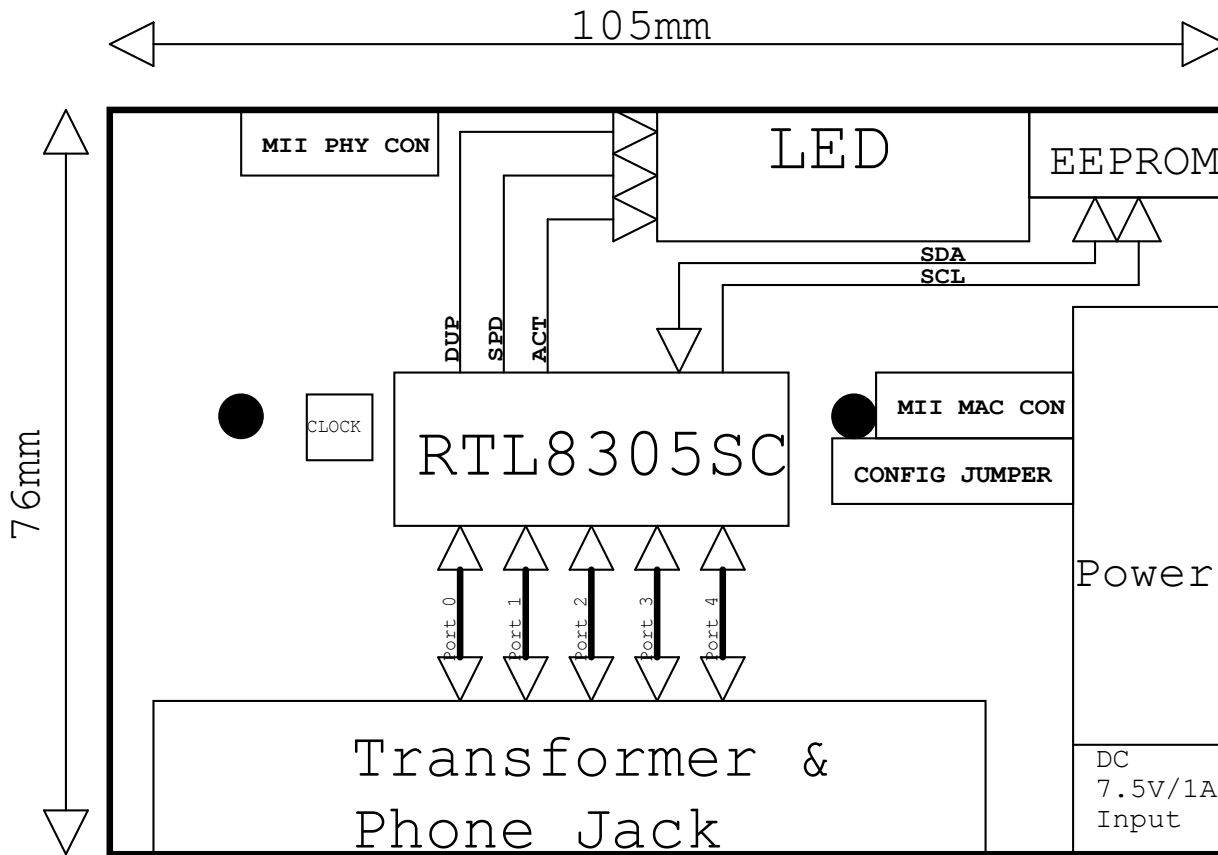


RTL8305SC Demo Board 5 port UTP



Note:

- 1: The demo board is 2 layer PCB and 1 side SMD for RTL8305SC.
- 2: Crystal shunt capacitor C50 and C51 should use 18pF.
- 3: L5~L8 are used for EMI test, optional for customers.
- 4: R13, IBREF resistor should use 1.96K ohm.
- 5: J2 is for Port4 PHY circuit MII interface connector.
- 6: J3 is for Port4 MAC circuit MII interface connector.
- 7: R75 and R76 is for internal test, don't need for customers.
8. R78 is used for PHY2TXEN pull down resistor.
When L2 dump switch test should not be assembled.
When enable Dual MII function, the resistor should be assembled.

RTL8305SC Demo Board Revision History

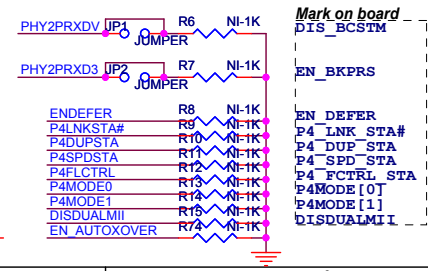
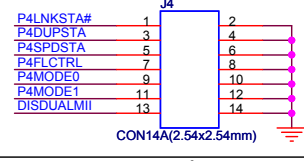
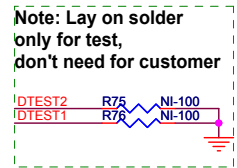
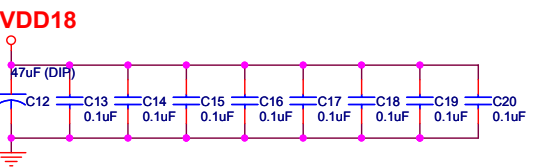
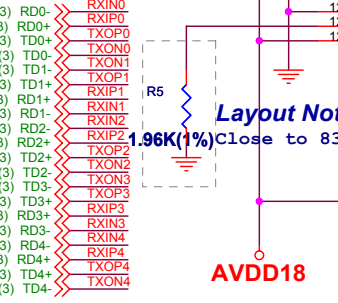
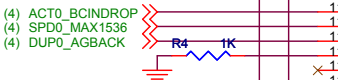
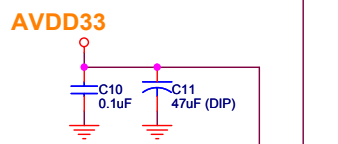
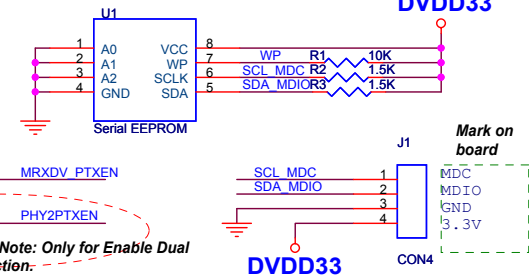
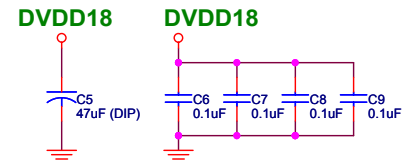
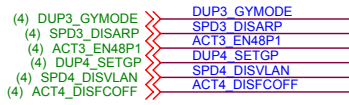
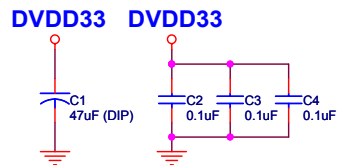
1.0	First release
1.1	Add R77 for MRXDV_PTXEN and R78 for PHY2TXEN pull down resistors when enable Port 4 MII function and Dual MII function.
2.0	PCB layout change to v.2.0 Power solution: C45 change to 470pF & R53, R54, R56, L11 short and removed for improve EMI. L5, L6, L7, L8 change to 1000pF/2KV for improve EMI. Separate RV1, RV2 circuit, and add RV4, RV5. RV1-RV5 change to 68pF/2KV for improve EMI. Add C55, C56, C57 at DC Jack CN1 for improve EMI. J1 change to 1*4 connector and add 3.3V at pin 4. J4 change to 2*7 connector and remove EN_DEFER setting pin. J3.3 MDC & J3.4 MCIO pin change to NC pin.

RTL8305SC 5 Port Switch Demo Board Configuration Resister

R8	Defer enable/disable, open to enable and short to disable
T3/3, 4 R9	Port 4 Link Status Control, short with jumper to force Port 4 link
T3/5, 6 R10	Port 4 Duplex Control, open for full duplex and short for half duplex
T3/7, 8 R11	Port 4 Speed Control, open for 100Mbps and short for 10Mbps
T3/9, 10 R12	Port 4 Flow Control, open for enable and short for disable full duplex flow control
T3/11, 12 T3/13, 14 R13, R14	Port4 Mode Control, [11]: UTP/MII MAC; [10]: 100Base-FX; [01]: MII PHY; [00]: SNI PHY
T3/15, 16 R15	Disable Dual MII, short to enable Dual MII function
R6	Broadcast storm control enable/disable, open to disable and short to enable
R7	Backpressure enable/disable, open to enable and short to disable
RH1/RH2, RL1/RL2	Broadcast Input/Output drop, RH1/RH2 for input drop and RL1/RL2 for output drop

Realtek Semiconductor Corp.

Title		RTL8305SC DEMO BOARD		Author: Alex Lin	
Size	Document Number			Rev	
A	BLOCK DIAGRAM			2.0	
Date:	Thursday, May 07, 2009	Sheet	1	of	4



DVDD33

RTL8305SC

Layout Note:

1.96K(1%) Close to 8305SC

AVDD18

AVDD18

DVDD18

DVDD18

DVDD33

DVDD18

DVDD33

DVDD33

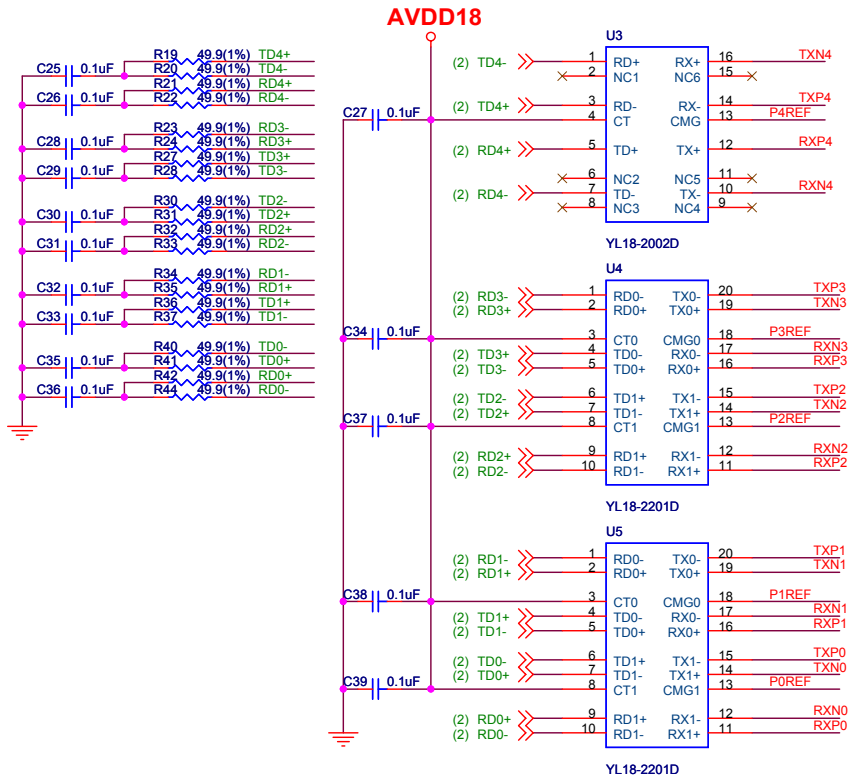
Mark on board

Mark on board

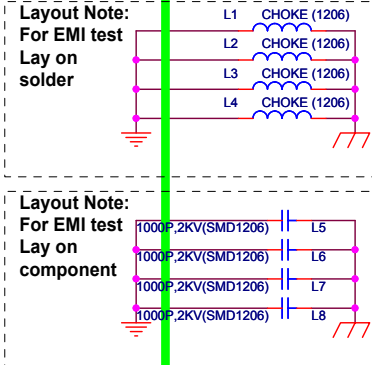
Mark on board

Realtek Semiconductor Corp.		
Title RTL8305SC DEMO BOARD		Author: Alex Lin
Size B	Document Number RTL8305SC	Rev 2.0
Date: Thursday, May 07, 2009	Sheet 2 of 4	

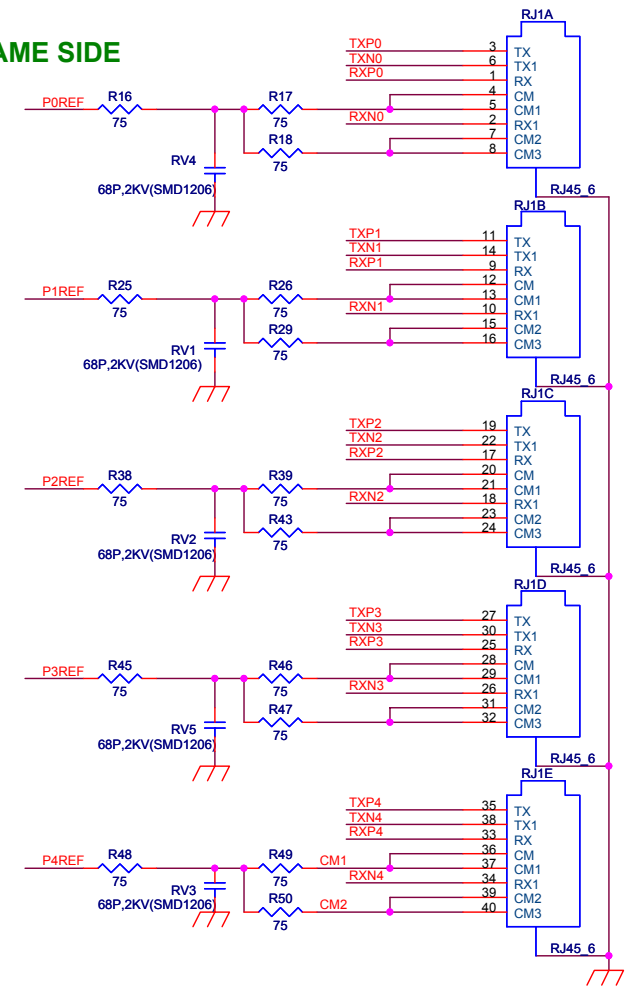
ANALOG POWER



Reference Transformer Part No. list
 YL18-2201D, YL18-2002D
 YuTai Electronics Co., LTD
 TEL: 86-574-63620701, 63621610
 http://www.yutai-elec.com
 EMAIL: nico_yu@yeah.net

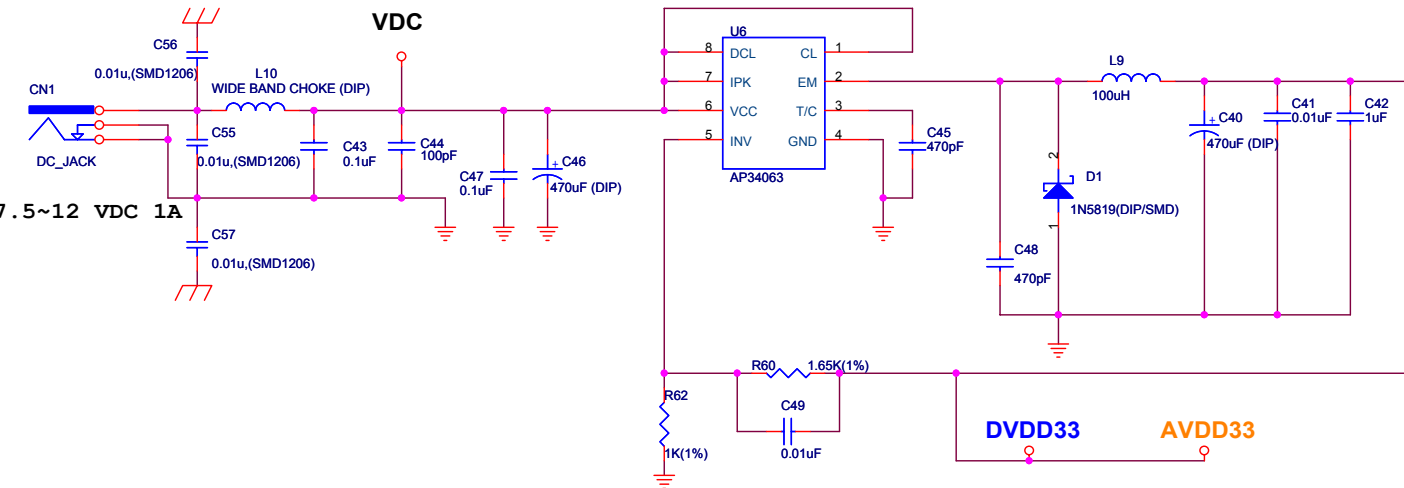


FRAME SIDE



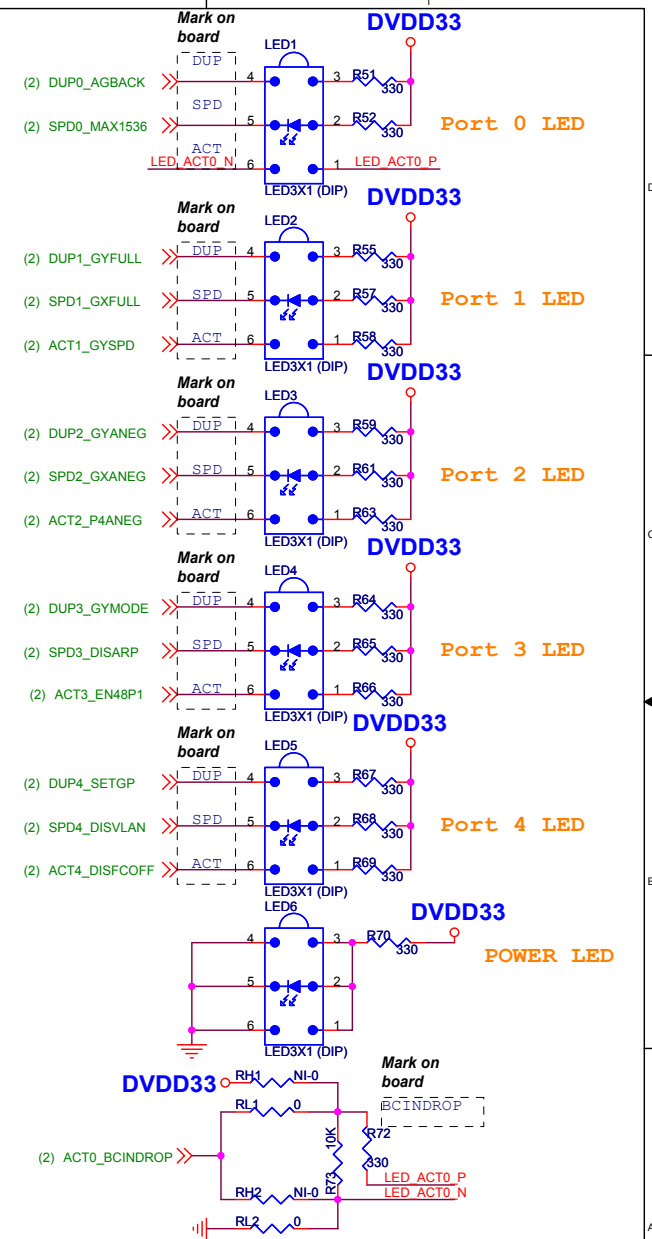
Realtek Semiconductor Corp.		
Title: RTL8305SC DEMO BOARD		
Author: Alex Lin		
Size B	Document Number: PhoneJack & XFORMER	Rev 2.0
Date: Thursday, May 07, 2009	Sheet 3	of 4

POWER 3.3V

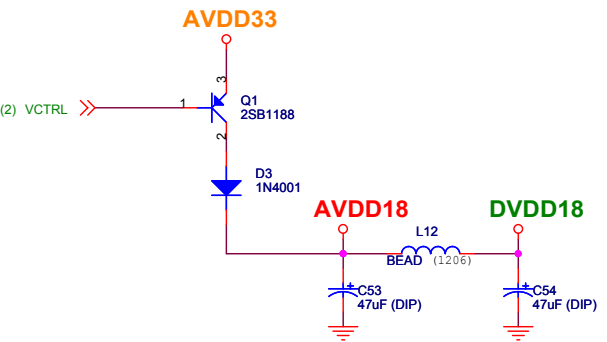


$$V_{out} = 1.25 * (R60 + R62) / R62$$

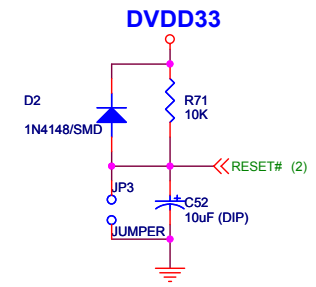
LED



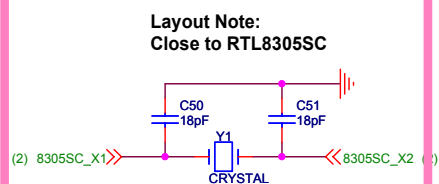
POWER 1.8V



RESET



CLOCK



Realtek Semiconductor Corp.		
Title: RTL8305SC DEMO BOARD		
Author: Alex Lin		Rev: 2.0
Size: B	Document Number: POWER & CLOCK & RESET & LED	Sheet: 4 of 4
Date: Thursday, May 07, 2009		