Procedure for checking over-voltage damage.

Published April 27, 2016

Contents

Checking procedure for over-voltage damage....8
1. Check Schottky diode measurement with multimeter;....8
2. Check voltage drop between diode array pin#1 and Ground....9
3. Check termination resistors resistance in RJ-45 connector. 10
260GSP series RouterBoards....11
Disassembling information....12
Schottky diode measuring with multimeter in diode mode....13
Voltage drop between Ethernet transformers and Ground....13
750r2 series RouterBoards....14
List of RB750r2 series:....14
Disassembling information....16
Schottky diode measuring with multimeter in diode mode....18
Voltage drop between TR100 pins and Ground....18
75R termination resistors resistance....19
750Gr3 series RouterBoards....20
List of RB750Gr3 series:....20
1.Disassembling information....21
Schottky diode measuring with multimeter in diode mode....22
Voltage drop between TR1 pins and Ground....22
75R termination resistors resistance....23
751U-2HnD series RouterBoards....24
Disassembling information....25
Schottky diode measuring with multimeter in diode mode....26
Voltage drop between TR100 pins and Ground....26
75R termination resistors resistance....27
850Gx2 series RouterBoards....28
Schottky diode measuring with multimeter in diode mode....29
Voltage drop between TR5, ether2 - ether5 pins and Ground....30
75R Termination resistors resistance....31
911-2Hn series RouterBoards....32
Schottky diode measuring with multimeter in diode mode....33
Voltage drop between TR400 Pins and Ground....33
75R termination resistors resistance....34
911-5Hn series RouterBoards....35
Schottky diode measuring with multimeter in diode mode....36
Voltage drop between TR400 Pins and Ground....36
75R termination resistors resistance....37
912G - 2HnD series RouterBoards....38
BaseBox 2 disassembling information....41
Schottky diode measuring with multimeter in diode mode....43
Voltage drop between TR1 Pins and Ground....44

75R Termination resistors resistance....45
912G - 5HPnD series RouterBoards....46
QRT 5 disassembling information....50
Schottky diode measuring with multimeter in diode mode....54
Voltage drop between TR1 pins and Ground....55
75R Termination resistors resistance....56
921UAGS-5SHPac series RouterBoards....57
RB921GS-5HPac series:....57
Disassembling information....58
Schottky diode measuring with multimeter in diode mode....60
Voltage drop between TR300 pins and Ground....61
922GS-5HPac series RouterBoards....62
RB922GS-5HPac series:....62
Disassembling information....67
mANTBox disassembling....71
Schottky diode measuring with multimeter in diode mode....74
Voltage drop between TR300 and Ground....75
951-2n series RouterBoards....76
Disassembling information....77
Schottky diode measuring with multimeter in diode mode....78
Voltage drop between TR1 pins and Ground....78
75R termination resistors resistance....79
951G-2HnD series RouterBoards....80
Disassembling information....81
Schottky diode measuring with multimeter in diode mode....82
Voltage drop between TR100 pins and Ground....82
75R termination resistors resistance....83
951Ui-2HnD series RouterBoards....84
Disassembling information....85
Schottky diode measuring with multimeter in diode mode....86
Voltage drop between TR102 pins and Ground....86
75R termination resistors resistance....87
953GS-5HnT series RouterBoards....88
Schottky diode measuring with multimeter in diode mode....89
....89
Voltage drop between TR1 pins and Ground....90
75R Termination resistors resistance....91
2011 series RouterBoards 92
List of RB2011 series RouterBoards:....92
Disassembling information....93
Schottky diode measuring with multimeter in diode mode....95
Voltage drop between Ethernet transformers pins and Ground....95
Termination resistors resistance in RJ-45 connector....96

3011 series RouterBoards 97
List of RB3011 series RouterBoards: 97
Disassembling information 97
Schottky diode measuring with multimeter in diode mode 98
Voltage drop between Ethernet transformers and Ground 98
Termination resistors resistance 99
cAP series RouterBoards 100
RBcAP series: 100
Disassembling information 101
Schottky diode measuring with multimeter in diode mode 102
Voltage drop between TRF1 pins and Ground 103
75R Termination resistors resistance 104
CCR1009 series RouterBoards 105
List of CCR1009 series RouterBoards: 105
Disassembling information 106
Schottky diode measuring with multimeter in diode mode 109
Voltage drop between Ethernet pins and Ground 109
Termination resistors resistance in RJ-45 connector 111
CCR1016-12G, CCR1036-12G series 112
List of Cloud Core Router CCR1016-12G, CCR1036-12G series: 112
Disassembling information 113
Voltage drop between diode array pin#1 and Ground 114
Termination resistors resistance in RJ-45 connector 115
CCR1036-8G-2S+ series 116
List of Cloud Core Router CCR1036-8G-2S+ series: 116
Disassembling information 117
Voltage drop between Ethernet Transformers on ports and Ground 119
CCR1072-1G-8S+ series 121
Cloud Core Router CCR1072-1G-8S+: 121
Disassembling information 121
Voltage drop between capacitors and Ground 122
CRS109-8G-4S series RouterBoards 123
Disassembling information 124
Schottky diode measuring with multimeter in diode mode 125
Voltage drop between TR1200, TR1201 and Ground 125
75R termination resistors resistance 126
CRS112-8G-4S series RouterBoards 127
Disassembling information 127
Schottky diode measuring with multimeter in diode mode 129
Voltage drop between diode TR1200, TR1201 and Ground 129
75R termination resistors resistance 130
CRS125-24G-1S series 131
List of Cloud Router Switch CRS125-24G-1S series: 131

Disassembling information....132
Schottky diode measuring with multimeter in diode mode....134
Voltage drop between Ethernet Transformers and Ground....134
Termination resistors resistance in RJ-45 connector....135
CRS210-8G-2S+ series RouterBoards....136
Disassembling information....136
Schottky diode measuring with multimeter in diode mode....138
Voltage drop between TR1200, TR1201 and Ground....138
CRS212-1G-10S-1S+ series RouterBoards....139
Disassembling information....139
Schottky diode measuring with multimeter in diode mode....141
Voltage drop between TRF1200 and Ground....141
75R termination resistors resistance....142
CRS226-24G-2S+ series RouterBoards....143
Disassembling information....144
Schottky diode measuring with multimeter in diode mode....145
Voltage drop between Ethernet Transformers and Ground....145
75R termination resistors resistance....146
DynaDish series RouterBoards....147
RBDynaDish series:....147
Disassembling information....148
Schottky diode measuring with multimeter in diode mode....149
Voltage drop between TR1 pins and Ground....150
FTC11 series RouterBoards....151
Schottky diode measuring with multimeter in diode mode....153
Voltage drop between TR1 pins and Ground....153
Groove 52HPn series RouterBoards....154
Voltage drop between TR300 pins and Ground....155
75R termination resistors resistance....155
hAP lite series RouterBoards....156
2.Disassembling information....157
Voltage drop between TR1 pins and Ground....160
hAP lite ac series RouterBoards....161
Disassembling information....162
Voltage drop between TR1 pins and Ground....163
hAP ac series RouterBoards....164
Disassembling information....165
Schottky diode measuring with multimeter in diode mode....166
Voltage drop between TR100 pins and Ground....167
75R termination resistors resistance....168
mAP series RouterBoards....169
RBmAP series:....169

Disassembling information....170
Schottky diode measuring with multimeter in diode mode....172
Voltage drop between J2 Pins and Ground....173
mAP lite series RouterBoards....174
RBmAPL-2nD series:....174
Disassembling information....174
Voltage drop between J300 Pins and Ground....176
Metal 5SHPn series RouterBoards....177
Schottky diode measuring with multimeter in diode mode....179
Voltage drop between TR1000 pins and Ground....179
Metal 2SHPn series RouterBoards....180
Schottky diode measuring with multimeter in diode mode....182
Voltage drop between TR1000 pins and Ground....182
Metal 9HPn series RouterBoards....183
Schottky diode measuring with multimeter in diode mode....185
Voltage drop between TR1000 pins and Ground....185
Metal 52 ac series RouterBoards....186
Schottky diode measuring with multimeter in diode mode....188
Voltage drop between TR1 pins and Ground....188
OmniTIK UPA-5HnD series RouterBoards....189
Schottky diode measuring with multimeter in diode mode....191
Voltage drop between TR102 pins and Ground....192
75R Termination resistors resistance....192
SXTG-2HnD series RouterBoards....193
SXT 2 series:....193
Disassembling information....194
Schottky diode measuring with multimeter in diode mode....196
Voltage drop between TR100 pins and Ground....197
SXTG-5HPnD series RouterBoards....198
RBSXTG-5HPnD series:....198
Disassembling information....199
Schottky diode measuring with multimeter in diode mode....201
Voltage drop between TRF401 pins and Ground....202
75R Termination resistors resistance....203
SXTG-5HPacD series RouterBoards....204
RBSXTG-5HPacD series:....204
Disassembling information....205
Schottky diode measuring with multimeter in diode mode....207
Voltage drop between TR1 pins and Ground....208
SXTLite2 series RouterBoards....209
RBSXTLite2 series:....209
Disassembling information....210

Schottky diode measuring with multimeter in diode mode....212
Voltage drop between TRF400 pins and Ground....213
75R Termination resistors resistance....214
SXTLite5 series RouterBoards....215
RBSXTLite5 series:....215
Disassembling information....216
Schottky diode measuring with multimeter in diode mode....218
Voltage drop between TRF400 pins and Ground....219
75R Termination resistors resistance....220
SXT Lite5 ac series RouterBoards....221
RBSXT Lite5 ac series:....221
Disassembling information....222
Schottky diode measuring with multimeter in diode mode....224
Voltage drop between TR1 pins and Ground....225
75R Termination resistors resistance....226
SXT LTE series RouterBoards....227
RBSXT LTE series:....227
Disassembling information....228
Schottky diode measuring with multimeter in diode mode....230
Voltage drop between TR300 pins and Ground....231
75R Termination resistors resistance....232
wAP series RouterBoards....233
Schottky diode measuring with multimeter in diode mode....235
Voltage drop between TR1 pins and Ground....235
LHG series RouterBoards....236
Schottky diode measuring with multimeter in diode mode....240
Voltage drop between TR1 pins and Ground....241

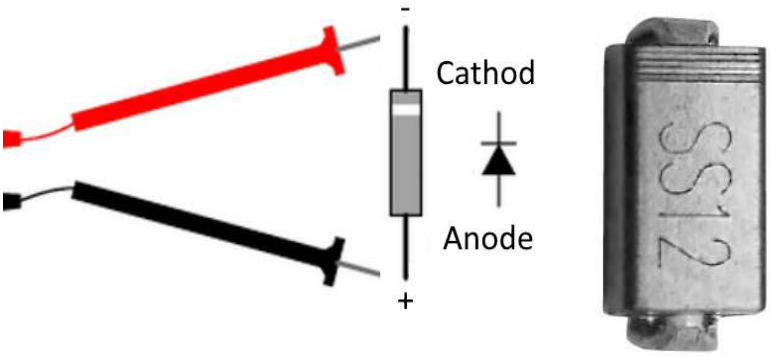
Checking procedure for over-voltage damage

Over-voltage can be caused by the following reasons: high voltage surge, lightning, electrostatics etc. You can check if routerboard was damaged by over-voltage, by using the following testing methods:

1. Check Schottky diode measurement with multimeter;

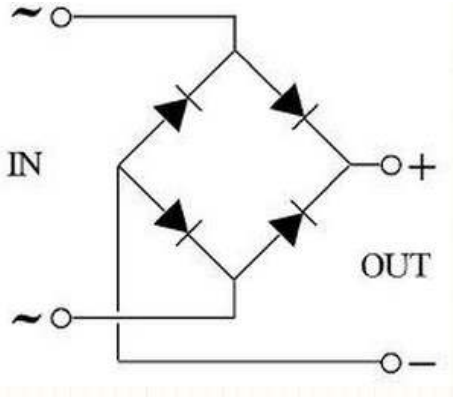
Schottky diode quality can be measured with diode test function, see picture 1, When the test probes are connected as shown in Pictur2: red probe to Cathode and black probe to Anode, Value of measurement should be Open loop, as in picture 1. If Schottky diode will be damaged, measurement will show some other value, from short to small voltage drop.

Picture 1

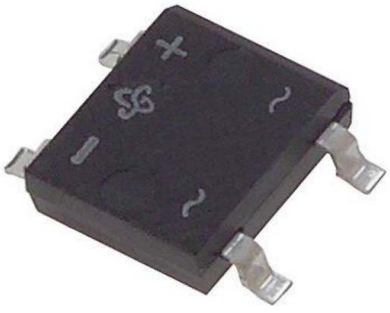


Picture 2

In the same manner we make Diode bridge test, considering schematic of bridge rectifiers, see Picture 3 and Picture 4.



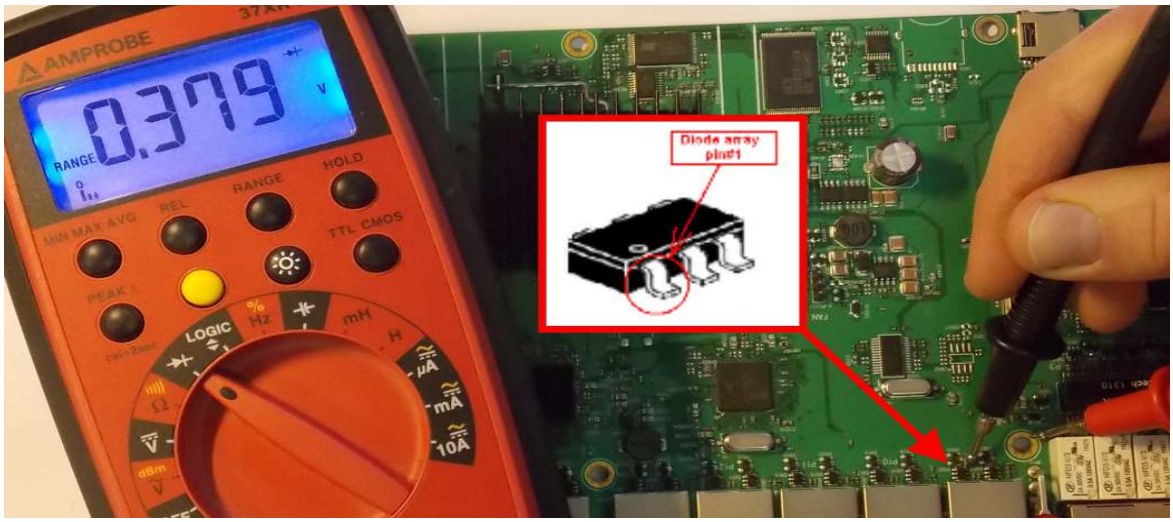
Picture 3



Picture 4

2. Check voltage drop between diode array pin#1 and Ground.

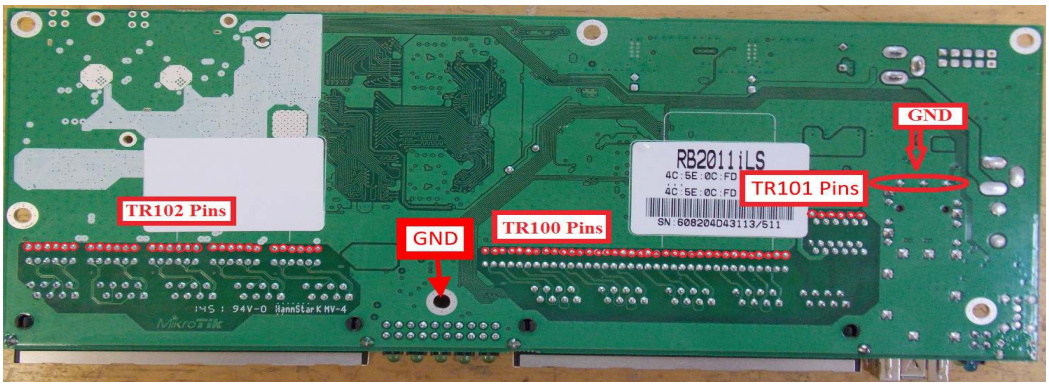
You should measure in diode mode: hold “positive” wire on the Ground and “COM” wire to diode array pin#1. Diode array pin#1 is always marked by dot mark on the diode array case,see picture 5 .



Picture 5

Often easier to measure the voltage drop on diode array pins are on transformer pins, wich also connects to diode array pins. Measurement do similar to diode array: measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked Transformers pins.

For example Picture 6 are marked Transformers pins and picture 7 are shown how to measure.



Picture 6

Picture 7

3. Check termination resistors resistance in RJ-45 connector.

Picture 8

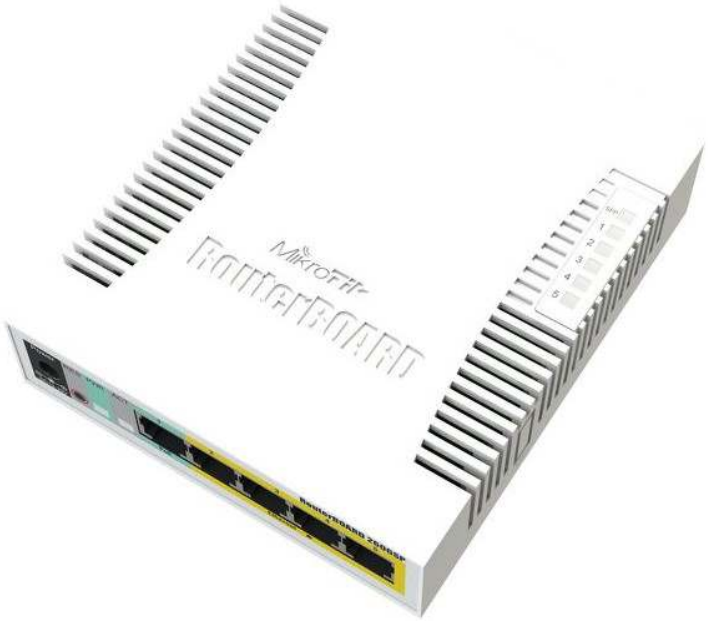
For this measurement you should take patch cord and plug it into the routerboard, see picture 8, and then measure resistance of termination resistors.

Resistance value between Rx and Tx line must be 150 Ohm +/-4%.

If resistance value is smaller or higher then Tx/Rx line was damaged by high voltage surge.

260GSP series RouterBoards

RB260GSP



Picture 9

RB260GS

Picture 10

Disassembling information

1. Take off the cover with a screwdriver as shown in the pictures 282

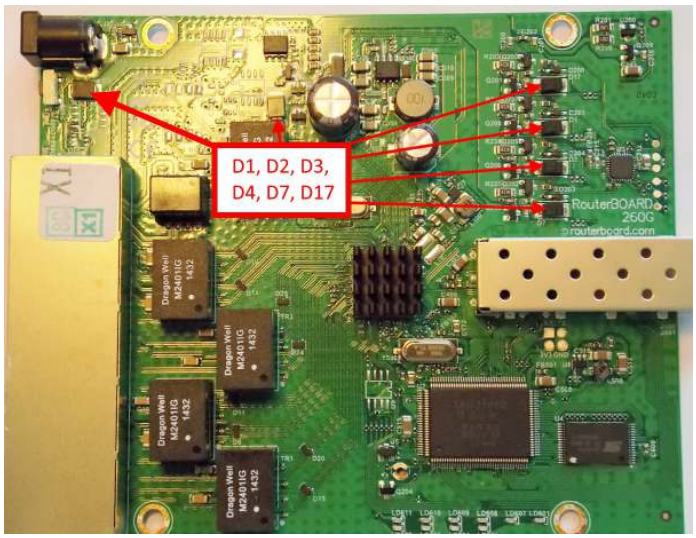
Picture 11

2. Take out the board with a screwdriver as shown in the picture 12

Picture 12

Schottky diode measuring with multimeter in diode mode

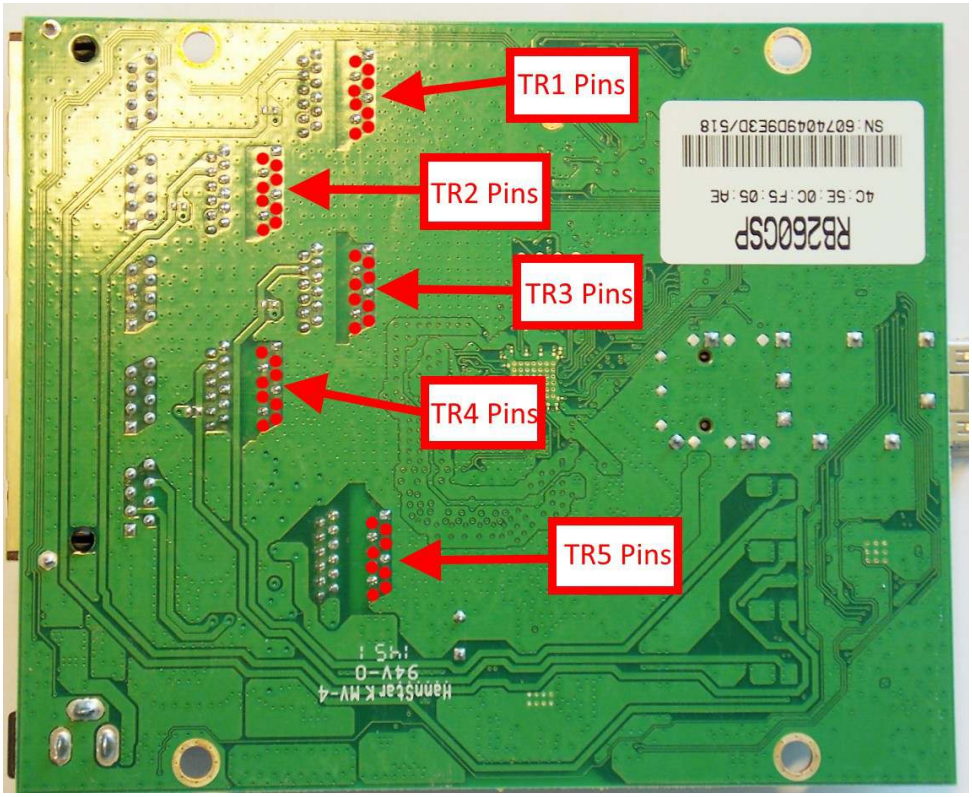
Diode bridge reference numbers are D1, D2, D3, D7, D17. Schottky diode quality measurement method describe on page 7



Picture 13

Voltage drop between Ethernet transformers and Ground.

Check voltage drop between TR1, TR2, TR3, TR4, TR5 Ethernet Transformers on ports Ether1 – Ether5 pins and Ground. Ether Pins are marked with red. It should be in the range from 0,32V to 0,438V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked Transformers pins.



Picture 14

750r2 series RouterBoards

List of RB750r2 series:

PowerBox

Picture 15

*h*EX lite

Picture 16

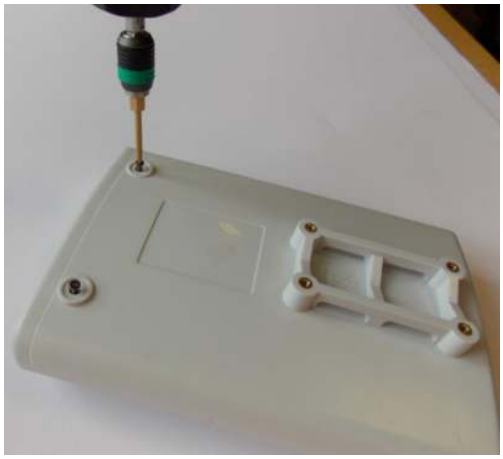
*h*EX PoE lite

Picture 17

Disassembling information

PowerBox disassembling

1. step



Picture 18

Unscrew with Torx T8

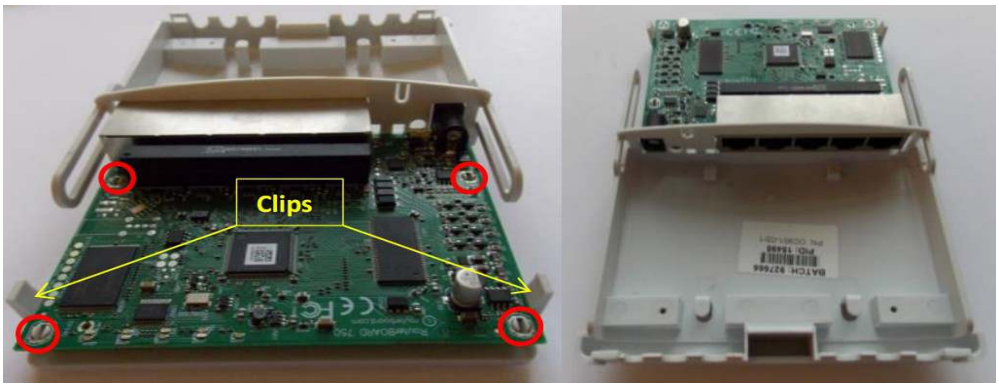
2. step

Remove board from case

Picture 19

3. Step

Incline fixed plastic clips to sever board from case.

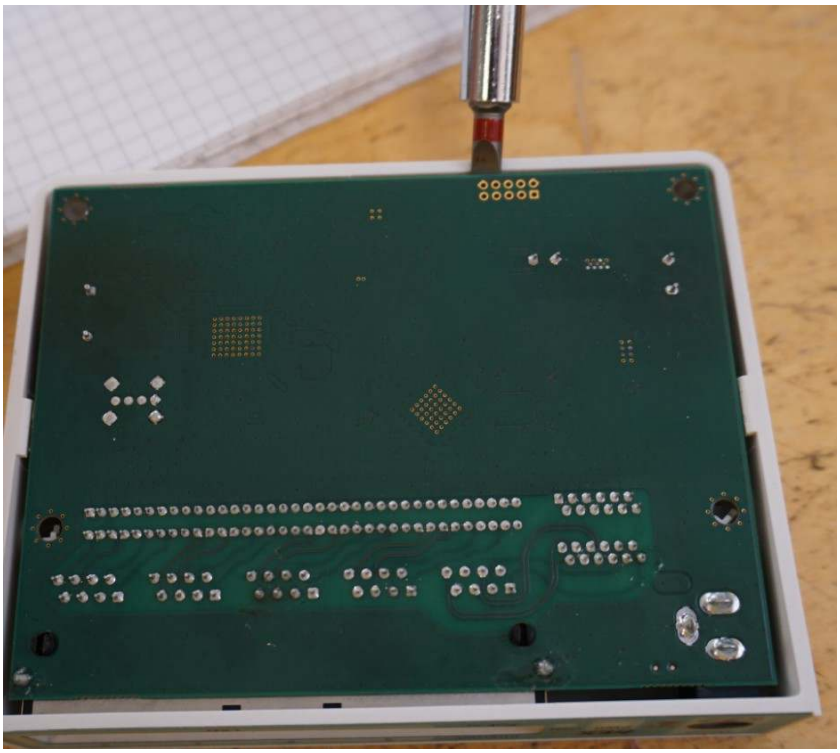


Picture 20

*h*EX lite and *h*EX PoE lite disassembling

Take off the cover with a screwdriver as shown in the picture 21

Picture 21



picture 22

Take out the board with a screwdriver as shown in the picture 22

Schottky diode measuring with multimeter in diode mode

Schottky diode reference numbers is D7, D8, D705, D706, D707, D708. Schottky diode quality measurement method describe on page 7

Picture 23

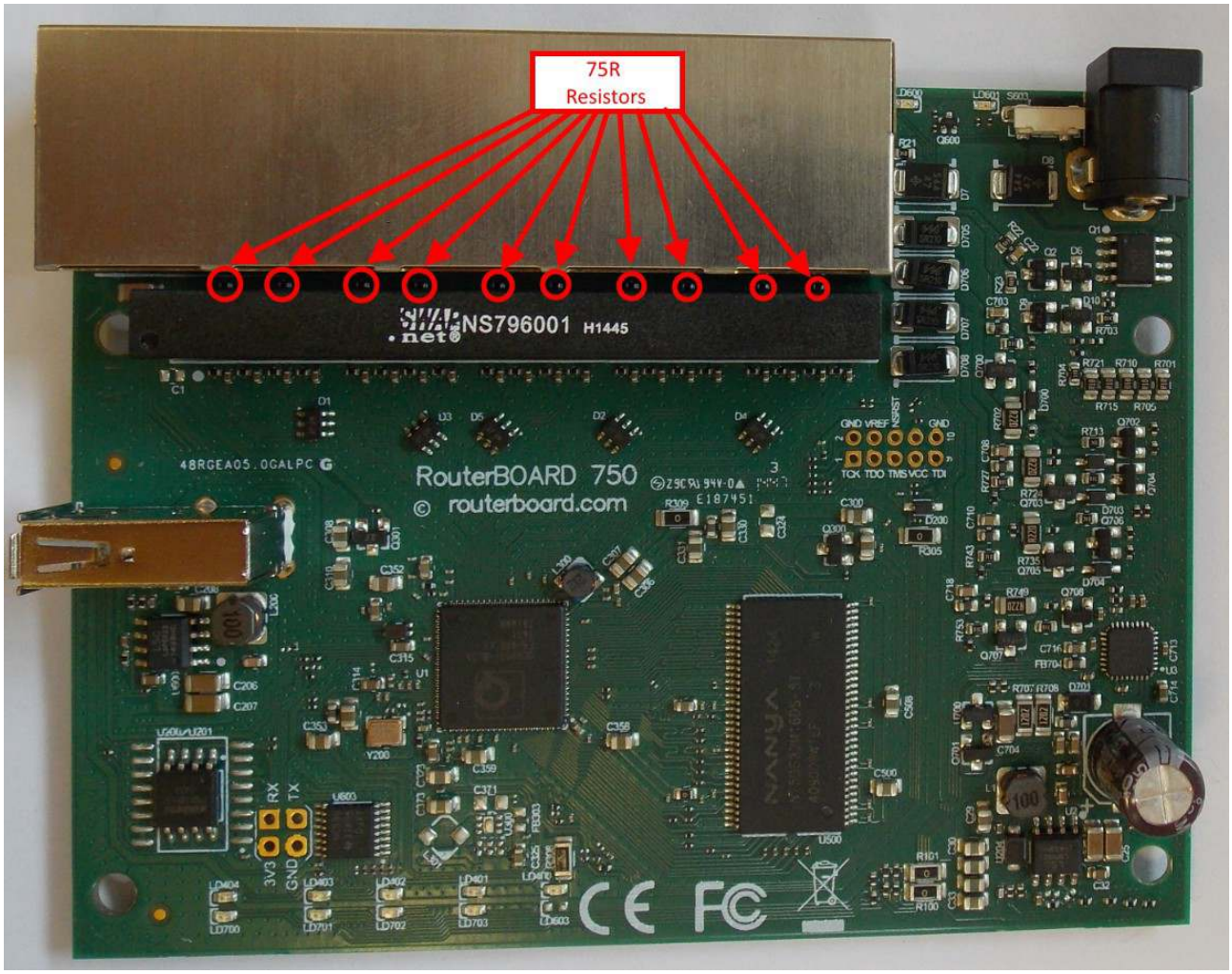
Voltage drop between TR100 pins and Ground.

Check voltage drop between TR1 Ethernet Transformers on ports Ether1 – Ether5 pins and Ground. Ether Pins are circled red. It should be in the range from 0,32V to 0,438V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked TR1 Transformers pins

Picture 24

75R termination resistors resistance

Red circled resistors resistance should be 75Ohm +/- 1%

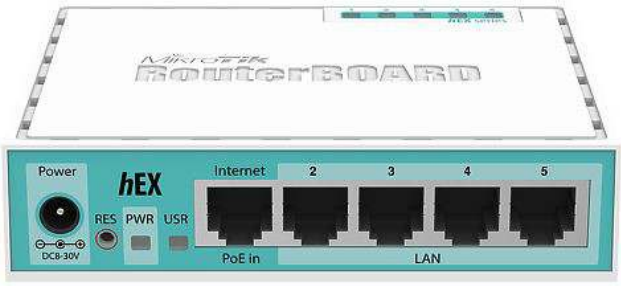


Picture 25

750Gr3 series RouterBoards

List of RB750Gr3 series:

*h*EX



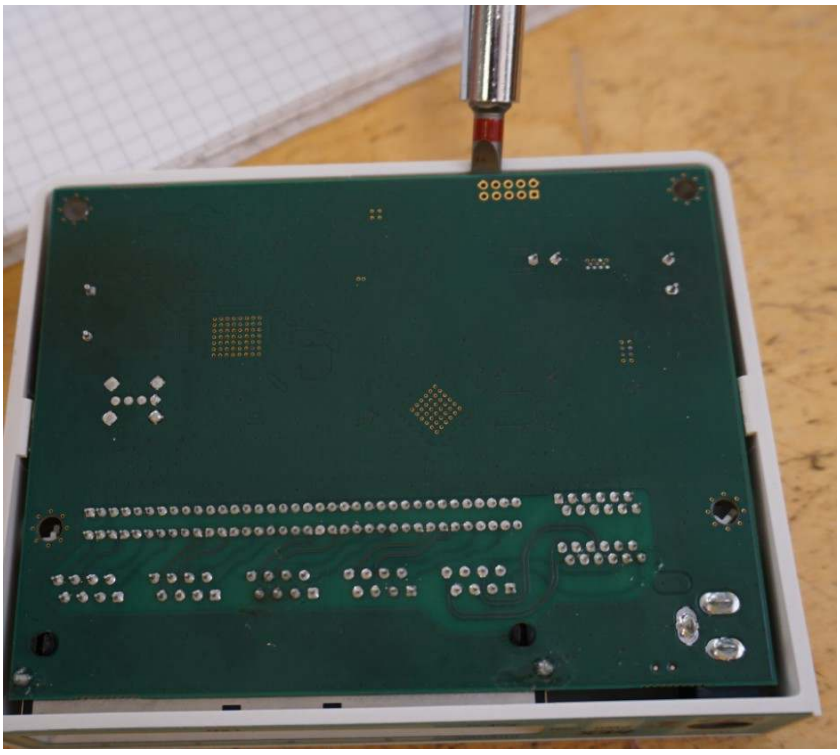
Picture 160

1. Disassembling information

*h*EX disassembling

Take off the cover with a screwdriver as shown in the picture 21

Picture 21

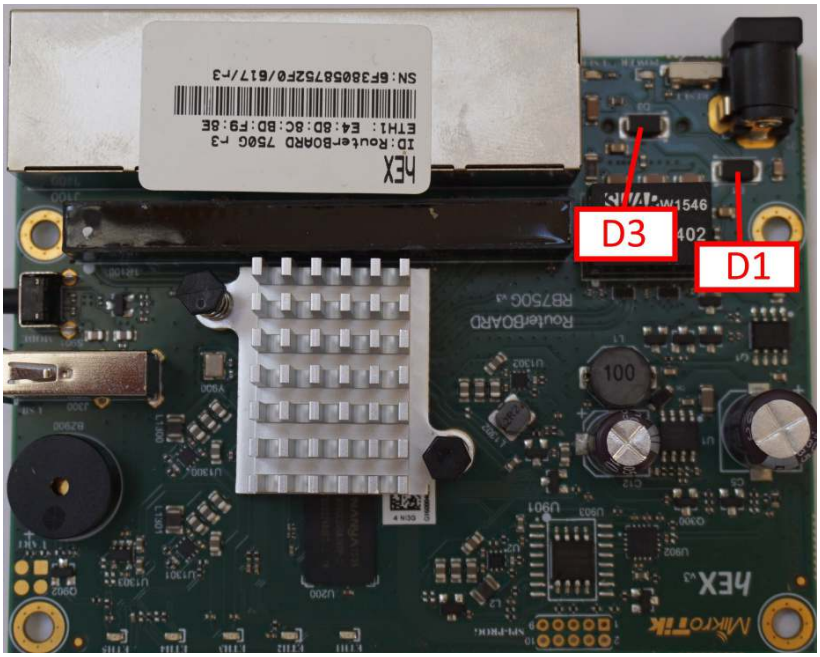


picture 22

Take out the board with a screwdriver as shown in the picture 22

Schottky diode measuring with multimeter in diode mode

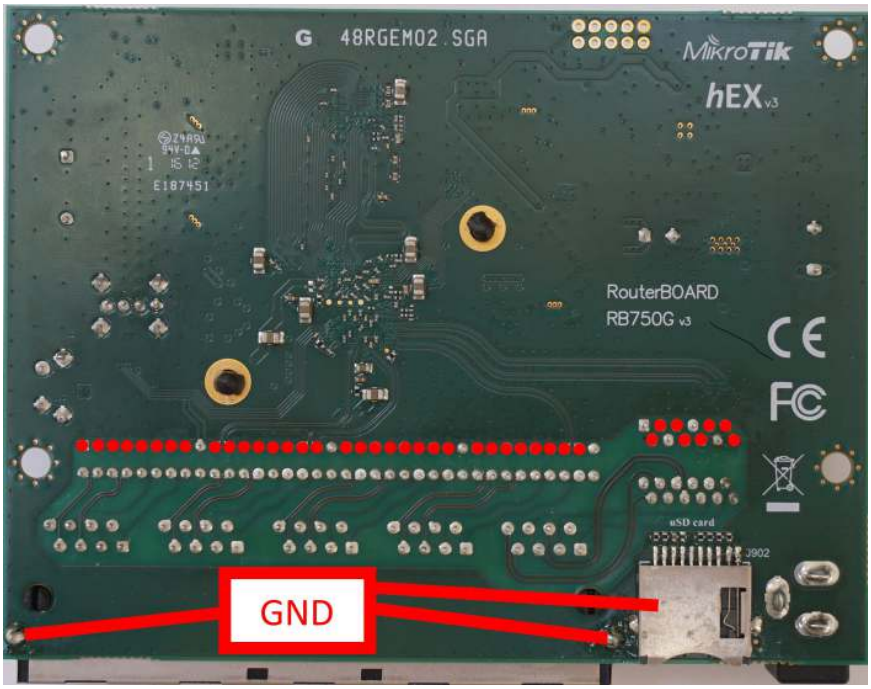
Schottky diode reference numbers is D1, D3. Schottky diode quality measurement method describe on page 7



Picture 123

Voltage drop between TR1 pins and Ground.

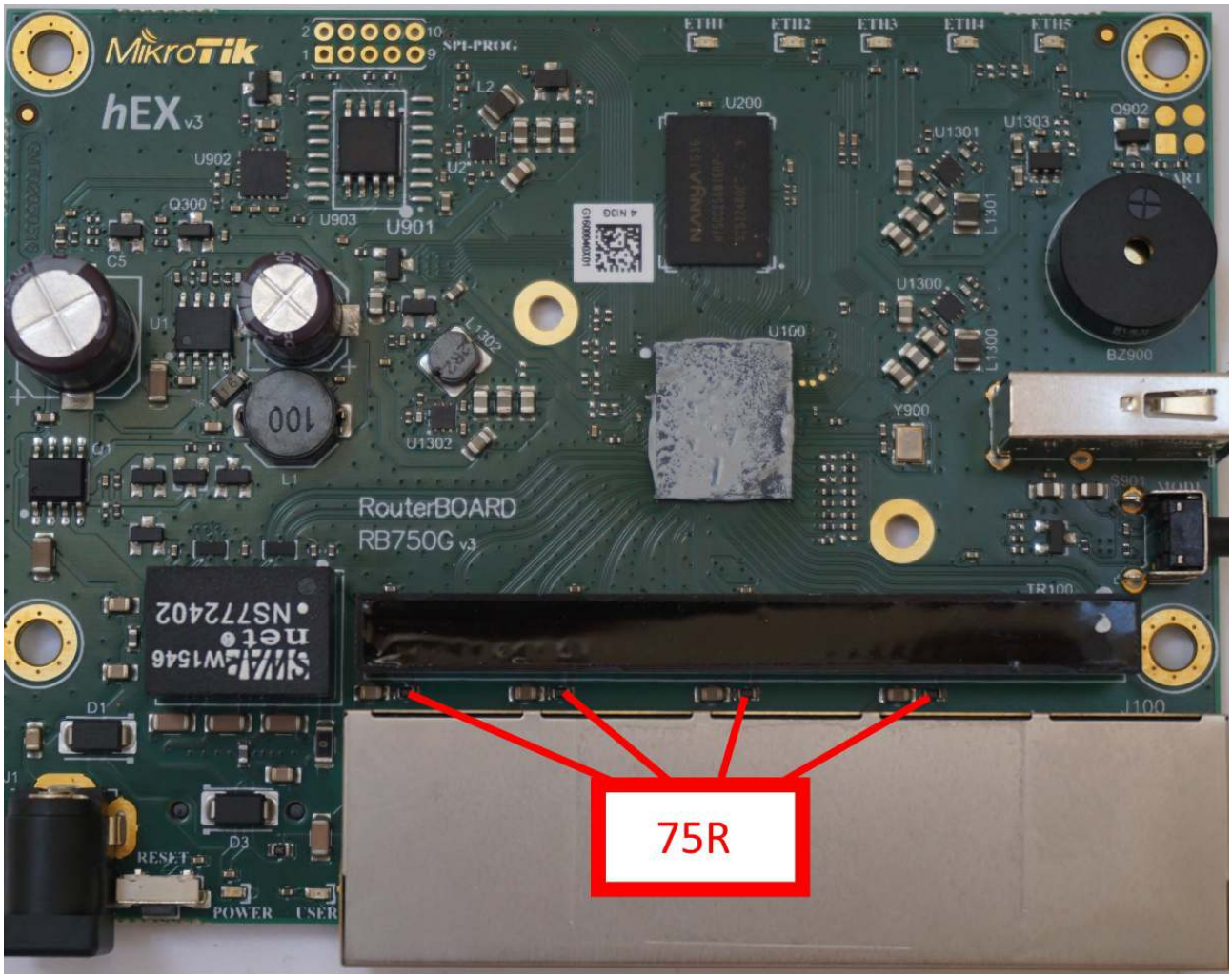
Check voltage drop between TR1 Ethernet Transformers on ports Ether1 – Ether5 pins and Ground. Ether Pins are circled red. It should be in the range from 0,27V to 0,338V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked TR100 Transformers pins



Picture 124

75R termination resistors resistance

Marked resistors resistance should be 75Ohm +/- 1%



Picture 125

751U-2HnD series RouterBoards

RB751U-2HnD

Picture 26

Disassembling information

Take off the cover with a screwdriver as shown in the pictures 27

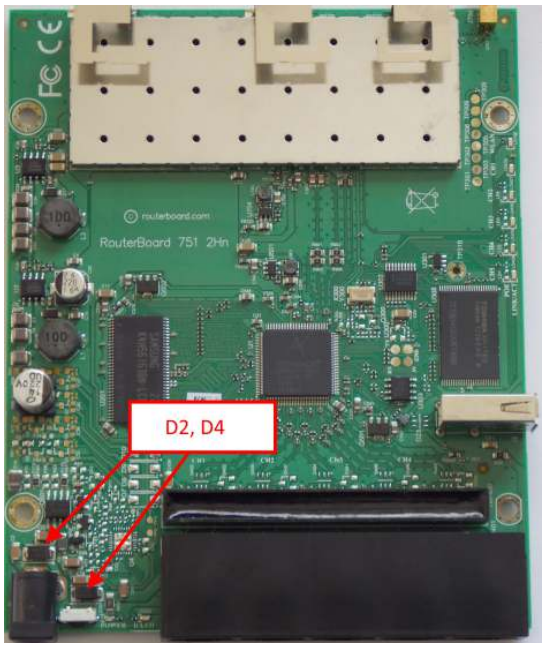
Picture 27

Take out the board with a screwdriver as shown in the picture 28

Picture 28

Schottky diode measuring with multimeter in diode mode

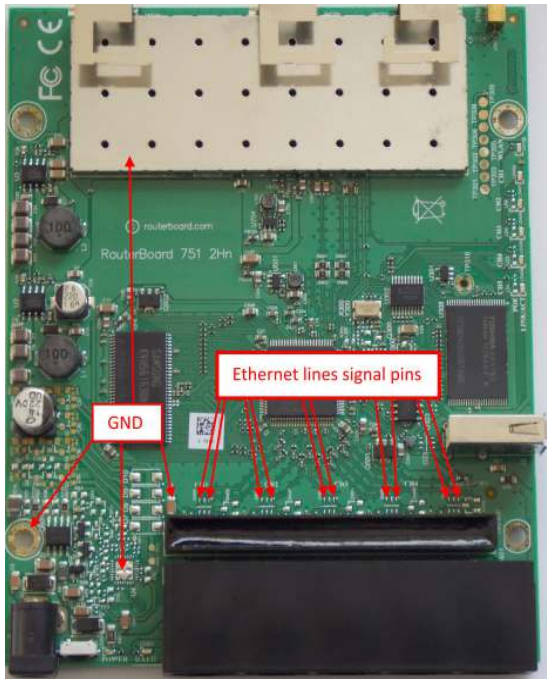
Diode bridge reference numbers are D2 and D4.
Schottky diode quality measurement method describe on page 7



Picture 29

Voltage drop between TR100 pins and Ground.

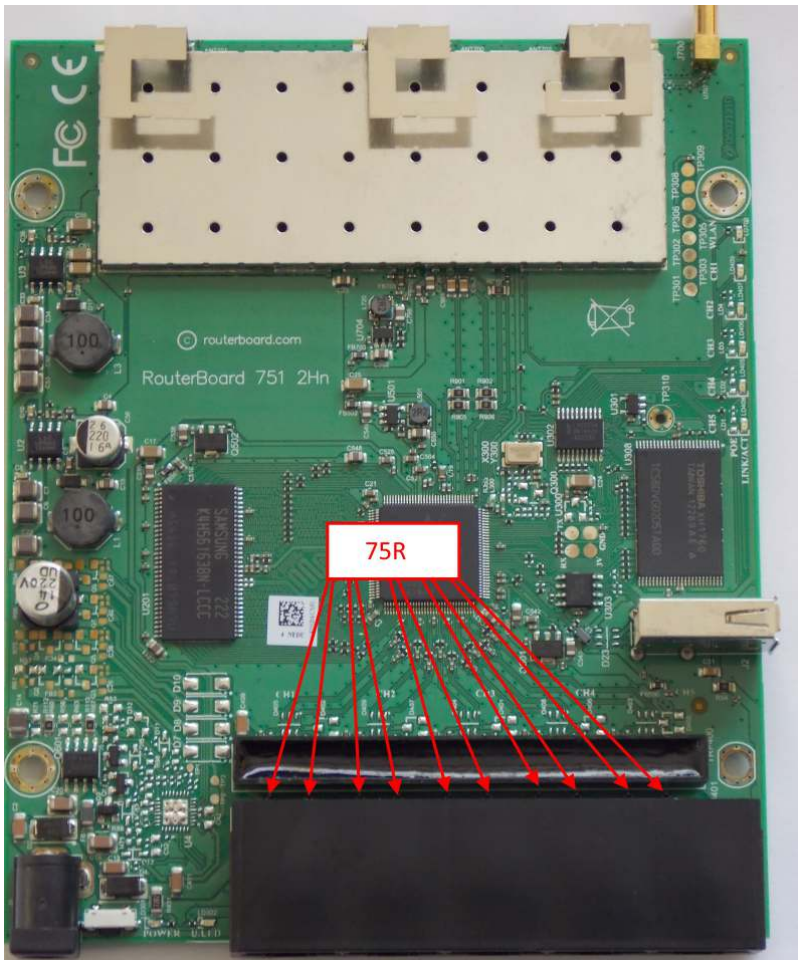
Check voltage drop between Ground and Ethernet signal lines, wich are connected to TR100 Ethernet Transformer on ports Ether1 – Ether5 pins. Ether Pins are marked with red arrows. It should be in the range from 0,32V to 0,438V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked Transformers pins.



Picture 30

75R termination resistors resistance

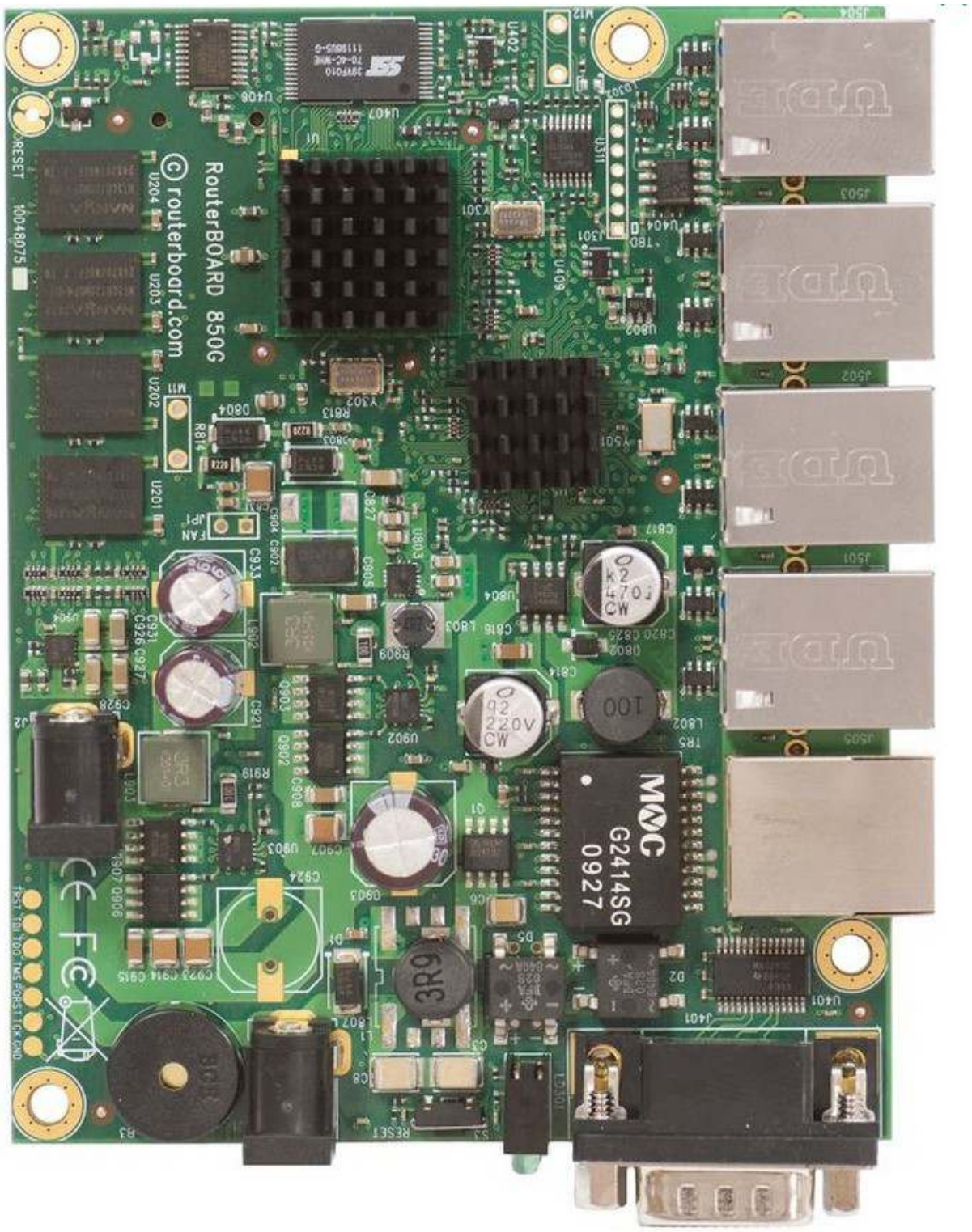
Red circled resistors resistance should be 75R +/- 1%



Picture 31

850Gx2 series RouterBoards

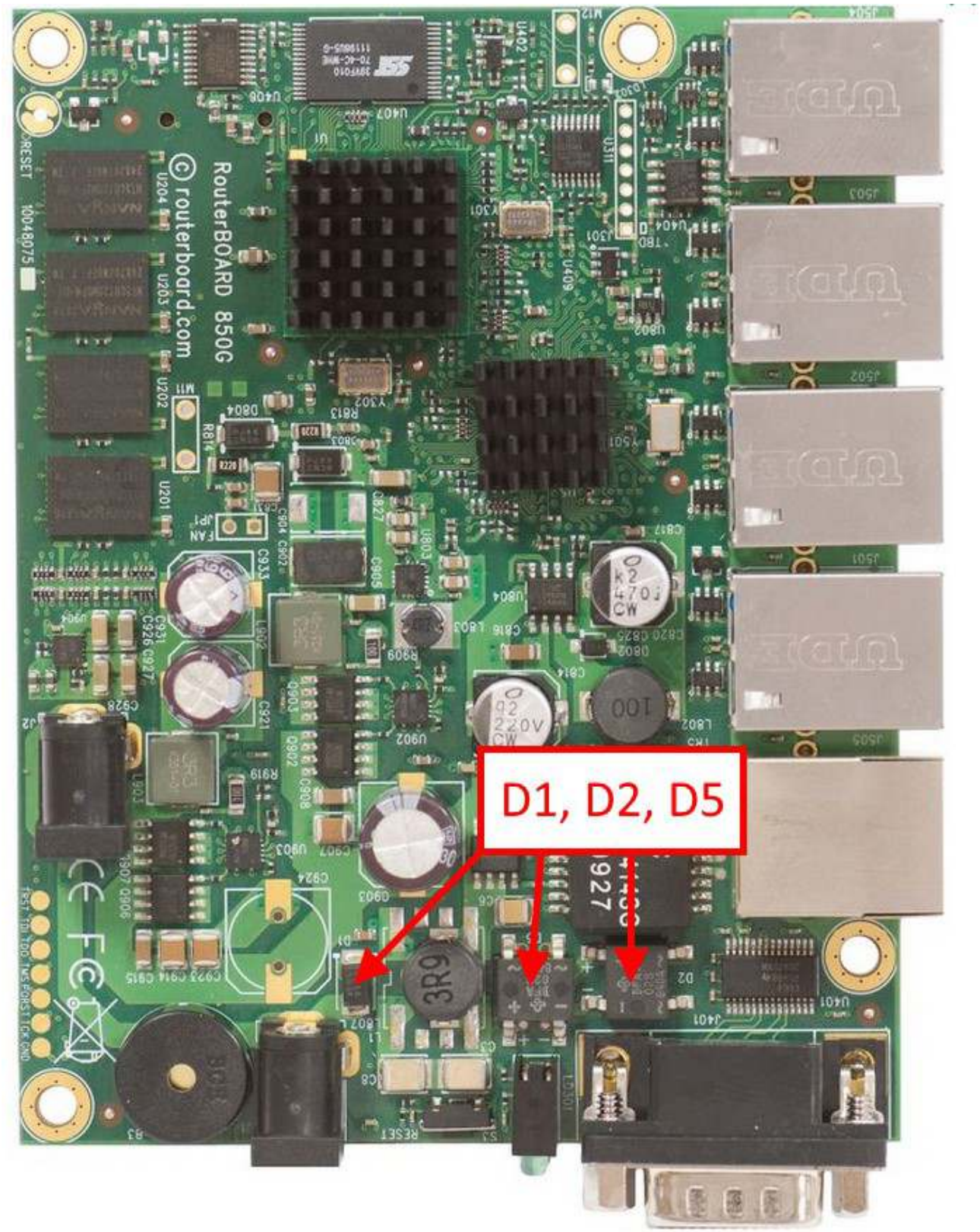
RB850Gx2



Picture 32

Schottky diode measuring with multimeter in diode mode

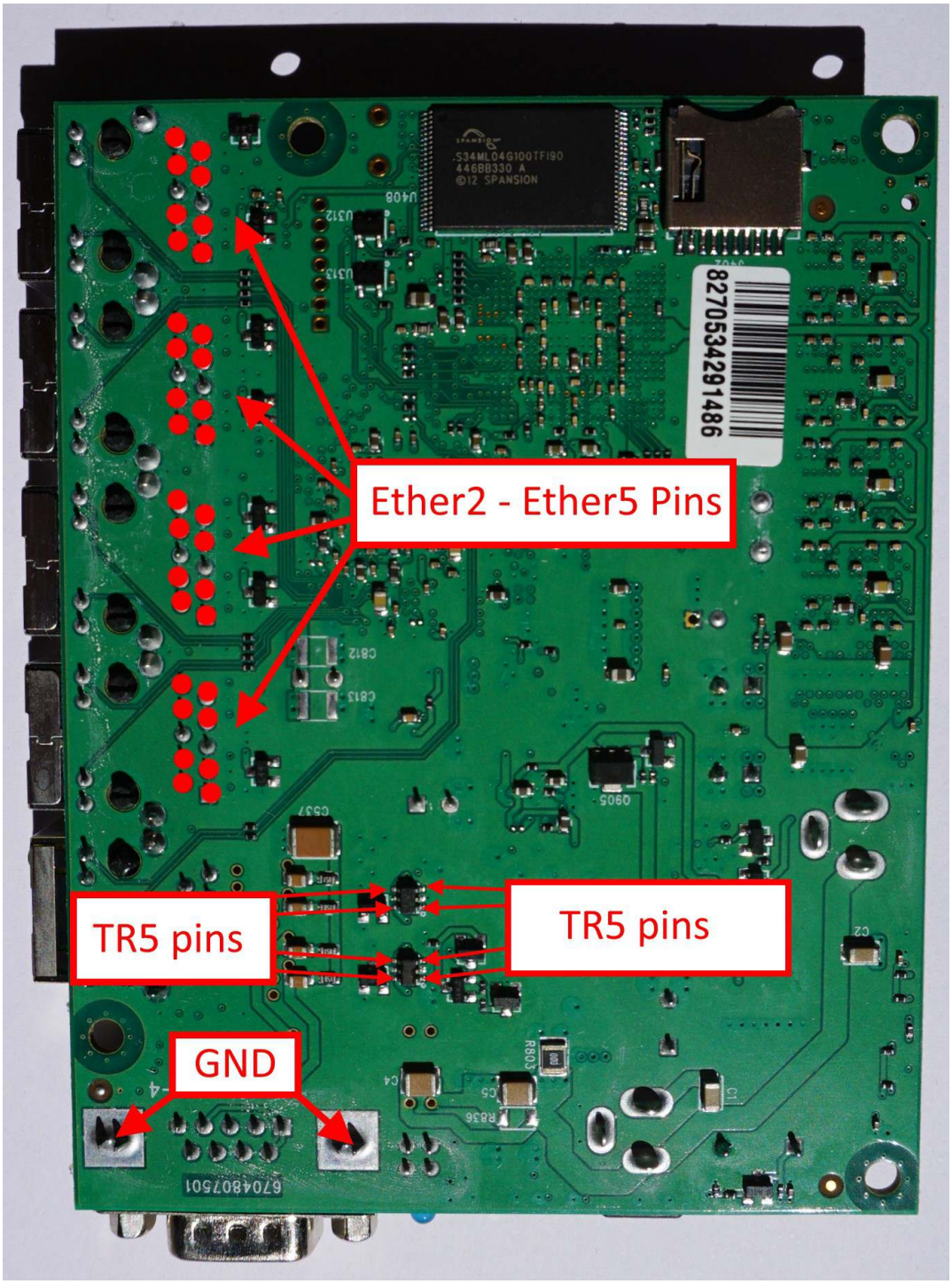
Schottky diode reference number is D1; Diode bridge reference numbers are D2 and D5. Schottky diode quality measurement method describe on page 7



Picture 33

Voltage drop between TR5, ether2 - ether5 pins and Ground.

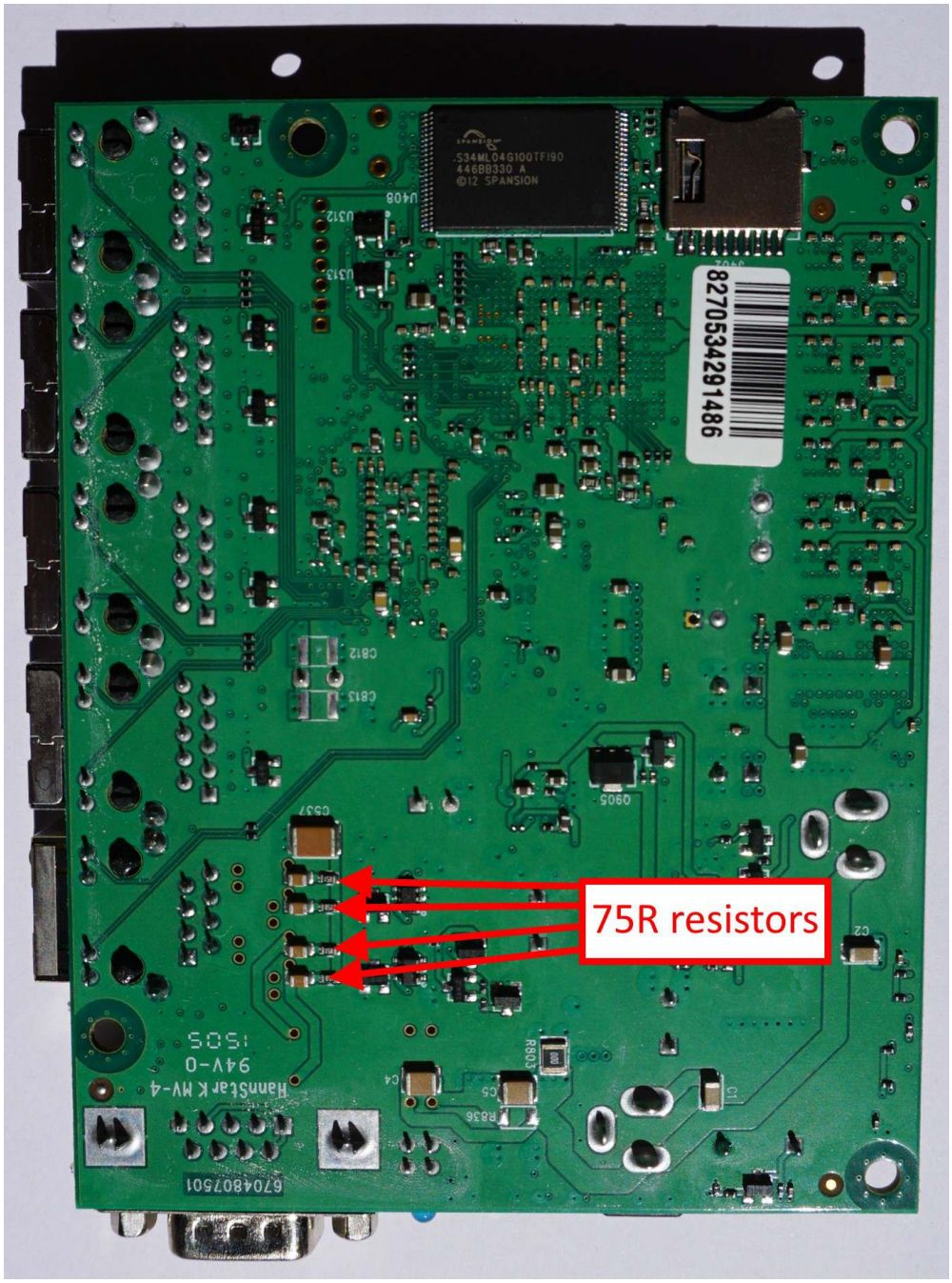
Check voltage drop between TR5, ether2- ether5 Transformers pins and Ground. Ether Pins are marked with red arrows and circles. It should be in the range from 0,32V to 0,589V. Measure in diode mode:hold “positive” wire on the Ground and “COM” wire to marked Ethernet and TR5 pins.



Picture 34

75R Termination resistors resistance.

Resistor resistance, marked with red arrow, should be 75 Ohm +/- 1%

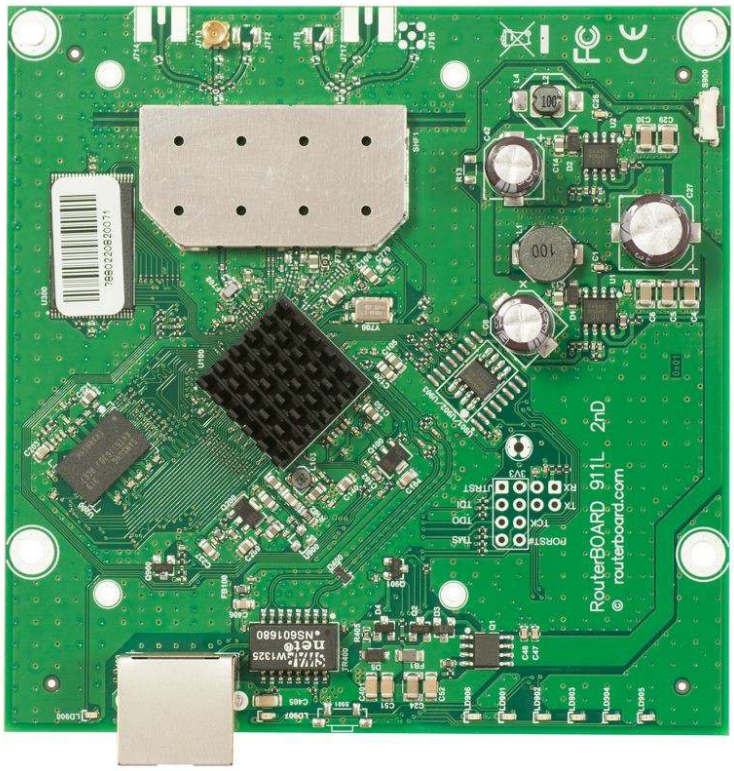


Picture 35

On ports Ether2 – Ether5 You can take patch cord and plug it into the routerboard, and then measure as describe on page 9

911-2Hn series RouterBoards

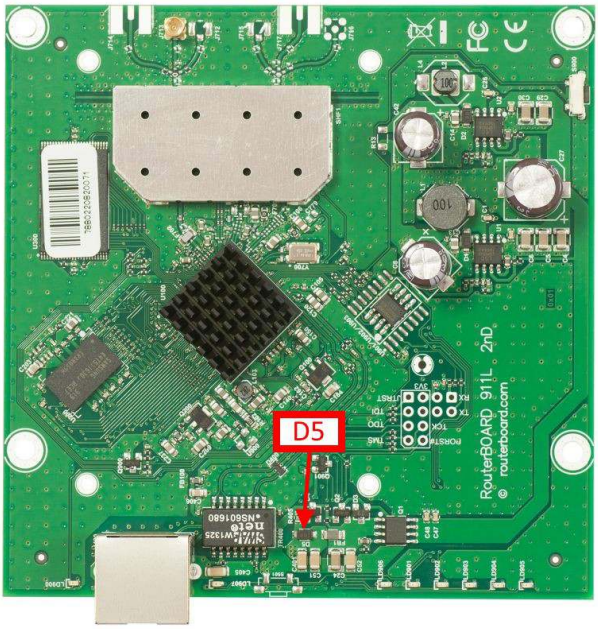
911 Lite2



Picture 36

Schottky diode measuring with multimeter in diode mode

Schottky diode reference numbers D5. Schottky diode quality measurement method describe on page 7

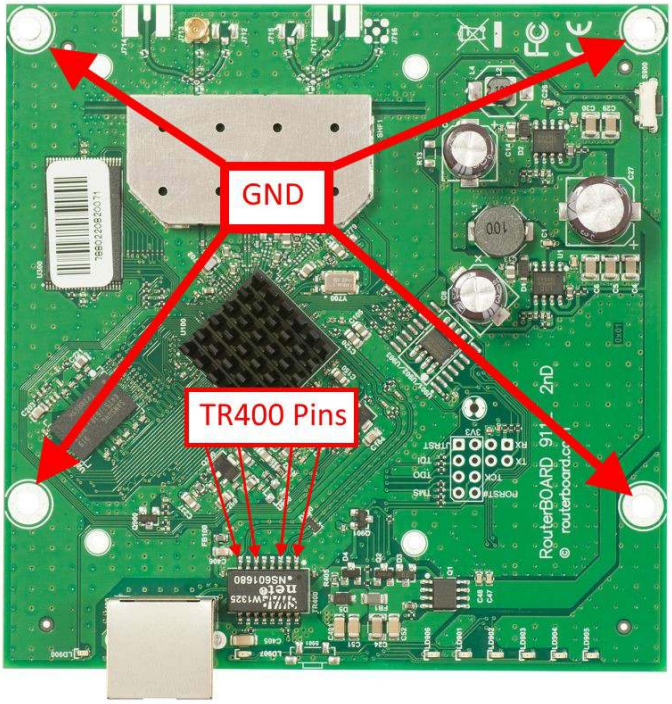


Picture 37

Voltage drop between TR400 Pins and Ground.

Check voltage drop between TR400 Ethernet Transformers on ports Ether1 pins and Ground. Ether Pins are marked with red arrows.

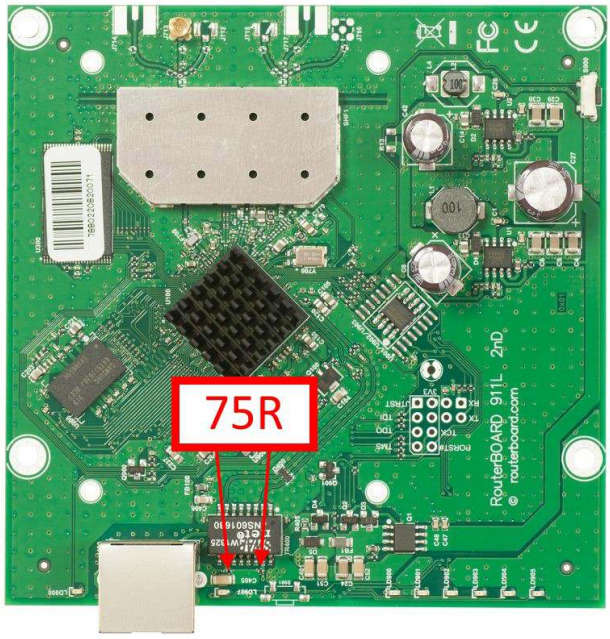
It should be in the range from 0,32V to 0,438V



Picture 38

75R termination resistors resistance

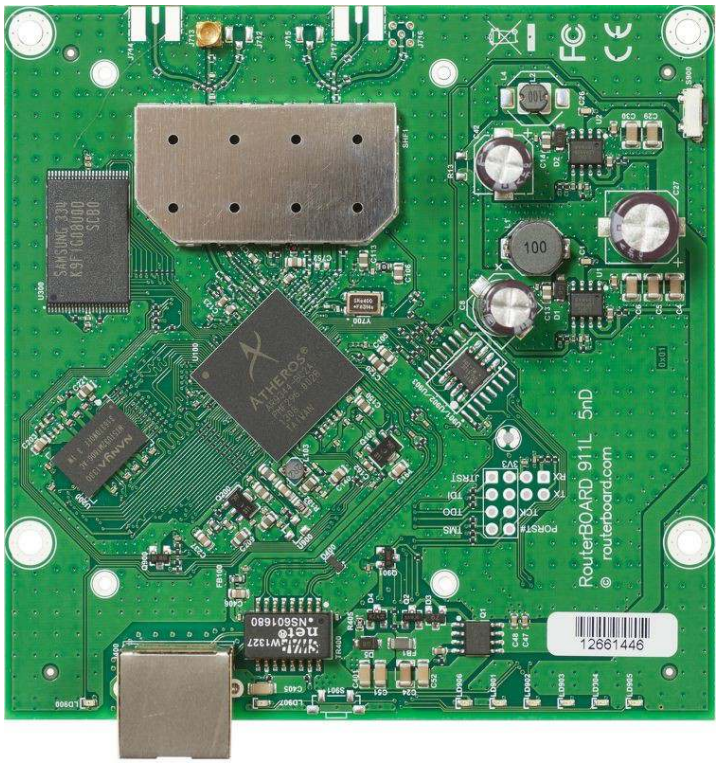
Resistors marked with red arrows should be 75Ohm +/- 1%



Picture 39

911-5Hn series RouterBoards

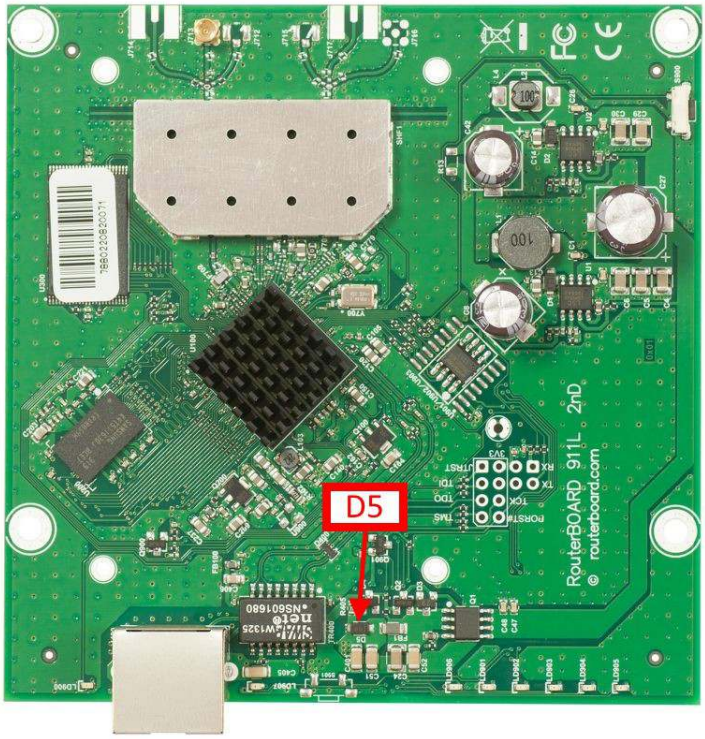
911 Lite5



Picture 40

Schottky diode measuring with multimeter in diode mode

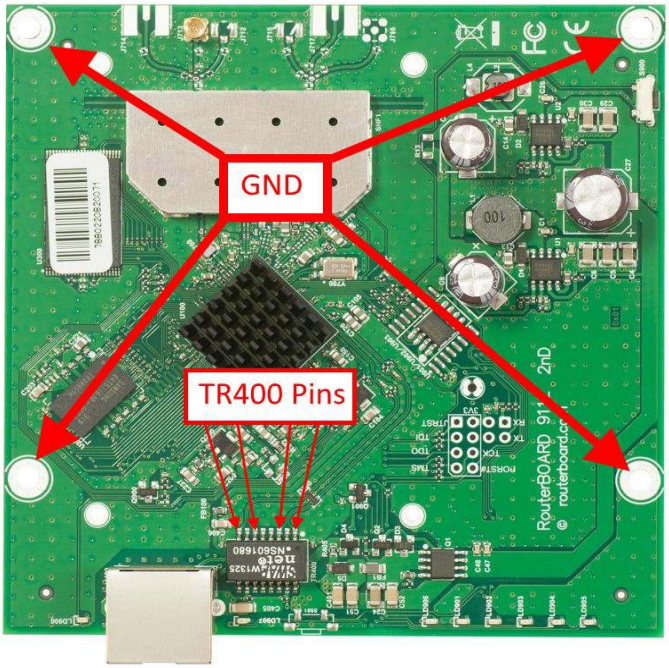
Schottky diode reference numbers D5. Schottky diode quality measurement method describe on page 7



Picture 41

Voltage drop between TR400 Pins and Ground.

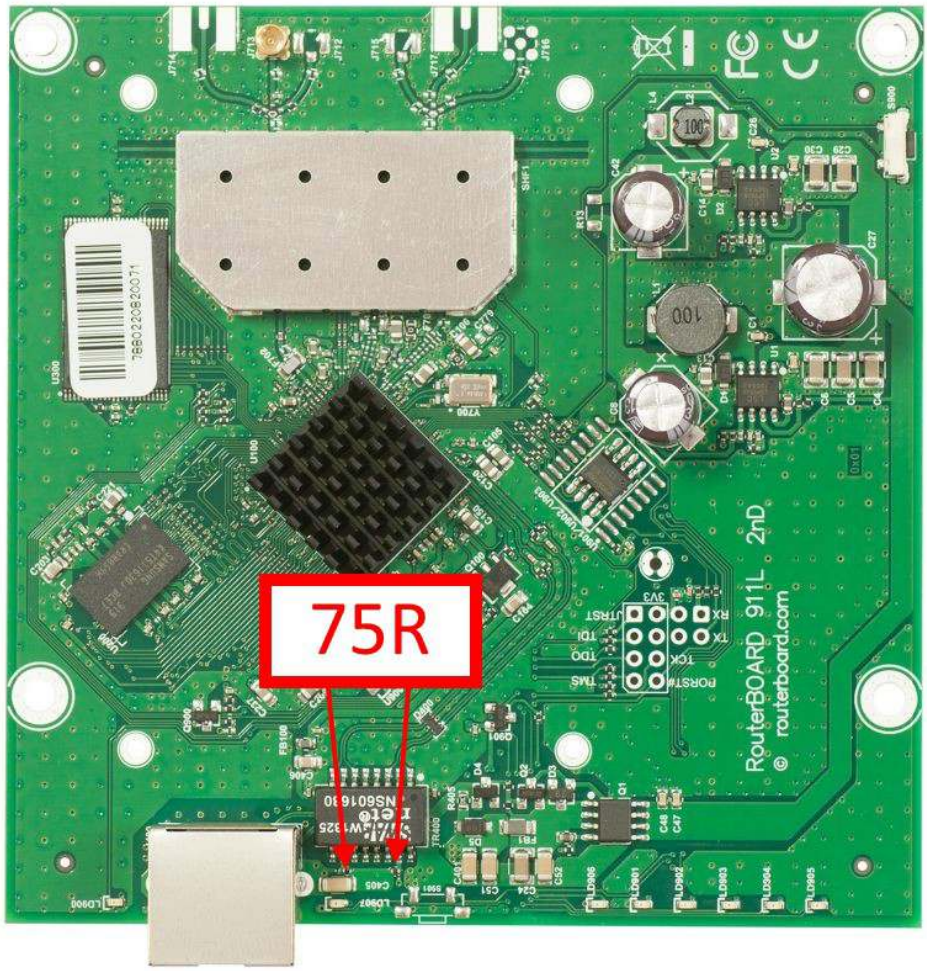
Check voltage drop between TR400 Ethernet Transformers on ports Ether1 pins and Ground. Ether Pins are marked with red arrows.It should be in the range from 0,32V to 0,438V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked TR400 Transformer pins.



Picture 42

75R termination resistors resistance

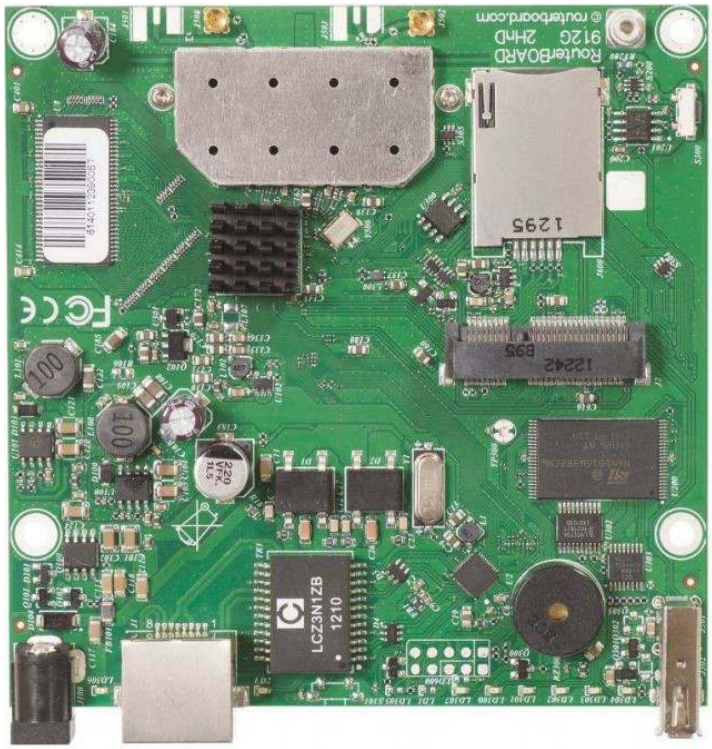
Resistors marked with red arrows should be 75Ohm +/- 1%



Picture 43

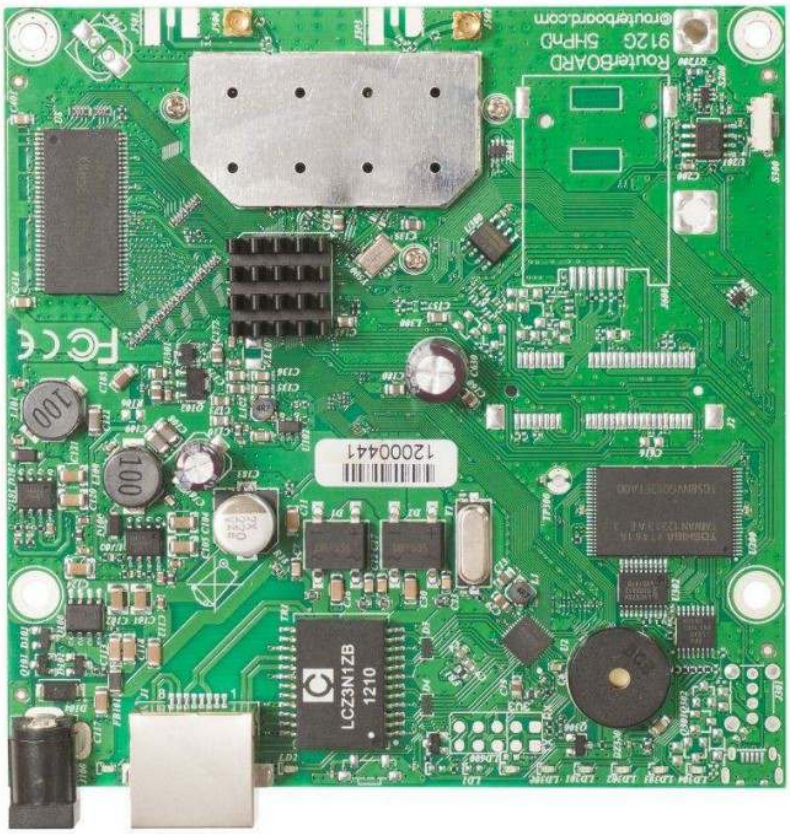
912G - 2HnD series RouterBoards

RB912UAG-2HPnD



Picture 44

RB911G-2HPnD



Picture 45

BaseBox 2

Picture 46

BaseBox 2 disassembling information

1. step

Remove the sticker from connectors

Picture 47

2. step

Remove the screw stickers

Picture 48

3. step

Unscrew the case base from the board holder with torque screwdriver T8

Picture 49

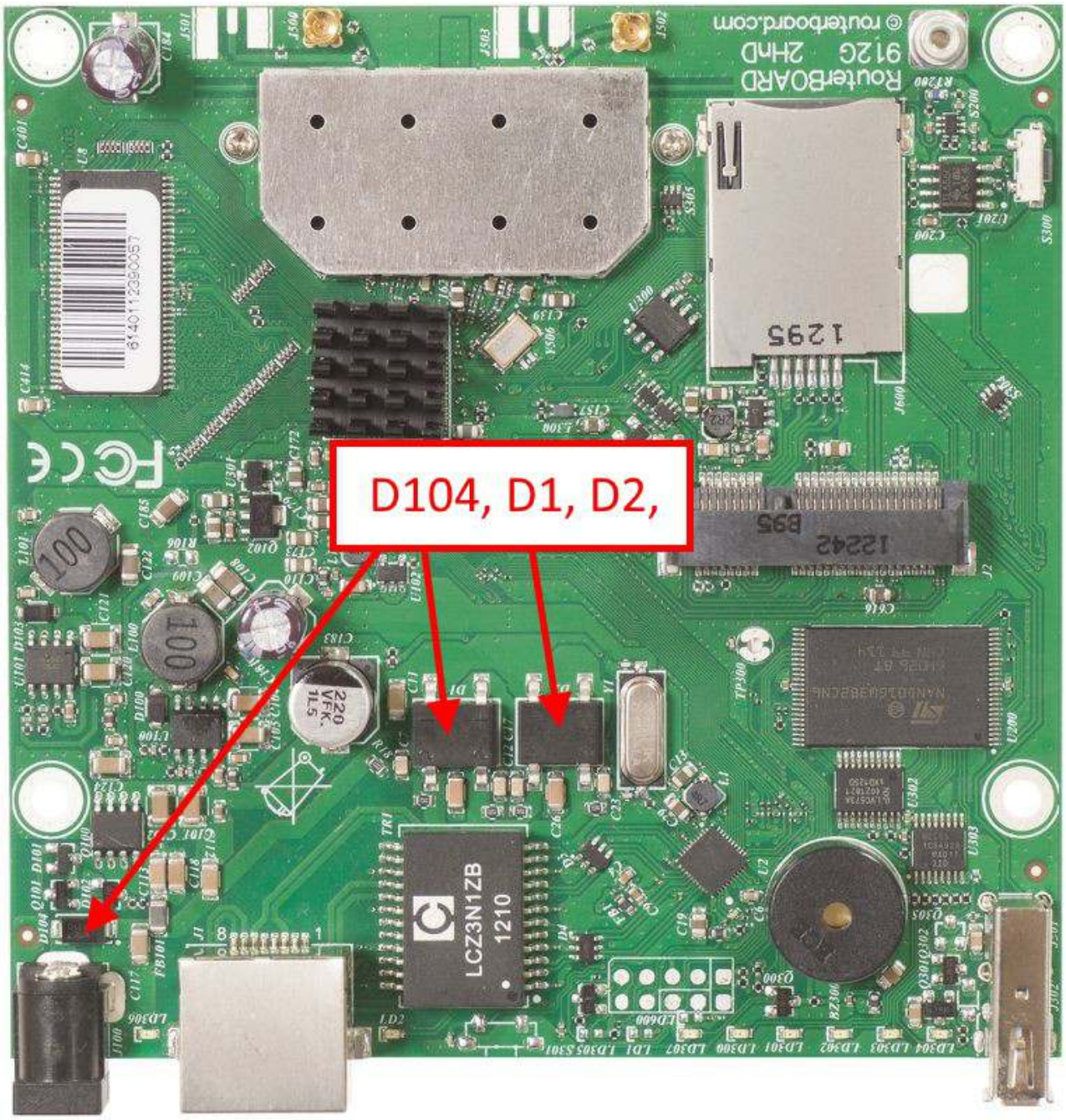
4. step

Remove the case base from the board holder

Picture 50

Schottky diode measuring with multimeter in diode mode

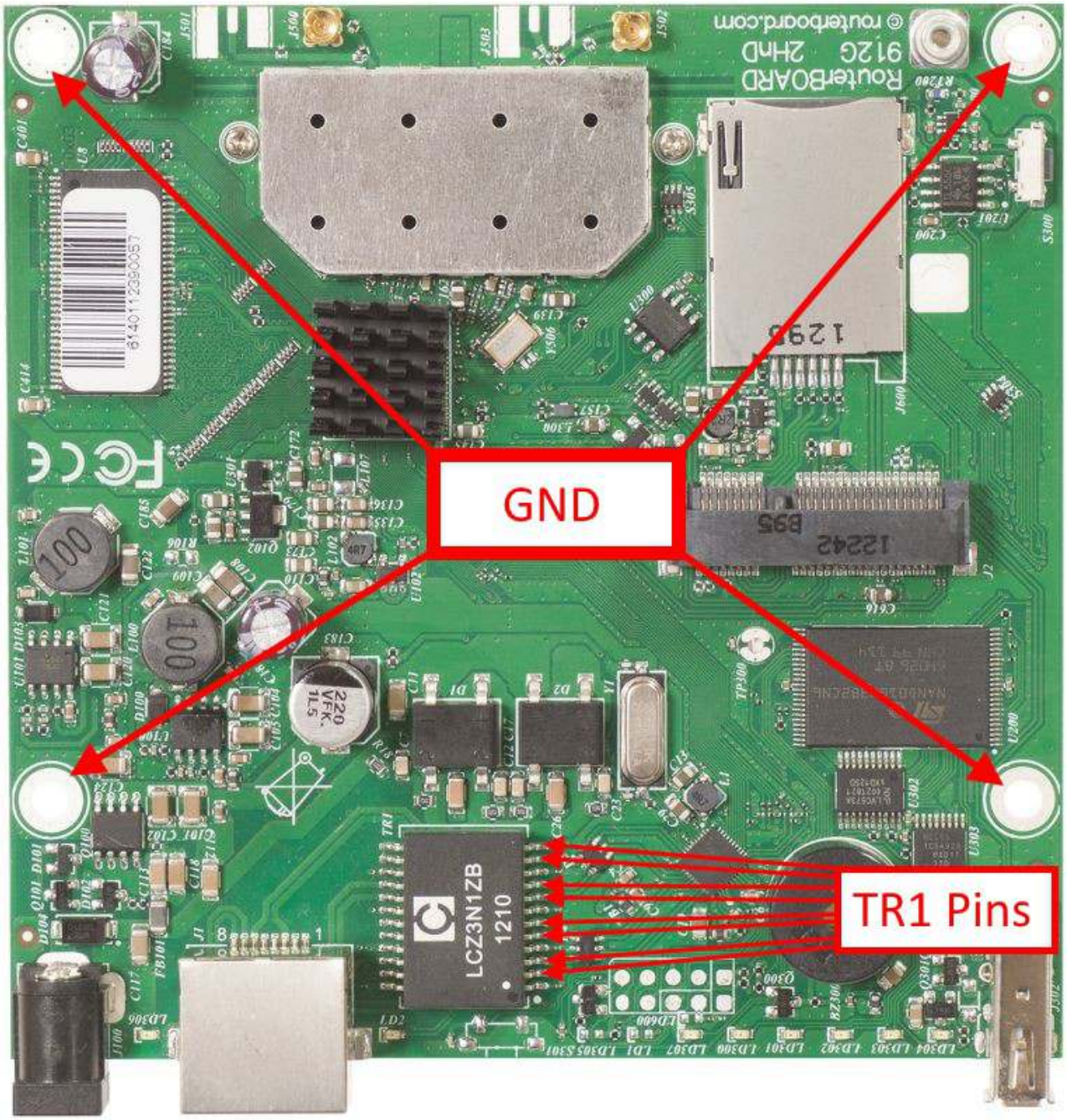
Schottky diode reference number is D104; Diode bridge reference numbers are D1 and D2. Schottky diode quality measurement method describe on page 7



Picture 51

Voltage drop between TR1 Pins and Ground.

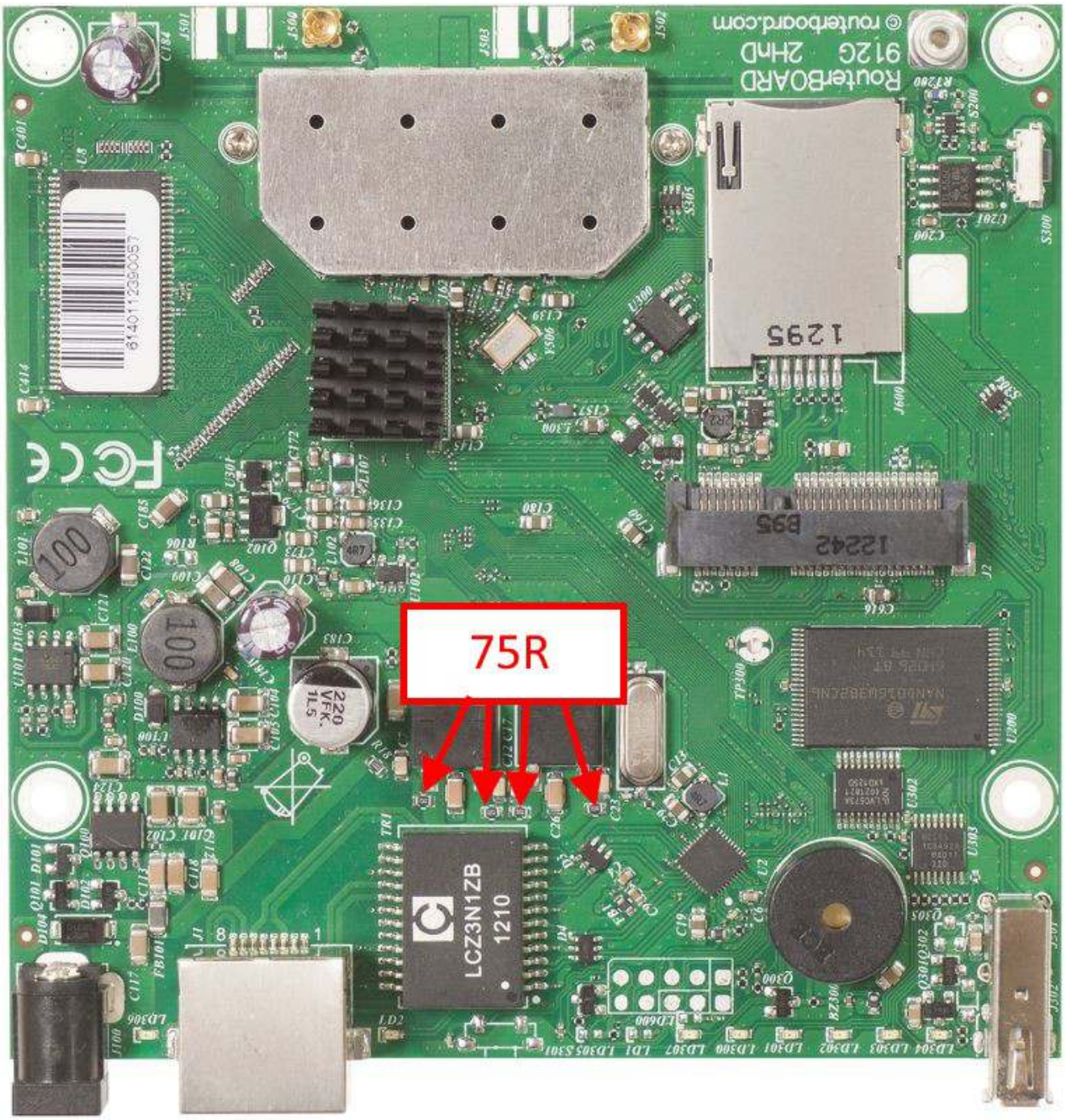
Check voltage drop between TR1, Transformers pins and Ground. Ether Pins are marked with red arrows. It should be in the range from 0,32V to 0,589V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked TR1 Transformers pins.



Picture 52

75R Termination resistors resistance.

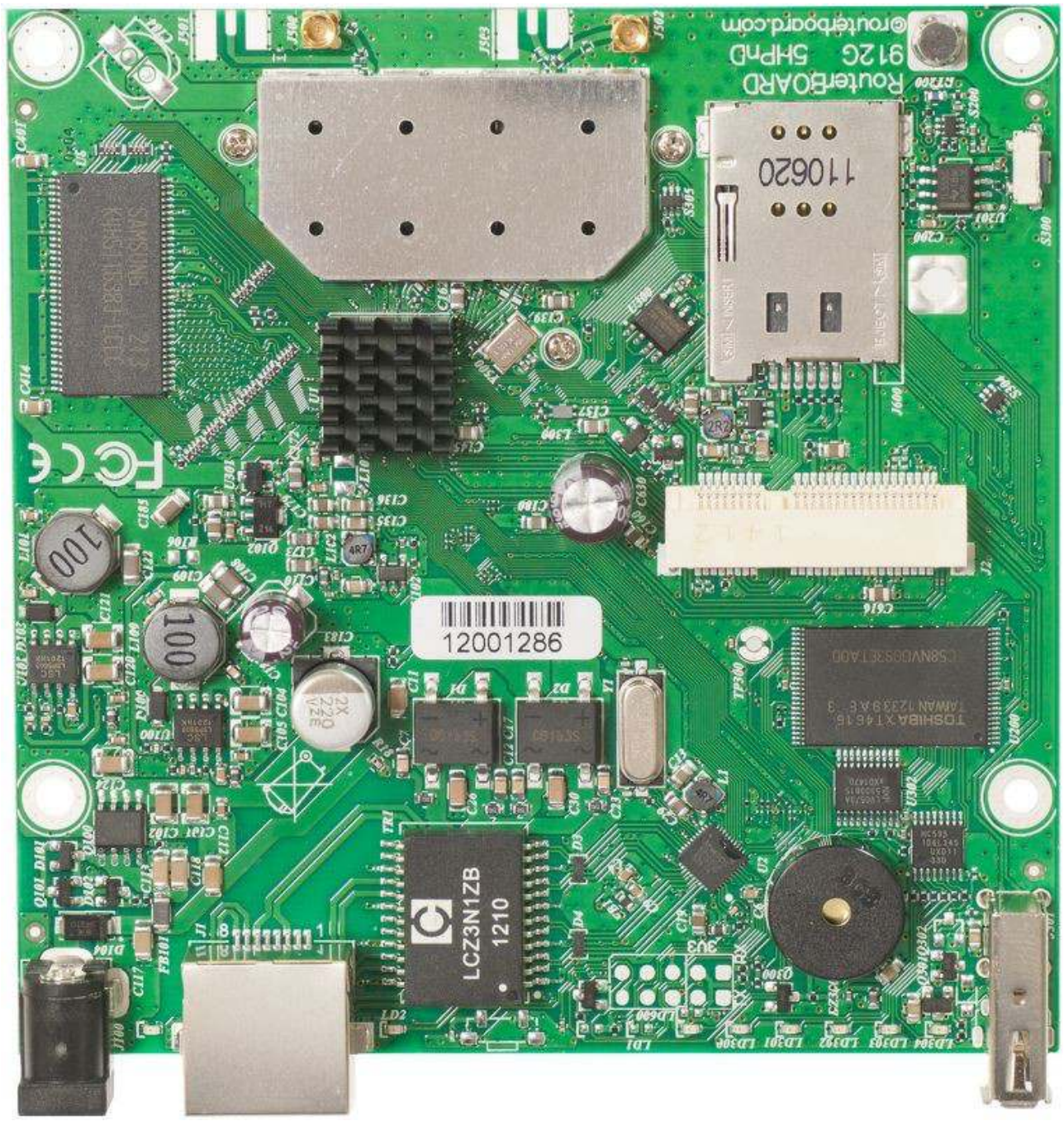
Resistor resistance, marked with red arrow, should be 75 Ohm +/- 1%



Picture 53

912G - 5HPnD series RouterBoards

RB912UAG-5HPnD



Picture 54

SEXTANT G 5HPnD

Picture 55

BaseBox 5

Picture 56

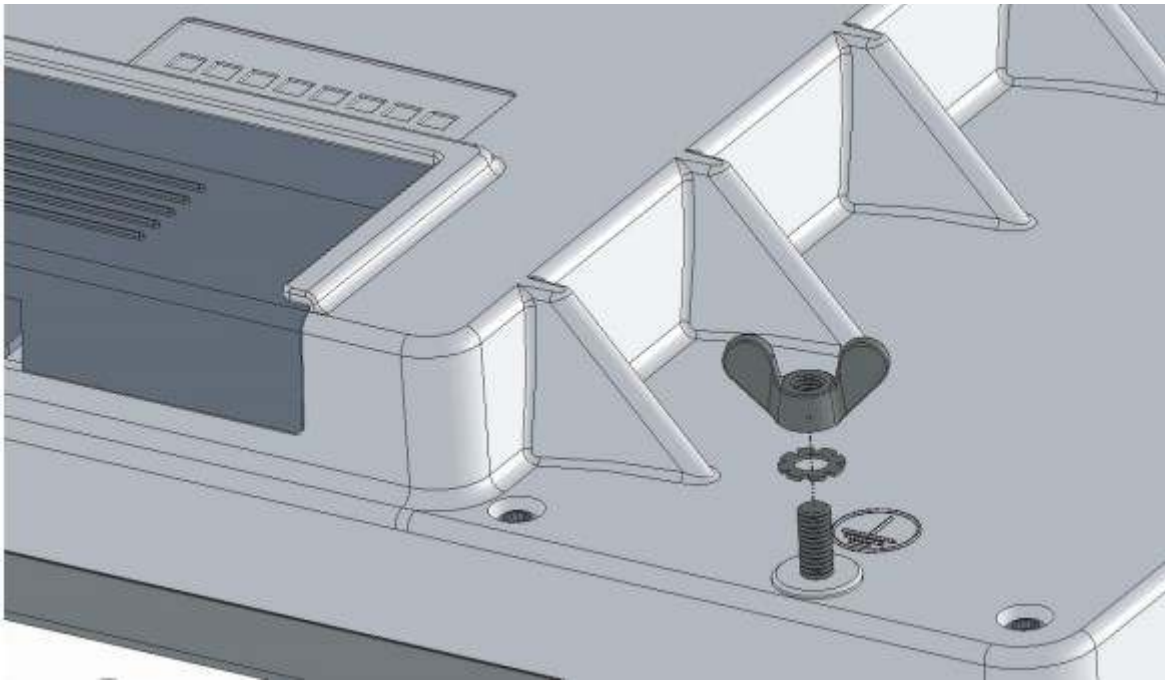
QRT 5

Picture 57

QRT 5 disassembling information

1. step

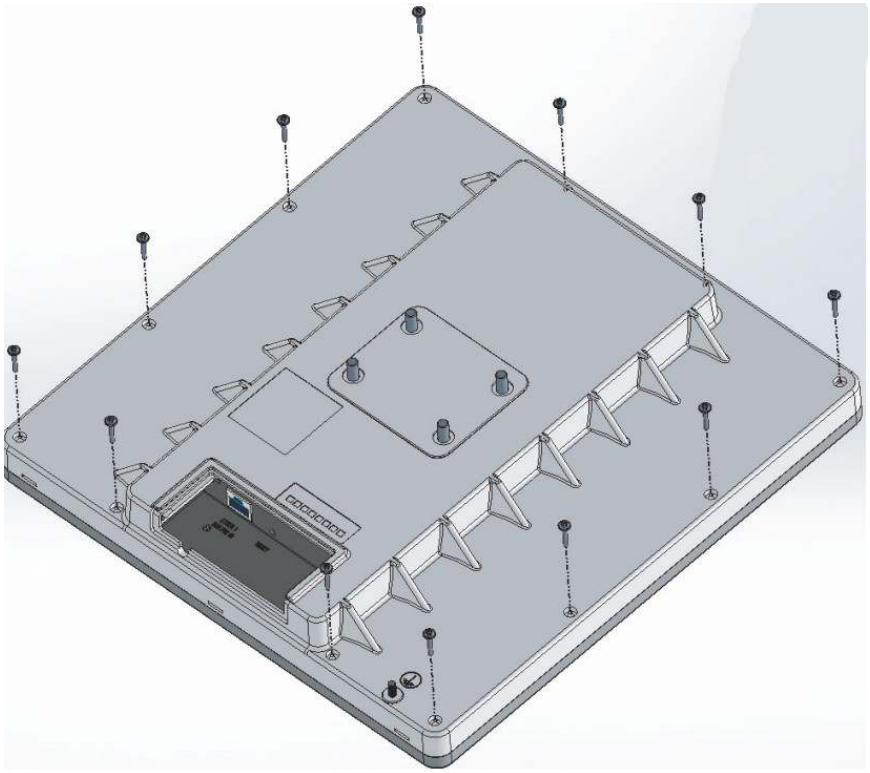
Remove the wing nut from Ground M4 screw



Picture 58

2. step

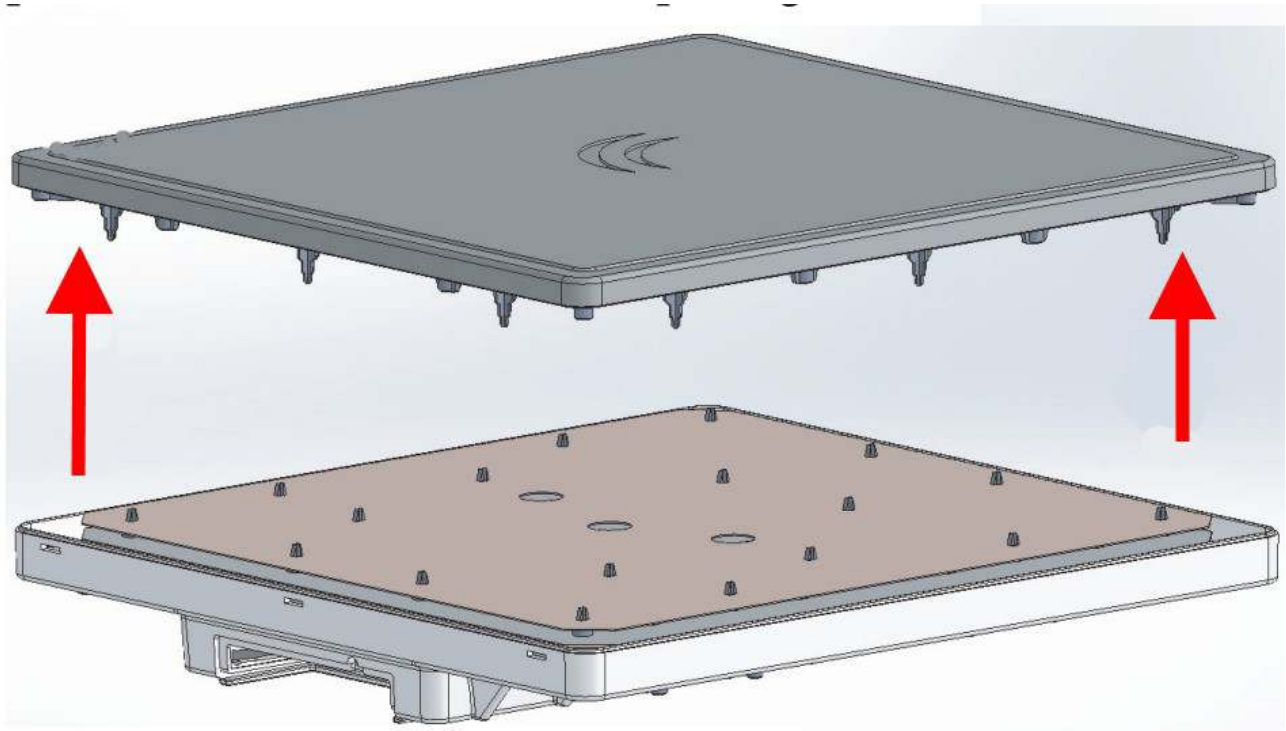
Remove the 12 pcs screws with torque screwdriverT8



Picture 59

3. step

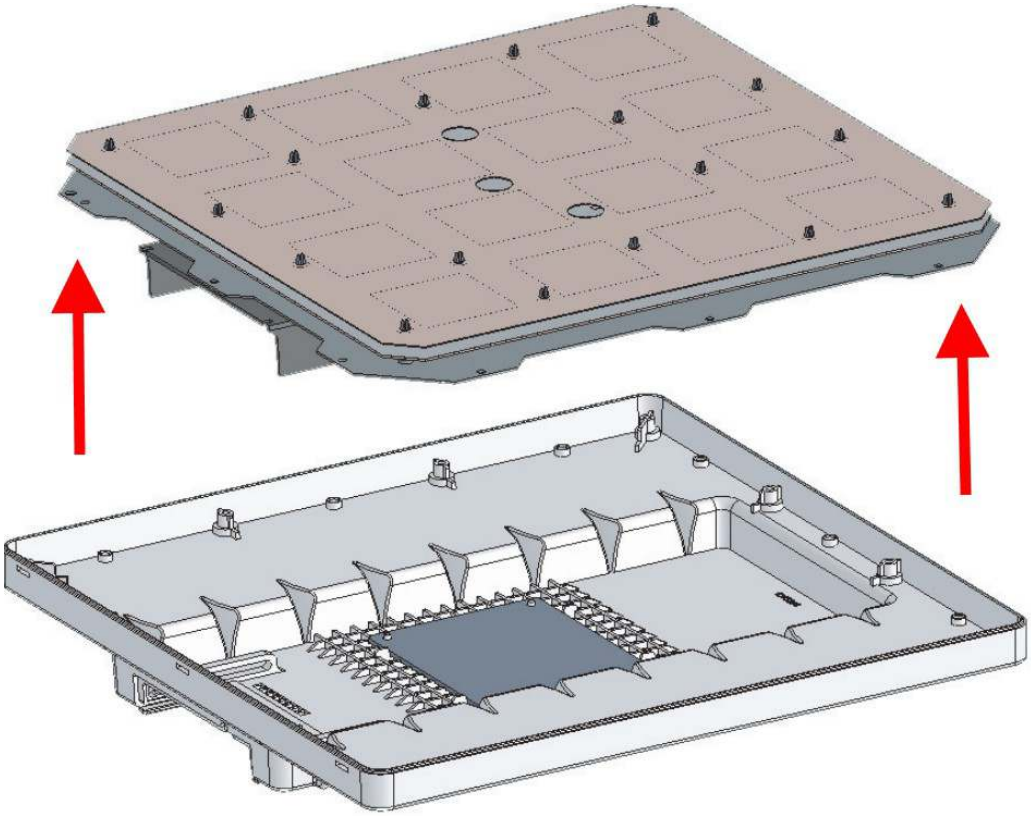
Remove the cover



Picture 60

4. step

Remove the M4 screw from bottom plate and than separate bottom plate from antenna with board.



Picture 61

BaseBox 5 disassembling information

1. step

Remove the sticker from connectors

Picture 62

2. step

Remove the screw stickers

Picture 63

3. step

Unscrew the case base from the board holder with torque screwdriver T8

Picture 64

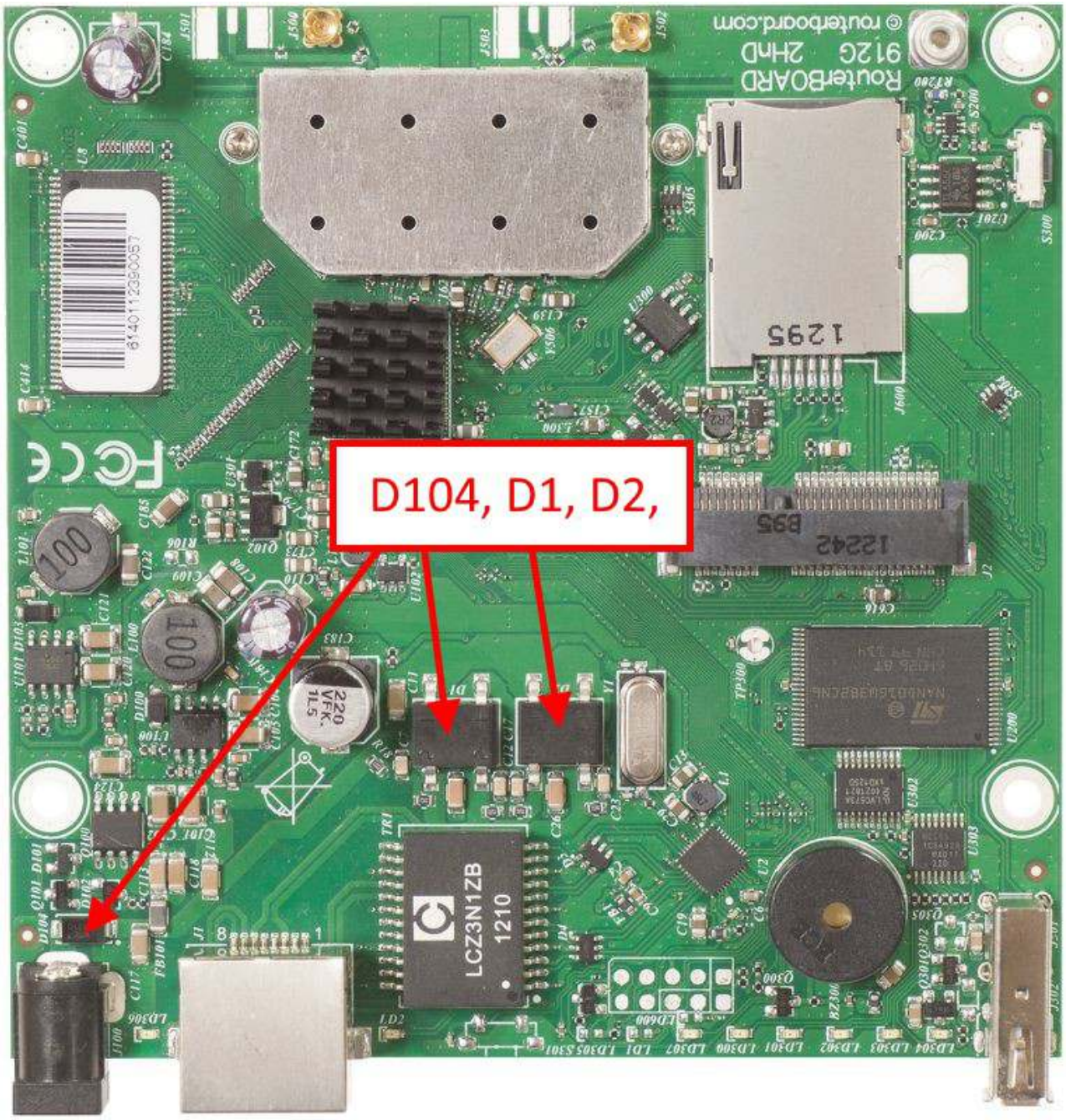
4. step

Remove the case base from the board holder

Picture 65

Schottky diode measuring with multimeter in diode mode

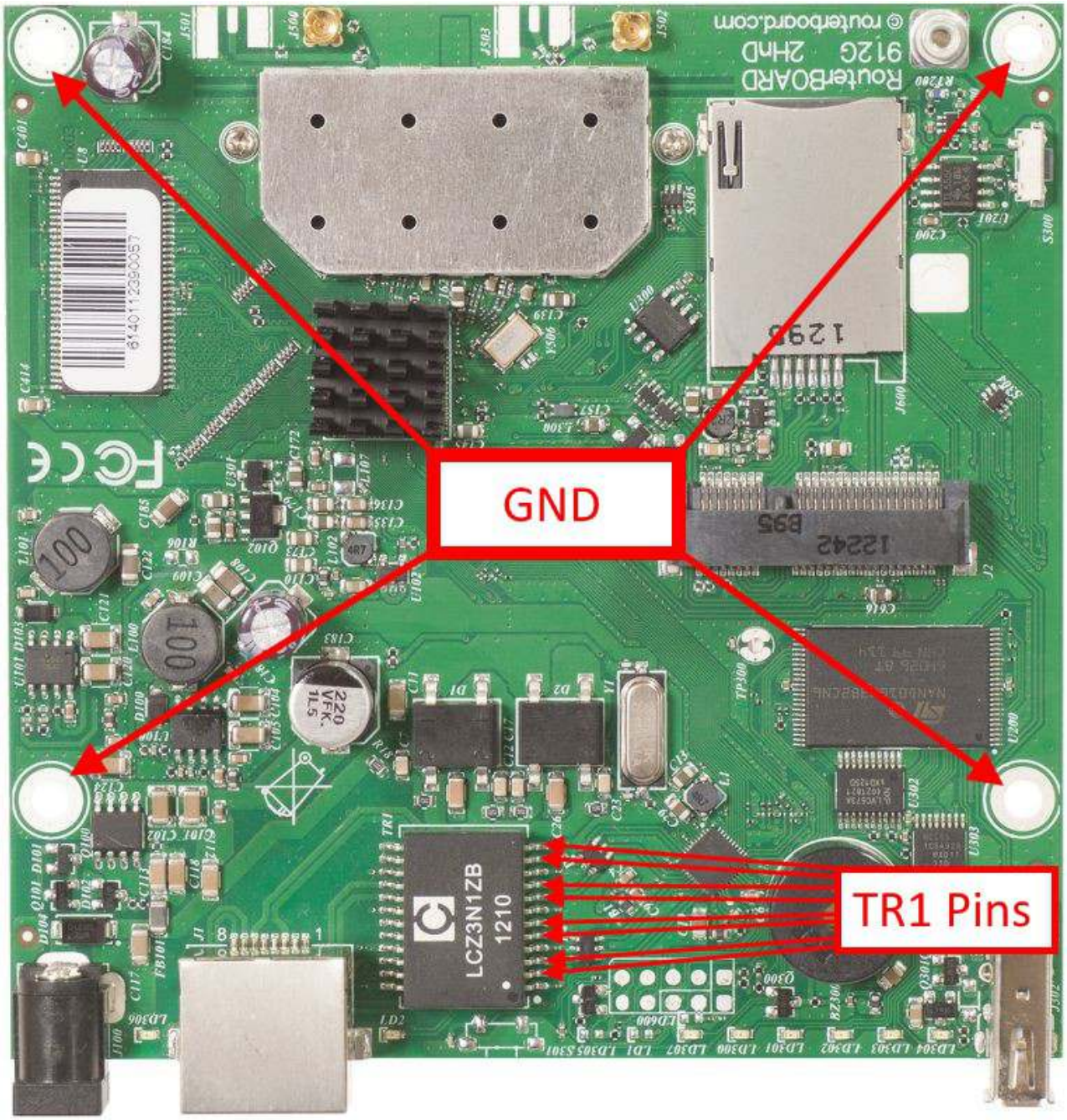
Schottky diode reference number is D104; Diode bridge reference numbers are D1 and D2. Schottky diode quality measurement method describe on page 7



Picture 66

Voltage drop between TR1 pins and Ground.

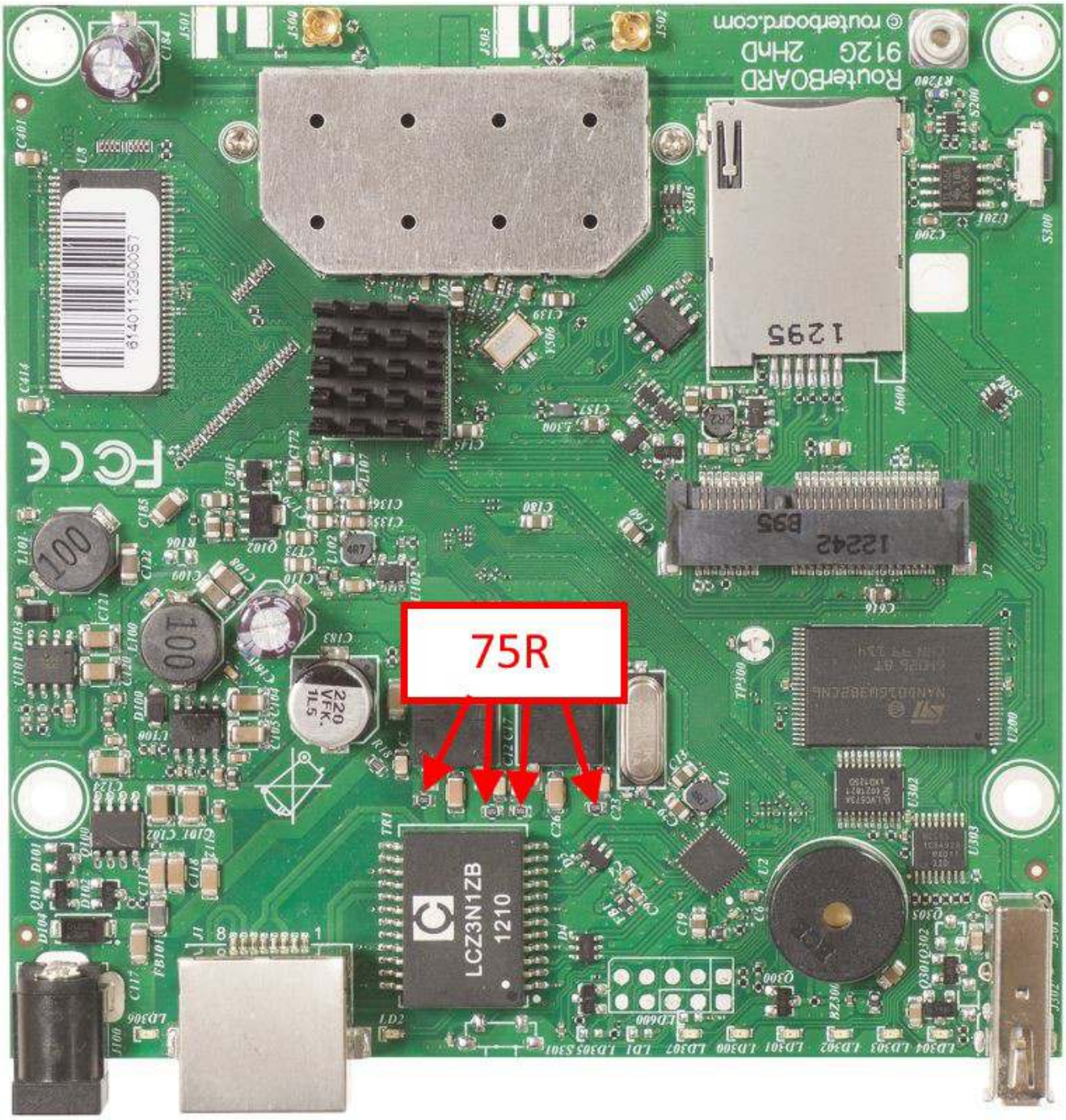
Check voltage drop between TR1, Transformers pins and Ground. Ether Pins are marked with red arrows. It should be in the range from 0,32V to 0,589V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked TR1 Transformer pins.



Picture 67

75R Termination resistors resistance.

Resistor resistance, marked with red arrow, should be 75 Ohm +/- 1%



Picture 68

921UAGS-5SHPac series RouterBoards

RB921GS-5HPac series:

NetMetal 5

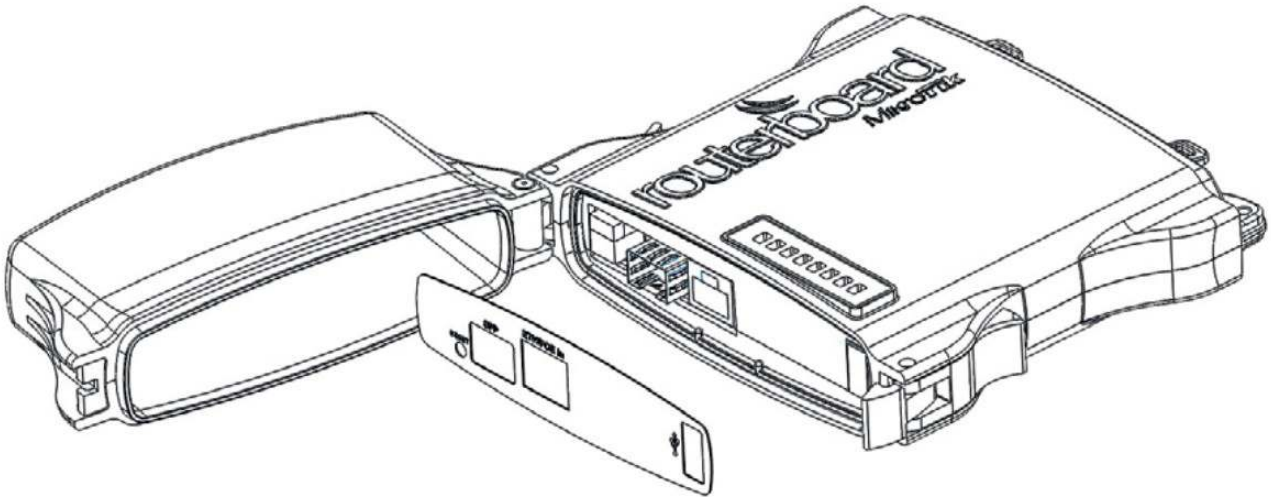
Picture 69

Disassembling information

NetMetal 5 disassembling

1. step

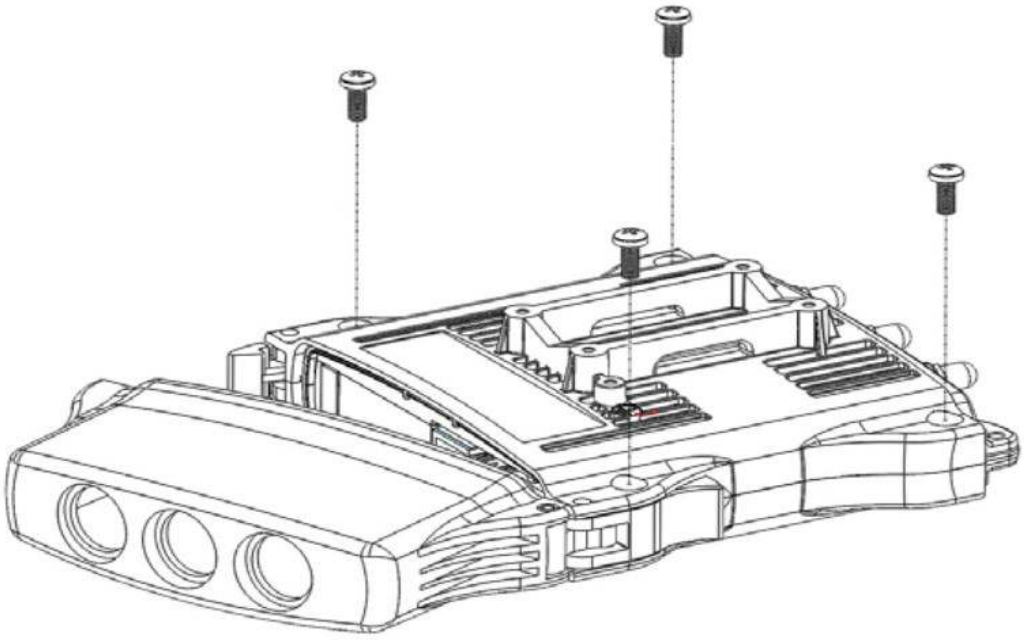
Open case and remove label from connectors



Picture 70

2. step

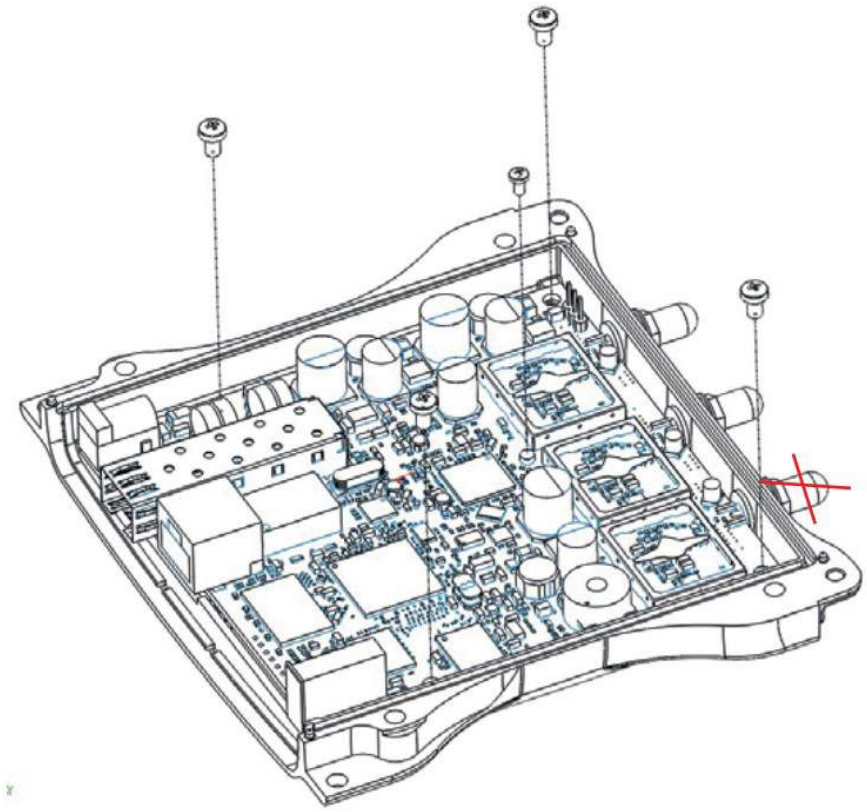
Remove 4 screws with hexagon key 3 mm screwdriver



Picture 71

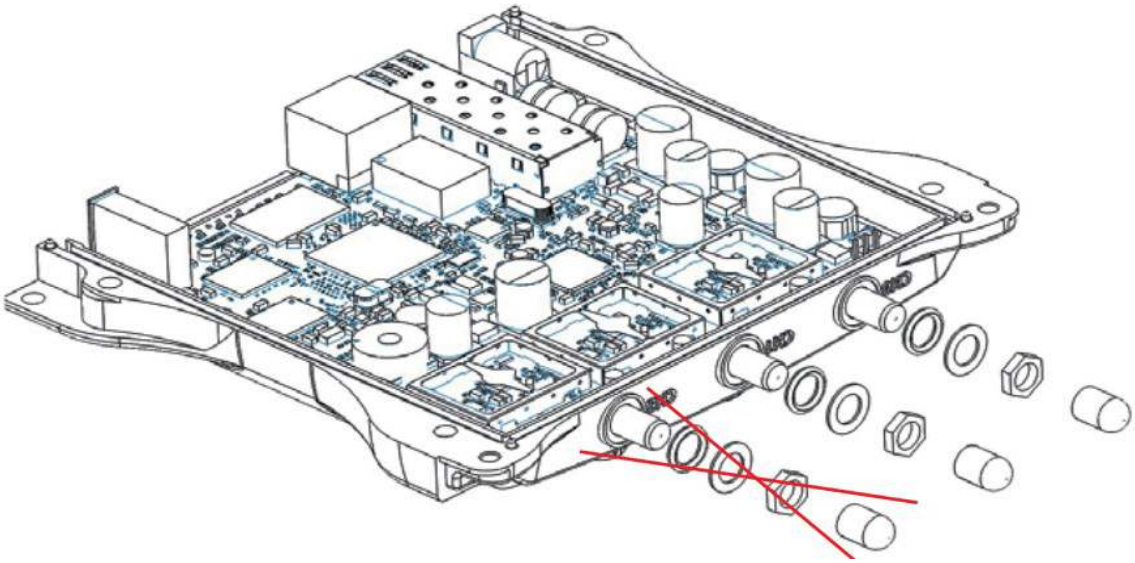
3. Step

Unscrew the PCB from case back with 4 pcs., M3 and 1 pcs., M2 screws



Picture 72

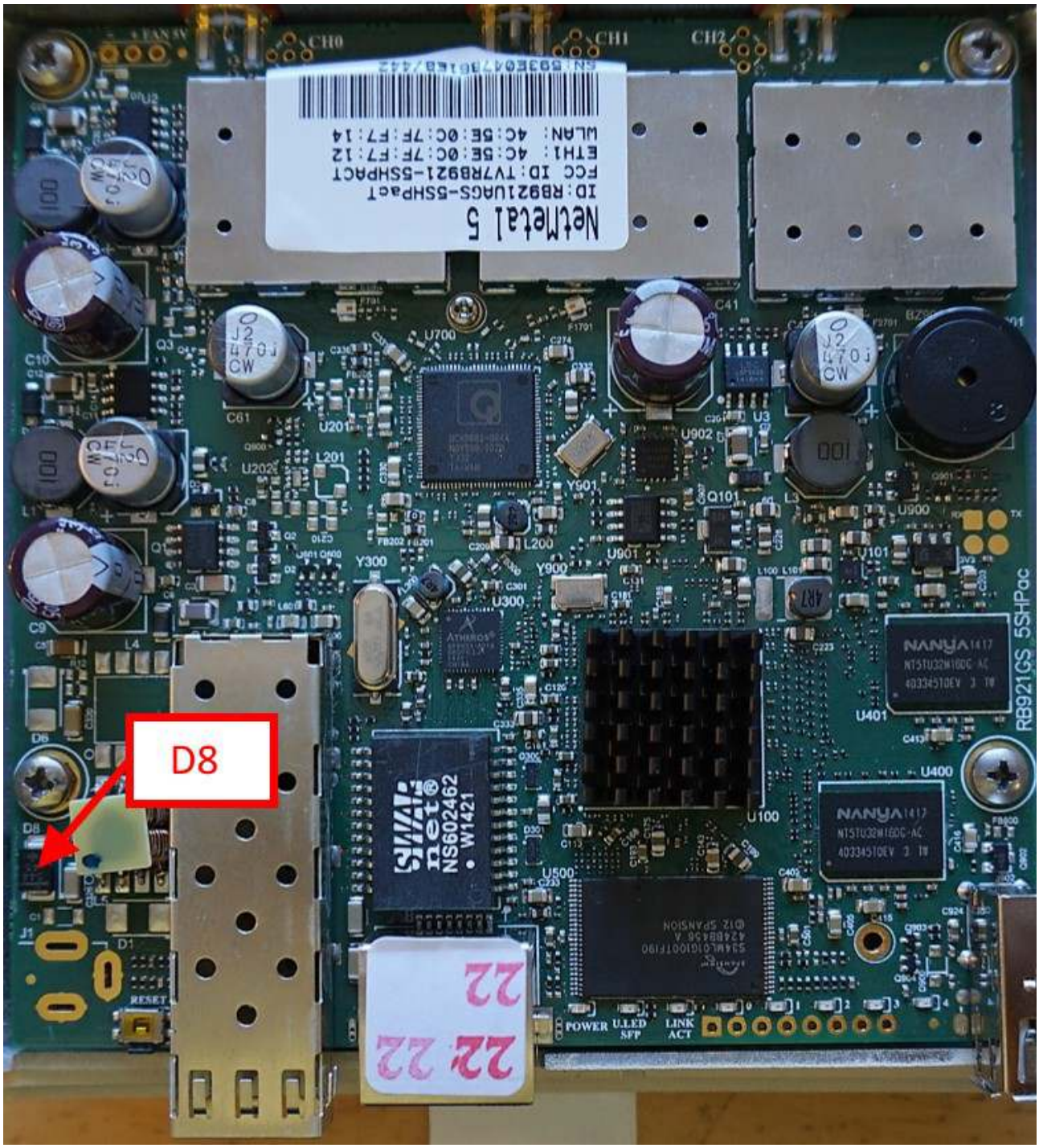
Unscrew the SMA connector nuts with 8 mm wrench.



Picture 73

Schottky diode measuring with multimeter in diode mode

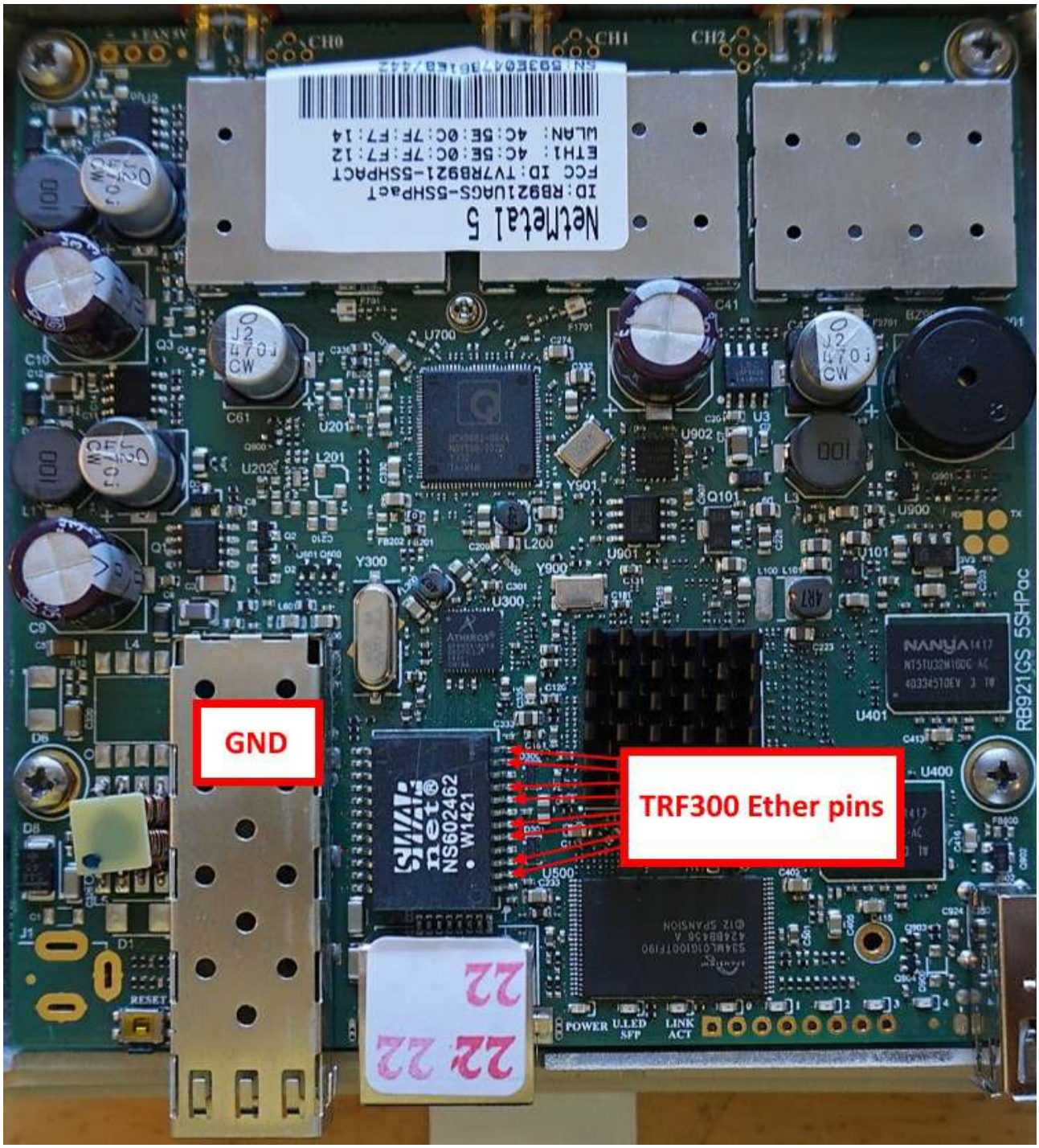
Schottky diode reference numbers are D8. Schottky diode quality measurement method describe on page 7



Picture 74

Voltage drop between TR300 pins and Ground.

Check voltage drop between TRF300 Ethernet Transformers on port Ether1 pins and Ground. Ether Pins are marked with red arrows. It should be in the range from 0,32V to 0,438V. Measure in diode mode:hold “positive” wire on the Ground and “COM” wire to marked TRF300 Transformers pins.



Picture 75

922GS-5HPac series RouterBoards

RB922GS-5HPac series:

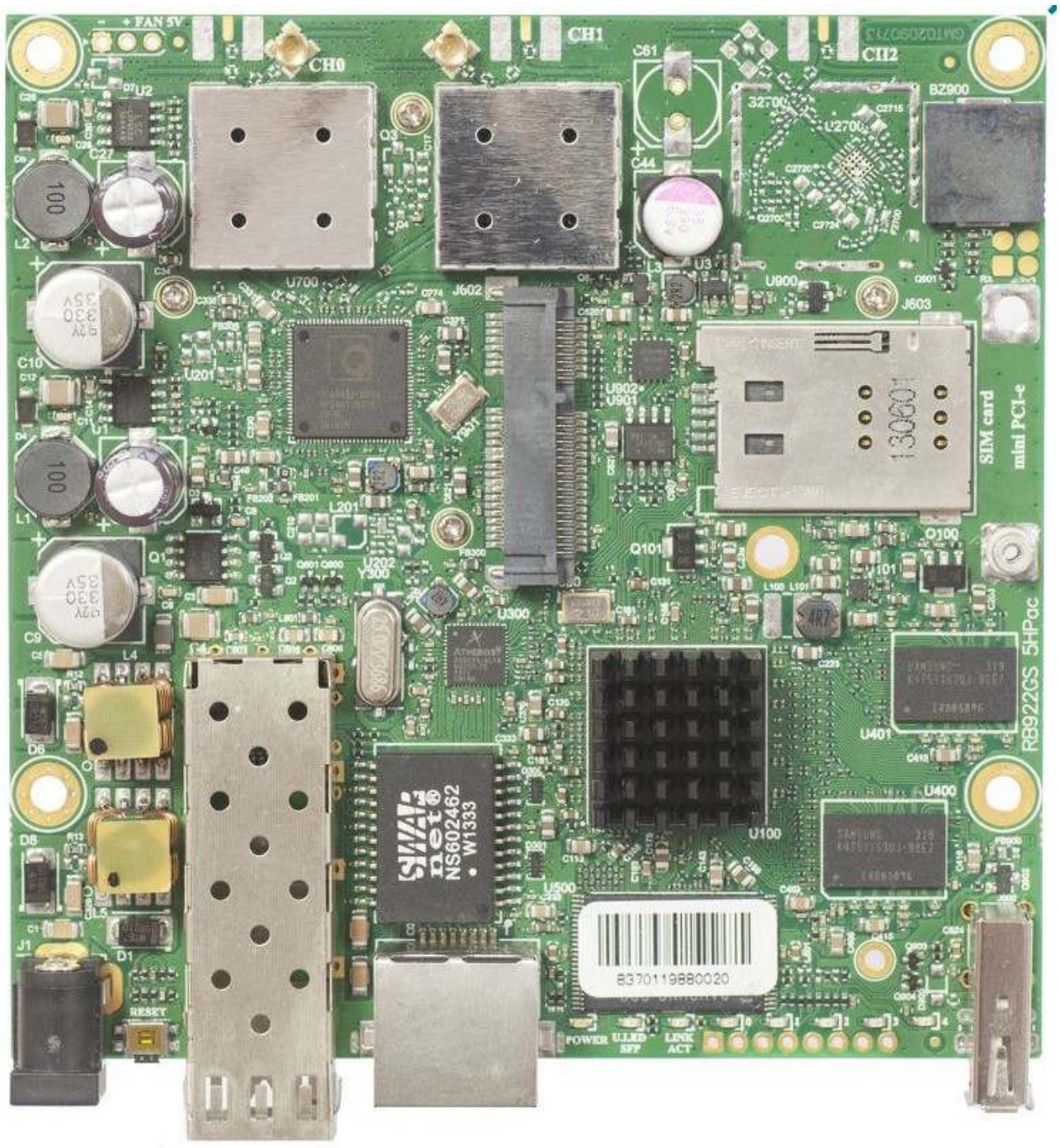
NetMetal 5

Picture 76

QRT 5 ac

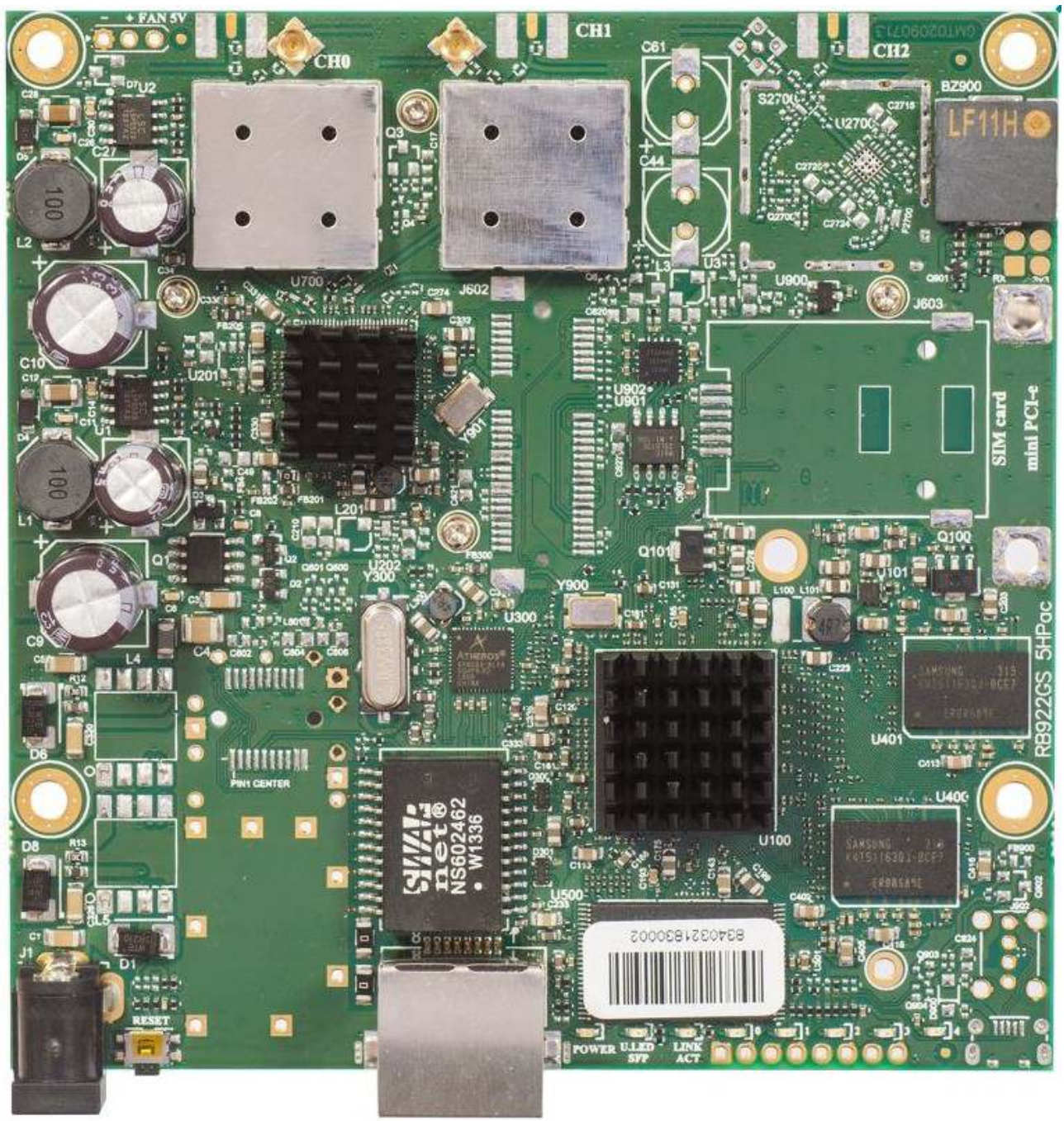
Picture 77

RB922UAGS-5HPacD



Picture 78

RB911G-5HPacD



Picture 79

mANTBox 15s

Picture 80

mANTBox 19s

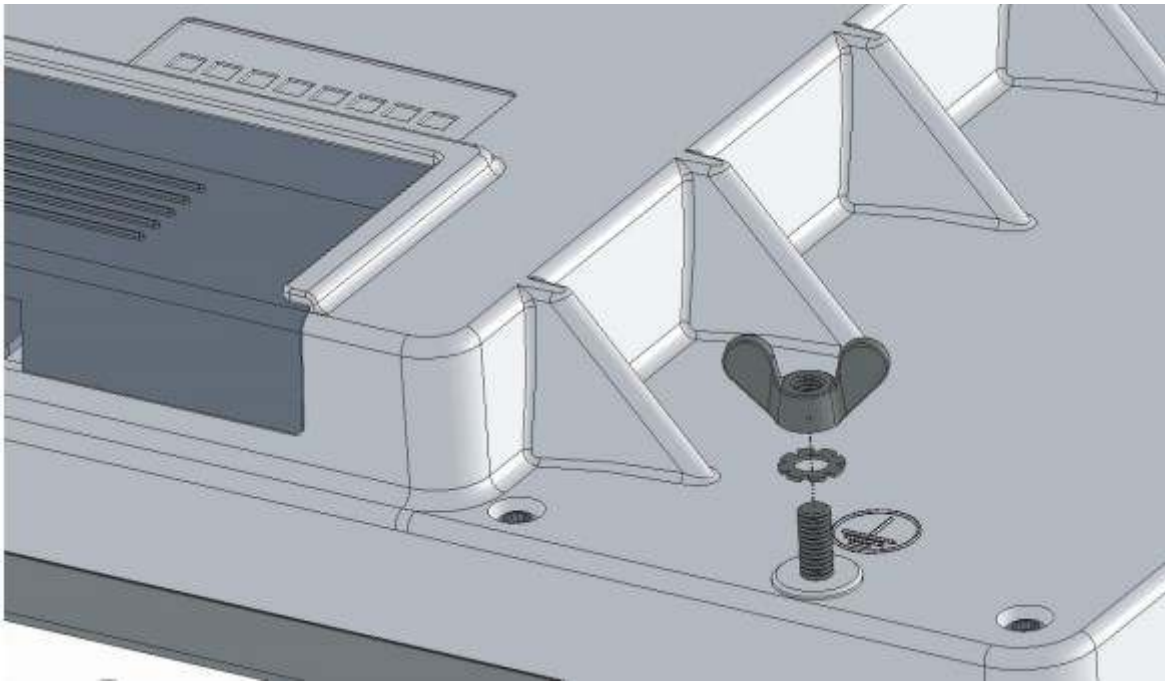
Picture 81

Disassembling information

QRT 5 ac disassembling.

1. step

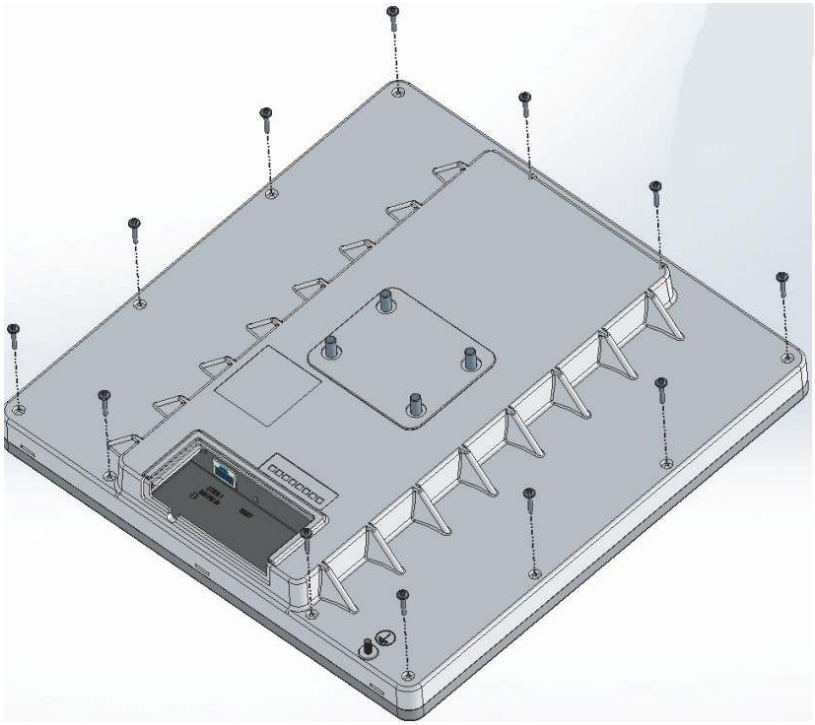
Remove the wing nut from Ground M4 screw



Picture 82

2. step

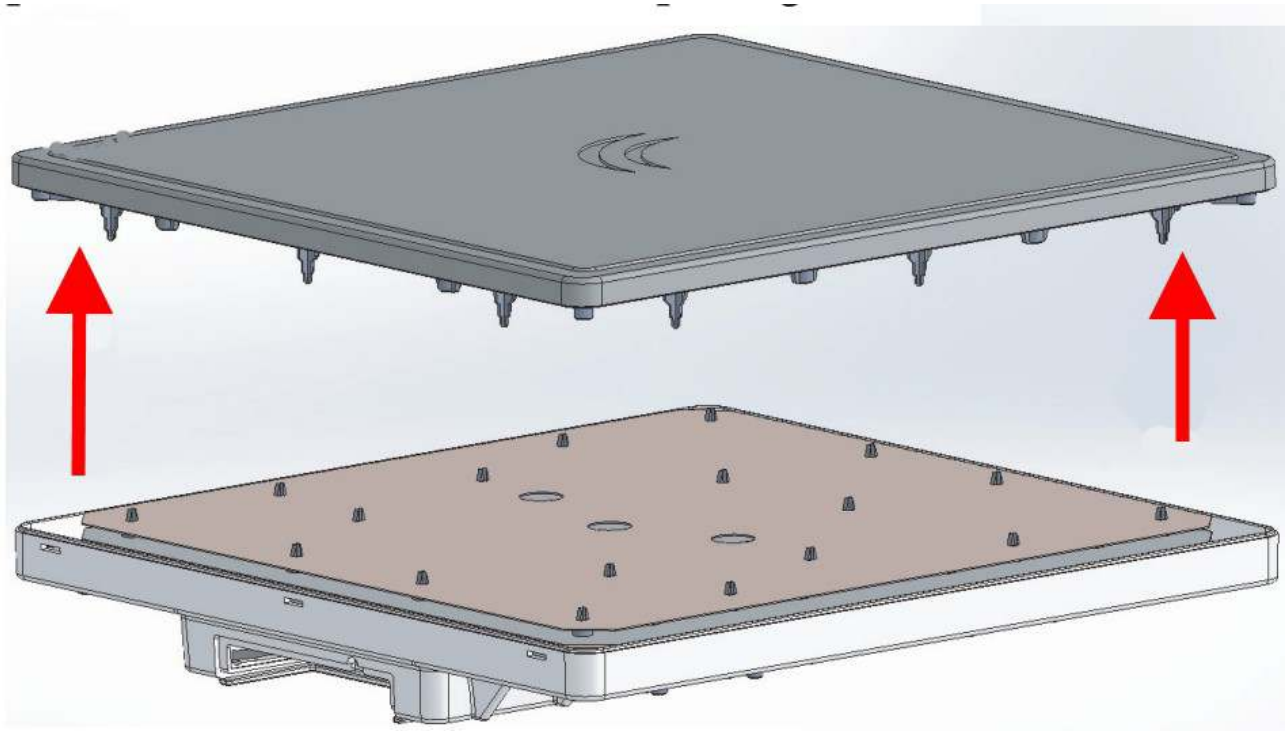
Remove the 12 pcs screws with torque screwdriverT8



Picture 83

3. step

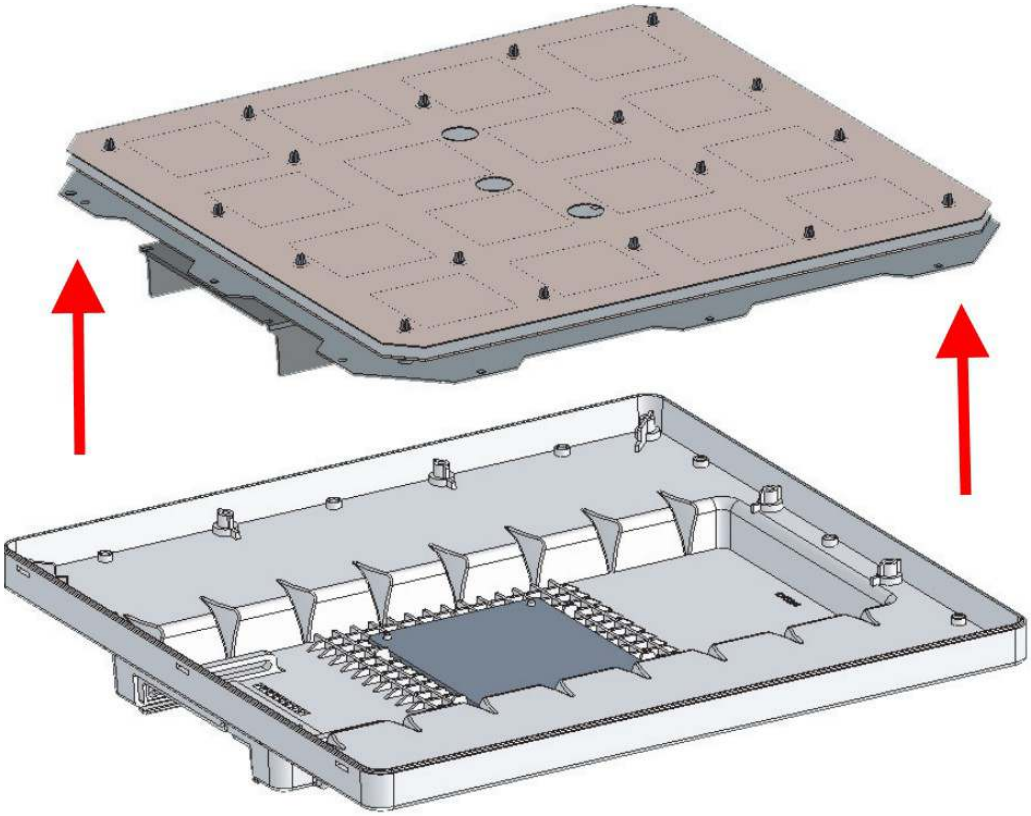
Remove the cover



Picture 84

4. step

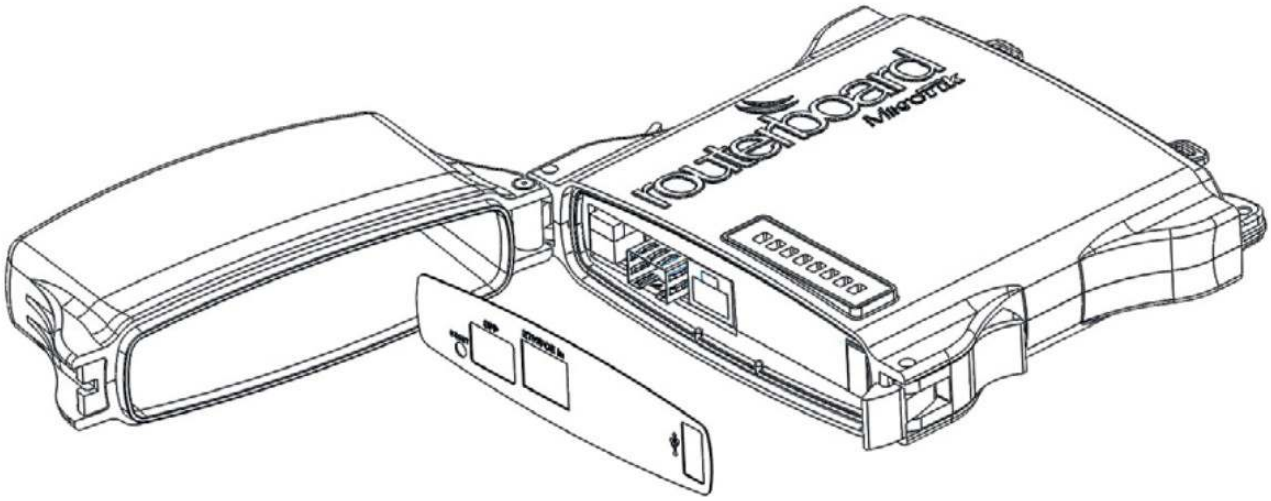
Remove the M4 screw from bottom plate and than separate bottom plate from antenna with board.



Picture 85

NetMetal 5 disassembling

1. step

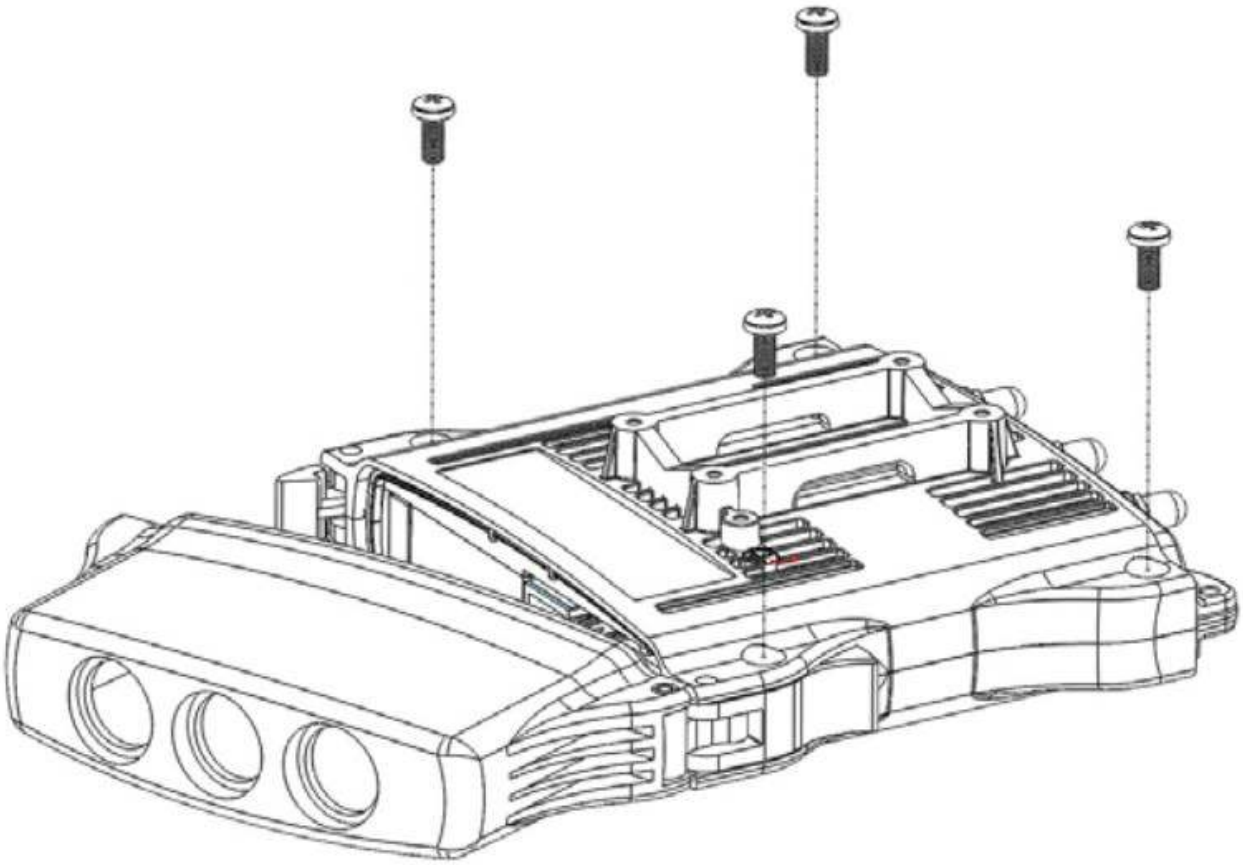


Picture 86

Open case and remove label from connectors

2. step

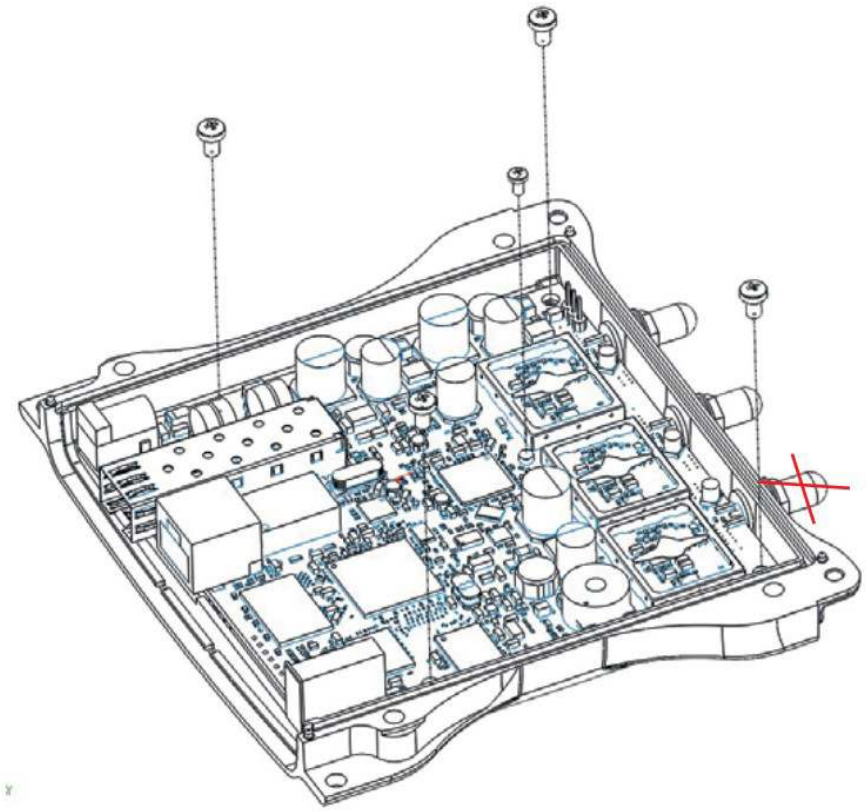
Remove 4 screws with hexagon key 3 mm screwdriver



Picture 87

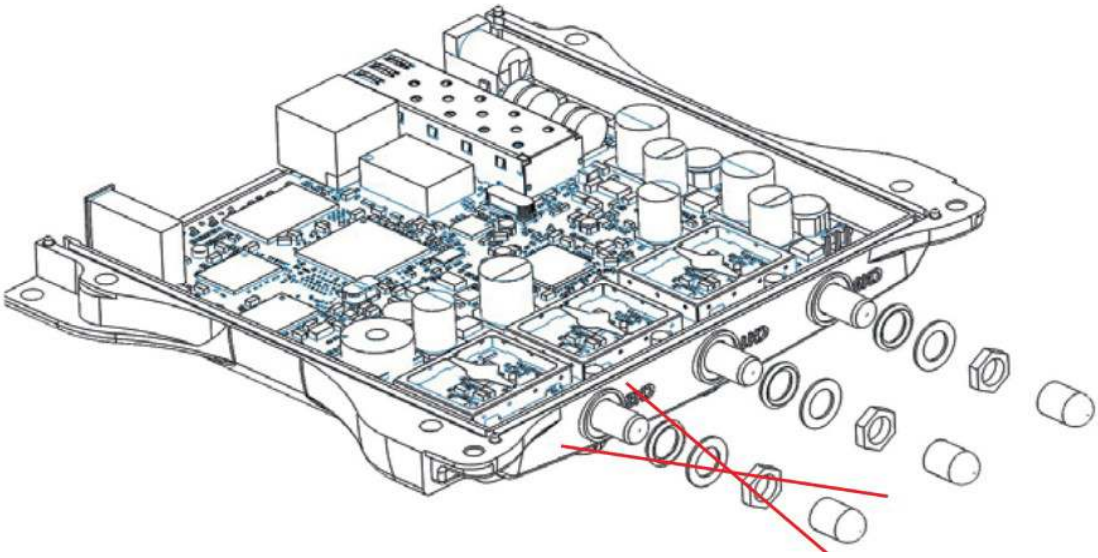
3. Step

Unscrew the PCB from case back with 4 pcs., M3 and 1 pcs., M2 screws



Picture 88

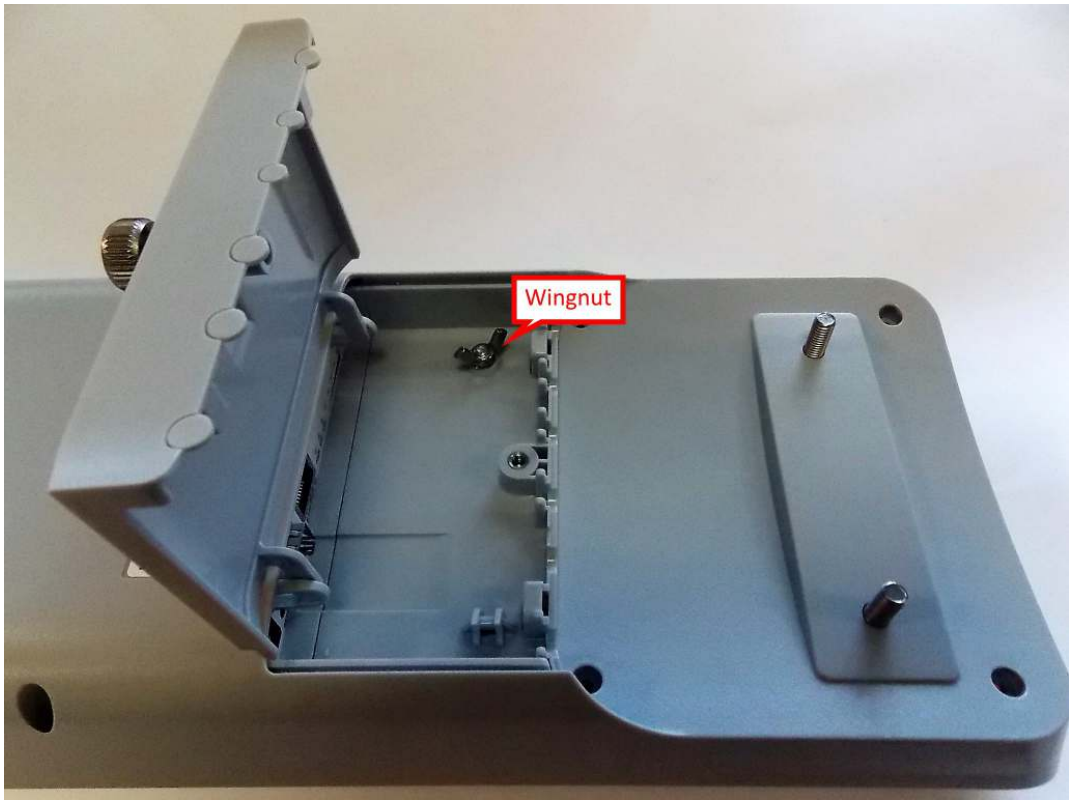
Unscrew the SMA connector nuts with 8 mm wrench.



Picture 89

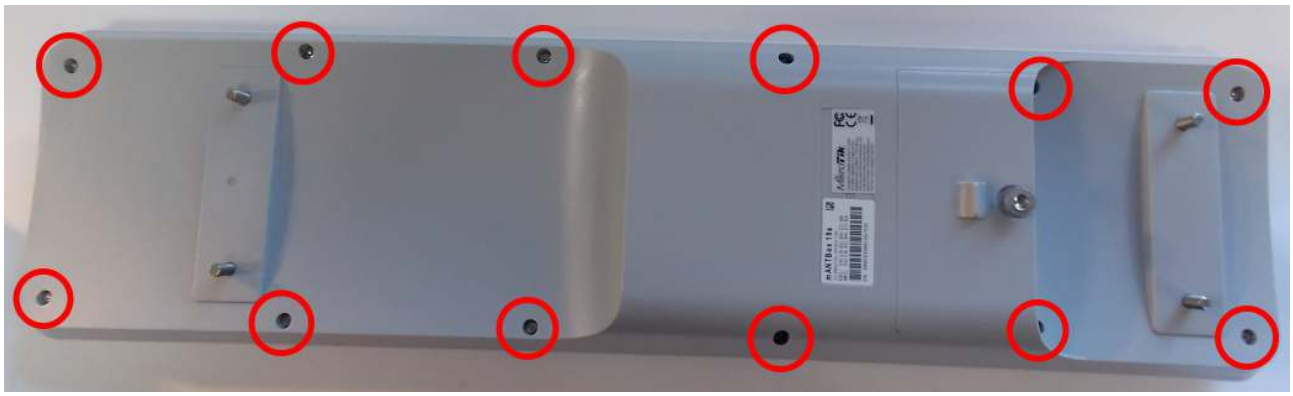
mANTBox disassembling.

1. Open antenna enclosure and unscrew wingnut.

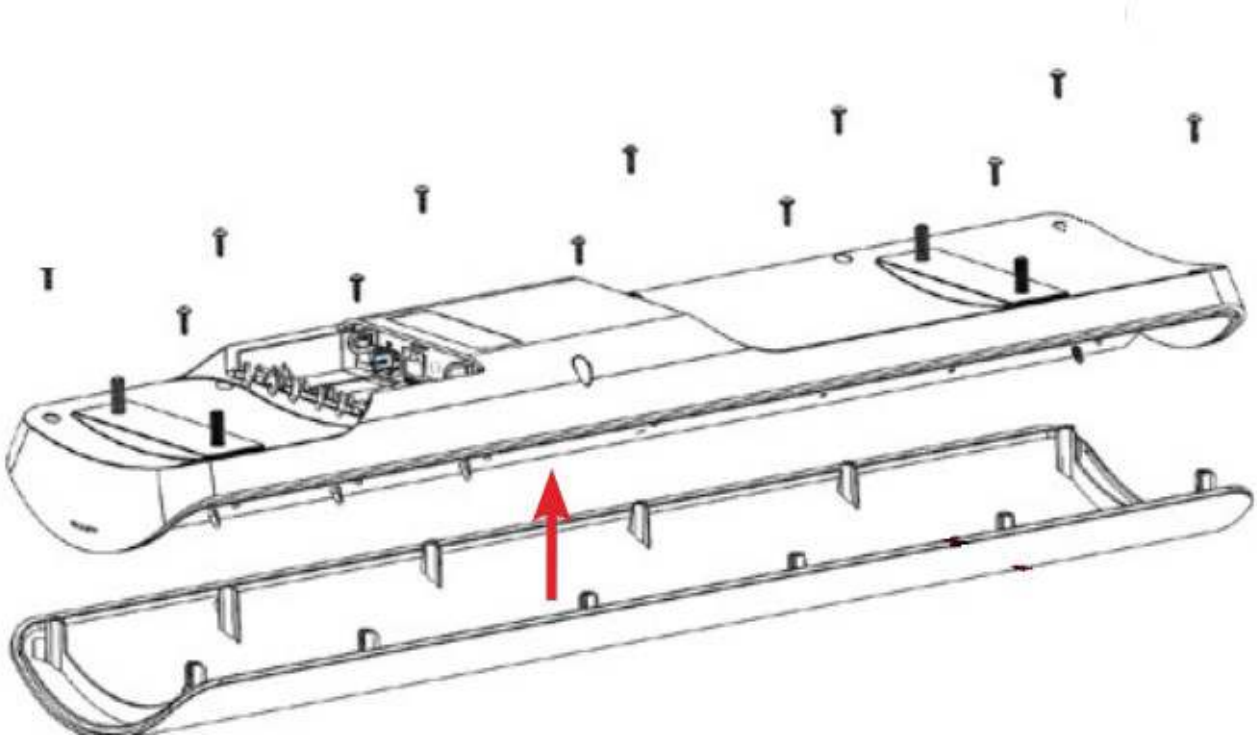


Picture 90

2. Unscrew case T10 hex screws and remove case

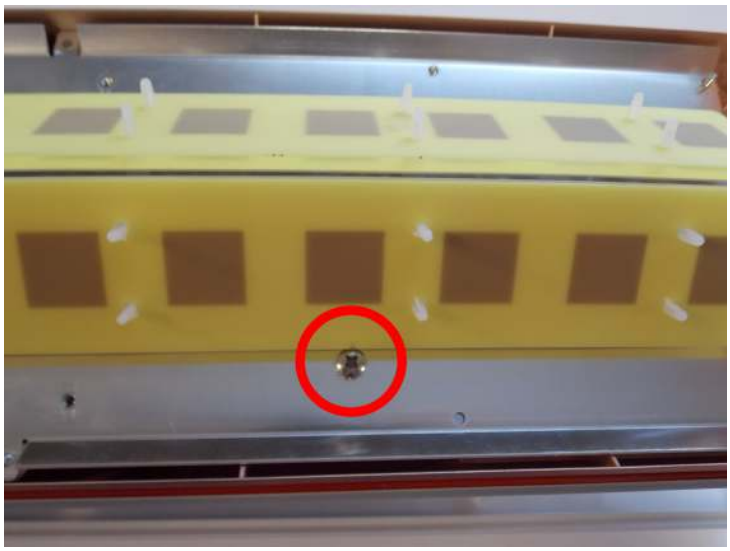


Picture 91



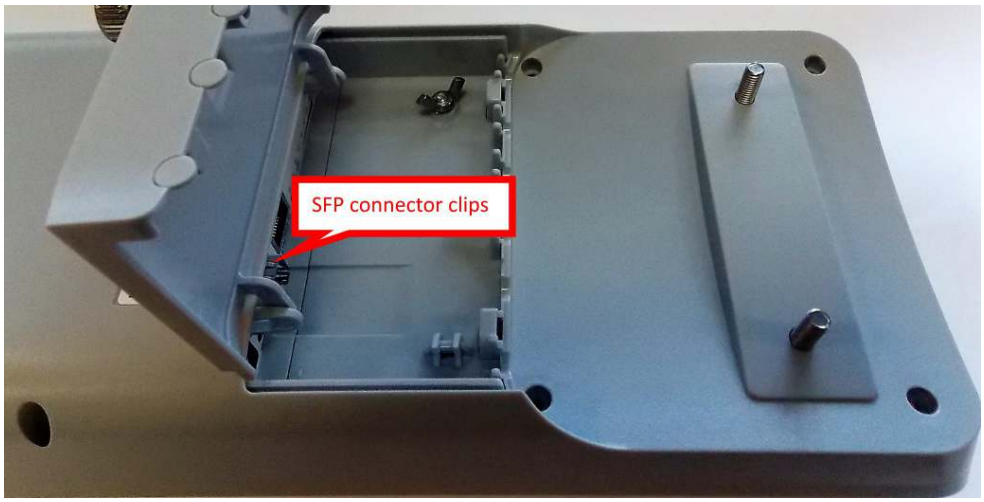
Picture 92

4. Unscrew M4x16 A2 screw and remove antenna assembly from case.



Picture 93

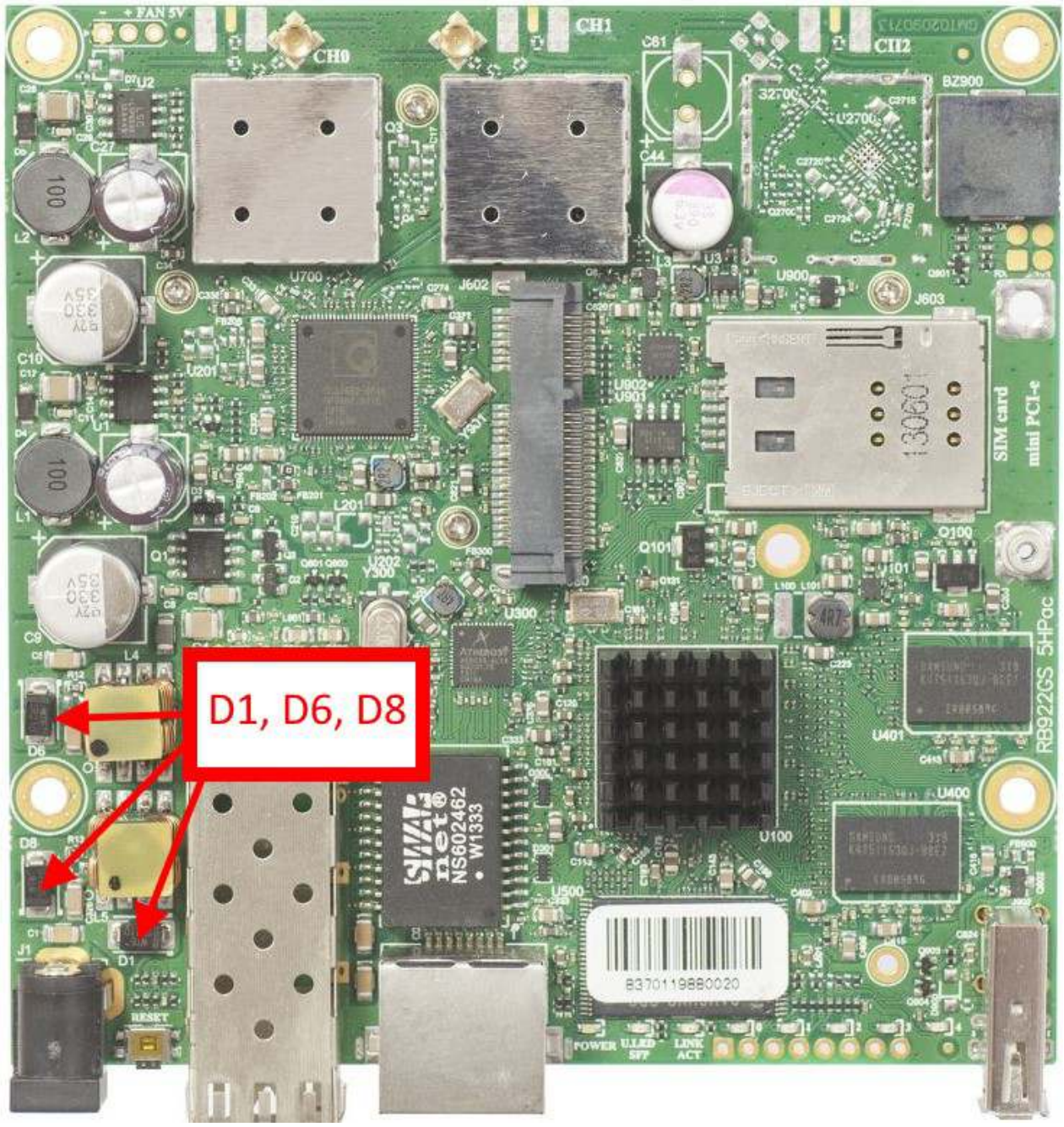
Make sure that SFP connector clips are not disturbing to remove antenna assembly



Picture 94

Schottky diode measuring with multimeter in diode mode

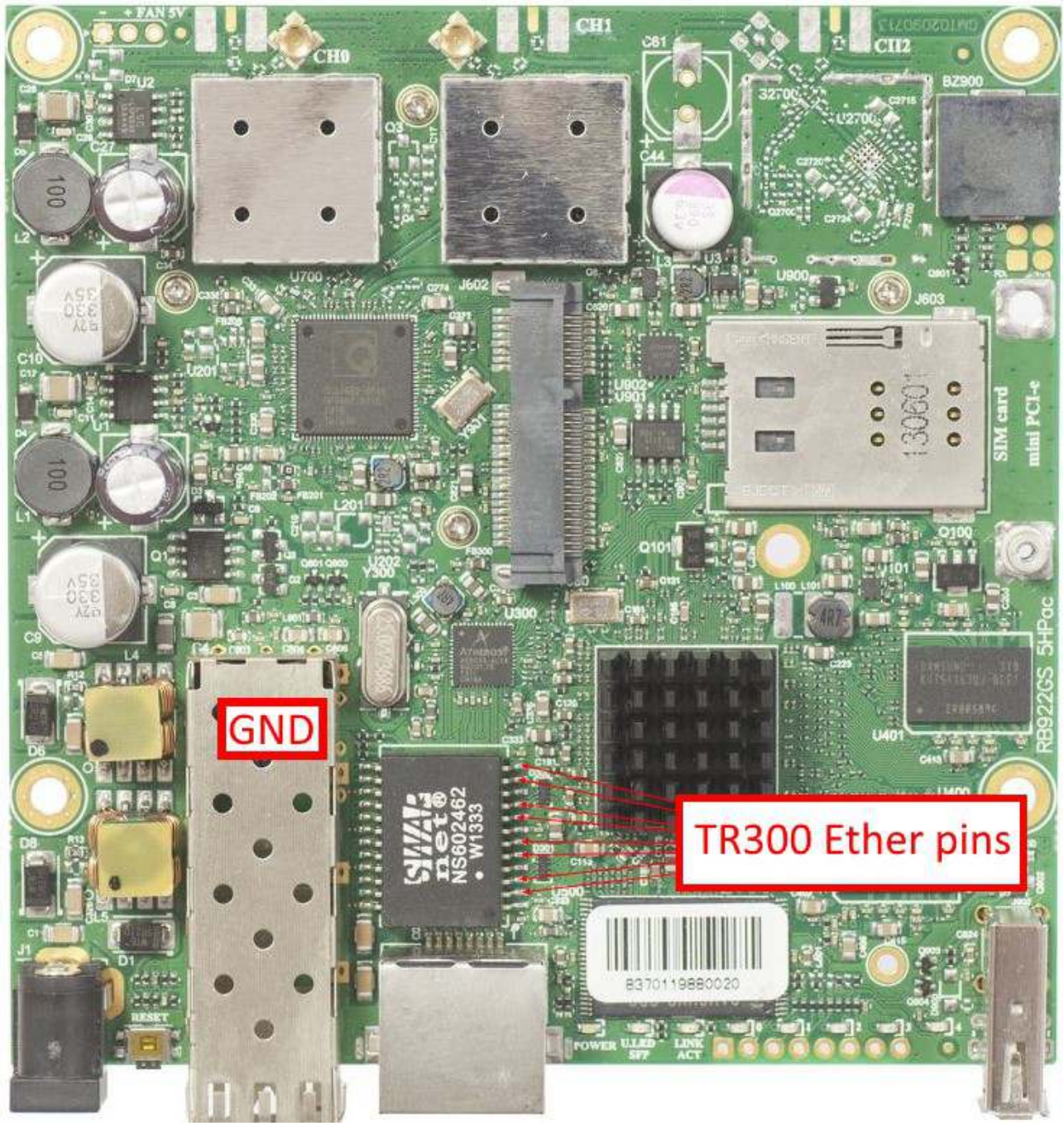
Schottky diode reference numbers are D1, D6, D8. Schottky diode quality measurement method describe on page 7



Picture 95

Voltage drop between TR300 and Ground.

Check voltage drop between Ethernet Transformers TR300 on port Ether1 pins and Ground. TR300 pins are marked with red arrows. It should be in the range from 0,32V to 0,438V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked Transformers pins



Picture 96

951-2n series RouterBoards

RB951-2n

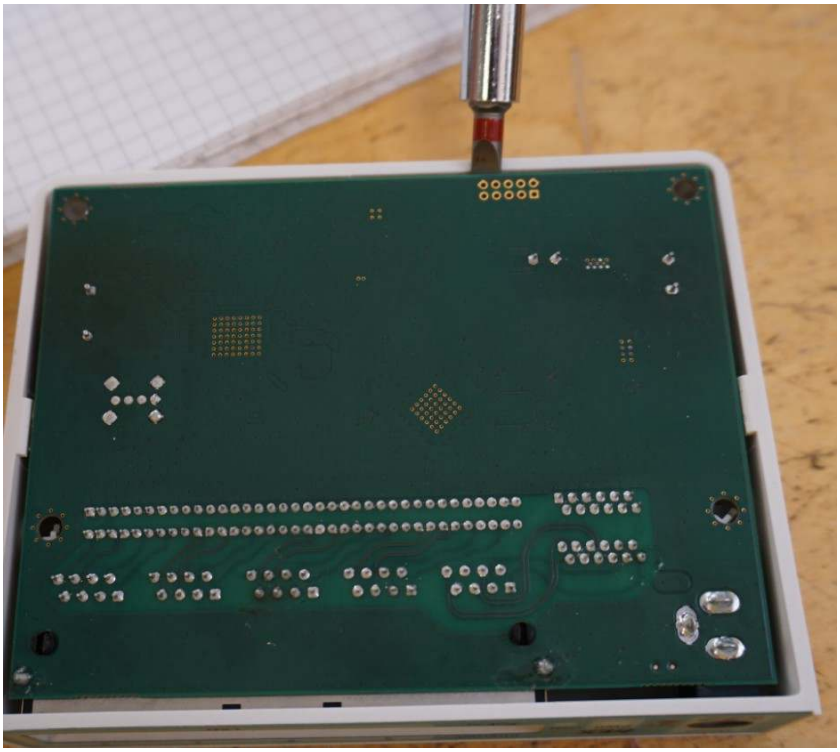
Picture 97

Disassembling information

Take off the cover with a screwdriver as shown in the picture 208

Picture 98

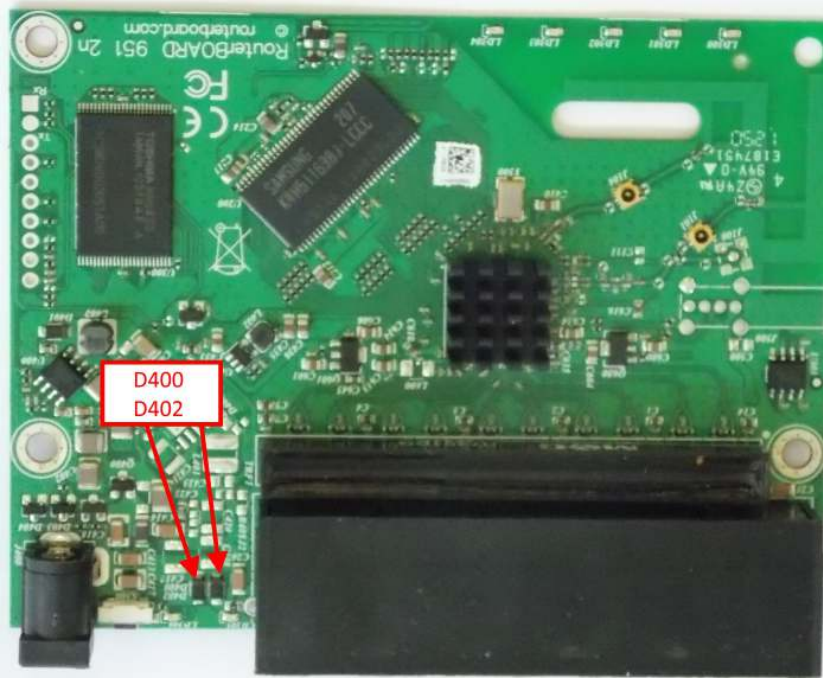
Take out the board with a screwdriver as shown in the picture 209



Picture 209

Schottky diode measuring with multimeter in diode mode

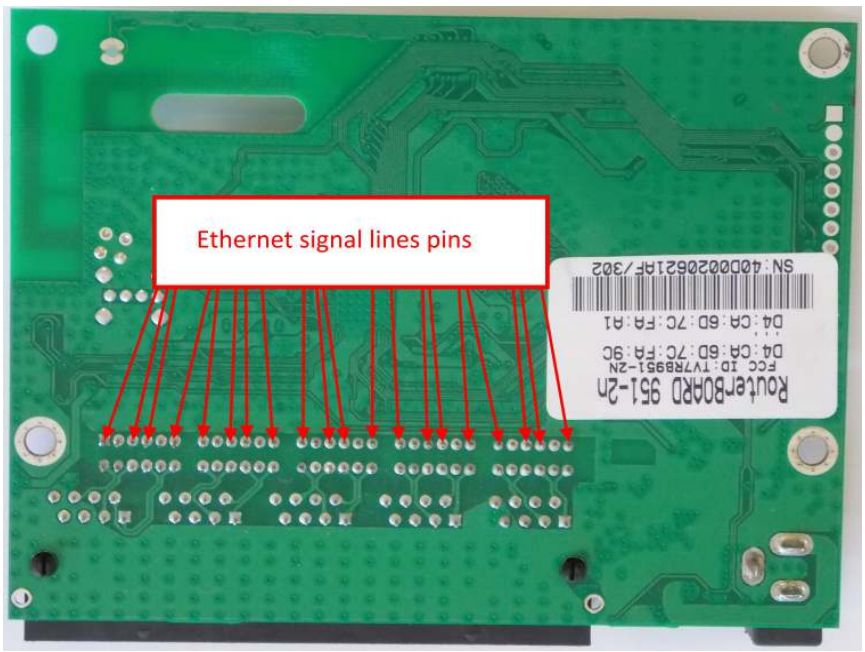
Schottky diode reference numbers are D400, D402. Schottky diode quality measurement method describe on page 7



Picture 99

Voltage drop between TR1 pins and Ground.

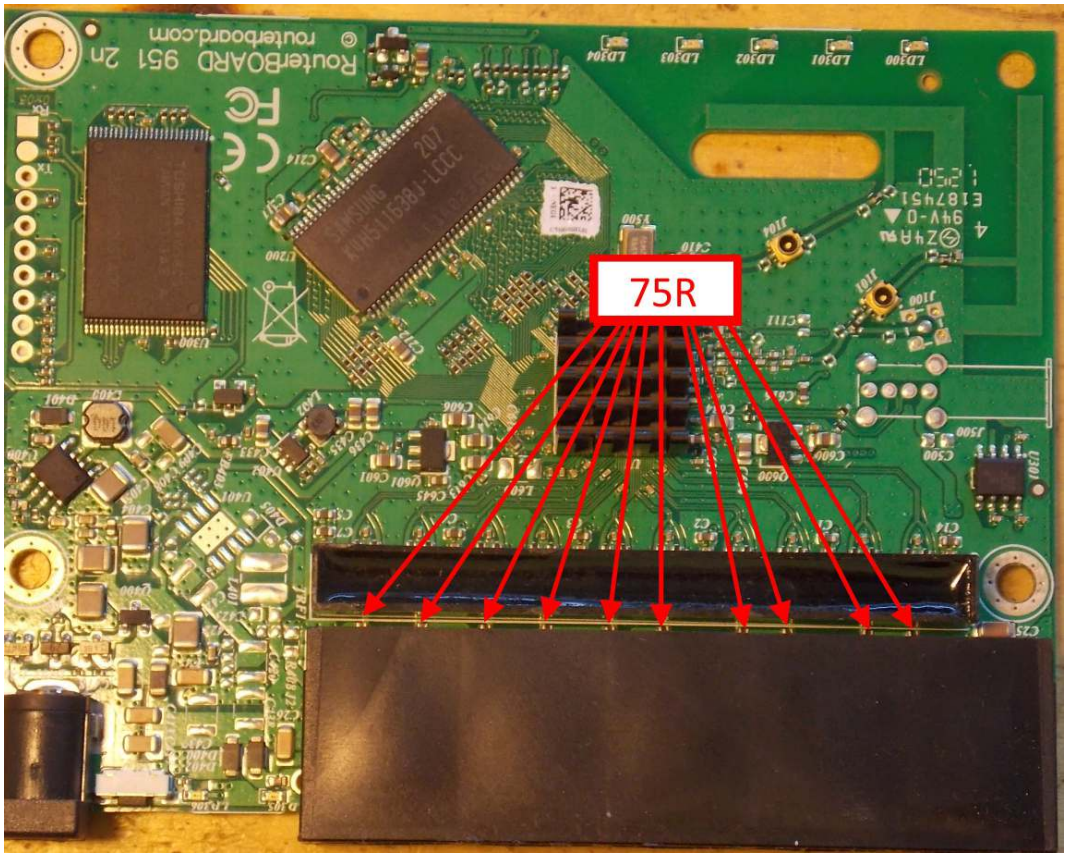
Check voltage drop between TR1 Ethernet Transformers on ports Ether1 – Ether5 pins and Ground. Ether Pins are circled red. It should be in the range from 0,32V to 0,438V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked Transformers pins.



Picture 100

75R termination resistors resistance

Red circled resistors resistance should be 75Ohm +/- 1%



Picture 101

951G-2HnD series RouterBoards

RB951G-2HnD

Picture 102

Disassembling information

951G-2HnD disassembling

Take off the cover with a screwdriver as shown in the picture 102

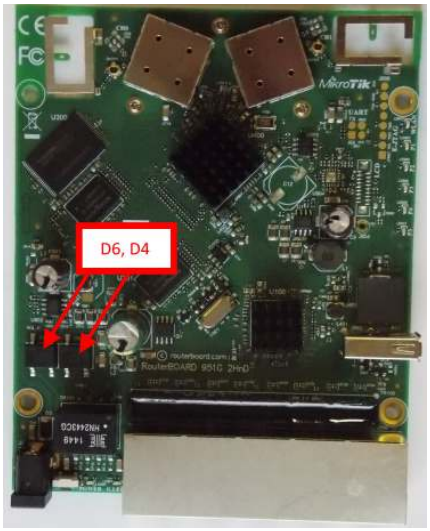
Picture 102

Take out the board with a screwdriver as shown in the picture 103

Picture 103

Schottky diode measuring with multimeter in diode mode

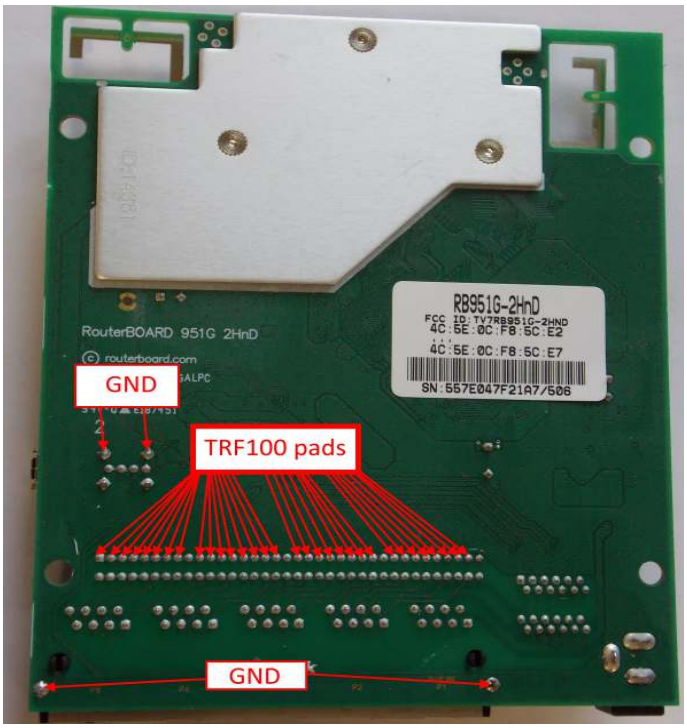
Diode bridge reference numbers are D4 and D6. Schottky diode quality measurement method describe on page 7



Picture 104

Voltage drop between TR100 pins and Ground.

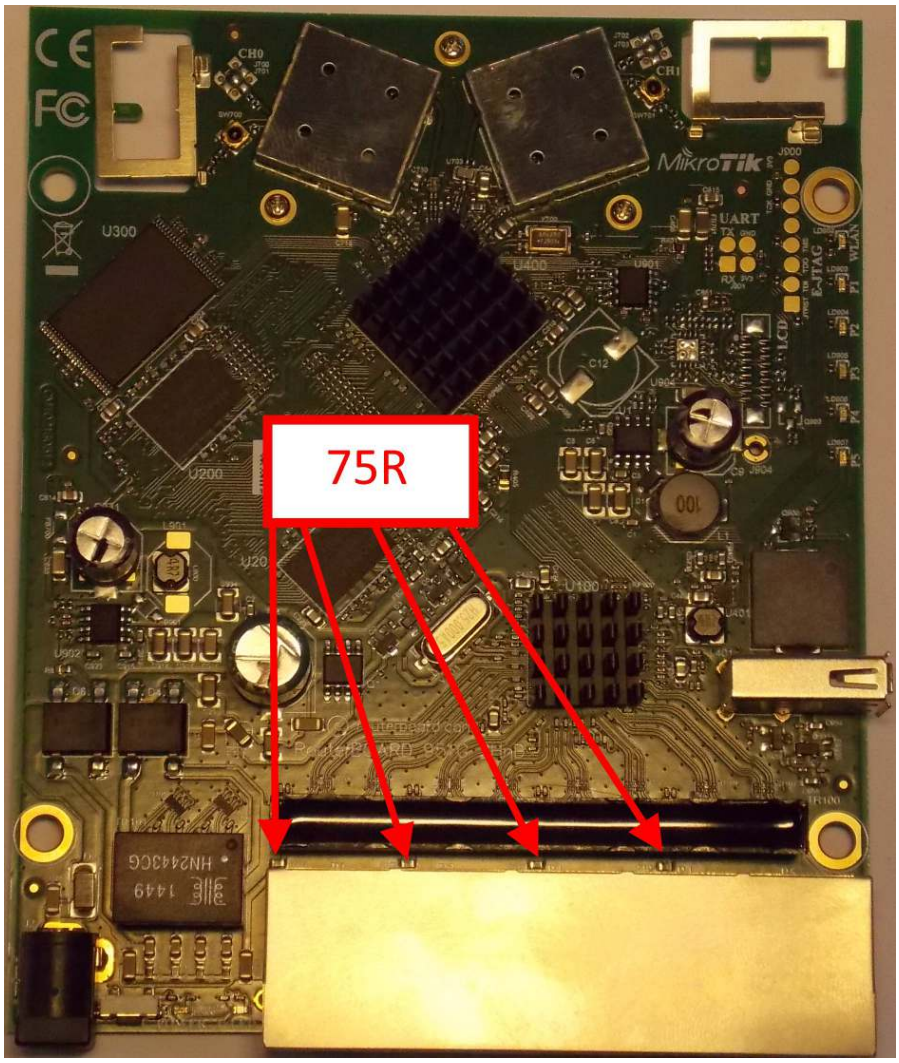
Check voltage drop between TR100 Ethernet Transformers on ports Ether1 – Ether5 pins and Ground. Ether Pins are marked with red arrows. It should be in the range from 0,32V to 0,438V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked TRF100 Transformer pins.



Picture 105

75R termination resistors resistance

Red circled resistors resistance should be 75R +/- 1%



Picture 106

951Ui-2HnD series RouterBoards

RB951Ui-2HnD

Picture 107

Disassembling information

Take off the cover with a screwdriver as shown in the pictures 108

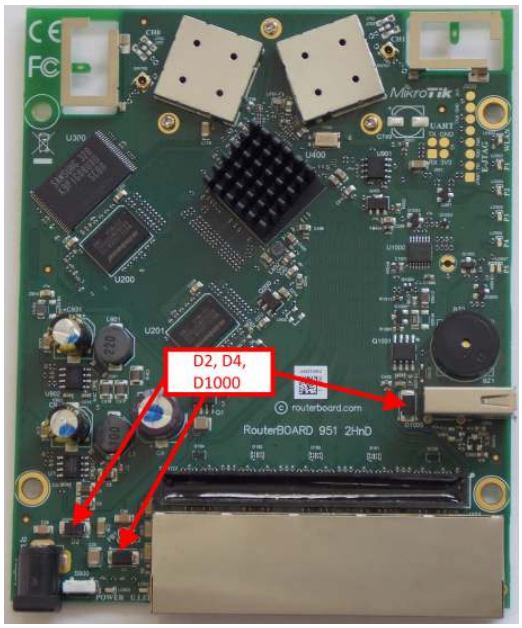
Picture 108

Take out the board with a screwdriver as shown in the picture109

Picture 109

Schottky diode measuring with multimeter in diode mode

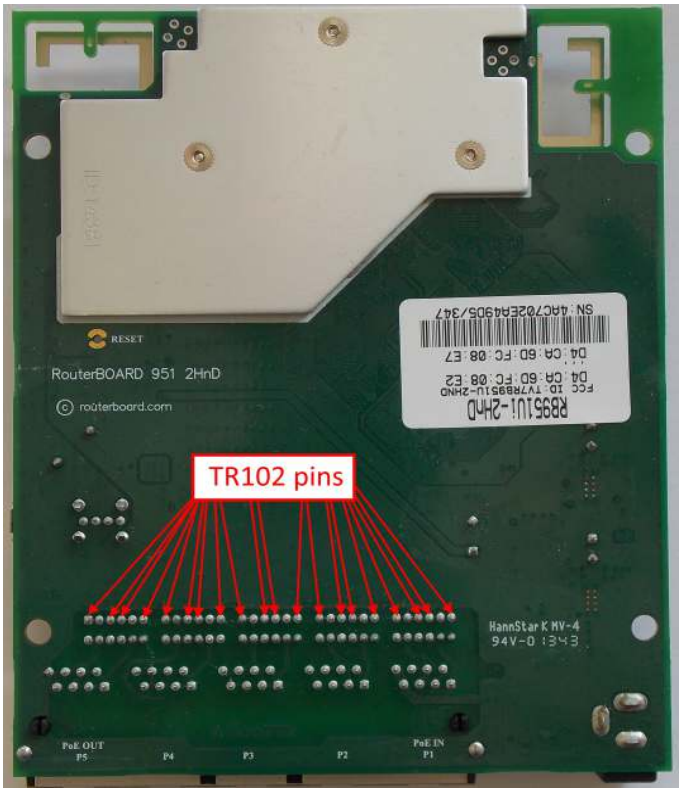
Diode bridge reference numbers are D2, D4 and D1000. Schottky diode quality measurement method describe on page 7



Picture 110

Voltage drop between TR102 pins and Ground.

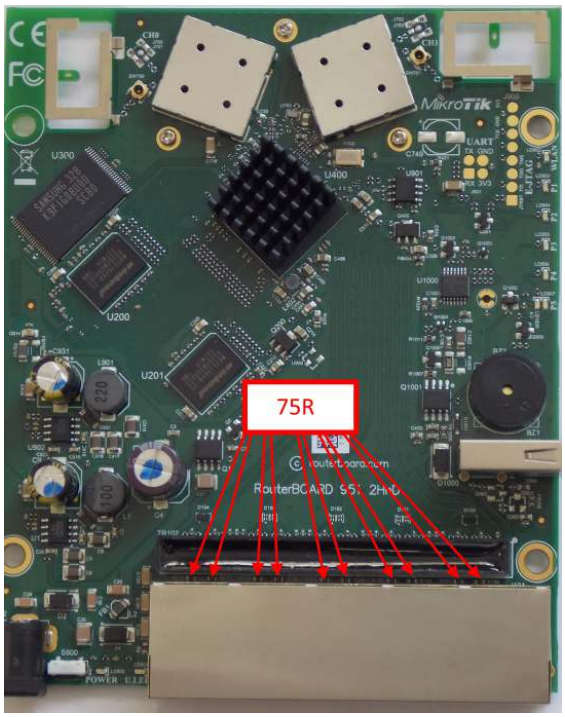
Check voltage drop between TR102 Ethernet Transformers on ports Ether1 – Ether5 pins and Ground. Ether Pins are marked with red arrows. It should be in the range from 0,32V to 0,438V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked TR102 Transformer pins.



Picture 112

75R termination resistors resistance

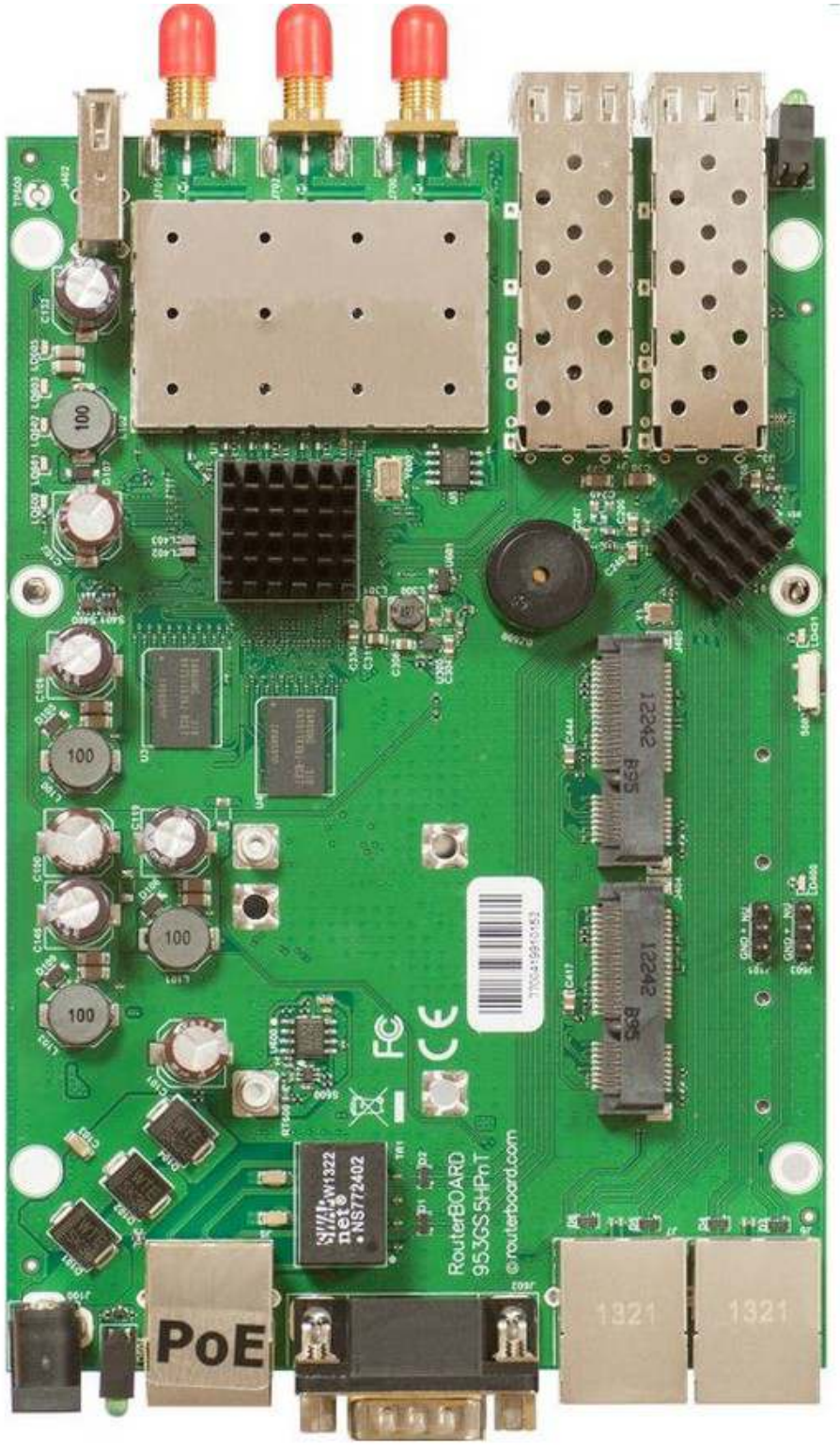
Red circled resistors resistance should be 75R +/- 1%



Picture 113

953GS-5HnT series RouterBoards

RB953GS-5HnT-RP



Picture 114

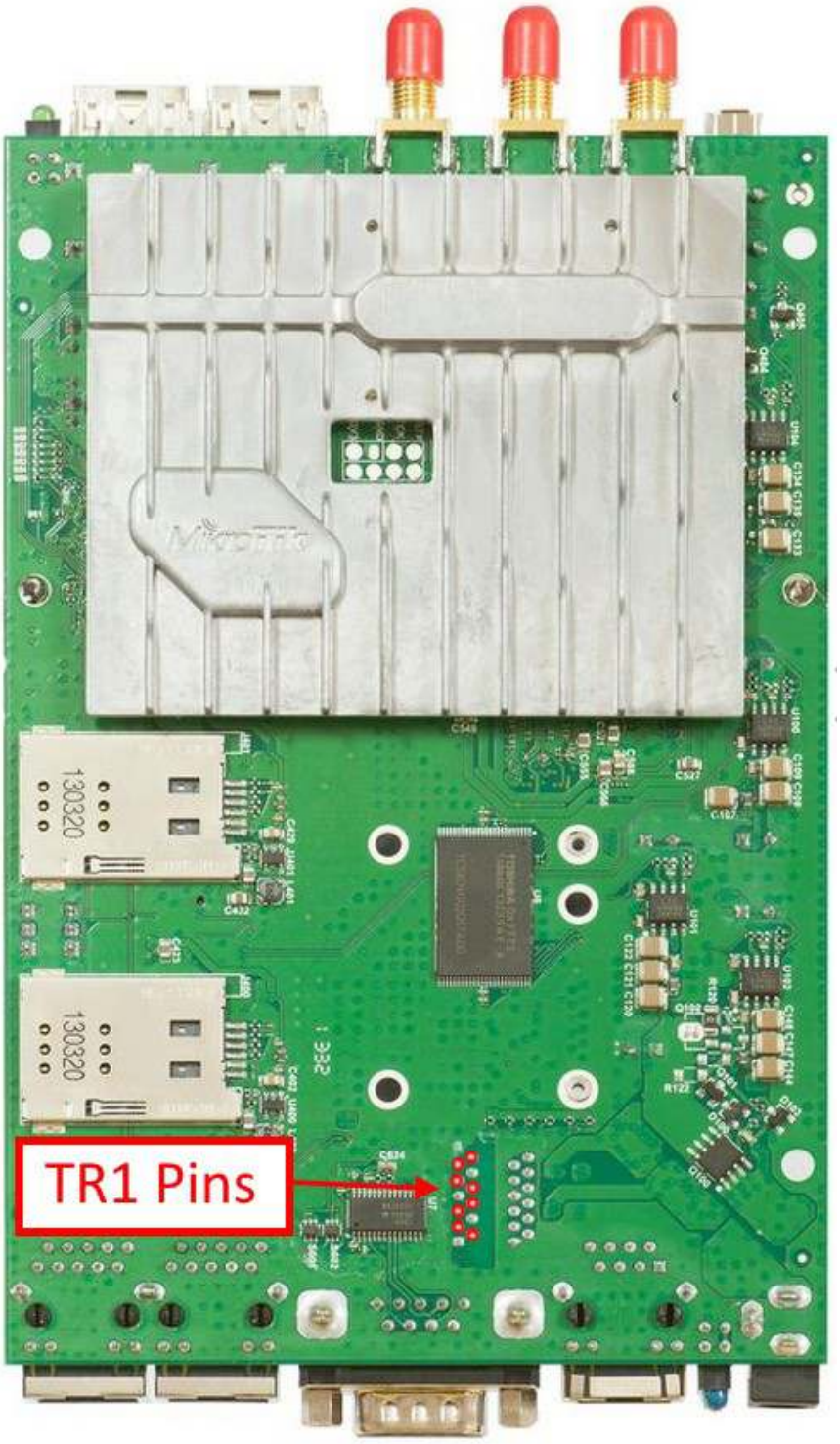
Schottky diode measuring with multimeter in diode mode

Schottky diode reference numbers are D101, D102, D104; Schottky diode quality measurement method describe on page 7

Picture 115

Voltage drop between TR1 pins and Ground.

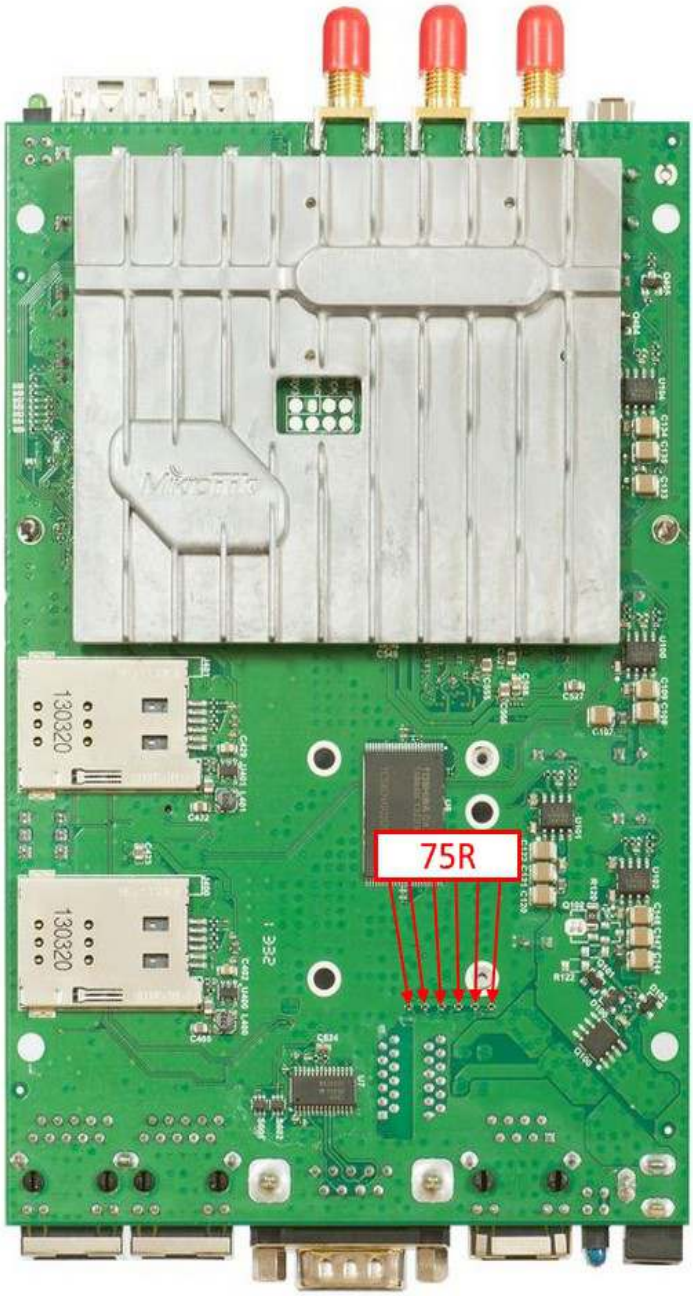
Check voltage drop between TR1 Ethernet Transformers pins and Ground. Ether Pins are marked with red circles. It should be in the range from 0,32V to 0,589V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked TR1 Transformers pins.



Picture 116

75R Termination resistors resistance.

Resistor resistance, marked with red arrow, should be 75 Ohm +/- 1%



Picture 117

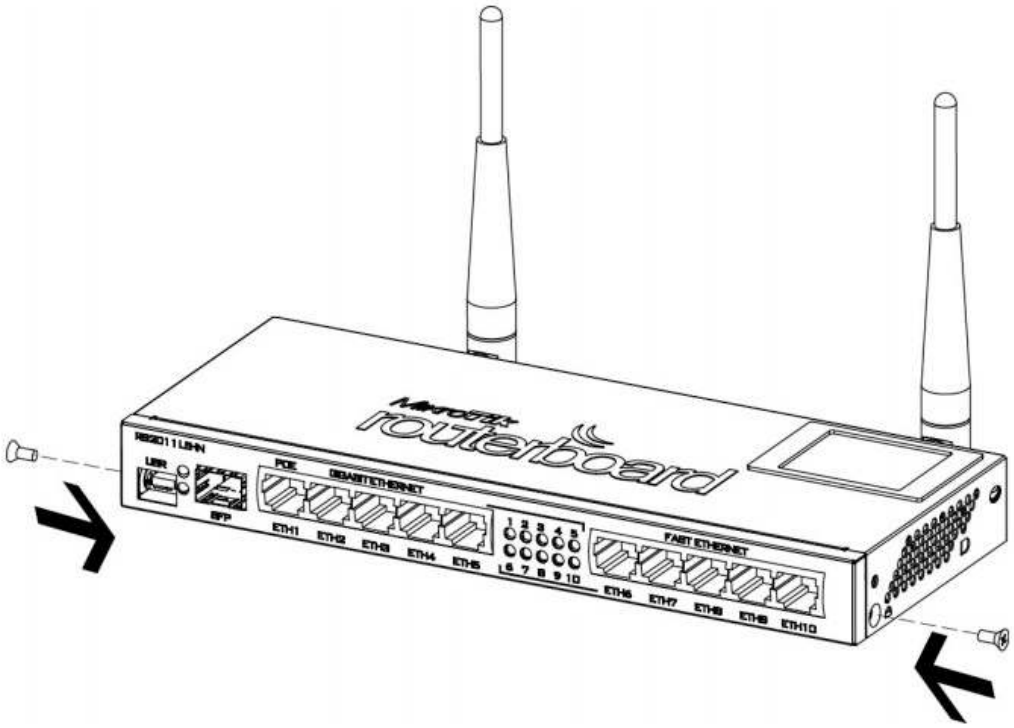
On ports Ether2 – Ether3 You can take patch cord and plug it into the routerboard, and then measure as describe on page 9

List of RB2011 series RouterBoards:

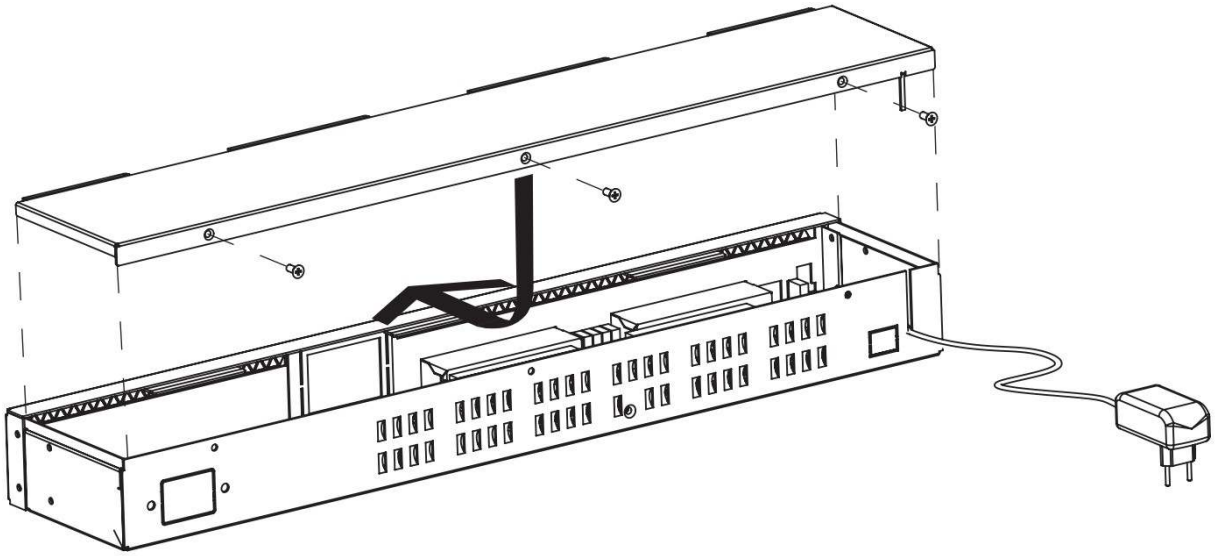
Picture 118

Disassembling information

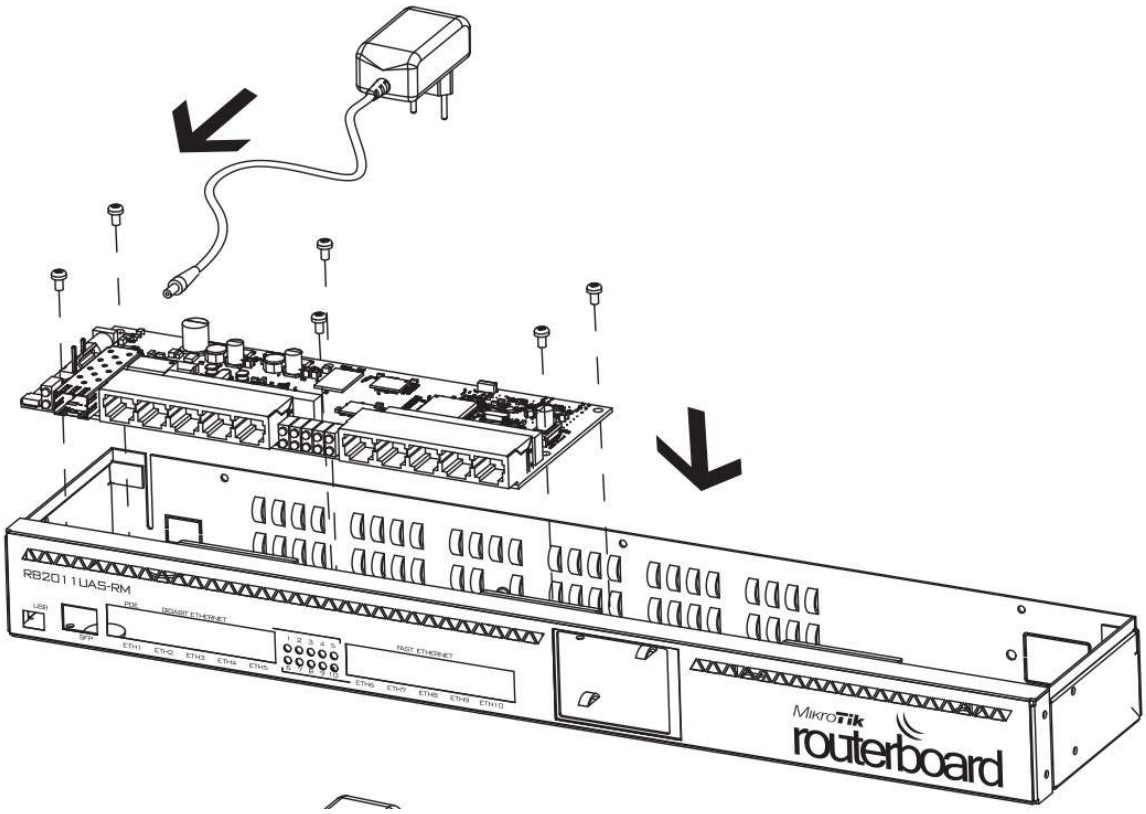
Indoor 2011 series RouterBoards



Picture 119



Picture 120



Picture 121

Schottky diode measuring with multimeter in diode mode

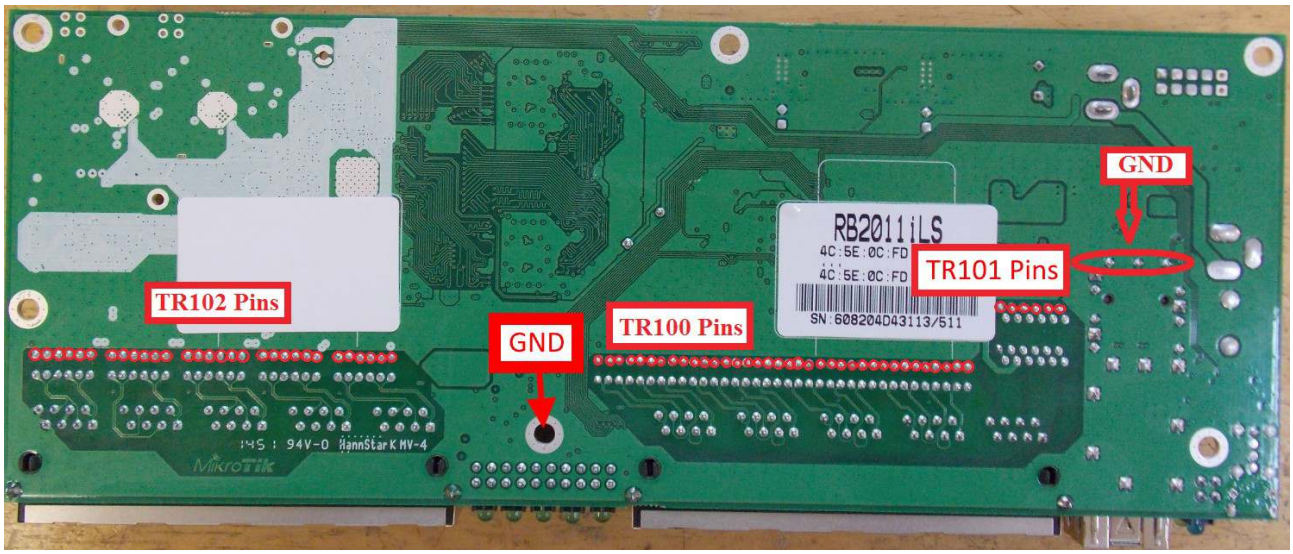
Schottky diode reference numbers is D2; Diode bridges reference numbers are D6, D4. Schottky diode quality measurement method describe on page 7

Picture 122

Voltage drop between Ethernet transformers pins and Ground.

Check voltage drop between Transformer TR100, TR101 and TR102 pins and Ground.

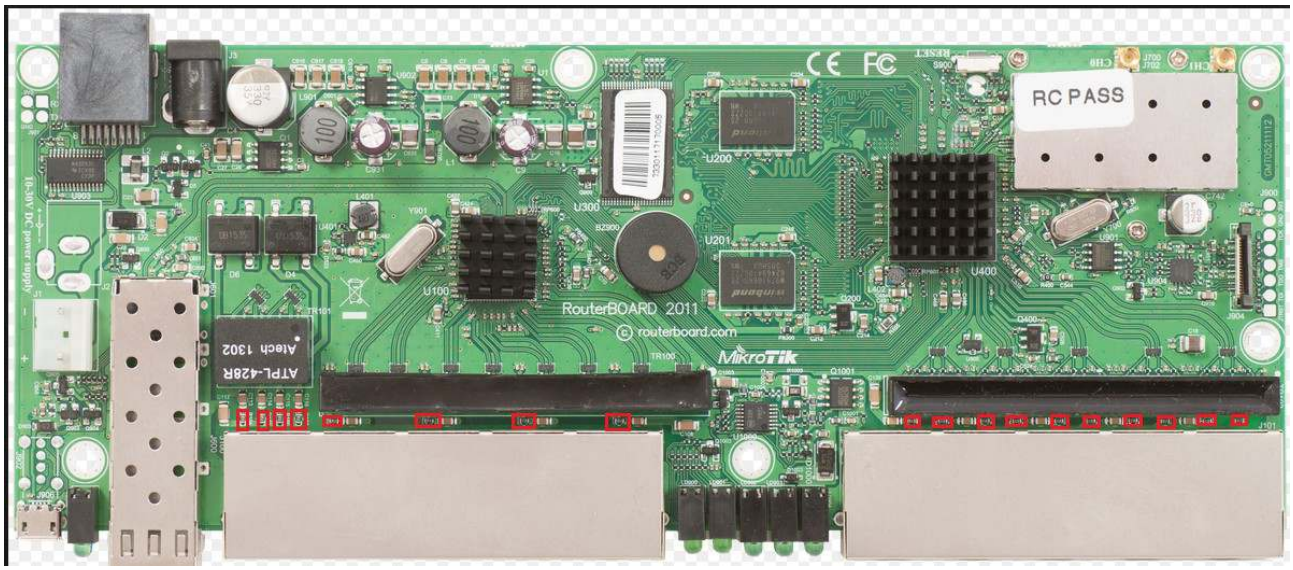
It should be in the range from 0,32V to 0,438V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked Transformers pins



Picture 123

Termination resistors resistance in RJ-45 connector

Red circled resistors resistance should be 75Ohm +/- 1%



Picture 124

On ports Ether2 – Ether10 You can take patch cord and plug it into the routerboard, and then measure as describe on page 9

3011 series RouterBoards

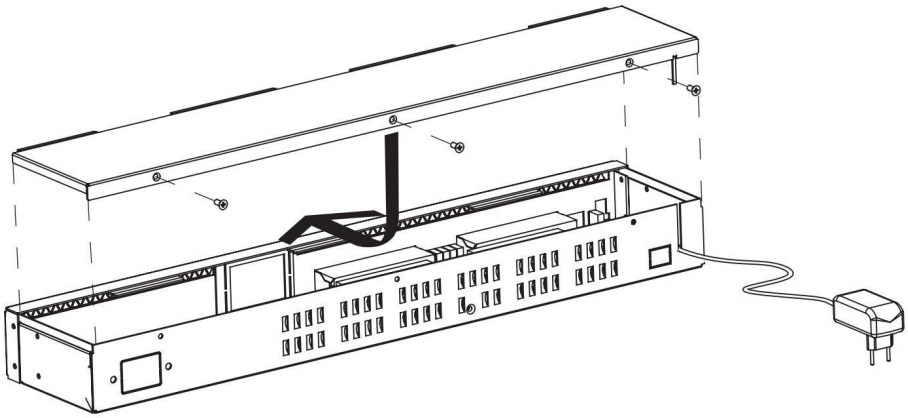
List of RB3011 series RouterBoards:

RB3011UiAS-RM

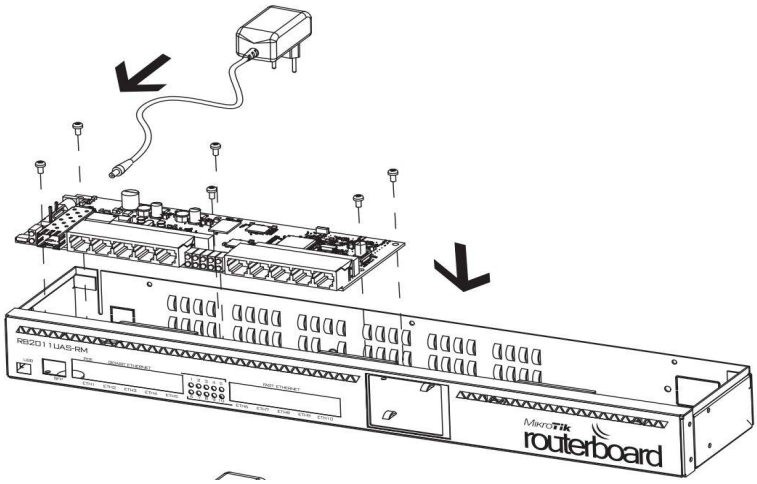
Picture 125

Disassembling information

Rackmount 3011 series RouterBoard



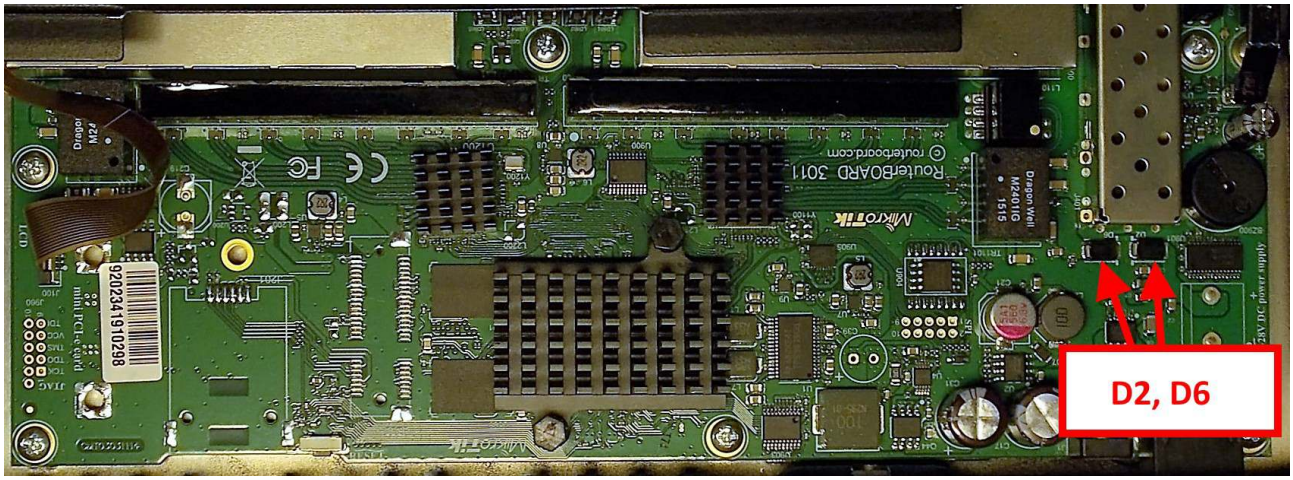
Picture 126



Picture 127

Schottky diode measuring with multimeter in diode mode

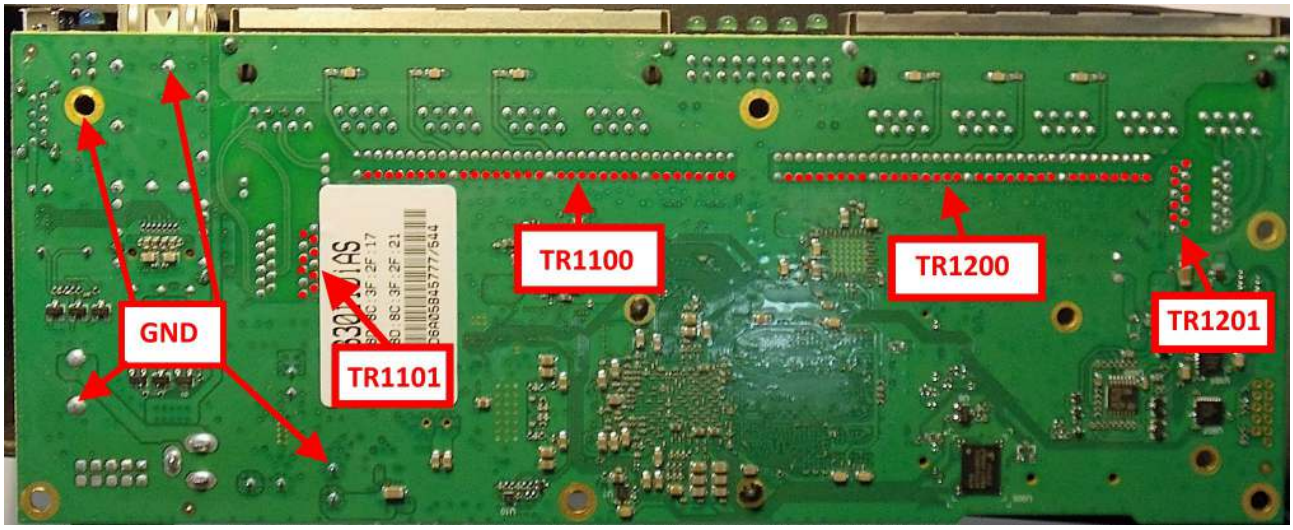
Schottky diode reference numbers are D2, D6;
Schottky diode quality measurement method describe on page 7



Picture 128

Voltage drop between Ethernet transformers and Ground.

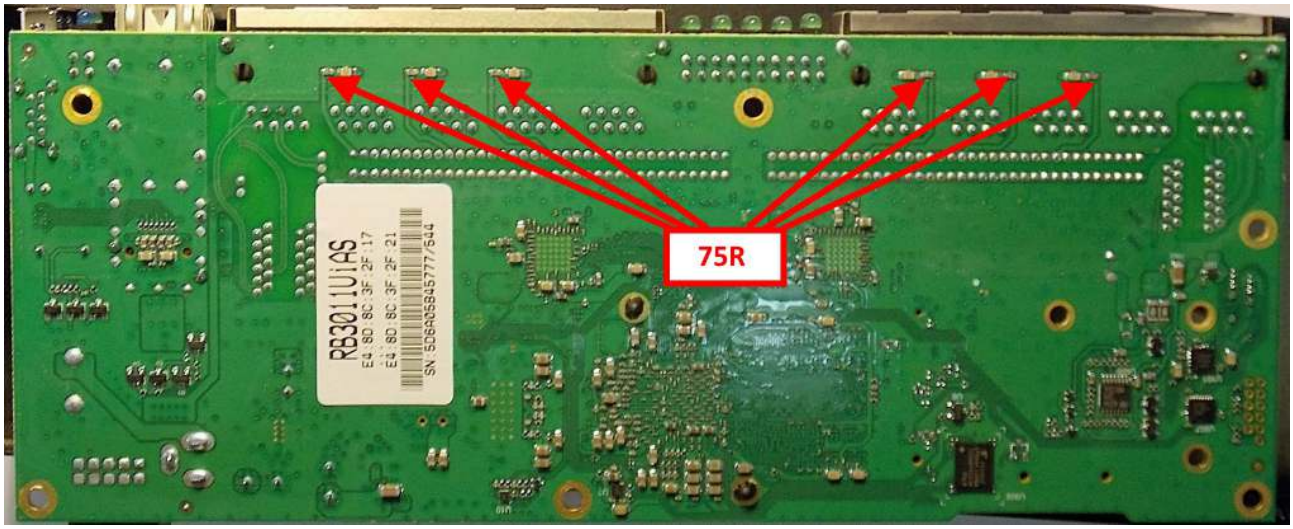
Check voltage drop between Transformers TR1100, TR1101, TR1200 and TR1202 pins and Ground. It should be in the range from 0,32V to 0,438V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked Transformers pins.



Picture 129

Termination resistors resistance

Resistors marked with red arrows resistance should be 75Ohm +/- 1%



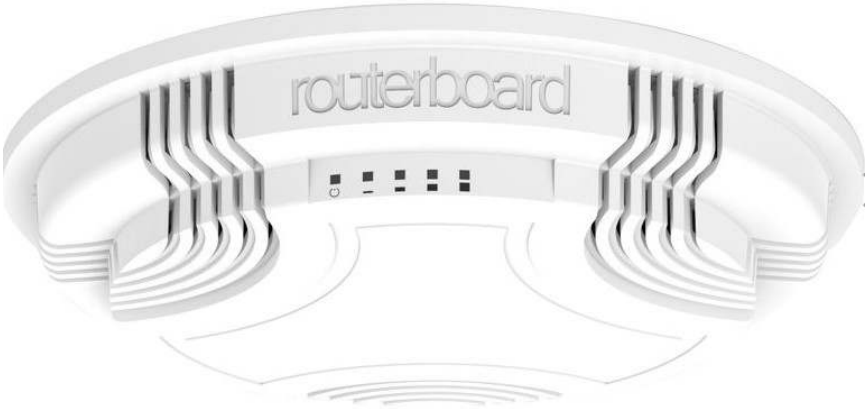
Picture 130

On ports Ether2 – Ether9 You can take patch cord and plug it into the routerboard, and then measure as describe on page 9

cAP series RouterBoards

RBcAP series:

cAP 2n



Picture 131

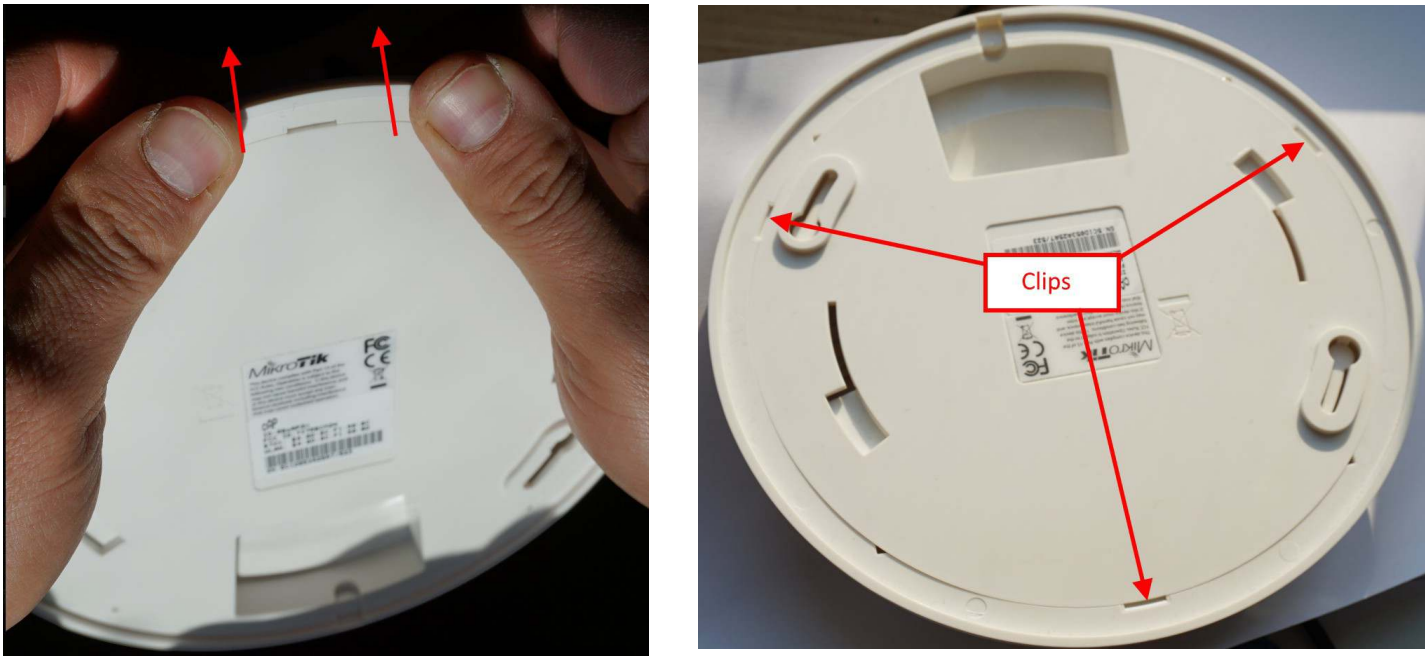
Picture 132

Disassembling information

cAP 2n disassembling

1. step

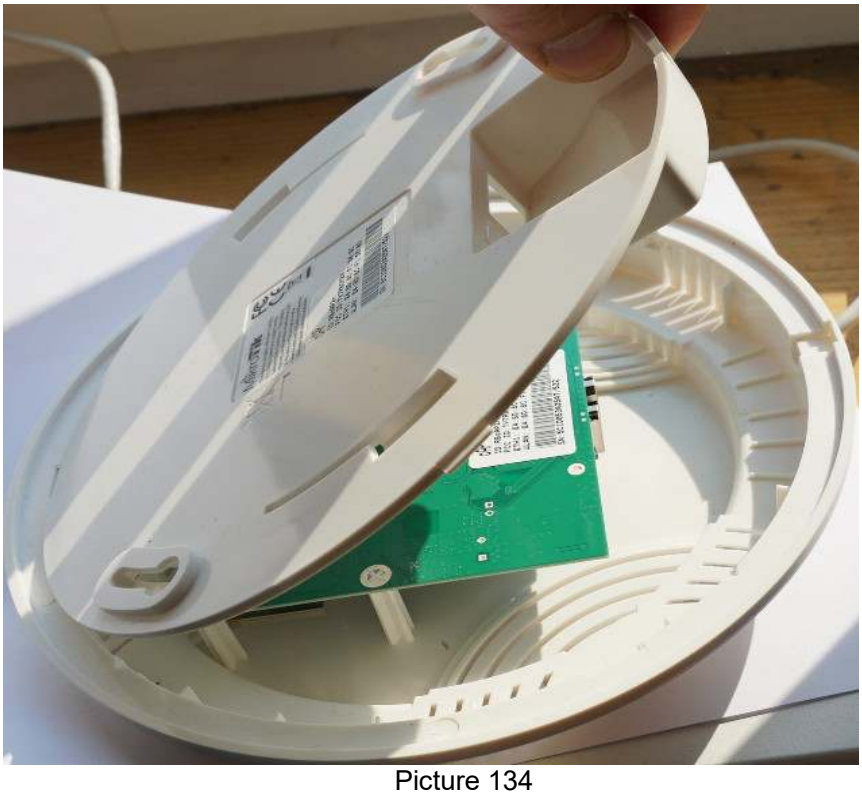
Push the outer edge around clips to open the case



Picture 133

2. step

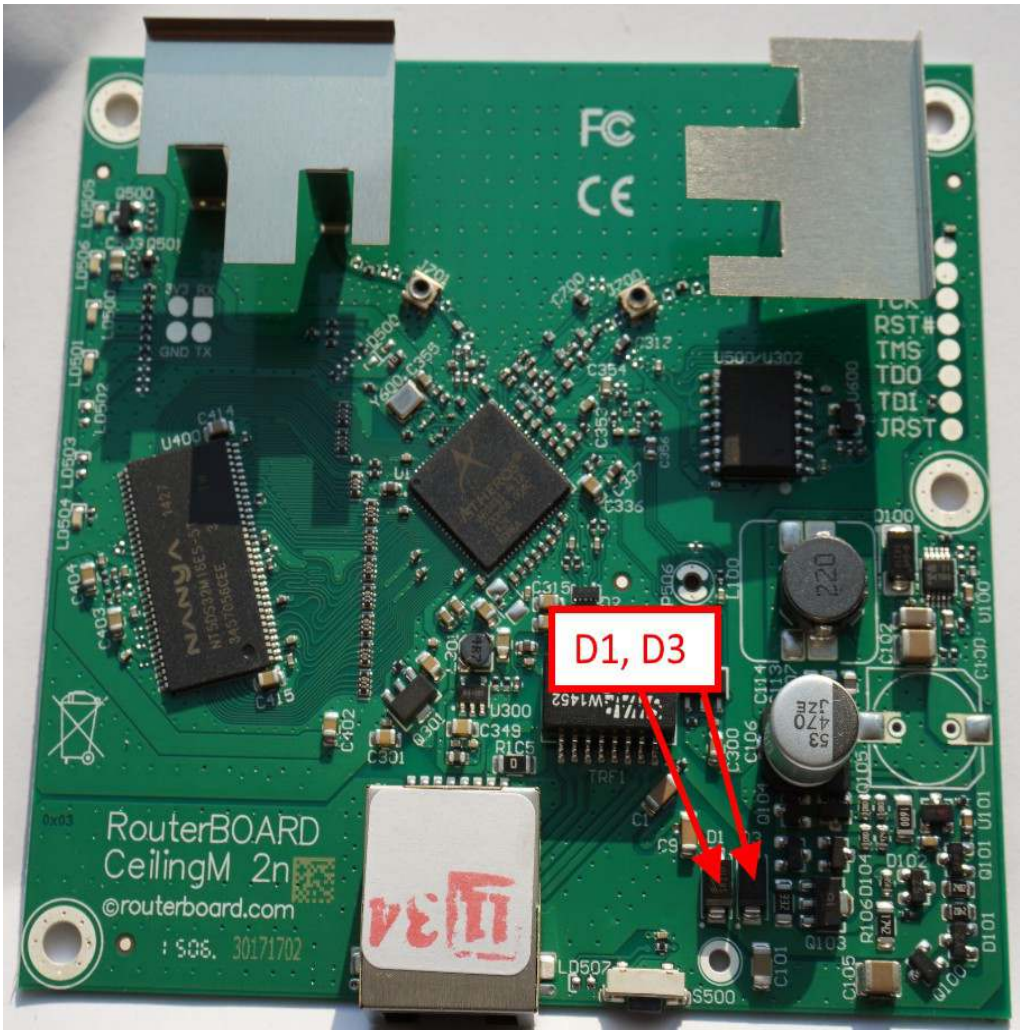
Remove cover and take out the board from case



Picture 134

Schottky diode measuring with multimeter in diode mode

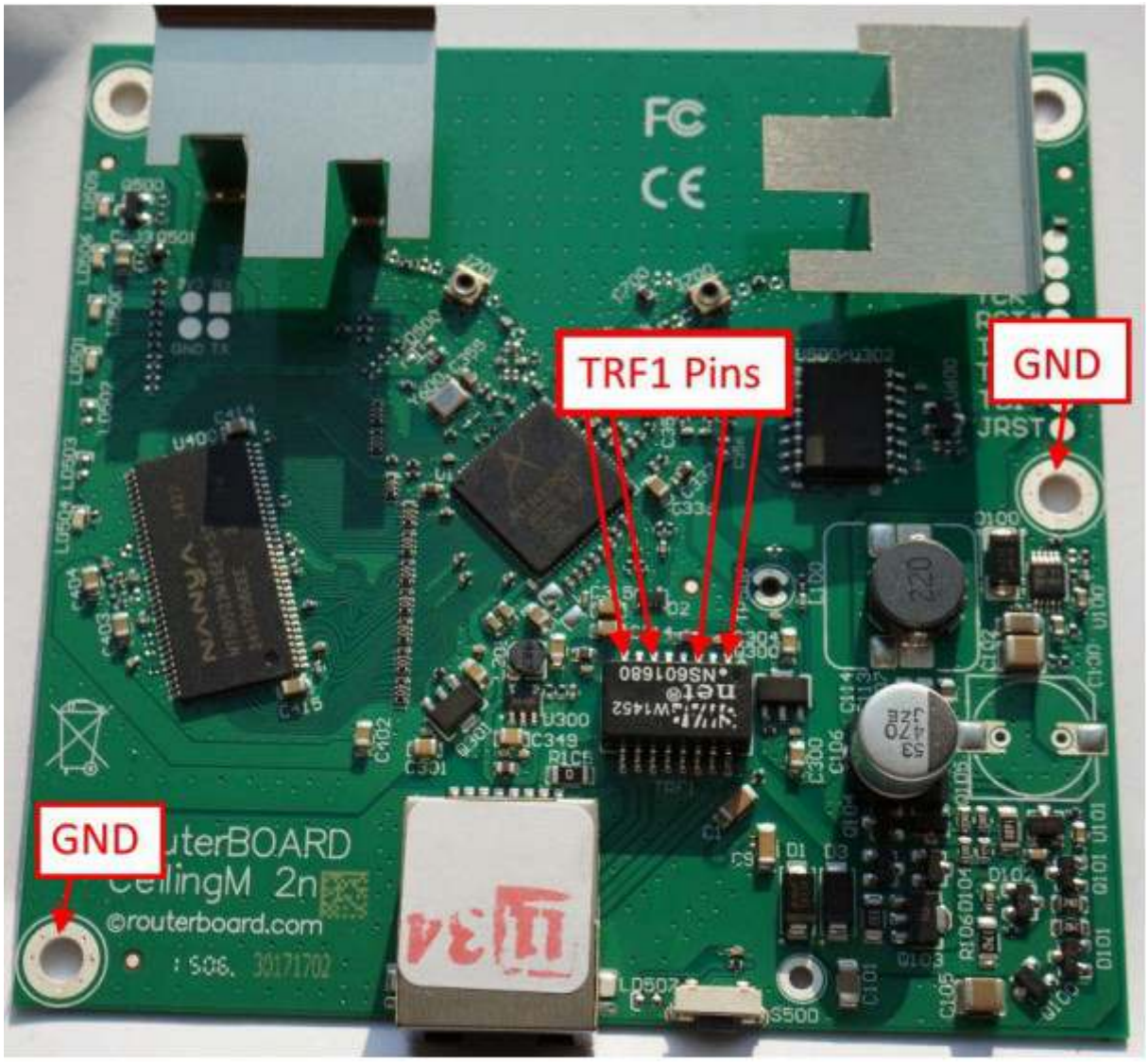
Schottky diode reference numbers are D1, D3. Schottky diode quality measurement method describe on page 7



Picture 135

Voltage drop between TRF1 pins and Ground.

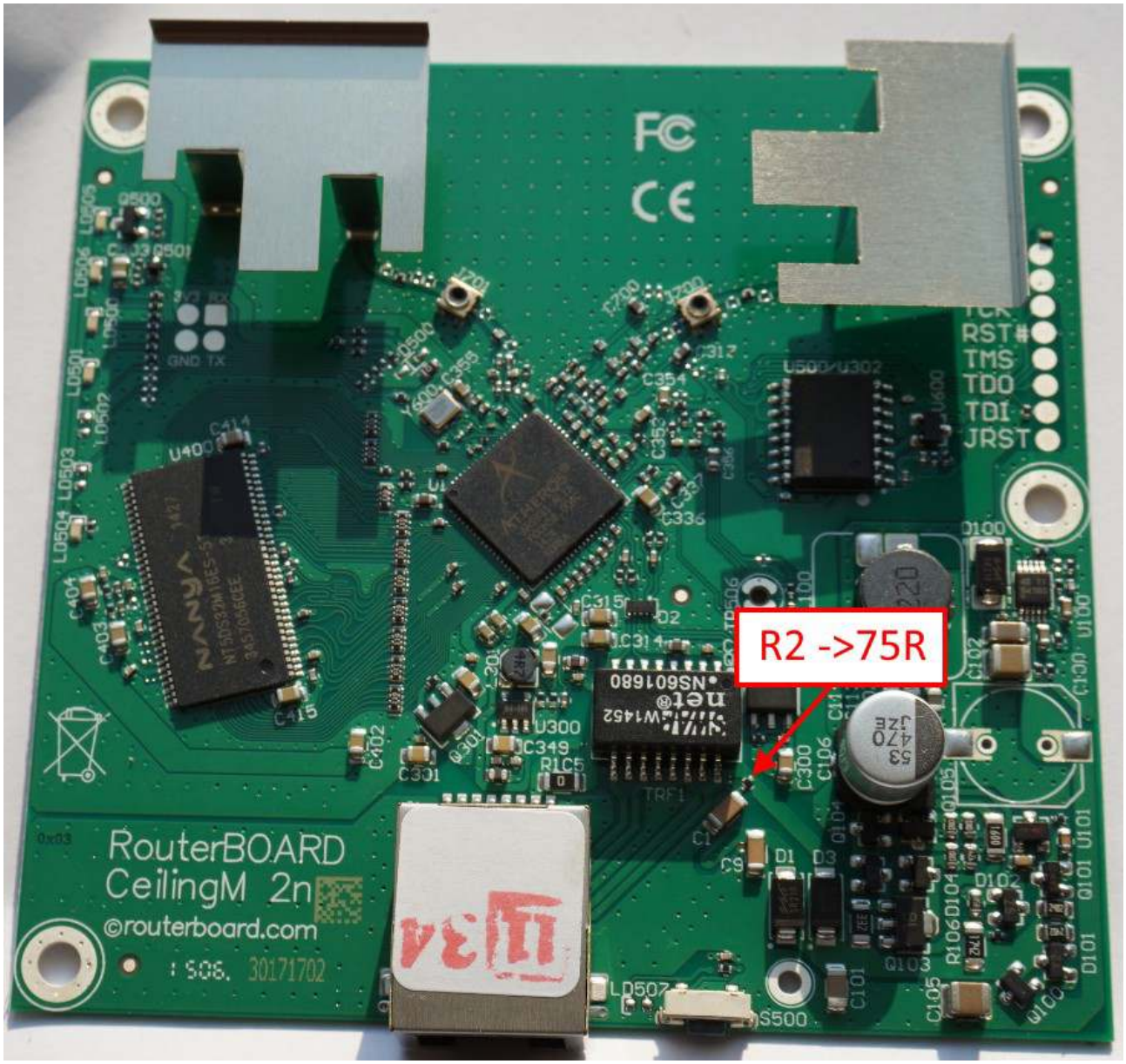
Check voltage drop between TRF1 Ethernet Transformers pins and Ground. Ether Pins are marked with red arrows. It should be in the range from 0,32V to 0,478V. Measure in diode mode:hold “positive” wire on the Ground and “COM” wire to marked TRF1 Transformer pins.



Picture 136

75R Termination resistors resistance.

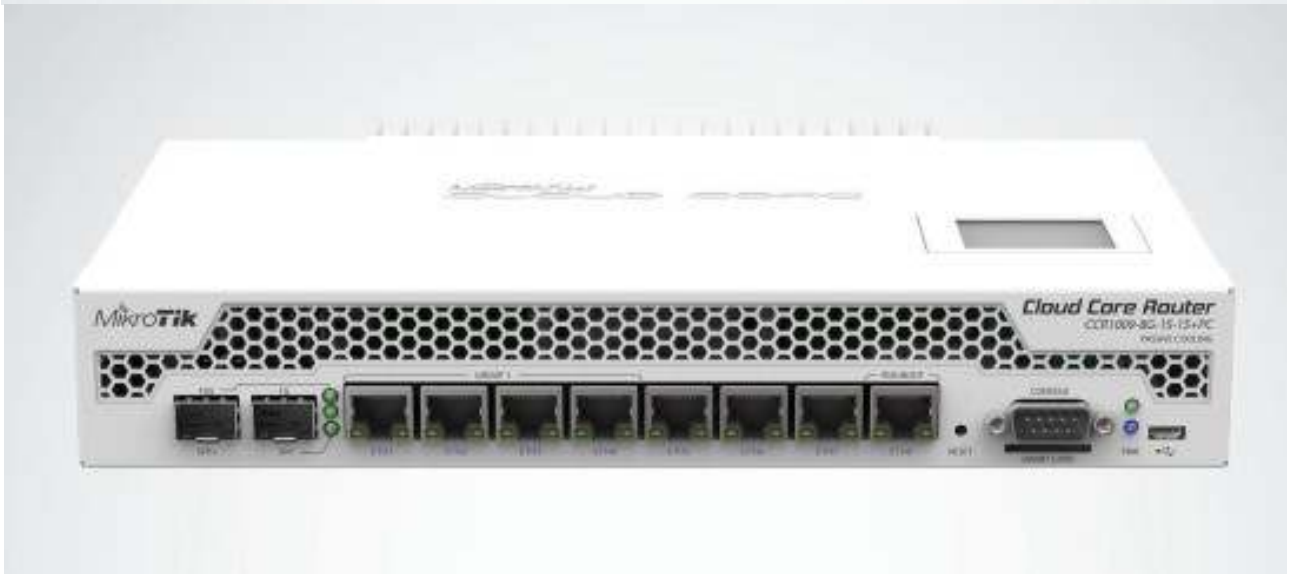
Resistor resistance, marked with red arrow, should be 75 Ohm +/- 1%



Picture 137

CCR1009 series RouterBoards

List of CCR1009 series RouterBoards:



CCR1009-8G-1S-1S+PC

Picture 138

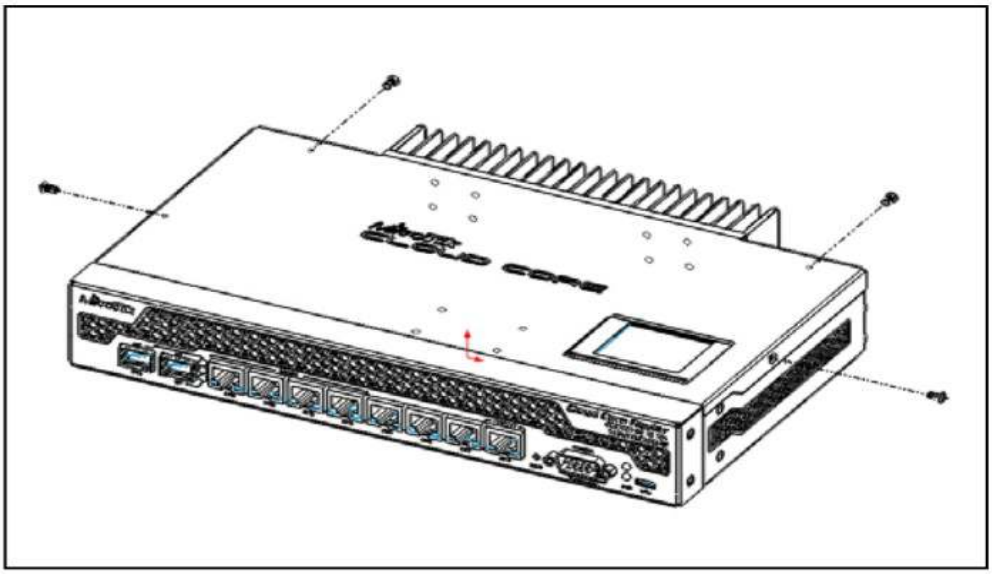
Disassembling information

CCR1009-8G-1S-1S+

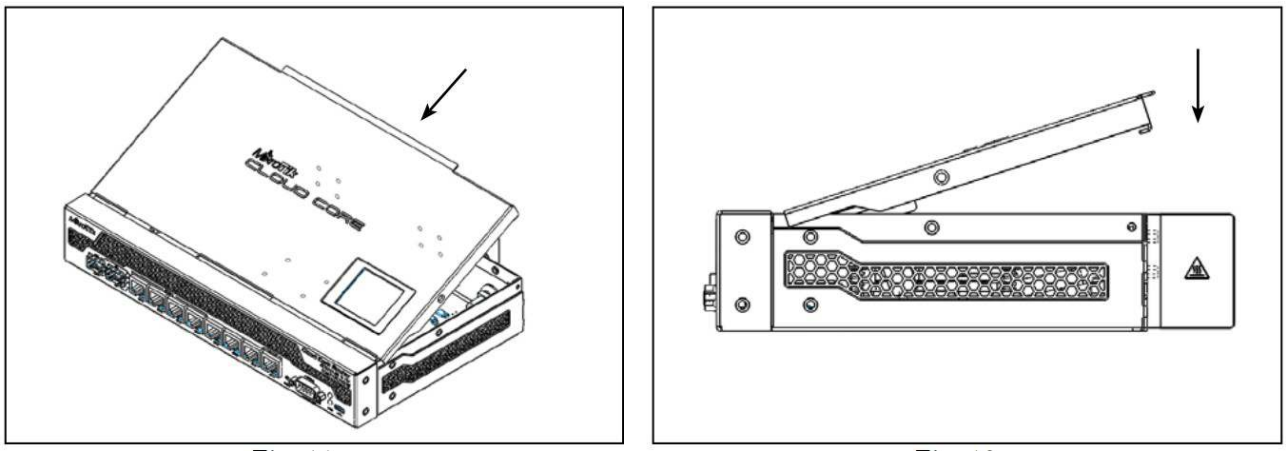
1. Use PH2 screw driver to loose backside screws then side screws, take off cover. Detach DSUB-9 connector fasteners.

Picture 139

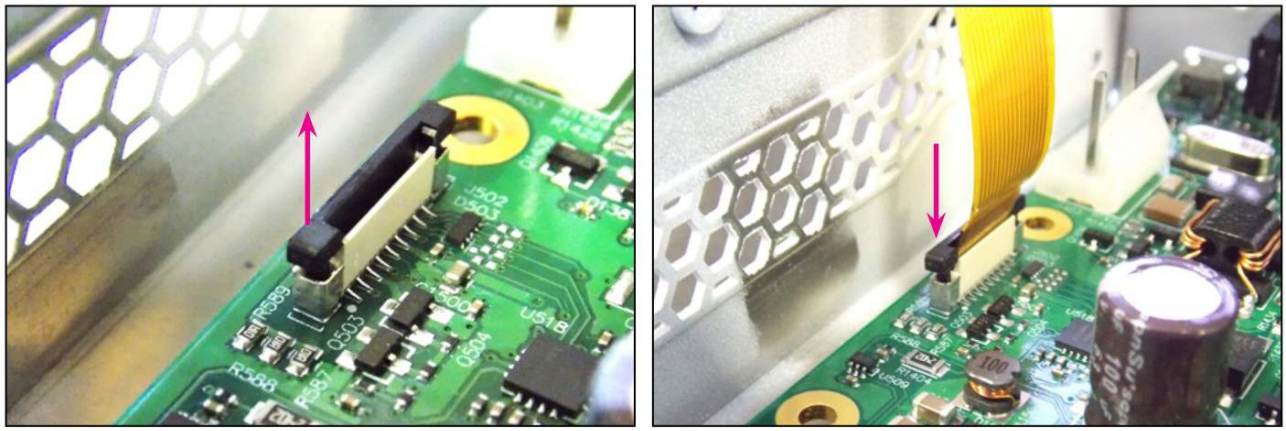
CCR1009-8G-1S-1S+PC



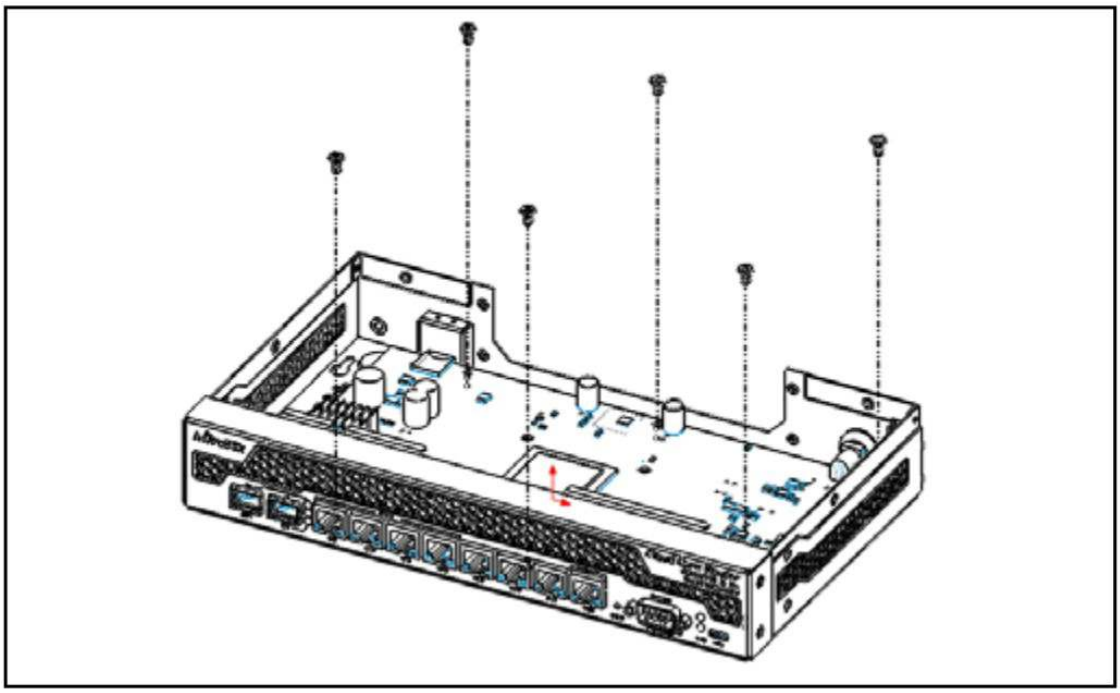
Picture 140



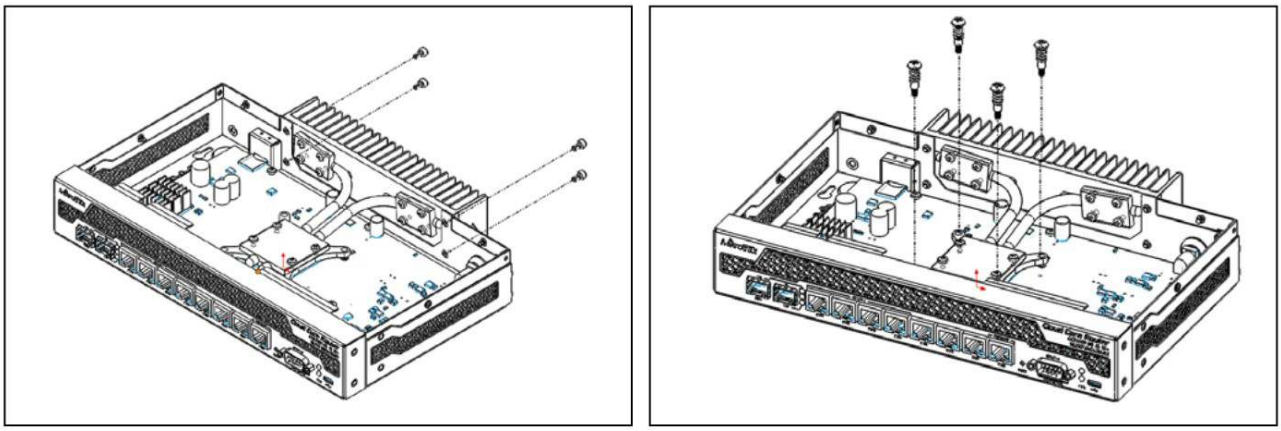
Picture 141



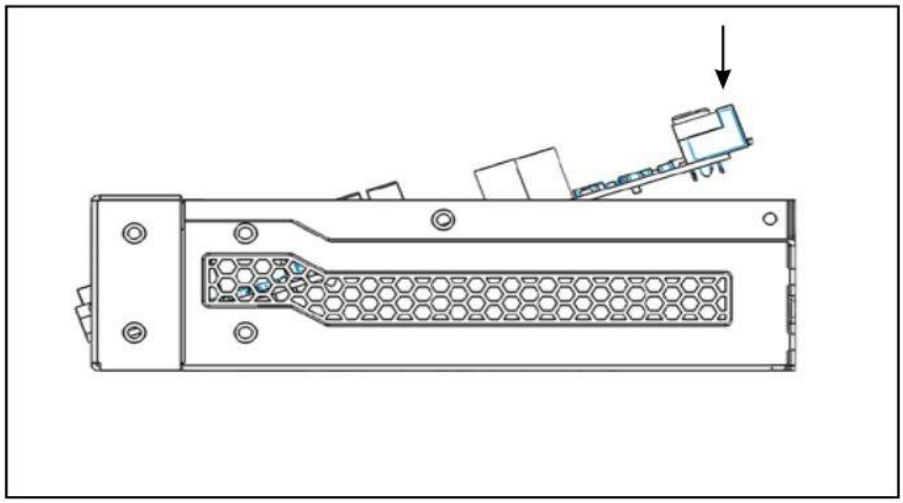
Picture 142



Picture 143



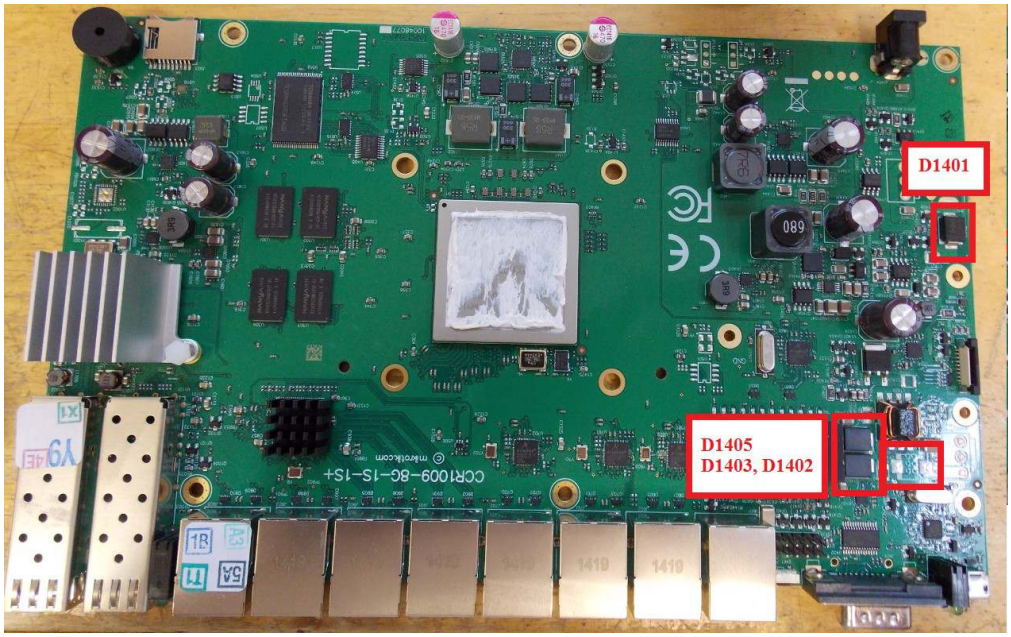
Picture 144



Picture 145

Schottky diode measuring with multimeter in diode mode

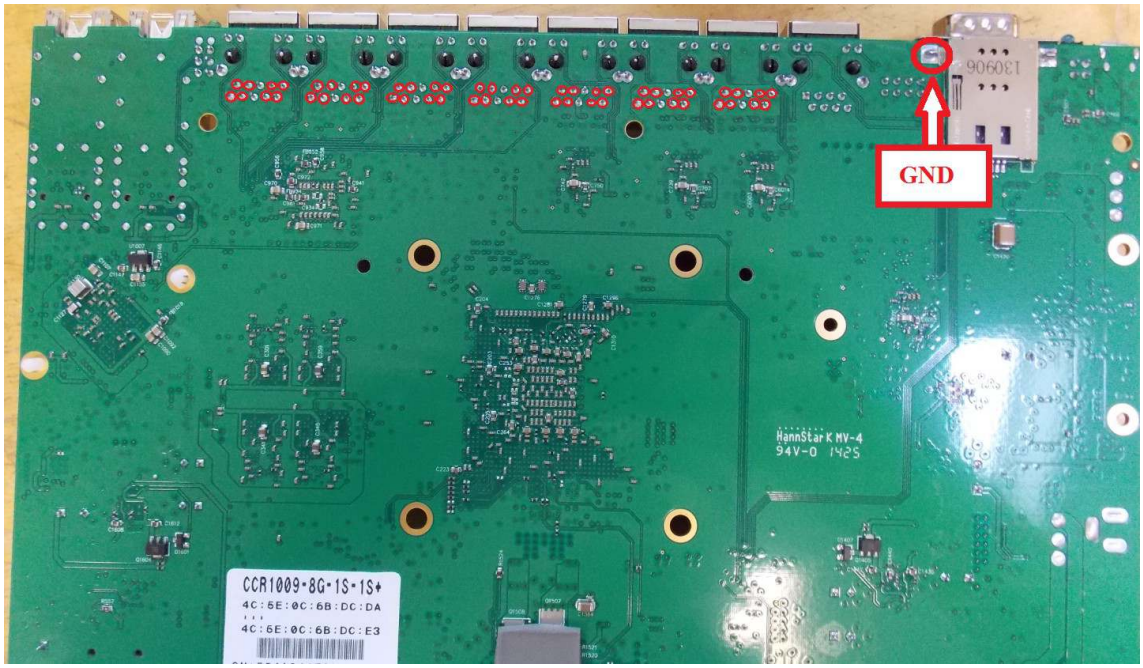
Schottky diode reference numbers is D1401, D1402, D1403, D1405. Schottky diode quality measurement method describe on page 7



Picture 146

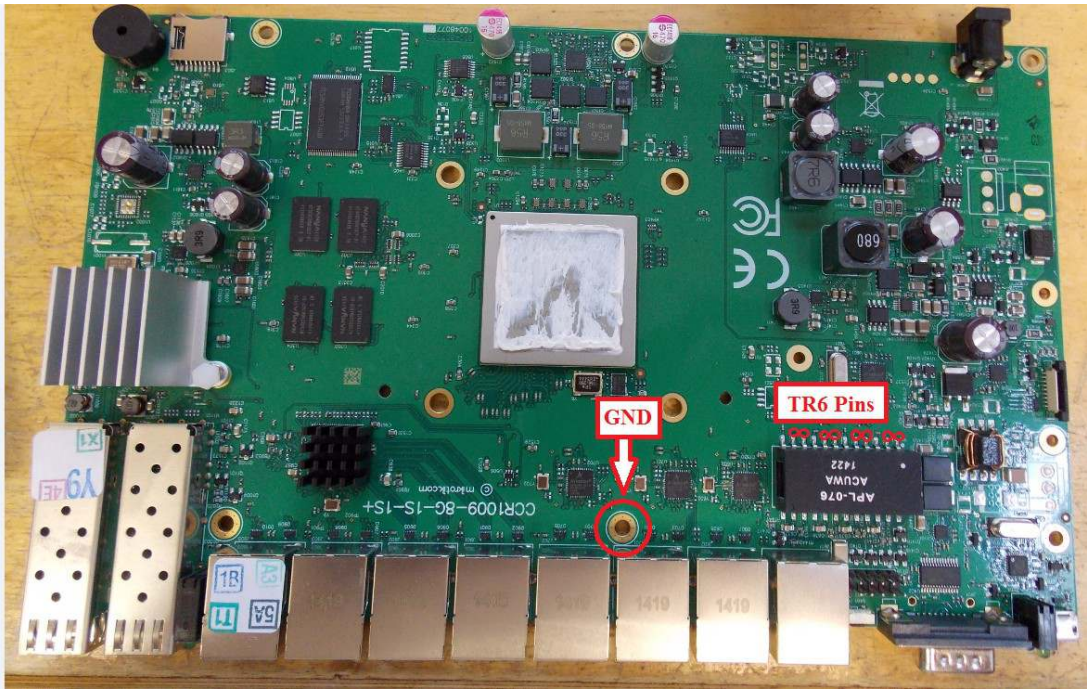
Voltage drop between Ethernet pins and Ground.

Check voltage drop between internal Ethernet Transformers on ports Ether2 – Ether8 pins and Ground. It should be in the range from 0,32V to 0,438V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked Ethernet pins.



Picture 147

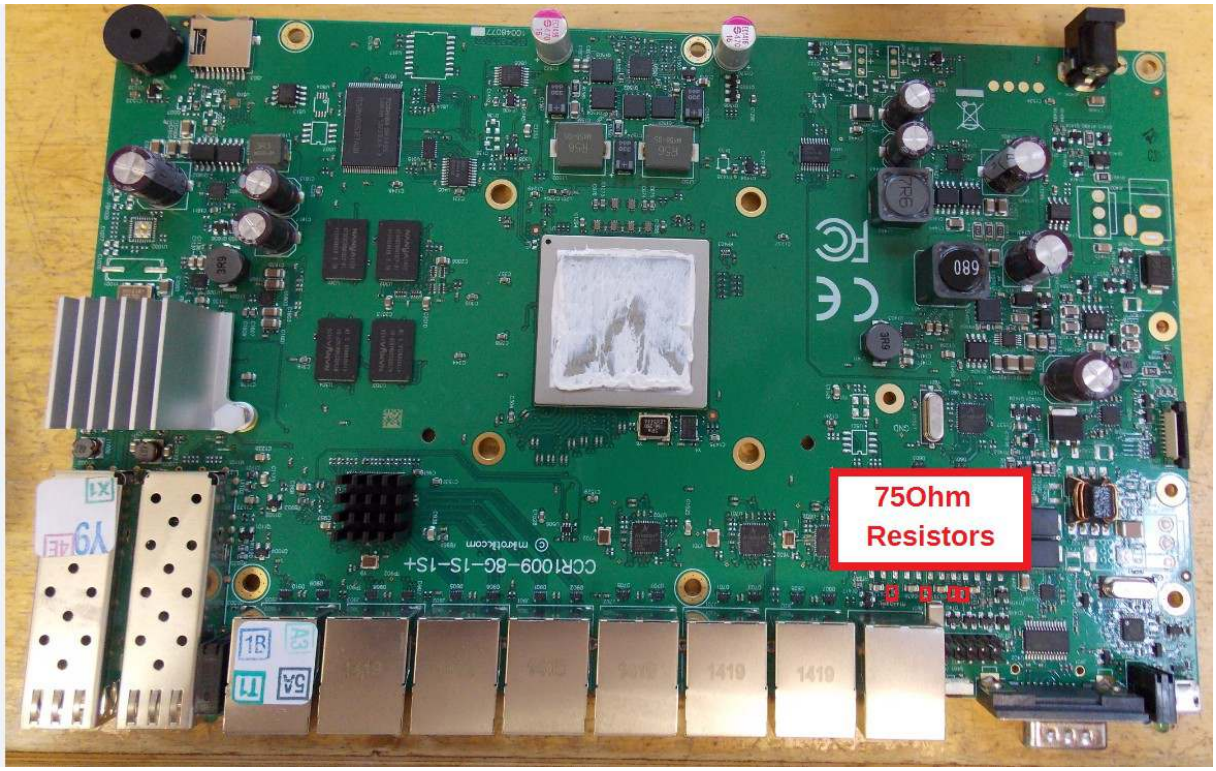
For Ether1 measure voltage drop on TR6 Pins and Ground. It should be in the range from 0,32V to 0,438V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked Transformers TR6 pins.



Picture 148

Termination resistors resistance in RJ-45 connector

Red circled resistors resistance should be 75Ohm +/- 1%



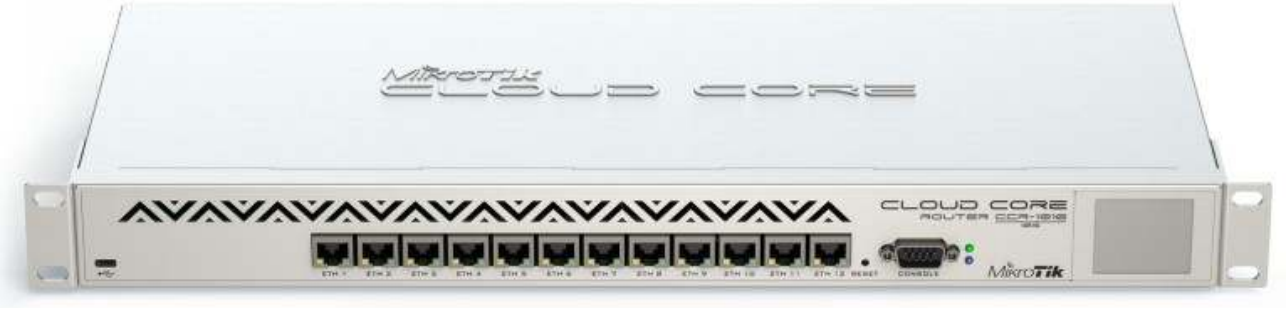
Picture 149

On ports Ether1 – Ether7 You can take patch cord and plug it into the routerboard, and then measure as describe on page 9

CCR1016-12G, CCR1036-12G series

List of Cloud Core Router CCR1016-12G, CCR1036-12G series:

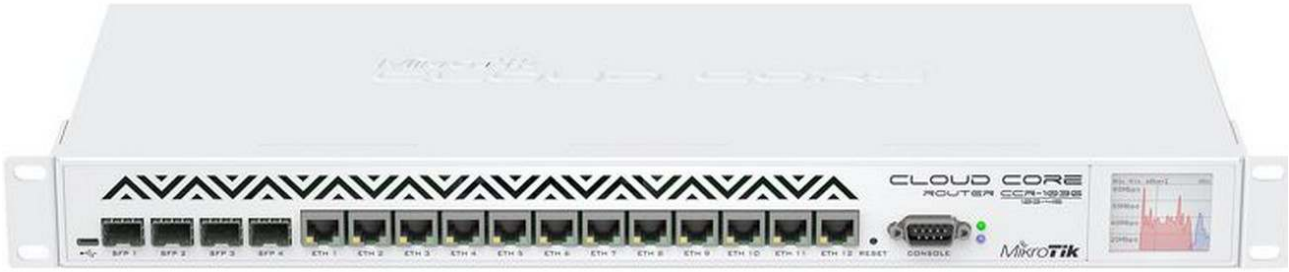
CCR1016-12G



Picture 150

CCR1036-12G-4S

CCR1036-12G-4S-EM



Picture 151

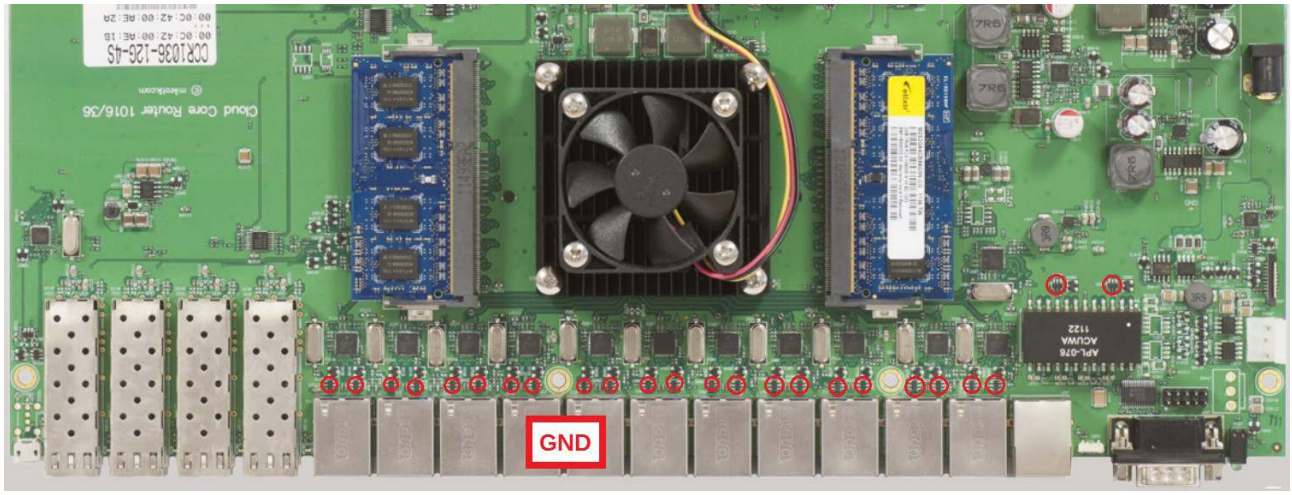
Disassembling information

Picture 152

Picture 153

Voltage drop between diode array pin#1 and Ground.

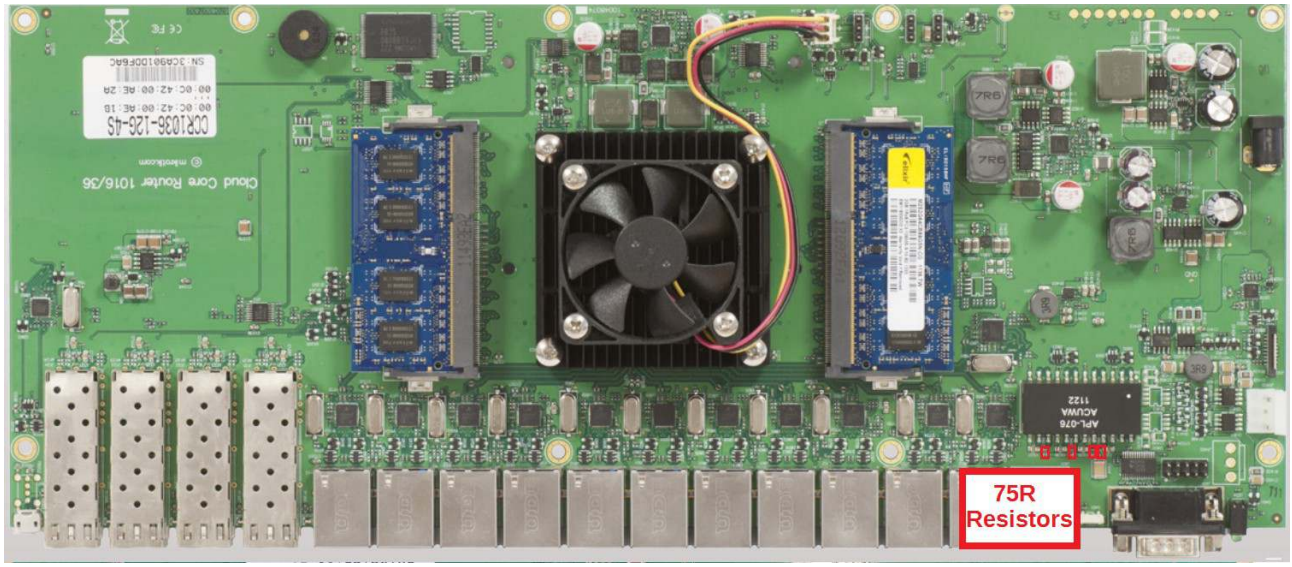
Check voltage drop between diode arrays pin#1 and Ground. Diode arrays are circled red. It should be in the range from 0,32V to 0,438V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked diode arrays pin#1.



Picture 154

Termination resistors resistance in RJ-45 connector

Red circled resistors resistance should be 75Ohm +/- 1%



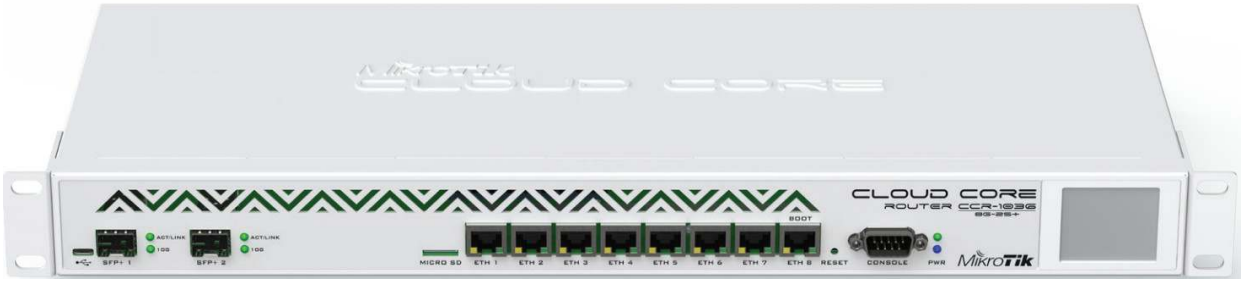
Picture 155

On ports Ether1 – Ether11 You can take patch cord and plug it into the routerboard, and then measure as describe on page 9

List of Cloud Core Router CCR1036-8G-2S+ series:

CCR1036-8G-2S+

CCR1036-8G-2S+EM

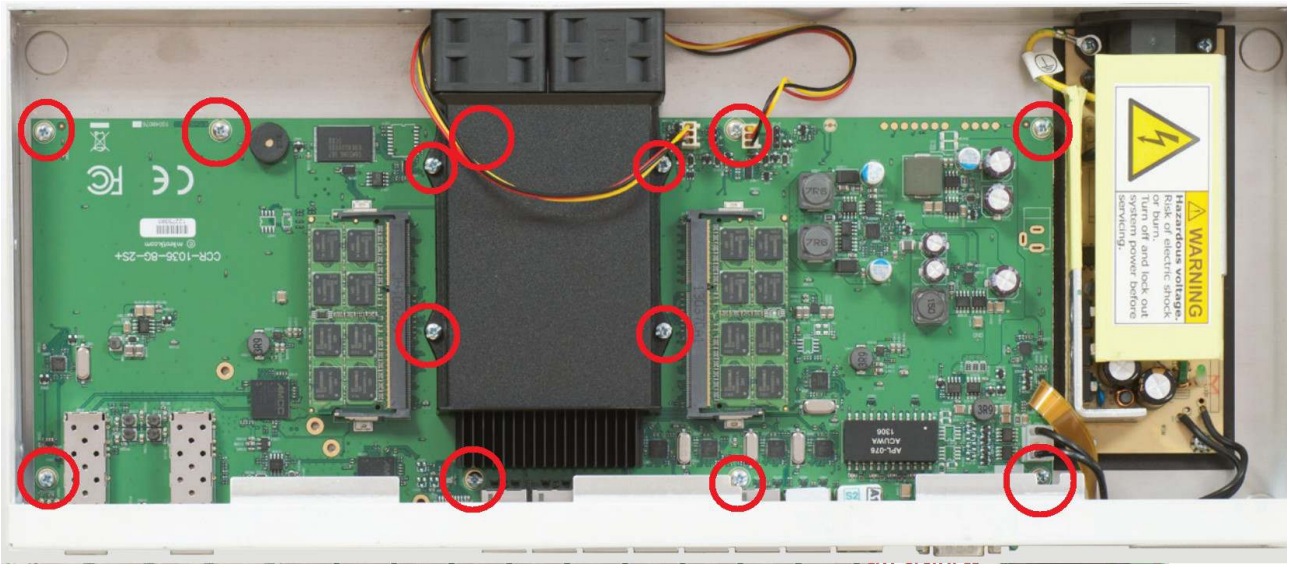


Picture 156

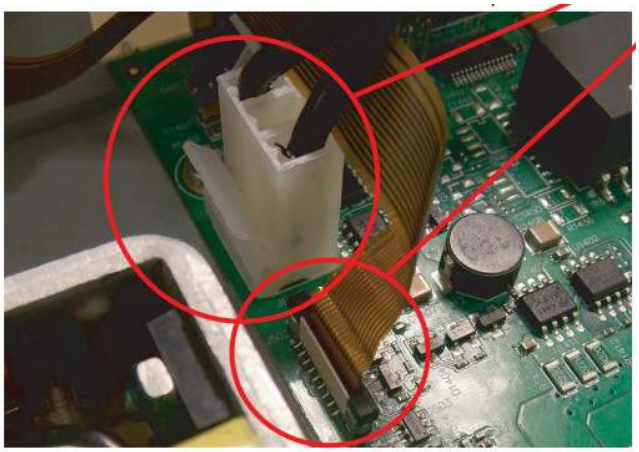
Disassembling information

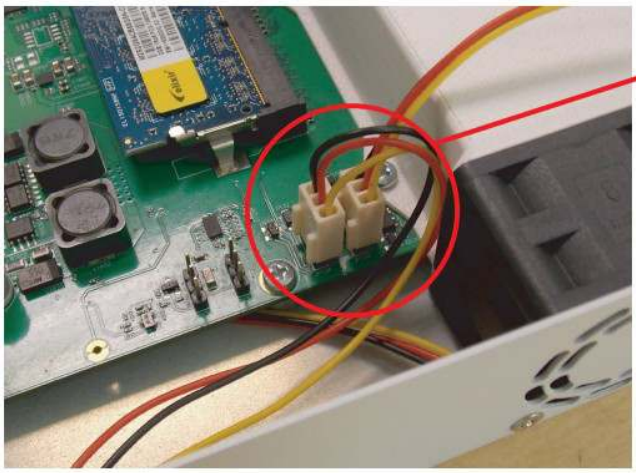
Picture 157

Picture 158



Picture 159





Picture 160

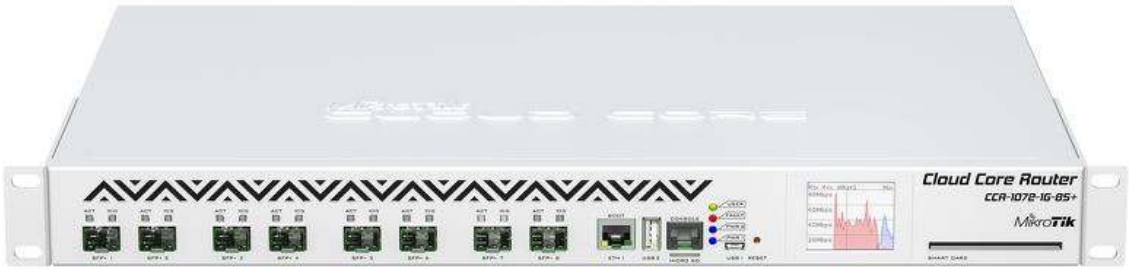
Voltage drop between Ethernet Transformers on ports and Ground.

Check voltage drop between internal Ethernet Transformers on ports Ether1 – Ether7 pins and Ground. Ether Pins are circled red. It should be in the range from 0,32V to 0,438V. Measure in diode mode (hold "positive" wire on the Ground and "COM" wire to marked Ethernet pins.

Picture 161

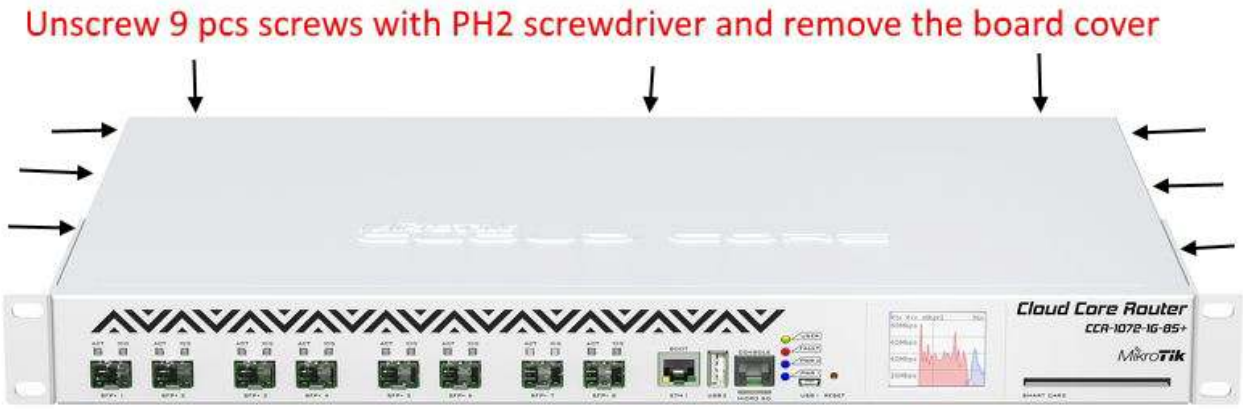
CCR1072-1G-8S+ series

Cloud Core Router CCR1072-1G-8S+:



Picture 162

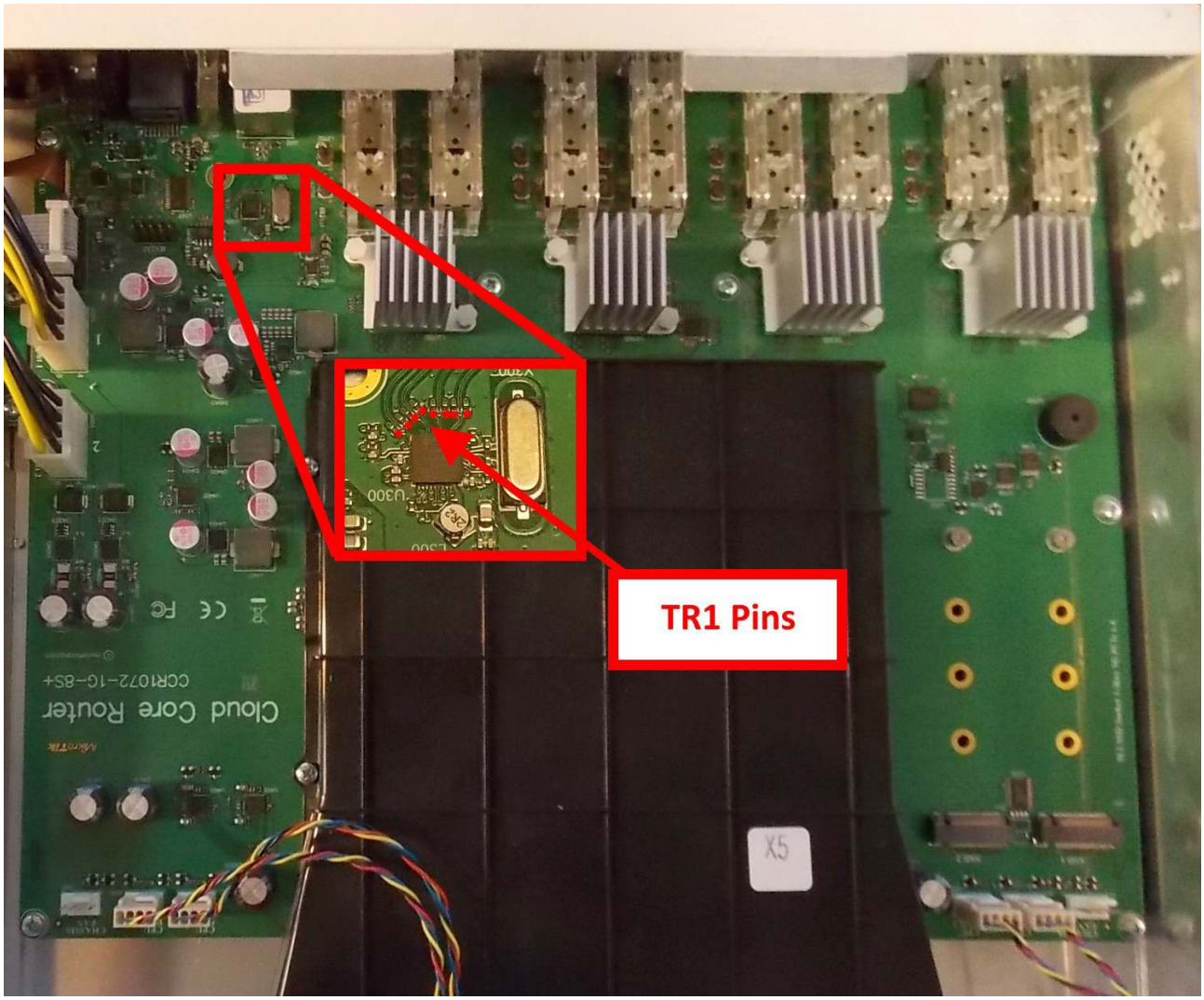
Disassembling information



Picture 163

Voltage drop between capacitors and Ground.

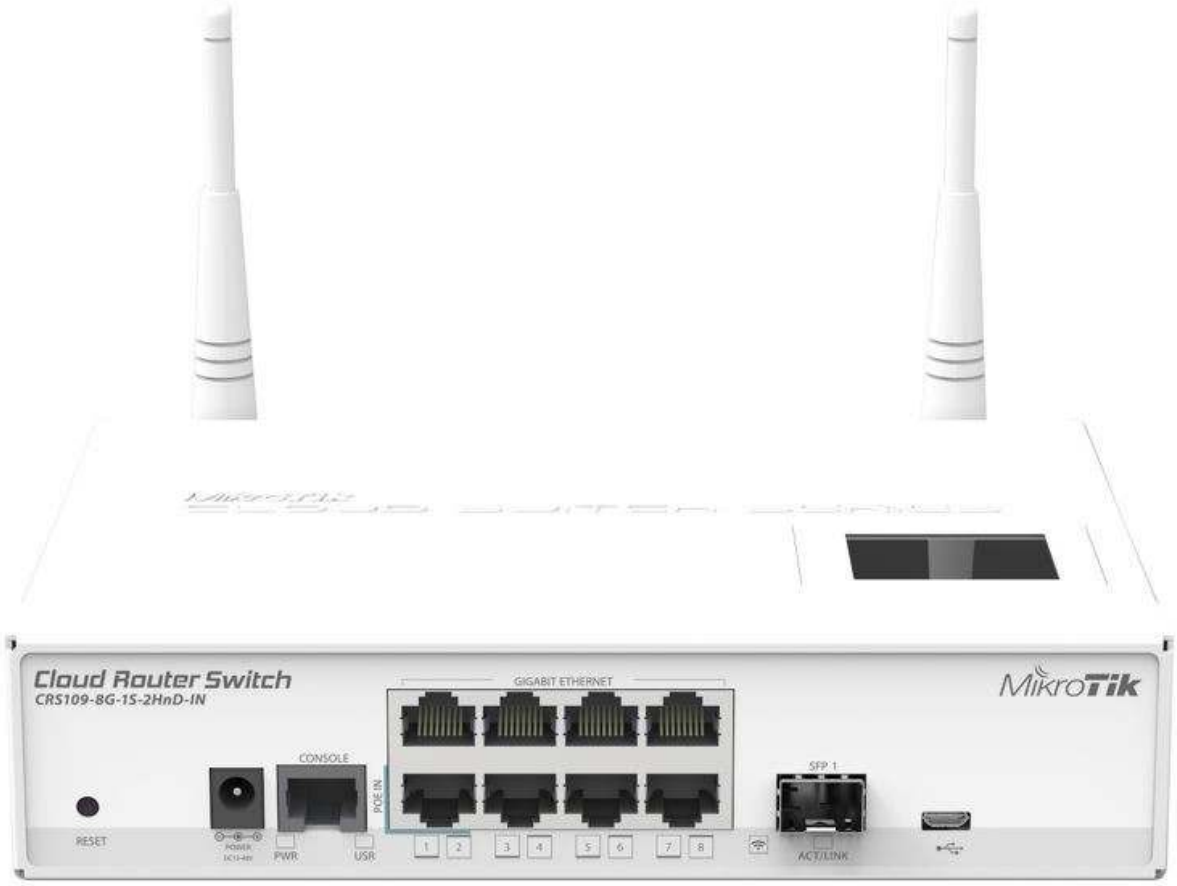
Check voltage drop between capacitors and Ground. Capacitor pins are circled red. It should be in the range from 0,31V to 0,438V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked Capacitors pins.



Picture 164

CRS109-8G-4S series RouterBoards

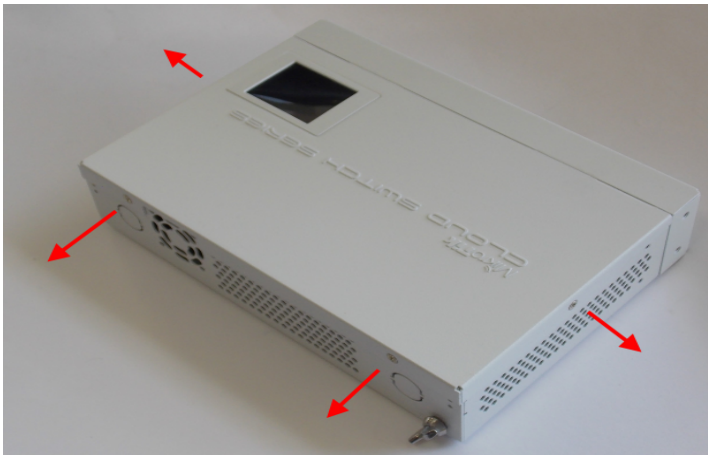
CRS109-8G-1S-2HnD-IN



Picture 165

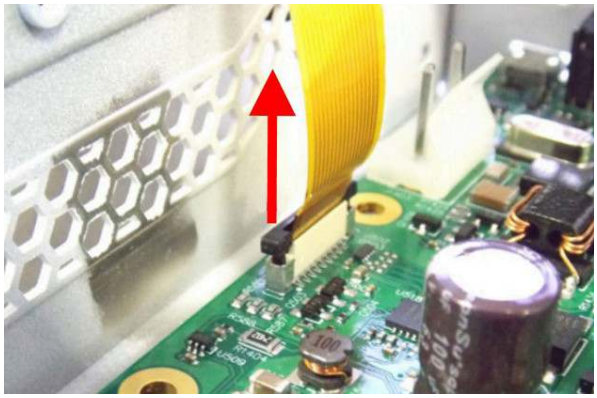
Disassembling information

1. Step: use PH2 screw driver to loose backside screws, take off cover.



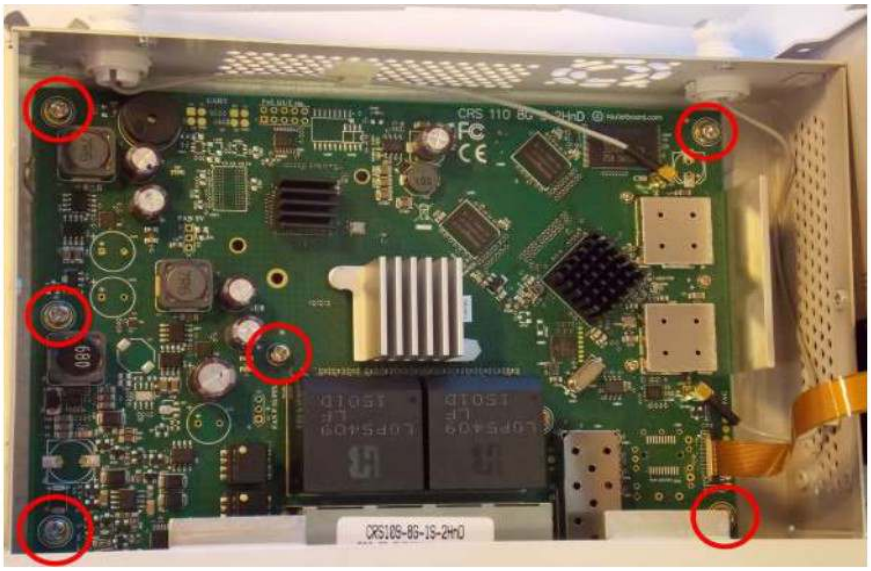
Picture 166

2. step: take off cover carefully, pay a tension to LCD connector. Push up both side of LCD connector from slot with “-” screwdriver as shown in next pictures



Picture 167

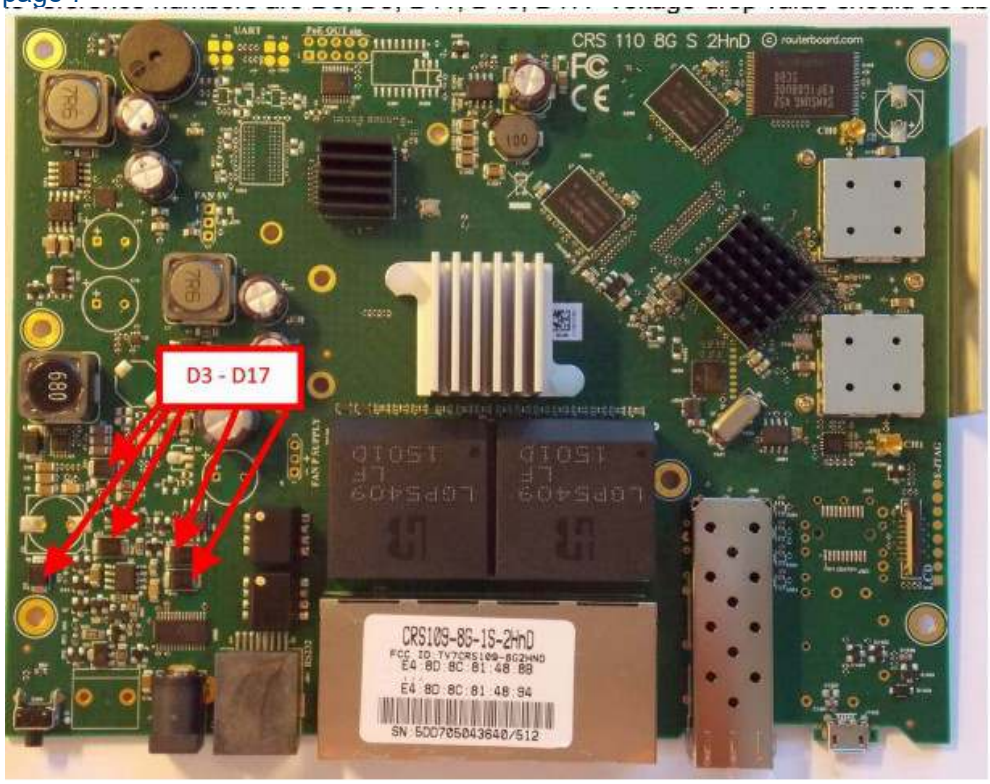
3. Step: use “+” screw driver to loose 7 pcs PCB screws, than take off PCB from case.



Picture 168

Schottky diode measuring with multimeter in diode mode

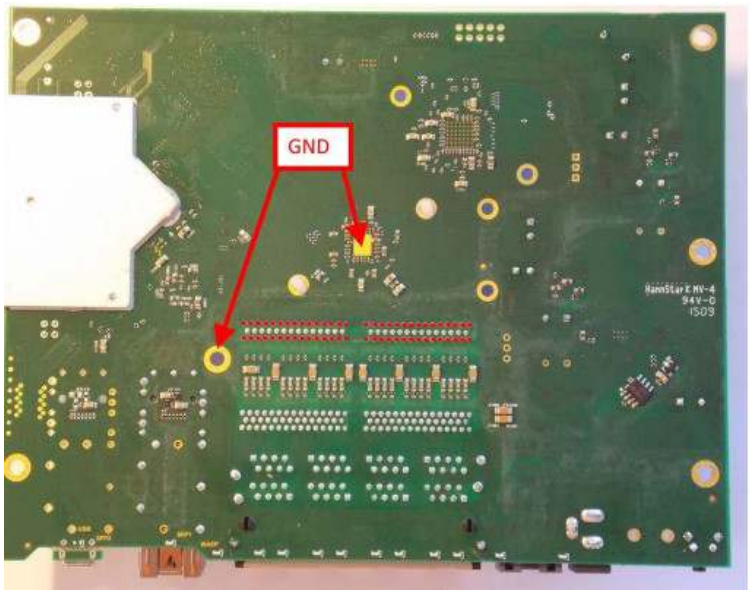
Schottky diode reference numbers are D3, D5, D11, D16, D17. Schottky diode quality measurement method describe on page 7



Picture 169

Voltage drop between TR1200, TR1201 and Ground.

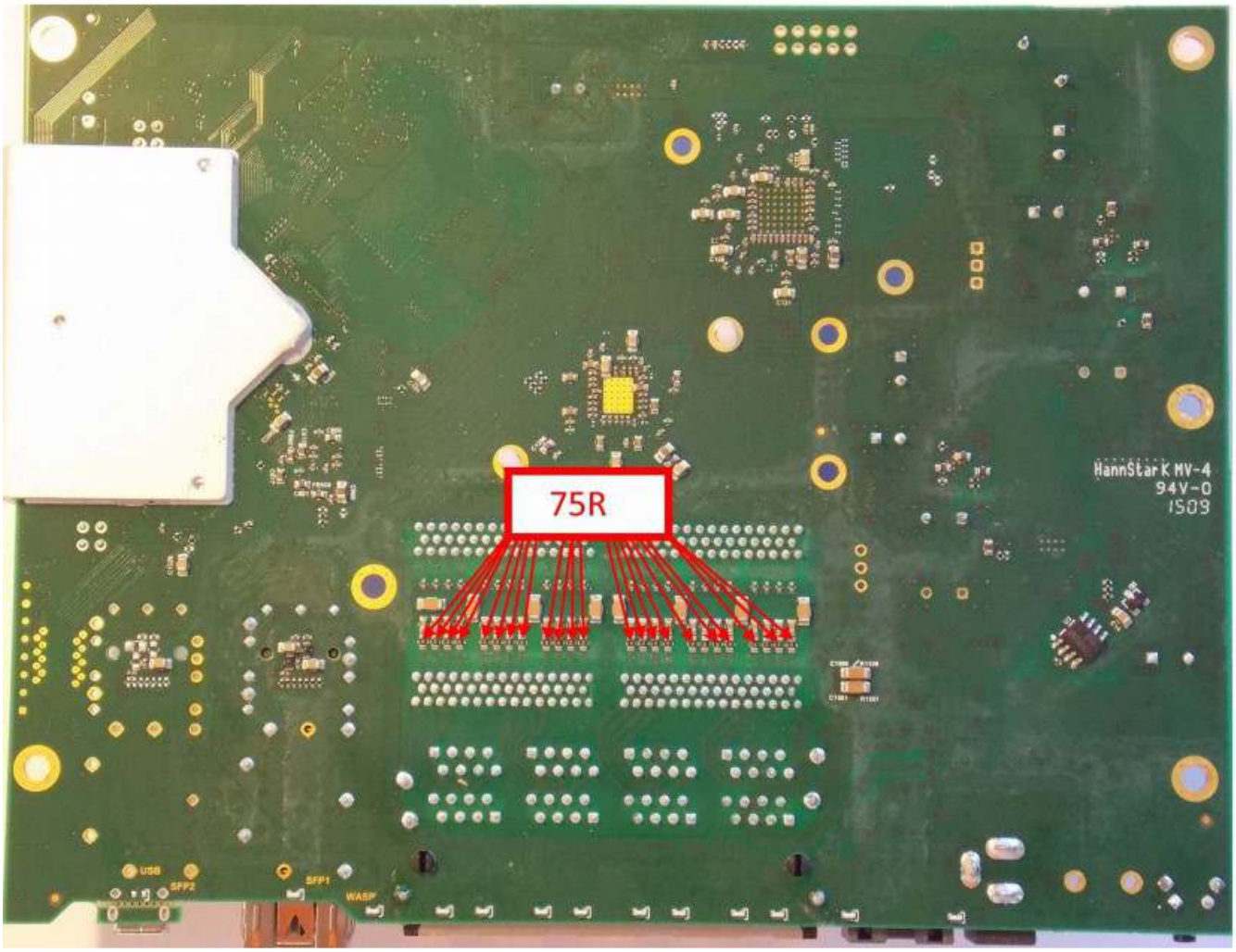
Check voltage drop between TR1200 and TR1201 Ethernet Transformers on ports Ether1 – Ether8 pins and Ground. Ether Pins are circled red. It should be in the range from 0,32V to 0,438V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked Transformers pins.



Picture 170

75R termination resistors resistance

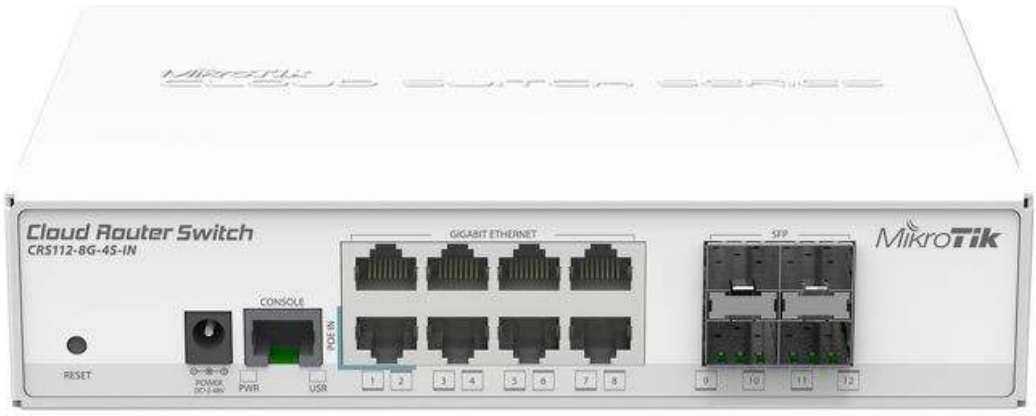
Resistors marked with red arrows should be 75Ohm +/- 1%



Picture 171

CRS112-8G-4S series RouterBoards

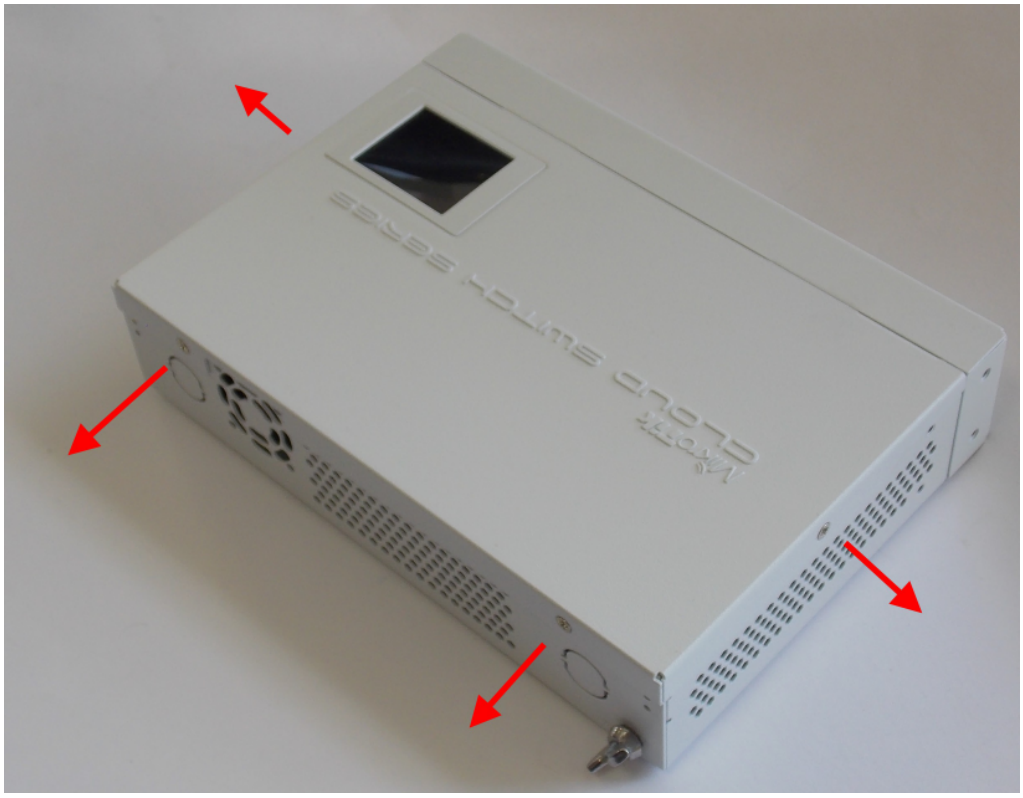
CRS112-8G-4S-IN



Picture 172

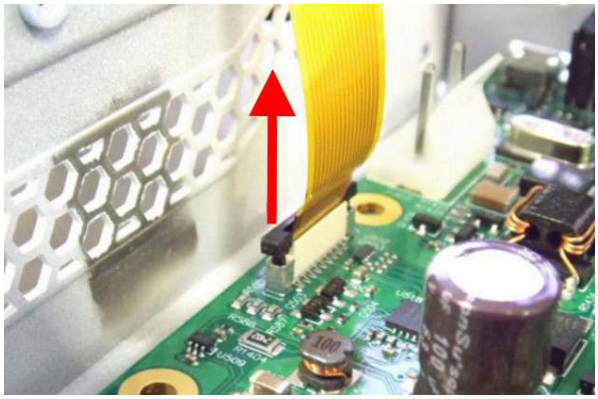
Disassembling information

1. Step: use PH2 screw driver to loose backside screws, take off cover.



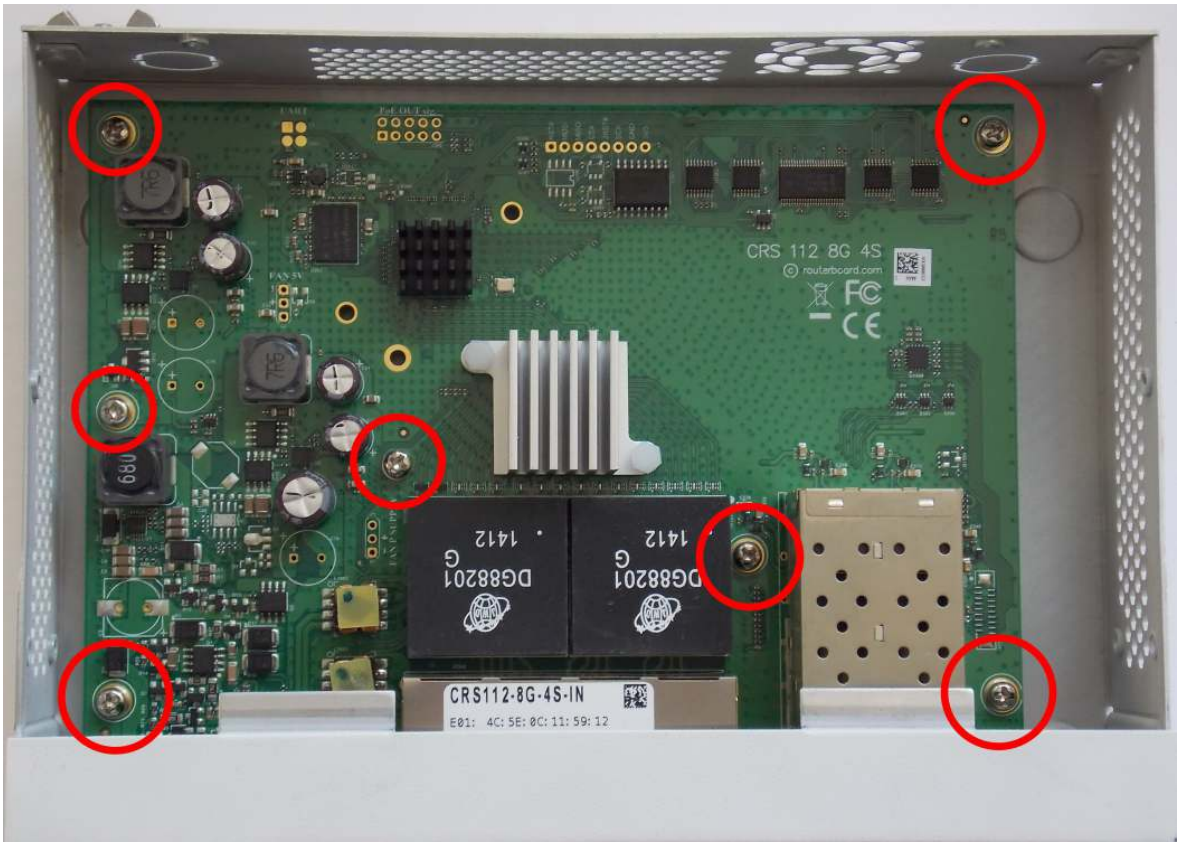
Picture 173

2. step: take off cover carefully, pay a tension to LCD connector. Push up both side of LCD connector from slot with “-” screwdriver as shown in next pictures 215



Picture 174

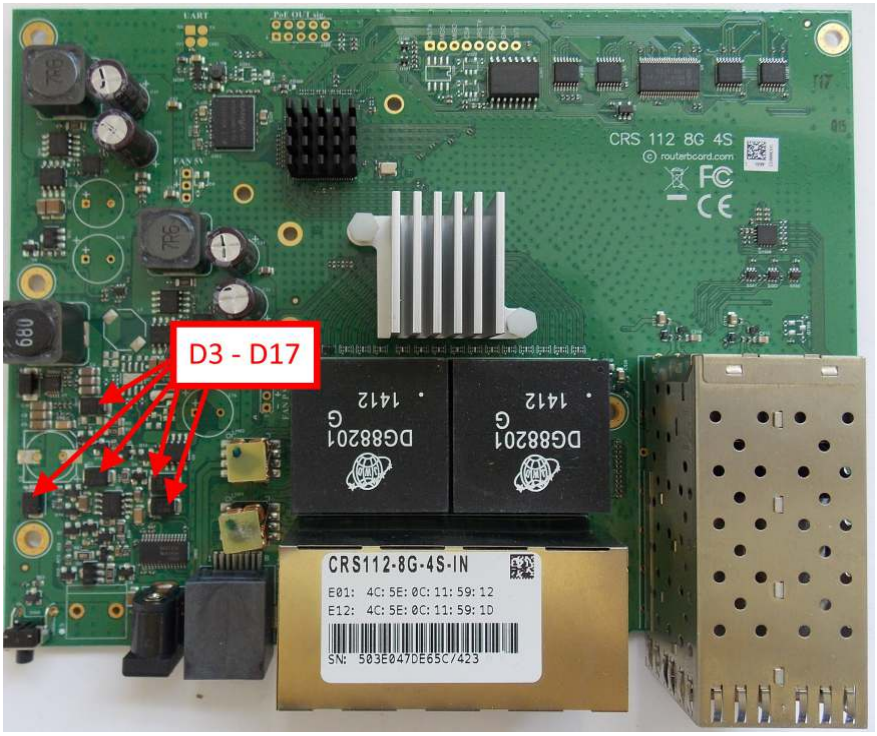
3. Step: use “+” screw driver to loose 7 pcs PCB screws, than take off PCB from case.



Picture 175

Schottky diode measuring with multimeter in diode mode

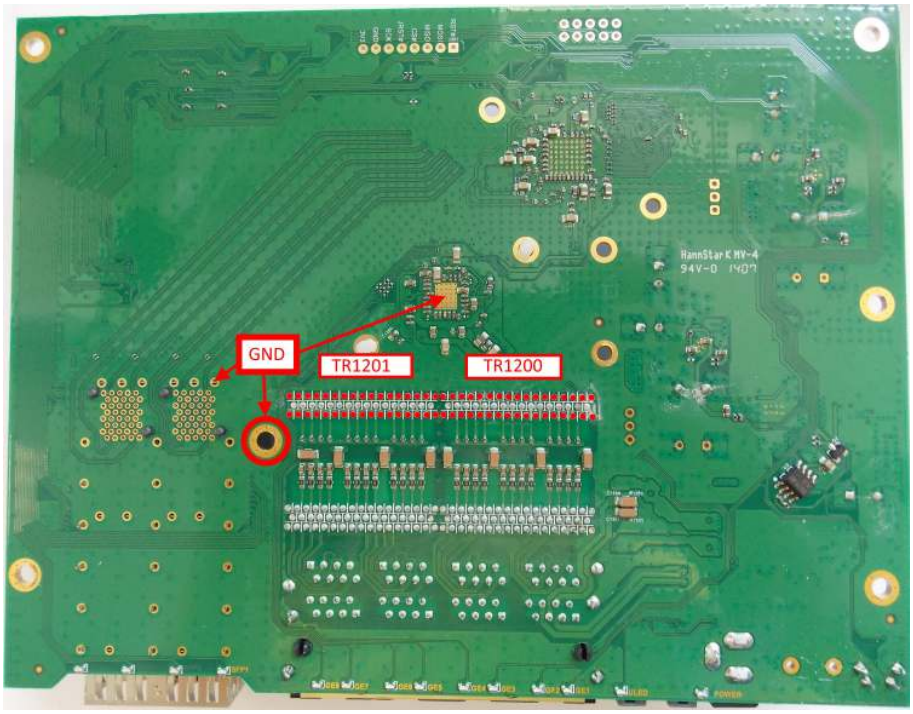
Schottky diode reference numbers are D3, D5, D11, D16, D17. Schottky diode quality measurement method describe on page 7



Picture 176

Voltage drop between diode TR1200, TR1201 and Ground.

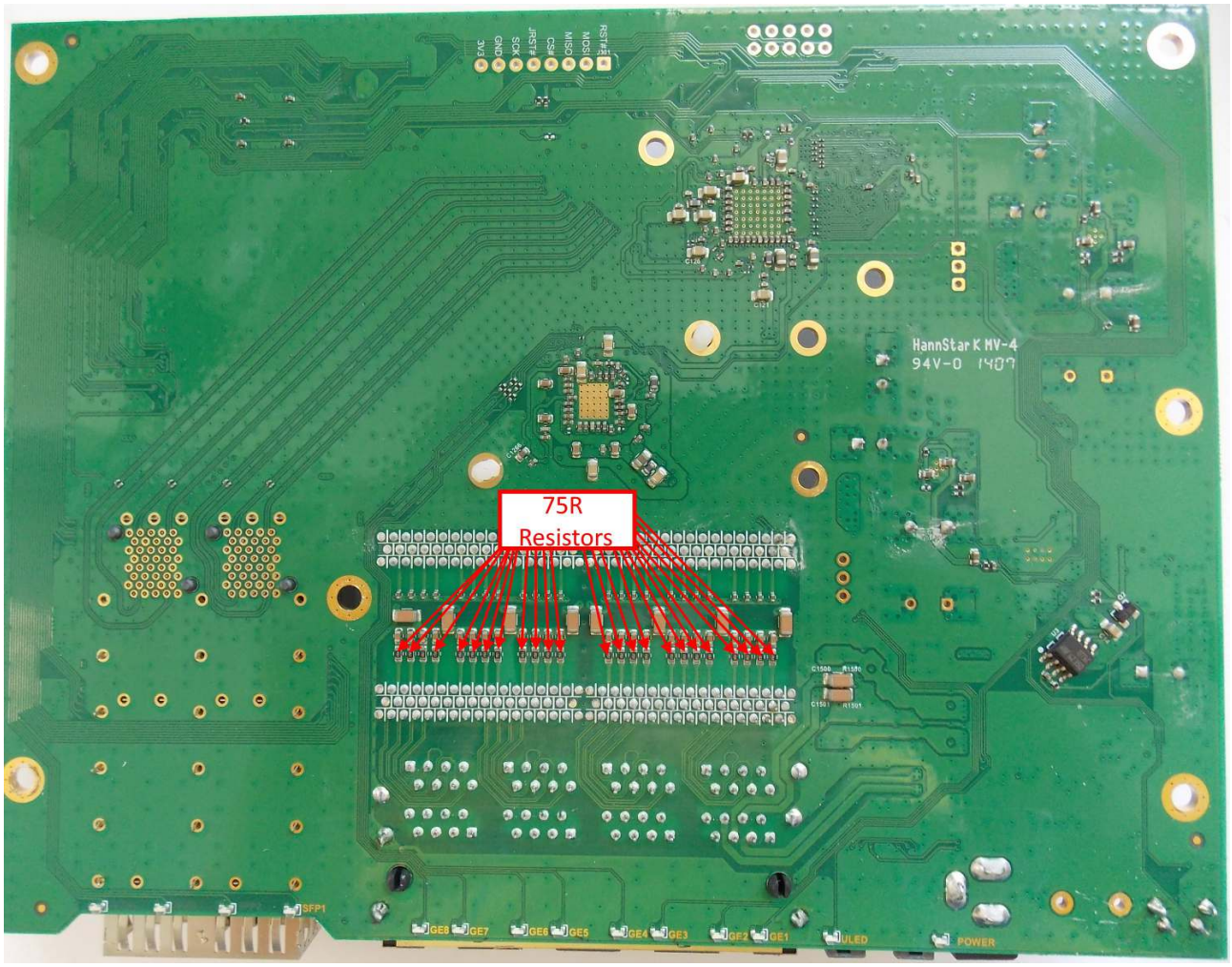
Check voltage drop between TR1200 and TR1201 Ethernet Transformers on ports Ether1 – Ether8 pins and Ground. Ether Pins are circled red. It should be in the range from 0,32V to 0,438V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked Transformers pins.



Picture 177

75R termination resistors resistance

Resistors marked with red arrows should be 75Ohm +/- 1%



Picture 178

CRS125-24G-1S series

List of Cloud Router Switch CRS125-24G-1S series:

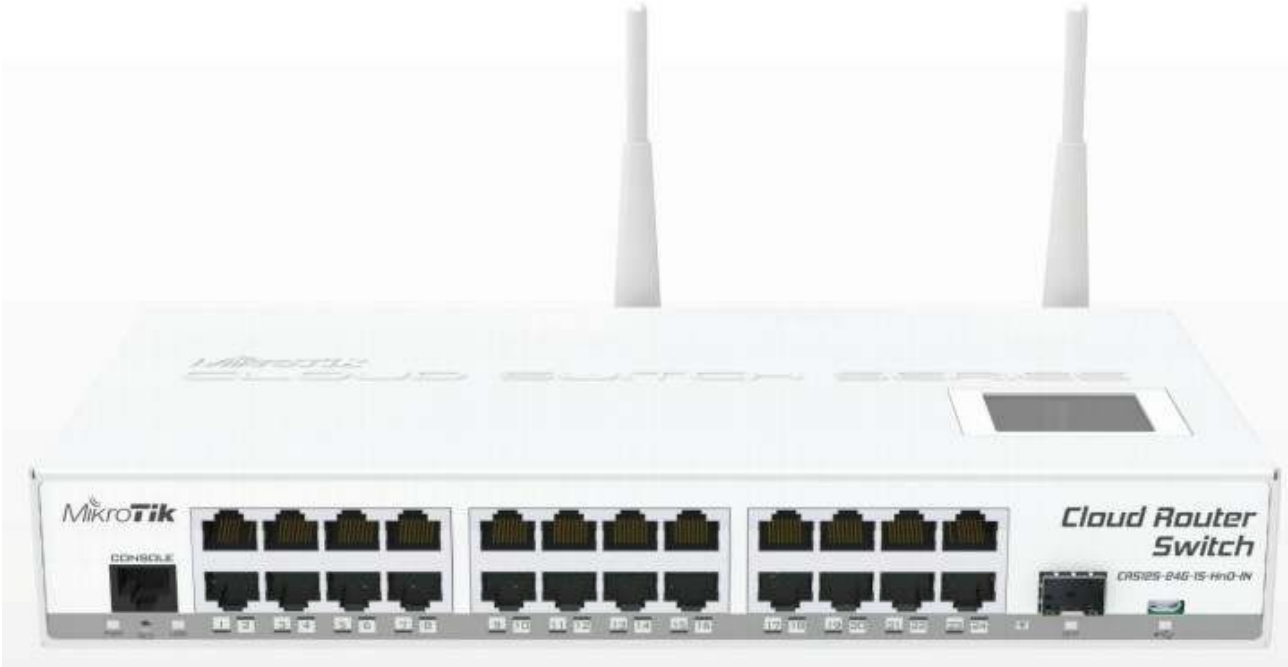
CRS125-24G-1S-IN

Picture 179

CRS125-24G-1S-RM

Picture 180

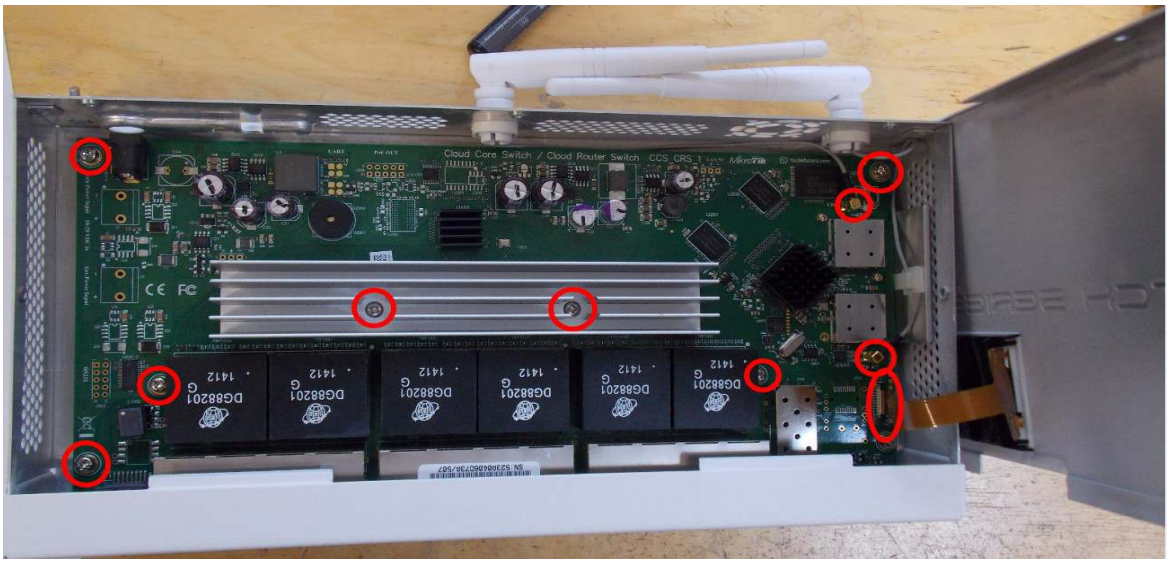
CRS125-24G-1S-2HnD-IN



Picture 181

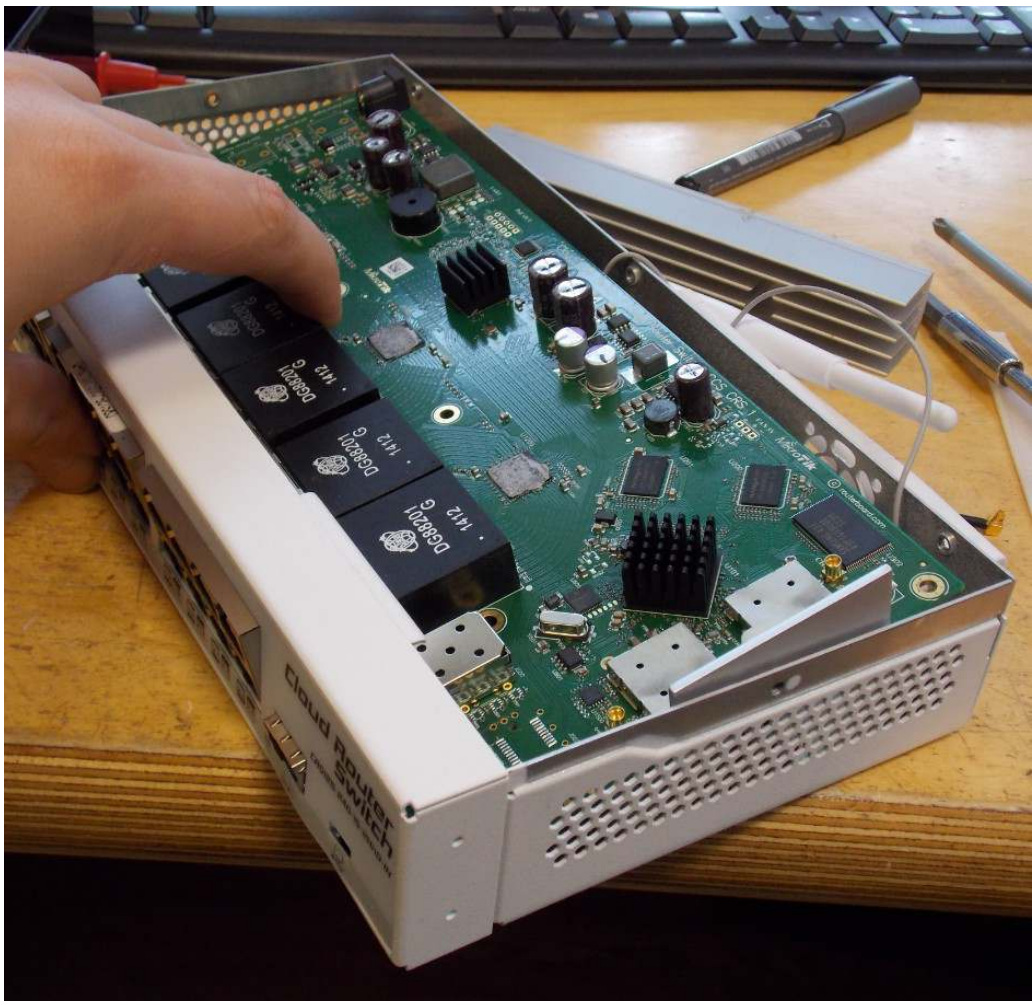
Disassembling information

Picture 182



Picture 183

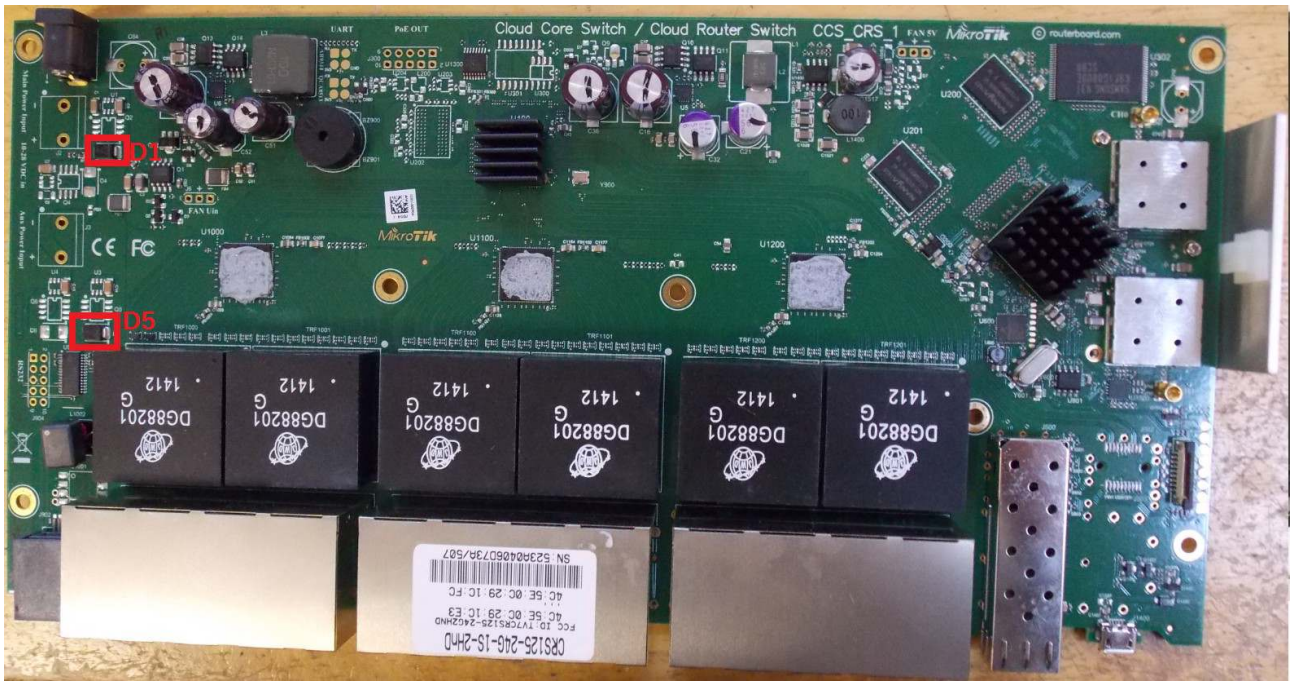
Picture 184



Picture 185

Schottky diode measuring with multimeter in diode mode

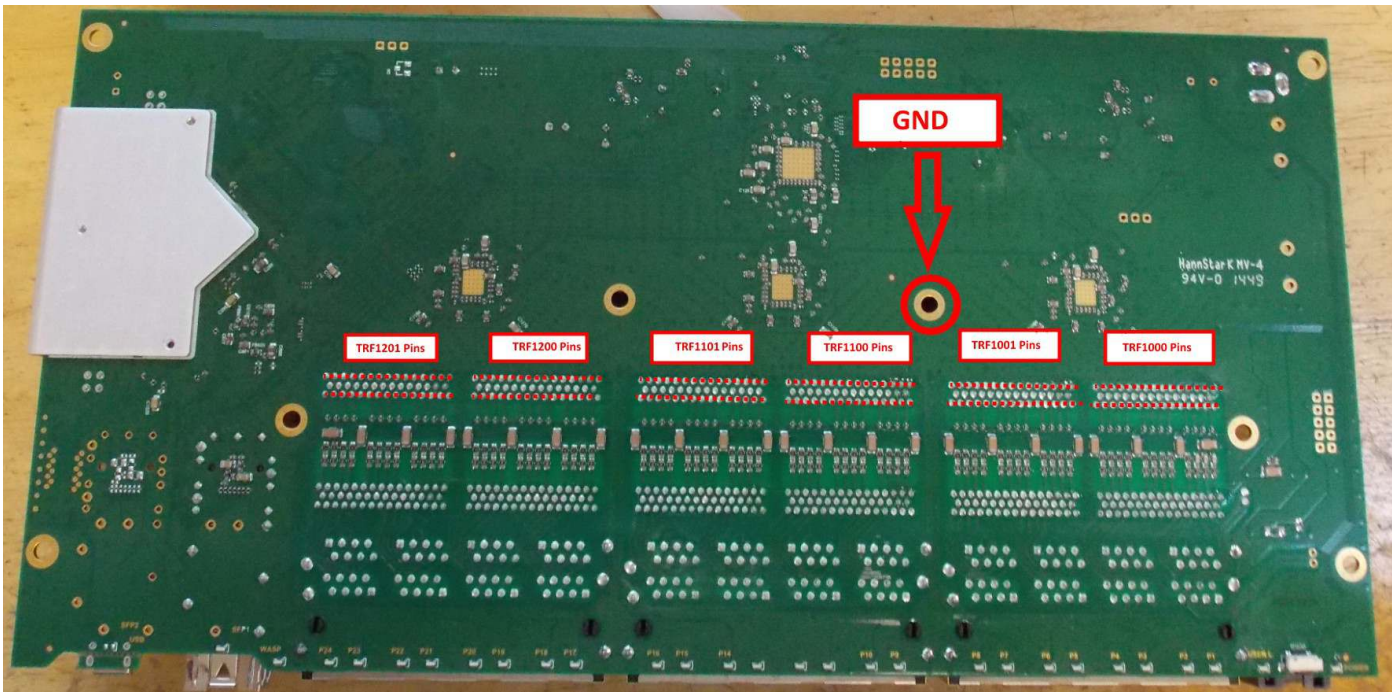
Schottky diode reference numbers is D1 and D5; Schottky diode quality measurement method describe on page 7



Picture 186

Voltage drop between Ethernet Transformers and Ground.

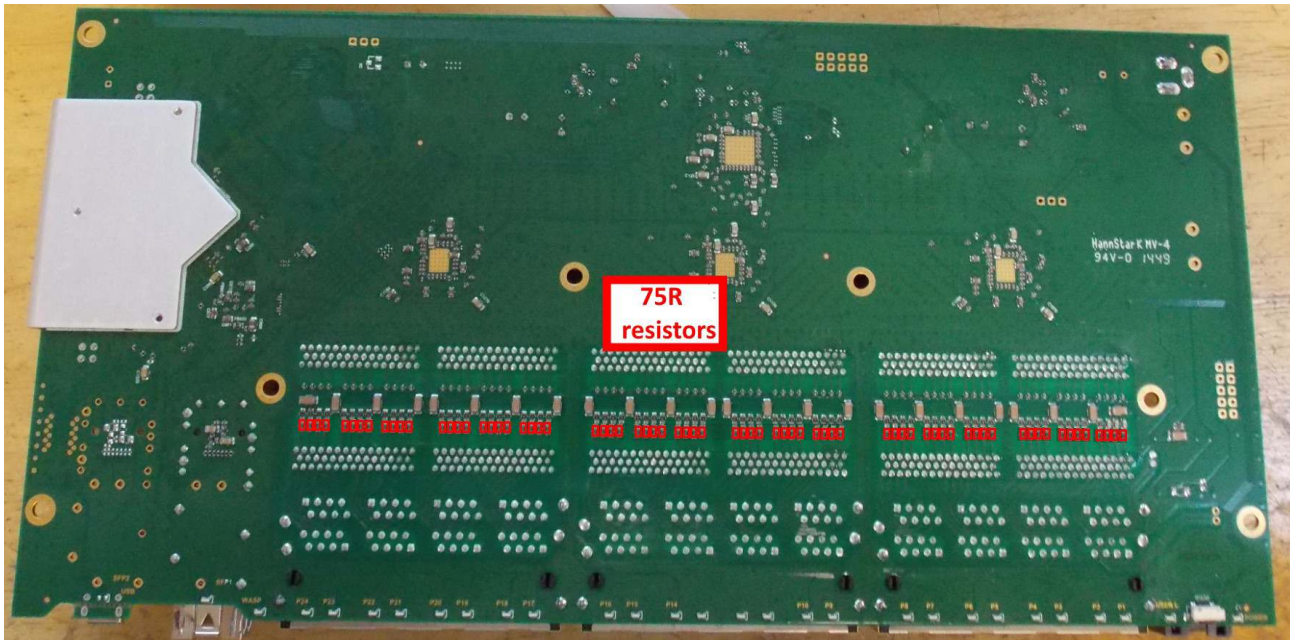
Check voltage drop between Transformers TRF1000, TRF1001, TRF1100, TRF1101, TRF1200 and TR1201 pins and Ground. It should be in the range from 0,32V to 0,438V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked Transformers pins.



Picture 187

Termination resistors resistance in RJ-45 connector

Red circled resistors resistance should be 75Ohm +/- 1%

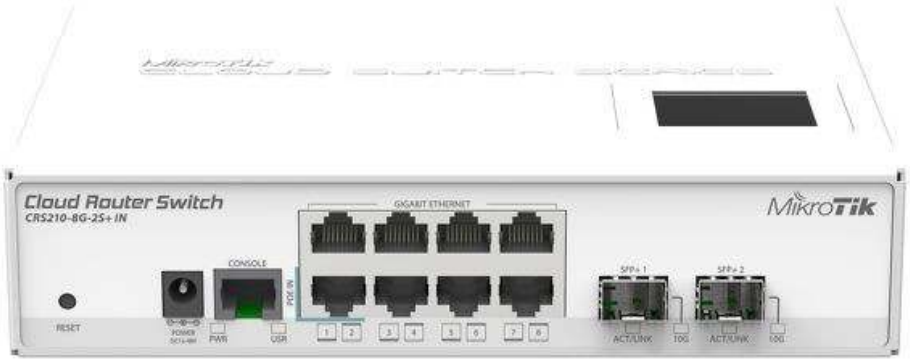


Picture 188

On ports Ether2 – Ether24 You can take patch cord and plug it into the routerboard, and then measure as describe on page 9

CRS210-8G-2S+ series RouterBoards

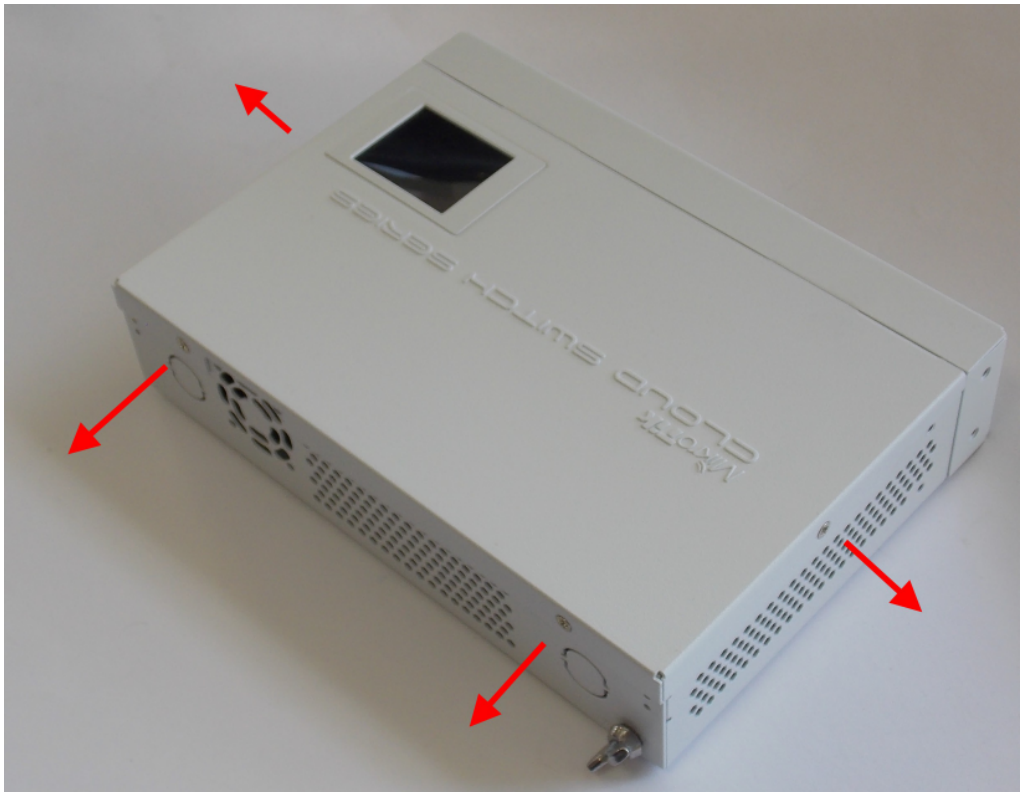
CRS210-8G-2S+IN



Picture 189

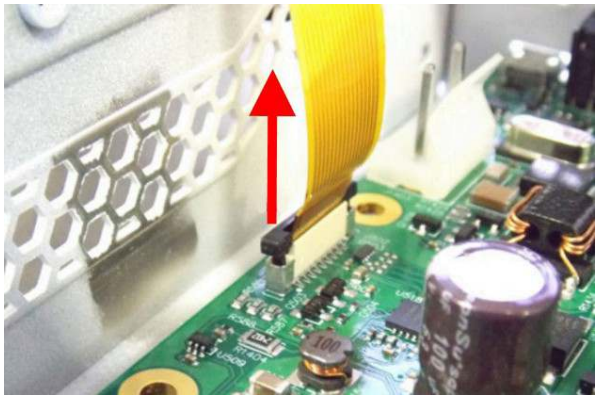
Disassembling information

1. Step: use PH2 screw driver to loose backside screws, take off cover.



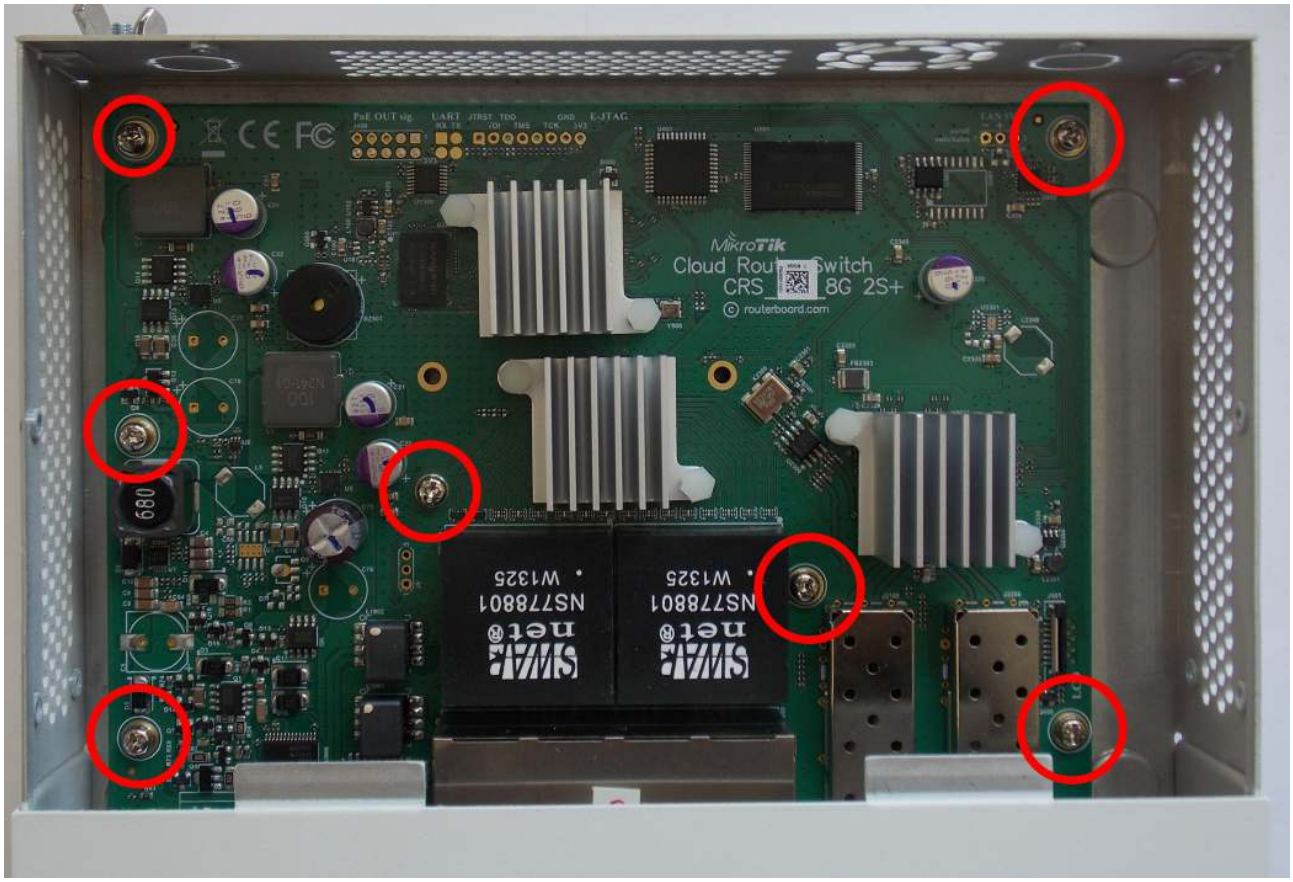
Picture 190

2. step: take off cover carefully, pay a tension to LCD connector. Push up both side of LCD connector from slot with “-” screwdriver as shown in next pictures 191



Picture 191

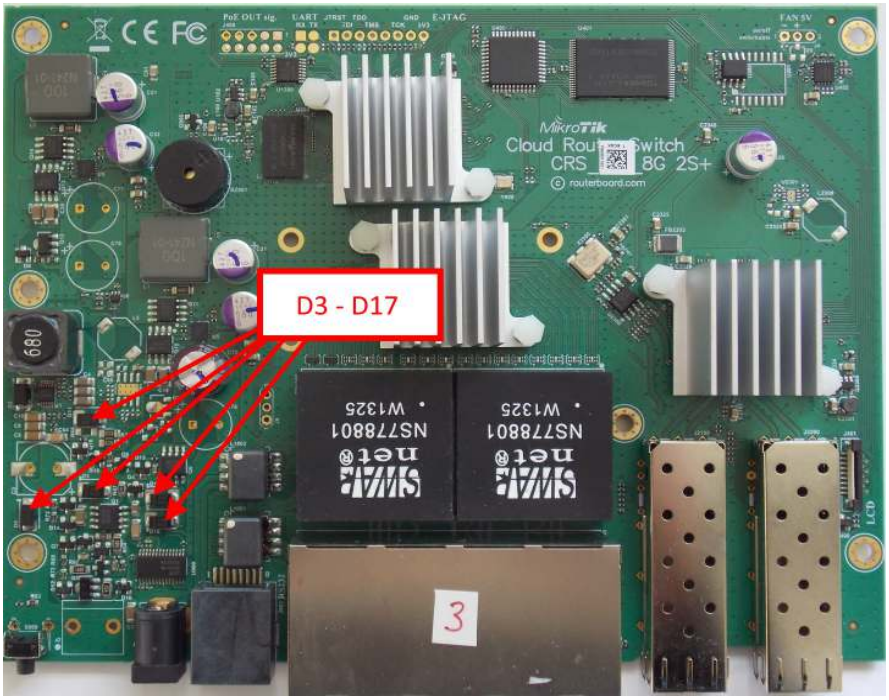
3. Step: use “+” screw driver to loose 7 pcs PCB screws, than take off PCB from case.



Picture 192

Schottky diode measuring with multimeter in diode mode

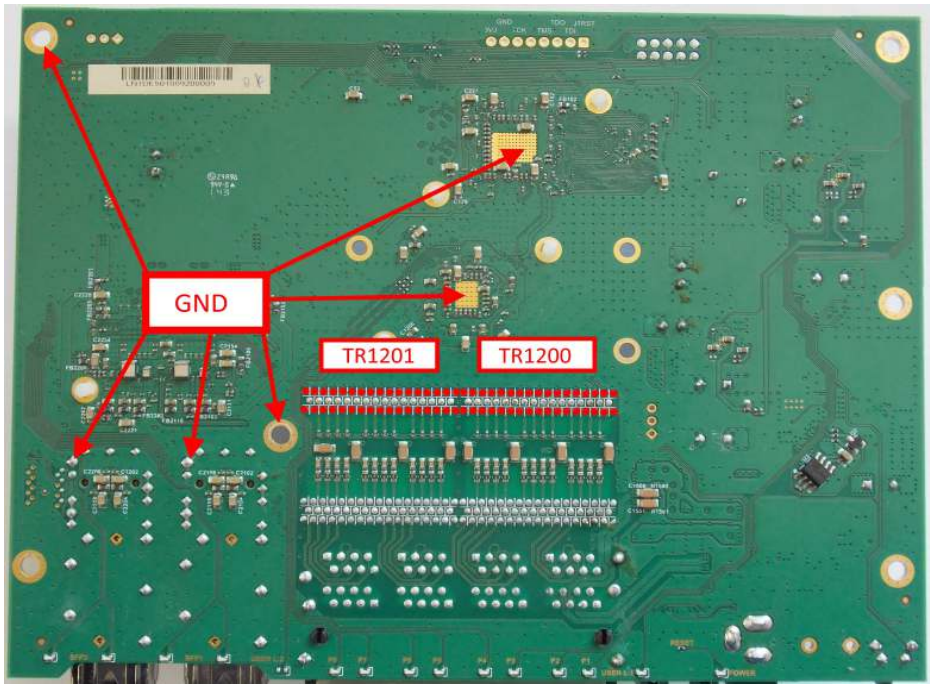
Schottky diode reference numbers are D3, D5, D11, D16, D17. Schottky diode quality measurement method describe on page 7



Picture 193

Voltage drop between TR1200, TR1201 and Ground.

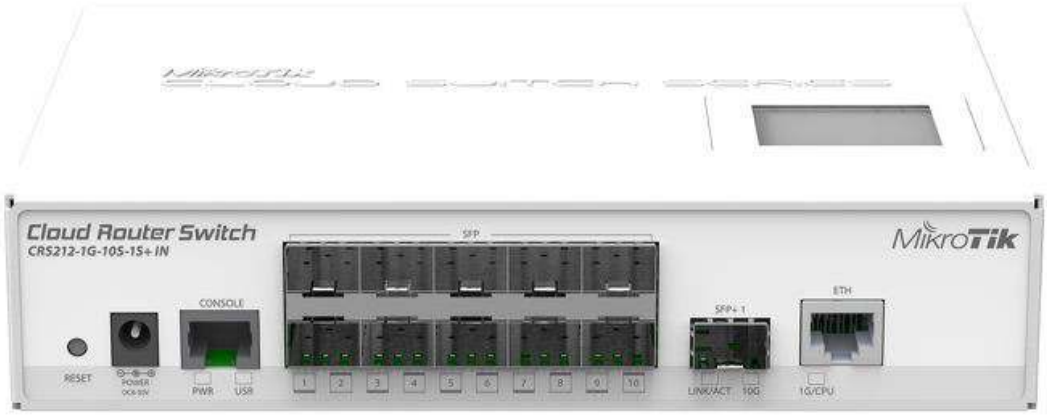
Check voltage drop between TR1200 and TR1201 Ethernet Transformers on ports Ether1 – Ether8 pins and Ground. Ether Pins are circled red.It should be in the range from 0,32V to 0,438V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked Transformers pins.



Picture 194

CRS212-1G-10S-1S+ series RouterBoards

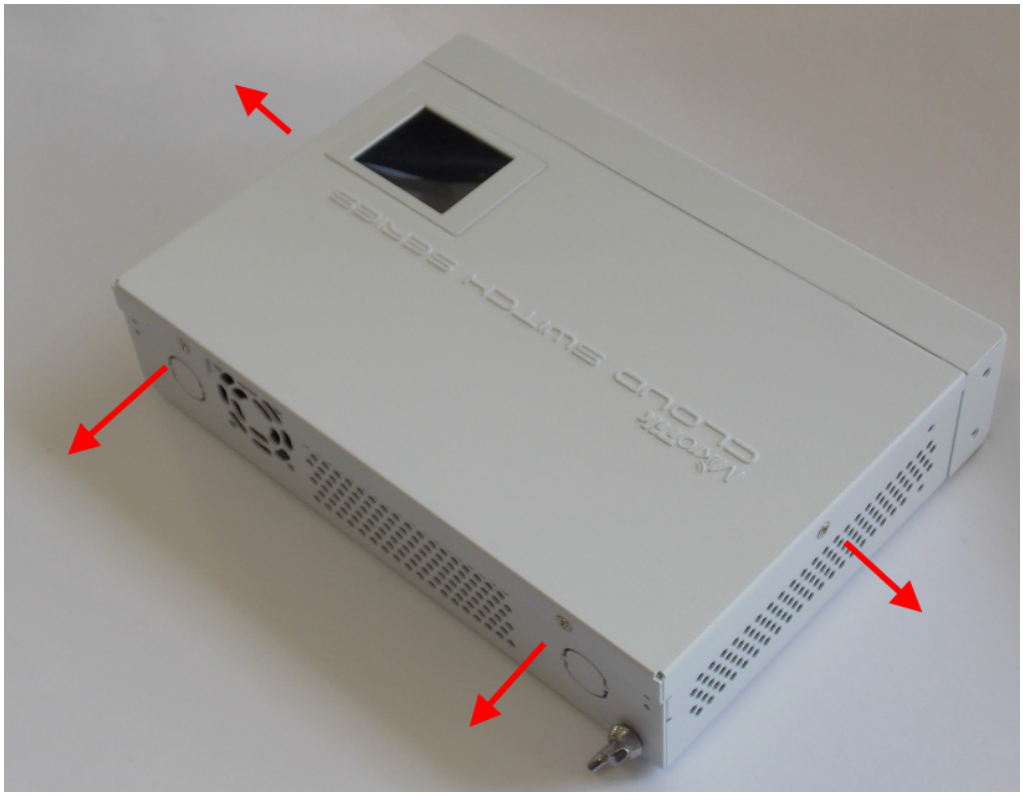
CRS212-1G-10S-1S+IN



Picture 195

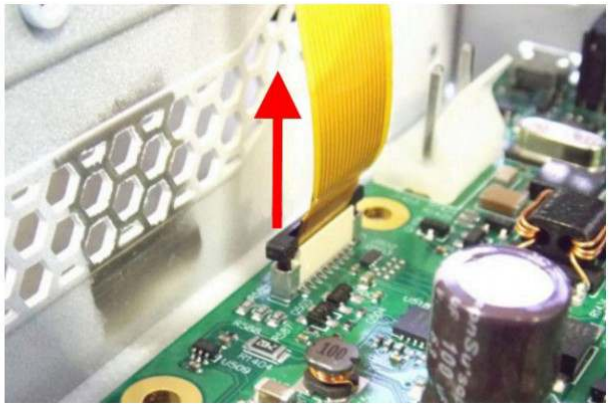
Disassembling information

1. Step: use PH2 screw driver to loose backside screws, take off cover.



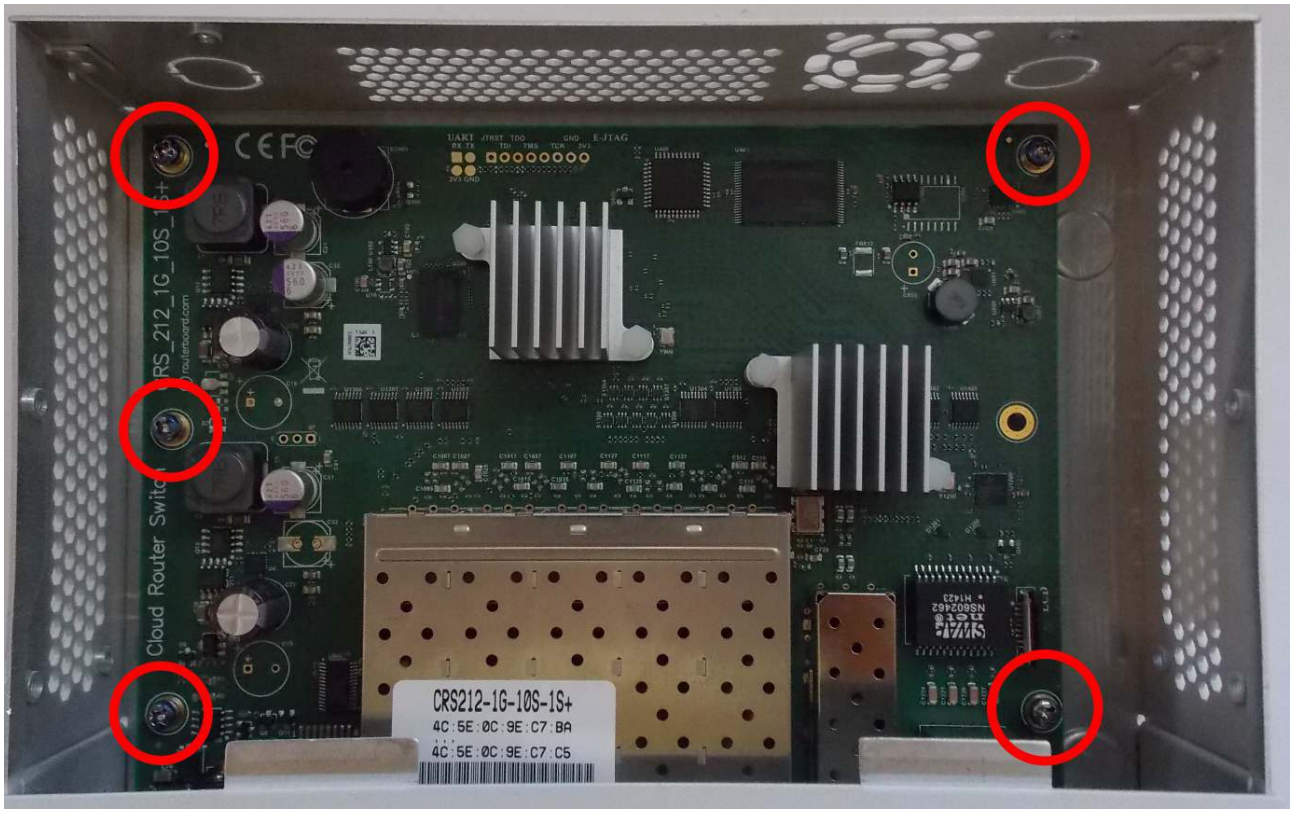
Picture 196

2. step: take off cover carefully, pay a tension to LCD connector. Push up both side of LCD connector from slot with “-” screwdriver as shown in next pictures 228



Picture 197

3. Step: use “+” screw driver to loose 7 pcs PCB screws, than take off PCB from case.



Picture 198

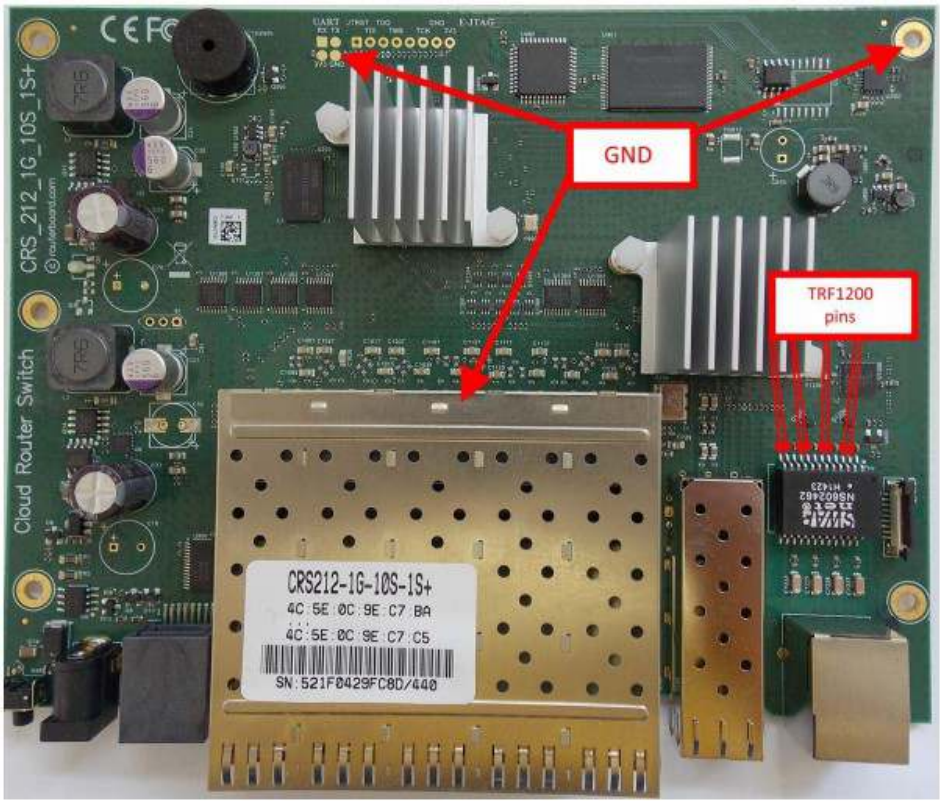
Schottky diode measuring with multimeter in diode mode

Schottky diode reference numbers are D5. Schottky diode quality measurement method describe on page 7

Picture 199

Voltage drop between TRF1200 and Ground.

Check voltage drop between TRF1200 Ethernet Transformers on ports Ether1 pins and Ground. Ether Pins are marked with red arrows. It should be in the range from 0,32V to 0,438V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked TRF1200 Transformer pins.



Picture 200

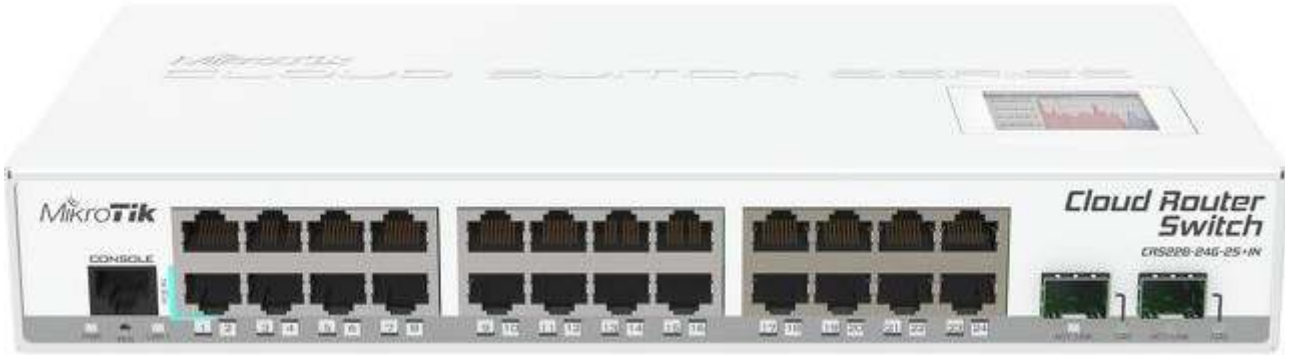
75R termination resistors resistance

Resistors marked with red arrows should be 75Ohm +/- 1%

Picture 201

CRS226-24G-2S+ series RouterBoards

CRS226-24G-2S+IN



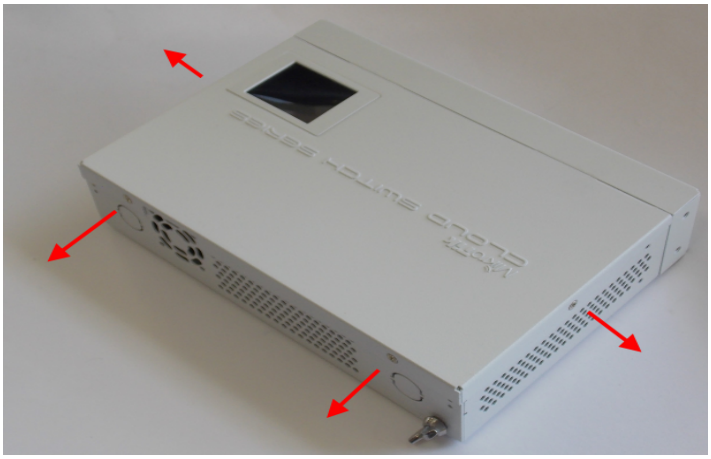
Picture 202

CRS226-24G-2S+RM

Picture 203

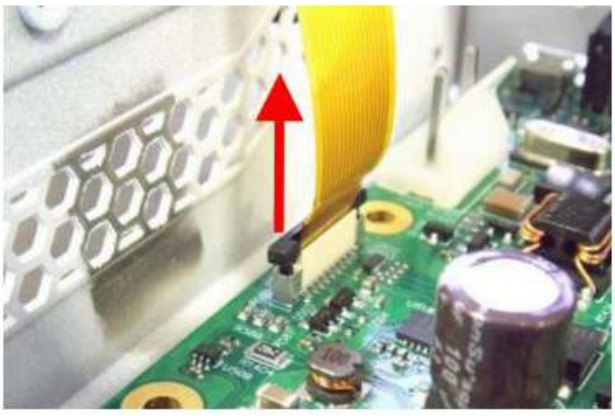
Disassembling information

1. Step: use PH2 screw driver to loose backside screws, take off cover.



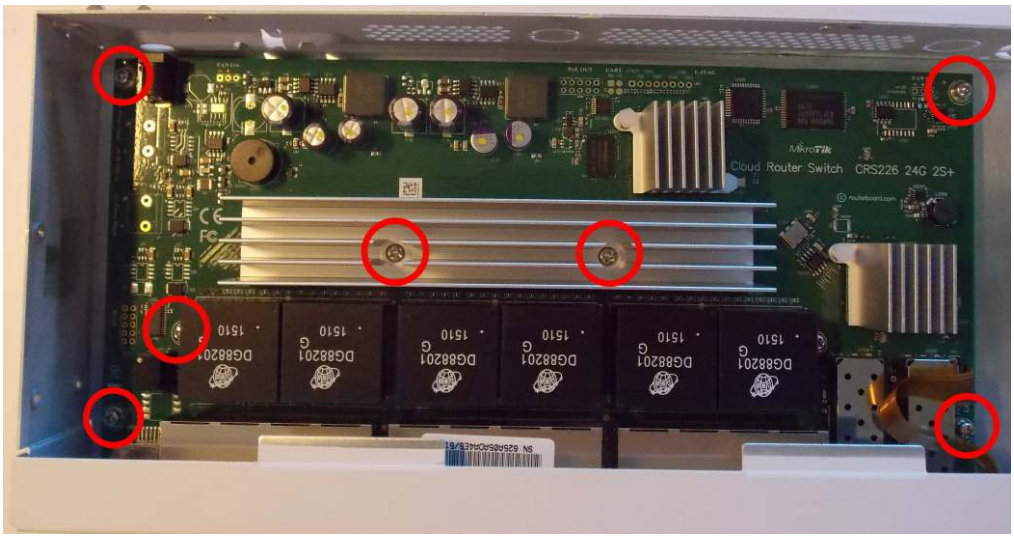
Picture 204

2. step: take off cover carefully, pay a tension to LCD connector. Push up both side of LCD connector from slot with “-” screwdriver as shown in next pictures



Picture 205

3. Step: use “+” screw driver to loose 7 pcs PCB screws, than take off PCB from case.



Picture 206

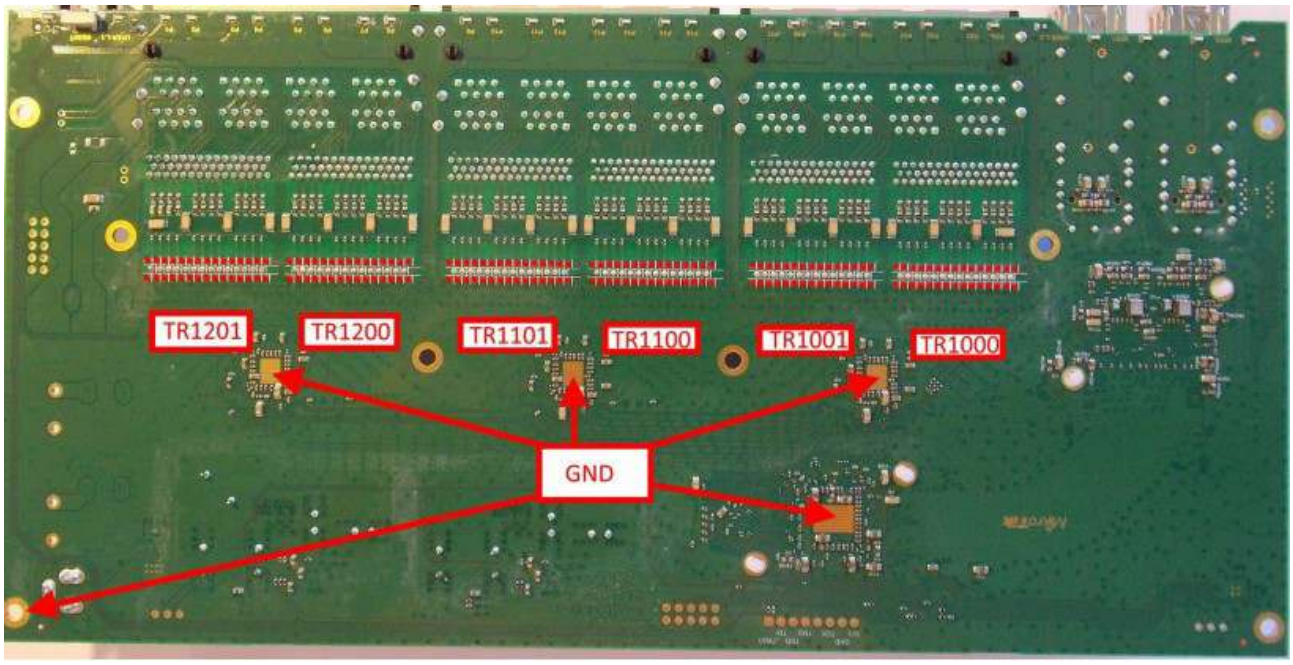
Schottky diode measuring with multimeter in diode mode

Schottky diode reference numbers are D1, D4, D5. Schottky diode quality measurement method describe on page 7

Picture 207

Voltage drop between Ethernet Transformers and Ground.

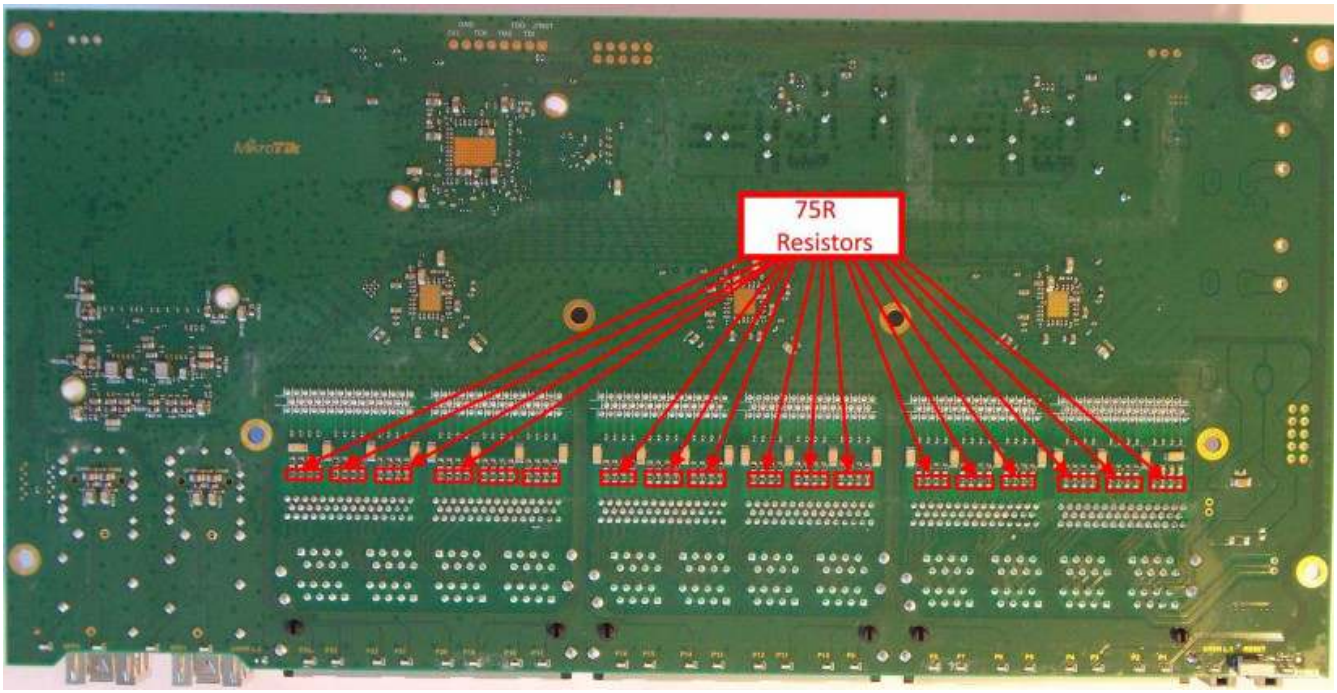
Check voltage drop between TR1200 and TR1201 Ethernet Transformers on ports Ether1 – Ether8 pins and Ground. Ether Pins are circled red. It should be in the range from 0,32V to 0,438V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked Transformers pins.



Picture 208

75R termination resistors resistance

Resistors marked with red arrows should be 75Ohm +/- 1%



Picture 209

DynaDish series RouterBoards

RBDynaDish series:

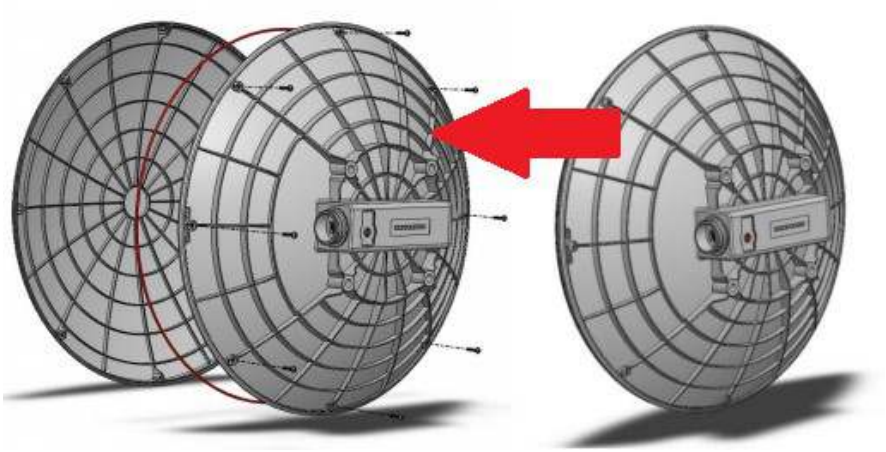
DynaDish 5

Picture 210

Disassembling information

DynaDish 5 disassembling

1. step

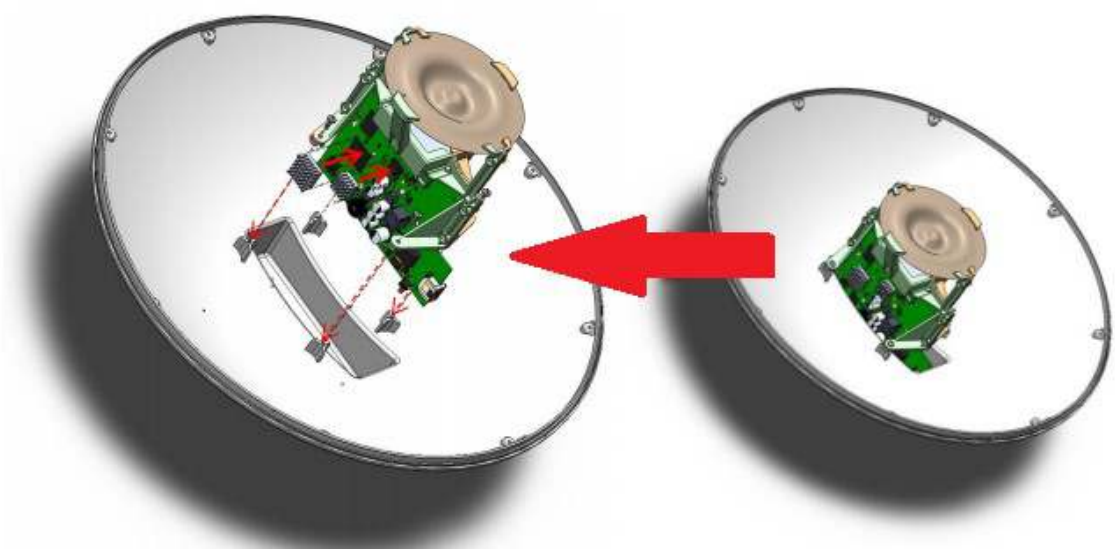


Picture 211

Unscrew 8 pcs screws with TX10 screwdriver and remove the antenna cover as shown in picture

2. step

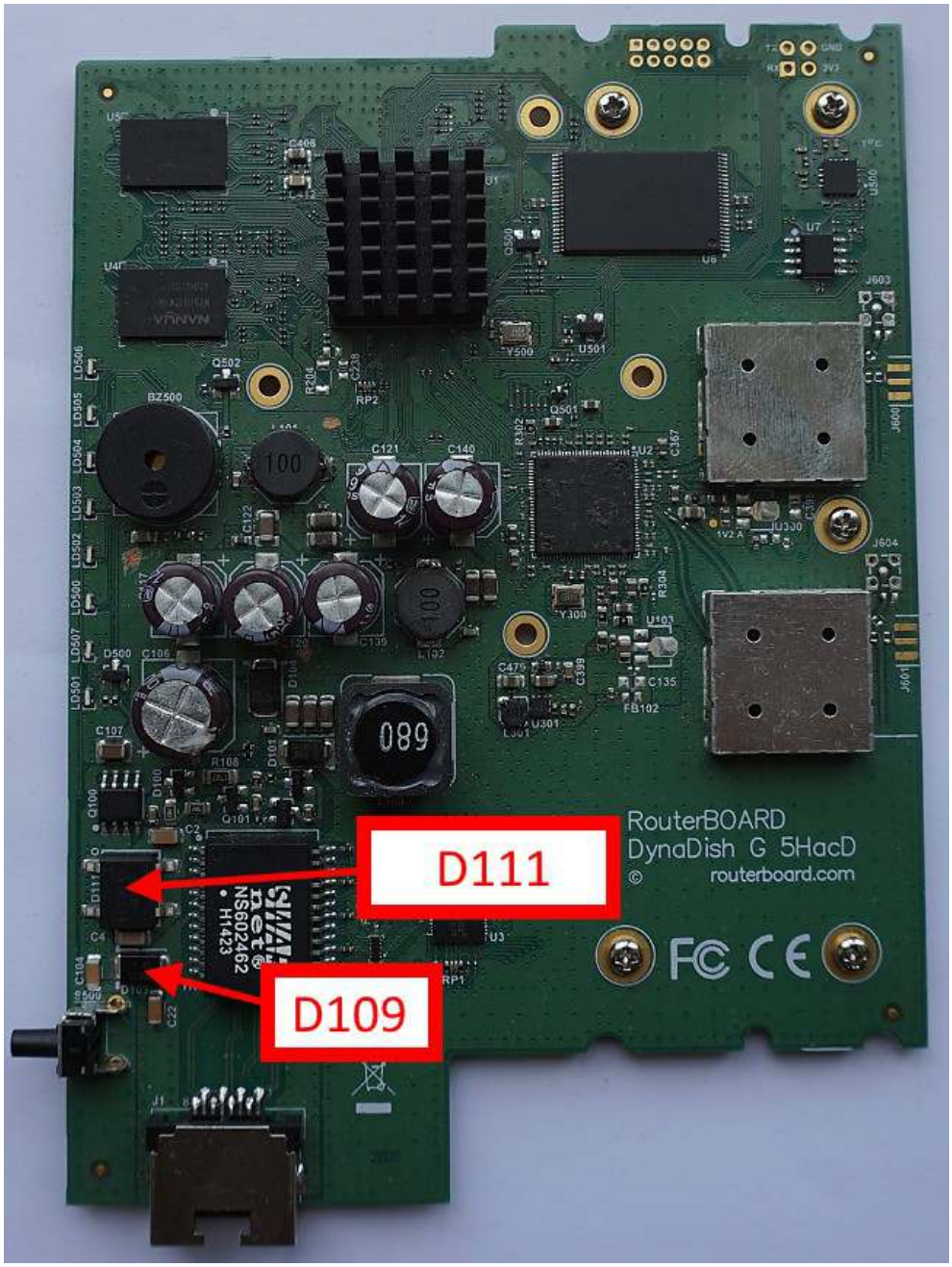
Unscrew 4 pcs screws with TX10 screwdriver and remove the board from the antenna construction as shown in picture.



Picture 212

Schottky diode measuring with multimeter in diode mode

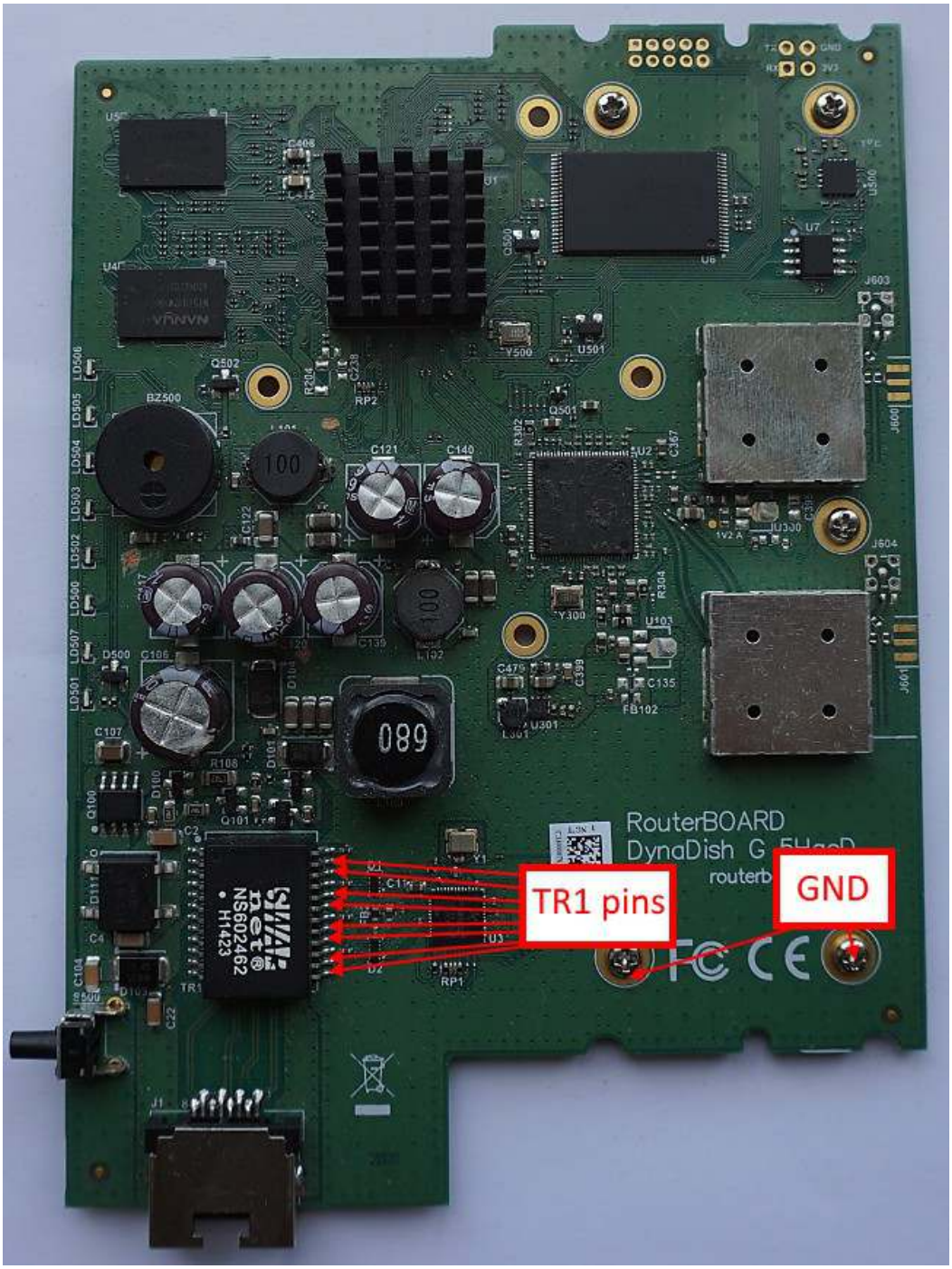
Schottky diode reference number is D109; Diode bridge reference number is D111. Schottky diode quality measurement method describe on page 7



Picture 213

Voltage drop between TR1 pins and Ground.

Check voltage drop between TR1 Ethernet Transformers pins and Ground. Ether Pins are marked with red arrows. It should be in the range from 0,32V to 0,487V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked TR1 Transformer pins.



Picture 214

FTC11 series RouterBoards

FTC

Picture 215

Disassembling information

1. step: use screw driver to loose 1 pcs cover screw, then take off cover.

Picture 216

2. step: use PH2 and TX8 screw driver to loose screws.

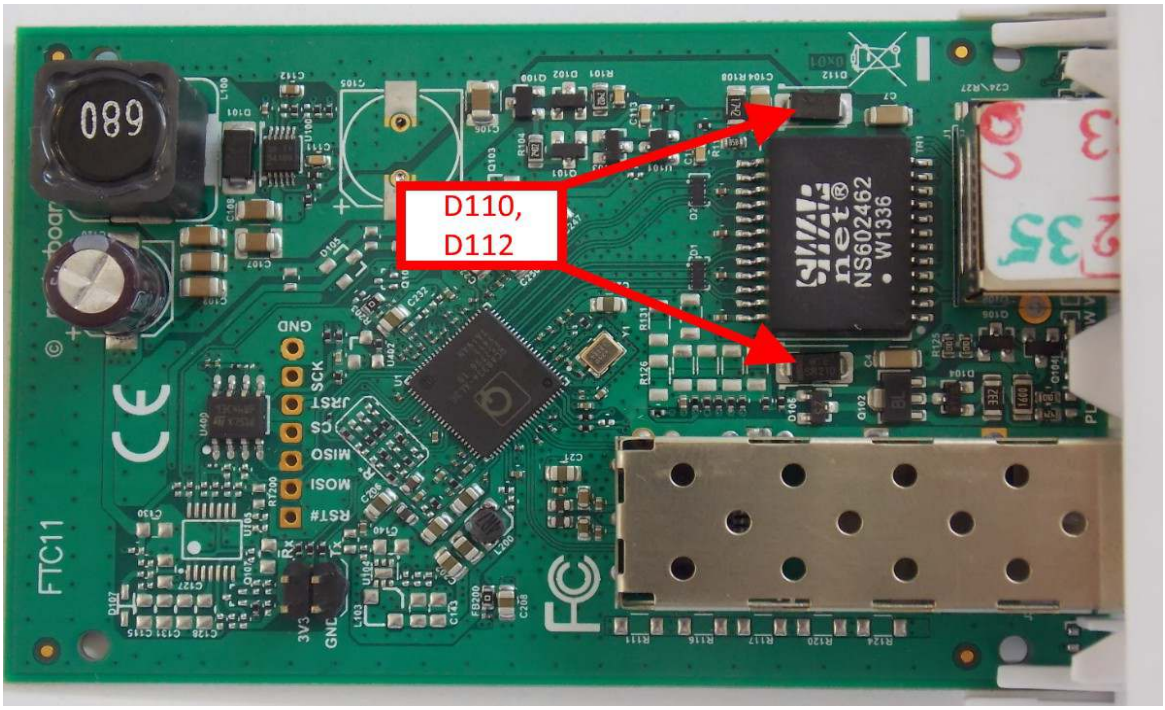
Picture 217

3. Step: take off cover with board.

Picture 218

Schottky diode measuring with multimeter in diode mode

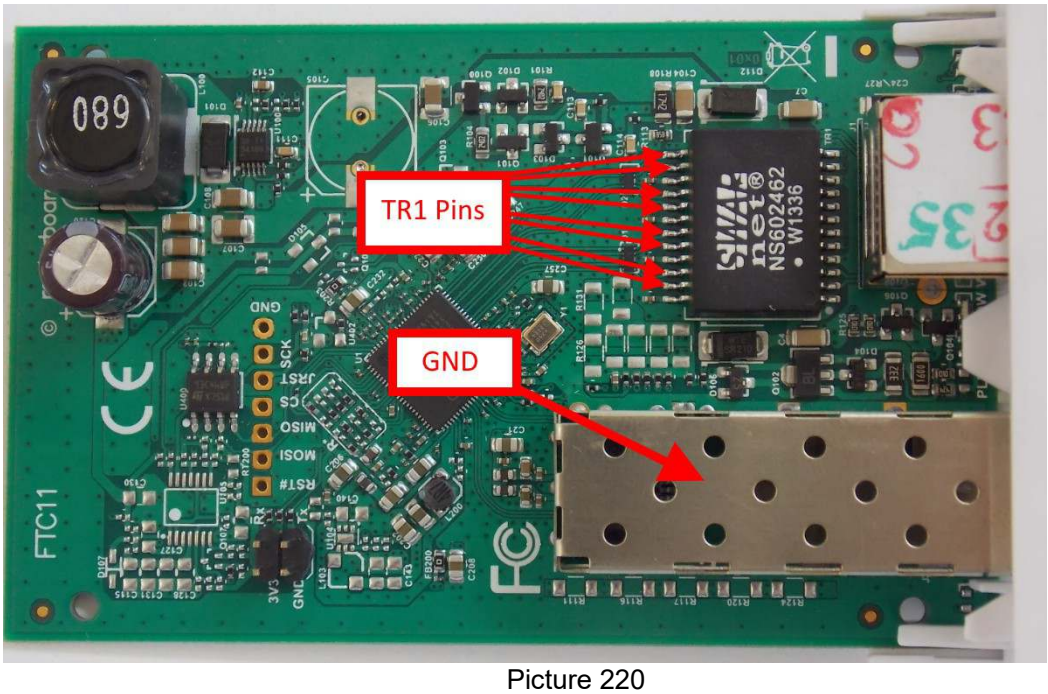
Schottky diode reference numbers D110, D112.
Schottky diode quality measurement method describe on page 7



Picture 219

Voltage drop between TR1 pins and Ground.

Check voltage drop between TR400 Ethernet Transformers on ports Ether1 pins and Ground. Ether Pins are marked with red arrows. It should be in the range from 0,32V to 0,438V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked TR1 Transformer pins.



Picture 220

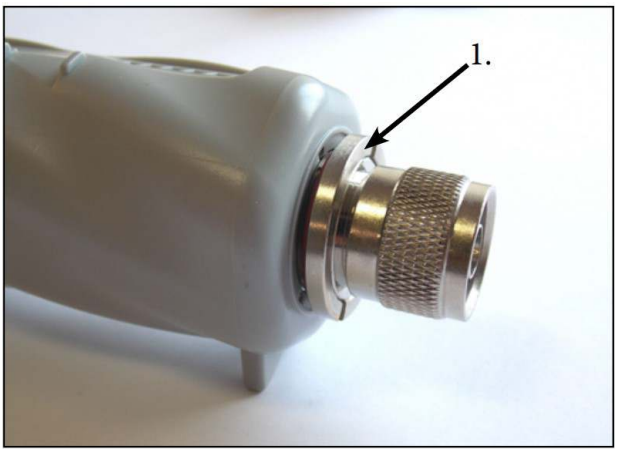
Groove 52HPn series RouterBoards

Groove 52HPn

Picture 221

Disassembling information

1. step: use screw driver to loose N-Male nut



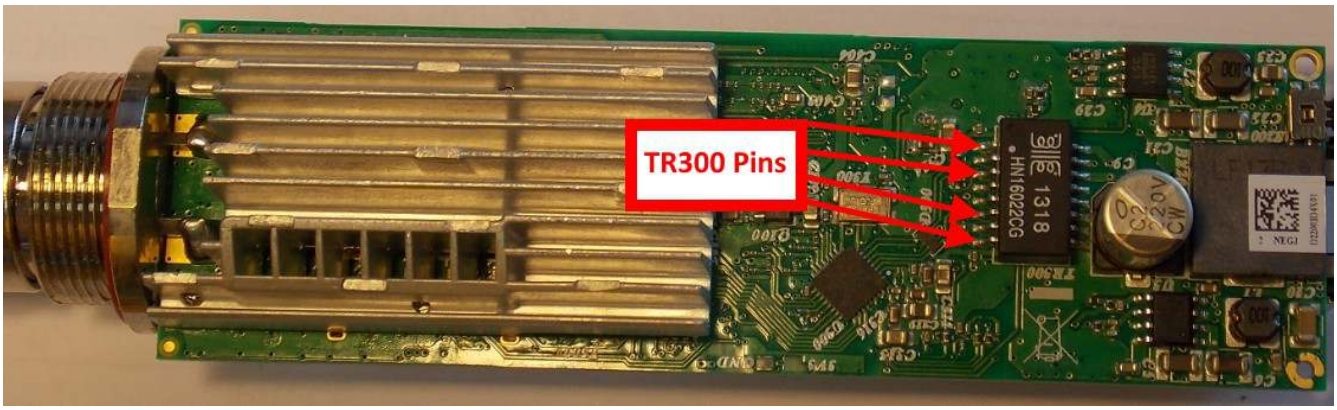
Picture 222

4. Step: take off the board.

Picture 223

Voltage drop between TR300 pins and Ground.

Check voltage drop between TR1000 Ethernet Transformers on ports Ether1 pins and Ground. Ether Pins are marked with red arrows. It should be in the range from 0,32V to 0,438V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked TR300 Transformer pins.



Picture 224

75R termination resistors resistance

Resistors marked with red arrows should be 75Ohm +/- 1%

Picture 225

hAP lite series RouterBoards

hAP lite

Picture 226

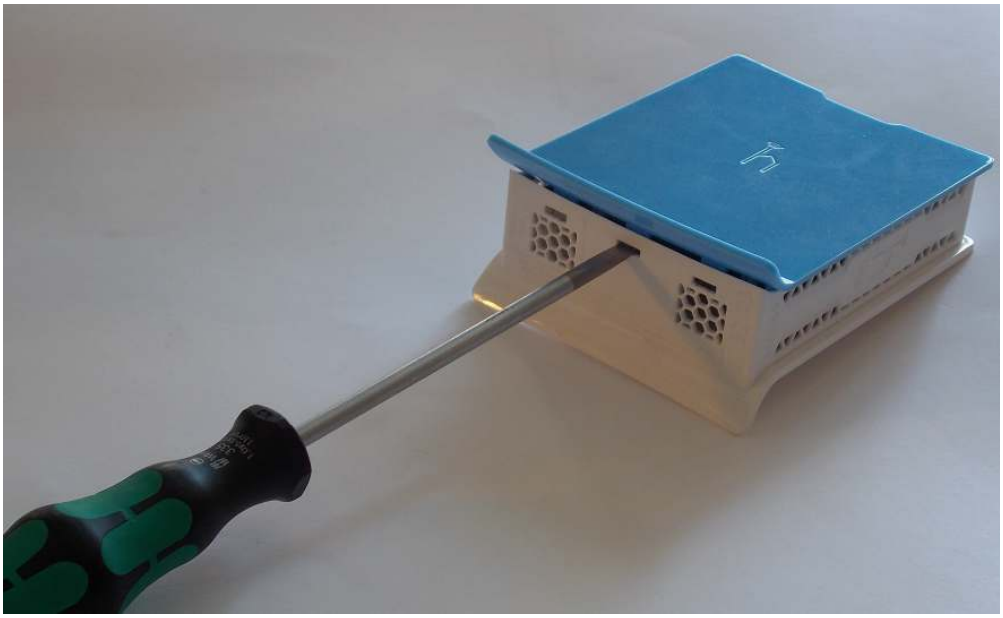
Picture 227

2. Disassembling information

hAP lite horizontal case disassembling

1. step

Push “-” screwdrivers in case cavities.



Picture 228

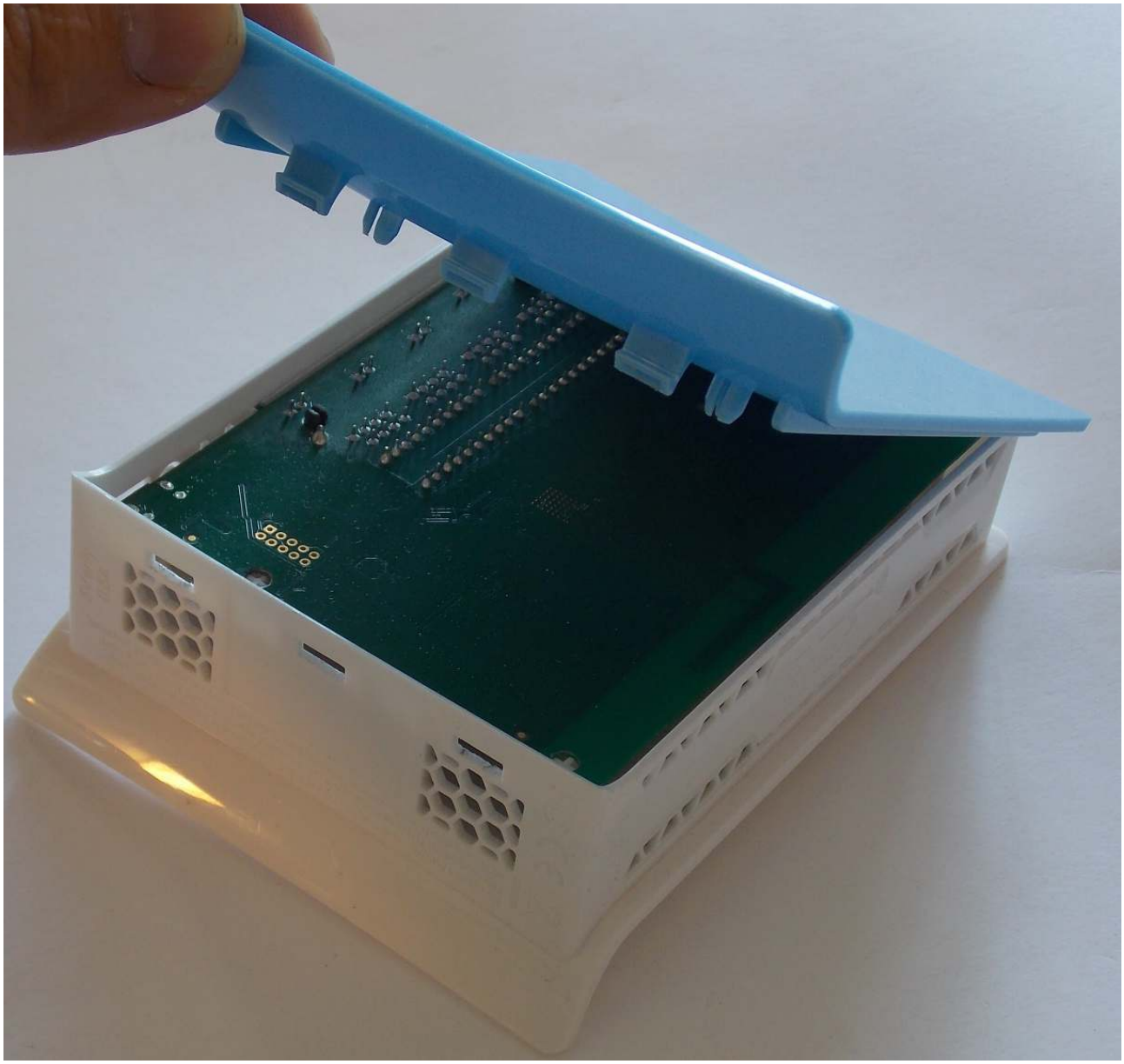
2. step

Rotate screwdriver and pull both case parts.

Picture 229

3. step

Open front case and take out the board.



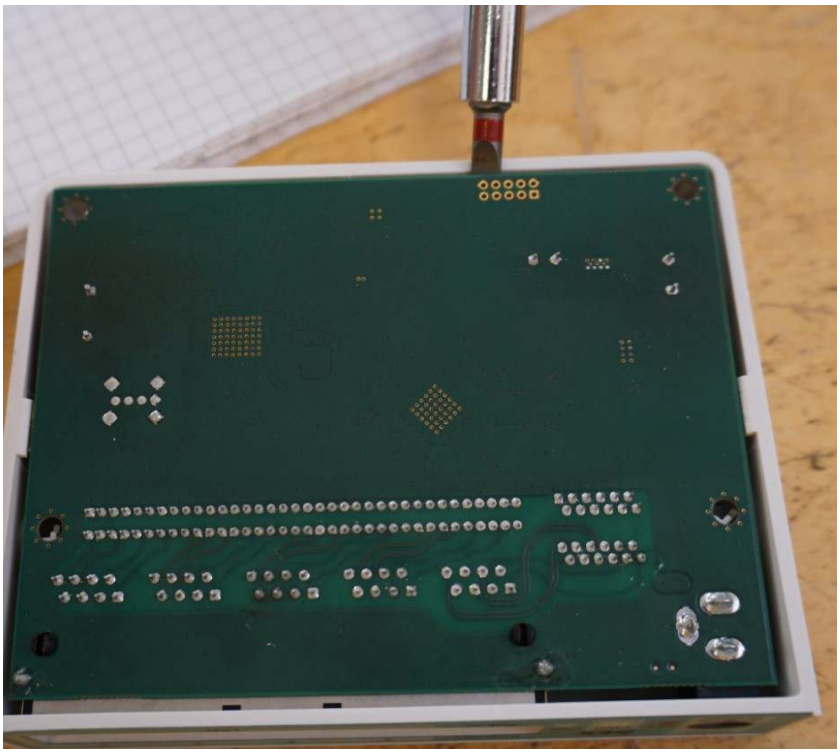
Picture 230

Horizontal case disassembling

Take off the cover with a screwdriver as shown in the picture186

Picture 231

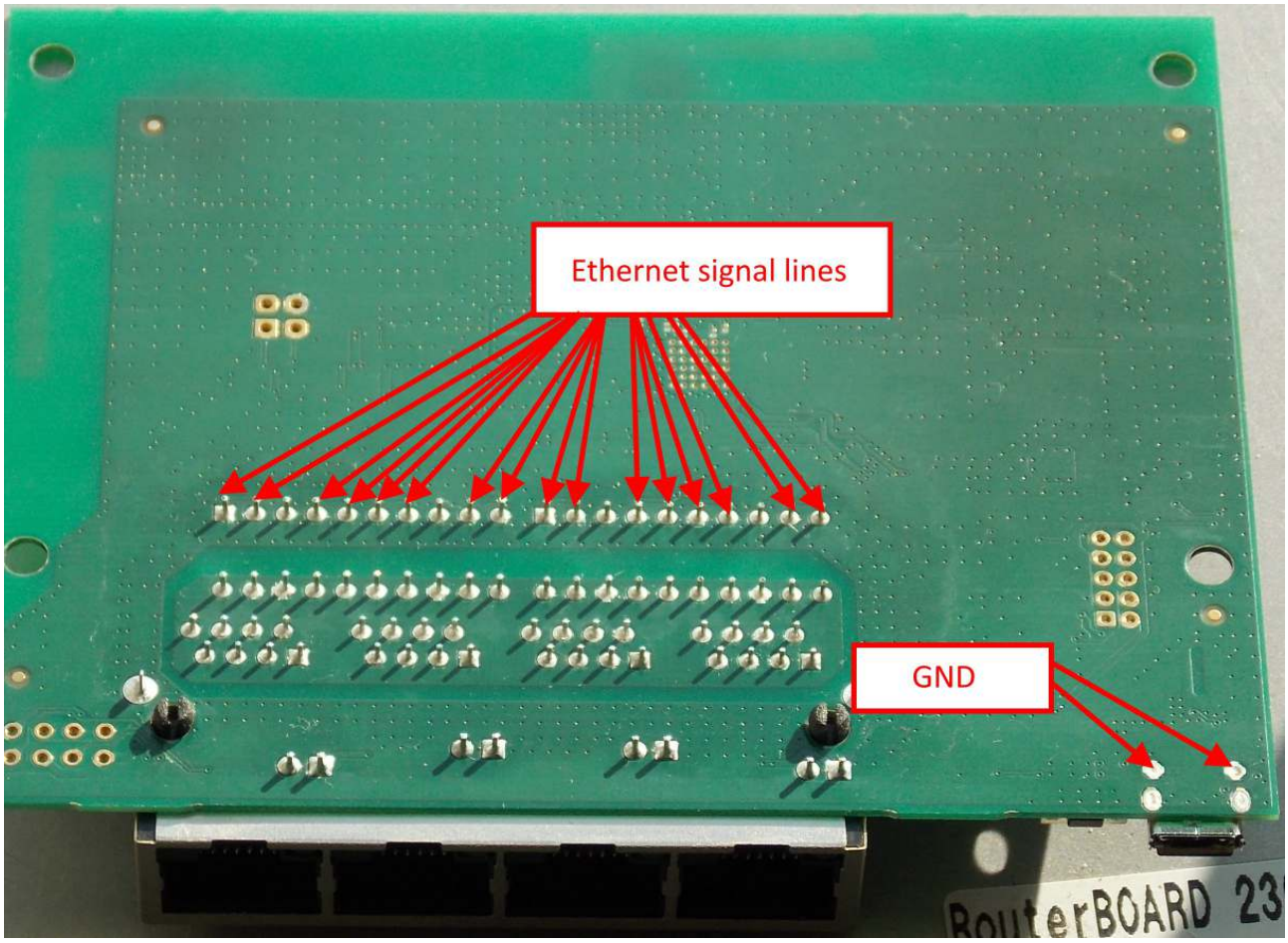
Take out the board with a screwdriver as shown in the picture187



Picture 232

Voltage drop between TR1 pins and Ground.

Check voltage drop between TR1 Ethernet Transformers pins and Ground. Ether Pins are marked with red arrows. It should be in the range from 0,32V to 0,48V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked Transformers pins.



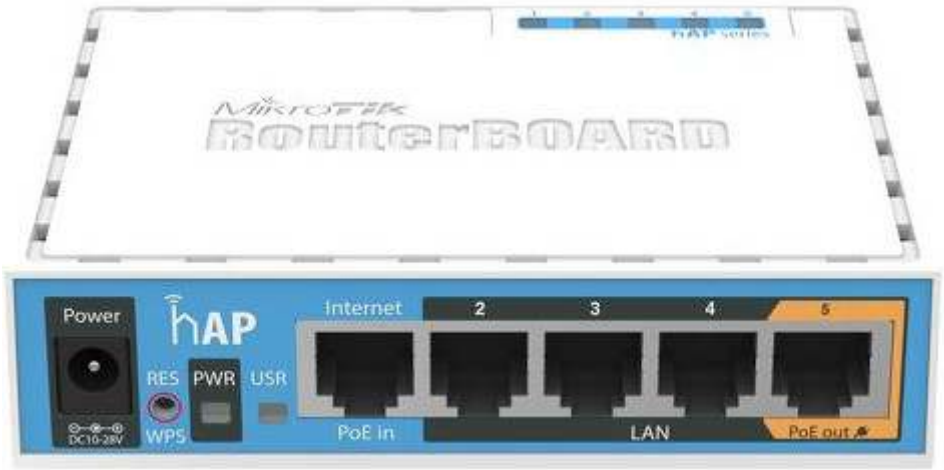
Picture 233

hAP lite ac series RouterBoards

hAP ac lite

Picture 226

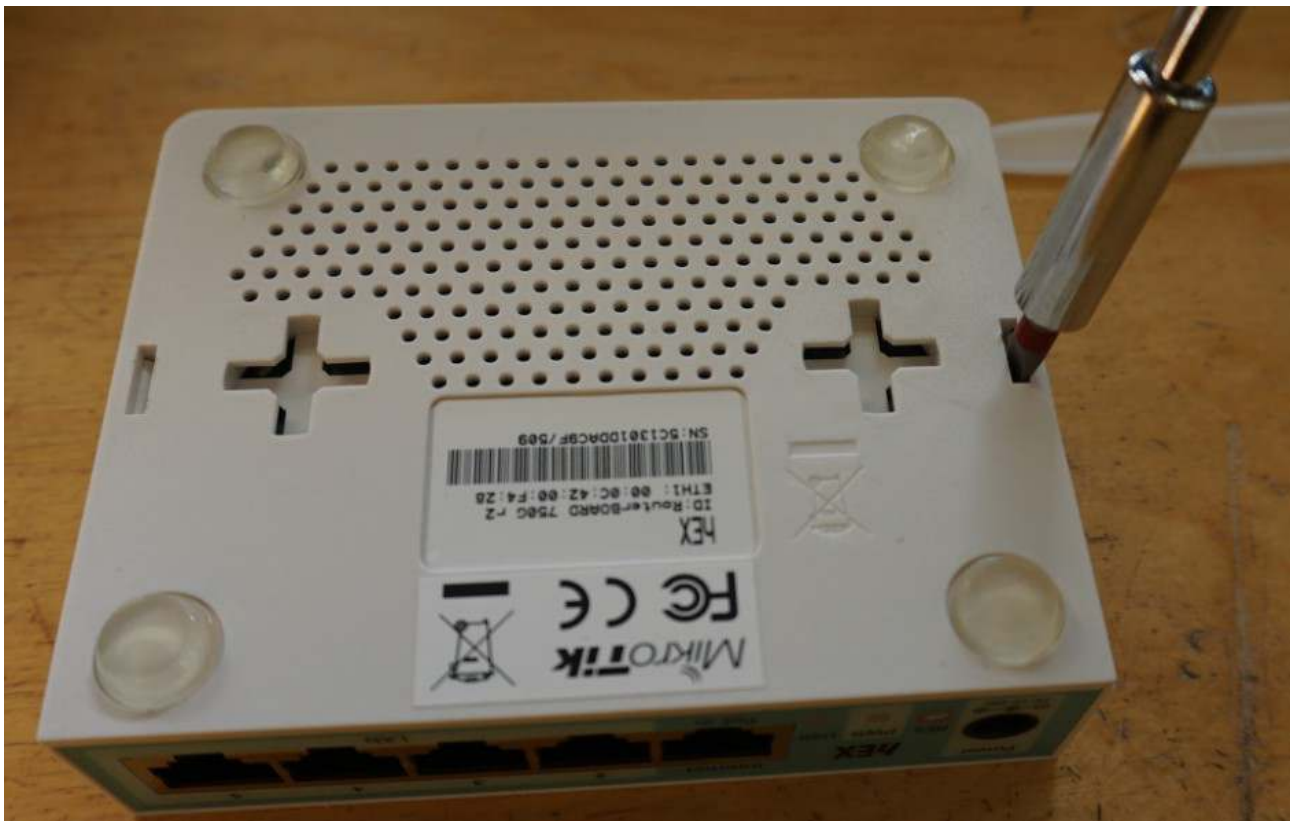
hAP



Disassembling information

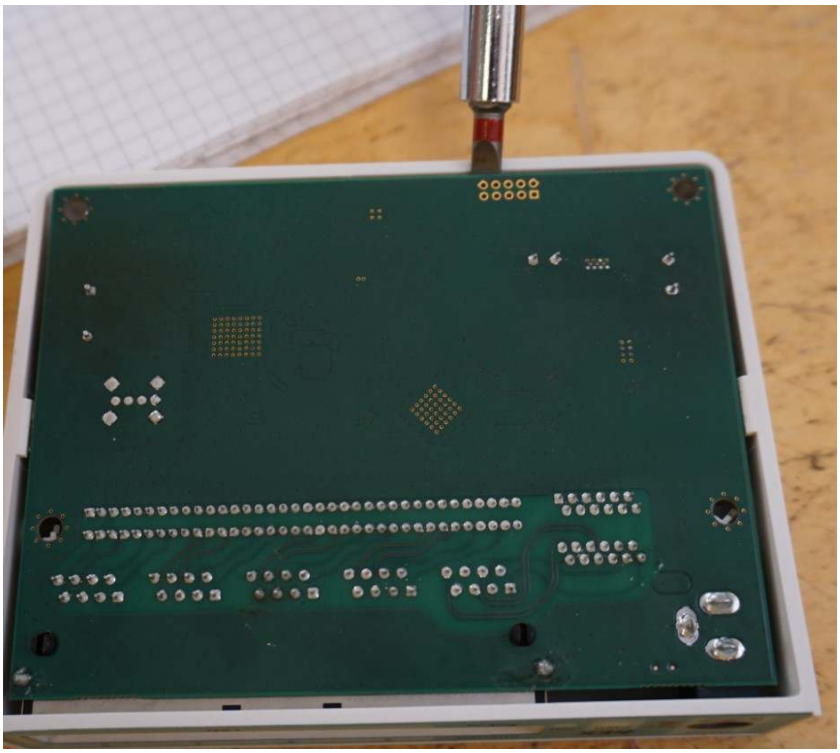
Horizontal case disassembling

Take off the cover with a screwdriver as shown in the picture 231



Picture 231

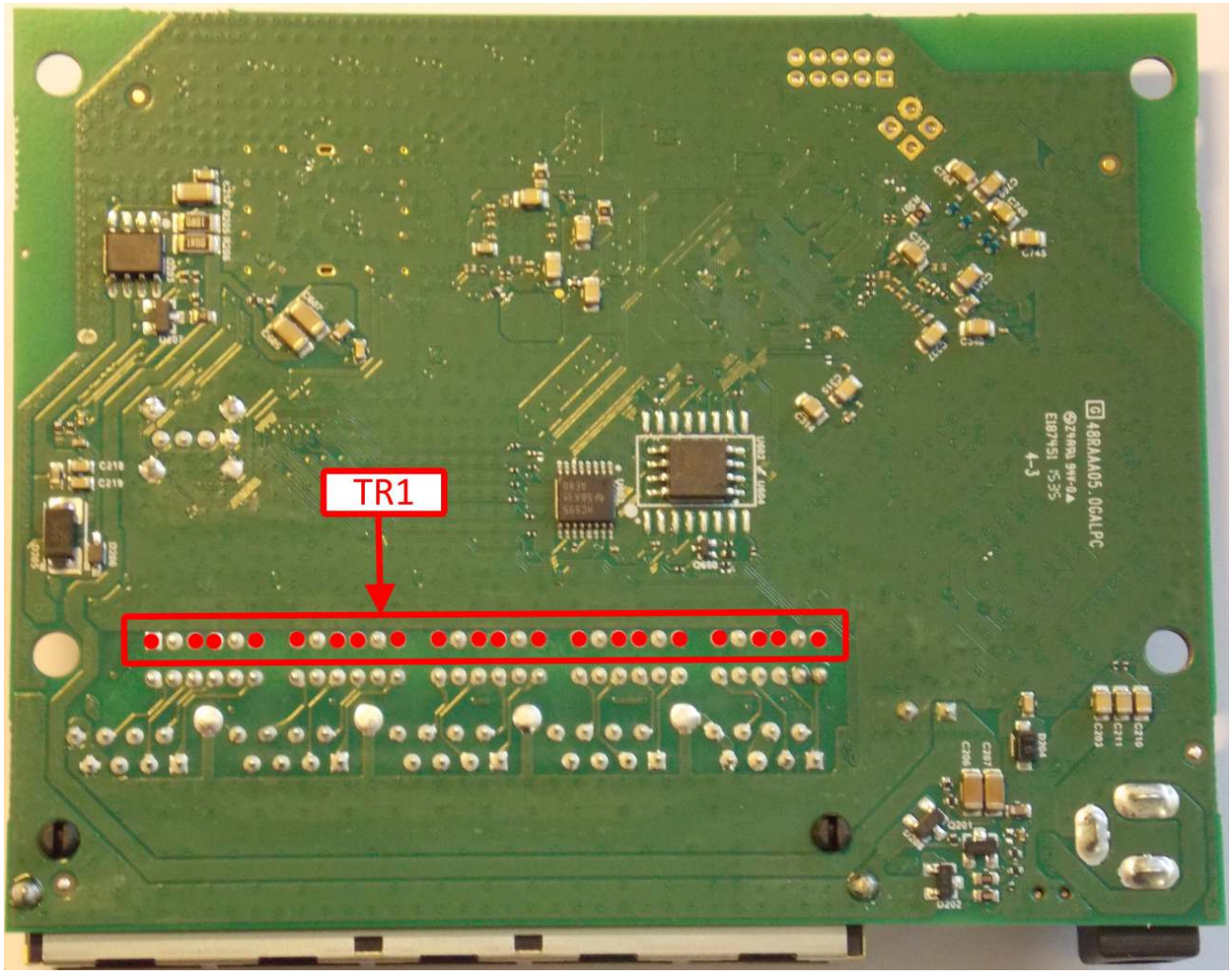
Take out the board with a screwdriver as shown in the picture 232



Picture 232

Voltage drop between TR1 pins and Ground.

Check voltage drop between TR1 Ethernet Transformers pins and Ground. Ether Pins are marked with red. It should be in the range from 0,32V to 0,48V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked Transformers pins.



Picture 233

hAP ac series RouterBoards

hAP ac

Picture 102

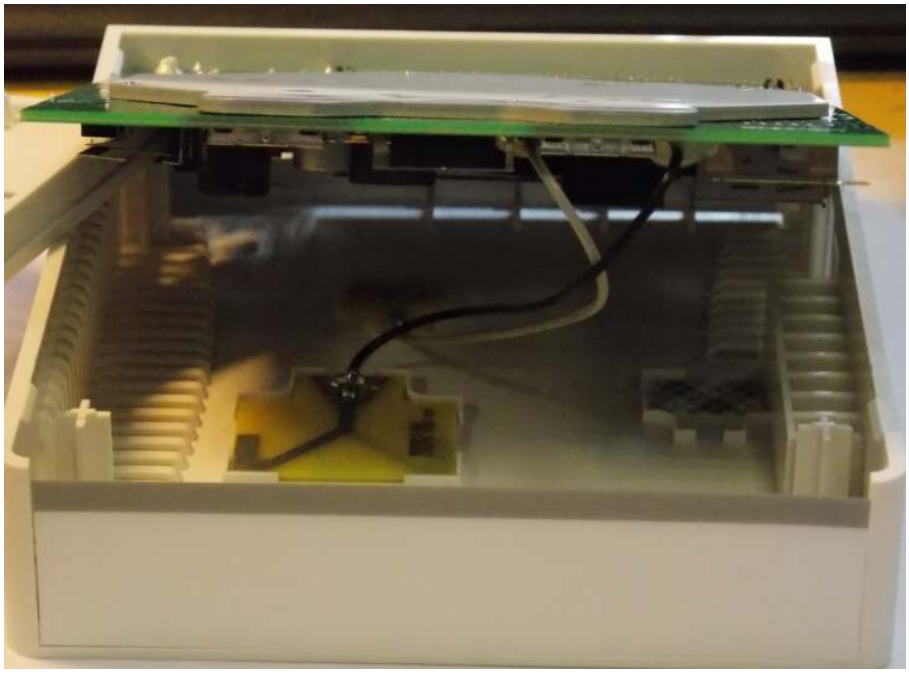
Disassembling information

hAP ac disassembling

Take off the cover with a screwdriver as shown in the picture 102

Picture 102

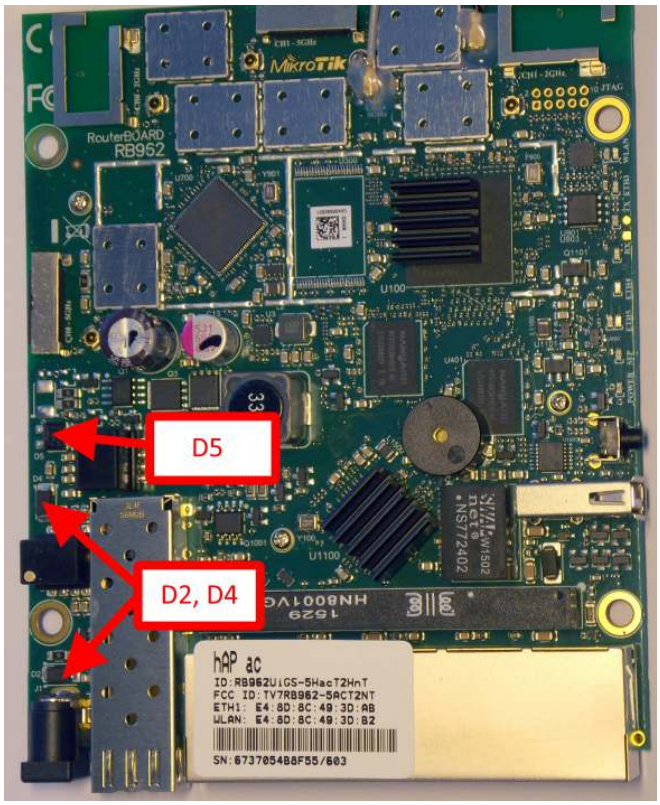
Take out the board with a screwdriver as shown in the picture 103, pay attention to the attached antenna wires.



Picture 103

Schottky diode measuring with multimeter in diode mode

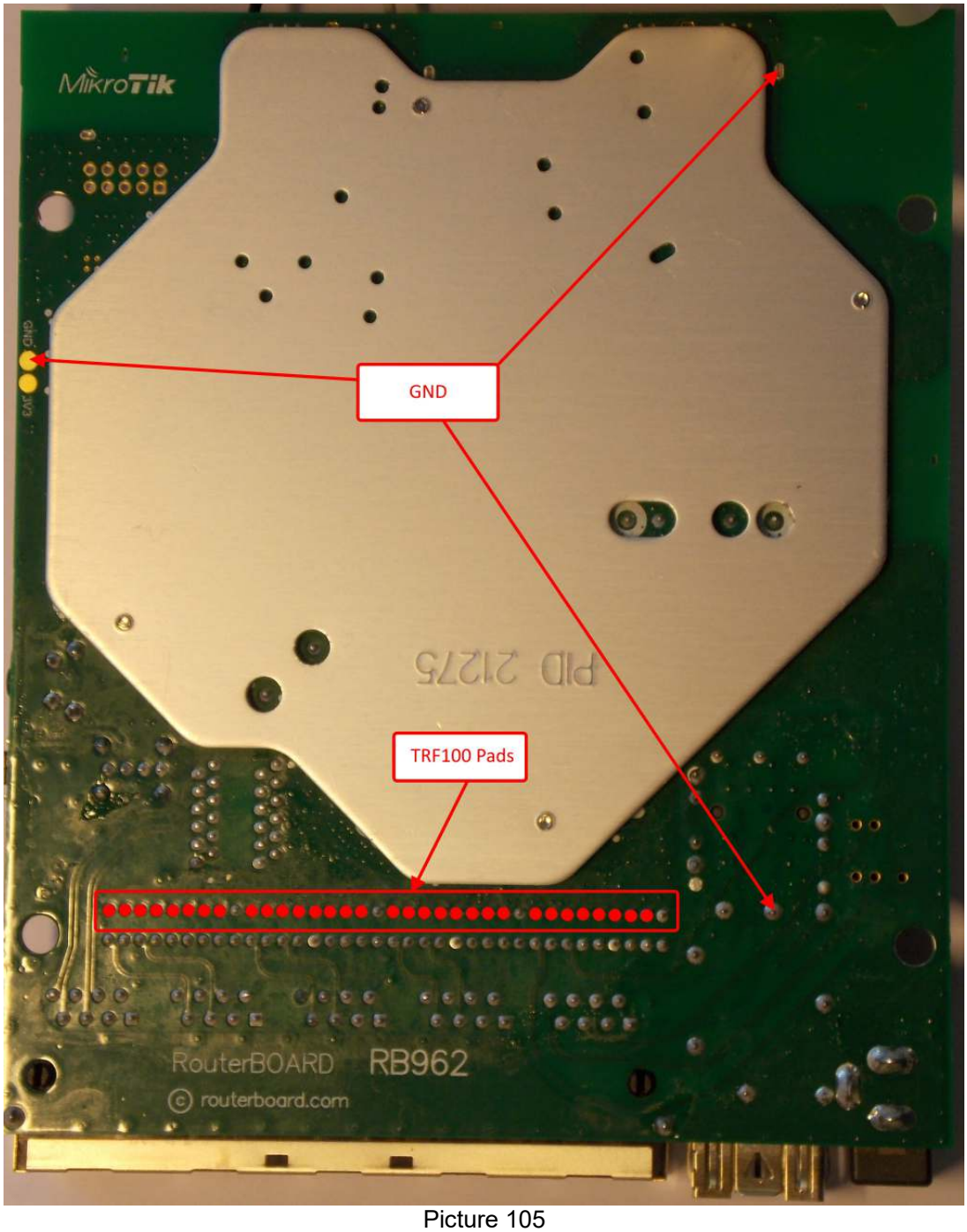
Diode bridge reference number is D5 and schotky diodes reference numbers are D2, D4. Schottky diode quality measurement method describe on page 7



Picture 104

Voltage drop between TR100 pins and Ground.

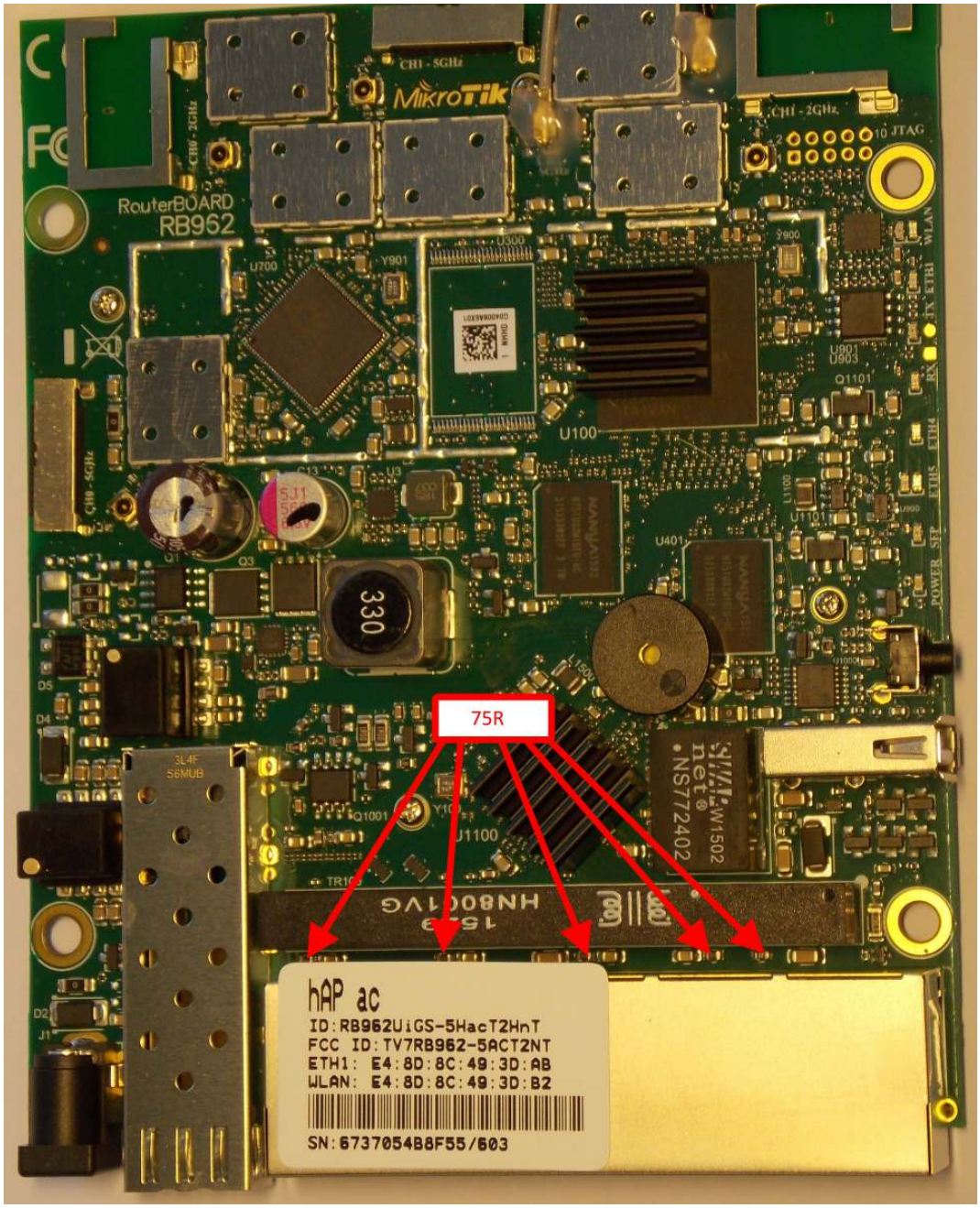
Check voltage drop between TR100 Ethernet Transformers on ports Ether1 – Ether5 pins and Ground. Ether Pins are marked with red arrows. It should be in the range from 0,32V to 0,438V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked TRF100 Transformer pins.



Picture 105

75R termination resistors resistance

Red circled resistors resistance should be 75R +/- 1%



Picture 106

mAP series RouterBoards

RBmAP series:

mAP 2n

Picture 234

Disassembling information

mAP 2n disassembling

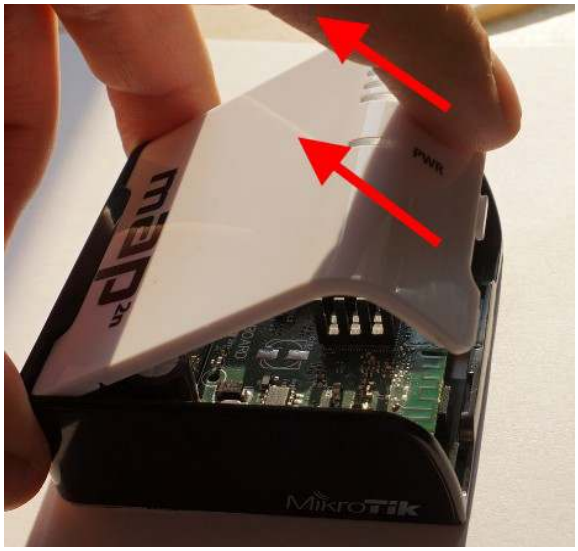
1. step

Push the white clip to open the case

Picture 235

2. step

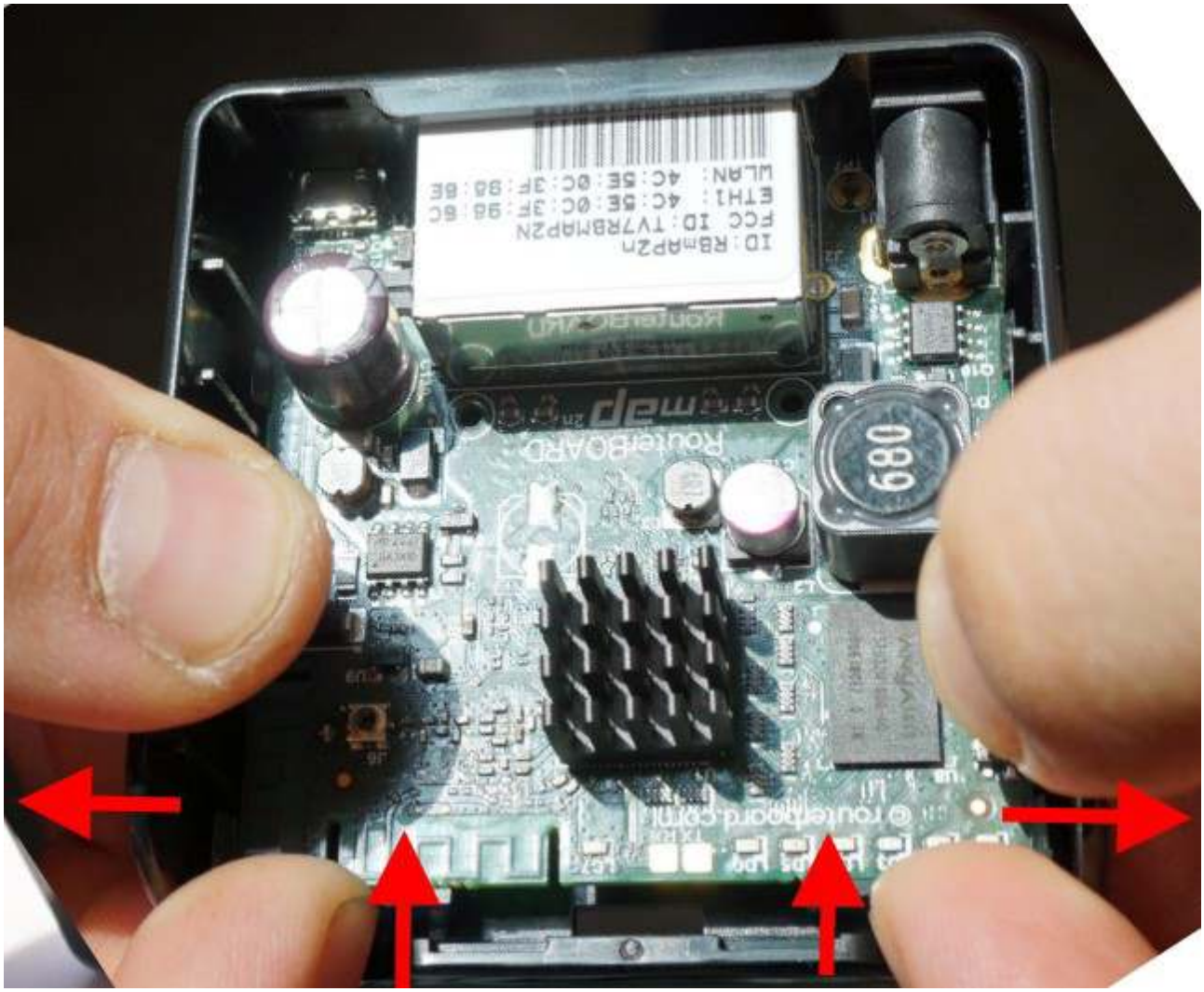
Remove front case



Picture 236

3. Step

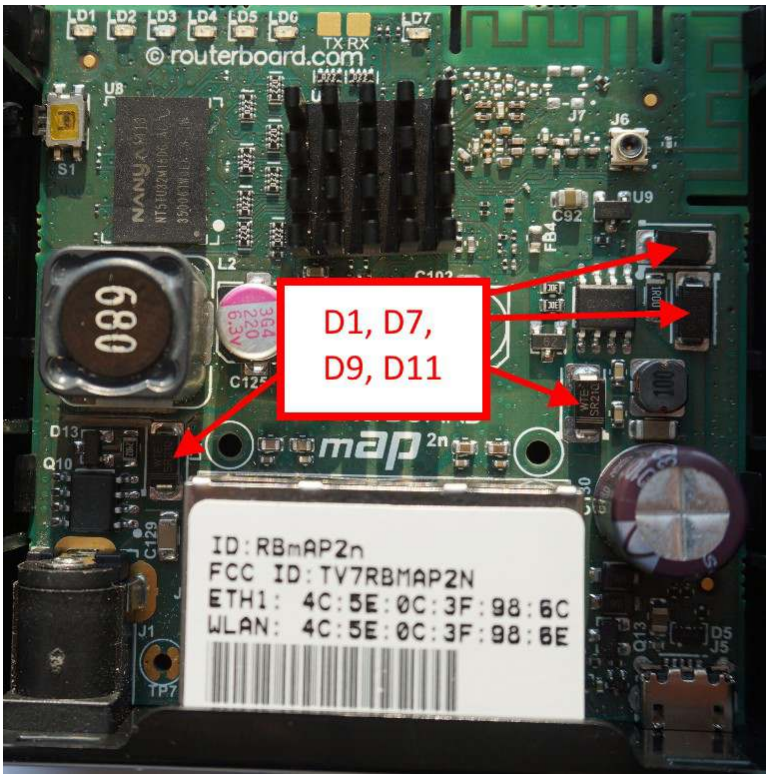
Remove board from case



Picture 237

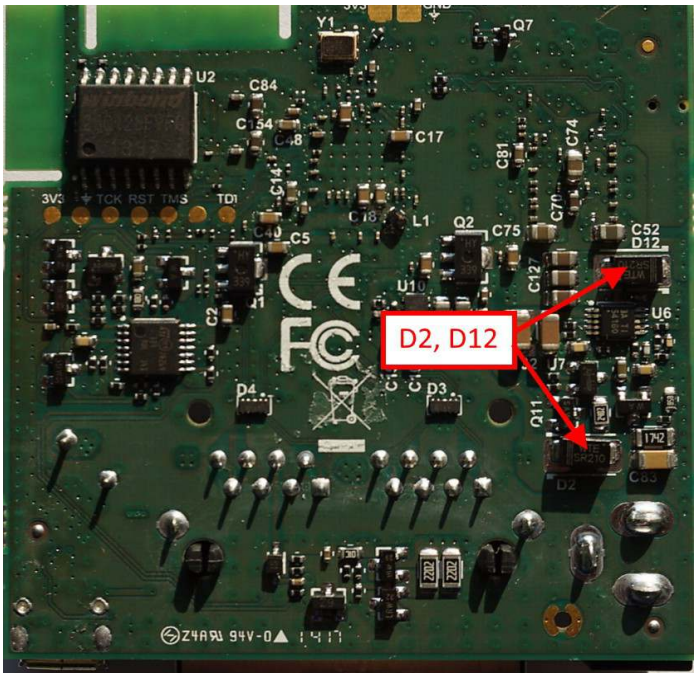
Schottky diode measuring with multimeter in diode mode

Schottky diode reference numbers are D1, D7, D9, D11 on top layer. Schottky diode quality measurement method describe on page 7



Picture 238

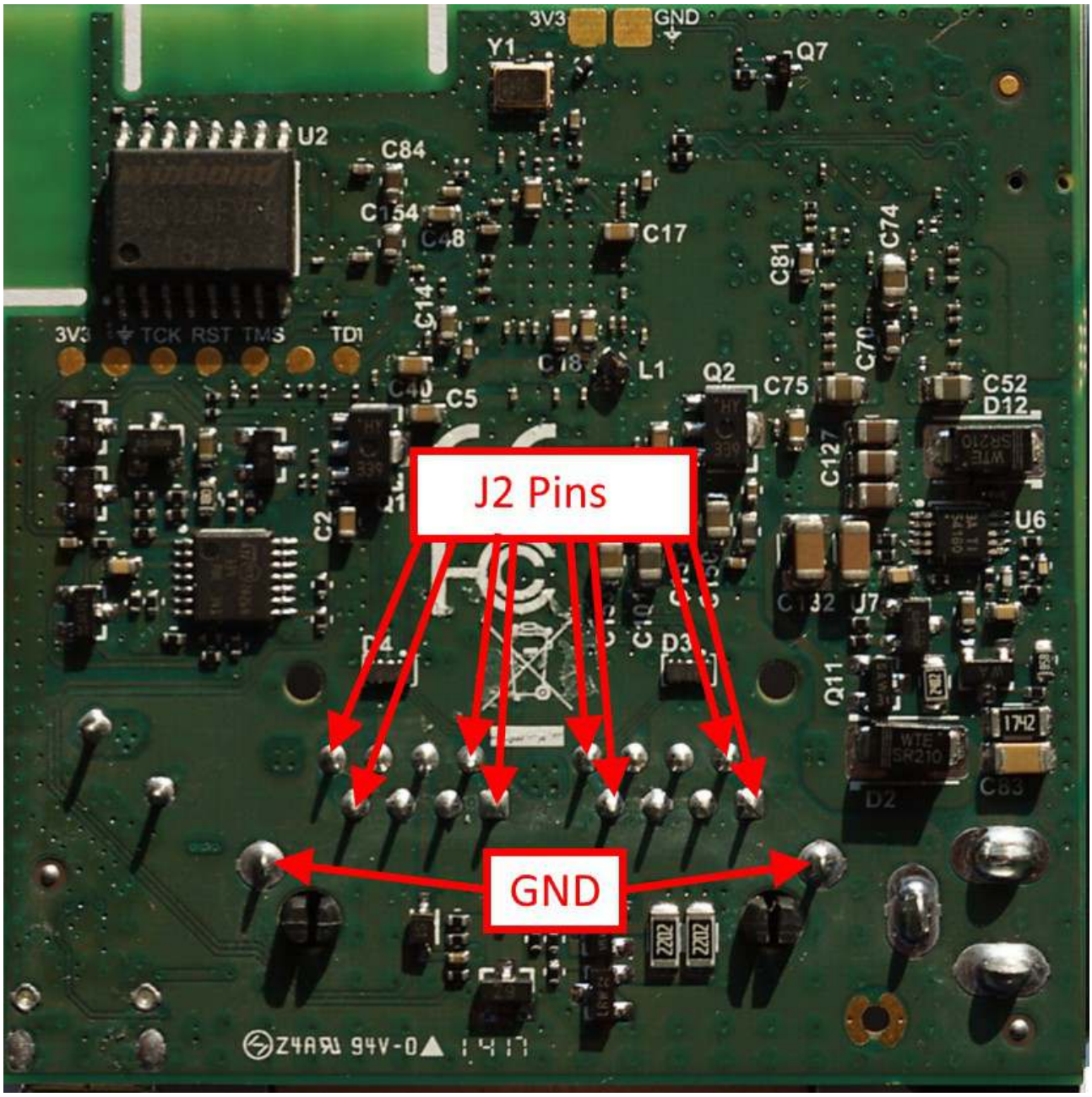
Schottky diode reference numbers are D2, D12 on bottom layer. Voltage drop value should be about 0,35V



Picture 239

Voltage drop between J2 Pins and Ground.

Check voltage drop between J2 Ethernet Transformers on port Ether1, Ether2 pins and Ground. Ether Pins are marked with red arrows. It should be in the range from 0,32V to 0,438V. Measure in diode mode:hold “positive” wire on the Ground and “COM” wire to marked J2 pins



Picture 240

mAP lite series RouterBoards

RBmAPL-2nD series:

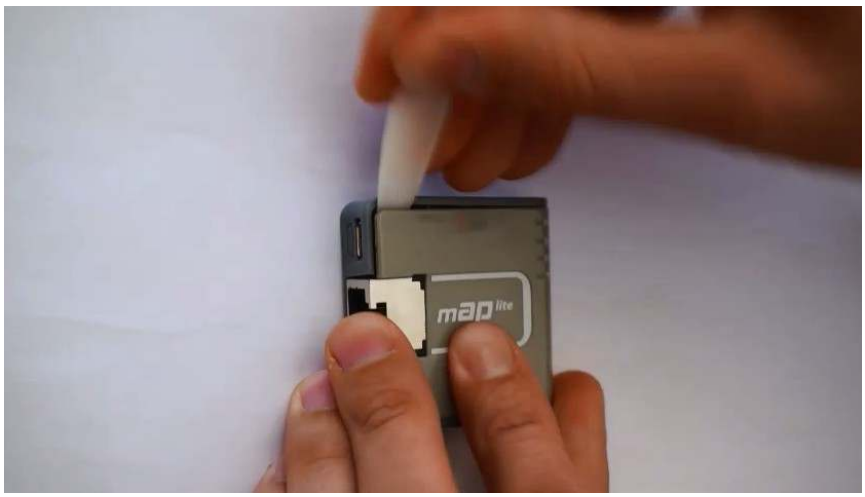
mAP lite

Picture 234

Disassembling information

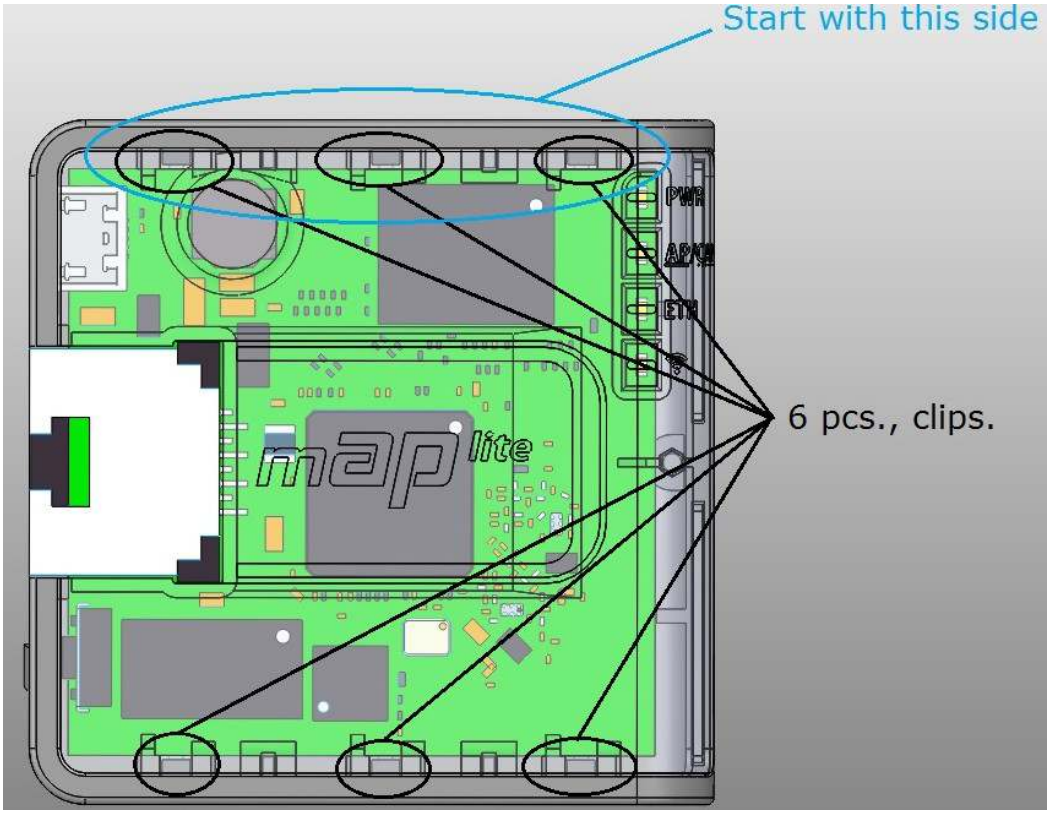
1. step

Take scalpel or screwdriver and glide it in case gaps.



2. step

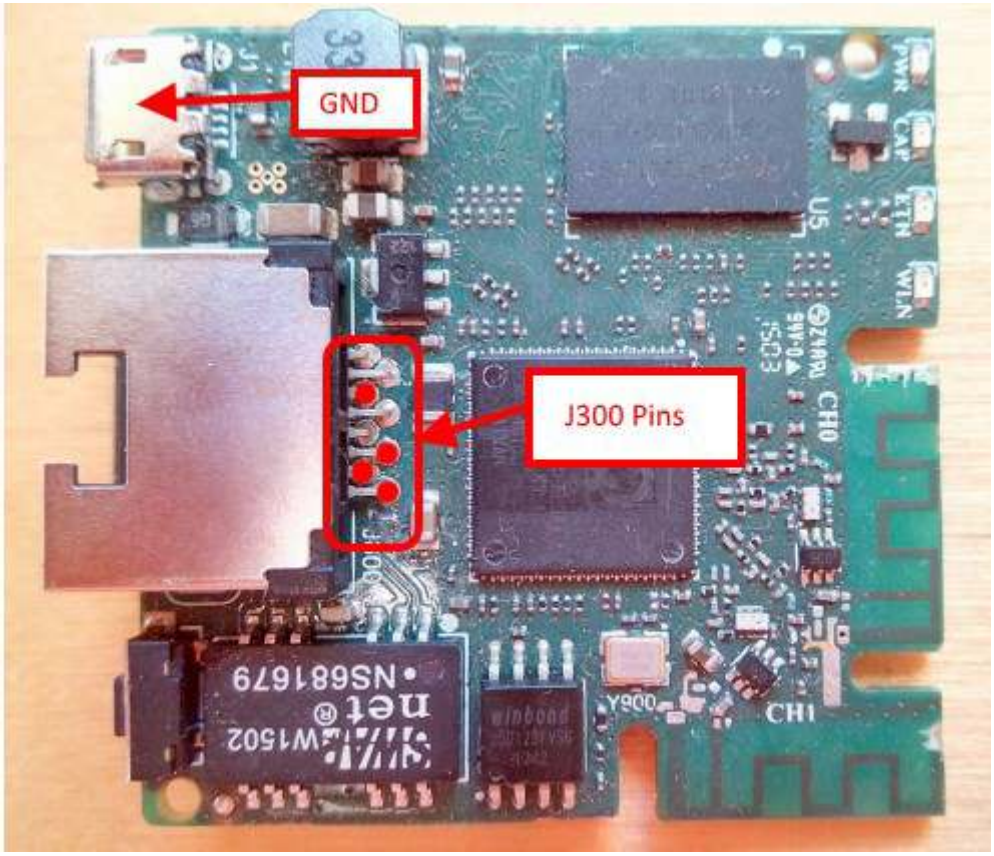
Push scalpel outward on all 6 pcs clips and lift up case cover.



2. Remove case cover and take out router board.

Voltage drop between J300 Pins and Ground.

Check voltage drop between J300 Ethernet Transformers on port Ether1 pins and Ground. Ether Pins are marked with red. It should be in the range from 0,32V to 0,438V. Measure in diode mode:hold “positive” wire on the Ground and “COM” wire to marked J300 pins



Picture 323

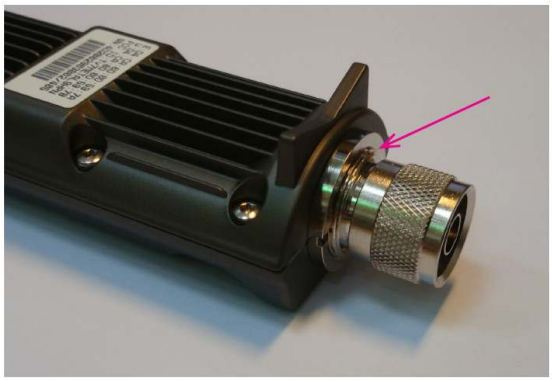
Metal 5SHPn series RouterBoards

Metal 5SHPn

Picture 241

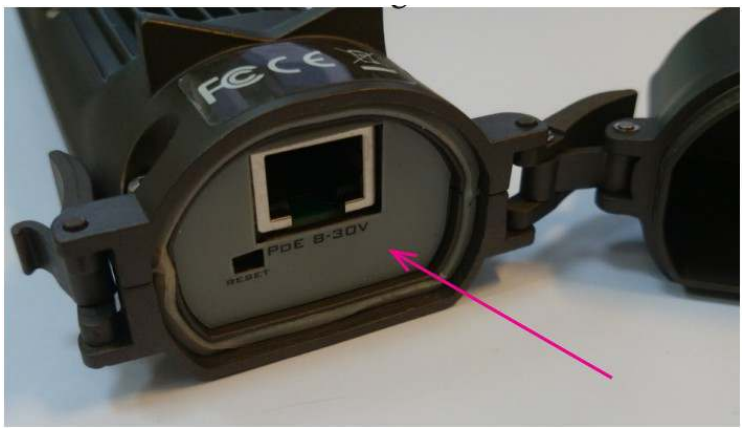
Disassembling information

1. step: use screw driver to loose N-Male nut



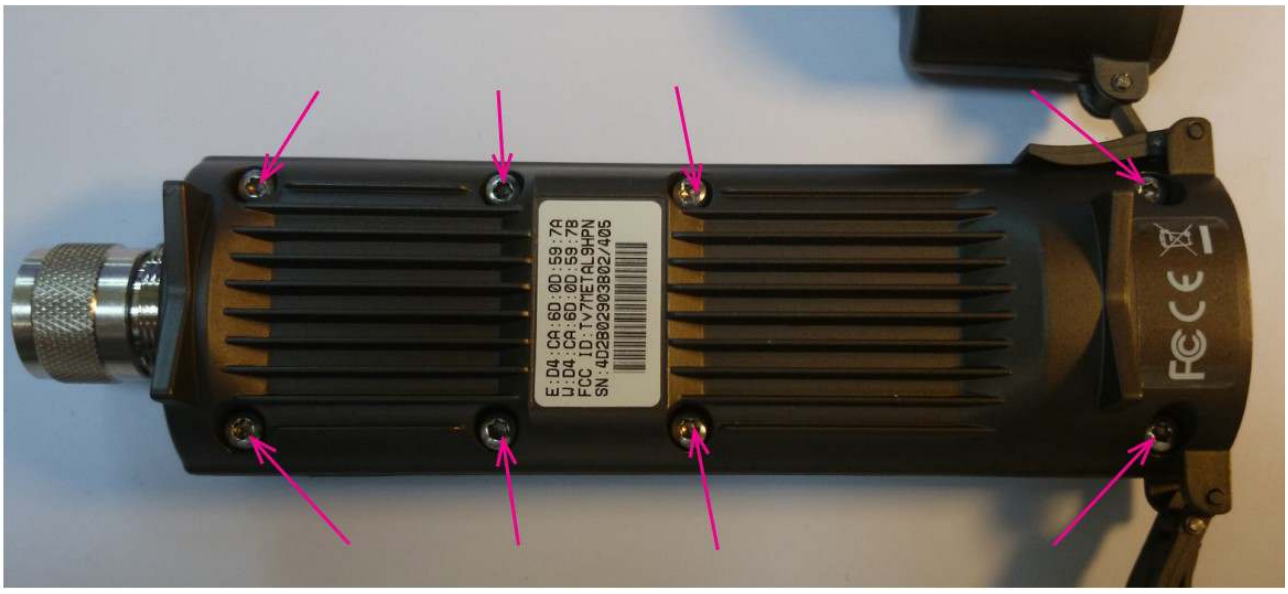
Picture 242

2. step: Removes the internal label



Picture 243

3. step: use TX8 screw driver to loose screws.



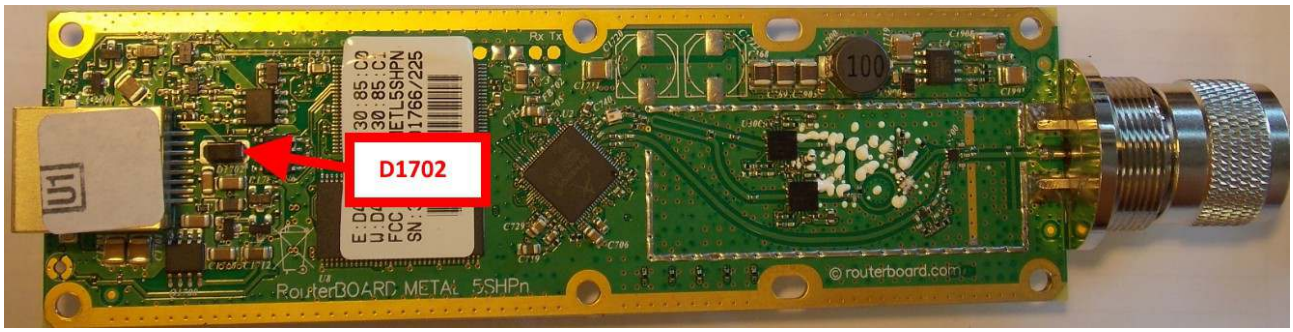
Picture 244

4. Step: take off cover.

Picture 245

Schottky diode measuring with multimeter in diode mode

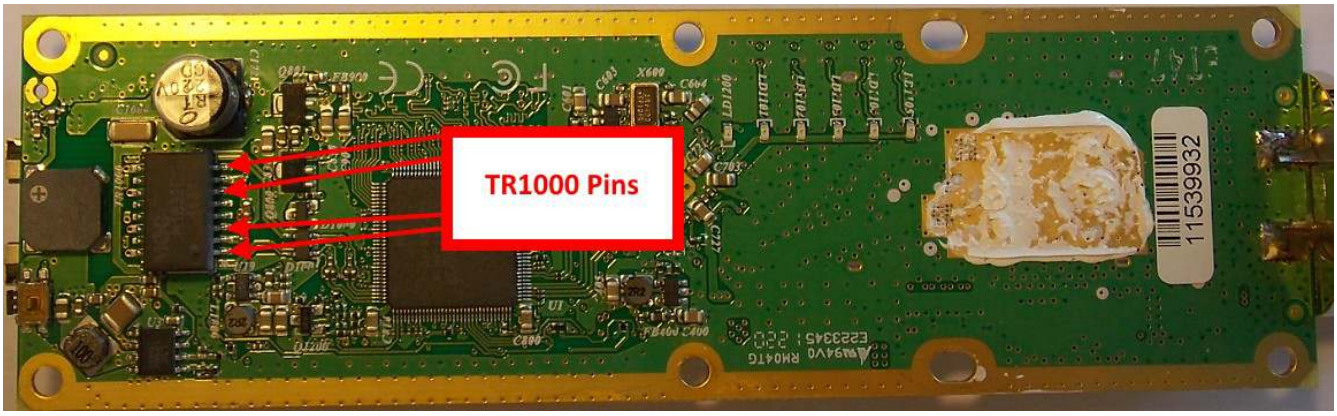
Schottky diode reference numbers are D1702;
Schottky diode quality measurement method describe on page 7



Picture 246

Voltage drop between TR1000 pins and Ground.

Check voltage drop between TR1000 Ethernet Transformers on ports Ether1 pins and Ground. Ether Pins are marked with red arrows. It should be in the range from 0,32V to 0,438V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked TR1000 Transformers pins.



Picture 247

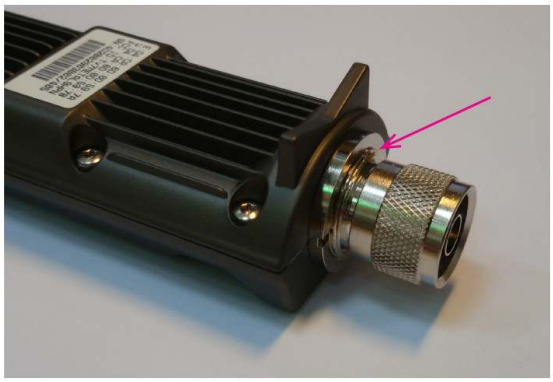
Metal 2SHPn series RouterBoards

Metal 2SHPn

Picture 248

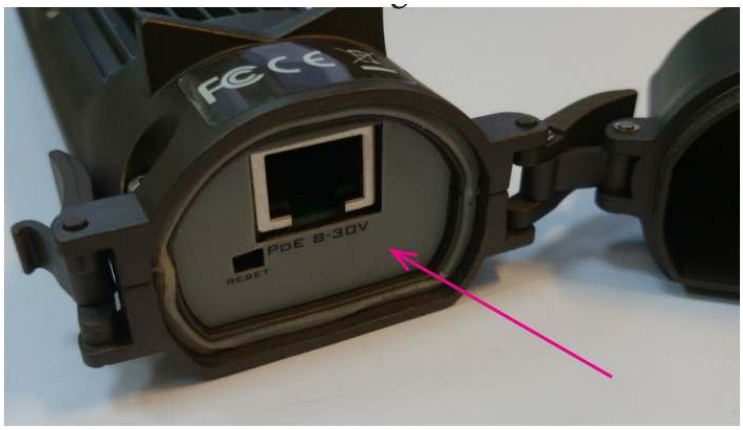
Disassembling information

1. step: use screw driver to loose N-Male nut



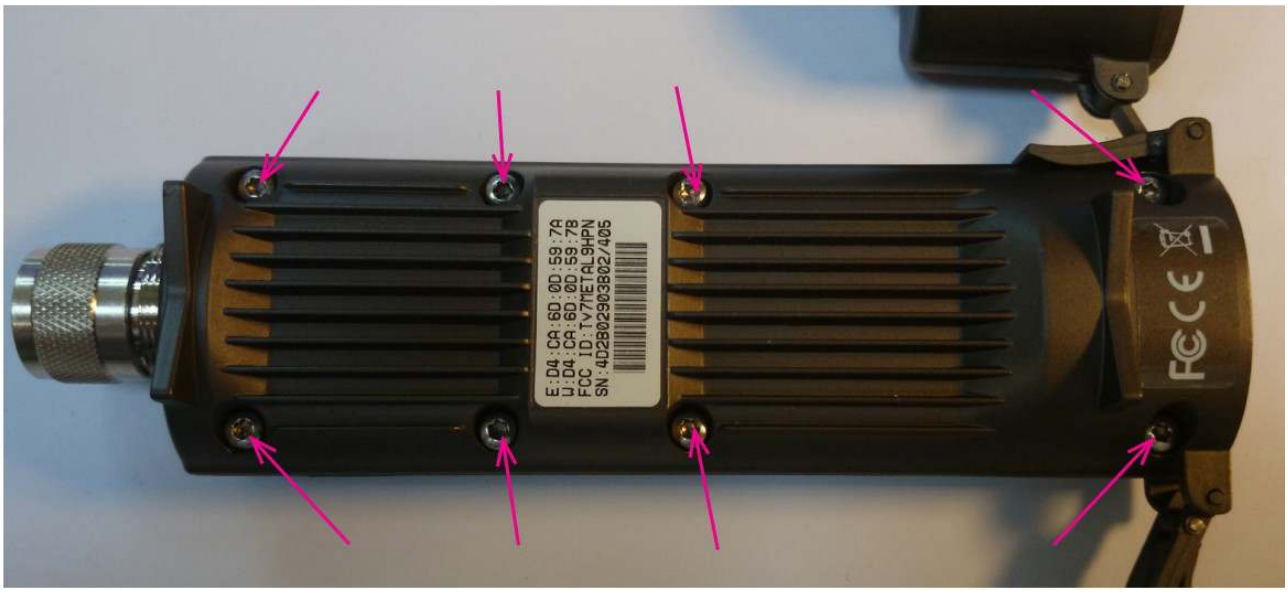
Picture 249

2. step: Removes the internal label



Picture 250

3. step: use TX8 screw driver to loose screws.



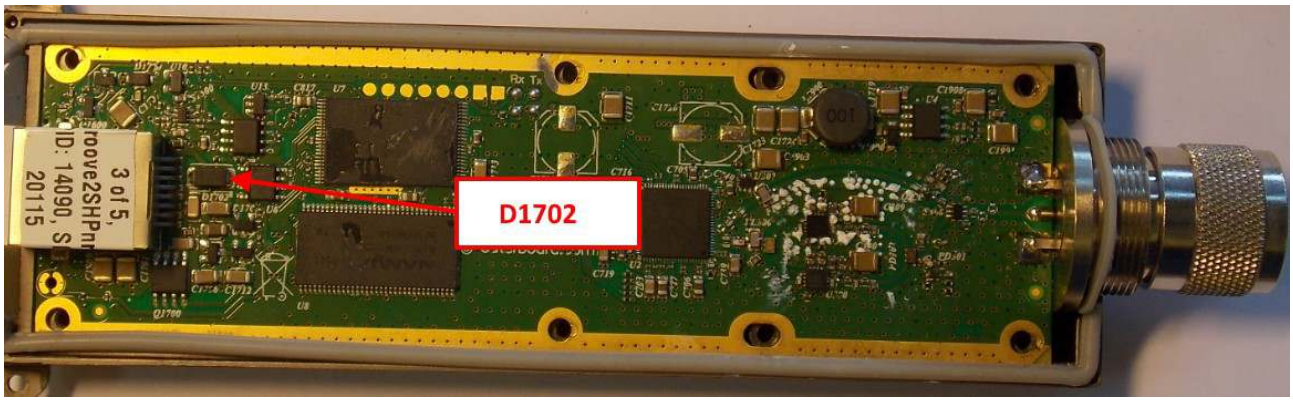
Picture 251

4. Step: take off cover.

Picture 252

Schottky diode measuring with multimeter in diode mode

Schottky diode reference numbers are D1702;
Schottky diode quality measurement method describe on page 7



Picture 253

Voltage drop between TR1000 pins and Ground.

Check voltage drop between TR1000 Ethernet Transformers on ports Ether1 pins and Ground. Ether Pins are marked with red arrows. It should be in the range from 0,32V to 0,438V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked TR1000 Transformers pins.

Picture 254

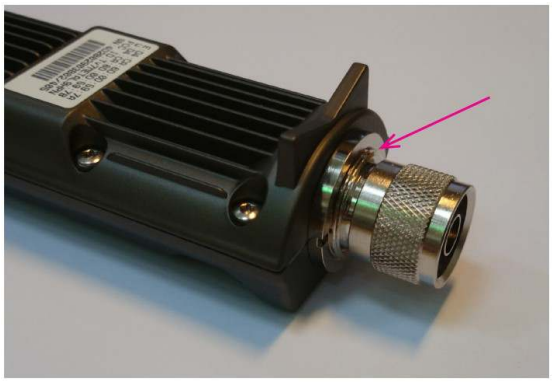
Metal 9HPn series RouterBoards

Metal 9HPn

Picture 256

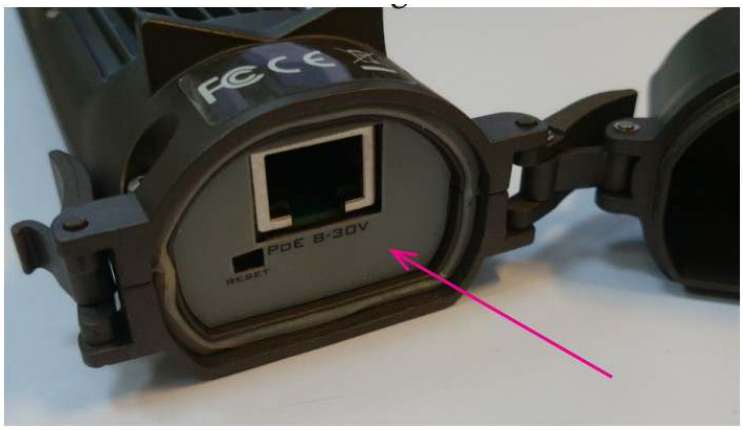
Disassembling information

1. step: use screw driver to loose N-Male nut



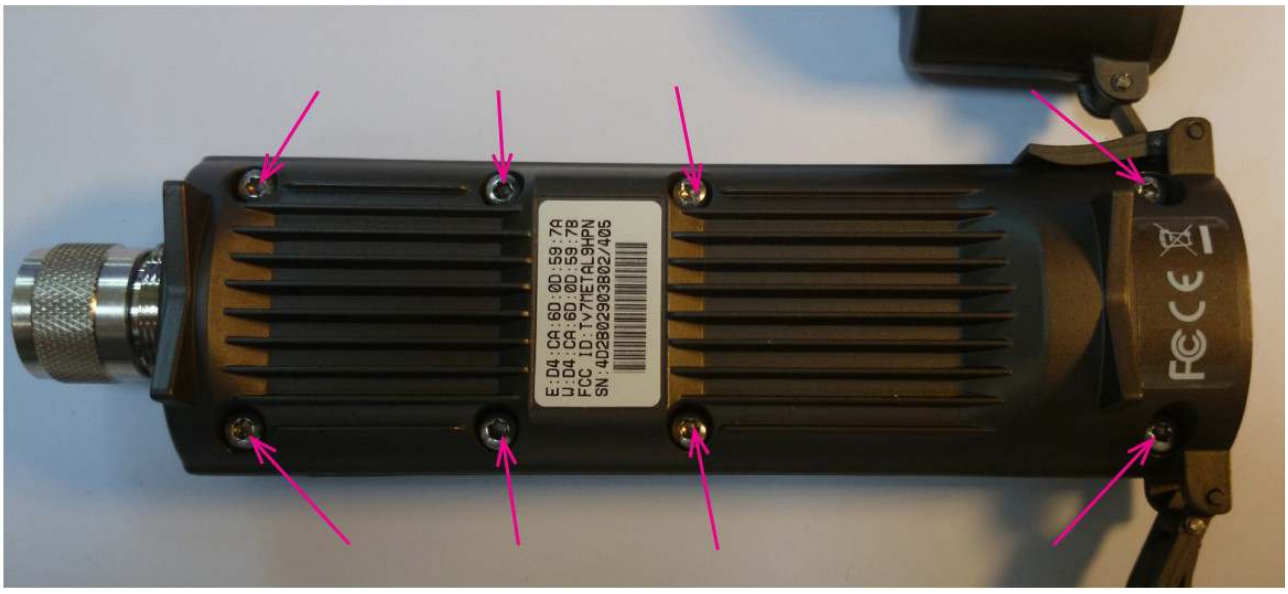
Picture 257

2. step: Removes the internal label



Picture 258

3. step: use TX8 screw driver to loose screws.



Picture 259

4. Step: take off cover.

Picture 260

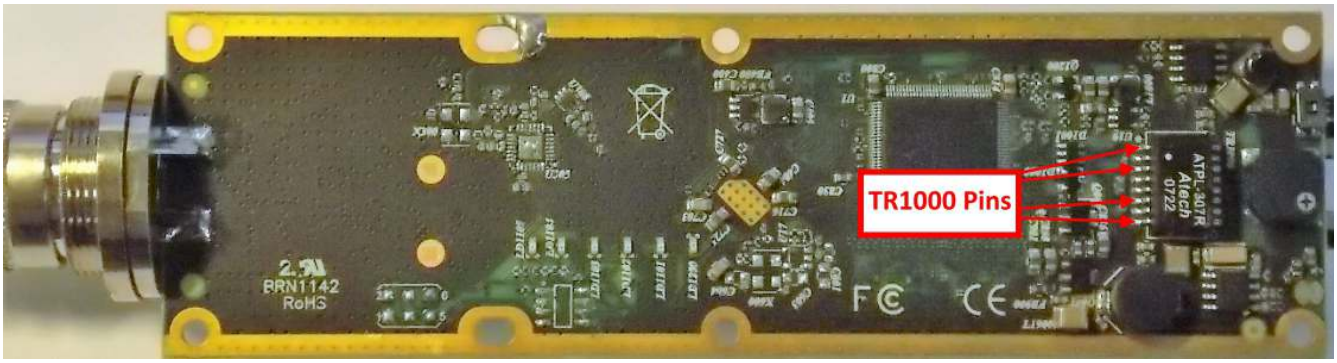
Schottky diode measuring with multimeter in diode mode

Schottky diode reference numbers are D1702;
Schottky diode quality measurement method describe on page 7

Picture 261

Voltage drop between TR1000 pins and Ground.

Check voltage drop between TR1000 Ethernet Transformers on ports Ether1 pins and Ground. Ether Pins are marked with red arrows. It should be in the range from 0,32V to 0,438V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked TR1000 Transformer pins.



Picture 262

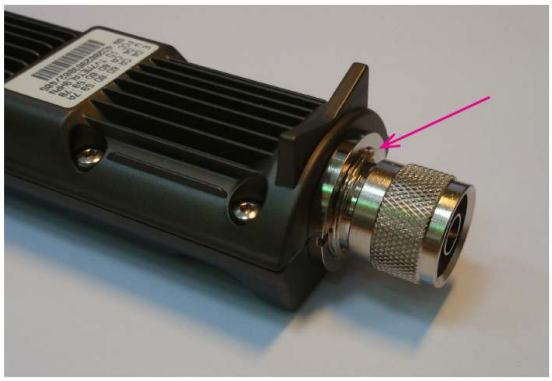
Metal 52 ac series RouterBoards

Metal 52 ac

Picture 256

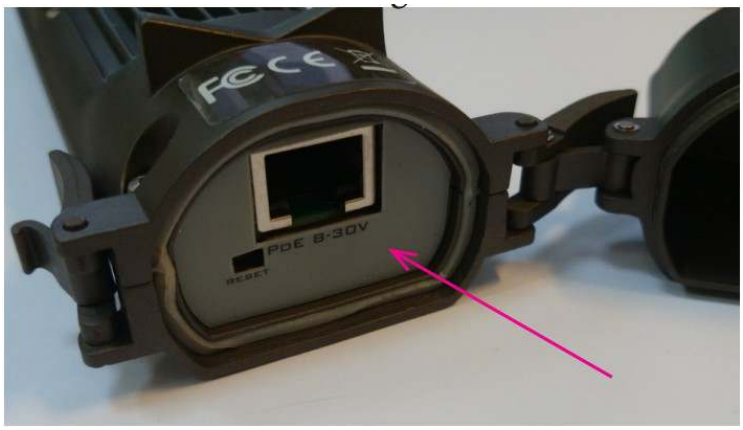
Disassembling information

1. step: use screw driver to loose N-Male nut



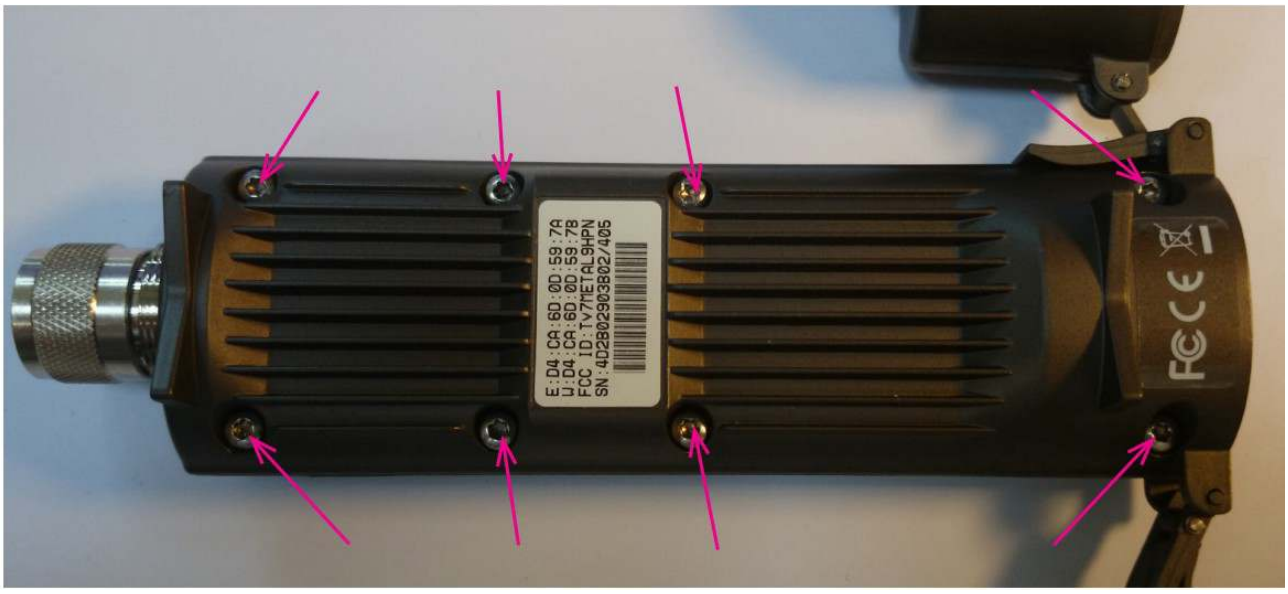
Picture 257

2. step: Removes the internal label



Picture 258

3. step: use TX8 screw driver to loose screws.



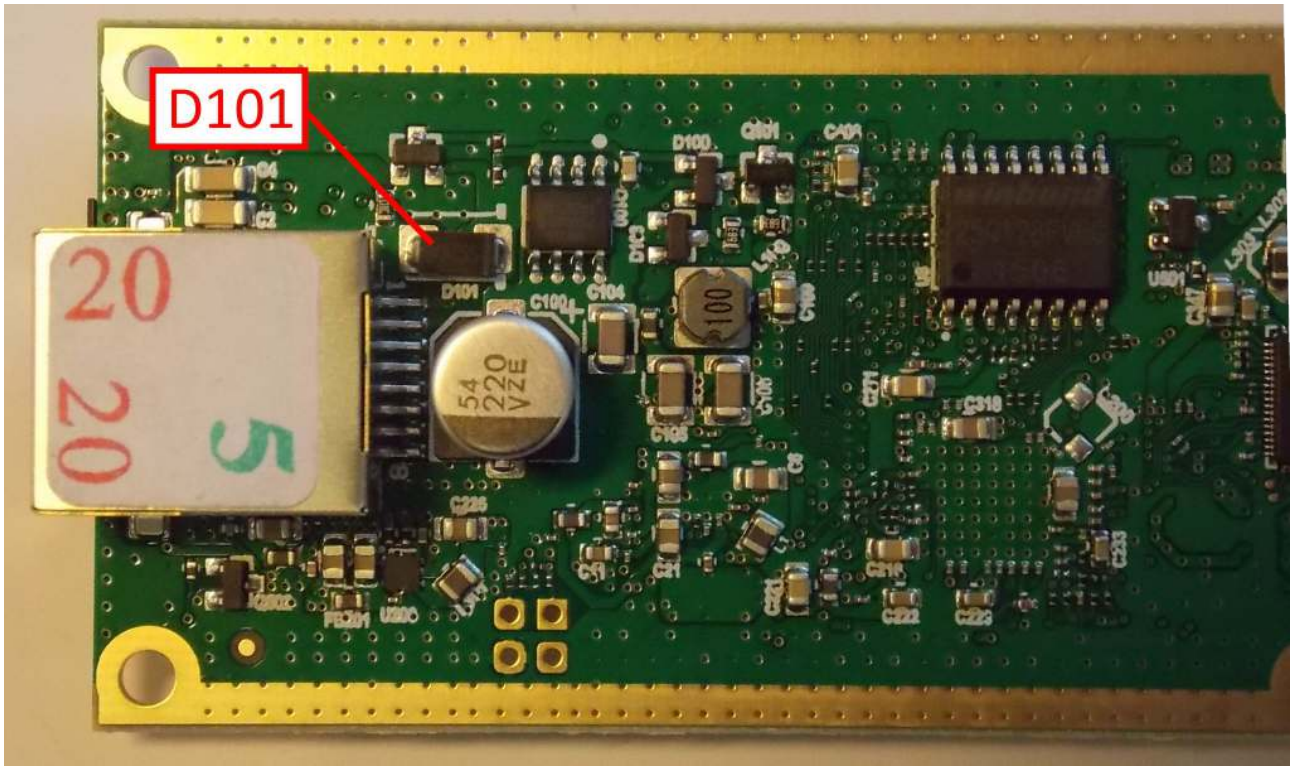
Picture 259

4. Step: take off cover.

Picture 260

Schottky diode measuring with multimeter in diode mode

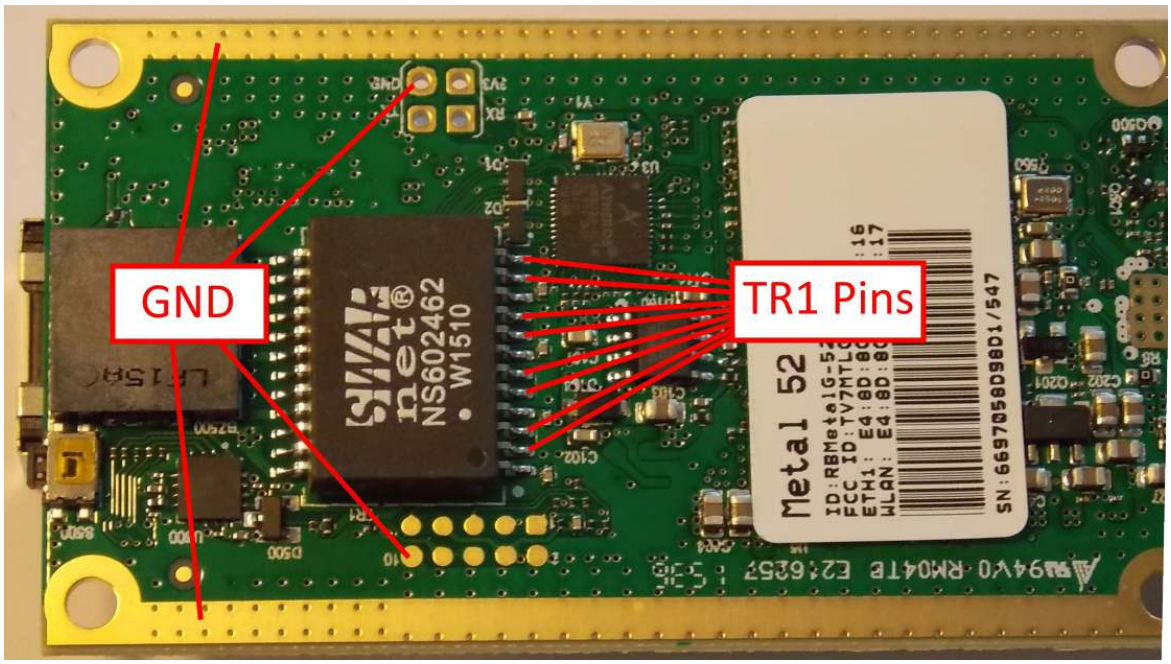
Schottky diode reference numbers are D101;
Schottky diode quality measurement method describe on page 7



Picture 261

Voltage drop between TR1 pins and Ground.

Check voltage drop between TR1 Ethernet Transformers on ports Ether1 pins and Ground. Ether Pins are marked with red arrows. It should be in the range from 0,32V to 0,438V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked TR1000 Transformer pins.



Picture 262

OmniTIK UPA-5HnD series RouterBoards

OmniTIK U-5HnD

OmniTIK UPA-5HnD

Picture 263

OmniTIK UPA-5HnD disassembling information

1. step

Remove the screw stickers and unscrew the case base from the board holder with torque screwdriver T8

Picture 264

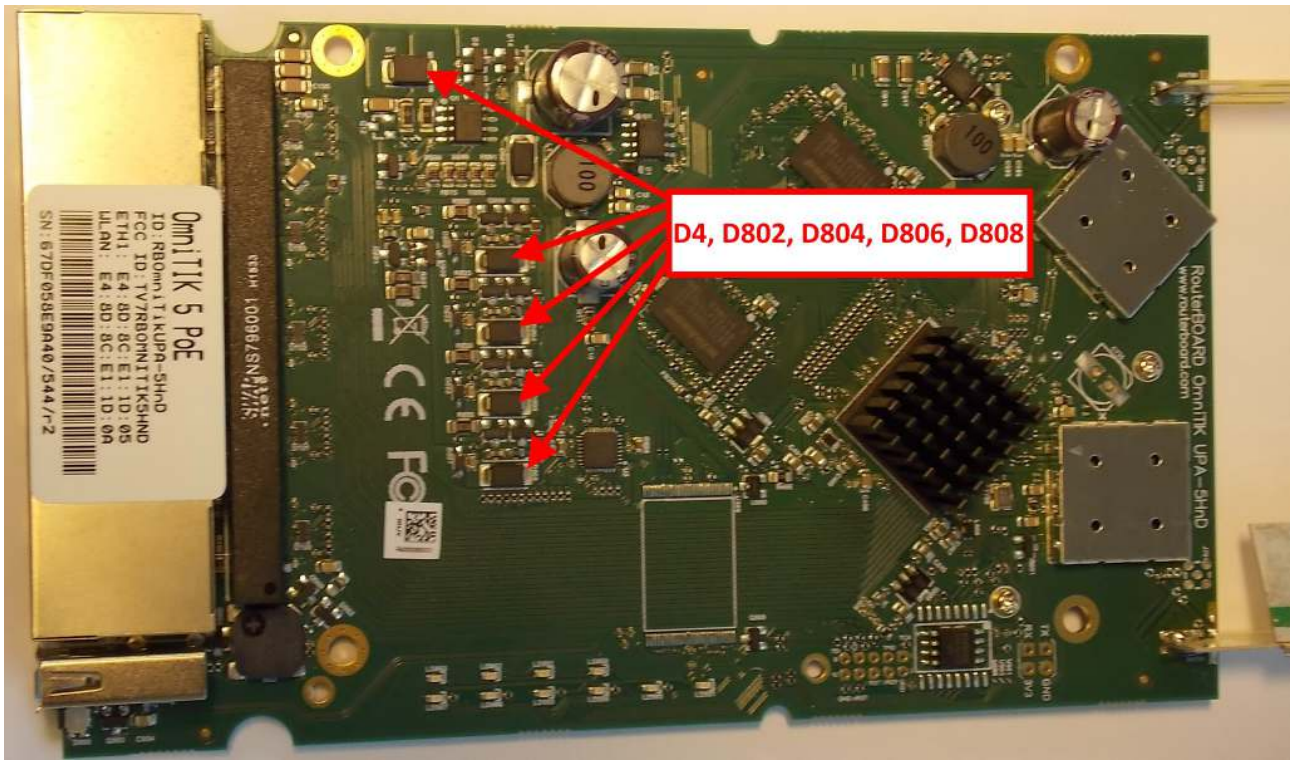
2. step

Remove the case base from the board holder

Picture 265

Schottky diode measuring with multimeter in diode mode

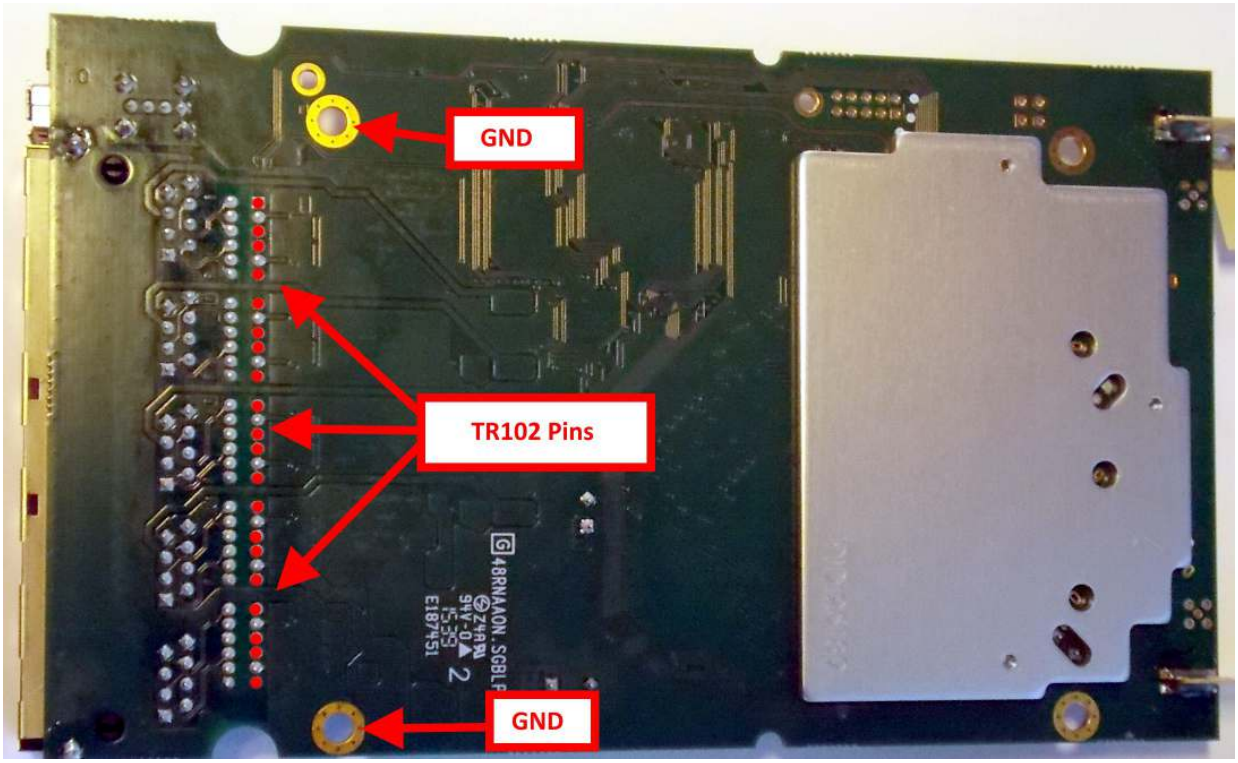
Schottky diode reference numbers are D4, D802, D804, D806, D808. Schottky diode quality measurement method describe on page 7



Picture 266

Voltage drop between TR102 pins and Ground.

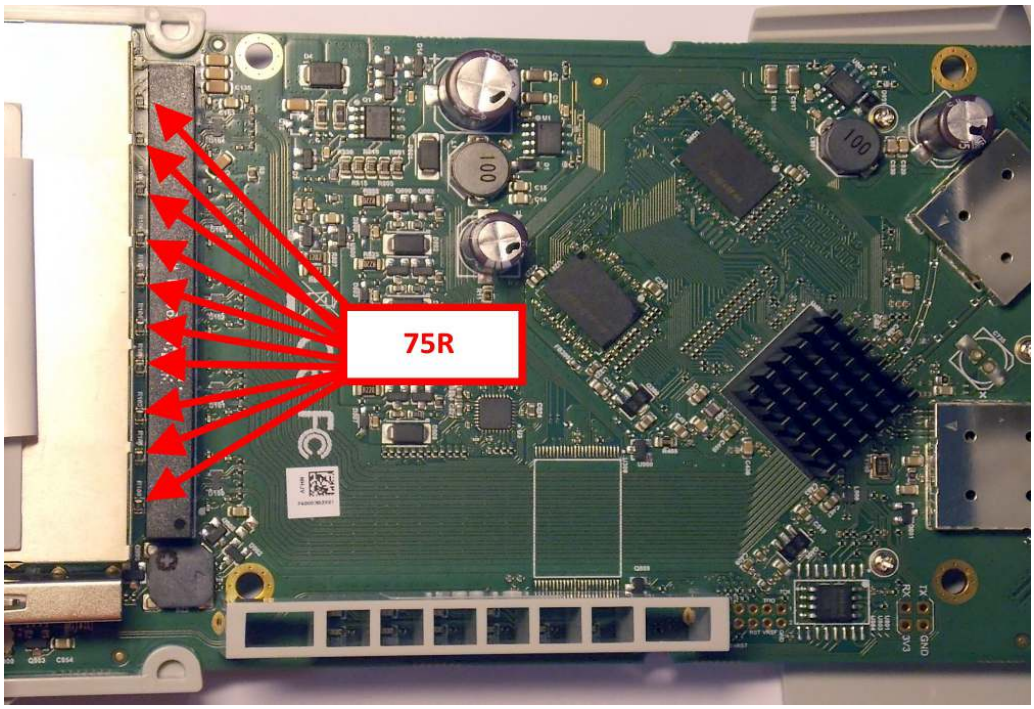
Check voltage drop between TR102 Transformers pins and Ground. Ether Pins are marked with red. It should be in the range from 0,32V to 0,589V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked TR102 Transformer pins.



Picture 267

75R Termination resistors resistance.

Resistor resistance, marked with red arrow, should be 75 Ohm +/- 1%



Picture 268

SXTG-2HnD series RouterBoards

SXT 2 series:

SXT 2

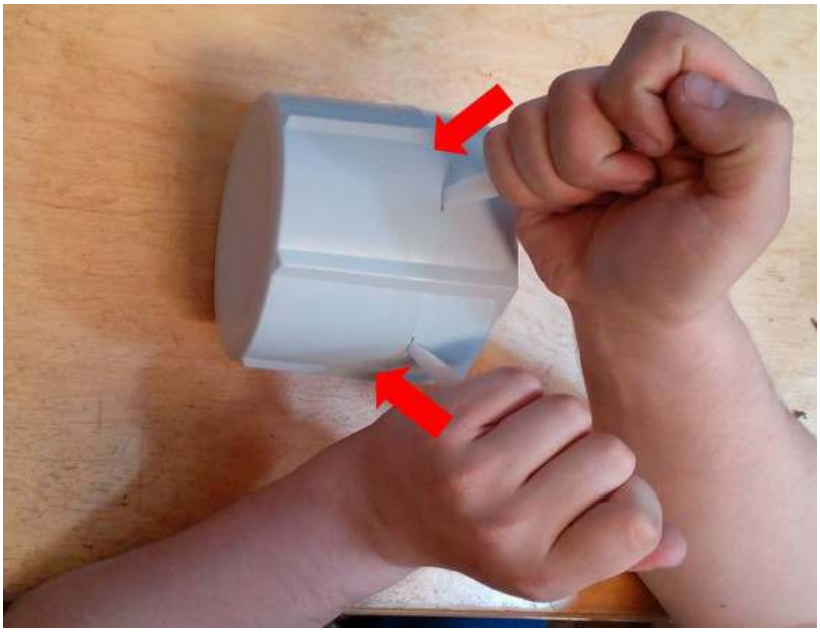
Picture 269

Disassembling information

SXT series disassembling

1. step

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



Picture 270

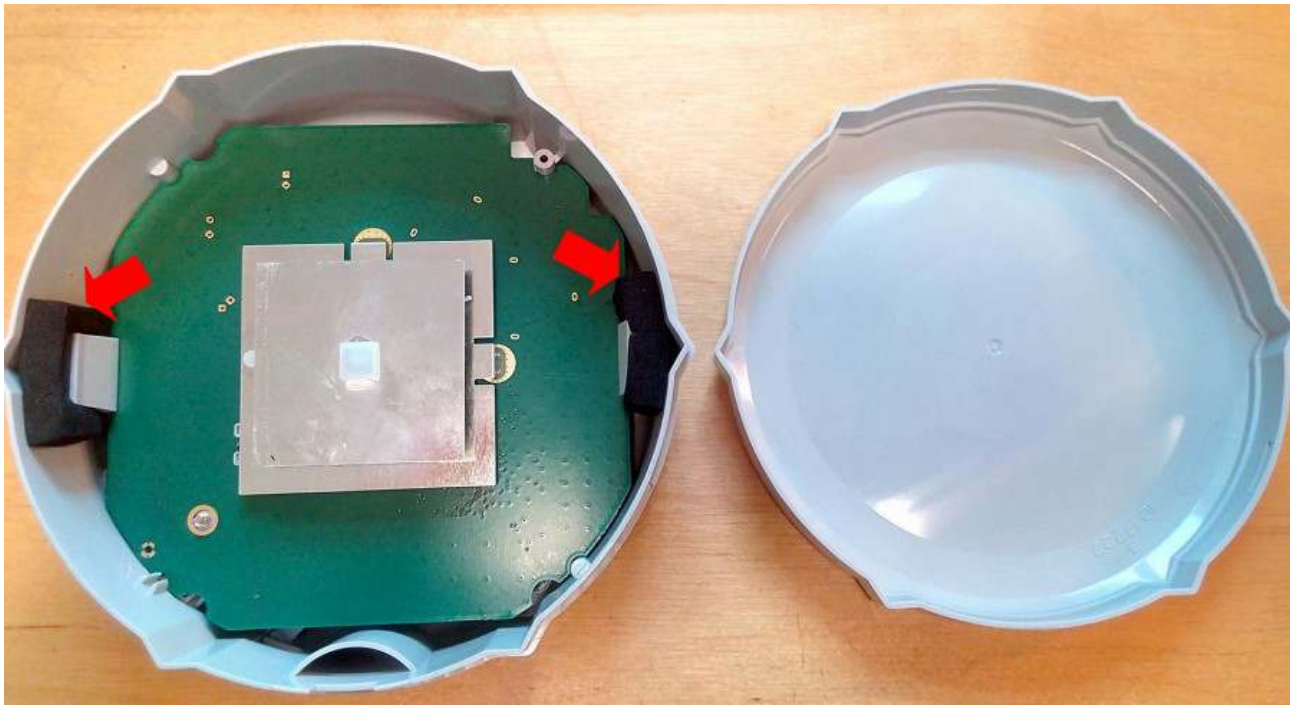
2. step

Rotate screwdriver and pull both case parts.

Picture 271

3. step

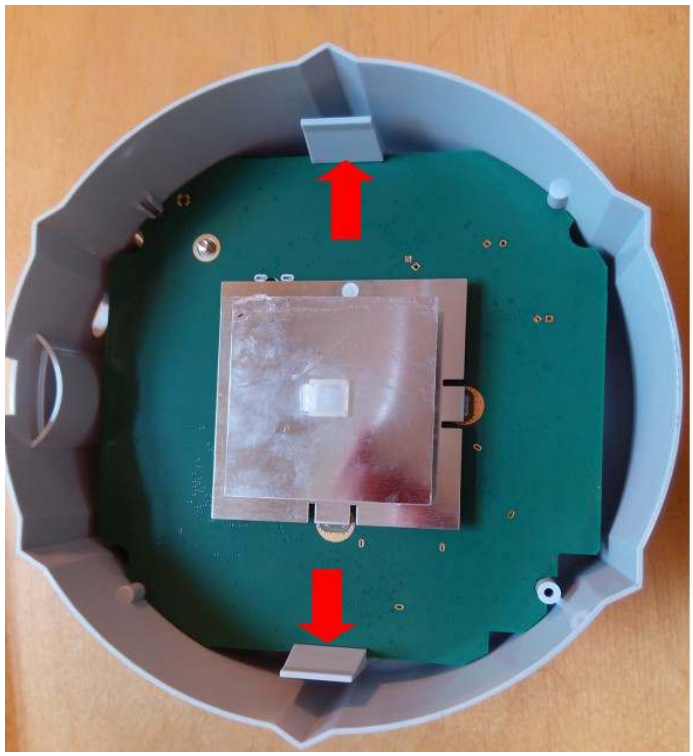
Remove rubber bushing



Picture 272

4. step

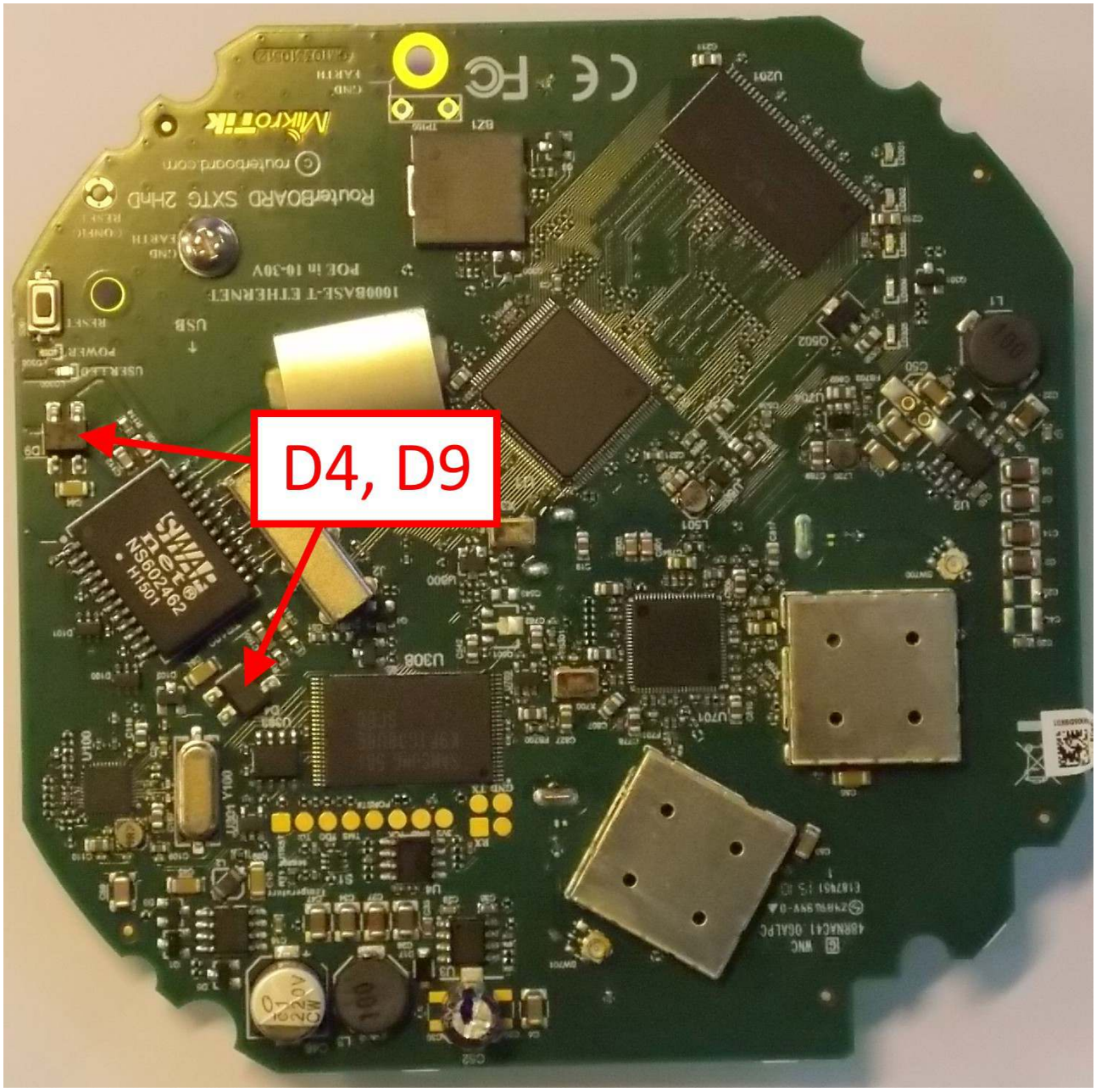
Push back Plastic PCB holders and take out the board.



Picture 273

Schottky diode measuring with multimeter in diode mode

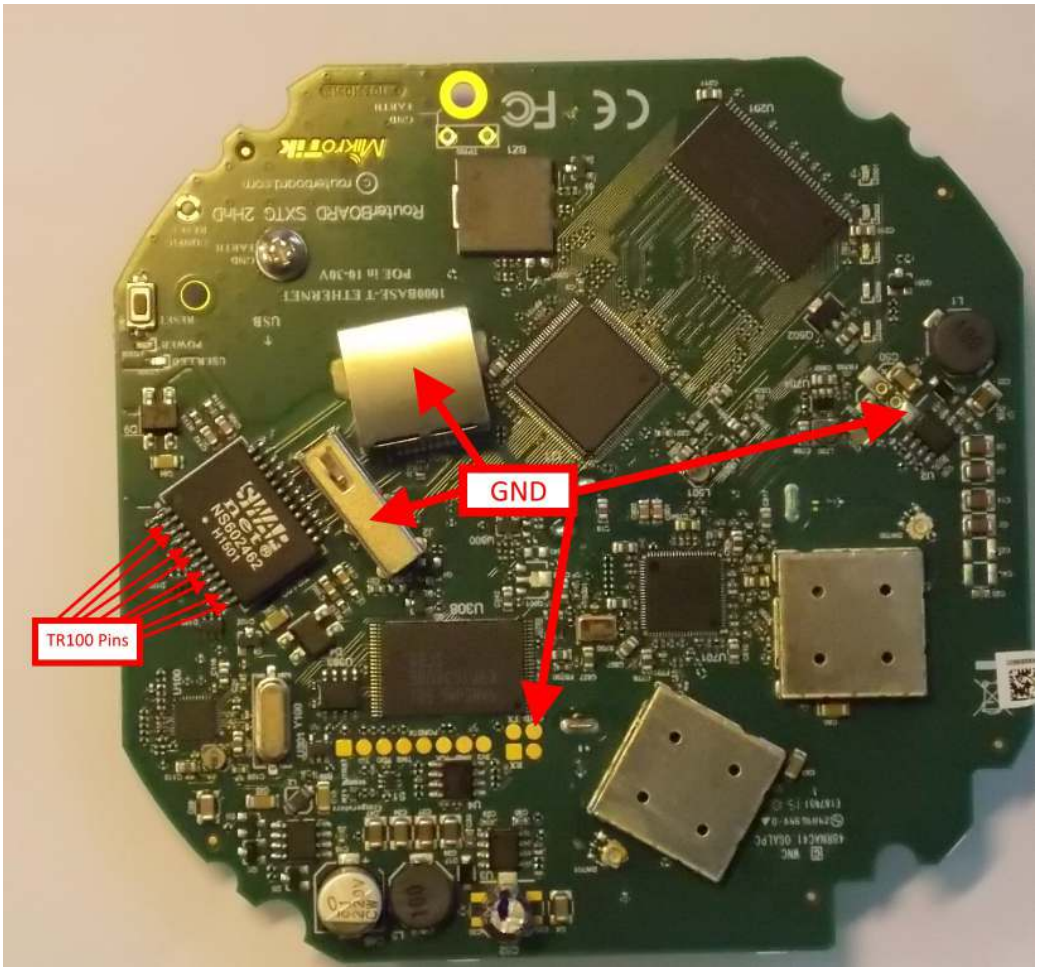
Diode bridges reference numbers are D4, D6.
Schottky diode quality measurement method describe on page 7



Picture 274

Voltage drop between TR100 pins and Ground.

Check voltage drop between TR100 Ethernet Transformers pins and Ground. Ether Pins are marked with red arrows. It should be in the range from 0,32V to 0,48V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked TR100 Transformer pins.



Picture 275

SXTG-5HPnD series RouterBoards

RBSXTG-5HPnD series:

SXT HG5

Picture 276

SXT SA5

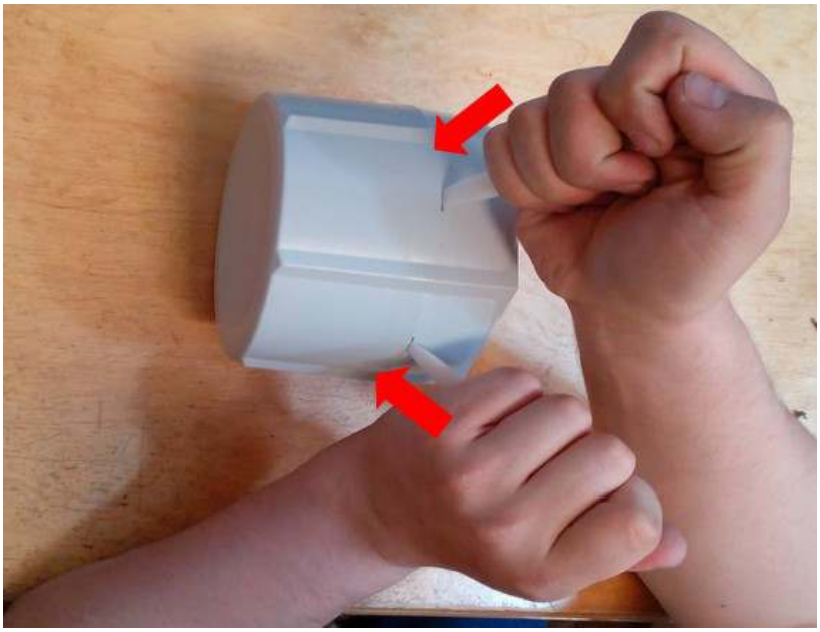
Picture 277

Disassembling information

SXT series disassembling

1. step

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



Picture 278

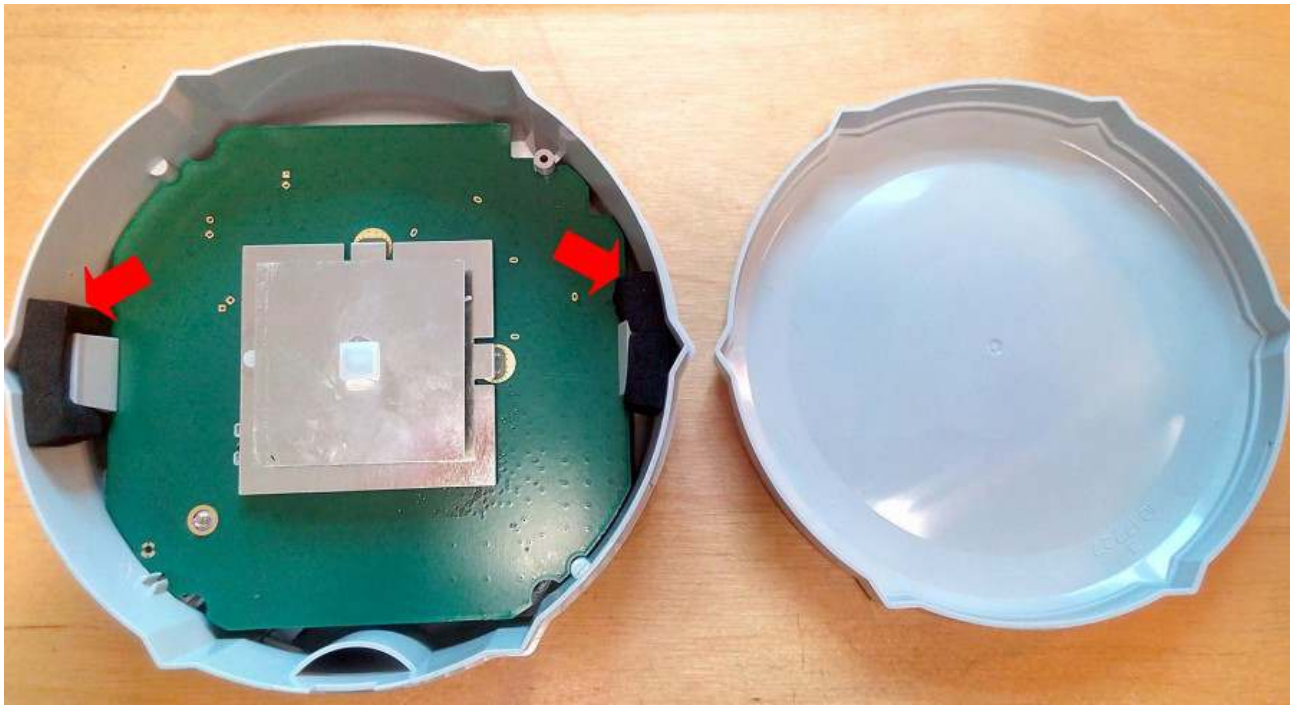
2. step

Rotate screwdriver and pull both case parts.

Picture 279

3. step

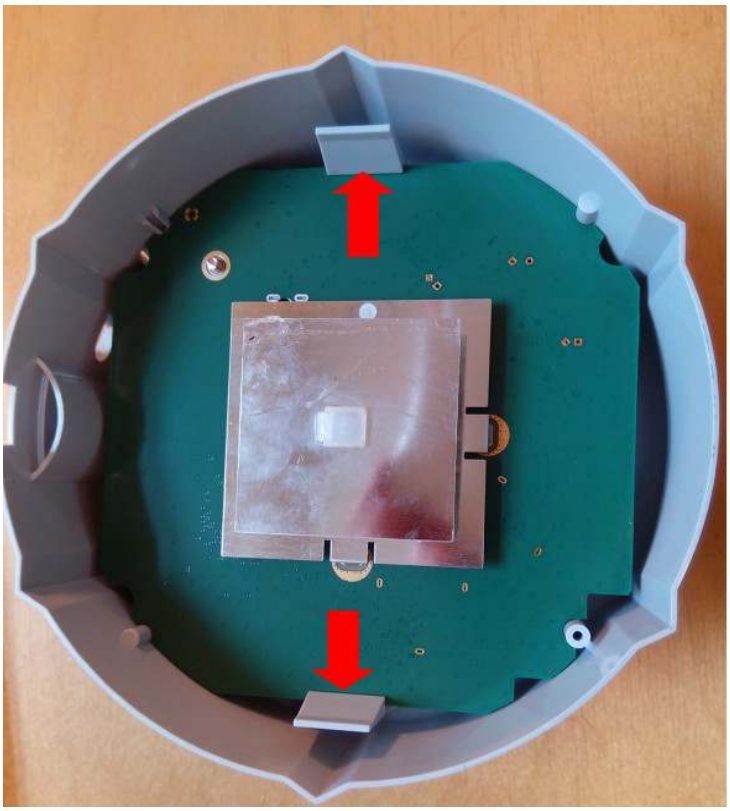
Remove rubber bushing



Picture 280

4. step

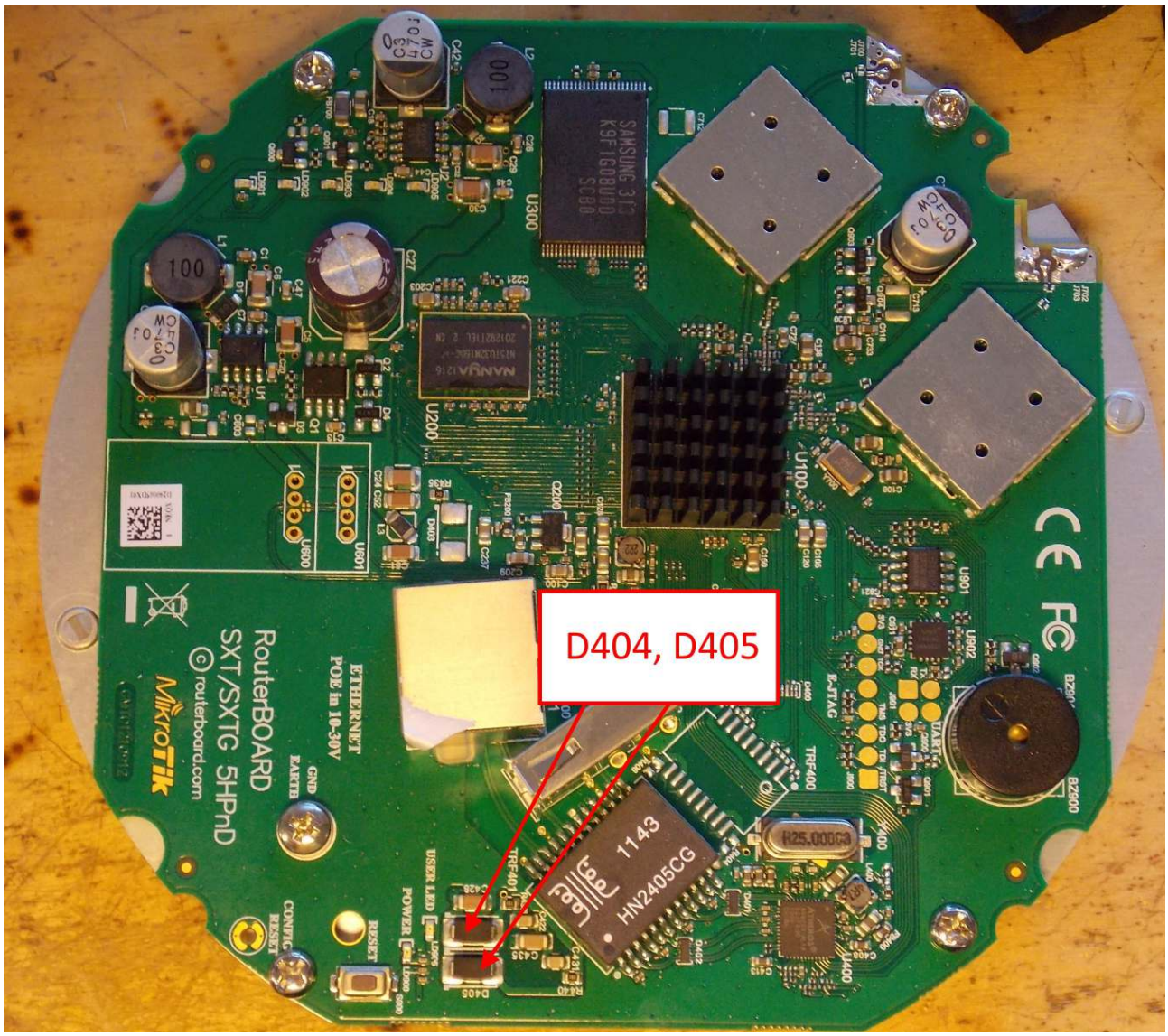
Push back Plastic PCB holders and take out the board.



Picture 281

Schottky diode measuring with multimeter in diode mode

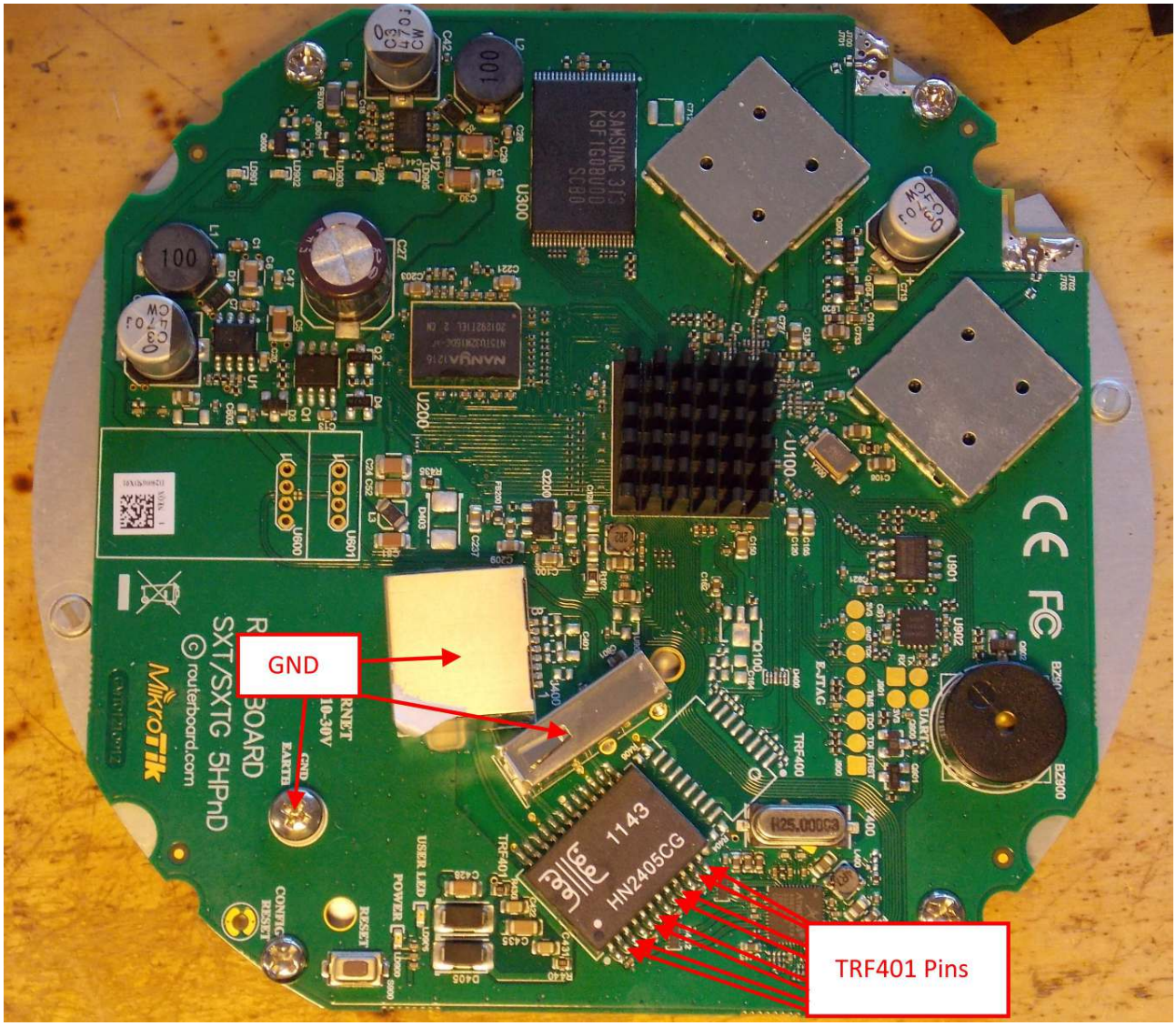
Schottky diode reference numbers are D404, D405 . Schottky diode quality measurement method describe on page 7



Picture 282

Voltage drop between TRF401 pins and Ground.

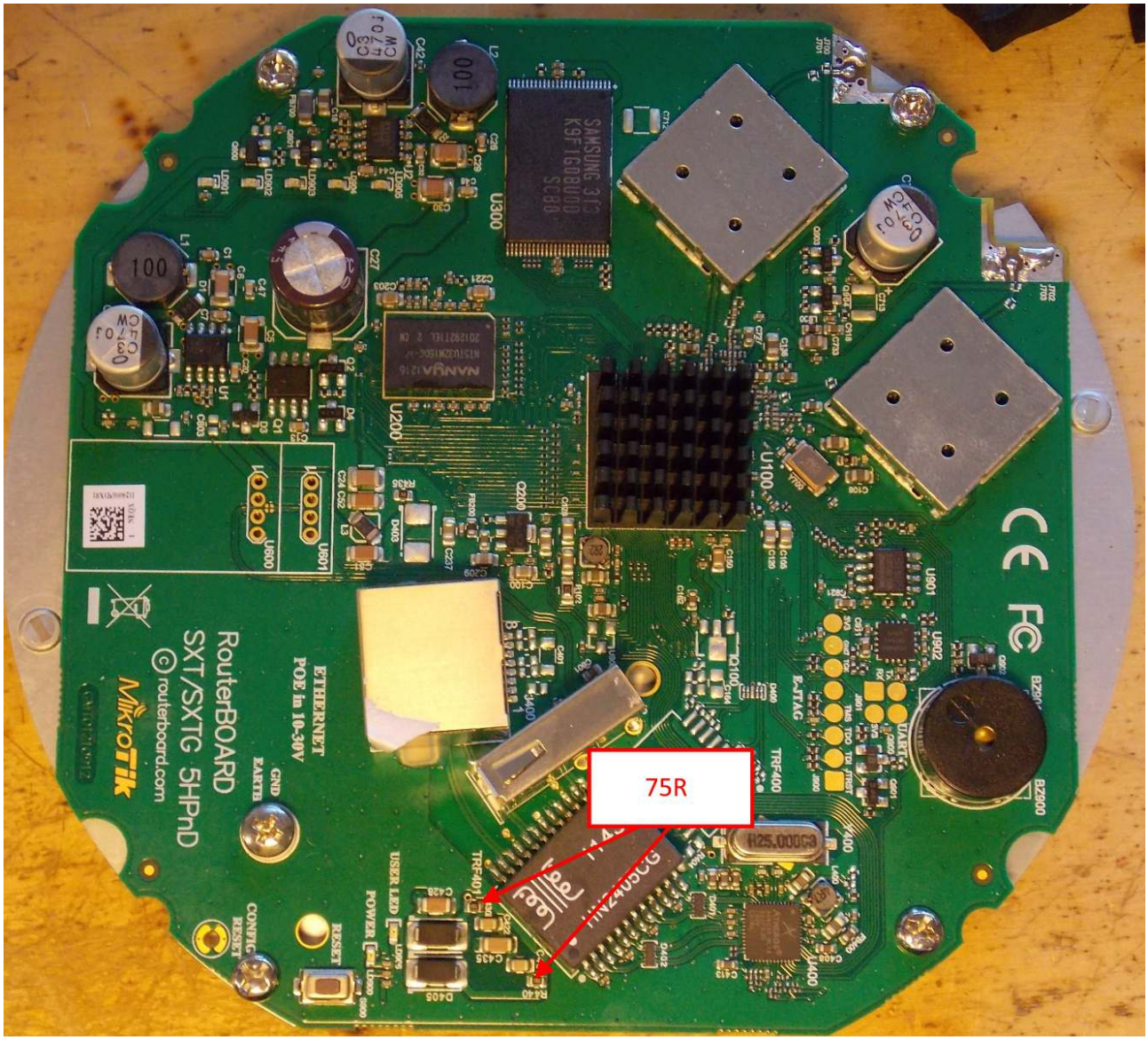
Check voltage drop between TRF401 Ethernet Transformers pins and Ground. Ether Pins are marked with red arrows. It should be in the range from 0,32V to 0,48V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked TRF401 Transformer pins.



Picture 283

75R Termination resistors resistance.

Resistor resistance, marked with red arrow, should be 75 Ohm +/- 1%



Picture 284

SXTG-5HPacD series RouterBoards

RBSXTG-5HPacD series:

SXT 5 ac

SXT SA5 ac

Picture 285

SXT HG5 ac

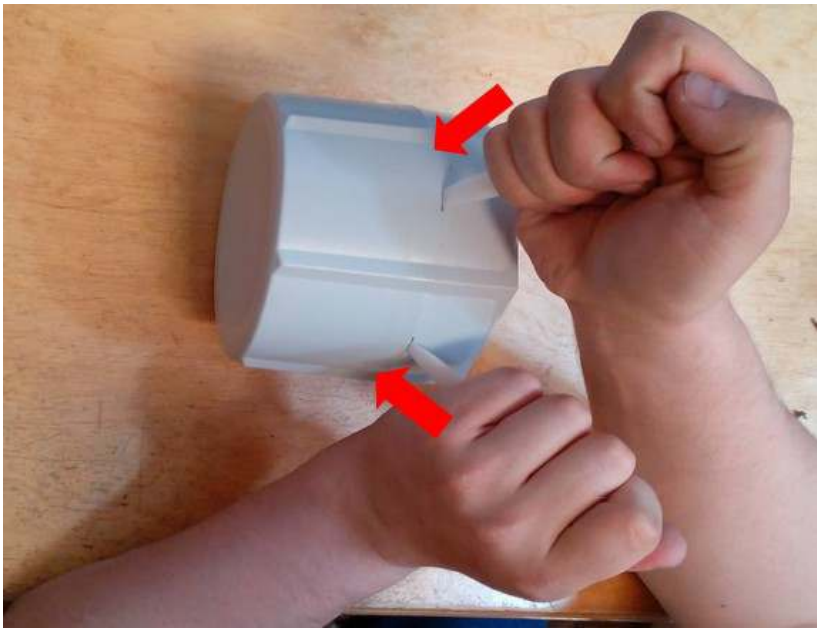
Picture 286

Disassembling information

SXT series disassembling

1. step

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



Picture 287

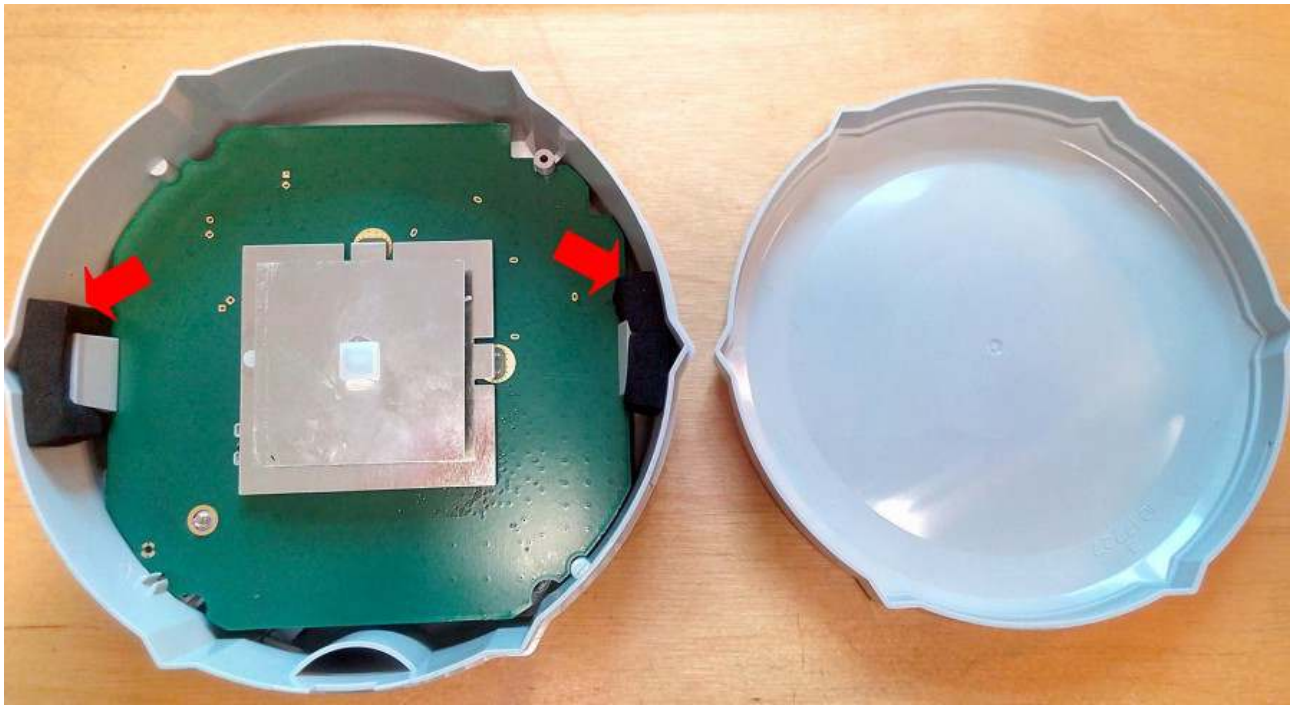
2. step

Rotate screwdriver and pull both case parts.

Picture 288

3. step

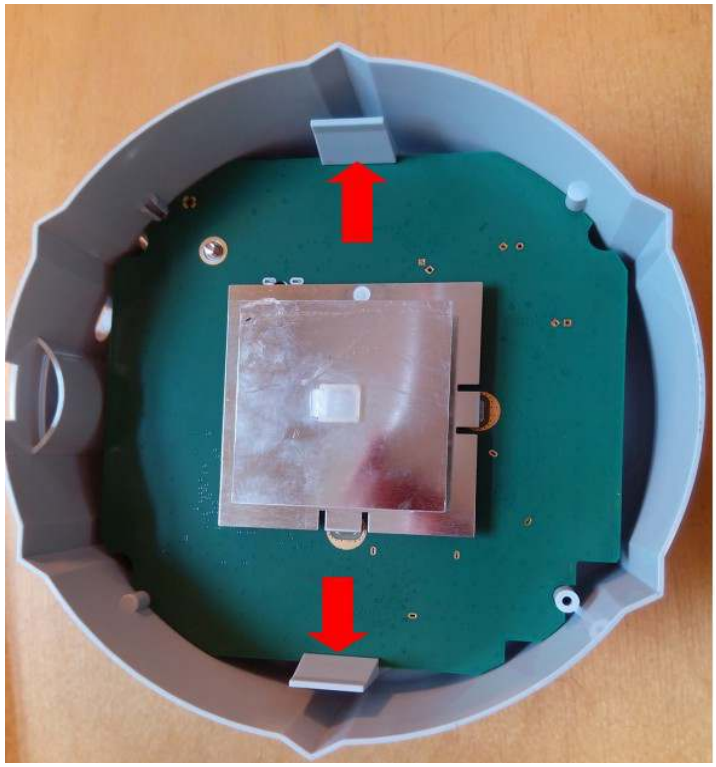
Remove rubber bushing



Picture 289

4. step

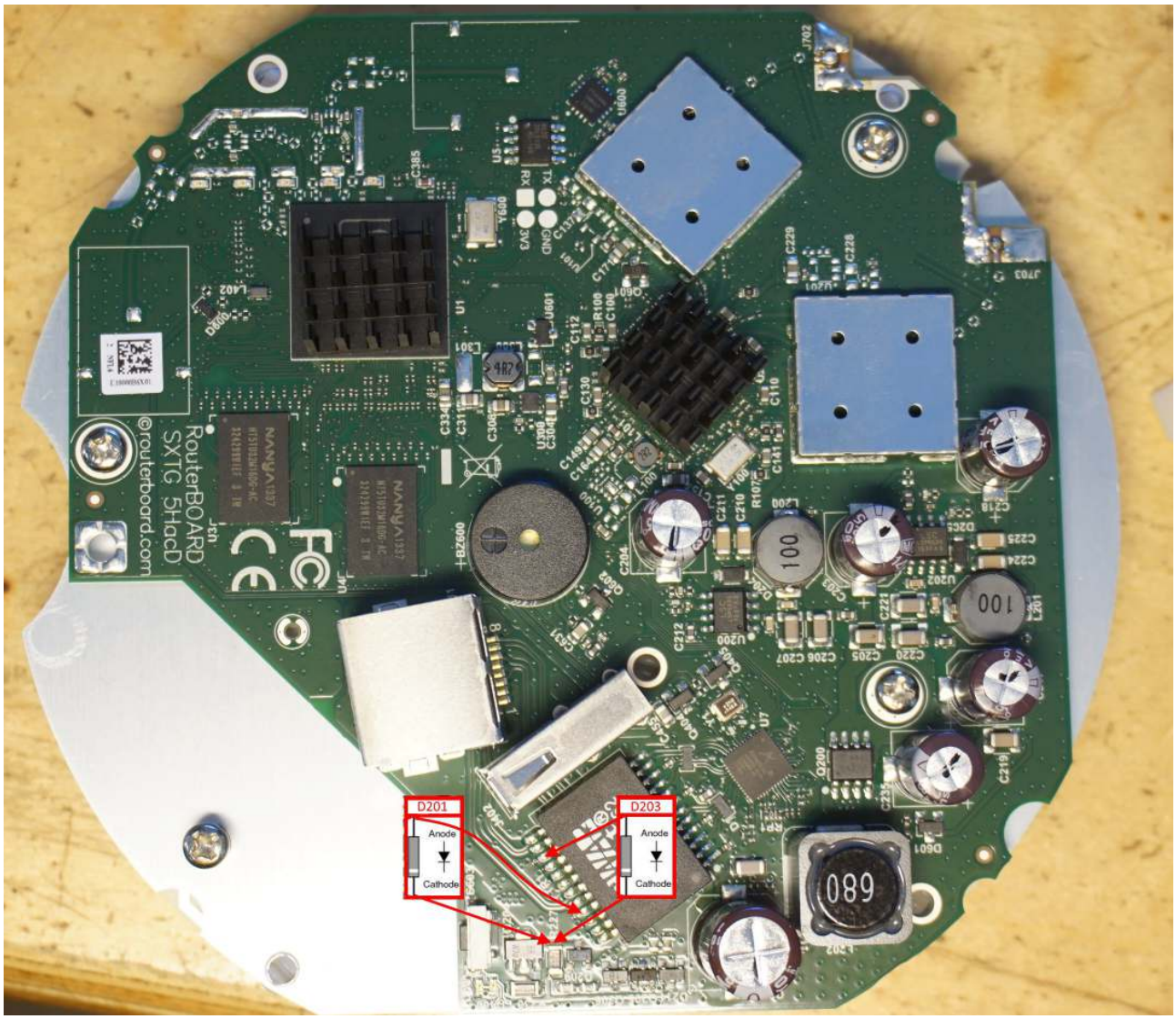
Push back Plastic PCB holders and take out the board.



Picture 290

Schottky diode measuring with multimeter in diode mode

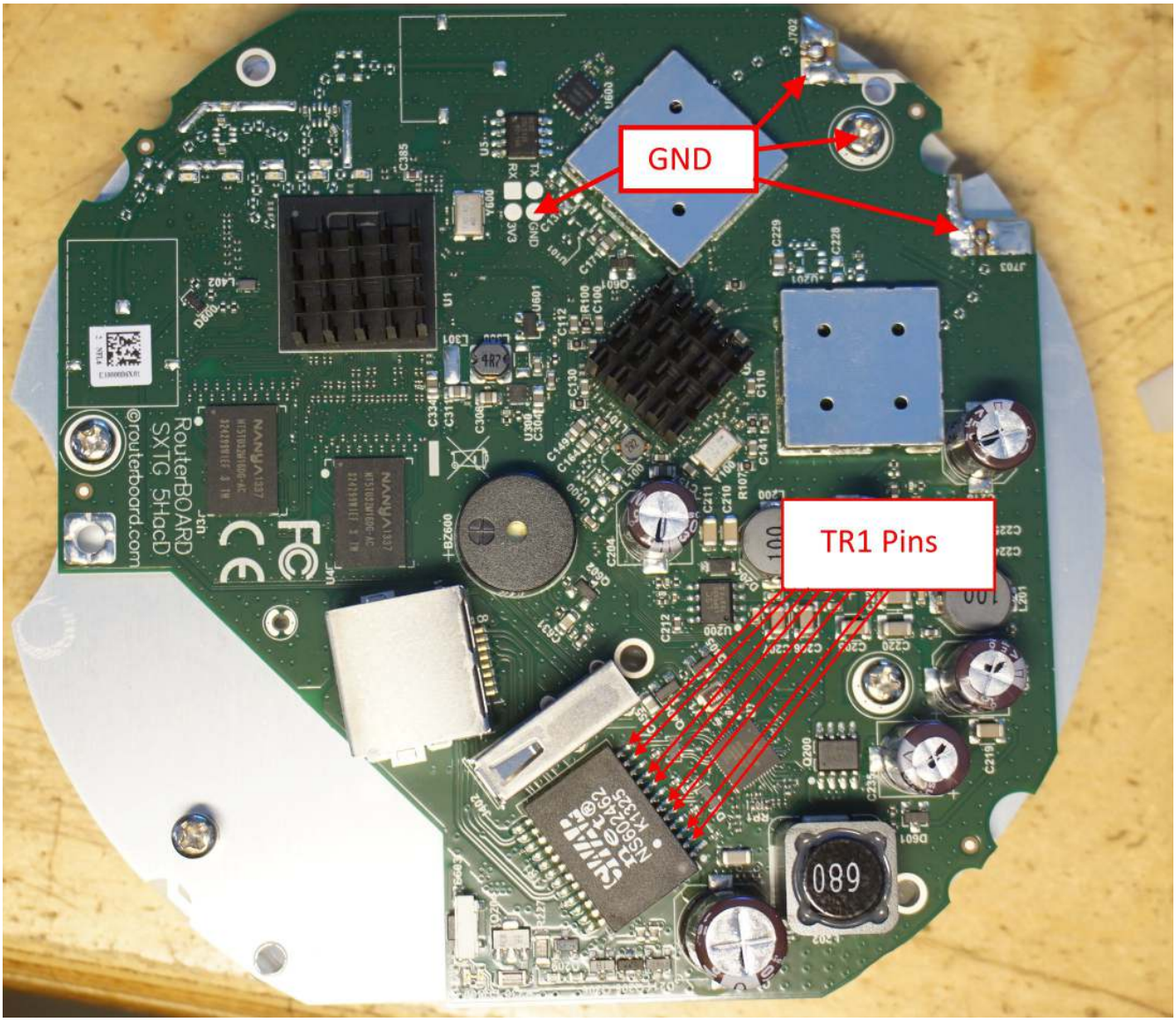
Schottky diode reference numbers are D201, D203 . Schottky diode quality measurement method describe on page 7



Picture 291

Voltage drop between TR1 pins and Ground.

Check voltage drop between TR1 Ethernet Transformers pins and Ground. Ether Pins are marked with red arrows. It should be in the range from 0,32V to 0,48V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked TR1 Transformers pins.



Picture 292

SXTLite2 series RouterBoards

RBSXTLite2 series:

SXT Lite2

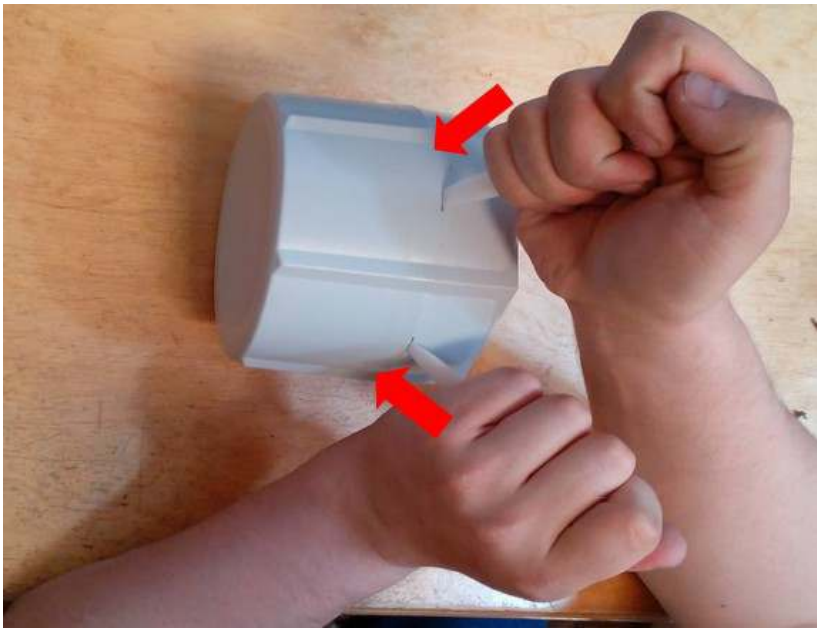
Picture 293

Disassembling information

SXT series disassembling

1. step

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



Picture 294

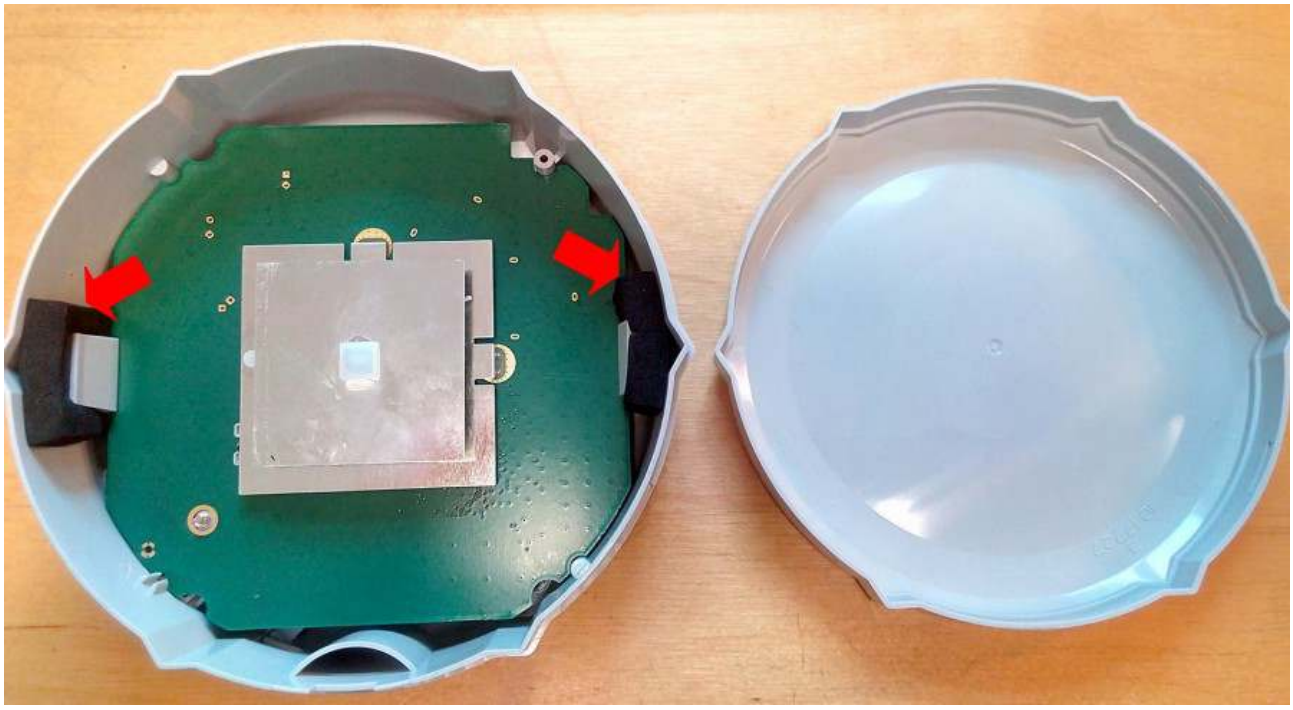
2. step

Rotate screwdriver and pull both case parts.

Picture 295

3. step

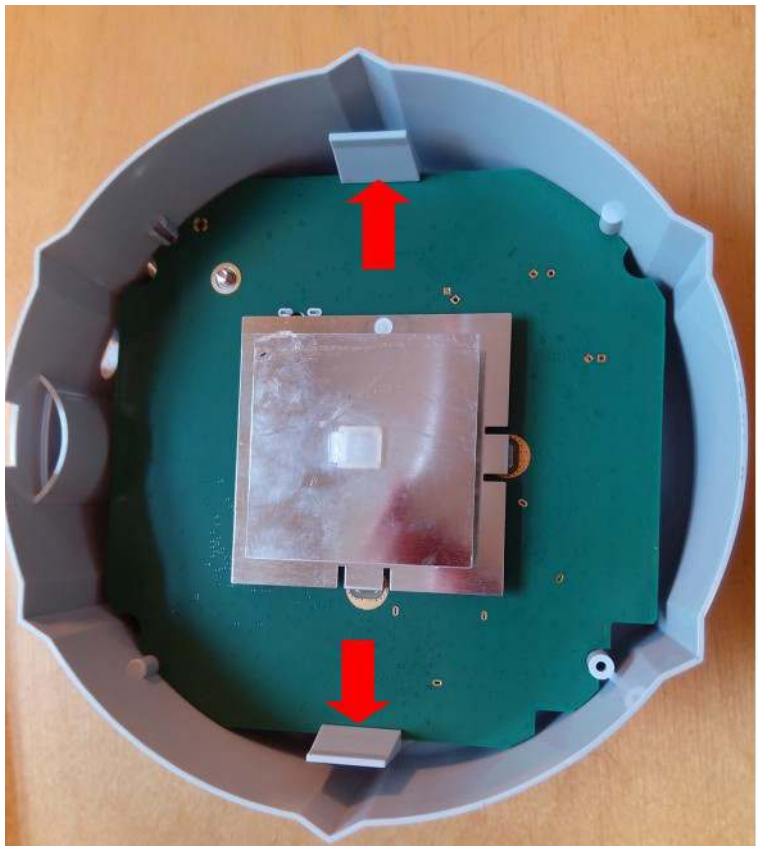
Remove rubber bushing



Picture 296

4. step

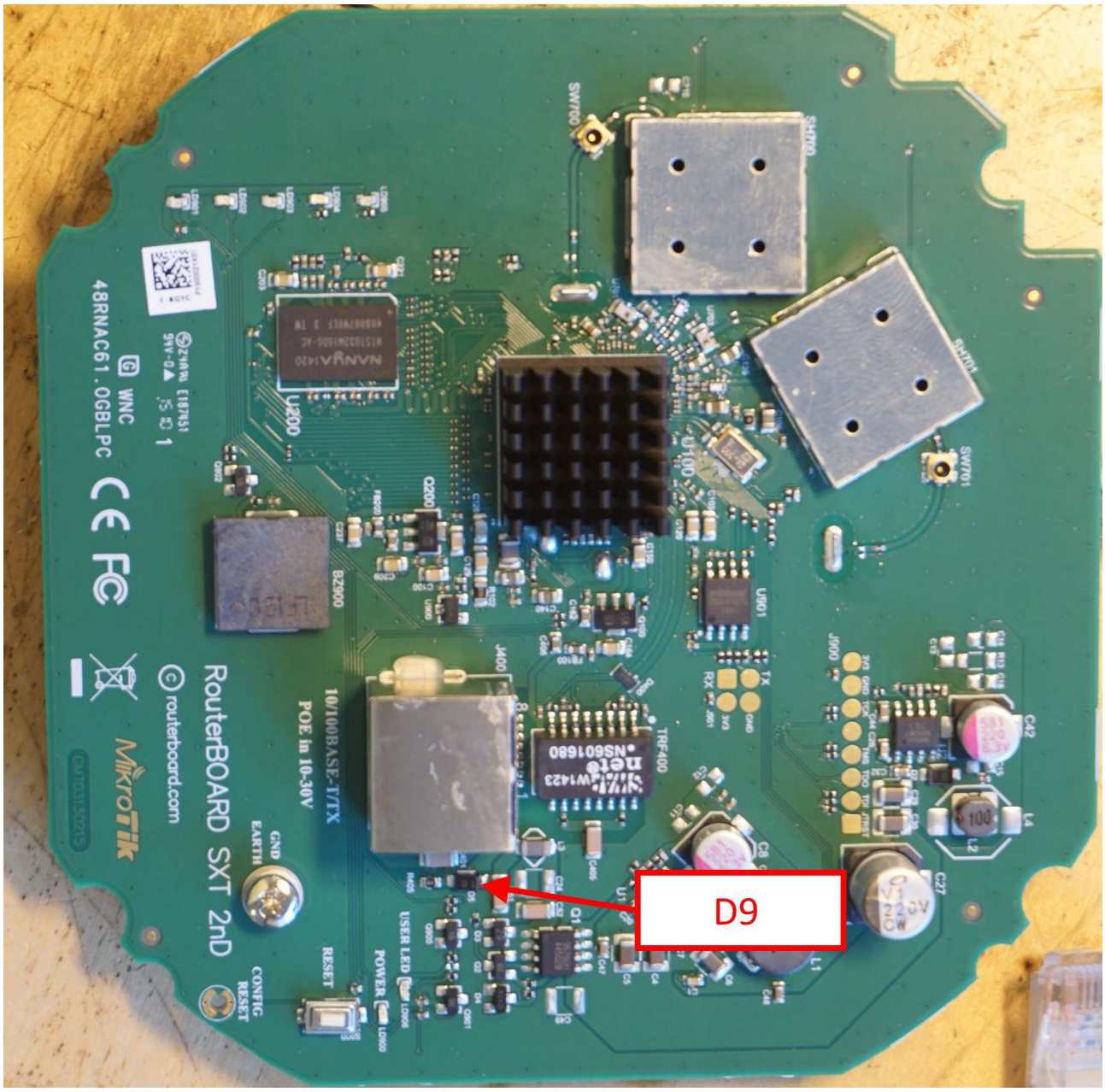
Push back Plastic PCB holders and take out the board.



Picture 297

Schottky diode measuring with multimeter in diode mode

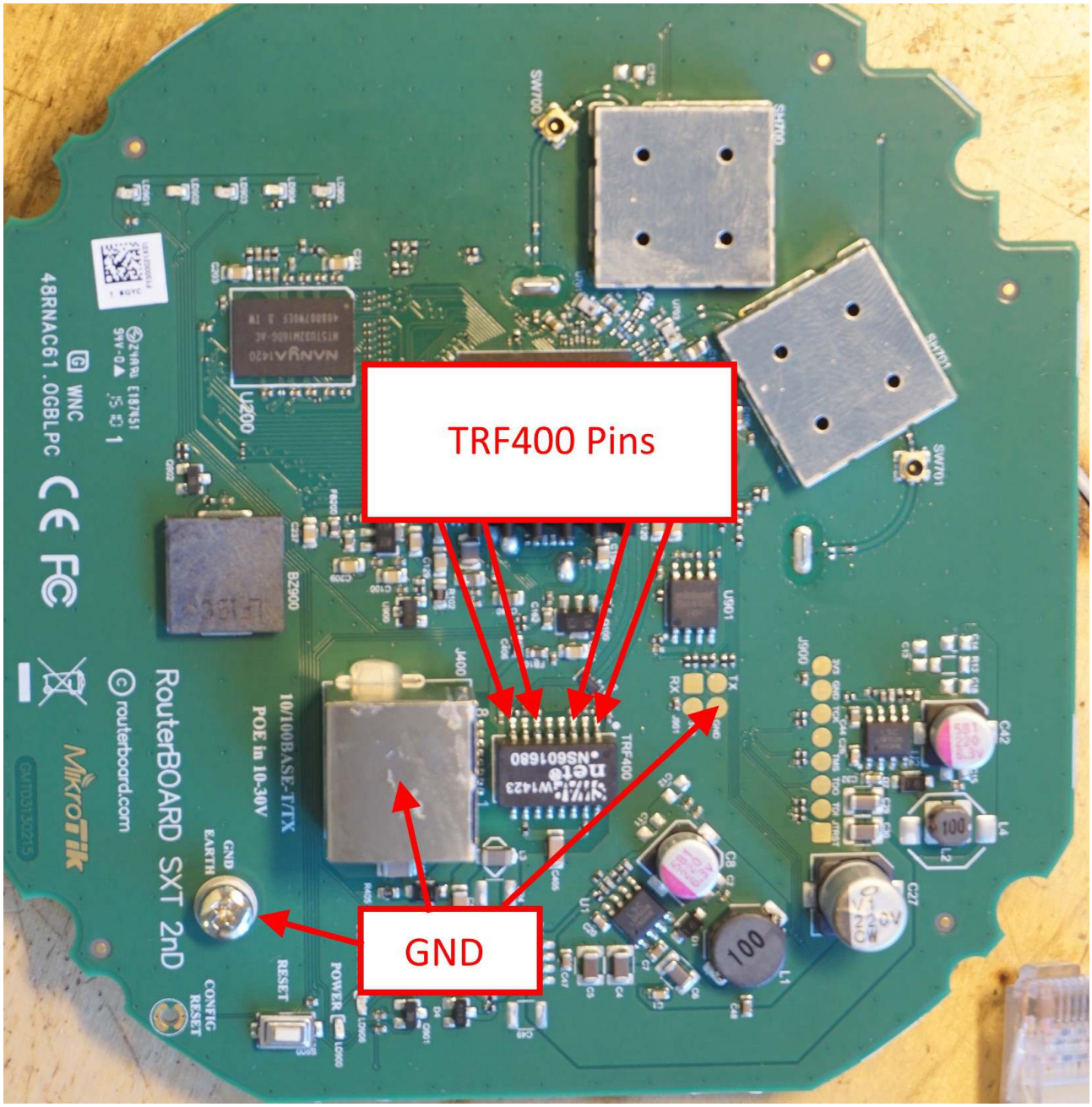
Schottky diode reference numbers are D5 . Schottky diode quality measurement method describe on page 7



Picture 298

Voltage drop between TRF400 pins and Ground.

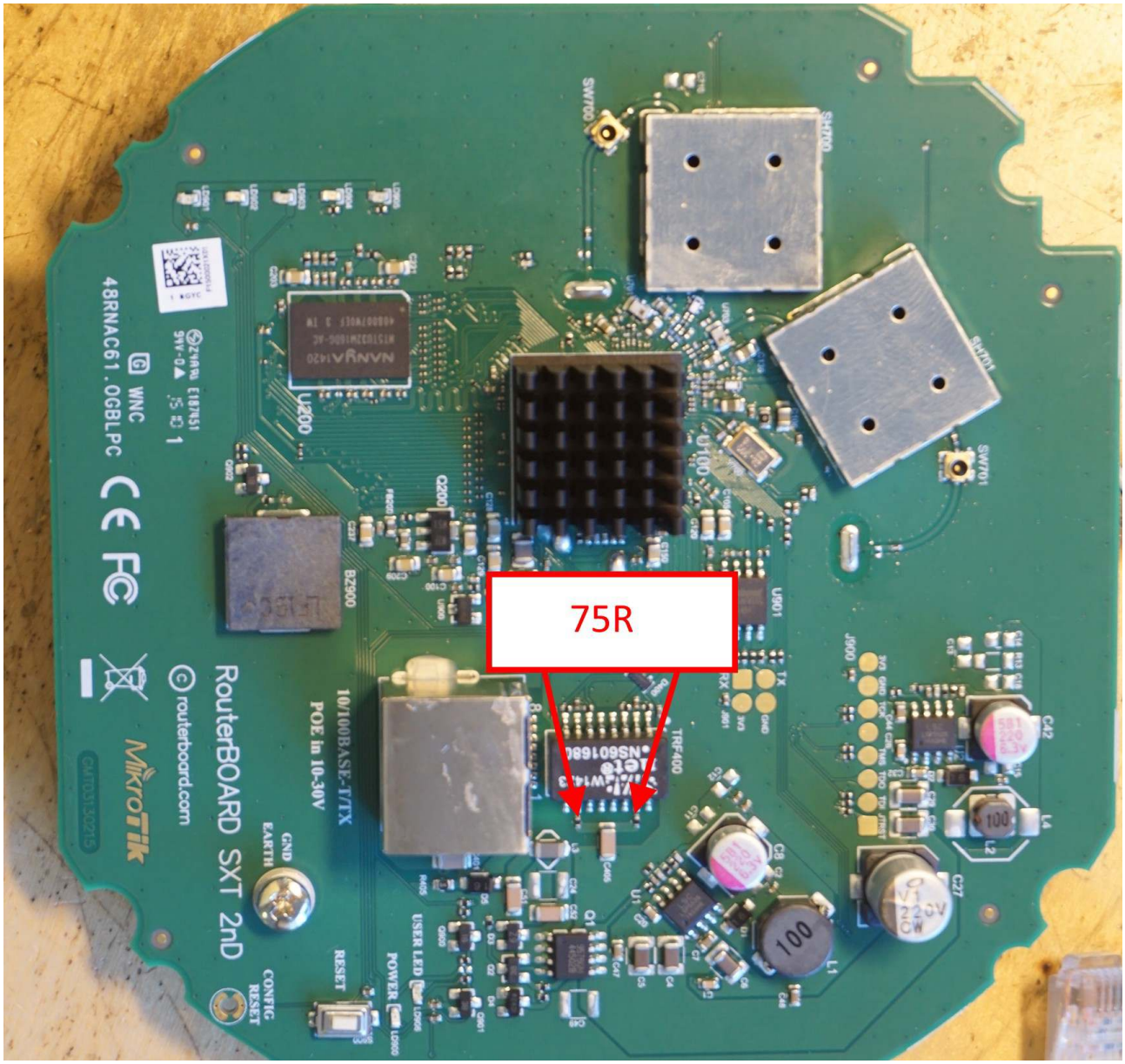
Check voltage drop between TRF400 Ethernet Transformers pins and Ground. Ether Pins are marked with red arrows. It should be in the range from 0,32V to 0,48V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked TRF400 Transformer pins.



Picture 299

75R Termination resistors resistance.

Resistor resistance, marked with red arrow, should be 75 Ohm +/- 1%



Picture 300

SXTLite5 series RouterBoards

RBSXTLite5 series:

SXT Lite5

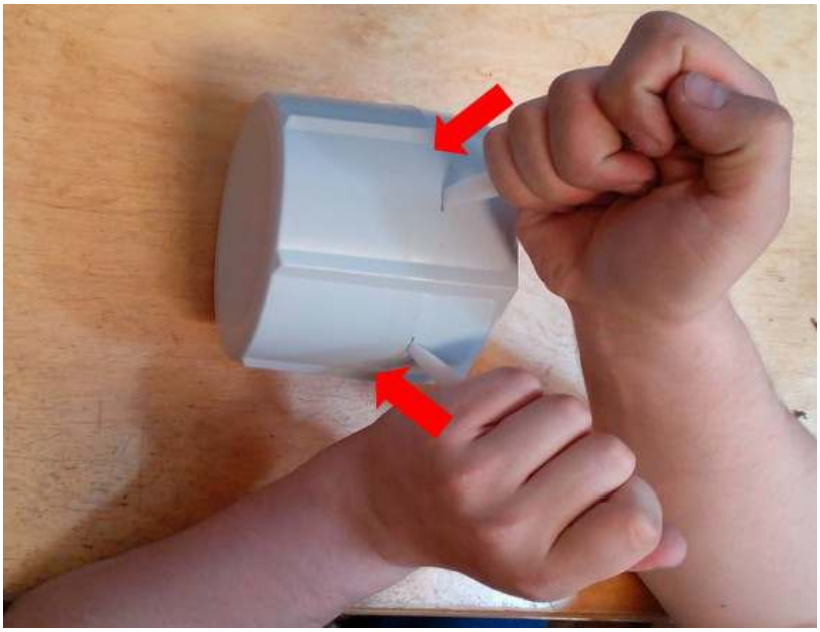
Picture 301

Disassembling information

SXT series disassembling

1. step

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



Picture 302

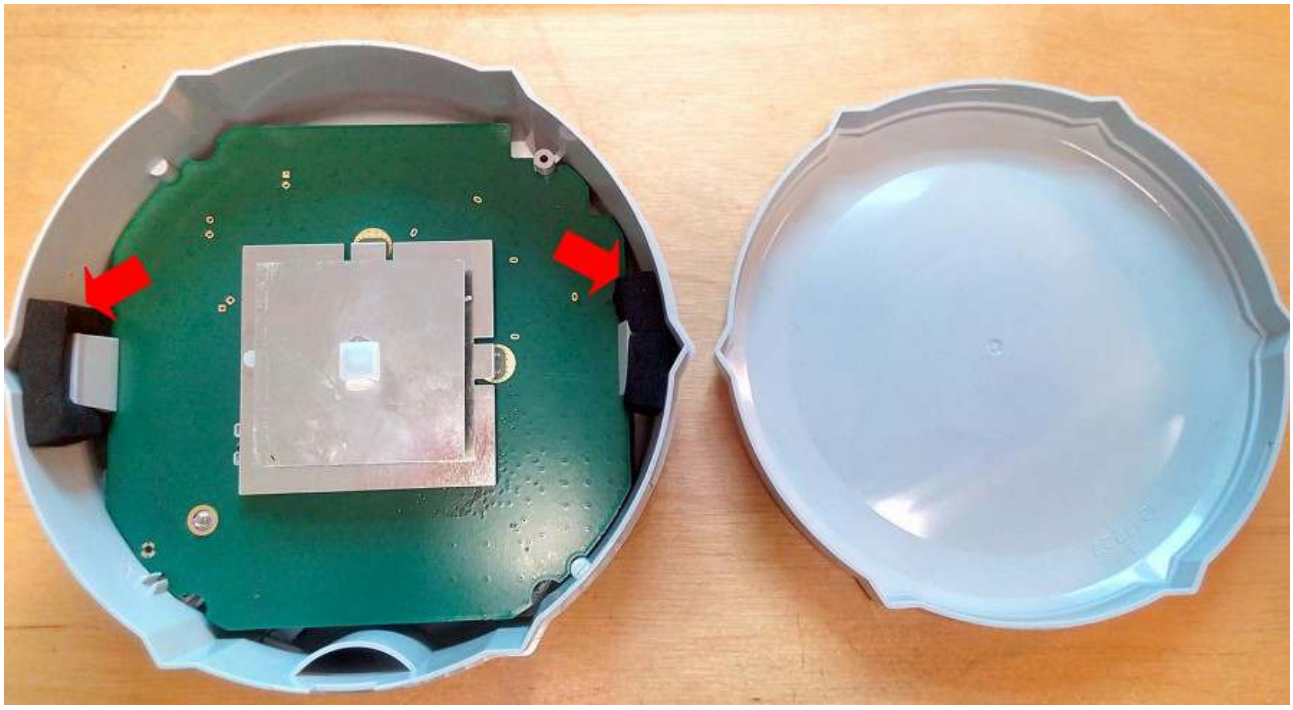
2. step

Rotate screwdriver and pull both case parts.

Picture 303

3. step

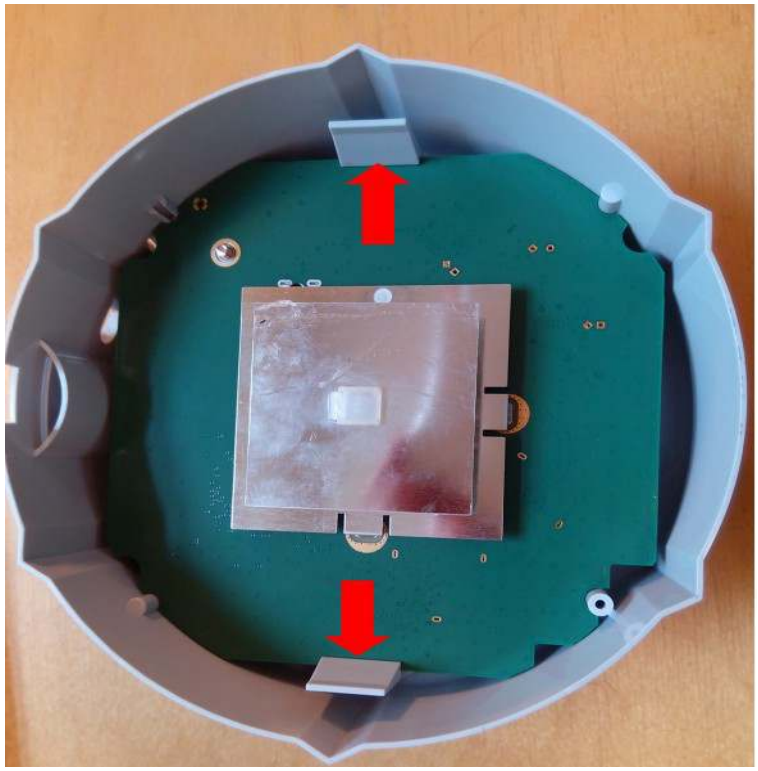
Remove rubber bushing



Picture 304

4. step

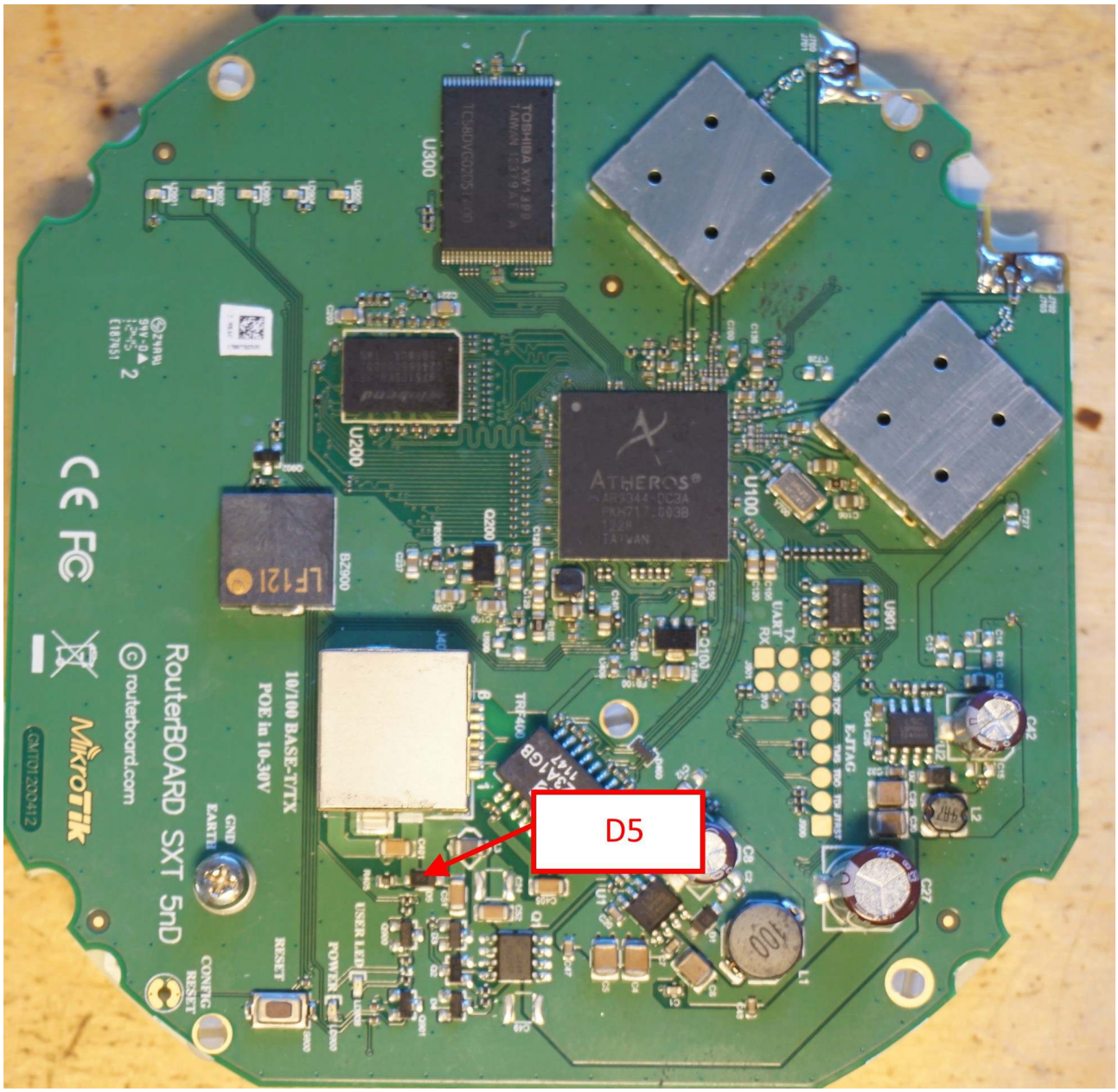
Push back Plastic PCB holders and take out the board.



Picture 305

Schottky diode measuring with multimeter in diode mode

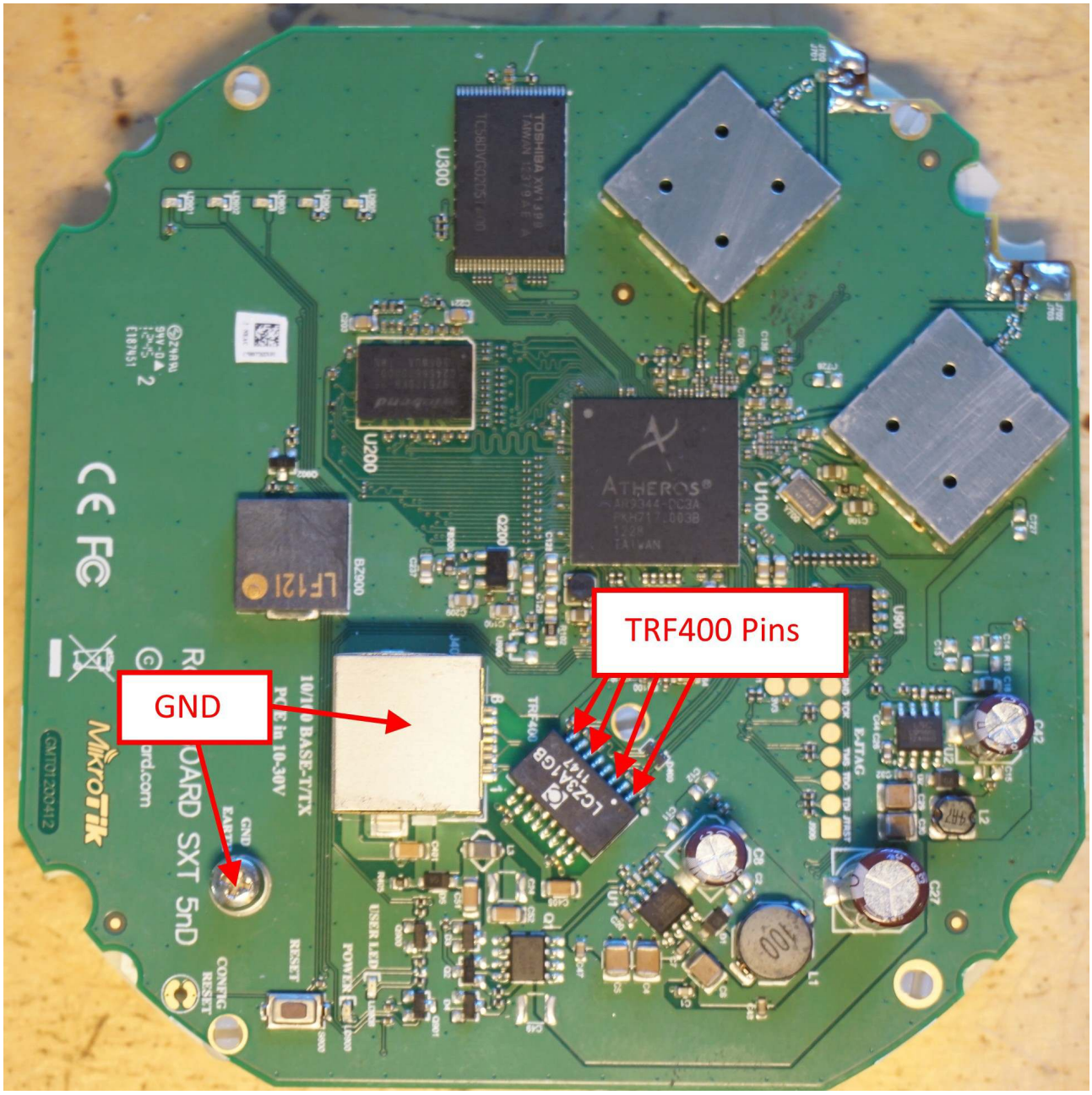
Schottky diode reference numbers are D5 . Schottky diode quality measurement method describe on page 7



Picture 306

Voltage drop between TRF400 pins and Ground.

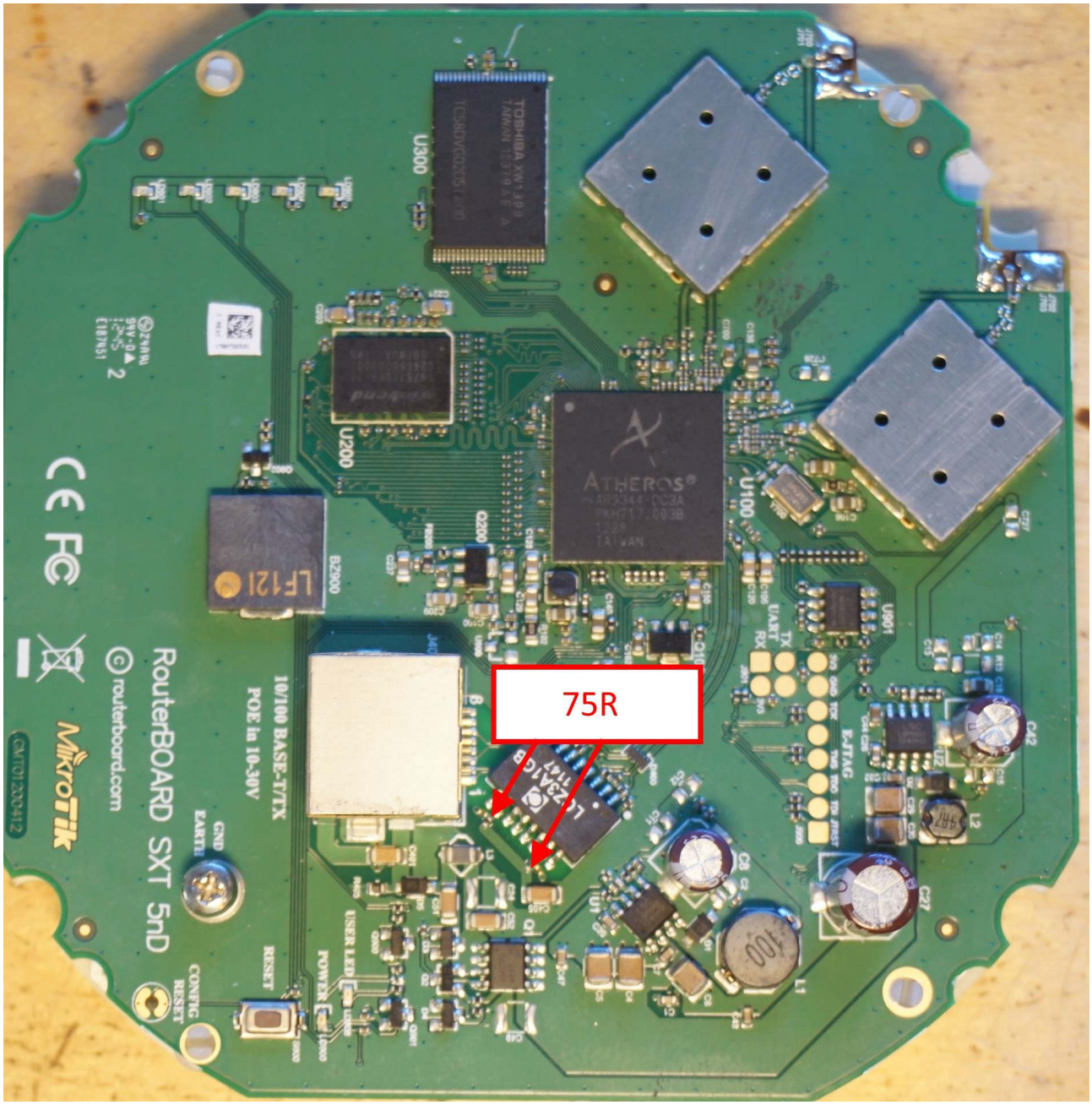
Check voltage drop between TRF400 Ethernet Transformers pins and Ground. TRF400 Pins are marked with red arrows. It should be in the range from 0,32V to 0,48V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked TRF400 Transformer pins.



Picture 307

75R Termination resistors resistance.

Resistor resistance, marked with red arrow, should be 75 Ohm +/- 1%



Picture 308

SXT Lite5 ac series RouterBoards

RBSXT Lite5 ac series:

SXT Lite5 ac

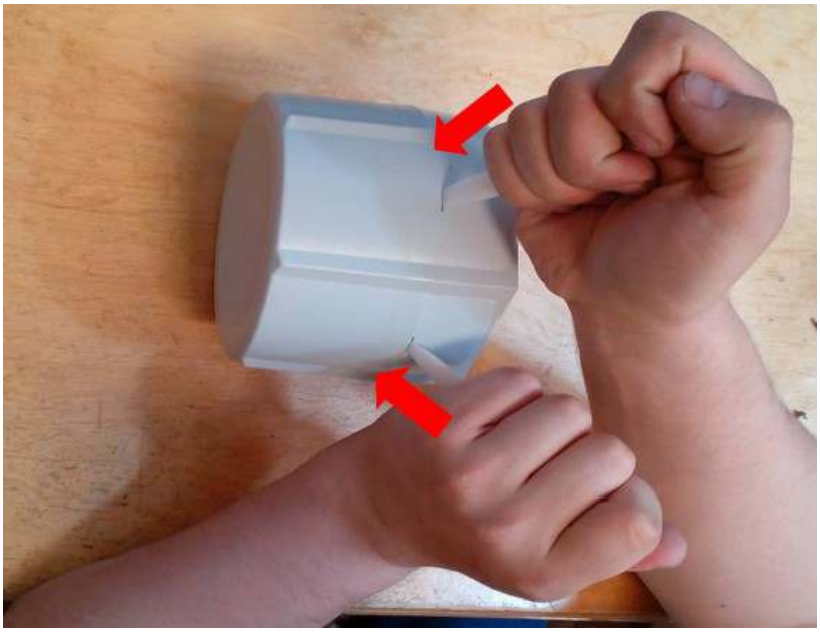
Picture 301

Disassembling information

SXT series disassembling

1. step

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



Picture 302

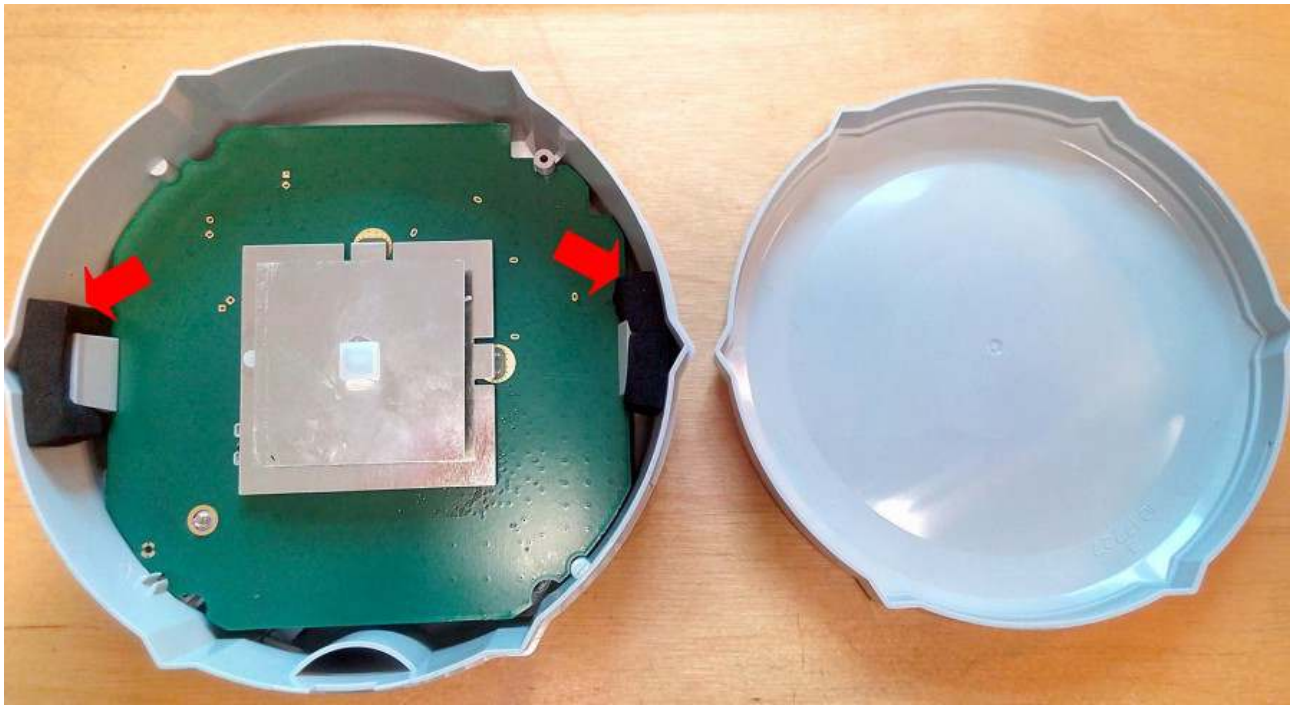
2. step

Rotate screwdriver and pull both case parts.

Picture 303

3. step

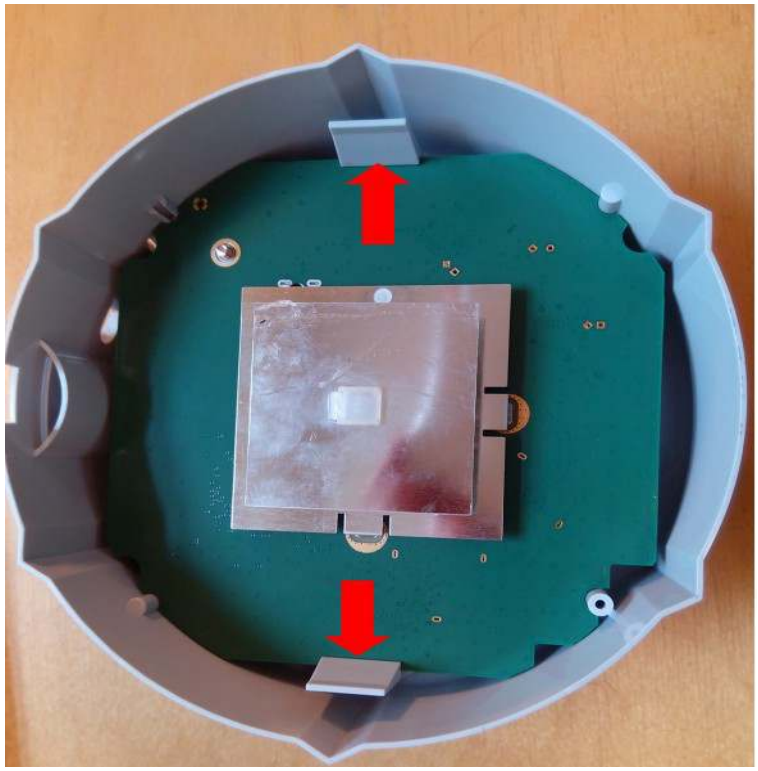
Remove rubber bushing



Picture 304

4. step

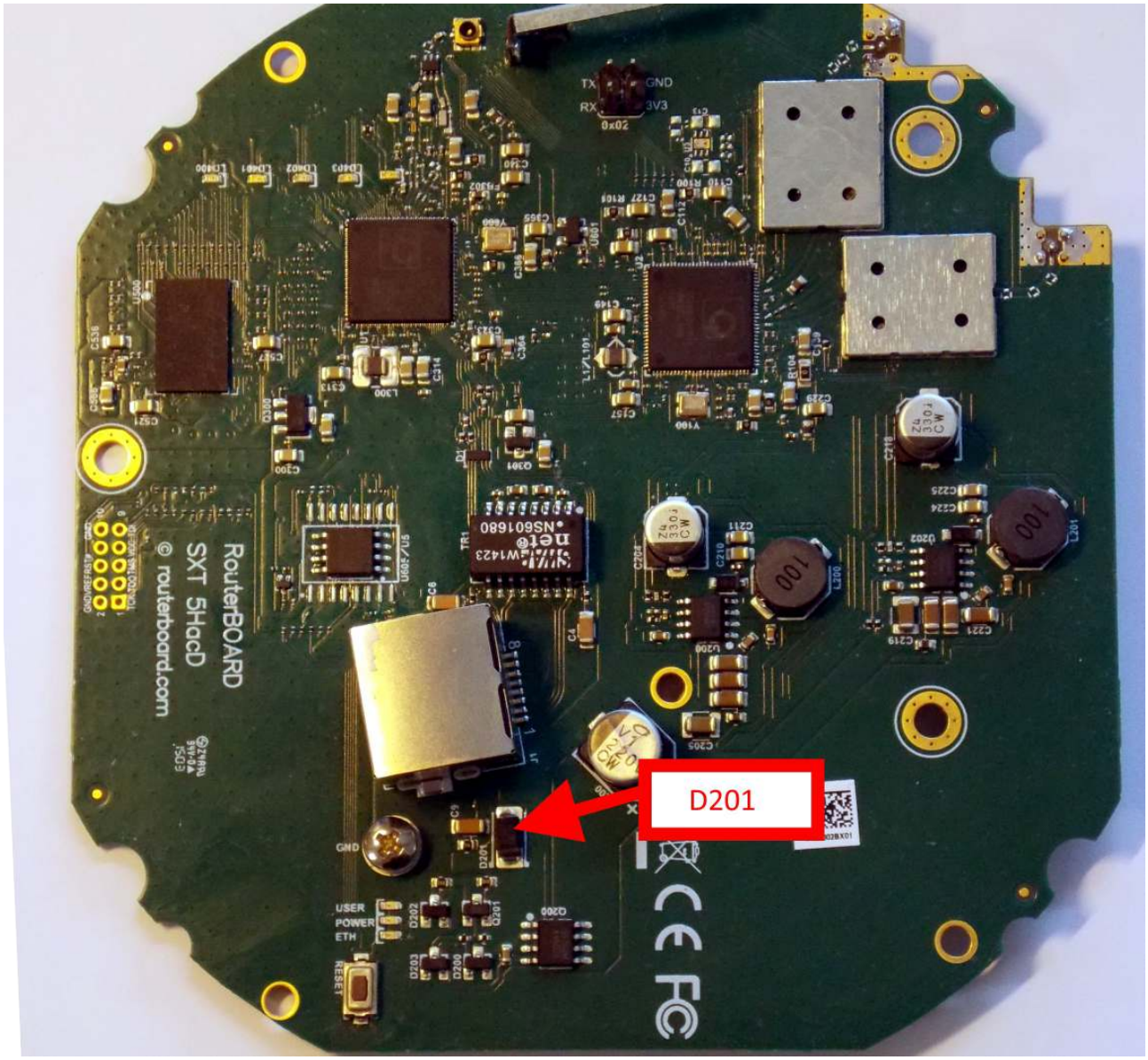
Push back Plastic PCB holders and take out the board.



Picture 305

Schottky diode measuring with multimeter in diode mode

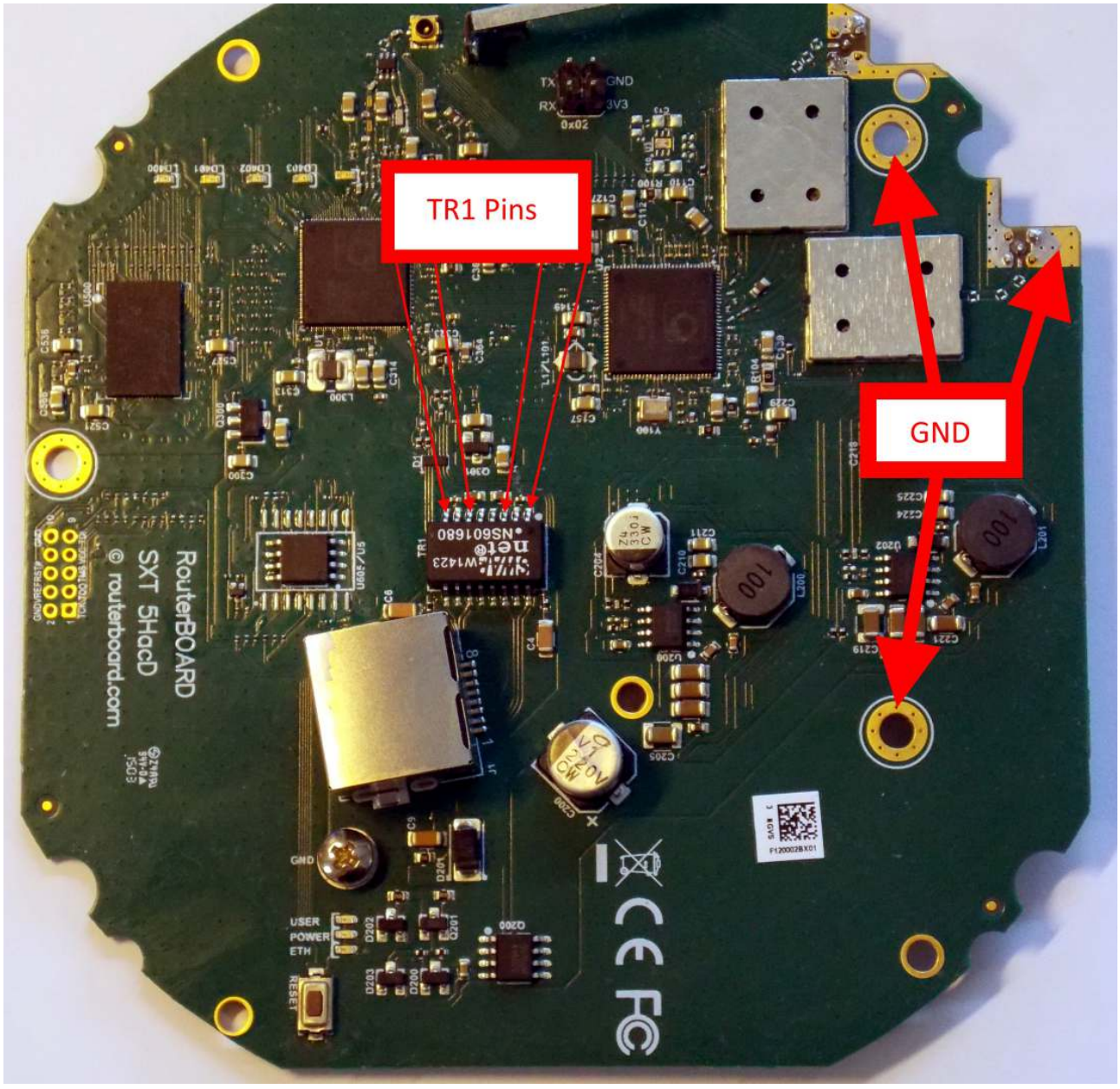
Schottky diode reference numbers are D201 . Schottky diode quality measurement method describe on page 7



Picture 324

Voltage drop between TR1 pins and Ground.

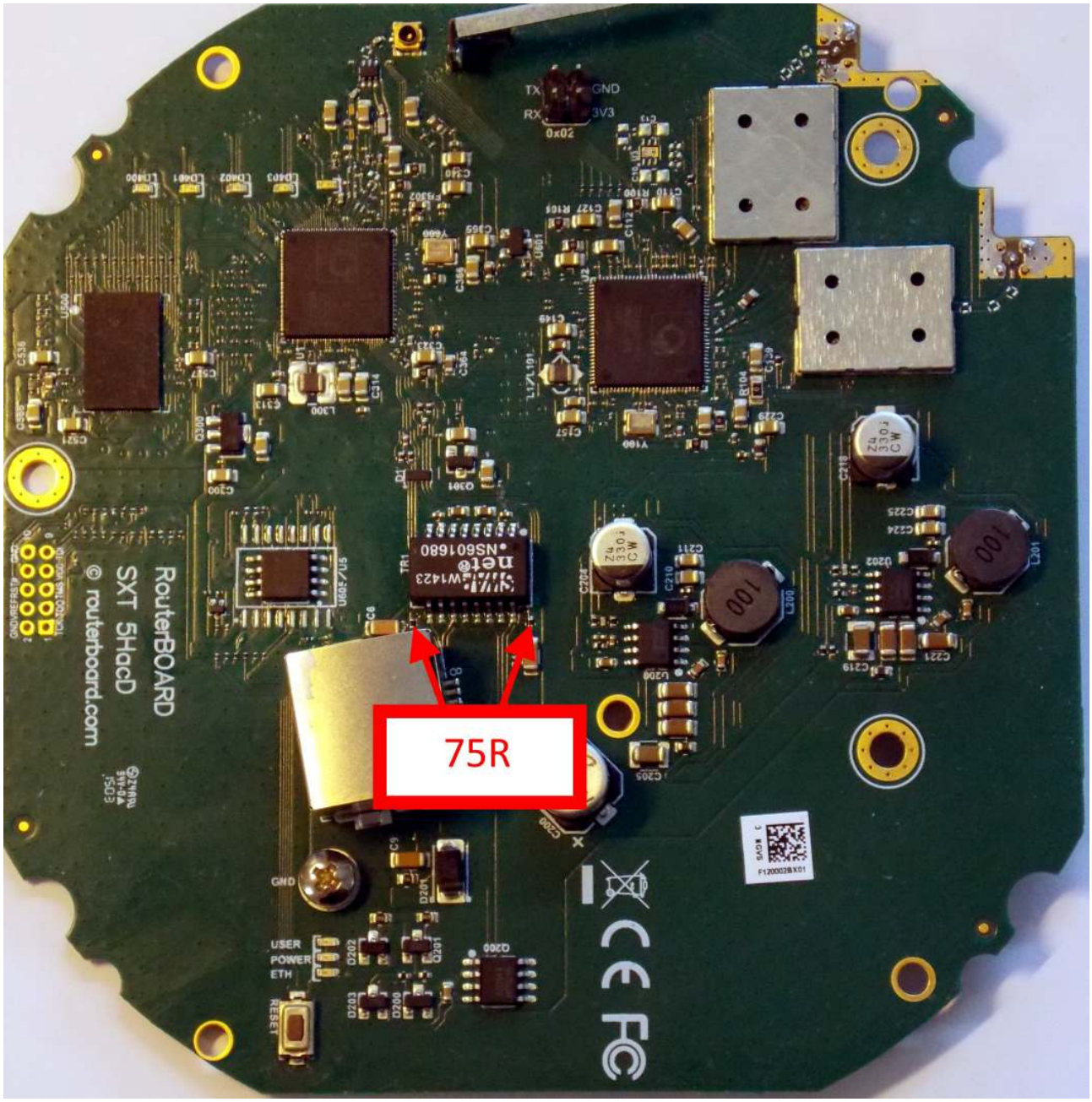
Check voltage drop between TR1 Ethernet Transformers pins and Ground. TR1 Pins are marked with red arrows. It should be in the range from 0,32V to 0,48V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked TR1 Transformer pins.



Picture 307

75R Termination resistors resistance.

Resistor resistance, marked with red arrow, should be 75 Ohm +/- 1%



Picture 308

SXT LTE series RouterBoards

RBSXT LTE series:

SXT LTE

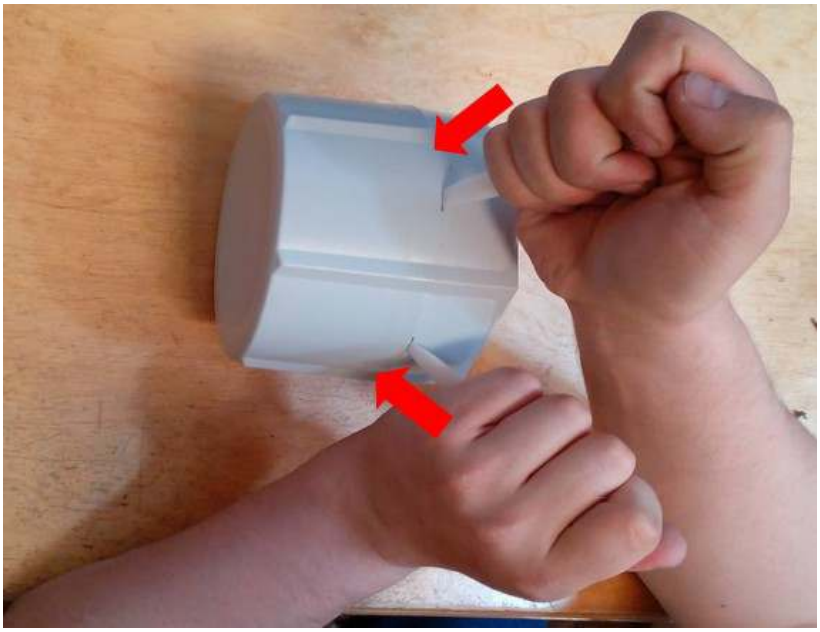
Picture 309

Disassembling information

SXT series disassembling

1. step

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



Picture 310

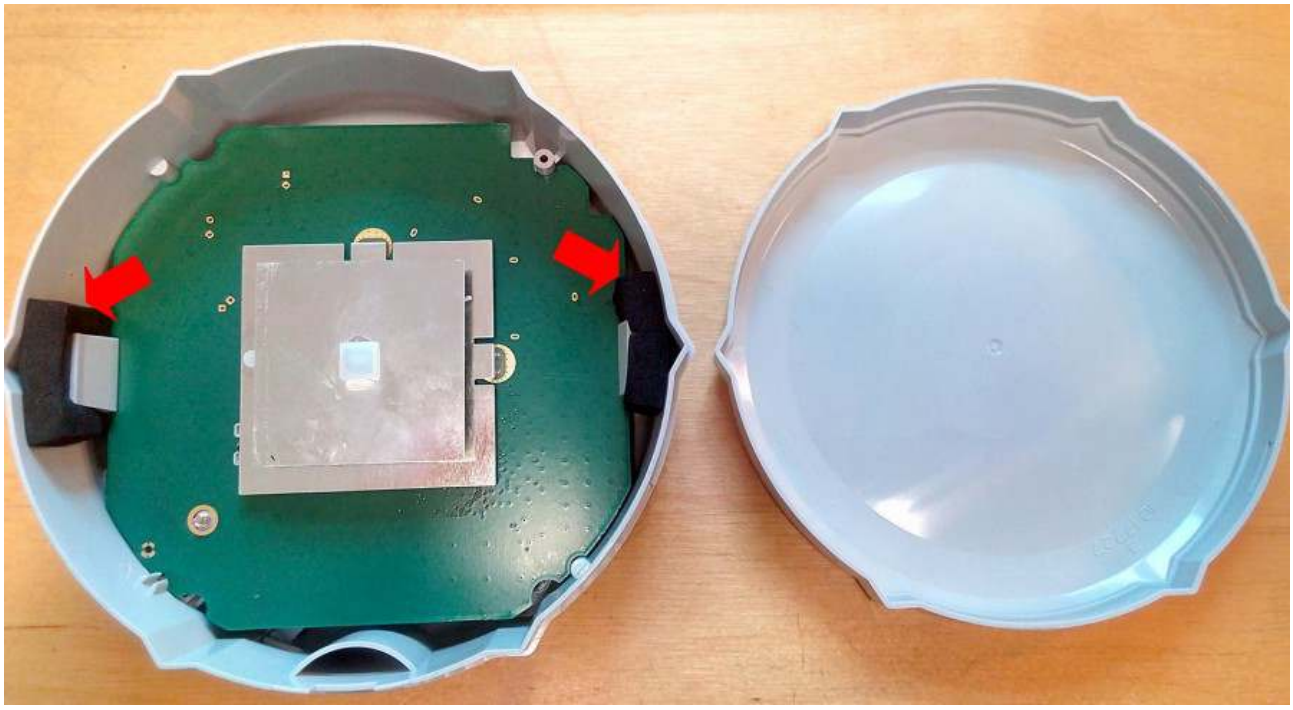
2. step

Rotate screwdriver and pull both case parts.

Picture 311

3. step

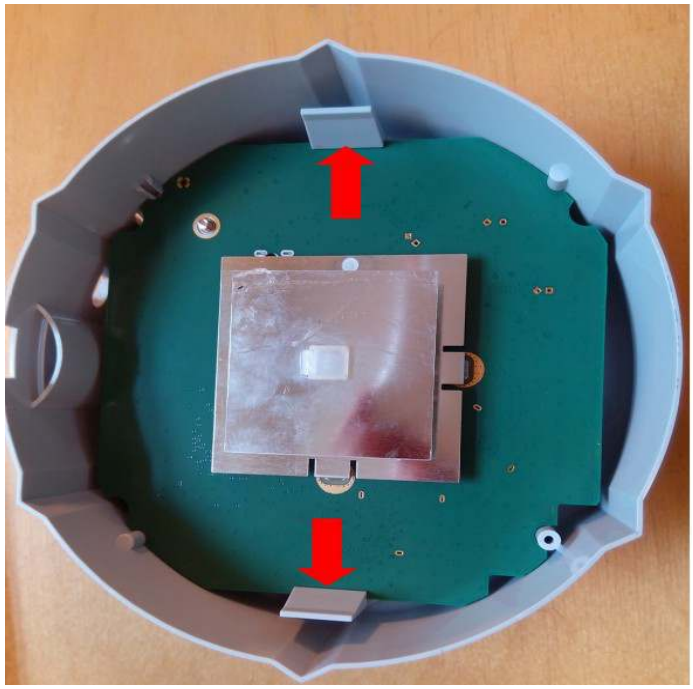
Remove rubber bushing



Picture 312

4. step

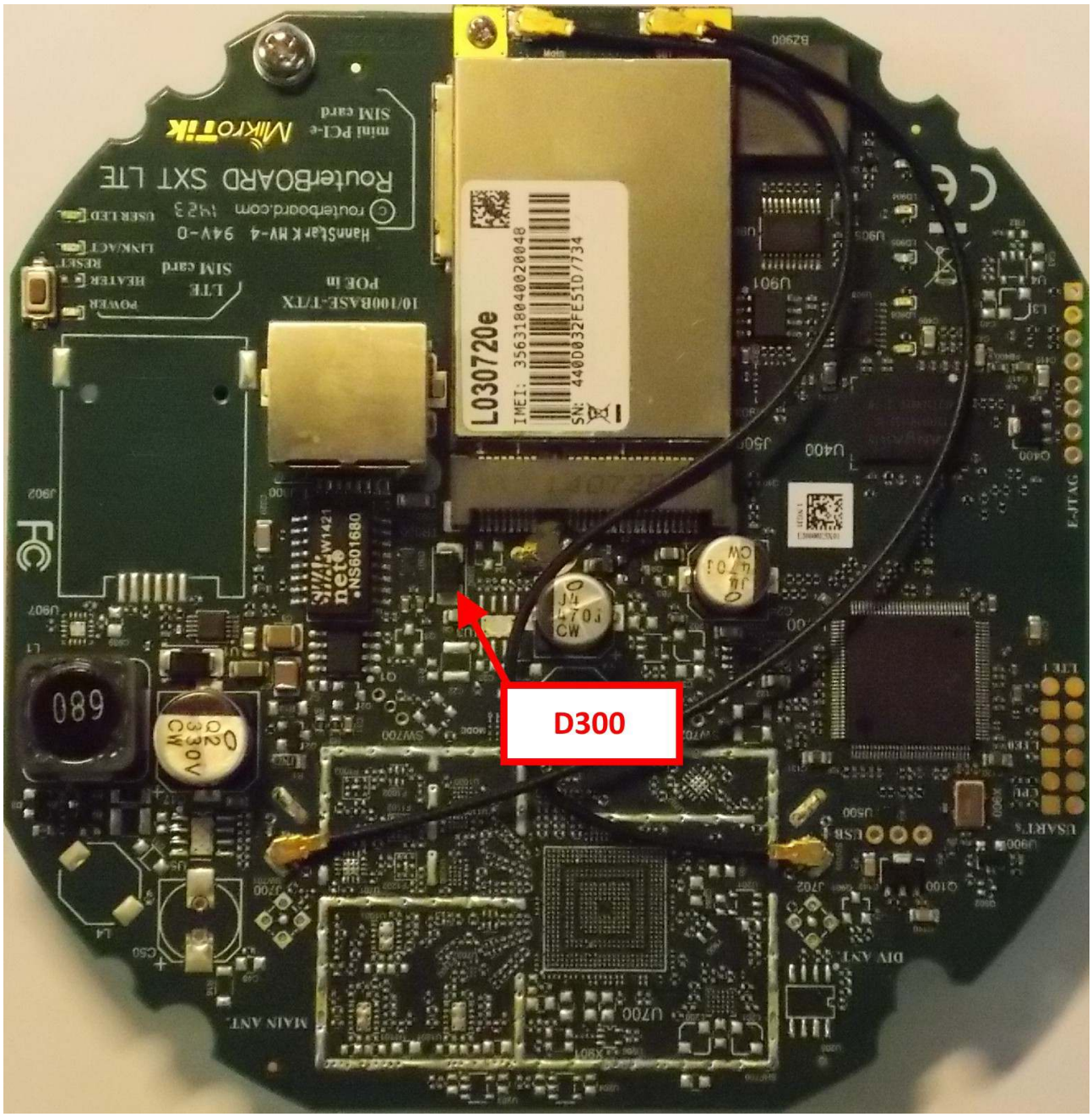
Push back Plastic PCB holders and take out the board.



Picture 313

Schottky diode measuring with multimeter in diode mode

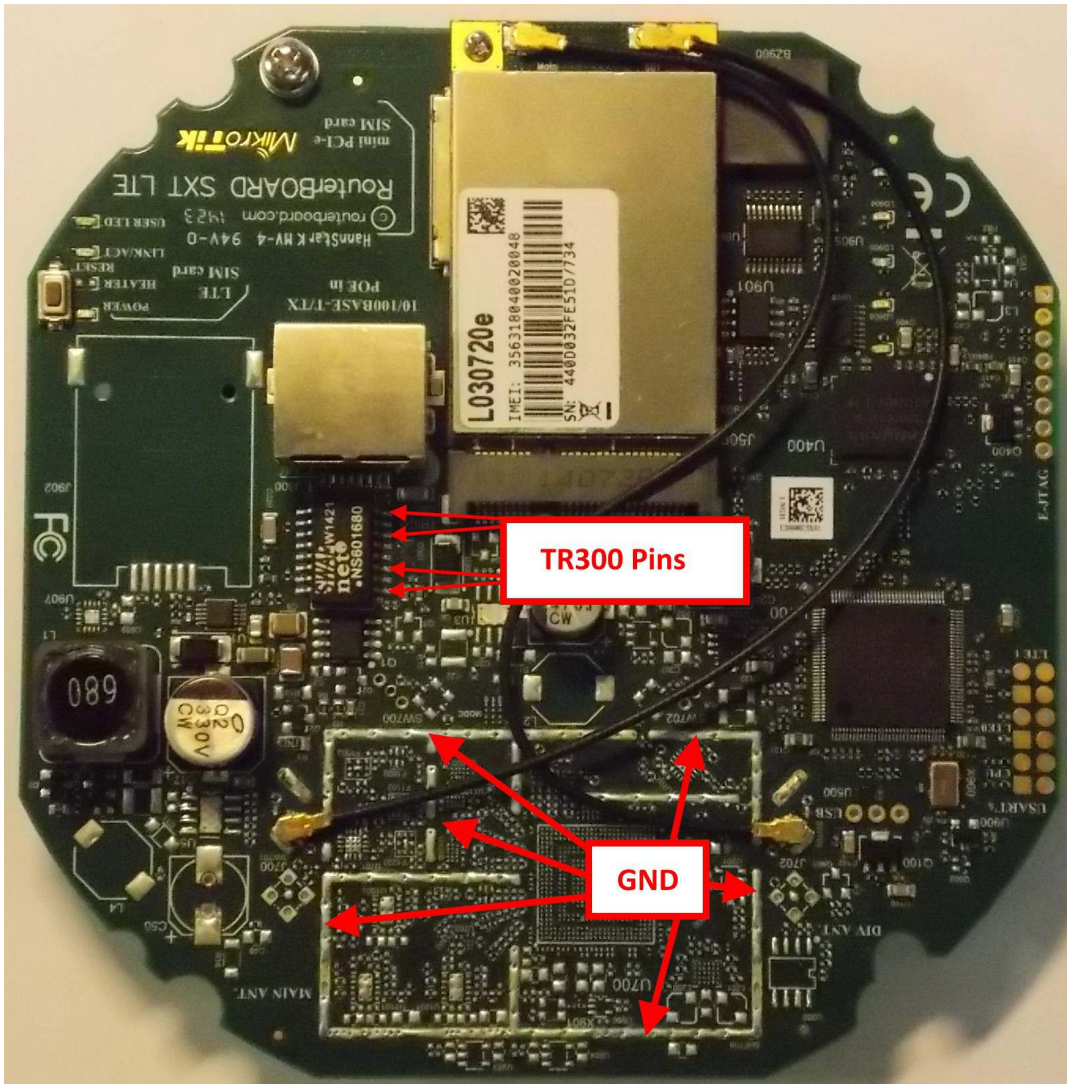
Schottky diode reference number is D300 . Schottky diode quality measurement method describe on page 7



Picture 314

Voltage drop between TR300 pins and Ground.

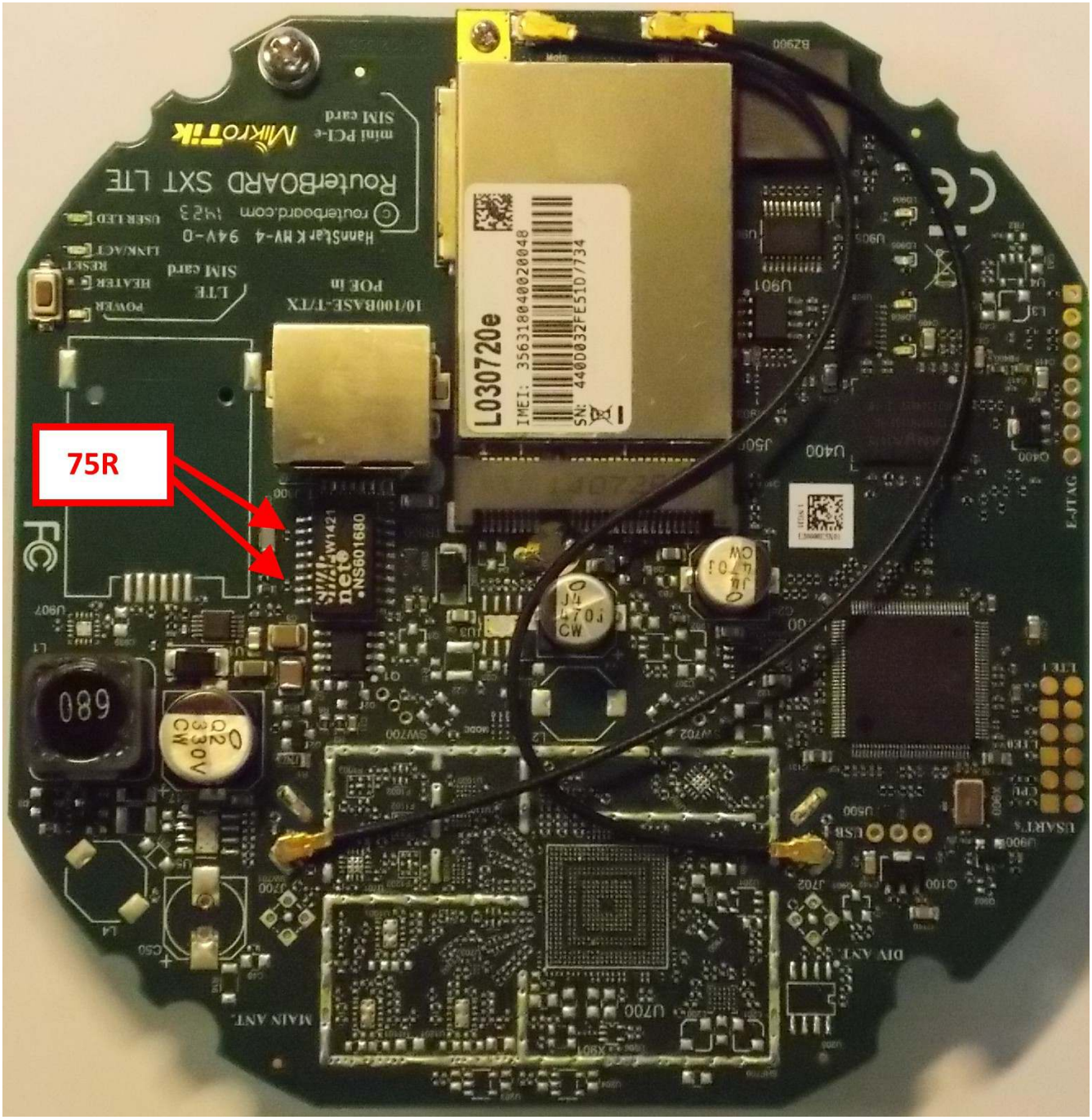
Check voltage drop between TR300 Ethernet Transformers pins and Ground. Ether Pins are marked with red arrows. It should be in the range from 0,32V to 0,48V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked TR300Transformer pins.



Picture 315

75R Termination resistors resistance.

Resistor resistance, marked with red arrow, should be 75 Ohm +/- 1%



Picture 316

wAP

Picture 317

Disassembling information

1. step: use screw driver to loose 1 pcs cover screw, then take off cover.

Picture 318

2. step: use PH2 and TX8 screw driver to loose screws.

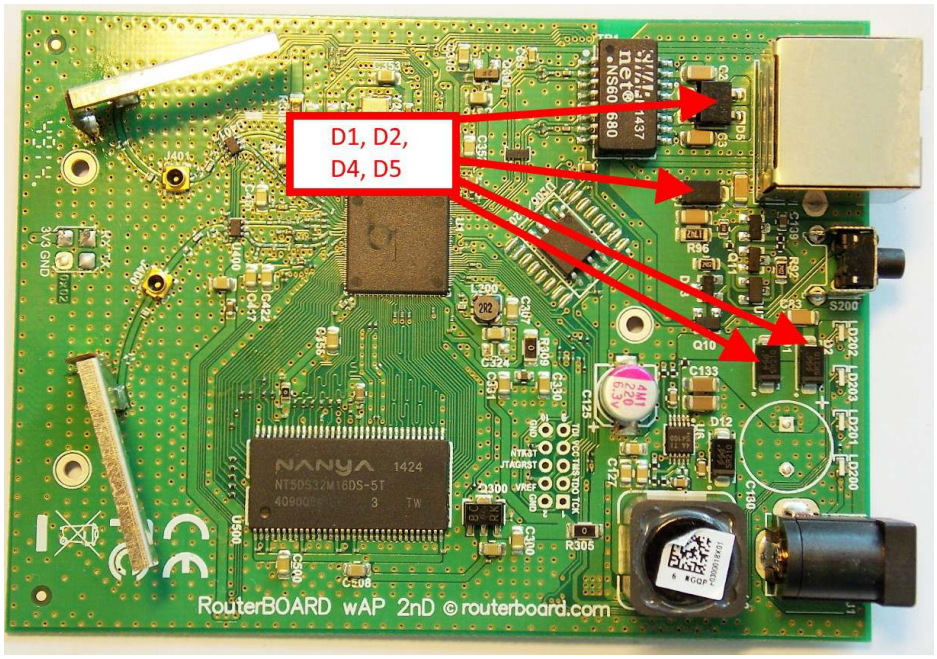
Picture 319

3. Step: take off cover with board.

Picture 320

Schottky diode measuring with multimeter in diode mode

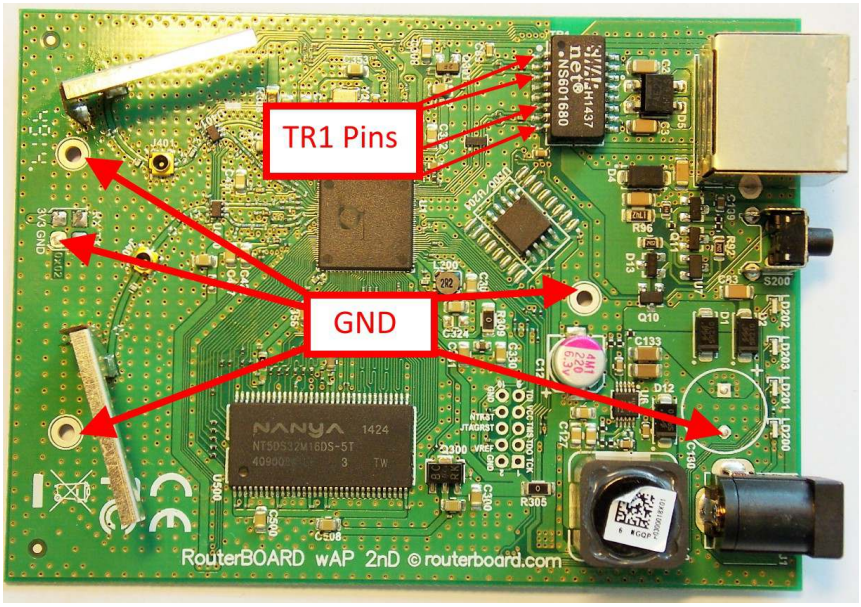
Schottky diode reference numbers are D1, D2, D4; Diode bridges reference numbers is D5. Schottky diode quality measurement method describe on page 7



Picture 321

Voltage drop between TR1 pins and Ground.

Check voltage drop between TR400 Ethernet Transformers on ports Ether1 pins and Ground. Ether Pins are marked with red arrows. It should be in the range from 0,32V to 0,438V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked TR1 Transformer pins.



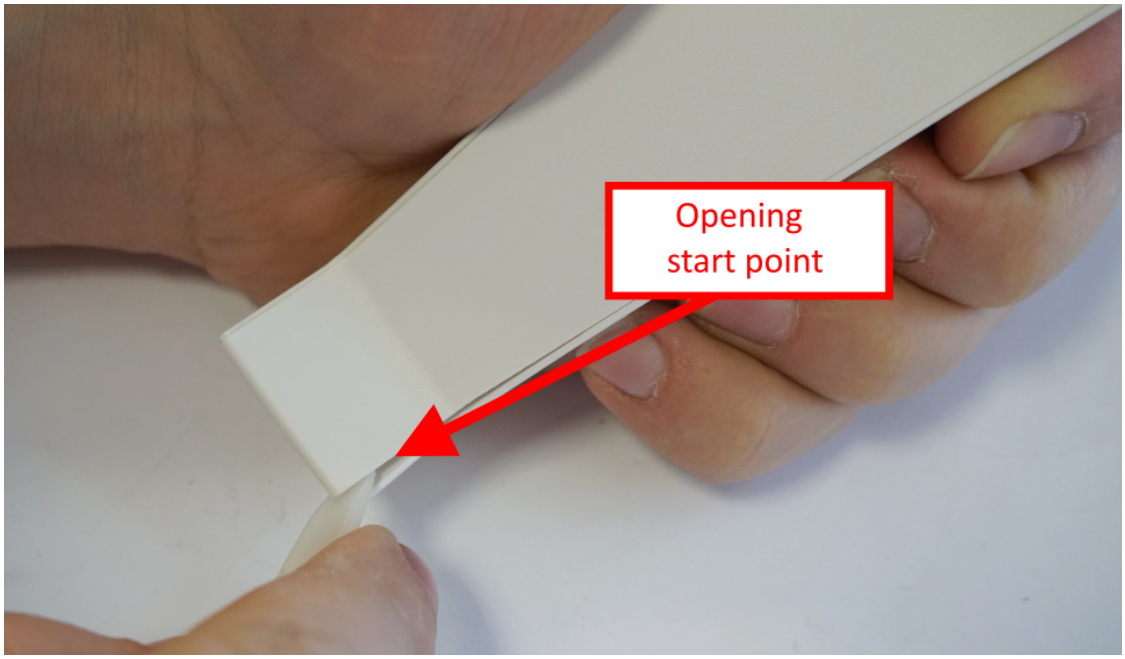
Picture 322

LHG 5

Picture 320

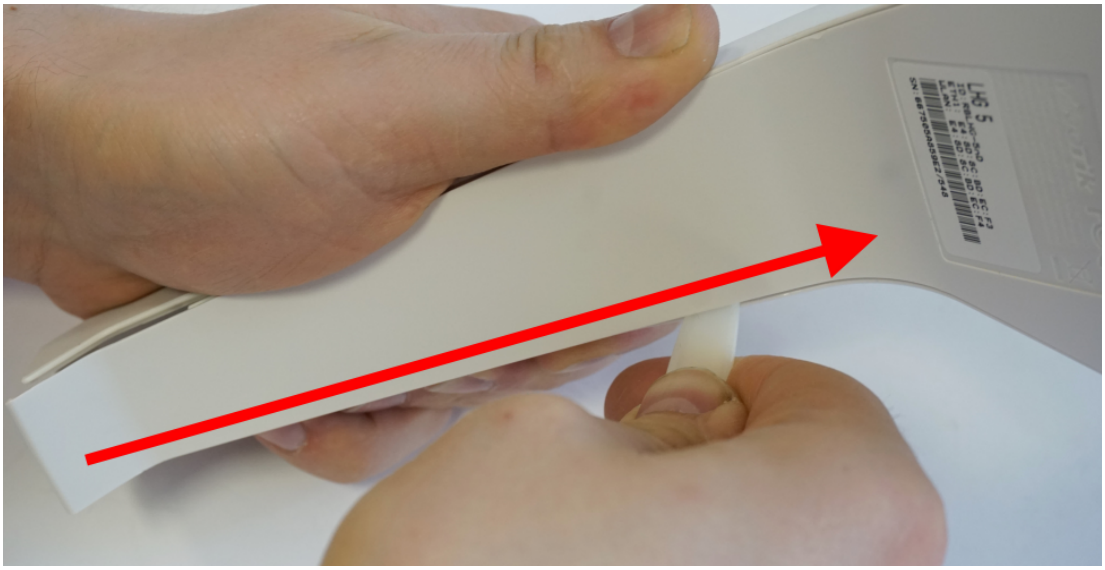
Disassembling information

1. Case opening starts with the short end, as shown in picture 321.



Picture 321

2. After that push the plastic sticker until the point where case is curly, as show in picture 322.

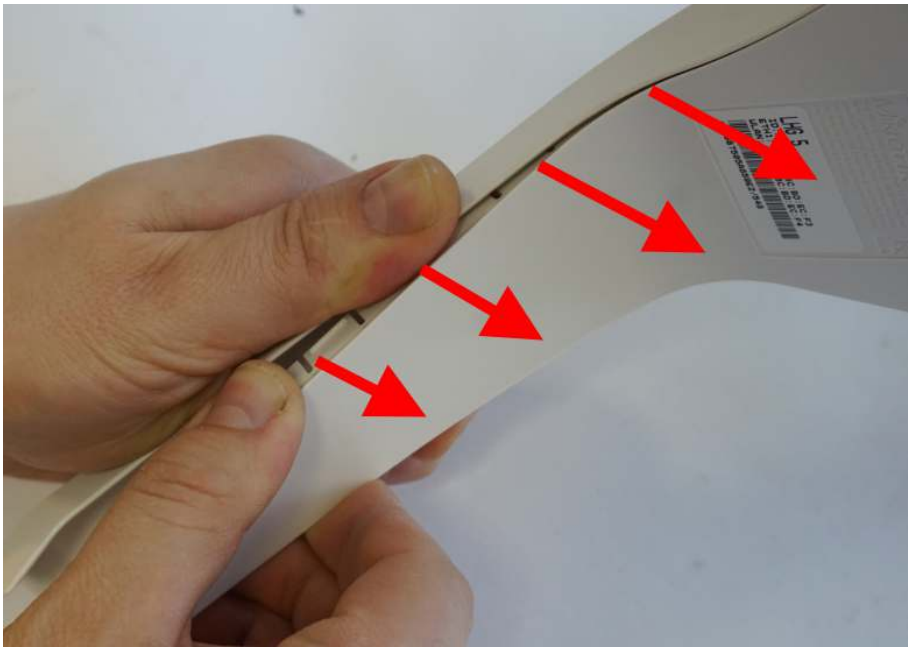


Picture 322

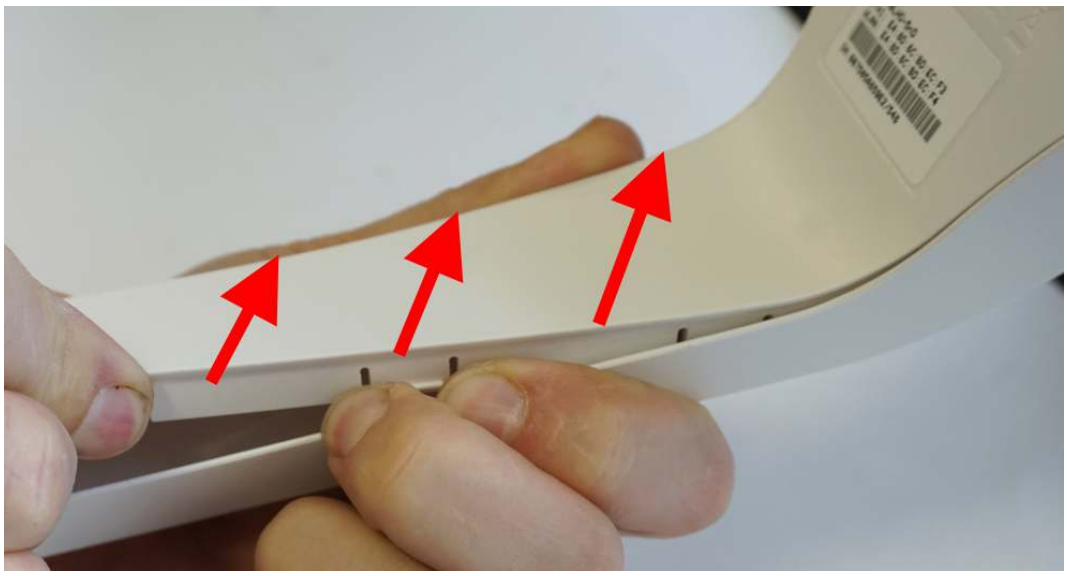
3. After that just do the same with second half, as shown in picture 323.

Picture 323

4. Then take case narrow end and gently push to both sides until cover is taken out as shown in Picture 4, picture 5 and picture 6.



Picture 324

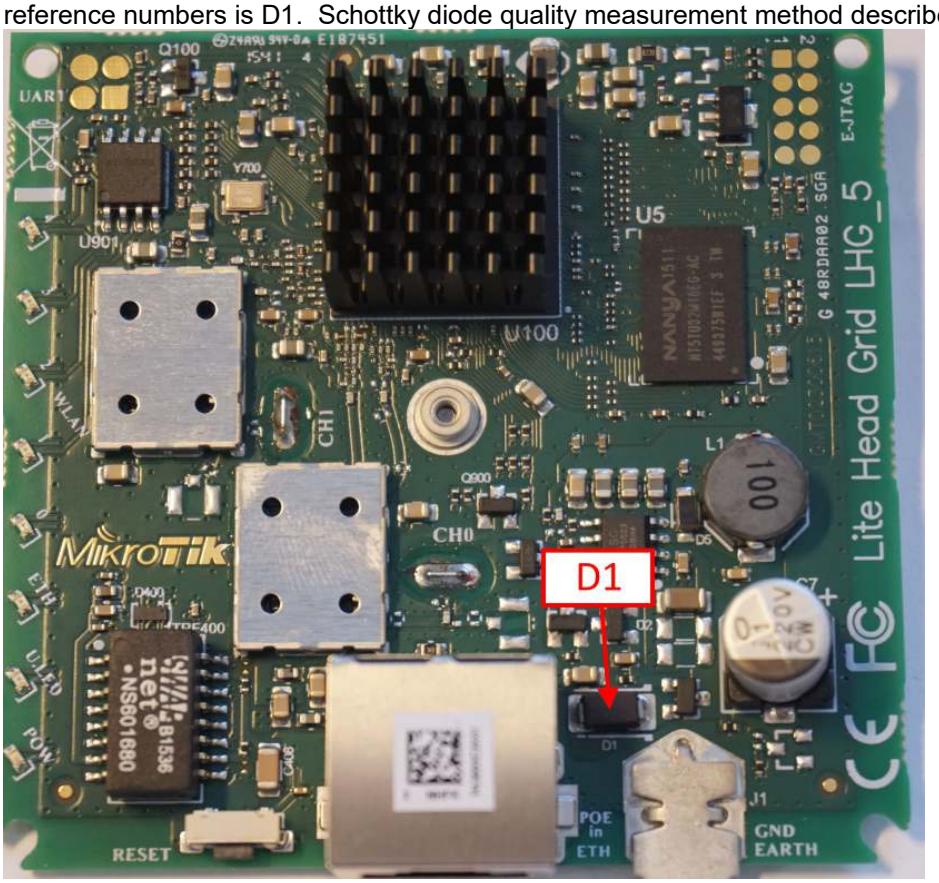


Picture 325

Picture 326

Schottky diode measuring with multimeter in diode mode

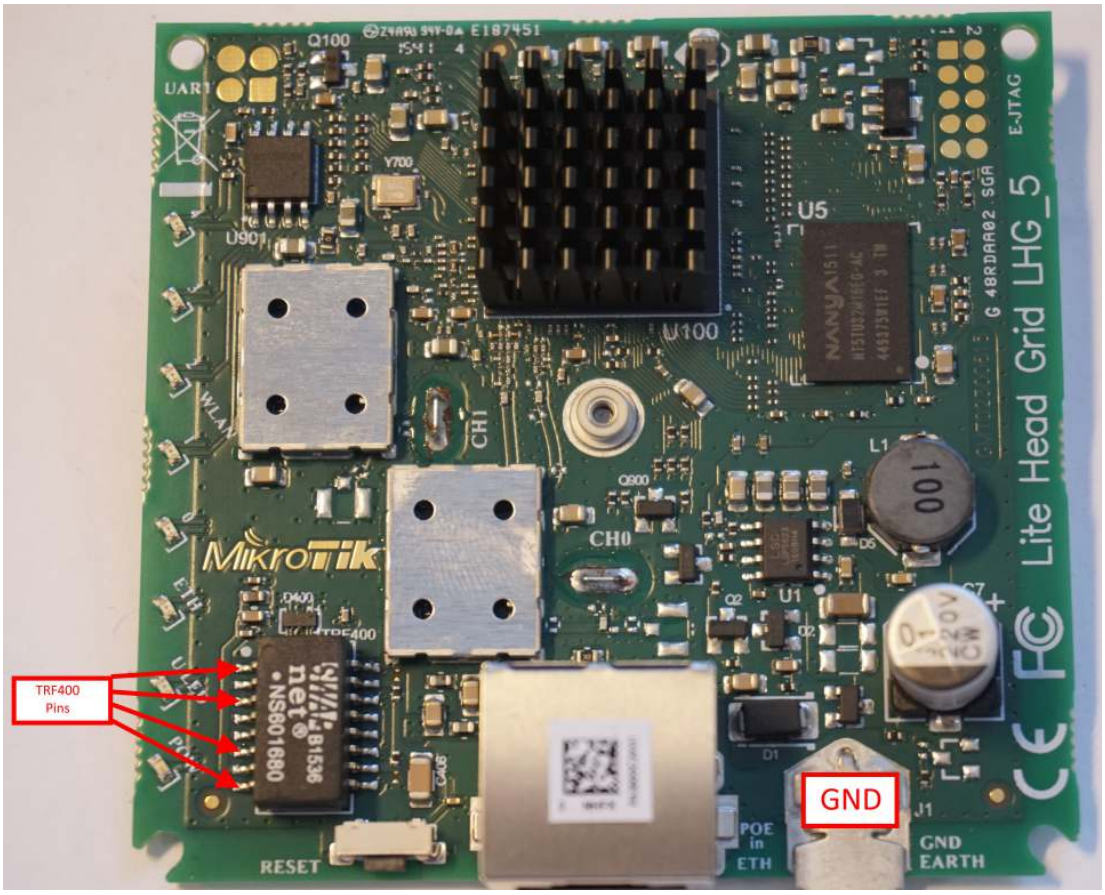
Schottky diode reference numbers is D1. Schottky diode quality measurement method describe on page 7



Picture 327

Voltage drop between TR1 pins and Ground.

Check voltage drop between TR400 Ethernet Transformers on ports Ether1 pins and Ground. Ether Pins are marked with red arrows. It should be in the range from 0,32V to 0,438V. Measure in diode mode: hold “positive” wire on the Ground and “COM” wire to marked TR400 Transformer pins.



Picture 328