FCC Radio Test Report

FCC ID: XMR2023RM520NGLM

Report No.	:	BTL-FCCP-12-2311T076
Equipment	:	5G Sub-6 GHz M.2 Module
Model Name	:	RM520N-GL
Brand Name	:	Quectel
Applicant	:	Quectel Wireless Solutions Co., Ltd.
Address	:	Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, China 200233
Radio Function	:	LTE Band 48
FCC Rule Part(s)	:	FCC CFR Title 47, Part 96
Date of Receipt	:	2023/11/16
Date of Test	:	2023/11/27 ~ 2024/1/12
Issued Date	:	2024/3/19

The above equipment has been tested and found in compliance with the requirement of the above standards by BTL Inc.

Prepared by : Jerry Chuang, Supervisor

Approved by : Peter Chen, Manager

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Declaration

BTL represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with standards traceable to international standard(s) and/or national standard(s).

BTL's reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. **BTL** shall have no liability for any declarations, inferences or generalizations drawn by the client or others from **BTL** issued reports.

This report is the confidential property of the client. As a mutual protection to the clients, the public and ourselves, the test report shall not be reproduced, except in full, without our written approval.

BTL's laboratory quality assurance procedures are in compliance with the **ISO/IEC 17025** requirements, and accredited by the conformity assessment authorities listed in this test report.

BTL is not responsible for the sampling stage, so the results only apply to the sample as received.

The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and in all the possible configurations as representative of its intended use.

Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

Please note that the measurement uncertainty is provided for informational purpose only and are not use in determining the Pass/Fail results.

CONTENTS

REVISION HISTORY

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-12-2311T076	R00	Original Report.	2024/1/31	Invalid
BTL-FCCP-12-2311T076	R01	Revised Typo.	2024/3/19	Invalid
BTL-FCCP-12-2311T076	R02	Revised Typo.	2024/3/19	Valid

1 SUMMARY OF TEST RESULTS

Test procedures according to the technical standards.

Standard(s) Section	Description	Test Result	Judgement	Remark
2.1046 96.41	Effective Isotropic Radiated Power	APPENDIX A	Pass	------
2.1053 96.41	Radiated Spurious Emissions	APPENDIX B	Pass	------

NOTE:
(1) ”N/A” denotes test is not applicable in this Test Report.
(2) The report format version is TP.1.1.1.
(3) This test report is issued for the RF module (FCCID: XMR2023RM520NGLM) to be incorporated to the host device (Model number: TP00160A), Product name: Notebook Computer).
Since the RF module has been certificated, after evaluation, above test items were criticized and reconfirmed in this report.
(4) After spot check, this revision does not change original radio parameters.

1.1 REFERENCE TEST GUIDANCE

ANSI C63.26-2015
ANSI/TIA-603-E-2016
FCC KDB 971168 D01 Power Meas License Digital Systems v03r01

1.2 TEST FACILITY

The test locations stated below are under the TAF Accreditation Number 0659.
The test location(s) used to collect the test data in this report are:
No. 68-1, Ln. 169, Sec. 2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan
(FCC DN: TW0659)
☐ C05 ☒ SR10 ☐ SR11
No. 72, Ln. 169, Sec. 2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan
(FCC DN: TW0659)
☐ C06 ☒ CB21 ☐ CB22

1.3 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y ± U**, where expanded uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k = 2**, providing a level of confidence of approximately **95 %**. The measurement instrumentation uncertainty considerations contained in CISPR 16-4-2. The BTL measurement uncertainty is less than the CISPR 16-4-2 U_{cispr} requirement.

A. Radiated emissions test :

Test Site	Measurement Frequency Range	U,(dB)
CB21	0.03 GHz ~ 0.2 GHz	4.17
	0.2 GHz ~ 1 GHz	4.72
	1 GHz ~ 6 GHz	5.21
	6 GHz ~ 18 GHz	5.51
	18 GHz ~ 26 GHz	3.69
	26 GHz ~ 40 GHz	4.23

NOTE:
Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.

1.4 TEST ENVIRONMENT CONDITIONS

Test Item	Environment Condition	Test Voltage	Tested by
Effective Isotropic Radiated Power	22.5 °C, 51 %	AC 120V	Cora Lin
Radiated Spurious Emissions	Refer to data	AC 120V	Kevin Zhen

2 GENERAL INFORMATION

2.1 DESCRIPTION OF EUT

Equipment	5G Sub-6 GHz M.2 Module			
Model Name	RM520N-GL			
Brand Name	Quectel			
Model Difference	N/A			
Power Source	Supplied from host system.			
Power Rating	3.3 Vdc			
Host device information				
Equipment	Notebook Computer			
Model Name	TP00160A			
Brand Name	Lenovo			
Model Difference	N/A			
Power Source	DC voltage supplied from External Power Supply. (Lenovo/ ADLX65YSDC2A)			
Power Rating	I/P: 100-240V~ 1.8A 50-60Hz O/P: 20.0VDC 3.25A 65.0W / 15.0VDC 3.0A / 9.0VDC 3.0A / 5.0VDC 3.0A 15.0W			
WIFI+BT Module	Intel® Wi-Fi 6E AX211 / AX211D2W Intel® BE200D2W / BE200D2W			
WWAN Module	Quectel / RM520N-GL Quectel / EM061K-GL			
NFC Module	FOXCONN / T77H747			
Operation Frequency	Band	UL Frequency (MHz)	DL Frequency (MHz)	
	LTE 48	3550 ~ 3700	-	
Maximum EIRP	Band	BW (MHz)	Mode	Power (W)
	LTE 48	5	QPSK	0.151
			16QAM	0.126
			64QAM	0.101
			256QAM	0.050
		10	QPSK	0.152
			16QAM	0.127
			64QAM	0.103
			256QAM	0.072
		15	QPSK	0.155
			16QAM	0.129
			64QAM	0.104
			256QAM	0.051
		20	QPSK	0.157
			16QAM	0.130
			64QAM	0.105
			256QAM	0.052
	LTE CA_48C	5+20	QPSK	0.140
			16QAM	0.082
			64QAM	0.115
			256QAM	0.081
		10+20	QPSK	0.143
			16QAM	0.083
			64QAM	0.117
			256QAM	0.082

Maximum EIRP	LTE CA_48C	15+20	QPSK	0.146
			16QAM	0.084
			64QAM	0.118
			256QAM	0.082
		20+5	QPSK	0.149
			16QAM	0.085
			64QAM	0.119
			256QAM	0.084
		20+10	QPSK	0.152
			16QAM	0.086
			64QAM	0.122
			256QAM	0.085
		20+15	QPSK	0.156
			16QAM	0.086
			64QAM	0.123
			256QAM	0.085
		20+20	QPSK	0.156
			16QAM	0.087
			64QAM	0.124
			256QAM	0.086
Test Model	RM520N-GL			
Sample Status	Engineering Sample			
EUT Modification(s)	N/A			

NOTE:

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

(2) Table for Filed Antenna:

Antenna	Manufacture	Parts Number	Type	Connector	Gain (dBi)	Note
Main	Luxshare-ICT	DC330022C00	PIFA	I-PEX	0.83	LTE Band 48
Aux	Luxshare-ICT	DC330022D00	PIFA	I-PEX	-	RX only

Antenna	Manufacture	Parts Number	Type	Connector	Gain (dBi)	Note
Main	SPEEDWIRE	DC330022J10	PIFA	I-PEX	0.83	LTE Band 48
Aux	SPEEDWIRE	DC330022J20	PIFA	I-PEX	-	RX only

(3) The above Antenna information are derived from the antenna data sheet provided by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

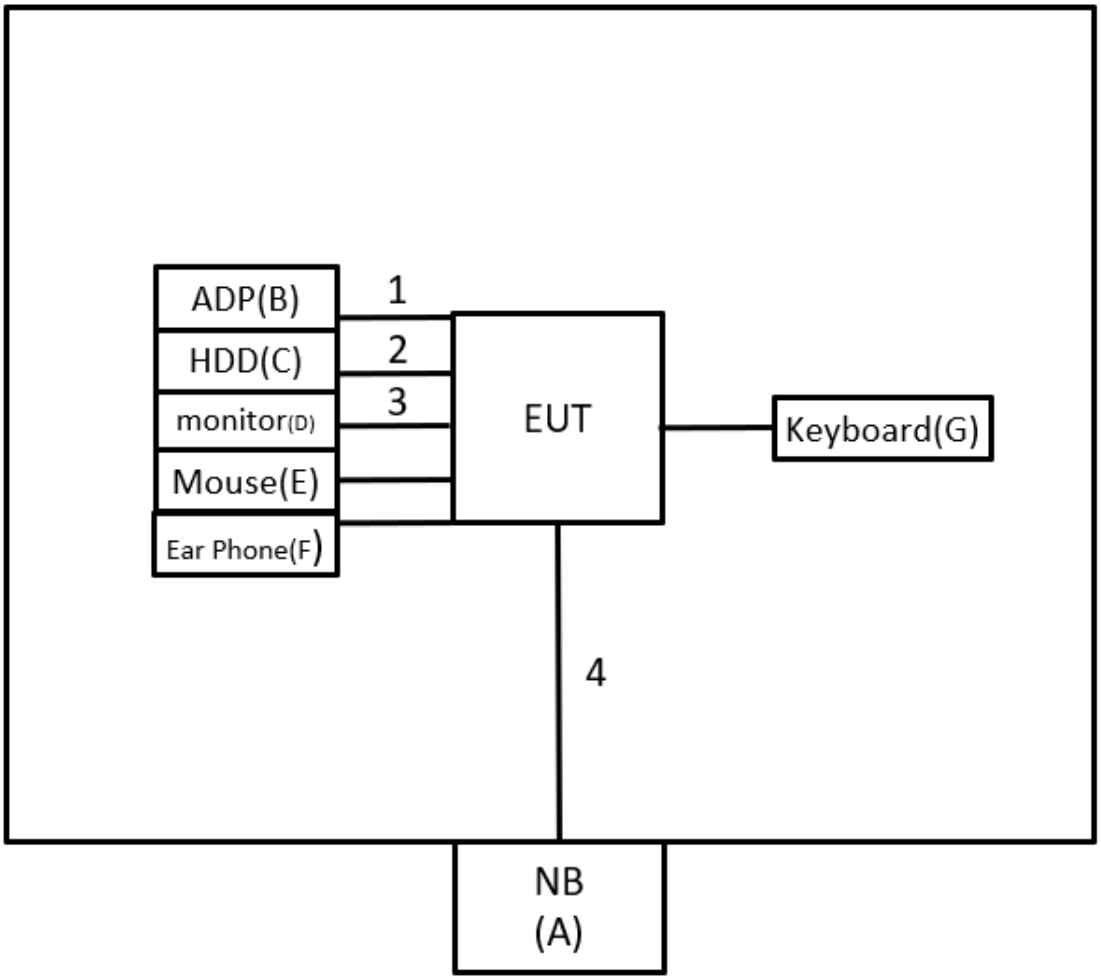
2.2 TEST MODES

Test Items	Band	Test Mode	Note
Effective Isotropic Radiated Power	LTE Band 48	Refer to APPENDIX A	-
	LTE Band CA_48C		
Radiated Spurious Emissions (Below 1G)	LTE Band 48	TX Mode (CH 55340)	-
	LTE Band CA_48C	TX Low CH_20MHz+20MHz	-
Radiated Spurious Emissions (Above 1G)	LTE Band 48	TX Mode (CH 55340/55990/56640)	-
	LTE Band CA_48C	TX Low/middle/High CH_20MHz+20MHz	-
Radiated Spurious Emissions (Above 18G)	LTE Band 48	TX Mode (CH 55340)	-
	LTE Band CA_48C	TX Low CH_20MHz+20MHz	-

NOTE:
(1) All X, Y and Z axes are evaluated, but only the worst case (X axis) is recorded.
(2) For Radiated Spurious Emissions both QPSK, 16QAM, 64QAM and 256QAM are evaluated, but only the worst case (QPSK) is recorded.

2.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Equipment letters and Cable numbers refer to item numbers described in the tables of clause 2.4.



2.4 SUPPORT UNITS

Item	Equipment	Brand	Model No.	Series No.	Remarks
A	NB	HP	TPN-I119	N/A	Furnished by test lab.
B	ADP	Lenovo	ADLX65YSDC2A	N/A	Supplied by test requester.
C	USB 2.5" HDD	TOSIBA	XS700	483B60M9KQSS	Furnished by test lab.
D	27” 4K Monitor	DELL	U2720Q	CN-083VF-WSL00-0B7-332L	Furnished by test lab.
E	Mouse	Lenovo	SM-8823	N/A	Furnished by test lab.
F	Ear Phone	HTC	N/A	N/A	Furnished by test lab.
G	Keyboard	Bloody	KB-8	N/A	Furnished by test lab.

Item	Shielded	Ferrite Core	Length	Cable Type	Remarks
1	N/A	N/A	0.9m	Power Cord	Supplied by test requester.
2	N/A	N/A	1m	Type C to USB Cable	Furnished by test lab.
3	N/A	N/A	1.8m	HDMI	Furnished by test lab.
4	N/A	N/A	10m	RJ45 Cable	Furnished by test lab.

3 EFFECTIVE ISOTROPIC RADIATED POWER MEASUREMENT

3.1 LIMIT

EIRP for CBRS equipment as below table:

Device	Maximum EIRP (dBm/10 MHz)
End User Device	23
Category A CBSD	30
Category B CBSD	47

3.2 TEST PROCEDURE

The testing follows FCC KDB 971168 v03r01 Section 5.8.

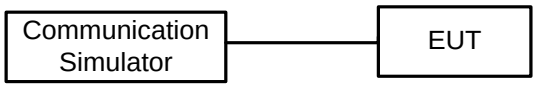
a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.
b. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to “Read Value “ of step a. Record the power level of S.G
c. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn.
d. ERP can be calculated form EIRP by subtracting the gain of dipole, ERP = EIPR - 2.15dBi..
e. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

3.3 DEVIATION FROM TEST STANDARD

No deviation.

3.4 TEST SETUP

Conducted Measurement:



3.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

3.6 TEST RESULT

Please refer to the APPENDIX A.

4 RADIATED SPURIOUS EMISSIONS MEASUREMENT

4.1 LIMIT

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit equal to -13dBm.

NOTE:
(1) The measurements of emission power can be expressed in peak or average values, provided they are expressed in the same parameters as the transmitter power.
(2) The test result calculated as following:
Measurement Value = Reading Level + Correct Factor
Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use)
Margin Level = Measurement Value - Limit Value
Calculation example:

Reading Level (dBm)		Correct Factor (dB/m)		Measurement Value (dBm)
-50.43	+	-2.11	=	-52.54

Measurement Value (dBm)		Limit Value (dBm)		Margin Level (dB)
-52.54	-	-13	=	-39.54

4.2 TEST PROCEDURE

The testing follows FCC KDB 971168 v03r01 Section 6.2.

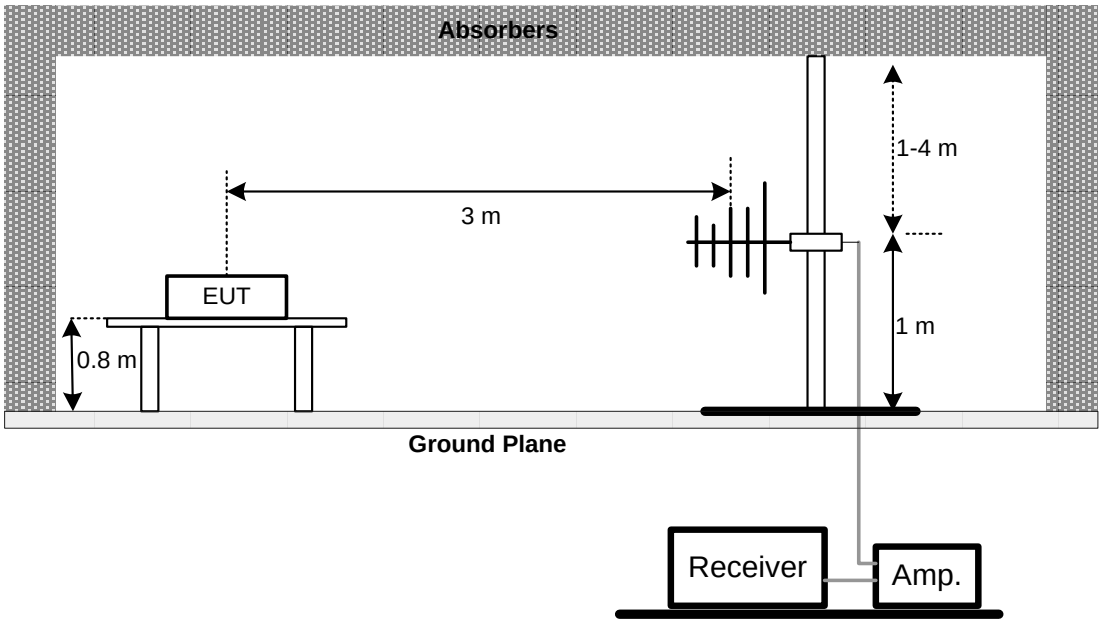
a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.
b. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to “Read Value “ of step a. Record the power level of S.G
c. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn.
d. ERP can be calculated form EIRP by subtracting the gain of dipole, ERP = EIPR - 2.15dBi..
e. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

4.3 DEVIATION FROM TEST STANDARD

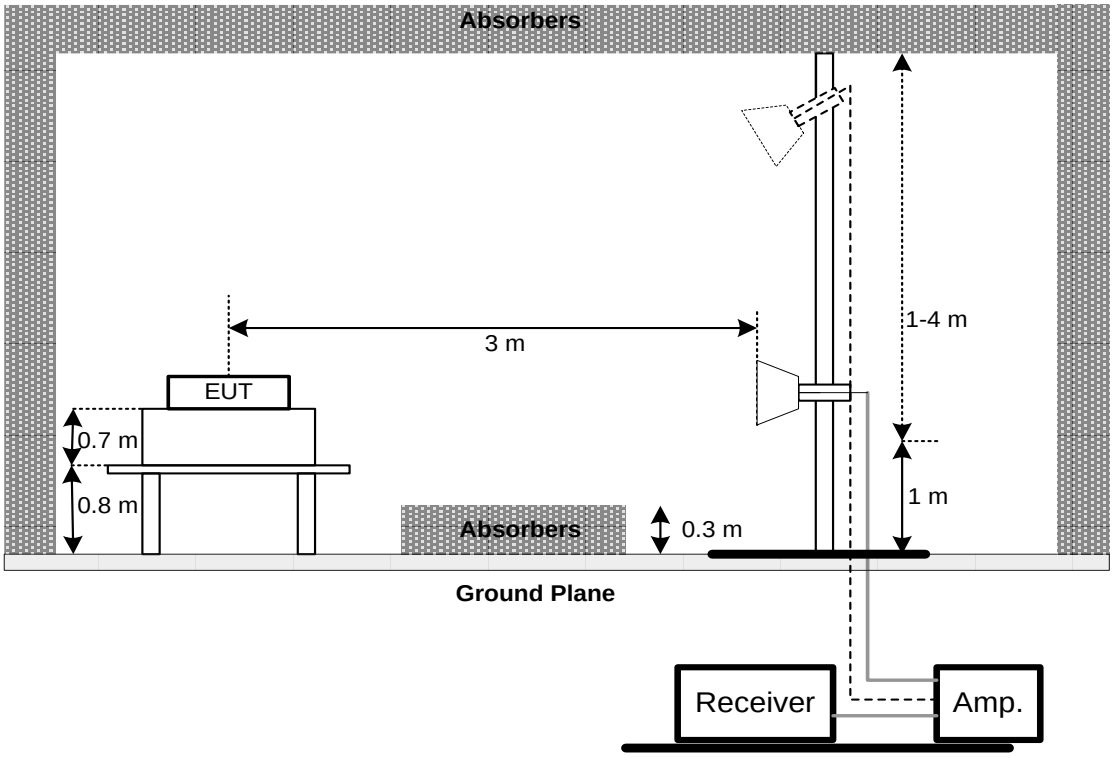
No deviation.

4.4 TEST SETUP

30 MHz to 1 GHz



Above 1 GHz



4.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

4.6 TEST RESULT

Please refer to the APPENDIX B.

5 LIST OF MEASURING EQUIPMENTS

Effective Isotropic Radiated Power						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	WIRELESS COMMUNICATION TEST SET	Agilent	E5515C	GB47390193	2023/7/4	2024/7/3
2	Radio Communication Test Station	ANRITSU	MT8821C	6262044728	2023/11/22	2024/11/21
3	Radio Communication Analyzer	ANRITSU	MT8000A	6262036844	2023/11/22	2024/11/21
4	Radio Communication Analyzer	Keysight	E7515B	MY59020217	2023/7/6	2024/7/5

Radiated Emissions						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Preamplifier	EMCI	EMC330N	980850	2023/9/6	2024/9/5
2	Preamplifier	EMCI	EMC118A45SE	980819	2023/3/7	2024/3/6
3	Pre-Amplifier	EMCI	EMC184045SE	980907	2023/9/21	2024/9/20
4	Test Cable	EMCI	EMC104-SM-1000	180809	2023/7/10	2024/7/9
5	Test Cable	EMCI	EMC104-SM-SM-3000	220322	2023/3/14	2024/3/13
6	Test Cable	EMCI	EMC104-SM-SM-7000	220324	2023/3/14	2024/3/13
7	EXA Signal Analyzer	keysight	N9020B	MY57120120	2023/2/24	2024/2/23
8	Horn Antenna	RFSPIN	DRH18-E	211202A18EN	2023/5/12	2024/5/11
9	Horn Ant	Schwarzbeck	BBHA 9170D	1136	2023/5/12	2024/5/11
10	Log-bicon Antenna	Schwarzbeck	VULB9168	1369	2023/5/9	2024/5/8
11	6dB Attenuator	EMCI	EMCI-N-6-06	AT-06001	2023/5/9	2024/5/8
12	Test Cable	EMCI	EMC101G-KM-KM-3000	220329	2023/3/14	2024/3/13
13	Test Cable	EMCI	EMC102-KM-KM-1000	220327	2023/3/14	2024/3/13
14	WIRELESS COMMUNICATION TEST SET	Agilent	E5515C	GB47390193	2023/7/4	2024/7/3
15	Radio Communication Analyzer	ANRITSU	MT8820C	6201381608	2022/12/22	2023/12/21
16	Radio Communication Analyzer	Keysight	E7515B	MY59020217	2023/7/6	2024/7/5
17	Measurement Software	EZ	EZ_EMC (Version NB-03A1-01)	N/A	N/A	N/A

Remark: "N/A" denotes no model name, no serial no. or no calibration specified.
All calibration period of equipment list is one year.

6 EUT TEST PHOTO

Please refer to document Appendix No.: TP-2311T076-FCCP-1 (APPENDIX-TEST PHOTOS).

7 EUT PHOTOS

Please refer to document Appendix No.: EP-2311T076-1(APPENDIX-EUT PHOTOS).

APPENDIX A EQUIVALENT ISOTROPIC RADIATED POWER

LTE Band 48 Power:

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	**EIRP** power (dBm)	**EIRP** power (W)
48	5	55265	3550.0	QPSK	1	0	0	20.82	21.65	0.146
					1	12	0	20.91	21.74	0.149
					1	24	0	20.96	21.79	0.151
					25	0	1	19.99	20.82	0.121
				16QAM	1	0	1	19.92	20.75	0.119
					1	12	1	20.07	20.90	0.123
					1	24	1	20.16	20.99	0.126
					25	0	2	18.99	19.82	0.096
				64QAM	1	0	2	19.21	20.04	0.101
					1	12	2	19.16	19.99	0.100
					1	24	2	18.99	19.82	0.096
					25	0	3	17.96	18.79	0.076
				256QAM	1	0	4	15.83	16.66	0.046
					1	12	4	15.80	16.63	0.046
					1	24	4	15.99	16.82	0.048
					25	0	5	15.97	16.80	0.048
		55990	3625.0	QPSK	1	0	0	20.77	21.60	0.145
					1	12	0	20.83	21.66	0.147
					1	24	0	20.75	21.58	0.144
					25	0	1	19.67	20.50	0.112
				16QAM	1	0	1	19.76	20.59	0.115
					1	12	1	20.05	20.88	0.122
					1	24	1	19.92	20.75	0.119
					25	0	2	18.89	19.72	0.094
				64QAM	1	0	2	18.98	19.81	0.096
					1	12	2	19.23	20.06	0.101
					1	24	2	19.05	19.88	0.097
					25	0	3	17.70	18.53	0.071
				256QAM	1	0	4	15.93	16.76	0.047
					1	12	4	16.13	16.96	0.050
					1	24	4	16.12	16.95	0.050
					25	0	5	15.91	16.74	0.047
		56715	3697.5	QPSK	1	0	0	20.57	21.40	0.138
					1	12	0	20.71	21.54	0.143
					1	24	0	20.65	21.48	0.141
					25	0	1	19.68	20.51	0.112
				16QAM	1	0	1	19.80	20.63	0.116
					1	12	1	20.13	20.96	0.125
					1	24	1	19.98	20.81	0.121
					25	0	2	18.75	19.58	0.091
				64QAM	1	0	2	18.98	19.81	0.096
					1	12	2	19.19	20.02	0.100
					1	24	2	18.96	19.79	0.095
					25	0	3	17.75	18.58	0.072
				256QAM	1	0	4	15.76	16.59	0.046
					1	12	4	15.72	16.55	0.045
					1	24	4	15.69	16.52	0.045
					25	0	5	15.71	16.54	0.045

NOTE:
(1) EIRP = Average power + Antenna gain.
(2) ERP = EIRP - 2.15.
(3) $P(W) = 1\ W \cdot 10^{(P(dBm)\ /\ 10)} / 1000$

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	EIRP power (dBm)	EIRP power (W)
48	10	55290	3555.0	QPSK	1	0	0	20.86	21.69	0.148
					1	24	0	20.96	21.79	0.151
					1	49	0	21.00	21.83	0.152
					50	0	1	20.06	20.89	0.123
				16QAM	1	0	1	19.99	20.82	0.121
					1	24	1	20.12	20.95	0.124
					1	49	1	20.22	21.05	0.127
					50	0	2	19.06	19.89	0.097
				64QAM	1	0	2	19.26	20.09	0.102
					1	24	2	19.21	20.04	0.101
					1	49	2	19.07	19.90	0.098
					50	0	3	18.01	18.84	0.077
				256QAM	1	0	4	15.87	16.70	0.047
					1	24	4	15.86	16.69	0.047
					1	49	4	16.06	16.89	0.049
					50	0	5	16.04	16.87	0.049
		55990	3625.0	QPSK	1	0	0	20.82	21.65	0.146
					1	24	0	20.90	21.73	0.149
					1	49	0	20.80	21.63	0.146
					50	0	1	19.74	20.57	0.114
				16QAM	1	0	1	19.83	20.66	0.116
					1	24	1	20.10	20.93	0.124
					1	49	1	19.99	20.82	0.121
					50	0	2	18.94	19.77	0.095
				64QAM	1	0	2	19.04	19.87	0.097
					1	24	2	19.29	20.12	0.103
					1	49	2	19.12	19.95	0.099
					50	0	3	17.77	18.60	0.072
				256QAM	1	0	4	15.99	16.82	0.048
					1	24	4	16.17	17.00	0.050
					1	49	4	16.18	17.01	0.050
					50	0	5	15.95	16.78	0.048
		56690	3695.0	QPSK	1	0	0	20.63	21.46	0.140
					1	24	0	20.78	21.61	0.145
					1	49	0	20.69	21.52	0.142
					50	0	1	19.76	20.59	0.115
				16QAM	1	0	1	19.85	20.68	0.117
					1	24	1	20.17	21.00	0.126
					1	49	1	20.03	20.86	0.122
					50	0	2	18.79	19.62	0.092
				64QAM	1	0	2	19.05	19.88	0.097
					1	24	2	19.25	20.08	0.102
					1	49	2	19.03	19.86	0.097
					50	0	3	17.81	18.64	0.073
				256QAM	1	0	4	15.80	16.63	0.046
					1	24	4	15.77	16.60	0.046
					1	49	4	15.74	16.57	0.045
					50	0	5	15.75	16.58	0.045

NOTE:
(1) EIRP = Average power + Antenna gain.
(2) ERP = EIRP - 2.15.
(3) P(W) = 1 W · $10^{(P(dBm)/10)}$ / 1000

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	EIRP power (dBm)	EIRP power (W)
48	15	55315	3557.5	QPSK	1	0	0	20.94	21.77	0.150
					1	38	0	21.02	21.85	0.153
					1	74	0	21.07	21.90	0.155
					75	0	1	20.14	20.97	0.125
				16QAM	1	0	1	20.05	20.88	0.122
					1	38	1	20.20	21.03	0.127
					1	74	1	20.27	21.10	0.129
					75	0	2	19.10	19.93	0.098
				64QAM	1	0	2	19.32	20.15	0.104
					1	38	2	19.27	20.10	0.102
					1	74	2	19.11	19.94	0.099
					75	0	3	18.08	18.91	0.078
				256QAM	1	0	4	15.92	16.75	0.047
					1	38	4	15.93	16.76	0.047
					1	74	4	16.14	16.97	0.050
					75	0	5	16.10	16.93	0.049
		55990	3625.0	QPSK	1	0	0	20.88	21.71	0.148
					1	38	0	20.97	21.80	0.151
					1	74	0	20.84	21.67	0.147
					75	0	1	19.80	20.63	0.116
				16QAM	1	0	1	19.90	20.73	0.118
					1	38	1	20.18	21.01	0.126
					1	74	1	20.04	20.87	0.122
					75	0	2	18.99	19.82	0.096
				64QAM	1	0	2	19.10	19.93	0.098
					1	38	2	19.34	20.17	0.104
					1	74	2	19.19	20.02	0.100
					75	0	3	17.84	18.67	0.074
				256QAM	1	0	4	16.03	16.86	0.049
					1	38	4	16.21	17.04	0.051
					1	74	4	16.24	17.07	0.051
					75	0	5	16.03	16.86	0.049
		56665	3692.5	QPSK	1	0	0	20.69	21.52	0.142
					1	38	0	20.86	21.69	0.148
					1	74	0	20.76	21.59	0.144
					75	0	1	19.80	20.63	0.116
				16QAM	1	0	1	19.89	20.72	0.118
					1	38	1	20.22	21.05	0.127
					1	74	1	20.09	20.92	0.124
					75	0	2	18.84	19.67	0.093
				64QAM	1	0	2	19.13	19.96	0.099
					1	38	2	19.30	20.13	0.103
					1	74	2	19.09	19.92	0.098
					75	0	3	17.87	18.70	0.074
				256QAM	1	0	4	15.88	16.71	0.047
					1	38	4	15.81	16.64	0.046
					1	74	4	15.79	16.62	0.046
					75	0	5	15.79	16.62	0.046

NOTE:
(1) EIRP = Average power + Antenna gain.
(2) ERP = EIRP - 2.15.
(3) $P(W) = 1\ W \cdot 10^{(P(dBm)/10)} / 1000$

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	UL RB Allocation	UL RB Offset	MPR	Average power (dBm)	EIRP power (dBm)	EIRP power (W)
48	20	55340	3560.0	QPSK	1	0	0	21.01	21.84	0.153
					1	49	0	21.09	21.92	0.156
					1	99	0	21.13	21.96	0.157
					100	0	1	20.21	21.04	0.127
				16QAM	1	0	1	20.09	20.92	0.124
					1	49	1	20.24	21.07	0.128
					1	99	1	20.31	21.14	0.130
					100	0	2	19.14	19.97	0.099
				64QAM	1	0	2	19.37	20.20	0.105
					1	49	2	19.34	20.17	0.104
					1	99	2	19.18	20.01	0.100
					100	0	3	18.15	18.98	0.079
				256QAM	1	0	4	15.98	16.81	0.048
					1	49	4	16.01	16.84	0.048
					1	99	4	16.19	17.02	0.050
					100	0	5	16.16	16.99	0.050
		55990	3625.0	QPSK	1	0	0	20.93	21.76	0.150
					1	49	0	21.03	21.86	0.153
					1	99	0	20.90	21.73	0.149
					100	0	1	19.84	20.67	0.117
				16QAM	1	0	1	19.96	20.79	0.120
					1	49	1	20.23	21.06	0.128
					1	99	1	20.09	20.92	0.124
					100	0	2	19.04	19.87	0.097
				64QAM	1	0	2	19.15	19.98	0.100
					1	49	2	19.39	20.22	0.105
					1	99	2	19.24	20.07	0.102
					100	0	3	17.89	18.72	0.074
				256QAM	1	0	4	16.08	16.91	0.049
					1	49	4	16.26	17.09	0.051
					1	99	4	16.29	17.12	0.052
					100	0	5	16.08	16.91	0.049
		56640	3690.0	QPSK	1	0	0	20.74	21.57	0.144
					1	49	0	20.91	21.74	0.149
					1	99	0	20.81	21.64	0.146
					100	0	1	19.85	20.68	0.117
				16QAM	1	0	1	19.94	20.77	0.119
					1	49	1	20.27	21.10	0.129
					1	99	1	20.14	20.97	0.125
					100	0	2	18.89	19.72	0.094
				64QAM	1	0	2	19.18	20.01	0.100
					1	49	2	19.35	20.18	0.104
					1	99	2	19.14	19.97	0.099
					100	0	3	17.92	18.75	0.075
				256QAM	1	0	4	15.93	16.76	0.047
					1	49	4	15.86	16.69	0.047
					1	99	4	15.84	16.67	0.046
					100	0	5	15.84	16.67	0.046

NOTE:
(1) EIRP = Average power + Antenna gain.
(2) ERP = EIRP - 2.15.
(3) P(W) = 1 W · $10^{(P(dBm)/10)}$ / 1000

LTE Band CA_48C Power:

Band	BW (MHz)	PCC/SCC Channel	Frequency (MHz)	Mode	PCC UL RB Allocation	PCC UL RB Start	SCC UL RB Allocation	SCC UL RB Start	MPR	Average power (dBm)	EIRP power (dBm)	EIRP power (W)
Band 48+48	5+20	55273 55390	3553.3 3565	QPSK	1	0	0	0	1	20.64	21.47	0.140
					25	0	100	0	2	18.14	18.97	0.079
				16QAM	1	0	0	0	1.5	18.22	19.05	0.080
					25	0	100	0	3	18.07	18.90	0.078
				64QAM	1	0	0	0	2	18.10	18.93	0.078
					25	0	100	0	2	19.76	20.59	0.115
				256QAM	1	0	0	0	6	18.27	19.10	0.081
					25	0	100	0	6	18.08	18.91	0.078
		55898 56015	3615.8 3633.5	QPSK	1	0	0	0	1	19.57	20.40	0.110
					25	0	100	0	2	18.84	19.67	0.093
				16QAM	1	0	0	0	1.5	18.11	18.94	0.078
					25	0	100	0	3	18.32	19.15	0.082
				64QAM	1	0	0	0	2	19.76	20.59	0.115
					25	0	100	0	2	18.81	19.64	0.092
				256QAM	1	0	0	0	6	18.13	18.96	0.079
					25	0	100	0	6	18.02	18.85	0.077
		56523 56640	3678.3 3690	QPSK	1	0	0	0	1	18.99	19.82	0.096
					25	0	100	0	2	15.62	16.45	0.044
				16QAM	1	0	0	0	1.5	18.27	19.10	0.081
					25	0	100	0	3	16.16	16.99	0.050
				64QAM	1	0	0	0	2	15.54	16.37	0.043
					25	0	100	0	2	15.67	16.50	0.045
				256QAM	1	0	0	0	6	16.00	16.83	0.048
					25	0	100	0	6	16.08	16.91	0.049

NOTE:
(1) EIRP = Average power + Antenna gain.
(2) ERP = EIRP - 2.15.
(3) $P(W) = 1\ W \cdot 10^{(P(dBm)\ /\ 10)} / 1000$

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	PCC UL RB Allocation	PCC UL RB Start	SCC UL RB Allocation	SCC UL RB Start	MPR	Average power (dBm)	EIRP power (dBm)	EIRP power (W)
Band 48+48	10+20	55295 55439	3555.5 3569.9	QPSK	50	0	100	0	1	20.71	21.54	0.143
					1	0	0	0	2	18.17	19.00	0.079
				16QAM	50	0	100	0	1.5	18.27	19.10	0.081
					1	0	0	0	3	18.16	18.99	0.079
				64QAM	50	0	100	0	2	18.13	18.96	0.079
					1	0	0	0	2	19.79	20.62	0.115
				256QAM	50	0	100	0	6	18.31	19.14	0.082
					1	0	0	0	6	18.17	19.00	0.079
		55896 56040	3615.6 3630	QPSK	50	0	100	0	1	19.65	20.48	0.112
					1	0	0	0	2	18.89	19.72	0.094
				16QAM	50	0	100	0	1.5	18.14	18.97	0.079
					1	0	0	0	3	18.37	19.20	0.083
				64QAM	50	0	100	0	2	19.84	20.67	0.117
					1	0	0	0	2	18.85	19.68	0.093
				256QAM	50	0	100	0	6	18.16	18.99	0.079
					1	0	0	0	6	18.06	18.89	0.077
		56496 56640	3675.6 3690	QPSK	50	0	100	0	1	19.00	19.83	0.096
					1	0	0	0	2	15.72	16.55	0.045
				16QAM	50	0	100	0	1.5	18.31	19.14	0.082
					1	0	0	0	3	16.21	17.04	0.051
				64QAM	50	0	100	0	2	15.62	16.45	0.044
					1	0	0	0	2	15.71	16.54	0.045
				256QAM	50	0	100	0	6	16.07	16.90	0.049
					1	0	0	0	6	16.15	16.98	0.050

NOTE:
(1) EIRP = Average power + Antenna gain.
(2) ERP = EIRP - 2.15.
(3) $P(W) = 1\ W \cdot 10^{(P(dBm)\ /\ 10)} / 1000$

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	PCC UL RB Allocation	PCC UL RB Start	SCC UL RB Allocation	SCC UL RB Start	MPR	Average power (dBm)	EIRP power (dBm)	EIRP power (W)
Band 48+48	15+20	55318 55489	3557.8 3574.9	QPSK	1	0	0	0	1	20.81	21.64	0.146
					75	0	100	0	2	18.24	19.07	0.081
				16QAM	1	0	0	0	1.5	18.29	19.12	0.082
					75	0	100	0	3	18.24	19.07	0.081
				64QAM	1	0	0	0	2	18.23	19.06	0.081
					75	0	100	0	2	19.82	20.65	0.116
				256QAM	1	0	0	0	6	18.33	19.16	0.082
					75	0	100	0	6	18.22	19.05	0.080
		55893 56064	3615.3 3632.4	QPSK	1	0	0	0	1	19.75	20.58	0.114
					75	0	100	0	2	18.91	19.74	0.094
				16QAM	1	0	0	0	1.5	18.16	18.99	0.079
					75	0	100	0	3	18.43	19.26	0.084
				64QAM	1	0	0	0	2	19.88	20.71	0.118
					75	0	100	0	2	18.89	19.72	0.094
				256QAM	1	0	0	0	6	18.17	19.00	0.079
					75	0	100	0	6	18.16	18.99	0.079
		56469 56640	3672.9 3690	QPSK	1	0	0	0	1	19.03	19.86	0.097
					75	0	100	0	2	15.81	16.64	0.046
				16QAM	1	0	0	0	1.5	18.37	19.20	0.083
					75	0	100	0	3	16.25	17.08	0.051
				64QAM	1	0	0	0	2	15.69	16.52	0.045
					75	0	100	0	2	15.80	16.63	0.046
				256QAM	1	0	0	0	6	16.13	16.96	0.050
					75	0	100	0	6	16.19	17.02	0.050

NOTE:
(1) EIRP = Average power + Antenna gain.
(2) ERP = EIRP - 2.15.
(3) $P(W) = 1\ W \cdot 10^{(P(dBm)\ /\ 10)} / 1000$

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	PCC UL RB Allocation	PCC UL RB Start	SCC UL RB Allocation	SCC UL RB Start	MPR	Average power (dBm)	EIRP power (dBm)	EIRP power (W)
Band 48+48	20+5	55340 55457	3560 3571.7	QPSK	1	0	0	0	1	20.90	21.73	0.149
					100	0	25	0	2	18.29	19.12	0.082
				16QAM	1	0	0	0	1.5	18.33	19.16	0.082
					100	0	25	0	3	18.33	19.16	0.082
				64QAM	1	0	0	0	2	18.27	19.10	0.081
					100	0	25	0	2	19.91	20.74	0.119
				256QAM	1	0	0	0	6	18.39	19.22	0.084
					100	0	25	0	6	18.32	19.15	0.082
		55965 56082	3622.5 3634.2	QPSK	1	0	0	0	1	19.84	20.67	0.117
					100	0	25	0	2	18.95	19.78	0.095
				16QAM	1	0	0	0	1.5	18.19	19.02	0.080
					100	0	25	0	3	18.48	19.31	0.085
				64QAM	1	0	0	0	2	19.93	20.76	0.119
					100	0	25	0	2	18.93	19.76	0.095
				256QAM	1	0	0	0	6	18.24	19.07	0.081
					100	0	25	0	6	18.25	19.08	0.081
		56590 56707	3685 3696.7	QPSK	1	0	0	0	1	19.10	19.93	0.098
					100	0	25	0	2	15.87	16.70	0.047
				16QAM	1	0	0	0	1.5	18.38	19.21	0.083
					100	0	25	0	3	16.31	17.14	0.052
				64QAM	1	0	0	0	2	15.75	16.58	0.045
					100	0	25	0	2	15.90	16.73	0.047
				256QAM	1	0	0	0	6	16.18	17.01	0.050
					100	0	25	0	6	16.27	17.10	0.051

NOTE:
(1) EIRP = Average power + Antenna gain.
(2) ERP = EIRP - 2.15.
(3) $P(W) = 1\ W \cdot 10^{(P(dBm)\ /\ 10)} / 1000$

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	PCC UL RB Allocation	PCC UL RB Start	SCC UL RB Allocation	SCC UL RB Start	MPR	Average power (dBm)	EIRP power (dBm)	EIRP power (W)
Band 48+48	20+10	55340 55484	3560 3574.4	QPSK	1	0	0	0	1	21.00	21.83	0.152
					100	0	50	0	2	18.38	19.21	0.083
				16QAM	1	0	0	0	1.5	18.39	19.22	0.084
					100	0	50	0	3	18.39	19.22	0.084
				64QAM	1	0	0	0	2	18.30	19.13	0.082
					100	0	50	0	2	19.93	20.76	0.119
				256QAM	1	0	0	0	6	18.44	19.27	0.085
					100	0	50	0	6	18.37	19.20	0.083
		55941 56085	3620.1 3634.5	QPSK	1	0	0	0	1	19.91	20.74	0.119
					100	0	50	0	2	19.03	19.86	0.097
				16QAM	1	0	0	0	1.5	18.27	19.10	0.081
					100	0	50	0	3	18.52	19.35	0.086
				64QAM	1	0	0	0	2	20.02	20.85	0.122
					100	0	50	0	2	18.99	19.82	0.096
				256QAM	1	0	0	0	6	18.34	19.17	0.083
					100	0	50	0	6	18.31	19.14	0.082
		56541 56685	3680.1 3694.5	QPSK	1	0	0	0	1	19.16	19.99	0.100
					100	0	50	0	2	15.94	16.77	0.048
				16QAM	1	0	0	0	1.5	18.41	19.24	0.084
					100	0	50	0	3	16.34	17.17	0.052
				64QAM	1	0	0	0	2	15.80	16.63	0.046
					100	0	50	0	2	15.91	16.74	0.047
				256QAM	1	0	0	0	6	16.24	17.07	0.051
					100	0	50	0	6	16.31	17.14	0.052

NOTE:
(1) EIRP = Average power + Antenna gain.
(2) ERP = EIRP - 2.15.
(3) $P(W) = 1\ W \cdot 10^{(P(dBm)\ /\ 10)} / 1000$

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	PCC UL RB Allocation	PCC UL RB Start	SCC UL RB Allocation	SCC UL RB Start	MPR	Average power (dBm)	EIRP power (dBm)	EIRP power (W)
Band 48+48	20+15	55340 55511	3560 3577.1	QPSK	1	0	0	0	1	21.09	21.92	0.156
					100	0	75	0	2	18.47	19.30	0.085
				16QAM	1	0	0	0	1.5	18.43	19.26	0.084
					100	0	75	0	3	18.48	19.31	0.085
				64QAM	1	0	0	0	2	18.37	19.20	0.083
					100	0	75	0	2	20.02	20.85	0.122
				256QAM	1	0	0	0	6	18.47	19.30	0.085
					100	0	75	0	6	18.41	19.24	0.084
		55916 56087	3617.6 3634.7	QPSK	1	0	0	0	1	20.00	20.83	0.121
					100	0	75	0	2	19.12	19.95	0.099
				16QAM	1	0	0	0	1.5	18.35	19.18	0.083
					100	0	75	0	3	18.54	19.37	0.086
				64QAM	1	0	0	0	2	20.07	20.90	0.123
					100	0	75	0	2	19.02	19.85	0.097
				256QAM	1	0	0	0	6	18.41	19.24	0.084
					100	0	75	0	6	18.33	19.16	0.082
		56491 56662	3675.1 3692.2	QPSK	1	0	0	0	1	19.18	20.01	0.100
					100	0	75	0	2	16.01	16.84	0.048
				16QAM	1	0	0	0	1.5	18.46	19.29	0.085
					100	0	75	0	3	16.37	17.20	0.052
				64QAM	1	0	0	0	2	15.88	16.71	0.047
					100	0	75	0	2	15.99	16.82	0.048
				256QAM	1	0	0	0	6	16.33	17.16	0.052
					100	0	75	0	6	16.34	17.17	0.052

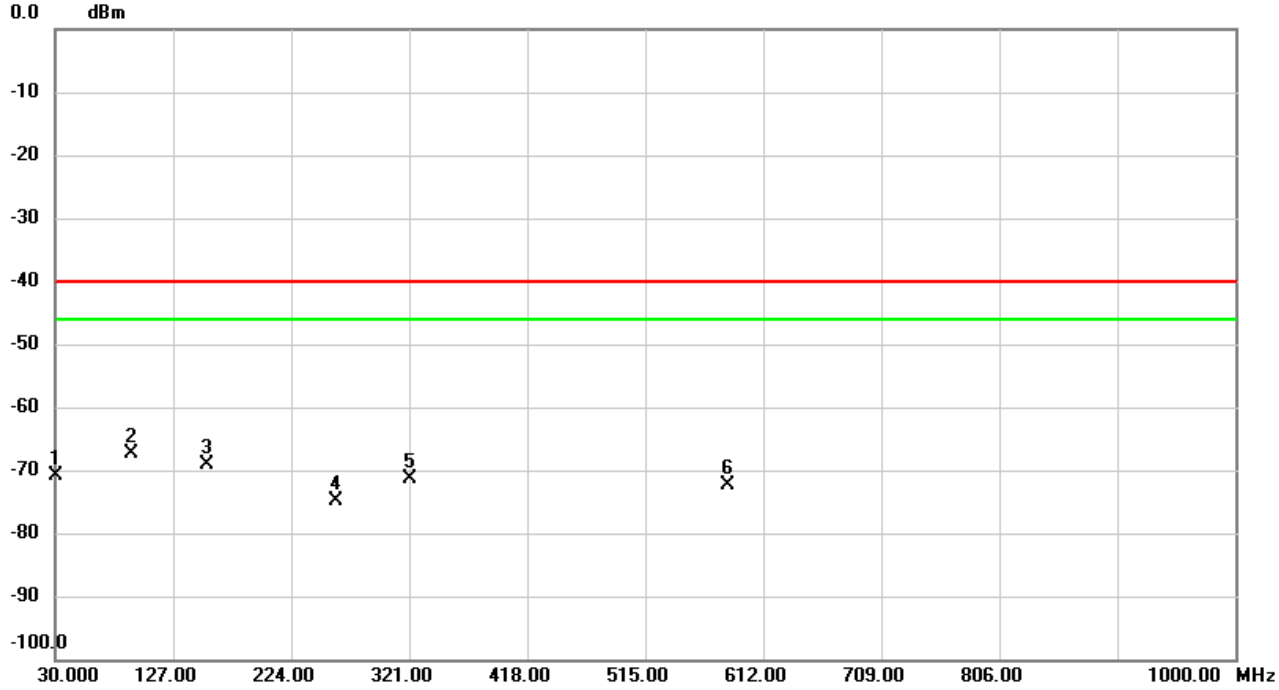
NOTE:
(1) EIRP = Average power + Antenna gain.
(2) ERP = EIRP - 2.15.
(3) $P(W) = 1\ W \cdot 10^{(P(dBm)\ /\ 10)} / 1000$

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	PCC UL RB Allocation	PCC UL RB Start	SCC UL RB Allocation	SCC UL RB Start	MPR	Average power (dBm)	EIRP power (dBm)	EIRP power (W)
Band 48+48	20+20	55340 55538	3560 3579.8	QPSK	1	0	0	0	1	21.10	21.93	0.156
					100	0	100	0	2	18.51	19.34	0.086
				16QAM	1	0	0	0	1.5	18.49	19.32	0.086
					100	0	100	0	3	18.53	19.36	0.086
				64QAM	1	0	0	0	2	18.47	19.30	0.085
					100	0	100	0	2	20.08	20.91	0.123
				256QAM	1	0	0	0	6	18.53	19.36	0.086
					100	0	100	0	6	18.49	19.32	0.086
		55891 56089	3615.1 3634.9	QPSK	1	0	0	0	1	20.03	20.86	0.122
					100	0	100	0	2	19.15	19.98	0.100
				16QAM	1	0	0	0	1.5	18.38	19.21	0.083
					100	0	100	0	3	18.57	19.40	0.087
				64QAM	1	0	0	0	2	20.11	20.94	0.124
					100	0	100	0	2	19.11	19.94	0.099
				256QAM	1	0	0	0	6	18.46	19.29	0.085
					100	0	100	0	6	18.42	19.25	0.084
		56442 56640	3670.2 3690	QPSK	1	0	0	0	1	19.19	20.02	0.100
					100	0	100	0	2	16.11	16.94	0.049
				16QAM	1	0	0	0	1.5	18.55	19.38	0.087
					100	0	100	0	3	16.42	17.25	0.053
				64QAM	1	0	0	0	2	15.95	16.78	0.048
					100	0	100	0	2	16.05	16.88	0.049
				256QAM	1	0	0	0	6	16.43	17.26	0.053
					100	0	100	0	6	16.42	17.25	0.053

NOTE:
(1) EIRP = Average power + Antenna gain.
(2) ERP = EIRP - 2.15.
(3) $P(W) = 1\ W \cdot 10^{(P(dBm)\ /\ 10)} / 1000$

APPENDIX B RADIATED SPURIOUS EMISSIONS

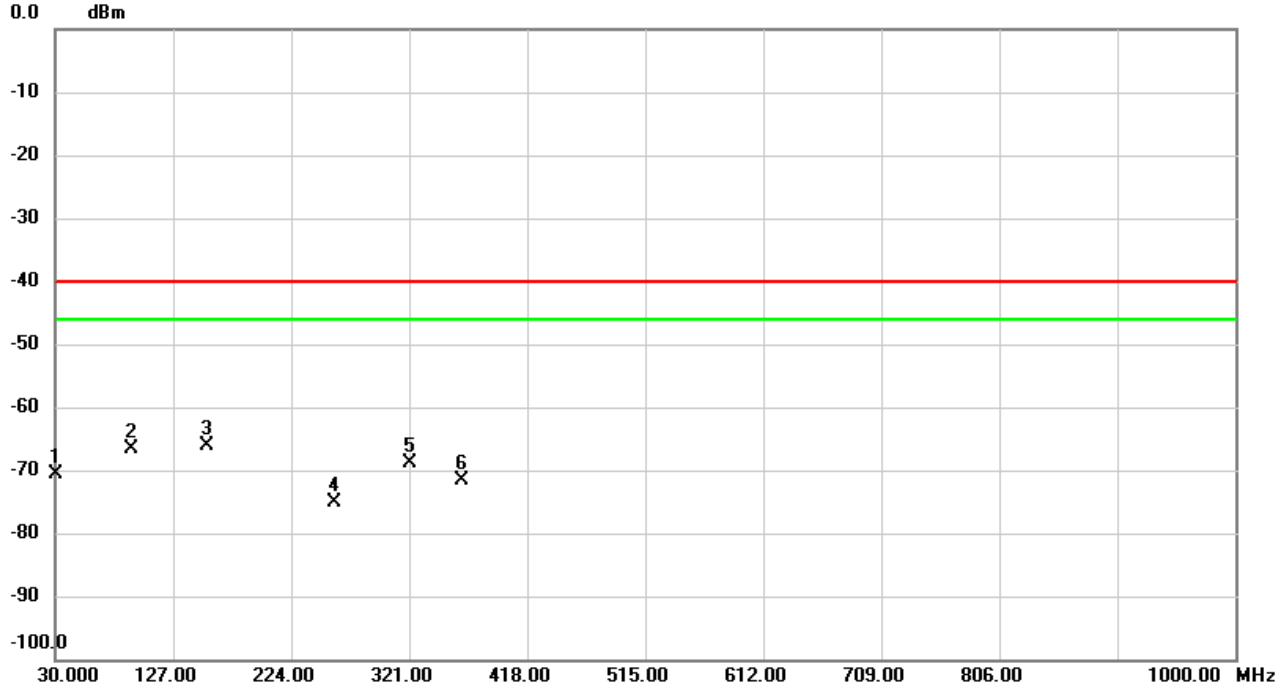
Test Mode	LTE Band 48	Test Date	2023/11/29
Test Channel	CH55340	Polarization	Vertical
Temp	23°C	Hum.	56%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1		30.0000	-61.84	-9.14	-70.98	-40.00	-30.98	peak	
2	*	92.2093	-61.64	-5.74	-67.38	-40.00	-27.38	peak	
3		154.7420	-66.57	-2.46	-69.03	-40.00	-29.03	peak	
4		261.1510	-71.86	-3.04	-74.90	-40.00	-34.90	peak	
5		321.0323	-68.40	-3.09	-71.49	-40.00	-31.49	peak	
6		583.1263	-75.31	3.06	-72.25	-40.00	-32.25	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

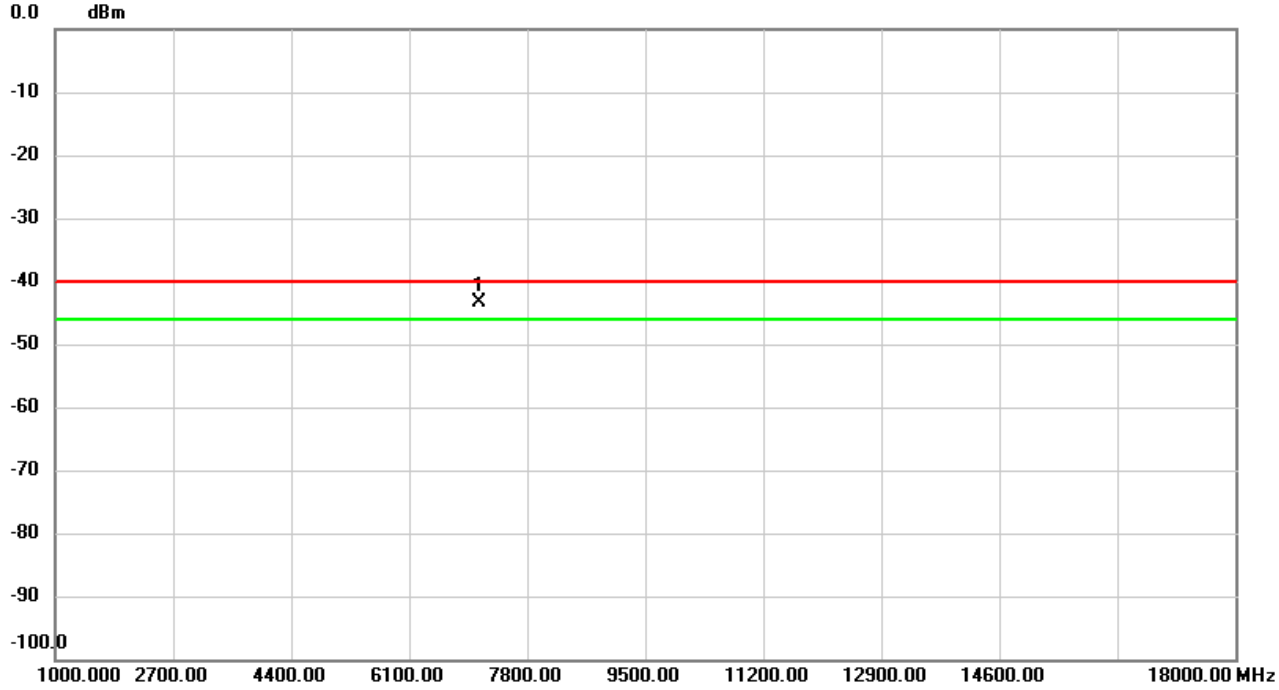
Test Mode	LTE Band 48	Test Date	2023/11/29
Test Channel	CH55340	Polarization	Horizontal
Temp	23°C	Hum.	56%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1		30.0000	-73.42	2.87	-70.55	-40.00	-30.55	peak	
2		93.2117	-58.40	-8.17	-66.57	-40.00	-26.57	peak	
3	*	154.4510	-60.34	-5.82	-66.16	-40.00	-26.16	peak	
4		259.6313	-67.59	-7.63	-75.22	-40.00	-35.22	peak	
5		321.0323	-64.13	-4.64	-68.77	-40.00	-28.77	peak	
6		364.8440	-68.94	-2.58	-71.52	-40.00	-31.52	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

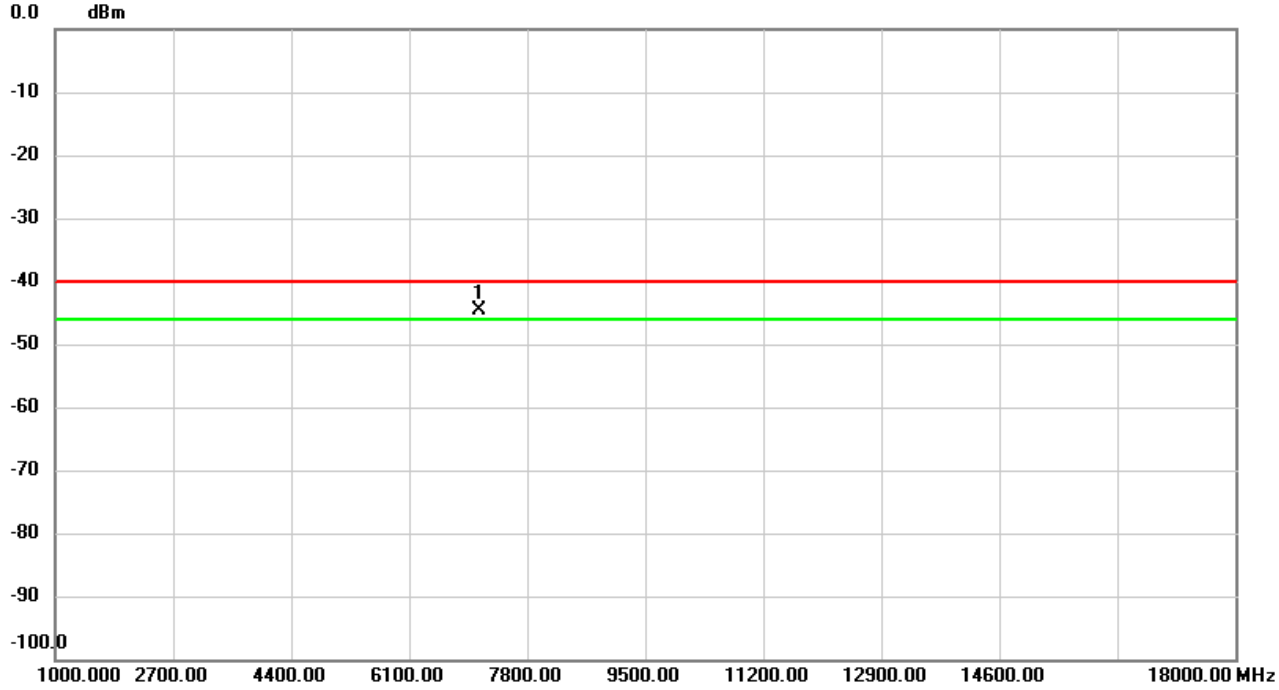
Test Mode	LTE Band 48	Test Date	2023/11/29
Test Channel	CH55340	Polarization	Vertical
Temp	23°C	Hum.	56%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	7100.000	-62.00	18.54	-43.46	-40.00	-3.46	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

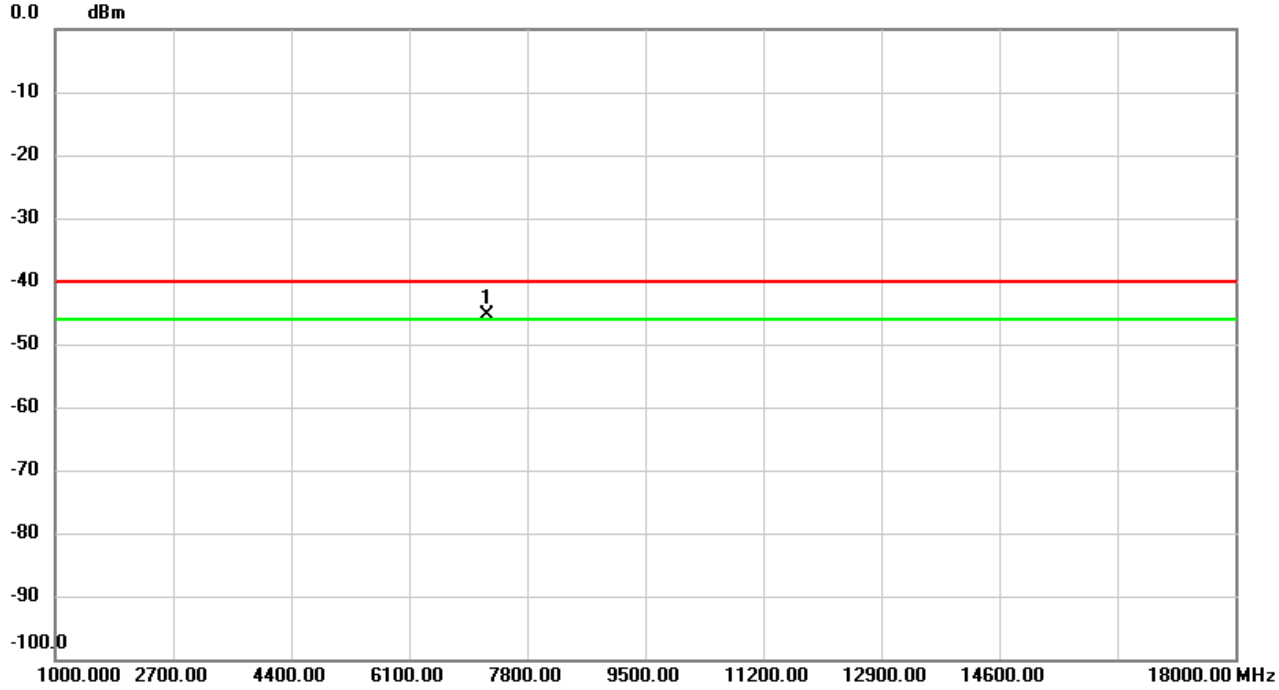
Test Mode	LTE Band 48	Test Date	2023/11/29
Test Channel	CH55340	Polarization	Horizontal
Temp	23°C	Hum.	56%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	7100.000	-62.91	18.40	-44.51	-40.00	-4.51	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

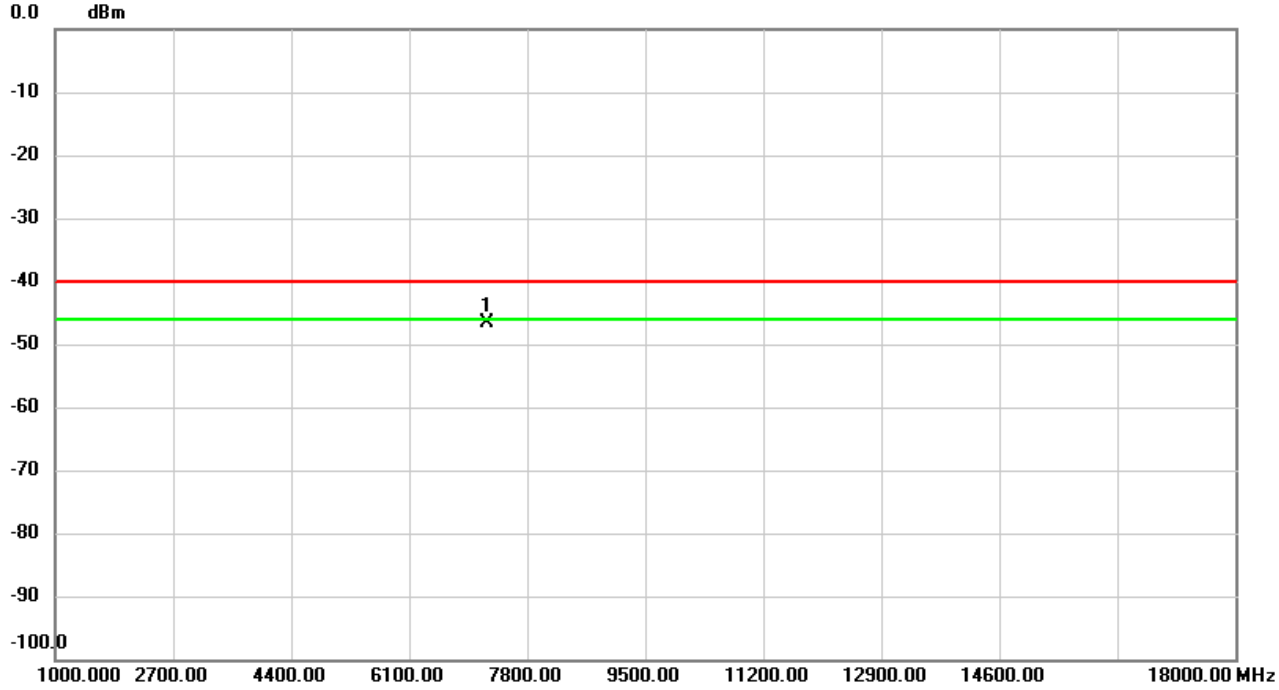
Test Mode	LTE Band 48	Test Date	2023/11/29
Test Channel	CH55990	Polarization	Vertical
Temp	23°C	Hum.	56%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	7230.000	-63.23	17.91	-45.32	-40.00	-5.32	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

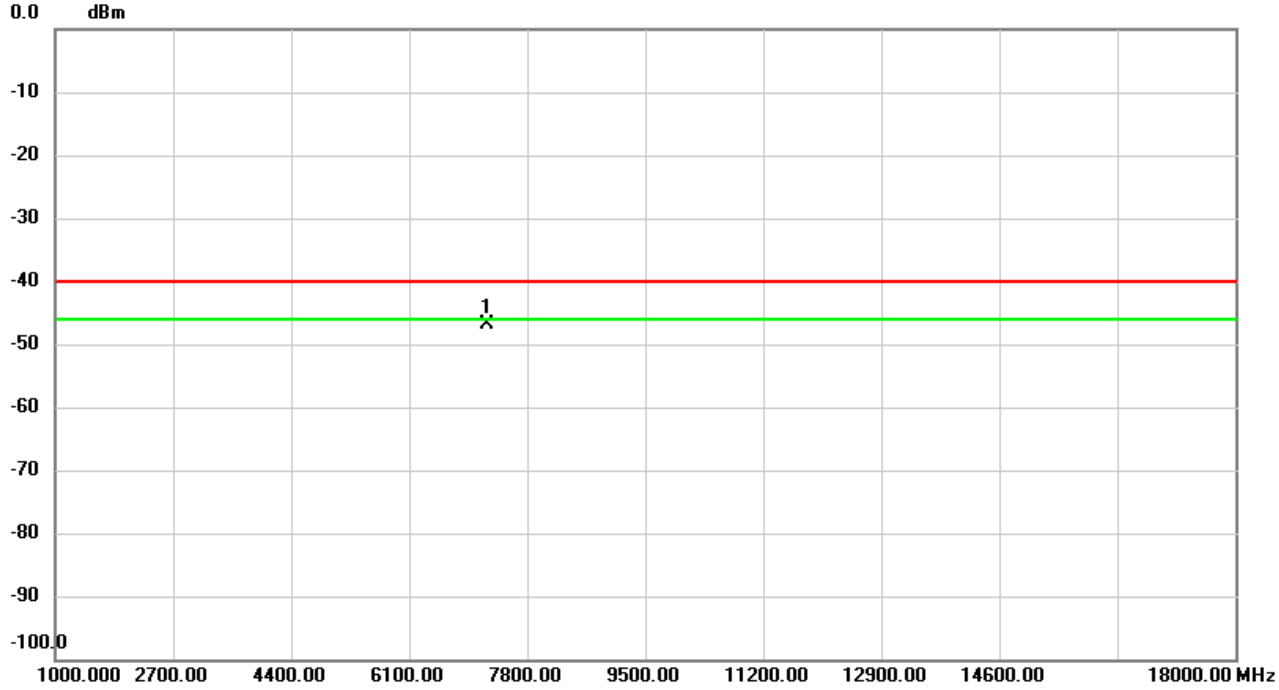
Test Mode	LTE Band 48	Test Date	2023/11/29
Test Channel	CH55990	Polarization	Vertical
Temp	23°C	Hum.	56%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	7230.000	-64.44	17.91	-46.53	-40.00	-6.53	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

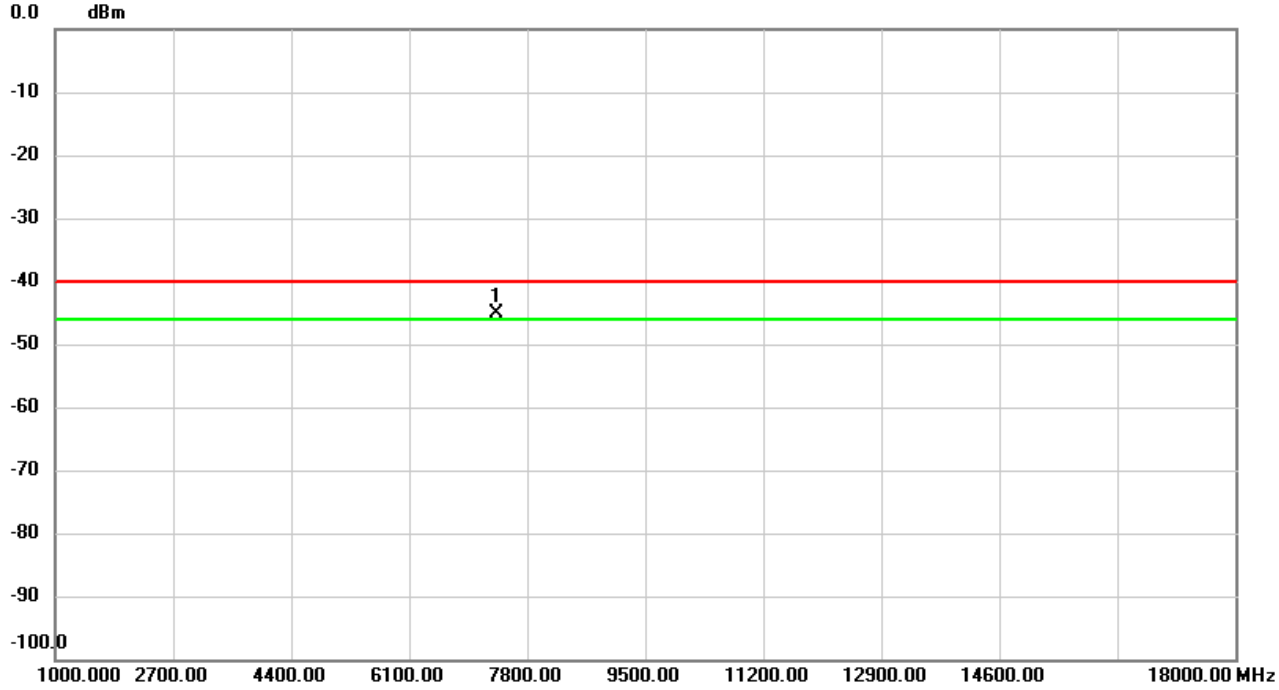
Test Mode	LTE Band 48	Test Date	2023/11/29
Test Channel	CH55990	Polarization	Horizontal
Temp	23°C	Hum.	56%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	7230.000	-64.25	17.50	-46.75	-40.00	-6.75	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

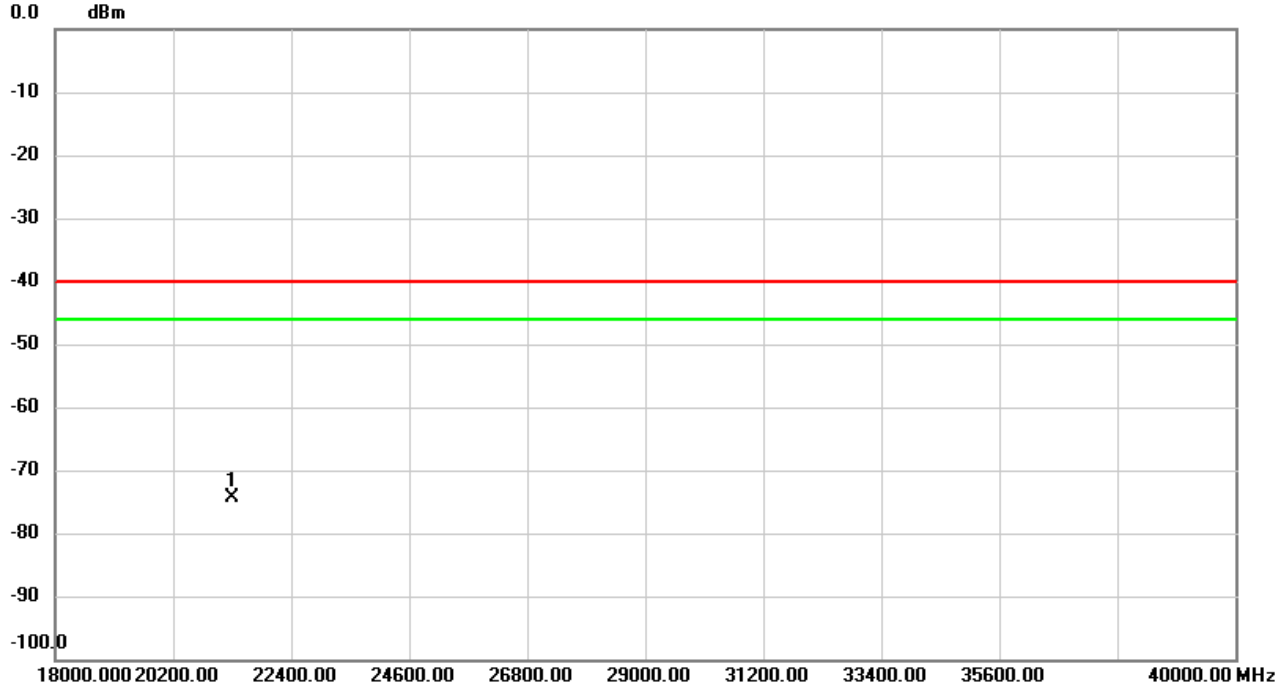
Test Mode	LTE Band 48	Test Date	2023/11/29
Test Channel	CH56640	Polarization	Vertical
Temp	23°C	Hum.	56%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	7360.000	-62.89	17.74	-45.15	-40.00	-5.15	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

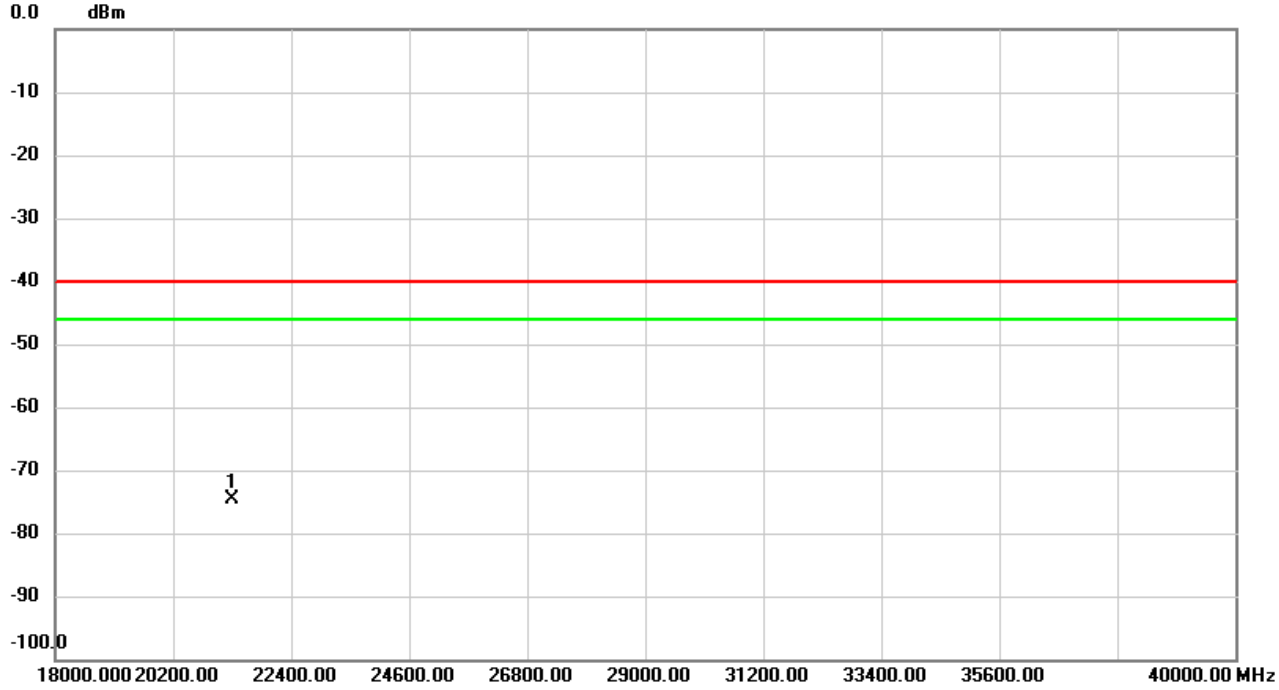
Test Mode	LTE Band 48	Test Date	2023/12/27
Test Channel	CH55340	Polarization	Vertical
Temp	23°C	Hum.	58%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	21300.00	-68.12	-6.13	-74.25	-40.00	-34.25	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

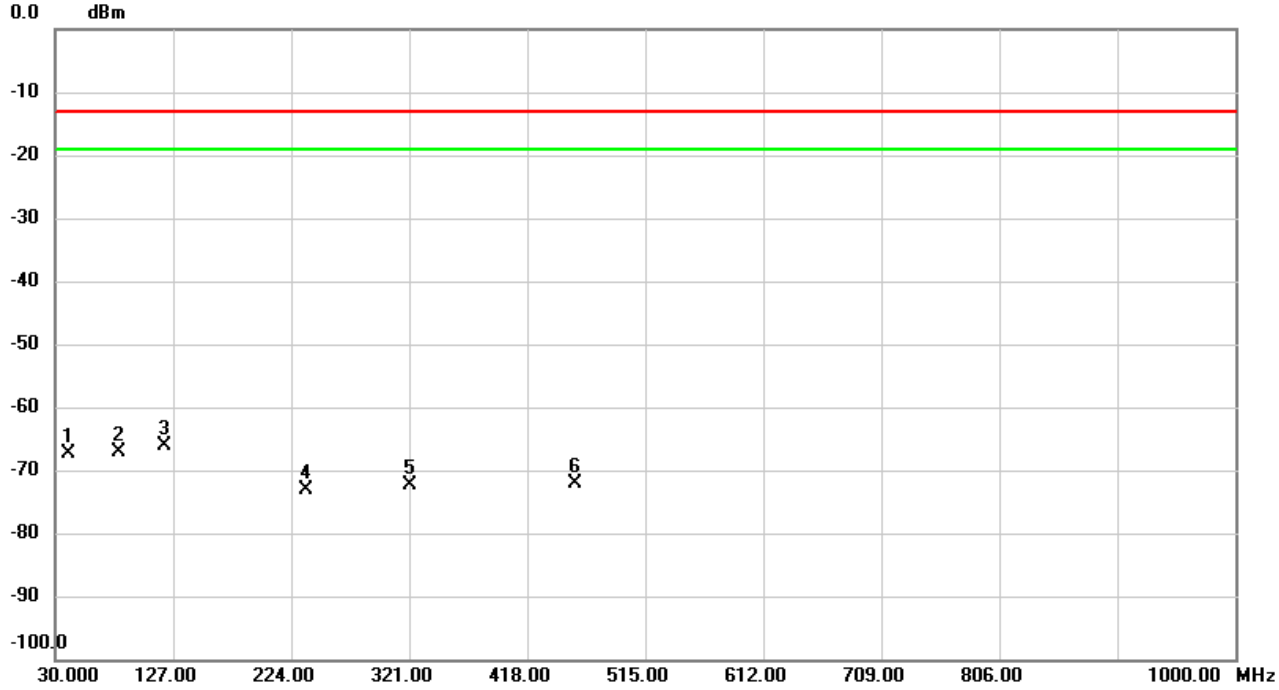
Test Mode	LTE Band 48	Test Date	2023/12/27
Test Channel	CH55340	Polarization	Horizontal
Temp	23°C	Hum.	58%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	21300.00	-68.56	-6.13	-74.69	-40.00	-34.69	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

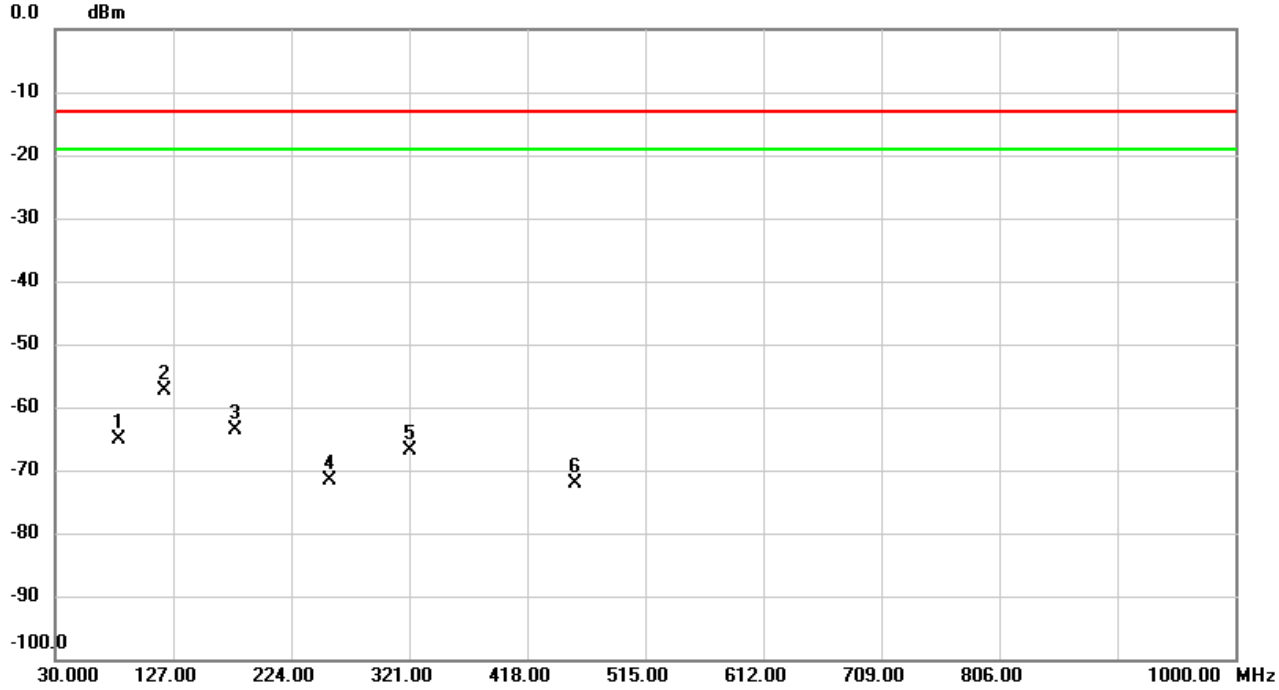
Test Mode	LTE Band CA_48C	Test Date	2023/12/4
Test Channel	Low CH	Polarization	Vertical
Temp	22°C	Hum.	58%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1		40.6376	-65.22	-2.15	-67.37	-13.00	-54.37	peak	
2		82.8326	-65.00	-2.15	-67.15	-13.00	-54.15	peak	
3	*	119.6603	-64.06	-2.15	-66.21	-13.00	-53.21	peak	
4		236.6746	-71.01	-2.15	-73.16	-13.00	-60.16	peak	
5		321.0323	-70.33	-2.15	-72.48	-13.00	-59.48	peak	
6		457.0586	-69.91	-2.15	-72.06	-13.00	-59.06	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

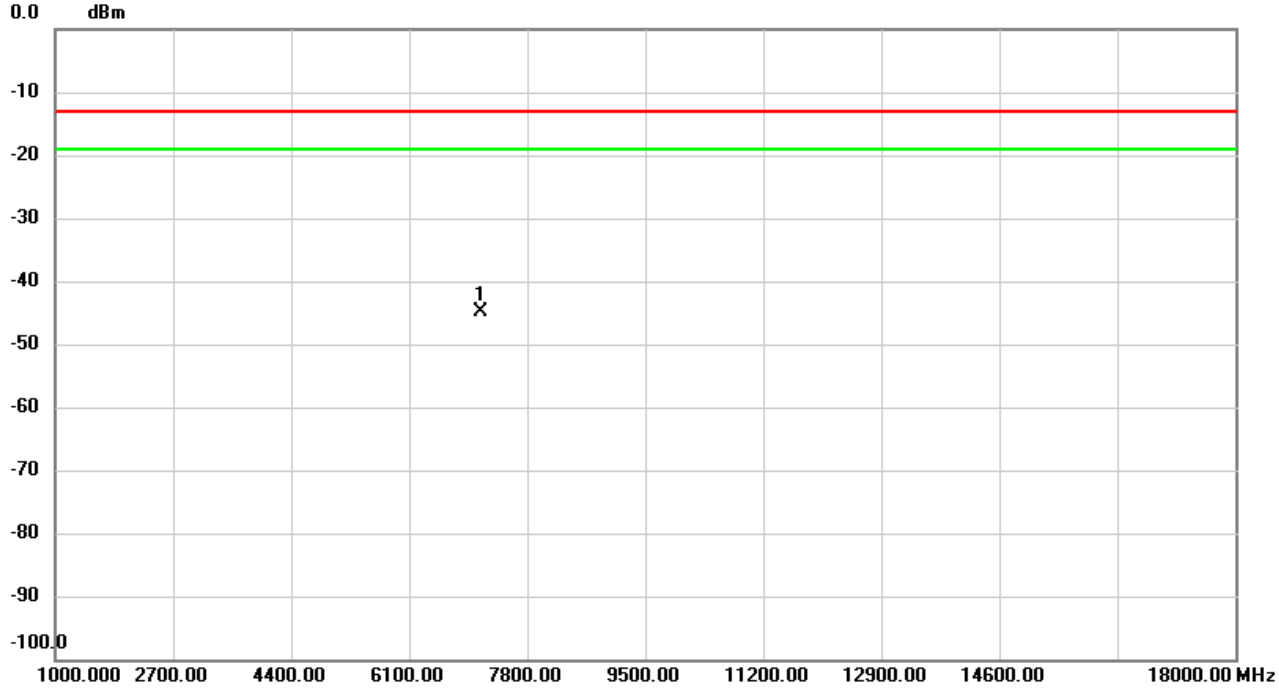
Test Mode	LTE Band CA_48C	Test Date	2023/12/4
Test Channel	Low CH	Polarization	Horizontal
Temp	22°C	Hum.	58%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1		82.8973	-63.02	-2.15	-65.17	-13.00	-52.17	peak	
2	*	119.3047	-55.17	-2.15	-57.32	-13.00	-44.32	peak	
3		177.9897	-61.39	-2.15	-63.54	-13.00	-50.54	peak	
4		255.6220	-69.58	-2.15	-71.73	-13.00	-58.73	peak	
5		321.0970	-64.65	-2.15	-66.80	-13.00	-53.80	peak	
6		456.9940	-69.93	-2.15	-72.08	-13.00	-59.08	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

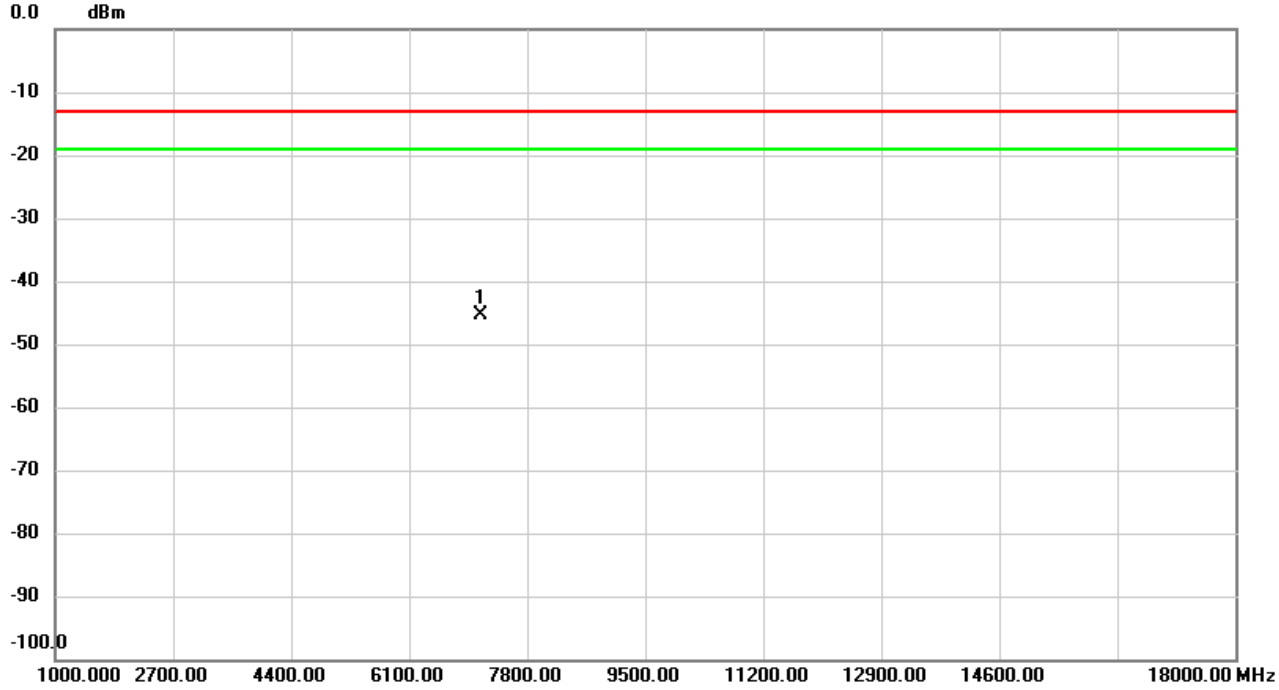
Test Mode	LTE Band CA_48C	Test Date	2023/12/1
Test Channel	Low CH	Polarization	Horizontal
Temp	21°C	Hum.	57%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	7120.000	-62.90	18.10	-44.80	-13.00	-31.80	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

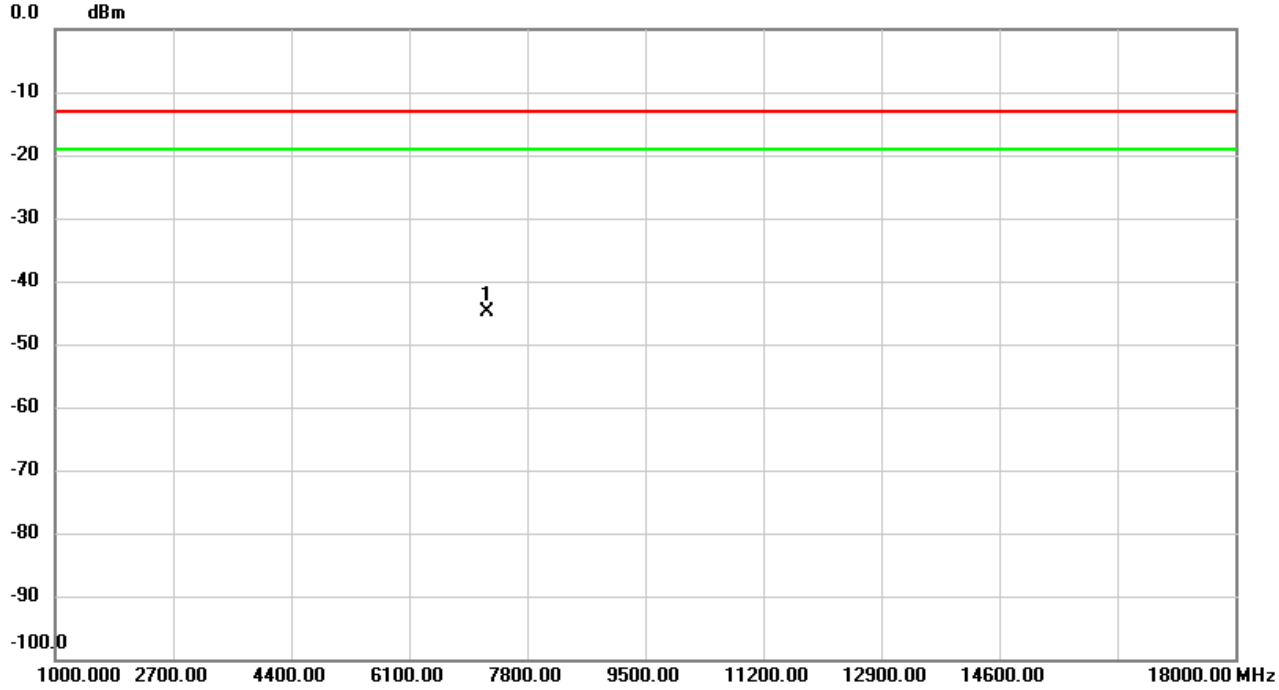
Test Mode	LTE Band CA_48C	Test Date	2023/12/1
Test Channel	Low CH	Polarization	Vertical
Temp	21°C	Hum.	57%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	7120.000	-63.67	18.29	-45.38	-13.00	-32.38	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

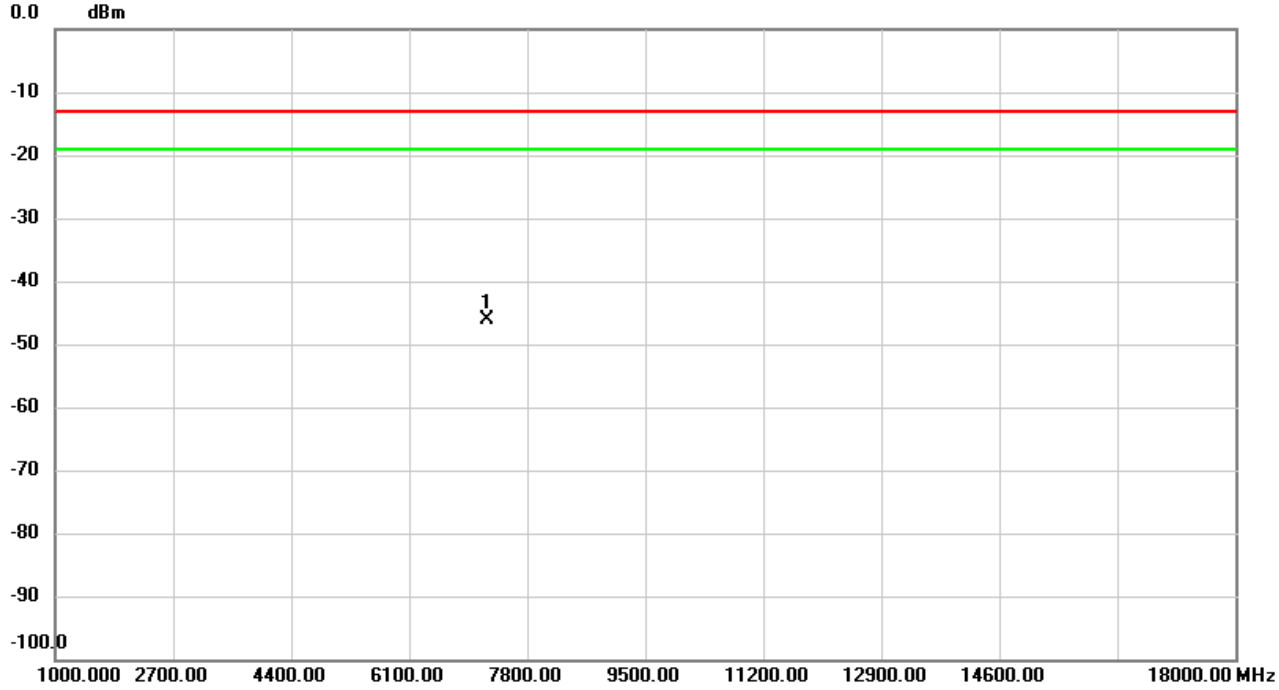
Test Mode	LTE Band CA_48C	Test Date	2023/12/1
Test Channel	Middle CH	Polarization	Vertical
Temp	21°C	Hum.	57%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	7230.000	-62.86	17.91	-44.95	-13.00	-31.95	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

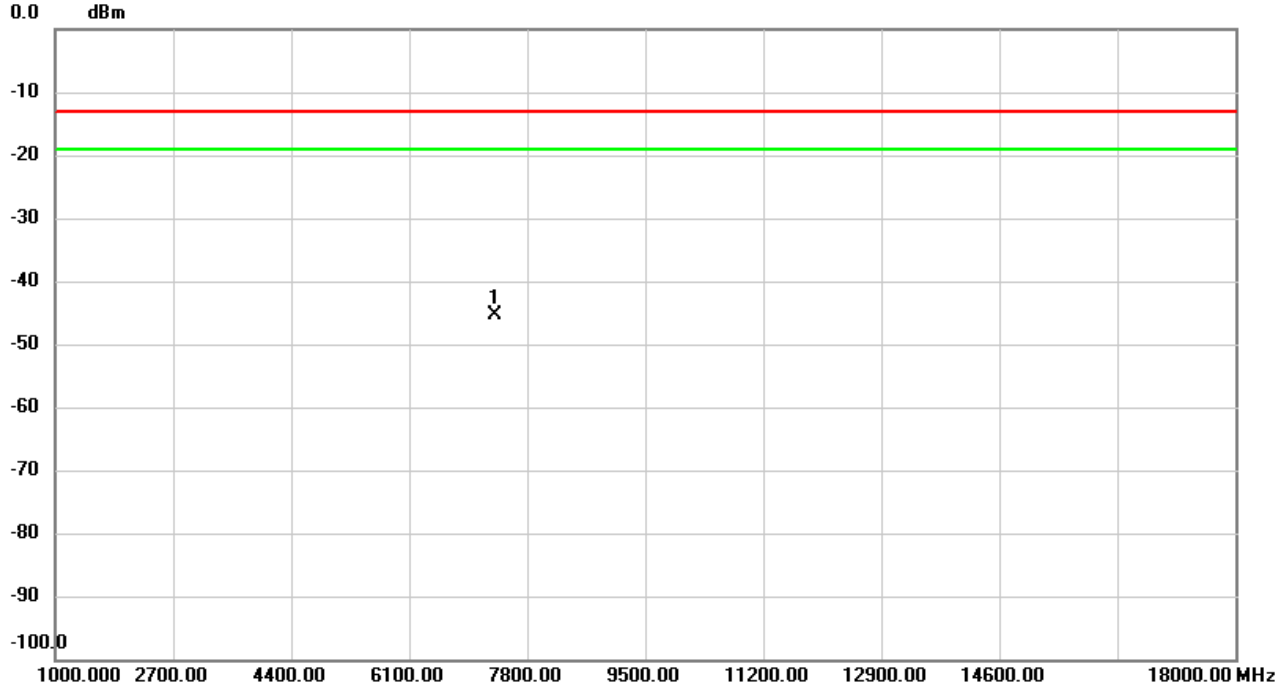
Test Mode	LTE Band CA_48C	Test Date	2023/12/1
Test Channel	Middle CH	Polarization	Horizontal
Temp	21°C	Hum.	57%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	7230.000	-63.51	17.50	-46.01	-13.00	-33.01	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

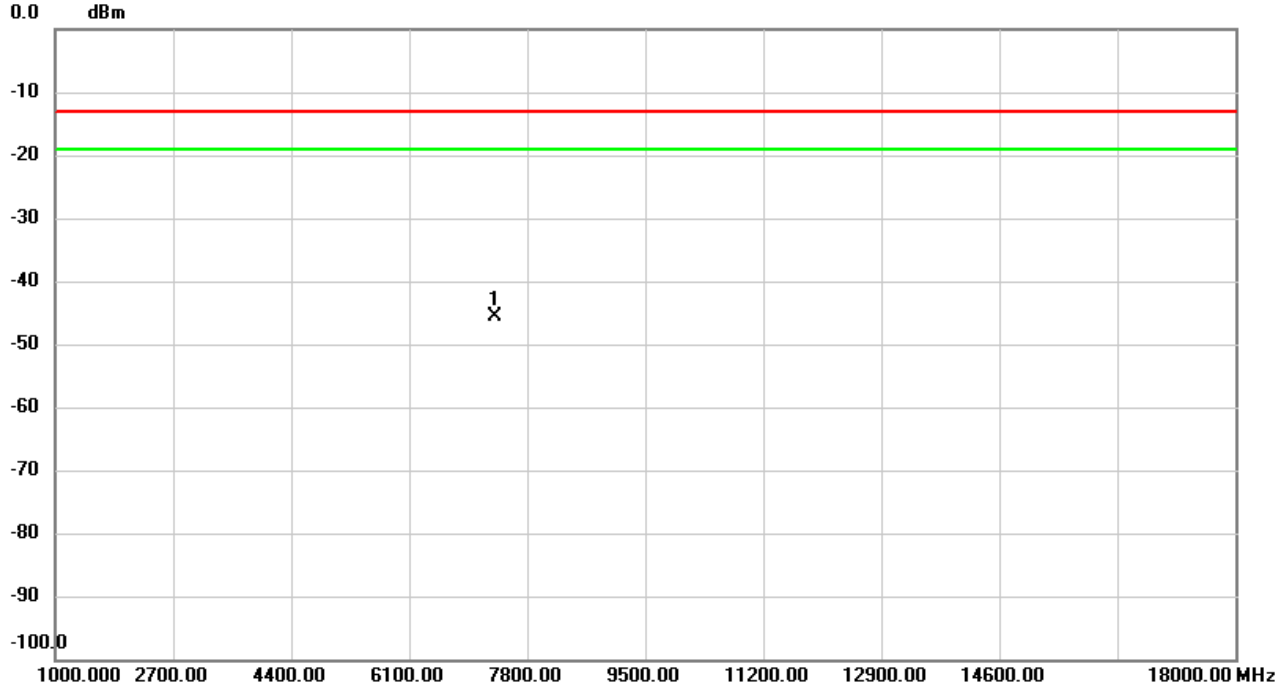
Test Mode	LTE Band CA_48C	Test Date	2023/12/1
Test Channel	High CH	Polarization	Vertical
Temp	21°C	Hum.	57%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	7340.000	-63.01	17.71	-45.30	-13.00	-32.30	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

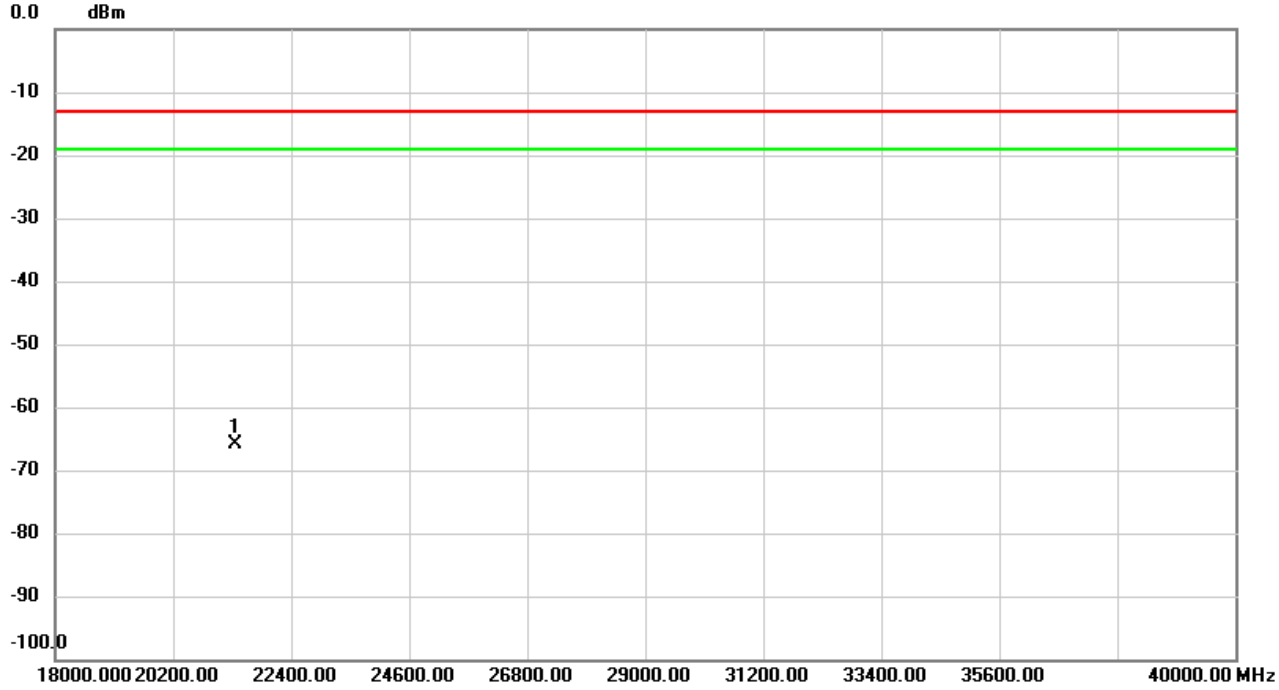
Test Mode	LTE Band CA_48C	Test Date	2023/12/1
Test Channel	High CH	Polarization	Horizontal
Temp	21°C	Hum.	57%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	7340.000	-63.02	17.40	-45.62	-13.00	-32.62	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

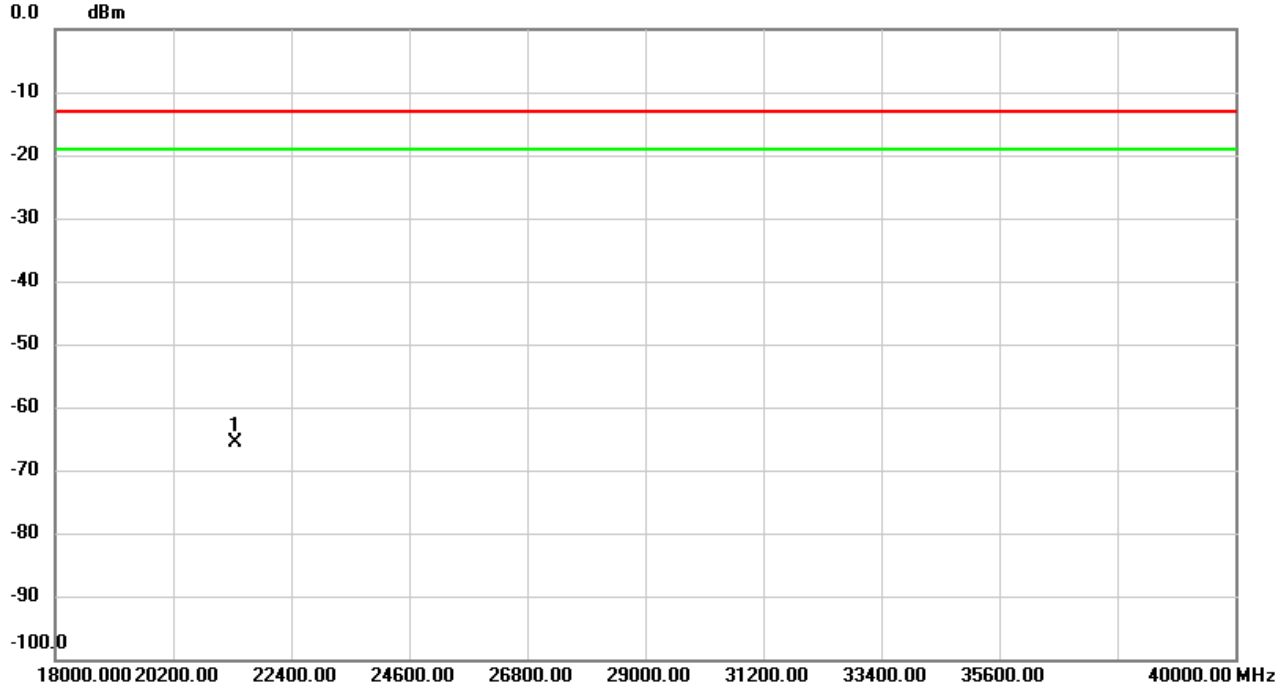
Test Mode	LTE Band CA_48C	Test Date	2024/1/4
Test Channel	Low CH	Polarization	Vertical
Temp	23°C	Hum.	55%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	21360.00	-59.83	-6.10	-65.93	-13.00	-52.93	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode	LTE Band CA_48C	Test Date	2024/1/4
Test Channel	Low CH	Polarization	Horizontal
Temp	23°C	Hum.	55%



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	21360.00	-59.57	-6.10	-65.67	-13.00	-52.67	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

End of Test Report