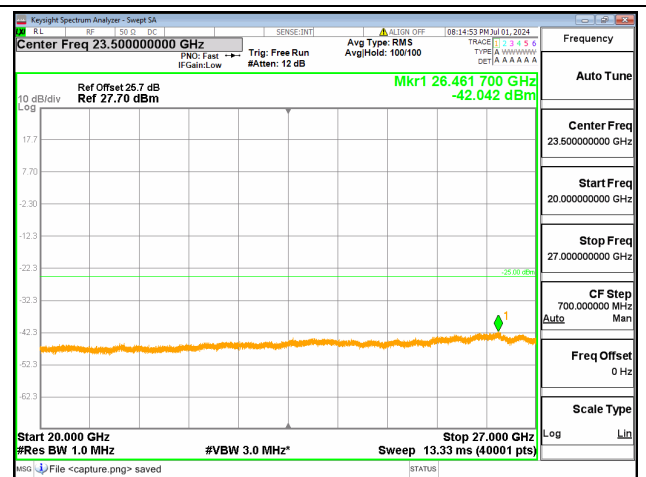
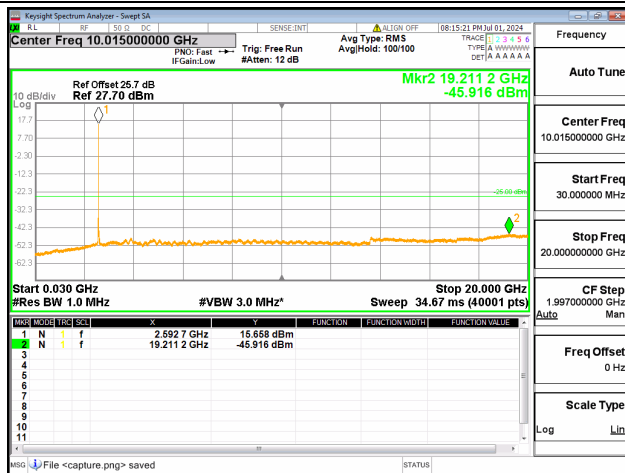


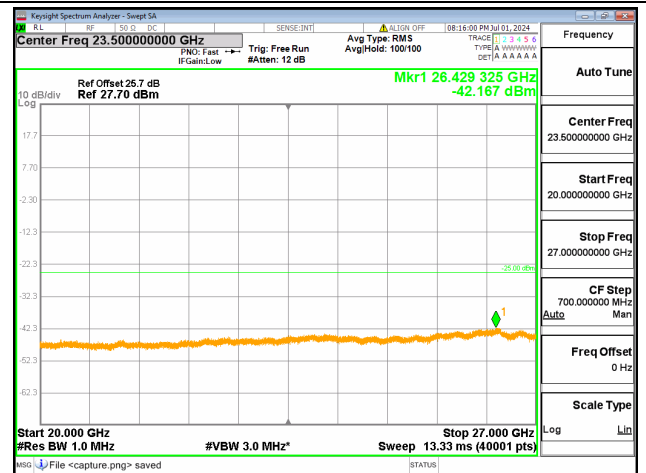
41C-30M-20G / 20+20MHz / QPSK / Mid CH / 1@0-1@99



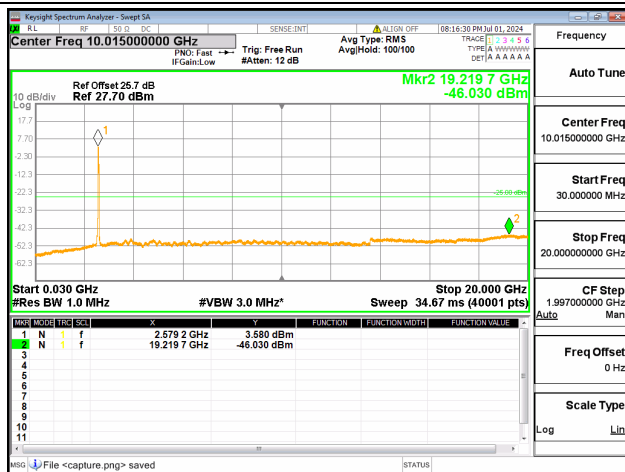
41C-20G-27G / 20+20MHz / QPSK / Mid CH / 1@0-1@99



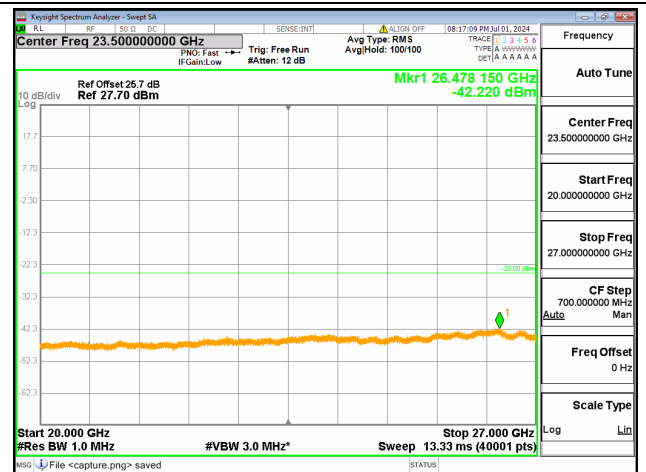
41C-30M-20G / 20+20MHz / QPSK / Mid CH / 1@99-1@0



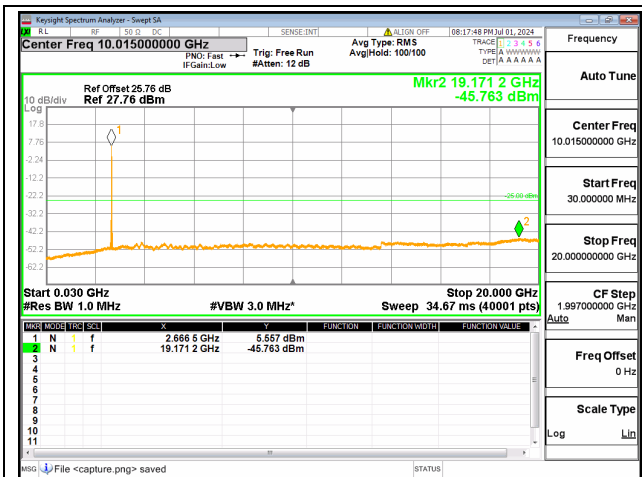
41C-20G-27G / 20+20MHz / QPSK / Mid CH / 1@99-1@0



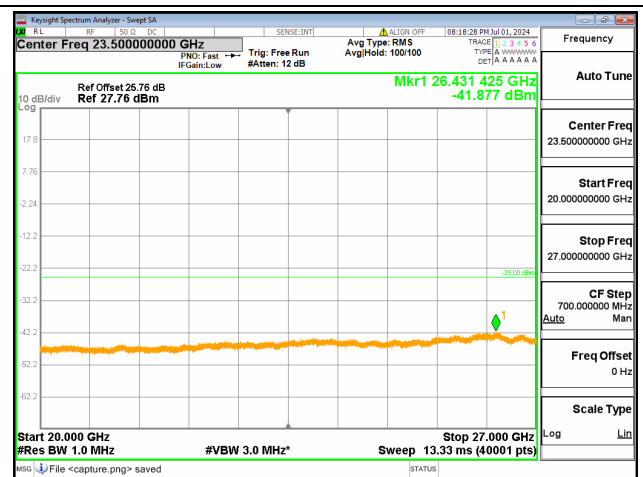
41C-30M-20G / 20+20MHz / QPSK / Mid CH / 100@0-100@



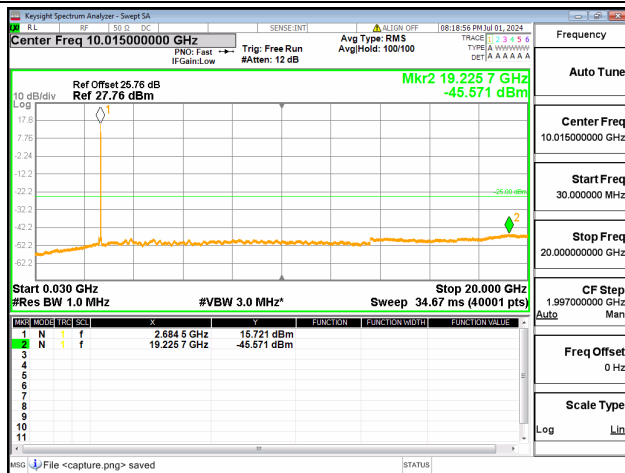
41C-20G-27G / 20+20MHz / QPSK / Mid CH / 100@0-100@



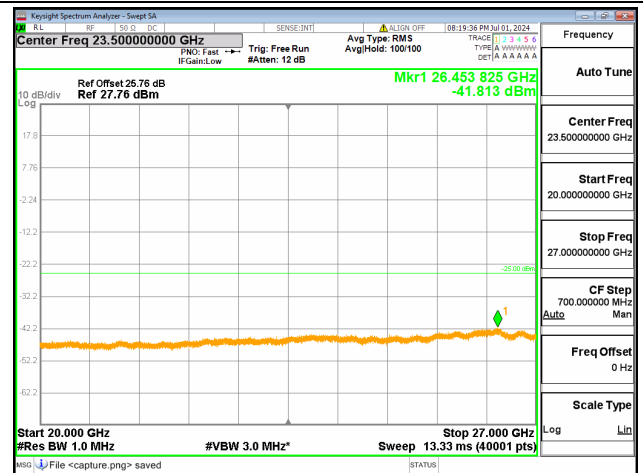
41C-30M-20G / 20+5MHz / QPSK / High CH / 1@0-1@24



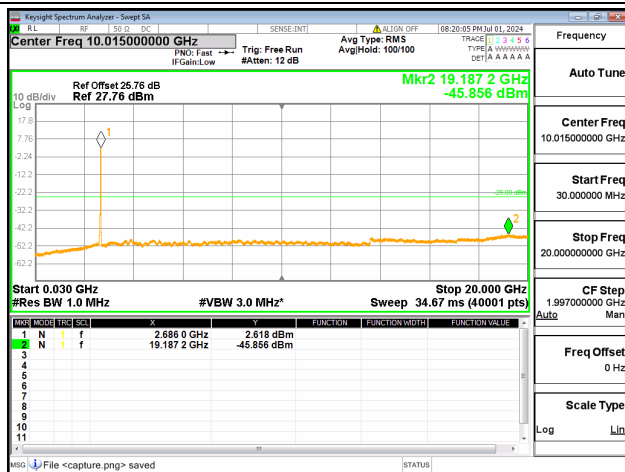
41C-20G-27G / 20+5MHz / QPSK / High CH / 1@0-1@24



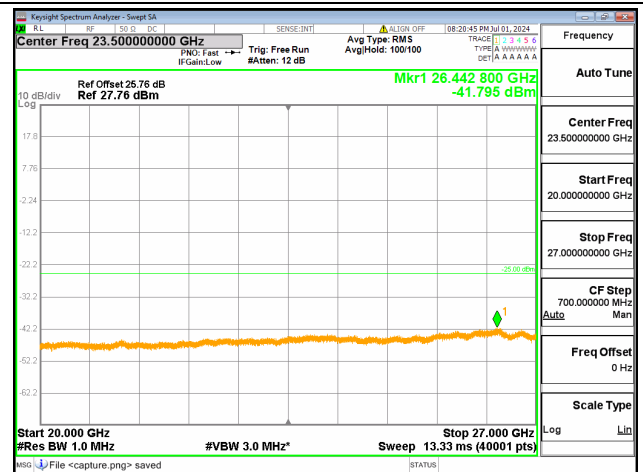
41C-30M-20G / 20+5MHz / QPSK / High CH / 1@99-1@0



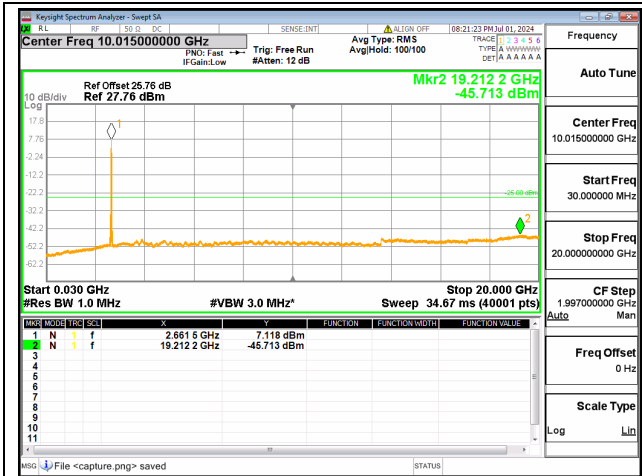
41C-20G-27G / 20+5MHz / QPSK / High CH / 1@99-1@0



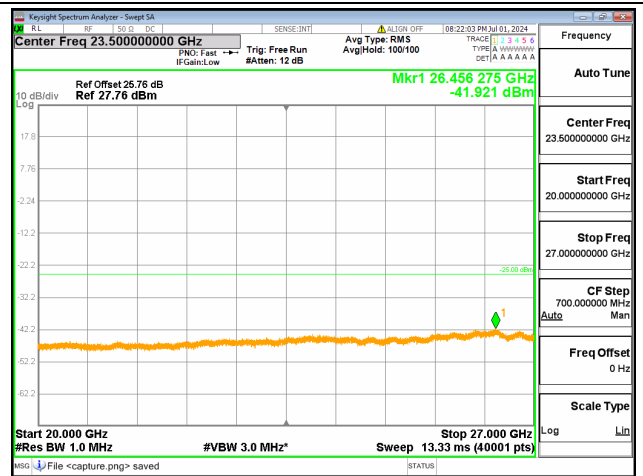
41C-30M-20G / 20+5MHz / QPSK / High CH / 100@0-25@0



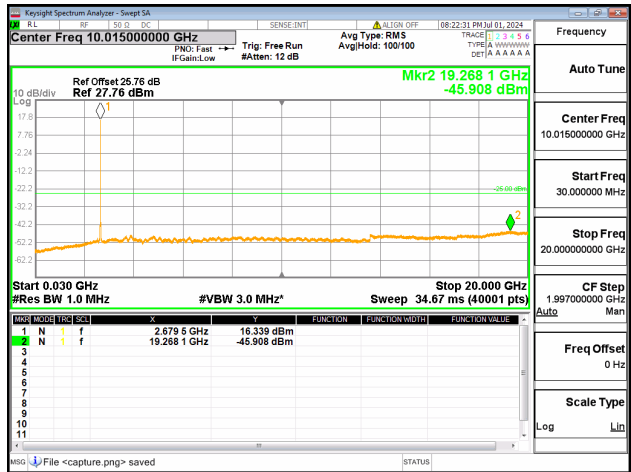
41C-20G-27G / 20+5MHz / QPSK / High CH / 100@0-25@0



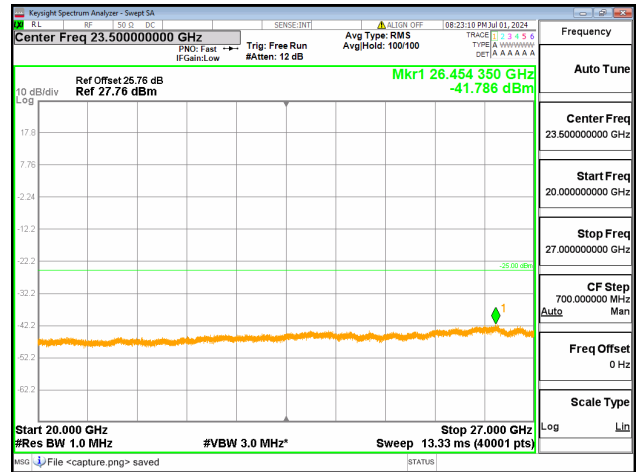
41C-30M-20G / 20+10MHz / QPSK / High CH / 1@0-1@49



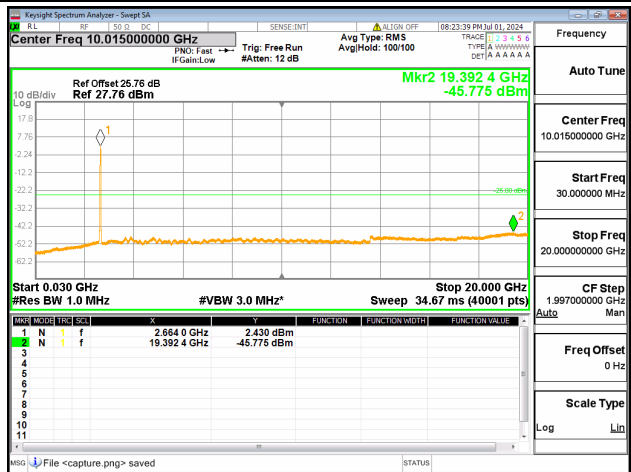
41C-20G-27G / 20+10MHz / QPSK / High CH / 1@0-1@49



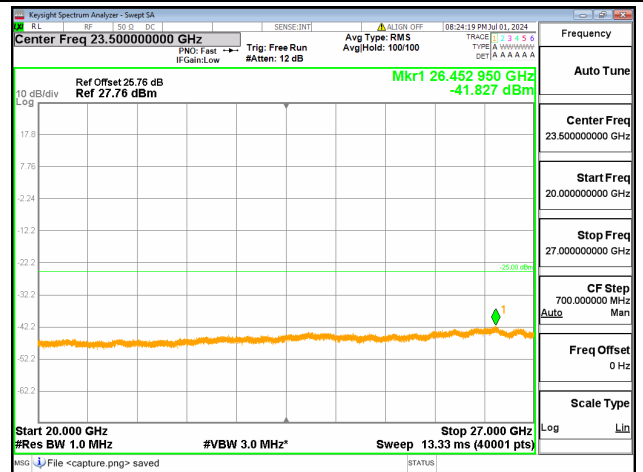
41C-30M-20G / 20+10MHz / QPSK / High CH / 1@99-1@0



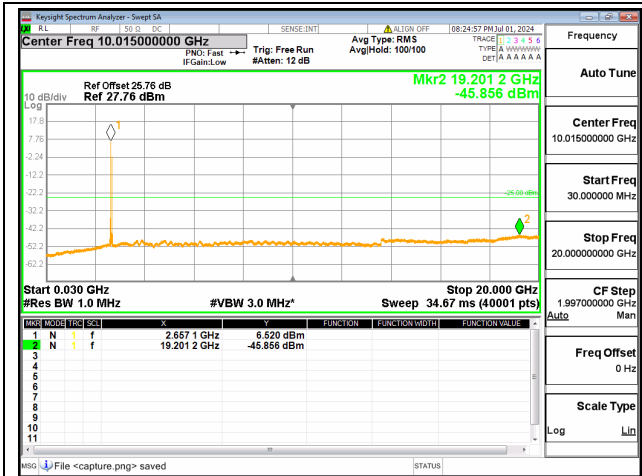
41C-20G-27G / 20+10MHz / QPSK / High CH / 1@99-1@0



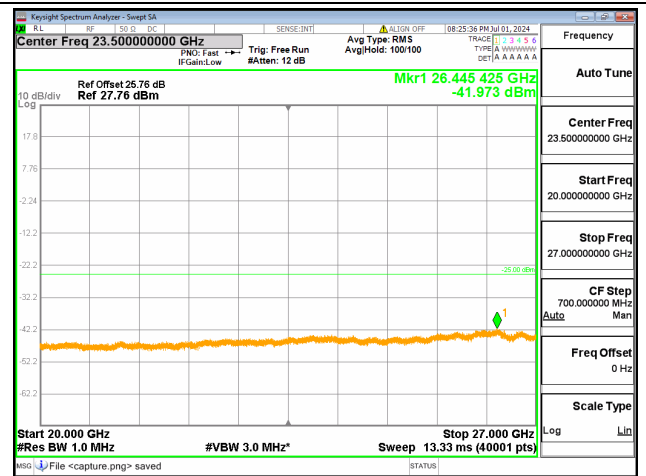
41C-30M-20G / 20+10MHz / QPSK / High CH / 100@0-50@0



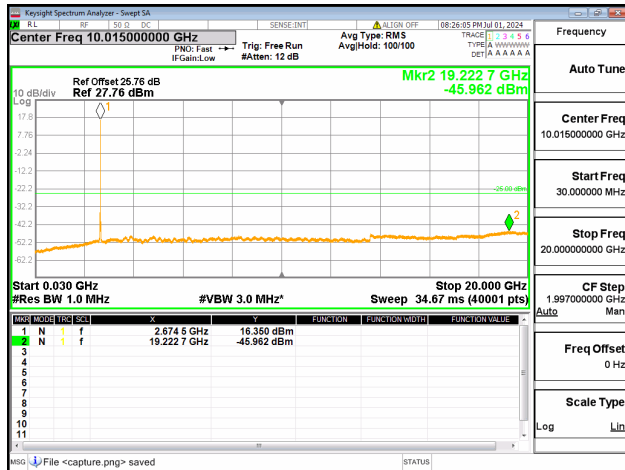
41C-20G-27G / 20+10MHz / QPSK / High CH / 100@0-50@0



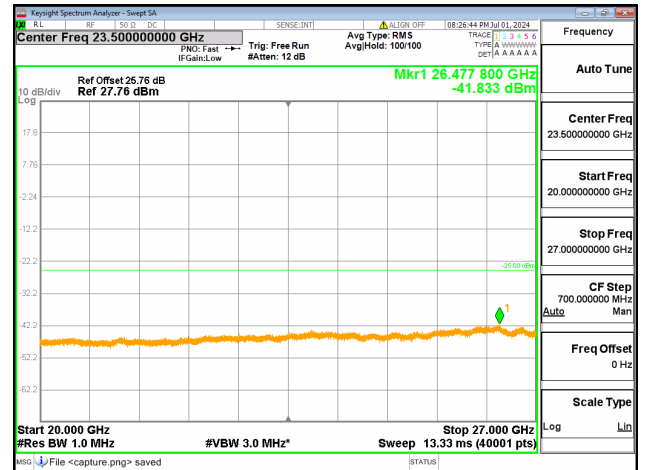
41C-30M-20G / 20+15MHz / QPSK / High CH / 1@0-1@74



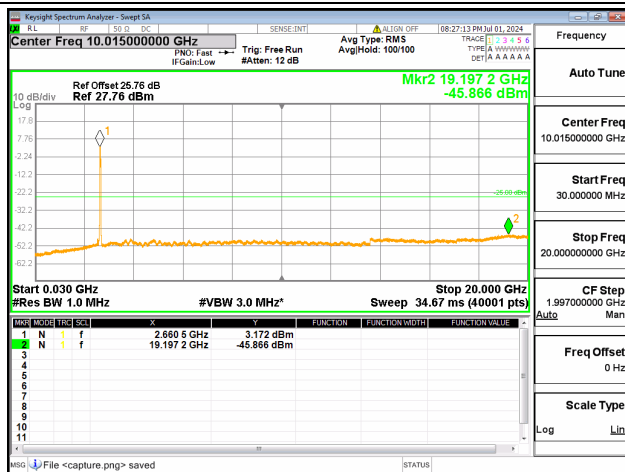
41C-20G-27G / 20+15MHz / QPSK / High CH / 1@0-1@74



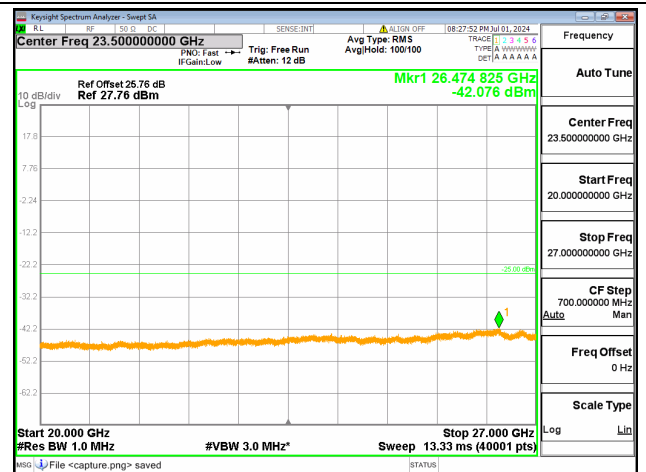
41C-30M-20G / 20+15MHz / QPSK / High CH / 1@99-1@0



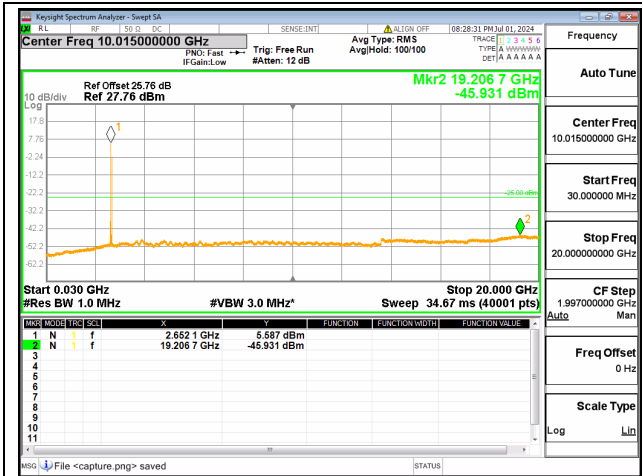
41C-20G-27G / 20+15MHz / QPSK / High CH / 1@99-1@0



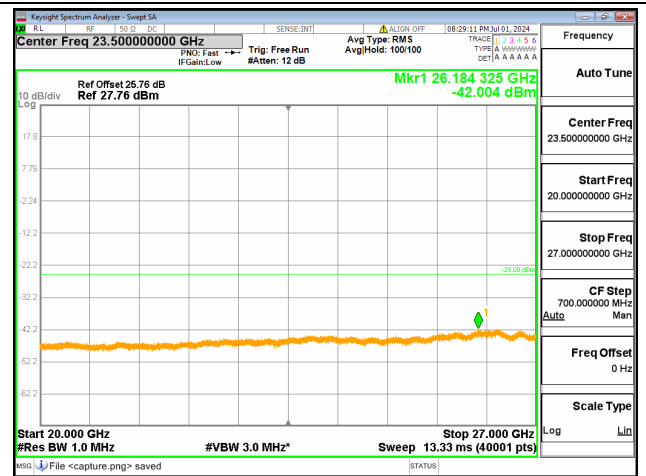
41C-30M-20G / 20+15MHz / QPSK / High CH / 100@0-75@0



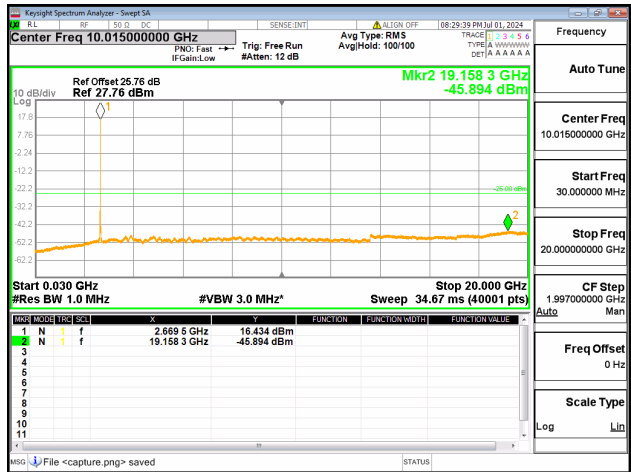
41C-20G-27G / 20+15MHz / QPSK / High CH / 100@0-75@0



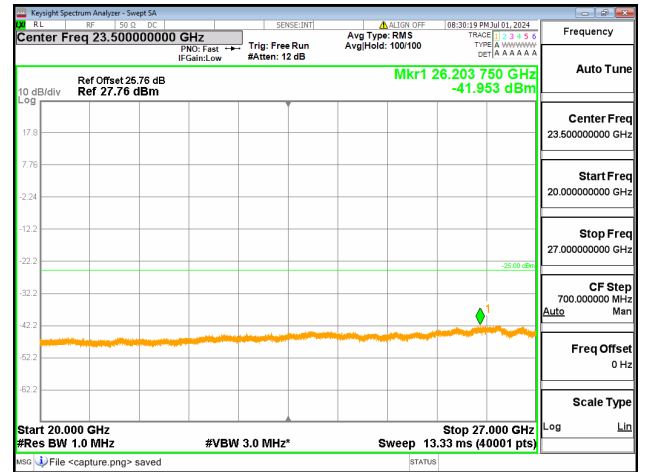
41C-30M-20G / 20+20MHz / QPSK / High CH / 1@0-1@99



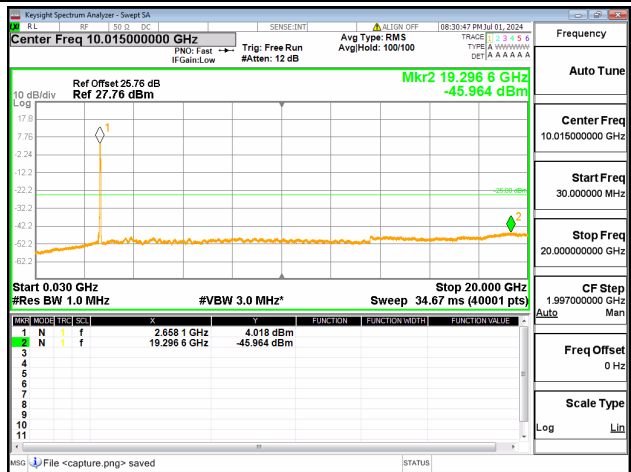
41C-20G-27G / 20+20MHz / QPSK / High CH / 1@0-1@99



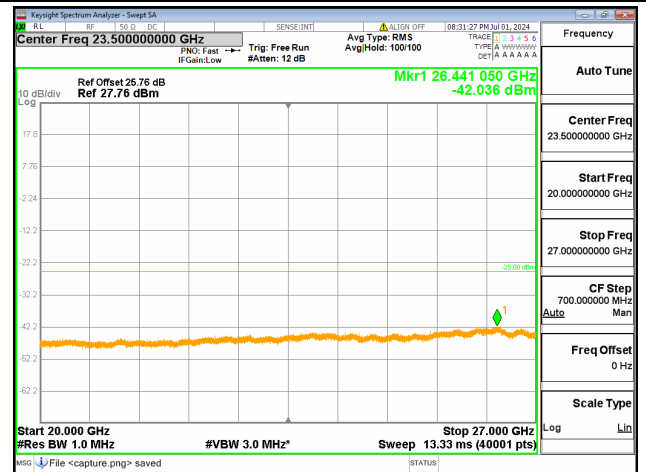
41C-30M-20G / 20+20MHz / QPSK / High CH / 1@99-1@0



41C-20G-27G / 20+20MHz / QPSK / High CH / 1@99-1@0



41C-30M-20G / 20+20MHz / QPSK / High CH / 100@0-100@0



41C-20G-27G / 20+20MHz / QPSK / High CH / 100@0-100@0

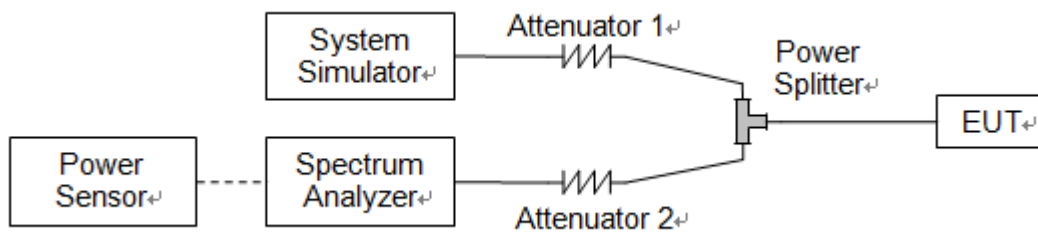
2.4. Band Edge

2.4.1. Requirement

Band 41

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.

2.4.2. Test Description



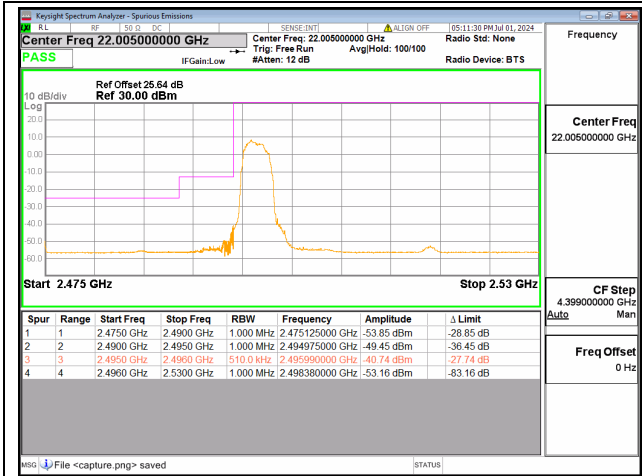
The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum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

2.4.3. Test Procedure

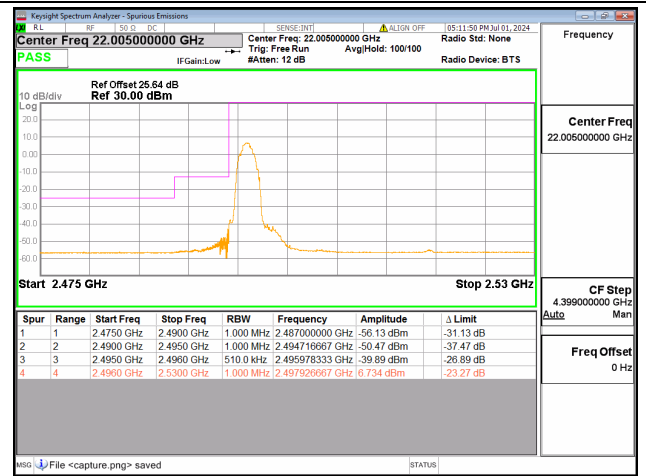
KDB 971168 D01v03 Section 6.0 and ANSI/TIA-603-E-2016.



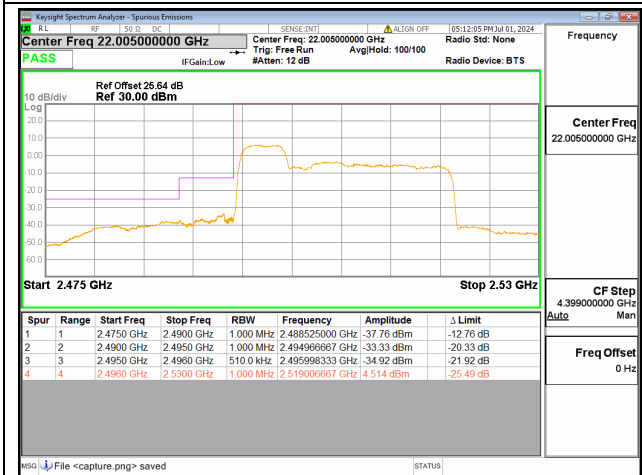
2.4.4. Test Result



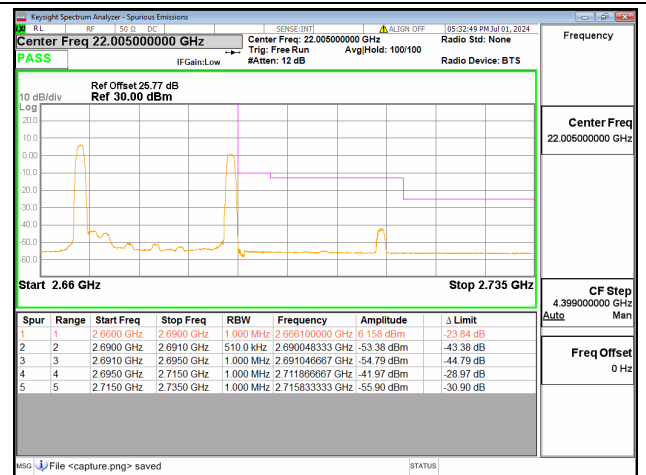
41C / 5+20MHz / Low CH / QPSK / 1#0-1#99



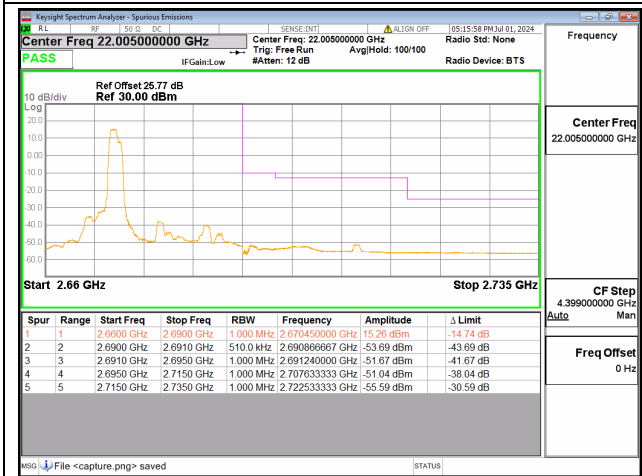
41C / 5+20MHz / Low CH / QPSK / 1#24-1#0



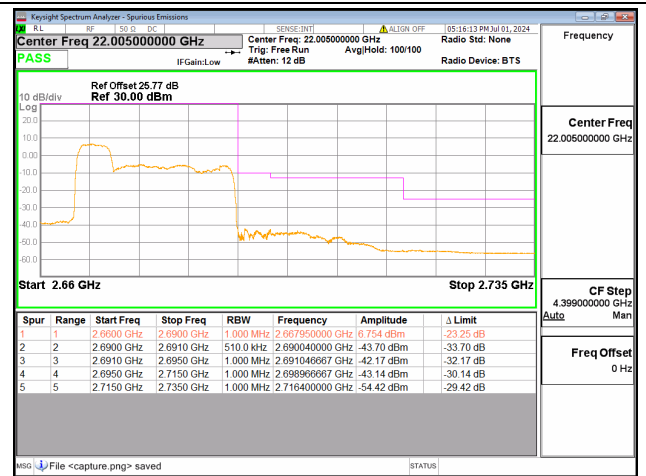
41C / 5+20MHz / Low CH / QPSK / 25#0-100#0



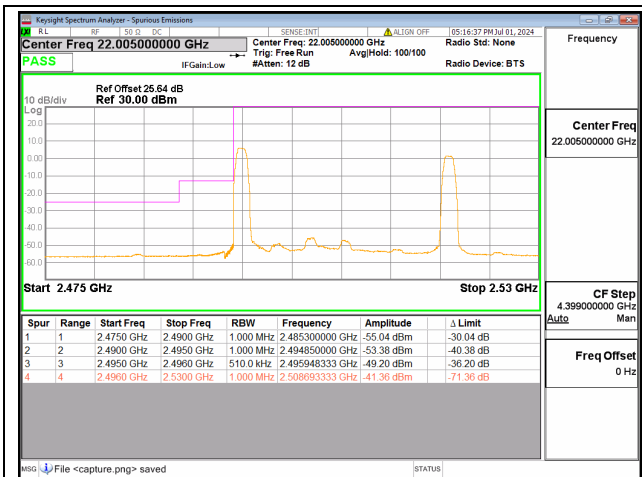
41C / 5+20MHz / High CH / QPSK / 1#0-1#99



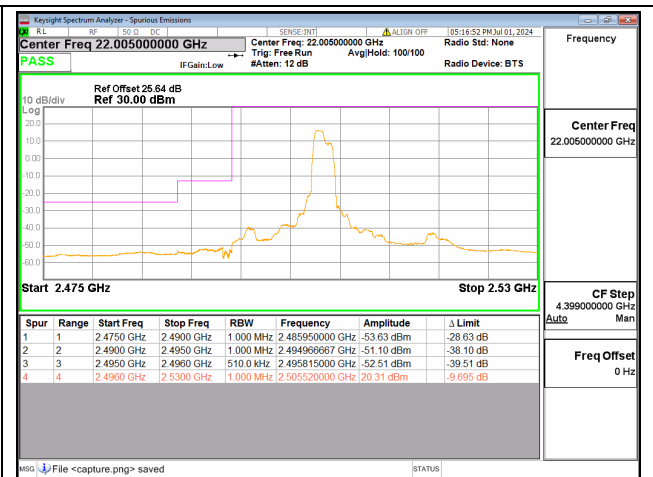
41C / 5+20MHz / High CH / QPSK / 1#24-1#0



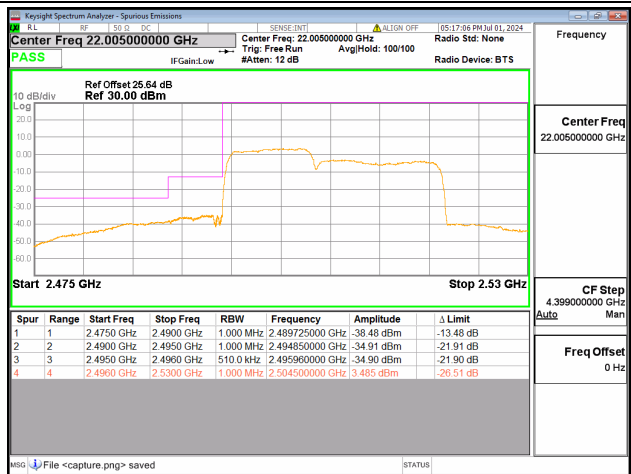
41C / 5+20MHz / High CH / QPSK / 25#0-100#0



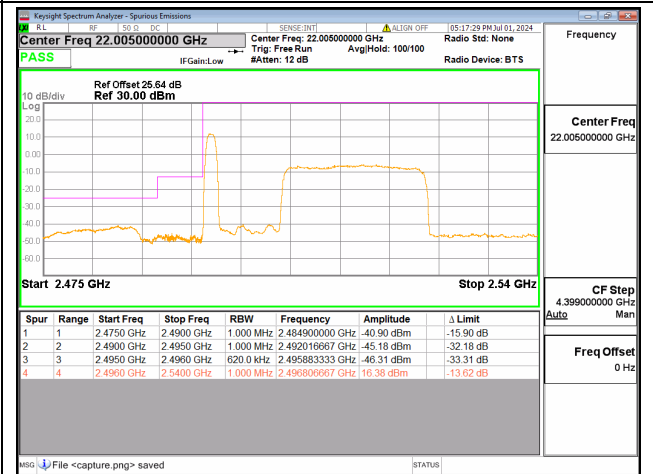
41C / 10+15MHz / Low CH / QPSK / 1#0-1#74



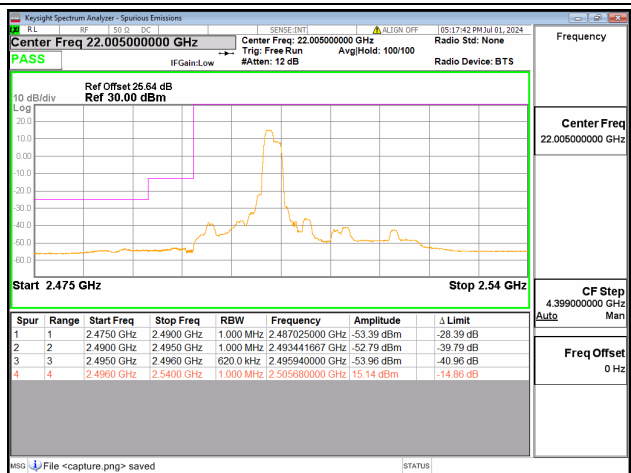
41C / 10+15MHz / Low CH / QPSK / 1#49-1#0



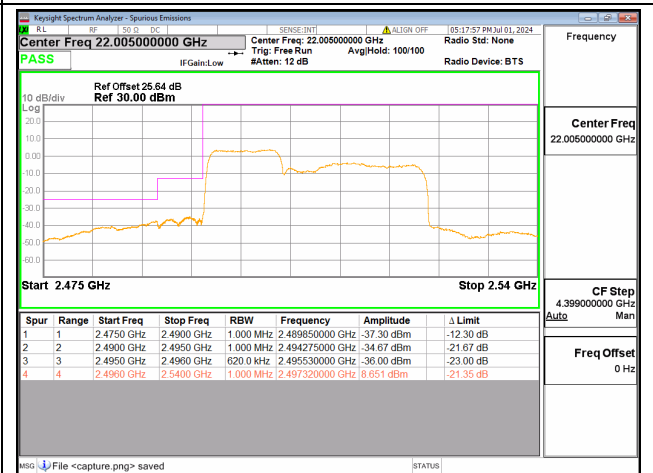
41C / 10+15MHz / Low CH / QPSK / 50#0-75#0



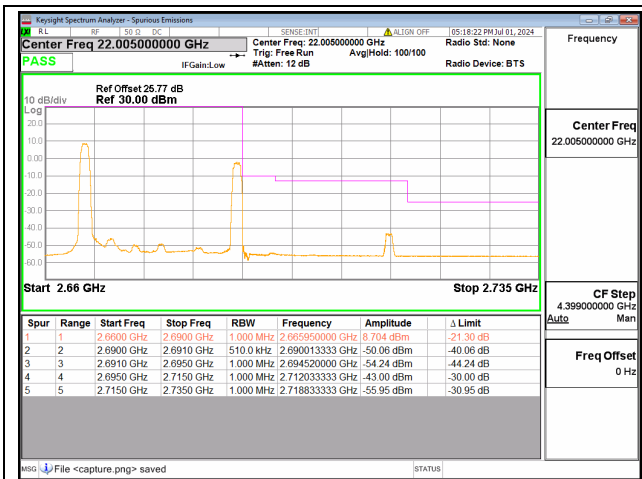
41C / 10+20MHz / Low CH / QPSK / 1#0-1#99



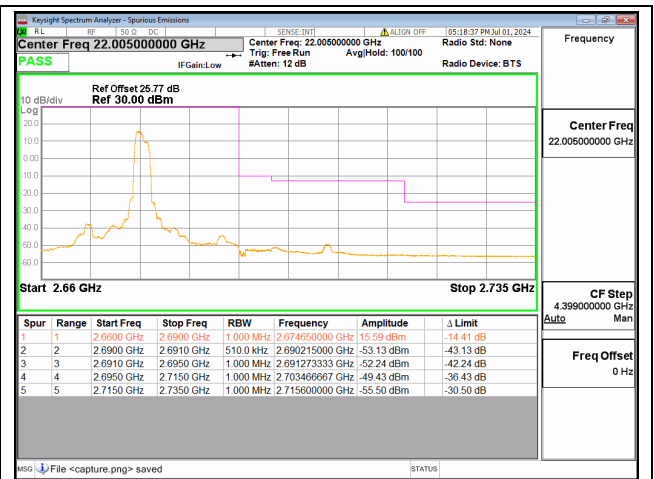
41C / 10+20MHz / Low CH / QPSK / 1#49-1#0



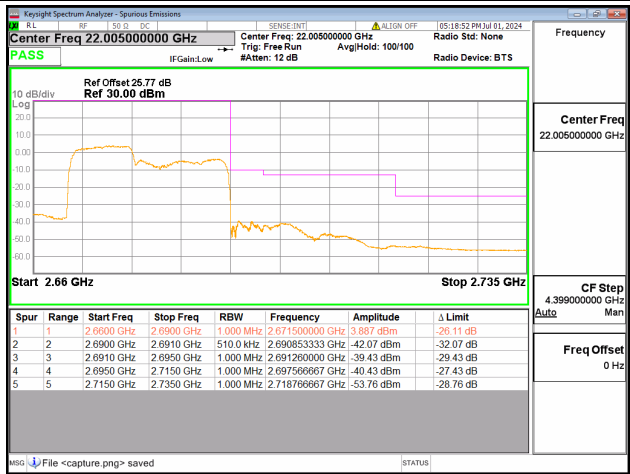
41C / 10+20MHz / Low CH / QPSK / 50#0-100#0



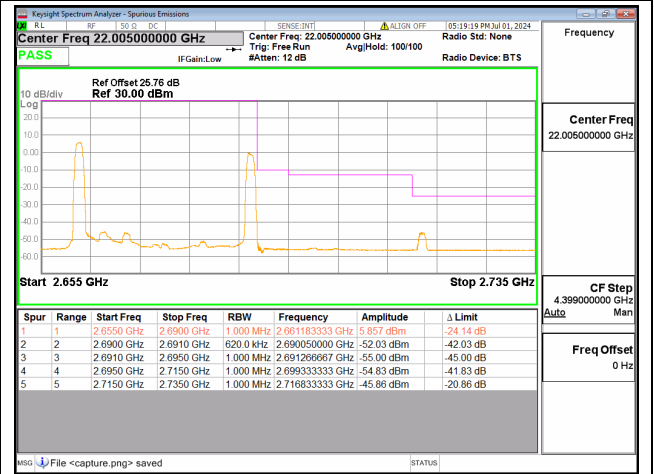
41C / 10+15MHz / High CH / QPSK / 1#0-1#74



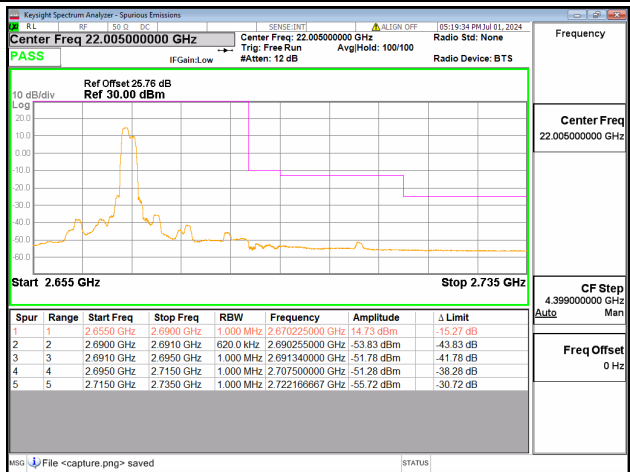
41C / 10+15MHz / High CH / QPSK / 1#49-1#0



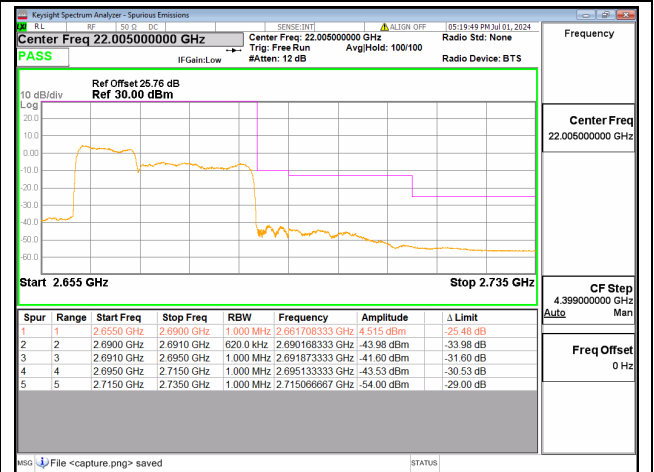
41C / 10+15MHz / High CH / QPSK / 50#0-75#0



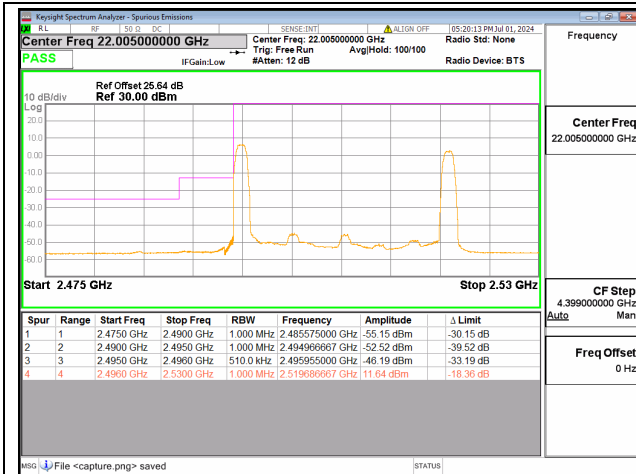
41C / 10+20MHz / High CH / QPSK / 1#0-1#99



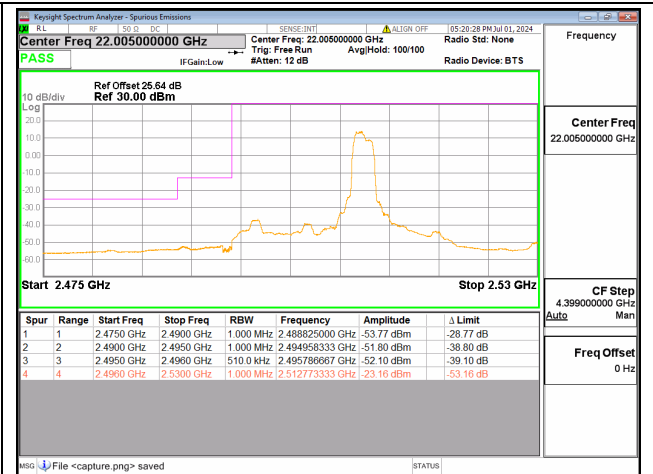
41C / 10+20MHz / High CH / QPSK / 1#49-1#0



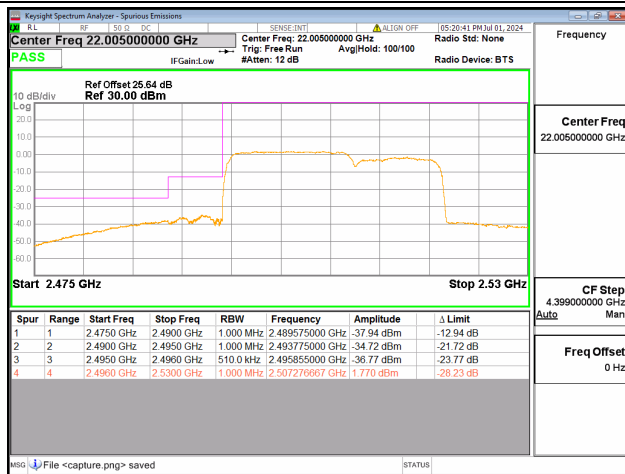
41C / 10+20MHz / High CH / QPSK / 50#0-100#0



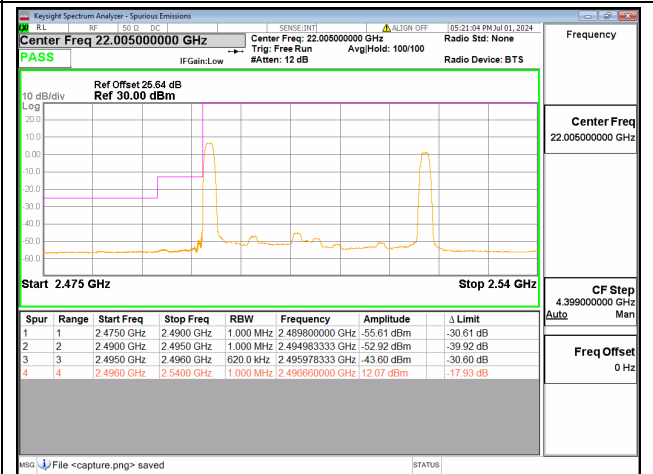
41C / 15+10MHz / Low CH / QPSK / 1#0-1#49



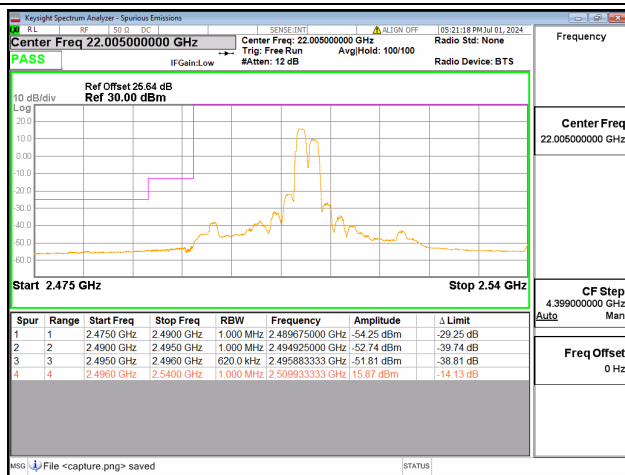
41C / 15+10MHz / Low CH / QPSK / 1#74-1#0



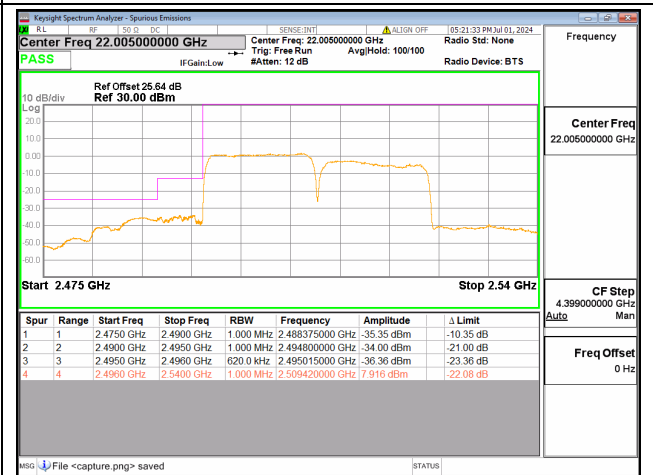
41C / 15+10MHz / Low CH / QPSK / 75#0-50#0



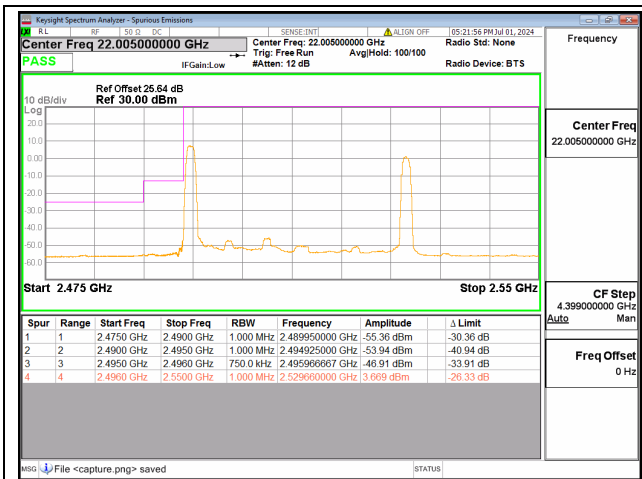
41C / 15+15MHz / Low CH / QPSK / 1#0-1#74



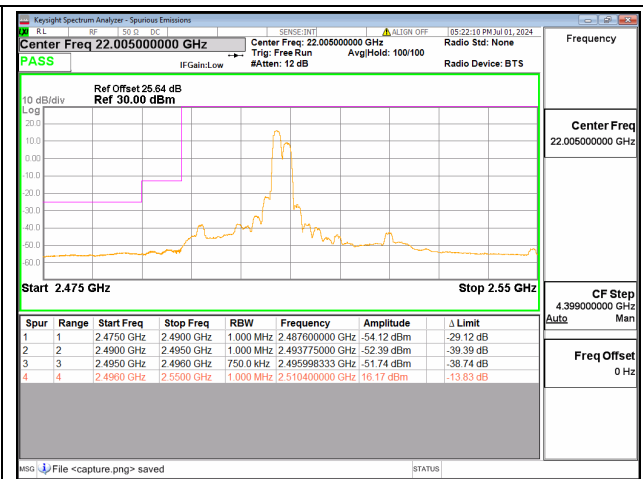
41C / 15+15MHz / Low CH / QPSK / 1#74-1#0



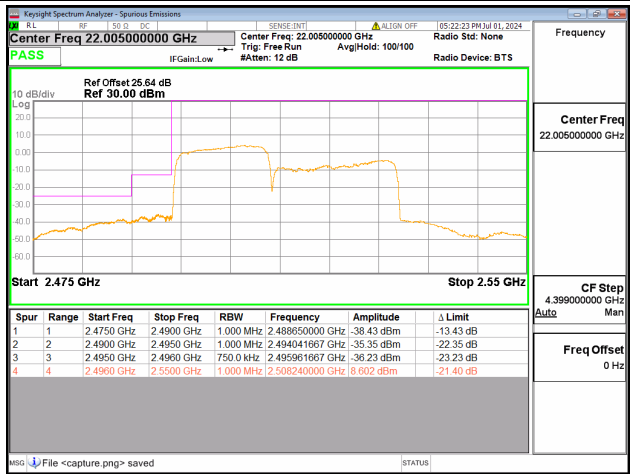
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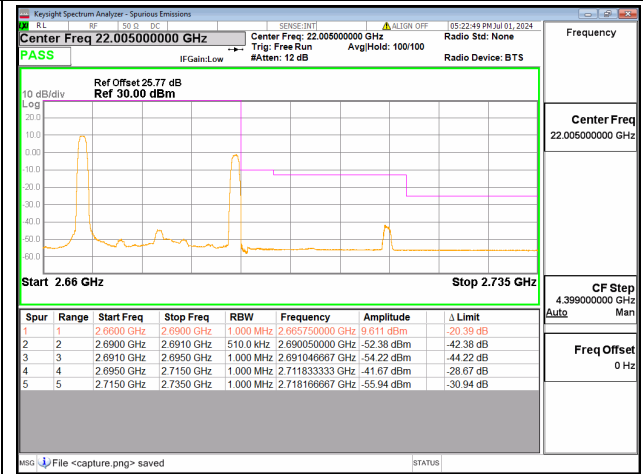
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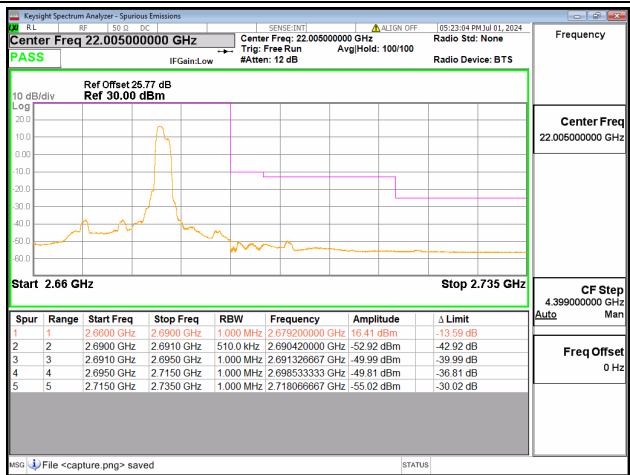
41C / 15+20MHz / Low CH / QPSK / 1#74-1#0



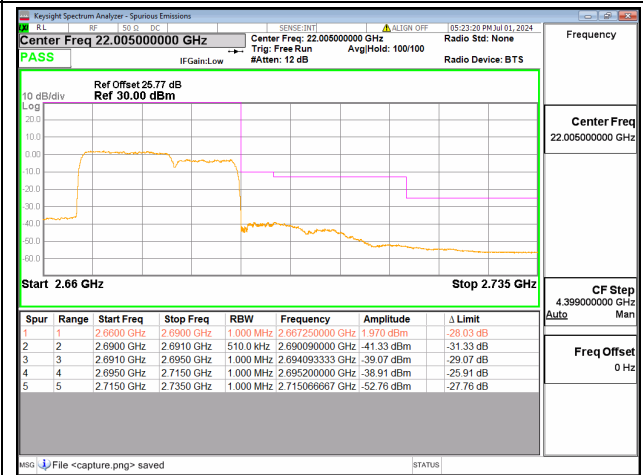
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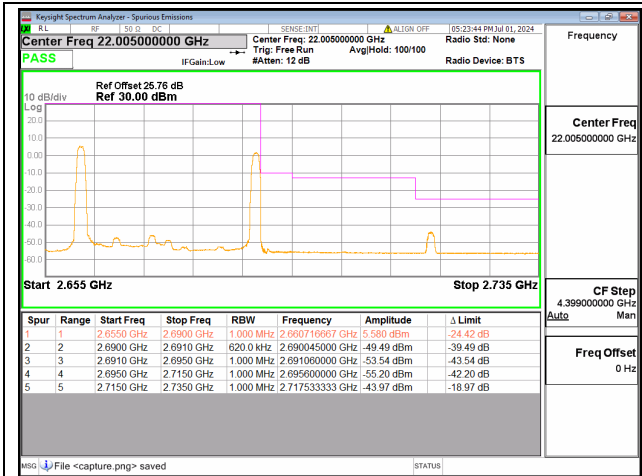
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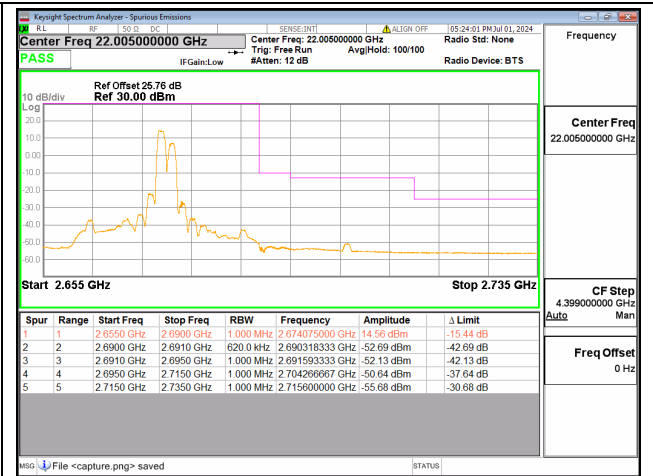
41C / 15+10MHz / High CH / QPSK / 1#74-1#0



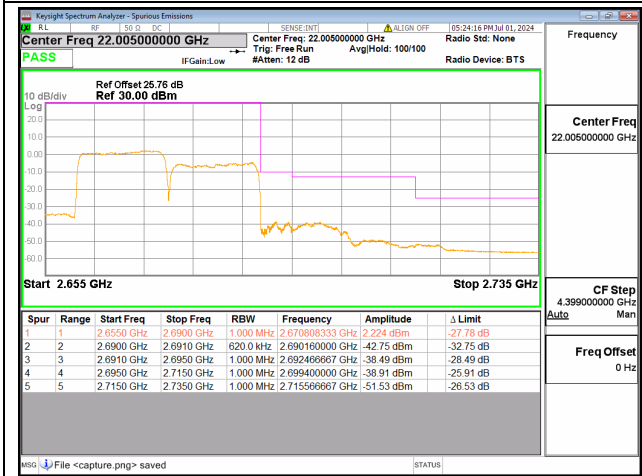
41C / 15+10MHz / High CH / QPSK / 75#0-50#0



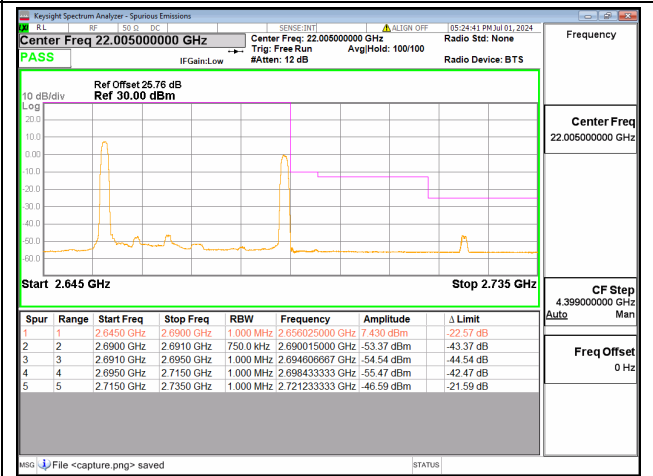
41C / 15+15MHz / High CH / QPSK / 1#0-1#74



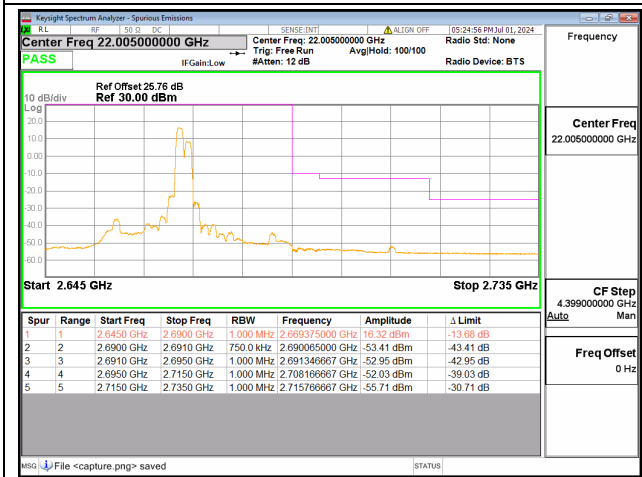
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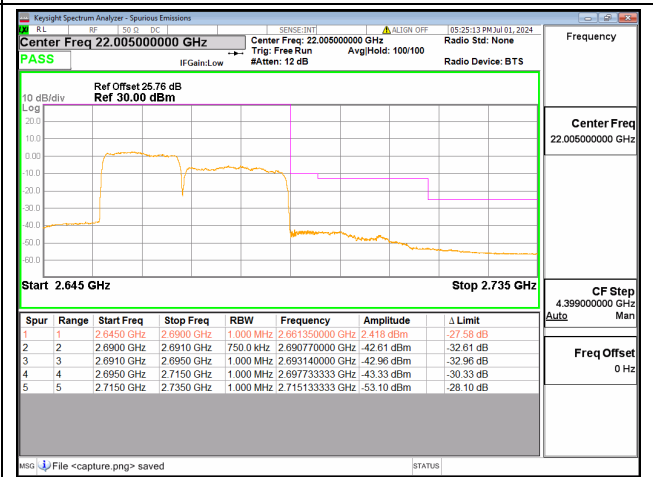
41C / 15+15MHz / High CH / QPSK / 75#0-75#0



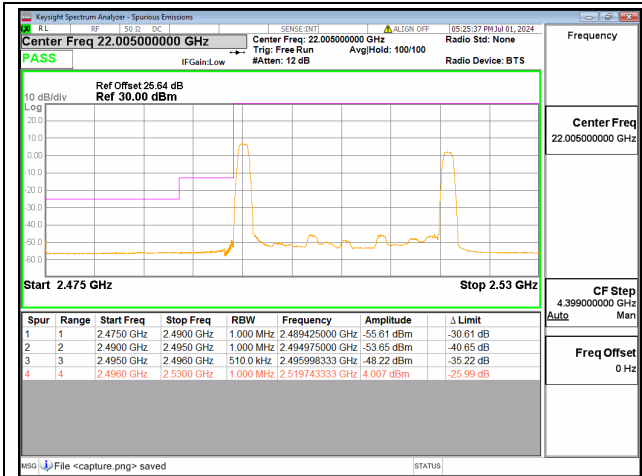
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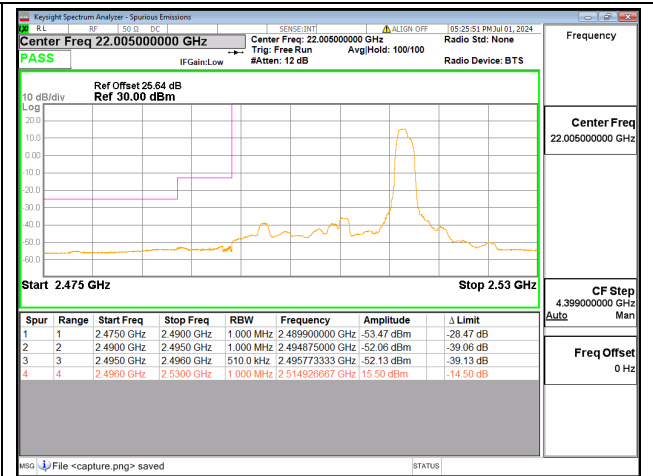
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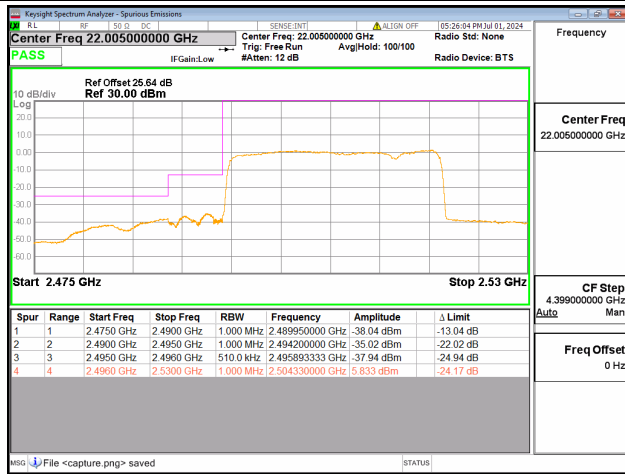
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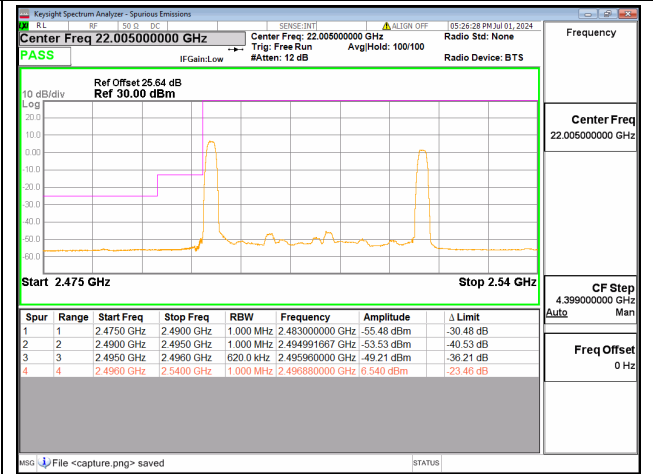
41C / 20+5MHz / Low CH / QPSK / 1#0-1#24



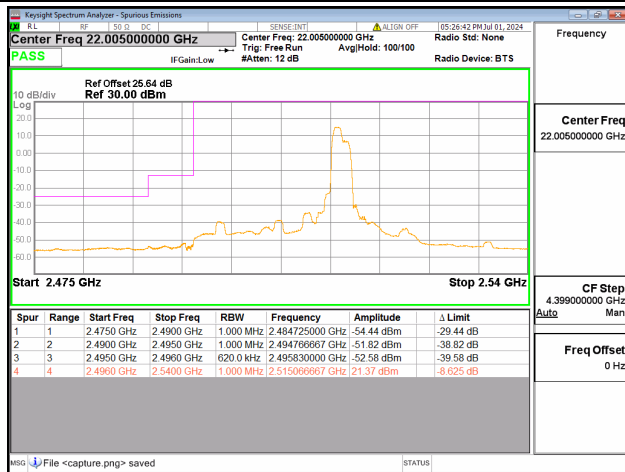
41C / 20+5MHz / Low CH / QPSK / 1#99-1#0



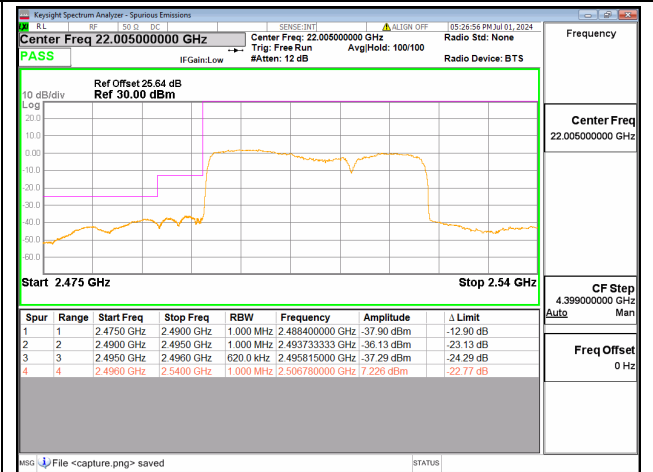
41C / 20+5MHz / Low CH / QPSK / 100#0-25#0



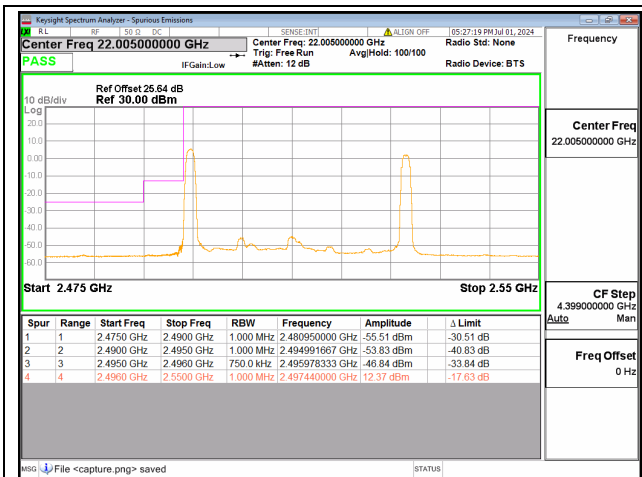
41C / 20+10MHz / Low CH / QPSK / 1#0-1#49



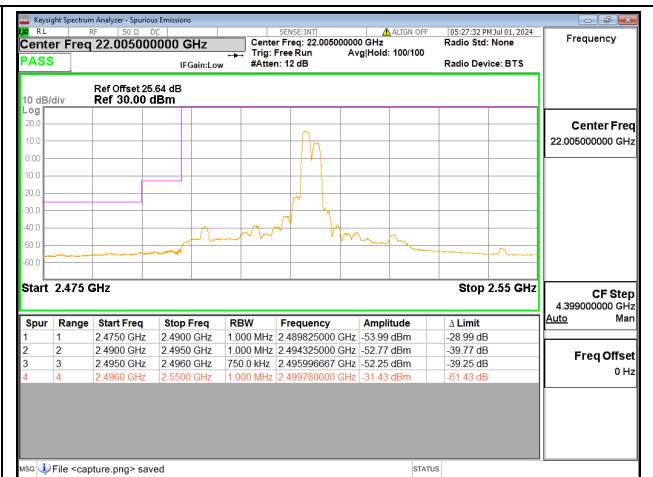
41C / 20+10MHz / Low CH / QPSK / 1#99-1#0



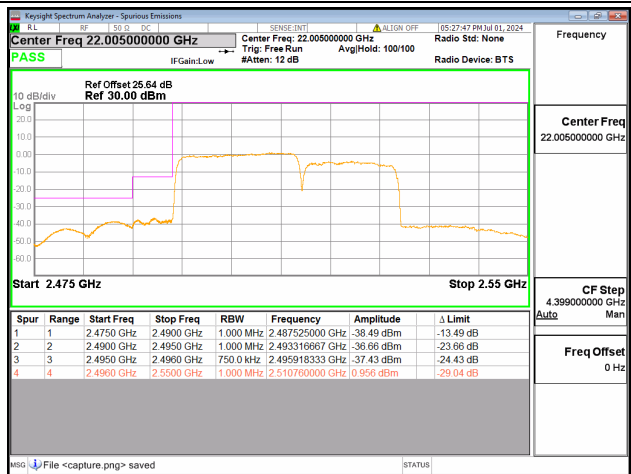
41C / 20+10MHz / Low CH / QPSK / 100#0-50#0



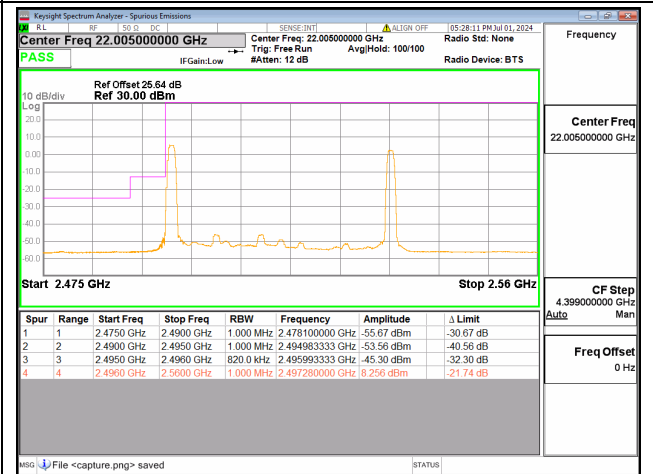
41C / 20+15MHz / Low CH / QPSK / 1#0-1#74



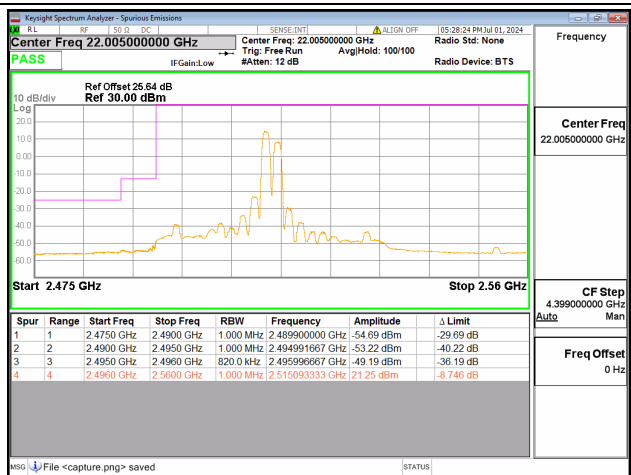
41C / 20+15MHz / Low CH / QPSK / 1#99-1#0



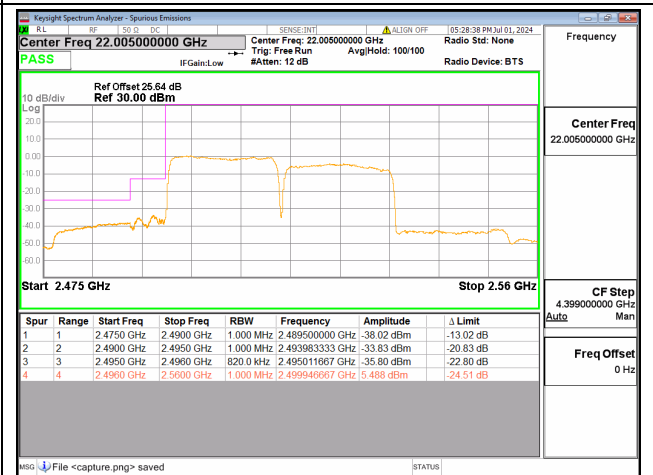
41C / 20+15MHz / Low CH / QPSK / 100#0-75#0



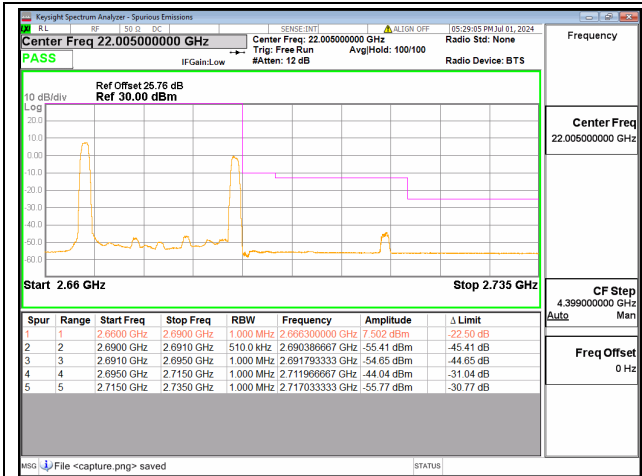
41C / 20+20MHz / Low CH / QPSK / 1#0-1#99



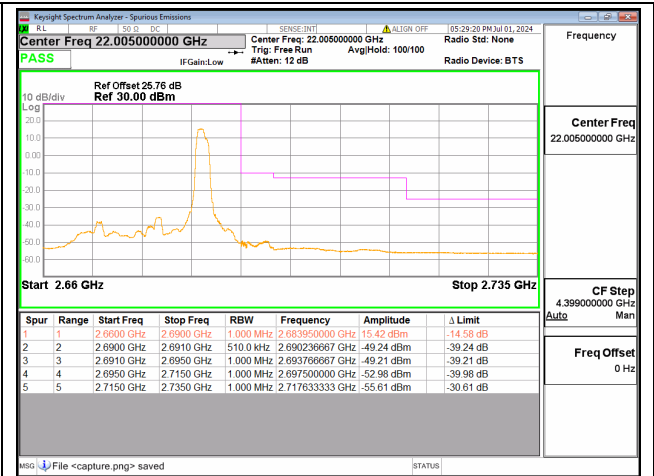
41C / 20+20MHz / Low CH / QPSK / 1#99-1#0



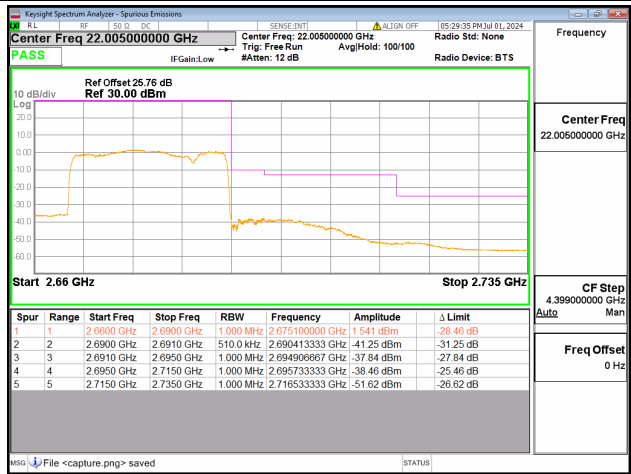
41C / 20+20MHz / Low CH / QPSK / 100#0-100#0



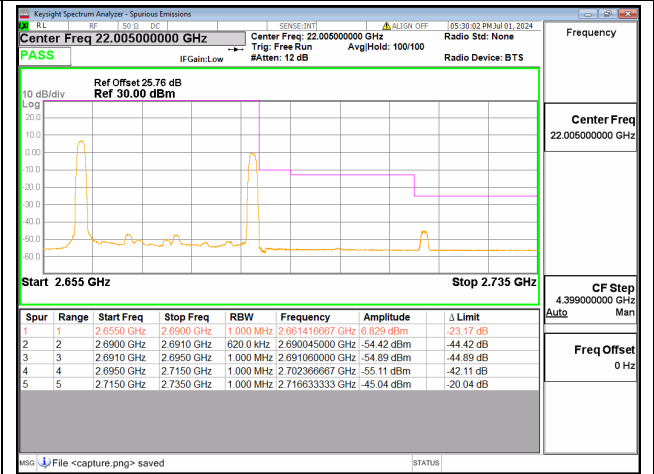
41C / 20+5MHz / High CH / QPSK / 1#0-1#24



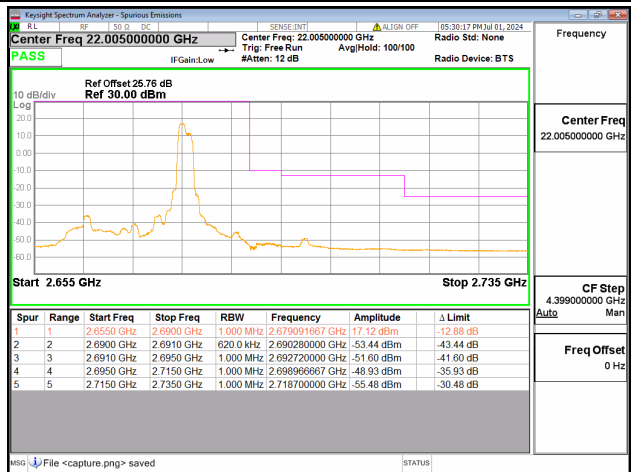
41C / 20+5MHz / High CH / QPSK / 1#99-1#0



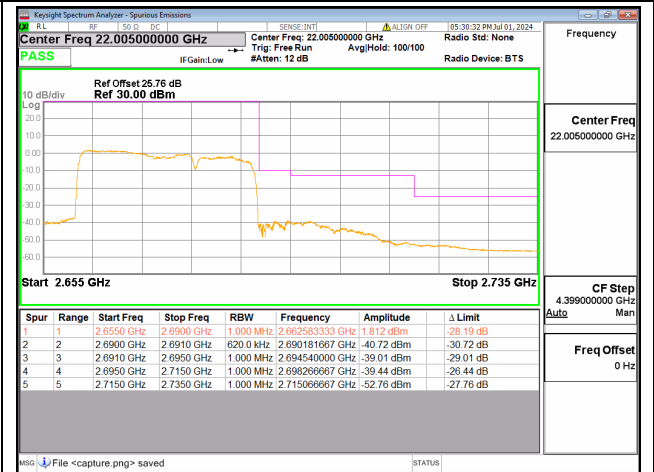
41C / 20+5MHz / High CH / QPSK / 100#0-25#0



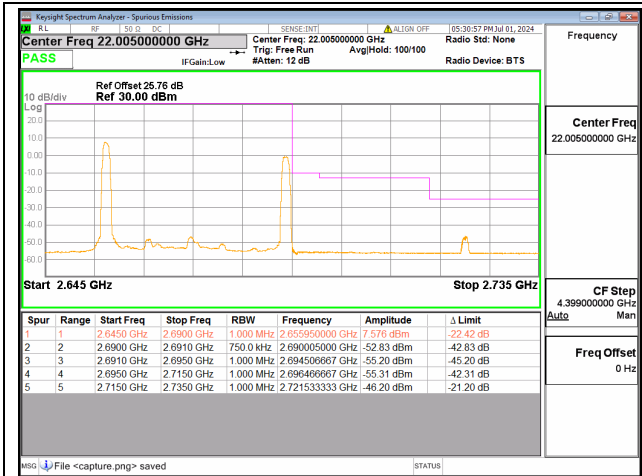
41C / 20+10MHz / High CH / QPSK / 1#0-1#49



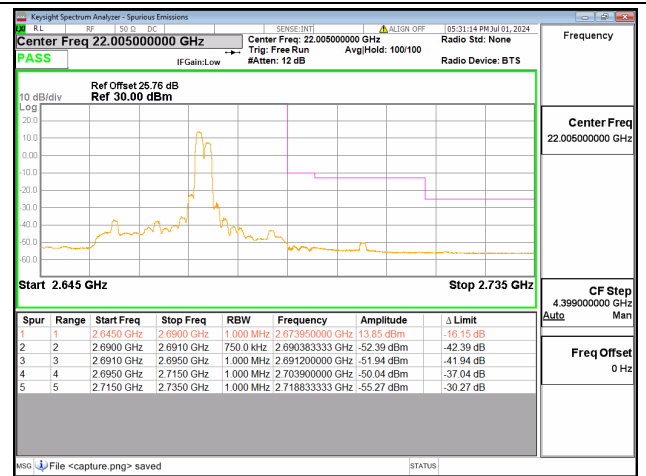
41C / 20+10MHz / High CH / QPSK / 1#99-1#0



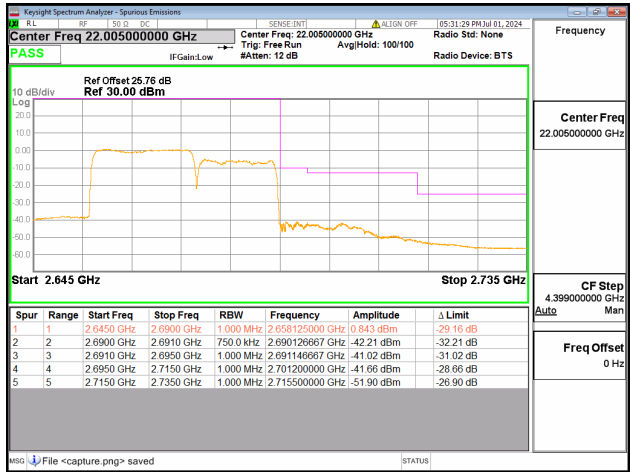
41C / 20+10MHz / High CH / QPSK / 100#0-50#0



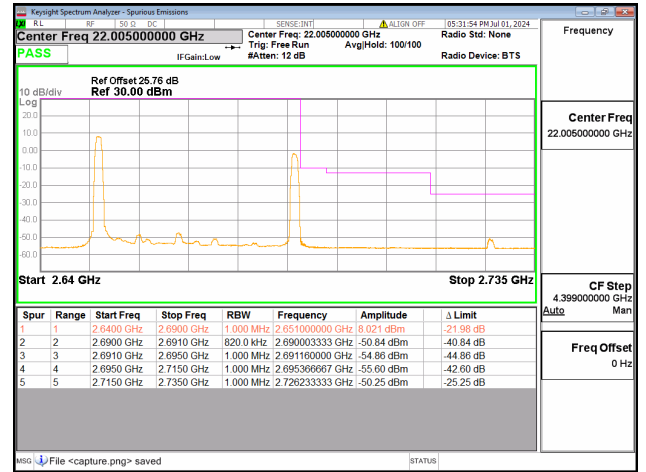
41C / 20+15MHz / High CH / QPSK / 1#0-1#74



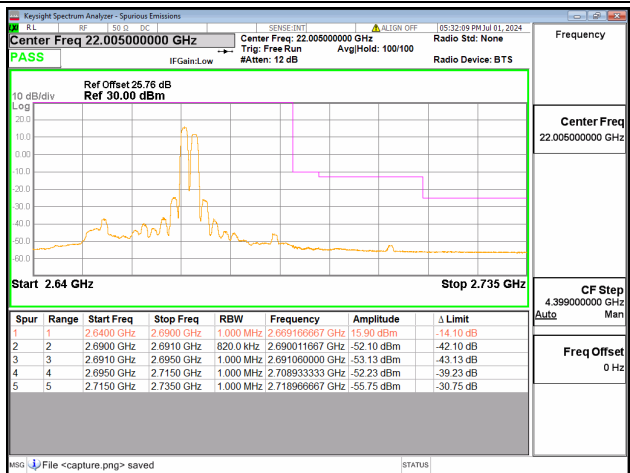
41C / 20+15MHz / High CH / QPSK / 1#99-1#0



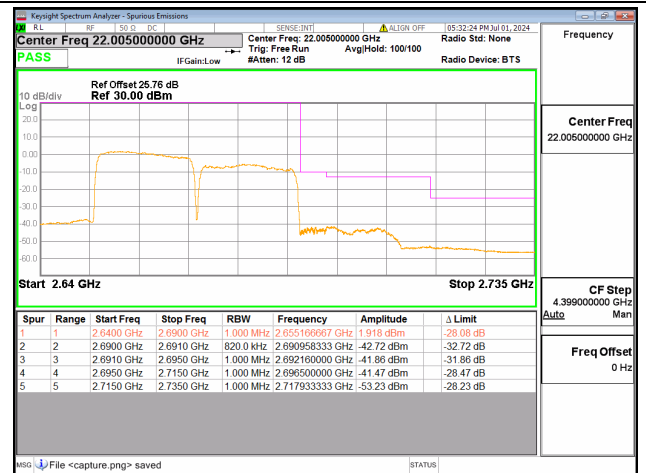
41C / 20+15MHz / High CH / QPSK / 100#0-75#0



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

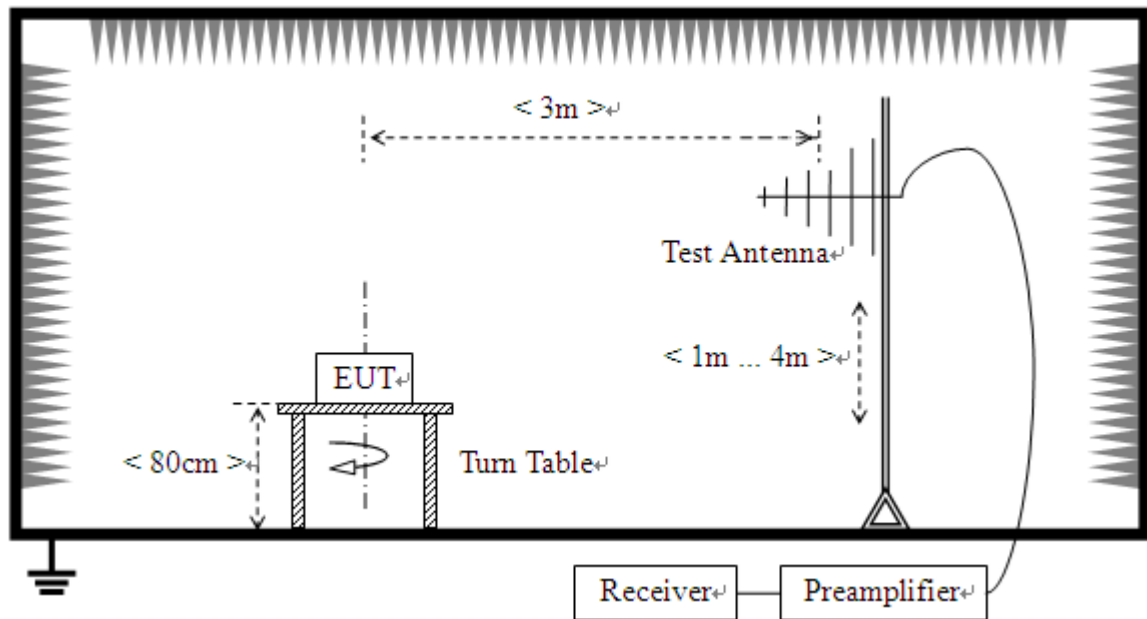
2.5.1. Requirement

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 $43 + 10 \cdot \log(P)$ dB. This calculated to be -13dBm.

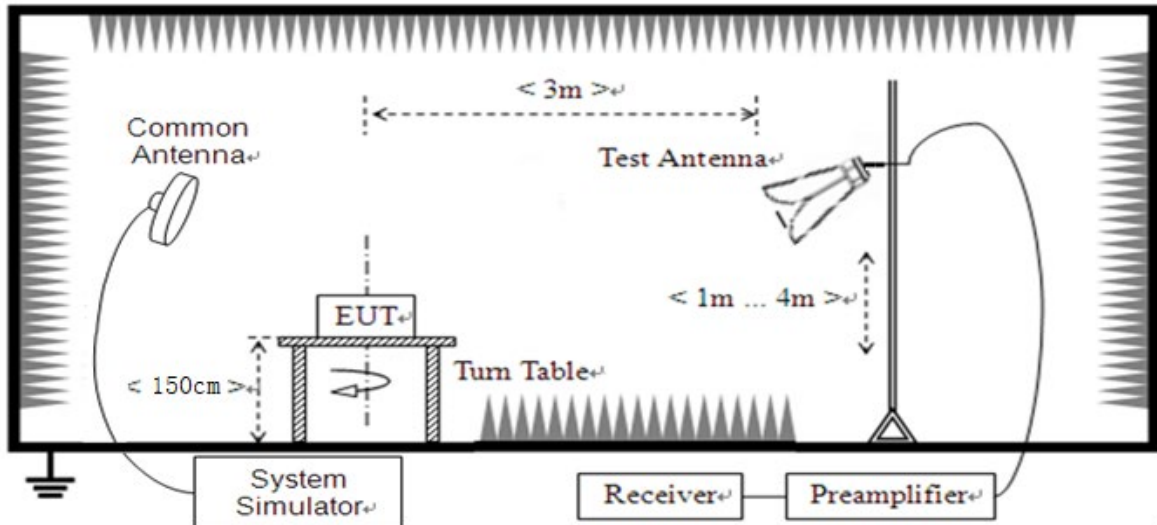
Additional requirement for LTE Band 41:

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 to 1GHz)



(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 5.8and 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. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. The lowest,



middle and highest channels are tested to verify the out of band emissions.

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.

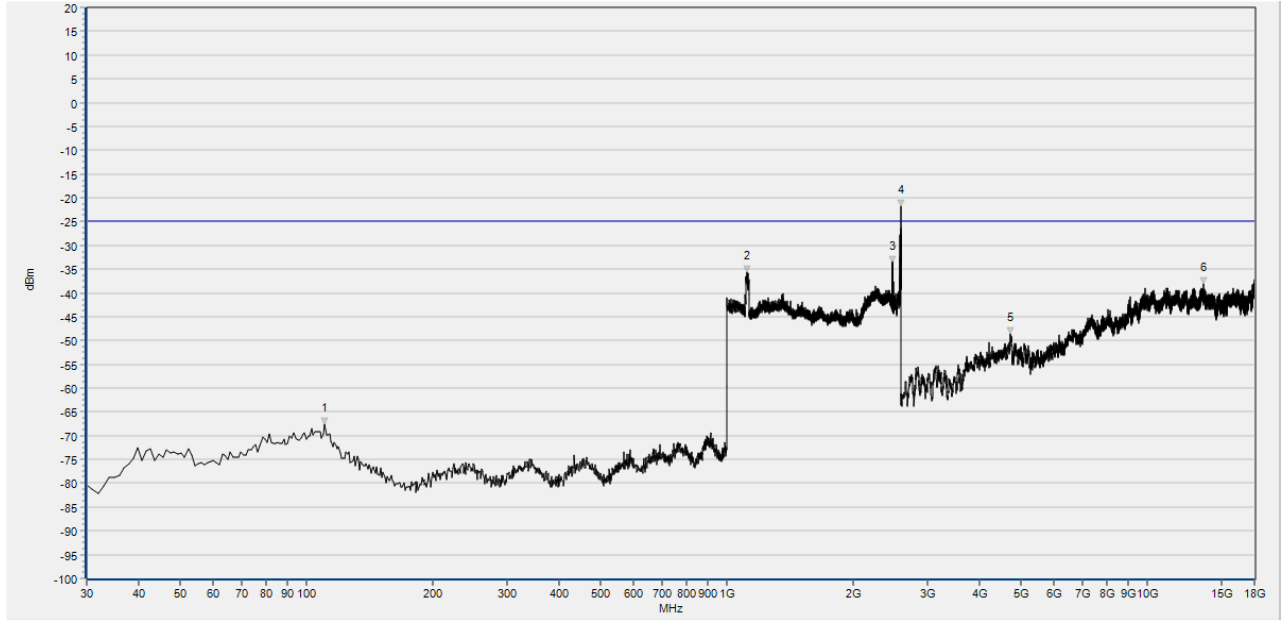
Note2: All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Note3: All bandwidth and modulation were considered and evaluated respectively by performing full test for each band; only the worst cases (Max Bandwidth and QPSK mode) were recorded in this test report.

Note 4: N/A means the frequency is the basic frequency or the base station frequency; they are no need to verdict.

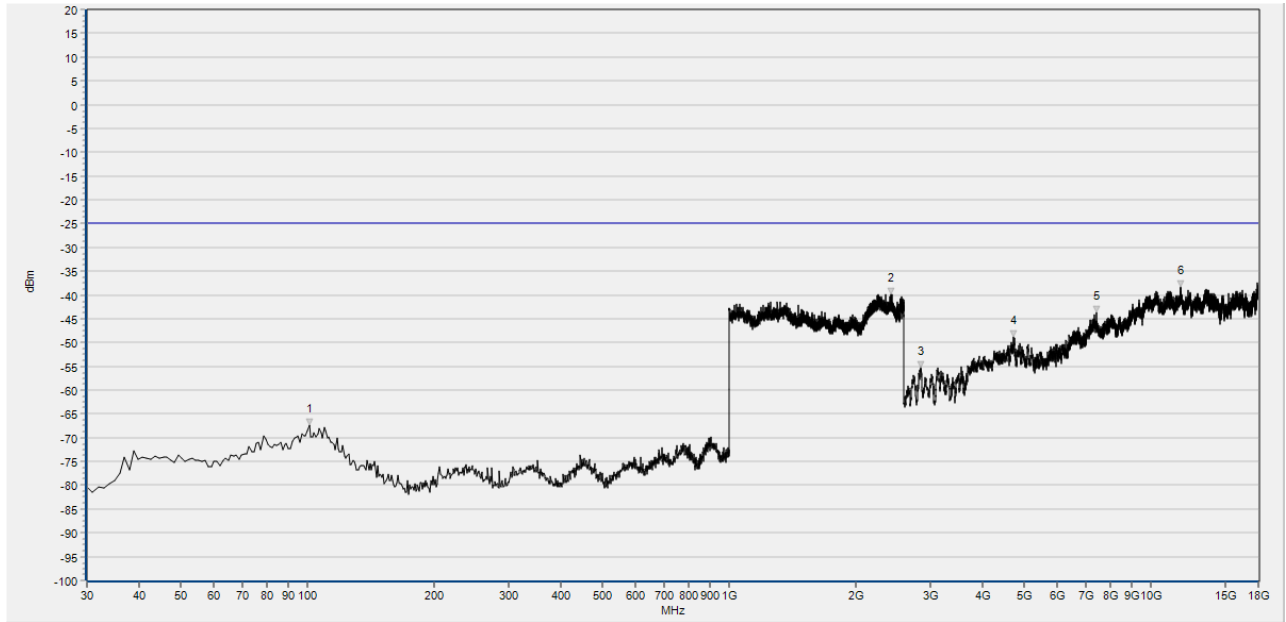


PIFA Antenna



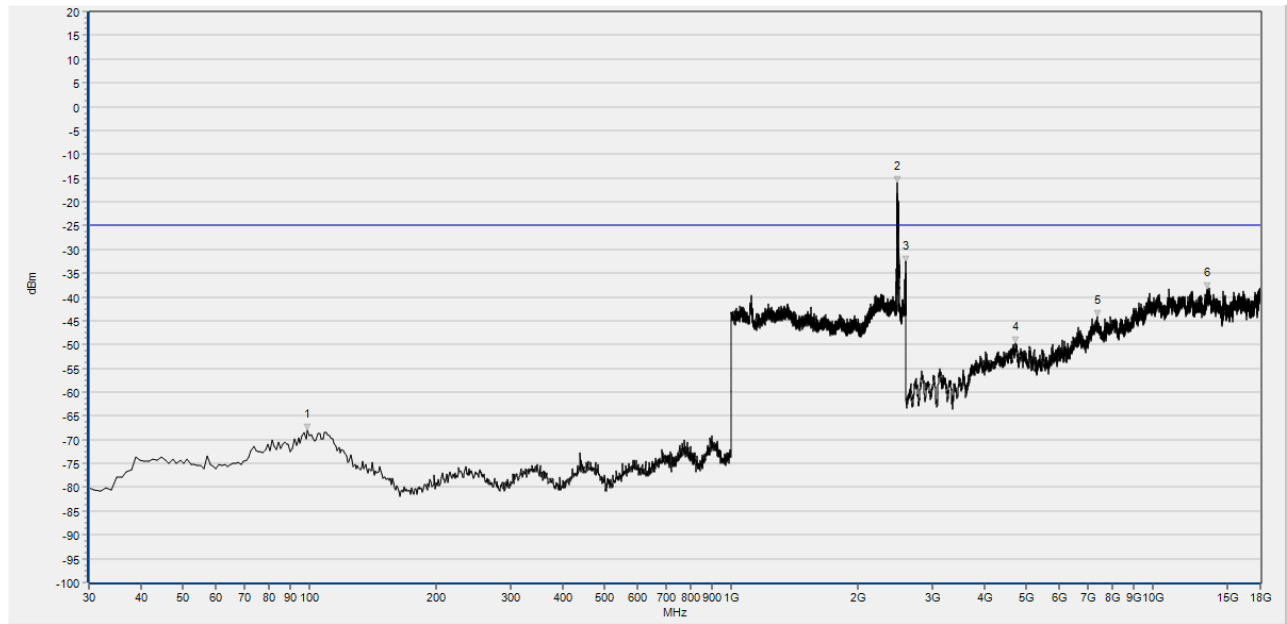
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	110.591	-67.58	-25.00	0.0	H	PASS
2	1115.772	-35.55	-25.00	282.1	H	PASS
3	2479.960	-33.64	-25.00	242.3	H	PASS
4	2600.000	-21.69	-25.00	258.7	H	NA
5	4734.867	-48.49	-25.00	82.2	H	PASS
6	13588.558	-38.16	-25.00	130.3	H	PASS

41C High H 30M-18G



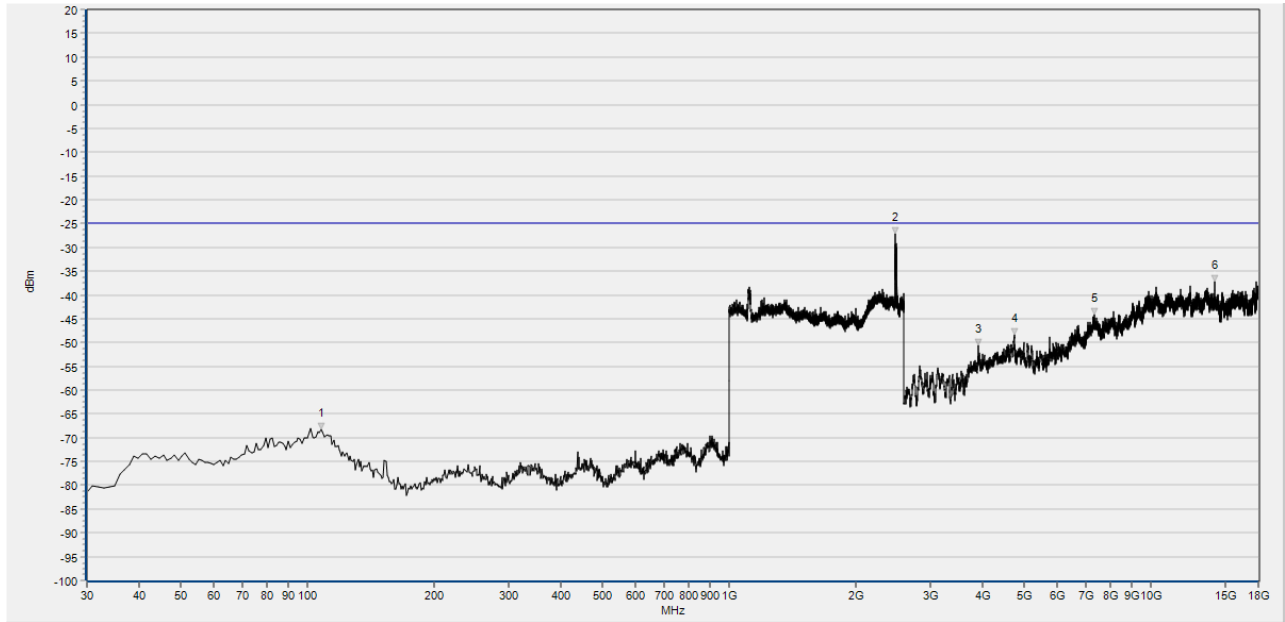
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	100.881	-67.34	-25.00	0.0	V	PASS
2	2415.939	-39.99	-25.00	0.0	V	PASS
3	2843.369	-55.22	-25.00	190.6	V	PASS
4	4731.786	-48.89	-25.00	190.6	V	PASS
5	7445.809	-43.78	-25.00	91.3	V	PASS
6	11786.397	-38.42	-25.00	311.9	V	PASS

41C High V 30M-18G



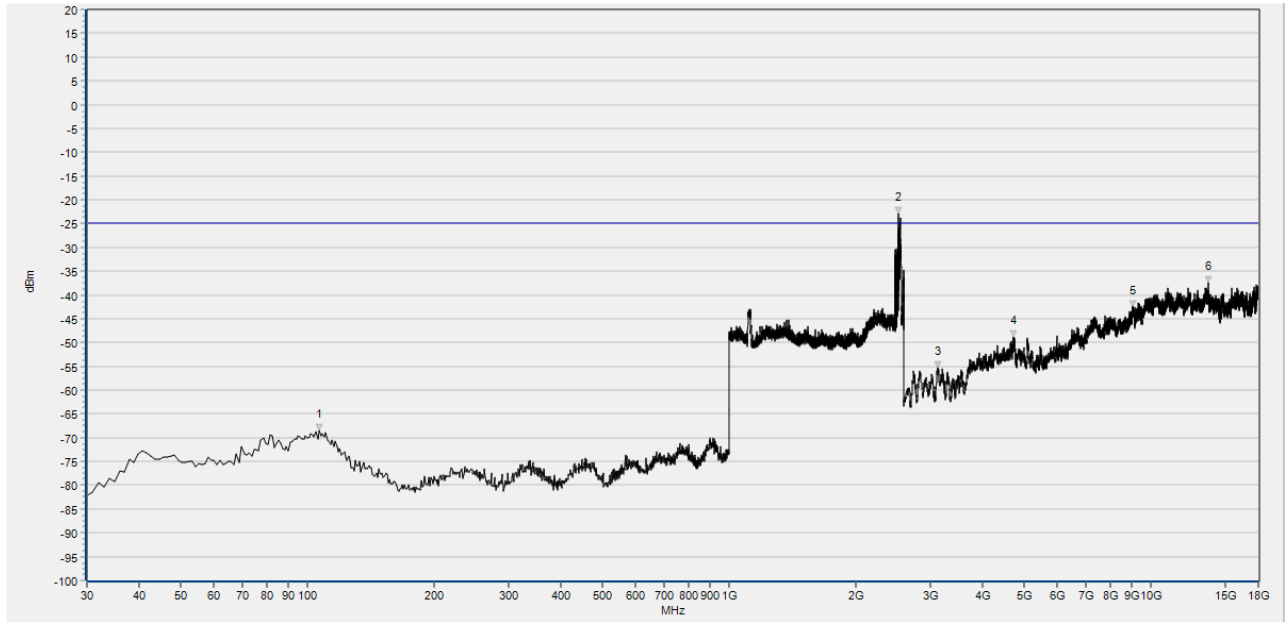
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	98.939	-68.12	-25.00	0.0	H	PASS
2	2479.960	-15.94	-25.00	0.0	H	NA
3	2589.330	-32.83	-25.00	0.0	H	NA
4	4734.867	-49.71	-25.00	256.7	H	PASS
5	7374.955	-44.19	-25.00	306.2	H	PASS
6	13459.172	-38.25	-25.00	169.7	H	PASS

41C Low H 30M-18G



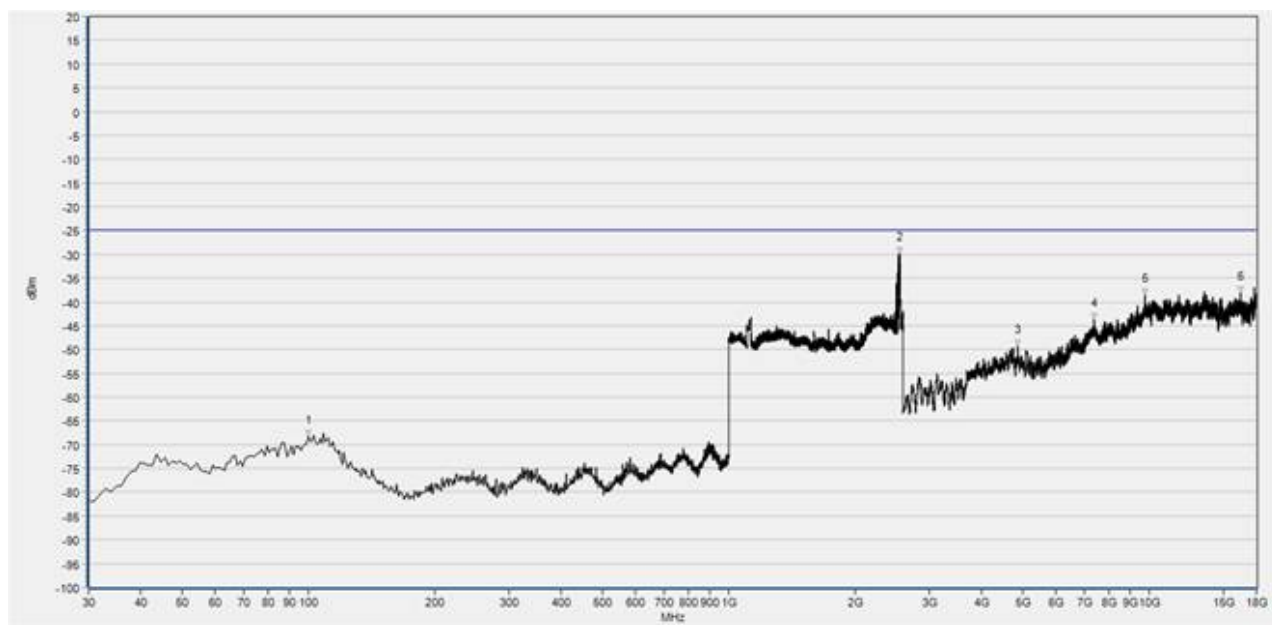
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	107.678	-68.21	-25.00	360.0	V	PASS
2	2475.692	-27.20	-25.00	327.6	V	NA
3	3900.020	-50.55	-25.00	341.3	V	PASS
4	4741.028	-48.48	-25.00	118.0	V	PASS
5	7347.229	-44.13	-25.00	229.6	V	PASS
6	14192.358	-37.10	-25.00	118.0	V	PASS

41C Low V 30M-18G



Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	106.707	-68.55	-25.00	360.0	H	PASS
2	2527.976	-22.99	-25.00	360.0	H	NA
3	3132.947	-55.20	-25.00	83.1	H	PASS
4	4731.786	-48.87	-25.00	269.9	H	PASS
5	9038.488	-42.51	-25.00	212.2	H	PASS
6	13662.492	-37.40	-25.00	346.5	H	PASS

41C Mid H 1G-18G



Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	99.910	-68.23	-25.00	360.0	V	PASS
2	2550.917	-29.94	-25.00	319.4	V	NA
3	4876.575	-49.18	-25.00	279.7	V	PASS
4	7381.116	-43.62	-25.00	317.0	V	PASS
5	9756.271	-38.54	-25.00	179.7	V	PASS
6	16539.788	-38.19	-25.00	44.7	V	PASS

41C Mid H 1G-18G



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

This uncertainty represent an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.



Annex B Testing Laboratory Information

1. Identification of the Responsible Testing Laboratory

Laboratory Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Laboratory 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 Equipments Utilized

4.1 Conducted Test Equipments

Equipment Name	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Power Splitter	NW521	1506A	Weinschel	N/A	N/A
Attenuator 1	(N/A.)	10dB	Resnet	N/A	N/A
EXA Signal Analyzer	MY54170556	N9030A	Keysight	2023.10.07	2024.10.06
System Simulator	6261830572	MT8821C	Anritsu	2024.01.25	2025.01.24
RF cable (30MHz-26GHz)	CB01	RF01	Morlab	N/A	N/A
Computer	T430i	Think Pad	Lenovo	N/A	N/A



4.2 List of Software Used

Description	Manufacturer	Software Version
MOR-2023E Test System	MORLAB	V7.99
MORLAB EMCR	MORLAB	V1.2

**4.3 Radiated Test Equipments**

Equipment Name	Serial No.	Type	Manufacturer	Cal. Date	Cal. Due
Bi-Log Antenna	9163-274	VULB 9163	SCHWARZBECK	2024.06.29	2025.06.28
Horn Antenna	9120D-963	BBHA 9120D	SCHWARZBECK	2024.06.03	2025.06.02
Receiver	MY54130016	N9038A	Agilent	2024.06.21	2025.06.20
Preamplifier (2GHz-18GHz)	61171/61172	S020180L3203	LUCIX CORP.	2024.03.30	2025.05.29
Preamplifier (10MHz-6GHz)	46732	S10M100L3802	LUCIX CORP.	2024.03.30	2025.05.29
System Simulator	152038	CMW500	R&S	2023.09.19	2024.09.18
RF Coaxial Cable (DC-18GHz)	MRE001	PE330	Pasternack	2024.03.30	2025.05.29
RF Coaxial Cable (DC-18GHz)	MRE002	CLU18	Pasternack	2024.03.30	2025.05.29
RF Coaxial Cable (DC-18GHz)	MRE003	CLU18	Pasternack	2024.03.30	2025.05.29
RF Coaxial Cable (DC-40GHz)	22290045	QA360-40-KK-0.5	Qualwave	N/A	N/A
RF Coaxial Cable (DC-40GHz)	22290046	QA360-40-KKF-2	Qualwave	N/A	N/A
RF Coaxial Cable (DC-18GHz)	22120181	QA500-18-NN-5	Qualwave	N/A	N/A

————— END OF REPORT —————