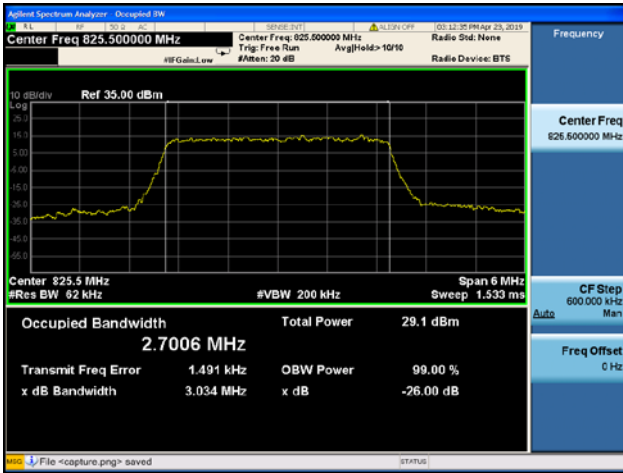
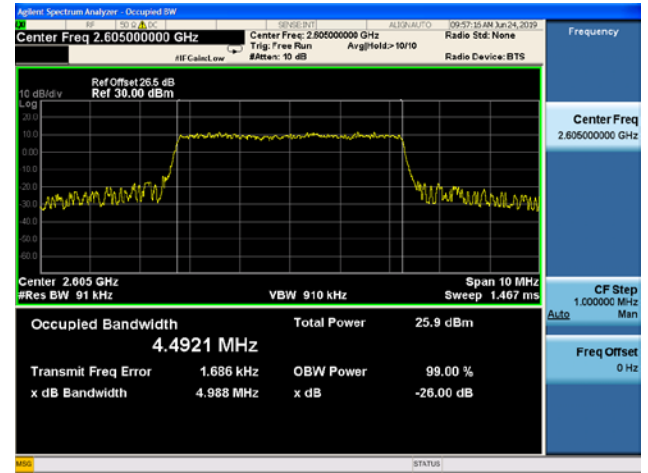




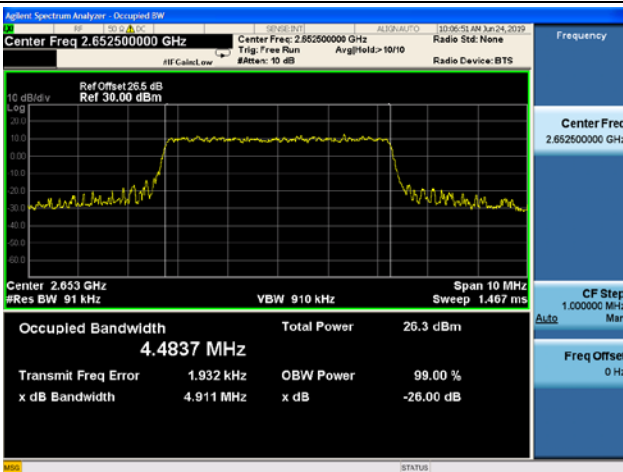
**5MHz/QPSK/ High CH**



**5MHz/16QAM/ High CH**



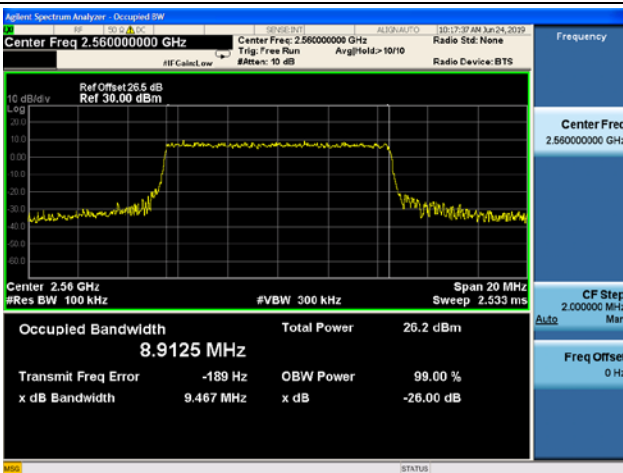
**5MHz/64QAM/ High CH**



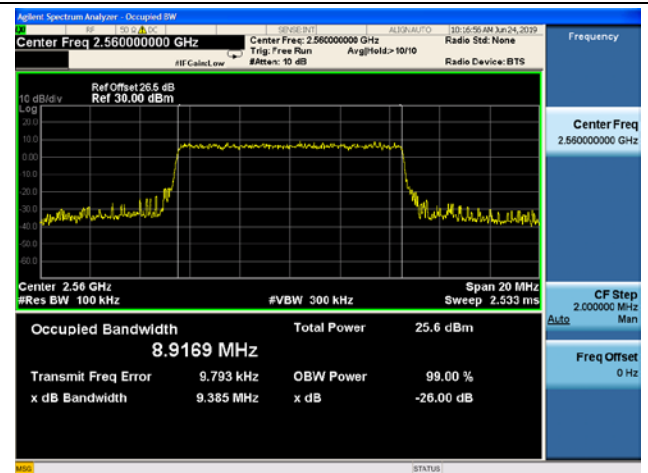
**10MHz/ QPSK / Low CH**

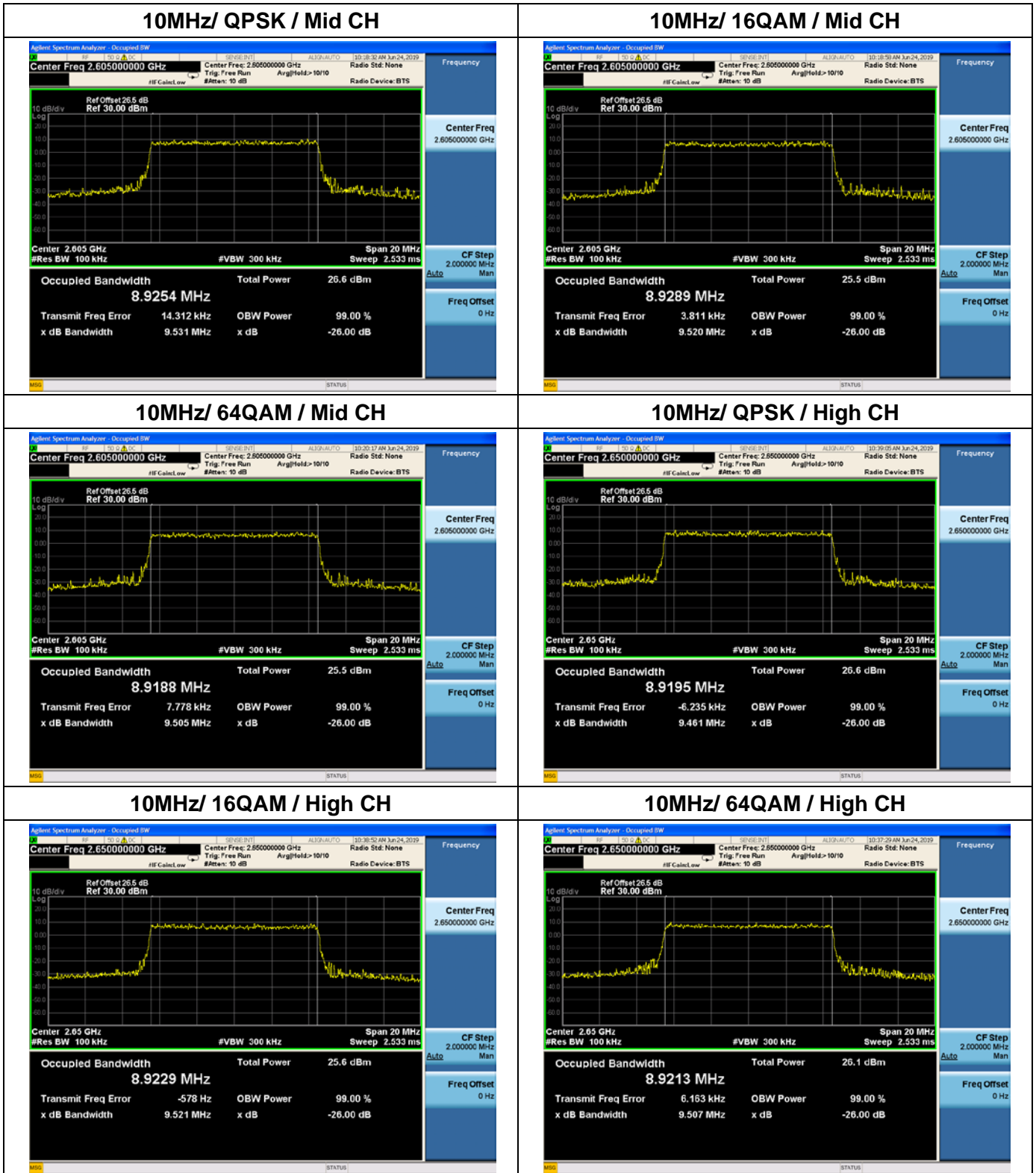


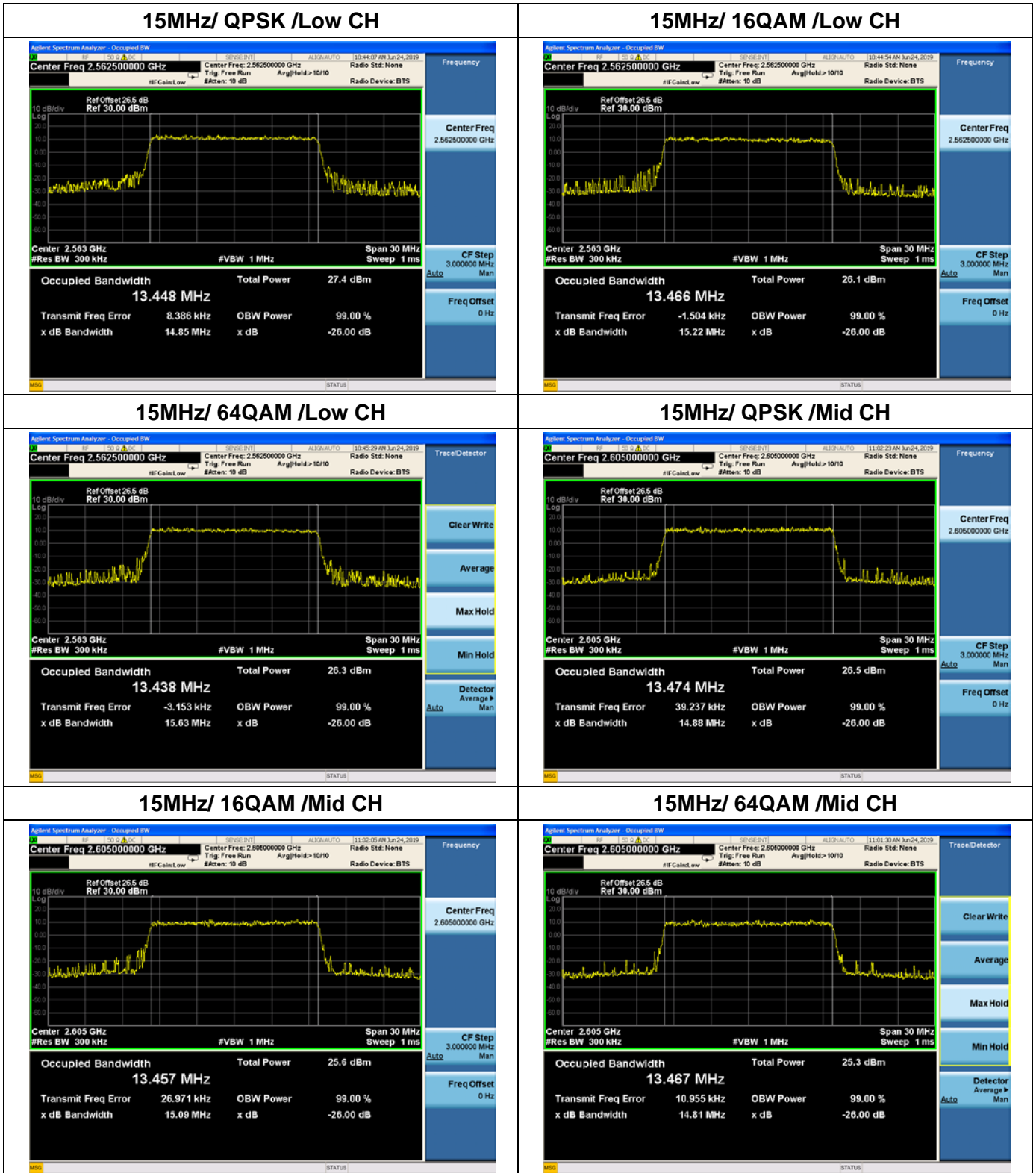
**10MHz/ 16QAM / Low CH**

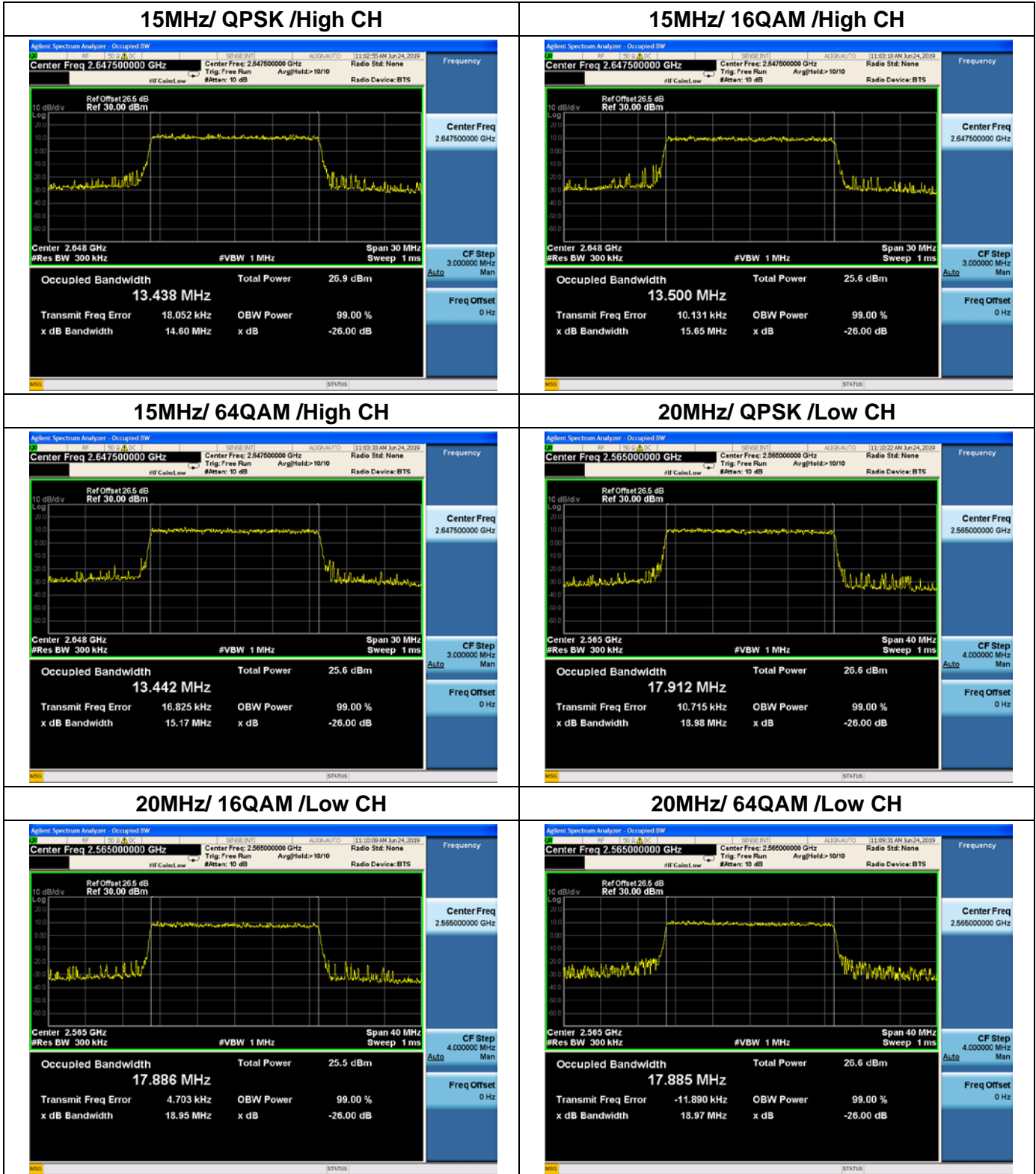


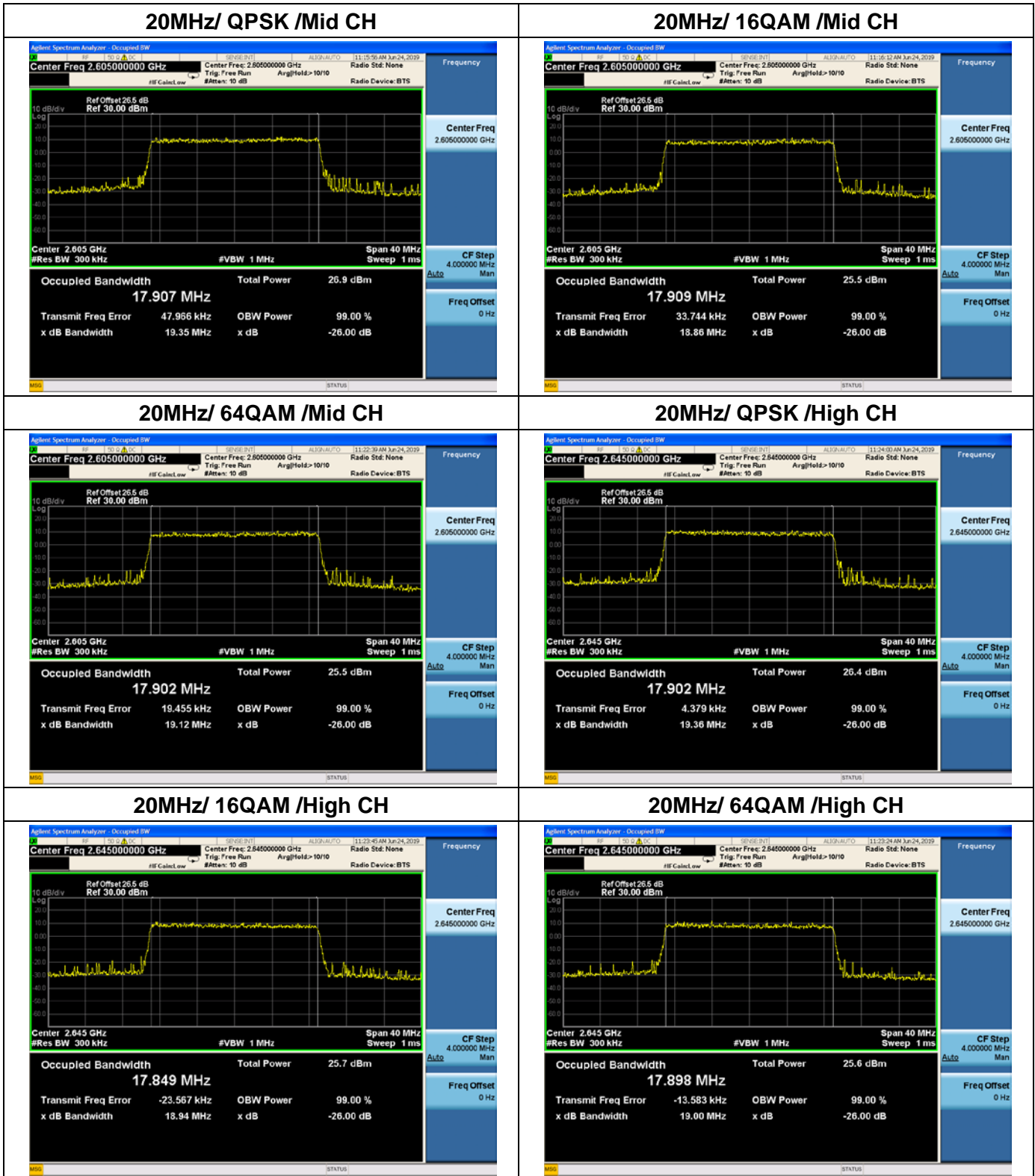
**10MHz/ 64QAM / Low CH**











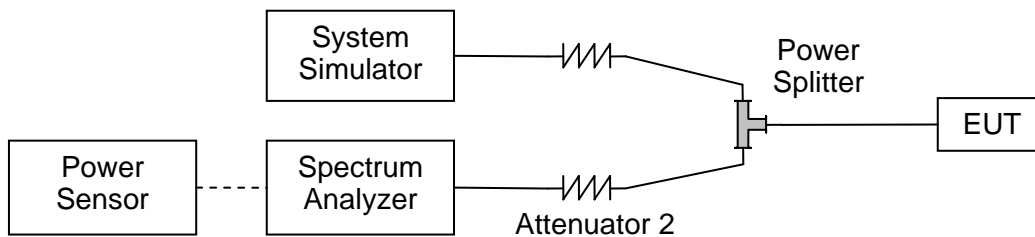
## 2.3. Frequency Stability

### 2.3.1. Requirement

According to FCC section 2.1055 & 27.54&24.235, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. According to FCC section 2.1055, the test conditions are:

- (a) The temperature is varied from  $-30^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$  at intervals of not more than  $10^{\circ}\text{C}$ .
- (b) For hand carried battery powered equipment, the primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacture. The supply voltage shall be measured at the input to the cable normally provided with the equipment, or at the power supply terminals if cables are not normally provided.

### 2.3.2. Test Description



The EUT which is powered by the DC Power Supply directly, is located in the Temperature Chamber. The EUT is commanded by the System Simulator (SS) to operate at the maximum output power. A call is established between the EUT and the SS via a Common Antenna.

### 2.3.3. Test procedure

KDB 971168 D01v03 Section 9.0 and ANSI/TIA-603-E-2016.

### 2.3.4. Test Result

The nominal, highest and lowest extreme voltages are separately 3.8VDC, 4.35VDC and 3.5VDC, which are specified by the applicant; the normal temperature here used is  $20^{\circ}\text{C}$ .



LTE Band 5, QPSK, Channel 20525, Frequency 836.5MHz Limit=±2.5ppm					
Voltage (%)	Power (VDC)	Temp (°C)	Fre. Dev. (Hz)	Deviation (ppm)	Result
100	5	-30	-46	-0.055	PASS
100		-20	15	0.018	
100		-10	34	0.041	
100		0	-33	-0.039	
100		+10	-54	-0.065	
100		+20	-43	-0.051	
100		+30	-38	-0.045	
100		+40	-53	-0.063	
100		+50	83	0.099	
115		4.8	+20	43	
85	5.2	+20	78	0.093	

LTE Band 40, QPSK, Channel 39150, Frequency 2350MHz Limit =Within Authorized Band					
Voltage(%)	Power(VDC )	Temp(°C)	Fre. Dev.(Hz)	Deviation (ppm)	Result
100	5	-30	34	0.015	PASS
100		-20	62	0.027	
100		-10	51	0.022	
100		0	-55	-0.024	
100		+10	-64	-0.028	
100		+20	-45	-0.019	
100		+30	37	0.016	
100		+40	82	0.035	
100		+50	51	0.022	
115		4.8	+20	23	
85	5.2	+20	31	0.013	



LTE Band 41, QPSK, Channel 40740, Frequency 2605MHz					
Limit =Within Authorized Band					
Voltage(%)	Power(VDC )	Temp(°C)	Fre. Dev.(Hz)	Deviation (ppm)	Result
100	5	-30	25	0.011	PASS
100		-20	36	0.015	
100		-10	47	0.020	
100		0	-64	-0.027	
100		+10	-72	-0.031	
100		+20	-53	-0.023	
100		+30	53	0.023	
100		+40	78	0.033	
100		+50	36	0.015	
115		4.8	+20	36	
85	5.2	+20	26	0.011	



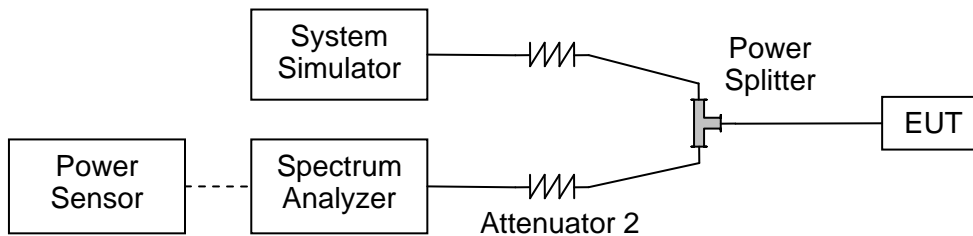
## 2.4. Peak to Average Ratio

### 2.4.1. Requirement

According to FCC section 24.232(d), the peak to average ratio (PAR) of the transmission may not exceed 13dB.

### 2.4.2. Test Description

#### A. Test Set:



The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50 Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power. A call is established between the EUT and the SS.

### 2.4.3. Test procedure

KDB 971168 D01v03 Section 5.7 and ANSI/TIA-603-E-2016.

### 2.4.4. Test Result

Record the maximum PAPR level associated with a probability of 0.1%.

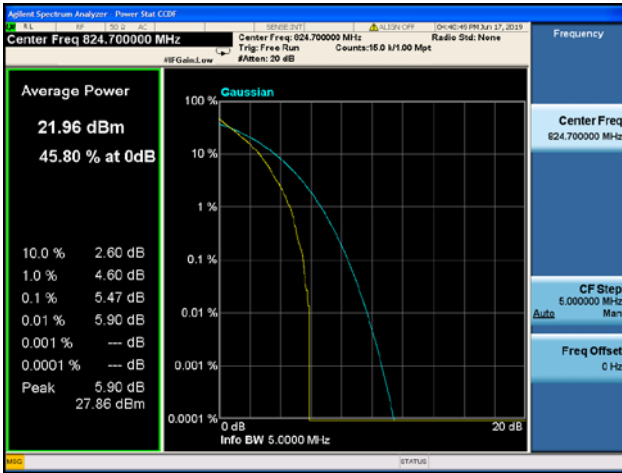


<b>LTE Band 5,BW: 1.4MHz</b>				
Channel	Frequency (MHz)	Peak to Average Radio(dB)		
		QPSK	16QAM	64QAM
20407	824.7	5.58	6.36	6.07
20525	836.5	5.03	5.83	5.67
20643	848.3	5.62	6.36	5.99
<b>LTE Band 5,BW: 3MHz</b>				
Channel	Frequency (MHz)	Peak to Average Radio(dB)		
		QPSK	16QAM	64QAM
20415	825.5	5.79	6.26	6.55
20525	836.5	5.00	5.85	5.97
20635	847.5	5.30	6.10	6.45
<b>LTE Band 5,BW: 5MHz</b>				
Channel	Frequency (MHz)	Peak to Average Radio(dB)		
		QPSK	16QAM	64QAM
20425	826.5	5.64	6.50	6.28
20525	836.5	5.27	6.04	6.02
20625	846.5	5.43	6.36	6.07
<b>LTE Band 5,BW: 10MHz</b>				
Channel	Frequency (MHz)	Peak to Average Radio(dB)		
		QPSK	16QAM	64QAM
20450	829.0	5.82	6.88	6.30
20525	836.5	5.44	6.13	6.02
20600	844.0	5.73	6.20	6.03

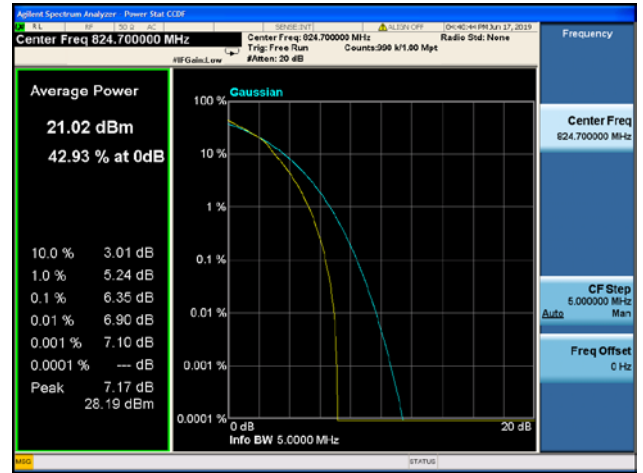


LTE Band 5 Peak to Average Radio

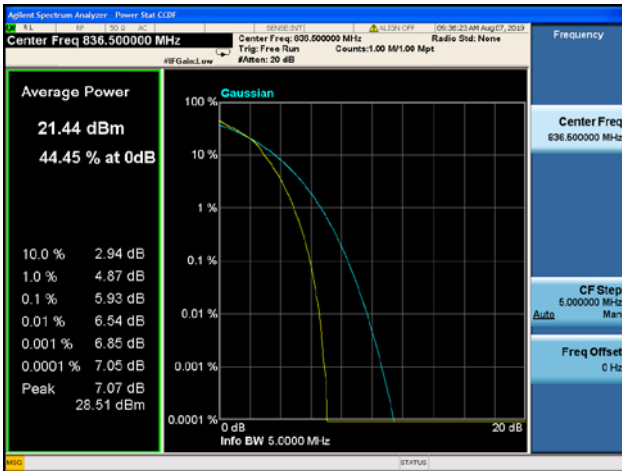
1.4MHz/QPSK/Low CH



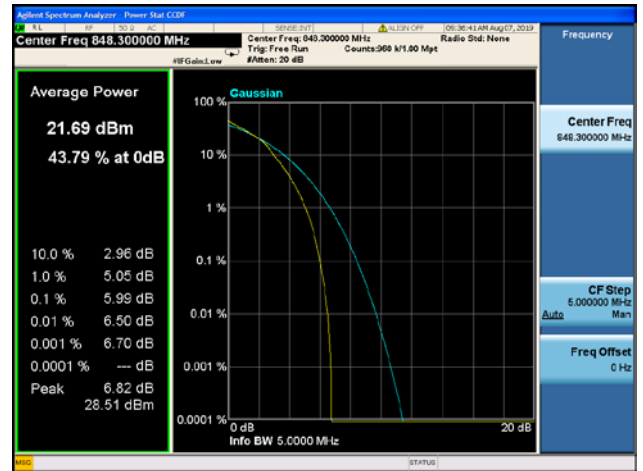
1.4MHz/16QAM/Low CH



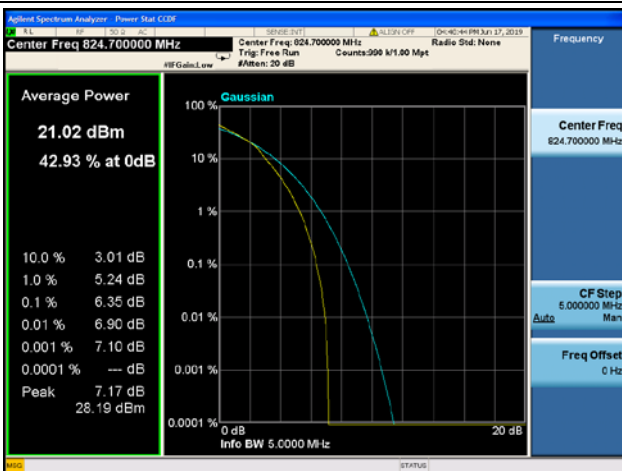
1.4MHz/64QAM/Low CH



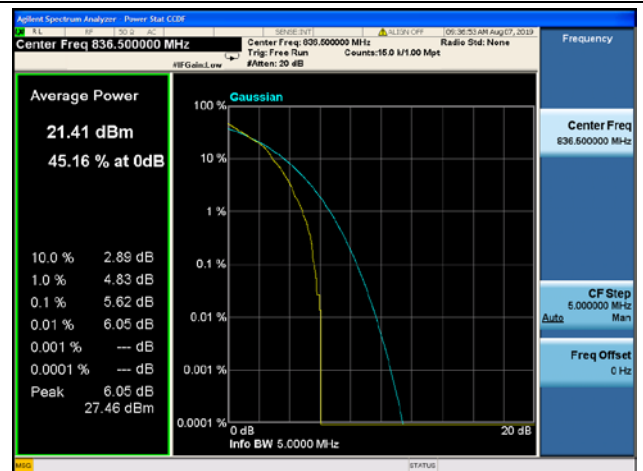
1.4MHz/QPSK/Mid CH



1.4MHz/16QAM/Mid CH

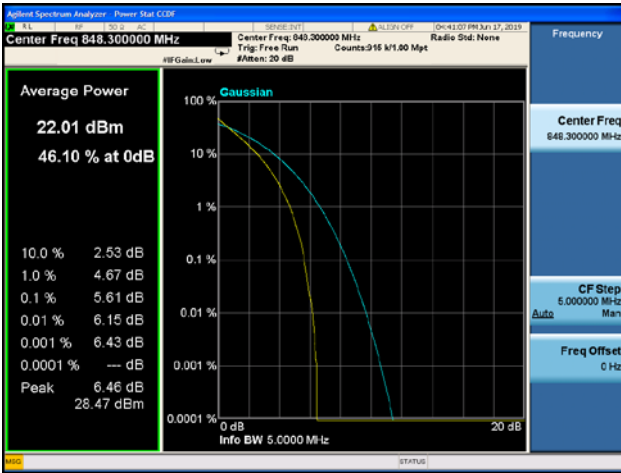


1.4MHz/64QAM/Mid CH

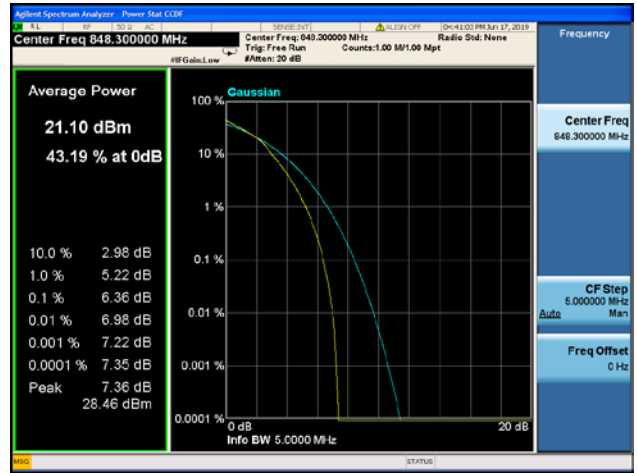




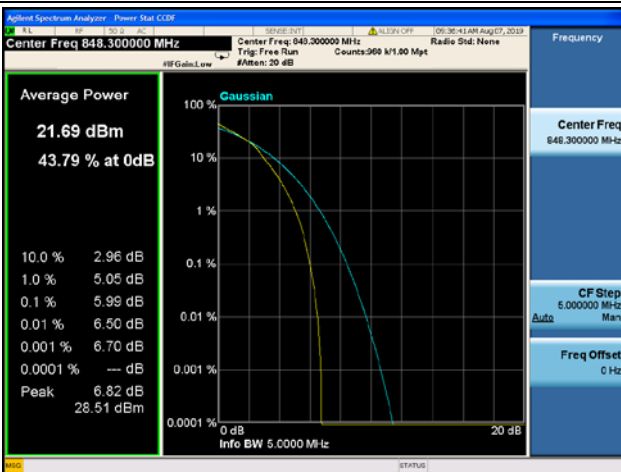
**1.4MHz/QPSK/High CH**



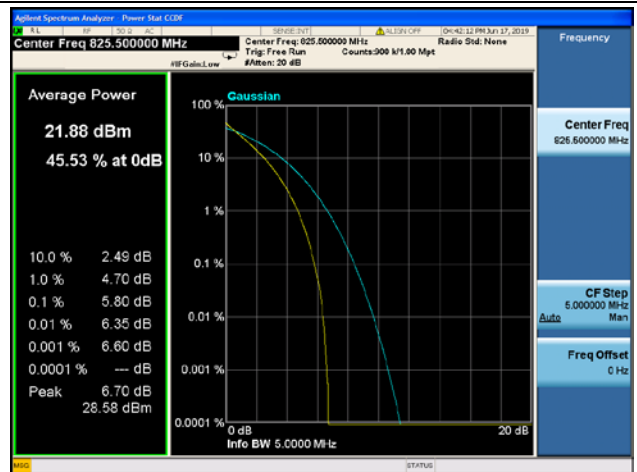
**1.4MHz/16QAM/High CH**



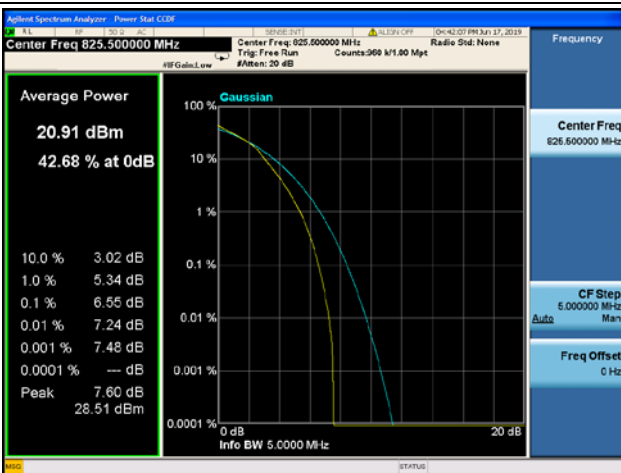
**1.4MHz/64QAM/High CH**



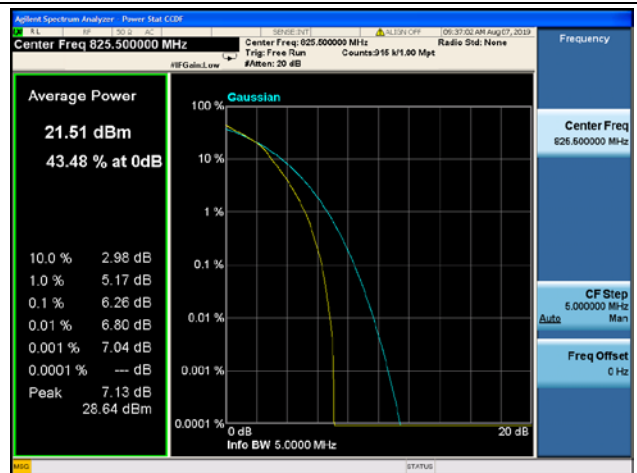
**3MHz/QPSK/Low CH**



**3MHz/16QAM/Low CH**

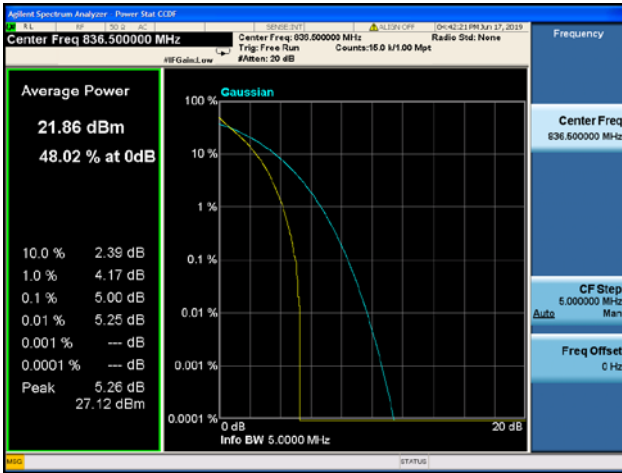


**3MHz/64QAM/Low CH**

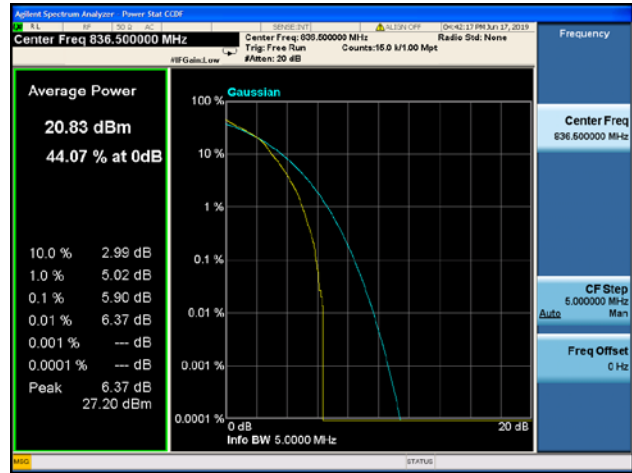




**3MHz/QPSK/Mid CH**



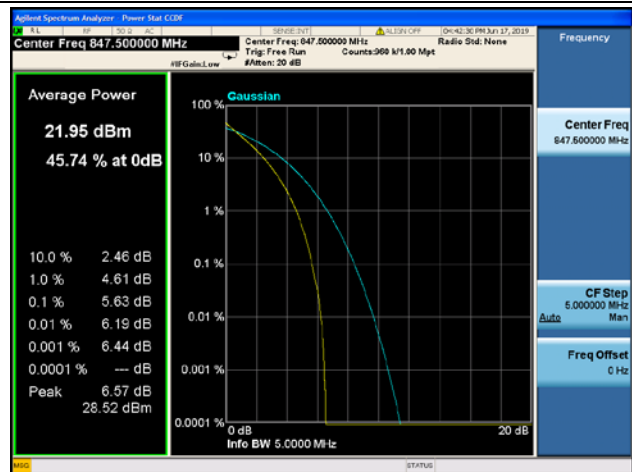
**3MHz/16QAM/Mid CH**



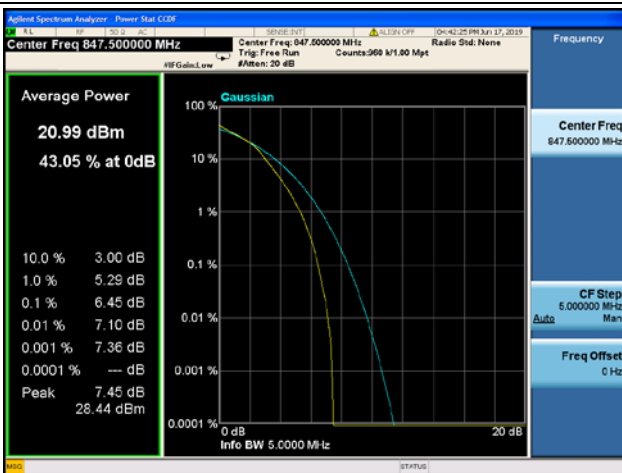
**3MHz/64QAM/Mid CH**



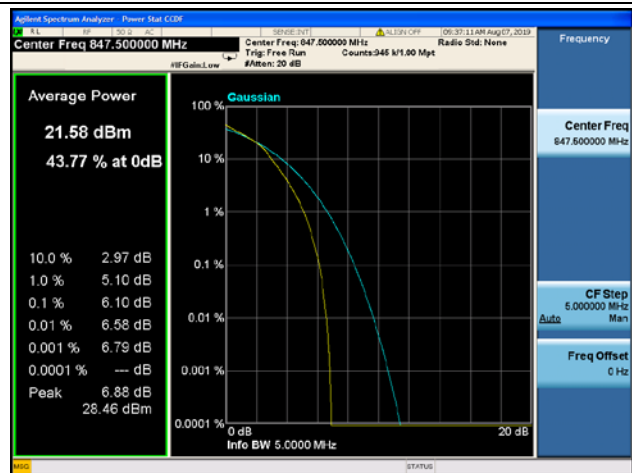
**3MHz/QPSK/High CH**



**3MHz/16QAM/High CH**

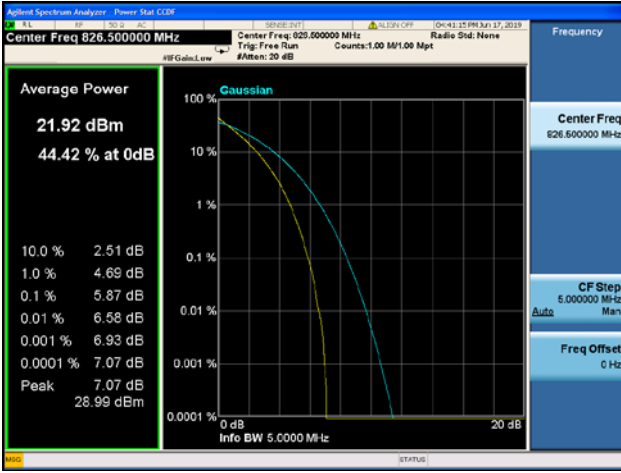


**3MHz/64QAM/High CH**

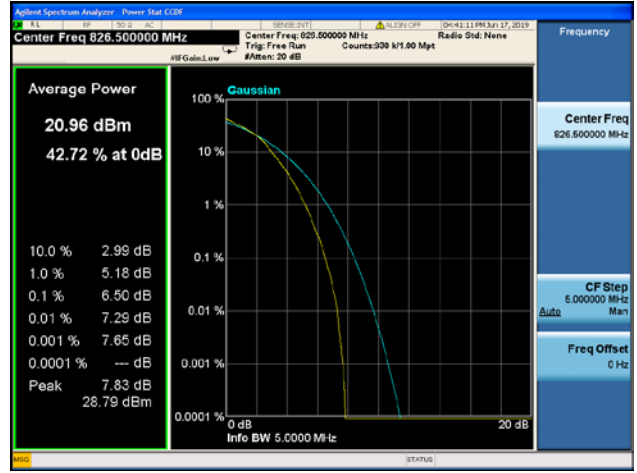




**5MHz/QPSK/Low CH**



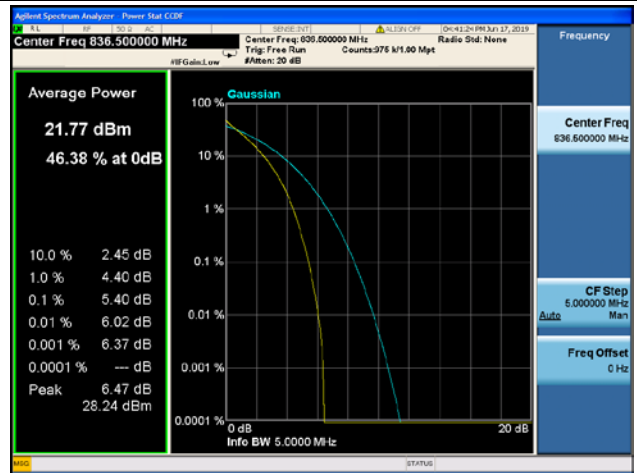
**5MHz/16QAM/Low CH**



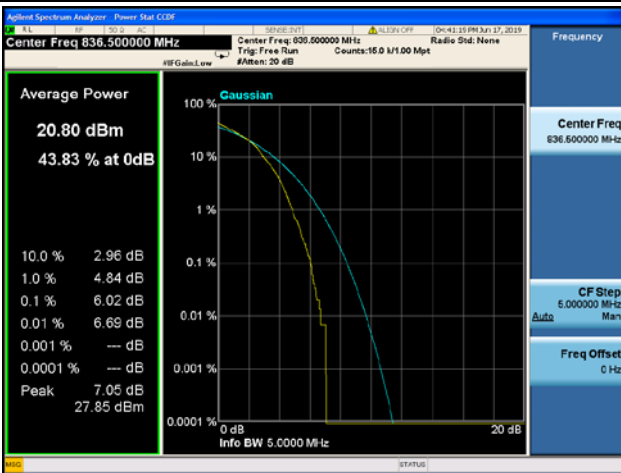
**5MHz/64QAM/Low CH**



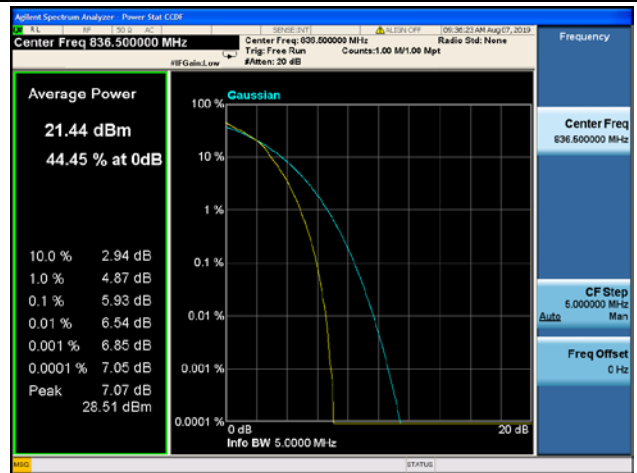
**5MHz/QPSK/Mid CH**



**5MHz/16QAM/Mid CH**

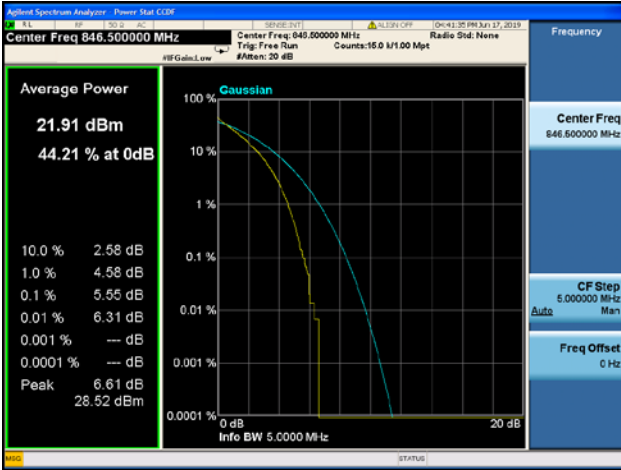


**5MHz/64QAM/Mid CH**

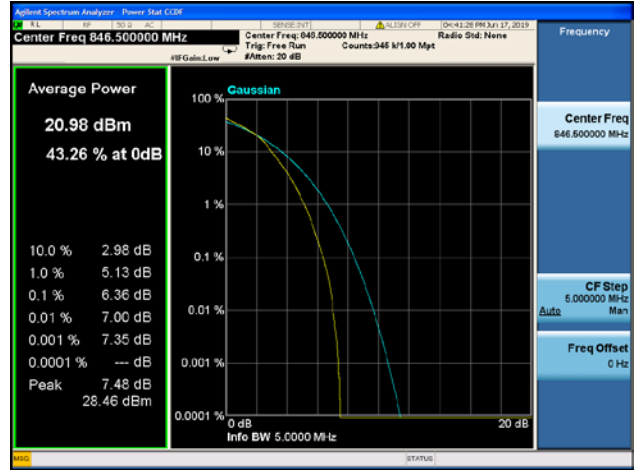




**5MHz/QPSK/High CH**



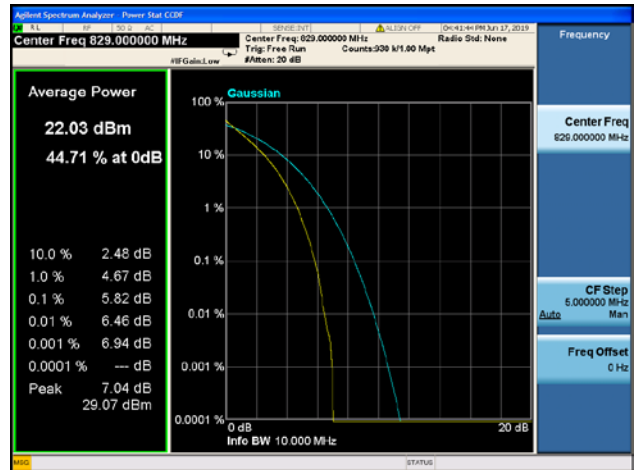
**5MHz/16QAM/High CH**



**5MHz/64QAM/High CH**



**10MHz/QPSK/Low CH**



**10MHz/16QAM/Low CH**

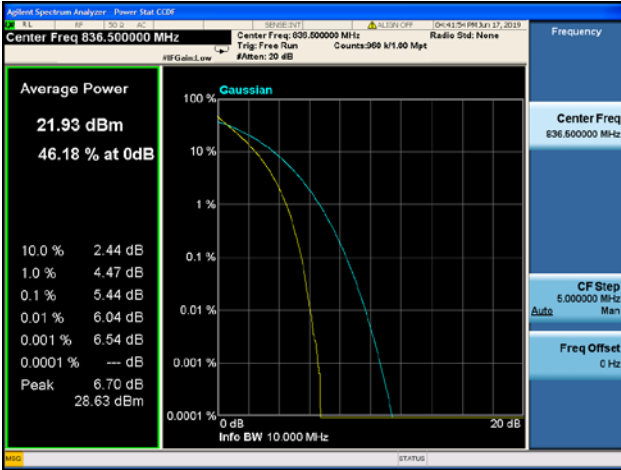


**10MHz/64QAM/Low CH**

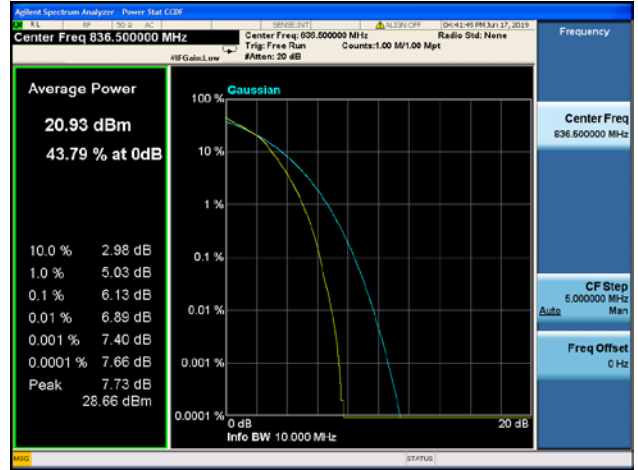




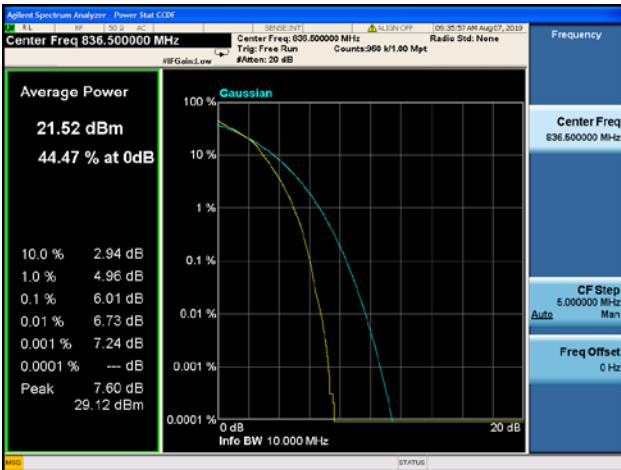
10MHz/QPSK/Mid CH



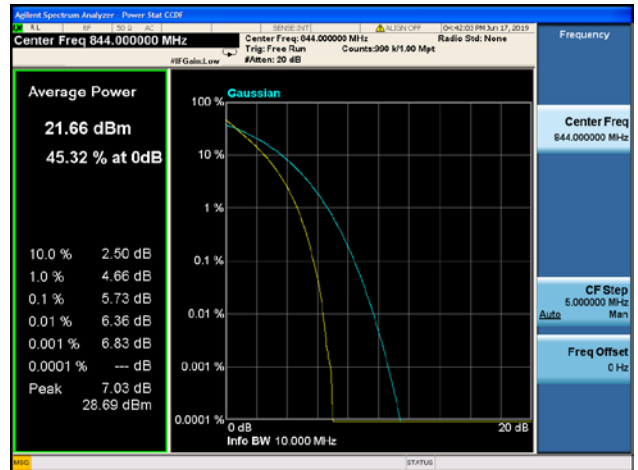
10MHz/16QAM/Mid CH



10MHz/64QAM/Mid CH



10MHz/QPSK/High CH



10MHz/16QAM/High CH



10MHz/64QAM/High CH







<b>LTE Band 40 (2305MHz ~ 2315MHz),BW: 5MHz</b>				
Channel	Frequency (MHz)	Peak to Average Ratio(dB)		
		QPSK	16QAM	64QAM
38750	2307.5	9.38	9.92	12.42
38750	2310	9.30	10.18	11.14
38775	2312.5	9.57	10.86	10.07
<b>LTE Band 40 (2305MHz ~ 2315MHz),BW: 10MHz</b>				
Channel	Frequency (MHz)	Peak to Average Ratio(dB)		
		QPSK	16QAM	64QAM
/	/	/	/	/
38750	2310	9.44	9.98	10.11
/	/	/	/	/

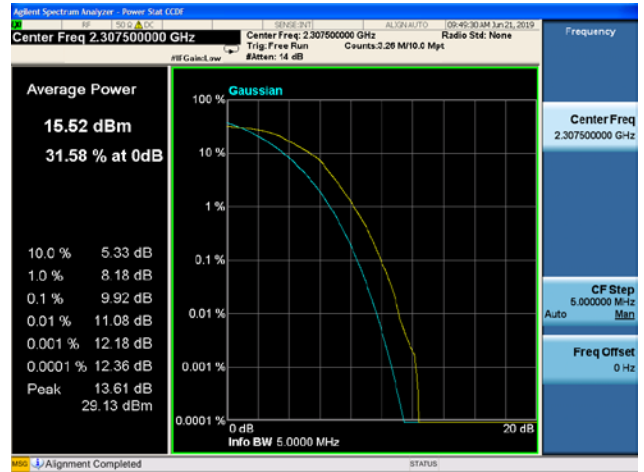
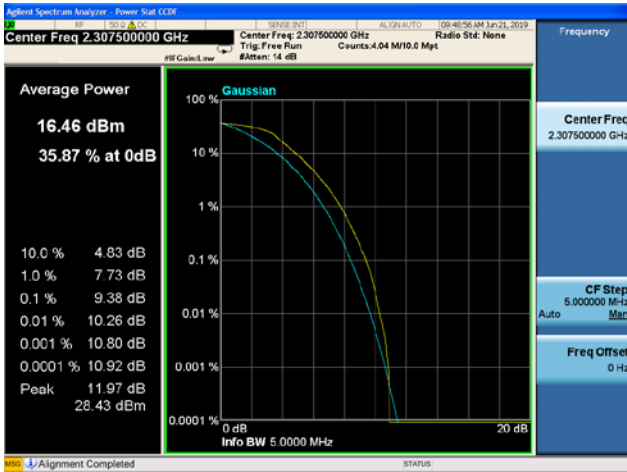
<b>LTE Band 40 (2350MHz ~ 2360MHz),BW: 5MHz</b>				
Channel	Frequency (MHz)	Peak to Average Ratio(dB)		
		QPSK	16QAM	64QAM
39175	2342.5	9.90	9.91	11.84
39200	2355	10.17	9.95	10.10
39225	2357.5	9.42	9.90	12.92
<b>LTE Band 40 (2350MHz ~ 2360MHz),BW: 10MHz</b>				
Channel	Frequency (MHz)	Peak to Average Ratio(dB)		
		QPSK	16QAM	64QAM
/	/	/	/	/
39200	2355	9.55	9.92	10.99
/	/	/	/	/



LTE Band 40(2305MHz ~ 2315MHz) Peak to Average Ratio

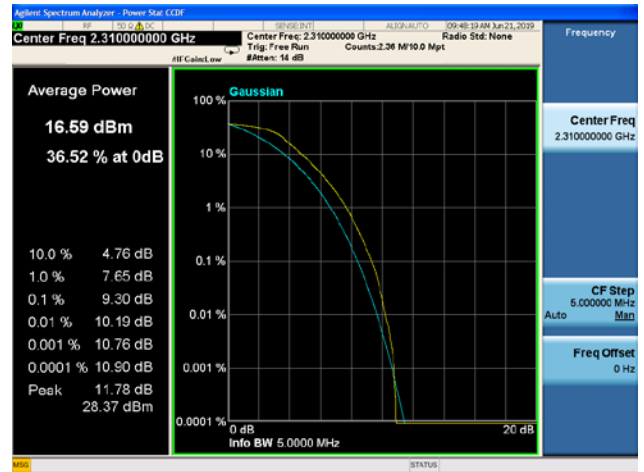
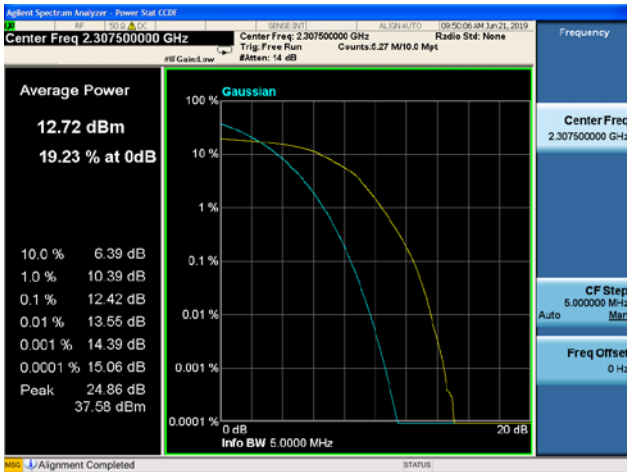
5MHz/QPSK/Low CH

5MHz/16QAM/Low CH



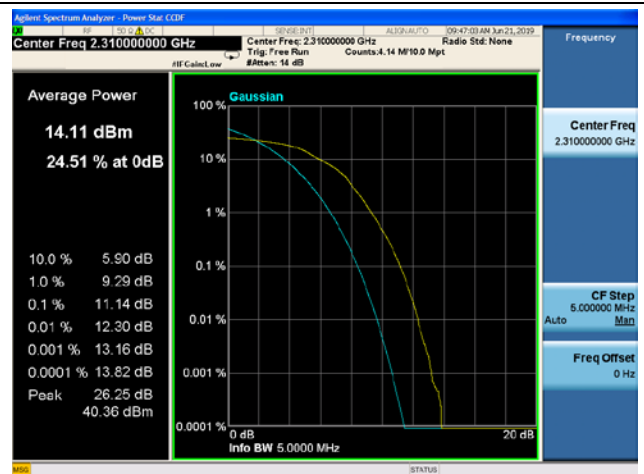
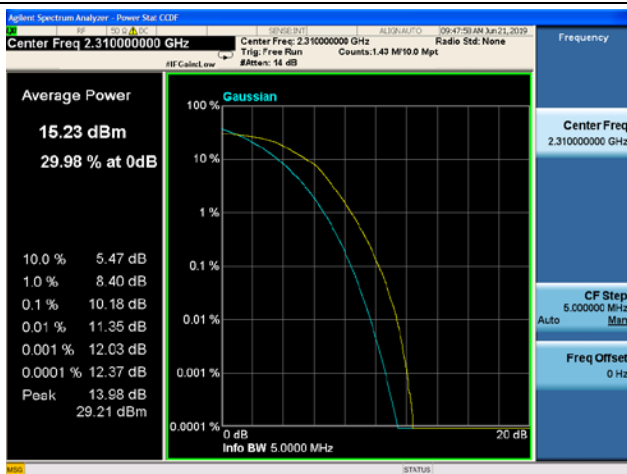
5MHz/64QAM/Low CH

5MHz/QPSK/Mid CH



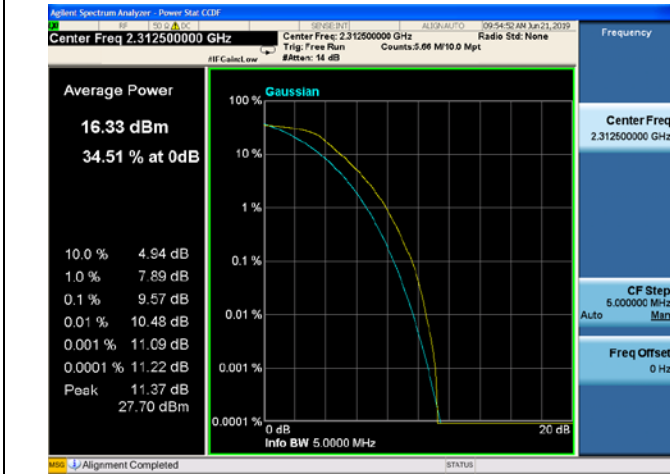
5MHz/16QAM/Mid CH

5MHz/64QAM/Mid CH

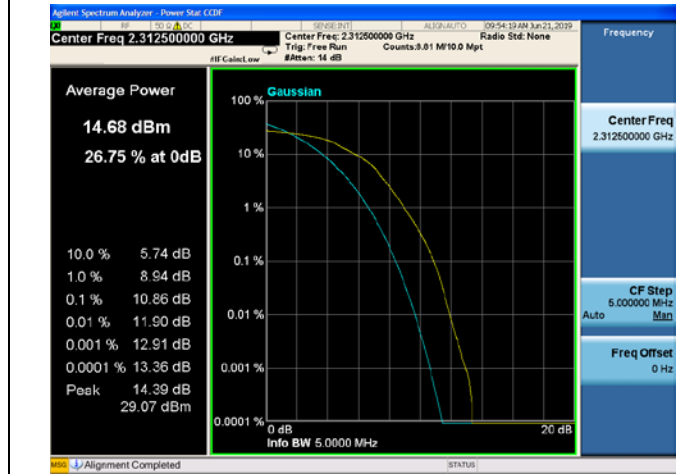




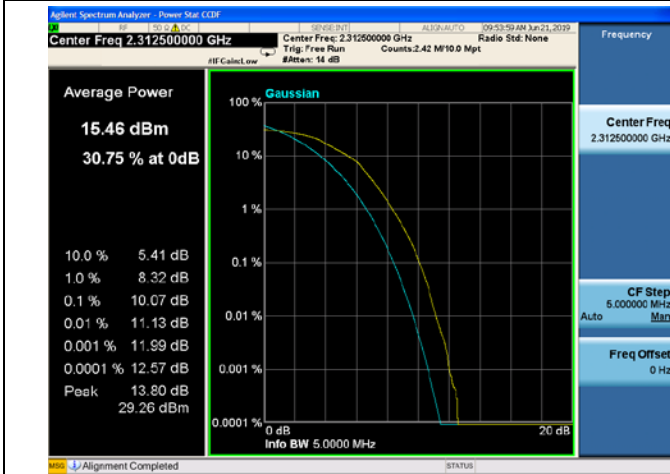
**5MHz/QPSK/High CH**



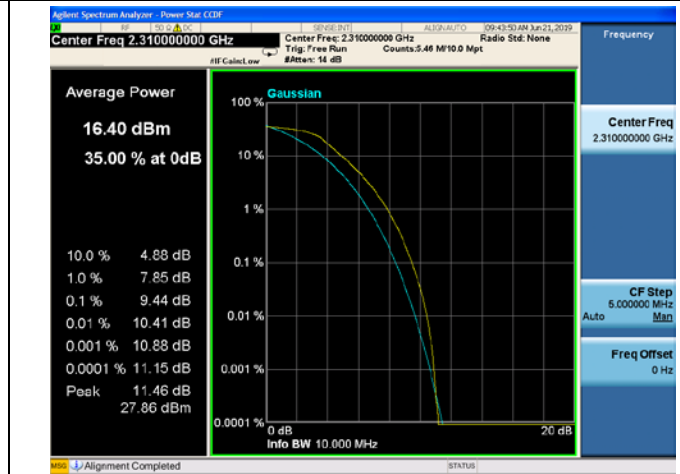
**5MHz/16QAM/High CH**



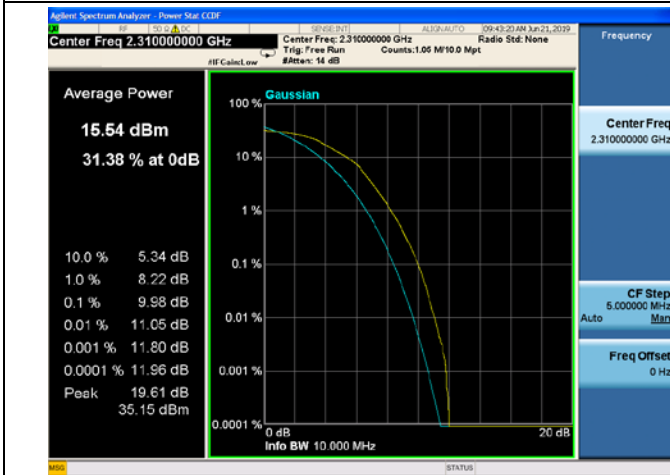
**5MHz/64QAM/High CH**



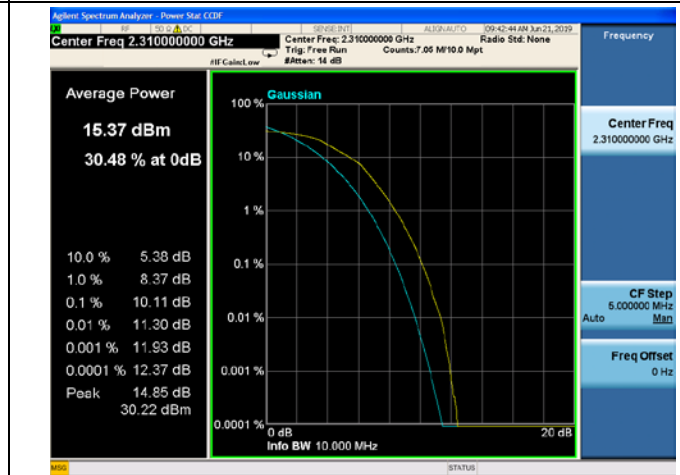
**10MHz/QPSK/Mid CH**



**10MHz/16QAM/Mid CH**



**10MHz/64QAM/Mid CH**

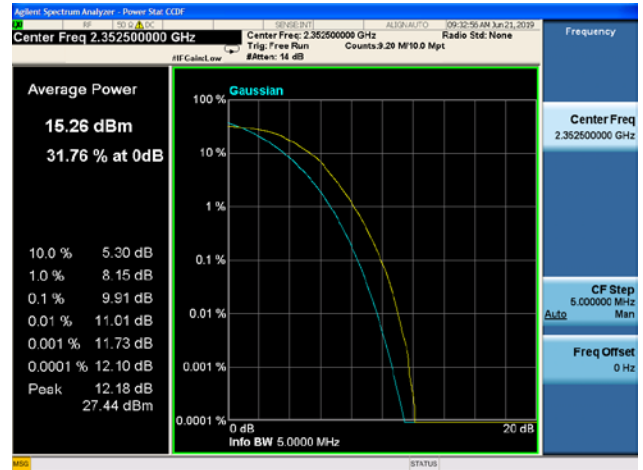
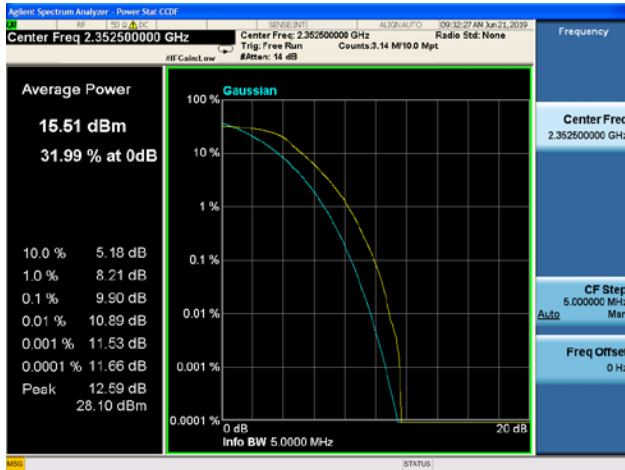




LTE Band 40(2305MHz ~ 2315MHz) Peak to Average Radio

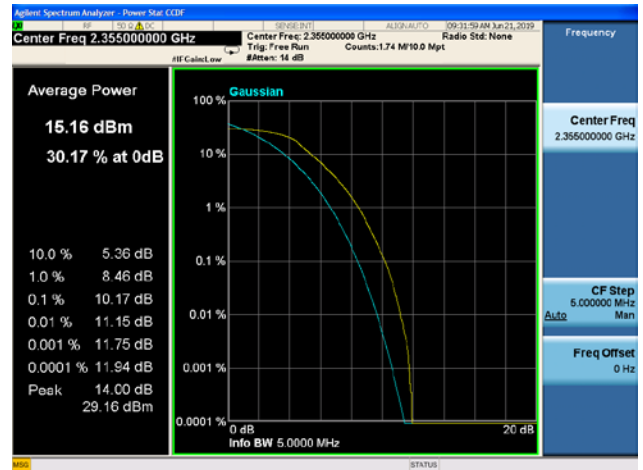
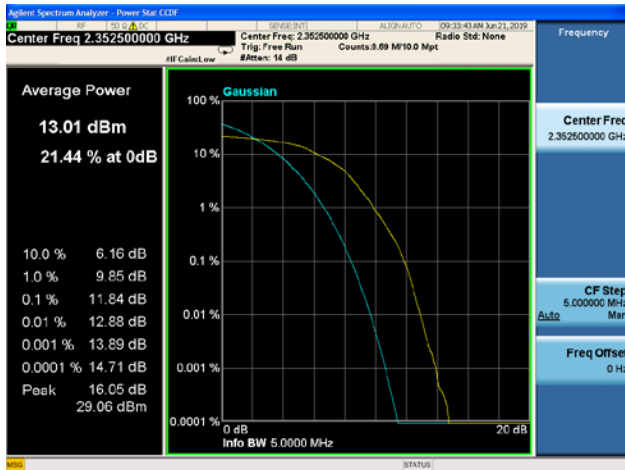
5MHz/QPSK/Low CH

5MHz/16QAM/Low CH



5MHz/64QAM/Low CH

5MHz/QPSK/Mid CH



5MHz/16QAM/Mid CH

5MHz/64QAM/Mid CH

