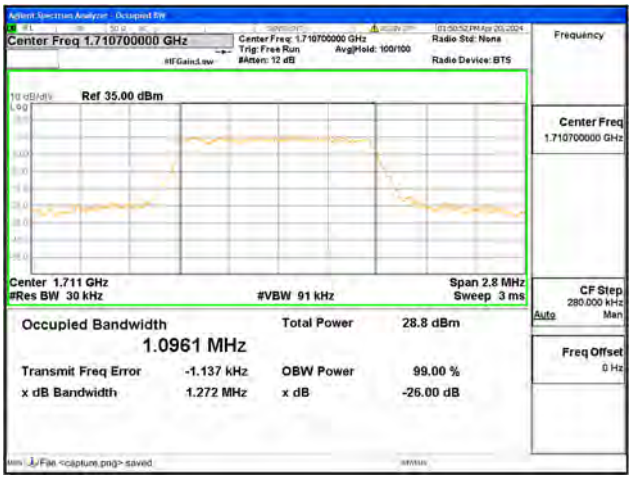
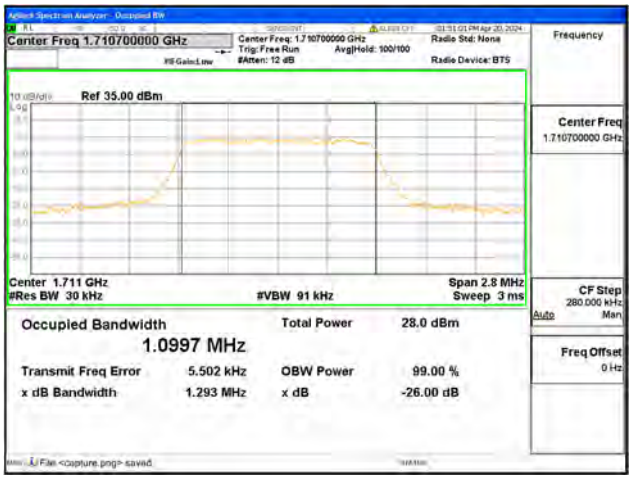
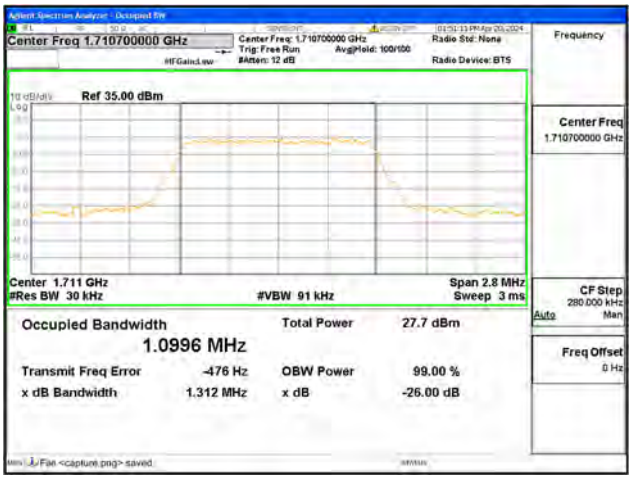


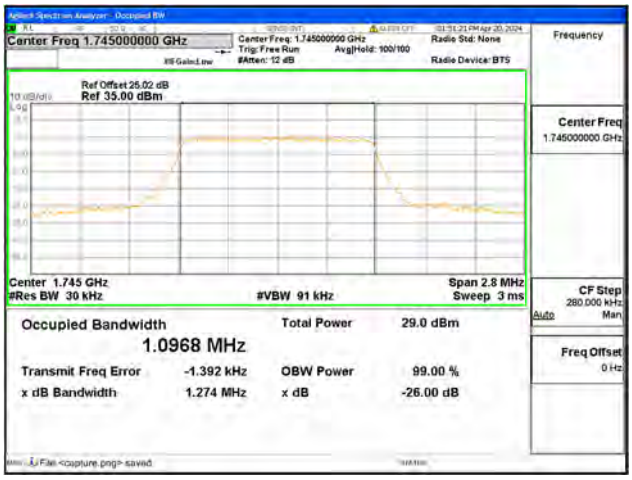
B66 / 1.4MHz / QPSK/ Low CH



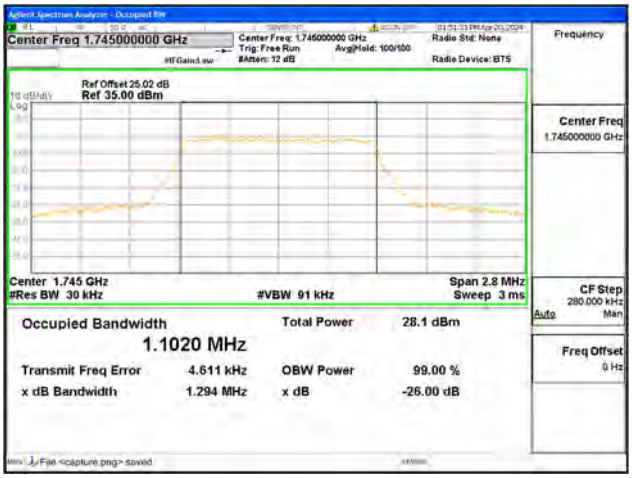
B66 / 1.4MHz / 16QAM/ Low CH



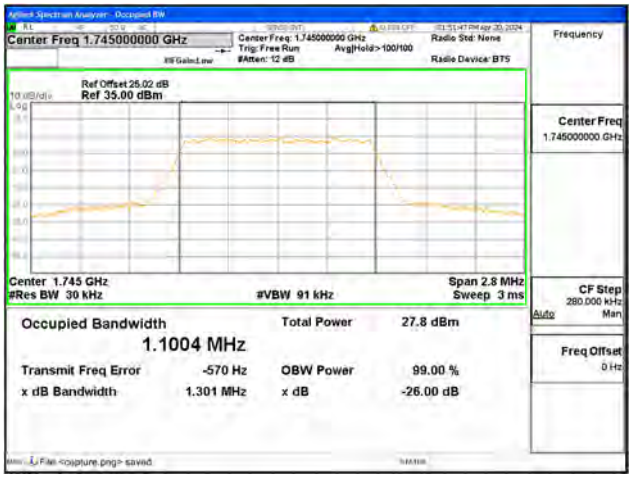
B66 / 1.4MHz / 64QAM/ Low CH



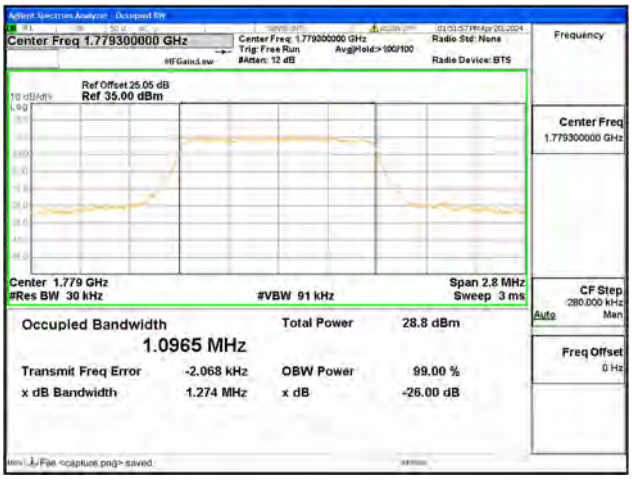
B66 / 1.4MHz / QPSK/ Mid CH



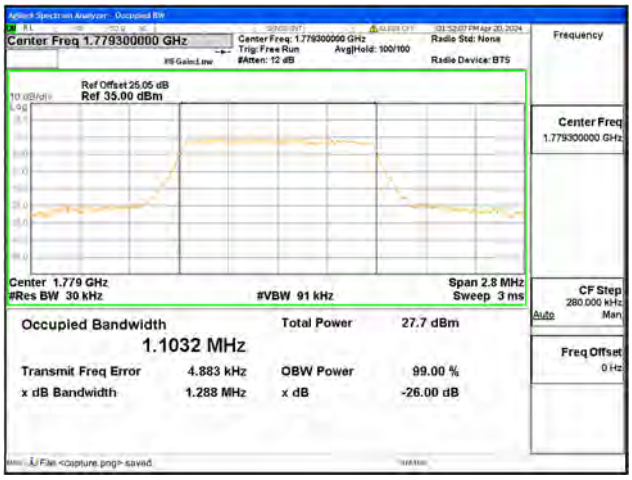
B66 / 1.4MHz / 16QAM/ Mid CH



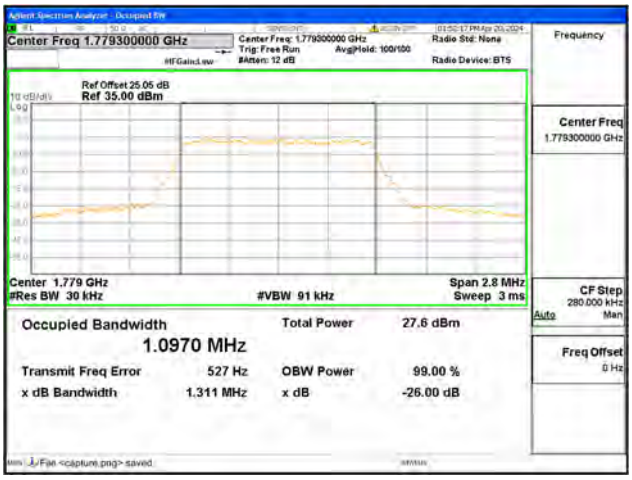
B66 / 1.4MHz / 64QAM/ Mid CH



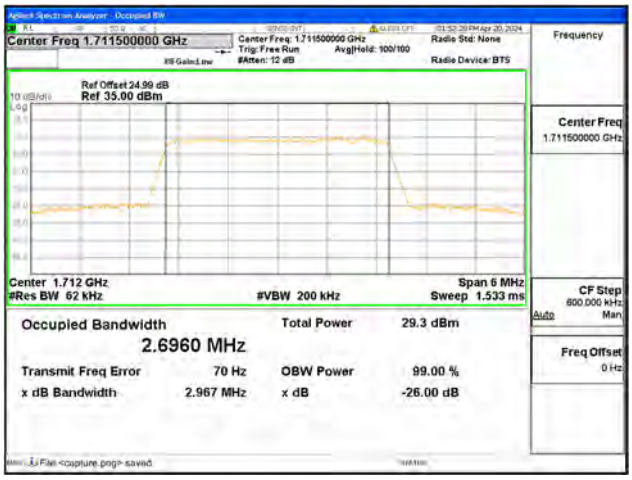
B66 / 1.4MHz / QPSK/ High CH



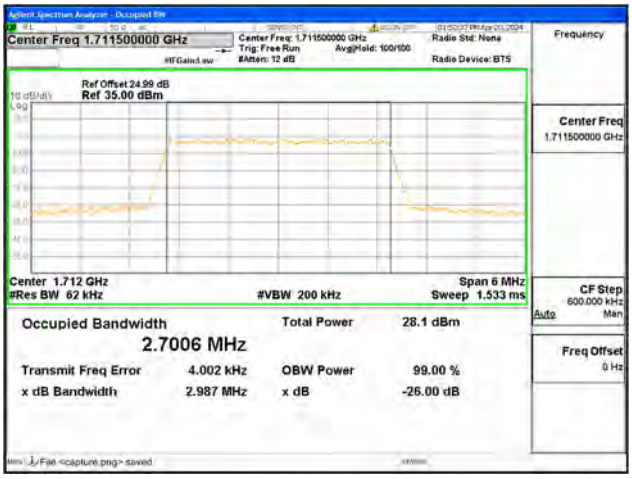
B66 / 1.4MHz / 16QAM/ High CH



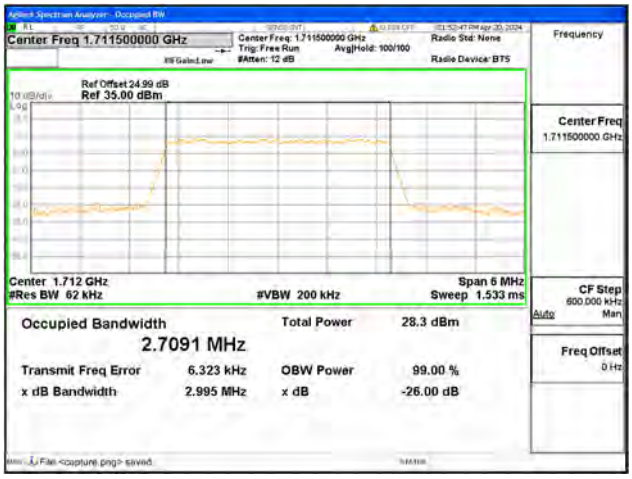
B66 / 1.4MHz / 64QAM/ High CH



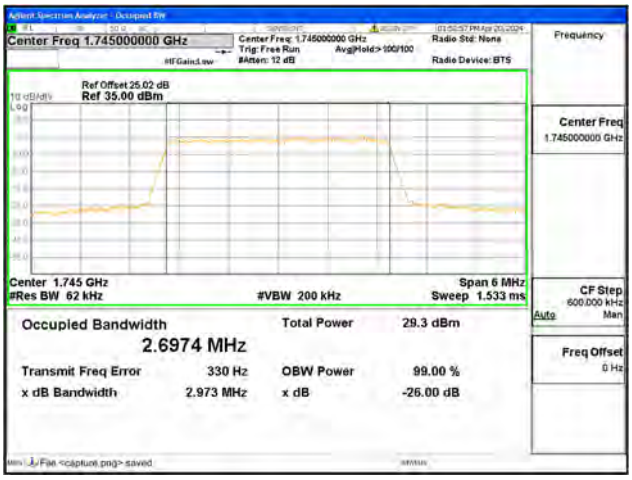
B66 / 3MHz / QPSK/ Low CH



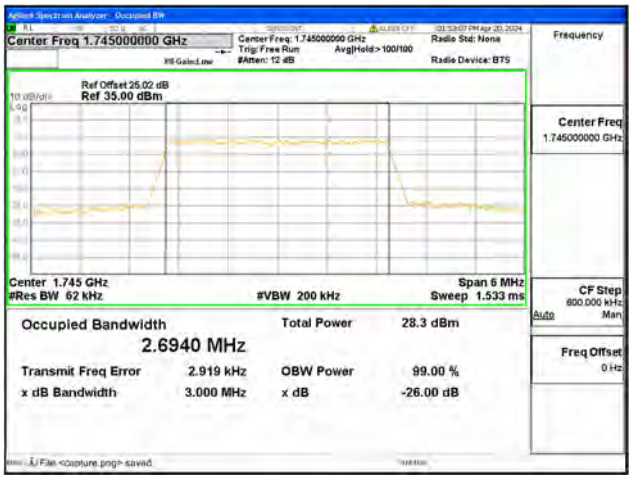
B66 / 3MHz / 16QAM/ Low CH



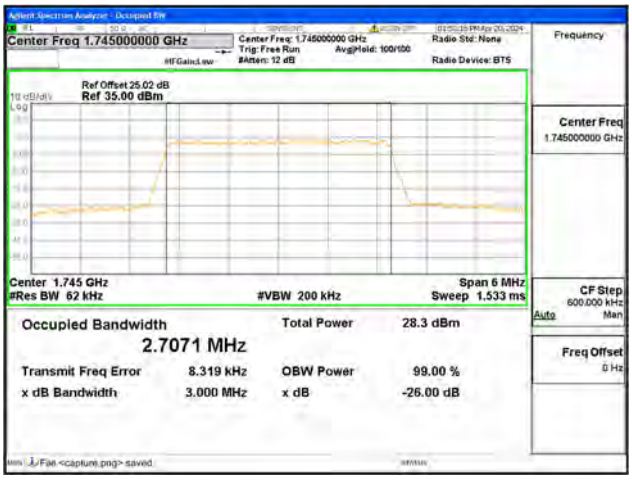
B66 / 3MHz / 64QAM/ Low CH



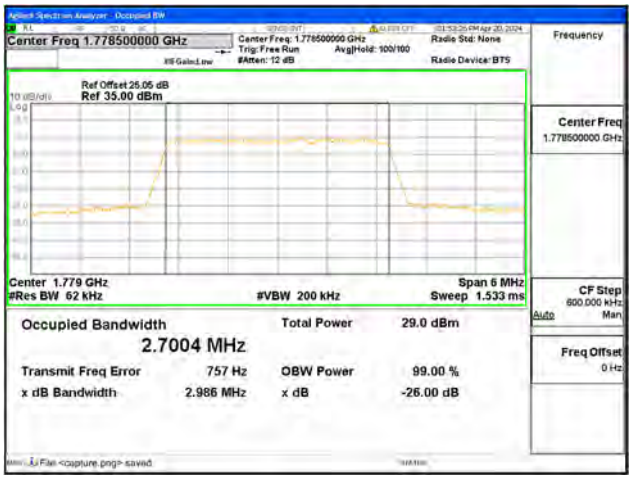
B66 / 3MHz / QPSK/ Mid CH



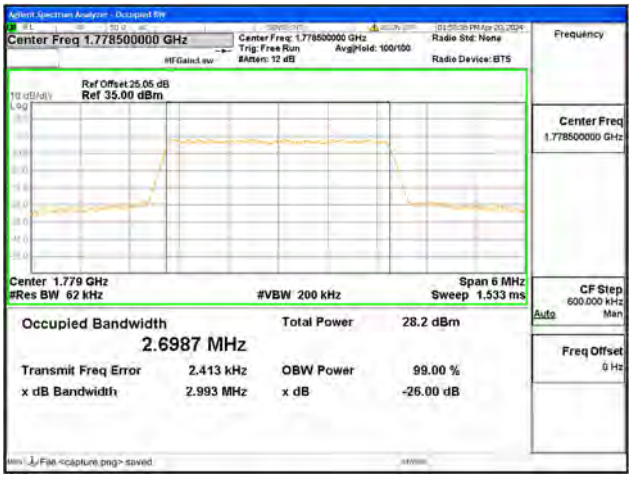
B66 / 3MHz / 16QAM/ Mid CH



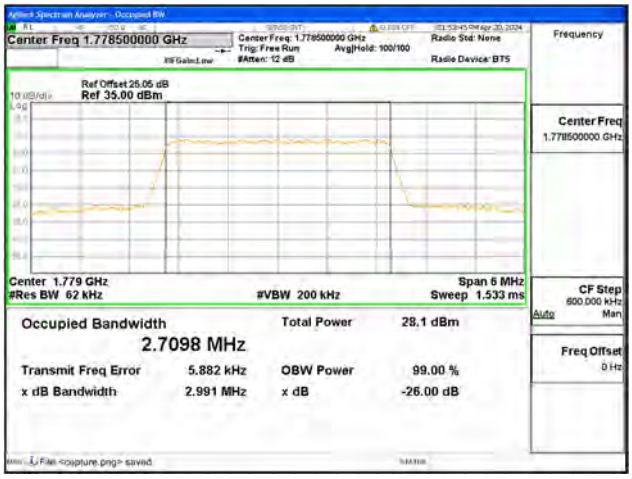
B66 / 3MHz / 64QAM/ Mid CH



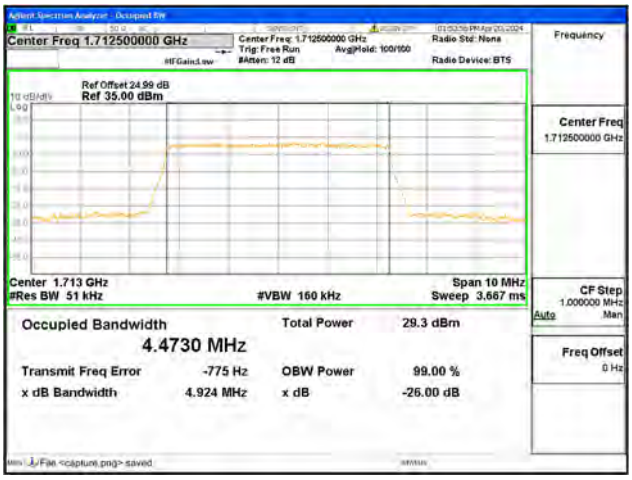
B66 / 3MHz / QPSK/ High CH



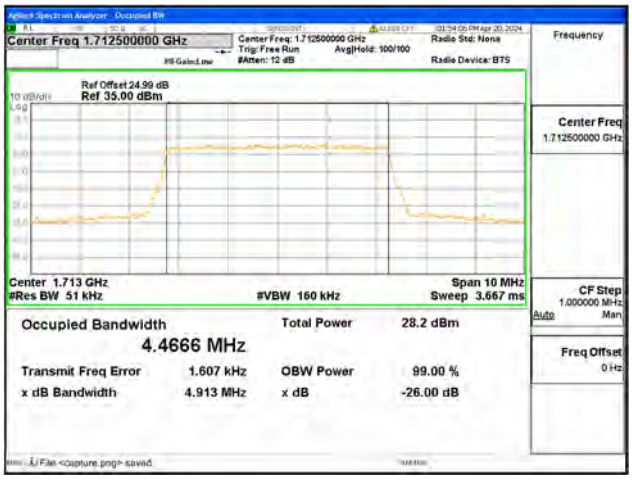
B66 / 3MHz / 16QAM/ High CH



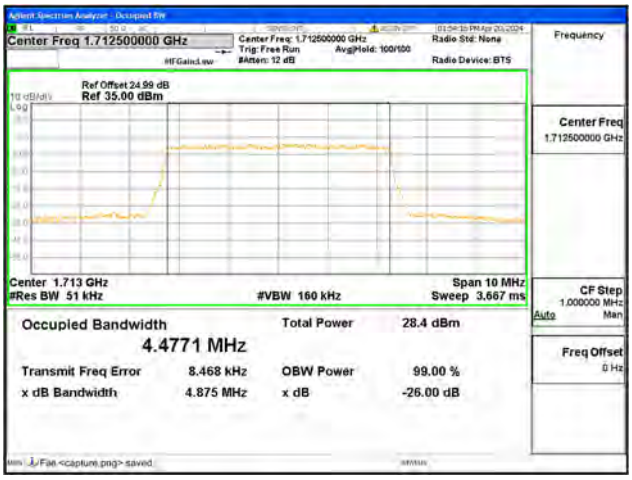
B66 / 3MHz / 64QAM/ High CH



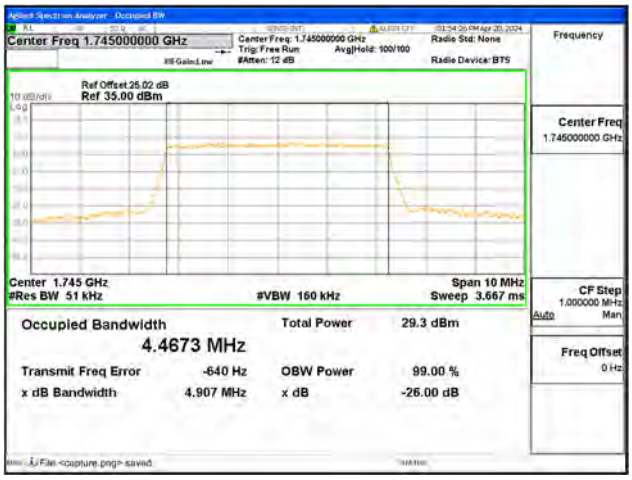
B66 / 5MHz / QPSK/ Low CH



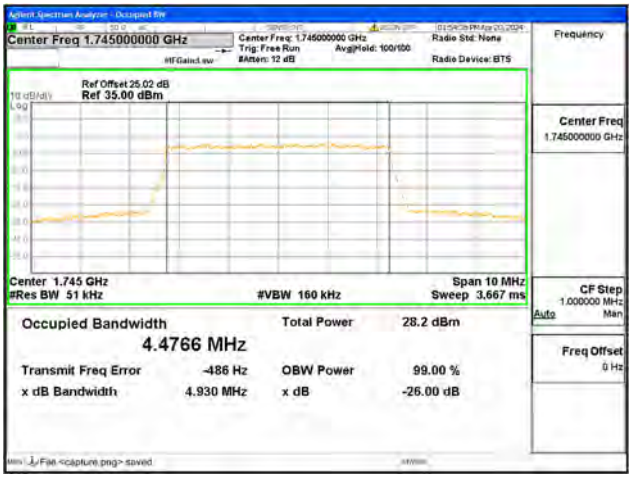
B66 / 5MHz / 16QAM/ Low CH



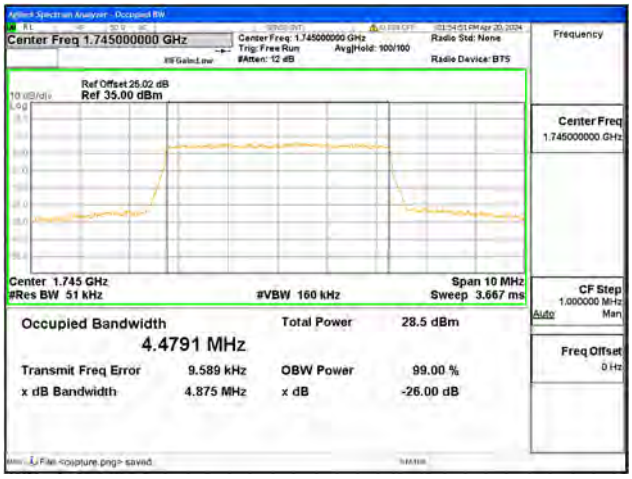
B66 / 5MHz / 64QAM/ Low CH



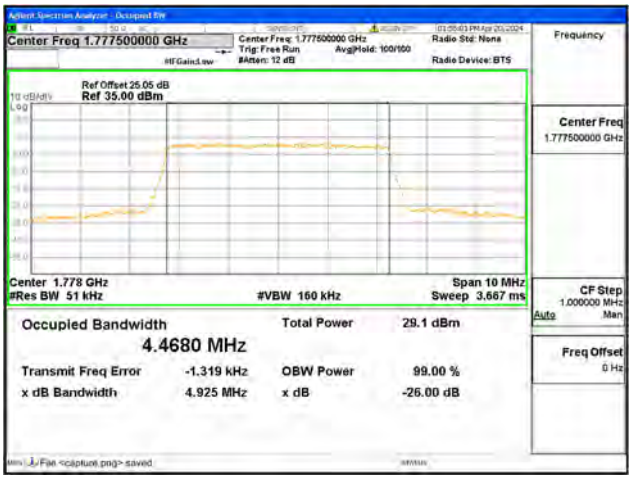
B66 / 5MHz / QPSK/ Mid CH



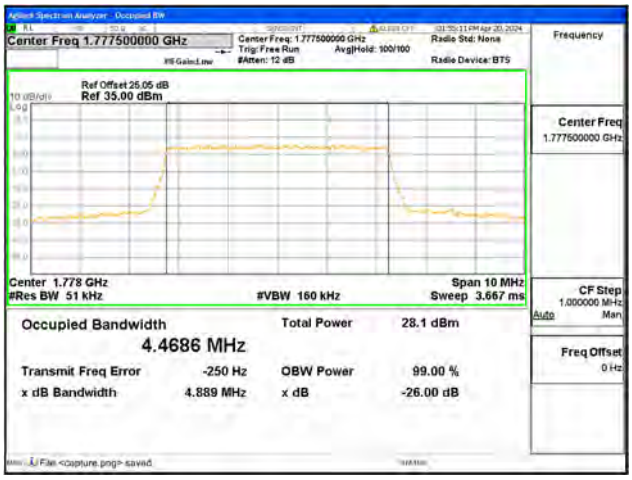
B66 / 5MHz / 16QAM/ Mid CH



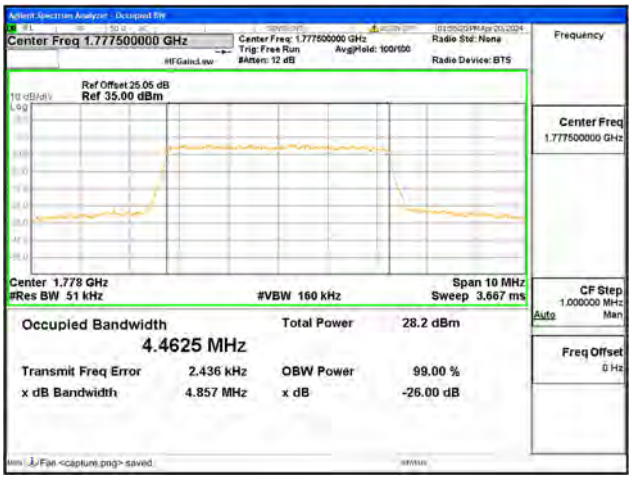
B66 / 5MHz / 64QAM/ Mid CH



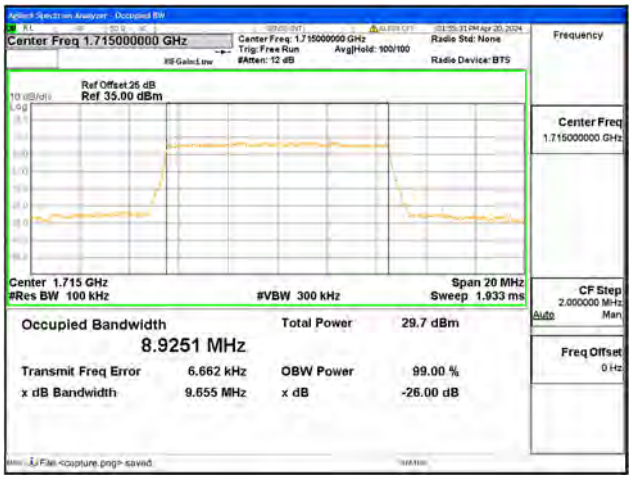
B66 / 5MHz / QPSK/ High CH



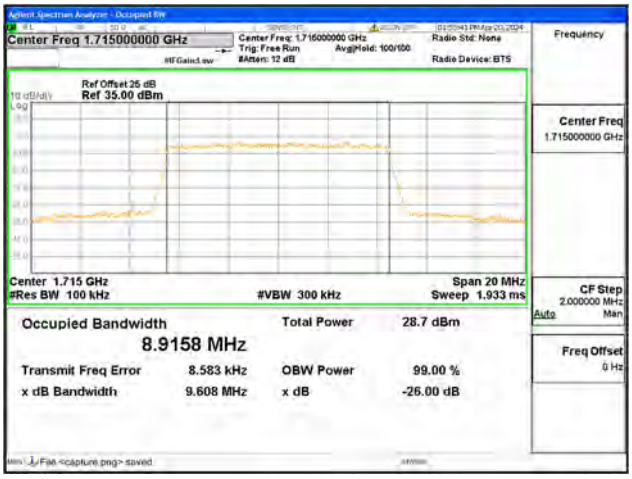
B66 / 5MHz / 16QAM/ High CH



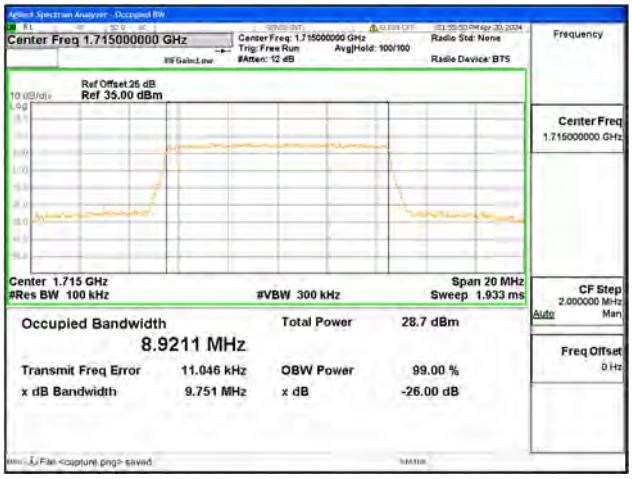
B66 / 5MHz / 64QAM/ High CH



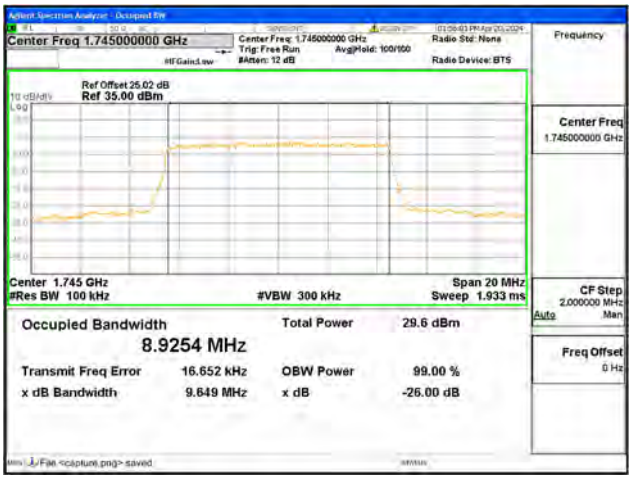
B66 / 10MHz / QPSK/ Low CH



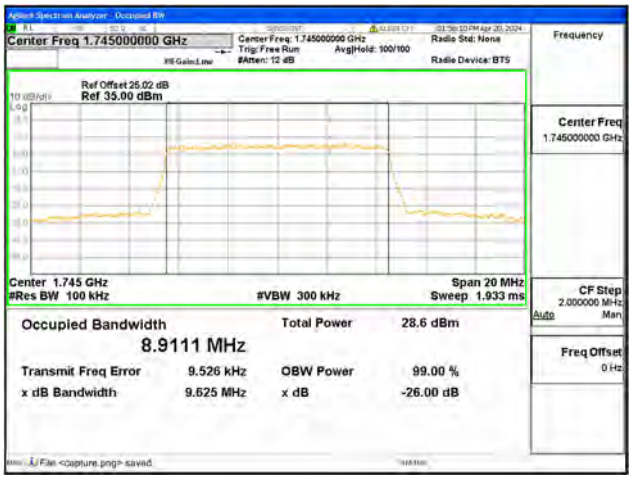
B66 / 10MHz / 16QAM/ Low CH



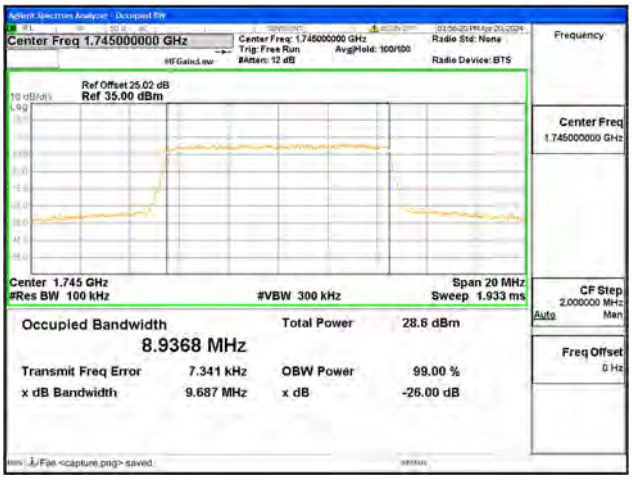
B66 / 10MHz / 64QAM/ Low CH



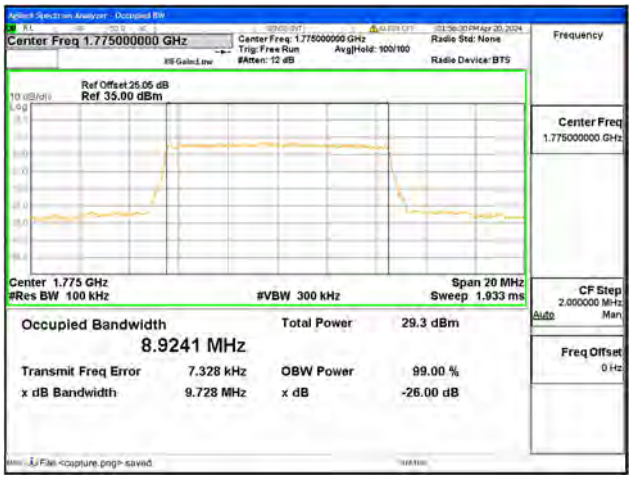
B66 / 10MHz / QPSK/ Mid CH



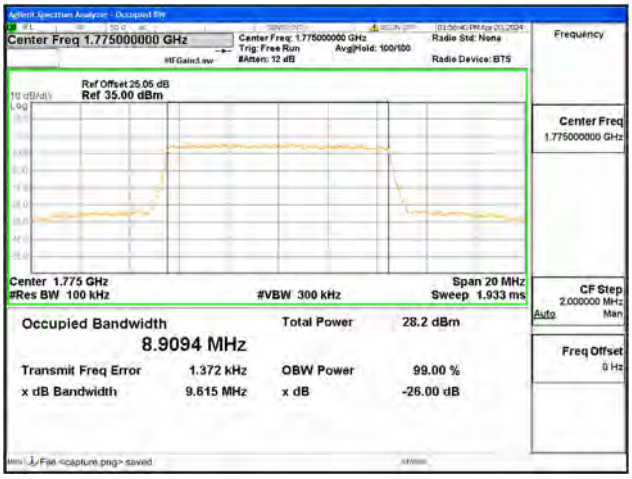
B66 / 10MHz / 16QAM/ Mid CH



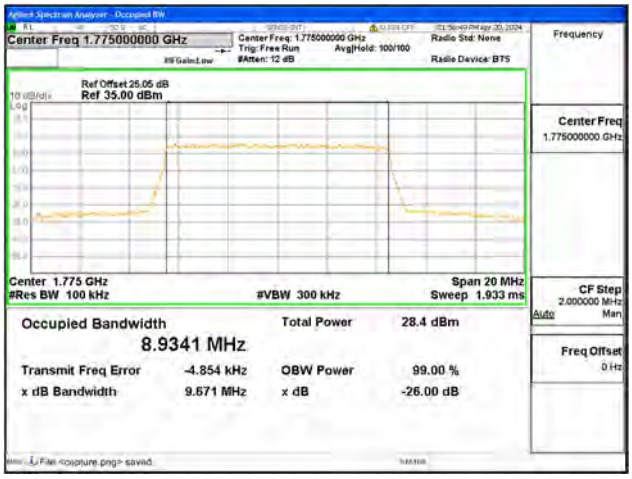
B66 / 10MHz / 64QAM/ Mid CH



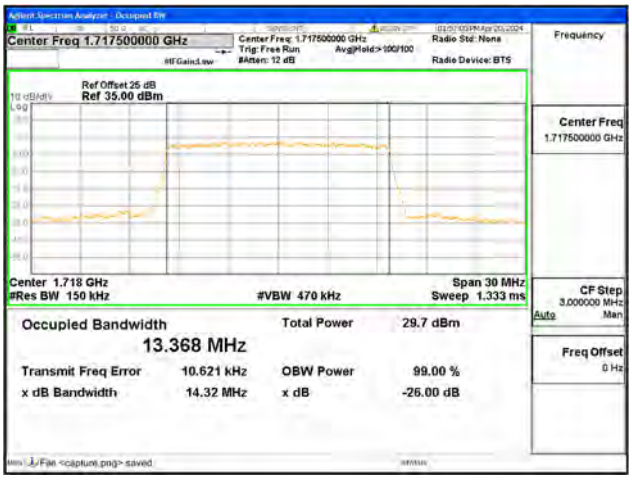
B66 / 10MHz / QPSK/ High CH



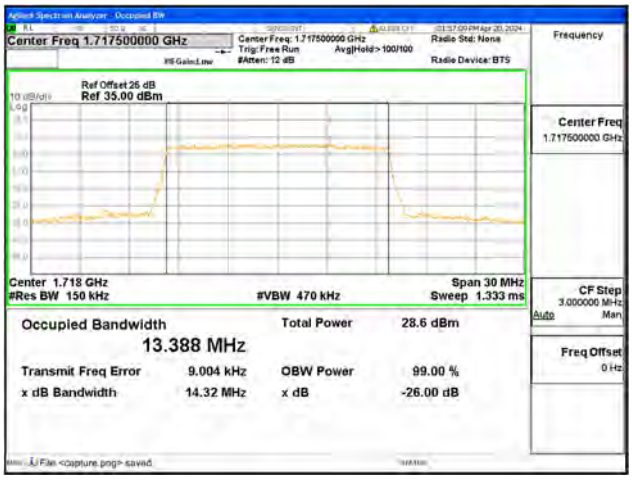
B66 / 10MHz / 16QAM/ High CH



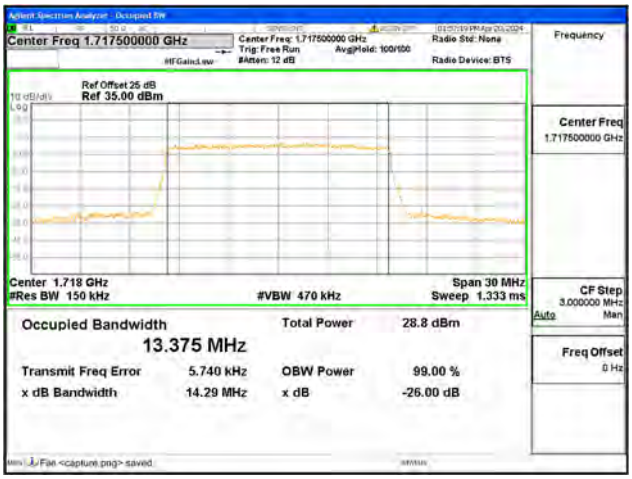
B66 / 10MHz / 64QAM/ High CH



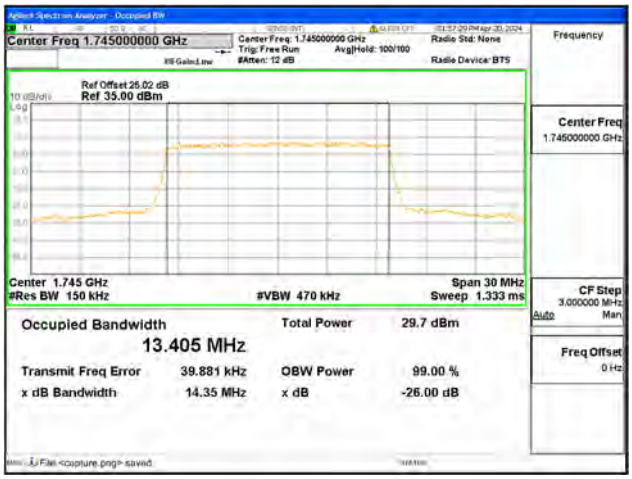
B66 / 15MHz / QPSK/ Low CH



B66 / 15MHz / 16QAM/ Low CH

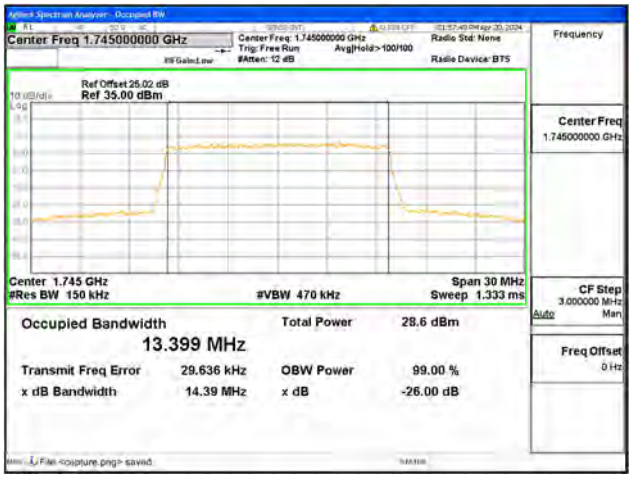


B66 / 15MHz / 64QAM/ Low CH

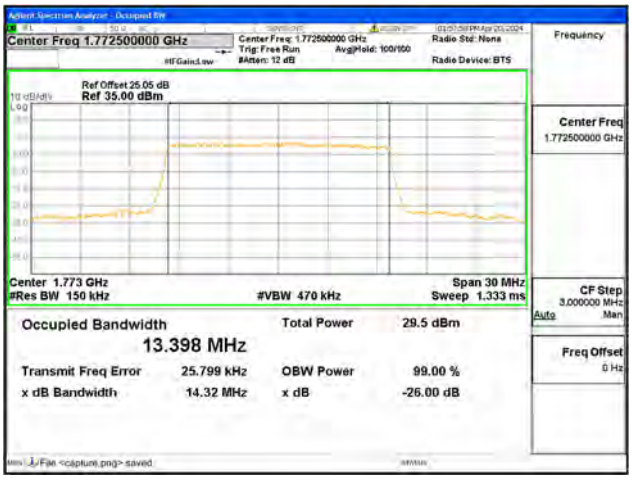


B66 / 15MHz / QPSK/ Mid CH

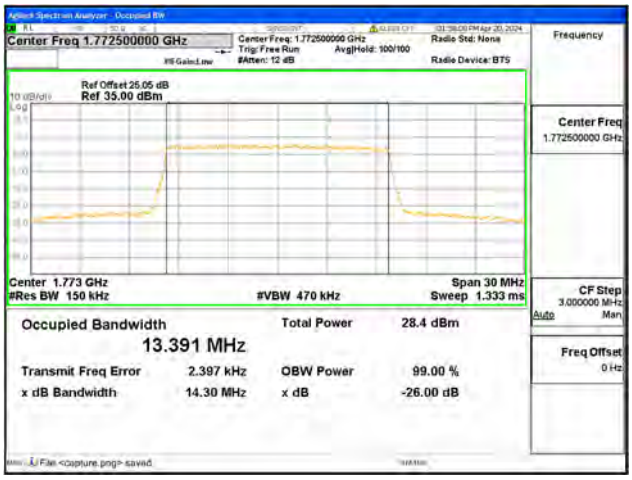
B66 / 15MHz / 16QAM/ Mid CH



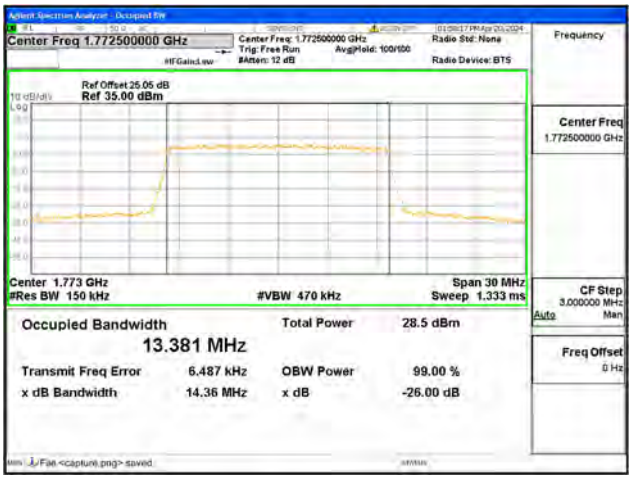
B66 / 15MHz / 64QAM/ Mid CH



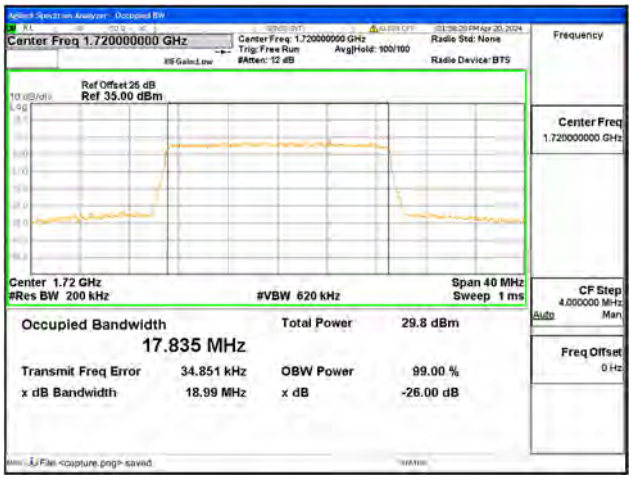
B66 / 15MHz / QPSK/ High CH



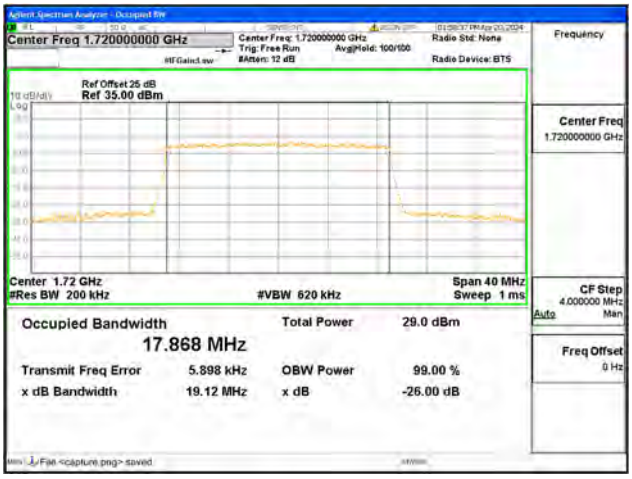
B66 / 15MHz / 16QAM/ High CH



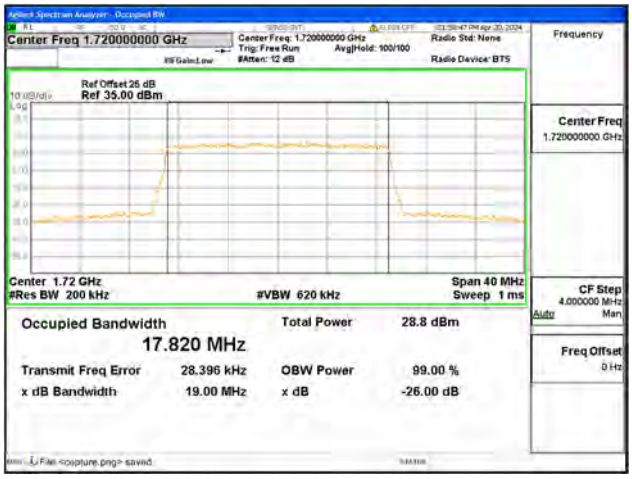
B66 / 15MHz / 64QAM/ High CH



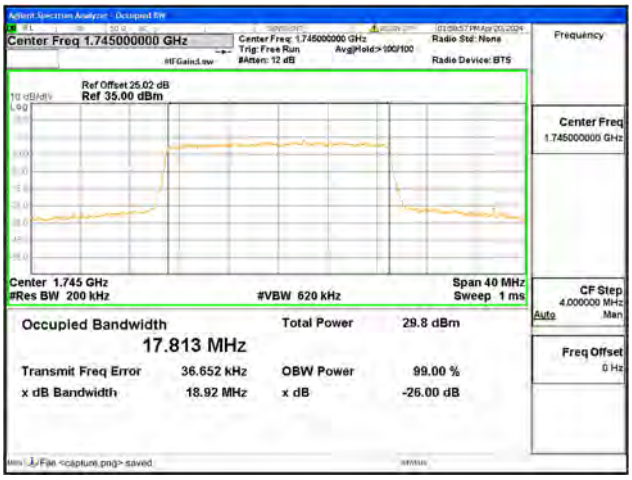
B66 / 20MHz / QPSK/ Low CH



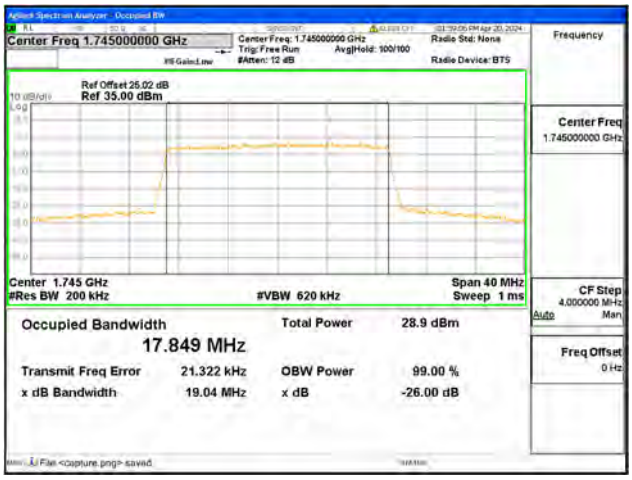
B66 / 20MHz / 16QAM/ Low CH



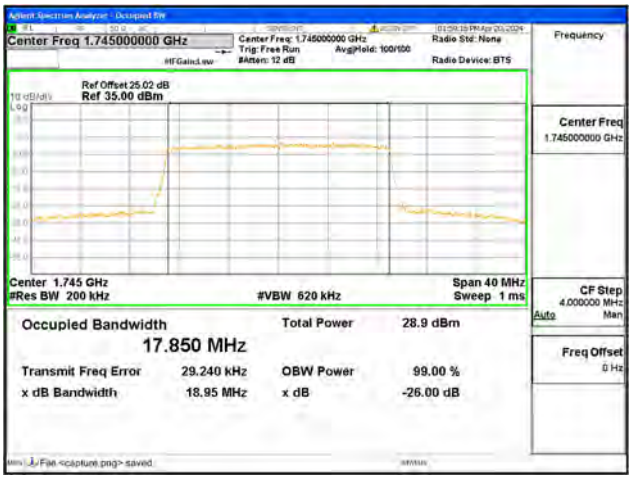
B66 / 20MHz / 64QAM/ Low CH



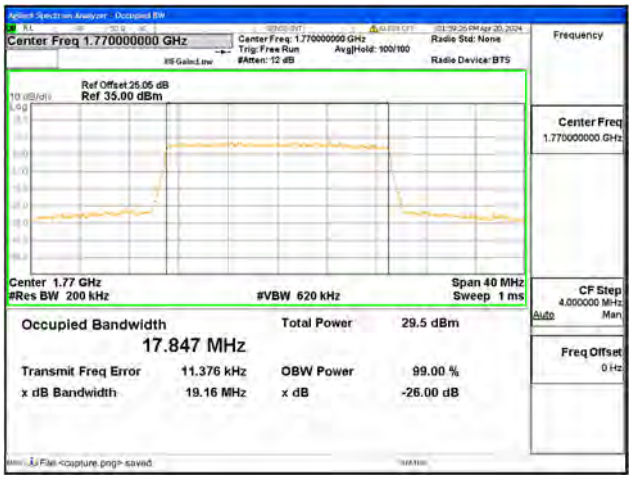
B66 / 20MHz / QPSK/ Mid CH



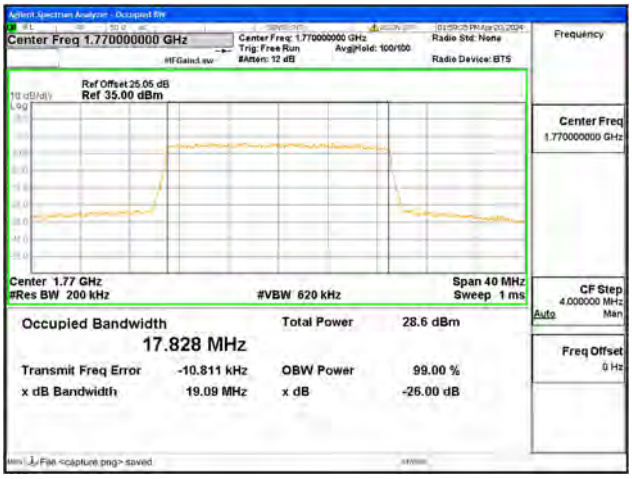
B66 / 20MHz / 16QAM/ Mid CH



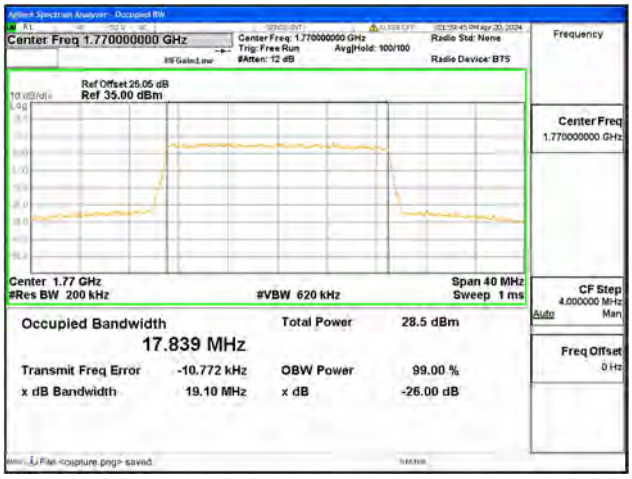
B66 / 20MHz / 64QAM/ Mid CH



B66 / 20MHz / QPSK/ High CH



B66 / 20MHz / 16QAM/ High CH



B66 / 20MHz / 64QAM/ High CH

2.3. Frequency Stability

2.3.1. Requirement

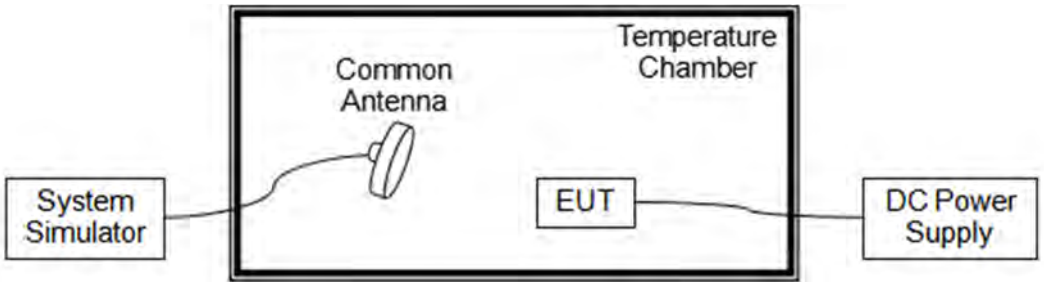
According to FCC section 2.1055, 24.235, 27.54, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. According to FCC section 2.1055, the test conditions are:

(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 35°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 3.89V, 4.45V and 3.40V, which are specified by the applicant; the normal temperature here used is 20°C.

LTE Band 2, 64QAM, Channel 18900, Frequency 1880.0MHz Limit =Within Authorized Band					
Voltage (%)	**Power (VDC)**	**Temp(°C)**	**Fre. Dev.(Hz)**	**Deviation (ppm)**	**Result**
Normal	3.89	+20(Ref)	18	0.010	PASS
Normal		0	10	0.005	
Normal		+10	15	0.008	
Normal		+20	15	0.008	
Normal		+30	10	0.005	
Normal		+35	20	**0.011**	
High	4.45	+20	-10	-0.005	
BATT.ENDPOINT	3.40	+20	15	0.008	

LTE Band 4, 64QAM, Channel 20175, Frequency 1732.5MHz Limit =Within Authorized Band					
Voltage (%)	**Power (VDC)**	**Temp(°C)**	**Fre. Dev.(Hz)**	**Deviation (ppm)**	**Result**
Normal	3.89	+20(Ref)	17	0.010	PASS
Normal		0	16	0.009	
Normal		+10	-21	-0.012	
Normal		+20	8	0.005	
Normal		+30	13	0.008	
Normal		+35	15	0.009	
High	4.45	+20	20	**0.012**	
BATT.ENDPOINT	3.40	+20	10	0.006	

LTE Band 5, 64QAM, Channel 20525, Frequency 836.5MHz Limit=±2.5ppm					
Voltage (%)	**Power (VDC)**	**Temp(°C)**	**Fre. Dev.(Hz)**	**Deviation (ppm)**	**Result**
Normal	3.89	+20(Ref)	15	0.018	PASS
Normal		0	-2	-0.002	
Normal		+10	13	0.016	
Normal		+20	19	**0.023**	
Normal		+30	17	0.020	
Normal		+35	-10	-0.012	
High	4.45	+20	13	0.016	
BATT.ENDPOINT	3.40	+20	-21	-0.025	

LTE Band 7, 64QAM, Channel 21100, Frequency 2535MHz Limit= Within Authorized Band					
Voltage (%)	**Power (VDC)**	**Temp(°C)**	**Fre. Dev.(Hz)**	**Deviation (ppm)**	**Result**
Normal	3.89	+20(Ref)	18	**0.007**	PASS
Normal		0	-22	-0.009	
Normal		+10	16	0.006	
Normal		+20	3	0.001	
Normal		+30	17	0.007	
Normal		+35	13	0.005	
High	4.45	+20	16	0.006	
BATT.ENDPOINT	3.40	+20	14	0.006	

LTE Band 12, 64QAM, Channel 23095, Frequency 707.5MHz Limit =Within Authorized Band					
Voltage (%)	**Power (VDC)**	**Temp(°C)**	**Fre. Dev.(Hz)**	**Deviation (ppm)**	**Result**
Normal	3.89	+20(Ref)	15	0.021	PASS
Normal		0	-14	-0.020	
Normal		+10	-3	-0.004	
Normal		+20	15	0.021	
Normal		+30	15	0.021	
Normal		+35	14	0.020	
High	4.45	+20	16	0.023	
BATT.ENDPOINT	3.40	+20	20	**0.028**	

LTE Band 13, 64QAM, Channel 23230, Frequency 782.0MHz Limit =Within Authorized Band					
Voltage (%)	**Power (VDC)**	**Temp(°C)**	**Fre. Dev.(Hz)**	**Deviation (ppm)**	**Result**
Normal	3.89	+20(Ref)	17	0.022	PASS
Normal		0	20	**0.026**	
Normal		+10	12	0.015	
Normal		+20	20	**0.026**	
Normal		+30	14	0.018	
Normal		+35	16	0.020	
High	4.45	+20	2	0.003	
BATT.ENDPOINT	3.40	+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	3.89	+20(Ref)	10	0.014	PASS
Normal		0	16	0.023	
Normal		+10	18	0.025	
Normal		+20	14	0.020	
Normal		+30	19	0.027	
Normal		+35	-19	-0.027	
High	4.45	+20	22	**0.031**	
BATT.ENDPOINT	3.40	+20	15	0.021	

LTE Band 38, 64QAM, Channel 38000, Frequency 2595MHz Limit =Within Authorized Band					
Voltage (%)	**Power (VDC)**	**Temp(°C)**	**Fre. Dev.(Hz)**	**Deviation (ppm)**	**Result**
Normal	3.89	+20(Ref)	8	0.003	PASS
Normal		0	19	**0.007**	
Normal		+10	13	0.005	
Normal		+20	-4	-0.002	
Normal		+30	17	**0.007**	
Normal		+35	15	0.006	
High	4.45	+20	13	0.005	
BATT.ENDPOINT	3.40	+20	16	0.006	

LTE Band 41, QPSK, Channel 40620, Frequency 2593MHz Limit =Within Authorized Band					
Voltage (%)	**Power (VDC)**	**Temp(°C)**	**Fre. Dev.(Hz)**	**Deviation (ppm)**	**Result**
Normal	3.89	+20(Ref)	0	0.000	PASS
Normal		0	14	0.005	
Normal		+10	16	0.006	
Normal		+20	1	0.000	
Normal		+30	19	0.007	
Normal		+35	13	0.005	
High	4.45	+20	-3	-0.001	
BATT.ENDPOINT	3.40	+20	20	**0.008**	

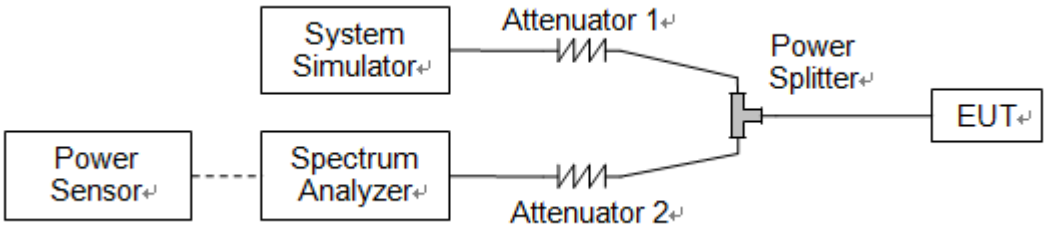
LTE Band 66, QPSK, Channel 132322, Frequency 1745MHz Limit =Within Authorized Band					
Voltage (%)	**Power (VDC)**	**Temp (°C)**	**Fre. Dev. (Hz)**	**Deviation (ppm)**	**Result**
Normal	3.89	+20(Ref)	-10	-0.006	PASS
Normal		0	17	0.010	
Normal		+10	18	0.010	
Normal		+20	10	0.006	
Normal		+30	13	0.007	
Normal		+35	22	**0.013**	
High	4.45	+20	-8	-0.005	
BATT.ENDPOINT	3.40	+20	15	0.009	

2.4. Peak to Average Radio

2.4.1. Requirement

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

2.4.2. Test Description



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

2.4.3. Test Procedure

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

2.4.4. Test Result

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

LTE Band	BW(MHz)	Channel Level	Channel	Frequency (MHz)	Modulation	Peak to Average Radio(dB)	Verdict
B2	1.4	Low	18607	1850.7	QPSK	5.58	PASS
B2	1.4	Low	18607	1850.7	16QAM	6.37	PASS
B2	1.4	Low	18607	1850.7	64QAM	6.49	PASS
B2	1.4	Mid	18900	1880	QPSK	5.71	PASS
B2	1.4	Mid	18900	1880	16QAM	6.34	PASS
B2	1.4	Mid	18900	1880	64QAM	6.54	PASS
B2	1.4	High	19193	1909.3	QPSK	5.38	PASS
B2	1.4	High	19193	1909.3	16QAM	6.11	PASS
B2	1.4	High	19193	1909.3	64QAM	6.37	PASS
B2	3	Low	18615	1851.5	QPSK	5.62	PASS
B2	3	Low	18615	1851.5	16QAM	6.37	PASS
B2	3	Low	18615	1851.5	64QAM	6.48	PASS
B2	3	Mid	18900	1880	QPSK	5.59	PASS
B2	3	Mid	18900	1880	16QAM	6.35	PASS
B2	3	Mid	18900	1880	64QAM	6.38	PASS
B2	3	High	19185	1908.5	QPSK	5.47	PASS
B2	3	High	19185	1908.5	16QAM	6.23	PASS
B2	3	High	19185	1908.5	64QAM	6.31	PASS
B2	5	Low	18625	1852.5	QPSK	5.69	PASS
B2	5	Low	18625	1852.5	16QAM	6.26	PASS
B2	5	Low	18625	1852.5	64QAM	6.45	PASS
B2	5	Mid	18900	1880	QPSK	5.59	PASS
B2	5	Mid	18900	1880	16QAM	6.24	PASS
B2	5	Mid	18900	1880	64QAM	6.38	PASS
B2	5	High	19175	1907.5	QPSK	5.54	PASS
B2	5	High	19175	1907.5	16QAM	6.21	PASS
B2	5	High	19175	1907.5	64QAM	6.35	PASS
B2	10	Low	18650	1855	QPSK	5.61	PASS
B2	10	Low	18650	1855	16QAM	6.27	PASS
B2	10	Low	18650	1855	64QAM	6.42	PASS
B2	10	Mid	18900	1880	QPSK	5.58	PASS
B2	10	Mid	18900	1880	16QAM	6.19	PASS
B2	10	Mid	18900	1880	64QAM	6.35	PASS
B2	10	High	19150	1905	QPSK	5.51	PASS
B2	10	High	19150	1905	16QAM	6.17	PASS

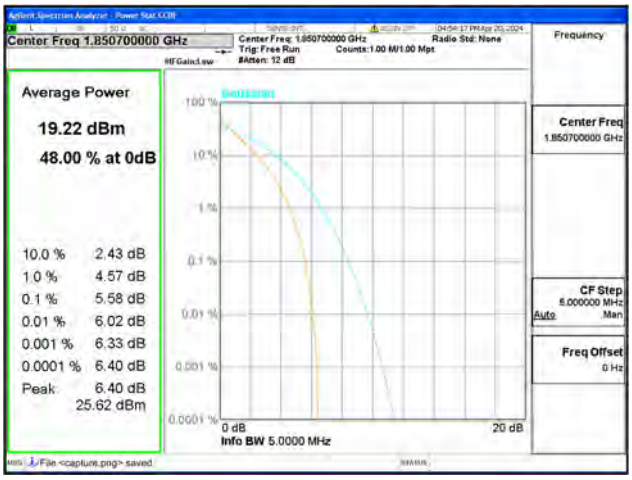
B2	10	High	19150	1905	64QAM	6.36	PASS
B2	15	Low	18675	1857.5	QPSK	5.56	PASS
B2	15	Low	18675	1857.5	16QAM	6.18	PASS
B2	15	Low	18675	1857.5	64QAM	6.45	PASS
B2	15	Mid	18900	1880	QPSK	5.45	PASS
B2	15	Mid	18900	1880	16QAM	6.13	PASS
B2	15	Mid	18900	1880	64QAM	6.39	PASS
B2	15	High	19125	1902.5	QPSK	5.36	PASS
B2	15	High	19125	1902.5	16QAM	6.11	PASS
B2	15	High	19125	1902.5	64QAM	6.34	PASS
B2	20	Low	18700	1860	QPSK	5.52	PASS
B2	20	Low	18700	1860	16QAM	6.28	PASS
B2	20	Low	18700	1860	64QAM	6.43	PASS
B2	20	Mid	18900	1880	QPSK	5.42	PASS
B2	20	Mid	18900	1880	16QAM	6.18	PASS
B2	20	Mid	18900	1880	64QAM	6.36	PASS
B2	20	High	19100	1900	QPSK	5.45	PASS
B2	20	High	19100	1900	16QAM	6.18	PASS
B2	20	High	19100	1900	64QAM	6.39	PASS

LTE Band	BW(MHz)	Channel Level	Channel	Frequency (MHz)	Modulation	Peak to Average Radio(dB)	Verdict
B4	1.4	Low	19957	1710.7	QPSK	5.85	PASS
B4	1.4	Low	19957	1710.7	16QAM	6.61	PASS
B4	1.4	Low	19957	1710.7	64QAM	6.74	PASS
B4	1.4	Mid	20175	1732.5	QPSK	5.98	PASS
B4	1.4	Mid	20175	1732.5	16QAM	6.72	PASS
B4	1.4	Mid	20175	1732.5	64QAM	6.70	PASS
B4	1.4	High	20393	1754.3	QPSK	5.67	PASS
B4	1.4	High	20393	1754.3	16QAM	6.24	PASS
B4	1.4	High	20393	1754.3	64QAM	6.22	PASS
B4	3	Low	19965	1711.5	QPSK	5.75	PASS
B4	3	Low	19965	1711.5	16QAM	6.53	PASS
B4	3	Low	19965	1711.5	64QAM	6.61	PASS
B4	3	Mid	20175	1732.5	QPSK	5.94	PASS
B4	3	Mid	20175	1732.5	16QAM	6.67	PASS
B4	3	Mid	20175	1732.5	64QAM	6.69	PASS
B4	3	High	20385	1753.5	QPSK	5.51	PASS
B4	3	High	20385	1753.5	16QAM	6.35	PASS
B4	3	High	20385	1753.5	64QAM	6.44	PASS
B4	5	Low	19975	1712.5	QPSK	5.76	PASS
B4	5	Low	19975	1712.5	16QAM	6.42	PASS
B4	5	Low	19975	1712.5	64QAM	6.61	PASS
B4	5	Mid	20175	1732.5	QPSK	5.83	PASS
B4	5	Mid	20175	1732.5	16QAM	6.51	PASS
B4	5	Mid	20175	1732.5	64QAM	6.63	PASS
B4	5	High	20375	1752.5	QPSK	5.66	PASS
B4	5	High	20375	1752.5	16QAM	6.21	PASS
B4	5	High	20375	1752.5	64QAM	6.40	PASS
B4	10	Low	20000	1715	QPSK	5.76	PASS
B4	10	Low	20000	1715	16QAM	6.38	PASS
B4	10	Low	20000	1715	64QAM	6.55	PASS
B4	10	Mid	20175	1732.5	QPSK	5.81	PASS
B4	10	Mid	20175	1732.5	16QAM	6.43	PASS
B4	10	Mid	20175	1732.5	64QAM	6.56	PASS
B4	10	High	20350	1750	QPSK	5.68	PASS
B4	10	High	20350	1750	16QAM	6.24	PASS

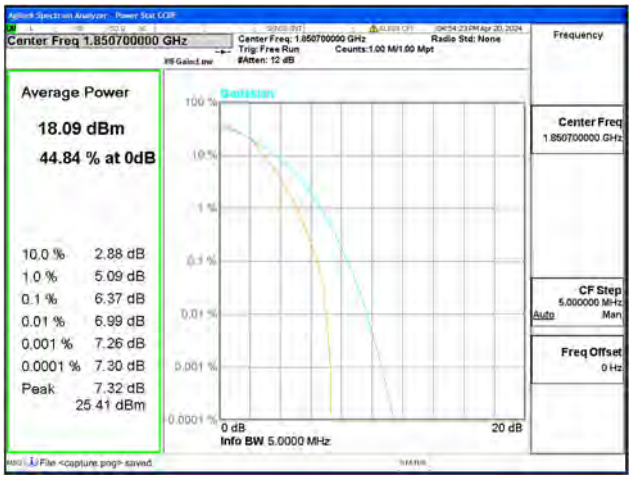
B4	10	High	20350	1750	64QAM	6.42	PASS
B4	15	Low	20025	1717.5	QPSK	5.68	PASS
B4	15	Low	20025	1717.5	16QAM	6.35	PASS
B4	15	Low	20025	1717.5	64QAM	6.56	PASS
B4	15	Mid	20175	1732.5	QPSK	5.80	PASS
B4	15	Mid	20175	1732.5	16QAM	6.45	PASS
B4	15	Mid	20175	1732.5	64QAM	6.60	PASS
B4	15	High	20325	1747.5	QPSK	5.56	PASS
B4	15	High	20325	1747.5	16QAM	6.25	PASS
B4	15	High	20325	1747.5	64QAM	6.44	PASS
B4	20	Low	20050	1720	QPSK	5.66	PASS
B4	20	Low	20050	1720	16QAM	6.46	PASS
B4	20	Low	20050	1720	64QAM	6.62	PASS
B4	20	Mid	20175	1732.5	QPSK	5.69	PASS
B4	20	Mid	20175	1732.5	16QAM	6.40	PASS
B4	20	Mid	20175	1732.5	64QAM	6.62	PASS
B4	20	High	20300	1745	QPSK	5.59	PASS
B4	20	High	20300	1745	16QAM	6.32	PASS
B4	20	High	20300	1745	64QAM	6.50	PASS

LTE Band	BW(MHz)	Channel Level	Channel	Frequency (MHz)	Modulation	Peak to Average Radio(dB)	Verdict
B66	1.4	Low	131979	1710.7	QPSK	5.58	PASS
B66	1.4	Low	131979	1710.7	16QAM	6.46	PASS
B66	1.4	Low	131979	1710.7	64QAM	6.56	PASS
B66	1.4	Mid	132322	1745	QPSK	5.76	PASS
B66	1.4	Mid	132322	1745	16QAM	6.52	PASS
B66	1.4	Mid	132322	1745	64QAM	6.57	PASS
B66	1.4	High	132665	1779.3	QPSK	5.71	PASS
B66	1.4	High	132665	1779.3	16QAM	6.51	PASS
B66	1.4	High	132665	1779.3	64QAM	6.54	PASS
B66	3	Low	131987	1711.5	QPSK	5.62	PASS
B66	3	Low	131987	1711.5	16QAM	6.39	PASS
B66	3	Low	131987	1711.5	64QAM	6.55	PASS
B66	3	Mid	132322	1745	QPSK	5.73	PASS
B66	3	Mid	132322	1745	16QAM	6.47	PASS
B66	3	Mid	132322	1745	64QAM	6.50	PASS
B66	3	High	132657	1778.5	QPSK	5.68	PASS
B66	3	High	132657	1778.5	16QAM	6.42	PASS
B66	3	High	132657	1778.5	64QAM	6.45	PASS
B66	5	Low	131997	1712.5	QPSK	5.61	PASS
B66	5	Low	131997	1712.5	16QAM	6.30	PASS
B66	5	Low	131997	1712.5	64QAM	6.51	PASS
B66	5	Mid	132322	1745	QPSK	5.63	PASS
B66	5	Mid	132322	1745	16QAM	6.28	PASS
B66	5	Mid	132322	1745	64QAM	6.47	PASS
B66	5	High	132647	1777.5	QPSK	5.65	PASS
B66	5	High	132647	1777.5	16QAM	6.30	PASS
B66	5	High	132647	1777.5	64QAM	6.43	PASS
B66	10	Low	132022	1715	QPSK	5.62	PASS
B66	10	Low	132022	1715	16QAM	6.30	PASS
B66	10	Low	132022	1715	64QAM	6.53	PASS
B66	10	Mid	132322	1745	QPSK	5.65	PASS
B66	10	Mid	132322	1745	16QAM	6.26	PASS
B66	10	Mid	132322	1745	64QAM	6.40	PASS
B66	10	High	132622	1775	QPSK	5.92	PASS
B66	10	High	132622	1775	16QAM	6.27	PASS

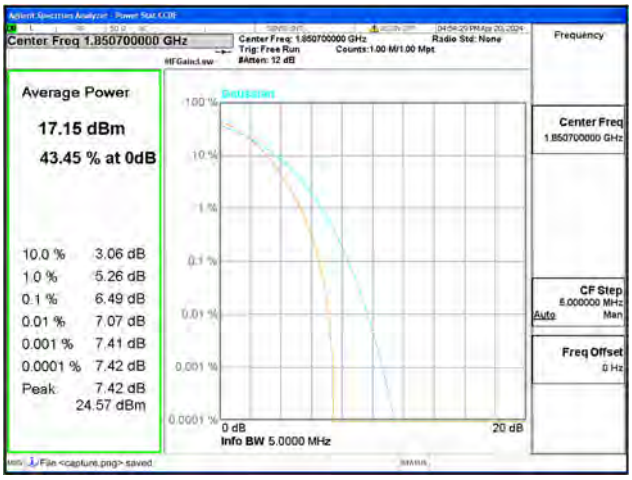
B66	10	High	132622	1775	64QAM	6.46	PASS
B66	15	Low	132047	1717.5	QPSK	5.51	PASS
B66	15	Low	132047	1717.5	16QAM	6.20	PASS
B66	15	Low	132047	1717.5	64QAM	6.50	PASS
B66	15	Mid	132322	1745	QPSK	5.51	PASS
B66	15	Mid	132322	1745	16QAM	6.21	PASS
B66	15	Mid	132322	1745	64QAM	6.43	PASS
B66	15	High	132597	1772.5	QPSK	5.49	PASS
B66	15	High	132597	1772.5	16QAM	6.16	PASS
B66	15	High	132597	1772.5	64QAM	6.43	PASS
B66	20	Low	132072	1720	QPSK	5.49	PASS
B66	20	Low	132072	1720	16QAM	6.25	PASS
B66	20	Low	132072	1720	64QAM	6.51	PASS
B66	20	Mid	132322	1745	QPSK	5.50	PASS
B66	20	Mid	132322	1745	16QAM	6.28	PASS
B66	20	Mid	132322	1745	64QAM	6.47	PASS
B66	20	High	132572	1770	QPSK	5.42	PASS
B66	20	High	132572	1770	16QAM	6.17	PASS
B66	20	High	132572	1770	64QAM	6.38	PASS



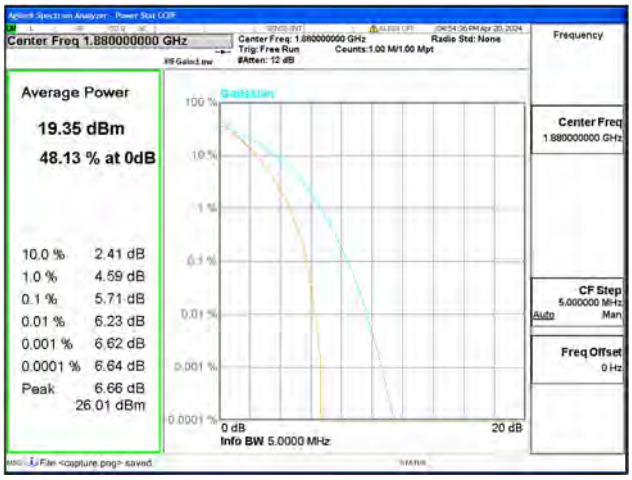
B2 / 1.4MHz / Low CH / QPSK



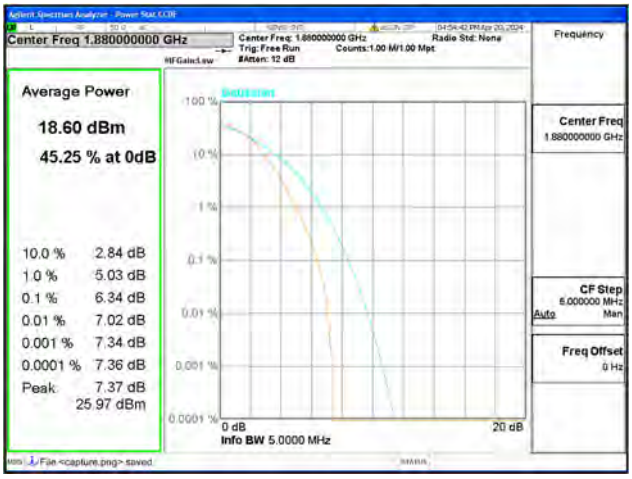
B2 / 1.4MHz / Low CH / 16QAM



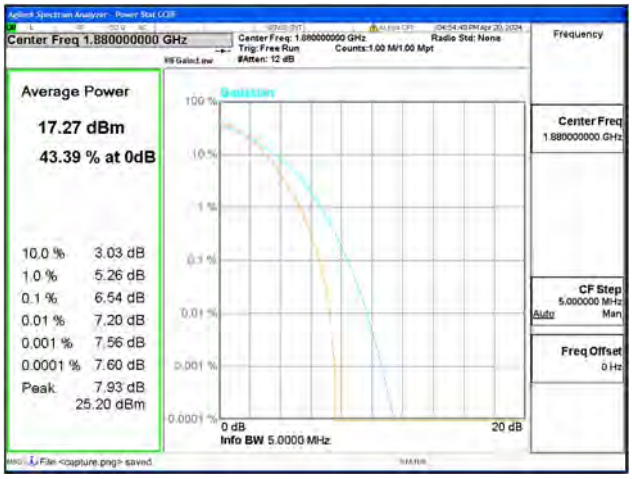
B2 / 1.4MHz / Low CH / 64QAM



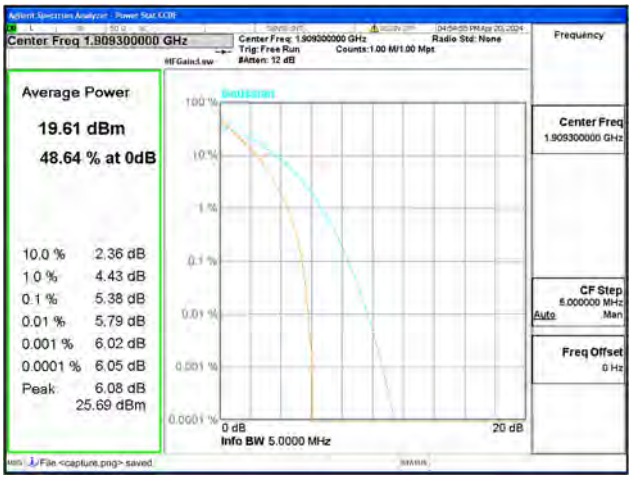
B2 / 1.4MHz / Mid CH / QPSK



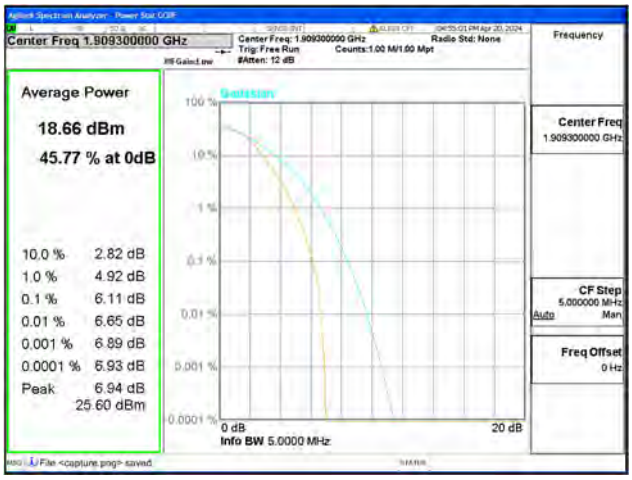
B2 / 1.4MHz / Mid CH / 16QAM



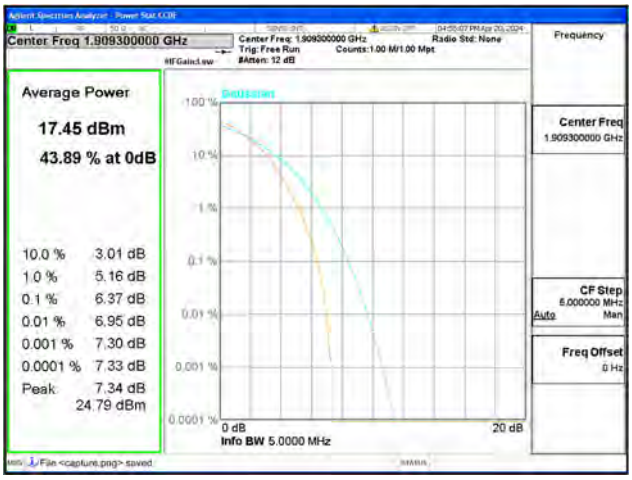
B2 / 1.4MHz / Mid CH / 64QAM



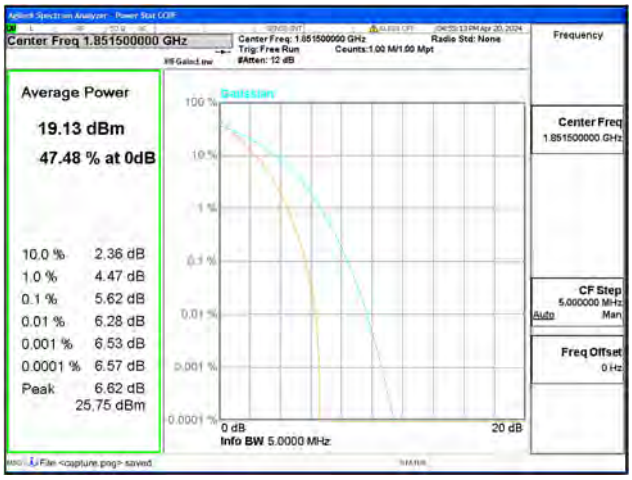
B2 / 1.4MHz / High CH / QPSK



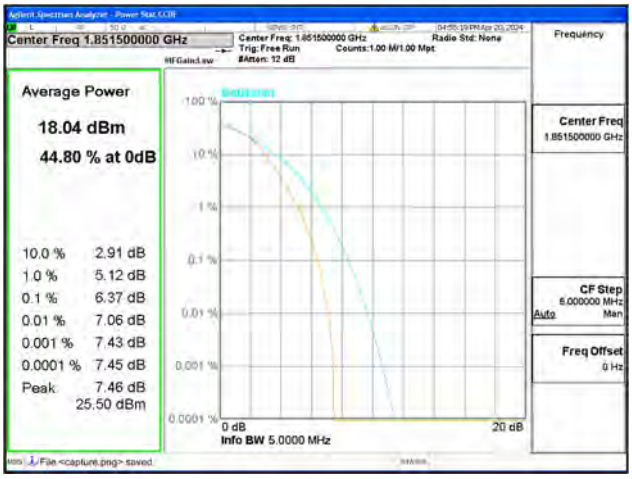
B2 / 1.4MHz / High CH / 16QAM



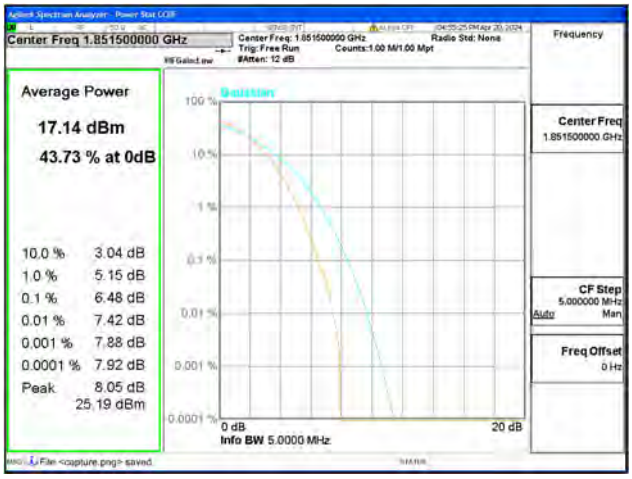
B2 / 1.4MHz / High CH / 64QAM



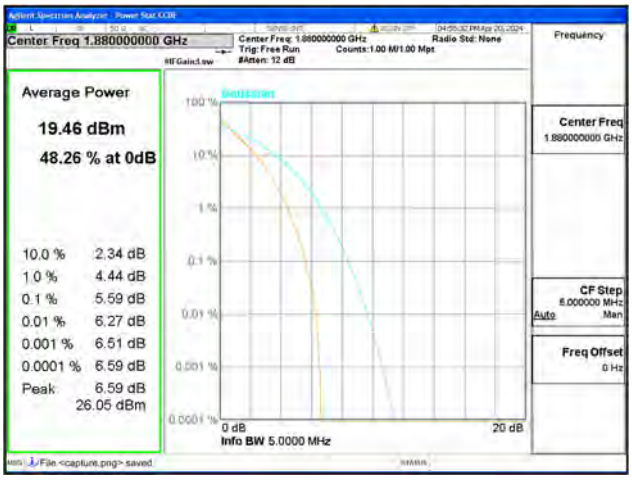
B2 / 3MHz / Low CH / QPSK



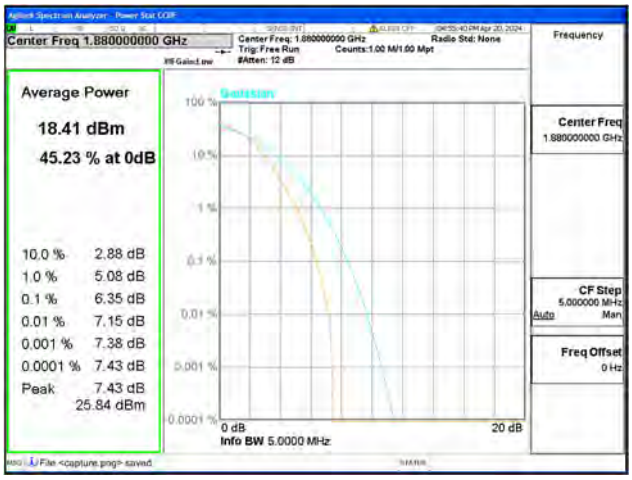
B2 / 3MHz / Low CH / 16QAM



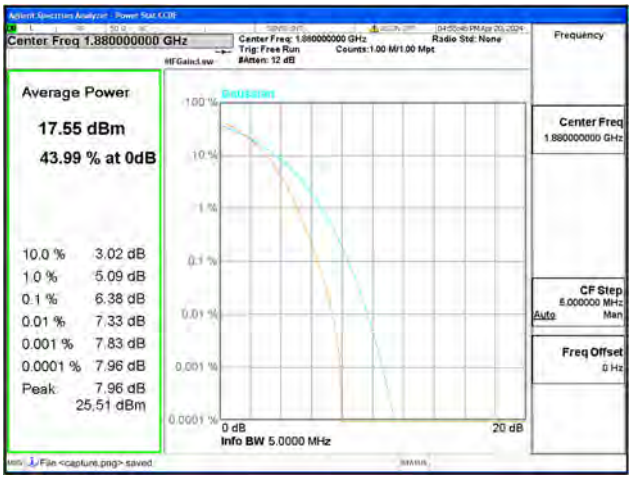
B2 / 3MHz / Low CH / 64QAM



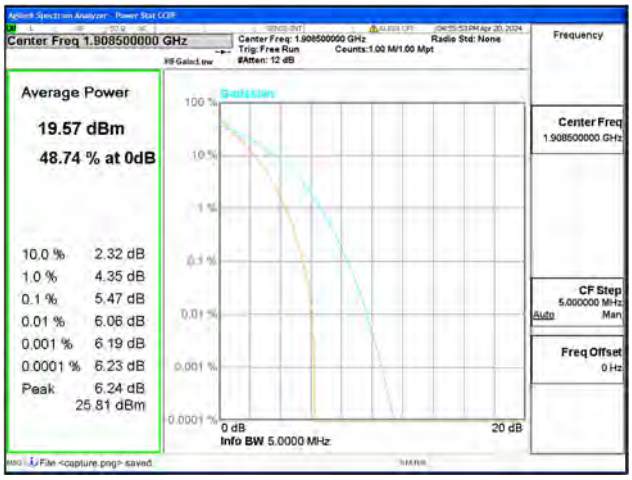
B2 / 3MHz / Mid CH / QPSK



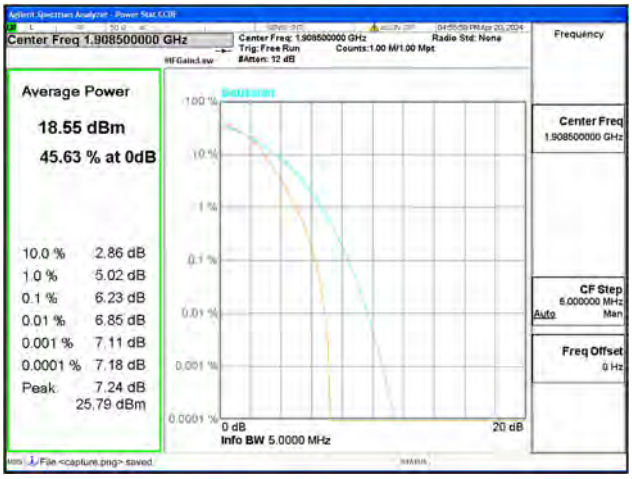
B2 / 3MHz / Mid CH / 16QAM



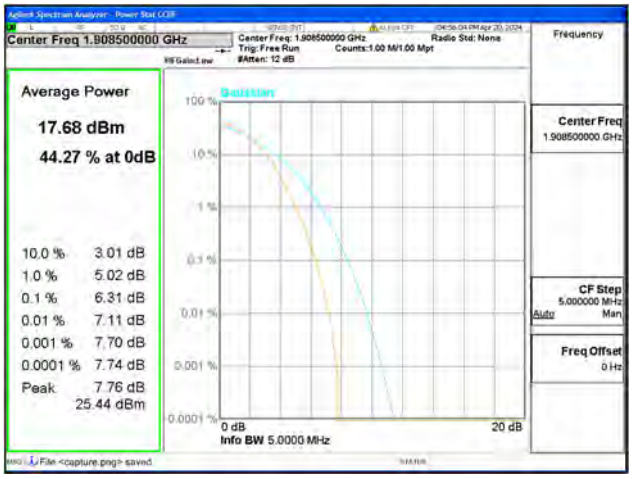
B2 / 3MHz / Mid CH / 64QAM



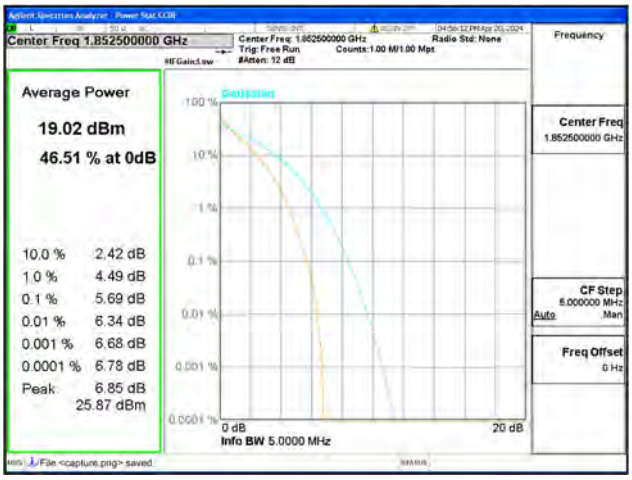
B2 / 3MHz / High CH / QPSK



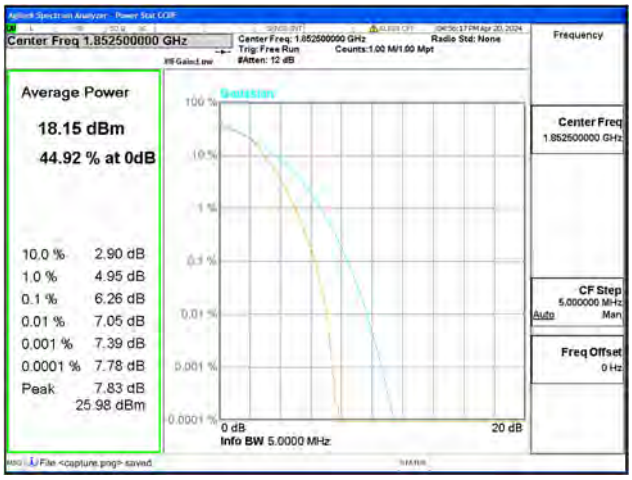
B2 / 3MHz / High CH / 16QAM



B2 / 3MHz / High CH / 64QAM

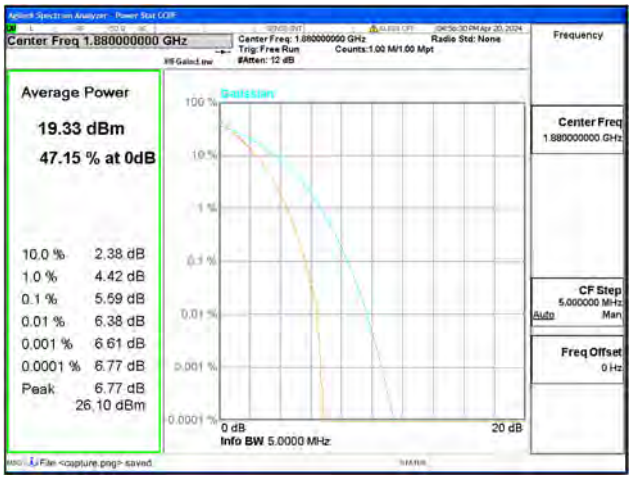


B2 / 5MHz / Low CH / QPSK

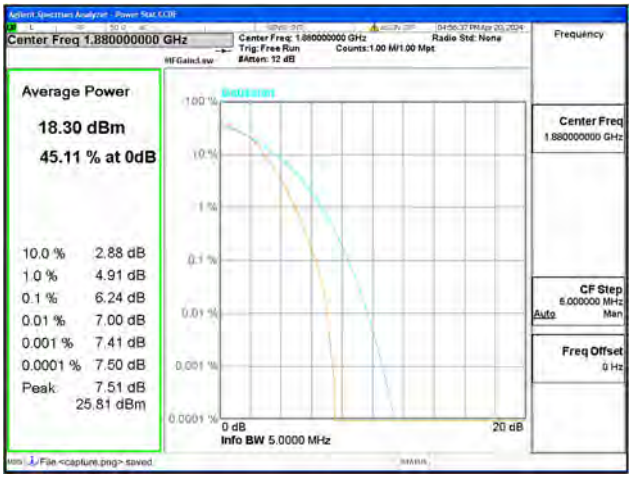


B2 / 5MHz / Low CH / 16QAM

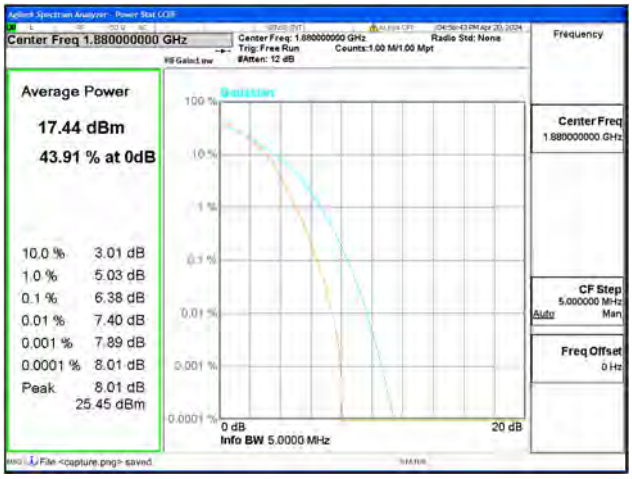
B2 / 5MHz / Low CH / 64QAM



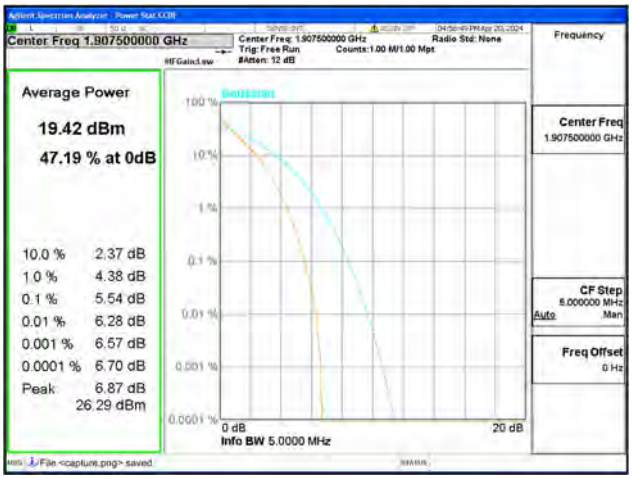
B2 / 5MHz / Mid CH / QPSK



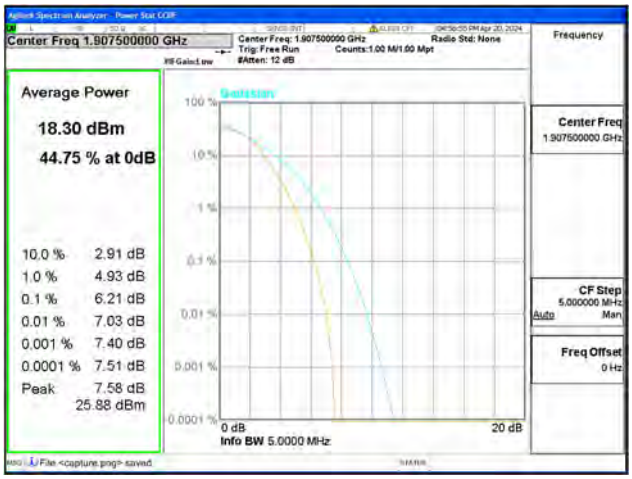
B2 / 5MHz / Mid CH / 16QAM



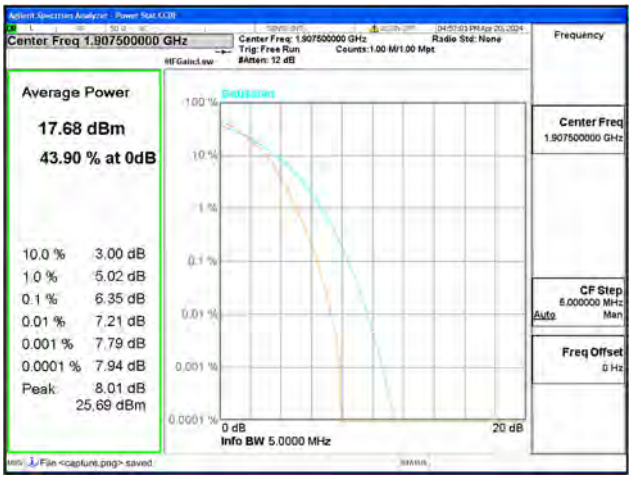
B2 / 5MHz / Mid CH / 64QAM



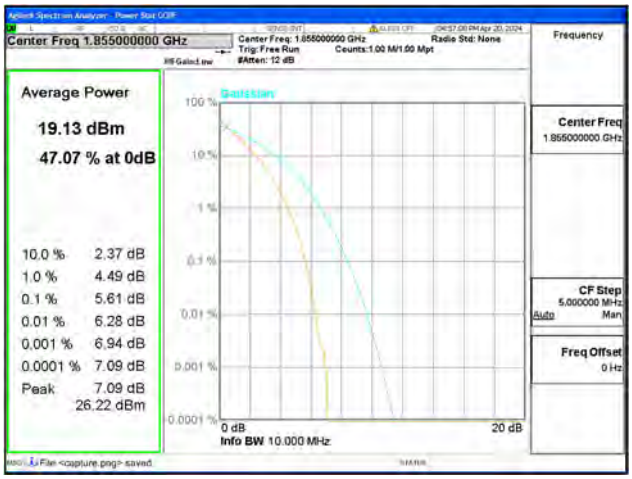
B2 / 5MHz / High CH / QPSK



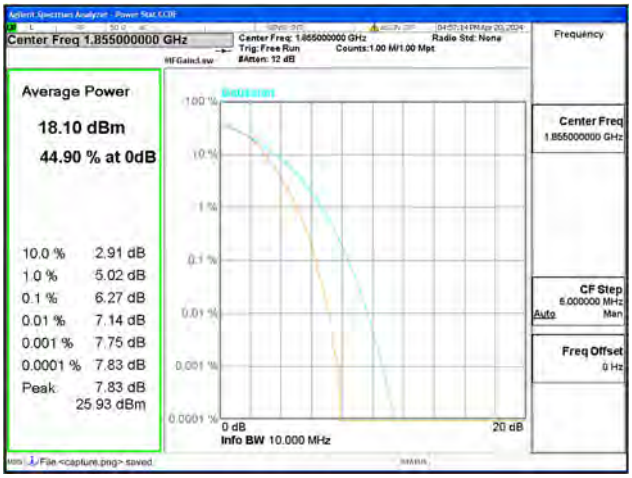
B2 / 5MHz / High CH / 16QAM



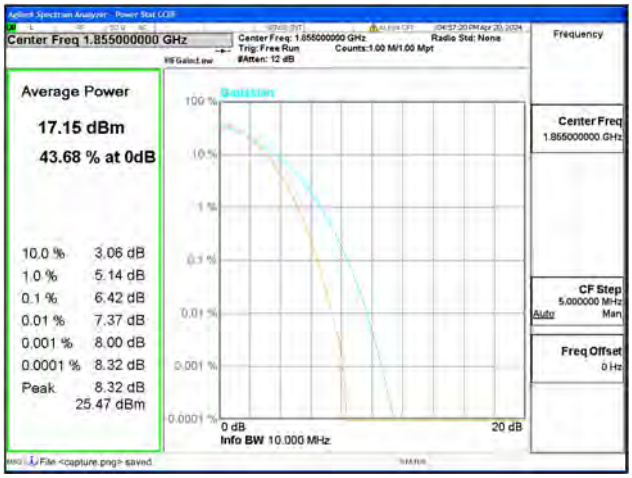
B2 / 5MHz / High CH / 64QAM



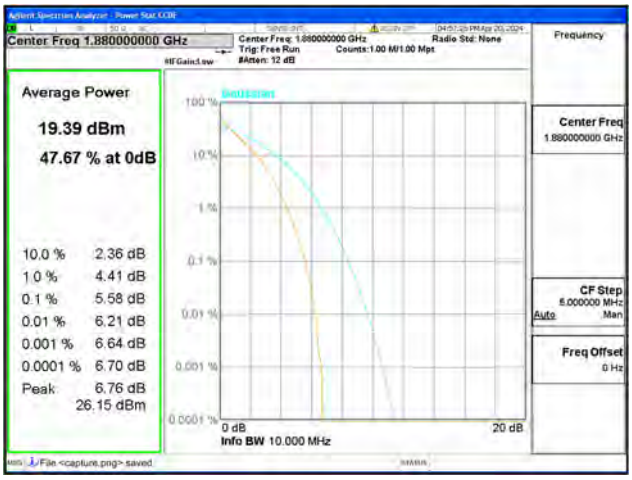
B2 / 10MHz / Low CH / QPSK



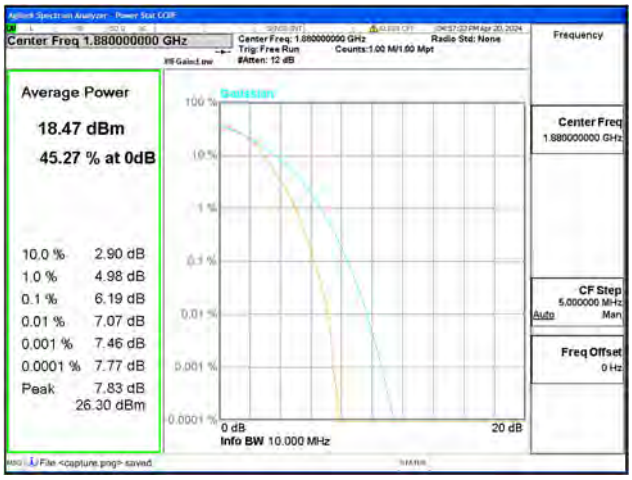
B2 / 10MHz / Low CH / 16QAM



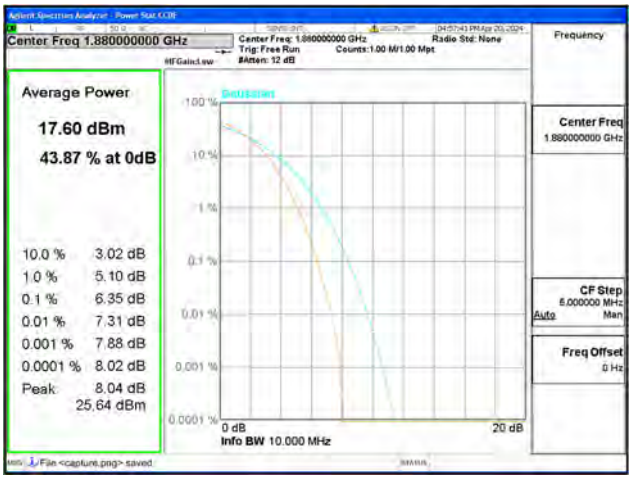
B2 / 10MHz / Low CH / 64QAM



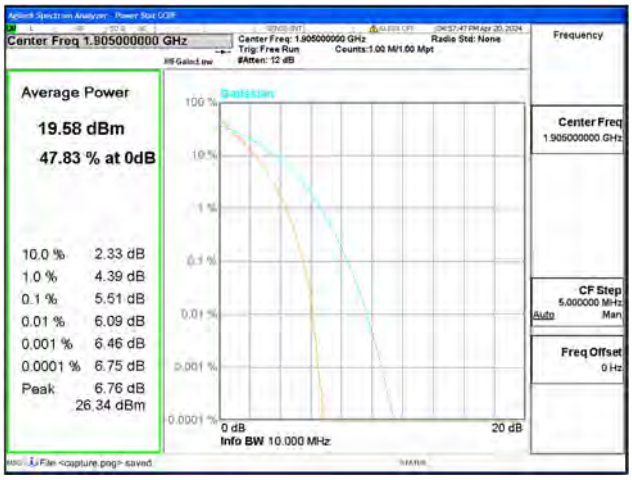
B2 / 10MHz / Mid CH / QPSK



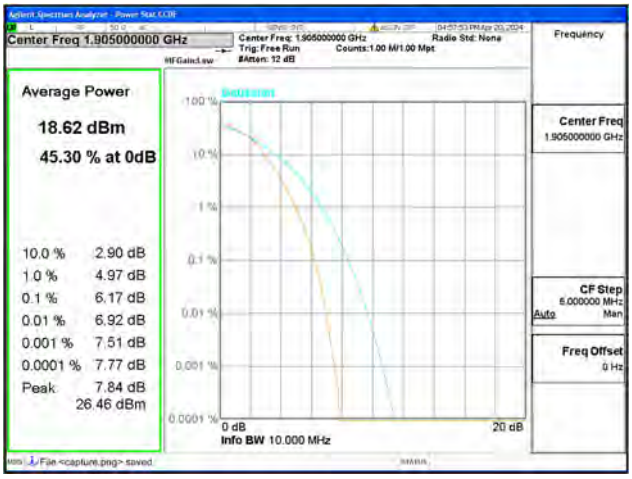
B2 / 10MHz / Mid CH / 16QAM



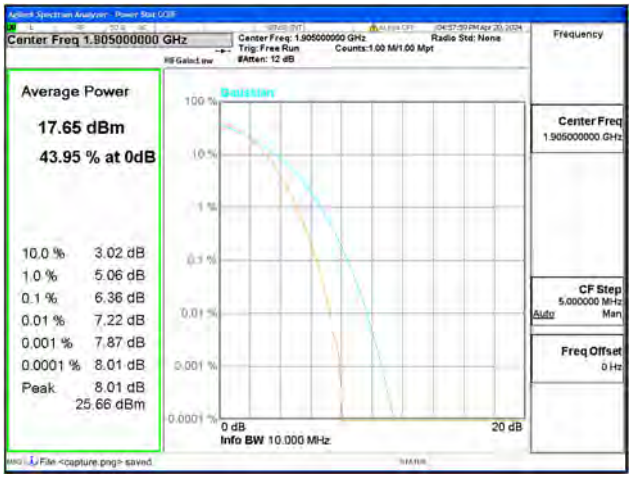
B2 / 10MHz / Mid CH / 64QAM



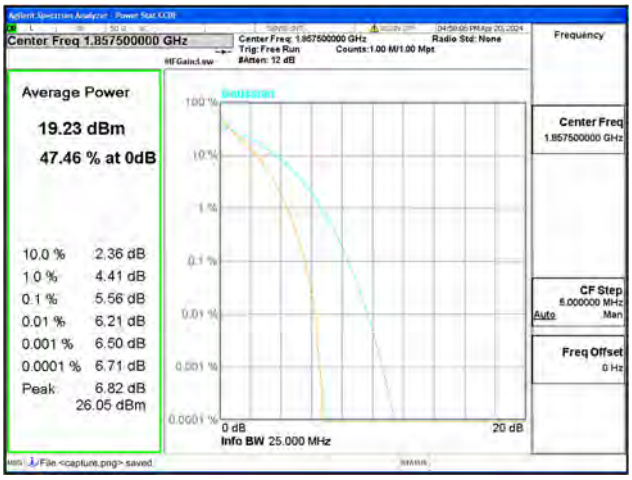
B2 / 10MHz / High CH / QPSK



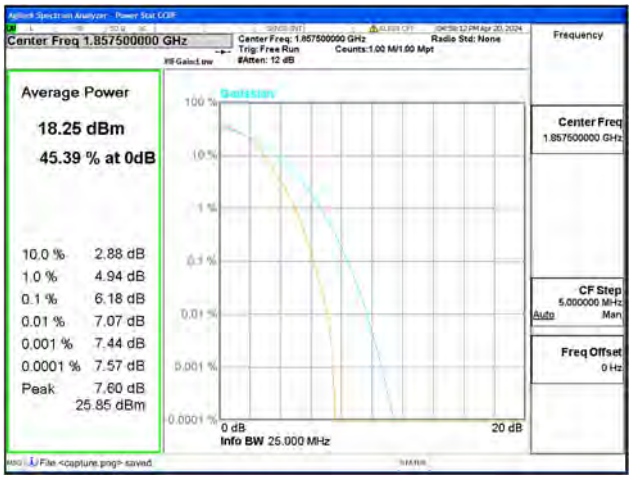
B2 / 10MHz / High CH / 16QAM



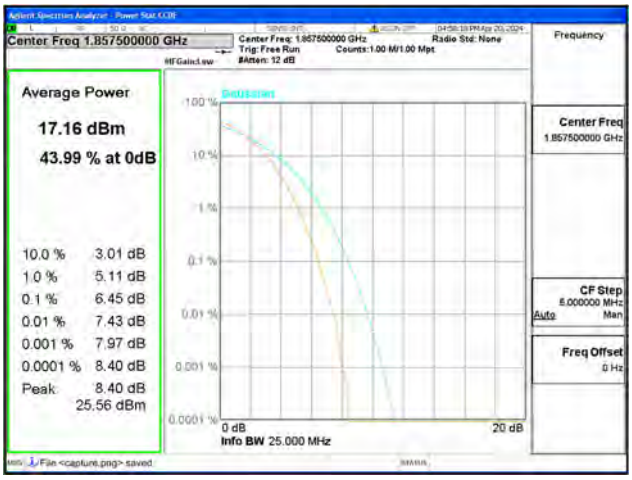
B2 / 10MHz / High CH / 64QAM



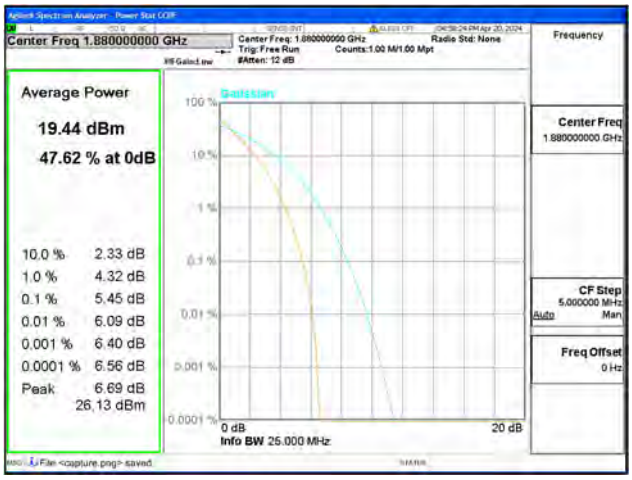
B2 / 15MHz / Low CH / QPSK



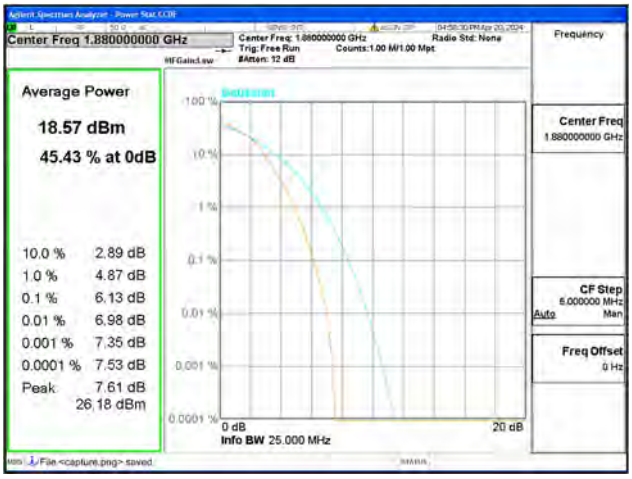
B2 / 15MHz / Low CH / 16QAM



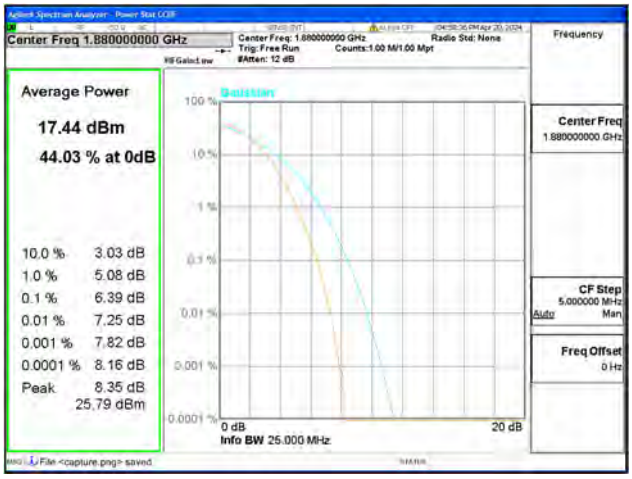
B2 / 15MHz / Low CH / 64QAM



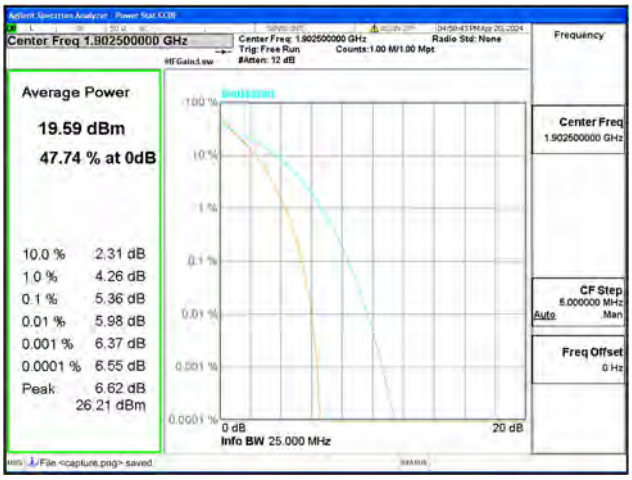
B2 / 15MHz / Mid CH / QPSK



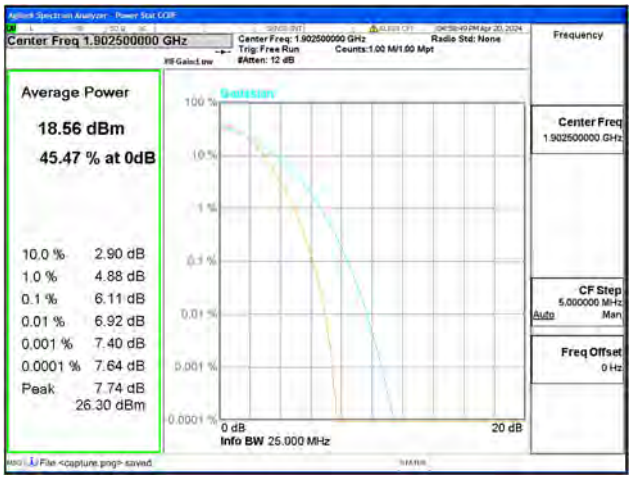
B2 / 15MHz / Mid CH / 16QAM



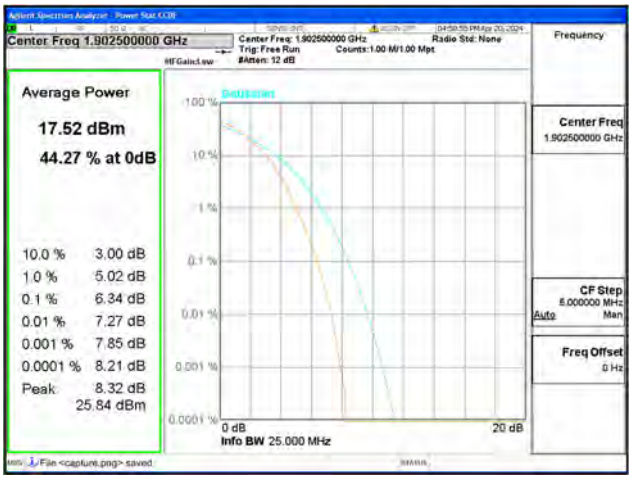
B2 / 15MHz / Mid CH / 64QAM



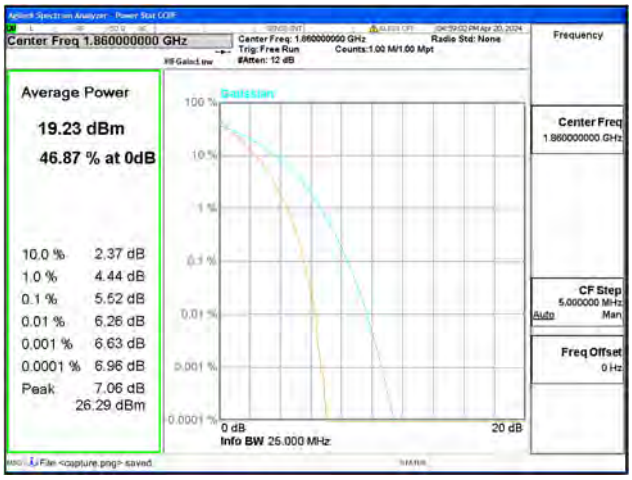
B2 / 15MHz / High CH / QPSK



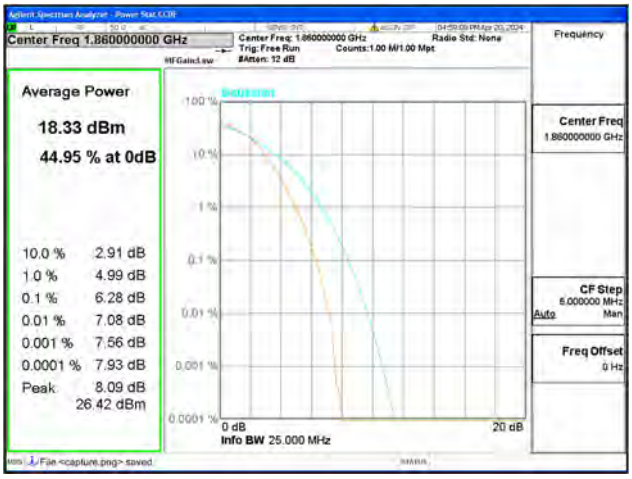
B2 / 15MHz / High CH / 16QAM



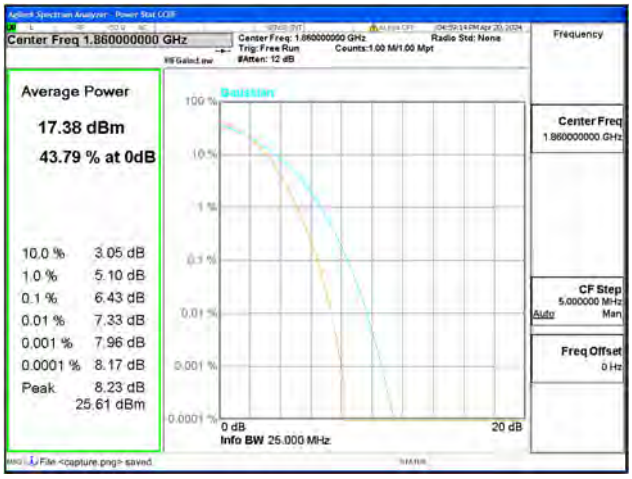
B2 / 15MHz / High CH / 64QAM



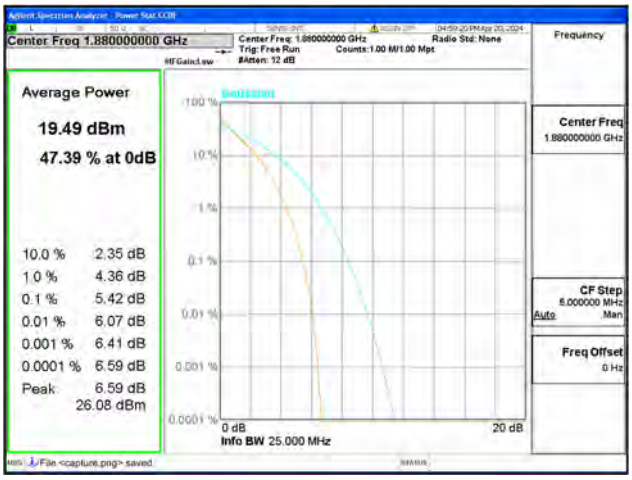
B2 / 20MHz / Low CH / QPSK



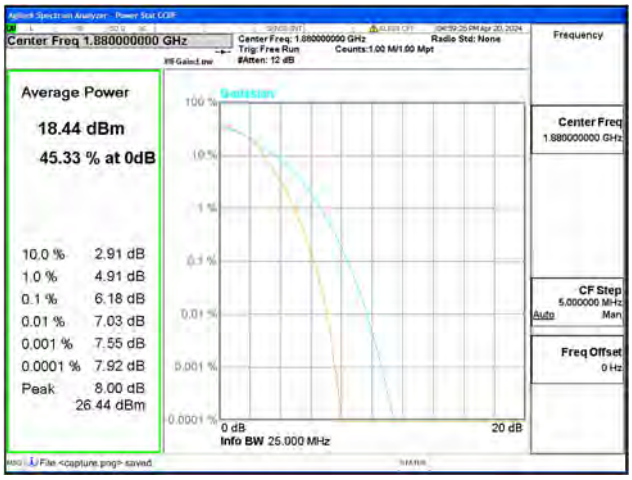
B2 / 20MHz / Low CH / 16QAM



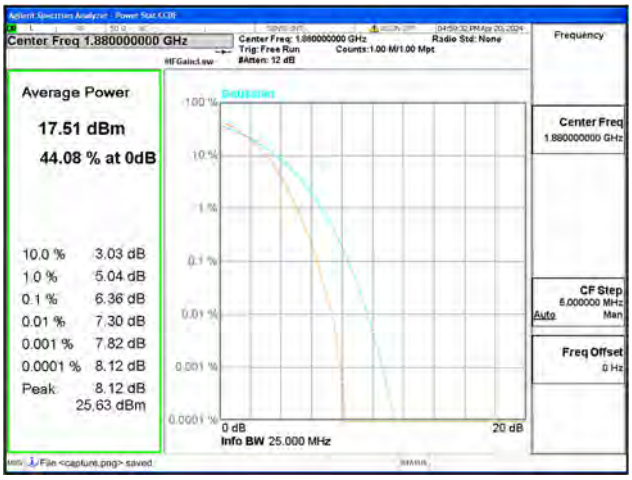
B2 / 20MHz / Low CH / 64QAM



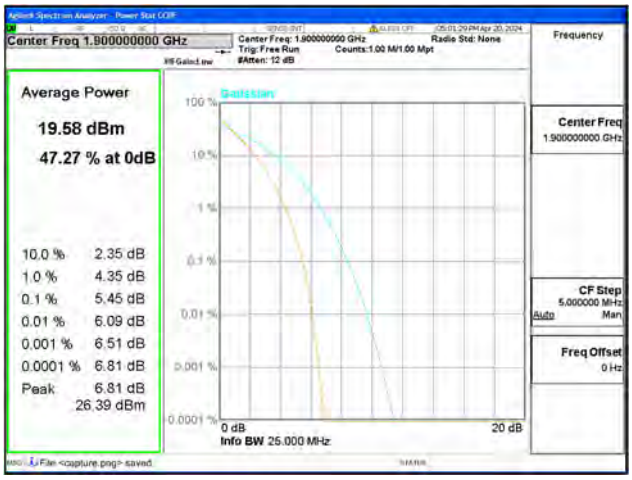
B2 / 20MHz / Mid CH / QPSK



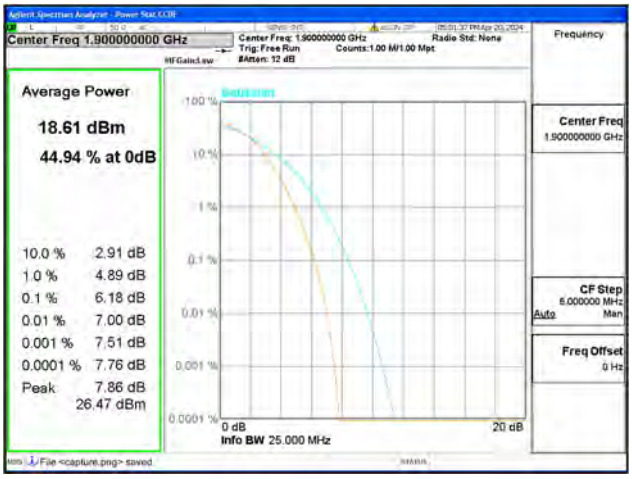
B2 / 20MHz / Mid CH / 16QAM



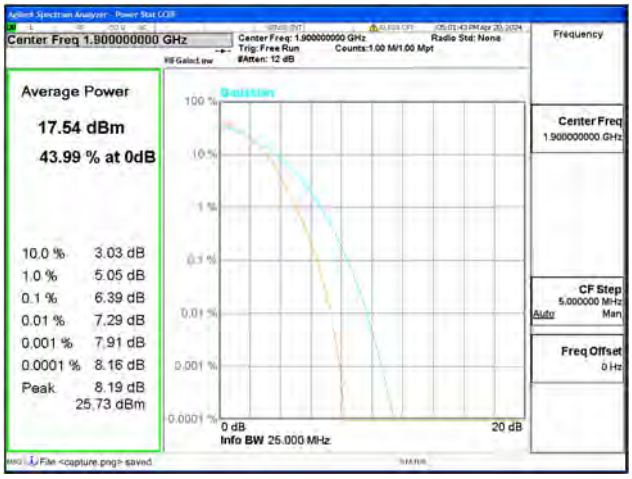
B2 / 20MHz / Mid CH / 64QAM



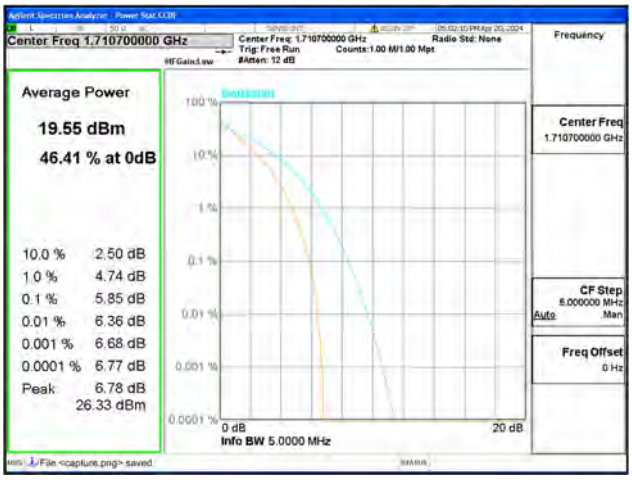
B2 / 20MHz / High CH / QPSK



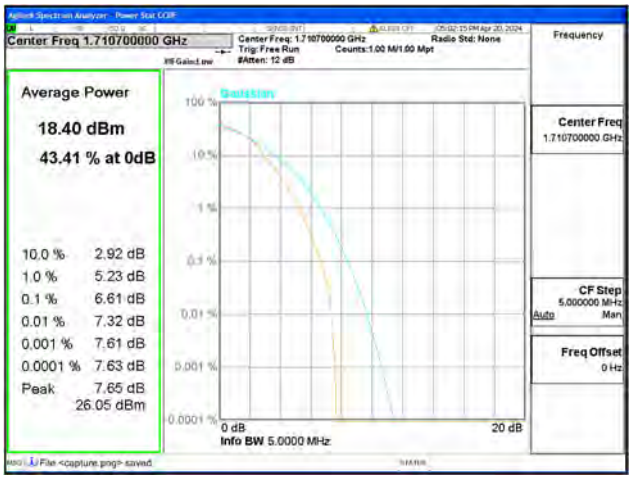
B2 / 20MHz / High CH / 16QAM



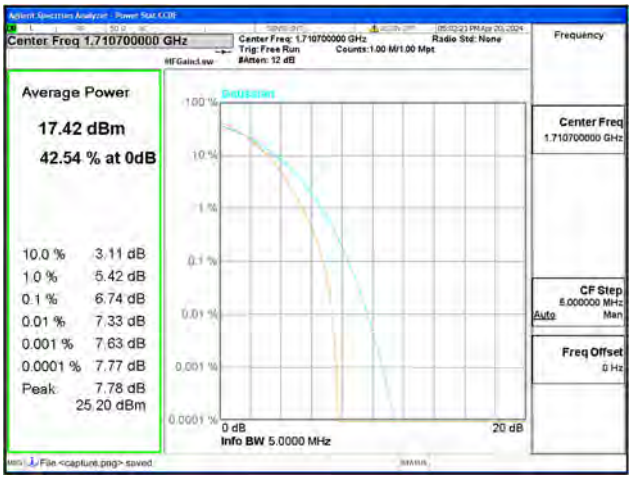
B2 / 20MHz / High CH / 64QAM



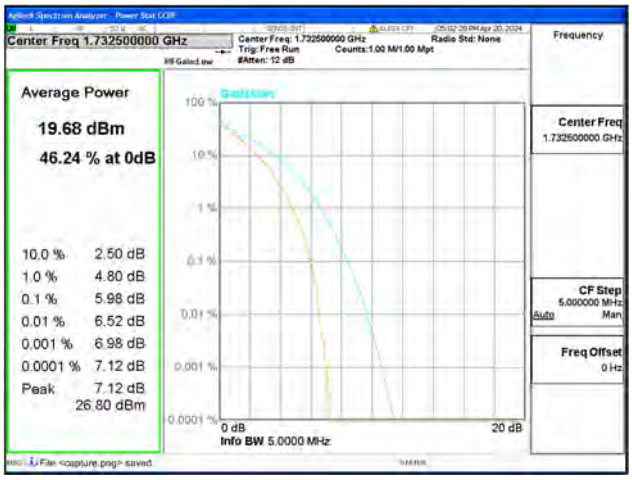
B4 / 1.4MHz / Low CH / QPSK



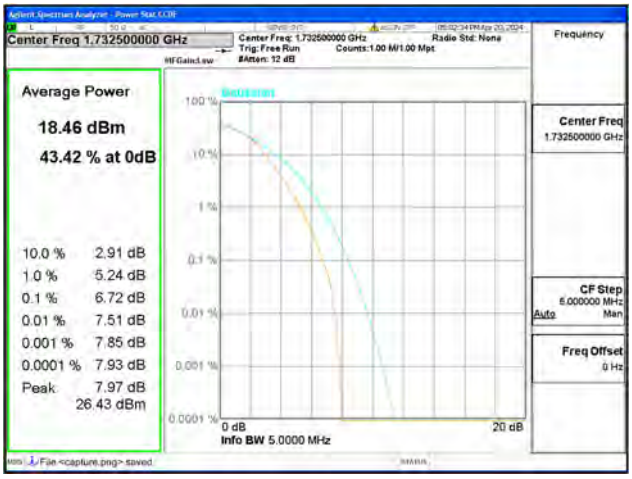
B4 / 1.4MHz / Low CH / 16QAM



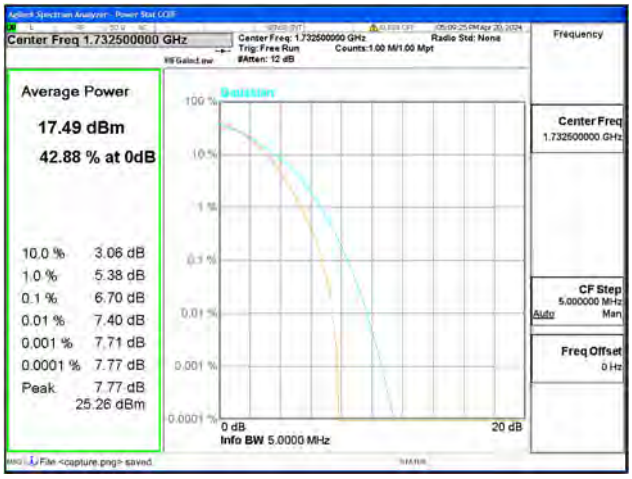
B4 / 1.4MHz / Low CH / 64QAM



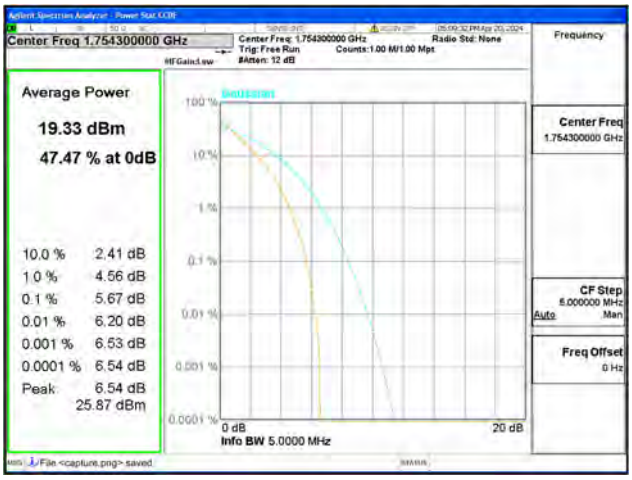
B4 / 1.4MHz / Mid CH / QPSK



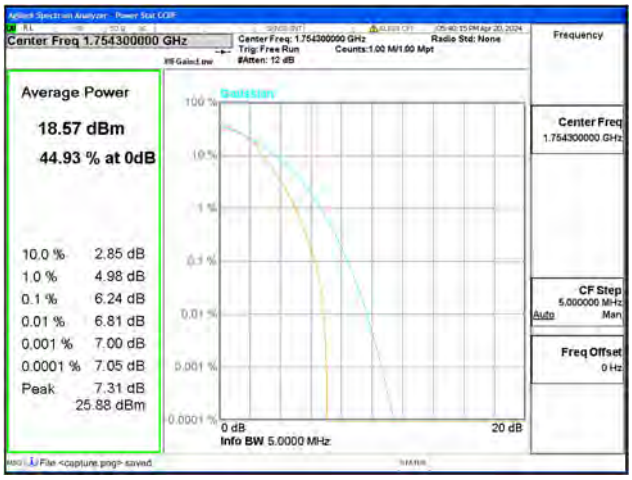
B4 / 1.4MHz / Mid CH / 16QAM



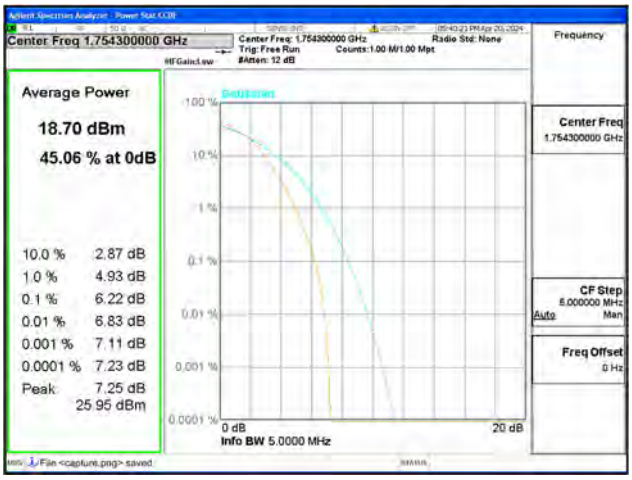
B4 / 1.4MHz / Mid CH / 64QAM



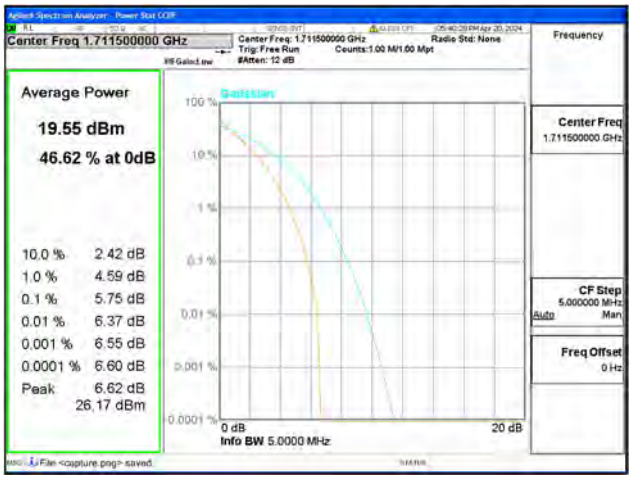
B4 / 1.4MHz / High CH / QPSK



B4 / 1.4MHz / High CH / 16QAM



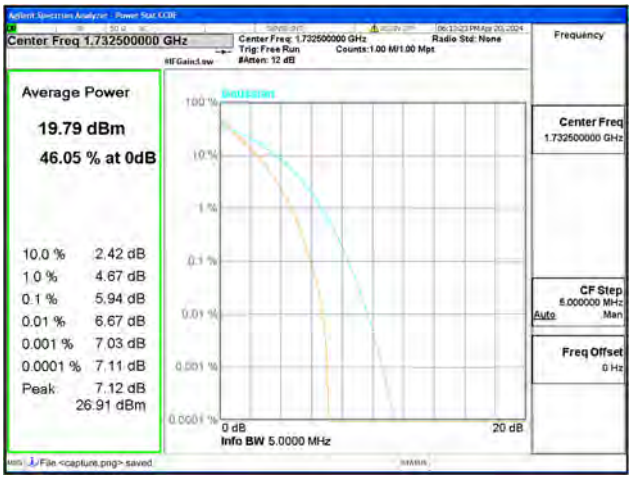
B4 / 1.4MHz / High CH / 64QAM



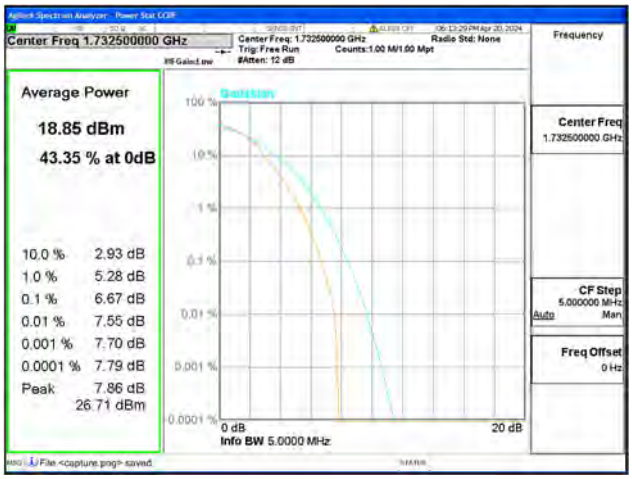
B4 / 3MHz / Low CH / QPSK

B4 / 3MHz / Low CH / 16QAM

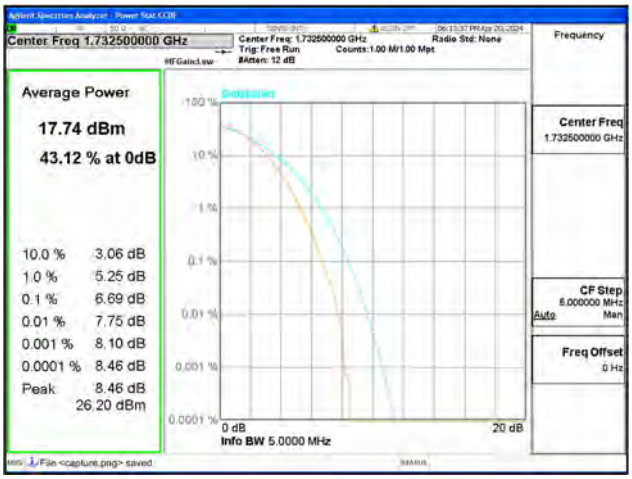
B4 / 3MHz / Low CH / 64QAM



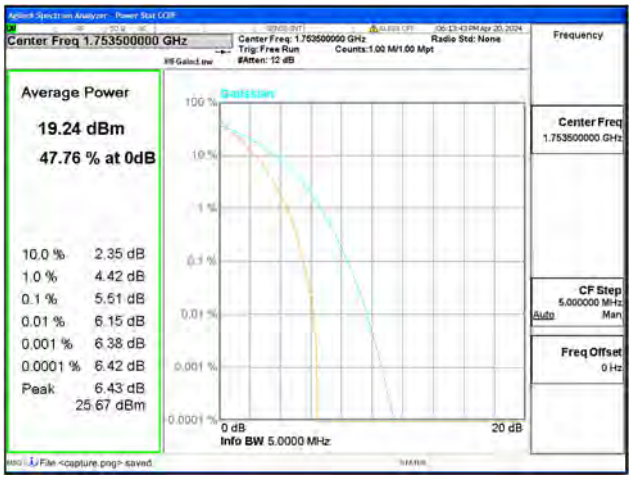
B4 / 3MHz / Mid CH / QPSK



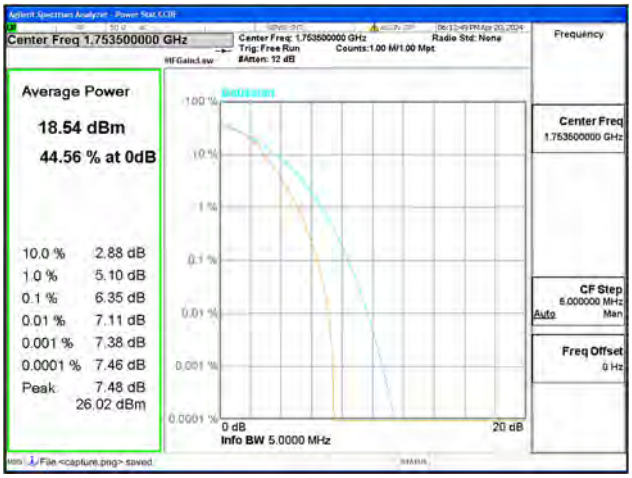
B4 / 3MHz / Mid CH / 16QAM



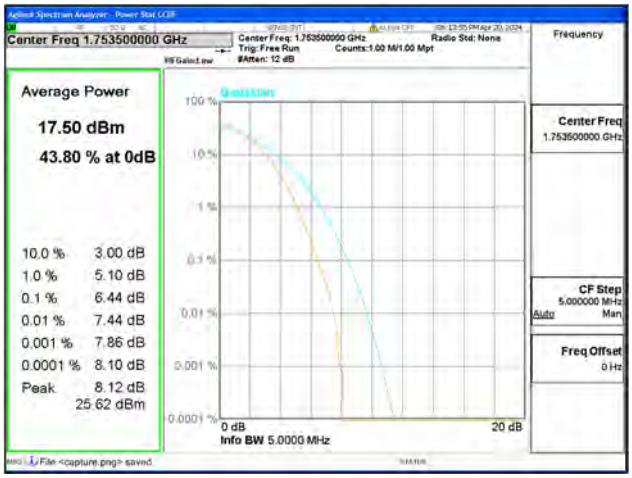
B4 / 3MHz / Mid CH / 64QAM



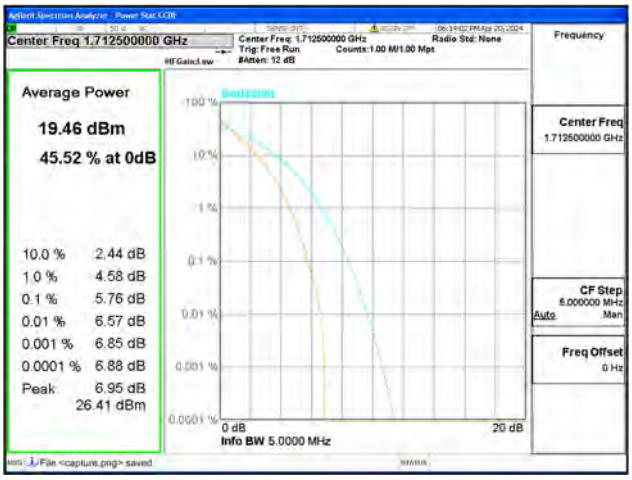
B4 / 3MHz / High CH / QPSK



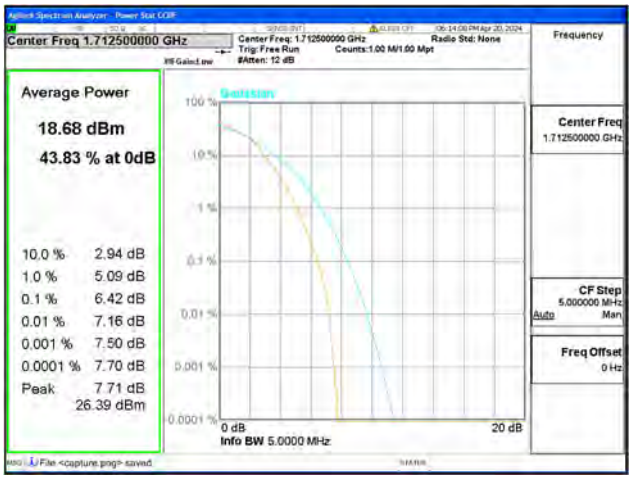
B4 / 3MHz / High CH / 16QAM



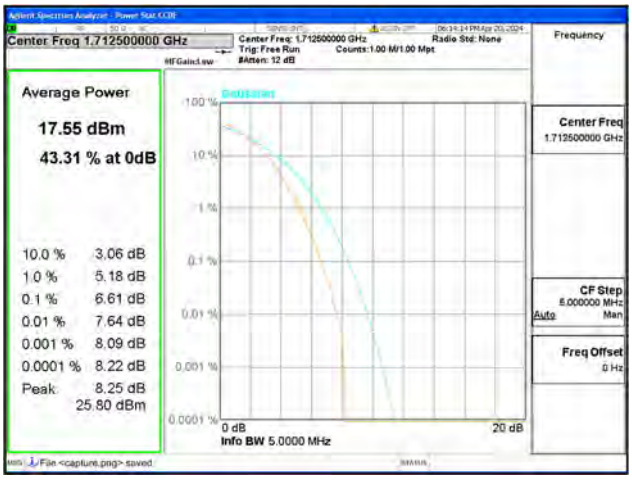
B4 / 3MHz / High CH / 64QAM



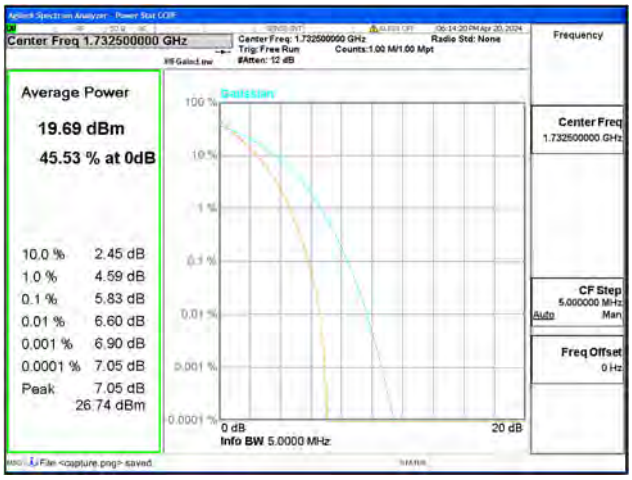
B4 / 5MHz / Low CH / QPSK



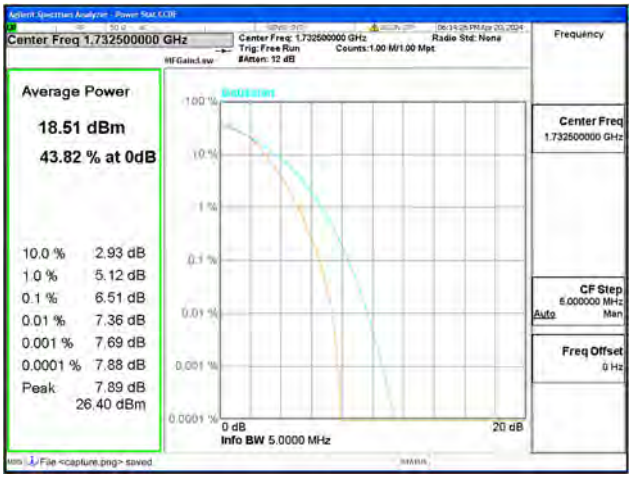
B4 / 5MHz / Low CH / 16QAM



B4 / 5MHz / Low CH / 64QAM

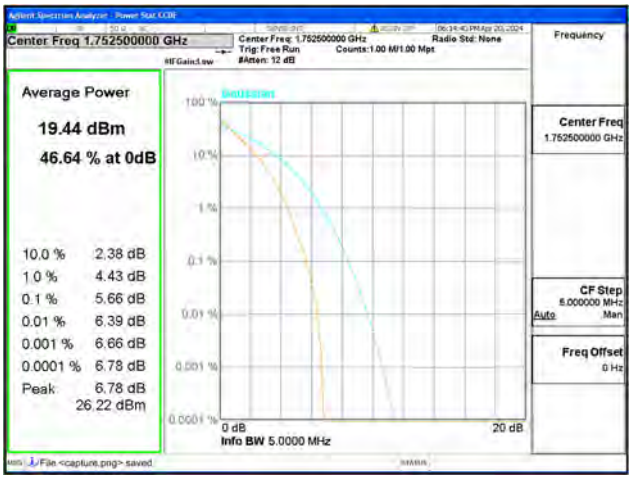


B4 / 5MHz / Mid CH / QPSK

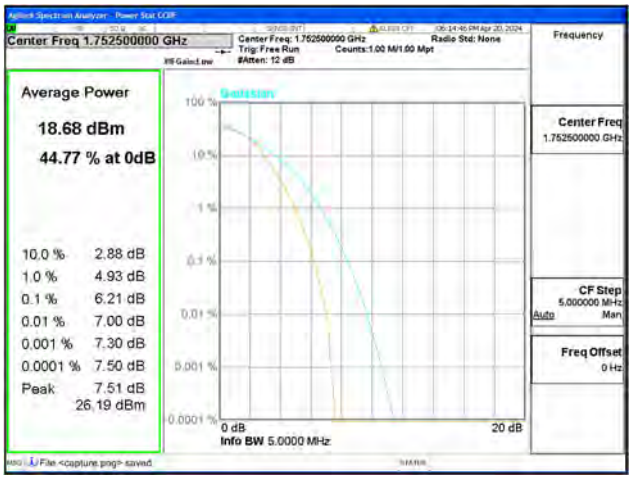


B4 / 5MHz / Mid CH / 16QAM

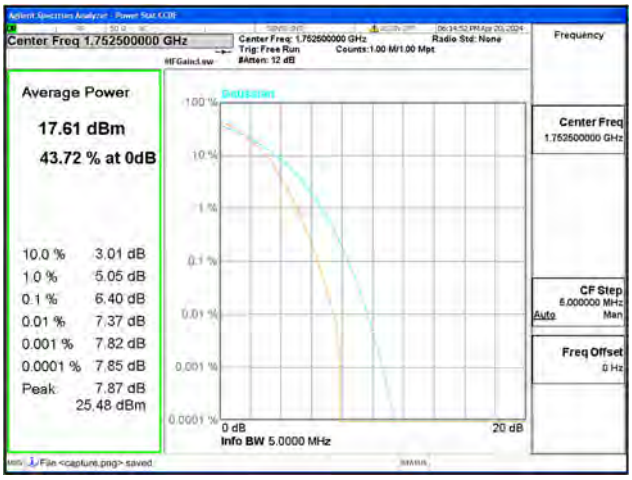
B4 / 5MHz / Mid CH / 64QAM



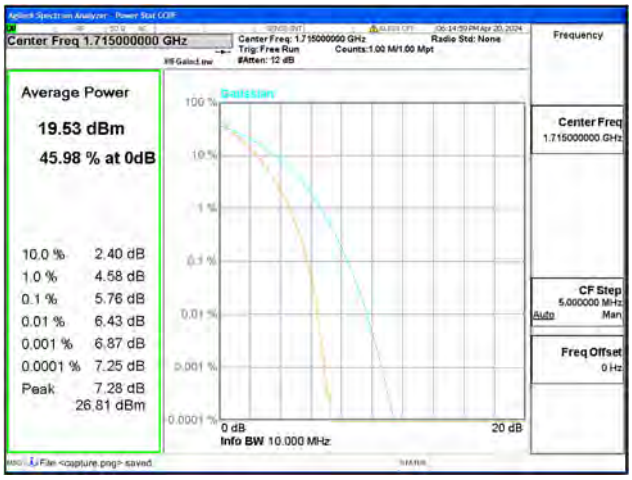
B4 / 5MHz / High CH / QPSK



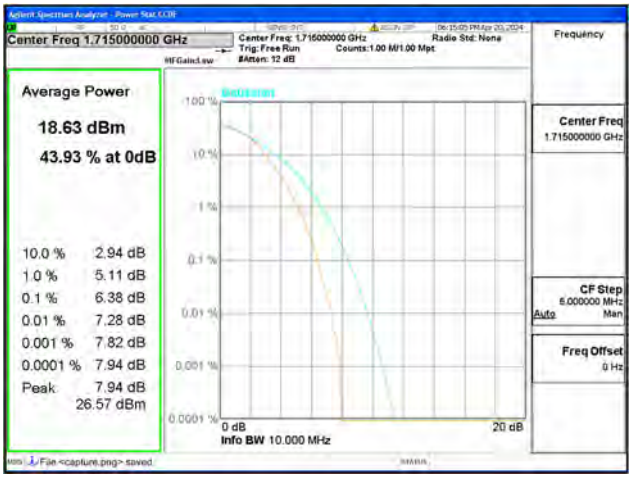
B4 / 5MHz / High CH / 16QAM



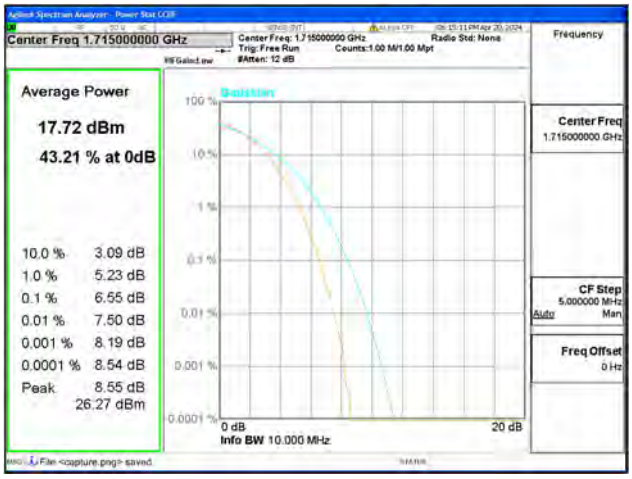
B4 / 5MHz / High CH / 64QAM



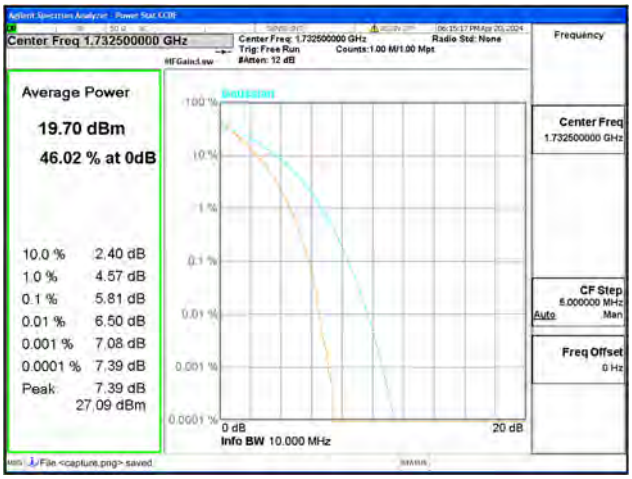
B4 / 10MHz / Low CH / QPSK



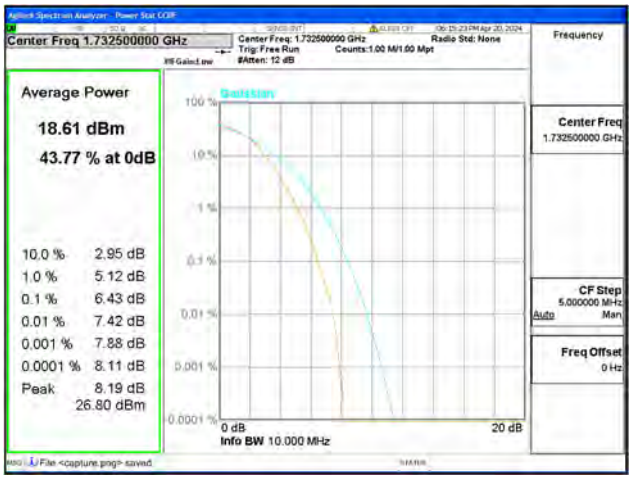
B4 / 10MHz / Low CH / 16QAM



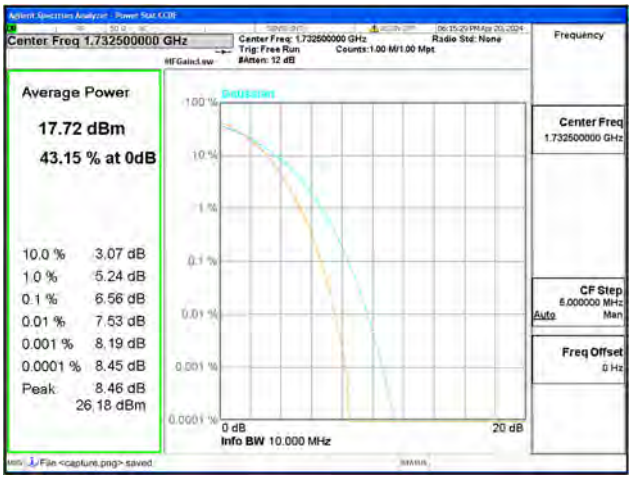
B4 / 10MHz / Low CH / 64QAM



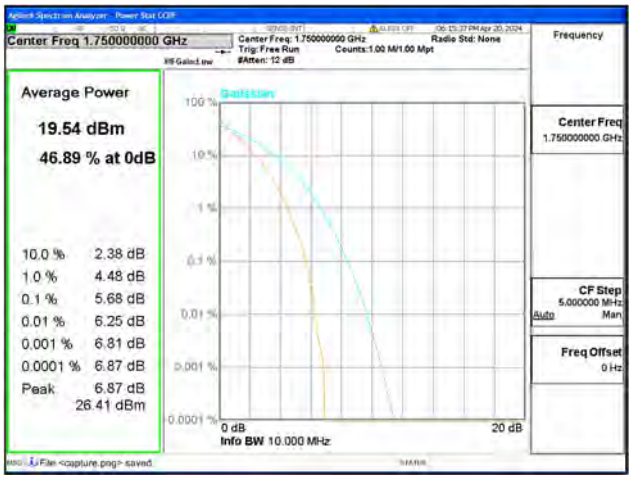
B4 / 10MHz / Mid CH / QPSK



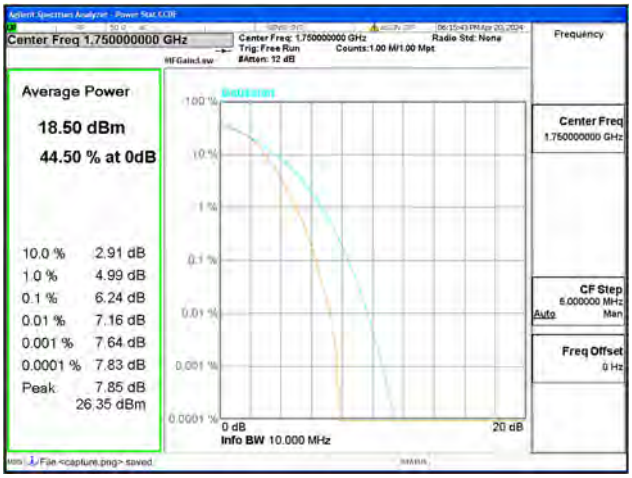
B4 / 10MHz / Mid CH / 16QAM



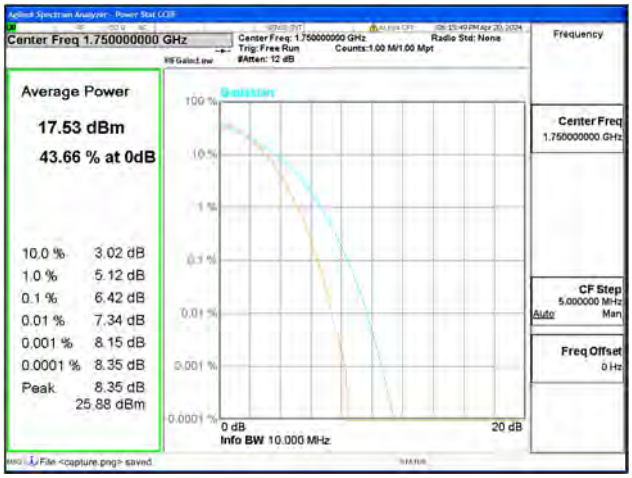
B4 / 10MHz / Mid CH / 64QAM



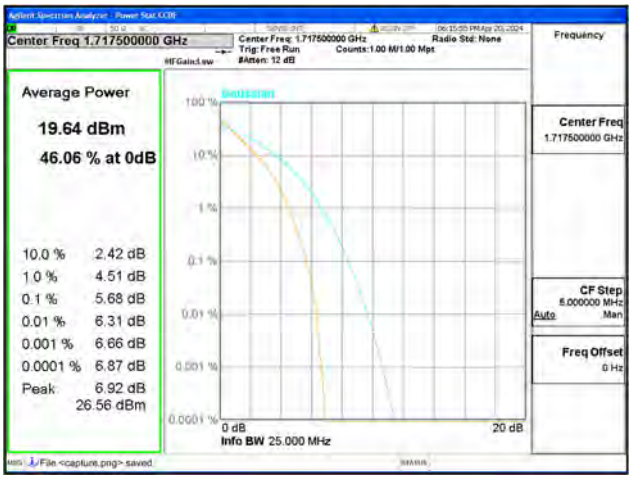
B4 / 10MHz / High CH / QPSK



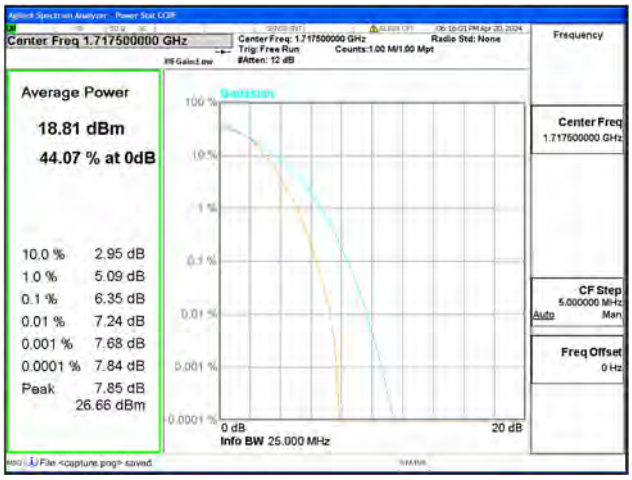
B4 / 10MHz / High CH / 16QAM



B4 / 10MHz / High CH / 64QAM

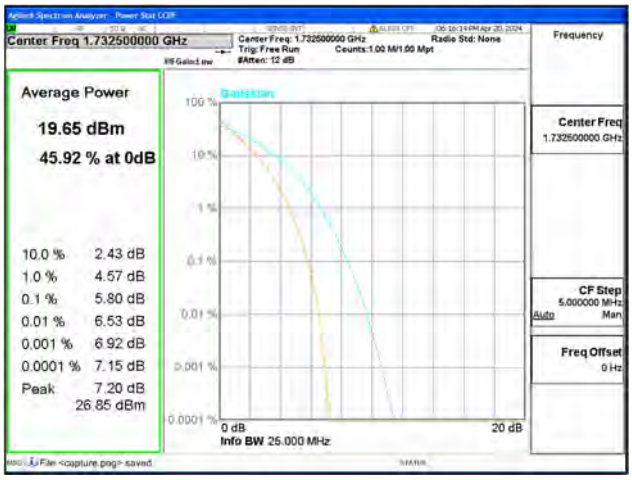


B4 / 15MHz / Low CH / QPSK

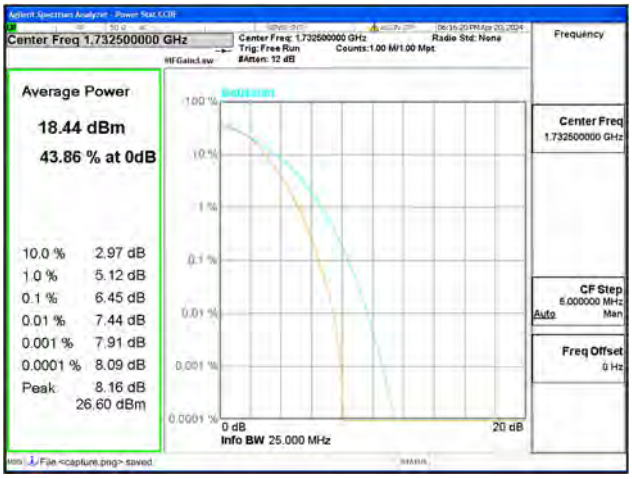


B4 / 15MHz / Low CH / 16QAM

B4 / 15MHz / Low CH / 64QAM



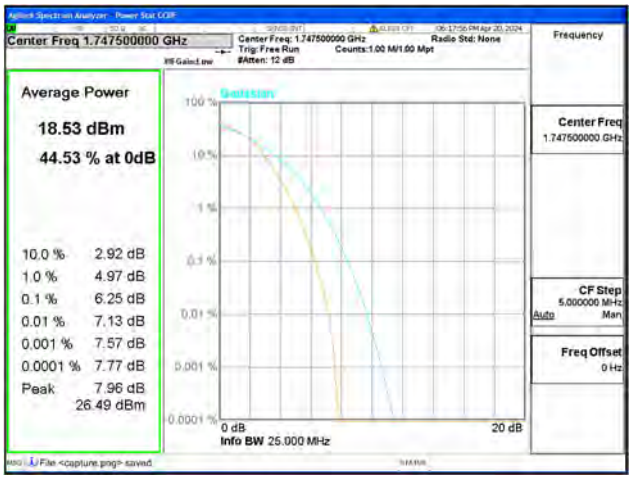
B4 / 15MHz / Mid CH / QPSK



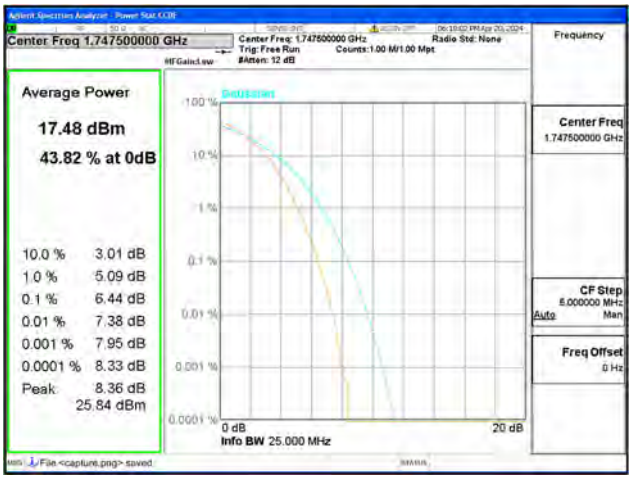
B4 / 15MHz / Mid CH / 16QAM

B4 / 15MHz / Mid CH / 64QAM

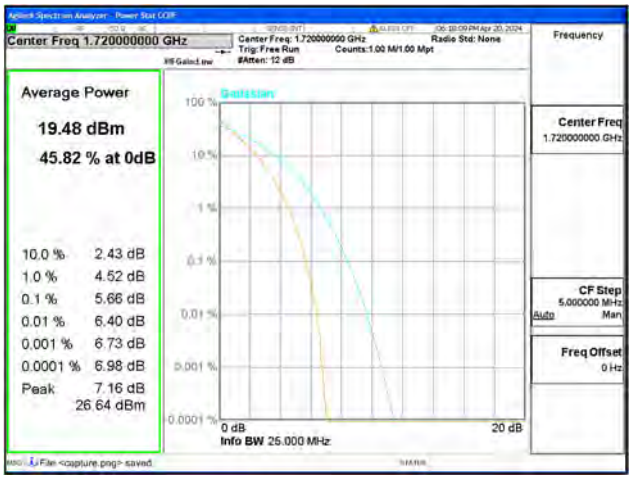
B4 / 15MHz / High CH / QPSK



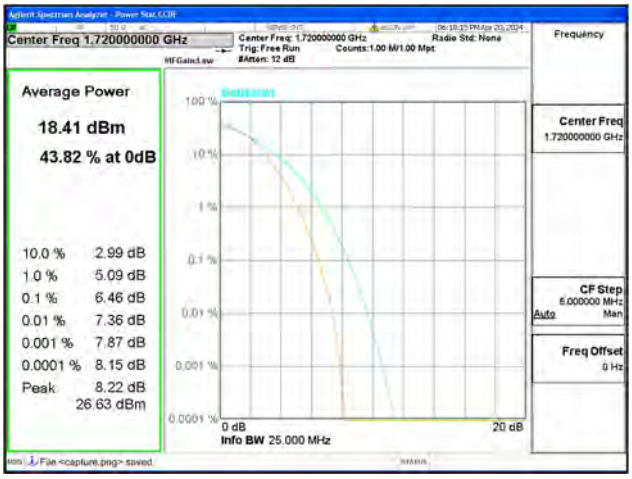
B4 / 15MHz / High CH / 16QAM



B4 / 15MHz / High CH / 64QAM

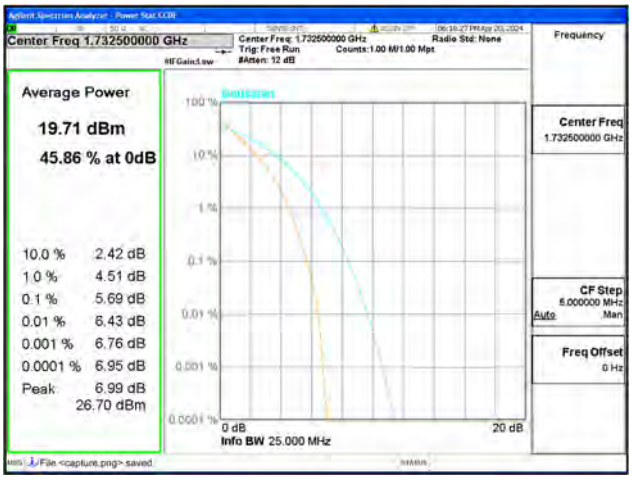


B4 / 20MHz / Low CH / QPSK

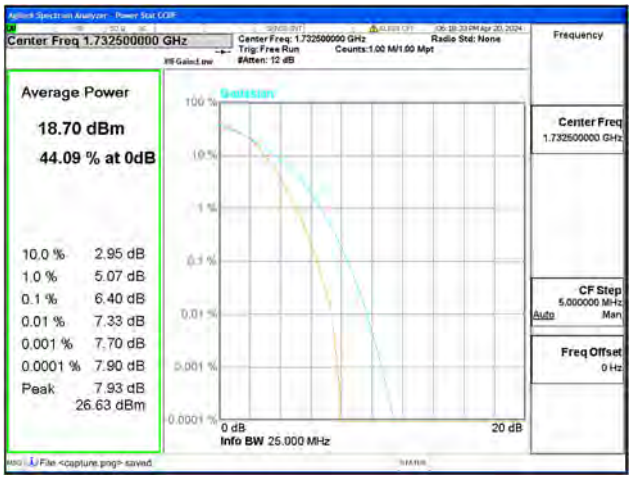


B4 / 20MHz / Low CH / 16QAM

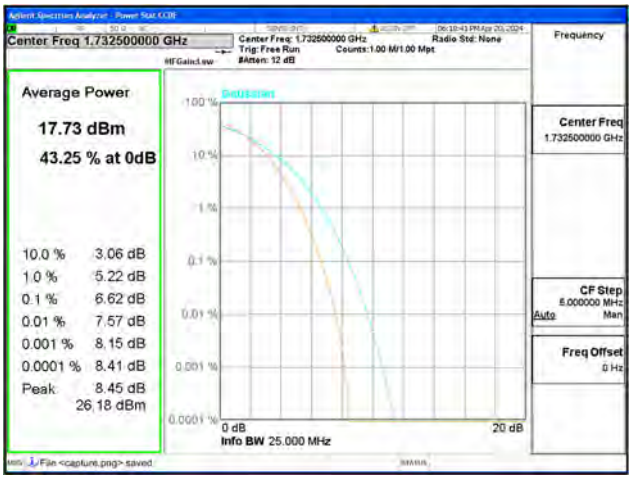
B4 / 20MHz / Low CH / 64QAM



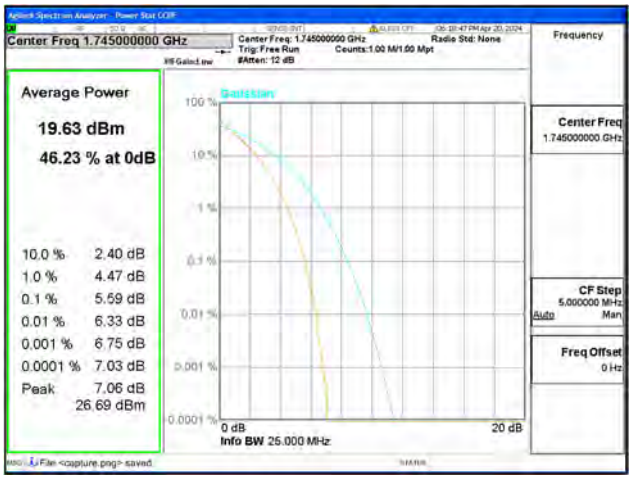
B4 / 20MHz / Mid CH / QPSK



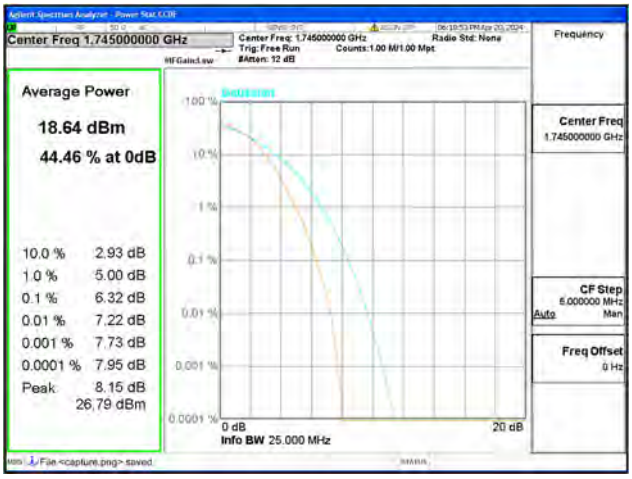
B4 / 20MHz / Mid CH / 16QAM



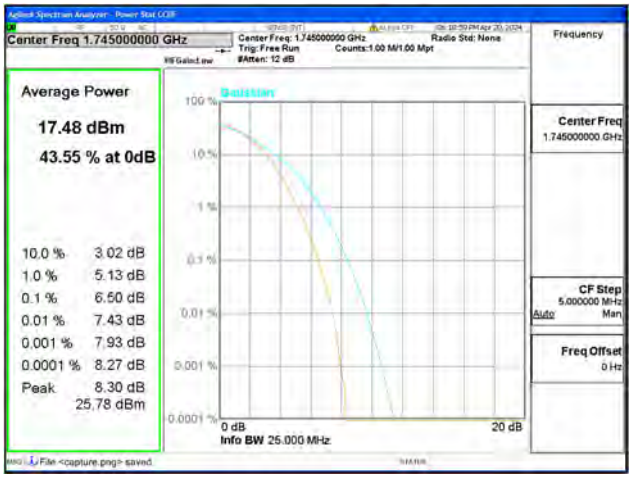
B4 / 20MHz / Mid CH / 64QAM



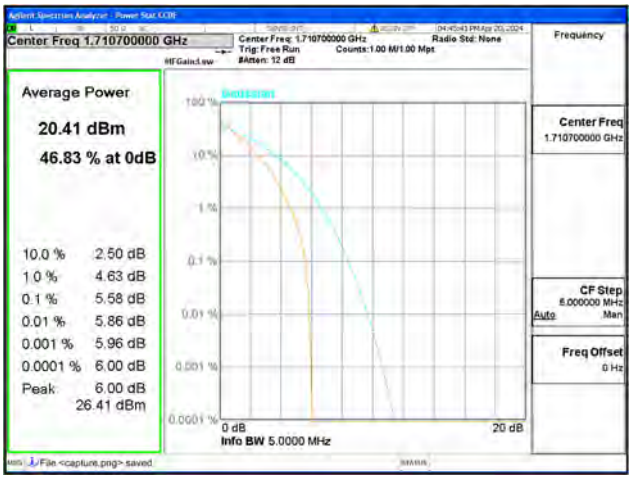
B4 / 20MHz / High CH / QPSK



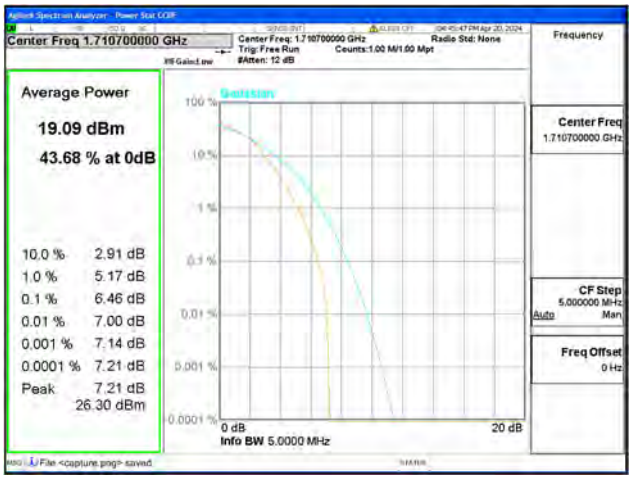
B4 / 20MHz / High CH / 16QAM



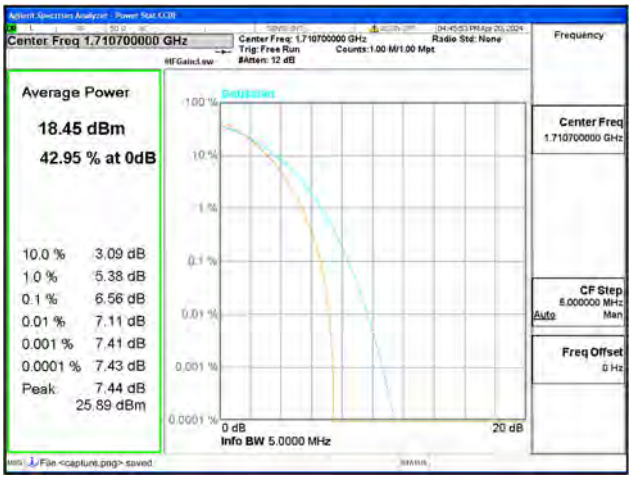
B4 / 20MHz / High CH / 64QAM



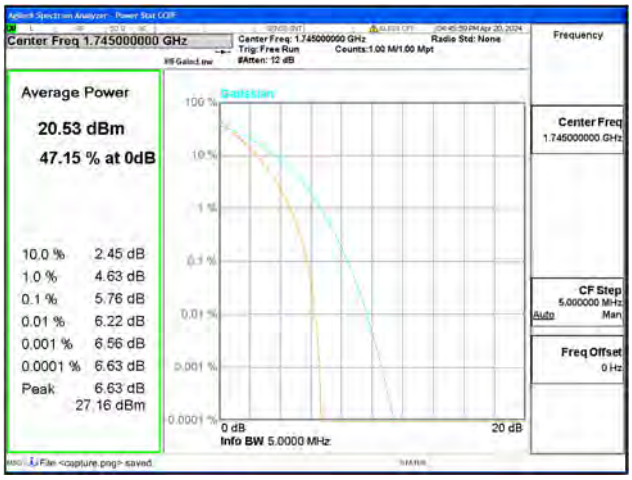
B66 / 1.4MHz / Low CH / QPSK



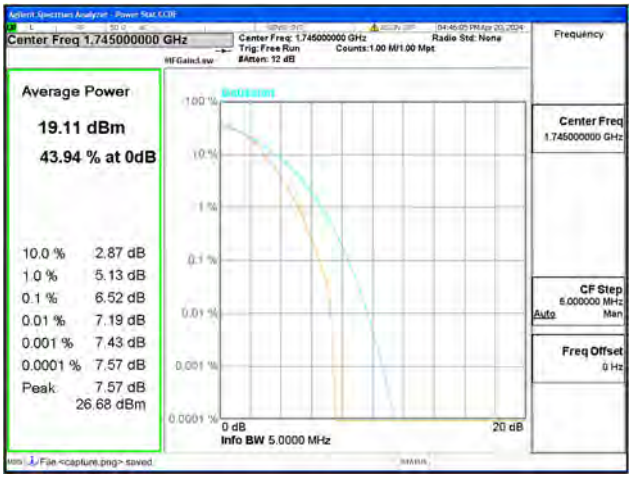
B66 / 1.4MHz / Low CH / 16QAM



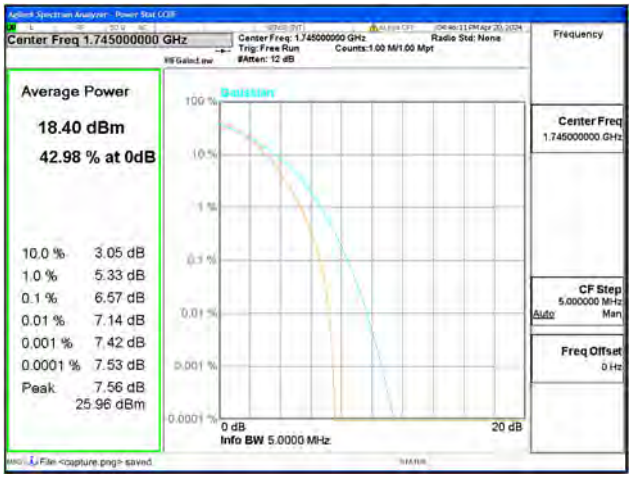
B66 / 1.4MHz / Low CH / 64QAM



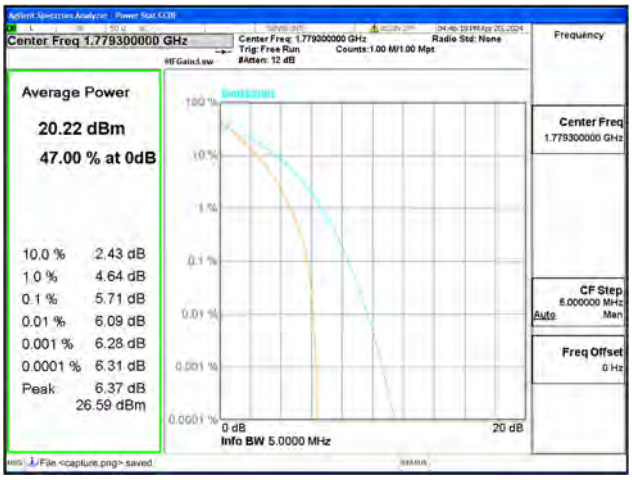
B66 / 1.4MHz / Mid CH / QPSK



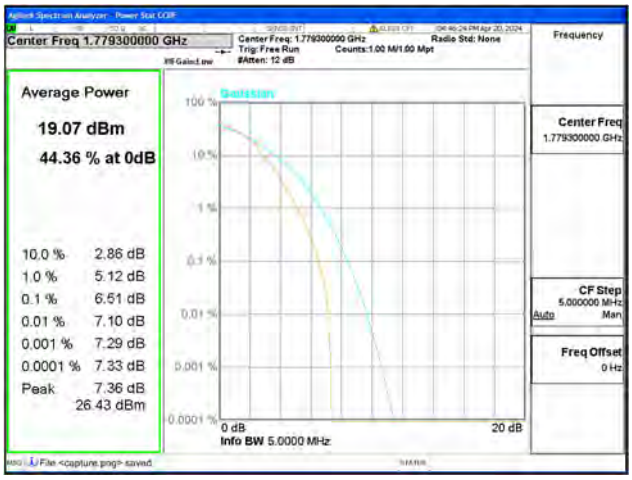
B66 / 1.4MHz / Mid CH / 16QAM



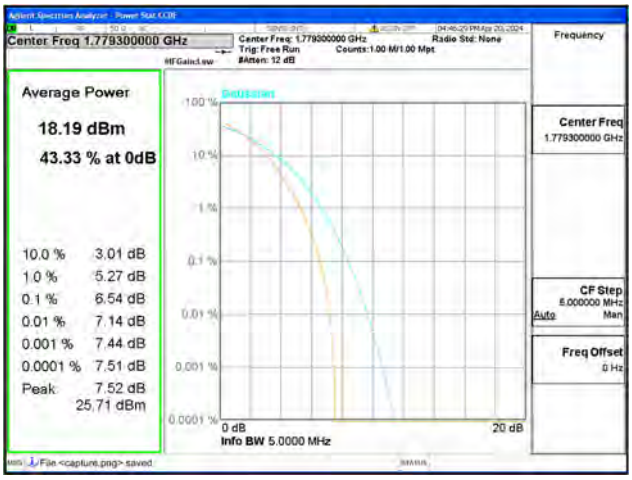
B66 / 1.4MHz / Mid CH / 64QAM



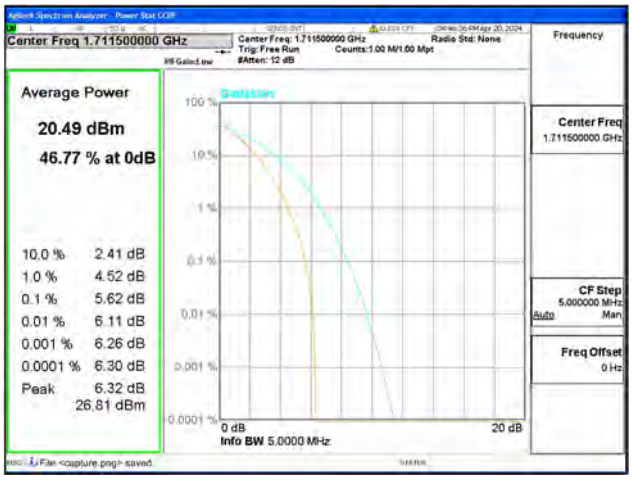
B66 / 1.4MHz / High CH / QPSK



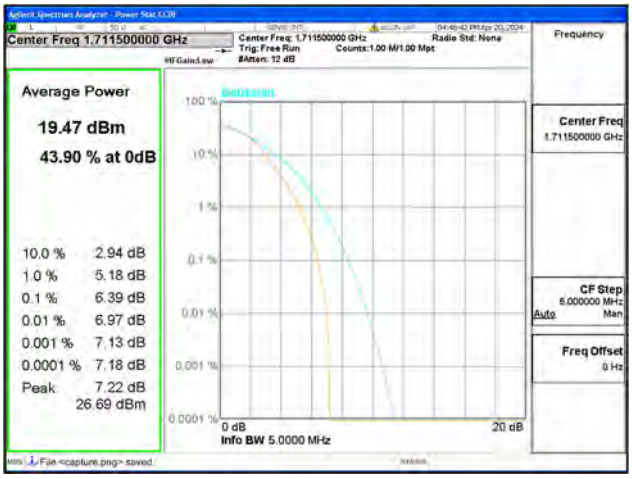
B66 / 1.4MHz / High CH / 16QAM



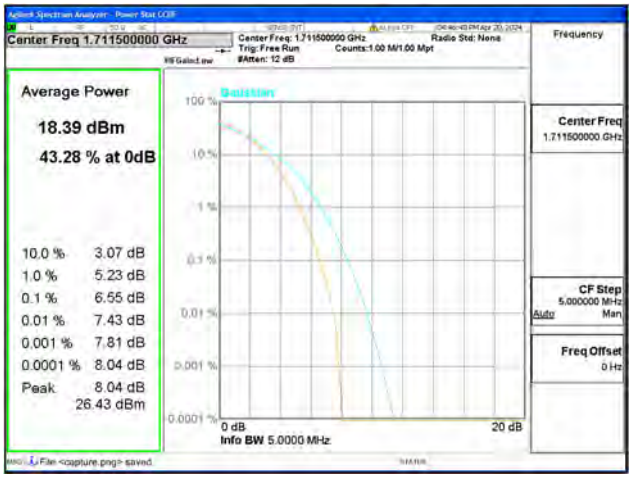
B66 / 1.4MHz / High CH / 64QAM



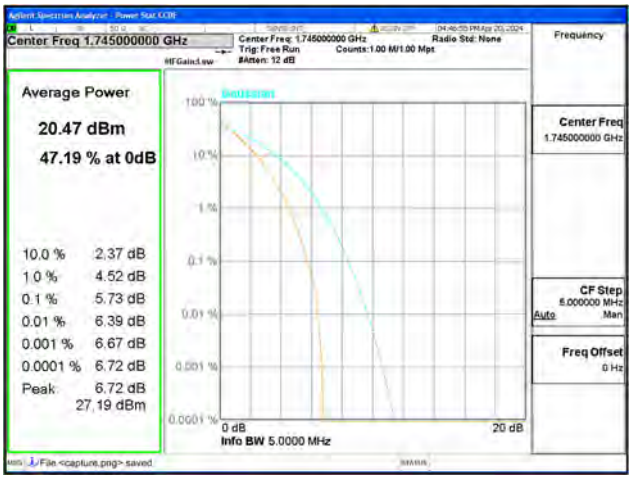
B66 / 3MHz / Low CH / QPSK



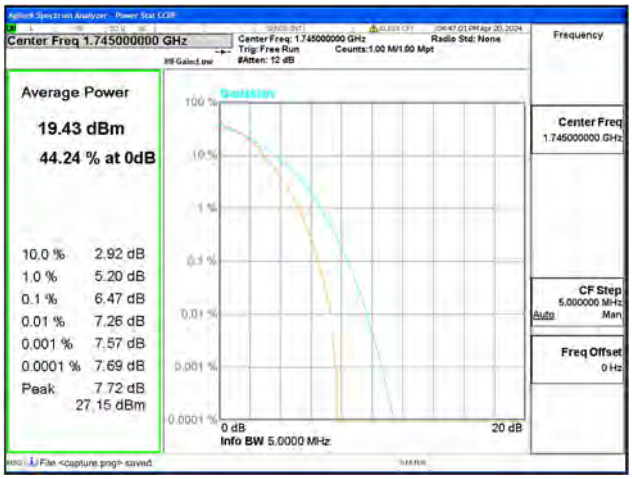
B66 / 3MHz / Low CH / 16QAM



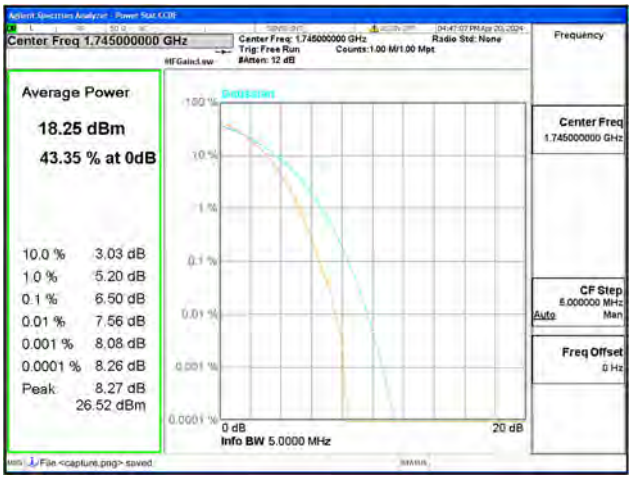
B66 / 3MHz / Low CH / 64QAM



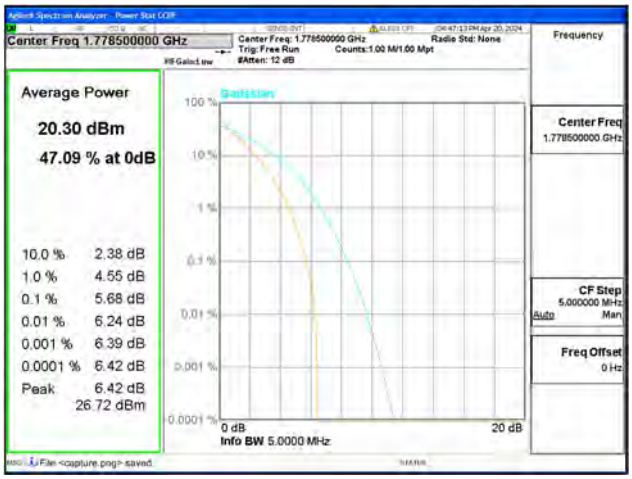
B66 / 3MHz / Mid CH / QPSK



B66 / 3MHz / Mid CH / 16QAM

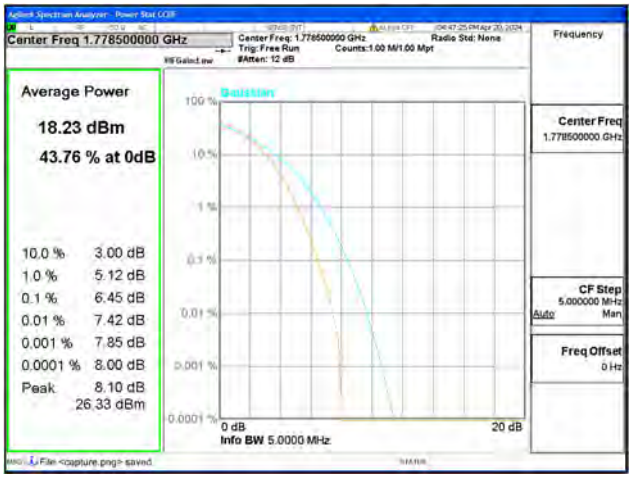


B66 / 3MHz / Mid CH / 64QAM

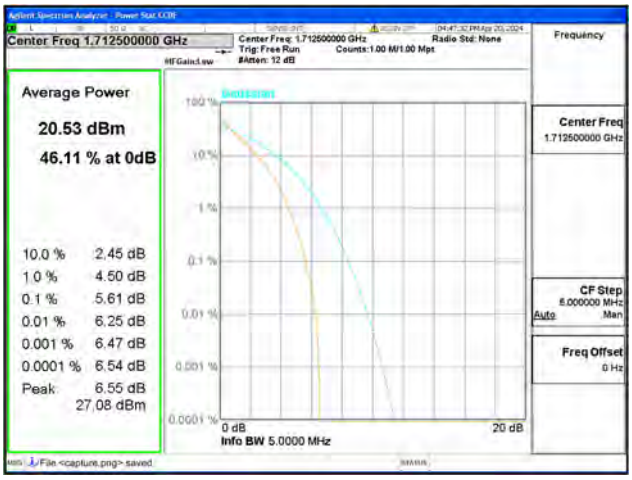


B66 / 3MHz / High CH / QPSK

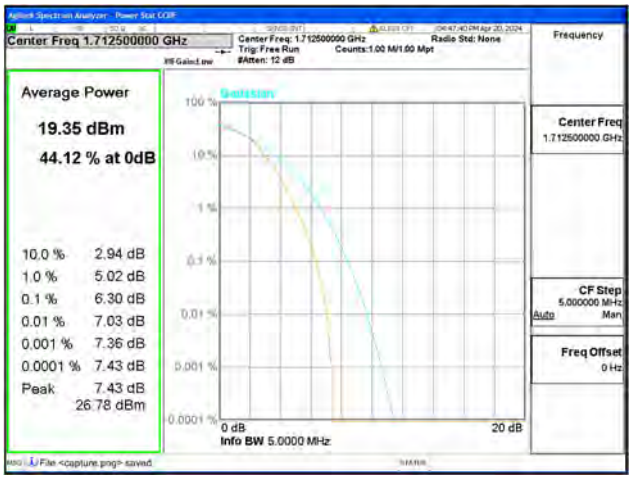
B66 / 3MHz / High CH / 16QAM



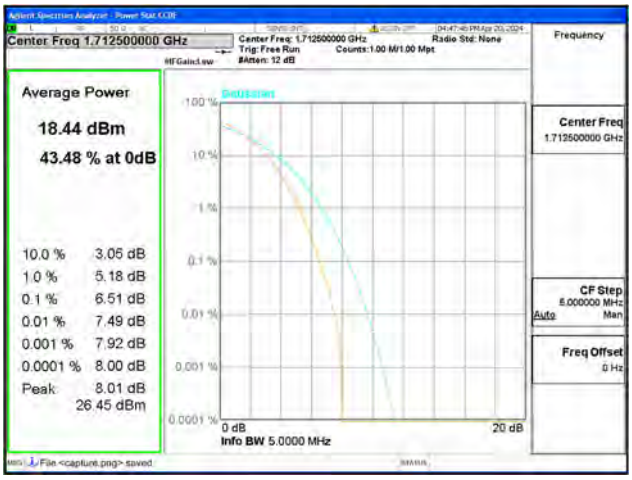
B66 / 3MHz / High CH / 64QAM



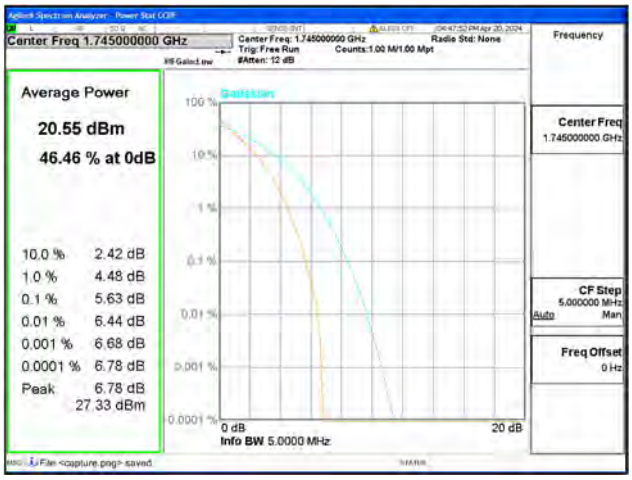
B66 / 5MHz / Low CH / QPSK



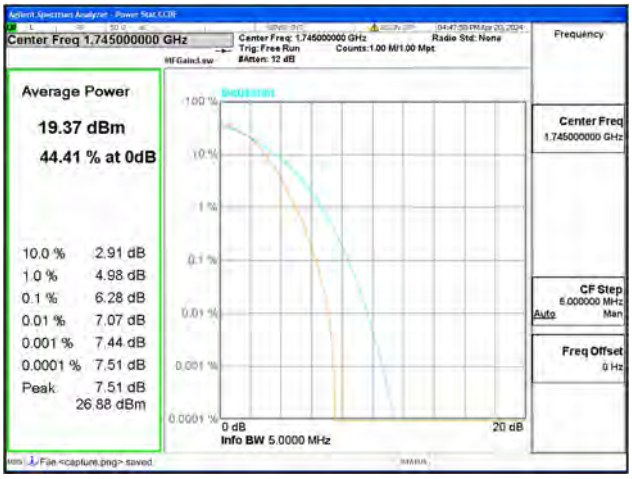
B66 / 5MHz / Low CH / 16QAM



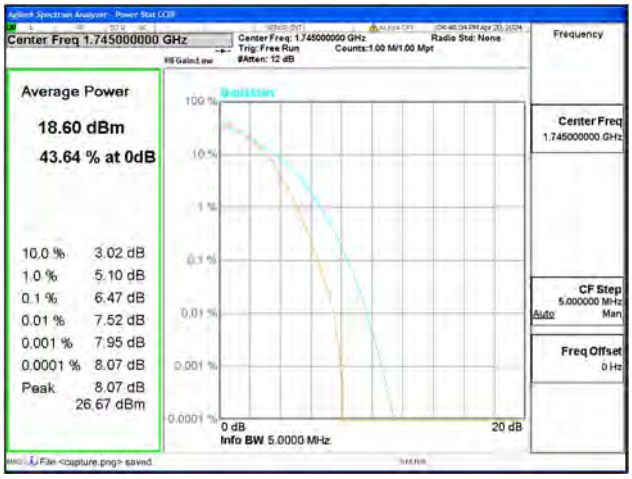
B66 / 5MHz / Low CH / 64QAM



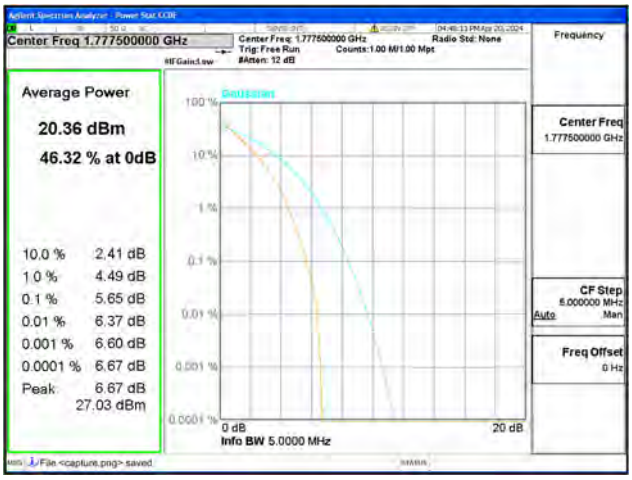
B66 / 5MHz / Mid CH / QPSK



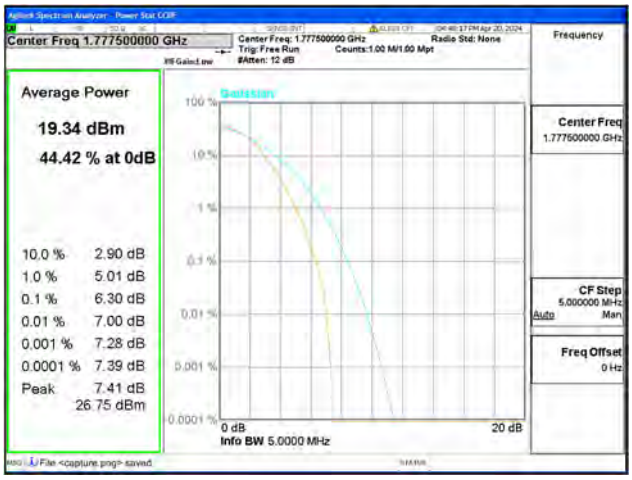
B66 / 5MHz / Mid CH / 16QAM



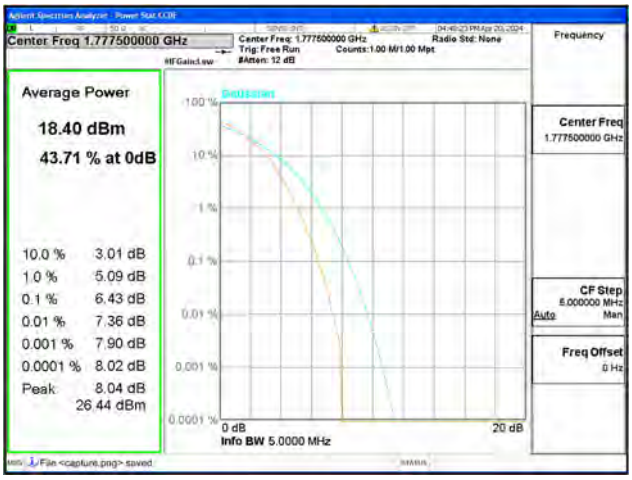
B66 / 5MHz / Mid CH / 64QAM



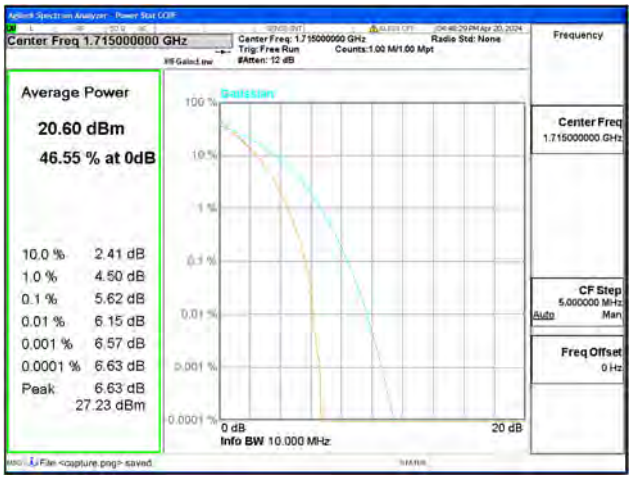
B66 / 5MHz / High CH / QPSK



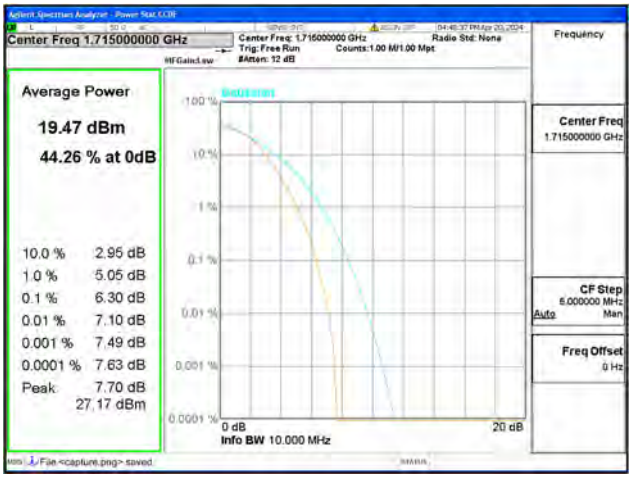
B66 / 5MHz / High CH / 16QAM



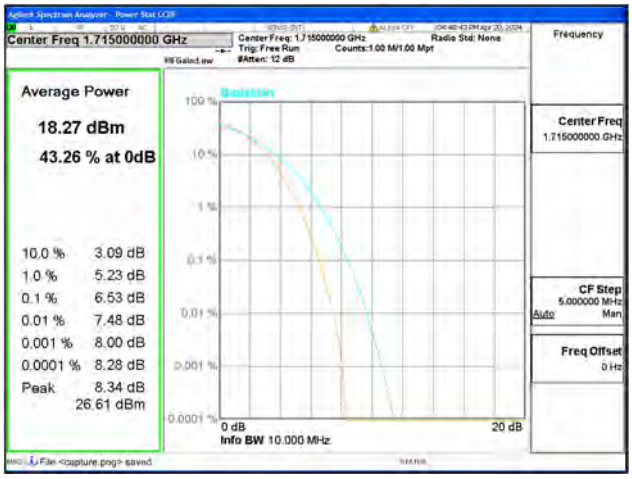
B66 / 5MHz / High CH / 64QAM



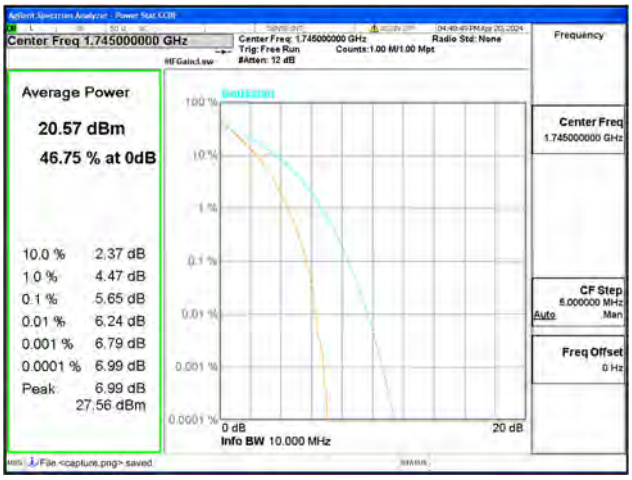
B66 / 10MHz / Low CH / QPSK



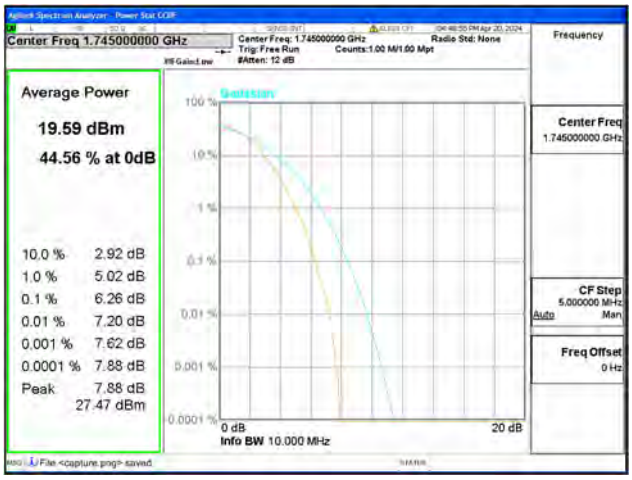
B66 / 10MHz / Low CH / 16QAM



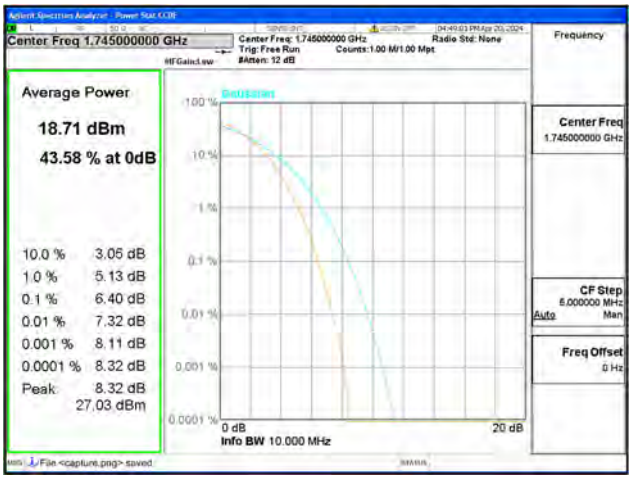
B66 / 10MHz / Low CH / 64QAM



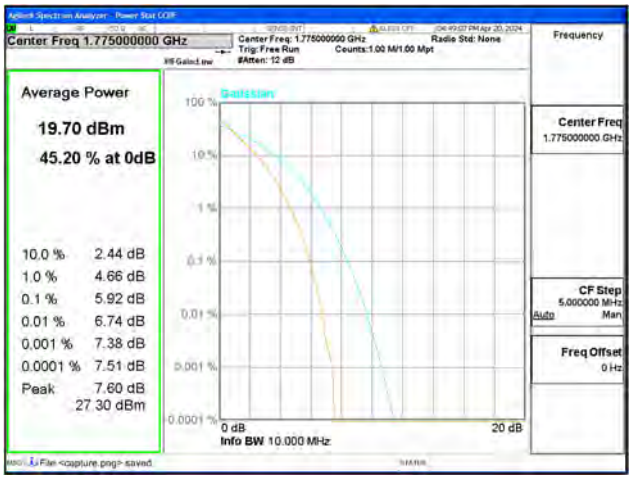
B66 / 10MHz / Mid CH / QPSK



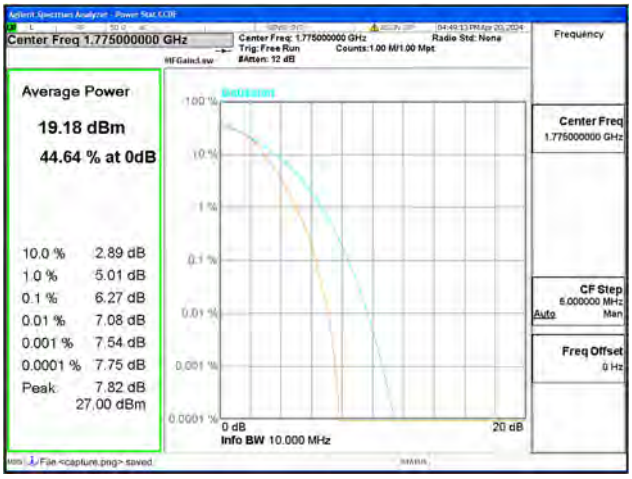
B66 / 10MHz / Mid CH / 16QAM



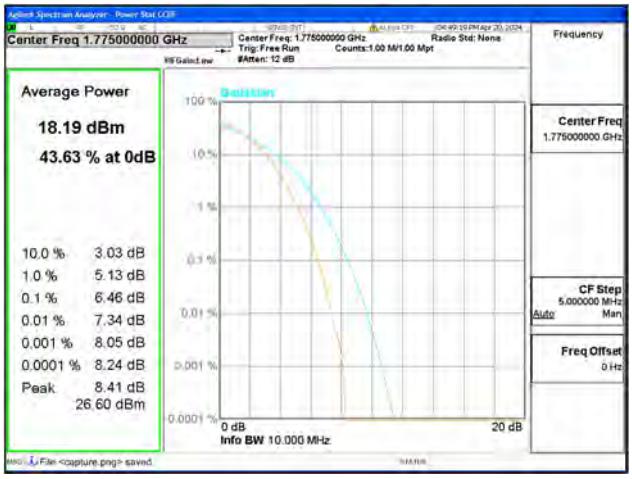
B66 / 10MHz / Mid CH / 64QAM



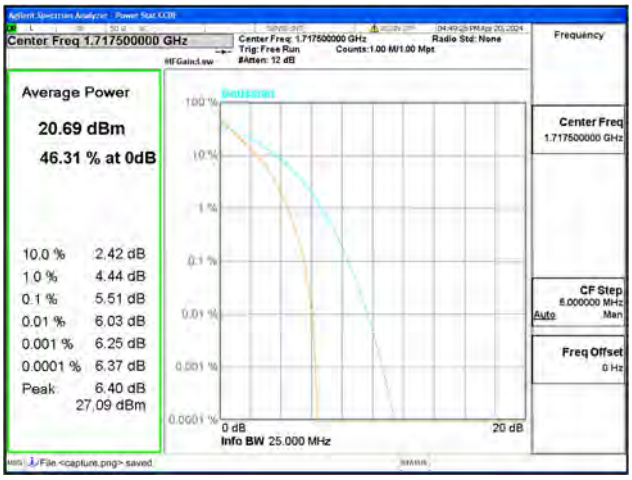
B66 / 10MHz / High CH / QPSK



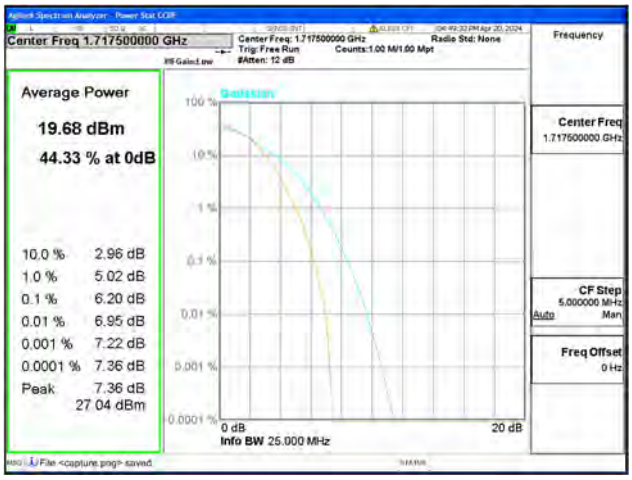
B66 / 10MHz / High CH / 16QAM



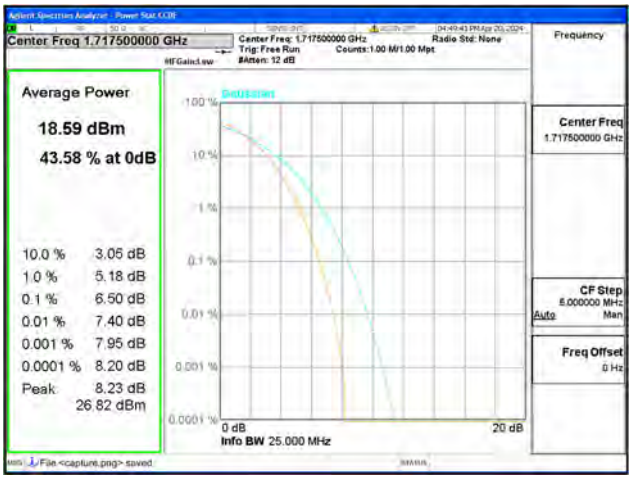
B66 / 10MHz / High CH / 64QAM



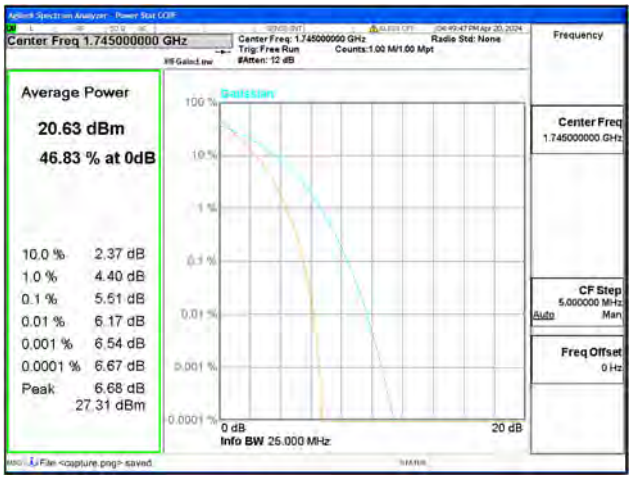
B66 / 15MHz / Low CH / QPSK



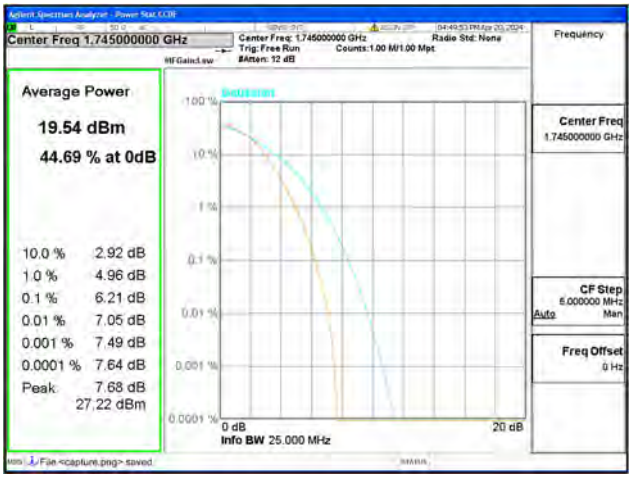
B66 / 15MHz / Low CH / 16QAM



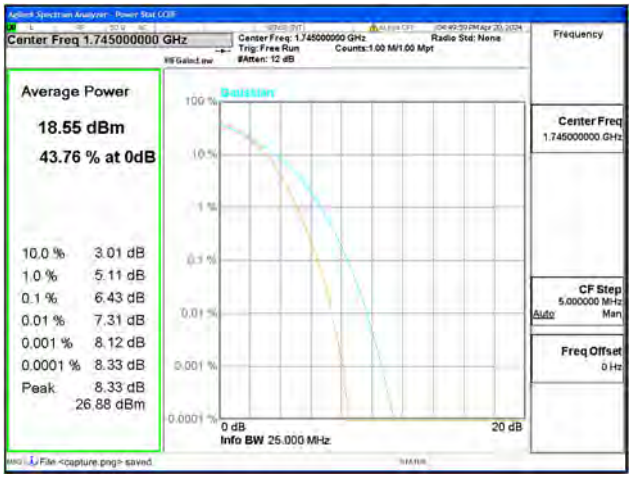
B66 / 15MHz / Low CH / 64QAM



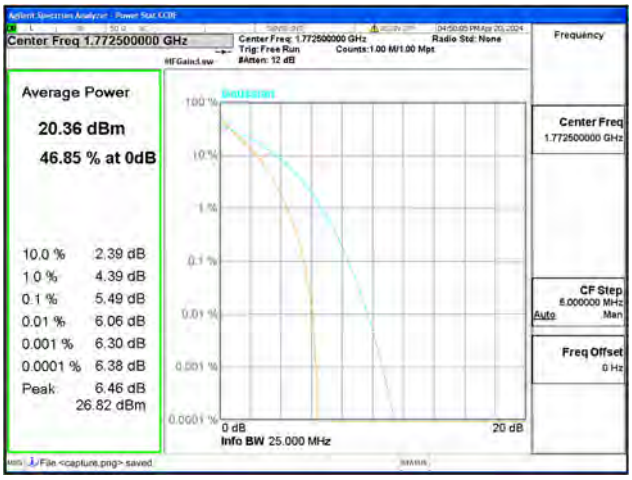
B66 / 15MHz / Mid CH / QPSK



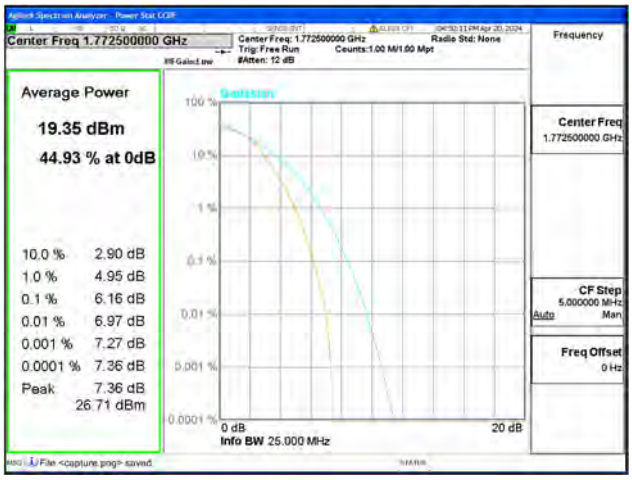
B66 / 15MHz / Mid CH / 16QAM



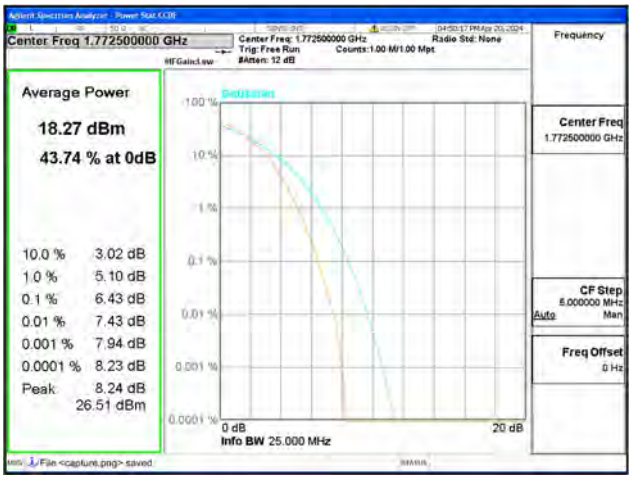
B66 / 15MHz / Mid CH / 64QAM



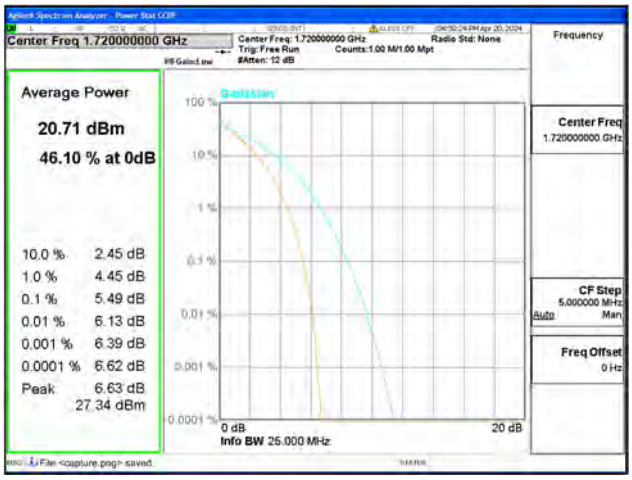
B66 / 15MHz / High CH / QPSK



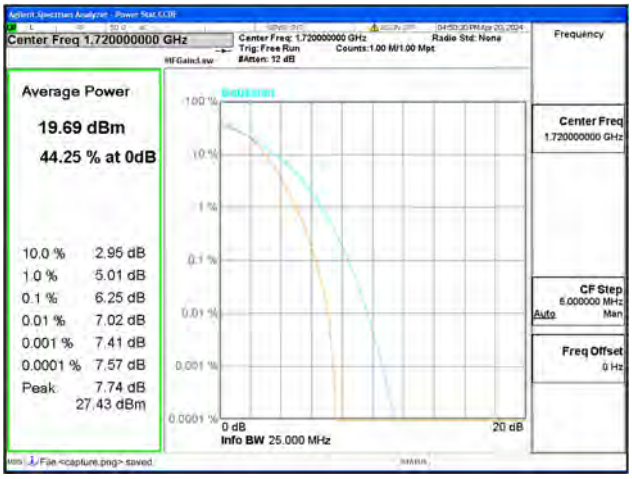
B66 / 15MHz / High CH / 16QAM



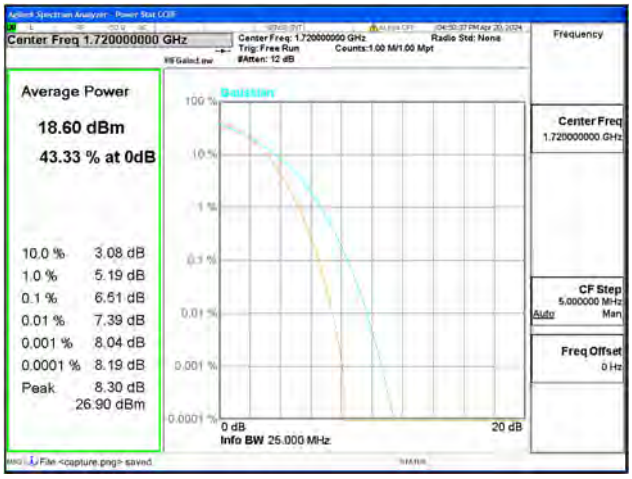
B66 / 15MHz / High CH / 64QAM



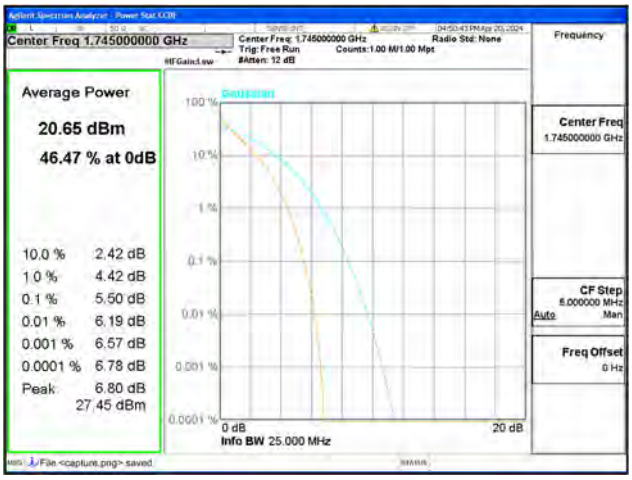
B66 / 20MHz / Low CH / QPSK



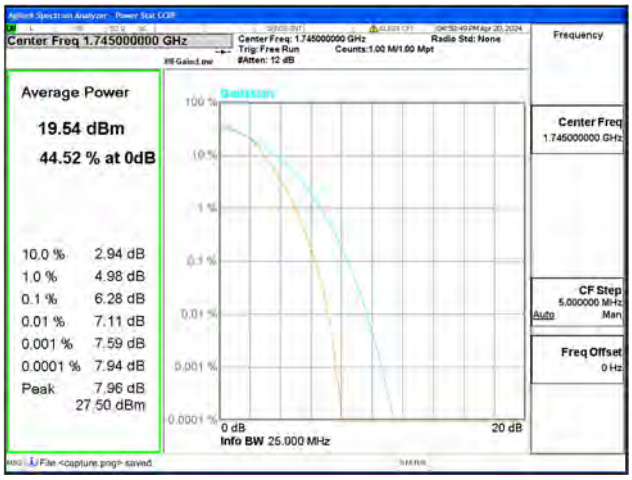
B66 / 20MHz / Low CH / 16QAM



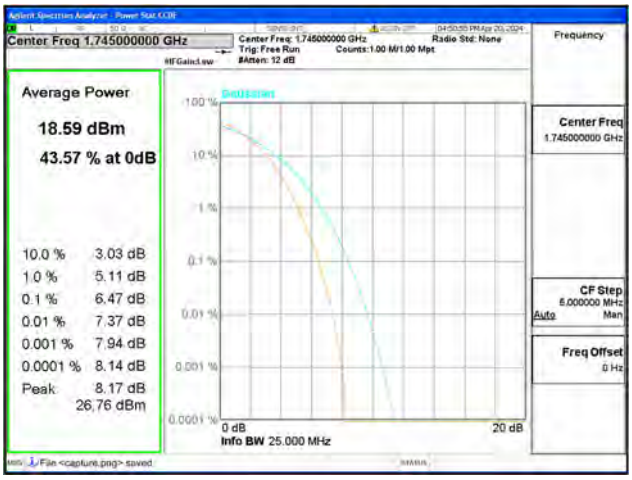
B66 / 20MHz / Low CH / 64QAM



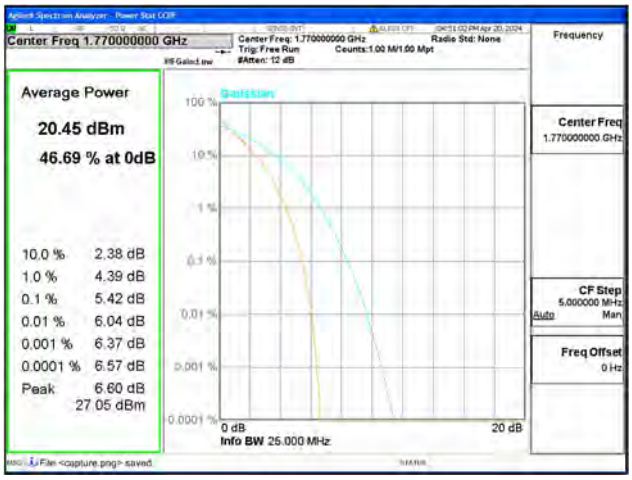
B66 / 20MHz / Mid CH / QPSK



B66 / 20MHz / Mid CH / 16QAM

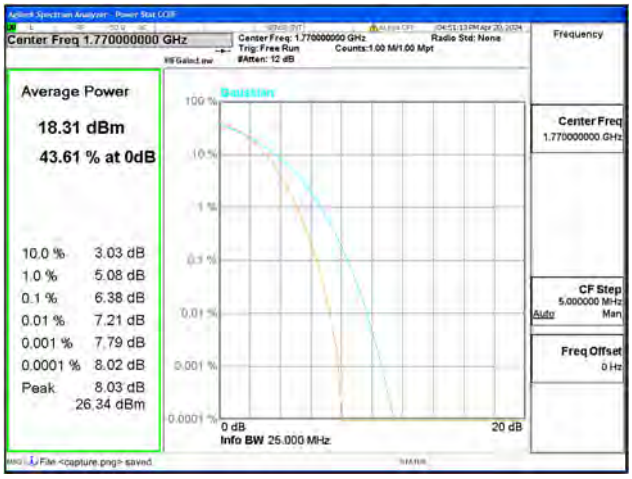


B66 / 20MHz / Mid CH / 64QAM



B66 / 20MHz / High CH / QPSK

B66 / 20MHz / High CH / 16QAM



B66 / 20MHz / High CH / 64QAM

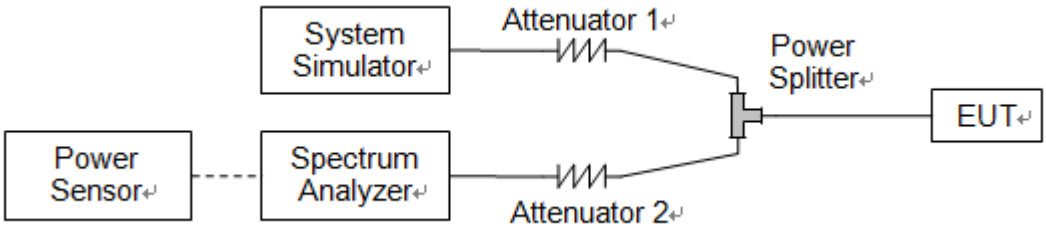
2.5. Conducted Spurious Emissions

2.5.1. Requirement

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

Additional requirement for LTE Band 7, 38, 41:
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 55 + 10 log(P) dB. This calculated to be -25dBm.

2.5.2. Test Description

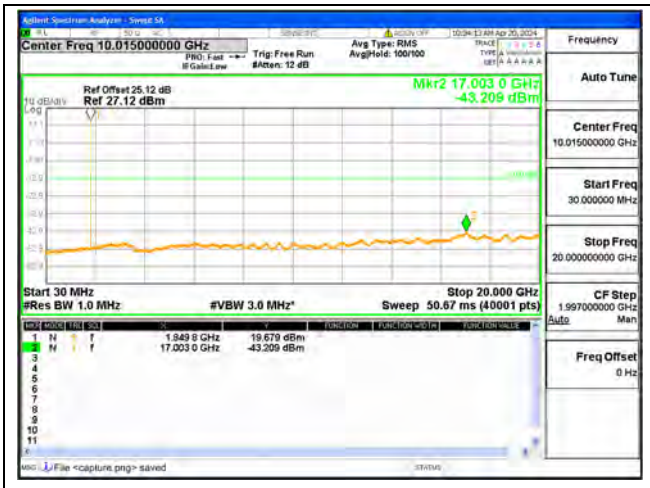


The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum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

2.5.3. Test Procedure

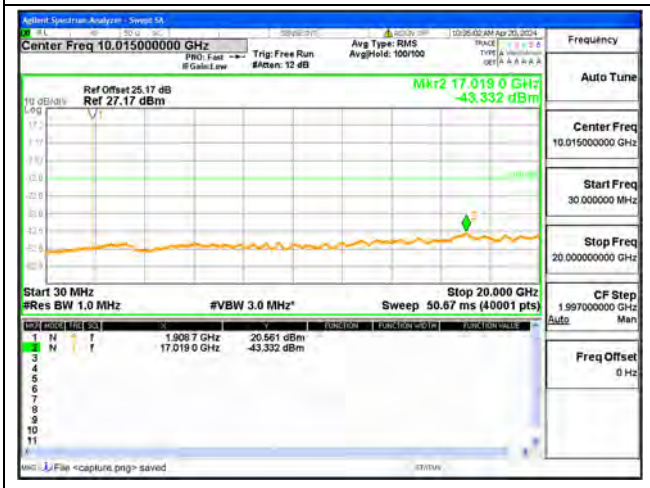
KDB 971168 D01v03 Section 6.0 and ANSI/TIA-603-E-2016.

2.5.4. Test Result



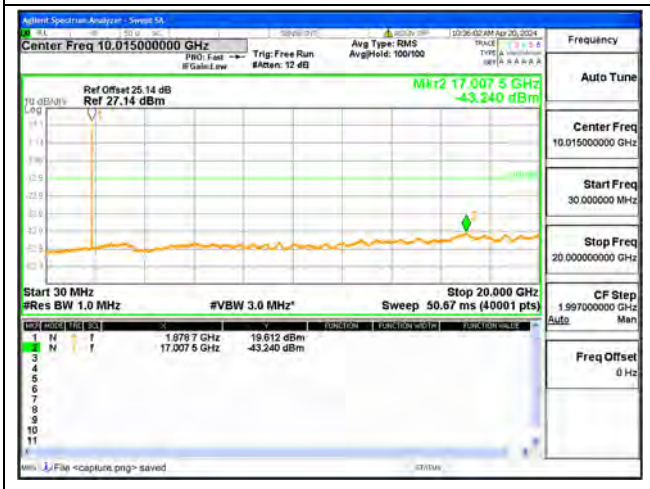
B2 / 1.4MHz / Low CH / QPSK

B2 / 1.4MHz / Mid CH / QPSK



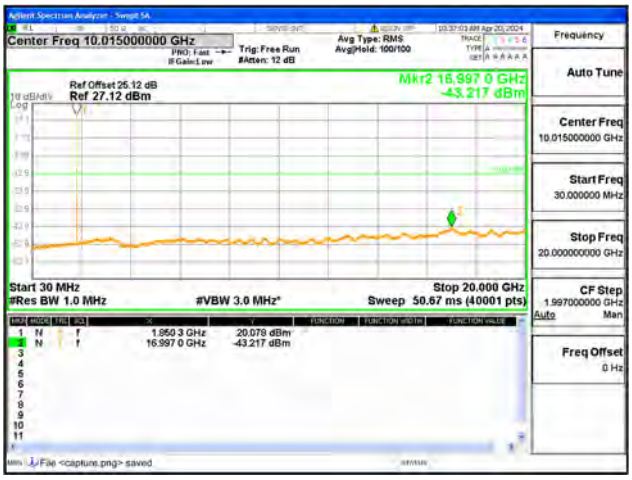
B2 / 1.4MHz / High CH / QPSK

B2 / 3MHz / Low CH / QPSK



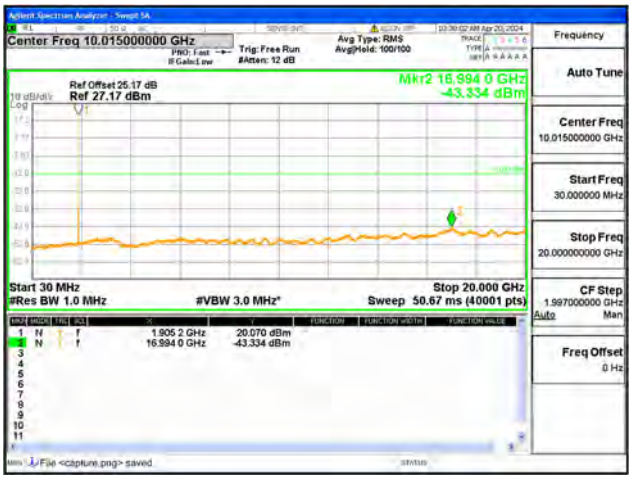
B2 / 3MHz / Mid CH / QPSK

B2 / 3MHz / High CH / QPSK



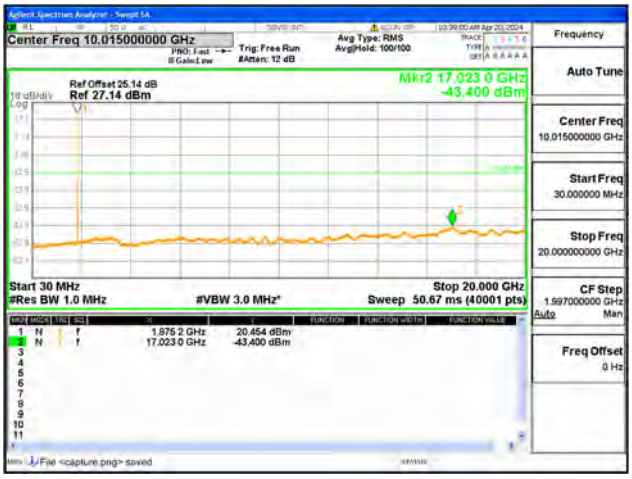
B2 / 5MHz / Low CH / QPSK

B2 / 5MHz / Mid CH / QPSK



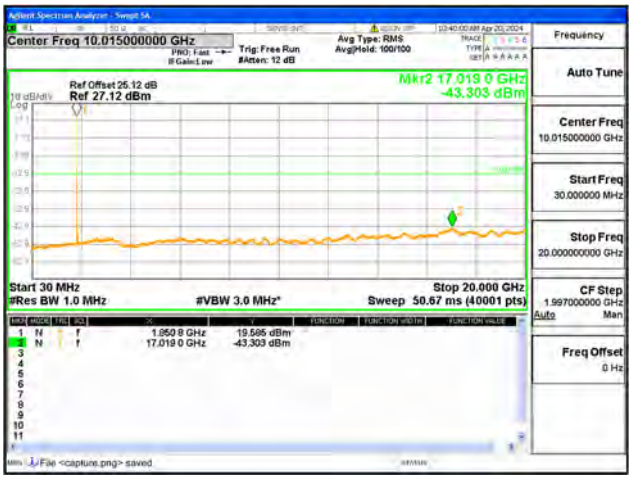
B2 / 5MHz / High CH / QPSK

B2 / 10MHz / Low CH / QPSK



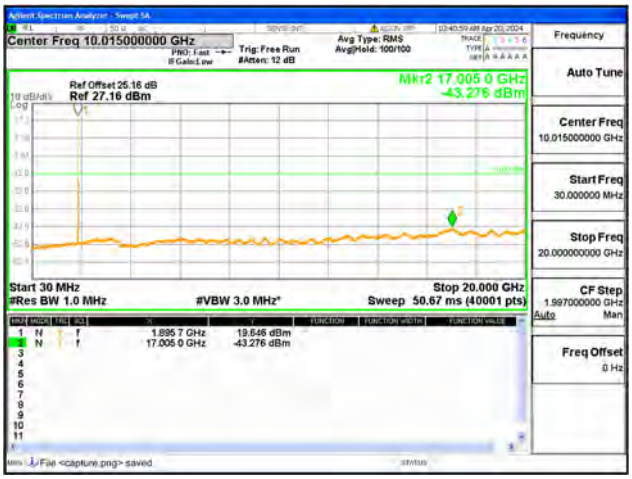
B2 / 10MHz / Mid CH / QPSK

B2 / 10MHz / High CH / QPSK



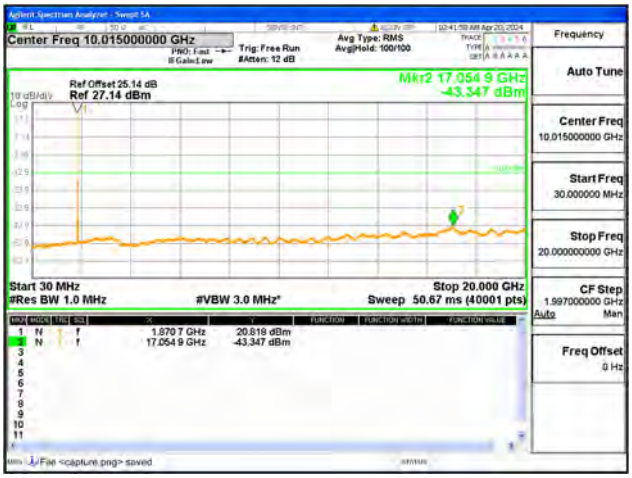
B2 / 15MHz / Low CH / QPSK

B2 / 15MHz / Mid CH / QPSK

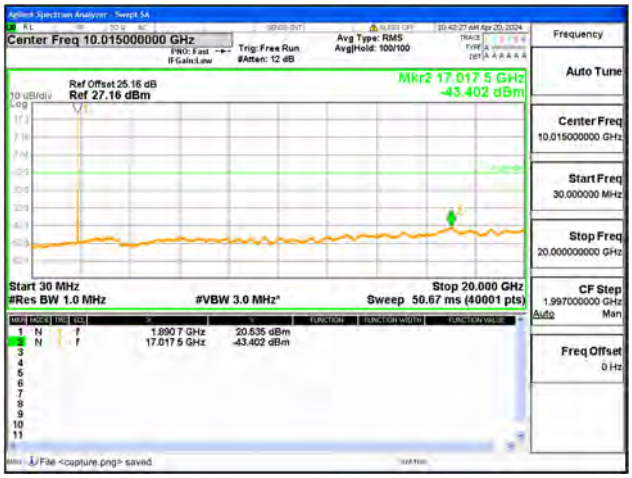


B2 / 15MHz / High CH / QPSK

B2 / 20MHz / Low CH / QPSK



B2 / 20MHz / Mid CH / QPSK



B2 / 20MHz / High CH / QPSK

B4 / 1.4MHz / Low CH / QPSK

B4 / 1.4MHz / Mid CH / QPSK

B4 / 1.4MHz / High CH / QPSK

B4 / 3MHz / Low CH / QPSK

B4 / 3MHz / Mid CH / QPSK

B4 / 3MHz / High CH / QPSK

B4 / 5MHz / Low CH / QPSK

B4 / 5MHz / Mid CH / QPSK

B4 / 5MHz / High CH / QPSK

B4 / 10MHz / Low CH / QPSK

B4 / 10MHz / Mid CH / QPSK

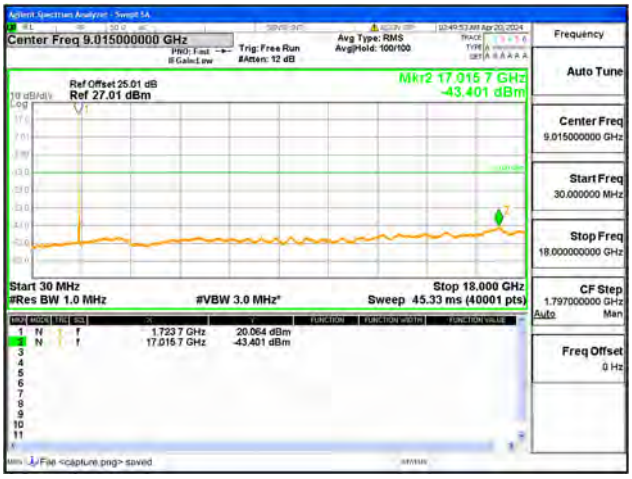
B4 / 10MHz / High CH / QPSK

B4 / 15MHz / Low CH / QPSK

B4 / 15MHz / Mid CH / QPSK

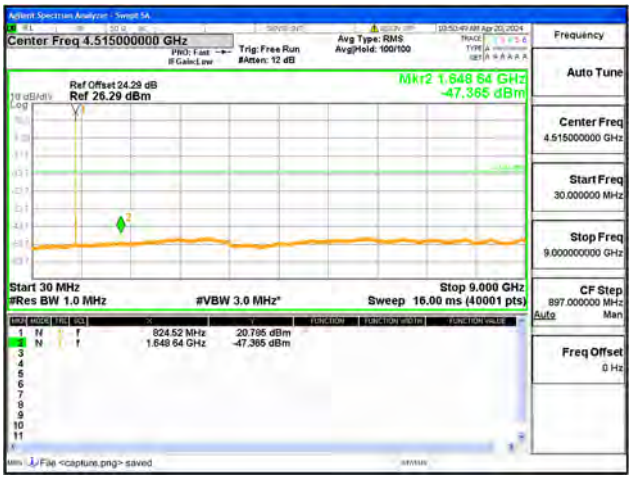
B4 / 15MHz / High CH / QPSK

B4 / 20MHz / Low CH / QPSK



B4 / 20MHz / Mid CH / QPSK

B4 / 20MHz / High CH / QPSK

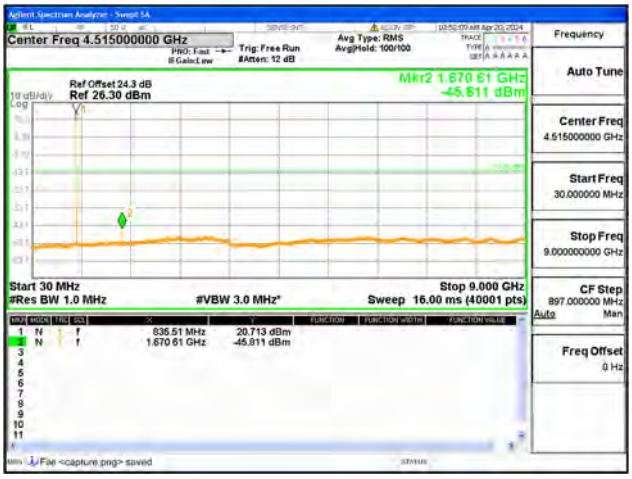


B5 / 1.4MHz / Low CH / QPSK

B5 / 1.4MHz / Mid CH / QPSK

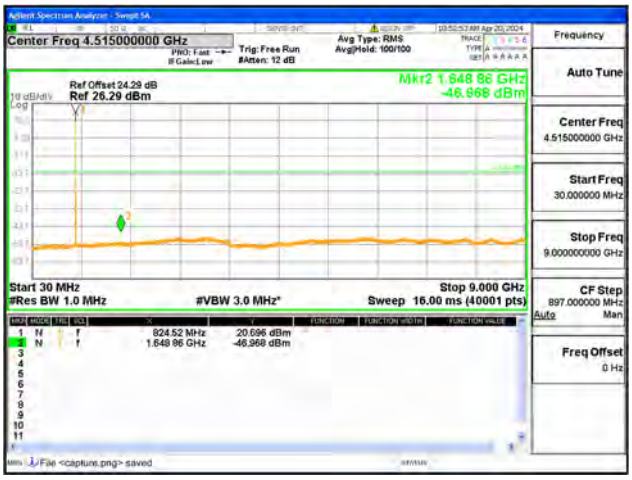
B5 / 1.4MHz / High CH / QPSK

B5 / 3MHz / Low CH / QPSK



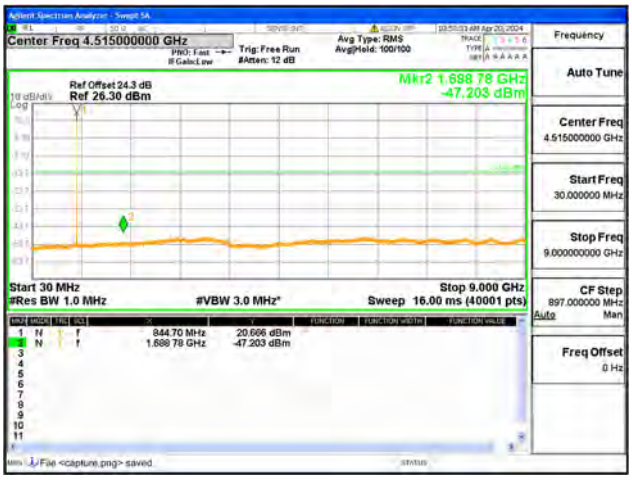
B5 / 3MHz / Mid CH / QPSK

B5 / 3MHz / High CH / QPSK



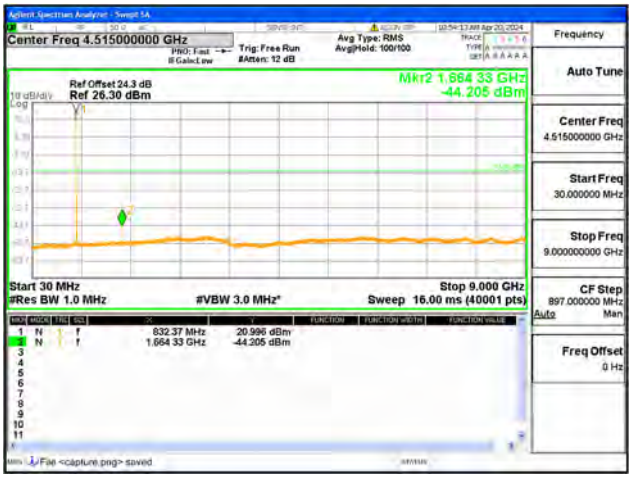
B5 / 5MHz / Low CH / QPSK

B5 / 5MHz / Mid CH / QPSK



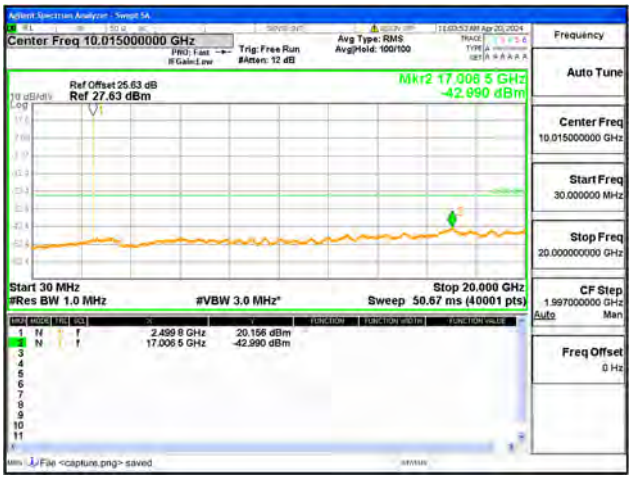
B5 / 5MHz / High CH / QPSK

B5 / 10MHz / Low CH / QPSK

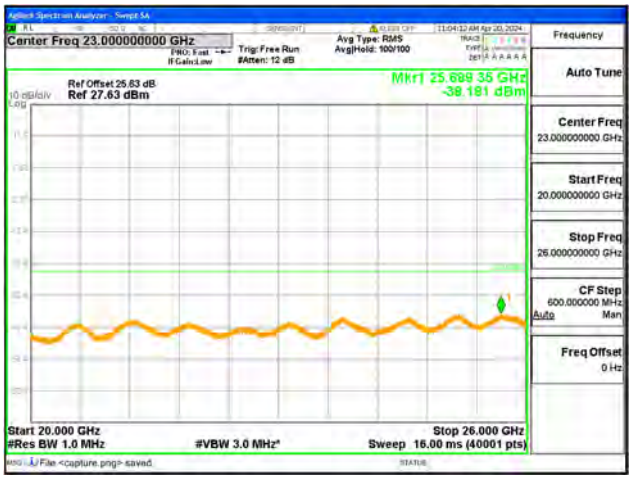


B5 / 10MHz / Mid CH / QPSK

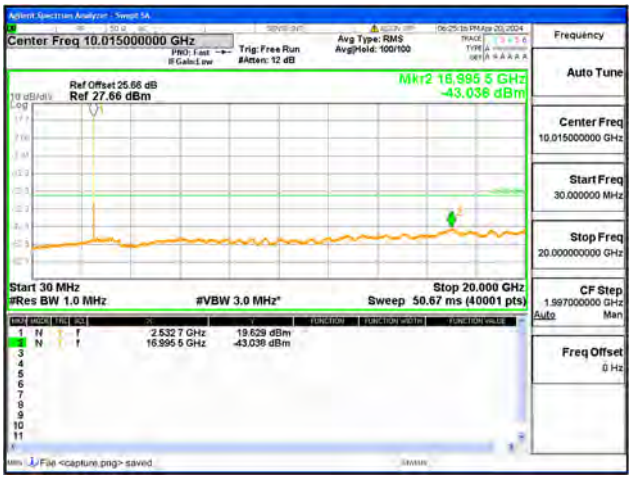
B5 / 10MHz / High CH / QPSK



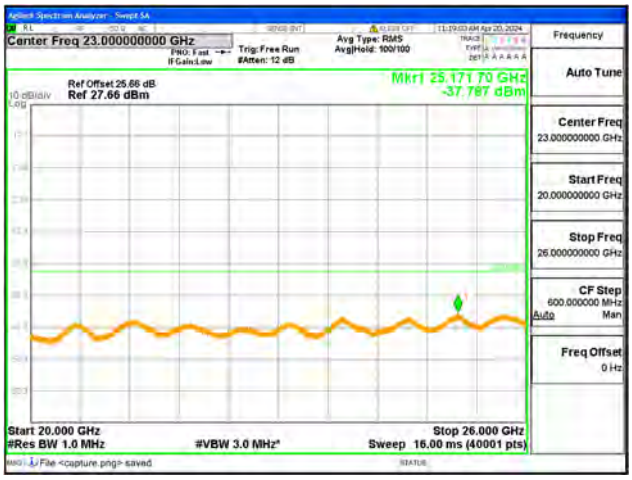
B7-30M-20G / 5MHz / Low CH / QPSK



B7-20G-26G / 5MHz / Low CH / QPSK

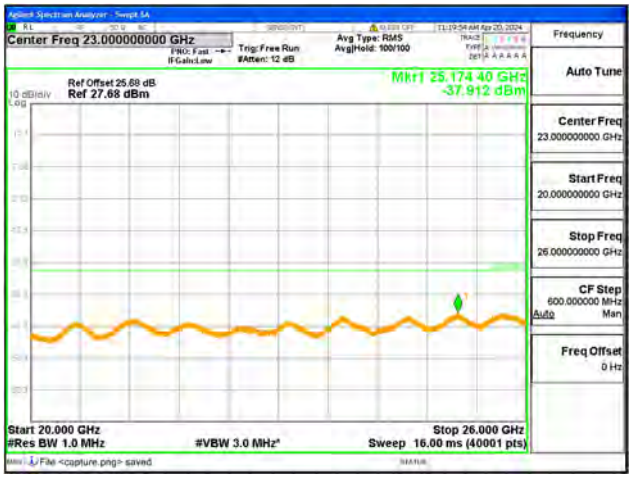


B7-30M-20G / 5MHz / Mid CH / QPSK

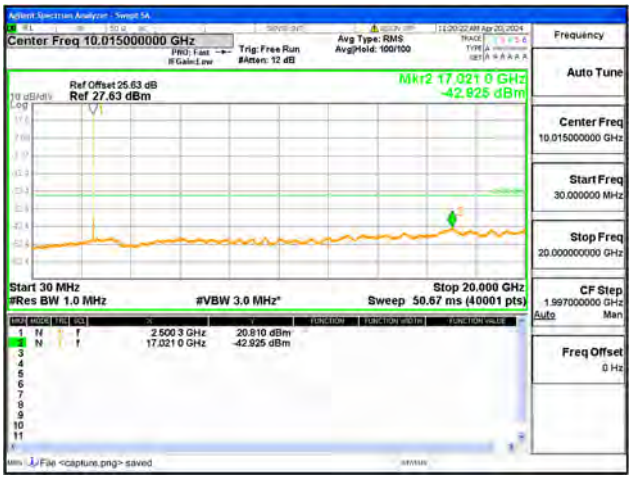


B7-20G-26G / 5MHz / Mid CH / QPSK

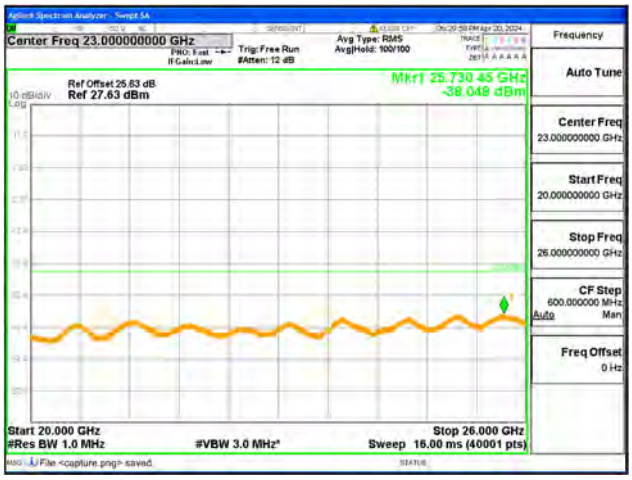
B7-30M-20G / 5MHz / High CH / QPSK



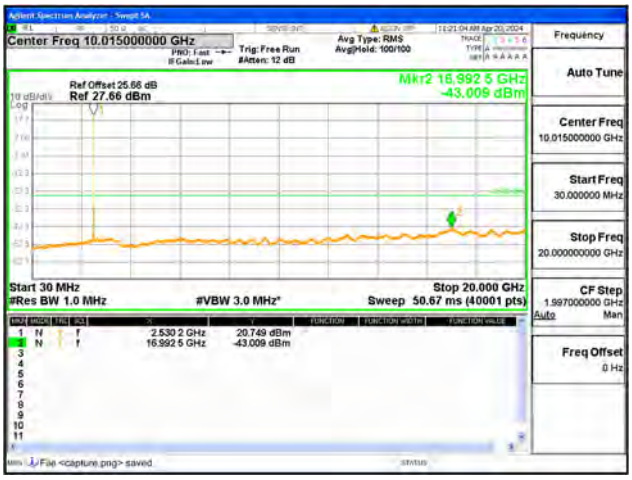
B7-20G-26G / 5MHz / High CH / QPSK



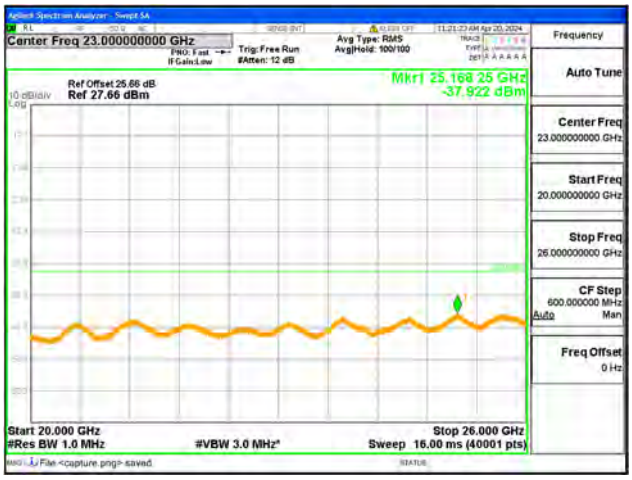
B7-30M-20G / 10MHz / Low CH / QPSK



B7-20G-26G / 10MHz / Low CH / QPSK

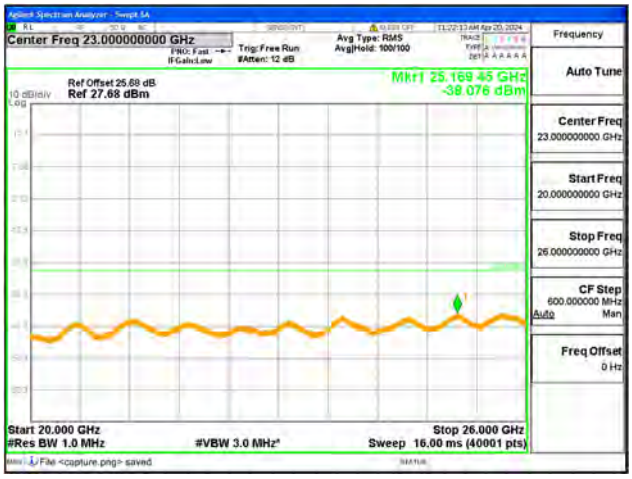


B7-30M-20G / 10MHz / Mid CH / QPSK

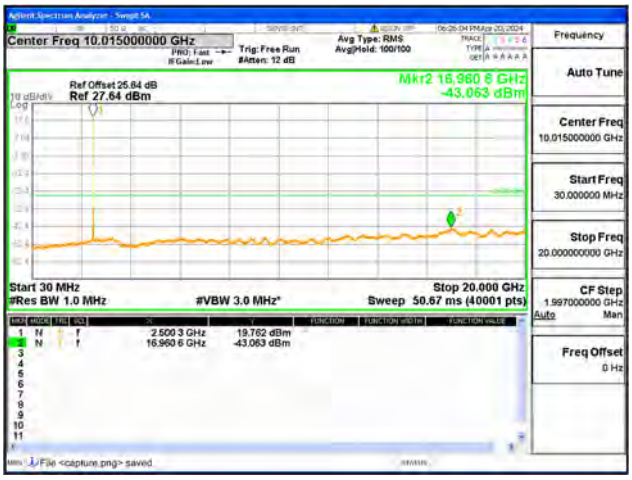


B7-20G-26G / 10MHz / Mid CH / QPSK

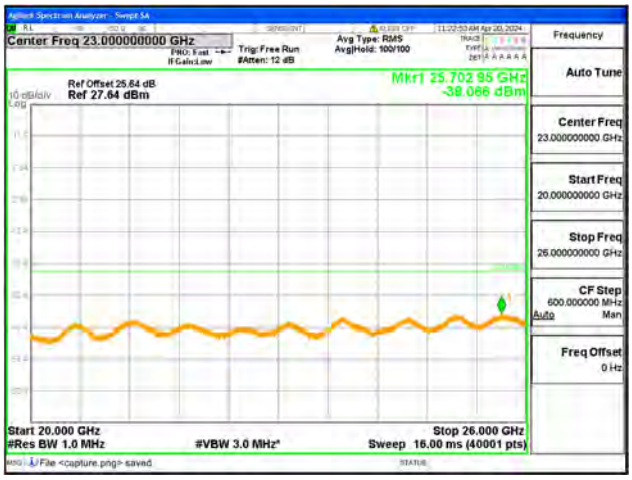
B7-30M-20G / 10MHz / High CH / QPSK



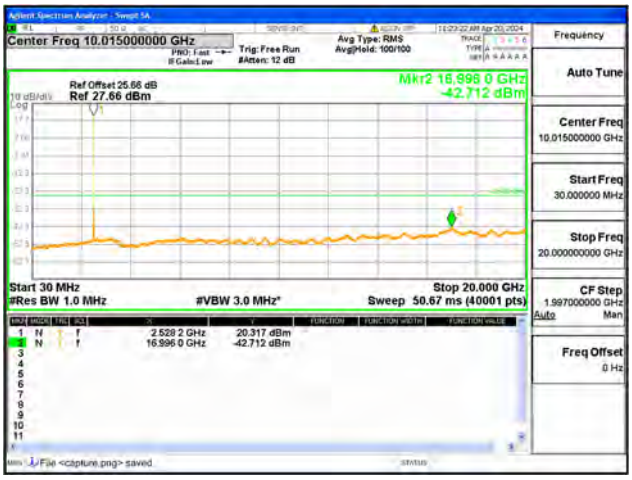
B7-20G-26G / 10MHz / High CH / QPSK



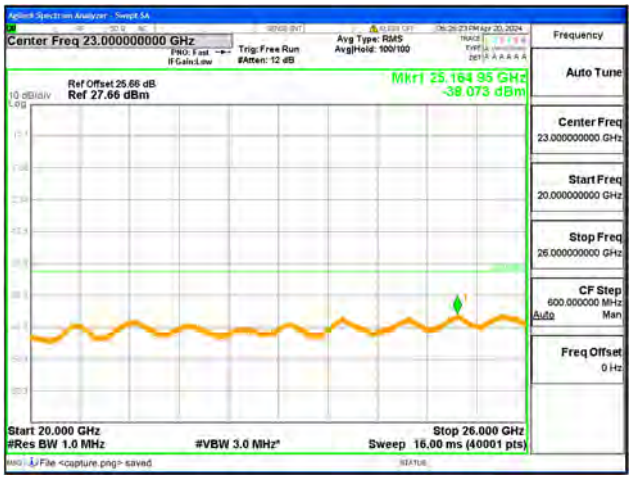
B7-30M-20G / 15MHz / Low CH / QPSK



B7-20G-26G / 15MHz / Low CH / QPSK



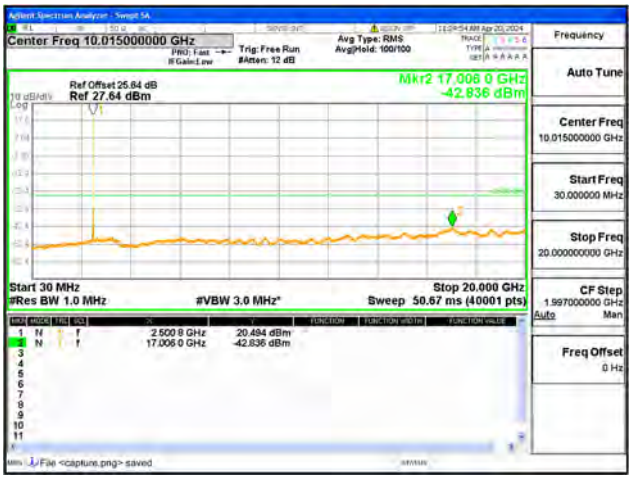
B7-30M-20G / 15MHz / Mid CH / QPSK



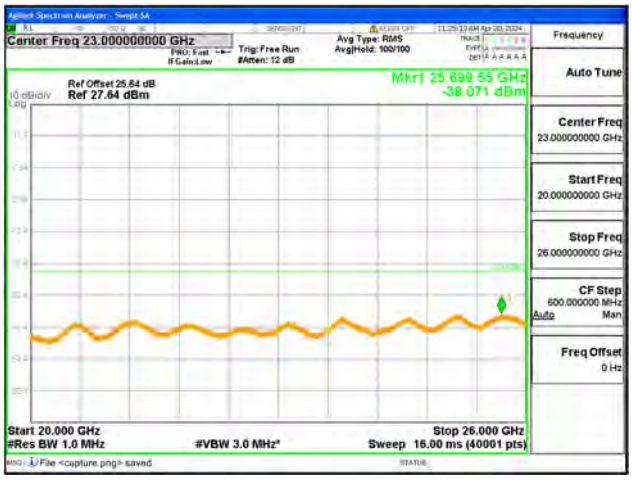
B7-20G-26G / 15MHz / Mid CH / QPSK

B7-30M-20G / 15MHz / High CH / QPSK

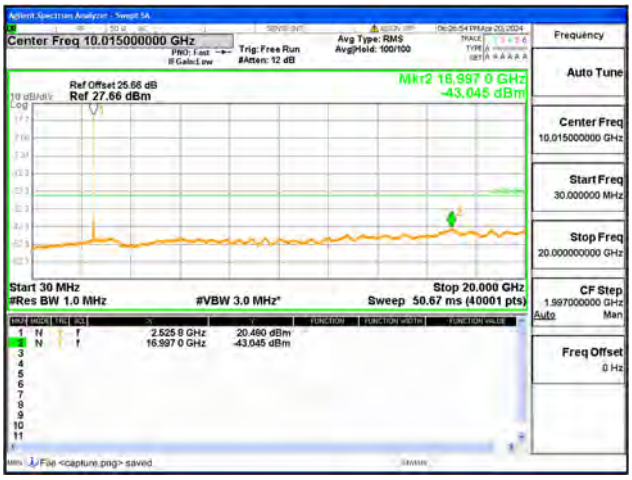
B7-20G-26G / 15MHz / High CH / QPSK



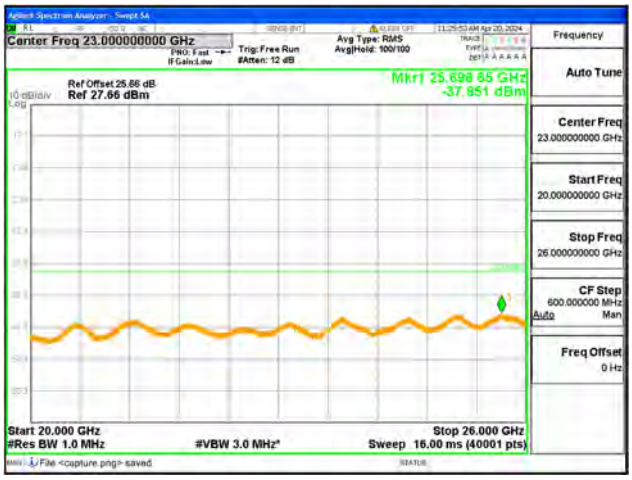
B7-30M-20G / 20MHz / Low CH / QPSK



B7-20G-26G / 20MHz / Low CH / QPSK

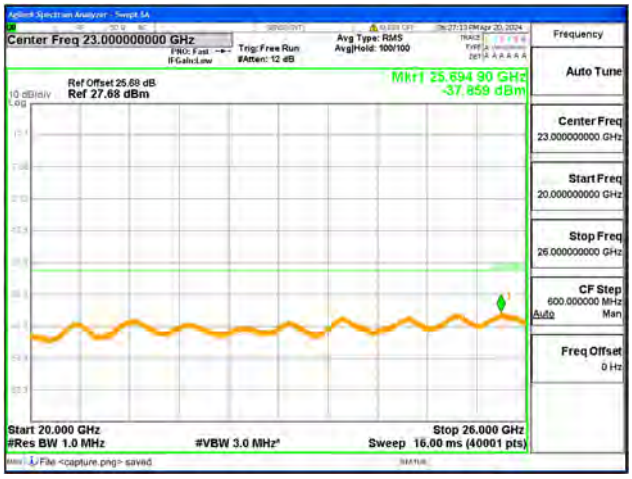


B7-30M-20G / 20MHz / Mid CH / QPSK



B7-20G-26G / 20MHz / Mid CH / QPSK

B7-30M-20G / 20MHz / High CH / QPSK



B7-20G-26G / 20MHz / High CH / QPSK

B12 / 1.4MHz / Low CH / QPSK

B12 / 1.4MHz / Mid CH / QPSK

B12 / 1.4MHz / High CH / QPSK

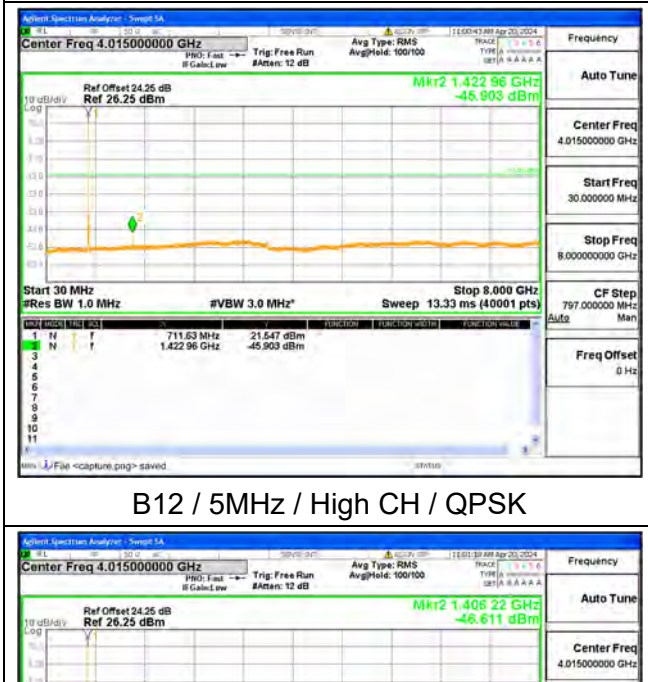
B12 / 3MHz / Low CH / QPSK

B12 / 3MHz / Mid CH / QPSK

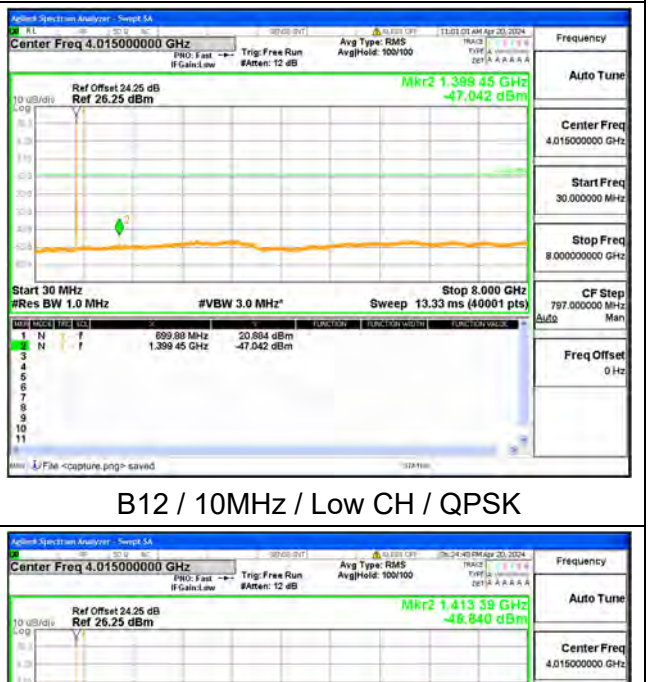
B12 / 3MHz / High CH / QPSK

B12 / 5MHz / Low CH / QPSK

B12 / 5MHz / Mid CH / QPSK



B12 / 5MHz / High CH / QPSK



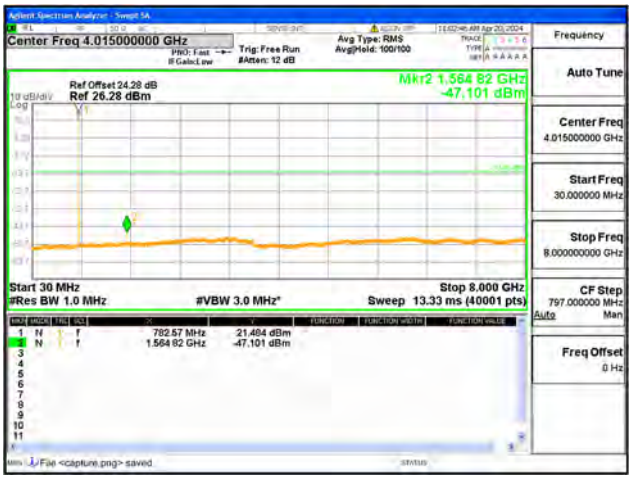
B12 / 10MHz / Low CH / QPSK

B12 / 10MHz / Mid CH / QPSK

B12 / 10MHz / High CH / QPSK

B13 / 5MHz / Low CH / QPSK

B13 / 5MHz / Mid CH / QPSK



B13 / 5MHz / High CH / QPSK

B13 / 10MHz / Mid CH / QPSK

B17 / 5MHz / Low CH / QPSK

B17 / 5MHz / Mid CH / QPSK

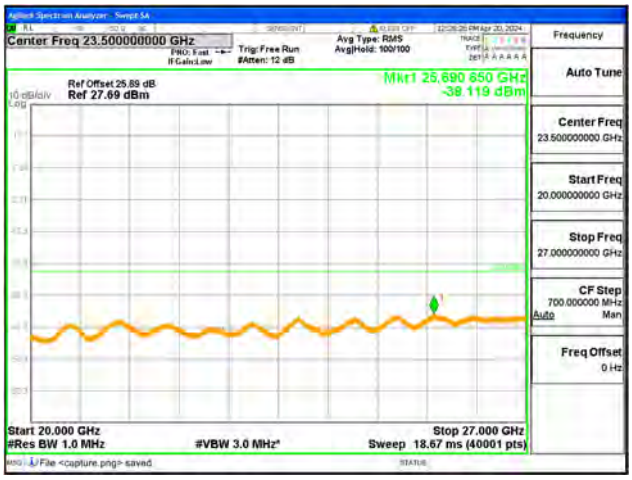
B17 / 5MHz / High CH / QPSK

B17 / 10MHz / Low CH / QPSK

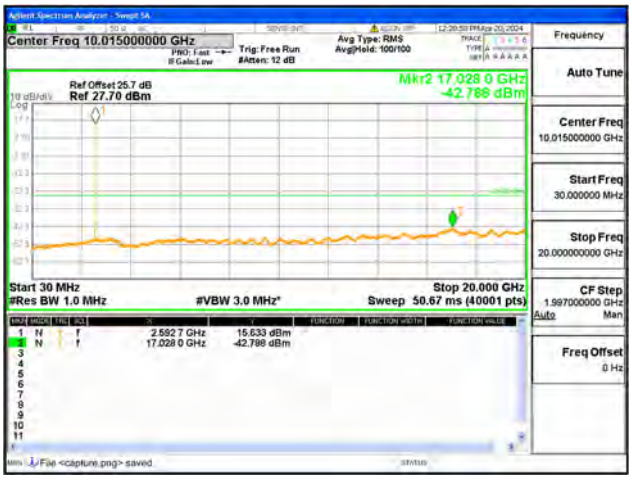
B17 / 10MHz / Mid CH / QPSK

B17 / 10MHz / High CH / QPSK

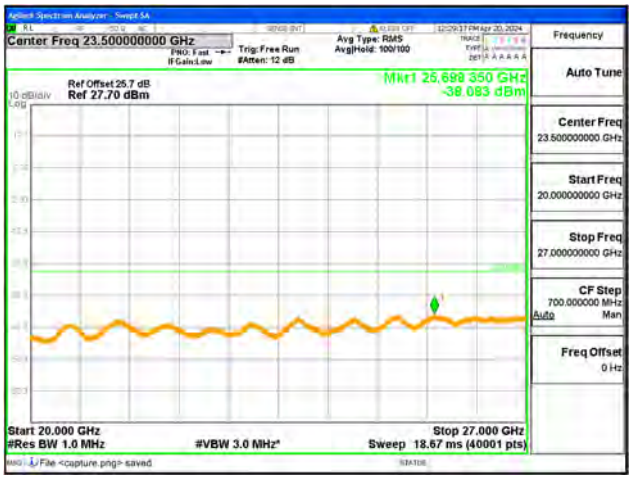
B38-30M-20G / 5MHz / Low CH / QPSK



B38-20G-27G / 5MHz / Low CH / QPSK



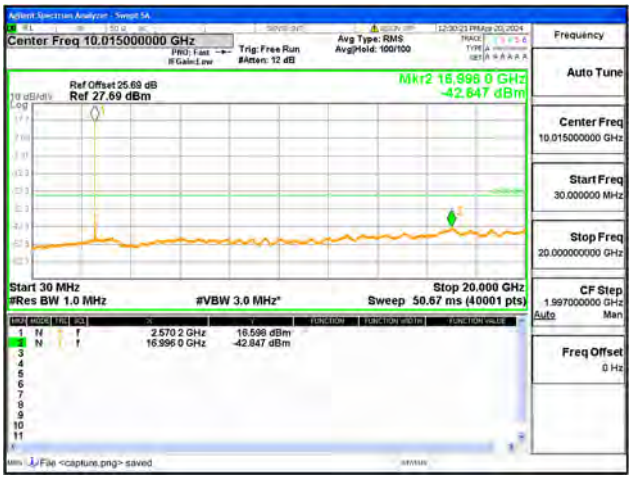
B38-30M-20G / 5MHz / Mid CH / QPSK



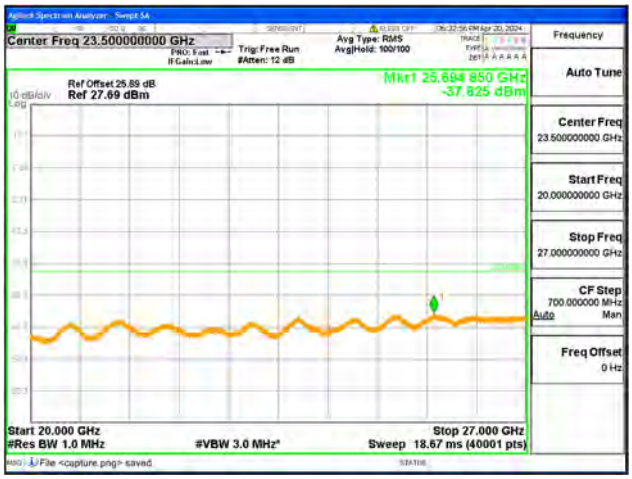
B38-20G-27G / 5MHz / Mid CH / QPSK

B38-30M-20G / 5MHz / High CH / QPSK

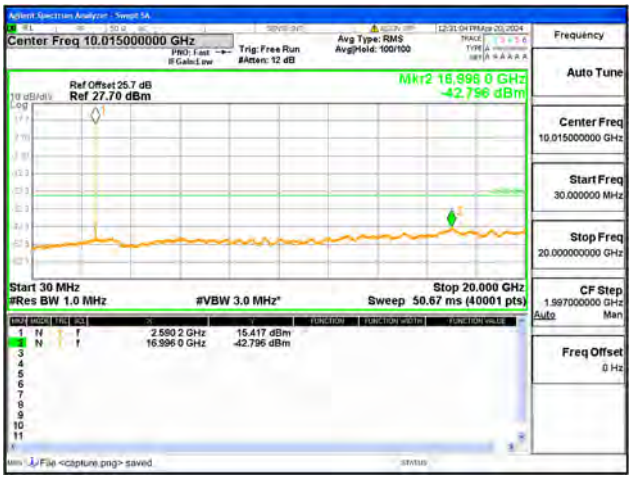
B38-20G-27G / 5MHz / High CH / QPSK



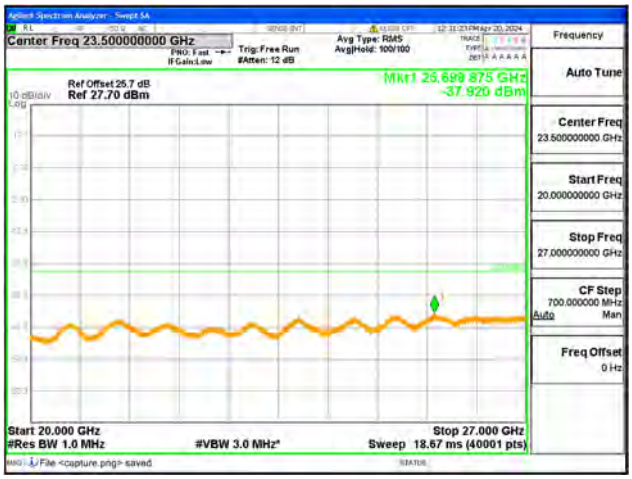
B38-30M-20G / 10MHz / Low CH / QPSK



B38-20G-27G / 10MHz / Low CH / QPSK



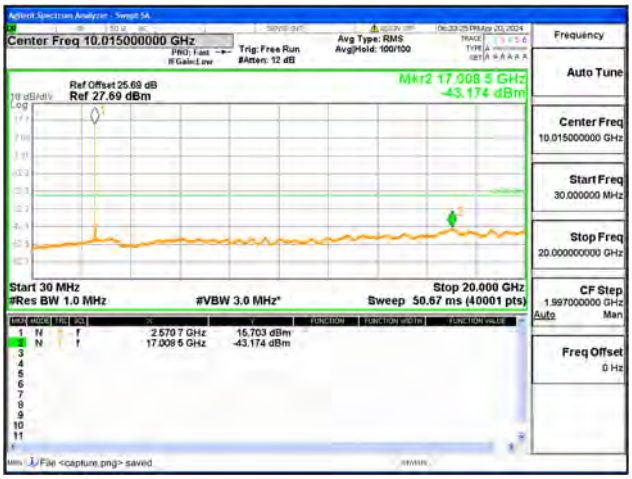
B38-30M-20G / 10MHz / Mid CH / QPSK



B38-20G-27G / 10MHz / Mid CH / QPSK

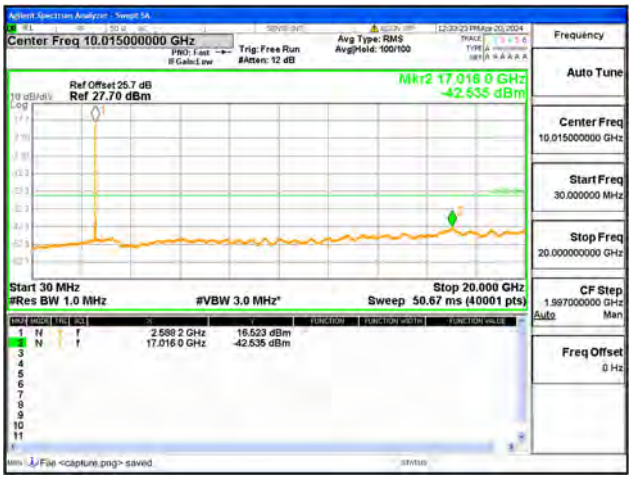
B38-30M-20G / 10MHz / High CH / QPSK

B38-20G-27G / 10MHz / High CH / QPSK



B38-30M-20G / 15MHz / Low CH / QPSK

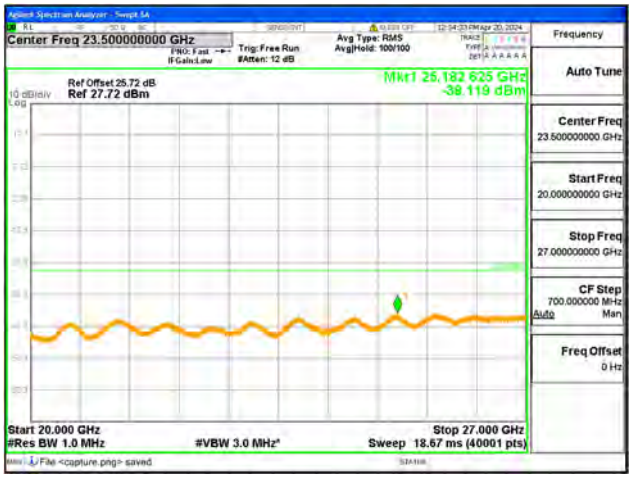
B38-20G-27G / 15MHz / Low CH / QPSK



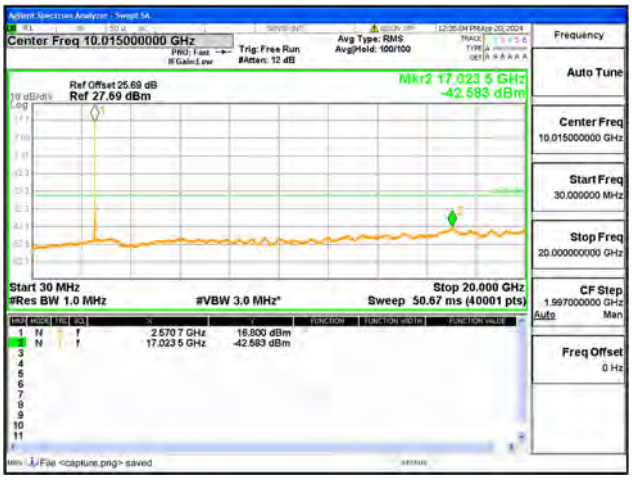
B38-30M-20G / 15MHz / Mid CH / QPSK

B38-20G-27G / 15MHz / Mid CH / QPSK

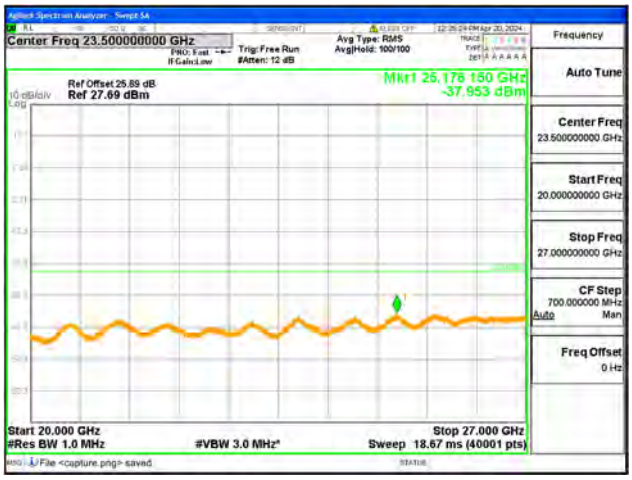
B38-30M-20G / 15MHz / High CH / QPSK



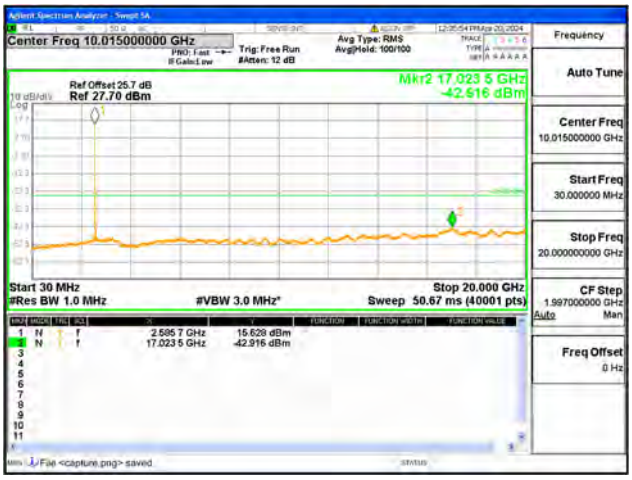
B38-20G-27G / 15MHz / High CH / QPSK



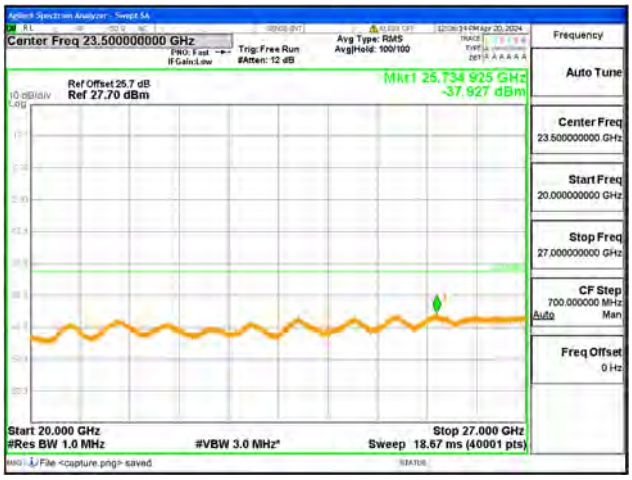
B38-30M-20G / 20MHz / Low CH / QPSK



B38-20G-27G / 20MHz / Low CH / QPSK



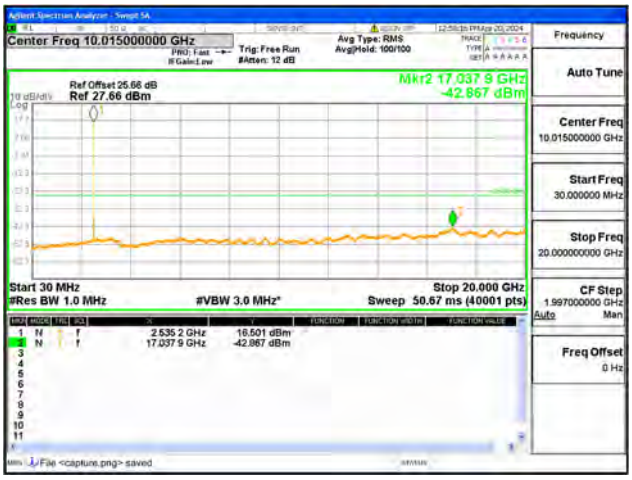
B38-30M-20G / 20MHz / Mid CH / QPSK



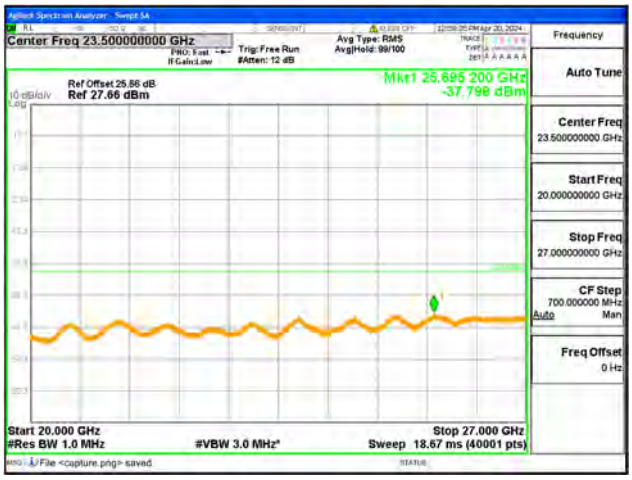
B38-20G-27G / 20MHz / Mid CH / QPSK

B38-30M-20G / 20MHz / High CH / QPSK

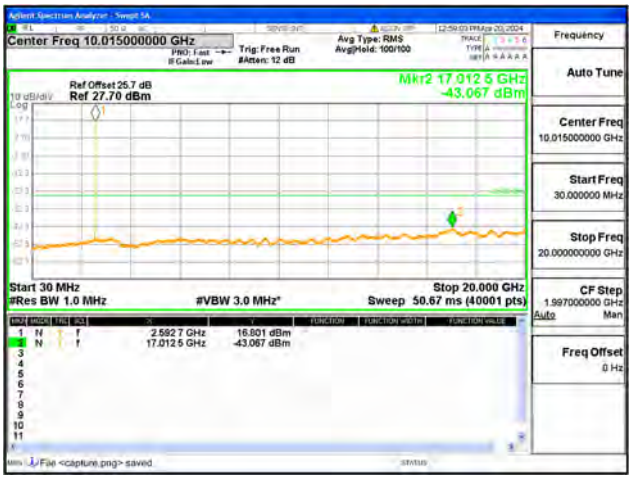
B38-20G-27G / 20MHz / High CH / QPSK



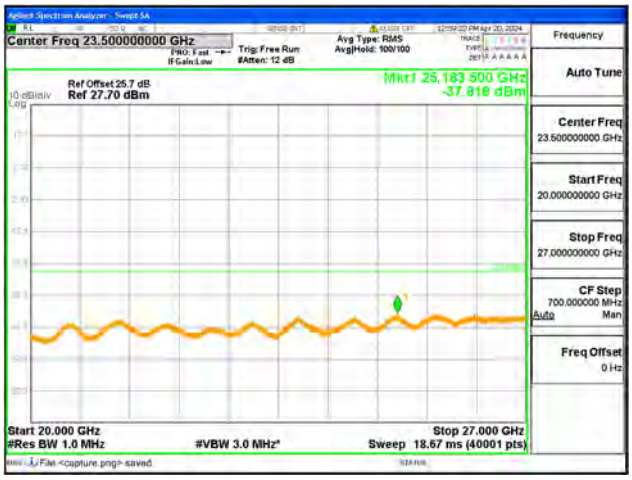
B41-30M-20G / 5MHz / Low CH / QPSK



B41-20G-27G / 5MHz / Low CH / QPSK



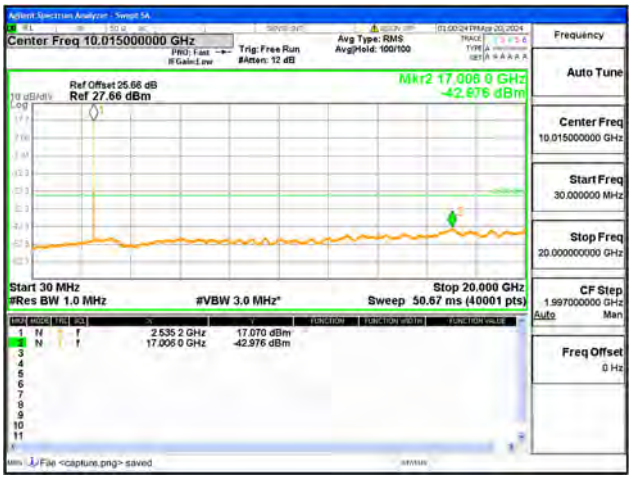
B41-30M-20G / 5MHz / Mid CH / QPSK



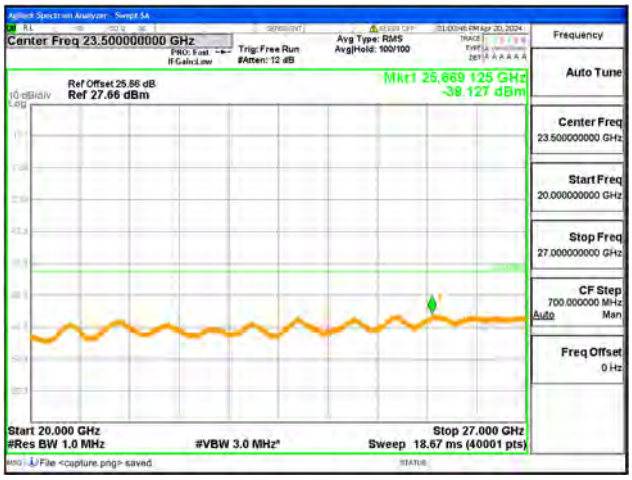
B41-20G-27G / 5MHz / Mid CH / QPSK

B41-30M-20G / 5MHz / High CH / QPSK

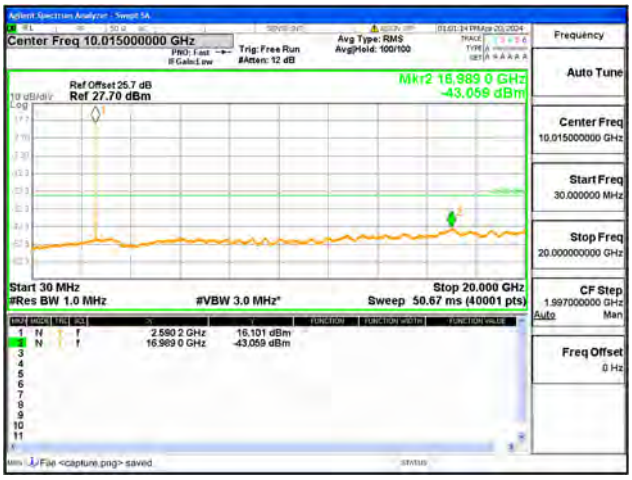
B41-20G-27G / 5MHz / High CH / QPSK



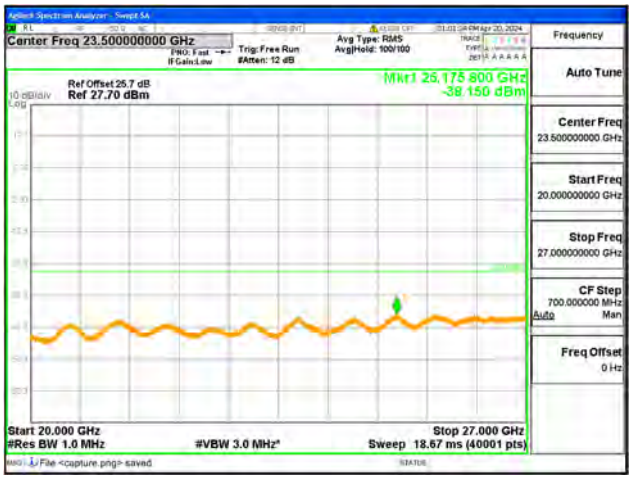
B41-30M-20G / 10MHz / Low CH / QPSK



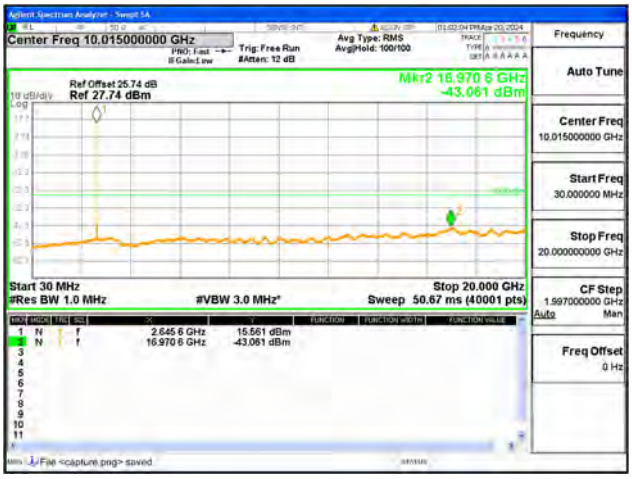
B41-20G-27G / 10MHz / Low CH / QPSK



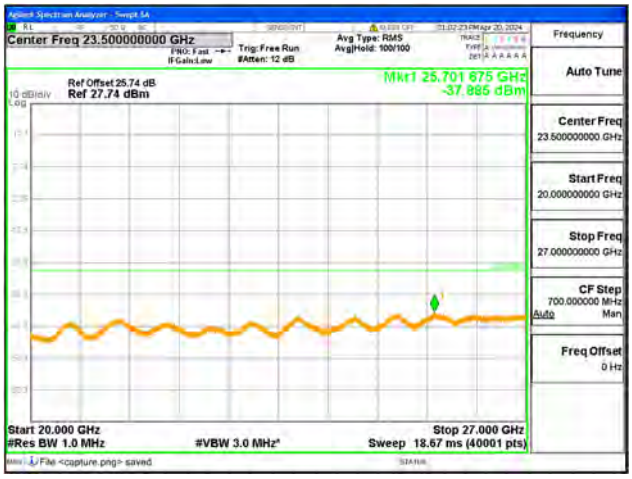
B41-30M-20G / 10MHz / Mid CH / QPSK



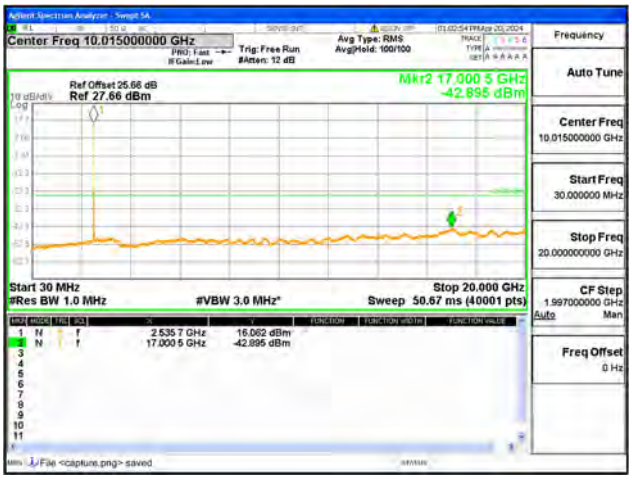
B41-20G-27G / 10MHz / Mid CH / QPSK



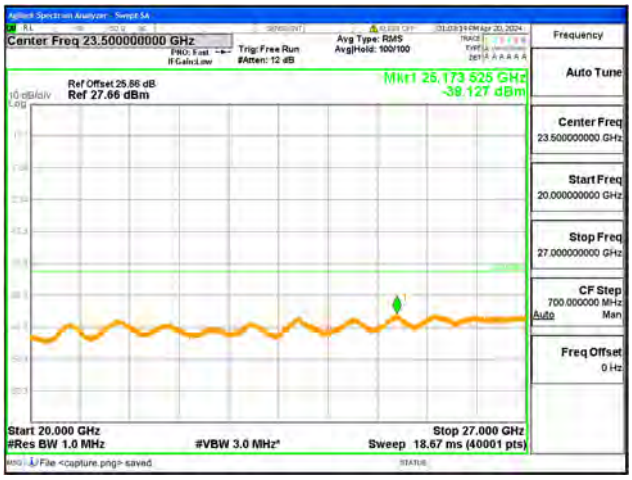
B41-30M-20G / 10MHz / High CH / QPSK



B41-20G-27G / 10MHz / High CH / QPSK

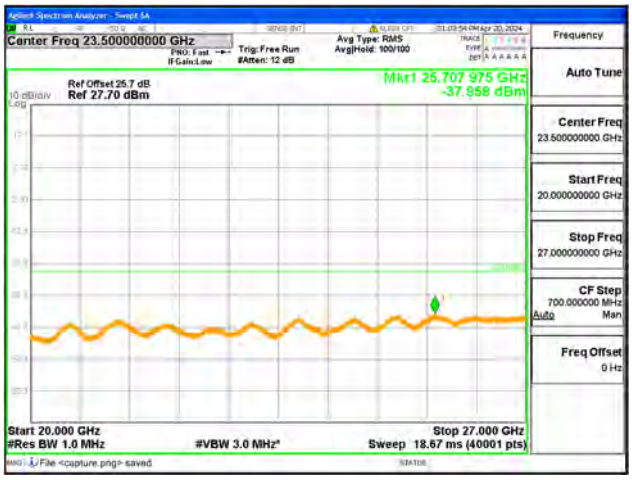


B41-30M-20G / 15MHz / Low CH / QPSK



B41-20G-27G / 15MHz / Low CH / QPSK

B41-30M-20G / 15MHz / Mid CH / QPSK



B41-20G-27G / 15MHz / Mid CH / QPSK

B41-30M-20G / 15MHz / High CH / QPSK

B41-20G-27G / 15MHz / High CH / QPSK