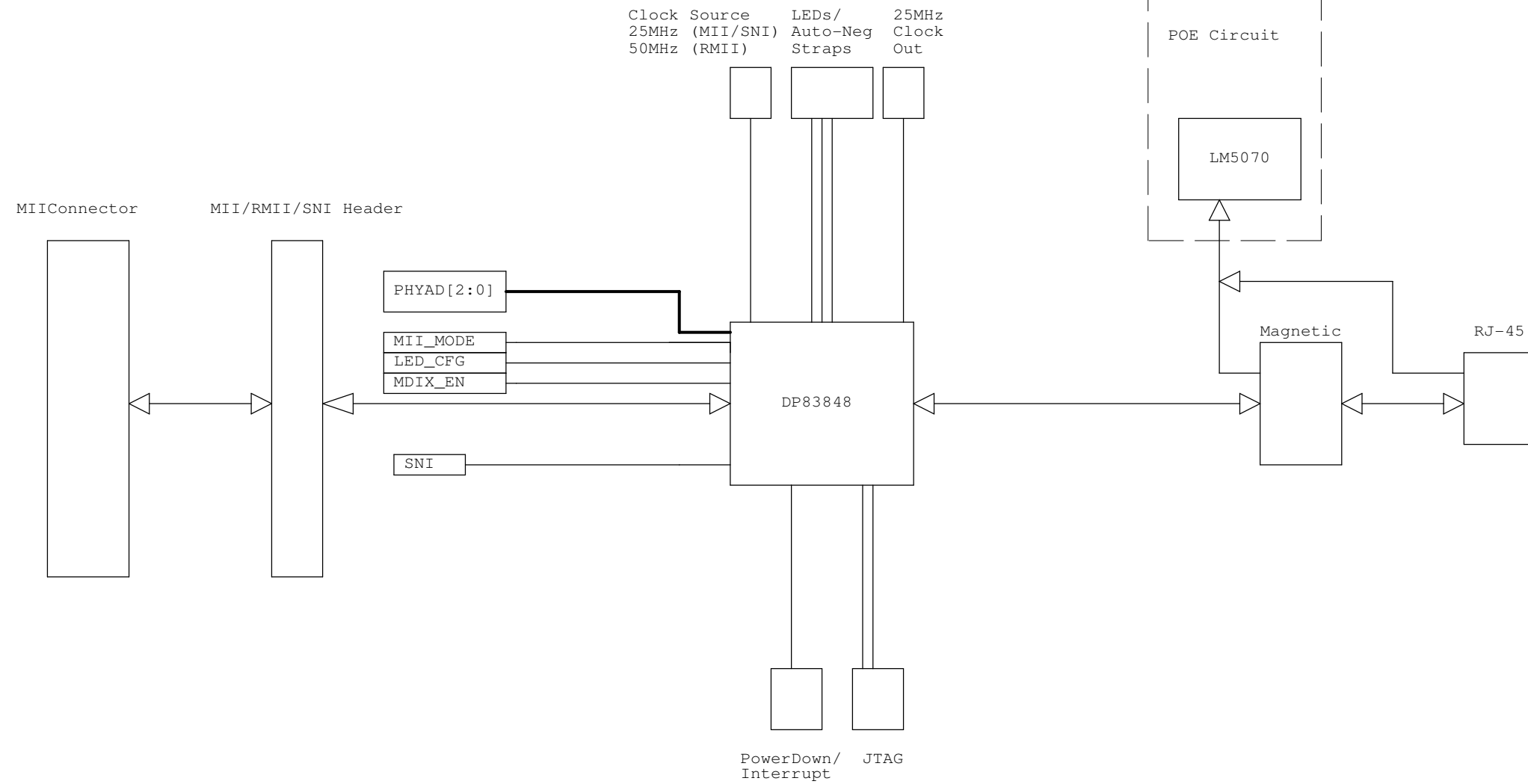


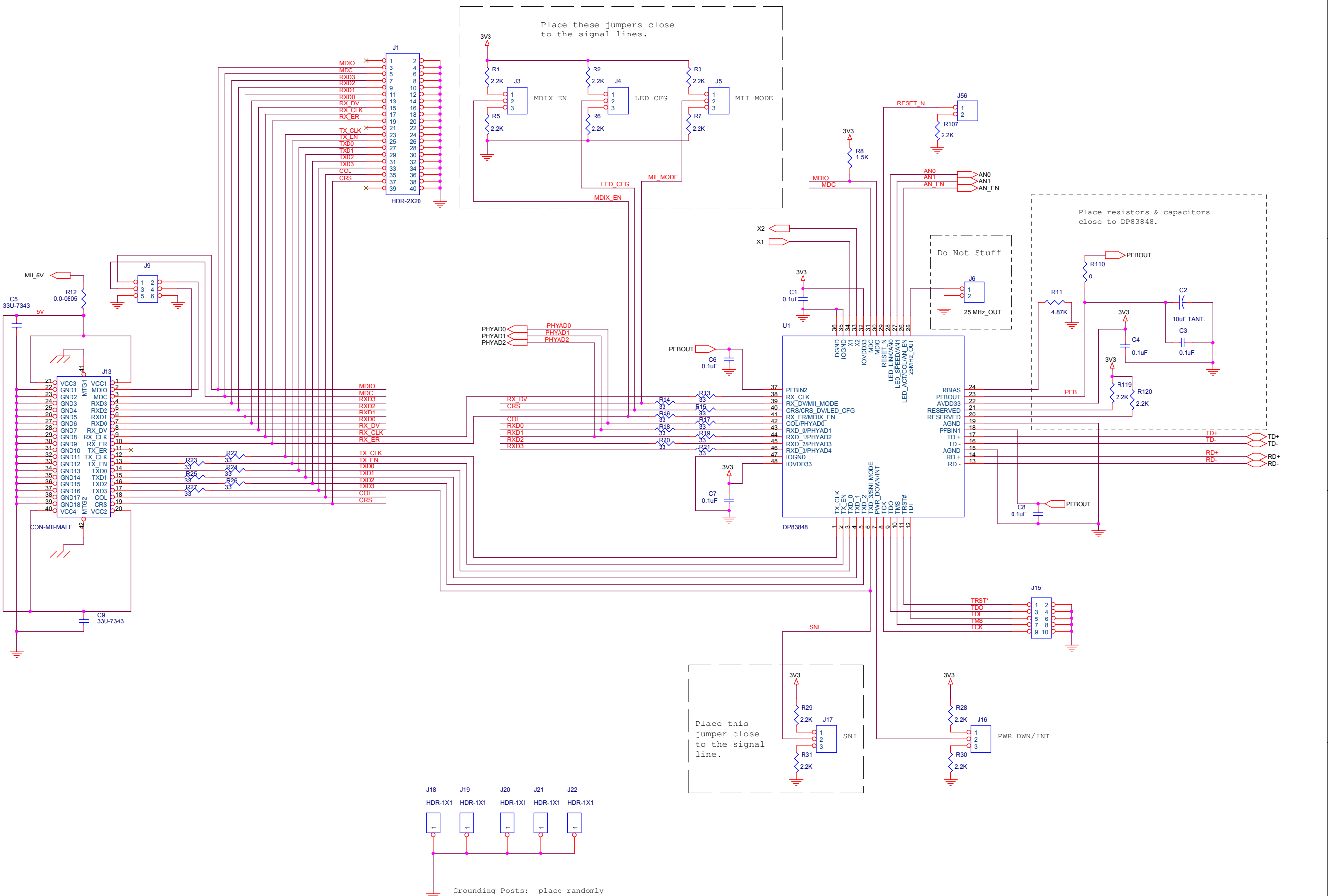
These schematics are provided for reference only. For any designs based on these schematics always contact National Semiconductor Corporation BEFORE initiating PCB manufacturing and ask for your design to be reviewed. Copyright (c) 2005 National Semiconductor Corporation. All Rights Reserved. Unpublished rights reserved under the copyright laws of the United States of America, other countries and international treaties. These schematics are provided without fee. Permission to use, copy, store, modify, disclose, transmit or distribute the schematics is granted, provided that this copyright notice must appear in any copy, modification, disclosure, transmission or distribution of the schematics. National Semiconductor Corporation retains all ownership, copyright, trade secret and proprietary rights in the schematics. THESE SCHEMATICS HAVE BEEN PROVIDED "AS IS", WITHOUT EXPRESS OR IMPLIED WARRANTY INCLUDING, WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR USE AND NON-INFRINGEMENT.

Release note:

- Revision B is to provide actual implementation on how to improve EMI beyond revision A2. This is to be used for information purpose only. No board has been fabricated.



Title		
DP83848 AspenPhy Demo II - Cover		
Size	Document Number	Rev
C	870012505-100	B
Date:	Thursday, August 11, 2005	Sheet 1 of 5



Place these jumpers close to the signal lines.

Place resistors & capacitors close to DP83848.

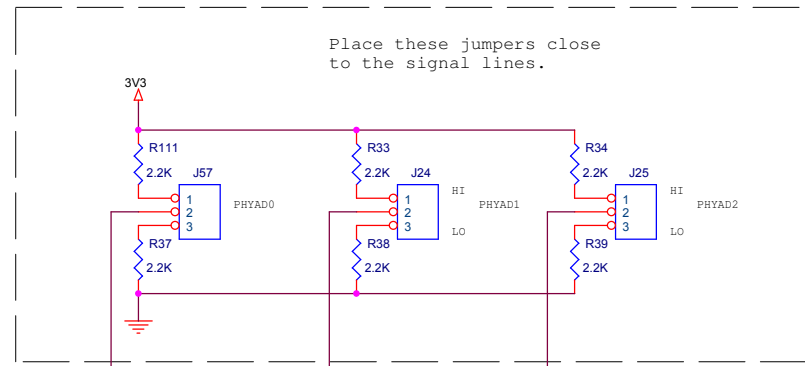
Do Not Stuff

Place this jumper close to the signal line.

J18 J19 J20 J21 J22
 HDR-1X1 HDR-1X1 HDR-1X1 HDR-1X1 HDR-1X1

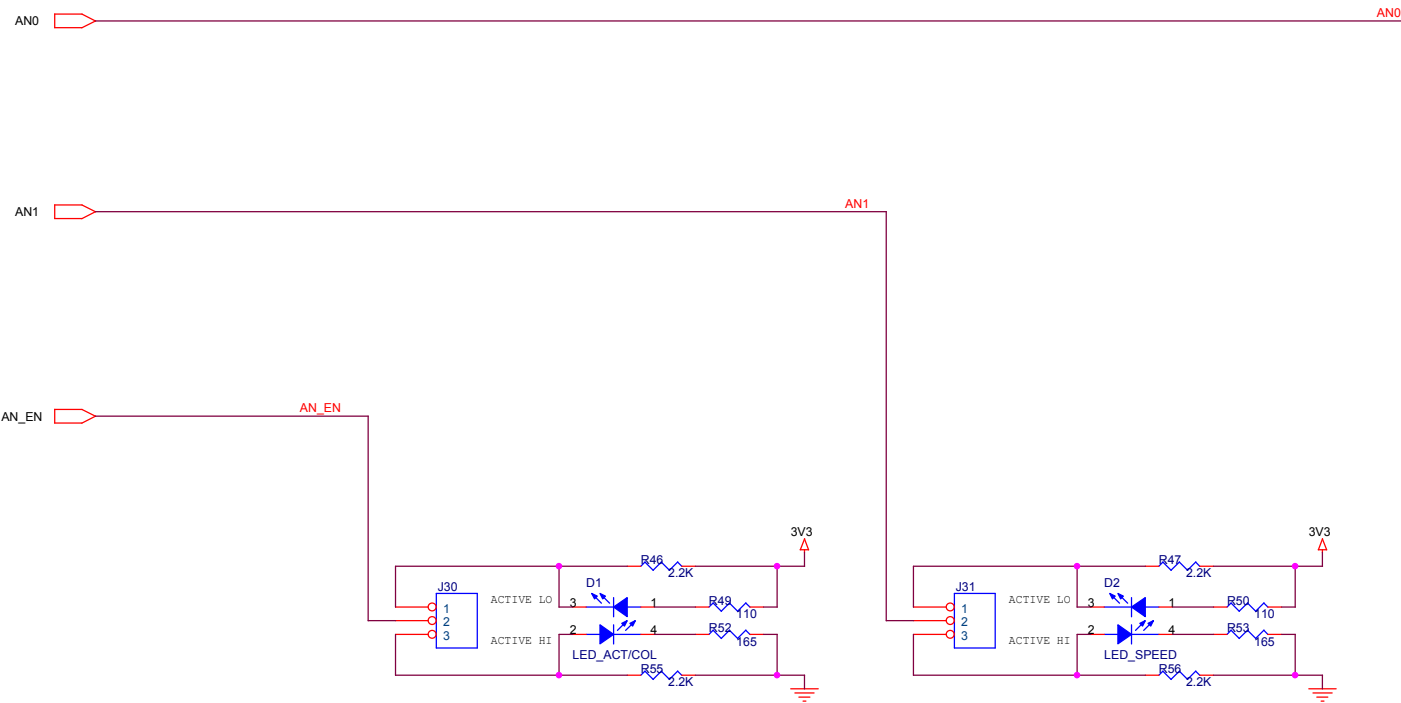
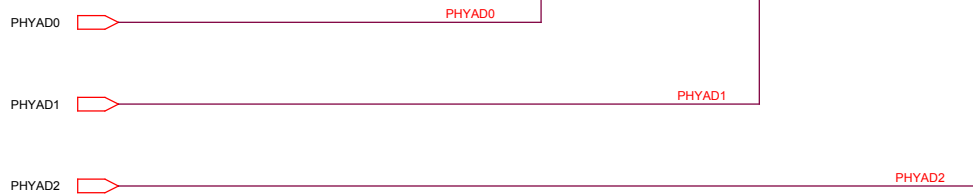
Grounding Posts: place randomly around board

Title		DP83848 AspenPhy Demo II - Ethernet Phy Page	
Size	C	Document Number	870012505-100
Date:	Thursday, August 11, 2005	Sheet	2 of 5
		Rev	B



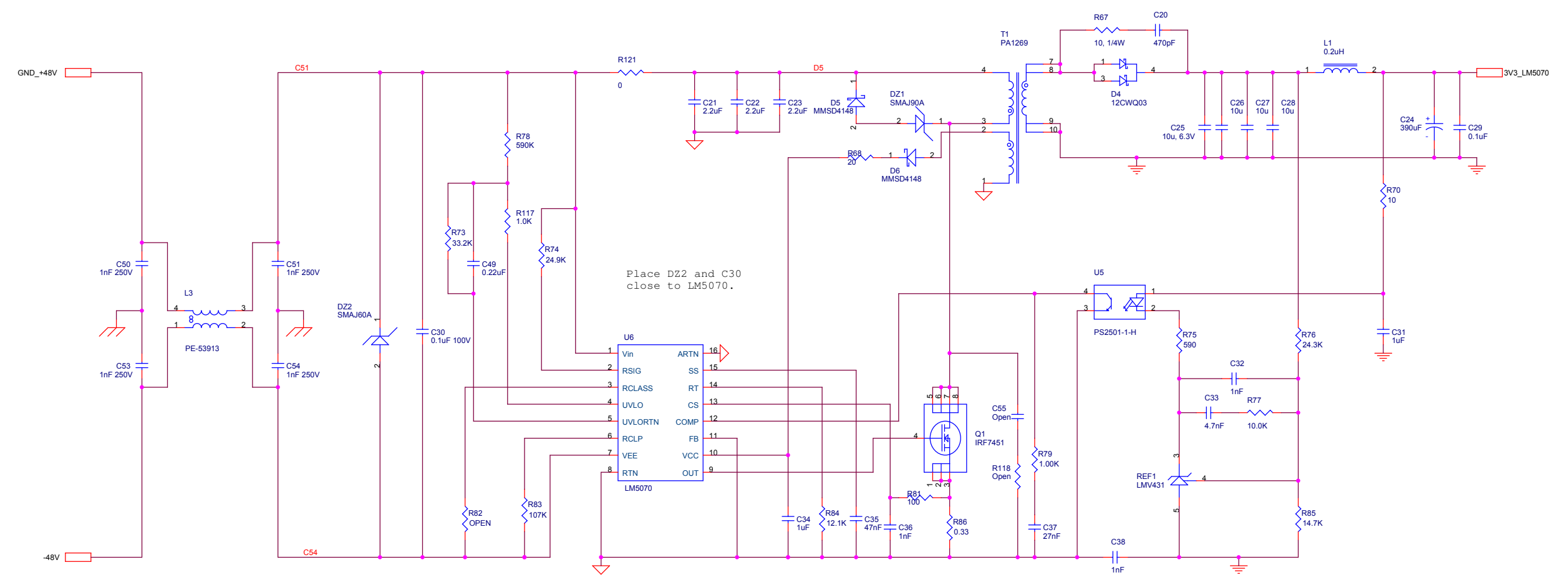
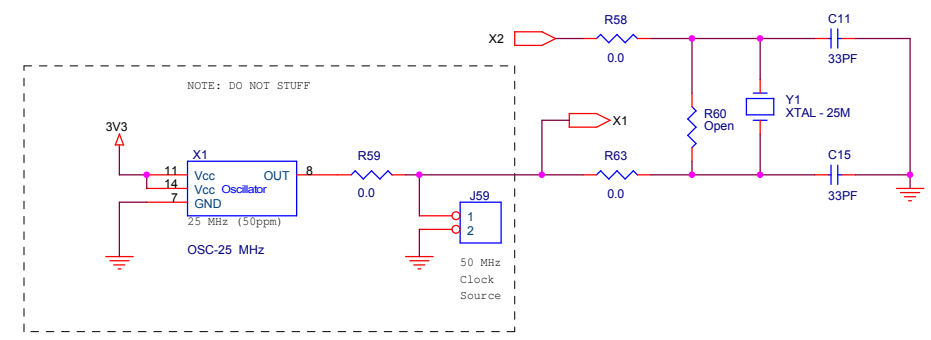
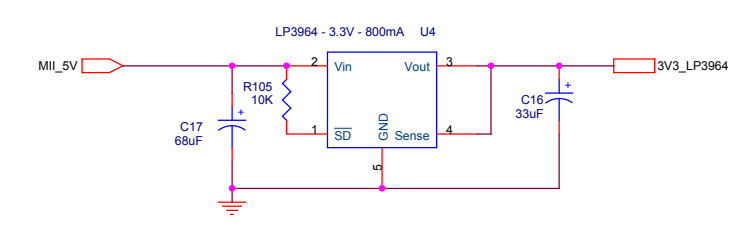
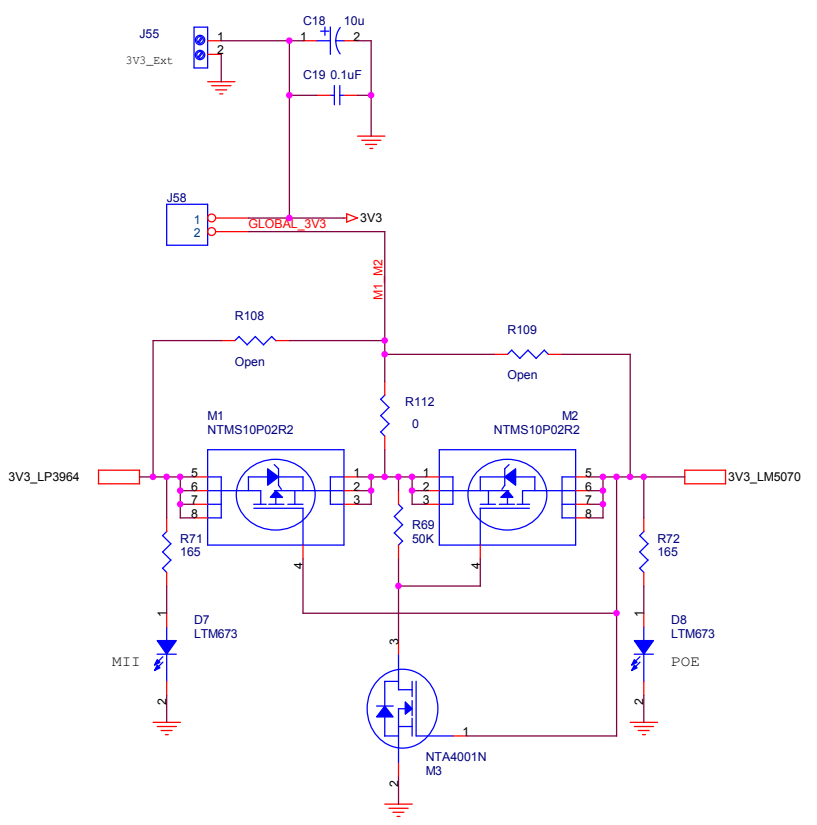
Phy Address Straps: Default is PHYAD0 = 1

J24	J25	Address
0	0	1
1	0	3
1	1	7
etc.		



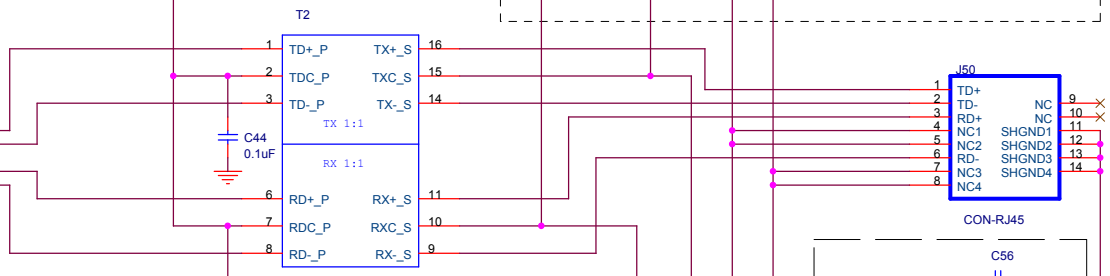
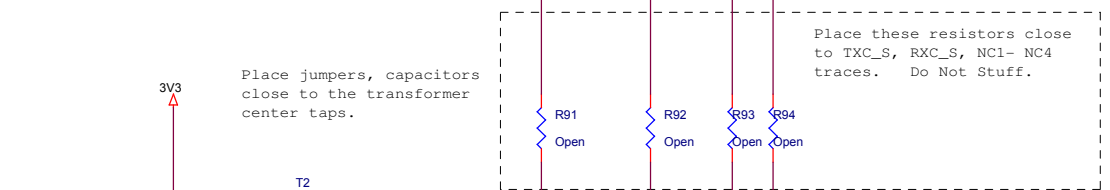
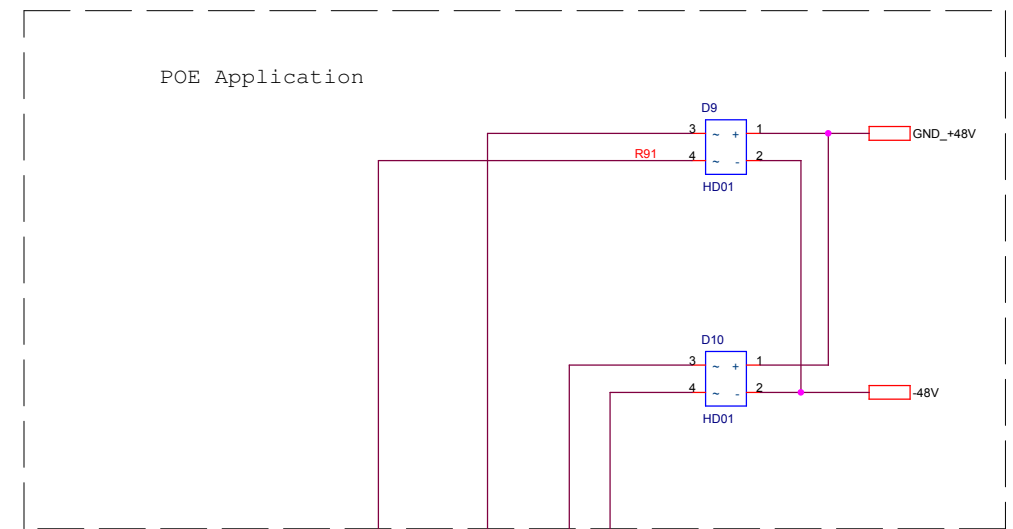
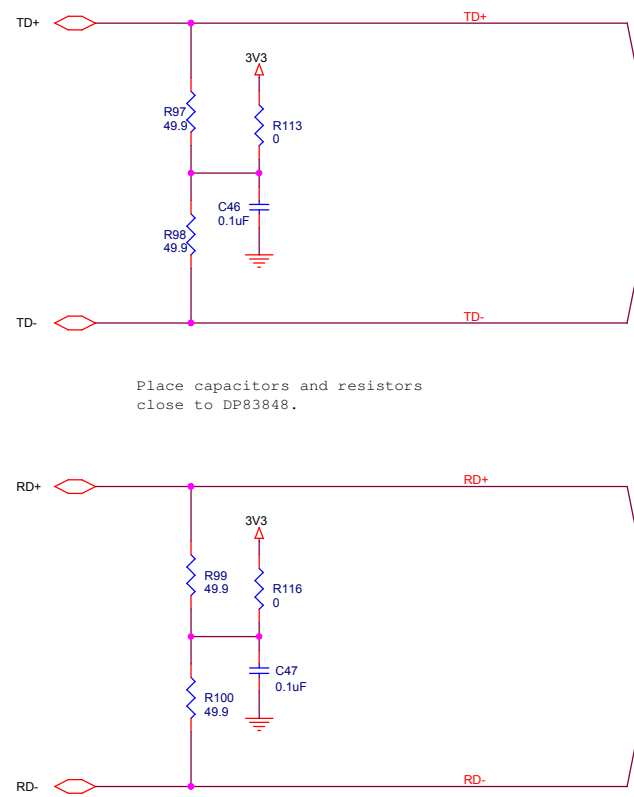
Auto-Negotiation Straps

AN0	AN1	AN_EN	Description
0	0	0	10Mbps HD Force
1	0	0	10Mbps FD Force
0	1	0	100Mbps HD Force
1	1	0	100Mbps FD Force
0	0	1	10Mbps H/FD Advertised
1	0	1	100Mbps H/FD Advertised
0	1	1	10/100Mbps HD Advertised
1	1	1	10/100Mbps H/FD Advertised (default)



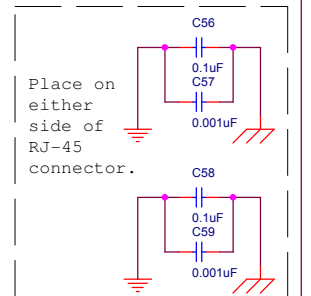
Note: Void Power and Ground planes underneath the POE circuit.

Title		DP83848 AspenPhy Demo II - Power & Clock	
Size	Document Number	Rev	
C	870012505-100	B	
Date:	Thursday, August 11, 2005	Sheet	4 of 5



Note: Void Power and Ground planes underneath the transformer.

Remove R101-R104 when R91-R94 (0 ohm values) are used.



Note: Things are implemented to improve EMI.
 - Connect only one mounting hole to Chassis Ground.
 - Add capacitive coupling networks, C56 & C57 and C58 & C59, on either side of the RJ-45 connector.

Title		
DP83848 AspenPhy Demo II - TP_IF		
Size	Document Number	Rev
C	870012505-100	B
Date:	Thursday, August 11, 2005	Sheet 5 of 5

IMPORTANT NOTICE

Texas Instruments Incorporated and its subsidiaries (TI) reserve the right to make corrections, modifications, enhancements, improvements, and other changes to its products and services at any time and to discontinue any product or service without notice. Customers should obtain the latest relevant information before placing orders and should verify that such information is current and complete. All products are sold subject to TI's terms and conditions of sale supplied at the time of order acknowledgment.

TI warrants performance of its hardware products to the specifications applicable at the time of sale in accordance with TI's standard warranty. Testing and other quality control techniques are used to the extent TI deems necessary to support this warranty. Except where mandated by government requirements, testing of all parameters of each product is not necessarily performed.

TI assumes no liability for applications assistance or customer product design. Customers are responsible for their products and applications using TI components. To minimize the risks associated with customer products and applications, customers should provide adequate design and operating safeguards.

TI does not warrant or represent that any license, either express or implied, is granted under any TI patent right, copyright, mask work right, or other TI intellectual property right relating to any combination, machine, or process in which TI products or services are used. Information published by TI regarding third-party products or services does not constitute a license from TI to use such products or services or a warranty or endorsement thereof. Use of such information may require a license from a third party under the patents or other intellectual property of the third party, or a license from TI under the patents or other intellectual property of TI.

Reproduction of TI information in TI data books or data sheets is permissible only if reproduction is without alteration and is accompanied by all associated warranties, conditions, limitations, and notices. Reproduction of this information with alteration is an unfair and deceptive business practice. TI is not responsible or liable for such altered documentation. Information of third parties may be subject to additional restrictions.

Resale of TI products or services with statements different from or beyond the parameters stated by TI for that product or service voids all express and any implied warranties for the associated TI product or service and is an unfair and deceptive business practice. TI is not responsible or liable for any such statements.

TI products are not authorized for use in safety-critical applications (such as life support) where a failure of the TI product would reasonably be expected to cause severe personal injury or death, unless officers of the parties have executed an agreement specifically governing such use. Buyers represent that they have all necessary expertise in the safety and regulatory ramifications of their applications, and acknowledge and agree that they are solely responsible for all legal, regulatory and safety-related requirements concerning their products and any use of TI products in such safety-critical applications, notwithstanding any applications-related information or support that may be provided by TI. Further, Buyers must fully indemnify TI and its representatives against any damages arising out of the use of TI products in such safety-critical applications.

TI products are neither designed nor intended for use in military/aerospace applications or environments unless the TI products are specifically designated by TI as military-grade or "enhanced plastic." Only products designated by TI as military-grade meet military specifications. Buyers acknowledge and agree that any such use of TI products which TI has not designated as military-grade is solely at the Buyer's risk, and that they are solely responsible for compliance with all legal and regulatory requirements in connection with such use.

TI products are neither designed nor intended for use in automotive applications or environments unless the specific TI products are designated by TI as compliant with ISO/TS 16949 requirements. Buyers acknowledge and agree that, if they use any non-designated products in automotive applications, TI will not be responsible for any failure to meet such requirements.

Following are URLs where you can obtain information on other Texas Instruments products and application solutions:

Products

Audio	www.ti.com/audio
Amplifiers	amplifier.ti.com
Data Converters	dataconverter.ti.com
DLP® Products	www.dlp.com
DSP	dsp.ti.com
Clocks and Timers	www.ti.com/clocks
Interface	interface.ti.com
Logic	logic.ti.com
Power Mgmt	power.ti.com
Microcontrollers	microcontroller.ti.com
RFID	www.ti-rfid.com
OMAP Mobile Processors	www.ti.com/omap
Wireless Connectivity	www.ti.com/wirelessconnectivity

Applications

Automotive and Transportation	www.ti.com/automotive
Communications and Telecom	www.ti.com/communications
Computers and Peripherals	www.ti.com/computers
Consumer Electronics	www.ti.com/consumer-apps
Energy and Lighting	www.ti.com/energy
Industrial	www.ti.com/industrial
Medical	www.ti.com/medical
Security	www.ti.com/security
Space, Avionics and Defense	www.ti.com/space-avionics-defense
Video and Imaging	www.ti.com/video

TI E2E Community Home Page

e2e.ti.com

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265
Copyright © 2012, Texas Instruments Incorporated