Undersampling 6m Tx test result

ji1udd

Measured output power and IMD3 when using TxDAC

Test Setup

CVA9 + HL v1.22 + Basic Frontend v1.0 with TxDAC Balun (BN43-2402 BF2T + 4T) + Amp

Interpolation OFF, IAMP Disable

PowerSDR, Freq 23.528MHz(=50.200MHz), DriveLevel 100

IMD : TwoTone 700Hz+1700Hz

Output Power : TUNE mode

Result

	IMD3 (dBc)	Output(dBm)
1. No Amp.	-63 (Fig1)	-10
2. Single stage 2222 Amp.	-60 (Fig2)	+4
3. Two stage 2222 Amp	-36 (Fig3)	+19

1. No Amp.

TxDAC + Balun → Diplexer + BPF → ATT 10dB → SA / Scope (50ohm load)

2. Single stage 2222 Amp.

TxDAC + Balun → Diplexer + BPF → 2222 Amp. → ATT 25dB → SA / Scope (50ohm load)

3. Two stage 2222 Amp

TxDAC + Balun → Diplexer + BPF → 2222 Amp.#1 → 2222 Amp.#2 → ATT 31dB → SA / Scope (50ohm load)

Output power is measured by scope without ATT

Fig.1

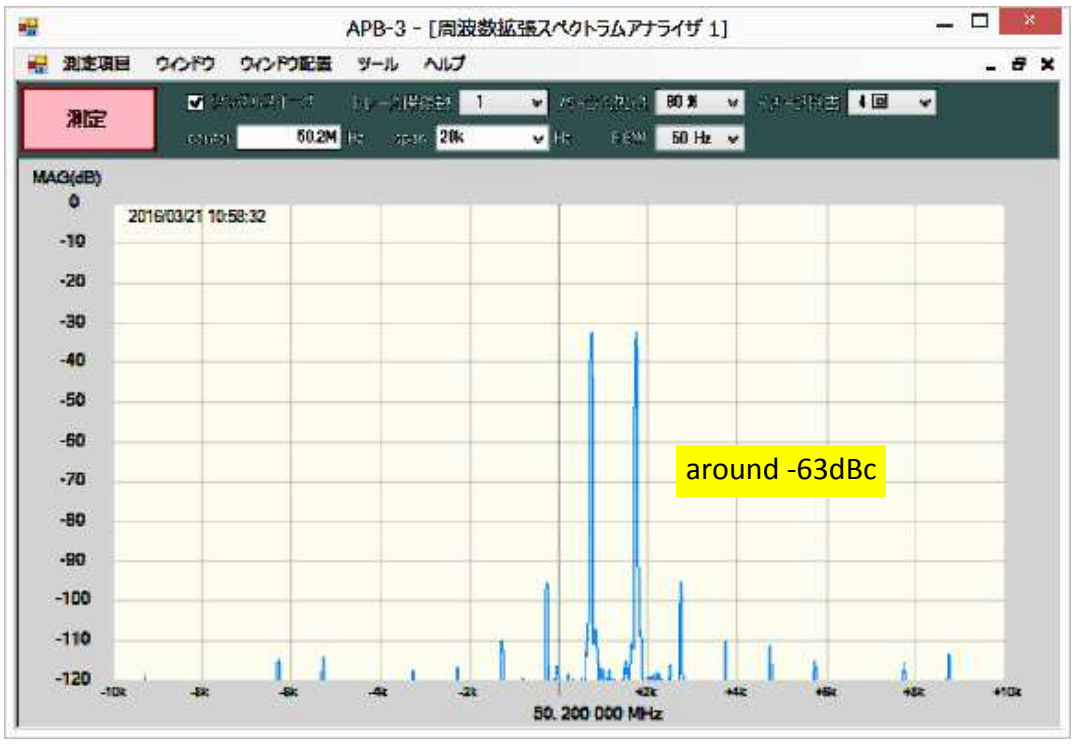


Fig.2

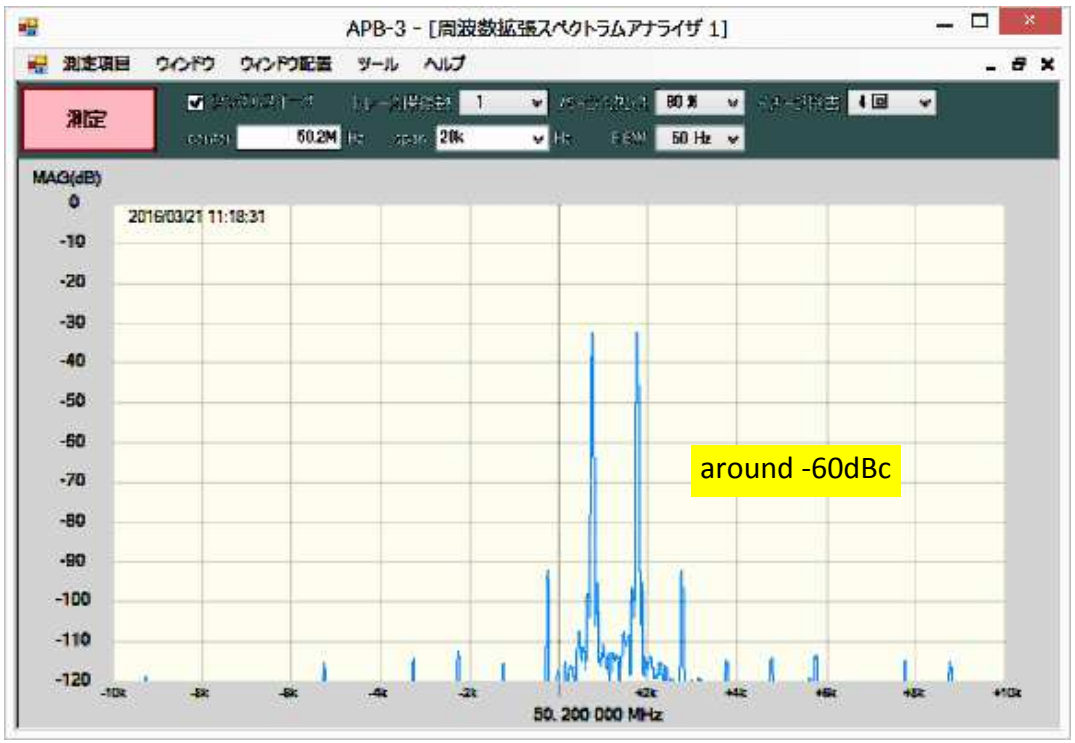
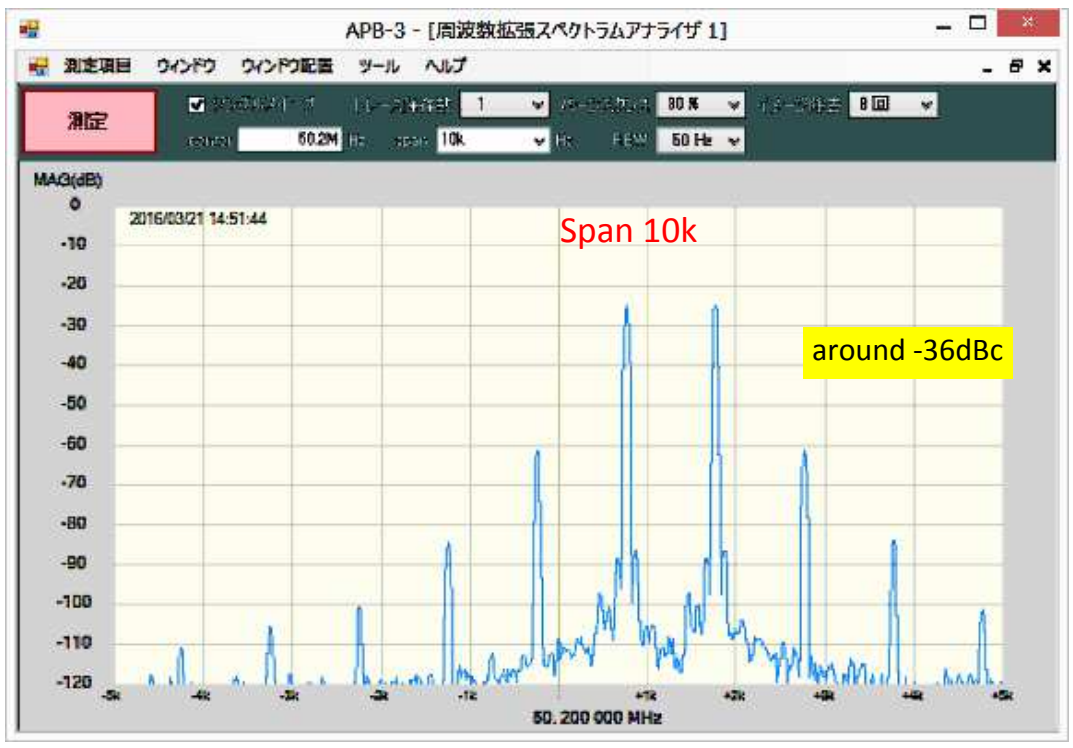

APB-3 - [周波数拡張スペクトラムアナライザ 1]
測定項目 ウィンドウ ウィンドウ配置 ツール ヘルプ
測定
50.2M
20k
50 Hz
MAG(dB)
2016/03/21 11:18:31
around -60dBc
50.200 000 MHz

Fig.3


APB-3 - [周波数拡張スペクトラムアナライザ 1]
測定項目 ウィンドウ ウィンドウ配置 ツール ヘルプ
測定
50.2M
10k
50 Hz
MAG(dB)
2016/03/21 14:51:44
Span 10k
around -36dBc
50.200 000 MHz