EDMONTON XBOX ONE S

DAE LAB JUAREZ

PRESENTATION MADE BY :

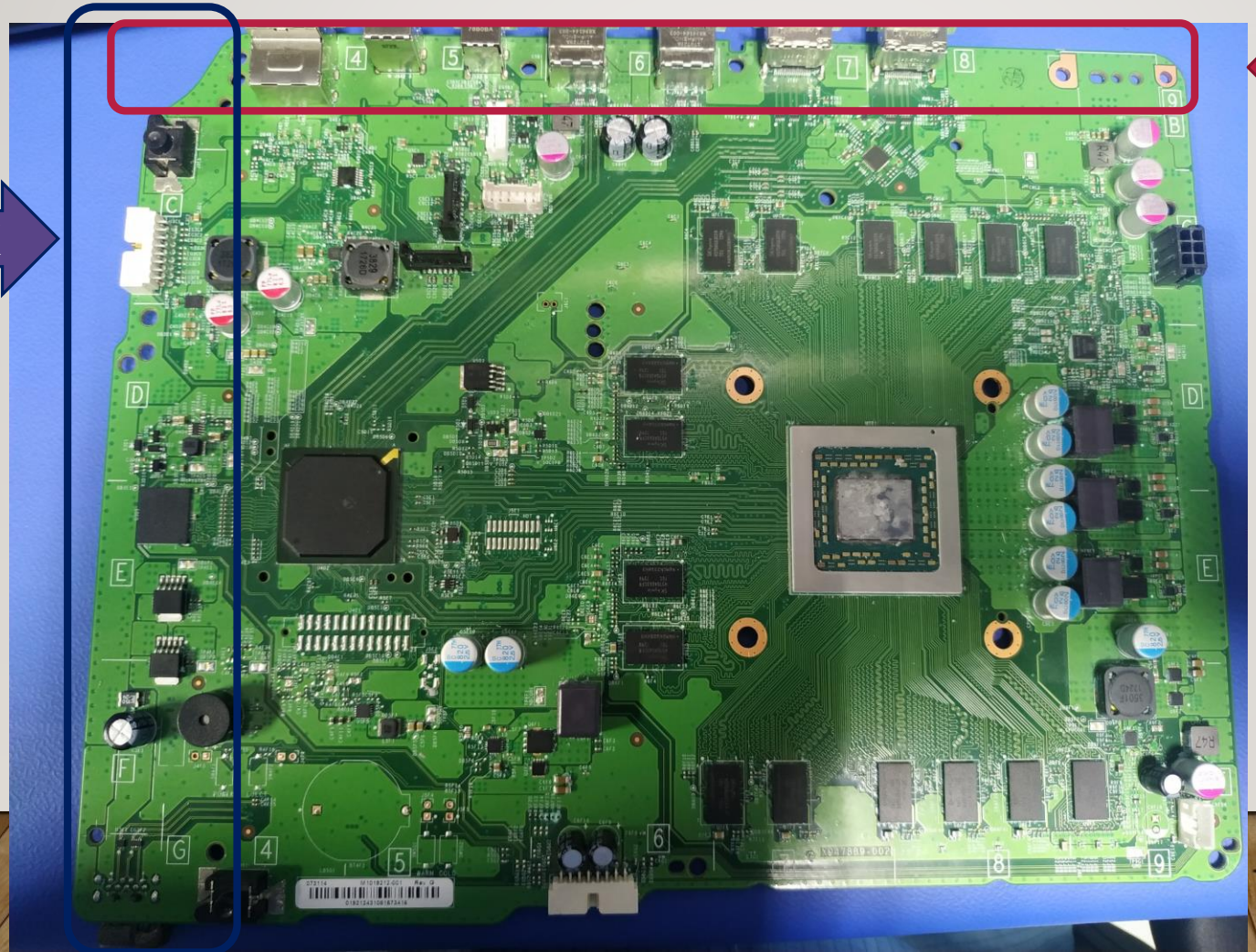
- JOSE DAVID GARCIA
- LUIS FERNANDO CALVILLO
- ALAN CORRAL

HOW TO FIND COMPONENTS WITHOUT ALLEGRO ON THE PCBA XBOX ONE

- The MOBO have coordinates :
  - The Letters (Top side (B to F) & Bottom side (P to Y)) are coordinate X
  - The Numbers(SideTop side (3 to 9) & Bottom side(1 to 7)) are Coordinate Y

- The component nomenclature is divided as follows to find its location with next two examples: **R5C3** and **C2R10**
  - **R5C3 (R**(Componet), **5**(Coordinate Y), **C**(Coordinate X in Top side), **3)**
  - **C2R10** (**C**(Componet**), 2(**Coordinate Y), R(Coordinate X in Bottom side), 10**)**

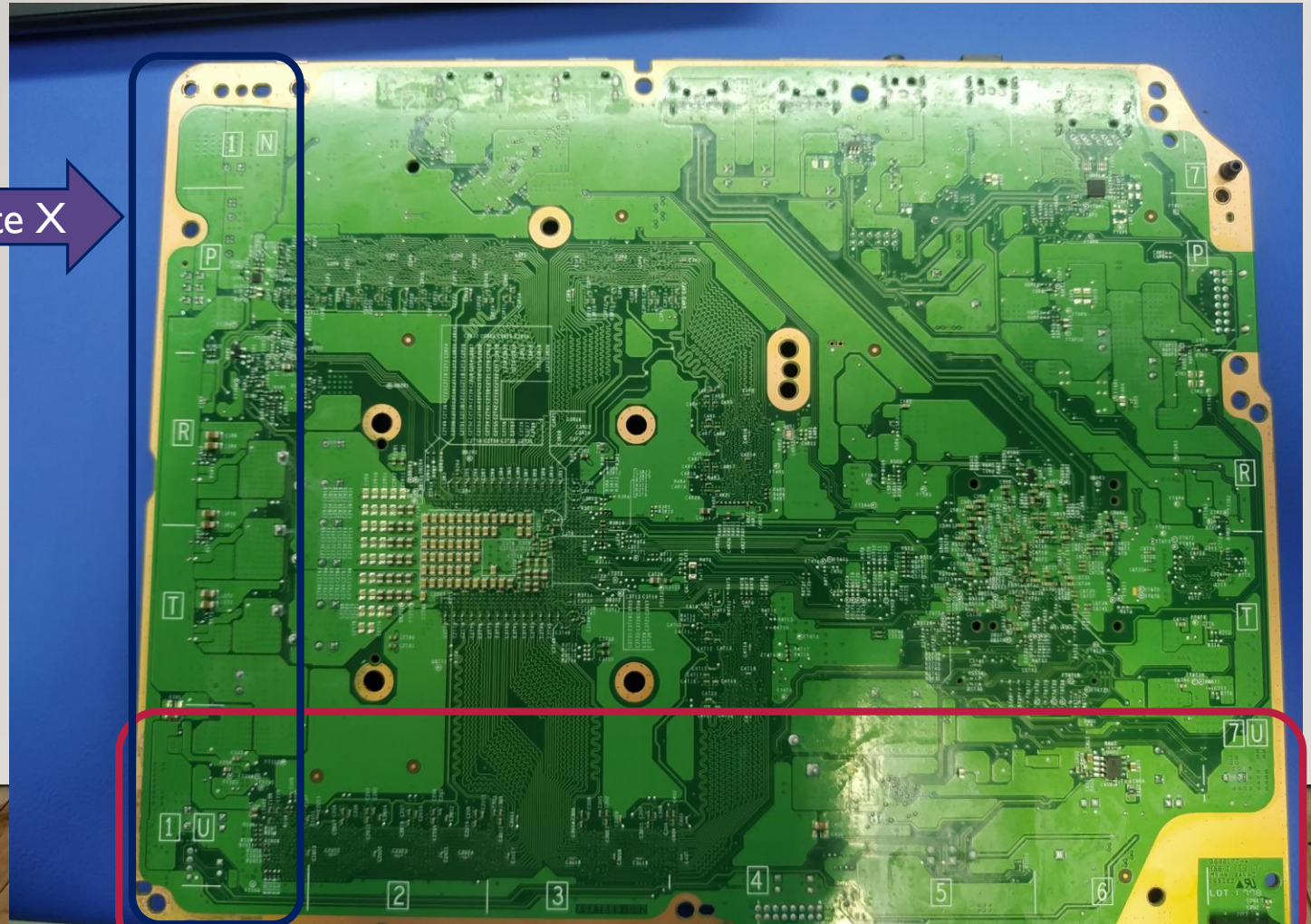
SIDE TOP OF ONE PCBA XBOX ONE S



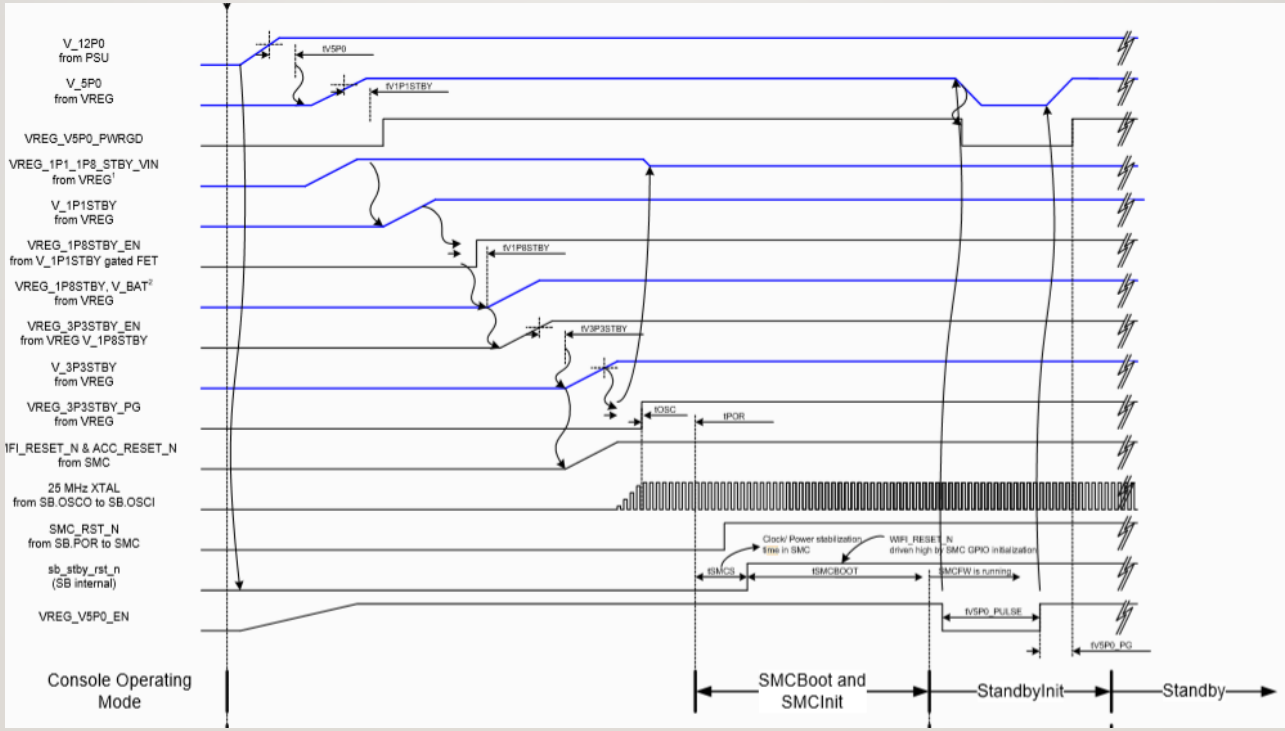
Coordenate X

Coordinate Y

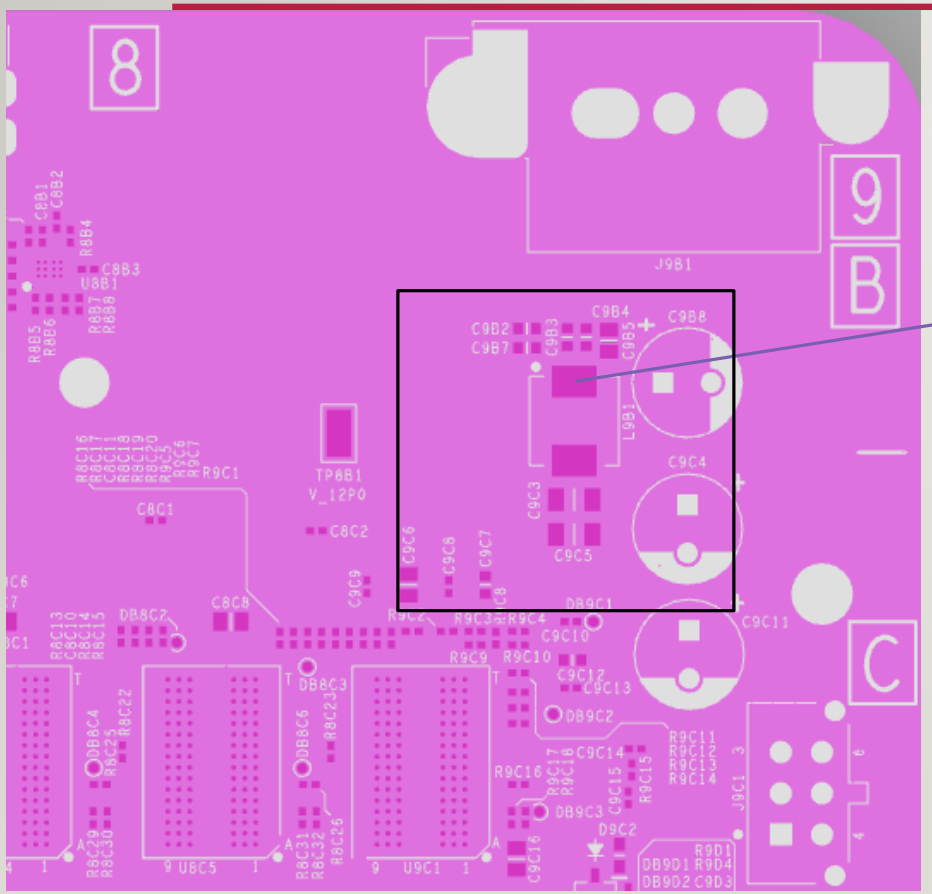
SIDE BOTTOM OF ONE PCBA XBOX ONE S

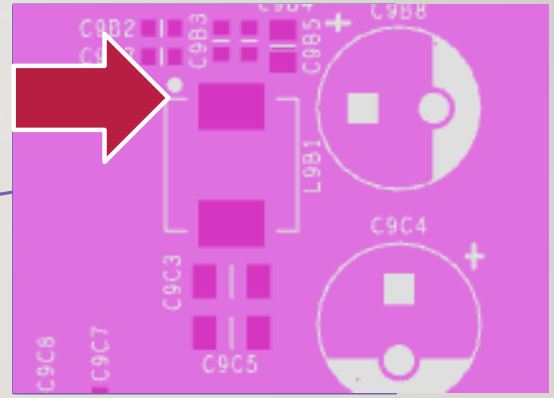


PO STBY


V_12P0
from PSU
V_5P0
from VREG
VREG_V5P0_PWRGD
VREG_1P1_1P8_STBY_VIN
from VREG[1]
V_1P1STBY
from VREG
VREG_1P8STBY_EN
from V_1P1STBY gated FET
VREG_1P8STBY, V_BAT[2]
from VREG
VREG_3P3STBY_EN
from VREG V_1P8STBY
V_3P3STBY
from VREG
VREG_3P3STBY_PG
from VREG
FI_RESET_N & ACC_RESET_N
from SMC
25 MHz XTAL
from SB.OSCO to SB.OSCI
SMC_RST_N
from SB.POR to SMC
sb_stby_rst_n
(SB internal)
VREG_V5P0_EN
tV5P0
tV1P1STBY
tV1P8STBY
tV3P3STBY
tOSC
tPOR
tSMCS
tSMCBOOT
tV5P0_PULSE
tV5P0_PG
Console Operating Mode
SMCBoot and SMCInit
StandbyInit
Standby

V_12P0

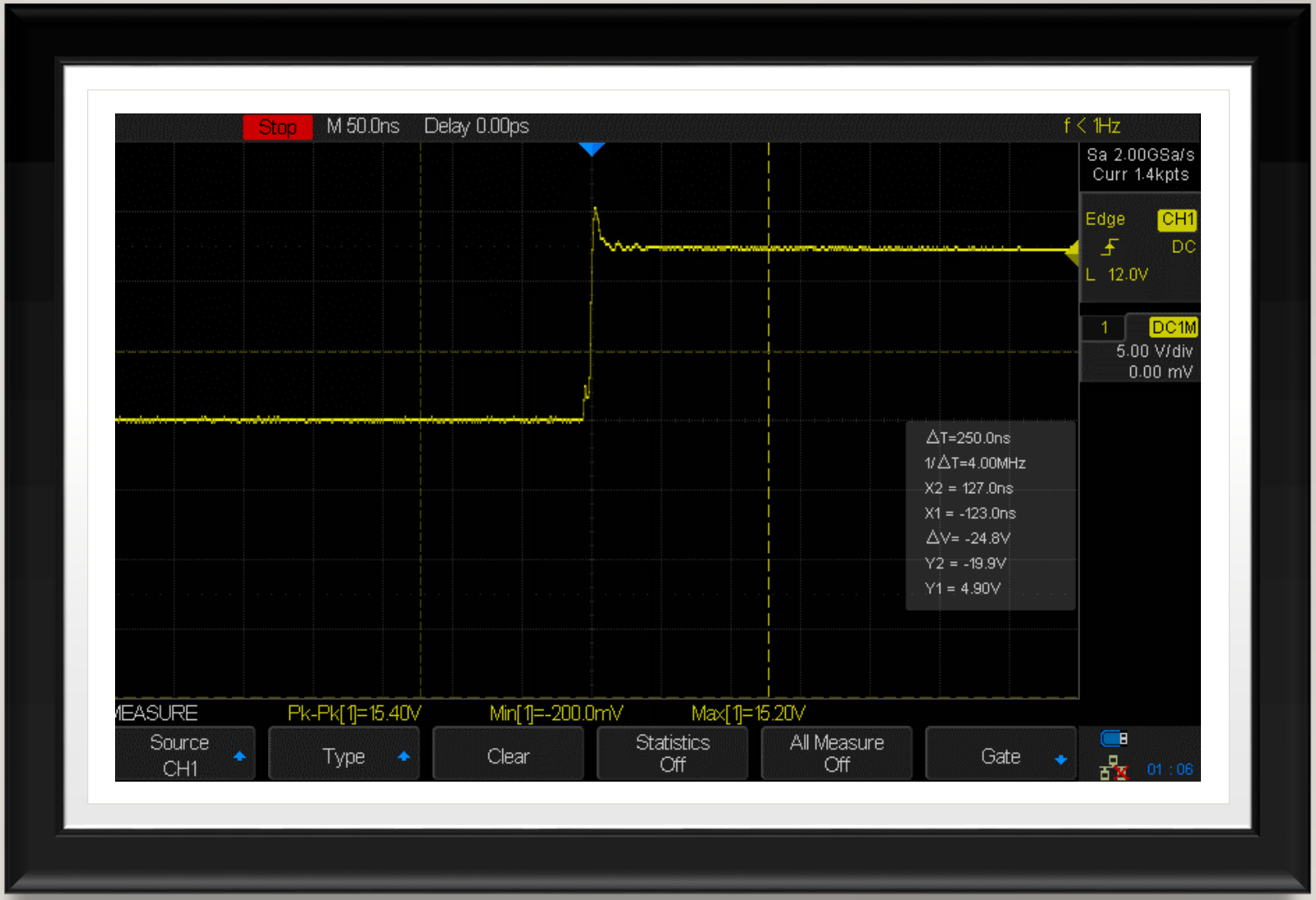




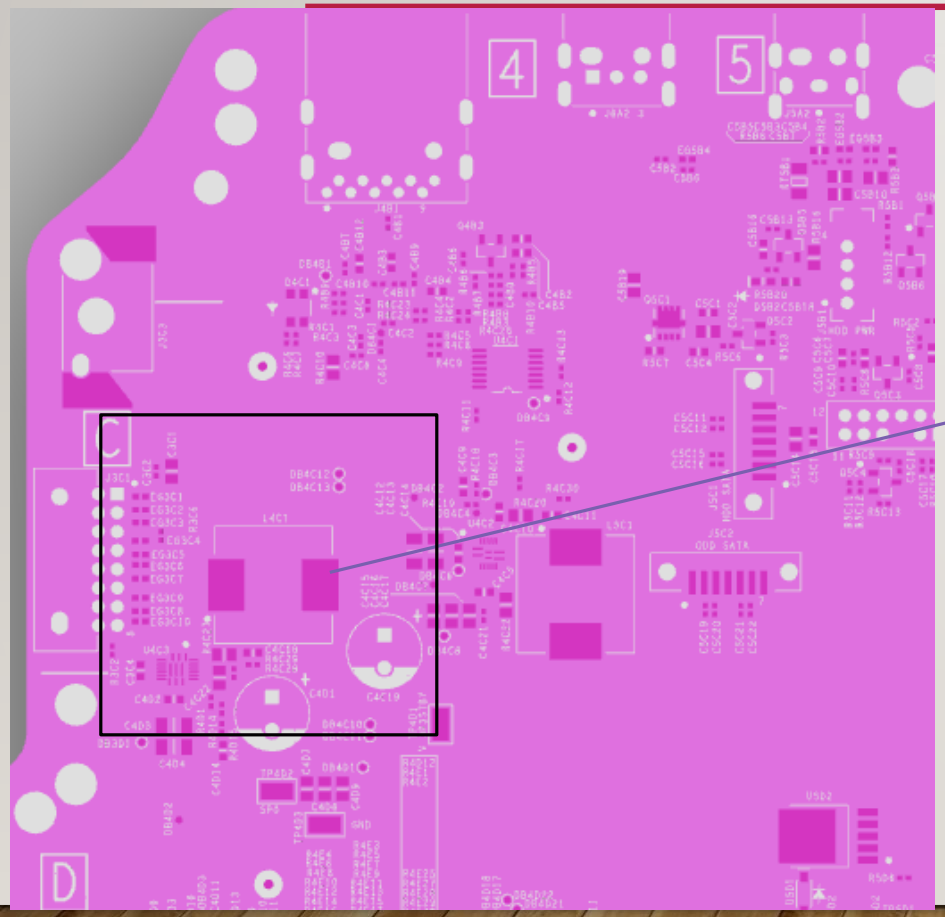
Components :
L9B1.1

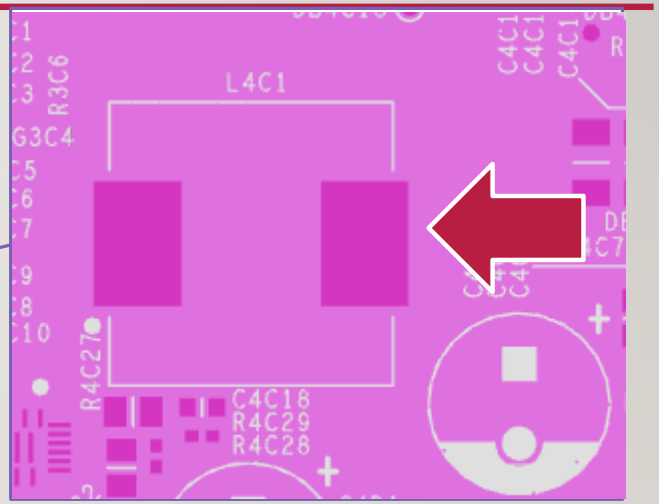
Impedance	Voltage
25 KΩ	12V

V_12P0


Stop
M 50.0ns
Delay 0.00ps
f < 1Hz
Sa 2.00GSa/s
Curr 1.4kpts
Edge
CH1
DC
L 12.0V
1
DC1M
5.00 V/div
0.00 mV
ΔT=250.0ns
1/ΔT=4.00MHz
X2 = 127.0ns
X1 = -123.0ns
ΔV= -24.8V
Y2 = -19.9V
Y1 = 4.90V
MEASURE
Pk-Pk[1]=15.40V
Min[1]=-200.0mV
Max[1]=15.20V
Source CH1
Type
Clear
Statistics Off
All Measure Off
Gate
01 : 06

V_5P0

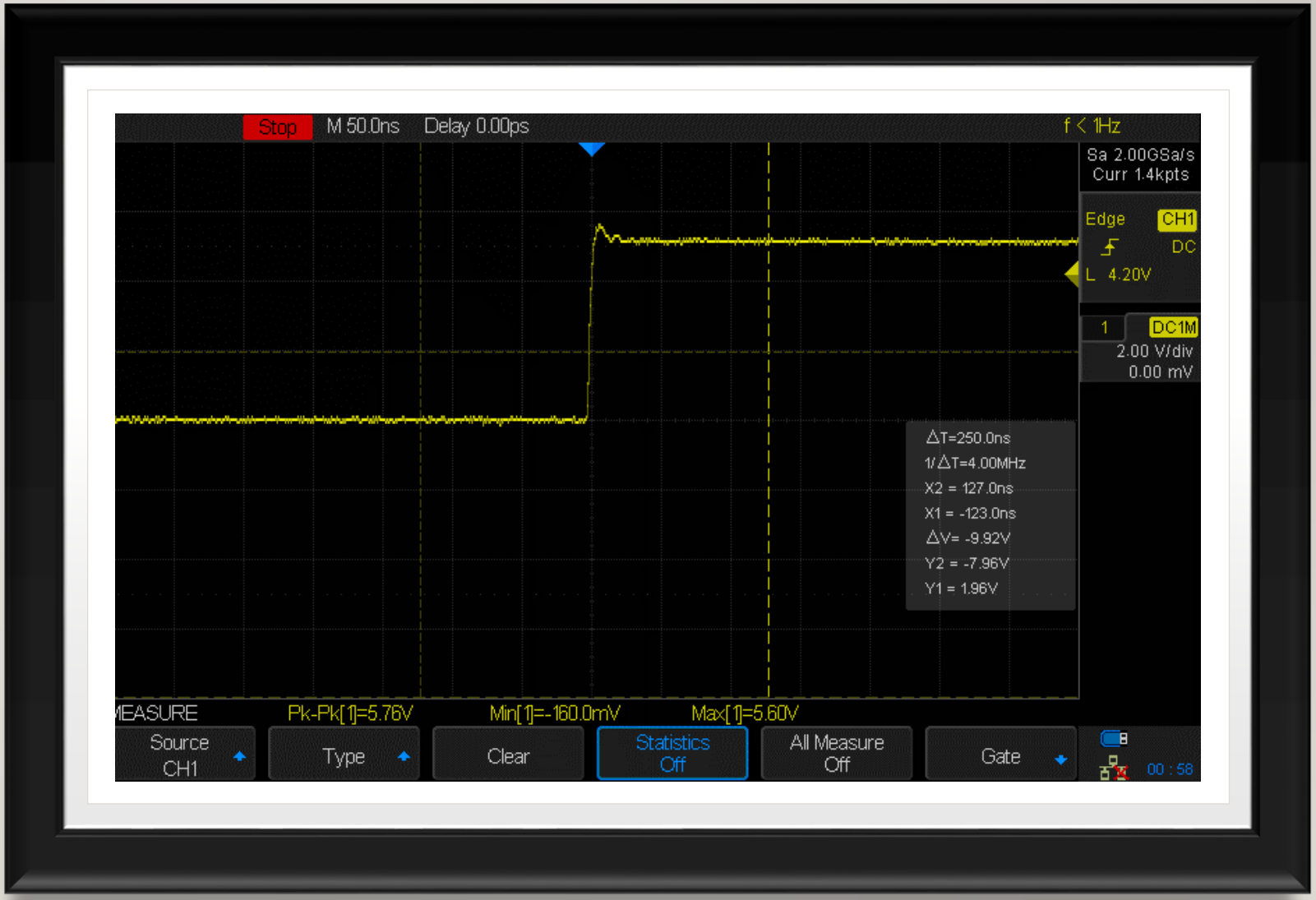




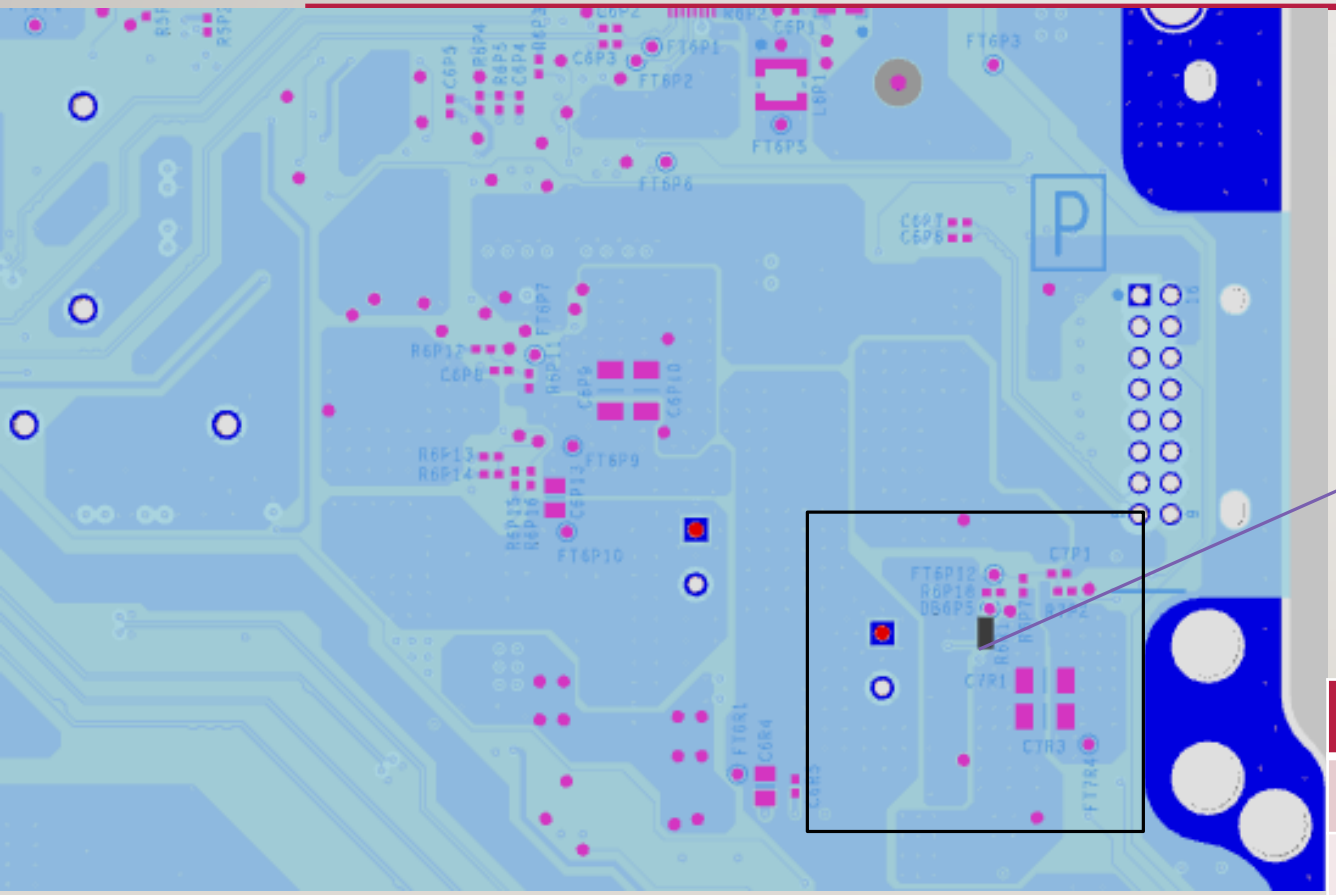
Components :
L4C1.2

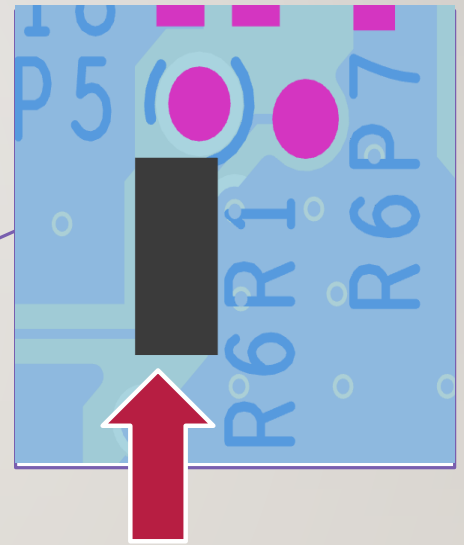
Impedance	Voltage
451Ω	5V

V_5P0


Stop
M 50.0ns
Delay 0.00ps
f < 1Hz
Sa 2.00GSa/s
Curr 1.4kpts
Edge
CH1
DC
L 4.20V
1
DC1M
2.00 V/div
0.00 mV
ΔT=250.0ns
1/ΔT=4.00MHz
X2 = 127.0ns
X1 = -123.0ns
ΔV= -9.92V
Y2 = -7.96V
Y1 = 1.96V
MEASURE
Pk-Pk[1]=5.76V
Min[1]=-160.0mV
Max[1]=5.60V
Source CH1
Type
Clear
Statistics Off
All Measure Off
Gate
00 : 58

VREG_V5P0_PWRGD



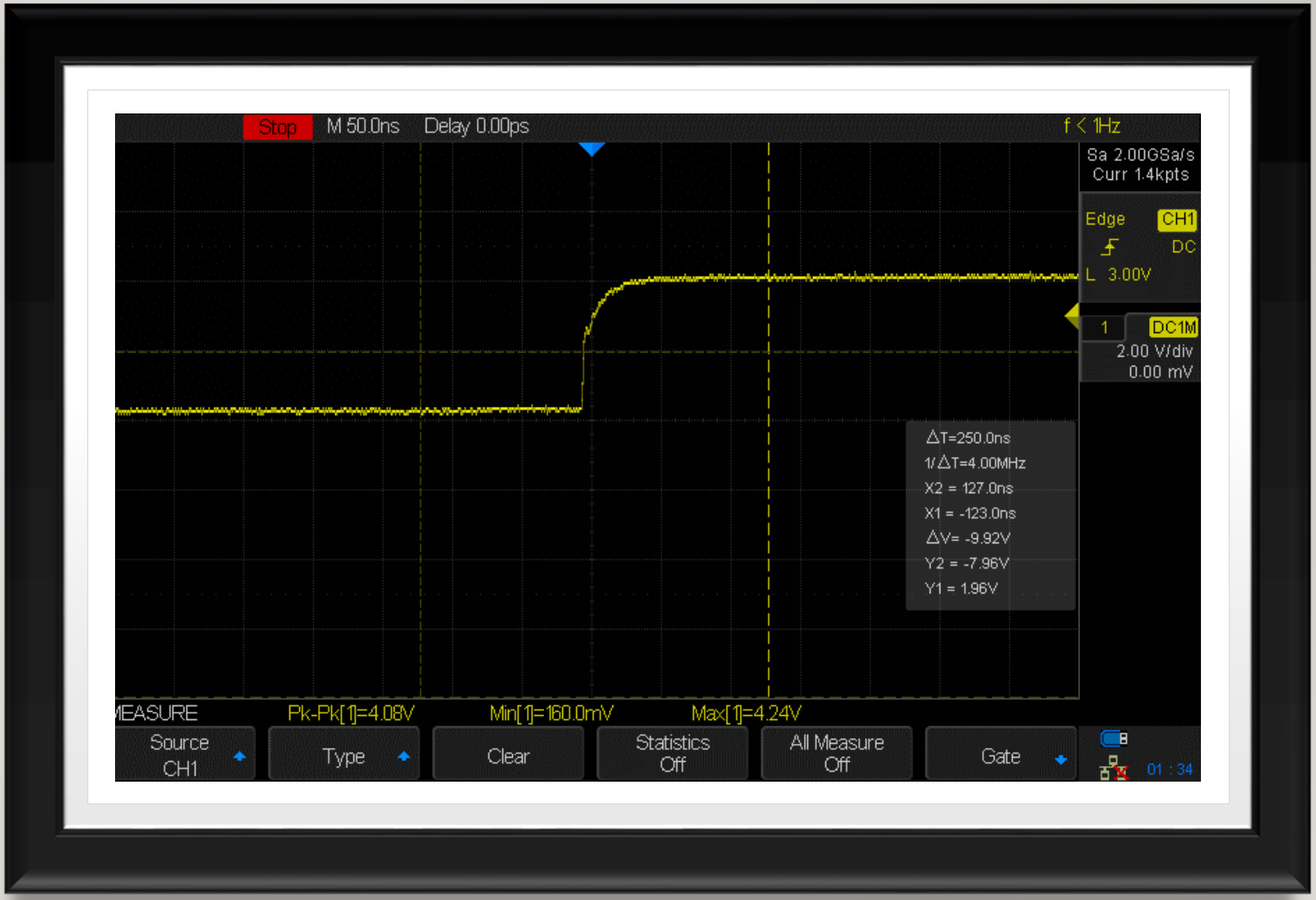


Components :

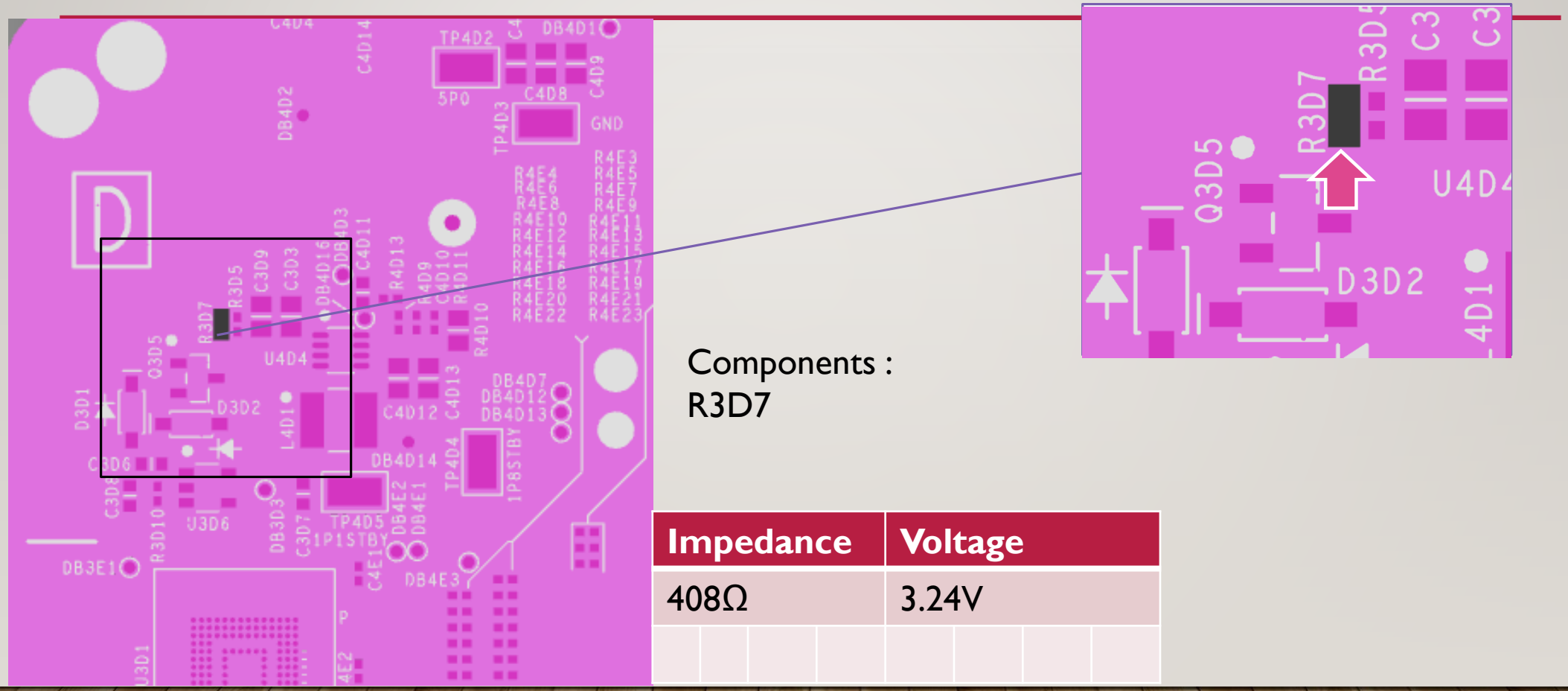
R6R1.2

Impedance	Voltage
36.7kΩ	4.08V

VREG_V5P0_PWRGD

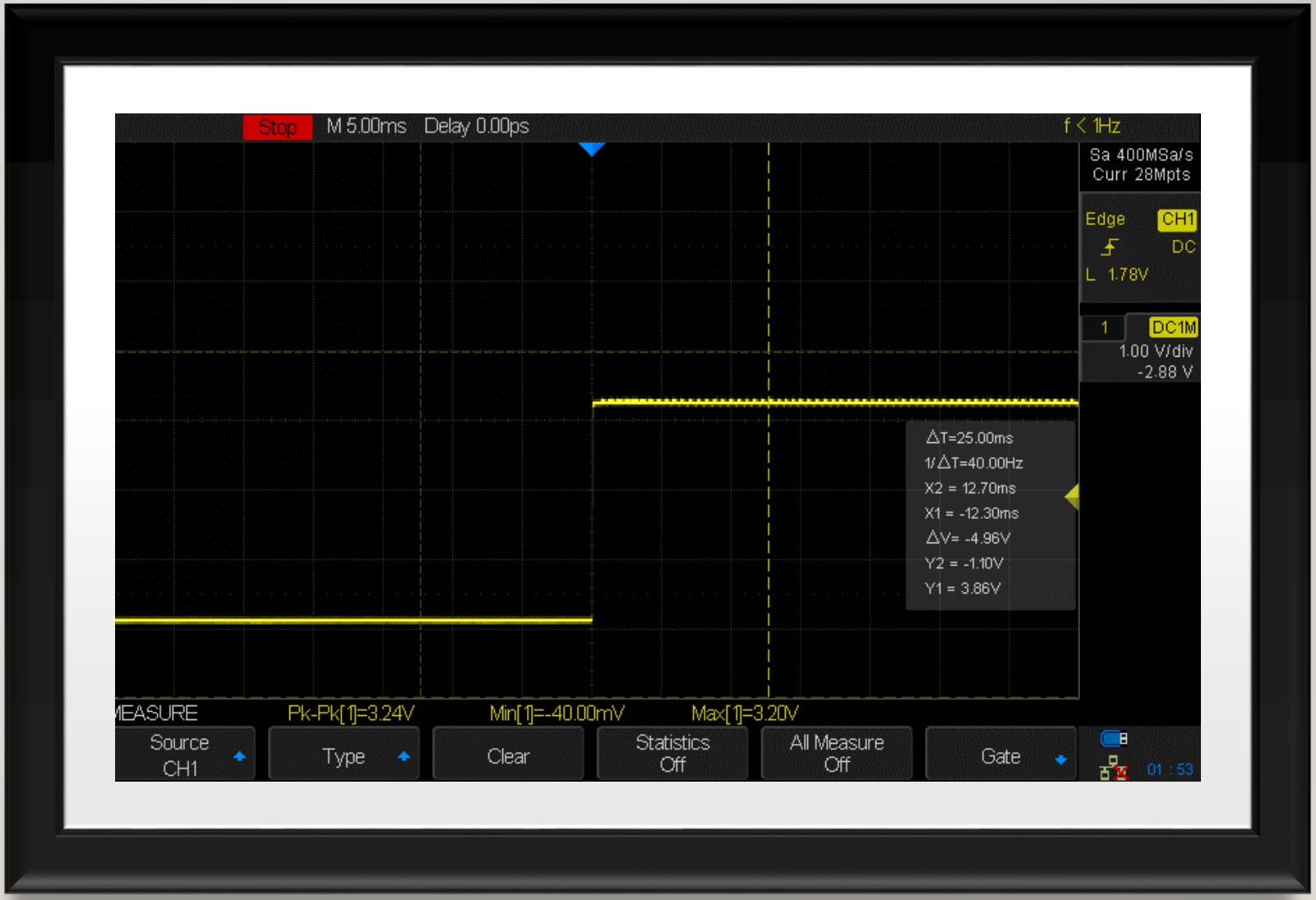


VREG_1P1_1P8_STBY_VIN

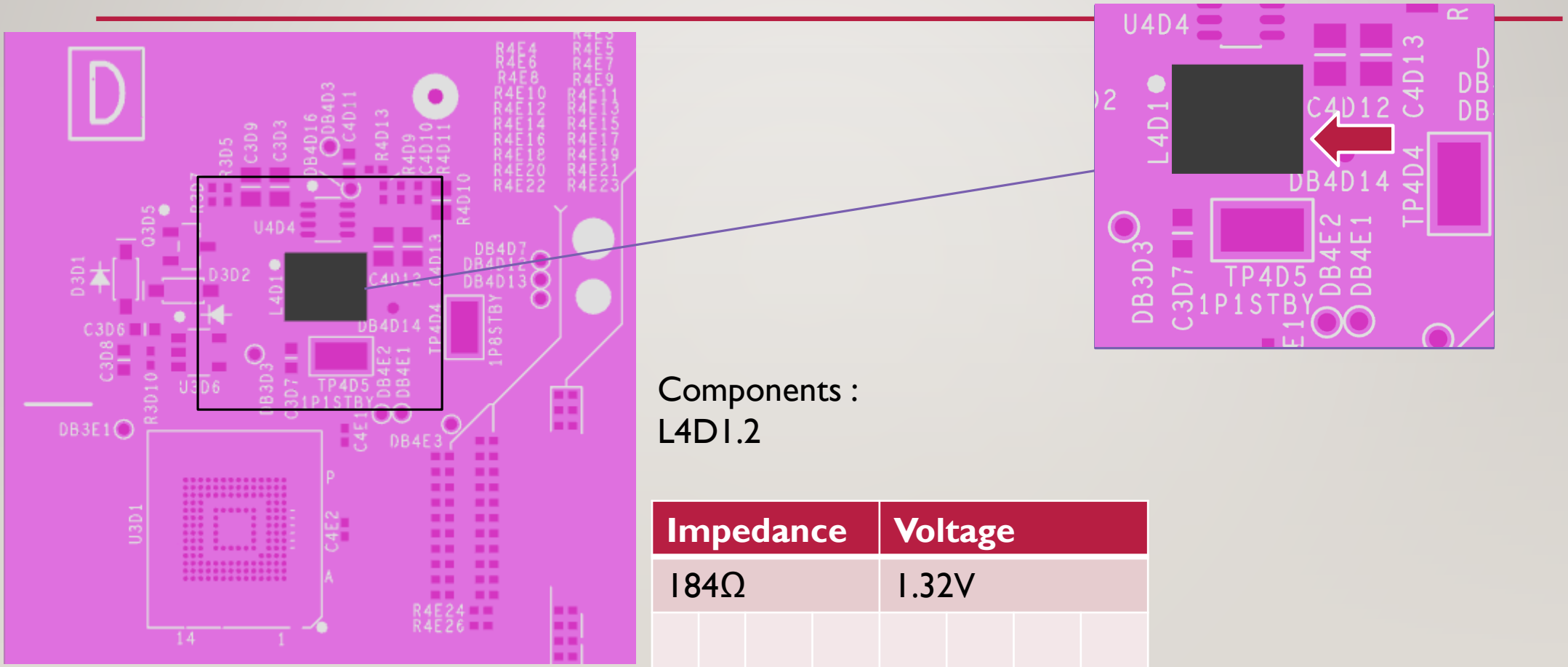


Impedance	Voltage
408Ω	3.24V

VREG_1P1_1P8_STBY_VIN



V_1P1STBY



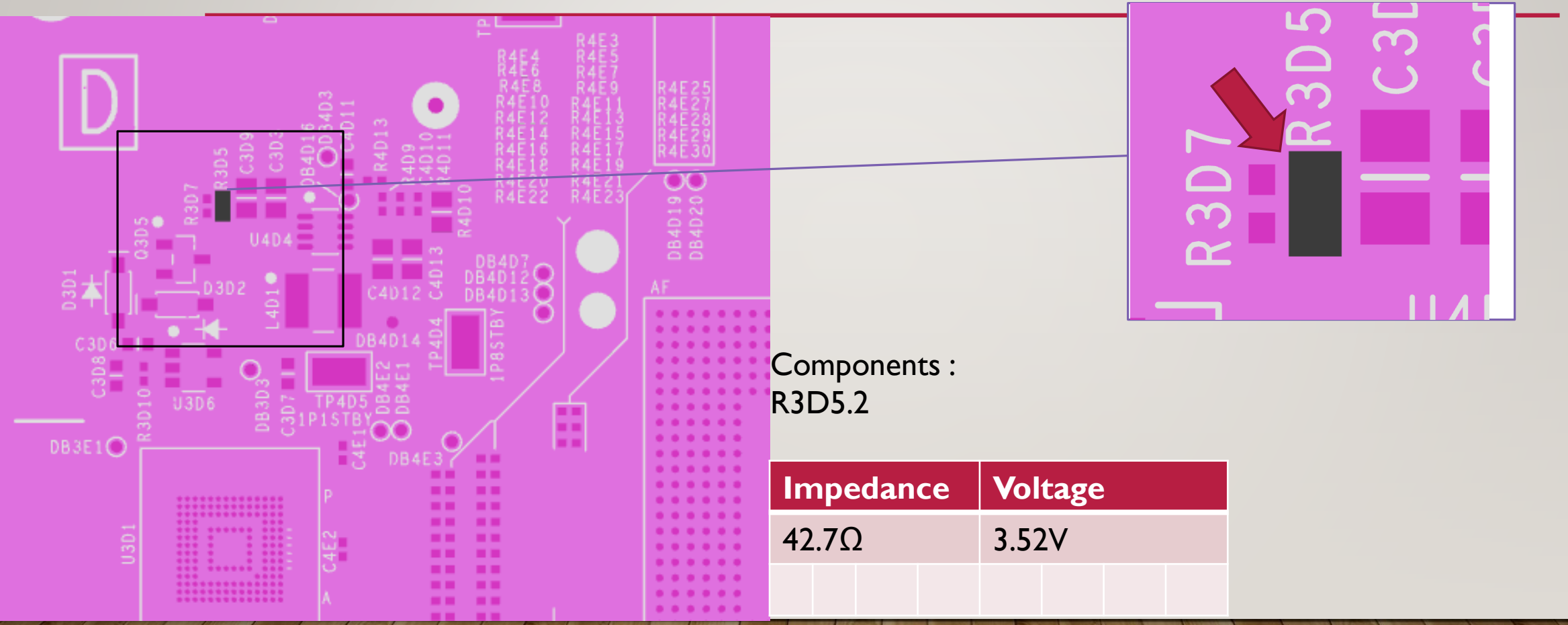
Components :
L4D1.2

Impedance	Voltage
184Ω	1.32V

V_IPISTBY


Stop
M 10.0µs
Delay 0.00ps
f < 1Hz
Sa 2.00GSa/s
Curr 280kpts
Edge
CH1
DC
L 980mV
1
DC1M
500 mV/div
-1.44 V
ΔT=50.00µs
X2 = 25.40µs
X1 = -24.60µs
ΔV= -2.46V
Y2 = -530mV
Y1 = 1.93V
UTO SETUP
Pk-Pk[1]=1.32V
Min[1]=-40.00mV
Max[1]=1.28V
02 : 06

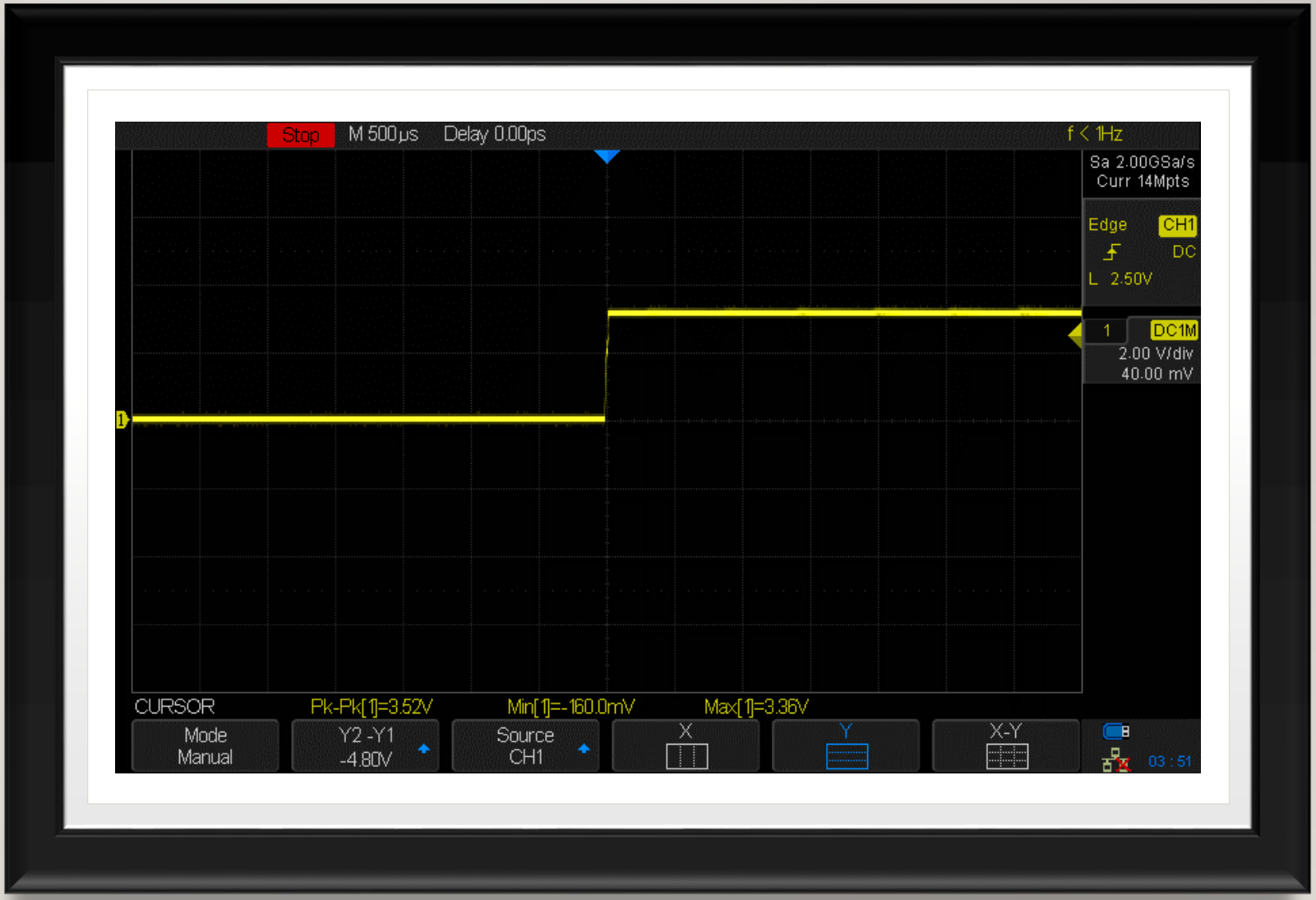
VREG_1P8STBY_EN



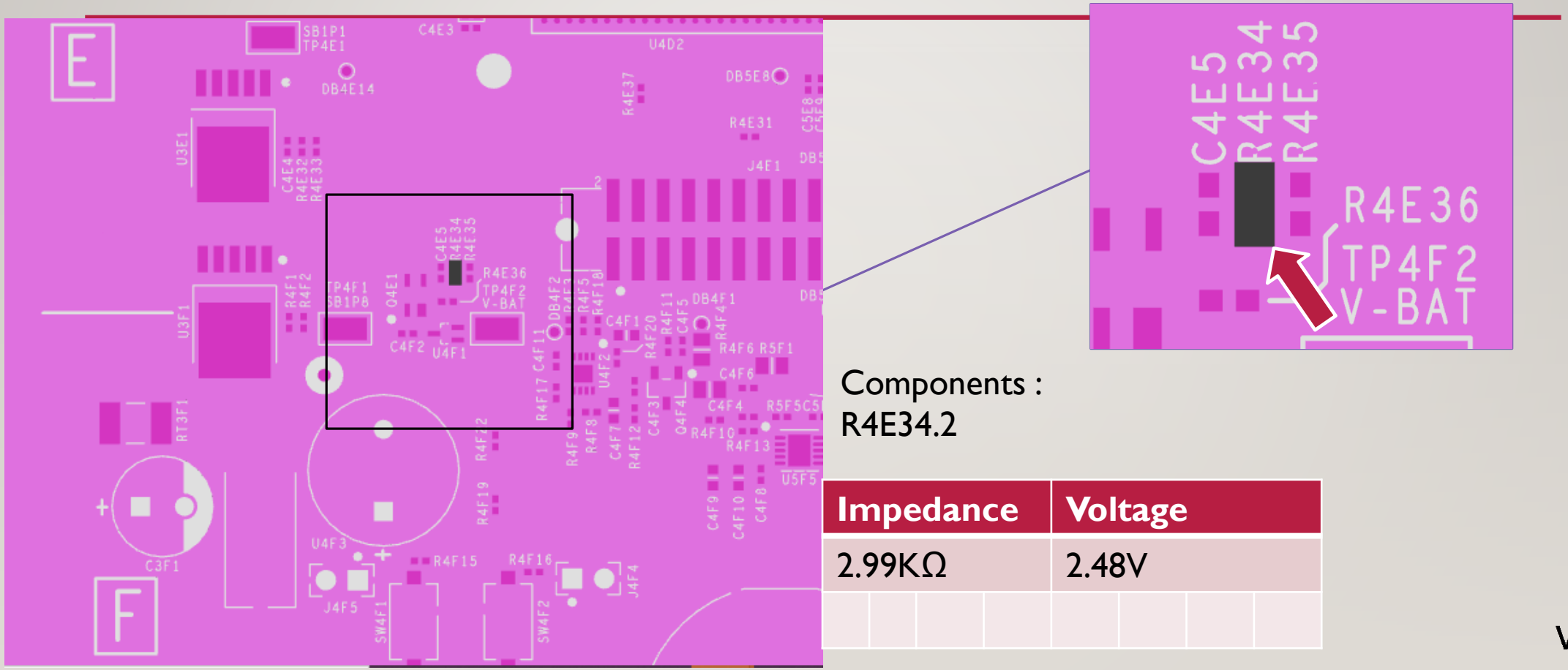
Components :
R3D5.2

Impedance	Voltage
42.7Ω	3.52V

VREG_1P8STBY_EN



V_BAT

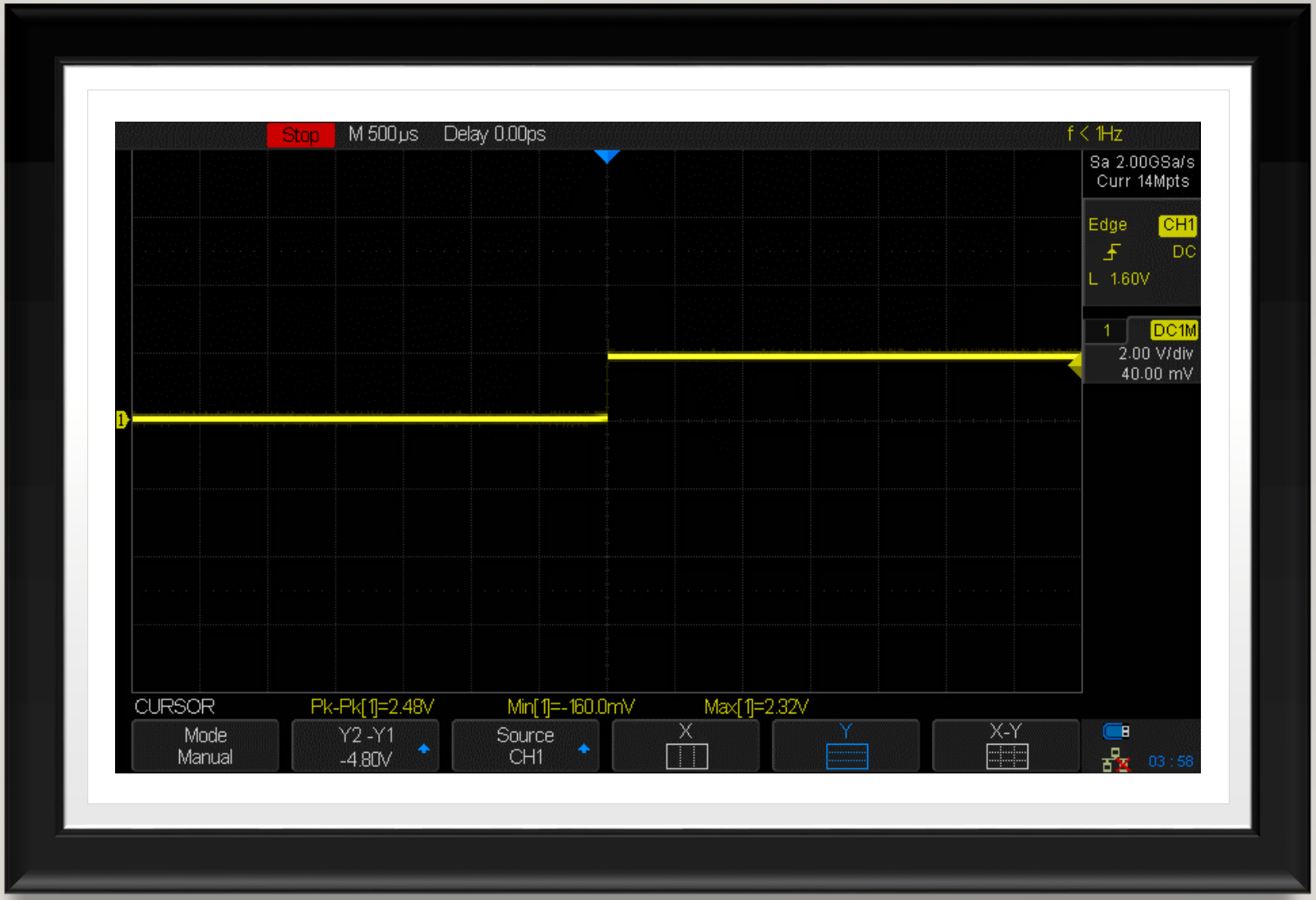


Components :
R4E34.2

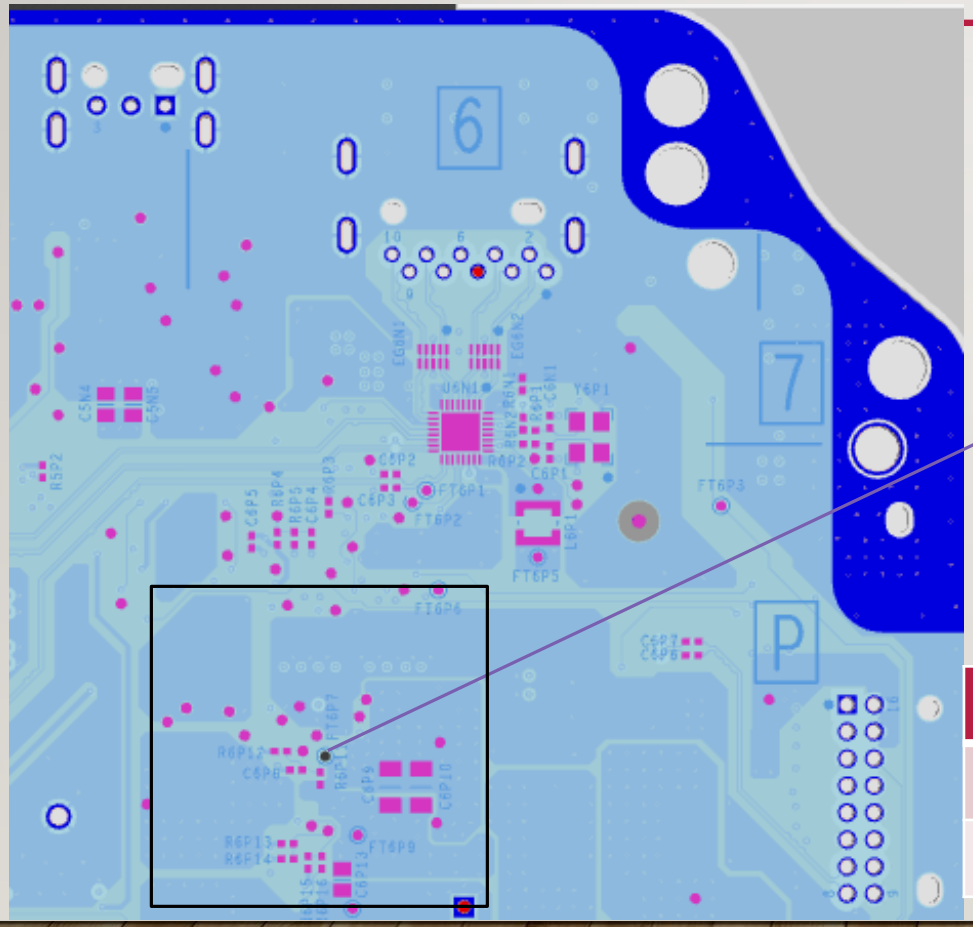
Impedance	Voltage
2.99KΩ	2.48V

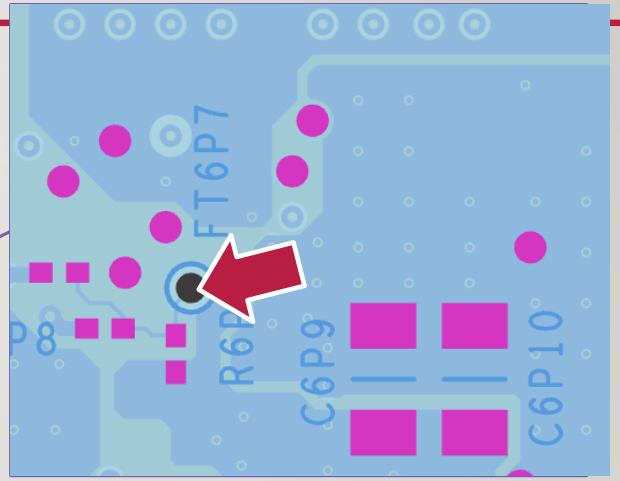
V_BAT.txt

V_BAT


Stop
M 500µs
Delay 0.00ps
f < 1Hz
Sa 2.00GSa/s
Curr 14Mpts
Edge
CH1
DC
L 1.60V
1
DC1M
2.00 V/div
40.00 mV
CURSOR
Pk-Pk[1]=2.48V
Min[1]=-160.0mV
Max[1]=2.32V
Mode
Manual
Y2 -Y1
-4.80V
Source
CH1
X
Y
X-Y
03 : 58

VREG_3P3STBY_EN

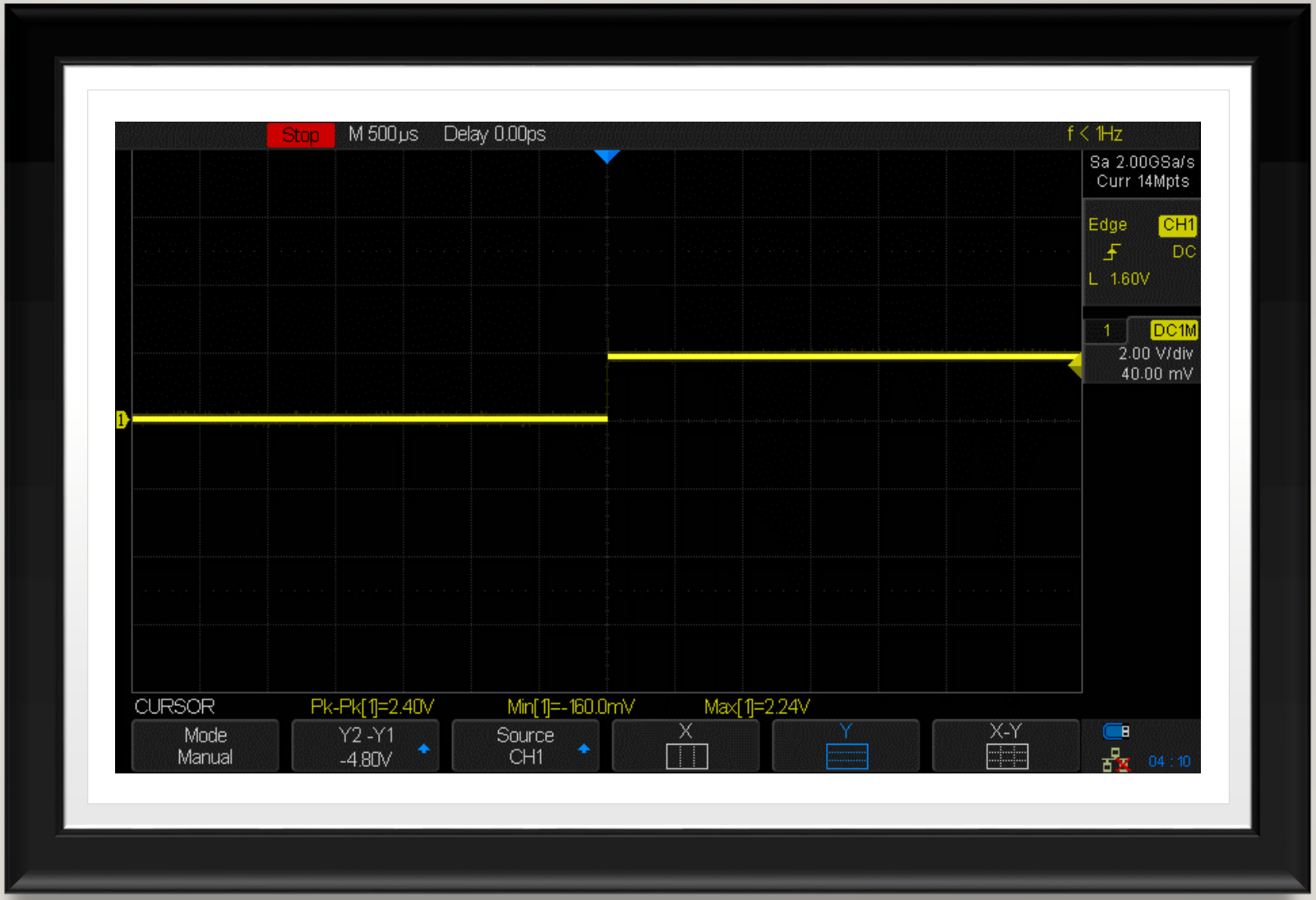




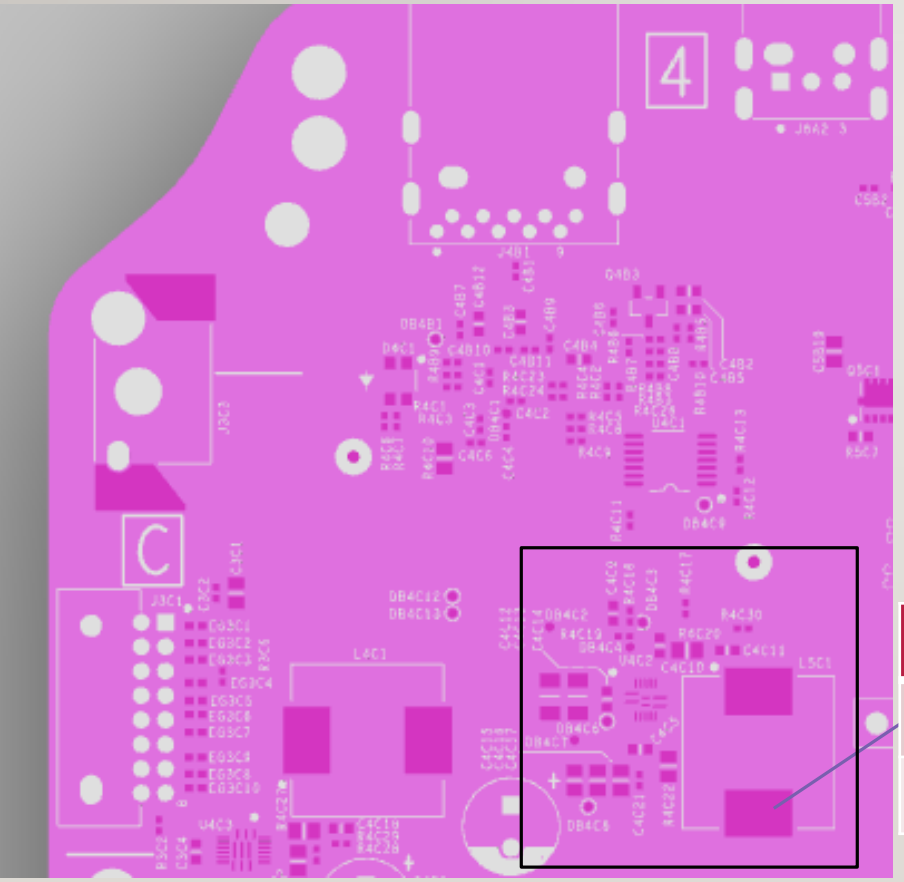
Components :
FT6P7

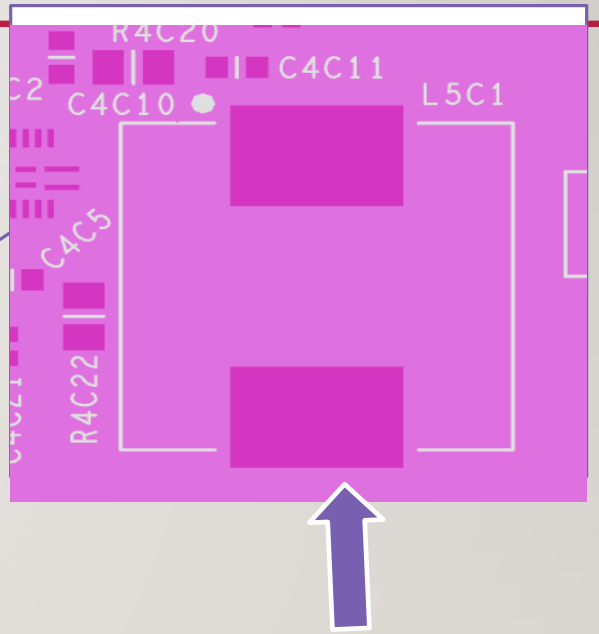
Impedance	Voltage
2.99KΩ	2.40V

VREG_3P3STBY_EN



V_3P3STBY



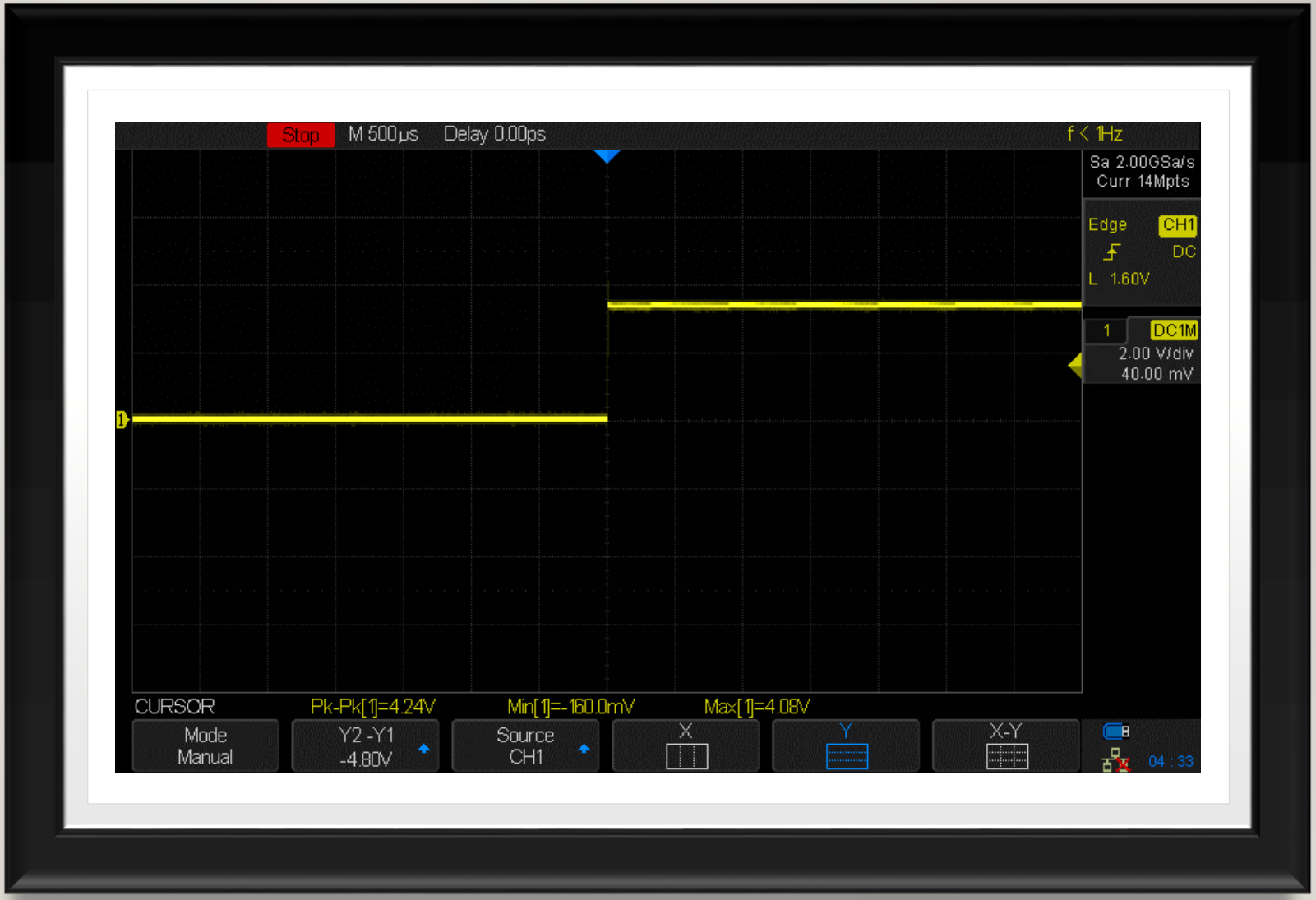


Components :
L5C1.2

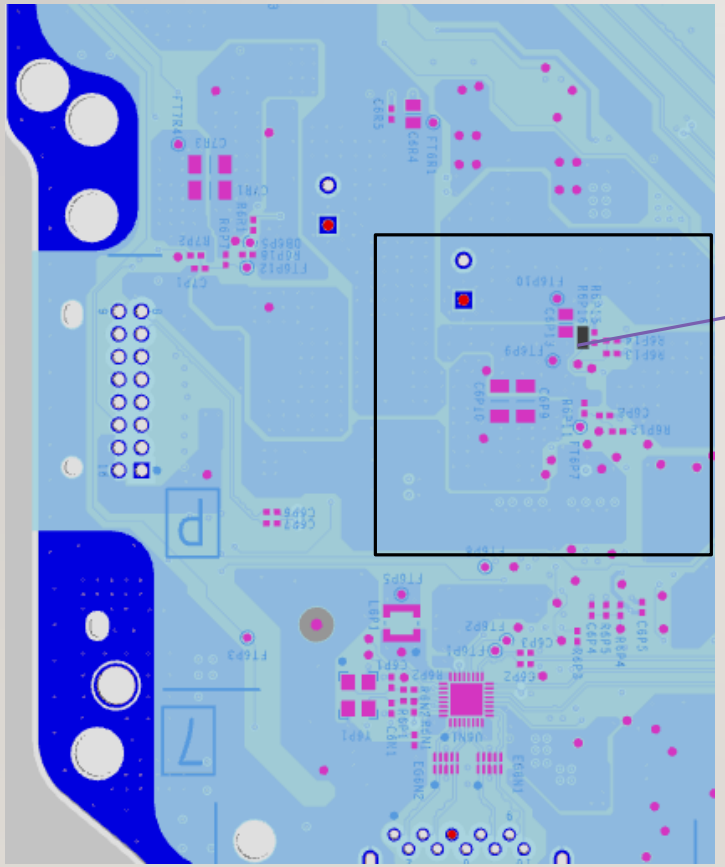
Impedance	Voltage
1.9KΩ	3.8V

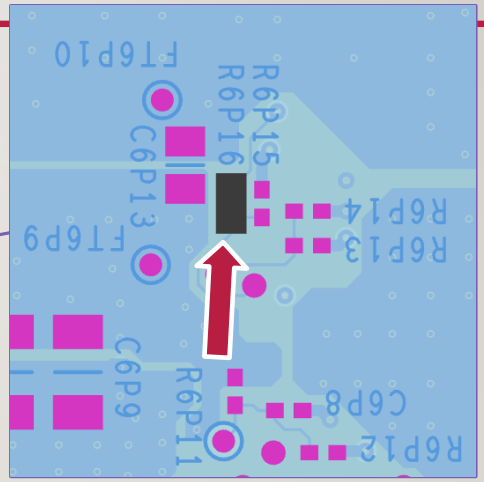
V_3P3STBY.txt

V_3P3STBY


Stop
M 500µs
Delay 0.00ps
f < 1Hz
Sa 2.00GSa/s
Curr 14Mpts
Edge
CH1
DC
L 1.60V
1
DC1M
2.00 V/div
40.00 mV
CURSOR
Pk-Pk[1]=4.24V
Min[1]=-160.0mV
Max[1]=4.08V
Mode
Manual
Y2 -Y1
-4.80V
Source
CH1
X
Y
X-Y
04 : 33

VREG_3P3STBY_PG



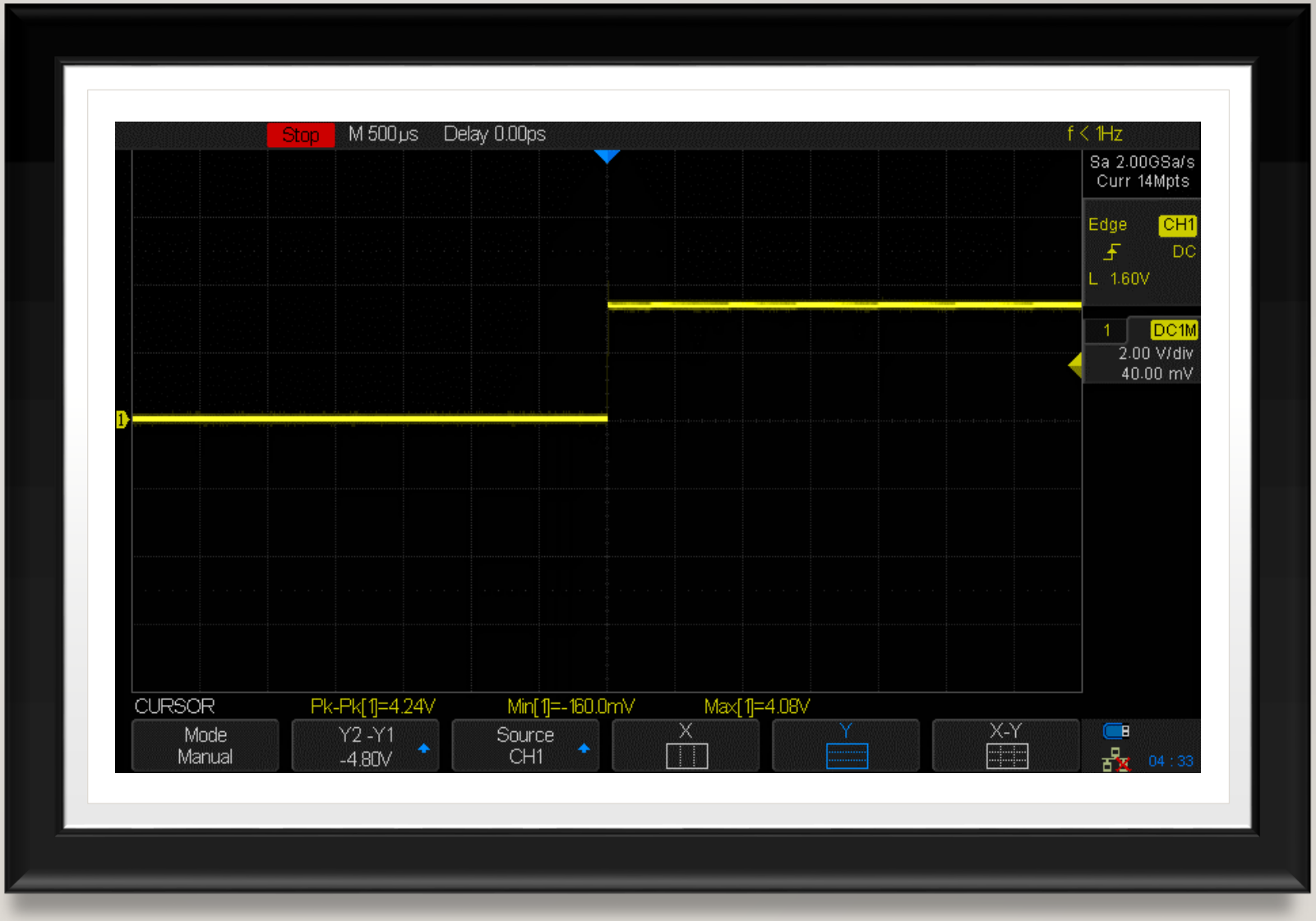


Components :

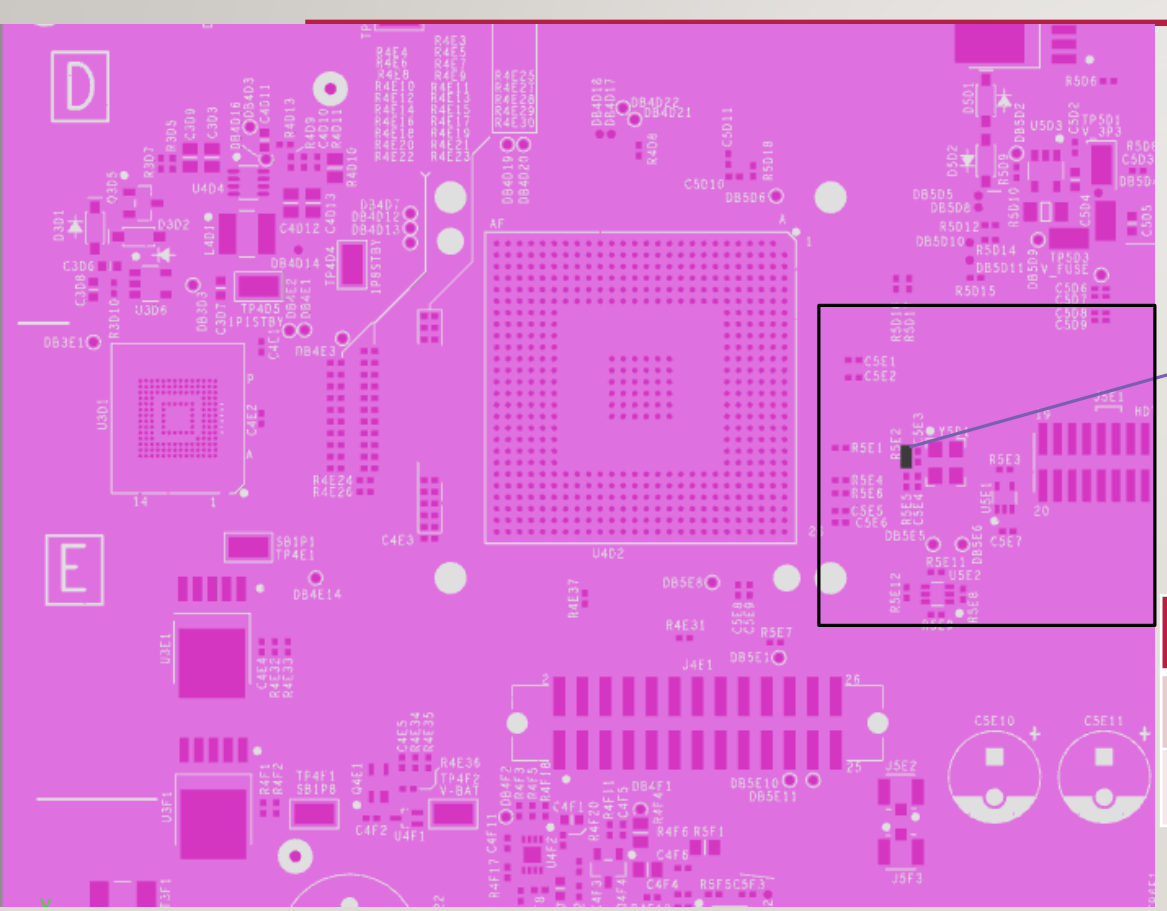
R6P16.2

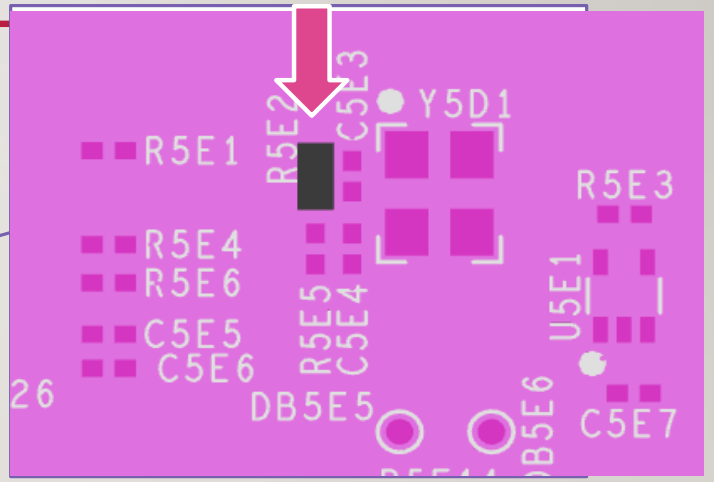
Impedance	Voltage
47KΩ	3.8V

VREG_3P3STBY_PG



25 MHZ XTAL

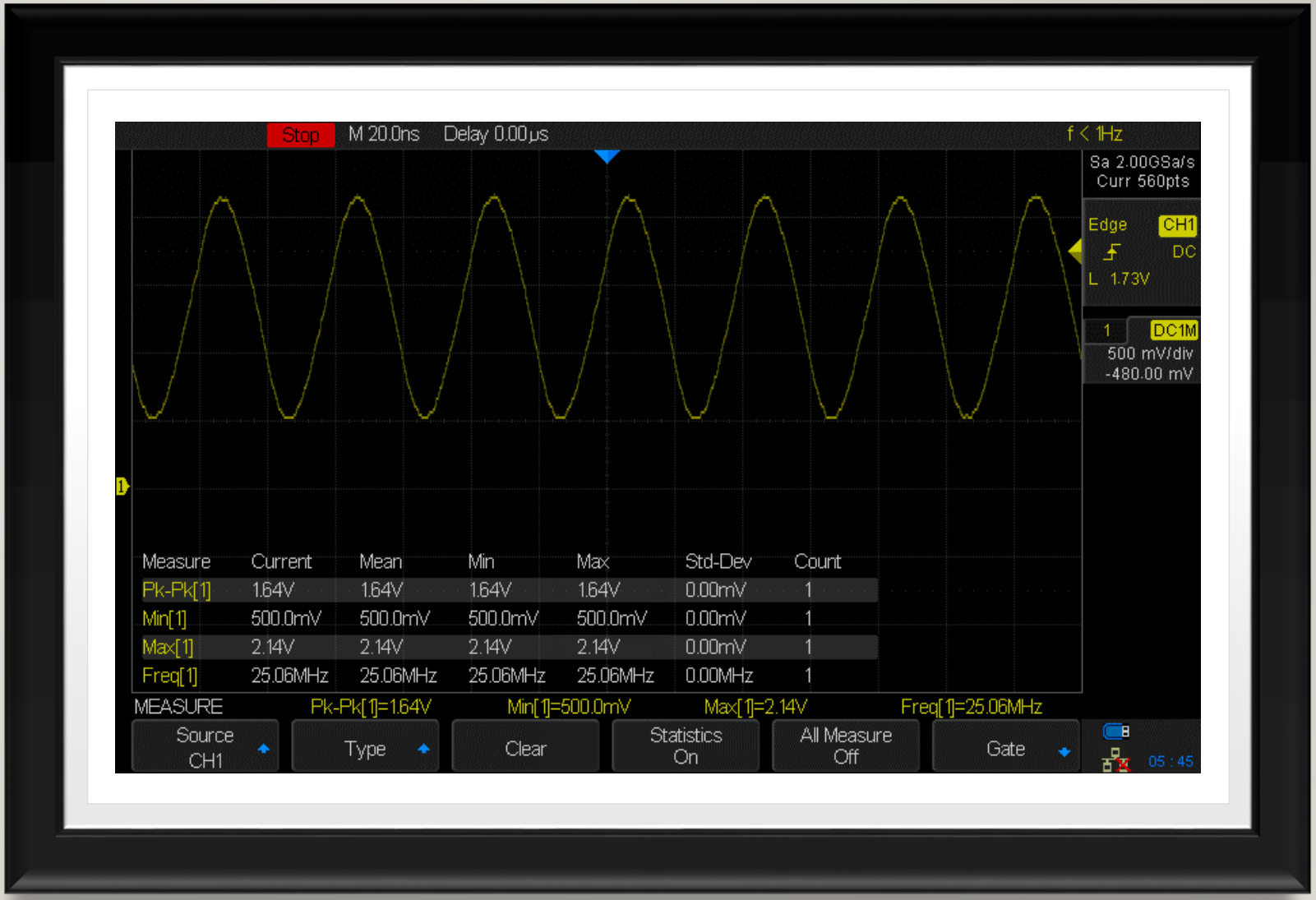




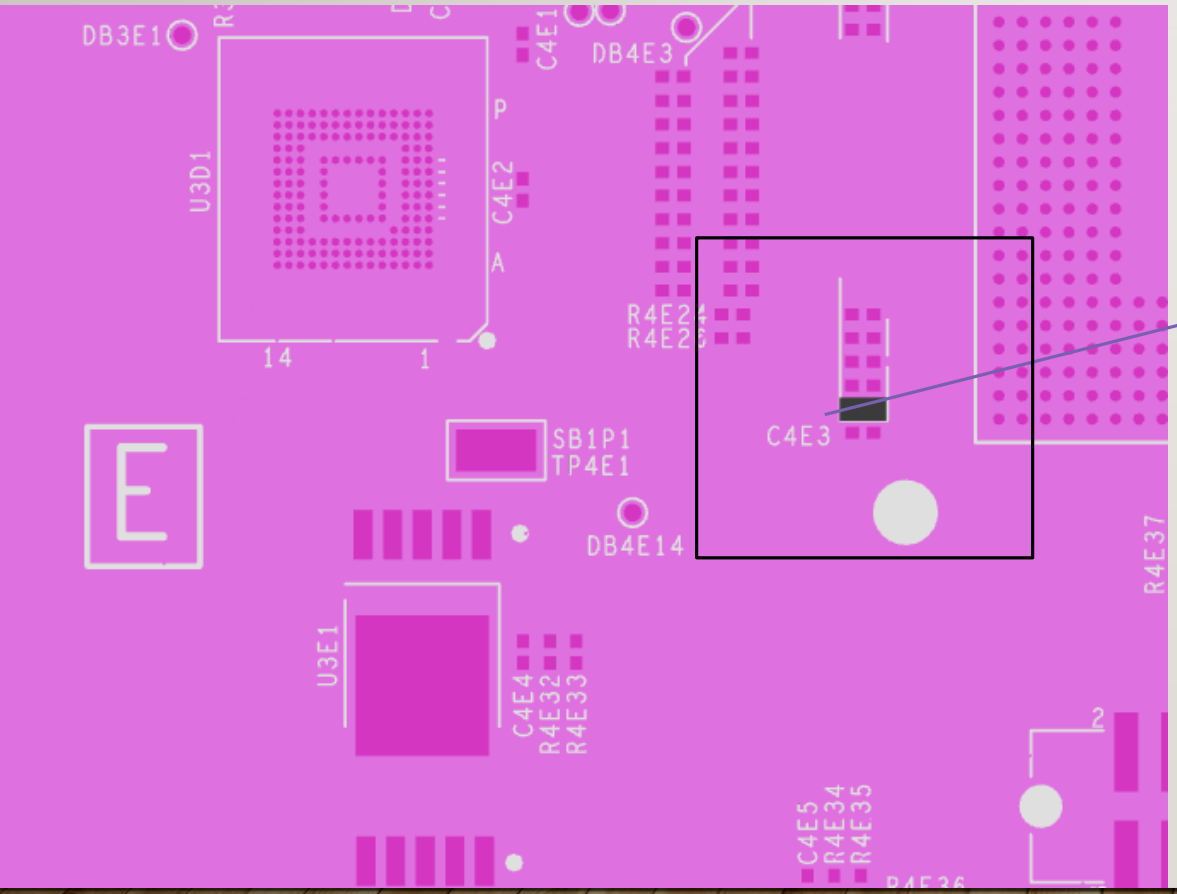
Components :

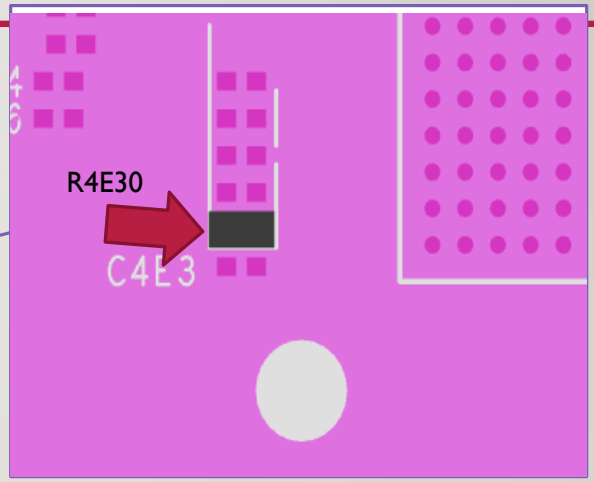
Impedance	Voltage
40.5KΩ	1.64V

25 MHZ XTAL


Stop
M 20.0ns
Delay 0.00µs
f < 1Hz
Sa 2.00GSa/s
Curr 560pts
Edge
CH1
DC
L 1.73V
1
DC1M
500 mV/div
-480.00 mV
Measure Current Mean Min Max Std-Dev Count
Pk-Pk[1] 1.64V 1.64V 1.64V 1.64V 0.00mV 1
Min[1] 500.0mV 500.0mV 500.0mV 500.0mV 0.00mV 1
Max[1] 2.14V 2.14V 2.14V 2.14V 0.00mV 1
Freq[1] 25.06MHz 25.06MHz 25.06MHz 25.06MHz 0.00MHz 1
MEASURE
Pk-Pk[1]=1.64V
Min[1]=500.0mV
Max[1]=2.14V
Freq[1]=25.06MHz
Source CH1
Type
Clear
Statistics On
All Measure Off
Gate
05 : 45

SMC_RST_N

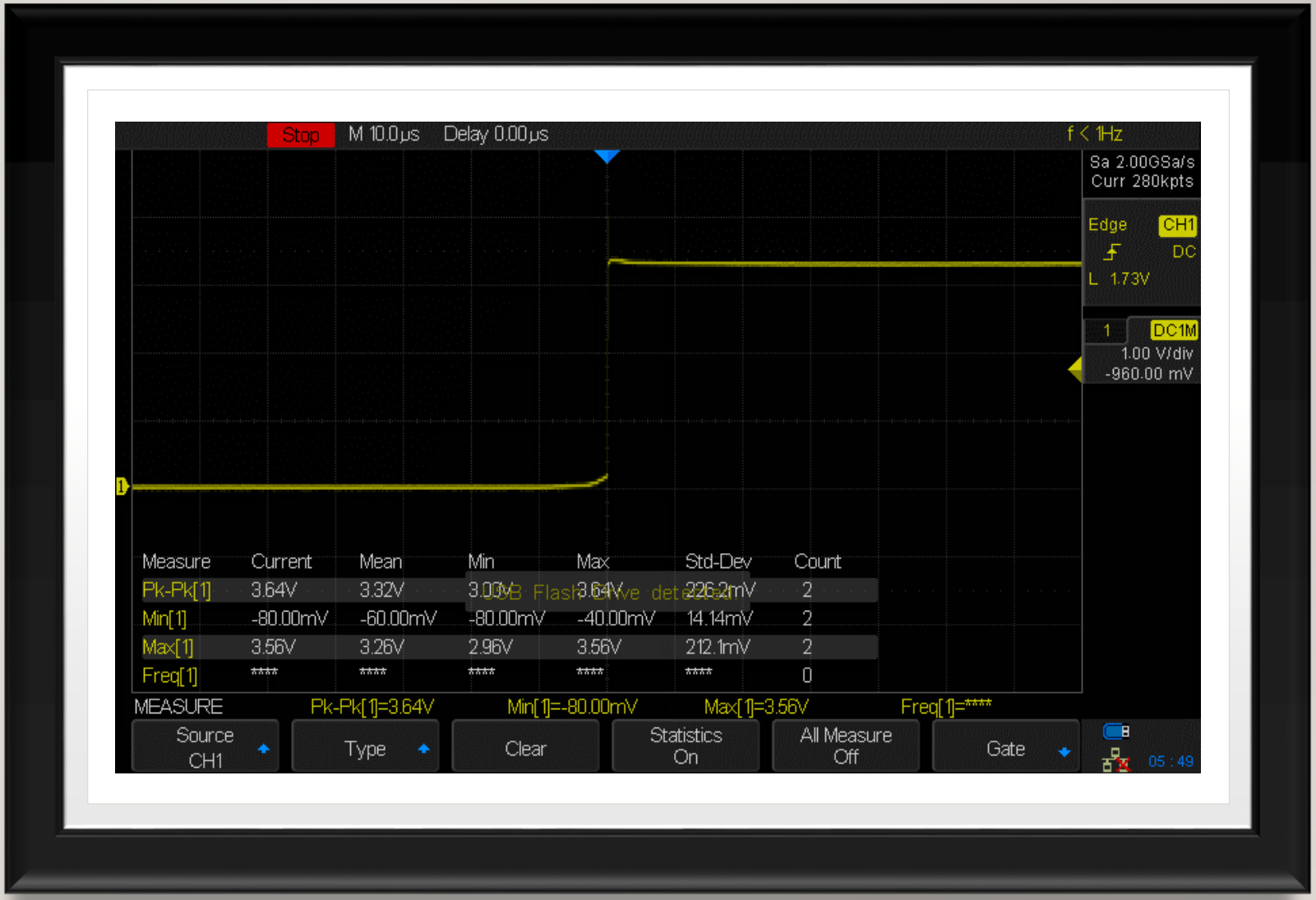




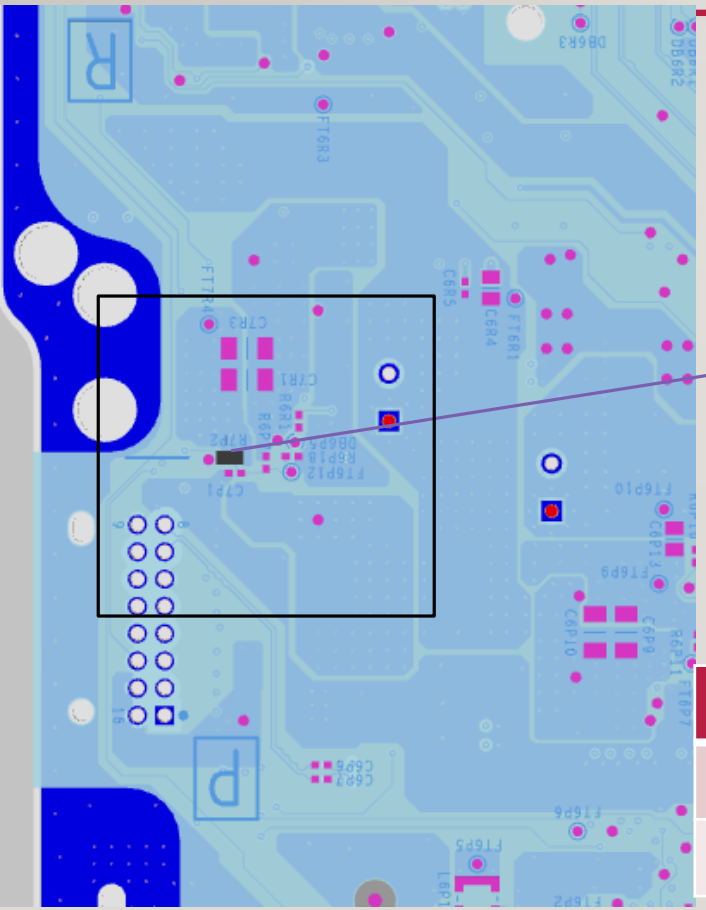
Components :
R4E30.2

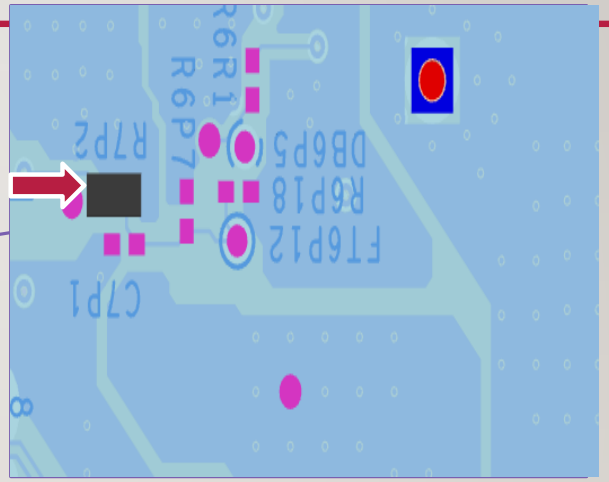
Impedance	Voltage
30KΩ	3.3V

SMC_RST_N


Stop
M 10.0µs
Delay 0.00µs
f < 1Hz
Sa 2.00GSa/s
Curr 280kpts
Edge
CH1
DC
L 1.73V
1
DC1M
1.00 V/div
-960.00 mV
Measure Current Mean Min Max Std-Dev Count
Pk-Pk[1] 3.64V 3.32V 3.00V 3.64V 226.2mV 2
Min[1] -80.00mV -60.00mV -80.00mV -40.00mV 14.14mV 2
Max[1] 3.56V 3.26V 2.96V 3.56V 212.1mV 2
Freq[1] **** **** **** **** **** 0
MEASURE
Pk-Pk[1]=3.64V
Min[1]=-80.00mV
Max[1]=3.56V
Freq[1]=****
Source CH1
Type
Clear
Statistics On
All Measure Off
Gate
05 : 49

VREG_V5P0_EN

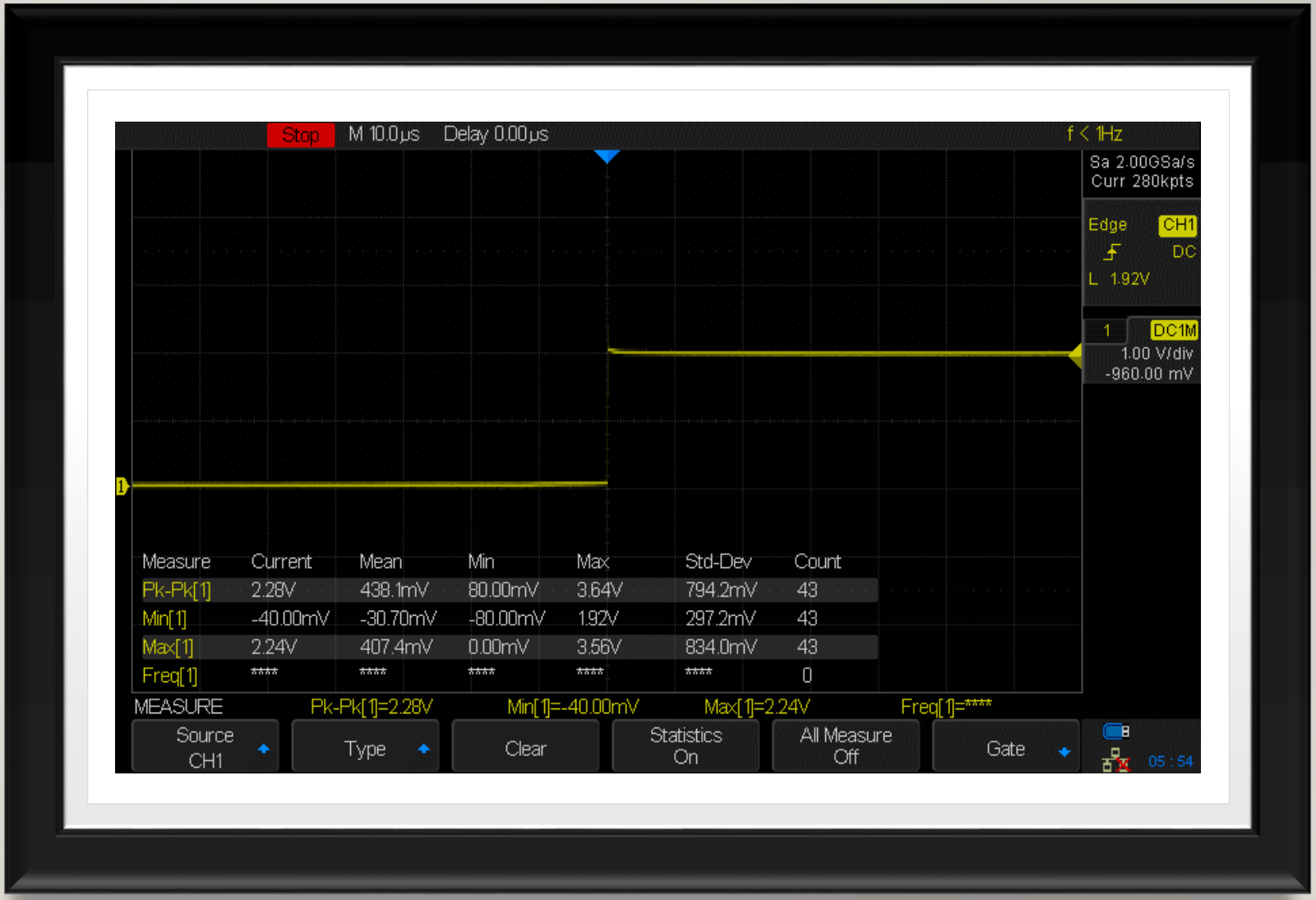




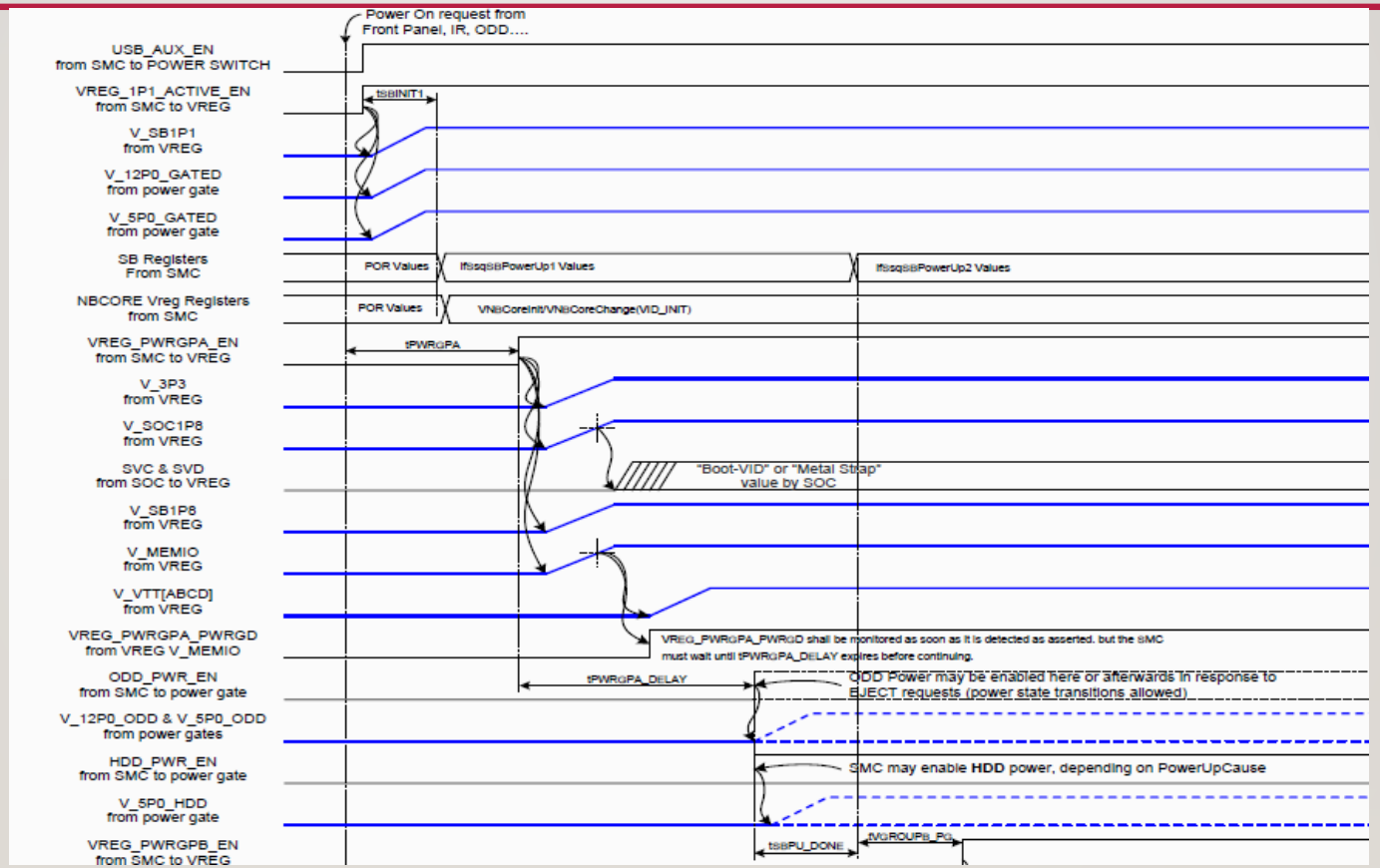
Components :
R7P2.1

Impedance	Voltage
16.30KΩ	2V

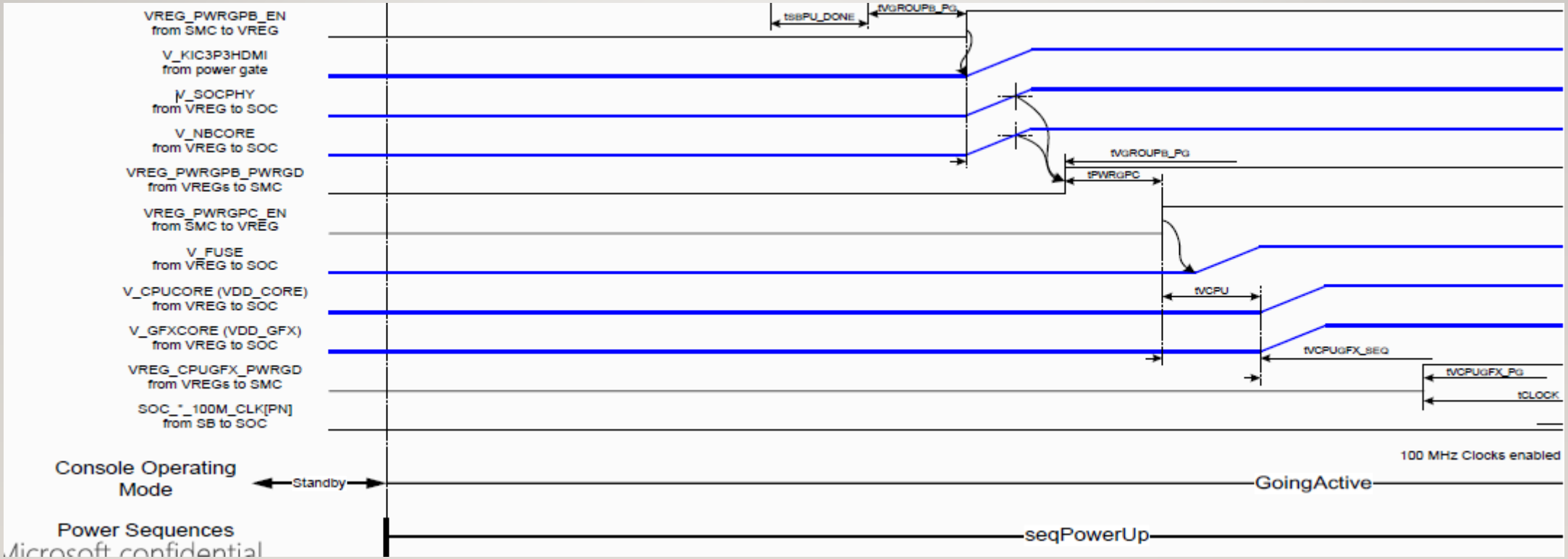
VREG_V5P0_EN


Stop
M 10.0µs
Delay 0.00µs
f < 1Hz
Sa 2.00GSa/s
Curr 280kpts
Edge
CH1
DC
L 1.92V
1
DC1M
1.00 V/div
-960.00 mV
Measure Current Mean Min Max Std-Dev Count
Pk-Pk[1] 2.28V 438.1mV 80.00mV 3.64V 794.2mV 43
Min[1] -40.00mV -30.70mV -80.00mV 1.92V 297.2mV 43
Max[1] 2.24V 407.4mV 0.00mV 3.56V 834.0mV 43
Freq[1] **** **** **** **** **** 0
MEASURE
Pk-Pk[1]=2.28V
Min[1]=-40.00mV
Max[1]=2.24V
Freq[1]=****
Source CH1
Type
Clear
Statistics On
All Measure Off
Gate
05 : 54

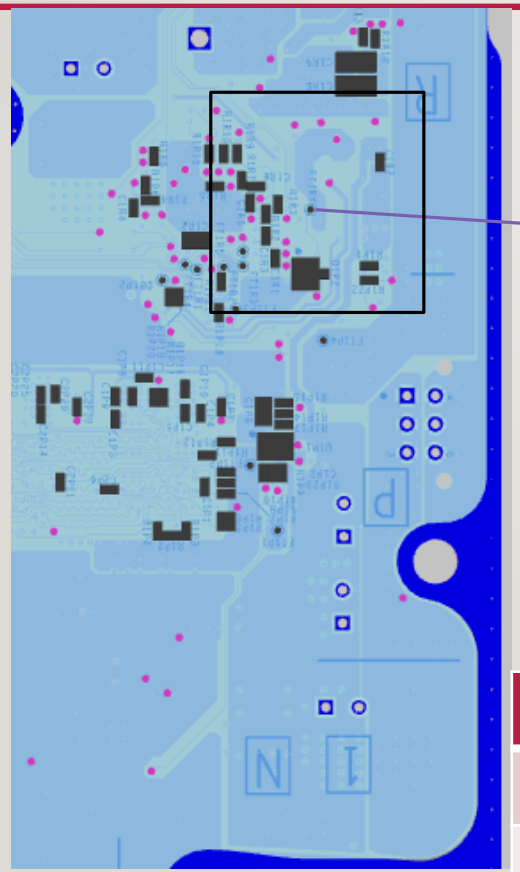
POWER ON SEQUENCE

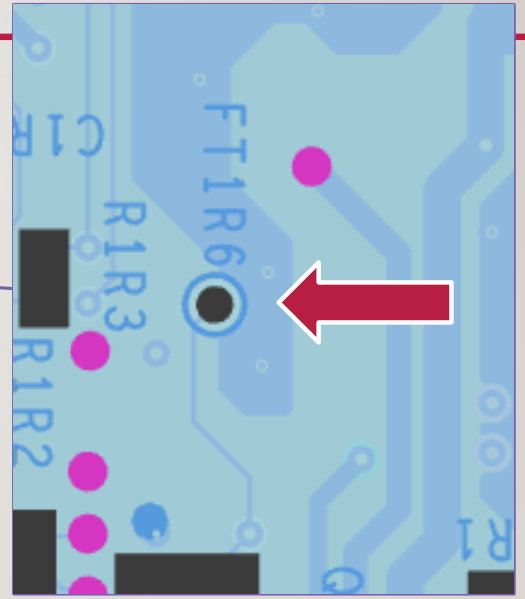


POWER ON SEQUENCE



VREG_1P1_ACTIVE_EN

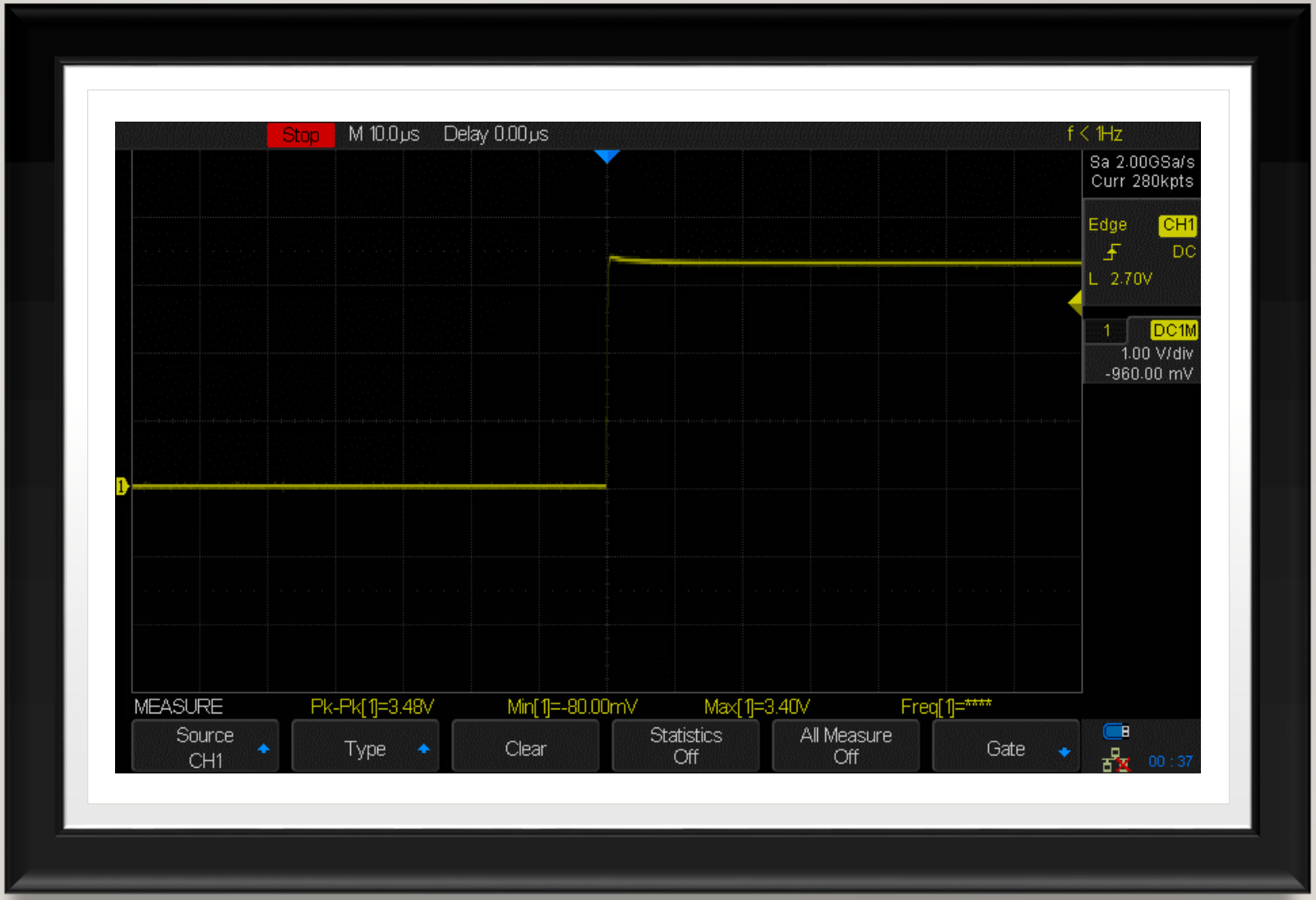




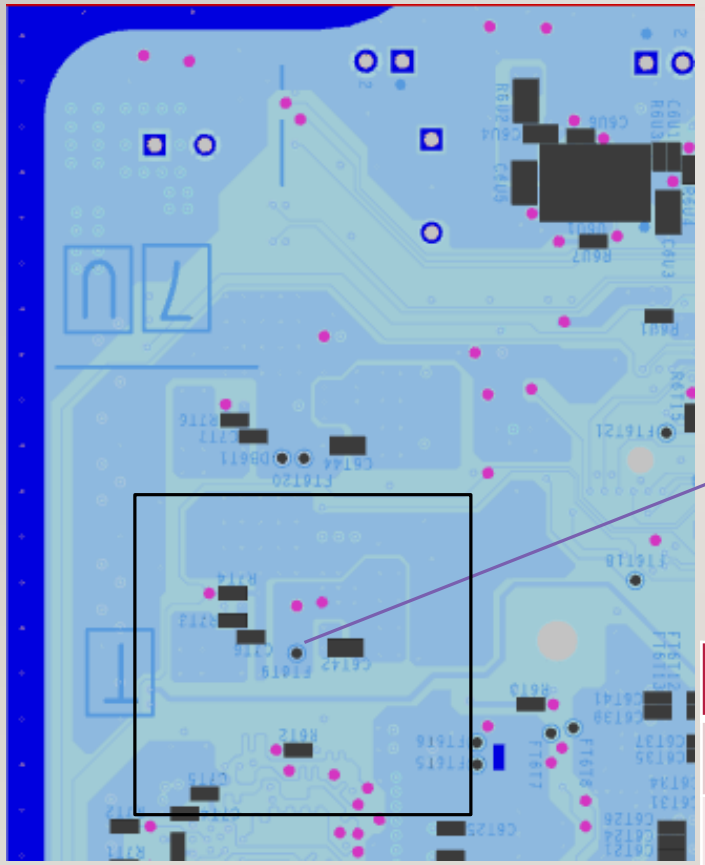
Components :
FT1R6

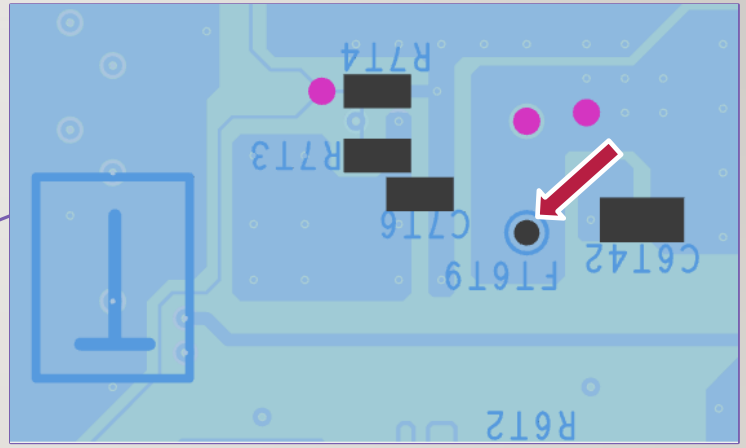
Impedance	Voltage
4.27KΩ	3.3V

VREG_1P1_ACTIVE_EN



V_SBIPI

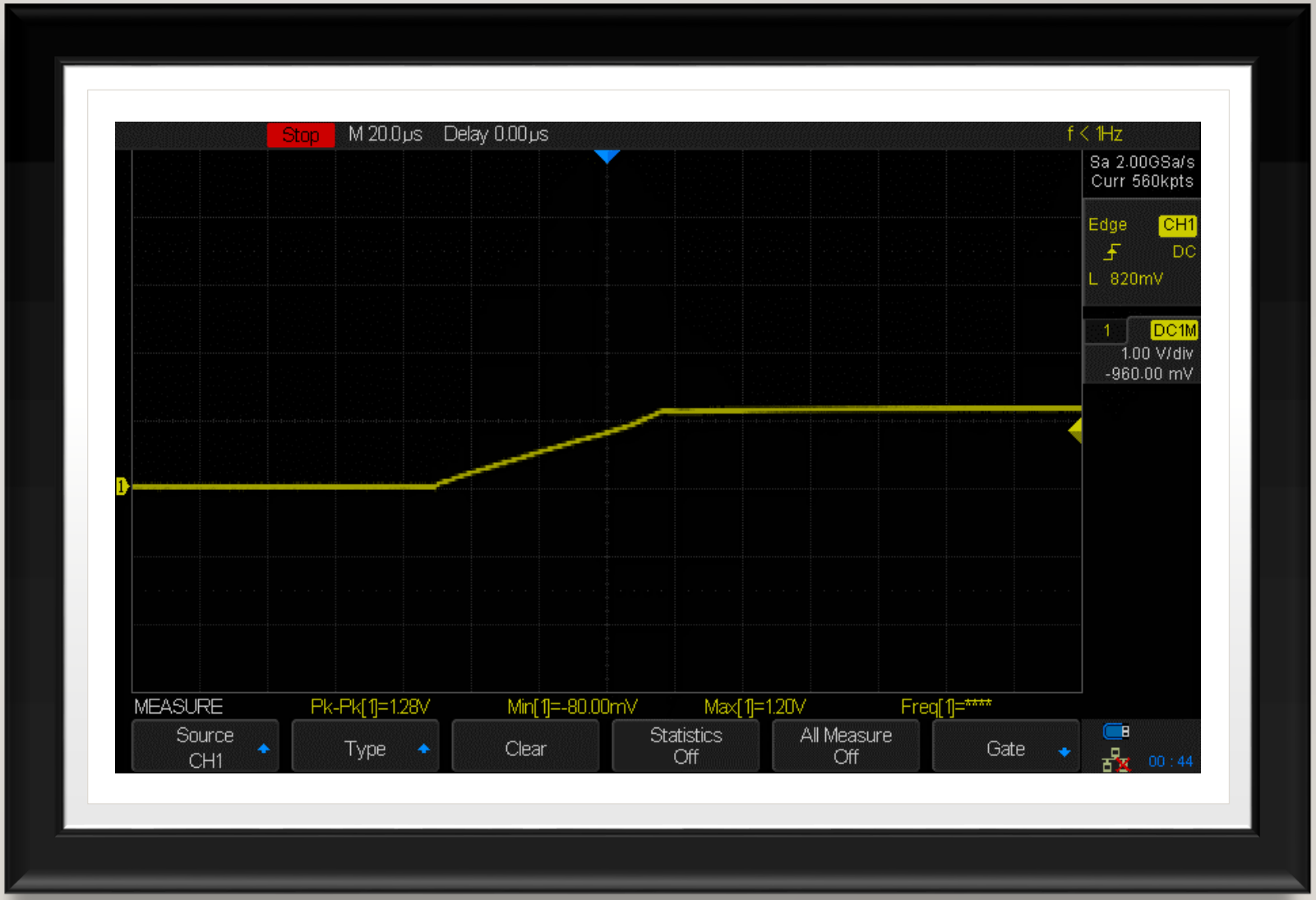




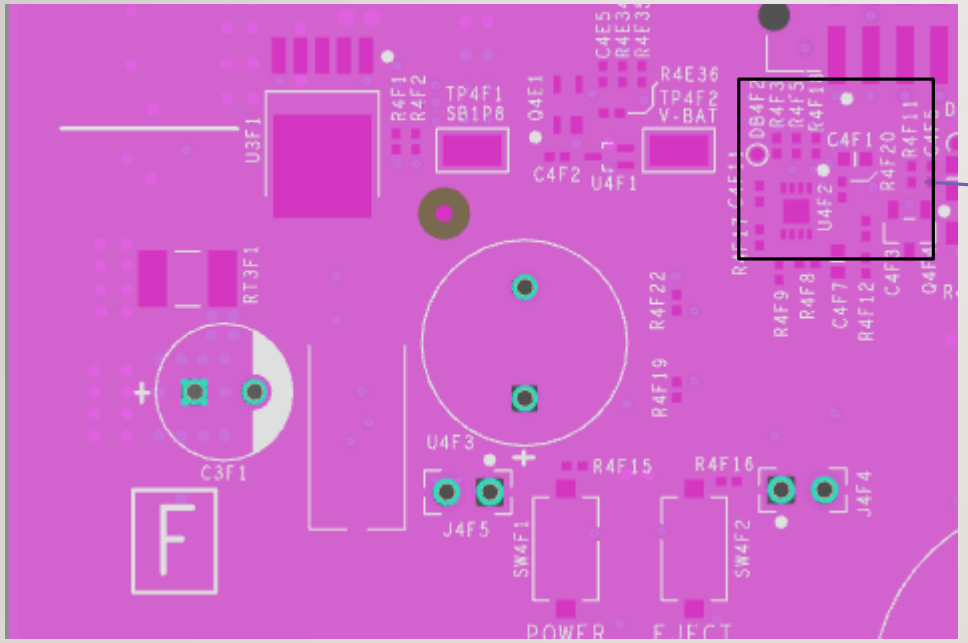
Components :
FT6T9 or DB4E14

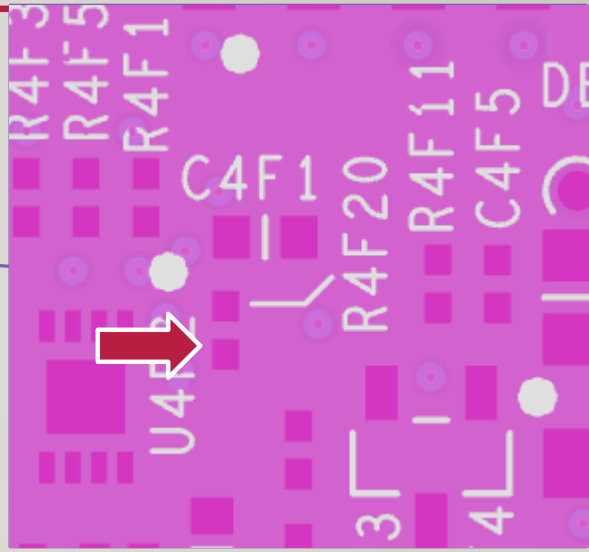
Impedance	Voltage
295Ω	1.28V

V_SBIPI


Stop
M 20.0µs
Delay 0.00µs
f < 1Hz
Sa 2.00GSa/s
Curr 560kpts
Edge
CH1
DC
L 820mV
1
DC1M
1.00 V/div
-960.00 mV
MEASURE
Pk-Pk[1]=1.28V
Min[1]=-80.00mV
Max[1]=1.20V
Freq[1]=****
Source CH1
Type
Clear
Statistics Off
All Measure Off
Gate
00 : 44

V_12P0_GATED



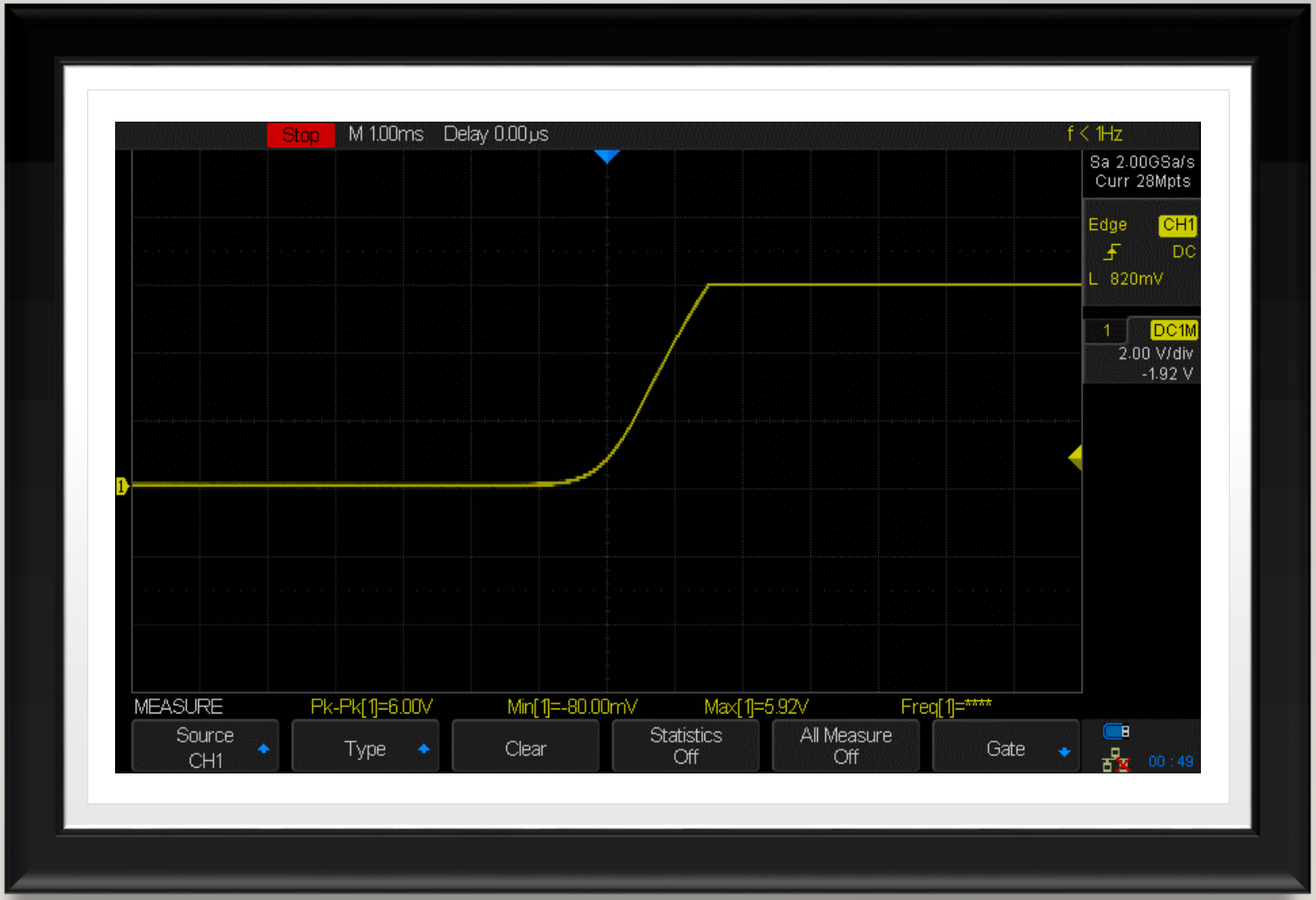


Components :

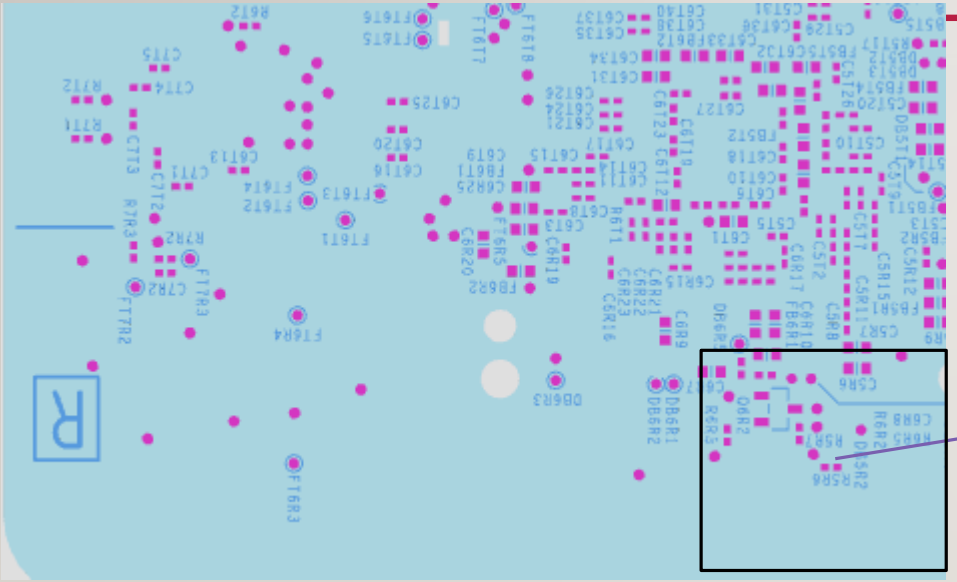
R4F20.1

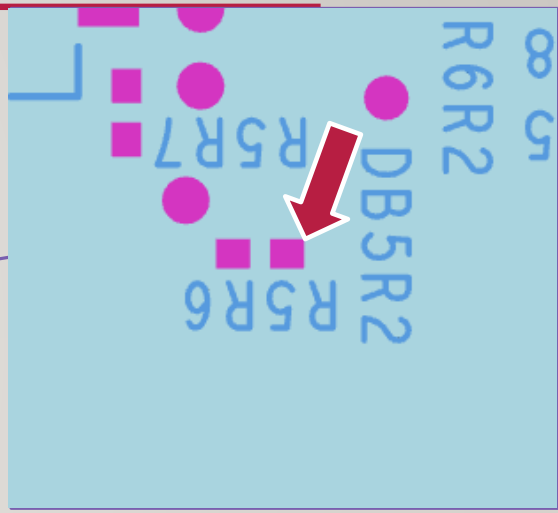
Impedance	Voltage
4.3KΩ	6V

V_12P0_GATED


Stop
M 1.00ms
Delay 0.00µs
f < 1Hz
Sa 2.00GSa/s
Curr 28Mpts
Edge
CH1
DC
L 820mV
1
DC1M
2.00 V/div
-1.92 V
MEASURE
Pk-Pk[1]=6.00V
Min[1]=-80.00mV
Max[1]=5.92V
Freq[1]=****
Source CH1
Type
Clear
Statistics Off
All Measure Off
Gate
00 : 49

V_5P0_GATED



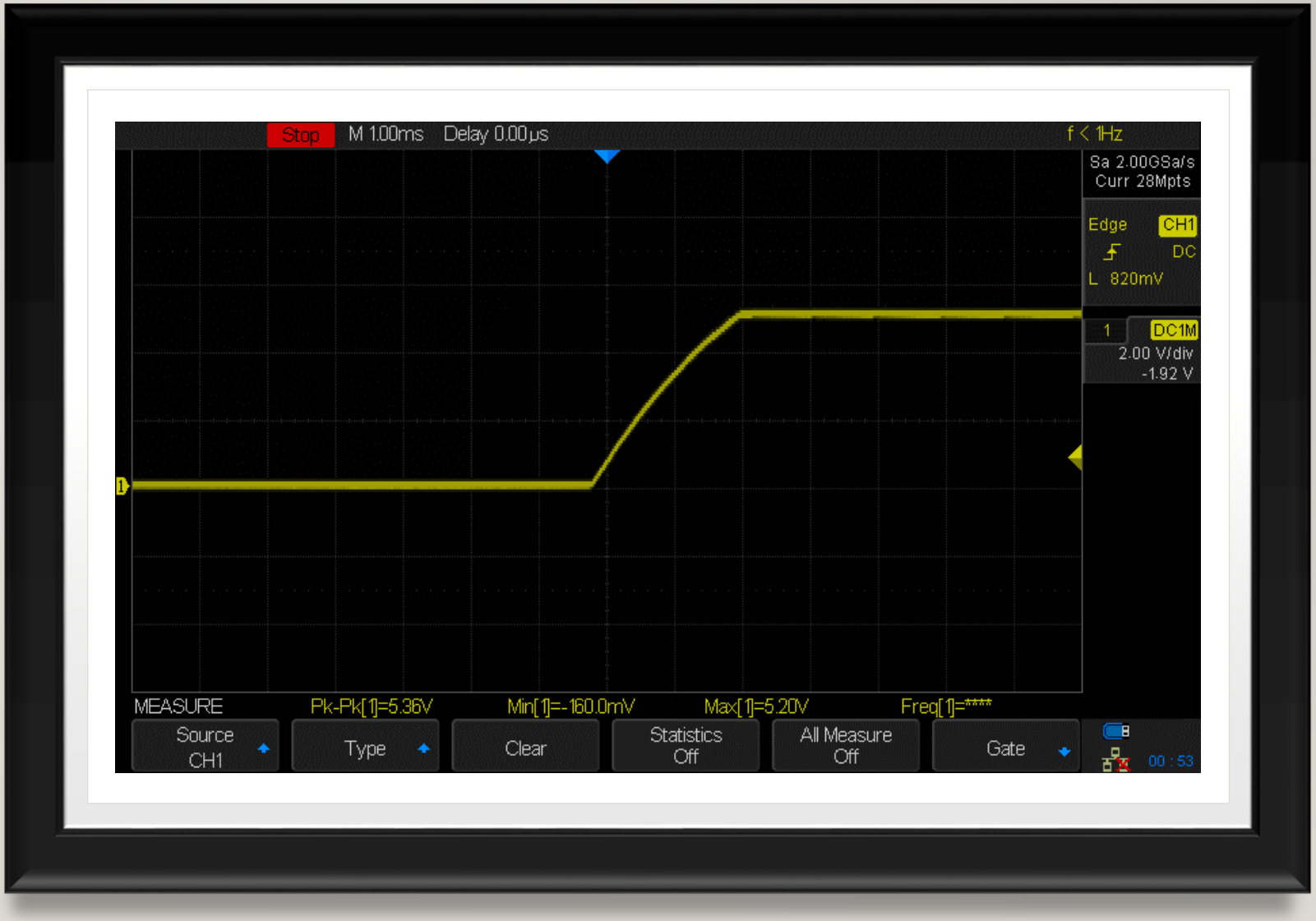


Components :

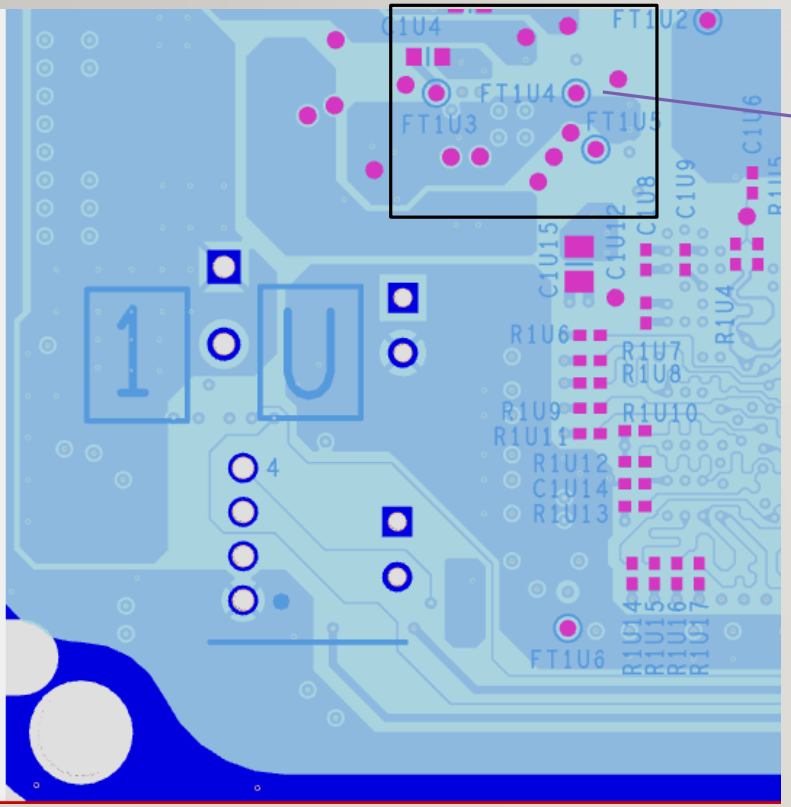
R5R6.1

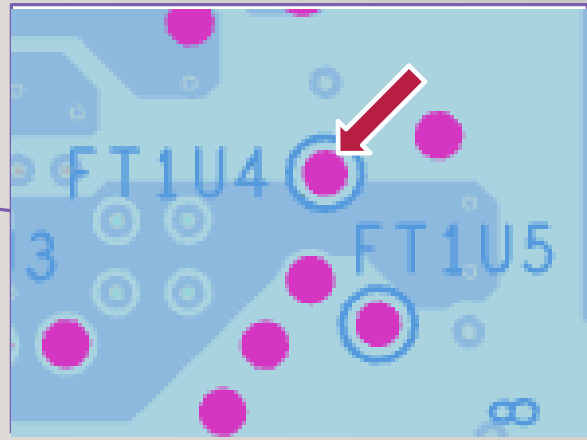
Impedance	Voltage
31.8KΩ	5V

V_5P0_GATED


Stop
M 1.00ms
Delay 0.00µs
f < 1Hz
Sa 2.00GSa/s
Curr 28Mpts
Edge
CH1
DC
L 820mV
1
DC1M
2.00 V/div
-1.92 V
MEASURE
Pk-Pk[1]=5.36V
Min[1]=-160.0mV
Max[1]=5.20V
Freq[1]=****
Source CH1
Type
Clear
Statistics Off
All Measure Off
Gate
00 : 53

VREG_PWRGPA_EN

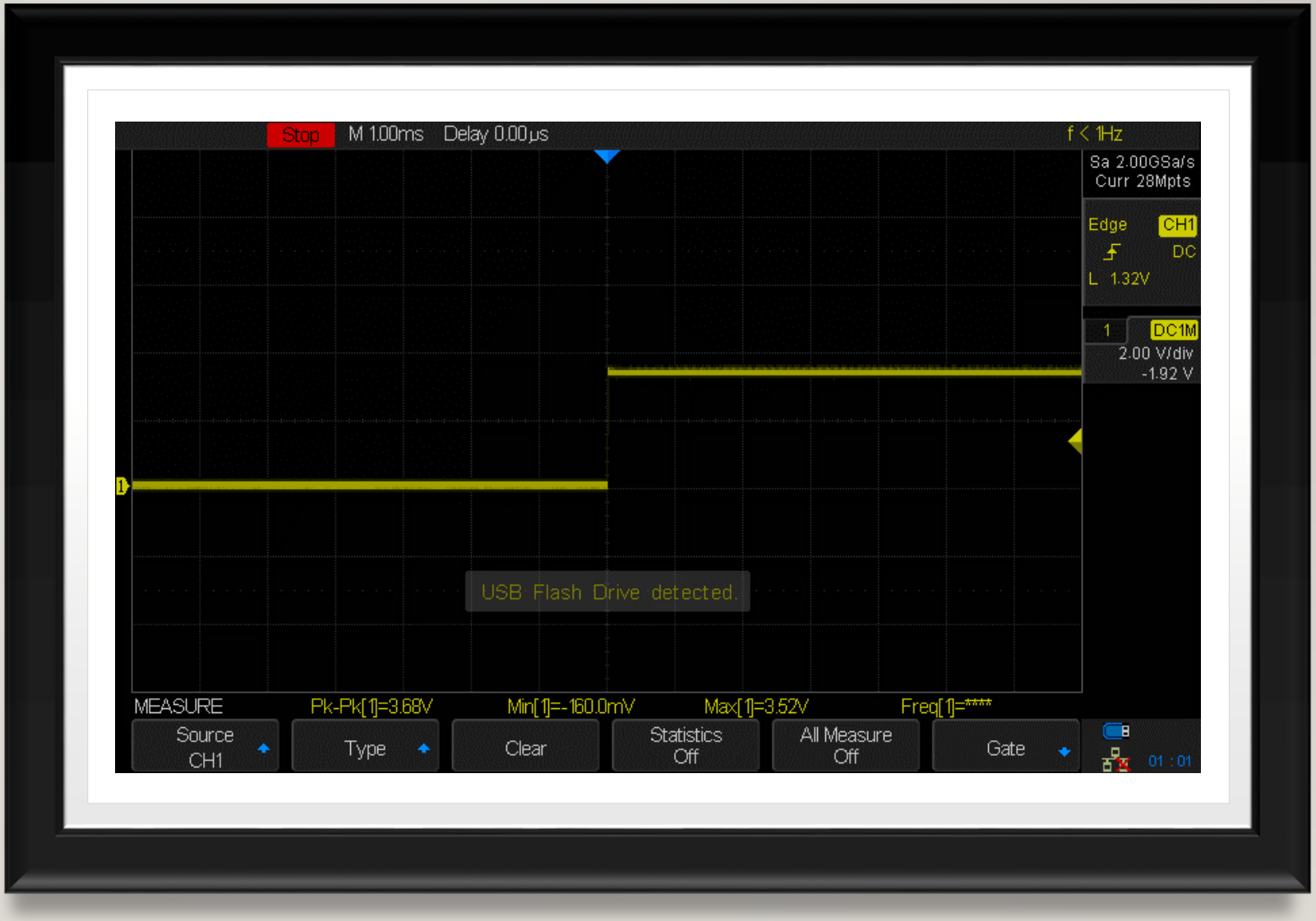




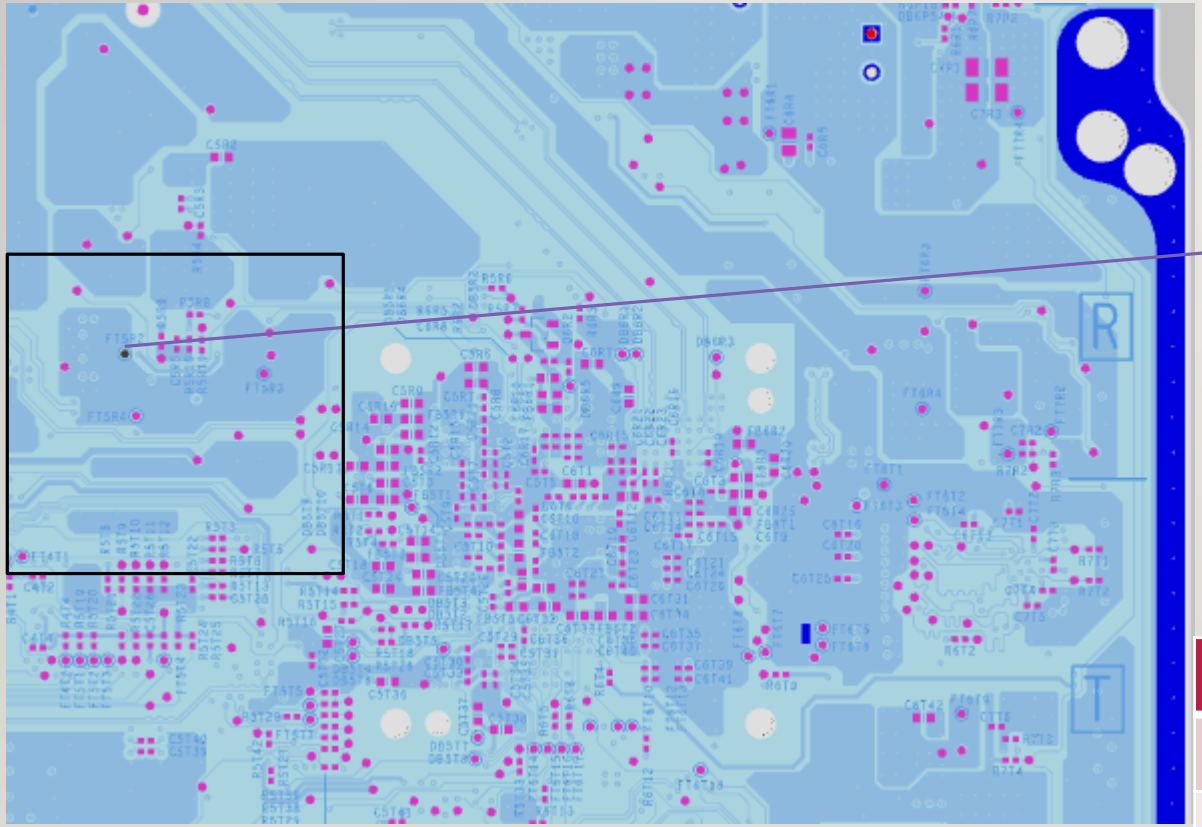
Components :
FT1U4

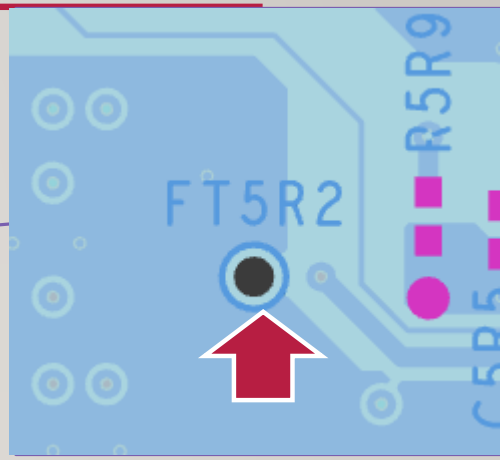
Impedance	Voltage
3.72KΩ	2.8V

VREG_PWRGPA_EN



V_3P3

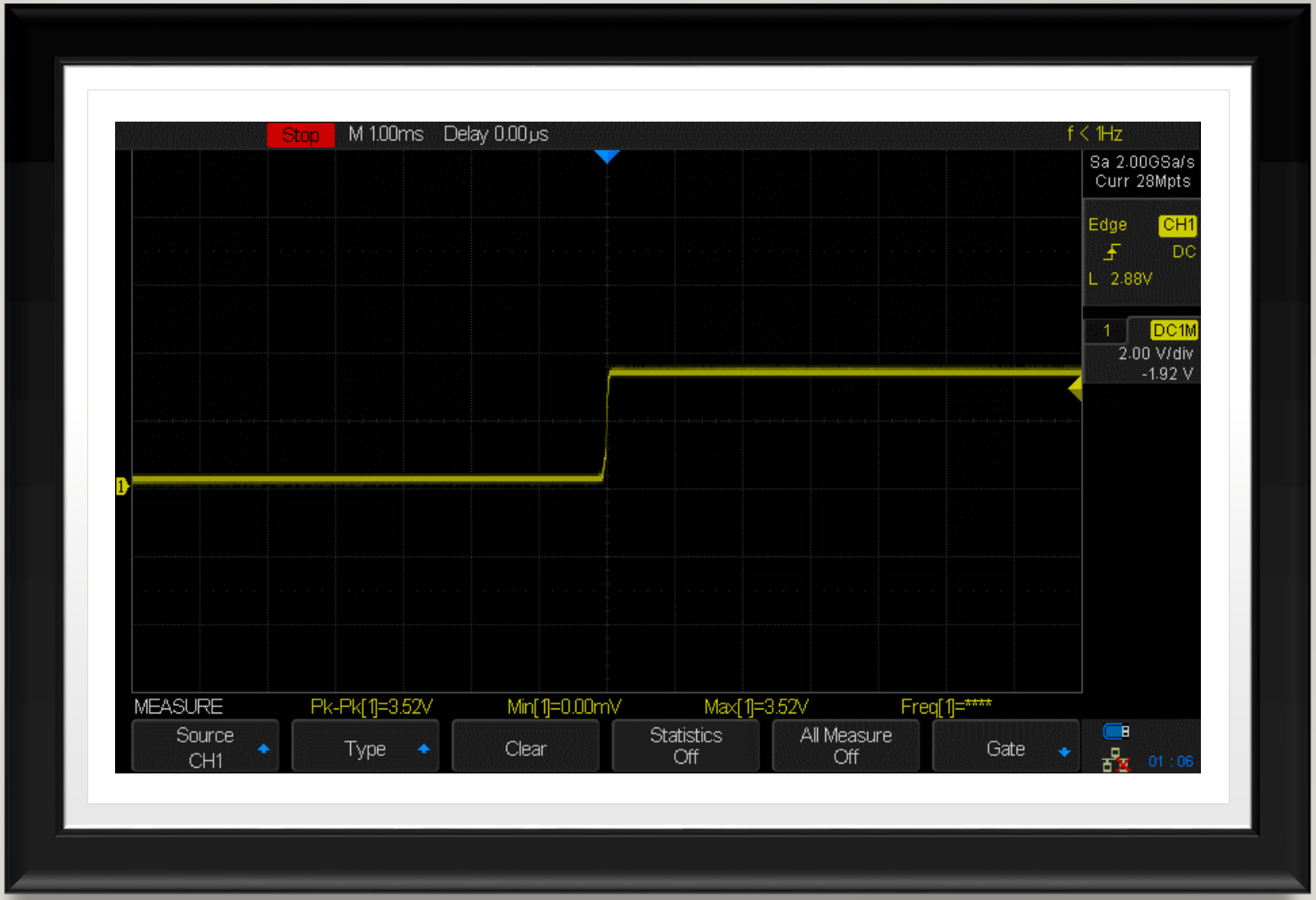




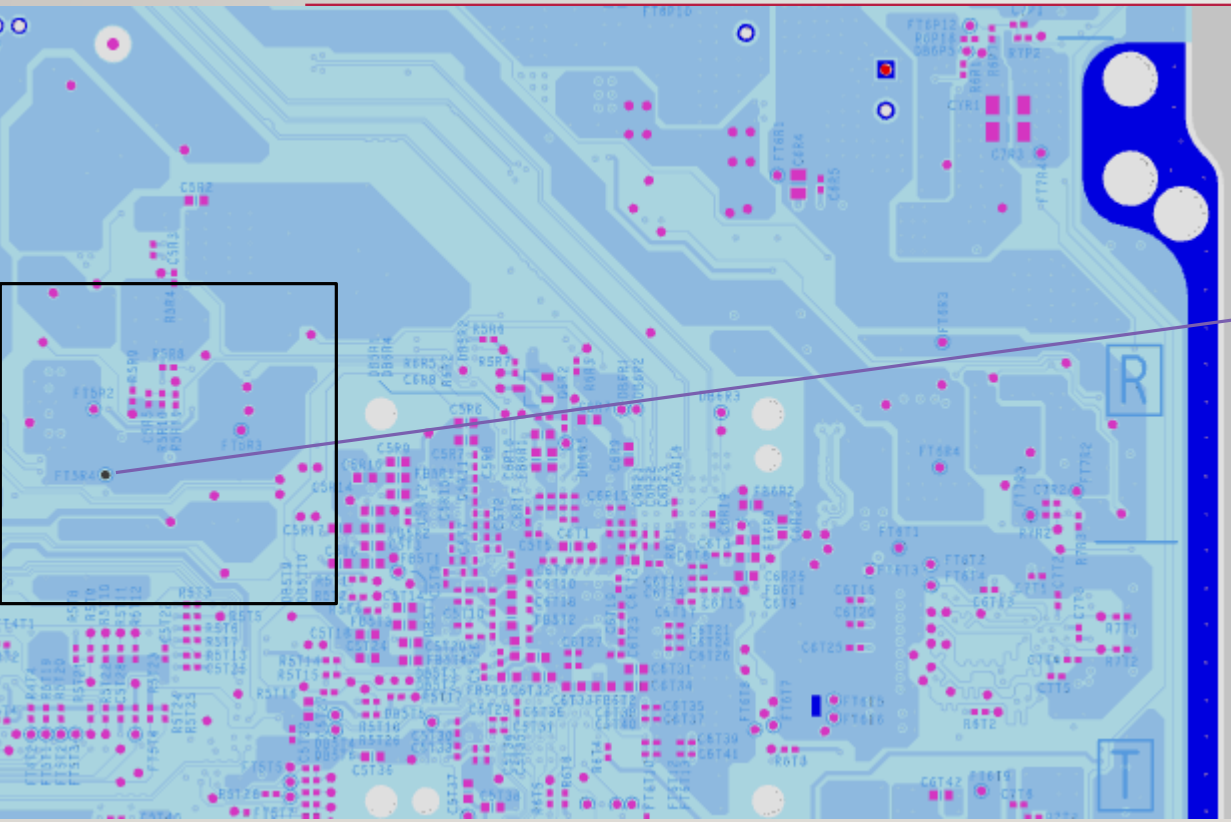
Components :
FT5R2 or DB5D2

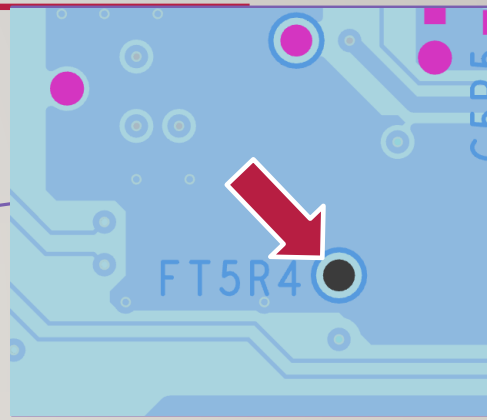
Impedance	Voltage
4.45KΩ	3.8V

V_3P3


Stop
M 1.00ms
Delay 0.00µs
f < 1Hz
Sa 2.00GSa/s
Curr 28Mpts
Edge
CH1
DC
L 2.88V
1
DC1M
2.00 V/div
-1.92 V
MEASURE
Pk-Pk[1]=3.52V
Min[1]=0.00mV
Max[1]=3.52V
Freq[1]=****
Source CH1
Type
Clear
Statistics Off
All Measure Off
Gate
01 : 06

V_SOC1P8





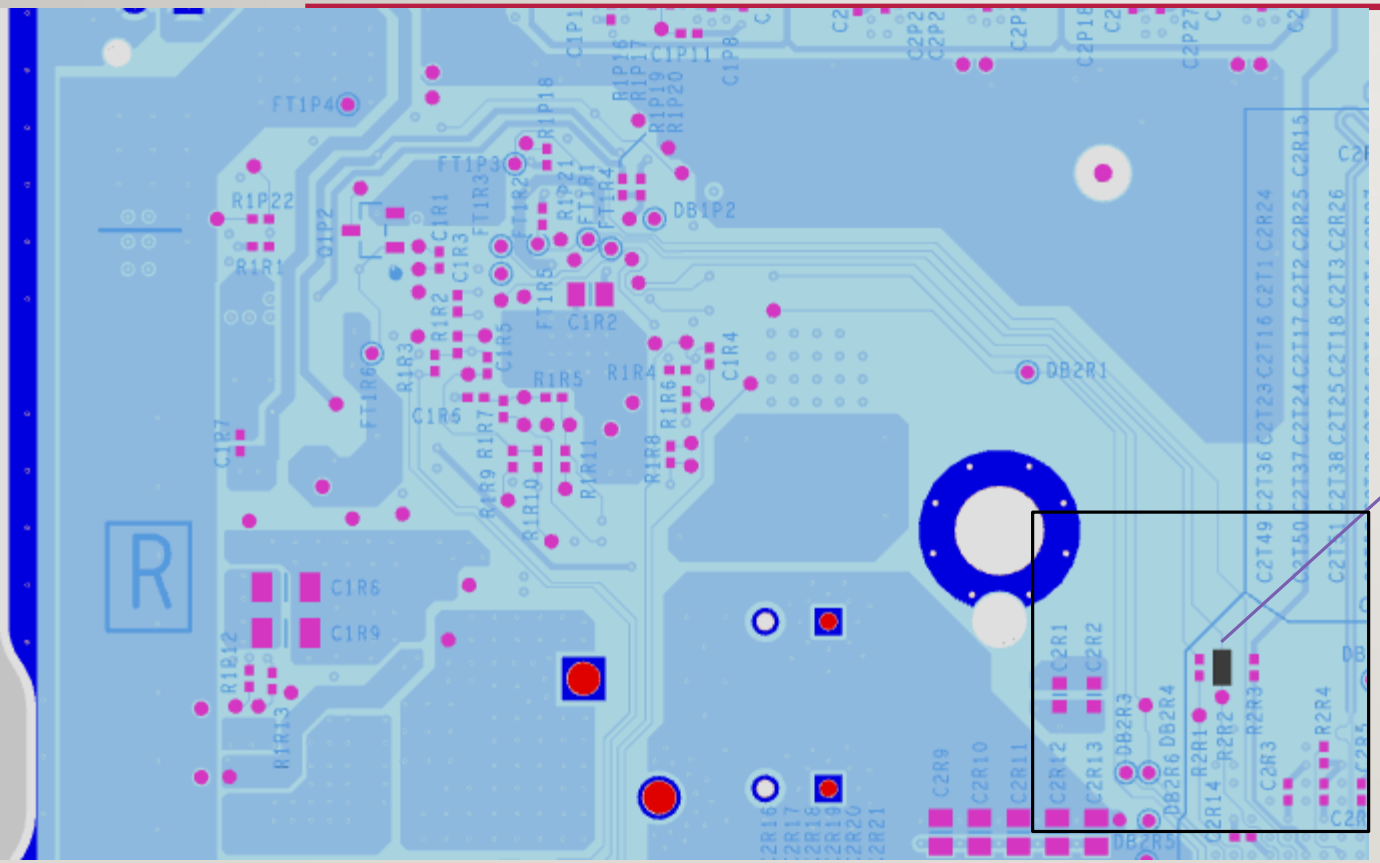
Components :
FT5R4 or DB5D12

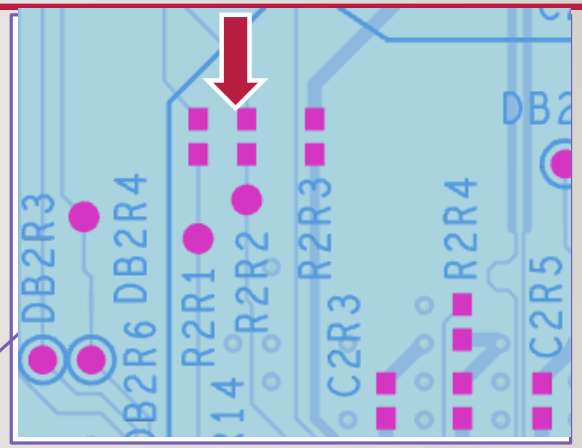
Impedance	Voltage
415Ω	2V

V_SOC1P8


Stop
M 1.00ms
Delay 0.00µs
f < 1Hz
Sa 2.00GSa/s
Curr 28Mpts
Edge
CH1
DC
L 1.88V
1
DC1M
2.00 V/div
-1.92 V
MEASURE
Pk-Pk[1]=400.0mV
Min[1]=1.68V
Max[1]=2.08V
Freq[1]=****
Source CH1
Type
Clear
Statistics Off
All Measure Off
Gate
01 : 11

SVC

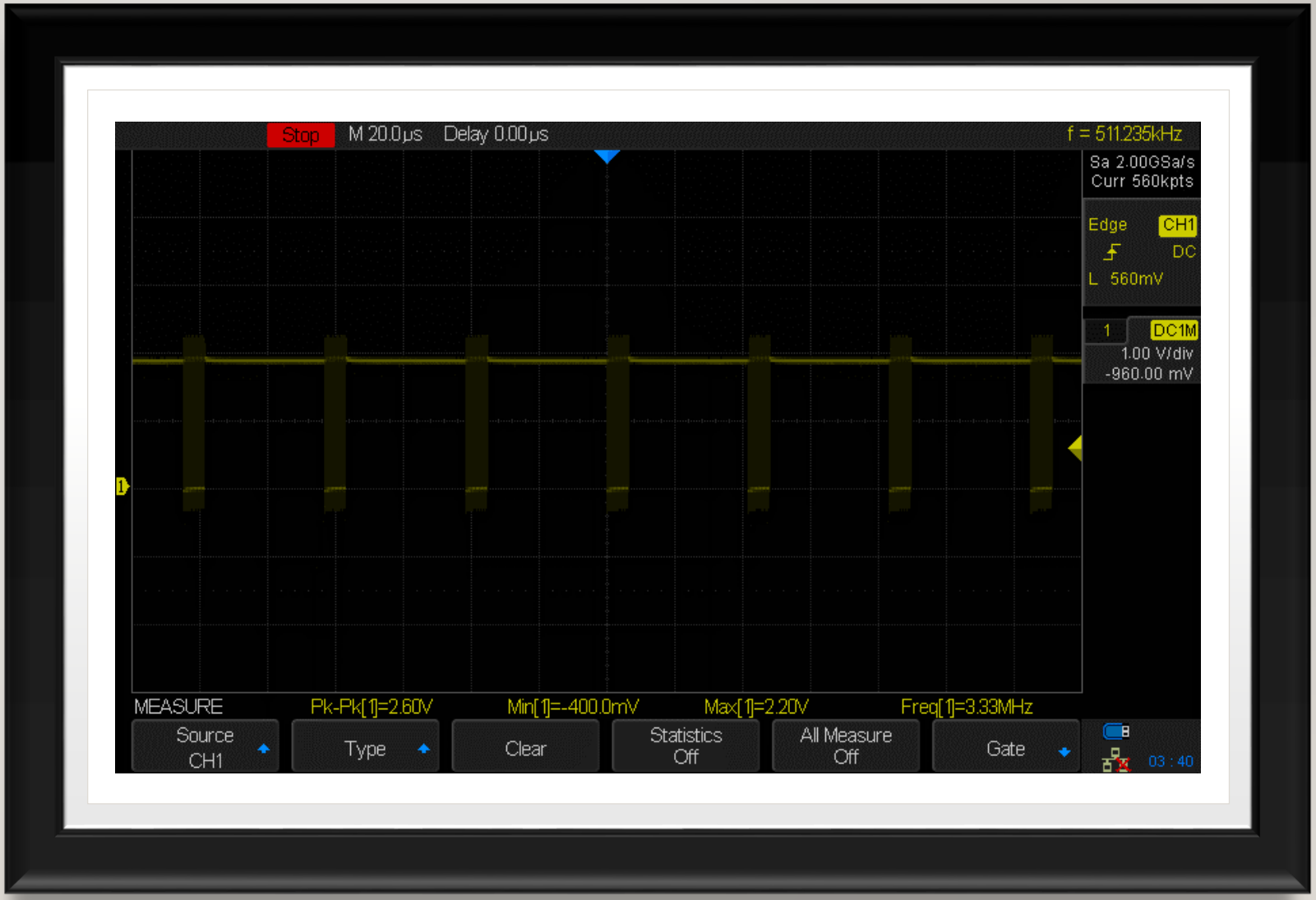




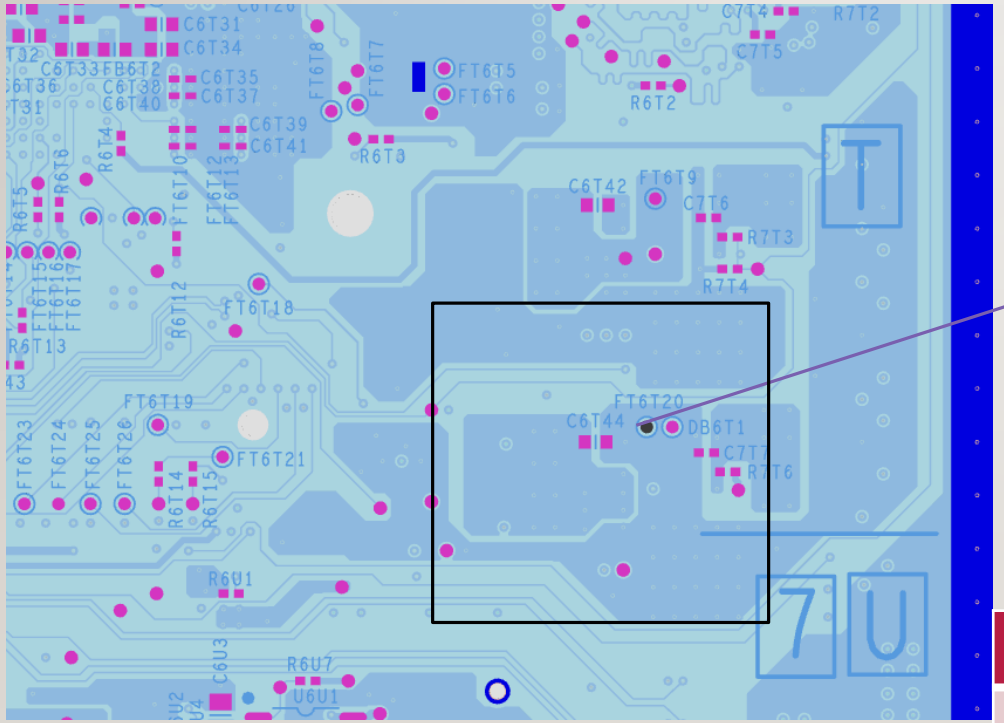
Components :
R2R2.1

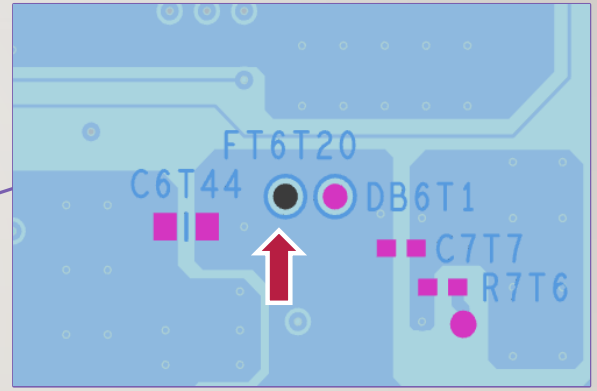
Impedance	Voltage
36KΩ	2V

SVC


Stop
M 20.0µs
Delay 0.00µs
f = 511.235kHz
Sa 2.00GSa/s
Curr 560kpts
Edge
CH1
DC
L 560mV
1
DC1M
1.00 V/div
-960.00 mV
MEASURE
Pk-Pk[1]=2.60V
Min[1]=-400.0mV
Max[1]=2.20V
Freq[1]=3.33MHz
Source CH1
Type
Clear
Statistics Off
All Measure Off
Gate
03 : 40

V_SB1P8





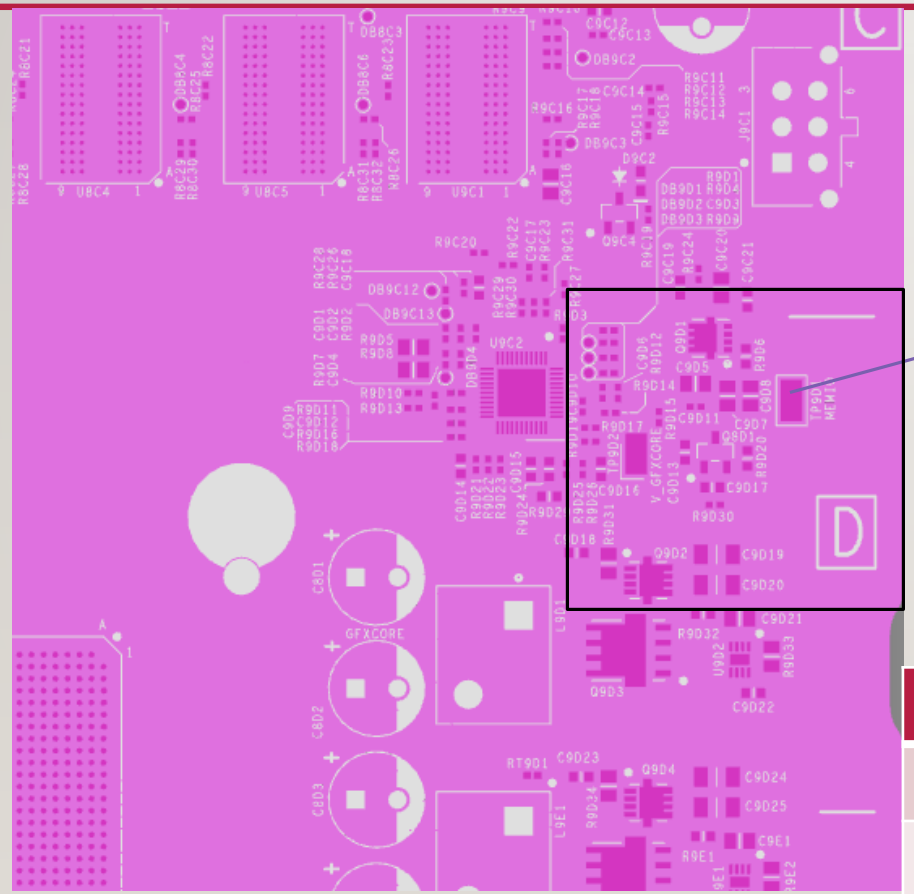
Components :
FT6T20 or DB6T1

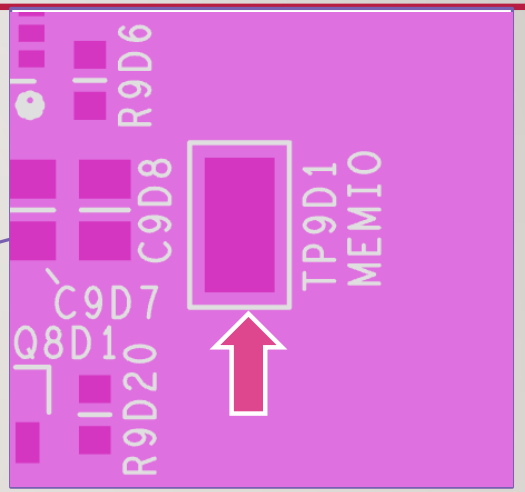
Impedance	Voltage
394Ω	2V

V_SB1P8


Stop
M 1.00ms
Delay 0.00µs
f < 1Hz
Sa 2.00GSa/s
Curr 28Mpts
Edge
CH1
DC
L 1.20V
1
DC1M
2.00 V/div
-1.92 V
MEASURE
Pk-Pk[1]=400.0mV
Min[1]=1.60V
Max[1]=2.00V
Freq[1]=****
Source CH1
Type
Clear
Statistics Off
All Measure Off
Gate
01 : 18

V_MEMIO



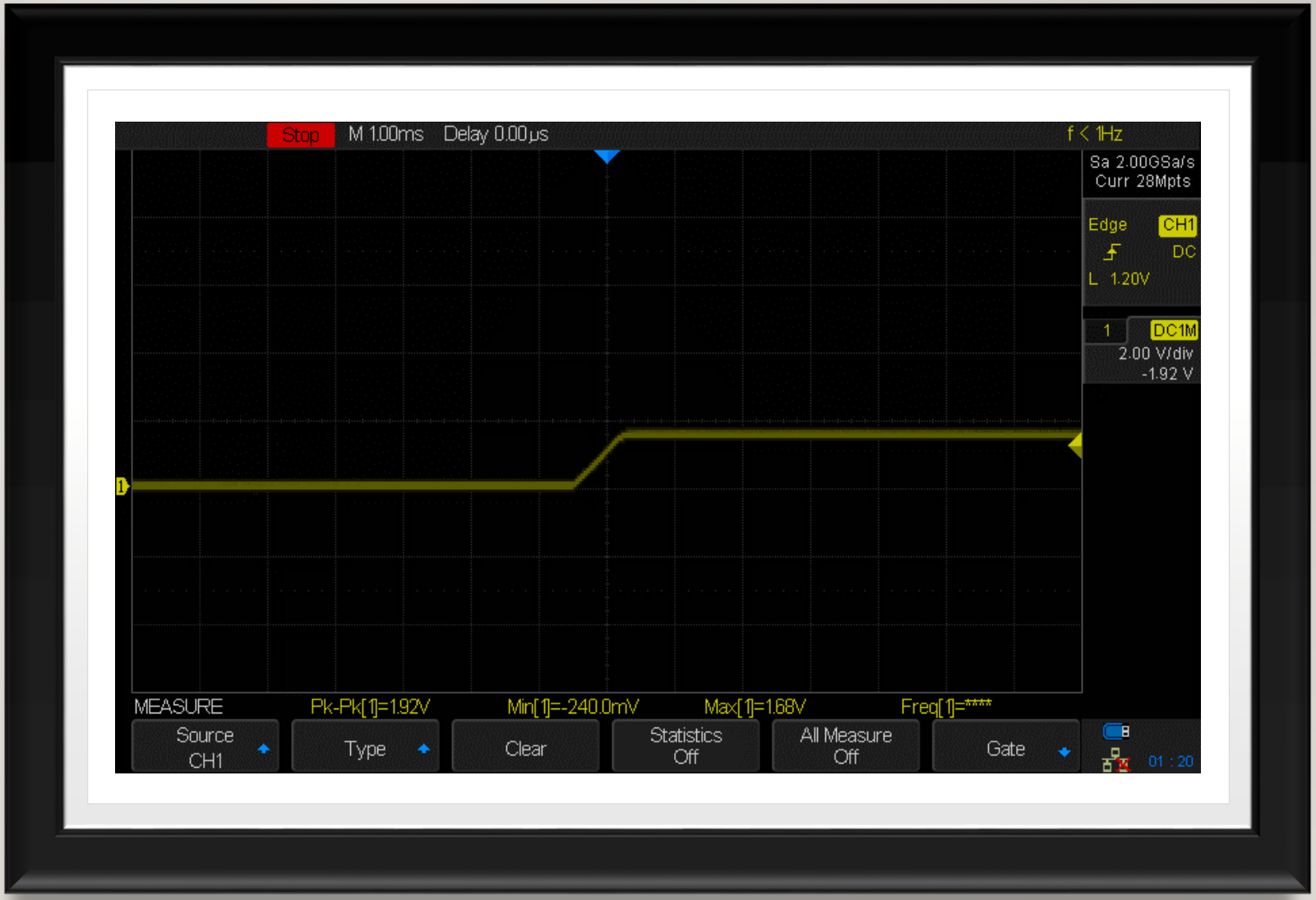


Components :

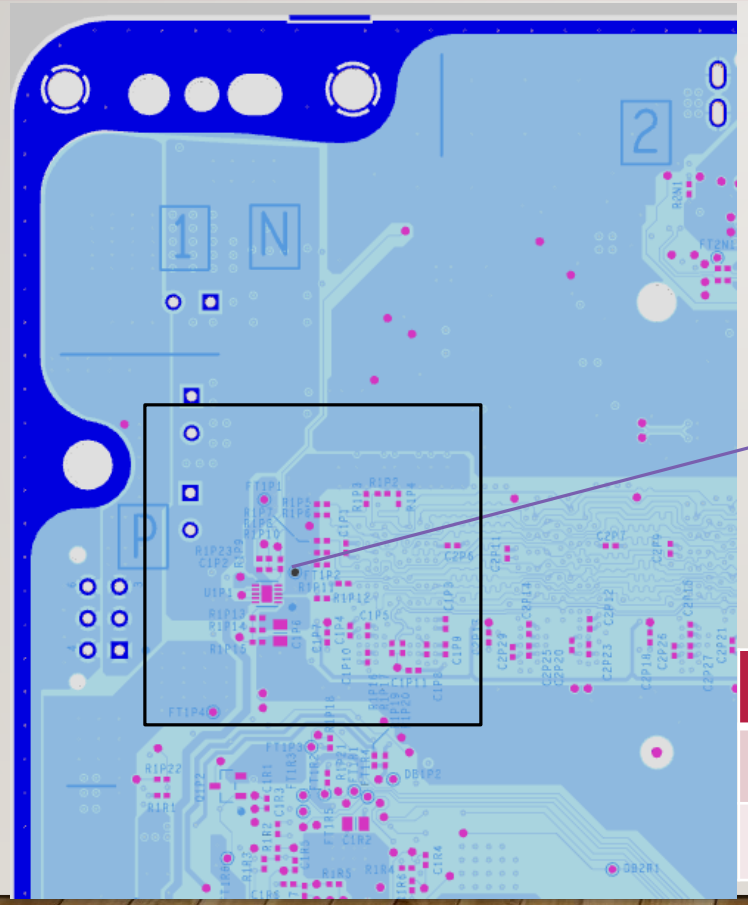
TP9D1

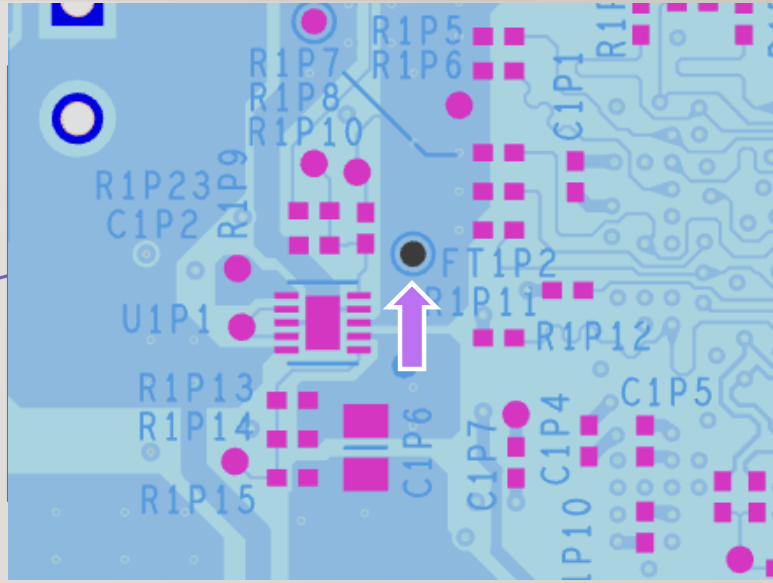
Impedance	Voltage
56Ω	1.92V

V_MEMIO


Stop
M 1.00ms
Delay 0.00µs
f < 1Hz
Sa 2.00GSa/s
Curr 28Mpts
Edge
CH1
DC
L 1.20V
1
DC1M
2.00 V/div
-1.92 V
MEASURE
Pk-Pk[1]=1.92V
Min[1]=-240.0mV
Max[1]=1.68V
Freq[1]=****
Source CH1
Type
Clear
Statistics Off
All Measure Off
Gate
01 : 20

V_VTT



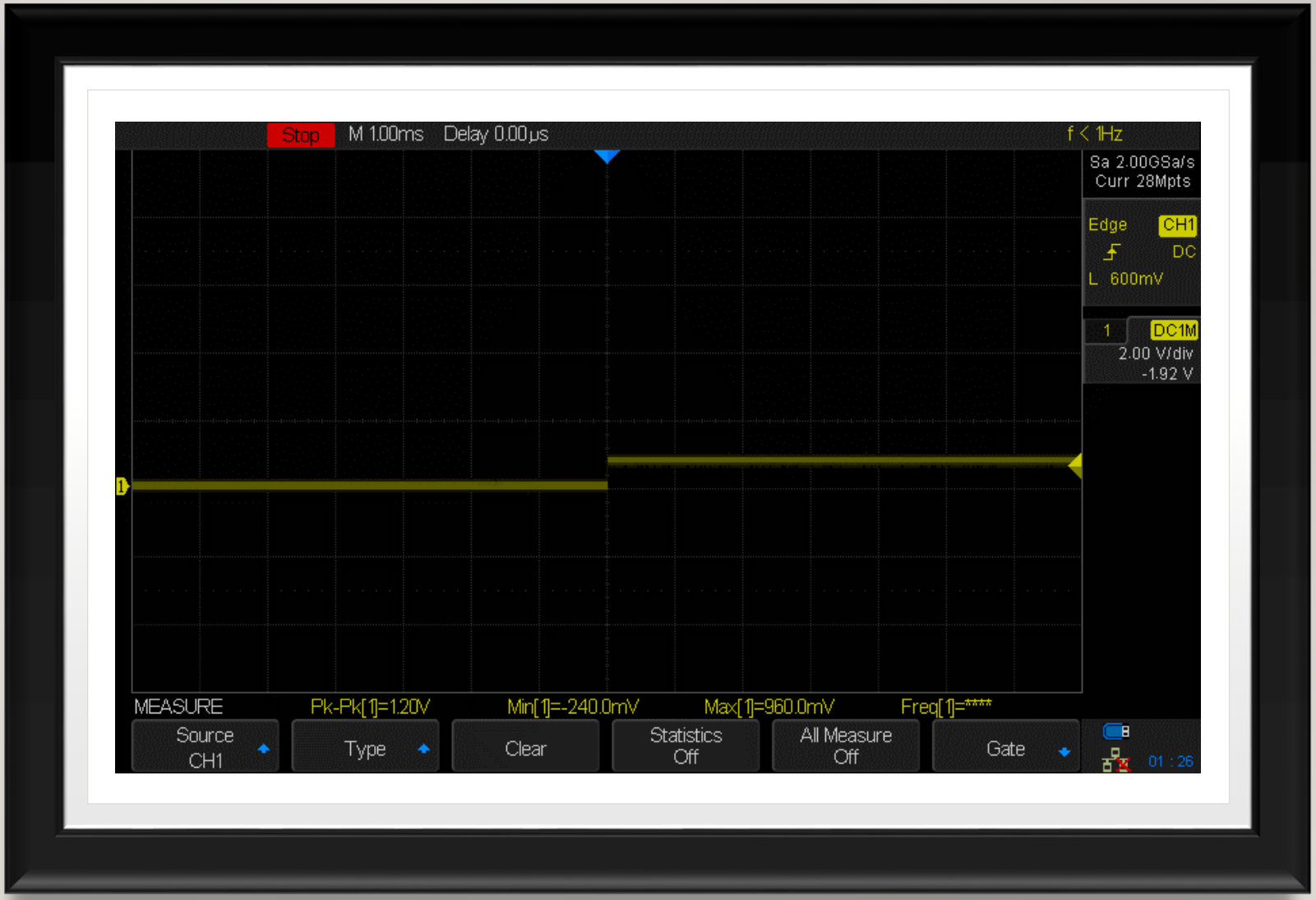


Components :

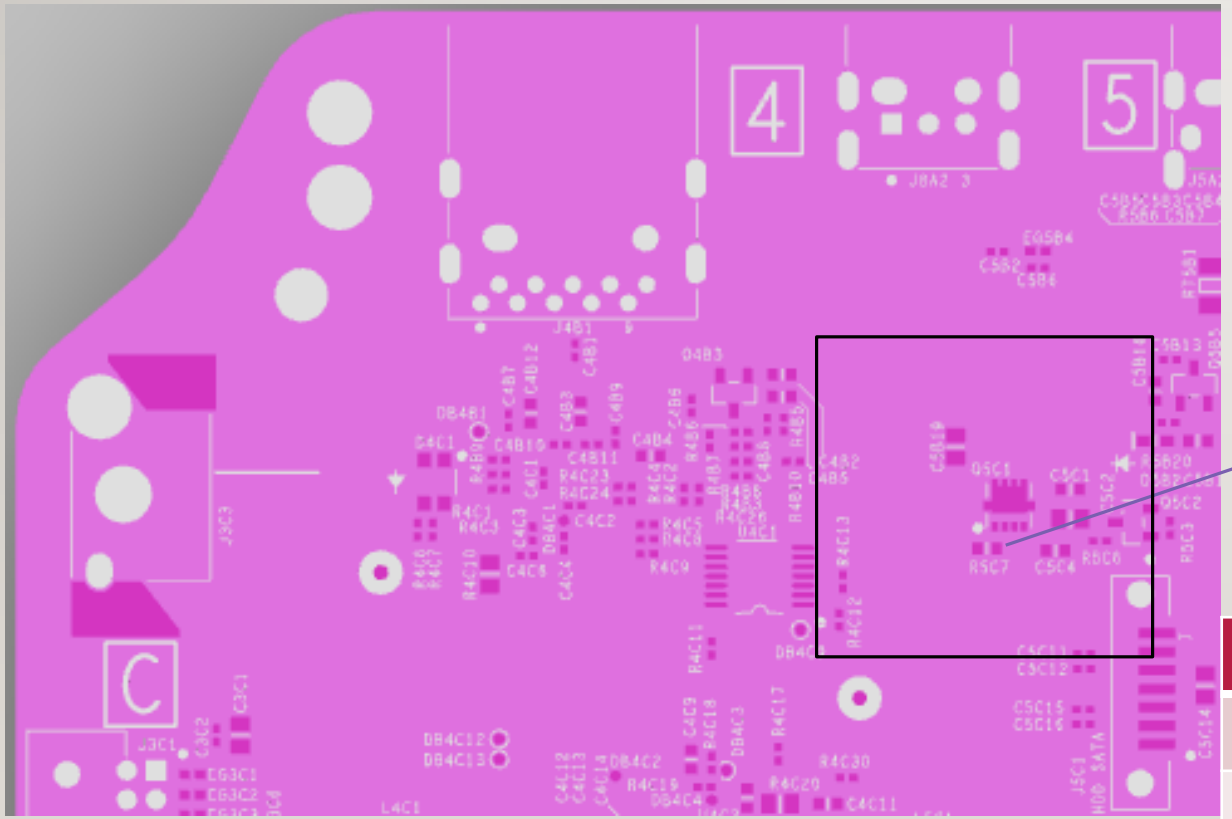
FT1P2 or DB9C2

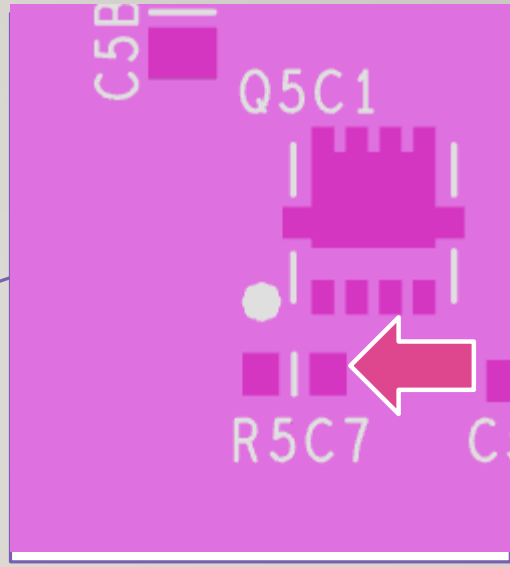
Impedance	Voltage
15.8KΩ	1.20V

V_VTT


Stop
M 1.00ms
Delay 0.00µs
f < 1Hz
Sa 2.00GSa/s
Curr 28Mpts
Edge
CH1
DC
L 600mV
1
DC1M
2.00 V/div
-1.92 V
MEASURE
Pk-Pk[1]=1.20V
Min[1]=-240.0mV
Max[1]=960.0mV
Freq[1]=****
Source CH1
Type
Clear
Statistics Off
All Measure Off
Gate
01 : 26

V_12P0_ODD



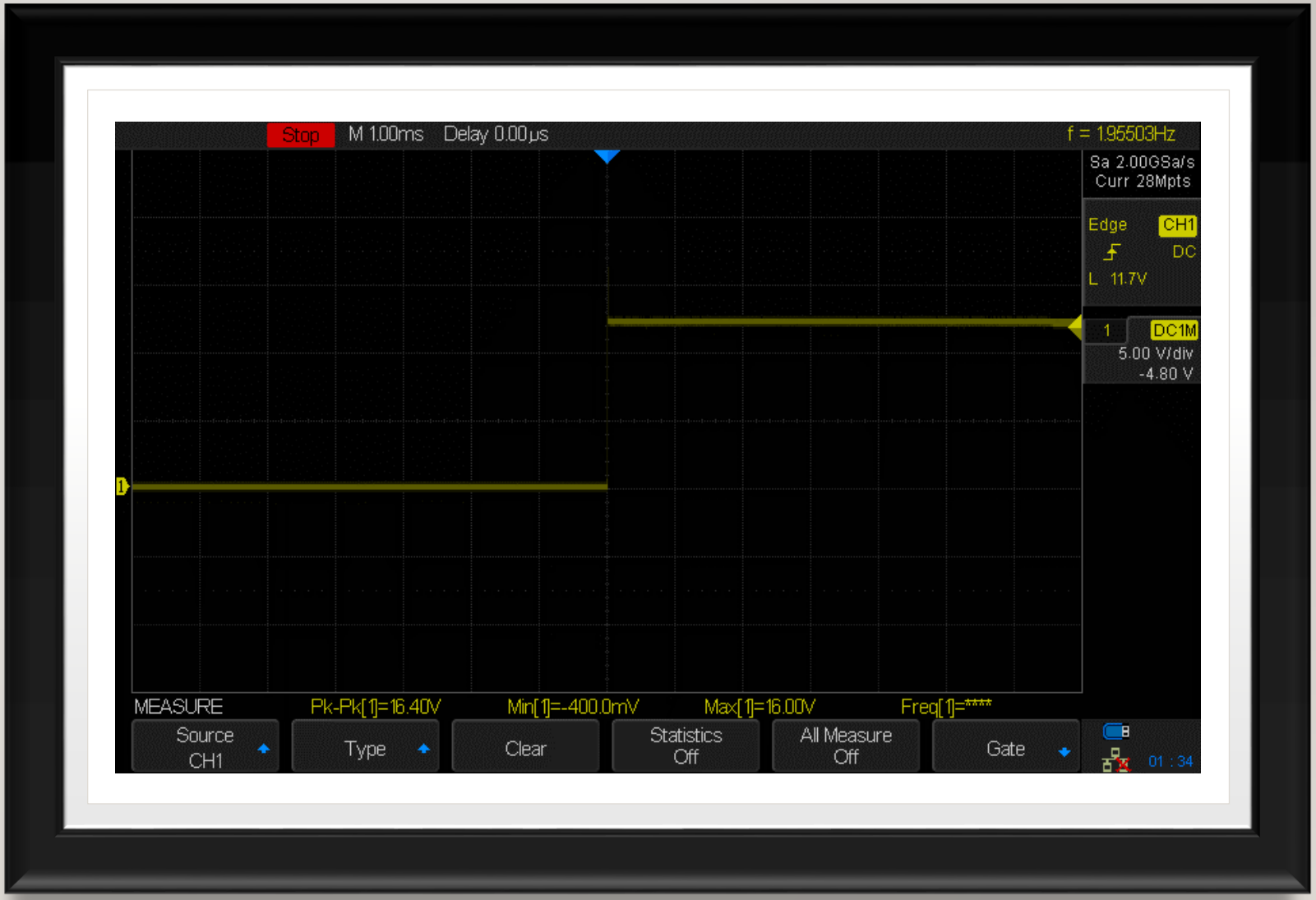


Components :

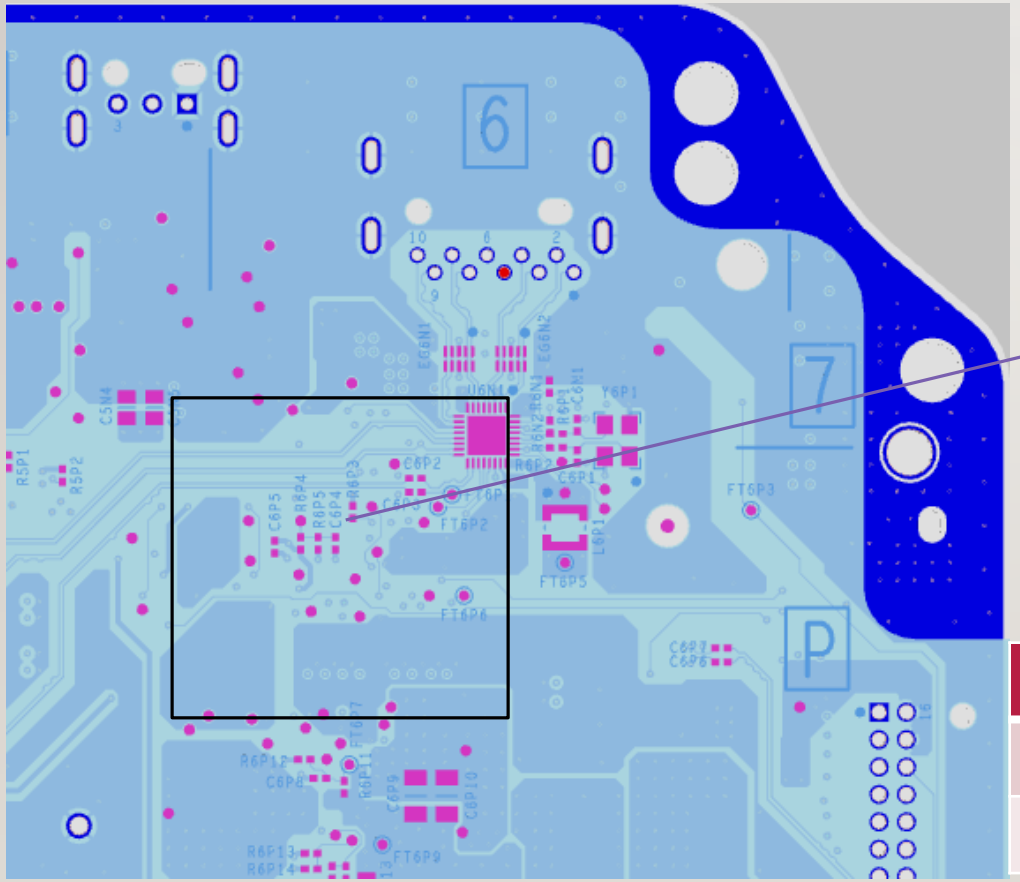
R5C7.2

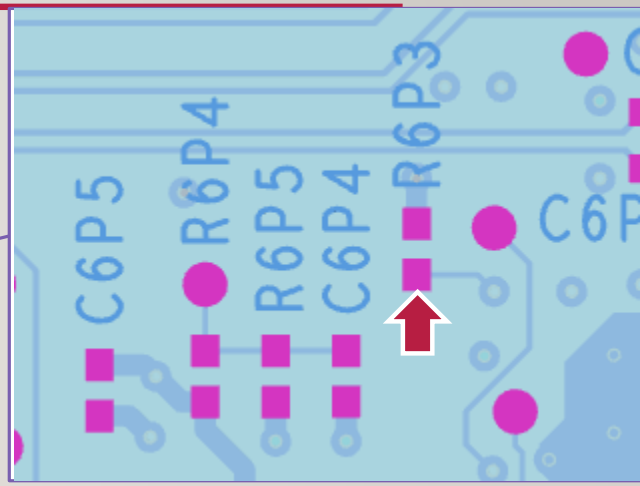
Impedance	Voltage
26KΩ	12V

V_12P0_ODD


Stop
M 1.00ms
Delay 0.00µs
f = 1.95503Hz
Sa 2.00GSa/s
Curr 28Mpts
Edge
CH1
DC
L 11.7V
1
DC1M
5.00 V/div
-4.80 V
MEASURE
Pk-Pk[1]=16.40V
Min[1]=-400.0mV
Max[1]=16.00V
Freq[1]=****
Source CH1
Type
Clear
Statistics Off
All Measure Off
Gate
01 : 34

HDD_PWR_EN



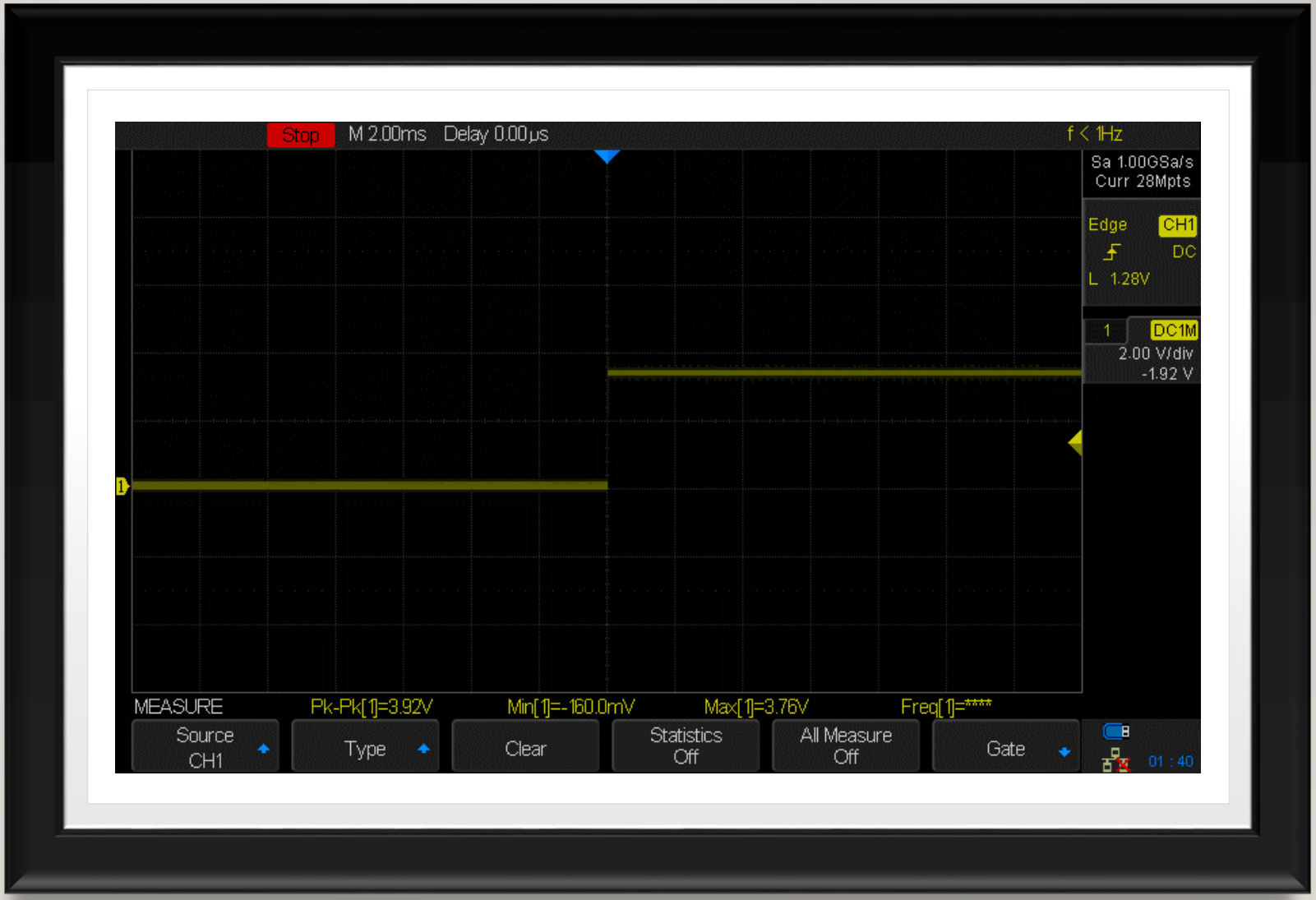


Components :

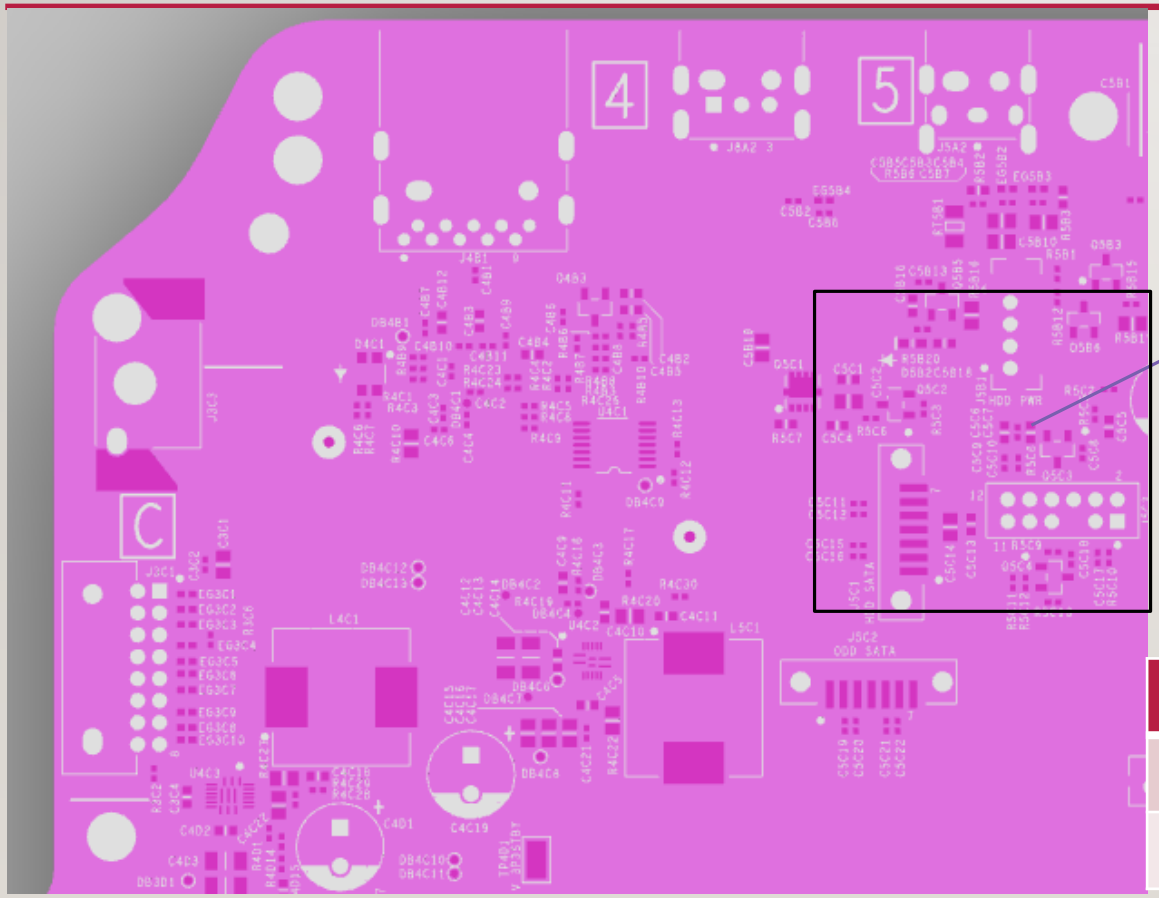
R6P3.1

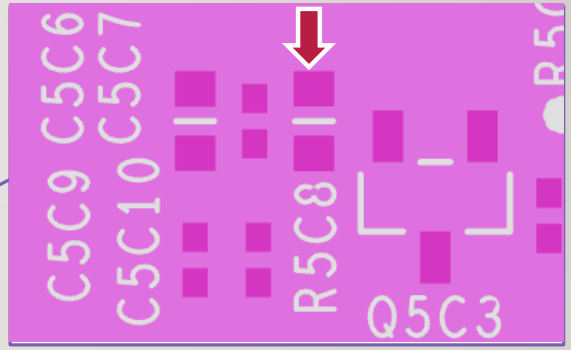
Impedance	Voltage
4.3KΩ	3.8V

HDD_PWR_EN


Stop
M 2.00ms Delay 0.00µs
f < 1Hz
Sa 1.00GSa/s
Curr 28Mpts
Edge
CH1
DC
L 1.28V
1
DC1M
2.00 V/div
-1.92 V
MEASURE
Pk-Pk[1]=3.92V
Min[1]=-160.0mV
Max[1]=3.76V
Freq[1]=****
Source CH1
Type
Clear
Statistics Off
All Measure Off
Gate
01 : 40

V_5P0_HDD



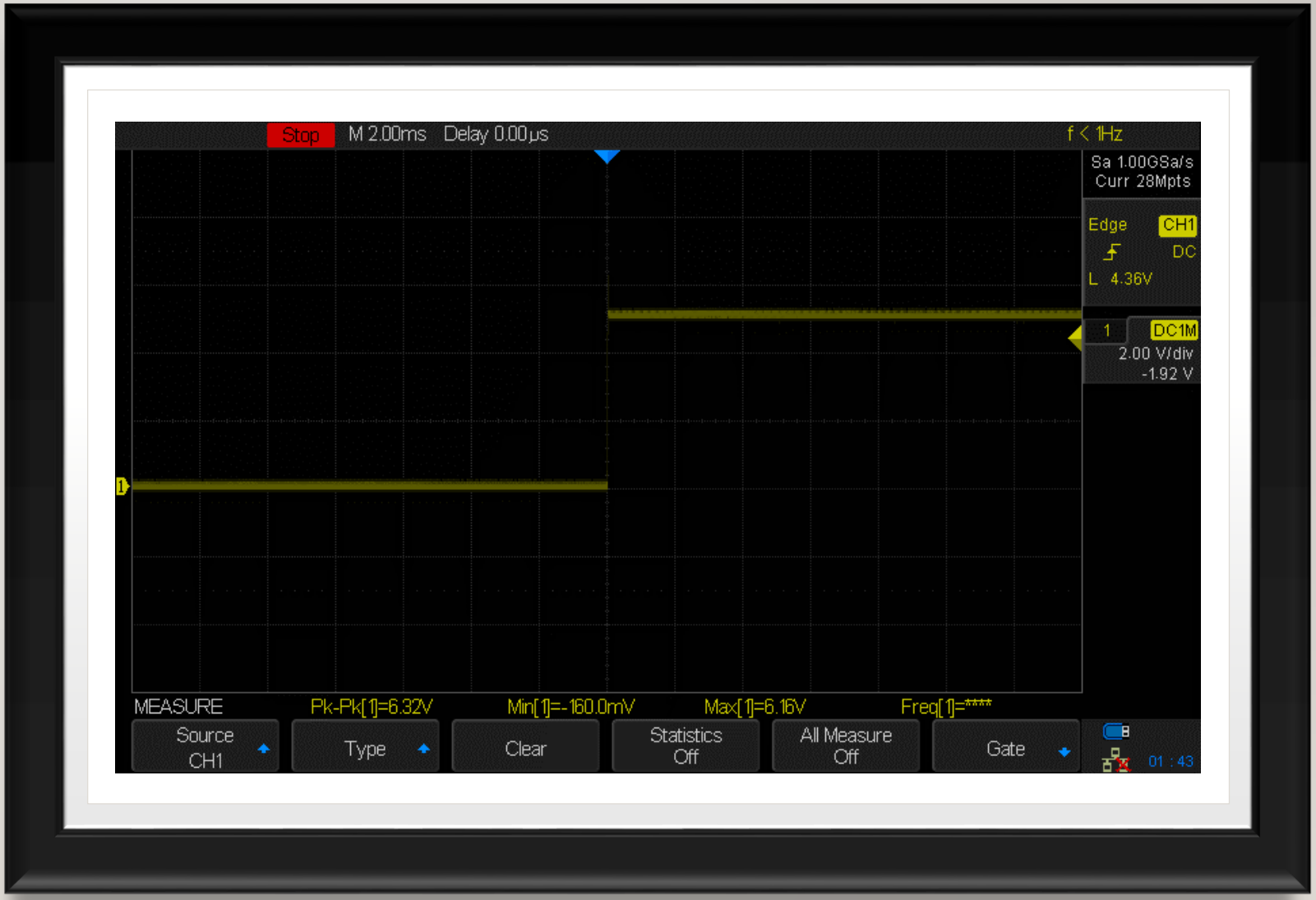


Components :

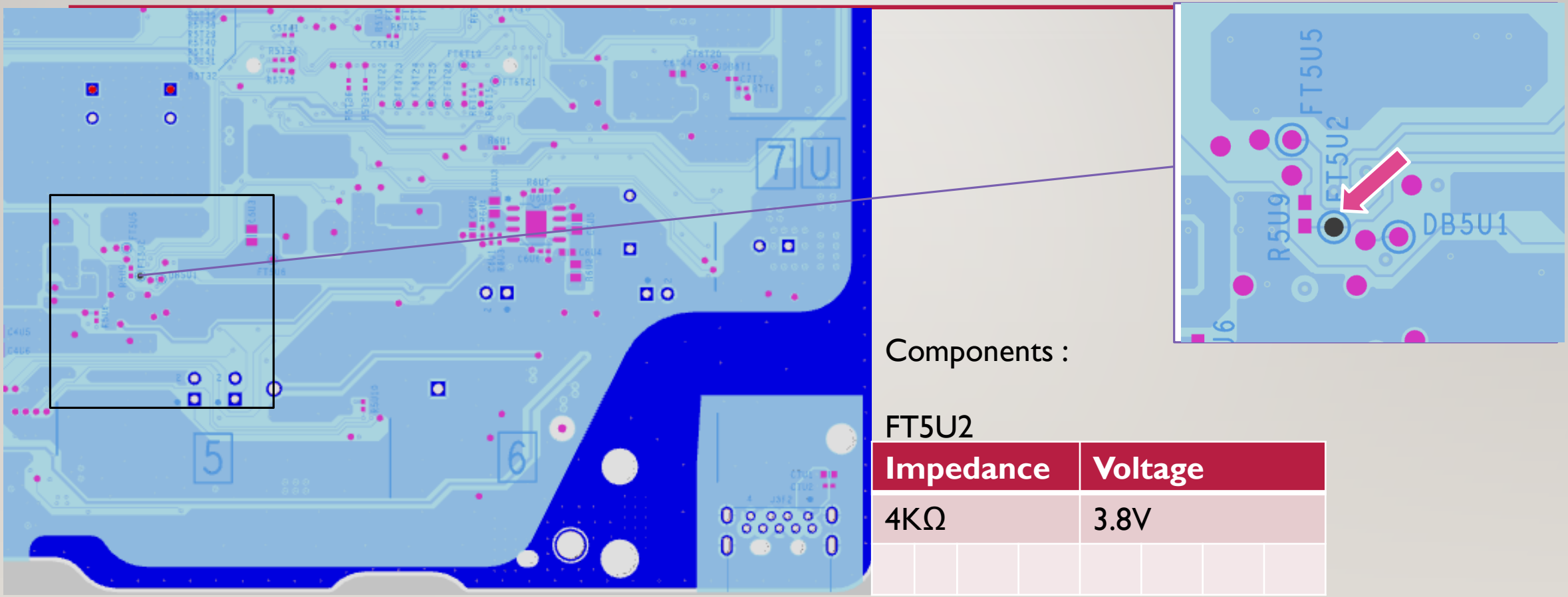
R5C8.2

Impedance	Voltage
54KΩ	5V

V_5P0_HDD


Stop
M 2.00ms Delay 0.00µs
f < 1Hz
Sa 1.00GSa/s
Curr 28Mpts
Edge
CH1
DC
L 4.36V
1
DC1M
2.00 V/div
-1.92 V
MEASURE
Pk-Pk[1]=6.32V
Min[1]=-160.0mV
Max[1]=6.16V
Freq[1]=****
Source CH1
Type
Clear
Statistics Off
All Measure Off
Gate
01 : 43

VREG_PWRGPB_EN

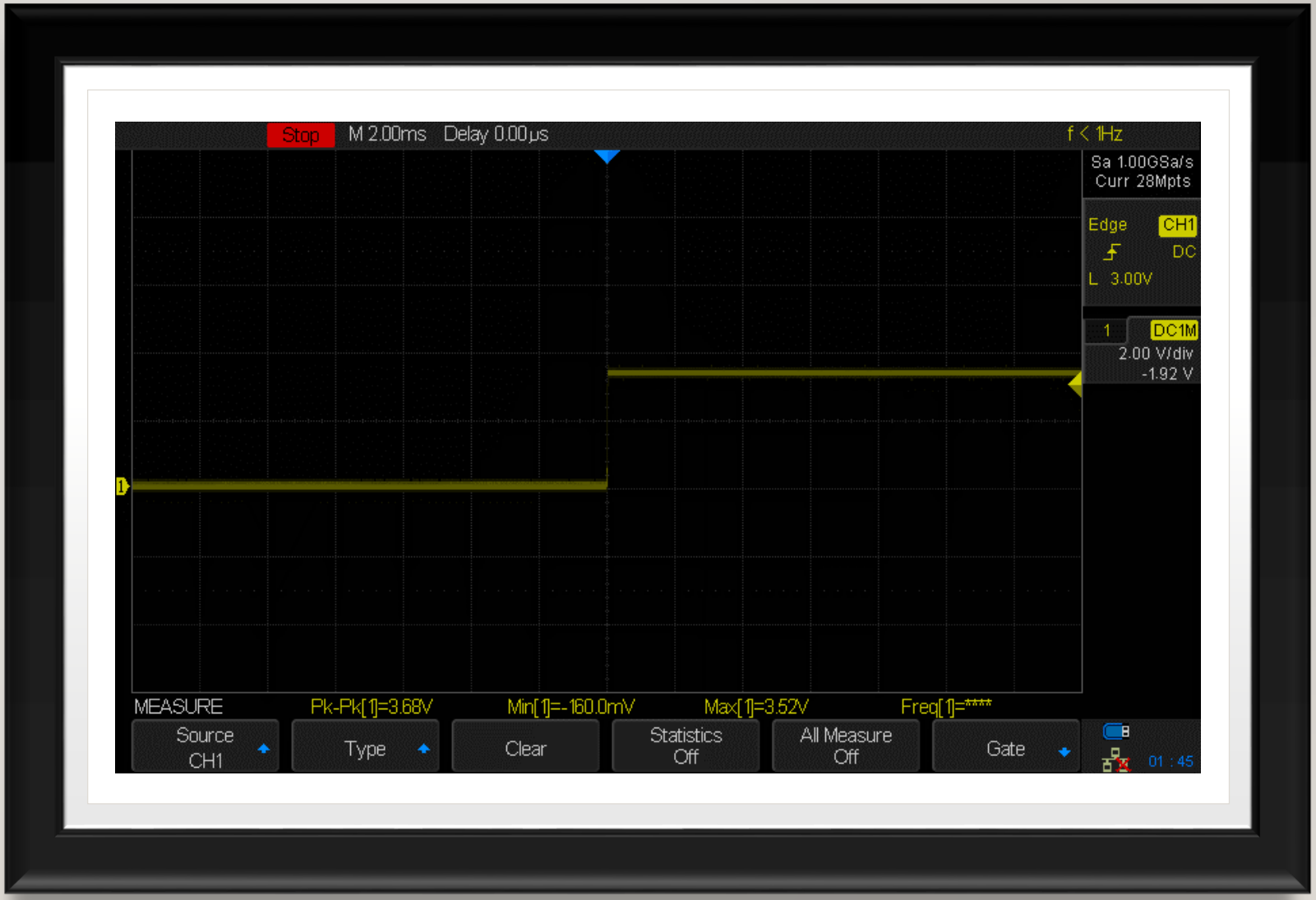


Components :

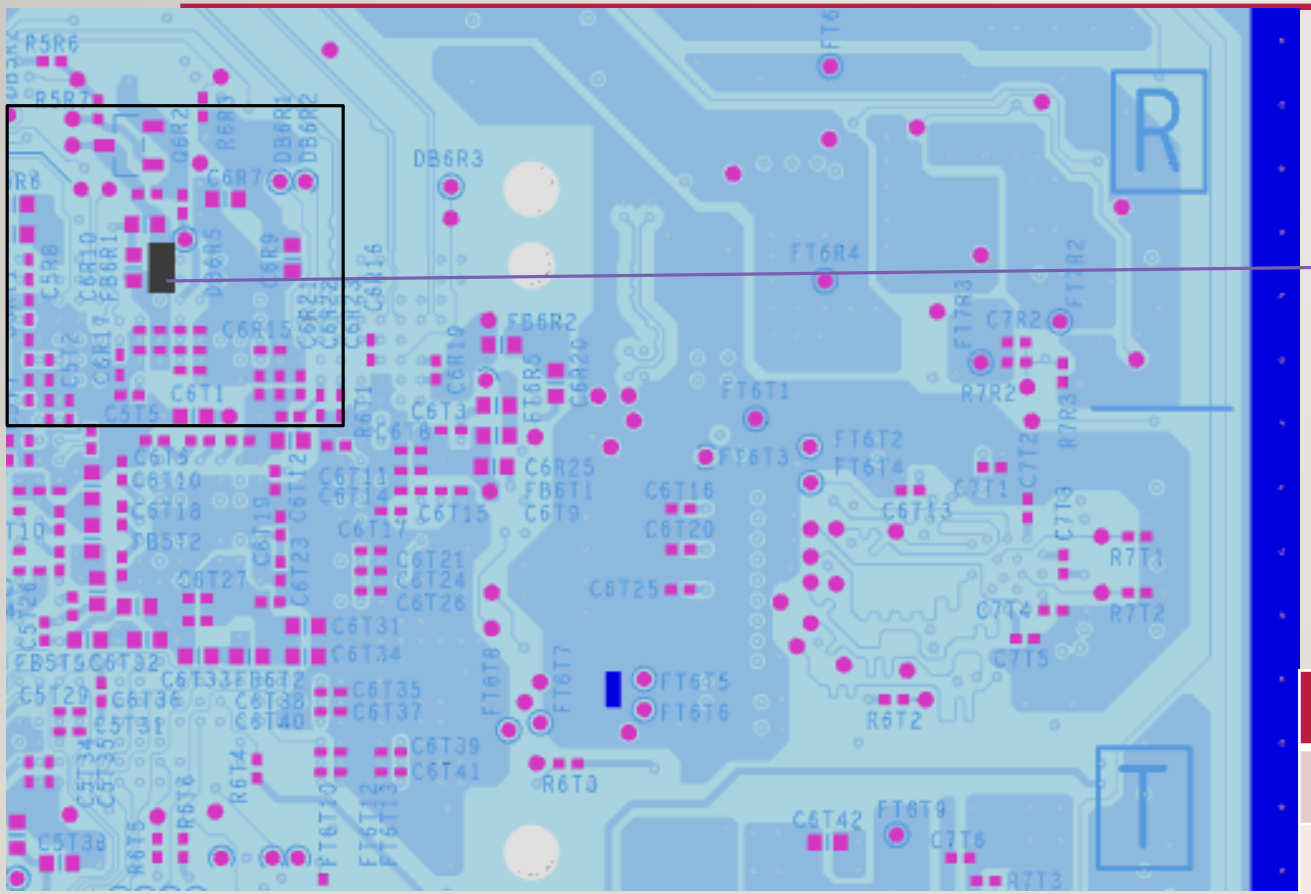
FT5U2

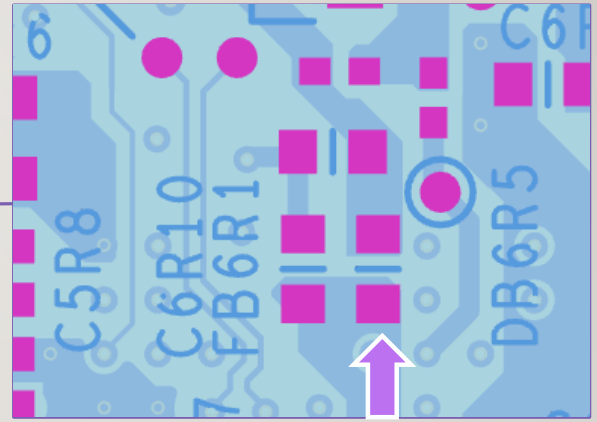
Impedance	Voltage
4KΩ	3.8V

VREG_PWRGPB_EN



V_KIC3P3HDMI



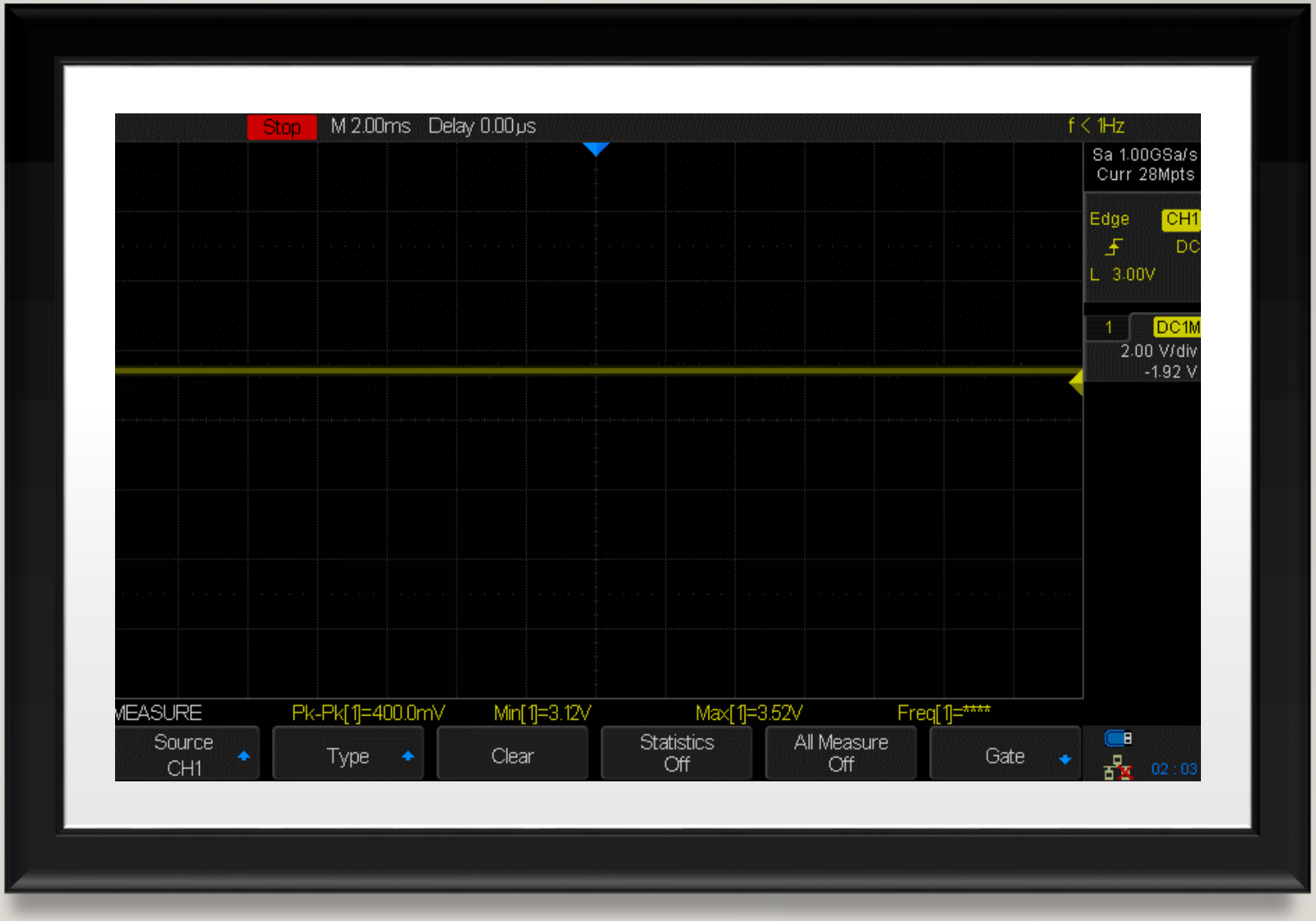


Components :

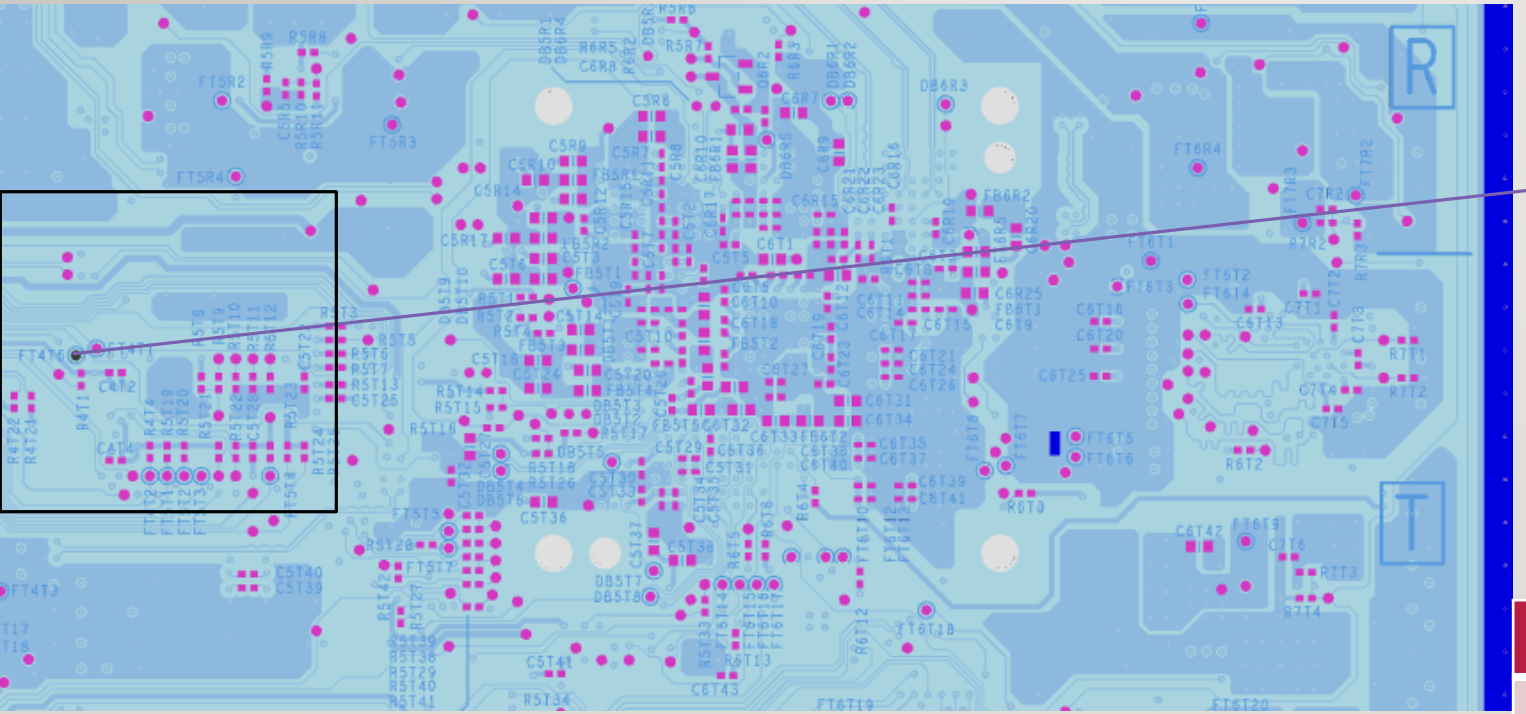
FB6R1.1

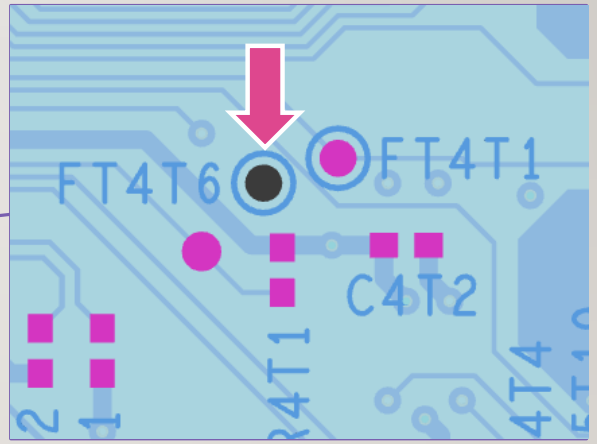
Impedance	Voltage
28KΩ	3.12V

V_KIC3P3HDMI



V_SOCPHY



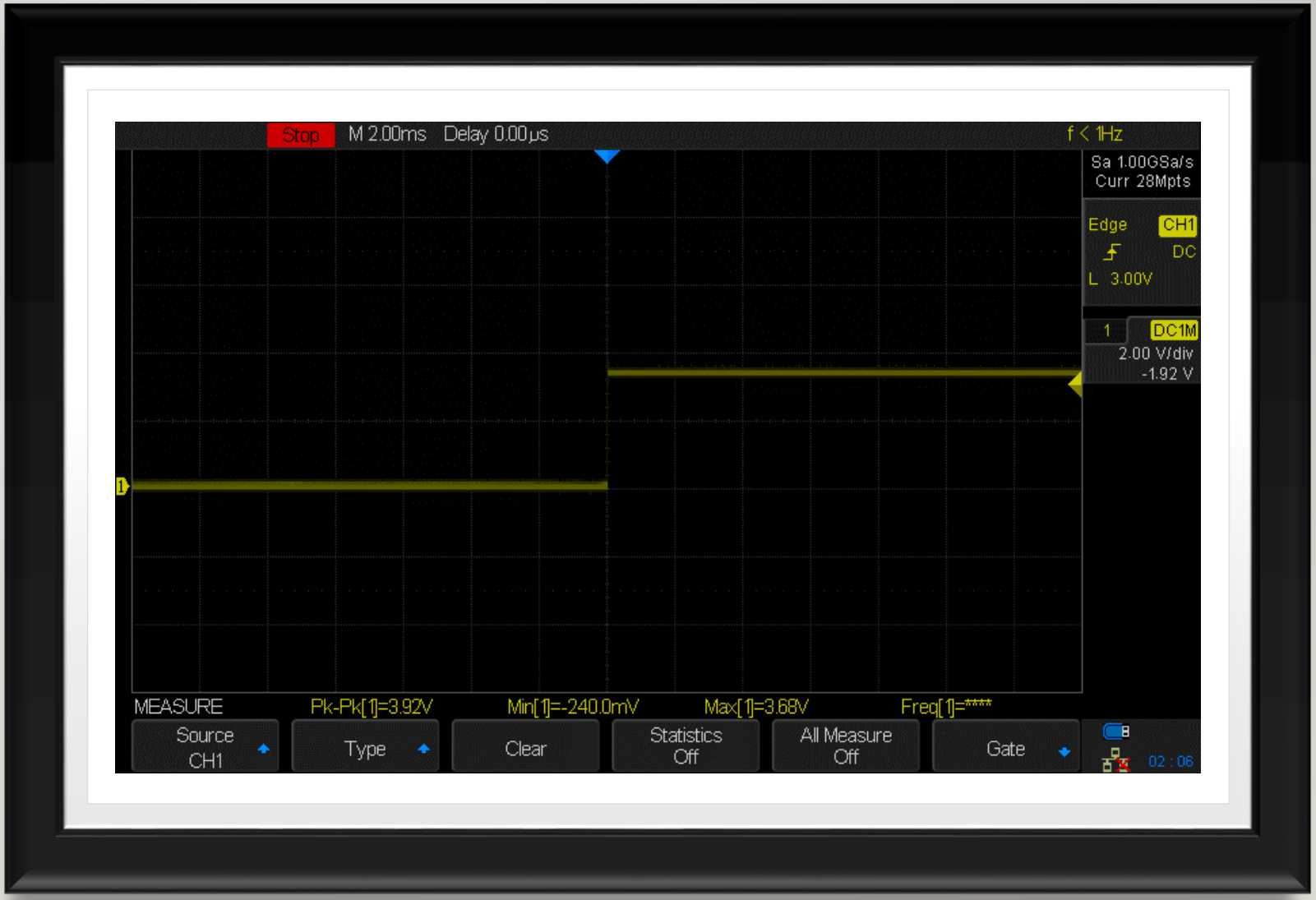


Components :

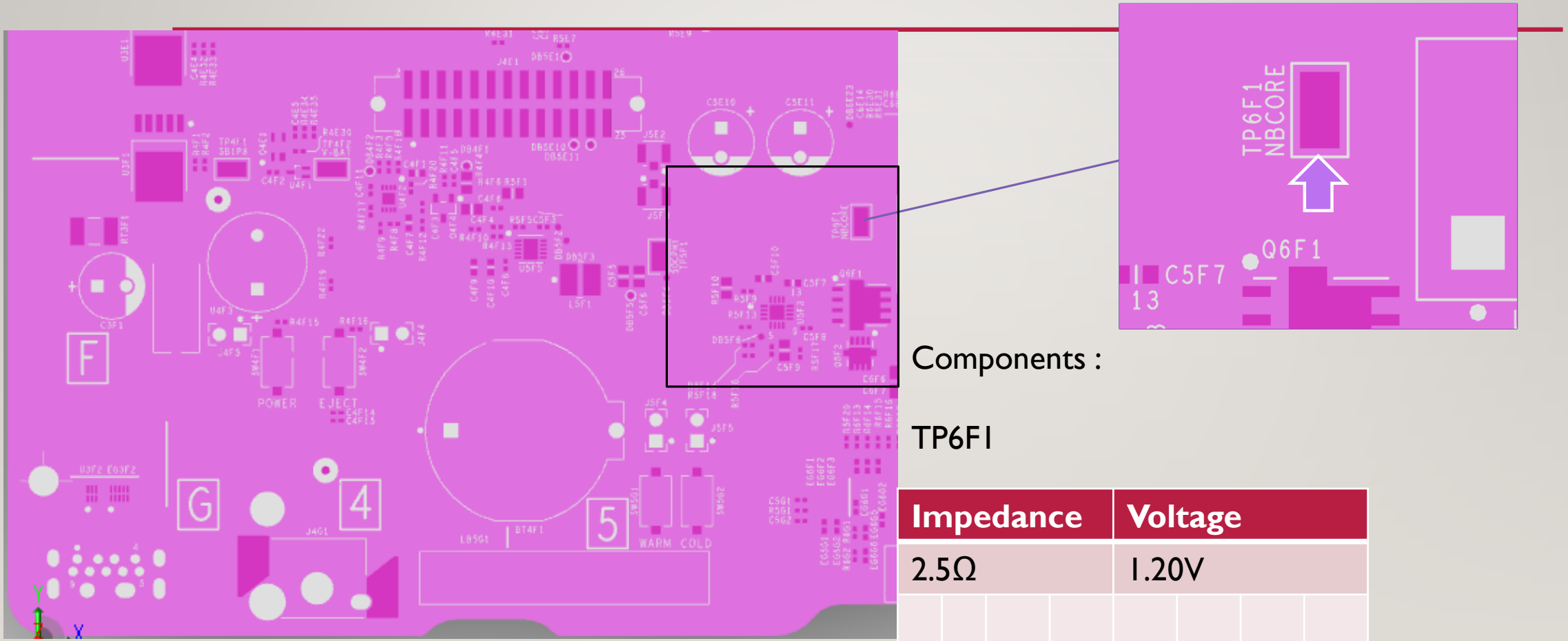
FT4T6 or DB5F4

Impedance	Voltage
79Ω	3.8V

V_SOCPHY


Stop
M 2.00ms Delay 0.00µs
f < 1Hz
Sa 1.00GSa/s
Curr 28Mpts
Edge CH1
DC
L 3.00V
1 DC1M
2.00 V/div
-1.92 V
MEASURE
Pk-Pk[1]=3.92V
Min[1]=-240.0mV
Max[1]=3.68V
Freq[1]=****
Source CH1
Type
Clear
Statistics Off
All Measure Off
Gate
02 : 06

V_NBCORE



Components :

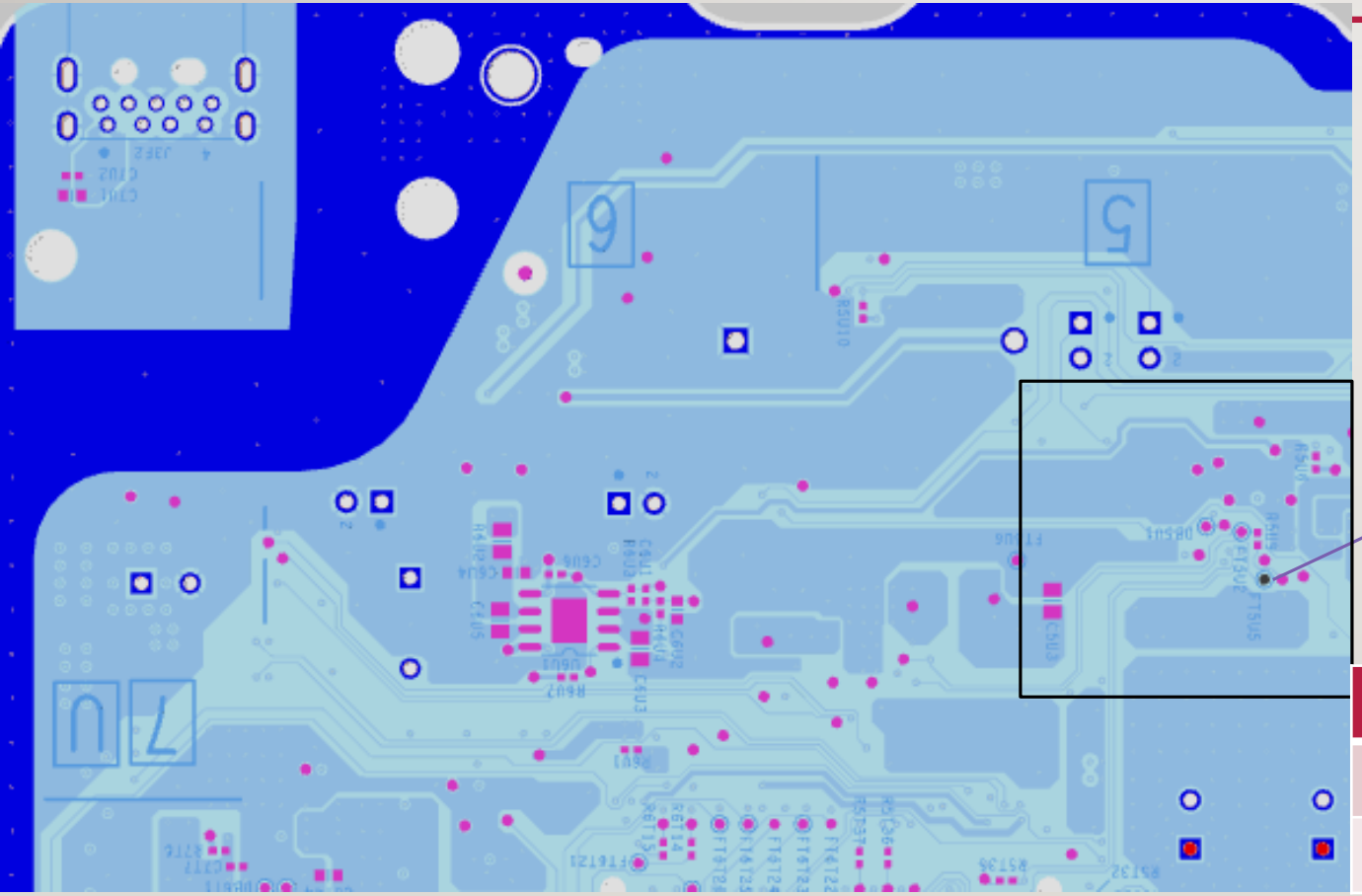
TP6F1

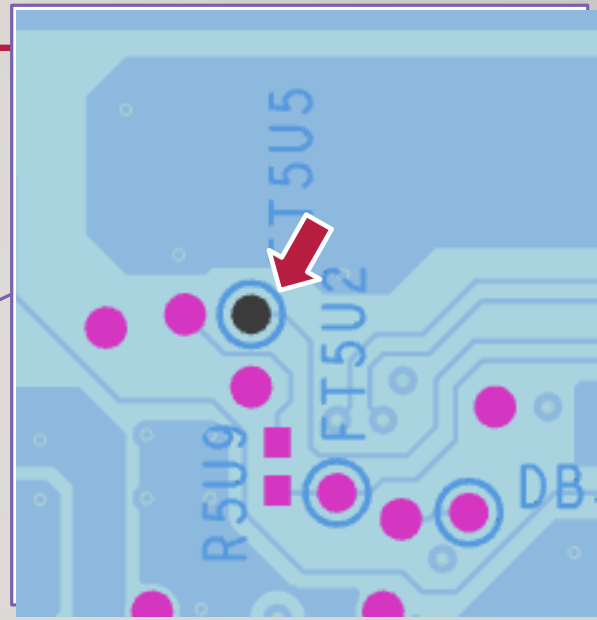
Impedance	Voltage
2.5Ω	1.20V

V_NBCORE


Stop
M 2.00ms Delay 0.00µs
f < 1Hz
Sa 1.00GSa/s
Curr 28Mpts
Edge CH1
DC
L 680mV
1 DC1M
2.00 V/div
-1.92 V
MEASURE
Pk-Pk[1]=400.0mV
Min[1]=800.0mV
Max[1]=1.20V
Freq[1]=****
Source CH1
Type
Clear
Statistics Off
All Measure Off
Gate
02 : 09

VREG_PWRGPB_PWRGD

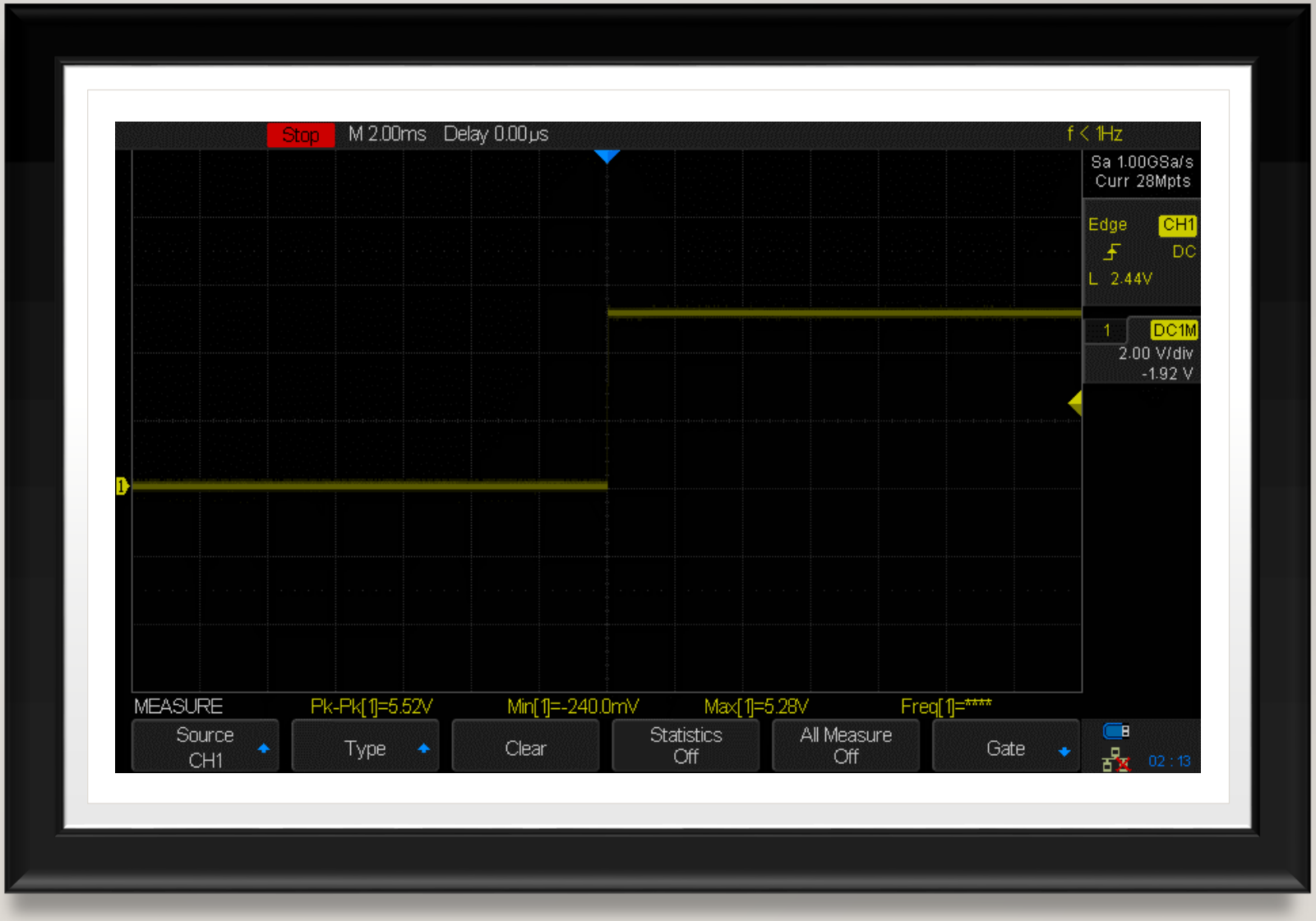




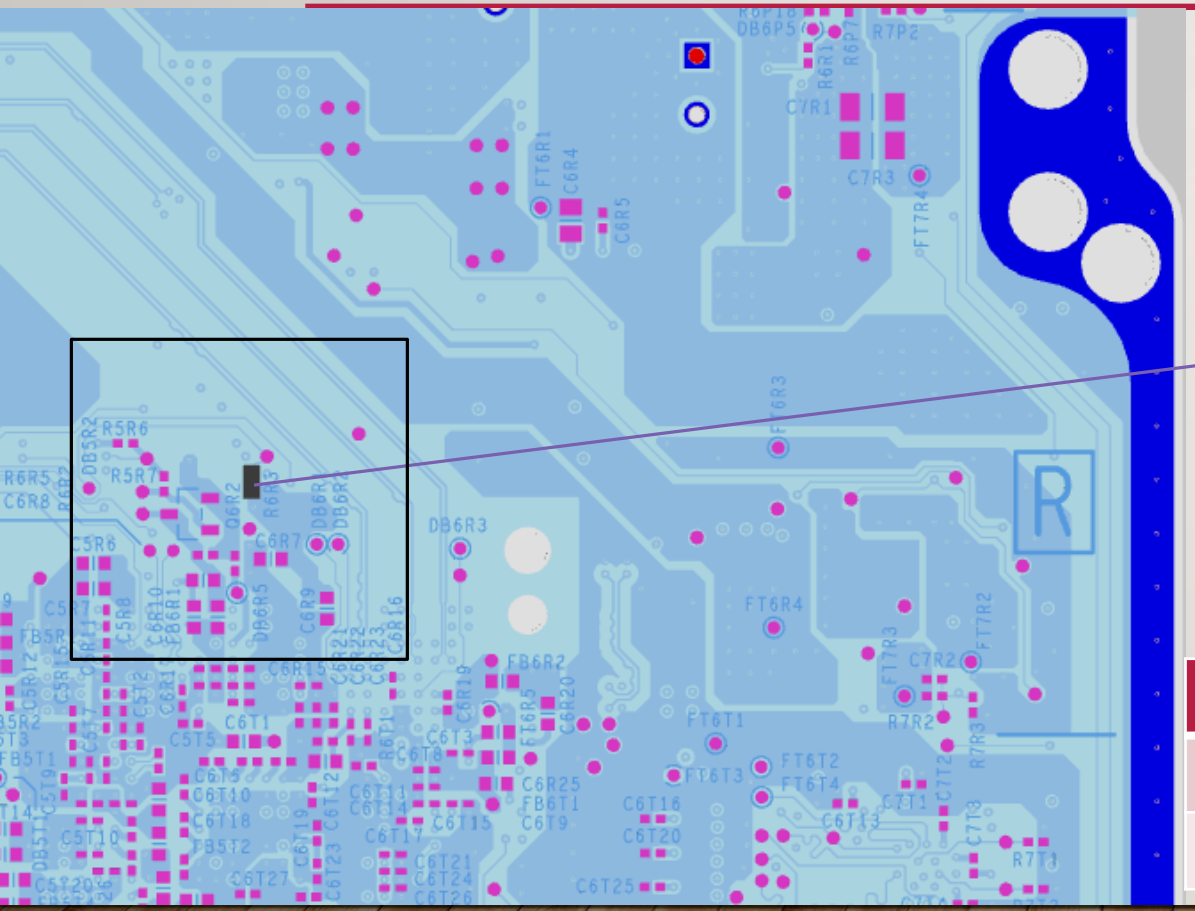
Components :
FT5U5

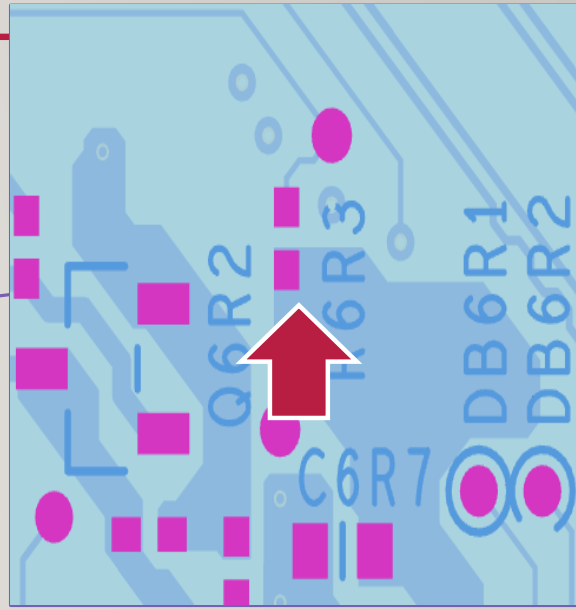
Impedance	Voltage
28KΩ	5V

VREG_PWRGPB_PWRGD



VREG_PWRGPC_EN





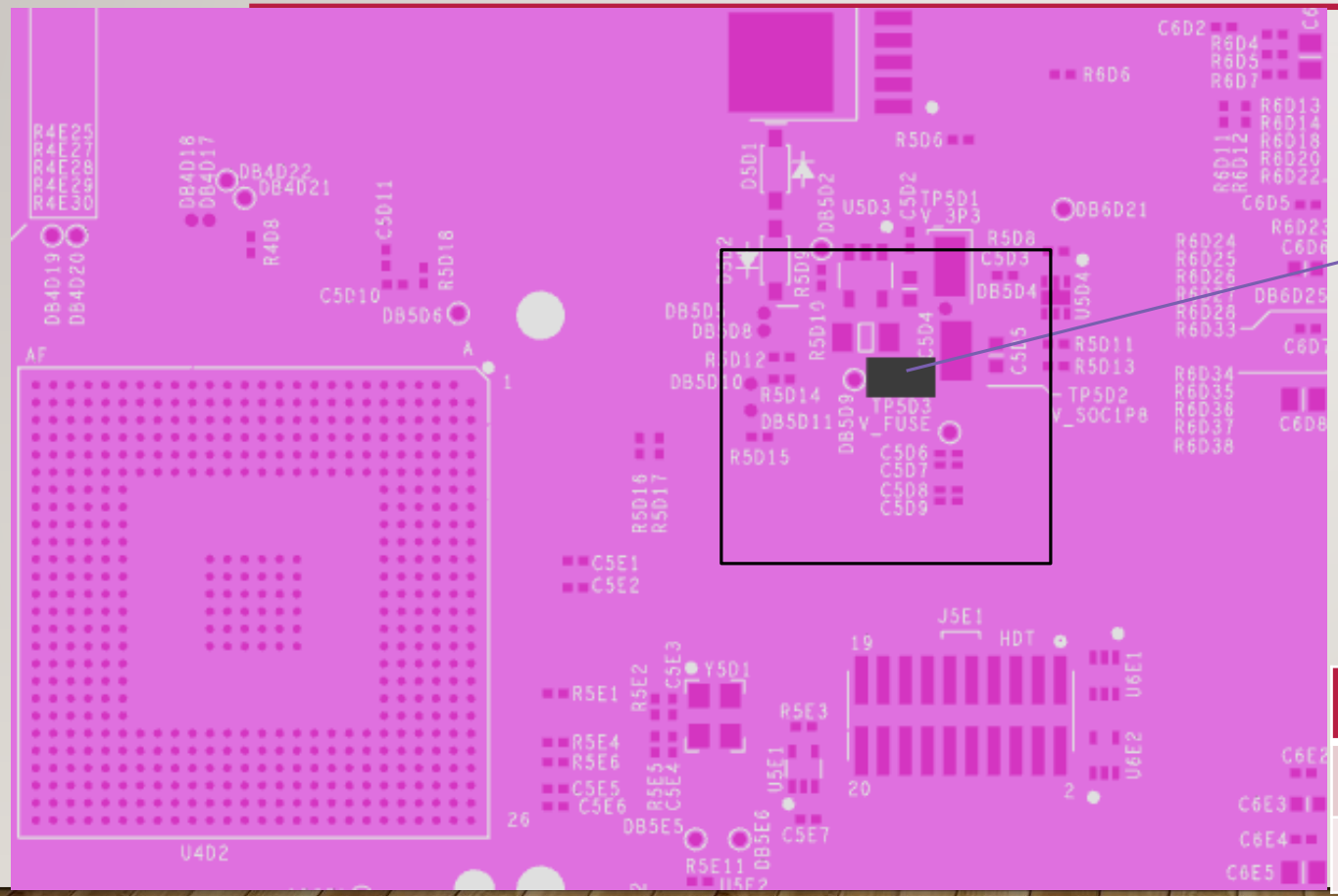
Components :

R6R3.1

Impedance	Voltage
4.12KΩ	3.8V

VREG_PWRGPC_EN

V_FUSE

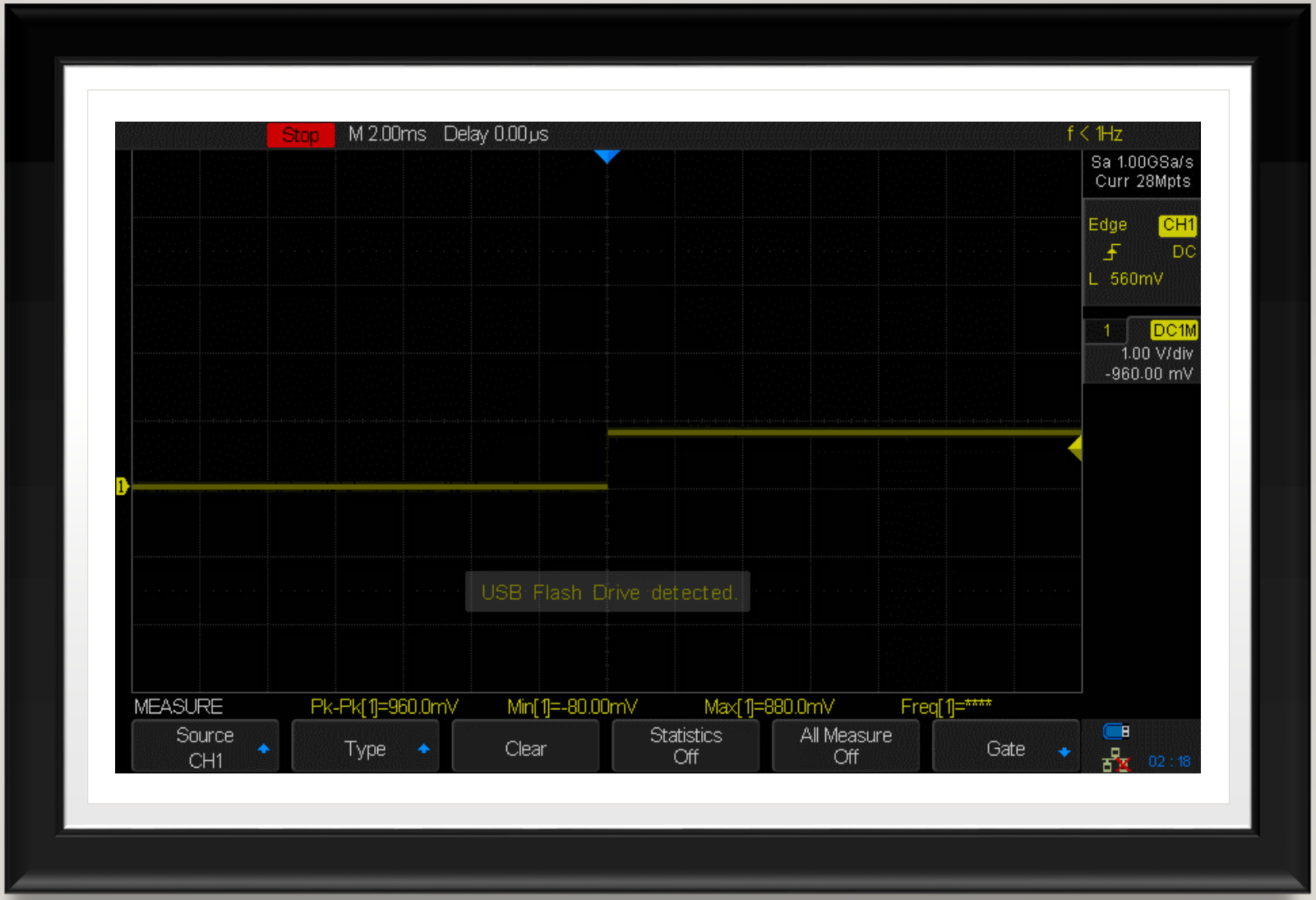


Components :

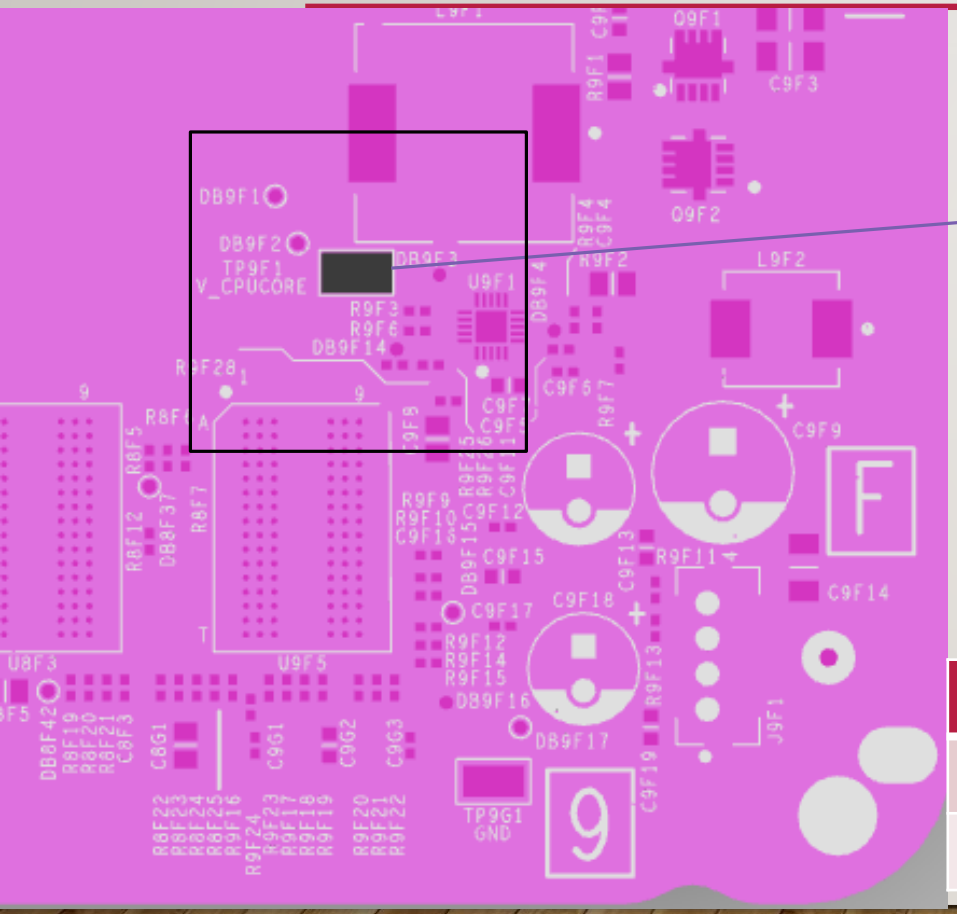
TP5D3

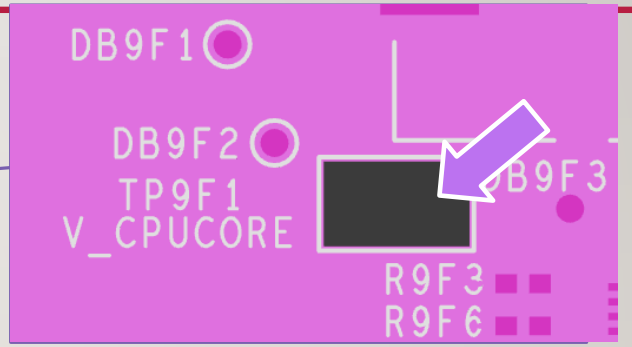
Impedance	Voltage
3.4KΩ	960mV

V_FUSE


Stop
M 2.00ms Delay 0.00µs
f < 1Hz
Sa 1.00GSa/s
Curr 28Mpts
Edge CH1
DC
L 560mV
1 DC1M
1.00 V/div
-960.00 mV
USB Flash Drive detected.
MEASURE
Pk-Pk[1]=960.0mV
Min[1]=-80.00mV
Max[1]=880.0mV
Freq[1]=****
Source CH1
Type
Clear
Statistics Off
All Measure Off
Gate
02 : 18

V_CPUCORE



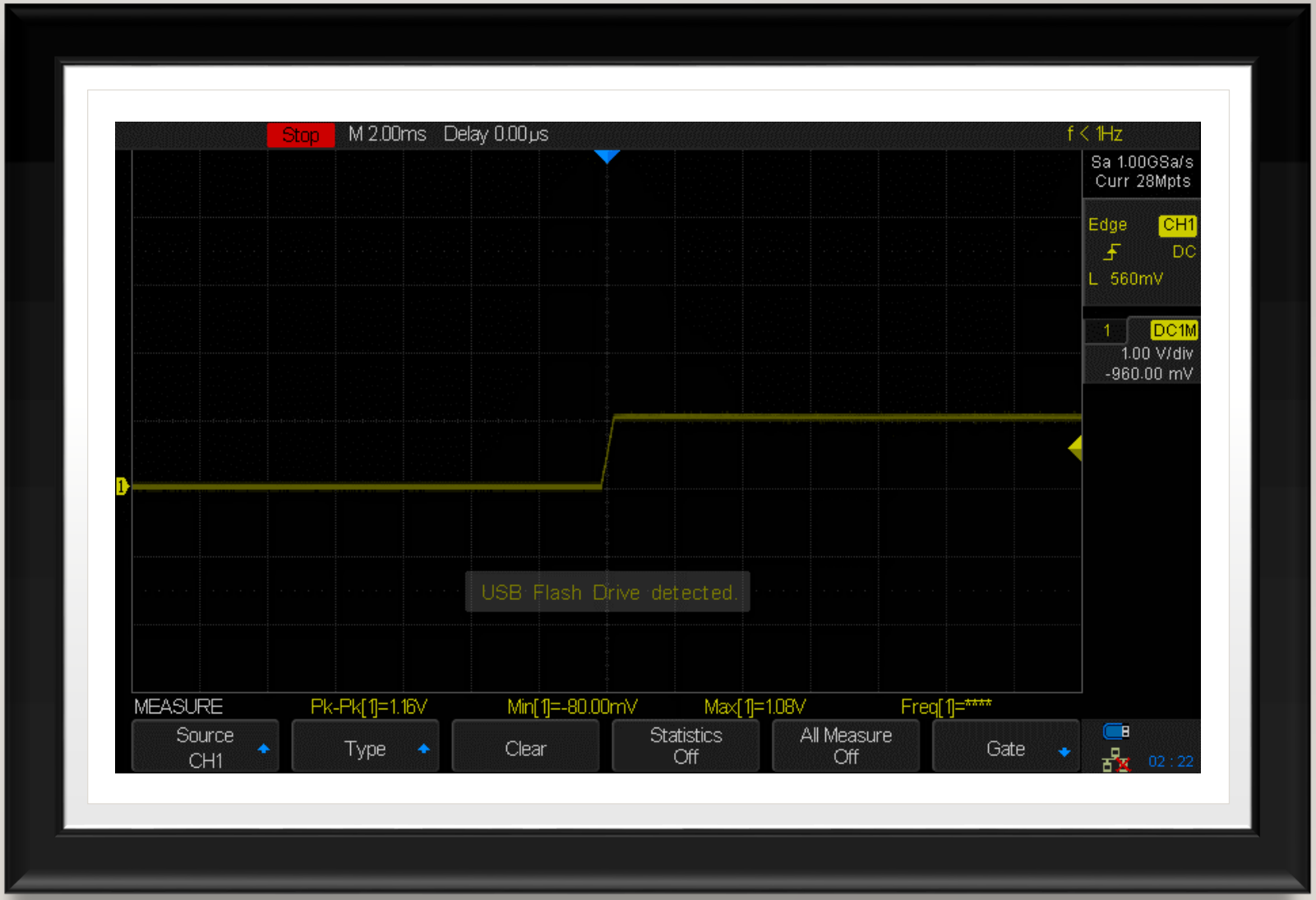


Components :

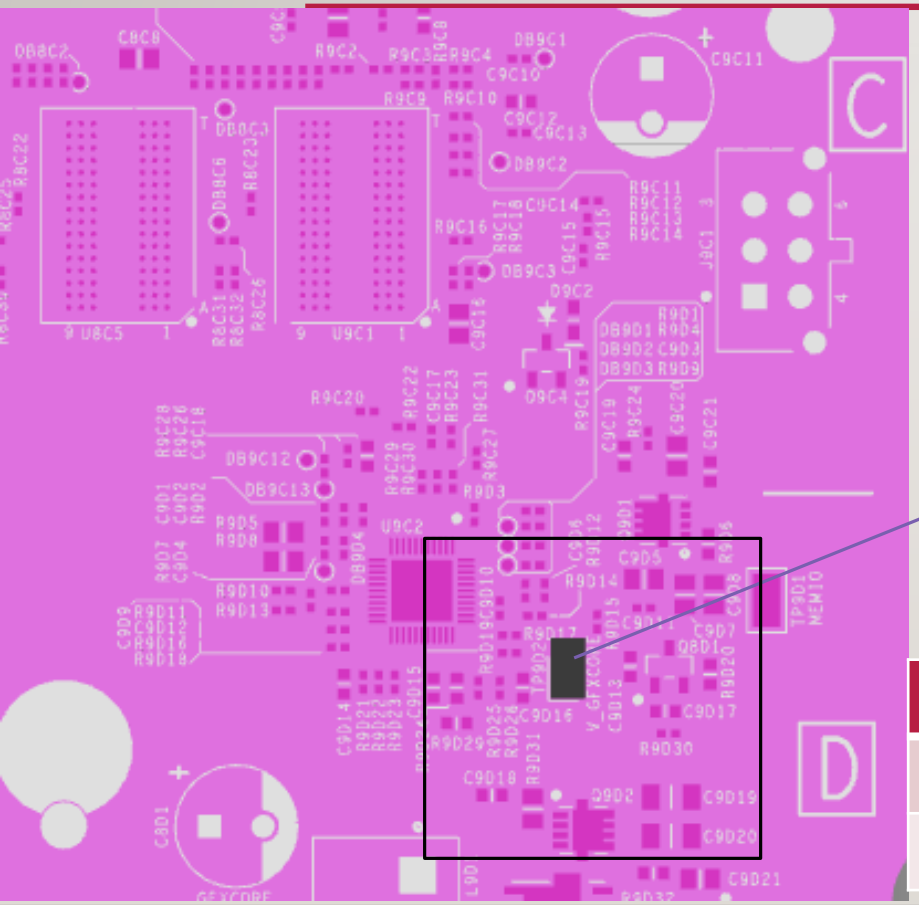
TP9F1

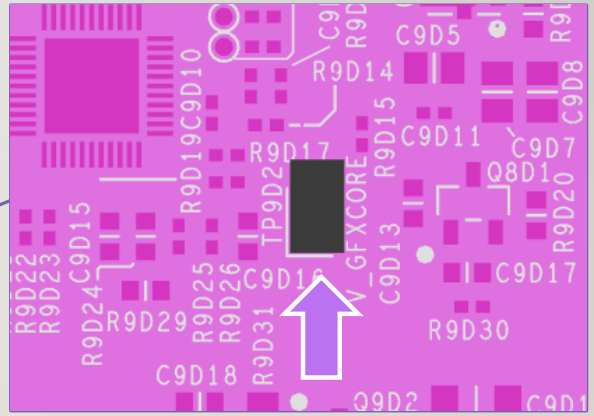
Impedance	Voltage
1.3Ω	1V

V_CPUCORE


Stop
M 2.00ms Delay 0.00µs
f < 1Hz
Sa 1.00GSa/s
Curr 28Mpts
Edge CH1
DC
L 560mV
1 DC1M
1.00 V/div
-960.00 mV
USB Flash Drive detected.
MEASURE
Pk-Pk[1]=1.16V
Min[1]=-80.00mV
Max[1]=1.08V
Freq[1]=****
Source CH1
Type
Clear
Statistics Off
All Measure Off
Gate
02 : 22

V_GFXCORE



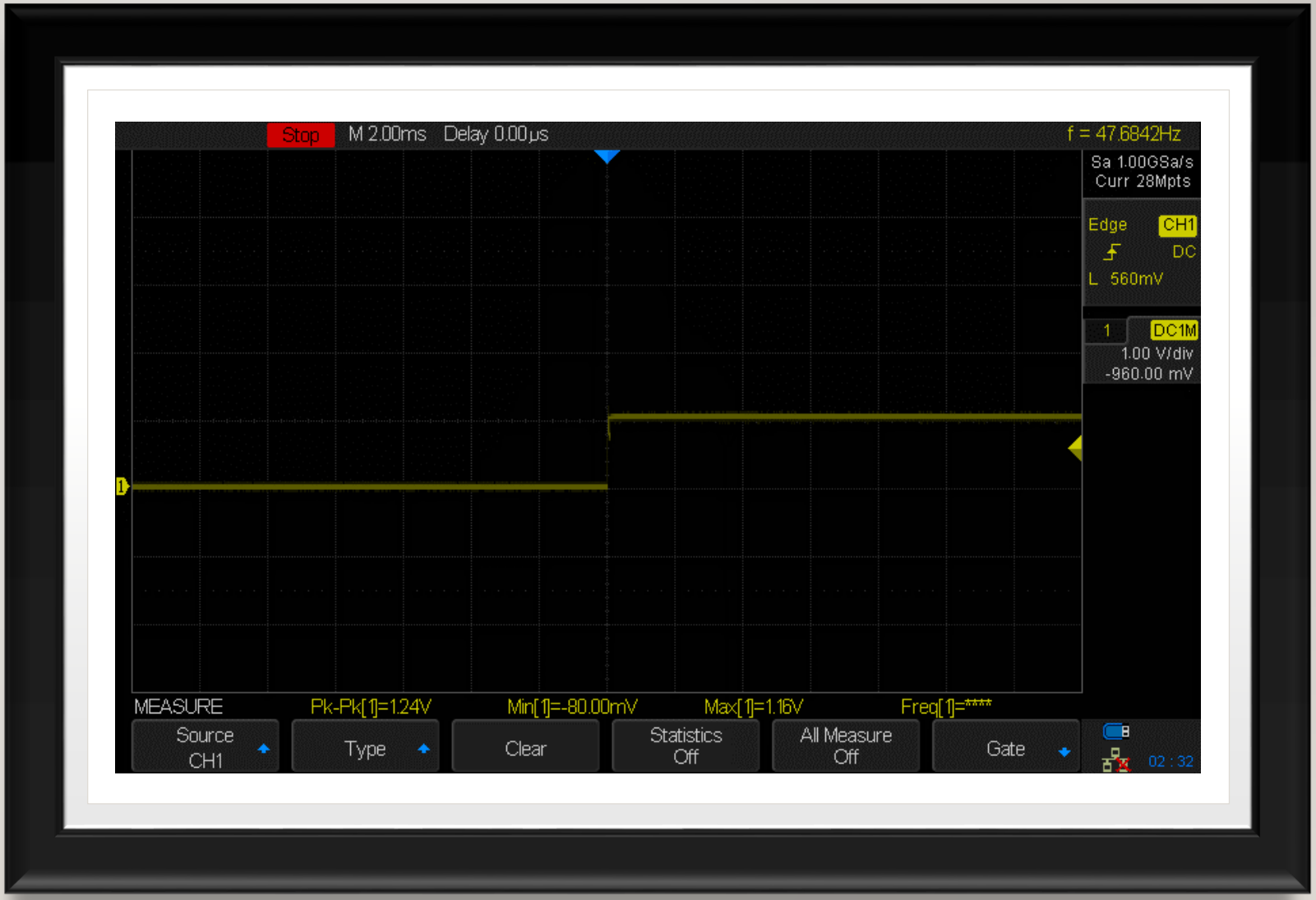


Components :

TP9D2

Impedance	Voltage
0.6Ω	1.24V

V_GFXCORE


Stop
M 2.00ms Delay 0.00µs
f = 47.6842Hz
Sa 1.00GSa/s
Curr 28Mpts
Edge
CH1
DC
L 560mV
1
DC1M
1.00 V/div
-960.00 mV
MEASURE
Pk-Pk[1]=1.24V
Min[1]=-80.00mV
Max[1]=1.16V
Freq[1]=****
Source CH1
Type
Clear
Statistics Off
All Measure Off
Gate
02 : 32