



Repair instruction

RBSXTG-5HPacD

Published July 16, 2015

**These repair instructions are for NON WARRANTY repairs only!
Please make visual inspection for signs of corrosion
or mechanical damages before starting.**

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List of RouterBoard SXT G-5HPacD series

SXT 5 ac



SXT 5SA ac

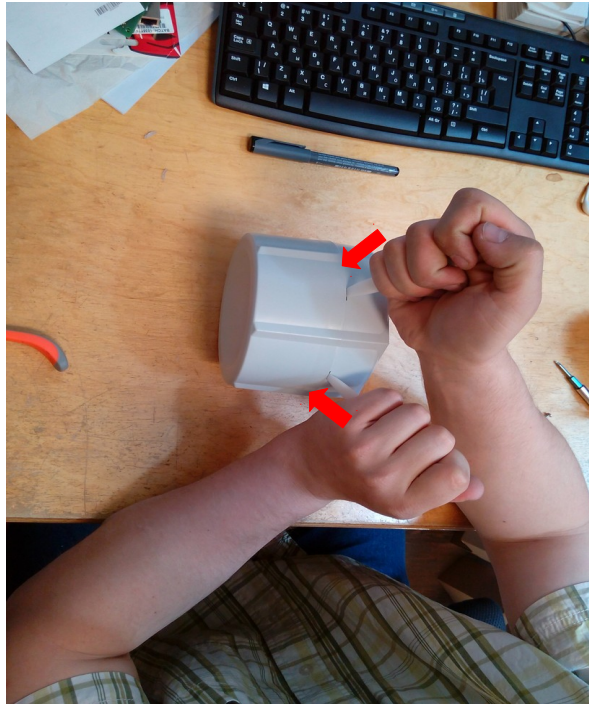


SXT 5HG ac

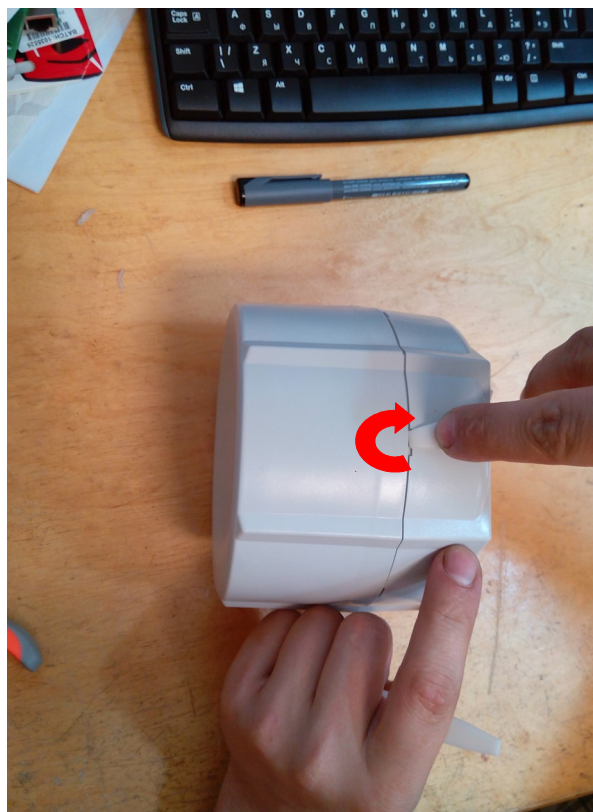


Disassembling information

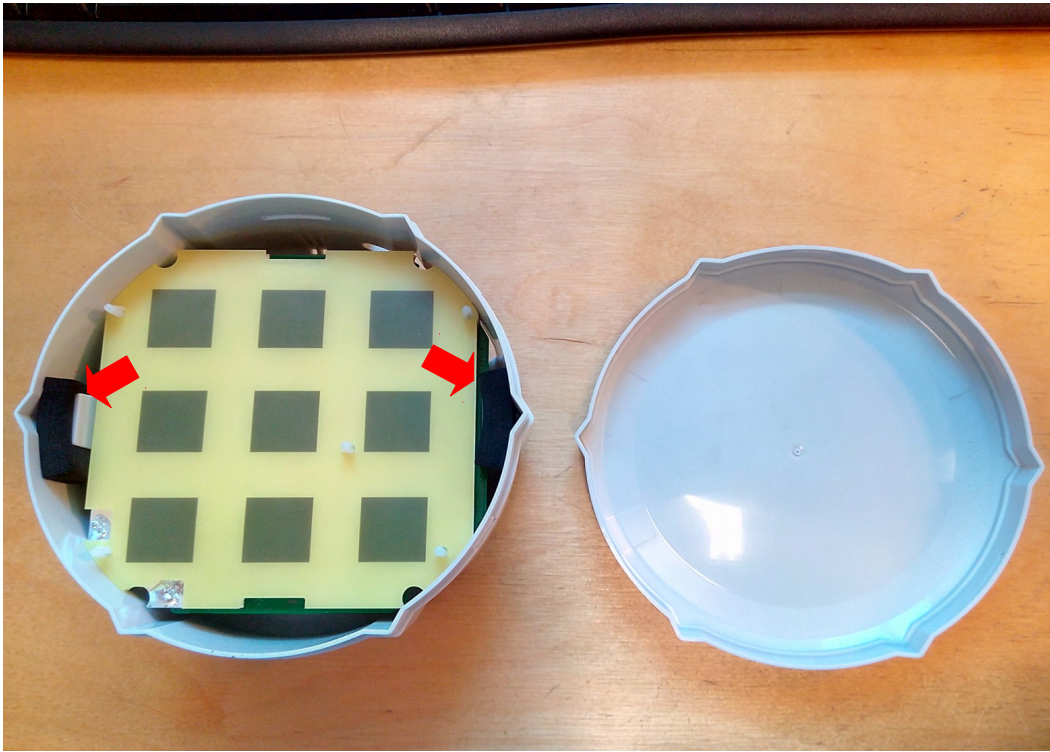
1. Use two “-” screwdrivers. Push screwdrivers in case cavities.



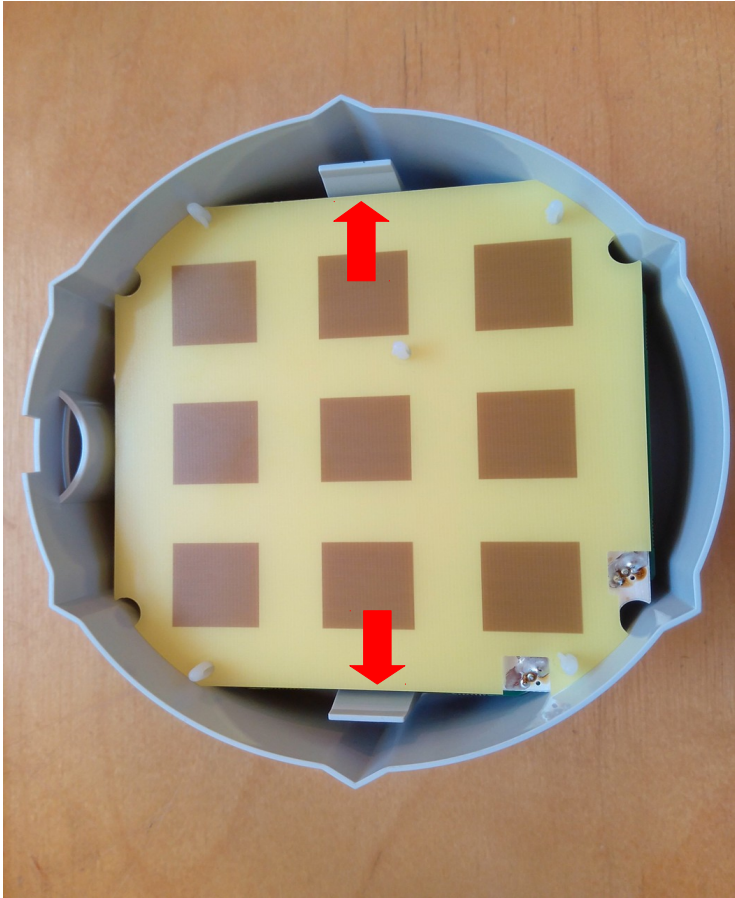
2. Rotate screwdriver and pull both case parts.



3. Remove rubber bushing



4. Push back Plastic PCB holders and take out the board.

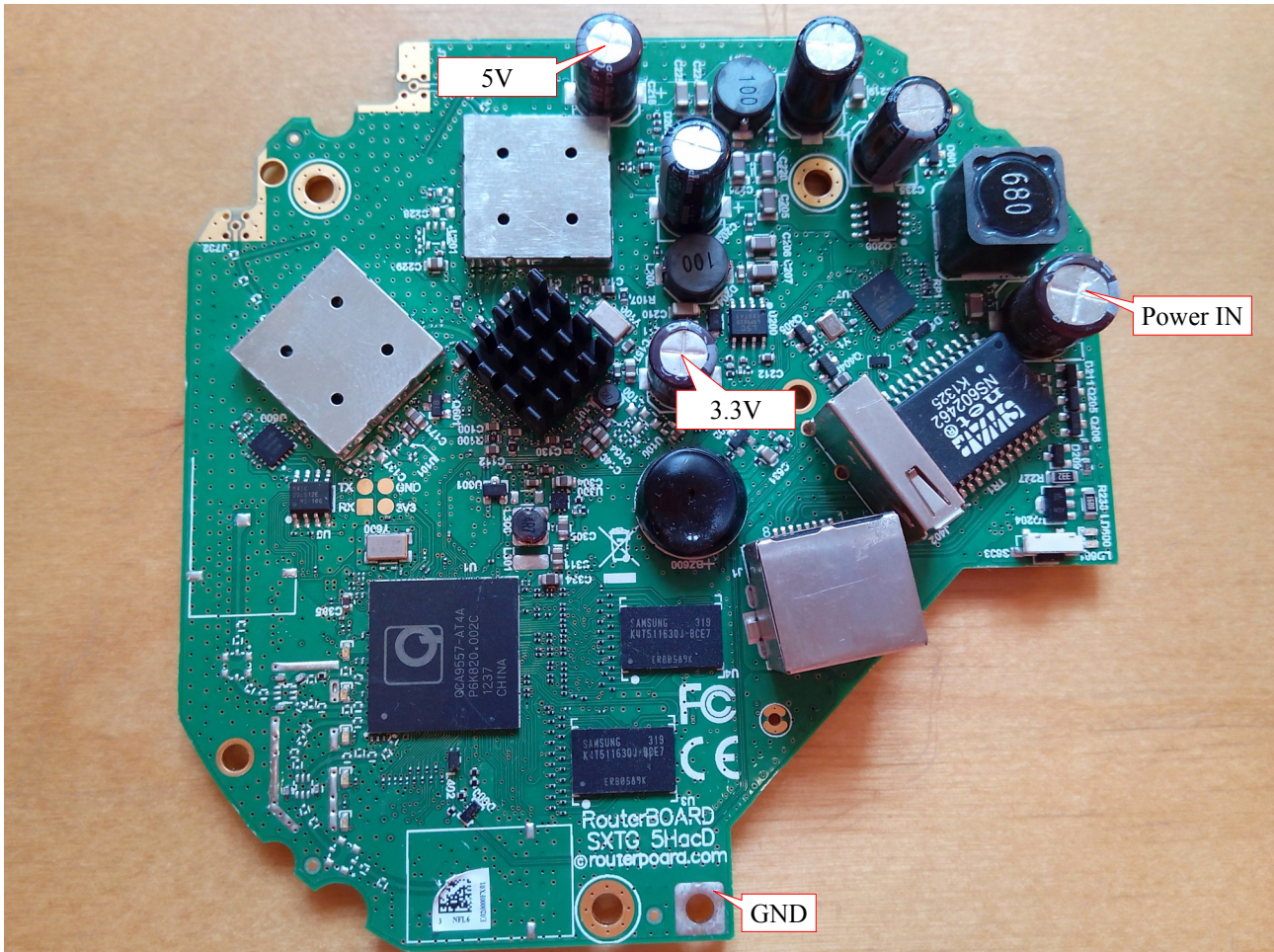


Routerboard does not power on

There no signs of any LED, LCD or buzzer activity

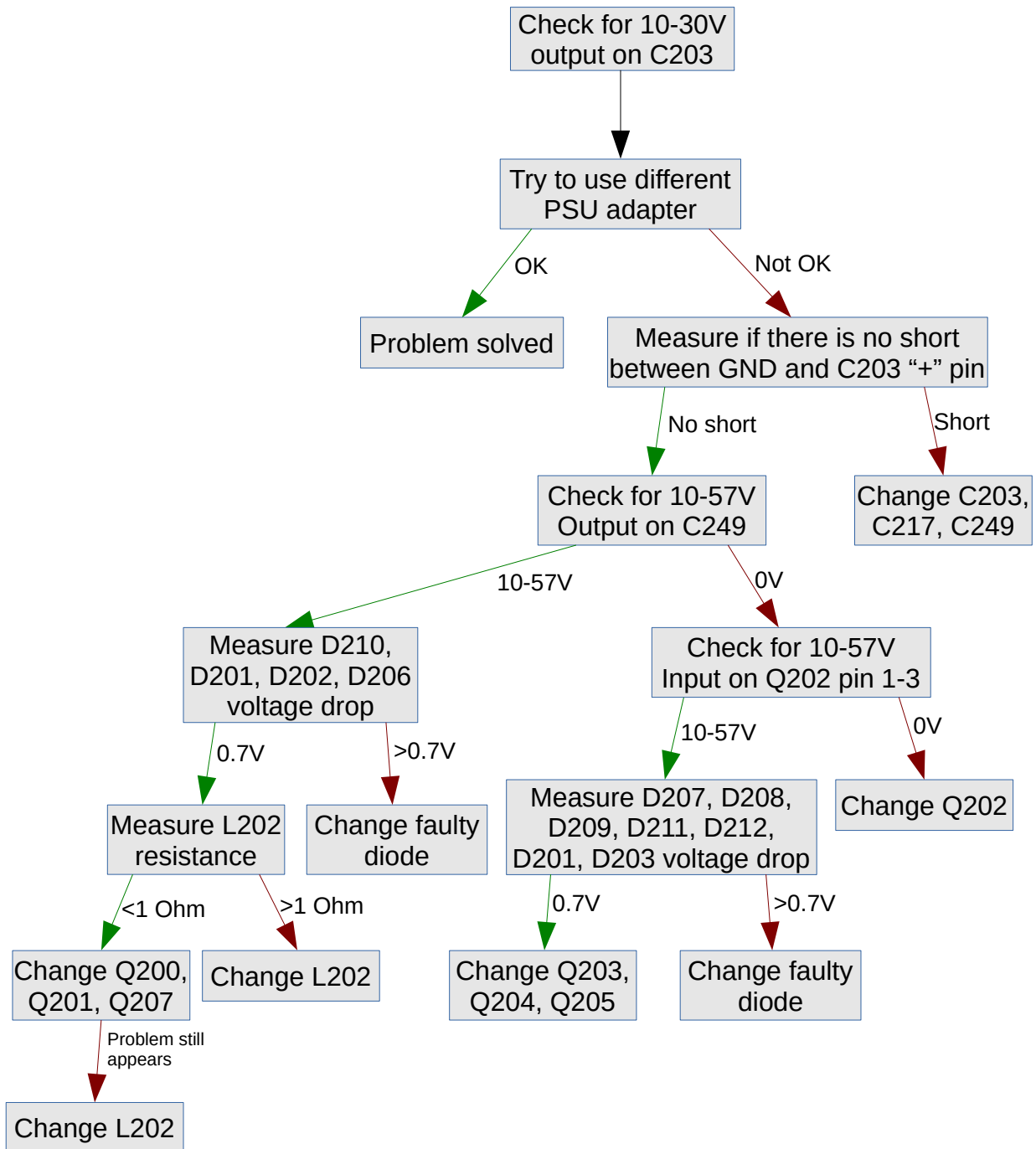
Find potential problem area

RouterBOARD does not turn on when one of the power is disconnected. Check Which voltage is switched off, Power IN (10 – 57V), 3.3V or 5V.



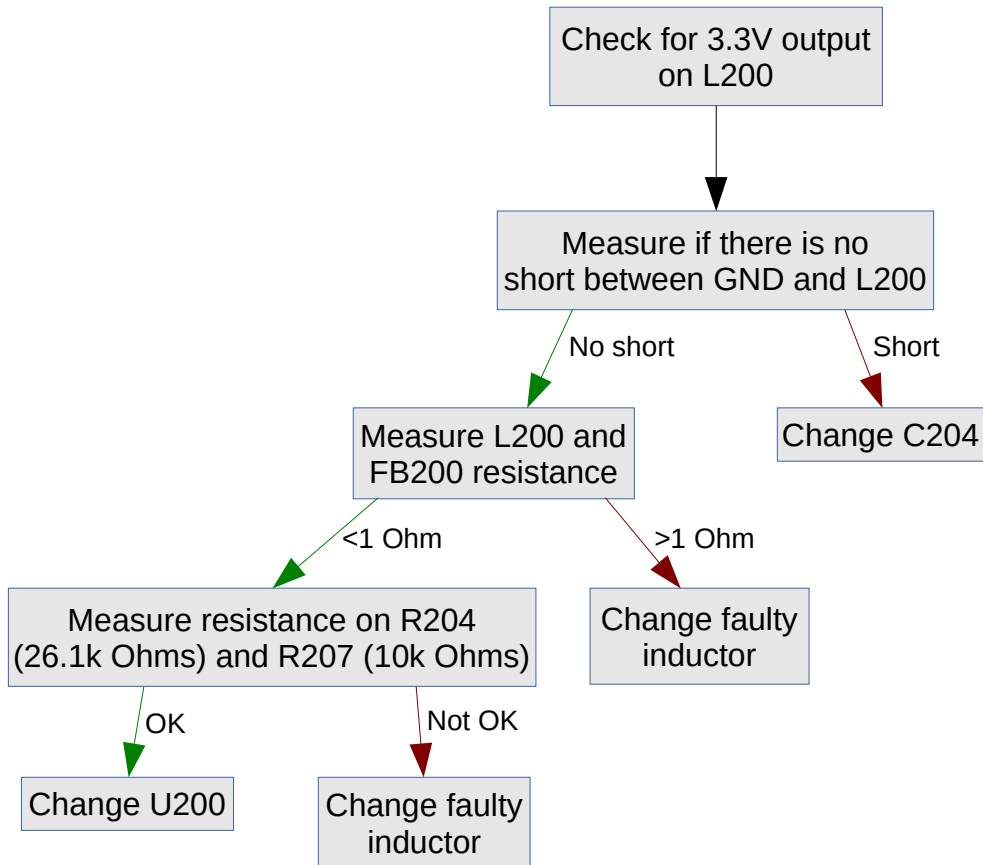
If Power_IN Failed

1. No power on 10-57V input

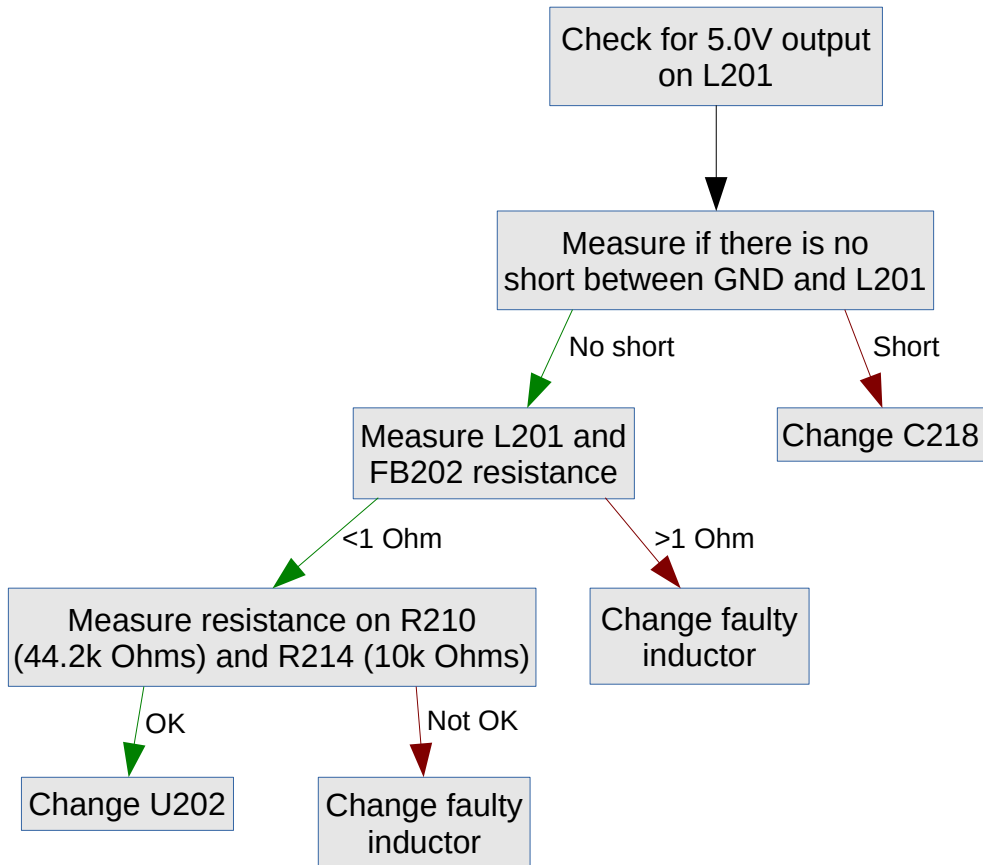


If still board does not power up, please send it to RMA.

2. No Voltage on 3.3V output

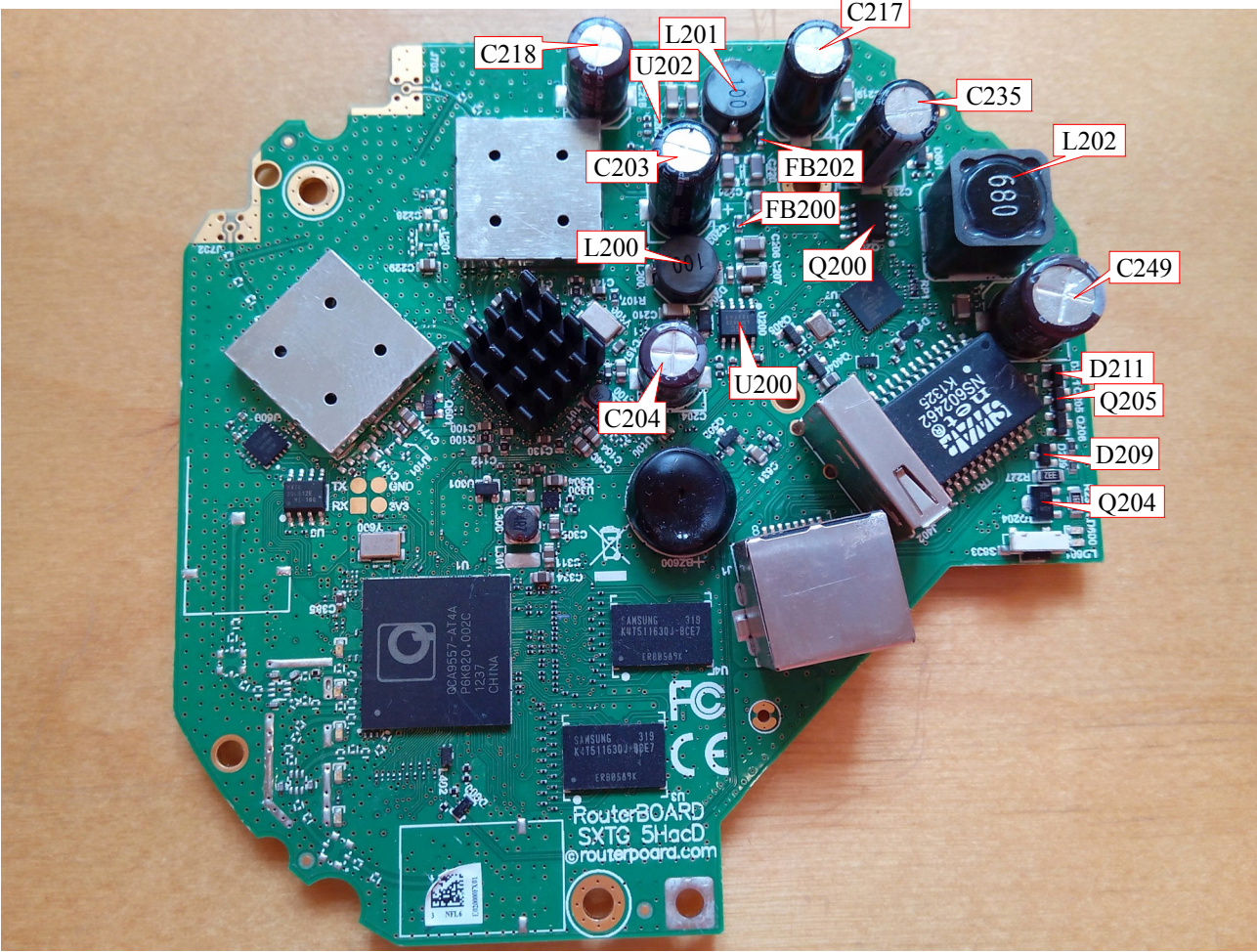


3. No Voltage on 5V output

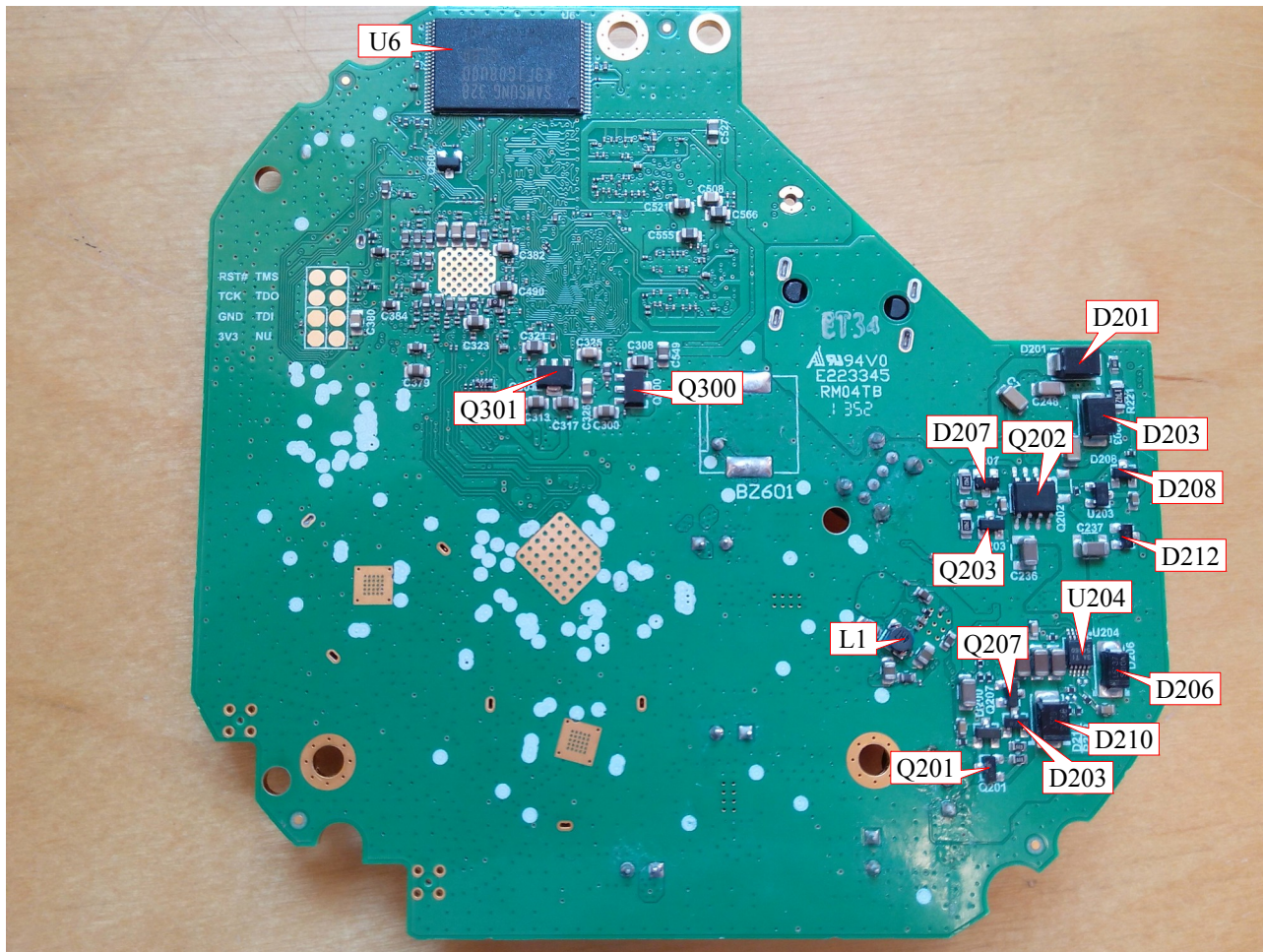


If still board does not power up, please send it to RMA.

4. Supply voltage components location on RouterBOARD



5. Board bottom side components



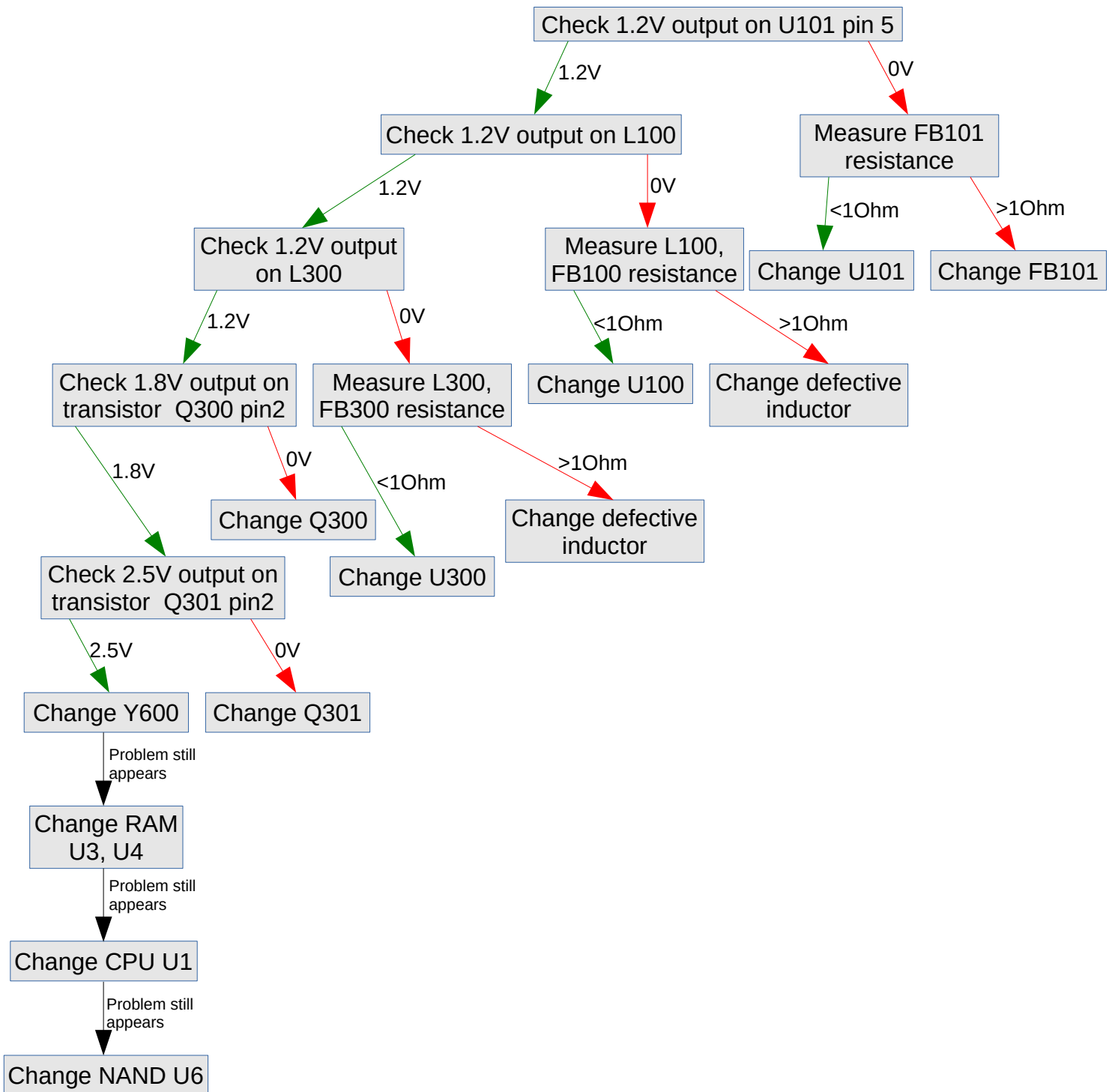
6. Supply voltage Components table

Reference	Manufacturer code	Description	Manufacturer
C203, C217	MG035M331G13PKKKS00R	Capacitor elec 330uF 20% 35V 10x13 TH P=5 6000h 1.36A 0.0430hm MG-series	KUAN KUN ELECTRONIC ENTERPRISE CO., LTD. (Su-scon)
C204, C218	MG006M681F12P787C30R	Capacitor elec 680uF 20% 6.3V 8x12 TH P=3.5 6000h 0.9A 0.0590hm MG-series Lead	KUAN KUN ELECTRONIC ENTERPRISE CO., LTD. (Su-scon)
C401, C428	HF063M101G13P787C35R	Capacitor elec 100uF 20% 63V 10x13 TH P=5 5000h 0.55A 0.250hm HF-series 105C	KUAN KUN ELECTRONIC ENTERPRISE CO., LTD. (Su-scon)
D201, D203, D210	B360B	Diode Schottky 60V 3A SMB	Lite-On Semiconductor corporation
D202	BZ84B30-AU_R1_000A1	Diode Zener BZ84B 30V 2% 400mW SOT23	PanJit International Inc.
D206	B2100AF	Diode Schottky 100V 2A SMA	Lite-On Semiconductor corporation
D207, D212	BZ84C12-7-F	Diode Zener BZ84C 12V 6% 350mW SOT23	Diodes Incorporated
D208	BZ84C5V6-7-F	Diode Zener BZ84C 5.6V 7.1% 350mW SOT23	Diodes Incorporated
D209	BZ84B9V1-E3-08	Diode Zener BZ84B 9.1V 2% 250mW SOT23	Diodes Incorporated
D211	BZ84C6V8-AU T/R 7"	Diode Zener BZ84C 6.8V 5% 350mW SOT23 Automotive	PanJit International Inc.
FB200, FB202	CB03YTYH331	Ferrite Bead 330 Ohm 1.5A 0603	Viking Tech Corporation
L200, L201	BCRH8D43-100N-NL	Inductor 10uH 30% 3.6A 8.3x8.3x4.7 34mOhm RoHS T&R	Bao Cheng Electronics Co.,Ltd.,
L202	BCRH1121Y-680M	Inductor 68uH +/-20% 3.5A 63mOhm, RoHS, Tape&Reel	Bao Cheng Electronics Co.,Ltd.,
Q200, Q202	P9006EVG	Transistor MOSFET P-Ch -60V -4.5A 90mOhm SO-8	Niko Semiconductor Co. Ltd.
Q201	BC856B,215	Transistor PNP -65V -100mA 250mW Hfe=220-470 SOT-23 RoHS	NXP Semiconductors
Q203, Q205	BSS123LT1G	MOSFET N-Ch 100V 170mA 6 Ohm 3V level SOT-23	ON Semiconductor [ONS]
Q204	BCX5616TA	Transistor NPN 80V 1A 1W Hfe=100-250 SOT89	Diodes Zetex Limited
Q207	BC846B,215	Transistor NPN 65V 100mA 250mW Hfe=290 SOT-23 RoHS	NXP Semiconductors
R204	RC0402FR-0726K1L	Resistor 26.1k 1% 0402	Yageo Corporation
R207, R214	CR10-1002-FN	Resistor 10k 1% 0402	ASJ PTE LTD
U204	TPSS4160DQQR	DC/DC Buck converter non-sync 60V in 1.5A out 10-MSOP RoHS Tape&Reel	Texas Instruments
U200, U202	LSP5523-R8A	DC-DC Step-down converter 4.5-30V input 3A output Sync SO8, RoHS	Lite-On Semiconductor corporation

Routerboard does not boot

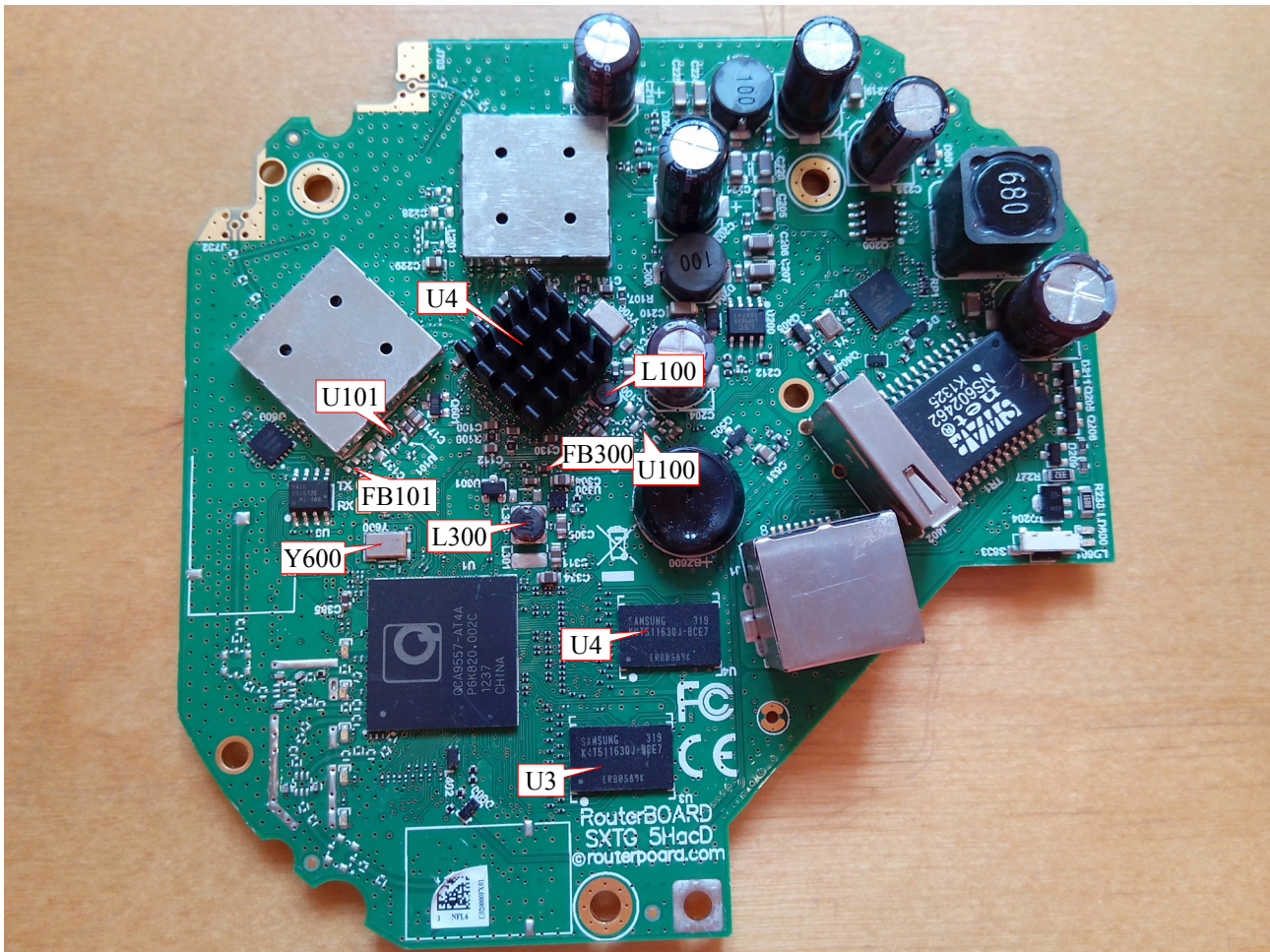
If Netinstall can see the board, but can not install it

1. Troubleshooting flow chart



If you still can't can't install Board, please send it to RMA.

2. Components location on RouterBOARD



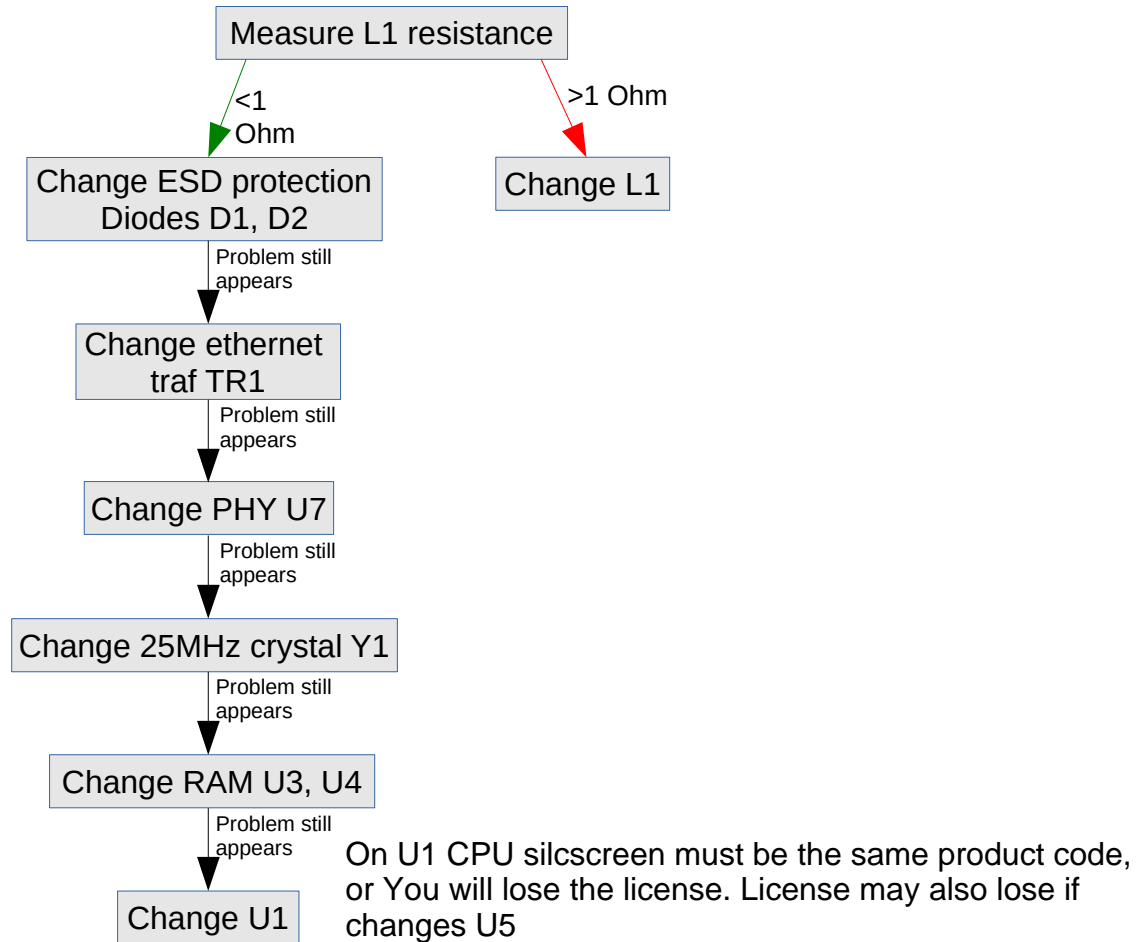
3. Components table

Reference	Manufacturer code	Description	Manufacturer
FB101	CB03YTYH331	Ferrite Bead 330 Ohm 1.5A 0603	Viking Tech Corporation
FB300	CB03YTYH330	Ferrite Bead 33 Ohm 3A 0603	Viking Tech Corporation
L100	BCRH2D18B/HP-4R7N	Inductor 4.7uH 1.2A 3.2x3.2x2 RoHS	Bao Cheng Electronics Co.,Ltd.,
L300	BC43-4R7M	Inductor 4.7uH 20% 1.7A 4.8x4.3x3.5 RoHS T&R	Bao Cheng Electronics Co.,Ltd.,
Q300, Q301	DXT2907A-13	Transistor PNP -60V -600mA 0.5W Hfe=100-300 SOT89 RoHS	Diodes Incorporated
U3, U4	W9751G6KB-25	DDR2 SDRAM 512Mbit DDR2-800 32Mx16bit BGA-84 0+85C T&R	Winbond Electronics Corp.
U6	K9F1G08U0E-SCB0000	NAND Flash 1Gbit x8 TSOP-48 3.3V Vih0.8Vcc -10+125C PB-Free Tray NOP1	Samsung Semiconductor Europe GmbH
U1	QCA9557-AT4A-R	2x2, Dual-band SoC with MIPS74K @700 MHz USB2.0, SGMI/RGBMII Interface T/R (Scorpion)	Qualcomm Atheros Technology Ltd.
U101	RT9043GB	IC 400mA Adj LDO SOT23-5 RoHS	Richtek Technology Corporation
Y600	7B40000017	Crystal 40MHz 9ppm 16pF -20-85 5x3.2	TXC CORPORATION

Ethernet port does not work

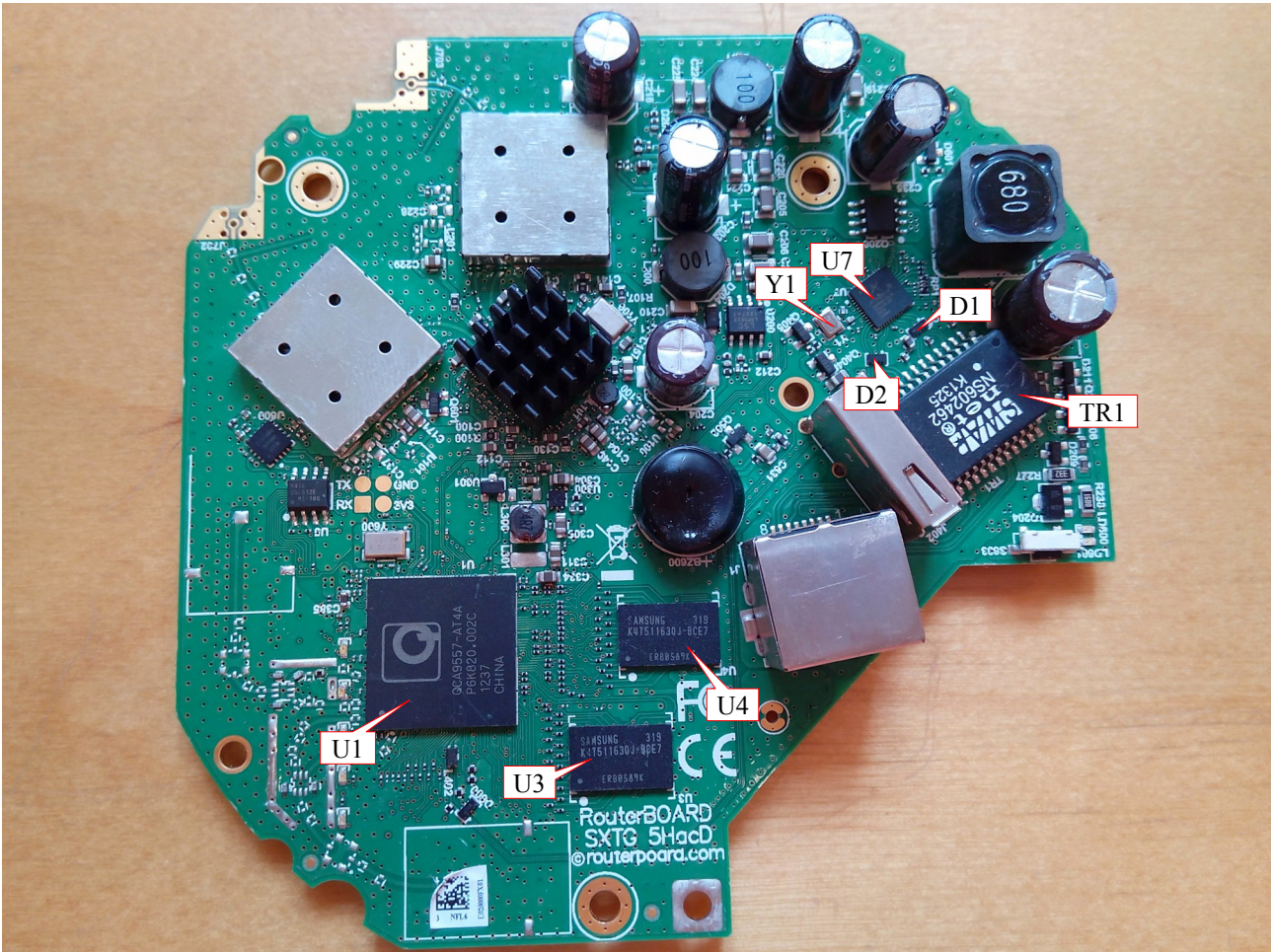
No link on Ethernet port

1. Troubleshooting flow chart



If there is still no link on ethernet port, please send board to RMA.

2. Ethernet port components location on RouterBOARD

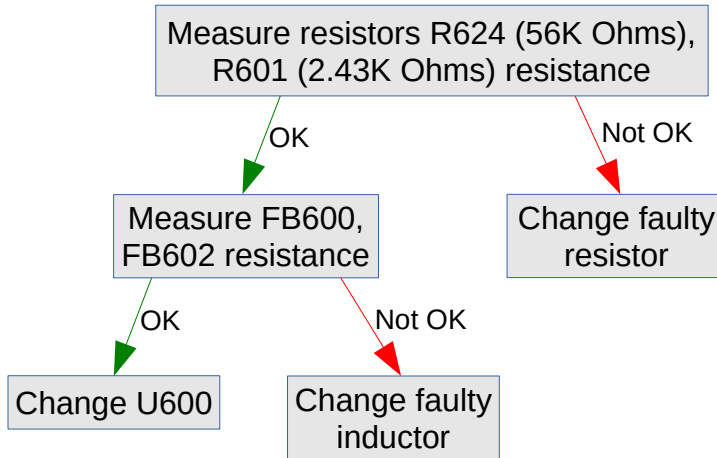


3. Ethernet port components table

Reference	Manufacturer code	Description	Manufacturer
D1, D2	AOZ8808DI-05	Diode Array TVS 4 channel low cap DFN-10	Alpha & Omega
L1	BCRH2D18B/HP-4R7N	Inductor 4.7uH 1.2A 3.2x3.2x2 RoHS	Bao Cheng Electronics Co.,Ltd.,
U1	QCA9557-AT4A-R	2x2, Dual-band SoC with MIPS74K @700 MHz USB2.0, SGMII/RGMII Interface T/R	Qualcomm Atheros Technology Ltd.
U3, U4	W9751G6KB-25	DDR2 SDRAM 512Mbit DDR2-800 32Mx16bit BGA-84 0+85C T&R	Winbond Electronics Corp.
U7	AR8033-AL1A-R	10/100/1000M RGMII AND SGMII INTERFACE ETHERNET PHY 48-pin QFN T&R	Atheros Technology Ltd.
TR1	NS602462	10/100/1000 Single Ethernet transformer SMD 24pin RoHS T&R	Feel Chemg Enterprise CO., LTD.

Voltage and temperature monitor does not work

1. Troubleshooting flow chart

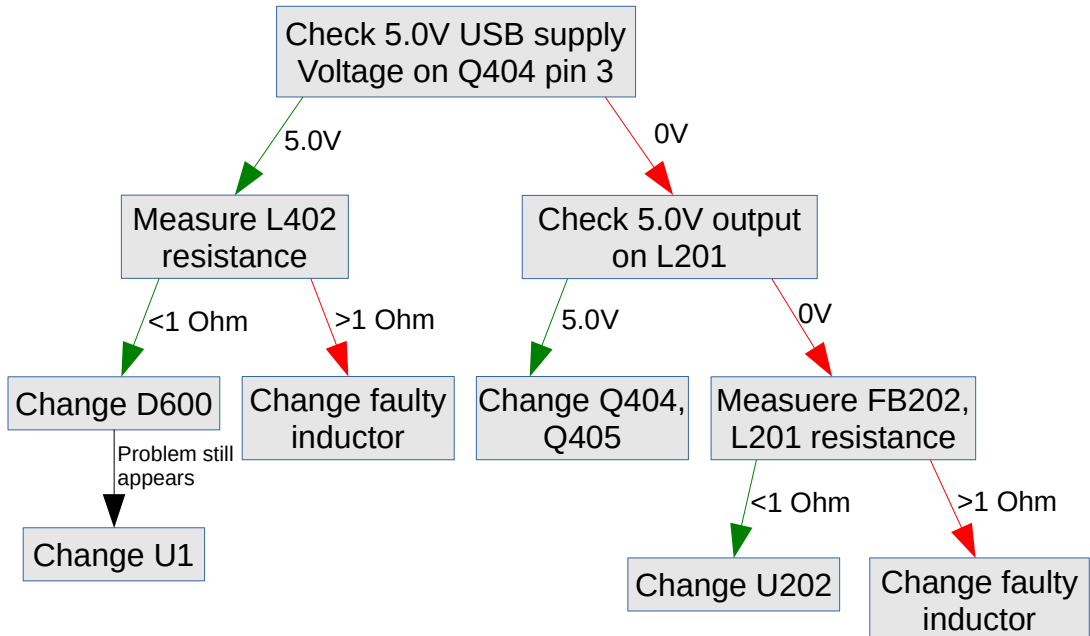


2. Voltage and temperature monitor components table

Reference	Manufacturer code	Description	Manufacturer
R624	RC0402FR-0756KL	Resistor 56k 1% 0402	Yageo Corporation
R958	RC0402FR-072K43L	Resistor 2.43k 1% 0402	Yageo Corporation
FB600, FB602	BK1005HS121-T	Ferrite Bead 120 Ohm 500mA 0402	Taiyo Yuden Co. Ltd.
U600	ZT2046Q	Touch screen controller Serial 4-wire Internal reference QFN-16	ZillTek Technology Corp

USB does not work

1. Troubleshooting flow chart

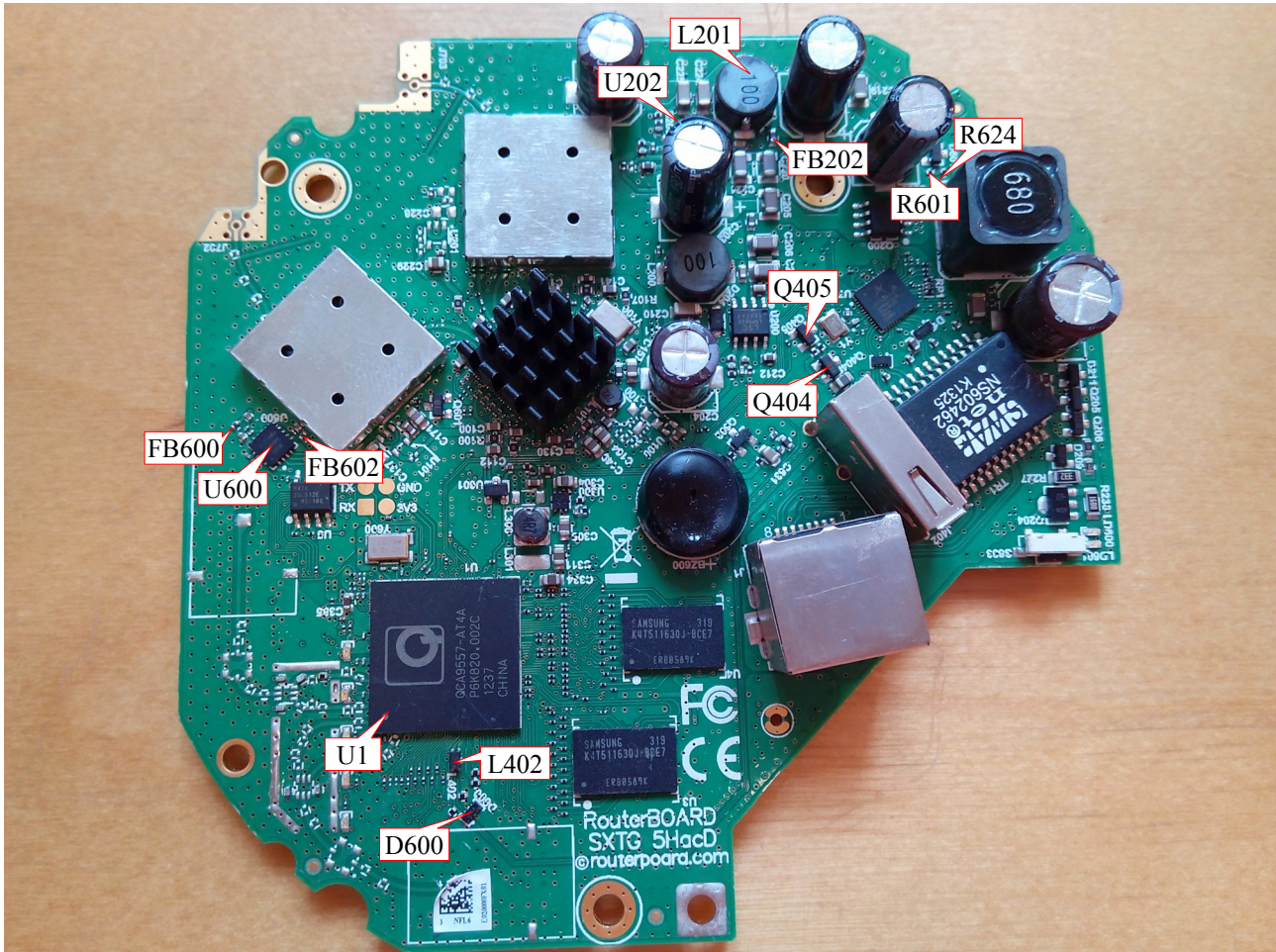


On U1 CPU silcscreen must be the same product code, or You will lose the license. License may also lose if changes U5

2. USB circuit components table

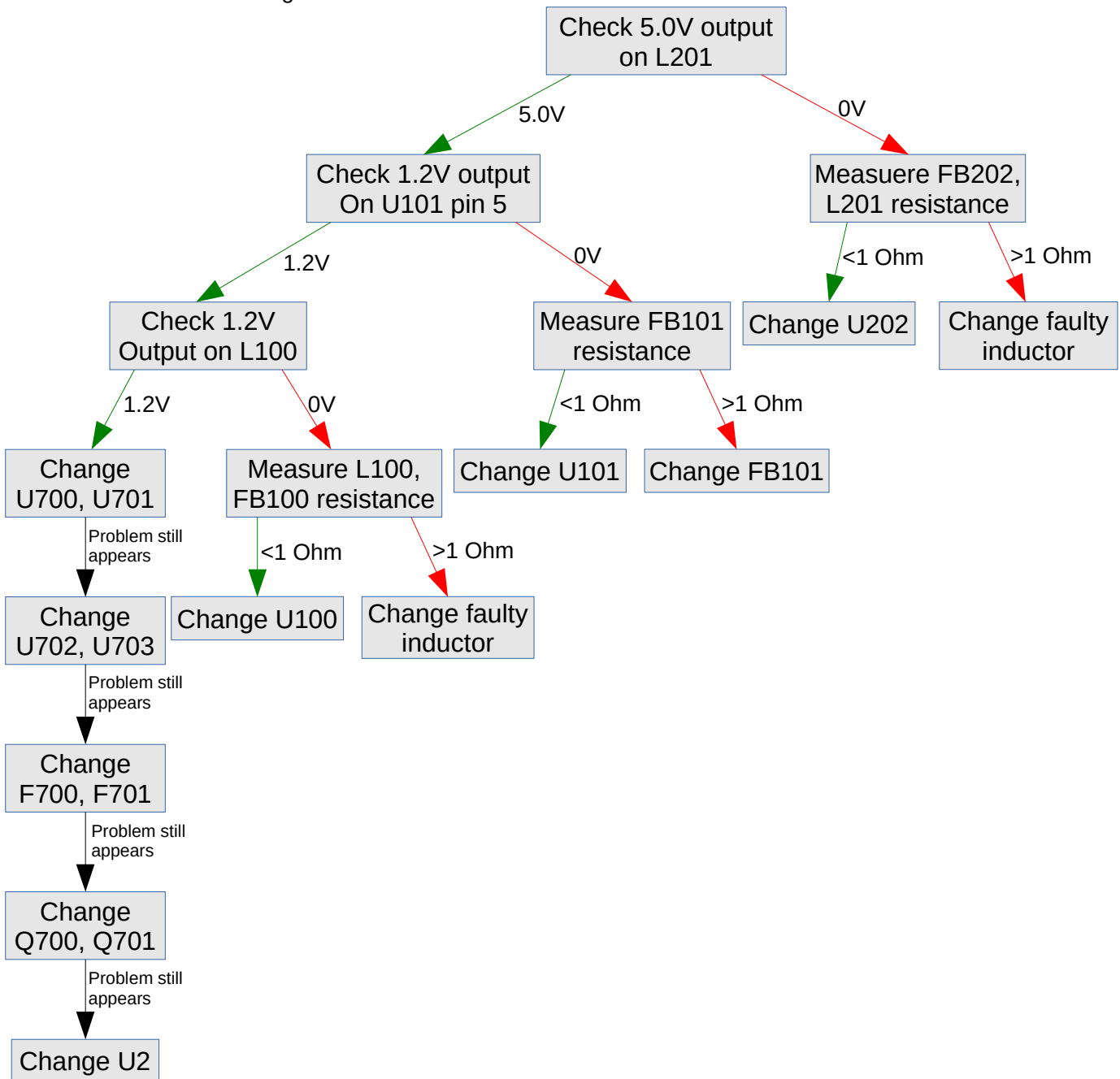
Reference	Manufacturer code	Description	Manufacturer
D600	L15ESDL5V0NA-4	Diode Array TVS 150W 4 channel low cap DFN-10	Lite-On Semiconductor corporation
FB202	CB03YTYH331	Ferrite Bead 330 Ohm 1.5A 0603	Viking Tech Corporation
L201	BCRH8D43-100N-NL	Inductor 10uH 30% 3.6A 8.3x8.3x4.7 34mOhm RoHS T&R	Bao Cheng Electronics Co.,Ltd.,
L402	WCM-2012-900T	P42069AT USB 2.0 EMI Filter, ACM2012	King Core Electronic Inc
Q404	LTC2303	MOSFET P-ch -20V -4.7A 70mOhm 1.5V level SOT-23	Lite-On Semiconductor corporation
Q405	BC846B,215	Transistor NPN 65V 100mA 250mW Hfe=290 SOT-23 RoHS	NXP Semiconductors
U1	QCA9557-AT4A-R	2x2, Dual-band SoC with MIPS74K @700 MHz USB2.0, SGMII/RGMII Interface T/R	Qualcomm Atheros Technology Ltd.

3. USB, voltage and temperature monitor components location on RouterBOARD



WiFi does not work

1. Troubleshooting flow chart



2. RF components table

Reference	Manufacturer code	Description	Manufacturer
F700, F701	LTB-2012-5G5H6-B3	Ceramic Bandpass Filter 5.5GHz	Mag.Layers Scientific-Technics Co., Ltd.
FB100	CB03YTYH330	Ferrite Bead 33 Ohm 3A 0603	Viking Tech Corporation
FB101, FB201	CB03YTYH331	Ferrite Bead 330 Ohm 1.5A 0603	Viking Tech Corporation
FB201	CB03YTYH331	SOC BGA 2x2 11n 5FE	Qualcomm Atheros Technology Ltd.
L100	BCRH2D18B/HP-4R7N	Inductor 4.7uH 1.2A 3.2x3.2x2 RoHS	Bao Cheng Electronics Co.,Ltd.,
L201	BCRH8D43-100N-NL	Inductor 10uH 30% 3.6A 8.3x8.3x4.7 34mOhm RoHS T&R	Bao Cheng Electronics Co.,Ltd.,
Q700, Q701	BFR740L3RHE6327	Transistor SiGe Heterostructure Bipolar DC-6GHz	Infineon Technologies Taiwan Co Ltd
U101	RT9043GB	IC 400mA Adj LDO SOT23-5 RoHS	Richtek Technology Corporation
U2	QCA9882-BR4A-R	2x2 802.11ac/a/b/g/n, PCIe T/R	Qualcomm Atheros Technology Ltd.
U202	LSP5523-R8A	DC-DC Step-down converter 4.5-30V input 3A output Sync SO8, RoHS	Lite-On Semiconductor corporation
U700, U701	SE5023L-R	5GHz Power Amplifier for 802.11ac, T&R	SiGe Semiconductor
U702, U703	JPG2163T5N-E2-A	GaAs MMIC SPDT Switch, 2.4GHz&6GHz, 2.5-5.3V	NEC Electronics
U100	LSP5015ADGE	1.5MHz, 1.5A, High Efficiency Step-Down DC/DC Converter DFN2020 2mm x 2mm	Lite-On Semiconductor corporation

3. RF components location on RouterBoard

