SAMPLE RATE CONVERSION - Performance Characterisation for SSRC ASRC DS3 and OS3

Release: 2.4.0

Publication Date: 2024/02/10

XMOS

Table of Contents

1 Pure Tone FFT SRC Plots Across Sample Rate Combinations 2
1.1 Frequency error: 0.999900Hz . . . 2
1.1.1 Output Fs : 16,000Hz . . . 2
1.1.2 Output Fs : 32,000Hz . . . 2
1.1.3 Output Fs : 44,100Hz . . . 3
1.1.4 Output Fs : 48,000Hz . . . 15
1.1.5 Output Fs : 88,200Hz . . . 27
1.1.6 Output Fs : 96,000Hz . . . 39
1.1.7 Output Fs : 176,400Hz . . . 51
1.1.8 Output Fs : 192,000Hz . . . 63
1.2 Frequency error: 1.000000Hz . . . 74
1.2.1 Output Fs : 16,000Hz . . . 75
1.2.2 Output Fs : 32,000Hz . . . 77
1.2.3 Output Fs : 44,100Hz . . . 79
1.2.4 Output Fs : 48,000Hz . . . 85
1.2.5 Output Fs : 88,200Hz . . . 92
1.2.6 Output Fs : 96,000Hz . . . 99
1.2.7 Output Fs : 176,400Hz . . . 106
1.2.8 Output Fs : 192,000Hz . . . 112
1.3 Frequency error: 1.000100Hz . . . 118
1.3.1 Output Fs : 16,000Hz . . . 118
1.3.2 Output Fs : 32,000Hz . . . 118
1.3.3 Output Fs : 44,100Hz . . . 119
1.3.4 Output Fs : 48,000Hz . . . 131
1.3.5 Output Fs : 88,200Hz . . . 143
1.3.6 Output Fs : 96,000Hz . . . 155
1.3.7 Output Fs : 176,400Hz . . . 167
1.3.8 Output Fs : 192,000Hz . . . 179

2 Tabulated data 191

The FFT plots in this section provide a visual guide to the performance of the SSRC, ASRC, DS3 and OS3 sample rate converters. Test signals were created allowing analysis of the sample rate converter output across different scenarios.

Two input signals were played through a stereo sample rate converter across a range of input and output sample rates. For Channel 0, a single pure tone was generated ensuring its frequency was well within the overall nyquist rate. For Channel 1, multiple tones spaced logarithmically were generated with the spacing most dense at higher frequencies.

The resulting frequency plot output clearly shows the noise floor relative to the sample rate converted injected tone(s). The plots are annotated with an estimate of the Signal to Noise Ratio (SNR) as well as Total Harmonic Distortion (THD).

For the case of the ASRC, in addition to the nominal input frequency of 0 PPM deviation, the +/-100 PPM frequency deviation cases are also shown.

1 Pure Tone FFT SRC Plots Across Sample Rate Combinations

1.1 Frequency error: 0.999900Hz

1.1.1 Output Fs : 16,000Hz

No SRC available for this scenario.

1.1.2 Output Fs : 32,000Hz

No SRC available for this scenario.

1.1.3 Output Fs : 44,100Hz

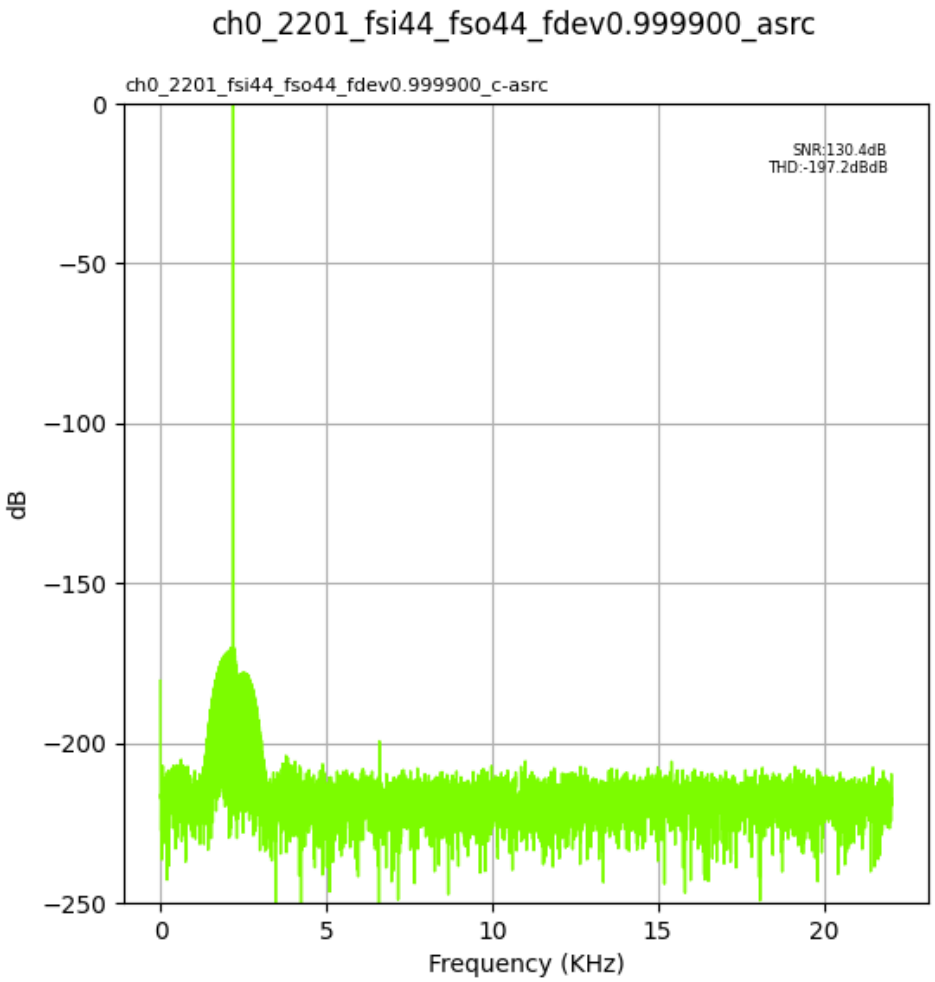

Fig. 1.1: Input Fs: 44,100Hz, Output Fs: 44,100Hz, Fs error: 0.999900, Results for: asrc

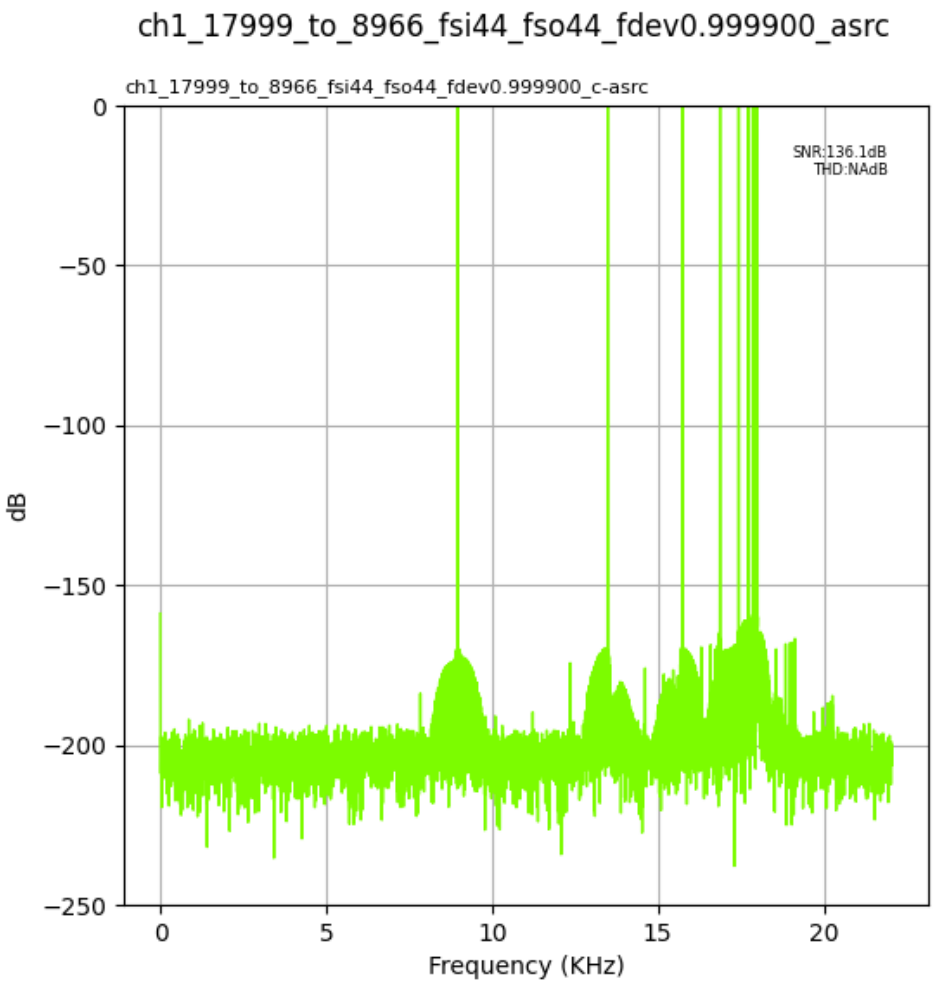

Fig. 1.2: Input Fs: 44,100Hz, Output Fs: 44,100Hz, Fs error: 0.999900, Results for: asrc

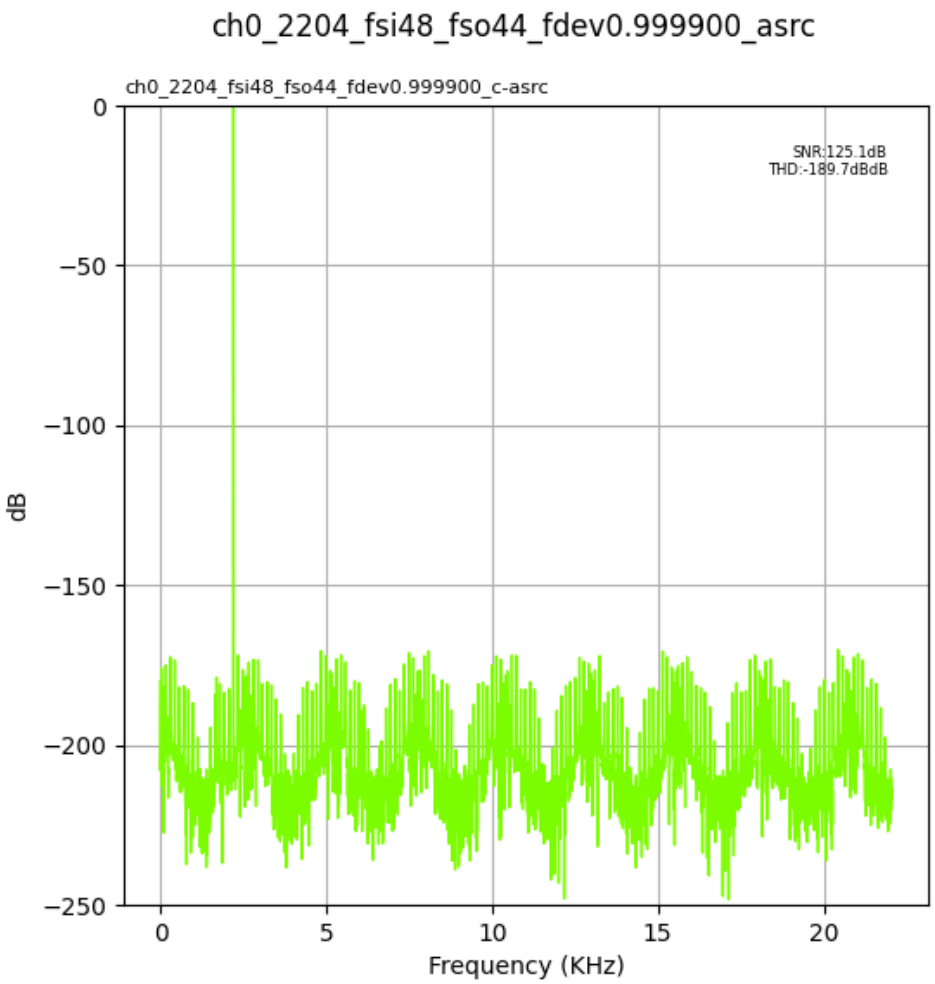

Fig. 1.3: Input Fs: 48,000Hz, Output Fs: 44,100Hz, Fs error: 0.999900, Results for: asrc

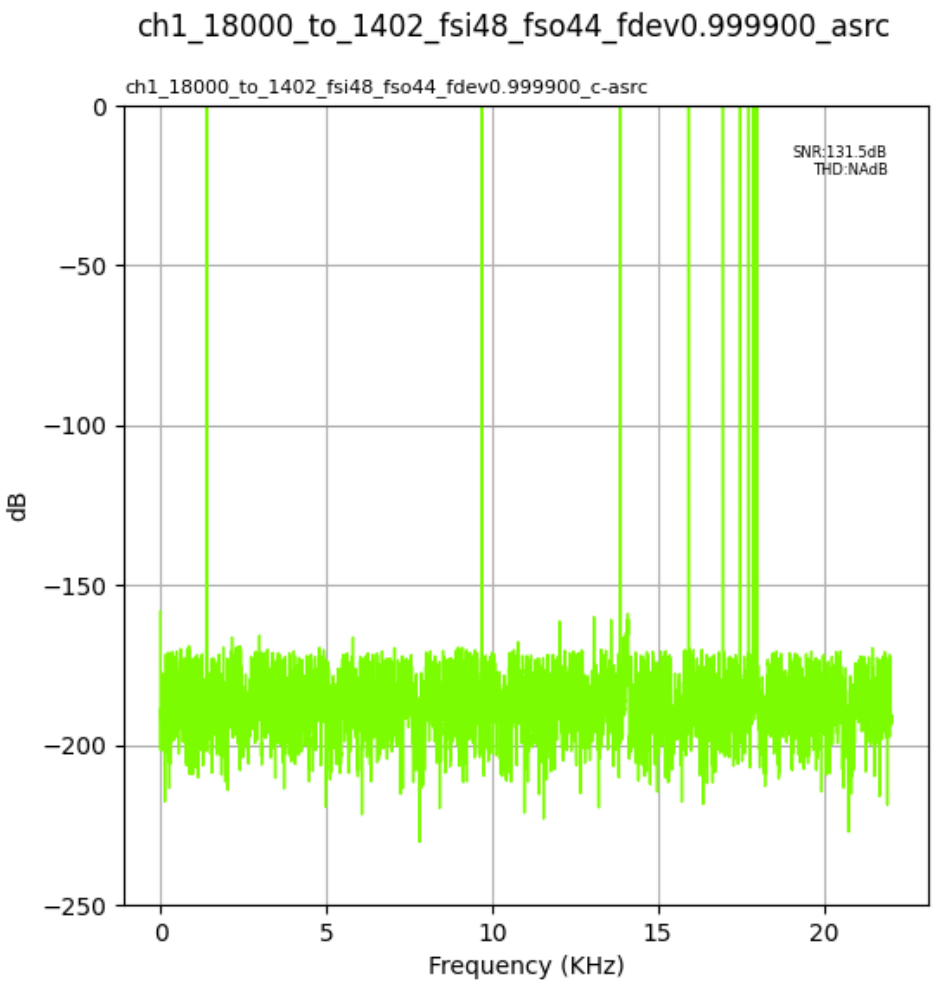

Fig. 1.4: Input Fs: 48,000Hz, Output Fs: 44,100Hz, Fs error: 0.999900, Results for: asrc

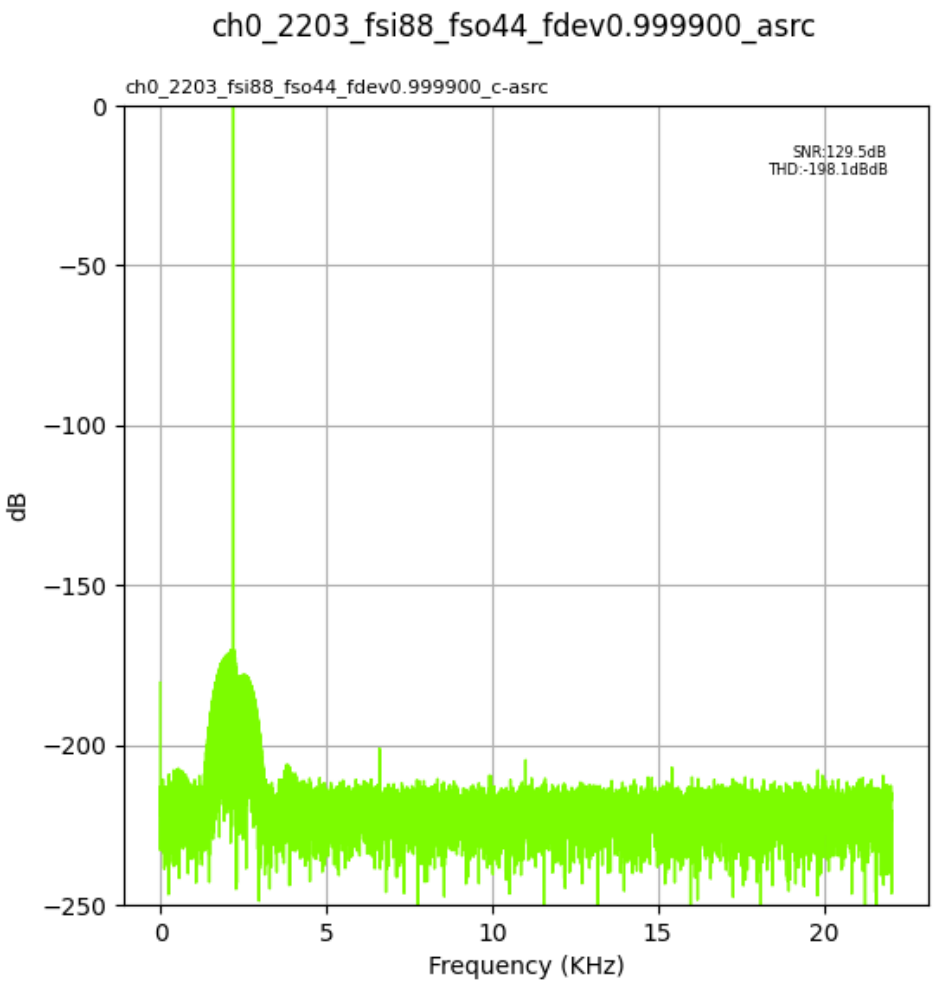

Fig. 1.5: Input Fs: 88,200Hz, Output Fs: 44,100Hz, Fs error: 0.999900, Results for: asrc

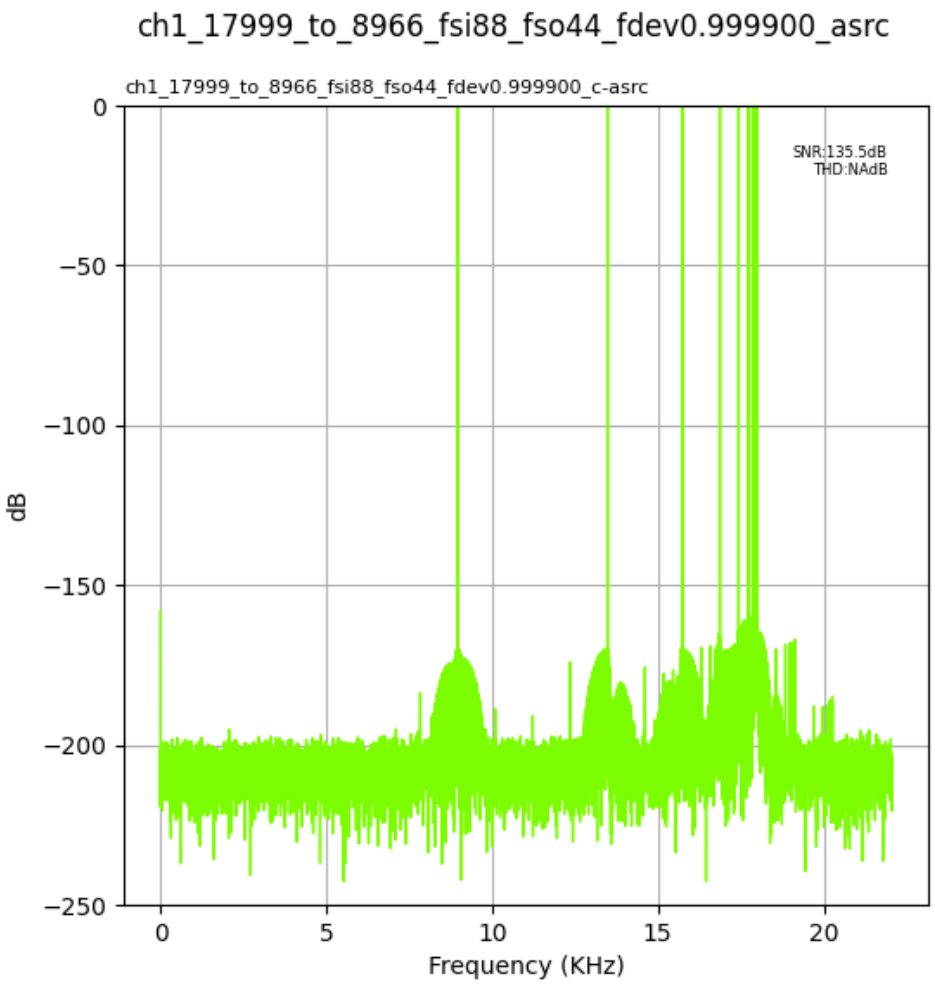

Fig. 1.6: Input Fs: 88,200Hz, Output Fs: 44,100Hz, Fs error: 0.999900, Results for: asrc

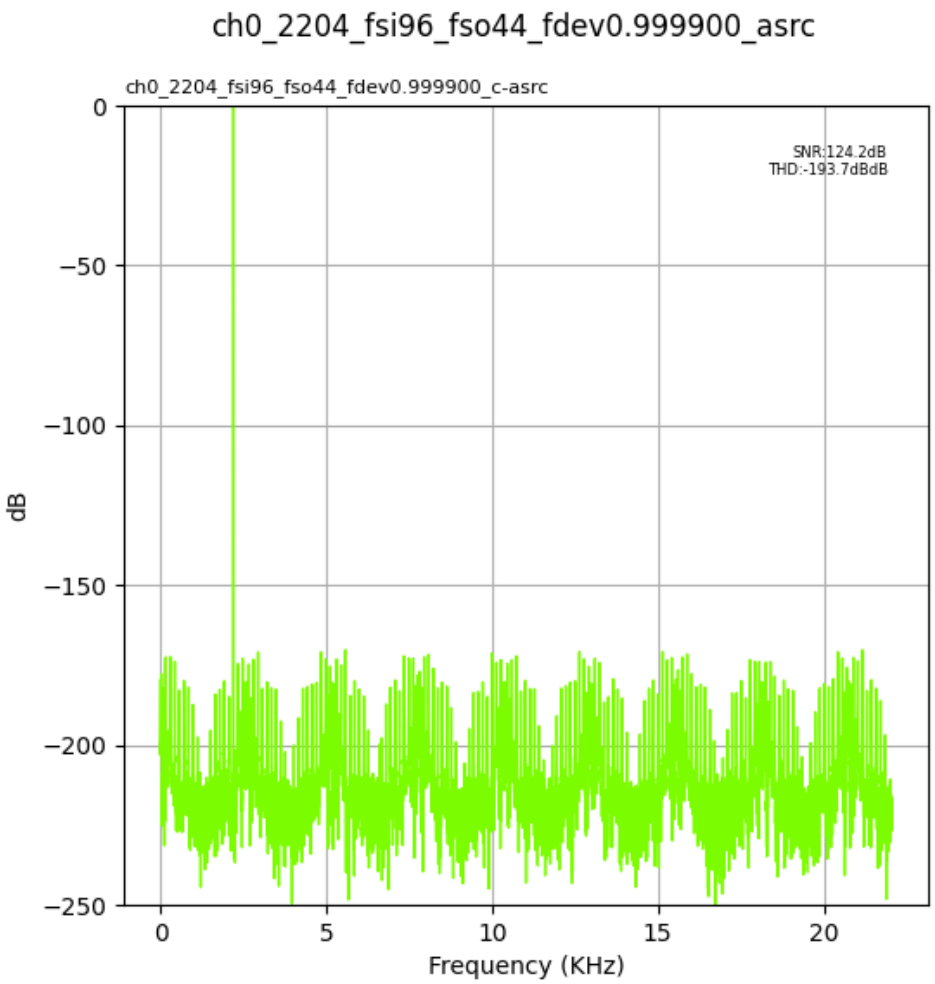

Fig. 1.7: Input Fs: 96,000Hz, Output Fs: 44,100Hz, Fs error: 0.999900, Results for: asrc

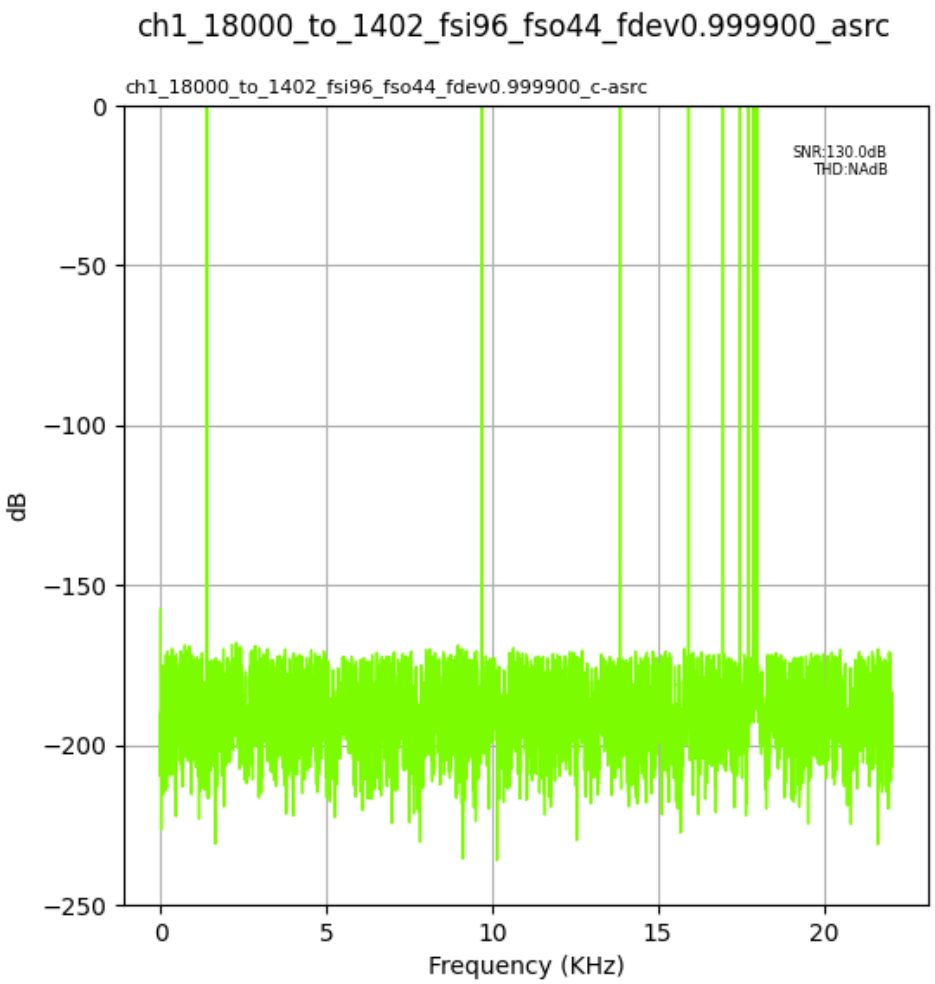

Fig. 1.8: Input Fs: 96,000Hz, Output Fs: 44,100Hz, Fs error: 0.999900, Results for: asrc

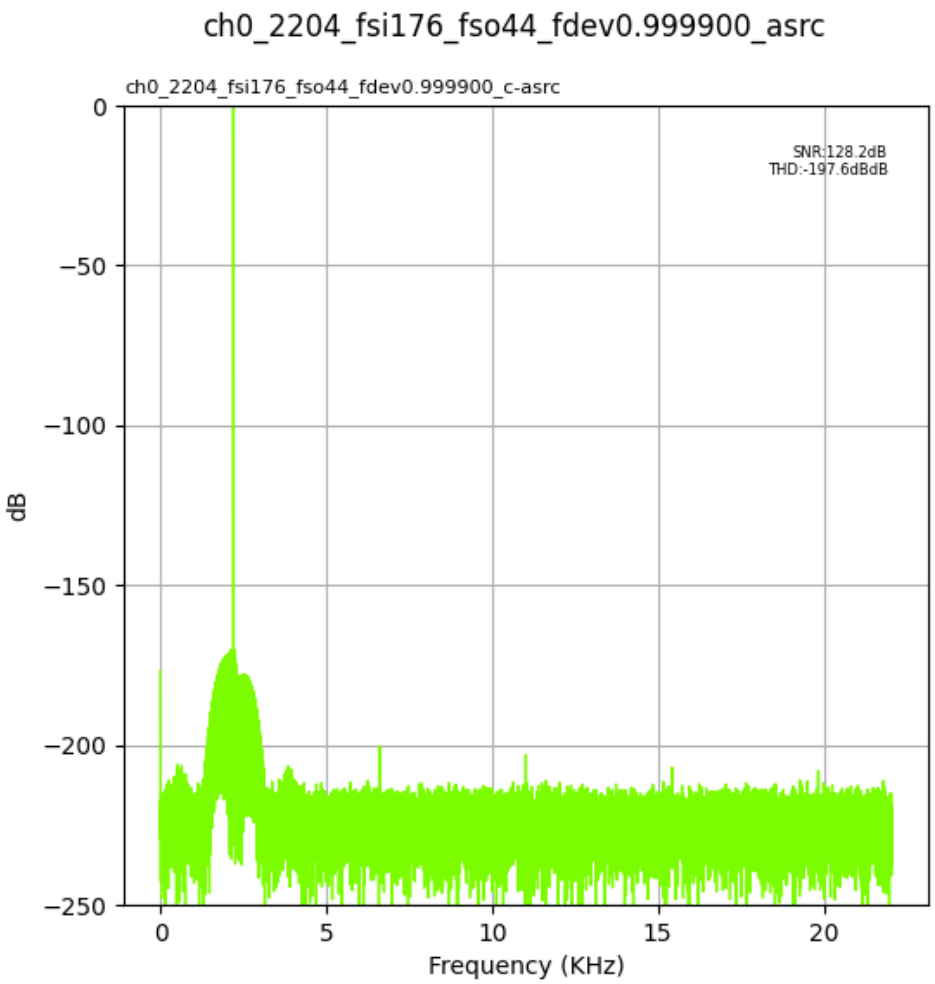

Fig. 1.9: Input Fs: 176,400Hz, Output Fs: 44,100Hz, Fs error: 0.999900, Results for: asrc

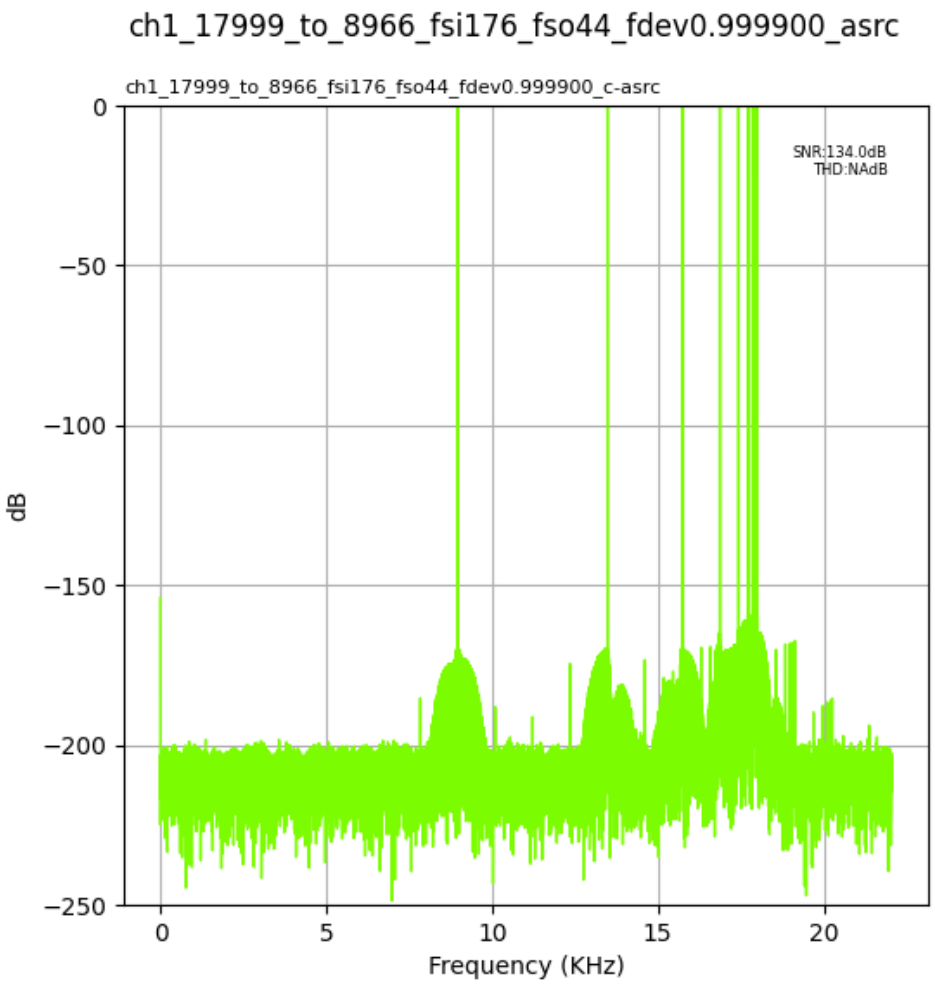

Fig. 1.10: Input Fs: 176,400Hz, Output Fs: 44,100Hz, Fs error: 0.999900, Results for: asrc

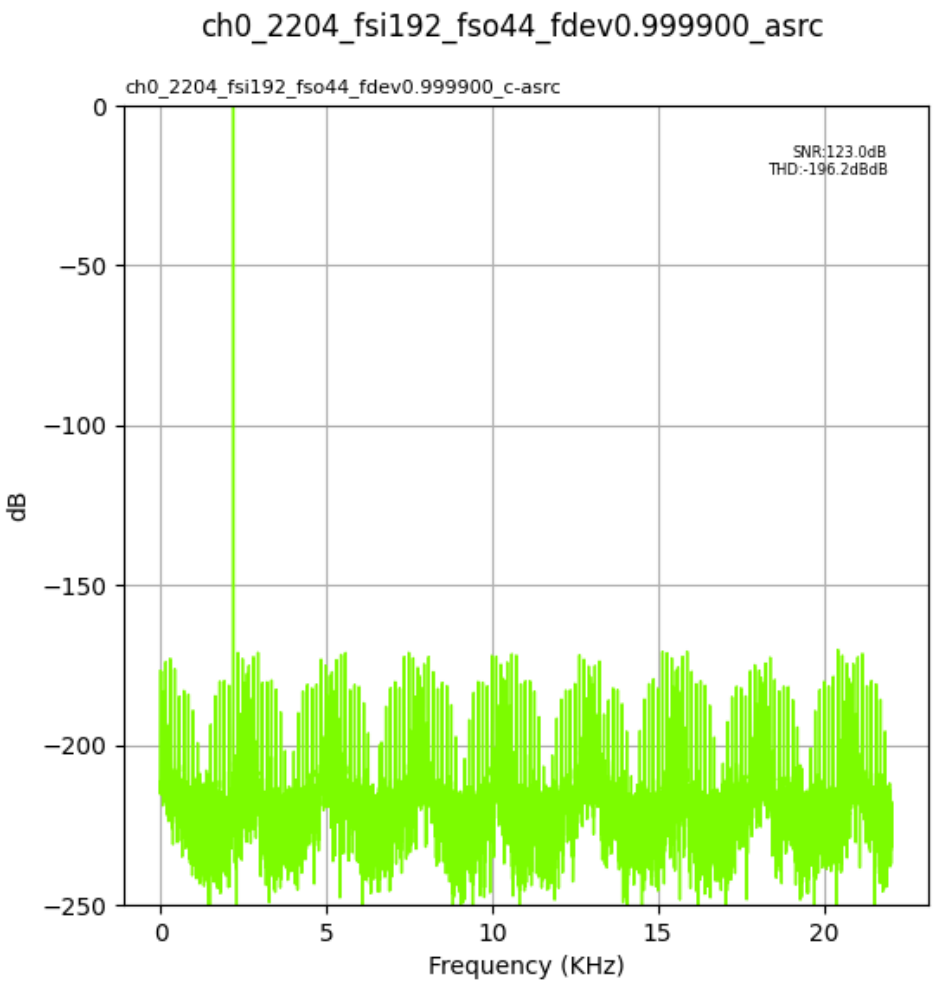

Fig. 1.11: Input Fs: 192,000Hz, Output Fs: 44,100Hz, Fs error: 0.999900, Results for: asrc

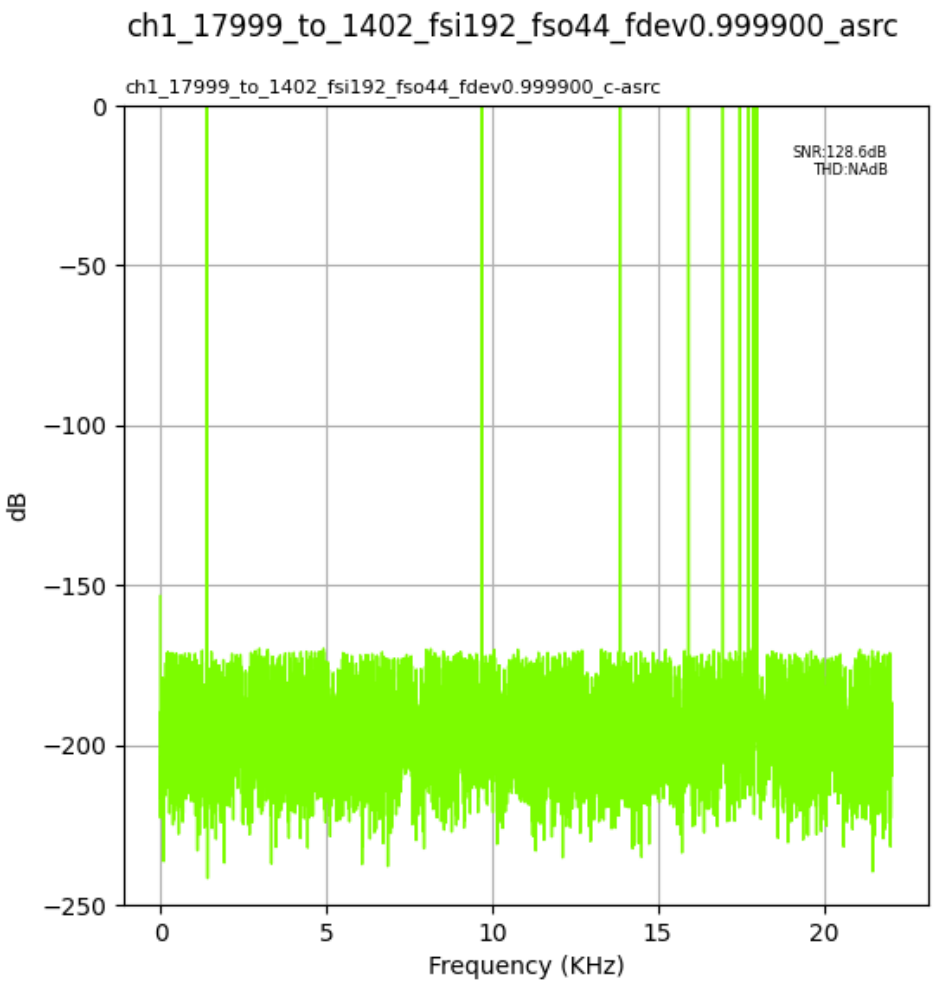

Fig. 1.12: Input Fs: 192,000Hz, Output Fs: 44,100Hz, Fs error: 0.999900, Results for: asrc

1.1.4 Output Fs : 48,000Hz

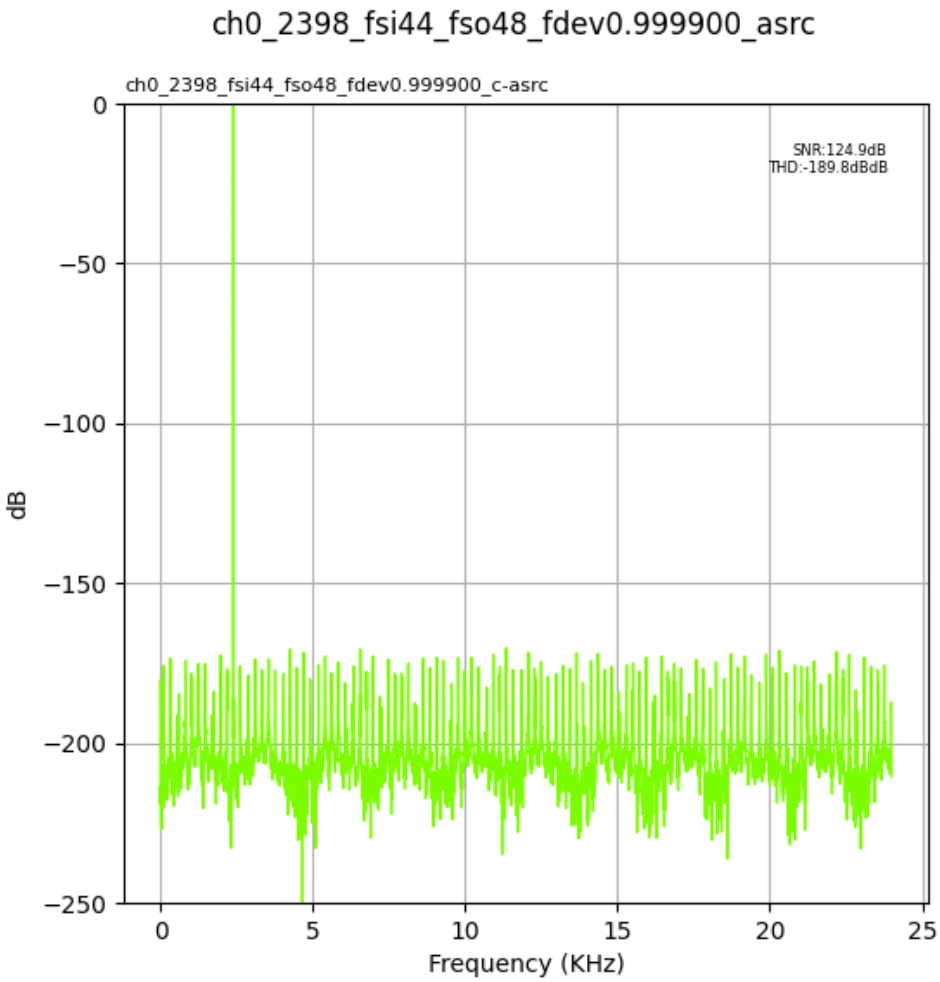

Fig. 1.13: Input Fs: 44,100Hz, Output Fs: 48,000Hz, Fs error: 0.999900, Results for: asrc

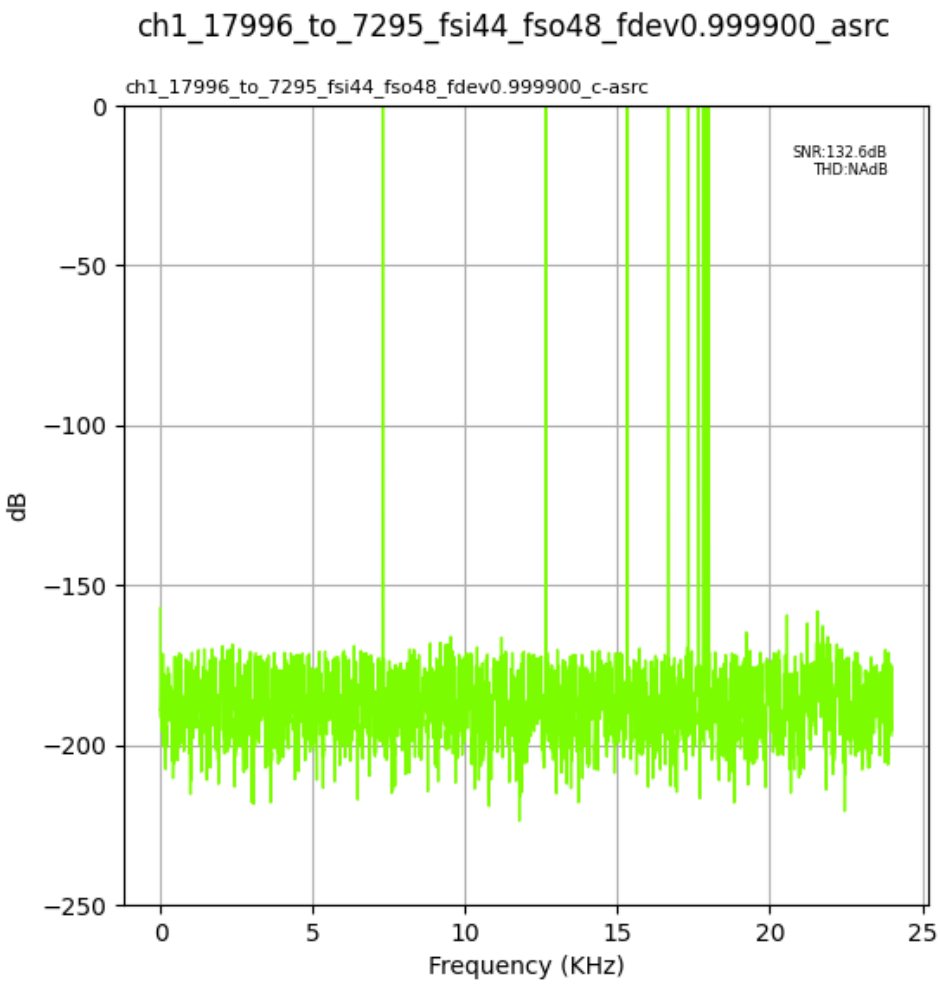

Fig. 1.14: Input Fs: 44,100Hz, Output Fs: 48,000Hz, Fs error: 0.999900, Results for: asrc

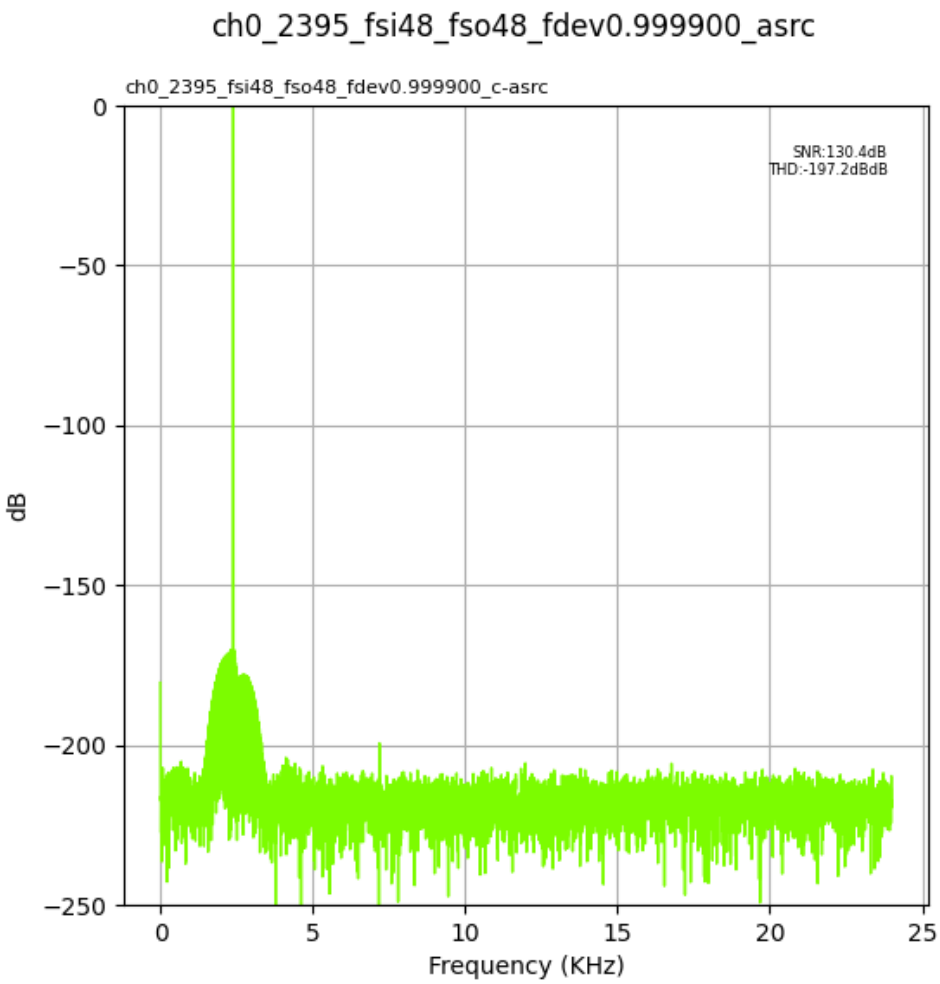

Fig. 1.15: Input Fs: 48,000Hz, Output Fs: 48,000Hz, Fs error: 0.999900, Results for: asrc

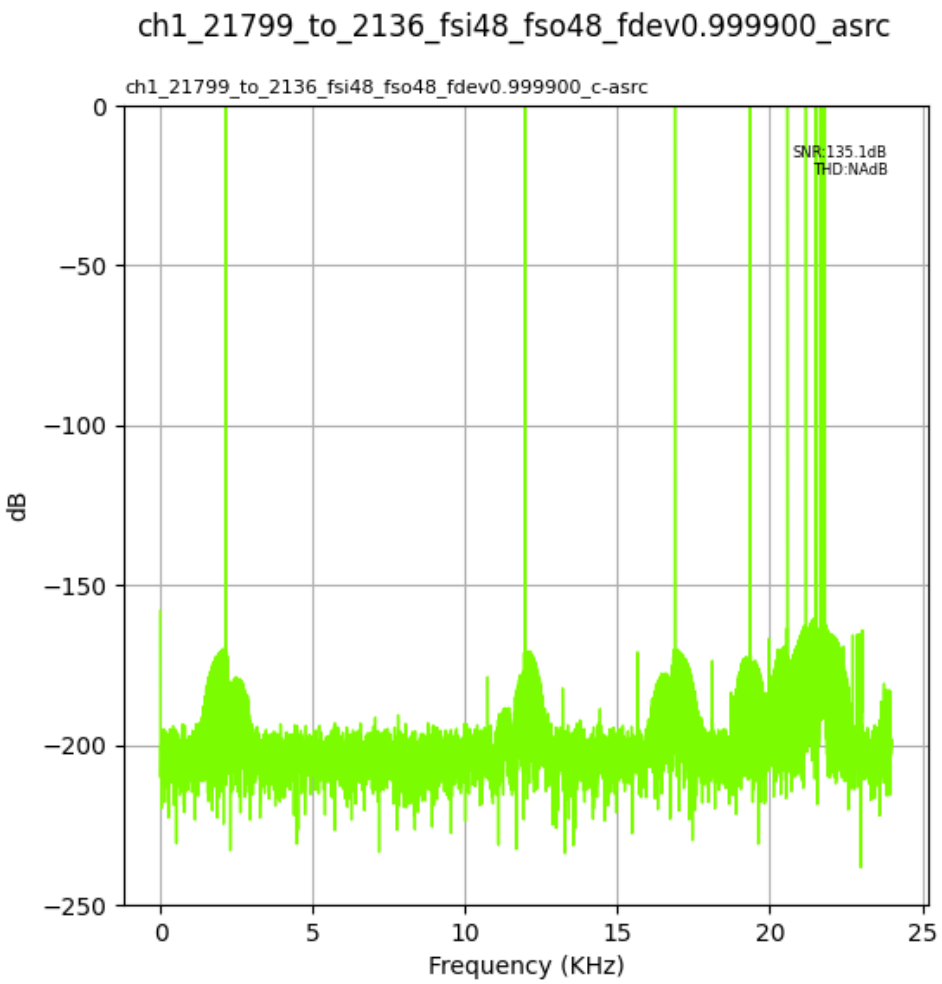

Fig. 1.16: Input Fs: 48,000Hz, Output Fs: 48,000Hz, Fs error: 0.999900, Results for: asrc

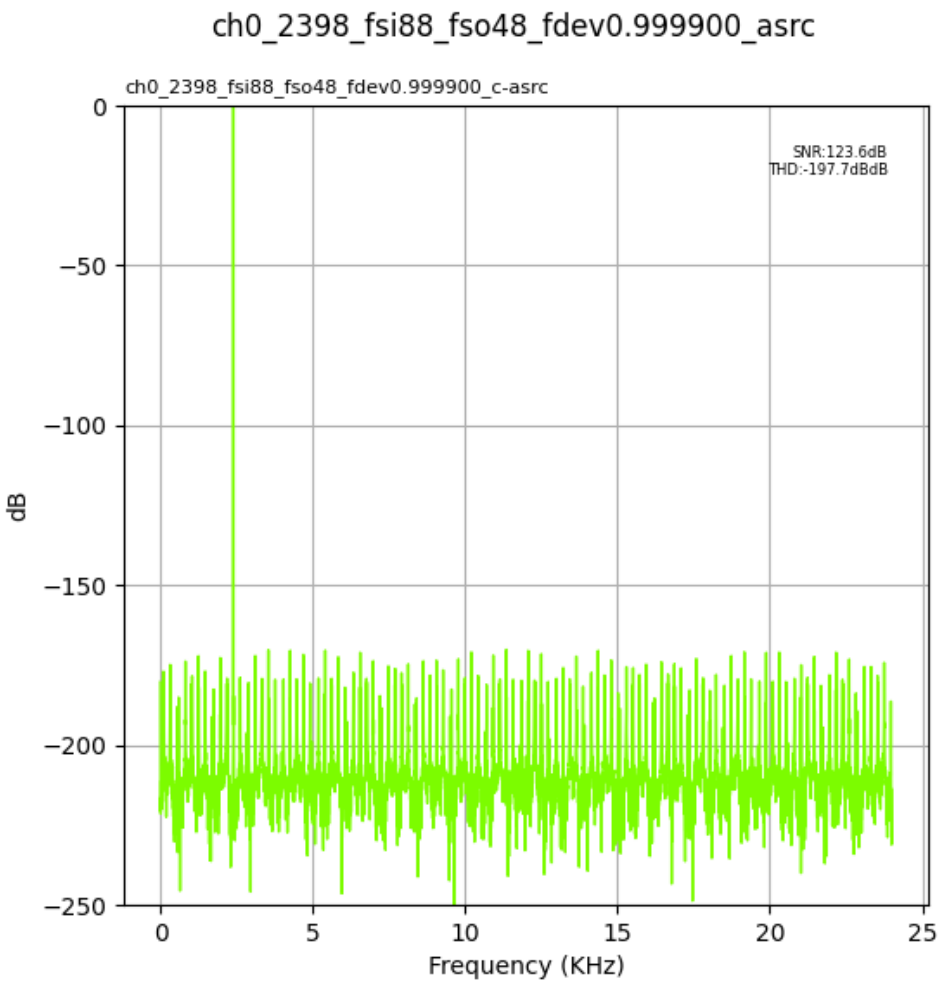

Fig. 1.17: Input Fs: 88,200Hz, Output Fs: 48,000Hz, Fs error: 0.999900, Results for: asrc

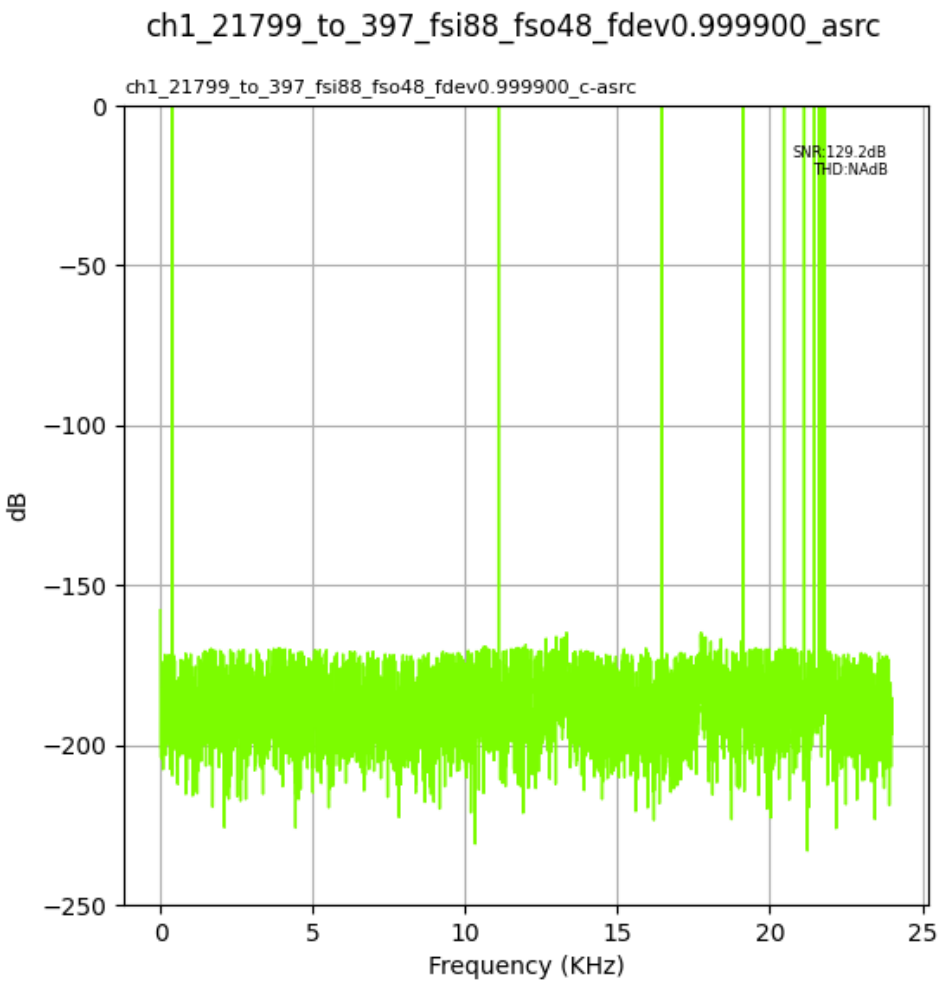

Fig. 1.18: Input Fs: 88,200Hz, Output Fs: 48,000Hz, Fs error: 0.999900, Results for: asrc

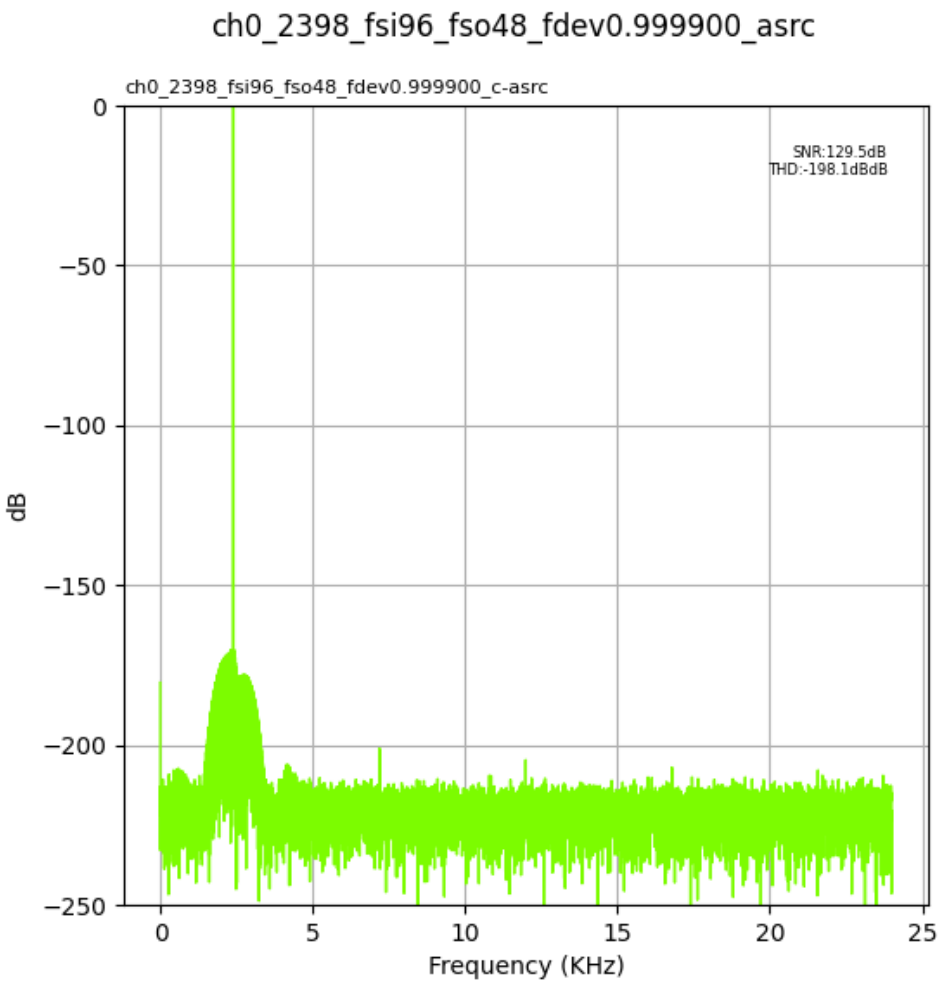

Fig. 1.19: Input Fs: 96,000Hz, Output Fs: 48,000Hz, Fs error: 0.999900, Results for: asrc

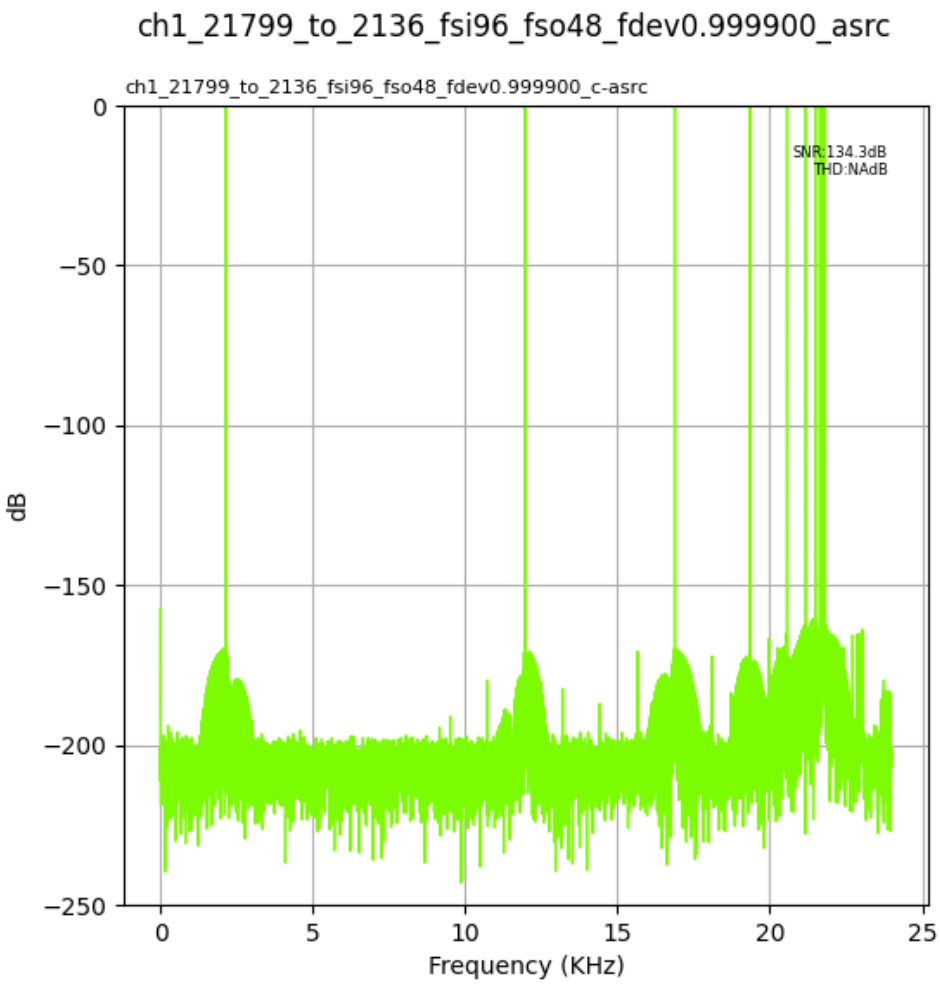

Fig. 1.20: Input Fs: 96,000Hz, Output Fs: 48,000Hz, Fs error: 0.999900, Results for: asrc

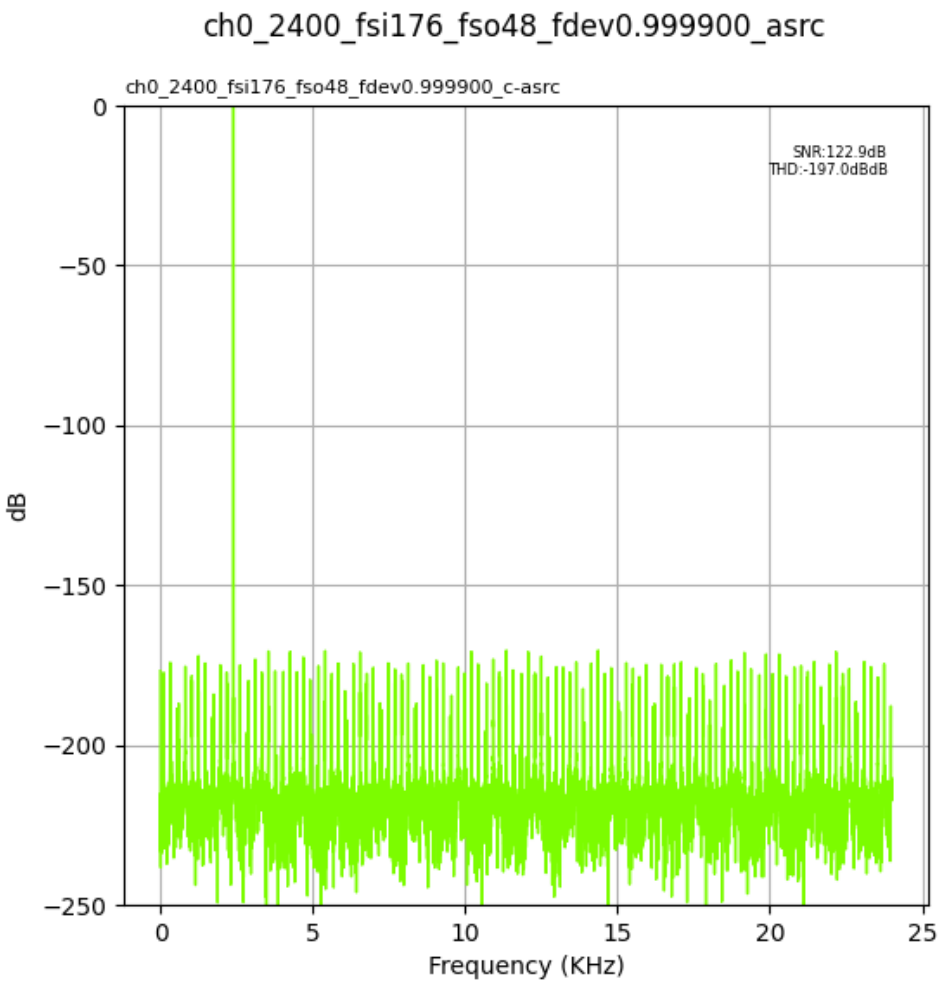

Fig. 1.21: Input Fs: 176,400Hz, Output Fs: 48,000Hz, Fs error: 0.999900, Results for: asrc

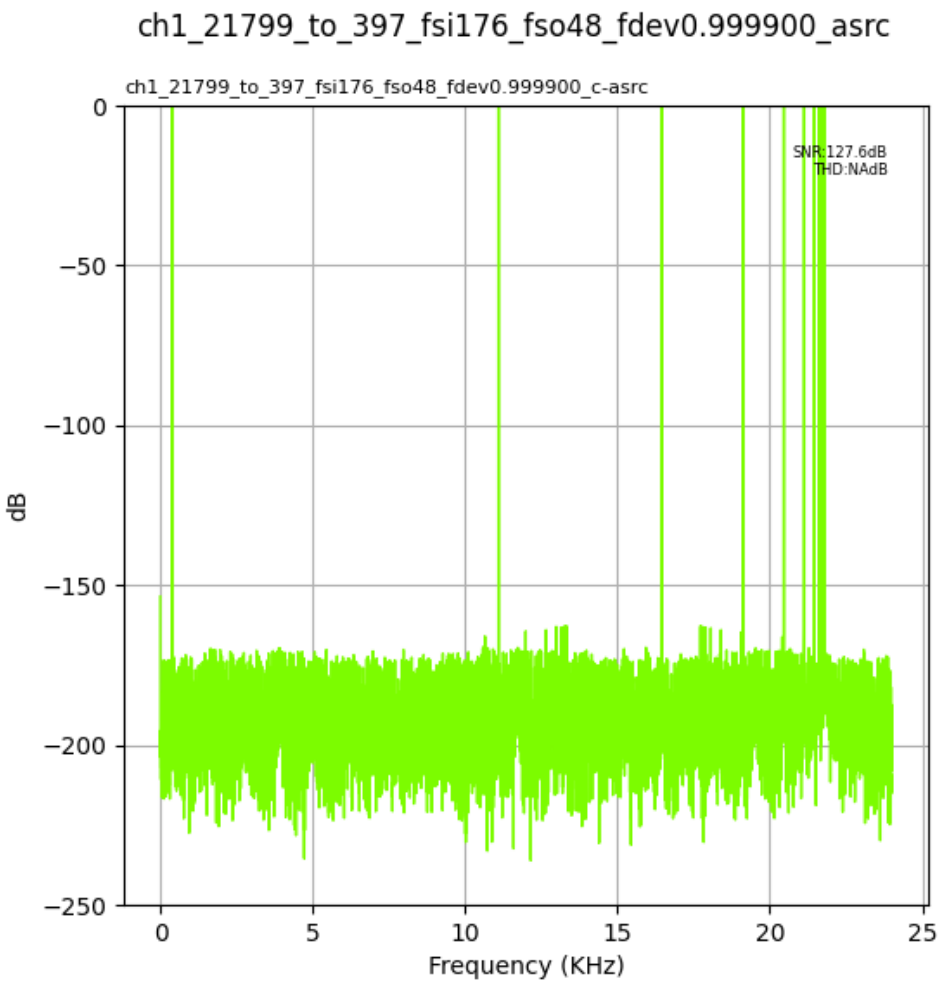

Fig. 1.22: Input Fs: 176,400Hz, Output Fs: 48,000Hz, Fs error: 0.999900, Results for: asrc

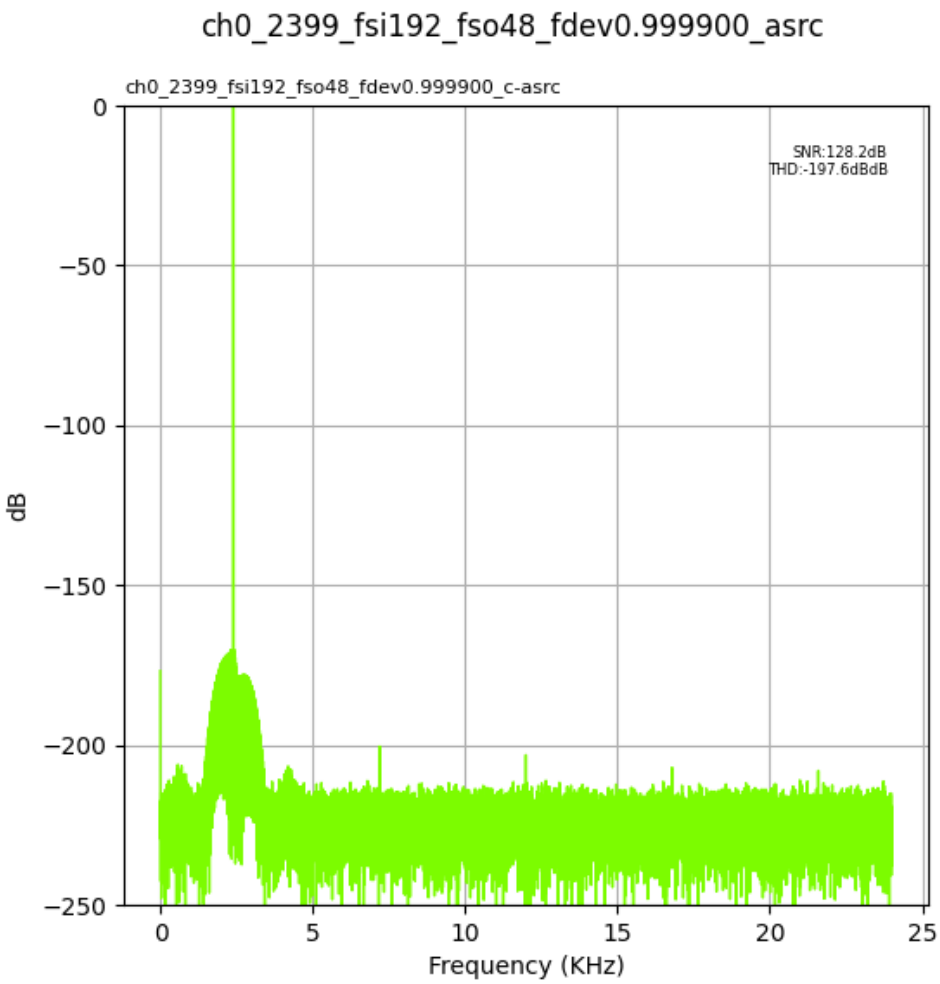

Fig. 1.23: Input Fs: 192,000Hz, Output Fs: 48,000Hz, Fs error: 0.999900, Results for: asrc

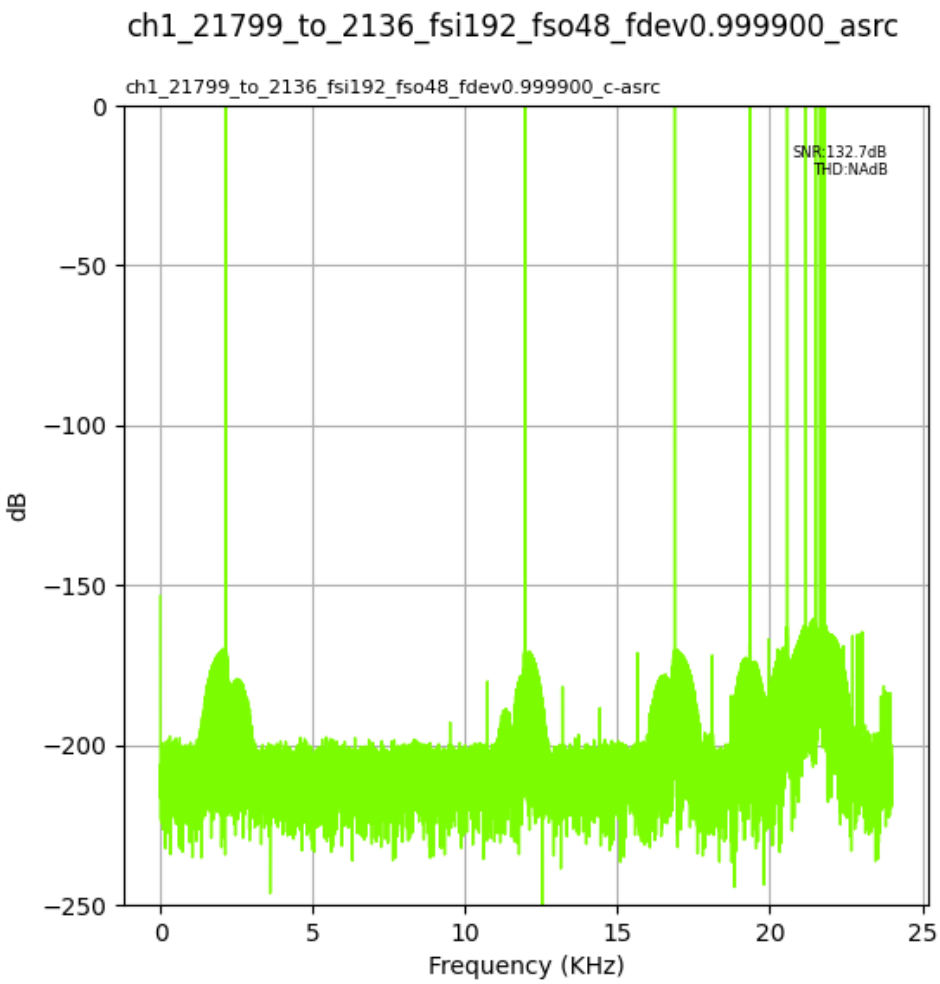

Fig. 1.24: Input Fs: 192,000Hz, Output Fs: 48,000Hz, Fs error: 0.999900, Results for: asrc

1.1.5 Output Fs : 88,200Hz

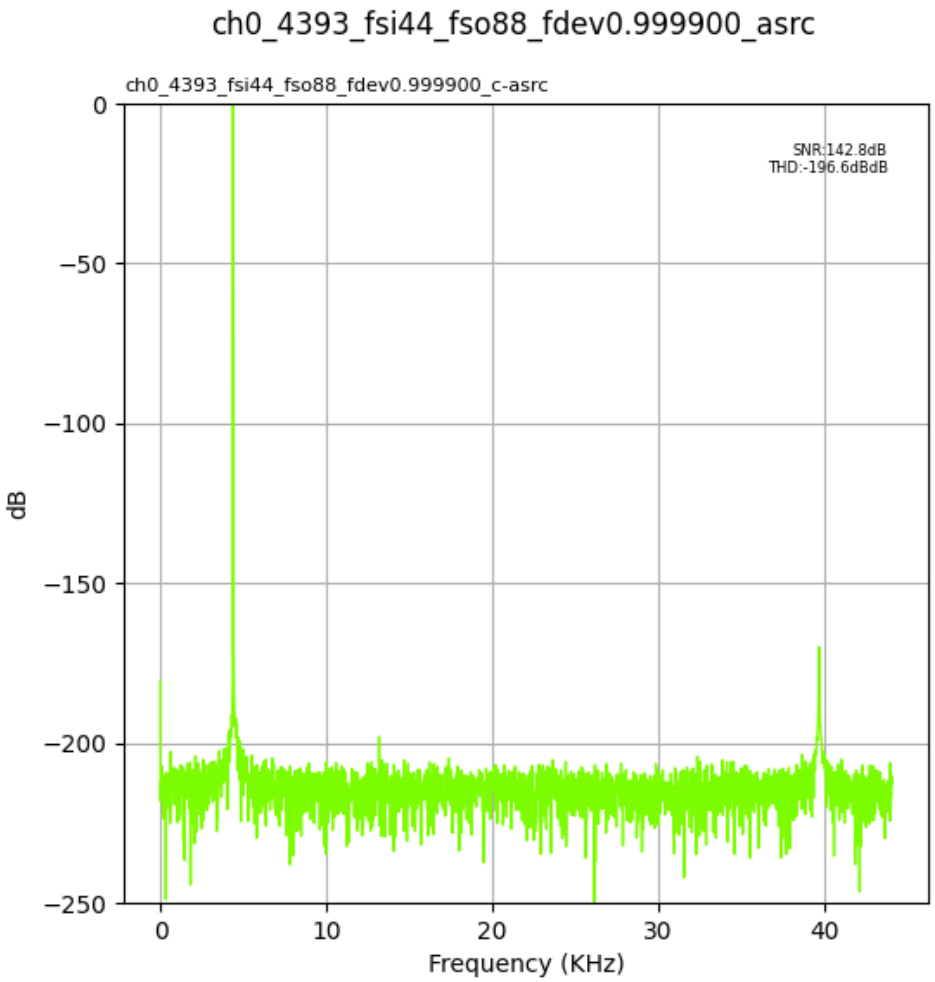

Fig. 1.25: Input Fs: 44,100Hz, Output Fs: 88,200Hz, Fs error: 0.999900, Results for: asrc

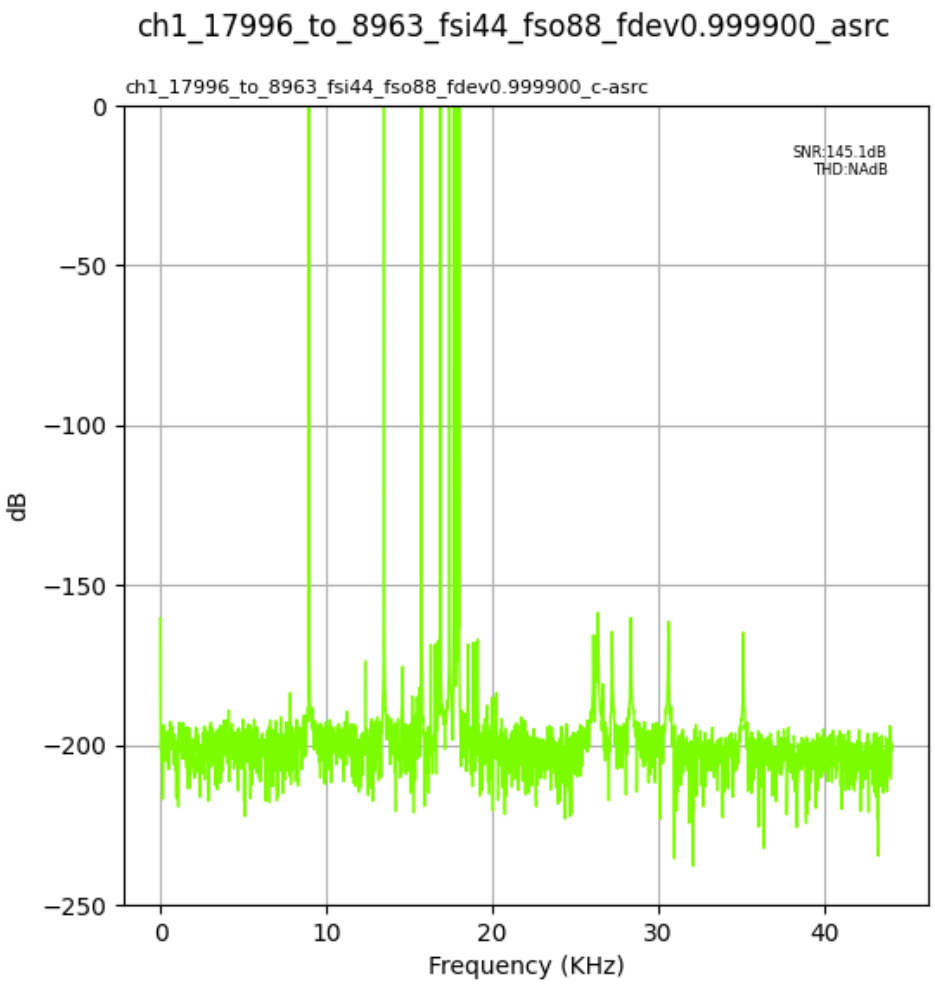

Fig. 1.26: Input Fs: 44,100Hz, Output Fs: 88,200Hz, Fs error: 0.999900, Results for: asrc

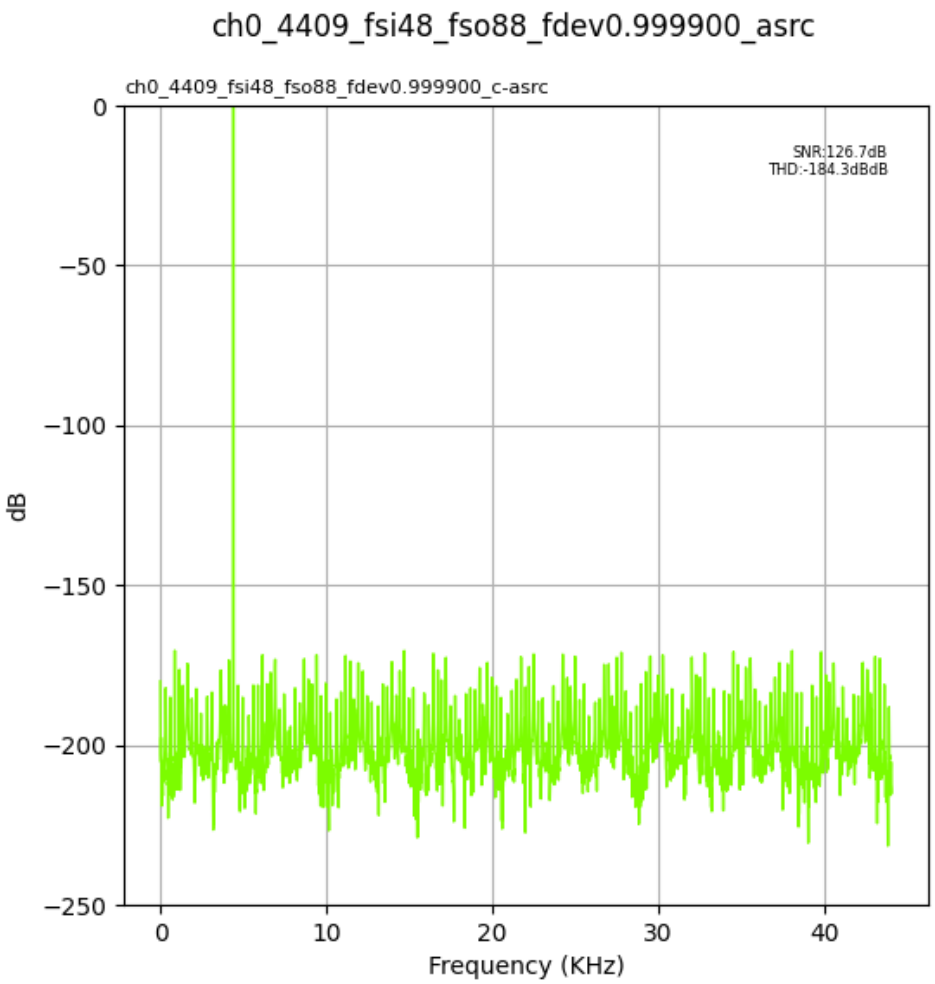

Fig. 1.27: Input Fs: 48,000Hz, Output Fs: 88,200Hz, Fs error: 0.999900, Results for: asrc

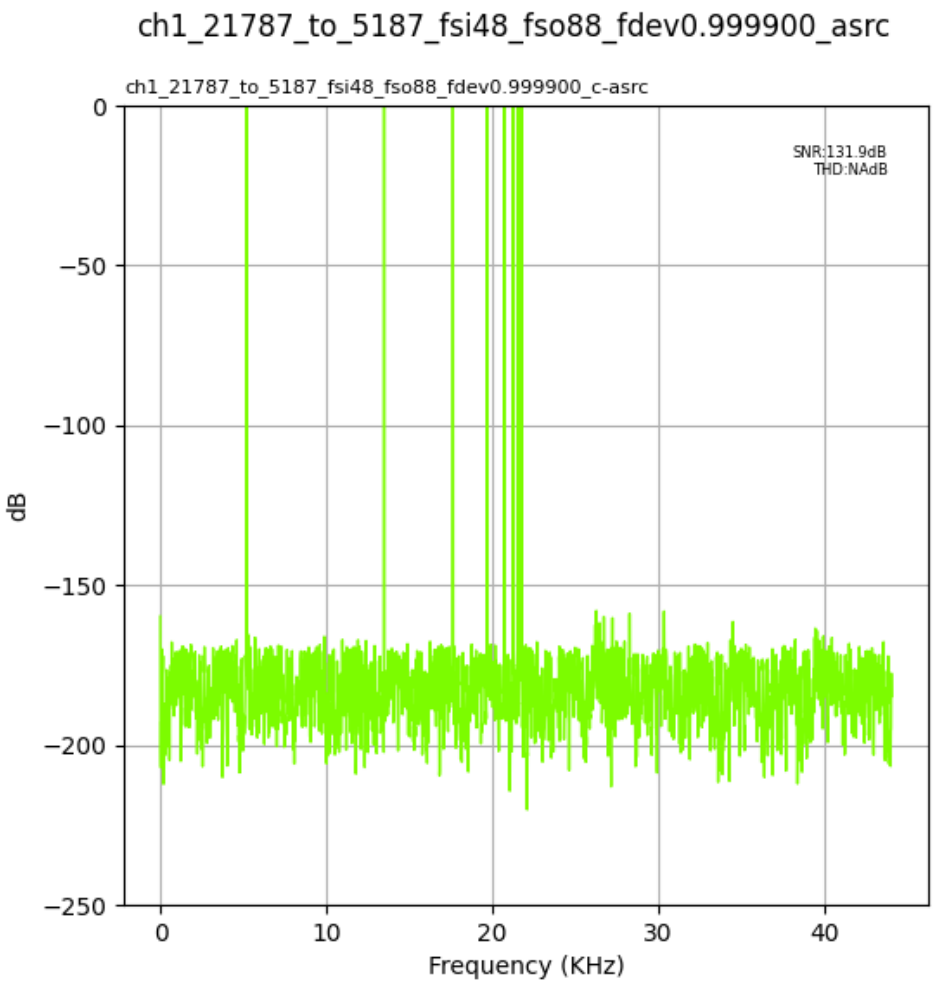

Fig. 1.28: Input Fs: 48,000Hz, Output Fs: 88,200Hz, Fs error: 0.999900, Results for: asrc

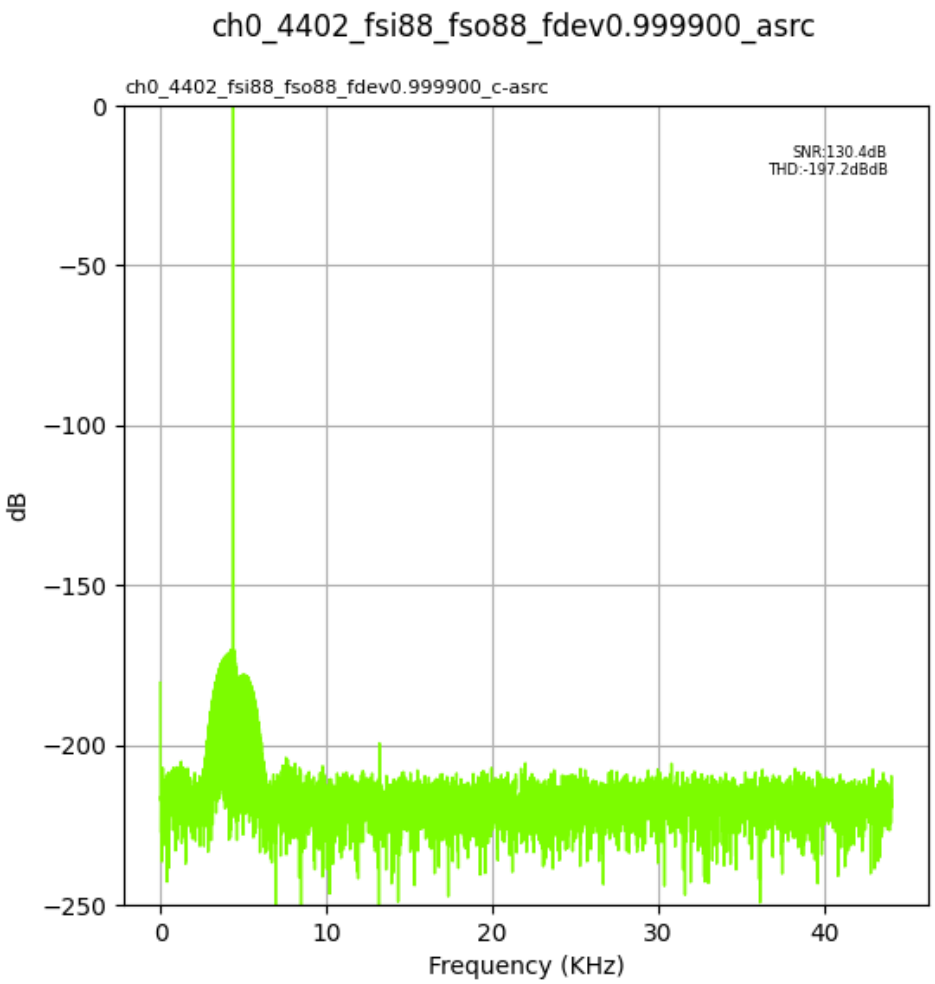

Fig. 1.29: Input Fs: 88,200Hz, Output Fs: 88,200Hz, Fs error: 0.999900, Results for: asrc

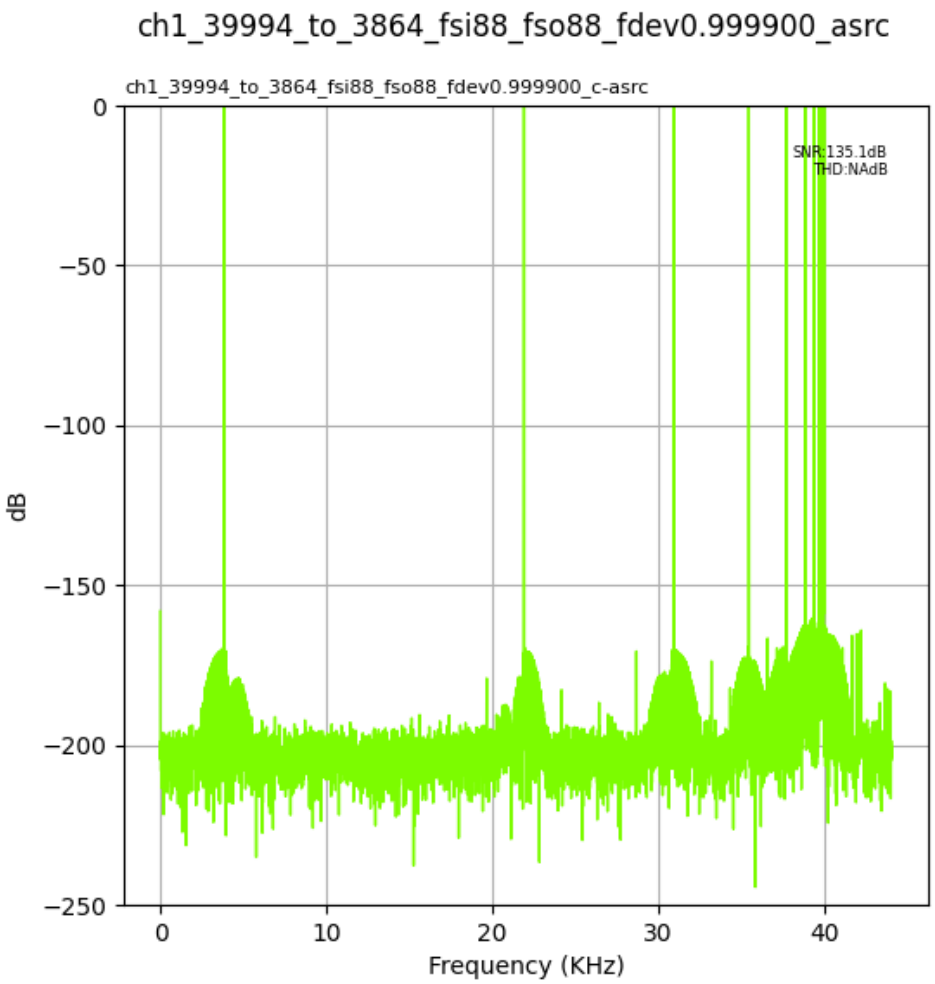

Fig. 1.30: Input Fs: 88,200Hz, Output Fs: 88,200Hz, Fs error: 0.999900, Results for: asrc

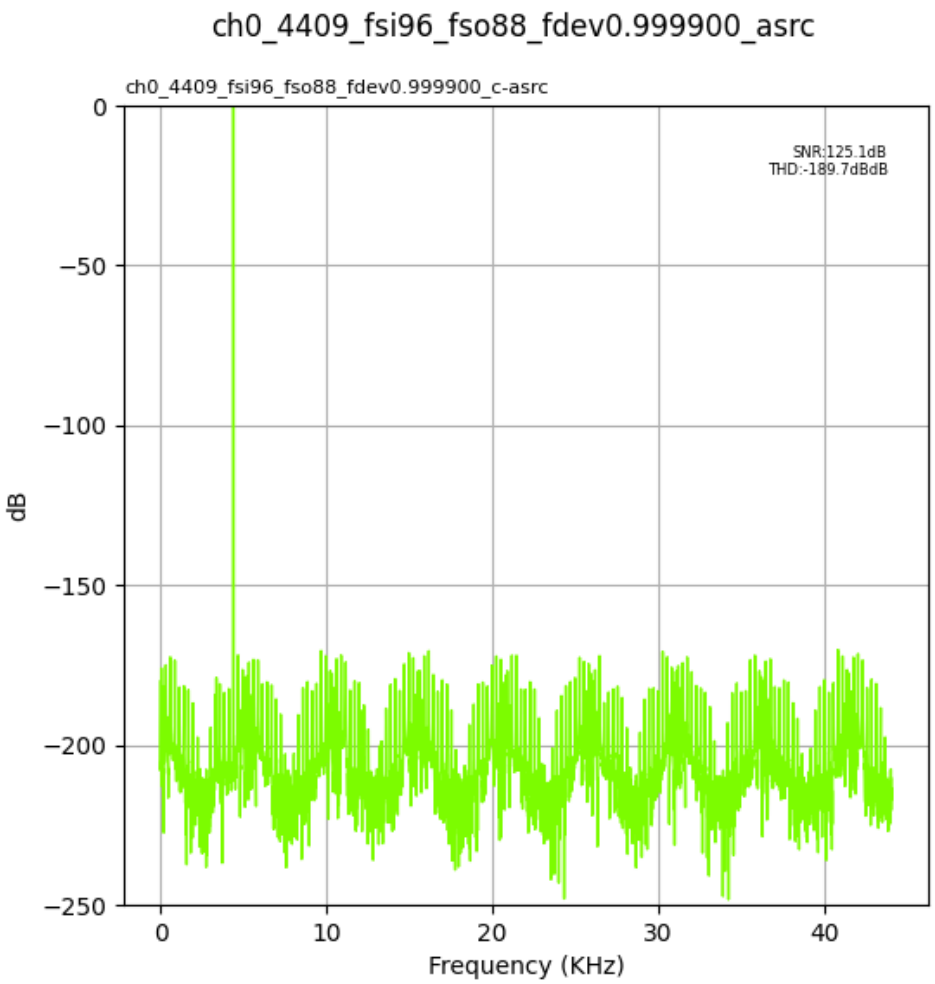

Fig. 1.31: Input Fs: 96,000Hz, Output Fs: 88,200Hz, Fs error: 0.999900, Results for: asrc

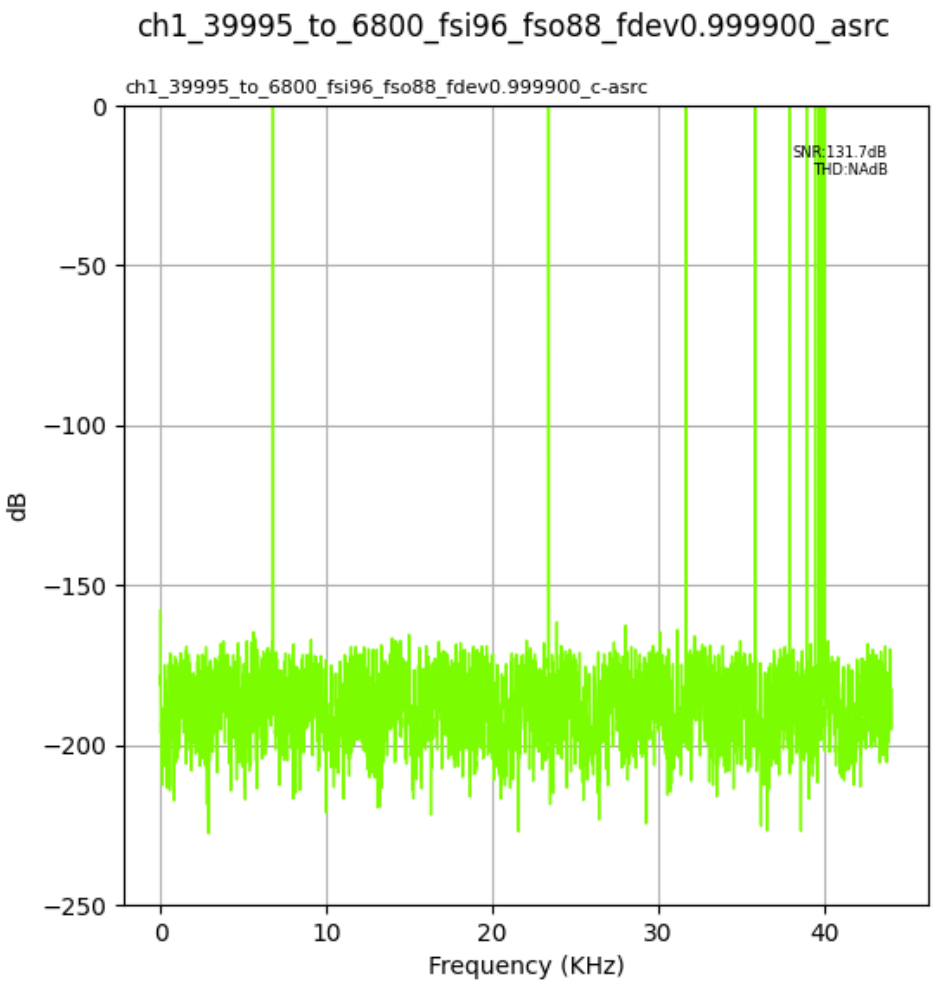

Fig. 1.32: Input Fs: 96,000Hz, Output Fs: 88,200Hz, Fs error: 0.999900, Results for: asrc

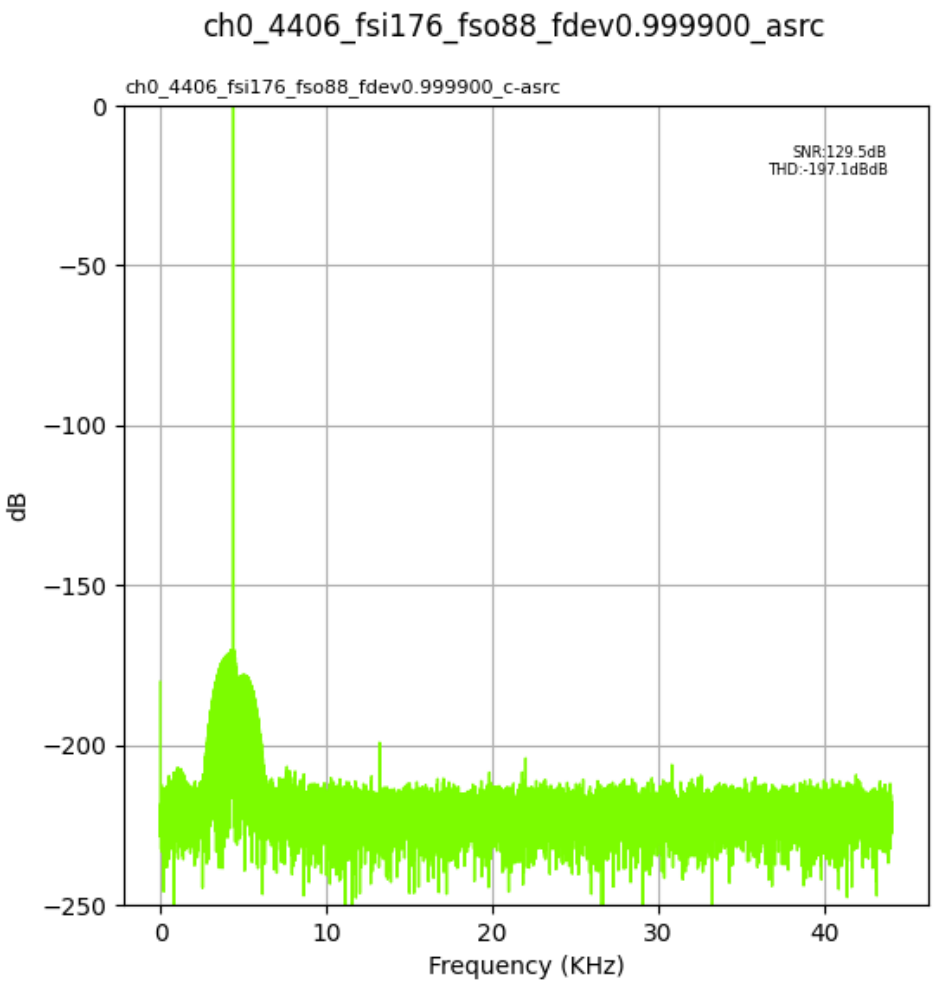

Fig. 1.33: Input Fs: 176,400Hz, Output Fs: 88,200Hz, Fs error: 0.999900, Results for: asrc

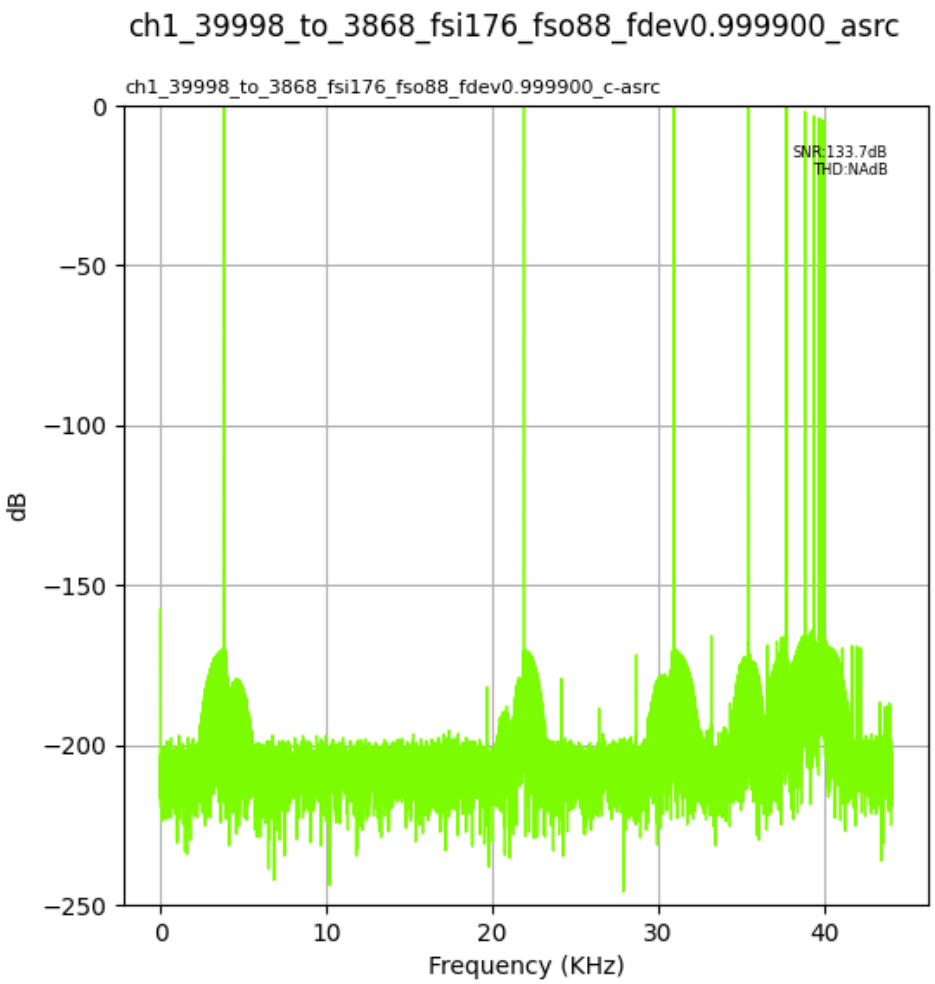

Fig. 1.34: Input Fs: 176,400Hz, Output Fs: 88,200Hz, Fs error: 0.999900, Results for: asrc

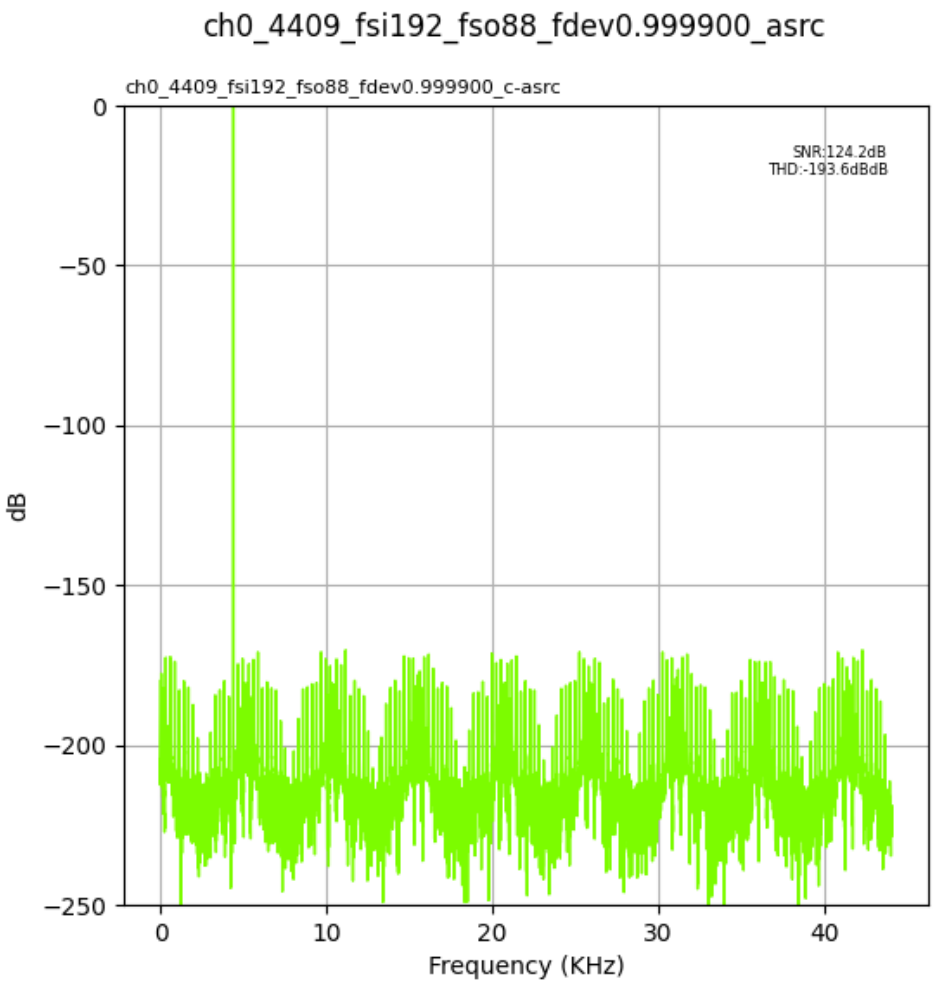

Fig. 1.35: Input Fs: 192,000Hz, Output Fs: 88,200Hz, Fs error: 0.999900, Results for: asrc

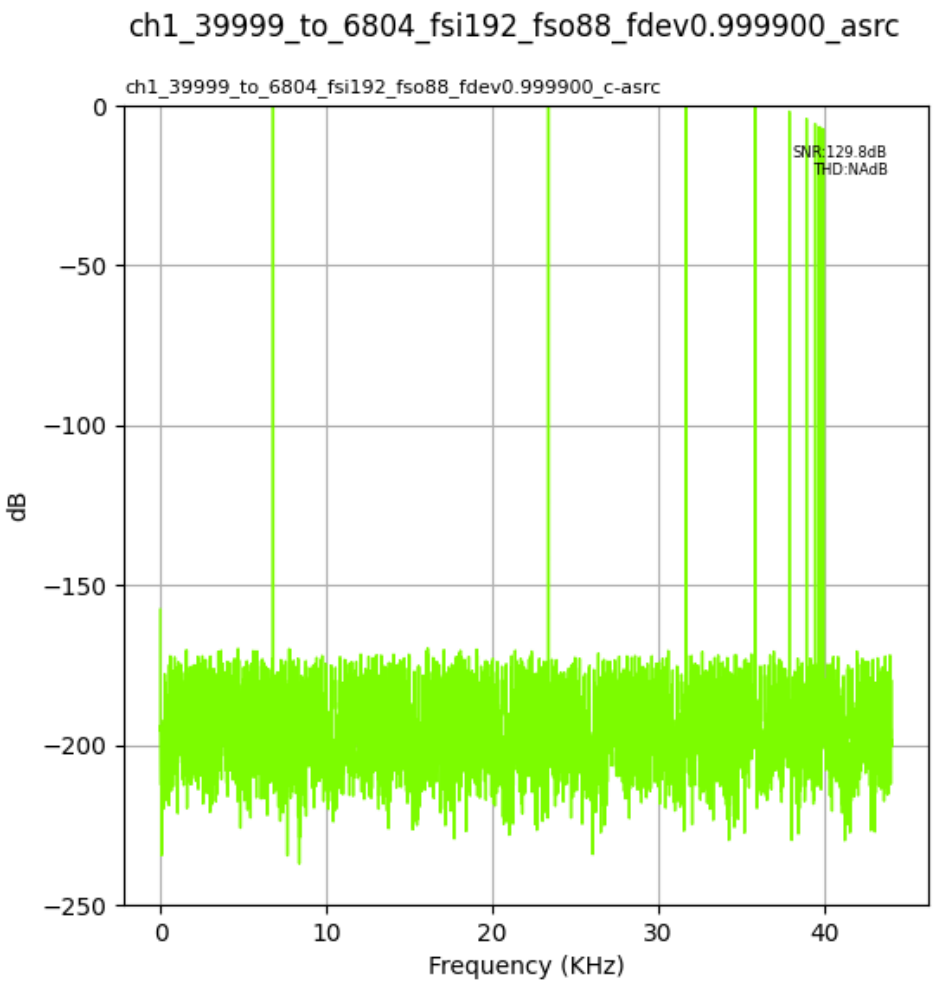

Fig. 1.36: Input Fs: 192,000Hz, Output Fs: 88,200Hz, Fs error: 0.999900, Results for: asrc

1.1.6 Output Fs : 96,000Hz

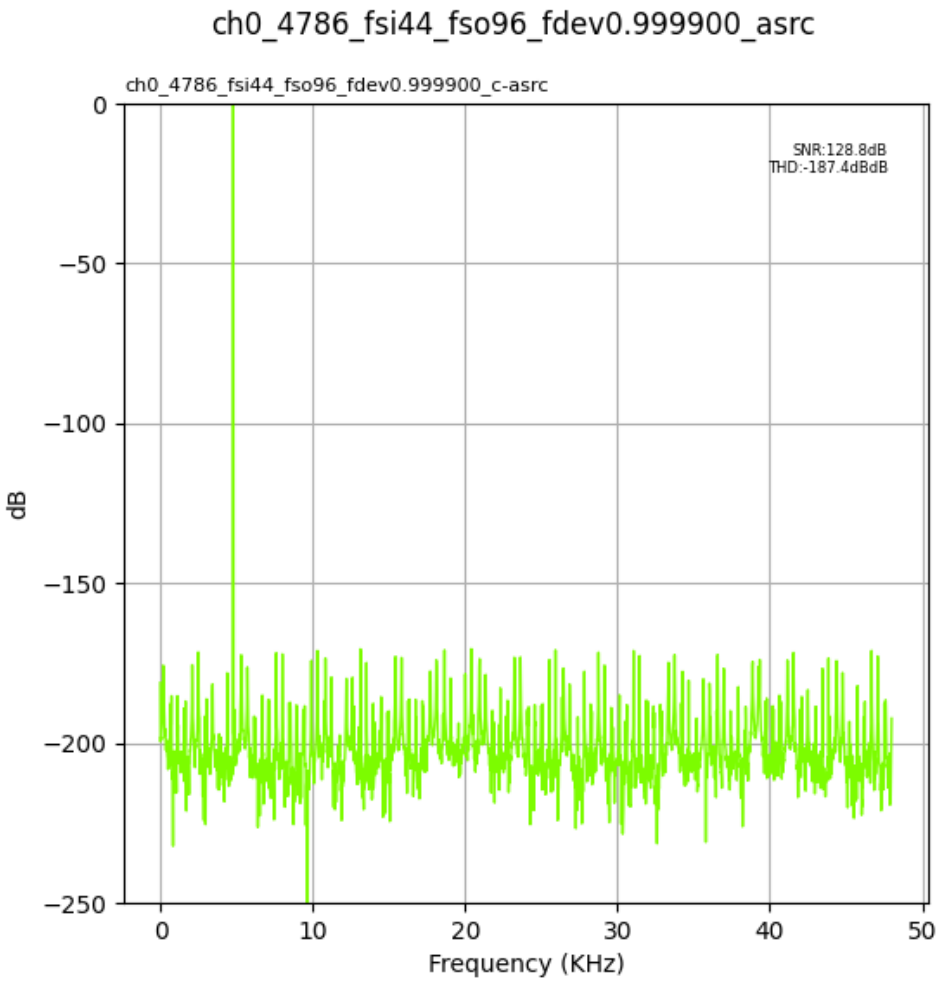

Fig. 1.37: Input Fs: 44,100Hz, Output Fs: 96,000Hz, Fs error: 0.999900, Results for: asrc

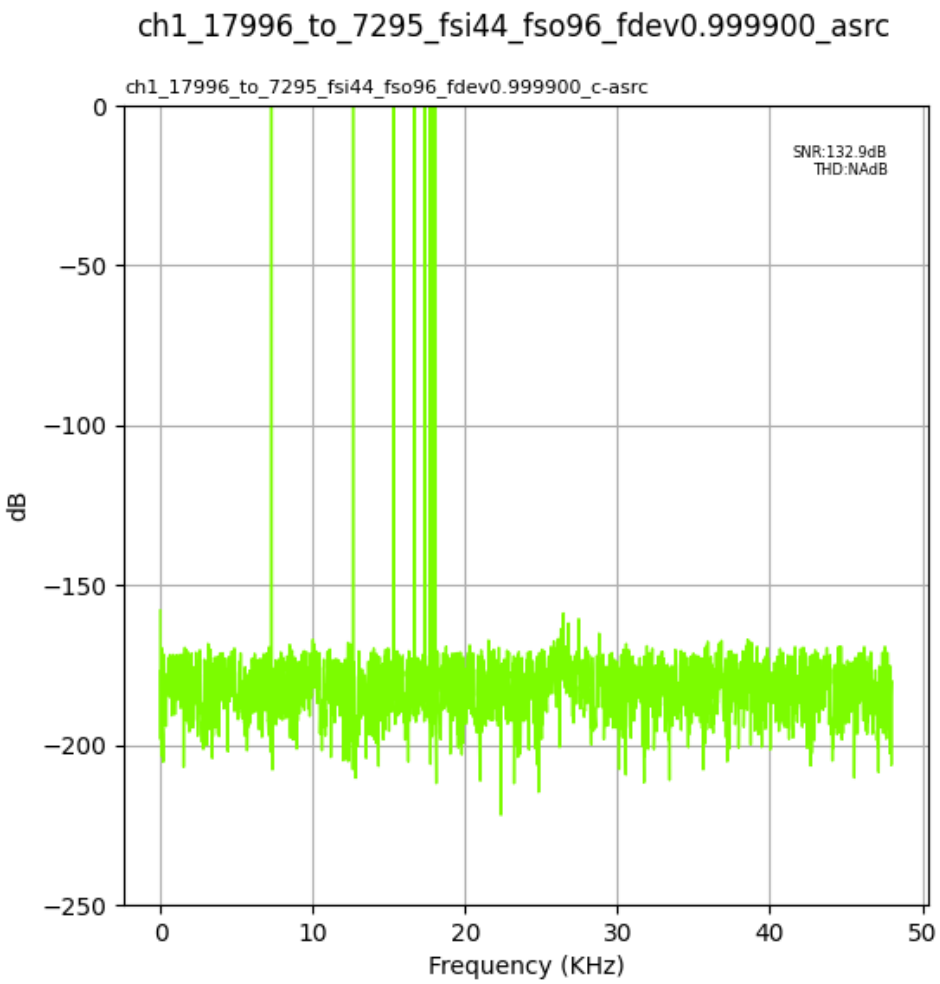

Fig. 1.38: Input Fs: 44,100Hz, Output Fs: 96,000Hz, Fs error: 0.999900, Results for: asrc

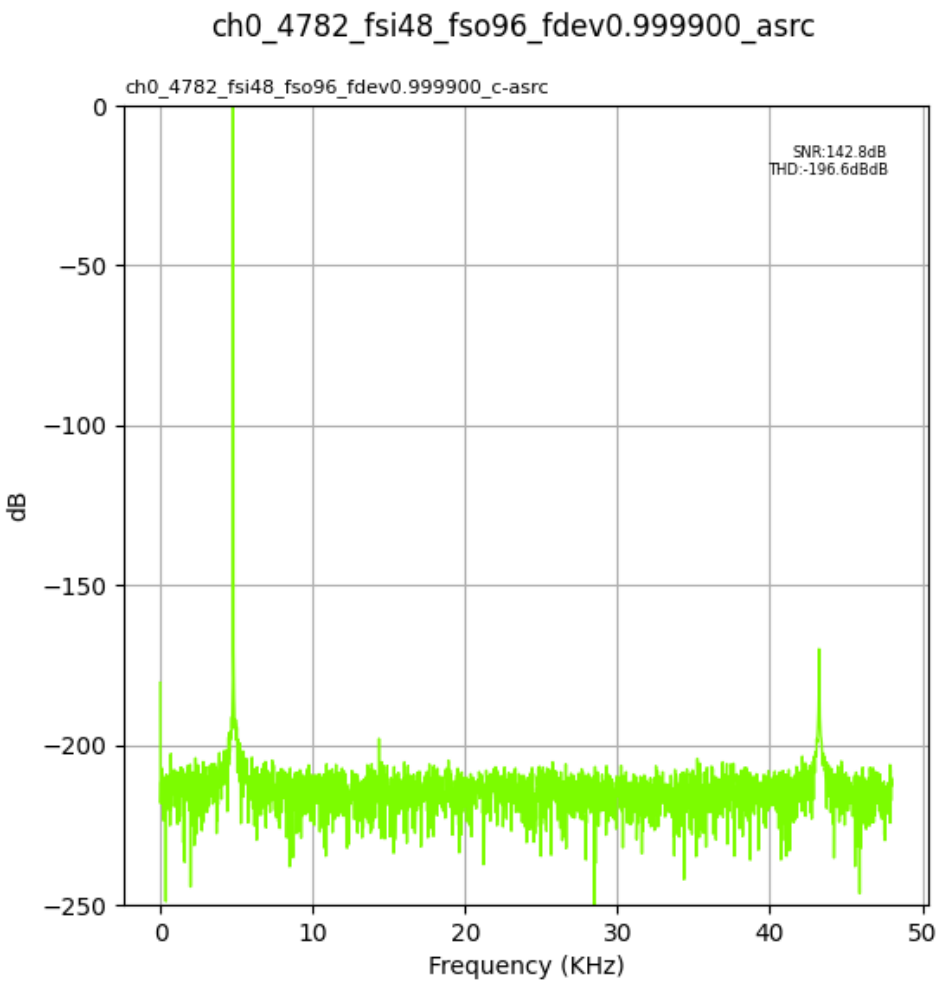

Fig. 1.39: Input Fs: 48,000Hz, Output Fs: 96,000Hz, Fs error: 0.999900, Results for: asrc

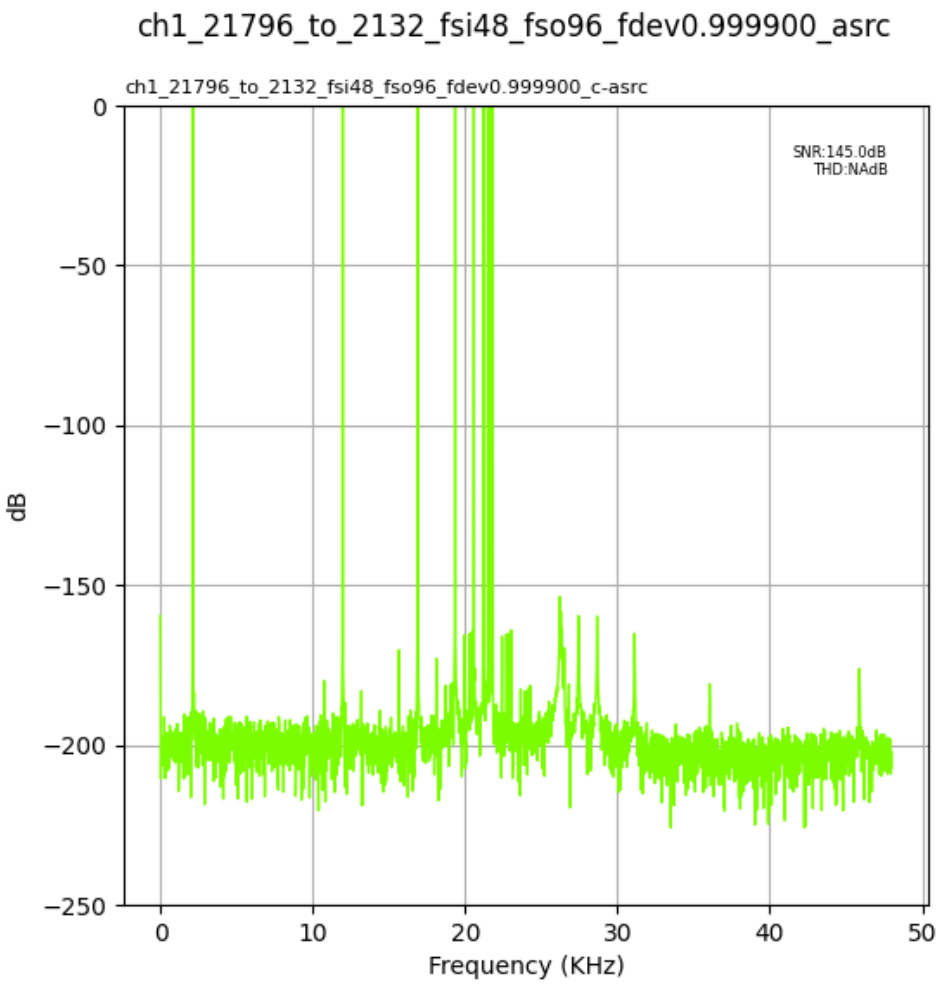

Fig. 1.40: Input Fs: 48,000Hz, Output Fs: 96,000Hz, Fs error: 0.999900, Results for: asrc

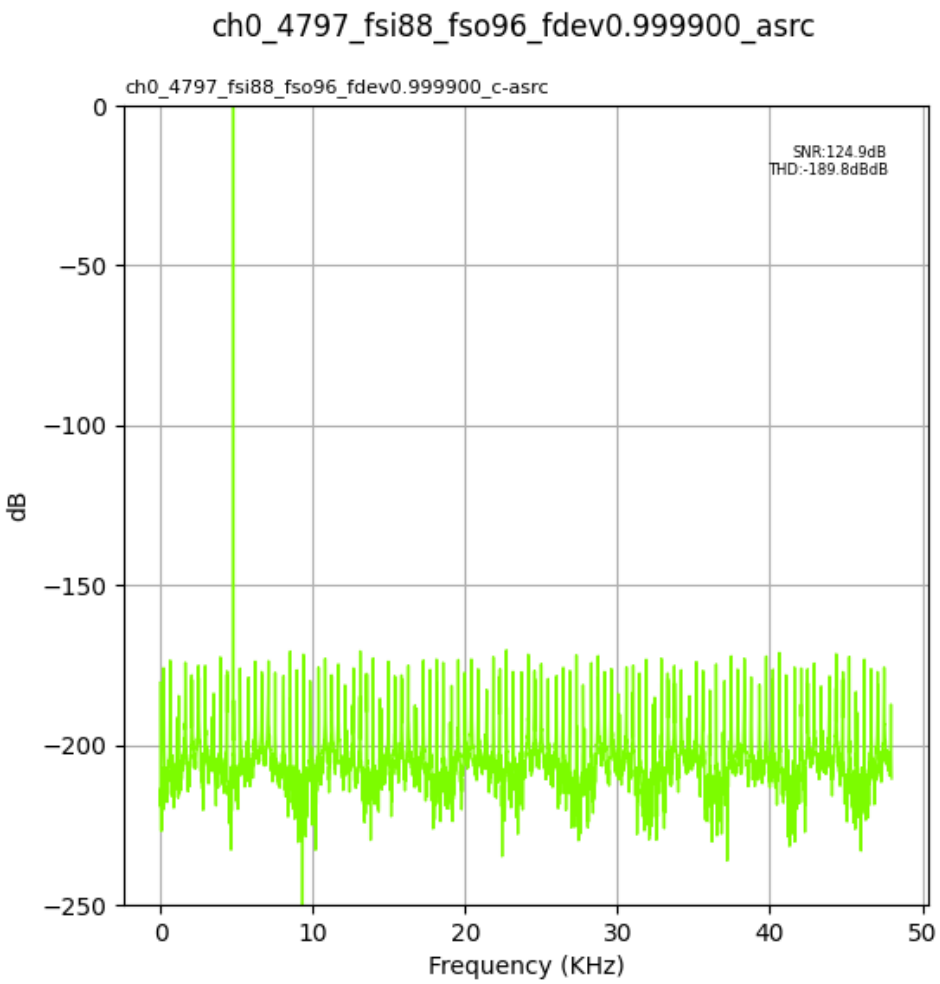

Fig. 1.41: Input Fs: 88,200Hz, Output Fs: 96,000Hz, Fs error: 0.999900, Results for: asrc

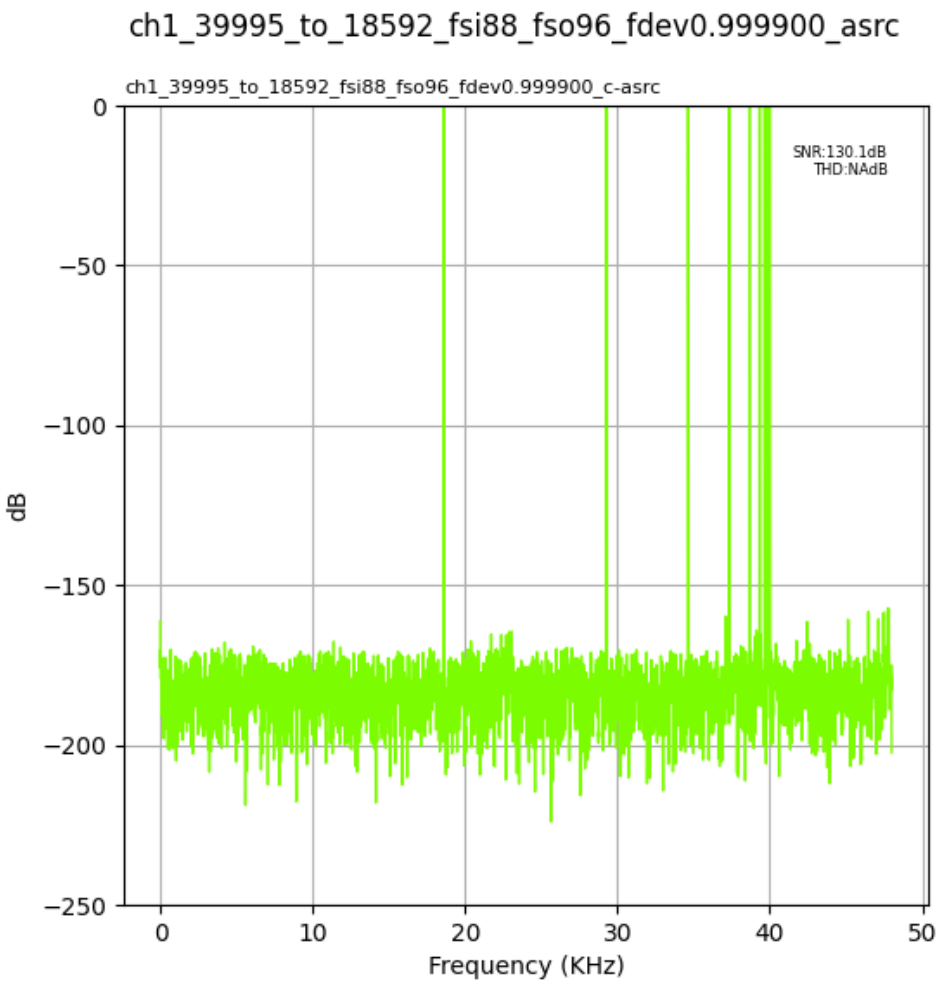

Fig. 1.42: Input Fs: 88,200Hz, Output Fs: 96,000Hz, Fs error: 0.999900, Results for: asrc

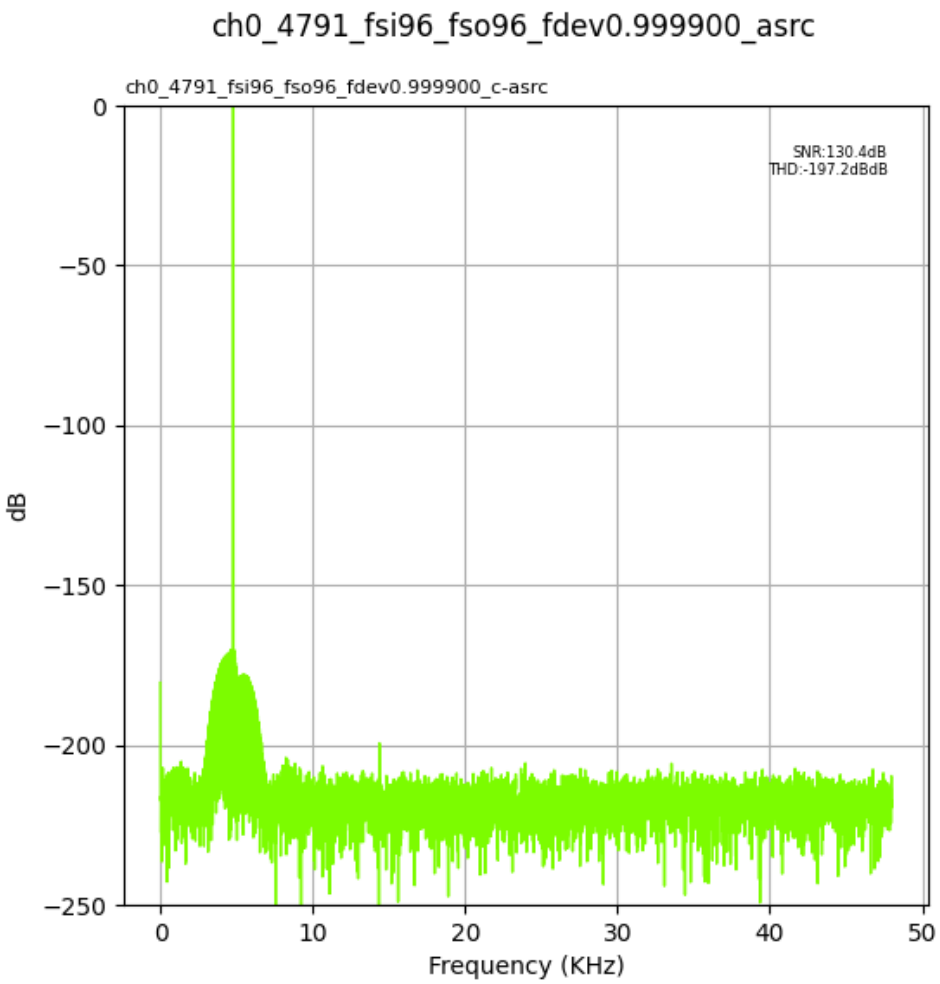

Fig. 1.43: Input Fs: 96,000Hz, Output Fs: 96,000Hz, Fs error: 0.999900, Results for: asrc

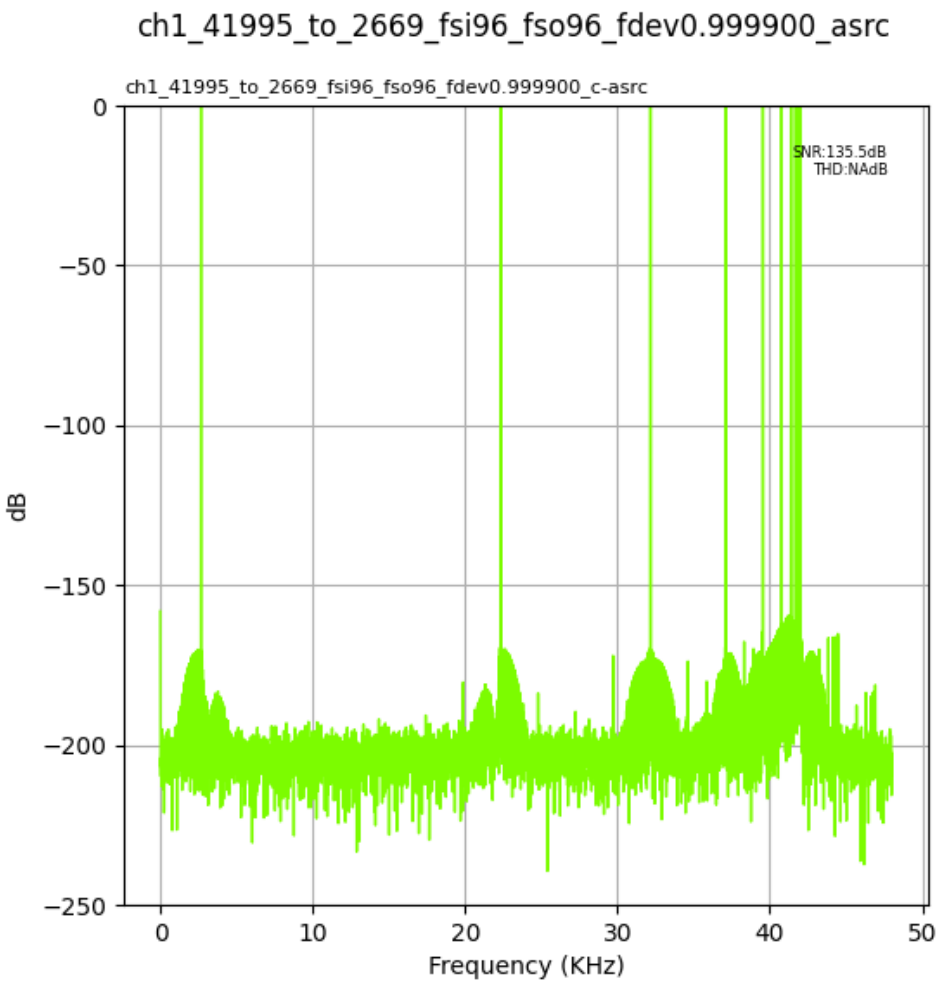

Fig. 1.44: Input Fs: 96,000Hz, Output Fs: 96,000Hz, Fs error: 0.999900, Results for: asrc

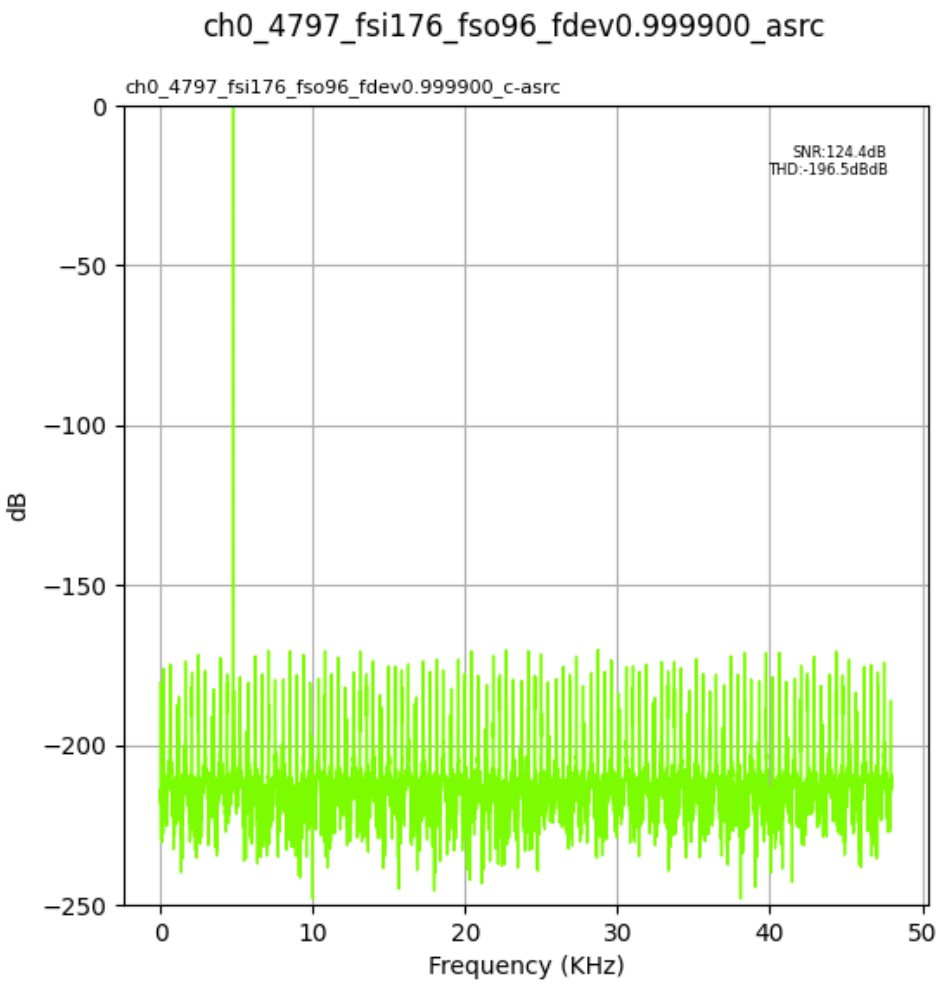

Fig. 1.45: Input Fs: 176,400Hz, Output Fs: 96,000Hz, Fs error: 0.999900, Results for: asrc

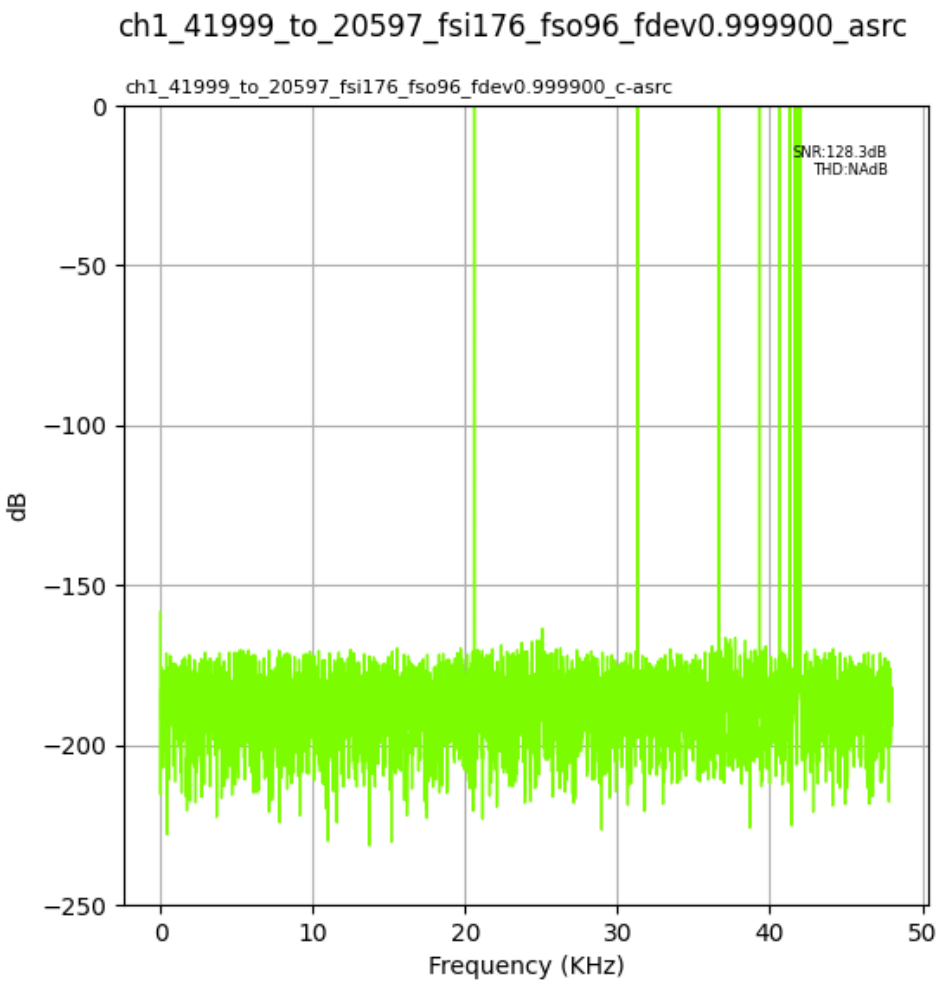

Fig. 1.46: Input Fs: 176,400Hz, Output Fs: 96,000Hz, Fs error: 0.999900, Results for: asrc

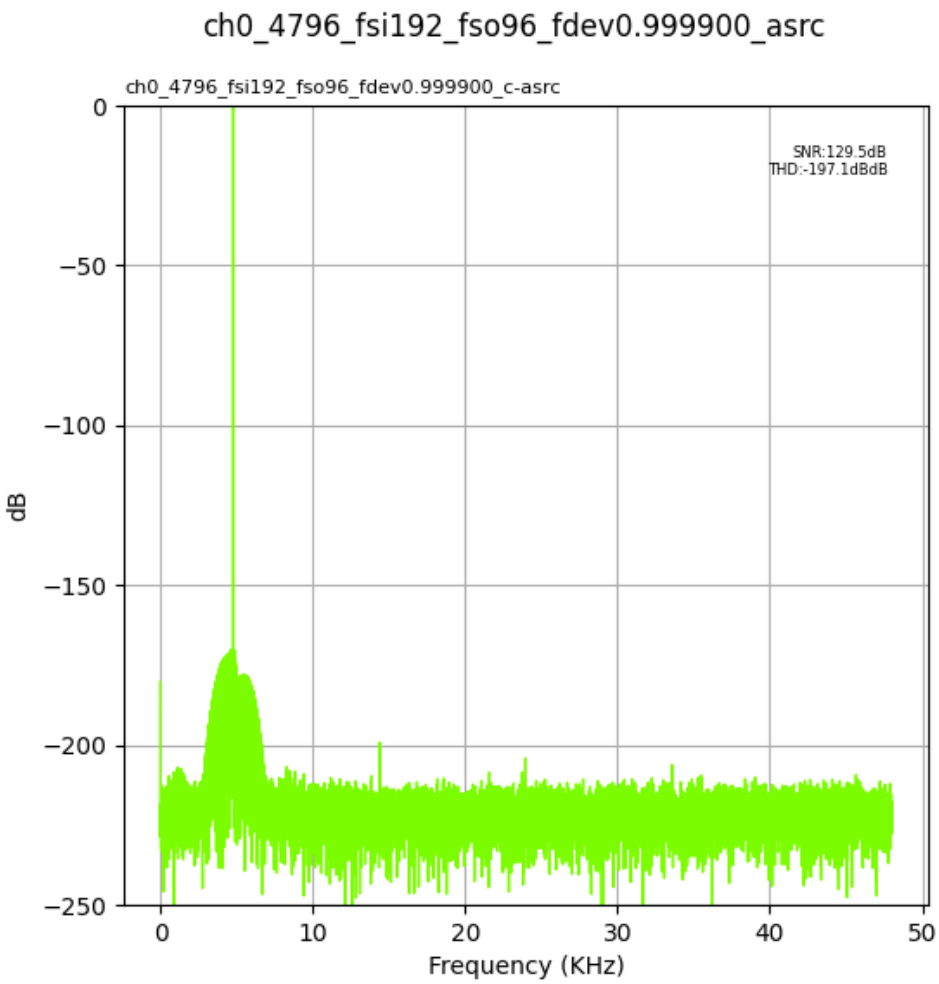

Fig. 1.47: Input Fs: 192,000Hz, Output Fs: 96,000Hz, Fs error: 0.999900, Results for: asrc

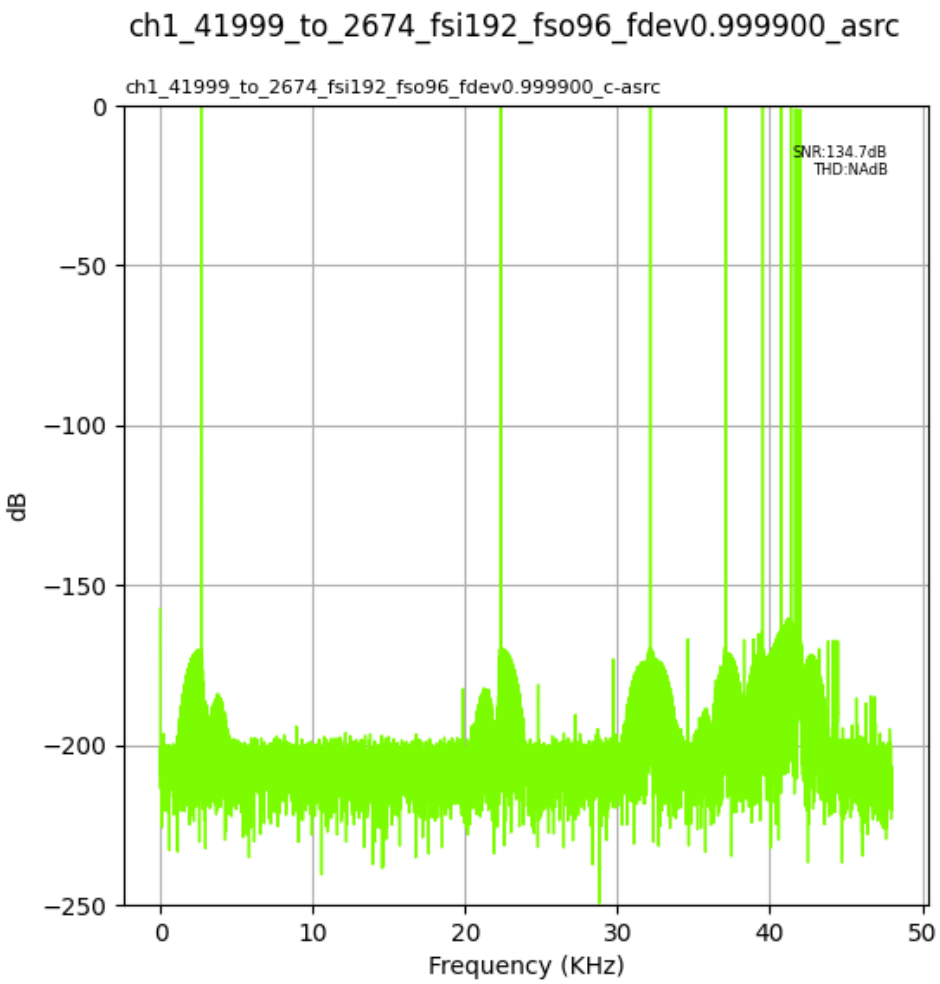

Fig. 1.48: Input Fs: 192,000Hz, Output Fs: 96,000Hz, Fs error: 0.999900, Results for: asrc

1.1.7 Output Fs : 176,400Hz

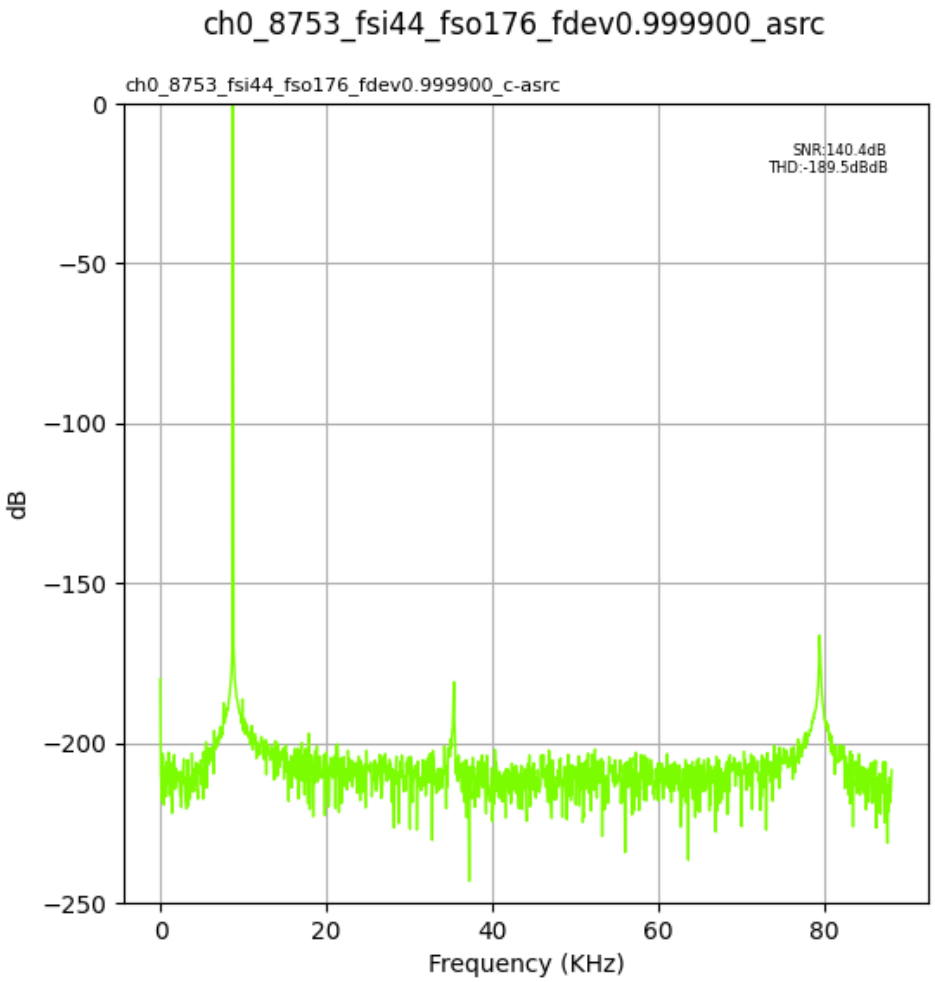

Fig. 1.49: Input Fs: 44,100Hz, Output Fs: 176,400Hz, Fs error: 0.999900, Results for: asrc

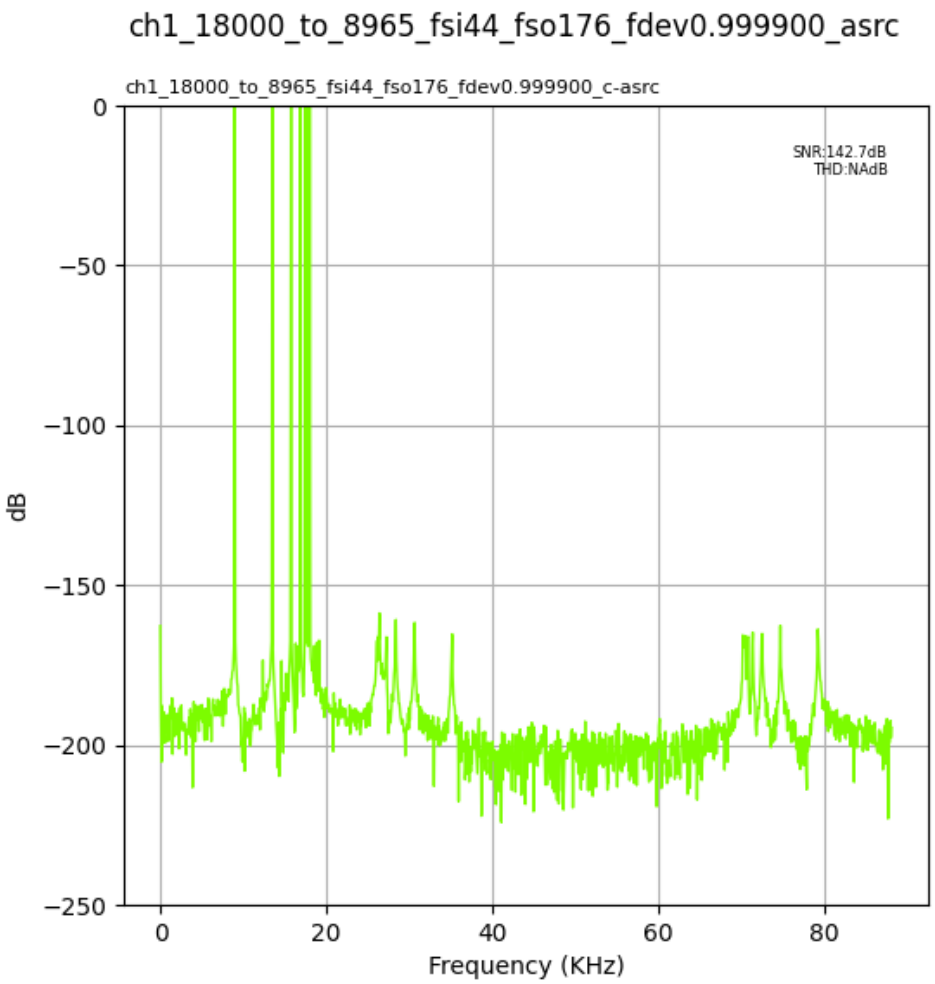

Fig. 1.50: Input Fs: 44,100Hz, Output Fs: 176,400Hz, Fs error: 0.999900, Results for: asrc

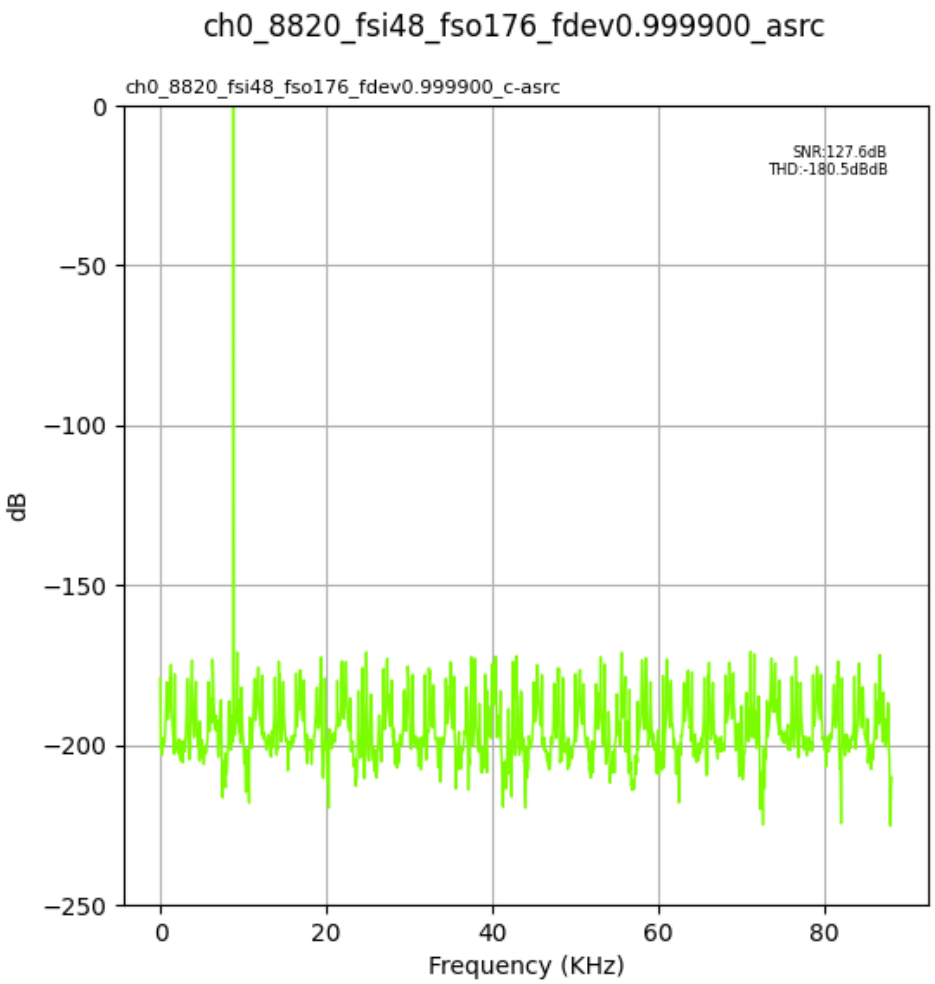

Fig. 1.51: Input Fs: 48,000Hz, Output Fs: 176,400Hz, Fs error: 0.999900, Results for: asrc

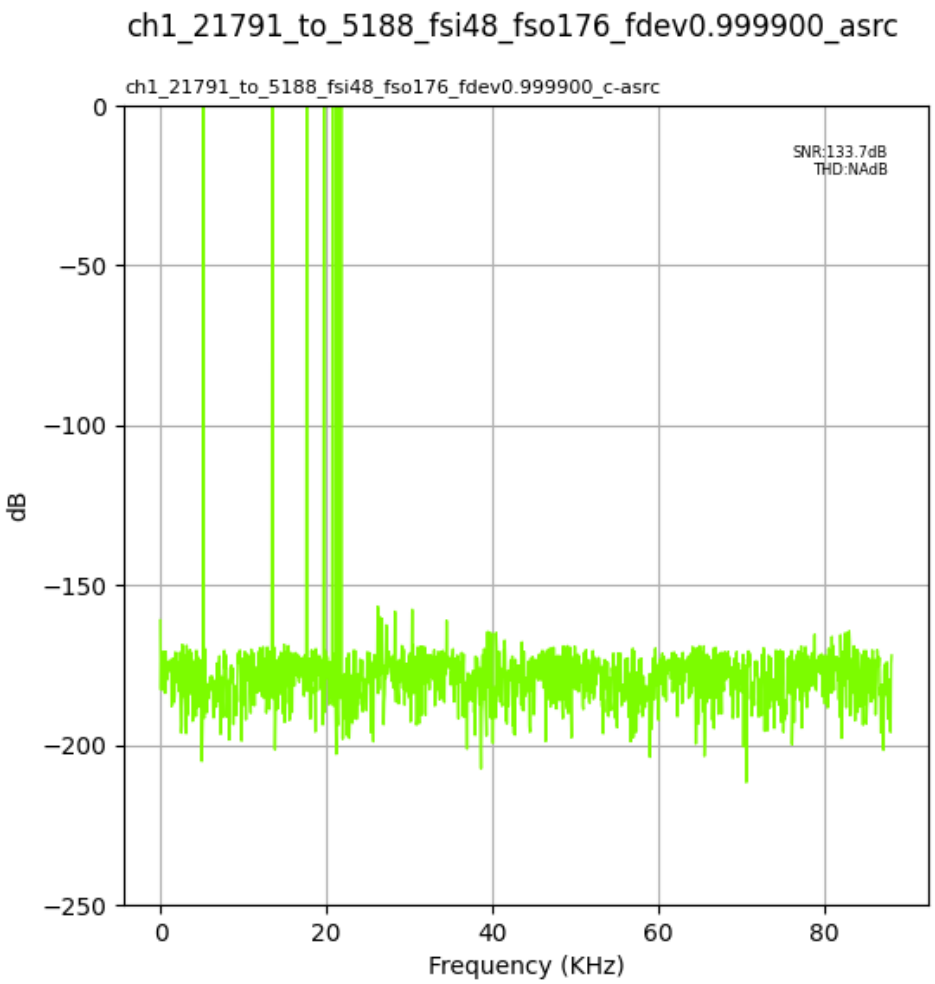

Fig. 1.52: Input Fs: 48,000Hz, Output Fs: 176,400Hz, Fs error: 0.999900, Results for: asrc

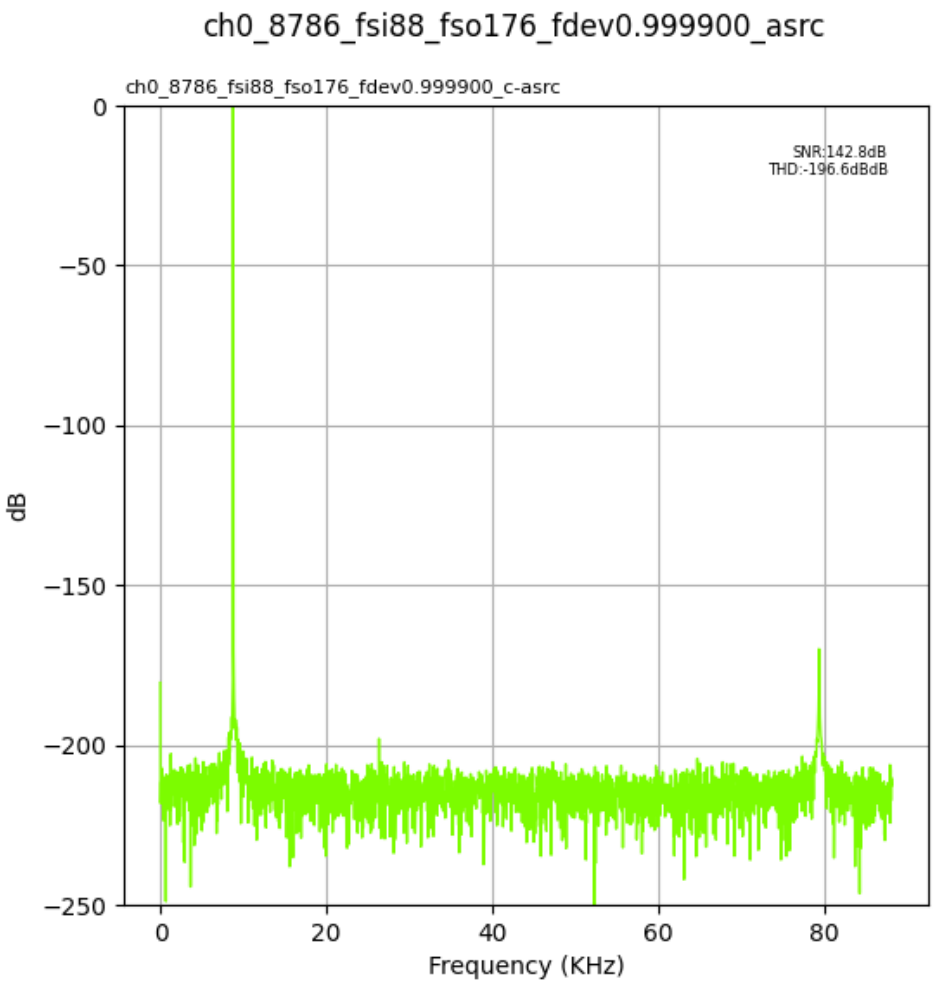

Fig. 1.53: Input Fs: 88,200Hz, Output Fs: 176,400Hz, Fs error: 0.999900, Results for: asrc

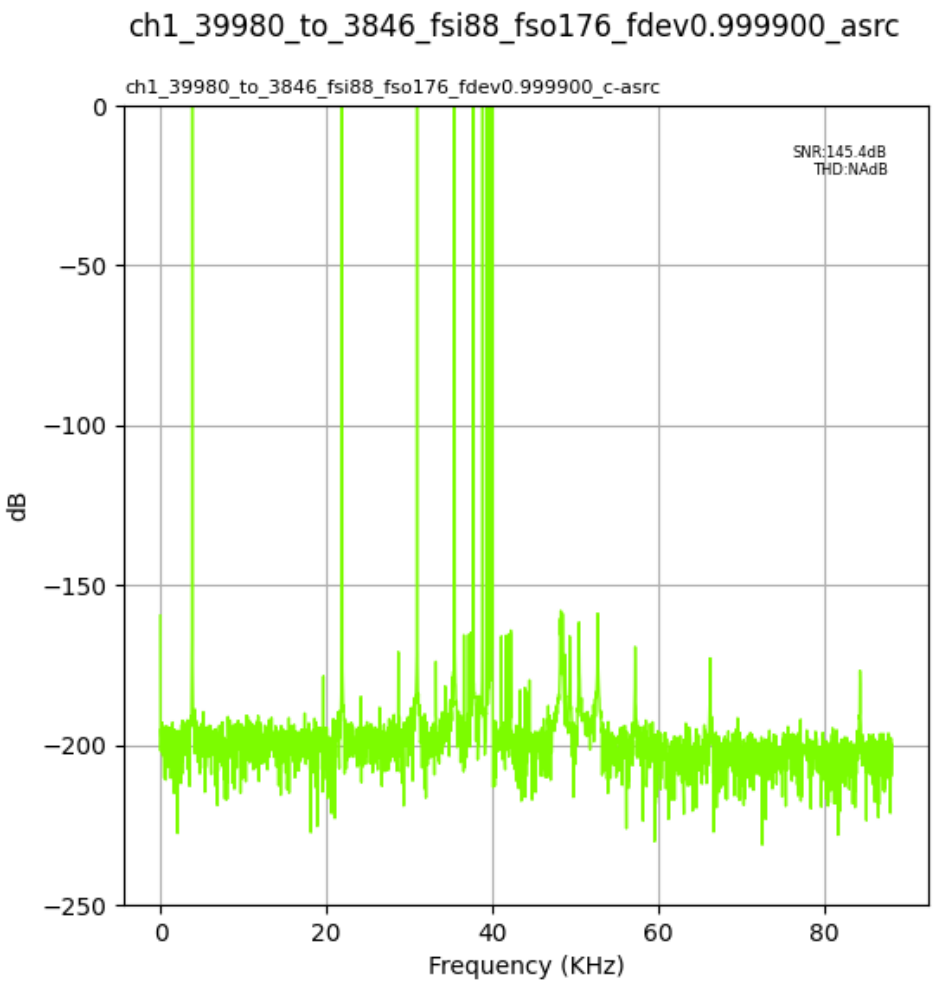

Fig. 1.54: Input Fs: 88,200Hz, Output Fs: 176,400Hz, Fs error: 0.999900, Results for: asrc

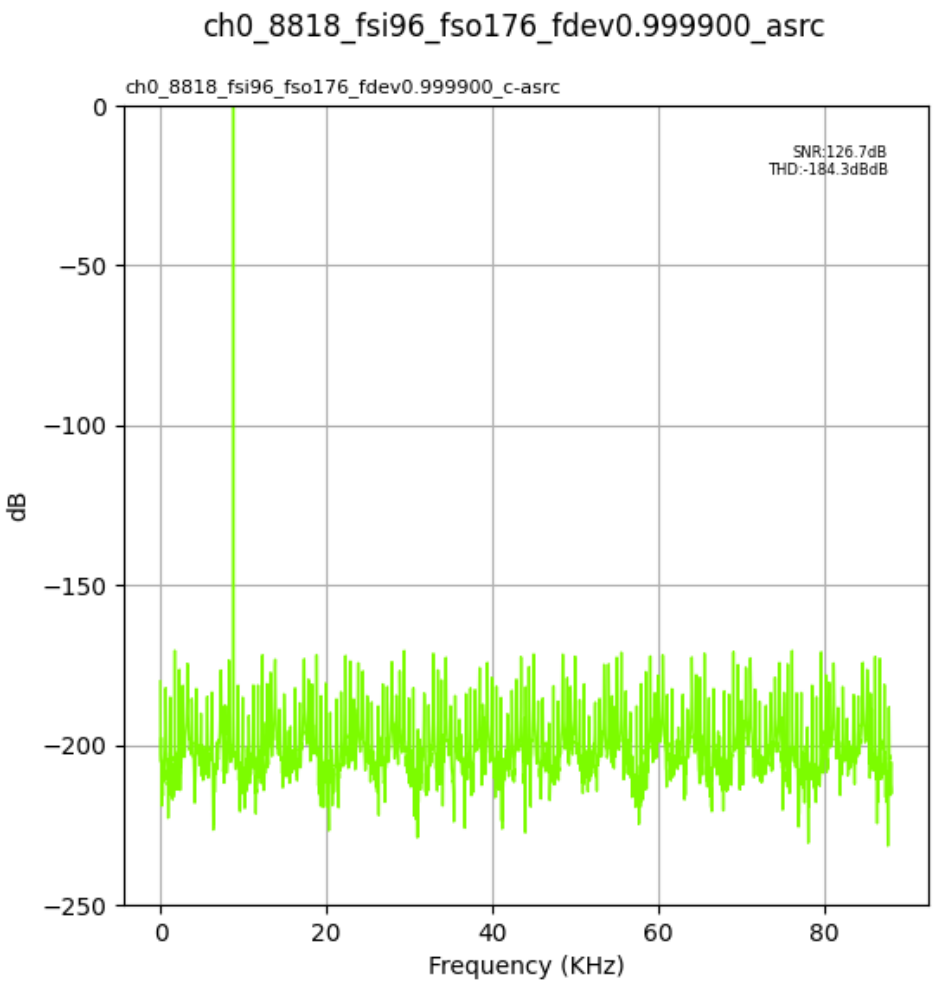

Fig. 1.55: Input Fs: 96,000Hz, Output Fs: 176,400Hz, Fs error: 0.999900, Results for: asrc

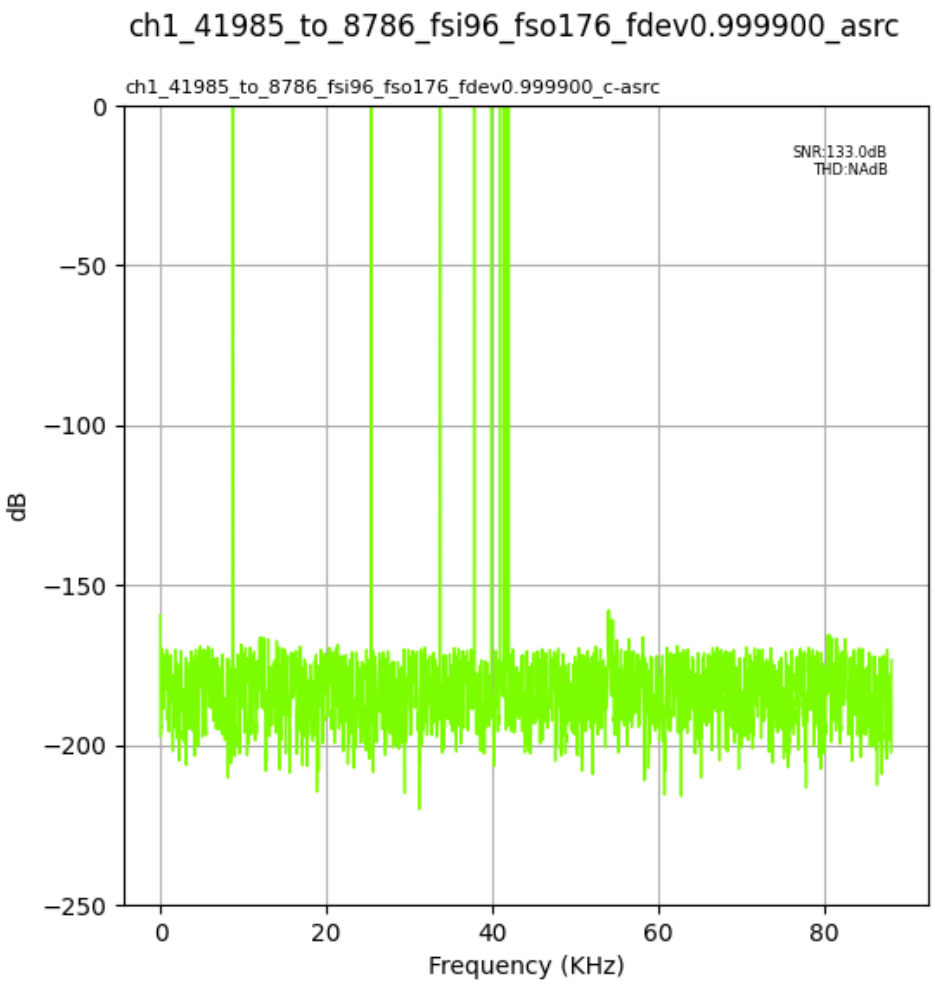

Fig. 1.56: Input Fs: 96,000Hz, Output Fs: 176,400Hz, Fs error: 0.999900, Results for: asrc

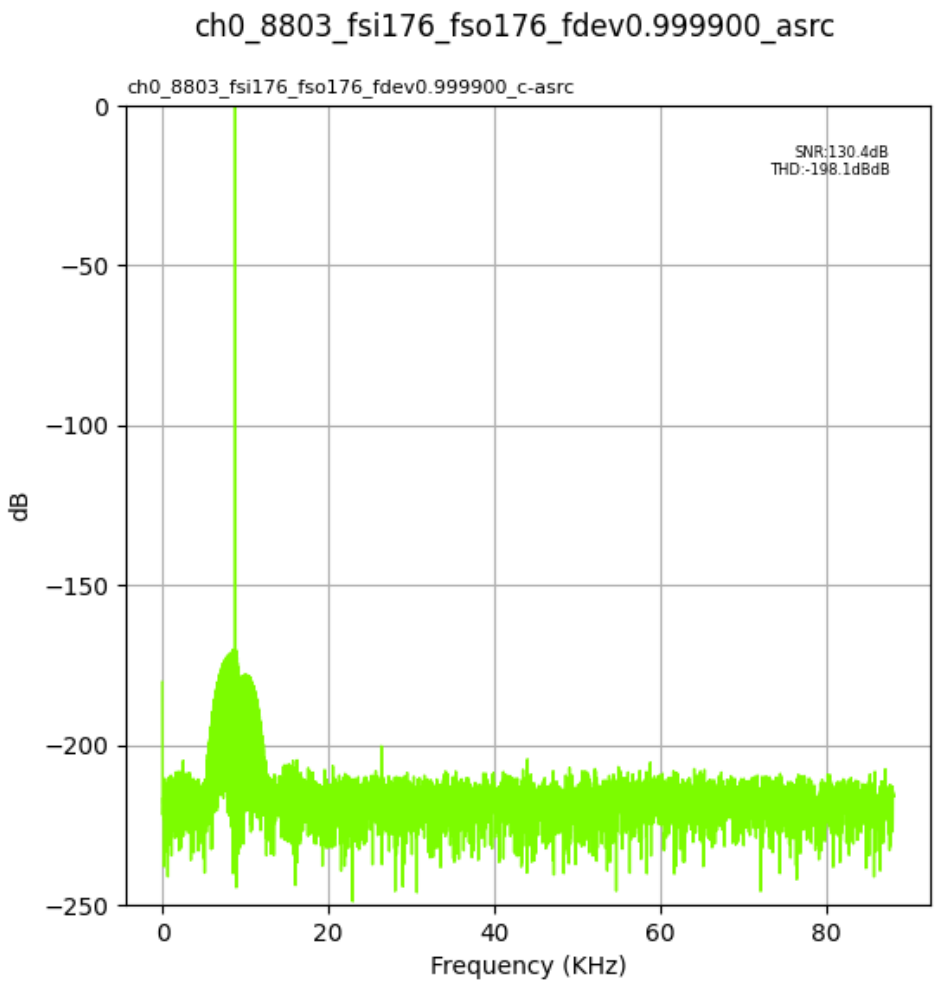

Fig. 1.57: Input Fs: 176,400Hz, Output Fs: 176,400Hz, Fs error: 0.999900, Results for: asrc

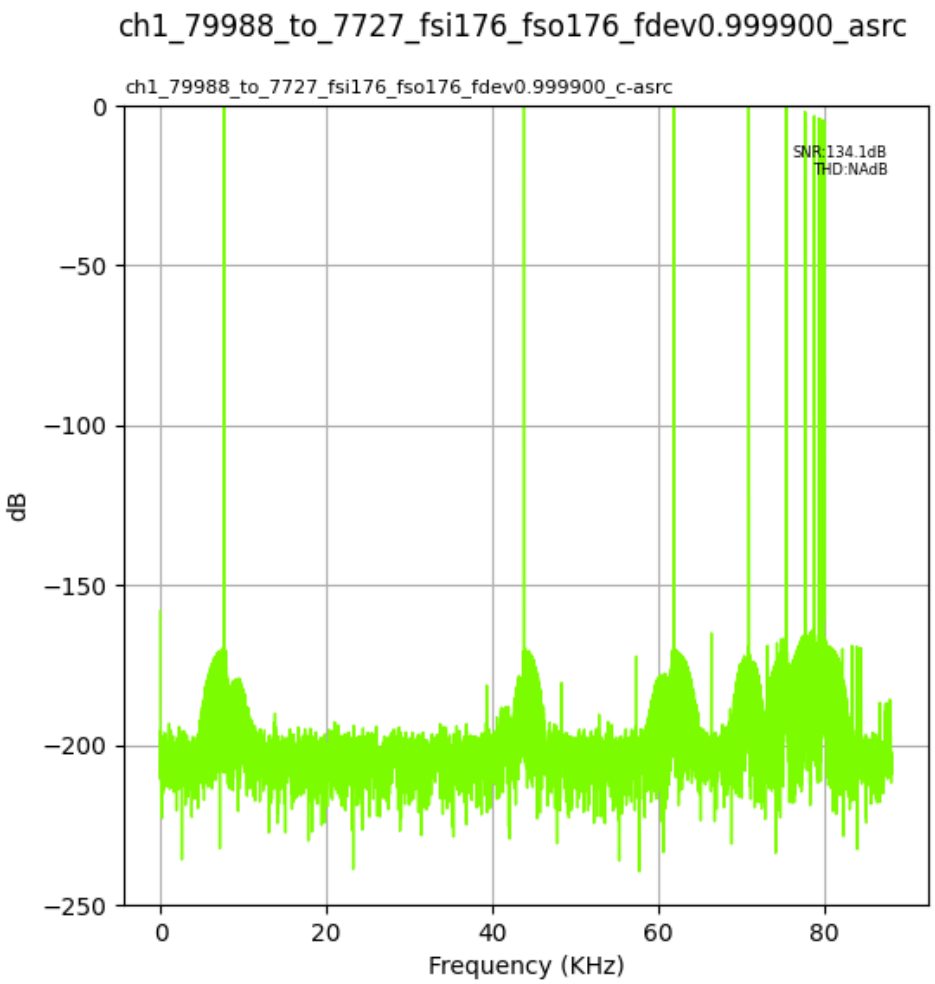

Fig. 1.58: Input Fs: 176,400Hz, Output Fs: 176,400Hz, Fs error: 0.999900, Results for: asrc

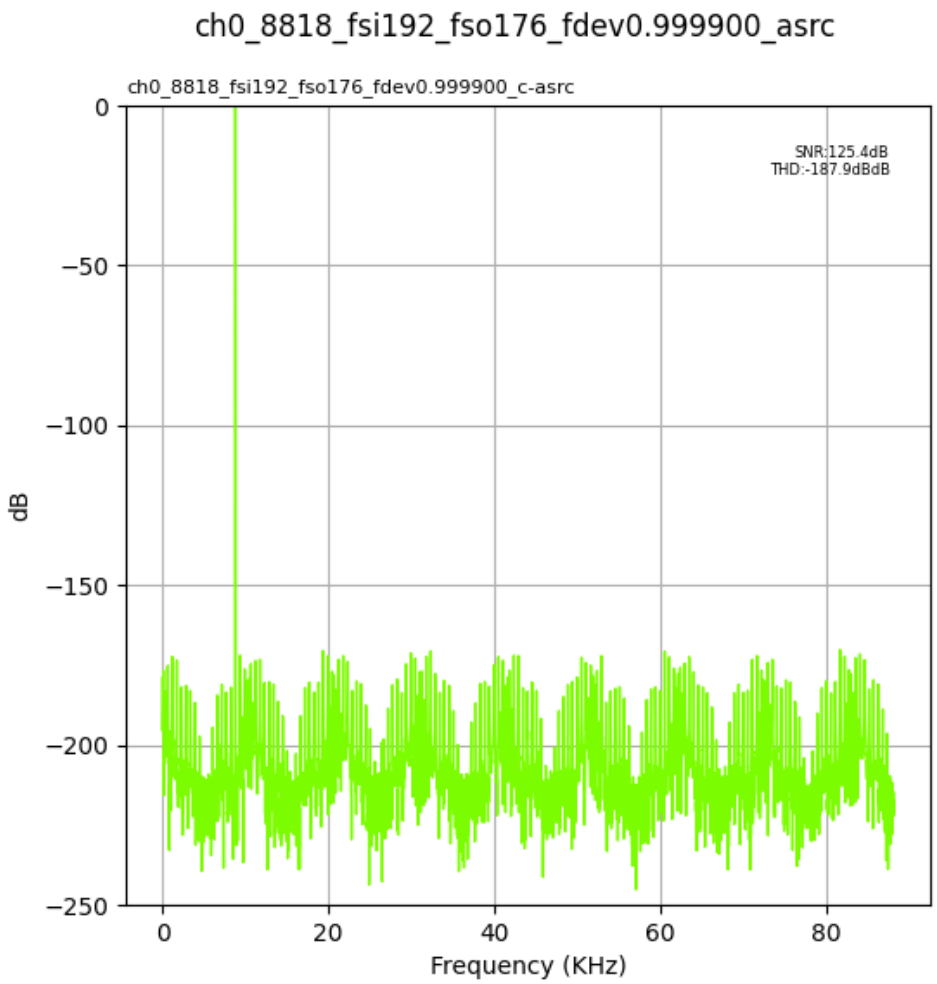

Fig. 1.59: Input Fs: 192,000Hz, Output Fs: 176,400Hz, Fs error: 0.999900, Results for: asrc

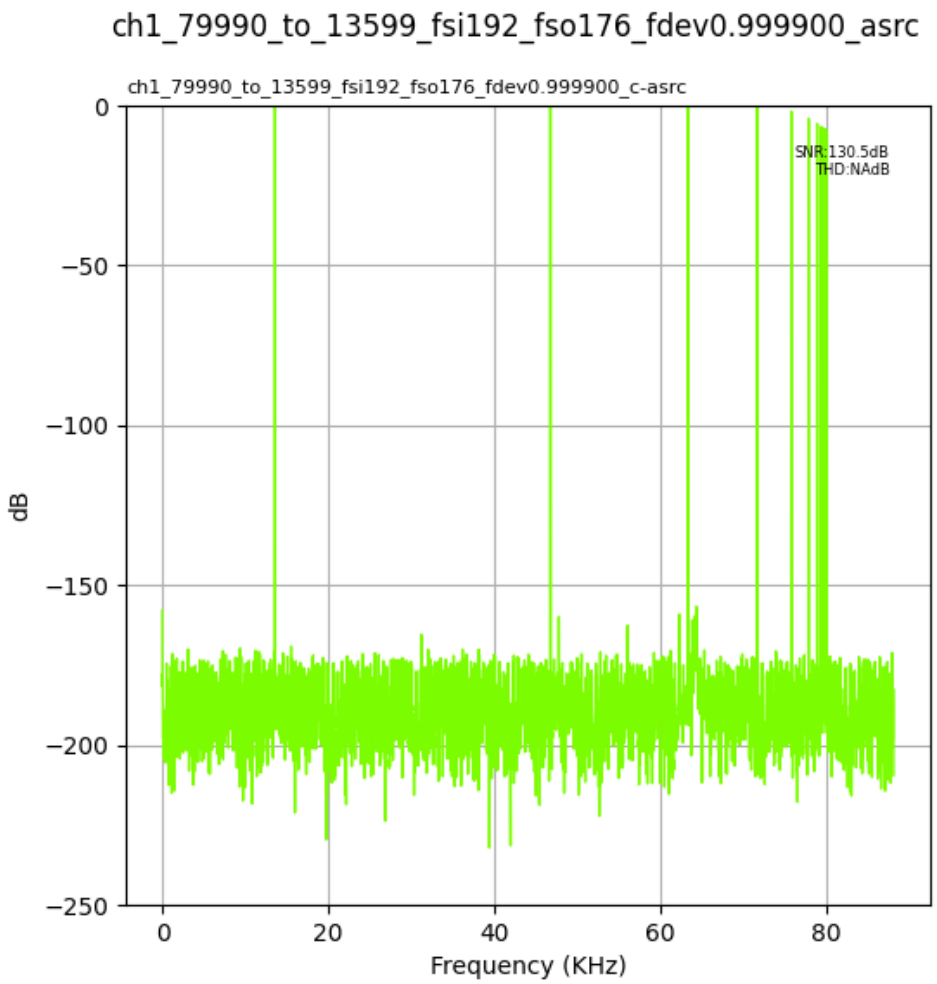

Fig. 1.60: Input Fs: 192,000Hz, Output Fs: 176,400Hz, Fs error: 0.999900, Results for: asrc

1.1.8 Output Fs : 192,000Hz

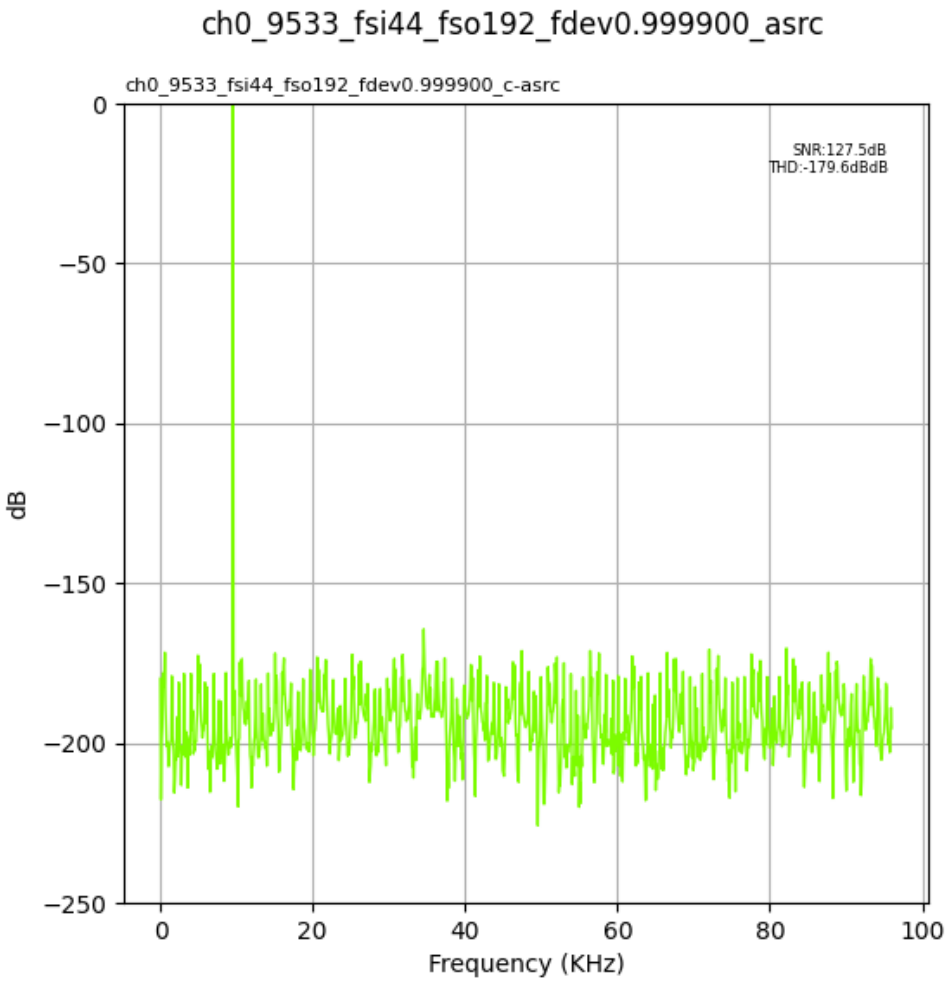

Fig. 1.61: Input Fs: 44,100Hz, Output Fs: 192,000Hz, Fs error: 0.999900, Results for: asrc

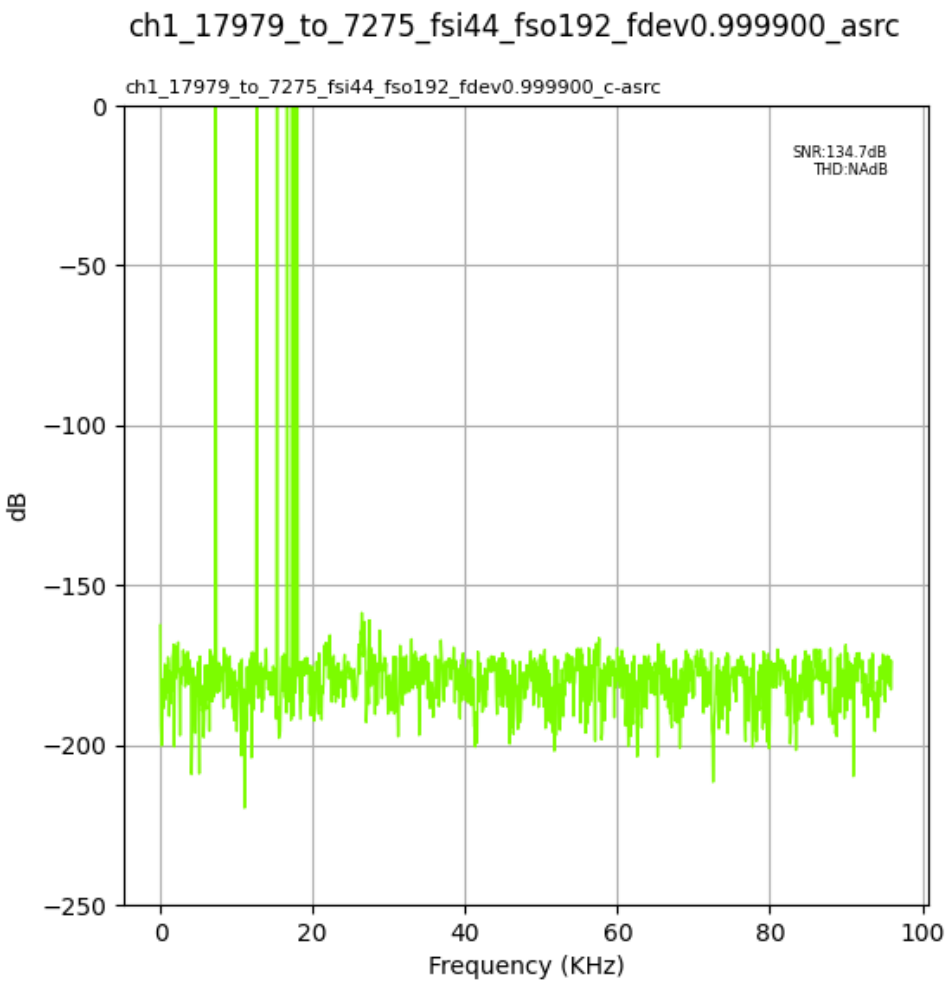

Fig. 1.62: Input Fs: 44,100Hz, Output Fs: 192,000Hz, Fs error: 0.999900, Results for: asrc

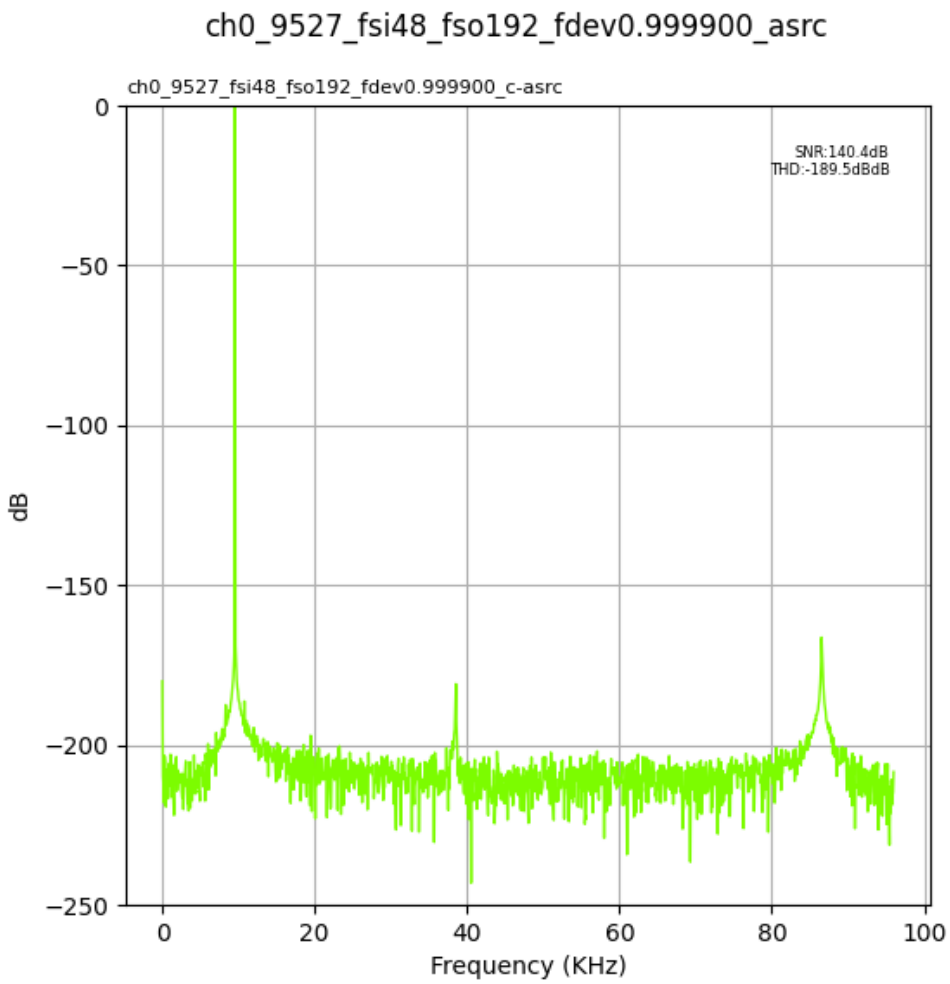

Fig. 1.63: Input Fs: 48,000Hz, Output Fs: 192,000Hz, Fs error: 0.999900, Results for: asrc

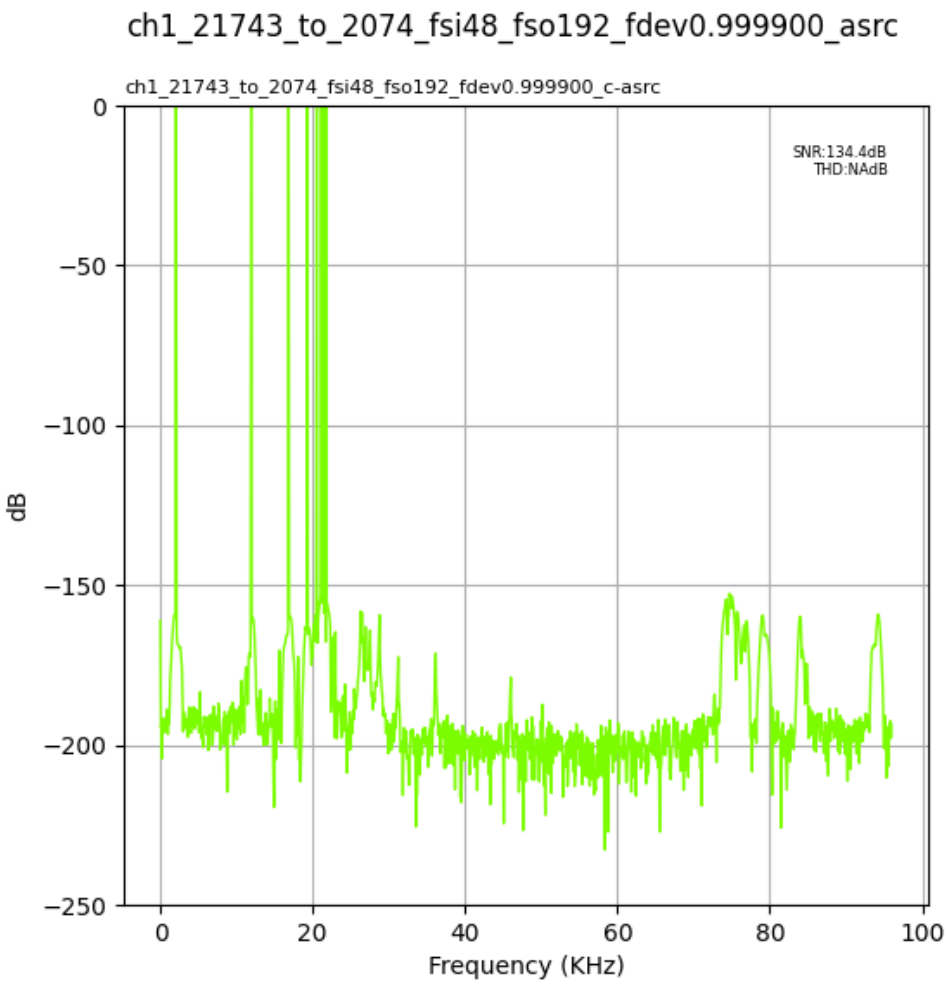

Fig. 1.64: Input Fs: 48,000Hz, Output Fs: 192,000Hz, Fs error: 0.999900, Results for: asrc

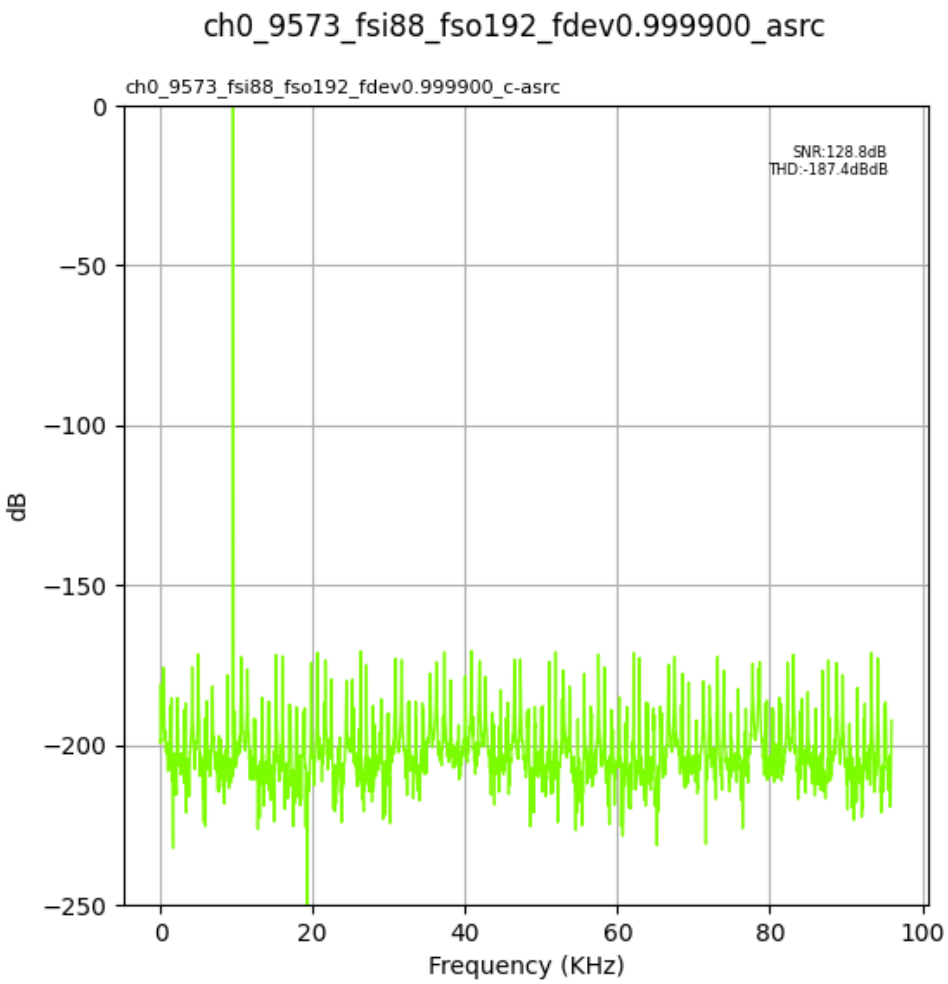

Fig. 1.65: Input Fs: 88,200Hz, Output Fs: 192,000Hz, Fs error: 0.999900, Results for: asrc

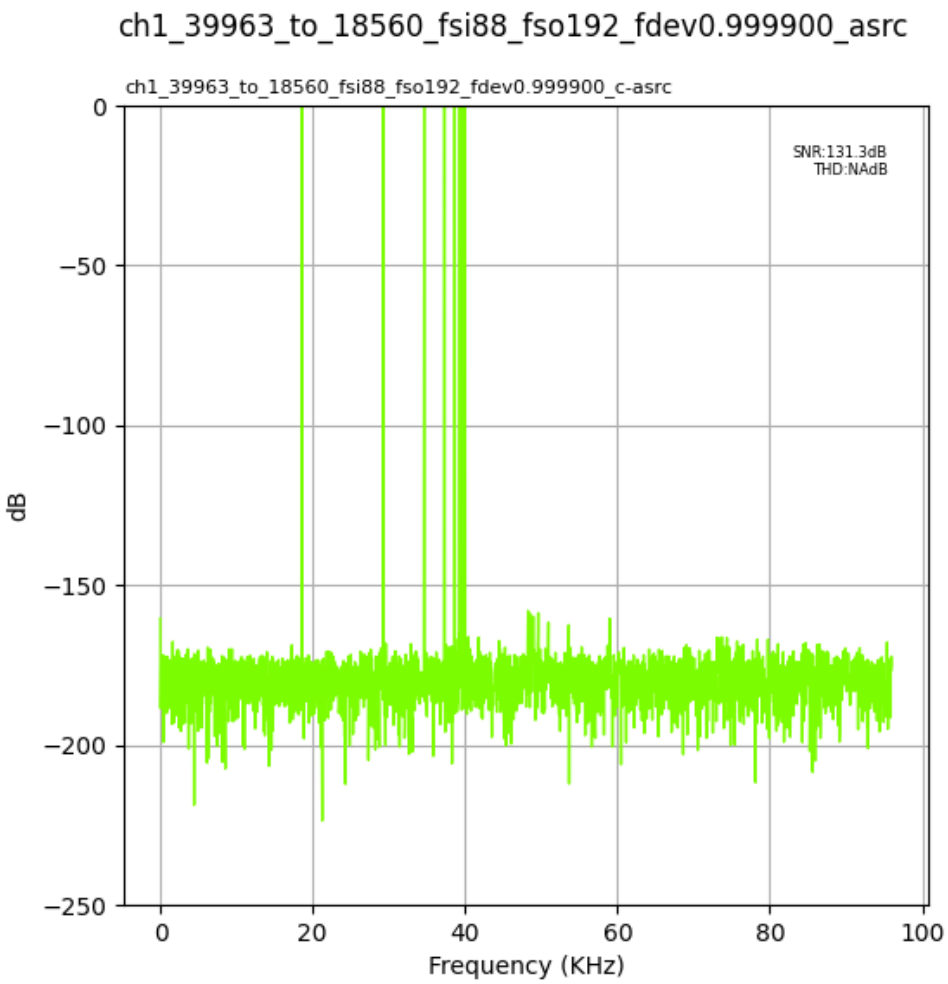

Fig. 1.66: Input Fs: 88,200Hz, Output Fs: 192,000Hz, Fs error: 0.999900, Results for: asrc

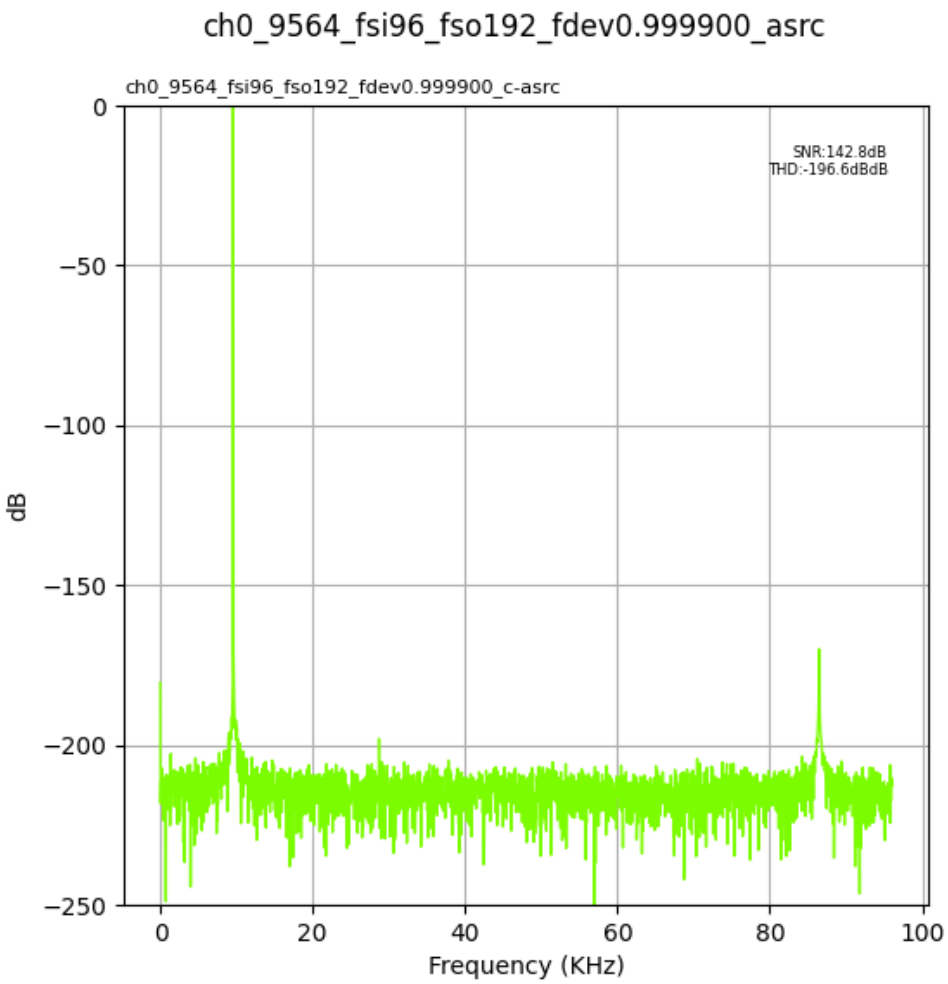

Fig. 1.67: Input Fs: 96,000Hz, Output Fs: 192,000Hz, Fs error: 0.999900, Results for: asrc

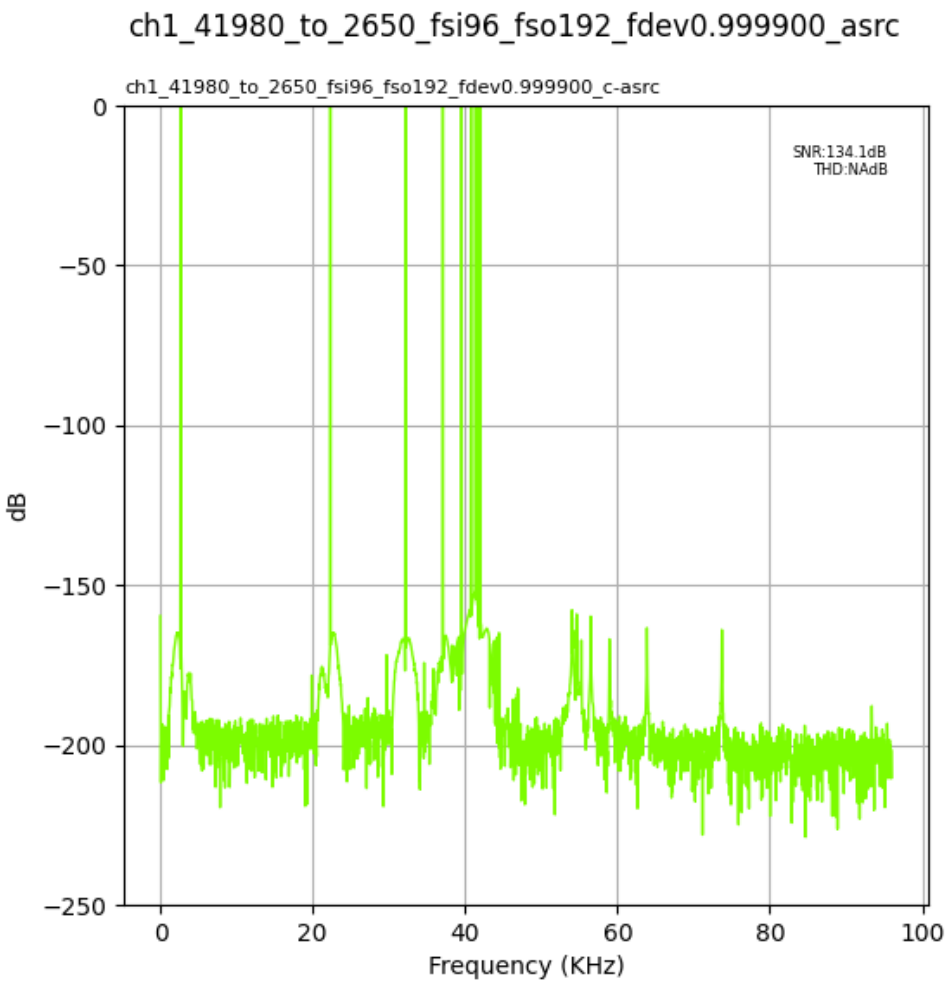

Fig. 1.68: Input Fs: 96,000Hz, Output Fs: 192,000Hz, Fs error: 0.999900, Results for: asrc

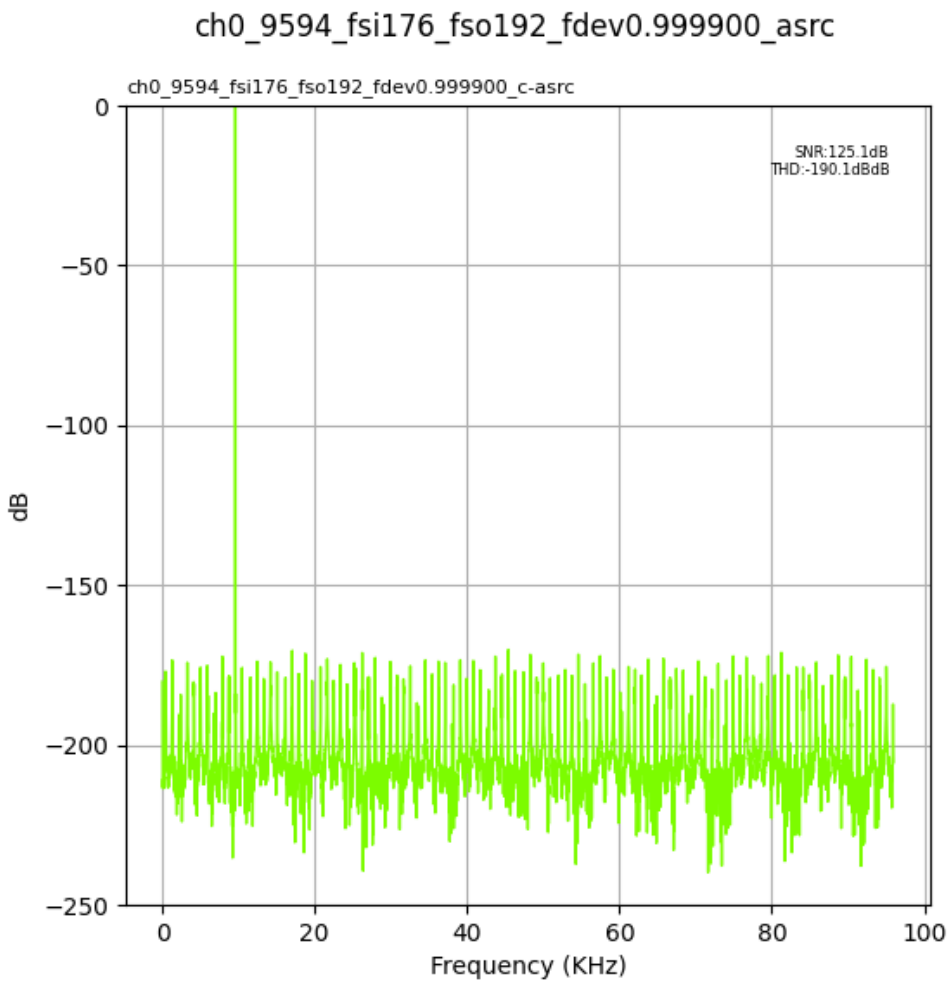

Fig. 1.69: Input Fs: 176,400Hz, Output Fs: 192,000Hz, Fs error: 0.999900, Results for: asrc

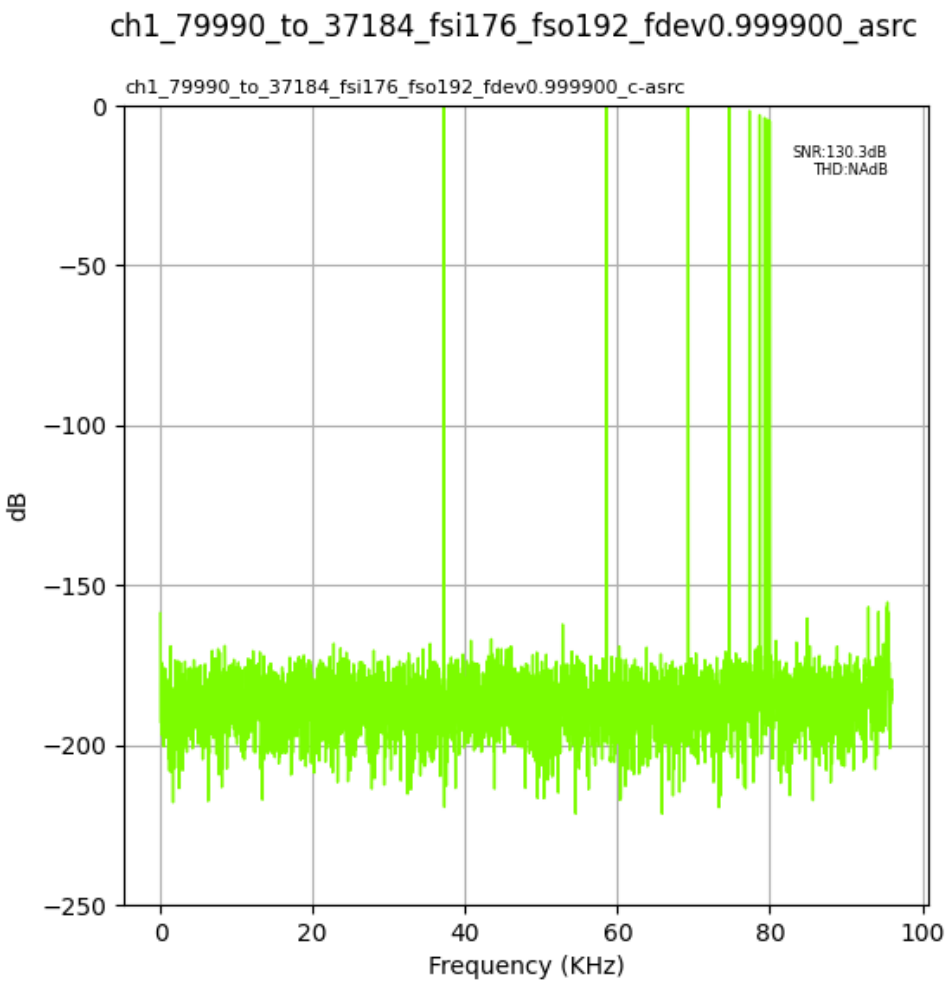

Fig. 1.70: Input Fs: 176,400Hz, Output Fs: 192,000Hz, Fs error: 0.999900, Results for: asrc

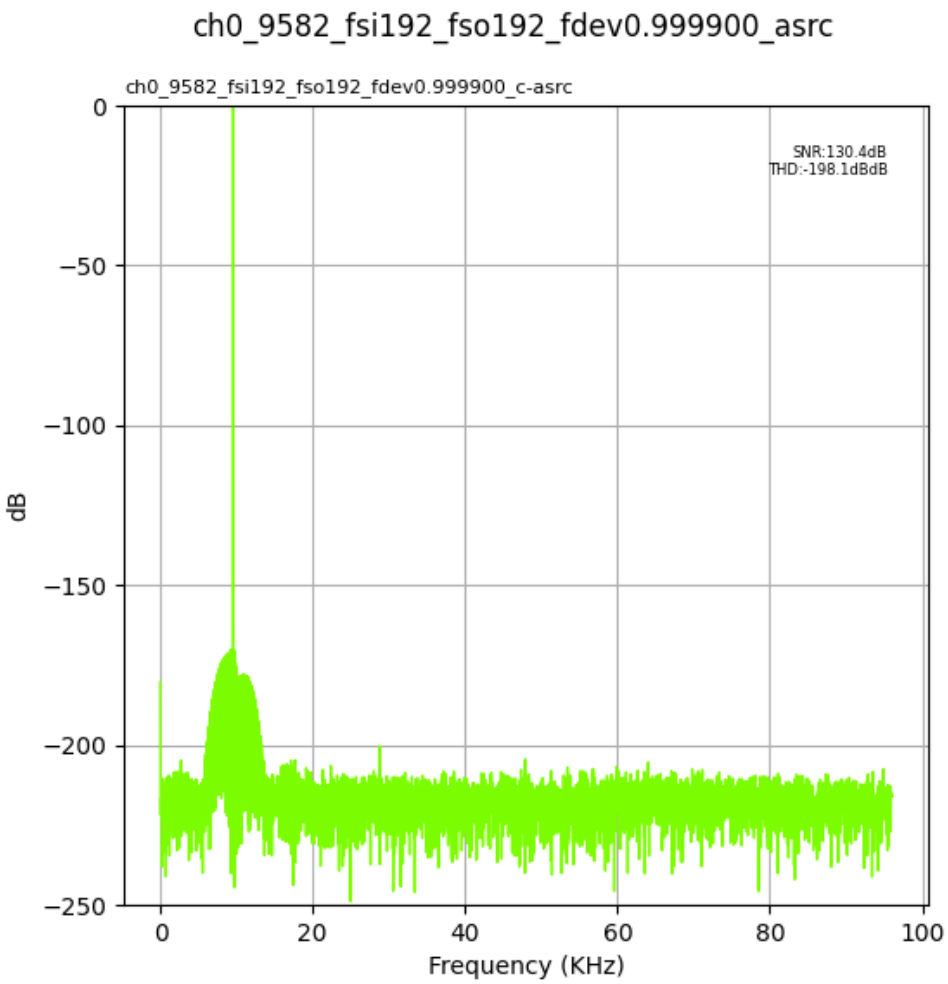

Fig. 1.71: Input Fs: 192,000Hz, Output Fs: 192,000Hz, Fs error: 0.999900, Results for: asrc

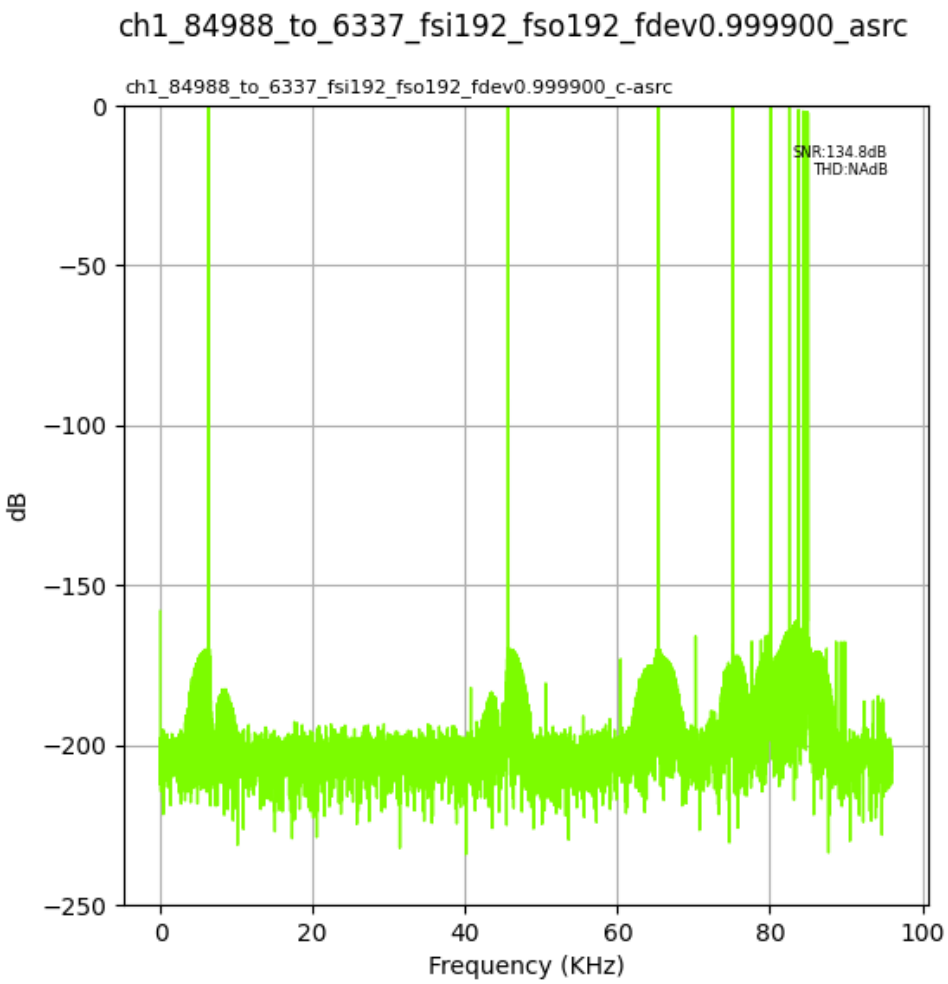

Fig. 1.72: Input Fs: 192,000Hz, Output Fs: 192,000Hz, Fs error: 0.999900, Results for: asrc

1.2 Frequency error: 1.000000Hz

1.2.1 Output Fs : 16,000Hz

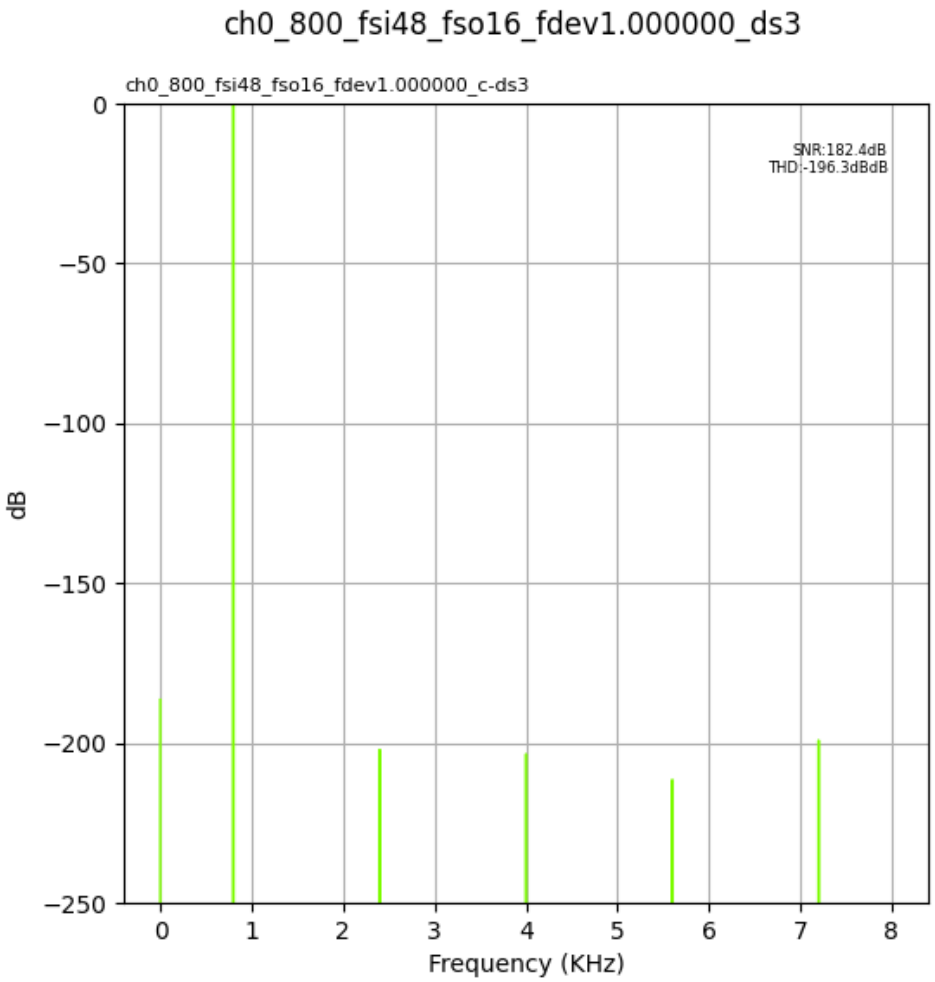

Fig. 1.73: Input Fs: 48,000Hz, Output Fs: 16,000Hz, Fs error: 1.000000, Results for: ds3

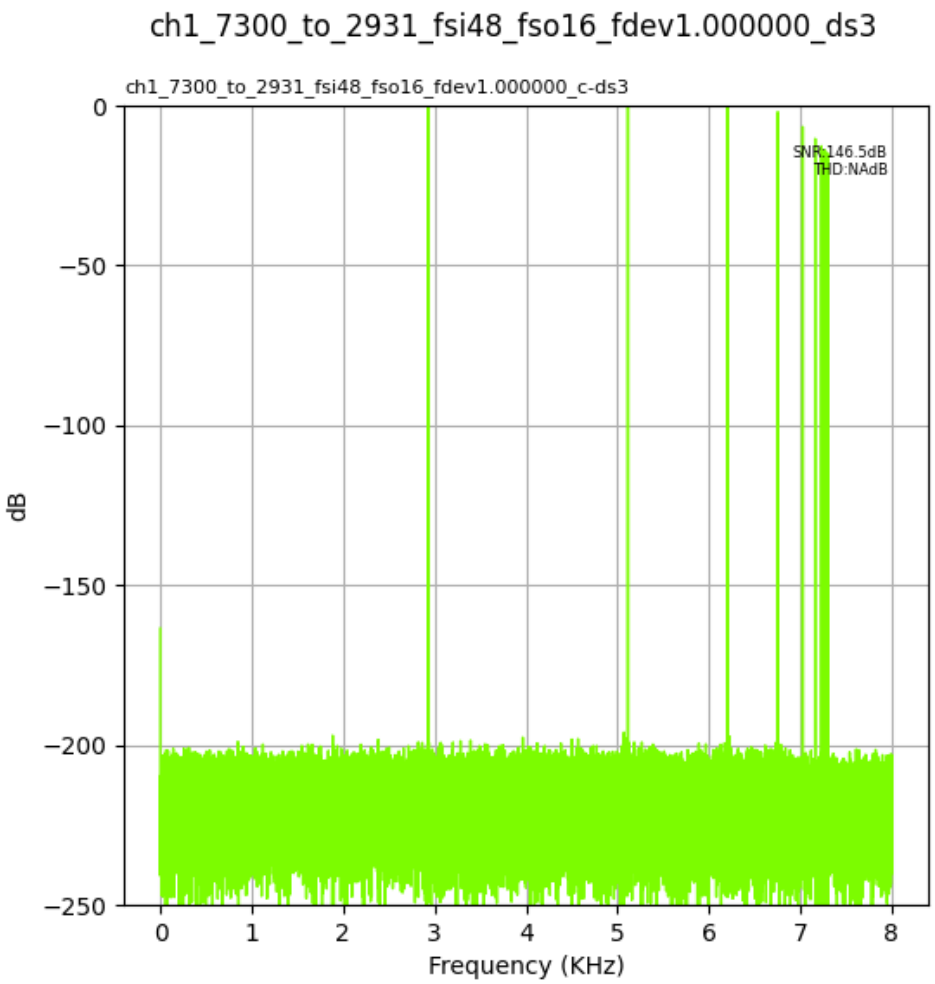

Fig. 1.74: Input Fs: 48,000Hz, Output Fs: 16,000Hz, Fs error: 1.000000, Results for: ds3

1.2.2 Output Fs : 32,000Hz

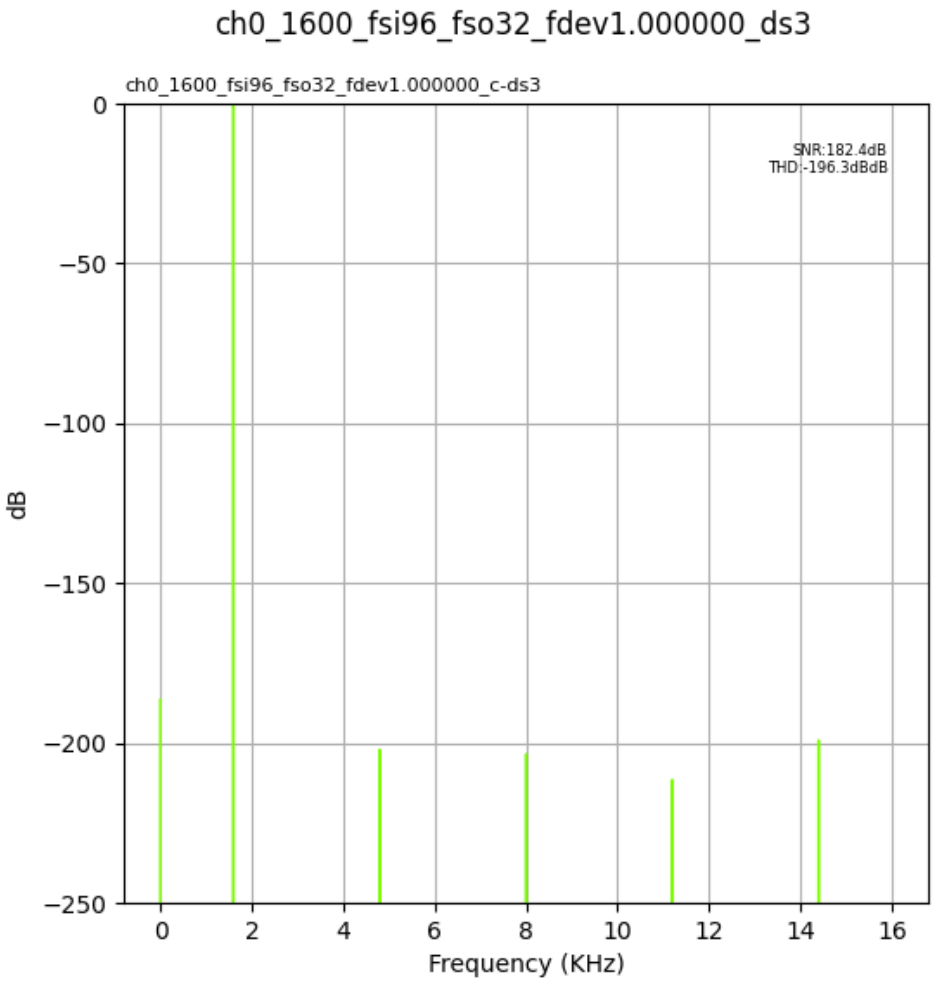

Fig. 1.75: Input Fs: 96,000Hz, Output Fs: 32,000Hz, Fs error: 1.000000, Results for: ds3

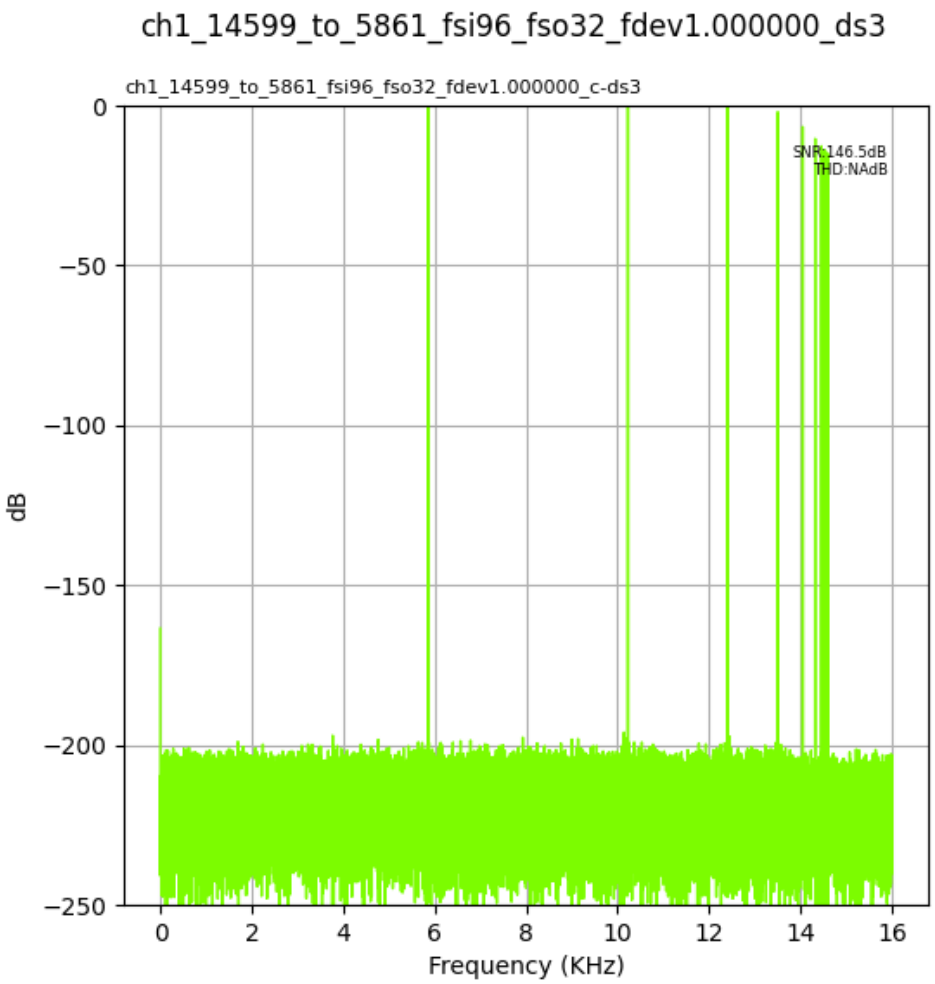

Fig. 1.76: Input Fs: 96,000Hz, Output Fs: 32,000Hz, Fs error: 1.000000, Results for: ds3

1.2.3 Output Fs : 44,100Hz

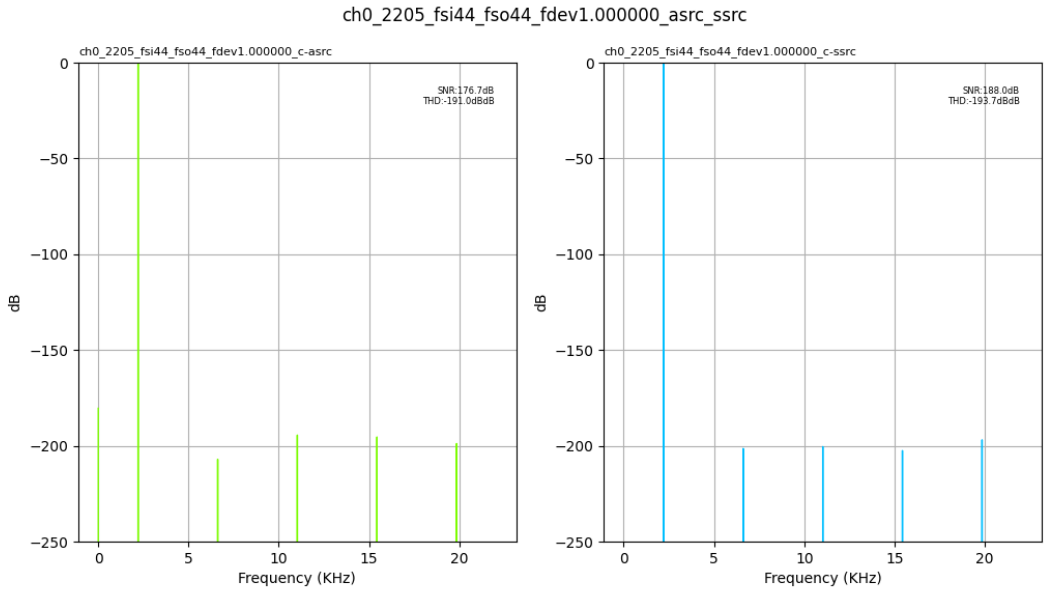

Fig. 1.77: Input Fs: 44,100Hz, Output Fs: 44,100Hz, Fs error: 1.000000, Results for: asrc, ssrc

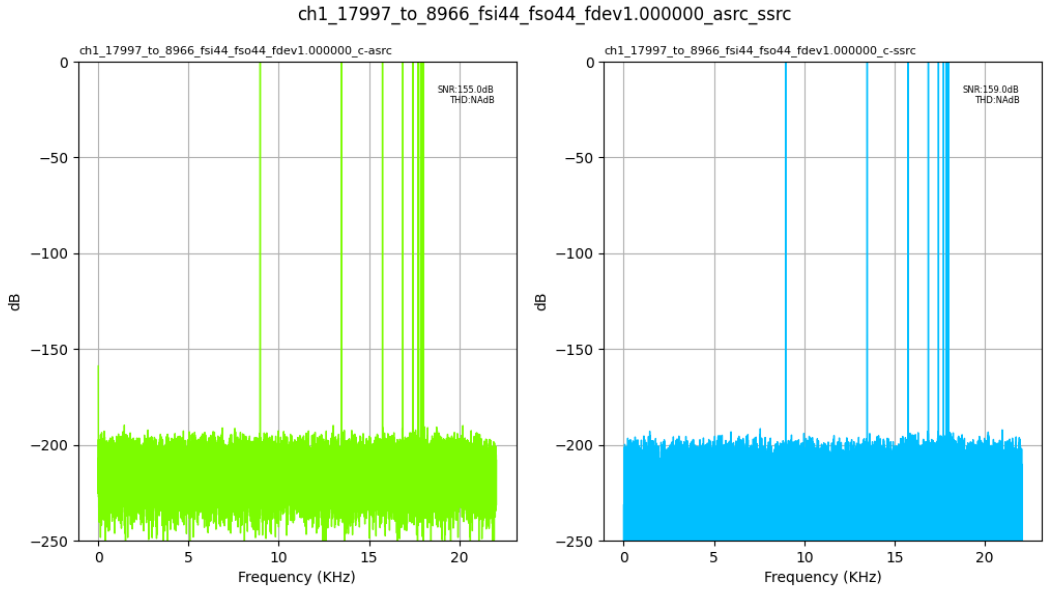

Fig. 1.78: Input Fs: 44,100Hz, Output Fs: 44,100Hz, Fs error: 1.000000, Results for: asrc, ssrc

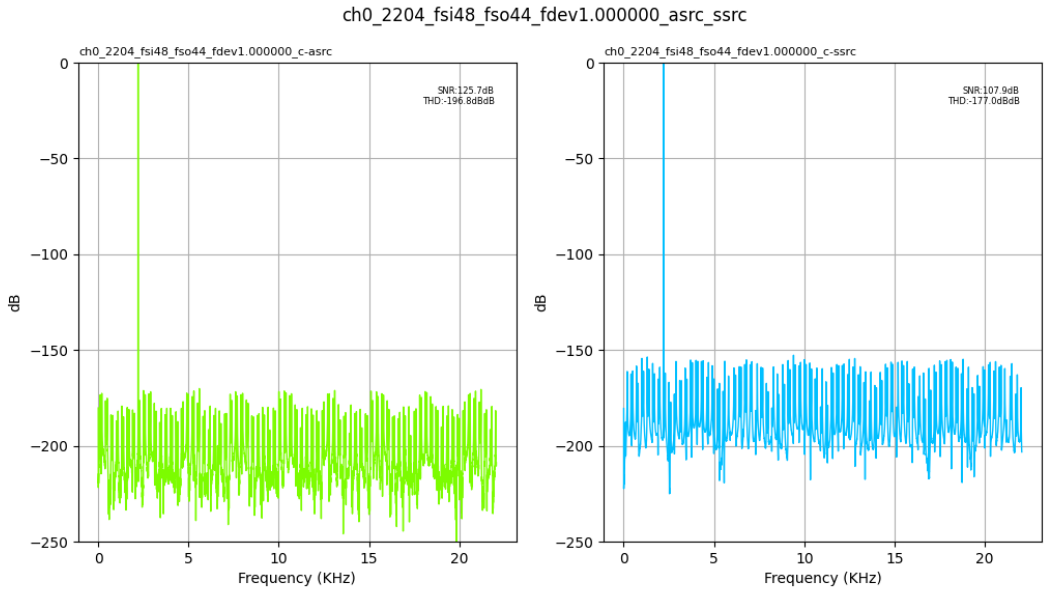

Fig. 1.79: Input Fs: 48,000Hz, Output Fs: 44,100Hz, Fs error: 1.000000, Results for: asrc, ssrc

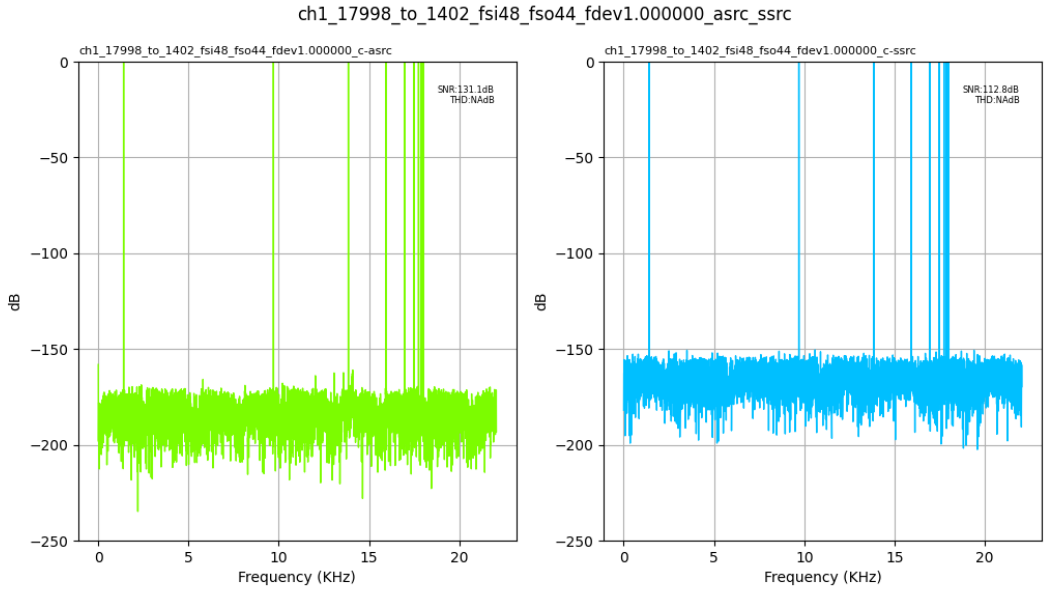

Fig. 1.80: Input Fs: 48,000Hz, Output Fs: 44,100Hz, Fs error: 1.000000, Results for: asrc, ssrc

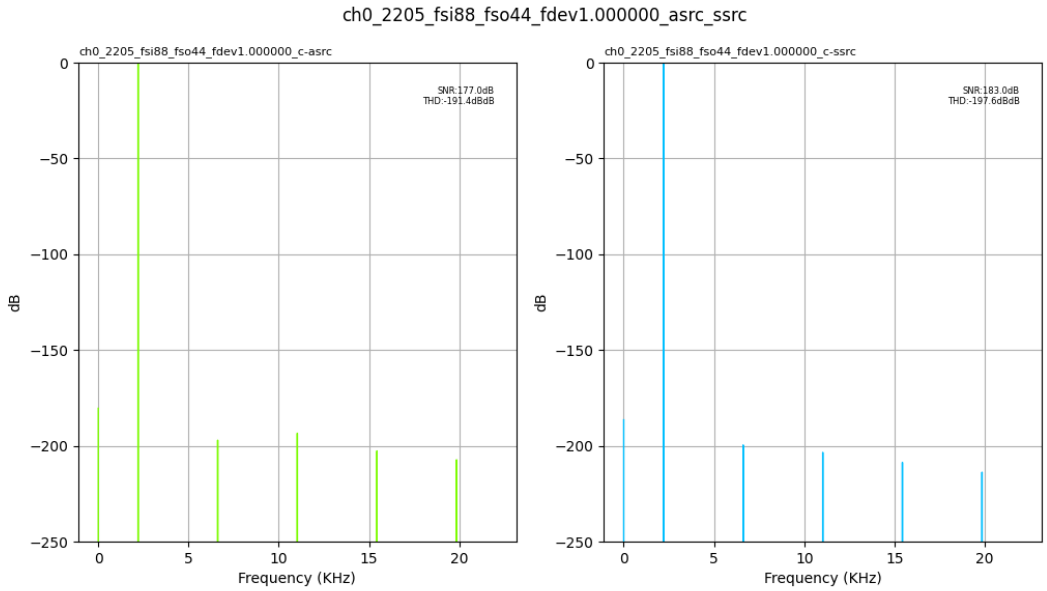

Fig. 1.81: Input Fs: 88,200Hz, Output Fs: 44,100Hz, Fs error: 1.000000, Results for: asrc, ssrc

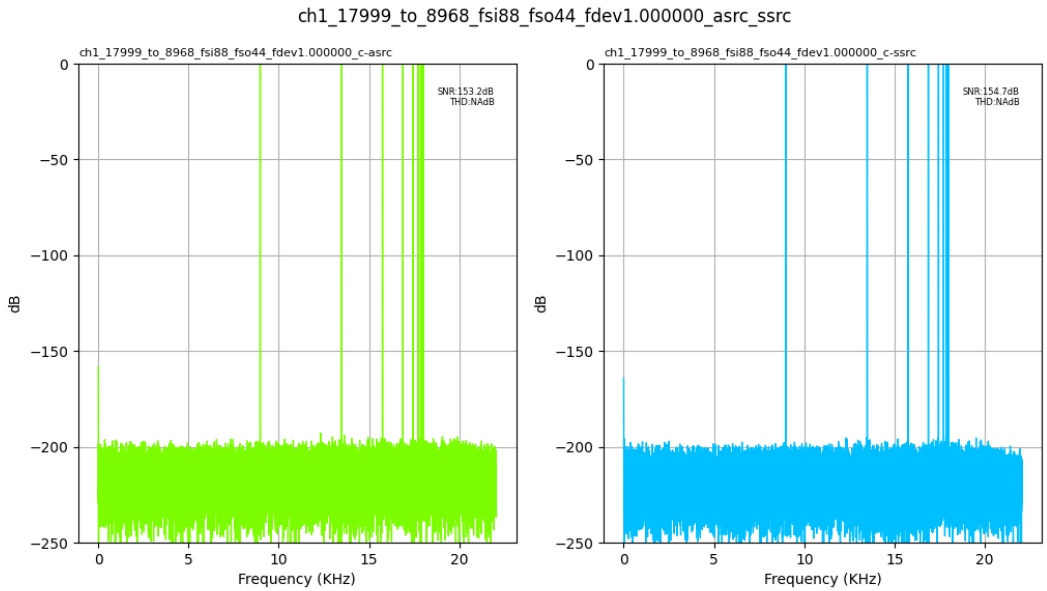

Fig. 1.82: Input Fs: 88,200Hz, Output Fs: 44,100Hz, Fs error: 1.000000, Results for: asrc, ssrc

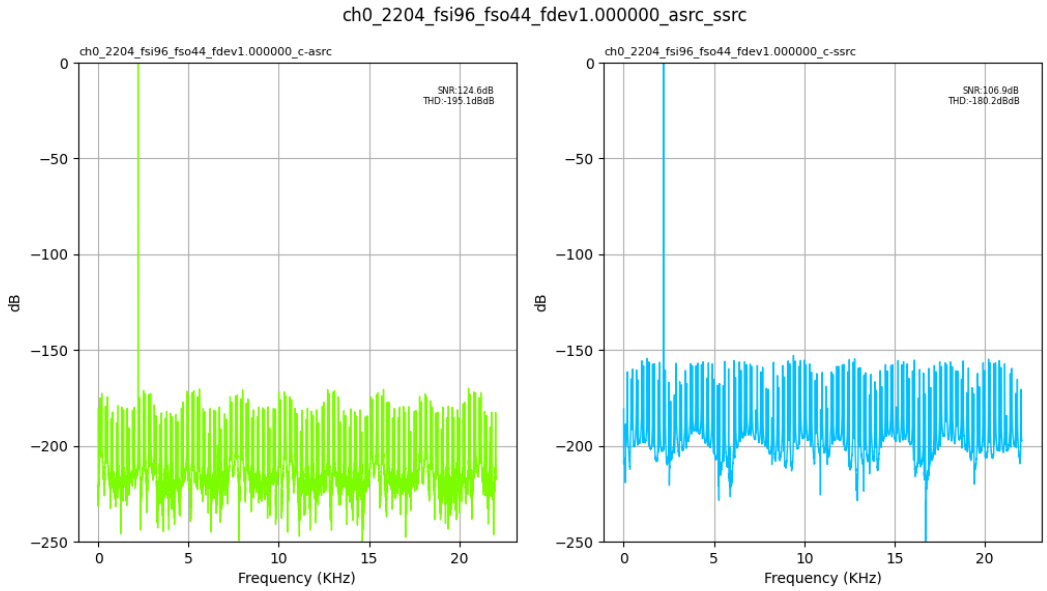

Fig. 1.83: Input Fs: 96,000Hz, Output Fs: 44,100Hz, Fs error: 1.000000, Results for: asrc, ssrc

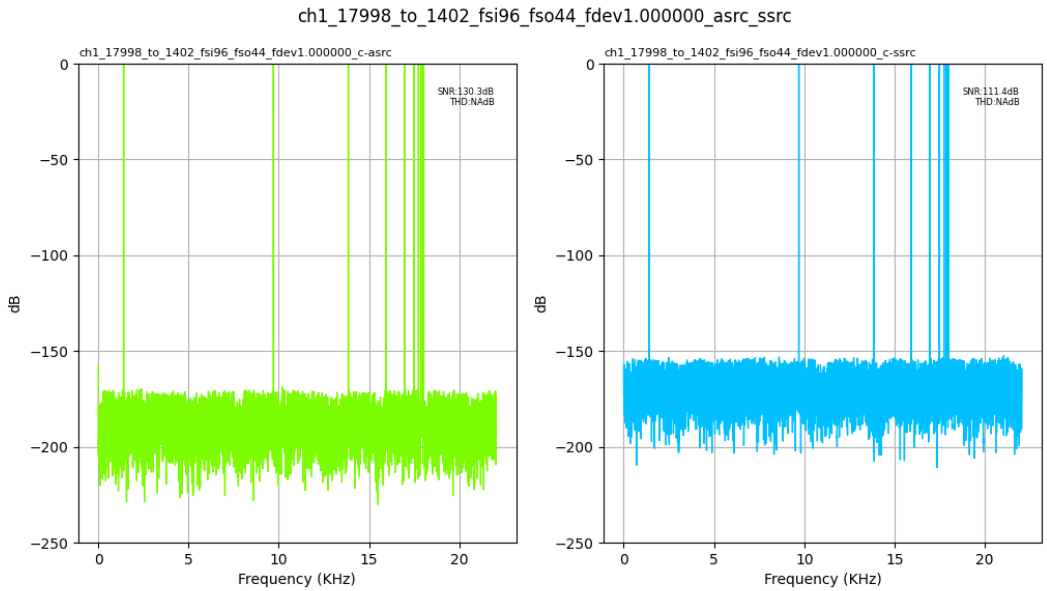

Fig. 1.84: Input Fs: 96,000Hz, Output Fs: 44,100Hz, Fs error: 1.000000, Results for: asrc, ssrc

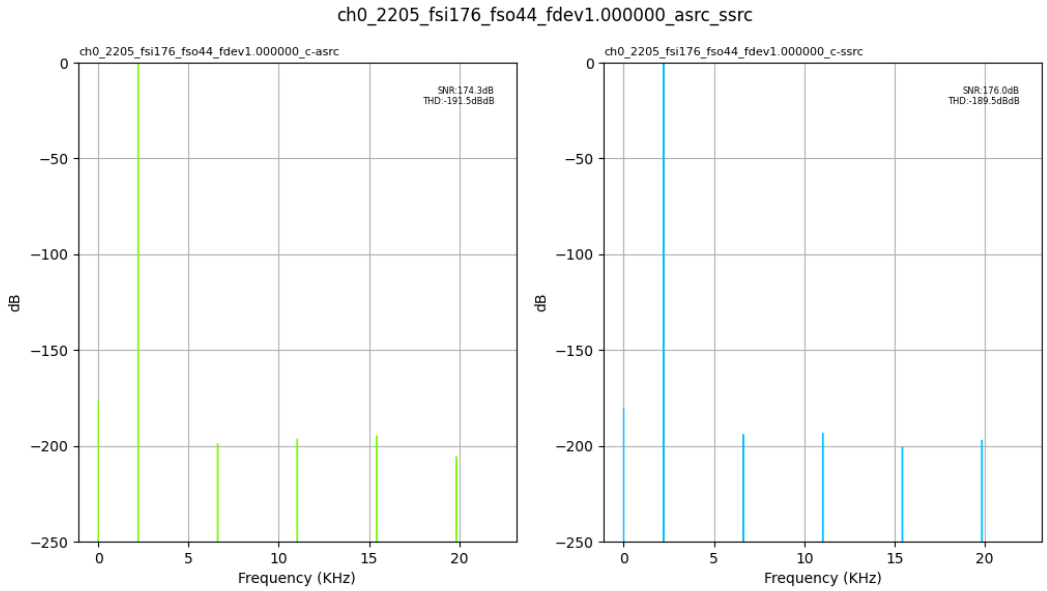

Fig. 1.85: Input Fs: 176,400Hz, Output Fs: 44,100Hz, Fs error: 1.000000, Results for: asrc, ssrc

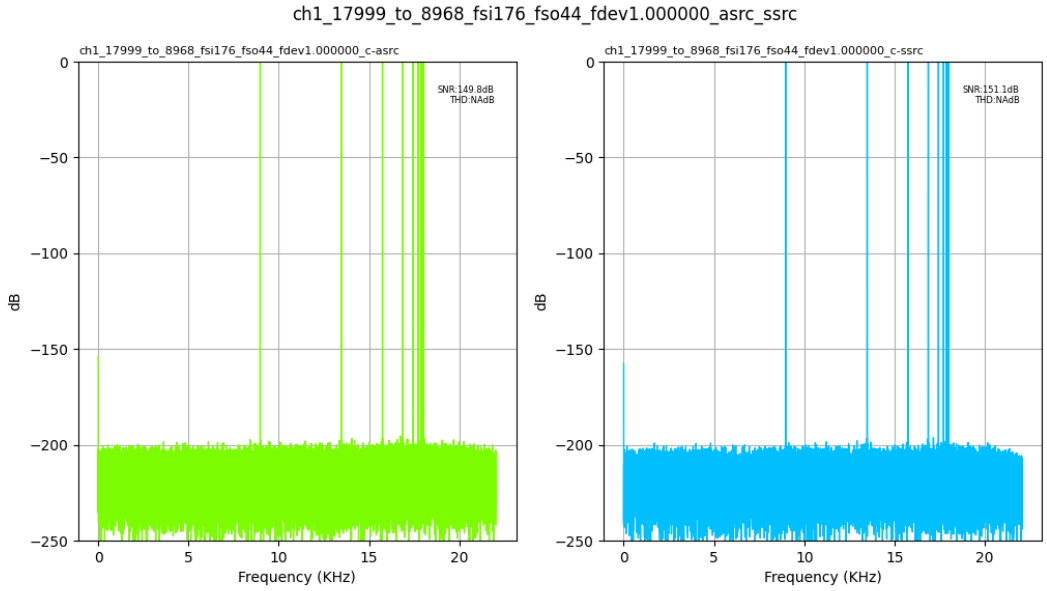

Fig. 1.86: Input Fs: 176,400Hz, Output Fs: 44,100Hz, Fs error: 1.000000, Results for: asrc, ssrc

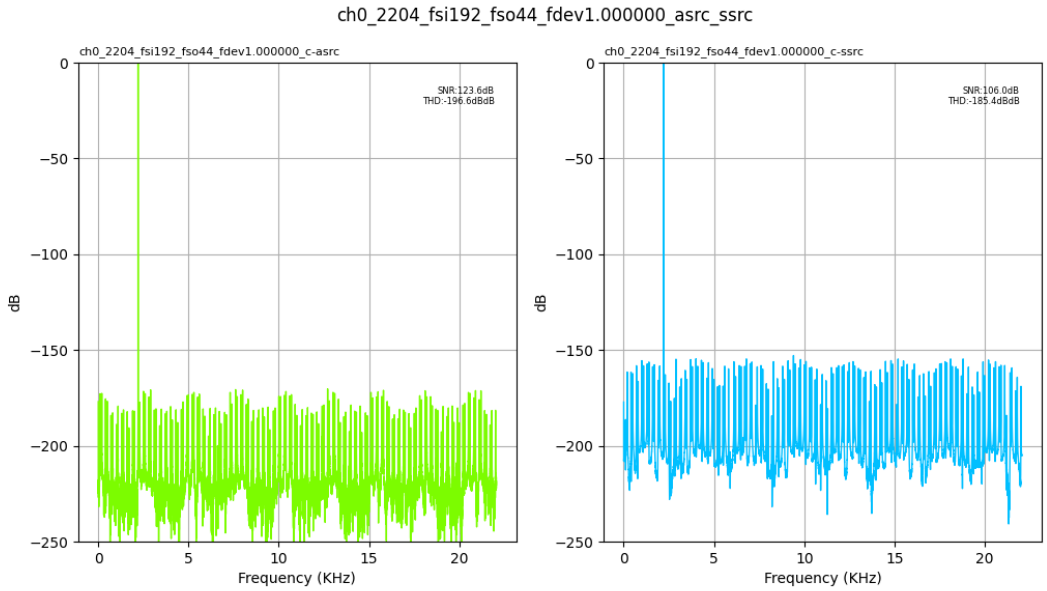

Fig. 1.87: Input Fs: 192,000Hz, Output Fs: 44,100Hz, Fs error: 1.000000, Results for: asrc, ssrc

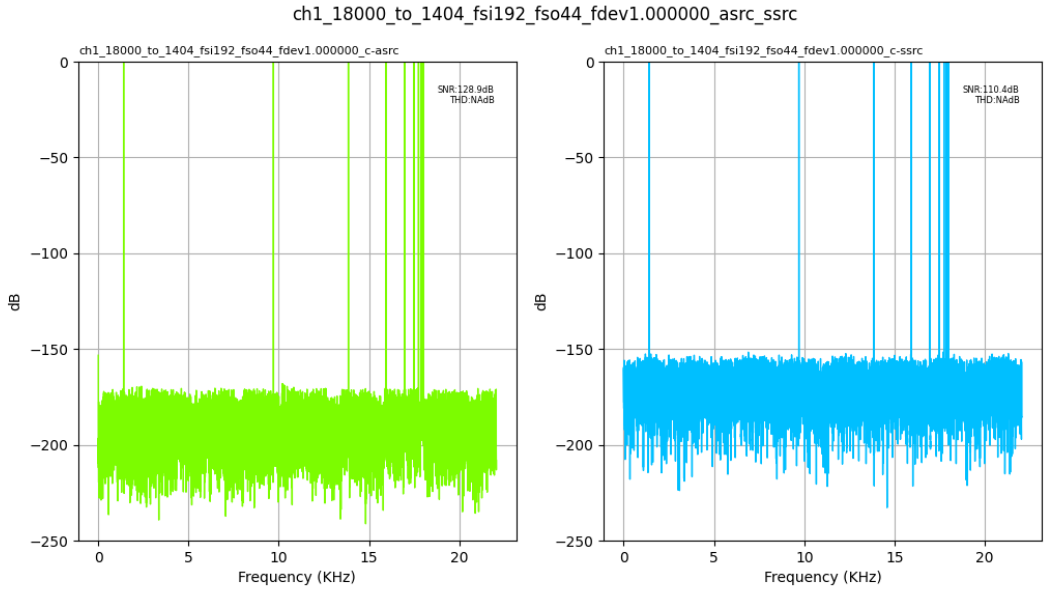

Fig. 1.88: Input Fs: 192,000Hz, Output Fs: 44,100Hz, Fs error: 1.000000, Results for: asrc, ssrc

1.2.4 Output Fs : 48,000Hz

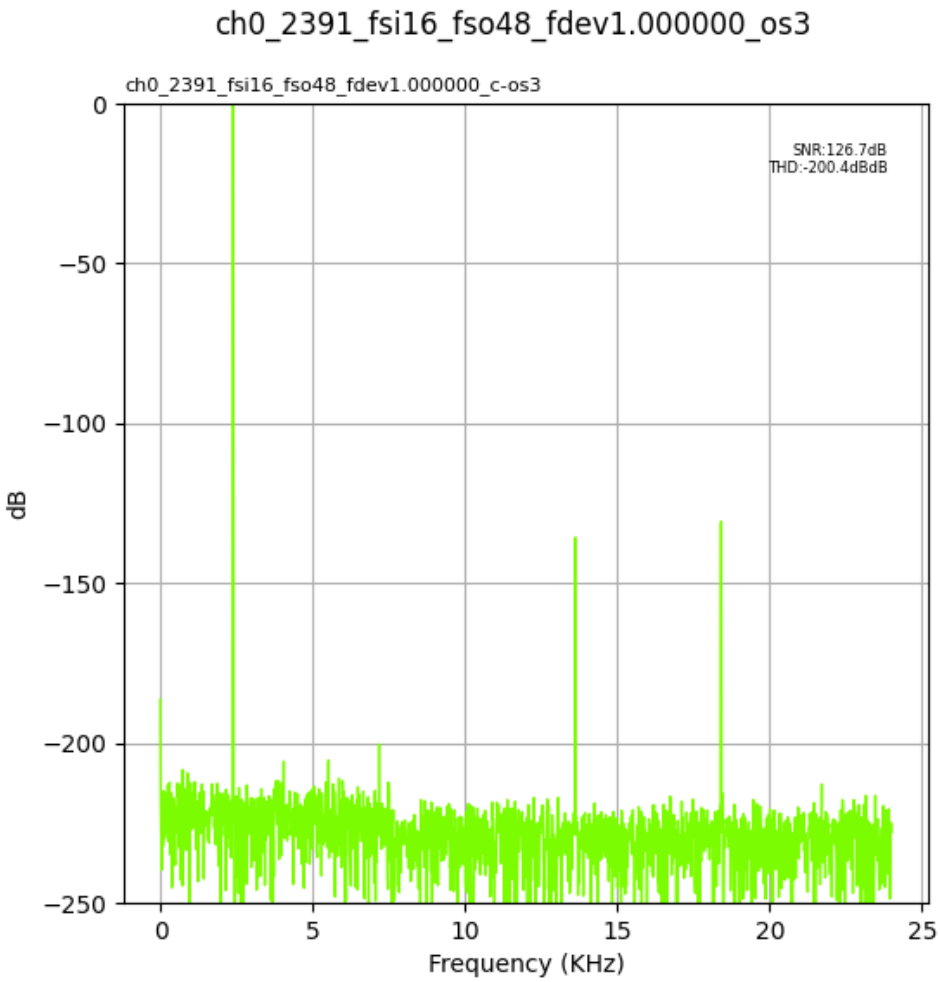

Fig. 1.89: Input Fs: 16,000Hz, Output Fs: 48,000Hz, Fs error: 1.000000, Results for: os3

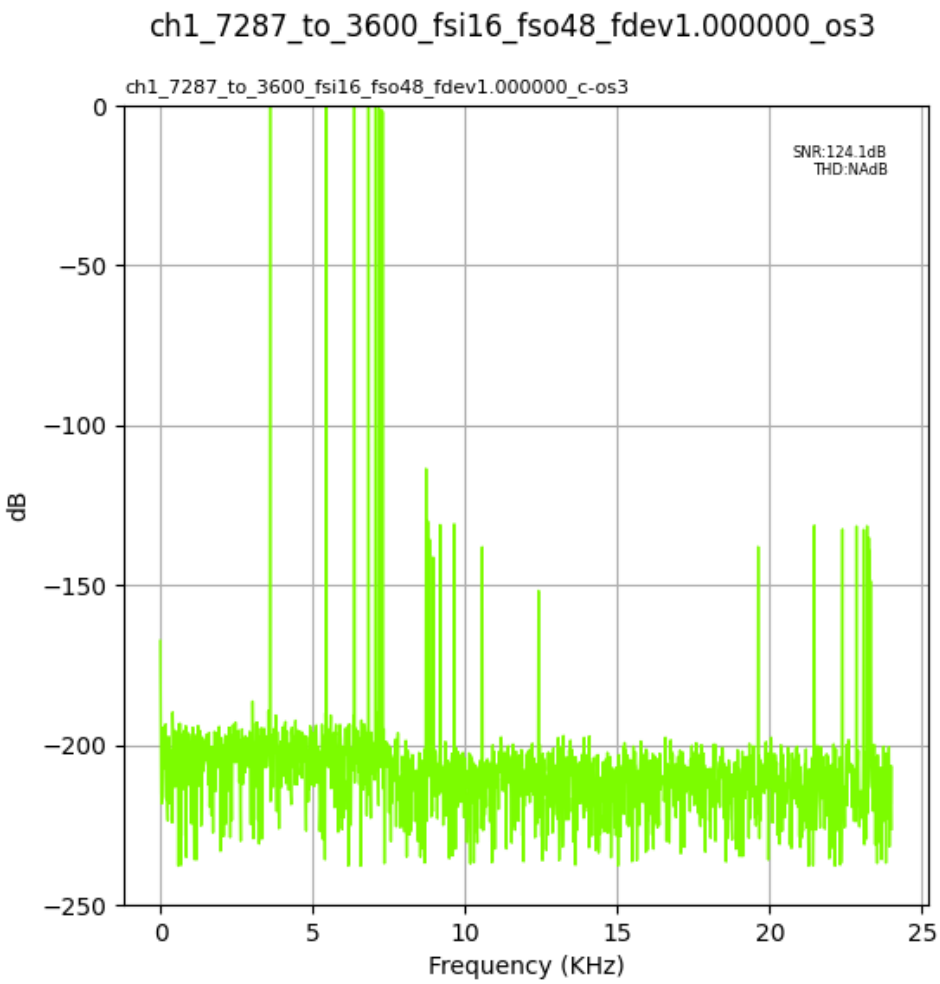

Fig. 1.90: Input Fs: 16,000Hz, Output Fs: 48,000Hz, Fs error: 1.000000, Results for: os3

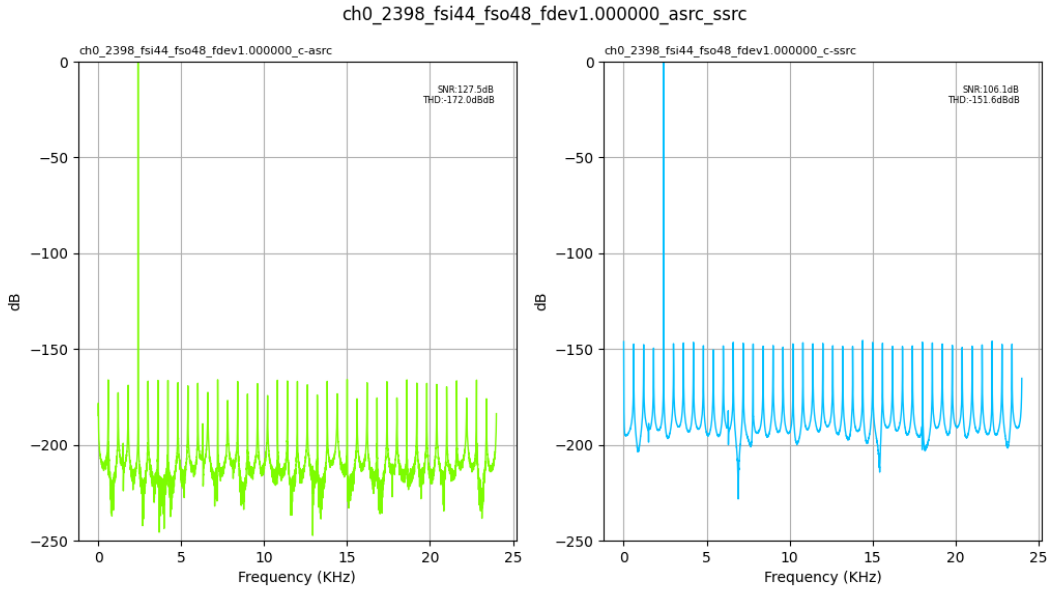

Fig. 1.91: Input Fs: 44,100Hz, Output Fs: 48,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

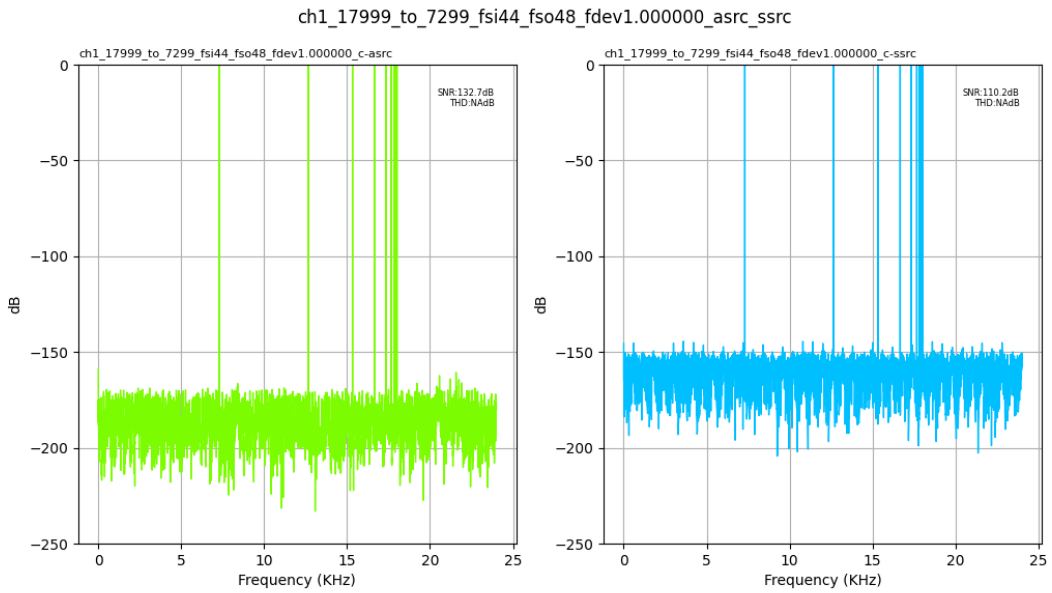

Fig. 1.92: Input Fs: 44,100Hz, Output Fs: 48,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

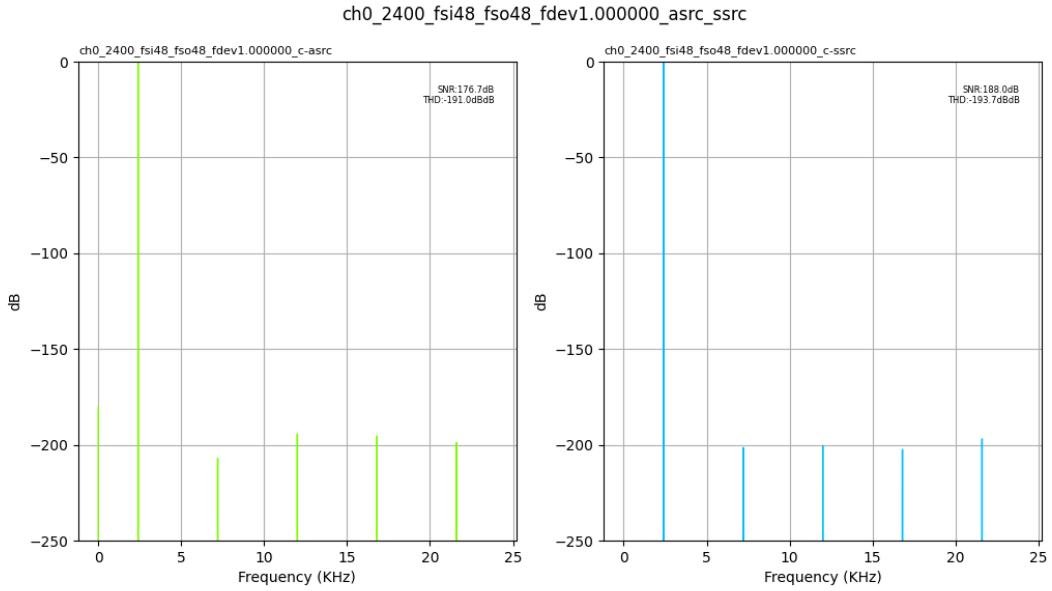

Fig. 1.93: Input Fs: 48,000Hz, Output Fs: 48,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

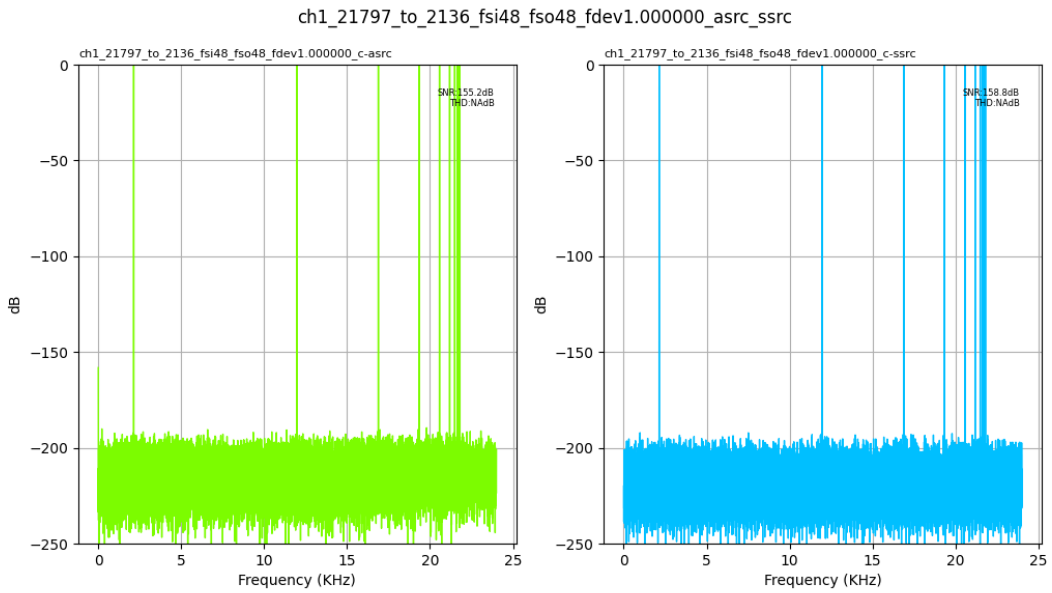

Fig. 1.94: Input Fs: 48,000Hz, Output Fs: 48,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

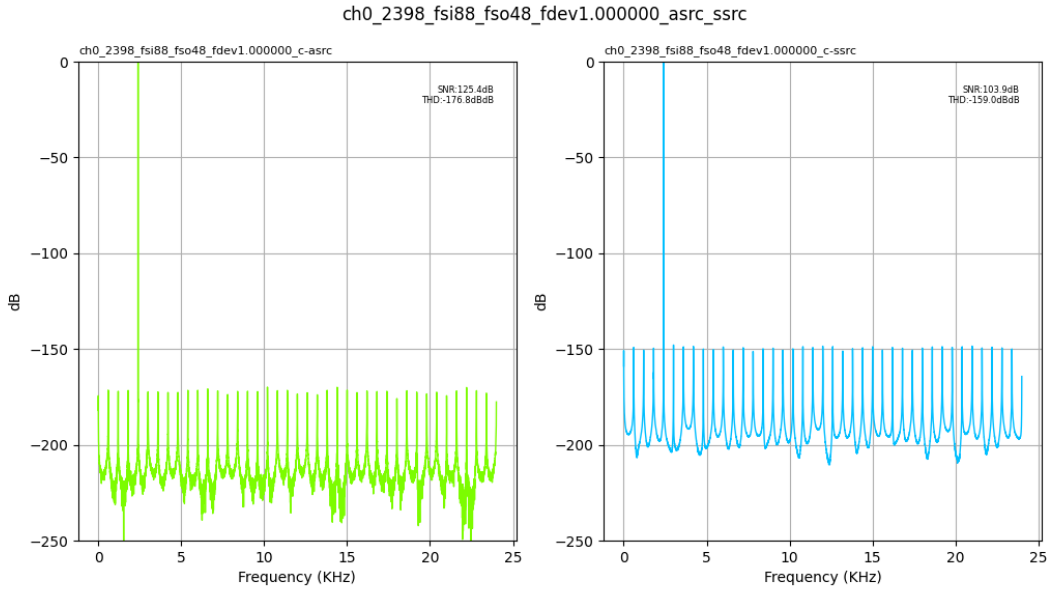

Fig. 1.95: Input Fs: 88,200Hz, Output Fs: 48,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

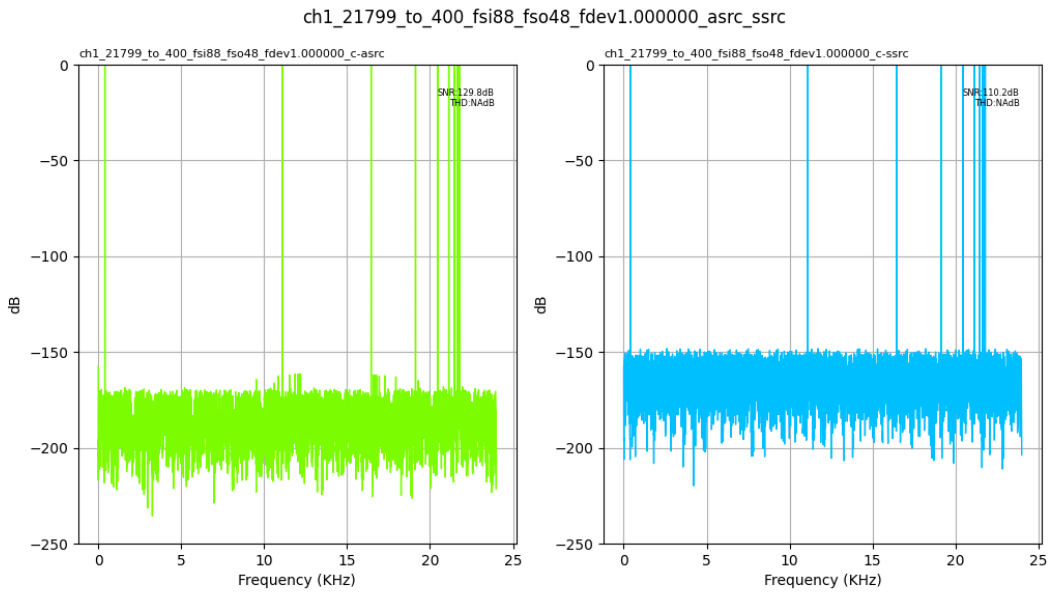

Fig. 1.96: Input Fs: 88,200Hz, Output Fs: 48,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

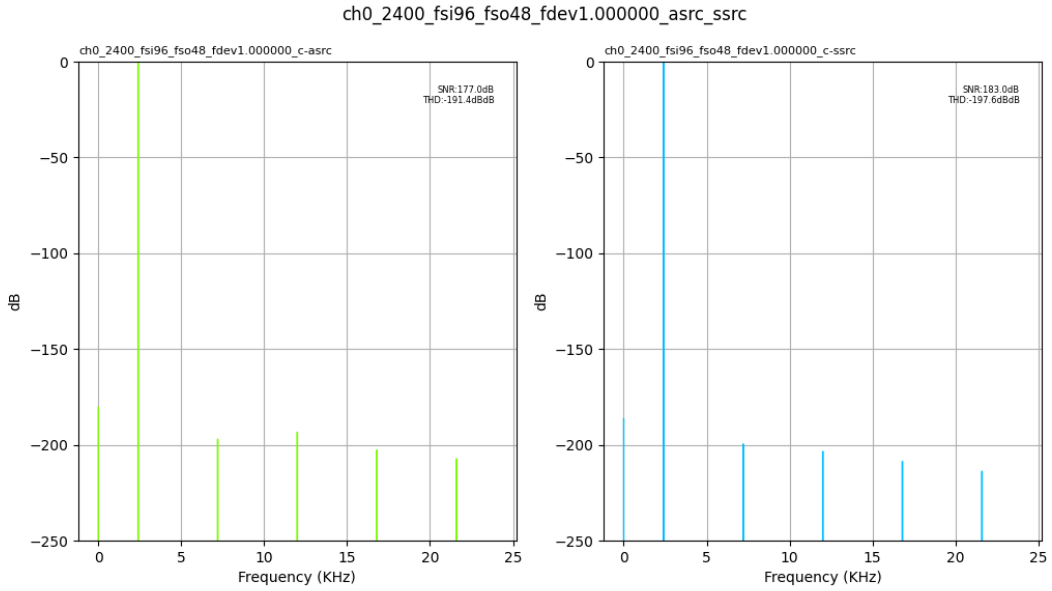

Fig. 1.97: Input Fs: 96,000Hz, Output Fs: 48,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

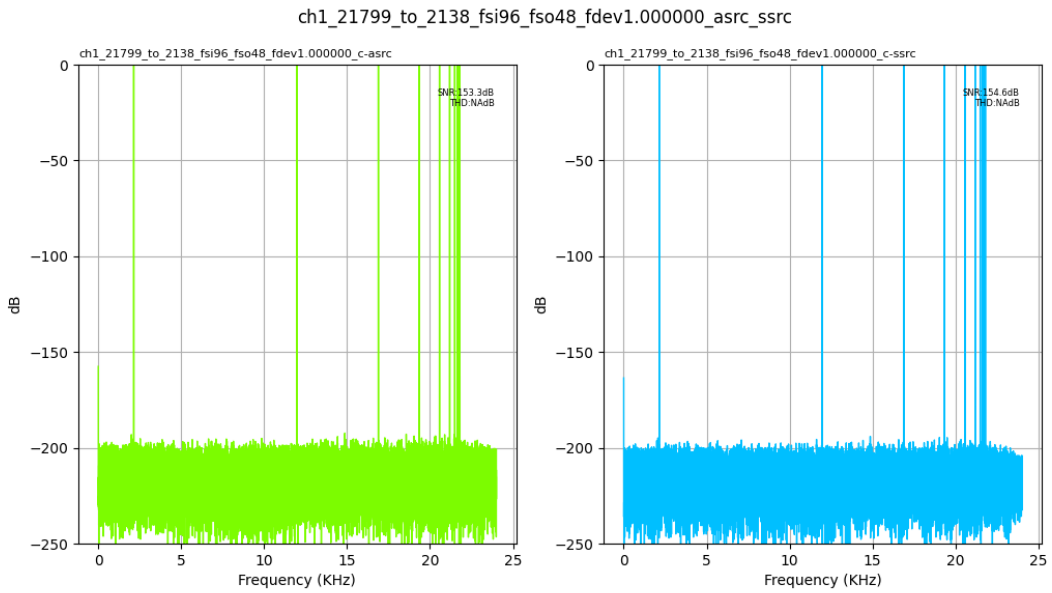

Fig. 1.98: Input Fs: 96,000Hz, Output Fs: 48,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

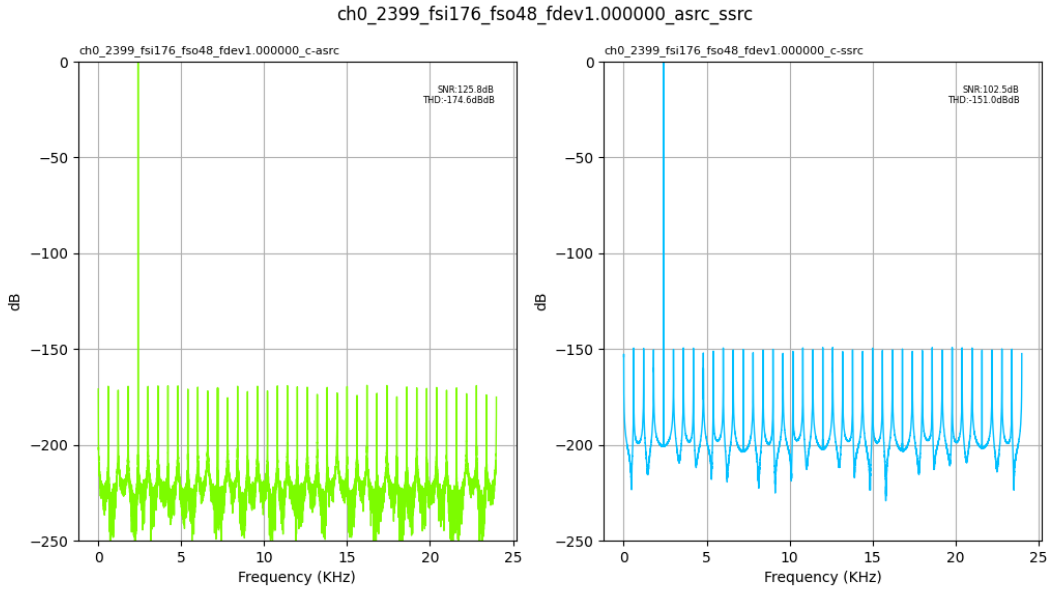

Fig. 1.99: Input Fs: 176,400Hz, Output Fs: 48,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

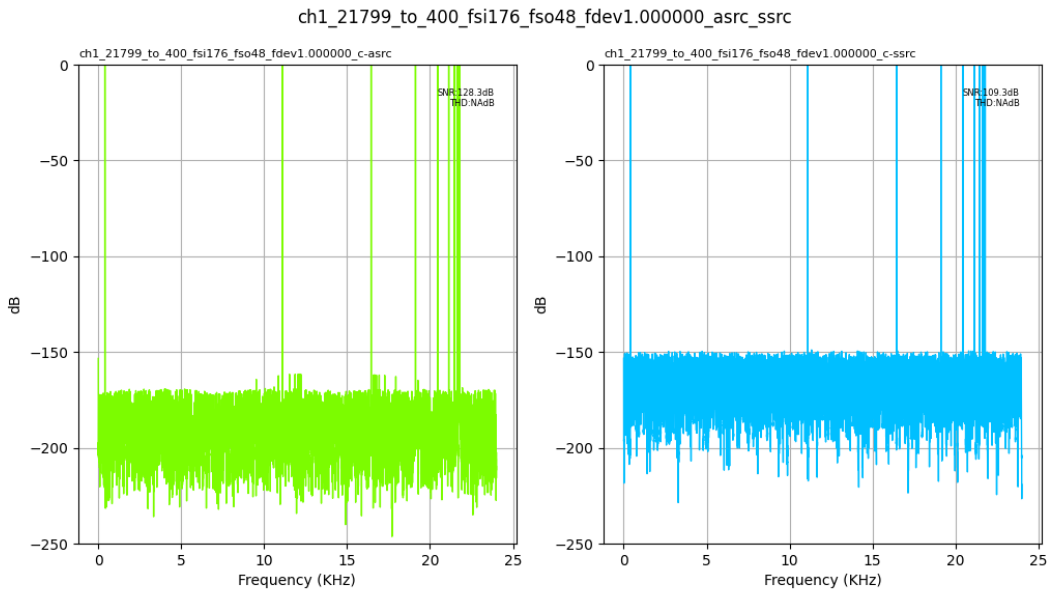

Fig. 1.100: Input Fs: 176,400Hz, Output Fs: 48,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

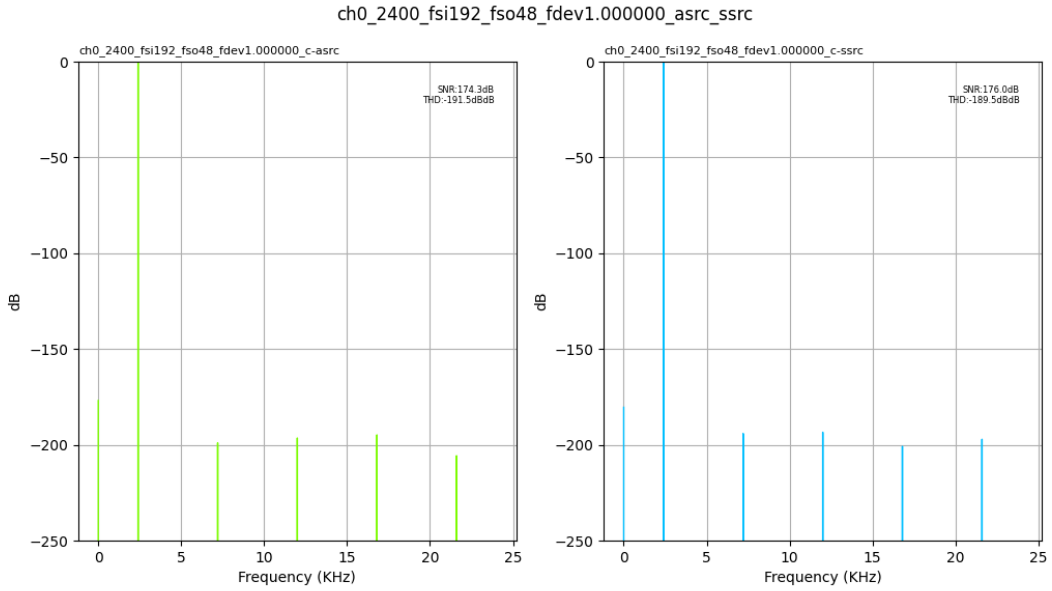

Fig. 1.101: Input Fs: 192,000Hz, Output Fs: 48,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

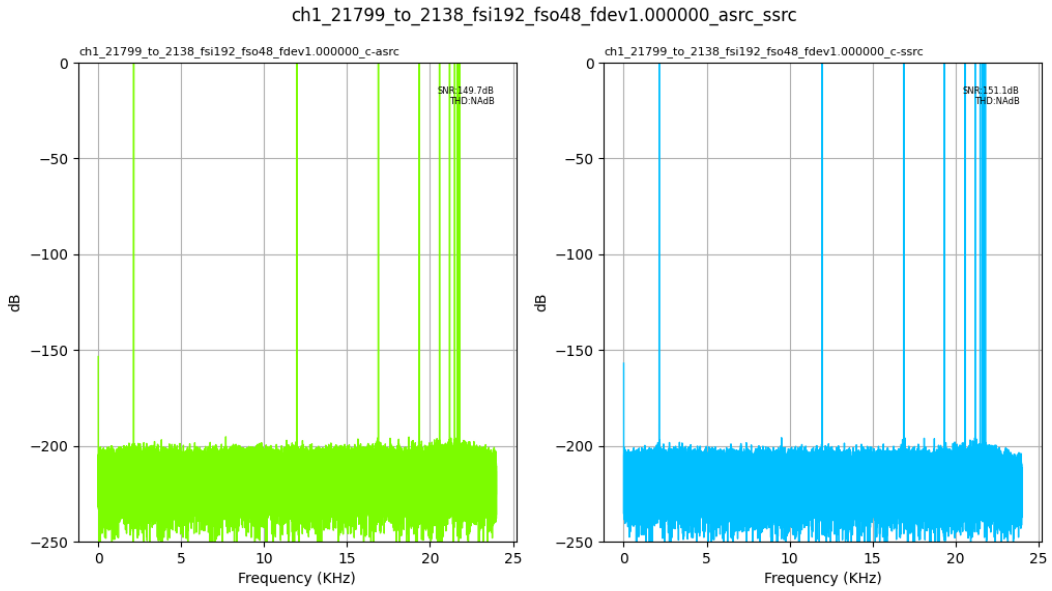

Fig. 1.102: Input Fs: 192,000Hz, Output Fs: 48,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

1.2.5 Output Fs : 88,200Hz

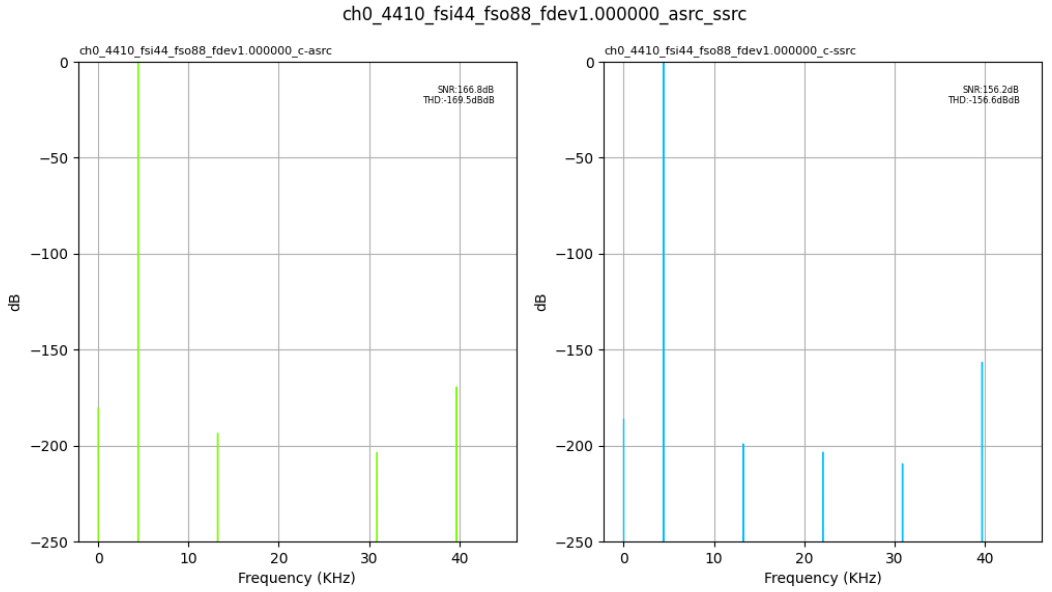

Fig. 1.103: Input Fs: 44,100Hz, Output Fs: 88,200Hz, Fs error: 1.000000, Results for: asrc, ssrc

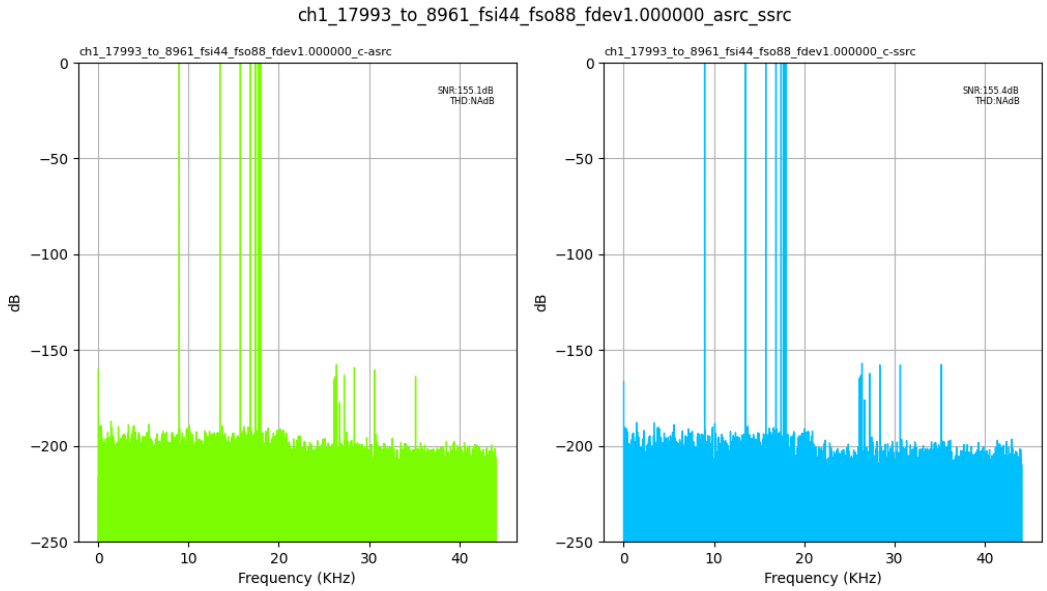

Fig. 1.104: Input Fs: 44,100Hz, Output Fs: 88,200Hz, Fs error: 1.000000, Results for: asrc, ssrc

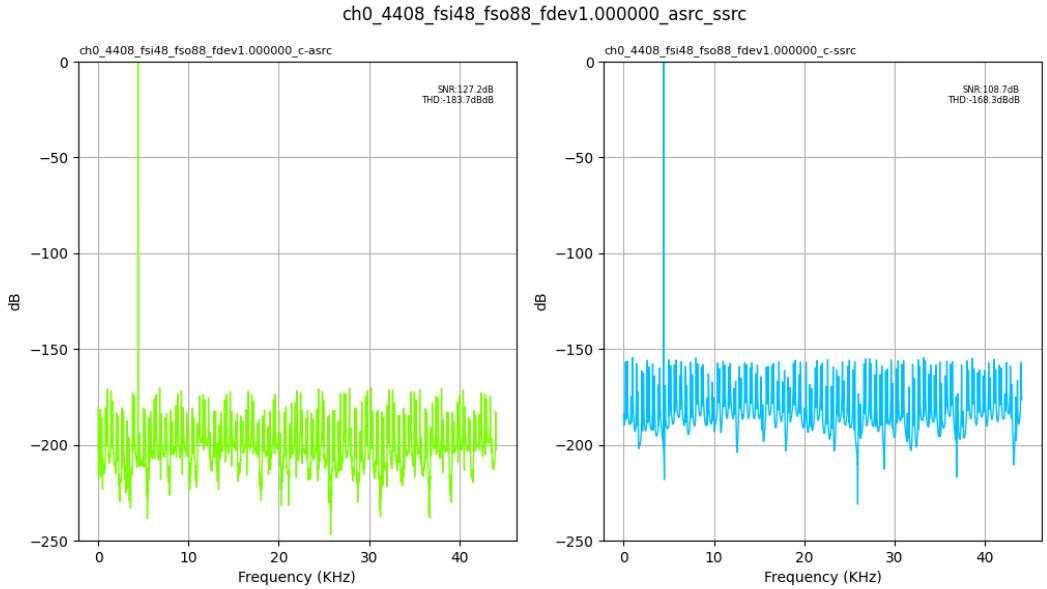

Fig. 1.105: Input Fs: 48,000Hz, Output Fs: 88,200Hz, Fs error: 1.000000, Results for: asrc, ssrc

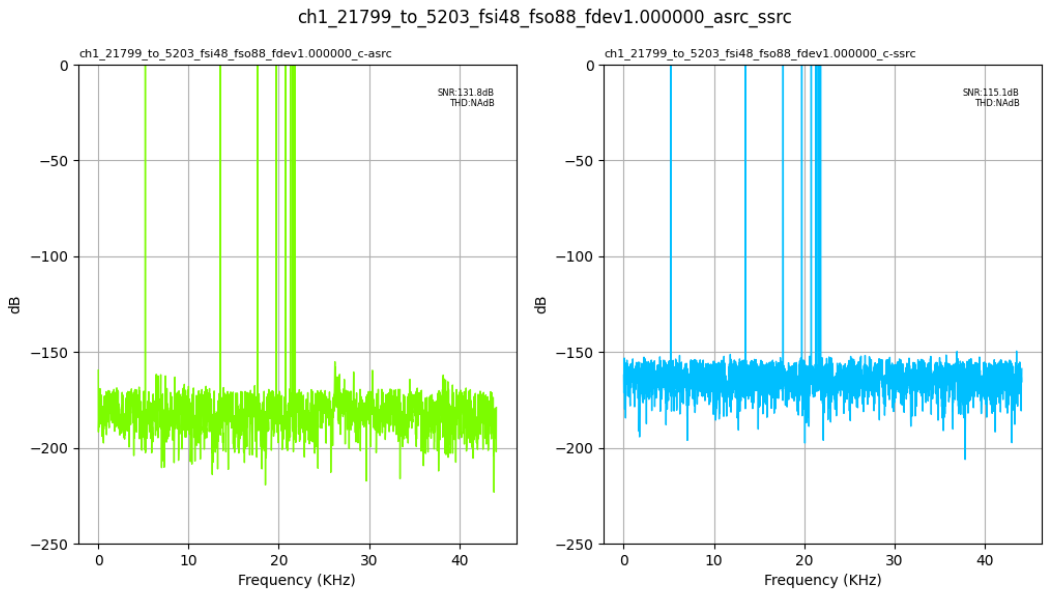

Fig. 1.106: Input Fs: 48,000Hz, Output Fs: 88,200Hz, Fs error: 1.000000, Results for: asrc, ssrc

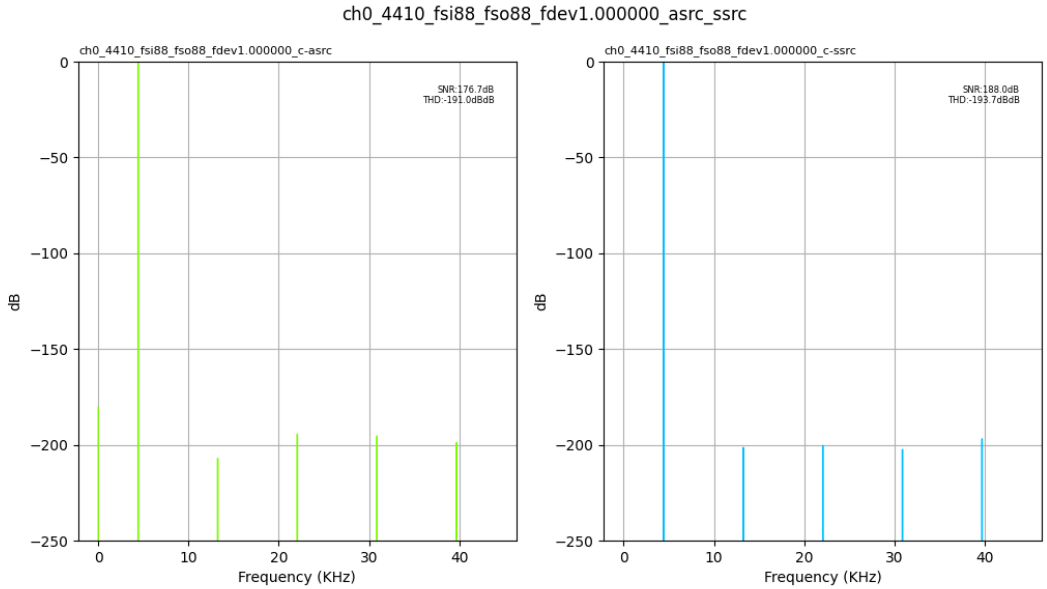

Fig. 1.107: Input Fs: 88,200Hz, Output Fs: 88,200Hz, Fs error: 1.000000, Results for: asrc, ssrc

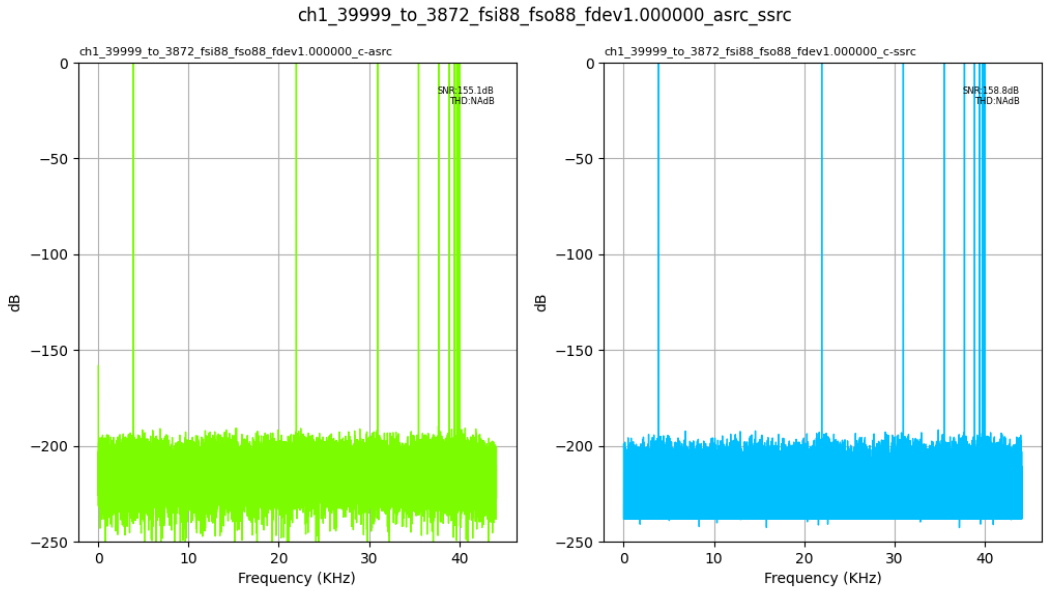

Fig. 1.108: Input Fs: 88,200Hz, Output Fs: 88,200Hz, Fs error: 1.000000, Results for: asrc, ssrc

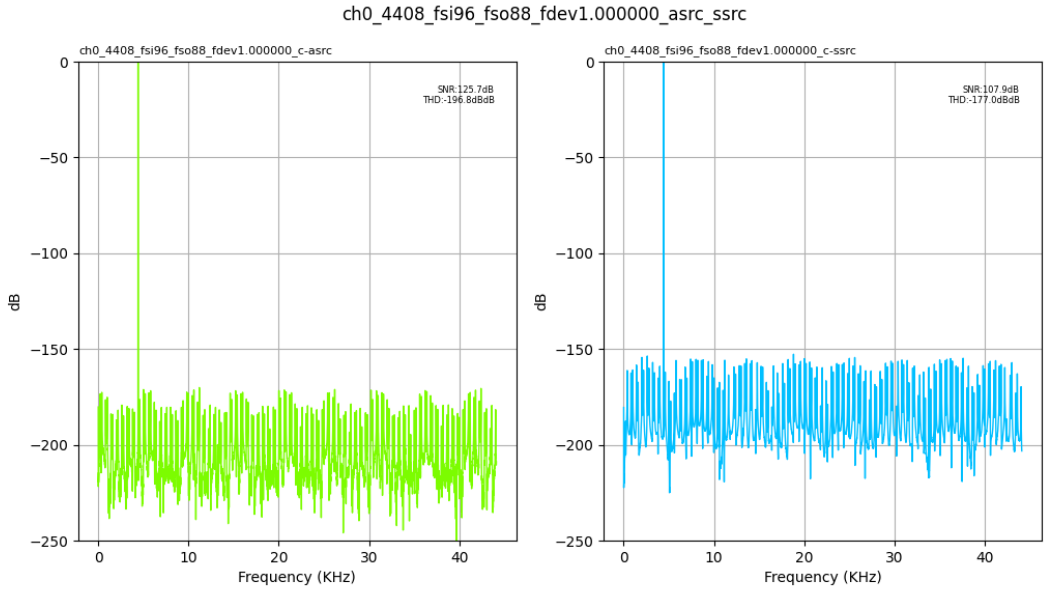

Fig. 1.109: Input Fs: 96,000Hz, Output Fs: 88,200Hz, Fs error: 1.000000, Results for: asrc, ssrc

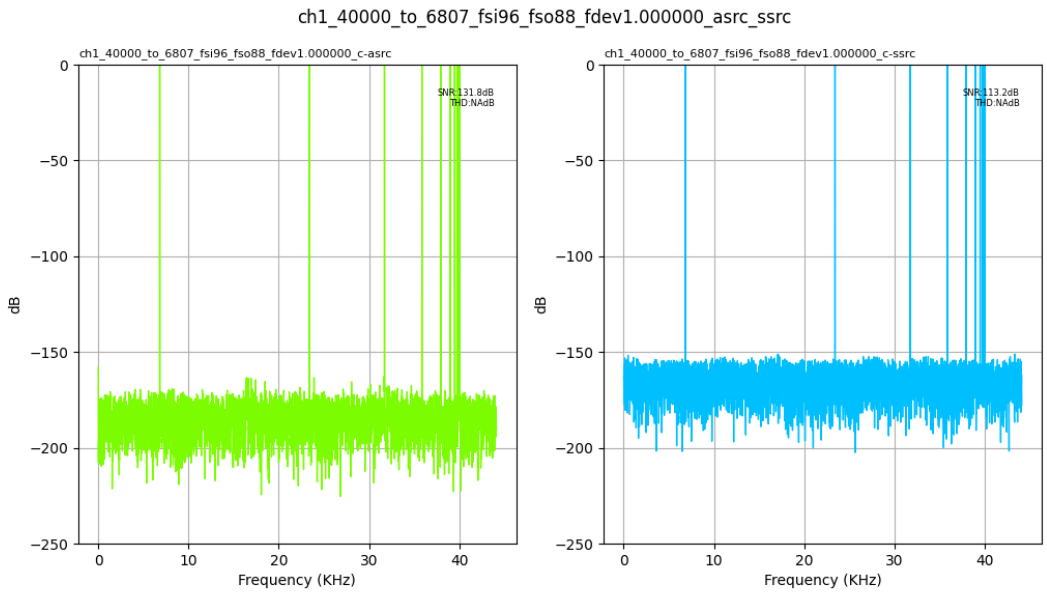

Fig. 1.110: Input Fs: 96,000Hz, Output Fs: 88,200Hz, Fs error: 1.000000, Results for: asrc, ssrc

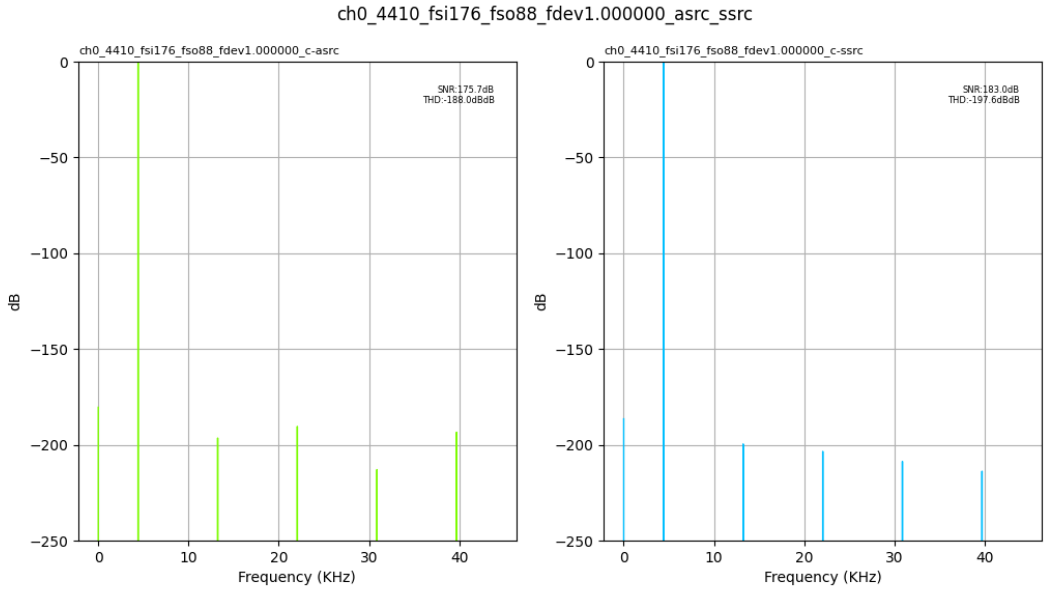

Fig. 1.111: Input Fs: 176,400Hz, Output Fs: 88,200Hz, Fs error: 1.000000, Results for: asrc, ssrc

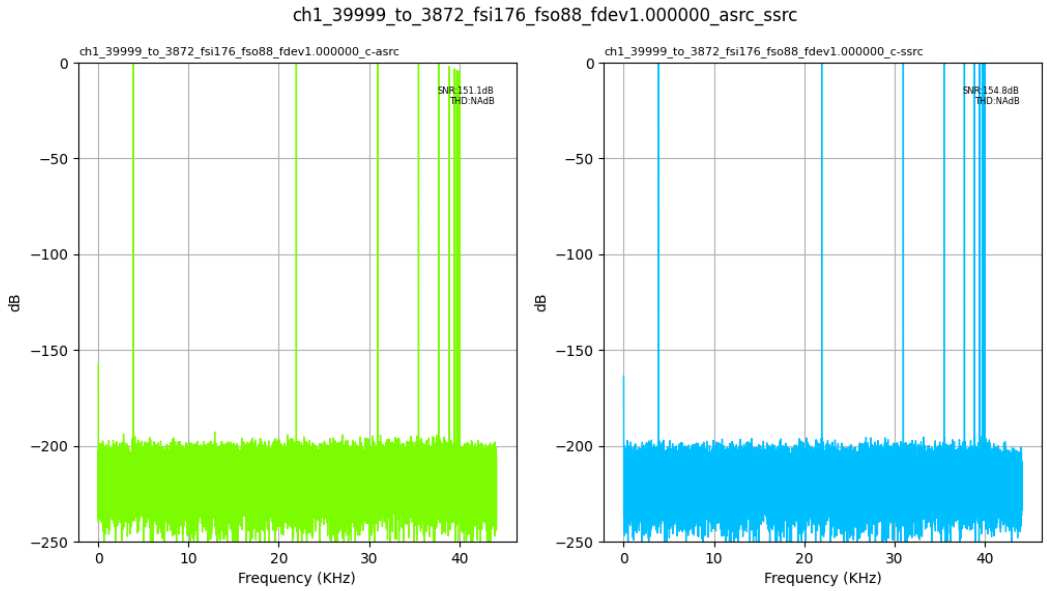

Fig. 1.112: Input Fs: 176,400Hz, Output Fs: 88,200Hz, Fs error: 1.000000, Results for: asrc, ssrc

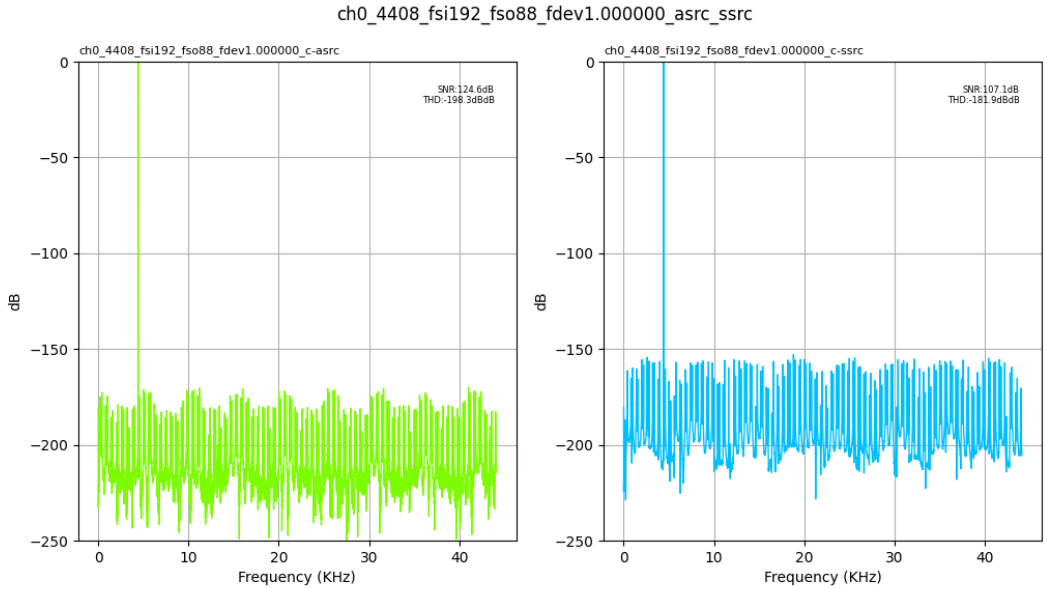

Fig. 1.113: Input Fs: 192,000Hz, Output Fs: 88,200Hz, Fs error: 1.000000, Results for: asrc, ssrc

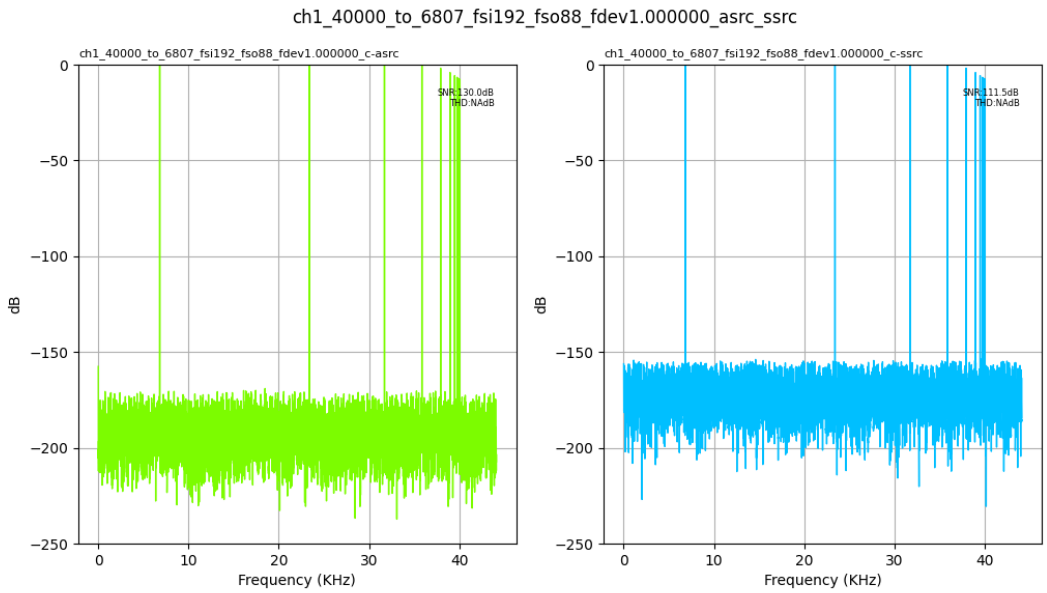

Fig. 1.114: Input Fs: 192,000Hz, Output Fs: 88,200Hz, Fs error: 1.000000, Results for: asrc, ssrc

1.2.6 Output Fs : 96,000Hz

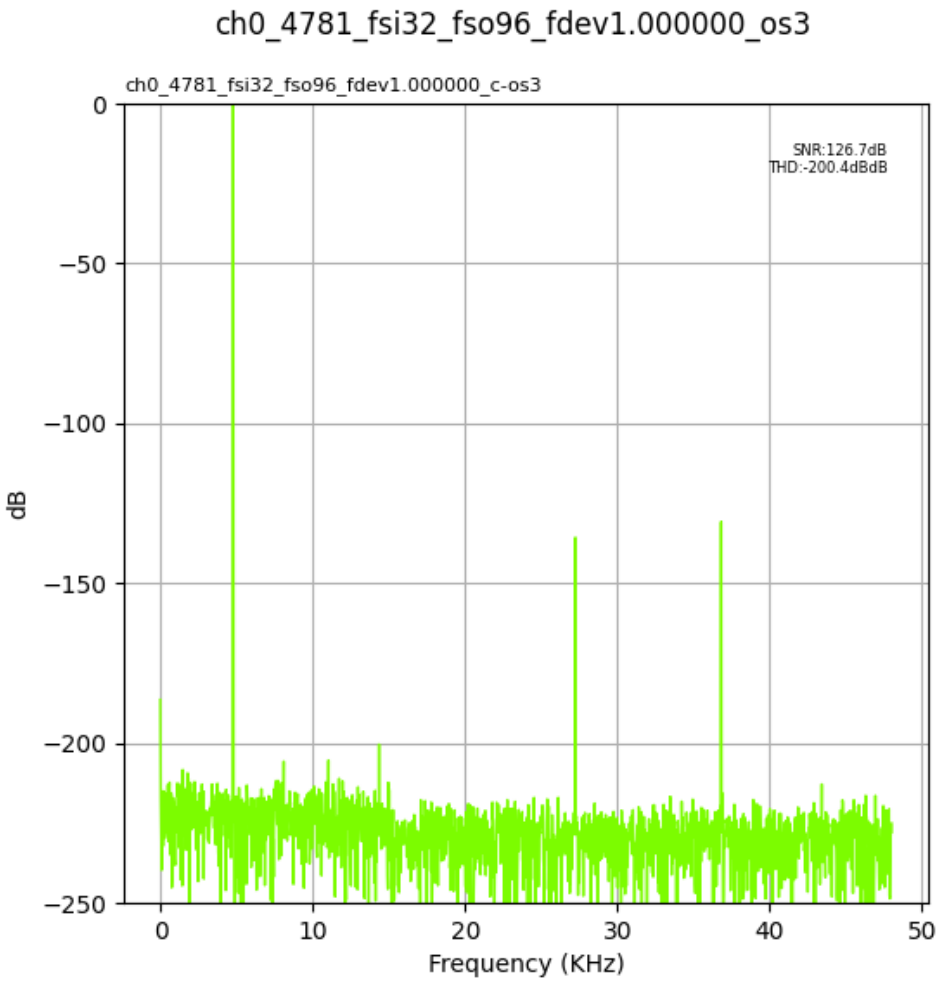

Fig. 1.115: Input Fs: 32,000Hz, Output Fs: 96,000Hz, Fs error: 1.000000, Results for: os3

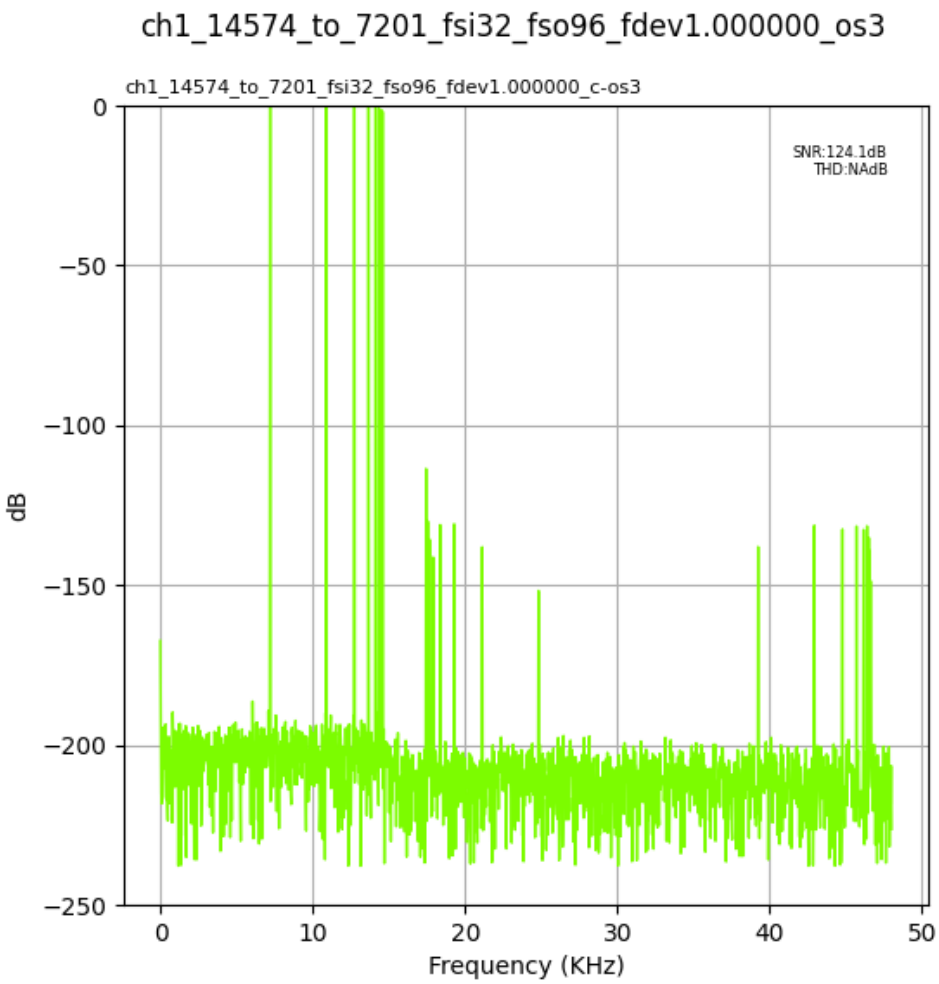

Fig. 1.116: Input Fs: 32,000Hz, Output Fs: 96,000Hz, Fs error: 1.000000, Results for: os3

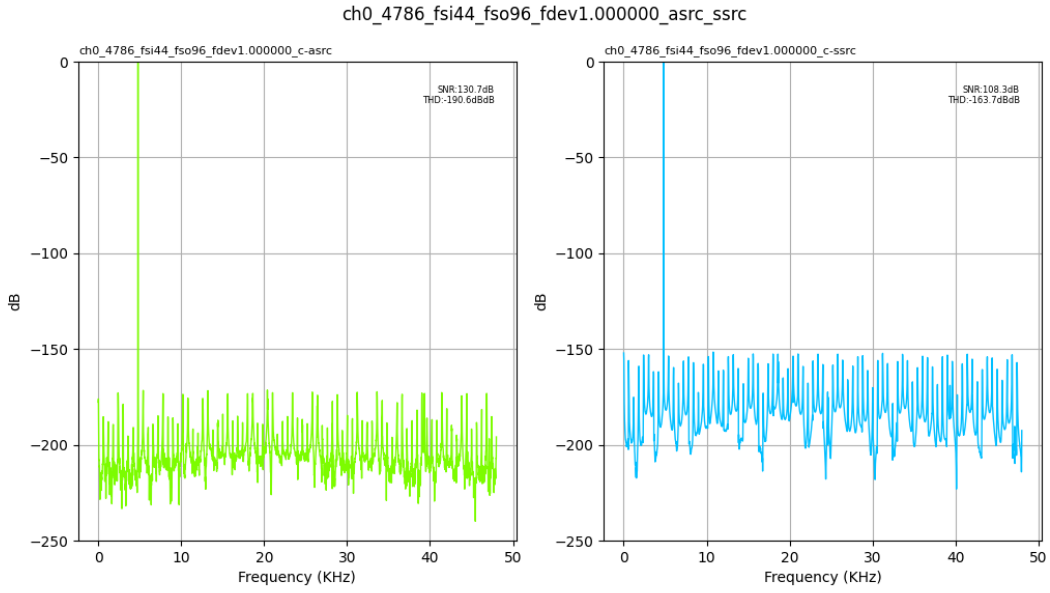

Fig. 1.117: Input Fs: 44,100Hz, Output Fs: 96,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

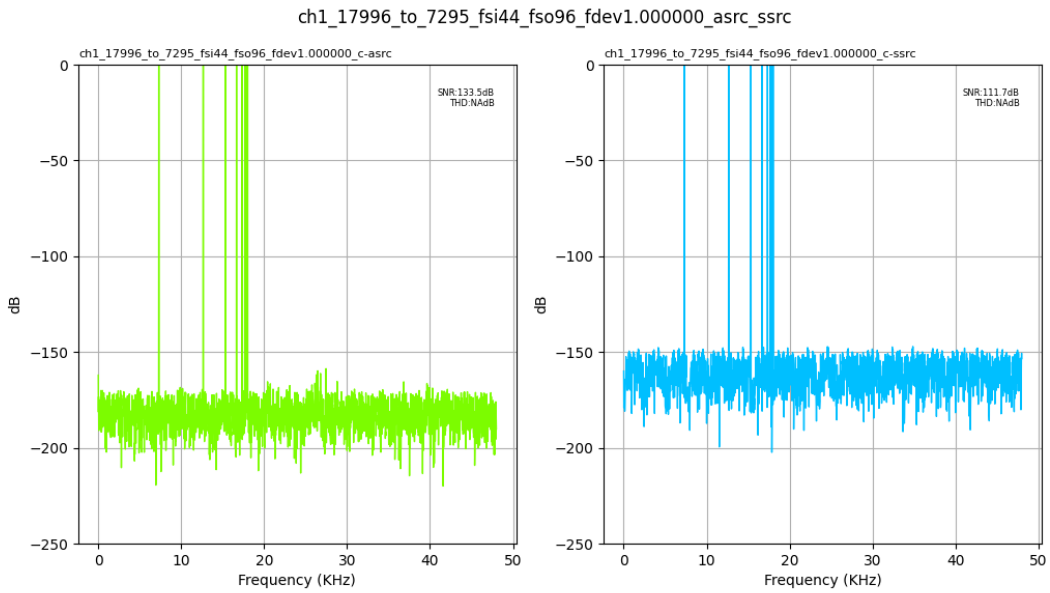

Fig. 1.118: Input Fs: 44,100Hz, Output Fs: 96,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

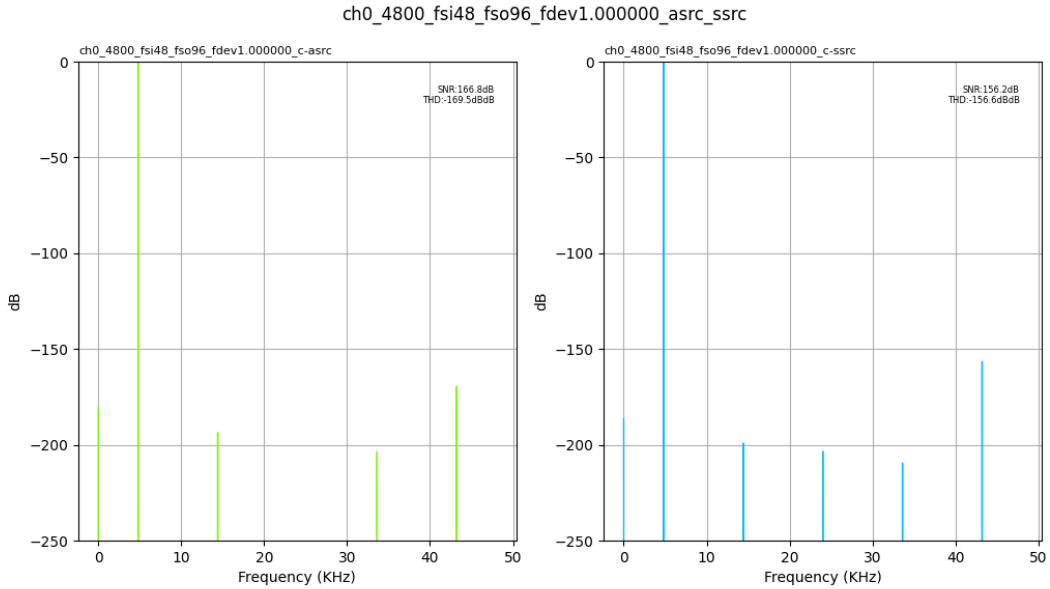

Fig. 1.119: Input Fs: 48,000Hz, Output Fs: 96,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

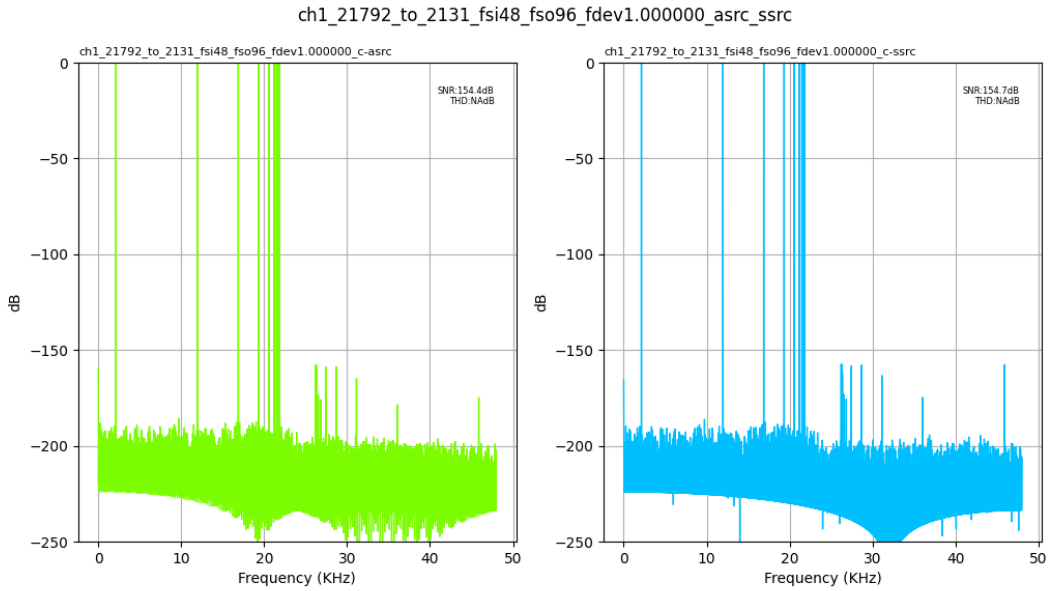

Fig. 1.120: Input Fs: 48,000Hz, Output Fs: 96,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

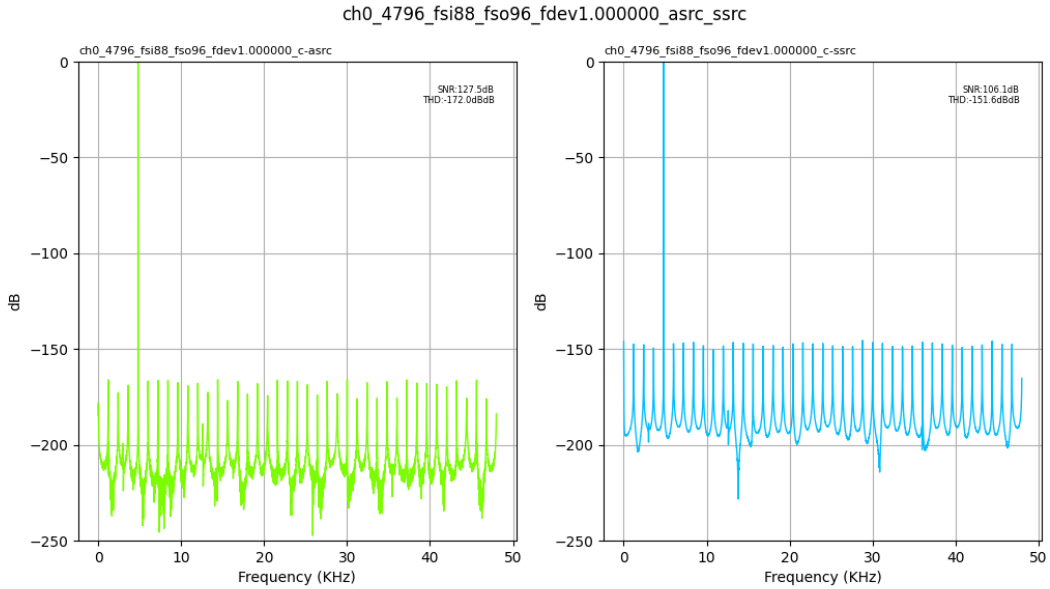

Fig. 1.121: Input Fs: 88,200Hz, Output Fs: 96,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

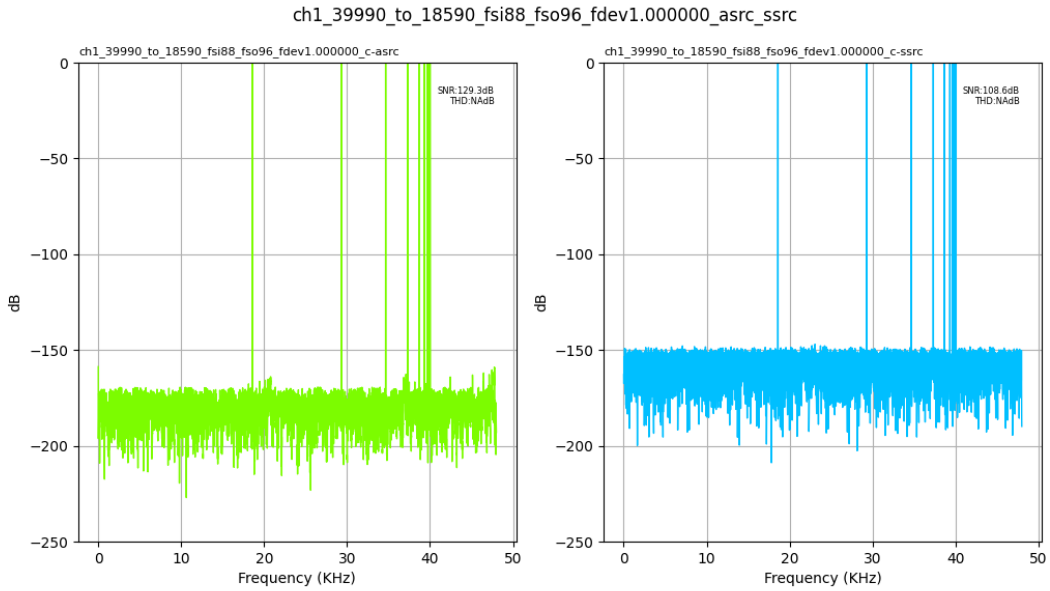

Fig. 1.122: Input Fs: 88,200Hz, Output Fs: 96,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

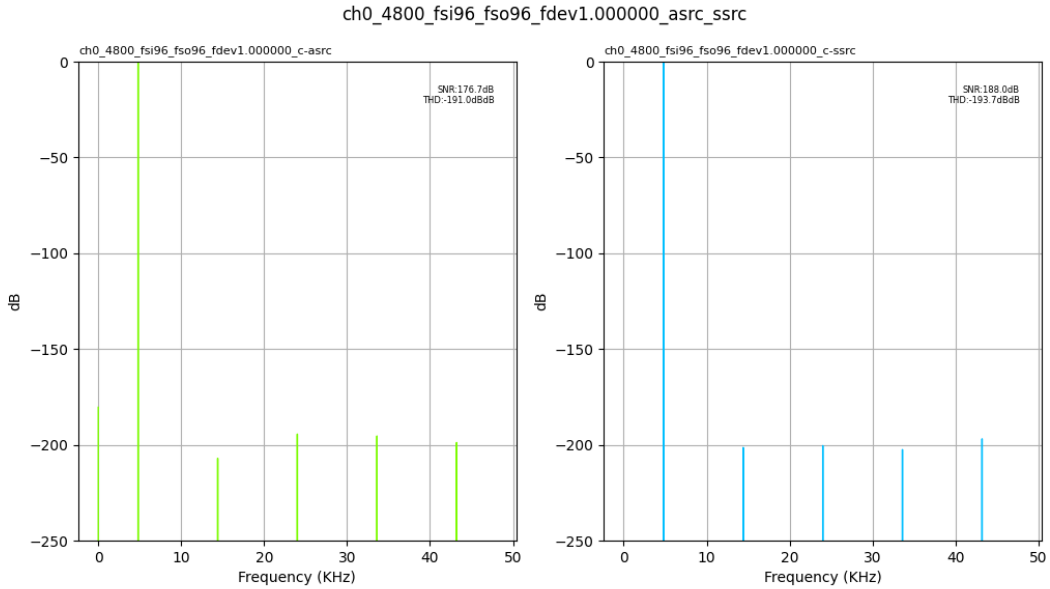

Fig. 1.123: Input Fs: 96,000Hz, Output Fs: 96,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

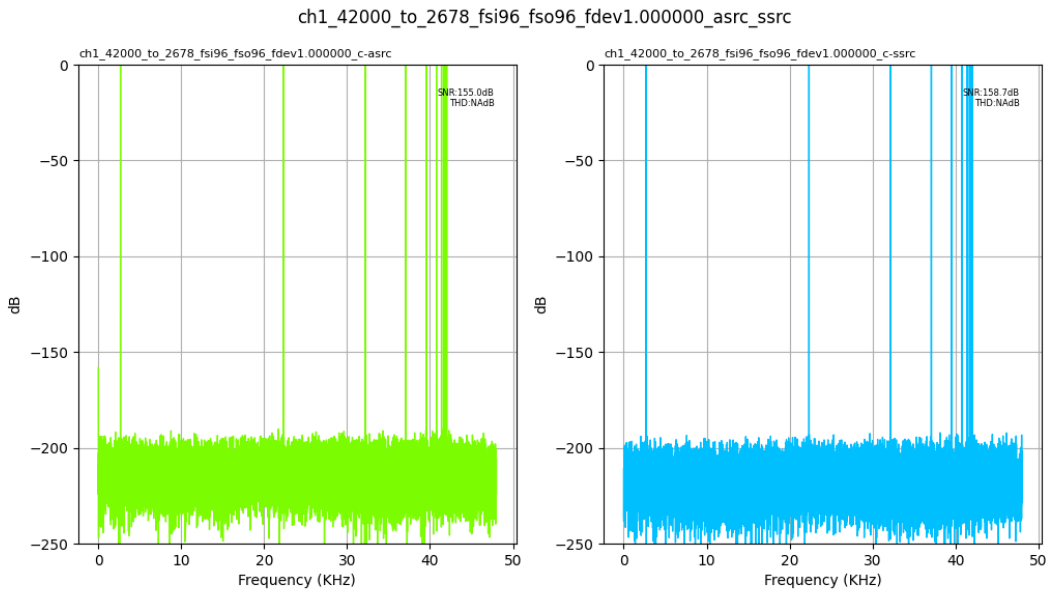

Fig. 1.124: Input Fs: 96,000Hz, Output Fs: 96,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

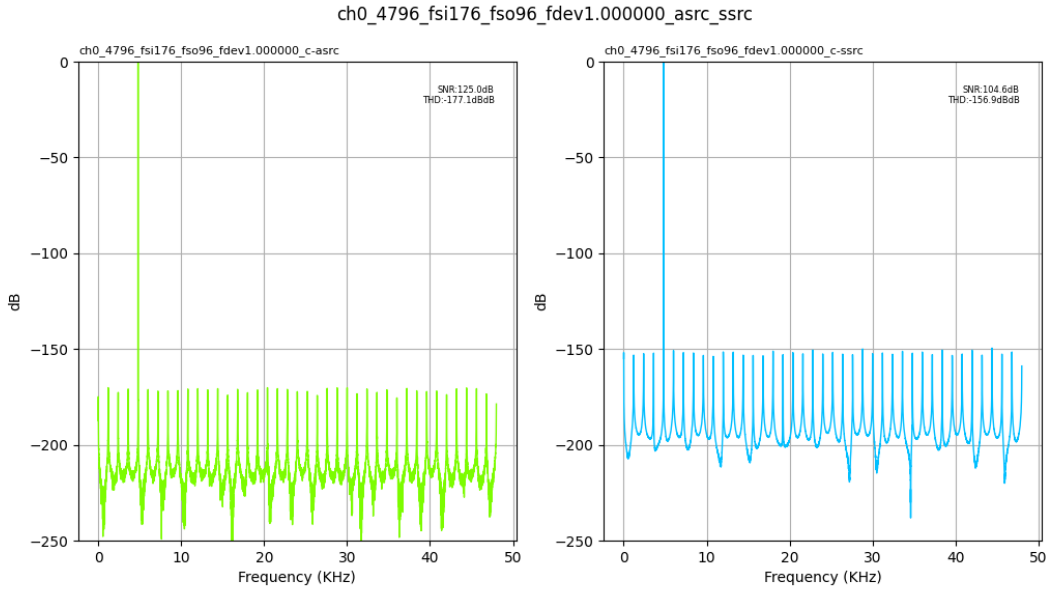

Fig. 1.125: Input Fs: 176,400Hz, Output Fs: 96,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

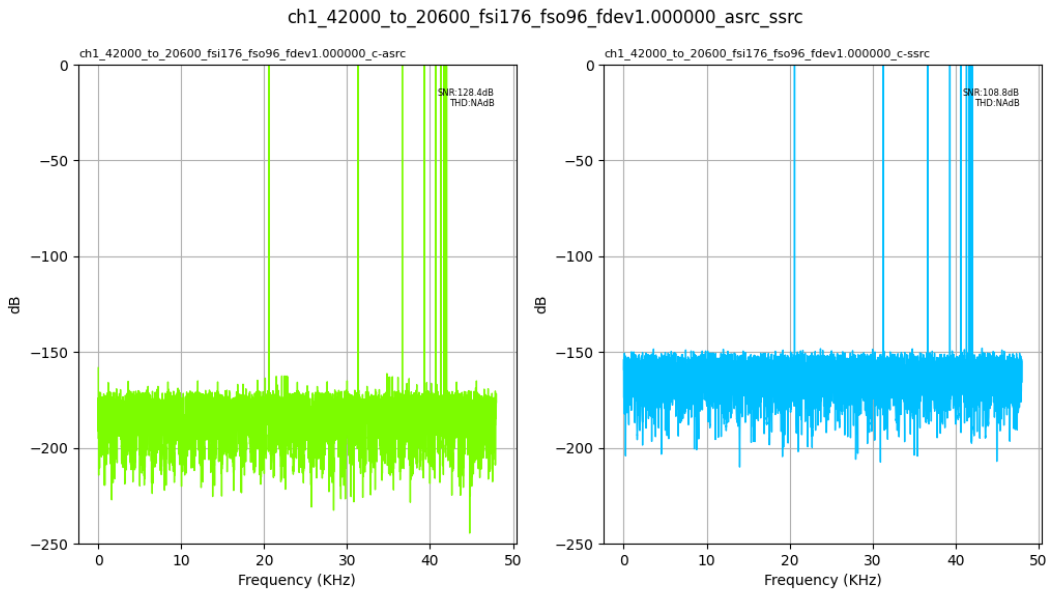

Fig. 1.126: Input Fs: 176,400Hz, Output Fs: 96,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

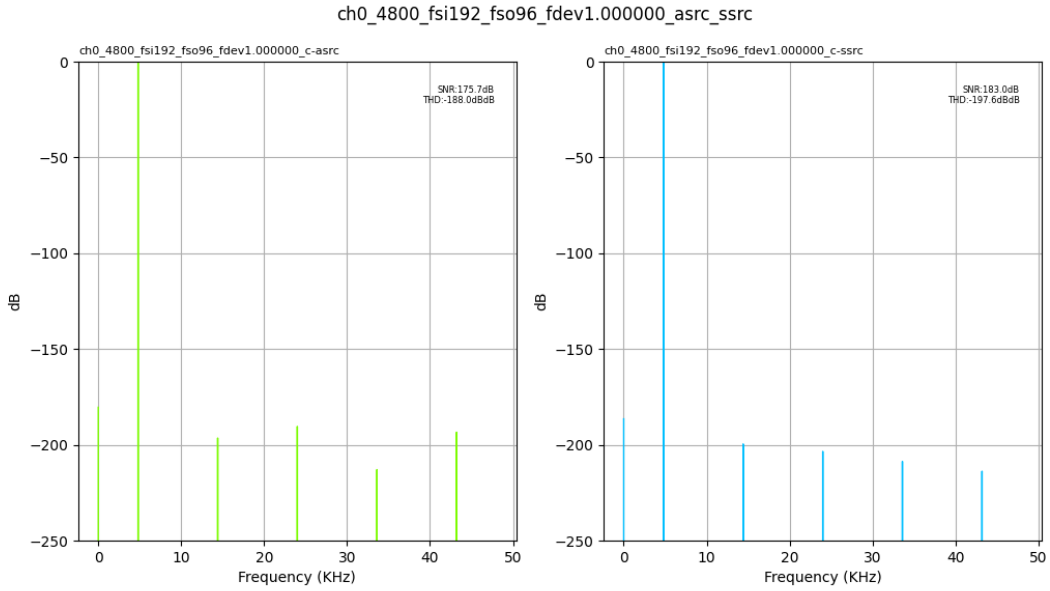

Fig. 1.127: Input Fs: 192,000Hz, Output Fs: 96,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

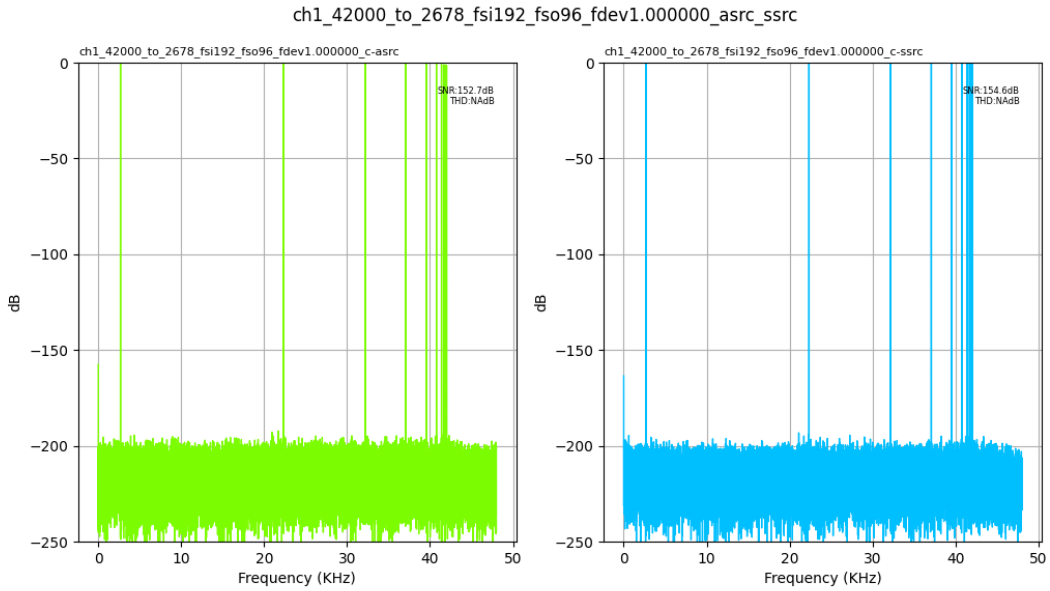

Fig. 1.128: Input Fs: 192,000Hz, Output Fs: 96,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

1.2.7 Output Fs : 176,400Hz

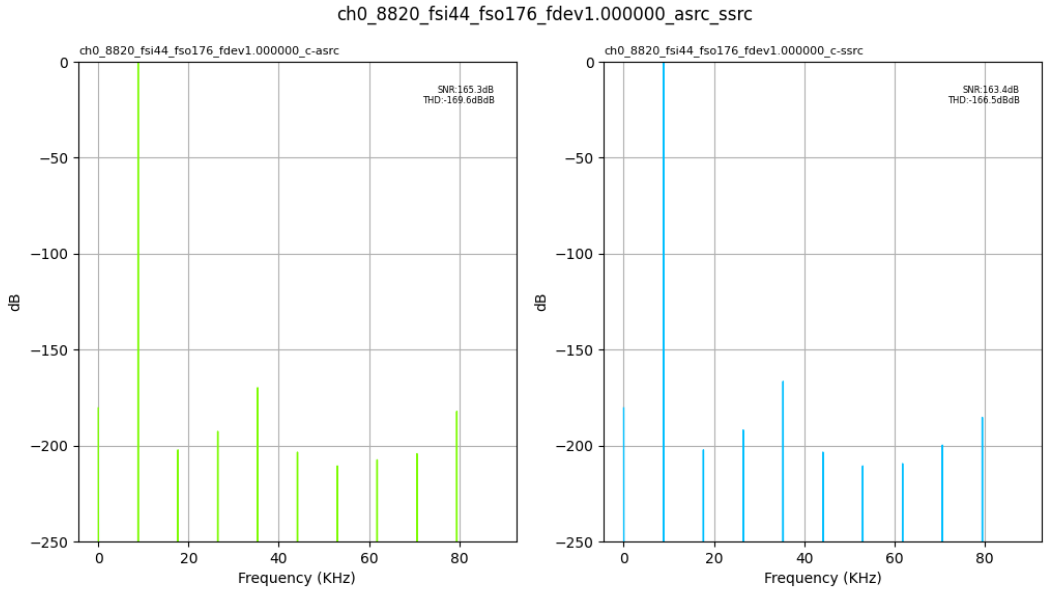

Fig. 1.129: Input Fs: 44,100Hz, Output Fs: 176,400Hz, Fs error: 1.000000, Results for: asrc, ssrc

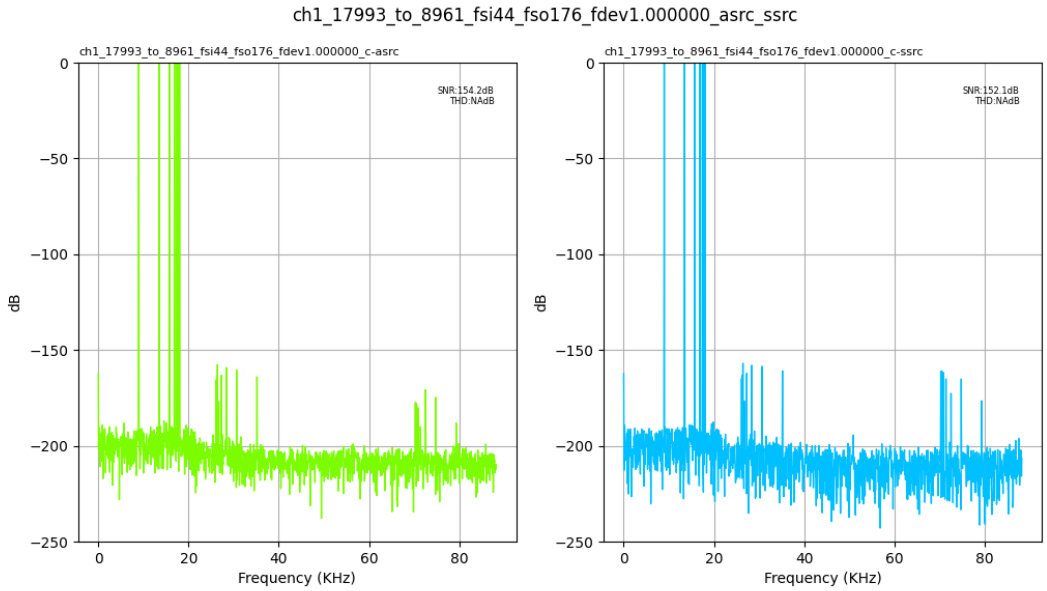

Fig. 1.130: Input Fs: 44,100Hz, Output Fs: 176,400Hz, Fs error: 1.000000, Results for: asrc, ssrc

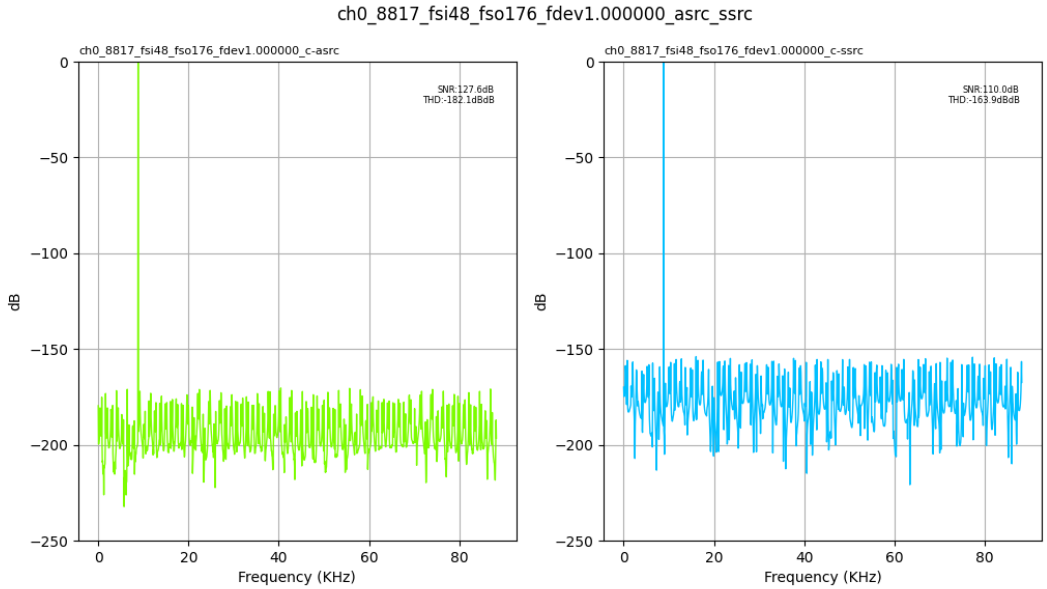

Fig. 1.131: Input Fs: 48,000Hz, Output Fs: 176,400Hz, Fs error: 1.000000, Results for: asrc, ssrc

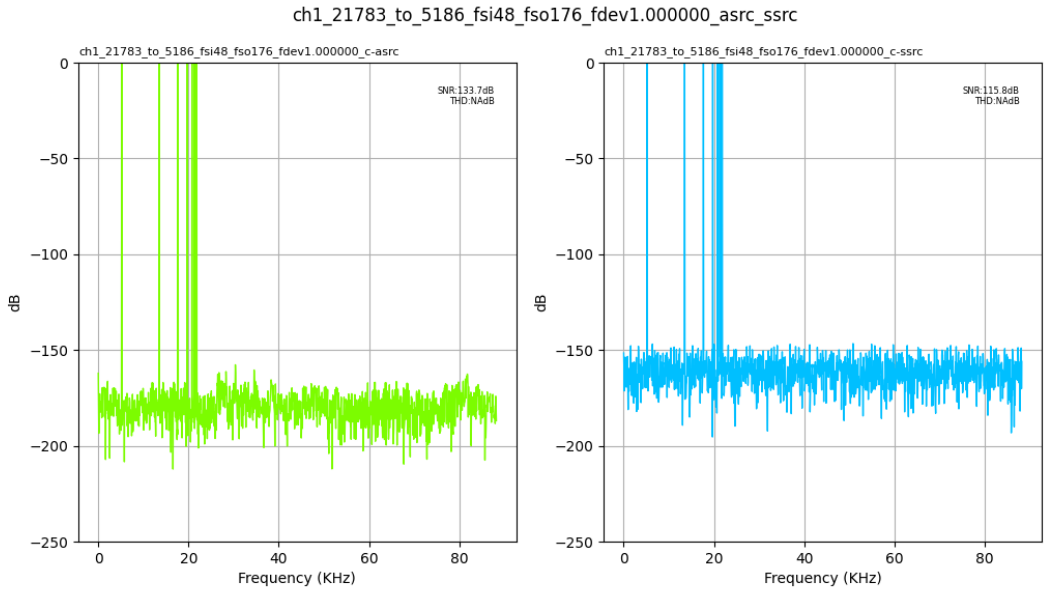

Fig. 1.132: Input Fs: 48,000Hz, Output Fs: 176,400Hz, Fs error: 1.000000, Results for: asrc, ssrc

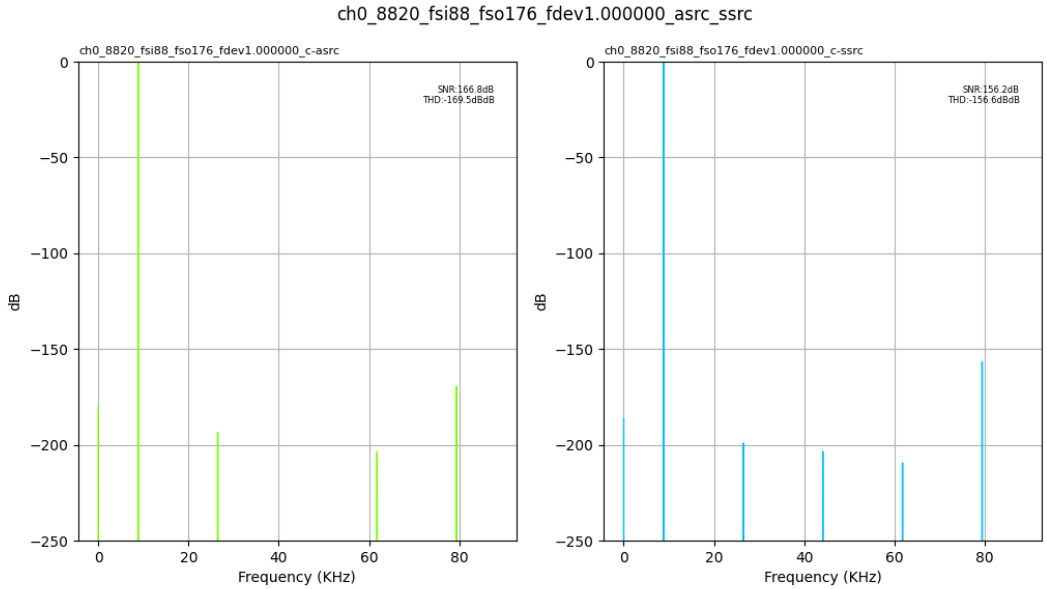

Fig. 1.133: Input Fs: 88,200Hz, Output Fs: 176,400Hz, Fs error: 1.000000, Results for: asrc, ssrc

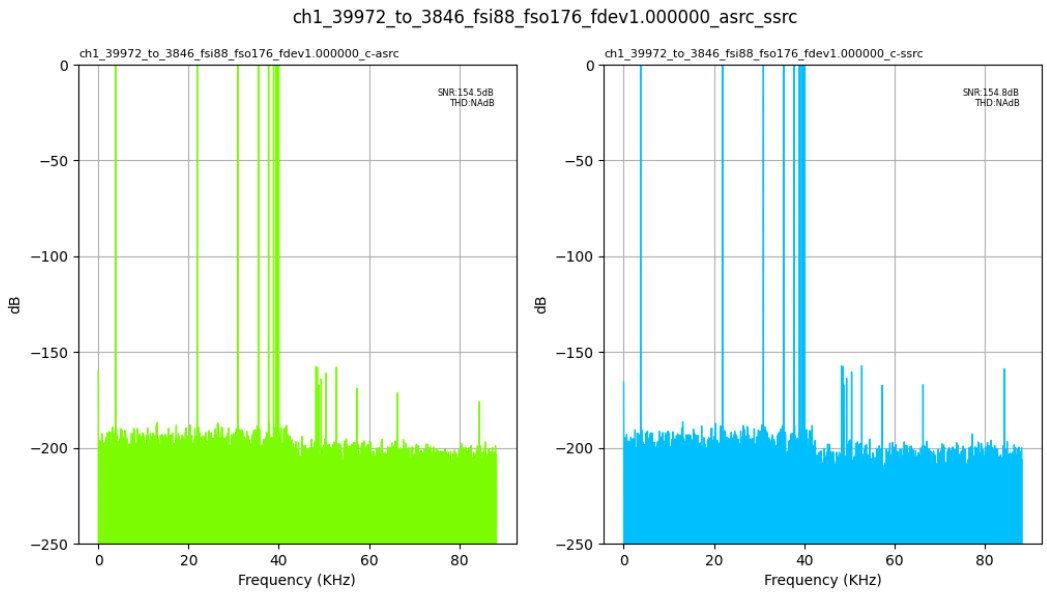

Fig. 1.134: Input Fs: 88,200Hz, Output Fs: 176,400Hz, Fs error: 1.000000, Results for: asrc, ssrc

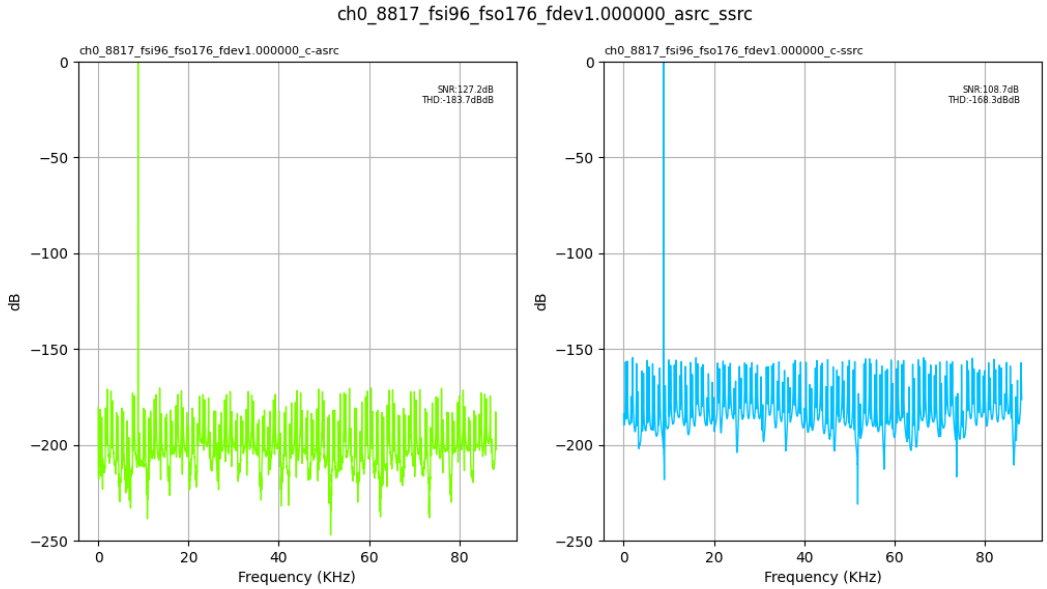

Fig. 1.135: Input Fs: 96,000Hz, Output Fs: 176,400Hz, Fs error: 1.000000, Results for: asrc, ssrc

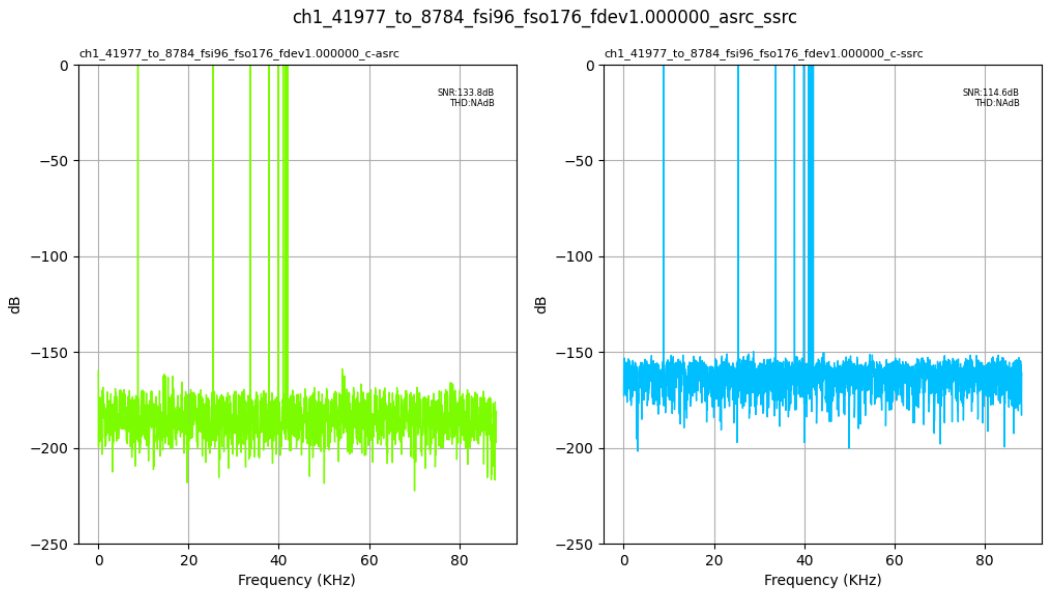

Fig. 1.136: Input Fs: 96,000Hz, Output Fs: 176,400Hz, Fs error: 1.000000, Results for: asrc, ssrc

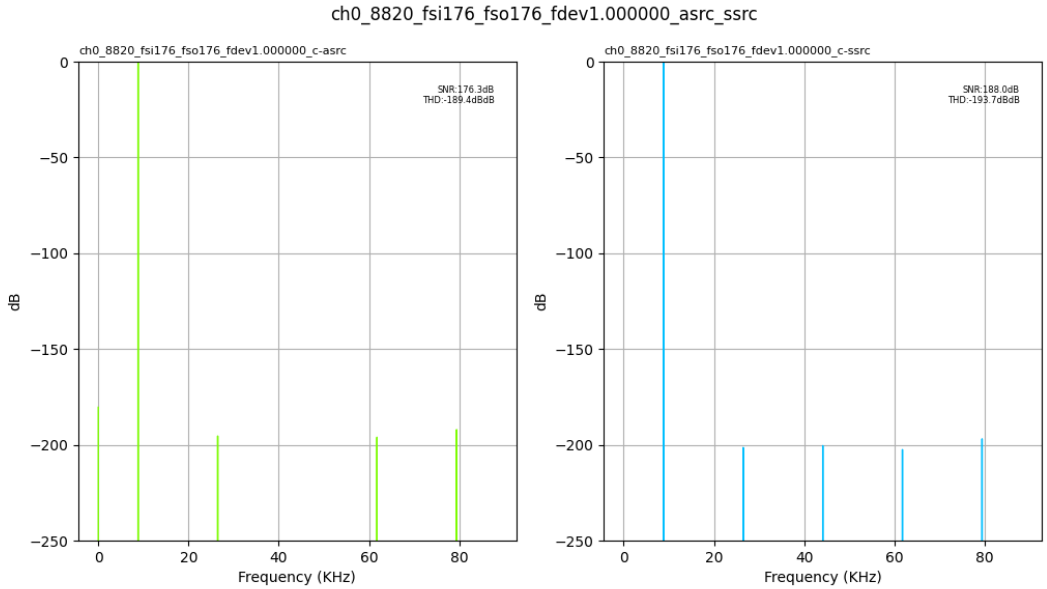

Fig. 1.137: Input Fs: 176,400Hz, Output Fs: 176,400Hz, Fs error: 1.000000, Results for: asrc, ssrc

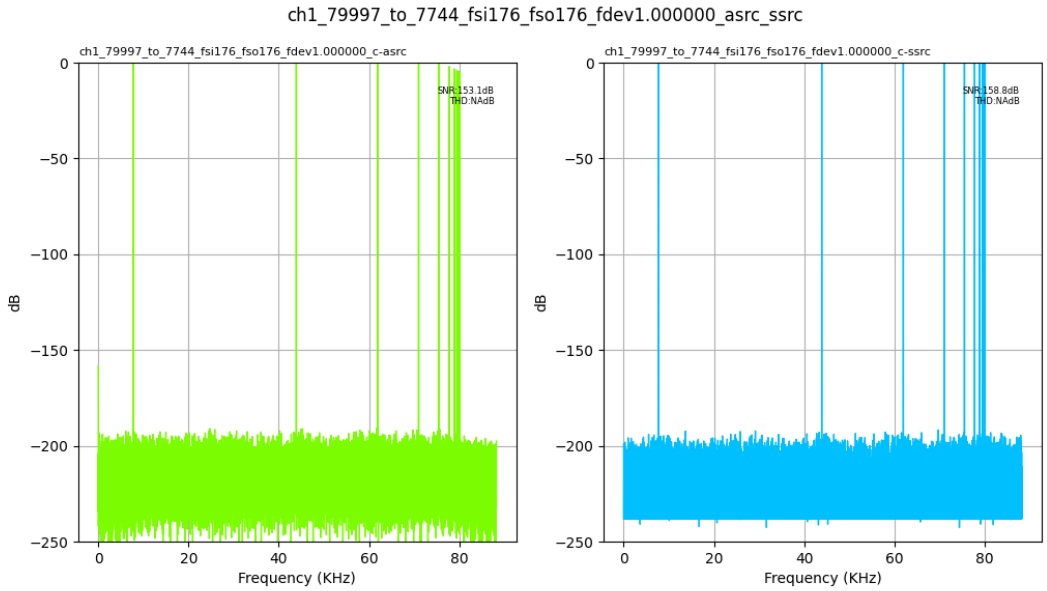

Fig. 1.138: Input Fs: 176,400Hz, Output Fs: 176,400Hz, Fs error: 1.000000, Results for: asrc, ssrc

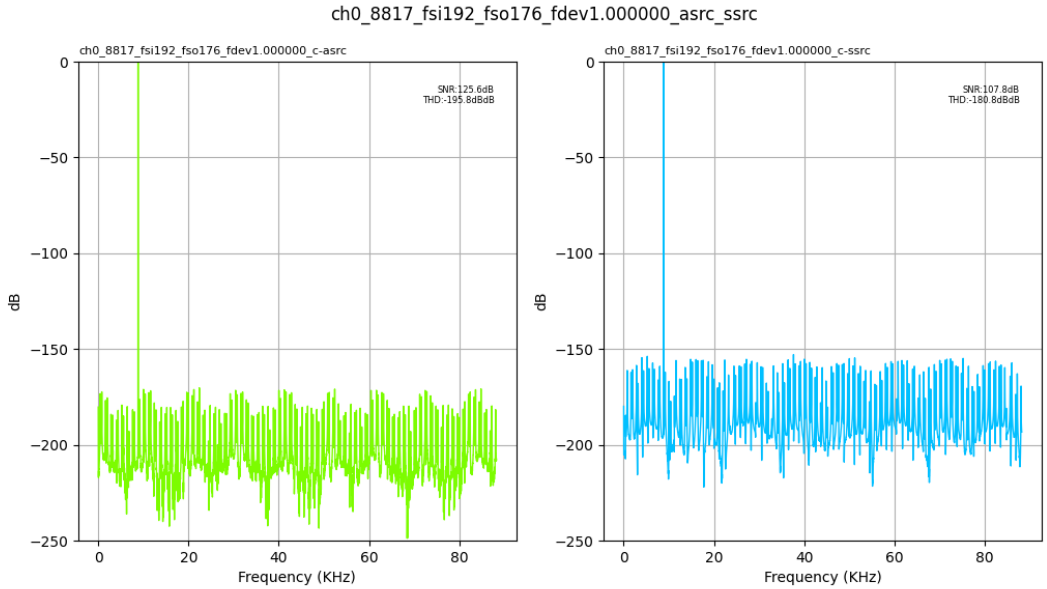

Fig. 1.139: Input Fs: 192,000Hz, Output Fs: 176,400Hz, Fs error: 1.000000, Results for: asrc, ssrc

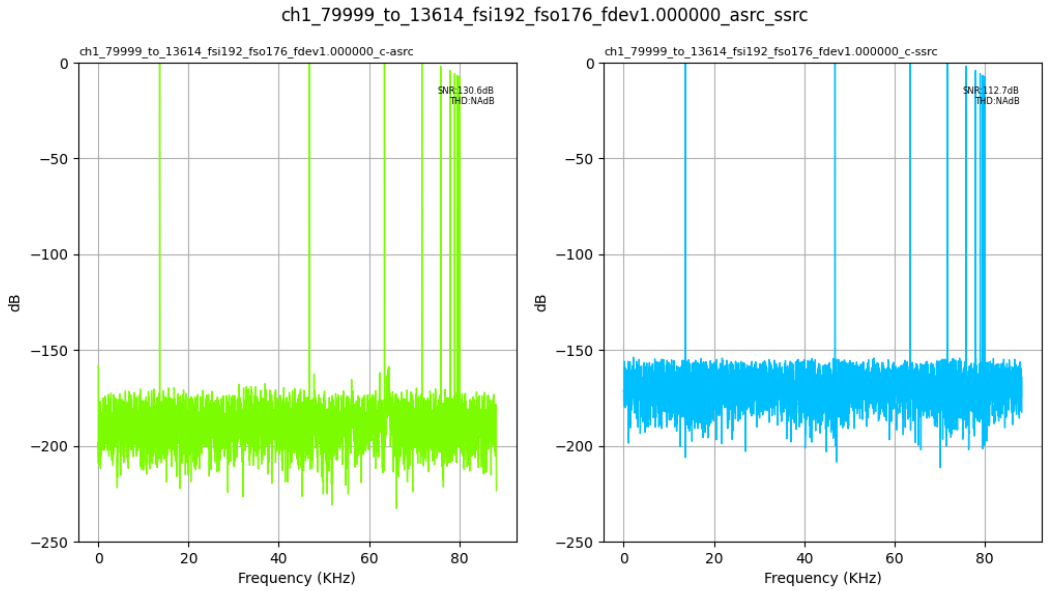

Fig. 1.140: Input Fs: 192,000Hz, Output Fs: 176,400Hz, Fs error: 1.000000, Results for: asrc, ssrc

1.2.8 Output Fs : 192,000Hz

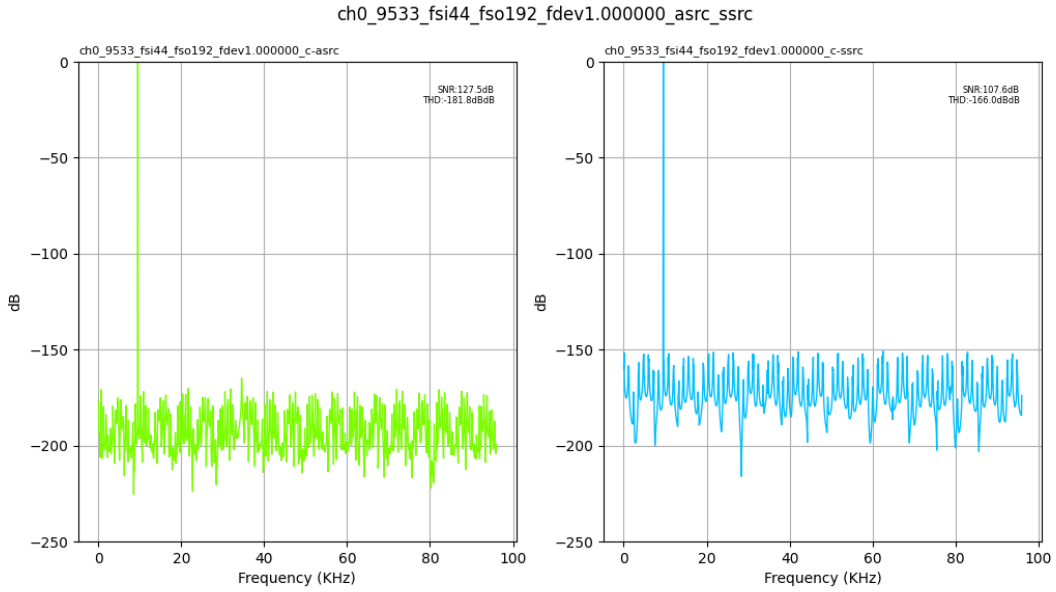

Fig. 1.141: Input Fs: 44,100Hz, Output Fs: 192,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

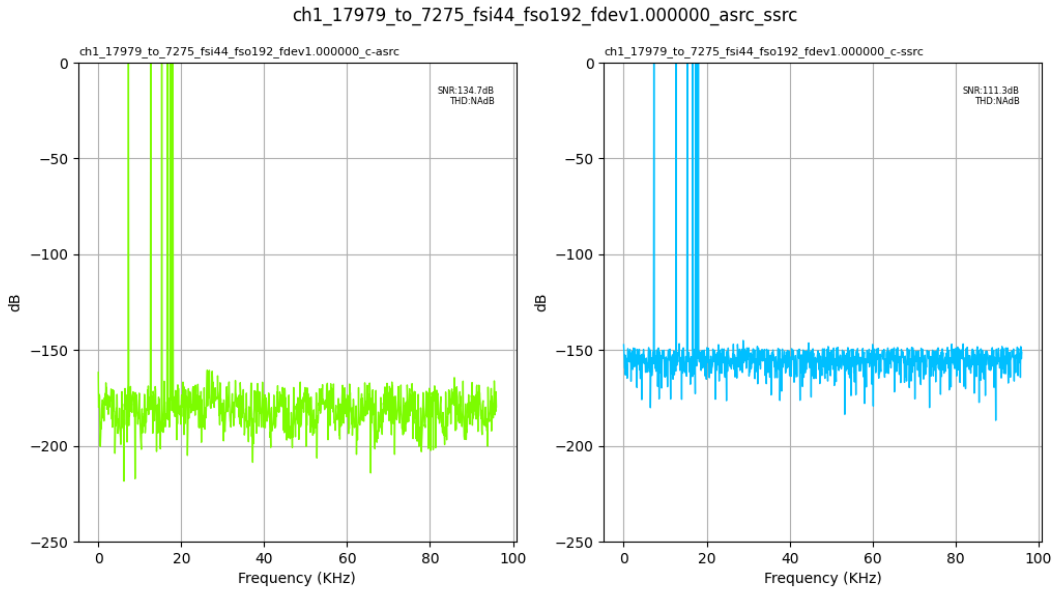

Fig. 1.142: Input Fs: 44,100Hz, Output Fs: 192,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

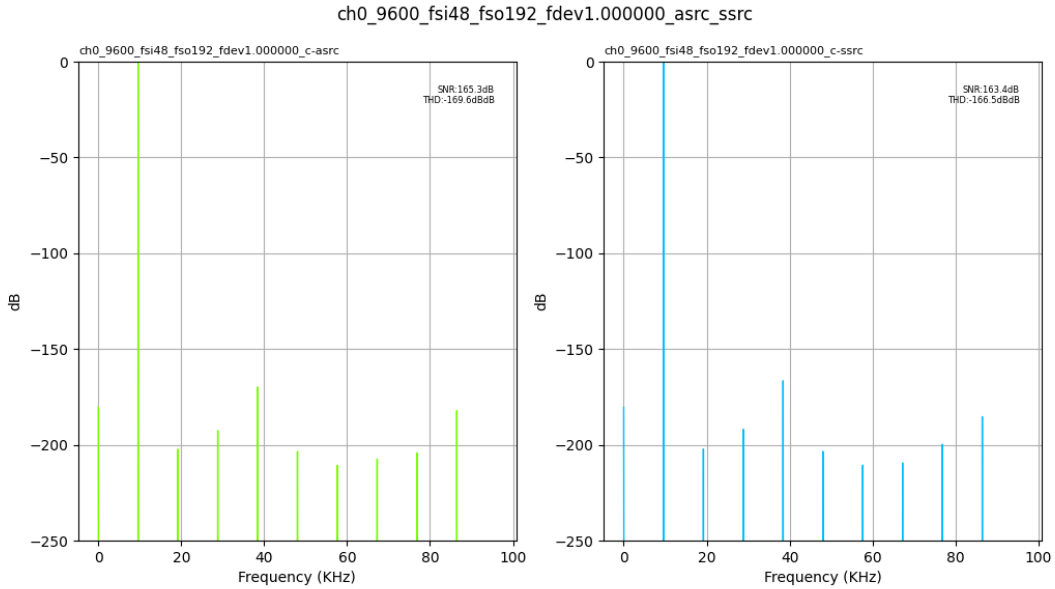

Fig. 1.143: Input Fs: 48,000Hz, Output Fs: 192,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

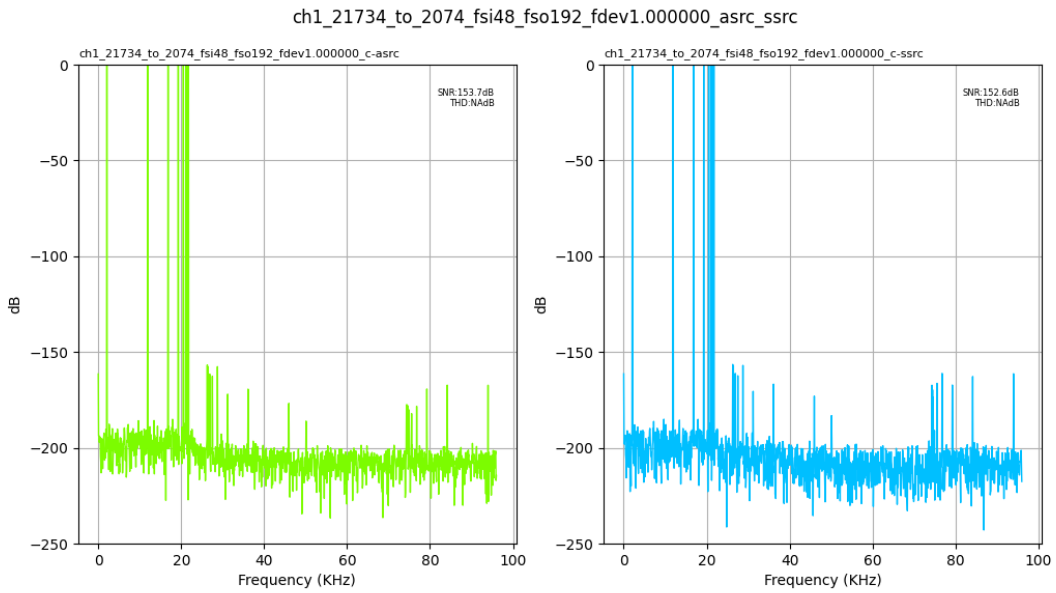

Fig. 1.144: Input Fs: 48,000Hz, Output Fs: 192,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

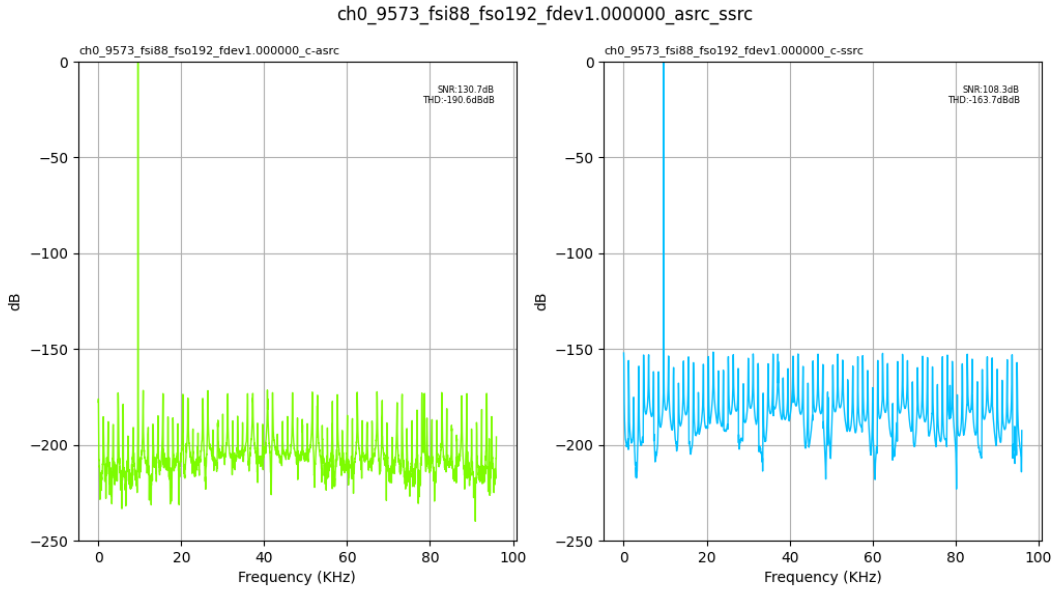

Fig. 1.145: Input Fs: 88,200Hz, Output Fs: 192,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

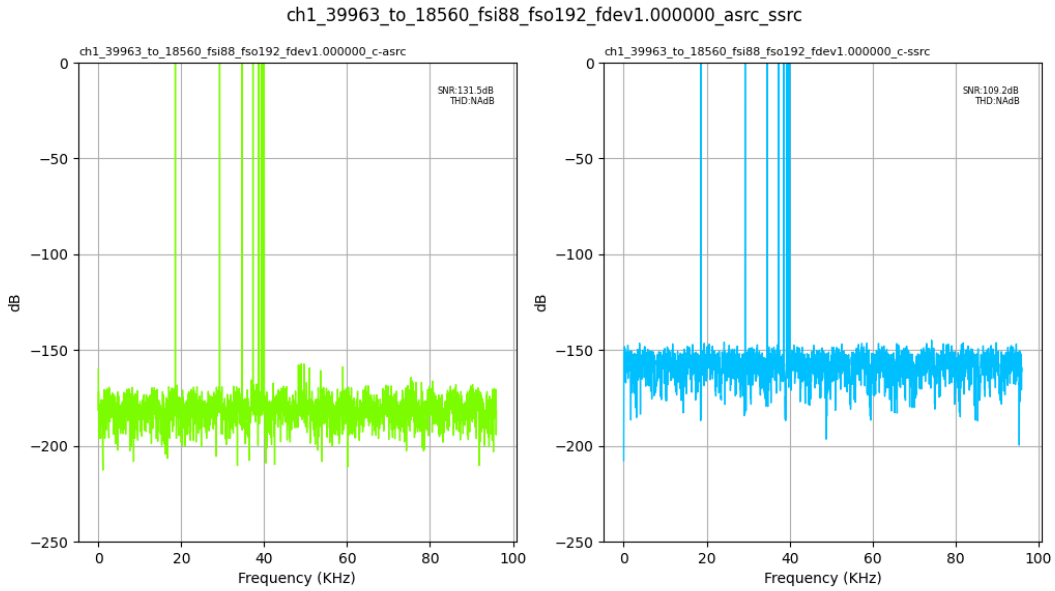

Fig. 1.146: Input Fs: 88,200Hz, Output Fs: 192,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

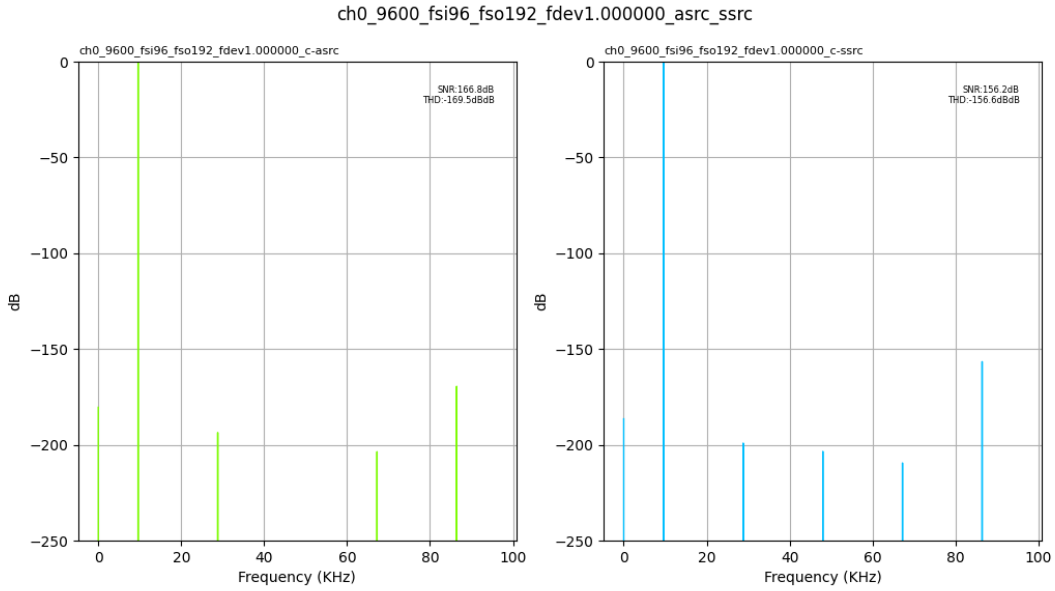

Fig. 1.147: Input Fs: 96,000Hz, Output Fs: 192,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

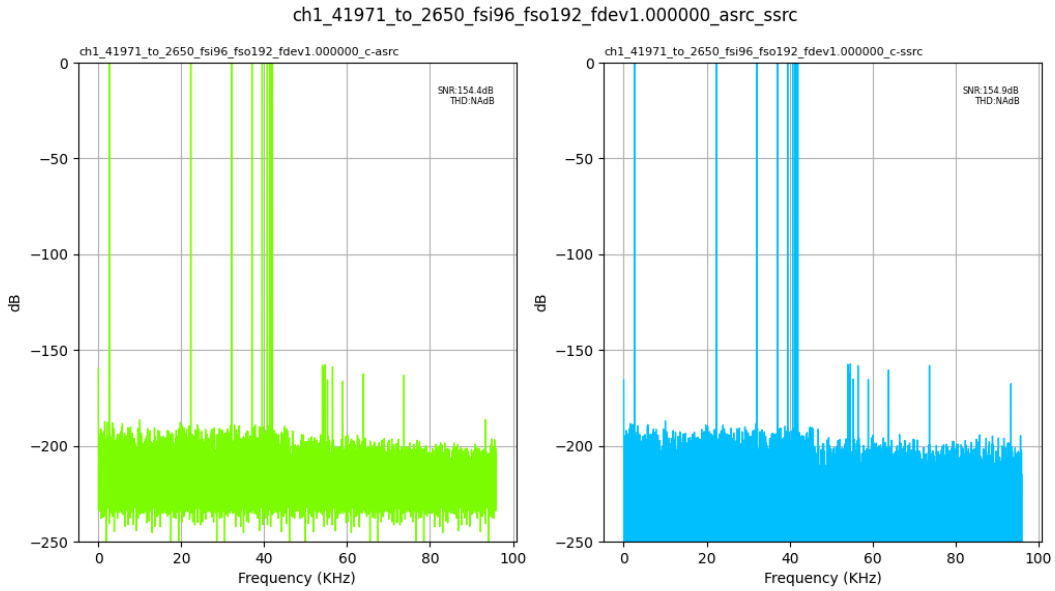

Fig. 1.148: Input Fs: 96,000Hz, Output Fs: 192,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

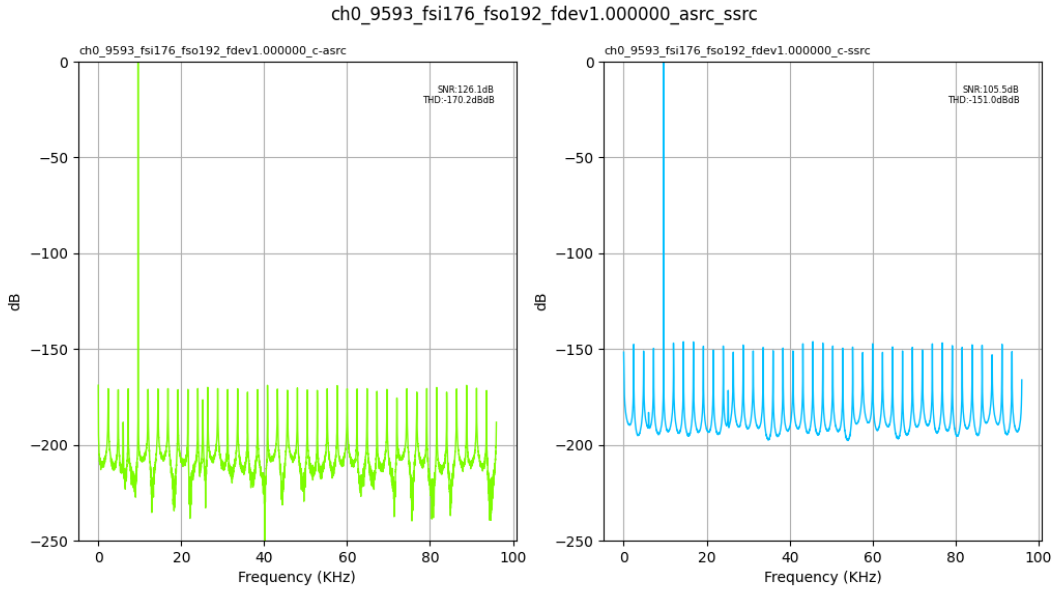

Fig. 1.149: Input Fs: 176,400Hz, Output Fs: 192,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

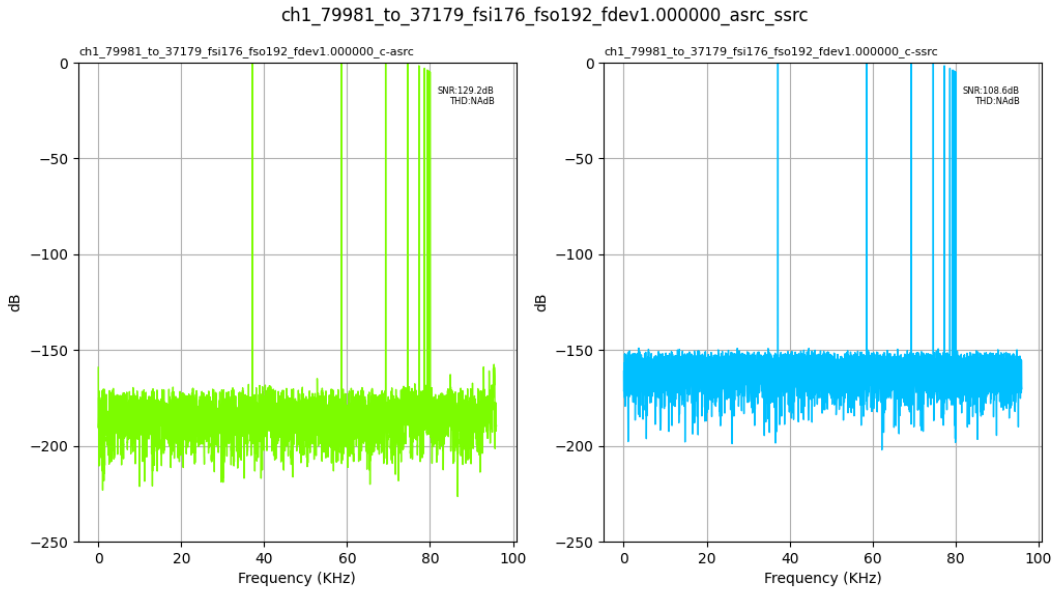

Fig. 1.150: Input Fs: 176,400Hz, Output Fs: 192,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

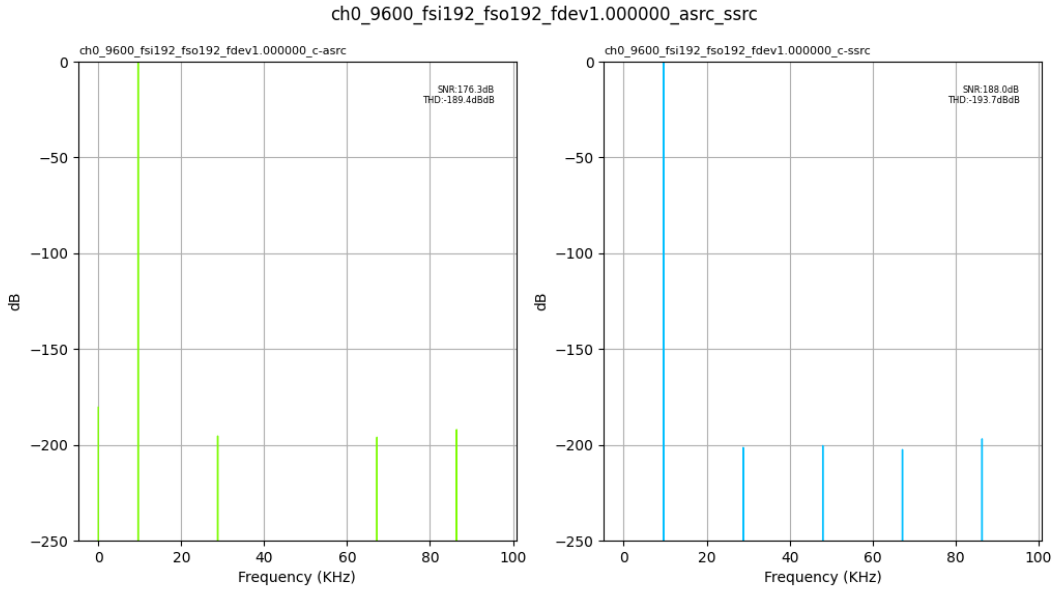

Fig. 1.151: Input Fs: 192,000Hz, Output Fs: 192,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

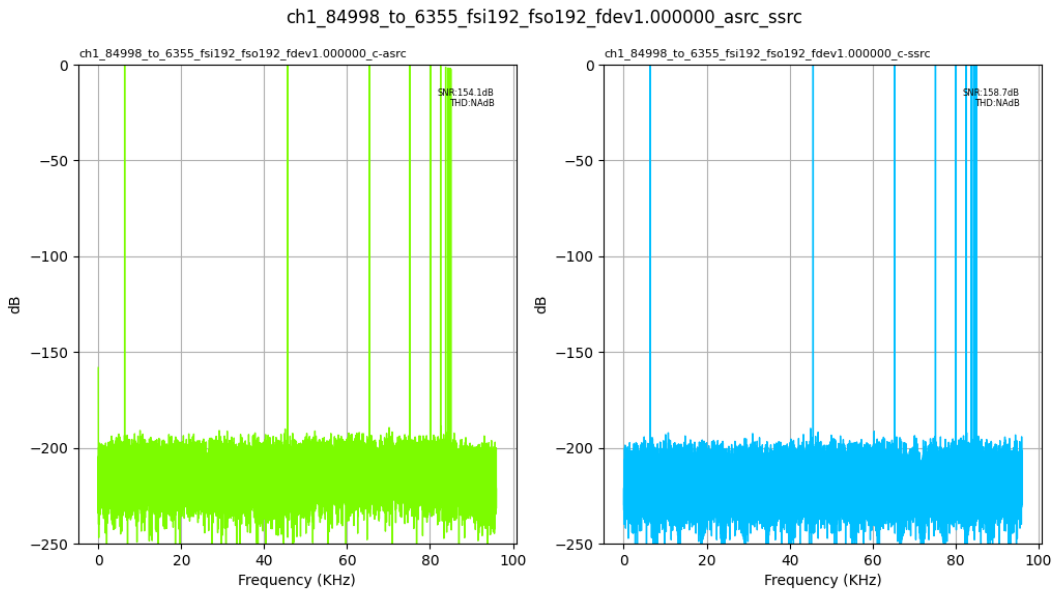

Fig. 1.152: Input Fs: 192,000Hz, Output Fs: 192,000Hz, Fs error: 1.000000, Results for: asrc, ssrc

1.3 Frequency error: 1.000100Hz

1.3.1 Output Fs : 16,000Hz

No SRC available for this scenario.

1.3.2 Output Fs : 32,000Hz

No SRC available for this scenario.

1.3.3 Output Fs : 44,100Hz

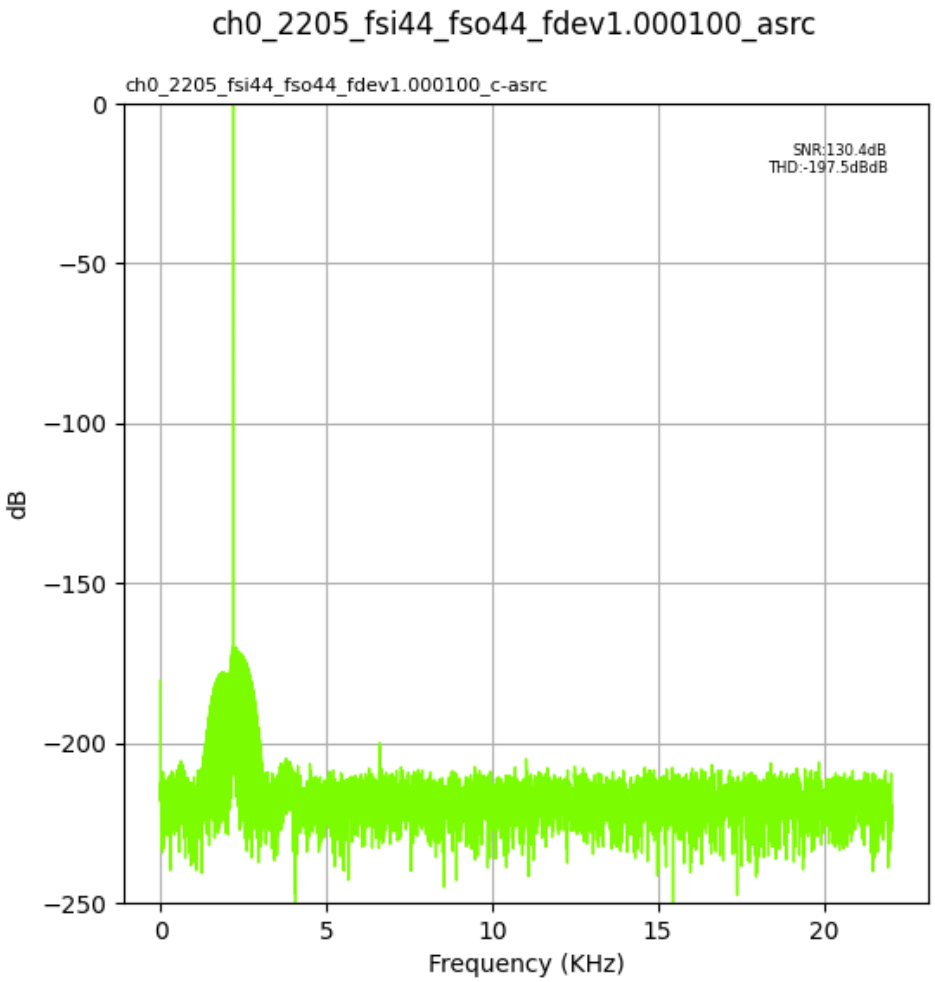

Fig. 1.153: Input Fs: 44,100Hz, Output Fs: 44,100Hz, Fs error: 1.000100, Results for: asrc

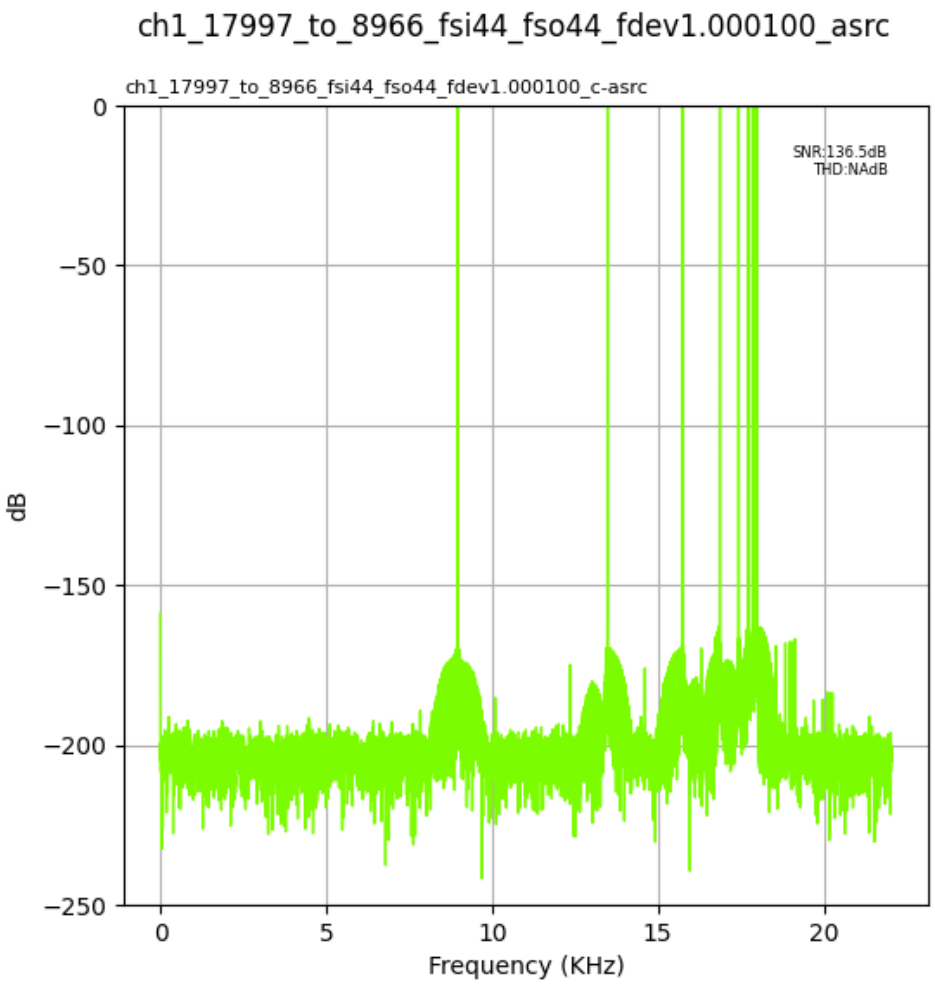

Fig. 1.154: Input Fs: 44,100Hz, Output Fs: 44,100Hz, Fs error: 1.000100, Results for: asrc

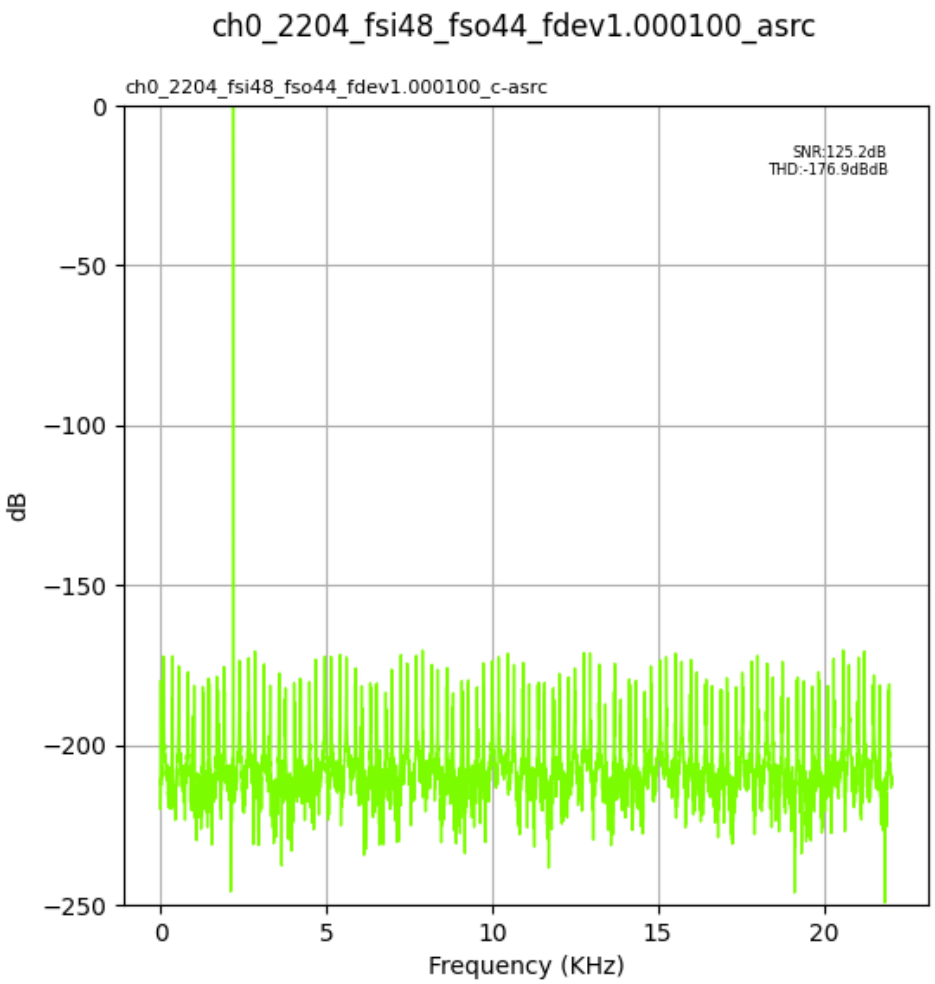

Fig. 1.155: Input Fs: 48,000Hz, Output Fs: 44,100Hz, Fs error: 1.000100, Results for: asrc

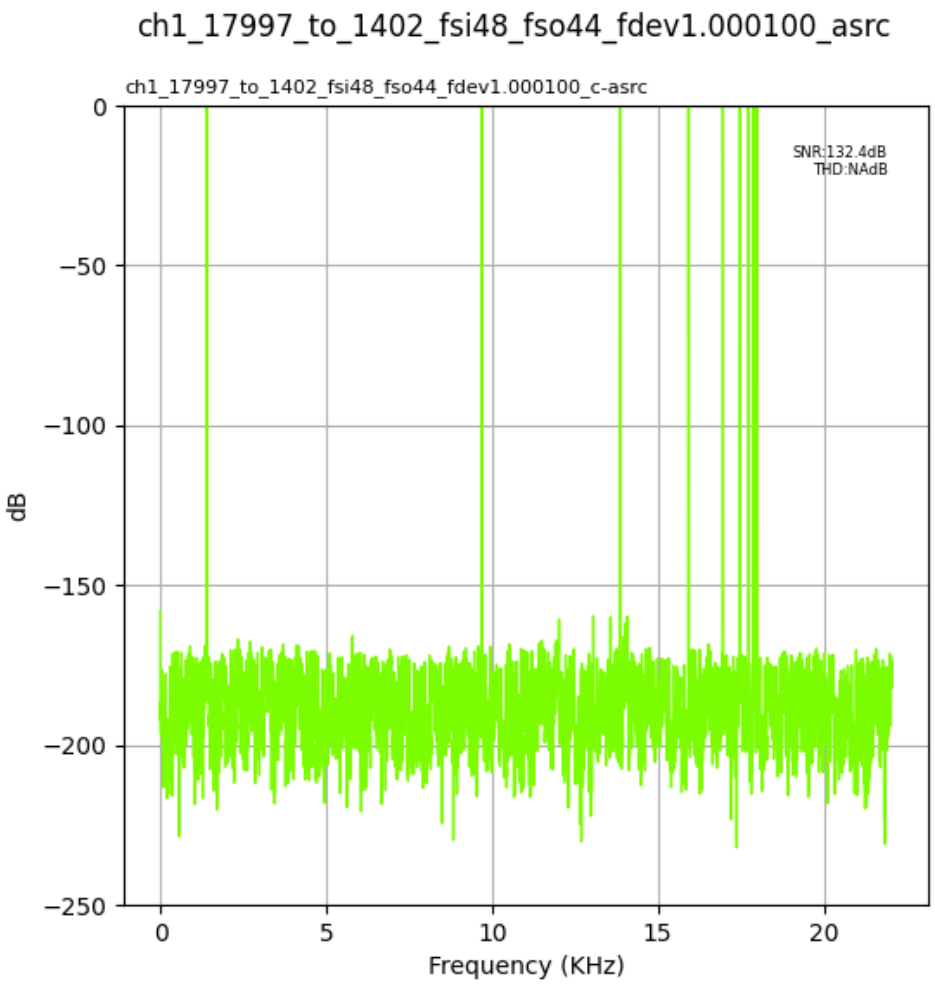

Fig. 1.156: Input Fs: 48,000Hz, Output Fs: 44,100Hz, Fs error: 1.000100, Results for: asrc

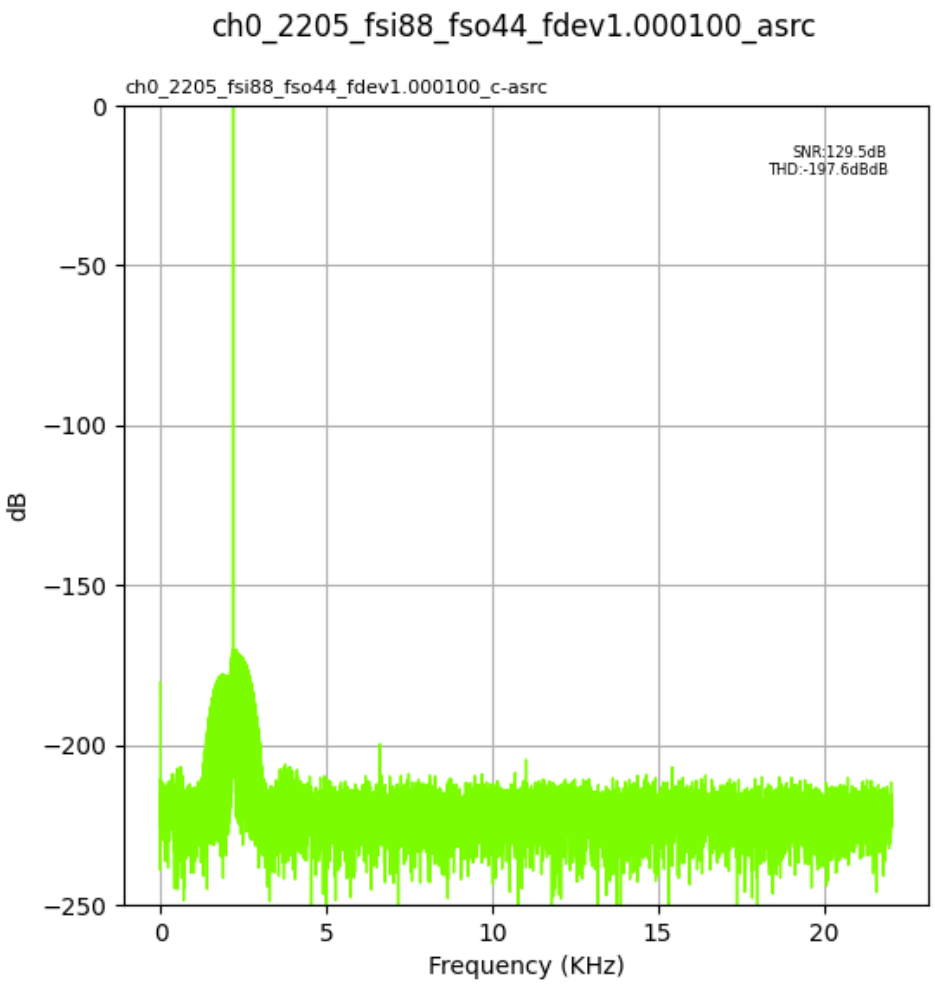

Fig. 1.157: Input Fs: 88,200Hz, Output Fs: 44,100Hz, Fs error: 1.000100, Results for: asrc

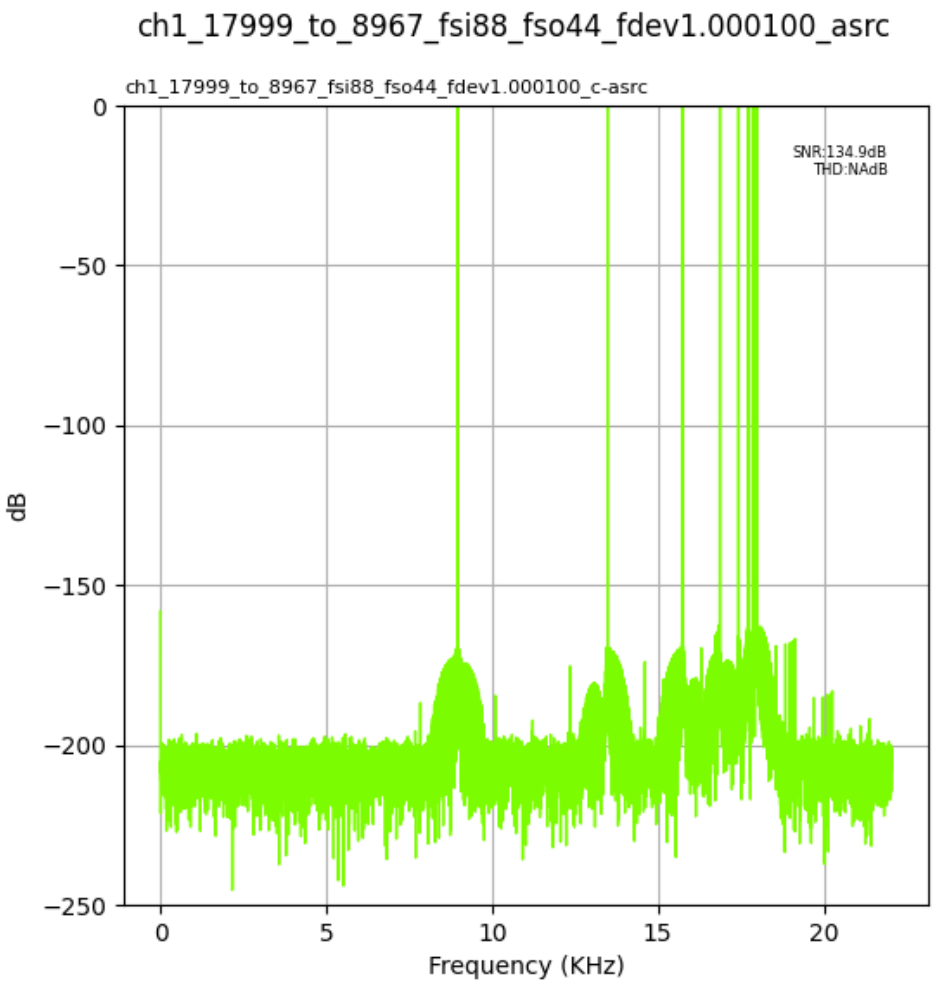

Fig. 1.158: Input Fs: 88,200Hz, Output Fs: 44,100Hz, Fs error: 1.000100, Results for: asrc

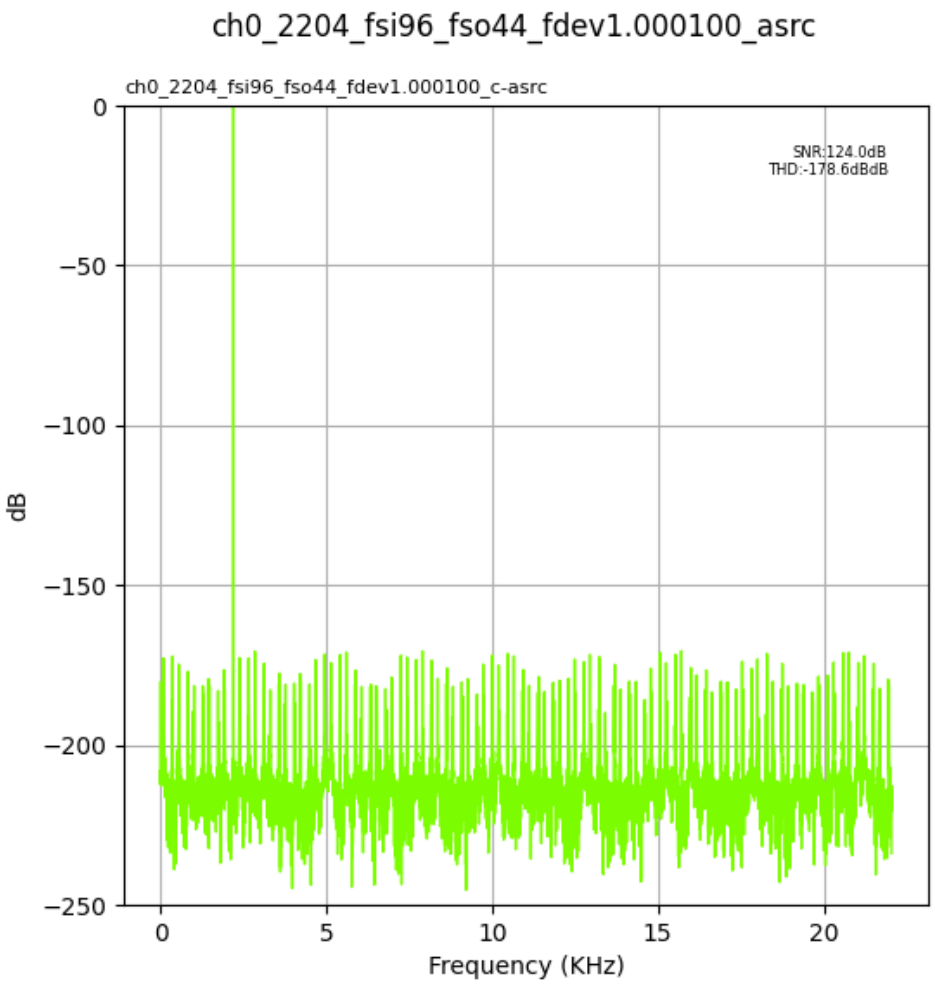

Fig. 1.159: Input Fs: 96,000Hz, Output Fs: 44,100Hz, Fs error: 1.000100, Results for: asrc

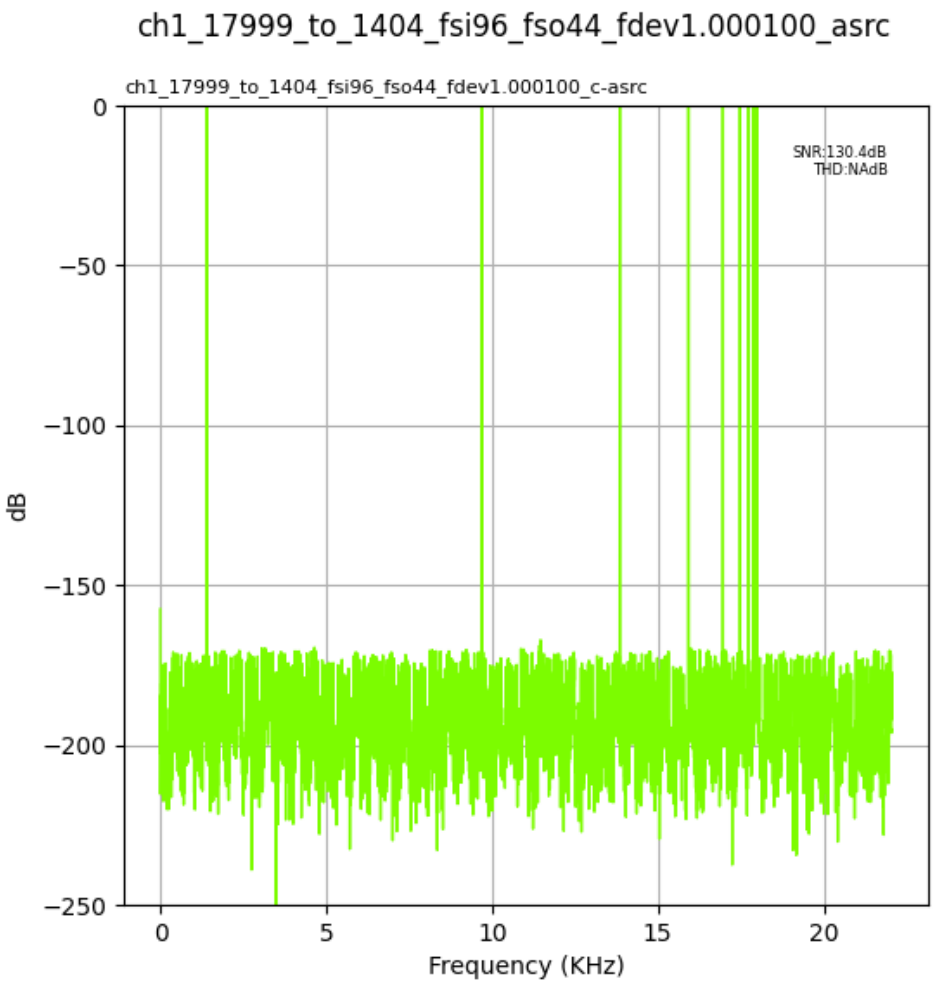

Fig. 1.160: Input Fs: 96,000Hz, Output Fs: 44,100Hz, Fs error: 1.000100, Results for: asrc

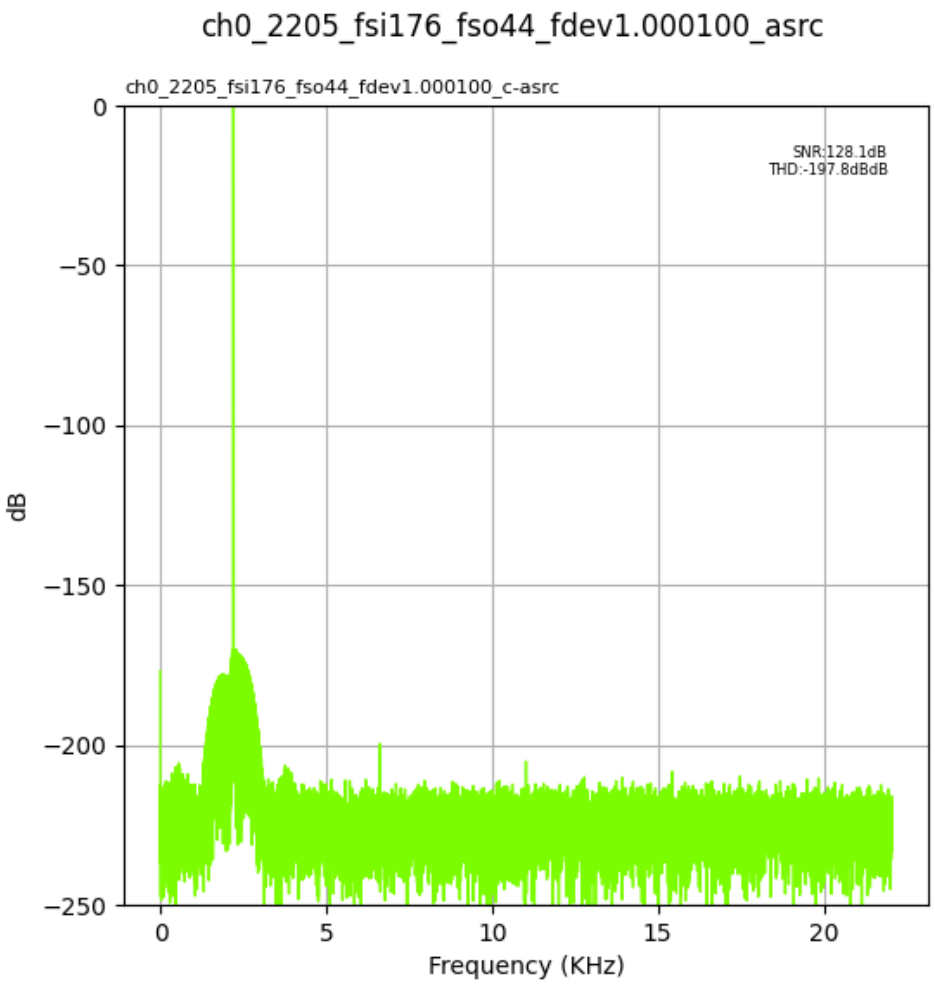

Fig. 1.161: Input Fs: 176,400Hz, Output Fs: 44,100Hz, Fs error: 1.000100, Results for: asrc

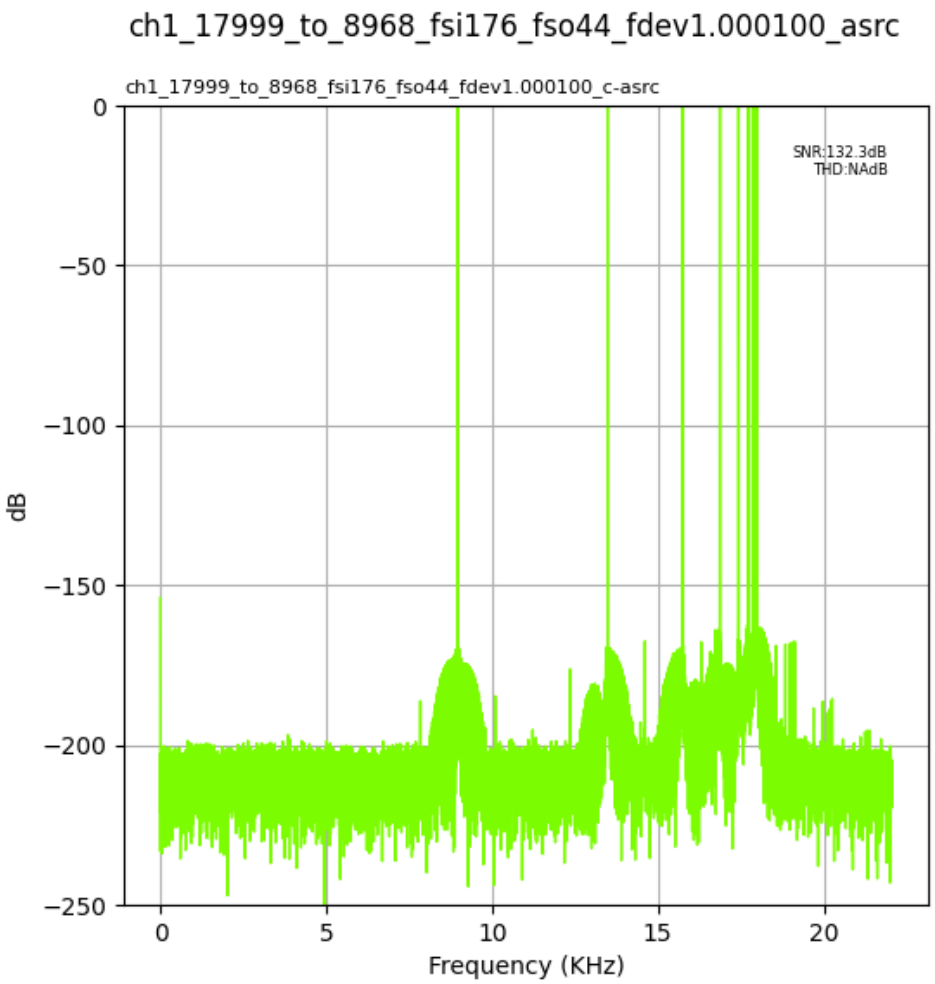

Fig. 1.162: Input Fs: 176,400Hz, Output Fs: 44,100Hz, Fs error: 1.000100, Results for: asrc

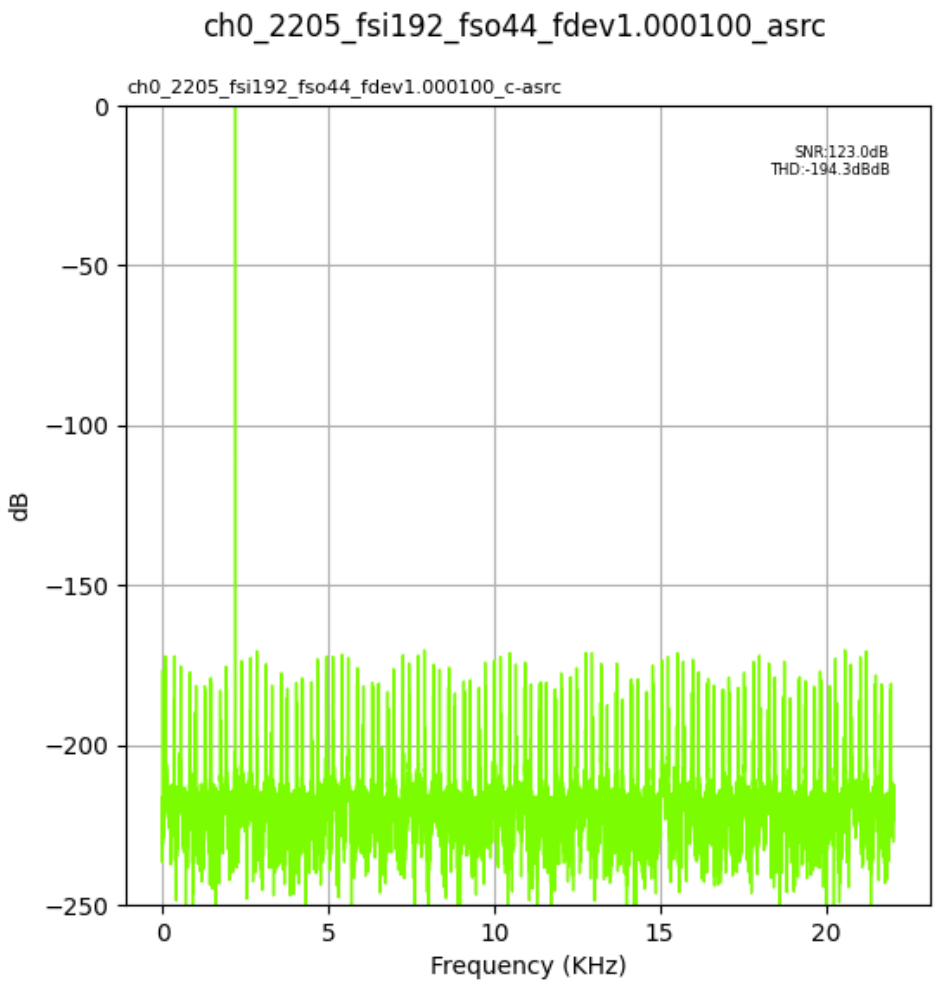

Fig. 1.163: Input Fs: 192,000Hz, Output Fs: 44,100Hz, Fs error: 1.000100, Results for: asrc

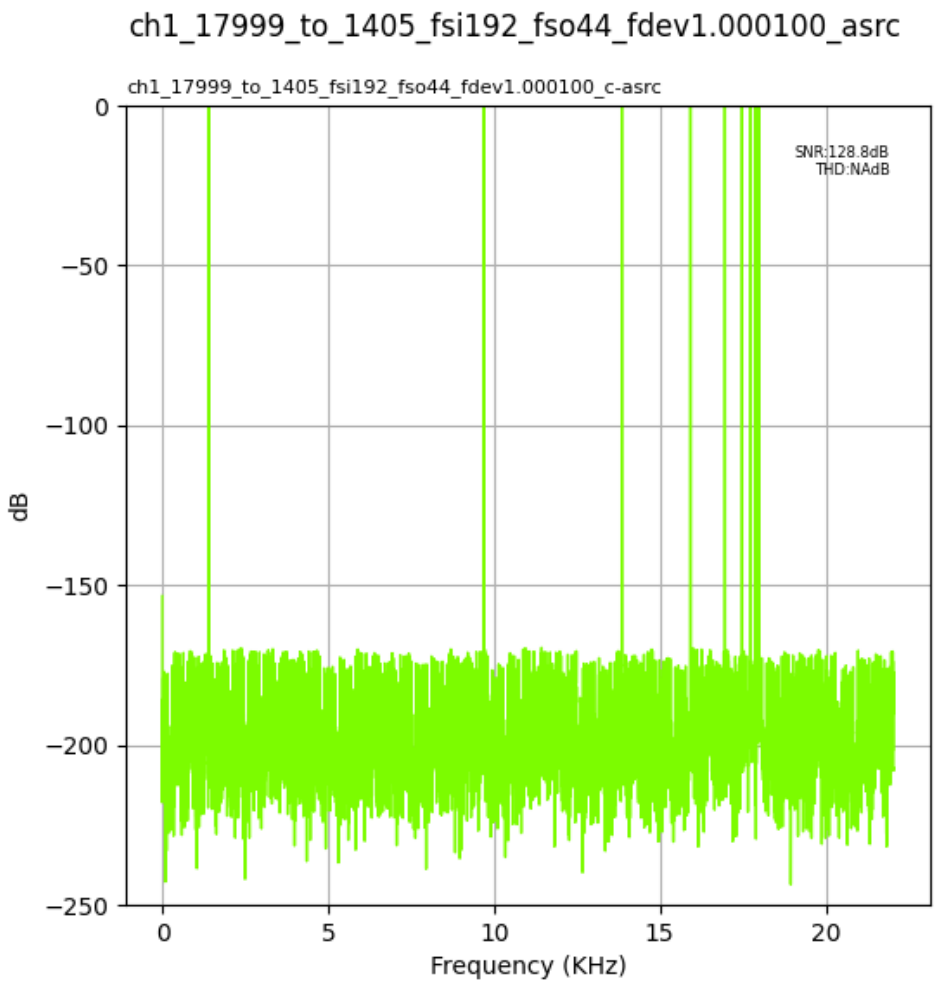

Fig. 1.164: Input Fs: 192,000Hz, Output Fs: 44,100Hz, Fs error: 1.000100, Results for: asrc

1.3.4 Output Fs : 48,000Hz

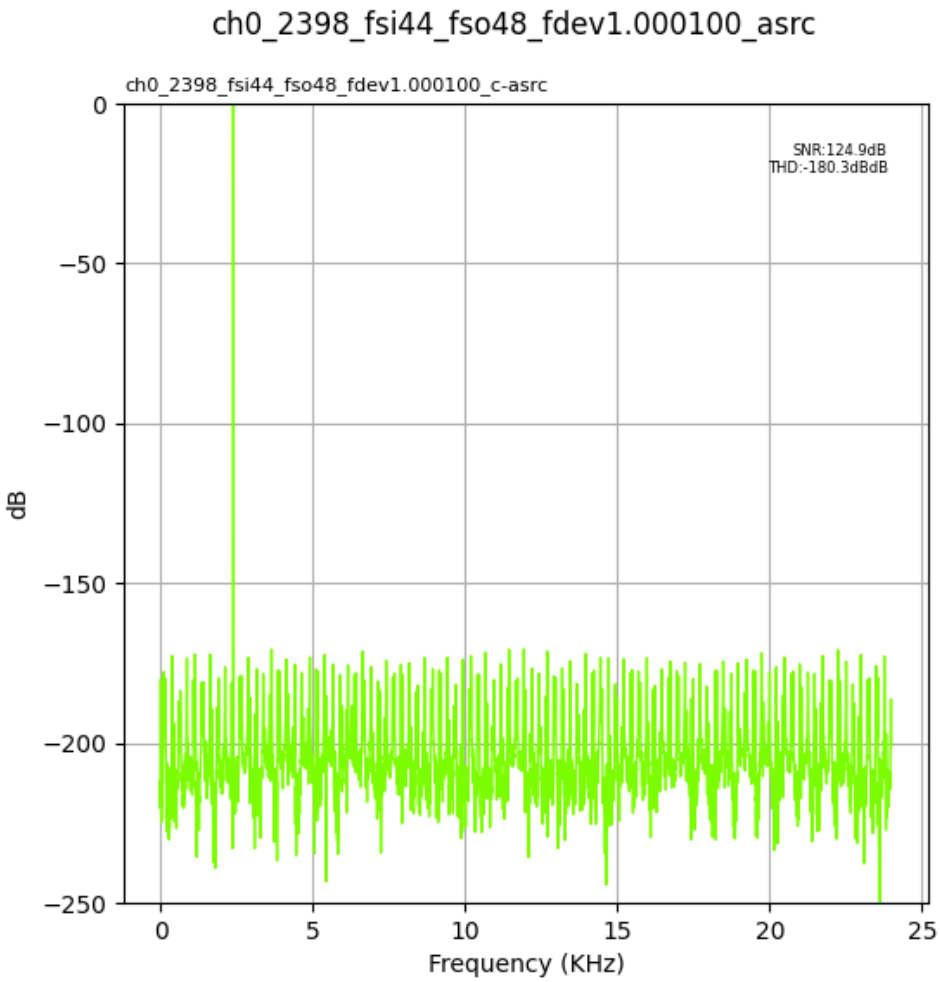

Fig. 1.165: Input Fs: 44,100Hz, Output Fs: 48,000Hz, Fs error: 1.000100, Results for: asrc

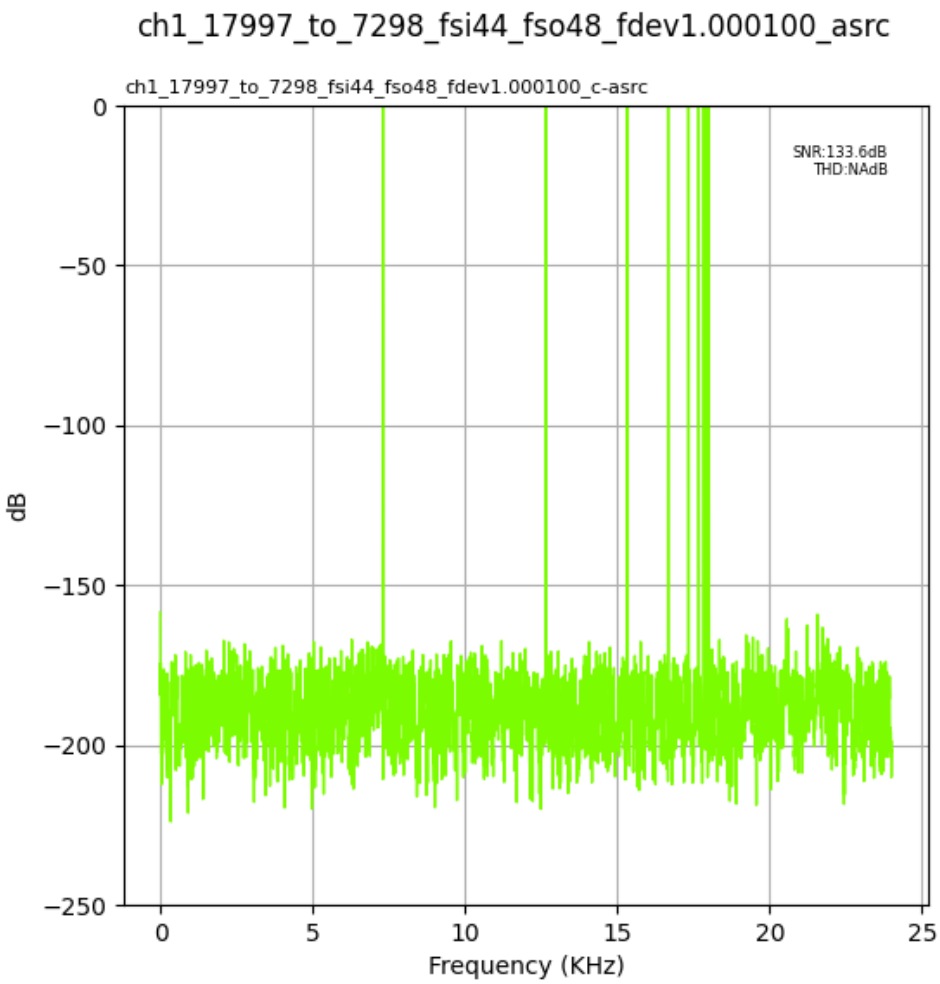

Fig. 1.166: Input Fs: 44,100Hz, Output Fs: 48,000Hz, Fs error: 1.000100, Results for: asrc

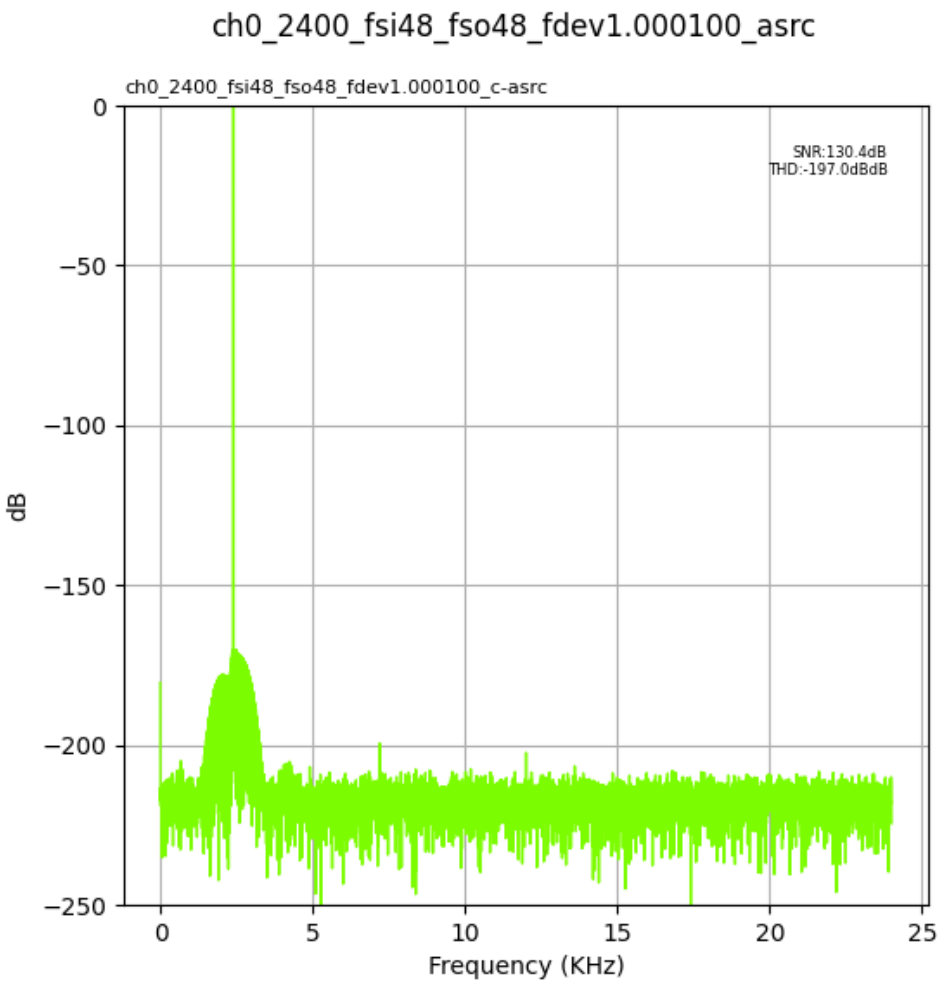

Fig. 1.167: Input Fs: 48,000Hz, Output Fs: 48,000Hz, Fs error: 1.000100, Results for: asrc

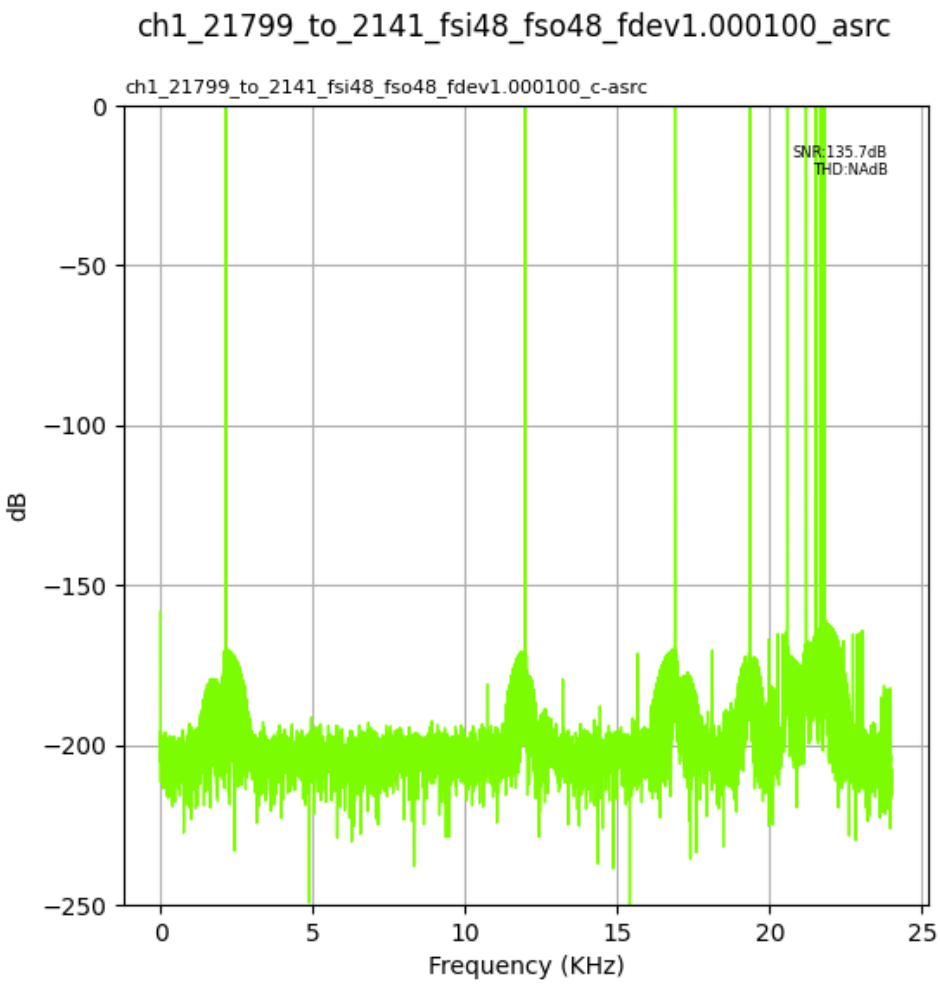

Fig. 1.168: Input Fs: 48,000Hz, Output Fs: 48,000Hz, Fs error: 1.000100, Results for: asrc

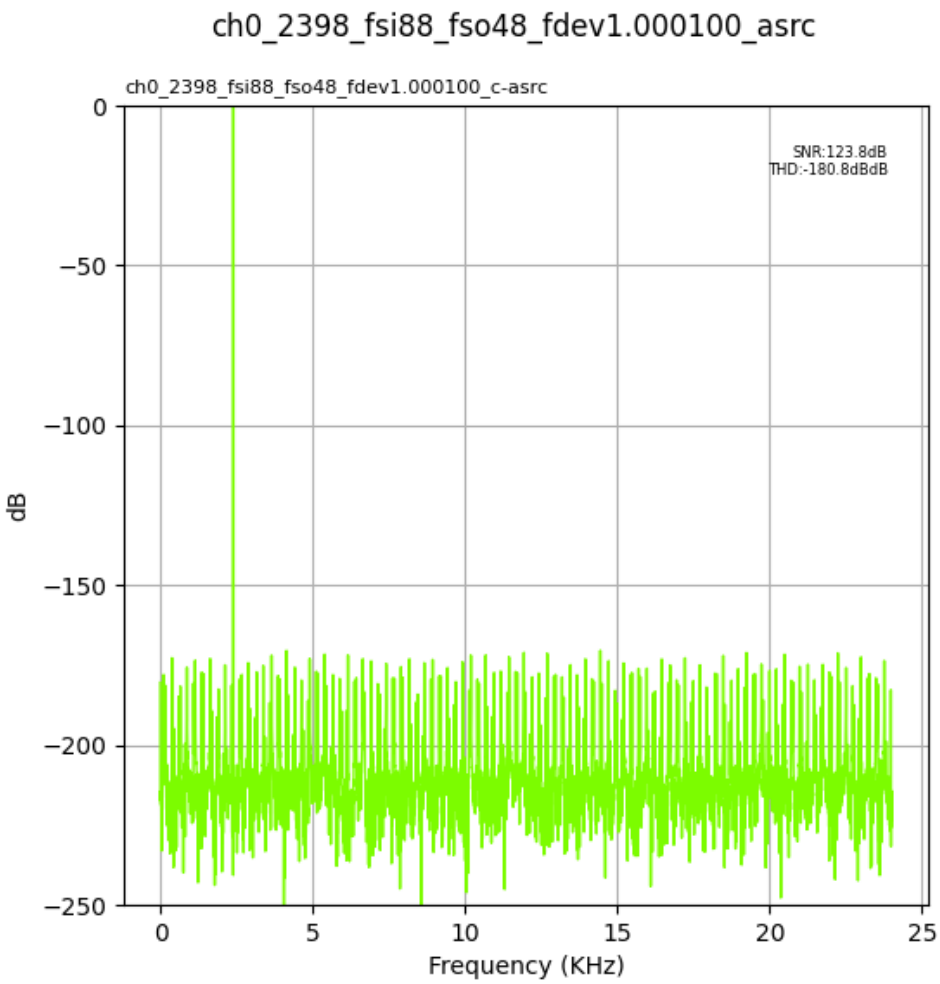

Fig. 1.169: Input Fs: 88,200Hz, Output Fs: 48,000Hz, Fs error: 1.000100, Results for: asrc

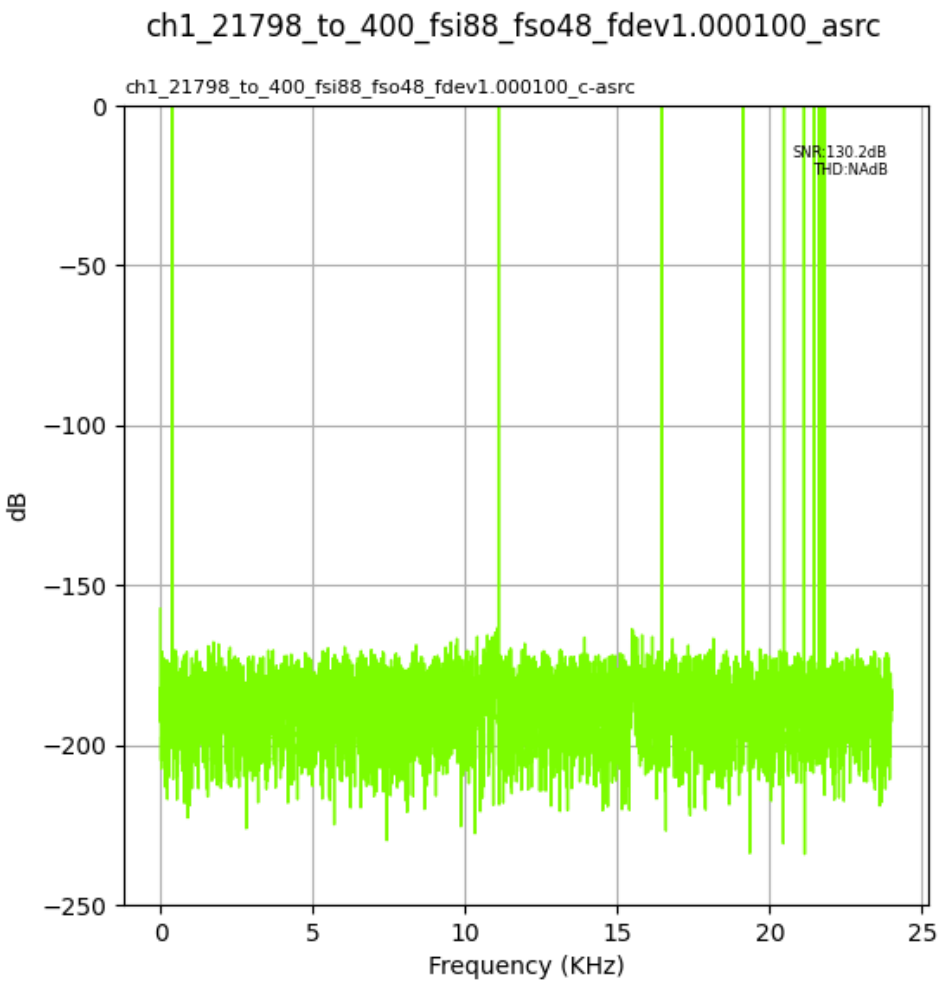

Fig. 1.170: Input Fs: 88,200Hz, Output Fs: 48,000Hz, Fs error: 1.000100, Results for: asrc

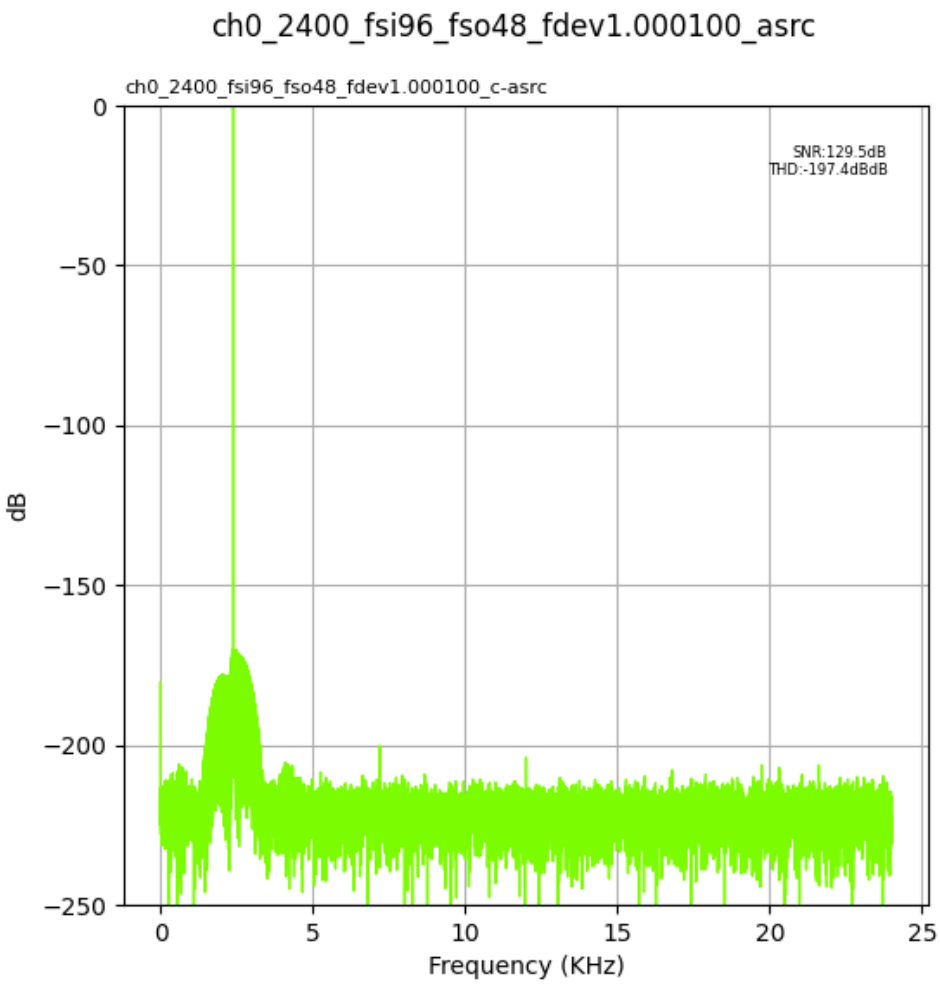

Fig. 1.171: Input Fs: 96,000Hz, Output Fs: 48,000Hz, Fs error: 1.000100, Results for: asrc

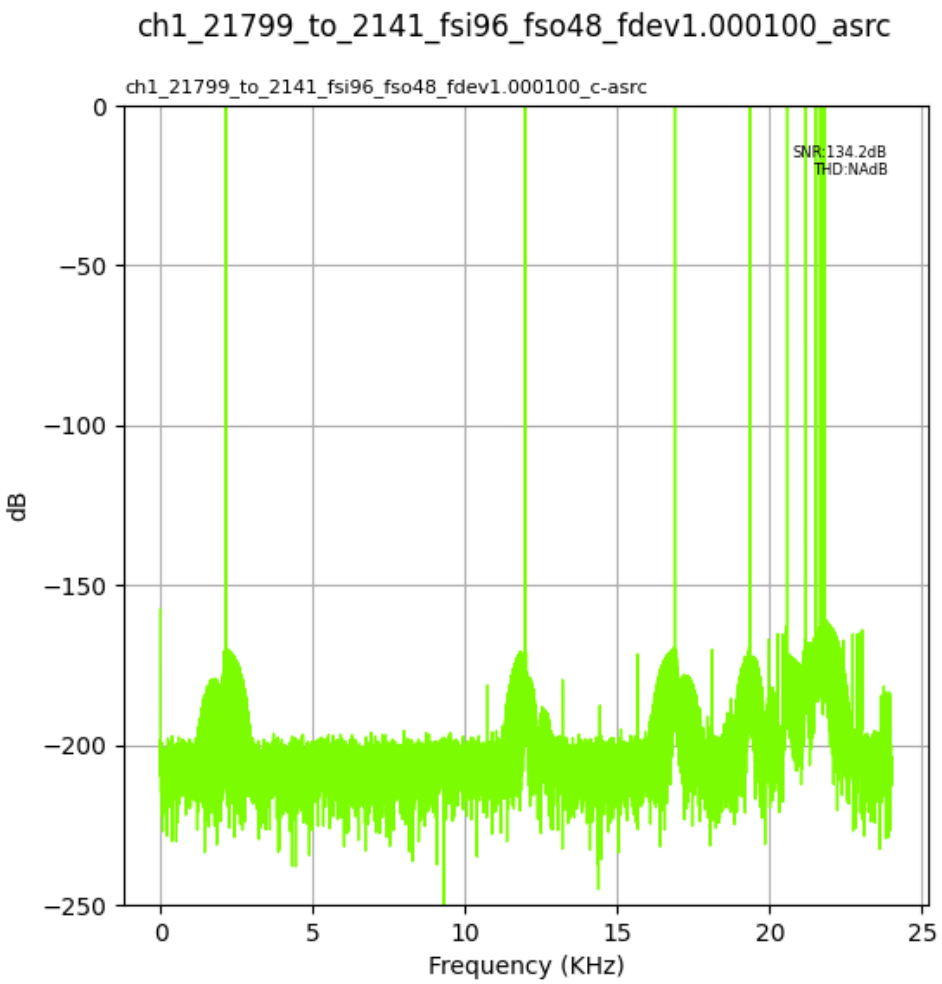

Fig. 1.172: Input Fs: 96,000Hz, Output Fs: 48,000Hz, Fs error: 1.000100, Results for: asrc

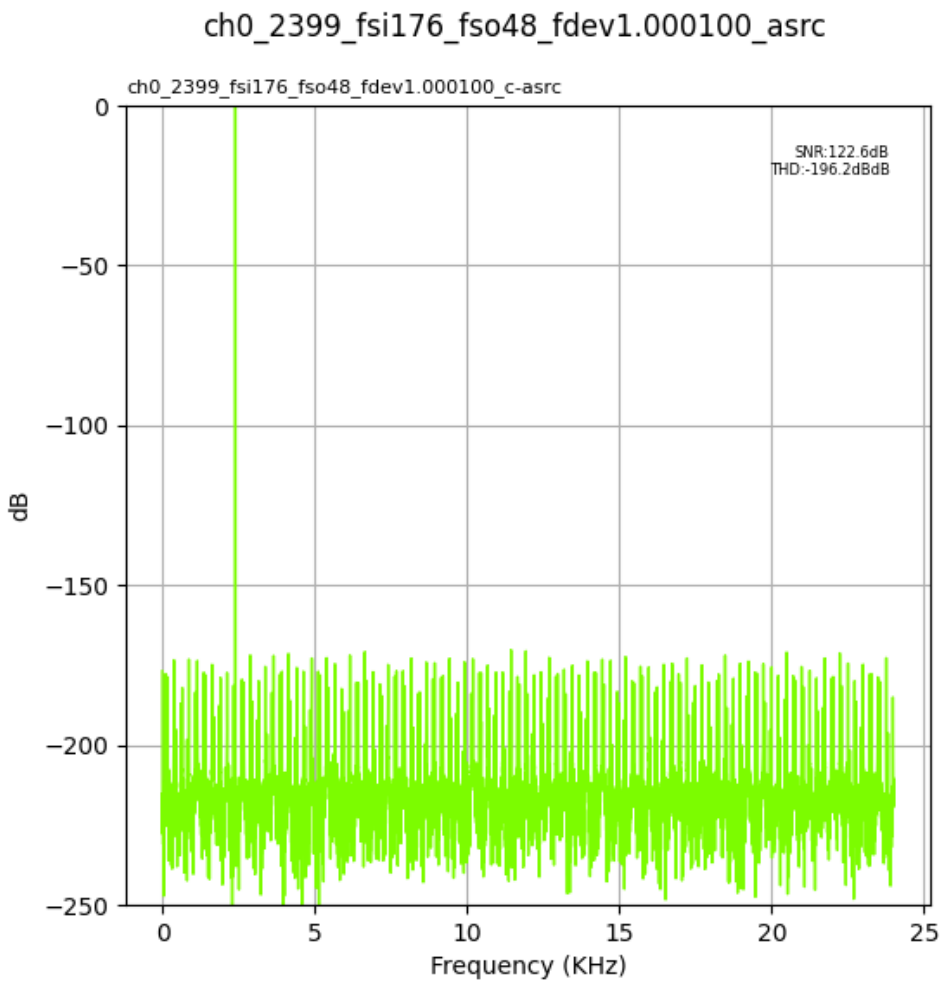

Fig. 1.173: Input Fs: 176,400Hz, Output Fs: 48,000Hz, Fs error: 1.000100, Results for: asrc

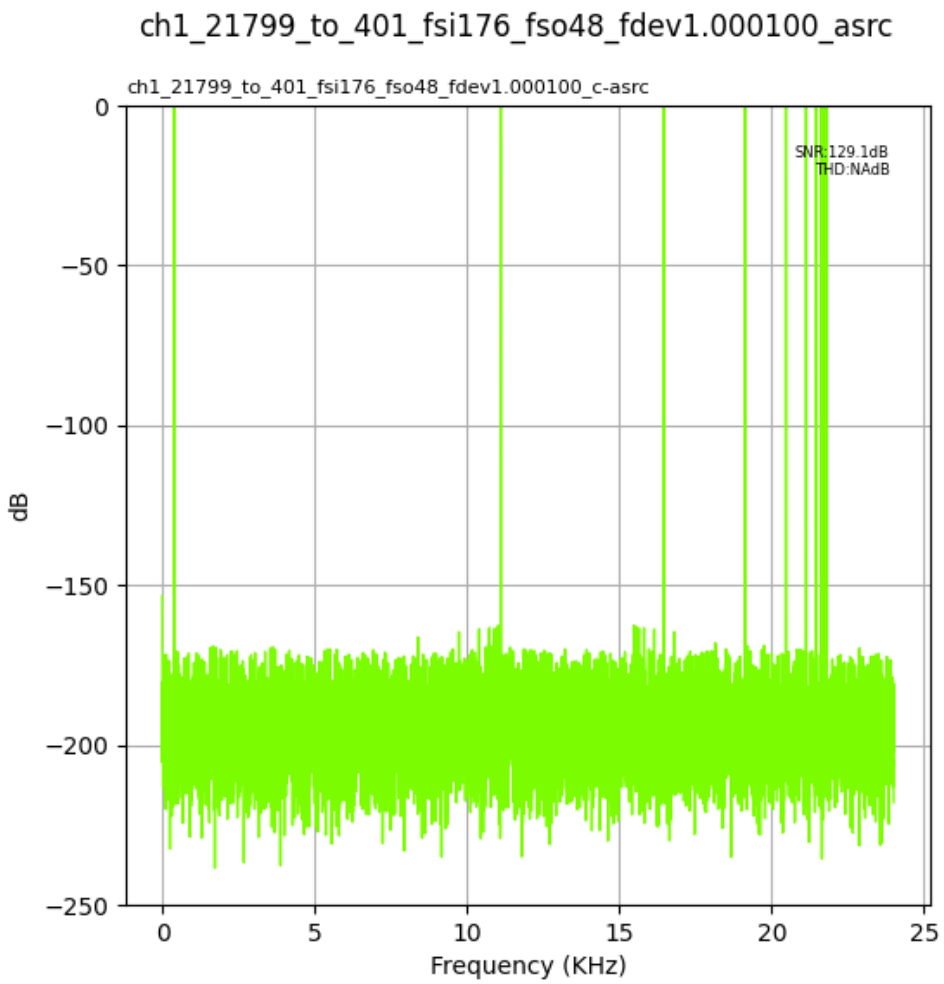

Fig. 1.174: Input Fs: 176,400Hz, Output Fs: 48,000Hz, Fs error: 1.000100, Results for: asrc

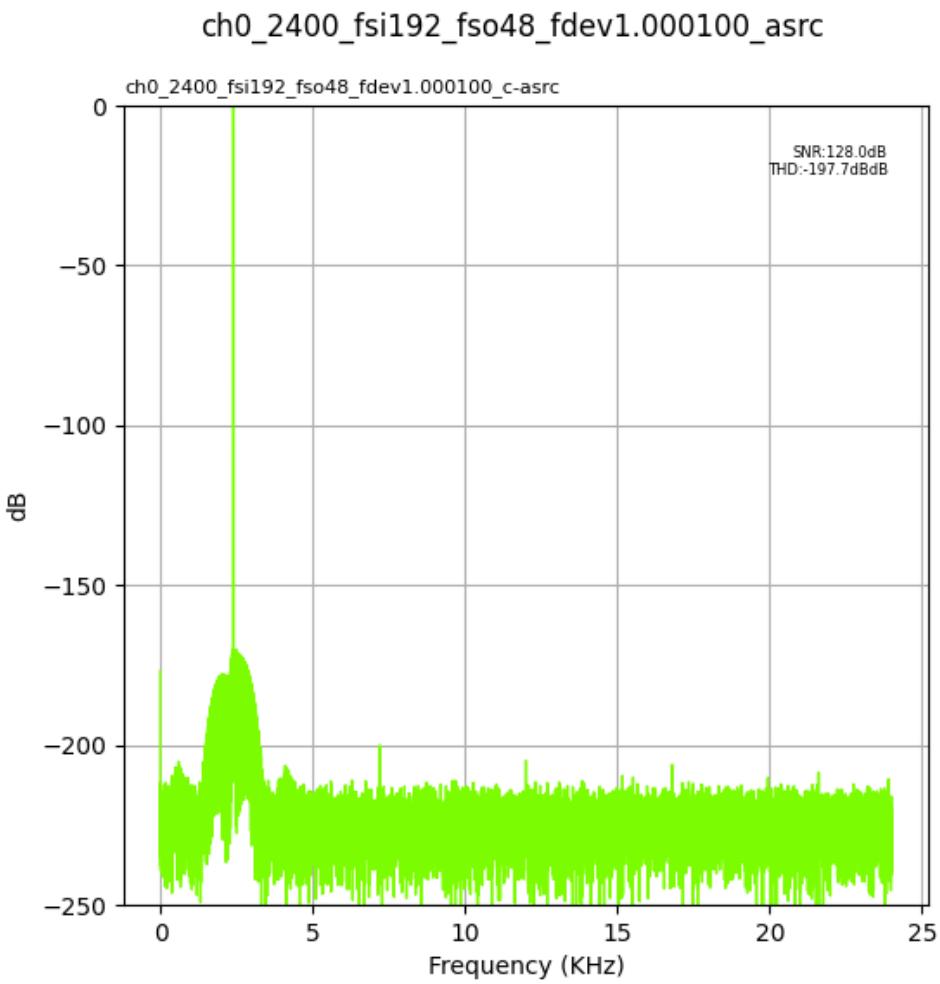

Fig. 1.175: Input Fs: 192,000Hz, Output Fs: 48,000Hz, Fs error: 1.000100, Results for: asrc

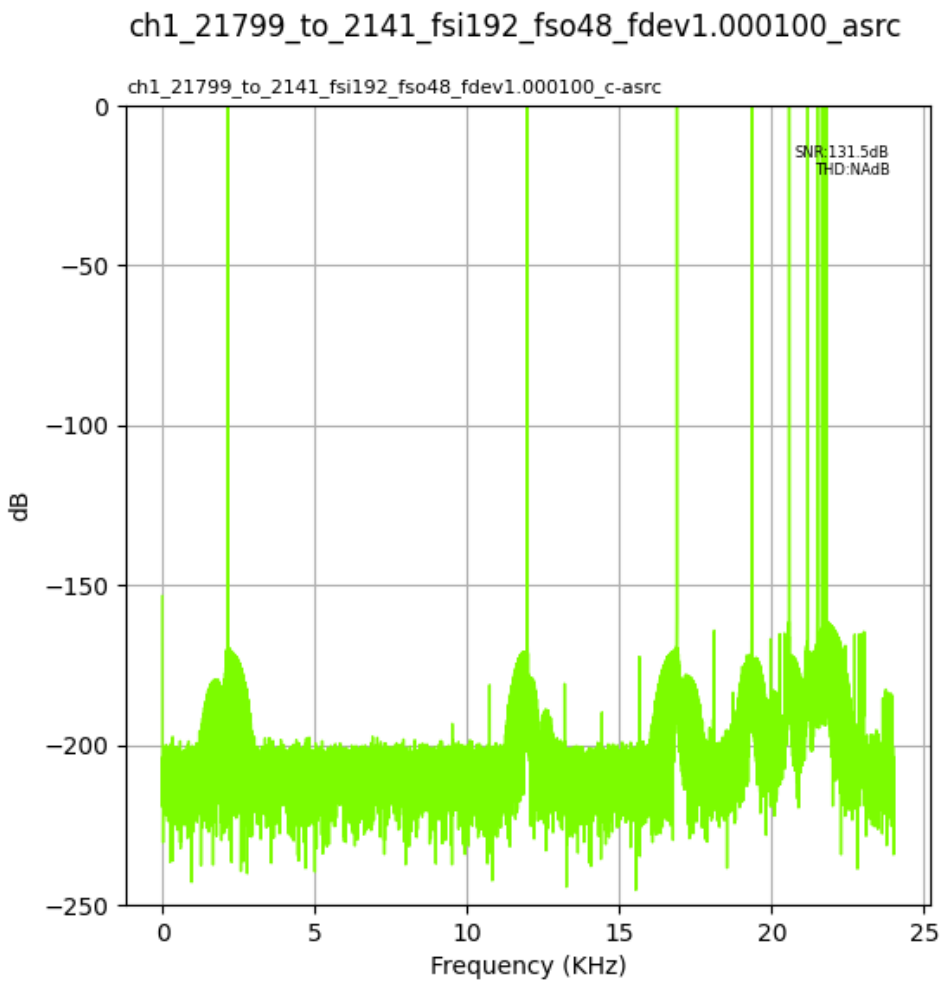

Fig. 1.176: Input Fs: 192,000Hz, Output Fs: 48,000Hz, Fs error: 1.000100, Results for: asrc

1.3.5 Output Fs : 88,200Hz

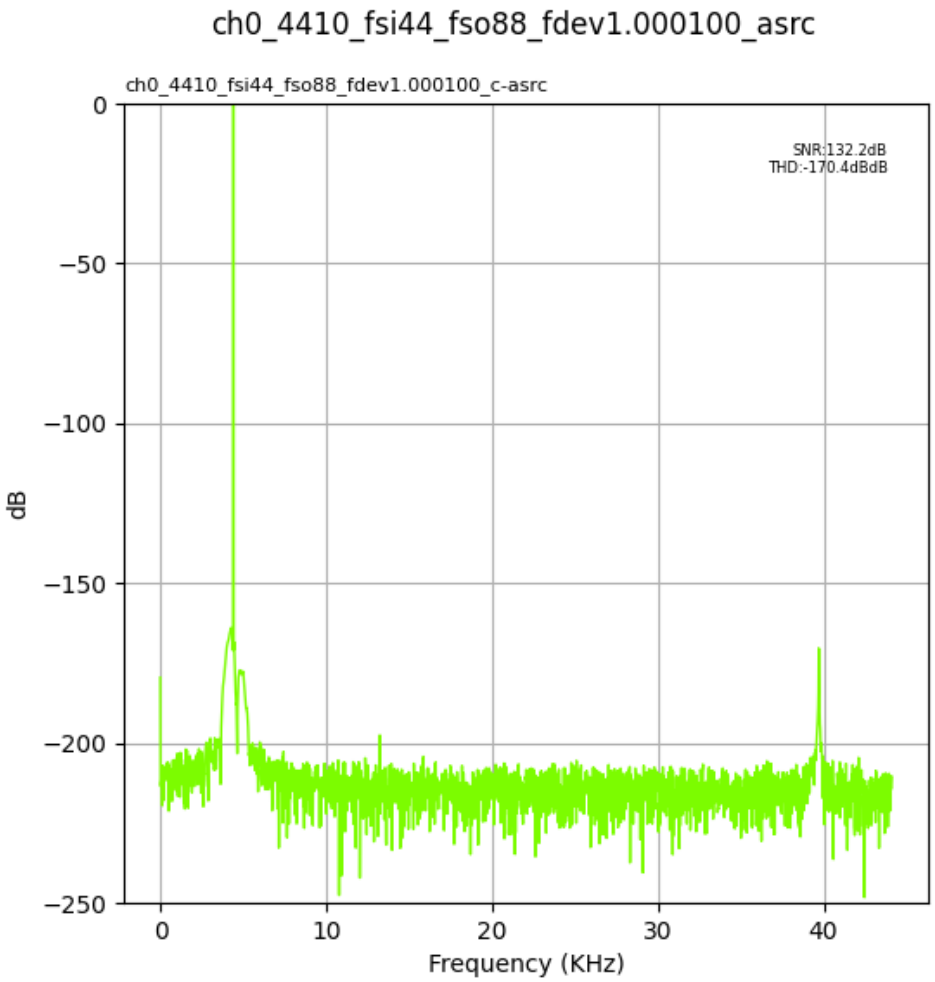

Fig. 1.177: Input Fs: 44,100Hz, Output Fs: 88,200Hz, Fs error: 1.000100, Results for: asrc

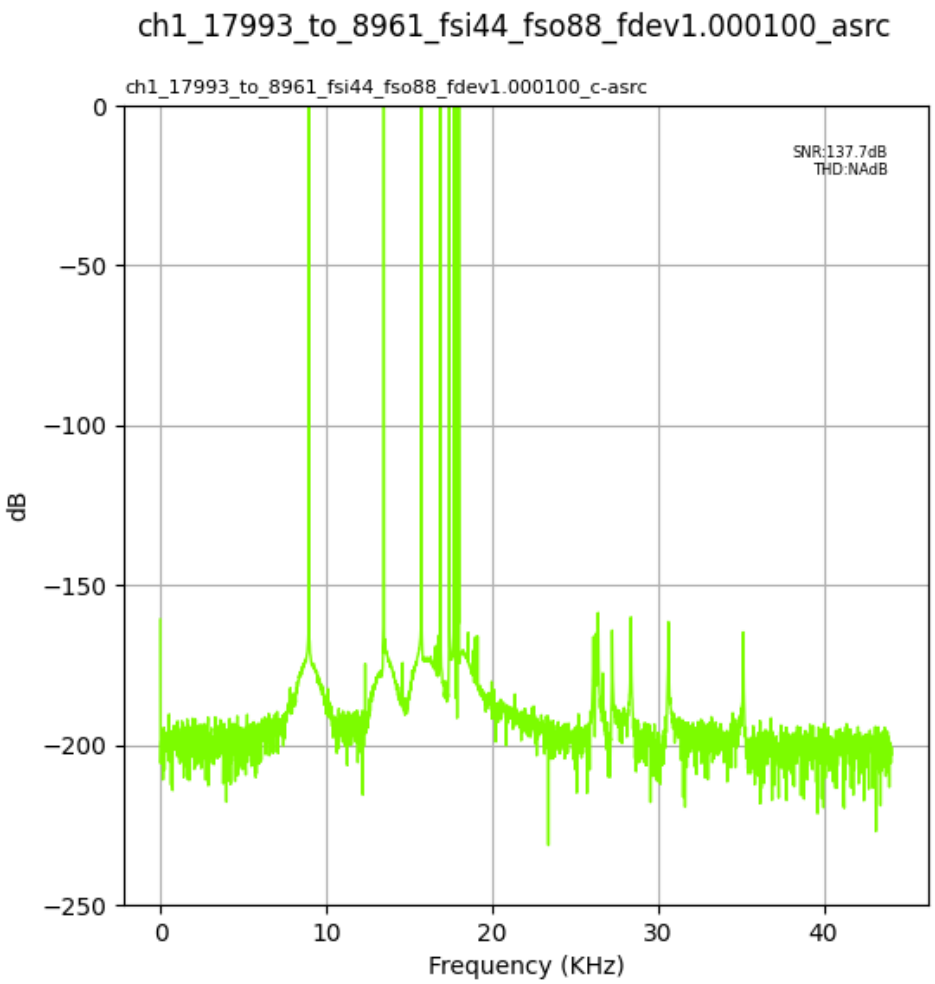

Fig. 1.178: Input Fs: 44,100Hz, Output Fs: 88,200Hz, Fs error: 1.000100, Results for: asrc

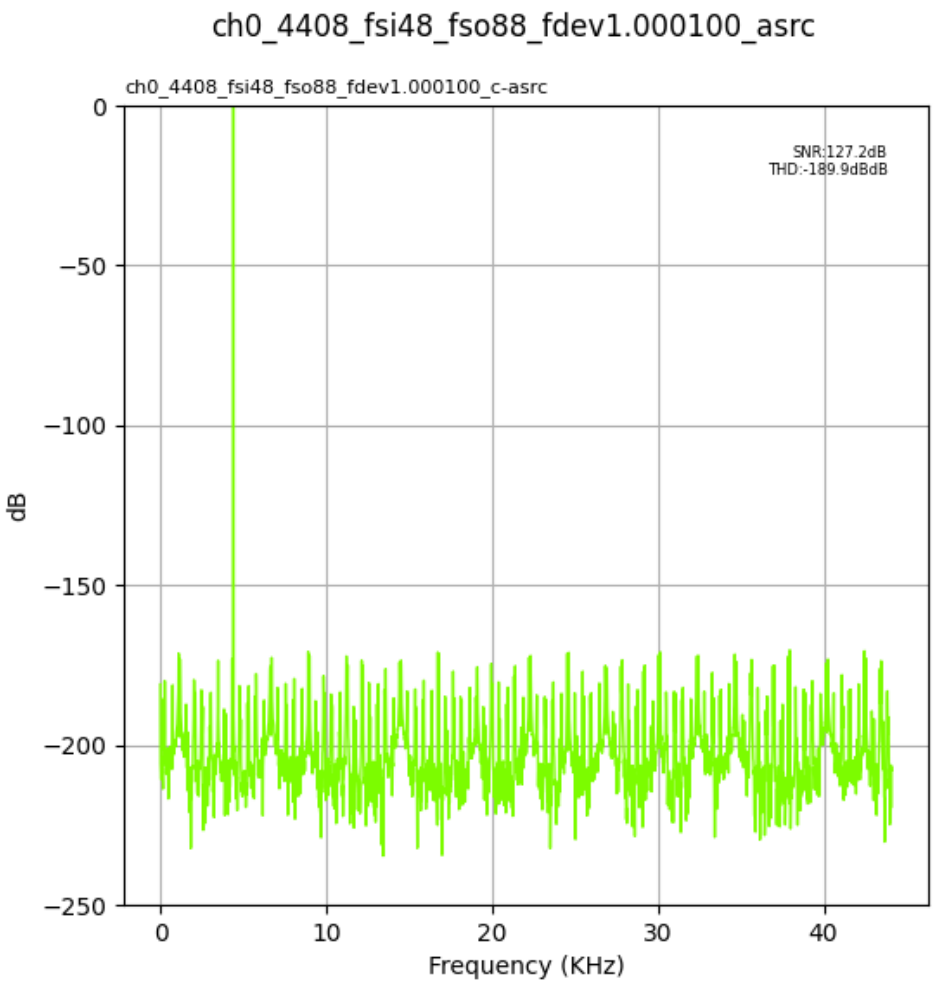

Fig. 1.179: Input Fs: 48,000Hz, Output Fs: 88,200Hz, Fs error: 1.000100, Results for: asrc

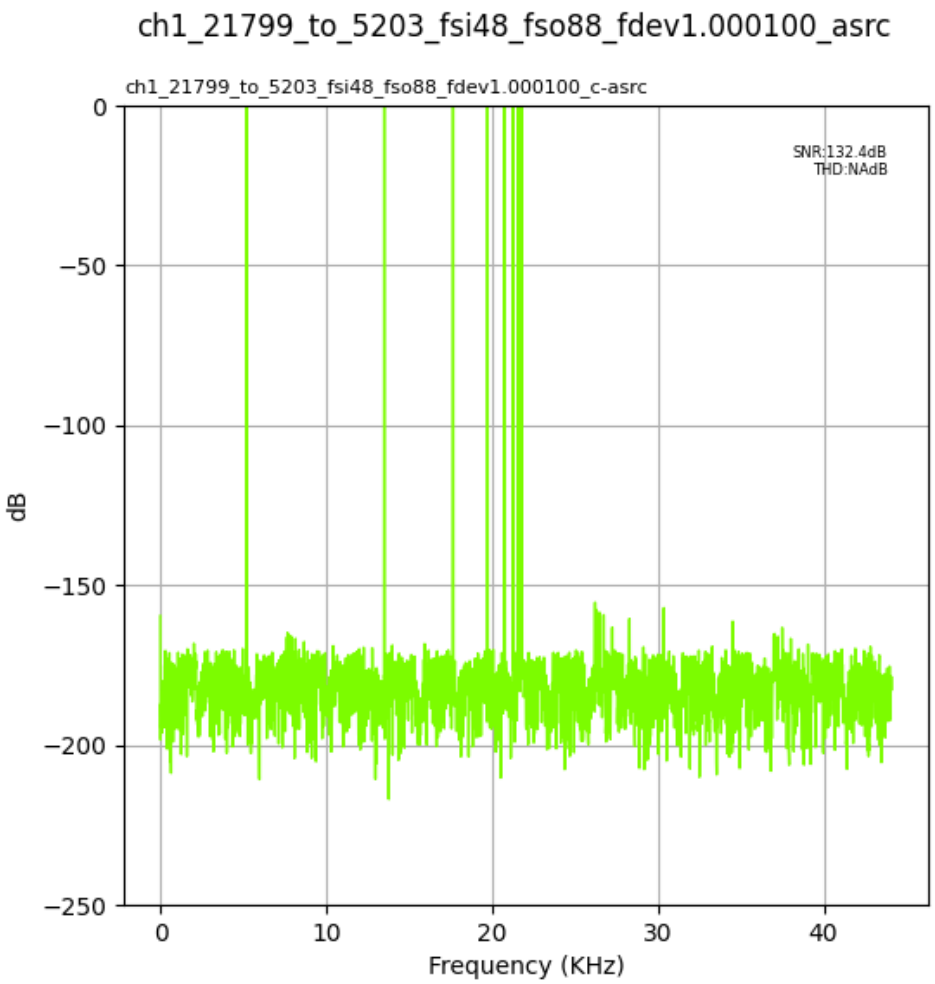

Fig. 1.180: Input Fs: 48,000Hz, Output Fs: 88,200Hz, Fs error: 1.000100, Results for: asrc

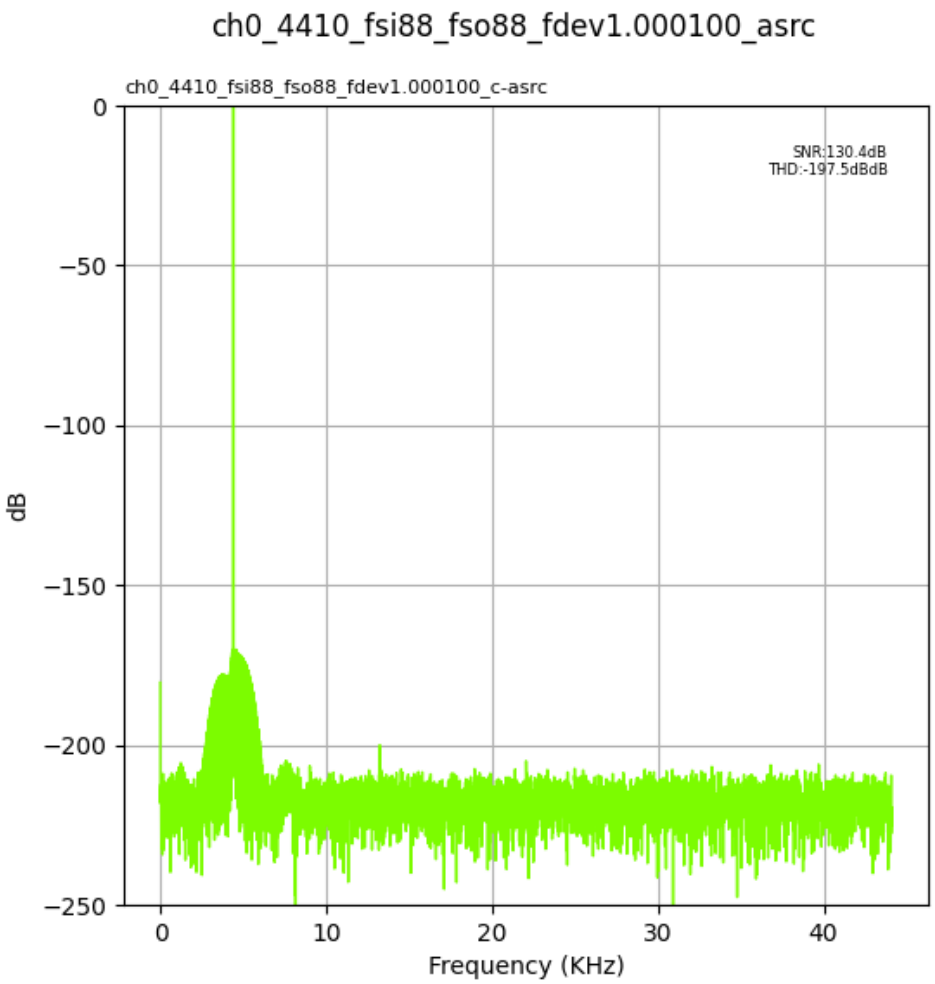

Fig. 1.181: Input Fs: 88,200Hz, Output Fs: 88,200Hz, Fs error: 1.000100, Results for: asrc

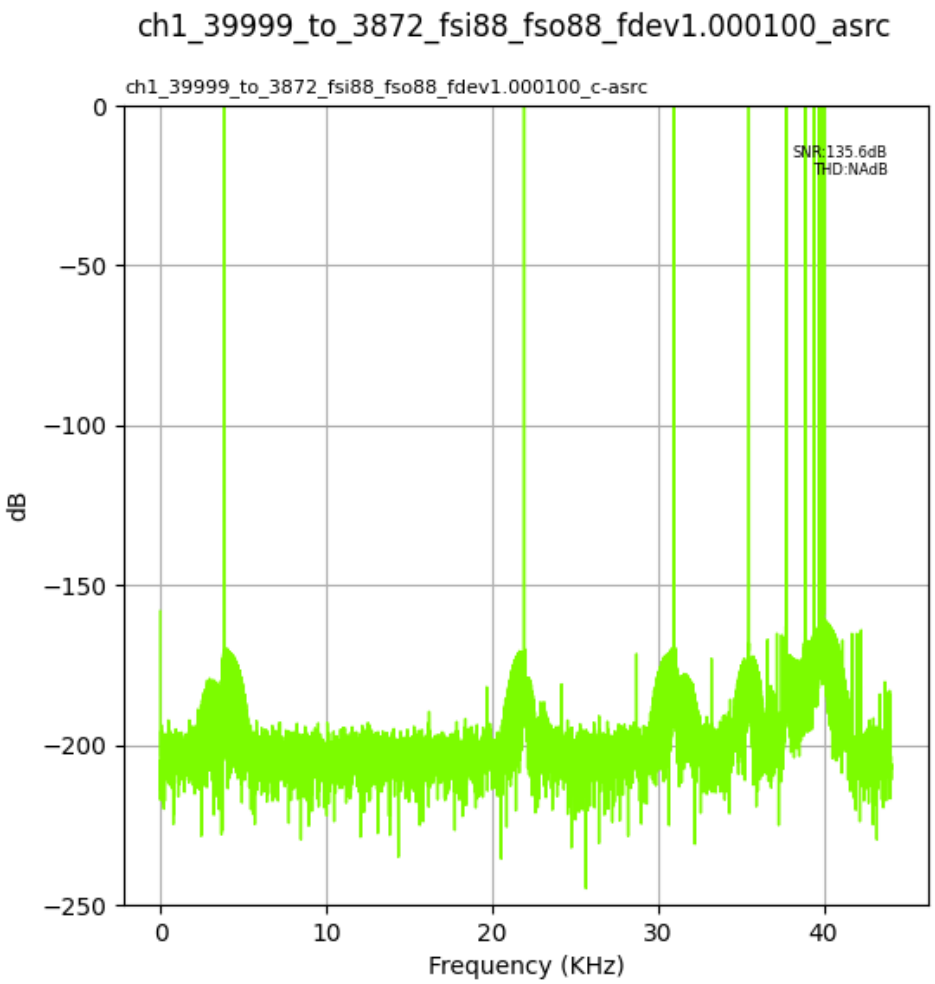

Fig. 1.182: Input Fs: 88,200Hz, Output Fs: 88,200Hz, Fs error: 1.000100, Results for: asrc

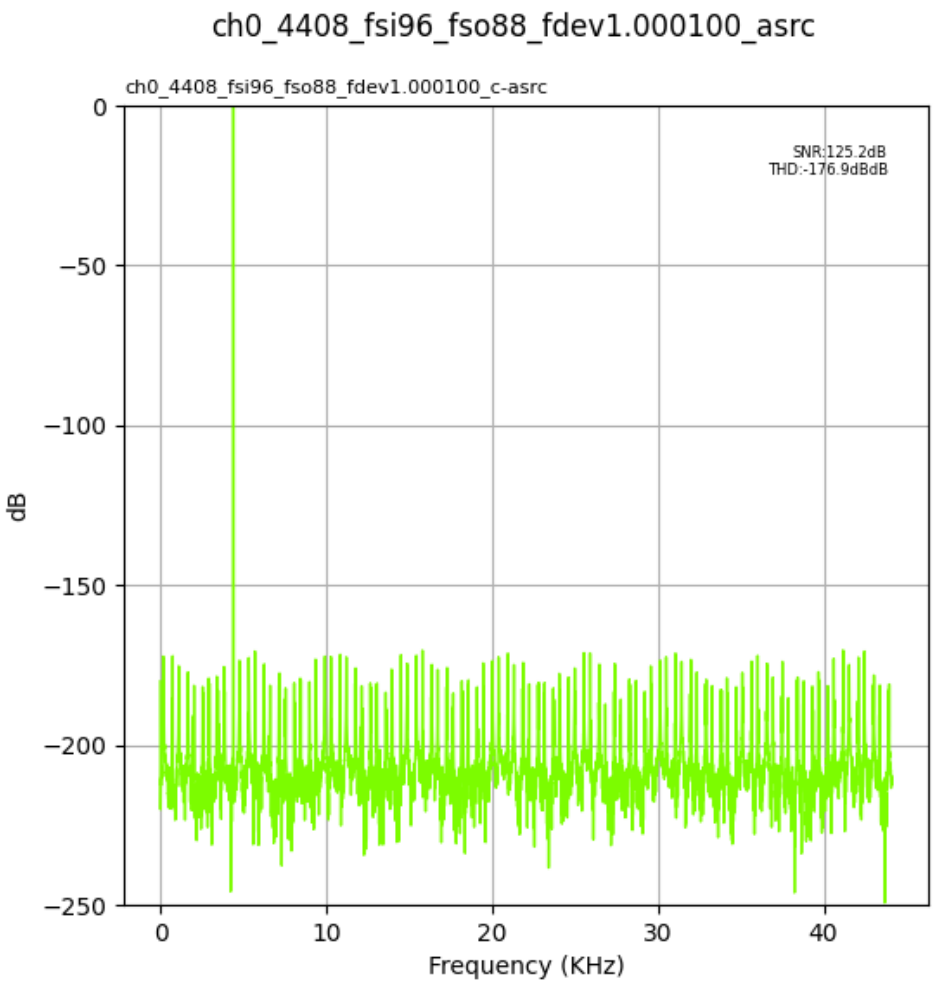

Fig. 1.183: Input Fs: 96,000Hz, Output Fs: 88,200Hz, Fs error: 1.000100, Results for: asrc

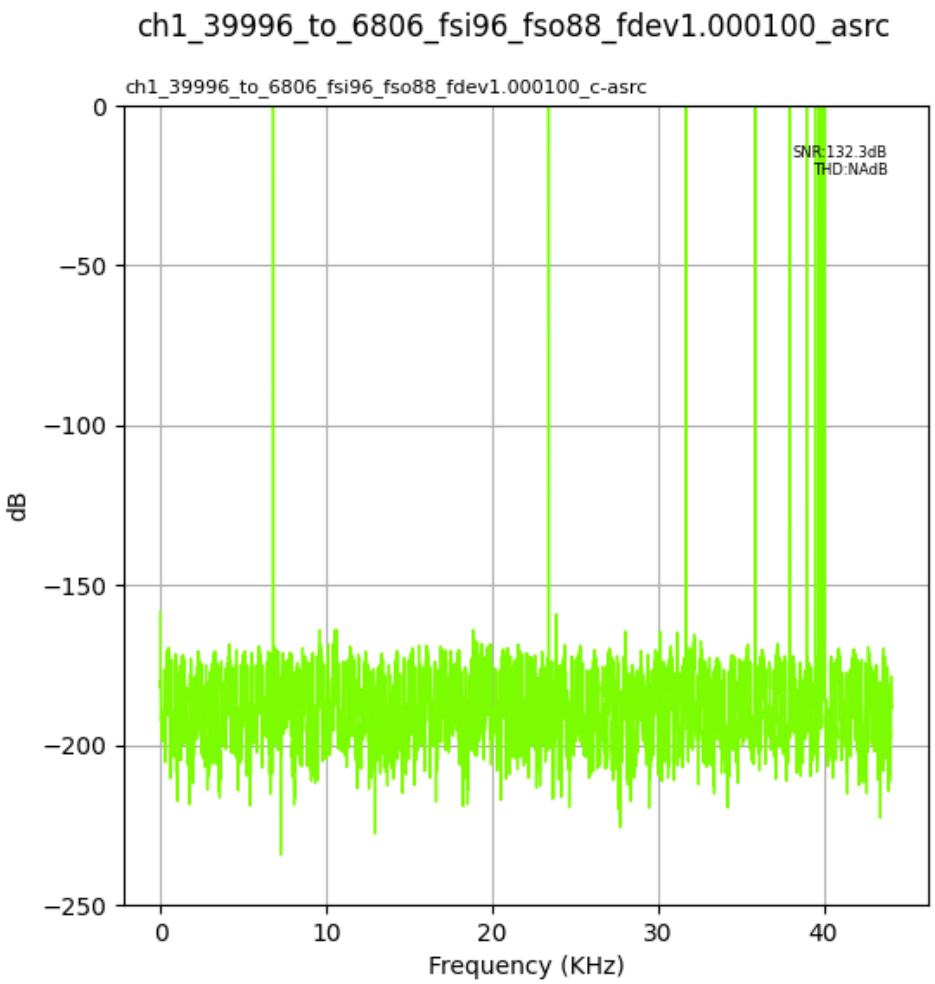

Fig. 1.184: Input Fs: 96,000Hz, Output Fs: 88,200Hz, Fs error: 1.000100, Results for: asrc

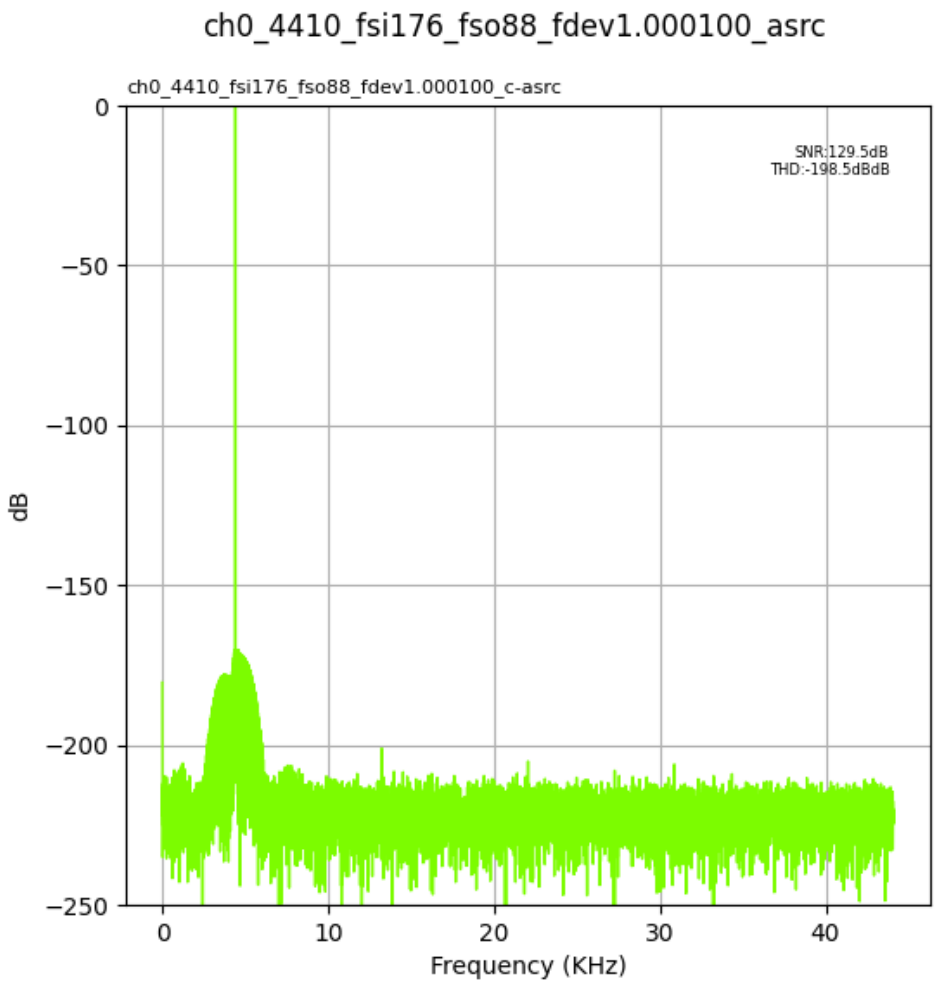

Fig. 1.185: Input Fs: 176,400Hz, Output Fs: 88,200Hz, Fs error: 1.000100, Results for: asrc

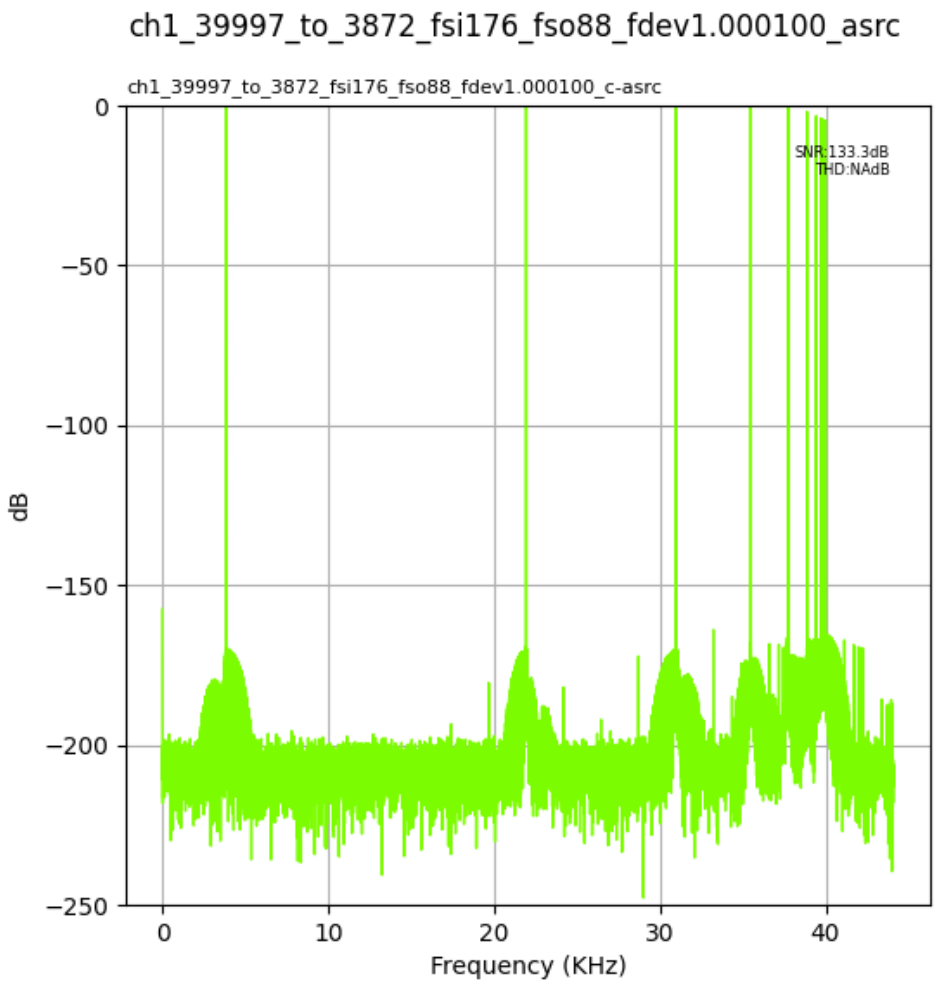

Fig. 1.186: Input Fs: 176,400Hz, Output Fs: 88,200Hz, Fs error: 1.000100, Results for: asrc

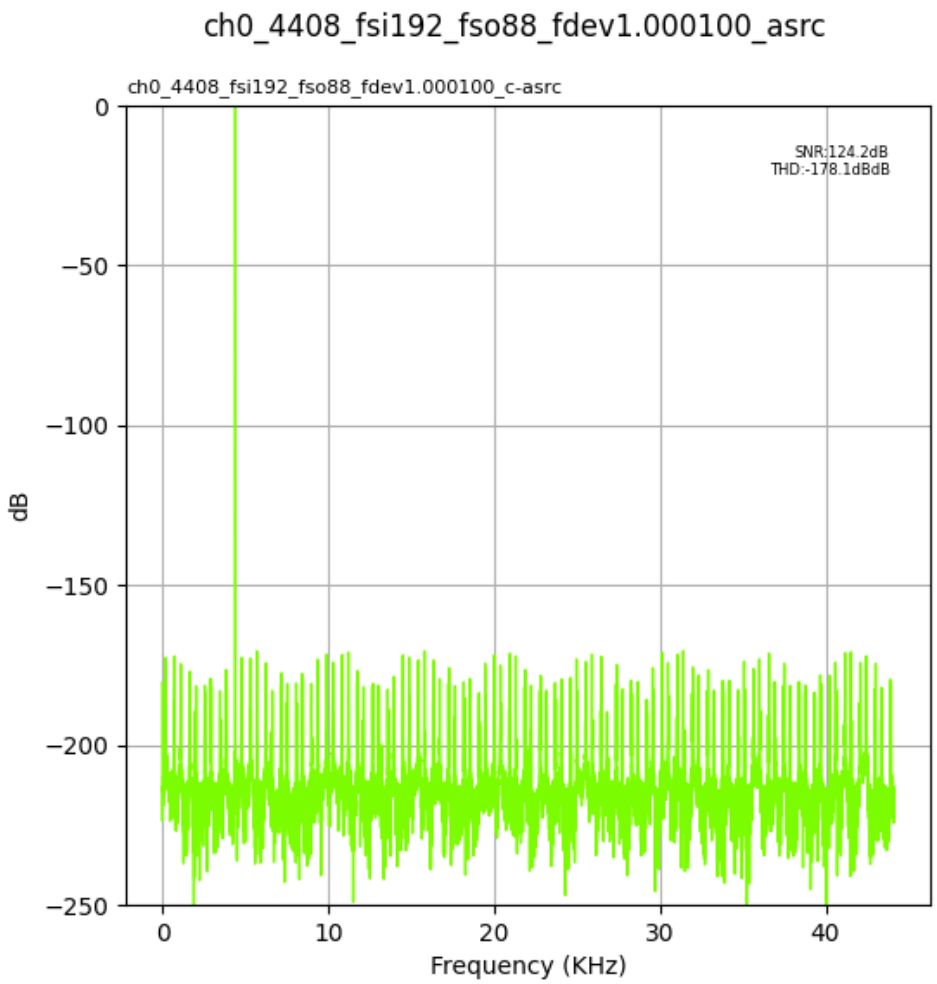

Fig. 1.187: Input Fs: 192,000Hz, Output Fs: 88,200Hz, Fs error: 1.000100, Results for: asrc

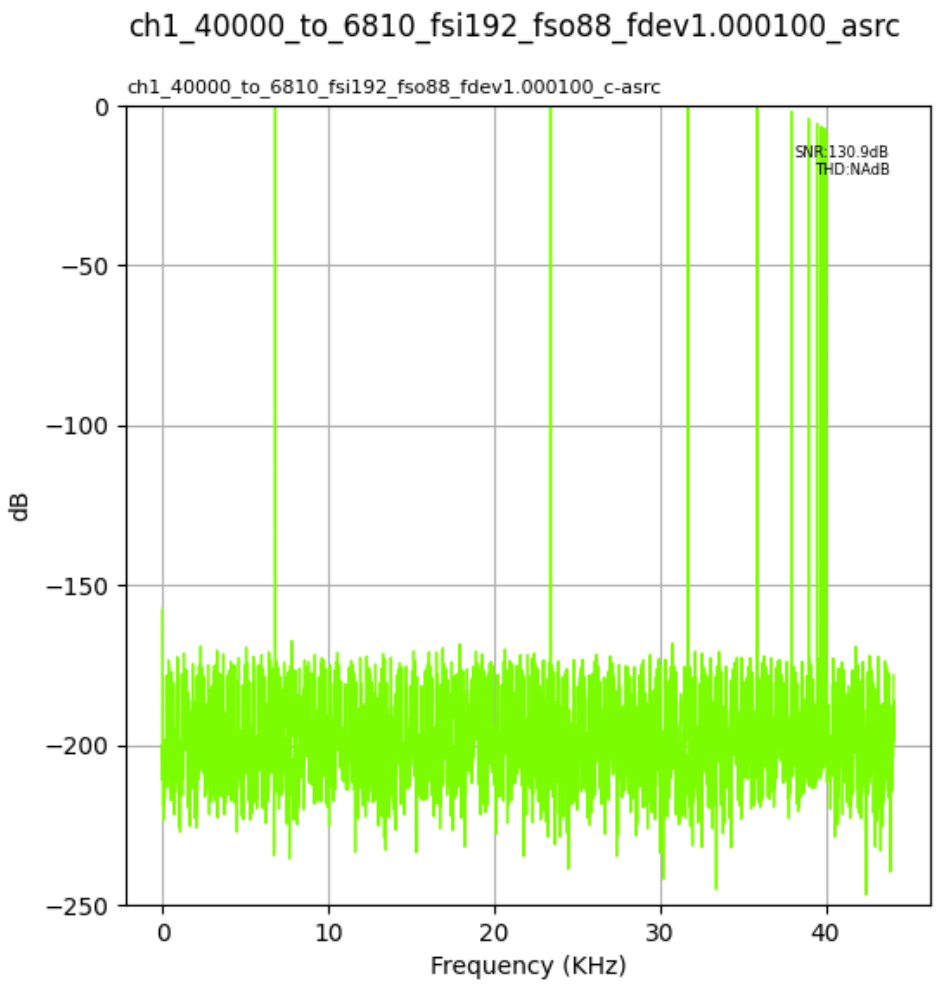

Fig. 1.188: Input Fs: 192,000Hz, Output Fs: 88,200Hz, Fs error: 1.000100, Results for: asrc

1.3.6 Output Fs : 96,000Hz

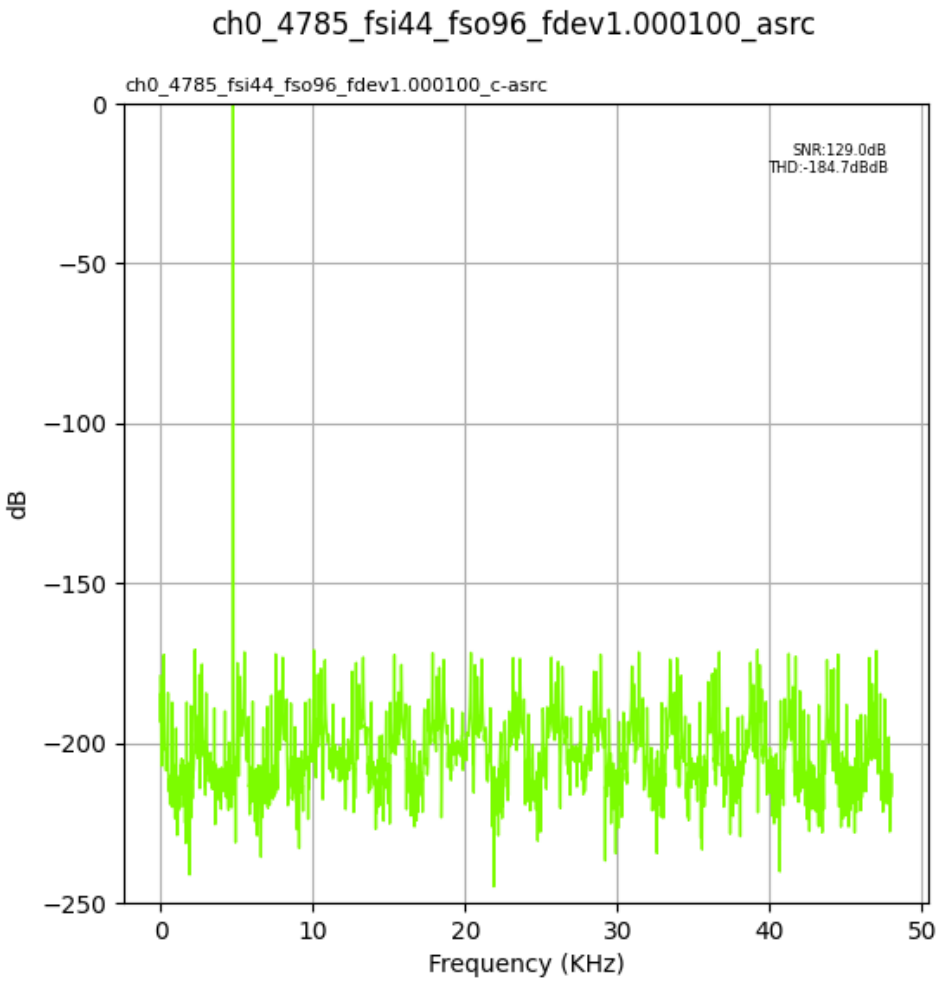

Fig. 1.189: Input Fs: 44,100Hz, Output Fs: 96,000Hz, Fs error: 1.000100, Results for: asrc

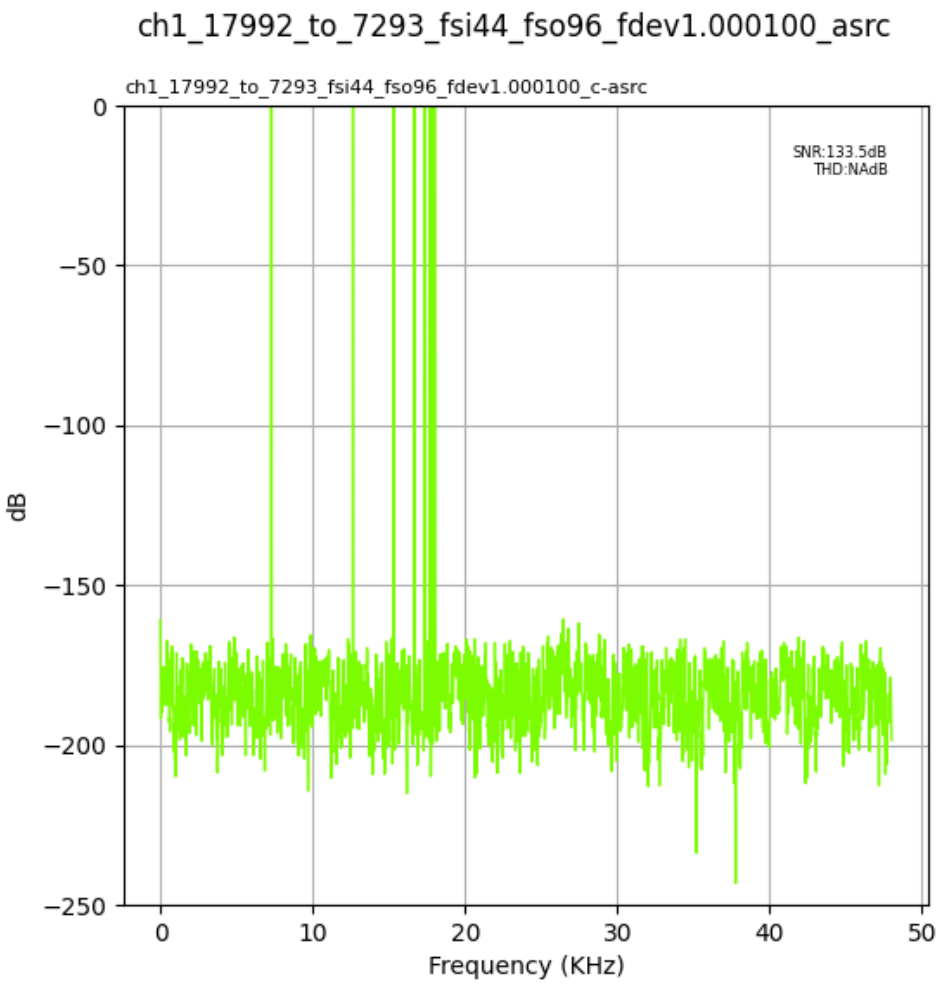

Fig. 1.190: Input Fs: 44,100Hz, Output Fs: 96,000Hz, Fs error: 1.000100, Results for: asrc

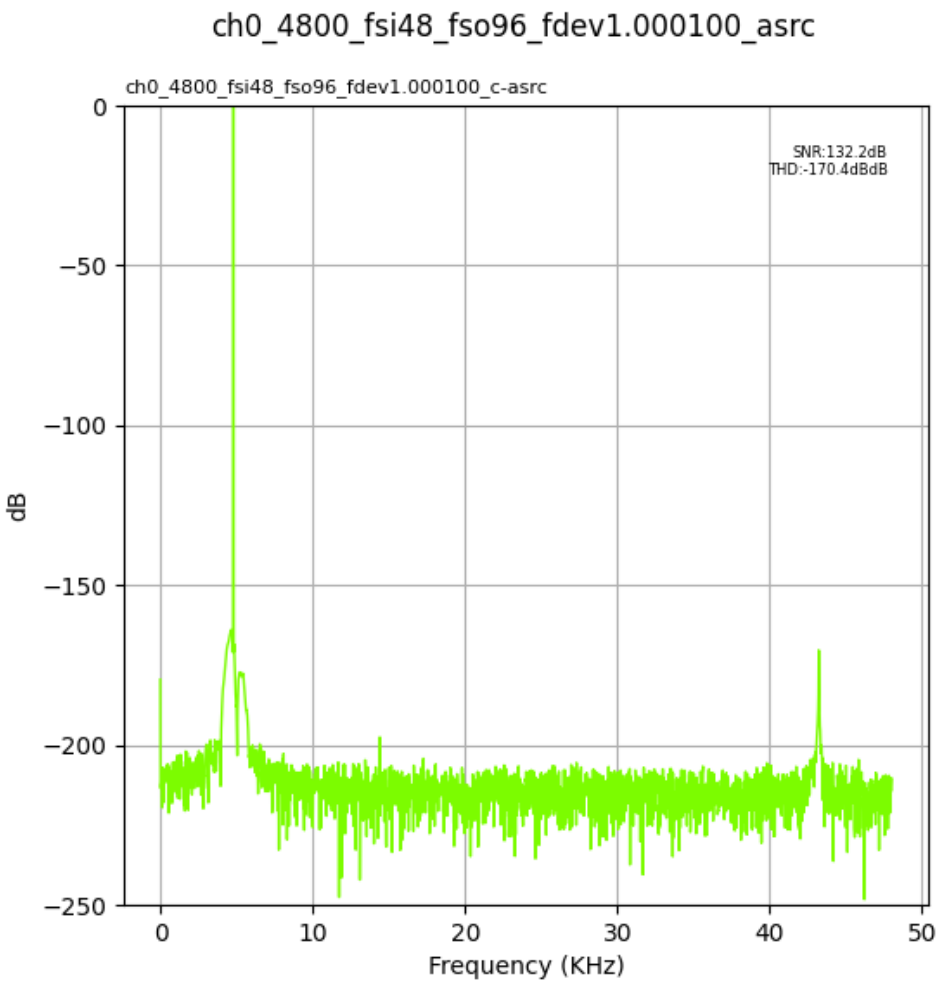

Fig. 1.191: Input Fs: 48,000Hz, Output Fs: 96,000Hz, Fs error: 1.000100, Results for: asrc

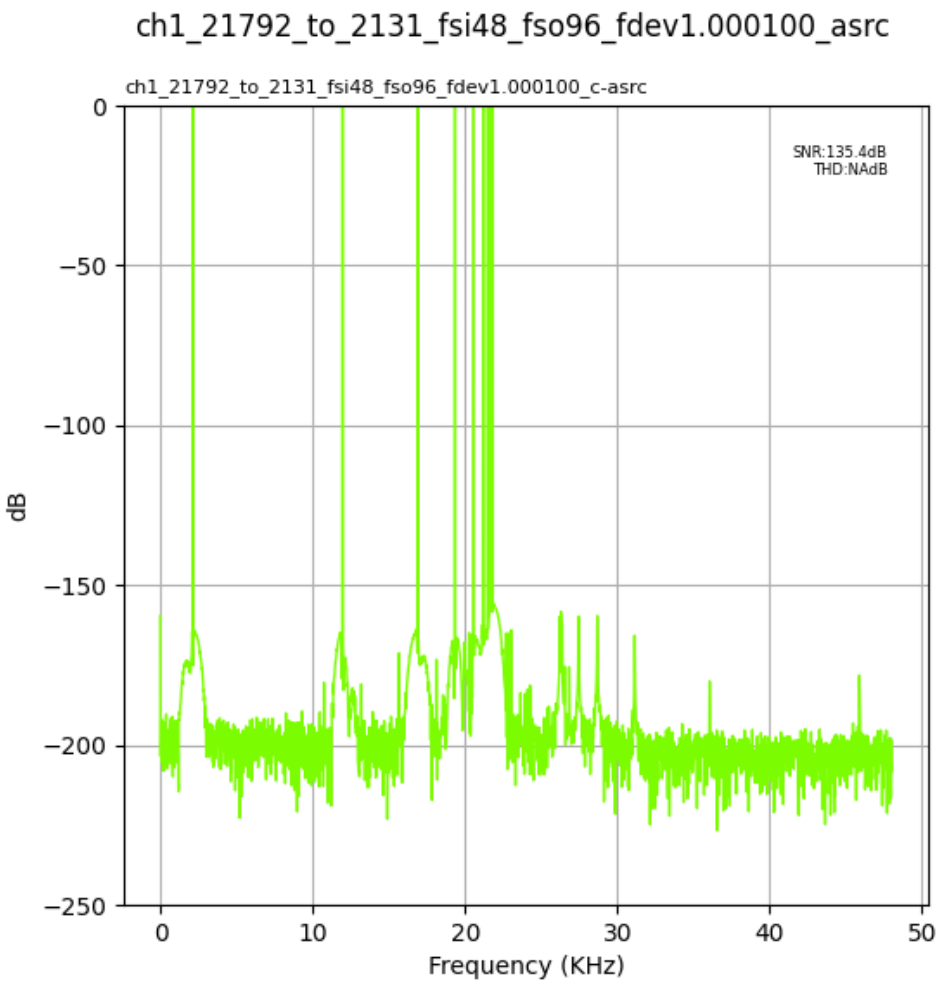

Fig. 1.192: Input Fs: 48,000Hz, Output Fs: 96,000Hz, Fs error: 1.000100, Results for: asrc

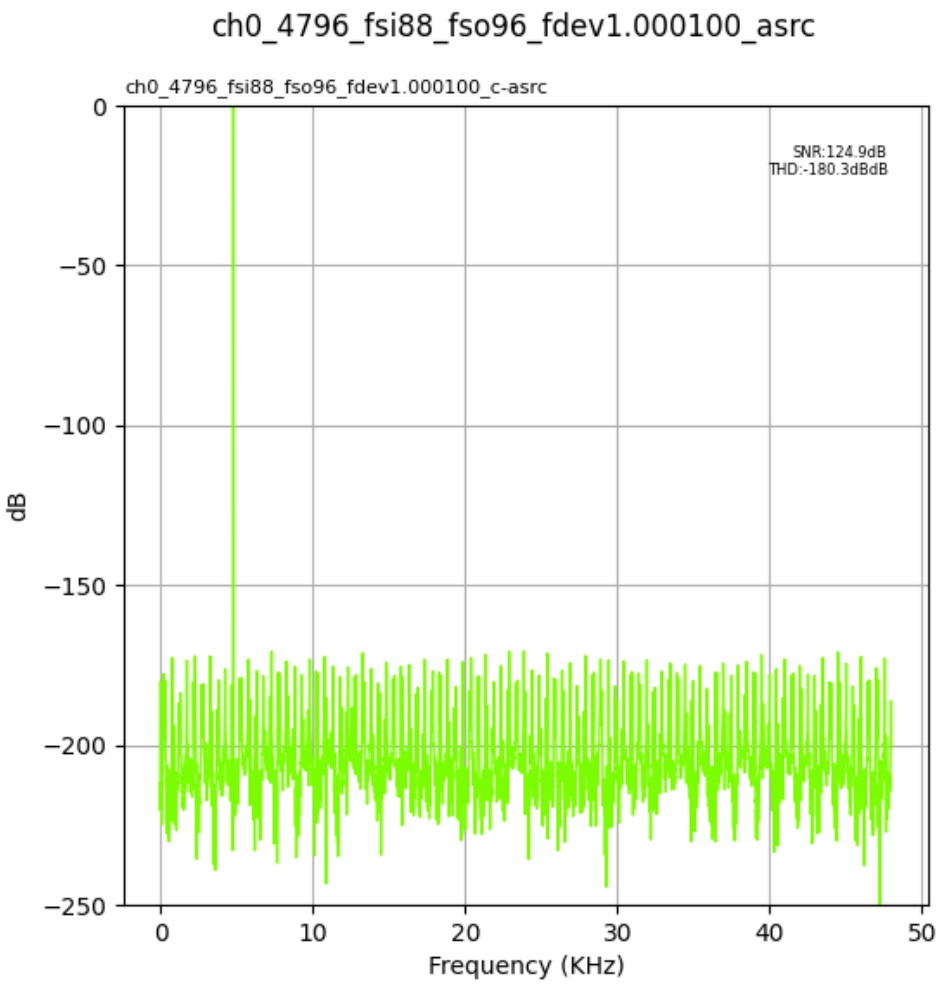

Fig. 1.193: Input Fs: 88,200Hz, Output Fs: 96,000Hz, Fs error: 1.000100, Results for: asrc

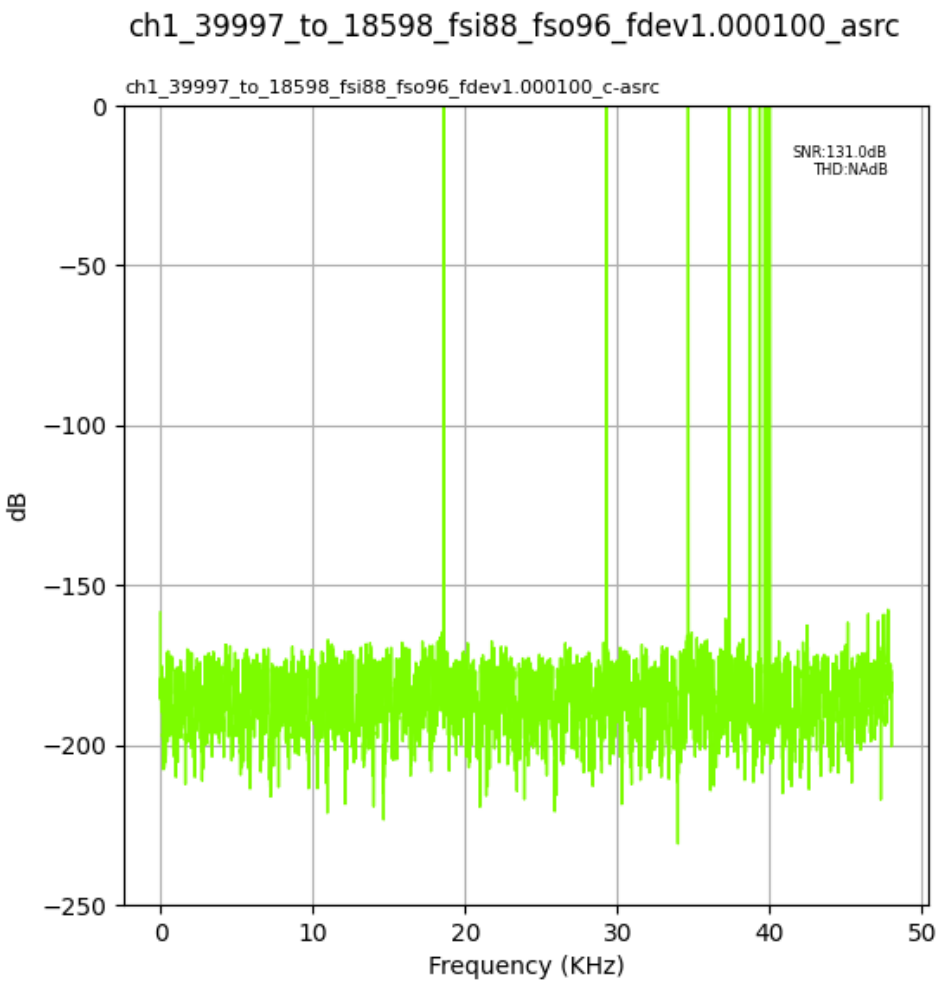

Fig. 1.194: Input Fs: 88,200Hz, Output Fs: 96,000Hz, Fs error: 1.000100, Results for: asrc

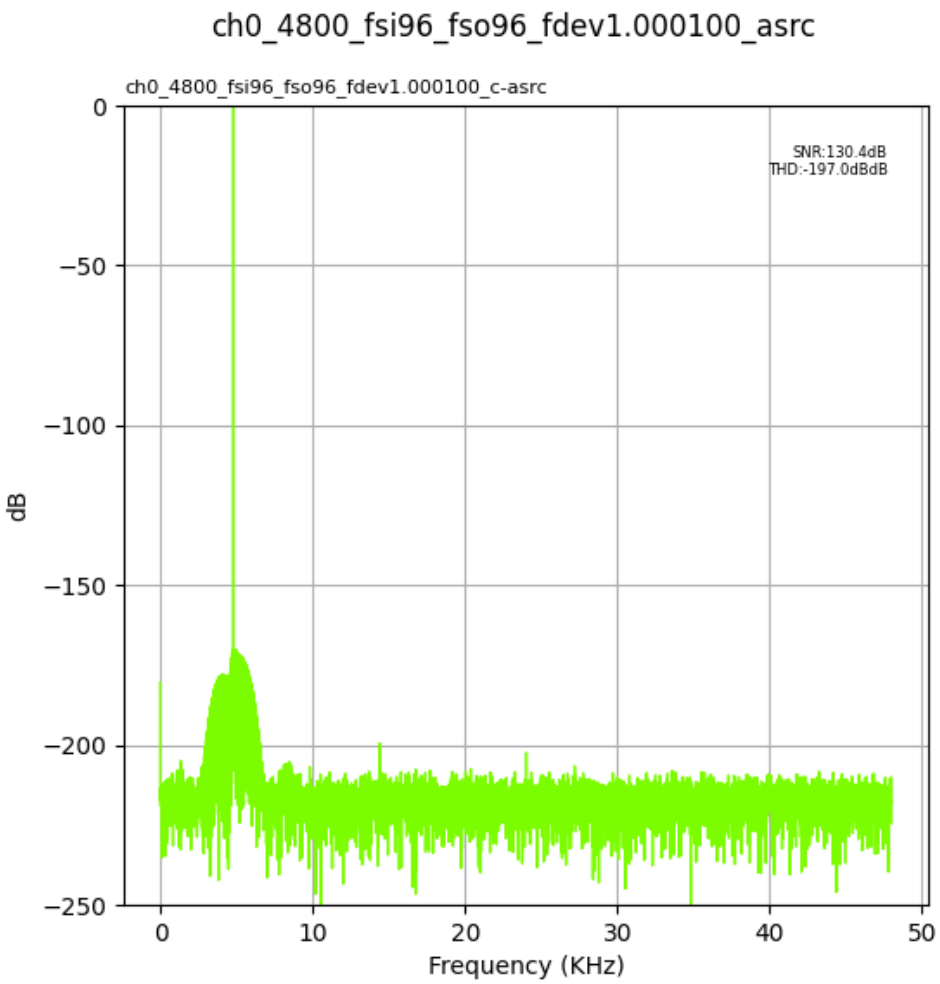

Fig. 1.195: Input Fs: 96,000Hz, Output Fs: 96,000Hz, Fs error: 1.000100, Results for: asrc

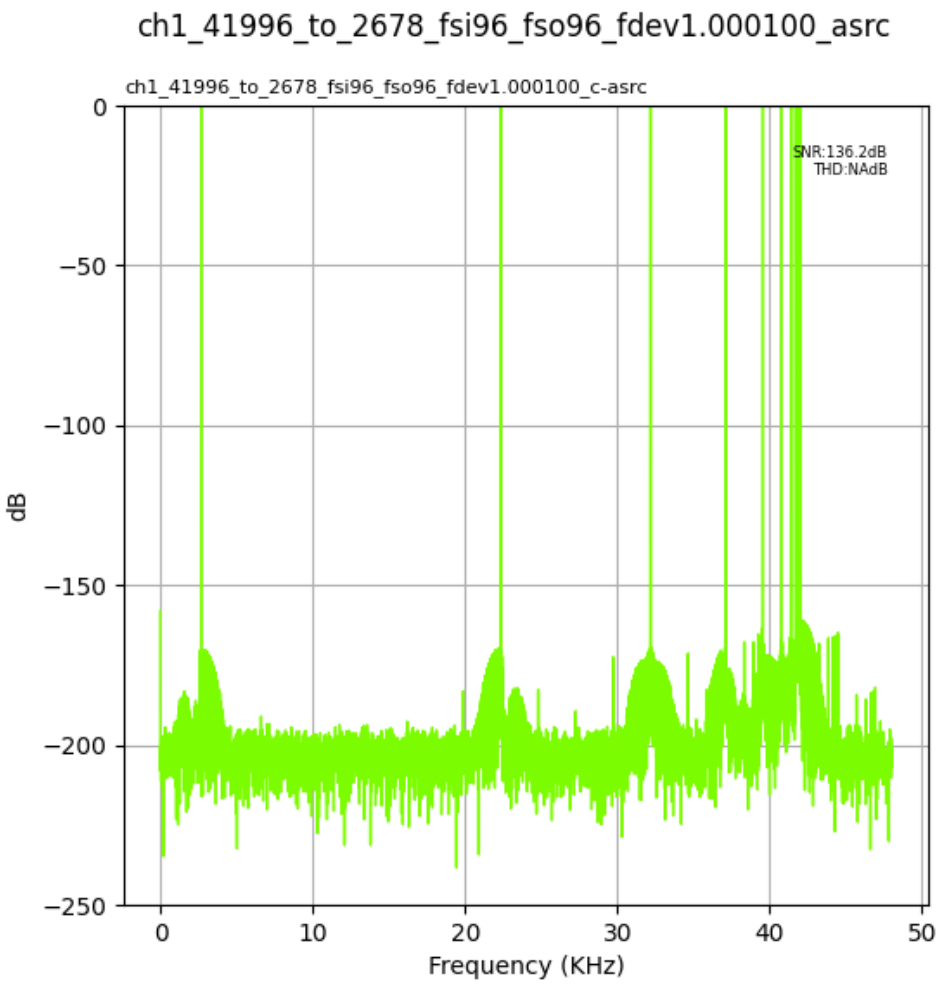

Fig. 1.196: Input Fs: 96,000Hz, Output Fs: 96,000Hz, Fs error: 1.000100, Results for: asrc

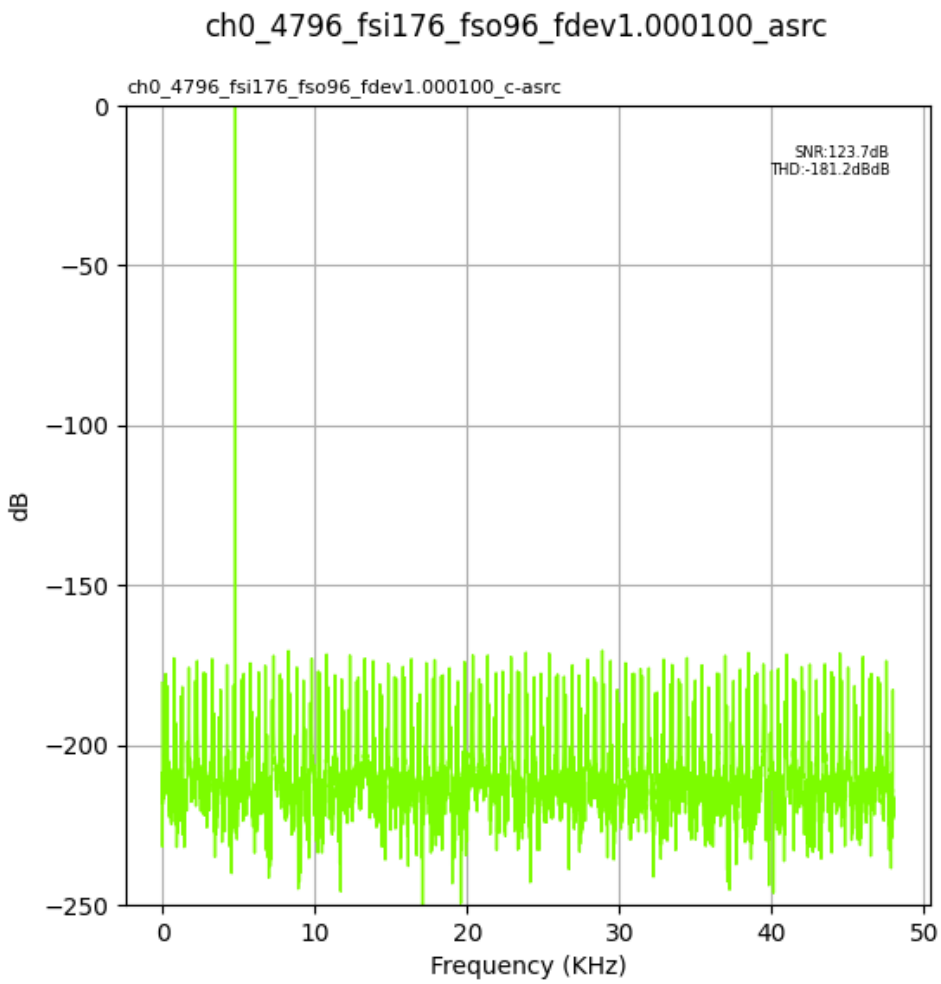

Fig. 1.197: Input Fs: 176,400Hz, Output Fs: 96,000Hz, Fs error: 1.000100, Results for: asrc

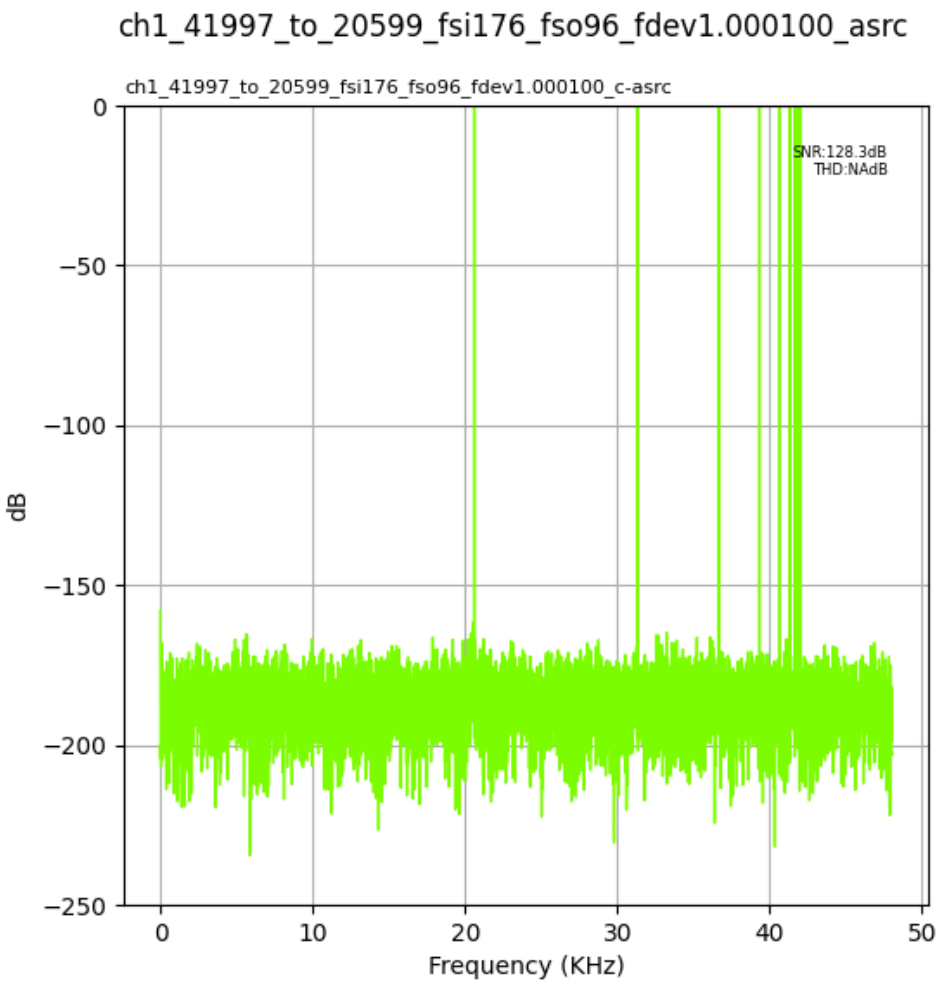

Fig. 1.198: Input Fs: 176,400Hz, Output Fs: 96,000Hz, Fs error: 1.000100, Results for: asrc

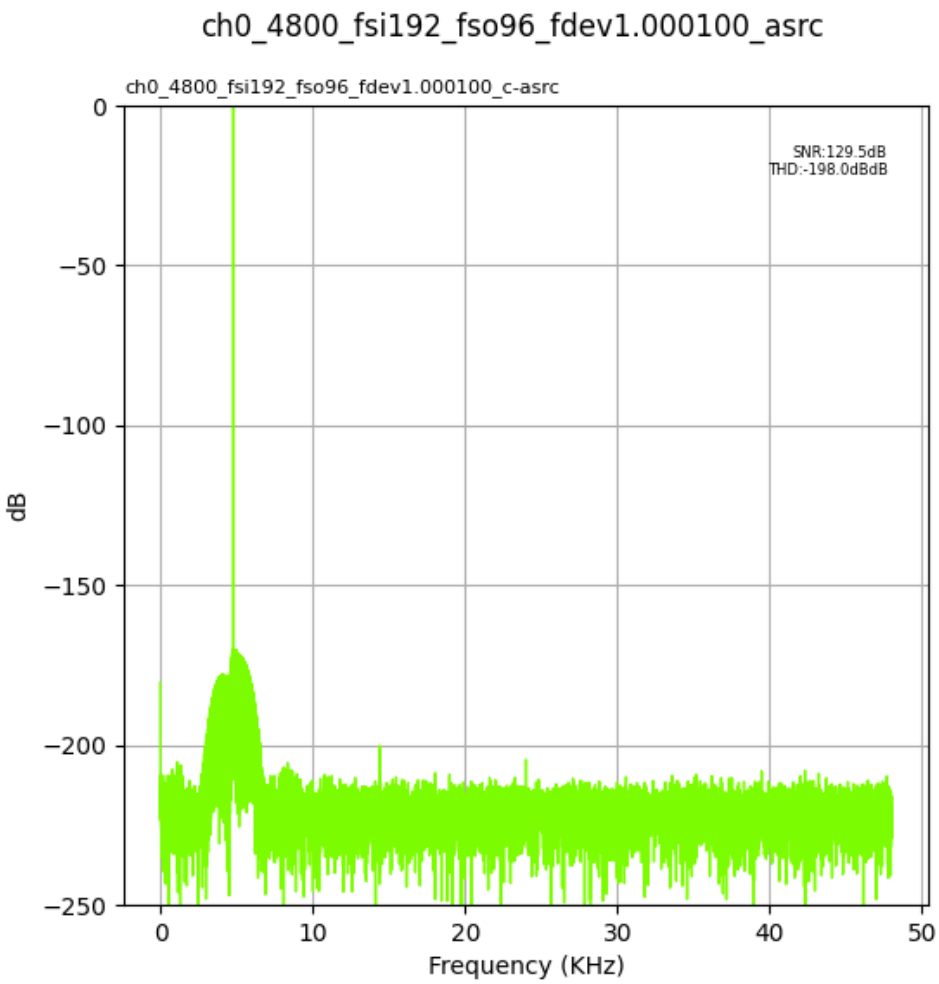

Fig. 1.199: Input Fs: 192,000Hz, Output Fs: 96,000Hz, Fs error: 1.000100, Results for: asrc

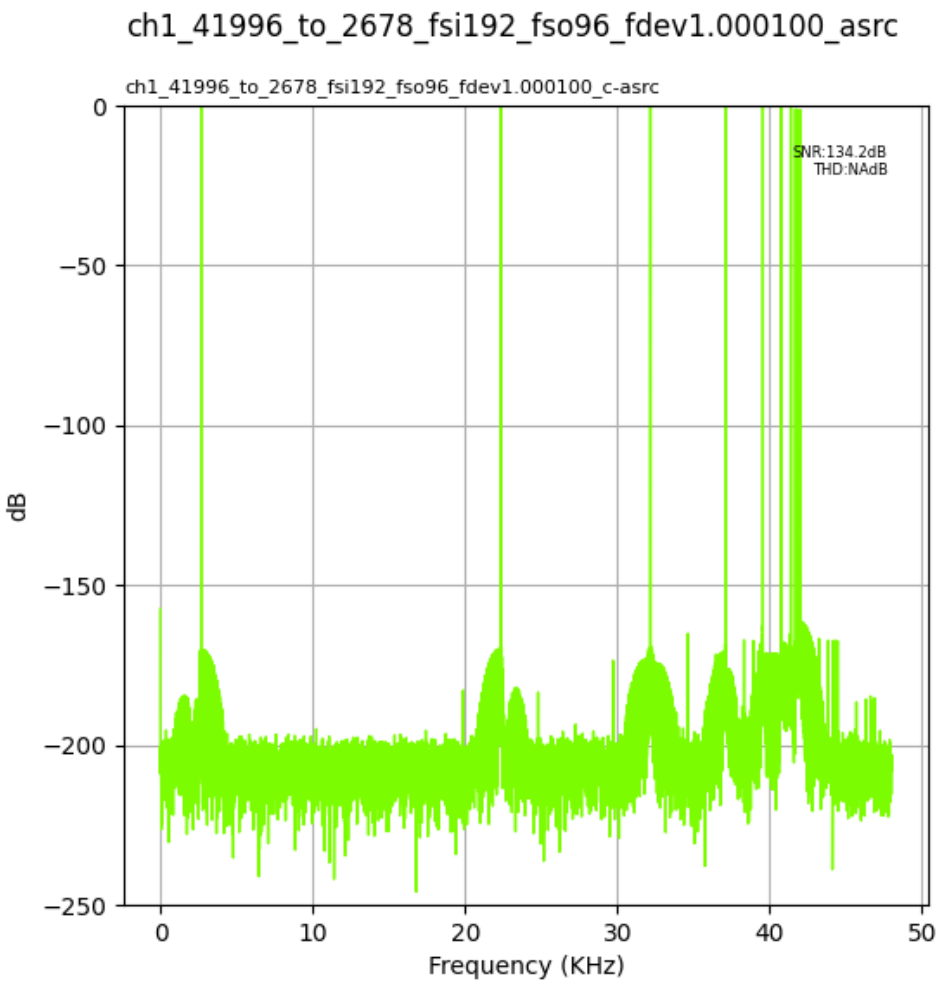

Fig. 1.200: Input Fs: 192,000Hz, Output Fs: 96,000Hz, Fs error: 1.000100, Results for: asrc

1.3.7 Output Fs : 176,400Hz

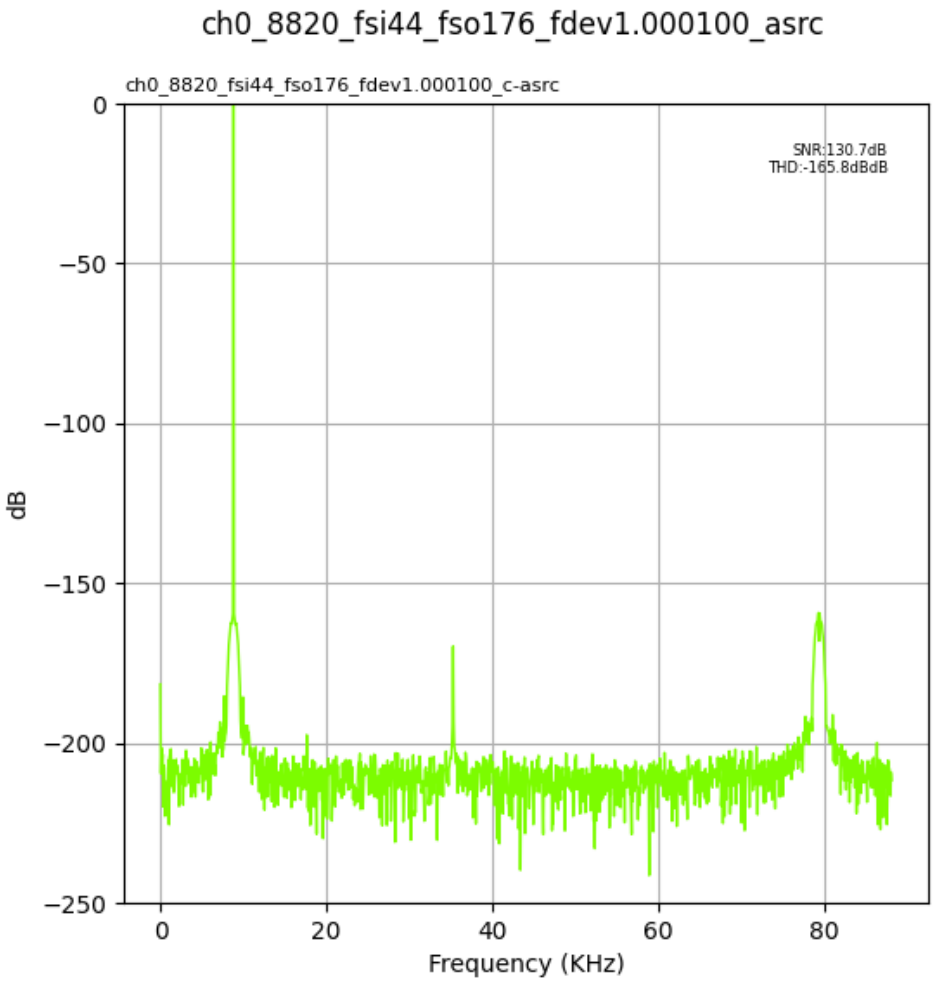

Fig. 1.201: Input Fs: 44,100Hz, Output Fs: 176,400Hz, Fs error: 1.000100, Results for: asrc

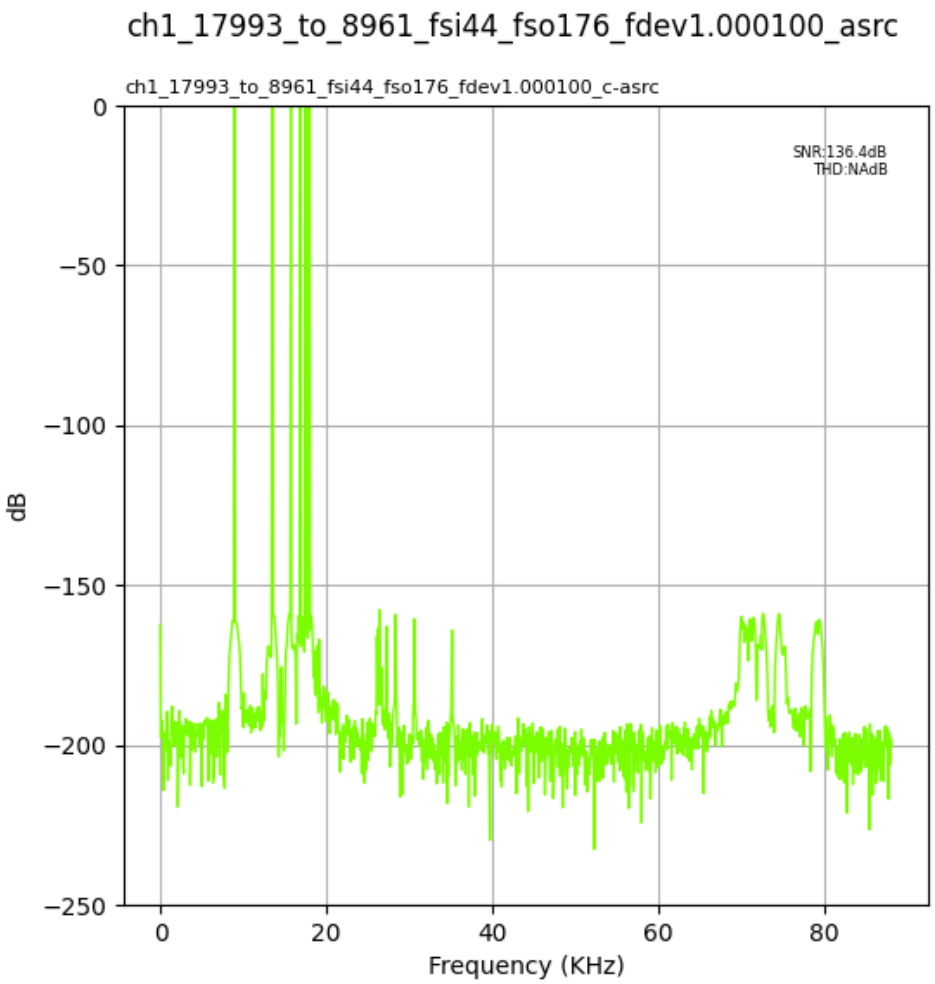

Fig. 1.202: Input Fs: 44,100Hz, Output Fs: 176,400Hz, Fs error: 1.000100, Results for: asrc

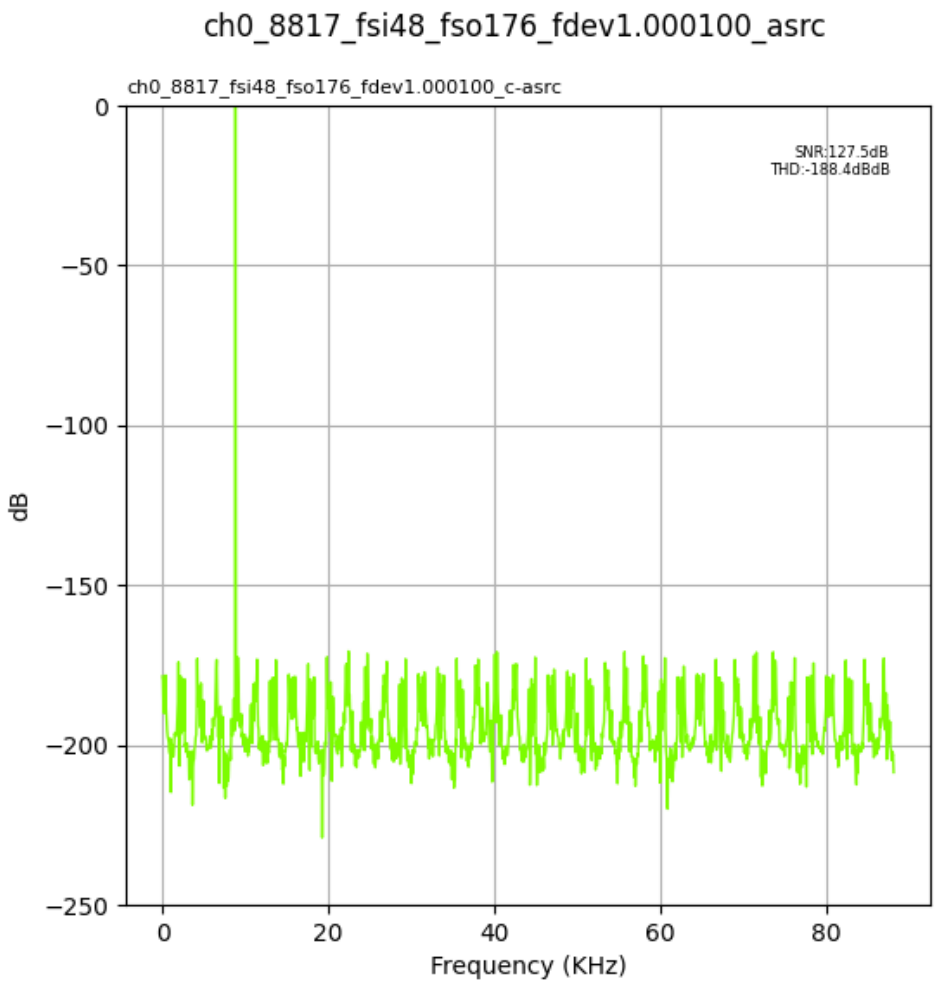

Fig. 1.203: Input Fs: 48,000Hz, Output Fs: 176,400Hz, Fs error: 1.000100, Results for: asrc

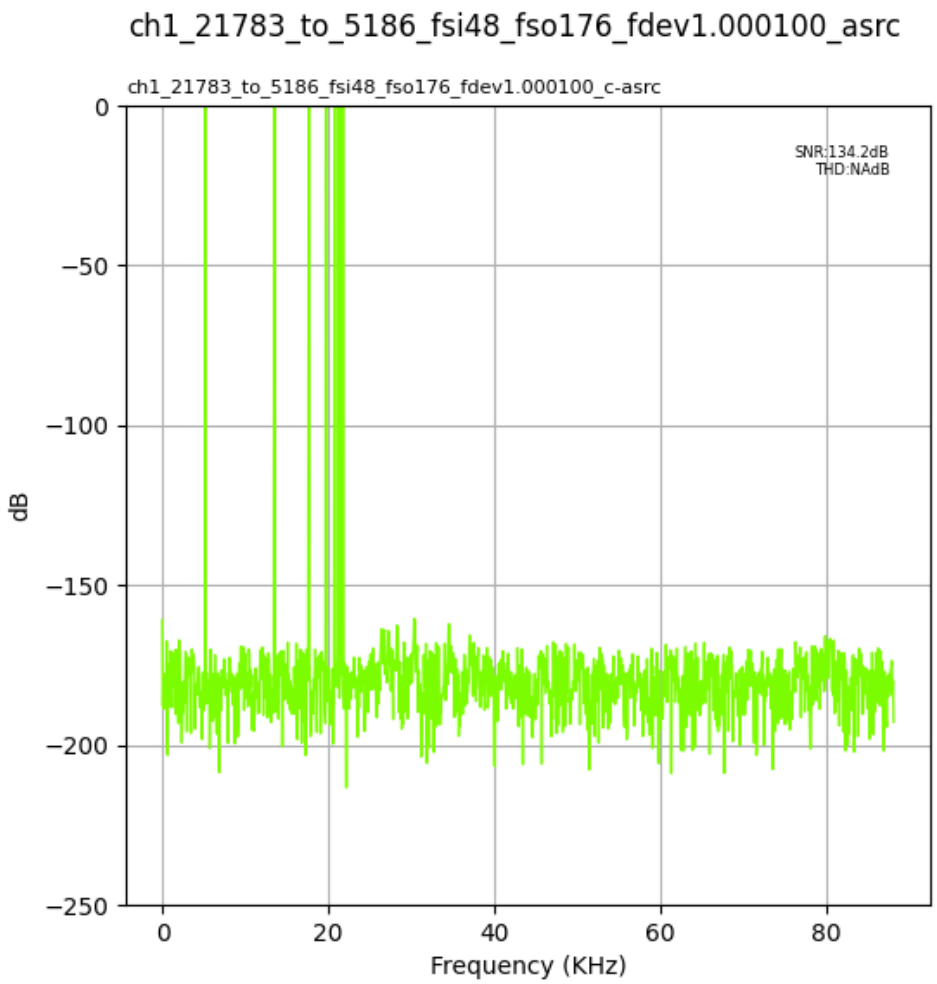

Fig. 1.204: Input Fs: 48,000Hz, Output Fs: 176,400Hz, Fs error: 1.000100, Results for: asrc

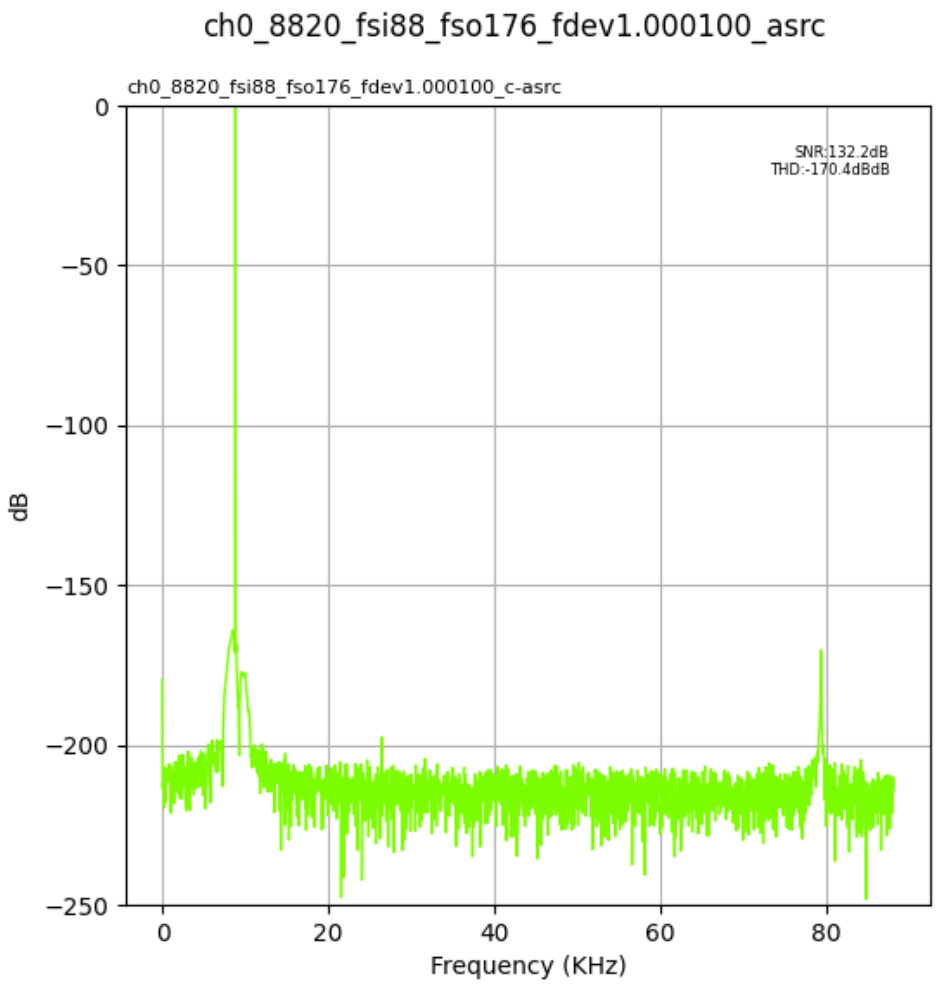

Fig. 1.205: Input Fs: 88,200Hz, Output Fs: 176,400Hz, Fs error: 1.000100, Results for: asrc

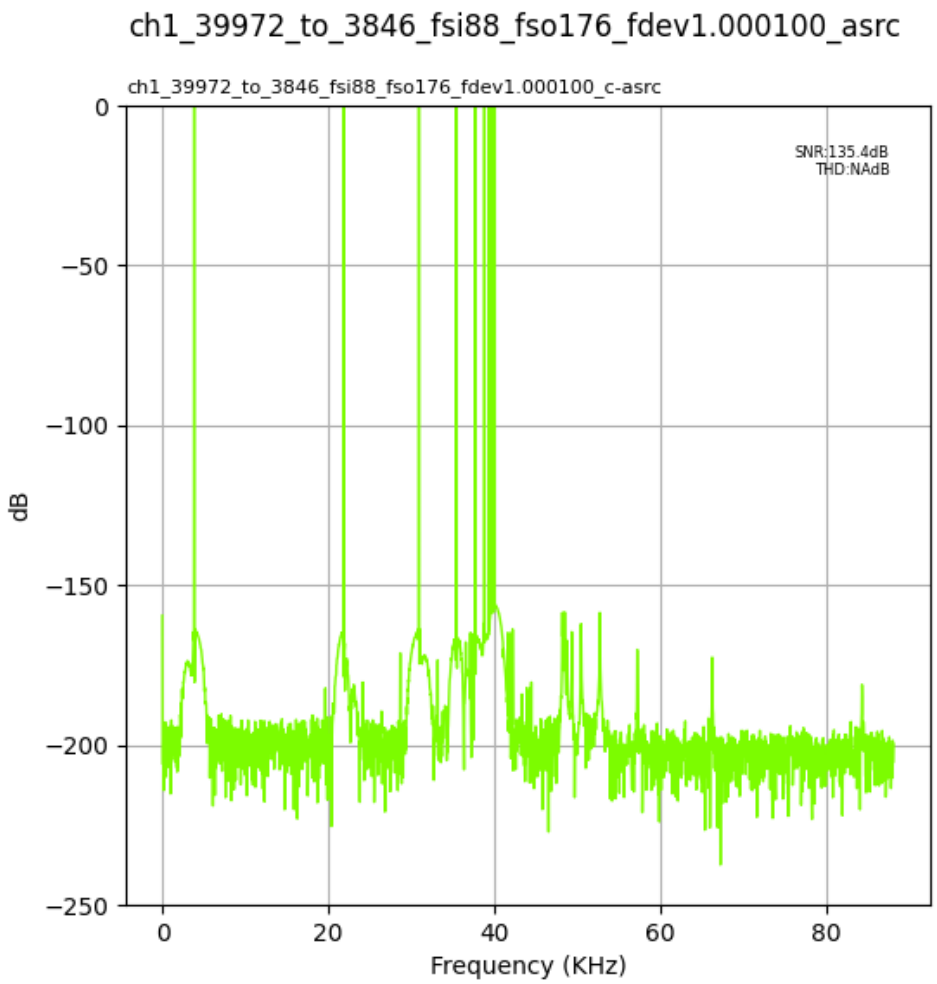

Fig. 1.206: Input Fs: 88,200Hz, Output Fs: 176,400Hz, Fs error: 1.000100, Results for: asrc

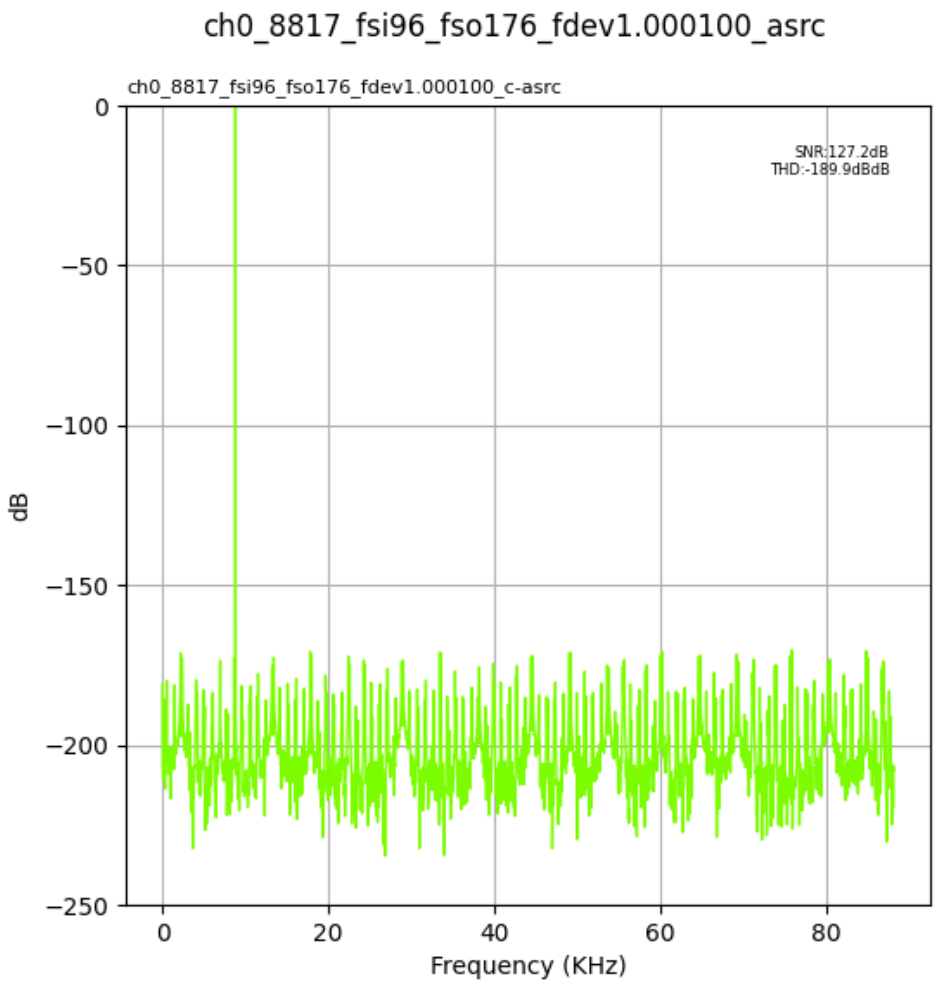

Fig. 1.207: Input Fs: 96,000Hz, Output Fs: 176,400Hz, Fs error: 1.000100, Results for: asrc

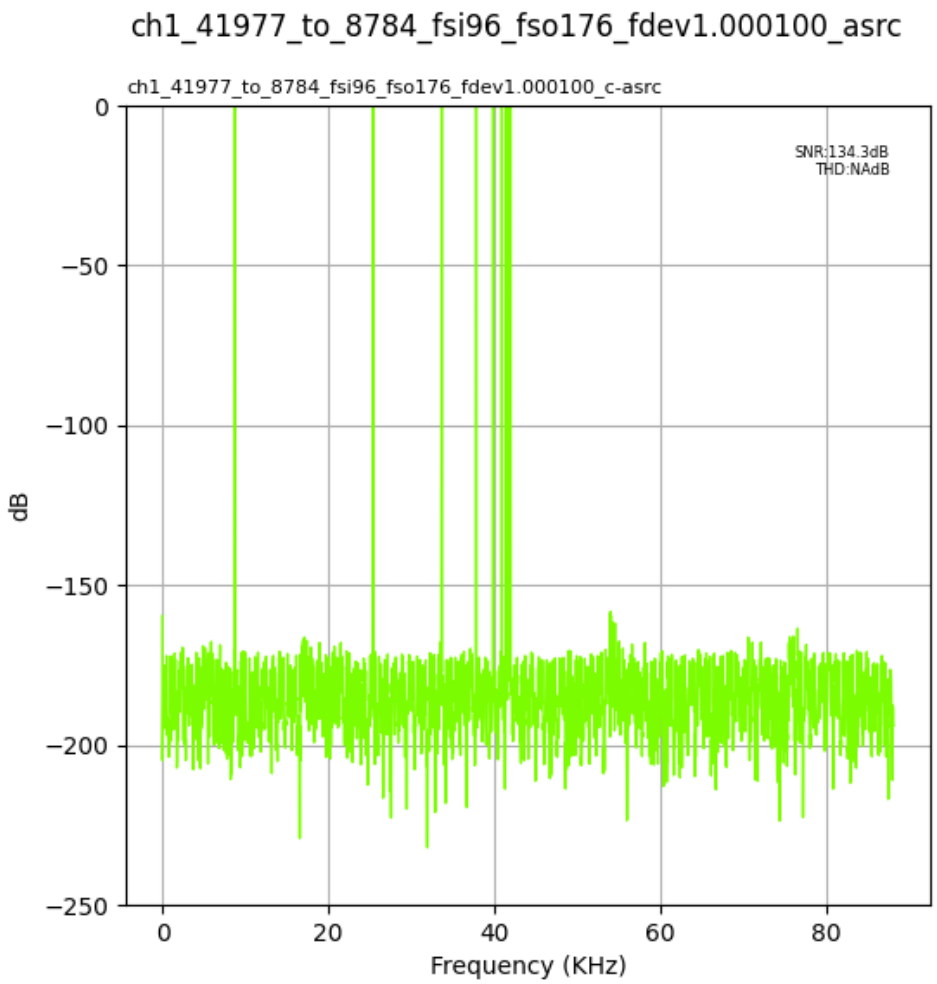

Fig. 1.208: Input Fs: 96,000Hz, Output Fs: 176,400Hz, Fs error: 1.000100, Results for: asrc

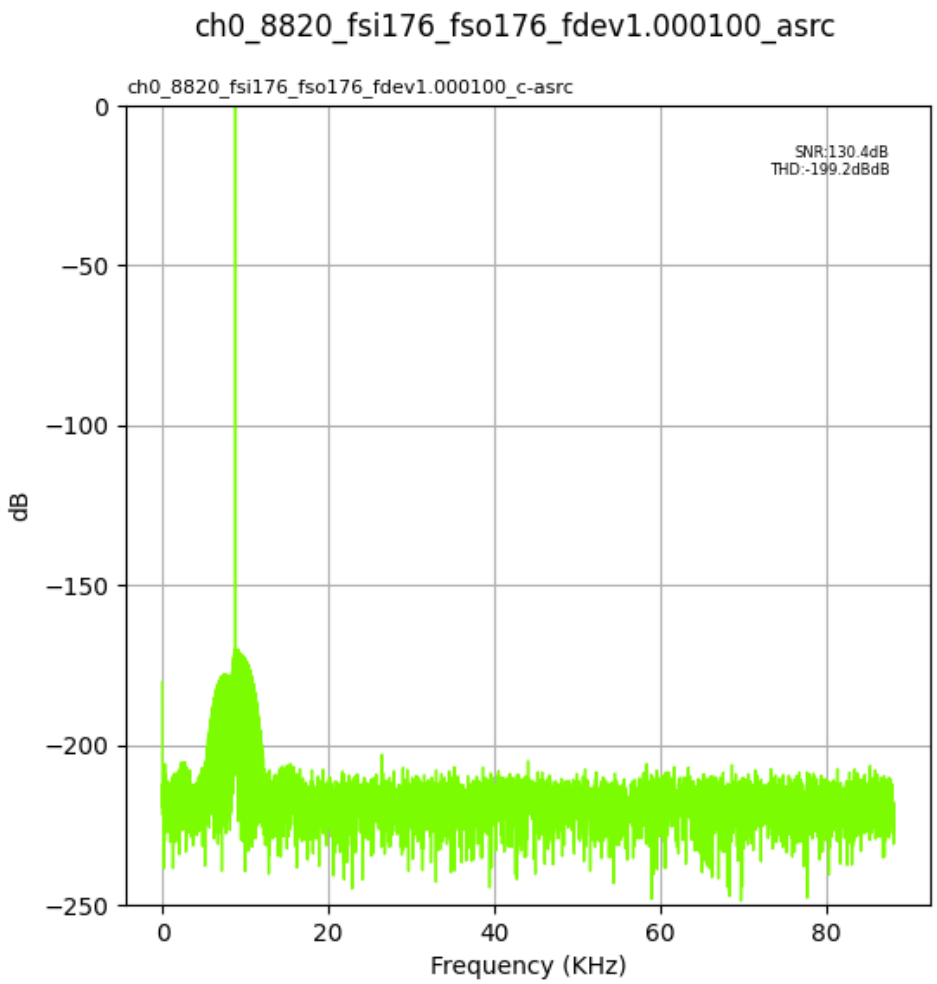

Fig. 1.209: Input Fs: 176,400Hz, Output Fs: 176,400Hz, Fs error: 1.000100, Results for: asrc

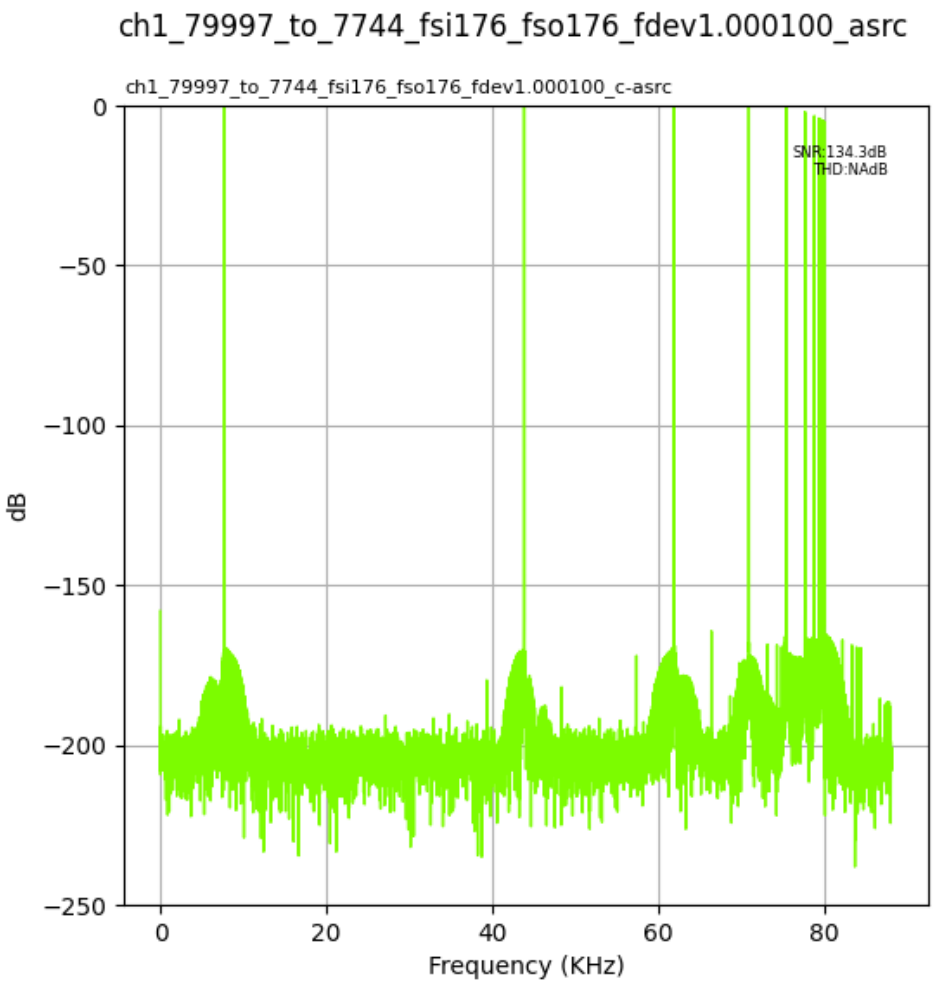

Fig. 1.210: Input Fs: 176,400Hz, Output Fs: 176,400Hz, Fs error: 1.000100, Results for: asrc

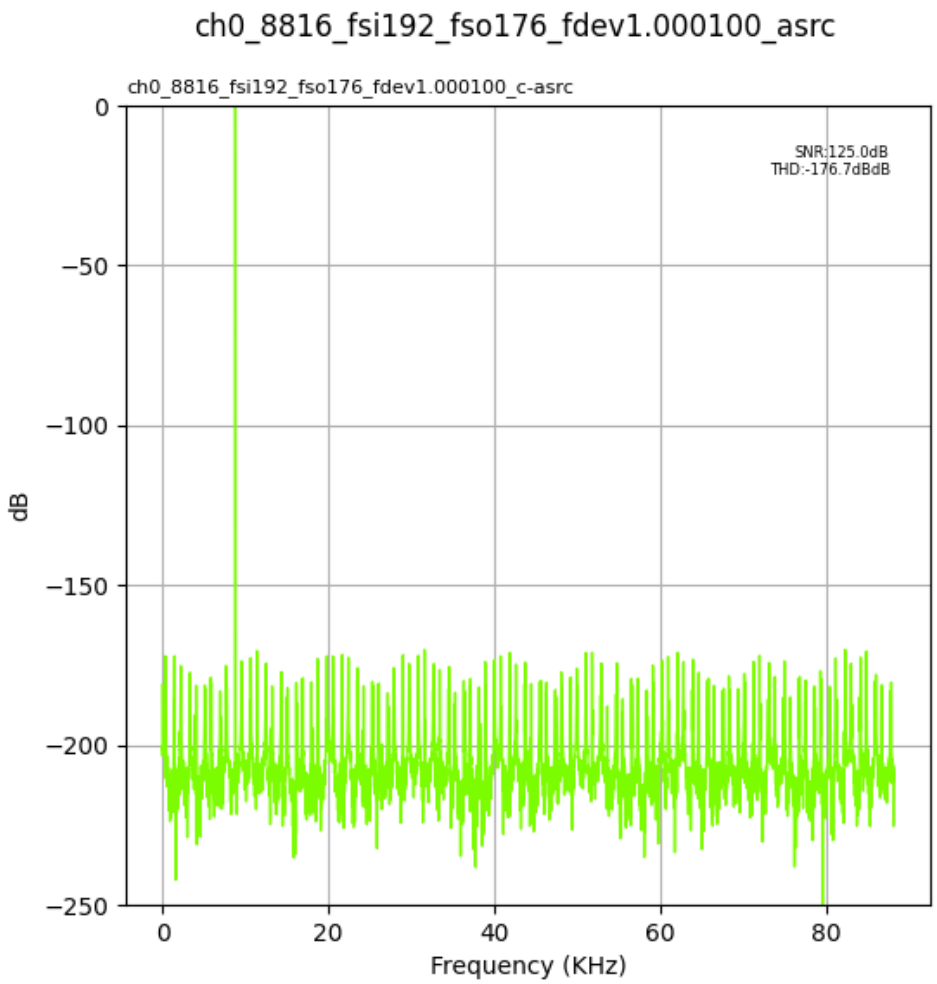

Fig. 1.211: Input Fs: 192,000Hz, Output Fs: 176,400Hz, Fs error: 1.000100, Results for: asrc

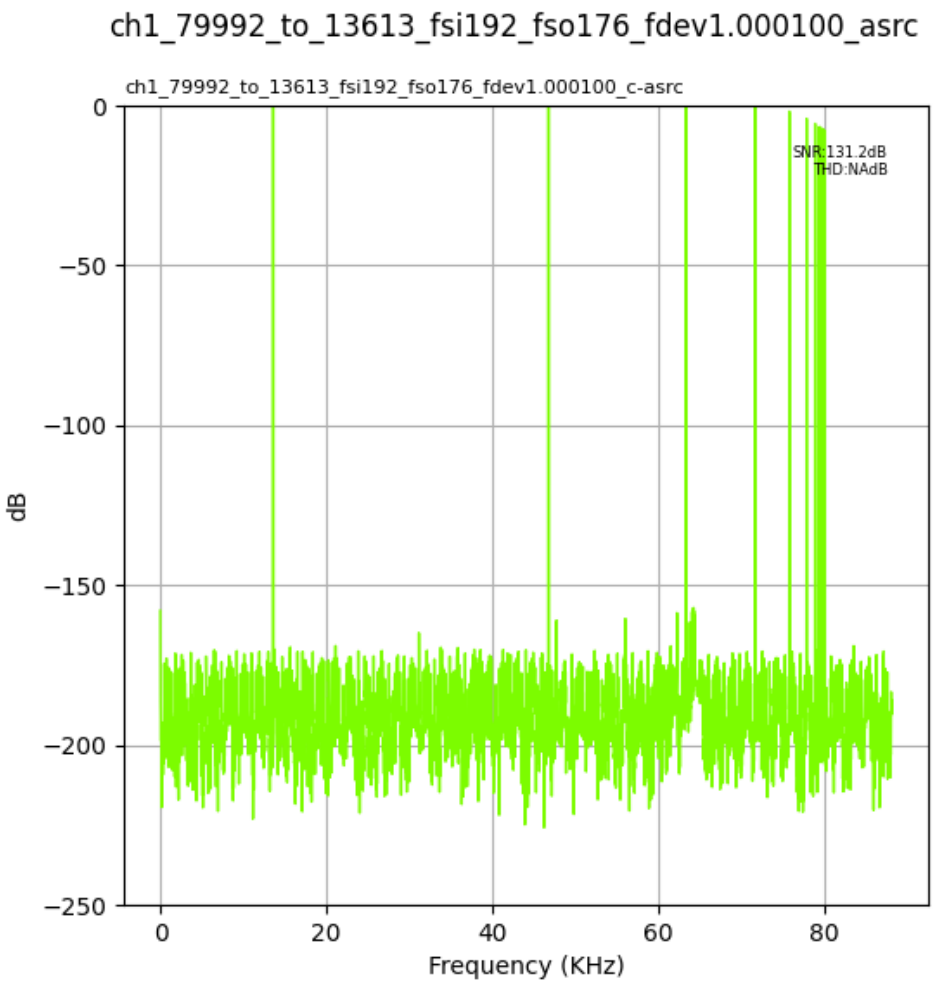

Fig. 1.212: Input Fs: 192,000Hz, Output Fs: 176,400Hz, Fs error: 1.000100, Results for: asrc

1.3.8 Output Fs : 192,000Hz

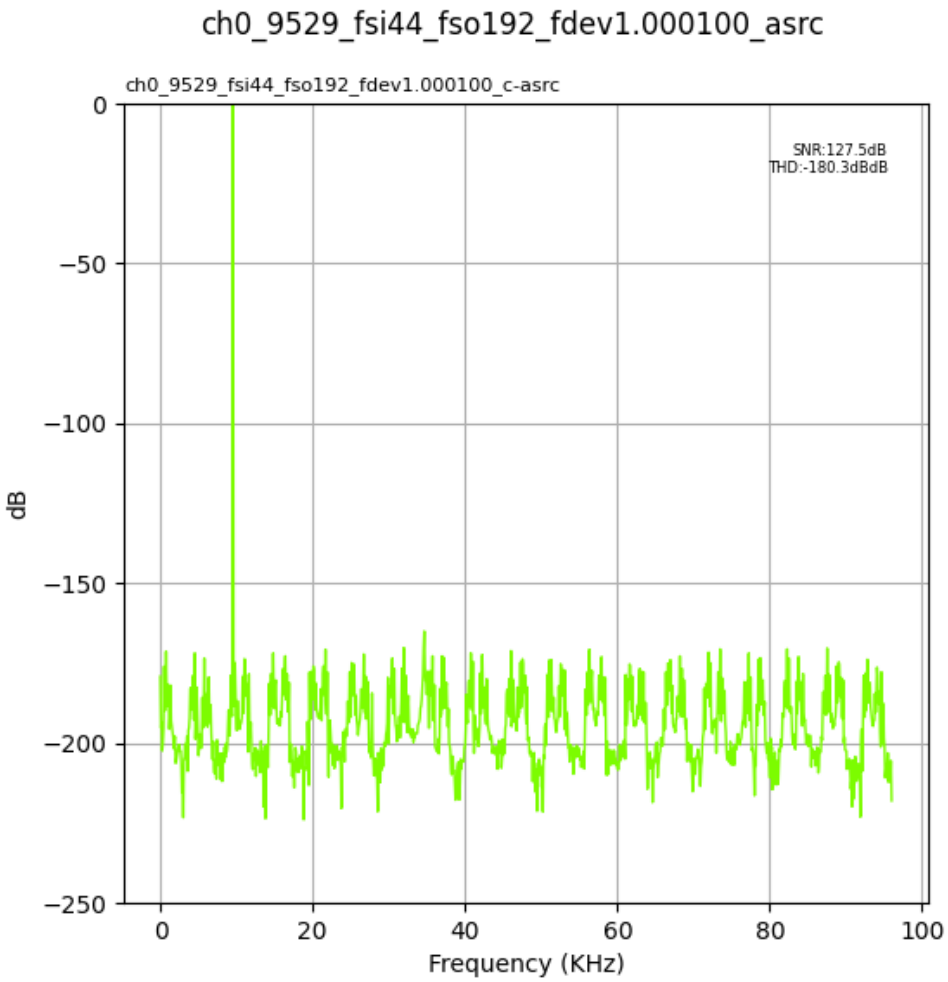

Fig. 1.213: Input Fs: 44,100Hz, Output Fs: 192,000Hz, Fs error: 1.000100, Results for: asrc

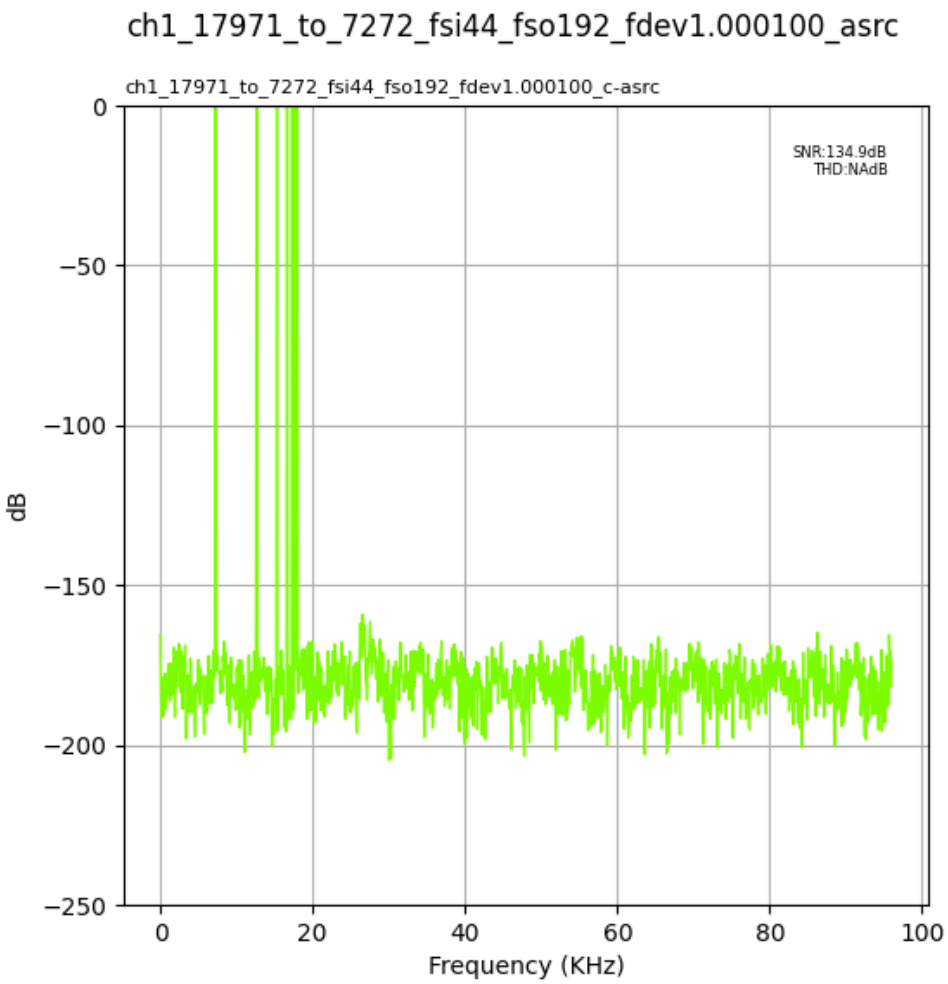

Fig. 1.214: Input Fs: 44,100Hz, Output Fs: 192,000Hz, Fs error: 1.000100, Results for: asrc

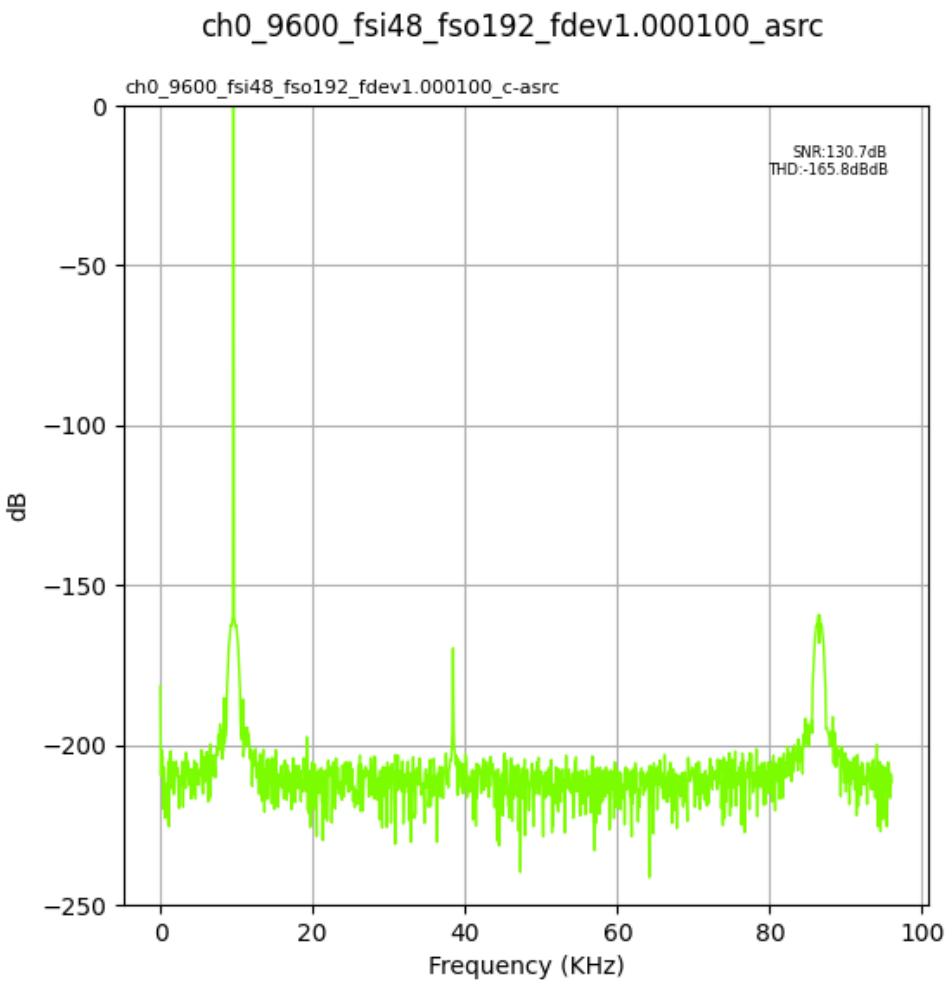

Fig. 1.215: Input Fs: 48,000Hz, Output Fs: 192,000Hz, Fs error: 1.000100, Results for: asrc

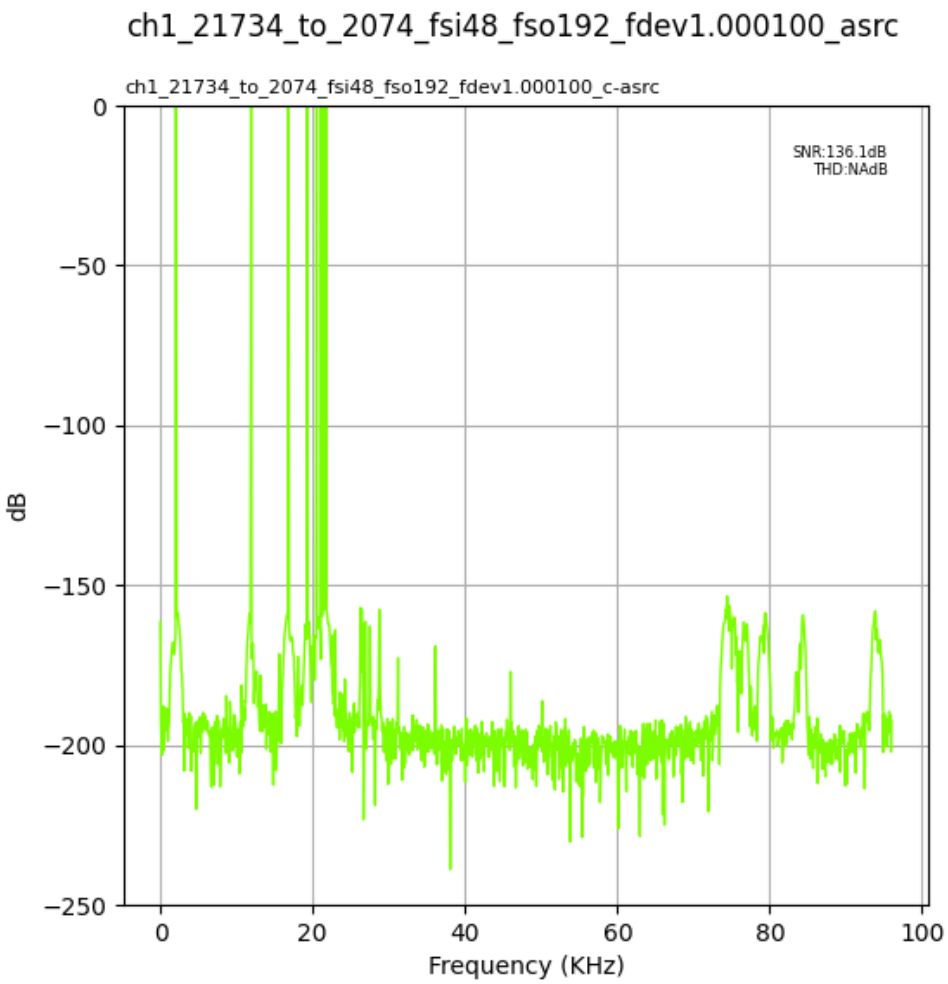

Fig. 1.216: Input Fs: 48,000Hz, Output Fs: 192,000Hz, Fs error: 1.000100, Results for: asrc

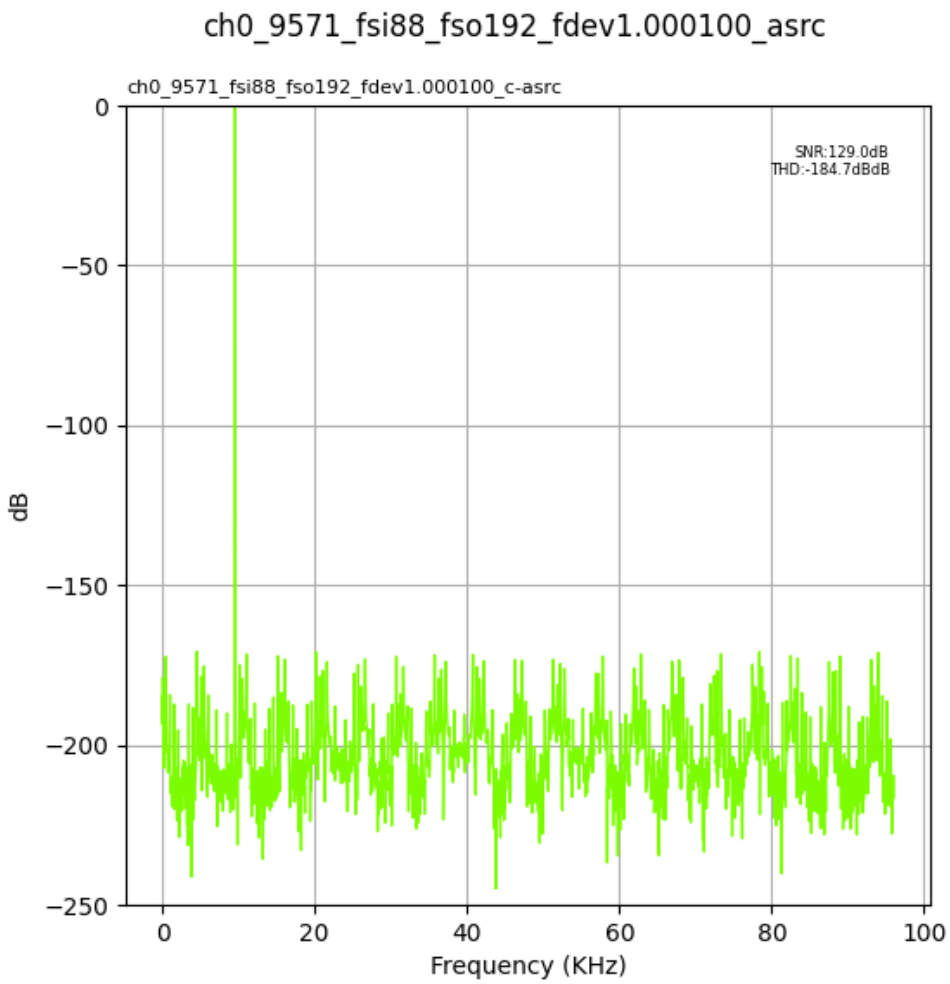

Fig. 1.217: Input Fs: 88,200Hz, Output Fs: 192,000Hz, Fs error: 1.000100, Results for: asrc

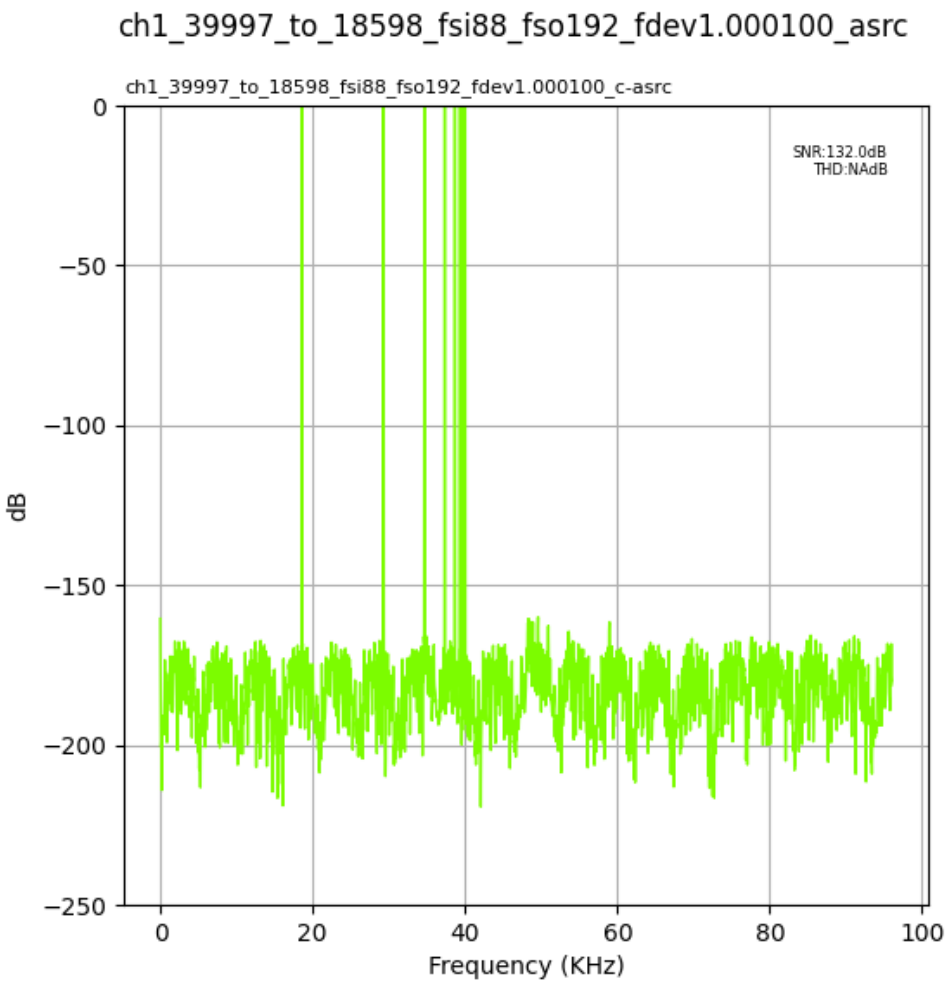

Fig. 1.218: Input Fs: 88,200Hz, Output Fs: 192,000Hz, Fs error: 1.000100, Results for: asrc

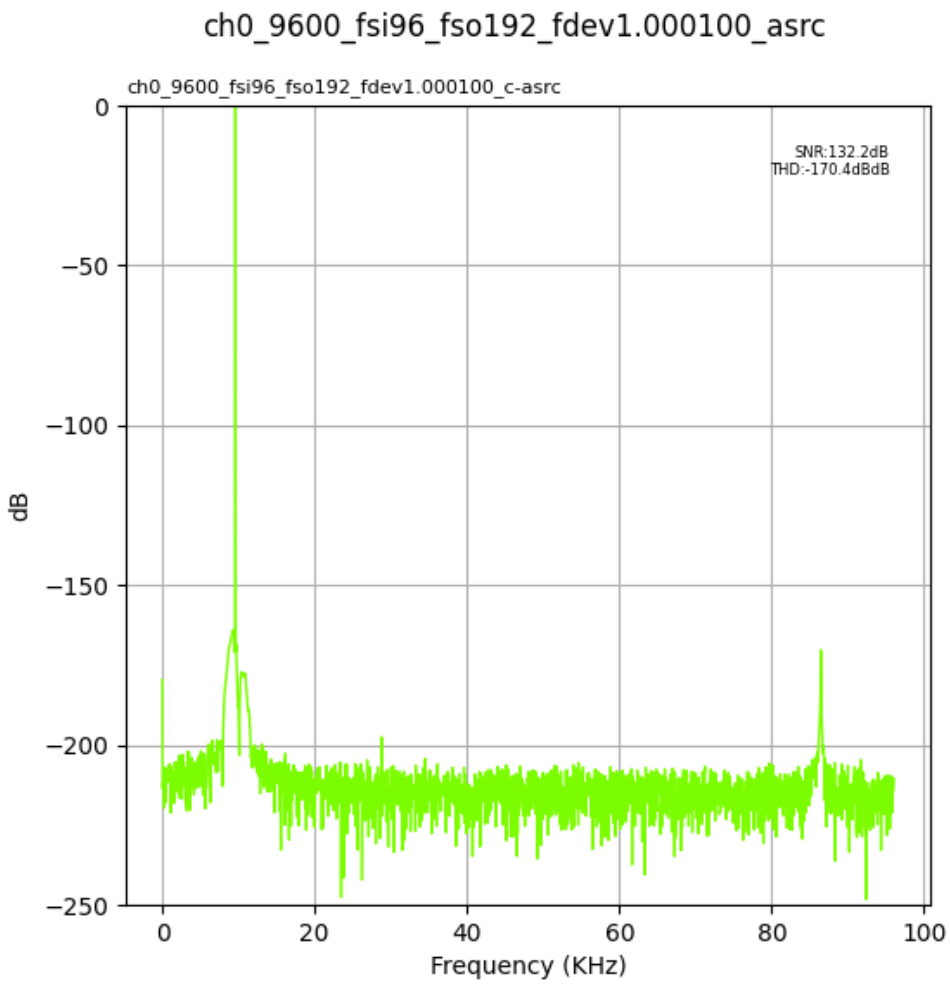

Fig. 1.219: Input Fs: 96,000Hz, Output Fs: 192,000Hz, Fs error: 1.000100, Results for: asrc

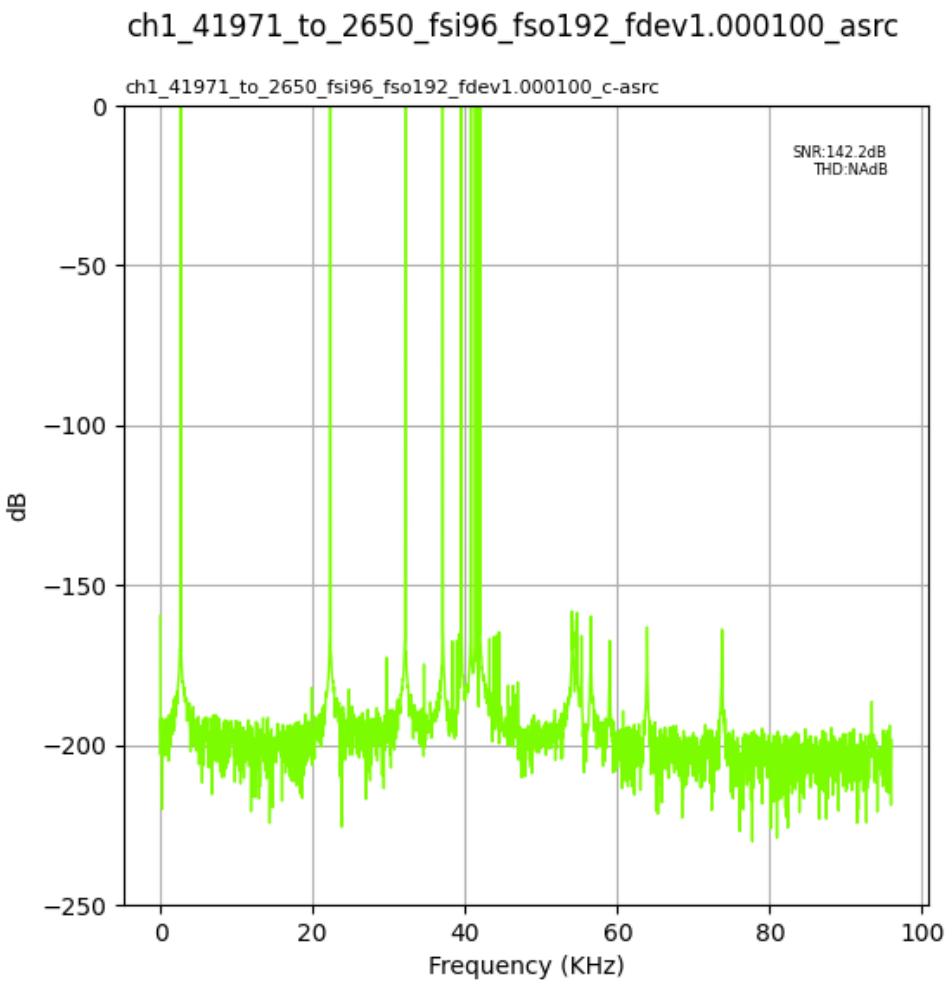

Fig. 1.220: Input Fs: 96,000Hz, Output Fs: 192,000Hz, Fs error: 1.000100, Results for: asrc

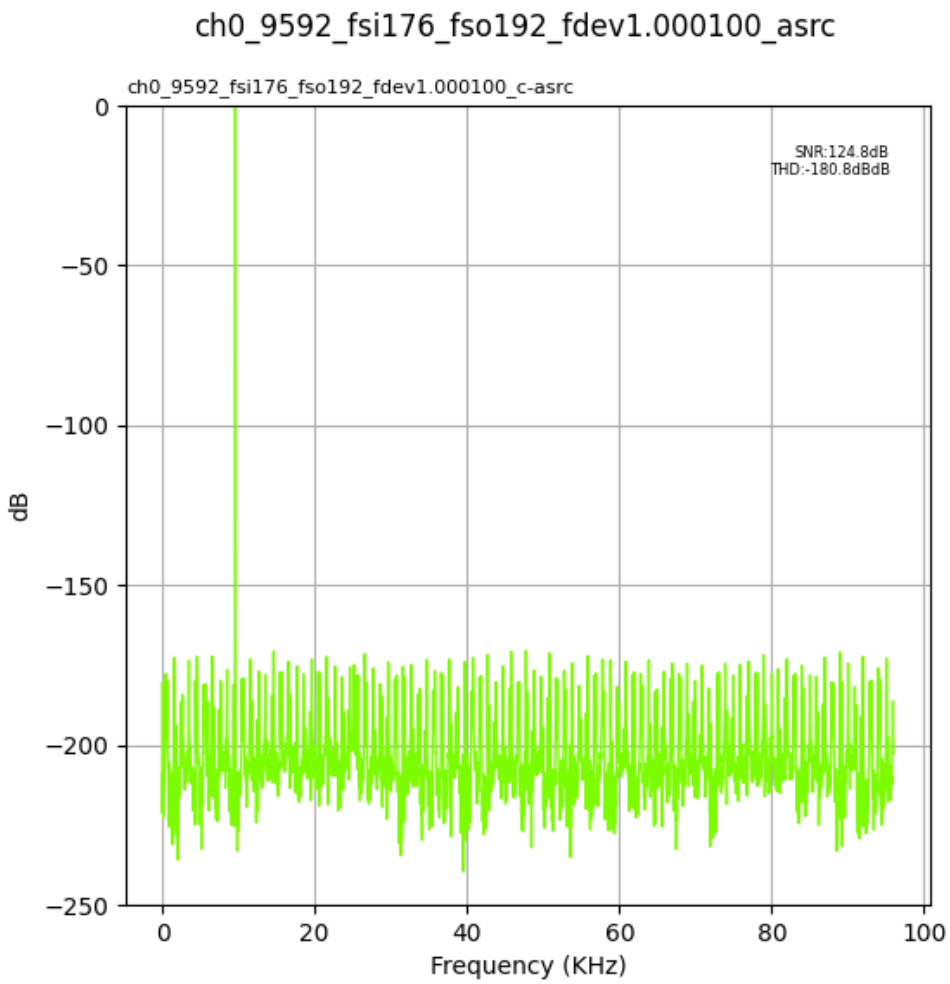

Fig. 1.221: Input Fs: 176,400Hz, Output Fs: 192,000Hz, Fs error: 1.000100, Results for: asrc

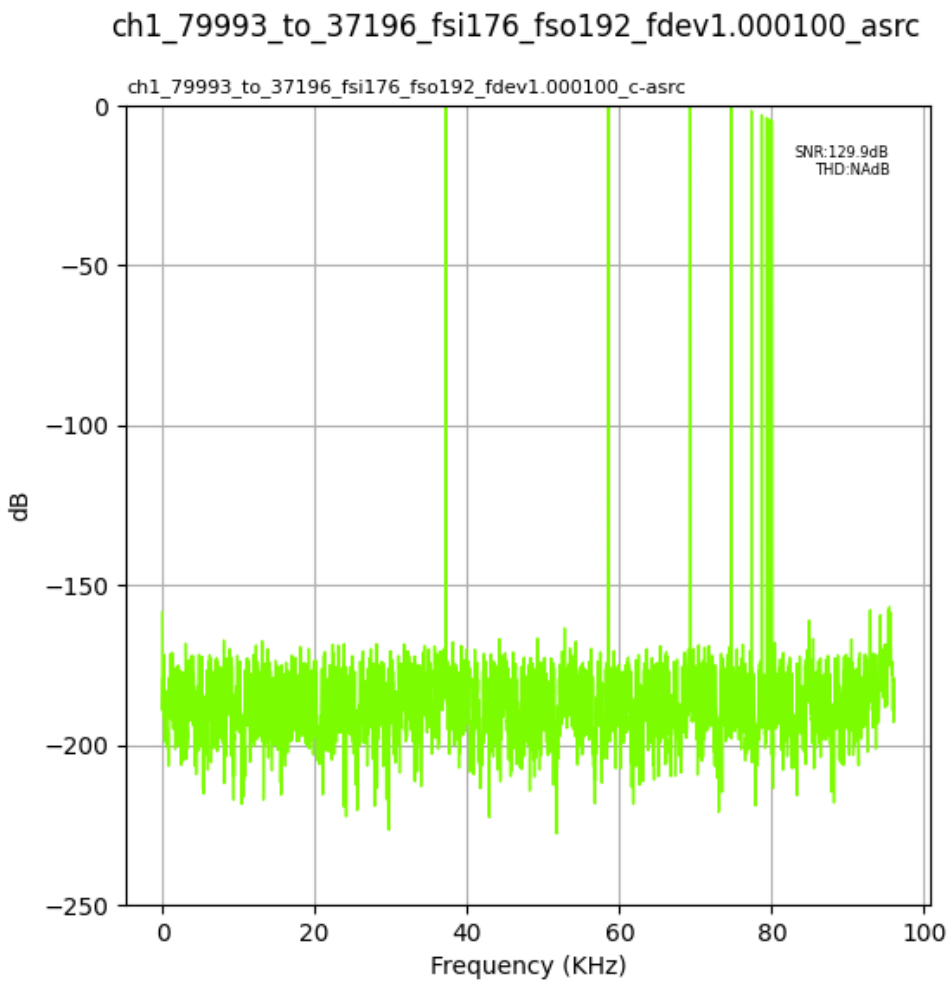

Fig. 1.222: Input Fs: 176,400Hz, Output Fs: 192,000Hz, Fs error: 1.000100, Results for: asrc

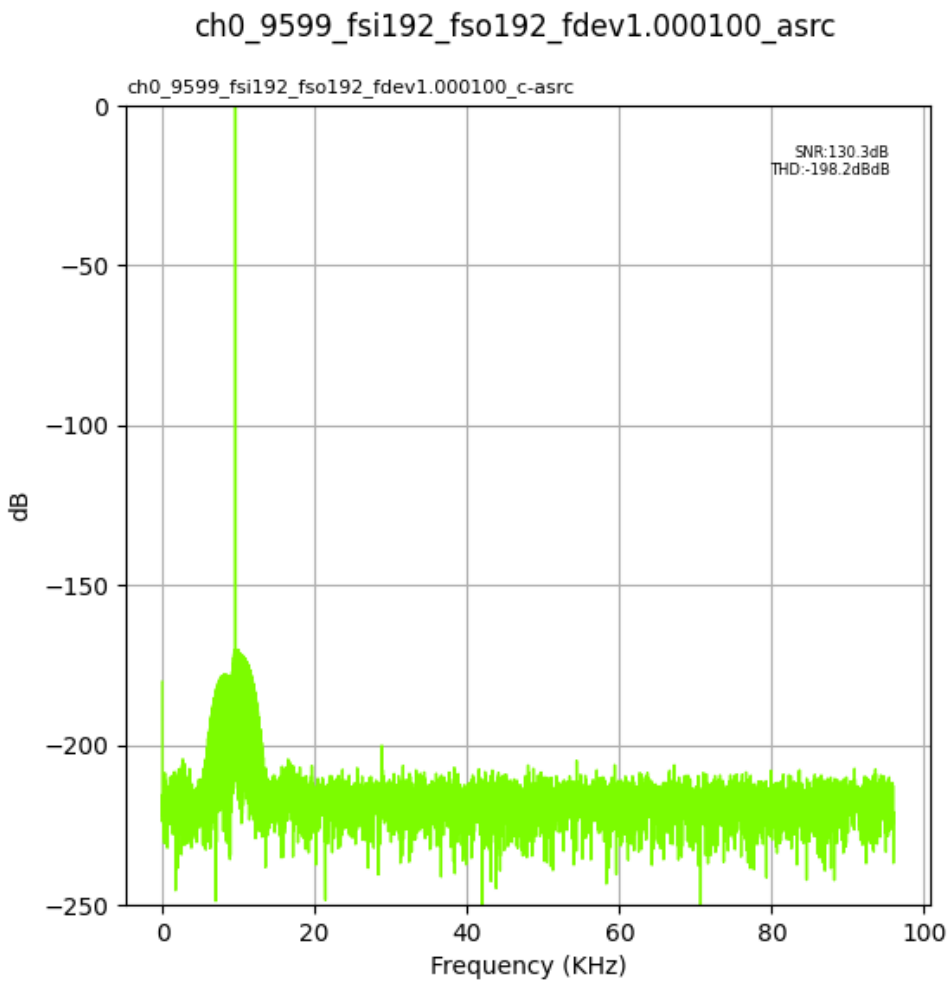

Fig. 1.223: Input Fs: 192,000Hz, Output Fs: 192,000Hz, Fs error: 1.000100, Results for: asrc

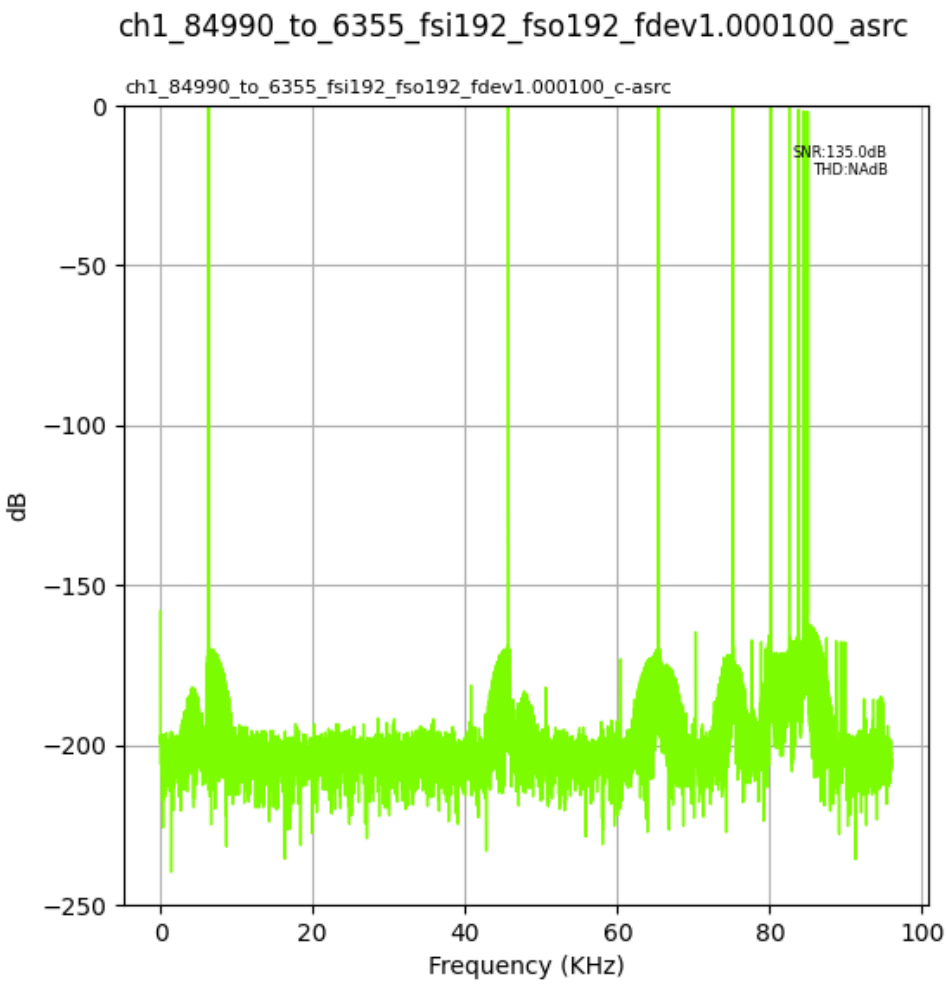

Fig. 1.224: Input Fs: 192,000Hz, Output Fs: 192,000Hz, Fs error: 1.000100, Results for: asrc

2 Tabulated data