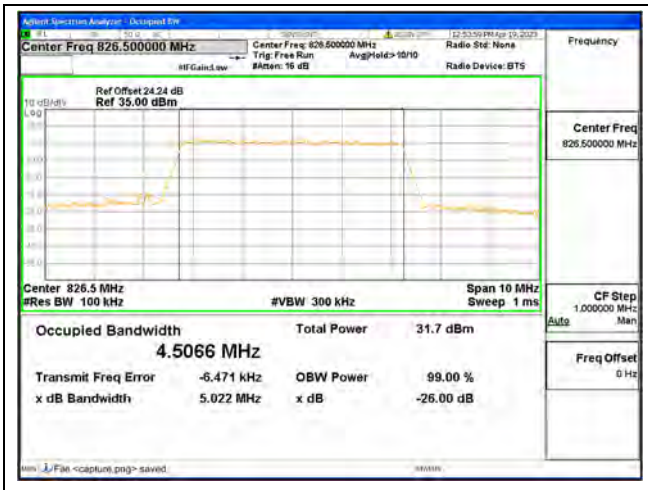
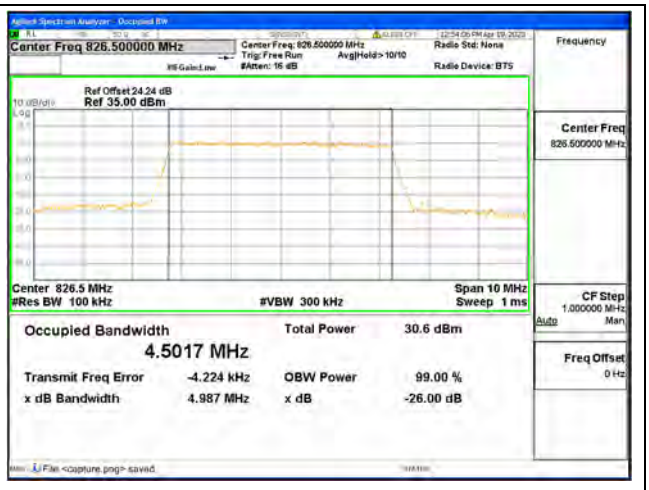
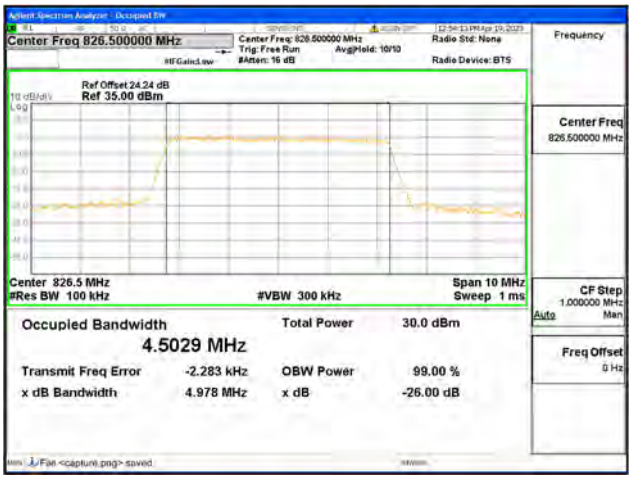


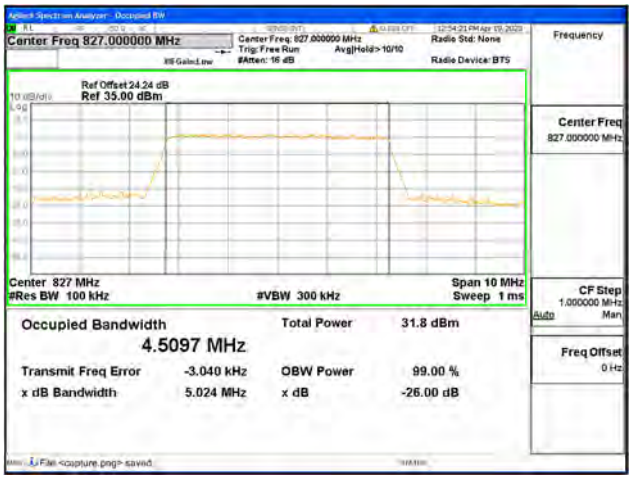
Band18 part22 / 5MHz / QPSK/ Low CH



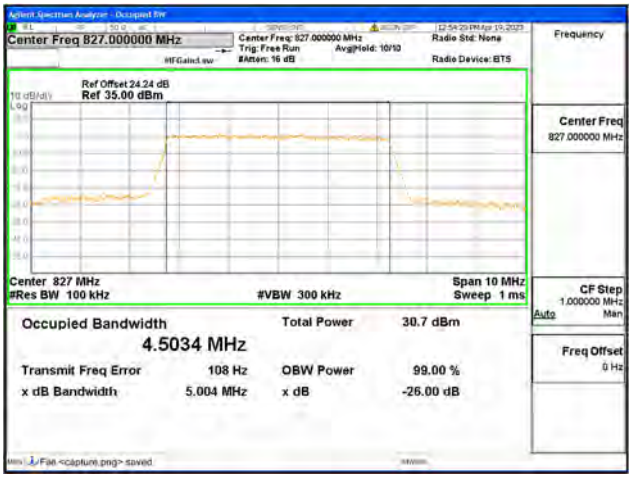
Band18 part22 / 5MHz / 16QAM/ Low CH



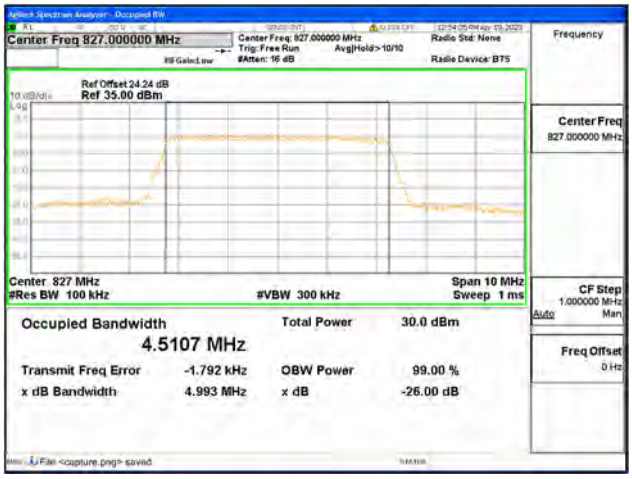
Band18 part22 / 5MHz / 64QAM/ Low CH



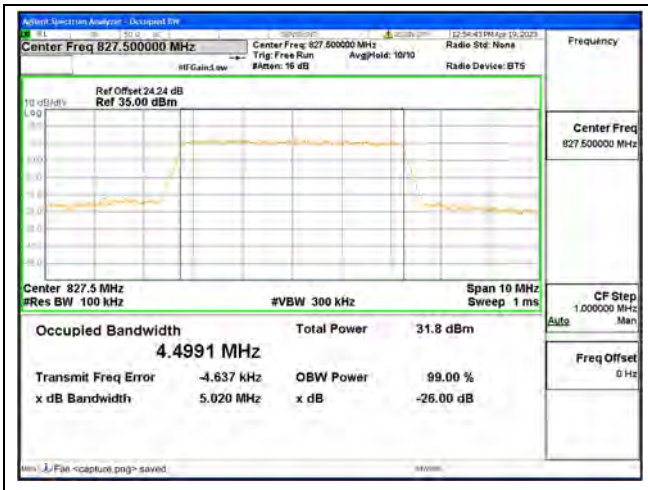
Band18 part22 / 5MHz / QPSK/ Mid CH



Band18 part22 / 5MHz / 16QAM/ Mid CH

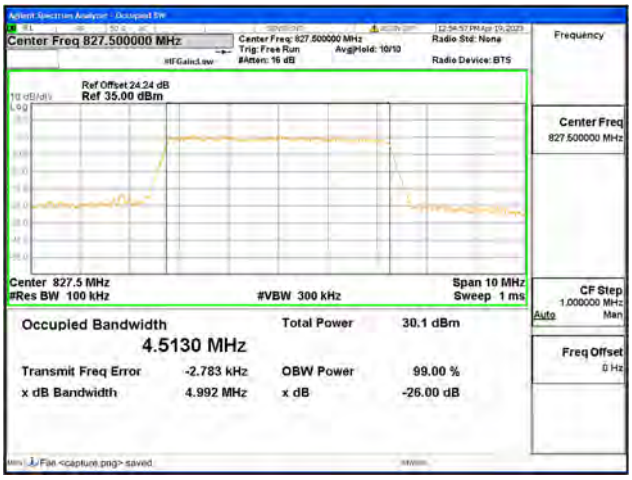


Band18 part22 / 5MHz / 64QAM/ Mid CH



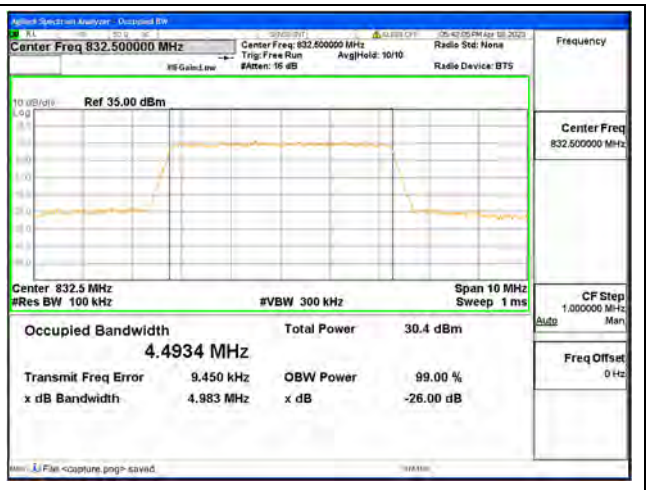
Band18 part22 / 5MHz / QPSK/ High CH

Band18 part22 / 5MHz / 16QAM/ High CH

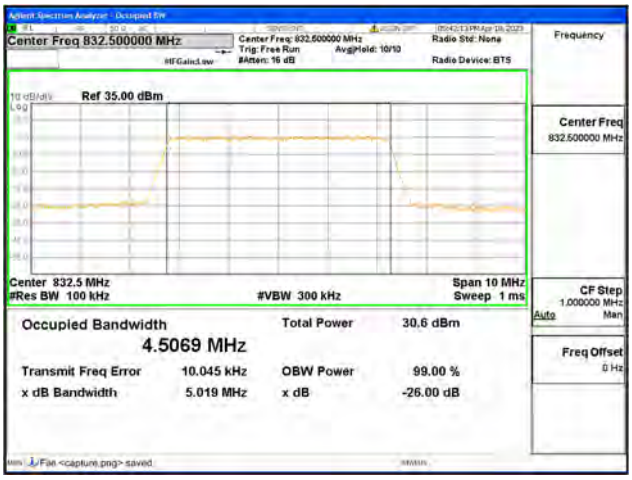


Band18 part22 / 5MHz / 64QAM/ High CH

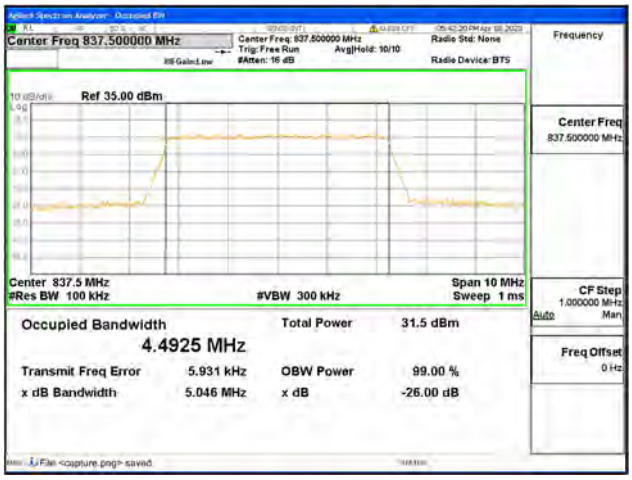
Band19 / 5MHz / QPSK/ Low CH



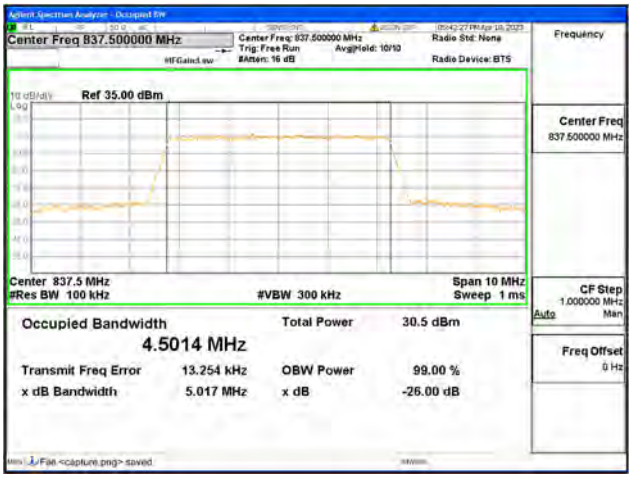
Band19 / 5MHz / 16QAM/ Low CH



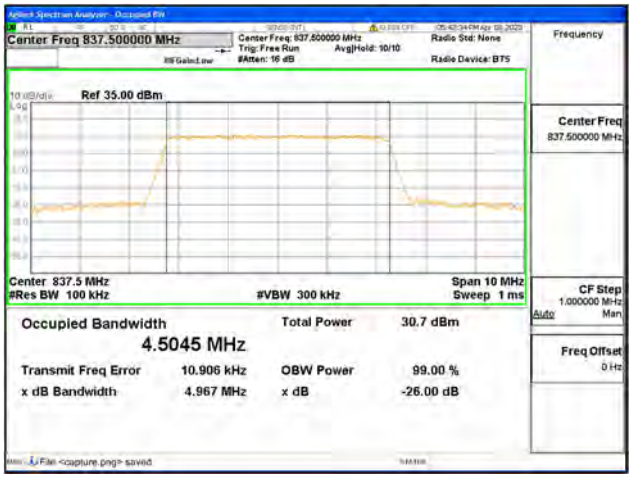
Band19 / 5MHz / 64QAM/ Low CH



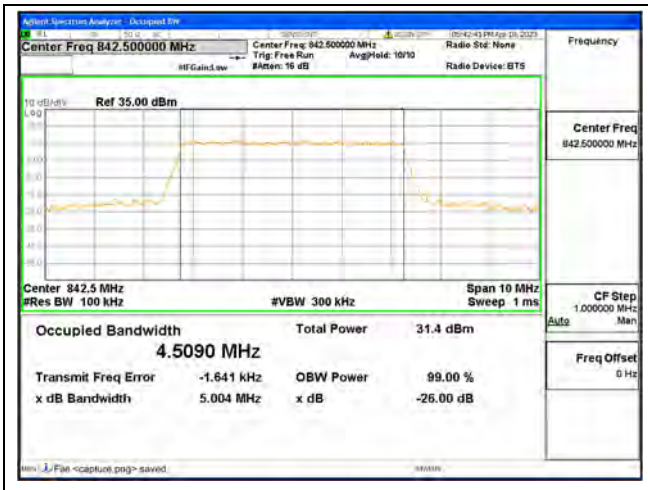
Band19 / 5MHz / QPSK/ Mid CH



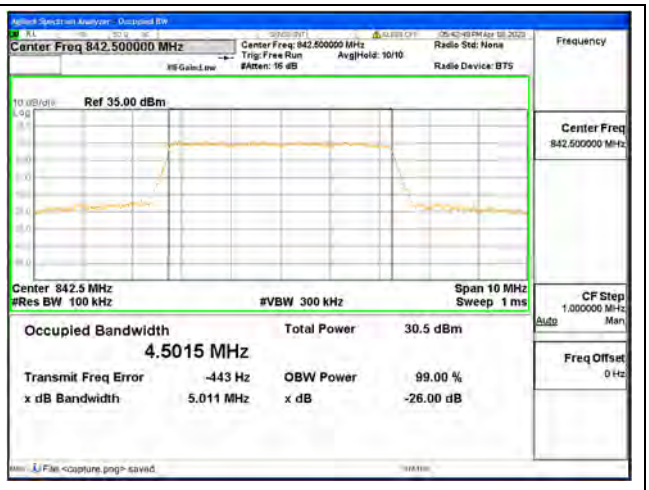
Band19 / 5MHz / 16QAM/ Mid CH



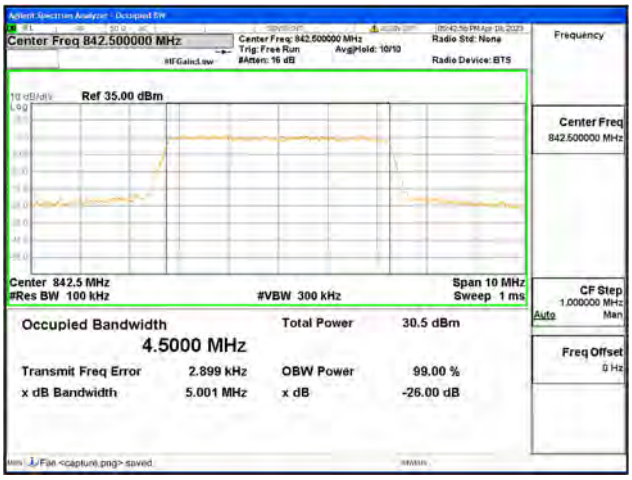
Band19 / 5MHz / 64QAM/ Mid CH



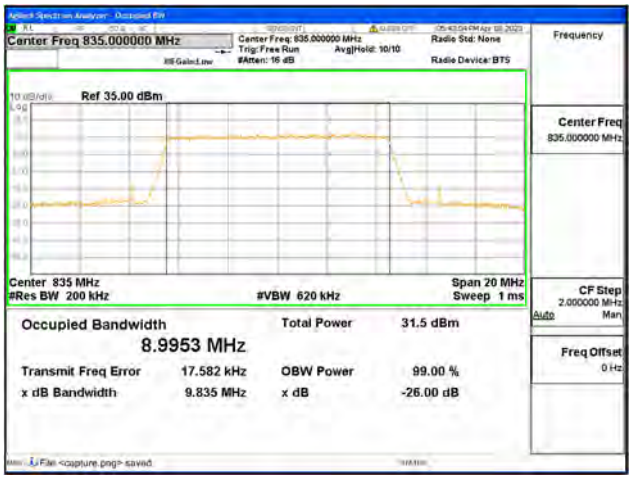
Band19 / 5MHz / QPSK/ High CH



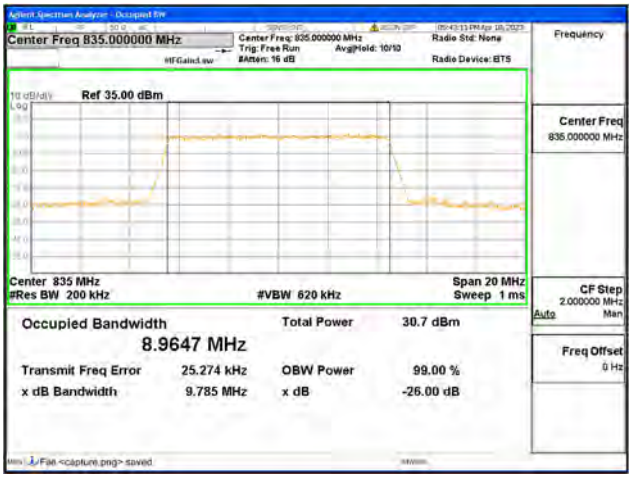
Band19 / 5MHz / 16QAM/ High CH



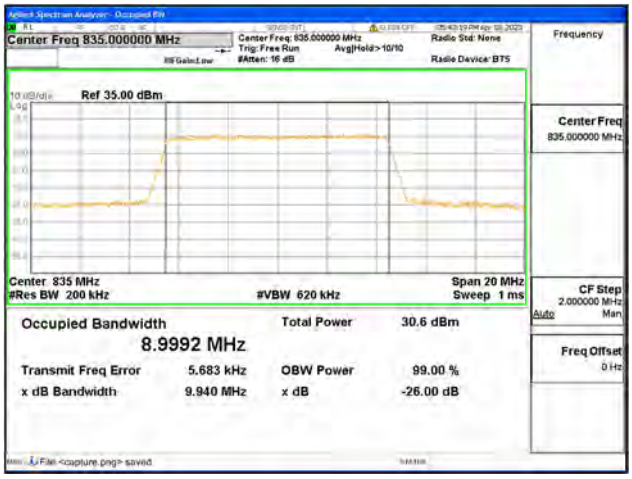
Band19 / 5MHz / 64QAM/ High CH



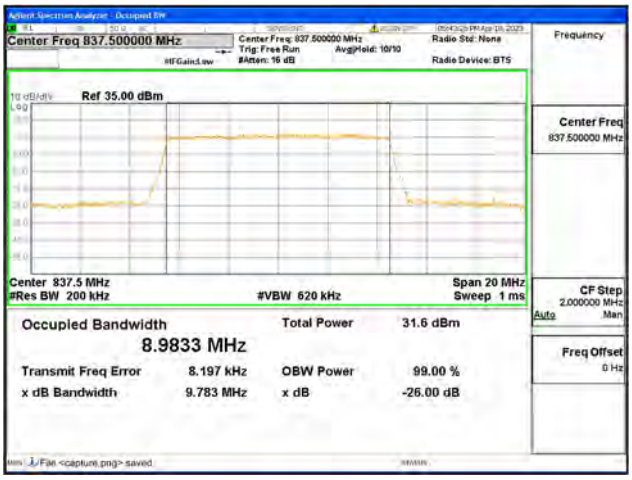
Band19 / 10MHz / QPSK/ Low CH



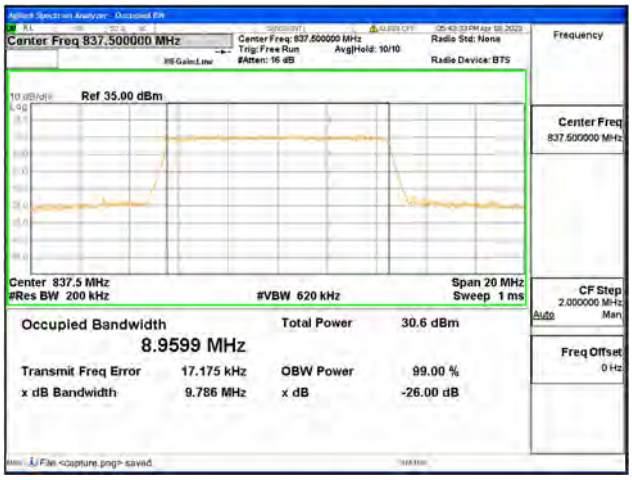
Band19 / 10MHz / 16QAM/ Low CH



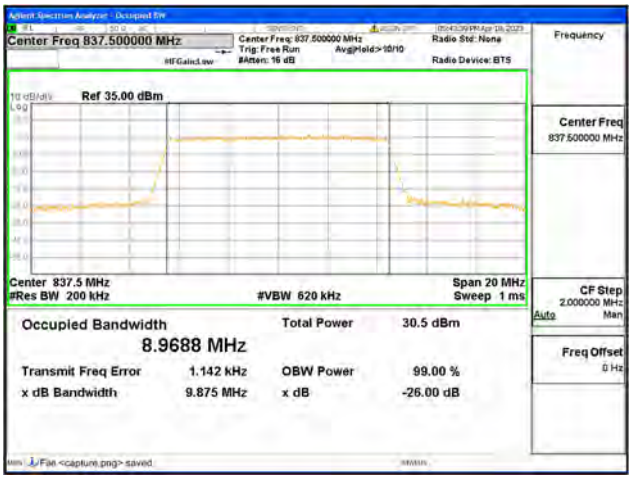
Band19 / 10MHz / 64QAM/ Low CH



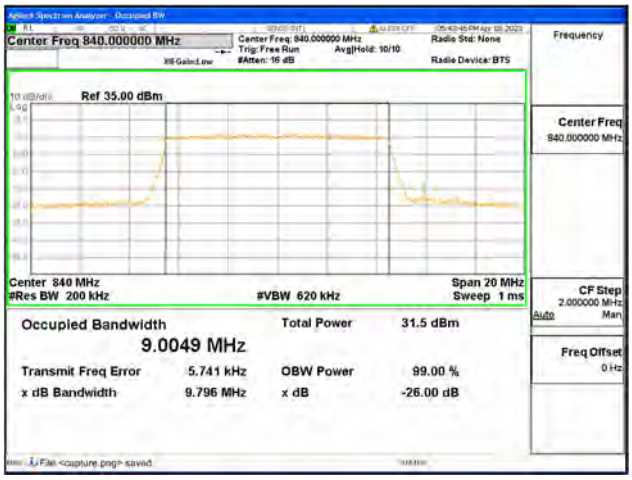
Band19 / 10MHz / QPSK/ Mid CH



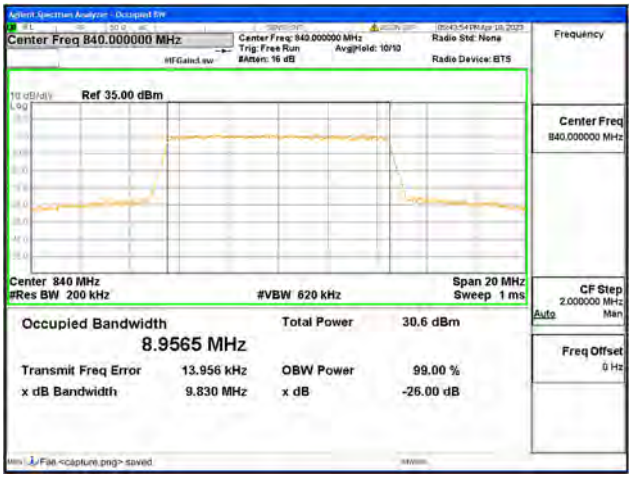
Band19 / 10MHz / 16QAM/ Mid CH



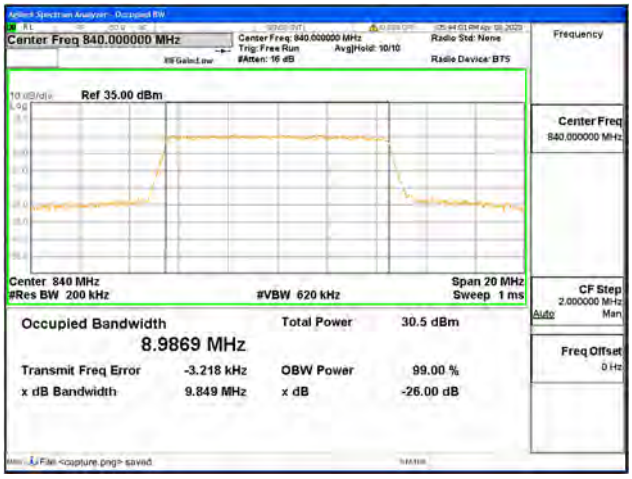
Band19 / 10MHz / 64QAM/ Mid CH



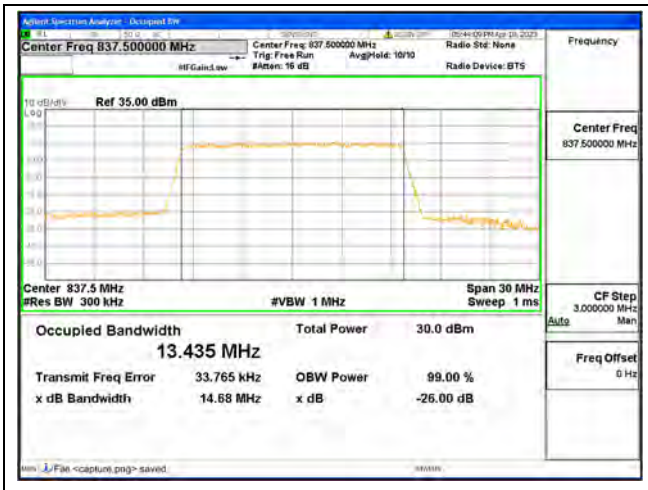
Band19 / 10MHz / QPSK/ High CH



Band19 / 10MHz / 16QAM/ High CH

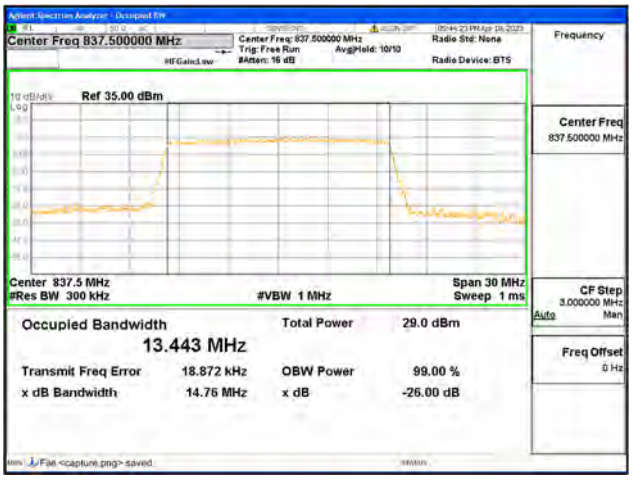


Band19 / 10MHz / 64QAM/ High CH

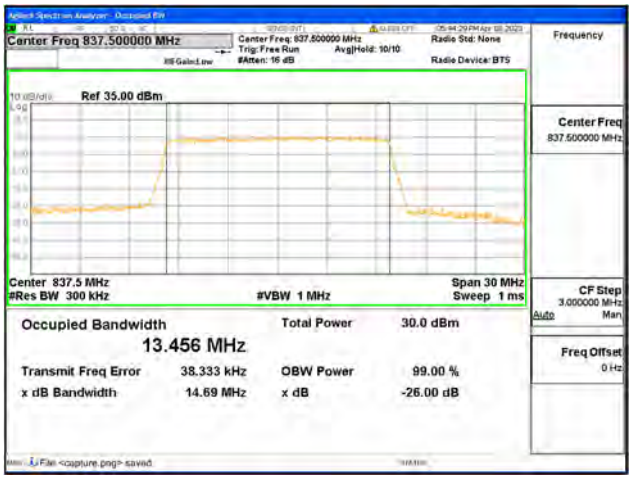


Band19 / 15MHz / QPSK/ Low CH

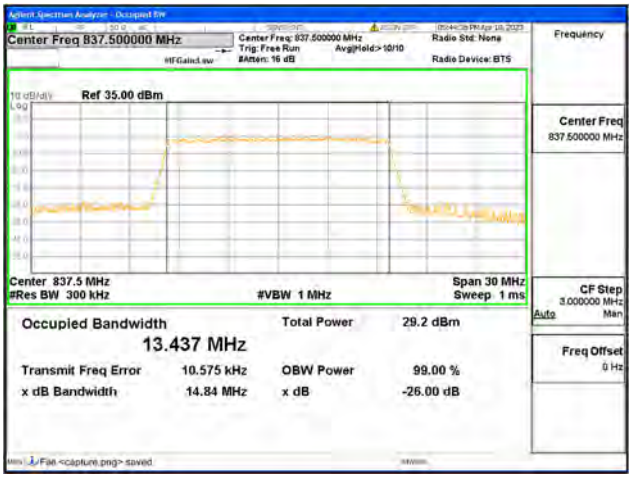
Band19 / 15MHz / 16QAM/ Low CH



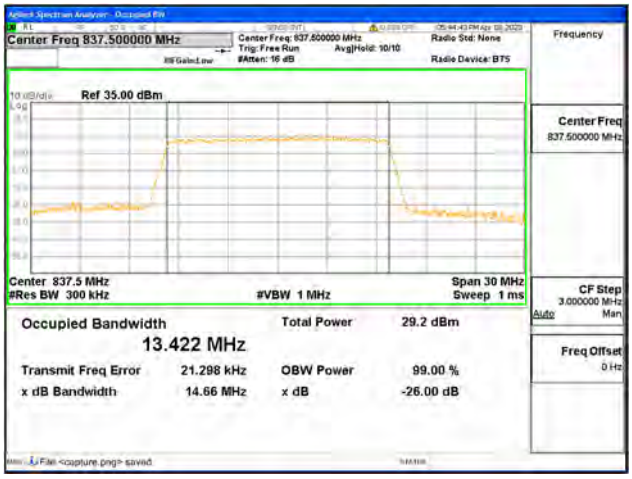
Band19 / 15MHz / 64QAM/ Low CH



Band19 / 15MHz / QPSK/ Mid CH

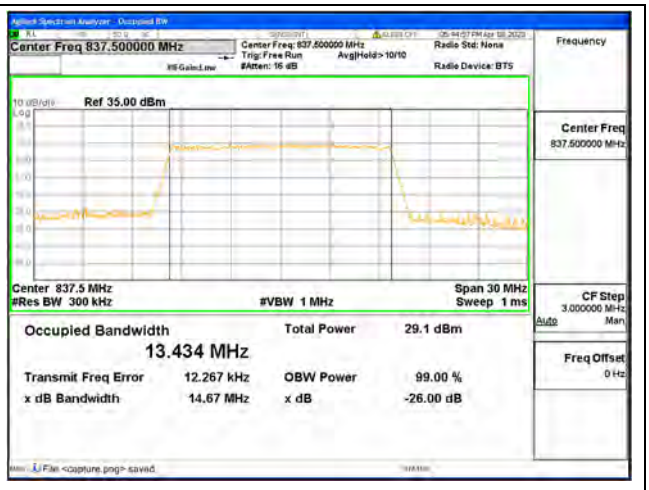


Band19 / 15MHz / 16QAM/ Mid CH

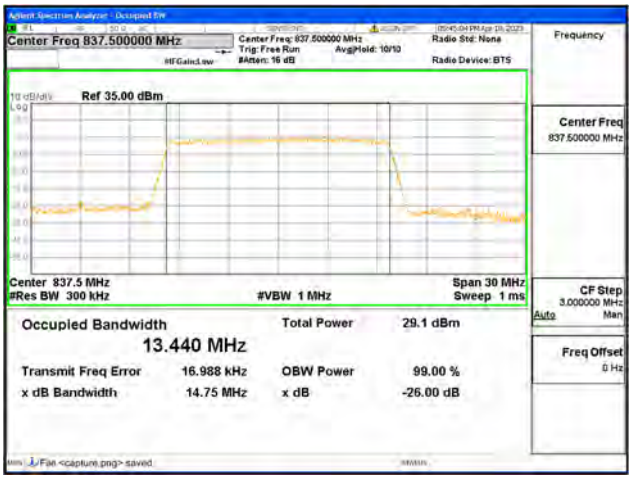


Band19 / 15MHz / 64QAM/ Mid CH

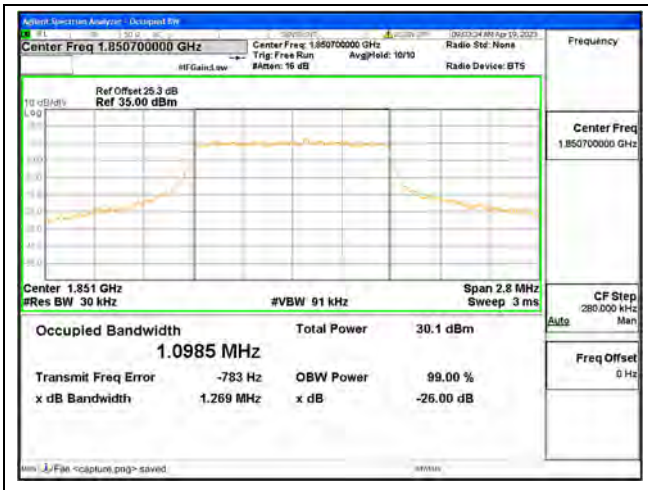
Band19 / 15MHz / QPSK/ High CH



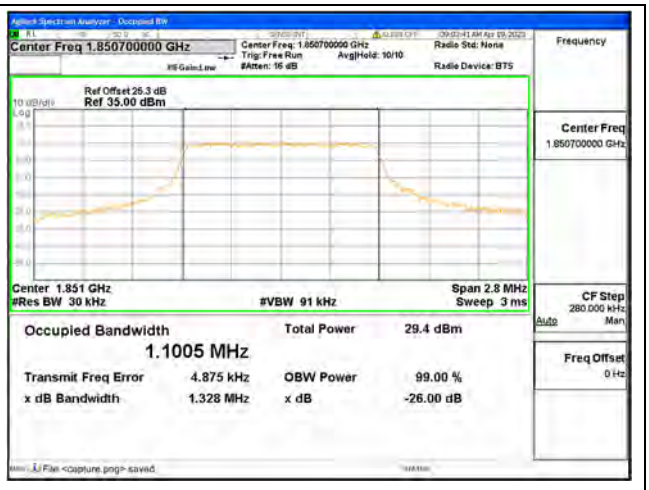
Band19 / 15MHz / 16QAM/ High CH



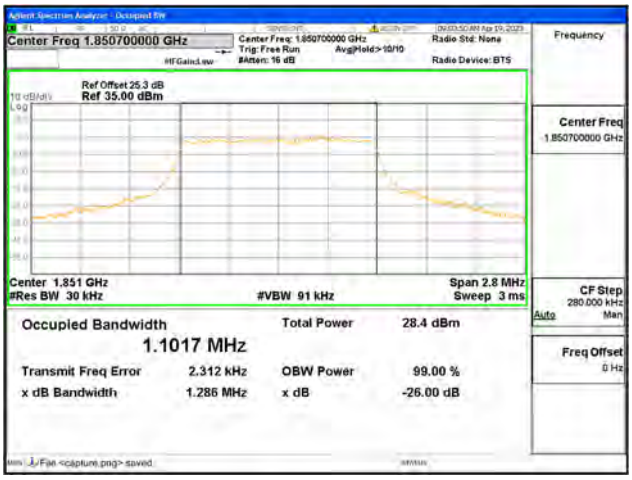
Band19 / 15MHz / 64QAM/ High CH



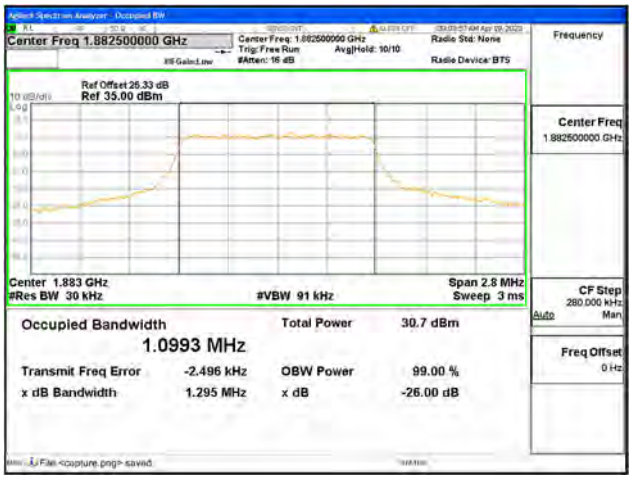
Band25 / 1.4MHz / QPSK/ Low CH



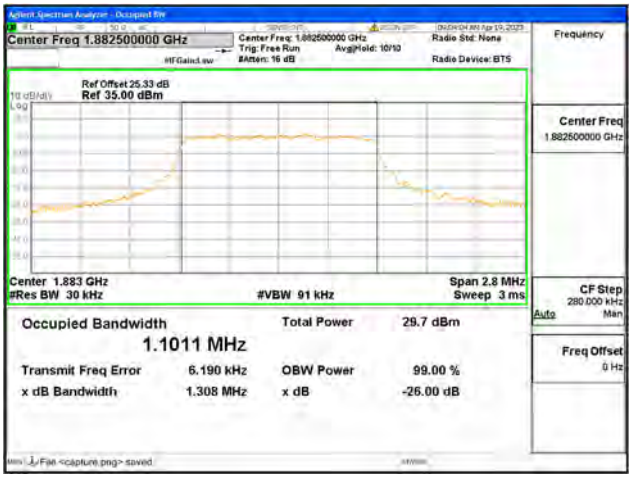
Band25 / 1.4MHz / 16QAM/ Low CH



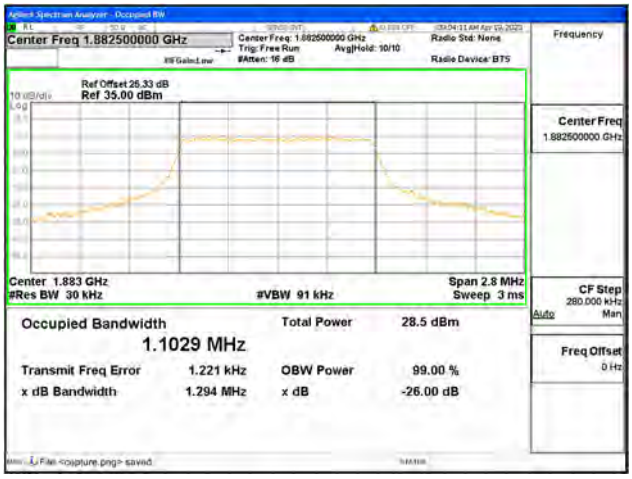
Band25 / 1.4MHz / 64QAM/ Low CH



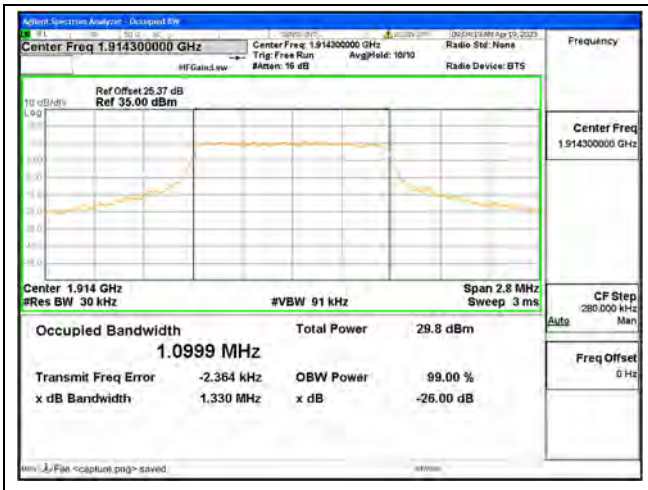
Band25 / 1.4MHz / QPSK/ Mid CH



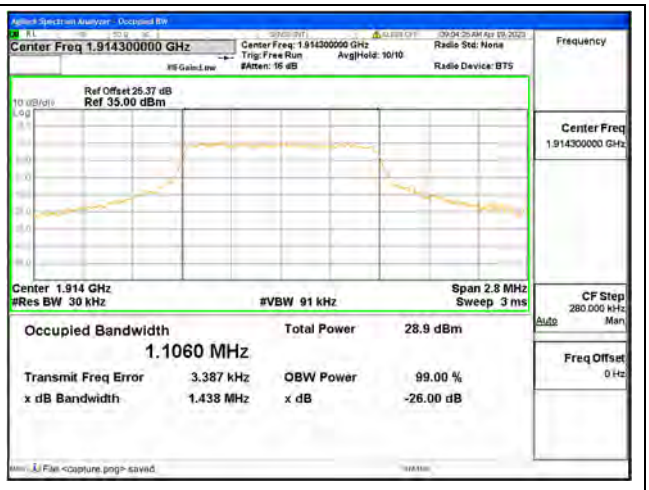
Band25 / 1.4MHz / 16QAM/ Mid CH



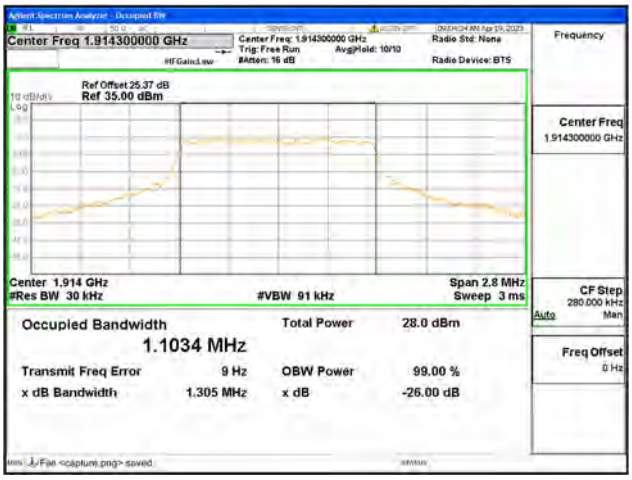
Band25 / 1.4MHz / 64QAM/ Mid CH



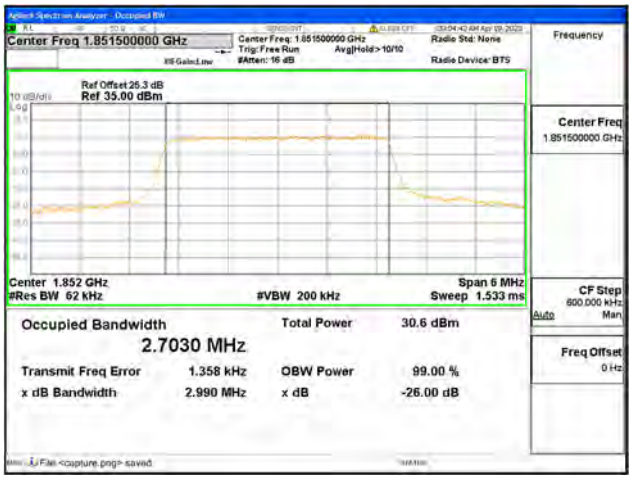
Band25 / 1.4MHz / QPSK/ High CH



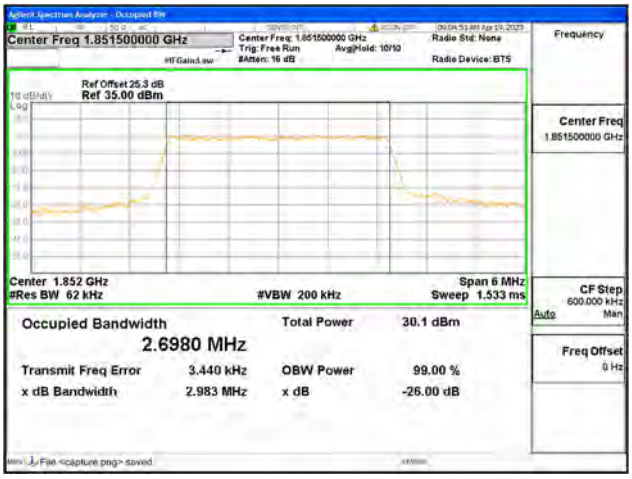
Band25 / 1.4MHz / 16QAM/ High CH



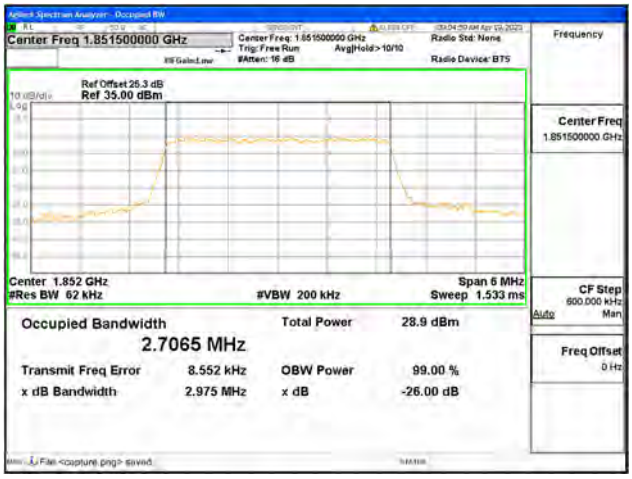
Band25 / 1.4MHz / 64QAM/ High CH



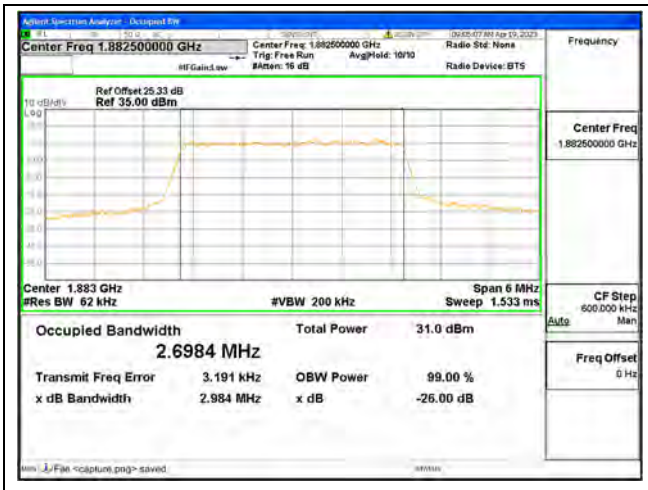
Band25 / 3MHz / QPSK/ Low CH



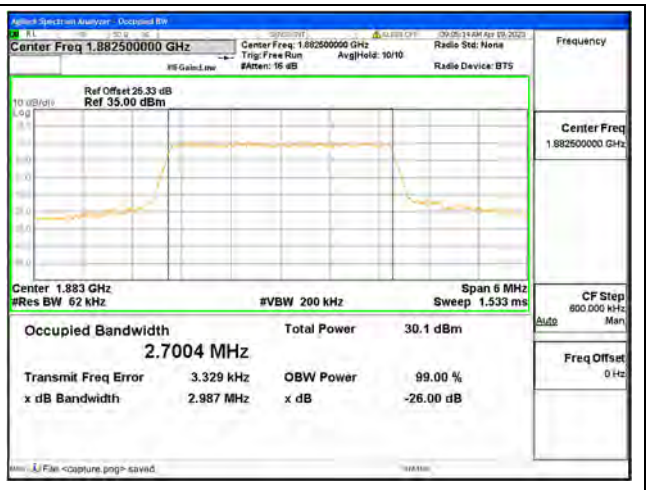
Band25 / 3MHz / 16QAM/ Low CH



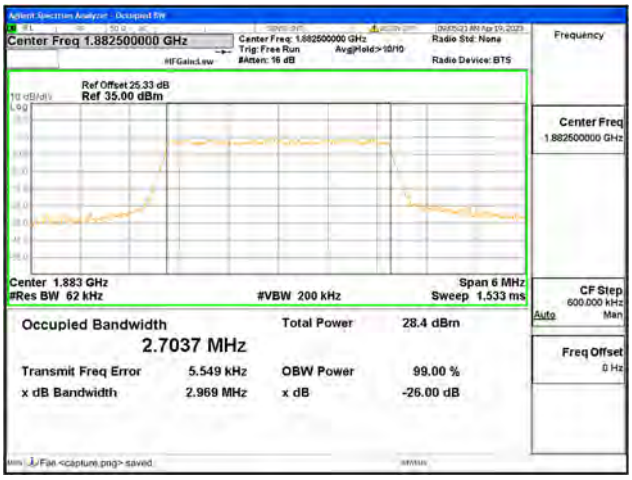
Band25 / 3MHz / 64QAM/ Low CH



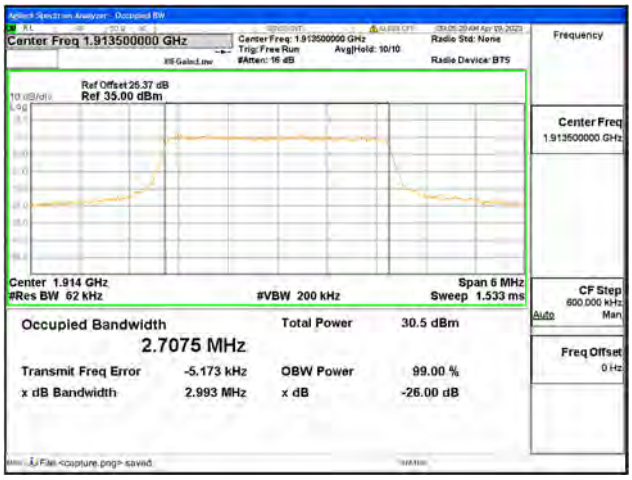
Band25 / 3MHz / QPSK/ Mid CH



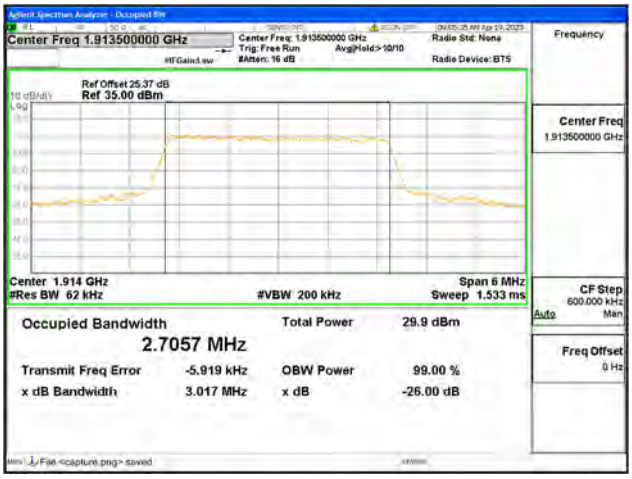
Band25 / 3MHz / 16QAM/ Mid CH



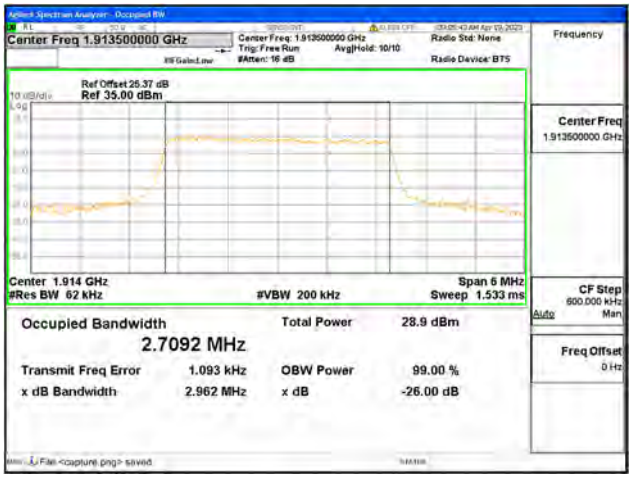
Band25 / 3MHz / 64QAM/ Mid CH



Band25 / 3MHz / QPSK/ High CH

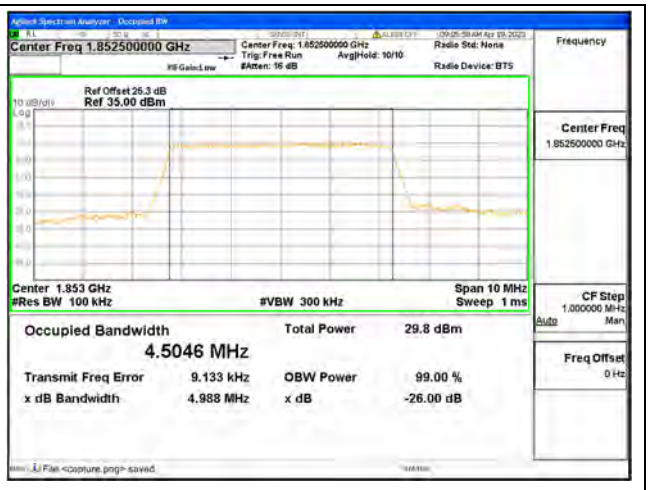


Band25 / 3MHz / 16QAM/ High CH

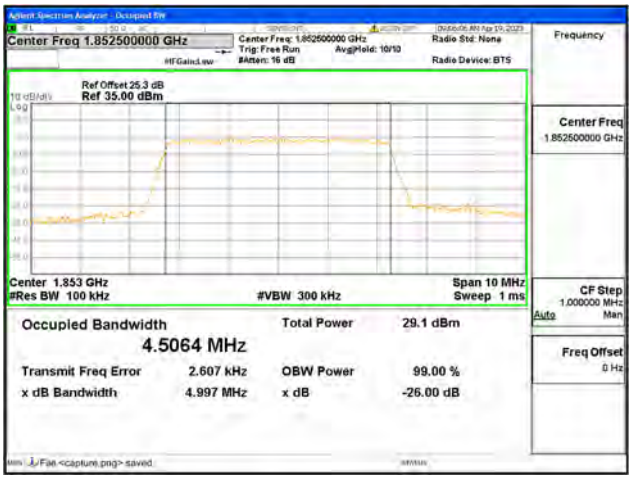


Band25 / 3MHz / 64QAM/ High CH

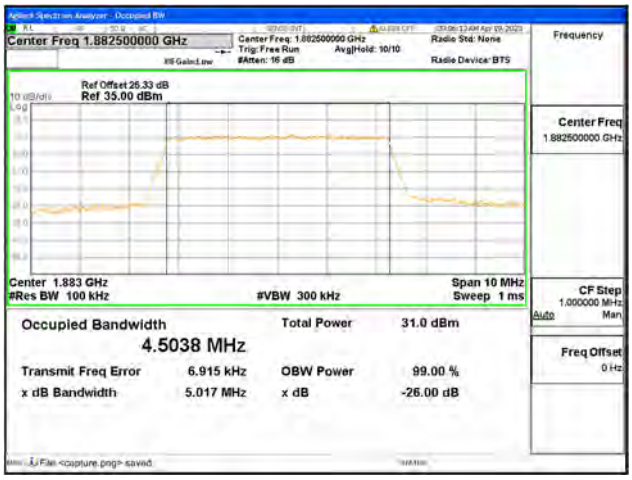
Band25 / 5MHz / QPSK/ Low CH



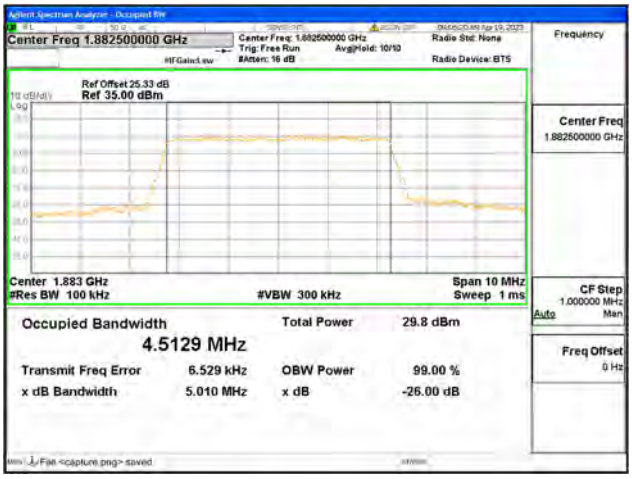
Band25 / 5MHz / 16QAM/ Low CH



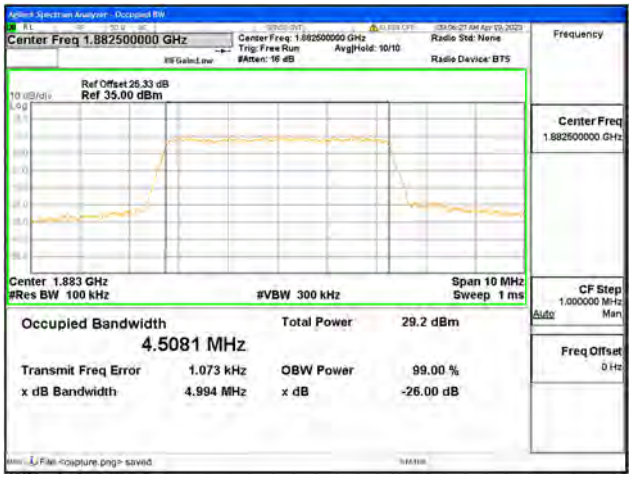
Band25 / 5MHz / 64QAM/ Low CH



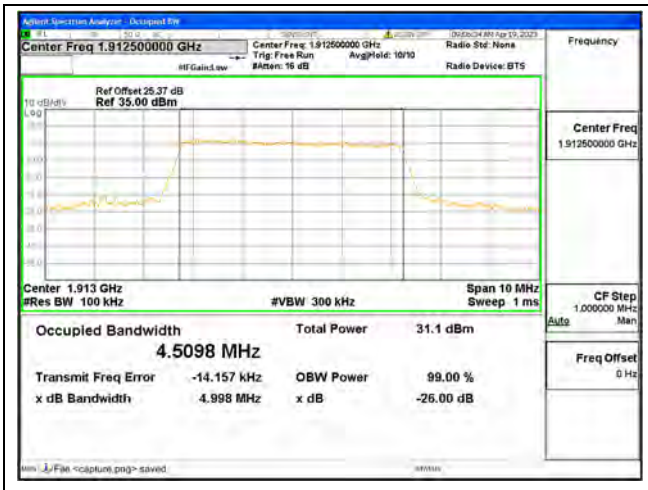
Band25 / 5MHz / QPSK/ Mid CH



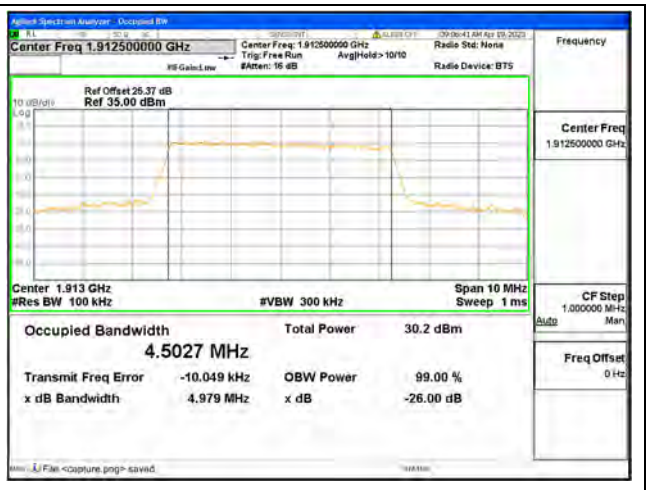
Band25 / 5MHz / 16QAM/ Mid CH



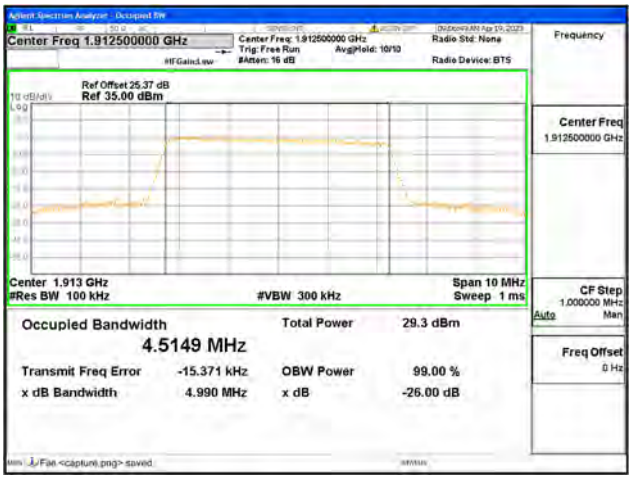
Band25 / 5MHz / 64QAM/ Mid CH



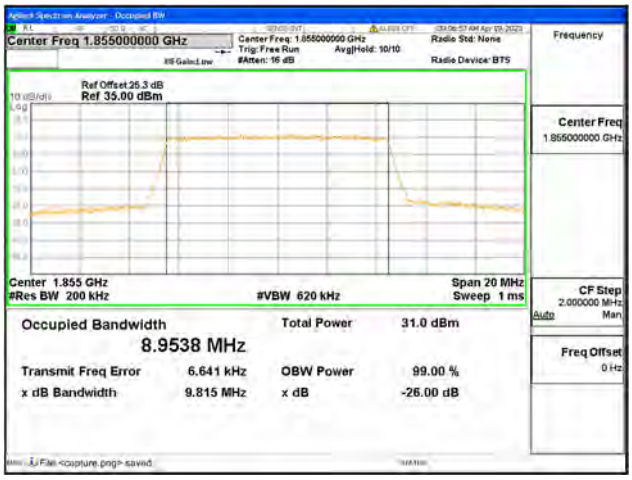
Band25 / 5MHz / QPSK/ High CH



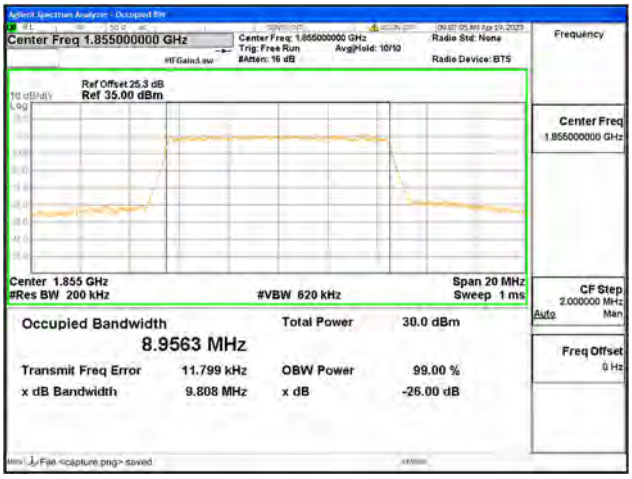
Band25 / 5MHz / 16QAM/ High CH



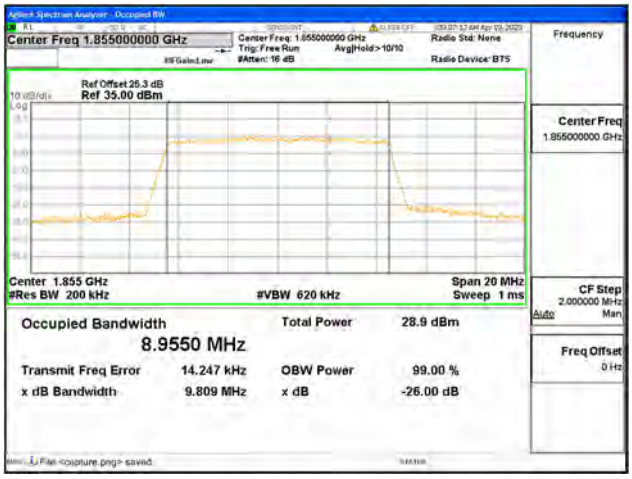
Band25 / 5MHz / 64QAM/ High CH



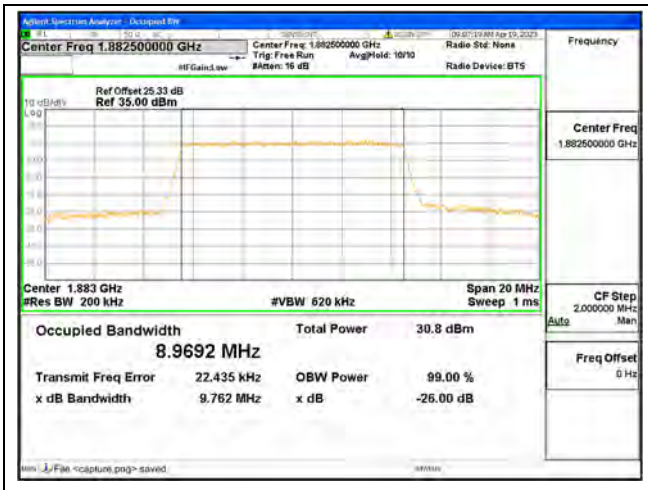
Band25 / 10MHz / QPSK/ Low CH



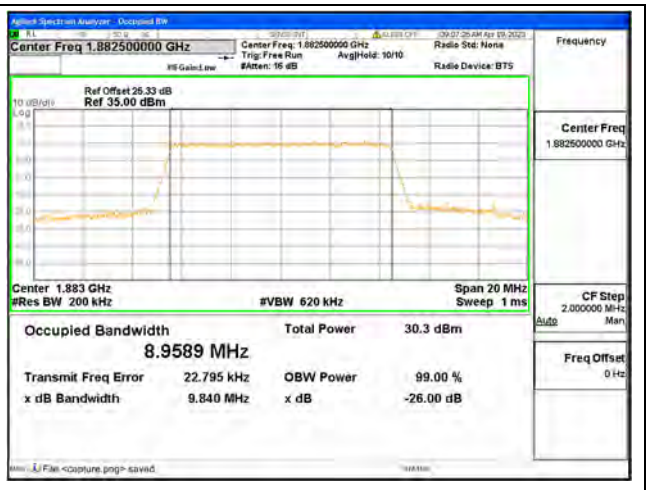
Band25 / 10MHz / 16QAM/ Low CH



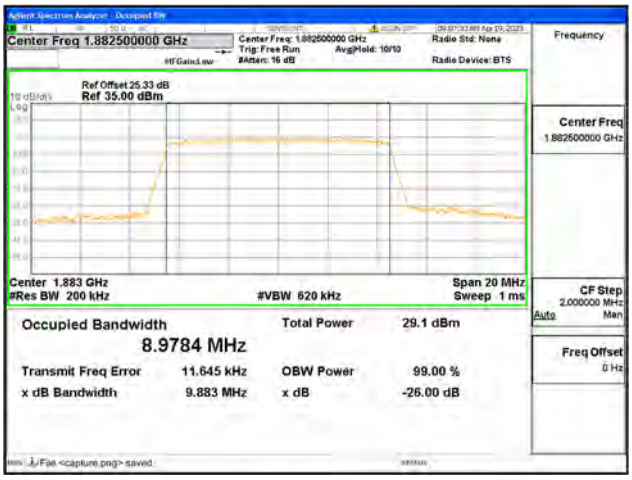
Band25 / 10MHz / 64QAM/ Low CH



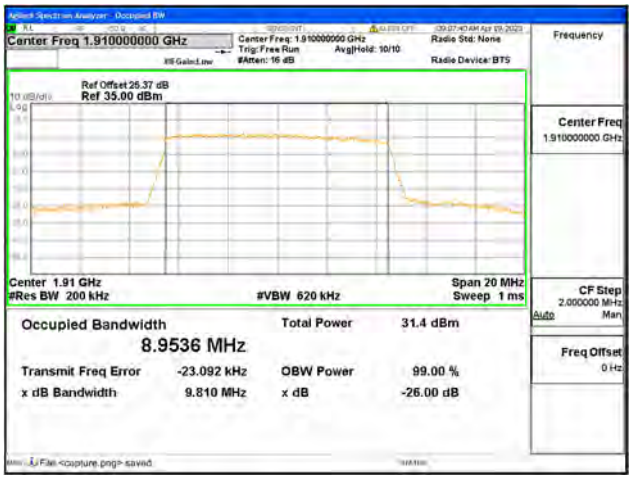
Band25 / 10MHz / QPSK/ Mid CH



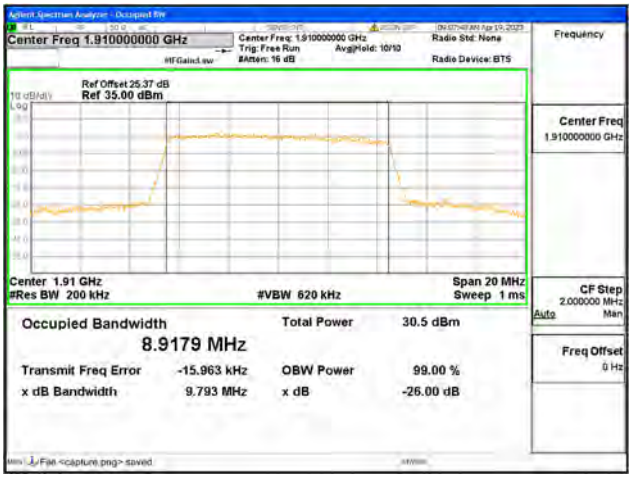
Band25 / 10MHz / 16QAM/ Mid CH



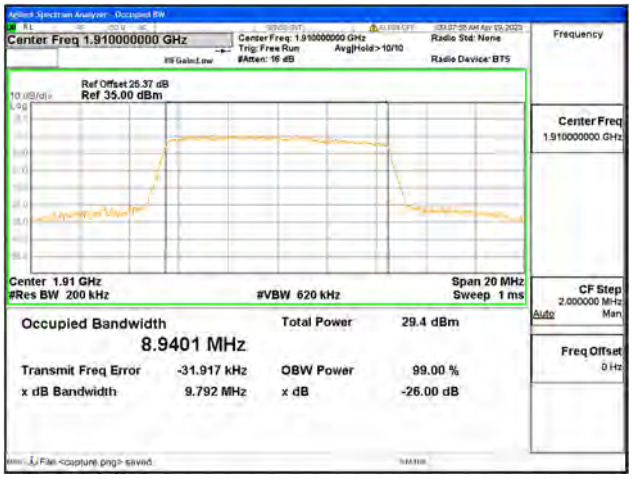
Band25 / 10MHz / 64QAM/ Mid CH



Band25 / 10MHz / QPSK/ High CH



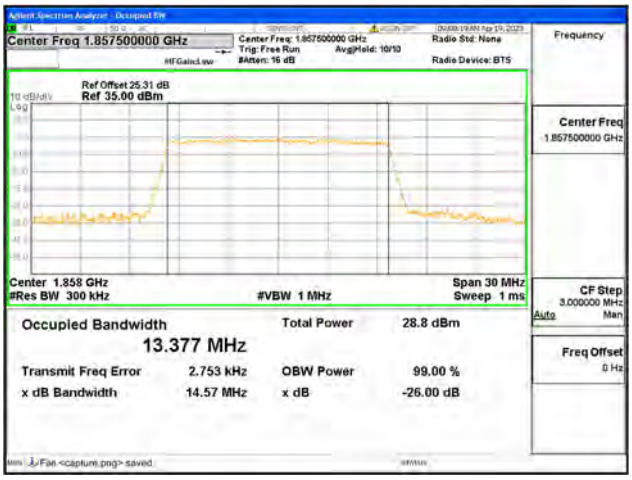
Band25 / 10MHz / 16QAM/ High CH



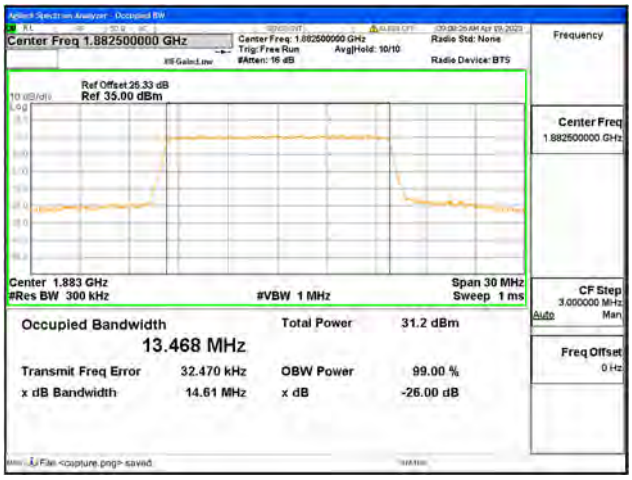
Band25 / 10MHz / 64QAM/ High CH

Band25 / 15MHz / QPSK/ Low CH

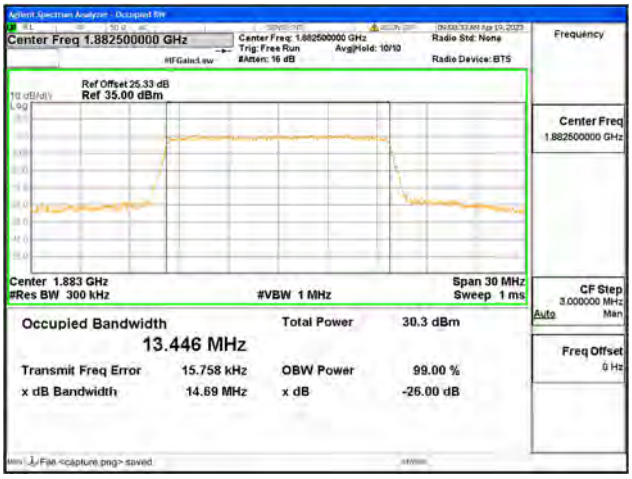
Band25 / 15MHz / 16QAM/ Low CH



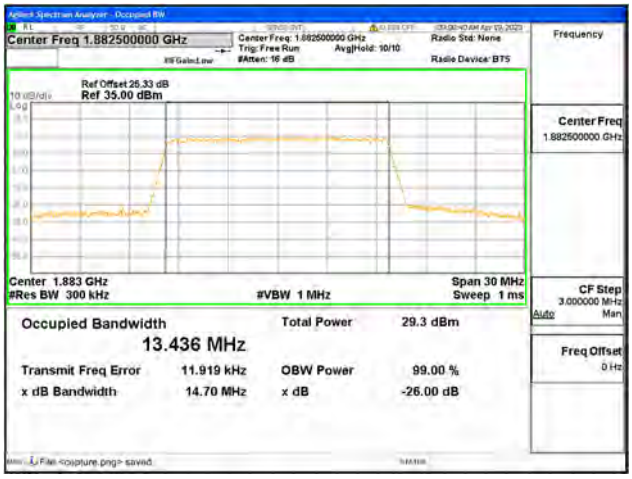
Band25 / 15MHz / 64QAM/ Low CH



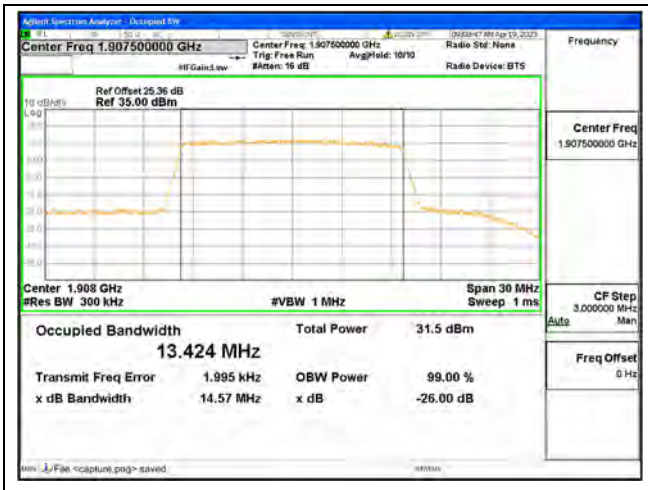
Band25 / 15MHz / QPSK/ Mid CH



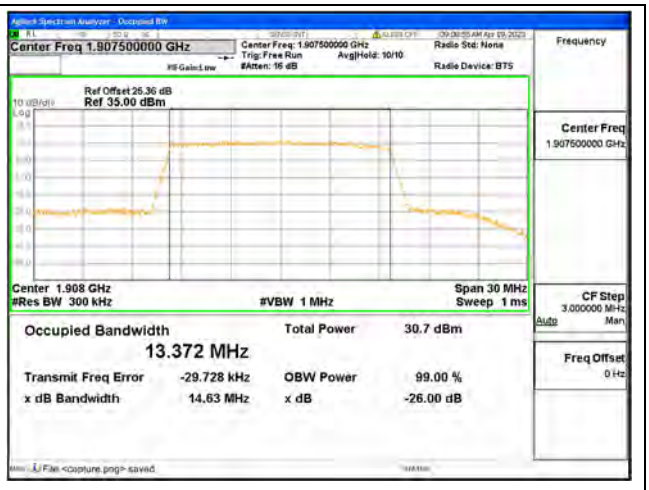
Band25 / 15MHz / 16QAM/ Mid CH



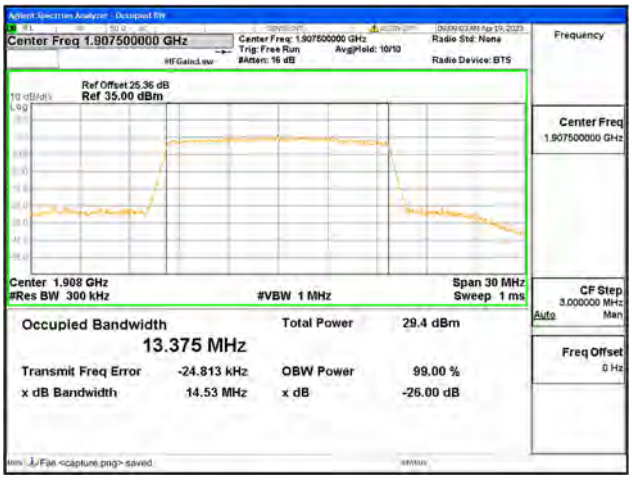
Band25 / 15MHz / 64QAM/ Mid CH



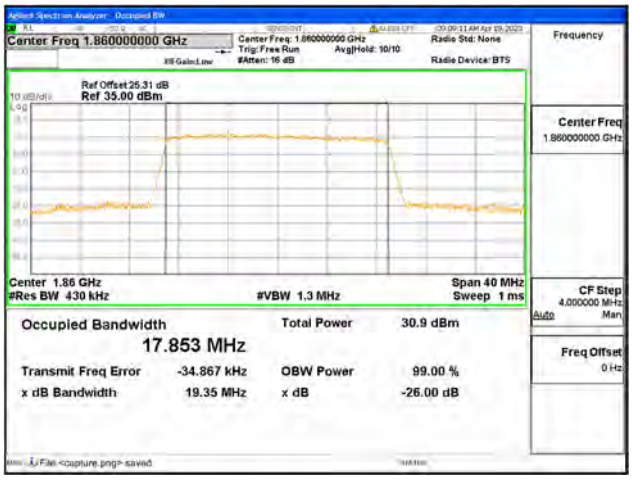
Band25 / 15MHz / QPSK/ High CH



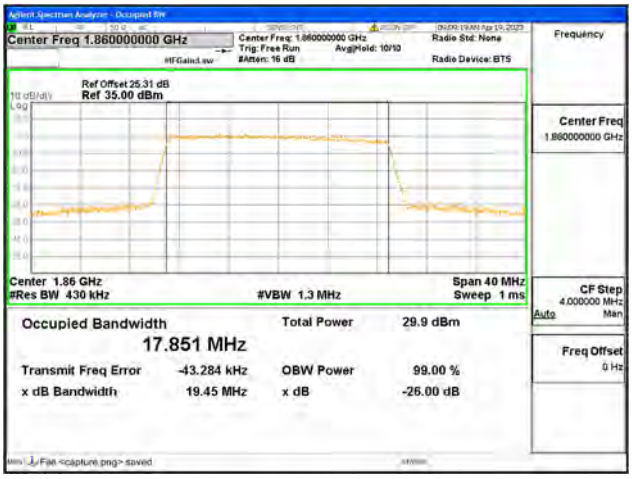
Band25 / 15MHz / 16QAM/ High CH



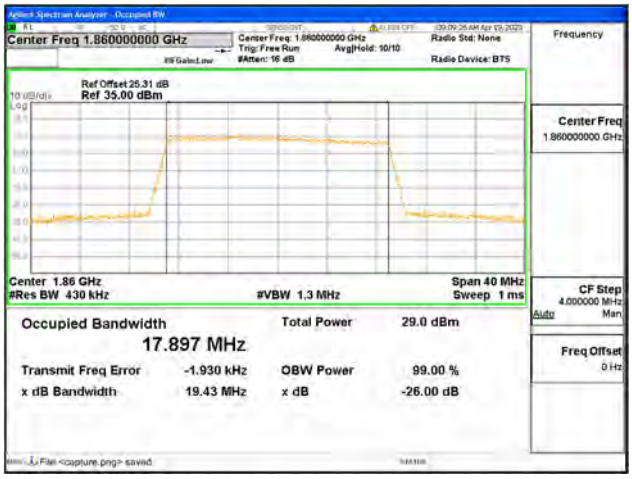
Band25 / 15MHz / 64QAM/ High CH



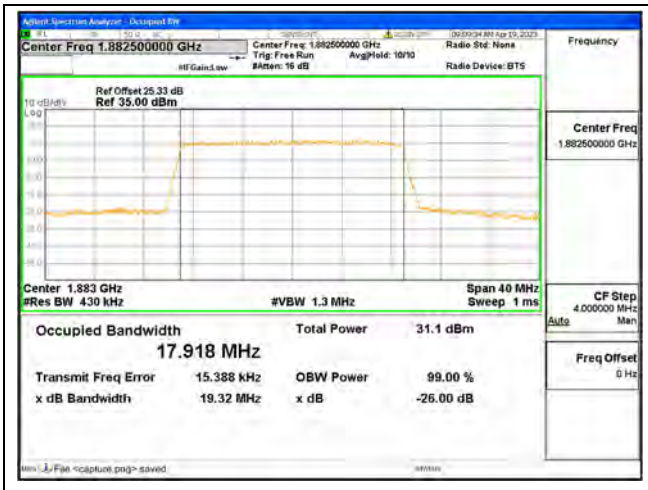
Band25 / 20MHz / QPSK/ Low CH



Band25 / 20MHz / 16QAM/ Low CH

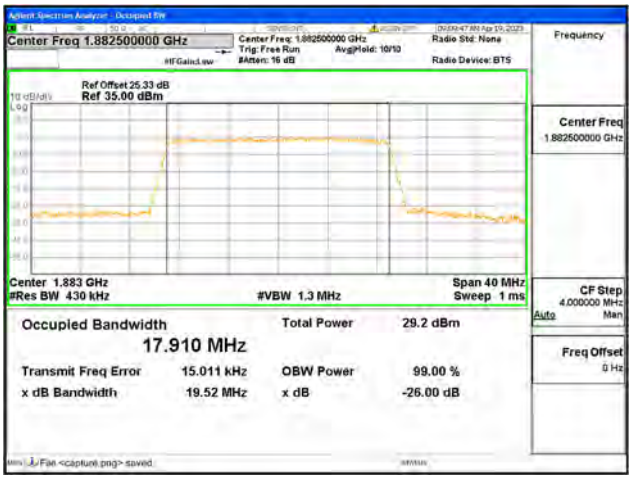


Band25 / 20MHz / 64QAM/ Low CH

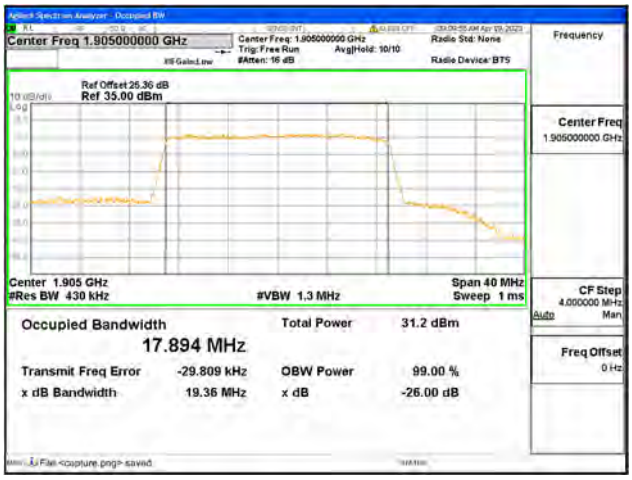


Band25 / 20MHz / QPSK/ Mid CH

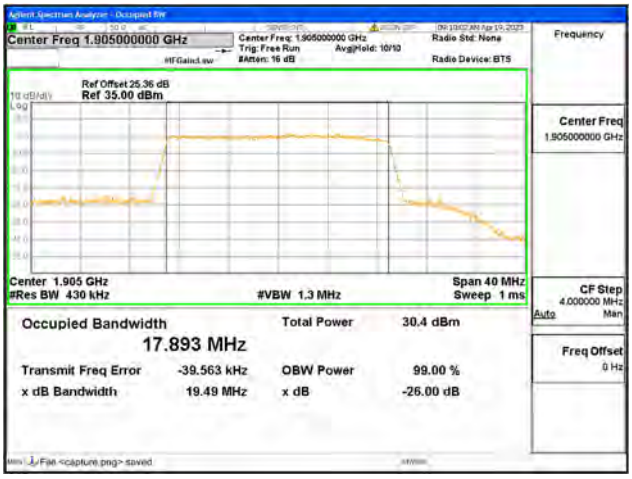
Band25 / 20MHz / 16QAM/ Mid CH



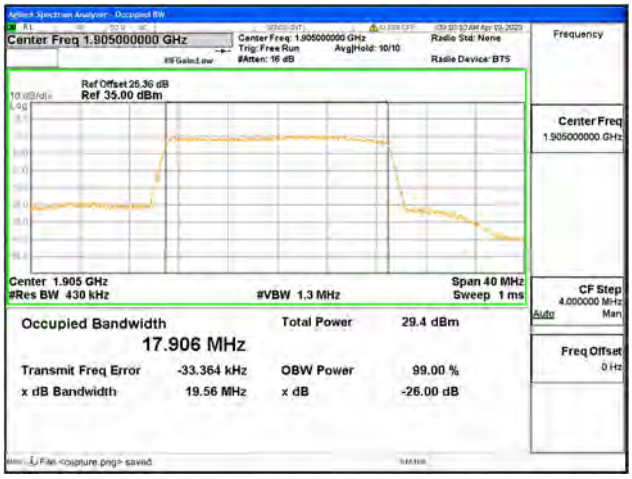
Band25 / 20MHz / 64QAM/ Mid CH



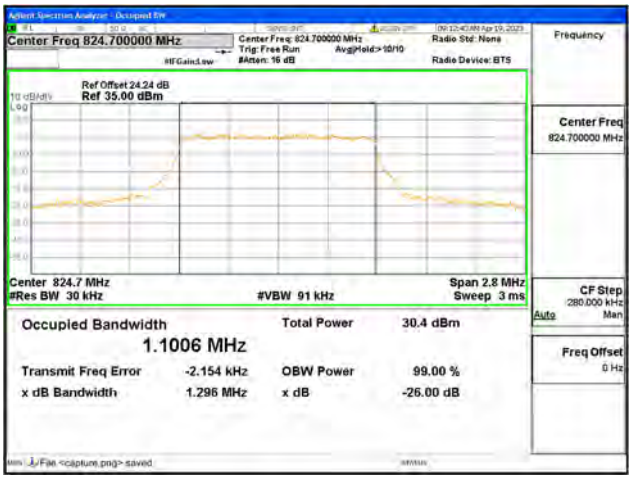
Band25 / 20MHz / QPSK/ High CH



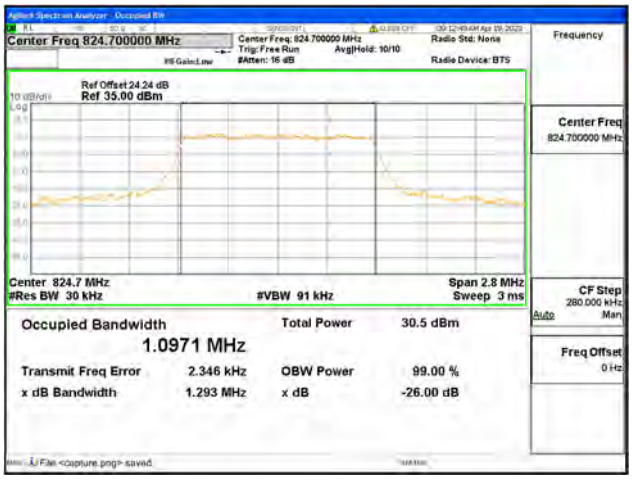
Band25 / 20MHz / 16QAM/ High CH



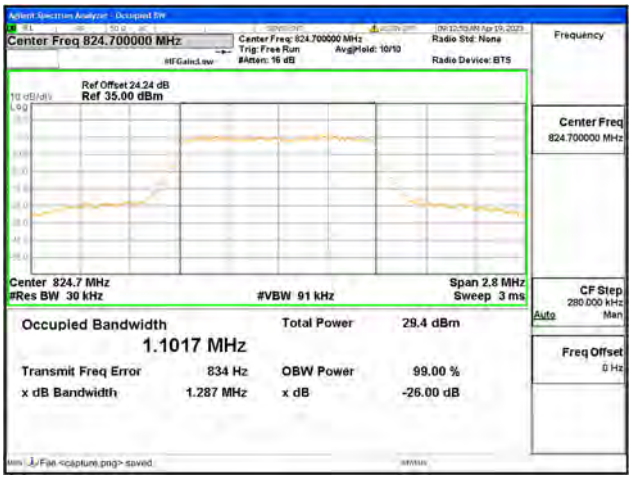
Band25 / 20MHz / 64QAM/ High CH



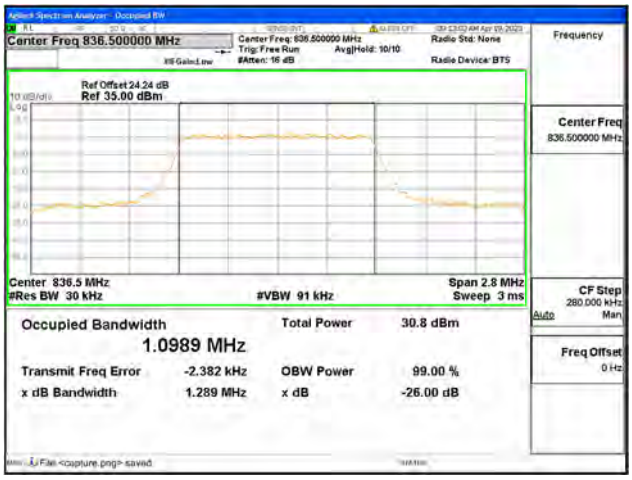
Band26 Part22 / 1.4MHz / QPSK/ Low CH



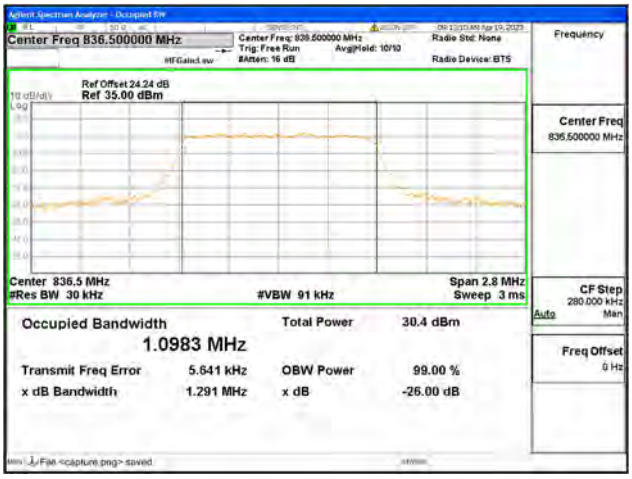
Band26 Part22 / 1.4MHz / 16QAM/ Low CH



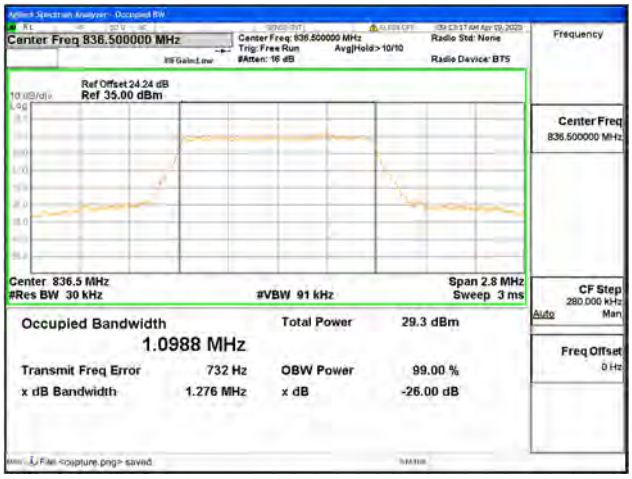
Band26 Part22 / 1.4MHz / 64QAM/ Low CH



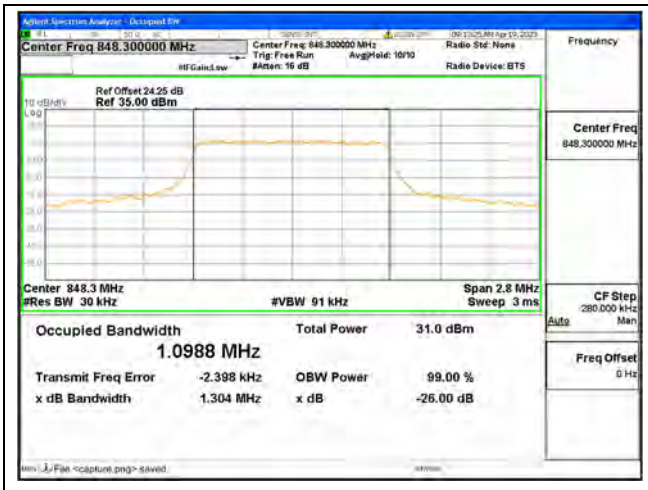
Band26 Part22 / 1.4MHz / QPSK/ Mid CH



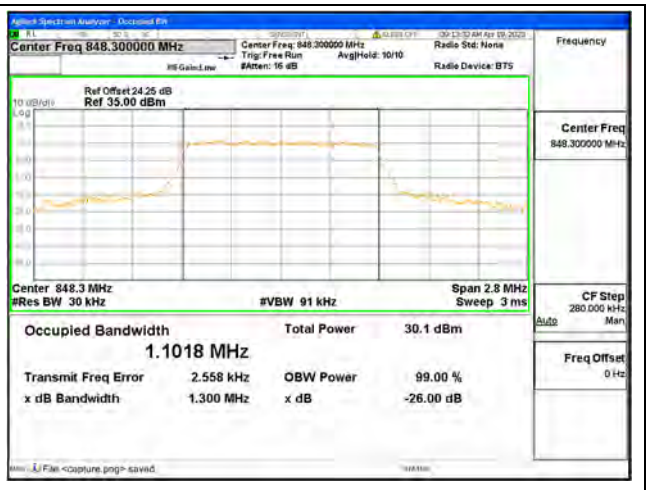
Band26 Part22 / 1.4MHz / 16QAM/ Mid CH



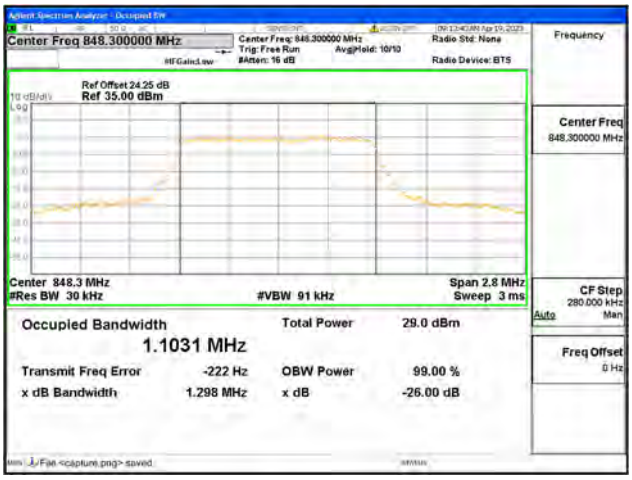
Band26 Part22 / 1.4MHz / 64QAM/ Mid CH



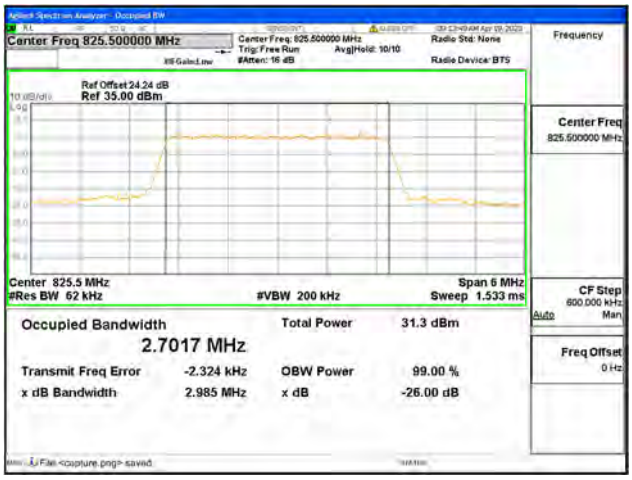
Band26 Part22 / 1.4MHz / QPSK/ High CH



Band26 Part22 / 1.4MHz / 16QAM/ High CH

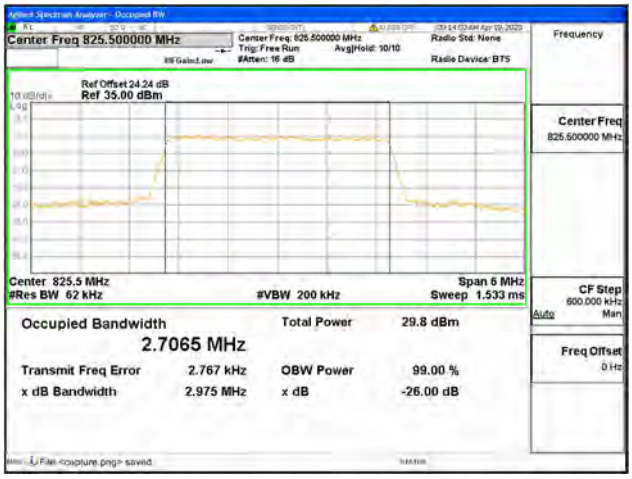


Band26 Part22 / 1.4MHz / 64QAM/ High CH

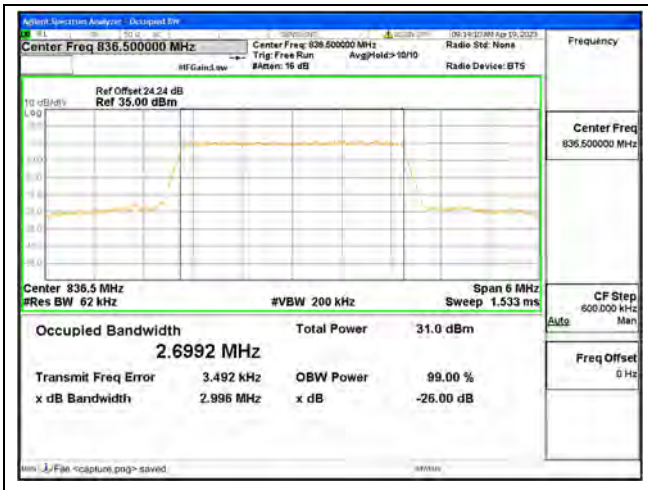


Band26 Part22 / 3MHz / QPSK/ Low CH

Band26 Part22 / 3MHz / 16QAM/ Low CH

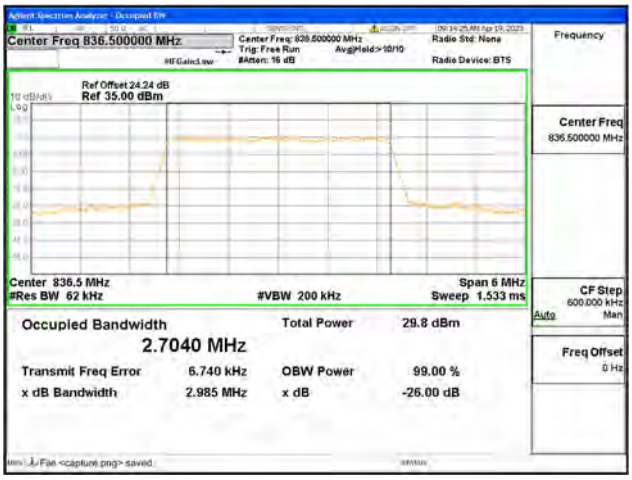


Band26 Part22 / 3MHz / 64QAM/ Low CH

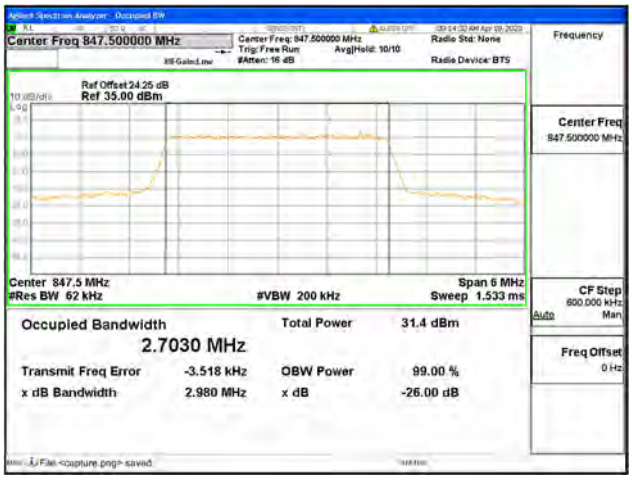


Band26 Part22 / 3MHz / QPSK/ Mid CH

Band26 Part22 / 3MHz / 16QAM/ Mid CH

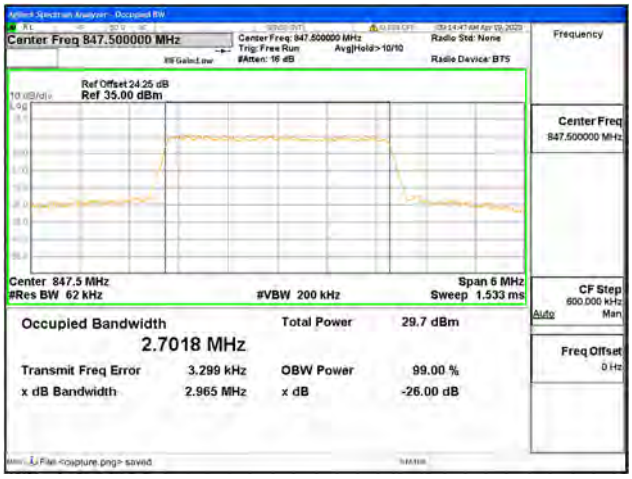


Band26 Part22 / 3MHz / 64QAM/ Mid CH

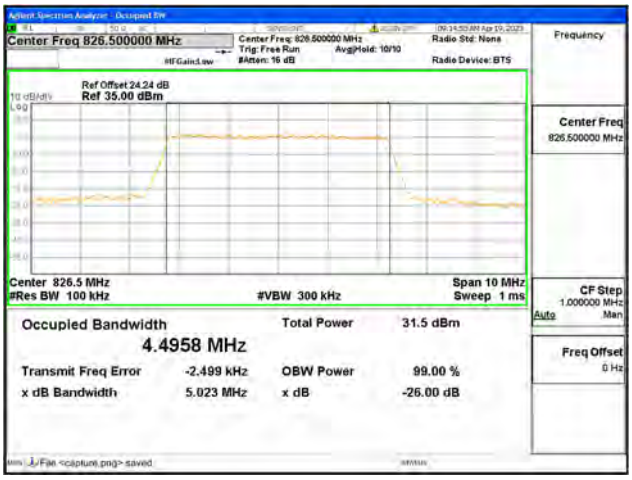


Band26 Part22 / 3MHz / QPSK/ High CH

Band26 Part22 / 3MHz / 16QAM/ High CH

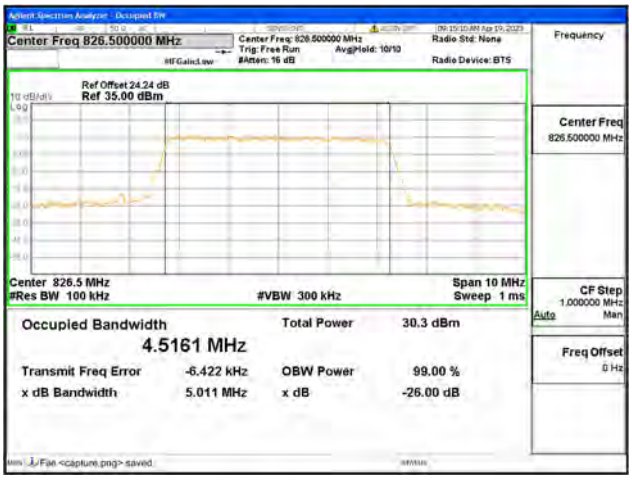


Band26 Part22 / 3MHz / 64QAM/ High CH

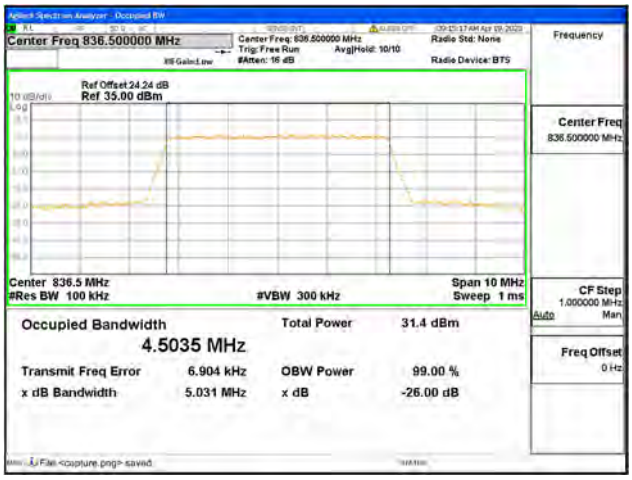


Band26 Part22 / 5MHz / QPSK/ Low CH

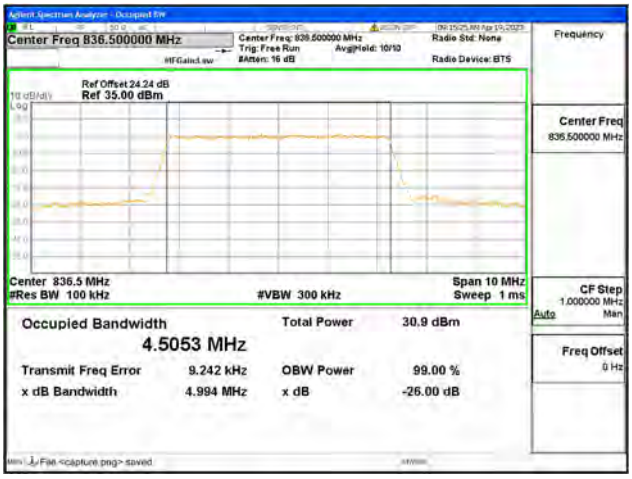
Band26 Part22 / 5MHz / 16QAM/ Low CH



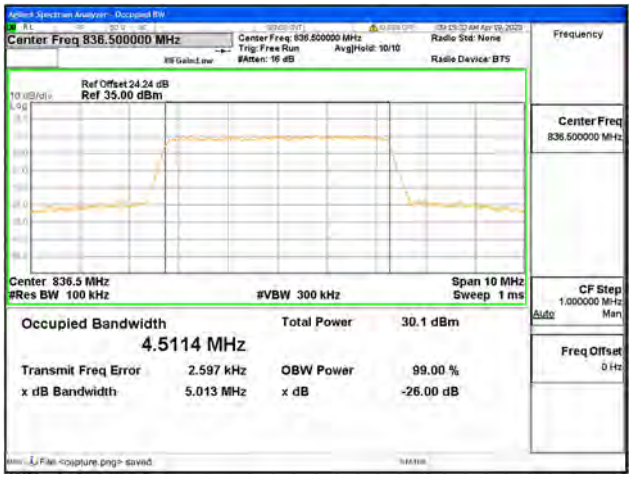
Band26 Part22 / 5MHz / 64QAM/ Low CH



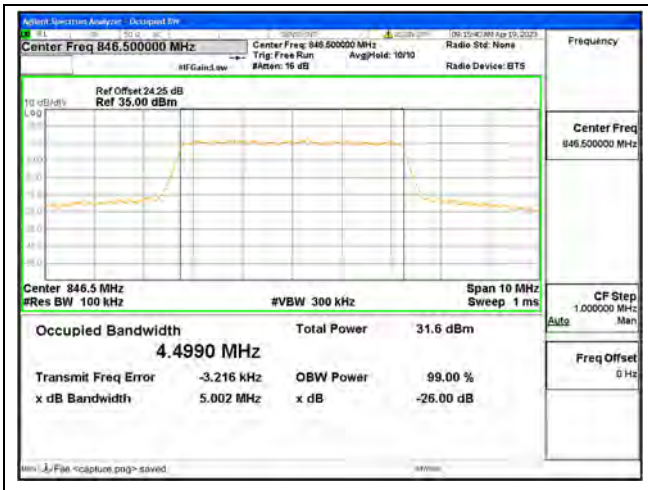
Band26 Part22 / 5MHz / QPSK/ Mid CH



Band26 Part22 / 5MHz / 16QAM/ Mid CH

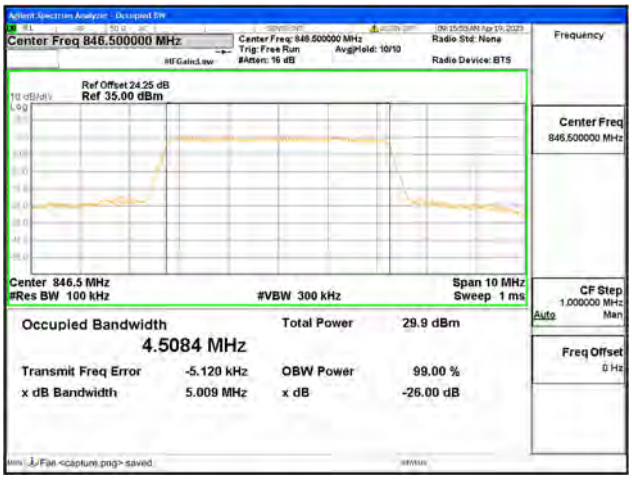


Band26 Part22 / 5MHz / 64QAM/ Mid CH

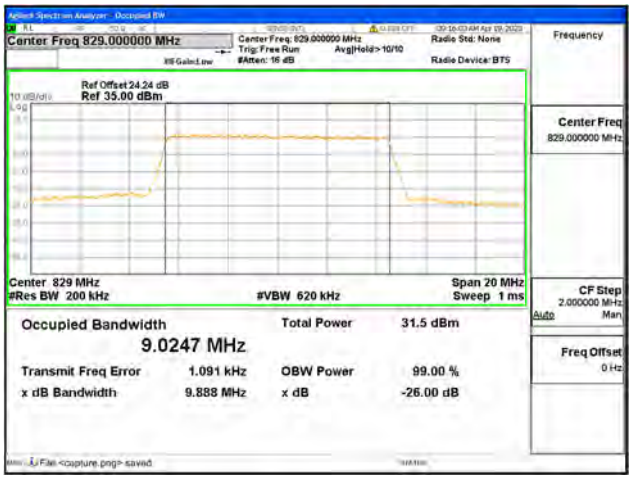


Band26 Part22 / 5MHz / QPSK/ High CH

Band26 Part22 / 5MHz / 16QAM/ High CH

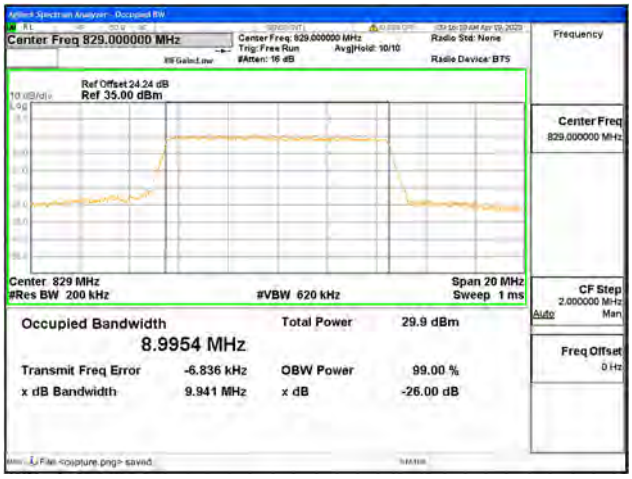


Band26 Part22 / 5MHz / 64QAM/ High CH

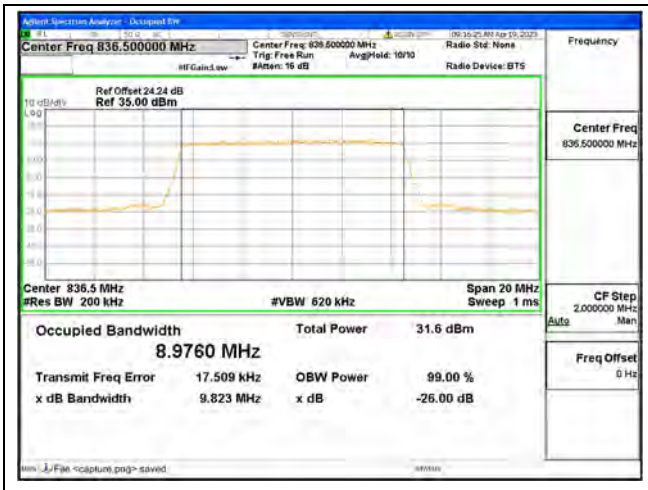


Band26 Part22 / 10MHz / QPSK/ Low CH

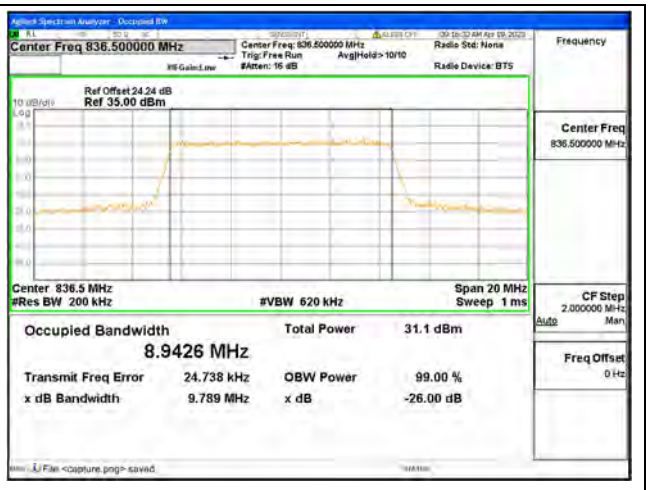
Band26 Part22 / 10MHz / 16QAM/ Low CH



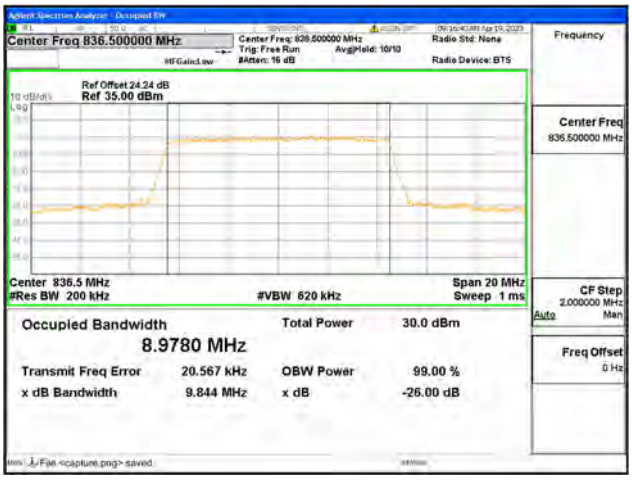
Band26 Part22 / 10MHz / 64QAM/ Low CH



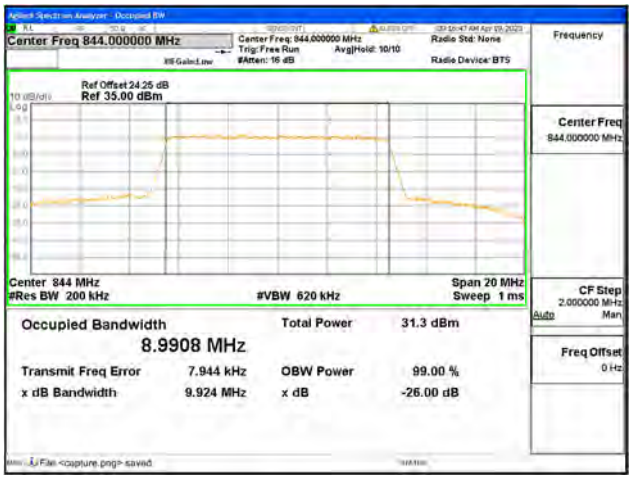
Band26 Part22 / 10MHz / QPSK/ Mid CH



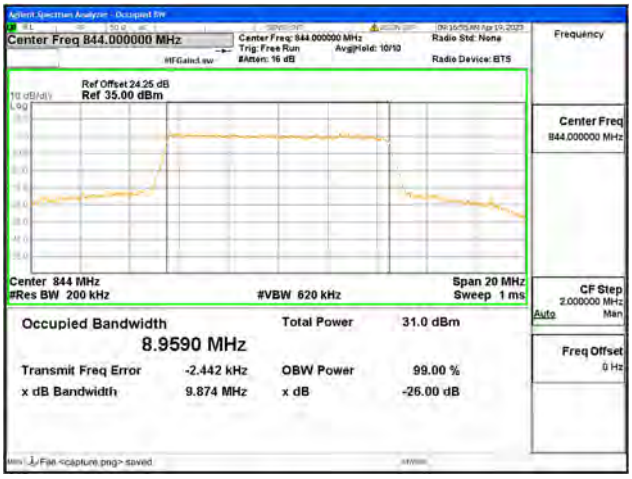
Band26 Part22 / 10MHz / 16QAM/ Mid CH



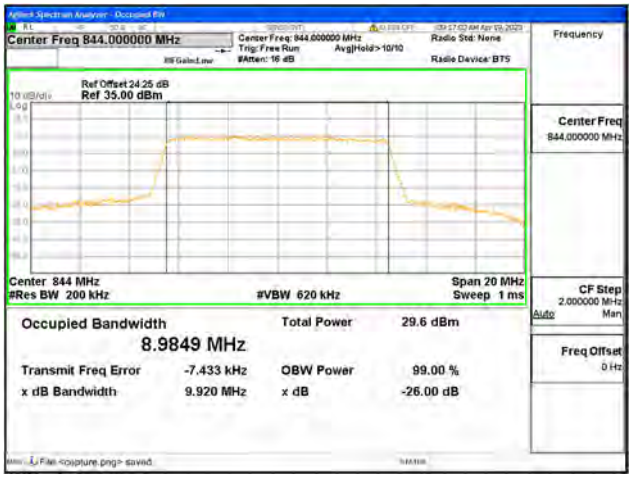
Band26 Part22 / 10MHz / 64QAM/ Mid CH



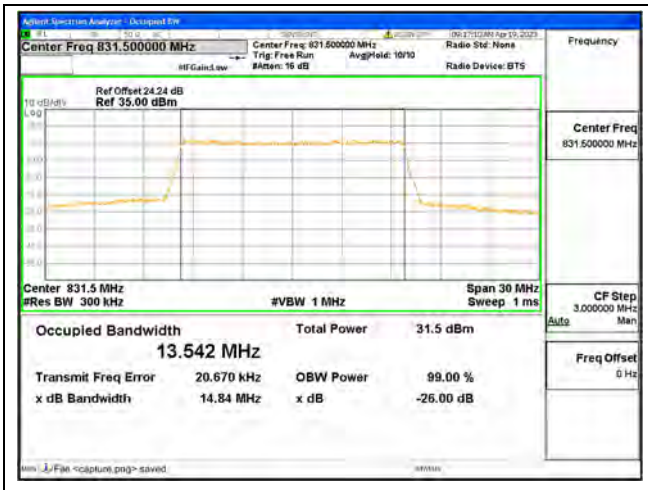
Band26 Part22 / 10MHz / QPSK/ High CH



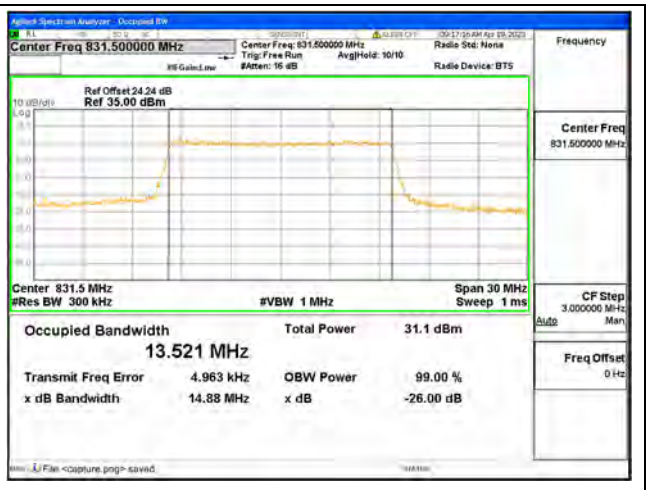
Band26 Part22 / 10MHz / 16QAM/ High CH



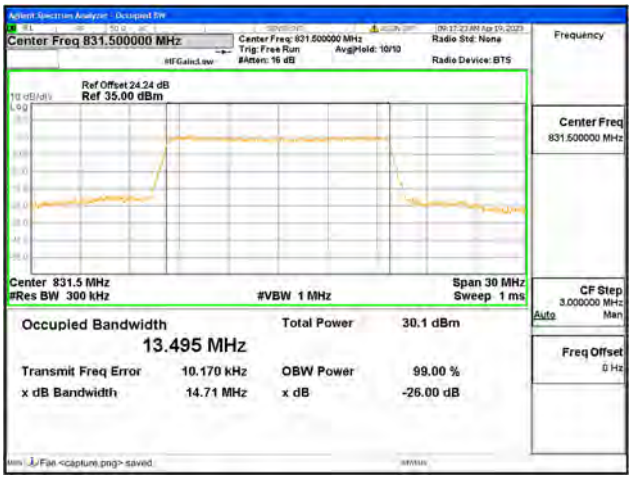
Band26 Part22 / 10MHz / 64QAM/ High CH



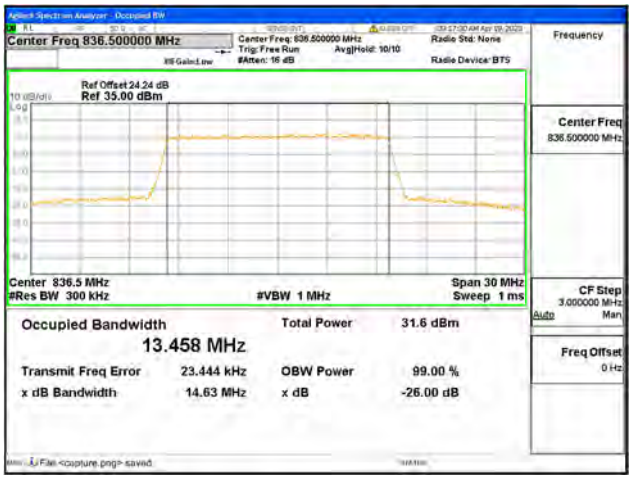
Band26 Part22 / 15MHz / QPSK/ Low CH



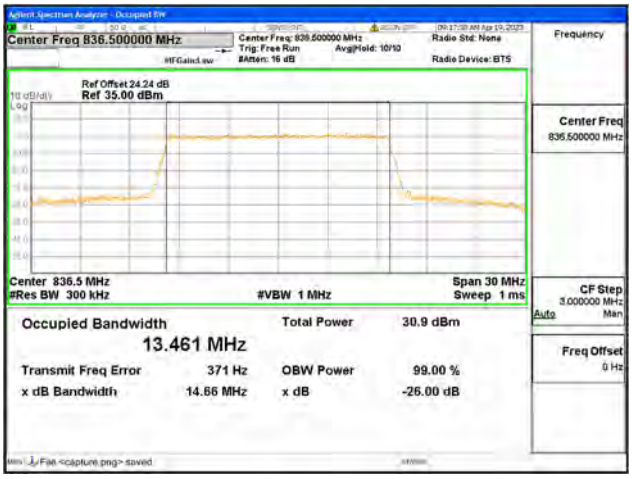
Band26 Part22 / 15MHz / 16QAM/ Low CH



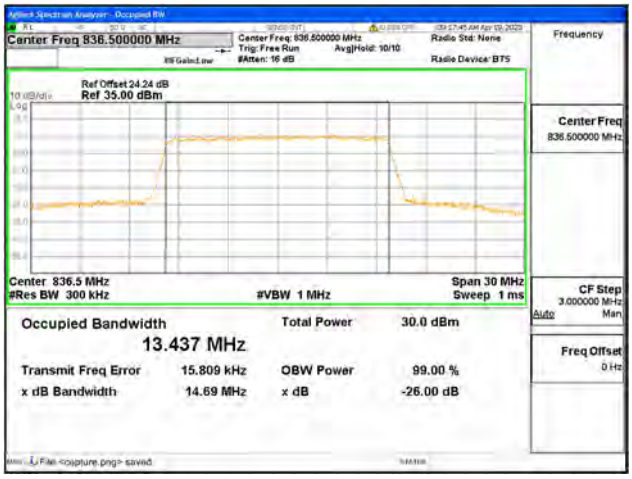
Band26 Part22 / 15MHz / 64QAM/ Low CH



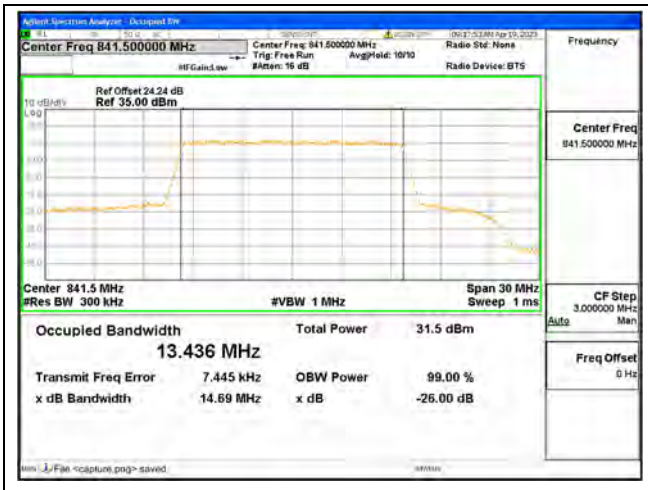
Band26 Part22 / 15MHz / QPSK/ Mid CH



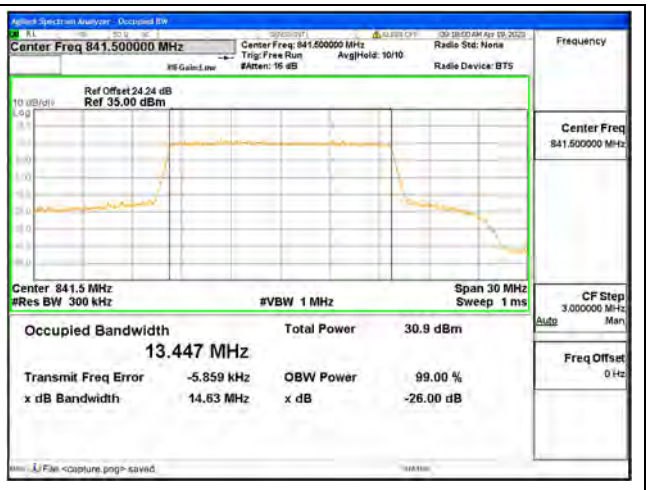
Band26 Part22 / 15MHz / 16QAM/ Mid CH



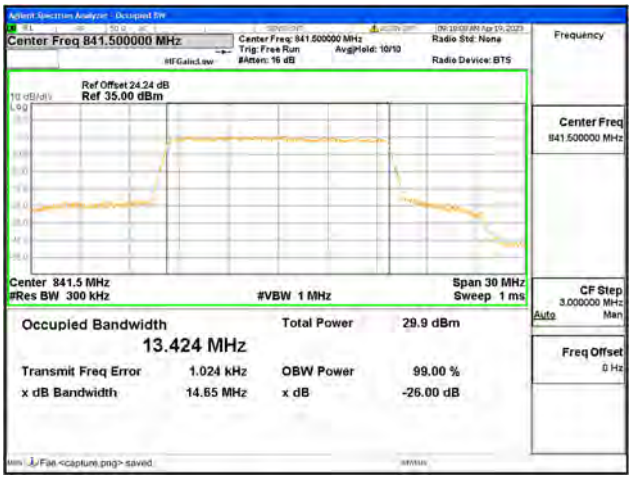
Band26 Part22 / 15MHz / 64QAM/ Mid CH



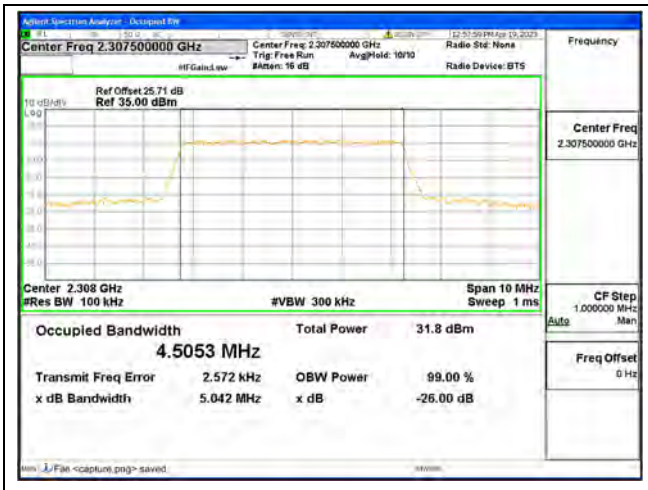
Band26 Part22 / 15MHz / QPSK/ High CH



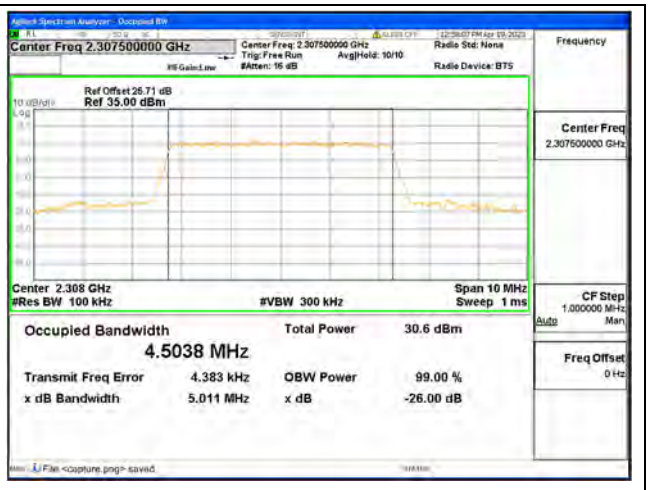
Band26 Part22 / 15MHz / 16QAM/ High CH



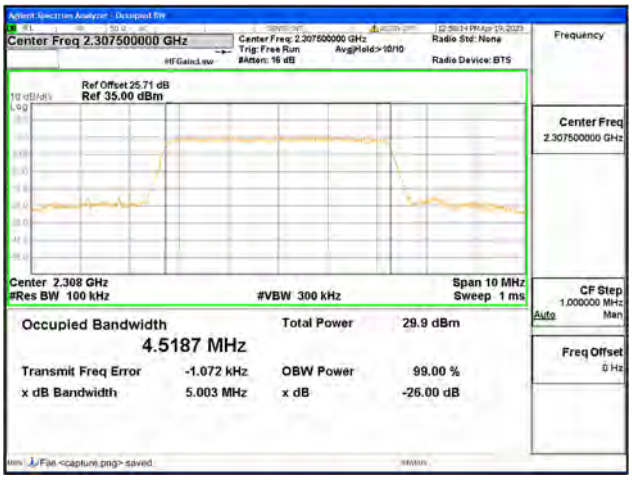
Band26 Part22 / 15MHz / 64QAM/ High CH



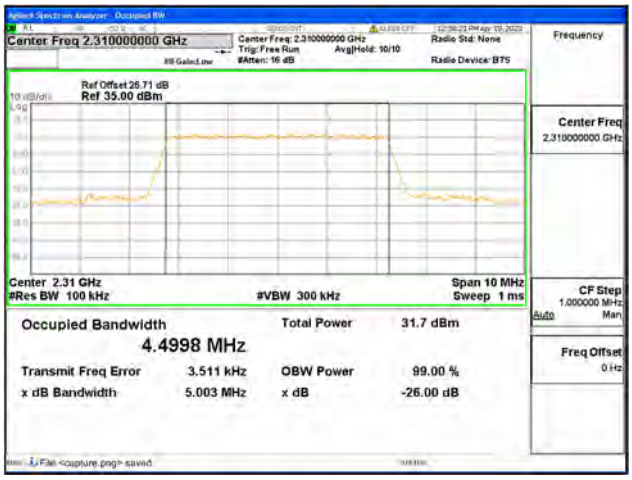
Band30 / 5MHz / QPSK/ Low CH



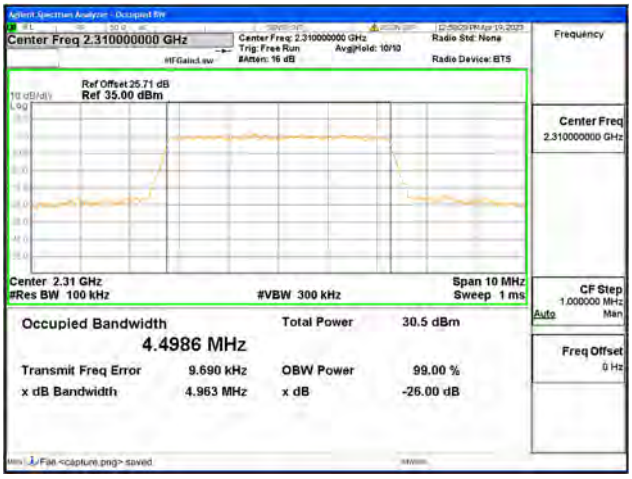
Band30 / 5MHz / 16QAM/ Low CH



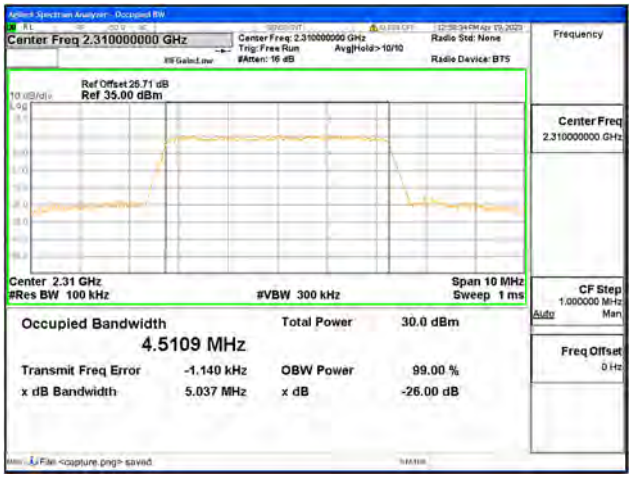
Band30 / 5MHz / 64QAM/ Low CH



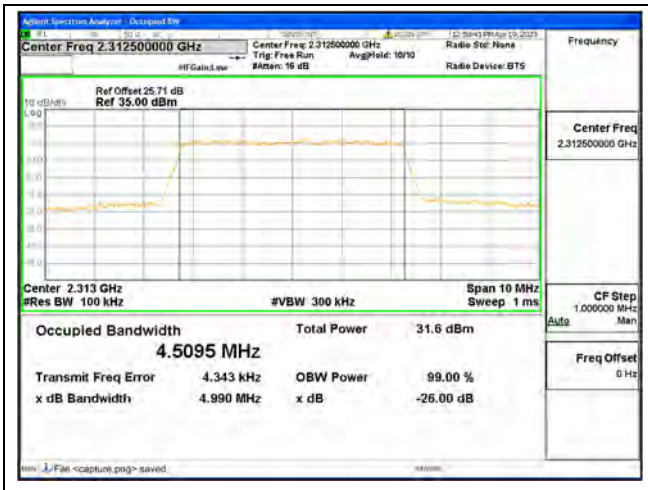
Band30 / 5MHz / QPSK/ Mid CH



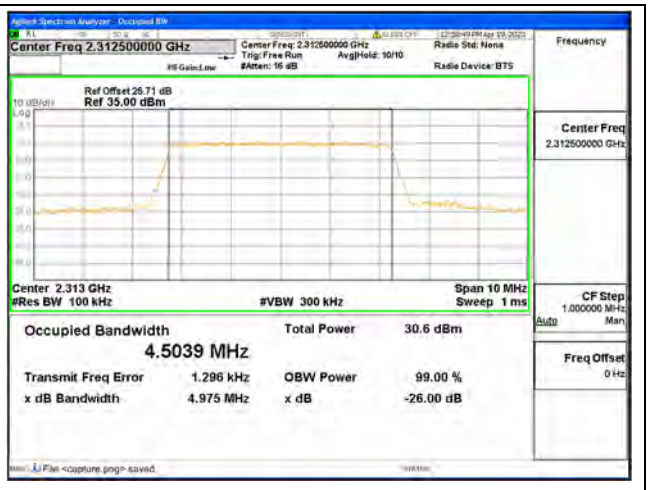
Band30 / 5MHz / 16QAM/ Mid CH



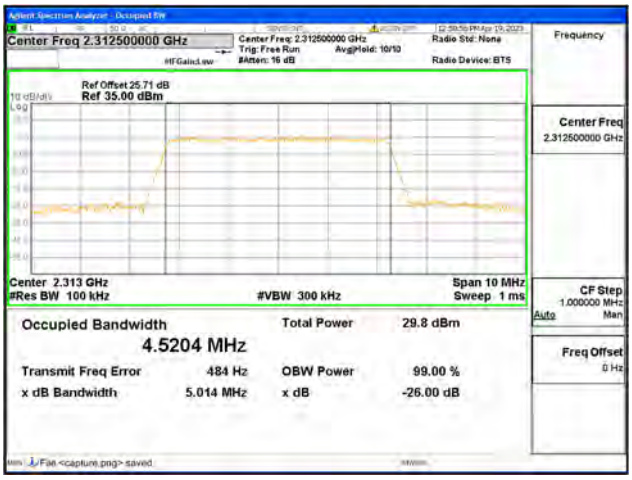
Band30 / 5MHz / 64QAM/ Mid CH



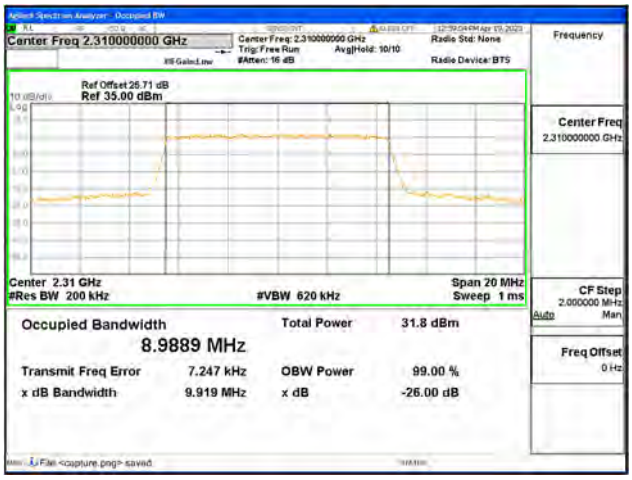
Band30 / 5MHz / QPSK/ High CH



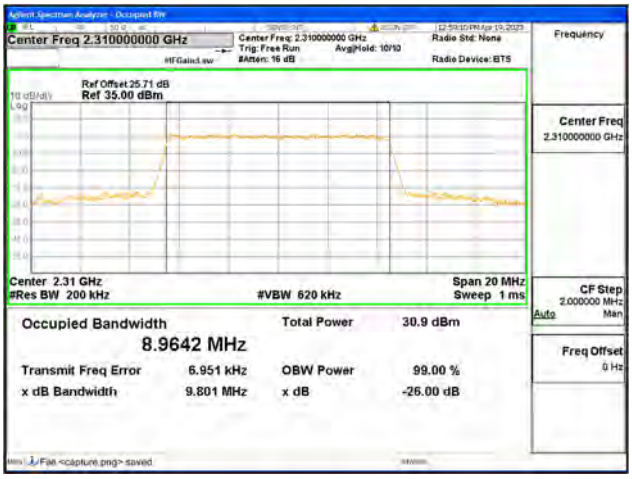
Band30 / 5MHz / 16QAM/ High CH



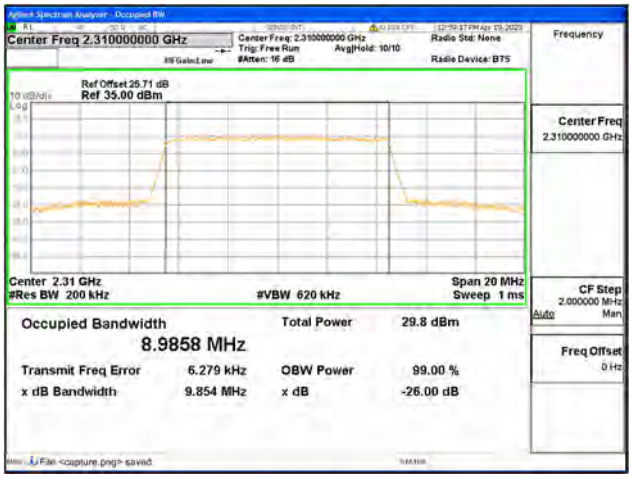
Band30 / 5MHz / 64QAM/ High CH



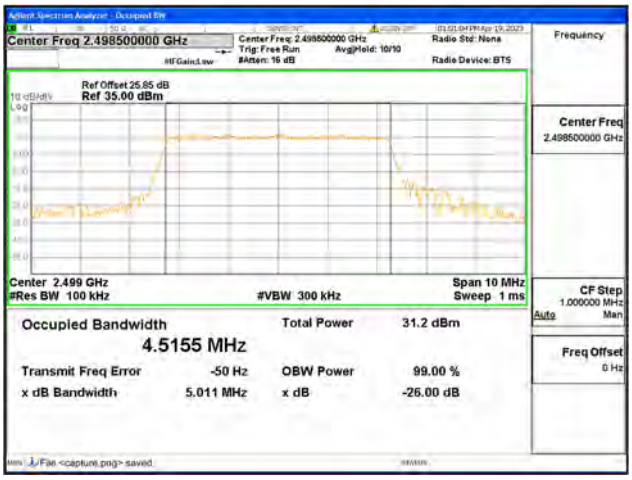
Band30 / 10MHz / QPSK/ Mid CH



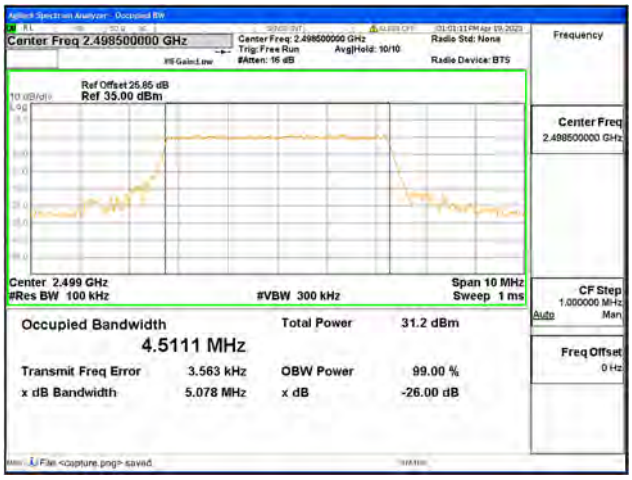
Band30 / 10MHz / 16QAM/ Mid CH



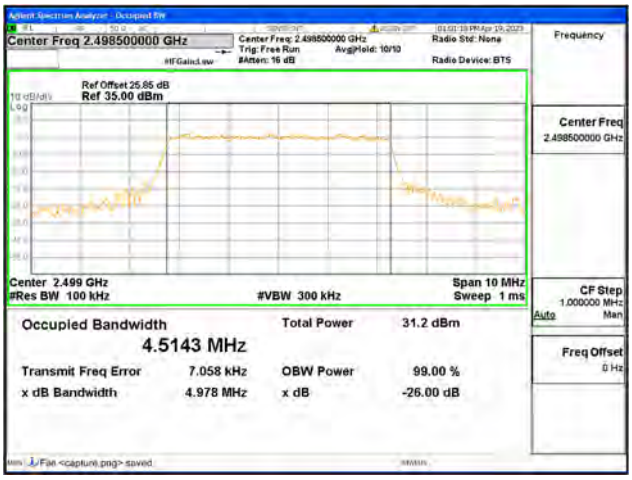
Band30 / 10MHz / 64QAM/ Mid CH



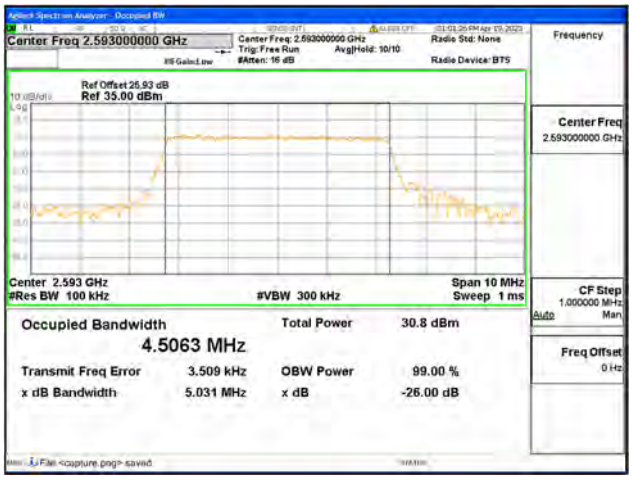
Band41 / 5MHz / QPSK/ Low CH



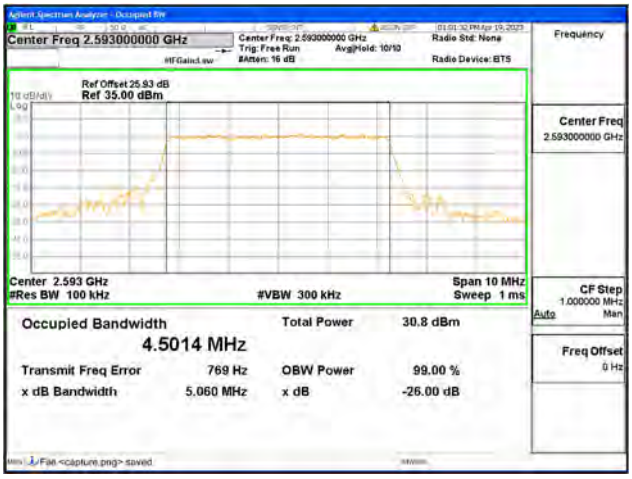
Band41 / 5MHz / 16QAM/ Low CH



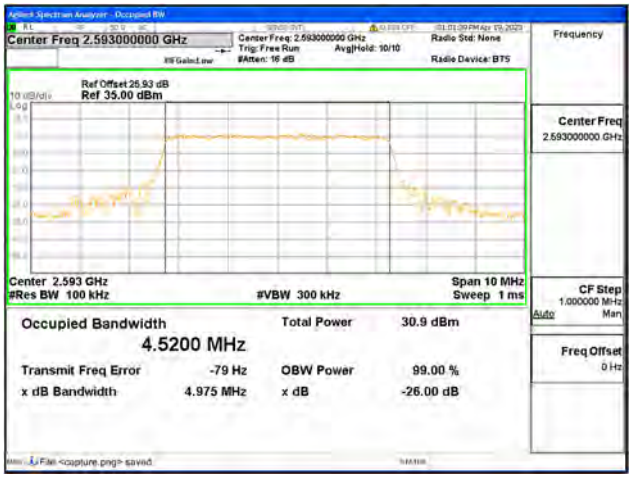
Band41 / 5MHz / 64QAM/ Low CH



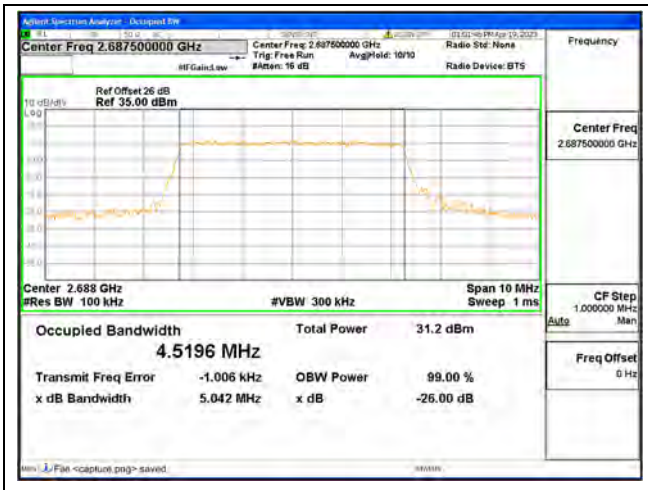
Band41 / 5MHz / QPSK/ Mid CH



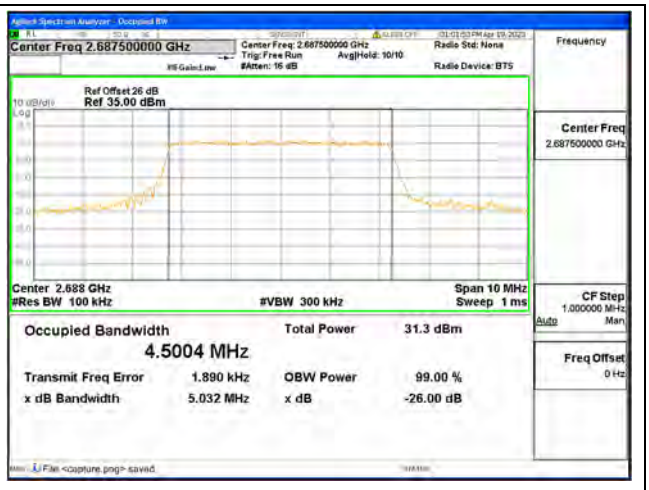
Band41 / 5MHz / 16QAM/ Mid CH



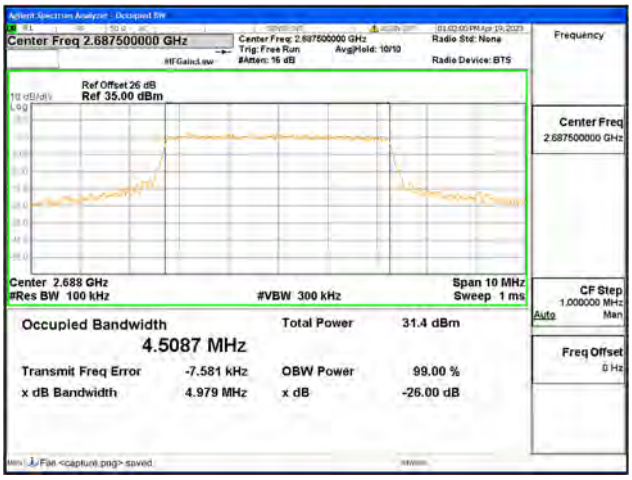
Band41 / 5MHz / 64QAM/ Mid CH



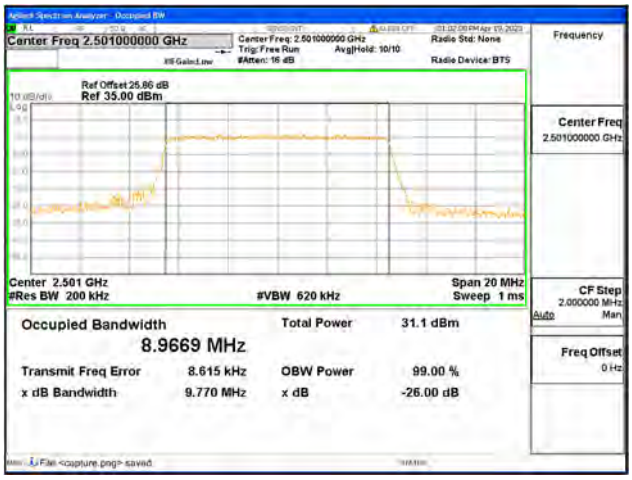
Band41 / 5MHz / QPSK/ High CH



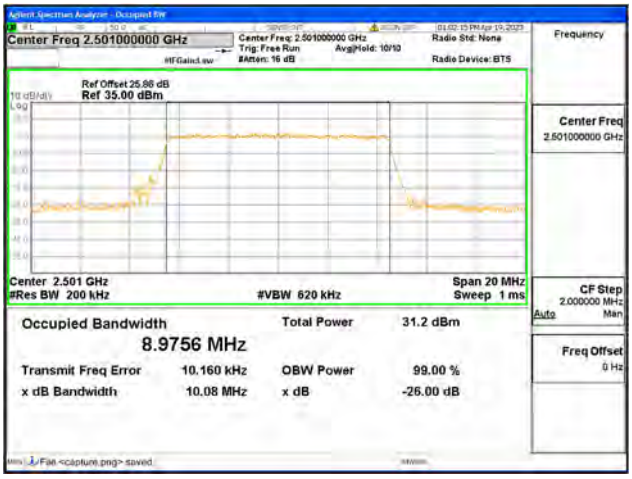
Band41 / 5MHz / 16QAM/ High CH



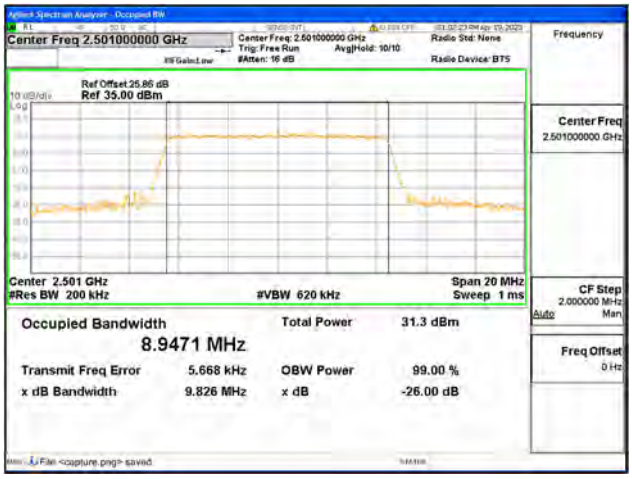
Band41 / 5MHz / 64QAM/ High CH



Band41 / 10MHz / QPSK/ Low CH

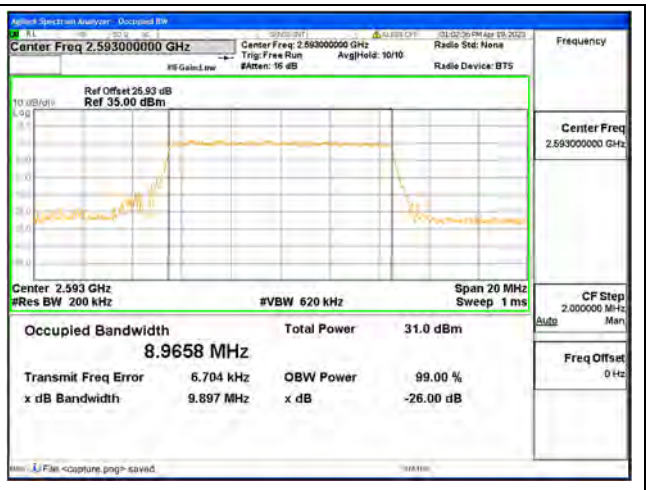


Band41 / 10MHz / 16QAM/ Low CH

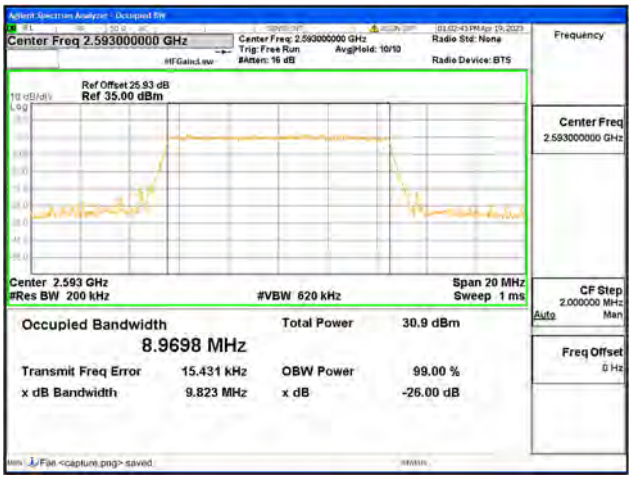


Band41 / 10MHz / 64QAM/ Low CH

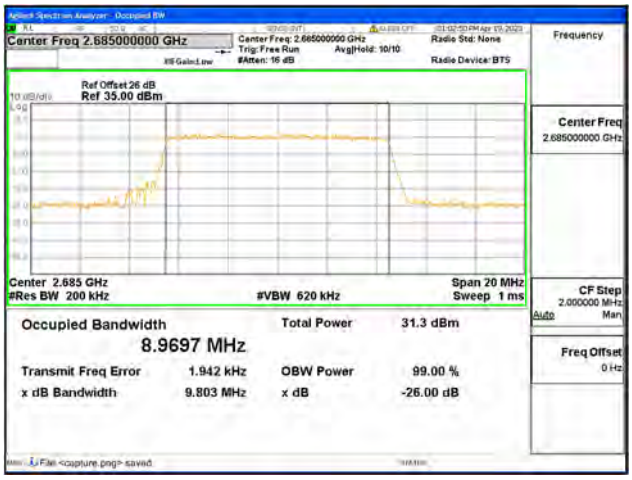
Band41 / 10MHz / QPSK/ Mid CH



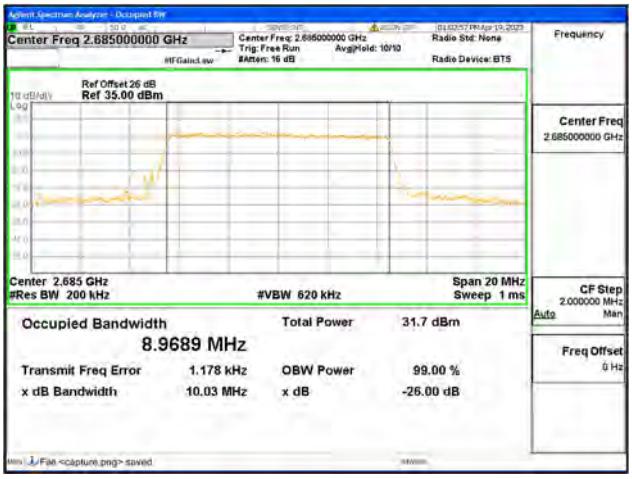
Band41 / 10MHz / 16QAM/ Mid CH



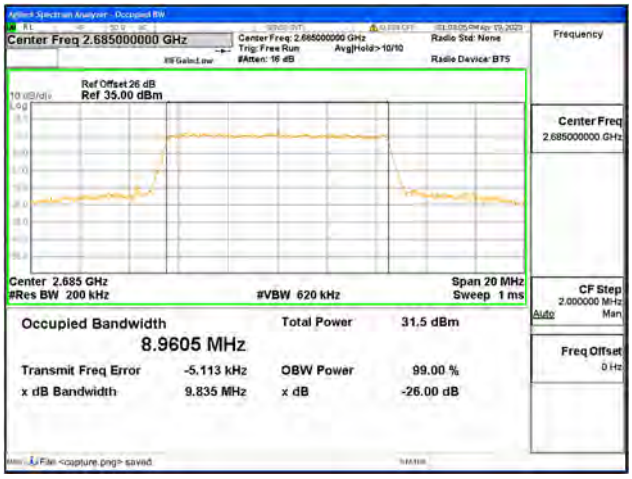
Band41 / 10MHz / 64QAM/ Mid CH



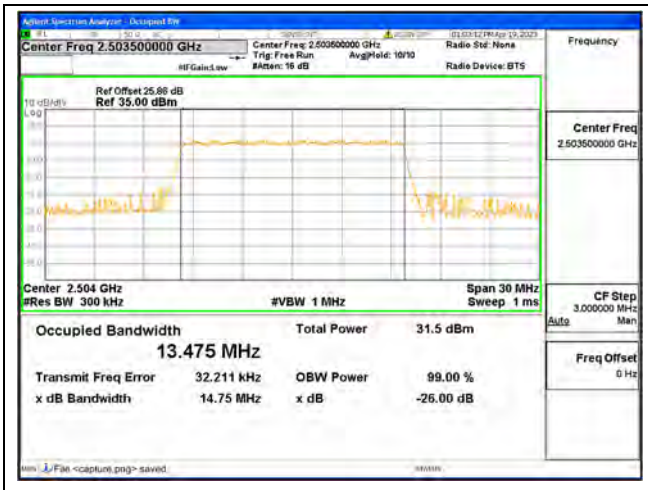
Band41 / 10MHz / QPSK/ High CH



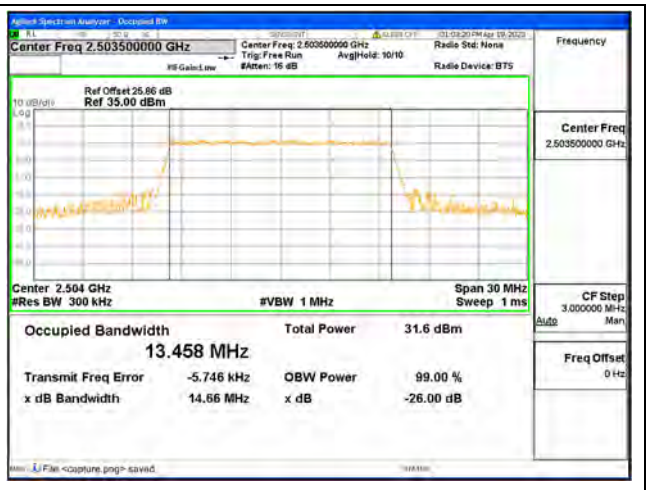
Band41 / 10MHz / 16QAM/ High CH



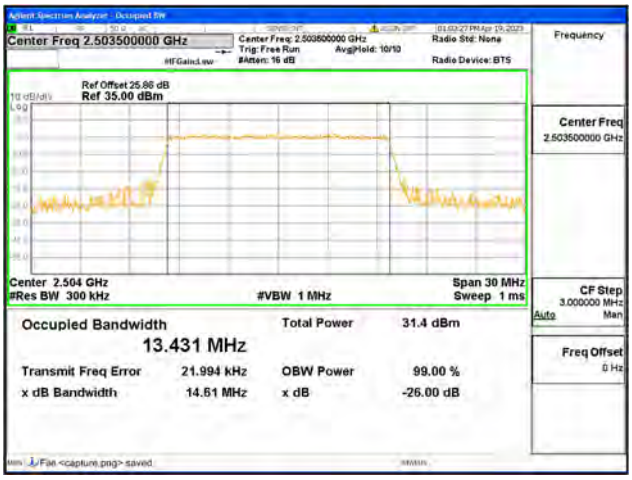
Band41 / 10MHz / 64QAM/ High CH



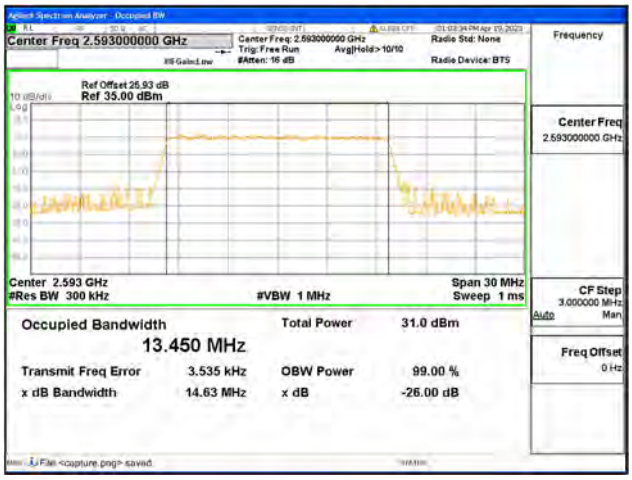
Band41 / 15MHz / QPSK/ Low CH



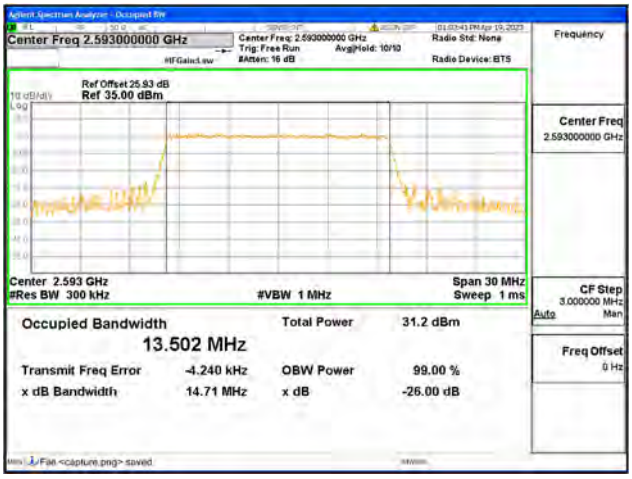
Band41 / 15MHz / 16QAM/ Low CH



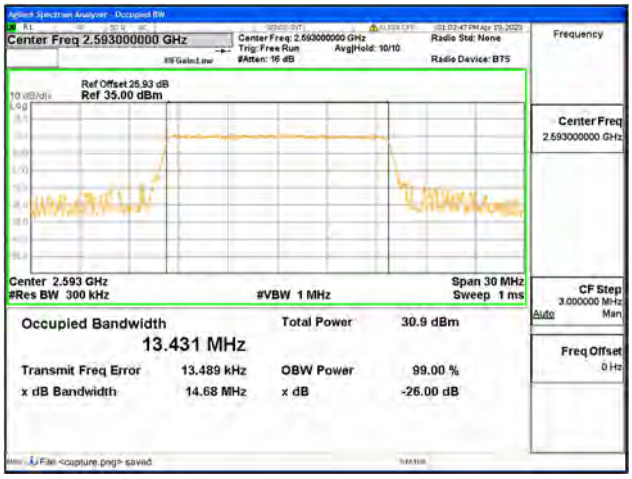
Band41 / 15MHz / 64QAM/ Low CH



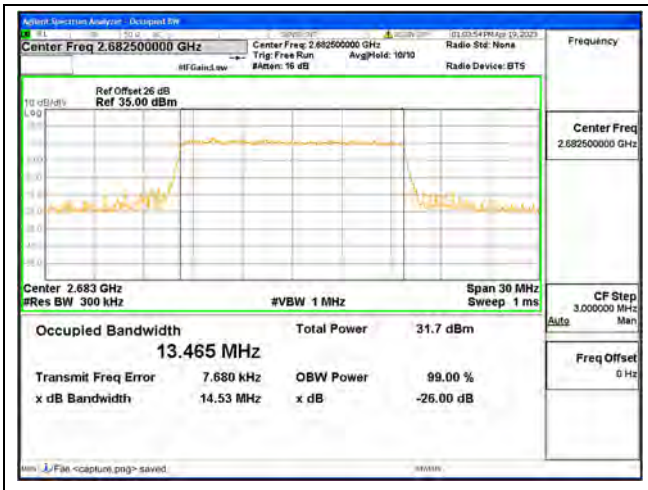
Band41 / 15MHz / QPSK/ Mid CH



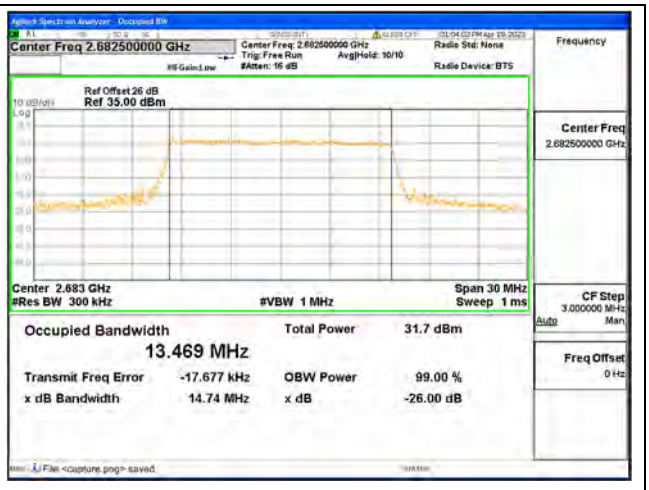
Band41 / 15MHz / 16QAM/ Mid CH



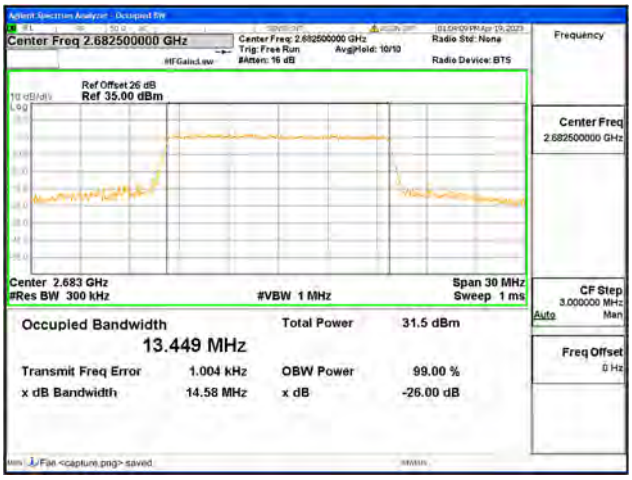
Band41 / 15MHz / 64QAM/ Mid CH



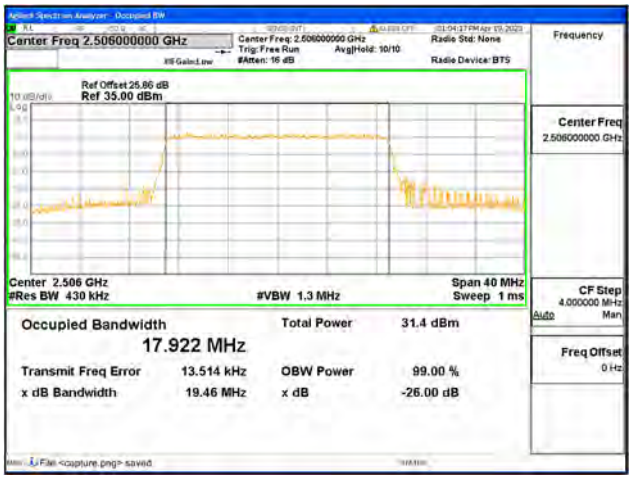
Band41 / 15MHz / QPSK/ High CH



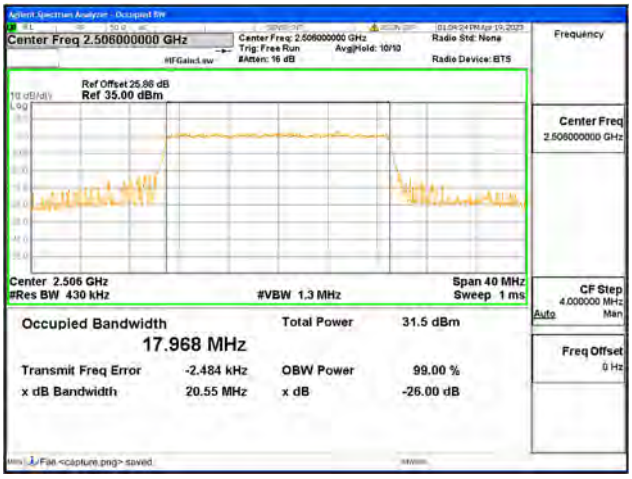
Band41 / 15MHz / 16QAM/ High CH



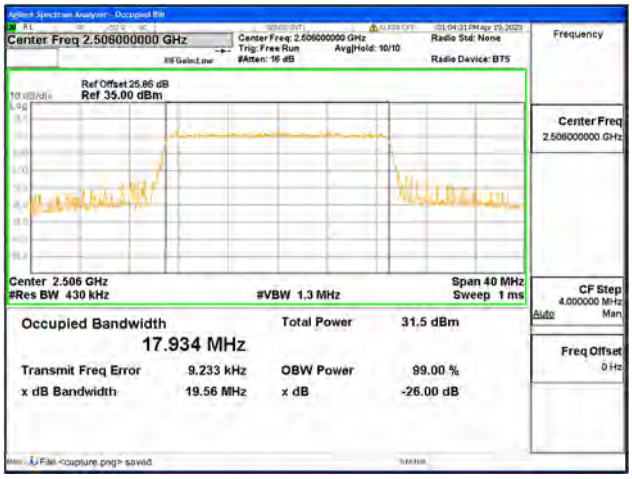
Band41 / 15MHz / 64QAM/ High CH



Band41 / 20MHz / QPSK/ Low CH

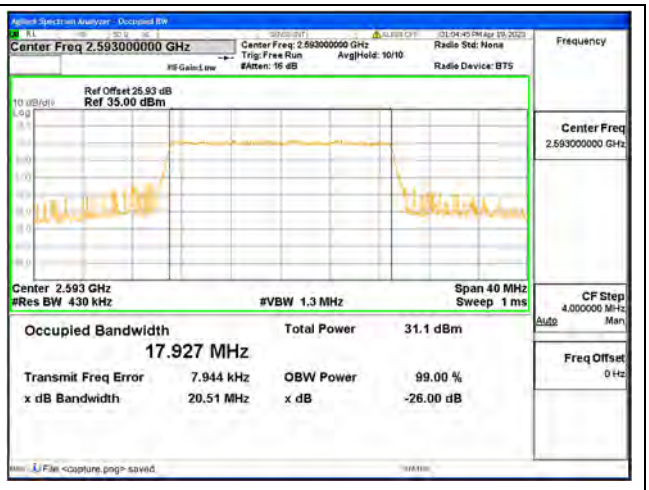


Band41 / 20MHz / 16QAM/ Low CH

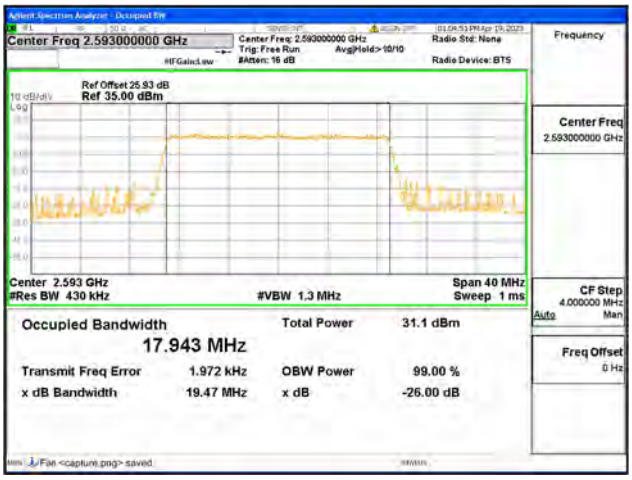


Band41 / 20MHz / 64QAM/ Low CH

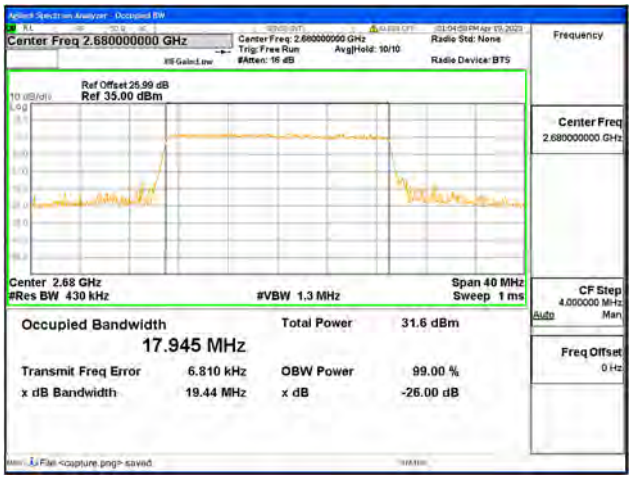
Band41 / 20MHz / QPSK/ Mid CH



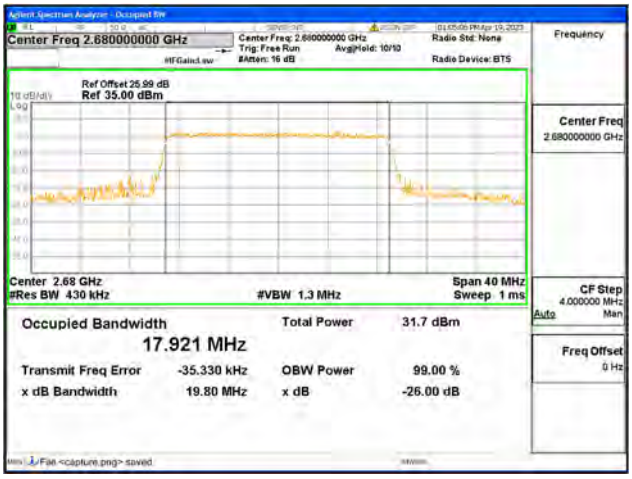
Band41 / 20MHz / 16QAM/ Mid CH



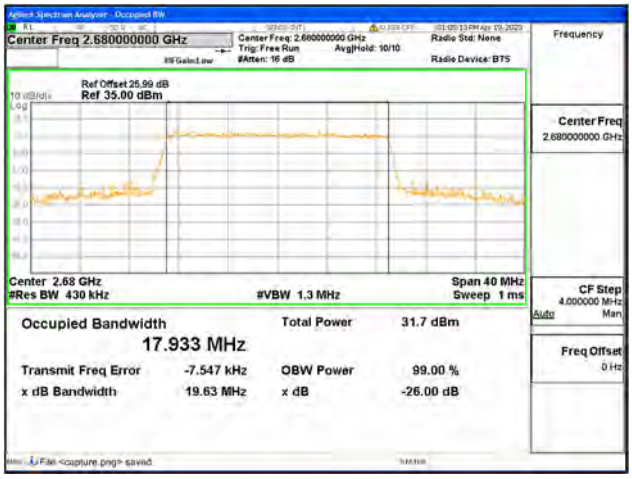
Band41 / 20MHz / 64QAM/ Mid CH



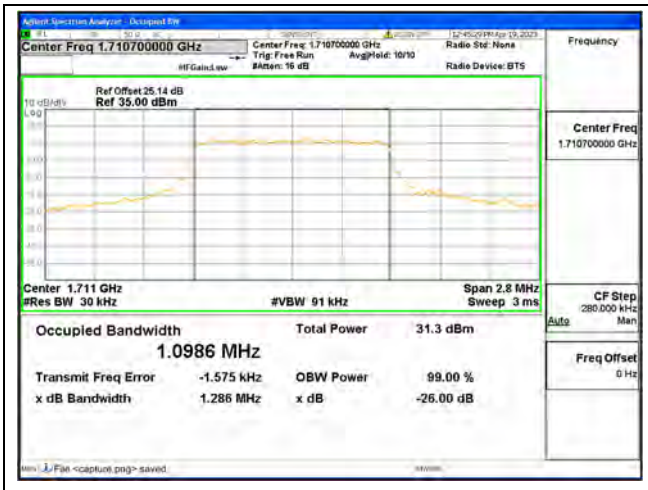
Band41 / 20MHz / QPSK/ High CH



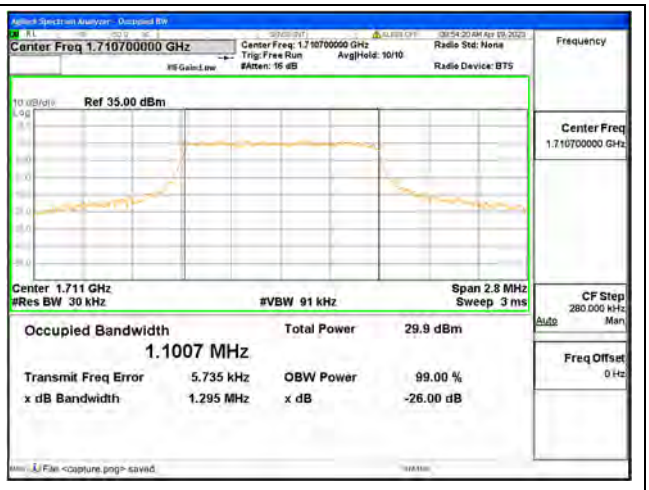
Band41 / 20MHz / 16QAM/ High CH



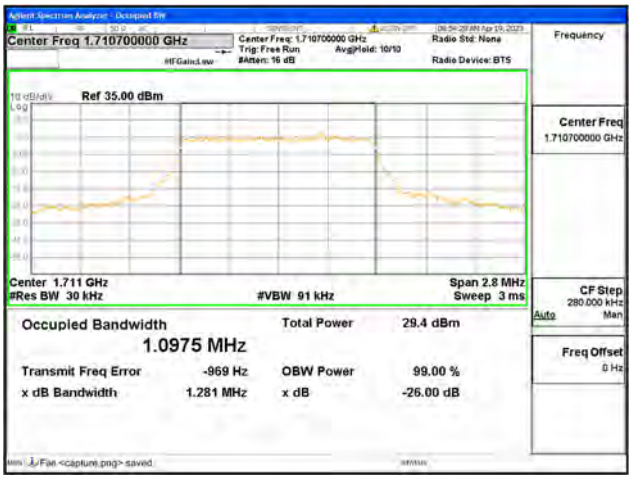
Band41 / 20MHz / 64QAM/ High CH



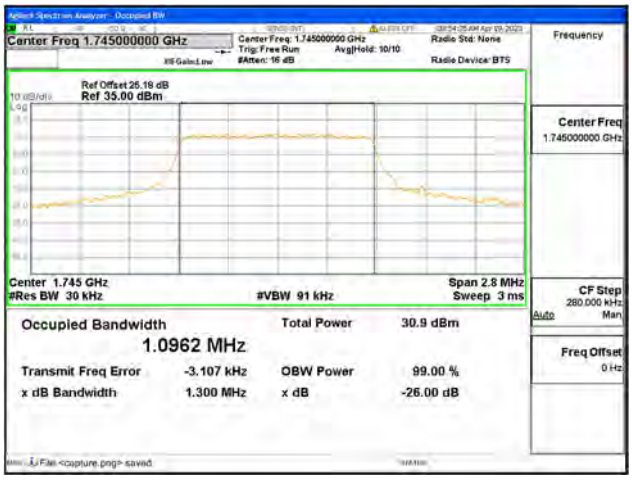
Band66 / 1.4MHz / QPSK/ Low CH



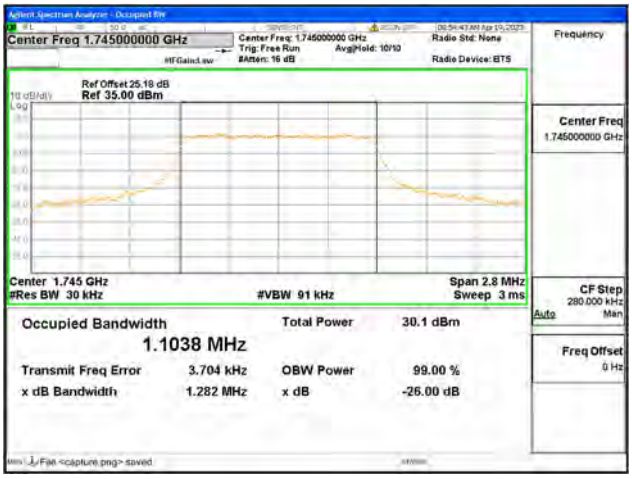
Band66 / 1.4MHz / 16QAM/ Low CH



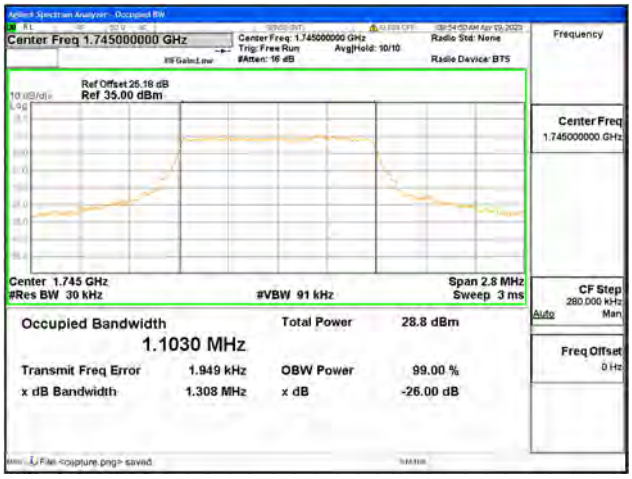
Band66 / 1.4MHz / 64QAM/ Low CH



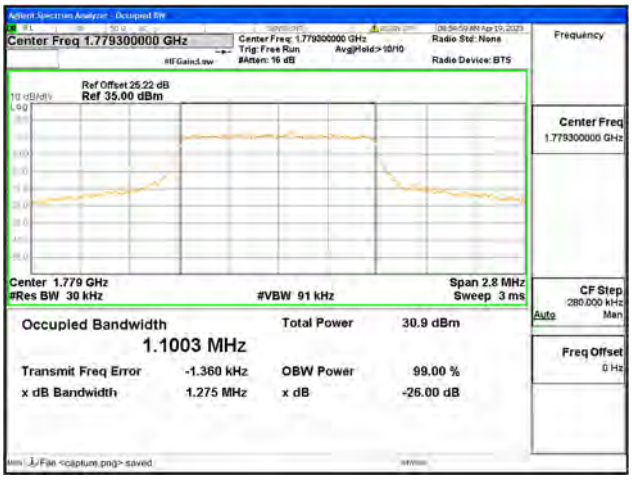
Band66 / 1.4MHz / QPSK/ Mid CH



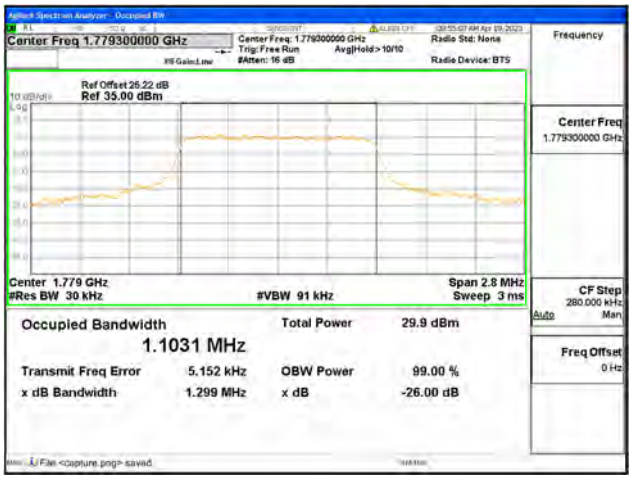
Band66 / 1.4MHz / 16QAM/ Mid CH



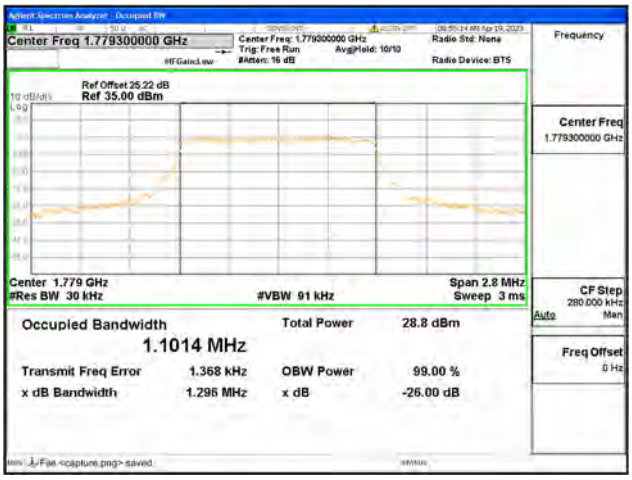
Band66 / 1.4MHz / 64QAM/ Mid CH



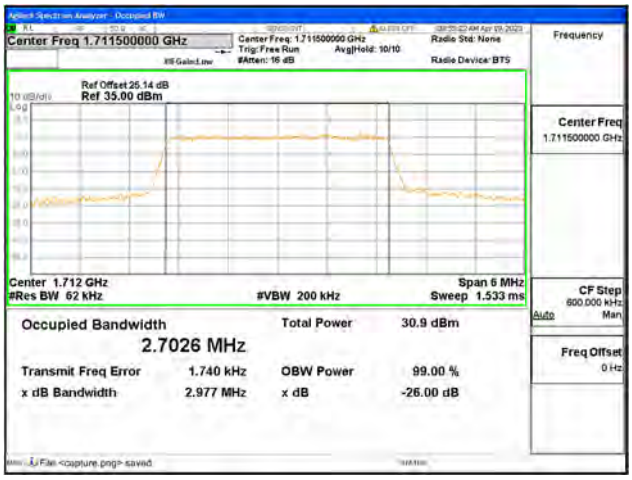
Band66 / 1.4MHz / QPSK/ High CH



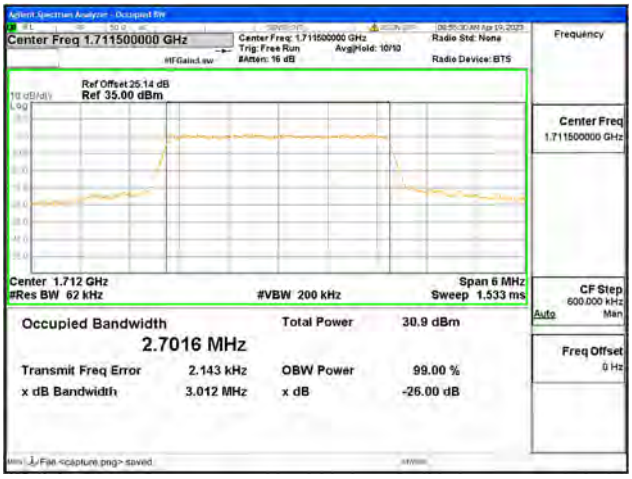
Band66 / 1.4MHz / 16QAM/ High CH



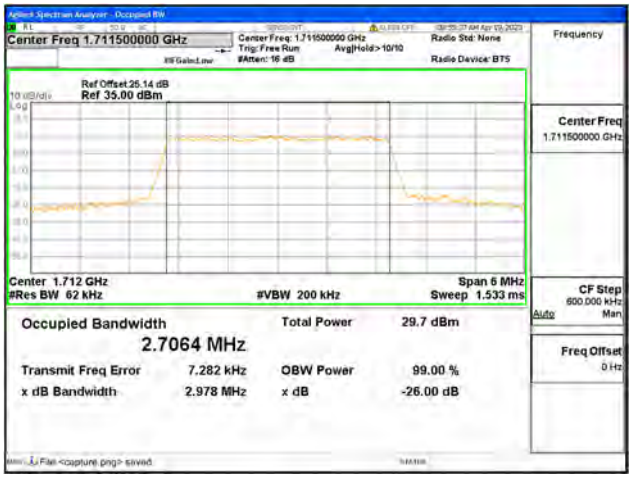
Band66 / 1.4MHz / 64QAM/ High CH



Band66 / 3MHz / QPSK/ Low CH

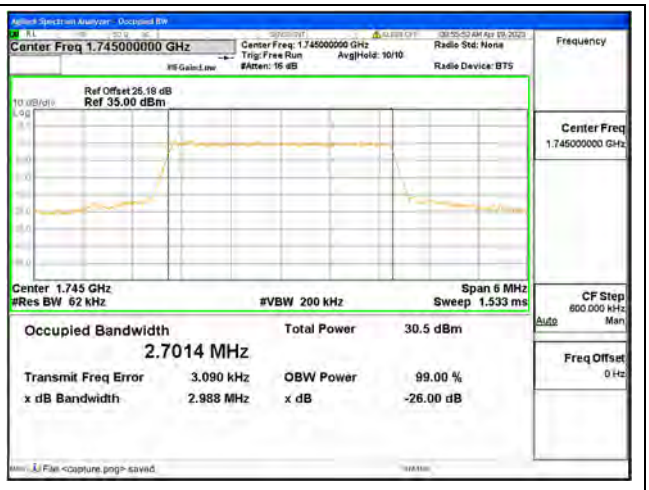


Band66 / 3MHz / 16QAM/ Low CH

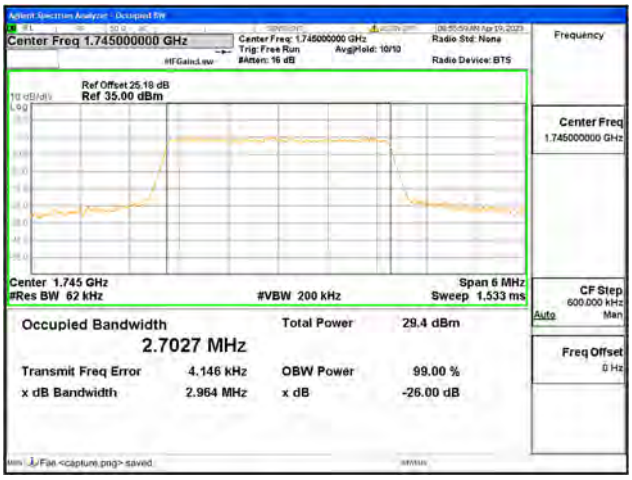


Band66 / 3MHz / 64QAM/ Low CH

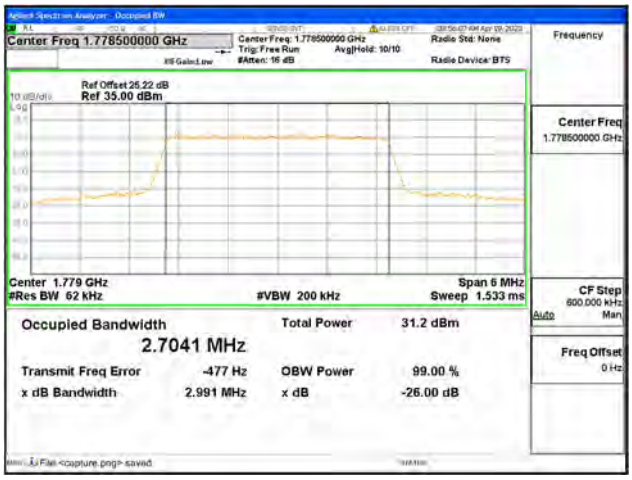
Band66 / 3MHz / QPSK/ Mid CH



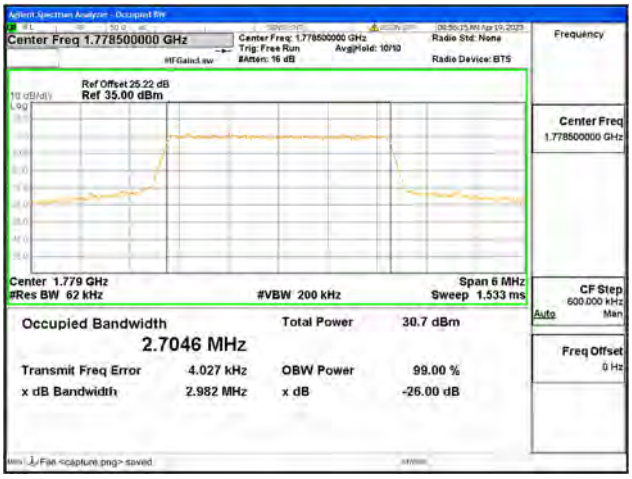
Band66 / 3MHz / 16QAM/ Mid CH



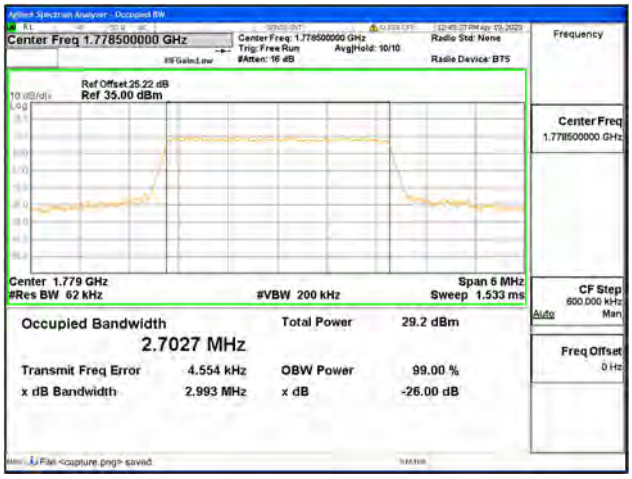
Band66 / 3MHz / 64QAM/ Mid CH



Band66 / 3MHz / QPSK/ High CH

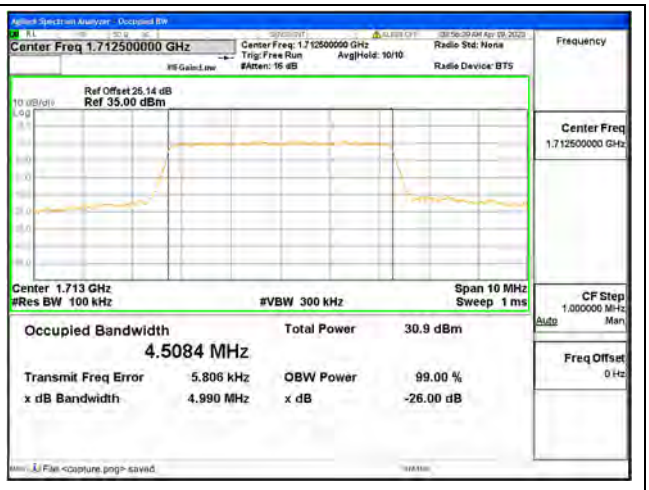


Band66 / 3MHz / 16QAM/ High CH

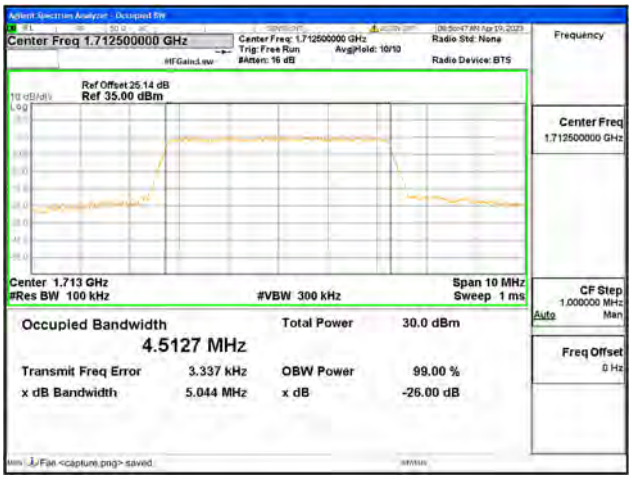


Band66 / 3MHz / 64QAM/ High CH

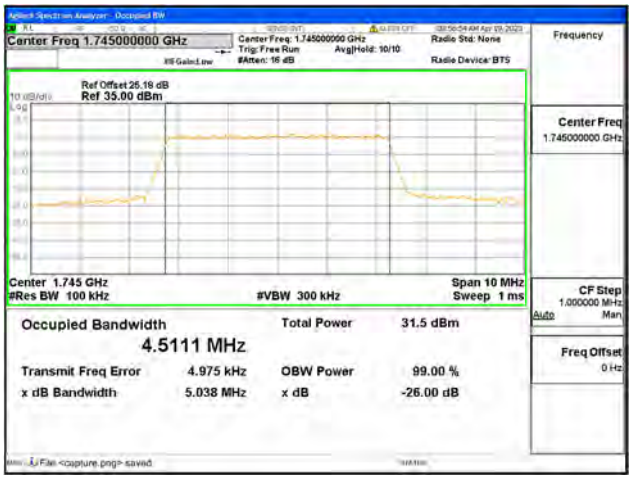
Band66 / 5MHz / QPSK/ Low CH



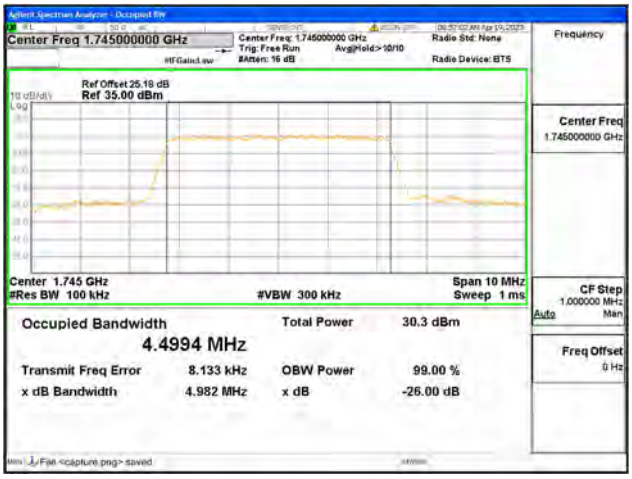
Band66 / 5MHz / 16QAM/ Low CH



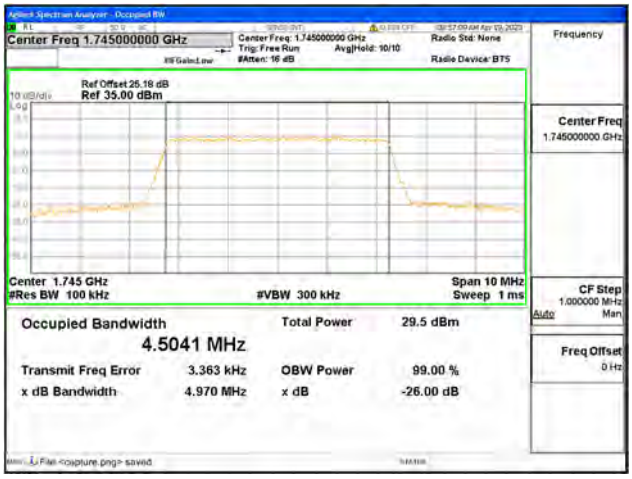
Band66 / 5MHz / 64QAM/ Low CH



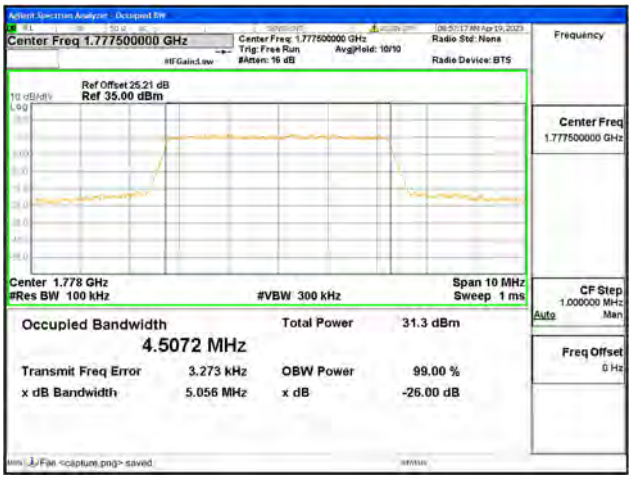
Band66 / 5MHz / QPSK/ Mid CH



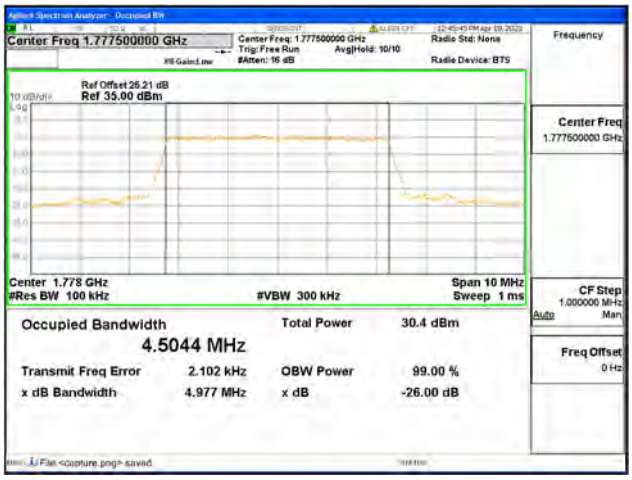
Band66 / 5MHz / 16QAM/ Mid CH



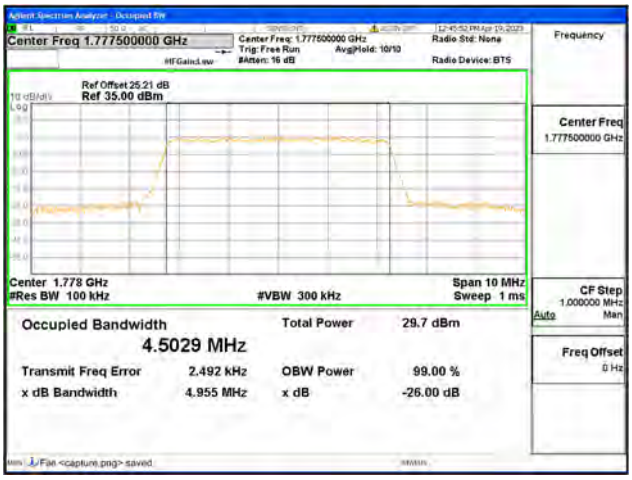
Band66 / 5MHz / 64QAM/ Mid CH



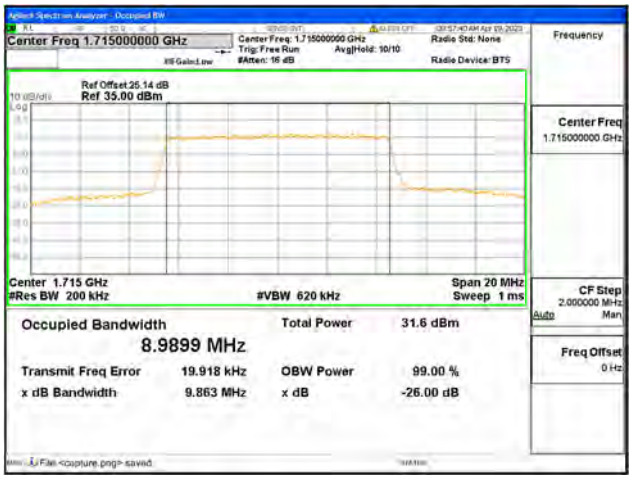
Band66 / 5MHz / QPSK/ High CH



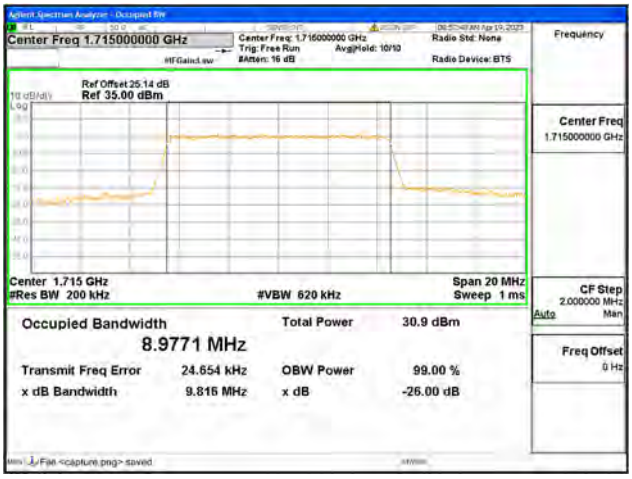
Band66 / 5MHz / 16QAM/ High CH



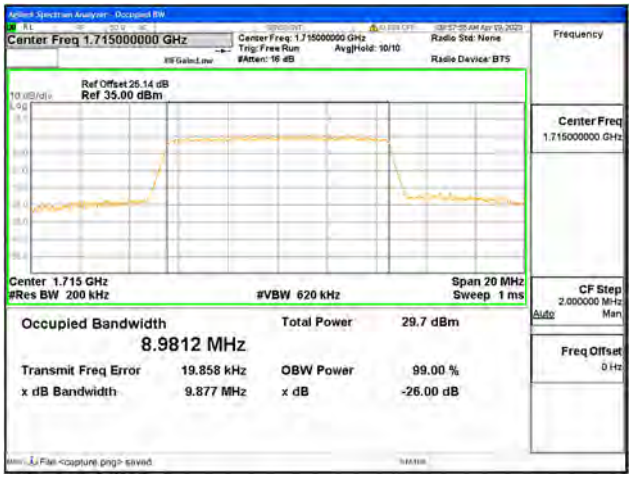
Band66 / 5MHz / 64QAM/ High CH



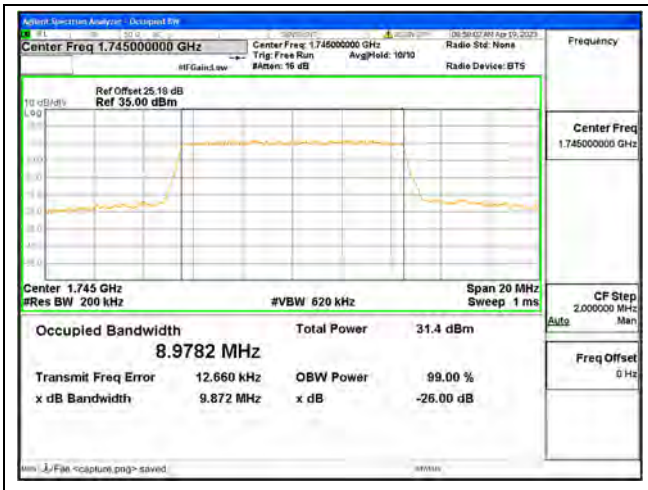
Band66 / 10MHz / QPSK/ Low CH



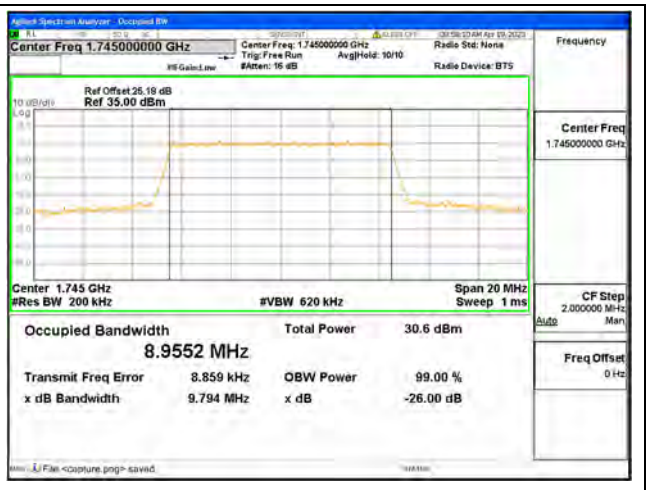
Band66 / 10MHz / 16QAM/ Low CH



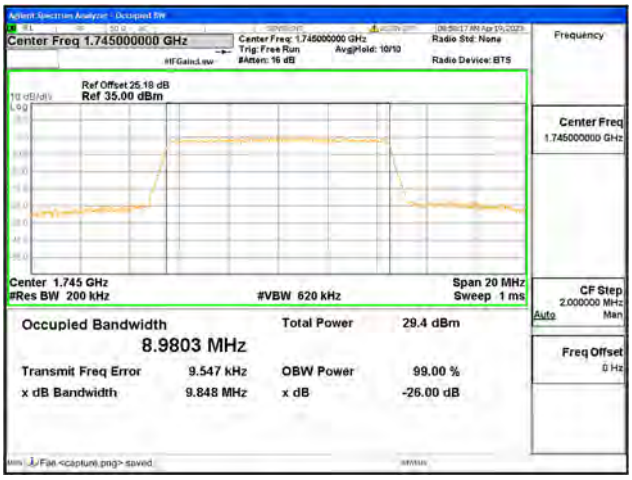
Band66 / 10MHz / 64QAM/ Low CH



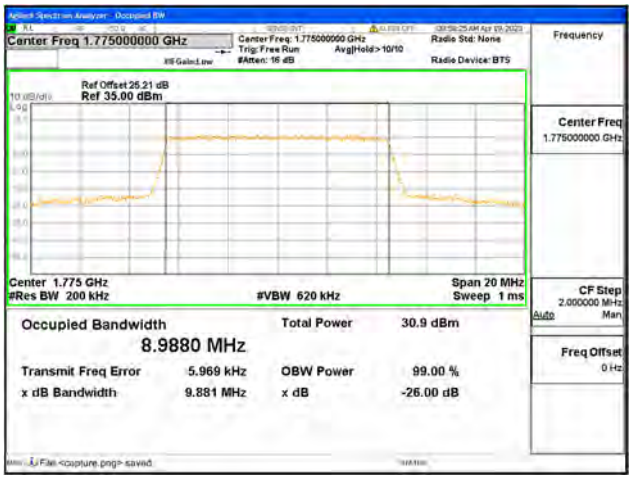
Band66 / 10MHz / QPSK/ Mid CH



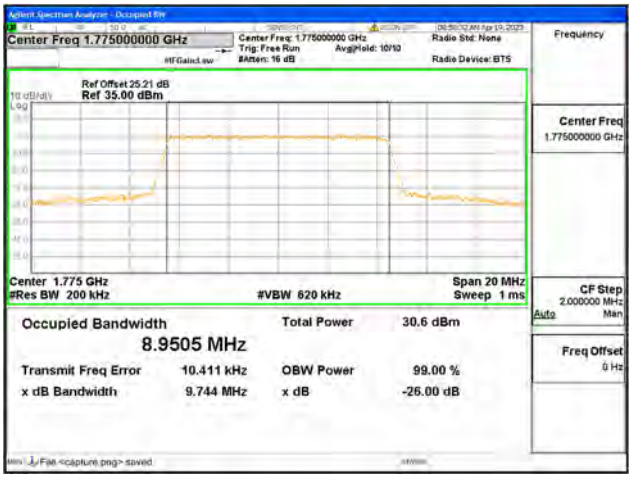
Band66 / 10MHz / 16QAM/ Mid CH



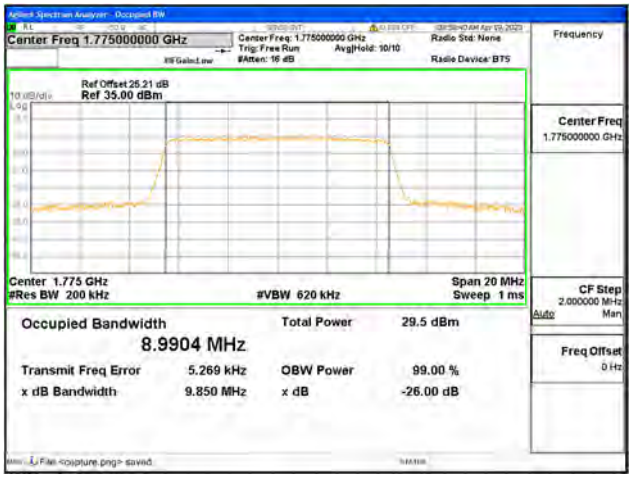
Band66 / 10MHz / 64QAM/ Mid CH



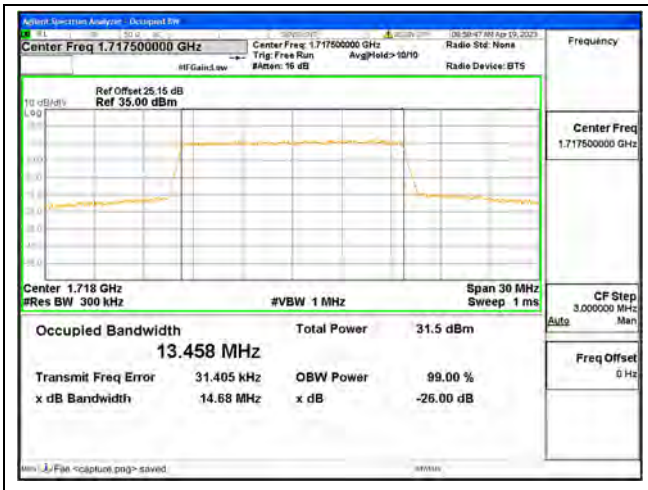
Band66 / 10MHz / QPSK/ High CH



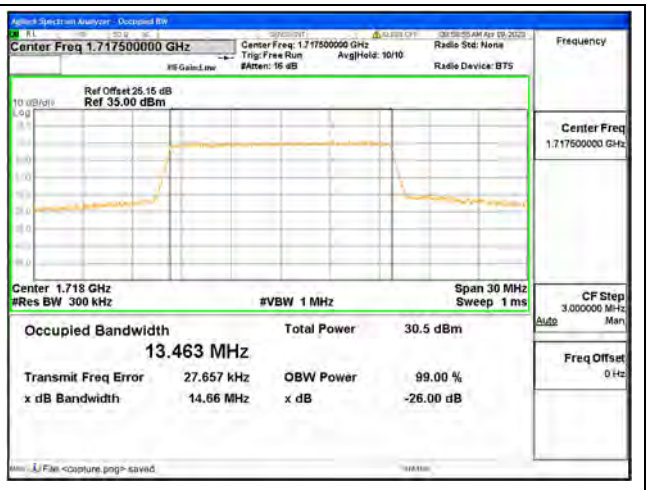
Band66 / 10MHz / 16QAM/ High CH



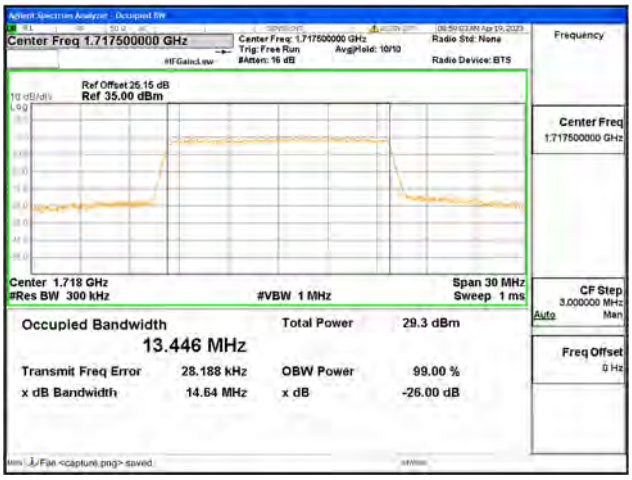
Band66 / 10MHz / 64QAM/ High CH



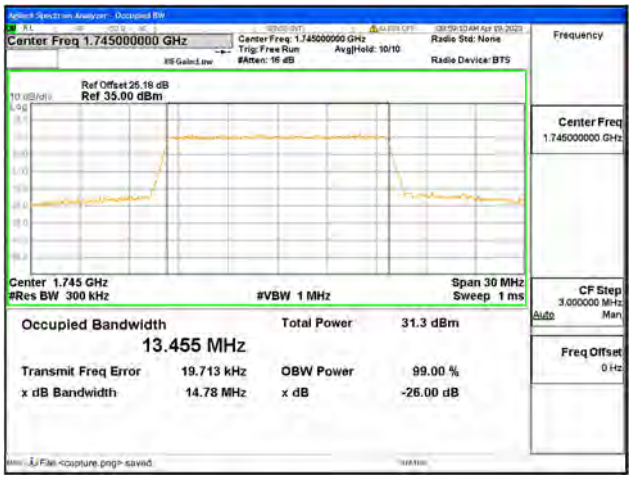
Band66 / 15MHz / QPSK/ Low CH



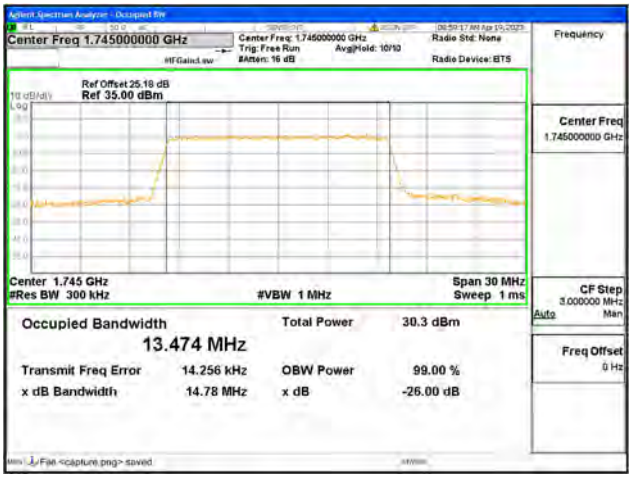
Band66 / 15MHz / 16QAM/ Low CH



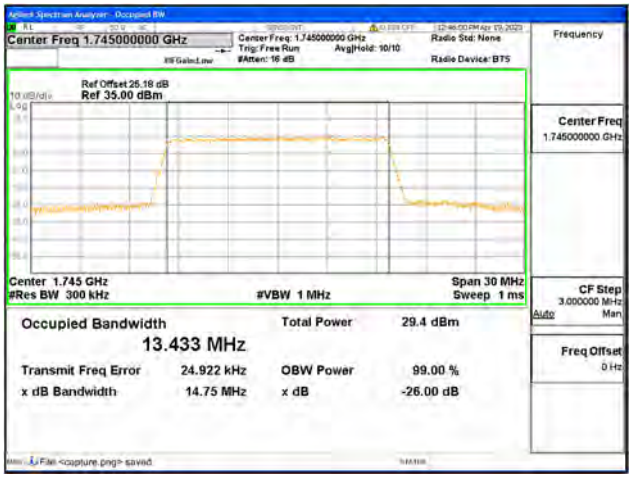
Band66 / 15MHz / 64QAM/ Low CH



Band66 / 15MHz / QPSK/ Mid CH

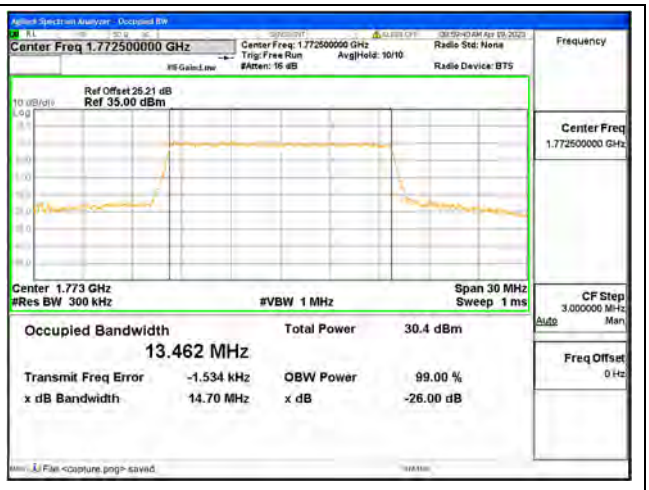


Band66 / 15MHz / 16QAM/ Mid CH

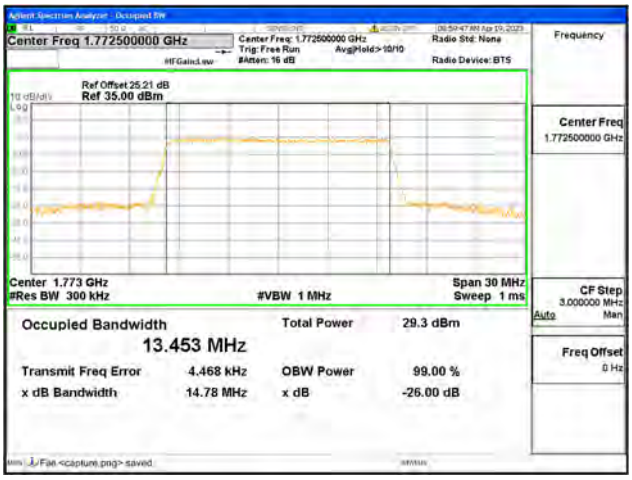


Band66 / 15MHz / 64QAM/ Mid CH

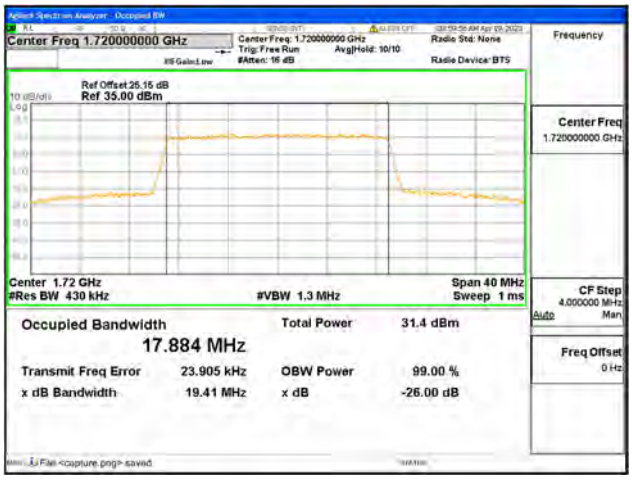
Band66 / 15MHz / QPSK/ High CH



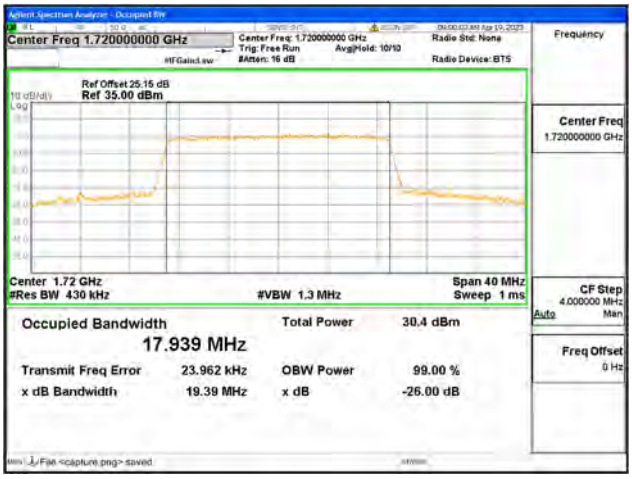
Band66 / 15MHz / 16QAM/ High CH



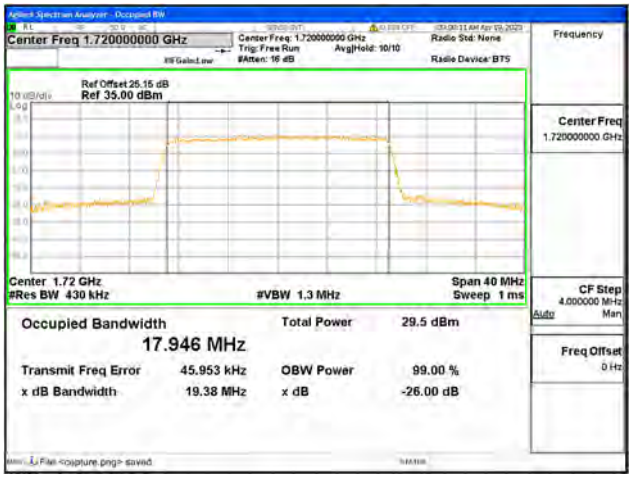
Band66 / 15MHz / 64QAM/ High CH



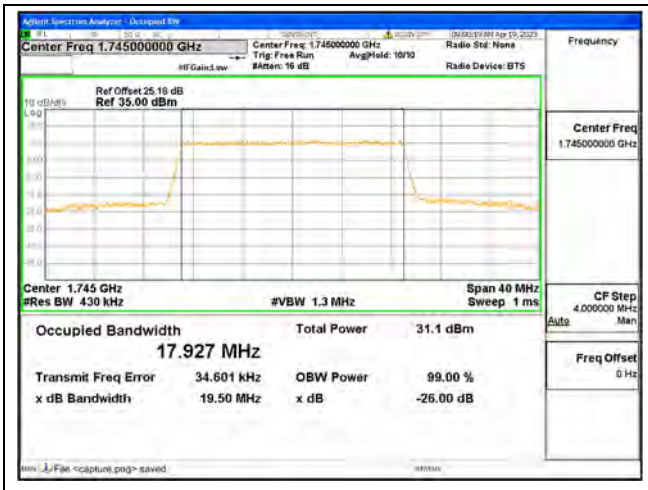
Band66 / 20MHz / QPSK/ Low CH



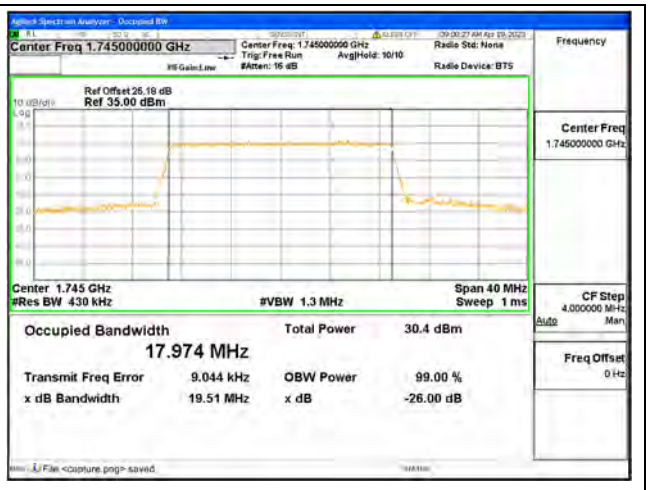
Band66 / 20MHz / 16QAM/ Low CH



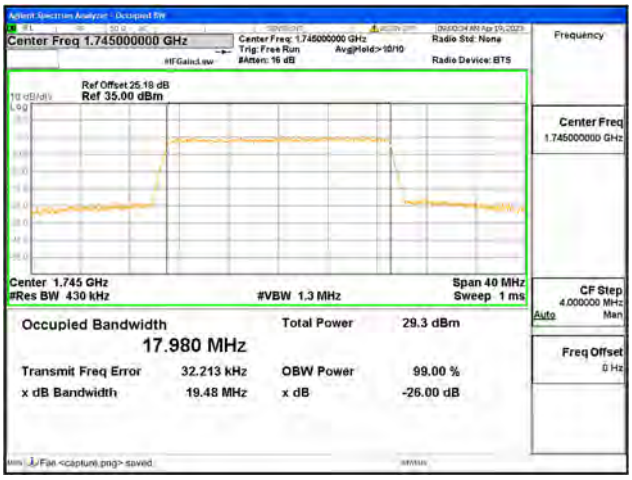
Band66 / 20MHz / 64QAM/ Low CH



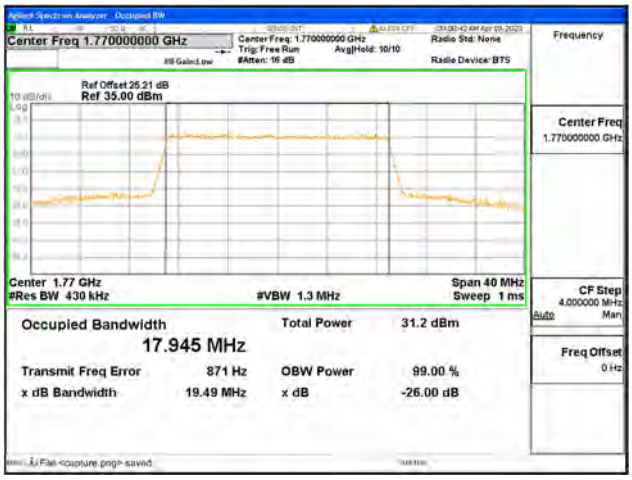
Band66 / 20MHz / QPSK/ Mid CH



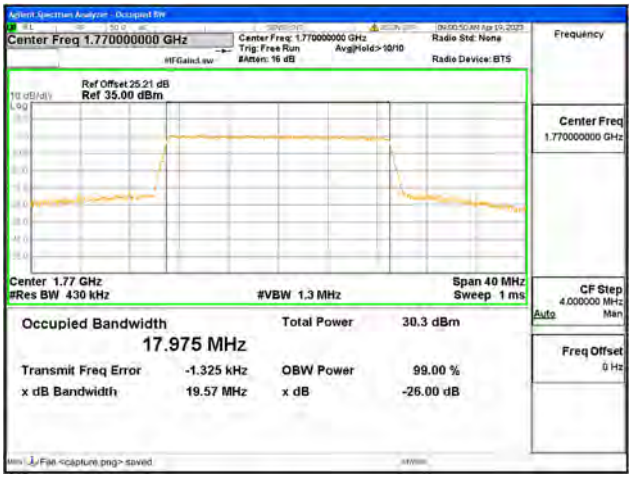
Band66 / 20MHz / 16QAM/ Mid CH



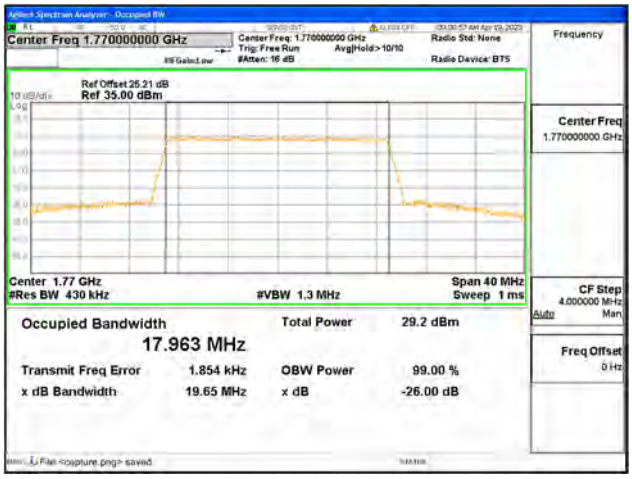
Band66 / 20MHz / 64QAM/ Mid CH



Band66 / 20MHz / QPSK/ High CH



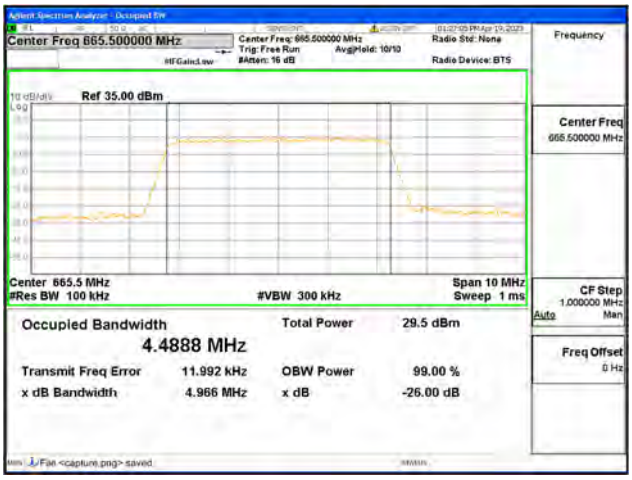
Band66 / 20MHz / 16QAM/ High CH



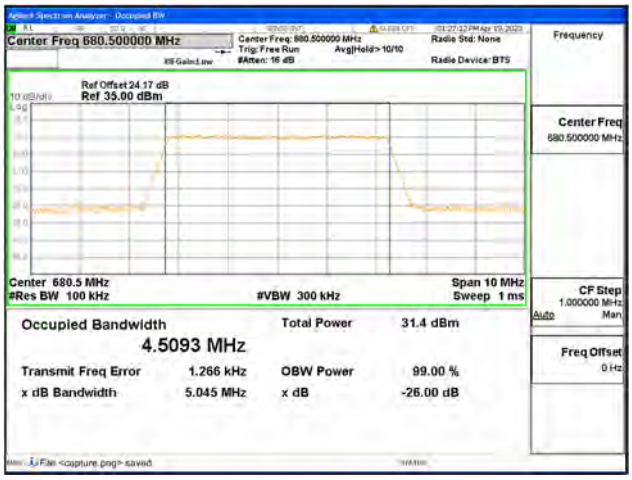
Band66 / 20MHz / 64QAM/ High CH

Band71 / 5MHz / QPSK/ Low CH

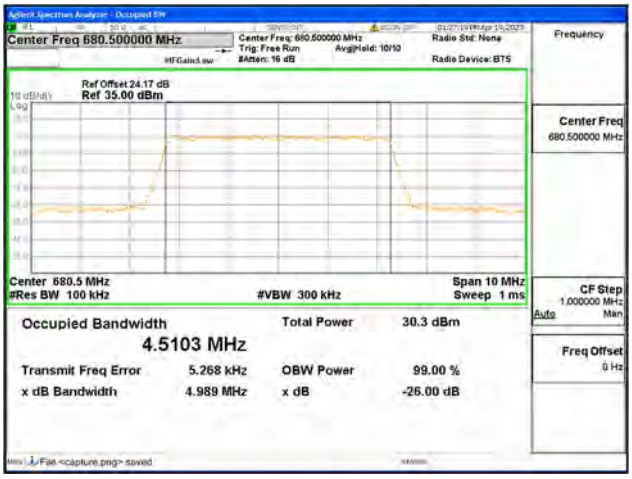
Band71 / 5MHz / 16QAM/ Low CH



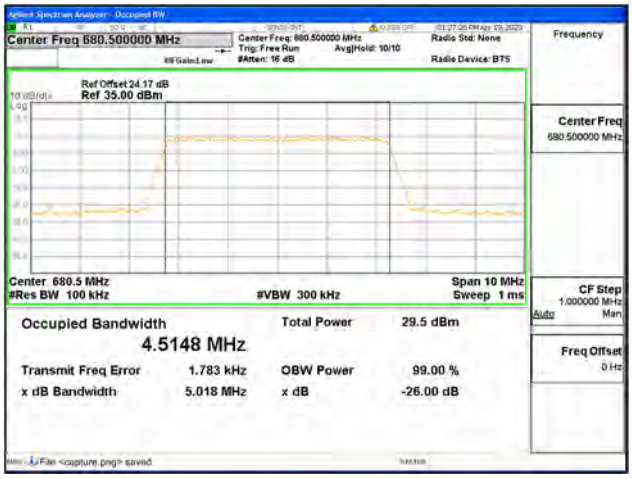
Band71 / 5MHz / 64QAM/ Low CH



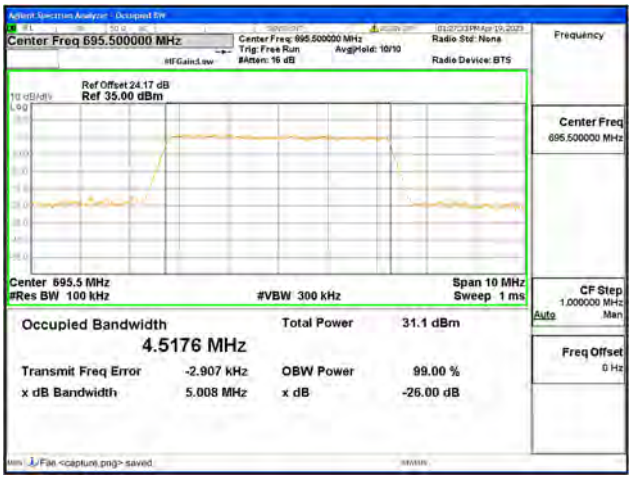
Band71 / 5MHz / QPSK/ Mid CH



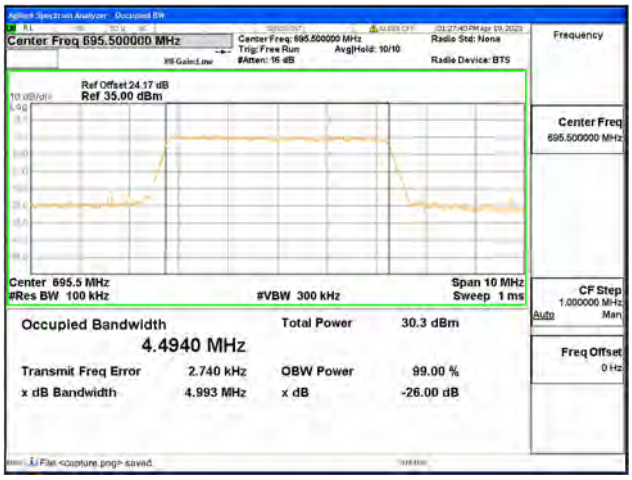
Band71 / 5MHz / 16QAM/ Mid CH



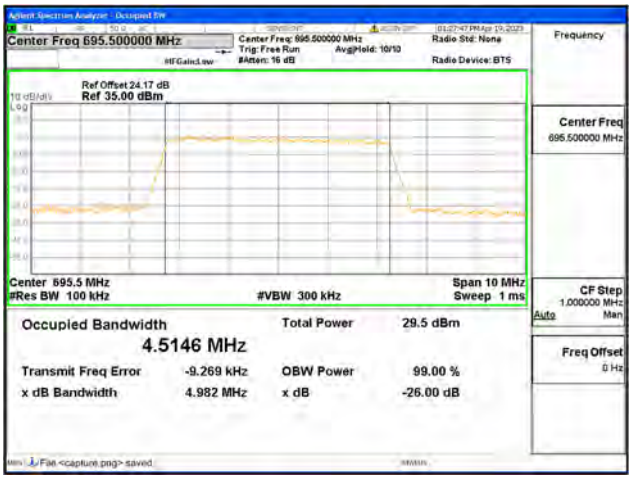
Band71 / 5MHz / 64QAM/ Mid CH



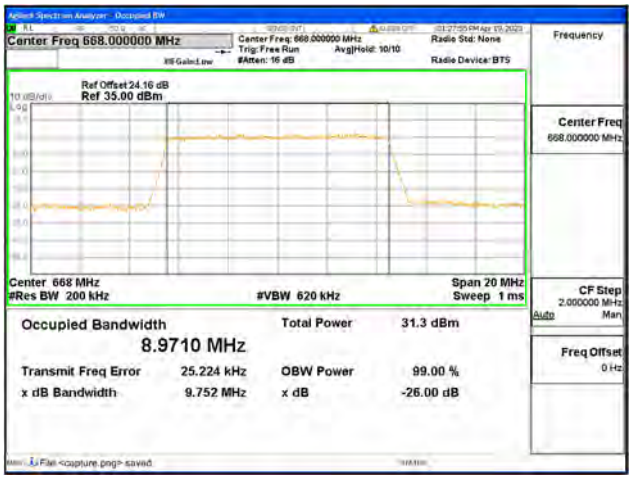
Band71 / 5MHz / QPSK/ High CH



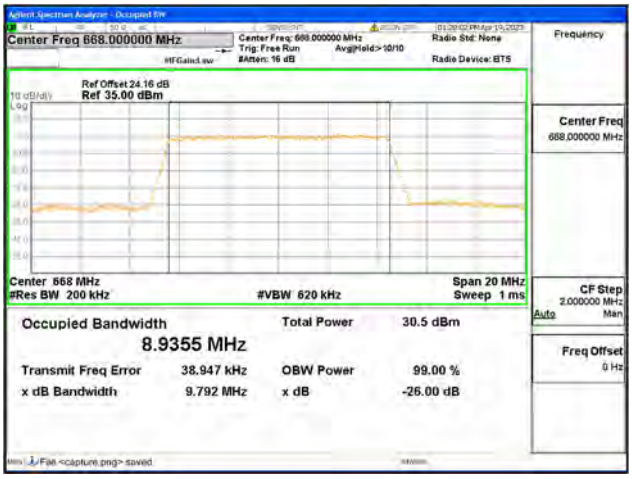
Band71 / 5MHz / 16QAM/ High CH



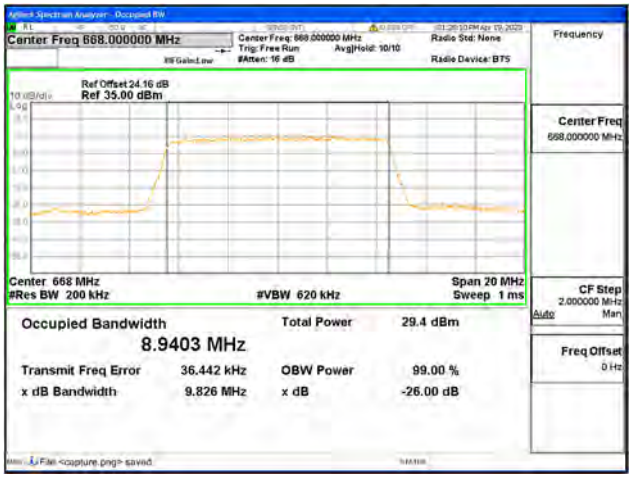
Band71 / 5MHz / 64QAM/ High CH



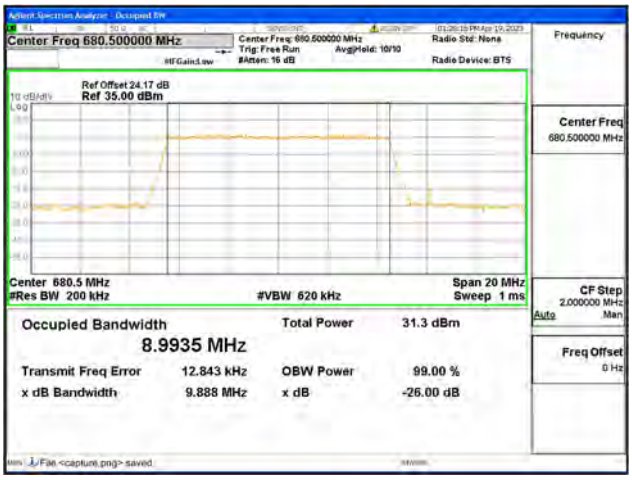
Band71 / 10MHz / QPSK/ Low CH



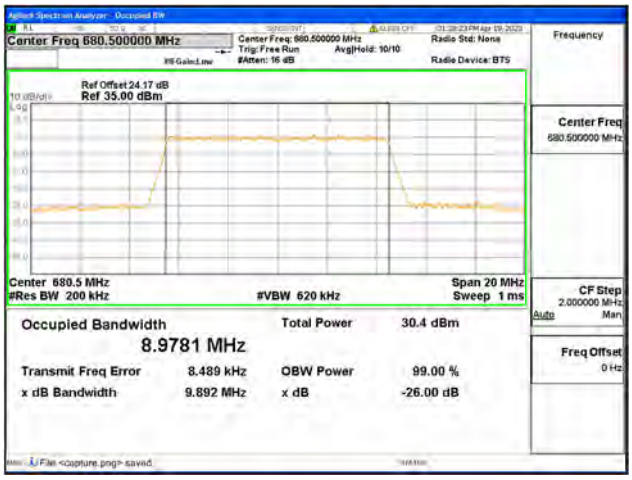
Band71 / 10MHz / 16QAM/ Low CH



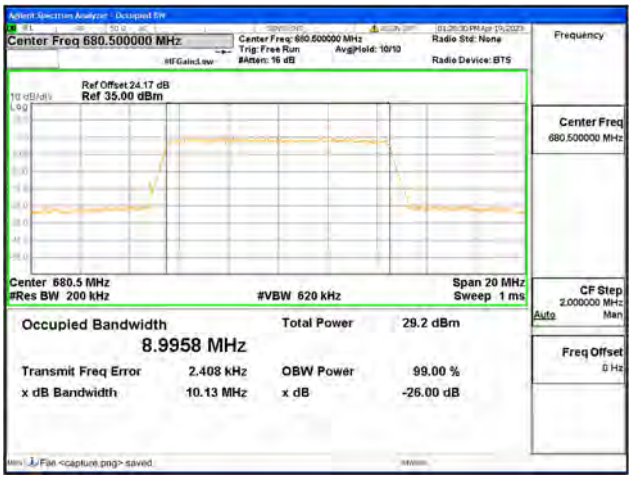
Band71 / 10MHz / 64QAM/ Low CH



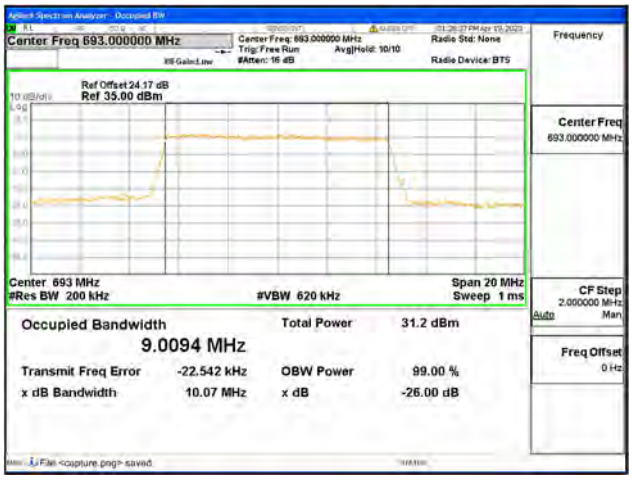
Band71 / 10MHz / QPSK/ Mid CH



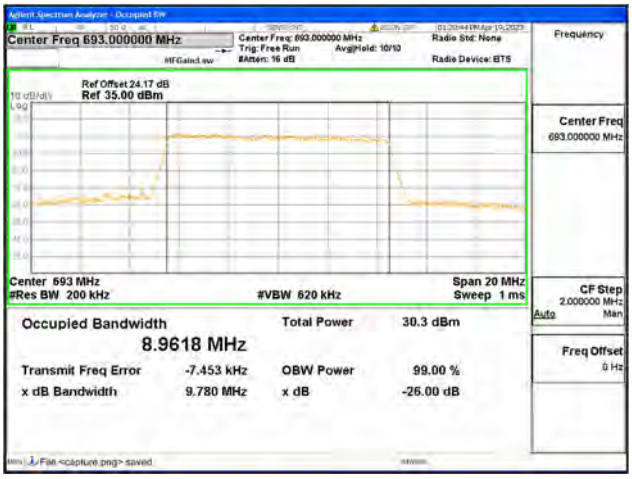
Band71 / 10MHz / 16QAM/ Mid CH



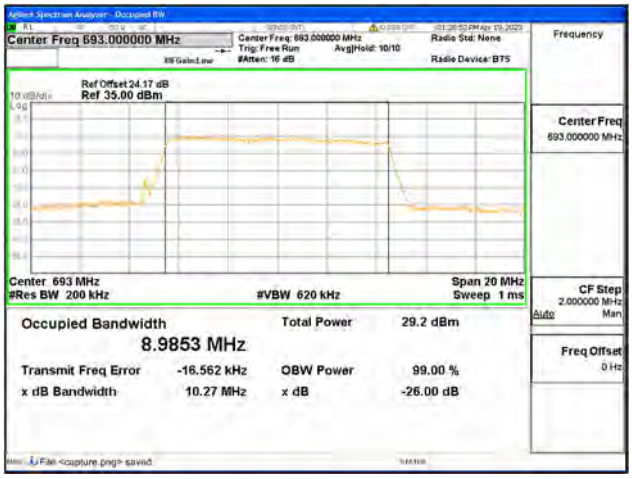
Band71 / 10MHz / 64QAM/ Mid CH



Band71 / 10MHz / QPSK/ High CH

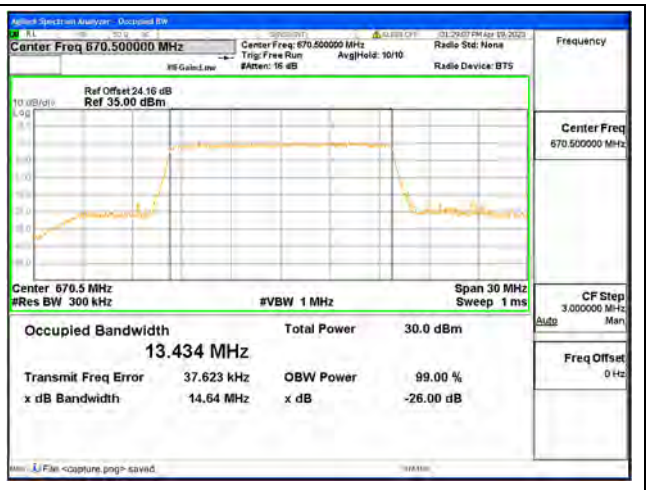


Band71 / 10MHz / 16QAM/ High CH

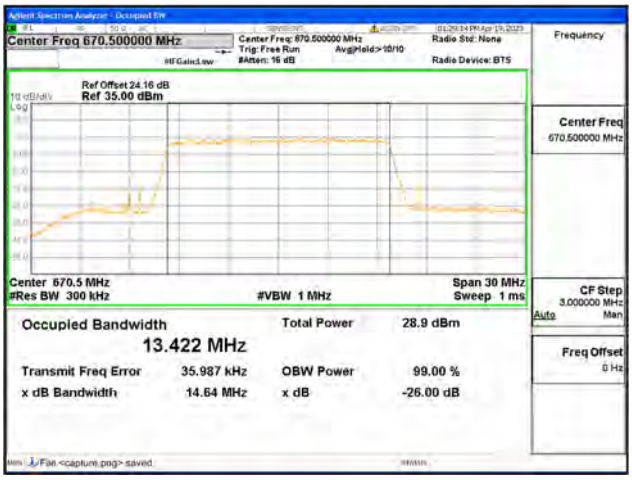


Band71 / 10MHz / 64QAM/ High CH

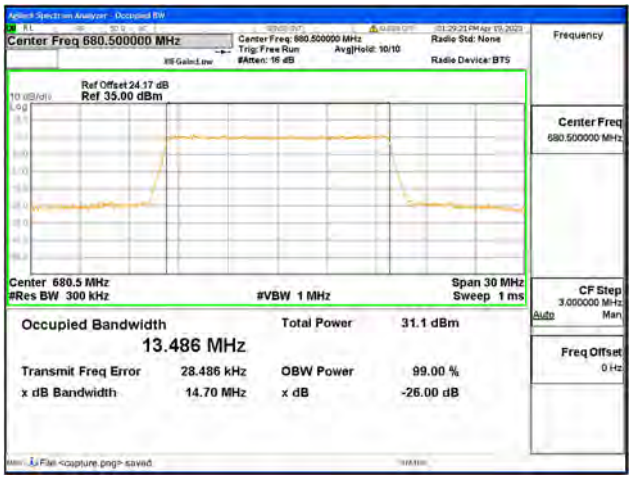
Band71 / 15MHz / QPSK/ Low CH



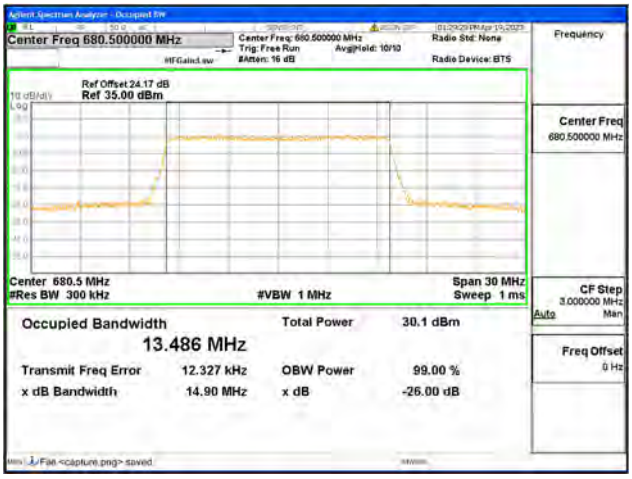
Band71 / 15MHz / 16QAM/ Low CH



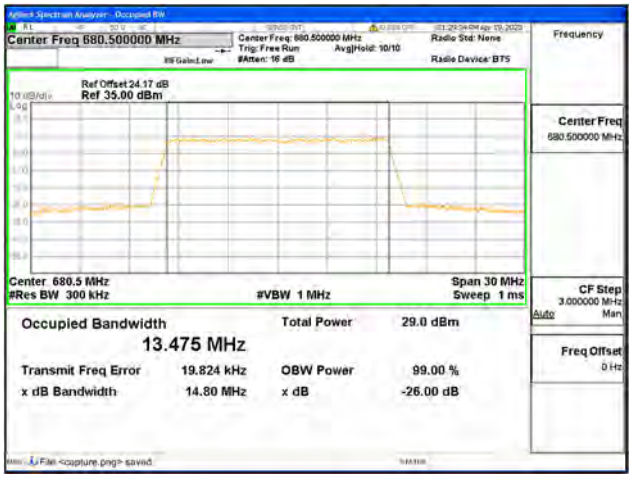
Band71 / 15MHz / 64QAM/ Low CH



Band71 / 15MHz / QPSK/ Mid CH

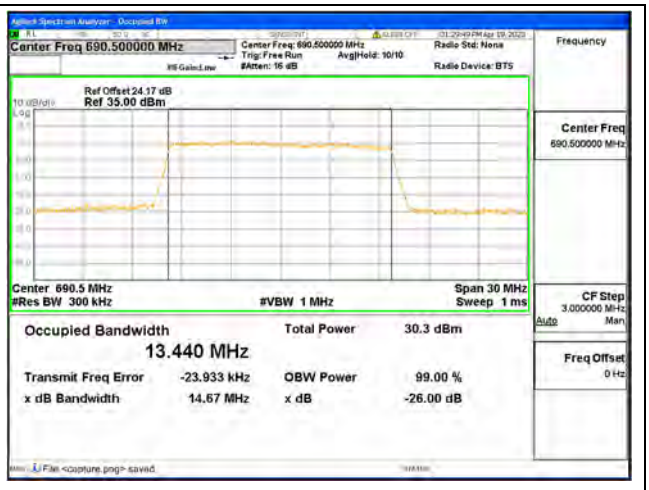


Band71 / 15MHz / 16QAM/ Mid CH

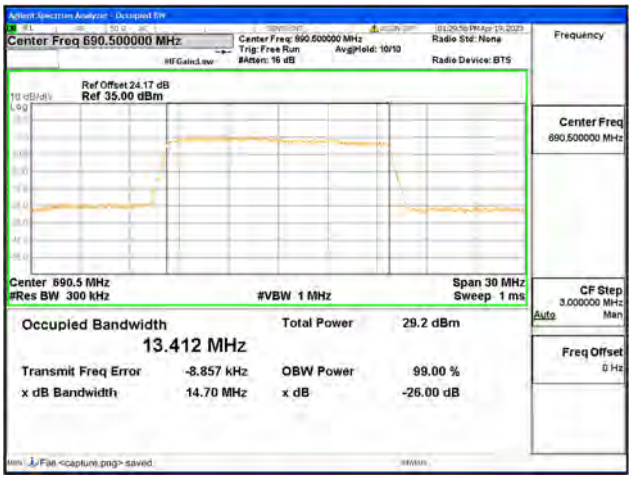


Band71 / 15MHz / 64QAM/ Mid CH

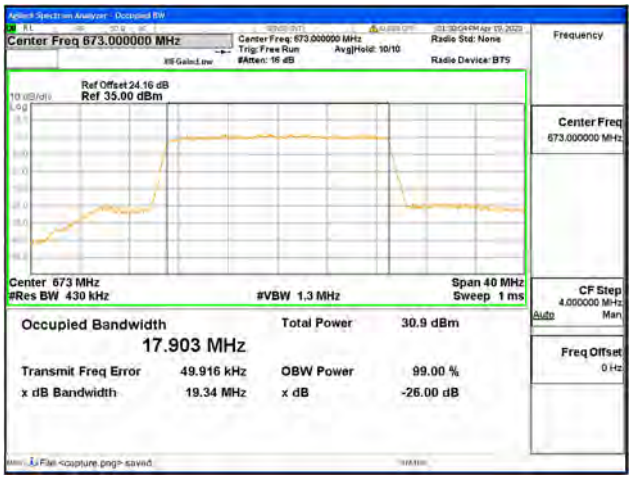
Band71 / 15MHz / QPSK/ High CH



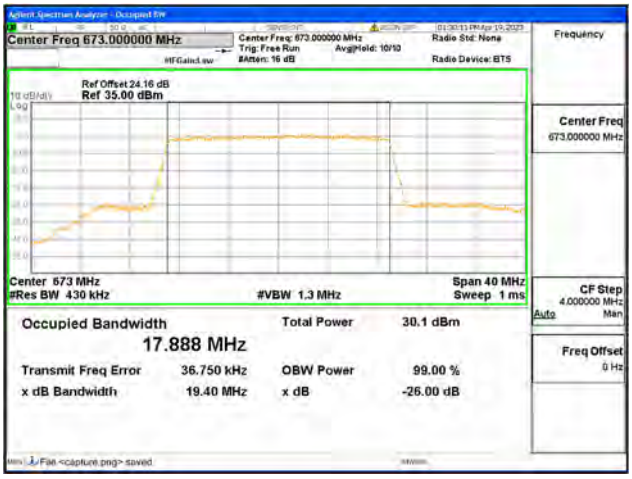
Band71 / 15MHz / 16QAM/ High CH



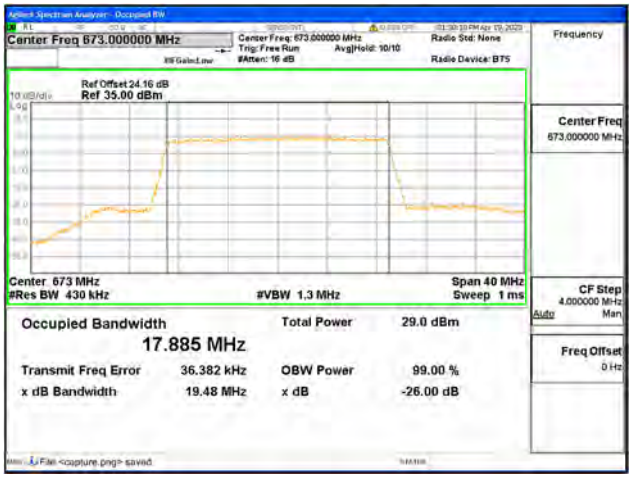
Band71 / 15MHz / 64QAM/ High CH



Band71 / 20MHz / QPSK/ Low CH



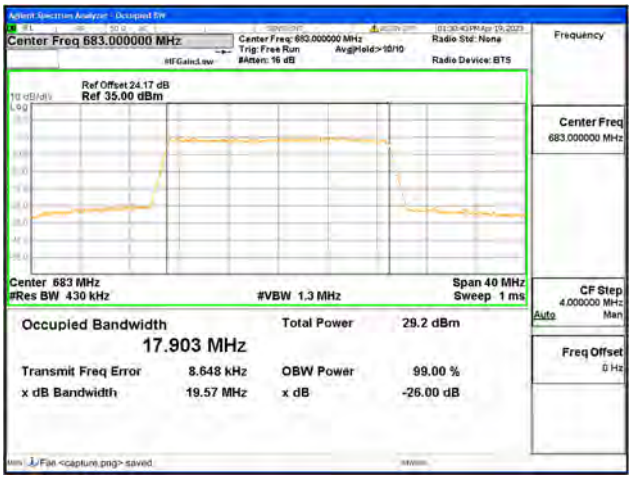
Band71 / 20MHz / 16QAM/ Low CH



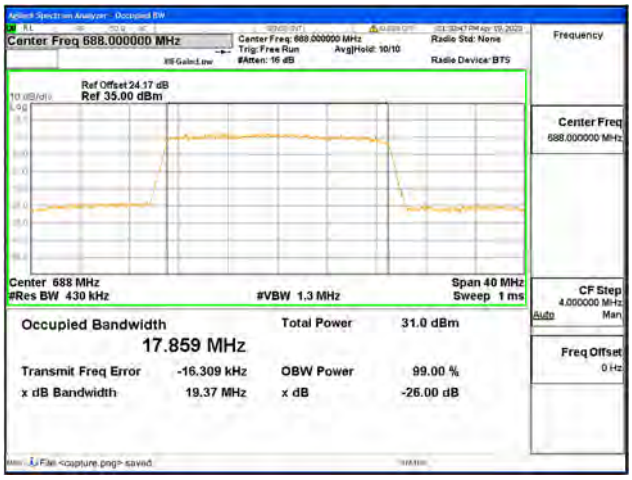
Band71 / 20MHz / 64QAM/ Low CH

Band71 / 20MHz / QPSK/ Mid CH

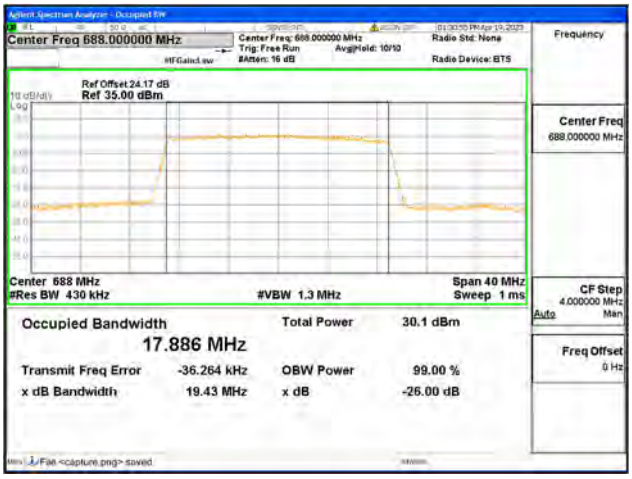
Band71 / 20MHz / 16QAM/ Mid CH



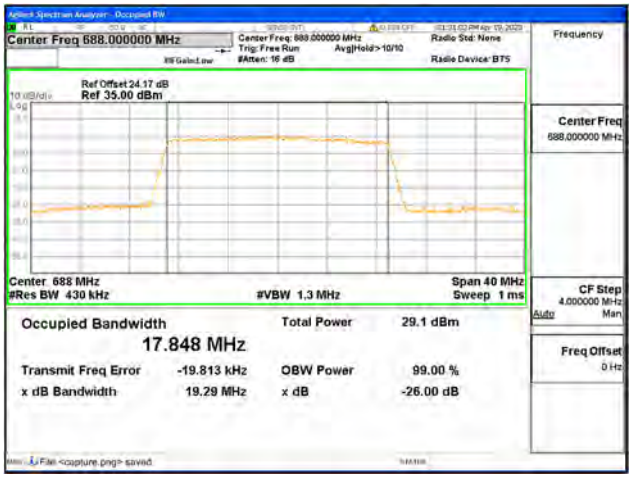
Band71 / 20MHz / 64QAM/ Mid CH



Band71 / 20MHz / QPSK/ High CH



Band71 / 20MHz / 16QAM/ High CH



Band71 / 20MHz / 64QAM/ High CH

2.3. Frequency Stability

2.3.1. Requirement

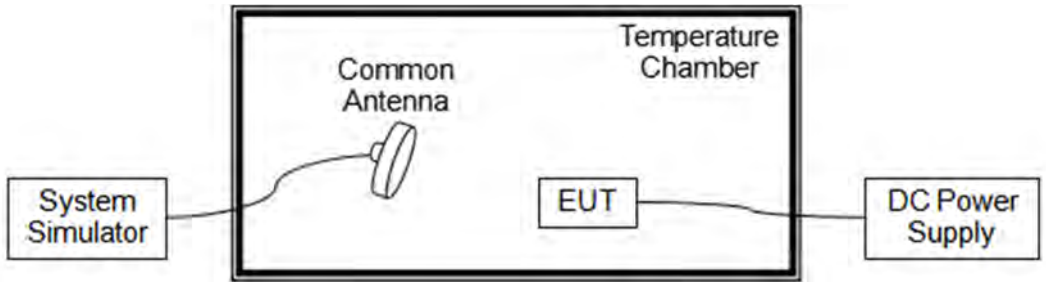
According to FCC section 2.1055, 24.235, 27.54, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. According to FCC section 2.1055, the test conditions are:

(a) The temperature is varied from -30°C to +50°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 0°C to 40°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 3.85V, 4.40V and 3.60V, 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**
Normal	3.85	+20(Ref)	19	0.010	PASS
Normal		0	18	0.010	
Normal		+10	13	0.007	
Normal		+20	21	**0.011**	
Normal		+30	-19	-0.010	
Normal		+40	-17	-0.009	
High	4.40	+20	20	0.011	
BATT.ENDPOINT	3.60	+20	16	0.009	

LTE Band 4, QPSK, Channel 20175, Frequency 1732.5MHz Limit =Within Authorized Band					
Voltage (%)	**Power (VDC)**	**Temp(°C)**	**Fre. Dev.(Hz)**	**Deviation (ppm)**	**Result**
Normal	3.85	+20(Ref)	19	0.011	PASS
Normal		0	14	0.008	
Normal		+10	6	0.003	
Normal		+20	14	0.008	
Normal		+30	20	**0.012**	
Normal		+40	12	0.007	
High	4.40	+20	-9	-0.005	
BATT.ENDPOINT	3.60	+20	13	0.008	

LTE Band 5, QPSK, Channel 20525, Frequency 836.5MHz Limit=±2.5ppm					
Voltage (%)	**Power (VDC)**	**Temp(°C)**	**Fre. Dev.(Hz)**	**Deviation (ppm)**	**Result**
Normal	3.85	+20(Ref)	0	0.000	PASS
Normal		0	15	0.018	
Normal		+10	16	0.019	
Normal		+20	14	0.017	
Normal		+30	19	**0.023**	
Normal		+40	15	0.018	
High	4.40	+20	-17	-0.020	
BATT.ENDPOINT	3.60	+20	-4	-0.005	

LTE Band 7, 64QAM, Channel 21100, Frequency 2535.0MHz Limit =Within Authorized Band					
Voltage (%)	**Power (VDC)**	**Temp (°C)**	**Fre. Dev. (Hz)**	**Deviation (ppm)**	**Result**
Normal	3.85	+20(Ref)	2	0.001	PASS
Normal		0	15	0.006	
Normal		+10	-22	-0.009	
Normal		+20	22	**0.009**	
Normal		+30	-8	-0.003	
Normal		+40	14	0.006	
High	4.40	+20	-1	0.000	
BATT.ENDPOINT	3.60	+20	2	0.001	

LTE Band 12, QPSK, Channel 23095, Frequency 707.5MHz Limit =Within Authorized Band					
Voltage (%)	**Power (VDC)**	**Temp(°C)**	**Fre. Dev.(Hz)**	**Deviation (ppm)**	**Result**
Normal	3.85	+20(Ref)	14	0.020	PASS
Normal		0	12	0.017	
Normal		+10	16	0.023	
Normal		+20	-8	-0.011	
Normal		+30	15	0.021	
Normal		+40	22	**0.031**	
High	4.40	+20	19	0.027	
BATT.ENDPOINT	3.60	+20	-3	-0.004	

LTE Band 13, QPSK, Channel 23230, Frequency 782MHz Limit=±2.5ppm					
Voltage (%)	**Power (VDC)**	**Temp(°C)**	**Fre. Dev.(Hz)**	**Deviation (ppm)**	**Result**
Normal	3.85	+20(Ref)	22	**0.028**	PASS
Normal		0	8	0.010	
Normal		+10	18	0.023	
Normal		+20	13	0.017	
Normal		+30	15	0.019	
Normal		+40	-21	-0.027	
High	4.40	+20	0	0.000	
BATT.ENDPOINT	3.60	+20	19	0.024	

LTE Band 17, 64QAM, Channel 23790, Frequency 710.0MHz Limit =Within Authorized Band					
Voltage (%)	**Power (VDC)**	**Temp (°C)**	**Fre. Dev. (Hz)**	**Deviation (ppm)**	**Result**
Normal	3.85	+20(Ref)	11	0.015	PASS
Normal		0	14	0.020	
Normal		+10	22	**0.031**	
Normal		+20	6	0.008	
Normal		+30	17	0.024	
Normal		+40	15	0.021	
High	4.40	+20	15	0.021	
BATT.ENDPOINT	3.60	+20	-11	-0.015	

LTE Band 18, 64QAM, Channel 23970, Frequency 827.0MHz Limit=±2.5ppm					
Voltage (%)	**Power (VDC)**	**Temp (°C)**	**Fre. Dev. (Hz)**	**Deviation (ppm)**	**Result**
Normal	3.85	+20(Ref)	7	0.008	PASS
Normal		0	20	**0.024**	
Normal		+10	14	0.017	
Normal		+20	16	0.019	
Normal		+30	-8	-0.010	
Normal		+40	17	0.021	
High	4.40	+20	14	0.017	
BATT.ENDPOINT	3.60	+20	19	0.023	

LTE Band 19, 64QAM, Channel 24075, Frequency 837.5MHz Limit=±2.5ppm					
Voltage (%)	**Power (VDC)**	**Temp (°C)**	**Fre. Dev. (Hz)**	**Deviation (ppm)**	**Result**
Normal	3.85	+20(Ref)	13	0.016	PASS
Normal		0	19	0.023	
Normal		+10	18	0.021	
Normal		+20	20	**0.024**	
Normal		+30	-9	-0.011	
Normal		+40	17	0.020	
High	4.40	+20	17	0.020	
BATT.ENDPOINT	3.60	+20	18	0.021	

LTE Band 25, QPSK, Channel 26365, Frequency 1882.5MHz Limit =Within Authorized Band					
Voltage (%)	**Power (VDC)**	**Temp(°C)**	**Fre. Dev.(Hz)**	**Deviation (ppm)**	**Result**
Normal	3.85	+20(Ref)	20	0.011	PASS
Normal		0	7	0.004	
Normal		+10	17	0.009	
Normal		+20	13	0.007	
Normal		+30	23	**0.012**	
Normal		+40	21	0.011	
High	4.40	+20	18	0.010	
BATT.ENDPOINT	3.60	+20	17	0.009	

LTE Band 26, QPSK, Channel 26915, Frequency 836.5MHz Limit=±2.5ppm					
Voltage (%)	**Power (VDC)**	**Temp(°C)**	**Fre. Dev.(Hz)**	**Deviation (ppm)**	**Result**
Normal	3.85	+20(Ref)	13	0.016	PASS
Normal		0	21	**0.025**	
Normal		+10	-9	-0.011	
Normal		+20	13	0.016	
Normal		+30	18	0.022	
Normal		+40	-2	-0.002	
High	4.40	+20	5	0.006	
BATT.ENDPOINT	3.60	+20	18	0.022	

LTE Band 30, 64QAM, Channel 27710, Frequency 2310.0MHz Limit =Within Authorized Band					
Voltage (%)	**Power (VDC)**	**Temp (°C)**	**Fre. Dev. (Hz)**	**Deviation (ppm)**	**Result**
Normal	3.85	+20(Ref)	13	0.006	PASS
Normal		0	3	0.001	
Normal		+10	19	0.008	
Normal		+20	20	0.009	
Normal		+30	19	0.008	
Normal		+40	21	**0.009**	
High	4.40	+20	-21	-0.009	
BATT.ENDPOINT	3.60	+20	-18	-0.008	

LTE Band 41, QPSK, Channel 40620, Frequency 2593MHz Limit =Within Authorized Band					
Voltage (%)	**Power (VDC)**	**Temp(°C)**	**Fre. Dev.(Hz)**	**Deviation (ppm)**	**Result**
Normal	3.85	+20(Ref)	14	0.005	PASS
Normal		0	7	0.003	
Normal		+10	18	0.007	
Normal		+20	20	**0.008**	
Normal		+30	18	0.007	
Normal		+40	15	0.006	
High	4.40	+20	-9	-0.003	
BATT.ENDPOINT	3.60	+20	19	0.007	

LTE Band 66, QPSK, Channel 132322, Frequency 1745MHz Limit =Within Authorized Band					
Voltage (%)	**Power (VDC)**	**Temp(°C)**	**Fre. Dev.(Hz)**	**Deviation (ppm)**	**Result**
Normal	3.85	+20(Ref)	13	0.007	PASS
Normal		0	15	0.009	
Normal		+10	-4	-0.002	
Normal		+20	14	0.008	
Normal		+30	22	**0.013**	
Normal		+40	-5	-0.003	
High	4.40	+20	17	0.010	
BATT.ENDPOINT	3.60	+20	1	0.001	

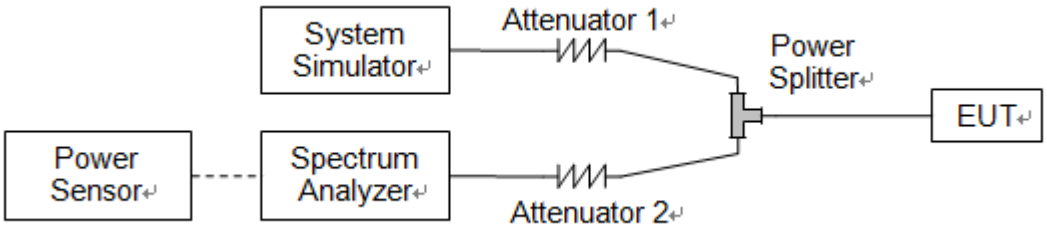
LTE Band 71, QPSK, Channel 133322, Frequency 683.0MHz Limit =Within Authorized Band					
Voltage (%)	**Power (VDC)**	**Temp(°C)**	**Fre. Dev.(Hz)**	**Deviation (ppm)**	**Result**
Normal	3.85	+20(Ref)	15	0.022	PASS
Normal		0	17	0.025	
Normal		+10	17	0.025	
Normal		+20	-21	-0.031	
Normal		+30	-13	-0.019	
Normal		+40	6	0.009	
High	4.40	+20	13	0.019	
BATT.ENDPOINT	3.60	+20	-11	-0.016	

2.4. Peak to Average Radio

2.4.1. Requirement

According to FCC section 24.232(d), 27.50(d) and 27.50(j)(4), 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	5.59	<=13	PASS
	Low	16QAM	6.36	<=13	PASS
	Low	64QAM	6.67	<=13	PASS
	Mid	QPSK	5.54	<=13	PASS
	Mid	16QAM	6.35	<=13	PASS
	Mid	64QAM	6.59	<=13	PASS
	High	QPSK	5.24	<=13	PASS
	High	16QAM	6.10	<=13	PASS
	High	64QAM	6.42	<=13	PASS
3	Low	QPSK	5.55	<=13	PASS
	Low	16QAM	6.40	<=13	PASS
	Low	64QAM	6.63	<=13	PASS
	Mid	QPSK	5.51	<=13	PASS
	Mid	16QAM	6.33	<=13	PASS
	Mid	64QAM	6.50	<=13	PASS
	High	QPSK	5.34	<=13	PASS
	High	16QAM	6.20	<=13	PASS
	High	64QAM	6.43	<=13	PASS
5	Low	QPSK	5.59	<=13	PASS
	Low	16QAM	6.27	<=13	PASS
	Low	64QAM	6.55	<=13	PASS
	Mid	QPSK	5.59	<=13	PASS
	Mid	16QAM	6.21	<=13	PASS
	Mid	64QAM	6.51	<=13	PASS
	High	QPSK	5.49	<=13	PASS
	High	16QAM	6.18	<=13	PASS
	High	64QAM	6.41	<=13	PASS
10	Low	QPSK	5.52	<=13	PASS
	Low	16QAM	6.19	<=13	PASS
	Low	64QAM	6.46	<=13	PASS
	Mid	QPSK	5.52	<=13	PASS
	Mid	16QAM	6.19	<=13	PASS
	Mid	64QAM	6.45	<=13	PASS
	High	QPSK	5.53	<=13	PASS
	High	16QAM	6.17	<=13	PASS
	High	64QAM	6.39	<=13	PASS

15	Low	QPSK	5.38	<=13	PASS
	Low	16QAM	6.12	<=13	PASS
	Low	64QAM	6.42	<=13	PASS
	Mid	QPSK	5.40	<=13	PASS
	Mid	16QAM	6.11	<=13	PASS
	Mid	64QAM	6.41	<=13	PASS
	High	QPSK	5.52	<=13	PASS
	High	16QAM	6.14	<=13	PASS
	High	64QAM	6.45	<=13	PASS
20	Low	QPSK	5.34	<=13	PASS
	Low	16QAM	6.16	<=13	PASS
	Low	64QAM	6.41	<=13	PASS
	Mid	QPSK	5.45	<=13	PASS
	Mid	16QAM	6.15	<=13	PASS
	Mid	64QAM	6.38	<=13	PASS
	High	QPSK	5.61	<=13	PASS
	High	16QAM	6.31	<=13	PASS
	High	64QAM	6.51	<=13	PASS

LTE Band 4					
BW(MHz)	**Channel Level**	**Modulation**	**PAR Radio(dB)**	**Limit(dB)**	**Verdict**
1.4	Low	QPSK	5.00	<=13	PASS
	Low	16QAM	5.61	<=13	PASS
	Low	64QAM	6.29	<=13	PASS
	Mid	QPSK	4.86	<=13	PASS
	Mid	16QAM	5.66	<=13	PASS
	Mid	64QAM	6.33	<=13	PASS
	High	QPSK	4.97	<=13	PASS
	High	16QAM	5.98	<=13	PASS
	High	64QAM	6.32	<=13	PASS
3	Low	QPSK	4.90	<=13	PASS
	Low	16QAM	5.89	<=13	PASS
	Low	64QAM	6.23	<=13	PASS
	Mid	QPSK	5.01	<=13	PASS
	Mid	16QAM	5.93	<=13	PASS
	Mid	64QAM	6.29	<=13	PASS
	High	QPSK	5.02	<=13	PASS
	High	16QAM	6.02	<=13	PASS
	High	64QAM	6.26	<=13	PASS
5	Low	QPSK	5.10	<=13	PASS
	Low	16QAM	5.91	<=13	PASS
	Low	64QAM	6.23	<=13	PASS
	Mid	QPSK	5.17	<=13	PASS
	Mid	16QAM	6.01	<=13	PASS
	Mid	64QAM	6.39	<=13	PASS
	High	QPSK	5.33	<=13	PASS
	High	16QAM	6.06	<=13	PASS
	High	64QAM	6.29	<=13	PASS
10	Low	QPSK	5.00	<=13	PASS
	Low	16QAM	5.71	<=13	PASS
	Low	64QAM	6.11	<=13	PASS
	Mid	QPSK	5.18	<=13	PASS
	Mid	16QAM	6.02	<=13	PASS
	Mid	64QAM	6.29	<=13	PASS
	High	QPSK	5.30	<=13	PASS
	High	16QAM	5.98	<=13	PASS
	High	64QAM	6.31	<=13	PASS

15	Low	QPSK	4.62	<=13	PASS
	Low	16QAM	5.42	<=13	PASS
	Low	64QAM	6.09	<=13	PASS
	Mid	QPSK	4.93	<=13	PASS
	Mid	16QAM	5.73	<=13	PASS
	Mid	64QAM	6.20	<=13	PASS
	High	QPSK	5.07	<=13	PASS
	High	16QAM	5.88	<=13	PASS
	High	64QAM	6.20	<=13	PASS
20	Low	QPSK	4.85	<=13	PASS
	Low	16QAM	5.60	<=13	PASS
	Low	64QAM	6.06	<=13	PASS
	Mid	QPSK	5.01	<=13	PASS
	Mid	16QAM	5.82	<=13	PASS
	Mid	64QAM	6.26	<=13	PASS
	High	QPSK	5.14	<=13	PASS
	High	16QAM	5.92	<=13	PASS
	High	64QAM	6.26	<=13	PASS

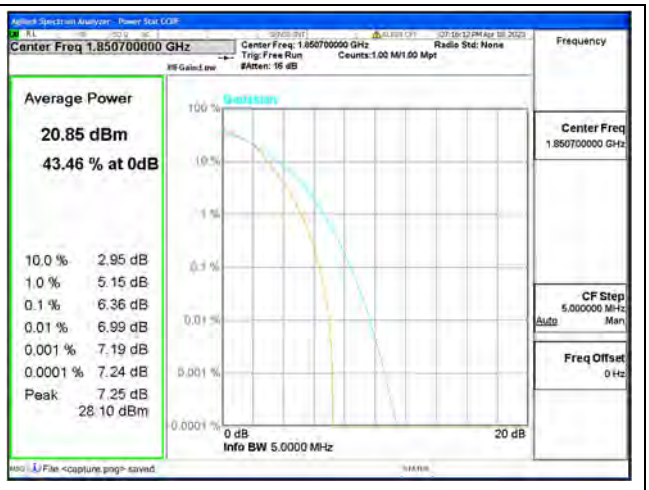
LTE Band 25					
BW(MHz)	**Channel Level**	**Modulation**	**PAR Radio(dB)**	**Limit(dB)**	**Verdict**
1.4	Low	QPSK	5.50	<=13	PASS
	Low	16QAM	6.36	<=13	PASS
	Low	64QAM	6.60	<=13	PASS
	Mid	QPSK	5.39	<=13	PASS
	Mid	16QAM	6.22	<=13	PASS
	Mid	64QAM	6.53	<=13	PASS
	High	QPSK	5.25	<=13	PASS
	High	16QAM	6.04	<=13	PASS
	High	64QAM	6.34	<=13	PASS
3	Low	QPSK	5.43	<=13	PASS
	Low	16QAM	6.26	<=13	PASS
	Low	64QAM	6.49	<=13	PASS
	Mid	QPSK	5.35	<=13	PASS
	Mid	16QAM	6.24	<=13	PASS
	Mid	64QAM	6.41	<=13	PASS
	High	QPSK	5.12	<=13	PASS
	High	16QAM	5.93	<=13	PASS
	High	64QAM	6.28	<=13	PASS
5	Low	QPSK	5.46	<=13	PASS
	Low	16QAM	6.24	<=13	PASS
	Low	64QAM	6.49	<=13	PASS
	Mid	QPSK	5.48	<=13	PASS
	Mid	16QAM	6.16	<=13	PASS
	Mid	64QAM	6.42	<=13	PASS
	High	QPSK	5.29	<=13	PASS
	High	16QAM	5.99	<=13	PASS
	High	64QAM	6.34	<=13	PASS
10	Low	QPSK	5.42	<=13	PASS
	Low	16QAM	6.12	<=13	PASS
	Low	64QAM	6.36	<=13	PASS
	Mid	QPSK	5.39	<=13	PASS
	Mid	16QAM	6.12	<=13	PASS
	Mid	64QAM	6.33	<=13	PASS
	High	QPSK	5.30	<=13	PASS
	High	16QAM	5.98	<=13	PASS
	High	64QAM	6.26	<=13	PASS

15	Low	QPSK	5.26	<=13	PASS
	Low	16QAM	6.02	<=13	PASS
	Low	64QAM	6.36	<=13	PASS
	Mid	QPSK	5.25	<=13	PASS
	Mid	16QAM	5.95	<=13	PASS
	Mid	64QAM	6.33	<=13	PASS
	High	QPSK	5.05	<=13	PASS
	High	16QAM	5.91	<=13	PASS
	High	64QAM	6.31	<=13	PASS
20	Low	QPSK	5.27	<=13	PASS
	Low	16QAM	6.07	<=13	PASS
	Low	64QAM	6.37	<=13	PASS
	Mid	QPSK	5.28	<=13	PASS
	Mid	16QAM	6.03	<=13	PASS
	Mid	64QAM	6.32	<=13	PASS
	High	QPSK	5.29	<=13	PASS
	High	16QAM	6.20	<=13	PASS
	High	64QAM	6.37	<=13	PASS

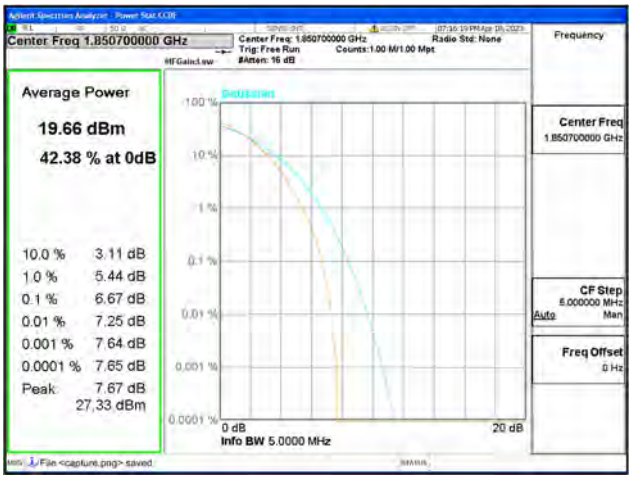
LTE Band 66					
BW(MHz)	**Channel Level**	**Modulation**	**PAR Radio(dB)**	**Limit(dB)**	**Verdict**
1.4	Low	QPSK	4.71	<=13	PASS
	Low	16QAM	5.56	<=13	PASS
	Low	64QAM	6.33	<=13	PASS
	Mid	QPSK	5.07	<=13	PASS
	Mid	16QAM	5.84	<=13	PASS
	Mid	64QAM	6.48	<=13	PASS
	High	QPSK	4.54	<=13	PASS
	High	16QAM	5.30	<=13	PASS
	High	64QAM	6.28	<=13	PASS
3	Low	QPSK	4.85	<=13	PASS
	Low	16QAM	5.69	<=13	PASS
	Low	64QAM	6.08	<=13	PASS
	Mid	QPSK	5.09	<=13	PASS
	Mid	16QAM	5.94	<=13	PASS
	Mid	64QAM	6.24	<=13	PASS
	High	QPSK	4.78	<=13	PASS
	High	16QAM	5.64	<=13	PASS
	High	64QAM	6.23	<=13	PASS
5	Low	QPSK	5.05	<=13	PASS
	Low	16QAM	5.73	<=13	PASS
	Low	64QAM	6.10	<=13	PASS
	Mid	QPSK	5.29	<=13	PASS
	Mid	16QAM	6.00	<=13	PASS
	Mid	64QAM	6.26	<=13	PASS
	High	QPSK	5.13	<=13	PASS
	High	16QAM	5.82	<=13	PASS
	High	64QAM	6.21	<=13	PASS
10	Low	QPSK	4.99	<=13	PASS
	Low	16QAM	5.67	<=13	PASS
	Low	64QAM	6.06	<=13	PASS
	Mid	QPSK	5.33	<=13	PASS
	Mid	16QAM	6.03	<=13	PASS
	Mid	64QAM	6.26	<=13	PASS
	High	QPSK	5.18	<=13	PASS
	High	16QAM	5.88	<=13	PASS
	High	64QAM	6.21	<=13	PASS

15	Low	QPSK	4.61	<=13	PASS
	Low	16QAM	5.37	<=13	PASS
	Low	64QAM	5.93	<=13	PASS
	Mid	QPSK	5.25	<=13	PASS
	Mid	16QAM	5.84	<=13	PASS
	Mid	64QAM	6.28	<=13	PASS
	High	QPSK	5.00	<=13	PASS
	High	16QAM	5.75	<=13	PASS
	High	64QAM	6.33	<=13	PASS
20	Low	QPSK	4.78	<=13	PASS
	Low	16QAM	5.60	<=13	PASS
	Low	64QAM	6.08	<=13	PASS
	Mid	QPSK	5.16	<=13	PASS
	Mid	16QAM	5.93	<=13	PASS
	Mid	64QAM	6.25	<=13	PASS
	High	QPSK	5.23	<=13	PASS
	High	16QAM	6.02	<=13	PASS
	High	64QAM	6.24	<=13	PASS

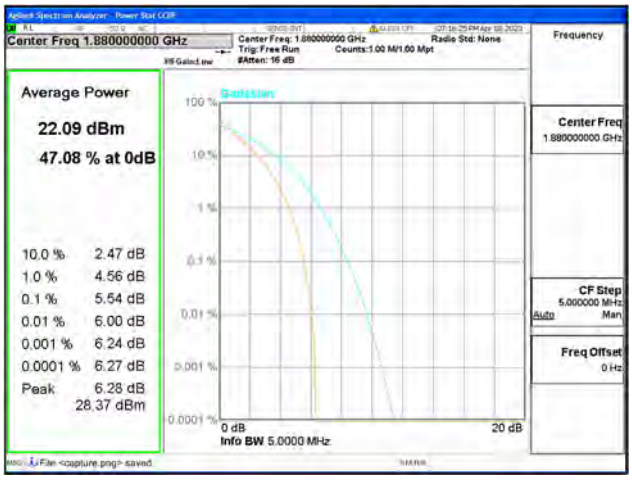
Band2 / 1.4MHz / Low CH / QPSK



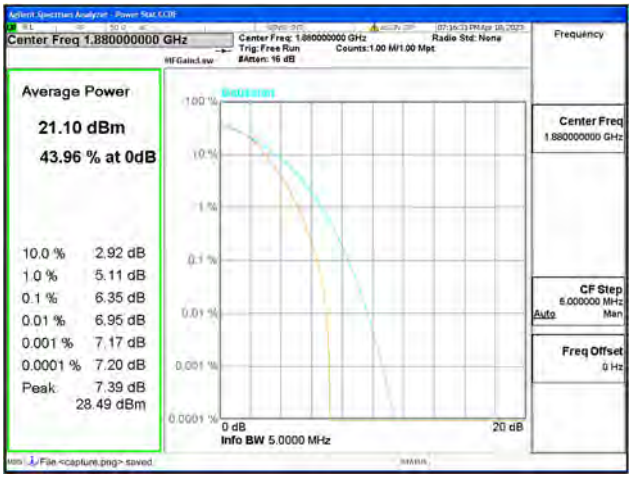
Band2 / 1.4MHz / Low CH / 16QAM



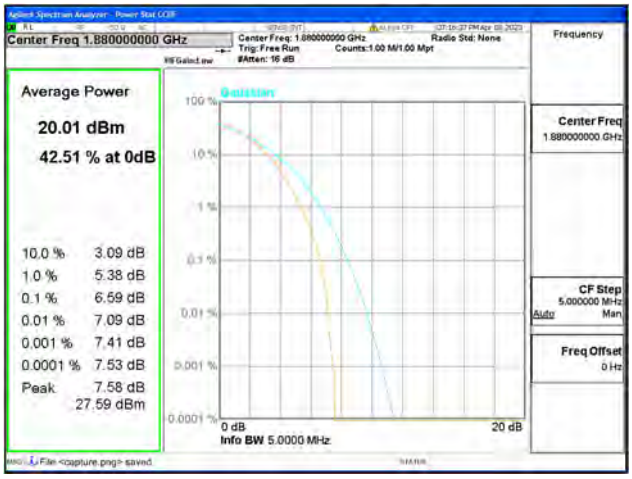
Band2 / 1.4MHz / Low CH / 64QAM



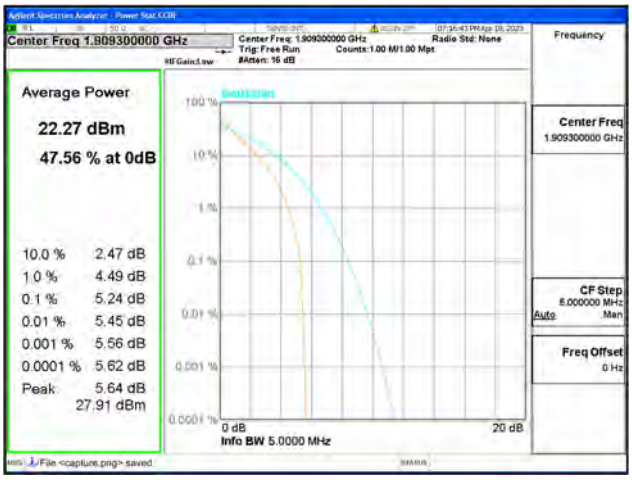
Band2 / 1.4MHz / Mid CH / QPSK



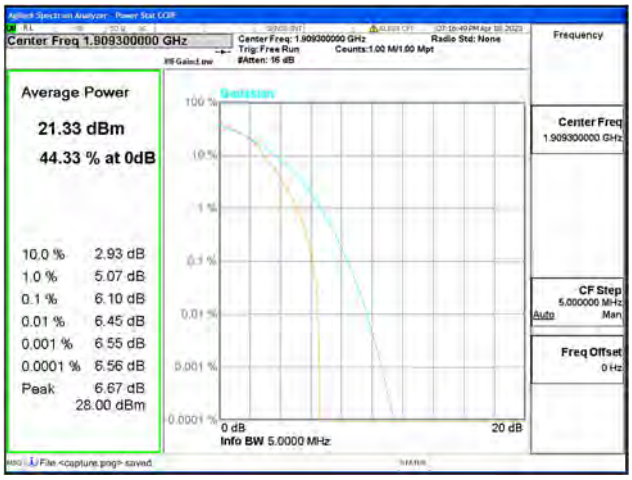
Band2 / 1.4MHz / Mid CH / 16QAM



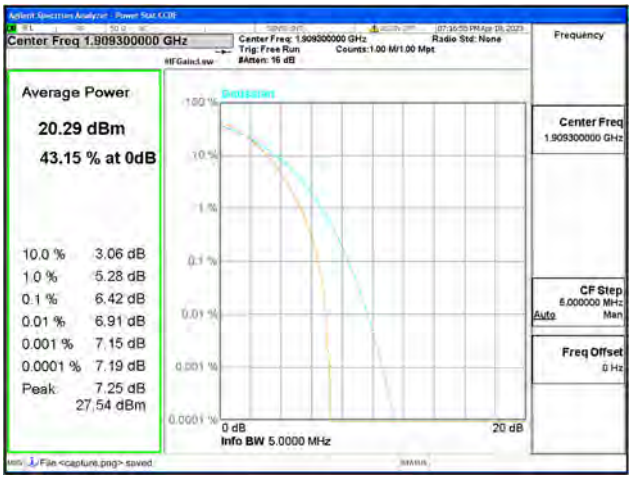
Band2 / 1.4MHz / Mid CH / 64QAM



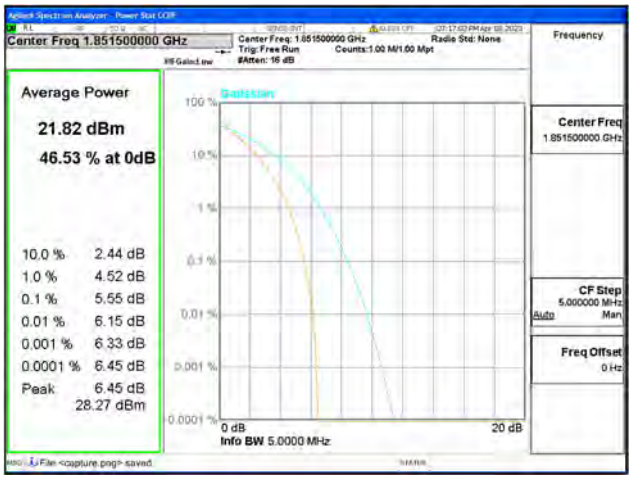
Band2 / 1.4MHz / High CH / QPSK



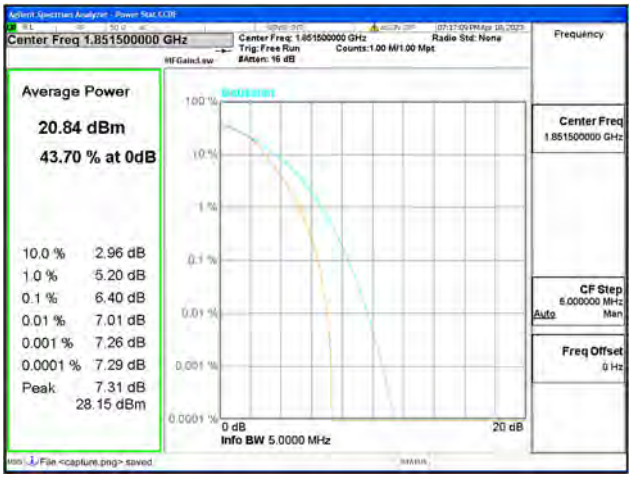
Band2 / 1.4MHz / High CH / 16QAM



Band2 / 1.4MHz / High CH / 64QAM

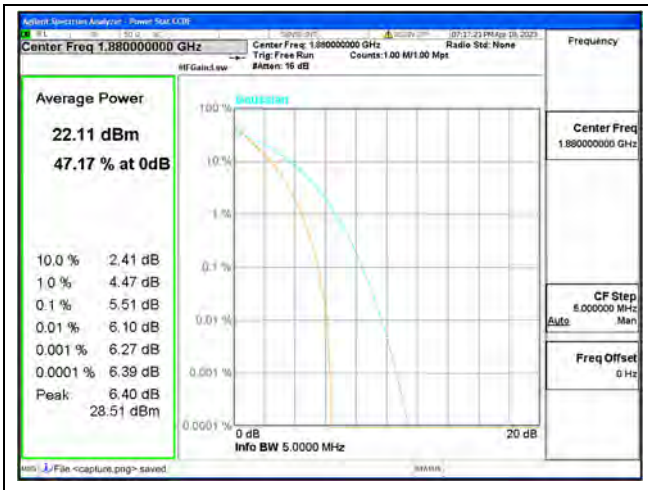


Band2 / 3MHz / Low CH / QPSK

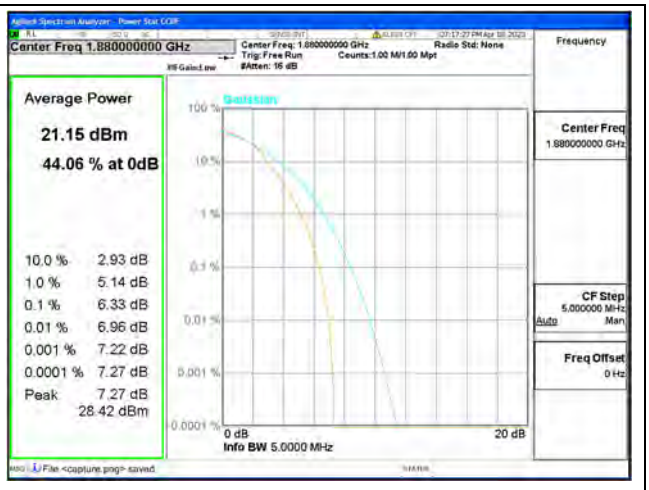


Band2 / 3MHz / Low CH / 16QAM

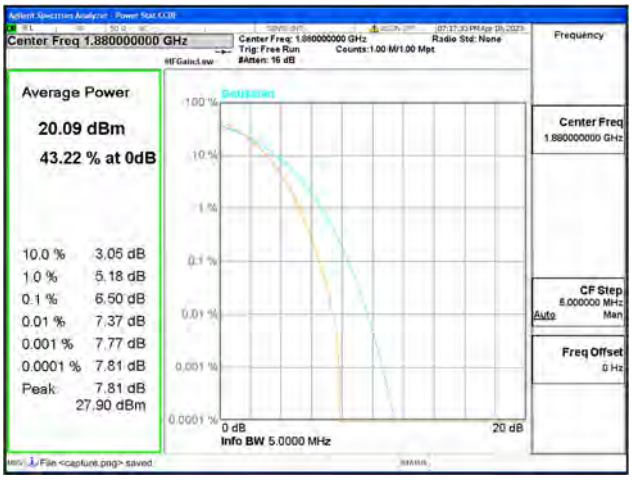
Band2 / 3MHz / Low CH / 64QAM



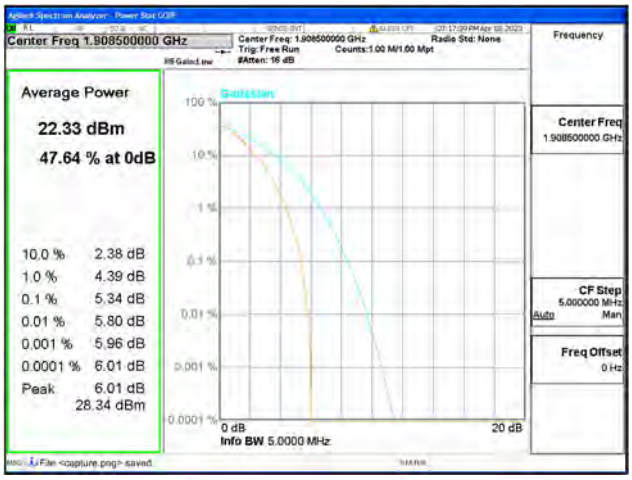
Band2 / 3MHz / Mid CH / QPSK



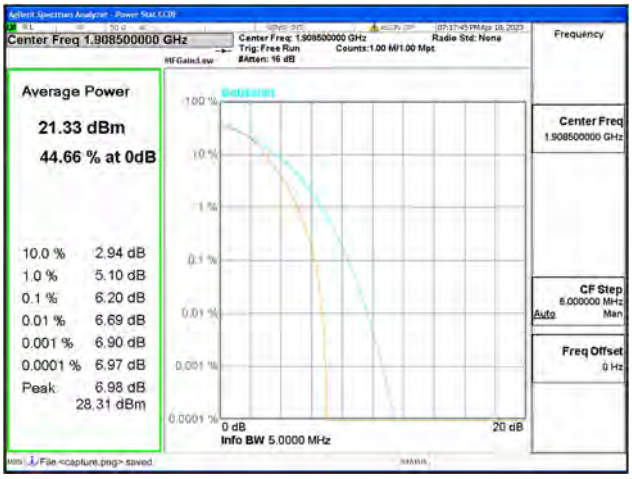
Band2 / 3MHz / Mid CH / 16QAM



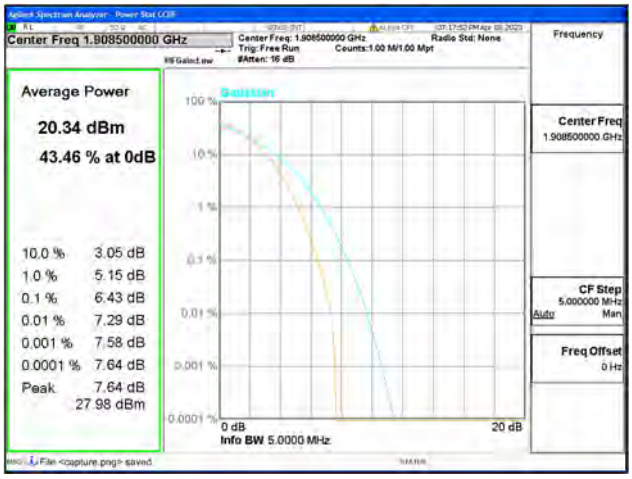
Band2 / 3MHz / Mid CH / 64QAM



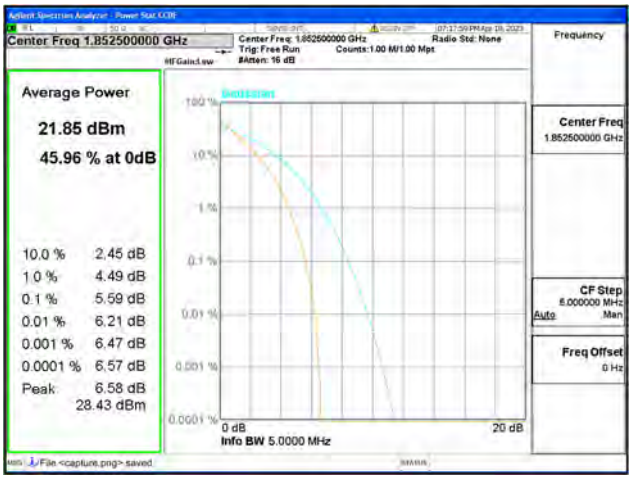
Band2 / 3MHz / High CH / QPSK



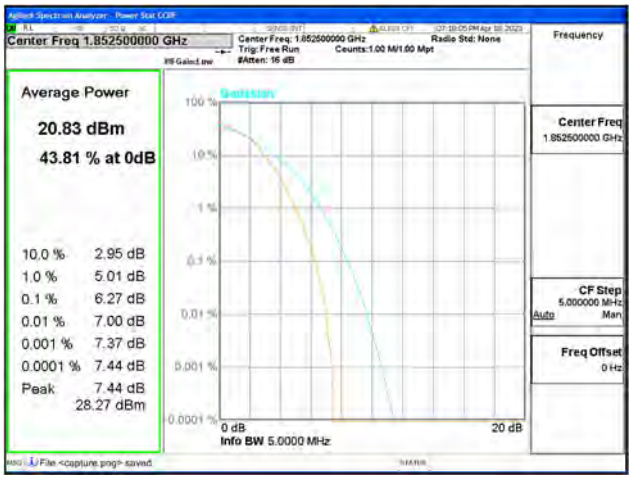
Band2 / 3MHz / High CH / 16QAM



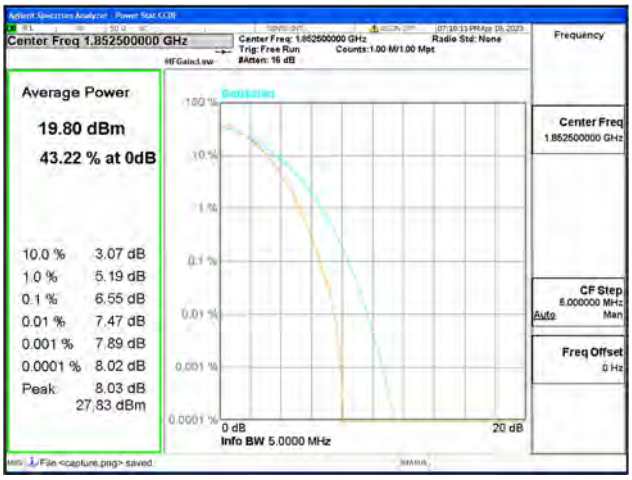
Band2 / 3MHz / High CH / 64QAM



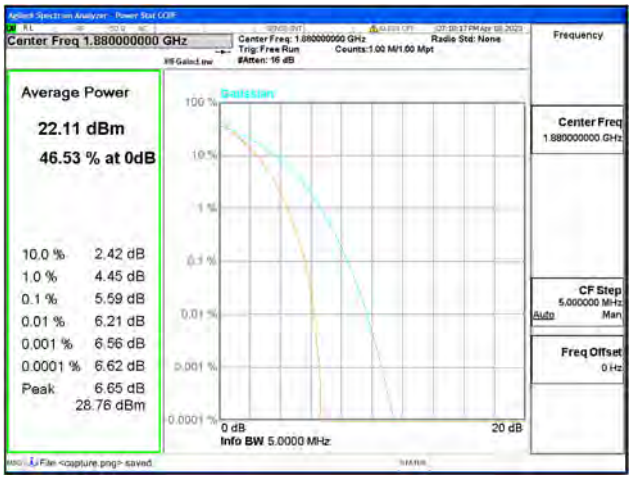
Band2 / 5MHz / Low CH / QPSK



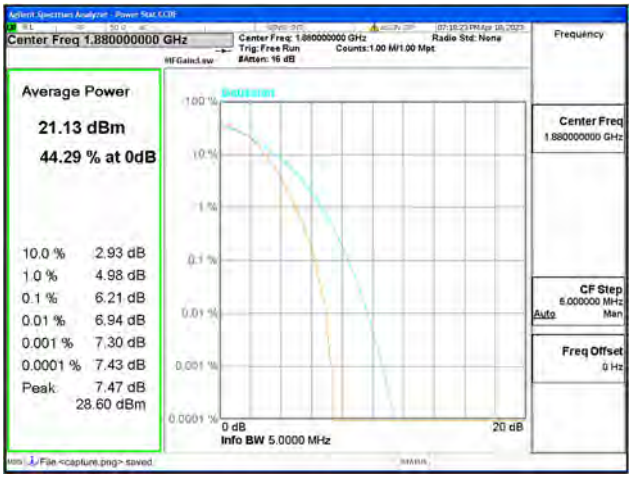
Band2 / 5MHz / Low CH / 16QAM



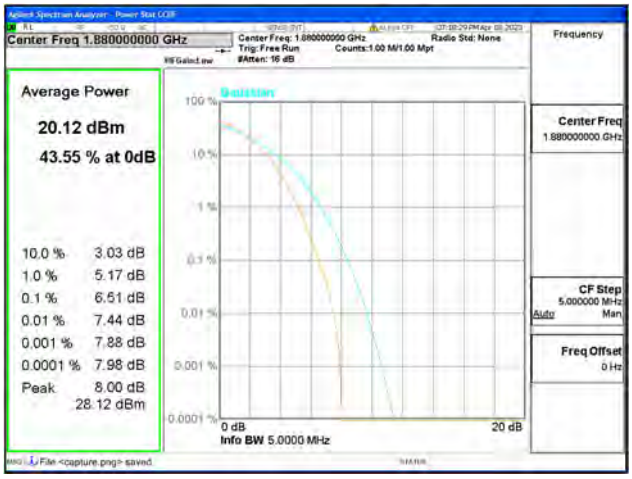
Band2 / 5MHz / Low CH / 64QAM



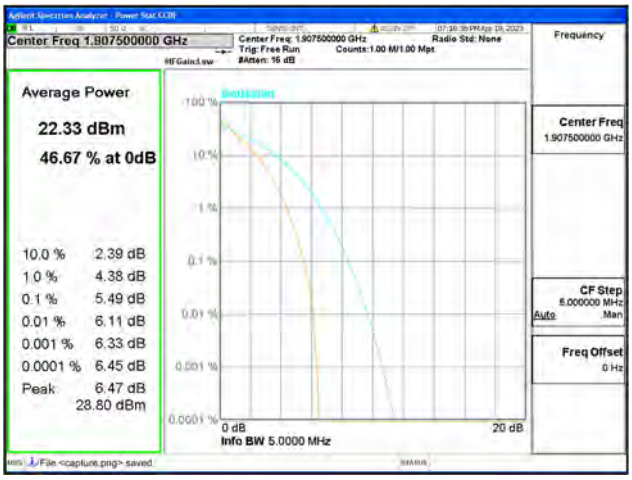
Band2 / 5MHz / Mid CH / QPSK



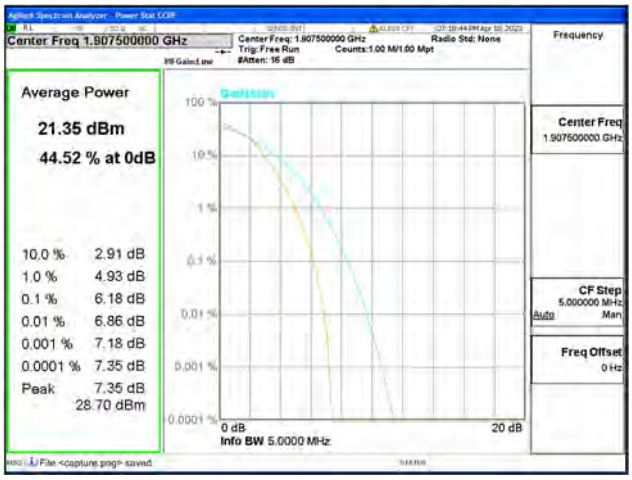
Band2 / 5MHz / Mid CH / 16QAM



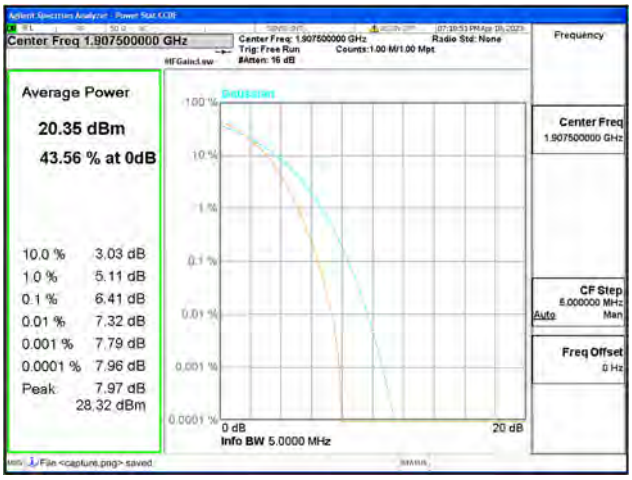
Band2 / 5MHz / Mid CH / 64QAM



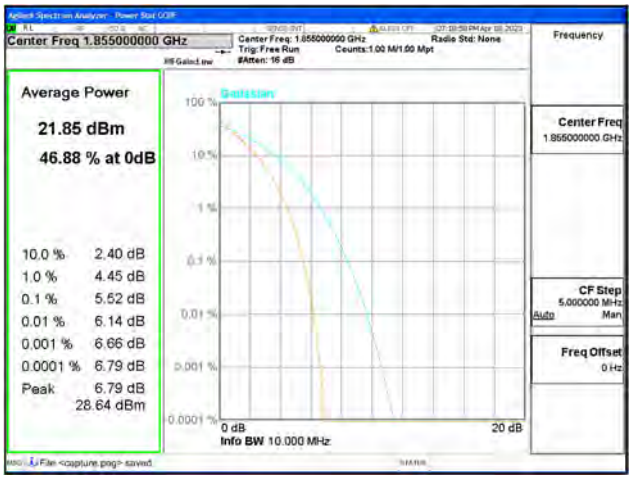
Band2 / 5MHz / High CH / QPSK



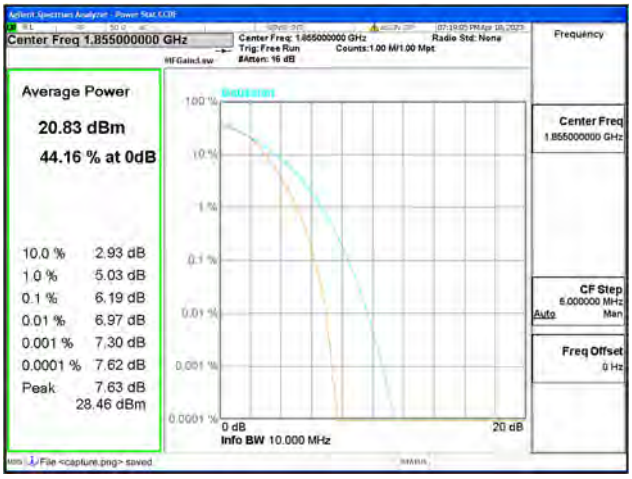
Band2 / 5MHz / High CH / 16QAM



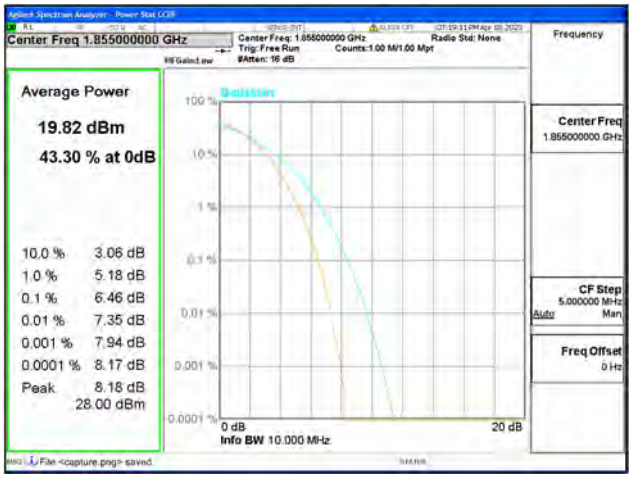
Band2 / 5MHz / High CH / 64QAM



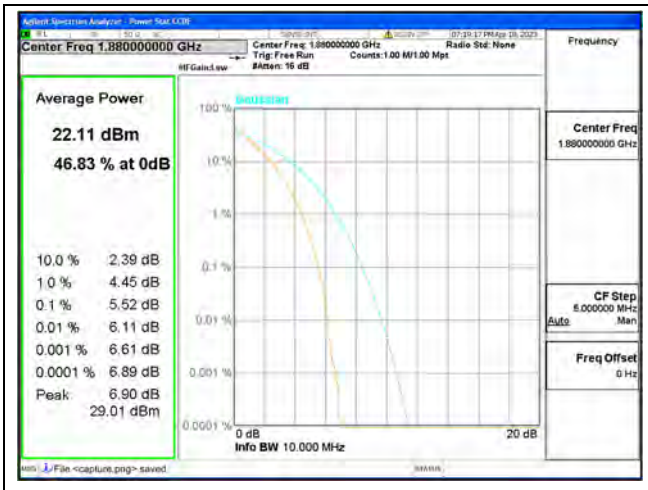
Band2 / 10MHz / Low CH / QPSK



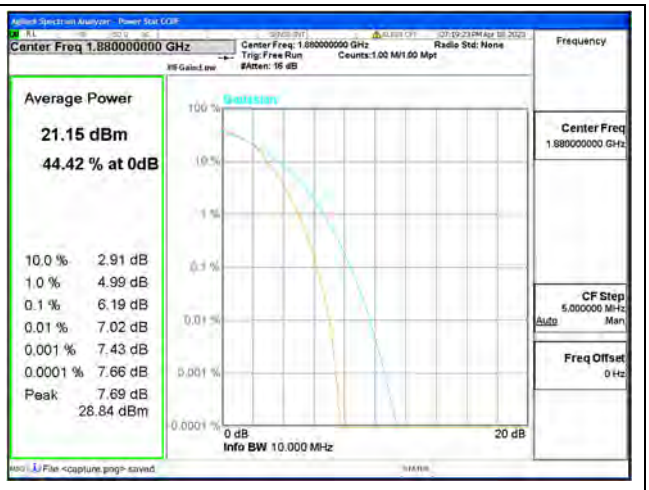
Band2 / 10MHz / Low CH / 16QAM



Band2 / 10MHz / Low CH / 64QAM

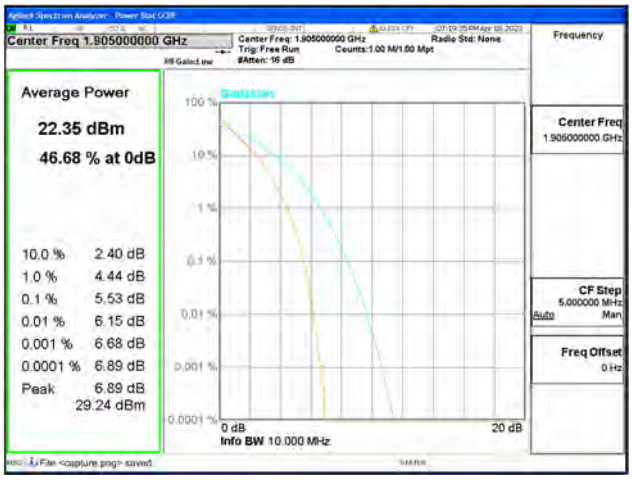


Band2 / 10MHz / Mid CH / QPSK



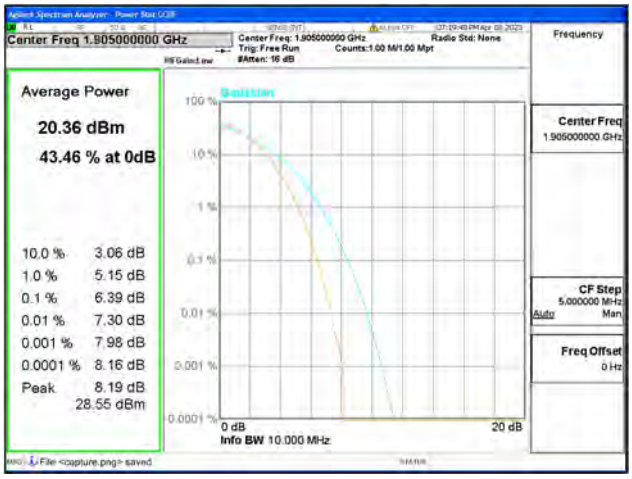
Band2 / 10MHz / Mid CH / 16QAM

Band2 / 10MHz / Mid CH / 64QAM



Band2 / 10MHz / High CH / QPSK

Band2 / 10MHz / High CH / 16QAM



Band2 / 10MHz / High CH / 64QAM