

[ADR366BUJZ](#) voltage reference.



This is a much more expensive chip than the MCP1501.

Seems really tight.

The ADC readings are much improved over the standard 3.3V regulator.

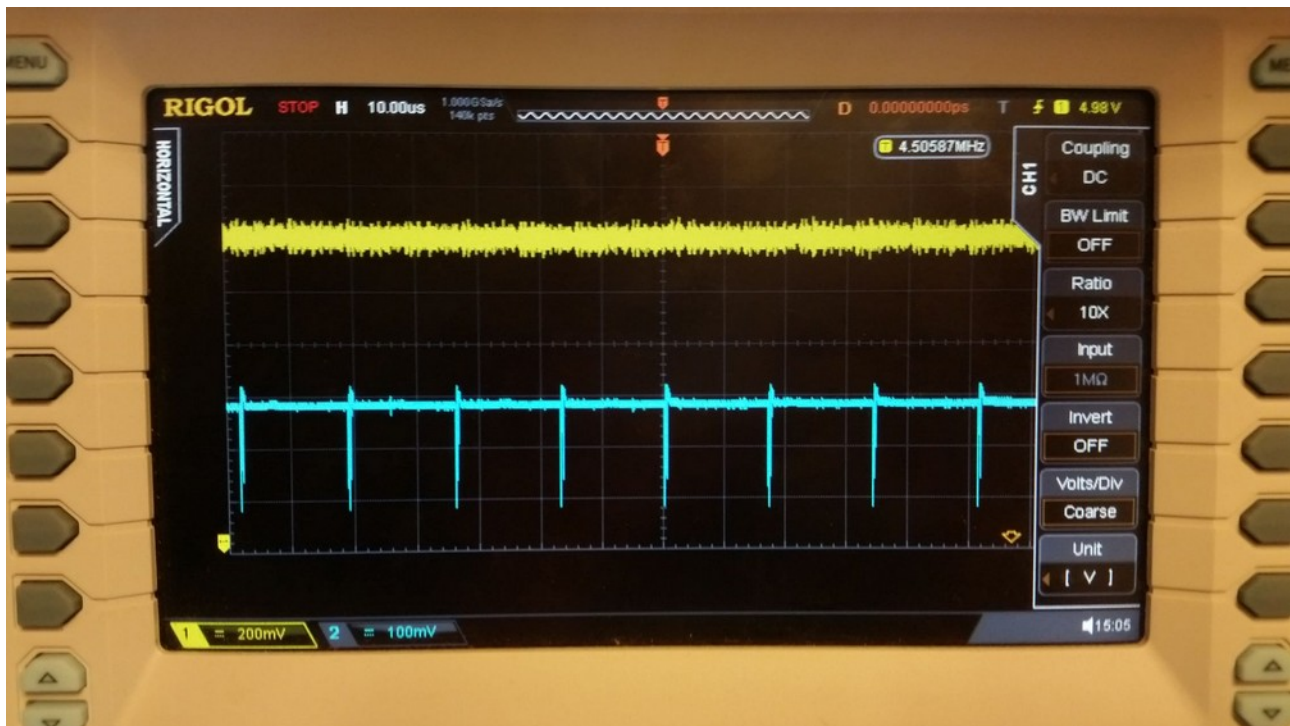
With onboard regulator:

```
PC:0
V0:245.53,I0:0.085,RP0:-1.1,AP0:20.9,PF0:-0.053,C0:16196,millis:18073
V1:245.53,I1:0.078,RP1:-2.9,AP1:19.1,PF1:-0.149,C1:16196,millis:18075
V2:245.54,I2:0.055,RP2:-1.6,AP2:13.5,PF2:-0.117,C2:16196,millis:18077
V3:245.53,I3:0.066,RP3:-2.4,AP3:16.2,PF3:-0.146,C3:16197,millis:18079
V4:245.53,I4:0.048,RP4:-0.6,AP4:11.8,PF4:-0.053,C4:16196,millis:18081
V5:245.53,I5:0.059,RP5:-2.0,AP5:14.5,PF5:-0.135,C5:16196,millis:18083
V6:245.54,I6:0.069,RP6:-2.5,AP6:17.0,PF6:-0.149,C6:16196,millis:18085
V7:245.53,I7:0.053,RP7:-0.8,AP7:13.1,PF7:-0.060,C7:16196,millis:18087
V8:245.53,I8:0.075,RP8:-3.1,AP8:18.4,PF8:-0.168,C8:16196,millis:18090
PC:0
```

With the reference:

```
PC:0
V0:239.48,I0:0.000,RP0:0.0,AP0:0.0,PF0:0.000,C0:16182,millis:218857
V1:239.53,I1:0.000,RP1:0.0,AP1:0.0,PF1:0.000,C1:16183,millis:218859
V2:239.53,I2:0.000,RP2:0.0,AP2:0.0,PF2:0.000,C2:16182,millis:218861
V3:239.51,I3:0.000,RP3:0.0,AP3:0.0,PF3:0.000,C3:16183,millis:218863
V4:239.47,I4:0.000,RP4:0.0,AP4:0.0,PF4:0.000,C4:16182,millis:218865
V5:239.49,I5:0.000,RP5:0.0,AP5:0.0,PF5:0.000,C5:16183,millis:218866
V6:239.56,I6:0.000,RP6:0.0,AP6:0.0,PF6:0.000,C6:16182,millis:218868
V7:239.48,I7:0.000,RP7:0.0,AP7:0.0,PF7:0.000,C7:16182,millis:218870
V8:239.50,I8:0.000,RP8:-0.0,AP8:0.0,PF8:0.000,C8:16182,millis:218872
PC:0
```

The reference with 100nF capacitance on it's output.



And serial shows an issue:

```
PC:0
V0:235.61,I0:0.514,RP0:0.4,AP0:121.2,PF0:0.003,C0:16196,millis:380866
V1:235.61,I1:0.540,RP1:-2.1,AP1:127.3,PF1:-0.016,C1:16196,millis:380868
V2:235.55,I2:0.534,RP2:-4.3,AP2:125.8,PF2:-0.034,C2:16197,millis:380870
V3:235.60,I3:0.534,RP3:-4.2,AP3:125.7,PF3:-0.033,C3:16196,millis:380872
V4:235.58,I4:0.532,RP4:-1.9,AP4:125.4,PF4:-0.015,C4:16196,millis:380874
V5:235.62,I5:0.530,RP5:-3.0,AP5:124.9,PF5:-0.024,C5:16196,millis:380876
V6:235.62,I6:0.523,RP6:-3.8,AP6:123.2,PF6:-0.031,C6:16197,millis:380878
V7:235.61,I7:0.514,RP7:0.3,AP7:121.0,PF7:0.003,C7:16196,millis:380881
V8:235.62,I8:0.545,RP8:-7.0,AP8:128.5,PF8:-0.054,C8:16196,millis:380883
PC:0
```