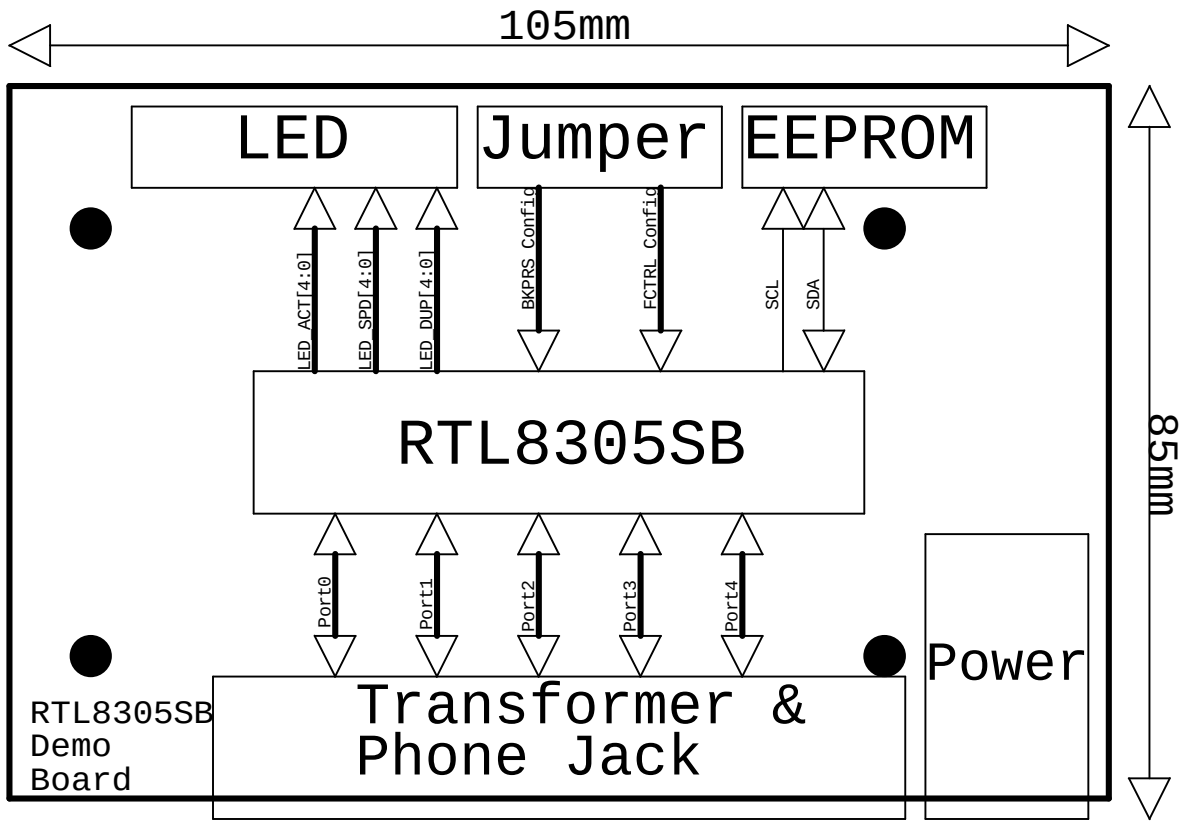
Replace the R17 by 1.96K resister.

RTL8305SB Demo Board 5 port UTP



RTL8305SB Demo Board Revision History	
1.0	First release
1.1	Divide the 2.5V power into RVDD and digital 2.5V power by L11. Add LS3-6, L12-L15 for EMI test.
1.2	Replace the R17 by 1.91K resister. Replace the L1-L4 1206 SMD Beads by 1000pF(1206SMD) capacitors for EMI improvement. Replace the C24, C26, C28, C31, and C33 1000pF/1KV capacitors by 50pF/1KV capacitors for EMI improvement. BOM add L15 assembly with 1000pF(1206SMD) capacitor for EMI improvement.
1.3	Enhance board description on PCB.
1.31	Replace the R17 by 1.96K resister.
1.32	Replace the C52 and C53 with 27pF capacitor.

	Function For RTL8305SB
R3	Assembly to disable EEPROM Autoload
R4	Assembly to disable Half Duplex Backpressure Control
R5	Assembly to disable GroupX Full Duplex Flow Control
R6	Assembly to disable GroupX Full Duplex Flow Control
R7	Assembly to disable Port4 Full Duplex Flow Control
R8	Assembly to disable Auto Cross Over Function
R11	Change QoS Weighted Round Robin ratio
R12	Assembly to set Port0 as high priority port
R13	Assembly to set Port1 as high priority port
R14	Assembly to enable VLAN tag priority
R15	Assembly to enable Broadcast Storm Control
R16	Assembly to enable VLAN function
RH1, RH3	Assembly to enable DEFER Control, RL1, RL3 should not assembly at the same time
RL1, RL3	Assembly to disable DEFER Control, RH1, RH3 should not assembly at the same time
RH2, RH4	Assembly to enable 48Pass1 Control, RL2, RL4 should not assembly at the same time
RL2, RL2	Assembly to disable 48Pass1 Control, RH2, RH4 should not assembly at the same time

Note:

1: The demo board is 2 layer PCB and 1 side SMD for RTL8305SB, 2 side SMD for RTL8305S.
2: U2 should be 5V~2.5V power input capable, otherwise the VIN should be 3.3V.
3: RS1~RS5, CS1~CS5, LS1, LS2 are for RTL8305S and are placed on solder side.
4: NIJ1~NIJ9 are for internal test, don't need to be assembled by customers.
5: NIC1~NIC5 are for future use, don't need to be assembled by customers.
6: For Defer, RH1 and RH3 are for ON, RL1 and RL3 are for OFF, should not coexist.
7: For 48Pass1, RH2 and RH4 are for ON, RL2 and RL4 are for OFF, should not coexist.
8: For LoopLED, R63 is for Loop indication and R14 is for tag priority enable, should not coexist.
9: R18 is for 3.3V and R19 is for 2.5V VIN capable EEPROM, should not coexist.
10: R1 and R2 are for EMI reduce test, optional for customers.
11: U3 could use H1102 or H1012 for RTL8305S, but only H1102 for RTL8305SB.
12: QXFRM1 should use H1062 for RTL8305S and H1164 for RTL8305SB.
13: L11 is used to seperate digital 2.5V and analog 2.5V power.
14: LS3-LS6 and L12-L15 are used for EMI test, optional for customers.
15: R17, IBREF resister should use 1.96K ohm.

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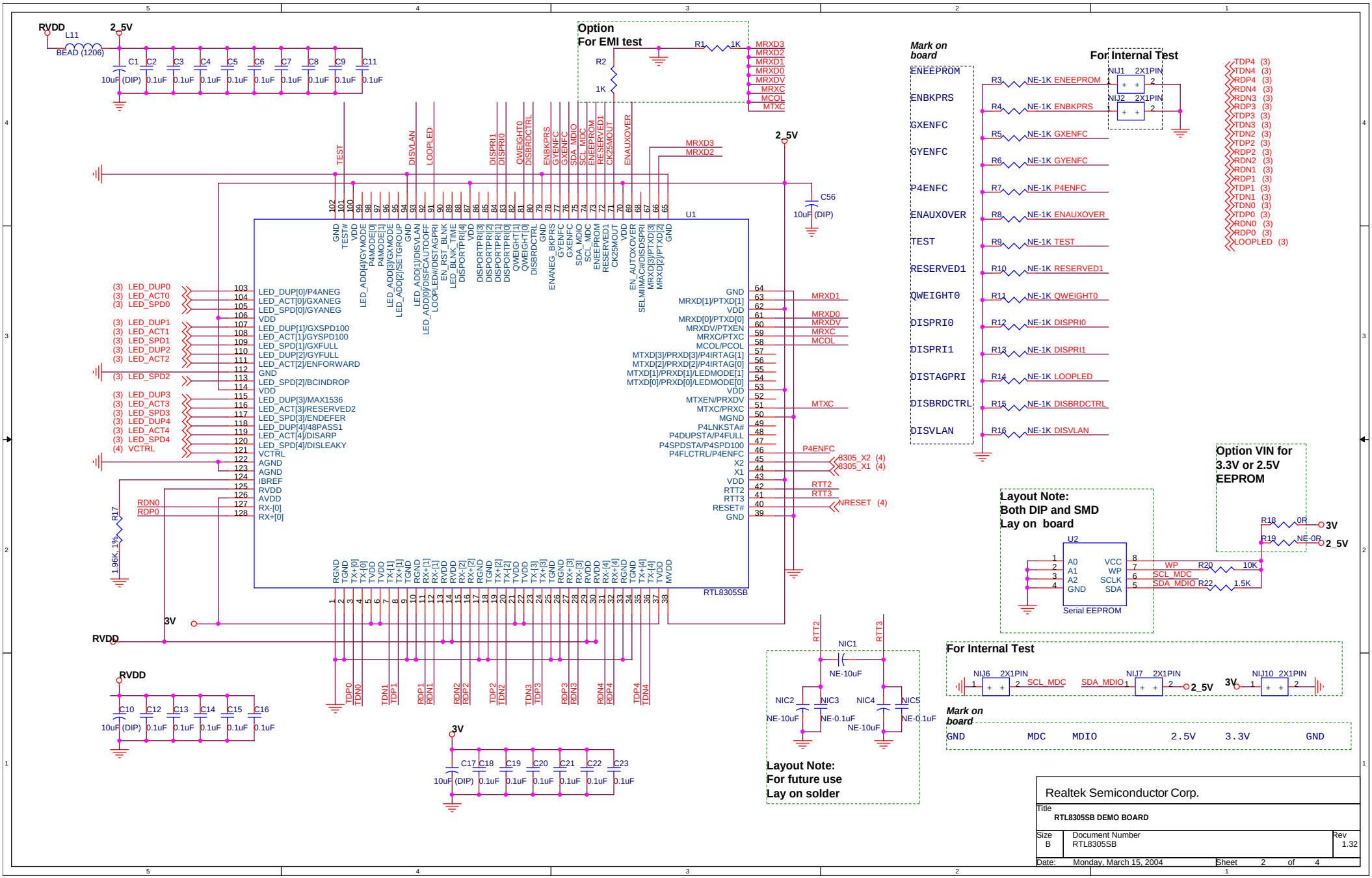
Title
RTL8305SB DEMO BOARD

Size	Document Number	Rev
A	BLOCK DIAGRAM	1.32

Date: Monday, March 15, 2004 Sheet 1 of 4


RVDD
2_5V
L11
BEAD (1206)
C1 C2 C3 C4 C5 C6 C7 C8 C9 C11
10uF (DIP) 0.1uF 0.1uF 0.1uF 0.1uF 0.1uF 0.1uF 0.1uF 0.1uF 0.1uF
Option
For EMI test
R1 1K
R2 1K
MRXD3
MRXD2
MRXD1
MRXD0
MRXDV
MRXC
MCOL
MTXC
Mark on board
ENEEPROM
ENBKPRS
GXENFC
GYENFC
P4ENFC
ENAUXOVER
TEST
RESERVED1
QWEIGHT0
DISPRI0
DISPRI1
DISTAGPRI
DISBRDCTRL
DISVLAN
For Internal Test
NIJ1 2X1PIN
NIJ2 2X1PIN
R3 NE-1K ENEEPROM
R4 NE-1K ENBKPRS
R5 NE-1K GXENFC
R6 NE-1K GYENFC
R7 NE-1K P4ENFC
R8 NE-1K ENAUXOVER
R9 NE-1K TEST
R10 NE-1K RESERVED1
R11 NE-1K QWEIGHT0
R12 NE-1K DISPRI0
R13 NE-1K DISPRI1
R14 NE-1K LOOPLED
R15 NE-1K DISBRDCTRL
R16 NE-1K DISVLAN
TDP4 (3)
TDN4 (3)
RDP4 (3)
RDN4 (3)
RDN3 (3)
RDP3 (3)
TDP3 (3)
TDN3 (3)
TDN2 (3)
TDP2 (3)
RDP2 (3)
RDN2 (3)
RDN1 (3)
RDP1 (3)
TDP1 (3)
TDN1 (3)
TDN0 (3)
TDP0 (3)
RDN0 (3)
RDP0 (3)
LOOPLED (3)
U1
RTL8305SB
C56
10uF (DIP)
LED_DUP0 LED_ACT0 LED_SPD0
LED_DUP1 LED_ACT1 LED_SPD1 LED_DUP2 LED_ACT2
LED_SPD2
LED_DUP3 LED_ACT3 LED_SPD3 LED_DUP4 LED_ACT4 LED_SPD4
VCTRL
R17 1.96K 1%
RDN0
RDP0
3V
RVDD
C10 C12 C13 C14 C15 C16
10uF (DIP) 0.1uF 0.1uF 0.1uF 0.1uF 0.1uF
C17 C18 C19 C20 C21 C22 C23
10uF (DIP) 0.1uF 0.1uF 0.1uF 0.1uF 0.1uF 0.1uF
NIC1 NE-10uF
NIC2 NE-10uF
NIC3 NE-0.1uF
NIC4 NE-10uF
NIC5 NE-0.1uF
Layout Note:
For future use
Lay on solder
Option VIN for
3.3V or 2.5V
EEPROM
R18 0R 3V
R19 NE-0R 2_5V
Layout Note:
Both DIP and SMD
Lay on board
U2
A0 A1 A2 GND
VCC WP SCLK SDA
Serial EEPROM
WP R20 10K
SCL_MDC
SDA_MDIO R22 1.5K
For Internal Test
NIJ6 2X1PIN SCL_MDC
NIJ7 2X1PIN SDA_MDIO
NIJ10 2X1PIN
2_5V
3V
Mark on board
GND MDC MDIO 2.5V 3.3V GND
Realtek Semiconductor Corp.
Title
RTL8305SB DEMO BOARD
Size B
Document Number RTL8305SB
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Date: Monday, March 15, 2004
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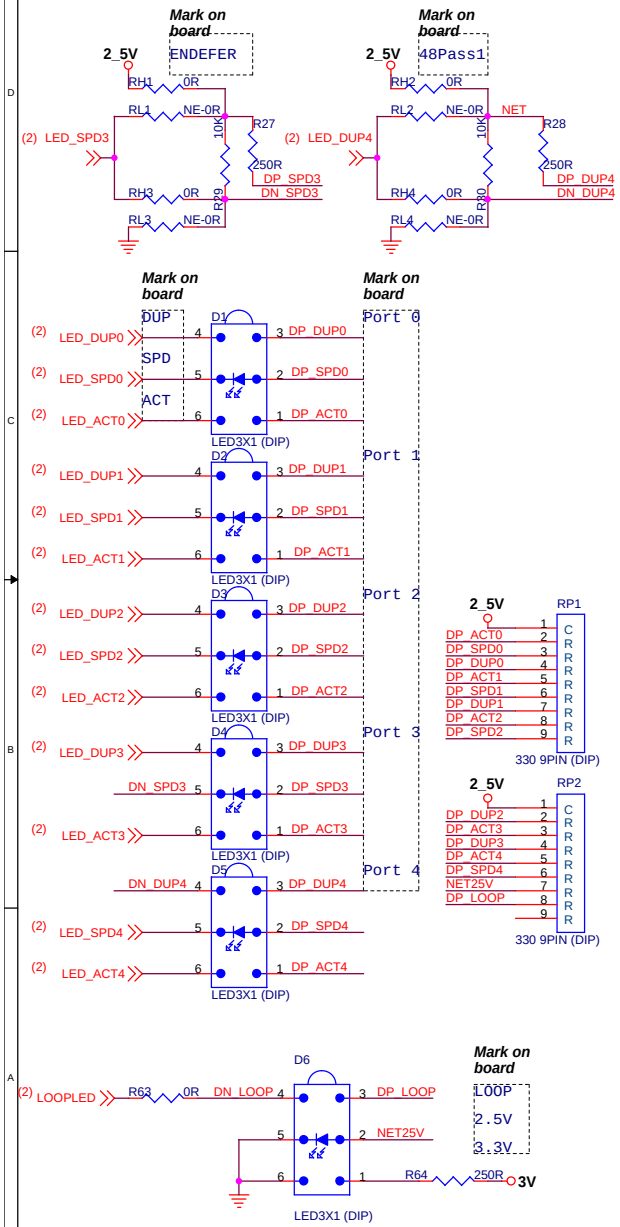
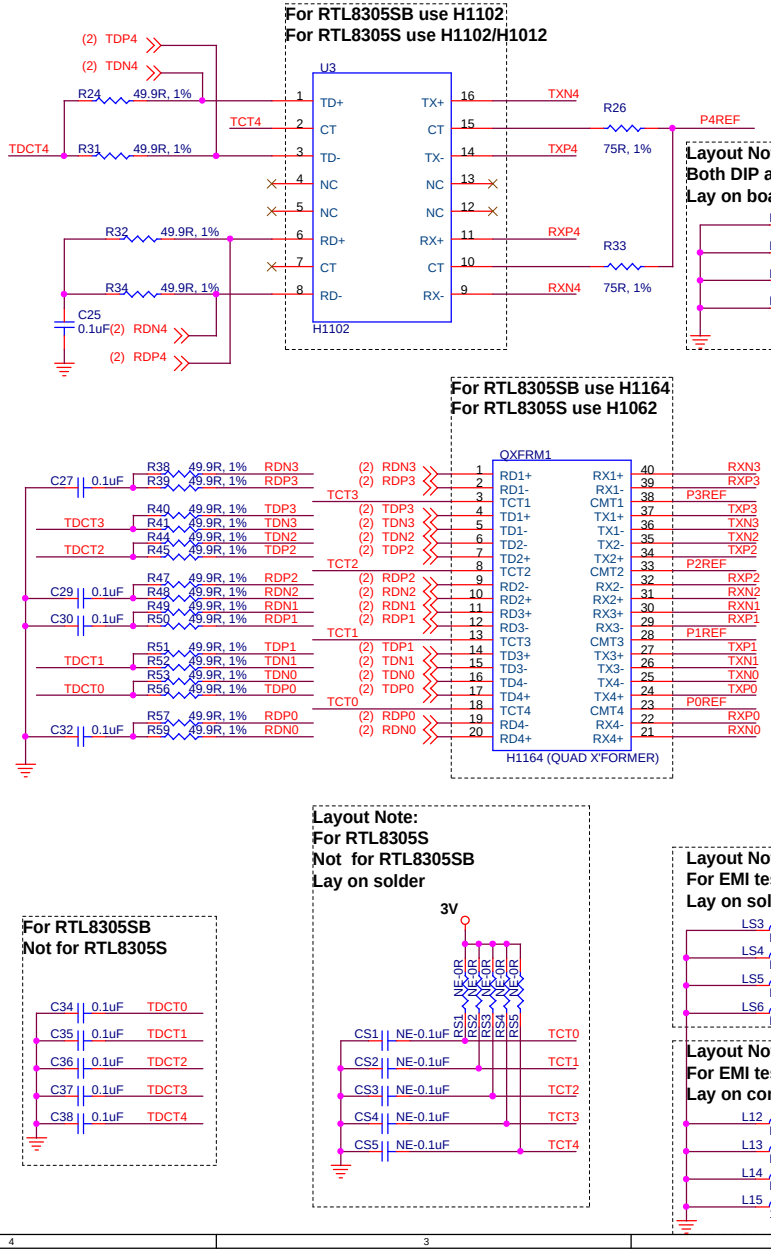
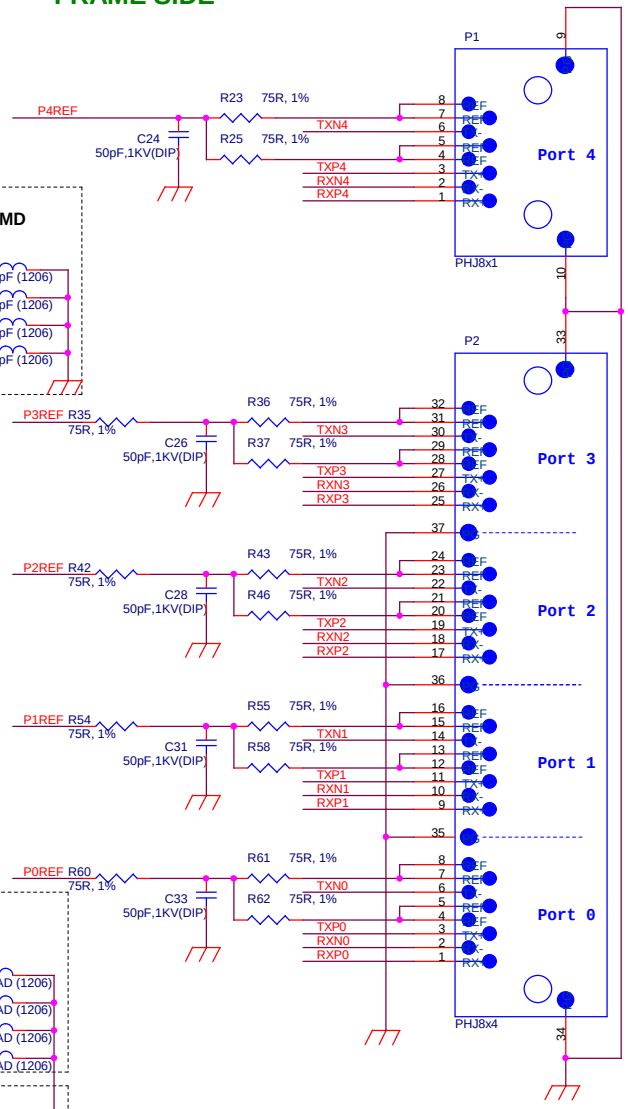
LED



TRANSFORMER



FRAME SIDE



Realtek Semiconductor Corp.

Title	RTL8305SB DEMO BOARD	
Size B	Document Number TRANSFORMER & PHONE JACK	Rev 1.32
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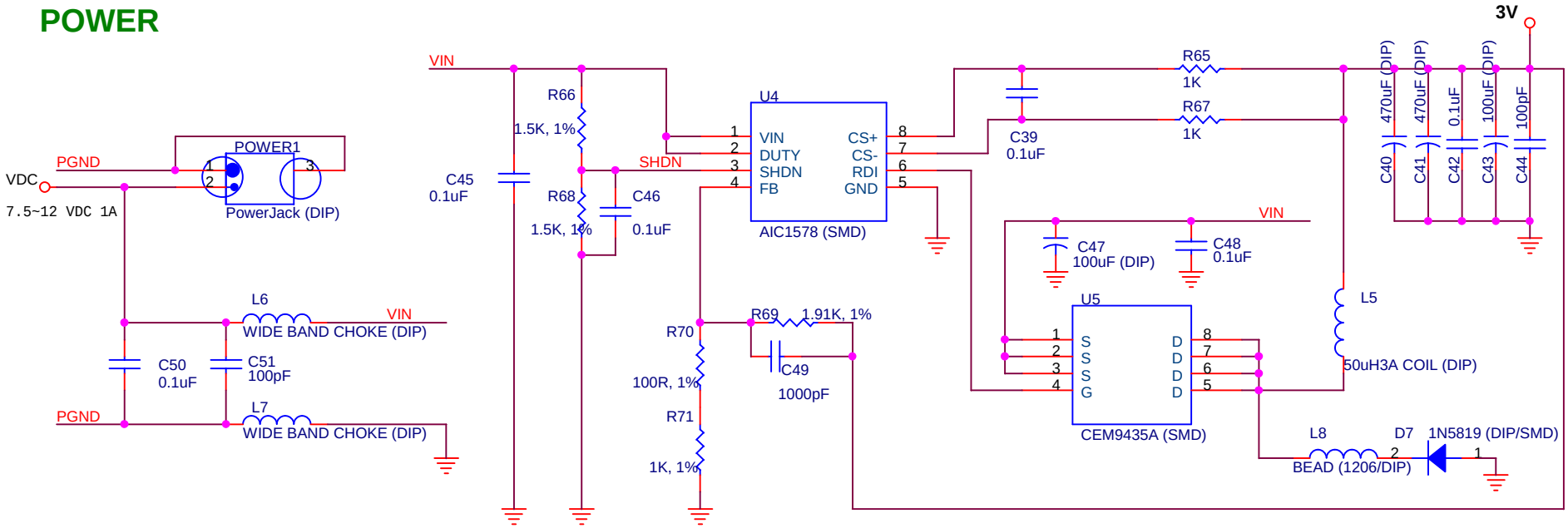
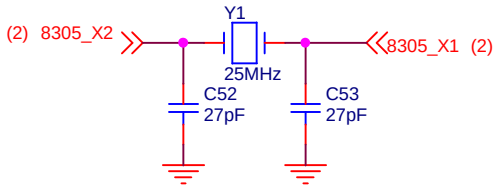
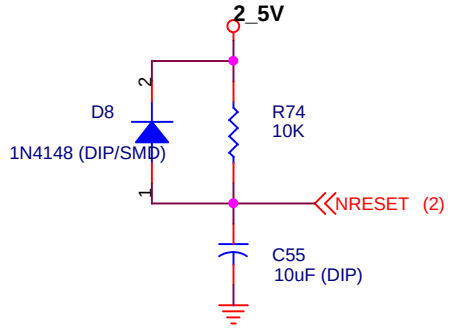
POWER



CLOCK

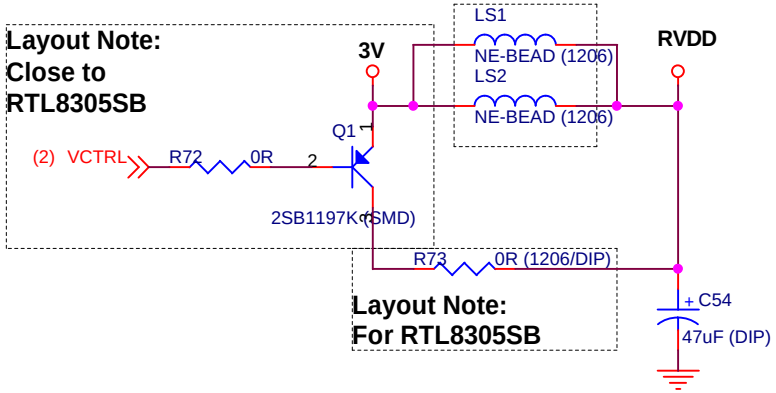


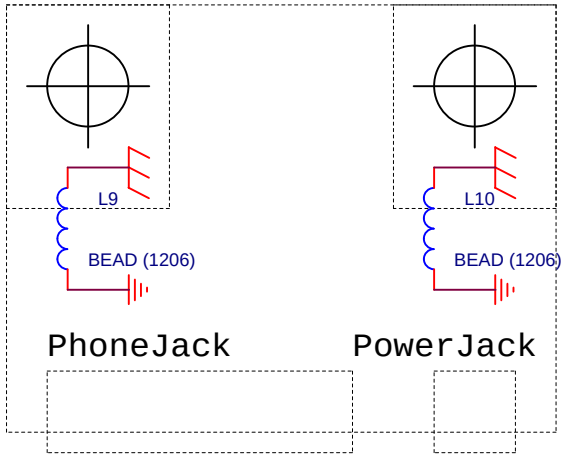
RESET



2.5V Power

Layout Note:
For RTL8305S
Lay on solder





Realtek Semiconductor Corp.		
Title: **RTL8305SB DEMO BOARD**		
Size: A	Document Number: POWER & CLOCK & RESET	Rev: 1.32
Date: Monday, March 15, 2004	Sheet 4 of 4	