

TEST REPORT

CERTIFICATE OF CONFORMITY

Standard: 47 CFR FCC Part 22
47 CFR FCC Part 24
47 CFR FCC Part 27
47 CFR FCC Part 2

Report No.: RFBFJZ-WTW-P22110126-14

FCC ID: V65E7200

Product: Smartphone

Brand: Kyocera

Model No.: E7200

Received Date: 2022/12/7

Test Date: 2023/3/29 ~ 2023/3/30

Issued Date: 2023/4/11

Applicant: Kyocera Corporation % Kyocera International, Inc.

Address: 8611 Balboa Avenue, San Diego, CA 92123

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lin Kou Laboratories

Lab Address: No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan

Test Location (1): No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN

FCC Registration / 788550 / TW0003

Designation Number:

Test Location (2): No. 70, Wenming Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)

FCC Registration / 281270 / TW0032

Designation Number:

Approved by: _____

Jeremy Lin

Date: _____

2023/4/11

Jeremy Lin / Project Engineer

This test report consists of 92 pages in total. It may be duplicated completely for legal use with the approval of the applicant. It should not be reproduced except in full, without the written approval of our laboratory. The test results in the report only apply to the tested sample. The test results in this report are traceable to the national or international standards.



Prepared by : Celine Chou / Senior Specialist

This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at <http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/> and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. Statements of conformity are based on simple acceptance criteria without taking measurement uncertainty into account, unless otherwise requested in writing. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

Table of Contents

Release Control Record	4
1 Certificate	5
2 Summary of Test Results	6
2.1 Measurement Uncertainty	7
2.2 Supplementary Information	7
3 General Information	8
3.1 General Description of EUT	8
3.2 Antenna Description of EUT	10
3.3 Test Mode Applicability and Tested Channel Detail	11
3.4 Test Program Used and Operation Descriptions	16
3.5 Connection Diagram of EUT and Peripheral Devices	16
3.6 Configuration of Peripheral Devices and Cable Connections	16
4 Test Instruments	17
4.1 Effective Radiated Power and Equivalent Isotropically Radiated Power	17
4.2 Peak to Average Ratio	17
4.3 Bandwidth	17
4.4 Conducted Spurious Emissions	17
4.5 Radiated Spurious Emissions below 1GHz	18
4.6 Radiated Spurious Emissions above 1GHz	19
4.7 Frequency Stability	20
5 Limits of Test Items	21
5.1 Effective Radiated Power and Equivalent Isotropically Radiated Power	21
5.2 Peak to Average Ratio	21
5.3 Bandwidth	21
5.4 Conducted Spurious Emissions	21
5.5 Radiated Spurious Emissions below 1GHz	22
5.6 Radiated Spurious Emissions above 1GHz	22
5.7 Frequency Stability	22
6 Test Arrangements	23
6.1 Effective Radiated Power and Equivalent Isotropically Radiated Power	23
6.1.1 Test Setup	23
6.1.2 Test Procedure	23
6.2 Peak to Average Ratio	24
6.2.1 Test Setup	24
6.2.2 Test Procedure	24
6.3 Bandwidth	25
6.3.1 Test Setup	25
6.3.2 Test Procedure	25
6.4 Conducted Spurious Emissions	27
6.4.1 Test Setup	27
6.4.2 Test Procedure	27
6.5 Radiated Spurious Emissions below 1GHz	28
6.5.1 Test Setup	28
6.5.2 Test Procedure	28
6.6 Radiated Spurious Emissions above 1GHz	29
6.6.1 Test Setup	29
6.6.2 Test Procedure	29
6.7 Frequency Stability	30
6.7.1 Test Setup	30
6.7.2 Test Procedure	30
7 Test Results of Test Item	31
7.1 Effective Radiated Power and Equivalent Isotropically Radiated Power	31
7.1.1 LTE Band 2 (CA 2C)	31



7.1.2	LTE Band 5 (CA 5B).....	33
7.1.3	LTE Band 41 (CA 41C).....	35
7.1.4	LTE Band 66 (CA 66B).....	37
7.1.5	LTE Band 66 (CA 66C).....	39
7.2	Peak to Average Ratio.....	41
7.2.1	LTE Band 2 (CA 2C).....	41
7.2.2	LTE Band 5 (CA 5B).....	42
7.2.3	LTE Band 41 (CA 41C).....	43
7.2.4	LTE Band 66 (CA 66B).....	44
7.2.5	LTE Band 66 (CA 66C).....	45
7.3	Bandwidth.....	46
7.3.1	LTE Band 2 (CA 2C).....	46
7.3.2	LTE Band 5 (CA 5B).....	47
7.3.3	LTE Band 41 (CA 41C).....	48
7.3.4	LTE Band 66 (CA 66B).....	49
7.3.5	LTE Band 66 (CA 66C).....	50
7.4	Conducted Spurious Emissions.....	51
7.4.1	LTE Band 2 (CA 2C).....	51
7.4.2	LTE Band 5 (CA 5B).....	53
7.4.3	LTE Band 41 (CA 41C).....	55
7.4.4	LTE Band 66 (CA 66B).....	57
7.4.5	LTE Band 66 (CA 66C).....	59
7.5	Radiated Spurious Emissions below 1GHz.....	61
7.5.1	LTE Band 2 (CA 2C).....	61
7.5.2	LTE Band 5 (CA 5B).....	63
7.5.3	LTE Band 41 (CA 41C).....	65
7.5.4	LTE Band 66 (CA 66B).....	67
7.5.5	LTE Band 66 (CA 66C).....	69
7.6	Radiated Spurious Emissions above 1GHz.....	71
7.6.1	LTE Band 2 (CA 2C).....	71
7.6.2	LTE Band 5 (CA 5B).....	74
7.6.3	LTE Band 41 (CA 41C).....	77
7.6.4	LTE Band 66 (CA 66B).....	80
7.6.5	LTE Band 66 (CA 66C).....	83
7.7	Frequency Stability.....	86
7.7.1	LTE Band 2 (CA 2C).....	86
7.7.2	LTE Band 5 (CA 5B).....	87
7.7.3	LTE Band 41 (CA 41C).....	88
7.7.4	LTE Band 66 (CA 66B).....	89
7.7.5	LTE Band 66 (CA 66C).....	90
8	Pictures of Test Arrangements.....	91
9	Information of the Testing Laboratories.....	92



Release Control Record

Issue No.	Description	Date Issued
RFBFJZ-WTW-P22110126-14	Original release.	2023/4/11

1 Certificate

Product: Smartphone

Brand: Kyocera

Test Model: E7200

Sample Status: Identical prototype

Applicant: Kyocera Corporation % Kyocera International, Inc.

Test Date: 2023/3/29 ~ 2023/3/30

Standard: 47 CFR FCC Part 22
47 CFR FCC Part 24
47 CFR FCC Part 27
47 CFR FCC Part 2

Measurement ANSI/TIA/EIA-603-E 2016

procedure: ANSI C63.26-2015

KDB 971168 D01 Power Meas License Digital Systems v03r01

KDB 971168 D02 Misc Rev Approv License Devices v02r01

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

2 Summary of Test Results

47 CFR FCC Part 22 47 CFR FCC Part 24 47 CFR FCC Part 27 47 CFR FCC Part 2			
Standard / Clause	Test Item	Result	Remark
FCC 47 CFR Part 2.1046 FCC 47 CFR Part 22.913 (a) FCC 47 CFR Part 24.232 (c) FCC 47 CFR Part 27.50(d) FCC 47 CFR Part 27.50(h)	Effective Radiated Power and Equivalent Isotropically Radiated Power	Pass	Meet the requirement of limit.
FCC 47 CFR Part 2.1047	Modulation Characteristics	Pass	Refer to Note 2
FCC 47 CFR Part 22.913 (d) FCC 47 CFR Part 24.232 (d) FCC 47 CFR Part 27.50(d)	Peak to Average Ratio	Pass	Meet the requirement of limit.
FCC 47 CFR Part 2.1049	Bandwidth	Pass	Meet the requirement of limit.
FCC 47 CFR Part 2.1051 FCC 47 CFR Part 22.917 FCC 47 CFR Part 24.238 FCC 47 CFR Part 27.53(h) FCC 47 CFR Part 27.53(m)	Conducted Spurious Emissions	Pass	Meet the requirement of limit.
FCC 47 CFR Part 2.1053 FCC 47 CFR Part 22.917 FCC 47 CFR Part 24.238 FCC 47 CFR Part 27.53(h) FCC 47 CFR Part 27.53(m)	Radiated Spurious Emissions below 1GHz	Pass	Minimum passing margin is -26.12 dB at 37.76 MHz

47 CFR FCC Part 22
 47 CFR FCC Part 24
 47 CFR FCC Part 27
 47 CFR FCC Part 2

Standard / Clause	Test Item	Result	Remark
FCC 47 CFR Part 2.1053 FCC 47 CFR Part 22.917 FCC 47 CFR Part 24.238 FCC 47 CFR Part 27.53(h) FCC 47 CFR Part 27.53(m)	Radiated Spurious Emissions above 1GHz	Pass	Minimum passing margin is -19.25 dB at 5012.00 MHz
FCC 47 CFR Part 2.1055 FCC 47 CFR Part 22.355 FCC 47 CFR Part 24.235 FCC 47 CFR Part 27.54	Frequency Stability	Pass	Meet the requirement of limit.

- Note:
- Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
 - LTE CA mode is similar to digital modulation in LTE single frequency band, so please refer to BV CPS report no.: RFBFJZ-WTW-P22110126-7 for the modulation characteristics data of CA mode

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Specification	Expanded Uncertainty (k=2) (±)
Radiated Spurious Emissions below 1GHz	9 kHz ~ 30 MHz	3.00 dB
	30 MHz ~ 1 GHz	2.93 dB
Radiated Spurious Emissions above 1GHz	1 GHz ~ 18 GHz	1.76 dB
	18 GHz ~ 40 GHz	1.77 dB

The other instruments specified are routine verified to remain within the calibrated levels, no measurement uncertainty is required to be calculated.

2.2 Supplementary Information

There is not any deviation from the test standards for the test method, and no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Smartphone
Brand	Kyocera
Test Model	E7200
Status of EUT	Identical prototype
Power Supply Rating	20Vdc or 15Vdc or 9Vdc or 5Vdc (From adapter) 3.87Vdc (From battery)

Note:

1. EUT Overview

Band / Bandwidth	TX Frequency Range (MHz)	Max. EIRP Power			
		QPSK	16QAM	64QAM	256QAM
LTE Band 2 (CA 2C) (20MHz + 20MHz)	1860.0-1900.0	209.894mW (23.22dBm)	171.791mW (22.35dBm)	181.134mW (22.58dBm)	168.655mW (22.27dBm)
LTE Band 41 (CA 41C) (20MHz + 20MHz)	2506.0-2680.0	215.278mW (23.33dBm)	175.388mW (22.44dBm)	186.638mW (22.71dBm)	168.267mW (22.26dBm)
LTE Band 66 (CA 66B) (10MHz + 10MHz)	1715.0-1775.0	194.984mW (22.90dBm)	154.882mW (21.90dBm)	167.109mW (22.23dBm)	153.815mW (21.87dBm)
LTE Band 66 (CA 66C) (20MHz + 20MHz)	1720.0-1770.0	199.526mW (23.00dBm)	159.956mW (22.04dBm)	175.388mW (22.44dBm)	160.325mW (22.05dBm)

Band / Bandwidth	TX Frequency Range (MHz)	Max. ERP Power			
		QPSK	16QAM	64QAM	256QAM
LTE Band 5 (CA 5B) (10MHz + 10MHz)	829.0-844.0	63.241mW (18.01dBm)	50.699mW (17.05dBm)	55.463mW (17.44dBm)	49.545mW (16.95dBm)

Band / Bandwidth	TX Frequency Range (MHz)	Emission Designator			
		QPSK	16QAM	64QAM	256QAM
LTE Band 2 (CA 2C) (20MHz + 20MHz)	1860.0-1900.0	37M6G7D	37M6D7W	37M6D7W	37M6D7W
LTE Band 5 (CA 5B) (10MHz + 10MHz)	829.0-844.0	18M7G7D	18M7D7W	18M7D7W	18M7D7W
LTE Band 41 (CA 41C) (20MHz + 20MHz)	2506.0-2680.0	37M5G7D	37M5D7W	37M5D7W	37M5D7W
LTE Band 66 (CA 66B) (10MHz + 10MHz)	1715.0-1775.0	18M8G7D	18M8D7W	18M8D7W	18M8D7W
LTE Band 66 (CA 66C) (20MHz + 20MHz)	1720.0-1770.0	37M6G7D	37M6D7W	37M6D7W	37M6D7W

2. The EUT uses following accessories.

Battery		
Brand	Model	Specification
Kyocera	SCP-76LBPS	Power Rating : 3.87Vdc, typ 4270mAh, typ. 16.6Wh
USB Type A to USB type C cable		
Brand	Model	Specification
Kyocera	SCP-24 SDC	Signal Line : 1m shielded Type A to Type C USB

3. The EUT uses following support unit only.

Adapter (Support unit)		
Brand	Model	Specification
Kyocera	SCP-53ADT	AC Input: 100-240 Vac, 50/60 Hz, 0.6A DC Output: 5Vdc, 3A; 9Vdc, 3A; 15Vdc 1.8A; 20Vdc, 1.35A

4. For CA mode configuration, please consult the manufacturer to declare the test mode.

5. The EUT support the following CA Configuration.

Band Configuration
2C
5B
41C
66B
66C

6. The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Antenna Type		Monopole	
Antenna Connector		NA	
Item	Antenna No.	Band	Gain (dBi)
LTE	ANT0	Band 2	-0.7
		Band 5	-2.8
		Band 41	0.5
		Band 66	-0.1
	ANT1	Band 2	0.1
		Band 41	-1.5
		Band 48	-2.0
		Band 66	0.0

* The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

3.3 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	EUT can be used in the following ways: X-axis/ Y-axis/ Z-axis. Pre-scan these ways and find the worst case as a representative test condition.
Worst Case:	X-axis/ Y-axis/ Z-axis Worst Condition: Z-axis

For LTE Band 2 (CA 2C)

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
EIRP	18700 (1860.0MHz) + 18898 (1879.8MHz) 18801 (1870.1MHz) + 18999 (1889.9MHz) 18902 (1880.2MHz) + 19100 (1900.0MHz)	20MHz + 20MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
Frequency Stability	18700 (1860.0MHz) + 18898 (1879.8MHz) 18902 (1880.2MHz) + 19100 (1900.0MHz)	20MHz + 20MHz	QPSK	Full RB
Occupied Bandwidth	18700 (1860.0MHz) + 18898 (1879.8MHz) 18801 (1870.1MHz) + 18999 (1889.9MHz) 18902 (1880.2MHz) + 19100 (1900.0MHz)	20MHz + 20MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
Peak to Average Ratio	18700 (1860.0MHz) + 18898 (1879.8MHz) 18801 (1870.1MHz) + 18999 (1889.9MHz) 18902 (1880.2MHz) + 19100 (1900.0MHz)	20MHz + 20MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
Conducted Emission	18700 (1860.0MHz) + 18898 (1879.8MHz) 18801 (1870.1MHz) + 18999 (1889.9MHz) 18902 (1880.2MHz) + 19100 (1900.0MHz)	20MHz + 20MHz	QPSK	1 RB Full RB
RE Below 1GHz	18801 (1870.1MHz) + 18999 (1889.9MHz)	20MHz + 20MHz	QPSK	1 RB
RE Above 1GHz	18700 (1860.0MHz) + 18898 (1879.8MHz) 18801 (1870.1MHz) + 18999 (1889.9MHz) 18902 (1880.2MHz) + 19100 (1900.0MHz)	20MHz + 20MHz	QPSK	1 RB

For LTE Band 5 (CA 5B)

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
ERP	20450 (829.0MHz) + 20549 (838.9MHz) 20476 (831.6MHz) + 20575 (841.5MHz) 20501 (834.1MHz) + 20600 (844.0MHz)	10MHz + 10MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
Frequency Stability	20450 (829.0MHz) + 20549 (838.9MHz) 20501 (834.1MHz) + 20600 (844.0MHz)	10MHz + 10MHz	QPSK	Full RB
Occupied Bandwidth	20450 (829.0MHz) + 20549 (838.9MHz) 20476 (831.6MHz) + 20575 (841.5MHz) 20501 (834.1MHz) + 20600 (844.0MHz)	10MHz + 10MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
Peak to Average Ratio	20450 (829.0MHz) + 20549 (838.9MHz) 20476 (831.6MHz) + 20575 (841.5MHz) 20501 (834.1MHz) + 20600 (844.0MHz)	10MHz + 10MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
Conducted Emission	20450 (829.0MHz) + 20549 (838.9MHz) 20476 (831.6MHz) + 20575 (841.5MHz) 20501 (834.1MHz) + 20600 (844.0MHz)	10MHz + 10MHz	QPSK	1 RB Full RB
RE Below 1GHz	20476 (831.6MHz) + 20575 (841.5MHz)	10MHz + 10MHz	QPSK	1 RB
RE Above 1GHz	20450 (829.0MHz) + 20549 (838.9MHz) 20476 (831.6MHz) + 20575 (841.5MHz) 20501 (834.1MHz) + 20600 (844.0MHz)	10MHz + 10MHz	QPSK	1 RB

For LTE Band 41 (CA 41C)

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
EIRP	39750 (2506.0MHz) + 39948 (2525.8MHz) 40521 (2583.1MHz) + 40719 (2602.9MHz) 41292 (2660.2MHz) + 41490 (2680.0MHz)	20MHz + 20MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
Frequency Stability	39750 (2506.0MHz) + 39948 (2525.8MHz) 41292 (2660.2MHz) + 41490 (2680.0MHz)	20MHz + 20MHz	QPSK	Full RB
Occupied Bandwidth	39750 (2506.0MHz) + 39948 (2525.8MHz) 40521 (2583.1MHz) + 40719 (2602.9MHz) 41292 (2660.2MHz) + 41490 (2680.0MHz)	20MHz + 20MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
Peak to Average Ratio	39750 (2506.0MHz) + 39948 (2525.8MHz) 40521 (2583.1MHz) + 40719 (2602.9MHz) 41292 (2660.2MHz) + 41490 (2680.0MHz)	20MHz + 20MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
Conducted Emission	39750 (2506.0MHz) + 39948 (2525.8MHz) 40521 (2583.1MHz) + 40719 (2602.9MHz) 41292 (2660.2MHz) + 41490 (2680.0MHz)	20MHz + 20MHz	QPSK	1 RB Full RB
RE Below 1GHz	40521 (2583.1MHz) + 40719 (2602.9MHz)	20MHz + 20MHz	QPSK	1 RB
RE Above 1GHz	39750 (2506.0MHz) + 39948 (2525.8MHz) 40521 (2583.1MHz) + 40719 (2602.9MHz) 41292 (2660.2MHz) + 41490 (2680.0MHz)	20MHz + 20MHz	QPSK	1 RB

For LTE Band 66 (CA 66B)

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
EIRP	132022 (1715.0MHz) + 132121 (1724.9MHz) 132373 (1750.1MHz) + 132472 (1760.0MHz) 132523 (1765.1MHz) + 132622 (1775.0MHz)	10MHz + 10MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
Frequency Stability	132022 (1715.0MHz) + 132121 (1724.9MHz) 132523 (1765.1MHz) + 132622 (1775.0MHz)	10MHz + 10MHz	QPSK	Full RB
Occupied Bandwidth	132022 (1715.0MHz) + 132121 (1724.9MHz) 132373 (1750.1MHz) + 132472 (1760.0MHz) 132523 (1765.1MHz) + 132622 (1775.0MHz)	10MHz + 10MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
Peak to Average Ratio	132022 (1715.0MHz) + 132121 (1724.9MHz) 132373 (1750.1MHz) + 132472 (1760.0MHz) 132523 (1765.1MHz) + 132622 (1775.0MHz)	10MHz + 10MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
Conducted Emission	132022 (1715.0MHz) + 132121 (1724.9MHz) 132373 (1750.1MHz) + 132472 (1760.0MHz) 132523 (1765.1MHz) + 132622 (1775.0MHz)	10MHz + 10MHz	QPSK	1 RB Full RB
RE Below 1GHz	132373 (1750.1MHz) + 132472 (1760.0MHz)	10MHz + 10MHz	QPSK	1 RB
RE Above 1GHz	132022 (1715.0MHz) + 132121 (1724.9MHz) 132373 (1750.1MHz) + 132472 (1760.0MHz) 132523 (1765.1MHz) + 132622 (1775.0MHz)	10MHz + 10MHz	QPSK	1 RB

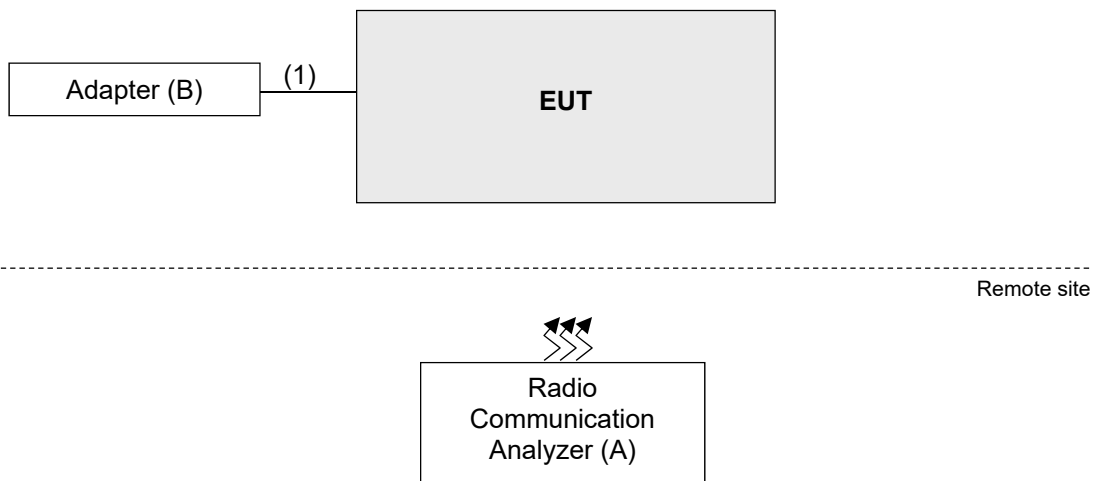
For LTE Band 66 (CA 66C)

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
EIRP	132072 (1720.0MHz) + 132270 (1739.8MHz) 132323 (1745.1MHz) + 132521 (1764.9MHz) 132374 (1750.2MHz) + 132572 (1770.0MHz)	20MHz + 20MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
Frequency Stability	132072 (1720.0MHz) + 132270 (1739.8MHz) 132374 (1750.2MHz) + 132572 (1770.0MHz)	20MHz + 20MHz	QPSK	Full RB
Occupied Bandwidth	132072 (1720.0MHz) + 132270 (1739.8MHz) 132323 (1745.1MHz) + 132521 (1764.9MHz) 132374 (1750.2MHz) + 132572 (1770.0MHz)	20MHz + 20MHz	QPSK / 16QAM / 64QAM / 256QAM	Full RB
Peak to Average Ratio	132072 (1720.0MHz) + 132270 (1739.8MHz) 132323 (1745.1MHz) + 132521 (1764.9MHz) 132374 (1750.2MHz) + 132572 (1770.0MHz)	20MHz + 20MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB
Conducted Emission	132072 (1720.0MHz) + 132270 (1739.8MHz) 132323 (1745.1MHz) + 132521 (1764.9MHz) 132374 (1750.2MHz) + 132572 (1770.0MHz)	20MHz + 20MHz	QPSK	1 RB Full RB
RE Below 1GHz	132323 (1745.1MHz) + 132521 (1764.9MHz)	20MHz + 20MHz	QPSK	1 RB
RE Above 1GHz	132072 (1720.0MHz) + 132270 (1739.8MHz) 132323 (1745.1MHz) + 132521 (1764.9MHz) 132374 (1750.2MHz) + 132572 (1770.0MHz)	20MHz + 20MHz	QPSK	1 RB

3.4 Test Program Used and Operation Descriptions

There is no need to controlling software during the test, and the EUT can be paired with the Radio Communication Analyzer to test the connection when it is powered on.

3.5 Connection Diagram of EUT and Peripheral Devices



3.6 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Radio Communication Analyzer	Anritsu	MT8821C	6201462755	N/A	Provided by Lab
B	Adapter	Kyocera	SCP-53ADT	N/A	N/A	Provided by Client

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	USB Cable	1	1	Y	0	Accessory of EUT

4 Test Instruments

The calibration interval of the all test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.1 Effective Radiated Power and Equivalent Isotropically Radiated Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
N9030B - PXA Signal Analyzer KEYSIGHT	N9030B	MY57140488	2023/3/6	2024/3/5
Radio Communication Analyzer Anritsu	MT8821C	6201462755	2023/3/3	2024/3/2
Software BV	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2023/3/30

4.2 Peak to Average Ratio

Refer to section 4.1 to get information of the instruments.

4.3 Bandwidth

Refer to section 4.1 to get information of the instruments.

4.4 Conducted Spurious Emissions

Refer to section 4.1 to get information of the instruments.

4.5 Radiated Spurious Emissions below 1GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower Max-Full	MFT-151SS-0.5T	N/A	N/A	N/A
Bi-log Broadband Antenna Schwarzbeck	VULB9168	9168-1213	2022/10/20	2023/10/19
Loop Antenna EMCI	EM-6879	269	2022/9/19	2023/9/18
Loop Antenna TESEQ	HLA 6121	45745	2022/7/27	2023/7/26
Pre-amplifier EMCI	EMC001340	980201	2022/9/23	2023/9/22
Pre_Amplifier EMCI	EMC330N	980782	2023/1/16	2024/1/15
RF Coaxial Cable EMCI	5D-NM-BM	140903+140902	2023/1/7	2024/1/6
	EMCCFD400-NM-NM- 500	201233	2023/1/16	2024/1/15
	EMCCFD400-NM-NM- 3000	201235	2023/1/16	2024/1/15
	EMCCFD400-NM-NM- 9000	201236	2023/1/16	2024/1/15
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Spectrum Analyzer R&S	FSW43	101866	2023/1/10	2024/1/9
Test Receiver R&S	ESR3+	102782	2022/12/12	2023/12/11
Turn Table Max-Full	MF-7802BS	N/A	N/A	N/A
Turn Table Controller Max-Full	MF-7802BS	MF780208674	N/A	N/A
Radio Communication Analyzer Anritsu	MT8821C	6201462755	2023/3/3	2024/3/2

Notes:

1. The test was performed in WM - 966 chamber 8.
2. Tested Date: 2023/3/30

4.6 Radiated Spurious Emissions above 1GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower Max-Full	MFT-151SS-0.5T	N/A	N/A	N/A
Horn Antenna RFSPIN	DRH18-E	210103A18E	2022/11/13	2023/11/12
Horn Antenna Schwarzbeck	BBHA 9170	9170-1049	2022/11/13	2023/11/12
Pre_Amplifier EMCI	EMC118A45SE	980808	2022/12/29	2023/12/28
	EMC184045SE	980788	2023/1/16	2024/1/15
RF Coaxial Cable EMCI	EMC101G-KM-KM-2000	201254	2023/1/16	2024/1/15
	EMC101G-KM-KM-3000	201257	2023/1/16	2024/1/15
	EMC101G-KM-KM-5000	201260	2023/1/16	2024/1/15
	EMC104-SM-SM-1000	210102	2023/1/16	2024/1/15
	EMC104-SM-SM-3000	201231	2023/1/16	2024/1/15
	EMC104-SM-SM-9000	201243	2023/1/16	2024/1/15
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Spectrum Analyzer R&S	FSW43	101866	2023/1/10	2024/1/9
Test Receiver R&S	ESR3+	102782	2022/12/12	2023/12/11
Turn Table Max-Full	MF-7802BS	N/A	N/A	N/A
Turn Table Controller Max-Full	MF-7802BS	MF780208674	N/A	N/A
Radio Communication Analyzer Anritsu	MT8821C	6201462755	2023/3/3	2024/3/2

Notes:

1. The test was performed in WM - 966 chamber 8.
2. Tested Date: 2023/3/29 ~ 2023/3/30

4.7 Frequency Stability

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
3-channel DC power supply JIN YIH Technology	ODP3033	ODP30332128138	N/A	N/A
Digital Multimeter Fluke	87-III	70360742	2022/6/23	2023/6/22
Software BV	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A
Spectrum Analyzer R&S	FSV40	100980	2022/4/20	2023/4/19
Temperature & Humidity Chamber TERCHY	HRM-120RF	931022	2022/12/27	2023/12/26
Radio Communication Analyzer Anritsu	MT8821C	6201462755	2023/3/3	2024/3/2

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2023/3/30

5 Limits of Test Items

5.1 Effective Radiated Power and Equivalent Isotropically Radiated Power

For LTE Band 2 (CA 2C):

Mobile and portable stations are limited to 2 watts EIRP.

For LTE Band 5 (CA 5B):

The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

For LTE Band 41 (CA 41C):

Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

For LTE Band 66 (CA 66B), LTE Band 66 (CA 66C):

Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

5.2 Peak to Average Ratio

In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13 dB.

5.3 Bandwidth

According to FCC 47 CFR part 2.1049, the occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5% of the total mean power radiated by a given emission.

5.4 Conducted Spurious Emissions

For LTE Band 2 (CA 2C), LTE Band 5 (CA 5B):

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. The emission limit equal to -13 dBm.

For LTE Band 41 (CA 41C):

According to FCC 47 CFR part 27.53(m)(4) regulations, any transmit power outside of the channel edge must be attenuated below the transmitting power (P) by a 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. 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. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed, except when the 1 megahertz band is 2495-2496 MHz, in which case a resolution bandwidth of at least one percent may be employed.

For LTE Band 66 (CA 66B), LTE Band 66 (CA 66C):

According to FCC 47 CFR part 27.53(h), for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 MHz bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log(P)$ dB. However, in the 1 megahertz 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.

5.5 Radiated Spurious Emissions below 1GHz

For LTE Band 2 (CA 2C), LTE Band 5 (CA 5B):

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. The emission limit equal to -13 dBm.

For LTE Band 41 (CA 41C):

According to FCC 47 CFR part 27.53(m)(4), on any frequency outside a licensee's frequency block, The power of any emission shall be attenuated below the transmitter power (P) by at least $55 + 10 \log(P)$ dB. The emission limit equal to -25 dBm.

For LTE Band 66 (CA 66B), LTE Band 66 (CA 66C):

According to FCC 47 CFR part 27.53(h), for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log(P)$ dB. The limit of emission is equal to -13 dBm.

5.6 Radiated Spurious Emissions above 1GHz

For LTE Band 2 (CA 2C), LTE Band 5 (CA 5B):

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. The emission limit equal to -13 dBm.

For LTE Band 41 (CA 41C):

According to FCC 47 CFR part 27.53(m)(4), on any frequency outside a licensee's frequency block, The power of any emission shall be attenuated below the transmitter power (P) by at least $55 + 10 \log(P)$ dB. The emission limit equal to -25 dBm.

For LTE Band 66 (CA 66B), LTE Band 66 (CA 66C):

According to FCC 47 CFR part 27.53(h), for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log(P)$ dB. The limit of emission is equal to -13 dBm.

5.7 Frequency Stability

For LTE Band 5 (CA 5B):

1.5 ppm is for base and fixed station. 2.5 ppm is for mobile station.

For LTE Band 2 (CA 2C), LTE Band 41 (CA 41C), LTE Band 66 (CA 66B), LTE Band 66 (CA 66C):

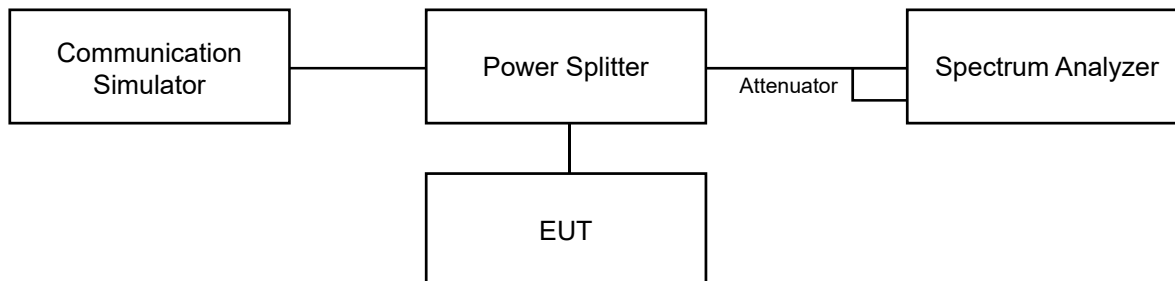
The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation (authorized frequency block).

6 Test Arrangements

6.1 Effective Radiated Power and Equivalent Isotropically Radiated Power

6.1.1 Test Setup

Conducted Power Measurement:



6.1.2 Test Procedure

Conducted Power Measurement:

The EUT is configured by emulator to set data modulation and maximum power using WWAN technology. The power measurement was performed on emulator and power value was measured from power function on emulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

Maximum EIRP / ERP

The relevant equation for determining the maximum ERP or EIRP from the measured RF output power is given in Equation as follows:

$$\text{EIRP} = P_{\text{Meas}} + G_{\text{T}}$$

$$\text{ERP} = P_{\text{Meas}} + G_{\text{T}} - 2.15$$

where

ERP or EIRP effective radiated power or equivalent isotropically radiated power, respectively

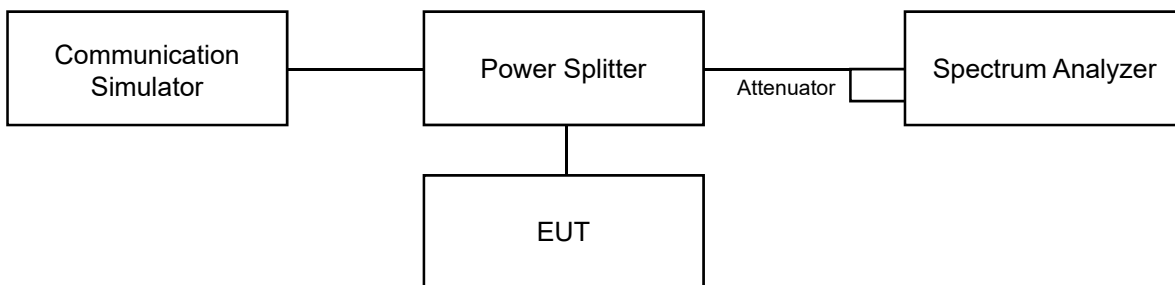
(expressed in the same units as P_{Meas} , e.g., dBm or dBW)

P_{Meas} measured transmitter output power or PSD, in dBm or dBW

G_{T} gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP)

6.2 Peak to Average Ratio

6.2.1 Test Setup

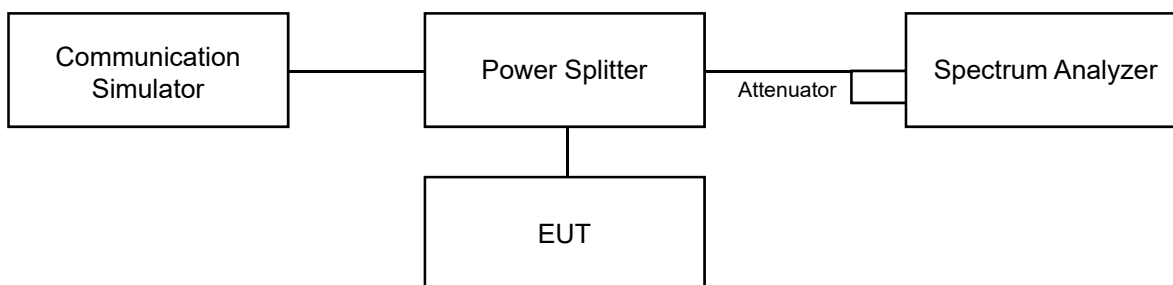


6.2.2 Test Procedure

- Set resolution/measurement bandwidth \geq signal's occupied bandwidth;
- Set the number of counts to a value that stabilizes the measured CCDF curve;
- Record the maximum PAPR level associated with a probability of 0.1%.

6.3 Bandwidth

6.3.1 Test Setup



6.3.2 Test Procedure

For the 26 dBc bandwidth measurement method, please refer to section 5.4.3 of ANSI C63.26.

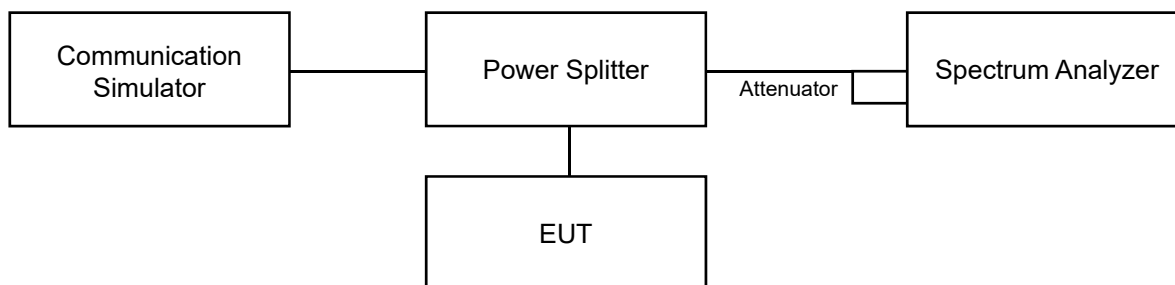
- a. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be wide enough to see sufficient roll off of the signal to make the measurement.
- b. The nominal RBW shall be in the range of 1% to 5% of the anticipated OBW, and the VBW shall be set $\geq 3 \times$ RBW.
- c. Set the reference level of the instrument as required to prevent the signal amplitude from exceeding the maximum spectrum analyzer input mixer level for linear operation. See guidance provided in 4.2.3.
- d. The dynamic range of the spectrum analyzer at the selected RBW shall be more than 10 dB below the target “-X dB” requirement, i.e., if the requirement calls for measuring the -26 dB OBW, the spectrum analyzer noise floor at the selected RBW shall be at least 36 dB below the reference level.
- e. Set spectrum analyzer detection mode to peak, and the trace mode to max hold.
- f. Determine the following reference values: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value).
- g. Determine the “-X dB amplitude” as equal to (Reference Value - X). Alternatively, this calculation can be performed on the spectrum analyzer using the delta-marker measurement function.
- h. Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the “-X dB amplitude” determined in step f). If a marker is below this “-X dB amplitude” value it should be as close as possible to this value. The OBW is the positive frequency difference between the two markers.
- i. The OBW shall be reported by providing plot(s) of the measuring instrument display, to include markers depicting the relevant frequency and amplitude information (e.g., marker table). The frequency and amplitude axis and scale shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

For the occupied bandwidth measurement method, please refer to section 5.4.4 of ANSI C63.26.

- a. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be wide enough to see sufficient roll off of the signal to make the measurement.
- b. The nominal RBW shall be in the range of 1% to 5% of the anticipated OBW, and the VBW shall be set $\geq 3 \times$ RBW.
- c. Set the reference level of the instrument as required to prevent the signal amplitude from exceeding the maximum spectrum analyzer input mixer level for linear operation. See guidance provided in 4.2.3.
- d. The dynamic range of the spectrum analyzer at the selected RBW shall be more than 10 dB below the target “-X dB” requirement, i.e., if the requirement calls for measuring the -26 dB OBW, the spectrum analyzer noise floor at the selected RBW shall be at least 36 dB below the reference level.
- e. Set spectrum analyzer detection mode to peak, and the trace mode to max hold.
- f. Determine the reference value by either of the following:
 - g. 1) Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value).
 - h. 2) Set the EUT to transmit an unmodulated carrier. Set the spectrum analyzer marker to the level of the carrier.
- i. Determine the “-X dB amplitude” as equal to (Reference Value - X). Alternatively, this calculation can be performed on the spectrum analyzer using the delta-marker measurement function.
- j. If the reference value was determined using an unmodulated carrier, turn the EUT modulation on, then either clear the existing trace or start a new trace on the spectrum analyzer and allow the new trace to stabilize. Otherwise the trace from step f) shall be used for step i).
- k. Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the “-X dB amplitude” determined in step f). If a marker is below this “-X dB amplitude” value it should be as close as possible to this value. The OBW is the positive frequency difference between the two markers. The spectral envelope can cross the “-X dB amplitude” at multiple points. The lowest or highest frequency shall be selected as the frequencies that are the farthest away from the center frequency at which the spectral envelope crosses the “-X dB amplitude.”
- l. The OBW shall be reported by providing plot(s) of the measuring instrument display, to include markers depicting the relevant frequency and amplitude information (e.g., marker table). The frequency and amplitude axis and scale shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

6.4 Conducted Spurious Emissions

6.4.1 Test Setup



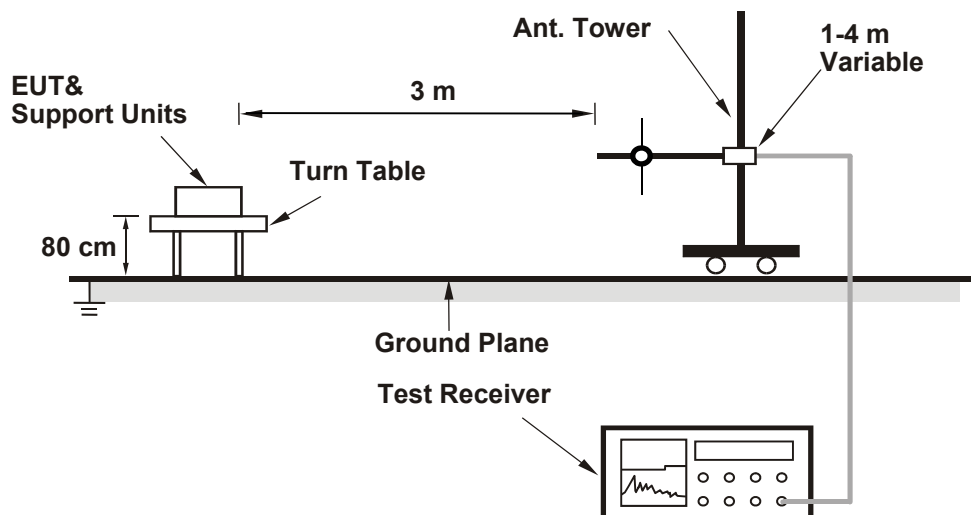
6.4.2 Test Procedure

- a. Measurement refer to ANSI C63.26 section 5.7.
- b. All measurements were done at 3 channels: low, middle and high operational frequency range.
- c. Measuring frequency range is from 9 kHz up to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower. 20 dB attenuation pad is connected with spectrum.
- d. The fundamental frequency above 1 GHz, the spectrum set RBW = 1 MHz, VBW = 3 MHz, Detector = Average.
- e. The fundamental frequency below 1 GHz, the spectrum set RBW \geq 100 kHz, VBW \geq 3 x RBW, Detector = Average.
- f. Measuring frequency band edge, narrow RBW (no less than 1% of the OBW) is used for conducted emission measurement.

6.5 Radiated Spurious Emissions below 1GHz

6.5.1 Test Setup

For radiated emission 30 MHz to 1 GHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).

6.5.2 Test Procedure

The EUT is configured by emulator to set data modulation and maximum power using WWAN technology.

- In the semi-anechoic chamber, EUT placed on the 0.8 m (below or equal 1 GHz) height of turn table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1 m to 4 m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- Perform a field strength measurement and record the worse read value, is the field strength value via a spectrum reading obtained corrected for antenna factor, cable loss and pre-amplifier factor and then mathematically convert the measured field strength level to EIRP/ERP level.
- Following C63.26 section 5.5 and 5.2.7
- $EIRP (dBm) = E (dB\mu V/m) + 20\log(D) - 104.8$; where D is the measurement distance (in the far field region) in m.
- $ERP (dBm) = E (dB\mu V/m) + 20\log(D) - 104.8 - 2.15$; where D is the measurement distance (in the far field region) in m.

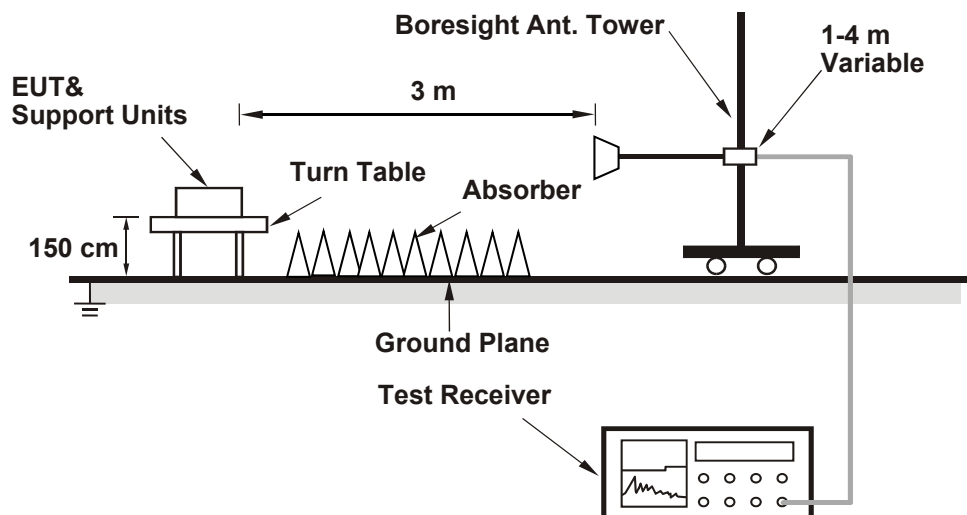
Note:

- The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz/3 MHz.
- The emission levels were against the limit of frequency range 9 kHz ~ 30 MHz:
The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

6.6 Radiated Spurious Emissions above 1GHz

6.6.1 Test Setup

For radiated emission above 1 GHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).

6.6.2 Test Procedure

The EUT is configured by emulator to set data modulation and maximum power using WWAN technology.

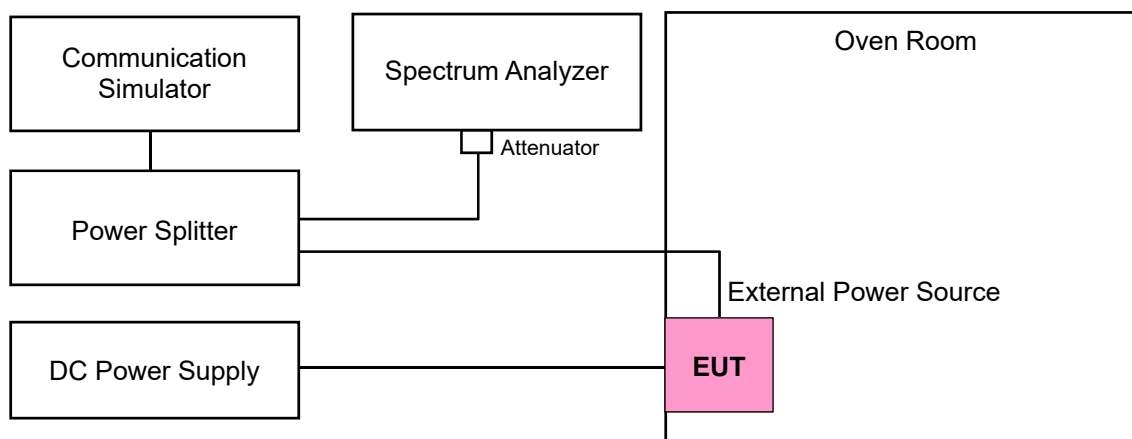
- In the semi-anechoic chamber, EUT placed on the 1.5 m height of turn table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1 m to 4 m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- Perform a field strength measurement and record the worse read value, is the field strength value via a spectrum reading obtained corrected for antenna factor, cable loss and pre-amplifier factor and then mathematically convert the measured field strength level to EIRP/ERP level.
- Following C63.26 section 5.5 and 5.2.7
- $EIRP (dBm) = E (dB\mu V/m) + 20\log(D) - 104.8$; where D is the measurement distance (in the far field region) in m.
- $ERP (dBm) = E (dB\mu V/m) + 20\log(D) - 104.8 - 2.15$; where D is the measurement distance (in the far field region) in m.

Note:

- The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz/3 MHz.

6.7 Frequency Stability

6.7.1 Test Setup



6.7.2 Test Procedure

The EUT is configured by emulator to set data modulation and maximum power using WWAN technology.

- Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.
- EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.
- The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the $\pm 0.5^{\circ}\text{C}$ during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

Note: The frequency error was recorded frequency error from the communication simulator.

7 Test Results of Test Item

7.1 Effective Radiated Power and Equivalent Isotropically Radiated Power

Input Power:	3.87 Vdc	Environmental Conditions:	21°C, 70% RH	Tested By:	Willy Cheng
--------------	----------	---------------------------	--------------	------------	-------------

7.1.1 LTE Band 2 (CA 2C)

Conducted Output Power (dBm)

Confugure	Combination	PCC							SCC							Measurement Power
		Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	Tx Power with UL-CA Active (dBm)
																Total
Intra Band Contiguous	CA_2C	2	20	QPSK	1	0	18700	1860	2	20	QPSK	1	99	18898	1879.8	15.64
					1	99						23.08				
		2	20	QPSK	1	0	18801	1870.1	2	20	QPSK	1	99	18999	1889.9	15.63
					1	99						23.12				
		2	20	QPSK	1	0	18902	1880.2	2	20	QPSK	1	99	19100	1900	15.72
					1	99						22.92				
Intra Band Contiguous	CA_2C	2	20	16QAM	1	0	18700	1860	2	20	16QAM	1	99	18898	1879.8	14.68
					1	99						22.19				
		2	20	16QAM	1	0	18801	1870.1	2	20	16QAM	1	99	18999	1889.9	14.63
					1	99						22.25				
		2	20	16QAM	1	0	18902	1880.2	2	20	16QAM	1	99	19100	1900	14.85
					1	99						21.94				
Intra Band Contiguous	CA_2C	2	20	64QAM	1	0	18700	1860	2	20	64QAM	1	99	18898	1879.8	15.00
					1	99						22.48				
		2	20	64QAM	1	0	18801	1870.1	2	20	64QAM	1	99	18999	1889.9	15.02
					1	99						22.45				
		2	20	64QAM	1	0	18902	1880.2	2	20	64QAM	1	99	19100	1900	15.12
					1	99						22.30				
Intra Band Contiguous	CA_2C	2	20	256QAM	1	0	18700	1860	2	20	256QAM	1	99	18898	1879.8	14.62
					1	99						21.99				
		2	20	256QAM	1	0	18801	1870.1	2	20	256QAM	1	99	18999	1889.9	14.68
					1	99						22.17				
		2	20	256QAM	1	0	18902	1880.2	2	20	256QAM	1	99	19100	1900	14.61
					1	99						21.84				



EIRP Power (dBm)

Configure	Combination	PCC							SCC							Measurement Power
		Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	EIRP (dBm)
					1	0		1				0	1		0	Total
Intra Band Contiguous	CA_2C	2	20	QPSK	1	0	18700	1860	2	20	QPSK	1	99	18898	1879.8	15.74
					1	99						1	0			23.18
		2	20	QPSK	1	0	18801	1870.1	2	20	QPSK	1	99	18999	1889.9	15.73
					1	99						1	0			23.22
		2	20	QPSK	1	0	18902	1880.2	2	20	QPSK	1	99	19100	1900	15.82
					1	99						1	0			23.02
Intra Band Contiguous	CA_2C	2	20	16QAM	1	0	18700	1860	2	20	16QAM	1	99	18898	1879.8	14.78
					1	99						1	0			22.29
		2	20	16QAM	1	0	18801	1870.1	2	20	16QAM	1	99	18999	1889.9	14.73
					1	99						1	0			22.35
		2	20	16QAM	1	0	18902	1880.2	2	20	16QAM	1	99	19100	1900	14.95
					1	99						1	0			22.04
Intra Band Contiguous	CA_2C	2	20	64QAM	1	0	18700	1860	2	20	64QAM	1	99	18898	1879.8	15.10
					1	99						1	0			22.58
		2	20	64QAM	1	0	18801	1870.1	2	20	64QAM	1	99	18999	1889.9	15.12
					1	99						1	0			22.55
		2	20	64QAM	1	0	18902	1880.2	2	20	64QAM	1	99	19100	1900	15.22
					1	99						1	0			22.40
Intra Band Contiguous	CA_2C	2	20	256QAM	1	0	18700	1860	2	20	256QAM	1	99	18898	1879.8	14.72
					1	99						1	0			22.09
		2	20	256QAM	1	0	18801	1870.1	2	20	256QAM	1	99	18999	1889.9	14.78
					1	99						1	0			22.27
		2	20	256QAM	1	0	18902	1880.2	2	20	256QAM	1	99	19100	1900	14.71
					1	99						1	0			21.94

*EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi)

7.1.2 LTE Band 5 (CA 5B)
Conducted Output Power (dBm)

Configure	Combination	PCC							SCC							Measurement Power
		Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	Tx Power with UL-CA Active (dBm)
																Total
Intra Band Contiguous	CA_5B	5	10	QPSK	1	0	20450	829	5	10	QPSK	1	49	20549	838.9	15.37
					1	49						1	0			22.73
		5	10	QPSK	1	0	20476	831.6	5	10	QPSK	1	49	20575	841.5	15.65
					1	49						1	0			22.96
		5	10	QPSK	1	0	20501	834.1	5	10	QPSK	1	49	20600	844	15.50
					1	49						1	0			22.75
Intra Band Contiguous	CA_5B	5	10	16QAM	1	0	20450	829	5	10	16QAM	1	49	20549	838.9	14.50
					1	49						1	0			21.82
		5	10	16QAM	1	0	20476	831.6	5	10	16QAM	1	49	20575	841.5	14.69
					1	49						1	0			22.00
		5	10	16QAM	1	0	20501	834.1	5	10	16QAM	1	49	20600	844	14.57
					1	49						1	0			21.82
Intra Band Contiguous	CA_5B	5	10	64QAM	1	0	20450	829	5	10	64QAM	1	49	20549	838.9	14.71
					1	49						1	0			22.07
		5	10	64QAM	1	0	20476	831.6	5	10	64QAM	1	49	20575	841.5	15.01
					1	49						1	0			22.39
		5	10	64QAM	1	0	20501	834.1	5	10	64QAM	1	49	20600	844	14.86
					1	49						1	0			22.13
Intra Band Contiguous	CA_5B	5	10	256QAM	1	0	20450	829	5	10	256QAM	1	49	20549	838.9	14.32
					1	49						1	0			21.69
		5	10	256QAM	1	0	20476	831.6	5	10	256QAM	1	49	20575	841.5	14.58
					1	49						1	0			21.90
		5	10	256QAM	1	0	20501	834.1	5	10	256QAM	1	49	20600	844	14.44
					1	49						1	0			21.66



ERP Power (dBm)

Configure	Combination	PCC							SCC							Measurement Power
		Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	ERP (dBm)
					1	0		1				0	1		0	Total
Intra Band Contiguous	CA_5B	5	10	QPSK	1	0	20450	829	5	10	QPSK	1	49	20549	838.9	10.42
					1	49						1	0			17.78
		5	10	QPSK	1	0	20476	831.6	5	10	QPSK	1	49	20575	841.5	10.70
					1	49						1	0			18.01
		5	10	QPSK	1	0	20501	834.1	5	10	QPSK	1	49	20600	844	10.55
					1	49						1	0			17.80
Intra Band Contiguous	CA_5B	5	10	16QAM	1	0	20450	829	5	10	16QAM	1	49	20549	838.9	9.55
					1	49						1	0			16.87
		5	10	16QAM	1	0	20476	831.6	5	10	16QAM	1	49	20575	841.5	9.74
					1	49						1	0			17.05
		5	10	16QAM	1	0	20501	834.1	5	10	16QAM	1	49	20600	844	9.62
					1	49						1	0			16.87
Intra Band Contiguous	CA_5B	5	10	64QAM	1	0	20450	829	5	10	64QAM	1	49	20549	838.9	9.76
					1	49						1	0			17.12
		5	10	64QAM	1	0	20476	831.6	5	10	64QAM	1	49	20575	841.5	10.06
					1	49						1	0			17.44
		5	10	64QAM	1	0	20501	834.1	5	10	64QAM	1	49	20600	844	9.91
					1	49						1	0			17.18
Intra Band Contiguous	CA_5B	5	10	256QAM	1	0	20450	829	5	10	256QAM	1	49	20549	838.9	9.37
					1	49						1	0			16.74
		5	10	256QAM	1	0	20476	831.6	5	10	256QAM	1	49	20575	841.5	9.63
					1	49						1	0			16.95
		5	10	256QAM	1	0	20501	834.1	5	10	256QAM	1	49	20600	844	9.49
					1	49						1	0			16.71

*ERP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi) - 2.15



7.1.3 LTE Band 41 (CA 41C)

Conducted Output Power (dBm)

Configuure	Combination	PCC							SCC							Measurement Power	
		Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	Tx Power with UL-CA Active (dBm)	
																Total	
Intra Band Contiguous	CA_41C	41	20	QPSK	1	0	39750	2506	41	20	QPSK	1	99	39948	2525.8	15.16	
					1	99						22.64					
		41	20	QPSK	1	0	40521	2583.1	41	20	QPSK	1	99	40719	2602.9	15.52	
					1	99						22.63					
		41	20	QPSK	1	0	41292	2660.2	41	20	QPSK	1	99	41490	2680	15.36	
					1	99						22.83					
Intra Band Contiguous	CA_41C	41	20	16QAM	1	0	39750	2506	41	20	16QAM	1	99	39948	2525.8	14.16	
					1	99						21.73					
		41	20	16QAM	1	0	40521	2583.1	41	20	16QAM	1	99	40719	2602.9	14.56	
					1	99						21.67					
		41	20	16QAM	1	0	41292	2660.2	41	20	16QAM	1	99	41490	2680	14.44	
					1	99						21.94					
Intra Band Contiguous	CA_41C	41	20	64QAM	1	0	39750	2506	41	20	64QAM	1	99	39948	2525.8	14.57	
					1	99						21.92					
		41	20	64QAM	1	0	40521	2583.1	41	20	64QAM	1	99	40818	2612.8	14.84	
					1	99						22.05					
		41	20	64QAM	1	0	41292	2660.2	41	20	64QAM	1	99	41490	2680	14.68	
					1	99						22.21					
Intra Band Contiguous	CA_41C	41	20	256QAM	1	0	39750	2506	41	20	256QAM	1	99	39948	2525.8	14.11	
					1	99						21.64					
		41	20	256QAM	1	0	40521	2583.1	41	20	256QAM	1	99	40818	2612.8	14.45	
					1	99						21.57					
		41	20	256QAM	1	0	41292	2660.2	41	20	256QAM	1	99	41490	2680	14.30	
					1	99						21.76					

EIRP Power (dBm)

Configure	Combination	PCC							SCC							Measurement Power
		Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	EIRP (dBm)
					1	0						1	0			Total
Intra Band Contiguous	CA_41C	41	20	QPSK	1	0	39750	2506	41	20	QPSK	1	99	39948	2525.8	15.66
					1	99						1	0			23.14
		41	20	QPSK	1	0	40521	2583.1	41	20	QPSK	1	99	40719	2602.9	16.02
					1	99						1	0			23.13
		41	20	QPSK	1	0	41292	2660.2	41	20	QPSK	1	99	41490	2680	15.86
					1	99						1	0			23.33
Intra Band Contiguous	CA_41C	41	20	16QAM	1	0	39750	2506	41	20	16QAM	1	99	39948	2525.8	14.66
					1	99						1	0			22.23
		41	20	16QAM	1	0	40521	2583.1	41	20	16QAM	1	99	40719	2602.9	15.06
					1	99						1	0			22.17
		41	20	16QAM	1	0	41292	2660.2	41	20	16QAM	1	99	41490	2680	14.94
					1	99						1	0			22.44
Intra Band Contiguous	CA_41C	41	20	64QAM	1	0	39750	2506	41	20	64QAM	1	99	39948	2525.8	15.07
					1	99						1	0			22.42
		41	20	64QAM	1	0	40521	2583.1	41	20	64QAM	1	99	40818	2612.8	15.34
					1	99						1	0			22.55
		41	20	64QAM	1	0	41292	2660.2	41	20	64QAM	1	99	41490	2680	15.18
					1	99						1	0			22.71
Intra Band Contiguous	CA_41C	41	20	256QAM	1	0	39750	2506	41	20	256QAM	1	99	39948	2525.8	14.61
					1	99						1	0			22.14
		41	20	256QAM	1	0	40521	2583.1	41	20	256QAM	1	99	40818	2612.8	14.95
					1	99						1	0			22.07
		41	20	256QAM	1	0	41292	2660.2	41	20	256QAM	1	99	41490	2680	14.80
					1	99						1	0			22.26

*EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi)

7.1.4 LTE Band 66 (CA 66B)

Conducted Output Power (dBm)

Configure	Combination	PCC							SCC							Measurement Power
		Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	Tx Power with UL-CA Active (dBm)
																Total
Intra Band Contiguous	CA_66B	66	10	QPSK	1	0	132022	1715	66	10	QPSK	1	49	132121	1724.9	15.45
					1	49						1	0			22.87
		66	10	QPSK	1	0	132373	1750.1	66	10	QPSK	1	49	132472	1760	15.45
					1	49						1	0			22.90
		66	10	QPSK	1	0	132523	1765.1	66	10	QPSK	1	49	132622	1775	15.35
					1	49						1	0			22.72
Intra Band Contiguous	CA_66B	66	10	16QAM	1	0	132022	1715	66	10	16QAM	1	49	132121	1724.9	14.45
					1	49						1	0			21.90
		66	10	16QAM	1	0	132373	1750.1	66	10	16QAM	1	49	132472	1760	14.52
					1	49						1	0			21.90
		66	10	16QAM	1	0	132523	1765.1	66	10	16QAM	1	49	132622	1775	14.44
					1	49						1	0			21.74
Intra Band Contiguous	CA_66B	66	10	64QAM	1	0	132022	1715	66	10	64QAM	1	49	132121	1724.9	14.74
					1	49						1	0			22.23
		66	10	64QAM	1	0	132373	1750.1	66	10	64QAM	1	49	132472	1760	14.74
					1	49						1	0			22.23
		66	10	64QAM	1	0	132523	1765.1	66	10	64QAM	1	49	132622	1775	14.76
					1	49						1	0			22.02
Intra Band Contiguous	CA_66B	66	10	256QAM	1	0	132022	1715	66	10	256QAM	1	49	132121	1724.9	14.51
					1	49						1	0			21.87
		66	10	256QAM	1	0	132373	1750.1	66	10	256QAM	1	49	132472	1760	14.44
					1	49						1	0			21.79
		66	10	256QAM	1	0	132523	1765.1	66	10	256QAM	1	49	132622	1775	14.33
					1	49						1	0			21.64



EIRP Power (dBm)

Configure	Combination	PCC							SCC							Measurement Power	
		Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	EIRP (dBm)	
																Total	
Intra Band Contiguous	CA_66B	66	10	QPSK	1	0	132022	1715	66	10	QPSK	1	49	132121	1724.9	15.45	
					1	49						22.87					
		66	10	QPSK	1	0	132373	1750.1	66	10	QPSK	1	49	132472	1760	15.45	
					1	49						22.90					
		66	10	QPSK	1	0	132523	1765.1	66	10	QPSK	1	49	132622	1775	15.35	
					1	49						22.72					
Intra Band Contiguous	CA_66B	66	10	16QAM	1	0	132022	1715	66	10	16QAM	1	49	132121	1724.9	14.45	
					1	49						21.90					
		66	10	16QAM	1	0	132373	1750.1	66	10	16QAM	1	49	132472	1760	14.52	
					1	49						21.90					
		66	10	16QAM	1	0	132523	1765.1	66	10	16QAM	1	49	132622	1775	14.44	
					1	49						21.74					
Intra Band Contiguous	CA_66B	66	10	64QAM	1	0	132022	1715	66	10	64QAM	1	49	132121	1724.9	14.74	
					1	49						22.23					
		66	10	64QAM	1	0	132373	1750.1	66	10	64QAM	1	49	132472	1760	14.74	
					1	49						22.23					
		66	10	64QAM	1	0	132523	1765.1	66	10	64QAM	1	49	132622	1775	14.76	
					1	49						22.02					
Intra Band Contiguous	CA_66B	66	10	256QAM	1	0	132022	1715	66	10	256QAM	1	49	132121	1724.9	14.51	
					1	49						21.87					
		66	10	256QAM	1	0	132373	1750.1	66	10	256QAM	1	49	132472	1760	14.44	
					1	49						21.79					
		66	10	256QAM	1	0	132523	1765.1	66	10	256QAM	1	49	132622	1775	14.33	
					1	49						21.64					

*EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi)

7.1.5 LTE Band 66 (CA 66C)

Conducted Output Power (dBm)

Configuure	Combination	PCC							SCC							Measurement Power
		Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	Tx Power with UL-CA Active (dBm)
																Total
Intra Band Contiguous	CA_66C	66	20	QPSK	1	0	132072	1720	66	20	QPSK	1	99	132270	1739.8	15.72
					1	99						1	0			22.77
		66	20	QPSK	1	0	132323	1745.1	66	20	QPSK	1	99	132521	1764.9	15.70
					1	99						1	0			23.00
		66	20	QPSK	1	0	132374	1750.2	66	20	QPSK	1	99	132572	1770	15.35
					1	99						1	0			22.75
Intra Band Contiguous	CA_66C	66	20	16QAM	1	0	132072	1720	66	20	16QAM	1	99	132270	1739.8	14.78
					1	99						1	0			21.84
		66	20	16QAM	1	0	132323	1745.1	66	20	16QAM	1	99	132521	1764.9	14.74
					1	99						1	0			22.04
		66	20	16QAM	1	0	132374	1750.2	66	20	16QAM	1	99	132572	1770	14.47
					1	99						1	0			21.79
Intra Band Contiguous	CA_66C	66	20	64QAM	1	0	132072	1720	66	20	64QAM	1	99	132270	1739.8	15.07
					1	99						1	0			22.15
		66	20	64QAM	1	0	132323	1745.1	66	20	64QAM	1	99	132521	1764.9	15.06
					1	99						1	0			22.44
		66	20	64QAM	1	0	132374	1750.2	66	20	64QAM	1	99	132572	1770	14.68
					1	99						1	0			22.08
Intra Band Contiguous	CA_66C	66	20	256QAM	1	0	132072	1720	66	20	256QAM	1	99	132270	1739.8	14.70
					1	99						1	0			21.74
		66	20	256QAM	1	0	132323	1745.1	66	20	256QAM	1	99	132521	1764.9	14.61
					1	99						1	0			22.05
		66	20	256QAM	1	0	132374	1750.2	66	20	256QAM	1	99	132572	1770	14.33
					1	99						1	0			21.78



EIRP Power (dBm)

Configure	Combination	PCC							SCC							Measurement Power
		Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	EIRP (dBm)
																Total
Intra Band Contiguous	CA_66C	66	20	QPSK	1	0	132072	1720	66	20	QPSK	1	99	132270	1739.8	15.72
					1	99						1	0			22.77
		66	20	QPSK	1	0	132323	1745.1	66	20	QPSK	1	99	132521	1764.9	15.70
					1	99						1	0			23.00
		66	20	QPSK	1	0	132374	1750.2	66	20	QPSK	1	99	132572	1770	15.35
					1	99						1	0			22.75
Intra Band Contiguous	CA_66C	66	20	16QAM	1	0	132072	1720	66	20	16QAM	1	99	132270	1739.8	14.78
					1	99						1	0			21.84
		66	20	16QAM	1	0	132323	1745.1	66	20	16QAM	1	99	132521	1764.9	14.74
					1	99						1	0			22.04
		66	20	16QAM	1	0	132374	1750.2	66	20	16QAM	1	99	132572	1770	14.47
					1	99						1	0			21.79
Intra Band Contiguous	CA_66C	66	20	64QAM	1	0	132072	1720	66	20	64QAM	1	99	132270	1739.8	15.07
					1	99						1	0			22.15
		66	20	64QAM	1	0	132323	1745.1	66	20	64QAM	1	99	132521	1764.9	15.06
					1	99						1	0			22.44
		66	20	64QAM	1	0	132374	1750.2	66	20	64QAM	1	99	132572	1770	14.68
					1	99						1	0			22.08
Intra Band Contiguous	CA_66C	66	20	256QAM	1	0	132072	1720	66	20	256QAM	1	99	132270	1739.8	14.70
					1	99						1	0			21.74
		66	20	256QAM	1	0	132323	1745.1	66	20	256QAM	1	99	132521	1764.9	14.61
					1	99						1	0			22.05
		66	20	256QAM	1	0	132374	1750.2	66	20	256QAM	1	99	132572	1770	14.33
					1	99						1	0			21.78

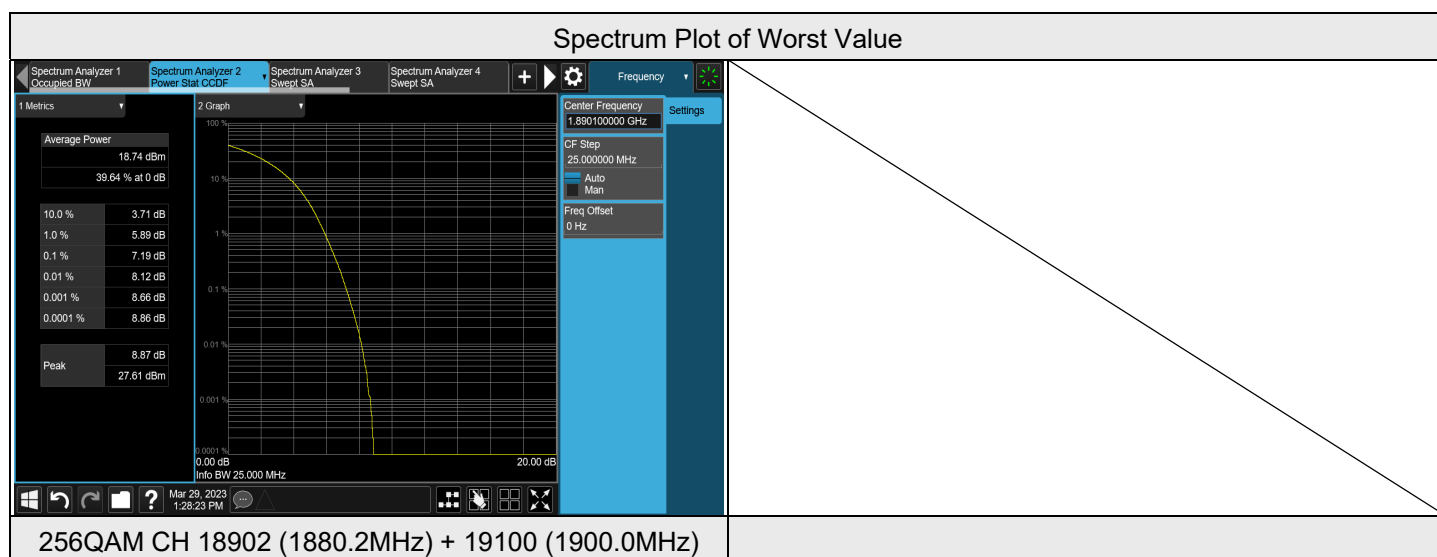
*EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi)

7.2 Peak to Average Ratio

Input Power:	3.87 Vdc	Environmental Conditions:	21°C, 70% RH	Tested By:	Willy Cheng
--------------	----------	---------------------------	--------------	------------	-------------

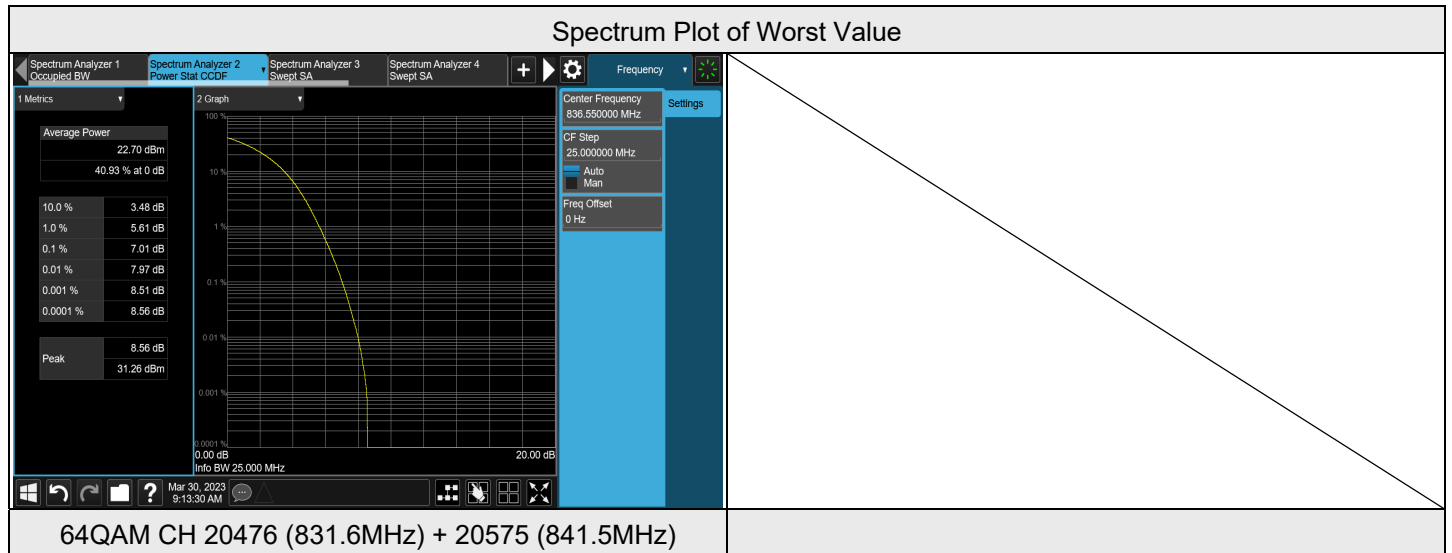
7.2.1 LTE Band 2 (CA 2C)

Channel	Frequency (MHz)		Peak to Average Ratio (dB)				Limit
			QPSK	16QAM	64QAM	256QAM	
18700 + 18898	1860	1879.8	3.53	4.45	6.57	6.63	13.00
18801 + 18999	1870.1	1889.9	4.67	5.64	6.45	6.68	
18902 + 19100	1880.2	1900	4.69	5.10	7.04	7.19	



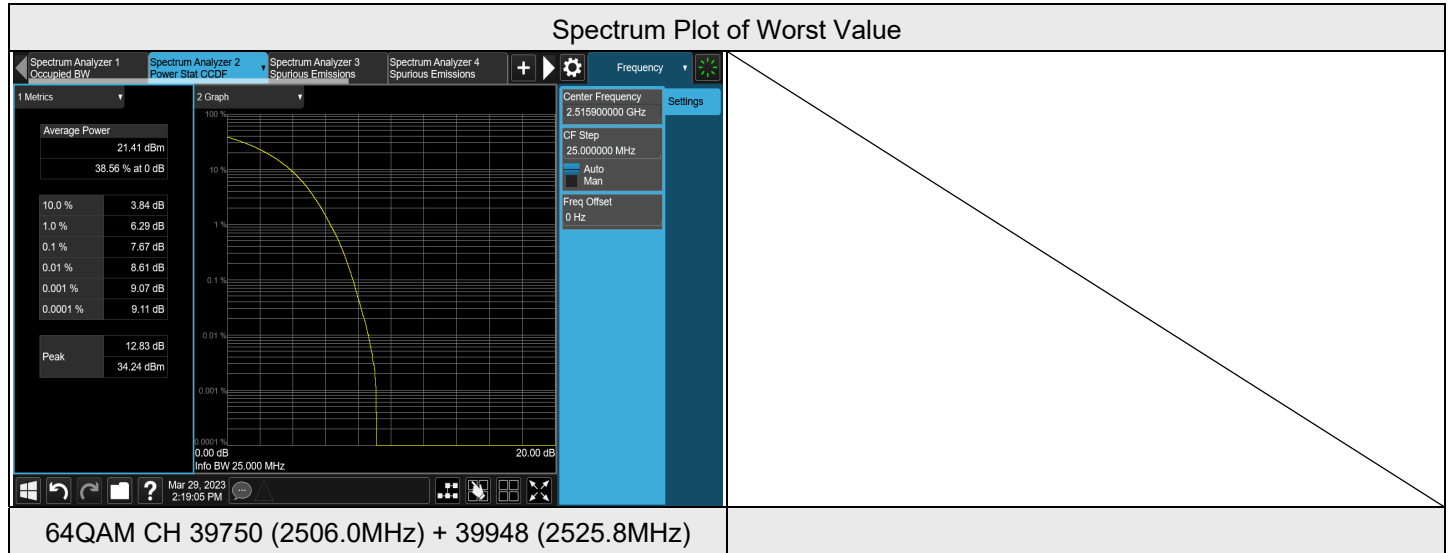
7.2.2 LTE Band 5 (CA 5B)

Channel	Frequency (MHz)		Peak to Average Ratio (dB)				Limit
			QPSK	16QAM	64QAM	256QAM	
20450 + 20549	829	838.9	6.03	6.89	6.98	6.89	13.00
20476 + 20575	831.6	841.5	6.48	6.91	7.01	6.95	
20501 + 20600	834.1	844	6.28	6.78	6.92	6.91	



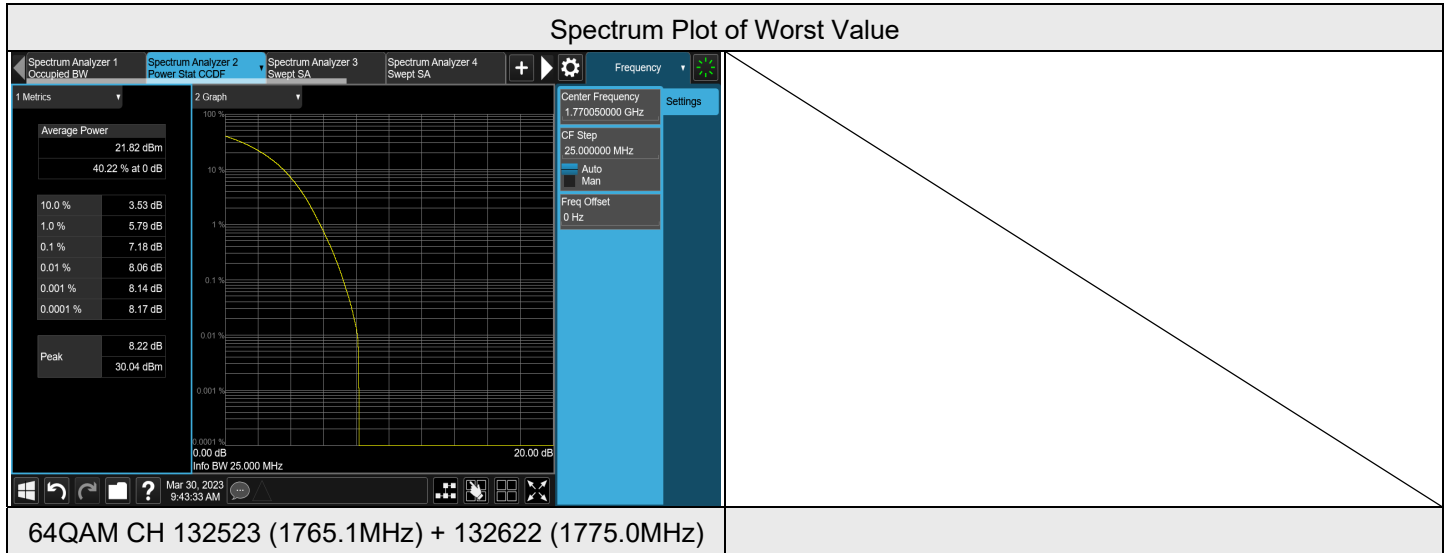
7.2.3 LTE Band 41 (CA 41C)

Channel	Frequency (MHz)		Peak to Average Ratio (dB)				Limit
			QPSK	16QAM	64QAM	256QAM	
39750 + 39948	2506	2525.8	4.39	5.24	7.67	7.29	13.00
40521 + 40719	2583.1	2602.9	3.92	4.64	7.15	7.06	
41292 + 41490	2660.2	2680	4.99	5.92	6.97	7.12	



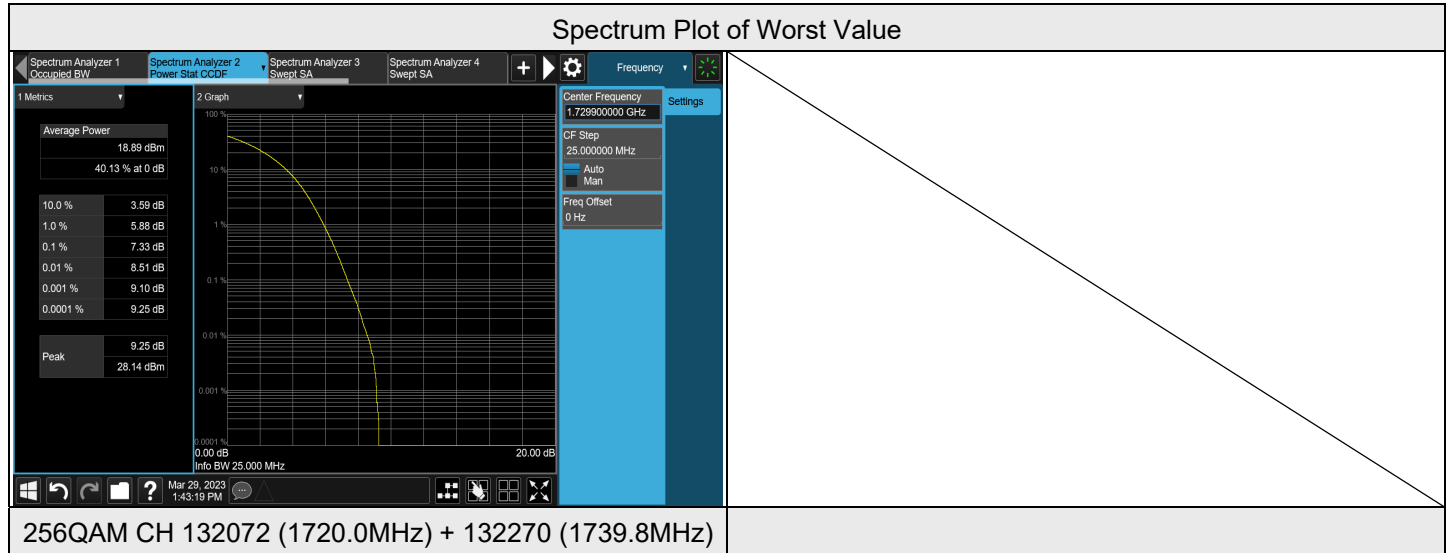
7.2.4 LTE Band 66 (CA 66B)

Channel	Frequency (MHz)		Peak to Average Ratio (dB)				Limit
			QPSK	16QAM	64QAM	256QAM	
132022 + 132121	1715	1724.9	5.71	6.65	7.17	7.12	13.00
132373 + 132472	1750.1	1760	4.09	5.30	6.99	7.06	
132523 + 132622	1765.1	1775	6.10	6.99	7.18	7.09	



7.2.5 LTE Band 66 (CA 66C)

Channel	Frequency (MHz)		Peak to Average Ratio (dB)				Limit
			QPSK	16QAM	64QAM	256QAM	
132072 + 132270	1720	1739.8	5.48	6.49	6.92	7.33	13.00
132323 + 132521	1745.1	1764.9	3.74	4.72	6.87	6.98	
132374 + 132572	1750.2	1770	3.72	4.58	6.87	7.24	



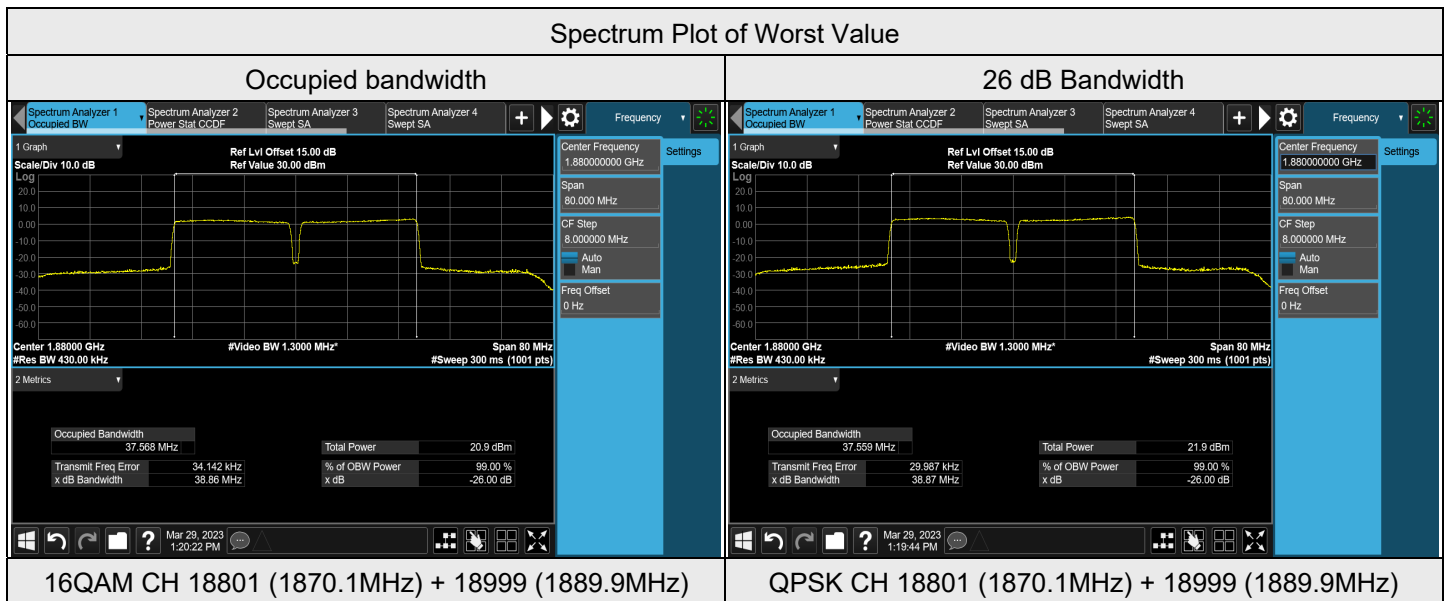


7.3 Bandwidth

Input Power:	3.87 Vdc	Environmental Conditions:	21°C, 70% RH	Tested By:	Willy Cheng
--------------	----------	---------------------------	--------------	------------	-------------

7.3.1 LTE Band 2 (CA 2C)

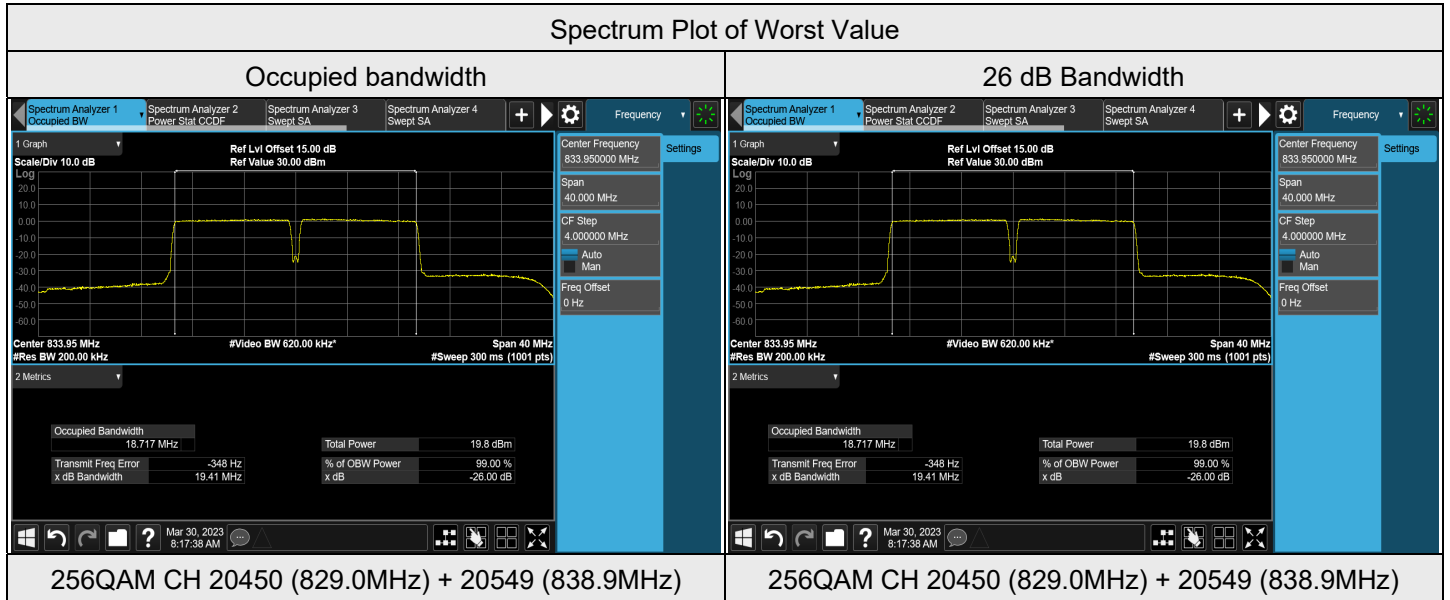
Channel	Frequency (MHz)		Occupied Bandwidth (MHz)				26 dB Bandwidth (MHz)			
			QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
18700 + 18898	1860	1879.8	37.45	37.44	37.45	37.44	38.85	38.85	38.85	38.83
18801 + 18999	1870.1	1889.9	37.56	37.57	37.57	37.57	38.87	38.86	38.86	38.85
18902 + 19100	1880.2	1900	37.50	37.48	37.50	37.49	38.85	38.85	38.85	38.86





7.3.2 LTE Band 5 (CA 5B)

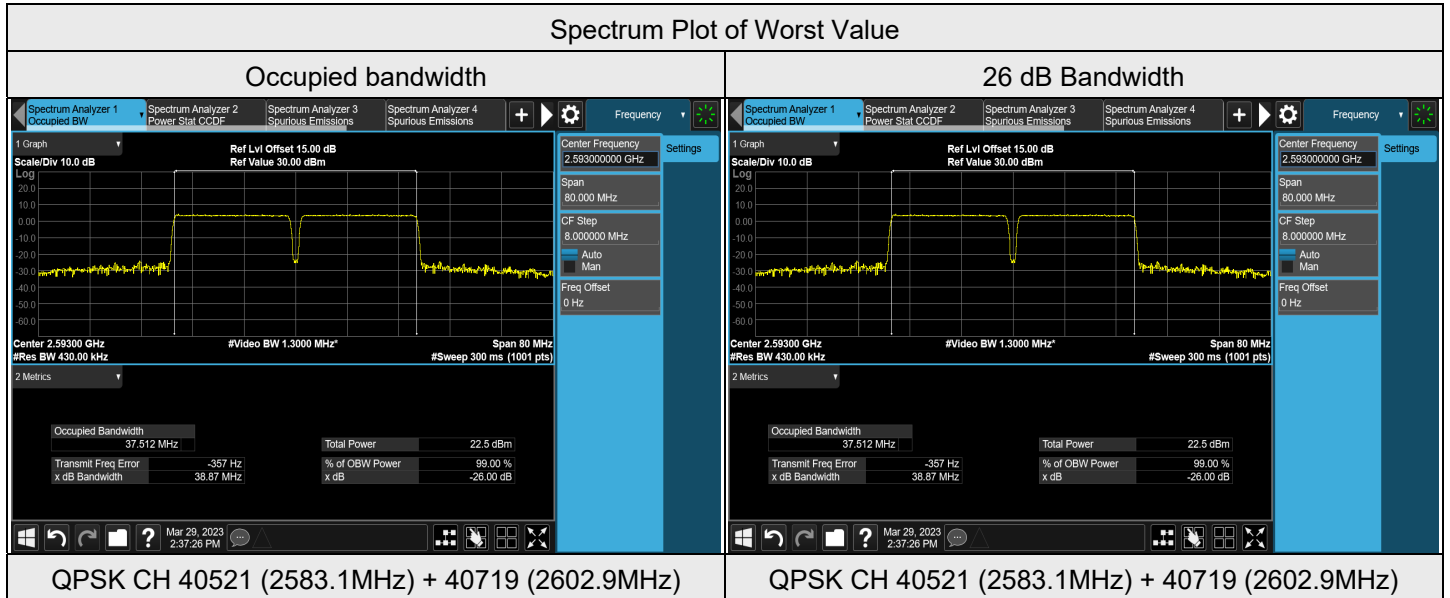
Channel	Frequency (MHz)		Occupied Bandwidth (MHz)				26 dB Bandwidth (MHz)			
			QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
20450 + 20549	829	838.9	18.72	18.71	18.71	18.72	19.41	19.40	19.40	19.41
20476 + 20575	831.6	841.5	18.71	18.71	18.71	18.70	19.40	19.41	19.40	19.39
20501 + 20600	834.1	844	18.71	18.71	18.70	18.70	19.40	19.41	19.39	19.40





7.3.3 LTE Band 41 (CA 41C)

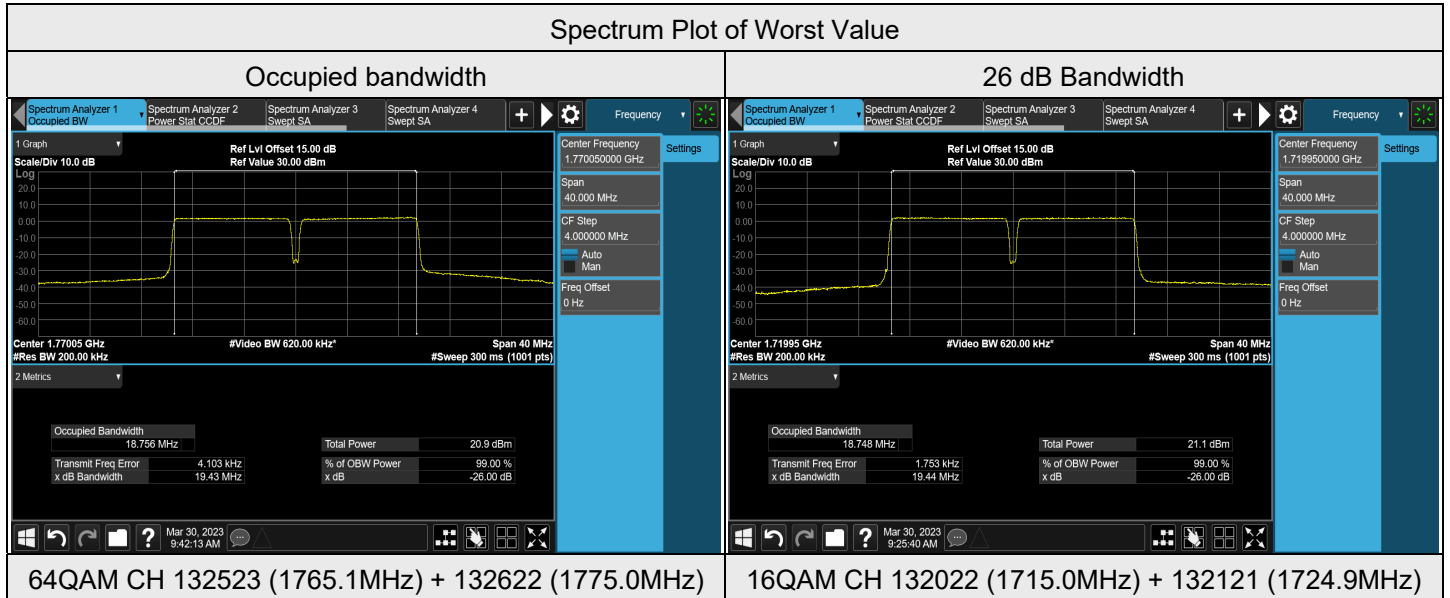
Channel	Frequency (MHz)		Occupied Bandwidth (MHz)				26 dB Bandwidth (MHz)			
			QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
39750 + 39948	2506	2525.8	37.48	37.48	37.47	37.46	38.83	38.85	38.84	38.84
40521 + 40719	2583.1	2602.9	37.51	37.50	37.50	37.49	38.87	38.84	38.83	38.85
41292 + 41490	2660.2	2680	37.47	37.46	37.46	37.47	38.84	38.84	38.82	38.83





7.3.4 LTE Band 66 (CA 66B)

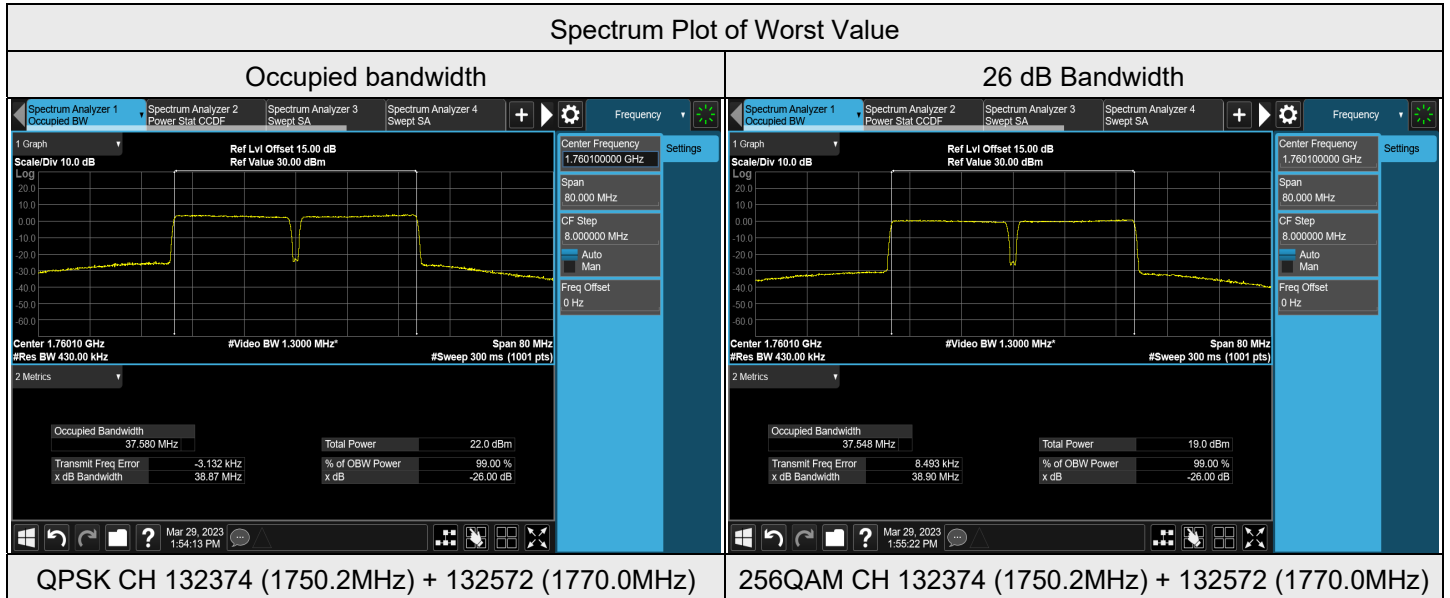
Channel	Frequency (MHz)		Occupied Bandwidth (MHz)				26 dB Bandwidth (MHz)			
			QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
132022 + 132121	1715	1724.9	18.75	18.75	18.74	18.75	19.43	19.44	19.42	19.42
132373 + 132472	1750.1	1760	18.74	18.74	18.74	18.74	19.42	19.42	19.41	19.42
132523 + 132622	1765.1	1775	18.75	18.75	18.76	18.76	19.43	19.42	19.43	19.43





7.3.5 LTE Band 66 (CA 66C)

Channel	Frequency (MHz)		Occupied Bandwidth (MHz)				26 dB Bandwidth (MHz)			
			QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
132072 + 132270	1720	1739.8	37.47	37.46	37.46	37.48	38.82	38.85	38.83	38.85
132323 + 132521	1745.1	1764.9	37.52	37.52	37.52	37.49	38.86	38.85	38.85	38.85
132374 + 132572	1750.2	1770	37.58	37.57	37.55	37.55	38.87	38.87	38.86	38.90

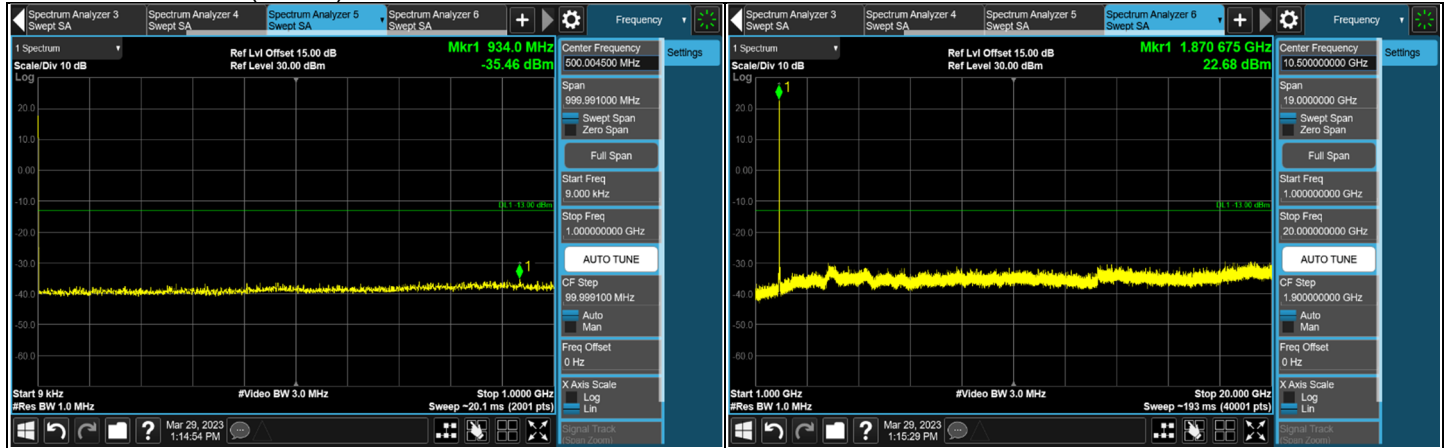




7.4 Conducted Spurious Emissions

Input Power:	3.87 Vdc	Environmental Conditions:	21°C, 70% RH	Tested By:	Willy Cheng
--------------	----------	---------------------------	--------------	------------	-------------

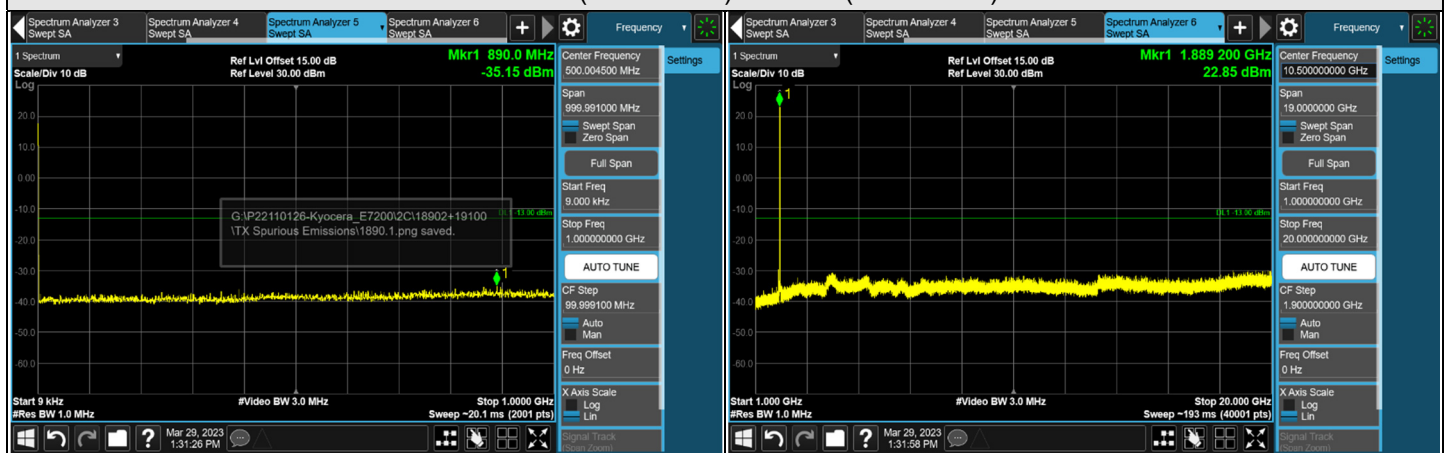
7.4.1 LTE Band 2 (CA 2C)



CH 18700 (1860.0MHz) + 18998 (1879.8MHz)

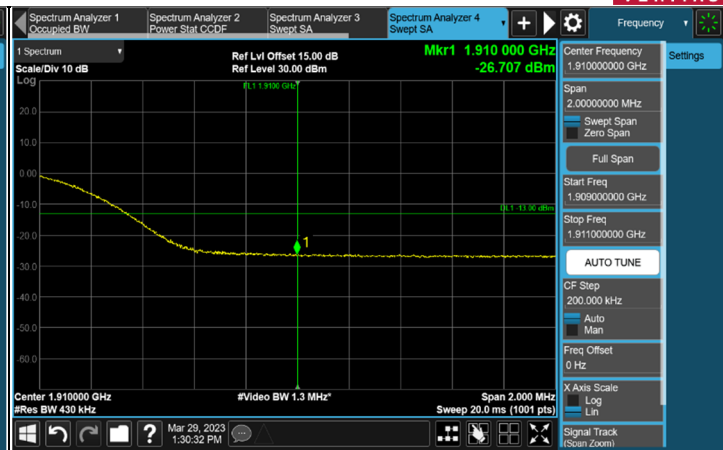


CH 18801 (1870.1MHz) + 18999 (1889.9MHz)



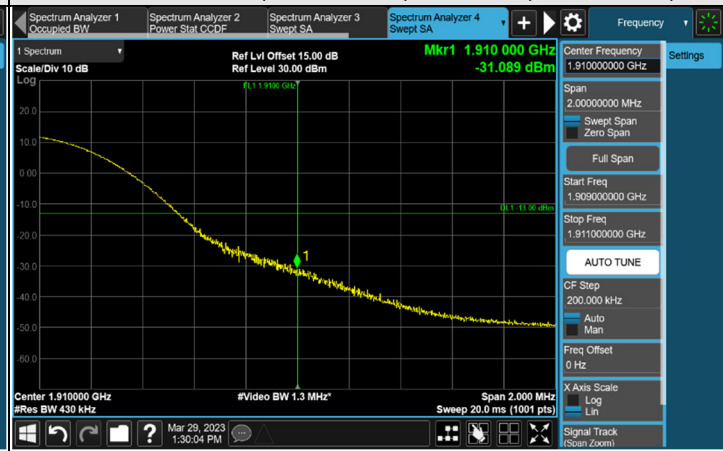
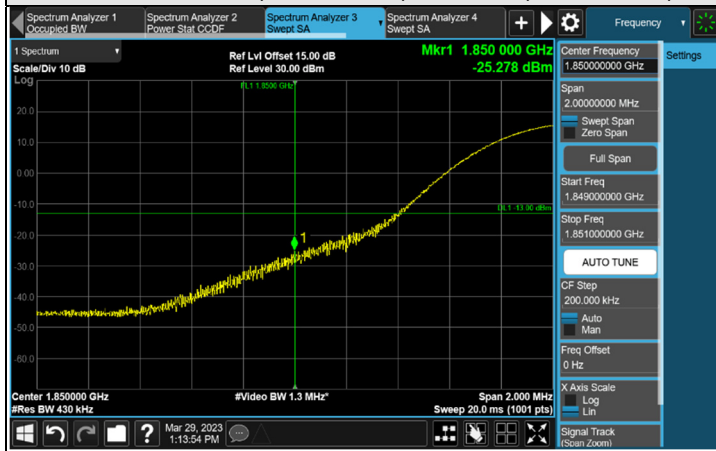
CH 18902 (1880.2MHz) + 19100 (1900.0MHz)

Note: The signal at 9 kHz is IF signal from spectrum analyzer.



FULL CH 18700 (1860.0MHz) + 18898 (1879.8MHz)

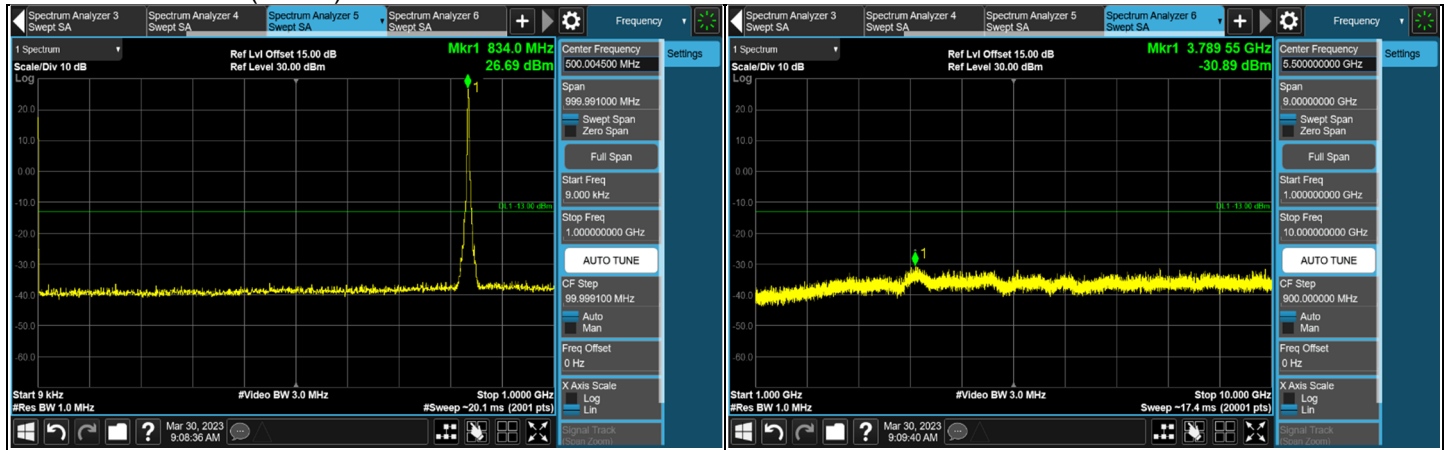
FULL CH 18902 (1880.2MHz) + 19100 (1900.0MHz)



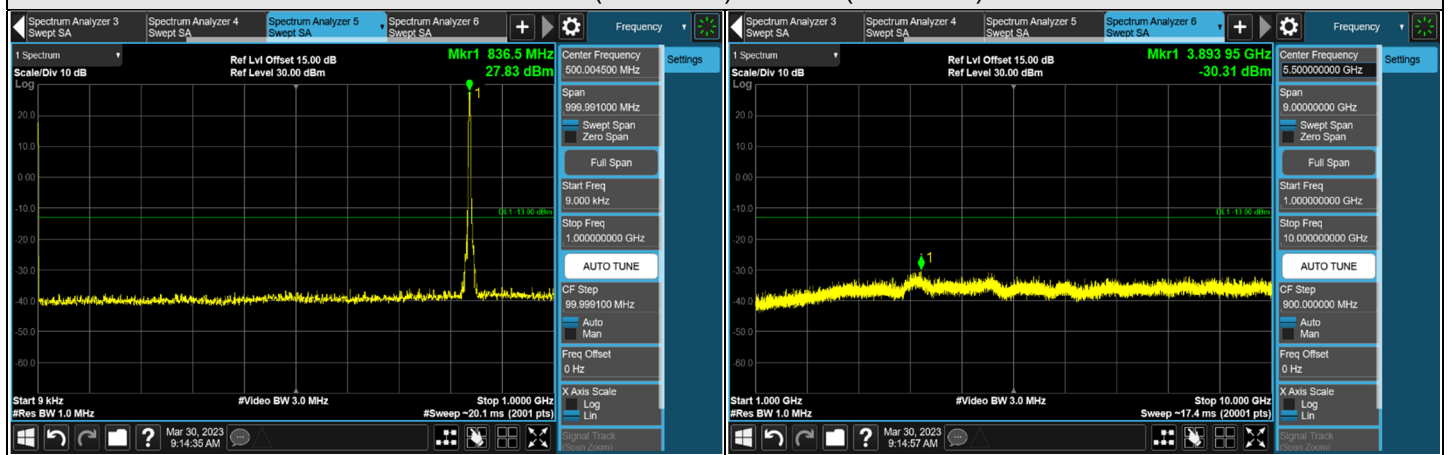
1RB CH 18700 (1860.0MHz) + 18898 (1879.8MHz)

1RB CH 18902 (1880.2MHz) + 19100 (1900.0MHz)

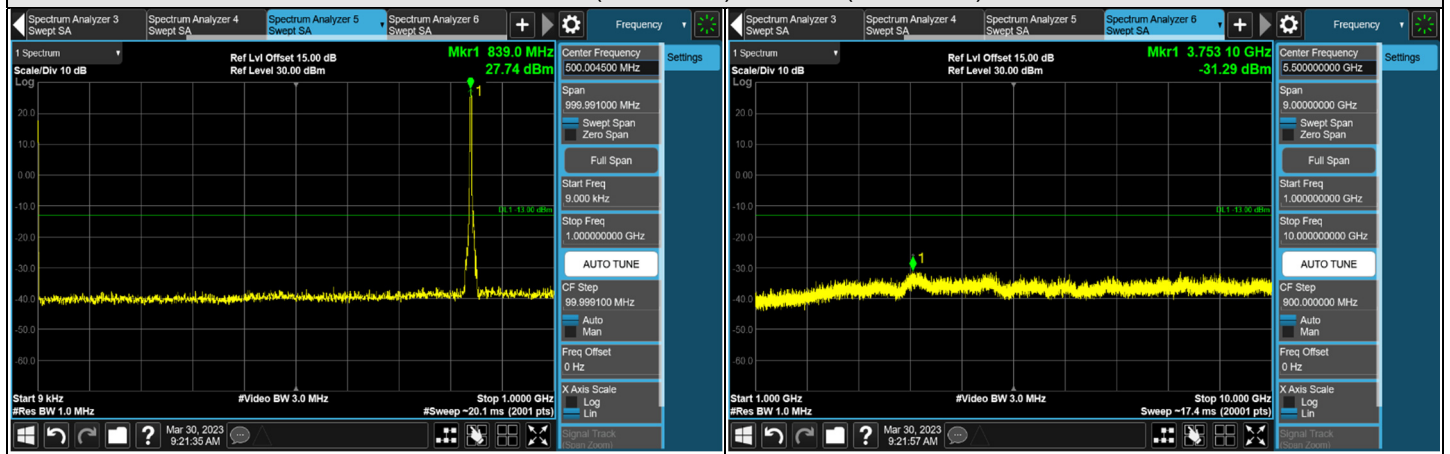
7.4.2 LTE Band 5 (CA 5B)



CH 20450 (829.0MHz) + 20549 (838.9MHz)

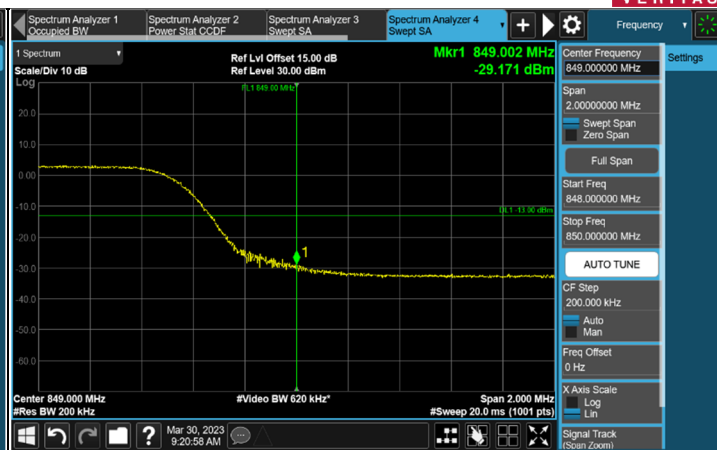


CH 20476 (831.6MHz) + 20575 (841.5MHz)



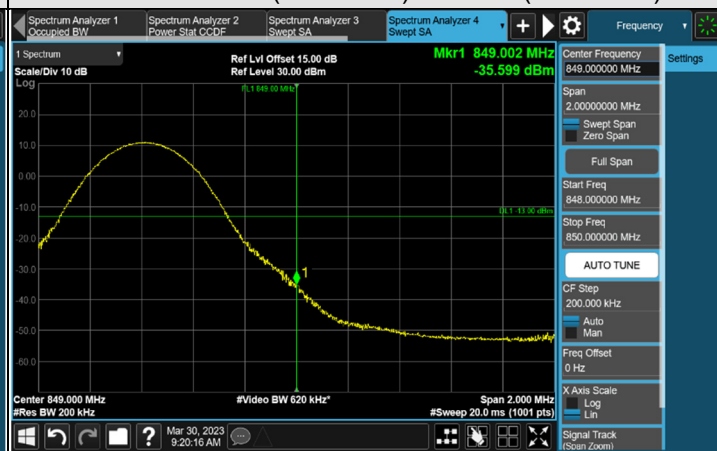
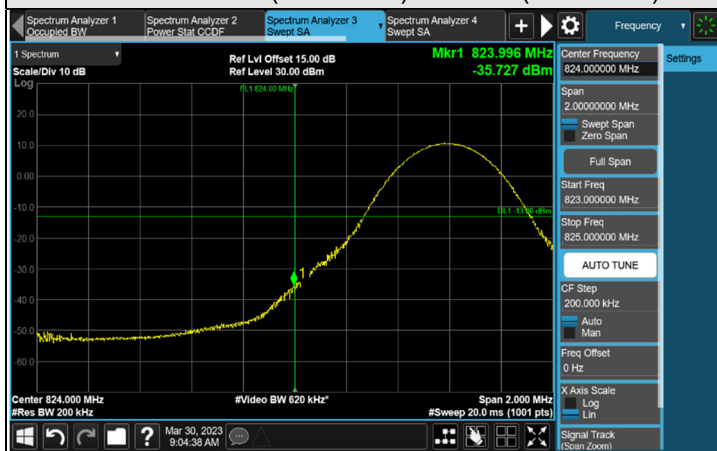
CH 20501 (834.1MHz) + 20600 (844.0MHz)

Note: The signal at 9 kHz is IF signal from spectrum analyzer.



FULL CH 20450 (829.0MHz) + 20549 (838.9MHz)

FULL CH 20501 (834.1MHz) + 20600 (844.0MHz)



1RB CH 20450 (829.0MHz) + 20549 (838.9MHz)

1RB CH 20501 (834.1MHz) + 20600 (844.0MHz)