

LTE Band5 Test Data

Project No. : ENS2111040057W00207R

Company: : Micro-Star Int'l Co.,Ltd.

EUT : Tablet

Model Number : MS-ND52-Gen2

Number of Samples : 1

Sample Number : 1#

Tested By : Tracy Hu

Reviewed By : Joe Xia

Appendix A: Effective (Isotropic) Radiated Power Output Data

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band5	1.4MHz	QPSK	20407	1RB#0	21.94	PASS
Band5	1.4MHz	QPSK	20407	1RB#2	22.00	PASS
Band5	1.4MHz	QPSK	20407	1RB#5	21.88	PASS
Band5	1.4MHz	QPSK	20407	3RB#0	21.84	PASS
Band5	1.4MHz	QPSK	20407	3RB#1	21.82	PASS
Band5	1.4MHz	QPSK	20407	3RB#3	21.80	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	20.90	PASS
Band5	1.4MHz	QPSK	20525	1RB#0	21.94	PASS
Band5	1.4MHz	QPSK	20525	1RB#2	21.90	PASS
Band5	1.4MHz	QPSK	20525	1RB#5	21.79	PASS
Band5	1.4MHz	QPSK	20525	3RB#0	21.92	PASS
Band5	1.4MHz	QPSK	20525	3RB#1	21.75	PASS
Band5	1.4MHz	QPSK	20525	3RB#3	21.80	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	20.91	PASS
Band5	1.4MHz	QPSK	20643	1RB#0	21.81	PASS
Band5	1.4MHz	QPSK	20643	1RB#2	21.81	PASS
Band5	1.4MHz	QPSK	20643	1RB#5	21.65	PASS
Band5	1.4MHz	QPSK	20643	3RB#0	21.77	PASS
Band5	1.4MHz	QPSK	20643	3RB#1	21.74	PASS
Band5	1.4MHz	QPSK	20643	3RB#3	21.69	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	20.72	PASS
Band5	1.4MHz	16QAM	20407	1RB#0	20.91	PASS
Band5	1.4MHz	16QAM	20407	1RB#2	20.95	PASS
Band5	1.4MHz	16QAM	20407	1RB#5	20.68	PASS
Band5	1.4MHz	16QAM	20407	3RB#0	20.66	PASS
Band5	1.4MHz	16QAM	20407	3RB#1	20.71	PASS
Band5	1.4MHz	16QAM	20407	3RB#3	20.68	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	19.83	PASS
Band5	1.4MHz	16QAM	20525	1RB#0	20.94	PASS
Band5	1.4MHz	16QAM	20525	1RB#2	20.94	PASS
Band5	1.4MHz	16QAM	20525	1RB#5	20.73	PASS
Band5	1.4MHz	16QAM	20525	3RB#0	20.63	PASS
Band5	1.4MHz	16QAM	20525	3RB#1	20.67	PASS

Band5	1.4MHz	16QAM	20525	3RB#3	20.65	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	19.83	PASS
Band5	1.4MHz	16QAM	20643	1RB#0	20.73	PASS
Band5	1.4MHz	16QAM	20643	1RB#2	20.82	PASS
Band5	1.4MHz	16QAM	20643	1RB#5	20.58	PASS
Band5	1.4MHz	16QAM	20643	3RB#0	20.65	PASS
Band5	1.4MHz	16QAM	20643	3RB#1	20.61	PASS
Band5	1.4MHz	16QAM	20643	3RB#3	20.58	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	19.67	PASS
Band5	3MHz	QPSK	20415	1RB#0	22.20	PASS
Band5	3MHz	QPSK	20415	1RB#8	22.13	PASS
Band5	3MHz	QPSK	20415	1RB#14	22.17	PASS
Band5	3MHz	QPSK	20415	8RB#0	21.00	PASS
Band5	3MHz	QPSK	20415	8RB#4	20.99	PASS
Band5	3MHz	QPSK	20415	8RB#7	21.14	PASS
Band5	3MHz	QPSK	20415	15RB#0	21.00	PASS
Band5	3MHz	QPSK	20525	1RB#0	22.09	PASS
Band5	3MHz	QPSK	20525	1RB#8	21.95	PASS
Band5	3MHz	QPSK	20525	1RB#14	21.95	PASS
Band5	3MHz	QPSK	20525	8RB#0	20.89	PASS
Band5	3MHz	QPSK	20525	8RB#4	20.91	PASS
Band5	3MHz	QPSK	20525	8RB#7	20.99	PASS
Band5	3MHz	QPSK	20525	15RB#0	20.92	PASS
Band5	3MHz	QPSK	20635	1RB#0	21.77	PASS
Band5	3MHz	QPSK	20635	1RB#8	21.73	PASS
Band5	3MHz	QPSK	20635	1RB#14	21.66	PASS
Band5	3MHz	QPSK	20635	8RB#0	20.82	PASS
Band5	3MHz	QPSK	20635	8RB#4	20.80	PASS
Band5	3MHz	QPSK	20635	8RB#7	20.77	PASS
Band5	3MHz	QPSK	20635	15RB#0	20.76	PASS
Band5	3MHz	16QAM	20415	1RB#0	21.24	PASS
Band5	3MHz	16QAM	20415	1RB#8	21.14	PASS
Band5	3MHz	16QAM	20415	1RB#14	21.01	PASS
Band5	3MHz	16QAM	20415	8RB#0	19.99	PASS
Band5	3MHz	16QAM	20415	8RB#4	20.01	PASS
Band5	3MHz	16QAM	20415	8RB#7	20.10	PASS
Band5	3MHz	16QAM	20415	15RB#0	19.99	PASS

Band5	3MHz	16QAM	20525	1RB#0	20.90	PASS
Band5	3MHz	16QAM	20525	1RB#8	20.76	PASS
Band5	3MHz	16QAM	20525	1RB#14	20.80	PASS
Band5	3MHz	16QAM	20525	8RB#0	19.85	PASS
Band5	3MHz	16QAM	20525	8RB#4	19.86	PASS
Band5	3MHz	16QAM	20525	8RB#7	19.91	PASS
Band5	3MHz	16QAM	20525	15RB#0	19.81	PASS
Band5	3MHz	16QAM	20635	1RB#0	20.58	PASS
Band5	3MHz	16QAM	20635	1RB#8	20.59	PASS
Band5	3MHz	16QAM	20635	1RB#14	20.57	PASS
Band5	3MHz	16QAM	20635	8RB#0	19.72	PASS
Band5	3MHz	16QAM	20635	8RB#4	19.77	PASS
Band5	3MHz	16QAM	20635	8RB#7	19.78	PASS
Band5	3MHz	16QAM	20635	15RB#0	19.68	PASS
Band5	5MHz	QPSK	20425	1RB#0	22.35	PASS
Band5	5MHz	QPSK	20425	1RB#12	22.41	PASS
Band5	5MHz	QPSK	20425	1RB#24	22.13	PASS
Band5	5MHz	QPSK	20425	12RB#0	20.99	PASS
Band5	5MHz	QPSK	20425	12RB#6	21.00	PASS
Band5	5MHz	QPSK	20425	12RB#13	21.10	PASS
Band5	5MHz	QPSK	20425	25RB#0	21.02	PASS
Band5	5MHz	QPSK	20525	1RB#0	22.01	PASS
Band5	5MHz	QPSK	20525	1RB#12	22.16	PASS
Band5	5MHz	QPSK	20525	1RB#24	21.93	PASS
Band5	5MHz	QPSK	20525	12RB#0	20.98	PASS
Band5	5MHz	QPSK	20525	12RB#6	20.99	PASS
Band5	5MHz	QPSK	20525	12RB#13	20.93	PASS
Band5	5MHz	QPSK	20525	25RB#0	20.91	PASS
Band5	5MHz	QPSK	20625	1RB#0	21.87	PASS
Band5	5MHz	QPSK	20625	1RB#12	22.14	PASS
Band5	5MHz	QPSK	20625	1RB#24	21.63	PASS
Band5	5MHz	QPSK	20625	12RB#0	20.84	PASS
Band5	5MHz	QPSK	20625	12RB#6	20.85	PASS
Band5	5MHz	QPSK	20625	12RB#13	20.75	PASS
Band5	5MHz	QPSK	20625	25RB#0	20.81	PASS
Band5	5MHz	16QAM	20425	1RB#0	21.18	PASS
Band5	5MHz	16QAM	20425	1RB#12	21.30	PASS

Band5	5MHz	16QAM	20425	1RB#24	21.08	PASS
Band5	5MHz	16QAM	20425	12RB#0	19.95	PASS
Band5	5MHz	16QAM	20425	12RB#6	19.96	PASS
Band5	5MHz	16QAM	20425	12RB#13	20.08	PASS
Band5	5MHz	16QAM	20425	25RB#0	20.00	PASS
Band5	5MHz	16QAM	20525	1RB#0	21.08	PASS
Band5	5MHz	16QAM	20525	1RB#12	21.15	PASS
Band5	5MHz	16QAM	20525	1RB#24	21.06	PASS
Band5	5MHz	16QAM	20525	12RB#0	19.98	PASS
Band5	5MHz	16QAM	20525	12RB#6	19.99	PASS
Band5	5MHz	16QAM	20525	12RB#13	19.94	PASS
Band5	5MHz	16QAM	20525	25RB#0	19.87	PASS
Band5	5MHz	16QAM	20625	1RB#0	20.74	PASS
Band5	5MHz	16QAM	20625	1RB#12	20.80	PASS
Band5	5MHz	16QAM	20625	1RB#24	20.58	PASS
Band5	5MHz	16QAM	20625	12RB#0	19.81	PASS
Band5	5MHz	16QAM	20625	12RB#6	19.94	PASS
Band5	5MHz	16QAM	20625	12RB#13	19.75	PASS
Band5	5MHz	16QAM	20625	25RB#0	19.89	PASS
Band5	10MHz	QPSK	20450	1RB#0	22.36	PASS
Band5	10MHz	QPSK	20450	1RB#24	22.29	PASS
Band5	10MHz	QPSK	20450	1RB#49	22.10	PASS
Band5	10MHz	QPSK	20450	25RB#0	21.12	PASS
Band5	10MHz	QPSK	20450	25RB#12	21.12	PASS
Band5	10MHz	QPSK	20450	25RB#25	20.99	PASS
Band5	10MHz	QPSK	20450	50RB#0	21.12	PASS
Band5	10MHz	QPSK	20525	1RB#0	22.02	PASS
Band5	10MHz	QPSK	20525	1RB#24	22.11	PASS
Band5	10MHz	QPSK	20525	1RB#49	21.98	PASS
Band5	10MHz	QPSK	20525	25RB#0	20.99	PASS
Band5	10MHz	QPSK	20525	25RB#12	21.08	PASS
Band5	10MHz	QPSK	20525	25RB#25	20.97	PASS
Band5	10MHz	QPSK	20525	50RB#0	21.01	PASS
Band5	10MHz	QPSK	20600	1RB#0	21.94	PASS
Band5	10MHz	QPSK	20600	1RB#24	21.95	PASS
Band5	10MHz	QPSK	20600	1RB#49	21.94	PASS
Band5	10MHz	QPSK	20600	25RB#0	20.93	PASS

Band5	10MHz	QPSK	20600	25RB#12	20.95	PASS
Band5	10MHz	QPSK	20600	25RB#25	20.89	PASS
Band5	10MHz	QPSK	20600	50RB#0	20.91	PASS
Band5	10MHz	16QAM	20450	1RB#0	21.26	PASS
Band5	10MHz	16QAM	20450	1RB#24	21.09	PASS
Band5	10MHz	16QAM	20450	1RB#49	21.14	PASS
Band5	10MHz	16QAM	20450	25RB#0	20.08	PASS
Band5	10MHz	16QAM	20450	25RB#12	20.05	PASS
Band5	10MHz	16QAM	20450	25RB#25	19.98	PASS
Band5	10MHz	16QAM	20450	50RB#0	20.11	PASS
Band5	10MHz	16QAM	20525	1RB#0	20.99	PASS
Band5	10MHz	16QAM	20525	1RB#24	20.85	PASS
Band5	10MHz	16QAM	20525	1RB#49	20.91	PASS
Band5	10MHz	16QAM	20525	25RB#0	20.00	PASS
Band5	10MHz	16QAM	20525	25RB#12	19.98	PASS
Band5	10MHz	16QAM	20525	25RB#25	19.96	PASS
Band5	10MHz	16QAM	20525	50RB#0	19.99	PASS
Band5	10MHz	16QAM	20600	1RB#0	20.78	PASS
Band5	10MHz	16QAM	20600	1RB#24	20.67	PASS
Band5	10MHz	16QAM	20600	1RB#49	20.56	PASS
Band5	10MHz	16QAM	20600	25RB#0	19.93	PASS
Band5	10MHz	16QAM	20600	25RB#12	20.02	PASS
Band5	10MHz	16QAM	20600	25RB#25	19.74	PASS
Band5	10MHz	16QAM	20600	50RB#0	19.89	PASS

Appendix B: Peak-to-Average Ratio(CCDF)

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band5	1.4MHz	QPSK	20407	6RB#0	5.13	13	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	5.08	13	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	4.92	13	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	5.89	13	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	5.83	13	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	5.79	13	PASS
Band5	3MHz	QPSK	20415	15RB#0	5.06	13	PASS
Band5	3MHz	QPSK	20525	15RB#0	5.04	13	PASS
Band5	3MHz	QPSK	20635	15RB#0	5.02	13	PASS
Band5	3MHz	16QAM	20415	15RB#0	5.87	13	PASS
Band5	3MHz	16QAM	20525	15RB#0	5.84	13	PASS
Band5	3MHz	16QAM	20635	15RB#0	5.83	13	PASS
Band5	5MHz	QPSK	20425	25RB#0	5.21	13	PASS
Band5	5MHz	QPSK	20525	25RB#0	5.19	13	PASS
Band5	5MHz	QPSK	20625	25RB#0	5.16	13	PASS
Band5	5MHz	16QAM	20425	25RB#0	5.88	13	PASS
Band5	5MHz	16QAM	20525	25RB#0	5.89	13	PASS
Band5	5MHz	16QAM	20625	25RB#0	5.84	13	PASS
Band5	10MHz	QPSK	20450	50RB#0	4.59	13	PASS
Band5	10MHz	QPSK	20525	50RB#0	4.62	13	PASS
Band5	10MHz	QPSK	20600	50RB#0	4.53	13	PASS
Band5	10MHz	16QAM	20450	50RB#0	5.98	13	PASS
Band5	10MHz	16QAM	20525	50RB#0	5.97	13	PASS
Band5	10MHz	16QAM	20600	50RB#0	6.02	13	PASS

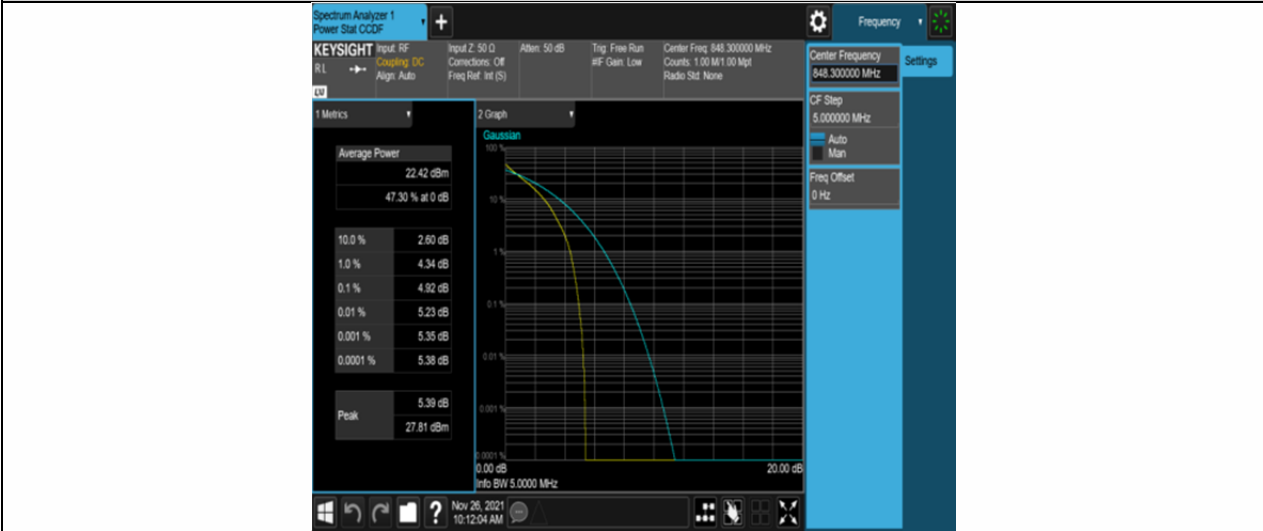
Test Graphs



Band5-1.4MHz-QPSK-20407-6RB#0



Band5-1.4MHz-QPSK-20525-6RB#0



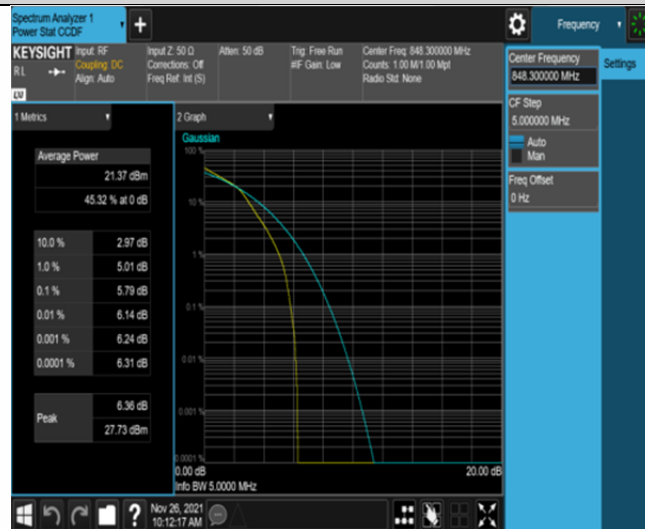
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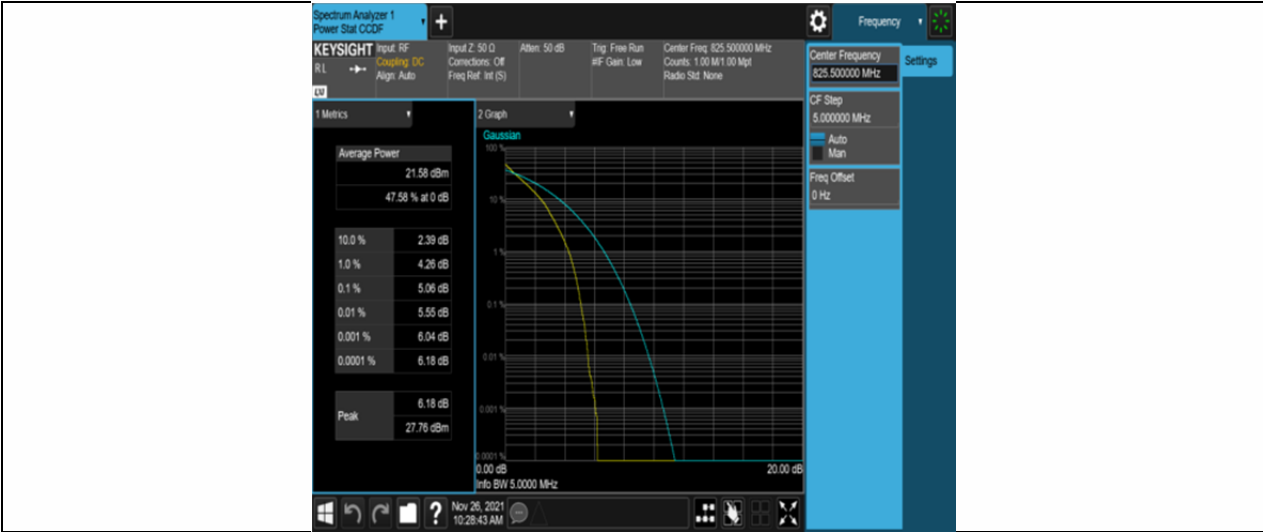
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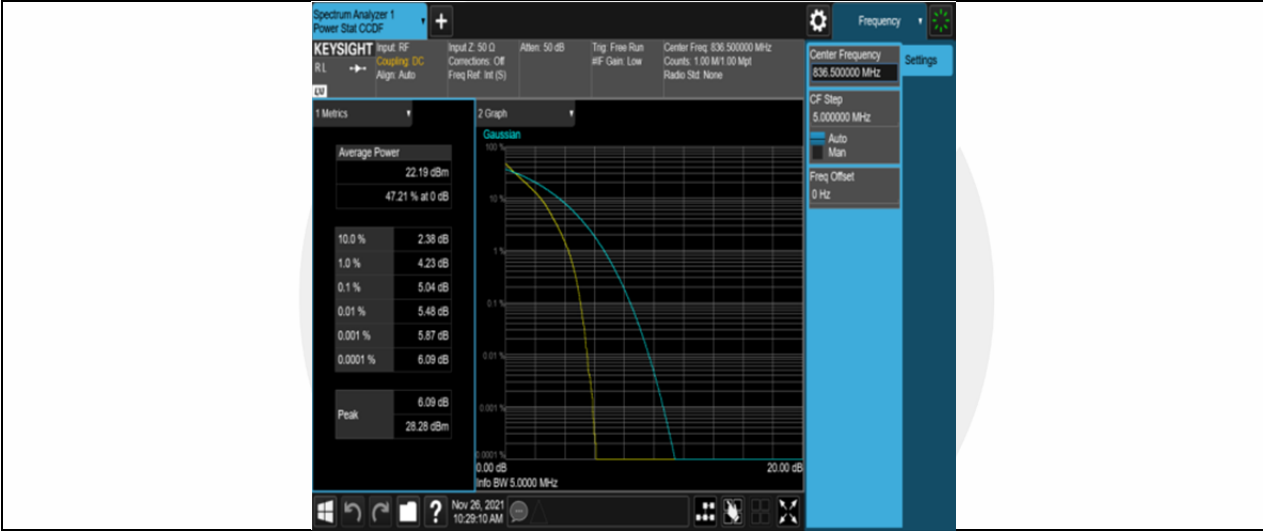
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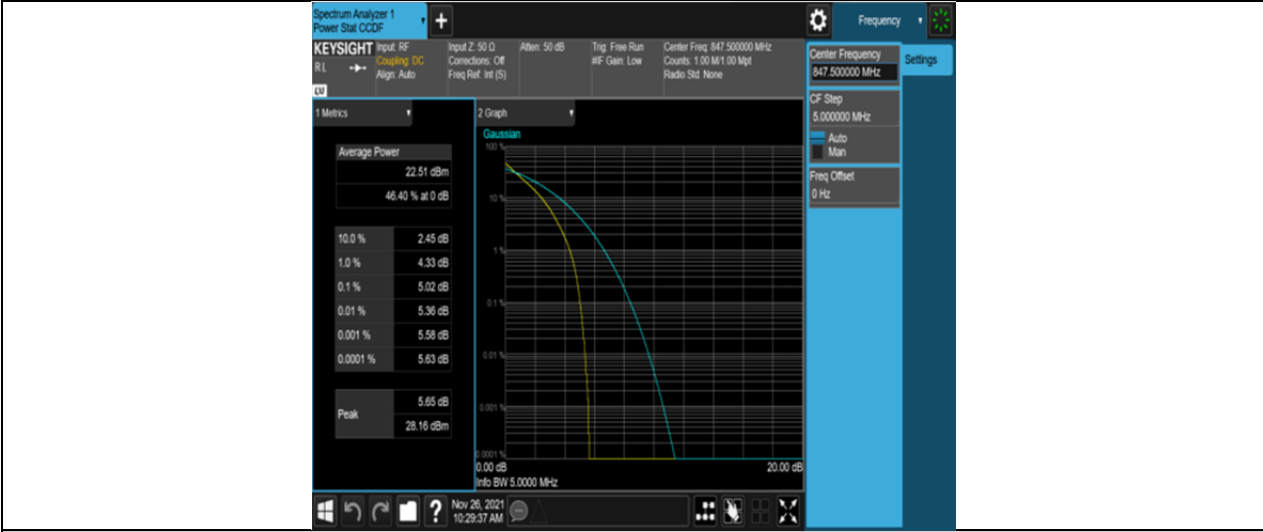
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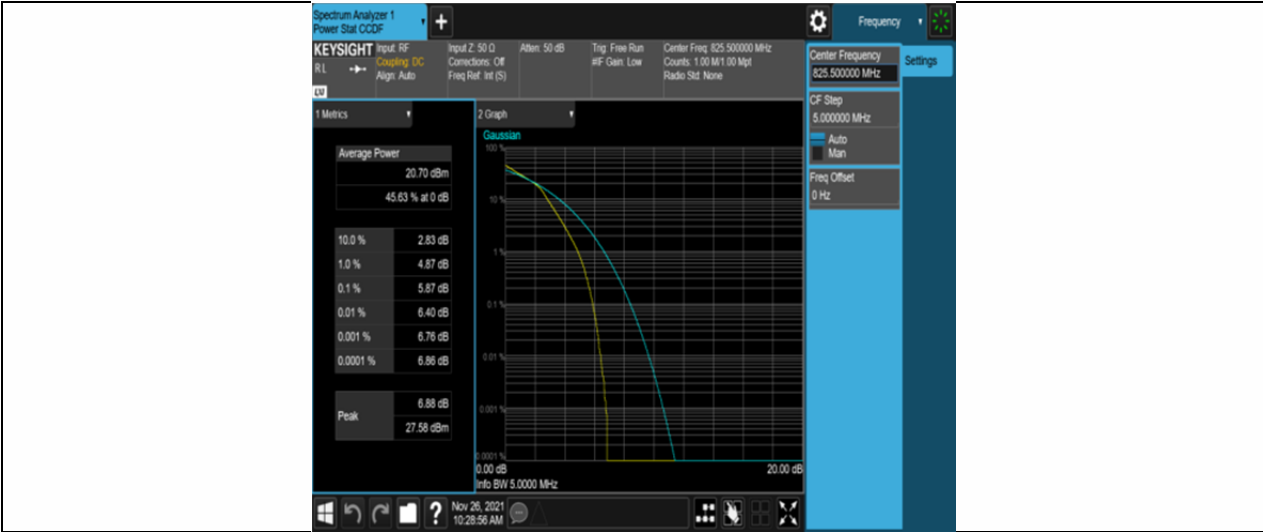
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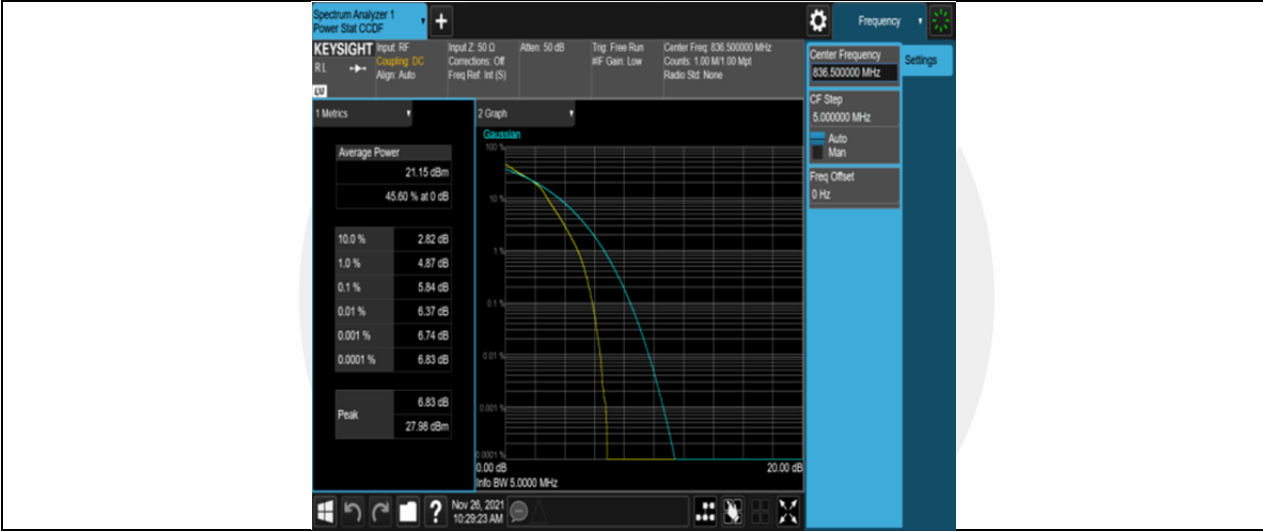
Band5-3MHz-QPSK-20525-15RB#0



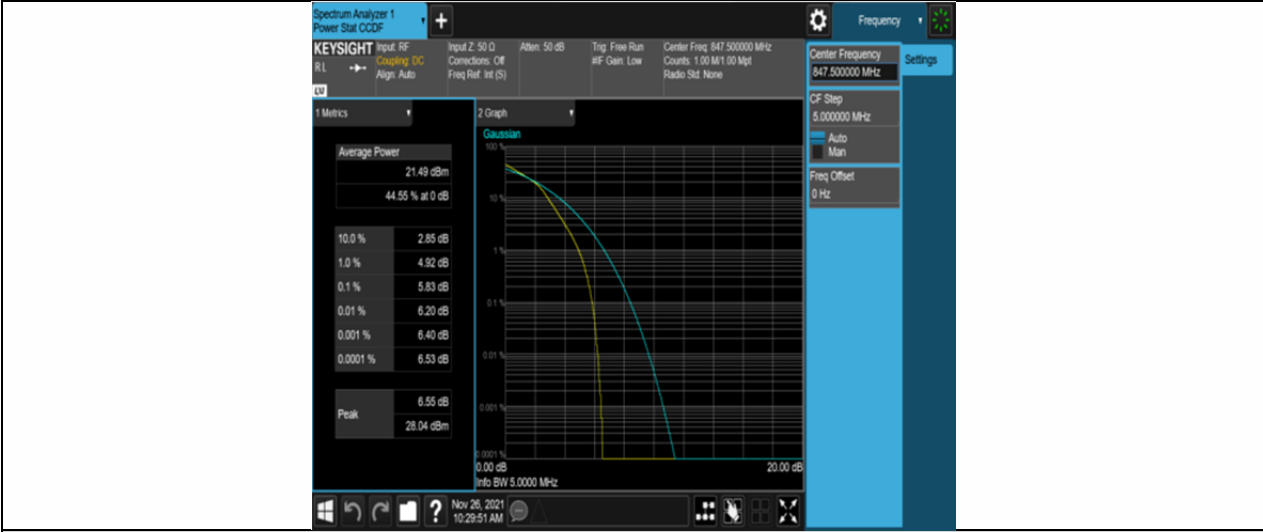
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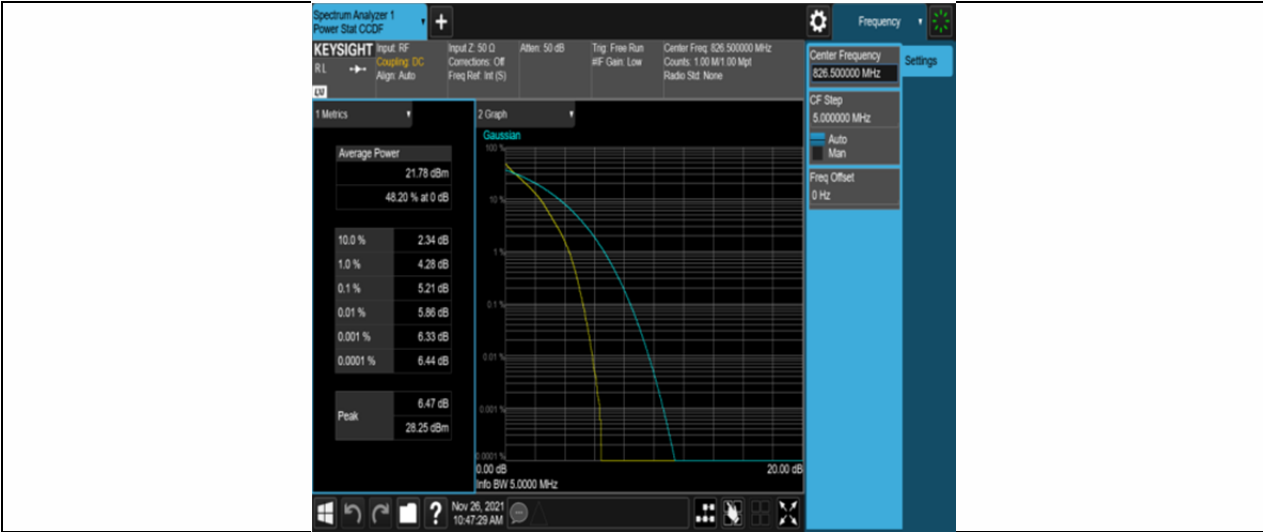
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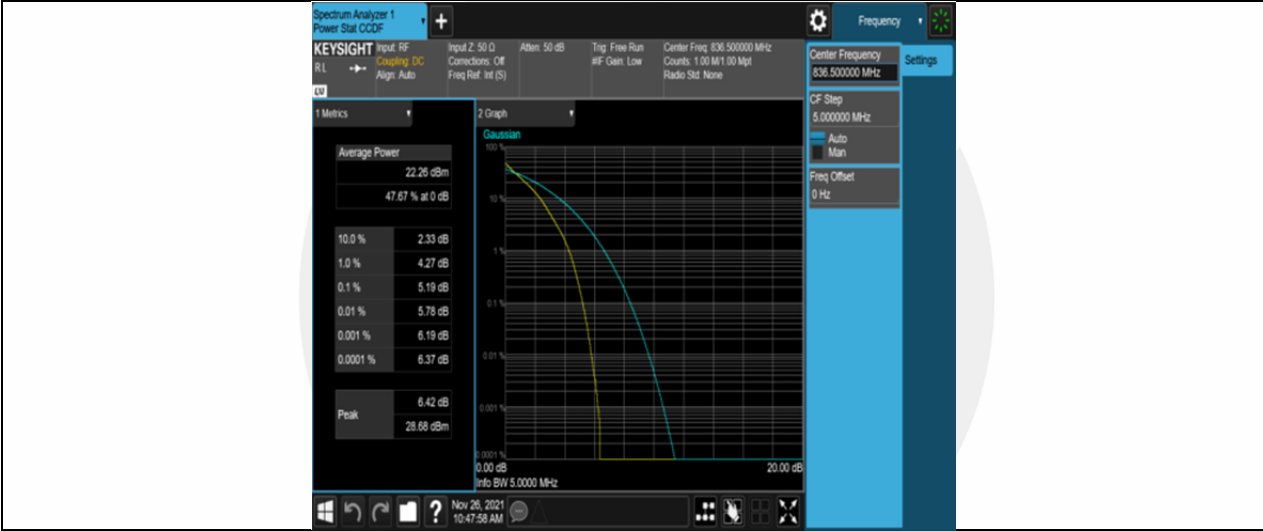
Band5-3MHz-16QAM-20525-15RB#0



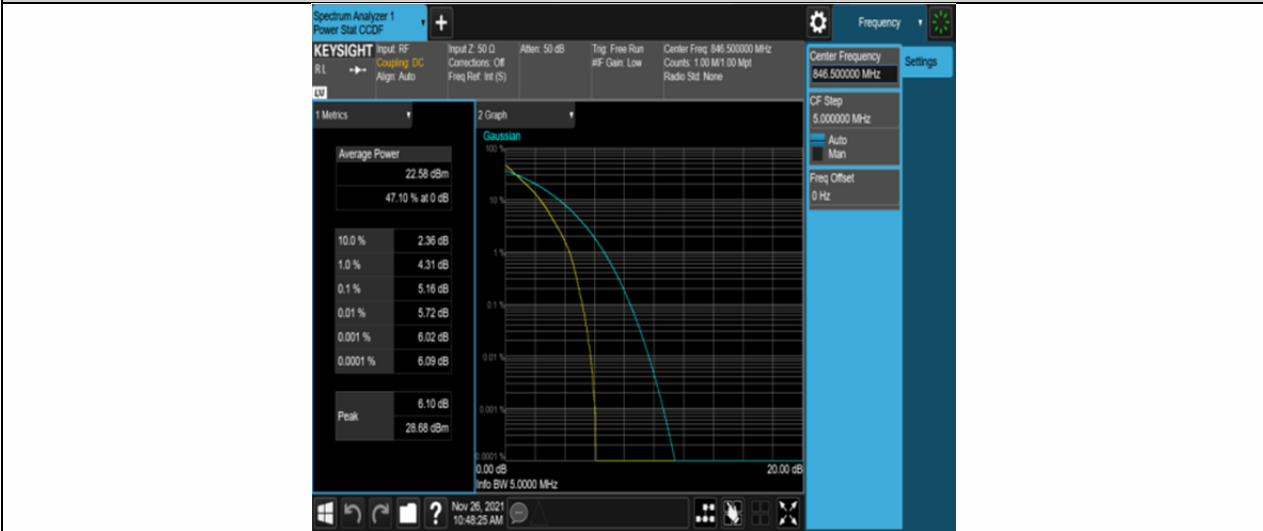
Band5-3MHz-16QAM-20635-15RB#0



Band5-5MHz-QPSK-20425-25RB#0



Band5-5MHz-QPSK-20525-25RB#0



Band5-5MHz-QPSK-20625-25RB#0



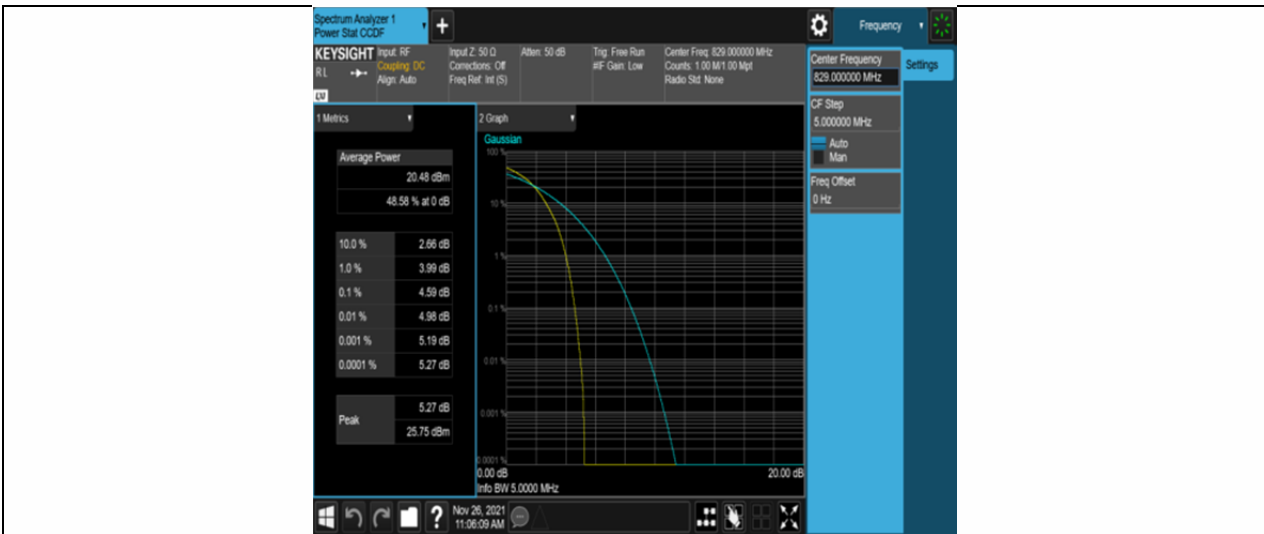
Band5-5MHz-16QAM-20425-25RB#0



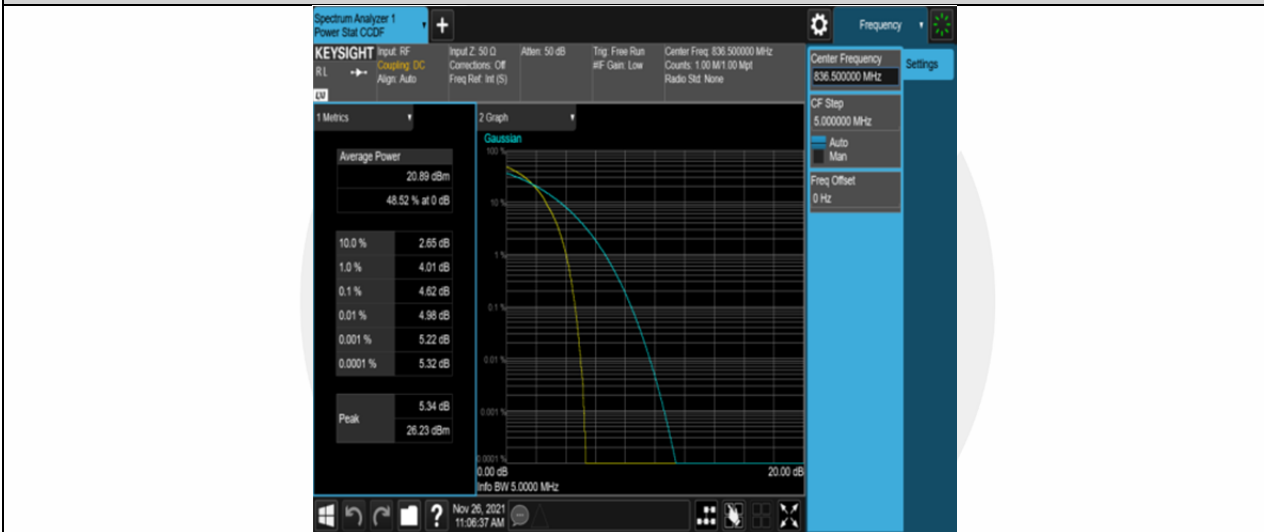
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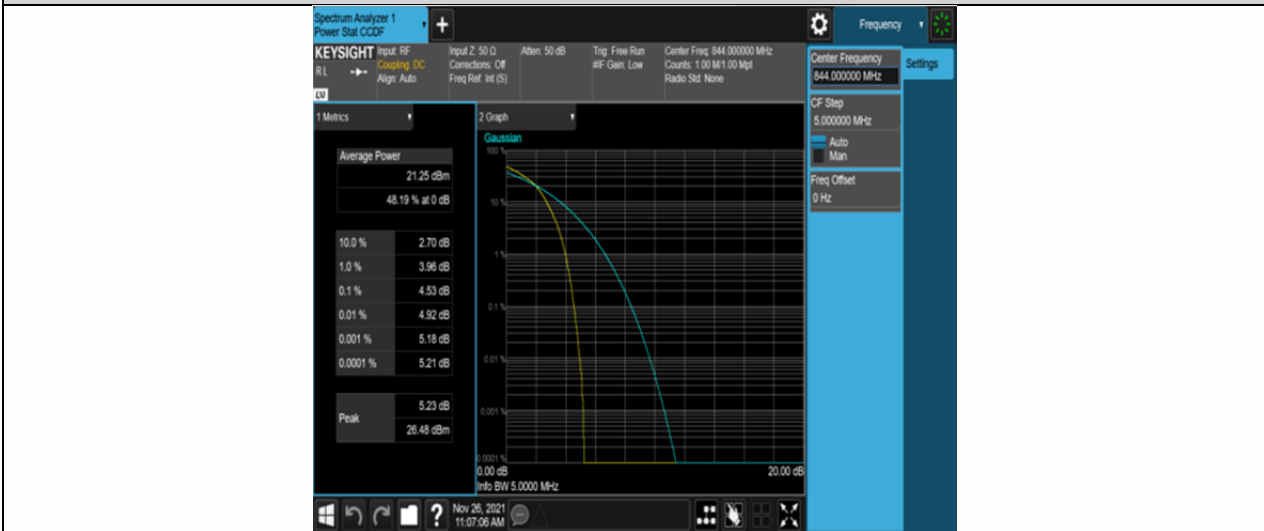
Band5-5MHz-16QAM-20625-25RB#0



Band5-10MHz-QPSK-20450-50RB#0



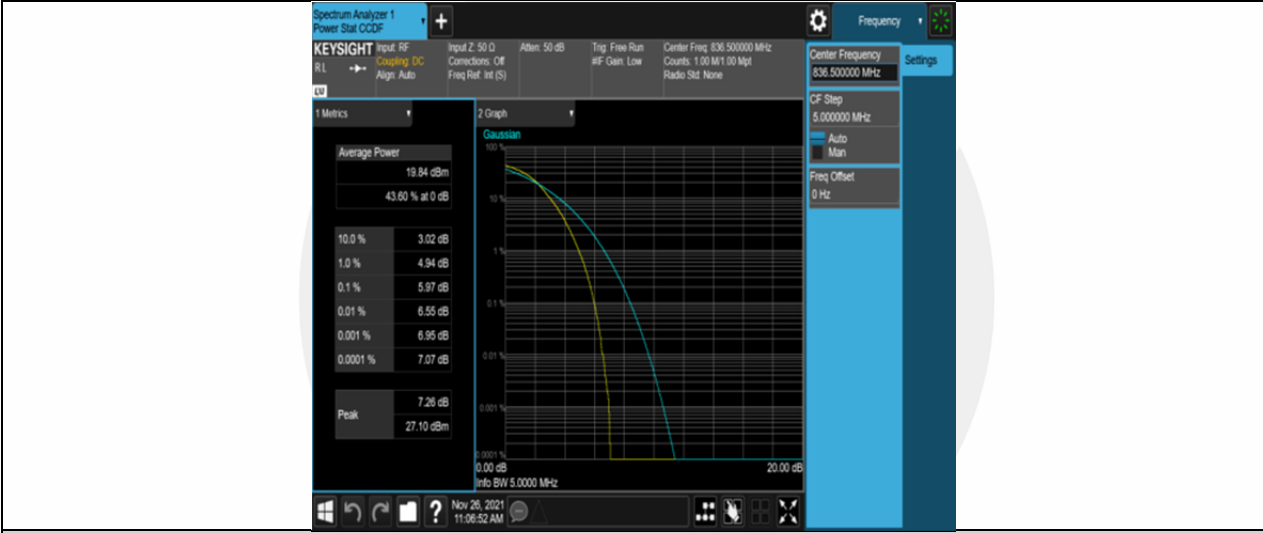
Band5-10MHz-QPSK-20525-50RB#0



Band5-10MHz-QPSK-20600-50RB#0



Band5-10MHz-16QAM-20450-50RB#0



Band5-10MHz-16QAM-20525-50RB#0



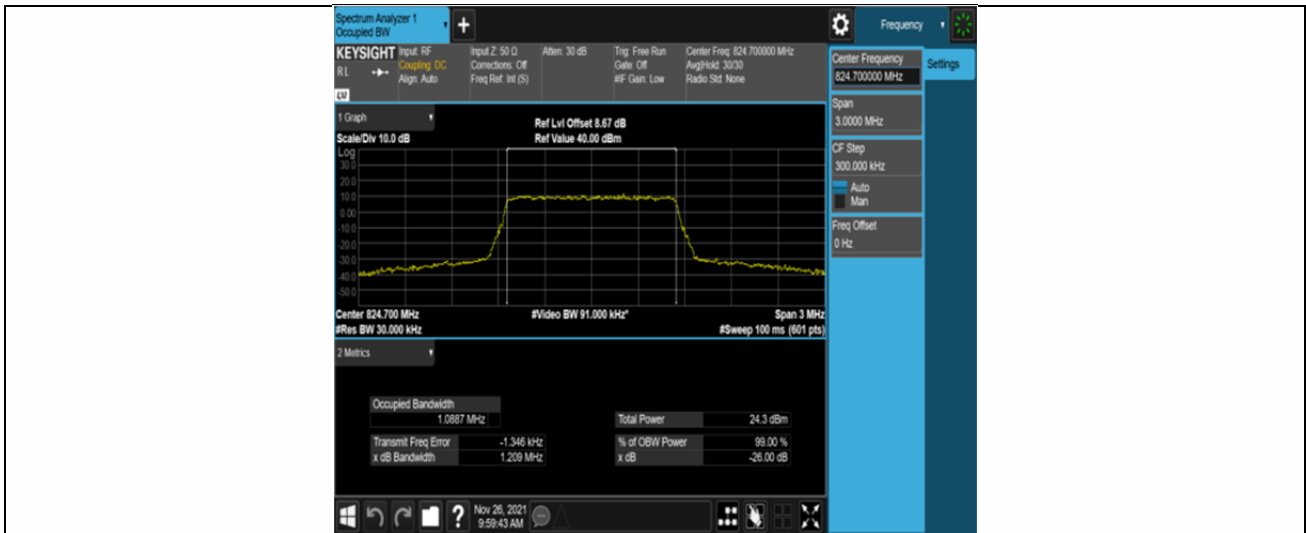
Band5-10MHz-16QAM-20600-50RB#0

Appendix C: 26dB Bandwidth and Occupied Bandwidth

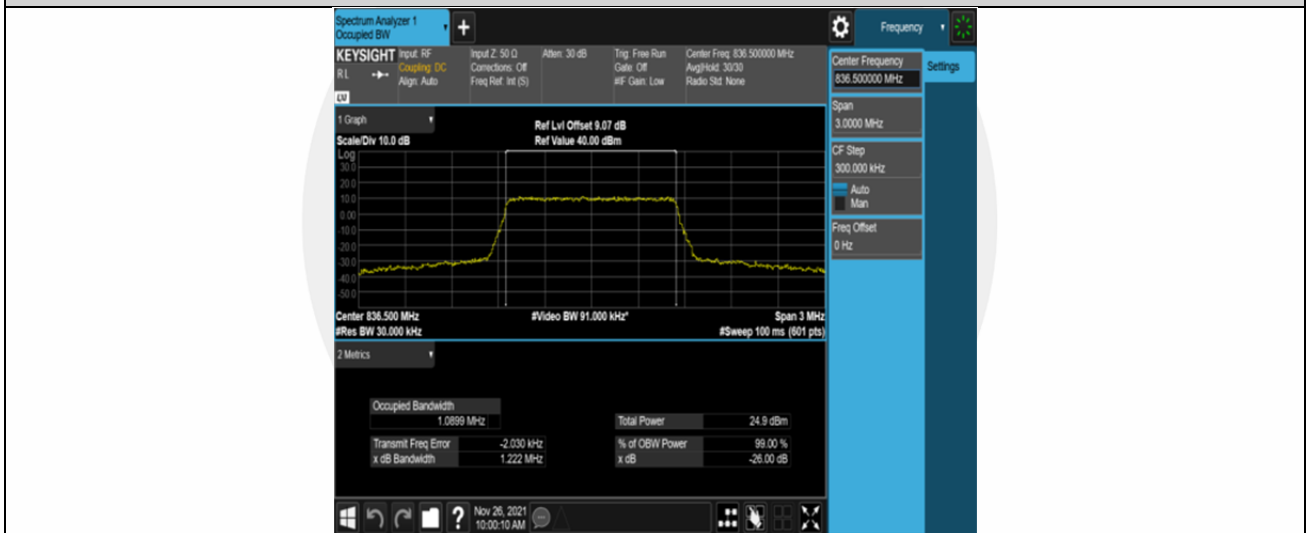
Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band5	1.4MHz	QPSK	20407	6RB#0	1.0887	1.209	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	1.0899	1.222	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	1.0895	1.226	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	1.0889	1.223	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	1.0894	1.226	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	1.0901	1.230	PASS
Band5	3MHz	QPSK	20415	15RB#0	2.6992	2.901	PASS
Band5	3MHz	QPSK	20525	15RB#0	2.6969	2.892	PASS
Band5	3MHz	QPSK	20635	15RB#0	2.7002	2.929	PASS
Band5	3MHz	16QAM	20415	15RB#0	2.6909	2.914	PASS
Band5	3MHz	16QAM	20525	15RB#0	2.6898	2.912	PASS
Band5	3MHz	16QAM	20635	15RB#0	2.6928	2.924	PASS
Band5	5MHz	QPSK	20425	25RB#0	4.4973	4.890	PASS
Band5	5MHz	QPSK	20525	25RB#0	4.4977	4.861	PASS
Band5	5MHz	QPSK	20625	25RB#0	4.4985	4.843	PASS
Band5	5MHz	16QAM	20425	25RB#0	4.5005	4.839	PASS
Band5	5MHz	16QAM	20525	25RB#0	4.5049	4.841	PASS
Band5	5MHz	16QAM	20625	25RB#0	4.4964	4.851	PASS
Band5	10MHz	QPSK	20450	50RB#0	8.9800	9.563	PASS
Band5	10MHz	QPSK	20525	50RB#0	8.9834	9.567	PASS
Band5	10MHz	QPSK	20600	50RB#0	8.9668	9.500	PASS
Band5	10MHz	16QAM	20450	50RB#0	8.9646	9.527	PASS
Band5	10MHz	16QAM	20525	50RB#0	8.9658	9.531	PASS
Band5	10MHz	16QAM	20600	50RB#0	8.9593	9.505	PASS

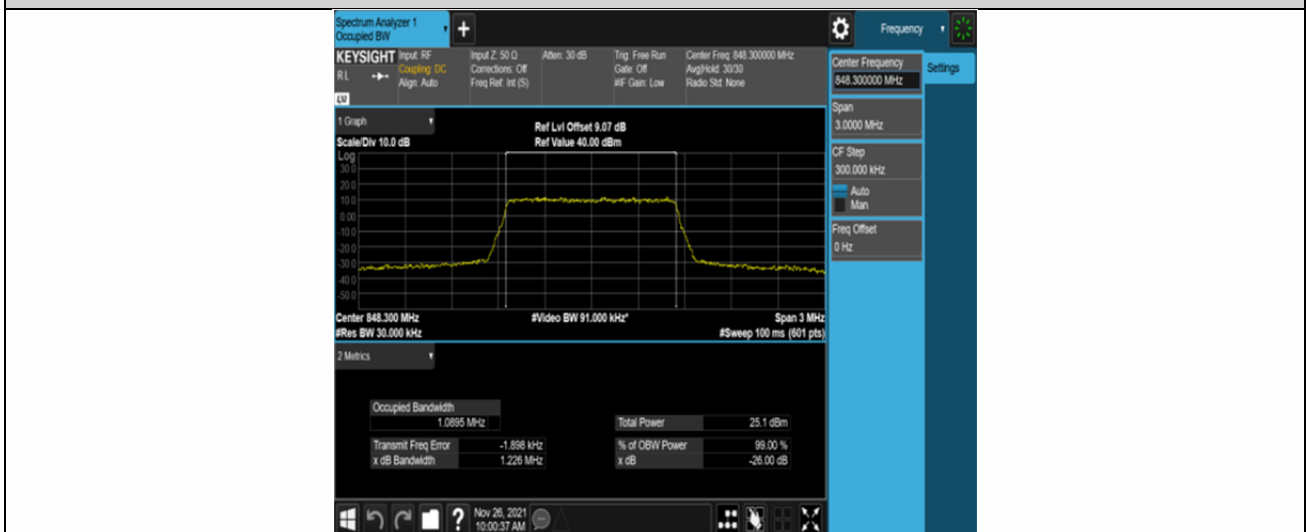
Test Graphs



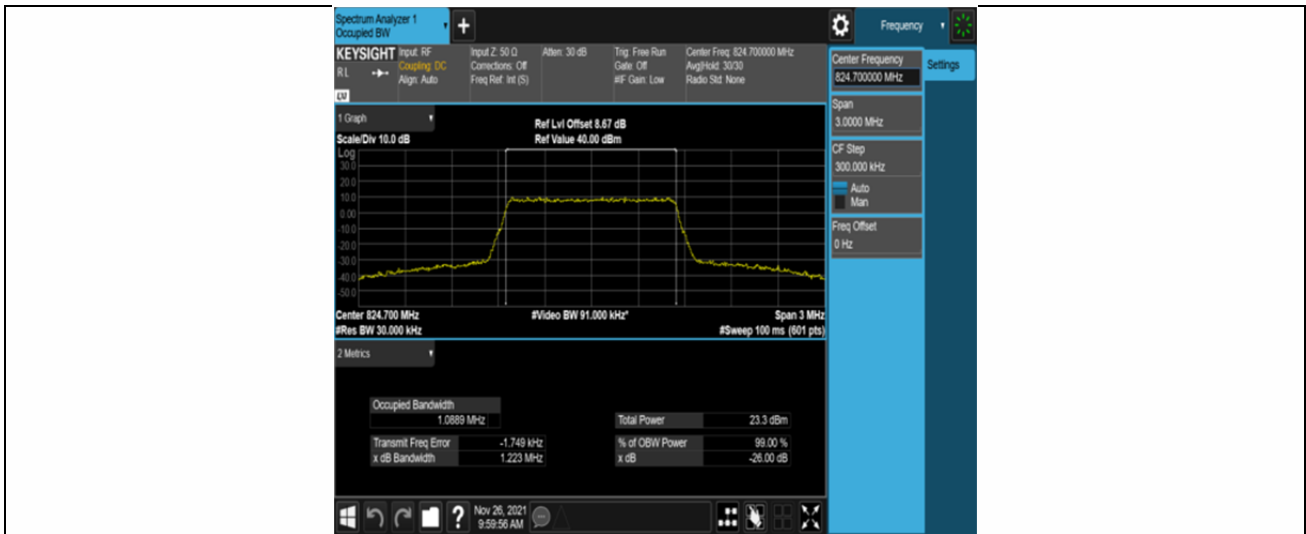
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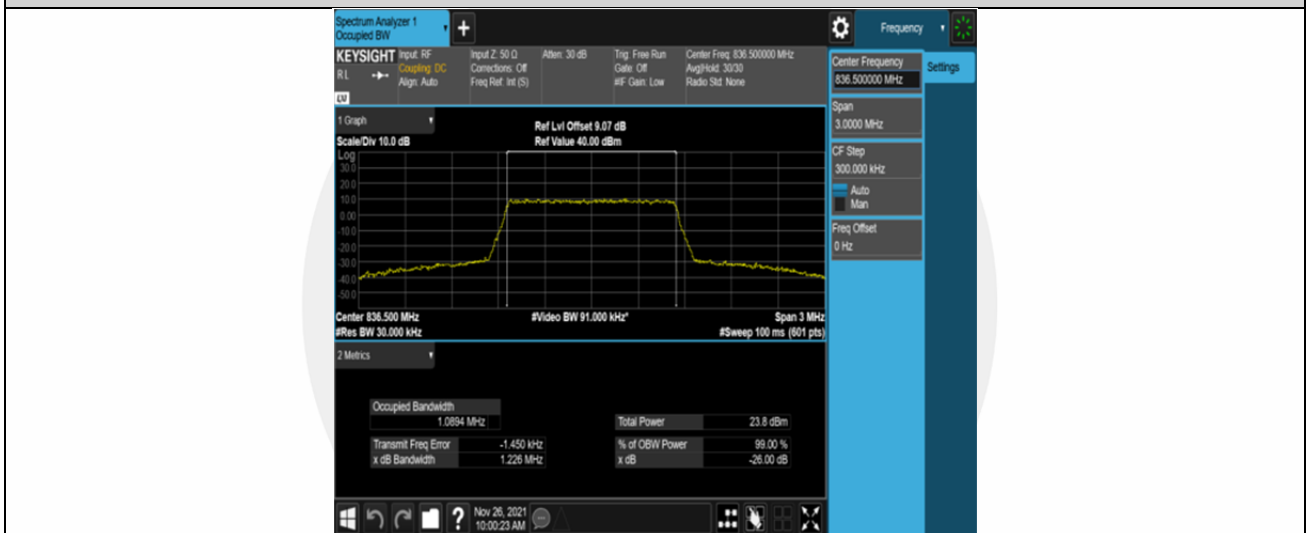
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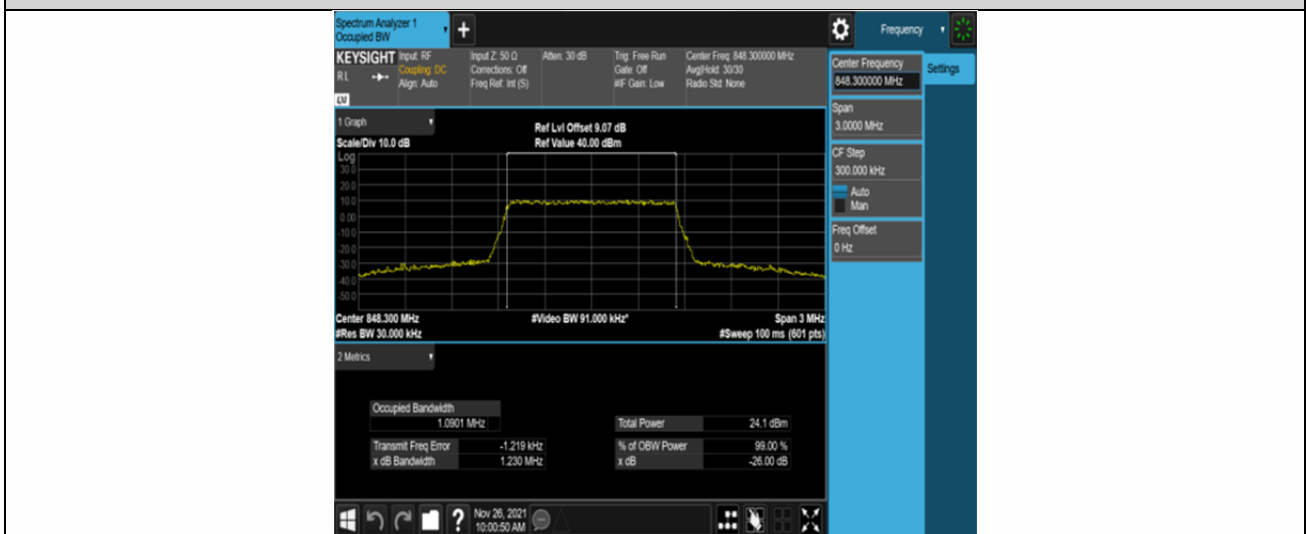
Band5-1.4MHz-QPSK-20643-6RB#0



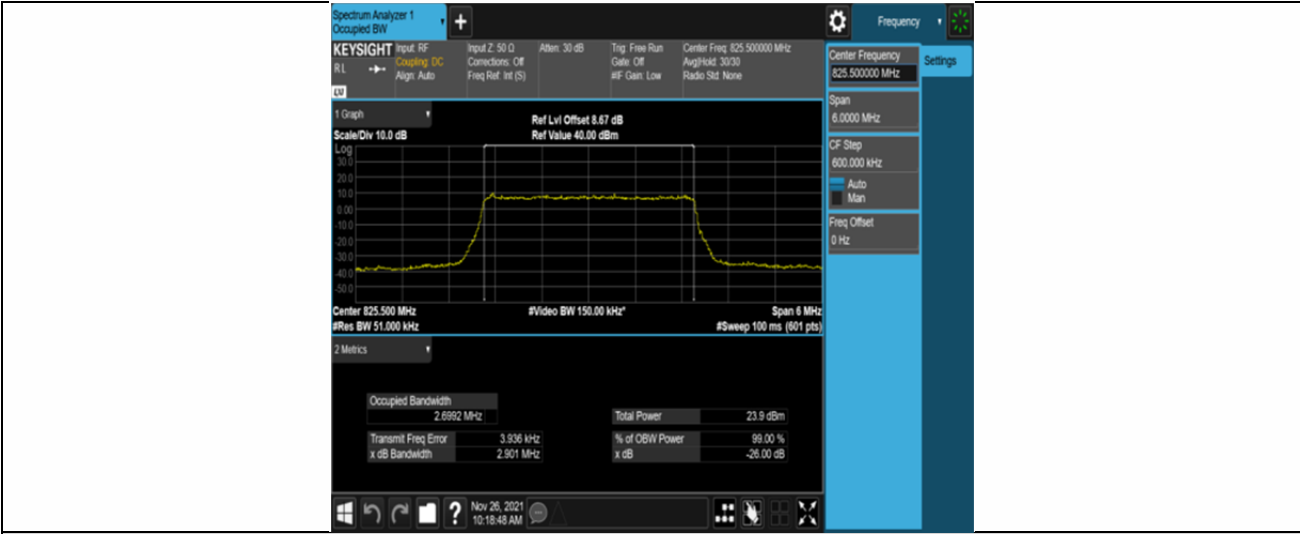
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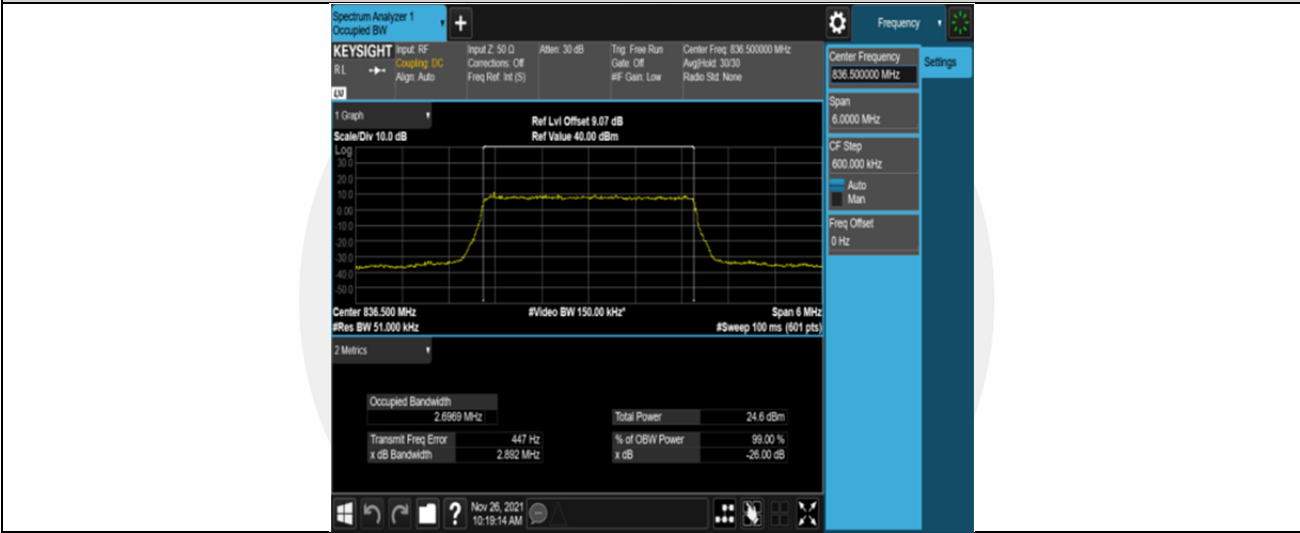
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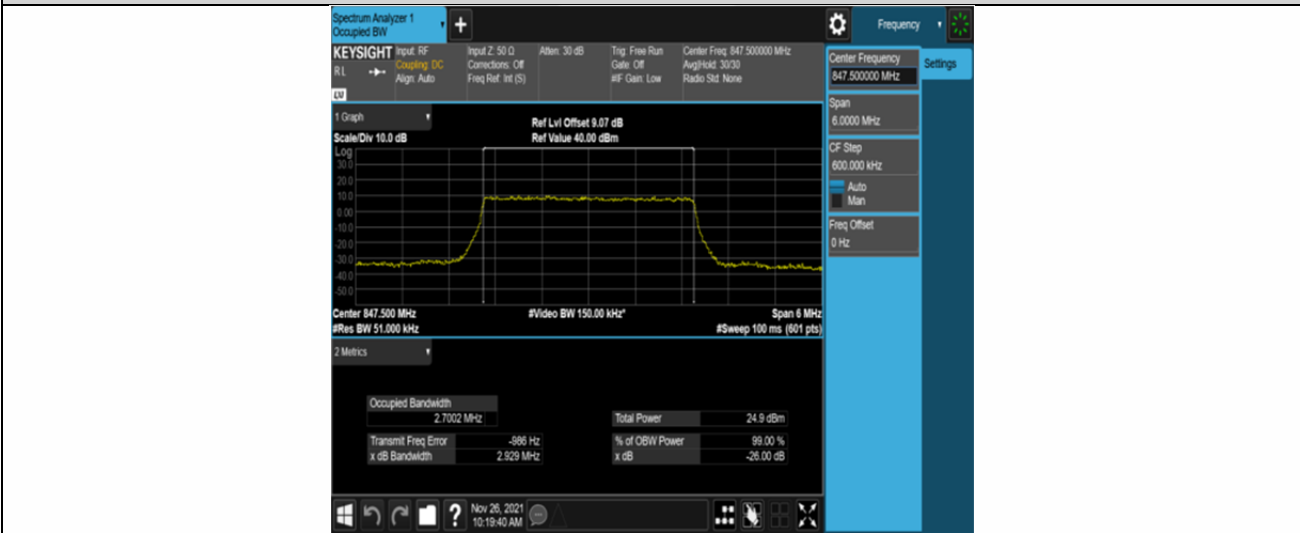
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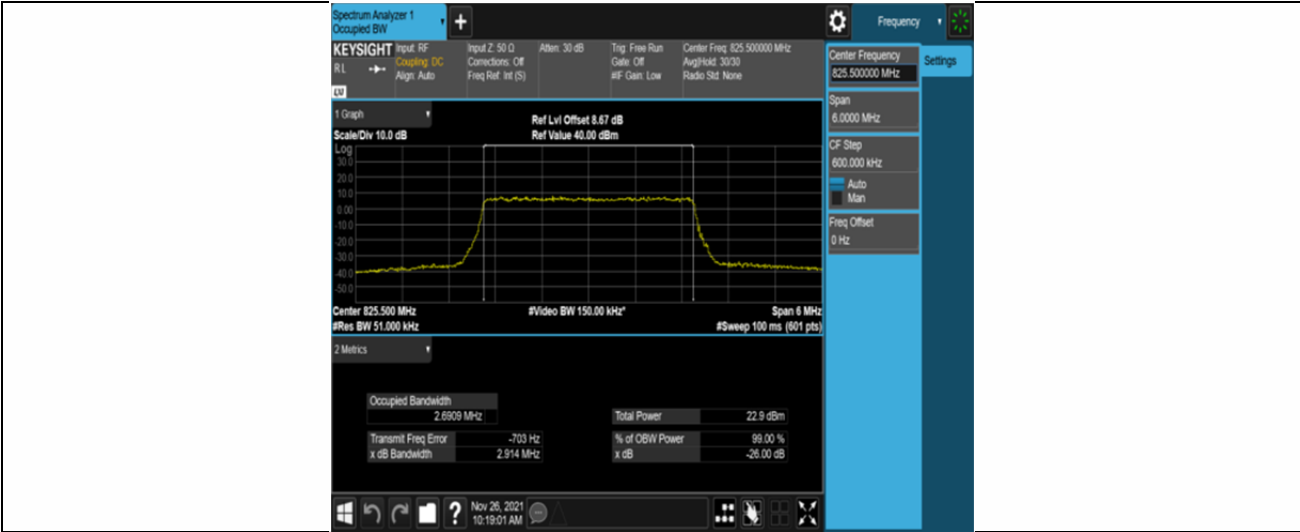
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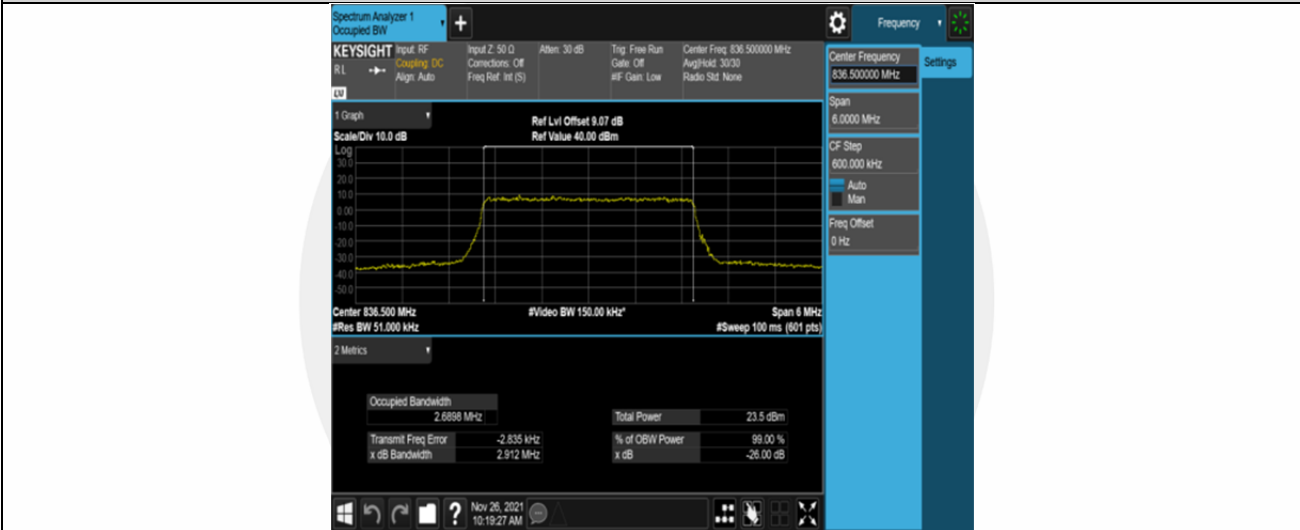
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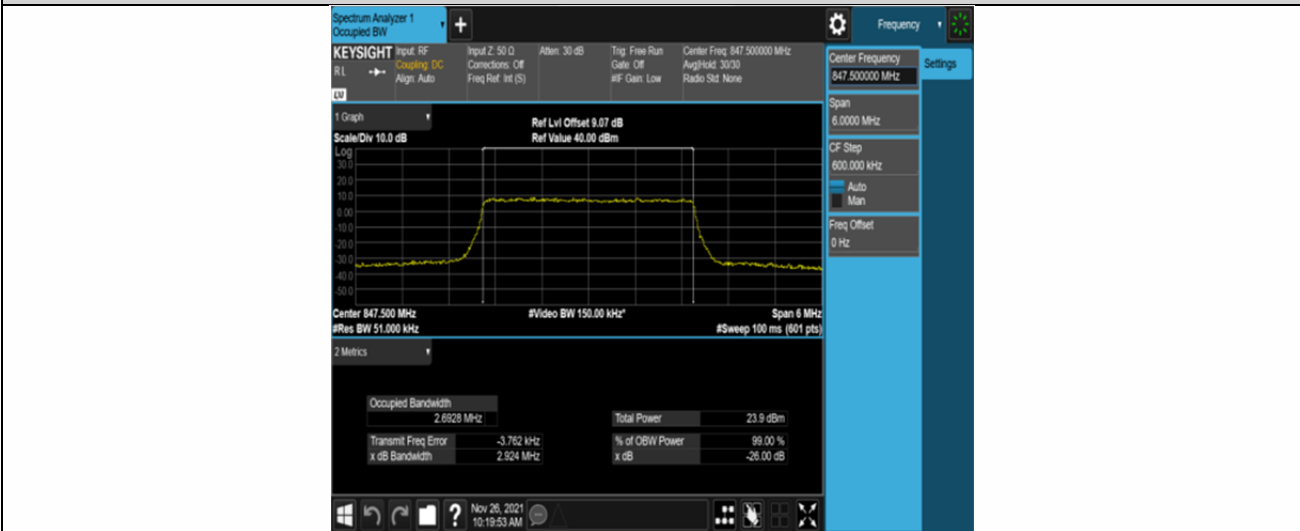
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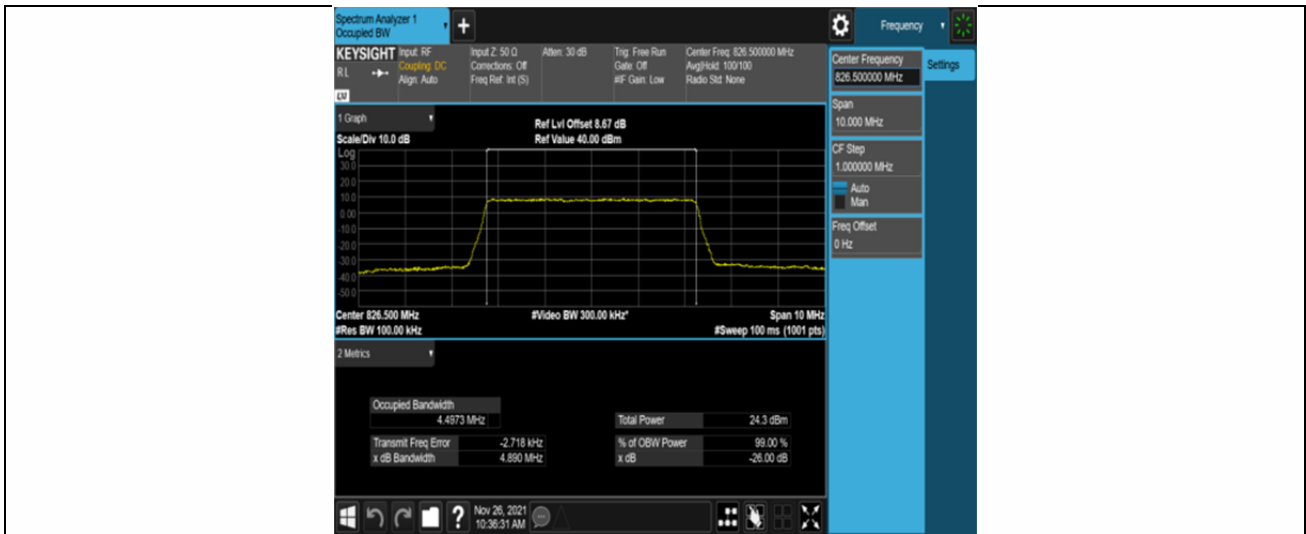
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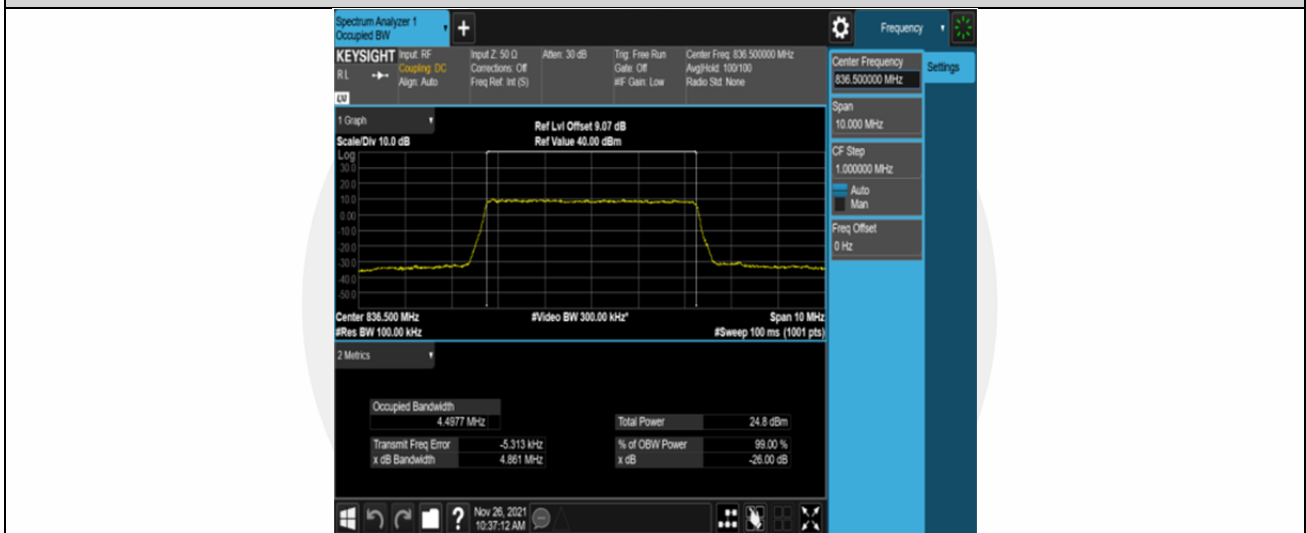
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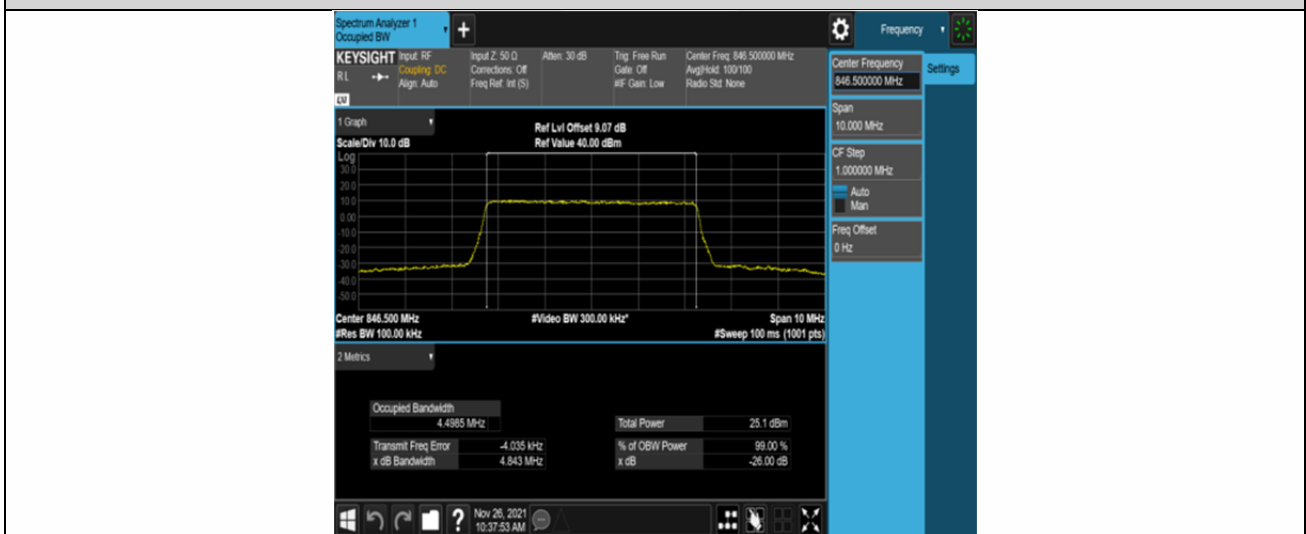
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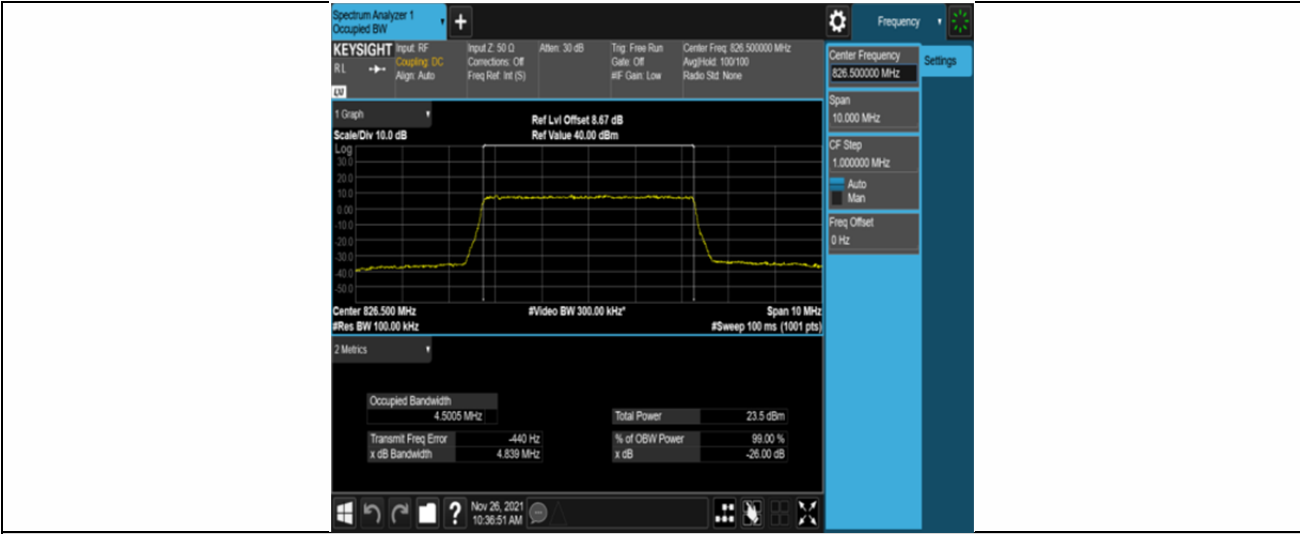
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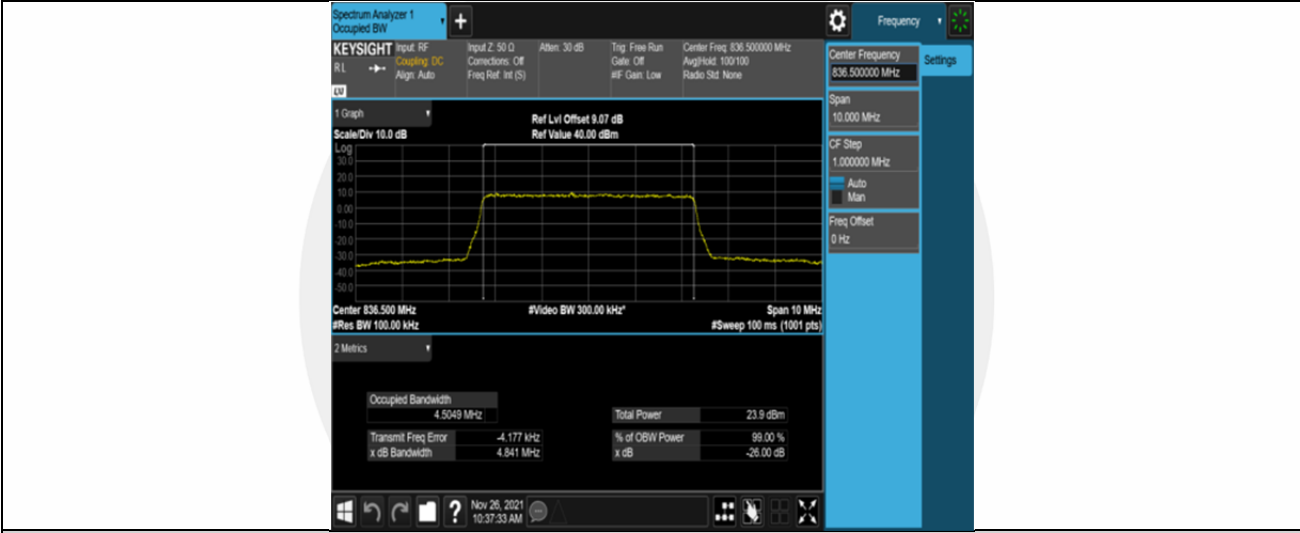
Band5-5MHz-QPSK-20525-25RB#0



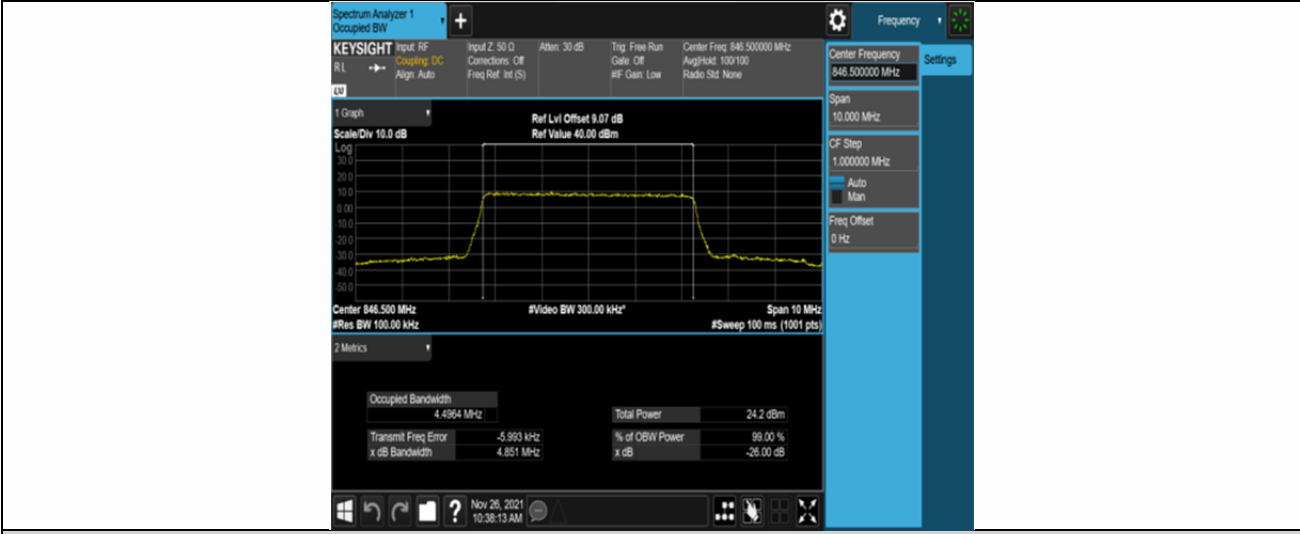
Band5-5MHz-QPSK-20625-25RB#0



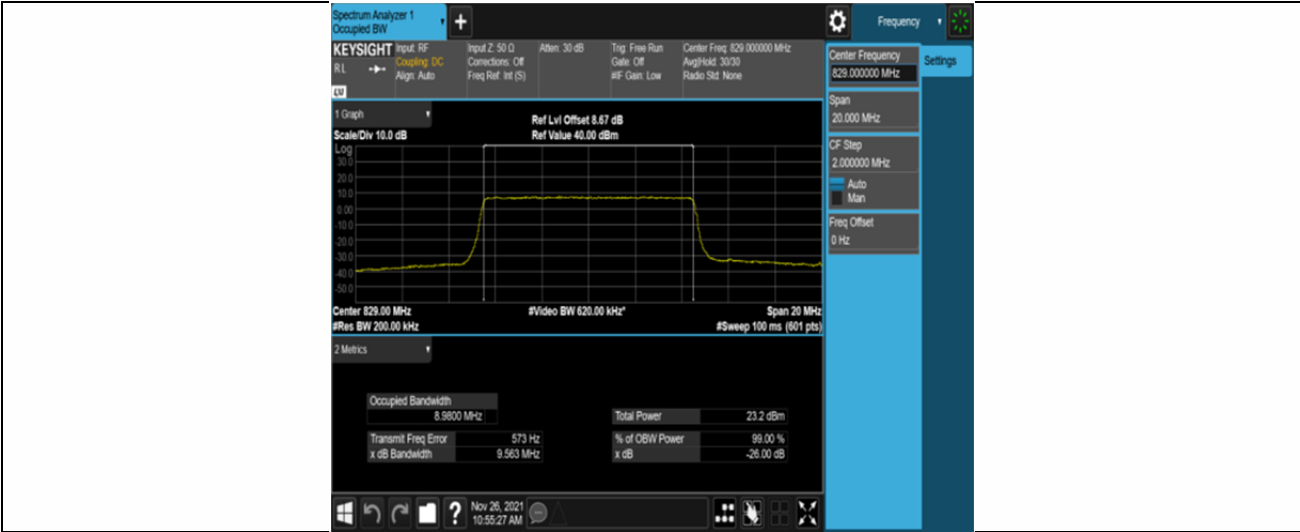
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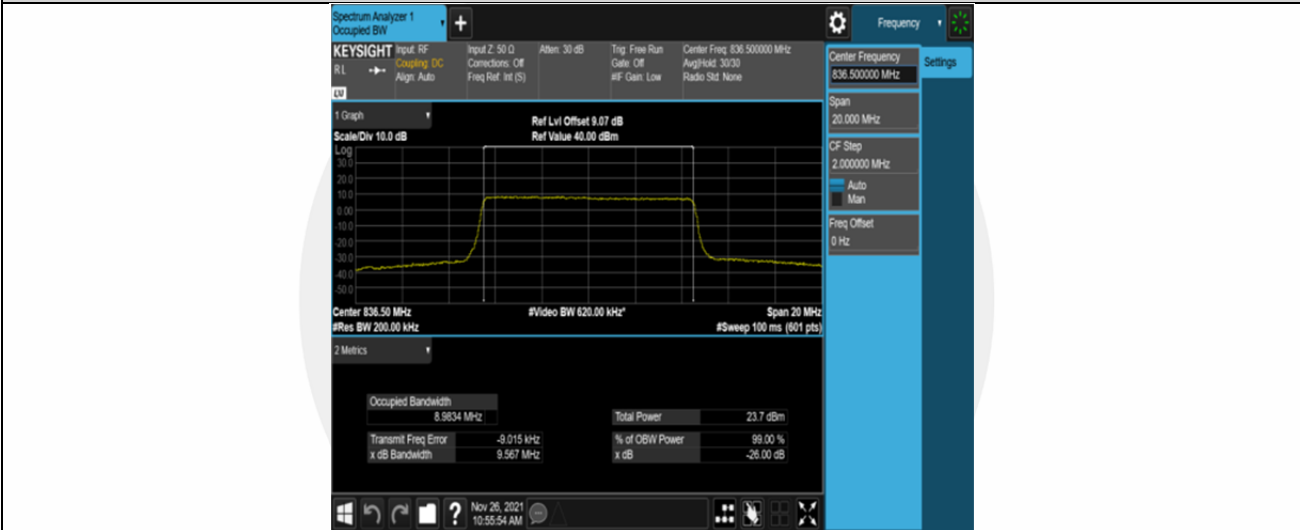
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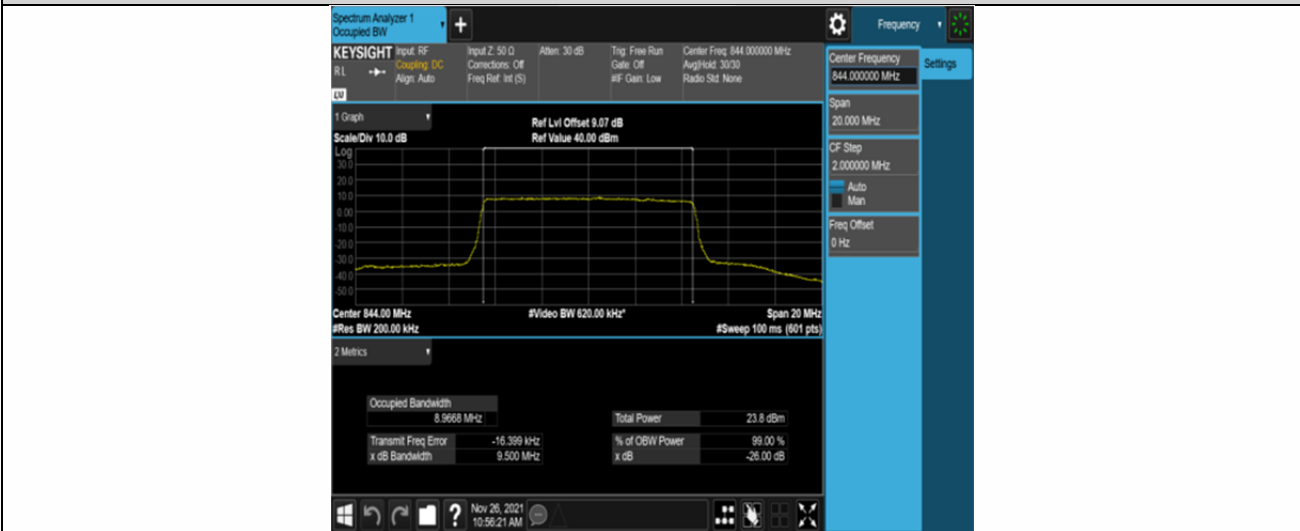
Band5-5MHz-16QAM-20625-25RB#0



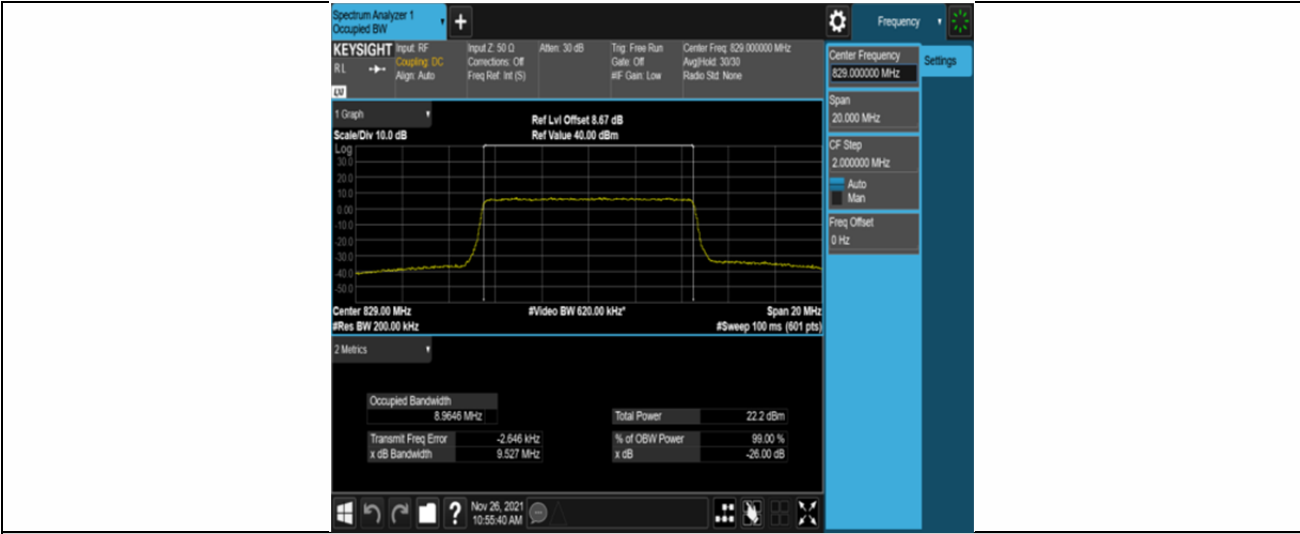
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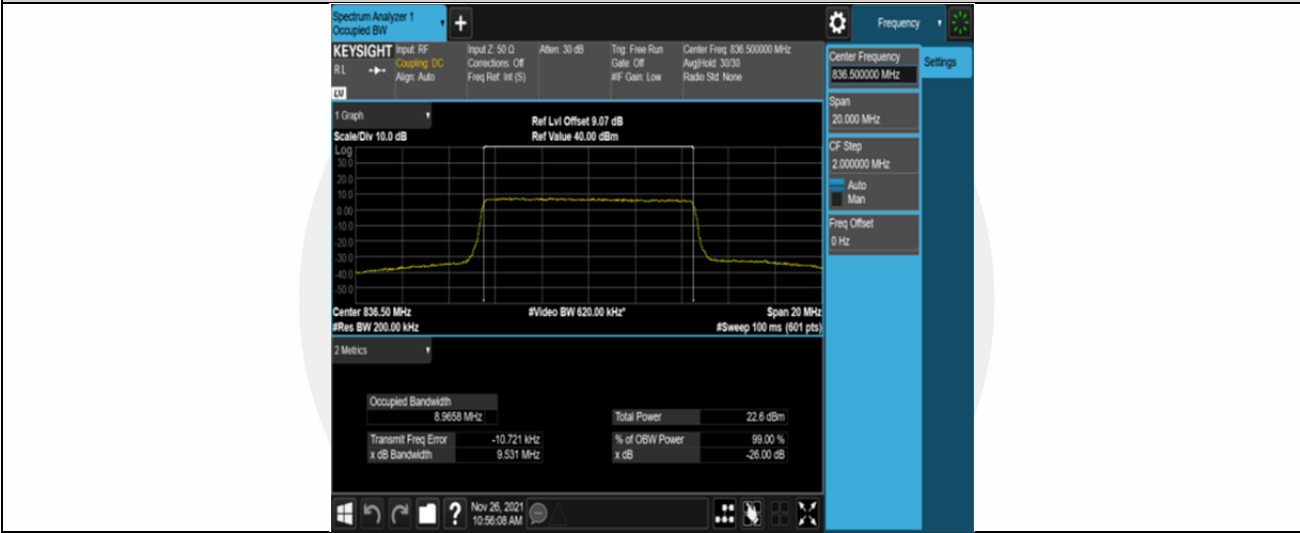
Band5-10MHz-QPSK-20525-50RB#0



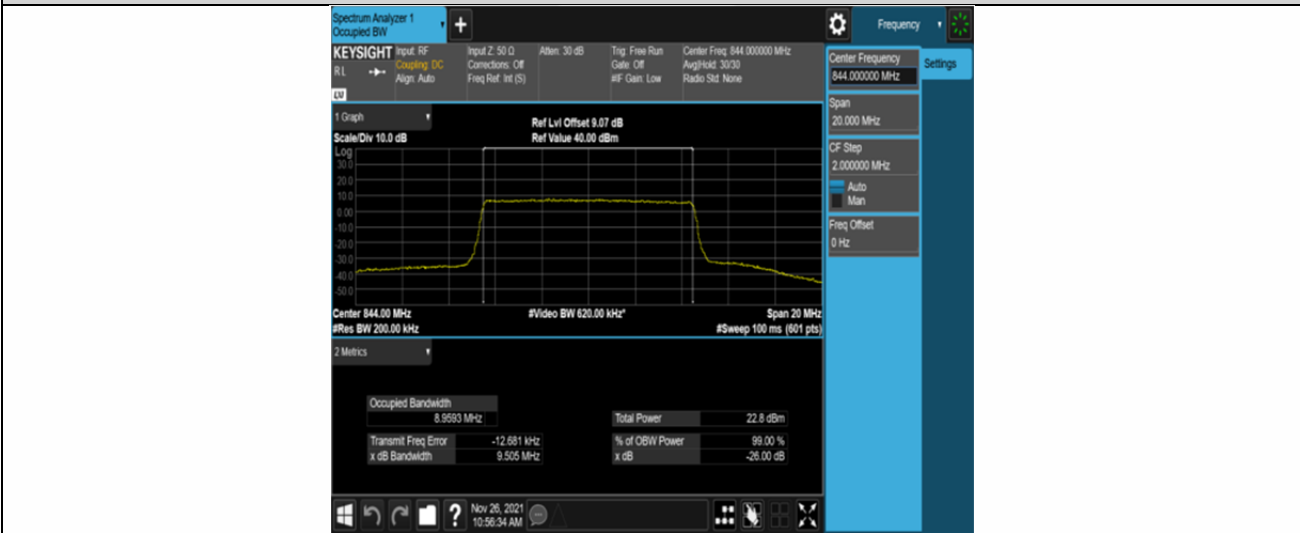
Band5-10MHz-QPSK-20600-50RB#0



Band5-10MHz-16QAM-20450-50RB#0



Band5-10MHz-16QAM-20525-50RB#0



Band5-10MHz-16QAM-20600-50RB#0

Appendix D: Band Edge

Test Result

Band	Bandwidth	Modulation	Channel	RB Config.	Result (dBm)	Verdict
Band5	1.4MHz	QPSK	20407	6RB#0	-33.11	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	-32.24	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	-34.26	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	-32.23	PASS
Band5	3MHz	QPSK	20415	15RB#0	-24.37	PASS
Band5	3MHz	QPSK	20635	15RB#0	-25.23	PASS
Band5	3MHz	16QAM	20415	15RB#0	-26.79	PASS
Band5	3MHz	16QAM	20635	15RB#0	-26.39	PASS
Band5	5MHz	QPSK	20425	25RB#0	-26.78	PASS
Band5	5MHz	QPSK	20625	25RB#0	-26.81	PASS
Band5	5MHz	16QAM	20425	25RB#0	-28.66	PASS
Band5	5MHz	16QAM	20625	25RB#0	-28.10	PASS
Band5	10MHz	QPSK	20450	50RB#0	-29.65	PASS
Band5	10MHz	QPSK	20600	50RB#0	-29.87	PASS
Band5	10MHz	16QAM	20450	50RB#0	-32.14	PASS
Band5	10MHz	16QAM	20600	50RB#0	-30.85	PASS