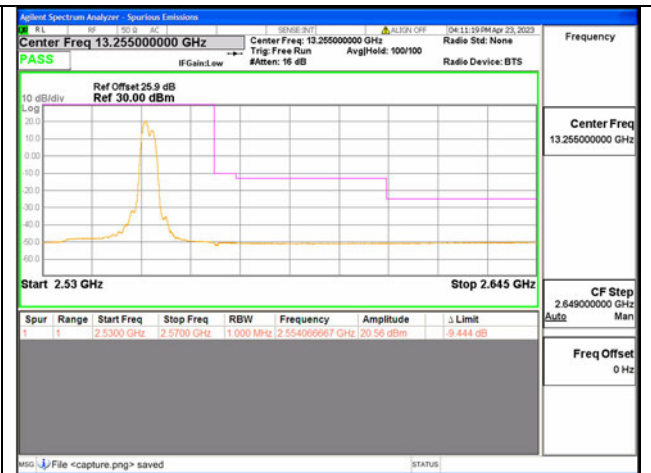
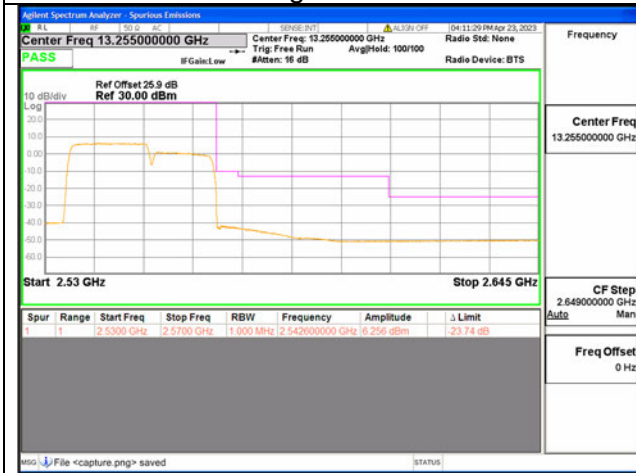




7C / 20+15MHz / High CH / QPSK / 1#0-1#74



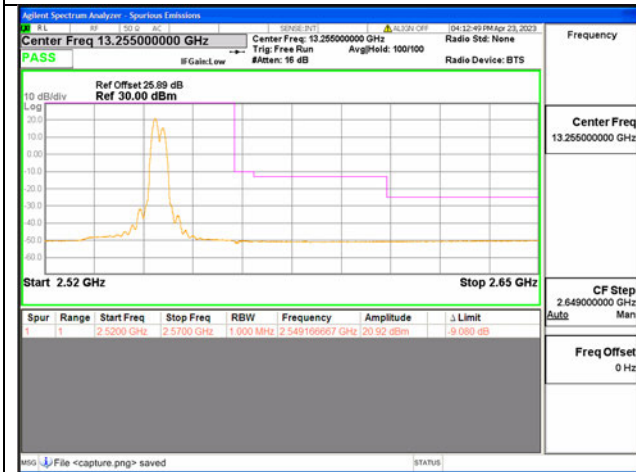
7C / 20+15MHz / High CH / QPSK / 1#99-1#0



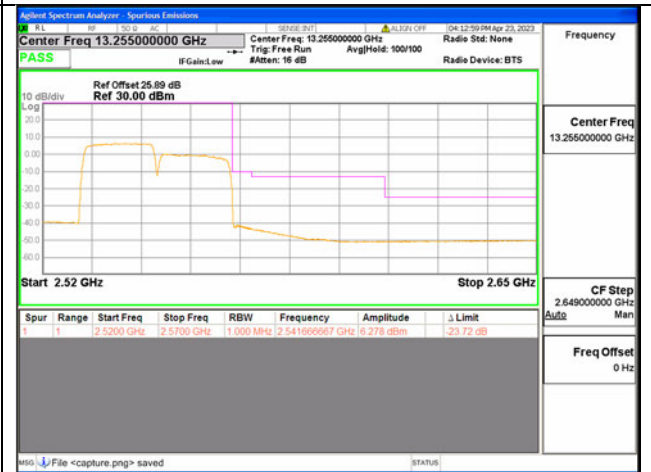
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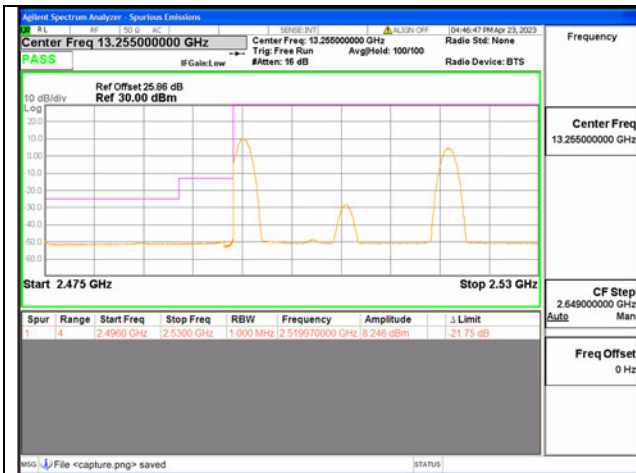
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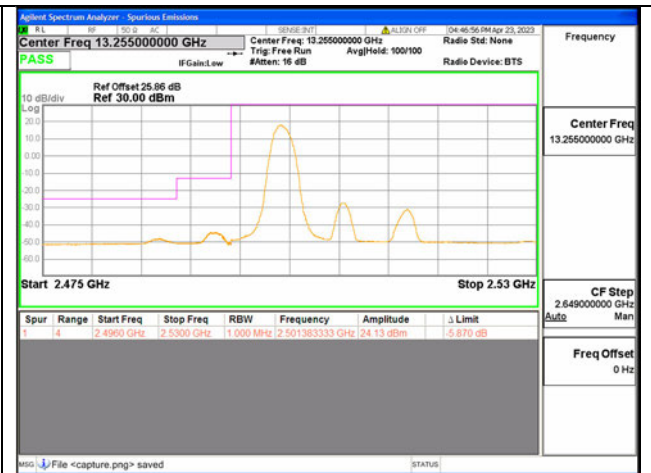
7C / 20+20MHz / High CH / QPSK / 1#99-1#0



7C / 20+20MHz / High CH / QPSK / 100#0-100#0



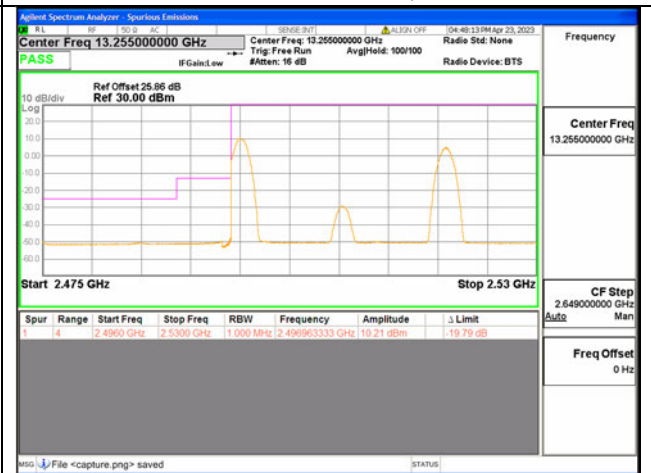
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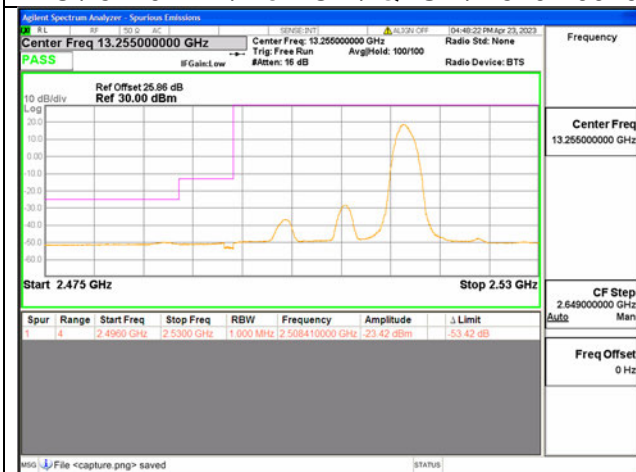
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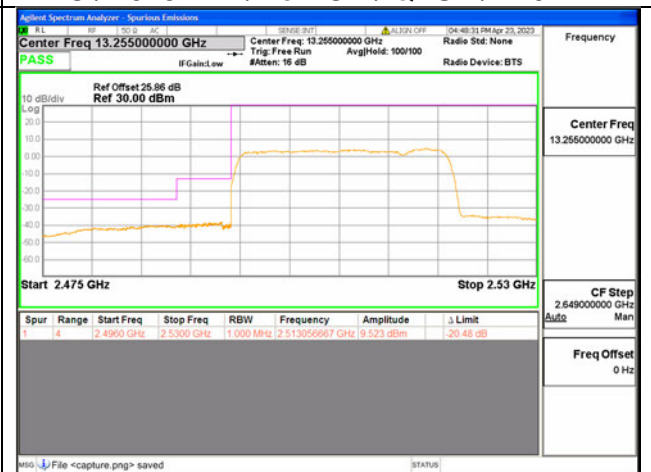
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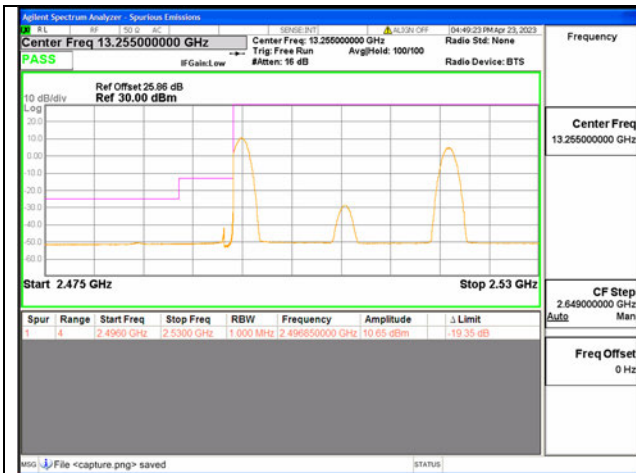
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41C / 20+5MHz / Low CH / QPSK / 1#99-1#0



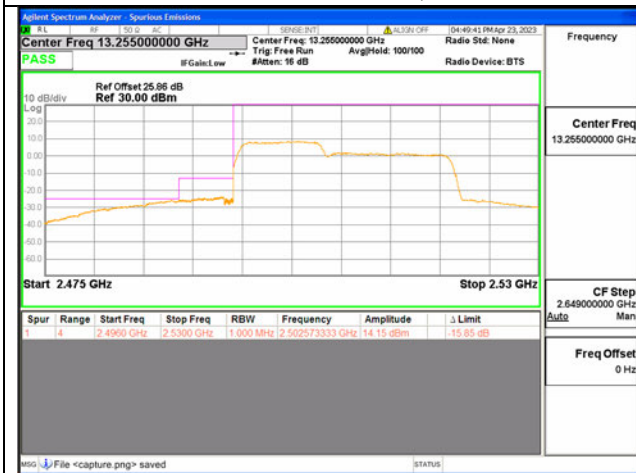
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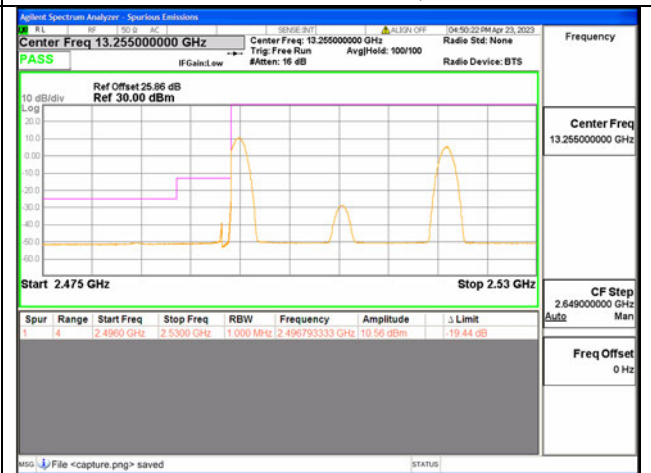
41C / 10+15MHz / Low CH / QPSK / 1#0-1#74



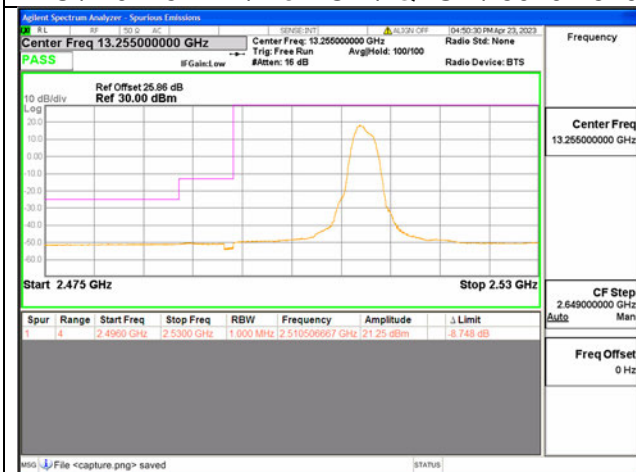
41C / 10+15MHz / Low CH / QPSK / 1#49-1#0



41C / 10+15MHz / Low CH / QPSK / 50#0-75#0



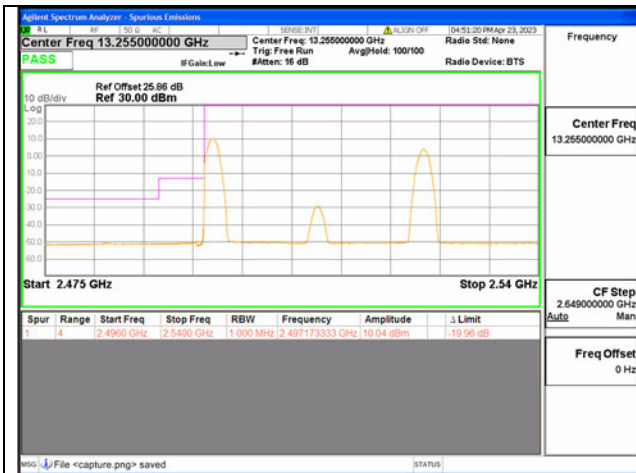
41C / 15+10MHz / Low CH / QPSK / 1#0-1#49



41C / 15+10MHz / Low CH / QPSK / 1#74-1#0



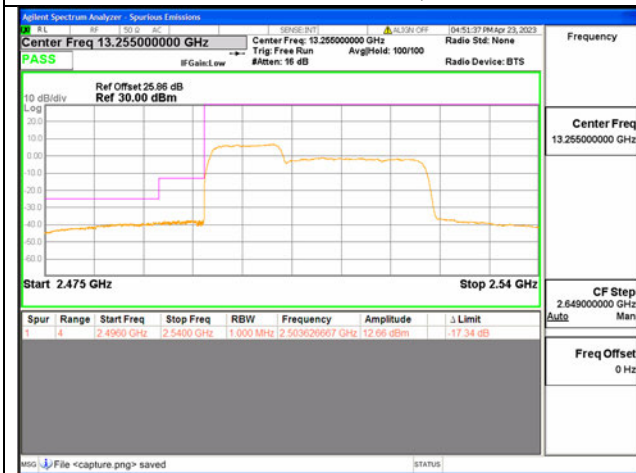
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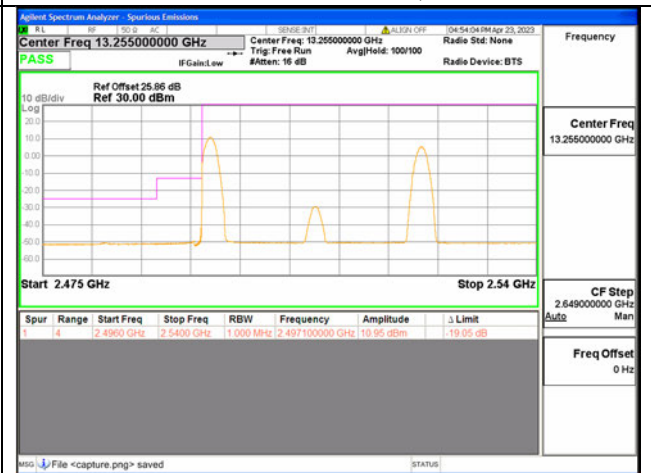
41C / 10+20MHz / Low CH / QPSK / 1#0-1#99



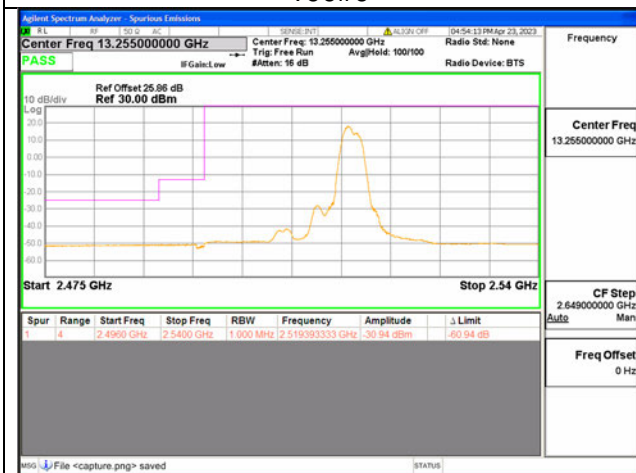
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41C / 10+20MHz / Low CH / QPSK / 50#0-100#0



41C / 20+10MHz / Low CH / QPSK / 1#0-1#49



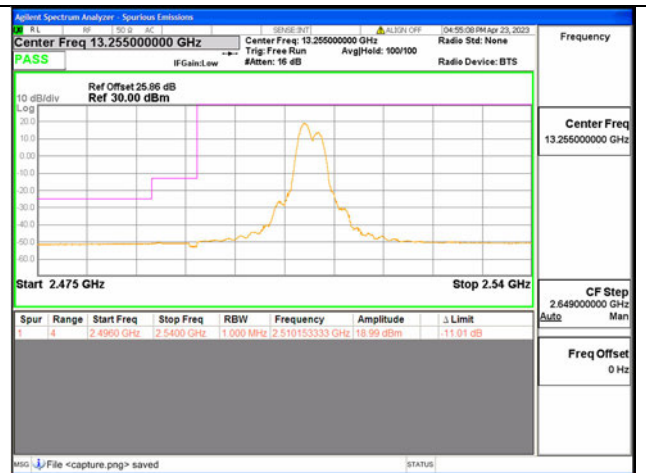
41C / 20+10MHz / Low CH / QPSK / 1#99-1#0



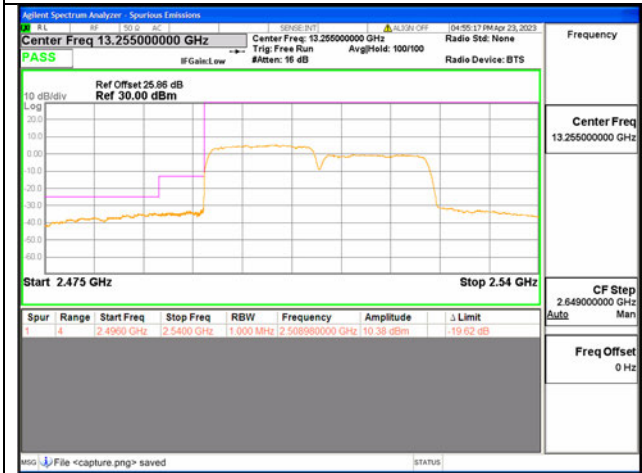
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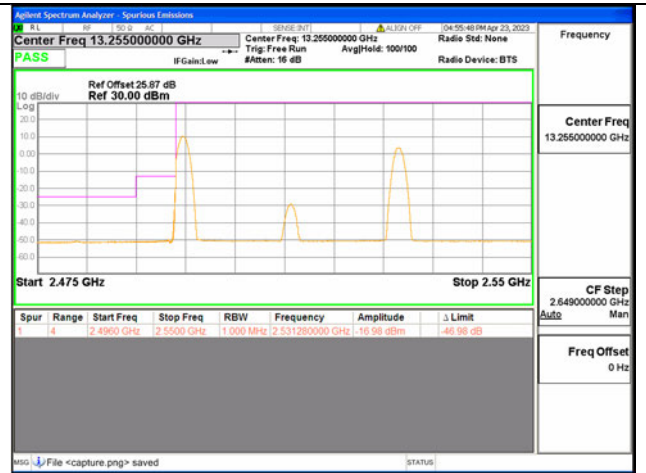
41C / 15+15MHz / Low CH / QPSK / 1#0-1#74



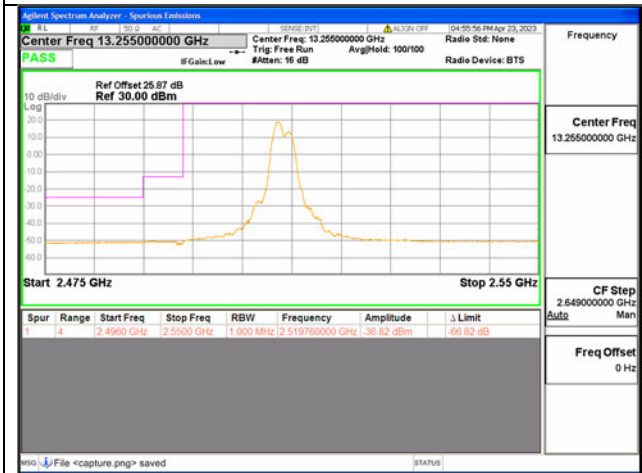
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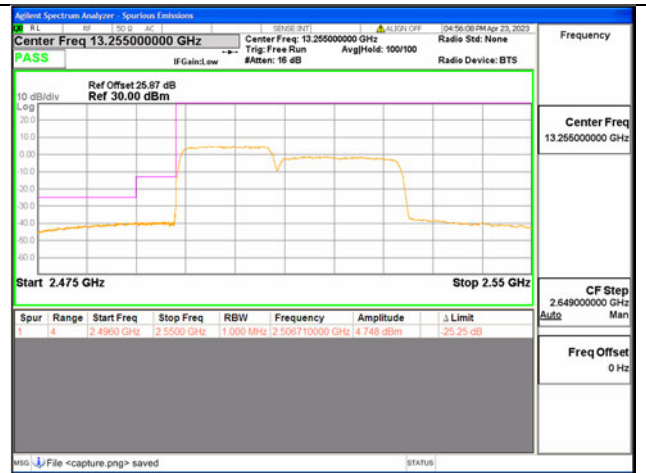
41C / 15+15MHz / Low CH / QPSK / 75#0-75#0



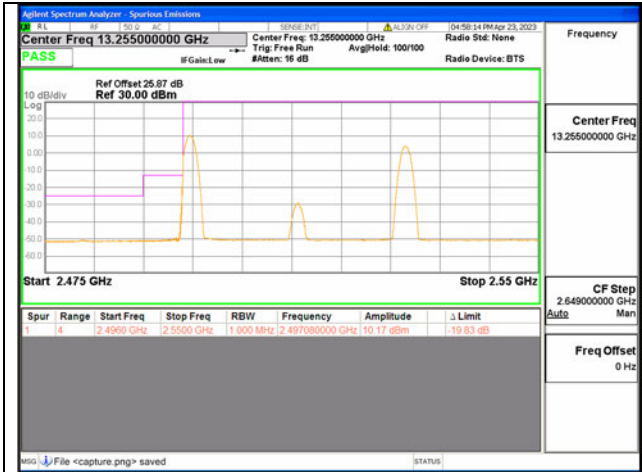
41C / 15+20MHz / Low CH / QPSK / 1#0-1#99



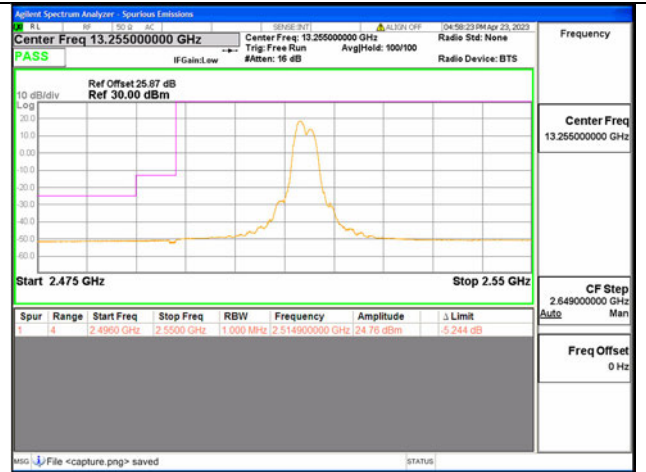
41C / 15+20MHz / Low CH / QPSK / 1#74-1#0



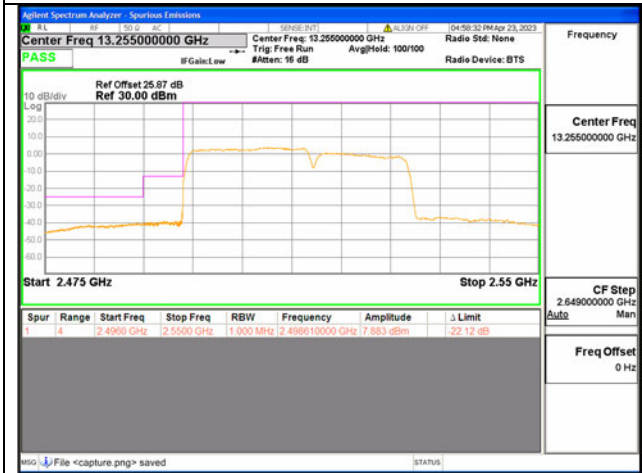
41C / 15+20MHz / Low CH / QPSK / 75#0-100#0



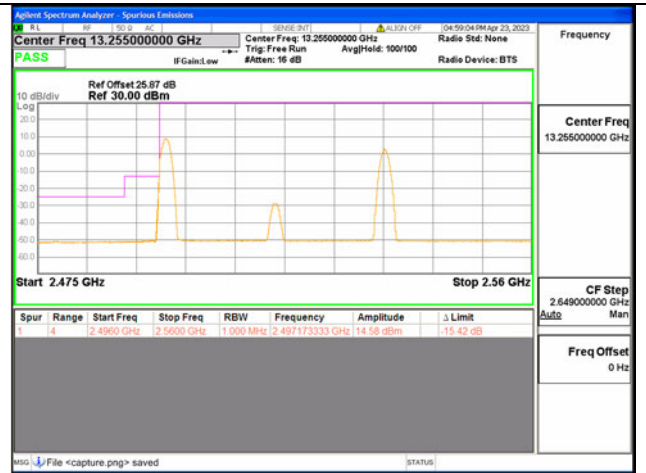
41C / 20+15MHz / Low CH / QPSK / 1#0-1#74



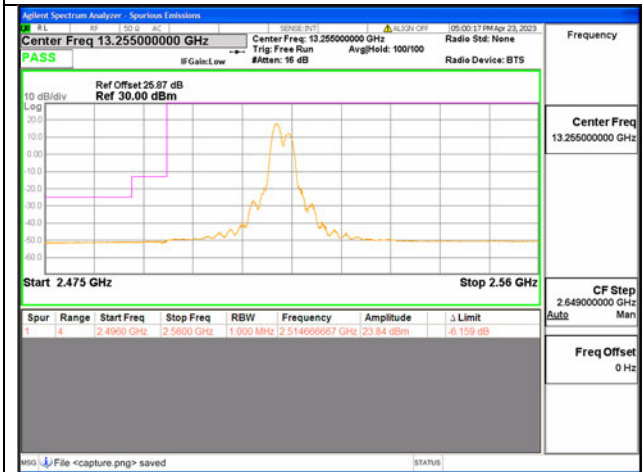
41C / 20+15MHz / Low CH / QPSK / 1#99-1#0



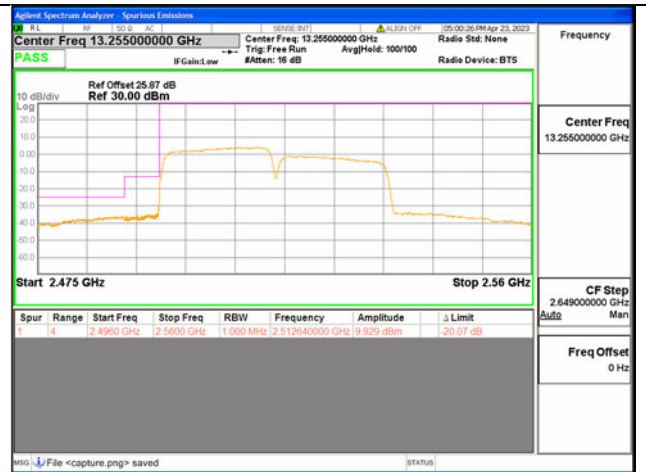
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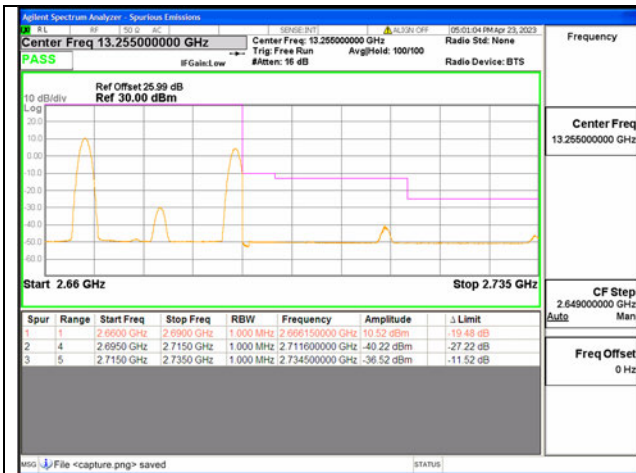
41C / 20+20MHz / Low CH / QPSK / 1#0-1#99



41C / 20+20MHz / Low CH / QPSK / 1#99-1#0



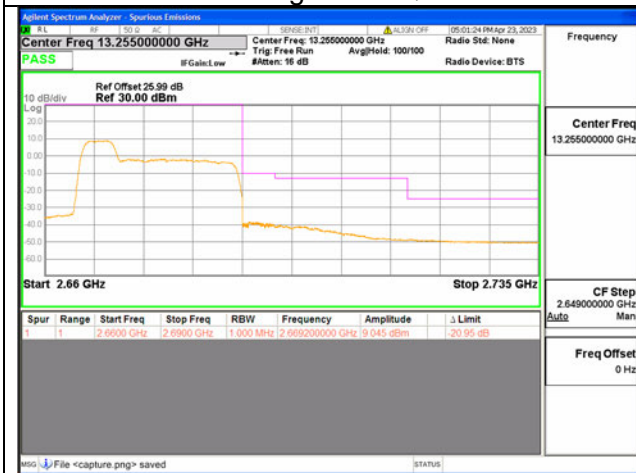
41C / 20+20MHz / Low CH / QPSK / 100#0-100#0



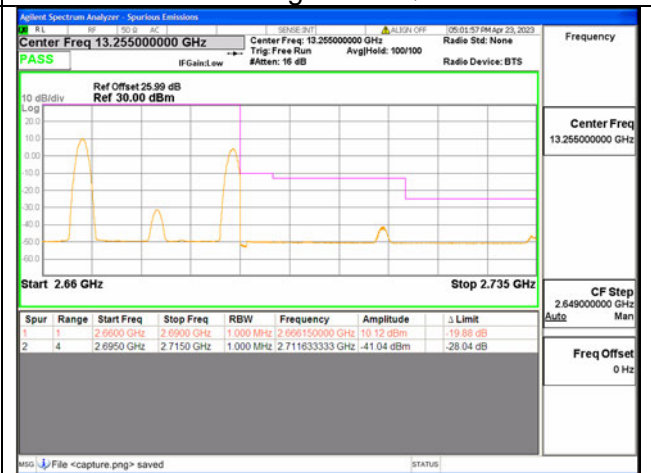
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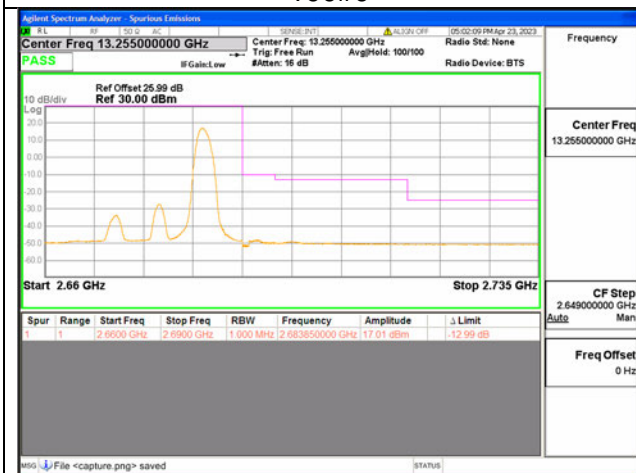
41C / 5+20MHz / High CH / QPSK / 1#24-1#0



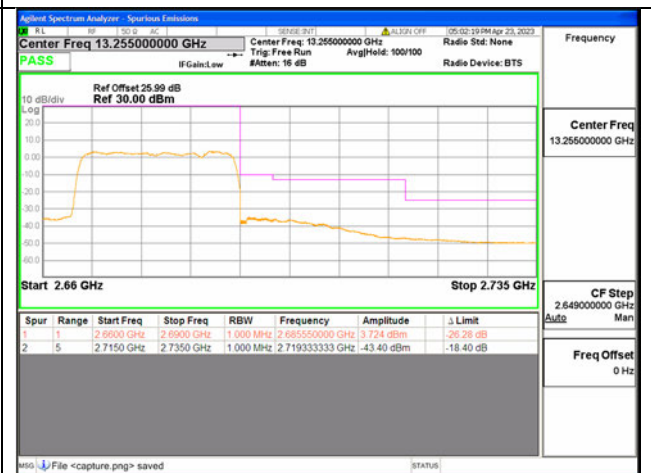
41C / 5+20MHz / High CH / QPSK / 25#0-100#



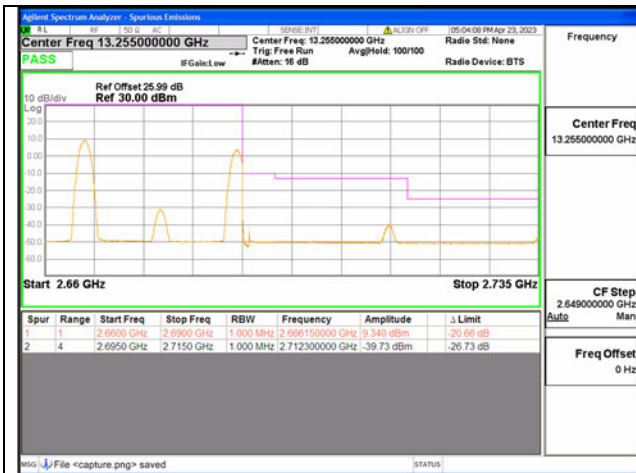
41C / 20+5MHz / High CH / QPSK / 1#0-1#24



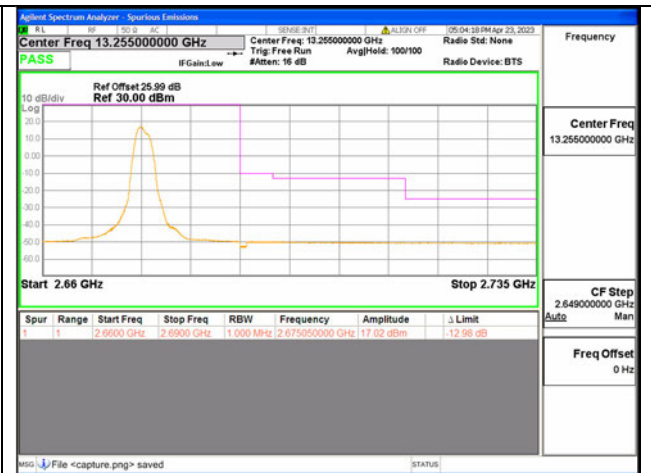
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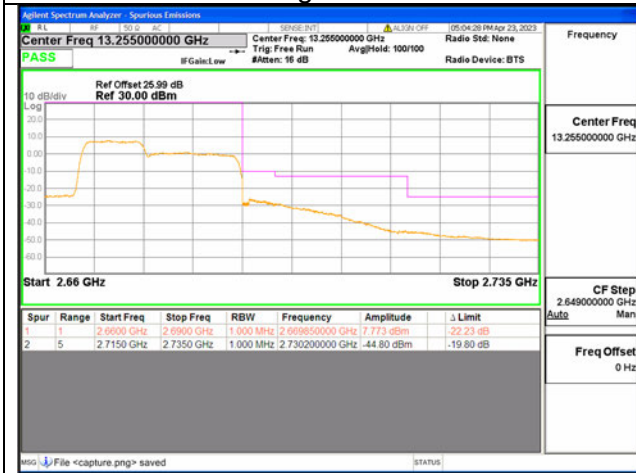
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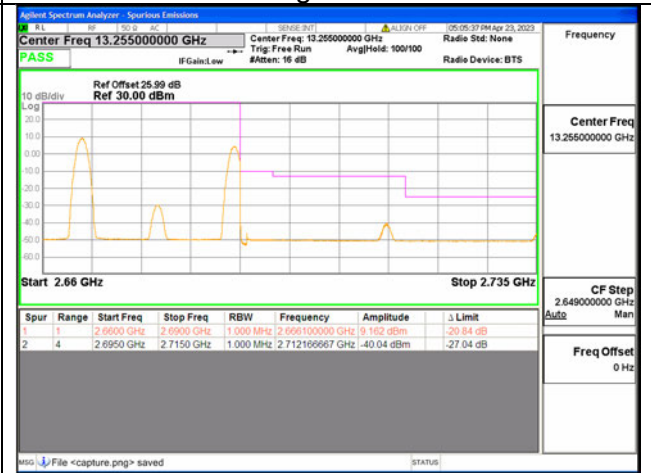
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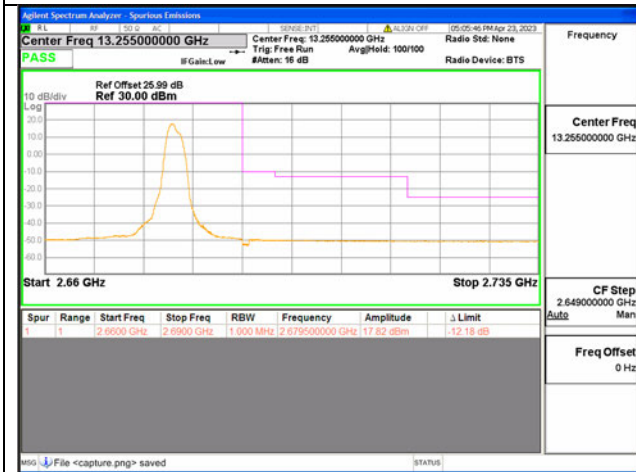
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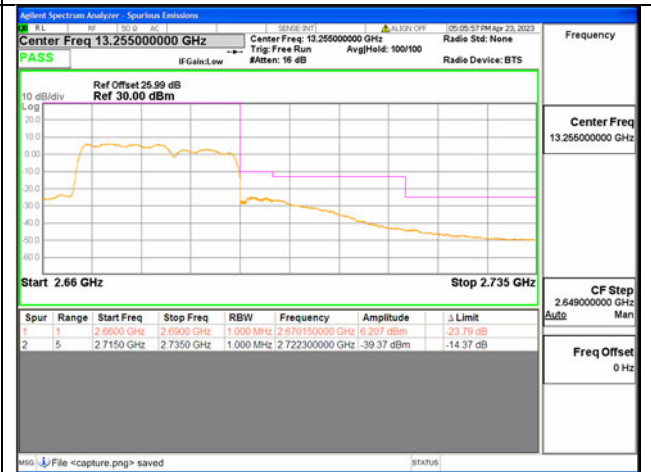
41C / 10+15MHz / High CH / QPSK / 50#0-75#0



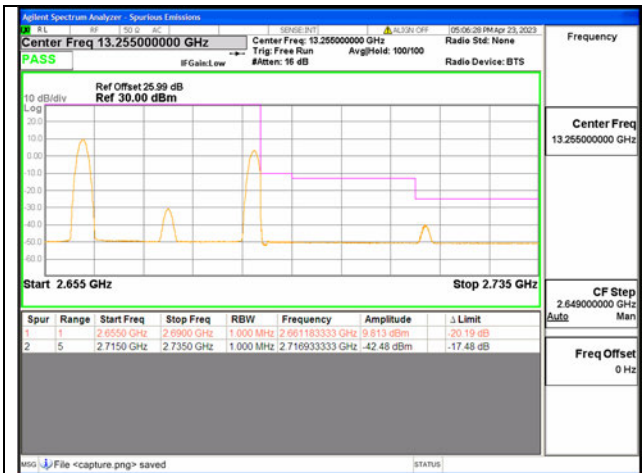
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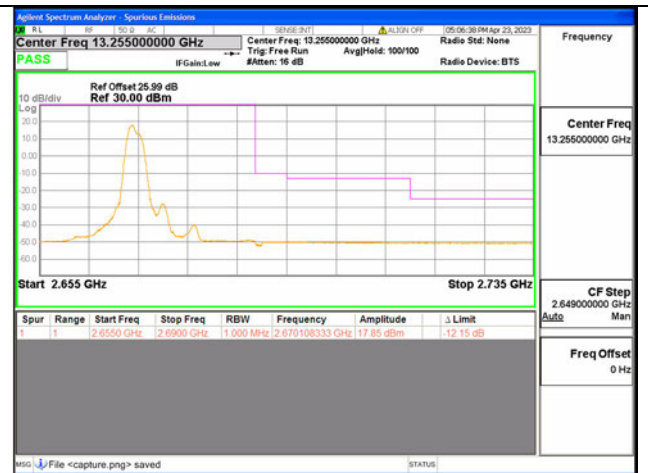
41C / 15+10MHz / High CH / QPSK / 1#74-1#0



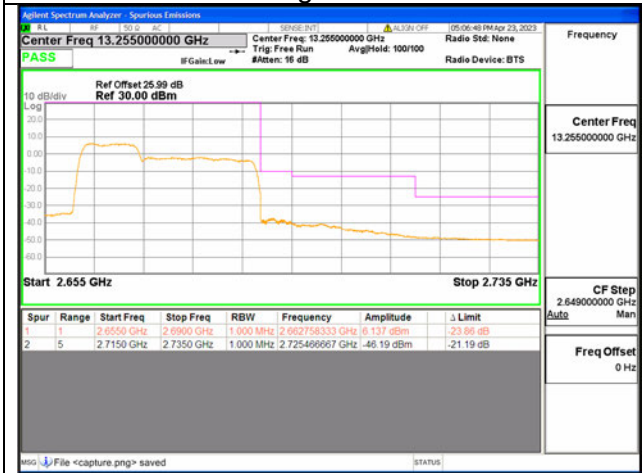
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41C / 10+20MHz / High CH / QPSK / 1#0-1#99



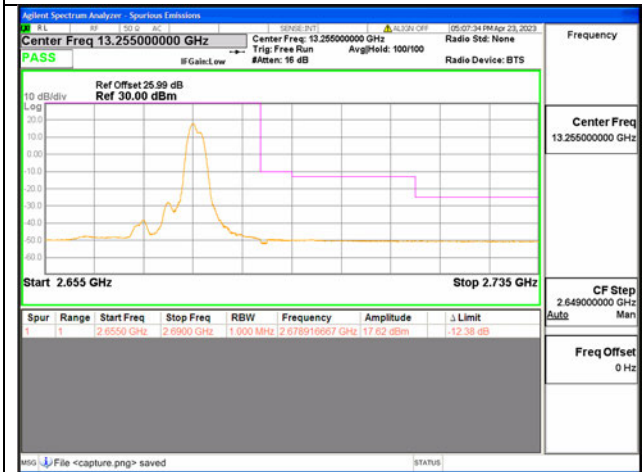
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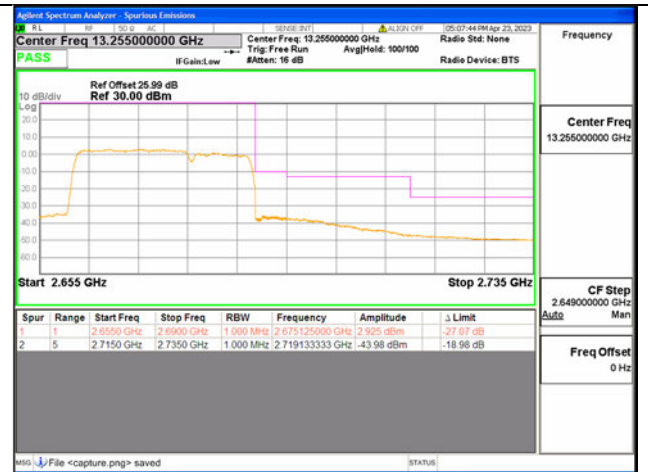
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41C / 20+10MHz / High CH / QPSK / 1#0-1#49



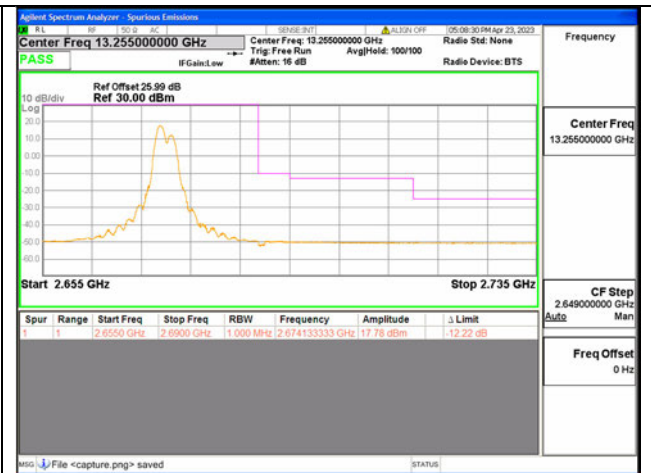
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41C / 20+10MHz / High CH / QPSK / 100#0-50#



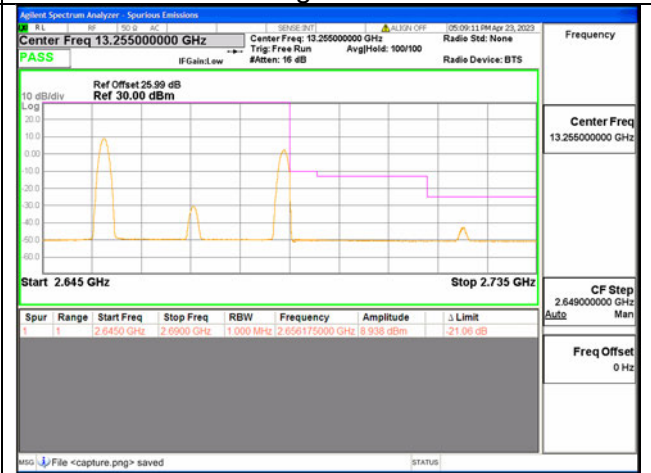
41C / 15+15MHz / High CH / QPSK / 1#0-1#74



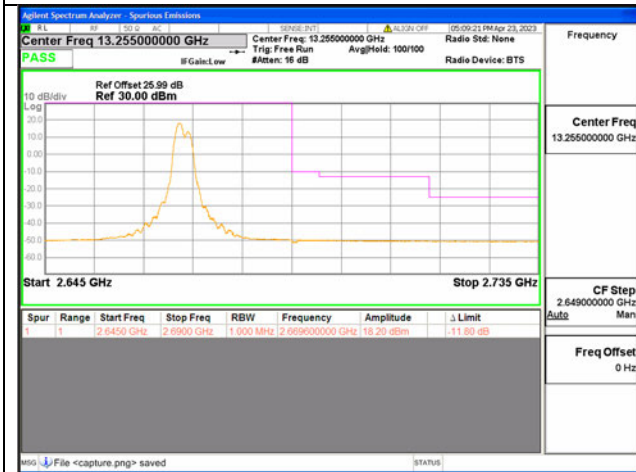
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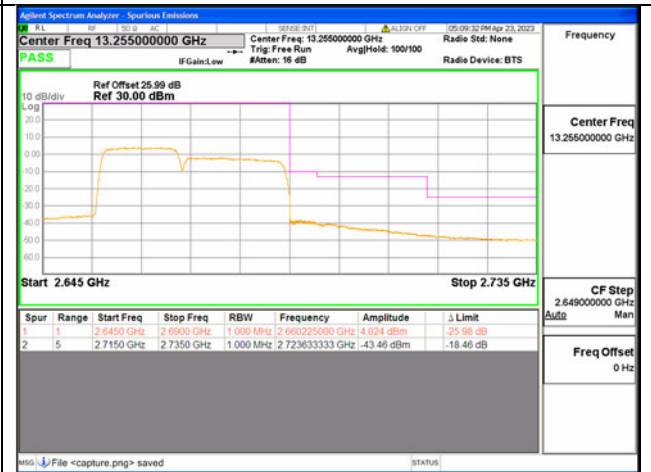
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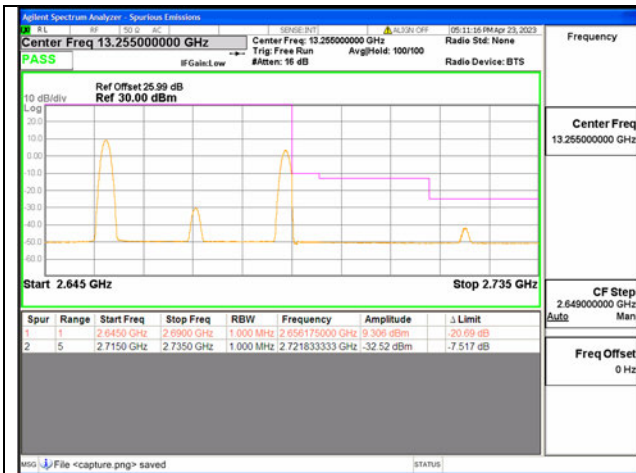
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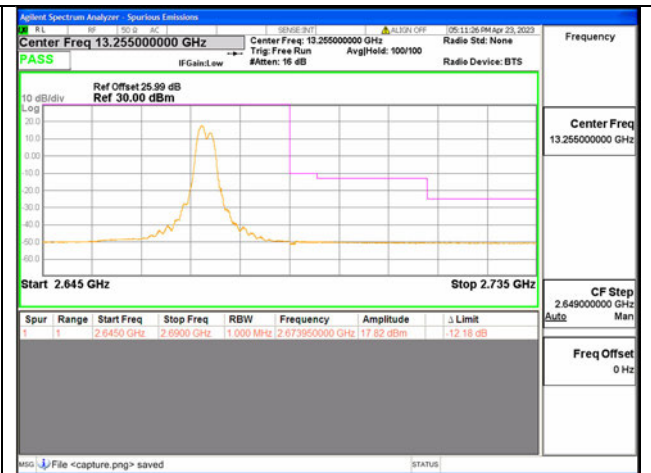
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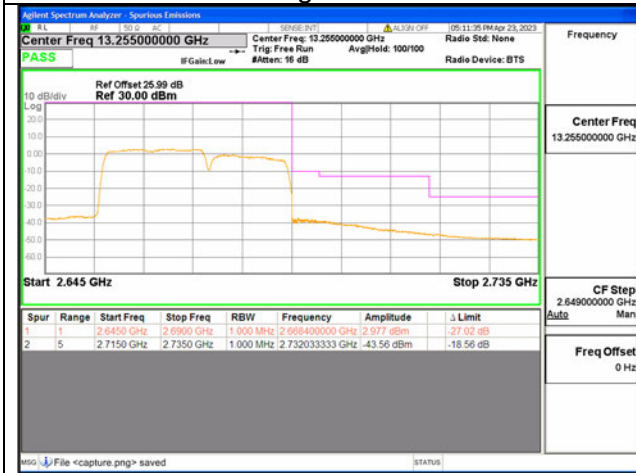
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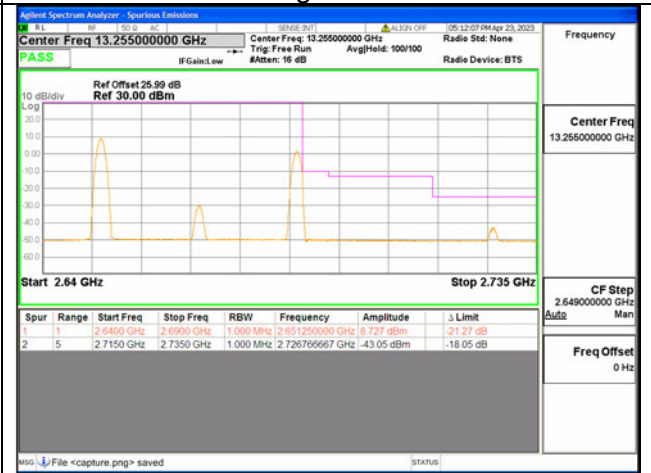
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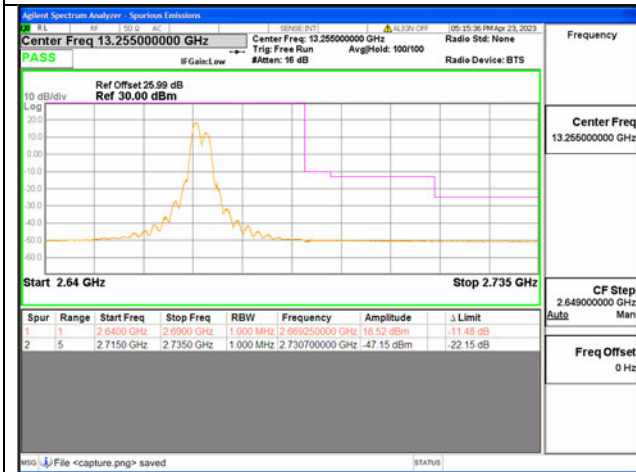
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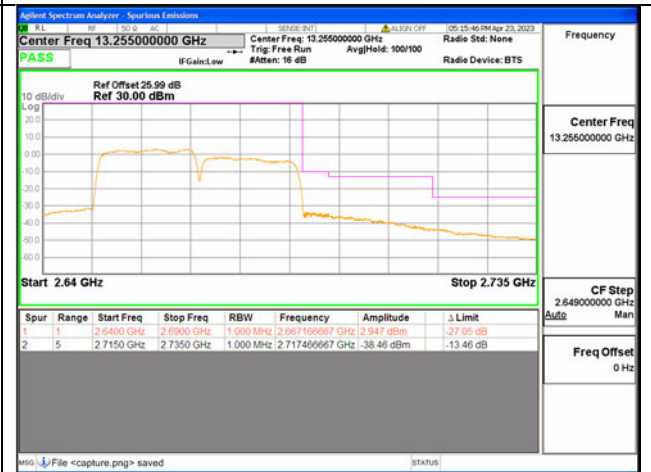
41C / 20+15MHz / High CH / QPSK / 100#0-75#0



41C / 20+20MHz / High CH / QPSK / 1#0-1#99



41C / 20+20MHz / High CH / QPSK / 1#99-1#0



41C / 20+20MHz / High CH / QPSK / 100#0-100#0

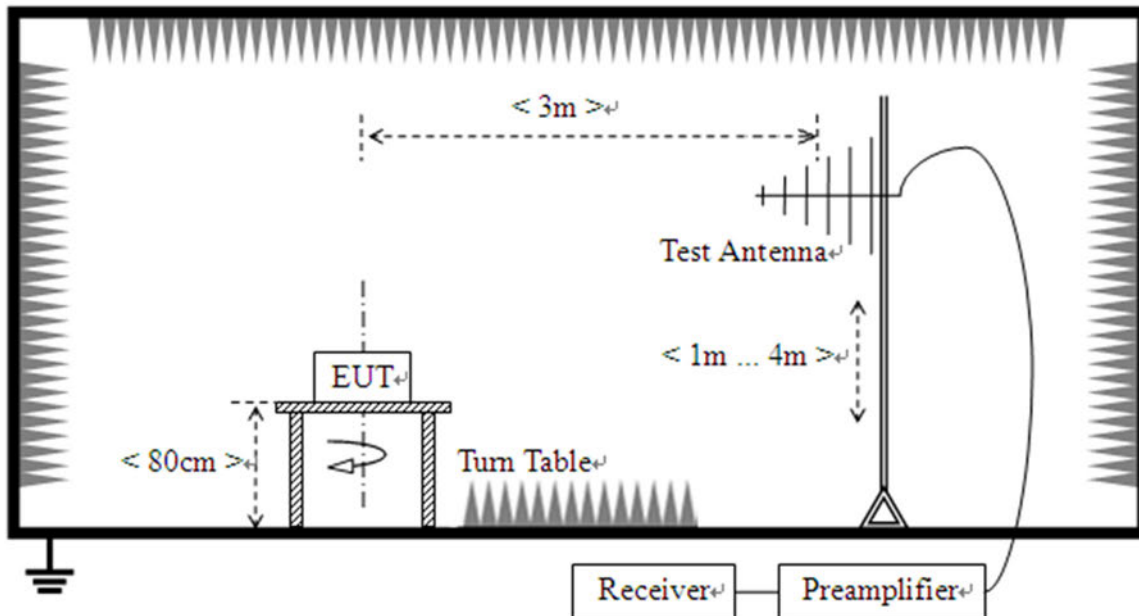
2.5. Radiated Spurious Emissions

2.5.1. Requirement

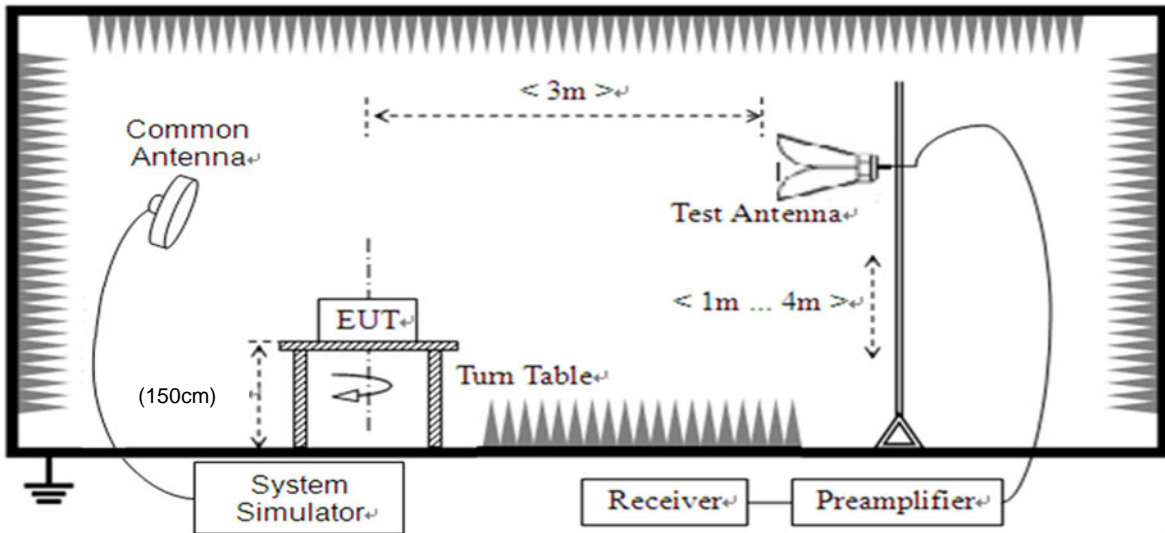
According to FCC section 2.1051, the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43+10\log(P)$ dB. This calculated to be -13dBm.

Additional requirement for LTE Band 7, 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



(For the test frequency from 30MHz to1GHz)



(For the test frequency above 1GHz)

The EUT is located in a 3m Full-Anechoic Chamber, the cable loss, air loss and so on of the site as factors are pre-calibrated using the "Substitution" method, and calculated to correct the reading.

A call is established between the EUT and the SS via a Common Antenna. The EUT is commanded by the SS to operate at the maximum and minimum output power, and only the test result of the maximum output power was recorded.

In the frequency range above 30MHz, Bi-Log Test Antenna (30MHz to 1GHz) and Horn Test Antenna (above 1GHz) are used. Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground and the Turn Table is actuated to turn from 0° to 360° to determine the maximum value of the radiated power. The emission levels at both horizontal and vertical polarizations should be tested. The Filters consists of Notch Filters and High Pass Filter.

Note: when doing measurements above 1GHz, the EUT has been within the 3dB cone width of the horn antenna during horizontal antenna.

2.5.3. Test procedure

KDB 971168 D01v03 Section 5.8 and ANSI/TIA-603-E-2016.



2.5.4. Test Result

The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. Test Antenna height is varied from 1m to 4m above the ground, and the Turn Table is actuated to turn from 0° to 360°, both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented.

The substitution corrections are obtained as described below:

$$A_{\text{SUBST}} = P_{\text{SUBST_TX}} - P_{\text{SUBST_RX}} - L_{\text{SUBST_CABLES}} + G_{\text{SUBST_TX_ANT}}$$

$$A_{\text{TOT}} = L_{\text{CABLES}} + A_{\text{SUBST}}$$

Where A_{SUBST} is the final substitution correction including receive antenna gain.

$P_{\text{SUBST_TX}}$ is signal generator level,

$P_{\text{SUBST_RX}}$ is receiver level,

$L_{\text{SUBST_CABLES}}$ is cable losses including TX cable,

$G_{\text{SUBST_TX_ANT}}$ is substitution antenna gain.

A_{TOT} is total correction factor including cable loss and substitution correction

During the test, the data of A_{TOT} was added in the Test Spectrum Analyze, so Spectrum Analyze reading is the final values which contain the data of A_{TOT} .

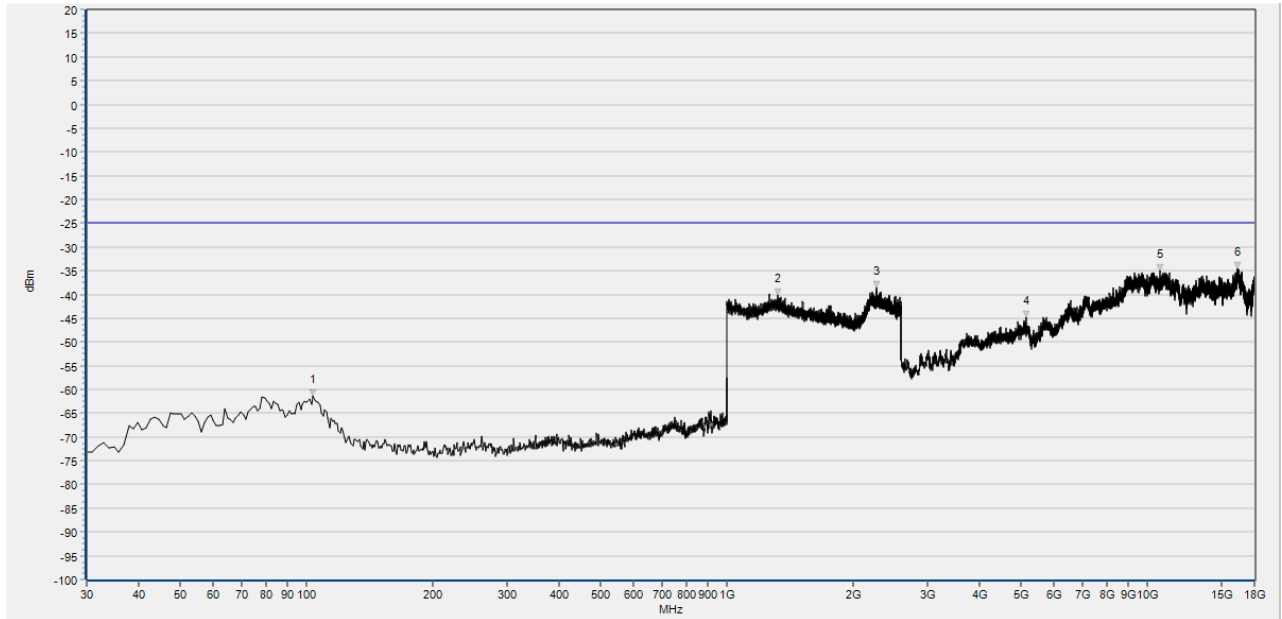
Note1: The power of the EUT transmitting frequency should be ignored.

Note2: All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Note3: All bandwidth and test channel were considered and evaluated respectively by performing full test for each band, only the worst cases were recorded in this test report.



Test Graph

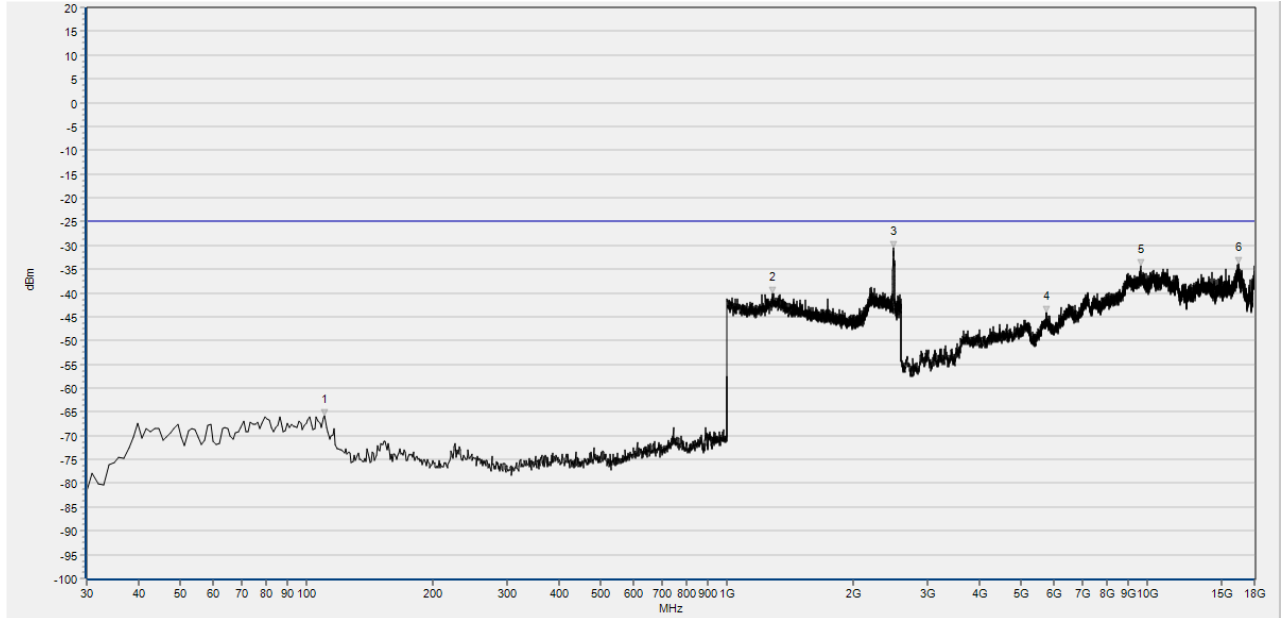


Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	103.720	-61.29	-25.00	152.6	V	PASS
2	1322.049	-40.10	-25.00	205.3	V	PASS
3	2264.506	-38.63	-25.00	226.7	V	PASS
4	5159.665	-44.83	-25.00	96.9	V	PASS
5	10724.277	-35.07	-25.00	175.8	V	PASS
6	16406.510	-34.54	-25.00	308.6	V	PASS

CA_7C Low 20M+20M QPSK 20850+21048 30M-18G V



Test Graph

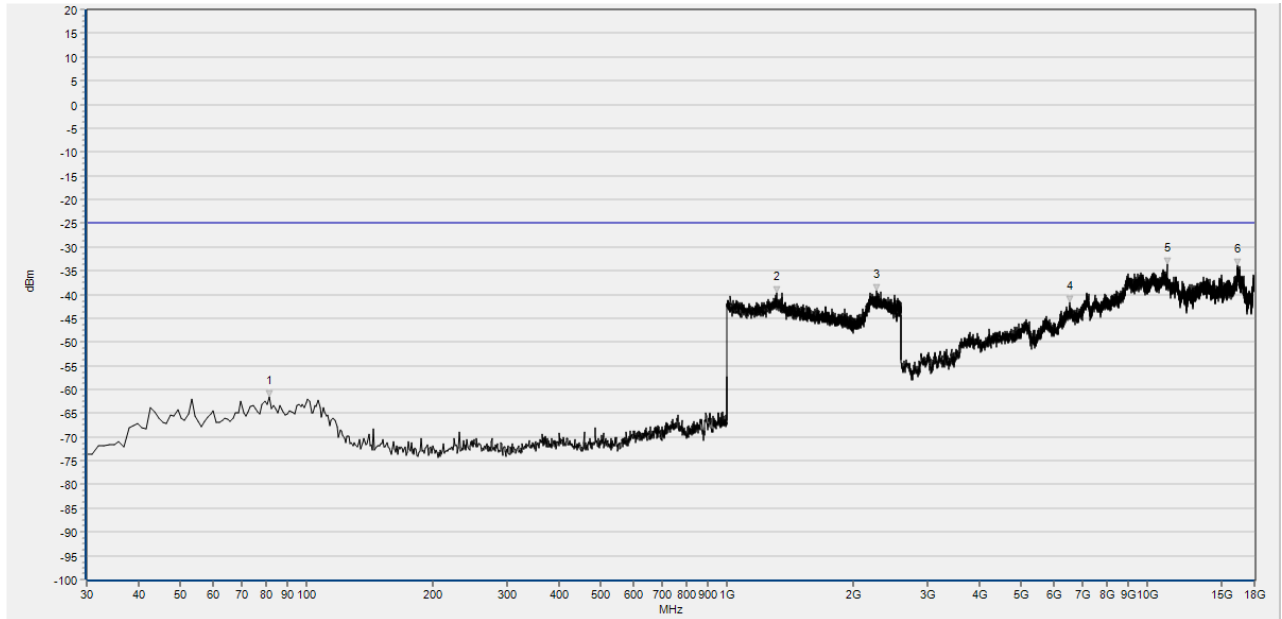


Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	110.510	-65.83	-25.00	208.3	H	PASS
2	1284.274	-40.19	-25.00	124.7	H	PASS
3	2488.595	-30.56	-25.00	95.6	H	N/A
4	5744.972	-44.19	-25.00	53.6	H	PASS
5	9634.879	-34.30	-25.00	26.1	H	PASS
6	16543.735	-33.88	-25.00	26.1	H	PASS

CA_7C Low 20M+20M QPSK 20850+21048 30M-18G H



Test Graph

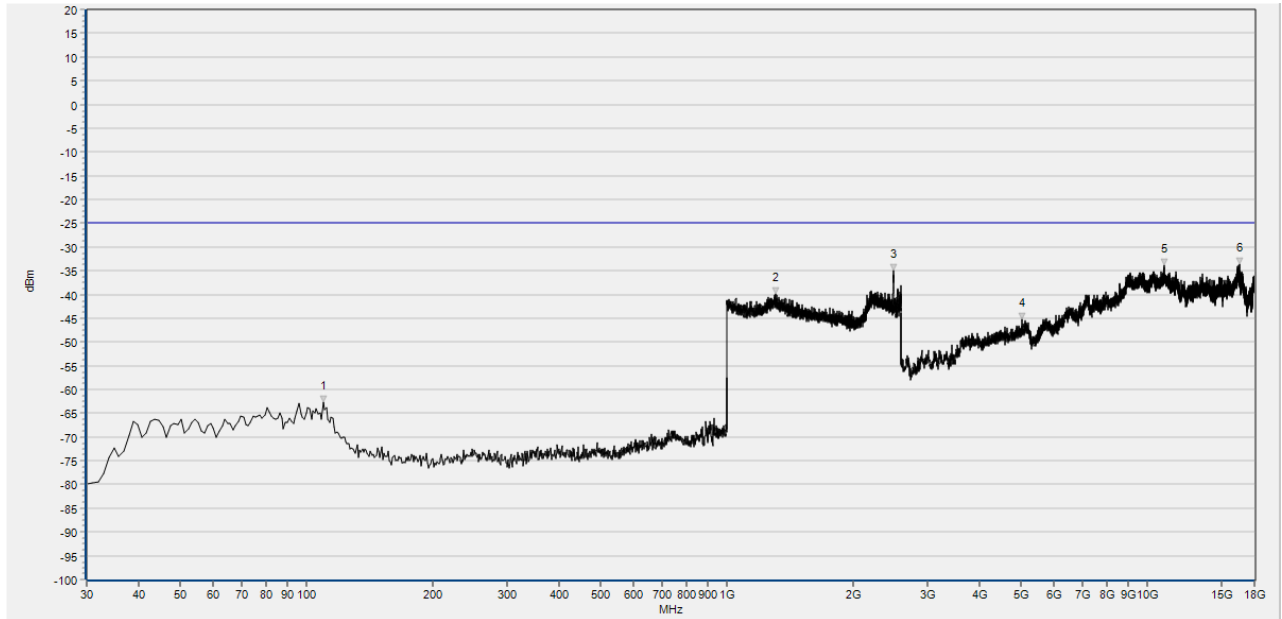


Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	81.410	-61.45	-25.00	94.1	V	PASS
2	1313.725	-39.60	-25.00	122.4	V	PASS
3	2272.829	-39.21	-25.00	107.2	V	PASS
4	6545.917	-41.72	-25.00	323.9	V	PASS
5	11141.553	-33.66	-25.00	350.6	V	PASS
6	16392.508	-33.87	-25.00	32.9	V	PASS

CA_7C Mid 20M+20M QPSK 21001+21199 30M-18G V



Test Graph



Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	109.540	-62.75	-25.00	209.5	H	PASS
2	1303.481	-39.82	-25.00	87.4	H	PASS
3	2488.595	-35.03	-25.00	126.5	H	N/A
4	5044.845	-45.28	-25.00	124.3	H	PASS
5	10948.318	-33.84	-25.00	197.1	H	PASS
6	16580.142	-33.65	-25.00	13.5	H	PASS

CA_7C Mid 20M+20M QPSK 21001+21199 30M-18G H



Test Graph



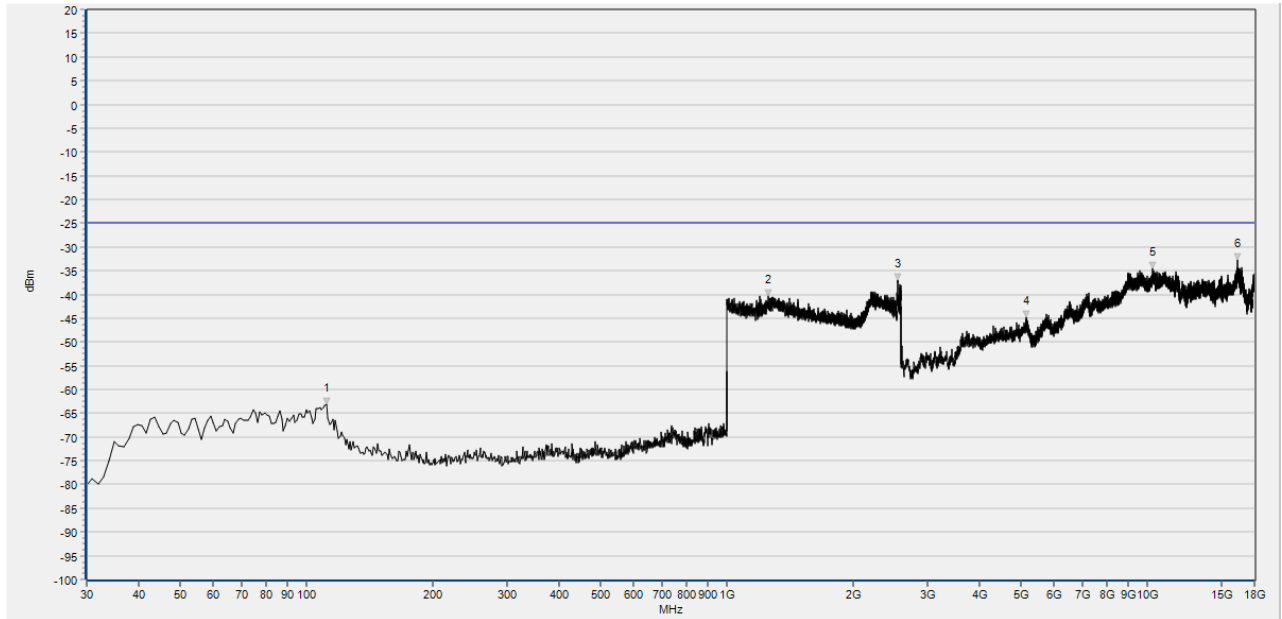
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	105.660	-61.63	-25.00	84.2	V	PASS
2	1282.353	-39.97	-25.00	144.6	V	PASS
3	2226.731	-39.48	-25.00	91.5	V	PASS
4	7223.641	-39.58	-25.00	338.8	V	PASS
5	9049.573	-34.59	-25.00	299.4	V	PASS
6	16546.536	-34.33	-25.00	154.0	V	PASS

CA_7C High 20M+20M QPSK 21152+21350 30M-18G V





Test Graph

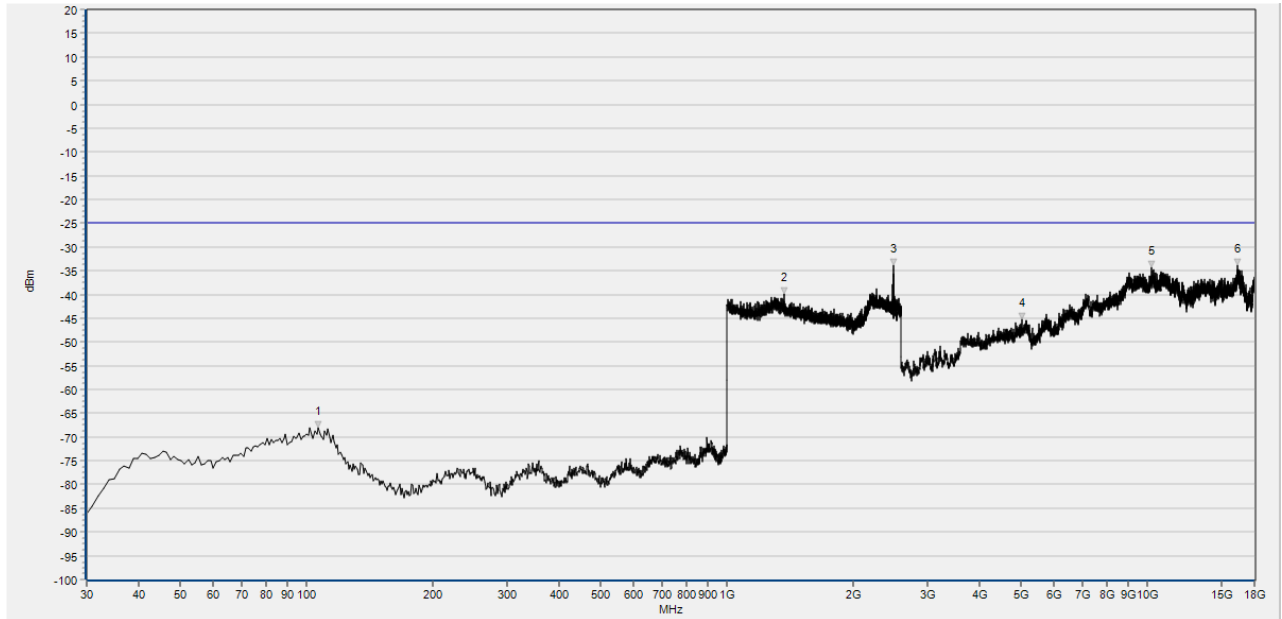


Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	111.480	-63.06	-25.00	163.7	H	PASS
2	1256.102	-40.36	-25.00	95.3	H	PASS
3	2546.859	-36.95	-25.00	120.5	H	N/A
4	5168.067	-44.70	-25.00	194.8	H	PASS
5	10295.799	-34.47	-25.00	128.6	H	PASS
6	16412.111	-32.69	-25.00	115.2	H	PASS

CA_7C High 20M+20M QPSK 21152+21350 30M-18G H



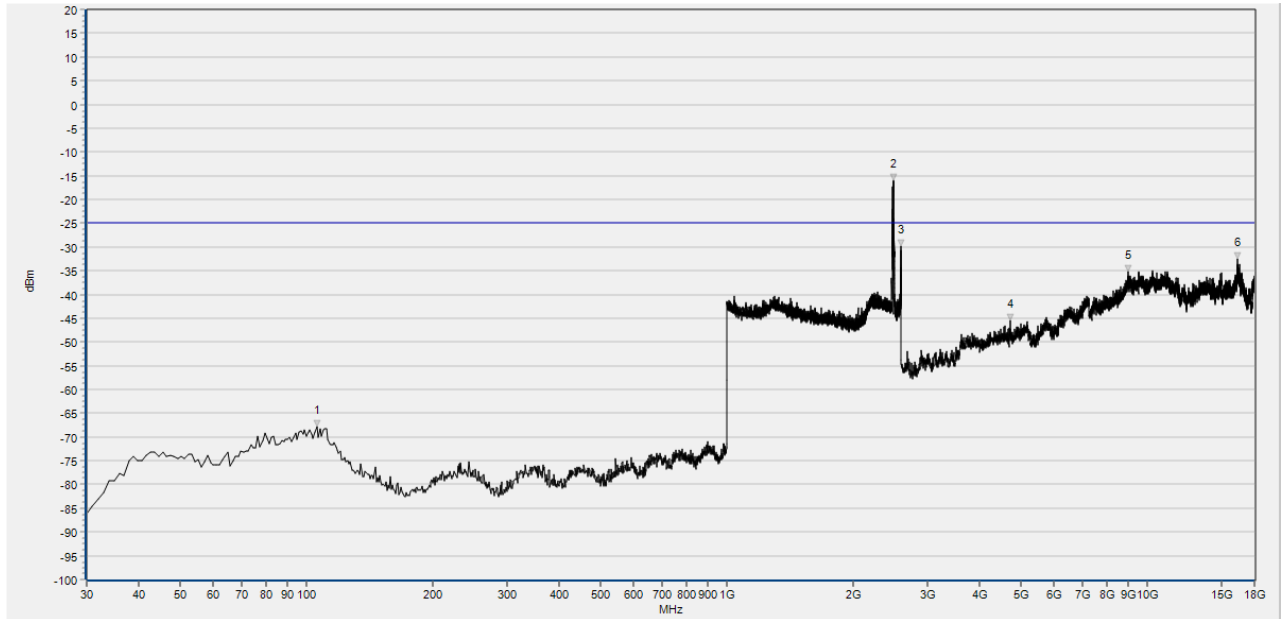
Test Graph



Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	106.707	-68.05	-25.00	208.4	V	PASS
2	1371.324	-39.98	-25.00	143.9	V	PASS
3	2489.030	-33.77	-25.00	246.1	V	N/A
4	5042.929	-45.25	-25.00	61.6	V	PASS
5	10224.525	-34.31	-25.00	160.6	V	PASS
6	16410.402	-33.82	-25.00	296.7	V	PASS

CA_41C Low 20M+20M QPSK 39750+39948 30M-18G V

Test Graph

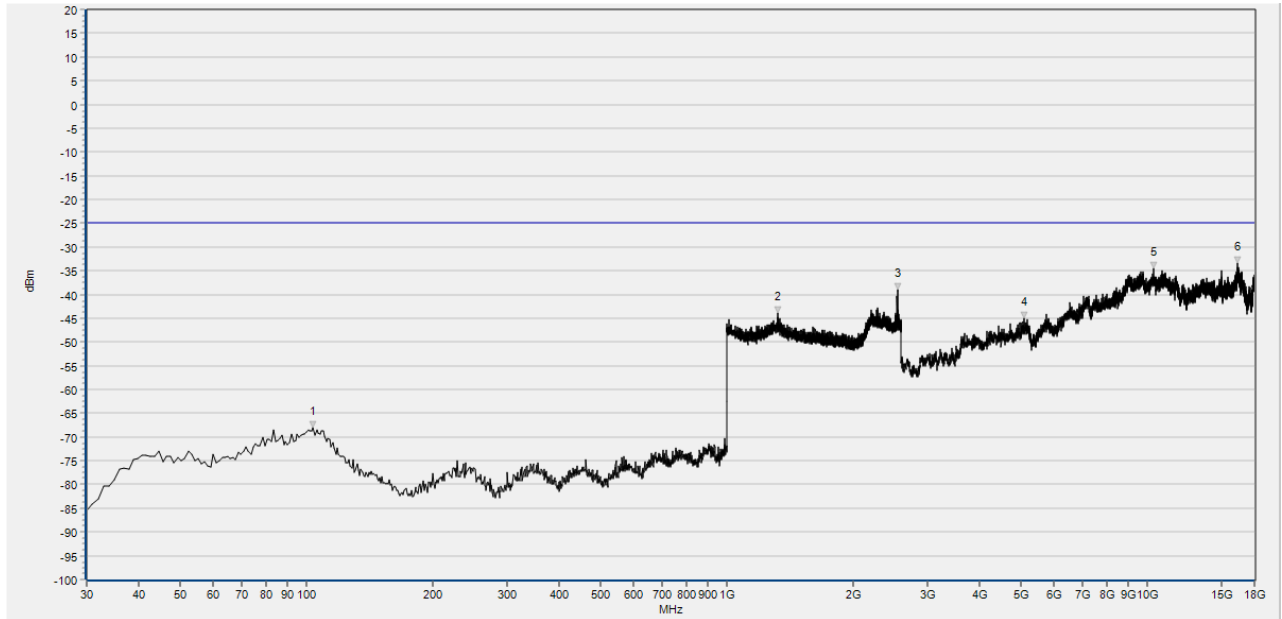


Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	105.736	-67.81	-25.00	152.3	H	PASS
2	2485.295	-15.91	-25.00	194.8	H	N/A
3	2593.598	-29.75	-25.00	99.4	H	N/A
4	4719.464	-45.52	-25.00	198.0	H	PASS
5	8998.440	-35.30	-25.00	106.8	H	PASS
6	16419.644	-32.59	-25.00	29.1	H	PASS

CA_41C Low 20M+20M QPSK 39750+39948 30M-18G H



Test Graph



Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	103.794	-68.10	-25.00	225.1	V	PASS
2	1325.442	-44.01	-25.00	124.6	V	PASS
3	2552.518	-38.98	-25.00	108.7	V	N/A
4	5089.138	-45.05	-25.00	196.8	V	PASS
5	10347.750	-34.60	-25.00	296.4	V	PASS
6	16394.999	-33.37	-25.00	220.9	V	PASS

CA_41C Mid 20M+20M QPSK 40529+40712 30M-18G V

Test Graph

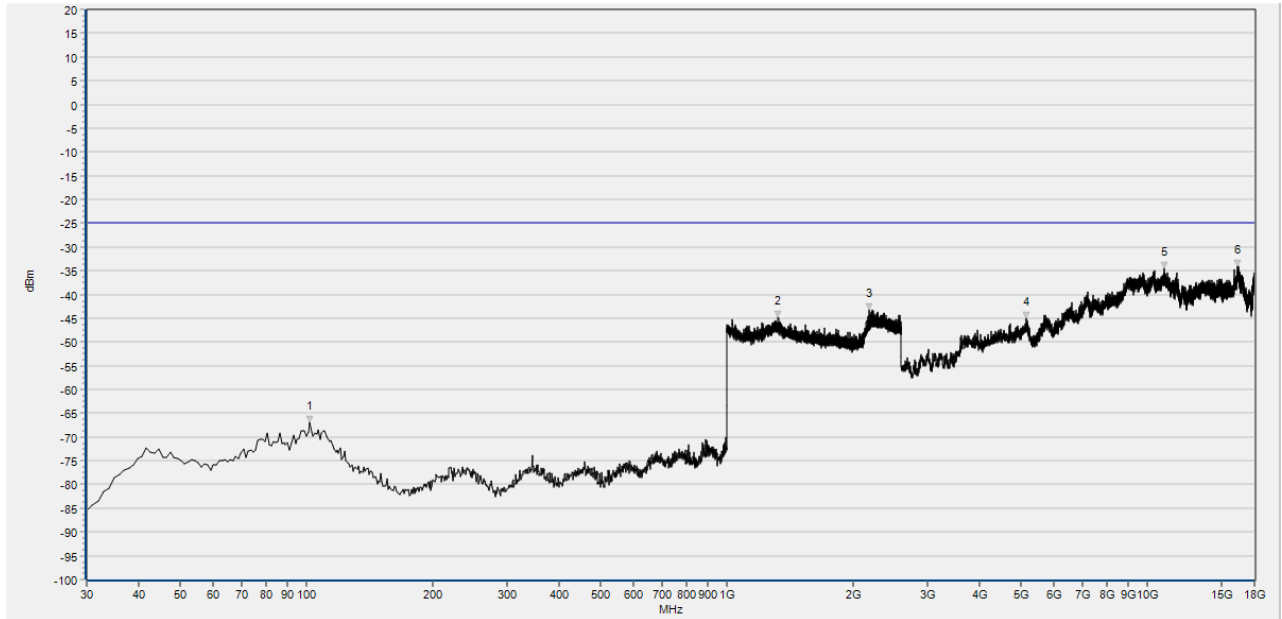


Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	96.997	-68.17	-25.00	241.2	H	PASS
2	1303.568	-44.36	-25.00	107.6	H	PASS
3	2550.383	-21.88	-25.00	95.7	H	N/A
4	4907.381	-45.47	-25.00	212.2	H	PASS
5	9580.676	-34.58	-25.00	113.3	H	PASS
6	16404.241	-34.81	-25.00	4.1	H	PASS

CA_41C Mid 20M+20M QPSK 40529+40712 30M-18G H



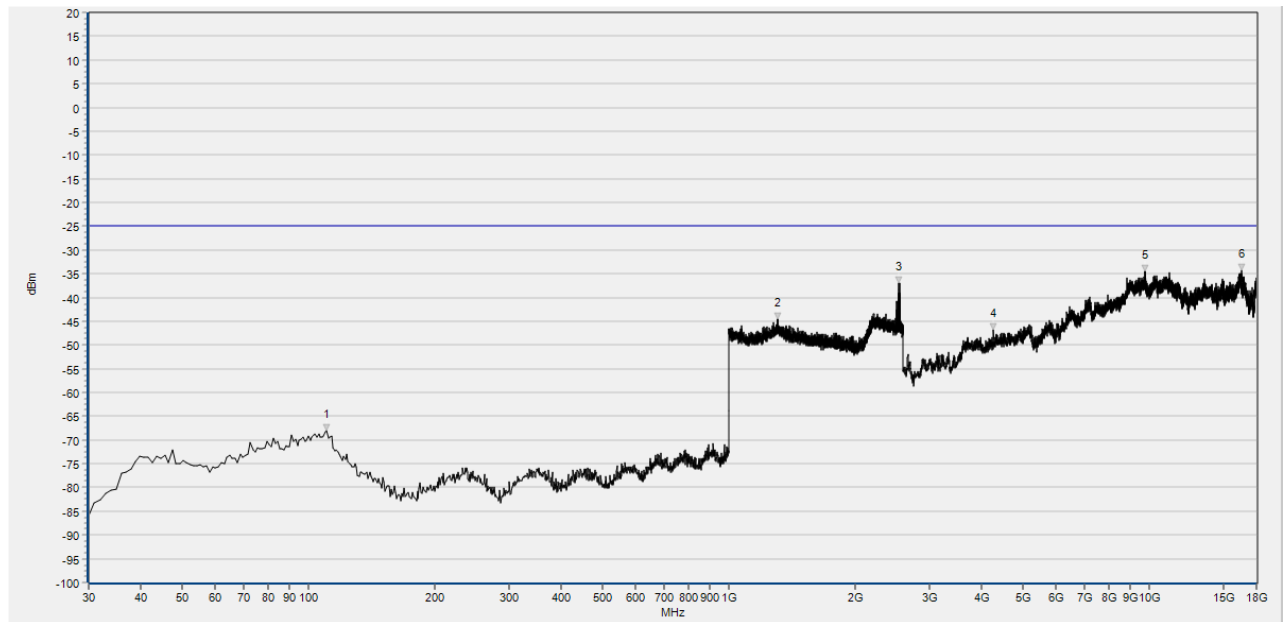
Test Graph



Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	101.852	-67.01	-25.00	174.2	V	PASS
2	1325.975	-44.88	-25.00	95.6	V	PASS
3	2184.928	-43.15	-25.00	227.4	V	PASS
4	5144.589	-45.07	-25.00	200.3	V	PASS
5	10966.953	-34.56	-25.00	358.1	V	PASS
6	16422.725	-34.00	-25.00	242.4	V	PASS

CA_41C High 20M+20M QPSK 41292+41490 30M-18G V

Test Graph



Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	110.591	-68.15	-25.00	205.3	H	PASS
2	1306.235	-44.67	-25.00	177.5	H	PASS
3	2541.847	-37.07	-25.00	124.7	H	N/A
4	4266.613	-46.89	-25.00	341.5	H	PASS
5	9780.916	-34.63	-25.00	144.7	H	PASS
6	16555.191	-34.21	-25.00	119.4	H	PASS

CA_41C High 20M+20M QPSK 41292+41490 30M-18G H



Annex A Test Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for test performed on the EUT as specified in CISPR 16-1-2:

Test items	Uncertainty
Output Power	± 2.22 dB
Bandwidth	$\pm 5\%$
Conducted Spurious Emission	± 2.77 dB
Band Edge	± 2.77 dB
Equivalent Isotropic Radiated Power	± 2.22 dB
Radiated Spurious Emissions	± 6 dB

When the test result is a critical value, we will use the measurement uncertainty give the judgment result based on the 95% confidence intervals.





Annex B Testing Laboratory Information

1. Identification of the Responsible Testing Laboratory

Company Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
Telephone:	+86 755 36698555
Facsimile:	+86 755 36698525

2. Identification of the Responsible Testing Location

Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China

3. Facilities and Accreditations

All measurement facilities used to collect the measurement data are located at FL.3, Building A, FeiYang Science Park, Block 67, BaoAn District, Shenzhen, 518101 P. R. China. The test site is constructed in conformance with the requirements of ANSI C63.10-2013 and CISPR Publication 22; the FCC designation number is CN1192, the test firm registration number is 226174.



4. Test Equipment Utilized

4.1 Conducted Test Equipment

Equipment Name	Serial No.	Type	versions	Manufacturer	Cal. Date	Cal. Due
Power Splitter	NW521	1506A	N/A	Weinschel	N/A	N/A
Attenuator	N/A	10dB	N/A	Resnet	N/A	N/A
EXA Signal Analyzer	MY515111 49	N9020A	N/A	Agilent	2022.07.04	2023.07.03
EXA Signal Analyzer	MY541705 56	N9030A	N/A	Keysight	2022.10.10	2023.10.09
System Simulator	62618305 72	MT8821C	0002214 22	Anritsu	2023.02.09	2024.02.08
RF cable (30MHz-26GHz)	CB01	RF01	N/A	Morlab	N/A	N/A
Computer	T430i	Think Pad	N/A	Lenovo	N/A	N/A

4.2 List of Software Used

Description	Manufacturer	Software Version
Morlab FCC Test System	MORLAB	V6.45
MORLAB EMCR V1.2	MORLAB	V1.2
PMM Emission Suite	PMM	2.02



4.3 Radiated Test Equipment

Equipment Name	Serial No.	Type	Manufacturer	Cal. Date	Cal.Due
Loop Antenna	00131	FMZB 1519B	SCHWARZBECK	2022.10.25	2025.10.24
Bi-Log Antenna	9163-274	VULB 9163	SCHWARZBECK	2022.11.07	2025.11.06
Horn Antenna	9120D-963	BBHA 9120D	SCHWARZBECK	2022.05.25	2025.05.24
Receiver	MY54130016	N9038A	Agilent	2022.07.07	2023.07.06
Receiver	595WX11007	PMM 9010	PMM	2023.02.09	2024.02.08
Preamplifier (2GHz-18GHz)	61171/61172	S020180L3203	LUCIX CORP.	2022.07.08	2023.07.07
Preamplifier (10MHz-6GHz)	46732	S10M100L3802	LUCIX CORP.	2022.07.08	2023.07.07
Preamplifier (18GHz-40GHz)	DS77209	DCLNA0118-40C-S	Decentest	2022.07.23	2023.07.22
System Simulator	152038	CMW500	R&S	2022.10.11	2023.10.10
System Simulator	MY48364176	8960-E5515C	Agilent	2023.02.27	2024.02.26
RF Coaxial Cable (DC-18GHz)	MRE001	PE330	Pasternack	2022.07.08	2023.07.07
RF Coaxial Cable (DC-18GHz)	MRE002	CLU18	Pasternack	2022.07.08	2023.07.07
RF Coaxial Cable (DC-18GHz)	MRE003	CLU18	Pasternack	2022.07.08	2023.07.07
RF Coaxial Cable (DC-40GHz)	22290045	QA360-40-KK-0.5	Qualwave	2022.07.08	2023.07.07
RF Coaxial Cable (DC-40GHz)	22290046	QA360-40-KKF-2	Qualwave	2022.07.08	2023.07.07
RF Coaxial Cable (DC-18GHz)	22120181	QA500-18-NN-5	Qualwave	2022.07.08	2023.07.07
Notch Filter	N/A	WRCGV -LTE B13	Wainwright	2022.07.08	2023.07.07
Notch Filter	N/A	WRCGV -LTE B17	Wainwright	2022.07.08	2023.07.07
Notch Filter	N/A	WRCGV -LTE B26	Wainwright	2022.07.08	2023.07.07
Notch Filter	N/A	WRCGV -LTE B38	Wainwright	2022.07.08	2023.07.07
Notch Filter	N/A	WRCGV -LTE B40	Wainwright	2022.07.08	2023.07.07
Notch Filter	N/A	WRCGV -LTE B41	Wainwright	2022.07.08	2023.07.07
Notch Filter	N/A	WRCGV -LTE B66	Wainwright	2022.07.08	2023.07.07
Anechoic Chamber	N/A	9m*6m*6m	CRT	2022.05.10	2025.05.09
Notch Filter	N/A	WRCGV -LTE B12	Wainwright	2022.07.08	2023.07.07





Equipment Name	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Notch Filter	N/A	WRCGV -LTE B13	Wainwright	2022.07.08	2023.07.07
Notch Filter	N/A	WRCGV -LTE B17	Wainwright	2022.07.08	2023.07.07
Notch Filter	N/A	WRCGV -LTE B26	Wainwright	2022.07.08	2023.07.07

—————END OF REPORT—————

