



LTE TEST REPORT

No. 25T04Z100239-036

for

TCL Communication Ltd.

GSM/UMTS/LTE/NR Mobile phone

Model Name: T513V

FCC ID: 2ACCJH187

with

Hardware Version: 04

Software Version: 9ABJ

Issued Date: 2025-04-18

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of CTTL.

Test Laboratory:

CTTL-Telecommunication Technology Labs, CAICT

No. 52, Huayuan North Road, Haidian District, Beijing, P. R. China 100191.

Tel: +86(0)10-62304633-2512, Fax: +86(0)10-62304633-2504

Email: cttl_terminals@caict.ac.cn, website: www.caict.ac.cn



REPORT HISTORY

Report Number	Revision	Description	Issue Date
25T04Z100239-036	Rev.0	1 st edition	2025-04-18

Note: the latest revision of the test report supersedes all previous version.

CONTENTS

1. TEST LABORATORY	4
1.1. INTRODUCTION & ACCREDITATION	4
1.2. TESTING LOCATION	4
1.3. TESTING ENVIRONMENT	4
1.4. PROJECT DATA	4
1.5. SIGNATURE	4
2. CLIENT INFORMATION	5
2.1. APPLICANT INFORMATION	5
2.2. MANUFACTURER INFORMATION	5
3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT (AE)	6
3.1. ABOUT EUT	6
3.2. INTERNAL IDENTIFICATION OF EUT USED DURING THE TEST	6
3.3. INTERNAL IDENTIFICATION OF AE USED DURING THE TEST	6
4. REFERENCE DOCUMENTS	7
4.1. DOCUMENTS SUPPLIED BY APPLICANT	7
4.2. REFERENCE DOCUMENTS FOR TESTING	7
5. SUMMARY OF TEST RESULT	8
6. TEST EQUIPMENTS UTILIZED	11
ANNEX A: MEASUREMENT RESULTS	13
A.1 OUTPUT POWER	13
A.2 EMISSION LIMIT	47
A.3 FREQUENCY STABILITY	69
A.4 OCCUPIED BANDWIDTH	74
A.5 EMISSION BANDWIDTH	112
A.6 BAND EDGE COMPLIANCE	150
A.7 CONDUCTED SPURIOUS EMISSION	269
A.8 PEAK-TO-AVERAGE POWER RATIO	280
ANNEX B: ACCREDITATION CERTIFICATE	282

1. Test Laboratory

1.1. Introduction & Accreditation

Telecommunication Technology Labs, CAICT is an ISO/IEC 17025:2017 accredited test laboratory under American Association for Laboratory Accreditation (A2LA) with lab code 7049.01, and is also an FCC accredited test laboratory (CN1349), and ISED accredited test laboratory (CAB identifier:CN0066). The detail accreditation scope can be found on A2LA website.

1.2. Testing Location

Location 1: CTTL (huayuan North Road)

Address: No. 52, Huayuan North Road, Haidian District, Beijing,
P. R. China 100191

Location 2: CTTL (BDA)

Address: No.18A, Kangding Street, Beijing Economic-Technology
Development Area, Beijing, P. R. China 100176

1.3. Testing Environment

Normal Temperature: 15-35°C

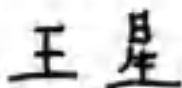
Relative Humidity: 20-75%

1.4. Project Data

Testing Start Date: 2025-02-17

Testing End Date: 2025-04-10

1.5. Signature



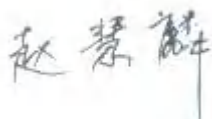
Wang Xing

(Prepared this test report)



Zhou Yu

(Reviewed this test report)



Zhao Hui Lin

(Approved this test report)

2. Client Information

2.1. Applicant Information

Company Name: TCL Communication Ltd.
Address /Post: 5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science
Park, Shatin, NT, Hong Kong
Contact: Ting Wang
Email: ting.wang.hz@tcl.com
Telephone: +86 752 2639091

2.2. Manufacturer Information

Company Name: TCL Communication Ltd.
Address /Post: 5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science
Park, Shatin, NT, Hong Kong
Contact: Ting Wang
Email: ting.wang.hz@tcl.com
Telephone: +86 752 2639091

3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

3.1. About EUT

Description	GSM/UMTS/LTE/NR Mobile phone
Model Name	T513V
FCC ID	2ACCJH187
Antenna	Embedded
Output power	23.27dBm maximum EIRP measured for LTE Band 2
Extreme Voltage	3.6VDC to 4.45VDC (nominal: 3.87VDC)
Extreme Temperature	-10°C to 55°C

Note: Components list, please refer to documents of the manufacturer; it is also included in the original test record of CTTL.

3.2. Internal Identification of EUT used during the test

EUT ID*	IMEI	HW Version	SW Version	Date of receipt
/	/	/	/	/

*EUT ID: is used to identify the test sample in the lab internally.

3.3. Internal Identification of AE used during the test

AE ID*	Description
--------	-------------

AE1	Battery
-----	---------

AE2	Battery
-----	---------

AE1

Model	CAC4900013C7 (TLp049F7)
-------	-------------------------

Manufacturer	VEKEN
--------------	-------

Capacitance	4900mAh, Typ 5010mAh
-------------	----------------------

AE2

Model	CAC4900035C9 (TLp049N9)
-------	-------------------------

Manufacturer	FENGHUA
--------------	---------

Capacitance	4900mAh, Typ5010mAh
-------------	---------------------

*AE ID: is used to identify the test sample in the lab internally.

4. Reference Documents

4.1. Documents supplied by applicant

EUT parameters are supplied by the customer, which are the bases of testing. CAICT is not responsible for the accuracy of customer supplied technical information that may affect the test results (for example, antenna gain and loss of customer supplied cable).

4.2. Reference Documents for testing

The following documents listed in this section are referred for testing.

Reference	Title	Version
FCC Part 24	PERSONAL COMMUNICATIONS SERVICES	10-1-23 Edition
FCC Part 22	PUBLIC MOBILE SERVICES	10-1-23 Edition
FCC Part 27	MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES	10-1-23 Edition
FCC Part 96	CITIZENS BROADBAND RADIO SERVICE	10-1-23 Edition
ANSI/TIA-603-E	Land Mobile FM or PM Communications Equipment Measurement and Performance Standards	2016
ANSI C63.26	American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services	2015
KDB 971168 D01	MEASUREMENT GUIDANCE FOR CERTIFICATION OF LICENSED DIGITAL TRANSMITTERS	v03r01
KDB 940660 D01	CERTIFICATION AND TEST PROCEDURES FOR CITIZENS BROADBAND RADIO SERVICE DEVICES AUTHORIZED UNDER PART 96	v03

5. Summary of Test Result

LTE Band 2

Items	Test Name	Clause in FCC rules	Verdict
1	Output Power	24.232	BR
2	Emission Limit	2.1051/24.238	BR
3	Frequency Stability	2.1055	BR
4	Occupied Bandwidth	2.1049	BR
5	Emission Bandwidth	24.238	BR
6	Band Edge Compliance	24.238	BR
7	Conducted Spurious Emission	24.238	BR
8	Peak-to-Average Power Ratio	24.232	BR

LTE Band 5

Items	Test Name	Clause in FCC rules	Verdict
1	Output Power	22.913	BR
2	Emission Limit	2.1051/22.917	BR
3	Frequency Stability	2.1055	BR
4	Occupied Bandwidth	2.1049	BR
5	Emission Bandwidth	22.917	BR
6	Band Edge Compliance	22.917	BR
7	Conducted Spurious Emission	22.917	BR

LTE Band 7

Items	Test Name	Clause in FCC rules	Verdict
1	Output Power	27.50	BR
2	Emission Limit	2.1051/27.53	BR
3	Frequency Stability	2.1055	BR
4	Occupied Bandwidth	2.1049	BR
5	Emission Bandwidth	27.53	BR
6	Band Edge Compliance	27.53	BR
7	Conducted Spurious Emission	27.53	BR
8	Peak-to-Average Power Ratio	27.50	BR

LTE Band 12

Items	Test Name	Clause in FCC rules	Verdict
1	Output Power	27.50	BR
2	Emission Limit	2.1051/27.53	BR
3	Frequency Stability	2.1055	BR
4	Occupied Bandwidth	2.1049	BR
5	Emission Bandwidth	27.53	BR
6	Band Edge Compliance	27.53	BR
7	Conducted Spurious Emission	27.53	BR
8	Peak-to-Average Power Ratio	27.50	BR

LTE Band 13

Items	Test Name	Clause in FCC rules	Verdict
1	Output Power	27.50	BR
2	Emission Limit	2.1051/27.53	BR
3	Frequency Stability	2.1055	BR
4	Occupied Bandwidth	2.1049	BR
5	Emission Bandwidth	27.53	BR
6	Band Edge Compliance	27.53	BR
7	Conducted Spurious Emission	27.53	BR
8	Peak-to-Average Power Ratio	27.50	BR

LTE Band 48

Items	Test Name	Clause in FCC rules	Verdict
1	Output Power	96.41	BR
2	Emission Limit	96.41	BR
3	Frequency Stability	2.1055	BR
4	Occupied Bandwidth	2.1049	BR
5	Emission Bandwidth	96.41	BR
6	Band Edge Compliance	96.41	BR
7	Conducted Spurious Emission	96.41	BR
8	Peak-to-Average Power Ratio	96.41	BR
9	End User Device Additional Requirements (CBSD Protocol)	96.47	BR

LTE Band 66 (4)

Items	Test Name	Clause in FCC rules	Verdict
1	Output Power	27.50	BR
2	Emission Limit	2.1051/27.53	BR
3	Frequency Stability	2.1055	BR
4	Occupied Bandwidth	2.1049	BR
5	Emission Bandwidth	27.53	BR
6	Band Edge Compliance	27.53	BR
7	Conducted Spurious Emission	27.53	BR
8	Peak-to-Average Power Ratio	27.50	BR

Terms used in Verdict column

P	Pass. The EUT complies with the essential requirements in the standard.
NP	Not Performed. The test was not performed by CTTL.
NA	Not Applicable. The test was not applicable.
BR	Re-use test data from basic model report.
F	Fail. The EUT does not comply with the essential requirements in the standard.

All the test results are based on normal power.

Measurement uncertainty is not taken into account when stating conformity with a specified requirement.

LTE Band 66 overlaps the entire frequency range of LTE Band 4. Therefore, test data provided in this report covers Band 4 as well as Band 66.

Explanation of worst-case configuration

The worst-case scenario for all measurements is based on the conducted output power measurement investigation results. Output power was measured on QPSK, 16QAM, 64QAM, 256QAM modulations. It was found that QPSK was the worst case. All testing was performed using QPSK modulations to represent the worst case unless otherwise stated. The test results shown in the following sections represent the worst case emission.

The Equipment Under Test (EUT) model T513V(FCC ID:2ACCJH187) is a variant product of T513SP(FCC ID:2ACCJH187), according to the declaration of changes provided by the applicant and FCC KDB publication 178919 D01, all the test results are derived from test report No.25T04Z100239-023.

For detail differences between two models please refer the Declaration of Changes document.

6. Test Equipment Utilized

Description	Type	Series Number	Manufacture	Cal Due Date	Calibration Interval
Wideband Radio Communication Tester	CMW500	159082	R&S	2025-12-03	1 year
Spectrum Analyzer	FSV	101576	R&S	2025-05-08	1 year
Signal&Spectrum Analyzer	FSW	104038	R&S	2025-07-02	1 year
Climate chamber	SH-241	92004642	ESPEC	2025-10-29	1 year
Test Receiver	ESW44	103144	R&S	2026-01-05	1 year
EMI Antenna	VULB9163	9163-482	Schwarzbeck	2025-05-19	1 year
EMI Antenna	9117	167	Schwarzbeck	2026-10-15	3 years
EMI Antenna	LB-7180-NF	J203001300005	Yinglian	2025-05-16	1 year
EMI Antenna	3115	00146404	ETS-Lindgren	2025-05-16	1 year
Signal Generator	SMF100A	101295	R&S	2026-02-16	1 year
Universal Radio Communication Tester	CMW500	143008	R&S	2026-01-15	1 year
Universal Radio Communication Tester	MT8000A	6272466183	Anritsu	2026-07-06	2 years
Universal Radio Communication Tester	MT8821C	62724459649	Anritsu	2026-07-06	2 years

7. Measurement Uncertainty

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.26. All measurement uncertainty values are shown with a coverage factor of $k = 2$ to indicate a 95% level of confidence. Measurement uncertainty is not taken into account when stating conformity with a specified requirement.

Test item		Measurement uncertainty
Output Power(dB)		1.90
Emission Limit(dB)		5.76
Frequency Stability	FE(ppm)	1.16
	$F_L F_H$ (kHz)	173.51
Occupied Bandwidth(%)		0.72
Emission Bandwidth(%)		0.75
Band Edge Compliance(dB)		1.94
Conducted Spurious Emission(dB)		4.77(0-20GHz)
		6.27(20-30GHz)
Peak-to-Average Power Ratio(dB)		2.10

Annex A: Measurement Results

A.1 Output Power

A.1.1 Summary

During the process of testing, the EUT was controlled via communication tester to ensure max power transmission and proper modulation.

In all cases, output power is within the specified limits.

A.1.2 Conducted

A.1.2.1 Method of Measurements

The EUT was set up for the max output power with pseudo random data modulation.

These measurements were done at 3 frequencies (bottom, middle and top of operational frequency range) for each bandwidth.

The results below include a correction factor for cable loss that is provided by the customer.

A.1.2.2 Measurement Result

LTE band 2

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			
			QPSK	16QAM	64QAM	256QAM
1.4MHz	1 RB high	1909.3	23.11	22.41	21.30	20.07
		1880.0	23.46	22.80	21.75	20.40
		1850.7	23.50	22.72	21.53	20.73
	1 RB low	1909.3	23.11	22.44	21.29	20.36
		1880.0	23.43	22.71	21.69	20.38
		1850.7	23.52	22.80	21.62	20.66
	50% RB mid	1909.3	23.08	22.11	21.21	20.32
		1880.0	23.45	22.43	21.53	20.23
		1850.7	23.50	22.39	21.57	20.05
	100% RB	1909.3	22.16	21.23	20.10	19.18
		1880.0	22.43	21.50	20.41	19.49
		1850.7	22.45	21.52	20.44	19.49
3MHz	1 RB high	1908.5	23.11	22.34	21.33	20.33
		1880.0	23.42	22.76	21.68	20.28
		1851.5	23.38	22.67	21.62	20.63
	1 RB low	1908.5	23.18	22.40	21.37	20.66
		1880.0	23.42	22.67	21.66	20.28
		1851.5	23.36	22.70	21.67	20.72
	50% RB mid	1908.5	22.16	21.25	20.21	19.36
		1880.0	22.45	21.48	20.49	19.57
		1851.5	22.44	21.49	20.46	19.13
	100% RB	1908.5	22.17	21.19	20.14	19.22

		1880.0	22.47	21.45	20.45	19.67
		1851.5	22.42	21.40	20.39	19.13
5MHz	1 RB high	1907.5	23.10	22.44	21.32	20.21
		1880.0	23.47	22.73	21.61	20.34
		1852.5	23.41	22.72	21.59	20.57
	1 RB low	1907.5	23.19	22.57	21.38	20.28
		1880.0	23.44	22.73	21.61	20.38
		1852.5	23.47	22.76	21.63	20.78
	50% RB mid	1907.5	22.22	21.24	20.23	19.38
		1880.0	22.51	21.52	20.56	19.47
		1852.5	22.44	21.44	20.45	19.45
	100% RB	1907.5	22.25	21.23	20.23	19.18
		1880.0	22.52	21.51	20.50	19.45
		1852.5	22.50	21.49	20.49	19.27
10MHz	1 RB high	1905.0	23.17	22.49	21.34	20.35
		1880.0	23.50	22.83	21.62	20.46
		1855.0	23.41	22.71	21.57	20.71
	1 RB low	1905.0	23.38	22.66	21.47	20.20
		1880.0	23.44	22.76	21.59	20.24
		1855.0	23.50	22.71	21.57	20.72
	50% RB mid	1905.0	22.26	21.22	20.21	19.30
		1880.0	22.46	21.45	20.43	19.53
		1855.0	22.40	21.39	20.38	19.17
	100% RB	1905.0	22.28	21.27	20.23	19.46
		1880.0	22.46	21.46	20.42	19.47
		1855.0	22.42	21.39	20.39	19.23
15MHz	1 RB high	1902.5	23.14	22.42	21.34	20.25
		1880.0	23.47	22.79	21.60	20.42
		1857.5	23.33	22.58	21.57	20.57
	1 RB low	1902.5	23.40	22.69	21.60	20.44
		1880.0	23.39	22.67	21.62	20.28
		1857.5	23.49	22.76	21.65	20.62
	50% RB mid	1902.5	22.34	21.31	20.32	19.48
		1880.0	22.51	21.50	20.51	19.43
		1857.5	22.43	21.44	20.46	19.21
	100% RB	1902.5	22.34	21.36	20.30	19.26
		1880.0	22.51	21.51	20.49	19.57
		1857.5	22.43	21.44	20.42	19.45
20MHz	1 RB high	1900.0	23.18	22.44	21.37	20.15
		1880.0	23.52	22.87	21.73	20.44
		1860.0	23.31	22.55	21.43	20.59
	1 RB low	1900.0	23.44	22.73	21.60	20.38
		1880.0	23.35	22.67	21.51	20.38

		1860.0	23.46	22.76	21.67	20.62
	50% RB mid	1900.0	22.44	21.44	20.43	19.34
		1880.0	22.52	21.51	20.52	19.41
		1860.0	22.46	21.43	20.46	19.33
	100% RB	1900.0	22.36	21.34	20.35	19.24
		1880.0	22.52	21.49	20.49	19.39
		1860.0	22.43	21.39	20.41	19.29

LTE band 5

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			
			QPSK	16QAM	64QAM	256QAM
1.4MHz	1 RB high	848.3	24.28	23.53	22.41	21.20
		836.5	24.32	23.56	22.56	21.41
		824.7	24.22	23.62	22.42	21.55
	1 RB low	848.3	24.30	23.51	22.53	21.59
		836.5	24.27	23.53	22.56	21.43
		824.7	24.21	23.58	22.41	21.26
	50% RB mid	848.3	24.26	23.37	22.38	21.23
		836.5	24.32	23.35	22.46	21.12
		824.7	24.22	23.24	22.37	21.02
	100% RB	848.3	23.30	22.40	21.30	20.08
		836.5	23.36	22.43	21.33	20.24
		824.7	23.27	22.39	21.24	20.33
3MHz	1 RB high	847.5	24.24	23.56	22.51	21.26
		836.5	24.38	23.57	22.58	21.47
		825.5	24.31	23.57	22.52	21.43
	1 RB low	847.5	24.34	23.58	22.50	21.31
		836.5	24.36	23.56	22.58	21.25
		825.5	24.29	23.52	22.49	21.18
	50% RB mid	847.5	23.30	22.37	21.31	20.27
		836.5	23.36	22.44	21.43	20.04
		825.5	23.34	22.40	21.37	20.30
	100% RB	847.5	23.31	22.35	21.30	20.10
		836.5	23.36	22.42	21.35	20.02
		825.5	23.35	22.39	21.34	20.05
5MHz	1 RB high	846.5	24.37	23.58	22.58	21.28
		836.5	24.38	23.70	22.59	21.63
		826.5	24.44	23.71	22.61	21.63
	1 RB low	846.5	24.37	23.70	22.63	21.27
		836.5	24.36	23.68	22.59	21.45
		826.5	24.29	23.60	22.52	21.52
	50% RB mid	846.5	23.41	22.38	21.43	20.11
		836.5	23.45	22.45	21.45	20.08
		826.5	23.44	22.41	21.48	20.36
	100% RB	846.5	23.43	22.45	21.40	20.24
		836.5	23.47	22.46	21.44	20.06
		826.5	23.47	22.46	21.41	20.35
10MHz	1 RB high	844.0	24.43	23.60	22.52	21.36
		836.5	24.46	23.69	22.69	21.65
		829.0	24.53	23.74	22.69	21.37
	1 RB low	844.0	24.42	23.68	22.61	21.37

		836.5	24.44	23.70	22.65	21.47
		829.0	24.33	23.60	22.56	21.42
	50% RB mid	844.0	23.43	22.44	21.39	20.31
		836.5	23.47	22.46	21.44	20.24
		829.0	23.47	22.46	21.44	20.32
	100% RB	844.0	23.46	22.45	21.44	20.34
		836.5	23.48	22.47	21.44	20.34
		829.0	23.49	22.48	21.43	20.39

LTE band 7

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			
			QPSK	16QAM	64QAM	256QAM
5MHz	1 RB high	2567.5	22.93	22.22	21.15	20.22
		2535.0	22.91	22.30	21.12	19.76
		2502.5	22.55	21.92	20.79	20.21
	1 RB low	2567.5	22.81	22.11	21.05	19.67
		2535.0	23.09	22.41	21.40	20.30
		2502.5	22.26	21.57	20.49	19.48
	50% RB mid	2567.5	21.89	20.92	19.95	18.46
		2535.0	22.06	21.09	20.12	18.70
		2502.5	21.44	20.49	19.53	18.79
	100% RB	2567.5	21.92	20.90	19.91	18.48
		2535.0	22.09	21.07	20.05	18.75
		2502.5	21.48	20.48	19.50	18.74
10MHz	1 RB high	2565.0	23.00	22.36	21.20	19.98
		2535.0	22.89	22.17	21.10	19.80
		2505.0	23.05	22.33	21.28	20.17
	1 RB low	2565.0	22.71	21.95	20.92	19.61
		2535.0	23.19	22.50	21.39	20.24
		2505.0	22.38	21.70	20.59	19.36
	50% RB mid	2565.0	21.80	20.79	19.80	18.44
		2535.0	22.04	20.99	20.00	18.88
		2505.0	21.64	20.65	19.62	18.65
	100% RB	2565.0	21.83	20.84	19.84	18.30
		2535.0	22.07	21.04	20.05	18.63
		2505.0	21.62	20.65	19.61	18.64
15MHz	1 RB high	2562.5	23.06	22.41	21.21	19.90
		2535.0	22.87	22.08	20.99	19.76
		2507.5	23.30	22.53	21.52	20.09
	1 RB low	2562.5	22.65	21.95	20.90	19.39
		2535.0	23.18	22.60	21.43	20.42
		2507.5	22.37	21.58	20.53	19.60
	50% RB mid	2562.5	21.76	20.77	19.85	18.52
		2535.0	22.06	21.09	20.10	18.64
		2507.5	21.85	20.84	19.86	18.73
	100% RB	2562.5	21.80	20.81	19.82	18.36
		2535.0	22.08	21.07	20.05	18.91
		2507.5	21.86	20.85	19.82	18.56
20MHz	1 RB high	2560.0	23.07	22.30	21.40	20.08
		2535.0	22.83	22.12	21.10	19.68
		2510.0	23.42	22.71	21.59	20.37
	1 RB low	2560.0	22.57	21.85	20.89	19.61

		2535.0	23.30	22.63	21.52	20.26
		2510.0	22.41	21.81	20.63	19.58
	50% RB mid	2560.0	21.78	20.80	19.78	18.38
		2535.0	22.14	21.12	20.10	18.80
		2510.0	22.05	21.04	20.05	18.77
	100% RB	2560.0	21.82	20.80	19.82	18.44
		2535.0	22.08	21.05	20.05	18.89
		2510.0	22.01	20.97	19.96	18.62

LTE band 12

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			
			QPSK	16QAM	64QAM	256QAM
1.4MHz	1 RB high	715.3	22.75	22.08	21.03	20.24
		707.5	22.83	22.11	20.97	20.26
		699.7	22.99	22.29	21.15	20.05
	1 RB low	715.3	22.84	22.08	21.09	19.90
		707.5	22.83	22.14	21.09	20.39
		699.7	23.02	22.23	21.11	19.90
	50% RB mid	715.3	22.84	21.82	20.91	19.96
		707.5	22.83	21.80	20.97	20.14
		699.7	23.01	21.96	21.02	19.89
	100% RB	715.3	21.86	20.92	20.05	18.81
		707.5	21.86	20.89	19.98	18.91
		699.7	21.95	20.99	20.13	19.06
3MHz	1 RB high	714.5	22.82	22.16	20.96	20.02
		707.5	22.87	22.18	21.07	20.18
		700.5	22.95	22.23	21.18	19.93
	1 RB low	714.5	22.83	22.12	20.99	20.14
		707.5	22.87	22.09	20.96	20.29
		700.5	23.00	22.21	21.16	20.14
	50% RB mid	714.5	21.87	20.92	20.11	18.82
		707.5	21.83	20.93	20.05	19.00
		700.5	21.96	21.04	20.16	19.03
	100% RB	714.5	21.88	20.84	20.05	18.75
		707.5	21.86	20.91	20.00	19.29
		700.5	21.96	20.96	20.12	19.12
5MHz	1 RB high	713.5	22.93	22.20	21.11	20.02
		707.5	22.96	22.15	21.14	20.18
		701.5	23.01	22.33	21.27	19.95
	1 RB low	713.5	22.90	22.13	21.03	20.04
		707.5	22.93	22.28	21.15	20.27
		701.5	23.02	22.34	21.25	20.28
	50% RB mid	713.5	21.94	20.94	20.17	18.74
		707.5	21.92	20.93	20.10	18.98
		701.5	22.00	21.02	20.18	18.83
	100% RB	713.5	22.00	20.97	20.14	19.15
		707.5	21.98	20.95	20.05	19.07
		701.5	22.05	21.00	20.14	19.02
10MHz	1 RB high	711.0	22.98	22.29	21.18	20.10
		707.5	23.01	22.33	21.19	20.18
		704.0	23.04	22.33	21.17	20.15
	1 RB low	711.0	22.96	22.25	21.18	20.04

		707.5	23.01	22.29	21.20	20.15
		704.0	23.05	22.35	21.23	20.10
	50% RB mid	711.0	21.98	20.94	20.07	18.78
		707.5	21.97	20.97	20.07	19.02
		704.0	22.02	21.01	20.12	18.81
	100% RB	711.0	21.95	20.91	20.02	18.95
		707.5	21.99	20.98	20.05	19.19
		704.0	22.04	21.02	20.14	19.06

LTE band 13

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			
			QPSK	16QAM	64QAM	256QAM
5MHz	1 RB high	784.5	24.30	23.59	22.50	21.07
		782.0	24.30	23.56	22.46	21.11
		779.5	24.30	23.50	22.45	20.97
	1 RB low	784.5	24.24	23.56	22.45	21.53
		782.0	24.18	23.44	22.42	21.35
		779.5	24.15	23.41	22.42	21.57
	50% RB mid	784.5	23.31	22.30	21.32	19.85
		782.0	23.28	22.28	21.34	19.95
		779.5	23.27	22.27	21.31	19.83
	100% RB	784.5	23.33	22.30	21.31	20.30
		782.0	23.29	22.29	21.29	20.18
		779.5	23.26	22.28	21.25	20.38
10MHz	1 RB high	782.0	24.36	23.62	22.49	21.35
	1 RB low	782.0	24.27	23.51	22.45	21.11
	50% RB mid	782.0	23.30	22.30	21.29	20.03
	100% RB	782.0	23.31	22.26	21.26	20.10

LTE band 48

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			
			QPSK	16QAM	64QAM	256QAM
5MHz	1 RB high	3697.5	23.27	22.56	21.56	19.99
		3625.0	23.09	22.21	21.05	20.15
		3552.5	22.97	21.98	20.98	20.36
	1 RB low	3697.5	23.20	22.50	21.51	19.84
		3625.0	23.09	22.25	21.18	20.18
		3552.5	22.95	21.86	20.95	19.89
	50% RB mid	3697.5	22.02	21.08	20.08	19.07
		3625.0	22.11	21.13	20.12	19.12
		3552.5	21.81	20.87	19.90	18.84
	100% RB	3697.5	22.24	21.11	19.99	19.14
		3625.0	22.05	20.99	20.04	19.30
		3552.5	21.87	20.97	19.94	18.88
10MHz	1 RB high	3695.0	23.09	21.79	20.74	20.03
		3625.0	23.12	21.85	20.95	19.89
		3555.0	22.94	22.25	21.22	20.30
	1 RB low	3695.0	23.14	21.69	20.61	19.86
		3625.0	23.24	21.97	21.07	20.08
		3555.0	22.79	22.06	21.06	19.83
	50% RB mid	3695.0	22.07	21.07	20.06	18.83
		3625.0	22.01	20.99	20.13	19.02
		3555.0	21.86	20.83	19.91	18.98
	100% RB	3695.0	21.99	21.07	19.96	19.06
		3625.0	22.06	21.04	20.20	18.96
		3555.0	21.99	20.88	19.95	19.00
15MHz	1 RB high	3692.5	23.15	21.95	20.94	20.25
		3625.0	23.07	21.93	20.85	20.05
		3557.5	23.06	22.37	21.38	20.14
	1 RB low	3692.5	22.99	21.78	20.87	19.84
		3625.0	23.20	22.04	21.14	20.16
		3557.5	22.85	22.09	21.12	19.97
	50% RB mid	3692.5	22.09	20.92	20.04	18.81
		3625.0	21.99	21.15	20.06	18.86
		3557.5	21.99	20.95	20.07	18.96
	100% RB	3692.5	22.11	21.04	20.05	19.12
		3625.0	22.06	21.05	20.05	19.14
		3557.5	21.93	20.96	19.97	19.10
20MHz	1 RB high	3690.0	23.01	22.02	21.15	20.03
		3625.0	23.00	22.12	21.13	20.01

		3560.0	23.39	22.31	21.34	20.32
	1 RB low	3690.0	22.92	21.95	20.86	19.70
		3625.0	23.23	22.35	21.34	20.36
		3560.0	22.93	22.03	20.89	19.99
	50% RB mid	3690.0	22.10	20.96	20.01	18.95
		3625.0	22.21	21.06	20.06	19.06
		3560.0	21.99	21.16	20.04	19.06
	100% RB	3690.0	22.12	21.09	20.10	19.06
		3625.0	22.12	21.18	20.24	19.24
		3560.0	22.14	21.05	20.04	19.00

LTE band 66

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)			
			QPSK	16QAM	64QAM	256QAM
1.4MHz	1 RB high	1779.3	23.36	22.65	21.61	20.23
		1745.0	23.47	22.73	21.69	20.30
		1710.7	23.11	22.38	21.32	20.83
	1 RB low	1779.3	23.40	22.72	21.63	20.41
		1745.0	23.52	22.75	21.69	20.80
		1710.7	23.11	22.36	21.23	20.23
	50% RB mid	1779.3	23.37	22.37	21.48	20.41
		1745.0	23.44	22.42	21.66	20.36
		1710.7	23.10	22.08	21.25	20.43
	100% RB	1779.3	22.39	21.46	20.36	19.13
		1745.0	22.49	21.56	20.45	19.45
		1710.7	22.14	21.19	20.11	19.38
3MHz	1 RB high	1778.5	23.34	22.59	21.55	20.47
		1745.0	23.42	22.70	21.62	20.48
		1711.5	23.20	22.49	21.32	21.05
	1 RB low	1778.5	23.34	22.65	21.54	20.53
		1745.0	23.45	22.81	21.63	20.60
		1711.5	23.10	22.42	21.27	20.15
	50% RB mid	1778.5	22.33	21.42	20.41	19.07
		1745.0	22.45	21.56	20.53	19.68
		1711.5	22.15	21.21	20.22	19.37
	100% RB	1778.5	22.35	21.37	20.35	19.17
		1745.0	22.50	21.47	20.49	19.55
		1711.5	22.18	21.17	20.10	19.46
5MHz	1 RB high	1777.5	23.35	22.74	21.52	20.53
		1745.0	23.46	22.78	21.54	20.32
		1712.5	23.32	22.68	21.51	20.71
	1 RB low	1777.5	23.33	22.74	21.55	20.51
		1745.0	23.48	22.82	21.69	20.94
		1712.5	23.17	22.50	21.40	20.19
	50% RB mid	1777.5	22.40	21.40	20.39	19.29
		1745.0	22.53	21.53	20.54	19.50
		1712.5	22.27	21.28	20.32	19.47
	100% RB	1777.5	22.43	21.40	20.41	19.37
		1745.0	22.53	21.53	20.52	19.45
		1712.5	22.31	21.27	20.27	19.42
10MHz	1 RB high	1775.0	23.43	22.72	21.59	20.21
		1745.0	23.46	22.68	21.62	20.30
		1715.0	23.50	22.82	21.57	20.75
	1 RB low	1775.0	23.40	22.60	21.59	20.47

		1745.0	23.59	22.89	21.72	20.64
		1715.0	23.22	22.56	21.32	20.15
	50% RB mid	1775.0	22.39	21.35	20.34	19.35
		1745.0	22.48	21.46	20.46	19.54
		1715.0	22.32	21.30	20.27	19.47
	100% RB	1775.0	22.39	21.41	20.36	19.17
		1745.0	22.50	21.48	20.44	19.53
		1715.0	22.33	21.31	20.32	19.52
15MHz	1 RB high	1772.5	23.43	22.70	21.55	20.19
		1745.0	23.34	22.74	21.47	20.46
		1717.5	23.50	22.81	21.69	20.61
	1 RB low	1772.5	23.24	22.57	21.53	20.37
		1745.0	23.61	22.89	21.75	20.84
		1717.5	23.25	22.57	21.47	20.27
	50% RB mid	1772.5	22.39	21.38	20.43	19.27
		1745.0	22.55	21.53	20.58	19.46
		1717.5	22.45	21.43	20.47	19.63
	100% RB	1772.5	22.39	21.39	20.37	19.09
		1745.0	22.54	21.54	20.52	19.47
		1717.5	22.47	21.46	20.43	19.42
20MHz	1 RB high	1770.0	23.37	22.74	21.46	20.25
		1745.0	23.30	22.59	21.51	20.52
		1720.0	23.63	22.92	21.80	20.61
	1 RB low	1770.0	23.28	22.52	21.50	20.41
		1745.0	23.67	22.92	21.91	20.94
		1720.0	23.20	22.57	21.32	20.21
	50% RB mid	1770.0	22.43	21.45	20.44	19.47
		1745.0	22.57	21.56	20.53	19.60
		1720.0	22.59	21.57	20.56	19.59
	100% RB	1770.0	22.39	21.36	20.36	19.35
		1745.0	22.58	21.54	20.54	19.37
		1720.0	22.56	21.53	20.51	19.50

LTE CA band 48C

Bandwidth	Frequency (MHz)	Frequency (MHz)	Modulation	PCC RB		SCC RB		Conducted Power(dBm)
				Size	Offset	Size	Offset	
5MHz/20MHz	3615.8	3627.5	QPSK	1	24	1	0	23.63
			QPSK	25	0	100	0	21.73
			16QAM	1	24	1	0	22.66
			16QAM	25	0	100	0	20.75
			64QAM	1	24	1	0	20.58
			64QAM	25	0	100	0	20.76
			256QAM	1	24	1	0	18.72
			256QAM	25	0	100	0	18.76
10MHz/20MHz	3615.6	3630.0	QPSK	1	49	1	0	23.71
			QPSK	50	0	100	0	21.77
			16QAM	1	49	1	0	22.68
			16QAM	50	0	100	0	20.82
			64QAM	1	49	1	0	20.48
			64QAM	50	0	100	0	20.80
			256QAM	1	49	1	0	18.69
			256QAM	50	0	100	0	18.81
15MHz/20MHz	3615.3	3632.4	QPSK	1	74	1	0	23.75
			QPSK	75	0	100	0	21.75
			16QAM	1	74	1	0	22.77
			16QAM	75	0	100	0	20.77
			64QAM	1	74	1	0	20.45
			64QAM	75	0	100	0	20.77
			256QAM	1	74	1	0	18.76
			256QAM	75	0	100	0	18.79
20MHz/5MHz	3622.5	3634.2	QPSK	1	99	1	0	23.75
			QPSK	100	0	25	0	21.74
			16QAM	1	99	1	0	22.72
			16QAM	100	0	25	0	20.80
			64QAM	1	99	1	0	20.91
			64QAM	100	0	25	0	20.79
			256QAM	1	99	1	0	18.68
			256QAM	100	0	25	0	18.81
20MHz/10MHz	3620.1	3634.5	QPSK	1	99	1	0	23.75
			QPSK	100	0	50	0	21.75
			16QAM	1	99	1	0	22.76
			16QAM	100	0	50	0	20.80
			64QAM	1	99	1	0	20.93
			64QAM	100	0	50	0	20.81
			256QAM	1	99	1	0	18.68
			256QAM	100	0	50	0	18.83

20MHz/15MHz	3617.6	3634.7	QPSK	1	99	1	0	23.72
			QPSK	100	0	75	0	21.76
			16QAM	1	99	1	0	22.71
			16QAM	100	0	75	0	20.79
			64QAM	1	99	1	0	20.92
			64QAM	100	0	75	0	20.79
			256QAM	1	99	1	0	18.66
			256QAM	100	0	75	0	18.81
20MHz/20MHz	3615.1	3634.9	QPSK	1	99	1	0	23.75
			QPSK	100	0	100	0	21.73
			16QAM	1	99	1	0	22.58
			16QAM	100	0	100	0	20.79
			64QAM	1	99	1	0	20.87
			64QAM	100	0	100	0	20.77
			256QAM	1	99	1	0	18.65
			256QAM	100	0	100	0	18.81

A.1.3 Radiated

A.1.3.1 Description

This is the test for the maximum radiated power from the EUT.

A.1.3.2 Method of Measurement

According to KDB 412172 D01 and ANSI C63.26 the relevant equation for determining the maximum ERP or EIRP from the measured RF output power is given in Equation as follows:

$$\text{ERP or EIRP} = P_T + G_T - L_c$$

where;

- **ERP or EIRP** = effective radiated power or equivalent isotropically radiated power(expressed in the same units as P_T).
- **P_T** = transmitter output power, in this report the unit express as dBm;
- **G_T** = gain of the transmitting antenna, in dBd(ERP) or dBi(EIRP);
- **L_c** = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

Alternatively, the EIRP can be determined from Equation above and then converted to ERP based on the maximum antenna gain relationship by applying the following equation:

$$\text{ERP} = \text{EIRP} - 2.15\text{dB}$$

Note: The antenna gain information was provided by the client. The laboratory is not responsible for identifying its authenticity during the test.

A.1.3.3 Limits and Measurement Results

LTE Band 2-EIRP

Limits: $\leq 33\text{dBm}(2\text{W})$

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)				Radiated Power (dBm)			
			QPSK	16QAM	64QAM	256QAM	GT = -0.25dBi			
1.4MHz	1 RB high	1909.3	23.11	22.41	21.3	20.07	22.86	22.16	21.05	19.82
		1880	23.46	22.8	21.75	20.4	23.21	22.55	21.5	20.15
		1850.7	23.5	22.72	21.53	20.73	23.25	22.47	21.28	20.48
	1 RB low	1909.3	23.11	22.44	21.29	20.36	22.86	22.19	21.04	20.11
		1880	23.43	22.71	21.69	20.38	23.18	22.46	21.44	20.13
		1850.7	23.52	22.8	21.62	20.66	23.27	22.55	21.37	20.41
	50% RB mid	1909.3	23.08	22.11	21.21	20.32	22.83	21.86	20.96	20.07
		1880	23.45	22.43	21.53	20.23	23.20	22.18	21.28	19.98
		1850.7	23.5	22.39	21.57	20.05	23.25	22.14	21.32	19.8
	100% RB	1909.3	22.16	21.23	20.1	19.18	21.91	20.98	19.85	18.93
		1880	22.43	21.5	20.41	19.49	22.18	21.25	20.16	19.24
		1850.7	22.45	21.52	20.44	19.49	22.20	21.27	20.19	19.24
3MHz	1 RB high	1908.5	23.11	22.34	21.33	20.33	22.86	22.09	21.08	20.08
		1880	23.42	22.76	21.68	20.28	23.17	22.51	21.43	20.03
		1851.5	23.38	22.67	21.62	20.63	23.13	22.42	21.37	20.38
	1 RB low	1908.5	23.18	22.4	21.37	20.66	22.93	22.15	21.12	20.41
		1880	23.42	22.67	21.66	20.28	23.17	22.42	21.41	20.03
		1851.5	23.36	22.7	21.67	20.72	23.11	22.45	21.42	20.47
	50% RB mid	1908.5	22.16	21.25	20.21	19.36	21.91	21.00	19.96	19.11
		1880	22.45	21.48	20.49	19.57	22.20	21.23	20.24	19.32
		1851.5	22.44	21.49	20.46	19.13	22.19	21.24	20.21	18.88
	100% RB	1908.5	22.17	21.19	20.14	19.22	21.92	20.94	19.89	18.97
		1880	22.47	21.45	20.45	19.67	22.22	21.20	20.2	19.42
		1851.5	22.42	21.4	20.39	19.13	22.17	21.15	20.14	18.88
5MHz	1 RB high	1907.5	23.1	22.44	21.32	20.21	22.85	22.19	21.07	19.96
		1880	23.47	22.73	21.61	20.34	23.22	22.48	21.36	20.09
		1852.5	23.41	22.72	21.59	20.57	23.16	22.47	21.34	20.32
	1 RB low	1907.5	23.19	22.57	21.38	20.28	22.94	22.32	21.13	20.03
		1880	23.44	22.73	21.61	20.38	23.19	22.48	21.36	20.13
		1852.5	23.47	22.76	21.63	20.78	23.22	22.51	21.38	20.53
	50% RB mid	1907.5	22.22	21.24	20.23	19.38	21.97	20.99	19.98	19.13
		1880	22.51	21.52	20.56	19.47	22.26	21.27	20.31	19.22
		1852.5	22.44	21.44	20.45	19.45	22.19	21.19	20.2	19.2
	100% RB	1907.5	22.25	21.23	20.23	19.18	22.00	20.98	19.98	18.93
		1880	22.52	21.51	20.5	19.45	22.27	21.26	20.25	19.2
		1852.5	22.5	21.49	20.49	19.27	22.25	21.24	20.24	19.02

10MHz	1 RB high	1905	23.17	22.49	21.34	20.35	22.92	22.24	21.09	20.1
		1880	23.5	22.83	21.62	20.46	23.25	22.58	21.37	20.21
		1855	23.41	22.71	21.57	20.71	23.16	22.46	21.32	20.46
	1 RB low	1905	23.38	22.66	21.47	20.2	23.13	22.41	21.22	19.95
		1880	23.44	22.76	21.59	20.24	23.19	22.51	21.34	19.99
		1855	23.5	22.71	21.57	20.72	23.25	22.46	21.32	20.47
	50% RB mid	1905	22.26	21.22	20.21	19.3	22.01	20.97	19.96	19.05
		1880	22.46	21.45	20.43	19.53	22.21	21.20	20.18	19.28
		1855	22.4	21.39	20.38	19.17	22.15	21.14	20.13	18.92
	100% RB	1905	22.28	21.27	20.23	19.46	22.03	21.02	19.98	19.21
		1880	22.46	21.46	20.42	19.47	22.21	21.21	20.17	19.22
		1855	22.42	21.39	20.39	19.23	22.17	21.14	20.14	18.98
15MHz	1 RB high	1902.5	23.14	22.42	21.34	20.25	22.89	22.17	21.09	20
		1880	23.47	22.79	21.6	20.42	23.22	22.54	21.35	20.17
		1857.5	23.33	22.58	21.57	20.57	23.08	22.33	21.32	20.32
	1 RB low	1902.5	23.4	22.69	21.6	20.44	23.15	22.44	21.35	20.19
		1880	23.39	22.67	21.62	20.28	23.14	22.42	21.37	20.03
		1857.5	23.49	22.76	21.65	20.62	23.24	22.51	21.4	20.37
	50% RB mid	1902.5	22.34	21.31	20.32	19.48	22.09	21.06	20.07	19.23
		1880	22.51	21.5	20.51	19.43	22.26	21.25	20.26	19.18
		1857.5	22.43	21.44	20.46	19.21	22.18	21.19	20.21	18.96
	100% RB	1902.5	22.34	21.36	20.3	19.26	22.09	21.11	20.05	19.01
		1880	22.51	21.51	20.49	19.57	22.26	21.26	20.24	19.32
		1857.5	22.43	21.44	20.42	19.45	22.18	21.19	20.17	19.2
20MHz	1 RB high	1900	23.18	22.44	21.37	20.15	22.93	22.19	21.12	19.9
		1880	23.52	22.87	21.73	20.44	23.27	22.62	21.48	20.19
		1860	23.31	22.55	21.43	20.59	23.06	22.30	21.18	20.34
	1 RB low	1900	23.44	22.73	21.6	20.38	23.19	22.48	21.35	20.13
		1880	23.35	22.67	21.51	20.38	23.10	22.42	21.26	20.13
		1860	23.46	22.76	21.67	20.62	23.21	22.51	21.42	20.37
	50% RB mid	1900	22.44	21.44	20.43	19.34	22.19	21.19	20.18	19.09
		1880	22.52	21.51	20.52	19.41	22.27	21.26	20.27	19.16
		1860	22.46	21.43	20.46	19.33	22.21	21.18	20.21	19.08
	100% RB	1900	22.36	21.34	20.35	19.24	22.11	21.09	20.1	18.99
		1880	22.52	21.49	20.49	19.39	22.27	21.24	20.24	19.14
		1860	22.43	21.39	20.41	19.29	22.18	21.14	20.16	19.04

LTE Band 5-ERP

Limits: $\leq 38.46\text{dBm}(7\text{W})$

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)				Radiated Power (dBm)			
			QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
1.4MHz	1 RB high	848.3	24.28	23.53	22.41	21.2	20.01	19.26	18.14	16.93
		836.5	24.32	23.56	22.56	21.41	20.05	19.29	18.29	17.14
		824.7	24.22	23.62	22.42	21.55	19.95	19.35	18.15	17.28
	1 RB low	848.3	24.3	23.51	22.53	21.59	20.03	19.24	18.26	17.32
		836.5	24.27	23.53	22.56	21.43	20.00	19.26	18.29	17.16
		824.7	24.21	23.58	22.41	21.26	19.94	19.31	18.14	16.99
	50% RB mid	848.3	24.26	23.37	22.38	21.23	19.99	19.10	18.11	16.96
		836.5	24.32	23.35	22.46	21.12	20.05	19.08	18.19	16.85
		824.7	24.22	23.24	22.37	21.02	19.95	18.97	18.10	16.75
	100% RB	848.3	23.3	22.4	21.3	20.08	19.03	18.13	17.03	15.81
		836.5	23.36	22.43	21.33	20.24	19.09	18.16	17.06	15.97
		824.7	23.27	22.39	21.24	20.33	19.00	18.12	16.97	16.06
3MHz	1 RB high	847.5	24.24	23.56	22.51	21.26	19.97	19.29	18.24	16.99
		836.5	24.38	23.57	22.58	21.47	20.11	19.30	18.31	17.20
		825.5	24.31	23.57	22.52	21.43	20.04	19.30	18.25	17.16
	1 RB low	847.5	24.34	23.58	22.5	21.31	20.07	19.31	18.23	17.04
		836.5	24.36	23.56	22.58	21.25	20.09	19.29	18.31	16.98
		825.5	24.29	23.52	22.49	21.18	20.02	19.25	18.22	16.91
	50% RB mid	847.5	23.3	22.37	21.31	20.27	19.03	18.10	17.04	16.00
		836.5	23.36	22.44	21.43	20.04	19.09	18.17	17.16	15.77
		825.5	23.34	22.4	21.37	20.3	19.07	18.13	17.10	16.03
	100% RB	847.5	23.31	22.35	21.3	20.1	19.04	18.08	17.03	15.83
		836.5	23.36	22.42	21.35	20.02	19.09	18.15	17.08	15.75
		825.5	23.35	22.39	21.34	20.05	19.08	18.12	17.07	15.78
5MHz	1 RB high	846.5	24.37	23.58	22.58	21.28	20.10	19.31	18.31	17.01
		836.5	24.38	23.7	22.59	21.63	20.11	19.43	18.32	17.36
		826.5	24.44	23.71	22.61	21.63	20.17	19.44	18.34	17.36
	1 RB low	846.5	24.37	23.7	22.63	21.27	20.10	19.43	18.36	17.00
		836.5	24.36	23.68	22.59	21.45	20.09	19.41	18.32	17.18
		826.5	24.29	23.6	22.52	21.52	20.02	19.33	18.25	17.25
	50% RB mid	846.5	23.41	22.38	21.43	20.11	19.14	18.11	17.16	15.84
		836.5	23.45	22.45	21.45	20.08	19.18	18.18	17.18	15.81
		826.5	23.44	22.41	21.48	20.36	19.17	18.14	17.21	16.09
	100% RB	846.5	23.43	22.45	21.4	20.24	19.16	18.18	17.13	15.97
		836.5	23.47	22.46	21.44	20.06	19.20	18.19	17.17	15.79
		826.5	23.47	22.46	21.41	20.35	19.20	18.19	17.14	16.08
10MHz	1 RB high	844	24.43	23.6	22.52	21.36	20.16	19.33	18.25	17.09

		836.5	24.46	23.69	22.69	21.65	20.19	19.42	18.42	17.38
		829	24.53	23.74	22.69	21.37	20.26	19.47	18.42	17.10
	1 RB low	844	24.42	23.68	22.61	21.37	20.15	19.41	18.34	17.10
		836.5	24.44	23.7	22.65	21.47	20.17	19.43	18.38	17.20
		829	24.33	23.6	22.56	21.42	20.06	19.33	18.29	17.15
	50% RB mid	844	23.43	22.44	21.39	20.31	19.16	18.17	17.12	16.04
		836.5	23.47	22.46	21.44	20.24	19.20	18.19	17.17	15.97
		829	23.47	22.46	21.44	20.32	19.20	18.19	17.17	16.05
	100% RB	844	23.46	22.45	21.44	20.34	19.19	18.18	17.17	16.07
		836.5	23.48	22.47	21.44	20.34	19.21	18.20	17.17	16.07
		829	23.49	22.48	21.43	20.39	19.22	18.21	17.16	16.12

LTE Band 7-EIRP

Limits: $\leq 33\text{dBm}(2\text{W})$

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)				Radiated Power (dBm)			
			QPSK	16QAM	64QAM	256QAM	GT = -0.45dBi			
5MHz	1 RB high	2567.5	22.93	22.22	21.15	20.22	22.48	21.77	20.70	19.77
		2535	22.91	22.3	21.12	19.76	22.46	21.85	20.67	19.31
		2502.5	22.55	21.92	20.79	20.21	22.10	21.47	20.34	19.76
	1 RB low	2567.5	22.81	22.11	21.05	19.67	22.36	21.66	20.60	19.22
		2535	23.09	22.41	21.4	20.3	22.64	21.96	20.95	19.85
		2502.5	22.26	21.57	20.49	19.48	21.81	21.12	20.04	19.03
	50% RB mid	2567.5	21.89	20.92	19.95	18.46	21.44	20.47	19.50	18.01
		2535	22.06	21.09	20.12	18.7	21.61	20.64	19.67	18.25
		2502.5	21.44	20.49	19.53	18.79	20.99	20.04	19.08	18.34
	100% RB	2567.5	21.92	20.9	19.91	18.48	21.47	20.45	19.46	18.03
		2535	22.09	21.07	20.05	18.75	21.64	20.62	19.60	18.30
		2502.5	21.48	20.48	19.5	18.74	21.03	20.03	19.05	18.29
10MHz	1 RB high	2565	23	22.36	21.2	19.98	22.55	21.91	20.75	19.53
		2535	22.89	22.17	21.1	19.8	22.44	21.72	20.65	19.35
		2505	23.05	22.33	21.28	20.17	22.60	21.88	20.83	19.72
	1 RB low	2565	22.71	21.95	20.92	19.61	22.26	21.50	20.47	19.16
		2535	23.19	22.5	21.39	20.24	22.74	22.05	20.94	19.79
		2505	22.38	21.7	20.59	19.36	21.93	21.25	20.14	18.91
	50% RB mid	2565	21.8	20.79	19.8	18.44	21.35	20.34	19.35	17.99
		2535	22.04	20.99	20	18.88	21.59	20.54	19.55	18.43
		2505	21.64	20.65	19.62	18.65	21.19	20.20	19.17	18.20
	100% RB	2565	21.83	20.84	19.84	18.3	21.38	20.39	19.39	17.85
		2535	22.07	21.04	20.05	18.63	21.62	20.59	19.60	18.18
		2505	21.62	20.65	19.61	18.64	21.17	20.20	19.16	18.19
15MHz	1 RB high	2562.5	23.06	22.41	21.21	19.9	22.61	21.96	20.76	19.45
		2535	22.87	22.08	20.99	19.76	22.42	21.63	20.54	19.31
		2507.5	23.3	22.53	21.52	20.09	22.85	22.08	21.07	19.64
	1 RB low	2562.5	22.65	21.95	20.9	19.39	22.20	21.50	20.45	18.94
		2535	23.18	22.6	21.43	20.42	22.73	22.15	20.98	19.97
		2507.5	22.37	21.58	20.53	19.6	21.92	21.13	20.08	19.15
	50% RB mid	2562.5	21.76	20.77	19.85	18.52	21.31	20.32	19.40	18.07
		2535	22.06	21.09	20.1	18.64	21.61	20.64	19.65	18.19
		2507.5	21.85	20.84	19.86	18.73	21.40	20.39	19.41	18.28
	100% RB	2562.5	21.8	20.81	19.82	18.36	21.35	20.36	19.37	17.91
		2535	22.08	21.07	20.05	18.91	21.63	20.62	19.60	18.46
		2507.5	21.86	20.85	19.82	18.56	21.41	20.40	19.37	18.11
20MHz	1 RB high	2560	23.07	22.3	21.4	20.08	22.62	21.85	20.95	19.63
		2535	22.83	22.12	21.1	19.68	22.38	21.67	20.65	19.23

		2510	23.42	22.71	21.59	20.37	22.97	22.26	21.14	19.92
	1 RB low	2560	22.57	21.85	20.89	19.61	22.12	21.40	20.44	19.16
		2535	23.3	22.63	21.52	20.26	22.85	22.18	21.07	19.81
		2510	22.41	21.81	20.63	19.58	21.96	21.36	20.18	19.13
	50% RB mid	2560	21.78	20.8	19.78	18.38	21.33	20.35	19.33	17.93
		2535	22.14	21.12	20.1	18.8	21.69	20.67	19.65	18.35
		2510	22.05	21.04	20.05	18.77	21.60	20.59	19.60	18.32
	100% RB	2560	21.82	20.8	19.82	18.44	21.37	20.35	19.37	17.99
		2535	22.08	21.05	20.05	18.89	21.63	20.60	19.60	18.44
		2510	22.01	20.97	19.96	18.62	21.56	20.52	19.51	18.17

LTE Band 12-ERP
Limits: $\leq 34.78\text{dBm}(3\text{W})$

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)				Radiated Power (dBm)			
			QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
1.4MHz	1 RB high	715.3	22.75	22.08	21.03	20.24	19.08	18.41	17.36	16.57
		707.5	22.83	22.11	20.97	20.26	19.16	18.44	17.30	16.59
		699.7	22.99	22.29	21.15	20.05	19.32	18.62	17.48	16.38
	1 RB low	715.3	22.84	22.08	21.09	19.9	19.17	18.41	17.42	16.23
		707.5	22.83	22.14	21.09	20.39	19.16	18.47	17.42	16.72
		699.7	23.02	22.23	21.11	19.9	19.35	18.56	17.44	16.23
	50% RB mid	715.3	22.84	21.82	20.91	19.96	19.17	18.15	17.24	16.29
		707.5	22.83	21.8	20.97	20.14	19.16	18.13	17.30	16.47
		699.7	23.01	21.96	21.02	19.89	19.34	18.29	17.35	16.22
	100% RB	715.3	21.86	20.92	20.05	18.81	18.19	17.25	16.38	15.14
		707.5	21.86	20.89	19.98	18.91	18.19	17.22	16.31	15.24
		699.7	21.95	20.99	20.13	19.06	18.28	17.32	16.46	15.39
3MHz	1 RB high	714.5	22.82	22.16	20.96	20.02	19.15	18.49	17.29	16.35
		707.5	22.87	22.18	21.07	20.18	19.20	18.51	17.40	16.51
		700.5	22.95	22.23	21.18	19.93	19.28	18.56	17.51	16.26
	1 RB low	714.5	22.83	22.12	20.99	20.14	19.16	18.45	17.32	16.47
		707.5	22.87	22.09	20.96	20.29	19.20	18.42	17.29	16.62
		700.5	23	22.21	21.16	20.14	19.33	18.54	17.49	16.47
	50% RB mid	714.5	21.87	20.92	20.11	18.82	18.20	17.25	16.44	15.15
		707.5	21.83	20.93	20.05	19	18.16	17.26	16.38	15.33
		700.5	21.96	21.04	20.16	19.03	18.29	17.37	16.49	15.36
	100% RB	714.5	21.88	20.84	20.05	18.75	18.21	17.17	16.38	15.08
		707.5	21.86	20.91	20	19.29	18.19	17.24	16.33	15.62
		700.5	21.96	20.96	20.12	19.12	18.29	17.29	16.45	15.45
5MHz	1 RB high	713.5	22.93	22.2	21.11	20.02	19.26	18.53	17.44	16.35
		707.5	22.96	22.15	21.14	20.18	19.29	18.48	17.47	16.51
		701.5	23.01	22.33	21.27	19.95	19.34	18.66	17.60	16.28
	1 RB low	713.5	22.9	22.13	21.03	20.04	19.23	18.46	17.36	16.37
		707.5	22.93	22.28	21.15	20.27	19.26	18.61	17.48	16.60
		701.5	23.02	22.34	21.25	20.28	19.35	18.67	17.58	16.61
	50% RB mid	713.5	21.94	20.94	20.17	18.74	18.27	17.27	16.50	15.07
		707.5	21.92	20.93	20.1	18.98	18.25	17.26	16.43	15.31
		701.5	22	21.02	20.18	18.83	18.33	17.35	16.51	15.16
	100% RB	713.5	22	20.97	20.14	19.15	18.33	17.30	16.47	15.48
		707.5	21.98	20.95	20.05	19.07	18.31	17.28	16.38	15.40
		701.5	22.05	21	20.14	19.02	18.38	17.33	16.47	15.35
10MHz	1 RB high	711	22.98	22.29	21.18	20.1	19.31	18.62	17.51	16.43

		707.5	23.01	22.33	21.19	20.18	19.34	18.66	17.52	16.51
		704	23.04	22.33	21.17	20.15	19.37	18.66	17.50	16.48
	1 RB low	711	22.96	22.25	21.18	20.04	19.29	18.58	17.51	16.37
		707.5	23.01	22.29	21.2	20.15	19.34	18.62	17.53	16.48
		704	23.05	22.35	21.23	20.1	19.38	18.68	17.56	16.43
	50% RB mid	711	21.98	20.94	20.07	18.78	18.31	17.27	16.40	15.11
		707.5	21.97	20.97	20.07	19.02	18.30	17.30	16.40	15.35
		704	22.02	21.01	20.12	18.81	18.35	17.34	16.45	15.14
	100% RB	711	21.95	20.91	20.02	18.95	18.28	17.24	16.35	15.28
		707.5	21.99	20.98	20.05	19.19	18.32	17.31	16.38	15.52
		704	22.04	21.02	20.14	19.06	18.37	17.35	16.47	15.39

LTE Band 13-ERP

Limits: $\leq 34.78\text{dBm}(3\text{W})$

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)				Radiated Power (dBm) GT = -1.32dBi			
			QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
5MHz	1 RB high	784.5	24.3	23.59	22.5	21.07	20.83	20.12	19.03	17.60
		782	24.3	23.56	22.46	21.11	20.83	20.09	18.99	17.64
		779.5	24.3	23.5	22.45	20.97	20.83	20.03	18.98	17.50
	1 RB low	784.5	24.24	23.56	22.45	21.53	20.77	20.09	18.98	18.06
		782	24.18	23.44	22.42	21.35	20.71	19.97	18.95	17.88
		779.5	24.15	23.41	22.42	21.57	20.68	19.94	18.95	18.10
	50% RB mid	784.5	23.31	22.3	21.32	19.85	19.84	18.83	17.85	16.38
		782	23.28	22.28	21.34	19.95	19.81	18.81	17.87	16.48
		779.5	23.27	22.27	21.31	19.83	19.80	18.80	17.84	16.36
	100% RB	784.5	23.33	22.3	21.31	20.3	19.86	18.83	17.84	16.83
		782	23.29	22.29	21.29	20.18	19.82	18.82	17.82	16.71
		779.5	23.26	22.28	21.25	20.38	19.79	18.81	17.78	16.91
10MHz	1 RB high	782	24.36	23.62	22.49	21.35	20.89	20.15	19.02	17.88
	1 RB low	782	24.27	23.51	22.45	21.11	20.80	20.04	18.98	17.64
	50% RB mid	782	23.3	22.3	21.29	20.03	19.83	18.83	17.82	16.56
	100% RB	782	23.31	22.26	21.26	20.1	19.84	18.79	17.79	16.63

LTE Band 48 - EIRP

Limits: $\leq 23\text{dBm}/10\text{MHz}$

Bandwidth	Frequency (MHz)	Modulation	RB Allocation	Conducted Power (dBm/10MHz)	EIRP (dBm/10MHz) GT=-2.92dBi
5MHz	3552.5	QPSK	1 RB low	24.40	21.48
5MHz	3552.5	QPSK	1 RB high	24.37	21.45
5MHz	3552.5	QPSK	100% RB	23.13	20.21
5MHz	3552.5	16QAM	1 RB low	23.48	20.56
5MHz	3552.5	16QAM	1 RB high	23.46	20.54
5MHz	3552.5	16QAM	100% RB	22.10	19.18
5MHz	3552.5	64QAM	1 RB low	22.49	19.57
5MHz	3552.5	64QAM	1 RB high	22.46	19.54
5MHz	3552.5	64QAM	100% RB	21.12	18.20
5MHz	3552.5	256QAM	1 RB low	19.51	16.59
5MHz	3552.5	256QAM	1 RB high	19.43	16.51
5MHz	3552.5	256QAM	100% RB	19.16	16.24
5MHz	3625	QPSK	1 RB low	24.63	21.71
5MHz	3625	QPSK	1 RB high	24.60	21.68
5MHz	3625	QPSK	100% RB	23.37	20.45
5MHz	3625	16QAM	1 RB low	23.71	20.79
5MHz	3625	16QAM	1 RB high	23.73	20.81
5MHz	3625	16QAM	100% RB	22.35	19.43
5MHz	3625	64QAM	1 RB low	22.71	19.79
5MHz	3625	64QAM	1 RB high	22.73	19.81
5MHz	3625	64QAM	100% RB	21.37	18.45
5MHz	3625	256QAM	1 RB low	19.71	16.79
5MHz	3625	256QAM	1 RB high	19.67	16.75
5MHz	3625	256QAM	100% RB	19.37	16.45
5MHz	3697.5	QPSK	1 RB low	24.60	21.68
5MHz	3697.5	QPSK	1 RB high	24.61	21.69
5MHz	3697.5	QPSK	100% RB	23.37	20.45
5MHz	3697.5	16QAM	1 RB low	23.70	20.78
5MHz	3697.5	16QAM	1 RB high	23.73	20.81
5MHz	3697.5	16QAM	100% RB	22.36	19.44
5MHz	3697.5	64QAM	1 RB low	22.72	19.80
5MHz	3697.5	64QAM	1 RB high	22.75	19.83
5MHz	3697.5	64QAM	100% RB	21.36	18.44
5MHz	3697.5	256QAM	1 RB low	19.67	16.75
5MHz	3697.5	256QAM	1 RB high	19.73	16.81
5MHz	3697.5	256QAM	100% RB	19.41	16.49
10MHz	3555	QPSK	1 RB low	24.41	21.49
10MHz	3555	QPSK	1 RB high	24.30	21.38
10MHz	3555	QPSK	100% RB	22.53	19.61

10MHz	3555	16QAM	1 RB low	23.61	20.69
10MHz	3555	16QAM	1 RB high	23.48	20.56
10MHz	3555	16QAM	100% RB	21.52	18.60
10MHz	3555	64QAM	1 RB low	22.40	19.48
10MHz	3555	64QAM	1 RB high	22.37	19.45
10MHz	3555	64QAM	100% RB	20.52	17.60
10MHz	3555	256QAM	1 RB low	19.49	16.57
10MHz	3555	256QAM	1 RB high	19.40	16.48
10MHz	3555	256QAM	100% RB	18.55	15.63
10MHz	3625	QPSK	1 RB low	24.49	21.57
10MHz	3625	QPSK	1 RB high	24.66	21.74
10MHz	3625	QPSK	100% RB	22.79	19.87
10MHz	3625	16QAM	1 RB low	23.62	20.70
10MHz	3625	16QAM	1 RB high	23.82	20.90
10MHz	3625	16QAM	100% RB	21.80	18.88
10MHz	3625	64QAM	1 RB low	22.54	19.62
10MHz	3625	64QAM	1 RB high	22.73	19.81
10MHz	3625	64QAM	100% RB	20.79	17.87
10MHz	3625	256QAM	1 RB low	19.58	16.66
10MHz	3625	256QAM	1 RB high	19.76	16.84
10MHz	3625	256QAM	100% RB	18.80	15.88
10MHz	3695	QPSK	1 RB low	24.56	21.64
10MHz	3695	QPSK	1 RB high	24.59	21.67
10MHz	3695	QPSK	100% RB	22.77	19.85
10MHz	3695	16QAM	1 RB low	23.65	20.73
10MHz	3695	16QAM	1 RB high	23.75	20.83
10MHz	3695	16QAM	100% RB	21.75	18.83
10MHz	3695	64QAM	1 RB low	22.59	19.67
10MHz	3695	64QAM	1 RB high	22.67	19.75
10MHz	3695	64QAM	100% RB	20.75	17.83
10MHz	3695	256QAM	1 RB low	19.61	16.69
10MHz	3695	256QAM	1 RB high	19.66	16.74
10MHz	3695	256QAM	100% RB	18.74	15.82
15MHz	3557.5	QPSK	1 RB low	24.45	21.53
15MHz	3557.5	QPSK	1 RB high	24.48	21.56
15MHz	3557.5	QPSK	100% RB	21.74	18.82
15MHz	3557.5	16QAM	1 RB low	23.58	20.66
15MHz	3557.5	16QAM	1 RB high	23.63	20.71
15MHz	3557.5	16QAM	100% RB	20.73	17.81
15MHz	3557.5	64QAM	1 RB low	22.67	19.75
15MHz	3557.5	64QAM	1 RB high	22.64	19.72
15MHz	3557.5	64QAM	100% RB	19.75	16.83
15MHz	3557.5	256QAM	1 RB low	19.51	16.59

15MHz	3557.5	256QAM	1 RB high	19.55	16.63
15MHz	3557.5	256QAM	100% RB	17.75	14.83
15MHz	3625	QPSK	1 RB low	24.46	21.54
15MHz	3625	QPSK	1 RB high	24.64	21.72
15MHz	3625	QPSK	100% RB	22.02	19.10
15MHz	3625	16QAM	1 RB low	23.57	20.65
15MHz	3625	16QAM	1 RB high	23.76	20.84
15MHz	3625	16QAM	100% RB	21.02	18.10
15MHz	3625	64QAM	1 RB low	22.45	19.53
15MHz	3625	64QAM	1 RB high	22.68	19.76
15MHz	3625	64QAM	100% RB	19.99	17.07
15MHz	3625	256QAM	1 RB low	19.53	16.61
15MHz	3625	256QAM	1 RB high	19.68	16.76
15MHz	3625	256QAM	100% RB	18.02	15.10
15MHz	3692.5	QPSK	1 RB low	24.34	21.42
15MHz	3692.5	QPSK	1 RB high	24.56	21.64
15MHz	3692.5	QPSK	100% RB	21.94	19.02
15MHz	3692.5	16QAM	1 RB low	23.47	20.55
15MHz	3692.5	16QAM	1 RB high	23.71	20.79
15MHz	3692.5	16QAM	100% RB	20.95	18.03
15MHz	3692.5	64QAM	1 RB low	22.44	19.52
15MHz	3692.5	64QAM	1 RB high	22.63	19.71
15MHz	3692.5	64QAM	100% RB	19.94	17.02
15MHz	3692.5	256QAM	1 RB low	19.42	16.50
15MHz	3692.5	256QAM	1 RB high	19.66	16.74
15MHz	3692.5	256QAM	100% RB	17.95	15.03
20MHz	3560	QPSK	1 RB low	24.40	21.48
20MHz	3560	QPSK	1 RB high	24.36	21.44
20MHz	3560	QPSK	100% RB	20.84	17.92
20MHz	3560	16QAM	1 RB low	23.46	20.54
20MHz	3560	16QAM	1 RB high	23.51	20.59
20MHz	3560	16QAM	100% RB	19.84	16.92
20MHz	3560	64QAM	1 RB low	22.46	19.54
20MHz	3560	64QAM	1 RB high	22.49	19.57
20MHz	3560	64QAM	100% RB	18.85	15.93
20MHz	3560	256QAM	1 RB low	19.40	16.48
20MHz	3560	256QAM	1 RB high	19.39	16.47
20MHz	3560	256QAM	100% RB	16.85	13.93
20MHz	3625	QPSK	1 RB low	24.44	21.52
20MHz	3625	QPSK	1 RB high	24.74	21.82
20MHz	3625	QPSK	100% RB	21.22	18.30
20MHz	3625	16QAM	1 RB low	23.68	20.76
20MHz	3625	16QAM	1 RB high	23.97	21.05

20MHz	3625	16QAM	100% RB	20.18	17.26
20MHz	3625	64QAM	1 RB low	22.58	19.66
20MHz	3625	64QAM	1 RB high	22.96	20.04
20MHz	3625	64QAM	100% RB	19.14	16.22
20MHz	3625	256QAM	1 RB low	19.67	16.75
20MHz	3625	256QAM	1 RB high	19.97	17.05
20MHz	3625	256QAM	100% RB	17.17	14.25
20MHz	3690	QPSK	1 RB low	24.46	21.54
20MHz	3690	QPSK	1 RB high	24.65	21.73
20MHz	3690	QPSK	100% RB	21.13	18.21
20MHz	3690	16QAM	1 RB low	23.67	20.75
20MHz	3690	16QAM	1 RB high	23.80	20.88
20MHz	3690	16QAM	100% RB	20.13	17.21
20MHz	3690	64QAM	1 RB low	22.63	19.71
20MHz	3690	64QAM	1 RB high	22.83	19.91
20MHz	3690	64QAM	100% RB	19.11	16.19
20MHz	3690	256QAM	1 RB low	19.68	16.76
20MHz	3690	256QAM	1 RB high	19.85	16.93
20MHz	3690	256QAM	100% RB	17.14	14.22

LTE Band 48

Radiated power(dBm) calculated from conducted power(dBm)

There is no limits for power(dBm)

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)				Radiated Power (dBm)			
			QPSK	16QAM	64QAM	256QAM	GT = -2.92dBi			
5MHz	1 RB high	3697.5	23.27	22.56	21.56	19.99	20.35	19.64	18.64	17.07
		3625	23.09	22.21	21.05	20.15	20.17	19.29	18.13	17.23
		3552.5	22.97	21.98	20.98	20.36	20.05	19.06	18.06	17.44
	1 RB low	3697.5	23.2	22.5	21.51	19.84	20.28	19.58	18.59	16.92
		3625	23.09	22.25	21.18	20.18	20.17	19.33	18.26	17.26
		3552.5	22.95	21.86	20.95	19.89	20.03	18.94	18.03	16.97
	50% RB mid	3697.5	22.02	21.08	20.08	19.07	19.10	18.16	17.16	16.15
		3625	22.11	21.13	20.12	19.12	19.19	18.21	17.20	16.20
		3552.5	21.81	20.87	19.9	18.84	18.89	17.95	16.98	15.92
	100% RB	3697.5	22.24	21.11	19.99	19.14	19.32	18.19	17.07	16.22
		3625	22.05	20.99	20.04	19.3	19.13	18.07	17.12	16.38
		3552.5	21.87	20.97	19.94	18.88	18.95	18.05	17.02	15.96
10MHz	1 RB high	3695	23.09	21.79	20.74	20.03	20.17	18.87	17.82	17.11
		3625	23.12	21.85	20.95	19.89	20.20	18.93	18.03	16.97
		3555	22.94	22.25	21.22	20.3	20.02	19.33	18.30	17.38
	1 RB low	3695	23.14	21.69	20.61	19.86	20.22	18.77	17.69	16.94
		3625	23.24	21.97	21.07	20.08	20.32	19.05	18.15	17.16
		3555	22.79	22.06	21.06	19.83	19.87	19.14	18.14	16.91
	50% RB mid	3695	22.07	21.07	20.06	18.83	19.15	18.15	17.14	15.91
		3625	22.01	20.99	20.13	19.02	19.09	18.07	17.21	16.10
		3555	21.86	20.83	19.91	18.98	18.94	17.91	16.99	16.06
	100% RB	3695	21.99	21.07	19.96	19.06	19.07	18.15	17.04	16.14
		3625	22.06	21.04	20.2	18.96	19.14	18.12	17.28	16.04
		3555	21.99	20.88	19.95	19	19.07	17.96	17.03	16.08
15MHz	1 RB high	3692.5	23.15	21.95	20.94	20.25	20.23	19.03	18.02	17.33
		3625	23.07	21.93	20.85	20.05	20.15	19.01	17.93	17.13
		3557.5	23.06	22.37	21.38	20.14	20.14	19.45	18.46	17.22
	1 RB low	3692.5	22.99	21.78	20.87	19.84	20.07	18.86	17.95	16.92
		3625	23.2	22.04	21.14	20.16	20.28	19.12	18.22	17.24
		3557.5	22.85	22.09	21.12	19.97	19.93	19.17	18.20	17.05
	50% RB mid	3692.5	22.09	20.92	20.04	18.81	19.17	18.00	17.12	15.89
		3625	21.99	21.15	20.06	18.86	19.07	18.23	17.14	15.94
		3557.5	21.99	20.95	20.07	18.96	19.07	18.03	17.15	16.04
	100% RB	3692.5	22.11	21.04	20.05	19.12	19.19	18.12	17.13	16.20
		3625	22.06	21.05	20.05	19.14	19.14	18.13	17.13	16.22
		3557.5	21.93	20.96	19.97	19.1	19.01	18.04	17.05	16.18

20MHz	1 RB high	3690	23.01	22.02	21.15	20.03	20.09	19.10	18.23	17.11
		3625	23	22.12	21.13	20.01	20.08	19.20	18.21	17.09
		3560	23.39	22.31	21.34	20.32	20.47	19.39	18.42	17.40
	1 RB low	3690	22.92	21.95	20.86	19.7	20.00	19.03	17.94	16.78
		3625	23.23	22.35	21.34	20.36	20.31	19.43	18.42	17.44
		3560	22.93	22.03	20.89	19.99	20.01	19.11	17.97	17.07
	50% RB mid	3690	22.1	20.96	20.01	18.95	19.18	18.04	17.09	16.03
		3625	22.21	21.06	20.06	19.06	19.29	18.14	17.14	16.14
		3560	21.99	21.16	20.04	19.06	19.07	18.24	17.12	16.14
	100% RB	3690	22.12	21.09	20.1	19.06	19.20	18.17	17.18	16.14
		3625	22.12	21.18	20.24	19.24	19.20	18.26	17.32	16.32
		3560	22.14	21.05	20.04	19	19.22	18.13	17.12	16.08

LTE Band 66-EIRP
Limits: $\leq 30\text{dBm}(1\text{W})$

Bandwidth	RB size/offset	Frequency (MHz)	Power (dBm)				Radiated Power (dBm)			
			QPSK	16QAM	64QAM	256QAM	GT = -0.47dBi			
1.4MHz	1 RB high	1779.3	23.36	22.65	21.61	20.23	22.89	22.18	21.14	19.76
		1745	23.47	22.73	21.69	20.3	23.00	22.26	21.22	19.83
		1710.7	23.11	22.38	21.32	20.83	22.64	21.91	20.85	20.36
	1 RB low	1779.3	23.4	22.72	21.63	20.41	22.93	22.25	21.16	19.94
		1745	23.52	22.75	21.69	20.8	23.05	22.28	21.22	20.33
		1710.7	23.11	22.36	21.23	20.23	22.64	21.89	20.76	19.76
	50% RB mid	1779.3	23.37	22.37	21.48	20.41	22.90	21.90	21.01	19.94
		1745	23.44	22.42	21.66	20.36	22.97	21.95	21.19	19.89
		1710.7	23.1	22.08	21.25	20.43	22.63	21.61	20.78	19.96
	100% RB	1779.3	22.39	21.46	20.36	19.13	21.92	20.99	19.89	18.66
		1745	22.49	21.56	20.45	19.45	22.02	21.09	19.98	18.98
		1710.7	22.14	21.19	20.11	19.38	21.67	20.72	19.64	18.91
3MHz	1 RB high	1778.5	23.34	22.59	21.55	20.47	22.87	22.12	21.08	20.00
		1745	23.42	22.7	21.62	20.48	22.95	22.23	21.15	20.01
		1711.5	23.2	22.49	21.32	21.05	22.73	22.02	20.85	20.58
	1 RB low	1778.5	23.34	22.65	21.54	20.53	22.87	22.18	21.07	20.06
		1745	23.45	22.81	21.63	20.6	22.98	22.34	21.16	20.13
		1711.5	23.1	22.42	21.27	20.15	22.63	21.95	20.80	19.68
	50% RB mid	1778.5	22.33	21.42	20.41	19.07	21.86	20.95	19.94	18.60
		1745	22.45	21.56	20.53	19.68	21.98	21.09	20.06	19.21
		1711.5	22.15	21.21	20.22	19.37	21.68	20.74	19.75	18.90
	100% RB	1778.5	22.35	21.37	20.35	19.17	21.88	20.90	19.88	18.70
		1745	22.5	21.47	20.49	19.55	22.03	21.00	20.02	19.08
		1711.5	22.18	21.17	20.1	19.46	21.71	20.70	19.63	18.99
5MHz	1 RB high	1777.5	23.35	22.74	21.52	20.53	22.88	22.27	21.05	20.06
		1745	23.46	22.78	21.54	20.32	22.99	22.31	21.07	19.85
		1712.5	23.32	22.68	21.51	20.71	22.85	22.21	21.04	20.24
	1 RB low	1777.5	23.33	22.74	21.55	20.51	22.86	22.27	21.08	20.04
		1745	23.48	22.82	21.69	20.94	23.01	22.35	21.22	20.47
		1712.5	23.17	22.5	21.4	20.19	22.70	22.03	20.93	19.72
	50% RB mid	1777.5	22.4	21.4	20.39	19.29	21.93	20.93	19.92	18.82
		1745	22.53	21.53	20.54	19.5	22.06	21.06	20.07	19.03
		1712.5	22.27	21.28	20.32	19.47	21.80	20.81	19.85	19.00
	100% RB	1777.5	22.43	21.4	20.41	19.37	21.96	20.93	19.94	18.90
		1745	22.53	21.53	20.52	19.45	22.06	21.06	20.05	18.98
		1712.5	22.31	21.27	20.27	19.42	21.84	20.80	19.80	18.95
10MHz	1 RB high	1775	23.43	22.72	21.59	20.21	22.96	22.25	21.12	19.74
		1745	23.46	22.68	21.62	20.3	22.99	22.21	21.15	19.83

	1 RB low	1715	23.5	22.82	21.57	20.75	23.03	22.35	21.10	20.28
		1775	23.4	22.6	21.59	20.47	22.93	22.13	21.12	20.00
		1745	23.59	22.89	21.72	20.64	23.12	22.42	21.25	20.17
	50% RB mid	1715	23.22	22.56	21.32	20.15	22.75	22.09	20.85	19.68
		1775	22.39	21.35	20.34	19.35	21.92	20.88	19.87	18.88
		1745	22.48	21.46	20.46	19.54	22.01	20.99	19.99	19.07
	100% RB	1715	22.32	21.3	20.27	19.47	21.85	20.83	19.80	19.00
		1775	22.39	21.41	20.36	19.17	21.92	20.94	19.89	18.70
		1745	22.5	21.48	20.44	19.53	22.03	21.01	19.97	19.06
		1715	22.33	21.31	20.32	19.52	21.86	20.84	19.85	19.05
15MHz	1 RB high	1772.5	23.43	22.7	21.55	20.19	22.96	22.23	21.08	19.72
		1745	23.34	22.74	21.47	20.46	22.87	22.27	21.00	19.99
		1717.5	23.5	22.81	21.69	20.61	23.03	22.34	21.22	20.14
	1 RB low	1772.5	23.24	22.57	21.53	20.37	22.77	22.10	21.06	19.90
		1745	23.61	22.89	21.75	20.84	23.14	22.42	21.28	20.37
		1717.5	23.25	22.57	21.47	20.27	22.78	22.10	21.00	19.80
	50% RB mid	1772.5	22.39	21.38	20.43	19.27	21.92	20.91	19.96	18.80
		1745	22.55	21.53	20.58	19.46	22.08	21.06	20.11	18.99
		1717.5	22.45	21.43	20.47	19.63	21.98	20.96	20.00	19.16
	100% RB	1772.5	22.39	21.39	20.37	19.09	21.92	20.92	19.90	18.62
		1745	22.54	21.54	20.52	19.47	22.07	21.07	20.05	19.00
		1717.5	22.47	21.46	20.43	19.42	22.00	20.99	19.96	18.95
20MHz	1 RB high	1770	23.37	22.74	21.46	20.25	22.90	22.27	20.99	19.78
		1745	23.3	22.59	21.51	20.52	22.83	22.12	21.04	20.05
		1720	23.63	22.92	21.8	20.61	23.16	22.45	21.33	20.14
	1 RB low	1770	23.28	22.52	21.5	20.41	22.81	22.05	21.03	19.94
		1745	23.67	22.92	21.91	20.94	23.20	22.45	21.44	20.47
		1720	23.2	22.57	21.32	20.21	22.73	22.10	20.85	19.74
	50% RB mid	1770	22.43	21.45	20.44	19.47	21.96	20.98	19.97	19.00
		1745	22.57	21.56	20.53	19.6	22.10	21.09	20.06	19.13
		1720	22.59	21.57	20.56	19.59	22.12	21.10	20.09	19.12
	100% RB	1770	22.39	21.36	20.36	19.35	21.92	20.89	19.89	18.88
		1745	22.58	21.54	20.54	19.37	22.11	21.07	20.07	18.90
		1720	22.56	21.53	20.51	19.5	22.09	21.06	20.04	19.03

LTE CA 48C-EIRP

Limits: $\leq 23\text{dBm}/10\text{MHz}$

Bandwidth	PCC Freq (MHz)	SCC Freq (MHz)	Modulation	PCC RB	SCC RB	Conducted Power (dBm/10MHz)	EIRP (dBm/10MHz) Gt=-2.92dBi
5MHz/20MHz	3615.8	3627.5	QPSK	1 RB high	1 RB low	24.36	21.44
5MHz/20MHz	3615.8	3627.5	QPSK	100% RB	100% RB	20.08	17.16
5MHz/20MHz	3615.8	3627.5	16QAM	1 RB high	1 RB low	23.42	20.50
5MHz/20MHz	3615.8	3627.5	16QAM	100% RB	100% RB	19.08	16.16
5MHz/20MHz	3615.8	3627.5	64QAM	1 RB high	1 RB low	21.44	18.52
5MHz/20MHz	3615.8	3627.5	64QAM	100% RB	100% RB	19.12	16.20
5MHz/20MHz	3615.8	3627.5	256QAM	1 RB high	1 RB low	19.39	16.47
5MHz/20MHz	3615.8	3627.5	256QAM	100% RB	100% RB	17.14	14.22
10MHz/20MHz	3615.6	3630	QPSK	1 RB high	1 RB low	24.38	21.46
10MHz/20MHz	3615.6	3630	QPSK	100% RB	100% RB	19.10	16.18
10MHz/20MHz	3615.6	3630	16QAM	1 RB high	1 RB low	23.42	20.50
10MHz/20MHz	3615.6	3630	16QAM	100% RB	100% RB	18.14	15.22
10MHz/20MHz	3615.6	3630	64QAM	1 RB high	1 RB low	21.36	18.44
10MHz/20MHz	3615.6	3630	64QAM	100% RB	100% RB	18.15	15.23
10MHz/20MHz	3615.6	3630	256QAM	1 RB high	1 RB low	19.25	16.33
10MHz/20MHz	3615.6	3630	256QAM	100% RB	100% RB	16.16	13.24
15MHz/20MHz	3615.3	3632.4	QPSK	1 RB high	1 RB low	24.29	21.37
15MHz/20MHz	3615.3	3632.4	QPSK	100% RB	100% RB	18.15	15.23
15MHz/20MHz	3615.3	3632.4	16QAM	1 RB high	1 RB low	23.25	20.33
15MHz/20MHz	3615.3	3632.4	16QAM	100% RB	100% RB	17.12	14.20
15MHz/20MHz	3615.3	3632.4	64QAM	1 RB high	1 RB low	21.46	18.54
15MHz/20MHz	3615.3	3632.4	64QAM	100% RB	100% RB	17.16	14.24
15MHz/20MHz	3615.3	3632.4	256QAM	1 RB high	1 RB low	19.59	16.67
15MHz/20MHz	3615.3	3632.4	256QAM	100% RB	100% RB	15.11	12.19
20MHz/5MHz	3622.5	3634.2	QPSK	1 RB high	1 RB low	24.53	21.61
20MHz/5MHz	3622.5	3634.2	QPSK	100% RB	100% RB	20.07	17.15
20MHz/5MHz	3622.5	3634.2	16QAM	1 RB high	1 RB low	23.51	20.59
20MHz/5MHz	3622.5	3634.2	16QAM	100% RB	100% RB	19.06	16.14
20MHz/5MHz	3622.5	3634.2	64QAM	1 RB high	1 RB low	21.51	18.59
20MHz/5MHz	3622.5	3634.2	64QAM	100% RB	100% RB	19.02	16.10
20MHz/5MHz	3622.5	3634.2	256QAM	1 RB high	1 RB low	19.53	16.61
20MHz/5MHz	3622.5	3634.2	256QAM	100% RB	100% RB	17.06	14.14
20MHz/10MHz	3620.1	3634.5	QPSK	1 RB high	1 RB low	24.52	21.60
20MHz/10MHz	3620.1	3634.5	QPSK	100% RB	100% RB	19.16	16.24
20MHz/10MHz	3620.1	3634.5	16QAM	1 RB high	1 RB low	23.46	20.54
20MHz/10MHz	3620.1	3634.5	16QAM	100% RB	100% RB	18.23	15.31
20MHz/10MHz	3620.1	3634.5	64QAM	1 RB high	1 RB low	21.31	18.39
20MHz/10MHz	3620.1	3634.5	64QAM	100% RB	100% RB	18.19	15.27

20MHz/10MHz	3620.1	3634.5	256QAM	1 RB high	1 RB low	19.46	16.54
20MHz/10MHz	3620.1	3634.5	256QAM	100% RB	100% RB	16.14	13.22
20MHz/15MHz	3617.6	3634.7	QPSK	1 RB high	1 RB low	24.43	21.51
20MHz/15MHz	3617.6	3634.7	QPSK	100% RB	100% RB	18.16	15.24
20MHz/15MHz	3617.6	3634.7	16QAM	1 RB high	1 RB low	23.46	20.54
20MHz/15MHz	3617.6	3634.7	16QAM	100% RB	100% RB	17.17	14.25
20MHz/15MHz	3617.6	3634.7	64QAM	1 RB high	1 RB low	21.43	18.51
20MHz/15MHz	3617.6	3634.7	64QAM	100% RB	100% RB	17.11	14.19
20MHz/15MHz	3617.6	3634.7	256QAM	1 RB high	1 RB low	19.52	16.60
20MHz/15MHz	3617.6	3634.7	256QAM	100% RB	100% RB	15.14	12.22
20MHz/20MHz	3615.1	3634.9	QPSK	1 RB high	1 RB low	24.41	21.49
20MHz/20MHz	3615.1	3634.9	QPSK	100% RB	100% RB	17.17	14.25
20MHz/20MHz	3615.1	3634.9	16QAM	1 RB high	1 RB low	23.30	20.38
20MHz/20MHz	3615.1	3634.9	16QAM	100% RB	100% RB	16.22	13.30
20MHz/20MHz	3615.1	3634.9	64QAM	1 RB high	1 RB low	21.32	18.40
20MHz/20MHz	3615.1	3634.9	64QAM	100% RB	100% RB	16.18	13.26
20MHz/20MHz	3615.1	3634.9	256QAM	1 RB high	1 RB low	19.41	16.49
20MHz/20MHz	3615.1	3634.9	256QAM	100% RB	100% RB	14.20	11.28

A.2 Emission Limit

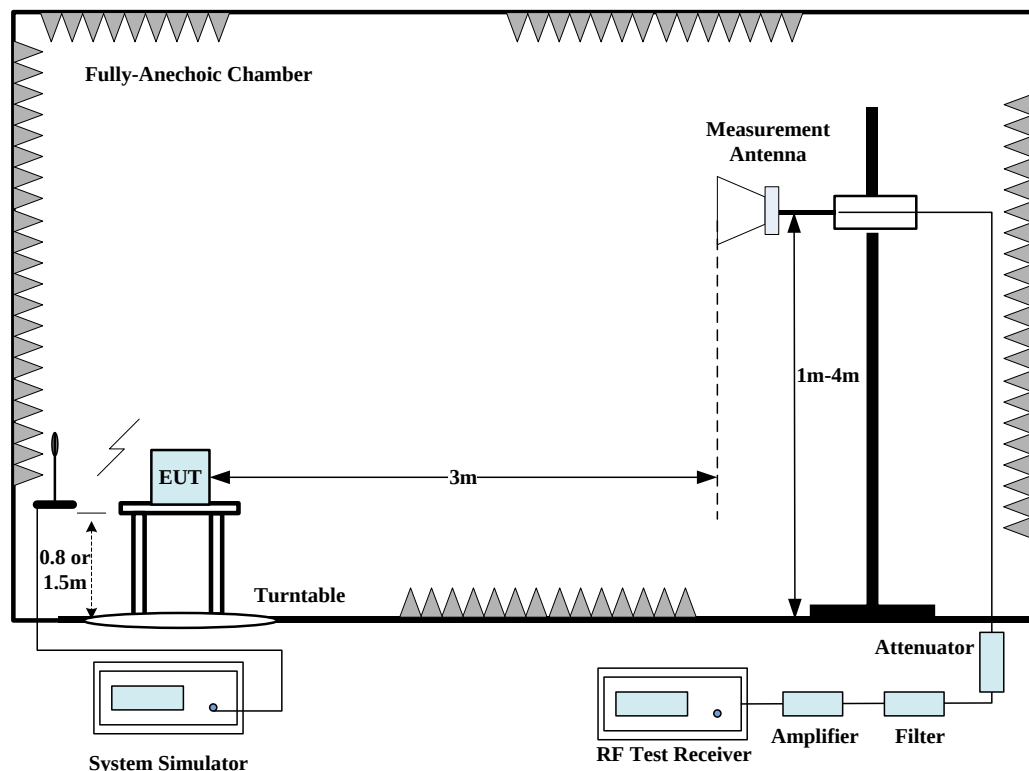
A.2.1 Measurement Method

The measurement procedures in TIA-603E-2016 are used.

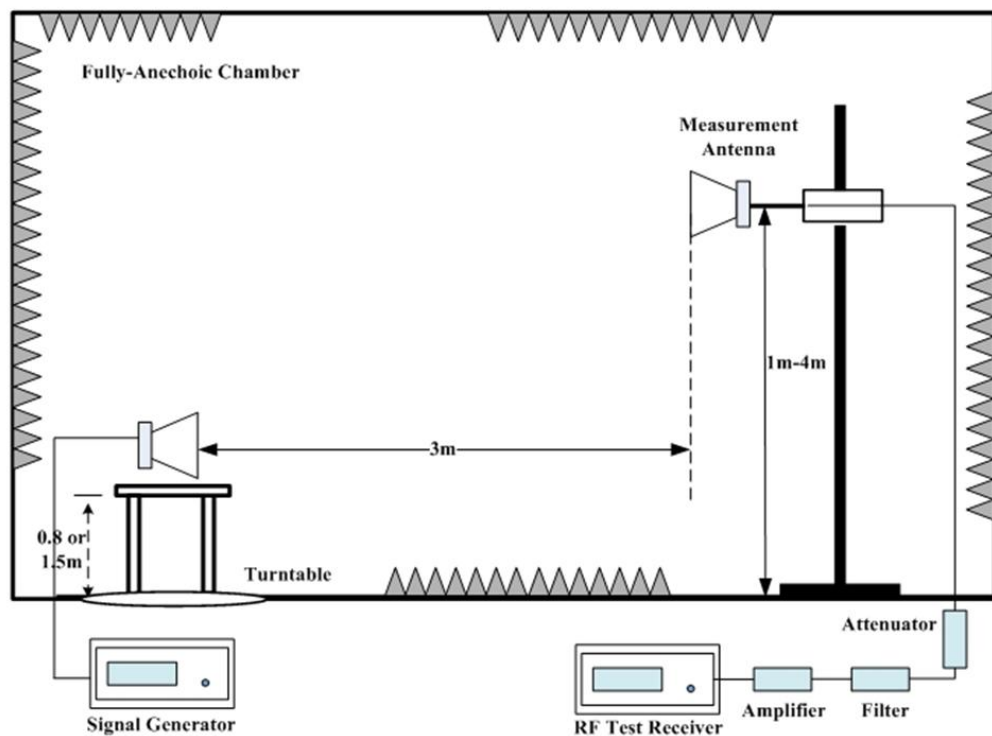
The spectrum was scanned from 30 MHz to the 10th harmonic of the highest frequency generated within the equipment, which is the transmitted carrier. The resolution bandwidth is set 1MHz. The spectrum was scanned with the mobile station transmitting at carrier frequencies that pertain to low, mid and high channels of each LTE Band.

The procedure of radiated spurious emissions is as follows:

For measurements performed at frequencies less than or equal to 1 GHz, the EUT was placed on a 80cm-high non-conductive support; For measurements performed at frequencies above 1GHz,EUT was placed on a 1.5-meter-high non-conductive support. A measurement antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. In the initial test, the height of the measurement antenna was varied from 1 m to 4 m for the relative positioning that produces the maximum radiated signal level. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the EUT through 360° and adjusting the receiving antenna polarization. The radiated emission measurements of all non-harmonic and harmonics of the transmit frequency through the 10th harmonic were measured with peak detector.



1. The EUT is then put into continuously transmitting mode at its maximum power level during the test. And the maximum value of the receiver should be recorded as (Pr).
2. The EUT shall be replaced by a substitution antenna. The test setup refers to figure below.



In the chamber, a substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. The height of measurement antenna varied between 1 m to 4 m to maximize the received signal amplitude for each emission that was detected and measured in the initial test. A power (P_{Mea}) is applied to the input of the substitution antenna and adjusts the level of the signal generator output until the value of the receiver reach the previously recorded (P_r). The power of signal source (P_{Mea}) is recorded. The test was performed with the measurement antenna in both vertical and horizontal polarization.

3. The Path loss (P_{pl}) between the Signal Source and the Substitution Antenna and the Substitution Antenna Gain (G_a) were recorded after test. A amplifier was connected in for the test. The Path loss (P_{pl}) is the summation of the cable loss and the gain of the amplifier.
4. The measurement results are obtained as described below:

$$\text{Power (EIRP)} = P_{Mea} - P_{pl} + G_a$$

This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power. ERP can be calculated from EIRP by subtracting the gain of the dipole, $ERP = EIRP - 2.15\text{dBi}$.

A.2.2 Measurement Limit

FDD Band 2: Part 24.238 specifies that 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.

FDD Band 12/13: Part 27.53(g) states for operations in the 600 MHz band and the 698–746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in

watts, by at least $43 + 10 \log (P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

FDD Band 5: Part 22.917 specifies that 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.

FDD Band 7: Part 27.53(m) specifies 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.

FDD Band 66: Part 27.53(h) specifies that 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.

A.2.3 Measurement Results

Radiated emissions measurements were made only at the upper, middle, and lower carrier frequencies of each LTE Band. It was decided that measurements at these three carrier frequencies would be sufficient to demonstrate compliance with emissions limits because it was seen that all the significant spurs occur well outside the band and no radiation was seen from a carrier in one block of each LTE Band into any of the other blocks. The equipment must still, however, meet emissions requirements with the carrier at all frequencies over which it is capable of operating and it is the manufacturer's responsibility to verify this. The range of evaluated frequency is from 30MHz to 26GHz.

Note 1: All CA UL combination bands have been tested, only the worst cases are reported.

Note 2: Both of Vertical and Horizontal polarizations are evaluated, but only the worst case is recorded in this report.

A.2.4 Measurement Results Table

Frequency	Channel	Frequency Range	Result
LTE Bands	Low	9kHz-26GHz	Pass
	Middle	9kHz-26GHz	Pass
	High	9kHz-26GHz	Pass

A.2.5 Sweep Table

Subrange	RBW	VBW
9~150 kHz	0.2kHz	0.6kHz
150kHz~30MHz	9kHz	27kHz
30MHz~1 GHz	100KHz	300KHz
1~20 GHz	1 MHz	3 MHz

A.2.6 Measurement Result

LB2, 1.4MHz,CH18607,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3701.50	-52.31	3.47	10.39	-45.39	-13.00	32.39	H
5552.50	-38.59	5.33	11.20	-32.72	-13.00	19.72	V
7402.00	-52.46	8.09	10.10	-50.45	-13.00	37.45	V
9254.00	-39.74	8.85	11.70	-36.89	-13.00	23.89	V
11104.50	-49.71	9.75	12.60	-46.86	-13.00	33.86	H
12952.50	-45.11	12.49	12.75	-44.85	-13.00	31.85	V

LB2, 1.4MHz,CH18900,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3760.00	-54.03	3.81	10.16	-47.68	-13.00	34.68	V
5640.00	-35.22	5.61	11.38	-29.45	-13.00	16.45	V
7519.50	-52.85	7.71	10.24	-50.32	-13.00	37.32	V
9400.50	-37.71	9.10	11.50	-35.31	-13.00	22.31	V
11293.00	-48.79	10.62	12.61	-46.80	-13.00	33.80	V
13153.50	-45.55	13.23	12.55	-46.23	-13.00	33.23	V

LB2, 1.4MHz,CH19193,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3818.50	-54.44	3.94	9.96	-48.42	-13.00	35.42	H
5728.50	-38.14	5.89	11.34	-32.69	-13.00	19.69	V
7637.50	-54.11	6.77	10.38	-50.50	-13.00	37.50	V
9547.00	-37.55	9.11	11.89	-34.77	-13.00	21.77	V
11458.00	-46.02	12.37	12.54	-45.85	-13.00	32.85	V
13351.00	-43.50	13.12	12.45	-44.17	-13.00	31.17	V

LB5, 1.4MHz,CH20407,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1649.00	-59.75	2.60	9.49	2.15	-55.01	-13.00	42.01	H
2474.00	-53.51	4.33	10.35	2.15	-49.64	-13.00	36.64	V
5773.50	-57.64	5.68	11.16	2.15	-54.31	-13.00	41.31	H
6585.00	-55.40	7.22	10.39	2.15	-54.38	-13.00	41.38	V
7423.00	-51.40	7.96	10.10	2.15	-51.41	-13.00	38.41	H
8260.50	-52.67	7.60	11.20	2.15	-51.22	-13.00	38.22	H

LB5, 1.4MHz,CH20525,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1673.50	-59.38	2.66	9.45	2.15	-54.74	-13.00	41.74	H
2510.00	-47.39	4.42	10.30	2.15	-43.66	-13.00	30.66	H
5855.50	-59.75	5.60	10.98	2.15	-56.52	-13.00	43.52	H
6688.00	-55.25	6.43	10.48	2.15	-53.35	-13.00	40.35	V
7542.50	-52.36	7.47	10.28	2.15	-51.70	-13.00	38.70	H
8368.50	-52.76	8.19	11.30	2.15	-51.80	-13.00	38.80	V

LB5, 1.4MHz,CH20643,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1696.50	-57.69	2.92	9.41	2.15	-53.35	-13.00	40.35	H
2545.00	-53.82	4.61	10.30	2.15	-50.28	-13.00	37.28	H
5933.00	-59.33	6.03	10.73	2.15	-56.78	-13.00	43.78	V
6787.50	-54.62	6.39	10.38	2.15	-52.78	-13.00	39.78	H
7635.50	-52.69	6.76	10.37	2.15	-51.23	-13.00	38.23	H
8496.00	-51.67	8.82	11.30	2.15	-51.34	-13.00	38.34	H

LB7, 5MHz,CH20775,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5005.00	-58.84	5.15	11.33	-52.66	-25.00	27.66	H
7508.00	-45.72	7.70	10.22	-43.20	-25.00	18.20	H
10010.50	-42.06	9.35	11.79	-39.62	-25.00	14.62	V
12500.50	-45.11	12.35	13.60	-43.86	-25.00	18.86	H
15029.50	-44.62	14.73	14.69	-44.66	-25.00	19.66	H
17503.50	-33.38	19.72	13.10	-40.00	-25.00	15.00	H

LB7, 5MHz,CH21100,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5070.50	-59.34	5.30	11.60	-53.04	-25.00	28.04	H
7605.50	-45.09	7.58	10.31	-42.36	-25.00	17.36	V
10141.00	-45.67	9.74	11.78	-43.63	-25.00	18.63	H
12688.00	-45.40	11.75	13.12	-44.03	-25.00	19.03	H
15203.50	-45.00	15.12	15.01	-45.11	-25.00	20.11	V
17757.50	-33.39	19.56	13.46	-39.49	-25.00	14.49	H

LB7, 5MHz,CH21425,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5135.00	-57.65	5.55	11.60	-51.60	-25.00	26.60	V
7703.00	-48.41	6.72	10.61	-44.52	-25.00	19.52	H
10270.50	-43.84	10.76	11.90	-42.70	-25.00	17.70	H
12841.00	-44.80	13.02	12.92	-44.90	-25.00	19.90	H
15411.50	-46.50	14.91	15.42	-45.99	-25.00	20.99	H
17962.50	-33.81	20.02	13.48	-40.35	-25.00	15.35	H

LB12, 1.4MHz,CH23017,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1399.50	-53.12	1.93	8.09	2.15	-49.11	-13.00	36.11	V
2098.50	-56.47	3.52	7.80	2.15	-54.34	-13.00	41.34	H
2802.00	-51.47	5.25	10.40	2.15	-48.47	-13.00	35.47	V
4886.00	-60.70	4.79	10.97	2.15	-56.67	-13.00	43.67	V
6294.50	-58.57	6.07	10.80	2.15	-55.99	-13.00	42.99	H
6990.00	-54.06	7.93	10.40	2.15	-53.74	-13.00	40.74	H

LB12, 1.4MHz,CH23095,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1415.00	-57.39	2.31	8.19	2.15	-53.66	-13.00	40.66	V
2124.50	-56.21	3.71	8.19	2.15	-53.88	-13.00	40.88	V
2828.50	-51.40	5.03	10.46	2.15	-48.12	-13.00	35.12	H
3537.50	-59.87	3.28	10.25	2.15	-55.05	-13.00	42.05	V
6376.50	-58.76	5.77	10.95	2.15	-55.73	-13.00	42.73	V
7083.50	-53.87	6.94	10.37	2.15	-52.59	-13.00	39.59	V

LB12, 1.4MHz,CH23173,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1431.00	-57.12	1.90	8.29	2.15	-52.88	-13.00	39.88	V
2157.00	-55.75	3.70	8.68	2.15	-52.92	-13.00	39.92	H
2873.00	-51.38	5.41	10.64	2.15	-48.30	-13.00	35.30	H
3577.00	-60.37	3.07	10.41	2.15	-55.18	-13.00	42.18	V
5723.00	-56.40	5.90	11.35	2.15	-53.10	-13.00	40.10	V
7154.00	-54.13	6.70	10.18	2.15	-52.80	-13.00	39.80	H

LB13, 5MHz,CH23205,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1559.00	-55.04	3.47	5.39	0.00	-55.27	-40.00	15.27	H
2347.69	-47.96	4.45	5.64	2.15	-48.92	-13.00	35.92	V
3126.00	-58.13	5.40	7.30	2.15	-58.38	-13.00	45.38	H
3931.50	-57.50	6.12	8.80	2.15	-56.97	-13.00	43.97	H
4719.50	-56.63	6.52	9.62	2.15	-55.68	-13.00	42.68	H
5489.00	-56.73	7.02	10.58	2.15	-55.32	-13.00	42.32	H

LB13, 5MHz,CH23230,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1564.36	-64.35	3.48	5.38	0.00	-64.60	-40.00	24.60	H
2355.64	-48.55	4.46	5.67	2.15	-49.49	-13.00	36.49	V
3139.00	-58.10	5.38	7.33	2.15	-58.30	-13.00	45.30	H
3919.50	-58.34	6.12	8.79	2.15	-57.82	-13.00	44.82	H
4711.00	-57.58	6.51	9.61	2.15	-56.63	-13.00	43.63	V
5489.00	-55.82	7.02	10.58	2.15	-54.41	-13.00	41.41	V

LB13, 5MHz,CH23255,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1569.20	-63.22	3.48	5.38	0.00	-63.47	-40.00	23.47	H
2350.18	-48.03	4.46	5.65	2.15	-48.99	-13.00	35.99	V
3138.00	-57.76	5.39	7.33	2.15	-57.97	-13.00	44.97	H
3921.00	-58.09	6.12	8.79	2.15	-57.57	-13.00	44.57	H
4708.00	-57.21	6.51	9.61	2.15	-56.26	-13.00	43.26	V
5493.50	-56.83	7.04	10.59	2.15	-55.43	-13.00	42.43	H

LB48, 5MHz,CH55265,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
7105.13	-59.31	8.16	11.73	-55.74	-40.00	15.74	H
8902.50	-62.03	8.85	13.08	-57.80	-40.00	17.80	V
10657.88	-58.93	9.29	13.13	-55.09	-40.00	15.09	H
12459.38	-58.18	10.28	13.18	-55.28	-40.00	15.28	H
14187.38	-58.70	10.90	14.46	-55.14	-40.00	15.14	V
15974.25	-56.98	11.77	13.70	-55.05	-40.00	15.05	V

LB48, 5MHz,CH55990,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
7250.25	-56.95	8.15	11.90	-53.20	-40.00	13.20	H
9049.13	-61.64	9.07	13.13	-57.58	-40.00	17.58	V
10849.88	-59.99	9.59	13.17	-56.41	-40.00	16.41	H
12674.25	-58.87	10.34	13.30	-55.91	-40.00	15.91	H
14473.13	-58.81	10.96	14.41	-55.36	-40.00	15.36	V
16309.88	-55.70	11.83	13.64	-53.89	-40.00	13.89	H

LB48, 5MHz,CH56715,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
7395.38	-57.55	8.12	12.07	-53.60	-40.00	13.60	H
9273.75	-61.26	9.09	13.26	-57.09	-40.00	17.09	V
11093.25	-55.54	9.85	13.18	-52.21	-40.00	12.21	H
12921.75	-57.53	10.50	13.45	-54.58	-40.00	14.58	H
14760.00	-57.95	11.16	14.19	-54.92	-40.00	14.92	H
16644.00	-55.65	11.89	13.66	-53.88	-40.00	13.88	V

LB66, 1.4MHz,CH131979,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5132.50	-58.78	5.56	11.60	-52.74	-13.00	39.74	H
8554.00	-52.33	8.52	11.20	-49.65	-13.00	36.65	V
10264.50	-55.07	10.80	11.90	-53.97	-13.00	40.97	H
11975.50	-54.30	12.28	13.05	-53.53	-13.00	40.53	V
13686.50	-51.49	13.01	12.20	-52.30	-13.00	39.30	V
17108.50	-47.25	18.45	13.49	-52.21	-13.00	39.21	H

LB66, 1.4MHz,CH132322,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3490.00	-59.93	2.86	10.10	-52.69	-13.00	39.69	V
5235.00	-56.44	4.70	11.70	-49.44	-13.00	36.44	V
8725.50	-53.83	8.45	11.10	-51.18	-13.00	38.18	V
12216.00	-55.97	12.17	13.40	-54.74	-13.00	41.74	V
13960.50	-50.45	14.62	12.16	-52.91	-13.00	39.91	H
17446.50	-44.04	19.26	13.05	-50.25	-13.00	37.25	H

LB66, 1.4MHz,CH132665,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
8897.00	-51.24	8.04	11.59	-47.69	-13.00	34.69	V
10676.50	-57.49	10.04	12.08	-55.45	-13.00	42.45	H
12459.00	-55.34	12.87	13.52	-54.69	-13.00	41.69	H
14232.00	-54.65	13.12	12.63	-55.14	-13.00	42.14	H
16013.50	-53.29	17.47	15.36	-55.40	-13.00	42.40	V
17797.50	-44.54	19.55	13.50	-50.59	-13.00	37.59	H

CA LB4, CH19975+LB13,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3425.16	-60.24	5.38	8.02	0.00	-57.60	-13.00	44.60	H
5137.97	-57.73	6.86	10.09	0.00	-54.50	-13.00	41.50	V
6850.78	-62.52	7.82	11.42	0.00	-58.92	-13.00	45.92	H
8563.13	-55.18	8.56	13.01	0.00	-50.73	-13.00	37.73	H
10275.94	-54.52	9.56	13.01	0.00	-51.07	-13.00	38.07	V
11988.75	-57.81	10.10	13.00	0.00	-54.91	-13.00	41.91	V
2345.50	-46.85	4.45	5.64	2.15	-47.81	-13.00	34.81	H
3127.97	-64.69	5.40	7.31	2.15	-64.93	-13.00	51.93	V
5474.53	-66.30	6.96	10.56	2.15	-64.85	-13.00	51.85	H
6255.47	-65.34	7.45	10.76	2.15	-64.18	-13.00	51.18	V
7042.50	-63.12	8.24	11.65	2.15	-61.86	-13.00	48.86	V
7822.03	-62.43	8.32	12.46	2.15	-60.44	-13.00	47.44	H

CA LB4, CH20175+LB13,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3465.47	-61.41	5.46	8.12	0.00	-58.75	-13.00	45.75	H
5197.97	-62.24	6.96	10.18	0.00	-59.02	-13.00	46.02	V
6930.47	-64.23	7.76	11.52	0.00	-60.47	-13.00	47.47	H
8662.97	-61.10	8.41	13.03	0.00	-56.48	-13.00	43.48	H
10395.94	-55.01	9.79	13.06	0.00	-51.74	-13.00	38.74	H
12097.03	-58.56	10.34	13.04	0.00	-55.86	-13.00	42.86	V
2351.00	-47.00	4.46	5.65	2.15	-47.96	-13.00	34.96	H
3127.97	-64.57	5.40	7.31	2.15	-64.81	-13.00	51.81	V
5474.53	-66.62	6.96	10.56	2.15	-65.17	-13.00	52.17	H
6253.13	-65.34	7.45	10.75	2.15	-64.19	-13.00	51.19	V
7037.34	-62.99	8.24	11.64	2.15	-61.74	-13.00	48.74	V
7822.97	-61.62	8.32	12.46	2.15	-59.63	-13.00	46.63	V

CA LB4, CH20375+LB13,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3504.84	-61.77	5.53	8.21	0.00	-59.09	-13.00	46.09	V
5257.97	-61.89	7.00	10.26	0.00	-58.63	-13.00	45.63	H
7010.63	-62.76	8.28	11.61	0.00	-59.43	-13.00	46.43	V
8763.28	-56.15	8.55	13.05	0.00	-51.65	-13.00	38.65	H
10515.94	-57.50	9.59	13.10	0.00	-53.99	-13.00	40.99	V
12316.41	-59.42	10.07	13.13	0.00	-56.36	-13.00	43.36	V
2348.00	-46.94	4.45	5.64	2.15	-47.90	-13.00	34.90	V
3127.97	-65.43	5.40	7.31	2.15	-65.67	-13.00	52.67	H
5474.53	-66.06	6.96	10.56	2.15	-64.61	-13.00	51.61	H
6252.19	-65.07	7.45	10.75	2.15	-63.92	-13.00	50.92	V
7039.22	-62.79	8.24	11.65	2.15	-61.53	-13.00	48.53	H
7822.50	-61.78	8.32	12.46	2.15	-59.79	-13.00	46.79	H

CA LB5, CH20425+LB66,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1645.00	-53.46	3.56	5.24	2.15	-53.93	-13.00	40.93	H
2474.50	-46.62	4.60	6.02	2.15	-47.35	-13.00	34.35	V
3306.09	-64.12	5.29	7.73	2.15	-63.83	-13.00	50.83	H
4119.38	-66.73	6.04	9.02	2.15	-65.90	-13.00	52.90	H
4971.09	-66.69	6.65	9.87	2.15	-65.62	-13.00	52.62	V
5786.25	-64.61	7.21	10.54	2.15	-63.43	-13.00	50.43	V
3423.28	-66.62	5.38	8.02	0.00	-63.98	-13.00	50.98	V
5137.50	-63.40	6.86	10.09	0.00	-60.17	-13.00	47.17	V
6892.97	-64.59	7.76	11.47	0.00	-60.88	-13.00	47.88	H
8562.66	-63.36	8.56	13.01	0.00	-58.91	-13.00	45.91	H
10275.47	-60.01	9.56	13.01	0.00	-56.56	-13.00	43.56	V
11995.31	-58.80	10.07	13.00	0.00	-55.87	-13.00	42.87	H

CA LB5, CH20525+LB66,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1688.00	-53.68	3.59	5.16	2.15	-54.26	-13.00	41.26	H
2494.50	-46.99	4.62	6.08	2.15	-47.68	-13.00	34.68	V
3346.41	-64.52	5.31	7.83	2.15	-64.15	-13.00	51.15	H
4180.31	-66.08	6.16	9.08	2.15	-65.31	-13.00	52.31	H
5004.38	-66.55	6.60	9.91	2.15	-65.39	-13.00	52.39	V
5856.09	-63.80	7.25	10.53	2.15	-62.67	-13.00	49.67	V
3490.31	-61.81	5.50	8.18	0.00	-59.13	-13.00	46.13	V
5235.00	-62.84	7.00	10.23	0.00	-59.61	-13.00	46.61	H
6980.16	-63.77	8.15	11.58	0.00	-60.34	-13.00	47.34	H
8725.78	-56.77	8.44	13.05	0.00	-52.16	-13.00	39.16	H
10470.47	-57.04	9.70	13.09	0.00	-53.65	-13.00	40.65	H
12215.63	-57.83	10.05	13.09	0.00	-54.79	-13.00	41.79	V

CA LB5, CH20625+LB66,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1693.50	-53.09	3.60	5.15	2.15	-53.69	-13.00	40.69	V
2551.50	-47.26	4.67	6.19	2.15	-47.89	-13.00	34.89	H
3386.72	-65.70	5.35	7.93	2.15	-65.27	-13.00	52.27	V
4219.69	-67.06	6.25	9.12	2.15	-66.34	-13.00	53.34	V
5069.53	-67.04	6.69	10.00	2.15	-65.88	-13.00	52.88	H
5926.88	-65.35	7.47	10.51	2.15	-64.46	-13.00	51.46	V
3555.00	-66.33	5.87	8.28	0.00	-63.92	-13.00	50.92	V
5328.28	-68.15	6.98	10.36	0.00	-64.77	-13.00	51.77	H
7109.53	-64.83	8.16	11.73	0.00	-61.26	-13.00	48.26	H
8888.44	-59.91	8.82	13.08	0.00	-55.65	-13.00	42.65	H
10709.06	-60.38	9.33	13.14	0.00	-56.57	-13.00	43.57	V
12484.22	-57.38	10.22	13.19	0.00	-54.41	-13.00	41.41	H

CA LB2, CH18650+LB66,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3430.00	-62.10	9.62	10.34	0.00	-61.38	-13.00	48.38	H
5145.00	-60.96	11.26	11.47	0.00	-60.76	-13.00	47.76	H
6860.00	-60.33	10.38	10.38	0.00	-60.33	-13.00	47.33	V
8575.00	-53.88	14.32	11.40	0.00	-56.80	-13.00	43.80	V
10290.47	-49.96	15.50	12.20	0.00	-53.26	-13.00	40.26	H
12005.00	-52.81	16.58	13.14	0.00	-56.25	-13.00	43.25	V
3710.00	-55.31	9.89	10.54	0.00	-54.66	-13.00	41.66	V
5565.00	-46.50	11.63	11.20	0.00	-46.93	-13.00	33.93	H
7420.00	-58.17	12.96	10.14	0.00	-60.99	-13.00	47.99	V
9275.00	-54.89	14.75	11.80	0.00	-57.84	-13.00	44.84	H
11130.00	-54.21	16.14	12.58	0.00	-57.77	-13.00	44.77	V
12985.00	-51.82	17.20	12.86	0.00	-56.16	-13.00	43.16	H

CA LB2, CH18900+LB66,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3490.00	-59.60	9.80	10.37	0.00	-59.03	-13.00	46.03	V
5235.00	-50.67	11.91	11.50	0.00	-51.08	-13.00	38.08	V
6980.00	-60.26	10.30	10.30	0.00	-60.26	-13.00	47.26	V
8725.00	-49.02	14.19	11.35	0.00	-51.86	-13.00	38.86	V
10470.47	-50.43	15.55	12.10	0.00	-53.88	-13.00	40.88	H
12215.00	-54.03	16.69	13.33	0.00	-57.38	-13.00	44.38	H
3760.00	-55.53	10.10	10.45	0.00	-55.18	-13.00	42.18	V
5640.00	-48.12	11.61	11.20	0.00	-48.53	-13.00	35.53	H
7520.00	-58.35	12.82	10.31	0.00	-60.87	-13.00	47.87	V
9400.00	-56.10	14.74	11.67	0.00	-59.17	-13.00	46.17	H
11280.00	-54.44	16.04	12.64	0.00	-57.85	-13.00	44.85	H
13160.00	-52.87	16.78	12.67	0.00	-56.98	-13.00	43.98	V

CA LB2, CH19150+LB66,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3550.00	-57.39	10.23	10.53	0.00	-57.09	-13.00	44.09	V
5325.00	-61.89	11.89	11.43	0.00	-62.35	-13.00	49.35	V
7100.00	-61.91	10.37	10.37	0.00	-61.91	-13.00	48.91	H
8875.31	-48.44	14.30	11.48	0.00	-51.27	-13.00	38.27	V
10650.00	-52.37	15.47	12.19	0.00	-55.65	-13.00	42.65	H
12425.00	-53.41	16.88	13.38	0.00	-56.90	-13.00	43.90	H
3810.00	-56.50	10.33	10.27	0.00	-56.56	-13.00	43.56	V
5715.00	-56.45	11.65	11.02	0.00	-57.07	-13.00	44.07	V
7620.00	-57.57	13.62	10.40	0.00	-60.79	-13.00	47.79	H
9525.00	-56.53	14.78	11.91	0.00	-59.40	-13.00	46.40	V
11430.00	-53.59	16.17	12.65	0.00	-57.11	-13.00	44.11	V
13335.00	-51.00	16.87	12.55	0.00	-55.32	-13.00	42.32	V

CA LB2, CH18625+LB5,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1653.40	-56.35	7.12	9.10	2.15	-56.52	-13.00	43.52	H
2480.10	-48.71	8.96	10.16	2.15	-49.65	-13.00	36.65	V
3306.56	-62.11	10.35	10.35	2.15	-64.26	-13.00	51.26	H
4133.50	-66.32	10.39	10.37	2.15	-68.50	-13.00	55.50	V
4960.20	-66.01	11.34	11.27	2.15	-68.23	-13.00	55.23	V
5786.90	-62.22	11.65	10.82	2.15	-65.19	-13.00	52.19	V
3705.00	-62.96	9.89	10.55	0.00	-62.30	-13.00	49.30	V
5558.44	-53.84	11.63	11.20	0.00	-54.27	-13.00	41.27	V
7412.00	-57.77	12.76	10.12	0.00	-60.41	-13.00	47.41	V
9262.97	-42.60	14.92	11.80	0.00	-45.72	-13.00	32.72	V
11118.00	-54.49	16.05	12.56	0.00	-57.98	-13.00	44.98	V
12968.91	-50.09	16.77	12.90	0.00	-53.96	-13.00	40.96	H

CA LB2, CH18625+LB5,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1673.30	-56.48	7.23	9.10	2.15	-56.76	-13.00	43.76	H
2509.95	-49.49	8.67	10.12	2.15	-50.19	-13.00	37.19	V
3346.60	-65.90	10.43	10.43	2.15	-68.05	-13.00	55.05	H
4183.25	-65.44	10.96	10.40	2.15	-68.15	-13.00	55.15	H
5019.90	-66.18	11.66	11.23	2.15	-68.76	-13.00	55.76	V
5856.55	-63.07	11.43	10.60	2.15	-66.06	-13.00	53.06	H
3760.00	-63.43	10.10	10.45	0.00	-63.09	-13.00	50.09	V
5640.47	-47.76	11.61	11.20	0.00	-48.17	-13.00	35.17	V
7520.00	-58.65	12.82	10.31	0.00	-61.17	-13.00	48.17	V
9400.78	-40.22	14.74	11.67	0.00	-43.30	-13.00	30.30	H
11280.00	-53.66	16.04	12.64	0.00	-57.06	-13.00	44.06	H
13160.00	-52.31	16.78	12.67	0.00	-56.42	-13.00	43.42	V

CA LB2, CH18900+LB5,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
1693.38	-55.22	7.36	9.10	2.15	-55.63	-13.00	42.63	H
2540.07	-49.45	8.65	10.18	2.15	-50.07	-13.00	37.07	H
3386.76	-67.50	10.44	10.44	2.15	-69.65	-13.00	56.65	V
4233.45	-66.84	10.33	10.67	2.15	-68.65	-13.00	55.65	V
5080.14	-66.36	11.46	11.27	2.15	-68.70	-13.00	55.70	H
5926.83	-62.55	11.71	10.39	2.15	-66.02	-13.00	53.02	H
3815.16	-59.33	10.12	10.25	0.00	-59.20	-13.00	46.20	H
5722.97	-53.58	11.65	11.00	0.00	-54.23	-13.00	41.23	H
7630.78	-55.21	13.21	10.40	0.00	-58.01	-13.00	45.01	H
9538.13	-38.10	14.83	11.95	0.00	-40.98	-13.00	27.98	H
11448.00	-53.64	16.26	12.66	0.00	-57.25	-13.00	44.25	V
13356.00	-50.74	16.98	12.54	0.00	-55.19	-13.00	42.19	V

CA LB2, CH18625+LB13,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3705.00	-59.84	9.89	10.55	0.00	-59.17	-13.00	46.17	V
5557.97	-58.42	11.63	11.20	0.00	-58.85	-13.00	45.85	H
7412.00	-60.60	10.12	10.12	0.00	-60.60	-13.00	47.60	V
9263.44	-40.77	14.94	11.80	0.00	-43.91	-13.00	30.91	H
11115.94	-52.48	16.05	12.56	0.00	-55.98	-13.00	42.98	H
12968.91	-49.73	16.77	12.90	0.00	-53.61	-13.00	40.61	V
1564.18	-56.91	6.94	8.81	0.00	-55.04	-40.00	15.04	H
2346.27	-49.74	8.51	10.26	2.15	-50.15	-13.00	37.15	H
3128.36	-66.29	9.47	10.04	2.15	-67.87	-13.00	54.87	V
3910.45	-68.05	10.10	10.22	2.15	-70.08	-13.00	57.08	V
4692.54	-67.53	11.10	11.29	2.15	-69.49	-13.00	56.49	V
5474.63	-64.56	11.26	11.18	2.15	-66.78	-13.00	53.78	V

CA LB2, CH18900+LB13,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3760.00	-61.04	10.10	10.45	0.00	-60.70	-13.00	47.70	H
5640.47	-57.03	11.61	11.20	0.00	-57.44	-13.00	44.44	H
7520.00	-60.78	10.31	10.31	0.00	-60.78	-13.00	47.78	H
9400.78	-40.61	14.74	11.67	0.00	-43.68	-13.00	30.68	H
11280.00	-53.91	16.04	12.64	0.00	-57.31	-13.00	44.31	H
13160.00	-52.40	16.78	12.67	0.00	-56.51	-13.00	43.51	V
1564.18	-56.71	6.94	8.81	0.00	-54.84	-40.00	14.84	H
2346.27	-49.86	8.51	10.26	2.15	-50.26	-13.00	37.26	H
3128.36	-66.01	9.47	10.04	2.15	-67.59	-13.00	54.59	H
3910.45	-67.84	10.10	10.22	2.15	-69.87	-13.00	56.87	V
4692.54	-67.68	11.10	11.29	2.15	-69.64	-13.00	56.64	H
5474.63	-64.87	11.26	11.18	2.15	-67.10	-13.00	54.10	V

CA LB2, CH19175+LB13,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3815.16	-61.70	10.12	10.25	0.00	-61.57	-13.00	48.57	V
5722.97	-58.95	11.65	11.00	0.00	-59.60	-13.00	46.60	H
7630.31	-57.89	10.40	10.40	0.00	-57.89	-13.00	44.89	H
9538.13	-38.05	14.83	11.95	0.00	-40.93	-13.00	27.93	H
11448.00	-53.90	16.26	12.66	0.00	-57.51	-13.00	44.51	V
13356.00	-50.65	16.98	12.54	0.00	-55.09	-13.00	42.09	V
1564.18	-57.08	6.94	8.81	0.00	-55.20	-40.00	15.20	H
2346.27	-49.78	8.51	10.26	2.15	-50.19	-13.00	37.19	V
3128.36	-66.13	9.47	10.04	2.15	-67.71	-13.00	54.71	V
3910.45	-68.48	10.10	10.22	2.15	-70.51	-13.00	57.51	V
4692.54	-67.51	11.10	11.29	2.15	-69.47	-13.00	56.47	V
5474.63	-65.36	11.26	11.18	2.15	-67.59	-13.00	54.59	V

CA_48C, CH55340_CH55538,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
7140.00	-57.93	12.61	10.29	0.00	-60.26	-40.00	20.26	V
8925.00	-56.16	14.53	11.62	0.00	-59.08	-40.00	19.08	V
10710.00	-57.54	12.24	12.24	0.00	-57.54	-40.00	17.54	H
12495.00	-52.88	16.68	13.41	0.00	-56.15	-40.00	16.15	H
14280.00	-51.42	17.33	12.79	0.00	-55.96	-40.00	15.96	H
17850.00	-45.78	18.31	12.87	0.00	-51.23	-40.00	11.23	H

CA_48C, CH55891_CH56089,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
7230.38	-55.66	12.74	10.17	0.00	-58.23	-40.00	18.23	V
7250.00	-56.92	13.19	10.07	0.00	-60.04	-40.00	20.04	H
9062.50	-58.64	11.80	11.80	0.00	-58.64	-40.00	18.64	H
10875.00	-54.08	16.33	12.38	0.00	-58.03	-40.00	18.03	H
12687.50	-54.15	16.09	13.21	0.00	-57.02	-40.00	17.02	V
14500.00	-51.89	17.66	13.17	0.00	-56.39	-40.00	16.39	H

CA_48C, CH56442_CH56640,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
7340.25	-56.57	12.85	9.95	0.00	-59.47	-40.00	19.47	H
7360.00	-56.30	13.33	10.02	0.00	-59.61	-40.00	19.61	V
11010.00	-57.72	12.44	12.44	0.00	-57.72	-40.00	17.72	H
11040.00	-54.16	15.81	12.45	0.00	-57.52	-40.00	17.52	V
14680.00	-52.68	17.43	13.64	0.00	-56.47	-40.00	16.47	H
14720.00	-51.88	17.79	13.80	0.00	-55.87	-40.00	15.87	H

CA_2A_48A, CH18625_CH55265,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3705.00	-53.14	9.89	10.55	0.00	-52.48	-13.00	39.48	V
5558.23	-47.62	11.63	11.20	0.00	-48.05	-13.00	35.05	V
7412.00	-60.33	10.12	10.12	0.00	-60.33	-13.00	47.33	V
9265.00	-55.28	14.98	11.80	0.00	-58.46	-13.00	45.46	H
11118.00	-54.03	16.05	12.56	0.00	-57.52	-13.00	44.52	V
12971.00	-51.54	16.92	12.89	0.00	-55.57	-13.00	42.57	V
7106.00	-59.46	12.86	10.35	0.00	-61.96	-40.00	21.96	H
9443.63	-53.63	15.09	11.71	0.00	-57.01	-40.00	17.01	H
10659.00	-54.37	15.15	12.20	0.00	-57.32	-40.00	17.32	H
11790.75	-50.96	16.50	12.99	0.00	-54.47	-40.00	14.47	H
14212.00	-51.51	17.17	12.68	0.00	-55.99	-40.00	15.99	V
17765.00	-46.57	17.91	12.83	0.00	-51.65	-40.00	11.65	H

CA_2A_48A, CH18900_CH55990,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3760.00	-52.98	10.10	10.45	0.00	-52.64	-13.00	39.64	V
5640.48	-47.58	11.61	11.20	0.00	-47.99	-13.00	34.99	V
7520.00	-60.56	10.31	10.31	0.00	-60.56	-13.00	47.56	H
9400.00	-55.34	14.74	11.67	0.00	-58.42	-13.00	45.42	V
11280.00	-54.85	16.04	12.64	0.00	-58.26	-13.00	45.26	V
13160.00	-52.09	16.78	12.67	0.00	-56.20	-13.00	43.20	H
7250.00	-55.95	13.19	10.07	0.00	-59.08	-40.00	19.08	H
8277.00	-56.02	13.90	11.36	0.00	-58.57	-40.00	18.57	H
9130.50	-50.03	14.81	11.86	0.00	-52.98	-40.00	12.98	V
10875.00	-46.59	16.33	12.38	0.00	-50.54	-40.00	10.54	H
12482.63	-51.35	16.68	13.41	0.00	-54.62	-40.00	14.62	H
14500.00	-52.04	17.66	13.17	0.00	-56.53	-40.00	16.53	V

CA_2A_48A, CH19175_CH56715,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
3815.32	-51.23	10.12	10.25	0.00	-51.09	-13.00	38.09	V
5723.23	-45.23	11.65	11.00	0.00	-45.88	-13.00	32.88	V
7632.00	-60.66	10.40	10.40	0.00	-60.66	-13.00	47.66	H
9538.50	-53.23	14.83	11.95	0.00	-56.11	-13.00	43.11	H
11448.00	-54.17	16.26	12.66	0.00	-57.78	-13.00	44.78	H
13356.00	-50.71	16.98	12.54	0.00	-55.16	-13.00	42.16	V
7396.00	-57.59	13.14	10.09	0.00	-60.63	-40.00	20.63	H
9302.63	-50.81	14.65	11.73	0.00	-53.73	-40.00	13.73	H
11093.25	-45.78	15.86	12.48	0.00	-49.16	-40.00	9.16	H
13620.38	-49.69	17.00	12.44	0.00	-54.24	-40.00	14.24	H
14792.00	-52.37	17.66	14.06	0.00	-55.97	-40.00	15.97	H
17448.38	-42.59	20.41	12.51	0.00	-50.49	-40.00	10.49	H

CA_48A_66A, CH55265_CH131997,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
7105.50	-56.44	12.86	10.36	0.00	-58.94	-40.00	18.94	V
10659.00	-54.33	15.15	12.20	0.00	-57.28	-40.00	17.28	H
12331.88	-52.35	16.79	13.37	0.00	-55.77	-40.00	15.77	V
14212.00	-51.34	17.17	12.68	0.00	-55.82	-40.00	15.82	H
16488.38	-47.80	19.50	14.05	0.00	-53.25	-40.00	13.25	V
17765.00	-46.74	17.91	12.83	0.00	-51.82	-40.00	11.82	V
3425.32	-53.96	9.62	10.35	0.00	-53.23	-13.00	40.23	V
5138.23	-51.98	11.67	11.45	0.00	-52.20	-13.00	39.20	H
6852.00	-62.17	10.37	10.37	0.00	-62.17	-13.00	49.17	V
8565.00	-56.93	14.24	11.40	0.00	-59.77	-13.00	46.77	H
10278.00	-54.99	15.42	12.18	0.00	-58.23	-13.00	45.23	V
11991.00	-53.69	16.46	13.08	0.00	-57.06	-13.00	44.06	V

CA_48A_66A, CH55990_CH132322,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
7250.00	-55.38	13.19	10.07	0.00	-58.50	-40.00	18.50	V
9302.25	-54.12	14.65	11.73	0.00	-57.04	-40.00	17.04	H
10875.00	-56.24	12.38	12.38	0.00	-56.24	-40.00	16.24	V
12778.50	-51.12	16.41	13.19	0.00	-54.33	-40.00	14.33	V
14500.00	-51.73	17.66	13.17	0.00	-56.23	-40.00	16.23	H
16065.75	-50.52	19.18	15.27	0.00	-54.43	-40.00	14.43	V
3490.16	-53.78	9.80	10.37	0.00	-53.21	-13.00	40.21	V
5235.48	-53.59	11.91	11.50	0.00	-54.00	-13.00	41.00	H
6980.00	-59.89	12.65	10.30	0.00	-62.24	-13.00	49.24	H
8725.00	-56.20	14.19	11.35	0.00	-59.04	-13.00	46.04	H
10470.00	-55.12	15.55	12.10	0.00	-58.58	-13.00	45.58	V
12215.00	-53.96	16.69	13.33	0.00	-57.32	-13.00	44.32	H

CA_48A_66A, CH56715_CH132647,QPSK

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction (dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
7395.38	-54.14	13.13	10.09	0.00	-57.18	-40.00	17.18	H
11093.25	-51.89	15.86	12.48	0.00	-55.27	-40.00	15.27	V
14792.00	-56.46	14.06	14.06	0.00	-56.46	-40.00	16.46	V
14950.13	-51.31	18.03	14.53	0.00	-54.81	-40.00	14.81	H
15351.75	-52.39	18.50	15.24	0.00	-55.65	-40.00	15.65	H
15785.25	-52.15	18.92	15.56	0.00	-55.51	-40.00	15.51	H
3555.48	-55.92	10.23	10.54	0.00	-55.61	-13.00	42.61	V
5332.74	-53.70	11.89	11.43	0.00	-54.16	-13.00	41.16	H
7112.00	-59.44	12.86	10.34	0.00	-61.95	-13.00	48.95	V
8890.00	-55.95	14.27	11.52	0.00	-58.71	-13.00	45.71	H
10668.00	-53.71	15.66	12.20	0.00	-57.17	-13.00	44.17	H
12446.00	-52.22	16.81	13.39	0.00	-55.64	-13.00	42.64	V

A.3 Frequency Stability

A.3.1 Method of Measurement

Frequency stability is a measure of the frequency drift due to temperature and supply voltage variations, with reference to the frequency measured at +20 °C and rated supply voltage. Two reference points are established at the applicable unwanted emissions limit using a RBW equal to the RBW required by the unwanted emissions specification of the applicable regulatory standard. These reference points measured using the lowest and highest channel of operation shall be identified as F_L and F_H respectively.

In order to measure the carrier frequency under the condition of AFC lock, it is necessary to make measurements with the EUT in a “call mode”. This is accomplished with the use of CMW500.

1. Measure the carrier frequency at room temperature.
2. Subject the EUT to overnight soak at -30°C.
3. With the EUT, powered via nominal voltage, connected to the CMW500, and in a simulated call on middle channel for each LTE band, measure the carrier frequency. These measurements should be made within 2 minutes of Powering up the EUT, to prevent significant self-warming.
4. Repeat the above measurements at 10°C increments from -30°C to +50°C. Allow at least 1.5 hours at each temperature, unpowered, before making measurements.
5. Re-measure carrier frequency at room temperature with nominal voltage. Vary supply voltage from minimum voltage to maximum voltage, in 0.1Volt increments re-measuring carrier frequency at each voltage. Pause at nominal voltage for 1.5 hours unpowered, to allow any self-heating to stabilize, before continuing.
6. Subject the EUT to overnight soak at +50°C.
7. With the EUT, powered via nominal voltage, connected to the CMW500 and in a simulated call on the center channel, measure the carrier frequency. These measurements should be made within 2 minutes of Powering up the EUT, to prevent significant self-warming.
8. Repeat the above measurements at 10 °C decrements from +50°C to -30°C. Allow at least 1.5 hours at each temperature, unpowered, before making measurements.
9. At all temperature levels hold the temperature to +/- 0.5°C during the measurement procedure.

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. As this transceiver is considered "Hand carried, battery powered equipment" Section 2.1055(d)(2) applies. This requires that the lower voltage for frequency stability testing be specified by the manufacturer. This transceiver is specified to operate with an input voltage of the lower, higher and nominal voltage. Operation above or below these voltage limits is prohibited by transceiver software in order to prevent improper operation as well as to protect components from overstress.

A.3.2 Measurement results

LTE band 2, 20MHz bandwidth QPSK(worst case of all bandwidths)

Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.87	1850.860	1909.140		
50				1.25	0.0007
40				0.79	0.0004
30				-0.13	0.0001
10				-0.74	0.0004
0				-2.16	0.0011
-10				-1.37	0.0007
-20				3.75	0.0020
-30				4.13	0.0022

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	1850.860	1909.140	0.36	0.0002
4.45				5.64	0.0030

LTE band 5, 10MHz bandwidth QPSK(worst case of all bandwidths)

Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.87	824.420	848.580		
50				-0.17	0.0002
40				0.56	0.0007
30				1.22	0.0015
10				0.12	0.0001
0				0.44	0.0005
-10				-0.54	0.0006
-20				2.05	0.0024
-30				0.00	0.0000

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	824.420	848.580	0.46	0.0005
4.45				-1.39	0.0017

LTE band 7, 20MHz bandwidth QPSK(worst case of all bandwidths)
Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.87	2500.660	2569.340		
50				-4.61	0.0018
40				0.90	0.0004
30				-2.39	0.0009
10				-0.13	0.0001
0				-4.99	0.0020
-10				-3.45	0.0014
-20				-0.33	0.0001
-30				-1.89	0.0007

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	2500.660	2569.340	-0.43	0.0002
4.45				-0.67	0.0003

LTE band 12, 10MHz bandwidth QPSK(worst case of all bandwidths)
Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.87	699.490	715.510		
50				0.40	0.0006
40				-0.56	0.0008
30				0.49	0.0007
10				-0.10	0.0001
0				0.82	0.0012
-10				-0.73	0.0010
-20				-0.94	0.0013
-30				0.02	0.0000

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	699.490	715.510	-0.64	0.0009
4.45				-0.37	0.0005

LTE band 13, 10MHz bandwidth QPSK(worst case of all bandwidths)
Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.87	777.480	786.520		
50				0.73	0.0009
40				-0.77	0.0010
30				-0.60	0.0008
10				-0.86	0.0011
0				-1.77	0.0023
-10				-0.82	0.0010
-20				-0.63	0.0008
-30				-1.47	0.0019

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	777.480	786.520	-1.56	0.0020
4.45				-1.47	0.0019

LTE band 48, 20MHz bandwidth QPSK(worst case of all bandwidths)
Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.87	3550.976	3699.024		
50				0.93	0.0003
40				-3.02	0.0008
30				-9.24	0.0025
10				0.23	0.0001
0				-1.93	0.0005
-10				2.70	0.0007
-20				-0.19	0.0001
-30				-0.67	0.0002

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	3550.976	3699.024	2.23	0.0006
4.45				-2.66	0.0007

LTE band 66, 20MHz bandwidth QPSK(worst case of all bandwidths)
Frequency Error vs Temperature

Temperature(°C)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.87	1710.850	1779.150		
50				-2.53	0.0015
40				-3.65	0.0021
30				1.86	0.0011
10				3.73	0.0021
0				2.23	0.0013
-10				3.91	0.0022
-20				1.92	0.0011
-30				1.35	0.0008

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	1710.850	1779.150	0.30	0.0002
4.45				3.52	0.0020

LTE CA band 48C, 20MHz+20MHz bandwidth QPSK(worst case of all bandwidths)
Frequency Error vs Voltage

Temperature(°C)	Voltage(V)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
20	3.87	3550.680	3699.320		
50				-5.82	0.0016
40				-1.16	0.0003
30				-6.85	0.0019
10				-2.69	0.0007
0				-0.23	0.0001
-10				-6.57	0.0018
-20				-6.40	0.0018
-30				-2.69	0.0007

Frequency Error vs Voltage

Voltage(V)	Temperature(°C)	FL(MHz)	FH(MHz)	Offset(Hz)	Frequency error(ppm)
3.6	20	3550.680	3699.320	-4.22	0.0012
4.45				1.02	0.0003

A.4 Occupied Bandwidth

Occupied bandwidth measurements are only provided for selected frequencies in order to reduce the amount of submitted data. Data were taken at the extreme and mid frequency. The table below lists the measured 99% BW. Spectrum analyzer plots are included on the following pages.

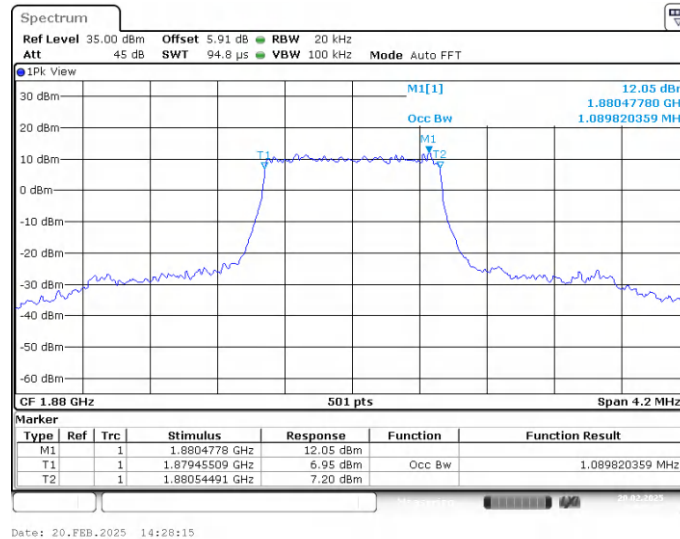
The measurement method is from ANSI C63.26:

- a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be set wide enough to capture all modulation products including the emission skirts.
- b) The nominal IF filter 3 dB bandwidth (RBW) shall be in the range of 1% to 5% of the anticipated OBW, and the VBW shall be set $\geq 3 \times \text{RBW}$.
- 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.
- d) Set the detection mode to peak, and the trace mode to max-hold.

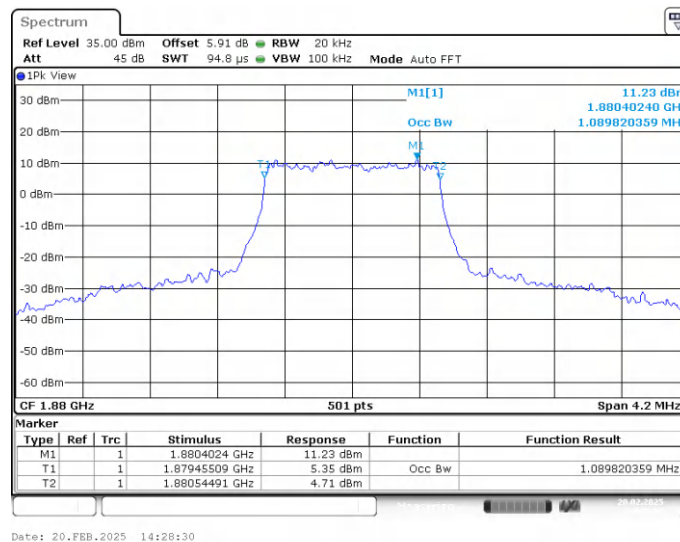
LTE band 2,1.4MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
1880	1.090	1.090

LTE band 2 , 1.4MHz Bandwidth,MID,QPSK (99% BW)



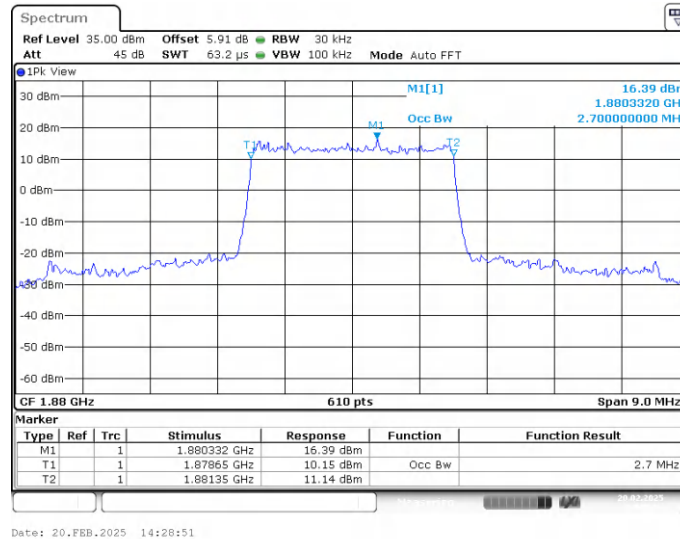
LTE band 2 , 1.4MHz Bandwidth,MID,16QAM (99% BW)



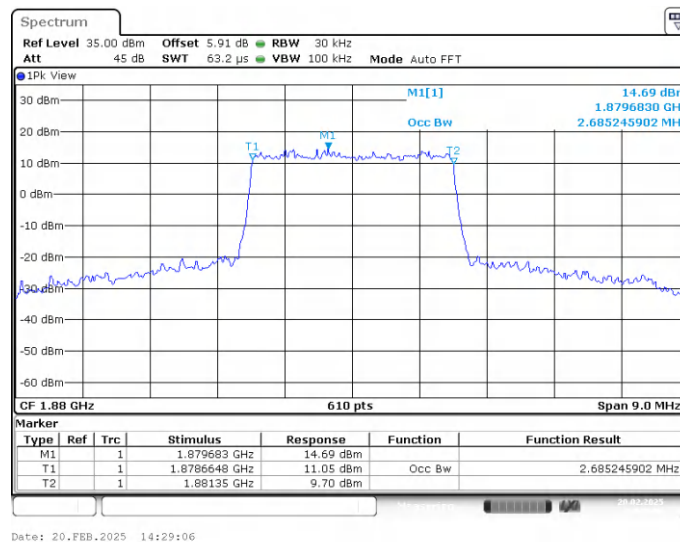
LTE band 2,3MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
1880	2.700	2.685

LTE band 2 , 3MHz Bandwidth,MID,QPSK (99% BW)



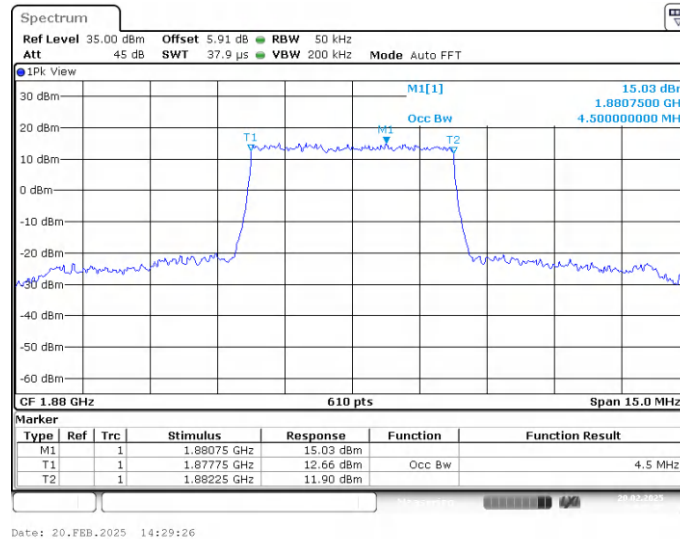
LTE band 2 , 3MHz Bandwidth,MID,16QAM (99% BW)



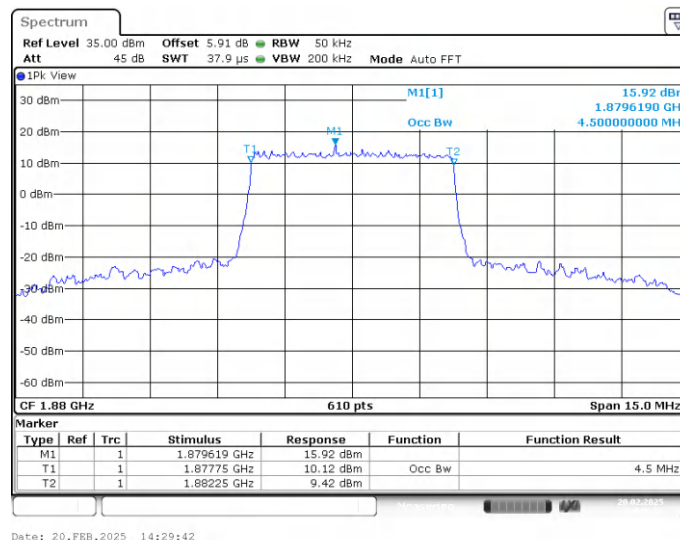
LTE band 2,5MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
1880	4.500	4.500

LTE band 2 , 5MHz Bandwidth,MID,QPSK (99% BW)



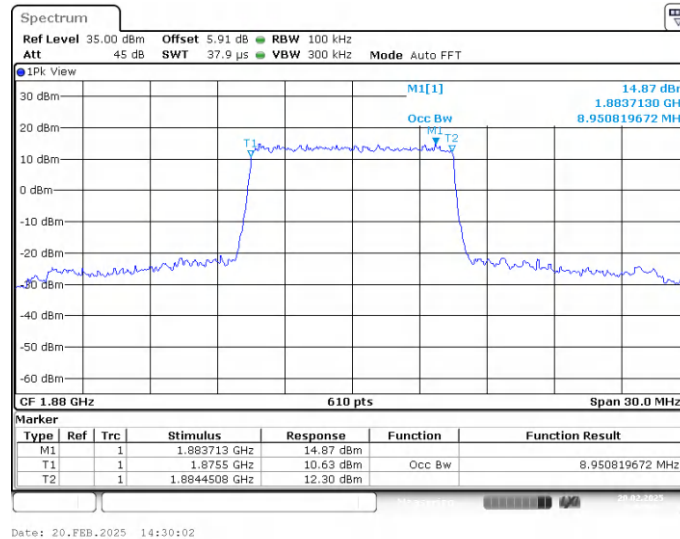
LTE band 2 , 5MHz Bandwidth,MID,16QAM (99% BW)



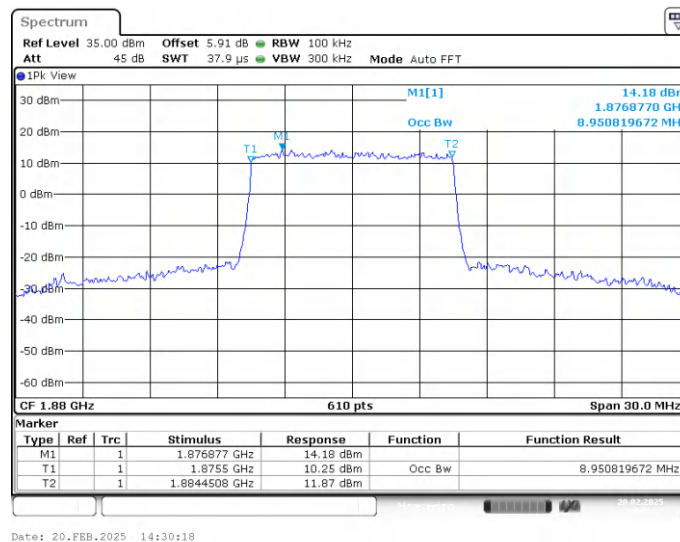
LTE band 2,10MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
1880	8.951	8.951

LTE band 2 , 10MHz Bandwidth,MID,QPSK (99% BW)



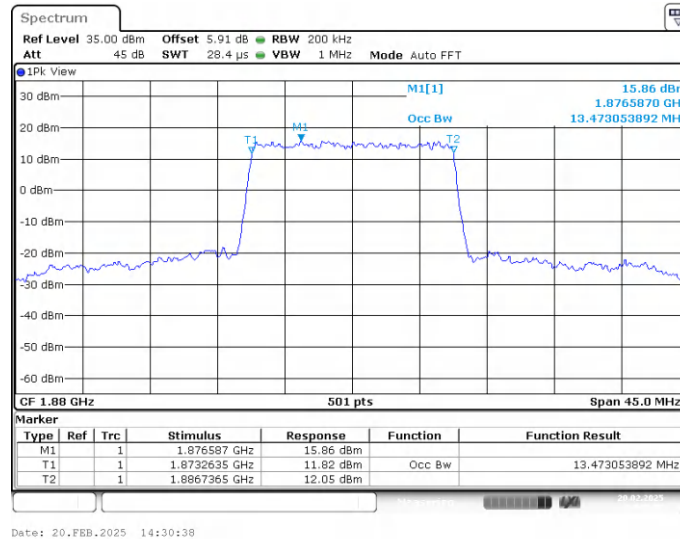
LTE band 2 , 10MHz Bandwidth,MID,16QAM (99% BW)



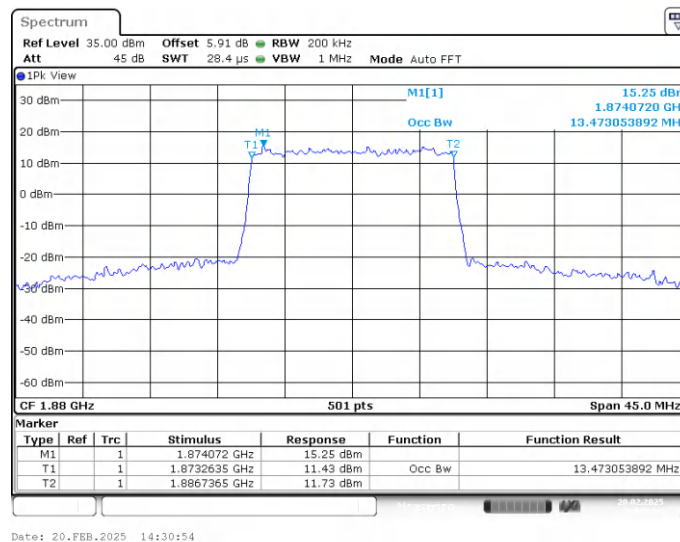
LTE band 2,15MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
1880	13.473	13.473

LTE band 2 , 15MHz Bandwidth,MID,QPSK (99% BW)



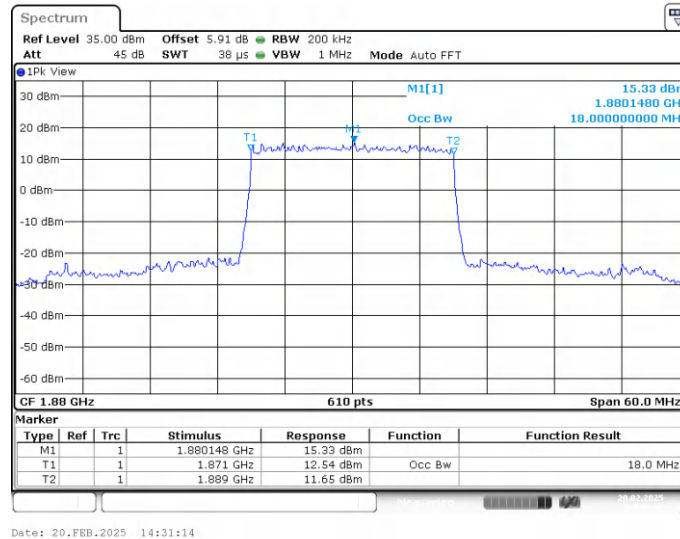
LTE band 2 , 15MHz Bandwidth,MID,16QAM (99% BW)



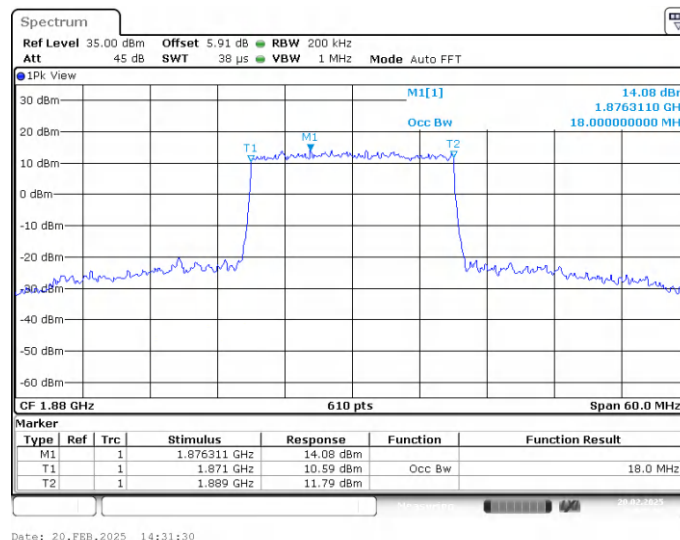
LTE band 2,20MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
1880	18.000	18.000

LTE band 2 , 20MHz Bandwidth,MID,QPSK (99% BW)



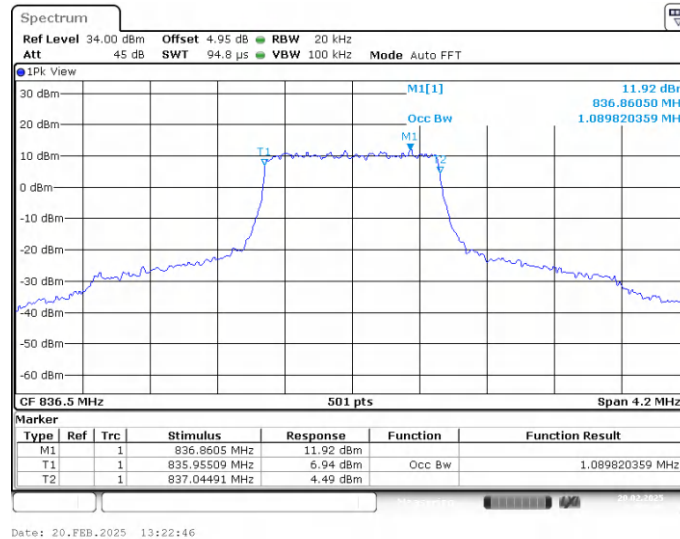
LTE band 2 , 20MHz Bandwidth,MID,16QAM (99% BW)



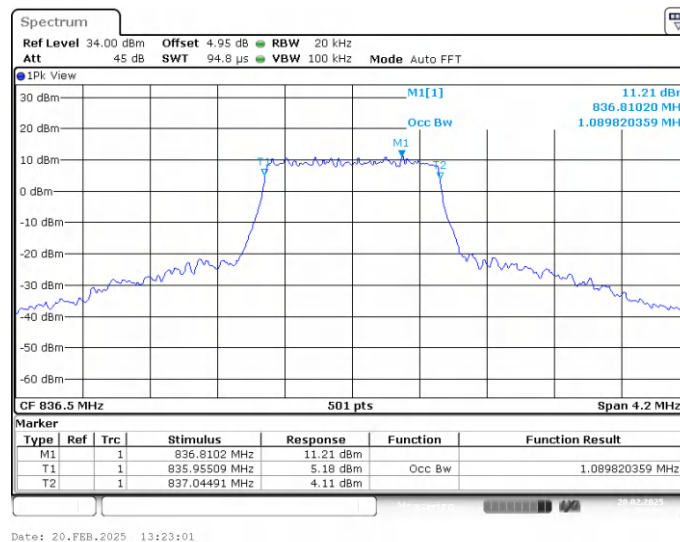
LTE band 5,1.4MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
836.5	1.090	1.090

LTE band 5 , 1.4MHz Bandwidth,MID,QPSK (99% BW)



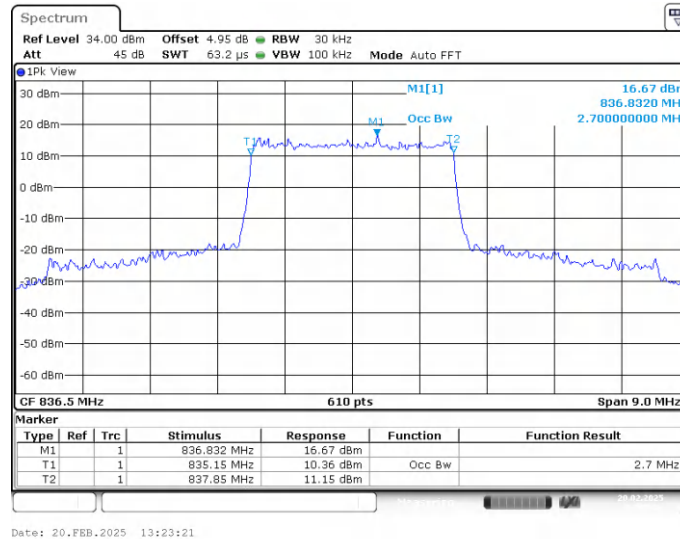
LTE band 5 , 1.4MHz Bandwidth,MID,16QAM (99% BW)



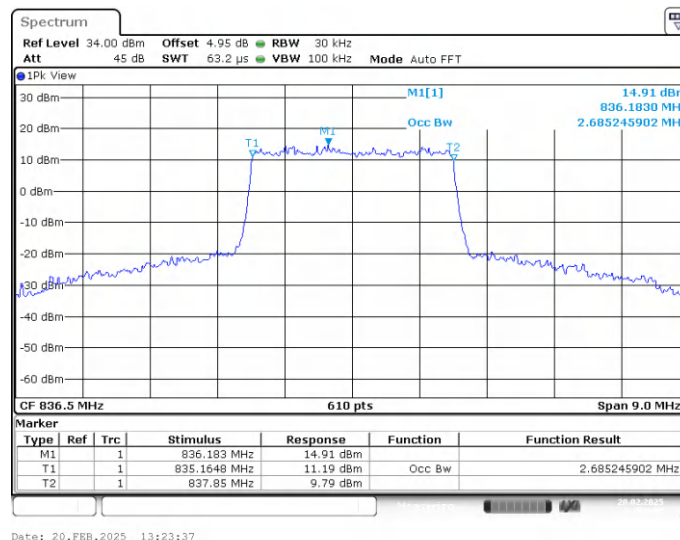
LTE band 5,3MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
836.5	2.700	2.685

LTE band 5 , 3MHz Bandwidth,MID,QPSK (99% BW)



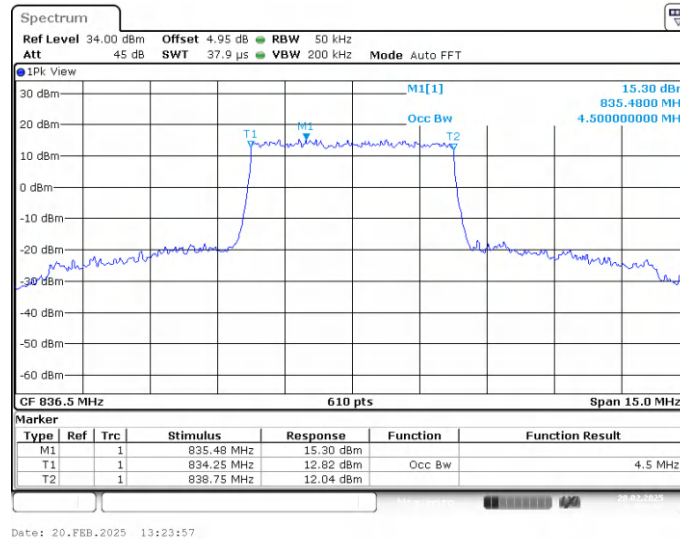
LTE band 5 , 3MHz Bandwidth,MID,16QAM (99% BW)



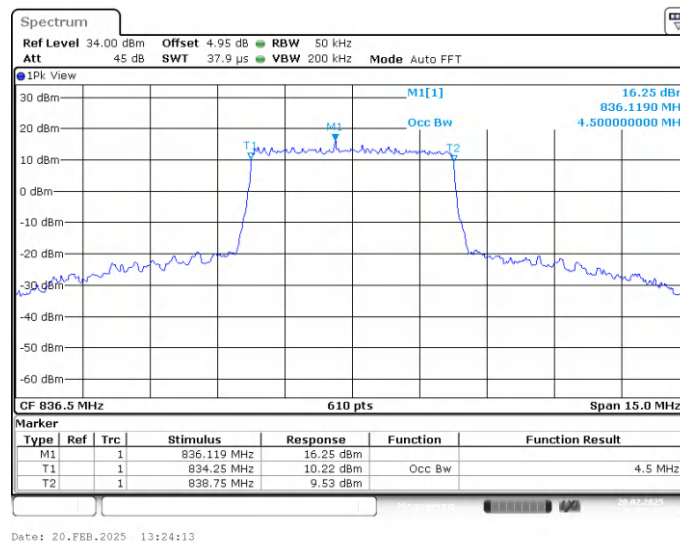
LTE band 5,5MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
836.5	4.500	4.500

LTE band 5 , 5MHz Bandwidth,MID,QPSK (99% BW)



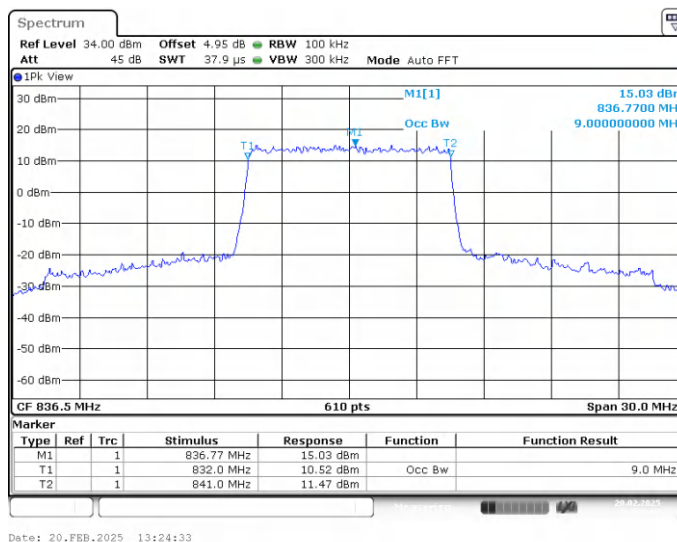
LTE band 5 , 5MHz Bandwidth,MID,16QAM (99% BW)



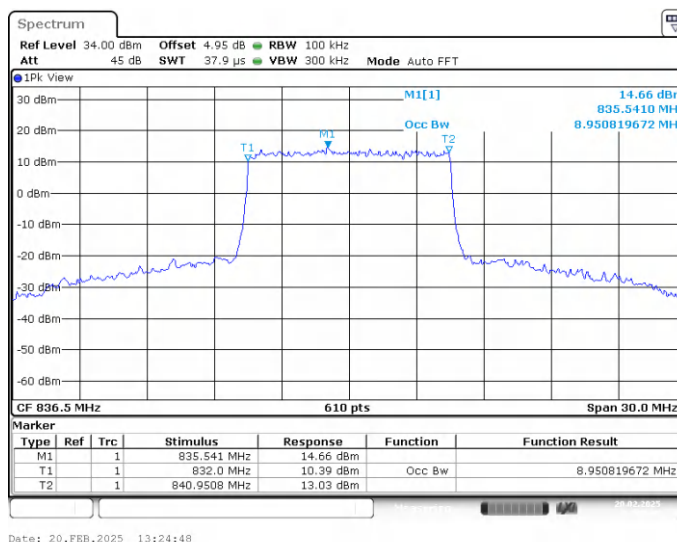
LTE band 5,10MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
836.5	9.000	8.951

LTE band 5 , 10MHz Bandwidth,MID,QPSK (99% BW)



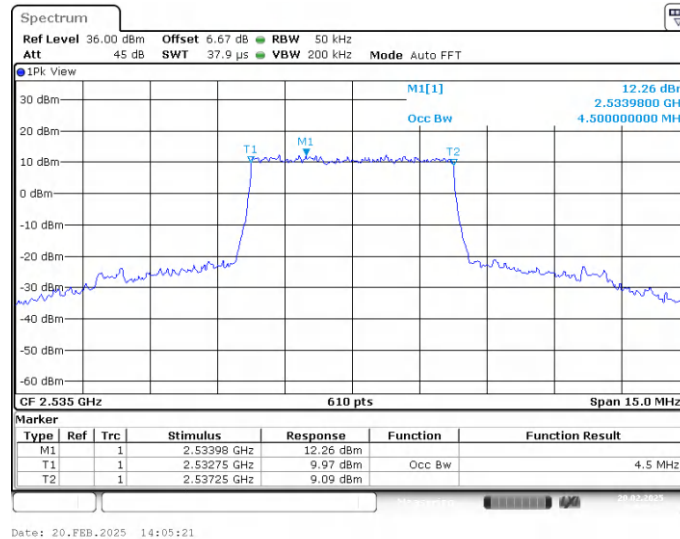
LTE band 5 , 10MHz Bandwidth,MID,16QAM (99% BW)



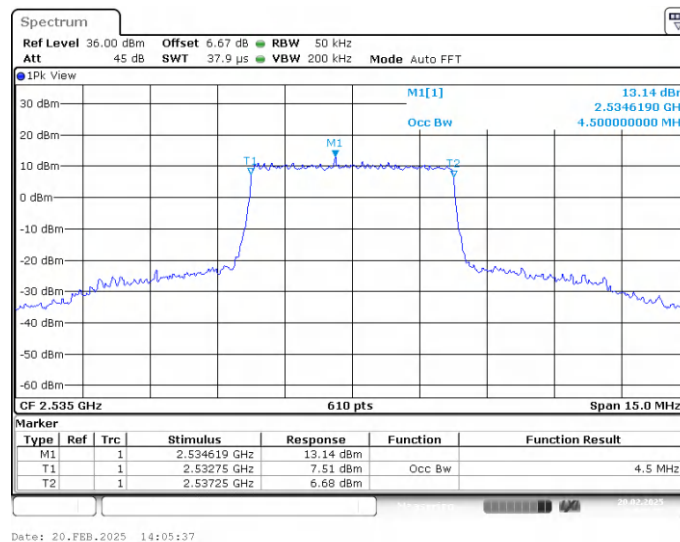
LTE band 7,5MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
2535	4.500	4.500

LTE band 7 , 5MHz Bandwidth,MID,QPSK (99% BW)



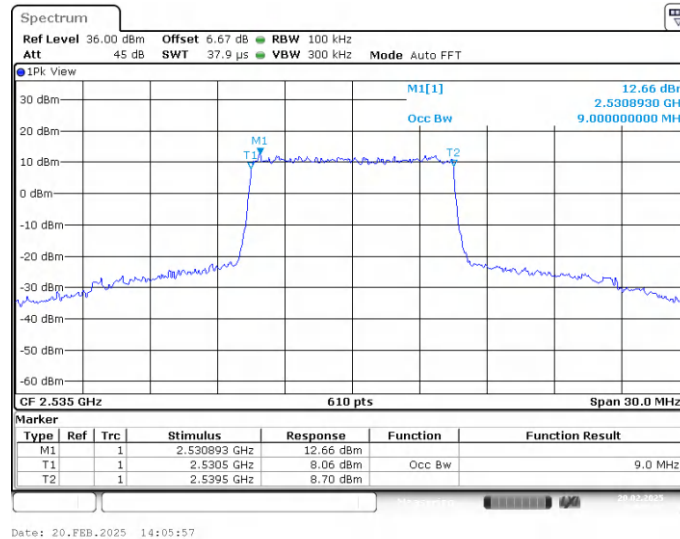
LTE band 7 , 5MHz Bandwidth,MID,16QAM (99% BW)



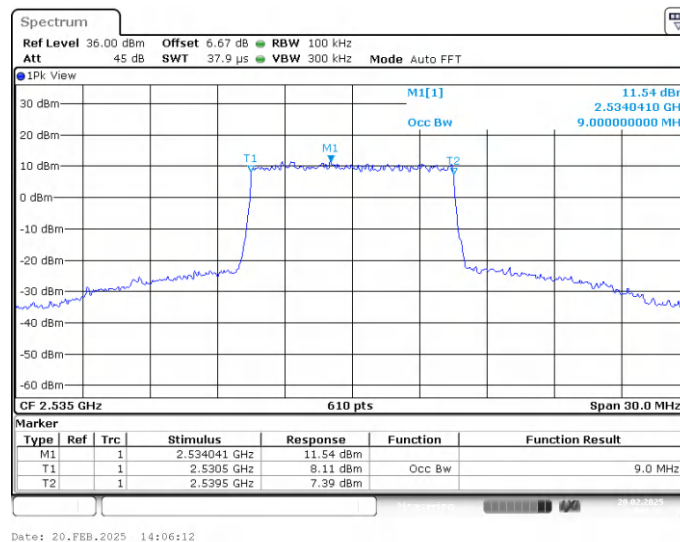
LTE band 7,10MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
2535	9.000	9.000

LTE band 7 , 10MHz Bandwidth,MID,QPSK (99% BW)



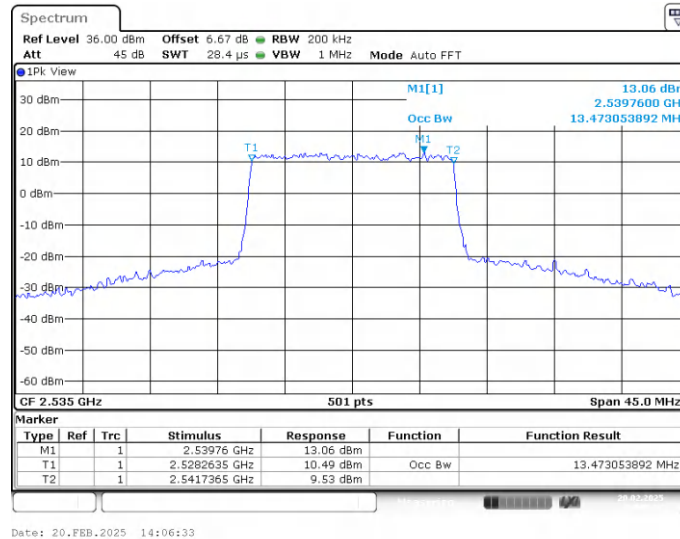
LTE band 7 , 10MHz Bandwidth,MID,16QAM (99% BW)



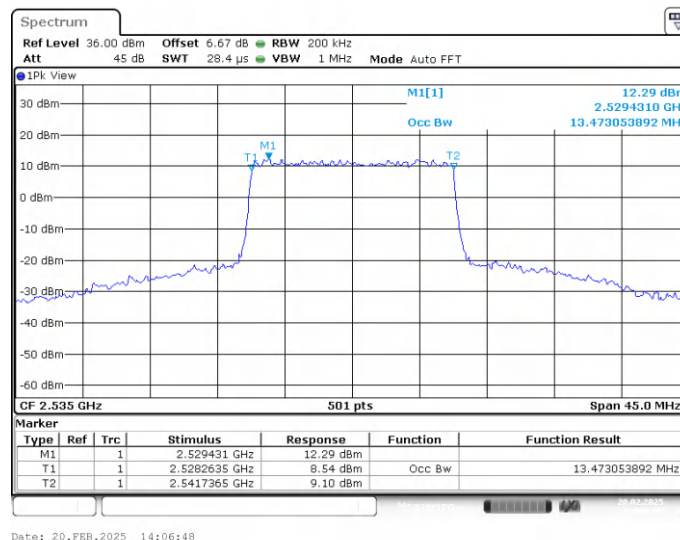
LTE band 7,15MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
2535	13.473	13.473

LTE band 7 , 15MHz Bandwidth,MID,QPSK (99% BW)



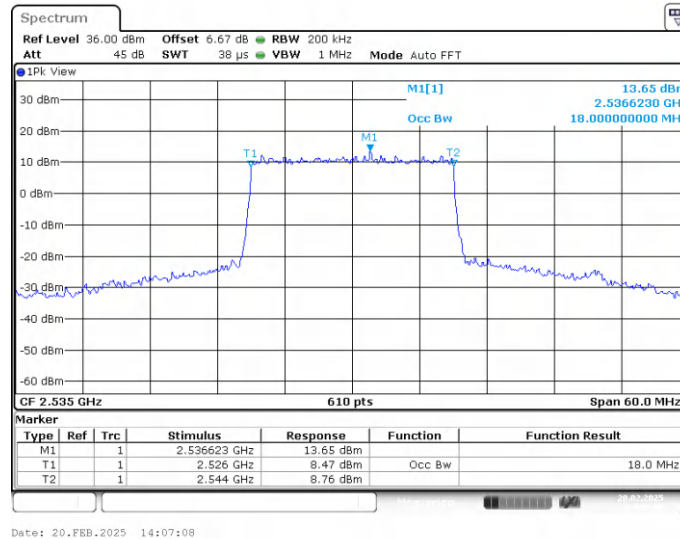
LTE band 7 , 15MHz Bandwidth,MID,16QAM (99% BW)



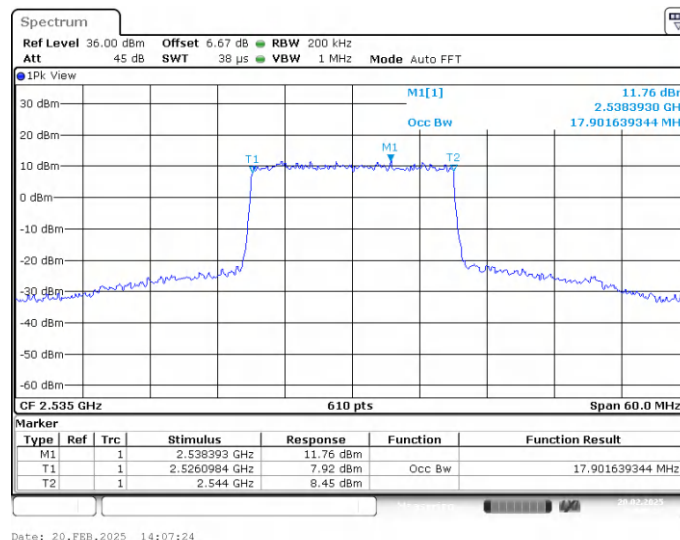
LTE band 7,20MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
2535	18.000	17.902

LTE band 7 , 20MHz Bandwidth,MID,QPSK (99% BW)



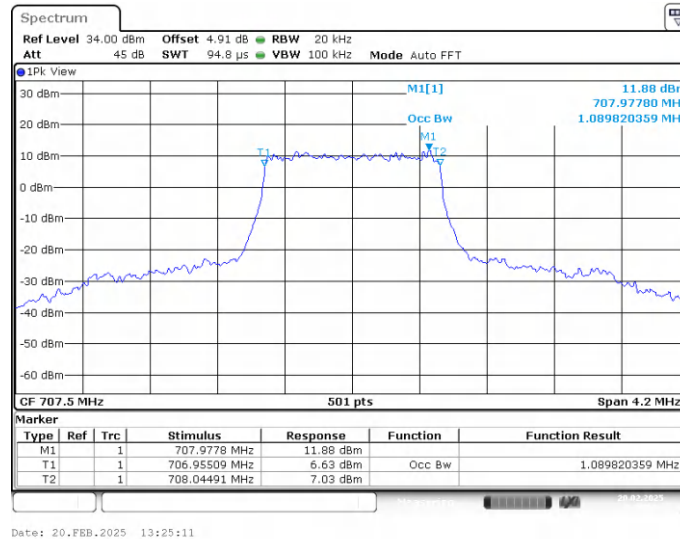
LTE band 7 , 20MHz Bandwidth,MID,16QAM (99% BW)



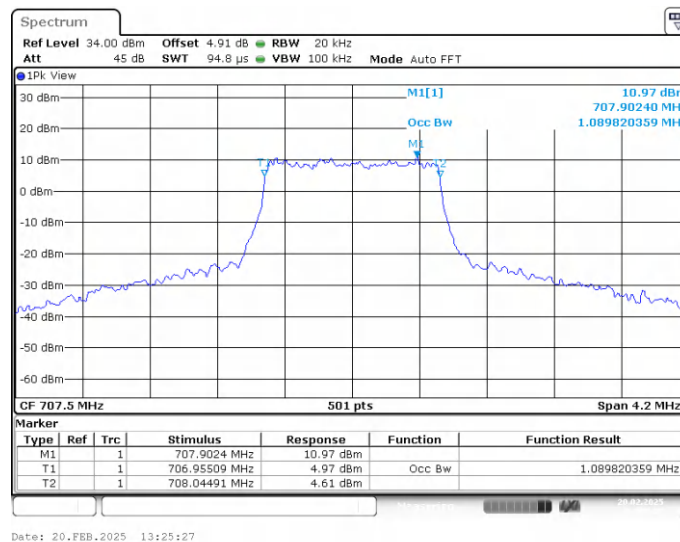
LTE band 12,1.4MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
707.5	1.090	1.090

LTE band 12 , 1.4MHz Bandwidth,MID,QPSK (99% BW)



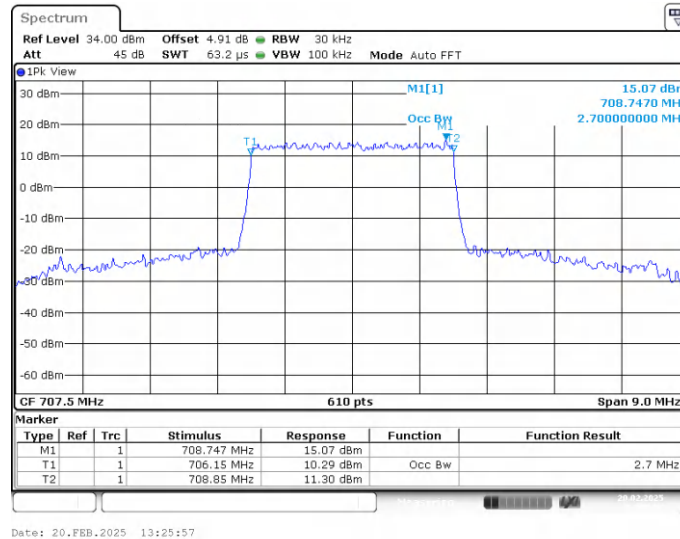
LTE band 12 , 1.4MHz Bandwidth,MID,16QAM (99% BW)



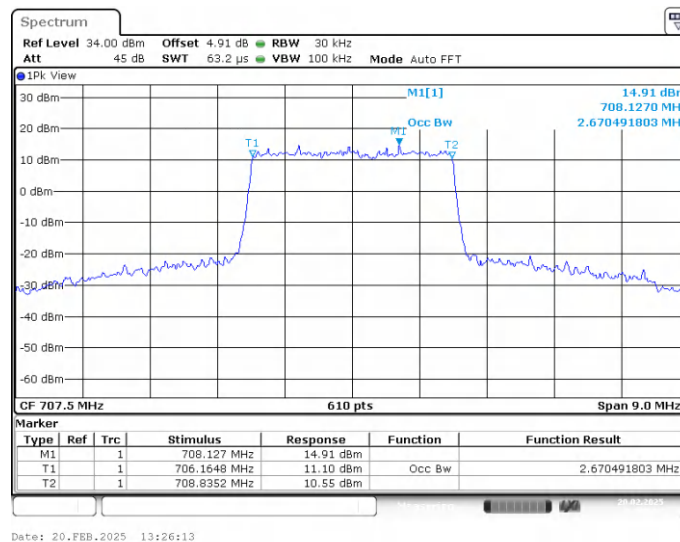
LTE band 12,3MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
707.5	2.700	2.670

LTE band 12 , 3MHz Bandwidth,MID,QPSK (99% BW)



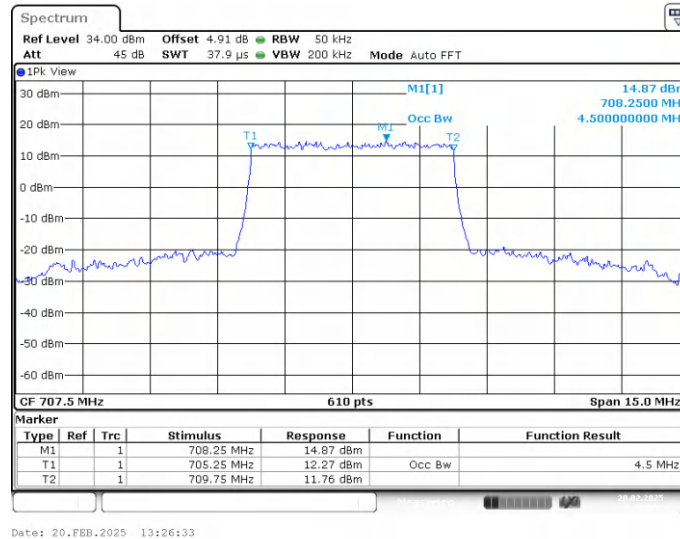
LTE band 12 , 3MHz Bandwidth,MID,16QAM (99% BW)



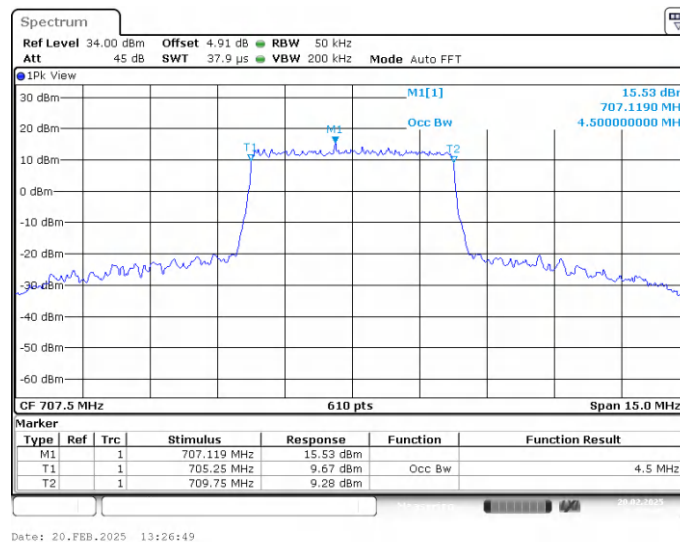
LTE band 12,5MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
707.5	4.500	4.500

LTE band 12 , 5MHz Bandwidth,MID,QPSK (99% BW)



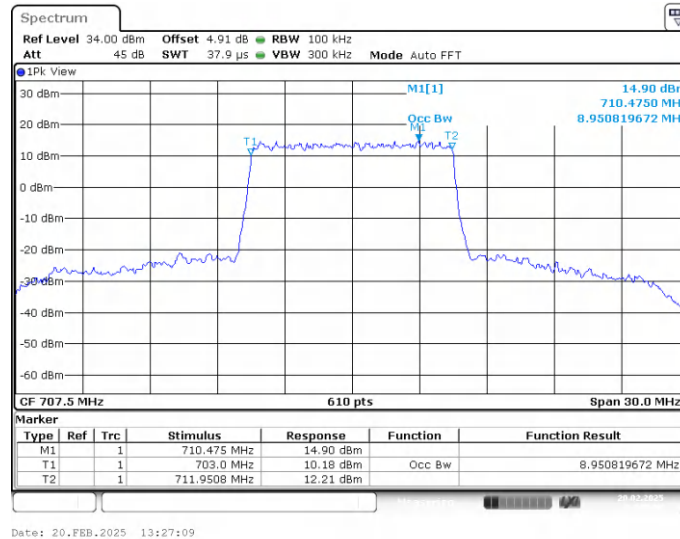
LTE band 12 , 5MHz Bandwidth,MID,16QAM (99% BW)



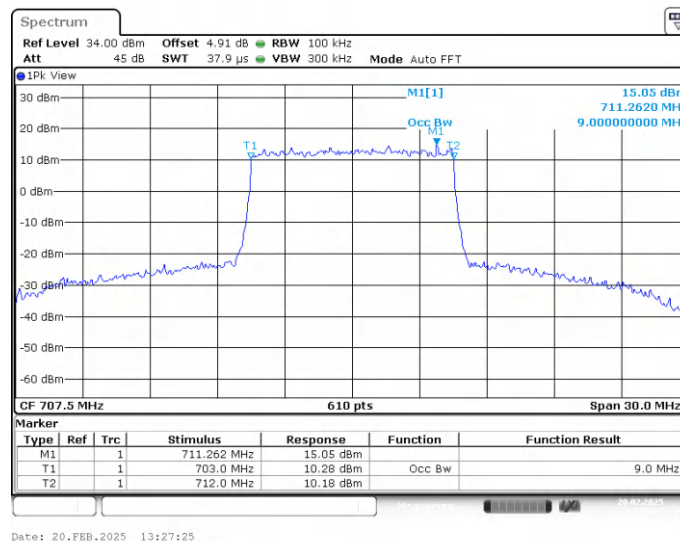
LTE band 12,10MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
707.5	8.951	9.000

LTE band 12 , 10MHz Bandwidth,MID,QPSK (99% BW)



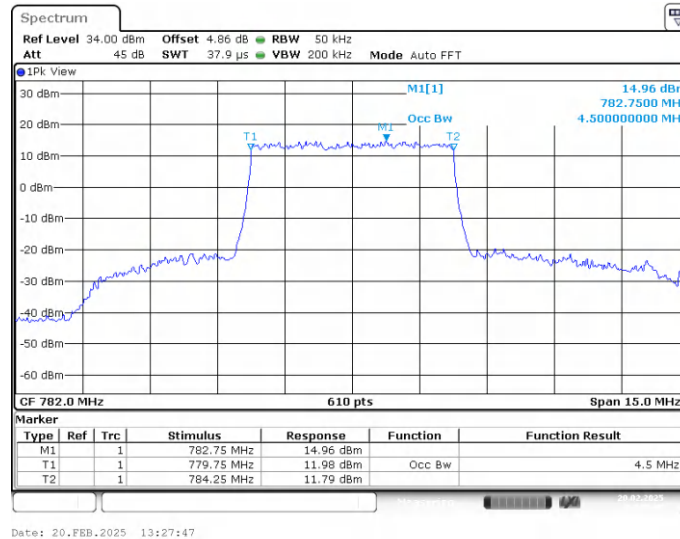
LTE band 12 , 10MHz Bandwidth,MID,16QAM (99% BW)



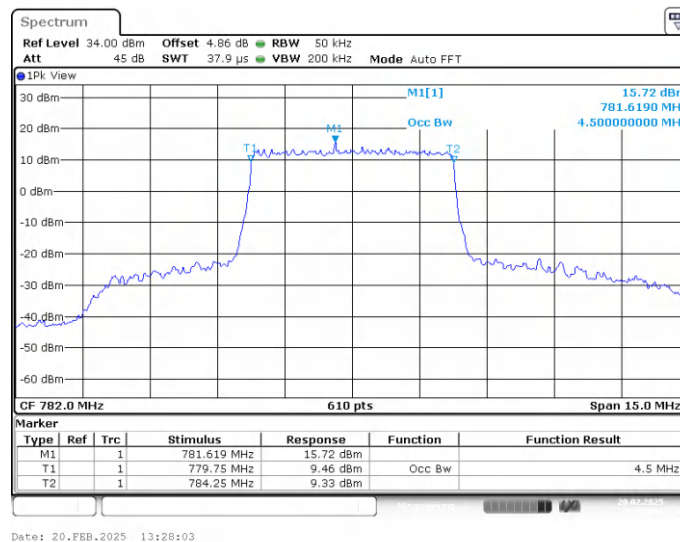
LTE band 13,5MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
782	4.500	4.500

LTE band 13 , 5MHz Bandwidth,MID,QPSK (99% BW)



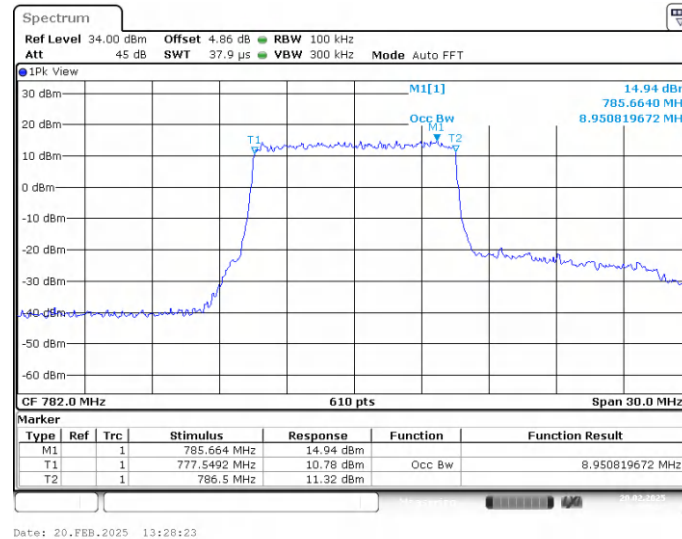
LTE band 13 , 5MHz Bandwidth,MID,16QAM (99% BW)



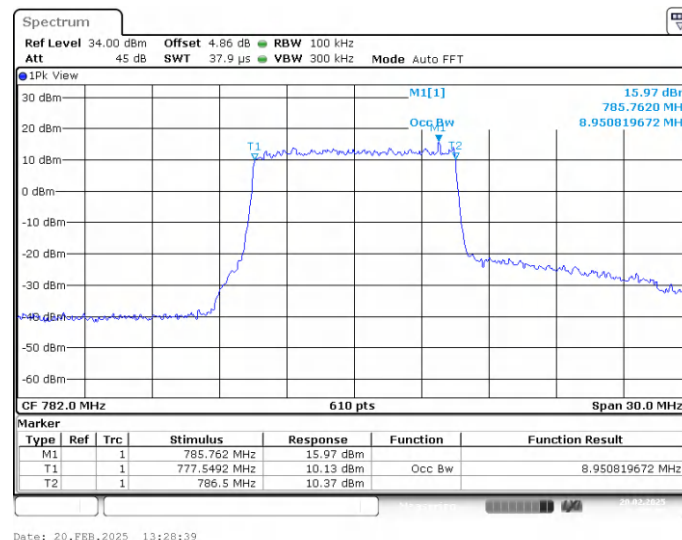
LTE band 13,10MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
782	8.951	8.951

LTE band 13 , 10MHz Bandwidth,MID,QPSK (99% BW)



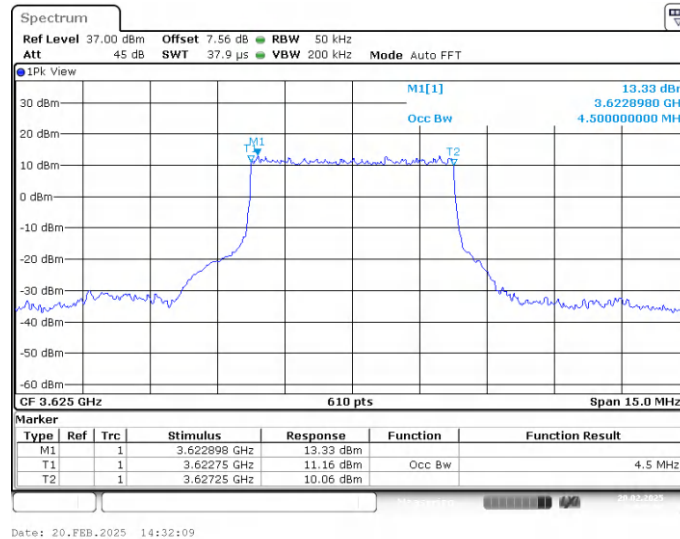
LTE band 13 , 10MHz Bandwidth,MID,16QAM (99% BW)



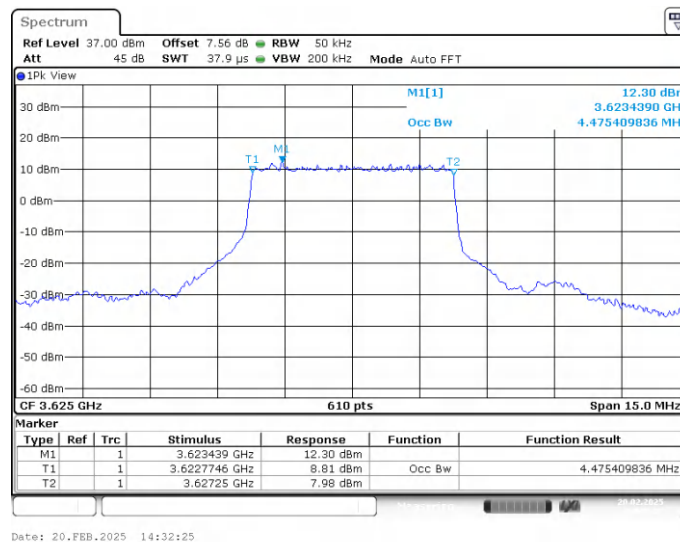
LTE band 48,5MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
3625	4.500	4.475

LTE band 48 , 5MHz Bandwidth,MID,QPSK (99% BW)



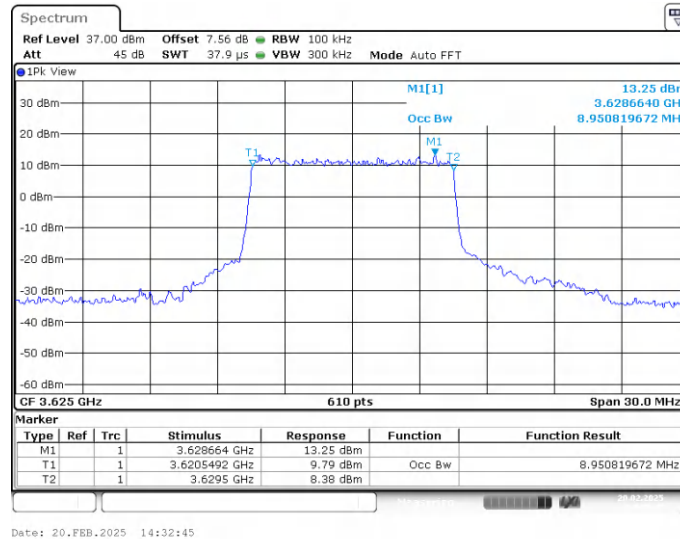
LTE band 48 , 5MHz Bandwidth,MID,16QAM (99% BW)



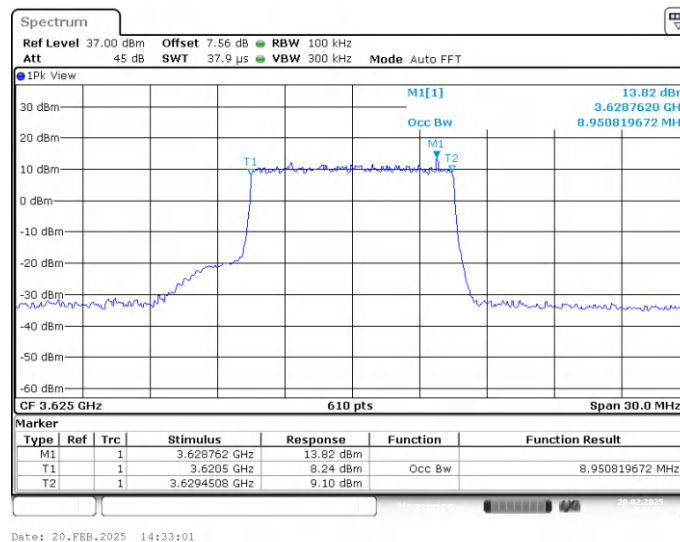
LTE band 48,10MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
3625	8.951	8.951

LTE band 48 , 10MHz Bandwidth,MID,QPSK (99% BW)



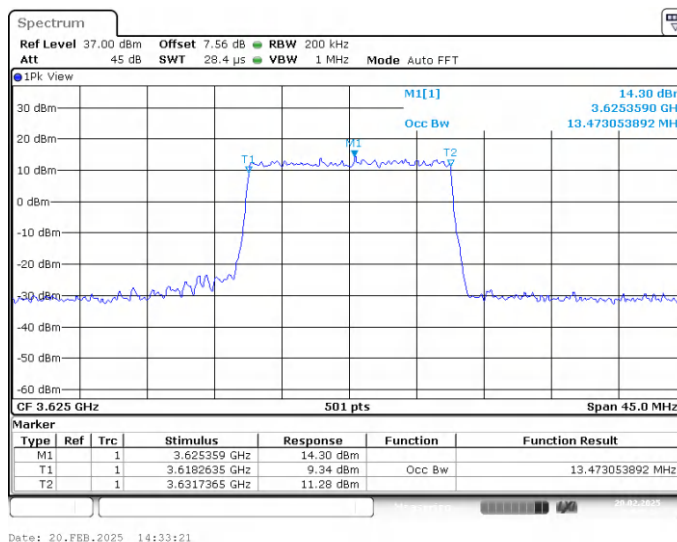
LTE band 48 , 10MHz Bandwidth,MID,16QAM (99% BW)



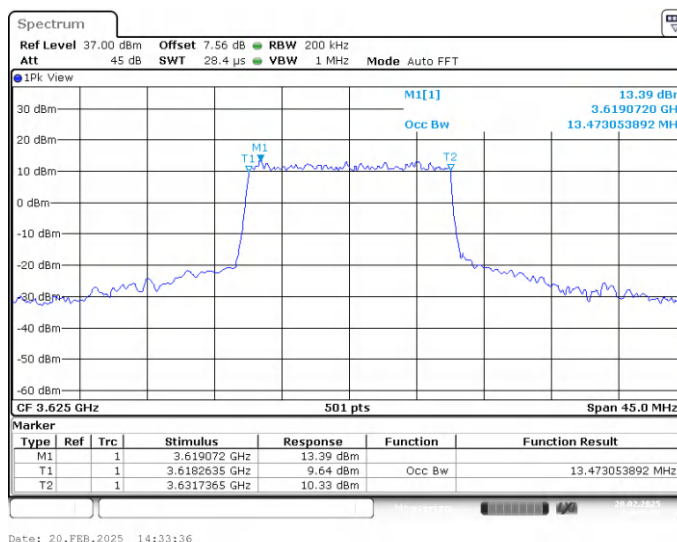
LTE band 48,15MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
3625	13.473	13.473

LTE band 48 , 15MHz Bandwidth,MID,QPSK (99% BW)



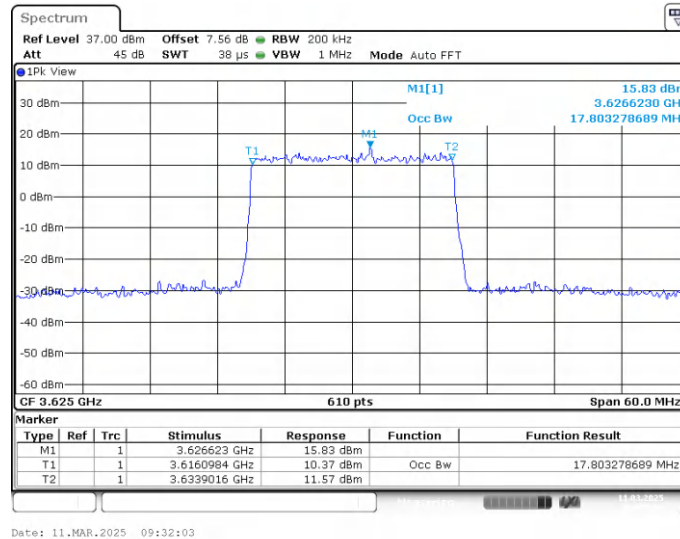
LTE band 48 , 15MHz Bandwidth,MID,16QAM (99% BW)



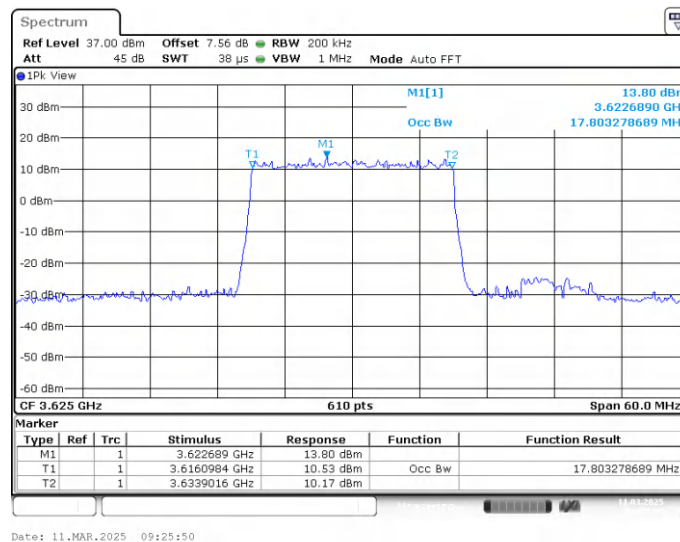
LTE band 48,20MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
3625	17.803	17.803

LTE band 48 , 20MHz Bandwidth,MID,QPSK (99% BW)



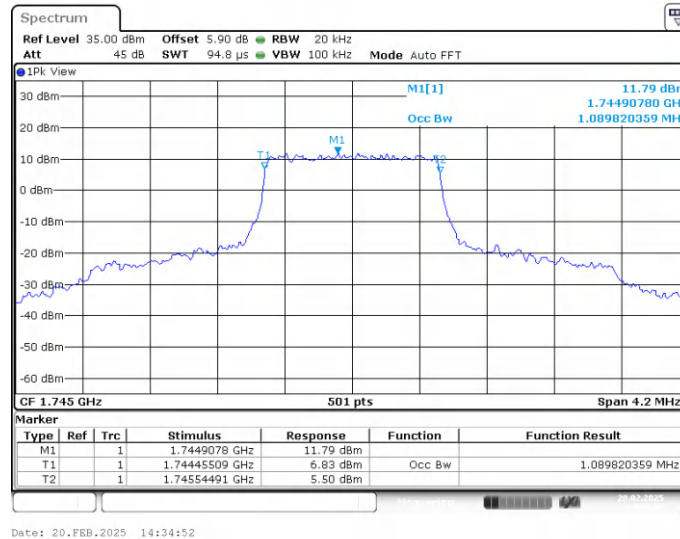
LTE band 48 , 20MHz Bandwidth,MID,16QAM (99% BW)



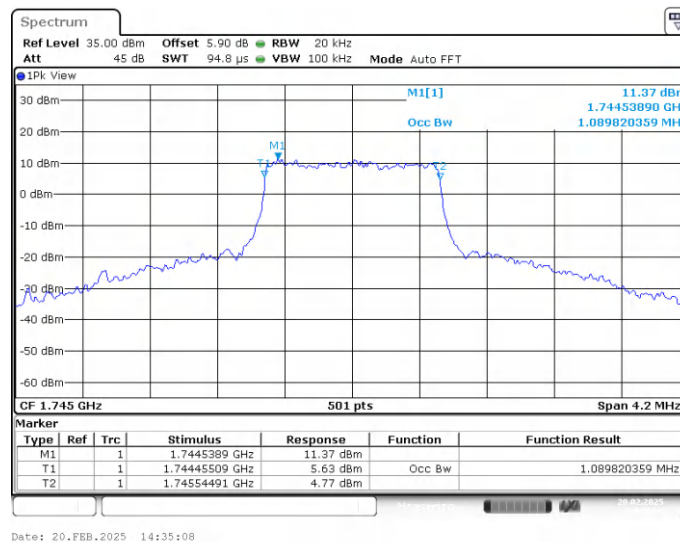
LTE band 66,1.4MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
1745	1.090	1.090

LTE band 66 , 1.4MHz Bandwidth,MID,QPSK (99% BW)



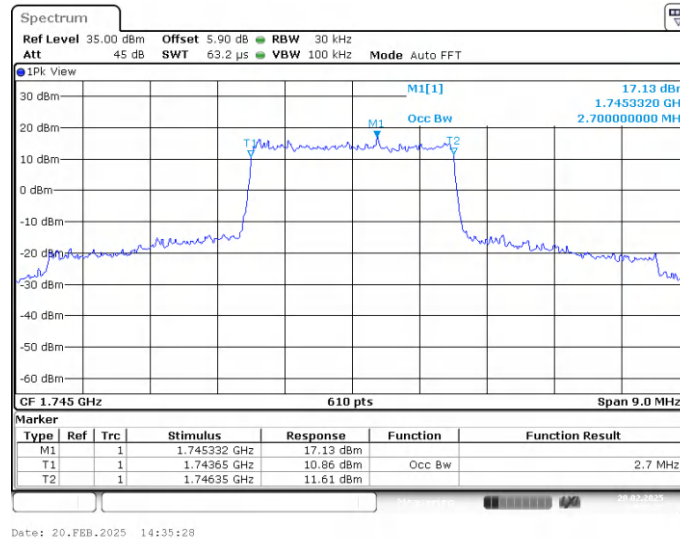
LTE band 66 , 1.4MHz Bandwidth,MID,16QAM (99% BW)



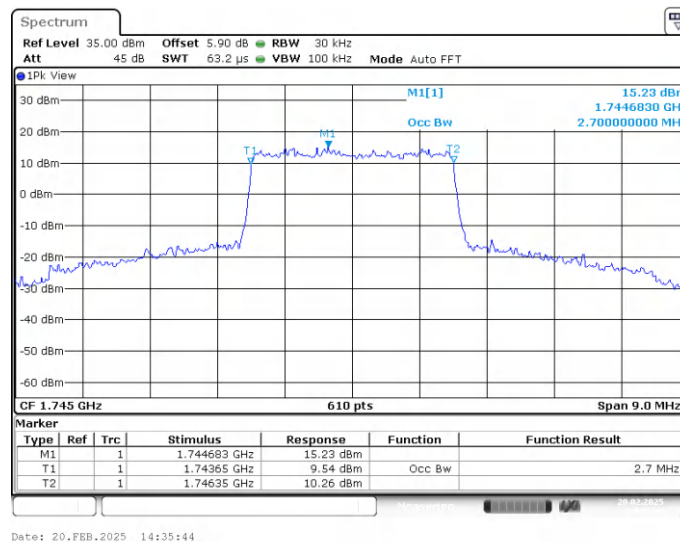
LTE band 66,3MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
1745	2.700	2.700

LTE band 66 , 3MHz Bandwidth,MID,QPSK (99% BW)



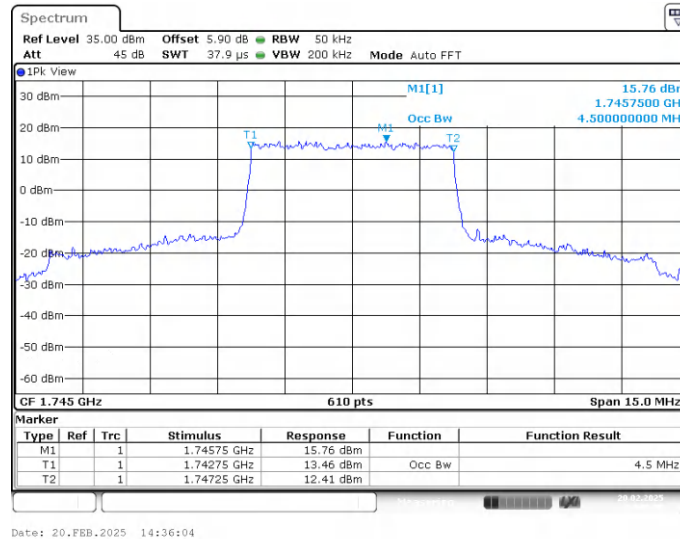
LTE band 66 , 3MHz Bandwidth,MID,16QAM (99% BW)



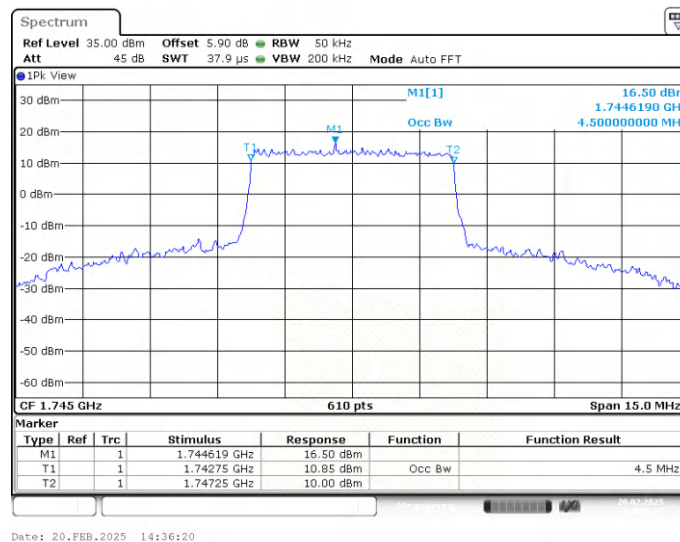
LTE band 66,5MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
1745	4.500	4.500

LTE band 66 , 5MHz Bandwidth,MID,QPSK (99% BW)



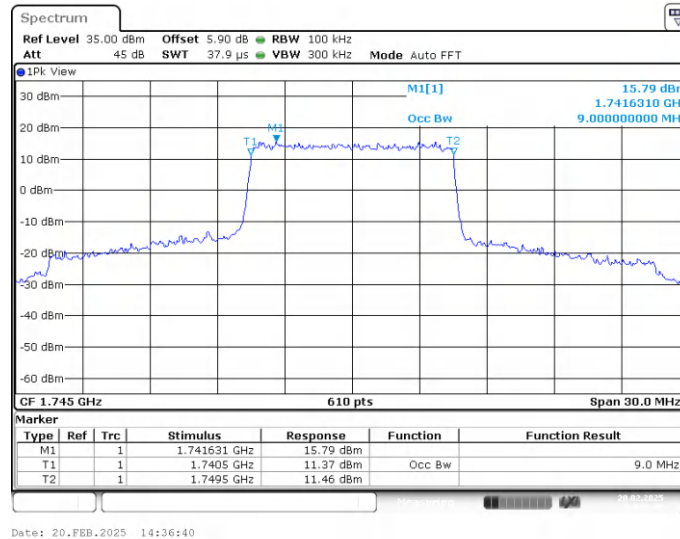
LTE band 66 , 5MHz Bandwidth,MID,16QAM (99% BW)



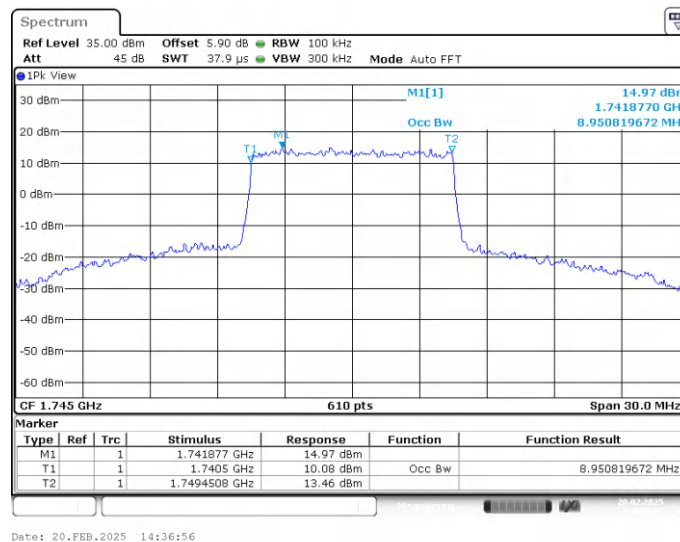
LTE band 66,10MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
1745	9.000	8.951

LTE band 66 , 10MHz Bandwidth,MID,QPSK (99% BW)



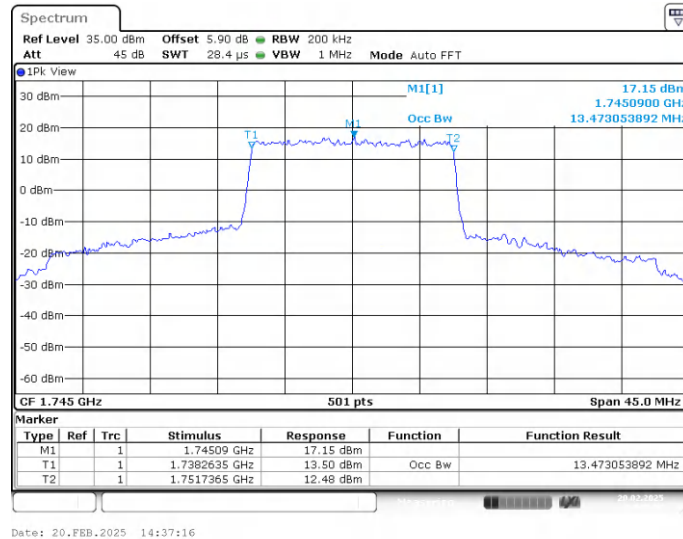
LTE band 66 , 10MHz Bandwidth,MID,16QAM (99% BW)



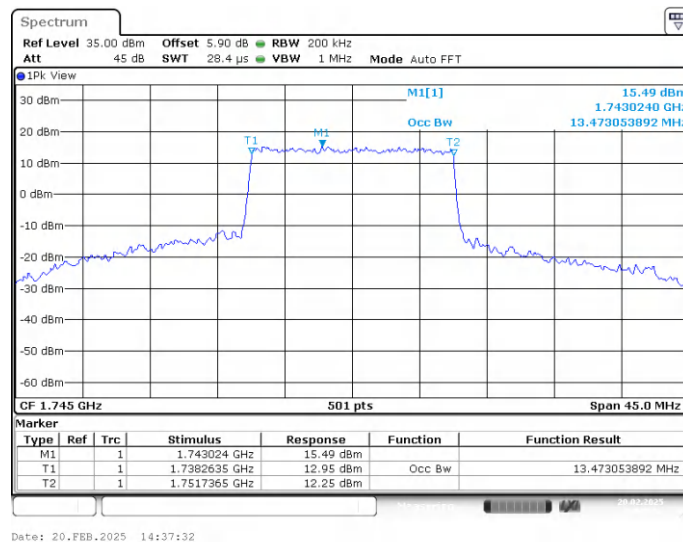
LTE band 66,15MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
1745	13.473	13.473

LTE band 66 , 15MHz Bandwidth,MID,QPSK (99% BW)



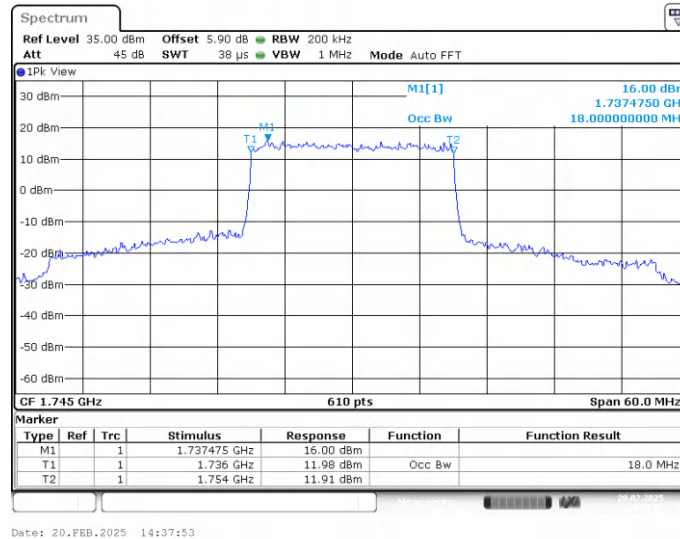
LTE band 66 , 15MHz Bandwidth,MID,16QAM (99% BW)



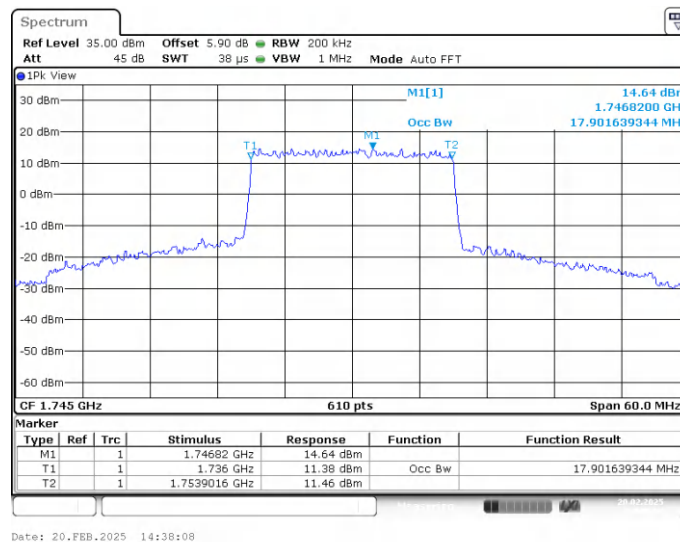
LTE band 66,20MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%)(MHz)	
	QPSK	16QAM
1745	18.000	17.902

LTE band 66 , 20MHz Bandwidth,MID,QPSK (99% BW)



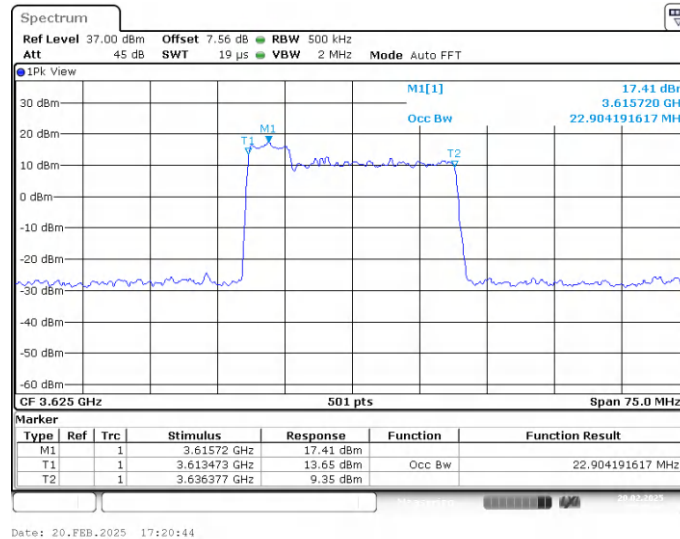
LTE band 66 , 20MHz Bandwidth,MID,16QAM (99% BW)



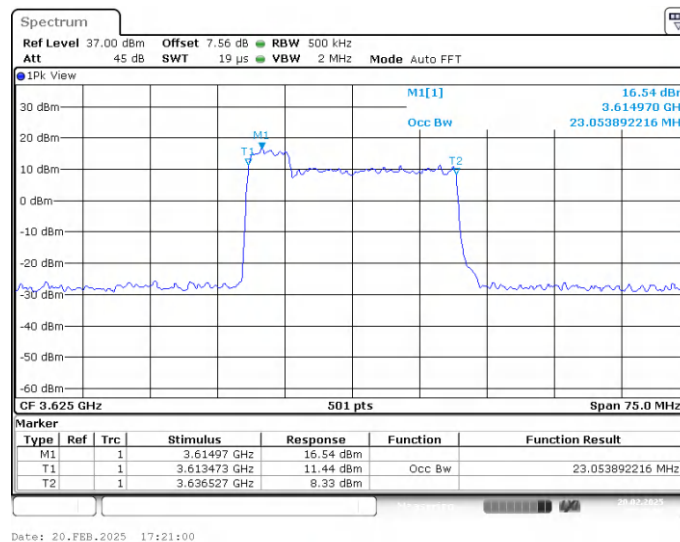
LTE CA band 48C, 5MHz+20MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
3625.0	22.904	23.054

LTE CA band 48C , 5MHz+20MHz Bandwidth,QPSK (99% BW)



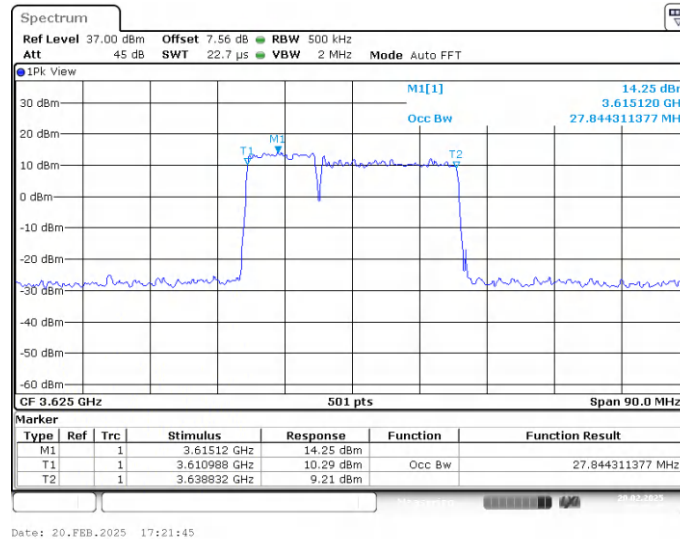
LTE CA band 48C , 5MHz+20MHz Bandwidth,16QAM (99% BW)



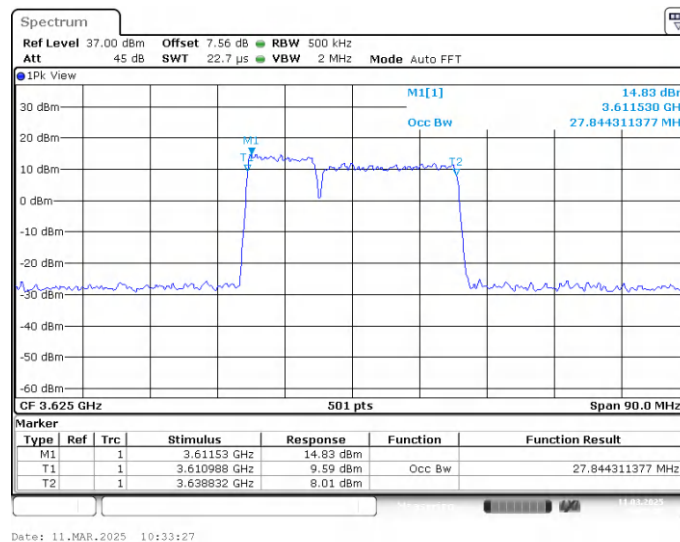
LTE CA band 48C, 10MHz+20MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
3625.0	27.844	27.844

LTE CA band 48C , 10MHz+20MHz Bandwidth,QPSK (99% BW)



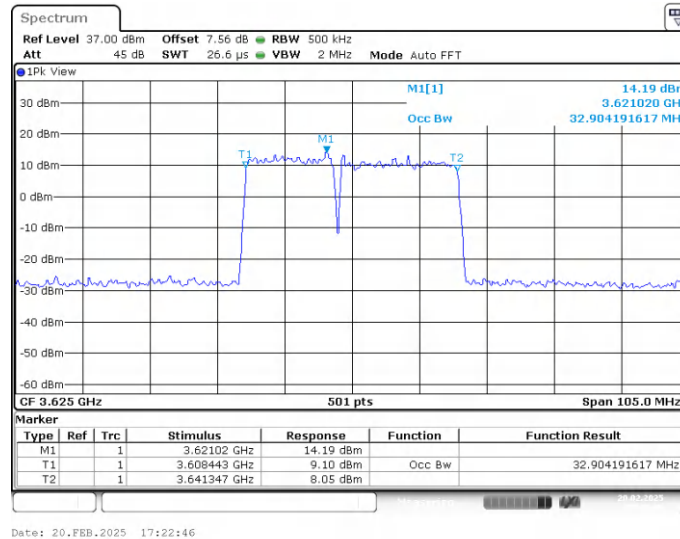
LTE CA band 48C , 10MHz+20MHz Bandwidth,16QAM (99% BW)



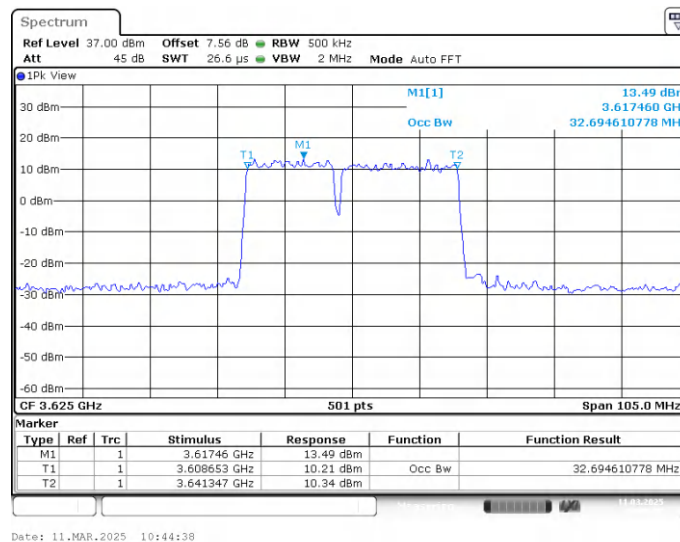
LTE CA band 48C, 15MHz+20MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
3625.0	32.904	32.695

LTE CA band 48C , 15MHz+20MHz Bandwidth,QPSK (99% BW)



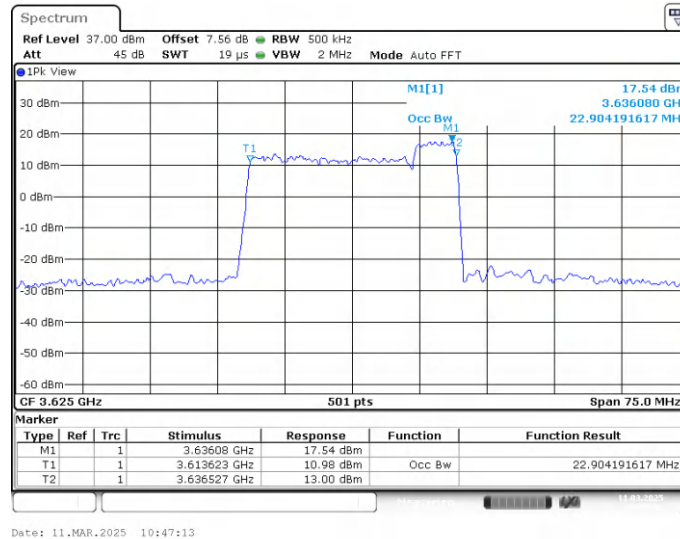
LTE CA band 48C , 15MHz+20MHz Bandwidth,16QAM (99% BW)



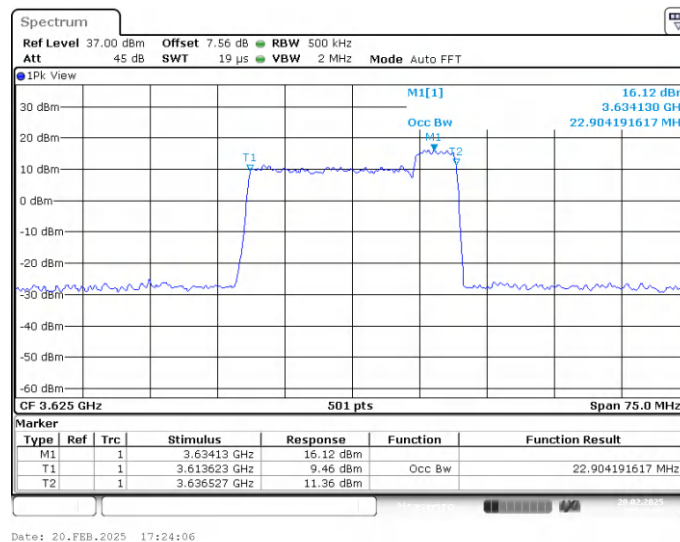
LTE CA band 48C, 20MHz+5MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
3625.0	22.904	22.904

LTE CA band 48C , 20MHz+5MHz Bandwidth,QPSK (99% BW)



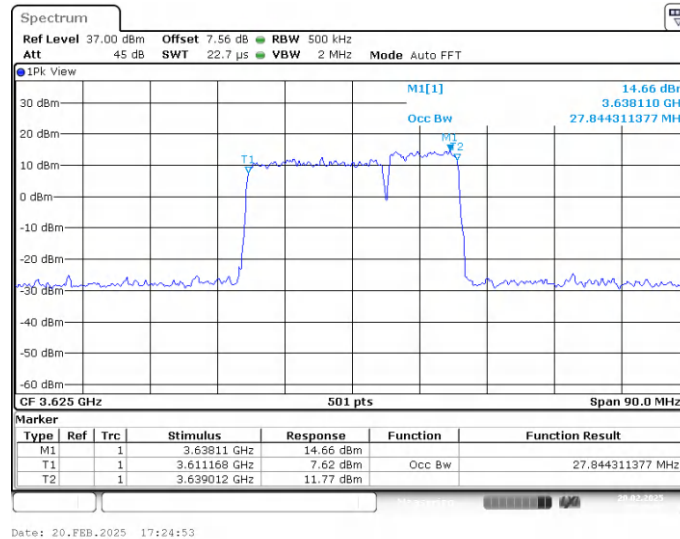
LTE CA band 48C , 20MHz+5MHz Bandwidth,16QAM (99% BW)



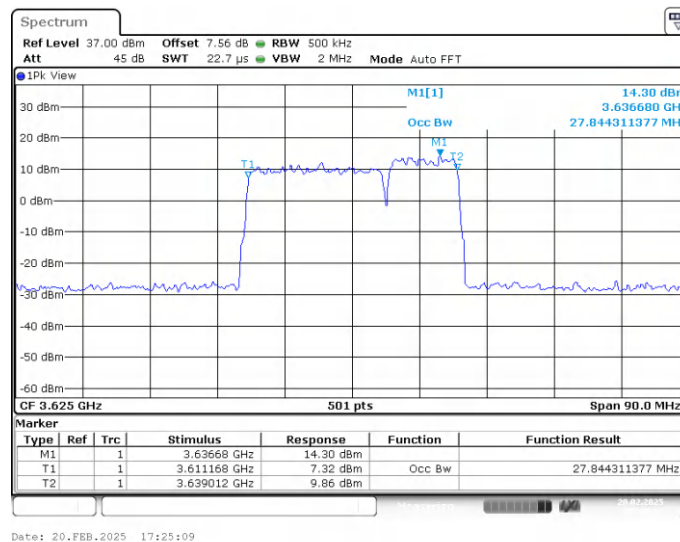
LTE CA band 48C, 20MHz+10MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
3625.0	27.844	27.844

LTE CA band 48C , 20MHz+10MHz Bandwidth,QPSK (99% BW)



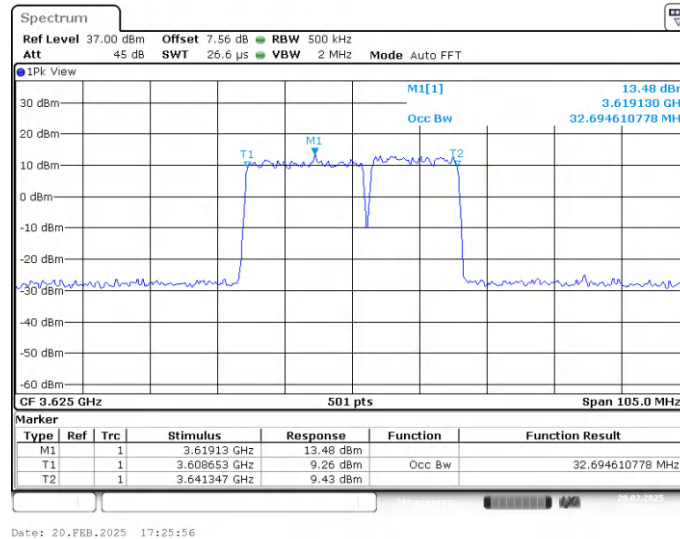
LTE CA band 48C , 20MHz+10MHz Bandwidth,16QAM (99% BW)



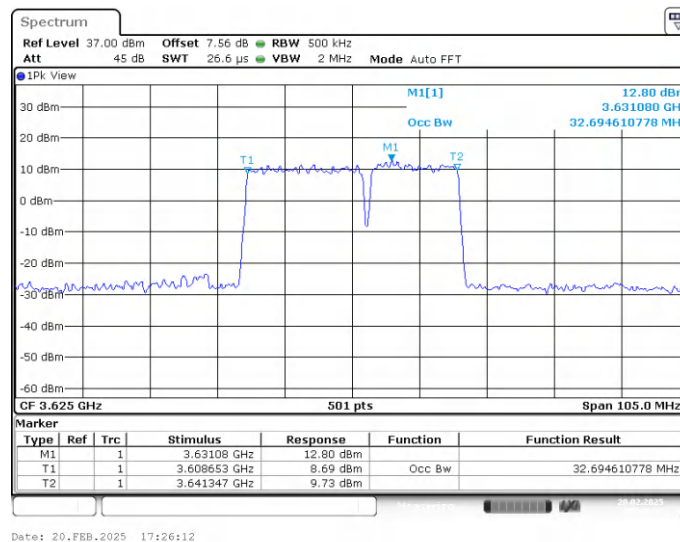
LTE CA band 48C, 20MHz+15MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
3625.0	32.695	32.695

LTE CA band 48C , 20MHz+15MHz Bandwidth,QPSK (99% BW)



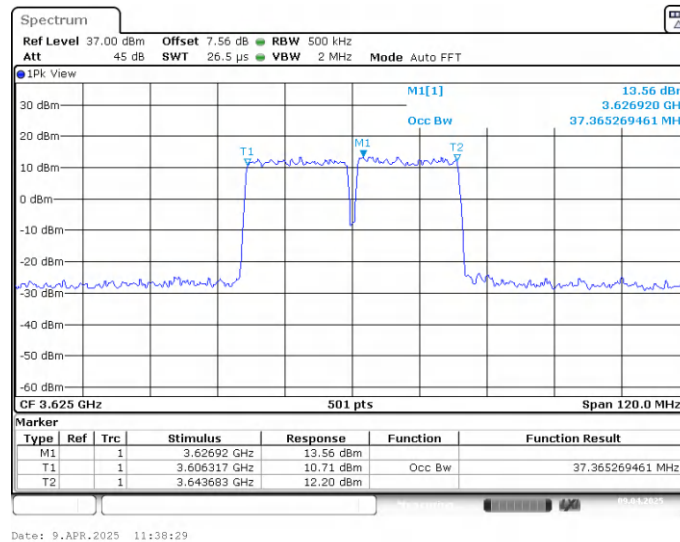
LTE CA band 48C , 20MHz+15MHz Bandwidth,16QAM (99% BW)



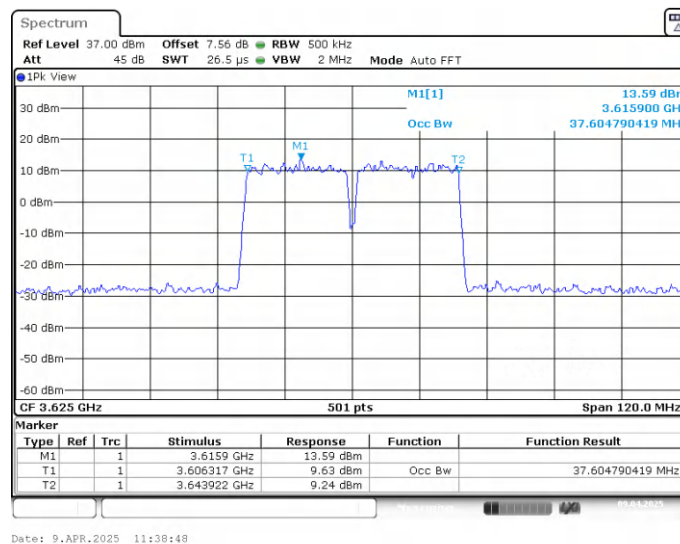
LTE CA band 48C, 20MHz+20MHz(99%)

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)	
	QPSK	16QAM
3625.0	37.365	37.605

LTE CA band 48C , 20MHz+20MHz Bandwidth,QPSK (99% BW)



LTE CA band 48C , 20MHz+20MHz Bandwidth,16QAM (99% BW)



A.5 Emission Bandwidth

The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

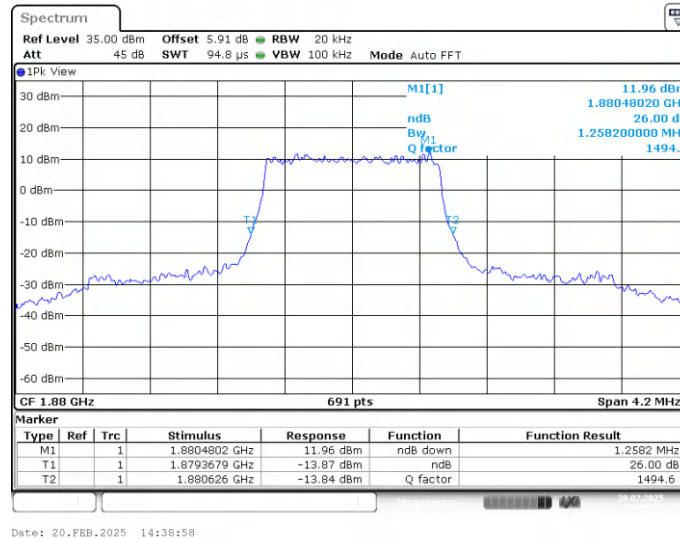
The measurement method is from ANSI C63.26:

- 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 $\geq 3 \times \text{RBW}$.
- 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.
- 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.

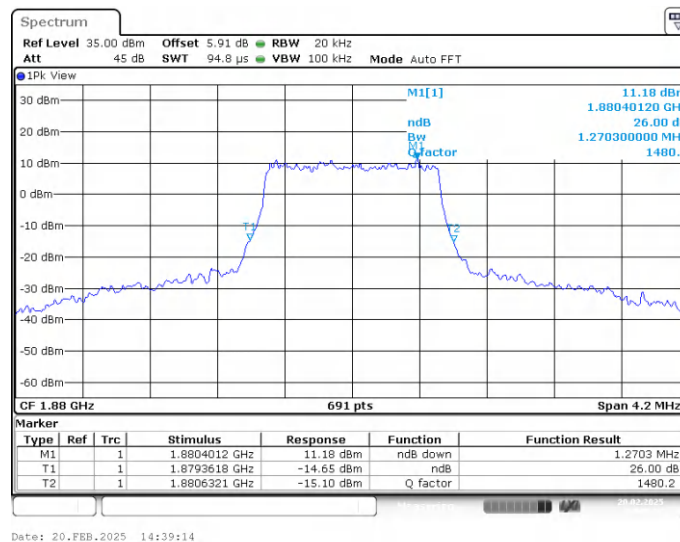
LTE band 2,1.4MHz(-26dBc)

Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	QPSK	16QAM
1880	1.258	1.270

LTE band 2 , 1.4MHz Bandwidth,MID,QPSK (-26dBc BW)



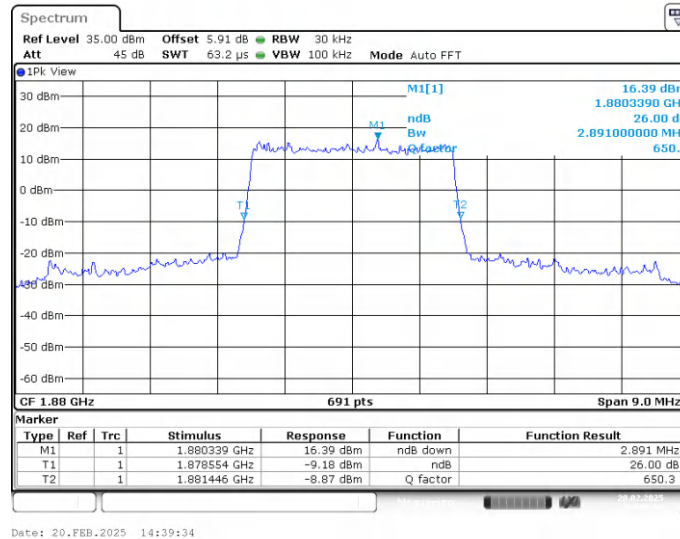
LTE band 2 , 1.4MHz Bandwidth,MID,16QAM (-26dBc BW)



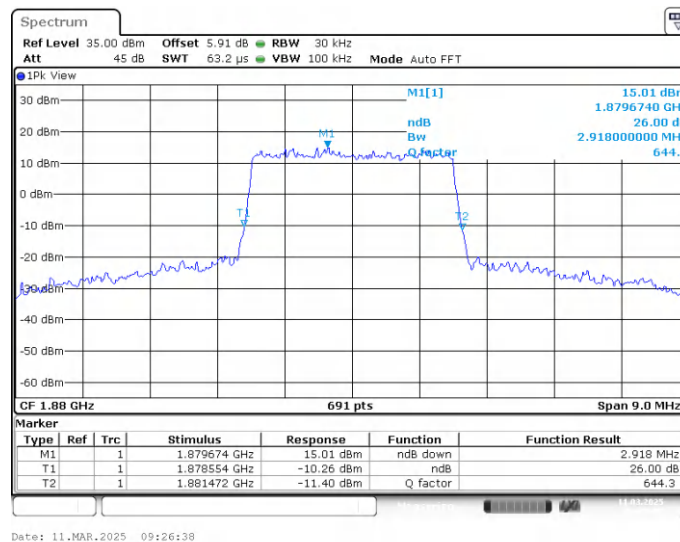
LTE band 2,3MHz(-26dBc)

Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	QPSK	16QAM
1880	2.891	2.918

LTE band 2 , 3MHz Bandwidth,MID,QPSK (-26dBc BW)



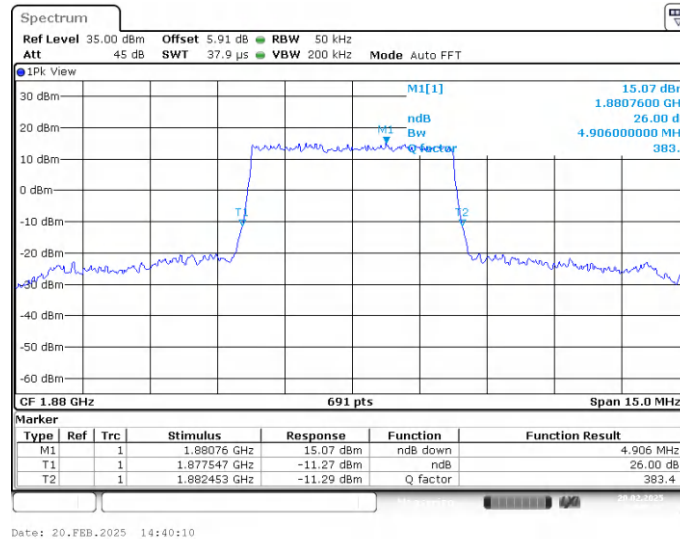
LTE band 2 , 3MHz Bandwidth,MID,16QAM (-26dBc BW)



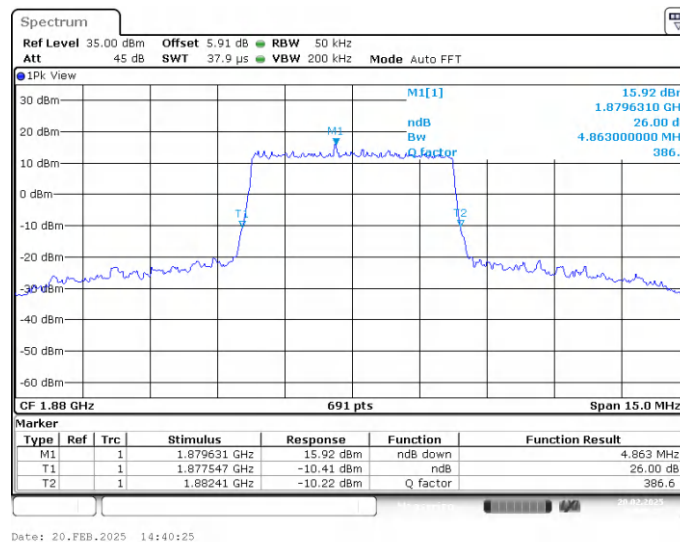
LTE band 2,5MHz(-26dBc)

Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	QPSK	16QAM
1880	4.906	4.863

LTE band 2 , 5MHz Bandwidth,MID,QPSK (-26dBc BW)



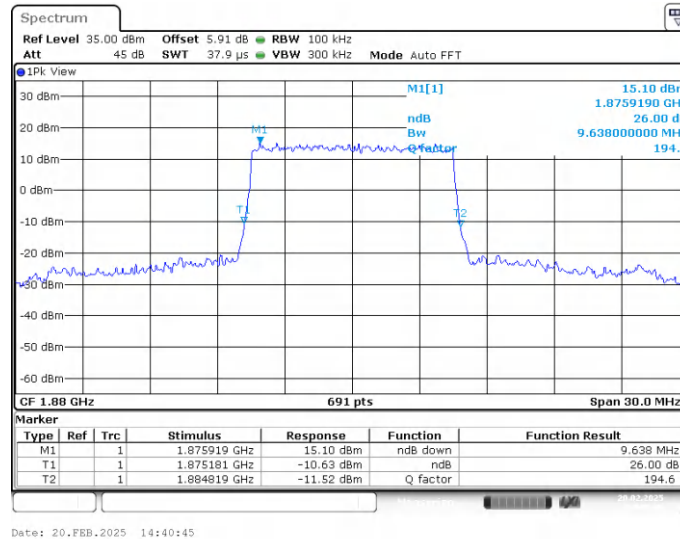
LTE band 2 , 5MHz Bandwidth,MID,16QAM (-26dBc BW)



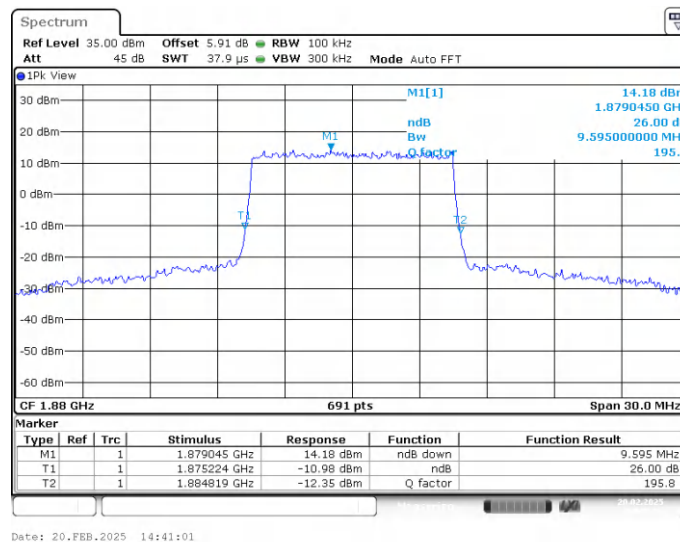
LTE band 2,10MHz(-26dBc)

Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	QPSK	16QAM
1880	9.638	9.595

LTE band 2 , 10MHz Bandwidth,MID,QPSK (-26dBc BW)



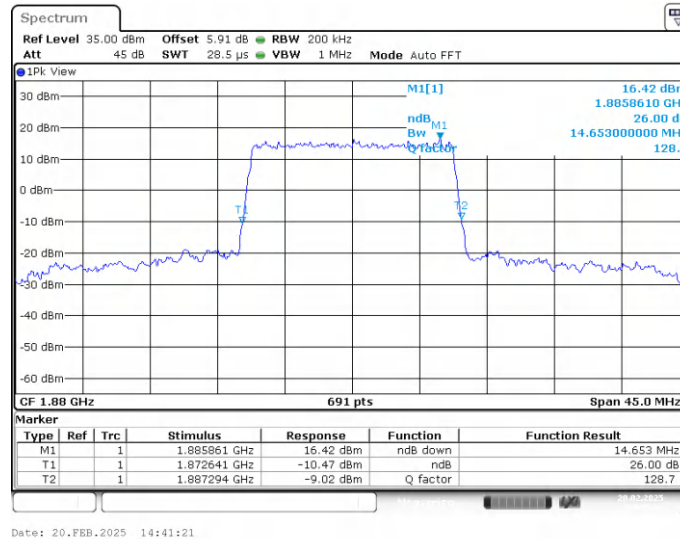
LTE band 2 , 10MHz Bandwidth,MID,16QAM (-26dBc BW)



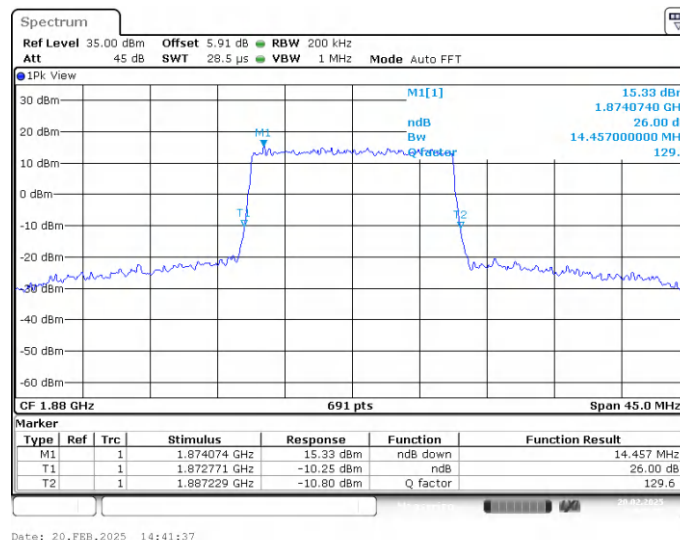
LTE band 2,15MHz(-26dBc)

Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	QPSK	16QAM
1880	14.653	14.457

LTE band 2 , 15MHz Bandwidth,MID,QPSK (-26dBc BW)



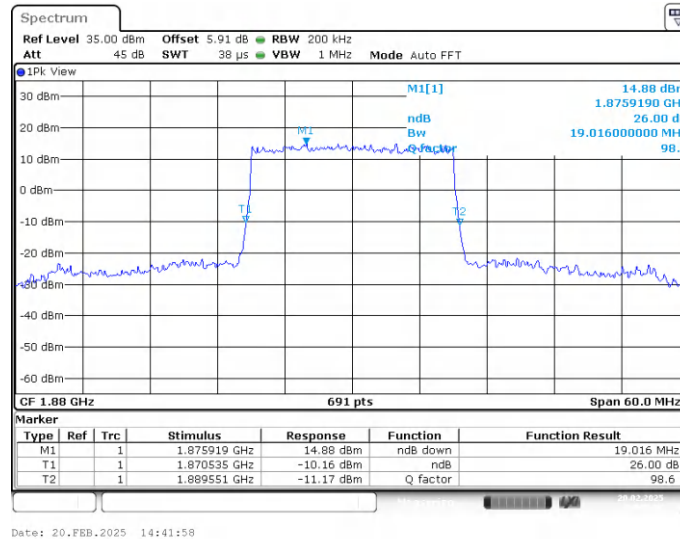
LTE band 2 , 15MHz Bandwidth,MID,16QAM (-26dBc BW)



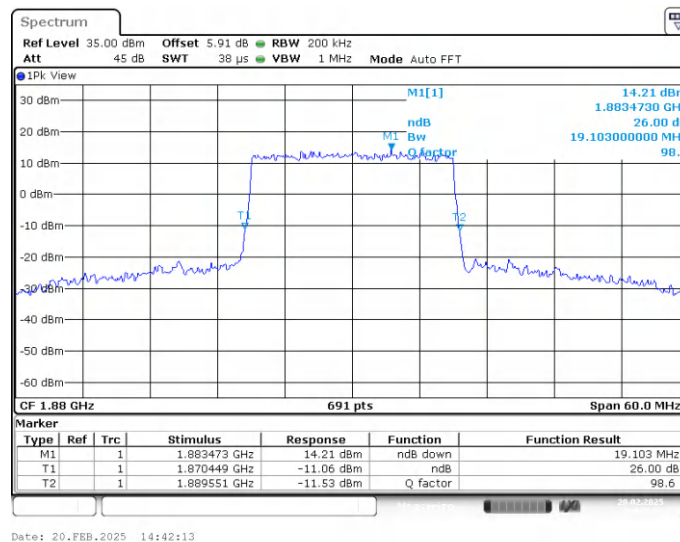
LTE band 2,20MHz(-26dBc)

Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	QPSK	16QAM
1880	19.016	19.103

LTE band 2 , 20MHz Bandwidth,MID,QPSK (-26dBc BW)



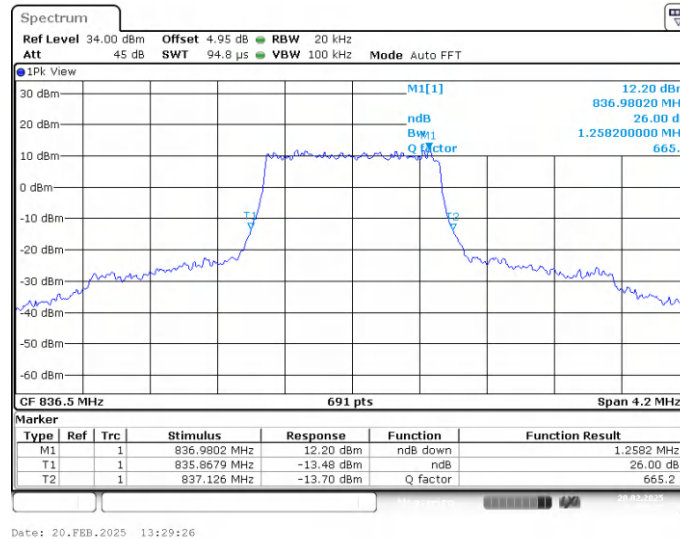
LTE band 2 , 20MHz Bandwidth,MID,16QAM (-26dBc BW)



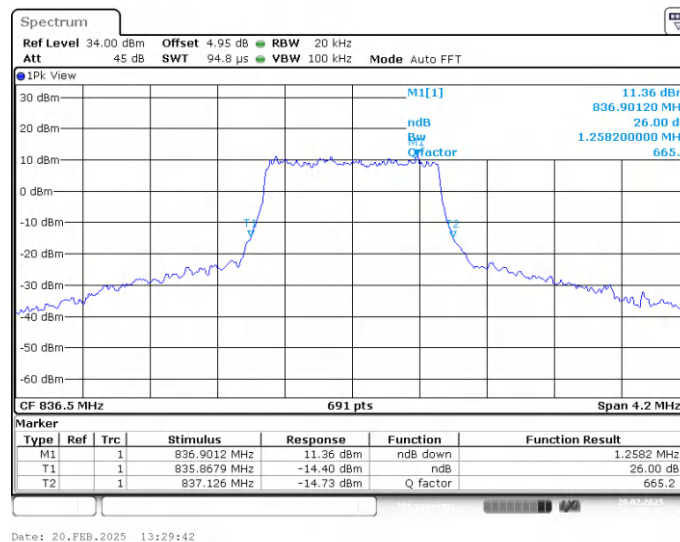
LTE band 5,1.4MHz(-26dBc)

Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	QPSK	16QAM
836.5	1.258	1.258

LTE band 5 , 1.4MHz Bandwidth,MID,QPSK (-26dBc BW)



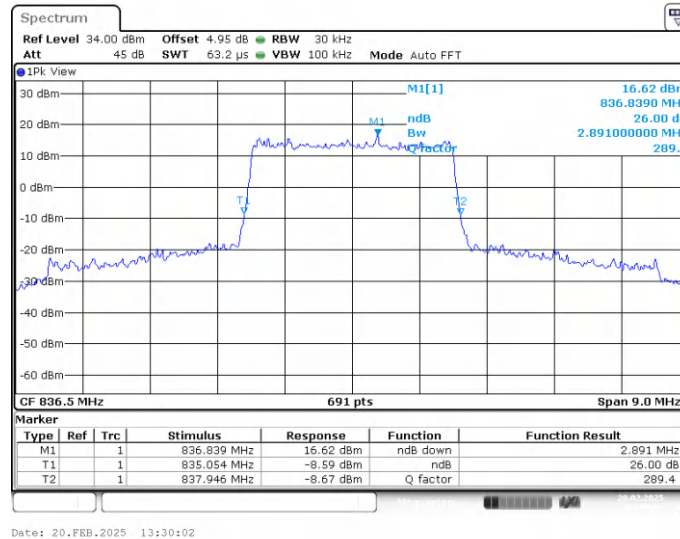
LTE band 5 , 1.4MHz Bandwidth,MID,16QAM (-26dBc BW)



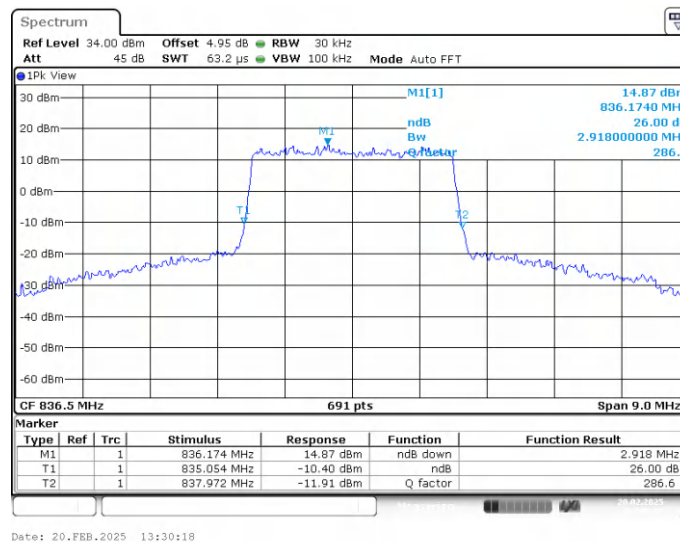
LTE band 5,3MHz(-26dBc)

Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	QPSK	16QAM
836.5	2.891	2.918

LTE band 5 , 3MHz Bandwidth,MID,QPSK (-26dBc BW)



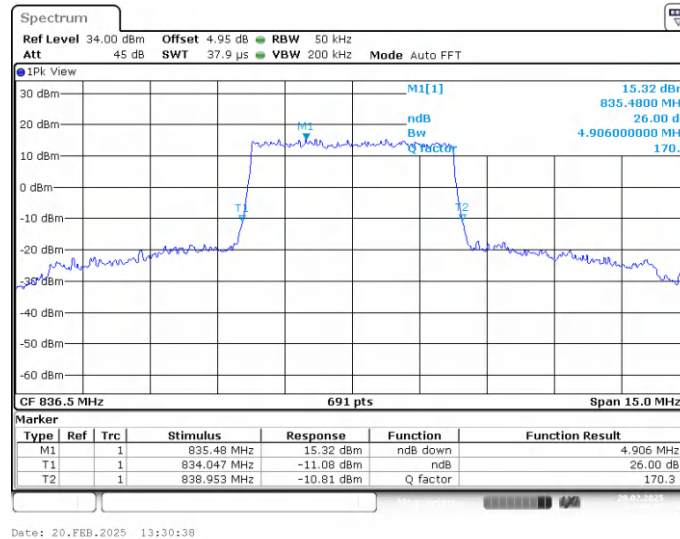
LTE band 5 , 3MHz Bandwidth,MID,16QAM (-26dBc BW)



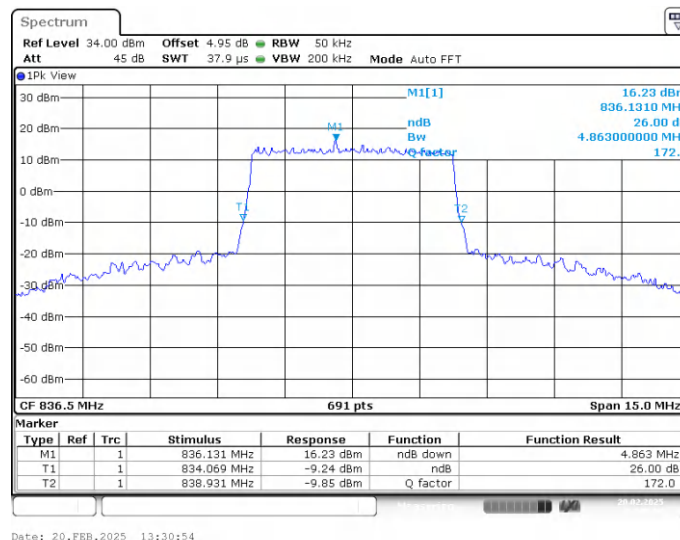
LTE band 5,5MHz(-26dBc)

Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	QPSK	16QAM
836.5	4.906	4.863

LTE band 5 , 5MHz Bandwidth,MID,QPSK (-26dBc BW)



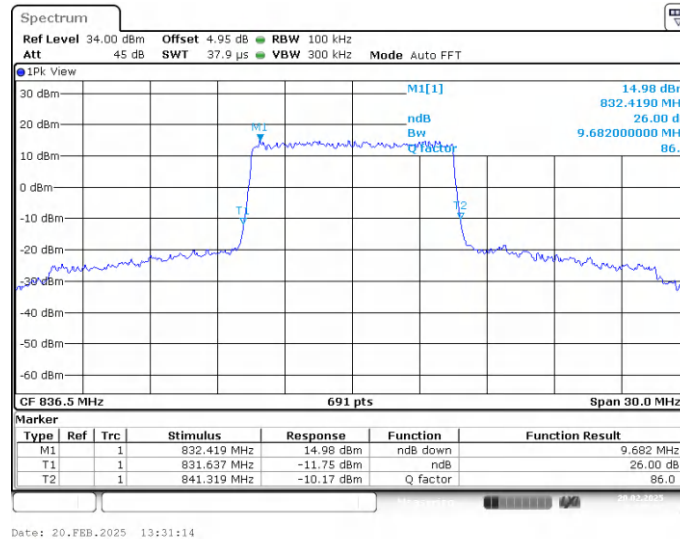
LTE band 5 , 5MHz Bandwidth,MID,16QAM (-26dBc BW)



LTE band 5,10MHz(-26dBc)

Frequency(MHz)	Emission Bandwidth (-26dBc)(MHz)	
	QPSK	16QAM
836.5	9.682	9.551

LTE band 5 , 10MHz Bandwidth,MID,QPSK (-26dBc BW)



LTE band 5 , 10MHz Bandwidth,MID,16QAM (-26dBc BW)

