

2.3. Frequency Stability

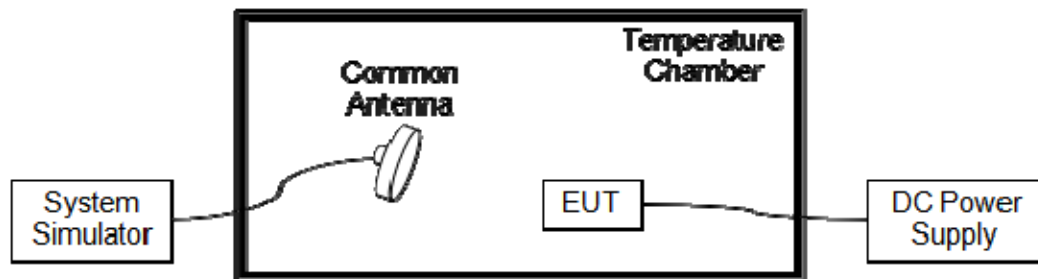
2.3.1. Requirement

According to FCC section 2.1055, 24.235, 27.54, 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°C to $+50^{\circ}\text{C}$ at intervals of not more than 10°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.

Note: The operating temperature of EUT is from -10°C to 60°C , which are specified by the applicant.

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 3.70V, 4.20V and 3.40V, which are specified by the applicant; the normal temperature here used is 20°C.

LTE Band 2, QPSK, Channel 18900, Frequency 1880.0MHz					
Limit =Within Authorized Band					
Voltage (%)	Power (VDC)	Temp(°C)	Fre. Dev. (Hz)	Deviation (ppm)	Result
100	3.70	+20(Ref)	-22	-0.012	PASS
100		-10	20	0.011	
100		0	40	0.021	
100		+10	29	0.015	
100		+20	46	0.024	
100		+30	15	0.008	
100		+40	30	0.016	
100		+50	13	0.007	
100		+60	-53	-0.028	
115	4.20	+20	-33	-0.018	
85	3.40	+20	-18	-0.010	

LTE Band 4, QPSK, Channel 20175, Frequency 1732.5MHz					
Limit =Within Authorized Band					
Voltage (%)	Power (VDC)	Temp(°C)	Fre. Dev. (Hz)	Deviation (ppm)	Result
100	3.70	+20(Ref)	44	0.025	PASS
100		-10	43	0.025	
100		0	36	0.021	
100		+10	15	0.009	
100		+20	-52	-0.030	
100		+30	16	0.009	
100		+40	22	0.013	
100		+50	-17	-0.010	
100		+60	-28	-0.016	
115	4.20	+20	23	0.013	
85	3.40	+20	-50	-0.029	



LTE Band 5, QPSK, Channel 20525, Frequency 836.5MHz					
Limit=±2.5ppm					
Voltage (%)	Power (VDC)	Temp(°C)	Fre. Dev. (Hz)	Deviation (ppm)	Result
100	3.70	+20(Ref)	-31	-0.037	PASS
100		-10	-38	-0.045	
100		0	55	0.066	
100		+10	45	0.054	
100		+20	45	0.054	
100		+30	16	0.019	
100		+40	23	0.027	
100		+50	25	0.030	
100		+60	44	0.053	
115		4.20	+20	43	
85	3.40	+20	-56	-0.067	

LTE Band 7, QPSK, Channel 21100, Frequency 2535MHz					
Limit= Within Authorized Band					
Voltage (%)	Power (VDC)	Temp(°C)	Fre. Dev. (Hz)	Deviation (ppm)	Result
100	3.70	+20(Ref)	44	0.017	PASS
100		-10	-33	-0.013	
100		0	-18	-0.007	
100		+10	51	0.020	
100		+20	51	0.020	
100		+30	46	0.018	
100		+40	-38	-0.015	
100		+50	23	0.009	
100		+60	34	0.013	
115		4.20	+20	41	
85	3.40	+20	-33	-0.013	



LTE Band 12, QPSK, Channel 23095, Frequency 707.5MHz					
Limit =Within Authorized Band					
Voltage (%)	Power (VDC)	Temp(°C)	Fre. Dev. (Hz)	Deviation (ppm)	Result
100	3.70	+20(Ref)	-22	-0.031	PASS
100		-10	37	0.052	
100		0	15	0.021	
100		+10	34	0.048	
100		+20	32	0.045	
100		+30	16	0.023	
100		+40	50	0.071	
100		+50	39	0.055	
100		+60	31	0.044	
115		4.20	+20	40	
85	3.40	+20	-23	-0.033	

LTE Band 17, QPSK, Channel 23790, Frequency 710MHz					
Limit =Within Authorized Band					
Voltage (%)	Power (VDC)	Temp(°C)	Fre. Dev. (Hz)	Deviation (ppm)	Result
100	3.70	+20(Ref)	49	0.069	PASS
100		-10	16	0.023	
100		0	45	0.063	
100		+10	21	0.030	
100		+20	22	0.031	
100		+30	-44	-0.062	
100		+40	41	0.058	
100		+50	-50	-0.070	
100		+60	38	0.054	
115		4.20	+20	-31	
85	3.40	+20	45	0.063	



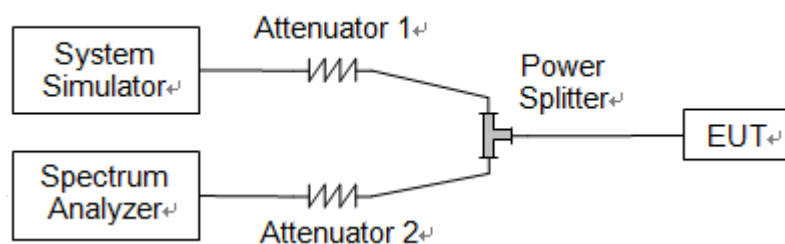
LTE Band 66, QPSK, Channel 132322, Frequency 1745MHz Limit =Within Authorized Band					
Voltage (%)	Power (VDC)	Temp (°C)	Fre. Dev. (Hz)	Deviation (ppm)	Result
100	3.70	+20(Ref)	-44	-0.025	PASS
100		-10	-39	-0.022	
100		0	51	0.029	
100		+10	-40	-0.023	
100		+20	-36	-0.021	
100		+30	50	0.029	
100		+40	-35	-0.020	
100		+50	-59	-0.034	
100		+60	-25	-0.014	
115		4.20	+20	55	
85	3.40	+20	49	0.028	

2.4. Peak to Average Ratio

2.4.1. Requirement

According to FCC section 24.232(d) and 27.50(d), the peak to average ratio (PAR) of the transmission may not exceed 13dB.

2.4.2. Test Description



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 50Ohm; 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%.



LTE Band 2					
BW(MHz)	Channel Level	Modulation	PAR Radio(dB)	Limit(dB)	Verdict
1.4	Low	QPSK	5.61	<=13	PASS
	Low	16QAM	6.60	<=13	PASS
	Low	64QAM	6.48	<=13	PASS
	Mid	QPSK	6.05	<=13	PASS
	Mid	16QAM	6.78	<=13	PASS
	Mid	64QAM	6.57	<=13	PASS
	High	QPSK	5.91	<=13	PASS
	High	16QAM	6.69	<=13	PASS
	High	64QAM	6.44	<=13	PASS
3	Low	QPSK	5.83	<=13	PASS
	Low	16QAM	6.61	<=13	PASS
	Low	64QAM	6.43	<=13	PASS
	Mid	QPSK	5.93	<=13	PASS
	Mid	16QAM	6.71	<=13	PASS
	Mid	64QAM	6.55	<=13	PASS
	High	QPSK	5.87	<=13	PASS
	High	16QAM	6.60	<=13	PASS
	High	64QAM	6.41	<=13	PASS
5	Low	QPSK	5.72	<=13	PASS
	Low	16QAM	6.35	<=13	PASS
	Low	64QAM	6.37	<=13	PASS
	Mid	QPSK	5.88	<=13	PASS
	Mid	16QAM	6.50	<=13	PASS
	Mid	64QAM	6.42	<=13	PASS
	High	QPSK	5.73	<=13	PASS
	High	16QAM	6.39	<=13	PASS
	High	64QAM	6.31	<=13	PASS
10	Low	QPSK	5.75	<=13	PASS
	Low	16QAM	6.36	<=13	PASS
	Low	64QAM	6.35	<=13	PASS
	Mid	QPSK	5.92	<=13	PASS
	Mid	16QAM	6.56	<=13	PASS
	Mid	64QAM	6.57	<=13	PASS
	High	QPSK	5.81	<=13	PASS
	High	16QAM	6.36	<=13	PASS
	High	64QAM	6.37	<=13	PASS



15	Low	QPSK	5.59	<=13	PASS
	Low	16QAM	6.27	<=13	PASS
	Low	64QAM	6.24	<=13	PASS
	Mid	QPSK	5.94	<=13	PASS
	Mid	16QAM	6.57	<=13	PASS
	Mid	64QAM	6.53	<=13	PASS
	High	QPSK	5.58	<=13	PASS
	High	16QAM	6.28	<=13	PASS
	High	64QAM	6.18	<=13	PASS
20	Low	QPSK	5.53	<=13	PASS
	Low	16QAM	6.30	<=13	PASS
	Low	64QAM	6.25	<=13	PASS
	Mid	QPSK	5.96	<=13	PASS
	Mid	16QAM	6.65	<=13	PASS
	Mid	64QAM	6.61	<=13	PASS
	High	QPSK	5.49	<=13	PASS
	High	16QAM	6.32	<=13	PASS
	High	64QAM	6.24	<=13	PASS



LTE Band 4					
BW(MHz)	Channel Level	Modulation	PAR Radio(dB)	Limit(dB)	Verdict
1.4	Low	QPSK	5.38	<=13	PASS
	Low	16QAM	6.50	<=13	PASS
	Low	64QAM	6.20	<=13	PASS
	Mid	QPSK	5.99	<=13	PASS
	Mid	16QAM	6.79	<=13	PASS
	Mid	64QAM	6.62	<=13	PASS
	High	QPSK	5.70	<=13	PASS
	High	16QAM	6.48	<=13	PASS
	High	64QAM	6.25	<=13	PASS
3	Low	QPSK	5.61	<=13	PASS
	Low	16QAM	6.35	<=13	PASS
	Low	64QAM	6.23	<=13	PASS
	Mid	QPSK	6.03	<=13	PASS
	Mid	16QAM	6.72	<=13	PASS
	Mid	64QAM	6.61	<=13	PASS
	High	QPSK	5.70	<=13	PASS
	High	16QAM	6.47	<=13	PASS
	High	64QAM	6.31	<=13	PASS
5	Low	QPSK	5.45	<=13	PASS
	Low	16QAM	6.28	<=13	PASS
	Low	64QAM	6.25	<=13	PASS
	Mid	QPSK	5.87	<=13	PASS
	Mid	16QAM	6.57	<=13	PASS
	Mid	64QAM	6.51	<=13	PASS
	High	QPSK	5.73	<=13	PASS
	High	16QAM	6.39	<=13	PASS
	High	64QAM	6.31	<=13	PASS
10	Low	QPSK	5.56	<=13	PASS
	Low	16QAM	6.37	<=13	PASS
	Low	64QAM	6.37	<=13	PASS
	Mid	QPSK	6.05	<=13	PASS
	Mid	16QAM	6.54	<=13	PASS
	Mid	64QAM	6.56	<=13	PASS
	High	QPSK	5.83	<=13	PASS
	High	16QAM	6.46	<=13	PASS
	High	64QAM	6.47	<=13	PASS



15	Low	QPSK	5.72	<=13	PASS
	Low	16QAM	6.34	<=13	PASS
	Low	64QAM	6.35	<=13	PASS
	Mid	QPSK	5.92	<=13	PASS
	Mid	16QAM	6.54	<=13	PASS
	Mid	64QAM	6.52	<=13	PASS
	High	QPSK	5.81	<=13	PASS
	High	16QAM	6.43	<=13	PASS
	High	64QAM	6.41	<=13	PASS
20	Low	QPSK	5.62	<=13	PASS
	Low	16QAM	6.47	<=13	PASS
	Low	64QAM	6.45	<=13	PASS
	Mid	QPSK	5.84	<=13	PASS
	Mid	16QAM	6.58	<=13	PASS
	Mid	64QAM	6.54	<=13	PASS
	High	QPSK	5.78	<=13	PASS
	High	16QAM	6.43	<=13	PASS
	High	64QAM	6.49	<=13	PASS



LTE Band 66					
BW(MHz)	Channel Level	Modulation	PAR Radio(dB)	Limit(dB)	Verdict
1.4	Low	QPSK	5.46	<=13	PASS
	Low	16QAM	6.32	<=13	PASS
	Low	64QAM	6.46	<=13	PASS
	Mid	QPSK	5.84	<=13	PASS
	Mid	16QAM	6.57	<=13	PASS
	Mid	64QAM	6.70	<=13	PASS
	High	QPSK	5.97	<=13	PASS
	High	16QAM	6.71	<=13	PASS
	High	64QAM	6.86	<=13	PASS
3	Low	QPSK	5.50	<=13	PASS
	Low	16QAM	6.24	<=13	PASS
	Low	64QAM	6.45	<=13	PASS
	Mid	QPSK	5.84	<=13	PASS
	Mid	16QAM	6.59	<=13	PASS
	Mid	64QAM	6.64	<=13	PASS
	High	QPSK	5.85	<=13	PASS
	High	16QAM	6.66	<=13	PASS
	High	64QAM	6.76	<=13	PASS
5	Low	QPSK	5.58	<=13	PASS
	Low	16QAM	6.23	<=13	PASS
	Low	64QAM	6.48	<=13	PASS
	Mid	QPSK	5.80	<=13	PASS
	Mid	16QAM	6.41	<=13	PASS
	Mid	64QAM	6.60	<=13	PASS
	High	QPSK	5.80	<=13	PASS
	High	16QAM	6.45	<=13	PASS
	High	64QAM	6.75	<=13	PASS
10	Low	QPSK	5.69	<=13	PASS
	Low	16QAM	6.33	<=13	PASS
	Low	64QAM	6.47	<=13	PASS
	Mid	QPSK	5.84	<=13	PASS
	Mid	16QAM	6.47	<=13	PASS
	Mid	64QAM	6.58	<=13	PASS
	High	QPSK	5.84	<=13	PASS
	High	16QAM	6.48	<=13	PASS
	High	64QAM	6.71	<=13	PASS



15	Low	QPSK	5.57	<=13	PASS
	Low	16QAM	6.26	<=13	PASS
	Low	64QAM	6.52	<=13	PASS
	Mid	QPSK	5.77	<=13	PASS
	Mid	16QAM	6.41	<=13	PASS
	Mid	64QAM	6.66	<=13	PASS
	High	QPSK	5.71	<=13	PASS
	High	16QAM	6.42	<=13	PASS
	High	64QAM	6.75	<=13	PASS
20	Low	QPSK	5.67	<=13	PASS
	Low	16QAM	6.43	<=13	PASS
	Low	64QAM	6.62	<=13	PASS
	Mid	QPSK	5.75	<=13	PASS
	Mid	16QAM	6.45	<=13	PASS
	Mid	64QAM	6.64	<=13	PASS
	High	QPSK	5.72	<=13	PASS
	High	16QAM	6.42	<=13	PASS
	High	64QAM	6.69	<=13	PASS



Band2 / 1.4MHz / Low CH / QPSK



Band2 / 1.4MHz / Low CH / 16QAM



Band2 / 1.4MHz / Low CH / 64QAM



Band2 / 1.4MHz / Mid CH / QPSK



Band2 / 1.4MHz / Mid CH / 16QAM



Band2 / 1.4MHz / Mid CH / 64QAM

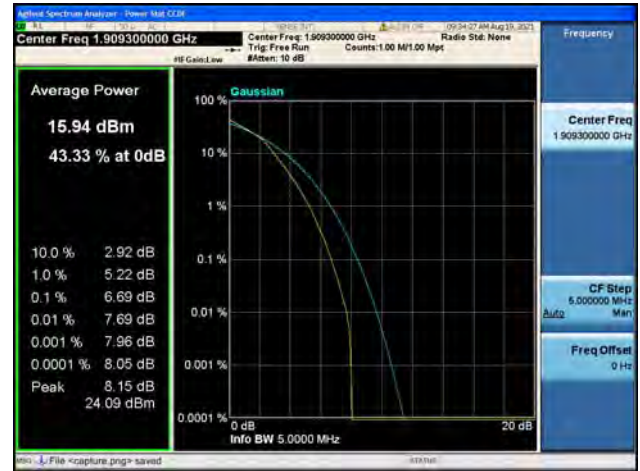




Band2 / 1.4MHz / High CH / QPSK



Band2 / 1.4MHz / High CH / 16QAM



Band2 / 1.4MHz / High CH / 64QAM



Band2 / 3MHz / Low CH / QPSK



Band2 / 3MHz / Low CH / 16QAM

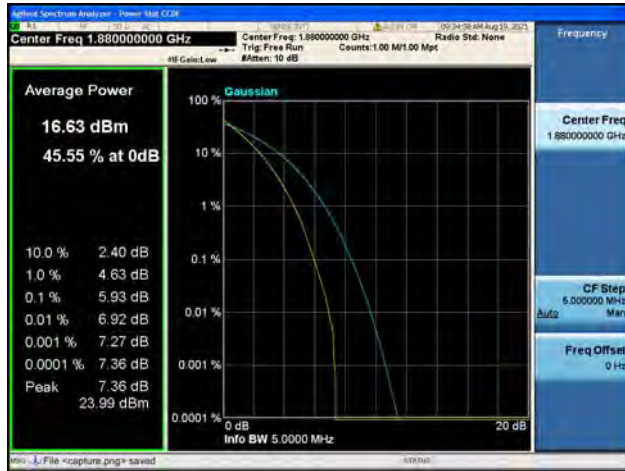


Band2 / 3MHz / Low CH / 64QAM





Band2 / 3MHz / Mid CH / QPSK



Band2 / 3MHz / Mid CH / 16QAM



Band2 / 3MHz / Mid CH / 64QAM



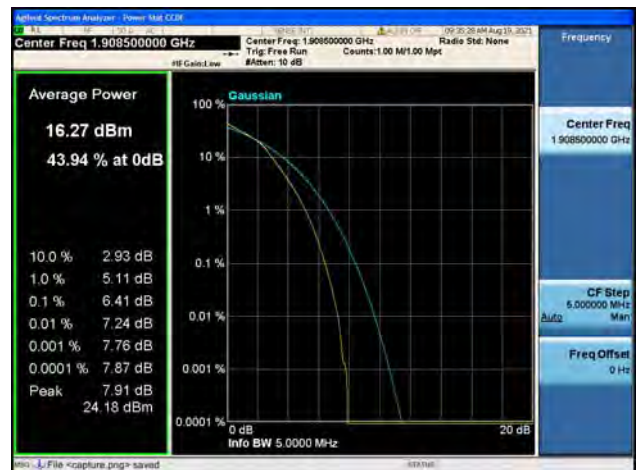
Band2 / 3MHz / High CH / QPSK



Band2 / 3MHz / High CH / 16QAM



Band2 / 3MHz / High CH / 64QAM





Band2 / 5MHz / Low CH / QPSK



Band2 / 5MHz / Low CH / 16QAM



Band2 / 5MHz / Low CH / 64QAM



Band2 / 5MHz / Mid CH / QPSK



Band2 / 5MHz / Mid CH / 16QAM



Band2 / 5MHz / Mid CH / 64QAM





Band2 / 5MHz / High CH / QPSK



Band2 / 5MHz / High CH / 16QAM



Band2 / 5MHz / High CH / 64QAM



Band2 / 10MHz / Low CH / QPSK



Band2 / 10MHz / Low CH / 16QAM

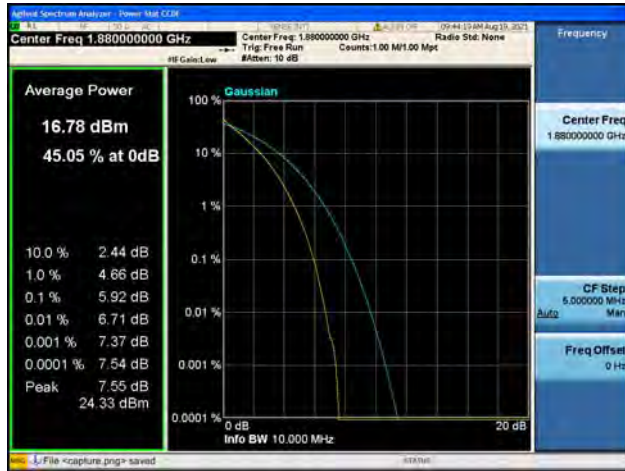


Band2 / 10MHz / Low CH / 64QAM





Band2 / 10MHz / Mid CH / QPSK



Band2 / 10MHz / Mid CH / 16QAM



Band2 / 10MHz / Mid CH / 64QAM



Band2 / 10MHz / High CH / QPSK



Band2 / 10MHz / High CH / 16QAM



Band2 / 10MHz / High CH / 64QAM





Band2 / 15MHz / Low CH / QPSK



Band2 / 15MHz / Low CH / 16QAM



Band2 / 15MHz / Low CH / 64QAM



Band2 / 15MHz / Mid CH / QPSK



Band2 / 15MHz / Mid CH / 16QAM



Band2 / 15MHz / Mid CH / 64QAM





Band2 / 15MHz / High CH / QPSK



Band2 / 15MHz / High CH / 16QAM



Band2 / 15MHz / High CH / 64QAM



Band2 / 20MHz / Low CH / QPSK



Band2 / 20MHz / Low CH / 16QAM



Band2 / 20MHz / Low CH / 64QAM





Band2 / 20MHz / Mid CH / QPSK



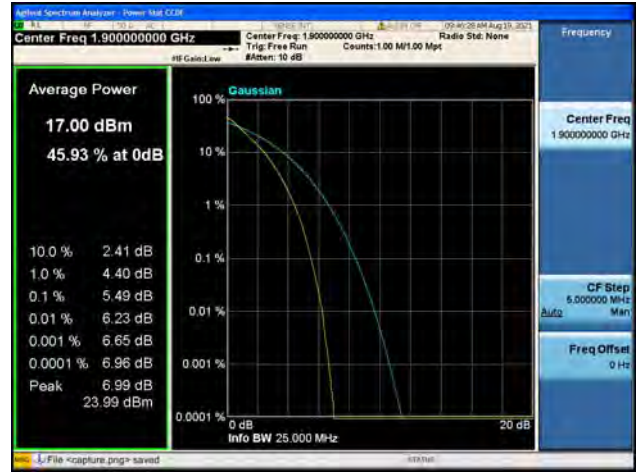
Band2 / 20MHz / Mid CH / 16QAM



Band2 / 20MHz / Mid CH / 64QAM



Band2 / 20MHz / High CH / QPSK



Band2 / 20MHz / High CH / 16QAM



Band2 / 20MHz / High CH / 64QAM





Band4 / 1.4MHz / Low CH / QPSK



Band4 / 1.4MHz / Low CH / 16QAM



Band4 / 1.4MHz / Low CH / 64QAM



Band4 / 1.4MHz / Mid CH / QPSK



Band4 / 1.4MHz / Mid CH / 16QAM

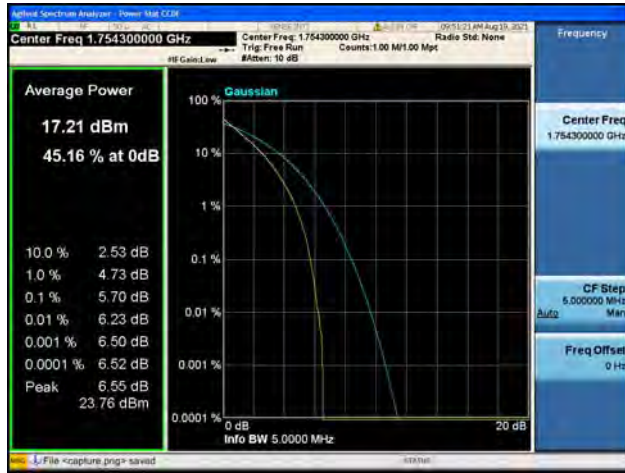


Band4 / 1.4MHz / Mid CH / 64QAM





Band4 / 1.4MHz / High CH / QPSK



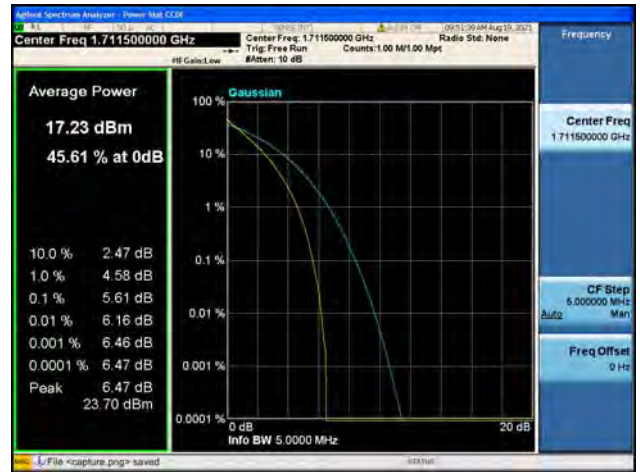
Band4 / 1.4MHz / High CH / 16QAM



Band4 / 1.4MHz / High CH / 64QAM



Band4 / 3MHz / Low CH / QPSK



Band4 / 3MHz / Low CH / 16QAM

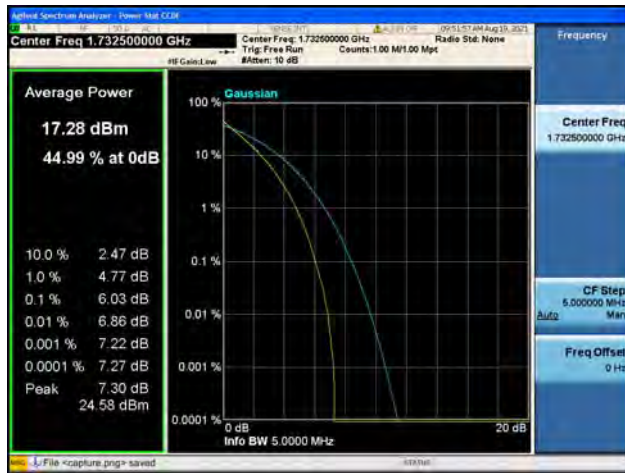


Band4 / 3MHz / Low CH / 64QAM





Band4 / 3MHz / Mid CH / QPSK



Band4 / 3MHz / Mid CH / 16QAM



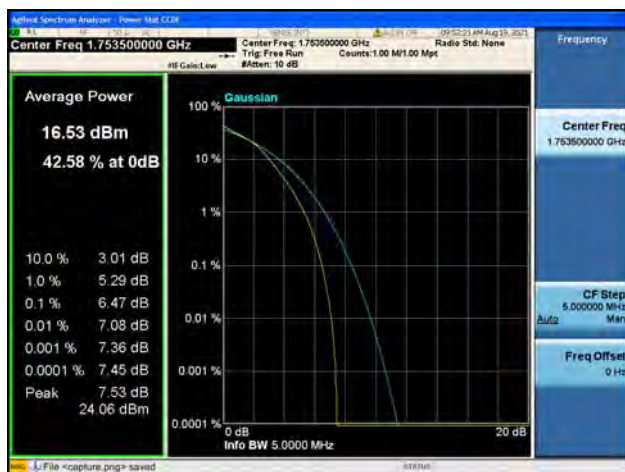
Band4 / 3MHz / Mid CH / 64QAM



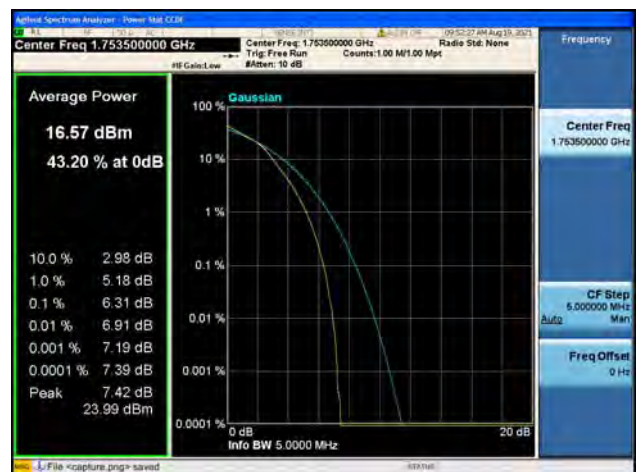
Band4 / 3MHz / High CH / QPSK



Band4 / 3MHz / High CH / 16QAM



Band4 / 3MHz / High CH / 64QAM





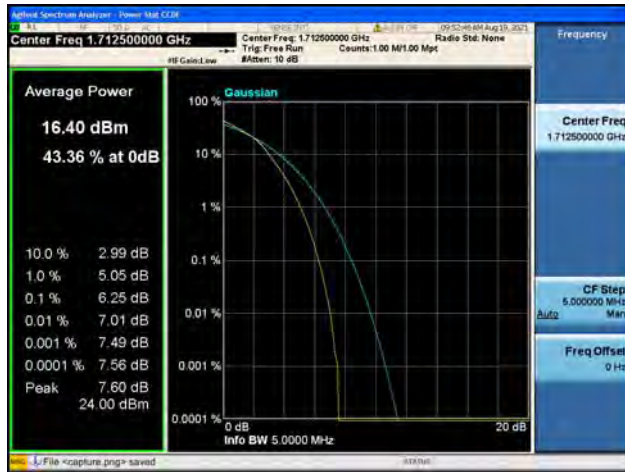
Band4 / 5MHz / Low CH / QPSK



Band4 / 5MHz / Low CH / 16QAM



Band4 / 5MHz / Low CH / 64QAM



Band4 / 5MHz / Mid CH / QPSK



Band4 / 5MHz / Mid CH / 16QAM



Band4 / 5MHz / Mid CH / 64QAM

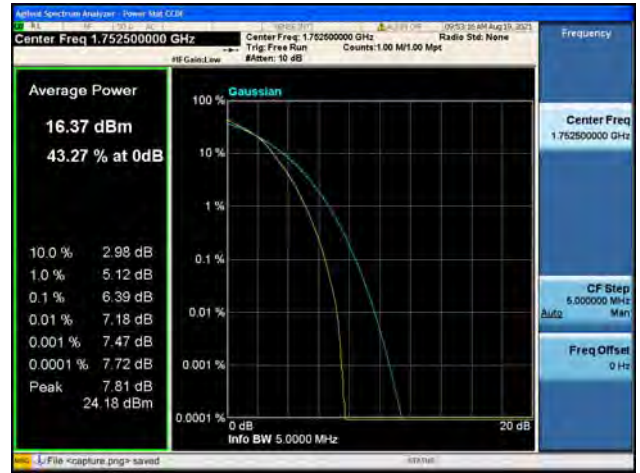




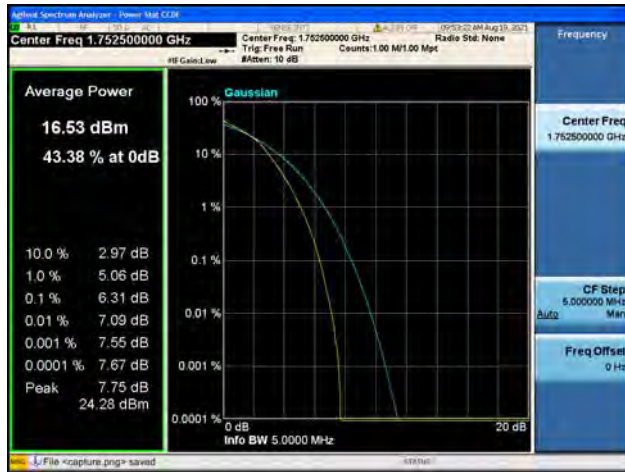
Band4 / 5MHz / High CH / QPSK



Band4 / 5MHz / High CH / 16QAM



Band4 / 5MHz / High CH / 64QAM



Band4 / 10MHz / Low CH / QPSK



Band4 / 10MHz / Low CH / 16QAM

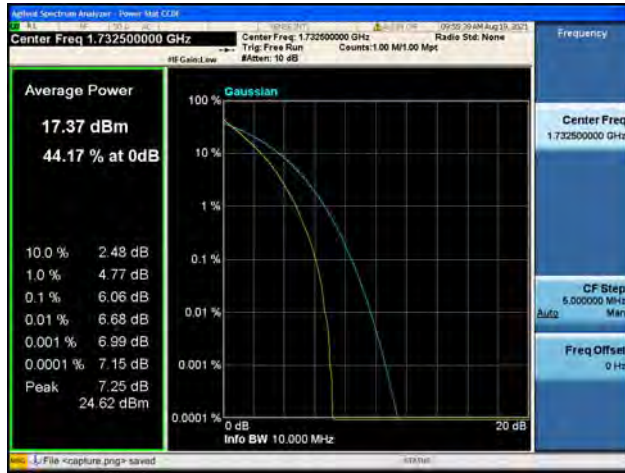


Band4 / 10MHz / Low CH / 64QAM





Band4 / 10MHz / Mid CH / QPSK



Band4 / 10MHz / Mid CH / 16QAM



Band4 / 10MHz / Mid CH / 64QAM



Band4 / 10MHz / High CH / QPSK



Band4 / 10MHz / High CH / 16QAM

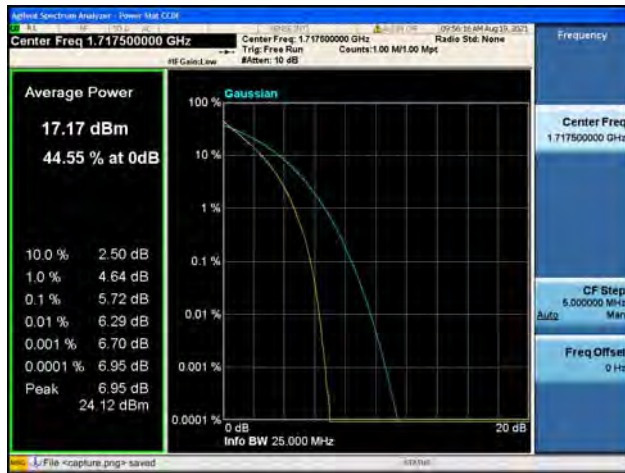


Band4 / 10MHz / High CH / 64QAM





Band4 / 15MHz / Low CH / QPSK



Band4 / 15MHz / Low CH / 16QAM



Band4 / 15MHz / Low CH / 64QAM



Band4 / 15MHz / Mid CH / QPSK



Band4 / 15MHz / Mid CH / 16QAM

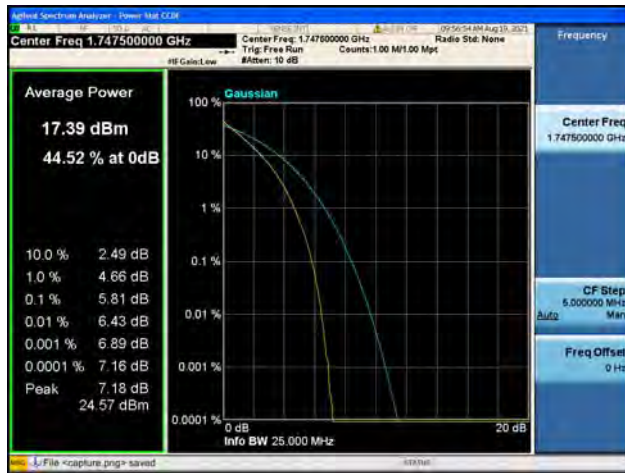


Band4 / 15MHz / Mid CH / 64QAM





Band4 / 15MHz / High CH / QPSK



Band4 / 15MHz / High CH / 16QAM



Band4 / 15MHz / High CH / 64QAM



Band4 / 20MHz / Low CH / QPSK



Band4 / 20MHz / Low CH / 16QAM



Band4 / 20MHz / Low CH / 64QAM

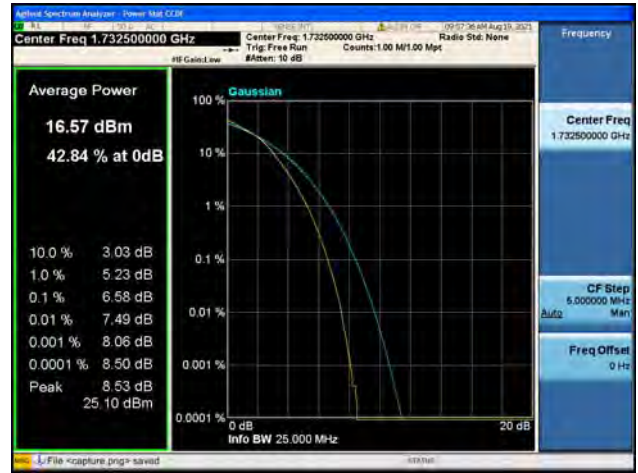




Band4 / 20MHz / Mid CH / QPSK



Band4 / 20MHz / Mid CH / 16QAM



Band4 / 20MHz / Mid CH / 64QAM



Band4 / 20MHz / High CH / QPSK



Band4 / 20MHz / High CH / 16QAM



Band4 / 20MHz / High CH / 64QAM





Band66 / 1.4MHz / Low CH / QPSK



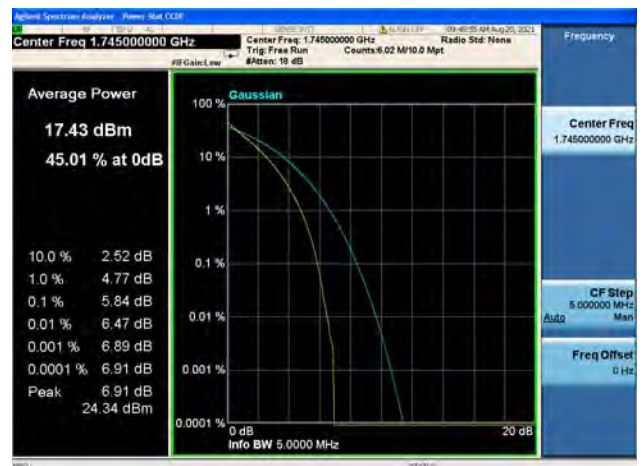
Band66 / 1.4MHz / Low CH / 16QAM



Band66 / 1.4MHz / Low CH / 64QAM



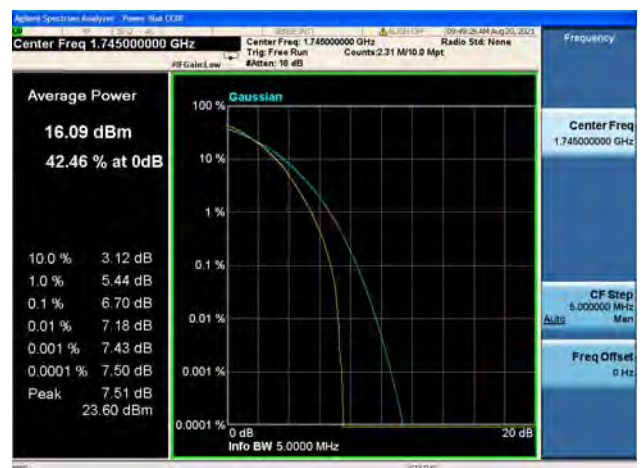
Band66 / 1.4MHz / Mid CH / QPSK



Band66 / 1.4MHz / Mid CH / 16QAM



Band66 / 1.4MHz / Mid CH / 64QAM





Band66 / 1.4MHz / High CH / QPSK



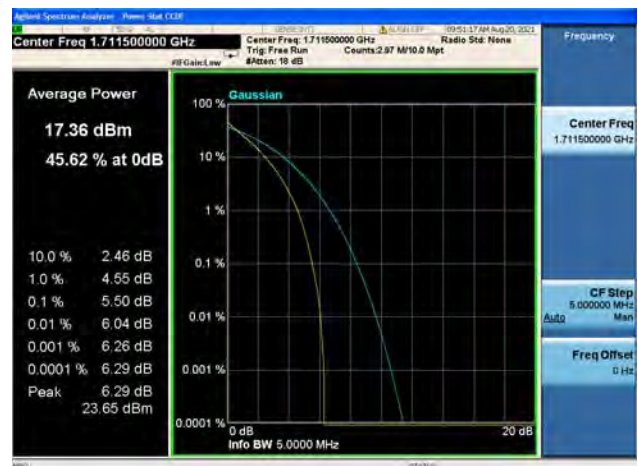
Band66 / 1.4MHz / High CH / 16QAM



Band66 / 1.4MHz / High CH / 64QAM



Band66 / 3MHz / Low CH / QPSK



Band66 / 3MHz / Low CH / 16QAM



Band66 / 3MHz / Low CH / 64QAM





Band66 / 3MHz / Mid CH / QPSK



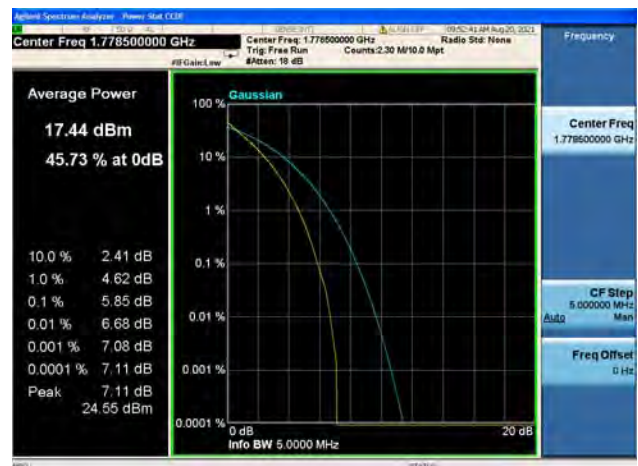
Band66 / 3MHz / Mid CH / 16QAM



Band66 / 3MHz / Mid CH / 64QAM



Band66 / 3MHz / High CH / QPSK



Band66 / 3MHz / High CH / 16QAM



Band66 / 3MHz / High CH / 64QAM





Band66 / 5MHz / Low CH / QPSK



Band66 / 5MHz / Low CH / 16QAM



Band66 / 5MHz / Low CH / 64QAM



Band66 / 5MHz / Mid CH / QPSK



Band66 / 5MHz / Mid CH / 16QAM

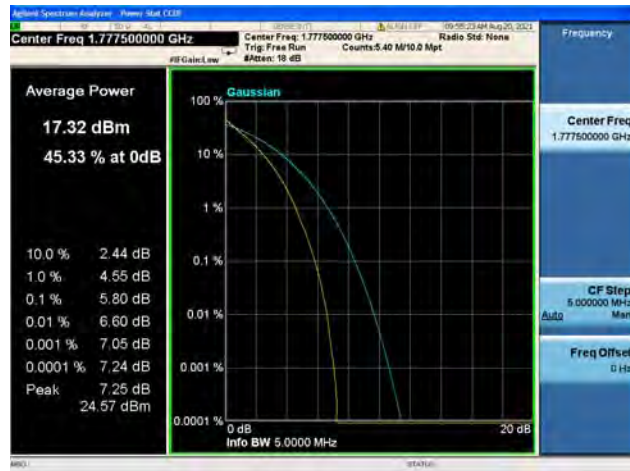


Band66 / 5MHz / Mid CH / 64QAM





Band66 / 5MHz / High CH / QPSK



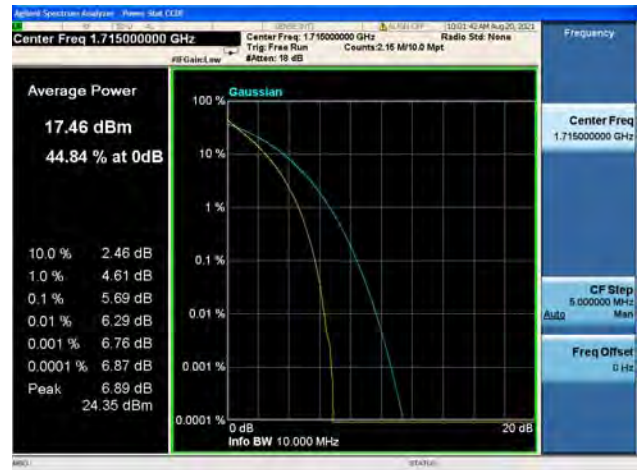
Band66 / 5MHz / High CH / 16QAM



Band66 / 5MHz / High CH / 64QAM



Band66 / 10MHz / Low CH / QPSK



Band66 / 10MHz / Low CH / 16QAM

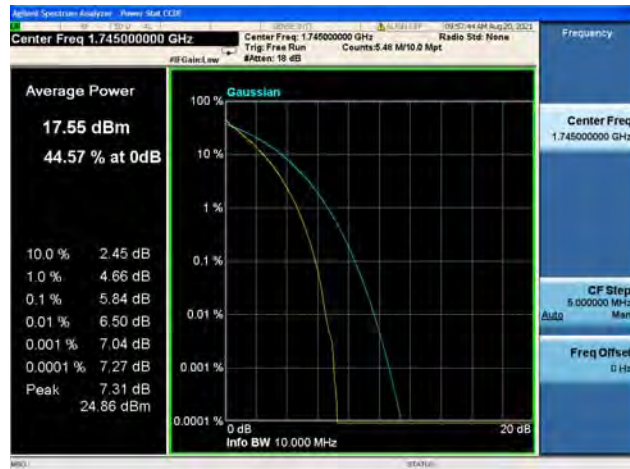


Band66 / 10MHz / Low CH / 64QAM

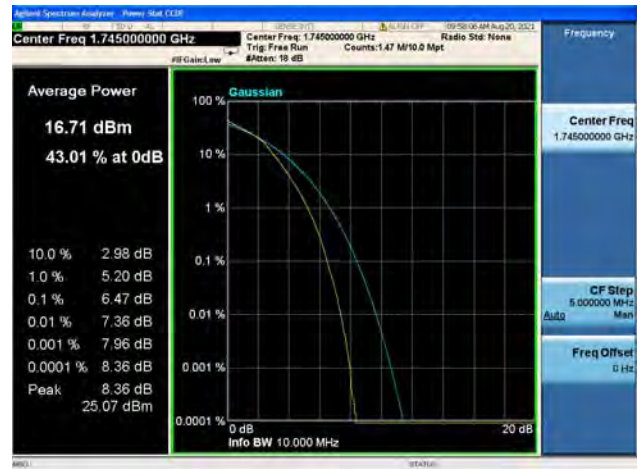




Band66 / 10MHz / Mid CH / QPSK



Band66 / 10MHz / Mid CH / 16QAM



Band66 / 10MHz / Mid CH / 64QAM



Band66 / 10MHz / High CH / QPSK



Band66 / 10MHz / High CH / 16QAM



Band66 / 10MHz / High CH / 64QAM





Band66 / 15MHz / Low CH / QPSK



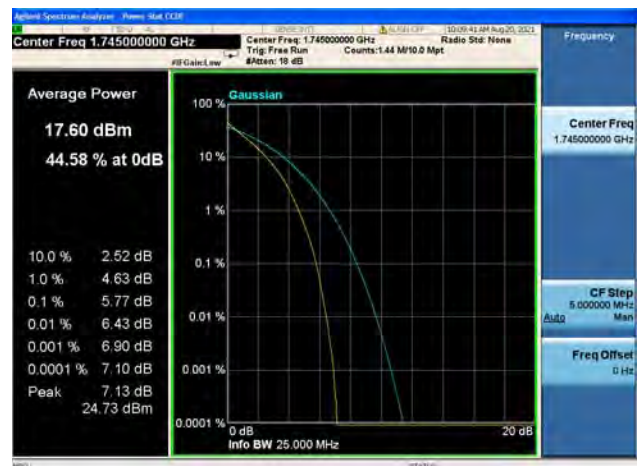
Band66 / 15MHz / Low CH / 16QAM



Band66 / 15MHz / Low CH / 64QAM



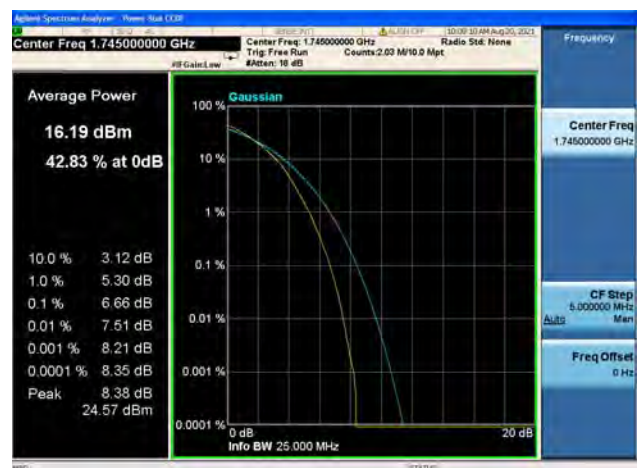
Band66 / 15MHz / Mid CH / QPSK



Band66 / 15MHz / Mid CH / 16QAM



Band66 / 15MHz / Mid CH / 64QAM





Band66 / 15MHz / High CH / QPSK



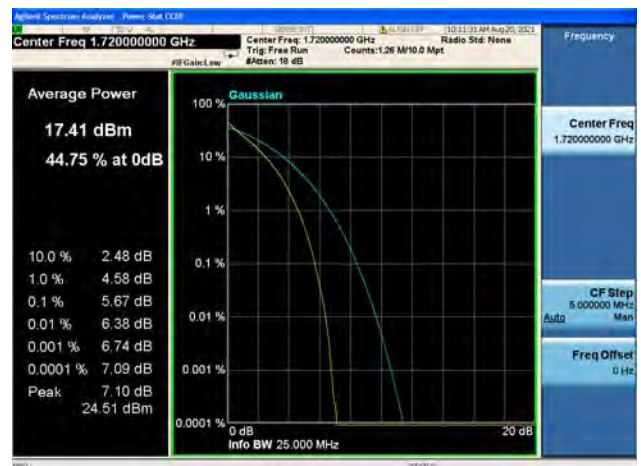
Band66 / 15MHz / High CH / 16QAM



Band66 / 15MHz / High CH / 64QAM



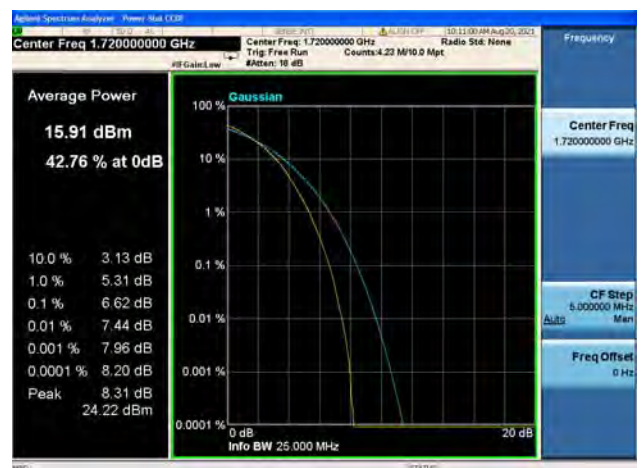
Band66 / 20MHz / Low CH / QPSK



Band66 / 20MHz / Low CH / 16QAM



Band66 / 20MHz / Low CH / 64QAM





Band66 / 20MHz / Mid CH / QPSK



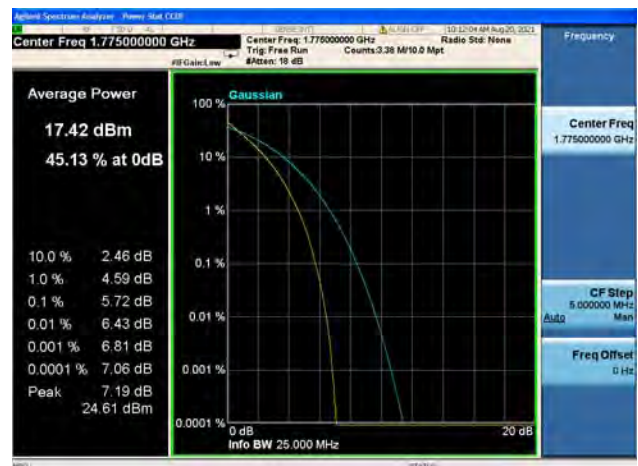
Band66 / 20MHz / Mid CH / 16QAM



Band66 / 20MHz / Mid CH / 64QAM



Band66 / 20MHz / High CH / QPSK



Band66 / 20MHz / High CH / 16QAM



Band66 / 20MHz / High CH / 64QAM



2.5. Conducted Spurious Emissions

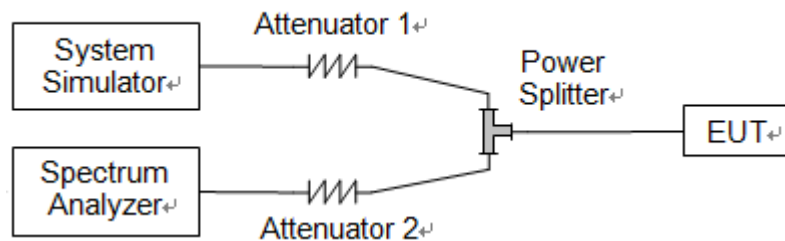
2.5.1. Requirement

According to FCC section 2.1051, the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43+10*\log(P)$ dB. This calculated to be -13dBm.

Additional requirement for LTE Band 7, 38, 41:

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $55 + 10 \log(P)$ dB. This calculated to be -25dBm.

2.5.2. Test Description



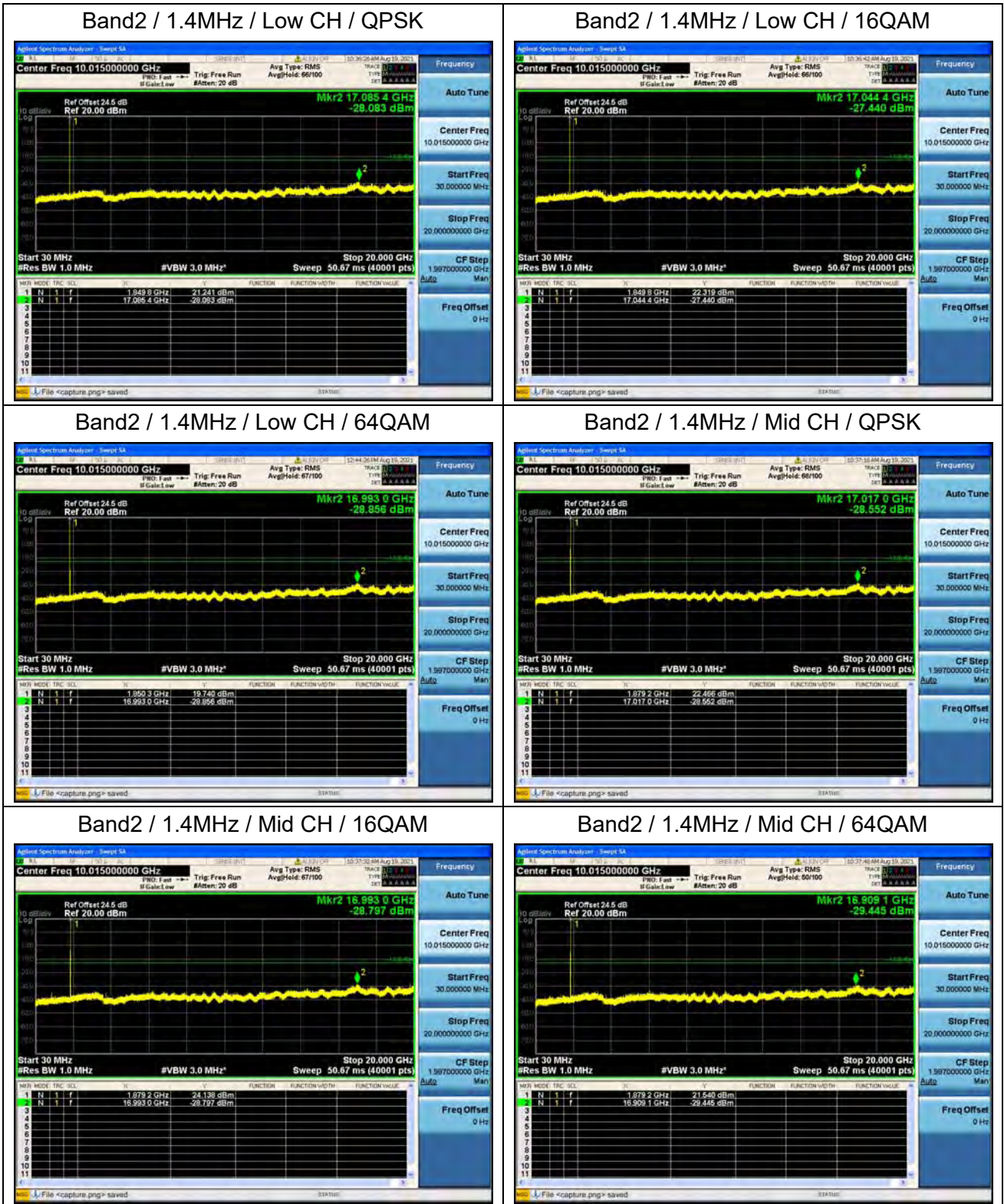
The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum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

2.5.3. Test Procedure

KDB 971168 D01v03 Section 6.0 and ANSI/TIA-603-E-2016.



2.5.4. Test Result





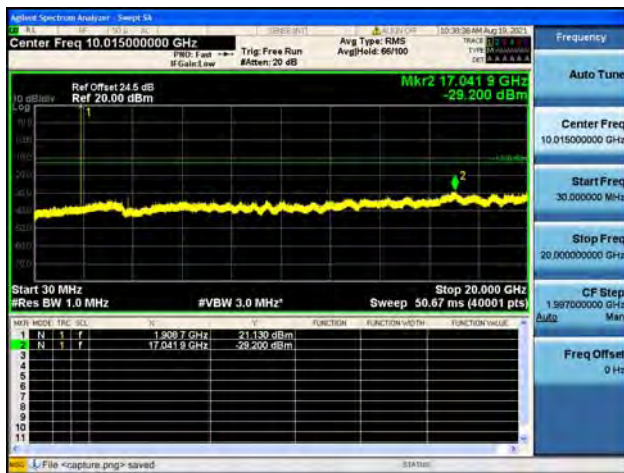
Band2 / 1.4MHz / High CH / QPSK



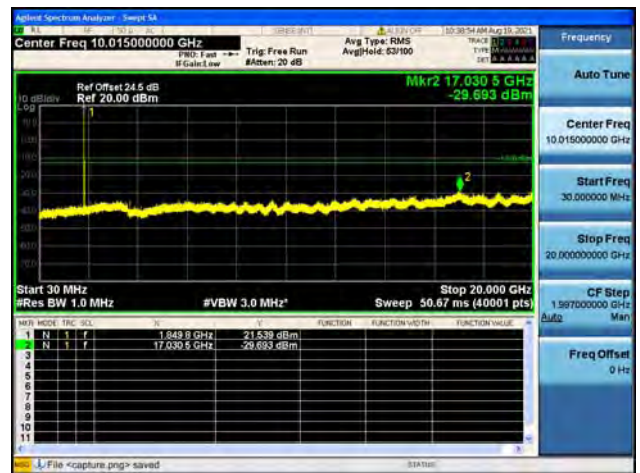
Band2 / 1.4MHz / High CH / 16QAM



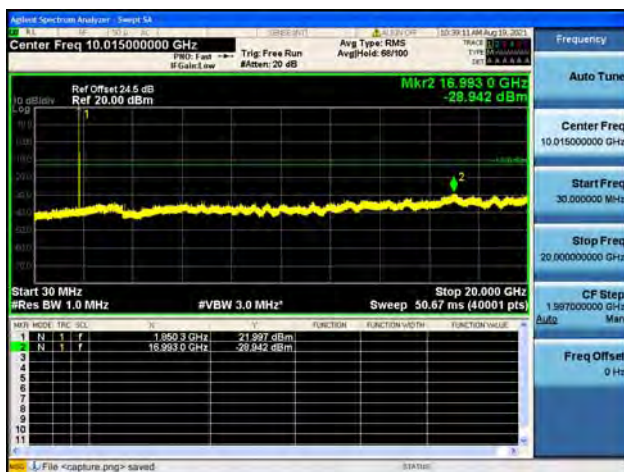
Band2 / 1.4MHz / High CH / 64QAM



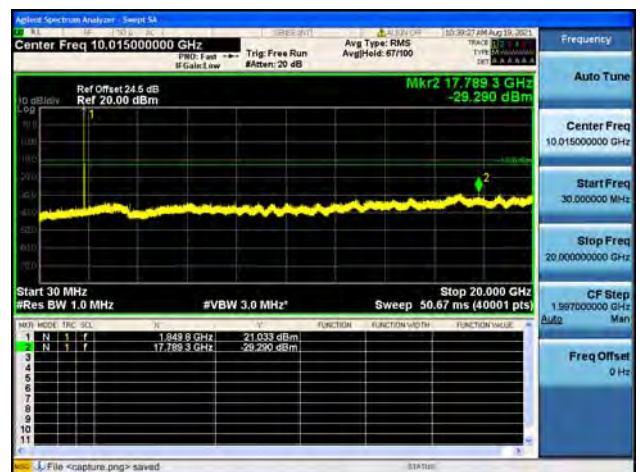
Band2 / 3MHz / Low CH / QPSK



Band2 / 3MHz / Low CH / 16QAM

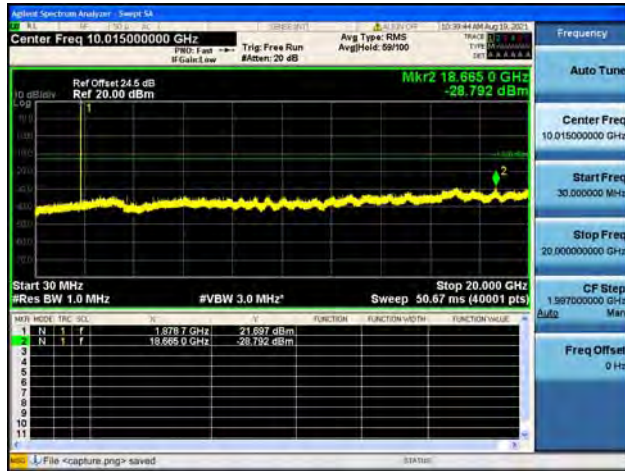


Band2 / 3MHz / Low CH / 64QAM





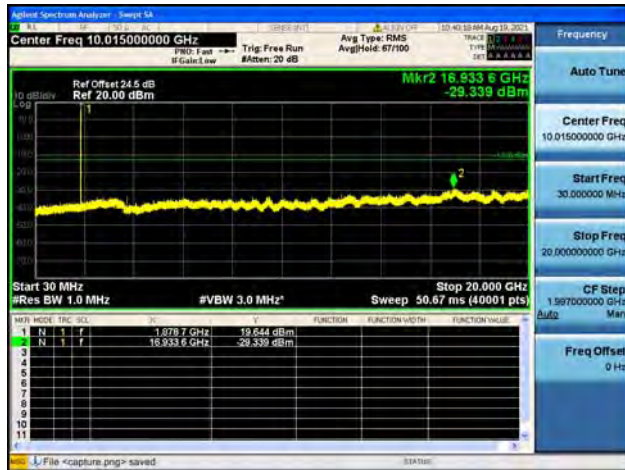
Band2 / 3MHz / Mid CH / QPSK



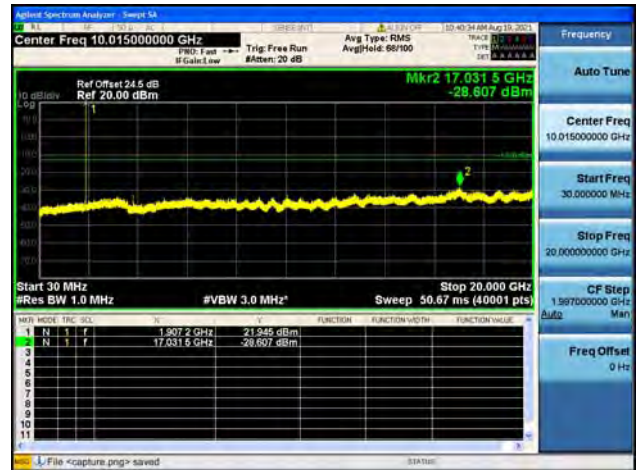
Band2 / 3MHz / Mid CH / 16QAM



Band2 / 3MHz / Mid CH / 64QAM



Band2 / 3MHz / High CH / QPSK



Band2 / 3MHz / High CH / 16QAM

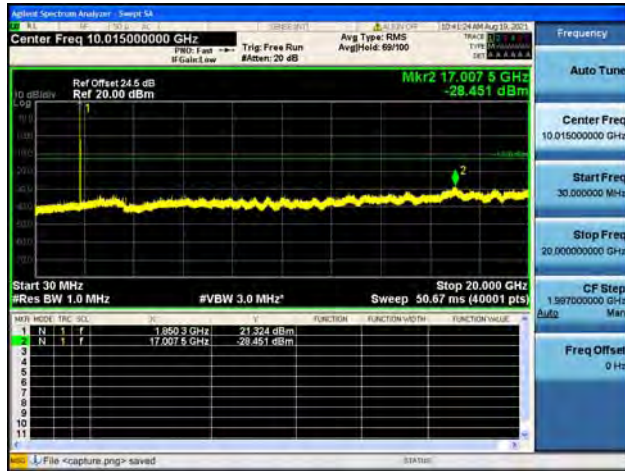


Band2 / 3MHz / High CH / 64QAM





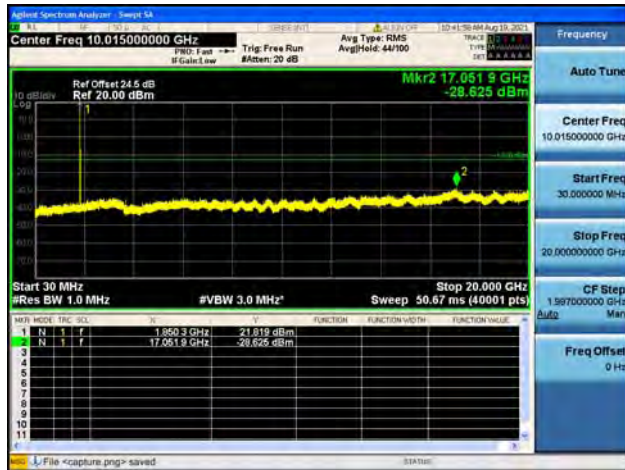
Band2 / 5MHz / Low CH / QPSK



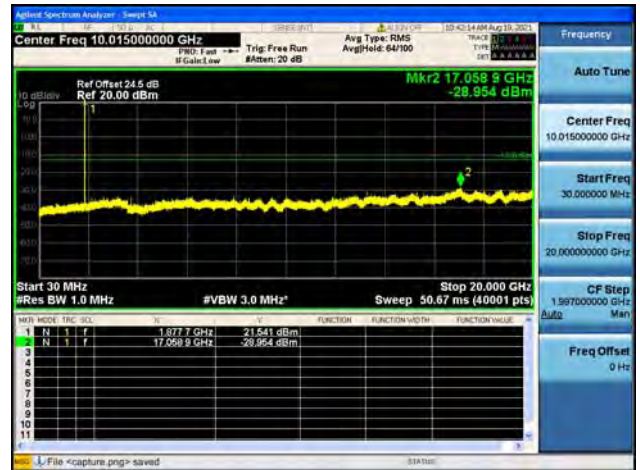
Band2 / 5MHz / Low CH / 16QAM



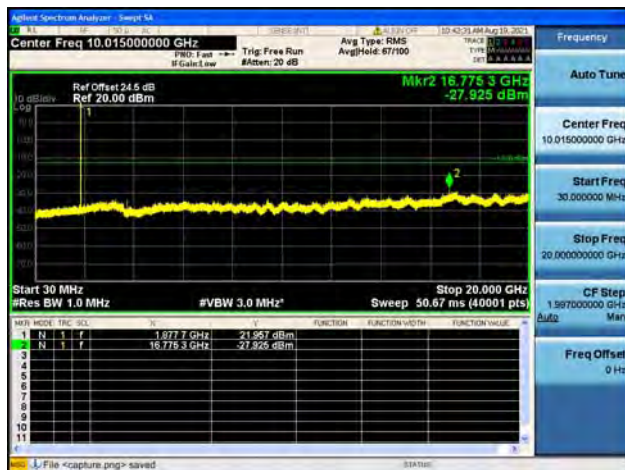
Band2 / 5MHz / Low CH / 64QAM



Band2 / 5MHz / Mid CH / QPSK



Band2 / 5MHz / Mid CH / 16QAM



Band2 / 5MHz / Mid CH / 64QAM





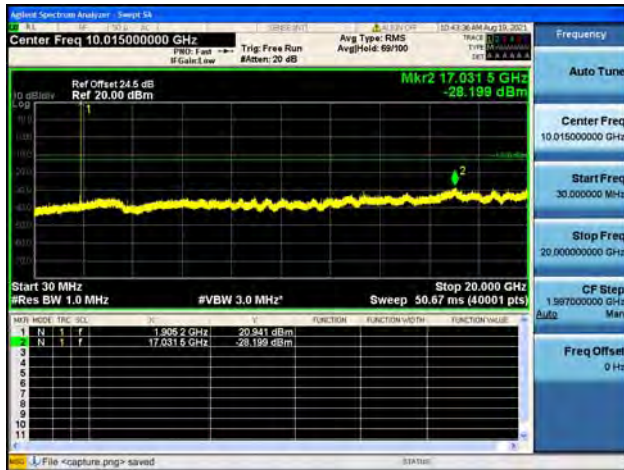
Band2 / 5MHz / High CH / QPSK



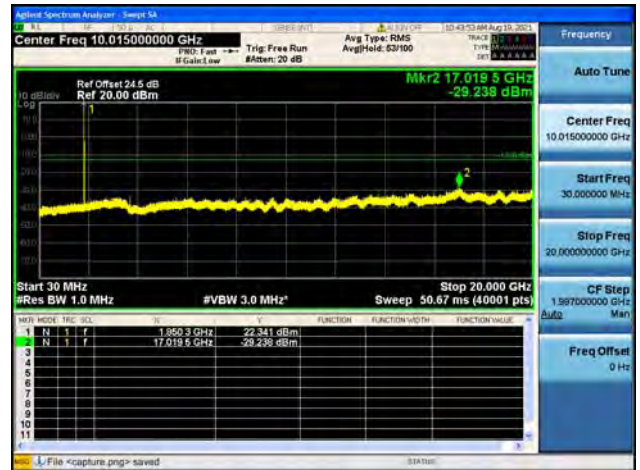
Band2 / 5MHz / High CH / 16QAM



Band2 / 5MHz / High CH / 64QAM



Band2 / 10MHz / Low CH / QPSK



Band2 / 10MHz / Low CH / 16QAM



Band2 / 10MHz / Low CH / 64QAM

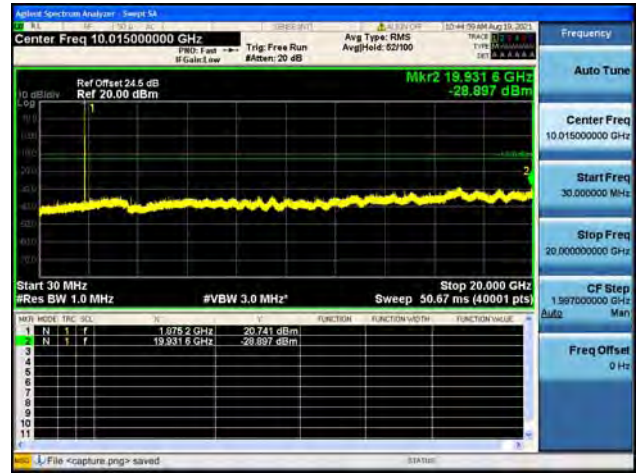




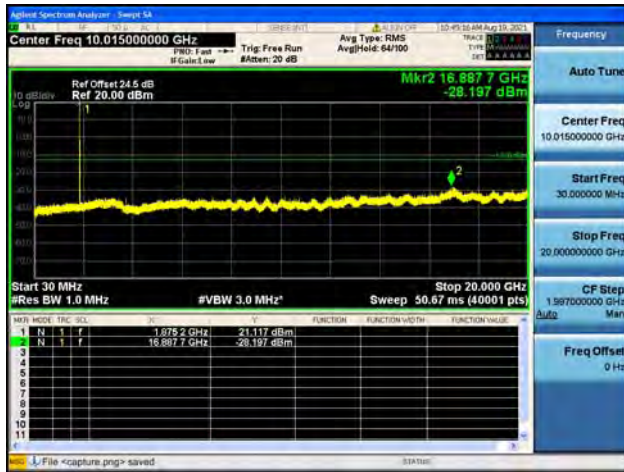
Band2 / 10MHz / Mid CH / QPSK



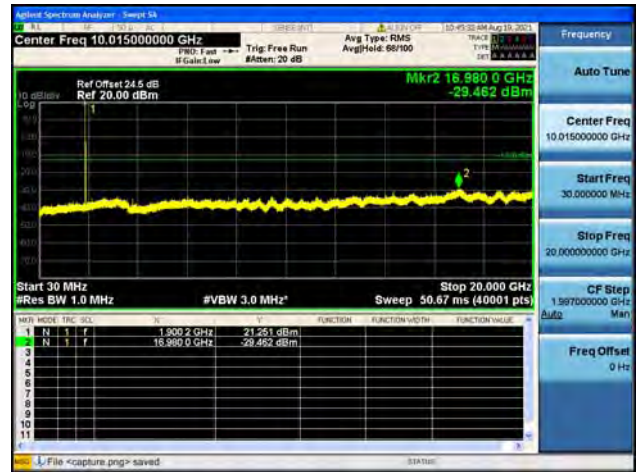
Band2 / 10MHz / Mid CH / 16QAM



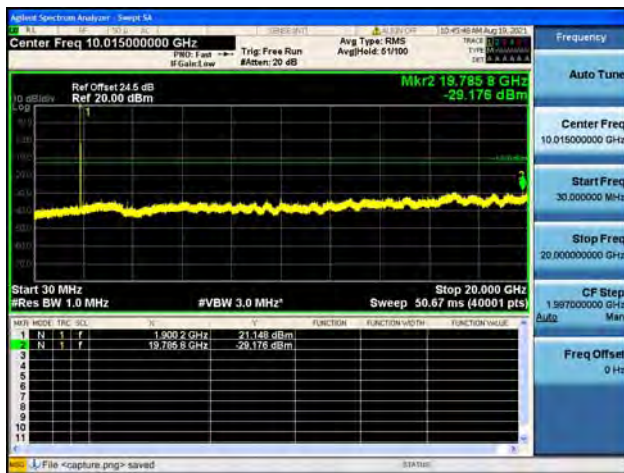
Band2 / 10MHz / Mid CH / 64QAM



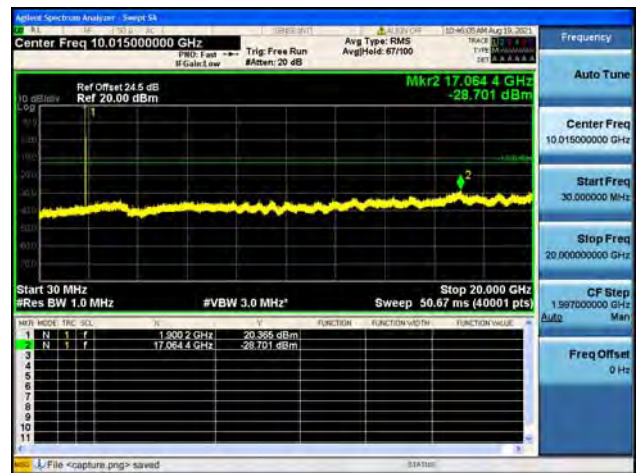
Band2 / 10MHz / High CH / QPSK



Band2 / 10MHz / High CH / 16QAM



Band2 / 10MHz / High CH / 64QAM

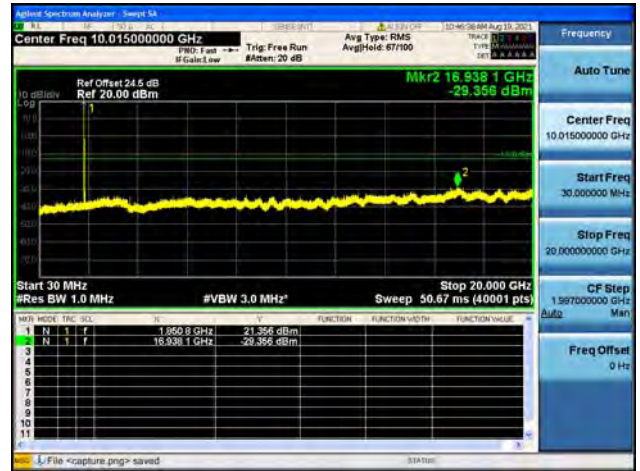




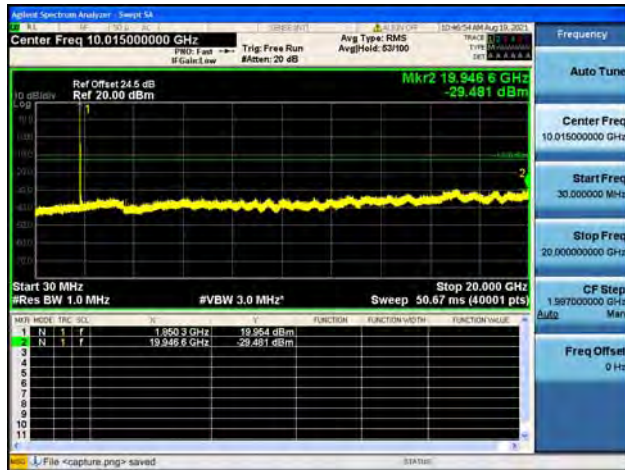
Band2 / 15MHz / Low CH / QPSK



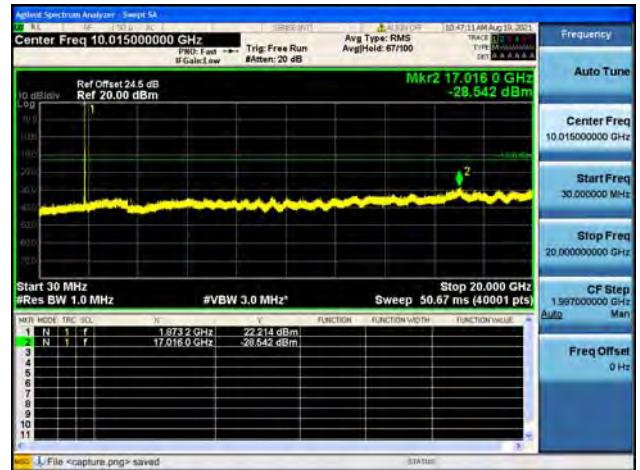
Band2 / 15MHz / Low CH / 16QAM



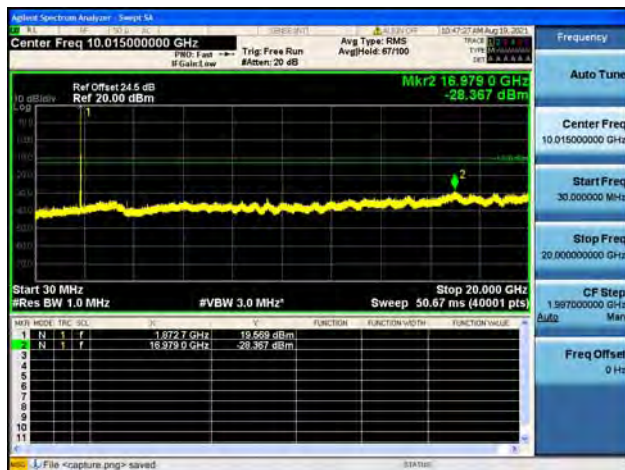
Band2 / 15MHz / Low CH / 64QAM



Band2 / 15MHz / Mid CH / QPSK



Band2 / 15MHz / Mid CH / 16QAM



Band2 / 15MHz / Mid CH / 64QAM





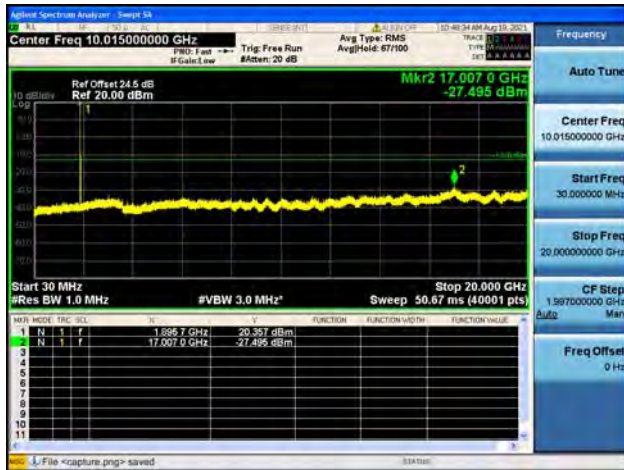
Band2 / 15MHz / High CH / QPSK



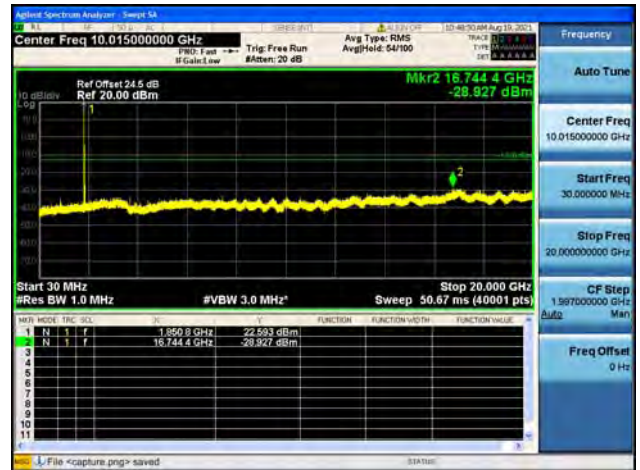
Band2 / 15MHz / High CH / 16QAM



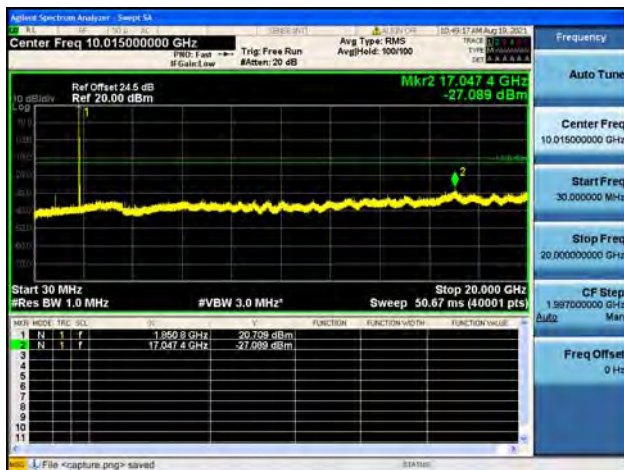
Band2 / 15MHz / High CH / 64QAM



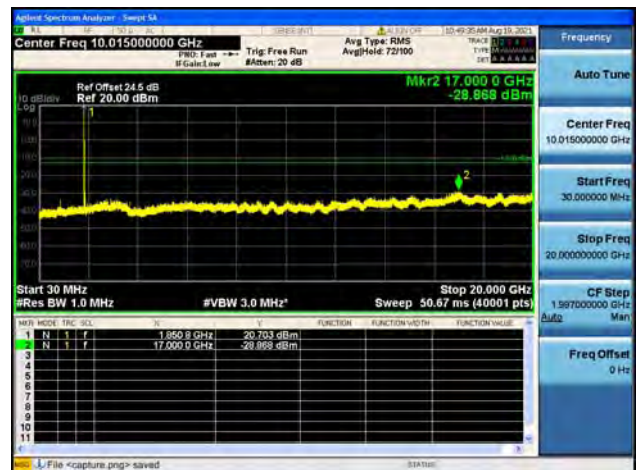
Band2 / 20MHz / Low CH / QPSK



Band2 / 20MHz / Low CH / 16QAM



Band2 / 20MHz / Low CH / 64QAM





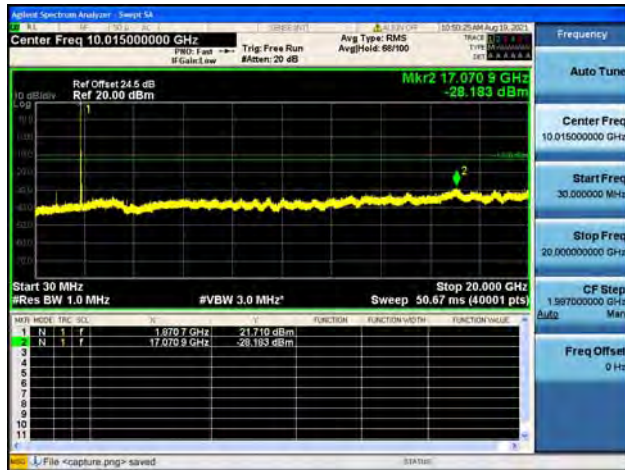
Band2 / 20MHz / Mid CH / QPSK



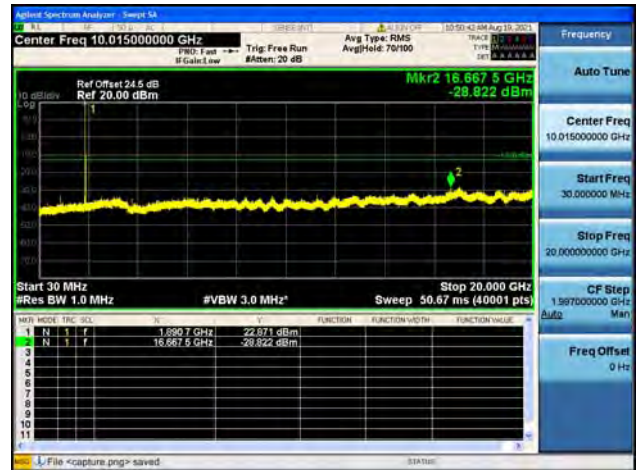
Band2 / 20MHz / Mid CH / 16QAM



Band2 / 20MHz / Mid CH / 64QAM



Band2 / 20MHz / High CH / QPSK



Band2 / 20MHz / High CH / 16QAM



Band2 / 20MHz / High CH / 64QAM





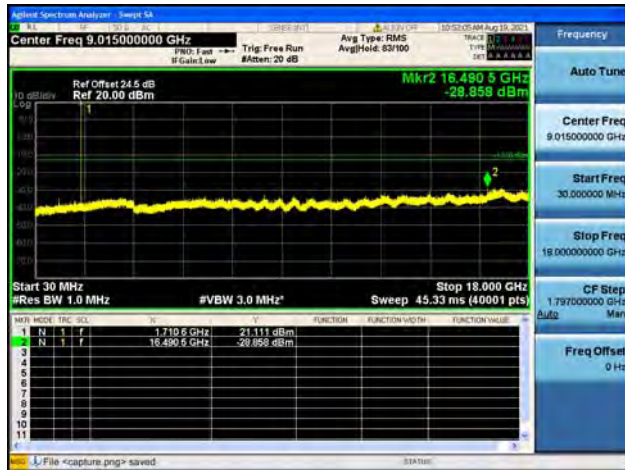
Band4 / 1.4MHz / Low CH / QPSK



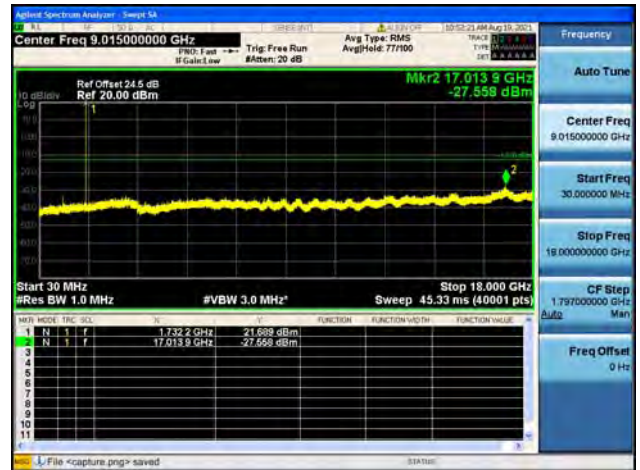
Band4 / 1.4MHz / Low CH / 16QAM



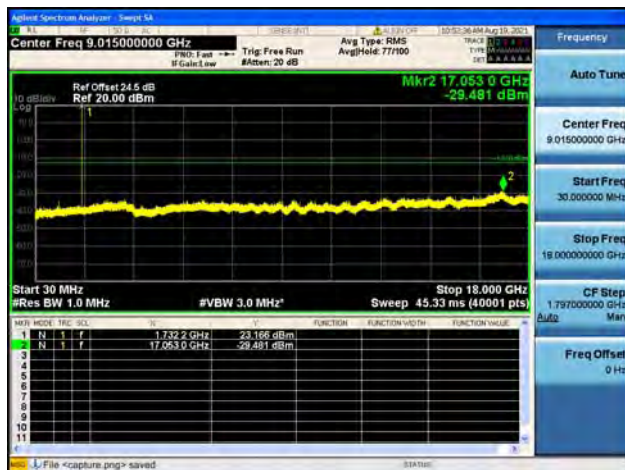
Band4 / 1.4MHz / Low CH / 64QAM



Band4 / 1.4MHz / Mid CH / QPSK



Band4 / 1.4MHz / Mid CH / 16QAM

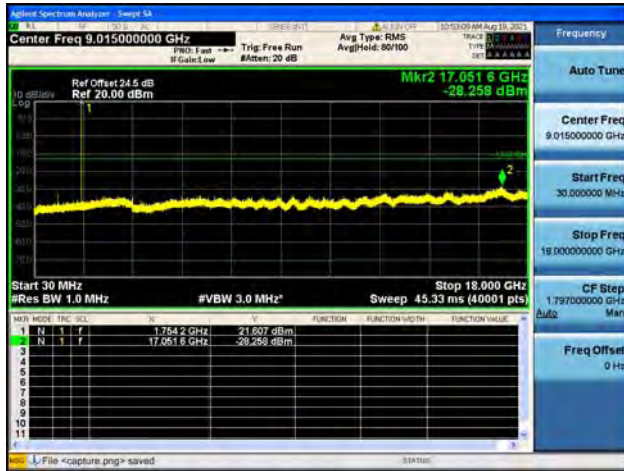


Band4 / 1.4MHz / Mid CH / 64QAM

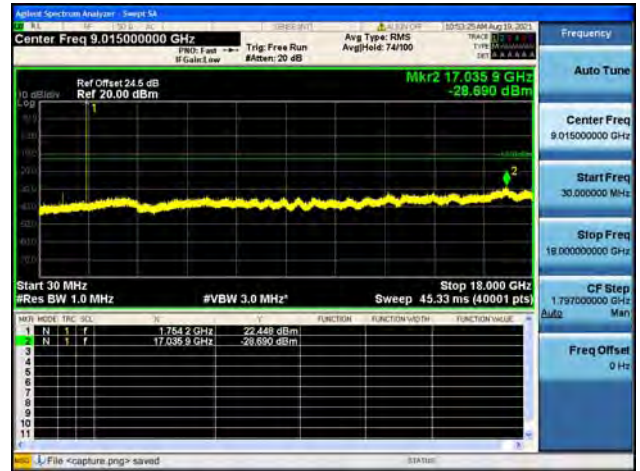




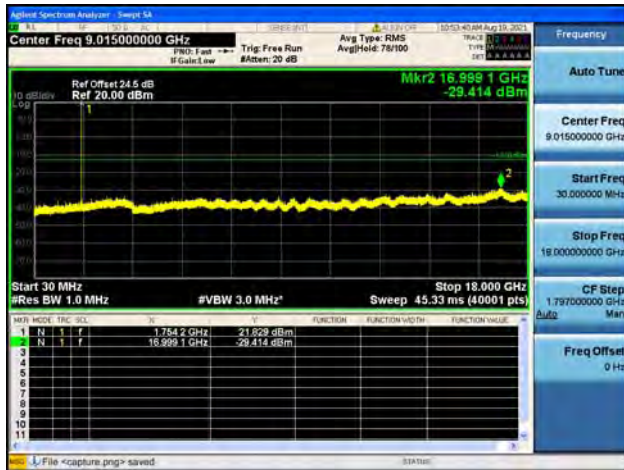
Band4 / 1.4MHz / High CH / QPSK



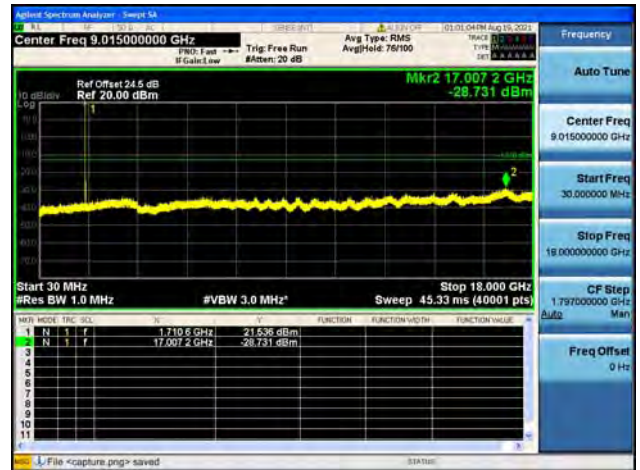
Band4 / 1.4MHz / High CH / 16QAM



Band4 / 1.4MHz / High CH / 64QAM



Band4 / 3MHz / Low CH / QPSK



Band4 / 3MHz / Low CH / 16QAM

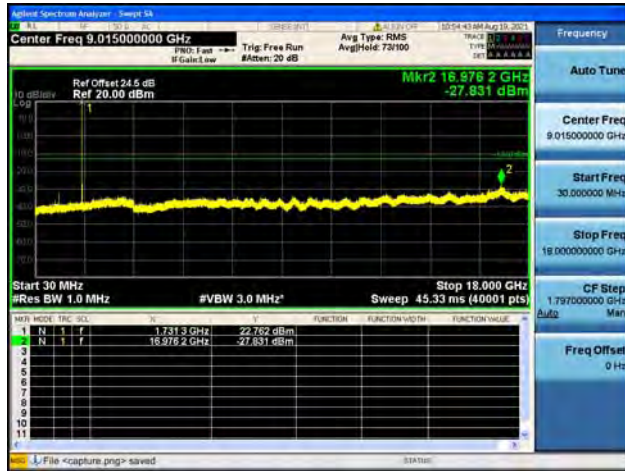


Band4 / 3MHz / Low CH / 64QAM

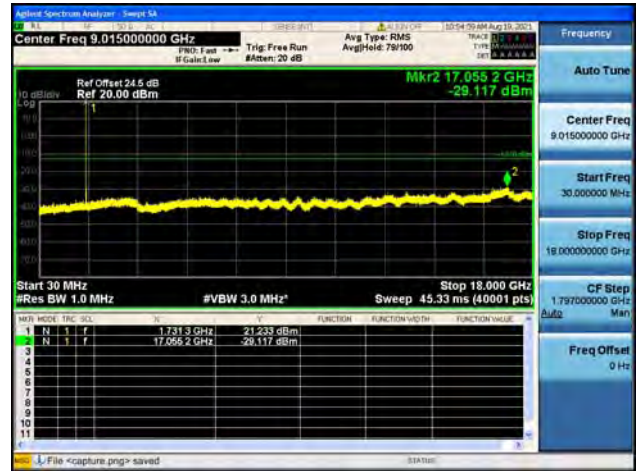




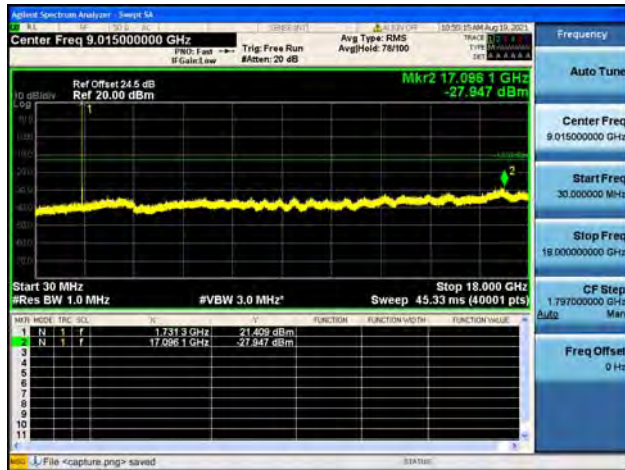
Band4 / 3MHz / Mid CH / QPSK



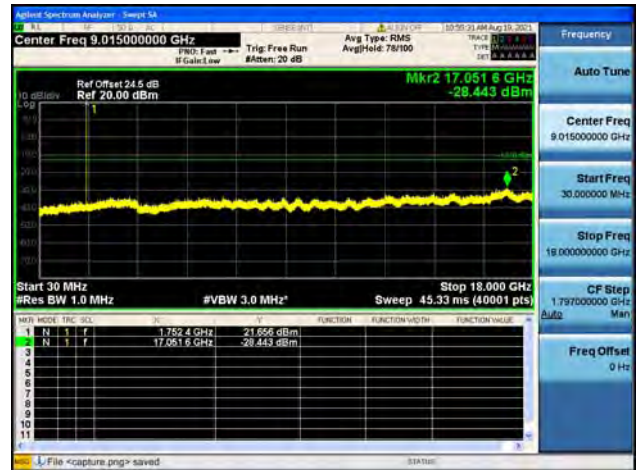
Band4 / 3MHz / Mid CH / 16QAM



Band4 / 3MHz / Mid CH / 64QAM



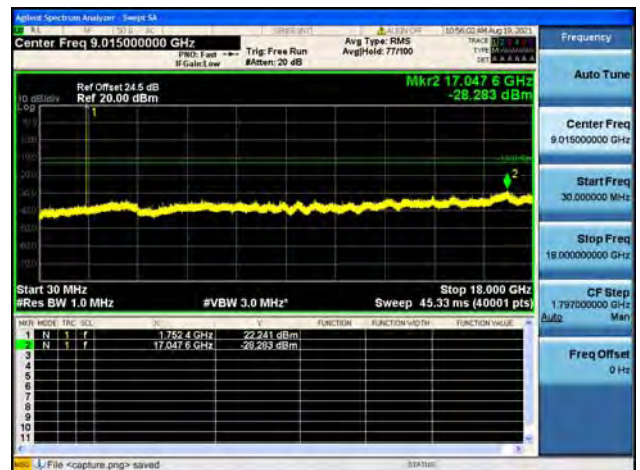
Band4 / 3MHz / High CH / QPSK



Band4 / 3MHz / High CH / 16QAM



Band4 / 3MHz / High CH / 64QAM





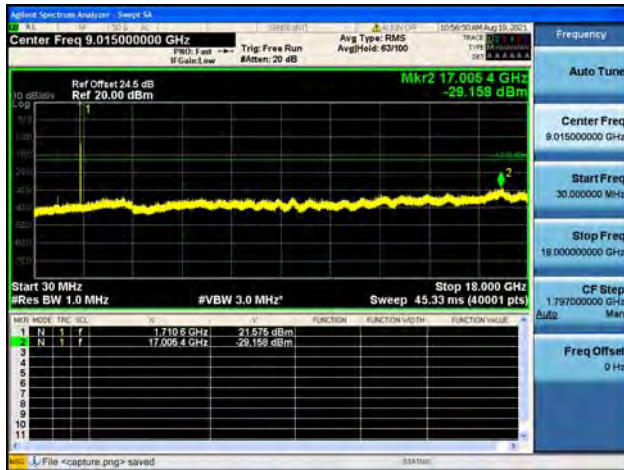
Band4 / 5MHz / Low CH / QPSK



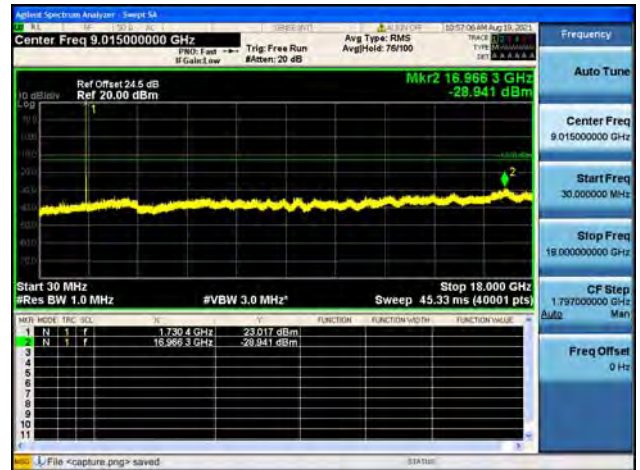
Band4 / 5MHz / Low CH / 16QAM



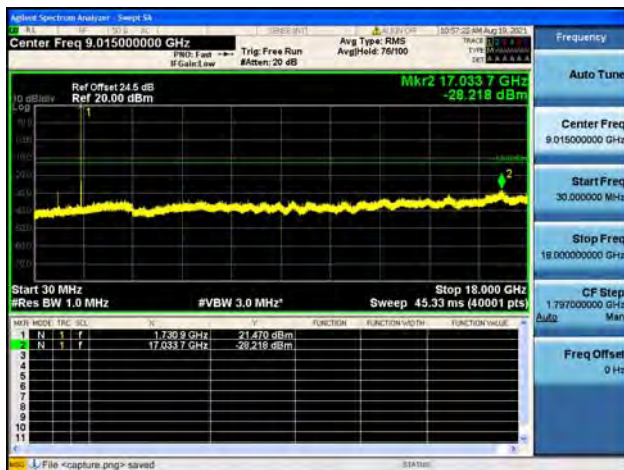
Band4 / 5MHz / Low CH / 64QAM



Band4 / 5MHz / Mid CH / QPSK



Band4 / 5MHz / Mid CH / 16QAM



Band4 / 5MHz / Mid CH / 64QAM





Band4 / 5MHz / High CH / QPSK



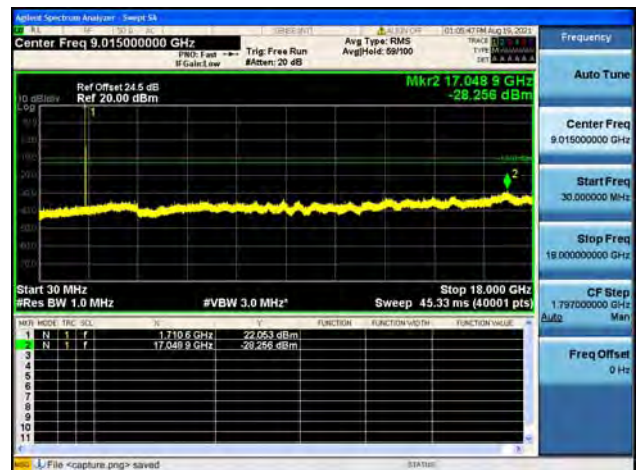
Band4 / 5MHz / High CH / 16QAM



Band4 / 5MHz / High CH / 64QAM



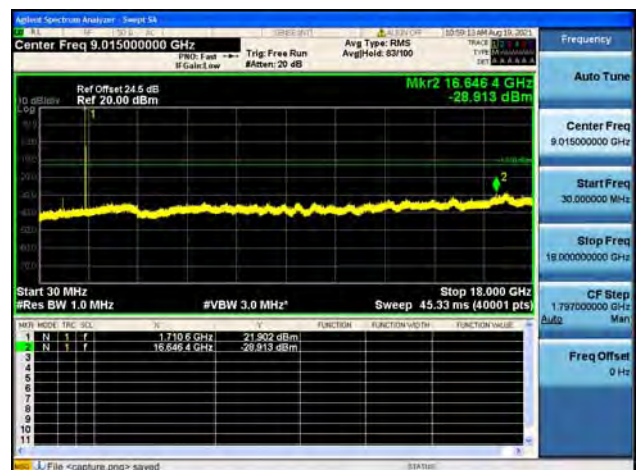
Band4 / 10MHz / Low CH / QPSK



Band4 / 10MHz / Low CH / 16QAM

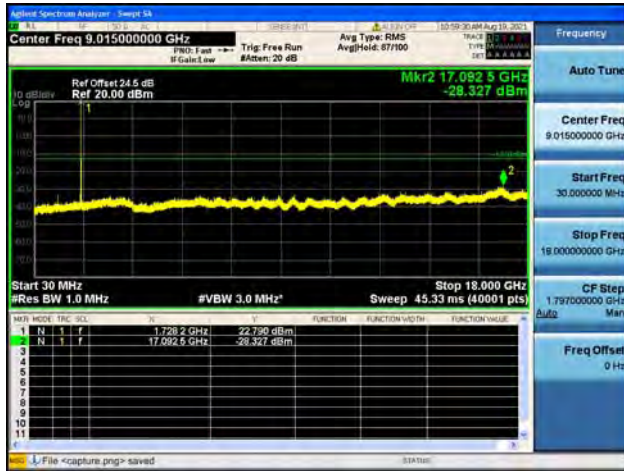


Band4 / 10MHz / Low CH / 64QAM





Band4 / 10MHz / Mid CH / QPSK



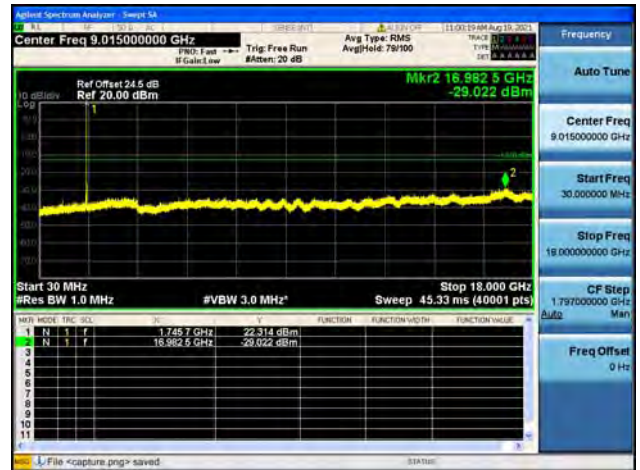
Band4 / 10MHz / Mid CH / 16QAM



Band4 / 10MHz / Mid CH / 64QAM



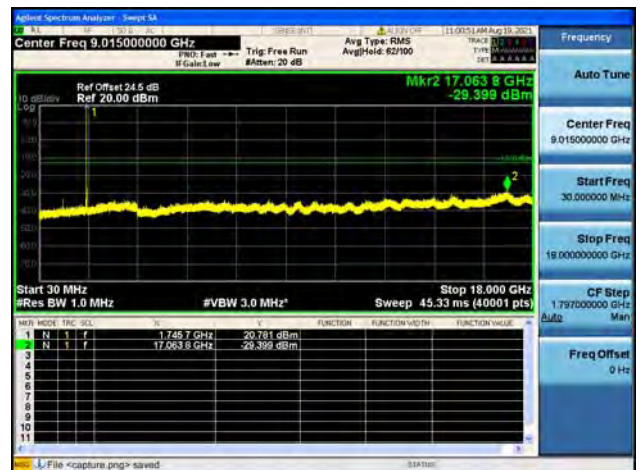
Band4 / 10MHz / High CH / QPSK



Band4 / 10MHz / High CH / 16QAM



Band4 / 10MHz / High CH / 64QAM

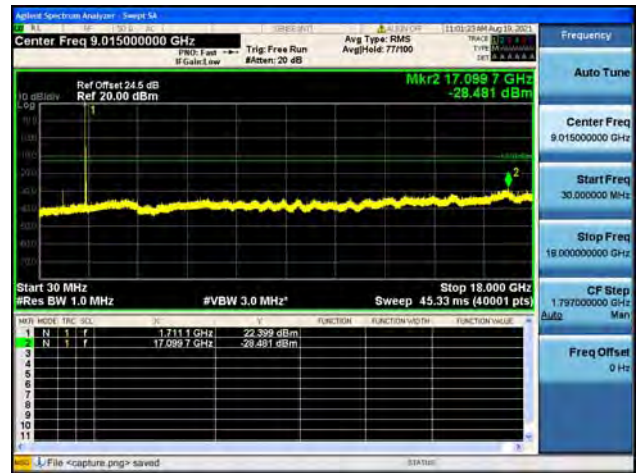




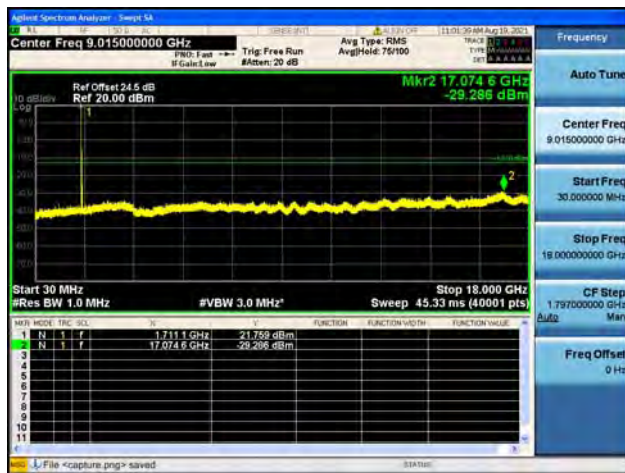
Band4 / 15MHz / Low CH / QPSK



Band4 / 15MHz / Low CH / 16QAM



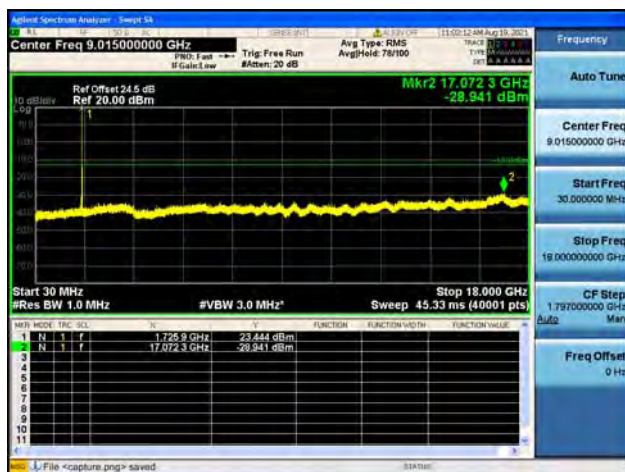
Band4 / 15MHz / Low CH / 64QAM



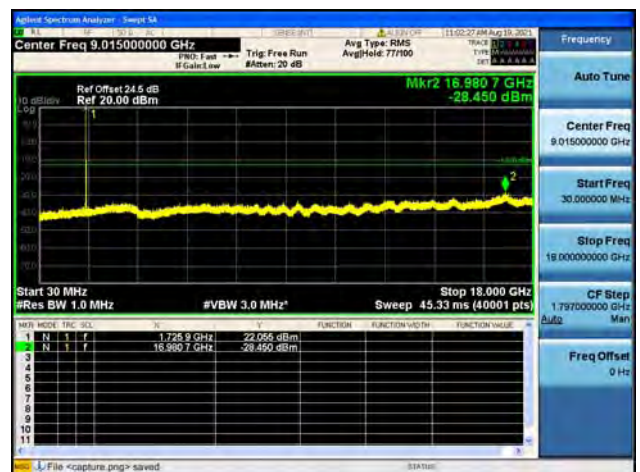
Band4 / 15MHz / Mid CH / QPSK



Band4 / 15MHz / Mid CH / 16QAM

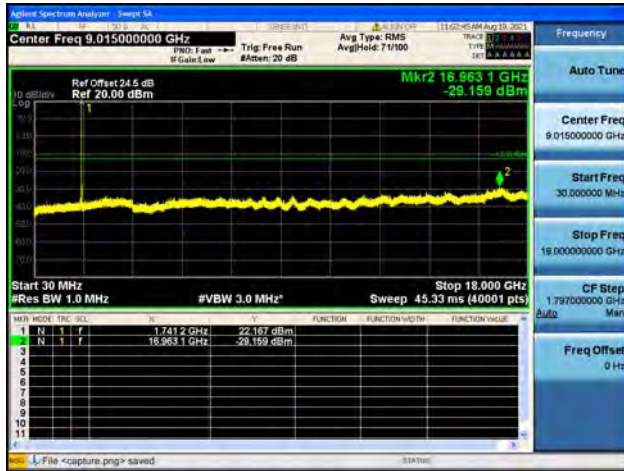


Band4 / 15MHz / Mid CH / 64QAM





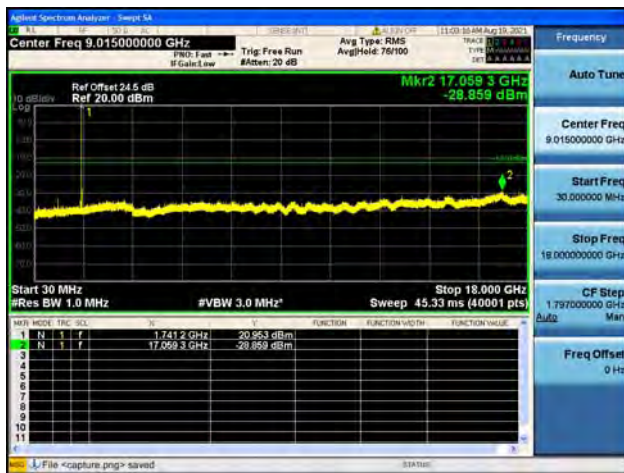
Band4 / 15MHz / High CH / QPSK



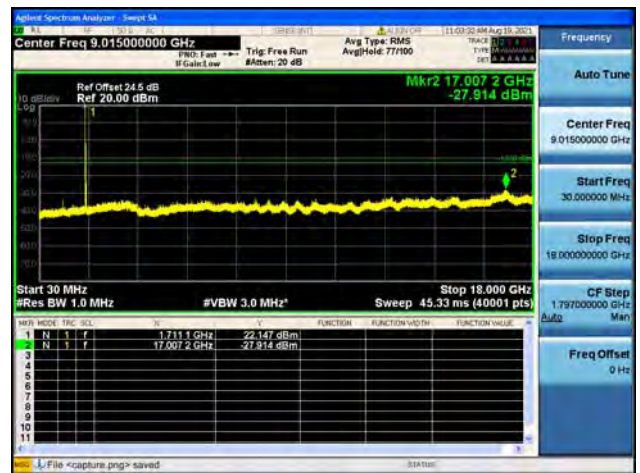
Band4 / 15MHz / High CH / 16QAM



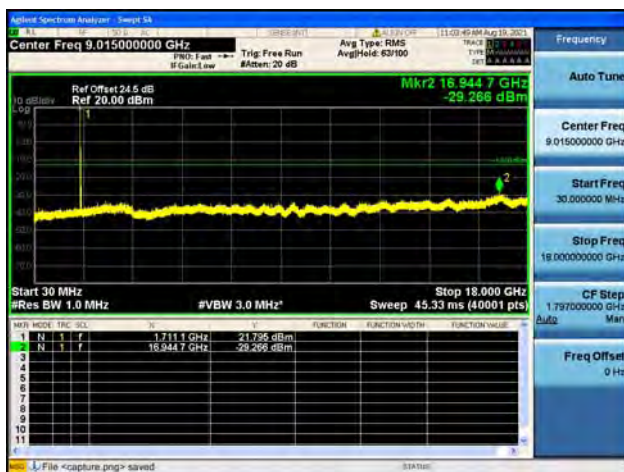
Band4 / 15MHz / High CH / 64QAM



Band4 / 20MHz / Low CH / QPSK



Band4 / 20MHz / Low CH / 16QAM



Band4 / 20MHz / Low CH / 64QAM

