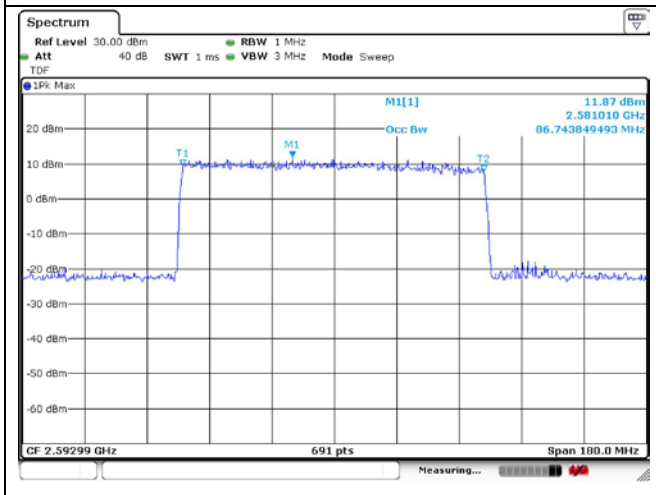
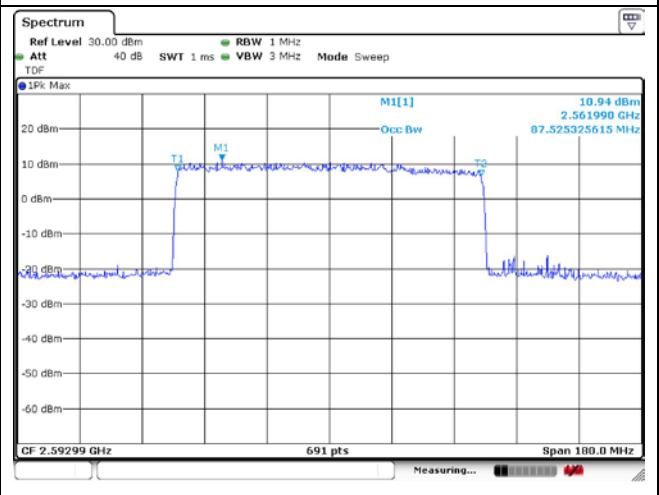


90 MHz DFT-S-OFDM BPSK Middle Channel – Full RB

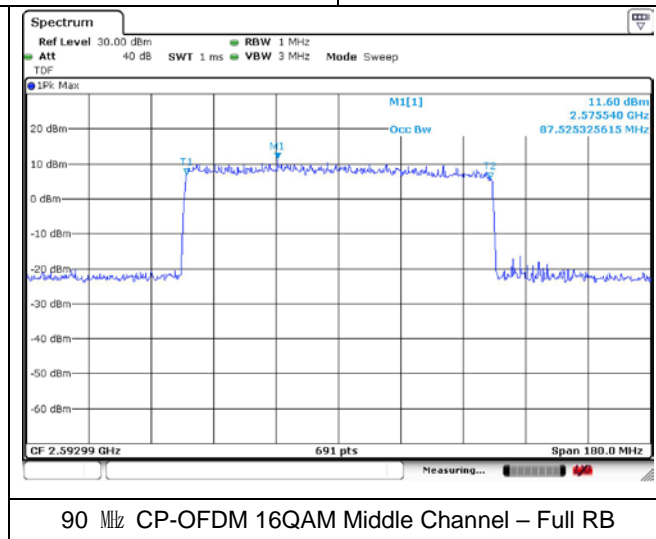
90 MHz DFT-S-OFDM QPSK Middle Channel – Full RB



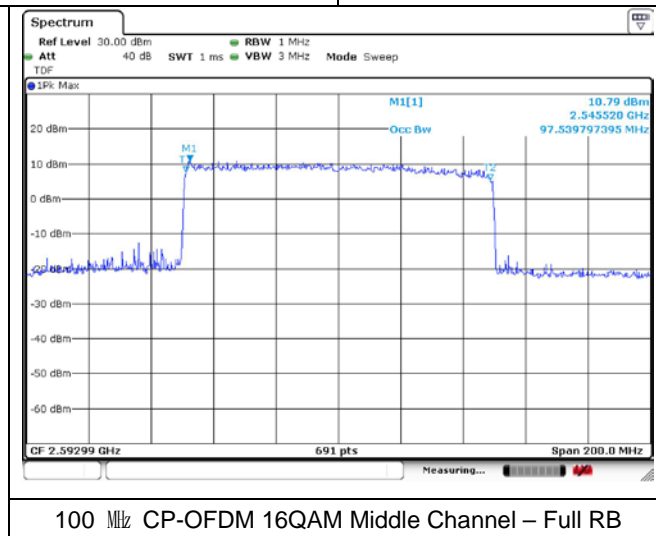
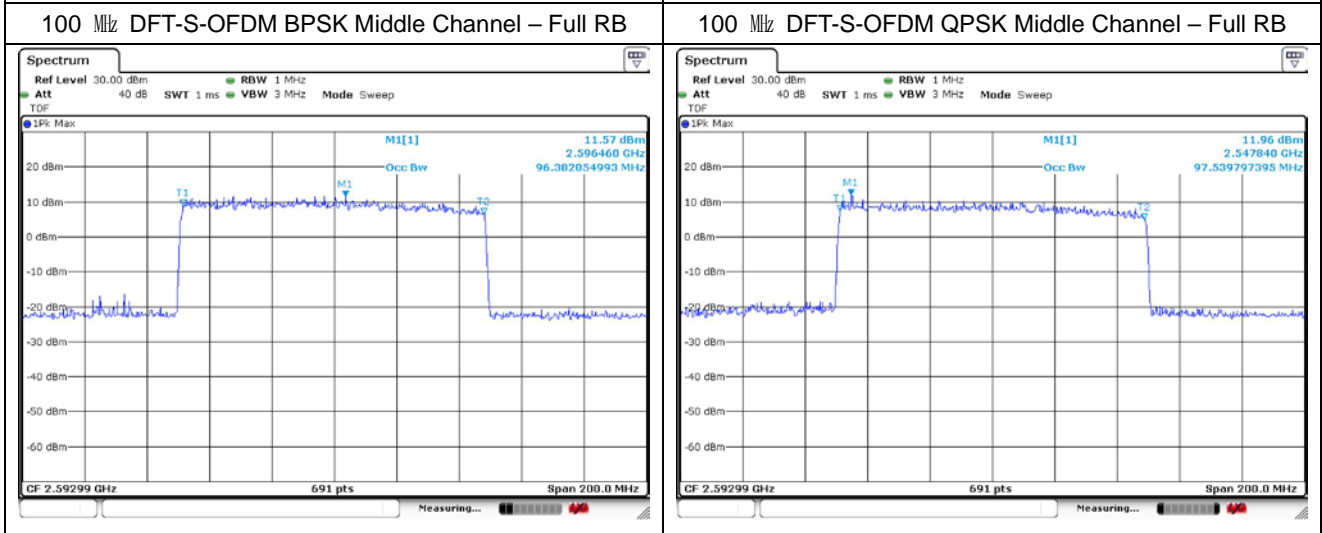
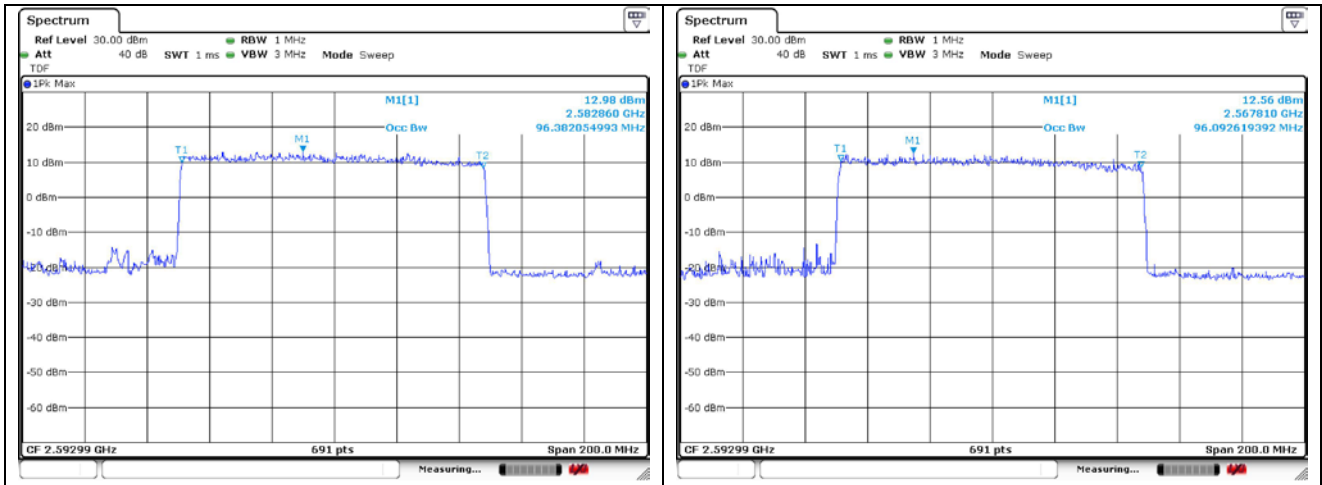
90 MHz DFT-S-OFDM 16QAM Middle Channel – Full RB



90 MHz CP-OFDM QPSK Middle Channel – Full RB



90 MHz CP-OFDM 16QAM Middle Channel – Full RB



5. Peak-Average Ratio

5.1. Limit

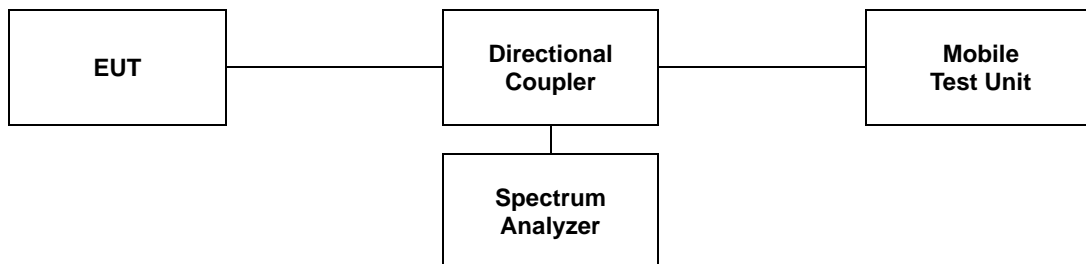
- §27.50(d)(5), power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (d)(6) of this section. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

5.2. Test Procedure

The test follows section 5.2.3.4 of ANSI C63.26-2015.

See instrumentation-specific application literature for further guidance regarding use of the CCDF capability. The following guidelines are offered for performing a CCDF measurement.

- a. Set resolution/measurement bandwidth \geq OBW or specified reference bandwidth.
- b. Set the number of counts to a value that stabilizes the measured CCDF curve.
- c. Set the measurement interval as follows:
 - 1) For continuous transmissions, set to greater of $[10 \times (\text{number of points in sweep}) \times (\text{transmission symbol period})]$ or 1 ms.
 - 2) For burst transmissions, employ an external trigger that is synchronized with the EUT burst timing sequence, or use the internal burst trigger with a trigger level that allows the burst to stabilize. Set the measurement interval to a time that is less than or equal to the burst duration.
 - 3) If there are several carriers in a single antenna port, the peak power shall be determined for each individual carrier (by disabling the other carriers while measuring the required carrier) and the total peak power calculated from the sum of the individual carrier peak powers.
- d. Record the maximum PAPR level associated with a probability of 0.1 %.
- e. The peak power level is calculated from the sum of the PAPR value from step d) to the measured average power.



5.3 Test Results

Ambient temperature : (23 ± 1) °C
 Relative humidity : 47 % R.H.

SIM 1

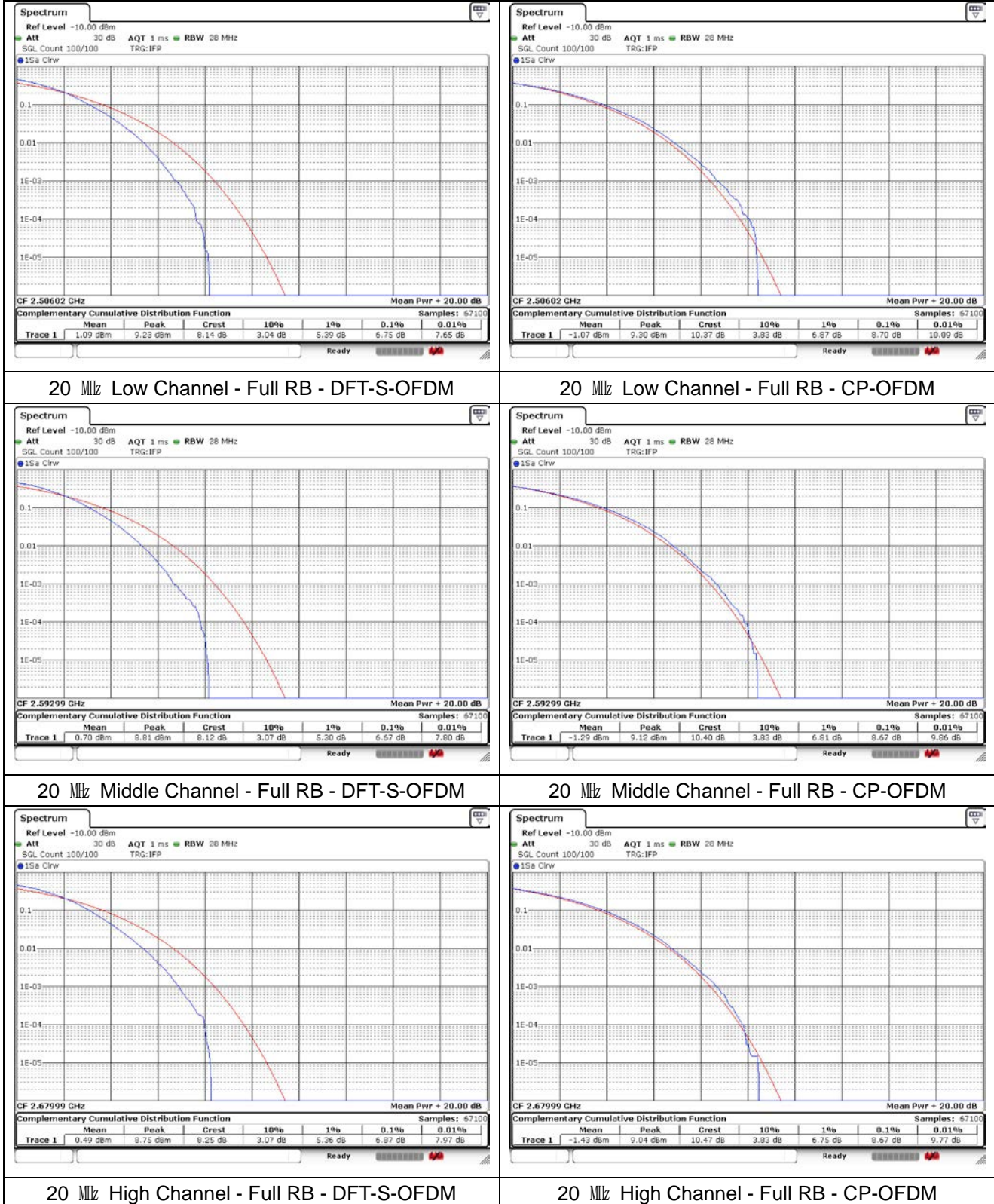
Band	SCS (kHz)	BW (MHz)	Mode	Frequency (MHz)	PAR (dB)	
					DFT-S-OFDM	CP-OFDM
41	30	20	256QAM	2 506.02	6.75	8.70
				2 592.99	6.67	8.67
				2 679.99	6.87	8.67
		30		2 511.00	6.75	8.81
				2 592.99	6.64	8.72
				2 674.98	6.70	8.64
		40		2 516.01	6.55	8.55
				2 592.99	6.49	8.78
				2 670.00	6.52	8.81
		50		2 521.02	6.46	8.55
				2 592.99	7.16	8.72
				2 664.99	6.58	8.55
		60		2 526.00	6.84	8.67
				2 592.99	6.87	8.58
				2 659.98	6.96	8.75
		80		2 536.02	7.13	8.43
				2 592.99	7.19	8.55
				2 649.99	7.19	8.58
		90		2 541.00	7.33	8.58
				2 592.99	7.39	8.52
2 644.98	7.45		8.70			
100	2 546.01	7.48	8.58			
	2 592.99	7.62	8.67			
	2 640.00	7.54	8.58			

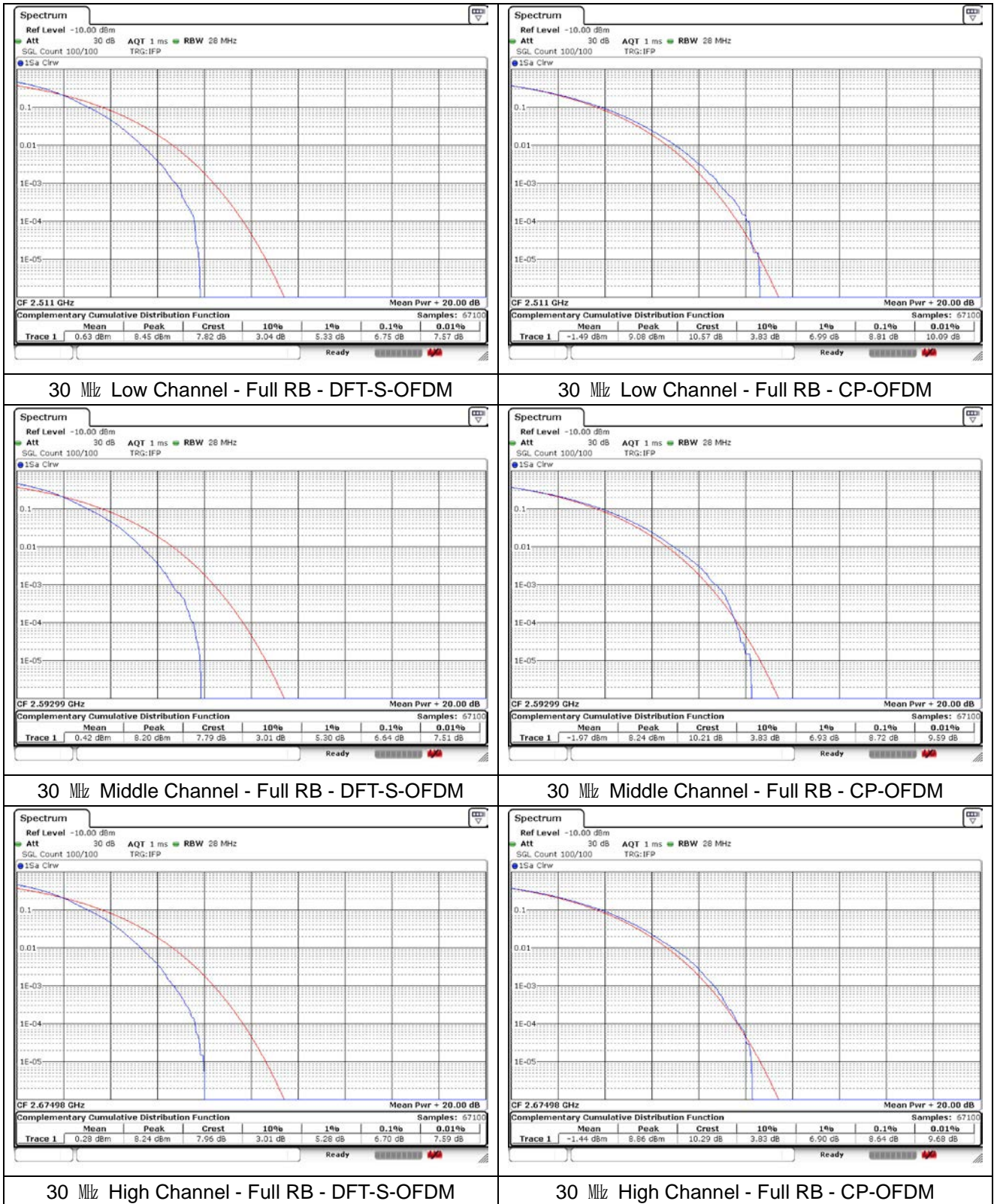
SIM 2

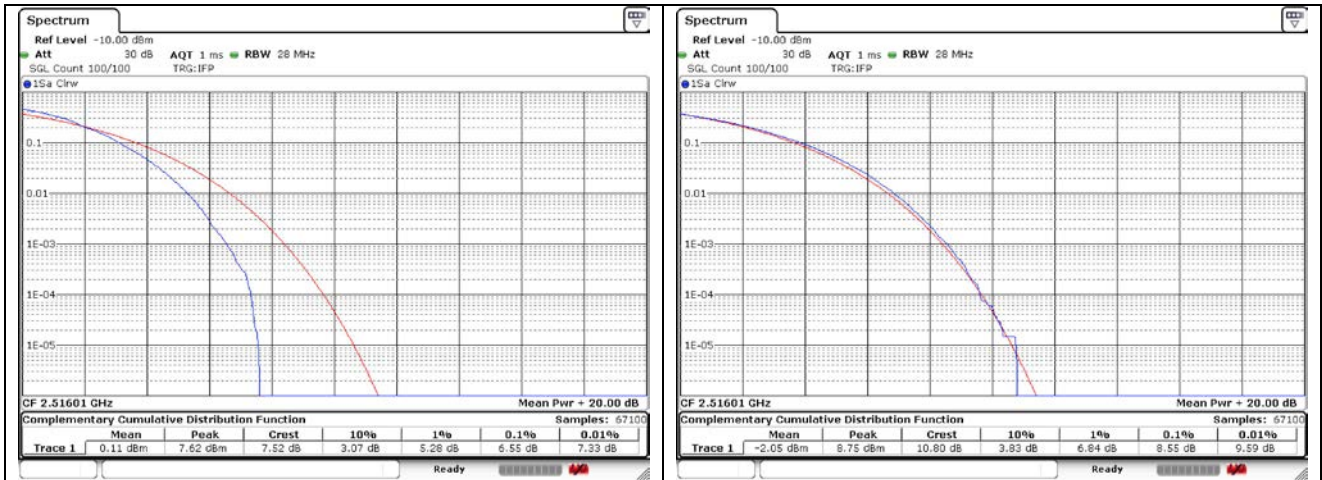
Band	SCS (kHz)	BW (MHz)	Mode	Frequency (MHz)	PAR (dB)		
					DFT-S-OFDM	CP-OFDM	
41	30	20	256QAM	2 506.02	6.75	8.67	
				2 592.99	6.87	8.61	
		2 679.99		6.84	8.72		
		30		2 511.00	6.61	8.55	
				2 592.99	6.78	8.78	
		40		2 674.98	6.55	8.78	
				2 516.01	6.64	8.55	
		50		2 592.99	6.49	8.64	
				2 670.00	6.61	8.70	
		60		2 521.02	6.43	8.64	
				2 592.99	6.52	8.70	
		80		2 664.99	6.61	8.64	
				2 526.00	6.87	8.75	
		90		2 592.99	6.75	8.70	
				2 659.98	6.87	8.61	
		100		2 536.02	7.10	8.46	
				2 592.99	7.22	8.58	
					2 649.99	7.22	8.61
					2 541.00	7.48	8.58
					2 592.99	7.45	8.67
		2 644.98	7.36	8.58			
		2 546.01	7.39	8.70			
		2 592.99	7.42	8.70			
		2 640.00	7.42	8.67			

- Test plots

SIM 1

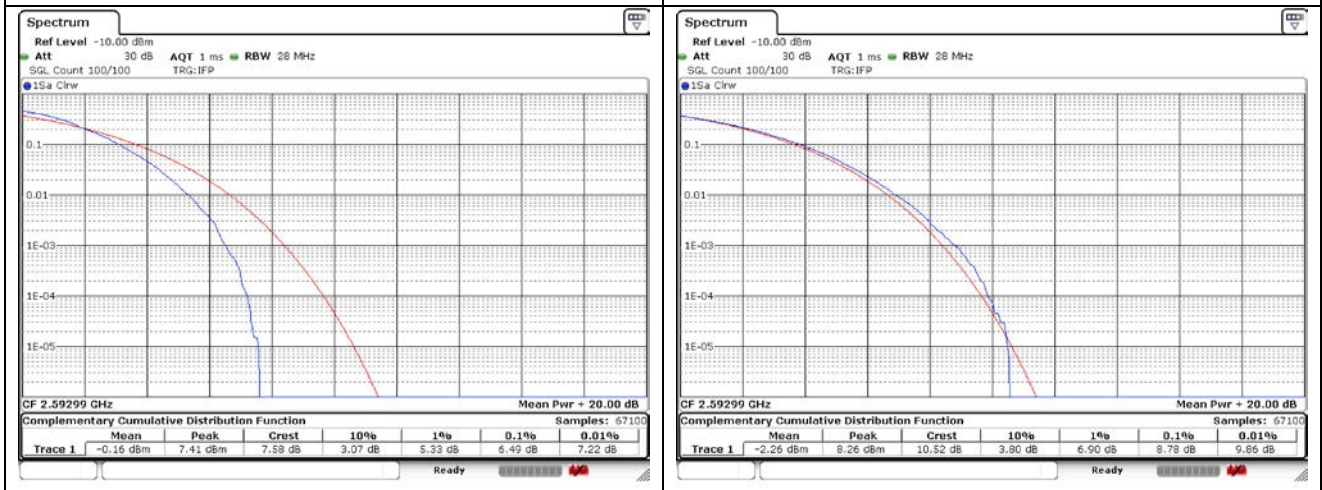






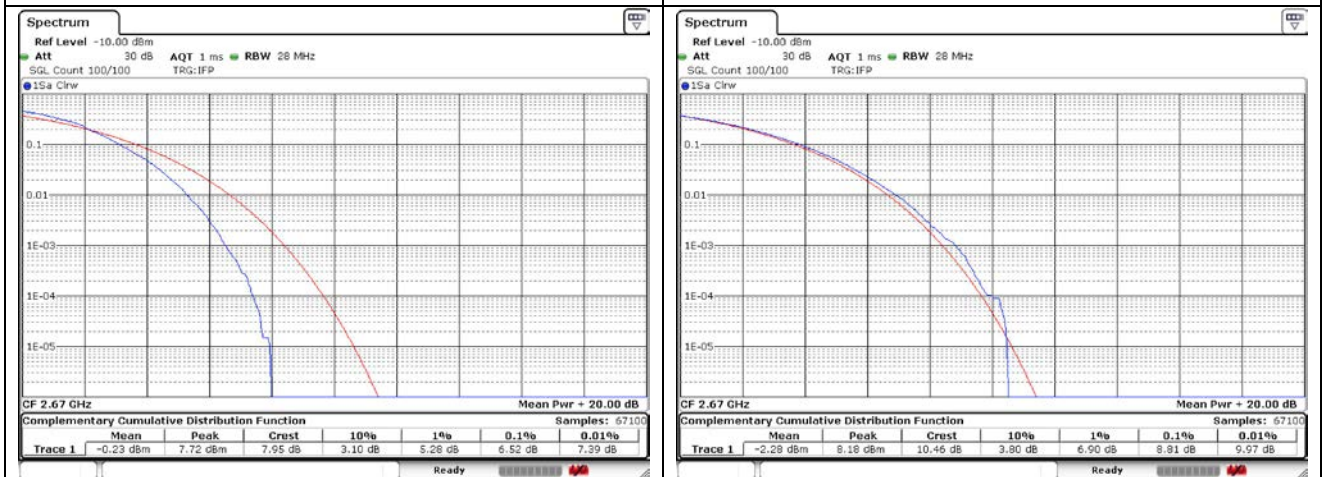
40 MHz Low Channel - Full RB - DFT-S-OFDM

40 MHz Low Channel - Full RB - CP-OFDM



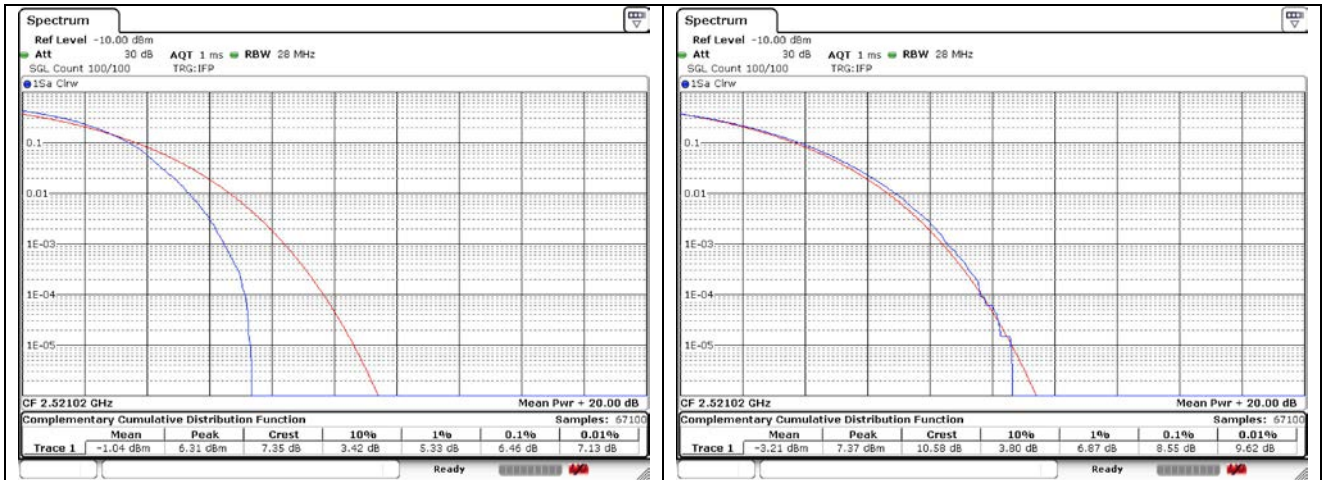
40 MHz Middle Channel - Full RB - DFT-S-OFDM

40 MHz Middle Channel - Full RB - CP-OFDM



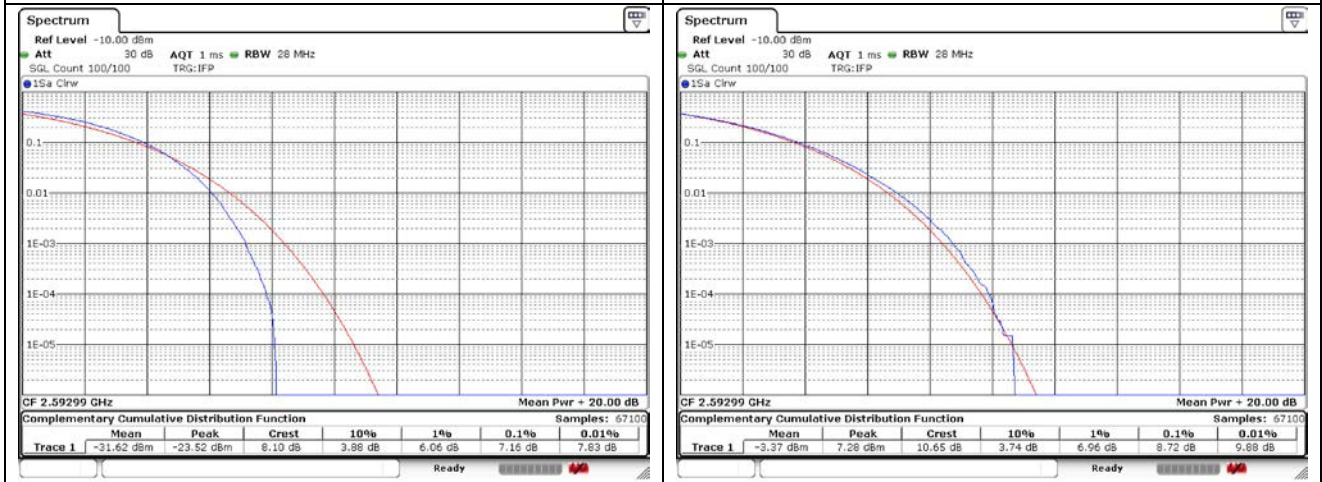
40 MHz High Channel - Full RB - DFT-S-OFDM

40 MHz High Channel - Full RB - CP-OFDM



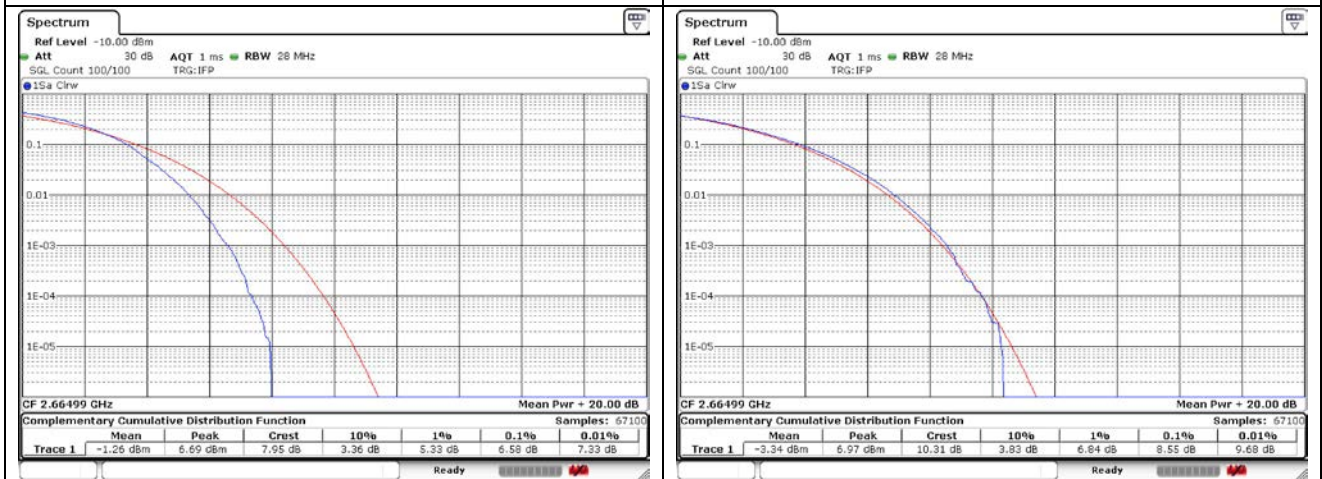
50 MHz Low Channel - Full RB - DFT-S-OFDM

50 MHz Low Channel - Full RB - CP-OFDM



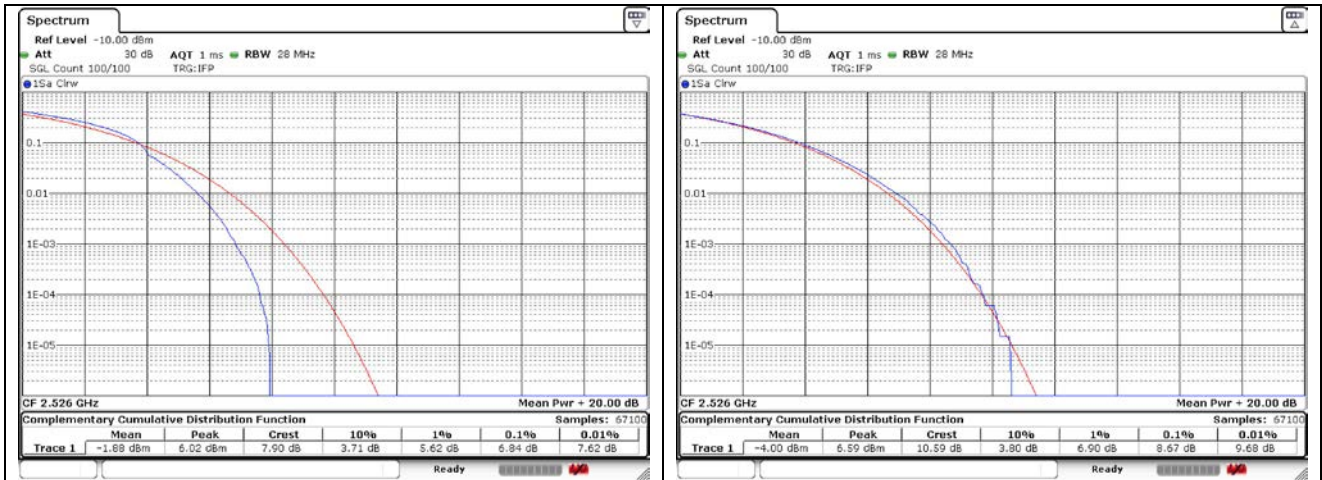
50 MHz Middle Channel - Full RB - DFT-S-OFDM

50 MHz Middle Channel - Full RB - CP-OFDM



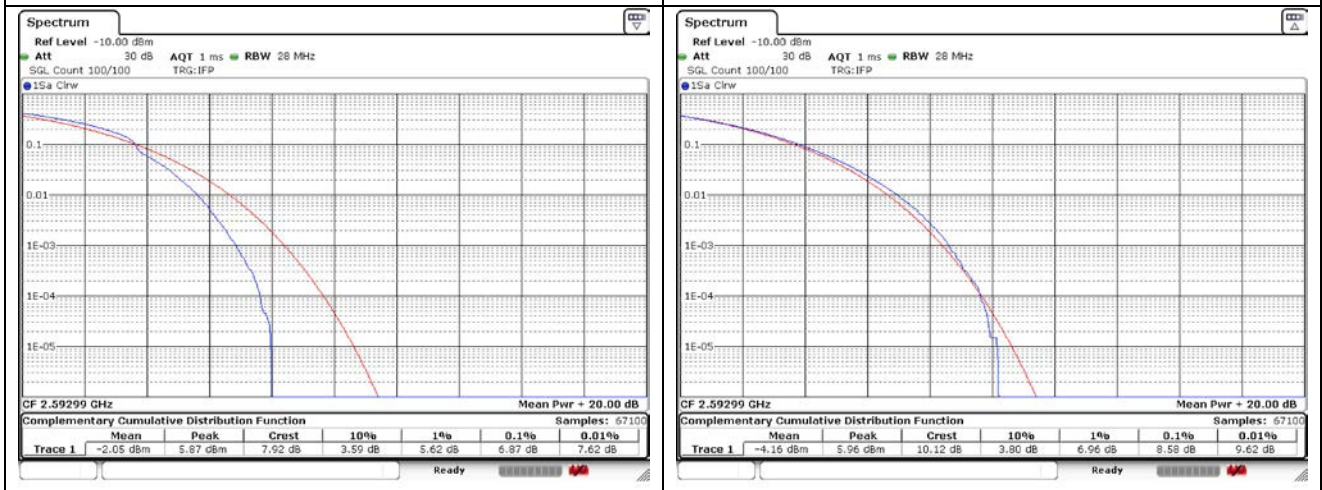
50 MHz High Channel - Full RB - DFT-S-OFDM

50 MHz High Channel - Full RB - CP-OFDM



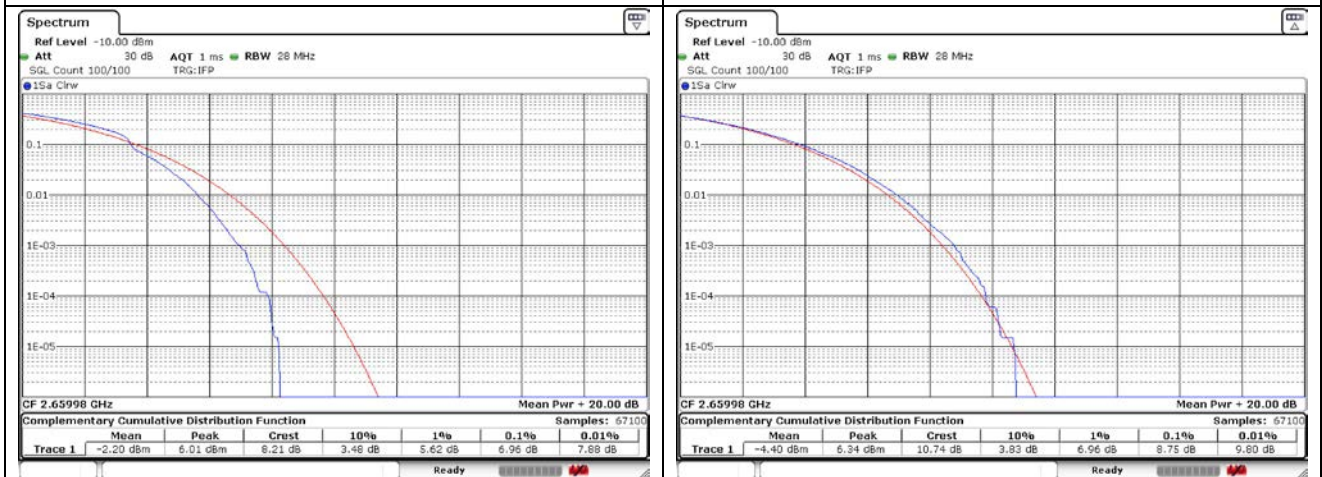
60 MHz Low Channel - Full RB - DFT-S-OFDM

60 MHz Low Channel - Full RB - CP-OFDM



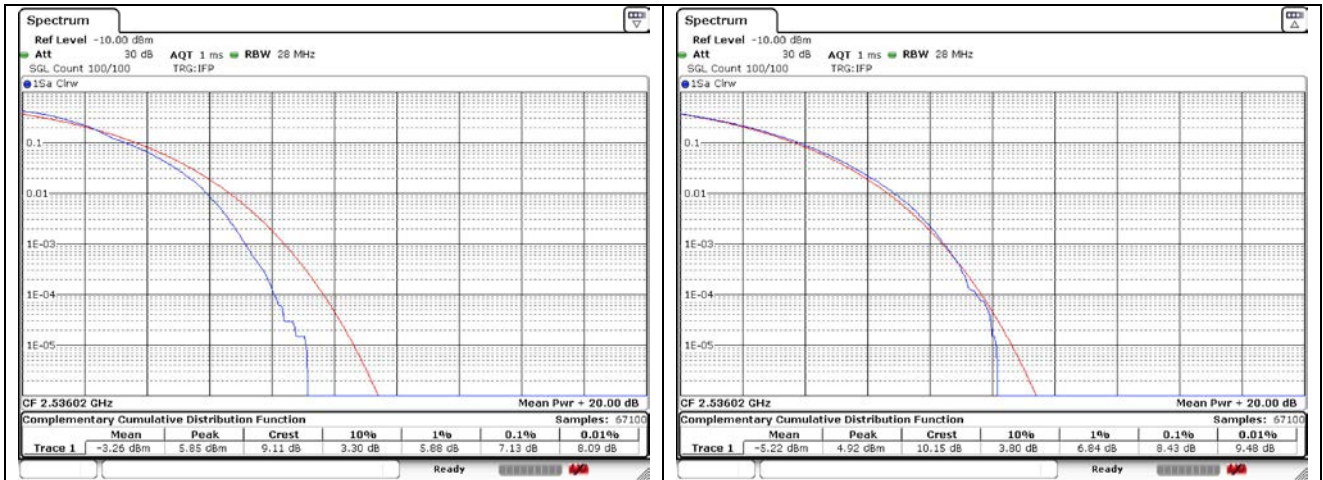
60 MHz Middle Channel - Full RB - DFT-S-OFDM

60 MHz Middle Channel - Full RB - CP-OFDM



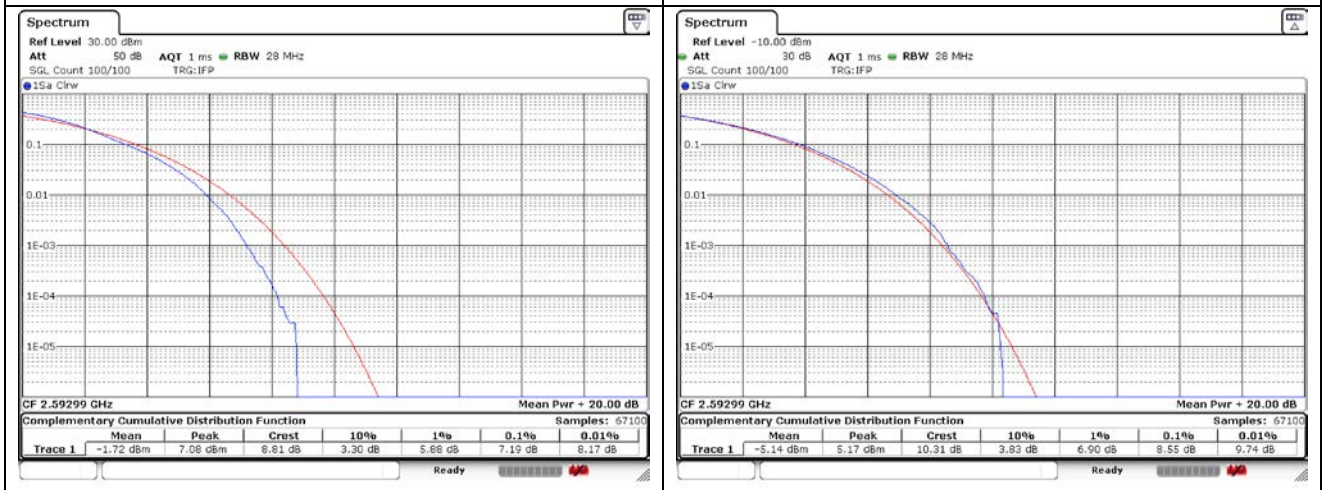
60 MHz High Channel - Full RB - DFT-S-OFDM

60 MHz High Channel - Full RB - CP-OFDM



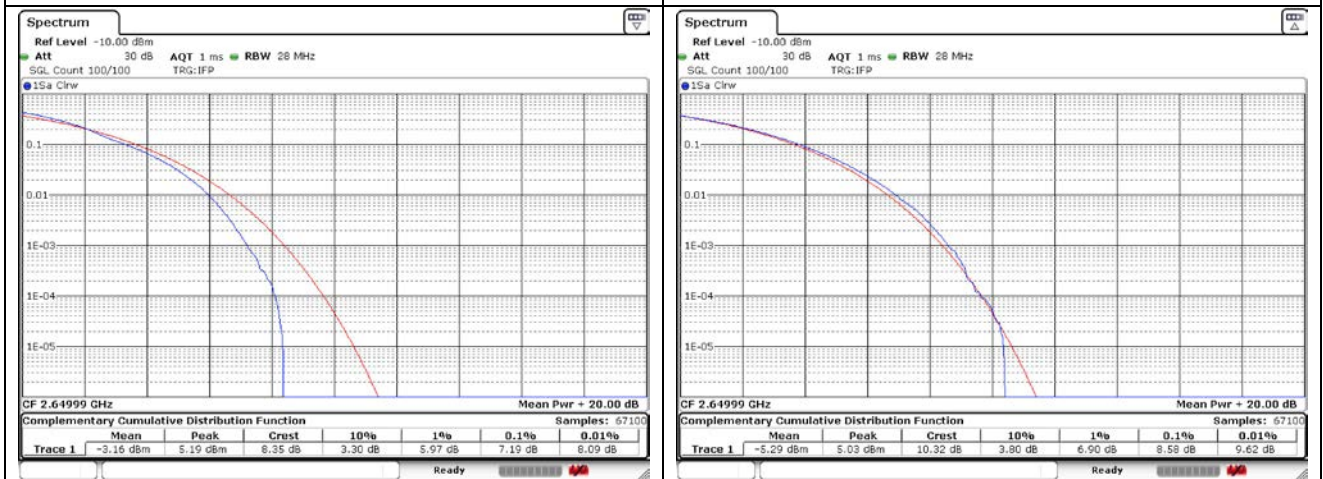
80 MHz Low Channel - Full RB - DFT-S-OFDM

80 MHz Low Channel - Full RB - CP-OFDM



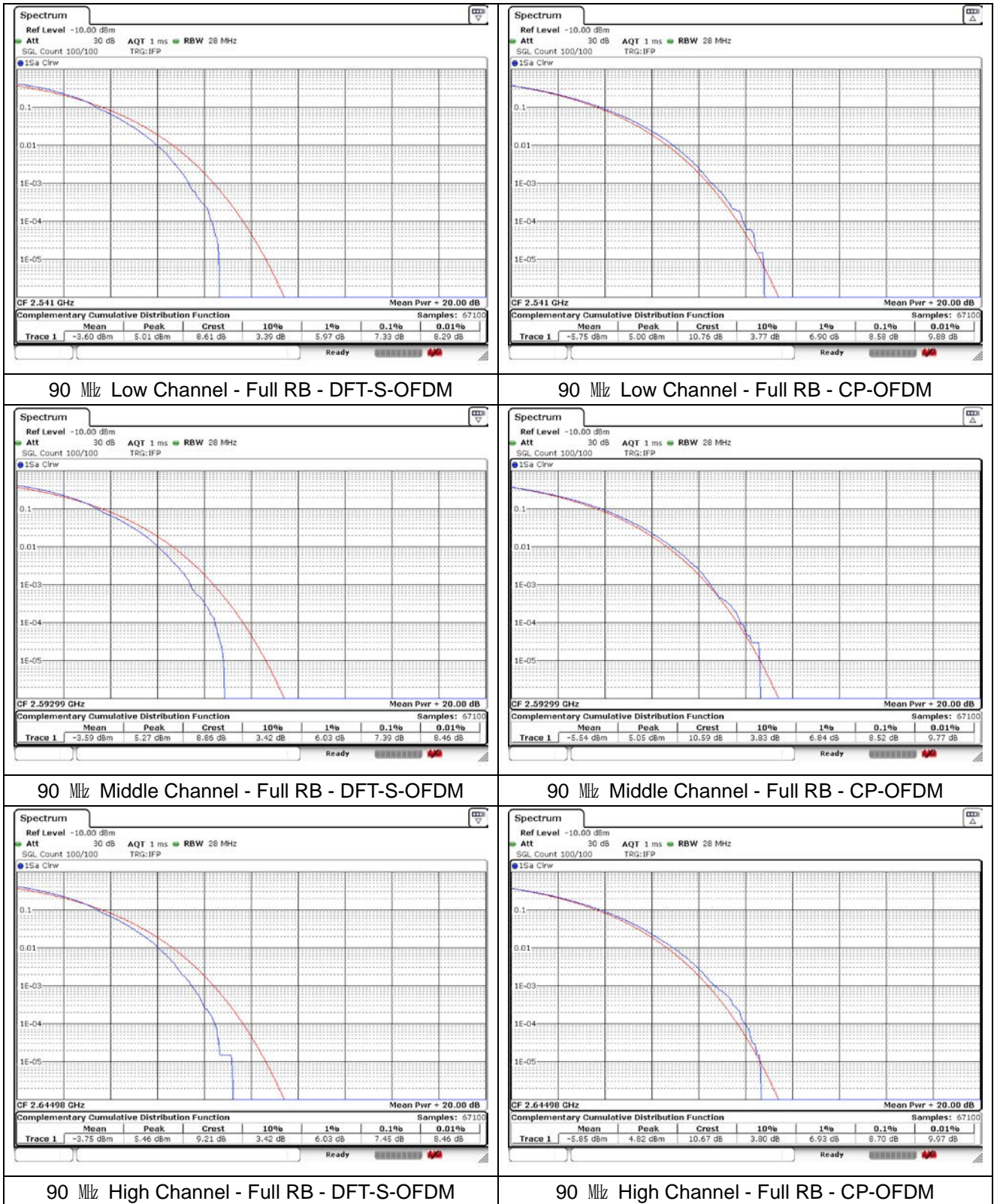
80 MHz Middle Channel - Full RB - DFT-S-OFDM

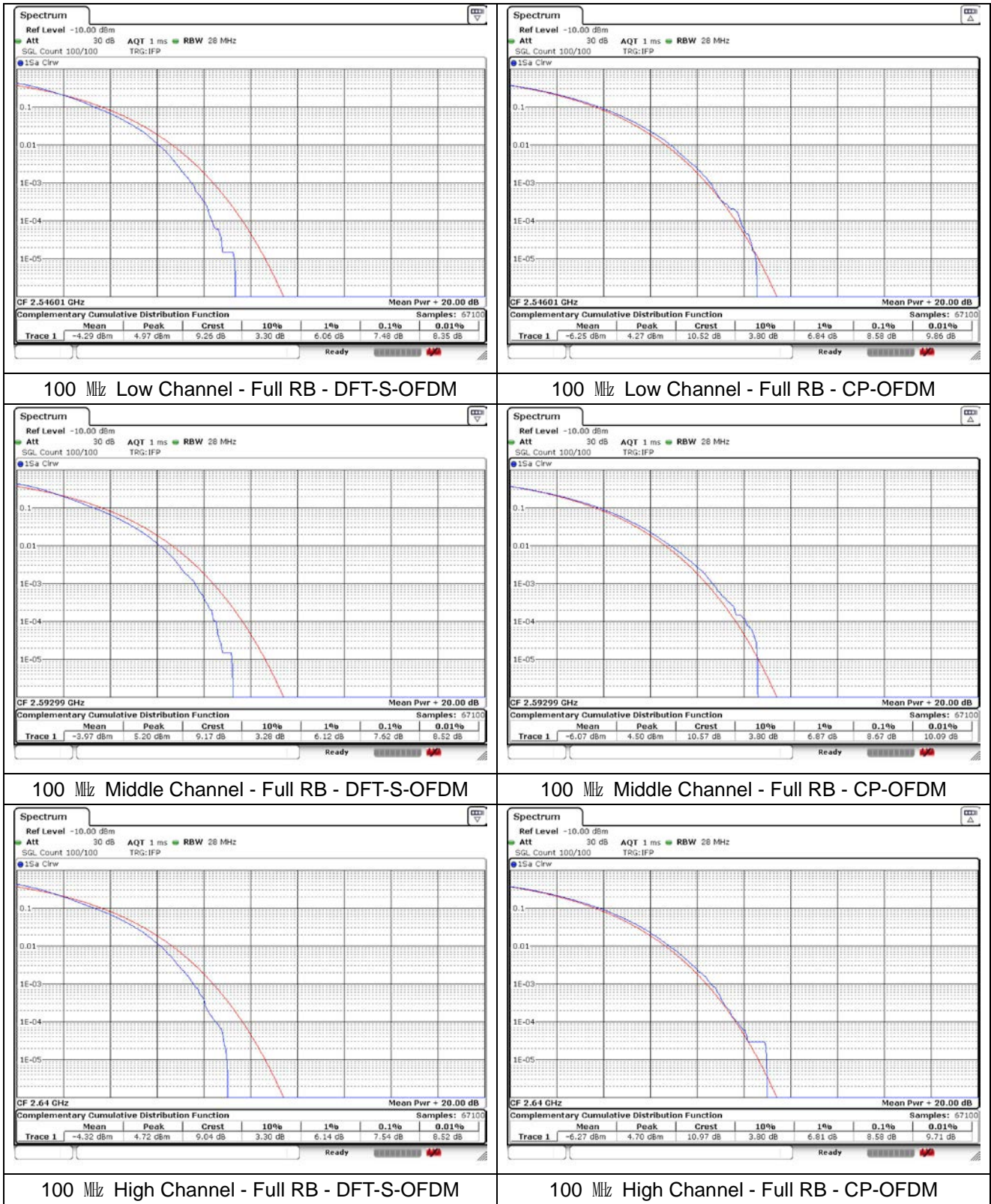
80 MHz Middle Channel - Full RB - CP-OFDM



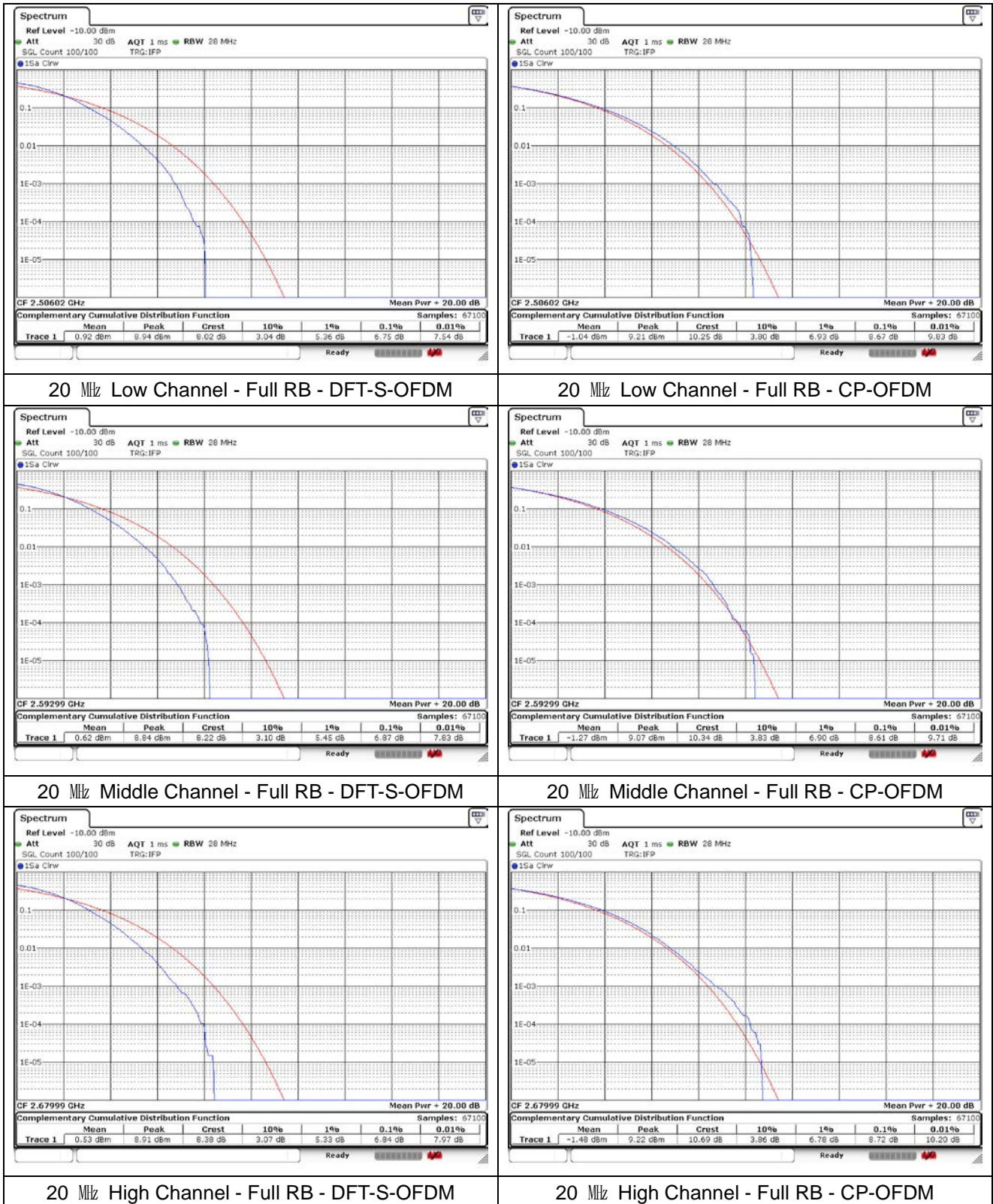
80 MHz High Channel - Full RB - DFT-S-OFDM

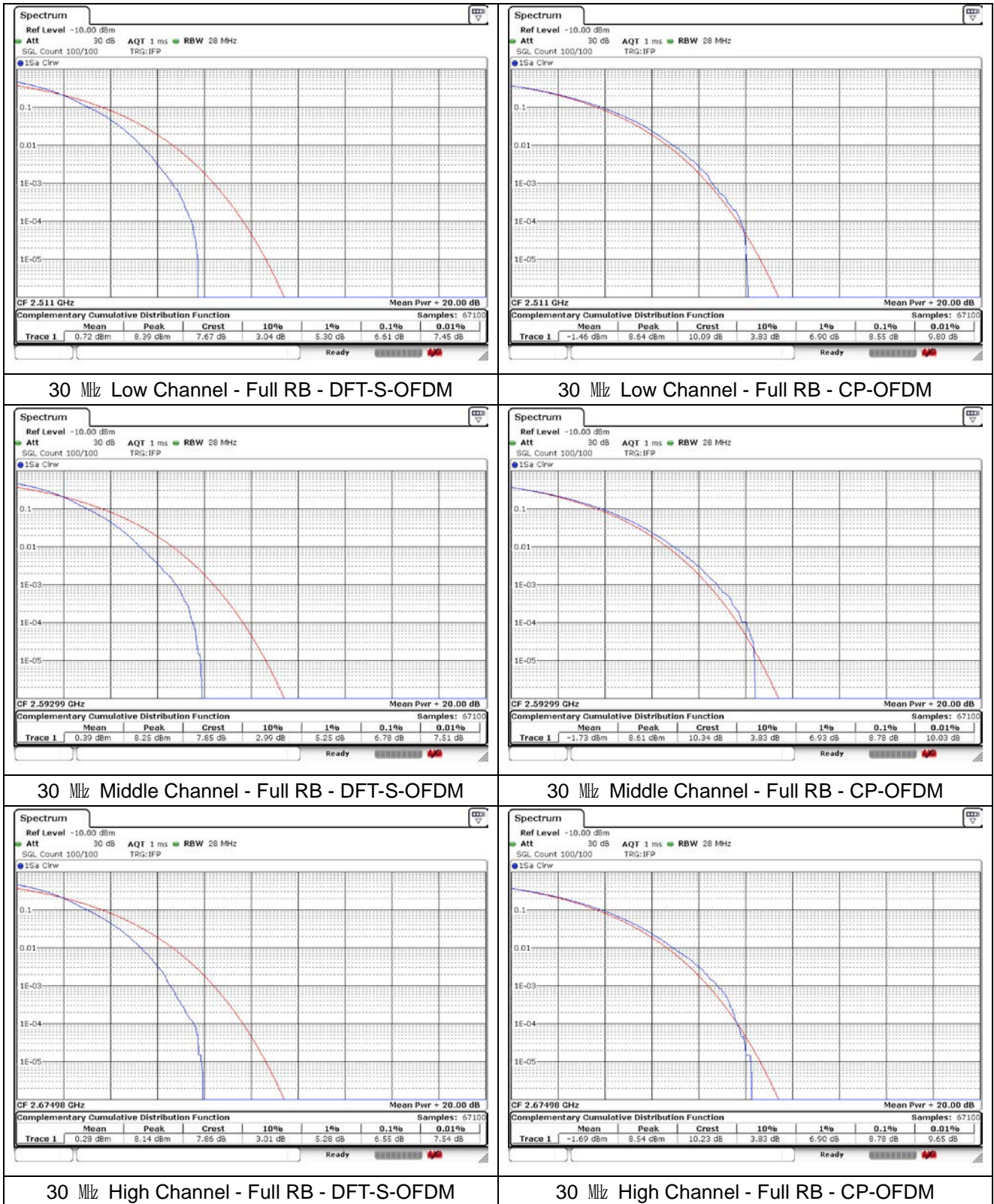
80 MHz High Channel - Full RB - CP-OFDM

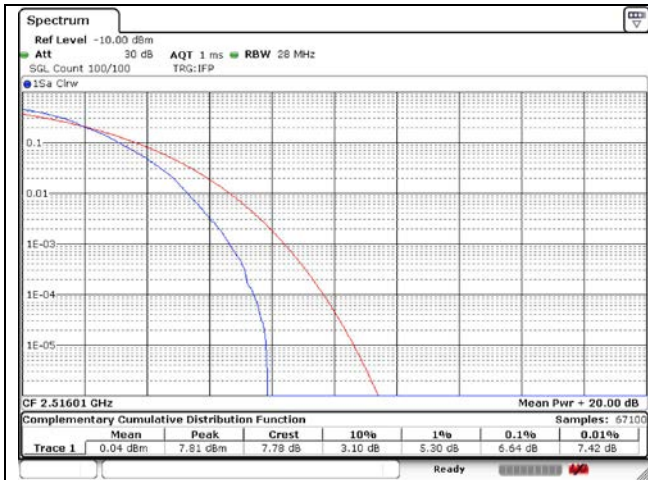




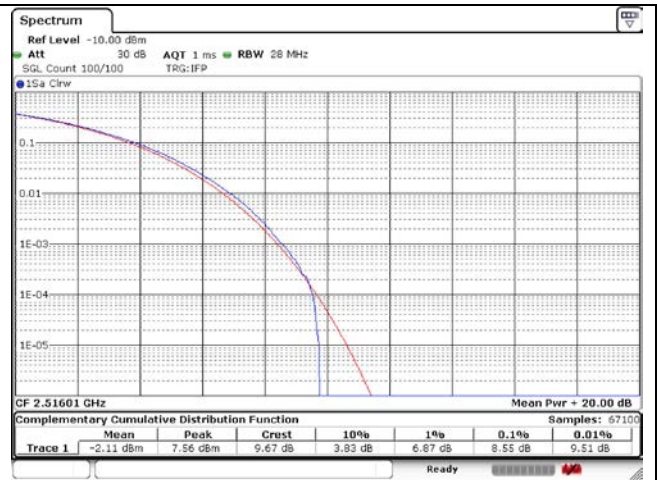
SIM 2



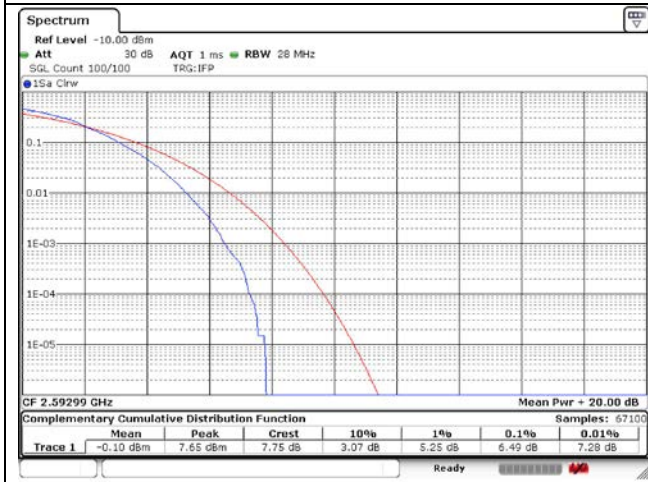




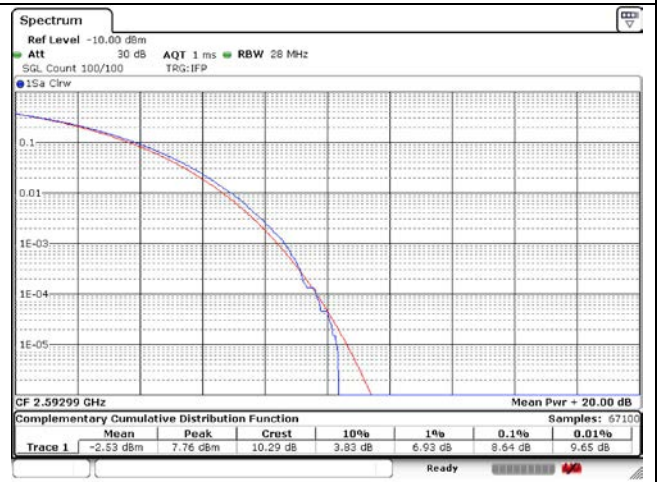
40 MHz Low Channel - Full RB - DFT-S-OFDM



40 MHz Low Channel - Full RB - CP-OFDM



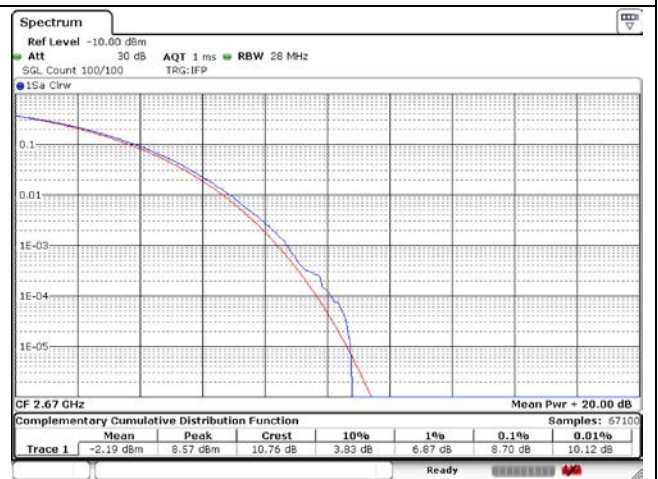
40 MHz Middle Channel - Full RB - DFT-S-OFDM



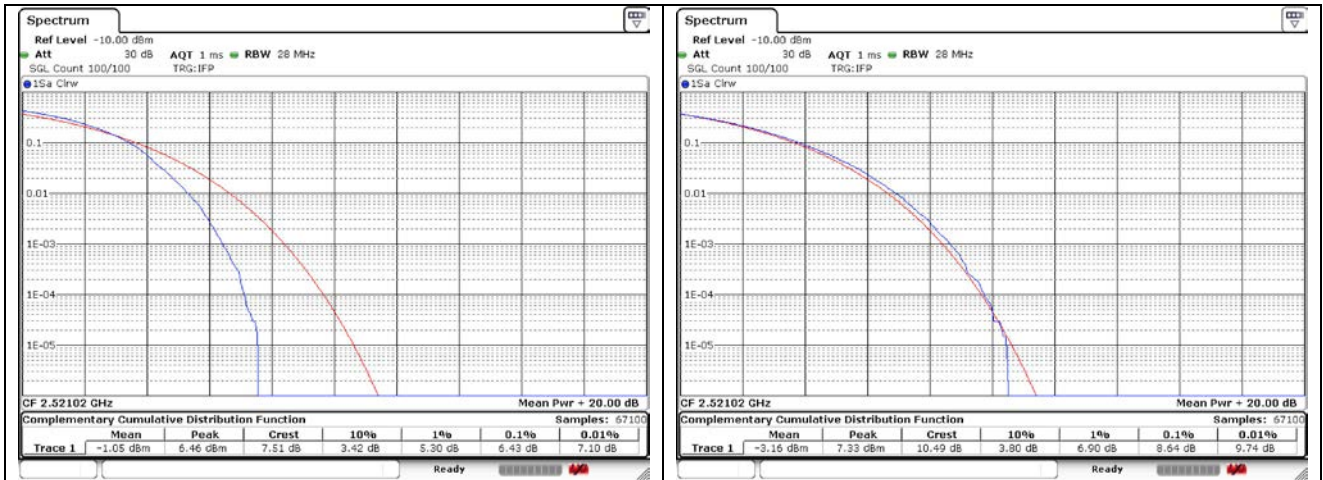
40 MHz Middle Channel - Full RB - CP-OFDM



40 MHz High Channel - Full RB - DFT-S-OFDM

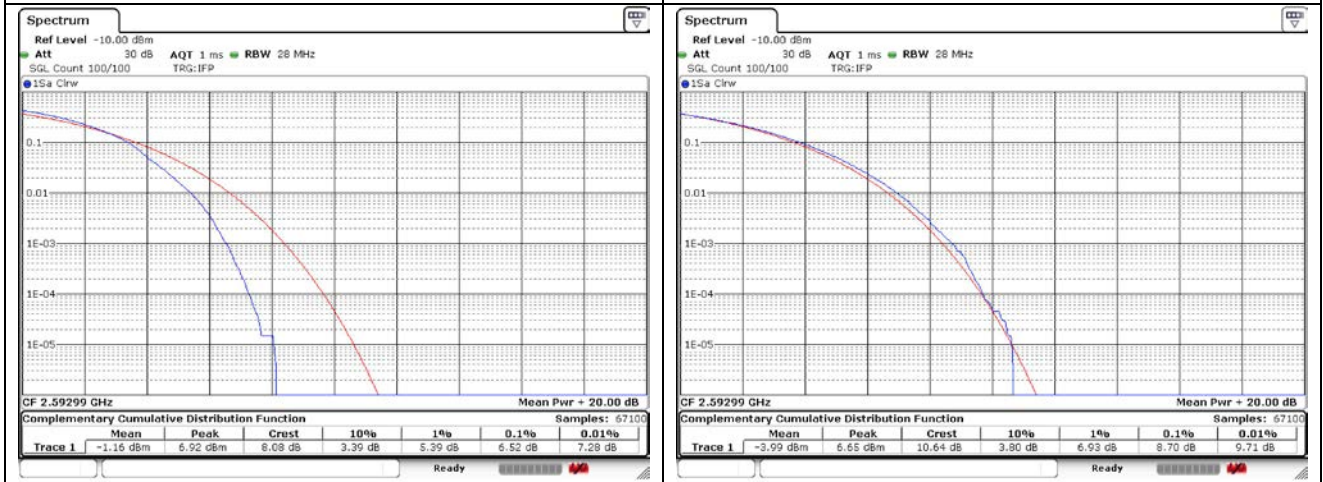


40 MHz High Channel - Full RB - CP-OFDM



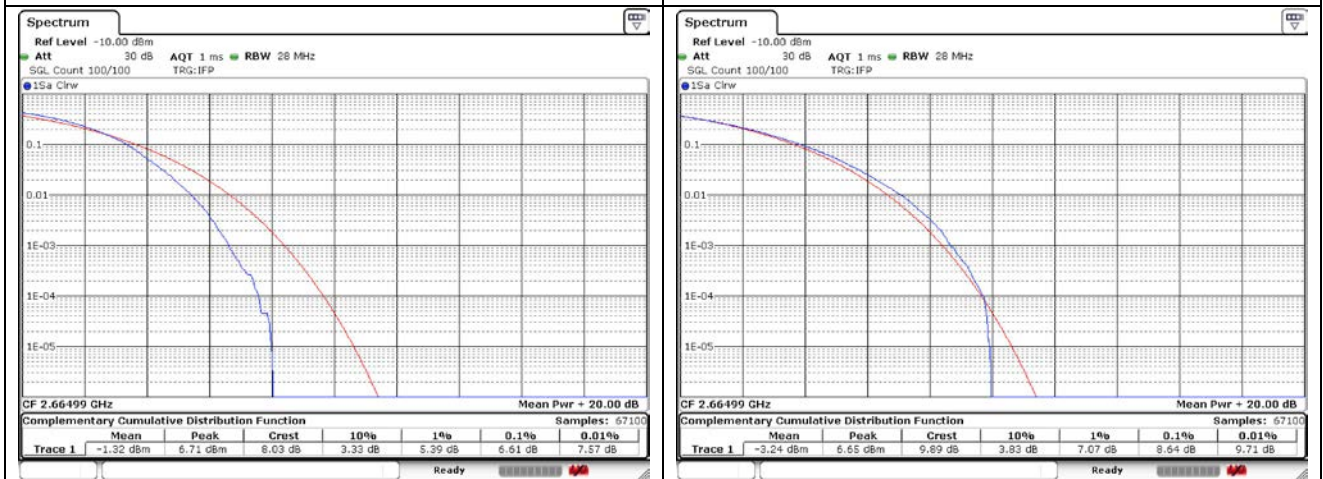
50 MHz Low Channel - Full RB - DFT-S-OFDM

50 MHz Low Channel - Full RB - CP-OFDM



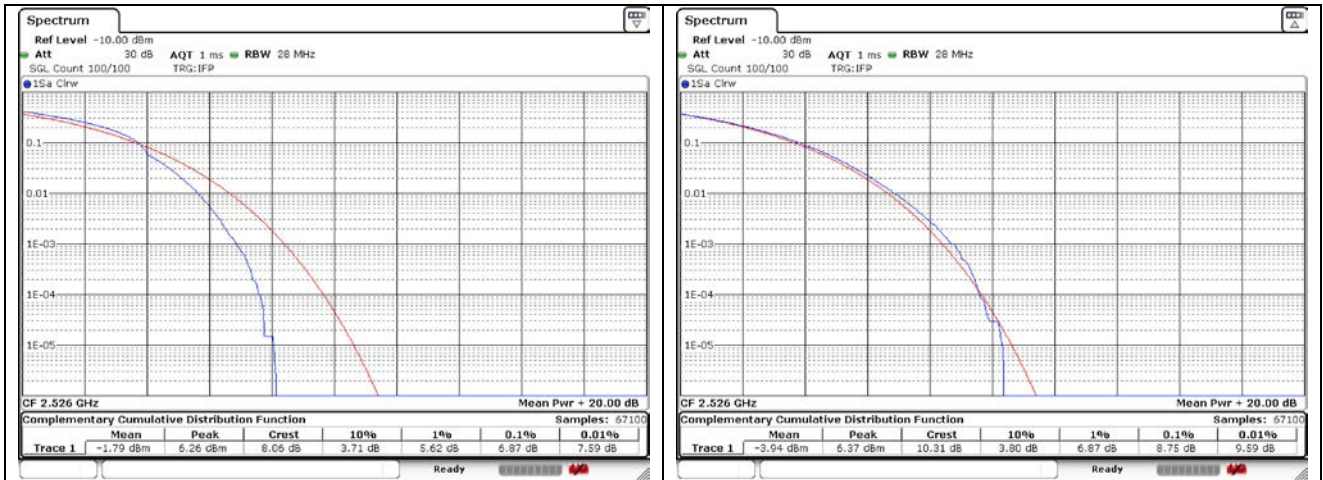
50 MHz Middle Channel - Full RB - DFT-S-OFDM

50 MHz Middle Channel - Full RB - CP-OFDM



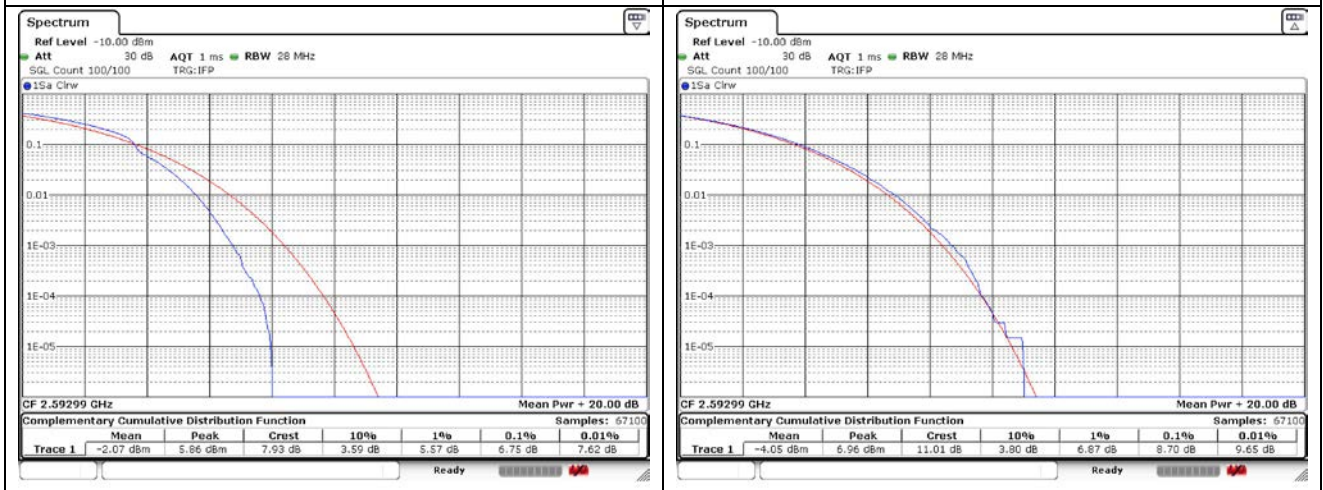
50 MHz High Channel - Full RB - DFT-S-OFDM

50 MHz High Channel - Full RB - CP-OFDM



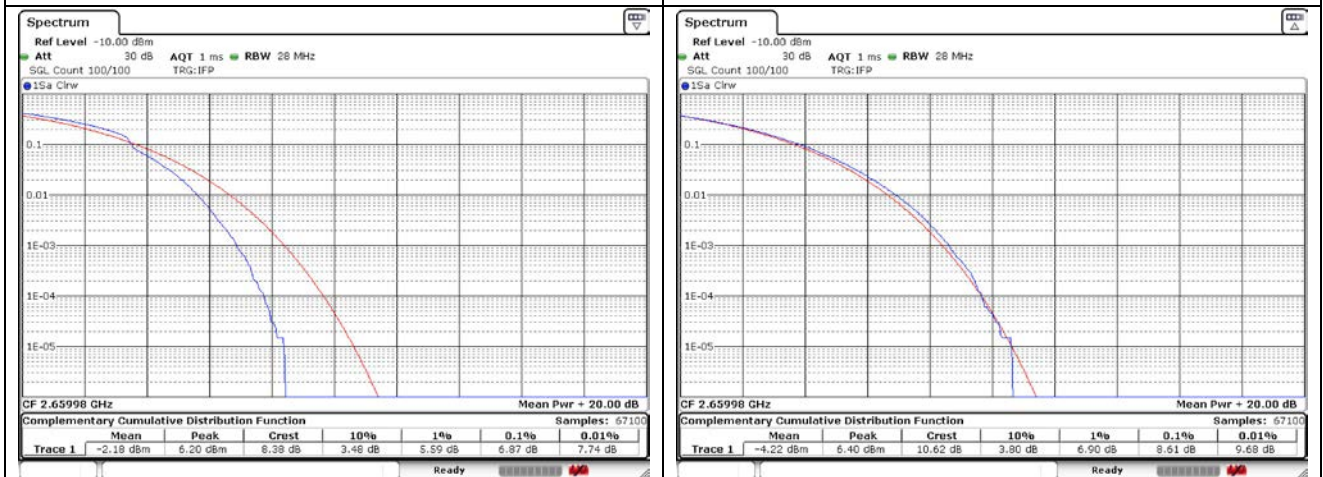
60 MHz Low Channel - Full RB - DFT-S-OFDM

60 MHz Low Channel - Full RB - CP-OFDM



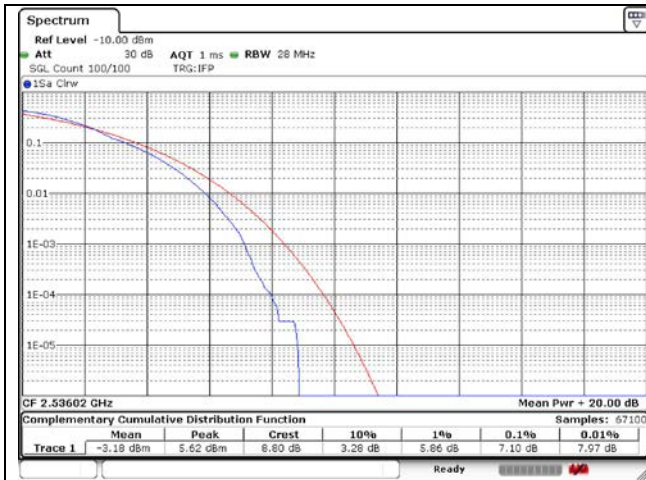
60 MHz Middle Channel - Full RB - DFT-S-OFDM

60 MHz Middle Channel - Full RB - CP-OFDM

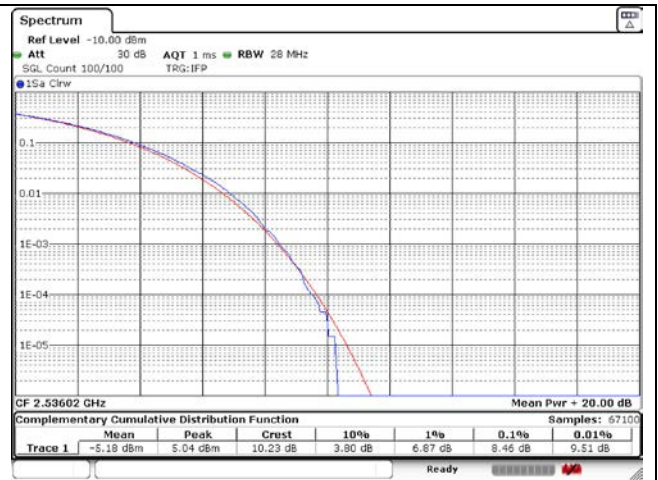


60 MHz High Channel - Full RB - DFT-S-OFDM

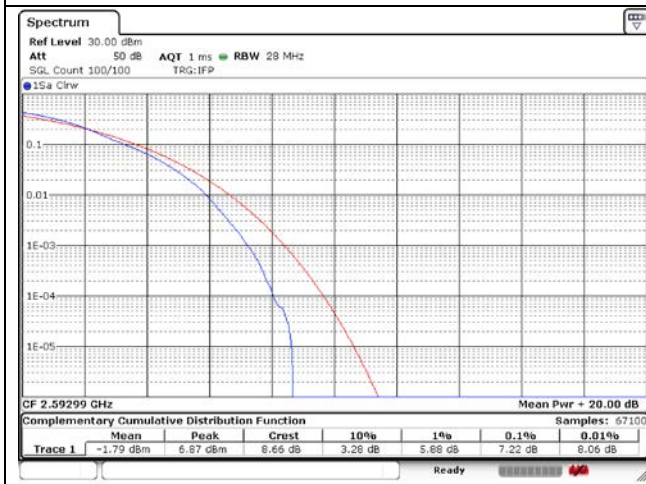
60 MHz High Channel - Full RB - CP-OFDM



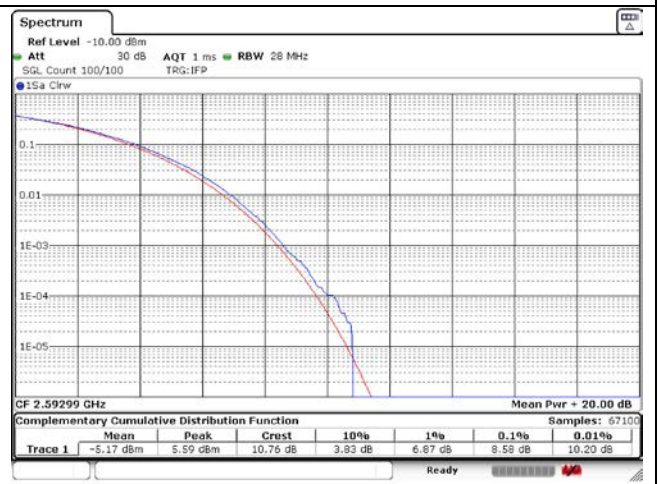
80 MHz Low Channel - Full RB - DFT-S-OFDM



80 MHz Low Channel - Full RB - CP-OFDM



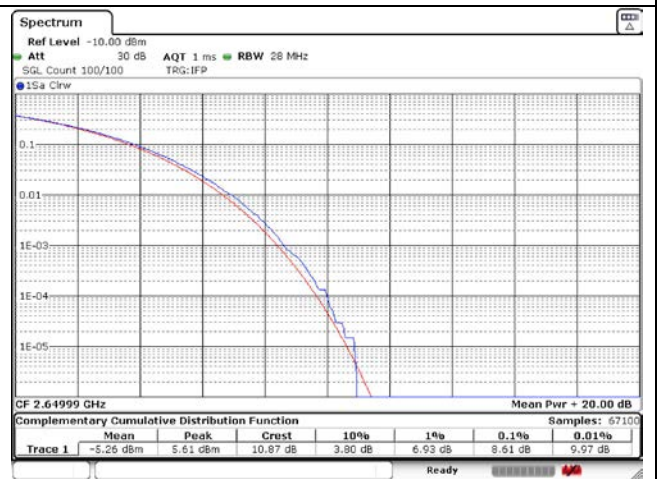
80 MHz Middle Channel - Full RB - DFT-S-OFDM



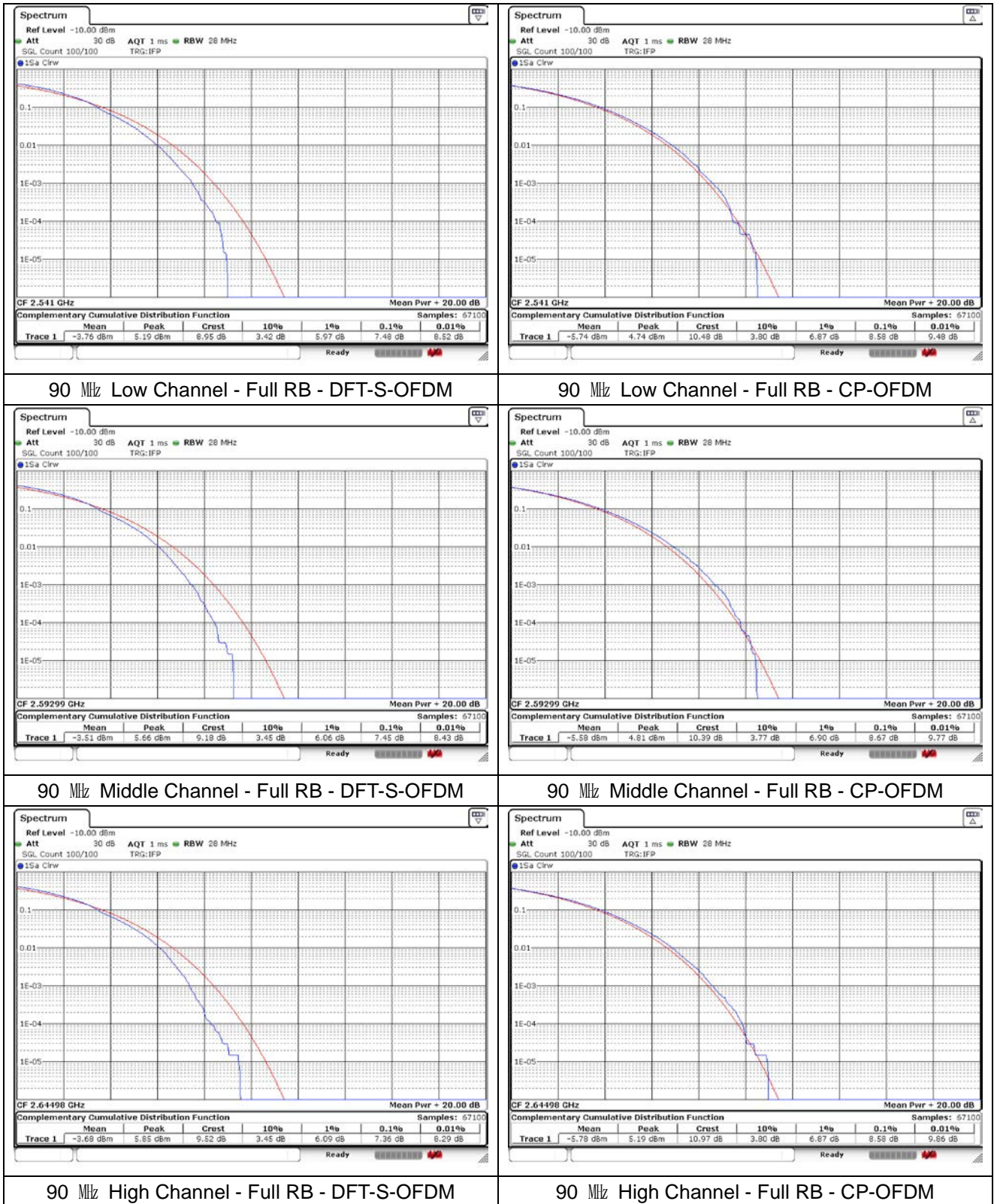
80 MHz Middle Channel - Full RB - CP-OFDM



80 MHz High Channel - Full RB - DFT-S-OFDM

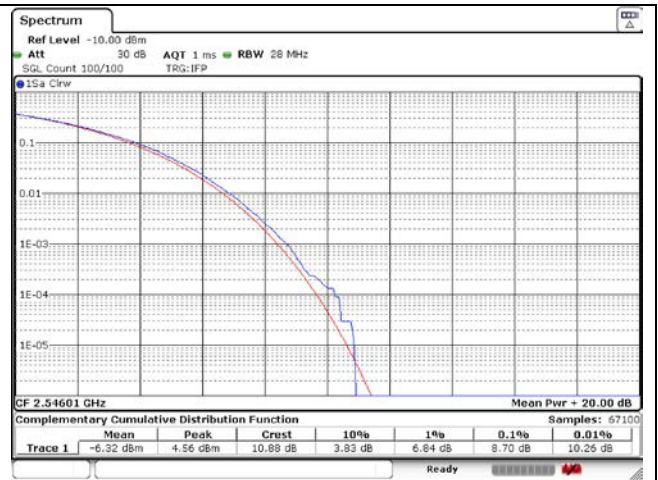


80 MHz High Channel - Full RB - CP-OFDM

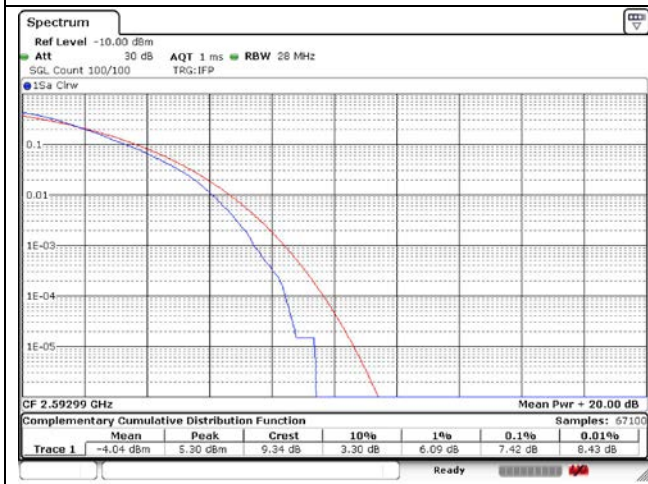




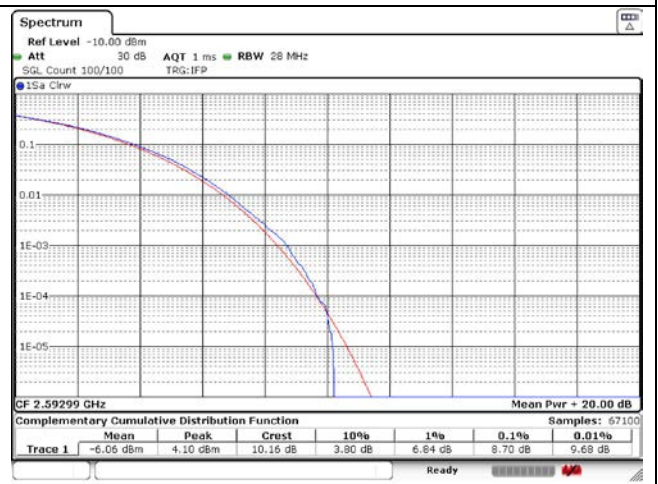
100 MHz Low Channel - Full RB - DFT-S-OFDM



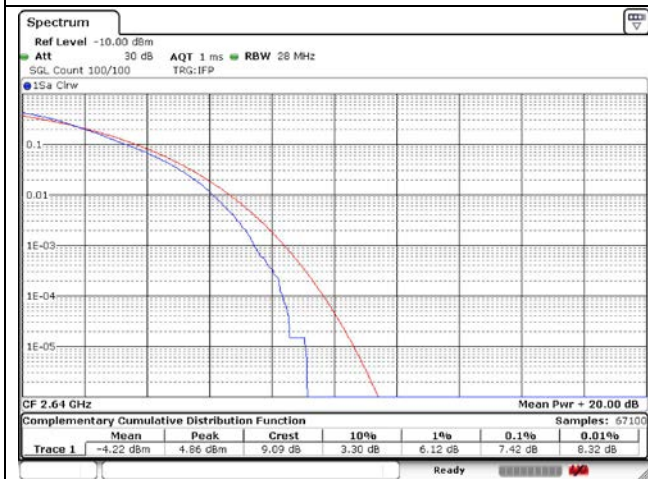
100 MHz Low Channel - Full RB - CP-OFDM



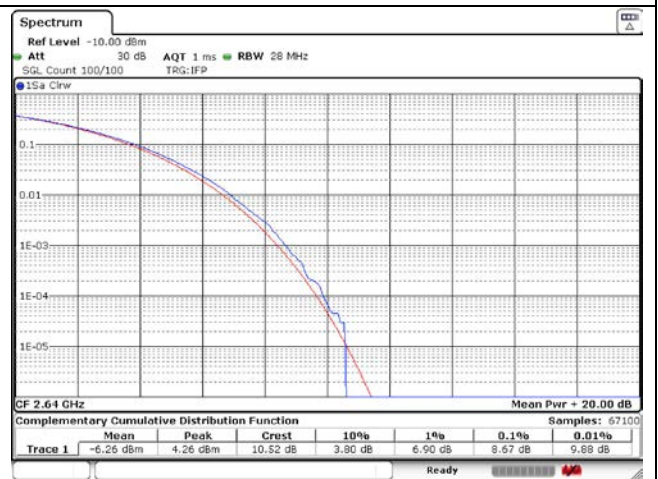
100 MHz Middle Channel - Full RB - DFT-S-OFDM



100 MHz Middle Channel - Full RB - CP-OFDM



100 MHz High Channel - Full RB - DFT-S-OFDM



100 MHz High Channel - Full RB - CP-OFDM

6. Spurious Emissions at Antenna Terminal

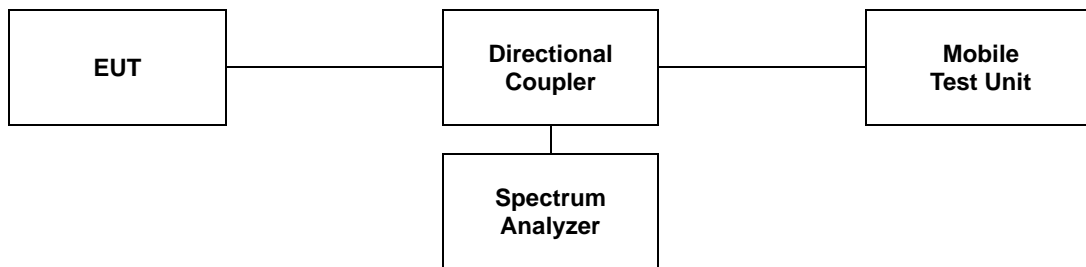
6.1. Limit

- §27.53(m)(4), for mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log_{10} (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log_{10} (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log_{10} (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that $43 + 10 \log_{10} (P)$ dB on all frequencies between 2 490.5 MHz and 2 496 MHz and $55 + 10 \log_{10} (P)$ dB at or below 2 490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2 495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

6.2. Test Procedure

The test follows section 5.7 of ANSI C63.26-2015.

1. Start frequency was set to 9 kHz and stop frequency was set to at least 10* the fundamental frequency.
2. Detector = Peak.
3. Trace mode = Max hold.
4. Sweep time = Auto couple.
5. The trace was allowed to stabilize.
6. Please see notes below for RBW and VBW settings.
7. For plots showing conducted spurious emissions from 9 kHz to 27 GHz, all path loss of wide frequency range was investigated and compensated to spectrum analyzer as TDF function.



Note;

Compliance with the applicable limits is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater for frequencies less than 1 GHz and frequencies greater than 1 GHz. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two point, one below the carrier center frequency and one above the carrier center frequency, outside of which all emission are attenuated at least 26 dB below the transmitter power.

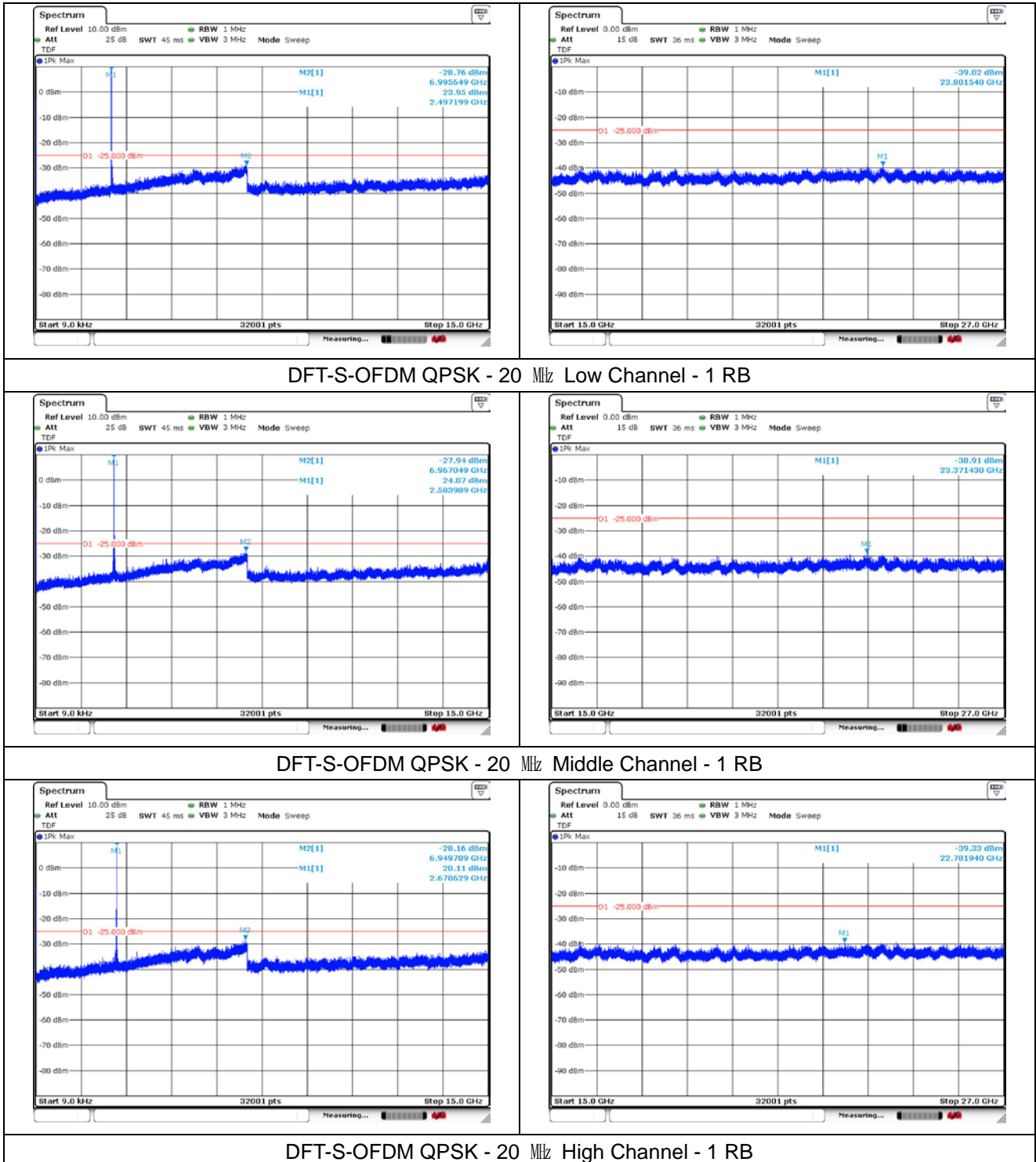
6.3. Test Results

Ambient temperature : (23 ± 1) °C
 Relative humidity : 47 % R.H.

- Test plots

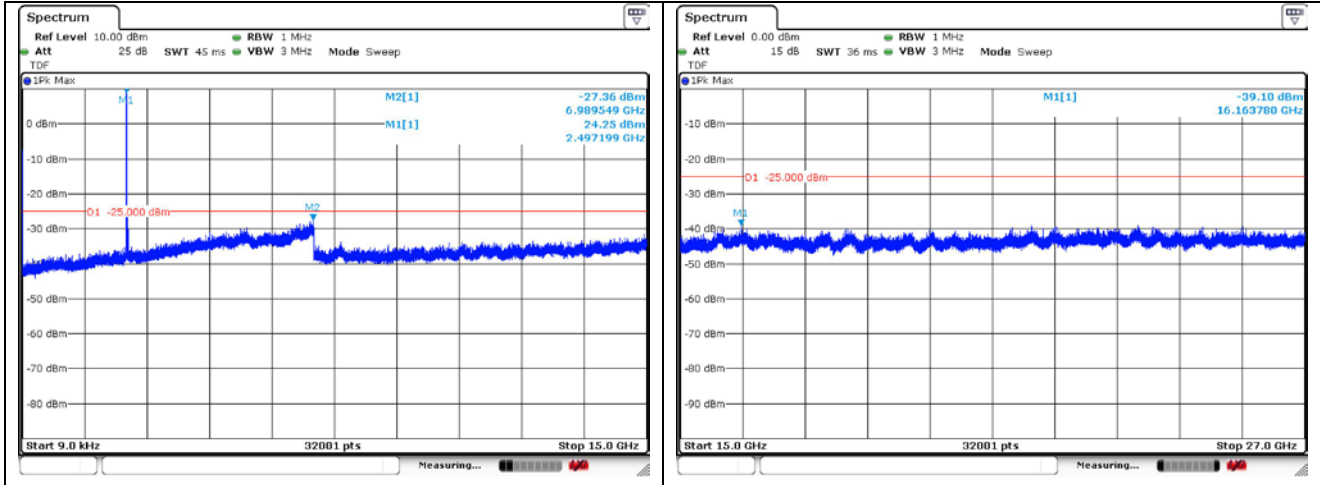
SIM 1

NR Band 41

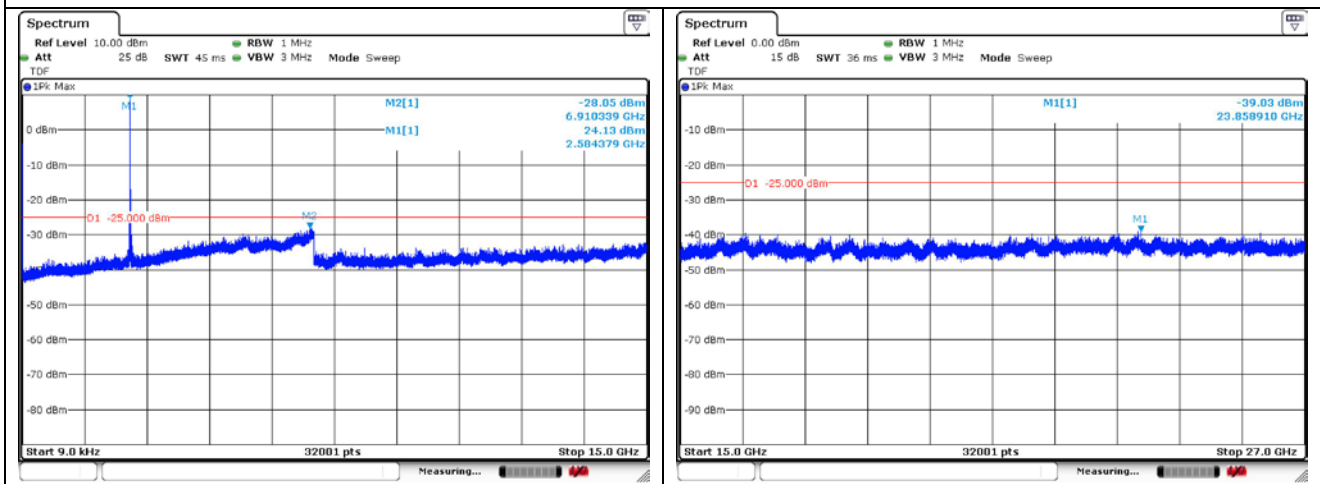


SIM 2

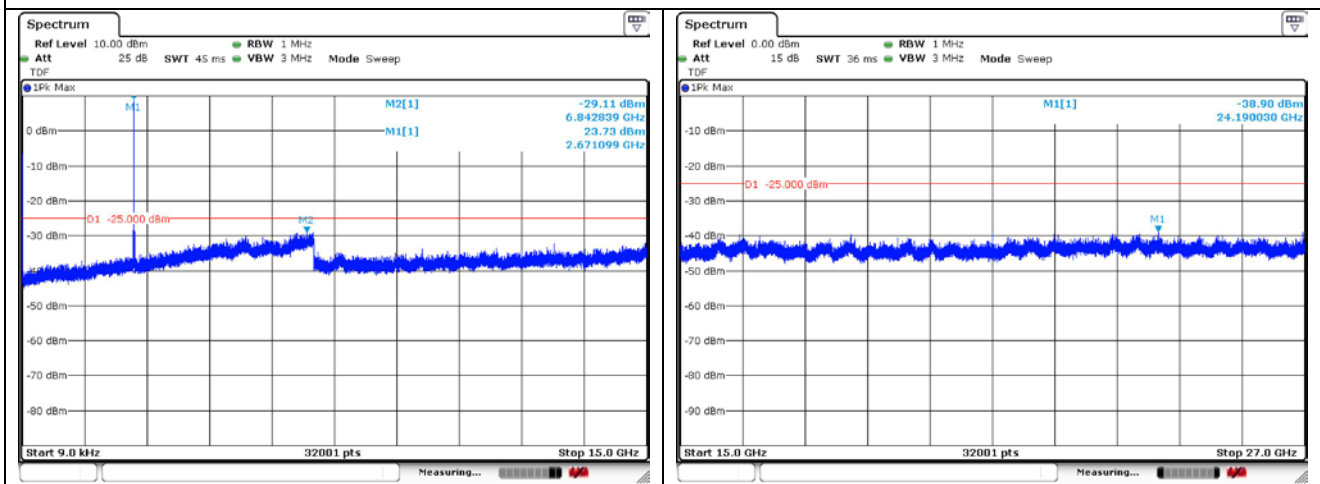
NR Band 41



DFT-S-OFDM QPSK - 20 MHz Low Channel - 1 RB



DFT-S-OFDM QPSK - 20 MHz Middle Channel - 1 RB



DFT-S-OFDM QPSK - 20 MHz High Channel - 1 RB