

ADC acquisition time is 1970nS

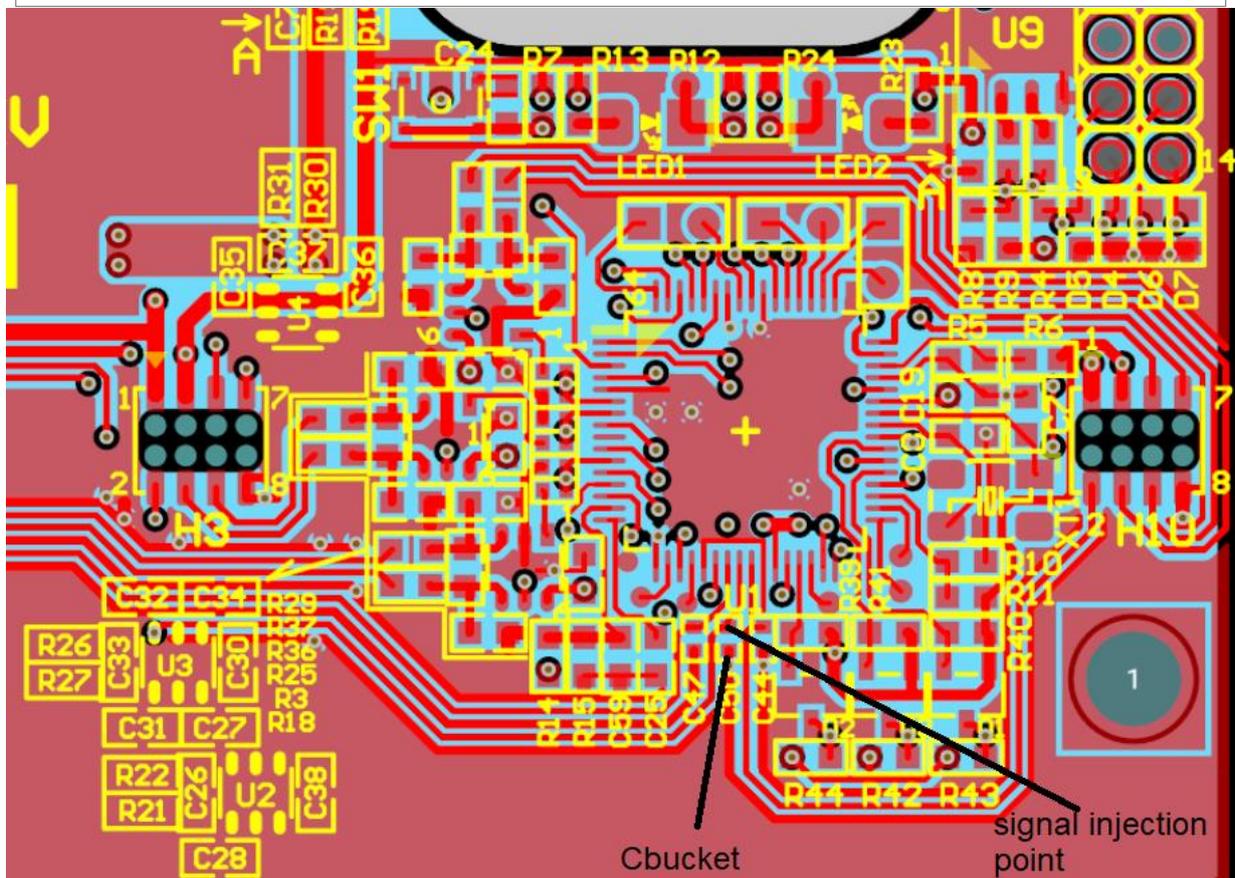
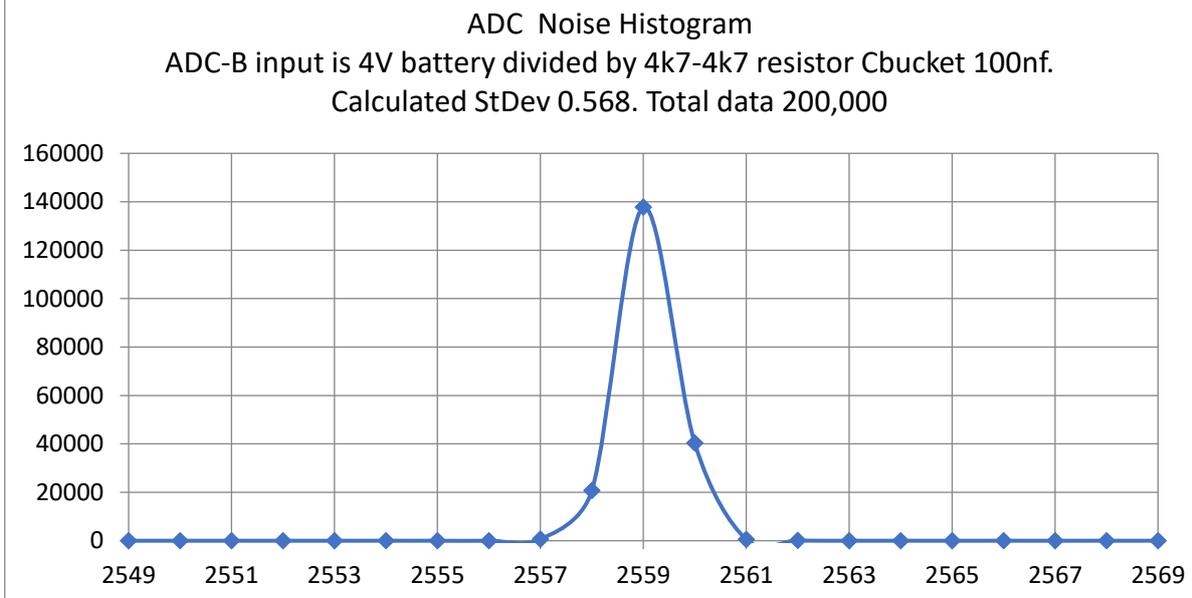


Figure 1

ADC Noise Histogram

ADC-C input is 4V battery divided by 4k7-4k7 resistor Cbucket 100nf.
Calculated StDev 0.559. Total data 200,000

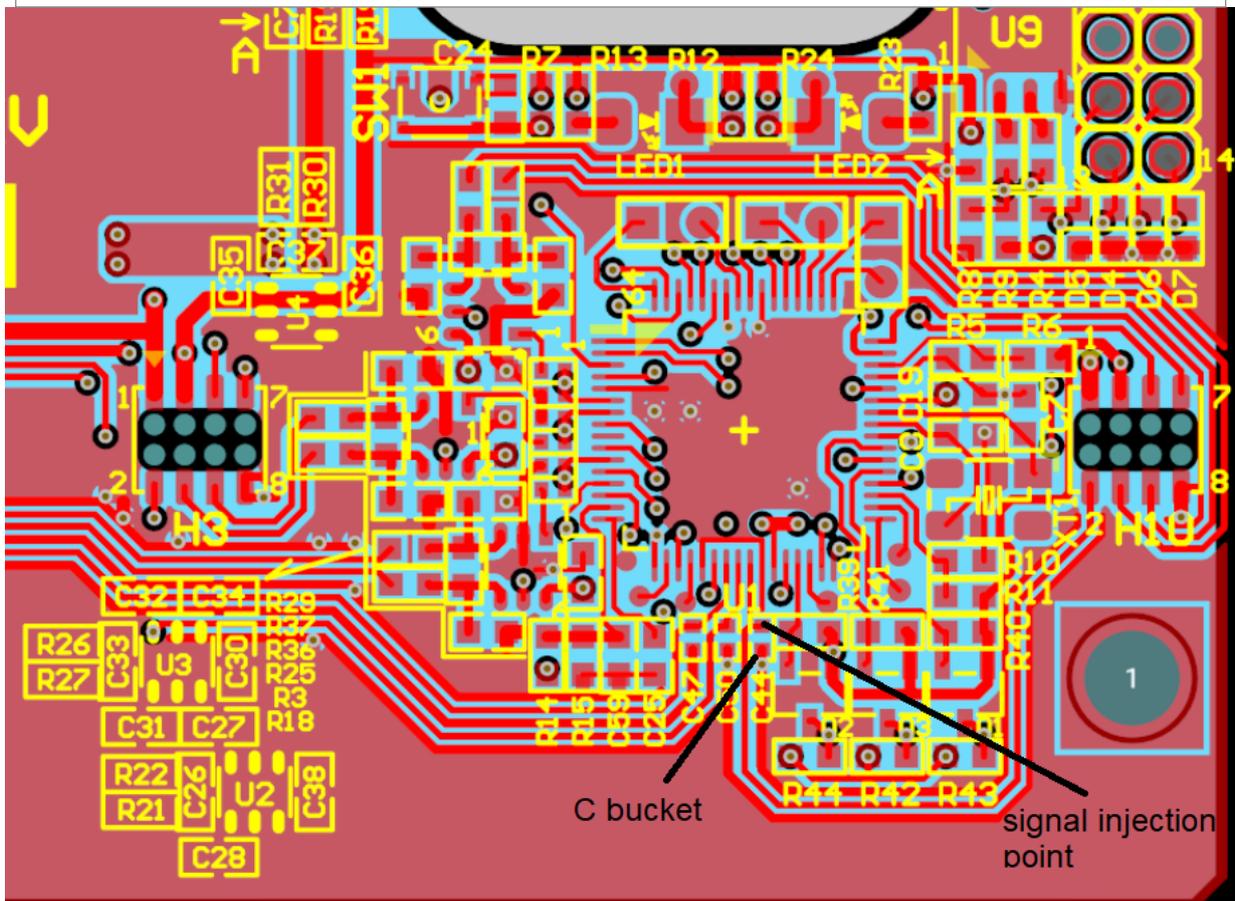
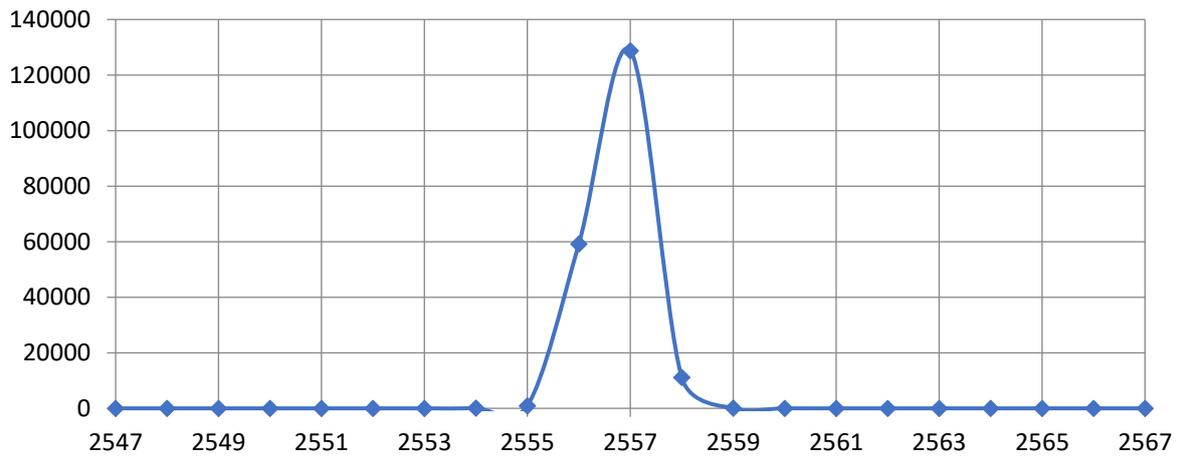


Figure 2

ADC Noise Histogram

ADC-B input is 4V battery divided by 1k-1k resistor Cbucket 150pf.
Calculated StDev 1.066 Total data 199,961

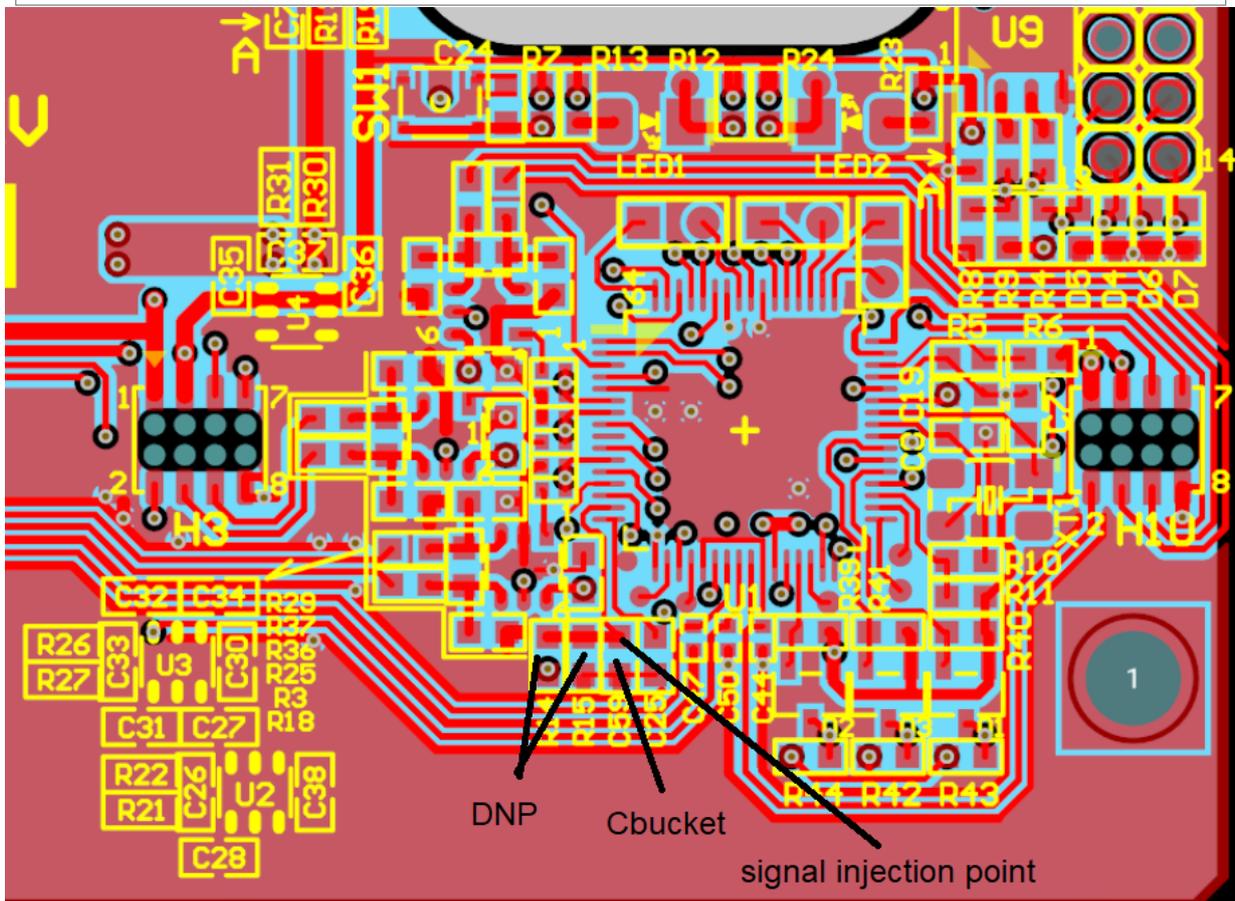
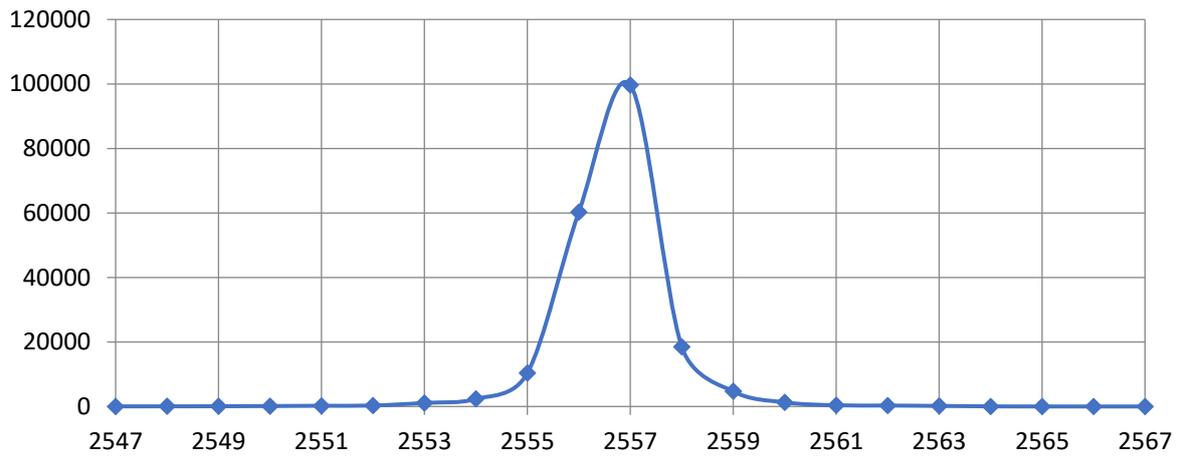


Figure 3

ADC Noise Histogram
 ADC-B input is 4V battery divided by 1k-1k resistor Cbucket 10nf.
 Calculated StDev 0.561. Total data 200,000

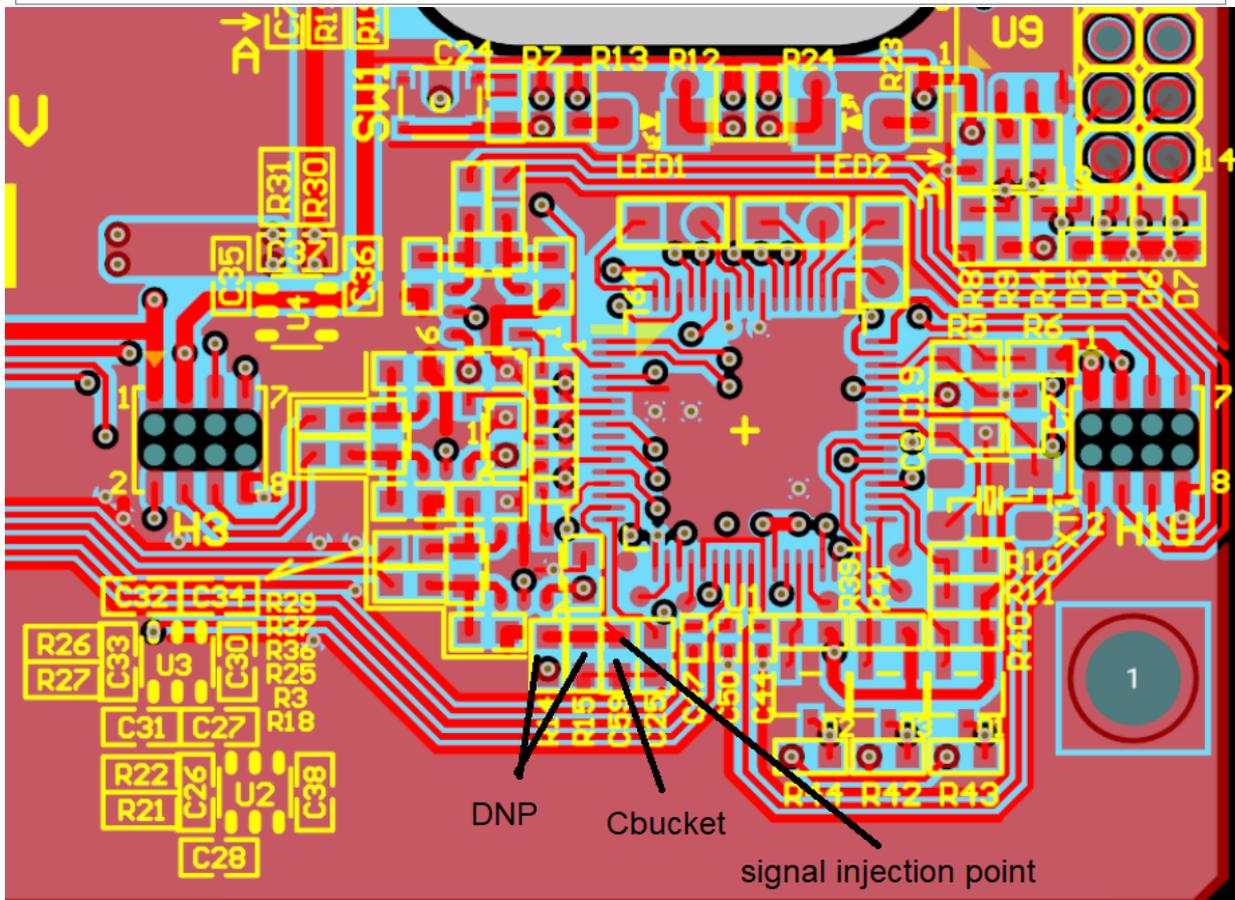
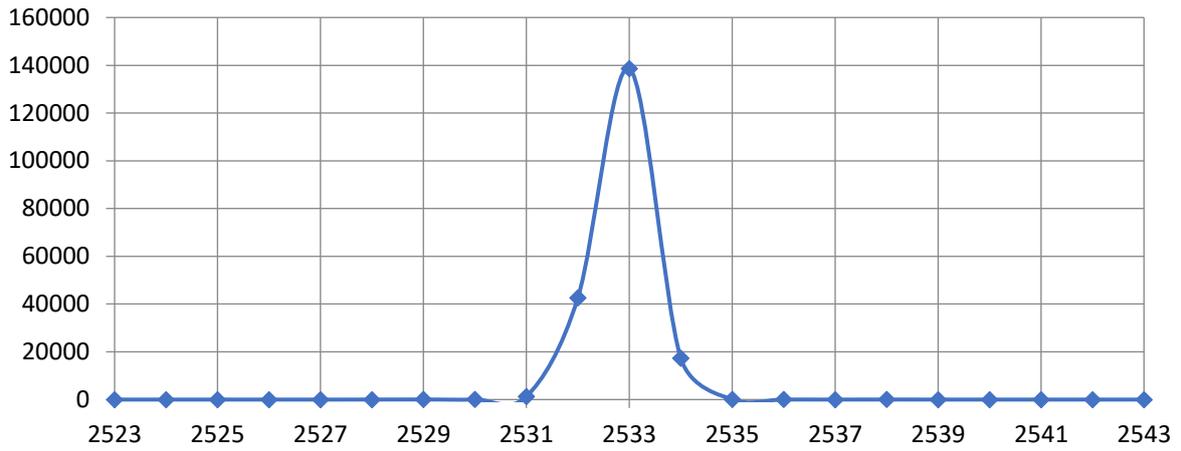


Figure 4

ADC Noise Histogram
 ADC-B input is 1.65V from DAC. Rbucket = 0R Cbucket 10nf.
 Calculated StDev 0.678. Total data 200,000

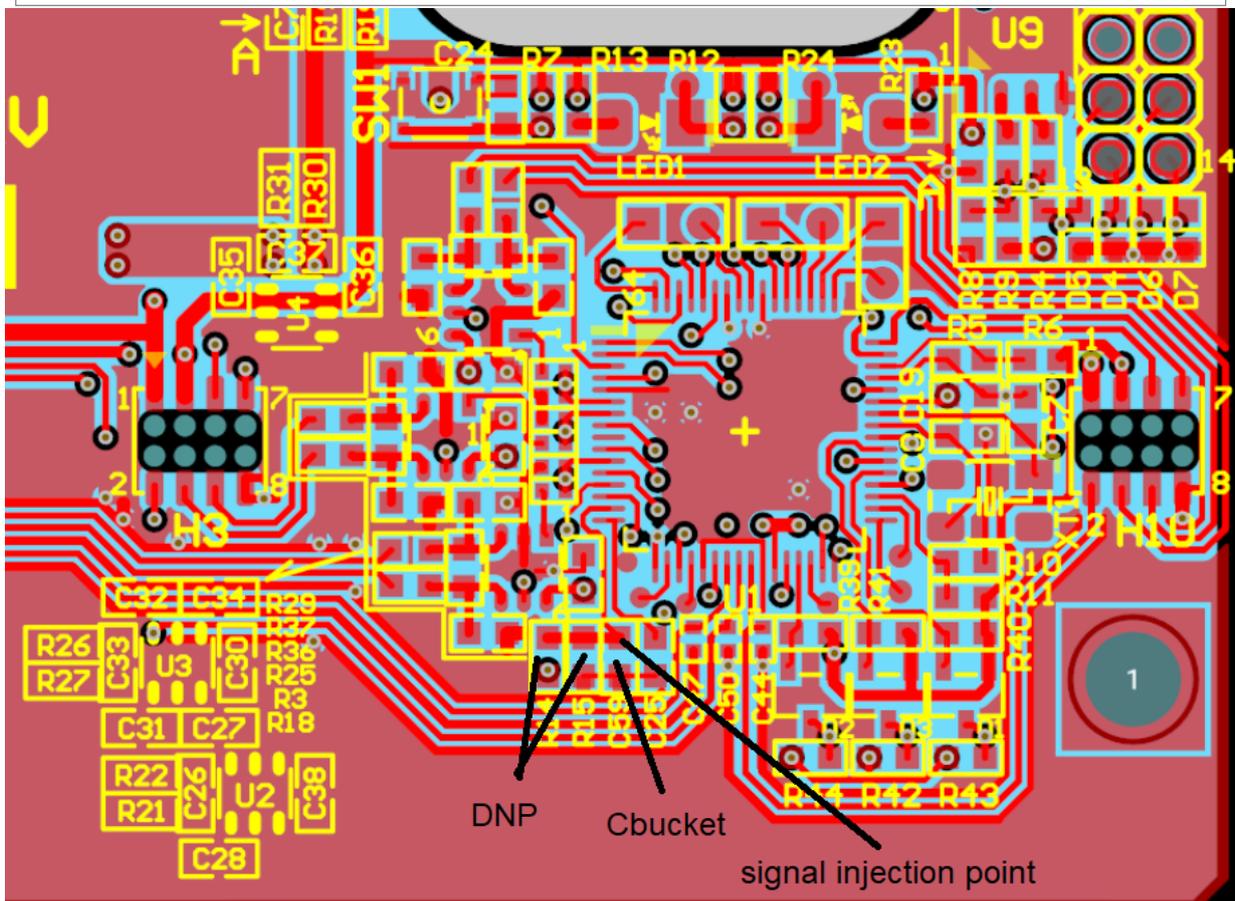
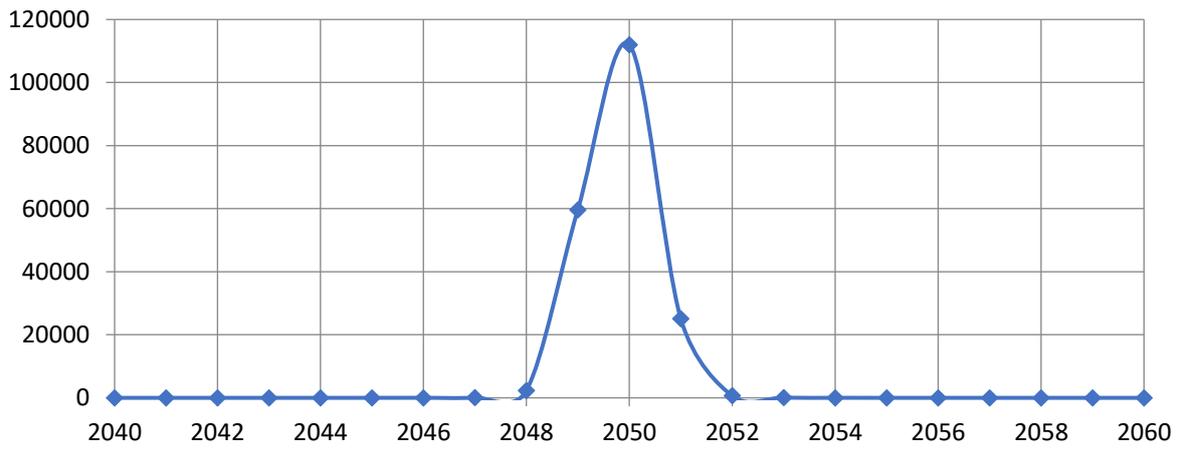


Figure 5

ADC Noise Histogram

ADC-B input is 1.65V from DAC. Rbucket = 0R Cbucket 150pf.

Calculated StDev 0.798. Total data 199,953

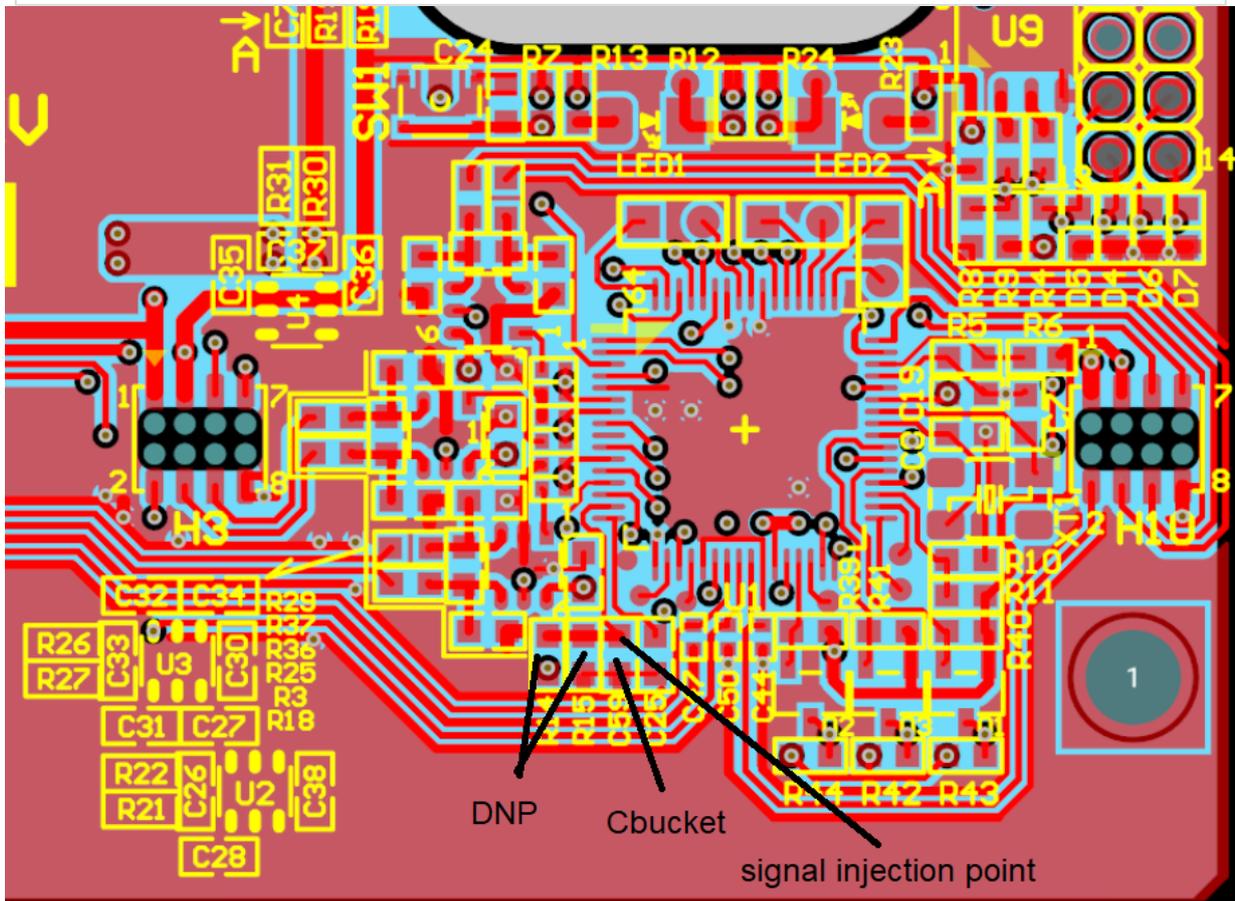
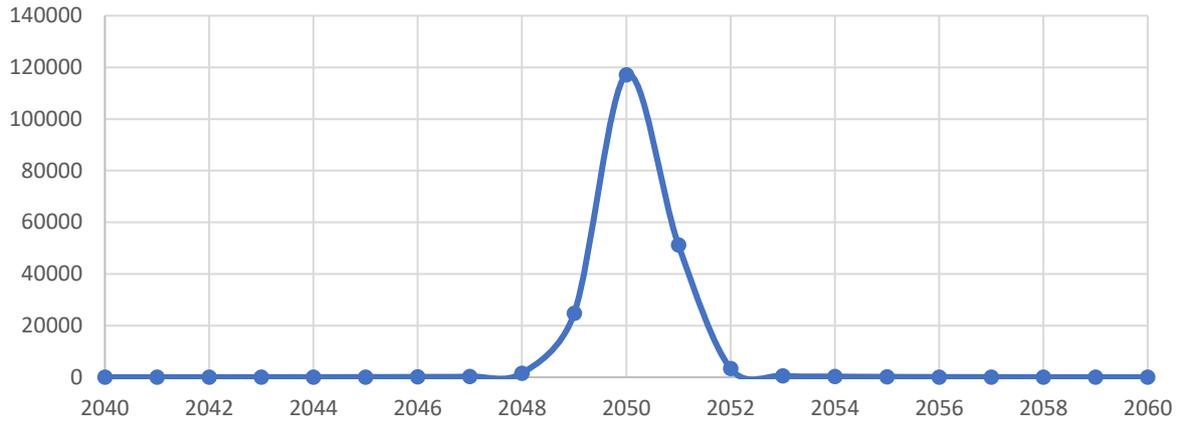


Figure 6

ADC Noise Histogram
 ADC-B input using INA181A2 : As in figure below
 Calculated StDev 2.2639 Total data 200,000

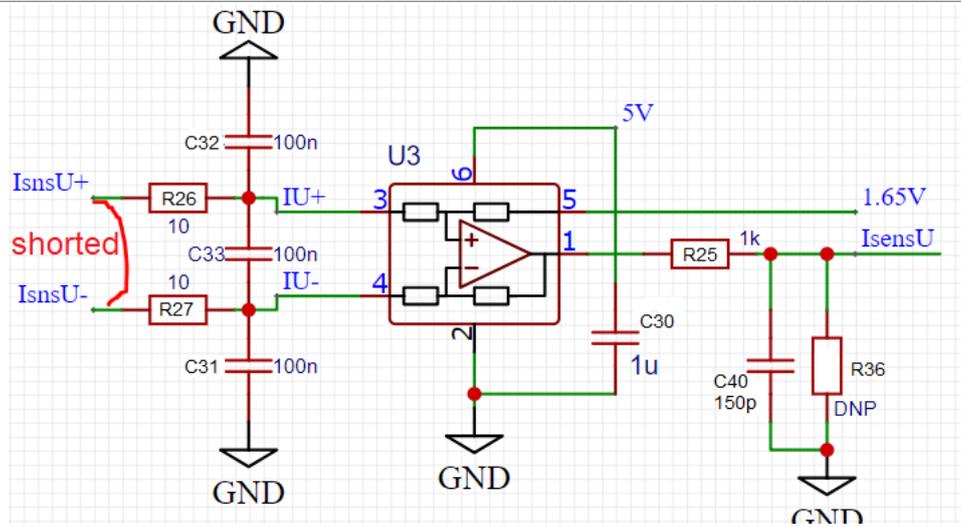
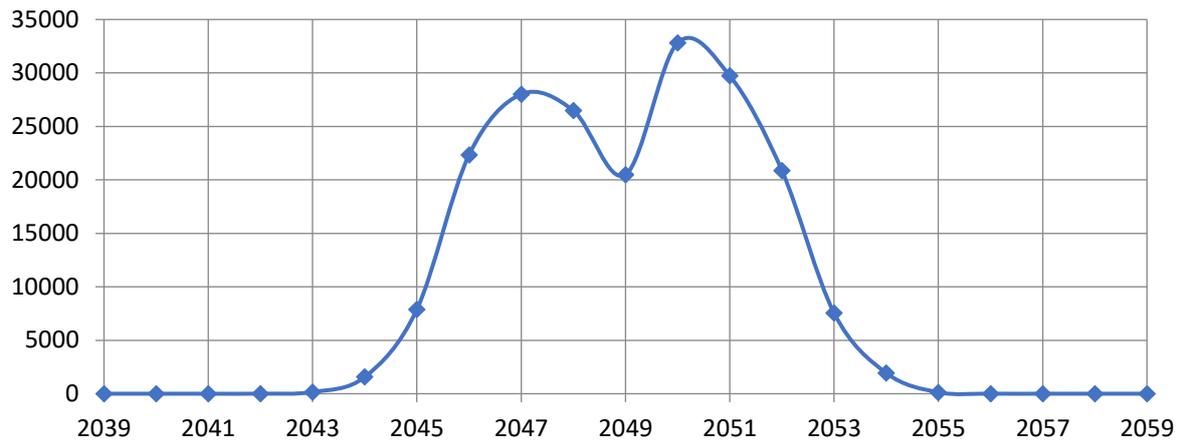
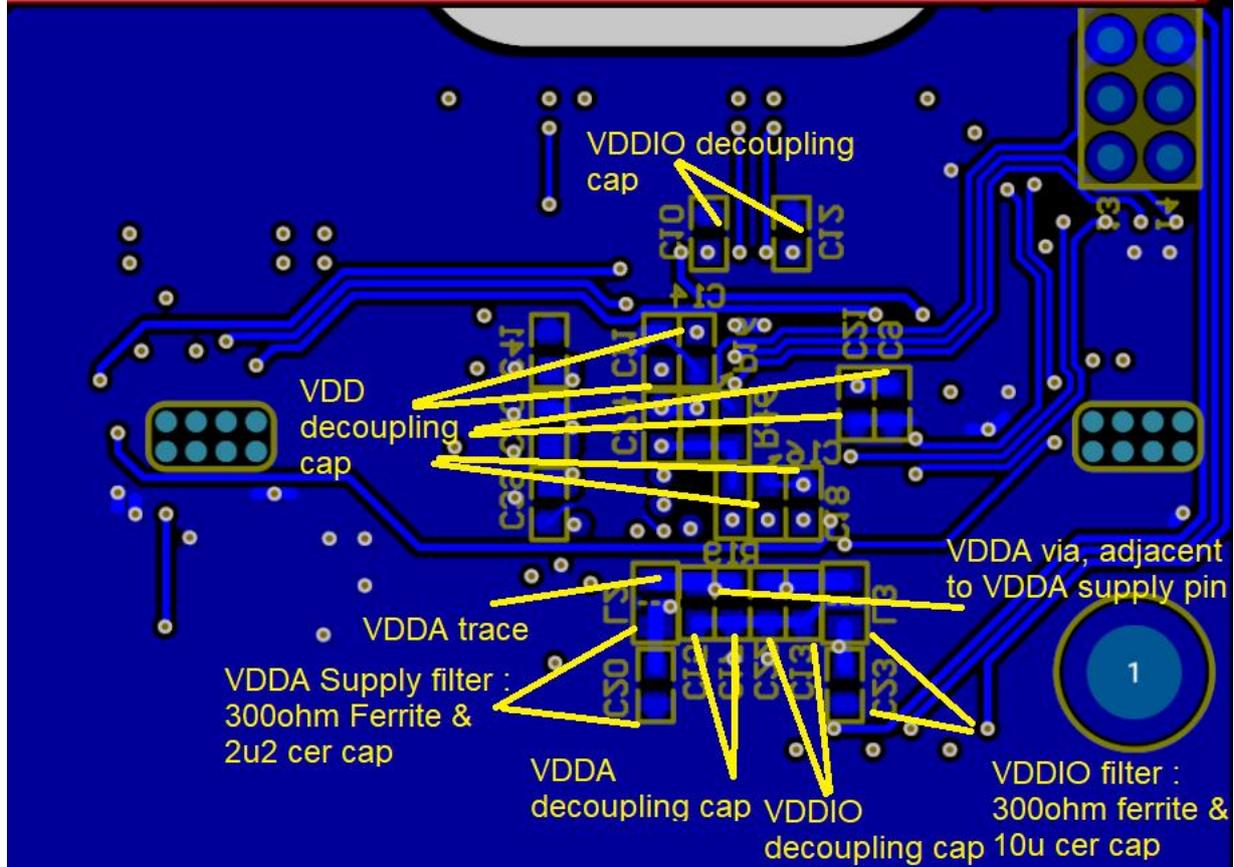
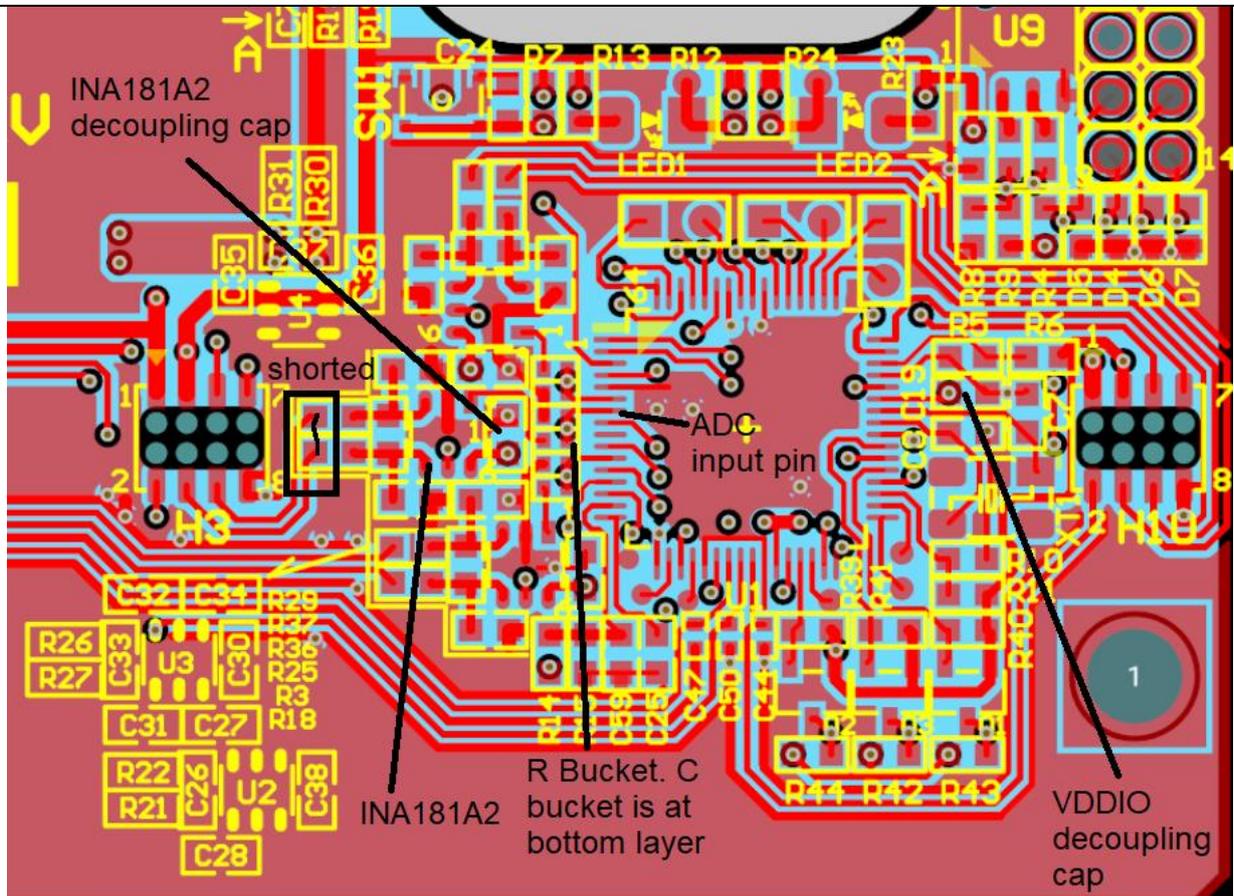


Figure 7



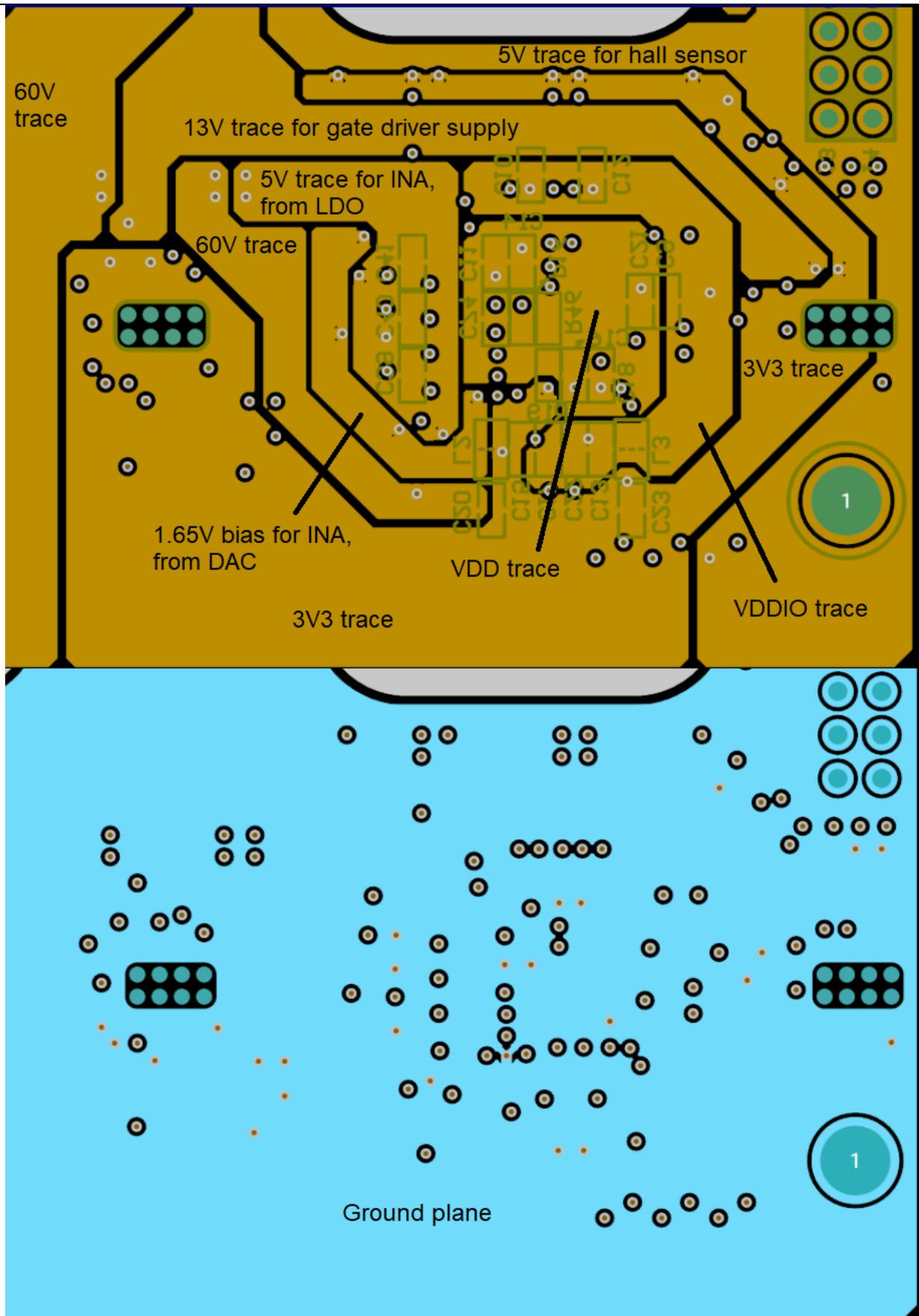
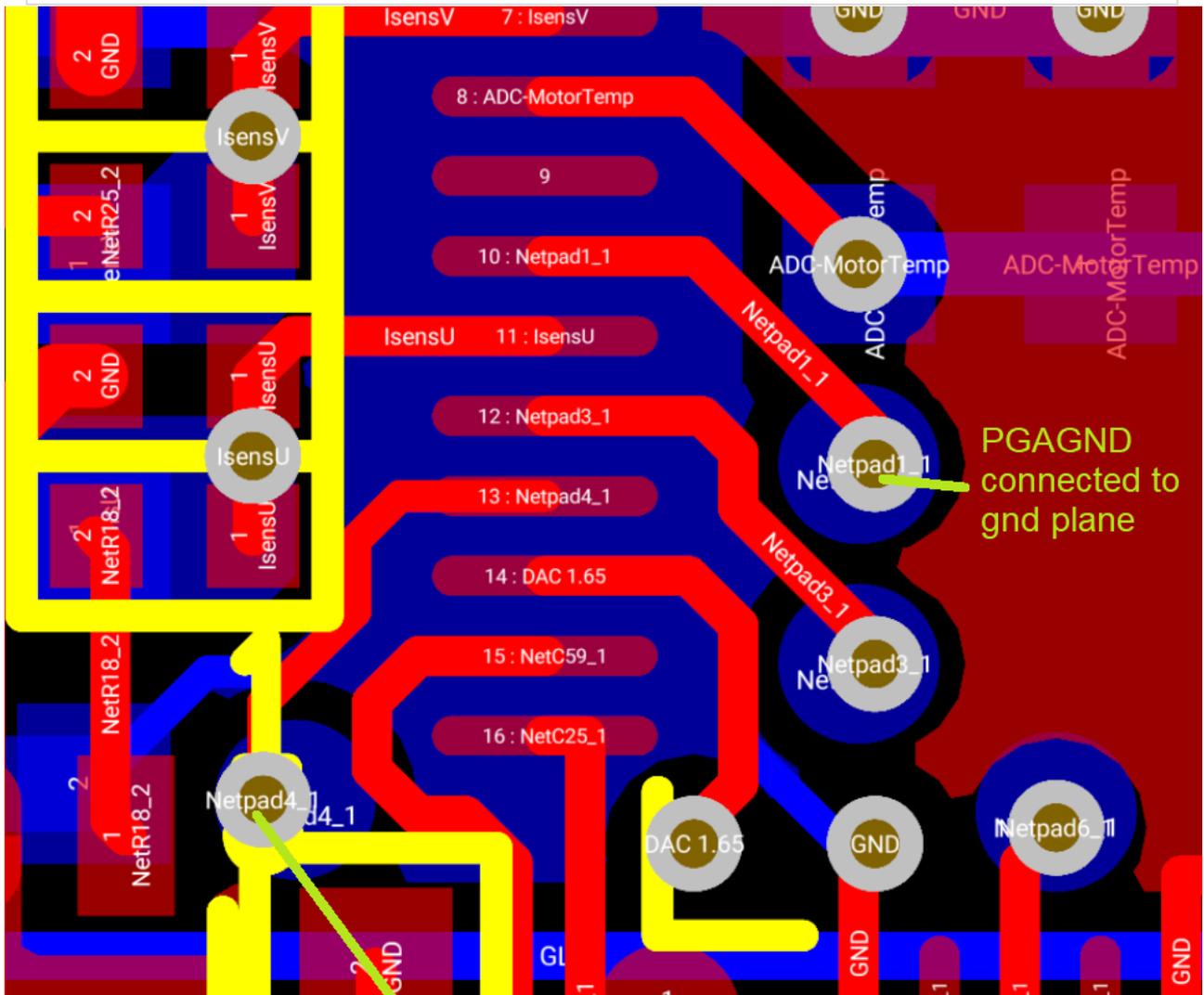
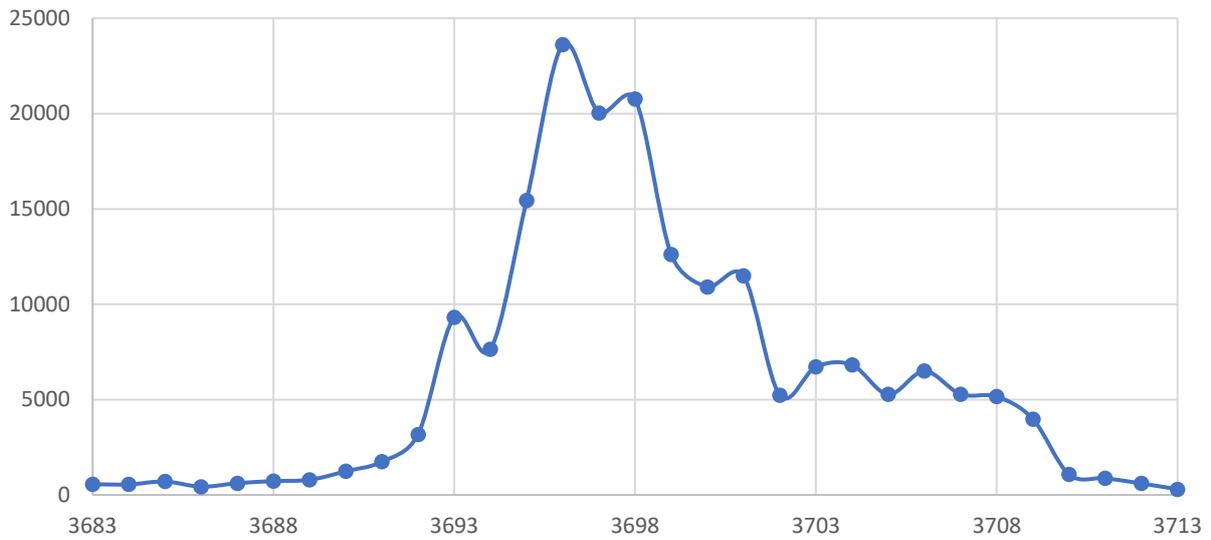


Figure 8. Layer stacking : Top(red) – Ground plane(cyan) – Power plane(brown) – Bottom (blue)
 60V trace and 13V trace are floating, so the buck regulator do not work.
 5V supply come from battery through LDO.
 3V3 supply come from 5V through LDO.
 VDD core use internal LDO

ADC Noise Histogram

ADC-B input come from PGA3OF. Rfilt (internal) 200ohm, Cfilt(ext) 150pf
 PGA3IN is from 4V battery, divided by 1K - 3K3 resistor. PGA3 gain is 3x
 Calculated StDev 4.943. Total data 190,220



signal injection point
(PGA3 in)

Figure 9

ADC Noise Histogram

ADC-B input using INA181A2 : As in figure below
Calculated StDev 1.422 Total data 200,000

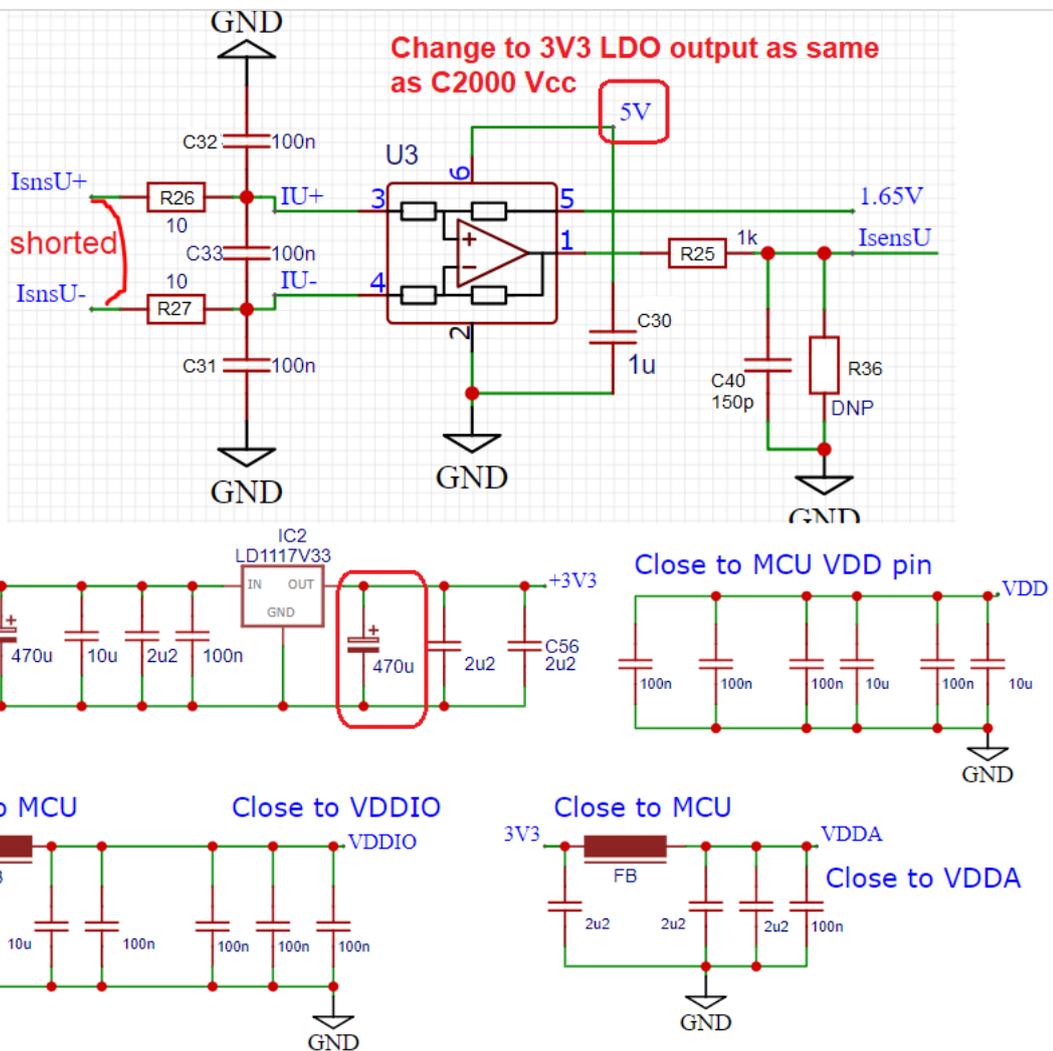
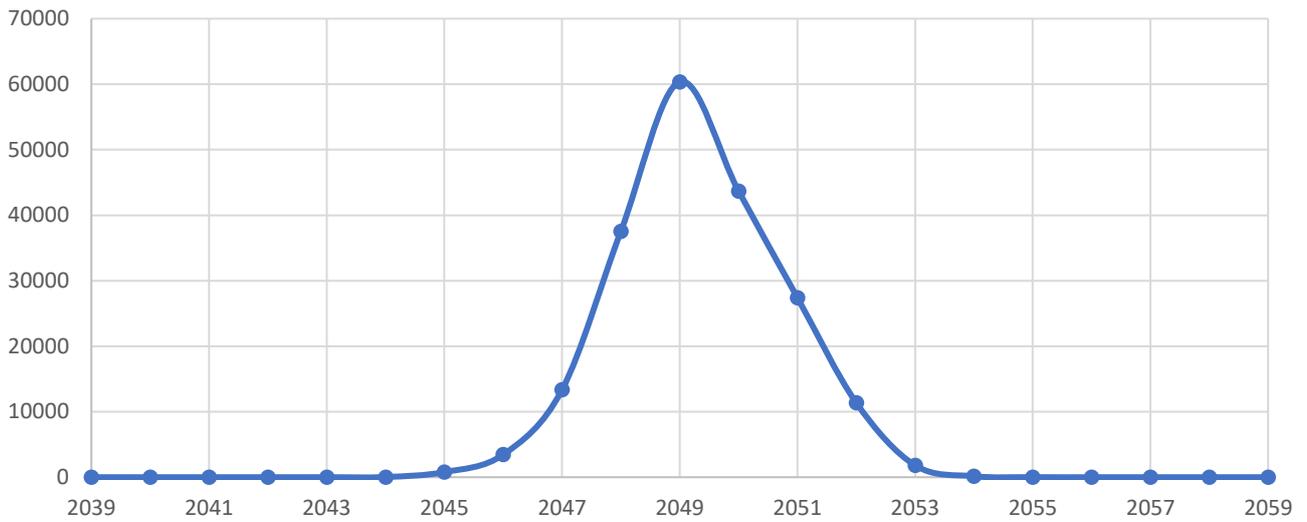


Figure 10

ADC Noise Histogram

ADC-B input using INA181A2 : As in figure below

Calculated StDev 1.425 Total data 200,000

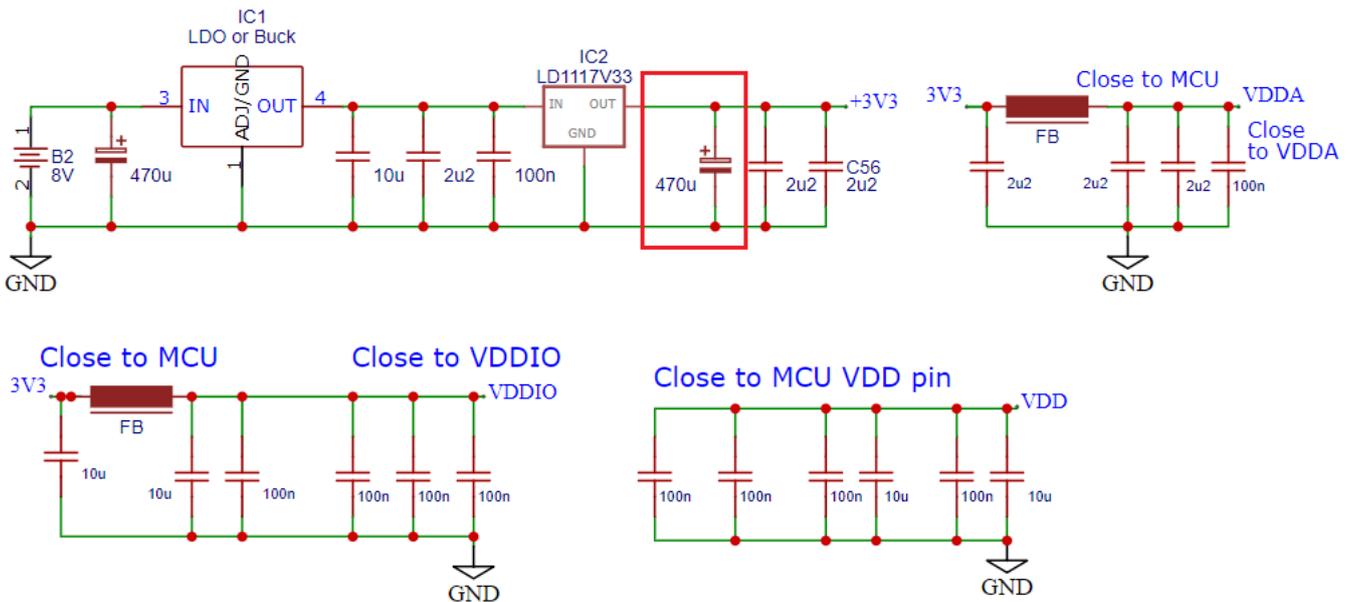
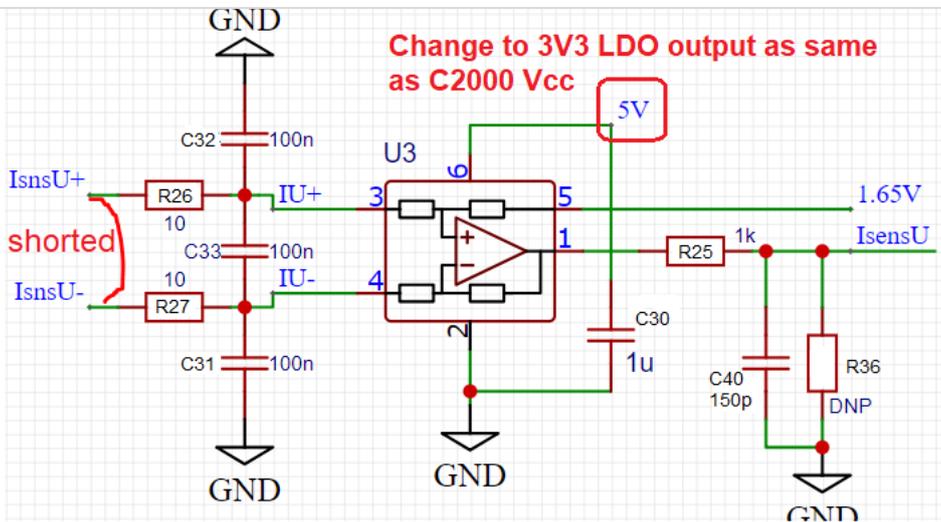
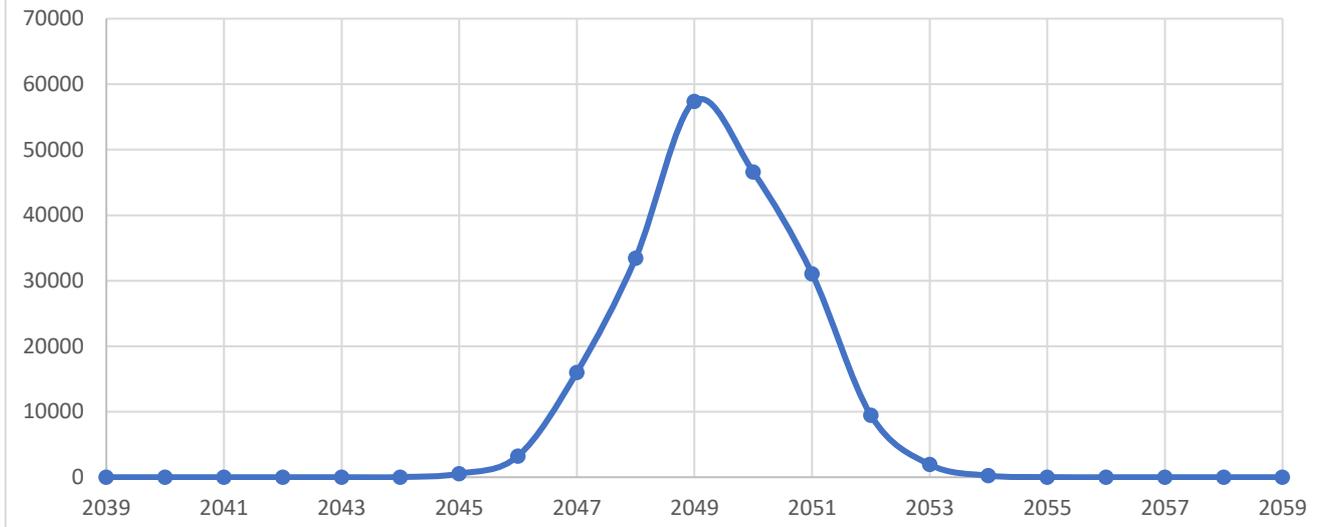


Figure 11

ADC Noise Histogram

ADC-B input using INA181A2 : As in figure below
Calculated StDev 1.418 Total data 200,000

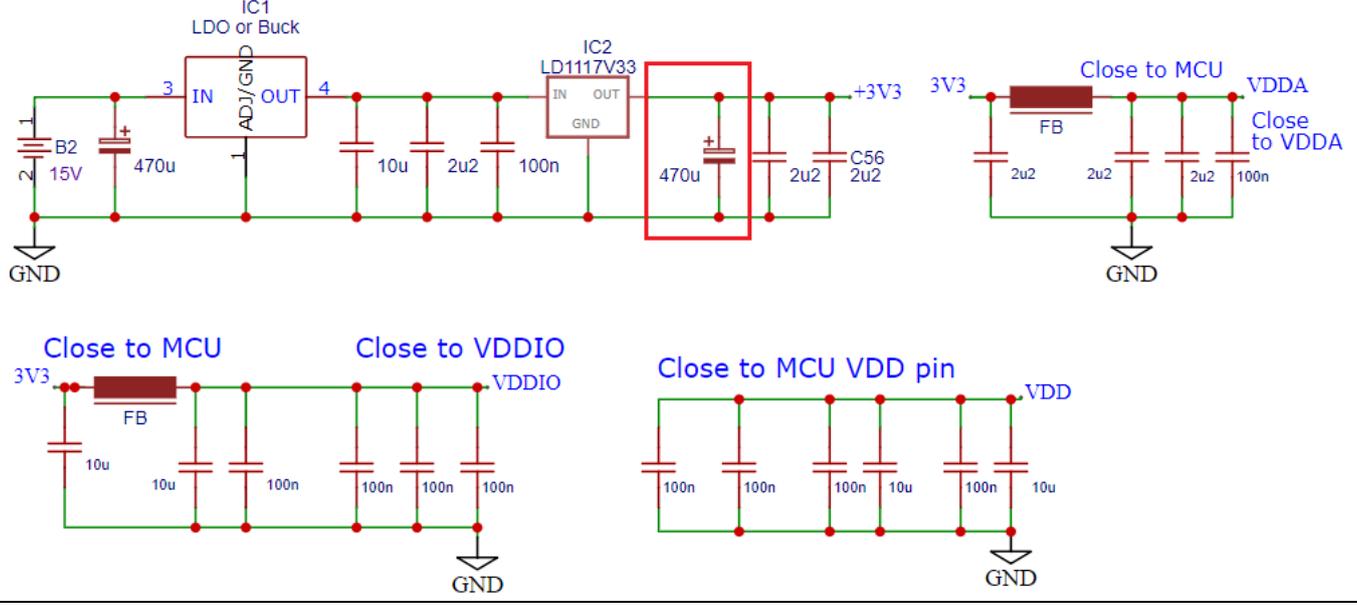
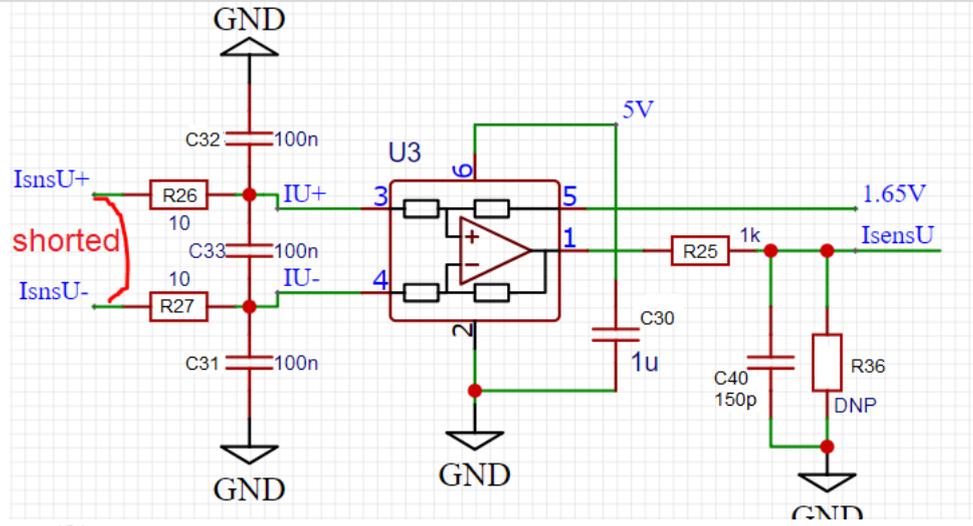
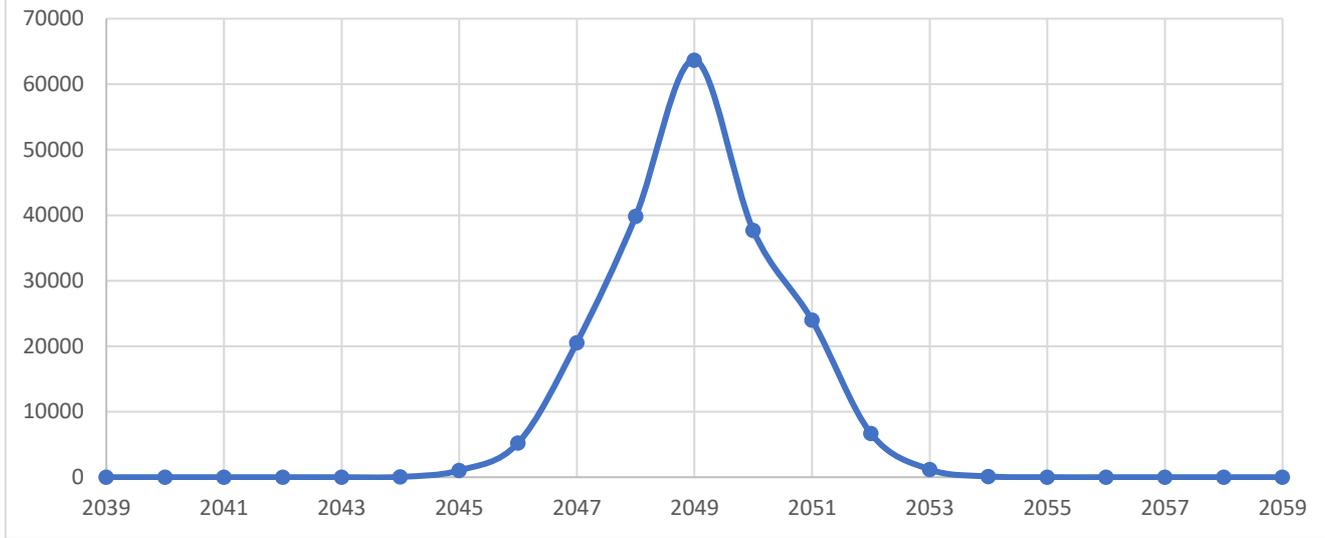


Figure 12

ADC Noise Histogram

ADC-B input come from PGA30F. Rfilt (internal) 200ohm, Cfilt(ext) 150pf
 Calculated Std 2.687. Total data 198,690

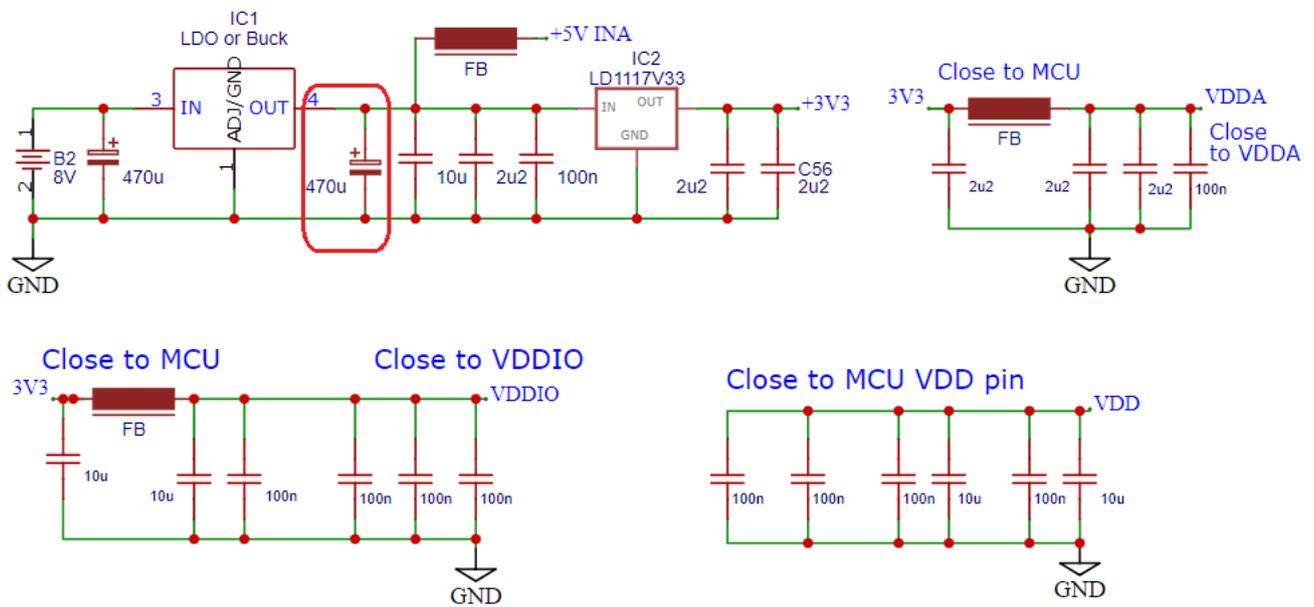
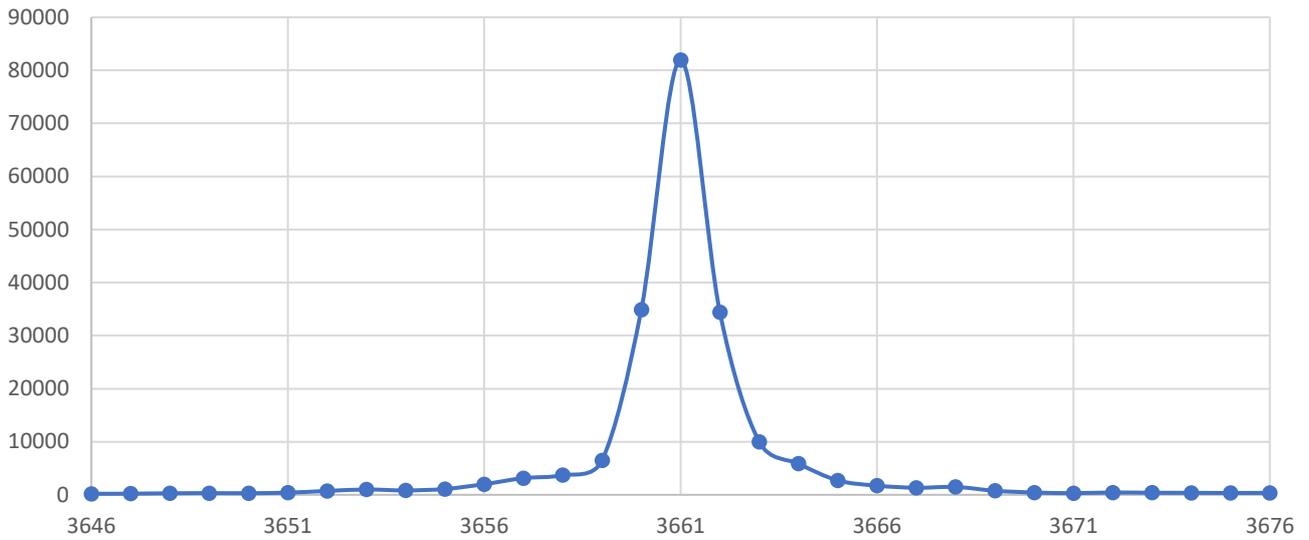


Figure 13

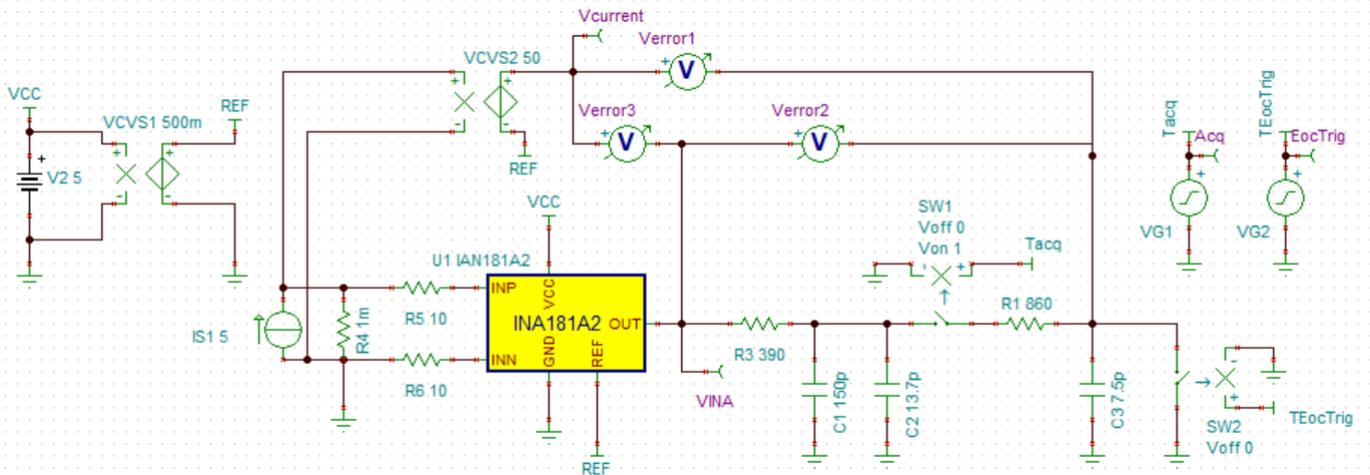


Figure 14

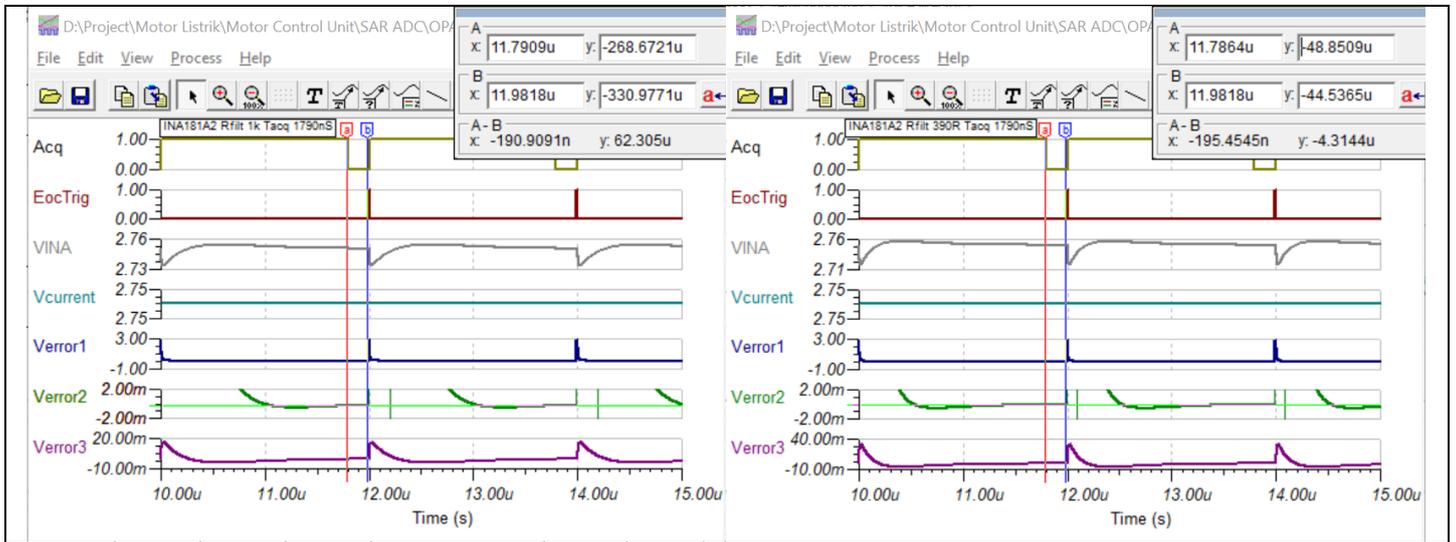


Figure 15