

Interference from 160-MHz Nonlinear Non-Continuous Channel

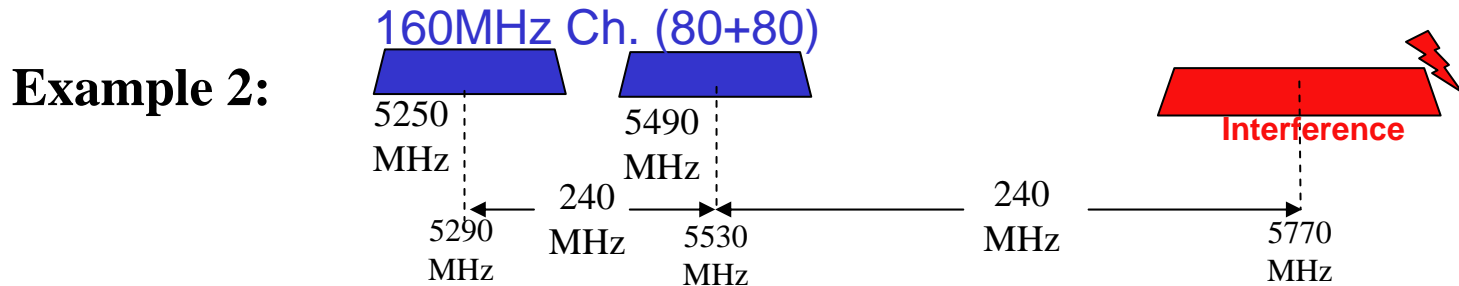
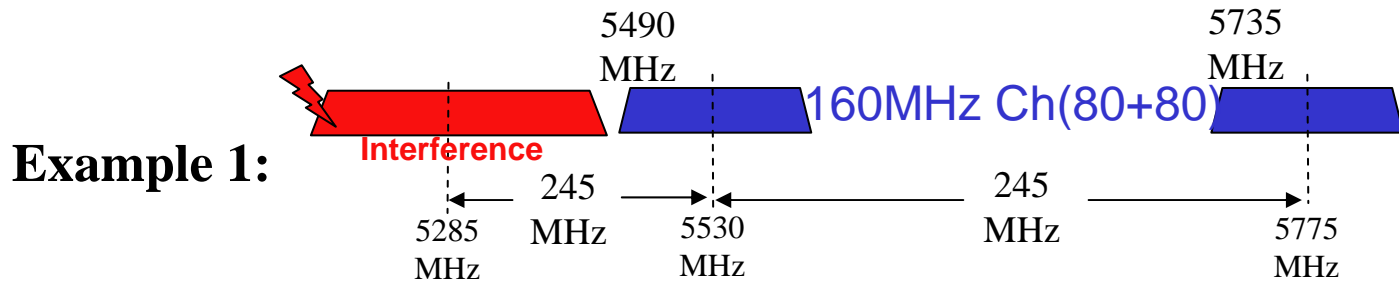
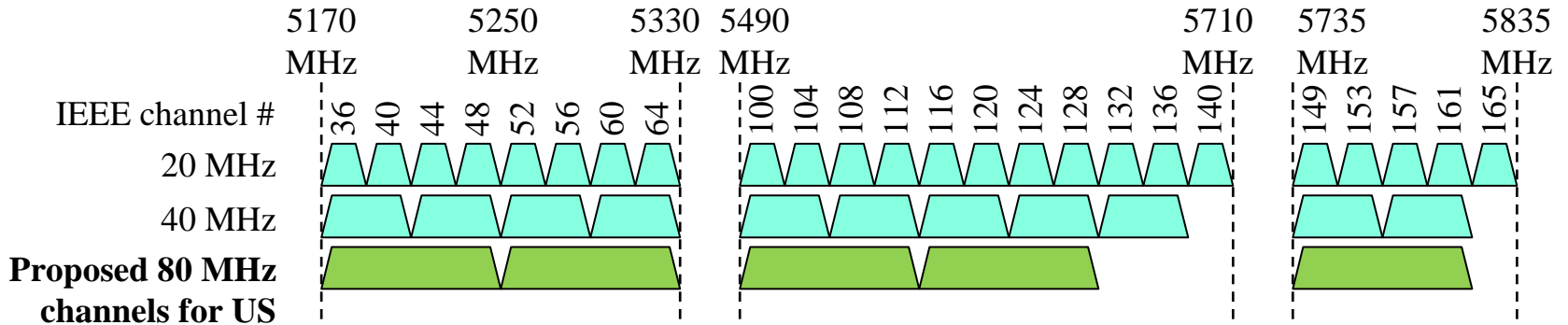
Date: 2011-03-14

Authors:

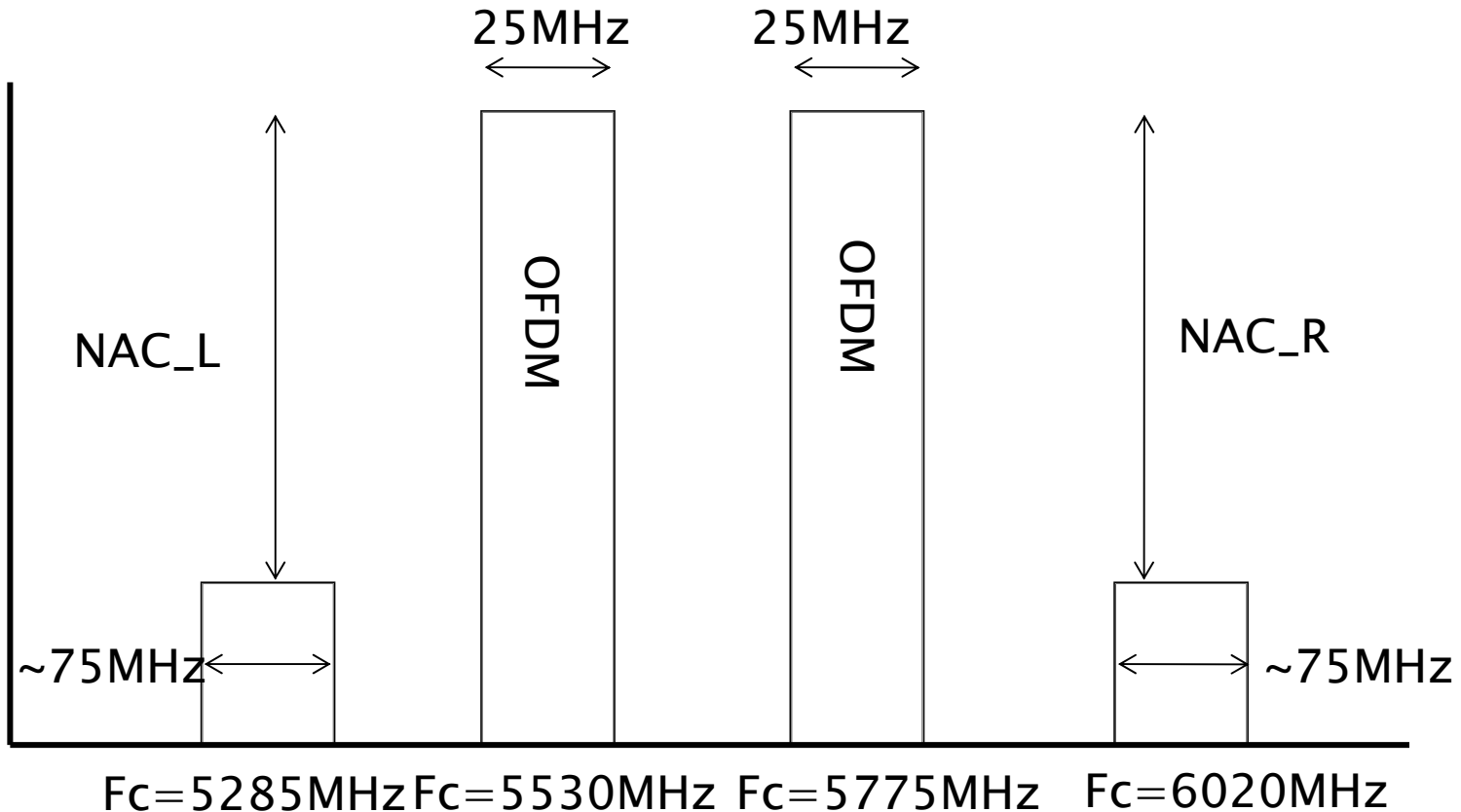
Name	Affiliations	Address	Phone	email
Tian-Wei Huang	National Taiwan University	No. 1, Sec. 4, Roosevelt Road, Taipei, 10617 Taiwan(R.O.C.)	+886-2-33665084	twhuang@cc.ee.ntu.edu.tw
Peter Gammel	SiGe Semiconductor	200 Brickstone Square Suite 203 Andover, MA 01810 USA	+1-978-327-6875	plg@sige.com
Craig Christmas	SiGe Semiconductor	200 Brickstone Square Suite 203 Andover, MA 01810 USA	+1-978-327-6875	craig_christmas@sige.com
Paul Huang	SiGe Semiconductor	200 Brickstone Square Suite 203 Andover, MA 01810 USA	+1-978- 327-6872	ph@sige.com

160 MHz Non-Adjacent Channel Possible Interference

doc.: IEEE 802.11-10/0773r0

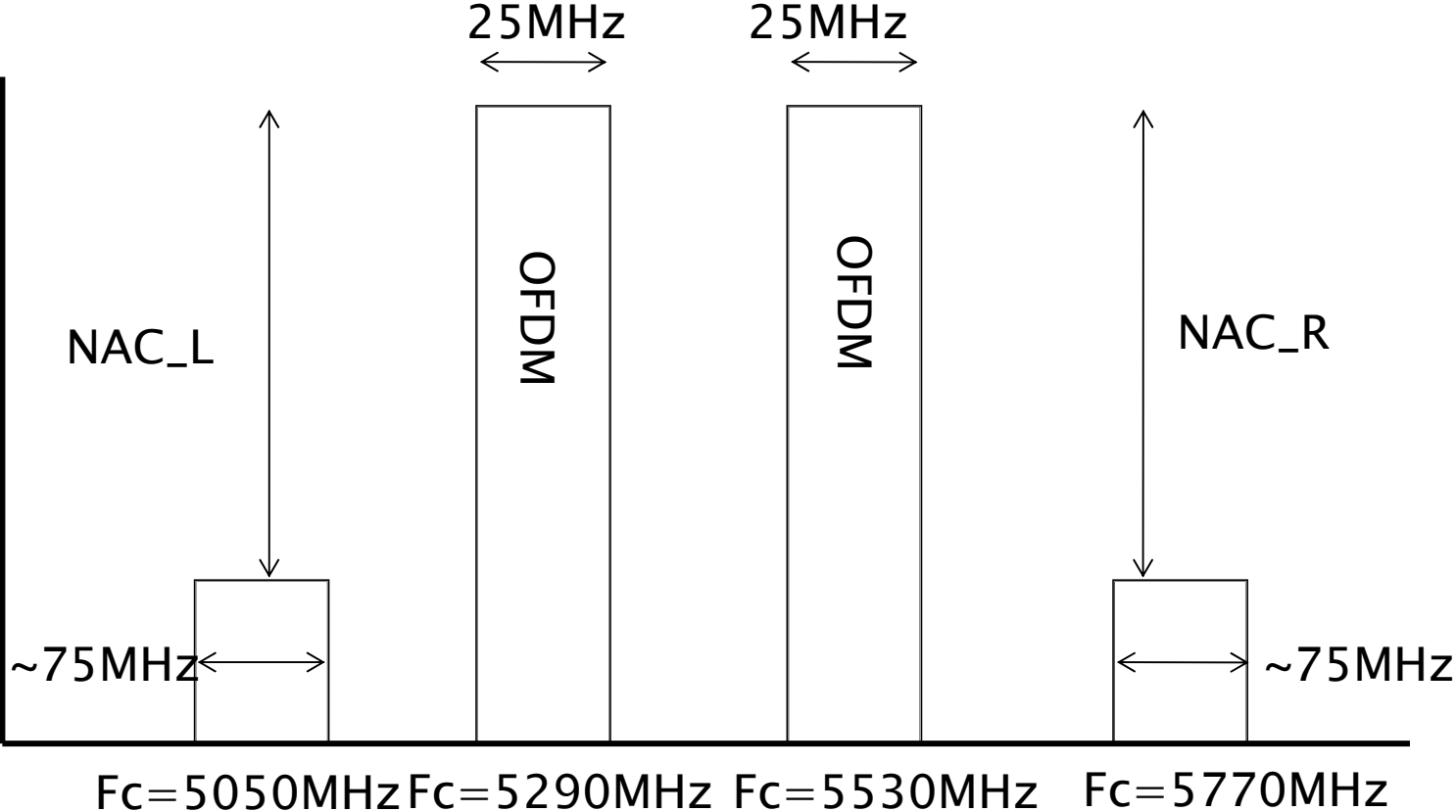


Example 1



Due to the bandwidth limitation of test equipment, we use 25MHz OFDM signal instead of 80MHz signal.

Example 2



Analog DSB AM Inter-modulation Spectrum

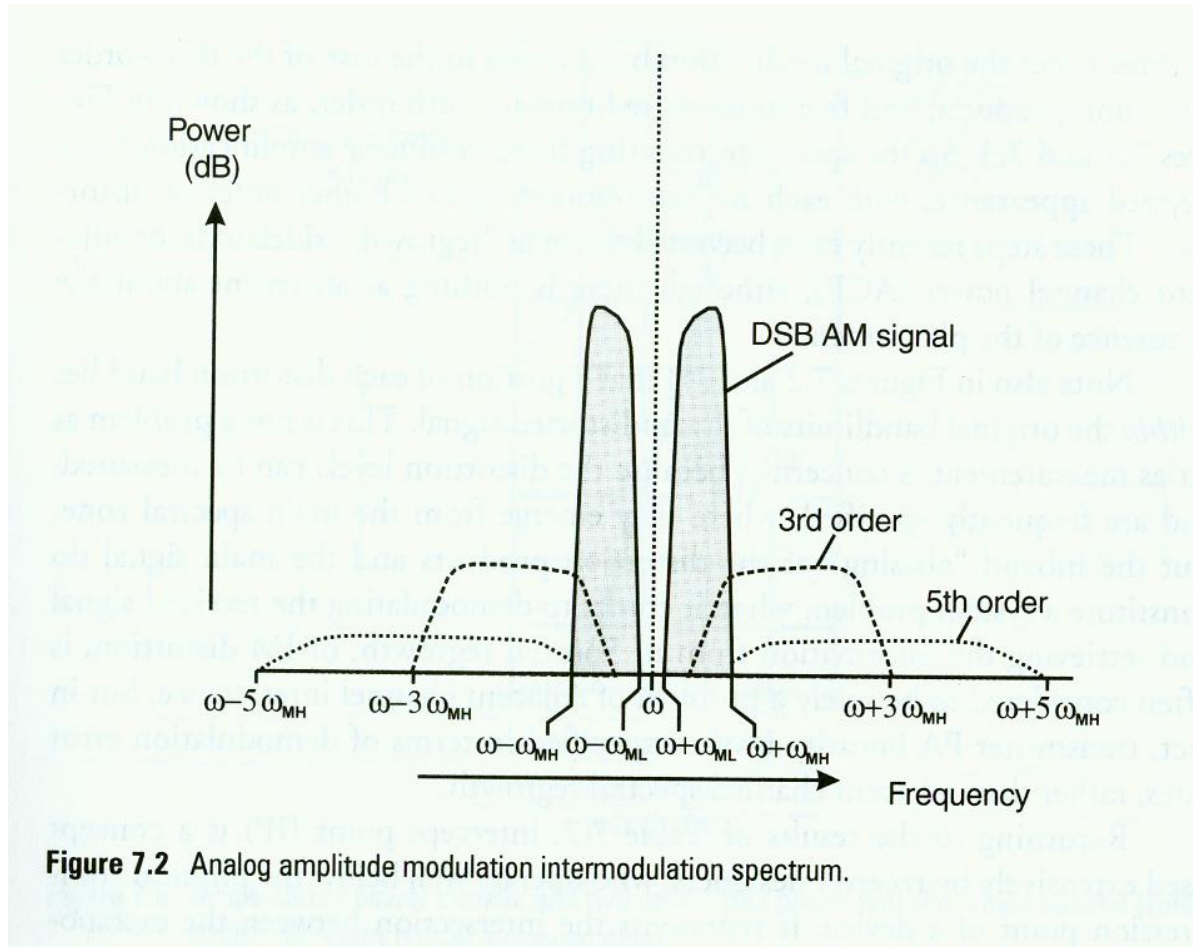
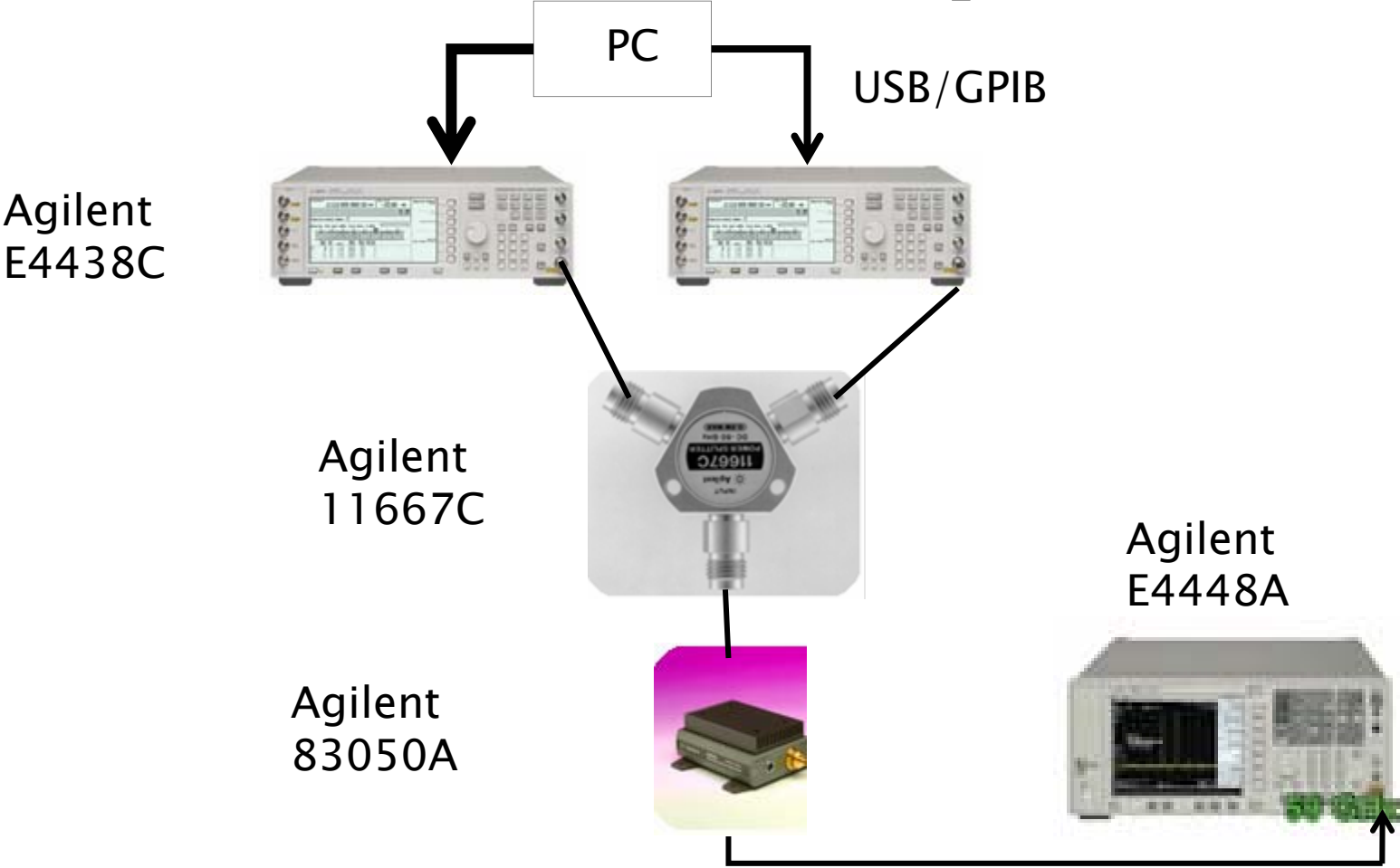


Figure 7.2 Analog amplitude modulation intermodulation spectrum.

*Steve C. Cripps, RF power amplifiers for wireless communications, Artech House, 1999.

Measurement Setup

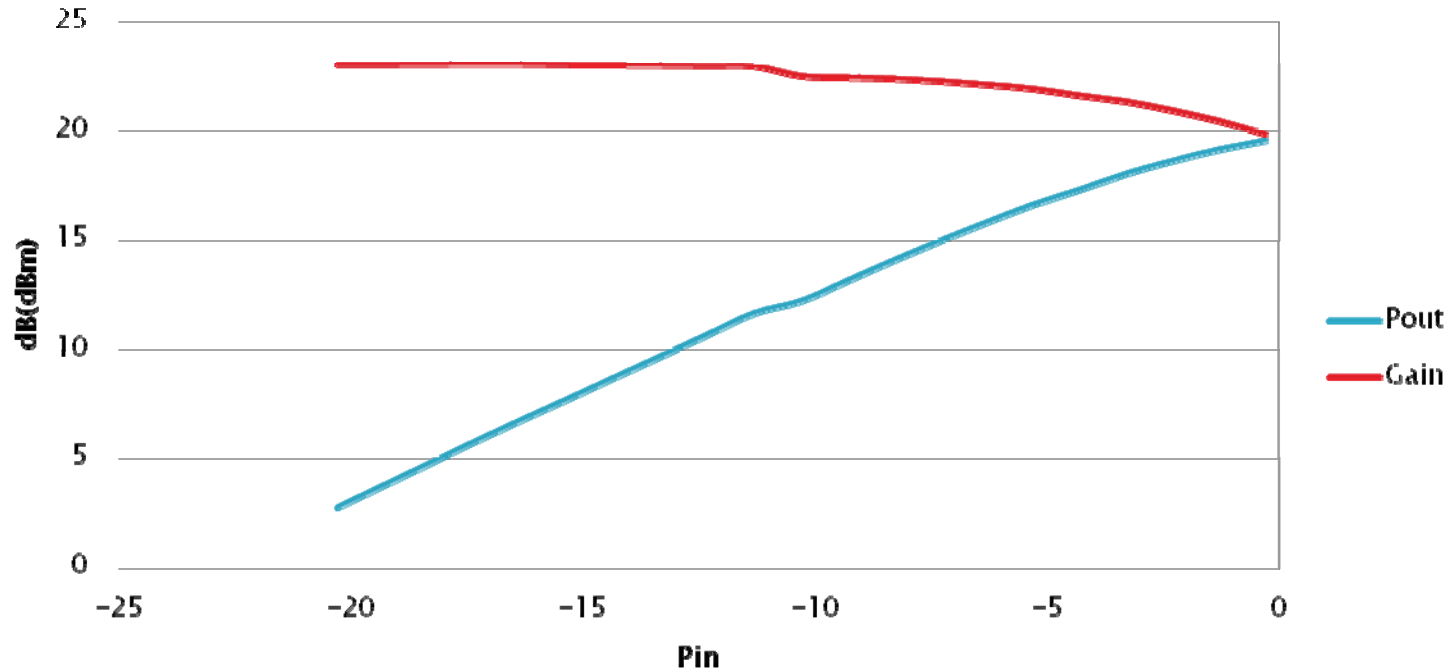


AM/AM of Power Amplifier

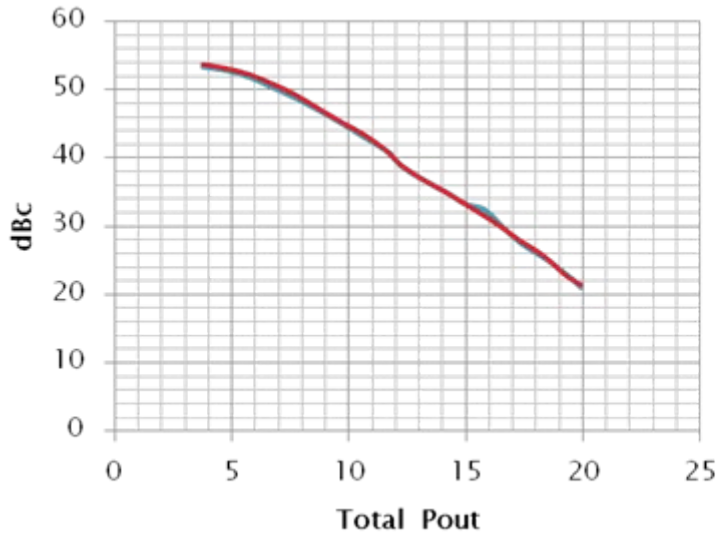
Agilent 83050A 2~50GHz Broadband Amplifier:

Psat: 20dBm
 Gain: 23.05dB (Single-Tone Input)
 P-1 dB: ~16dBm

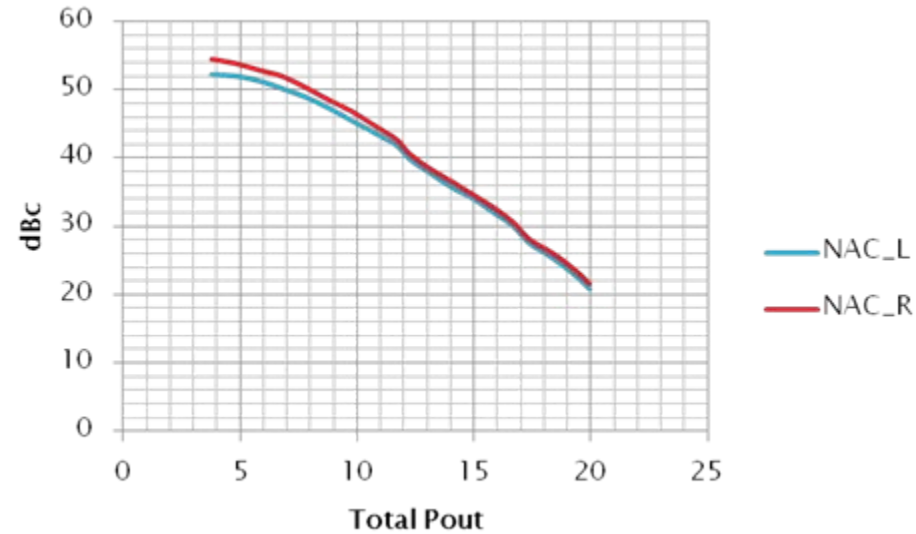
Pin-Pout:



NAC_L and NAC_R

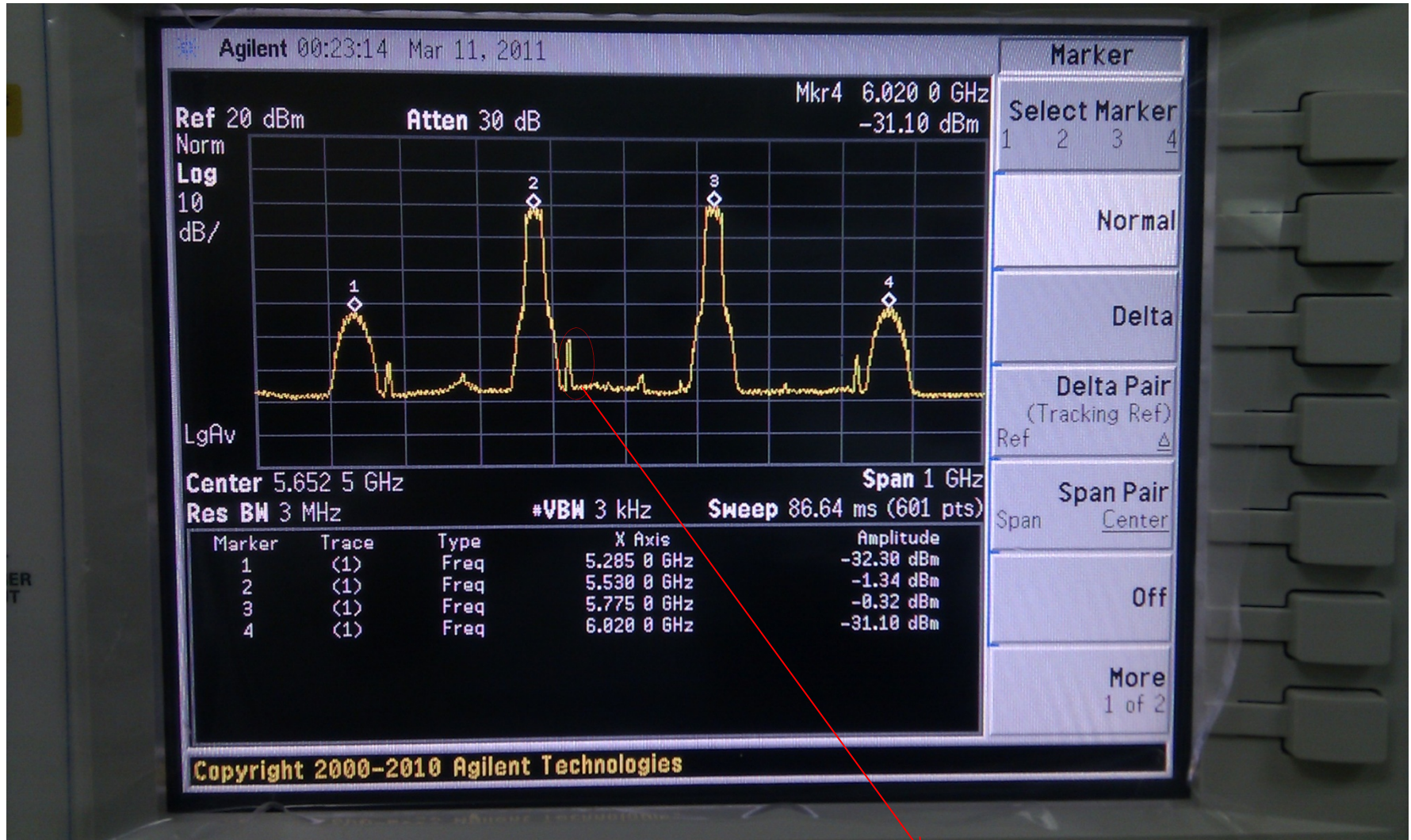


Example 1:
Two OFDM signal located
at 5530MHz & 5775MHz



Example 2:
Two OFDM signal located
at 5290MHz & 5530MHz

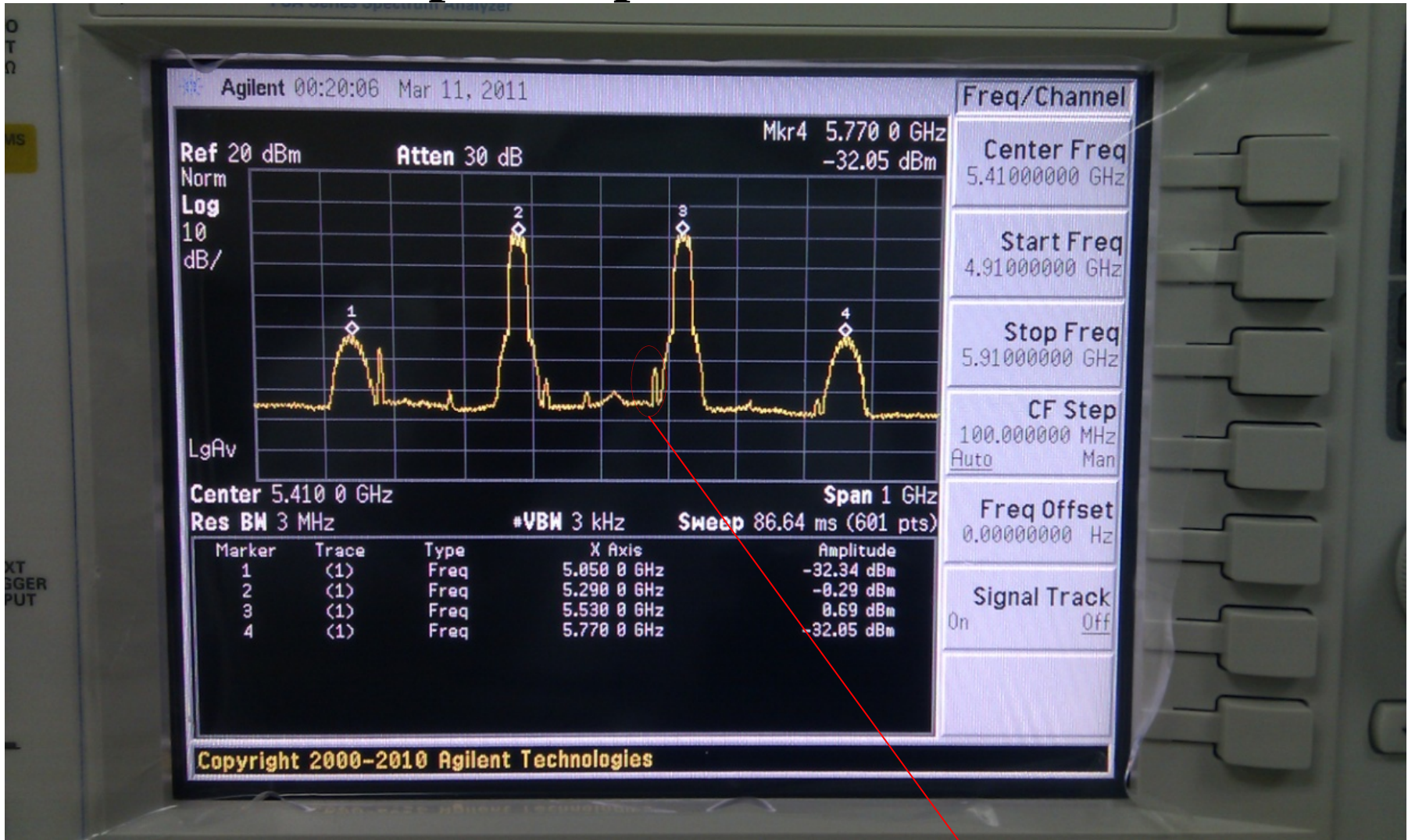
Example 1: Spectrum near P-1dB



LO Leakage by 4438C

Tian-Wei Huang, NTU and Peter Gammel, SiGe

Example 2: Spectrum near P-1dB



LO Leakage by 4438C