Below are the timing and spectral diagrams of signals from bad ADC channel. Typical signs of a problem of the analog part:

1) at the output a large offset DC +/- 20 ... 120 LSB (in good channels +/- 4)

2) lower transmission coefficient 1.4 ... 1.6 times

3) harmonic distortion, which appears as harmonics of the test signal

4) interference at a frequency equal to half the sampling frequency.

ADC Test Fs=1000 MHz

Input= 10 MHz, 0 dBm





Pocket 2F4LA #4, Channel Q(2) ADC1. DC offset -98 LSB





Pocket 2F4LA #1, Channel I(1) ADC2.

DC offset 126 LSB. The transmission coefficient is 1.6 times less





Pocket 2F4LA #3, Channel I(1) ADC1.

DC offset -20 LSB. The transmission coefficient is 1.4 times less

(The DC offset and signal amplitude measured at the I and Q inputs are the same)

## Good result





Pocket 2F4LA #3, Channel Q(2) ADC1. DC offset 2 LSB