



LTE Band 40, 64QAM, Channel 39200, Frequency 2355.0MHz Limit =Within Authorized Band					
Voltage (%)	Power (VDC)	Temp(°C)	Fre. Dev.(Hz)	Deviation (ppm)	Result
Normal	3.85	+20(Ref)	14	0.006	PASS
Normal		-10	20	0.008	
Normal		0	-2	-0.001	
Normal		+10	18	0.008	
Normal		+20	17	0.007	
Normal		+30	17	0.007	
Normal		+40	-19	-0.008	
Normal		+50	18	0.008	
Normal		+55	16	0.007	
High	4.40	+20	16	0.007	
BATT.ENDPOINT	3.40	+20	-2	-0.001	

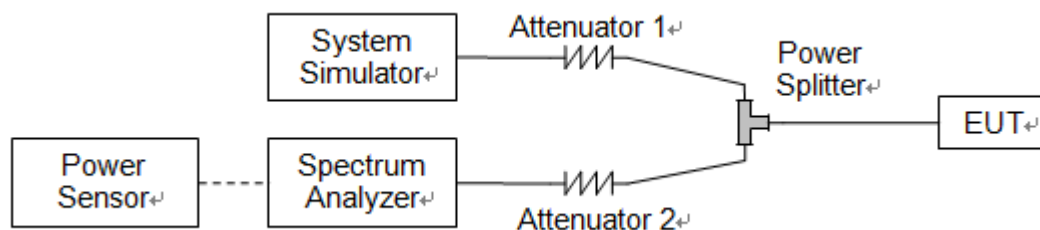
LTE Band 66, 64QAM, Channel 132322, Frequency 1745MHz Limit =Within Authorized Band					
Voltage (%)	Power (VDC)	Temp(°C)	Fre. Dev.(Hz)	Deviation (ppm)	Result
Normal	3.85	+20(Ref)	16	0.009	PASS
Normal		-10	-4	-0.002	
Normal		0	18	0.010	
Normal		+10	20	0.011	
Normal		+20	0	0.000	
Normal		+30	15	0.009	
Normal		+40	13	0.007	
Normal		+50	14	0.008	
Normal		+55	14	0.008	
High	4.40	+20	12	0.007	
BATT.ENDPOINT	3.40	+20	17	0.010	

2.4. Peak to Average Ratio

2.4.1. Requirement

According to FCC section 24.232(d), 27.50(d) and 27.50(j)(4), the peak to average ratio (PAR) of the transmission may not exceed 13dB.

2.4.2. Test Description



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

2.4.3. Test Procedure

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



2.4.4. Test Result

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

LTE Band	BW(MHz)	Channel Level	Channel	Frequency (MHz)	Modulation	Peak to Average Radio(dB)	Verdict
B2	1.4	Low	18607	1850.7	QPSK	5.75	PASS
B2	1.4	Low	18607	1850.7	16QAM	6.61	PASS
B2	1.4	Low	18607	1850.7	64QAM	6.77	PASS
B2	1.4	Mid	18900	1880	QPSK	6.10	PASS
B2	1.4	Mid	18900	1880	16QAM	6.85	PASS
B2	1.4	Mid	18900	1880	64QAM	6.96	PASS
B2	1.4	High	19193	1909.3	QPSK	5.45	PASS
B2	1.4	High	19193	1909.3	16QAM	6.25	PASS
B2	1.4	High	19193	1909.3	64QAM	6.57	PASS
B2	3	Low	18615	1851.5	QPSK	5.77	PASS
B2	3	Low	18615	1851.5	16QAM	6.53	PASS
B2	3	Low	18615	1851.5	64QAM	6.66	PASS
B2	3	Mid	18900	1880	QPSK	6.12	PASS
B2	3	Mid	18900	1880	16QAM	6.84	PASS
B2	3	Mid	18900	1880	64QAM	6.86	PASS
B2	3	High	19185	1908.5	QPSK	5.54	PASS
B2	3	High	19185	1908.5	16QAM	6.32	PASS
B2	3	High	19185	1908.5	64QAM	6.47	PASS
B2	5	Low	18625	1852.5	QPSK	5.73	PASS
B2	5	Low	18625	1852.5	16QAM	6.42	PASS
B2	5	Low	18625	1852.5	64QAM	6.69	PASS
B2	5	Mid	18900	1880	QPSK	5.94	PASS
B2	5	Mid	18900	1880	16QAM	6.63	PASS
B2	5	Mid	18900	1880	64QAM	6.83	PASS
B2	5	High	19175	1907.5	QPSK	5.59	PASS
B2	5	High	19175	1907.5	16QAM	6.26	PASS
B2	5	High	19175	1907.5	64QAM	6.59	PASS
B2	10	Low	18650	1855	QPSK	5.76	PASS
B2	10	Low	18650	1855	16QAM	6.39	PASS
B2	10	Low	18650	1855	64QAM	6.62	PASS
B2	10	Mid	18900	1880	QPSK	6.03	PASS



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B2	10	Mid	18900	1880	16QAM	6.64	PASS
B2	10	Mid	18900	1880	64QAM	6.83	PASS
B2	10	High	19150	1905	QPSK	5.70	PASS
B2	10	High	19150	1905	16QAM	6.30	PASS
B2	10	High	19150	1905	64QAM	6.59	PASS
B2	15	Low	18675	1857.5	QPSK	5.51	PASS
B2	15	Low	18675	1857.5	16QAM	6.21	PASS
B2	15	Low	18675	1857.5	64QAM	6.54	PASS
B2	15	Mid	18900	1880	QPSK	5.96	PASS
B2	15	Mid	18900	1880	16QAM	6.62	PASS
B2	15	Mid	18900	1880	64QAM	6.87	PASS
B2	15	High	19125	1902.5	QPSK	5.69	PASS
B2	15	High	19125	1902.5	16QAM	6.37	PASS
B2	15	High	19125	1902.5	64QAM	6.65	PASS
B2	20	Low	18700	1860	QPSK	5.47	PASS
B2	20	Low	18700	1860	16QAM	6.23	PASS
B2	20	Low	18700	1860	64QAM	6.50	PASS
B2	20	Mid	18900	1880	QPSK	5.97	PASS
B2	20	Mid	18900	1880	16QAM	6.70	PASS
B2	20	Mid	18900	1880	64QAM	6.88	PASS
B2	20	High	19100	1900	QPSK	5.79	PASS
B2	20	High	19100	1900	16QAM	6.49	PASS
B2	20	High	19100	1900	64QAM	6.77	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	4.93	PASS
B4	1.4	Low	19957	1710.7	16QAM	5.72	PASS
B4	1.4	Low	19957	1710.7	64QAM	5.67	PASS
B4	1.4	Mid	20175	1732.5	QPSK	5.83	PASS
B4	1.4	Mid	20175	1732.5	16QAM	6.57	PASS
B4	1.4	Mid	20175	1732.5	64QAM	6.57	PASS
B4	1.4	High	20393	1754.3	QPSK	4.75	PASS
B4	1.4	High	20393	1754.3	16QAM	5.58	PASS
B4	1.4	High	20393	1754.3	64QAM	5.56	PASS
B4	3	Low	19965	1711.5	QPSK	4.98	PASS
B4	3	Low	19965	1711.5	16QAM	5.57	PASS
B4	3	Low	19965	1711.5	64QAM	5.58	PASS
B4	3	Mid	20175	1732.5	QPSK	5.82	PASS
B4	3	Mid	20175	1732.5	16QAM	6.53	PASS
B4	3	Mid	20175	1732.5	64QAM	6.52	PASS
B4	3	High	20385	1753.5	QPSK	4.80	PASS
B4	3	High	20385	1753.5	16QAM	5.29	PASS
B4	3	High	20385	1753.5	64QAM	5.43	PASS
B4	5	Low	19975	1712.5	QPSK	5.12	PASS
B4	5	Low	19975	1712.5	16QAM	5.70	PASS
B4	5	Low	19975	1712.5	64QAM	5.80	PASS
B4	5	Mid	20175	1732.5	QPSK	5.79	PASS
B4	5	Mid	20175	1732.5	16QAM	6.41	PASS
B4	5	Mid	20175	1732.5	64QAM	6.56	PASS
B4	5	High	20375	1752.5	QPSK	4.98	PASS
B4	5	High	20375	1752.5	16QAM	5.50	PASS
B4	5	High	20375	1752.5	64QAM	5.60	PASS
B4	10	Low	20000	1715	QPSK	5.20	PASS
B4	10	Low	20000	1715	16QAM	5.73	PASS
B4	10	Low	20000	1715	64QAM	5.79	PASS
B4	10	Mid	20175	1732.5	QPSK	5.81	PASS
B4	10	Mid	20175	1732.5	16QAM	6.41	PASS
B4	10	Mid	20175	1732.5	64QAM	6.50	PASS
B4	10	High	20350	1750	QPSK	5.03	PASS
B4	10	High	20350	1750	16QAM	5.50	PASS



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B4	10	High	20350	1750	64QAM	5.58	PASS
B4	15	Low	20025	1717.5	QPSK	4.93	PASS
B4	15	Low	20025	1717.5	16QAM	5.55	PASS
B4	15	Low	20025	1717.5	64QAM	5.65	PASS
B4	15	Mid	20175	1732.5	QPSK	5.67	PASS
B4	15	Mid	20175	1732.5	16QAM	6.27	PASS
B4	15	Mid	20175	1732.5	64QAM	6.37	PASS
B4	15	High	20325	1747.5	QPSK	4.73	PASS
B4	15	High	20325	1747.5	16QAM	5.28	PASS
B4	15	High	20325	1747.5	64QAM	5.40	PASS
B4	20	Low	20050	1720	QPSK	5.22	PASS
B4	20	Low	20050	1720	16QAM	5.80	PASS
B4	20	Low	20050	1720	64QAM	5.90	PASS
B4	20	Mid	20175	1732.5	QPSK	5.68	PASS
B4	20	Mid	20175	1732.5	16QAM	6.28	PASS
B4	20	Mid	20175	1732.5	64QAM	6.40	PASS
B4	20	High	20300	1745	QPSK	5.29	PASS
B4	20	High	20300	1745	16QAM	5.76	PASS
B4	20	High	20300	1745	64QAM	5.86	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	4.57	PASS
B66	1.4	Low	131979	1710.7	16QAM	5.40	PASS
B66	1.4	Low	131979	1710.7	64QAM	5.64	PASS
B66	1.4	Mid	132322	1745	QPSK	4.37	PASS
B66	1.4	Mid	132322	1745	16QAM	5.05	PASS
B66	1.4	Mid	132322	1745	64QAM	5.36	PASS
B66	1.4	High	132665	1779.3	QPSK	5.52	PASS
B66	1.4	High	132665	1779.3	16QAM	6.27	PASS
B66	1.4	High	132665	1779.3	64QAM	6.38	PASS
B66	3	Low	131987	1711.5	QPSK	4.71	PASS
B66	3	Low	131987	1711.5	16QAM	5.23	PASS
B66	3	Low	131987	1711.5	64QAM	5.55	PASS
B66	3	Mid	132322	1745	QPSK	4.35	PASS
B66	3	Mid	132322	1745	16QAM	4.89	PASS
B66	3	Mid	132322	1745	64QAM	5.32	PASS
B66	3	High	132657	1778.5	QPSK	5.50	PASS
B66	3	High	132657	1778.5	16QAM	6.14	PASS
B66	3	High	132657	1778.5	64QAM	6.31	PASS
B66	5	Low	131997	1712.5	QPSK	4.87	PASS
B66	5	Low	131997	1712.5	16QAM	5.36	PASS
B66	5	Low	131997	1712.5	64QAM	5.76	PASS
B66	5	Mid	132322	1745	QPSK	4.73	PASS
B66	5	Mid	132322	1745	16QAM	5.25	PASS
B66	5	Mid	132322	1745	64QAM	5.59	PASS
B66	5	High	132647	1777.5	QPSK	5.57	PASS
B66	5	High	132647	1777.5	16QAM	6.18	PASS
B66	5	High	132647	1777.5	64QAM	6.40	PASS
B66	10	Low	132022	1715	QPSK	4.92	PASS
B66	10	Low	132022	1715	16QAM	5.47	PASS
B66	10	Low	132022	1715	64QAM	5.78	PASS
B66	10	Mid	132322	1745	QPSK	4.91	PASS
B66	10	Mid	132322	1745	16QAM	5.43	PASS
B66	10	Mid	132322	1745	64QAM	5.73	PASS
B66	10	High	132622	1775	QPSK	5.64	PASS
B66	10	High	132622	1775	16QAM	6.17	PASS



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B66	10	High	132622	1775	64QAM	6.39	PASS
B66	15	Low	132047	1717.5	QPSK	4.69	PASS
B66	15	Low	132047	1717.5	16QAM	5.11	PASS
B66	15	Low	132047	1717.5	64QAM	5.61	PASS
B66	15	Mid	132322	1745	QPSK	4.67	PASS
B66	15	Mid	132322	1745	16QAM	5.14	PASS
B66	15	Mid	132322	1745	64QAM	5.61	PASS
B66	15	High	132597	1772.5	QPSK	5.48	PASS
B66	15	High	132597	1772.5	16QAM	6.04	PASS
B66	15	High	132597	1772.5	64QAM	6.37	PASS
B66	20	Low	132072	1720	QPSK	5.10	PASS
B66	20	Low	132072	1720	16QAM	5.58	PASS
B66	20	Low	132072	1720	64QAM	5.89	PASS
B66	20	Mid	132322	1745	QPSK	4.92	PASS
B66	20	Mid	132322	1745	16QAM	5.50	PASS
B66	20	Mid	132322	1745	64QAM	5.84	PASS
B66	20	High	132572	1770	QPSK	5.49	PASS
B66	20	High	132572	1770	16QAM	6.16	PASS
B66	20	High	132572	1770	64QAM	6.40	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



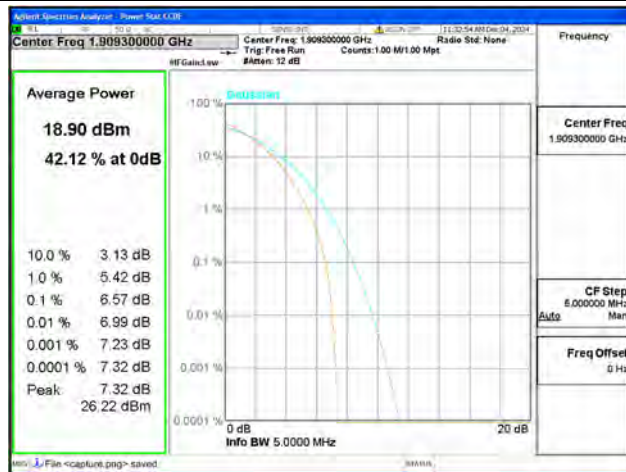
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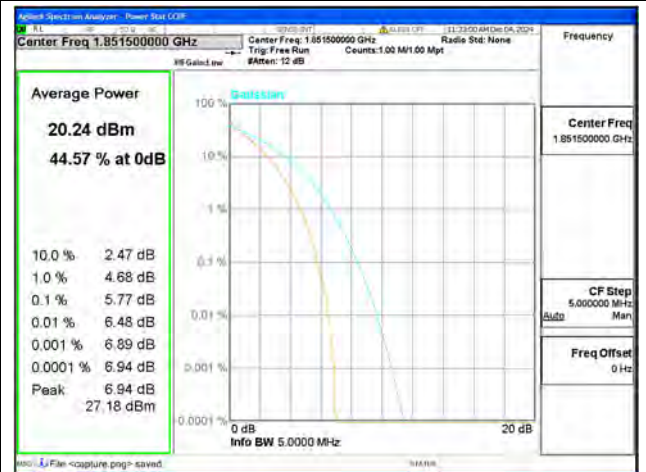
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B2 / 1.4MHz / High CH / 16QAM



B2 / 1.4MHz / High CH / 64QAM



B2 / 3MHz / Low CH / QPSK



B2 / 3MHz / Low CH / 16QAM



B2 / 3MHz / Low CH / 64QAM



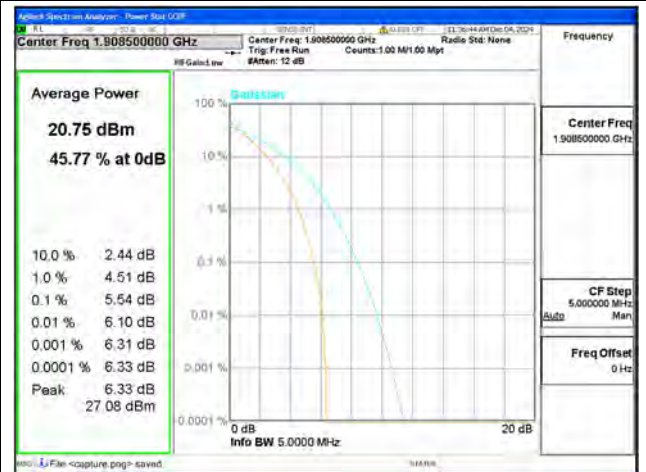
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B2 / 3MHz / Mid CH / 16QAM



B2 / 3MHz / Mid CH / 64QAM



B2 / 3MHz / High CH / QPSK



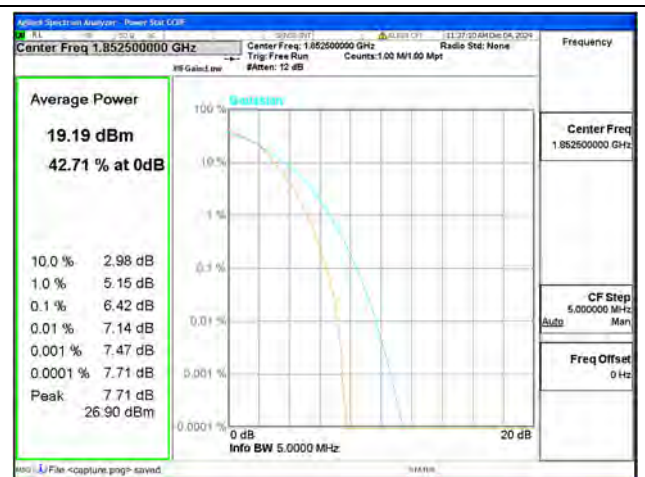
B2 / 3MHz / High CH / 16QAM



B2 / 3MHz / High CH / 64QAM



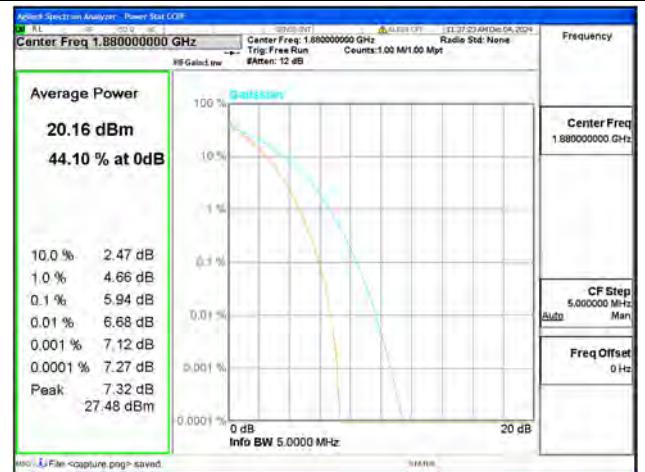
B2 / 5MHz / Low CH / QPSK



B2 / 5MHz / Low CH / 16QAM



B2 / 5MHz / Low CH / 64QAM



B2 / 5MHz / Mid CH / QPSK



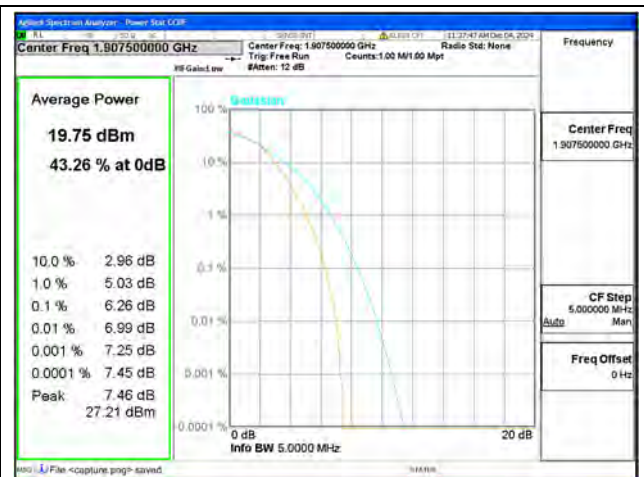
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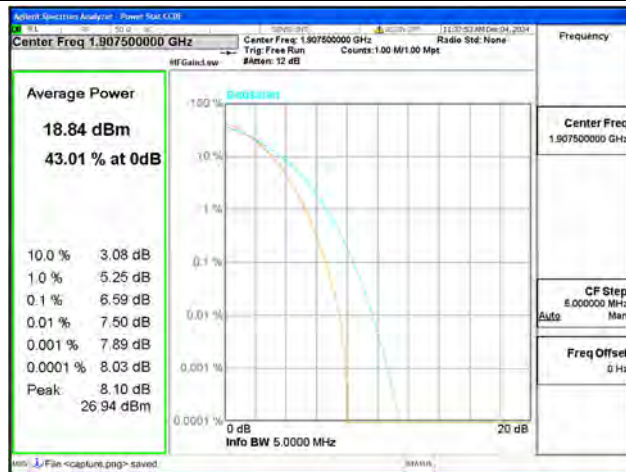
B2 / 5MHz / Mid CH / 64QAM



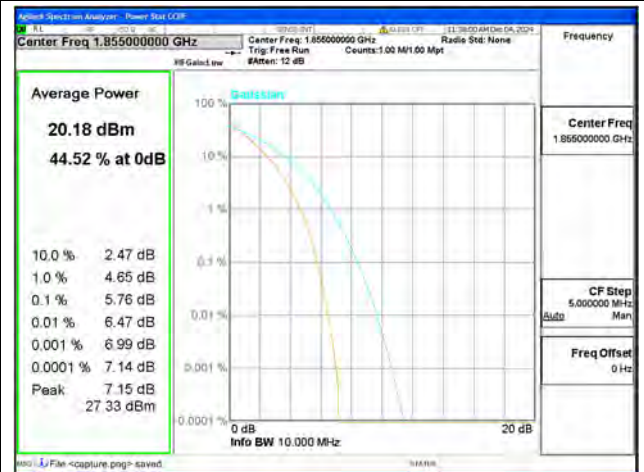
B2 / 5MHz / High CH / QPSK



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



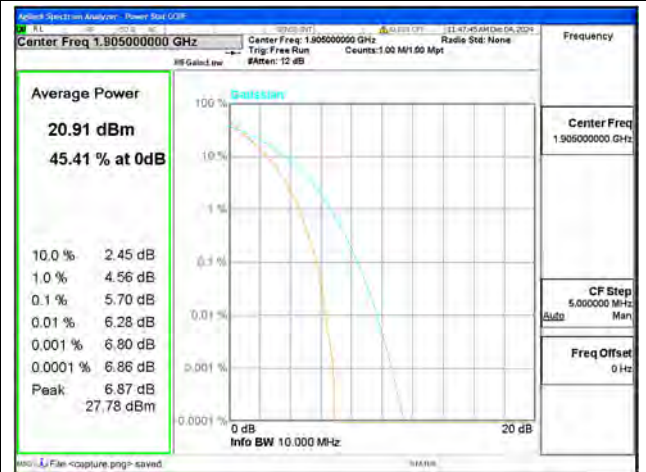
B2 / 10MHz / Mid CH / QPSK



B2 / 10MHz / Mid CH / 16QAM



B2 / 10MHz / Mid CH / 64QAM



B2 / 10MHz / High CH / QPSK



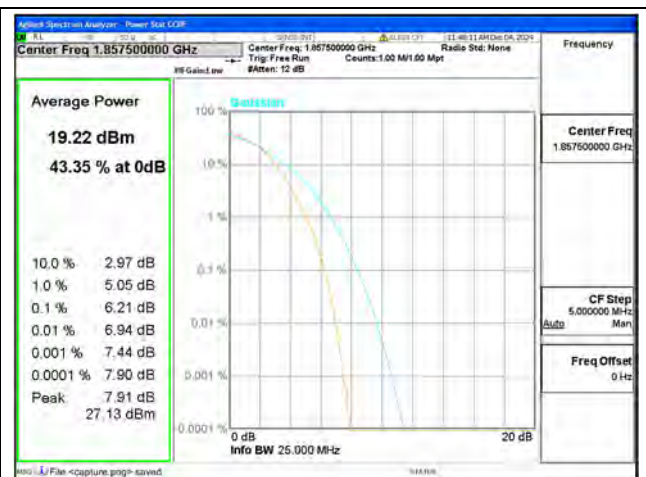
B2 / 10MHz / High CH / 16QAM



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



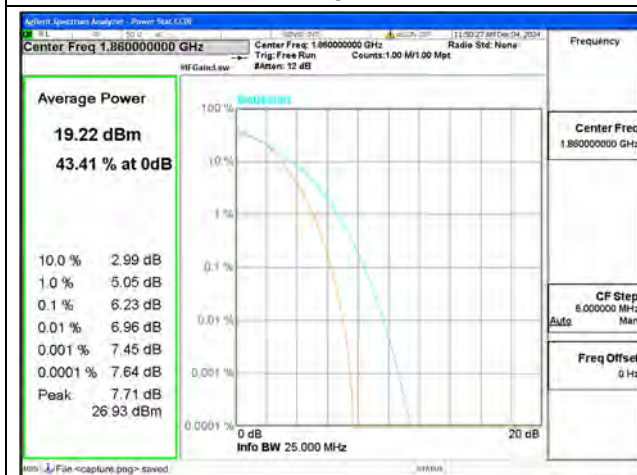
B2 / 15MHz / High CH / 16QAM



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



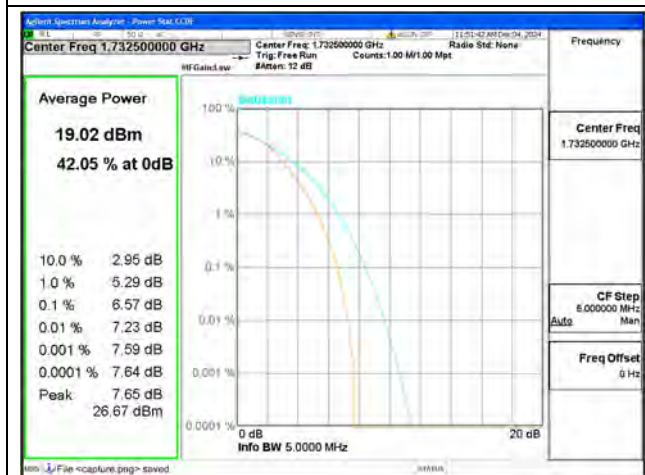
B4 / 1.4MHz / Low CH / 16QAM



B4 / 1.4MHz / Low CH / 64QAM



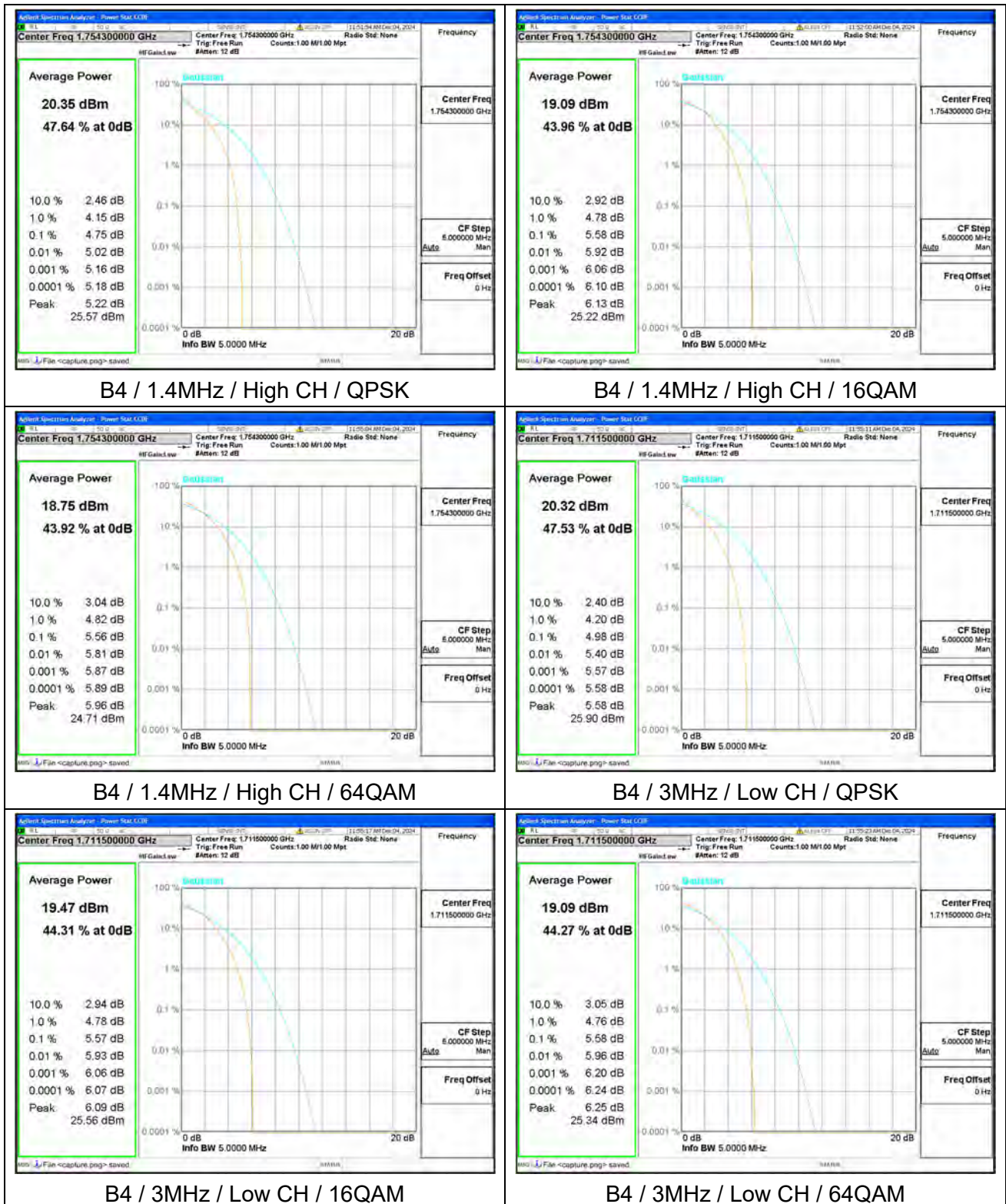
B4 / 1.4MHz / Mid CH / QPSK



B4 / 1.4MHz / Mid CH / 16QAM



B4 / 1.4MHz / Mid CH / 64QAM

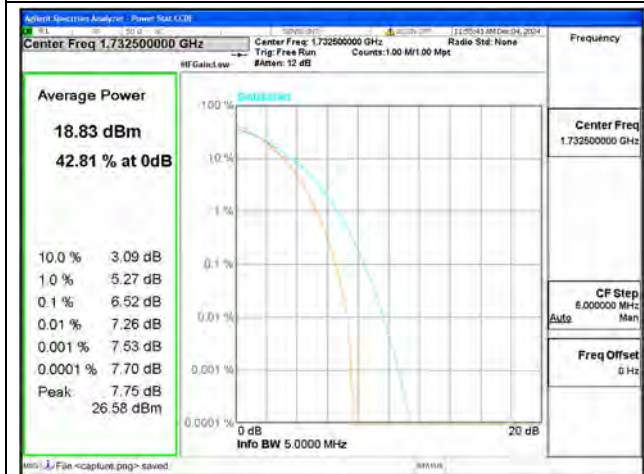




B4 / 3MHz / Mid CH / QPSK



B4 / 3MHz / Mid CH / 16QAM



B4 / 3MHz / Mid CH / 64QAM



B4 / 3MHz / High CH / QPSK



B4 / 3MHz / High CH / 16QAM



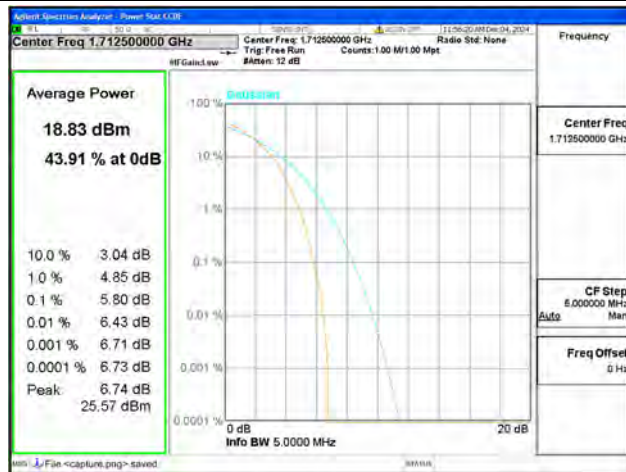
B4 / 3MHz / High CH / 64QAM



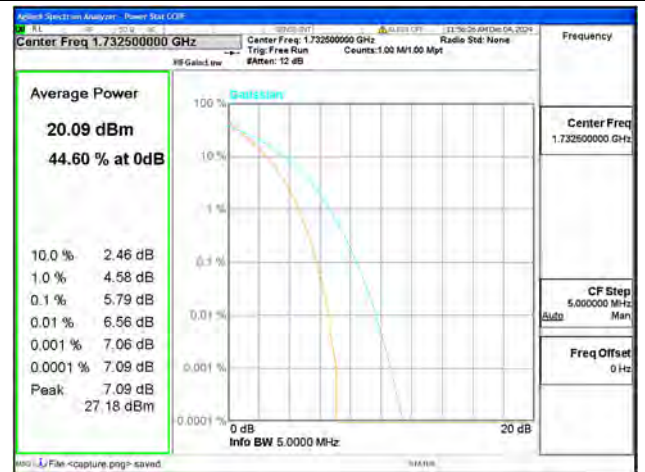
B4 / 5MHz / Low CH / QPSK



B4 / 5MHz / Low CH / 16QAM



B4 / 5MHz / Low CH / 64QAM



B4 / 5MHz / Mid CH / QPSK



B4 / 5MHz / Mid CH / 16QAM



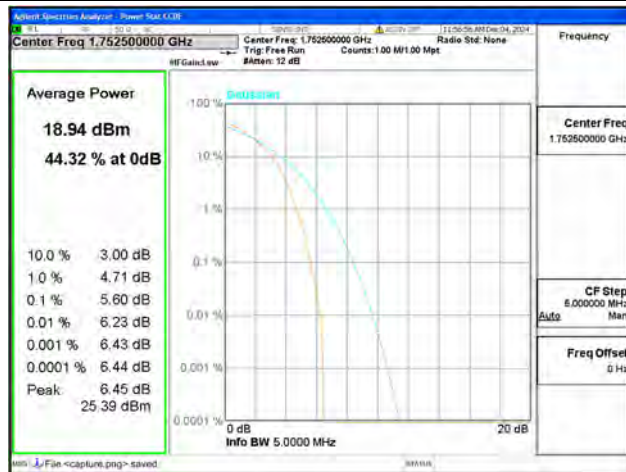
B4 / 5MHz / Mid CH / 64QAM



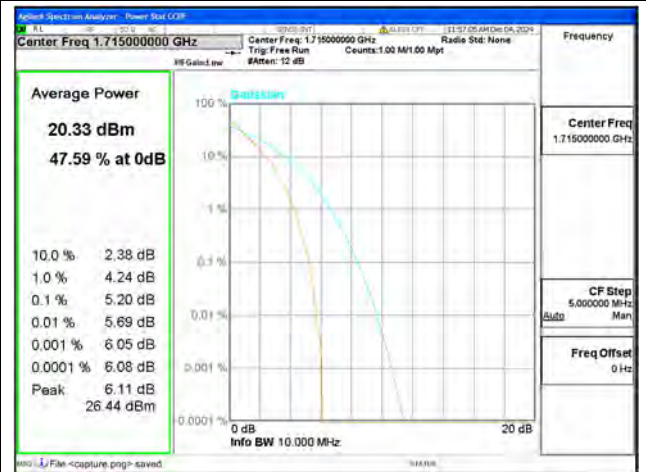
B4 / 5MHz / High CH / QPSK



B4 / 5MHz / High CH / 16QAM



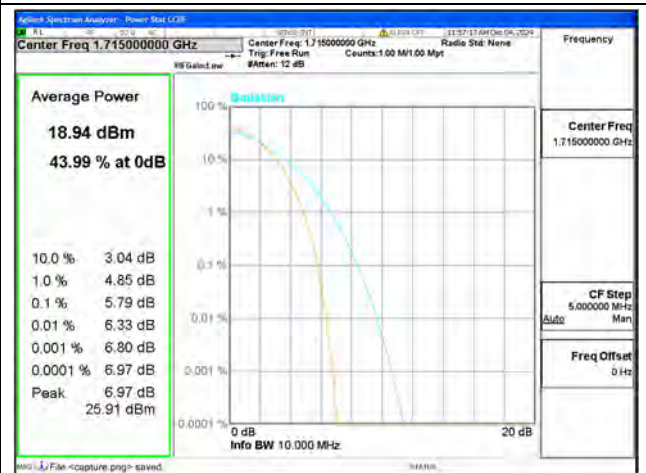
B4 / 5MHz / High CH / 64QAM



B4 / 10MHz / Low CH / QPSK



B4 / 10MHz / Low CH / 16QAM



B4 / 10MHz / Low CH / 64QAM



B4 / 10MHz / Mid CH / QPSK



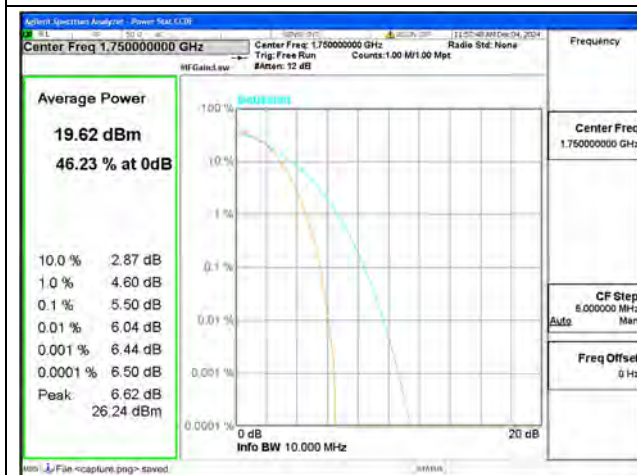
B4 / 10MHz / Mid CH / 16QAM



B4 / 10MHz / Mid CH / 64QAM



B4 / 10MHz / High CH / QPSK



B4 / 10MHz / High CH / 16QAM



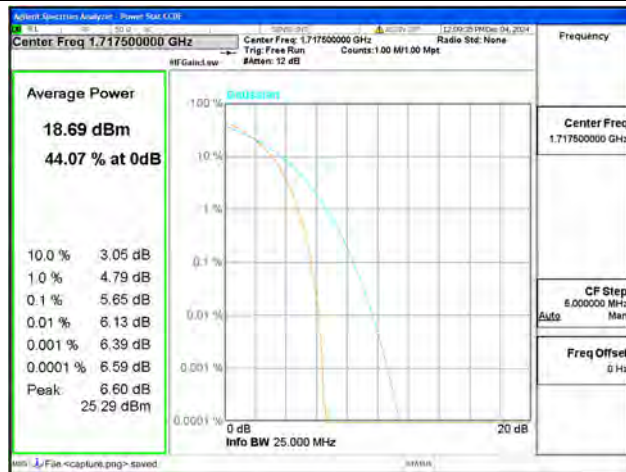
B4 / 10MHz / High CH / 64QAM



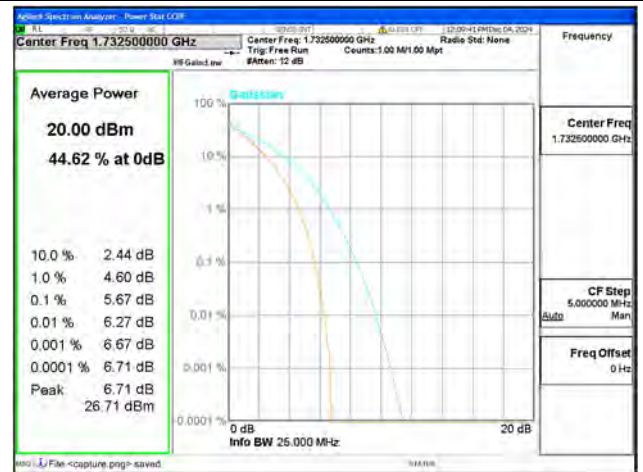
B4 / 15MHz / Low CH / QPSK



B4 / 15MHz / Low CH / 16QAM



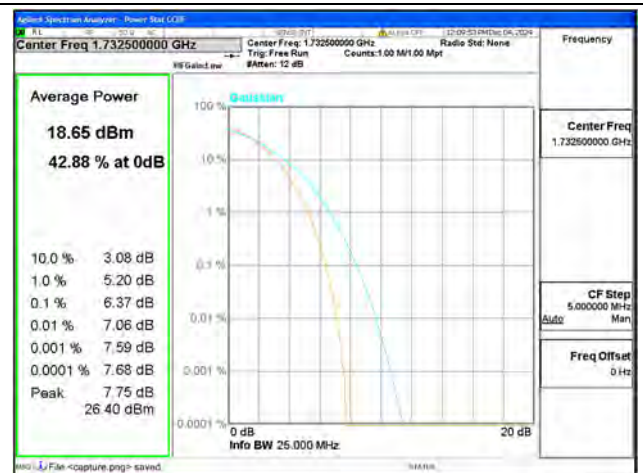
B4 / 15MHz / Low CH / 64QAM



B4 / 15MHz / Mid CH / QPSK



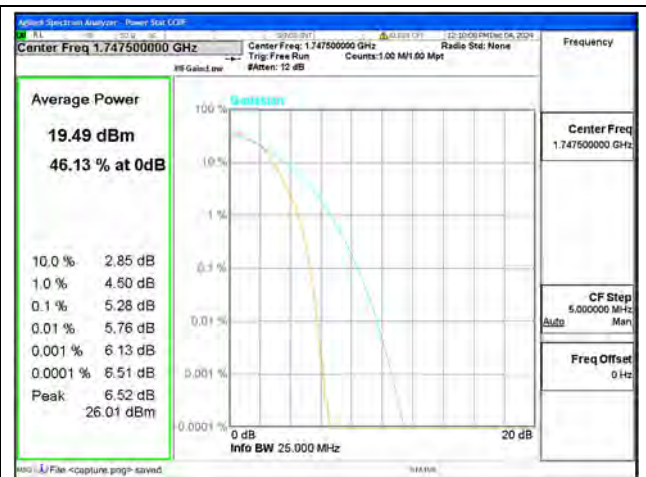
B4 / 15MHz / Mid CH / 16QAM



B4 / 15MHz / Mid CH / 64QAM



B4 / 15MHz / High CH / QPSK



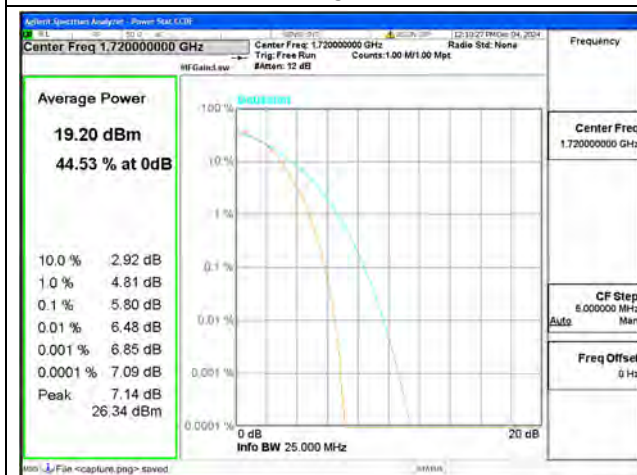
B4 / 15MHz / High CH / 16QAM



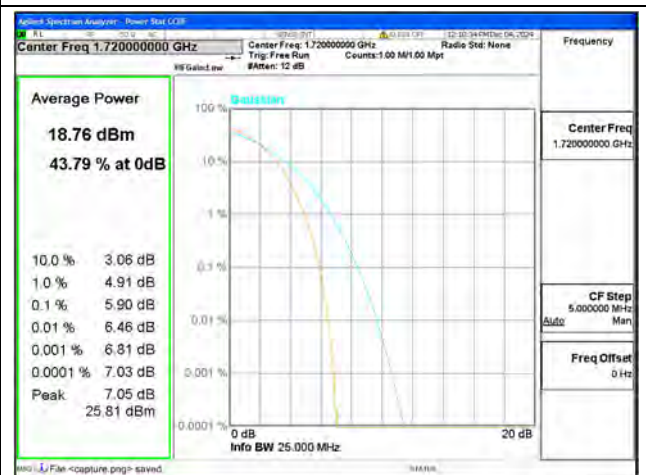
B4 / 15MHz / High CH / 64QAM



B4 / 20MHz / Low CH / QPSK



B4 / 20MHz / Low CH / 16QAM



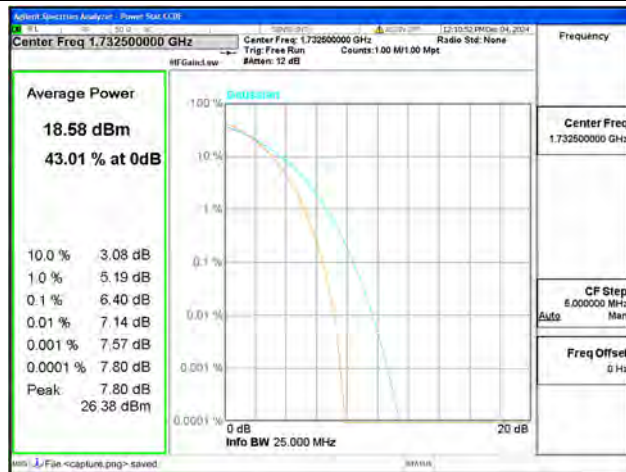
B4 / 20MHz / Low CH / 64QAM



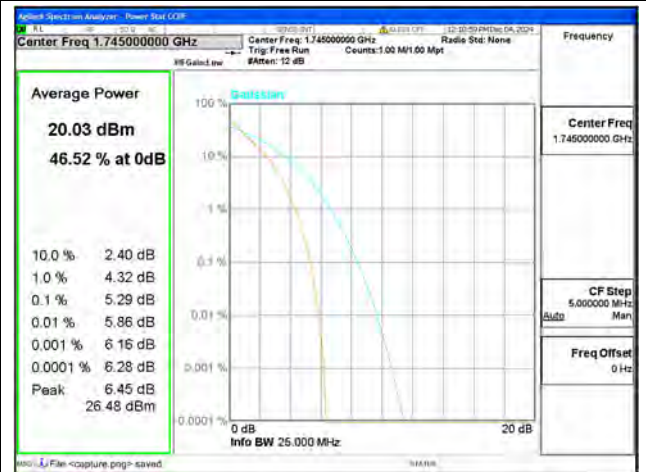
B4 / 20MHz / Mid CH / QPSK



B4 / 20MHz / Mid CH / 16QAM



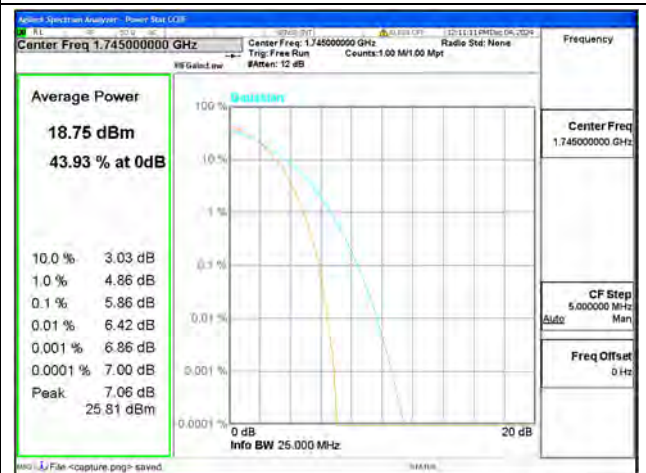
B4 / 20MHz / Mid CH / 64QAM



B4 / 20MHz / High CH / QPSK



B4 / 20MHz / High CH / 16QAM



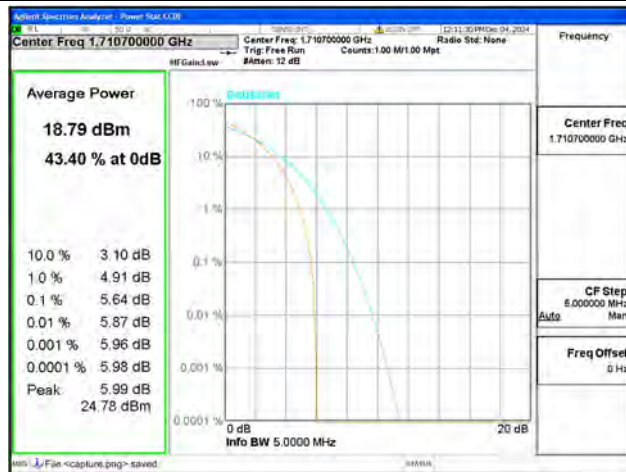
B4 / 20MHz / High CH / 64QAM



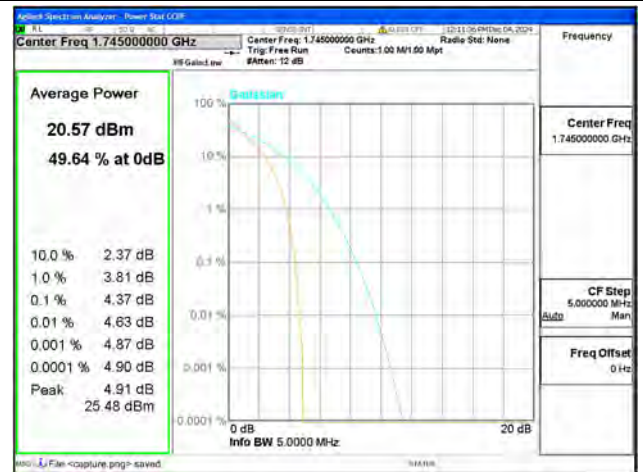
B66 / 1.4MHz / Low CH / QPSK



B66 / 1.4MHz / Low CH / 16QAM



B66 / 1.4MHz / Low CH / 64QAM



B66 / 1.4MHz / Mid CH / QPSK



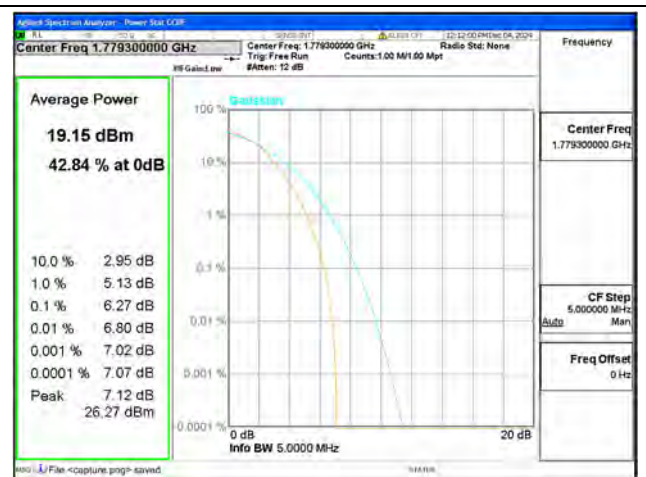
B66 / 1.4MHz / Mid CH / 16QAM



B66 / 1.4MHz / Mid CH / 64QAM



B66 / 1.4MHz / High CH / QPSK



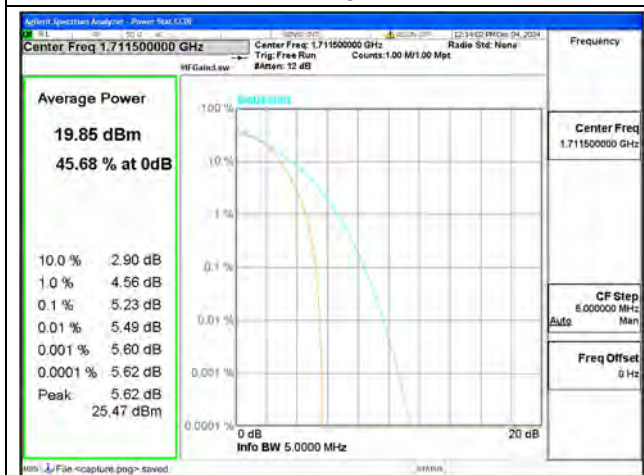
B66 / 1.4MHz / High CH / 16QAM



B66 / 1.4MHz / High CH / 64QAM



B66 / 3MHz / Low CH / QPSK



B66 / 3MHz / Low CH / 16QAM



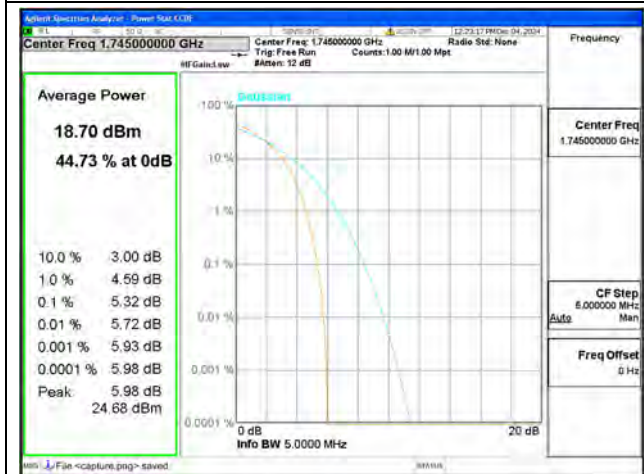
B66 / 3MHz / Low CH / 64QAM



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



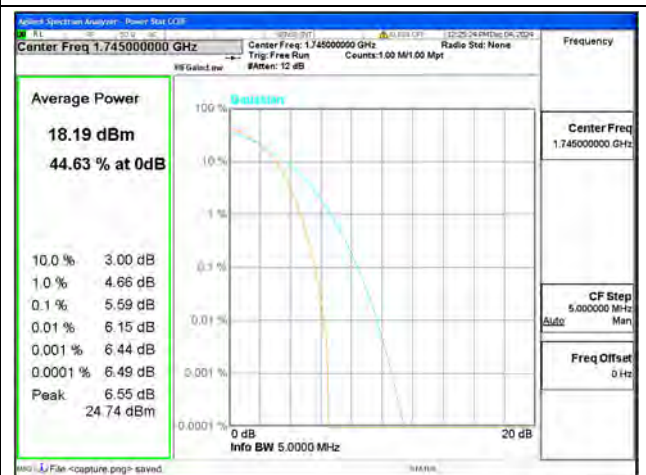
B66 / 5MHz / Low CH / 64QAM



B66 / 5MHz / Mid CH / QPSK



B66 / 5MHz / Mid CH / 16QAM



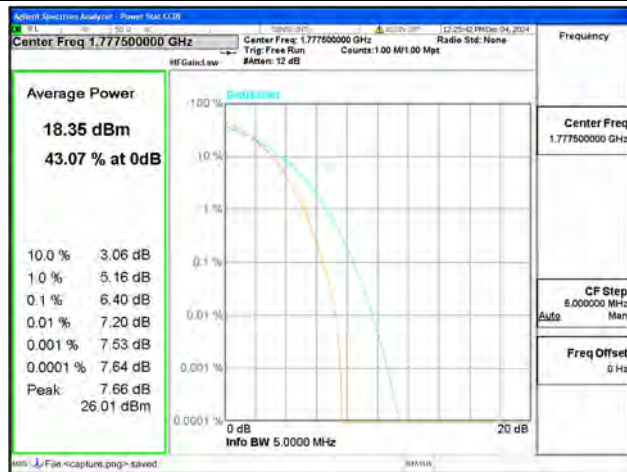
B66 / 5MHz / Mid CH / 64QAM



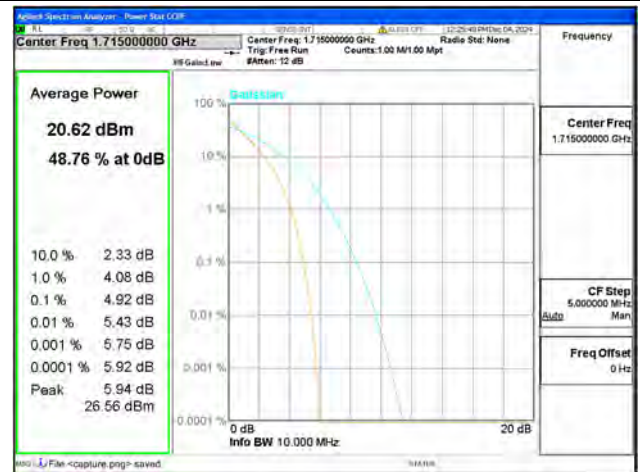
B66 / 5MHz / High CH / QPSK



B66 / 5MHz / High CH / 16QAM



B66 / 5MHz / High CH / 64QAM



B66 / 10MHz / Low CH / QPSK



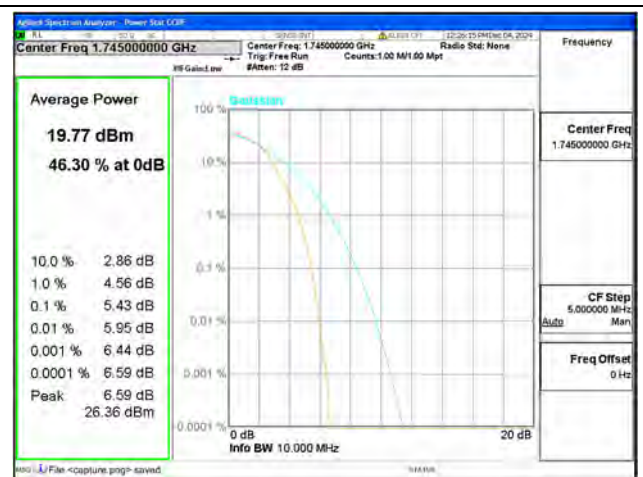
B66 / 10MHz / Low CH / 16QAM



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



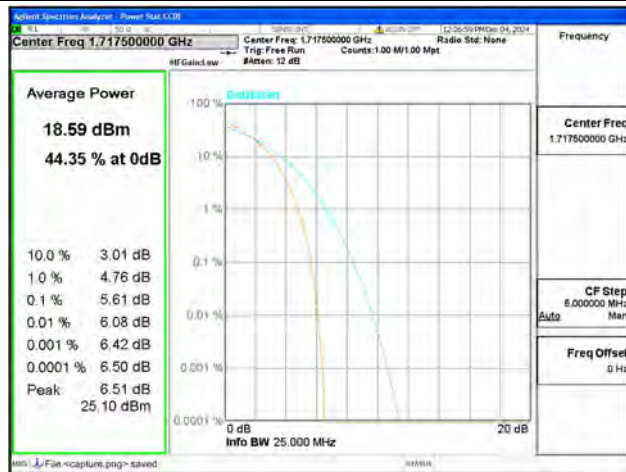
B66 / 10MHz / High CH / 64QAM



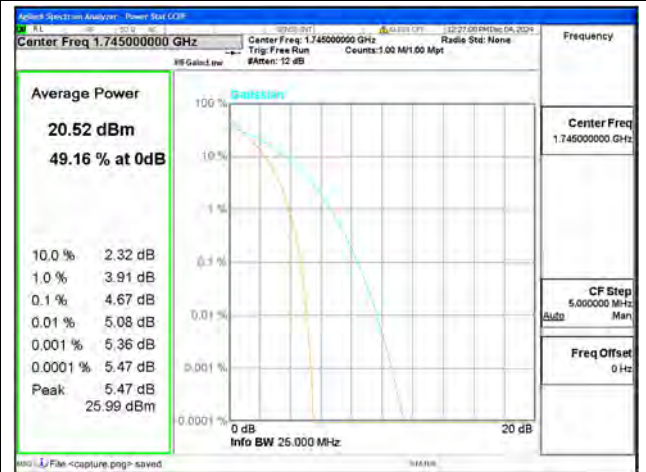
B66 / 15MHz / Low CH / QPSK



B66 / 15MHz / Low CH / 16QAM



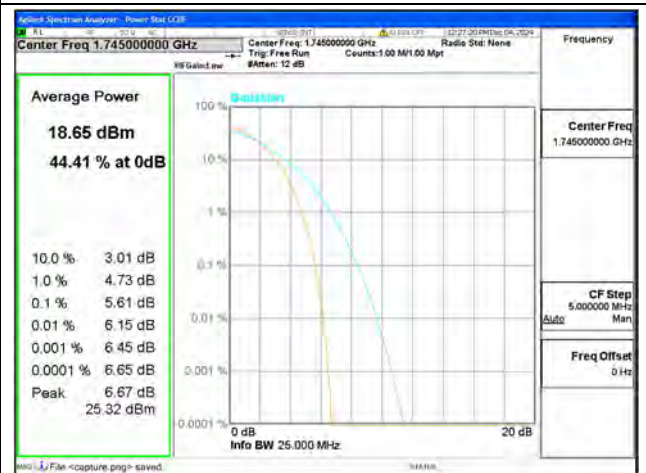
B66 / 15MHz / Low CH / 64QAM



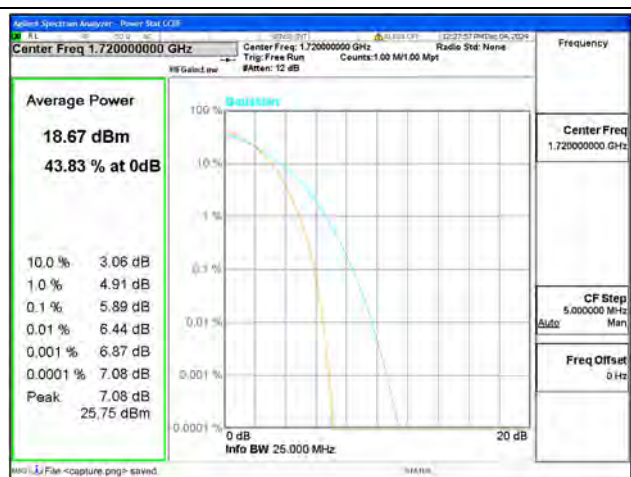
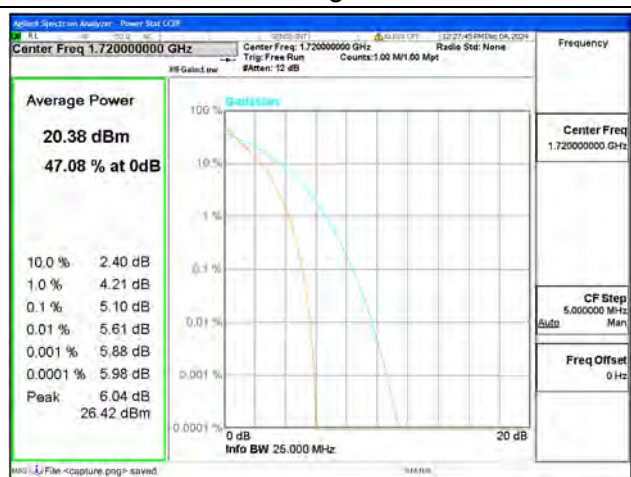
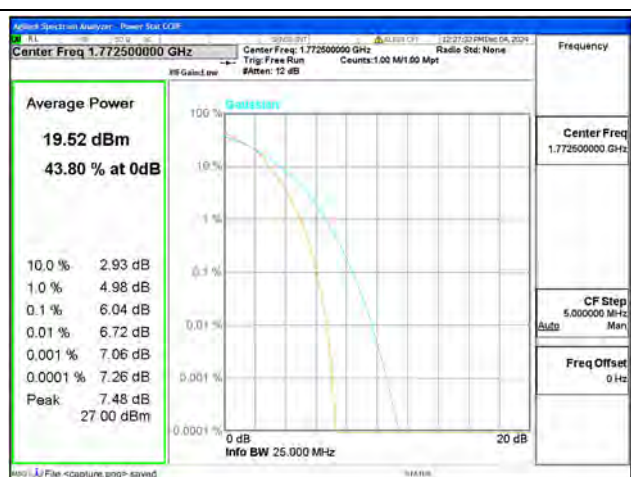
B66 / 15MHz / Mid CH / QPSK

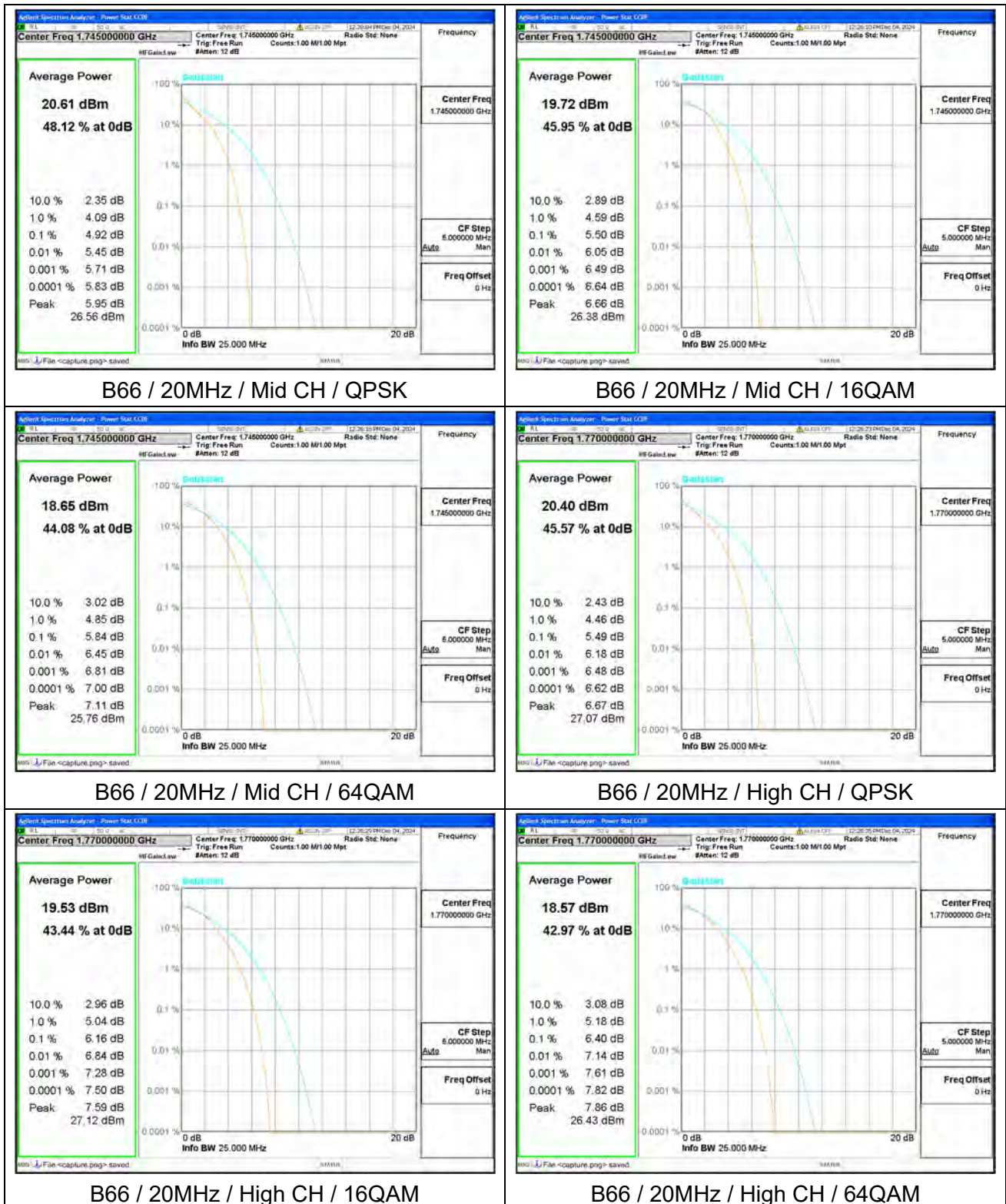


B66 / 15MHz / Mid CH / 16QAM



B66 / 15MHz / Mid CH / 64QAM





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.

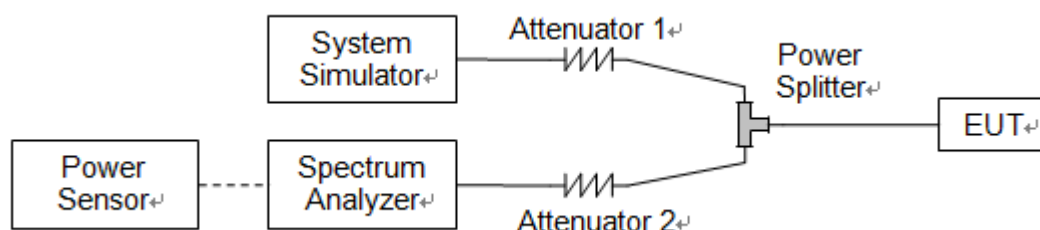
Additional requirement for LTE Band 7/38:

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.

Additional requirement for LTE Band 40:

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $70 + 10 \log(P)$ dB. This calculated to be -40dBm.

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.

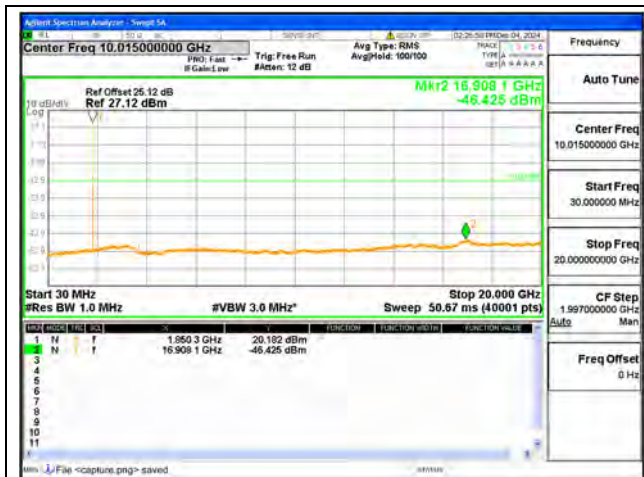
2.5.3. Test Procedure

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



2.5.4. Test Result





B2 / 5MHz / Low CH / QPSK



B2 / 5MHz / Mid CH / QPSK



B2 / 5MHz / High CH / QPSK



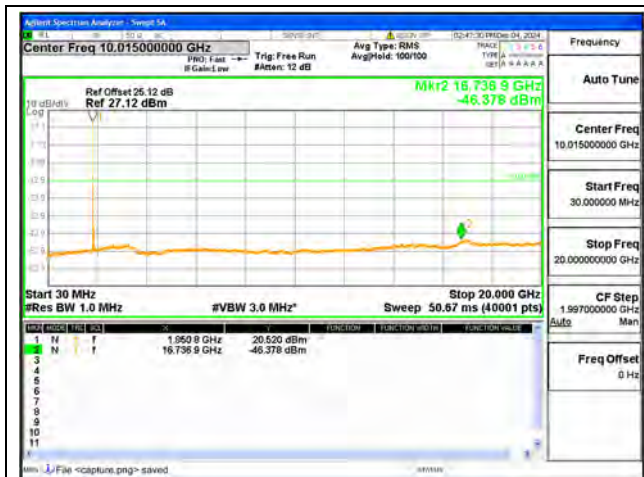
B2 / 10MHz / Low CH / QPSK



B2 / 10MHz / Mid CH / QPSK



B2 / 10MHz / High CH / QPSK



B2 / 15MHz / Low CH / QPSK



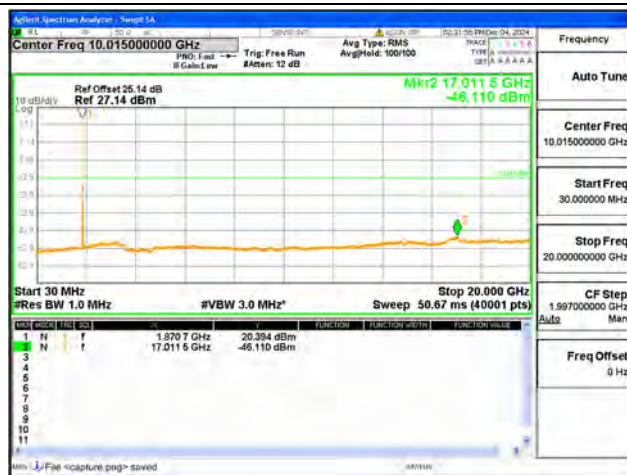
B2 / 15MHz / Mid CH / QPSK



B2 / 15MHz / High CH / QPSK



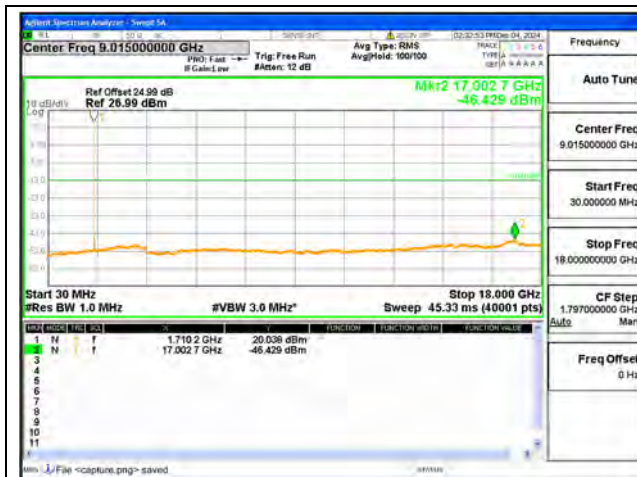
B2 / 20MHz / Low CH / QPSK



B2 / 20MHz / Mid CH / QPSK



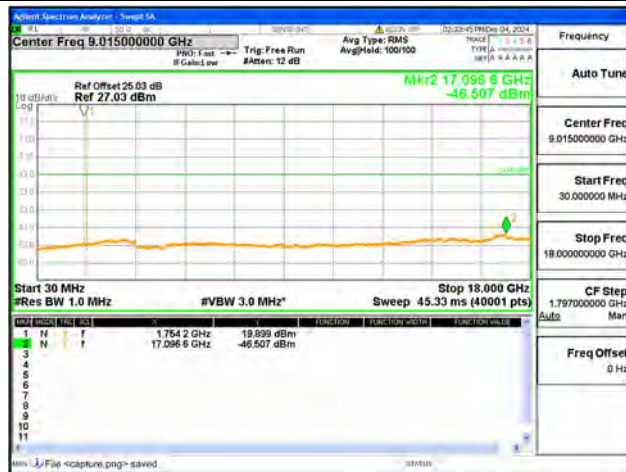
B2 / 20MHz / High CH / QPSK



B4 / 1.4MHz / Low CH / QPSK



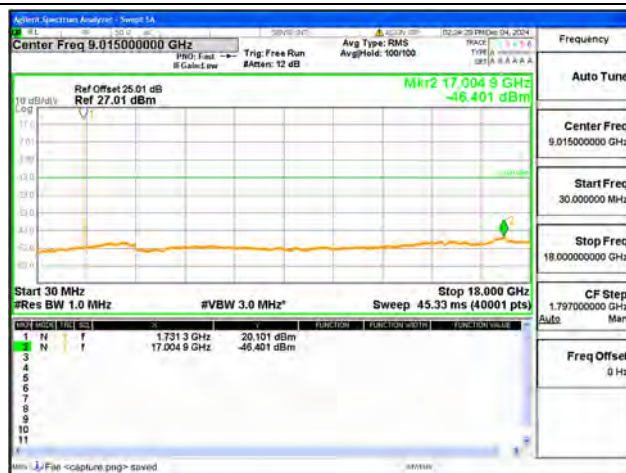
B4 / 1.4MHz / Mid CH / QPSK



B4 / 1.4MHz / High CH / QPSK



B4 / 3MHz / Low CH / QPSK



B4 / 3MHz / Mid CH / QPSK



B4 / 3MHz / High CH / QPSK





B4 / 15MHz / Low CH / QPSK



B4 / 15MHz / Mid CH / QPSK



B4 / 15MHz / High CH / QPSK



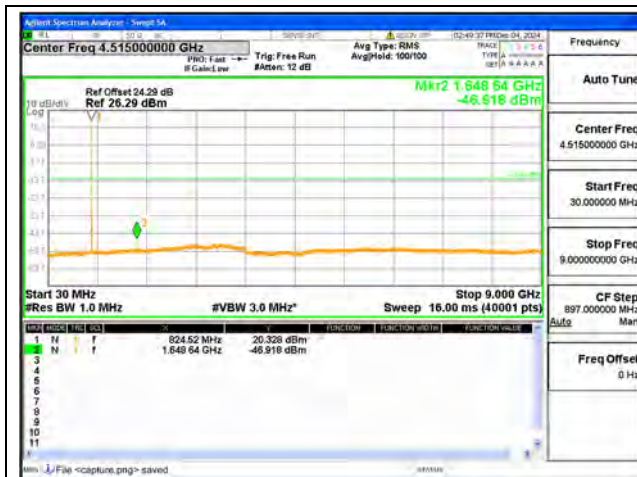
B4 / 20MHz / Low CH / QPSK



B4 / 20MHz / Mid CH / QPSK



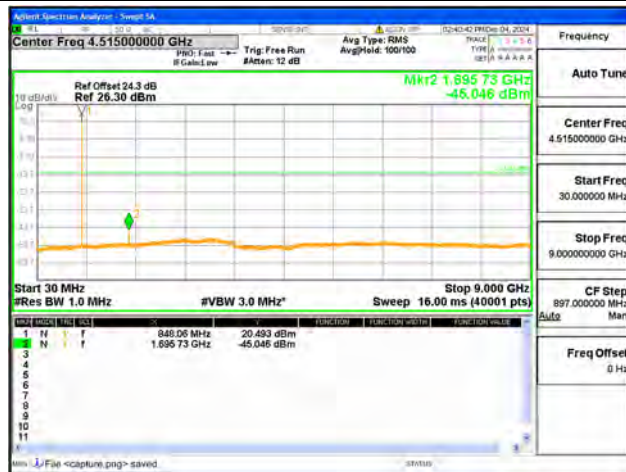
B4 / 20MHz / High CH / QPSK



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



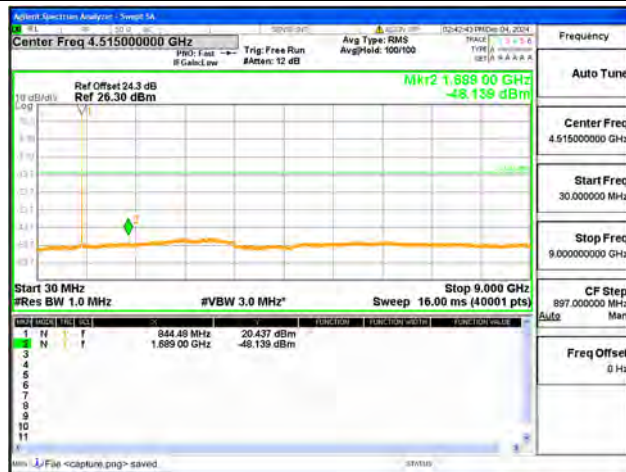
B5 / 3MHz / High CH / QPSK



B5 / 5MHz / Low CH / QPSK



B5 / 5MHz / Mid CH / QPSK



B5 / 5MHz / High CH / QPSK



B5 / 10MHz / Low CH / QPSK



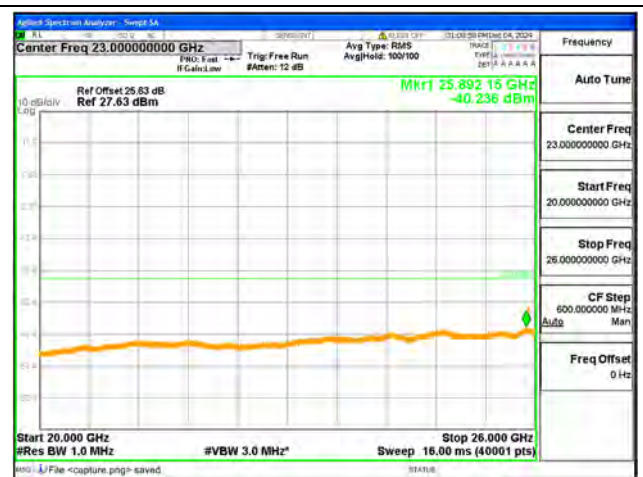
B5 / 10MHz / Mid CH / QPSK



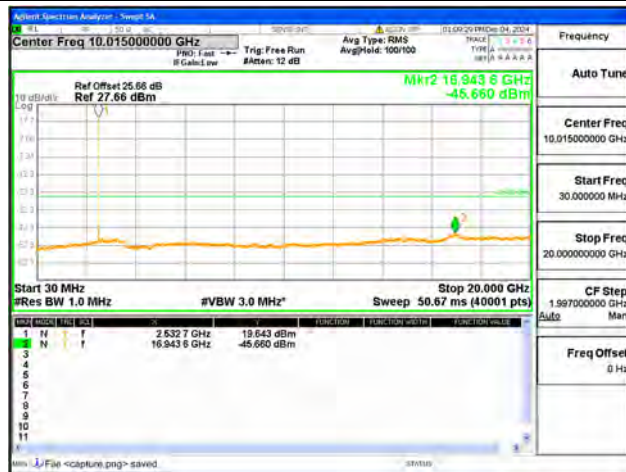
B5 / 10MHz / High CH / QPSK



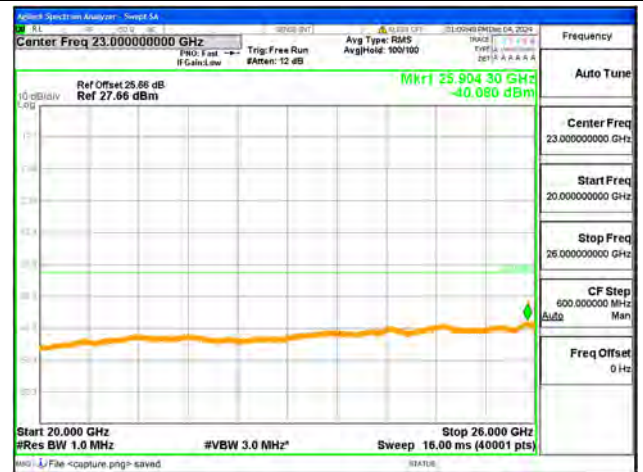
B7-30M-20G / 5MHz / Low CH / QPSK



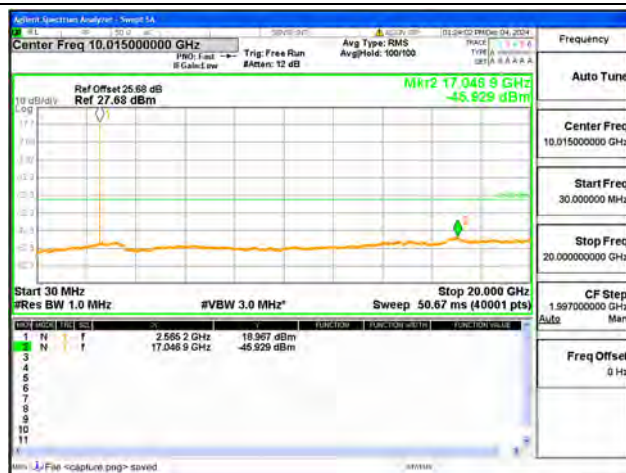
B7-20G-26G / 5MHz / Low CH / QPSK



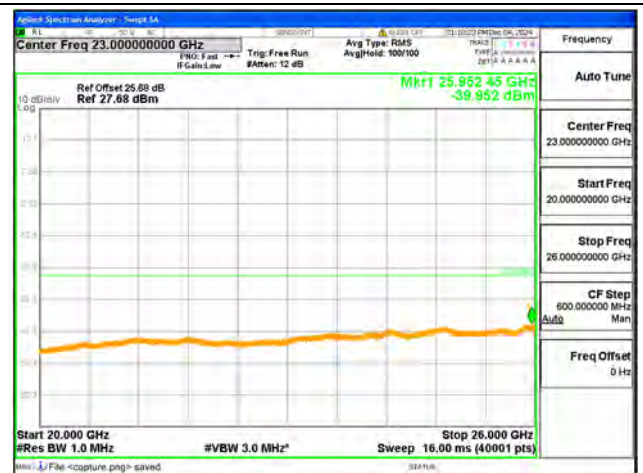
B7-30M-20G / 5MHz / Mid CH / QPSK



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



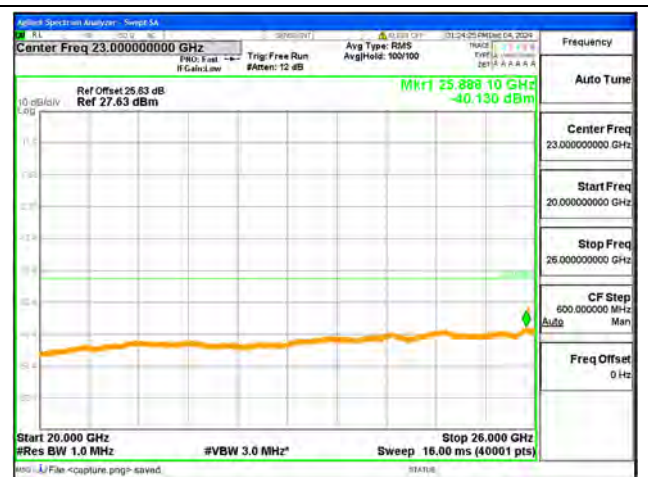
B7-30M-20G / 5MHz / High CH / QPSK



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



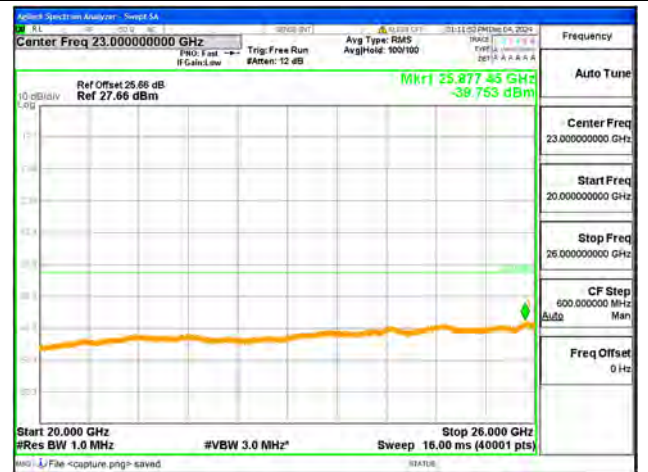
B7-30M-20G / 10MHz / Low CH / QPSK



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



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



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



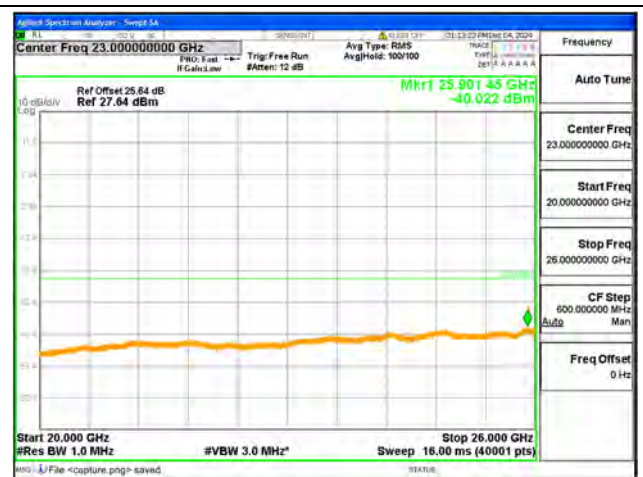
B7-30M-20G / 10MHz / High CH / QPSK



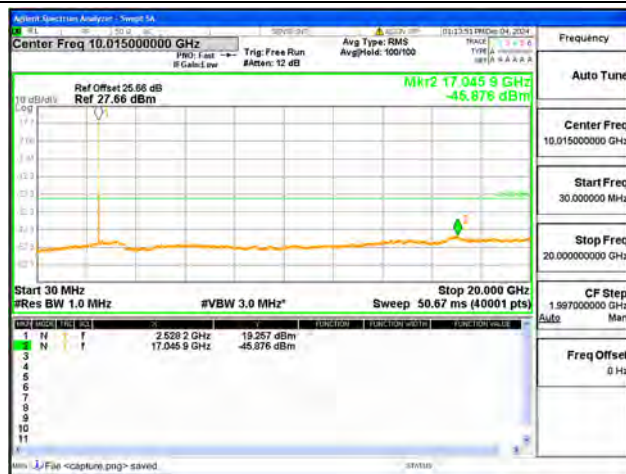
B7-20G-26G / 10MHz / High CH / QPSK



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



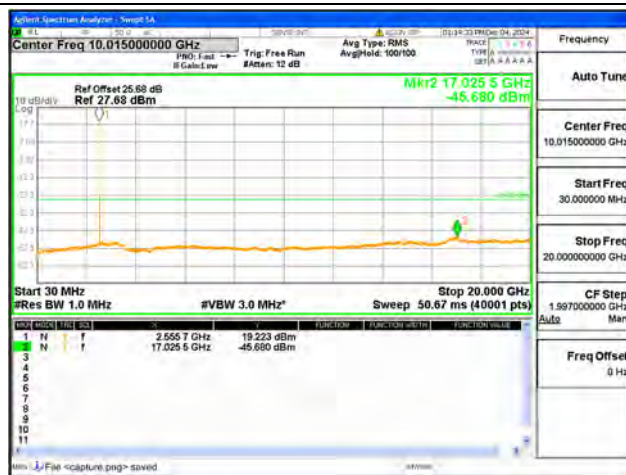
B7-20G-26G / 15MHz / Low CH / QPSK



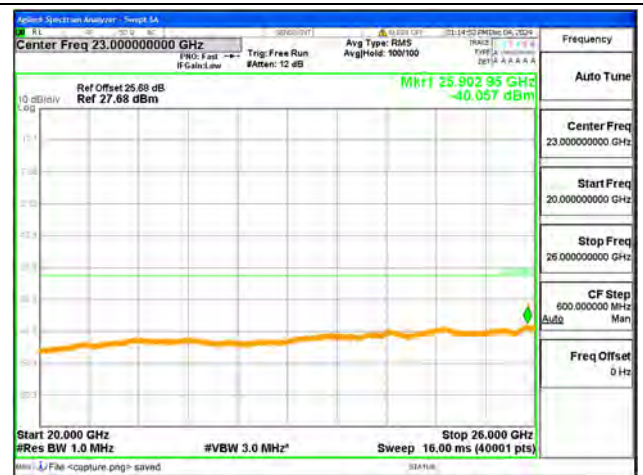
B7-30M-20G / 15MHz / Mid CH / QPSK



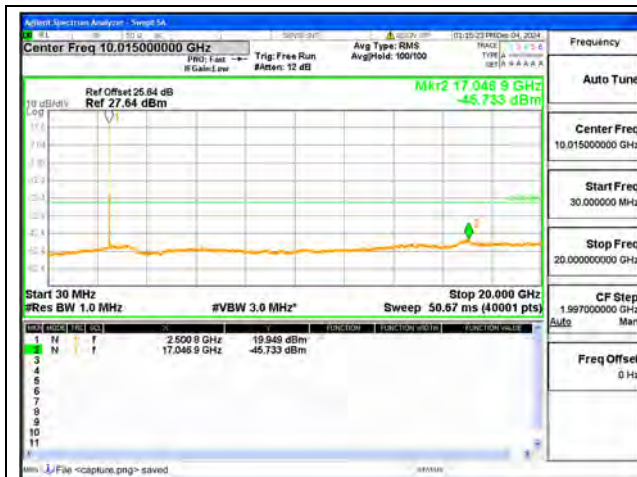
B7-20G-26G / 15MHz / Mid CH / QPSK



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



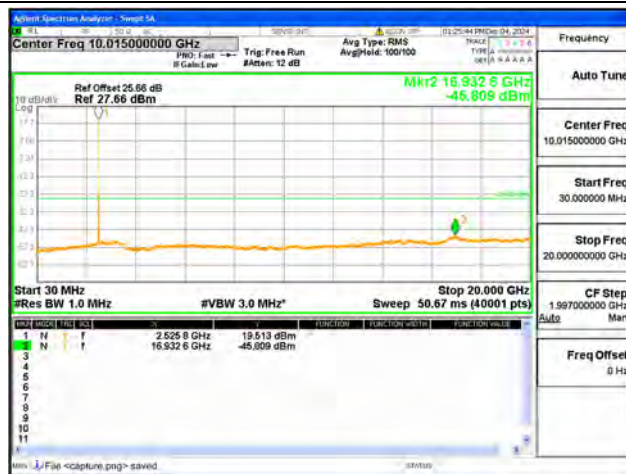
B7-20G-26G / 15MHz / High CH / QPSK



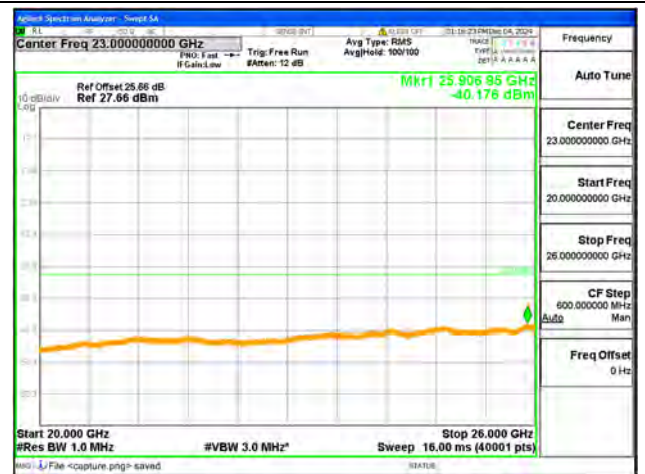
B7-30M-20G / 20MHz / Low CH / QPSK



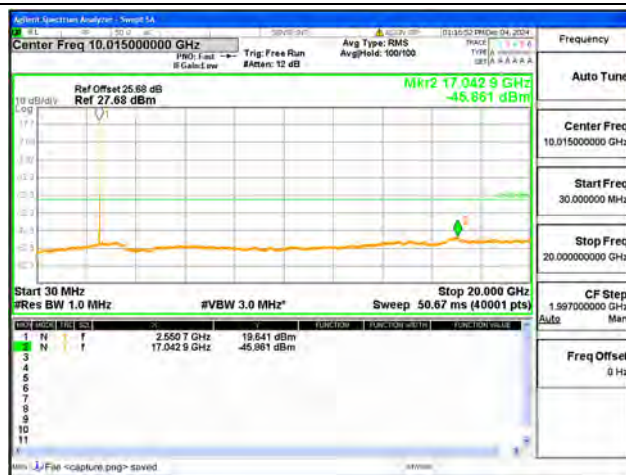
B7-20G-26G / 20MHz / Low CH / QPSK



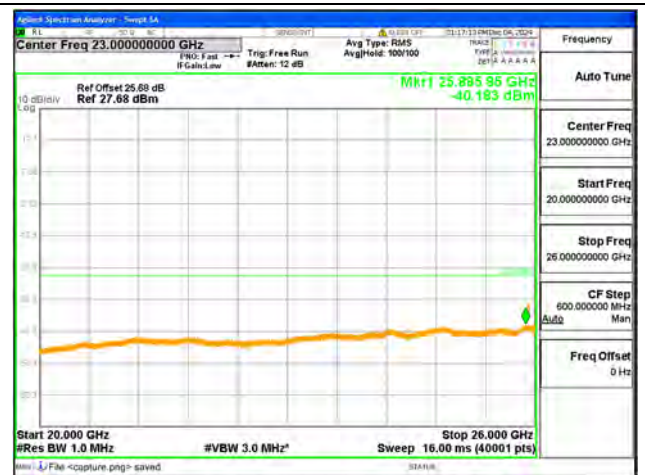
B7-30M-20G / 20MHz / Mid CH / QPSK



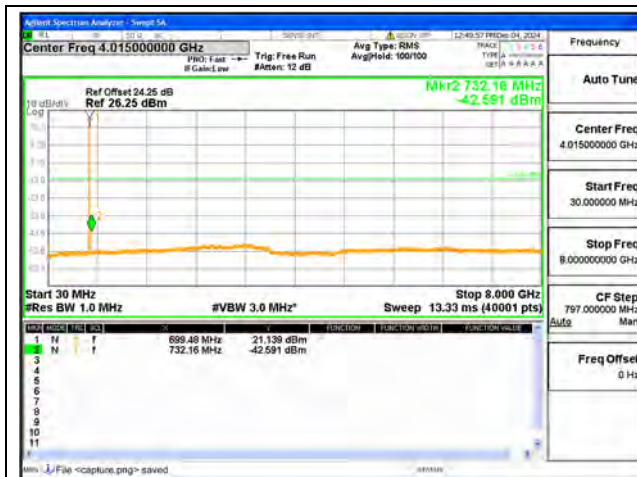
B7-20G-26G / 20MHz / Mid CH / QPSK



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



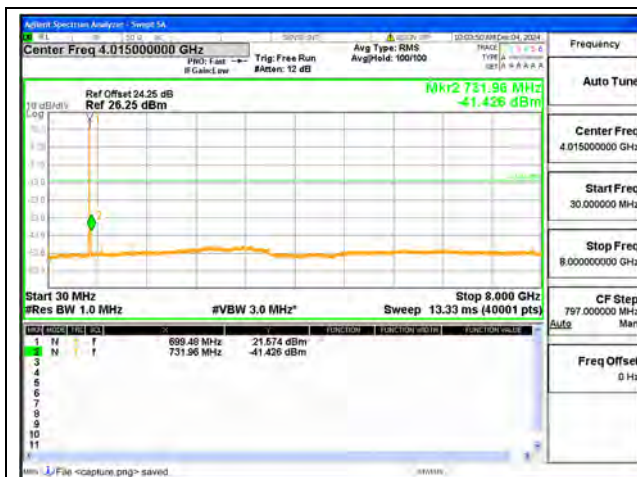
B12 / 3MHz / Low CH / QPSK



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



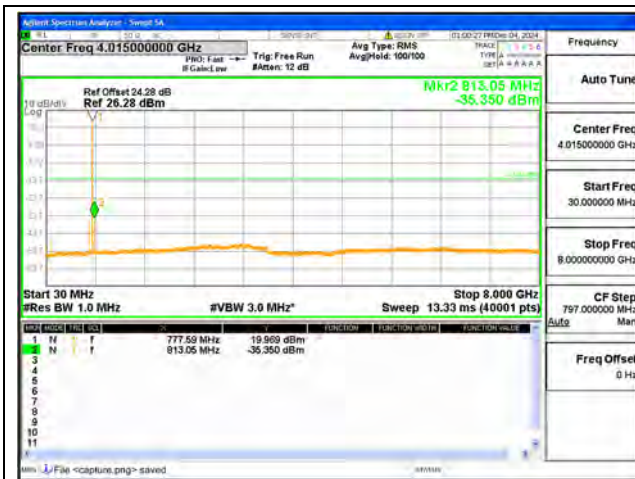
B12 / 10MHz / Low CH / QPSK



B12 / 10MHz / Mid CH / QPSK



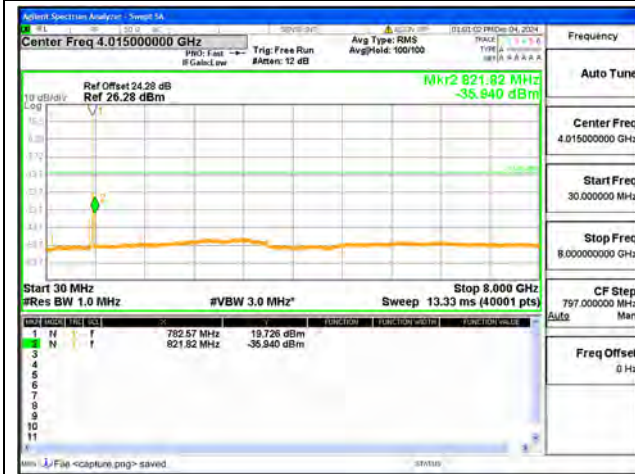
B12 / 10MHz / High CH / QPSK



B13 / 5MHz / Low CH / QPSK



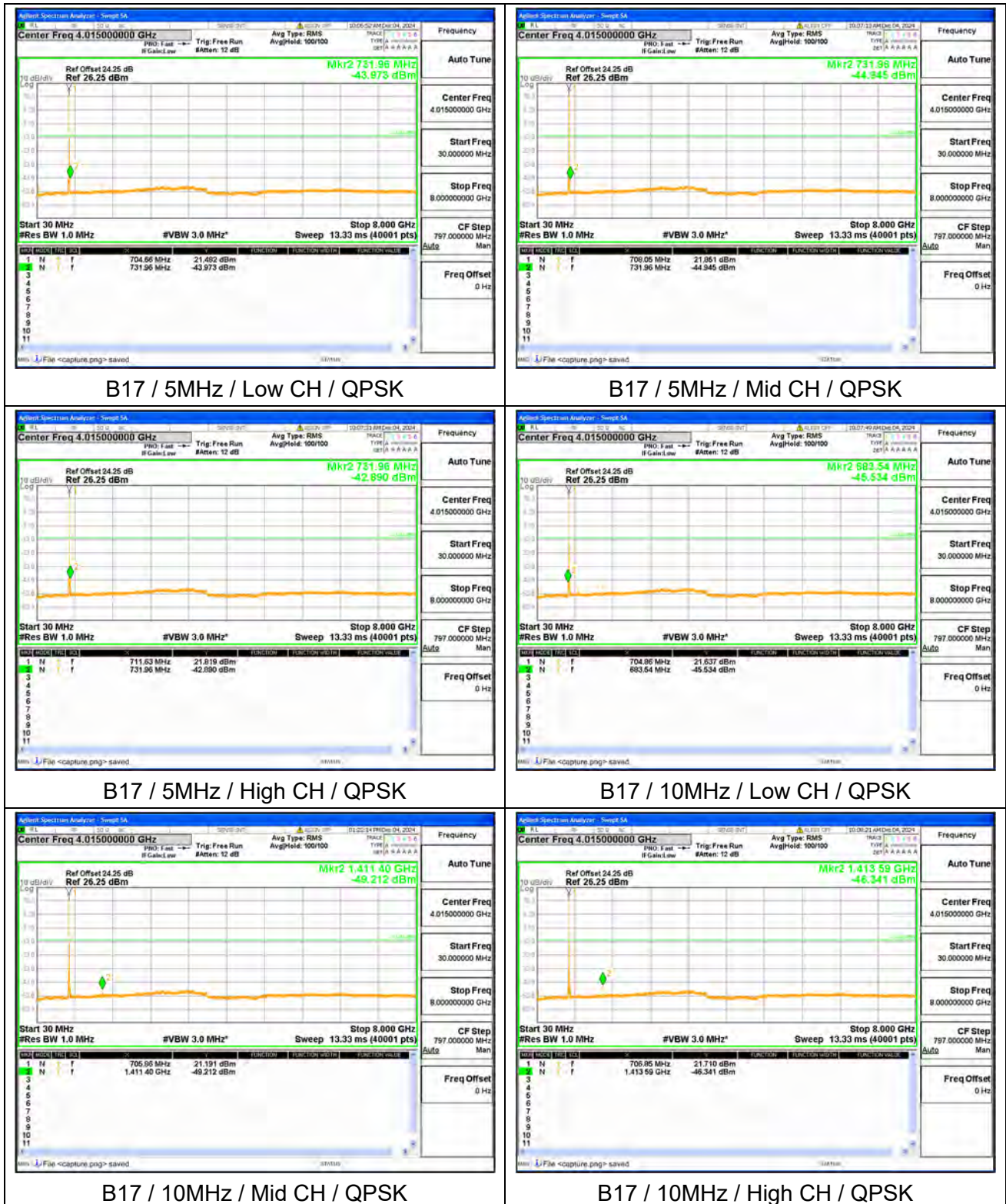
B13 / 5MHz / Mid CH / QPSK

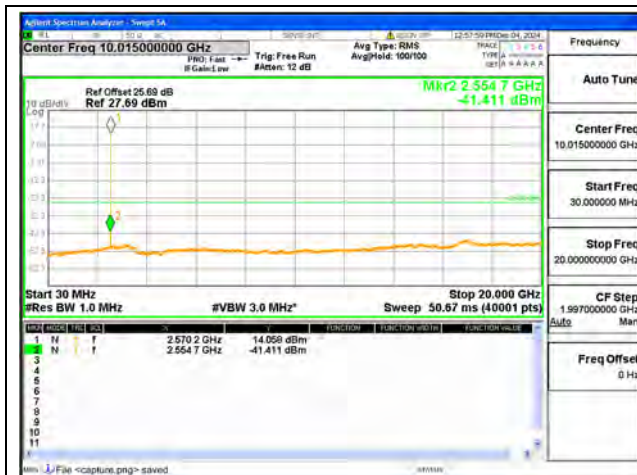


B13 / 5MHz / High CH / QPSK



B13 / 10MHz / Mid CH / QPSK





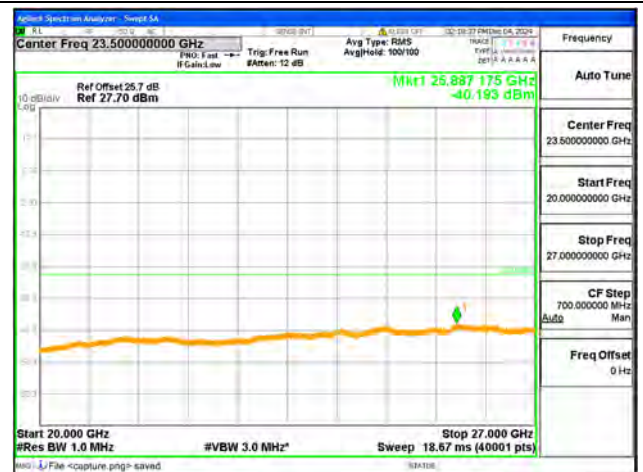
B38-30M-20G / 5MHz / Low CH / QPSK



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



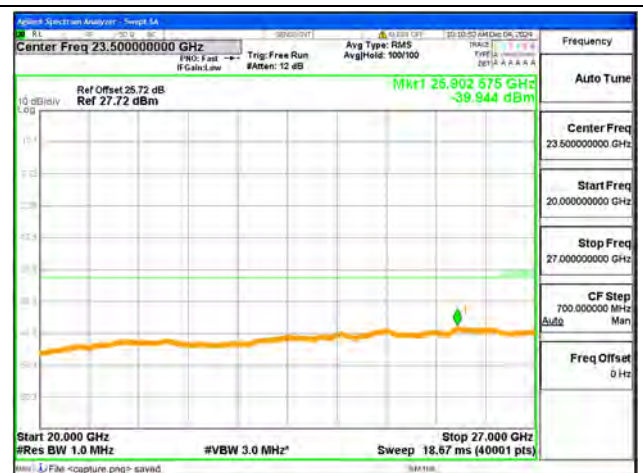
B38-30M-20G / 5MHz / Mid CH / QPSK



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



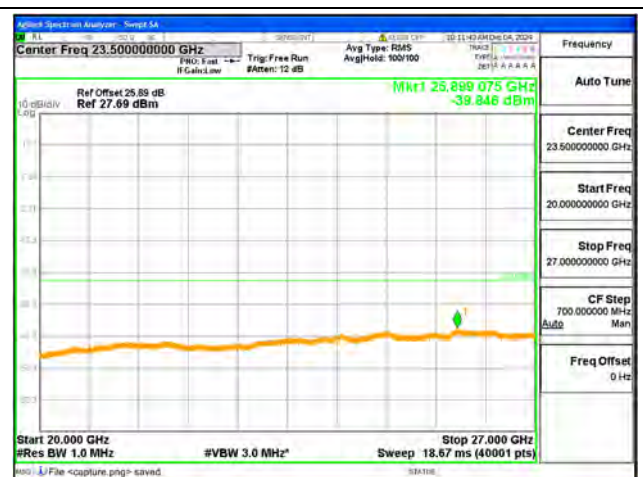
B38-30M-20G / 5MHz / High CH / QPSK



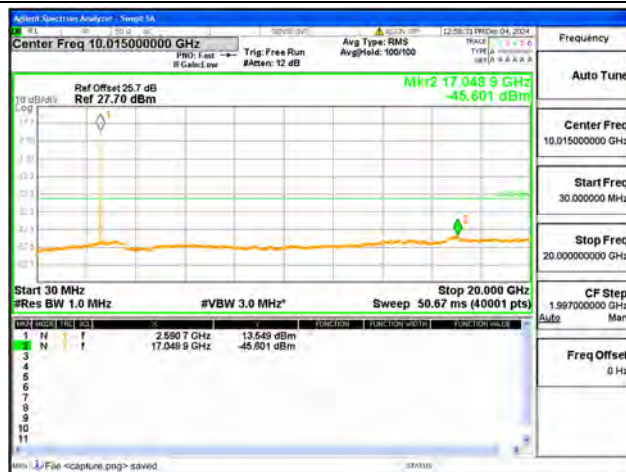
B38-20G-27G / 5MHz / High CH / QPSK



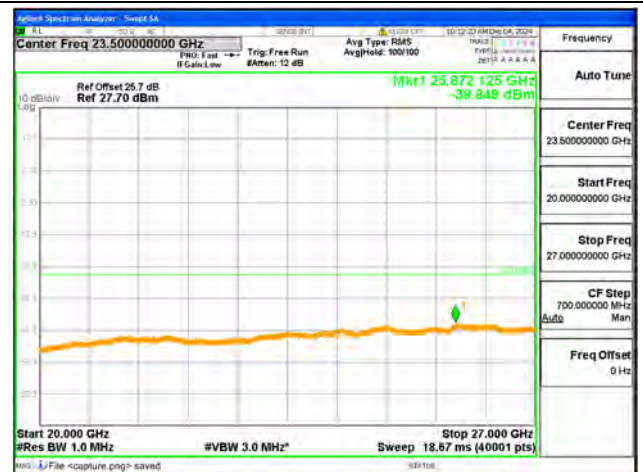
B38-30M-20G / 10MHz / Low CH / QPSK



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



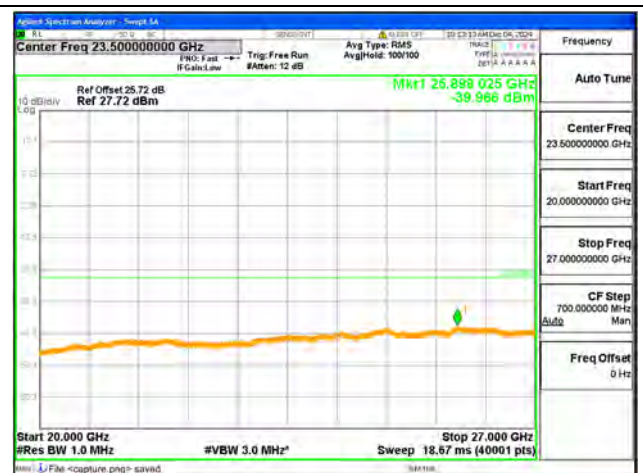
B38-30M-20G / 10MHz / Mid CH / QPSK



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



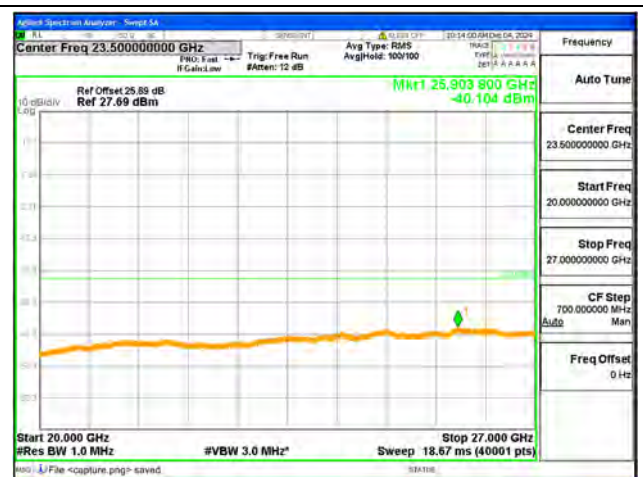
B38-30M-20G / 10MHz / High CH / QPSK



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



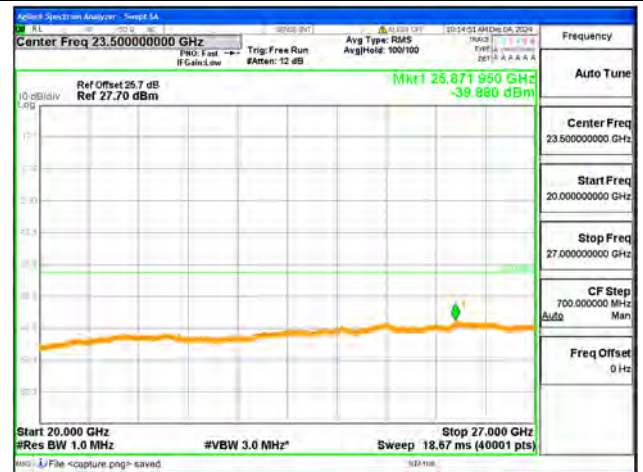
B38-30M-20G / 15MHz / Low CH / QPSK



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



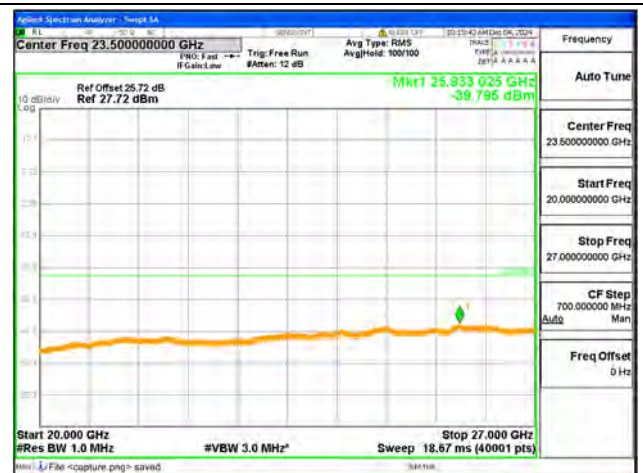
B38-30M-20G / 15MHz / Mid CH / QPSK



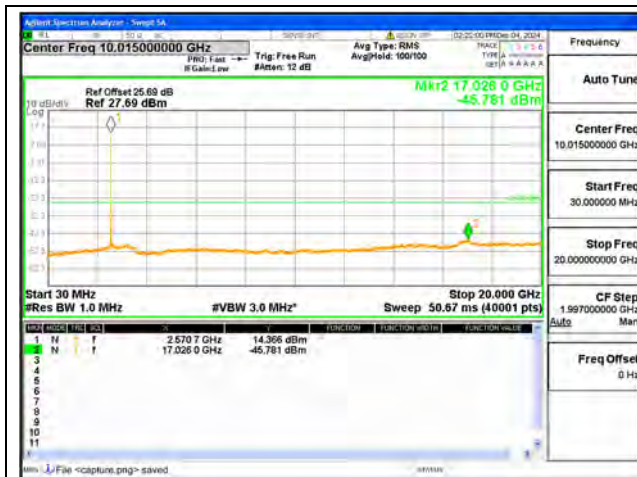
B38-20G-27G / 15MHz / Mid CH / QPSK



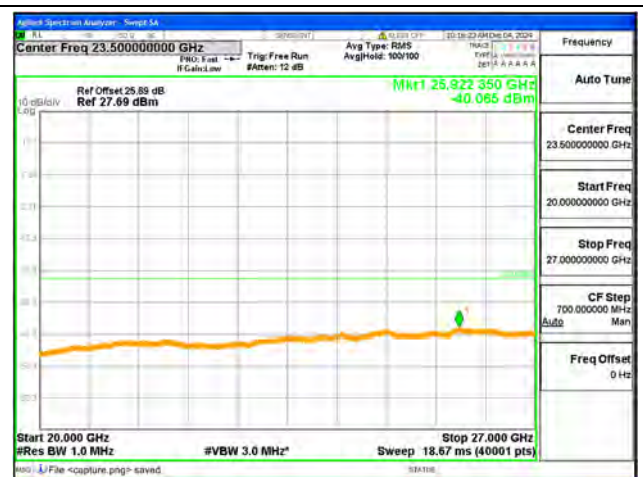
B38-30M-20G / 15MHz / High CH / QPSK



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



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



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



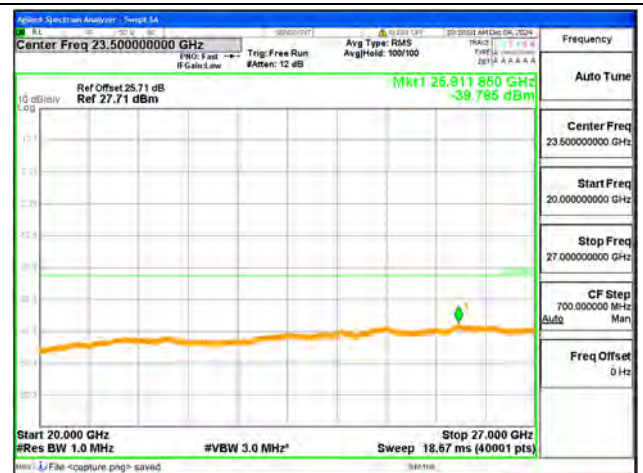
B38-30M-20G / 20MHz / Mid CH / QPSK



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



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



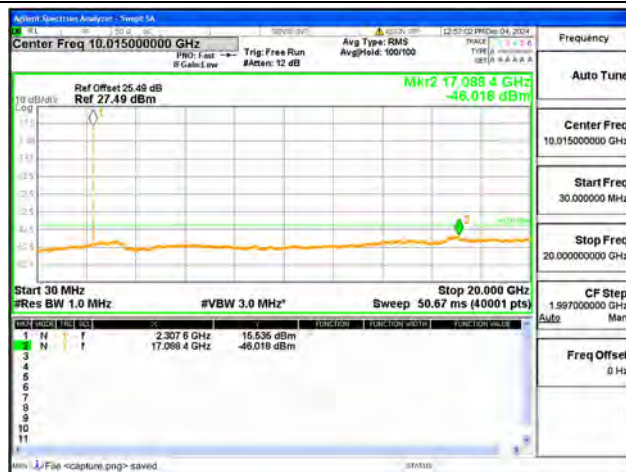
B38-20G-27G / 20MHz / High CH / QPSK



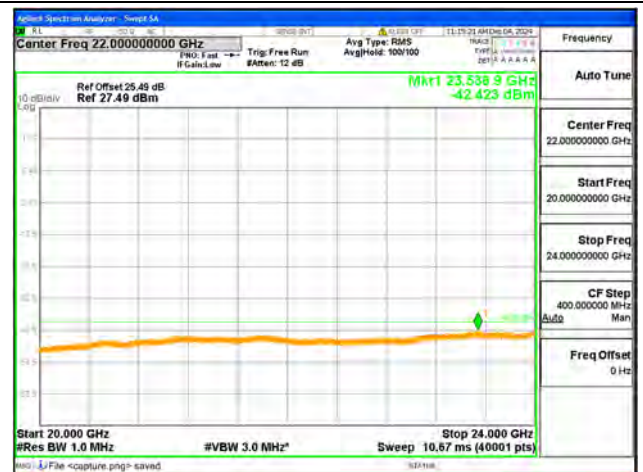
B40-1-30M-20G / 5MHz / Low CH / QPSK



B40-1-20G-24G / 5MHz / Low CH / QPSK



B40-1-30M-20G / 5MHz / Mid CH / QPSK



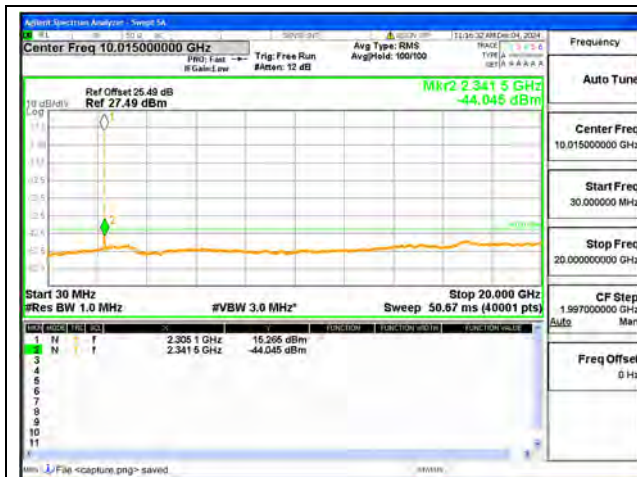
B40-1-20G-24G / 5MHz / Mid CH / QPSK



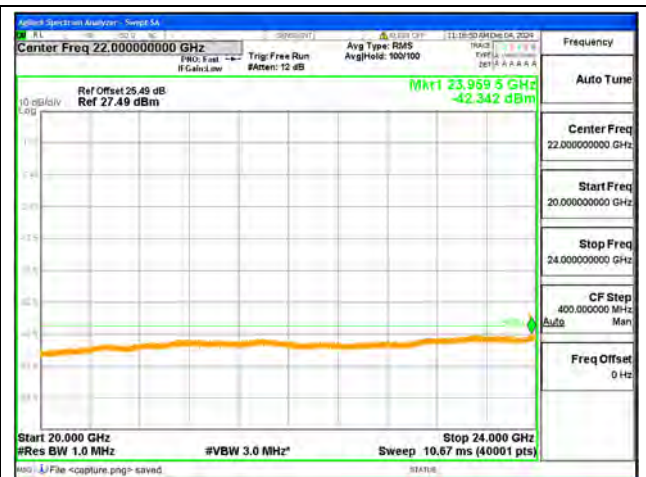
B40-1-30M-20G / 5MHz / High CH / QPSK



B40-1-20G-24G / 5MHz / High CH / QPSK



B40-1-30M-20G / 10MHz / Mid CH / QPSK



B40-1-20G-24G / 10MHz / Mid CH / QPSK



B40-2-30M-20G / 5MHz / Low CH / QPSK



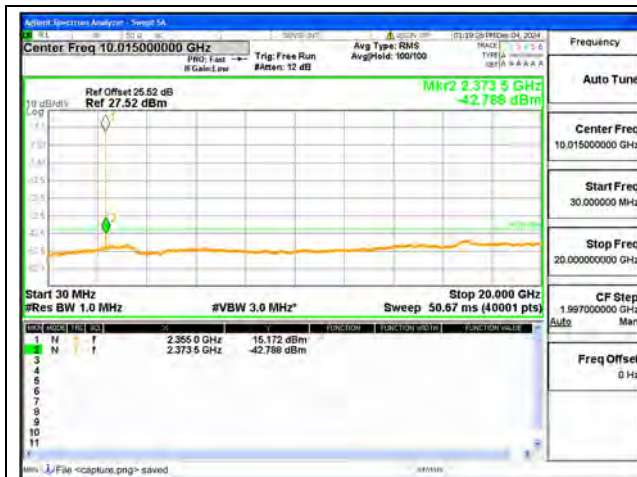
B40-2-20G-24G / 5MHz / Low CH / QPSK



B40-2-30M-20G / 5MHz / Mid CH / QPSK



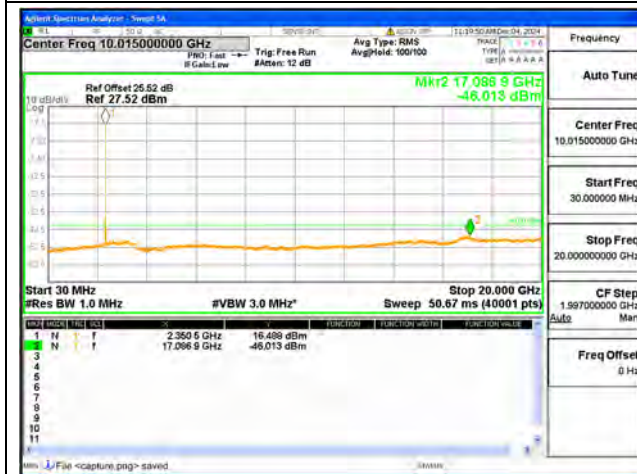
B40-2-20G-24G / 5MHz / Mid CH / QPSK



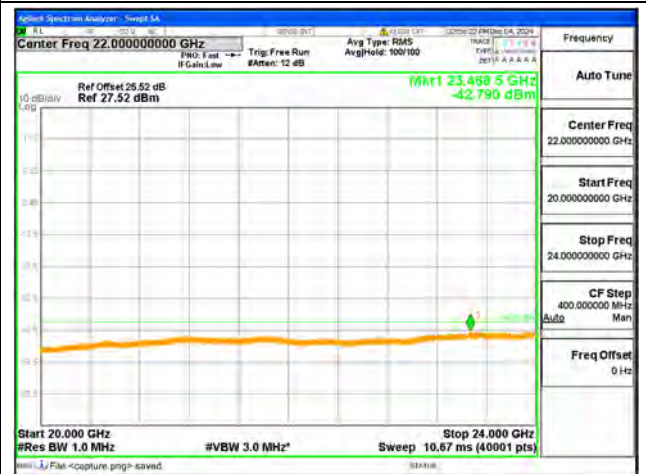
B40-2-30M-20G / 5MHz / High CH / QPSK



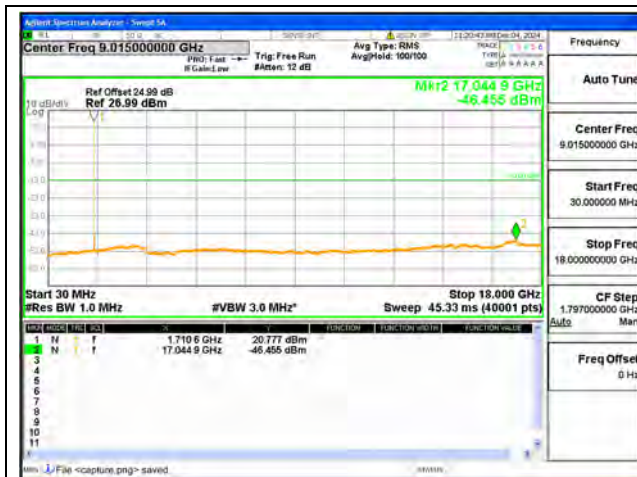
B40-2-20G-24G / 5MHz / High CH / QPSK



B40-2-30M-20G / 10MHz / Mid CH / QPSK



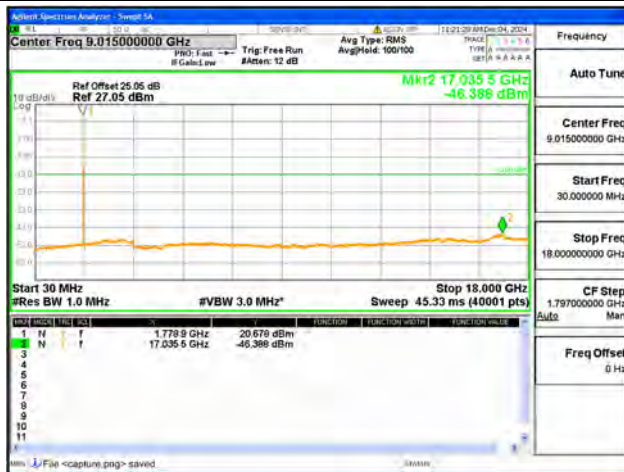
B40-2-20G-24G / 10MHz / Mid CH / QPSK



B66 / 1.4MHz / Low CH / QPSK



B66 / 1.4MHz / Mid CH / QPSK



B66 / 1.4MHz / High CH / QPSK



B66 / 3MHz / Low CH / QPSK



B66 / 3MHz / Mid CH / QPSK



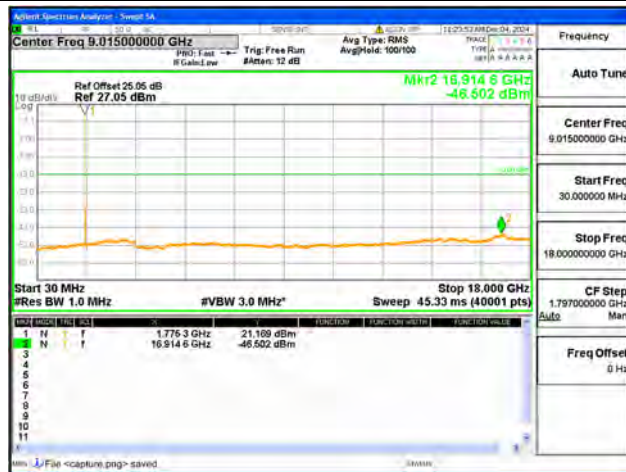
B66 / 3MHz / High CH / QPSK



B66 / 5MHz / Low CH / QPSK



B66 / 5MHz / Mid CH / QPSK



B66 / 5MHz / High CH / QPSK



B66 / 10MHz / Low CH / QPSK



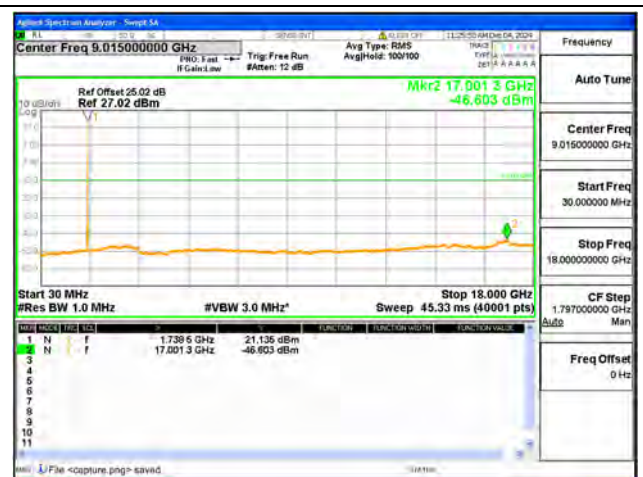
B66 / 10MHz / Mid CH / QPSK



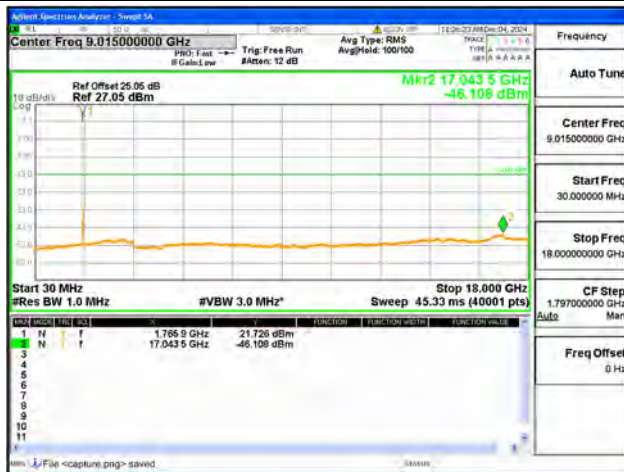
B66 / 10MHz / High CH / QPSK



B66 / 15MHz / Low CH / QPSK



B66 / 15MHz / Mid CH / QPSK



B66 / 15MHz / High CH / QPSK



B66 / 20MHz / Low CH / QPSK



B66 / 20MHz / Mid CH / QPSK



B66 / 20MHz / High CH / QPSK

2.6. Band Edge

2.6.1. Requirement

Band 2

According to FCC section 24.238(a), for operations in the 1850–1910MHz bands, 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 in a 1MHz bandwidth. However, in the 1 MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

Band 4, 66

According to FCC section 27.53(h), for operations in the 1710–1755MHz bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least $43 + 10 \log_{10}(P)$ dB a 1MHz bandwidth. However, in the 1 MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

Band 5

According to FCC section 22.917(a), for operations in the 824–849MHz bands, 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 in a 100kHz bandwidth. However, in the 1 MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

Band 7,38

According to FCC section 27.53(m) (4), for mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log(P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log(P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log(P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log(P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log(P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

**Band 12, 17**

According to FCC section 27.53(g), for operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

Band 13

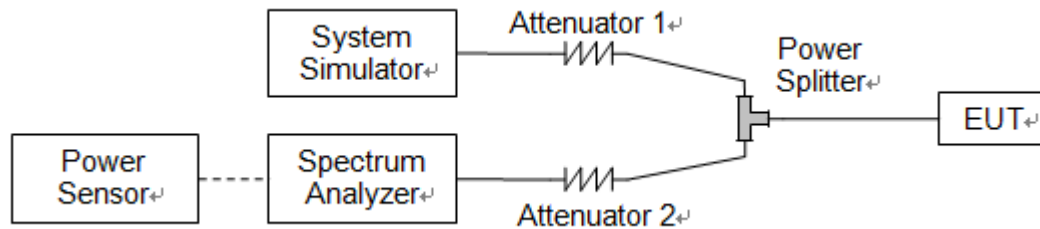
According to FCC section 27.53(c)(2), any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB in a 100kHz bandwidth. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed.

Band 40

According to FCC section 27.53(a) (4), for mobile and portable stations operating in the 2305-2315 MHz and 2350-2360 MHz bands:

- (i) By a factor of not less than: $43 + 10 \log (P)$ dB on all frequencies between 2305 and 2320 MHz and on all frequencies between 2345 and 2360 MHz that are outside the licensed band(s) of operation, not less than $55 + 10 \log (P)$ dB on all frequencies between 2320 and 2324 MHz and on all frequencies between 2341 and 2345 MHz, not less than $61 + 10 \log (P)$ dB on all frequencies between 2324 and 2328 MHz and on all frequencies between 2337 and 2341 MHz, and not less than $67 + 10 \log (P)$ dB on all frequencies between 2328 and 2337 MHz;
- (ii) By a factor of not less than $43 + 10 \log (P)$ dB on all frequencies between 2300 and 2305 MHz, $55 + 10 \log (P)$ dB on all frequencies between 2296 and 2300 MHz, $61 + 10 \log (P)$ dB on all frequencies between 2292 and 2296 MHz, $67 + 10 \log (P)$ dB on all frequencies between 2288 and 2292 MHz, and $70 + 10 \log (P)$ dB below 2288 MHz;
- (iii) By a factor of not less than $43 + 10 \log (P)$ dB on all frequencies between 2360 and 2365 MHz, and not less than $70 + 10 \log (P)$ dB above 2365 MHz.

2.6.2. Test Description



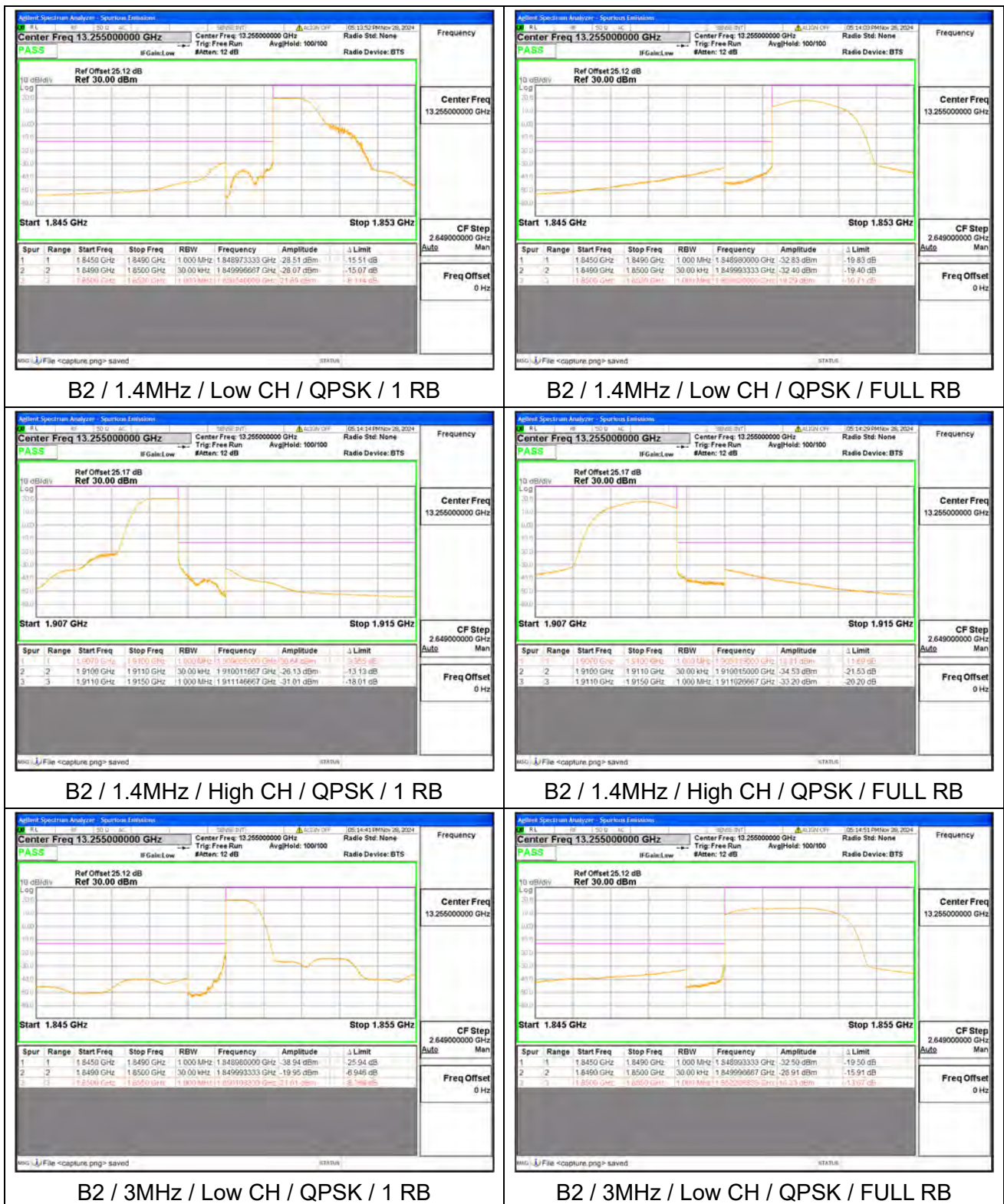
The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum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

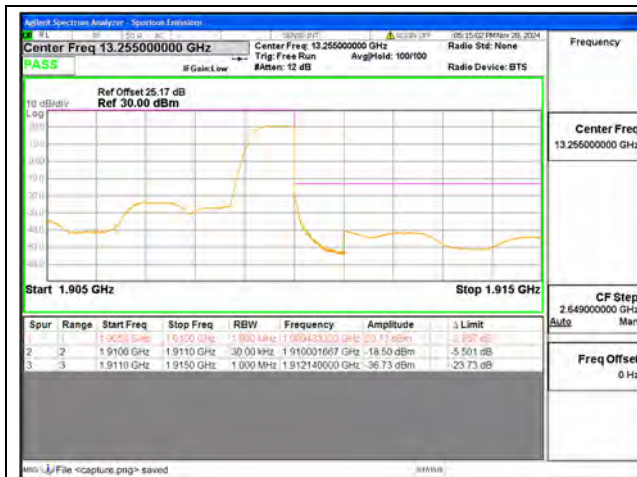
2.6.3. Test Procedure

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



2.6.4. Test Result

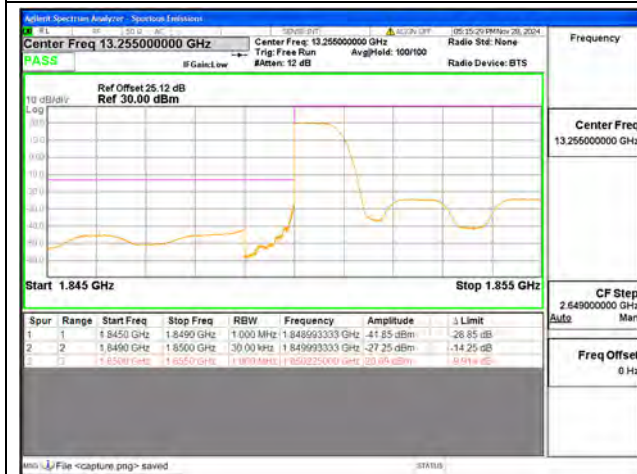




B2 / 3MHz / High CH / QPSK / 1 RB



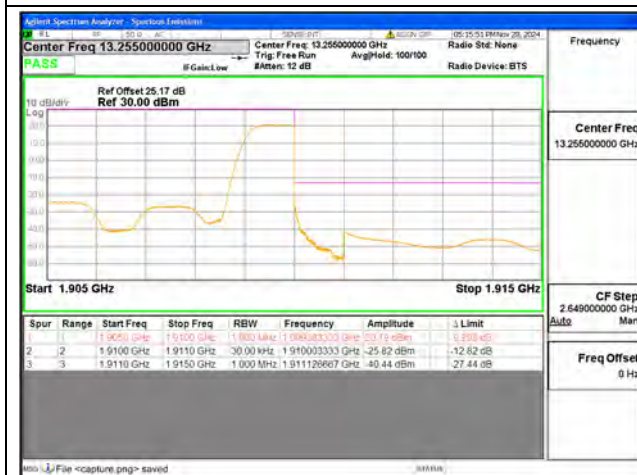
B2 / 3MHz / High CH / QPSK / FULL RB



B2 / 5MHz / Low CH / QPSK / 1 RB



B2 / 5MHz / Low CH / QPSK / FULL RB



B2 / 5MHz / High CH / QPSK / 1 RB



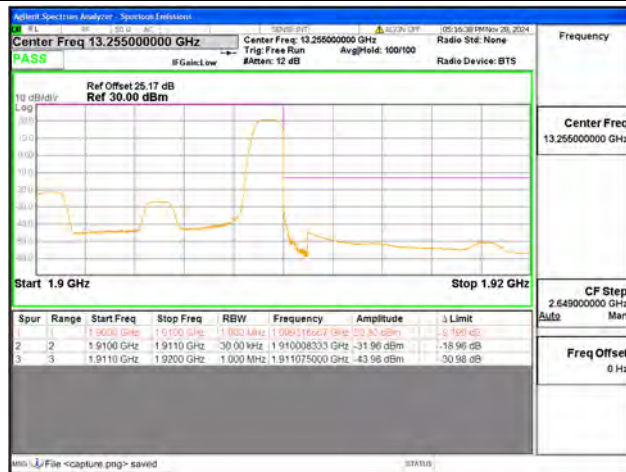
B2 / 5MHz / High CH / QPSK / FULL RB



B2 / 10MHz / Low CH / QPSK / 1 RB



B2 / 10MHz / Low CH / QPSK / FULL RB



B2 / 10MHz / High CH / QPSK / 1 RB



B2 / 10MHz / High CH / QPSK / FULL RB



B2 / 15MHz / Low CH / QPSK / 1 RB



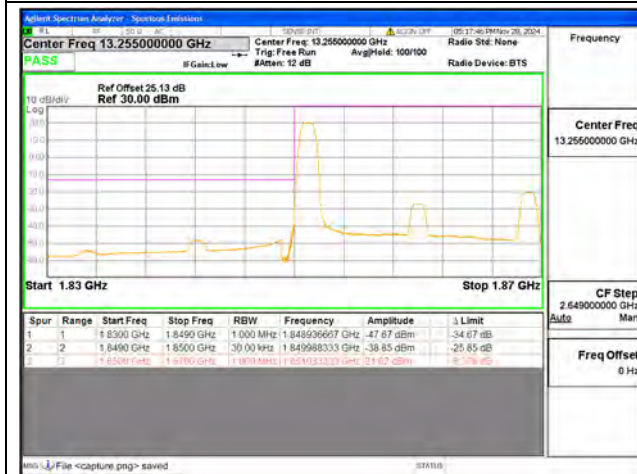
B2 / 15MHz / Low CH / QPSK / FULL RB



B2 / 15MHz / High CH / QPSK / 1 RB



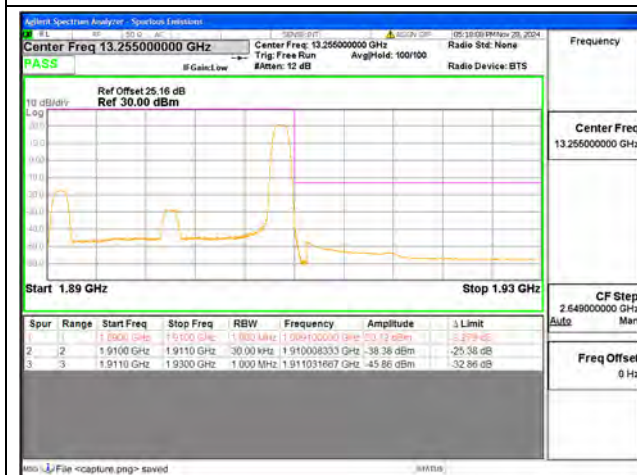
B2 / 15MHz / High CH / QPSK / FULL RB



B2 / 20MHz / Low CH / QPSK / 1 RB



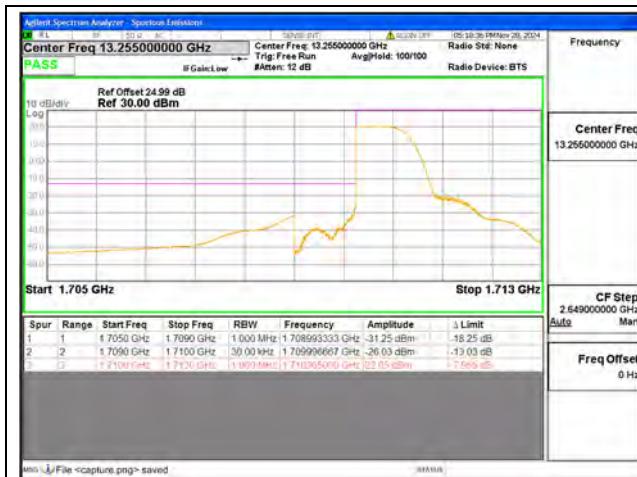
B2 / 20MHz / Low CH / QPSK / FULL RB



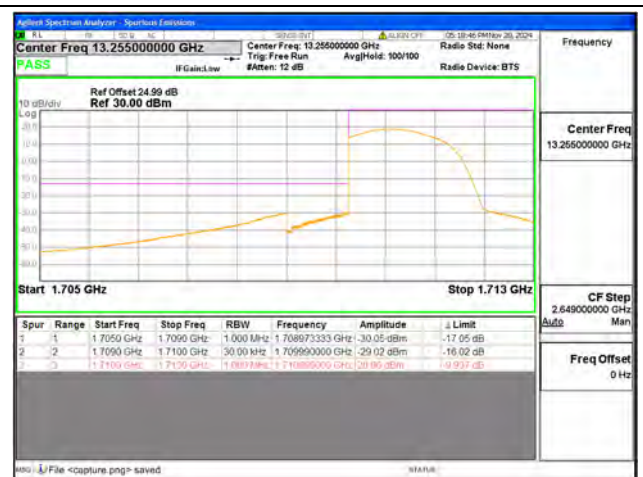
B2 / 20MHz / High CH / QPSK / 1 RB



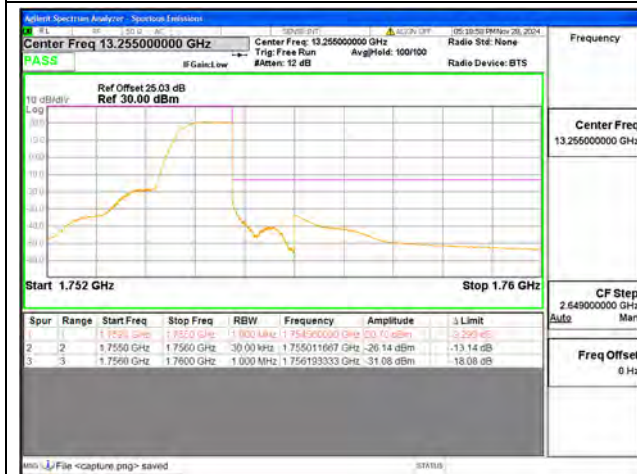
B2 / 20MHz / High CH / QPSK / FULL RB



B4 / 1.4MHz / Low CH / QPSK / 1 RB



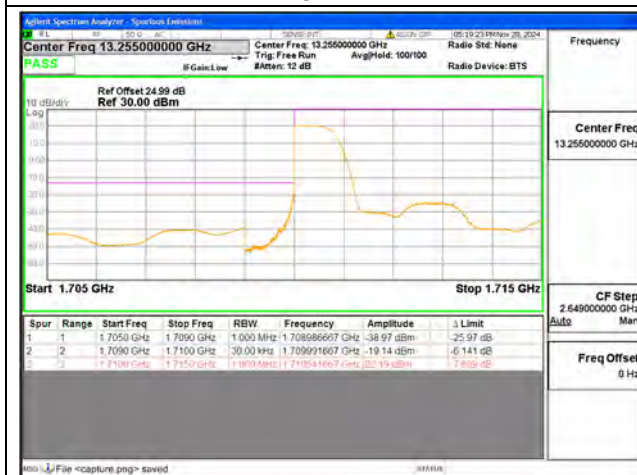
B4 / 1.4MHz / Low CH / QPSK / FULL RB



B4 / 1.4MHz / High CH / QPSK / 1 RB



B4 / 1.4MHz / High CH / QPSK / FULL RB



B4 / 3MHz / Low CH / QPSK / 1 RB



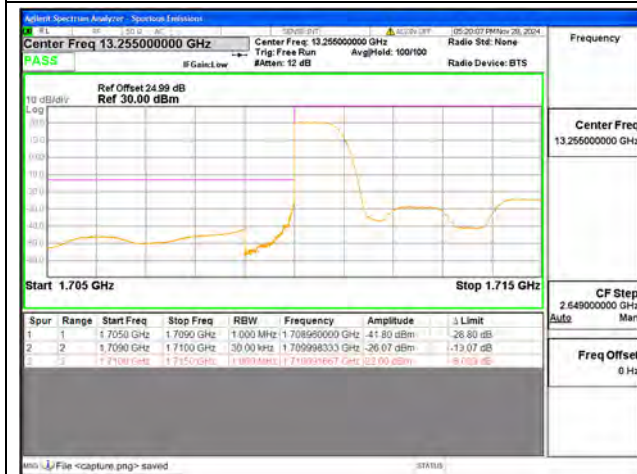
B4 / 3MHz / Low CH / QPSK / FULL RB



B4 / 3MHz / High CH / QPSK / 1 RB



B4 / 3MHz / High CH / QPSK / FULL RB



B4 / 5MHz / Low CH / QPSK / 1 RB



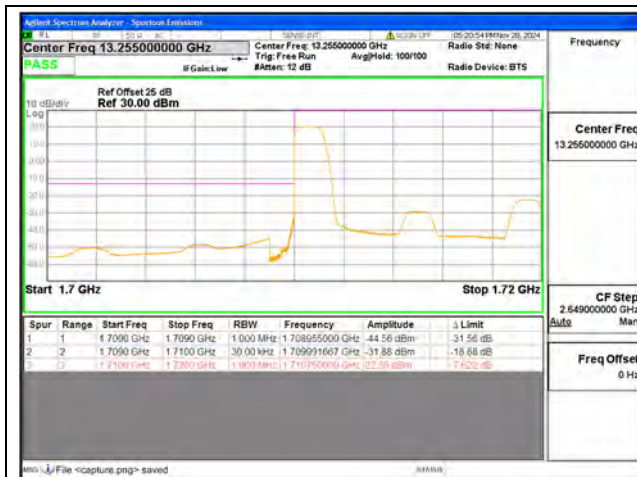
B4 / 5MHz / Low CH / QPSK / FULL RB



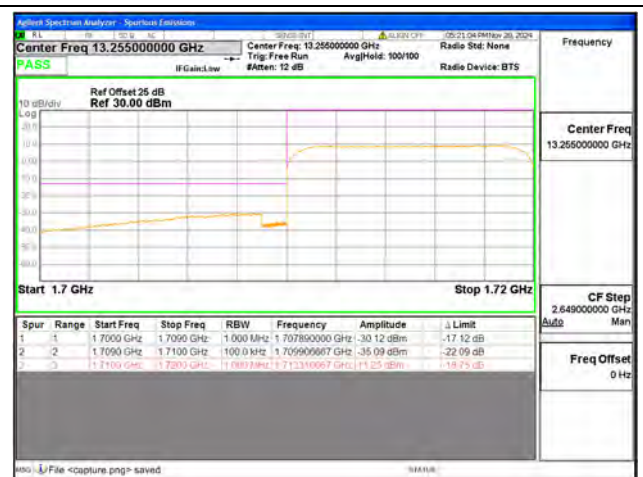
B4 / 5MHz / High CH / QPSK / 1 RB



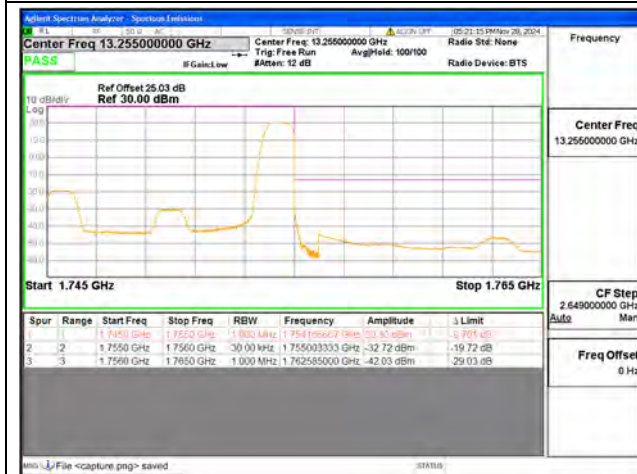
B4 / 5MHz / High CH / QPSK / FULL RB



B4 / 10MHz / Low CH / QPSK / 1 RB



B4 / 10MHz / Low CH / QPSK / FULL RB



B4 / 10MHz / High CH / QPSK / 1 RB



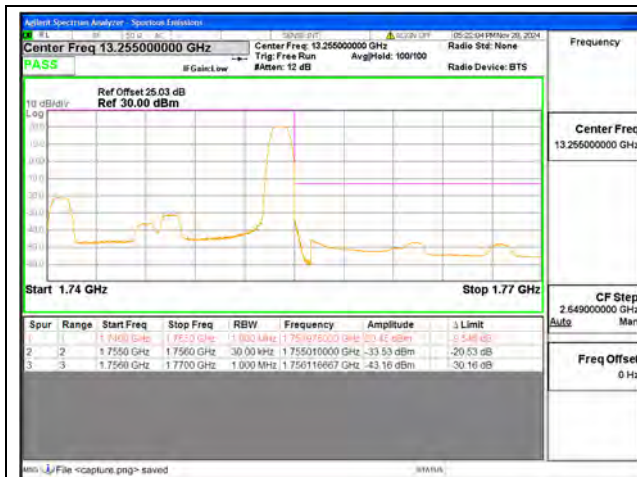
B4 / 10MHz / High CH / QPSK / FULL RB



B4 / 15MHz / Low CH / QPSK / 1 RB



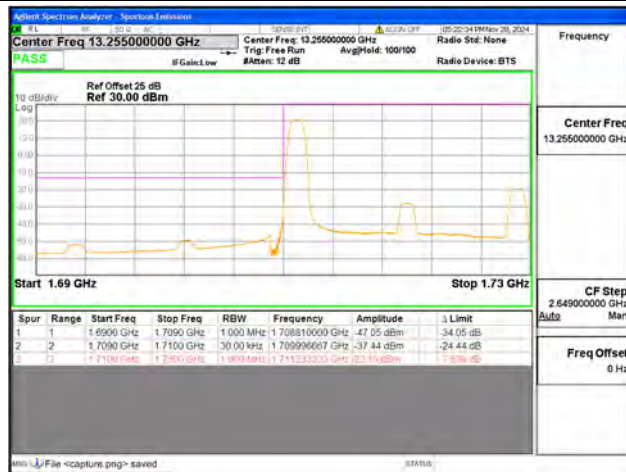
B4 / 15MHz / Low CH / QPSK / FULL RB



B4 / 15MHz / High CH / QPSK / 1 RB



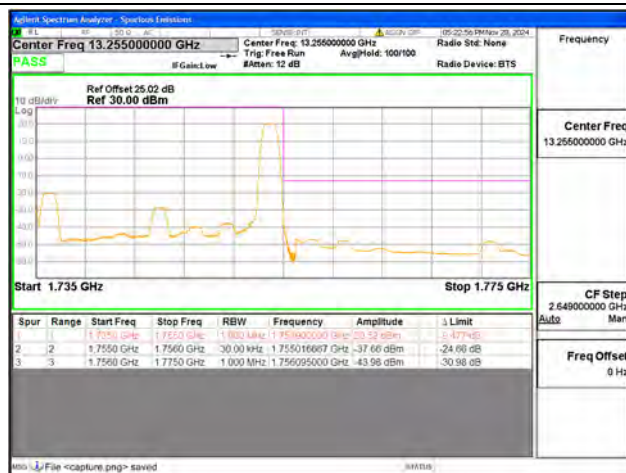
B4 / 15MHz / High CH / QPSK / FULL RB



B4 / 20MHz / Low CH / QPSK / 1 RB



B4 / 20MHz / Low CH / QPSK / FULL RB



B4 / 20MHz / High CH / QPSK / 1 RB



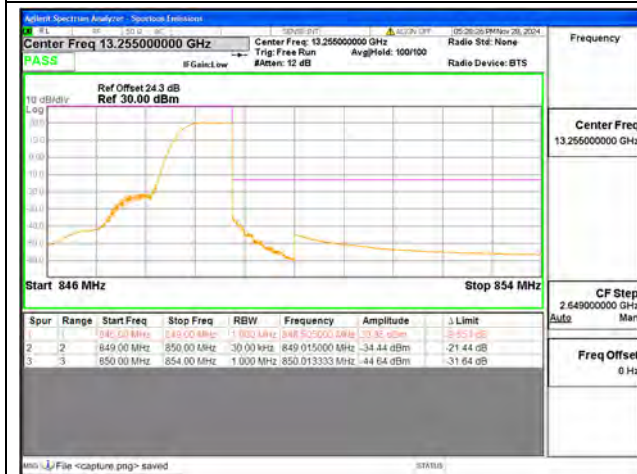
B4 / 20MHz / High CH / QPSK / FULL RB



B5 / 1.4MHz / Low CH / QPSK / 1 RB



B5 / 1.4MHz / Low CH / QPSK / FULL RB



B5 / 1.4MHz / High CH / QPSK / 1 RB



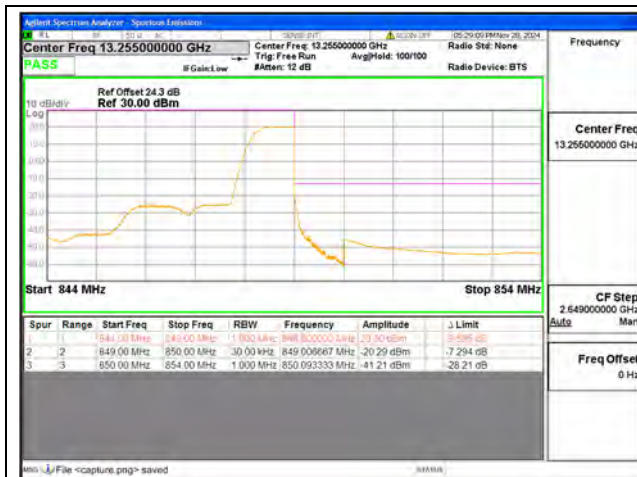
B5 / 1.4MHz / High CH / QPSK / FULL RB



B5 / 3MHz / Low CH / QPSK / 1 RB



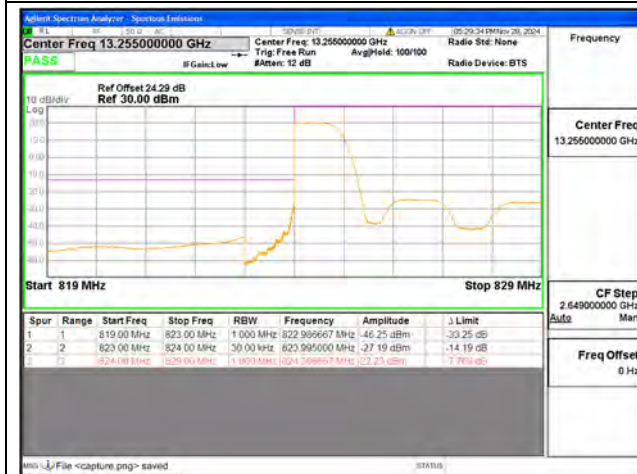
B5 / 3MHz / Low CH / QPSK / FULL RB



B5 / 3MHz / High CH / QPSK / 1 RB



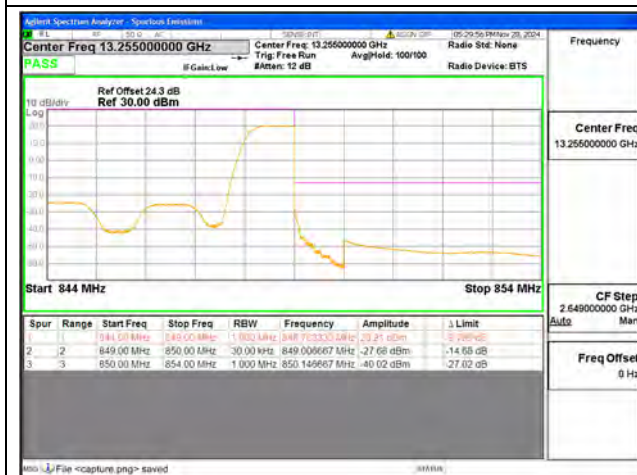
B5 / 3MHz / High CH / QPSK / FULL RB



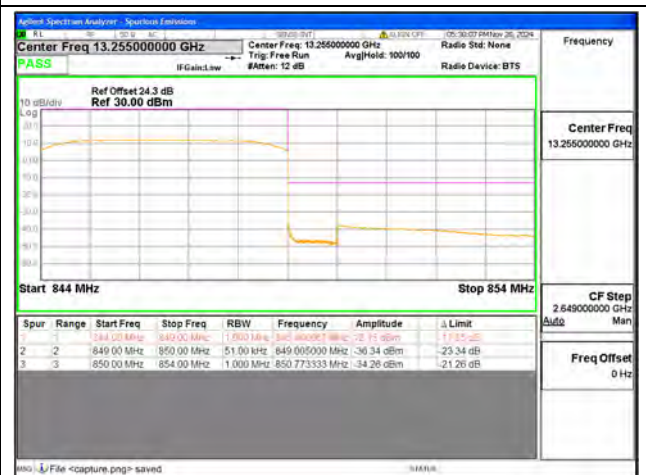
B5 / 5MHz / Low CH / QPSK / 1 RB



B5 / 5MHz / Low CH / QPSK / FULL RB



B5 / 5MHz / High CH / QPSK / 1 RB



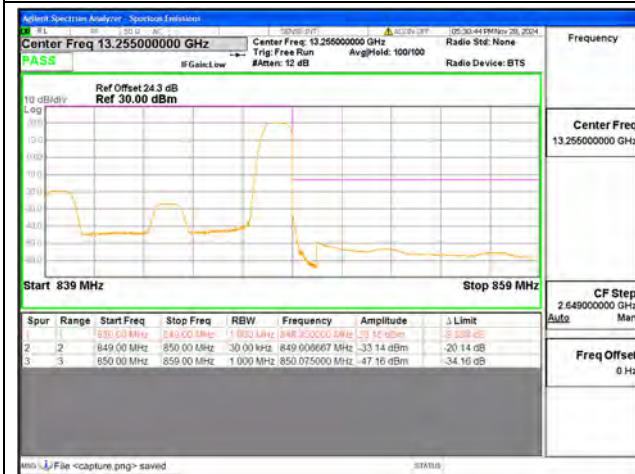
B5 / 5MHz / High CH / QPSK / FULL RB



B5 / 10MHz / Low CH / QPSK / 1 RB



B5 / 10MHz / Low CH / QPSK / FULL RB



B5 / 10MHz / High CH / QPSK / 1 RB



B5 / 10MHz / High CH / QPSK / FULL RB