



FCC PART 15E TEST REPORT No.24T04Z101045-017

for

TCL Communication Ltd.

Tablet PC

9491G

FCC ID: 2ACCJB221

with

Hardware Version: 05

Software Version: 1AS0

Issued Date: 2024-06-01

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:

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
24T04Z101045-017	Rev.0	1st edition	2024-06-01

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

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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

Conducted testing Location: CTTL(Huayuan North Road)

Address: No. 52, Huayuan North Road, Haidian District, Beijing,
P. R. China100191

Radiated testing Location: CTTL(Huayuan North Road)

Address: No. 52, Huayuan North Road, Haidian District, Beijing,
P. R. China100191

1.3. Testing Environment

Normal Temperature: 15-35°C

Relative Humidity: 20-75%

1.4. Project date

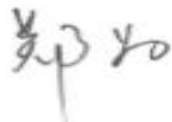
Testing Start Date: 2024-05-10

Testing End Date: 2024-05-30

1.5. Signature

Yao Xingyu

(Prepared this test report)



Zheng Wei

(Reviewed this test report)



Pang Shuai

(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
City: Hong Kong
Postal Code: /
Country: China
Contact Person: Ting Wang
Contact Email: ting.wang.hz@tcl.com
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Fax: 0086-755-36612000-81722

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
City: Hong Kong
Postal Code: /
Country: China
Contact Person: Ting Wang
Contact Email: ting.wang.hz@tcl.com
Telephone: +86 755 3661 1621
Fax: 0086-755-36612000-81722

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

3.1. About EUT

Description	Tablet PC
Model name	9491G
FCC ID	2ACCJB221
WLAN Frequency Band	ISM Bands: -5150MHz~5250MHz -5250MHz~5350MHz -5470MHz~5725MHz
Type of modulation	OFDM
Antenna	Integral Antenna
Nominal Voltage	3.9V
Extreme High Voltage	4.45V
Extreme Low Voltage	3.45V

3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version	Date of receipt
UT02a	USQC6DAMYXFA79CU	05	1AS0	2024-05-11
UT04a	VKBYLJGYIBLFYPV4	05	1AS0	2024-05-10

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

UT02a is used for Conduction test, UT04a is used for Radiation test.

3.3. Internal Identification of AE used during the test

AE ID*	Name	Model	Manufacturer
AE1	Battery	TLp100A7	Dongguan Veken Battery CO., LTD.
AE2	Charger	QC16US	SHENZHEN BAIJUNDA ELECTRONICS CO., LTD.
AE3	Charger	QC16UK	SHENZHEN BAIJUNDA ELECTRONICS CO., LTD.
AE4	Charger	QC16EU	SHENZHEN BAIJUNDA ELECTRONICS CO., LTD.
AE5	Charger	QC16AU	SHENZHEN BAIJUNDA ELECTRONICS CO., LTD.
AE6	Date Cable	CDA0000205C1	Huizhou Juwei Electronics Co., Ltd.

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

3.4. General Description

The Equipment under Test (EUT) is a model of Tablet PC with integrated antenna and inbuilt battery.

It consists of normal options: travel charger, USB cable.

Manual and specifications of the EUT were provided to fulfil the test.

Samples undergoing test were selected by the client.

3.5. Interpretation of the Test Environment

For the test methods, the test environment uncertainty figures correspond to an expansion factor $k=2$.

Measurement Uncertainty

Parameter	Uncertainty
temperature	0.48°C
humidity	2 %
DC voltages	0.003V

4. Reference Documents

4.1. Documents supplied by applicant

EUT feature information is supplied by the applicant or manufacturer, which is the basis of testing.

4.2. Reference Documents for testing

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

FCC Part15	Title 47 of the Code of Federal Regulations; Chapter I Part 15 - Radio frequency devices	2021
ANSI C63.10	Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	2013
UNII: KDB 789033 D02	General U-NII Test Procedures New Rules v02r01	2017-12

5. Laboratory Environment

Conducted RF performance testing is performed in shielding room.

EMC performance testing is performed in Semi-anechoic chamber.

6. Test Results

6.1. Summary of Test Results

SUMMARY OF MEASUREMENT RESULTS	Sub-clause of Part15E	Sub-clause of IC	Verdict
Maximum Output Power	15.407	/	P
Peak Power Spectral Density	15.407	/	P
Occupied 26dB Bandwidth	15.403	/	P
Radiated Unwanted Emission	15.407, 15.205, 15.209	/	P
AC Powerline Conducted Emission	15.107, 15.207	/	P
99% Occupied bandwidth	/	/	P
Transmit Power Control	15.407	/	NA

Please refer to **ANNEX A** for detail.

Terms used in Verdict column

P	Pass, The EUT complies with the essential requirements in the standard.
NM	Not measured, The test was not measured by CTTL
NA	Not Applicable, The test was not applicable
F	Fail, The EUT does not comply with the essential requirements in the standard

6.2. Statements

CTTL has evaluated the test cases as listed in section 6.1 of this report for the EUT specified in section 3 according to the standards or reference documents listed in section 4.

This report only deals with the WLAN function among the features described in section 3.

6.3. Test Conditions

For this report, all the test cases are tested under normal temperature and normal voltage, and also under norm humidity, the specific condition is shown as follows:

Temperature	26°C
Voltage	3.9V
Humidity	44%

7. Test Facilities Utilized

Conducted test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	Vector Signal Analyzer	FSW67	104051	Rohde & Schwarz	1 year	2025-04-01
2	Attenuator	10dB/2W	/	Rosenberger	/	/
3	Shielding Room	S81	/	ETS-Lindgren	/	/

Radiated emission test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	Test Receiver	ESW44	103015	R&S	1 year	2025-01-18
2	Test Receiver	ESW44	103023	R&S	1 year	2024-06-08
3	Loop Antenna	HFH2-Z2	829324/007	R&S	1 year	2025-01-04
4	EMI Antenna	VULB9163	01223	Schwarzbeck	1 year	2024-07-18
5	EMI Antenna	3115	6914	ETS-Lindgren	1 year	2024-06-07
6	EMI Antenna	3116	2663	ETS-Lindgren	1 year	2025-02-21

AC Power Line Conducted Emission

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	LISN	ENV216	101200	R&S	1 year	2025-05-16
2	Test Receiver	ESCI	100344	R&S	1 year	2025-04-01

8. Measurement Uncertainty

8.1 Transmitter Output Power

Measurement Uncertainty: 0.387dB,k=1.96

8.2 Peak Power Spectral Density

Measurement Uncertainty: 0.705dB,k=1.96

8.3 26dB Emission Bandwidth

Measurement Uncertainty: 60.80Hz,k=1.96

8.4 Band Edges Compliance

Measurement Uncertainty : 0.62dB,k=1.96

8.5 Spurious Emissions

Conducted (k=1.96)

Frequency Range	Uncertainty(dB)
$30\text{MHz} \leq f \leq 2\text{GHz}$	1.22
$2\text{GHz} \leq f \leq 3.6\text{GHz}$	1.22
$3.6\text{GHz} \leq f \leq 8\text{GHz}$	1.22
$8\text{GHz} \leq f \leq 12.75\text{GHz}$	1.51
$12.75\text{GHz} \leq f \leq 26\text{GHz}$	1.51
$26\text{GHz} \leq f \leq 40\text{GHz}$	1.59

Radiated (k=2)

Frequency Range	Uncertainty(dB)
9kHz-30MHz	4.92
$30\text{MHz} \leq f \leq 1\text{GHz}$	4.72
$1\text{GHz} \leq f \leq 18\text{GHz}$	4.84
$18\text{GHz} \leq f \leq 40\text{GHz}$	5.12

8.6 AC Power-line Conducted Emission

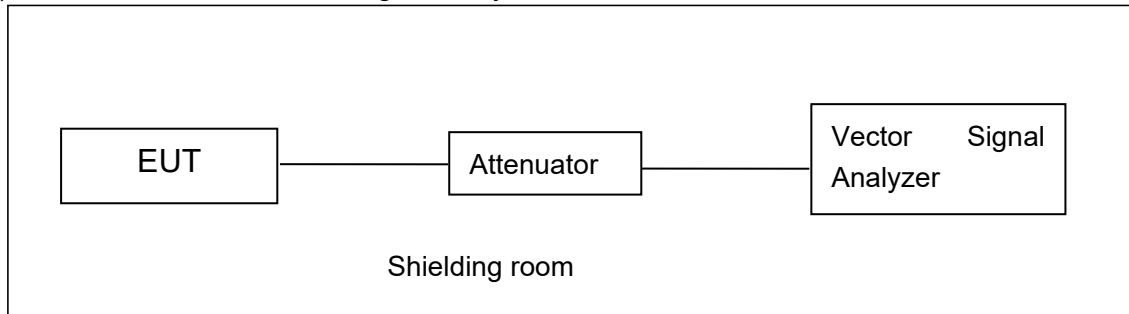
Measurement Uncertainty : 3.08dB,k=2

ANNEX A: Detailed Test Results

A.1. Measurement Method

A.1.1. Conducted Measurements

- 1). Connect the EUT to the test system correctly.
- 2). Set the EUT to the required work mode.
- 3). Set the EUT to the required channel.
- 4). Set the spectrum analyzer to start measurement.
- 5). Record the values. Vector Signal Analyzer



A.1.2. Radiated Emission Measurements

Measurement performed according to Clause 6.4, 6.5, 6.6 in ANSI C63.10 and II.G.4, II.G.5, II.G.6 in KDB 789033.

The radiated emission test is performed in semi-anechoic chamber. The EUT was placed on a non-conductive table with 80cm above the ground plane for measurement below 1GHz and 1.5m above the ground plane for measurement above 1GHz. The measurement antenna was placed at a distance of 3 meters from the EUT. The test is carried out on both vertical and horizontal polarization and only maximization result of both polarizations is kept. During the test, the turntable is rotated from 0° to 360° and the measurement antenna is moved from 1m to 4m to get the maximization result. The maximization process was repeated with the EUT positioned in each of its three orthogonal orientations

A.2. Maximum output Power

Measurement Limit and Method:

Standard	Frequency (MHz)	Limit (dBm)
FCC CRF Part 15.407(a)	5150MHz~5250MHz	24dBm
	5250MHz~5350MHz	24dBm or 11+10logB
	5470MHz~5725MHz	24dBm or 11+10logB

Limit use the less value, and B is the 26dB bandwidth.

The measurement method SA-2 is made according to KDB 789033

A.2.1 Antenna Gain

Antenna gain is 0.8dBi and the value is supplied by the applicant or manufacturer.

A.2.2 Maximum output Power-Conducted

EUT ID: UT02a

Measurement Results:

802.11a mode

Mode	Frequency	Test Result (dBm)							
		Data Rate (Mbps)							
		6	9	12	18	24	36	48	54
802.11a	5180MHz	16.40	/	/	/	/	/	/	/
	5200MHz	16.31	/	/	/	/	/	/	/
	5240MHz	16.50	/	/	/	/	/	/	/
	5260MHz	16.21	/	/	/	/	/	/	/
	5280MHz	16.58	/	/	/	/	/	/	/
	5320MHz	16.28	/	/	/	/	/	/	/
	5500MHz	16.83	/	/	/	/	/	/	/
	5580MHz	16.46	/	/	/	/	/	/	/
	5700MHz	16.51	/	/	/	/	/	/	/
	5720MHz	16.37	/	/	/	/	/	/	/

The data rate 6Mbps is selected as worst condition, and the following cases are performed with this condition.

802.11n-HT20 mode

Mode	Frequency	Test Result (dBm)							
		Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
802.11n (HT20)	5180MHz	16.34	/	/	/	/	/	/	/
	5200MHz	16.14	/	/	/	/	/	/	/
	5240MHz	16.50	/	/	/	/	/	/	/
	5260MHz	16.00	/	/	/	/	/	/	/
	5280MHz	16.63	/	/	/	/	/	/	/
	5320MHz	16.12	/	/	/	/	/	/	/

	5500MHz	16.81	/	/	/	/	/	/	/
	5580MHz	16.24	/	/	/	/	/	/	/
	5700MHz	16.68	/	/	/	/	/	/	/
	5720MHz	16.40	/	/	/	/	/	/	/

The data rate MCS0 is selected as worst condition, and the following cases are performed with this condition.

802.11ac-VHT20 mode

Mode	Frequency	Test Result (dBm)								
		Data Rate								
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8
802.11ac (VHT20)	5180MHz	16.31	/	/	/	/	/	/	/	/
	5200MHz	16.56	/	/	/	/	/	/	/	/
	5240MHz	16.79	/	/	/	/	/	/	/	/
	5260MHz	16.54	/	/	/	/	/	/	/	/
	5280MHz	16.98	/	/	/	/	/	/	/	/
	5320MHz	16.60	/	/	/	/	/	/	/	/
	5500MHz	16.69	/	/	/	/	/	/	/	/
	5580MHz	16.38	/	/	/	/	/	/	/	/
	5700MHz	16.99	/	/	/	/	/	/	/	/
	5720MHz	16.96	/	/	/	/	/	/	/	/

The data rate MCS0 is selected as worst condition, and the following cases are performed with this condition.

802.11n-HT40 mode

Mode	Frequency	Test Result (dBm)							
		Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
802.11n (HT40)	5190MHz	16.44	/	/	/	/	/	/	/
	5230MHz	16.61	/	/	/	/	/	/	/
	5270MHz	16.68	/	/	/	/	/	/	/
	5310MHz	16.43	/	/	/	/	/	/	/
	5510MHz	16.53	/	/	/	/	/	/	/
	5550MHz	16.10	/	/	/	/	/	/	/
	5670MHz	16.37	/	/	/	/	/	/	/
	5710MHz	16.88	/	/	/	/	/	/	/

The data rate MCS0 is selected as worst condition, and the following cases are performed with this condition.

802.11ac-VHT40 mode

Mode	Frequency	Test Result (dBm)									
		Data Rate									
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
802.11ac (VHT40)	5190MHz	16.13	/	/	/	/	/	/	/	/	/
	5230MHz	16.53	/	/	/	/	/	/	/	/	/
	5270MHz	16.60	/	/	/	/	/	/	/	/	/
	5310MHz	16.30	/	/	/	/	/	/	/	/	/
	5510MHz	16.47	/	/	/	/	/	/	/	/	/
	5550MHz	16.05	/	/	/	/	/	/	/	/	/
	5670MHz	16.58	/	/	/	/	/	/	/	/	/
	5710MHz	16.99	/	/	/	/	/	/	/	/	/

The data rate MCS0 is selected as worst condition, and the following cases are performed with this condition.

802.11ac-VHT80 mode

Mode	Frequency	Test Result (dBm)									
		Data Rate									
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
802.11ac (VHT80)	5210MHz	16.15	/	/	/	/	/	/	/	/	/
	5290MHz	16.47	/	/	/	/	/	/	/	/	/
	5530MHz	16.16	/	/	/	/	/	/	/	/	/
	5610MHz	16.01	/	/	/	/	/	/	/	/	/
	5690MHz	16.43	/	/	/	/	/	/	/	/	/

The data rate MCS0 is selected as worst condition, and the following cases are performed with this condition.

The duty cycle of all mode are 100%.



17:11:50 03.06.2024

Maximum output Power: 11a CH100

Conclusion: PASS

A.3. Peak Power Spectral Density (conducted)

Measurement Limit:

Standard	Frequency (MHz)	Limit (dBm/MHz)
FCC CRF Part 15.407(a)	5150MHz~5250MHz	11
	5250MHz~5350MHz	11
	5470MHz~5725MHz	11

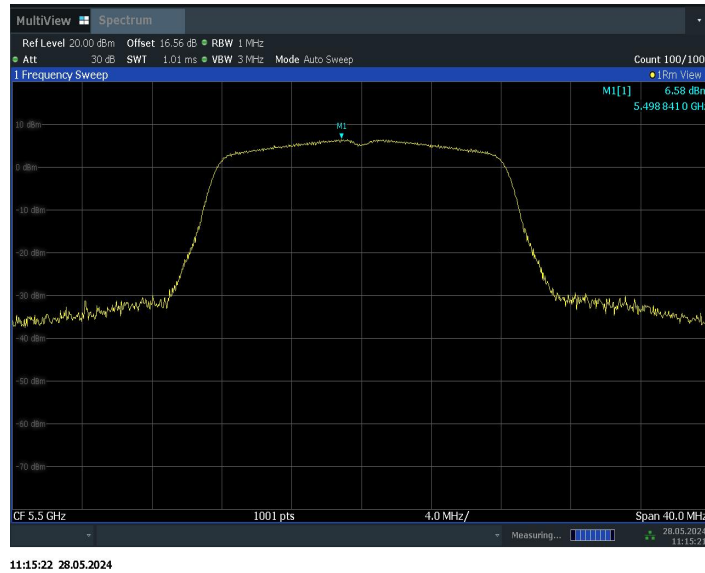
The output power measurement method Section F is made according to KDB 789033

EUT ID: UT02a

Measurement Results:

Mode	Frequency	Power Spectral Density (dBm/MHz)	Conclusion
802.11a	5180 MHz	6.25	P
	5200 MHz	6.19	P
	5240 MHz	6.53	P
	5260 MHz	6.09	P
	5280 MHz	6.40	P
	5320 MHz	5.93	P
	5500 MHz	6.58	P
	5580 MHz	6.27	P
	5700 MHz	6.38	P
	5720 MHz	5.99	P
802.11ac VHT20	5180 MHz	6.23	P
	5200 MHz	6.13	P
	5240 MHz	6.30	P
	5260 MHz	6.01	P
	5280 MHz	6.80	P
	5320 MHz	6.55	P
	5500 MHz	6.32	P
	5580 MHz	5.91	P
	5700 MHz	6.62	P
	5720 MHz	6.67	P
802.11ac VHT40	5190 MHz	3.12	P
	5230 MHz	3.50	P
	5270 MHz	3.35	P
	5310 MHz	2.98	P
	5510 MHz	3.40	P
	5550 MHz	2.98	P
	5670 MHz	3.33	P
	5710 MHz	3.82	P
802.11ac	5210 MHz	-0.58	P

VHT80	5290 MHz	0.08	P
	5530 MHz	-0.49	P
	5610 MHz	-0.42	P
	5690 MHz	0.19	P



Peak Power Spectral Density:11a CH100

Conclusion: PASS

A.4. 26dB Emission Bandwidth (conducted)

Measurement Limit:

Standard	Limit (kHz)
FCC 47 CFR Part 15.403 (i)	/

The measurement is made according to KDB 789033

Measurement Uncertainty:

Measurement Uncertainty	60.80Hz
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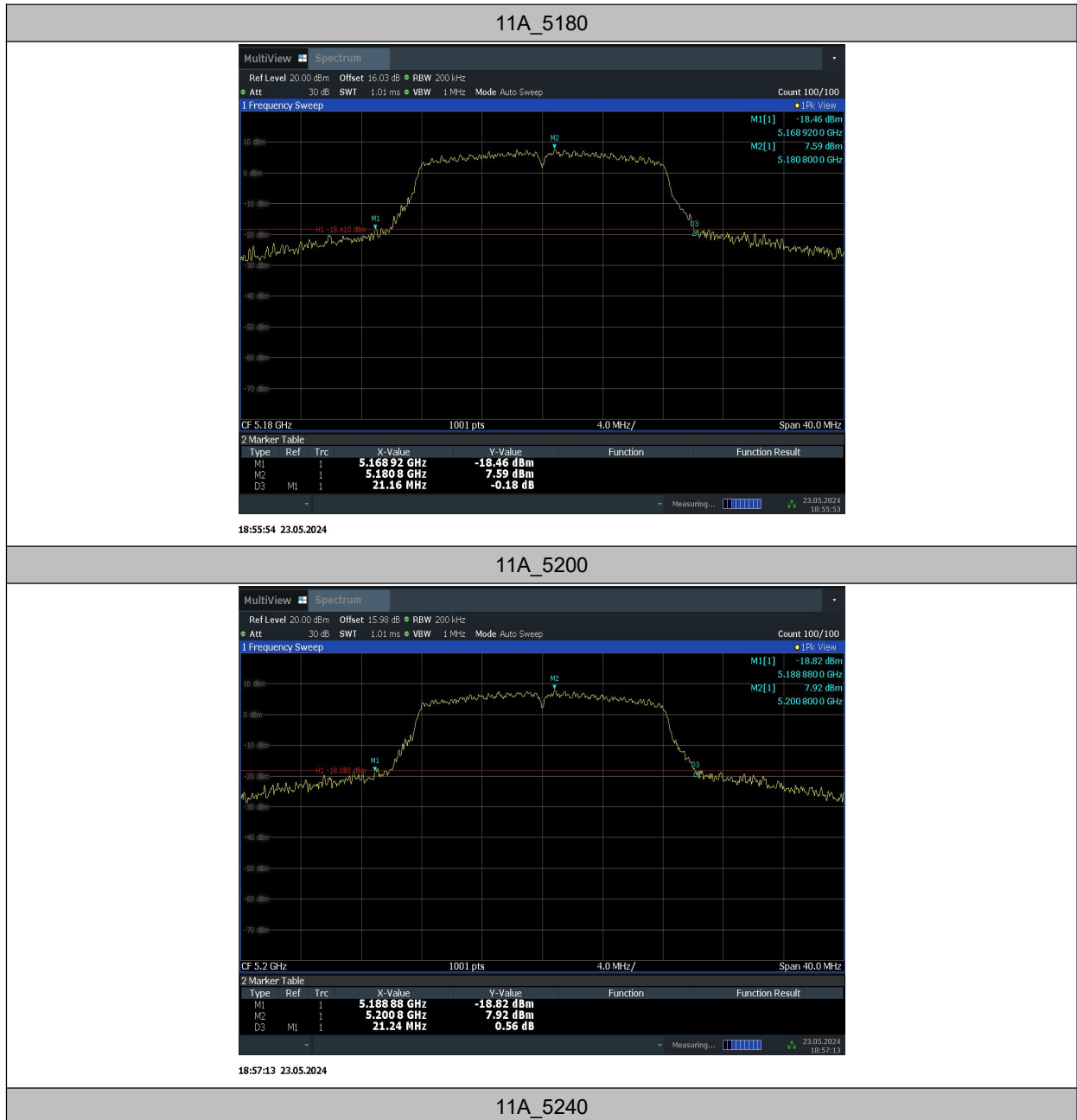
EUT ID: UT02a

Measurement Result:

TestMode	Frequency[MHz]	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	5180	21.16	5168.92	5190.08	---	---
	5200	21.24	5188.88	5210.12	---	---
	5240	21.96	5229.16	5251.12	---	---
	5260	21.52	5249.52	5271.04	---	---
	5280	21.72	5269.24	5290.96	---	---
	5320	24.08	5310.04	5334.12	---	---
	5500	25.20	5487.36	5512.56	---	---
	5580	25.72	5567.68	5593.40	---	---
	5700	29.12	5685.60	5714.72	---	---
	5720	29.24	5705.24	5734.48	---	---
11AC20	5180	24.36	5167.96	5192.32	---	---
	5200	21.84	5189.80	5211.64	---	---
	5240	23.80	5226.72	5250.52	---	---
	5260	22.72	5247.76	5270.48	---	---
	5280	22.12	5269.36	5291.48	---	---
	5320	21.20	5309.76	5330.96	---	---
	5500	25.12	5487.48	5512.60	---	---
	5580	23.92	5567.72	5591.64	---	---
	5700	28.48	5685.52	5714.00	---	---
	5720	28.88	5705.20	5734.08	---	---
11AC40	5190	41.20	5169.52	5210.72	---	---
	5230	40.80	5209.68	5250.48	---	---
	5270	44.24	5249.36	5293.60	---	---
	5310	53.44	5280.96	5334.40	---	---
	5510	45.52	5485.52	5531.04	---	---
	5550	48.08	5526.96	5575.04	---	---
	5670	57.44	5642.88	5700.32	---	---
	5710	62.96	5677.44	5740.40	---	---
11AC80	5210	124.16	5151.28	5275.44	---	---
	5290	91.52	5244.40	5335.92	---	---

	5530	108.64	5480.24	5588.88	---	---
	5610	123.52	5555.12	5678.64	---	---
	5690	132.64	5626.80	5759.44	---	---

Test Graphs





18:58:28 23.05.2024

11A_5260



18:59:41 23.05.2024

11A_5280



19:00:54 23.05.2024

11A_5320



19:02:10 23.05.2024

11A_5500



19:03:20 23.05.2024

11A_5580



19:04:30 23.05.2024

11A_5700



19:05:43 23.05.2024

11A_5720



19:06:55 23.05.2024

11AC20_5180



19:28:56 23.05.2024

11AC20_5200



19:30:04 23.05.2024

11AC20_5240



19:31:27 23.05.2024

11AC20_5260



19:32:36 23.05.2024

11AC20_5280



11AC20_5320

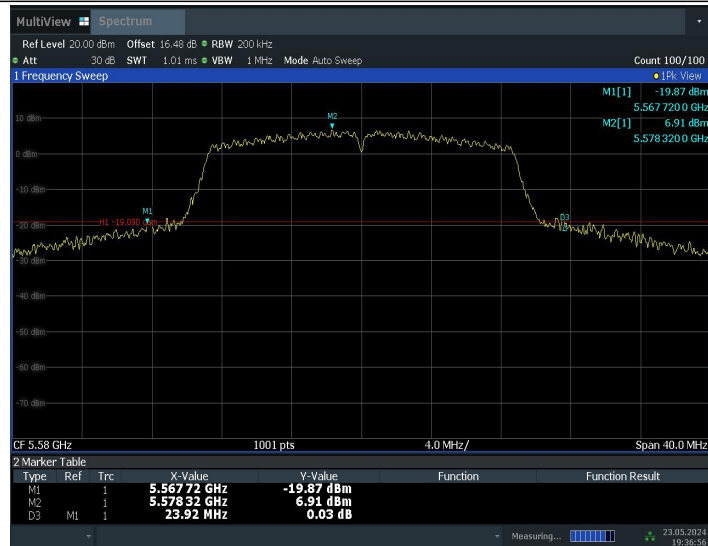


11AC20_5500



19:35:53 23.05.2024

11AC20_5580



19:36:57 23.05.2024

11AC20_5700



19:38:01 23.05.2024

11AC20_5720



19:39:07 23.05.2024

11AC40_5190



19:46:44 23.05.2024

11AC40_5230



19:47:52 23.05.2024

11AC40_5270



19:49:00 23.05.2024

11AC40_5310



19:50:09 23.05.2024

11AC40_5510



19:21:20 23.05.2024

11AC40_5550



19:22:26 23.05.2024

11AC40_5670



19:53:34 23.05.2024

11AC40_5710



19:54:44 23.05.2024

11AC80_5210



20:12:35 23.05.2024

11AC80_5290



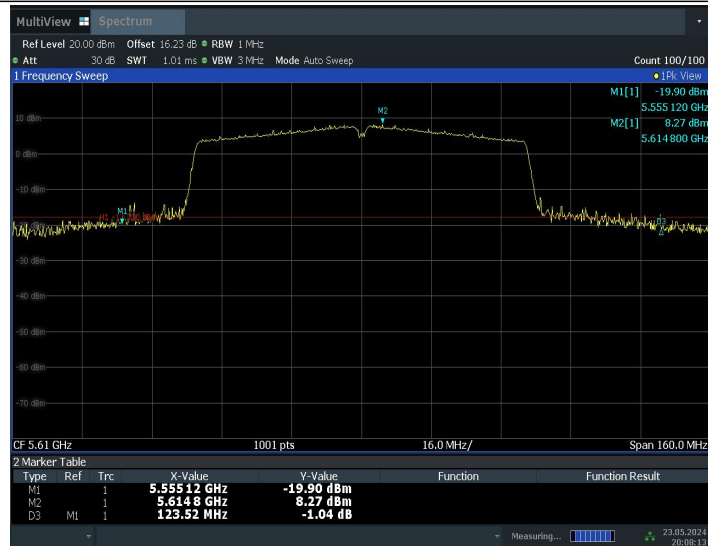
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11AC80_5530



20:07:07 23.05.2024

11AC80_5610



20:08:14 23.05.2024

11AC80_5690



Conclusion: PASS

A.5. Radiated Unwanted Emission

A.5.1 Limits

Unwanted Emissions in the unrestricted bands shall not exceed the limits that shown in 15.407:

Standard	Limit
FCC 47 CFR Part 15.407	(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz. (2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz. (3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c))

Frequency (MHz)	Field strength(μ V/m)	Measurement distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30

Frequency of emission (MHz)	Field strength (μ V/m)	Field strength (dBuV/m)	Measurement distance (m)
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

Note: When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor (as defined in KDB 789033 II.G.2.d).

A.5.2 Test setup

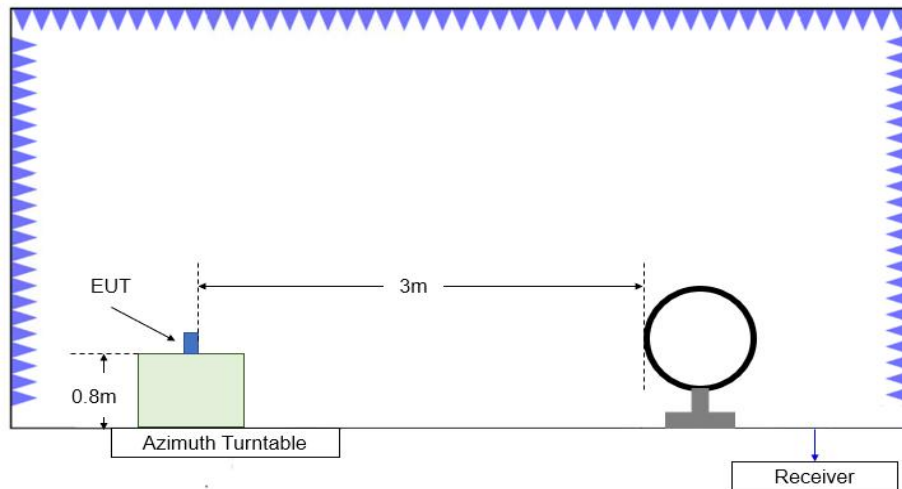


Figure 1 Test Site Diagram (9kHz-30MHz)

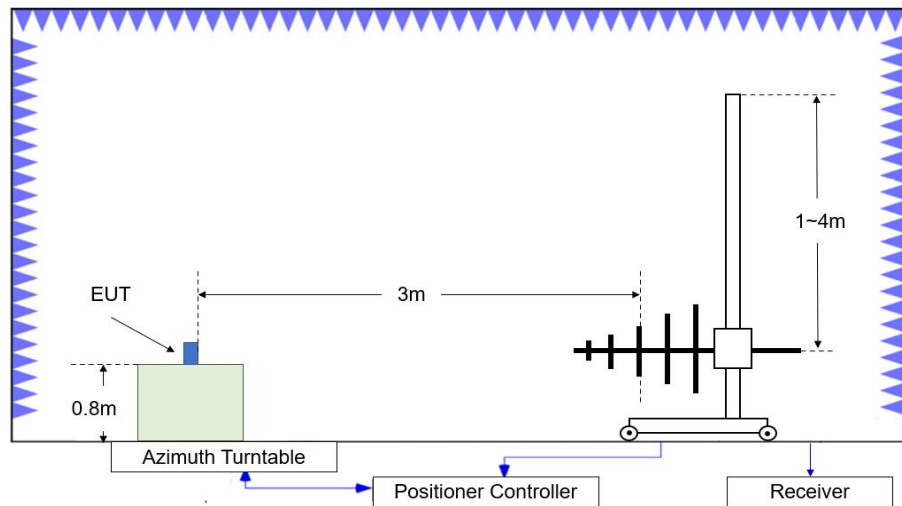


Figure 2 Test Site Diagram (30MHz-1GHz)

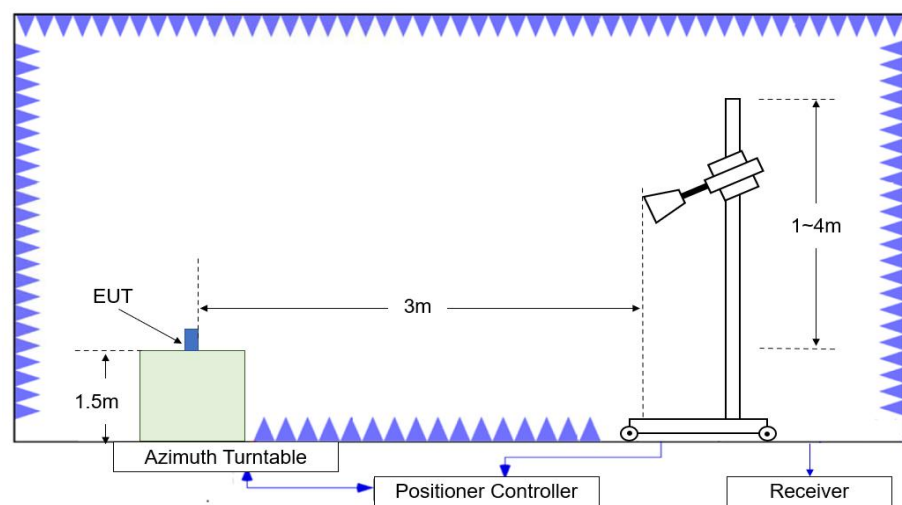


Figure 3 Test Site Diagram (1GHz-40GHz)

A.5.3 Test Procedures

Radiated unwanted emissions from the EUT were measured according to ANSI C63.10 and KDB 789033 D02 v02r01.

Test setting

Frequency of emission (MHz)	RBW/VBW
30-1000	100kHz/300kHz
1000-4000	1MHz/3MHz
4000-18000	1MHz/3MHz
18000-26500	1MHz/3MHz
26500-40000	1MHz/3MHz

A.5.4 Calculation

1. The measurement results reported below is calculated by:

Measurement Results (dB μ V/m) = $P_{\text{measurement}}$ (dB μ V) + Cable Loss(dB) + Antenna Factor (dB/m)

Where: $P_{\text{measurement}}$ is the field strength recorded from the instrument

2. Convert the resultant EIRP level to an equivalent electric field strength using the following relationship:

$$E = \text{EIRP} - 20 \log(D) + 104.77$$

Where:

E is the field strength in dB μ V/m

D is the measurement distance in meters

EIRP is the equivalent isotropically radiated power in dBm

Test note

1. The EUT is operating at its maximum duty cycle and its maximum power control level.
2. Investigation has been done on all modes and modulations/data rates. Only the radiated emissions of the configuration that produced the worst case emissions are reported in this section.
3. Spurious emissions for all channels were investigated and almost the same below 1GHz. According to FCC 47 CFR §15.31, emission levels are not report much lower than the limit by over 20dB
4. Measurement frequencies were performed from 9 kHz to 40GHz.

A.5.5 Measurement Results:

Average Results:

802.11a

Channel 36

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17993.950	40.00	-29.59	45.95	23.64	54.00	14.00	H
17983.500	39.99	-29.59	45.95	23.63	54.00	14.01	V
14491.000	35.20	-29.56	41.90	22.86	54.00	18.80	V
14476.700	35.09	-29.56	41.90	22.75	54.00	18.91	V
5149.460	43.26	-28.00	34.00	37.26	54.00	10.74	V
5148.860	43.08	-28.00	34.00	37.08	54.00	10.92	V

Channel 40

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17992.300	40.51	-29.59	45.95	24.15	54.00	13.49	V
17985.150	40.44	-29.59	45.95	24.08	54.00	13.56	V
14488.800	35.71	-29.56	41.90	23.37	54.00	18.29	V
14488.250	35.66	-29.56	41.90	23.32	54.00	18.34	V
11851.550	33.92	-32.73	39.15	27.50	54.00	20.08	V
11879.050	33.87	-32.73	39.15	27.45	54.00	20.13	V

Channel 48

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17991.750	40.32	-29.59	45.95	23.96	54.00	13.68	V
17996.700	40.28	-29.59	45.95	23.92	54.00	13.72	V
14488.250	35.87	-29.56	41.90	23.53	54.00	18.13	V
14495.400	35.80	-29.56	41.90	23.46	54.00	18.20	V
11874.100	33.92	-32.73	39.15	27.50	54.00	20.08	V
11929.100	33.83	-32.53	39.10	27.26	54.00	20.17	V

Channel 52

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17994.500	40.43	-29.59	45.95	24.07	54.00	13.57	V
17969.200	40.30	-29.59	45.95	23.94	54.00	13.70	V
14494.300	35.82	-29.56	41.90	23.48	54.00	18.18	V
14478.900	35.71	-29.56	41.90	23.37	54.00	18.29	V
11887.300	34.45	-32.53	39.10	27.88	54.00	19.55	V
11893.900	34.44	-32.53	39.10	27.87	54.00	19.56	V

Channel 56

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17982.400	40.47	-29.59	45.95	24.11	54.00	13.53	V
17998.900	40.47	-29.59	45.95	24.11	54.00	13.53	H
14488.800	36.15	-29.56	41.90	23.81	54.00	17.85	V
14498.700	35.88	-29.56	41.90	23.54	54.00	18.12	V
11893.900	34.48	-32.53	39.10	27.91	54.00	19.52	V
11862.550	34.39	-32.73	39.15	27.97	54.00	19.61	V

Channel 64

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17984.050	40.60	-29.59	45.95	24.24	54.00	13.40	H
17992.850	40.60	-29.59	45.95	24.24	54.00	13.40	V
14480.000	35.76	-29.56	41.90	23.42	54.00	18.24	V
13292.000	35.71	-31.40	40.60	26.51	54.00	18.29	V
5350.464	46.86	-27.82	34.20	40.48	54.00	7.14	V
5350.544	46.65	-27.82	34.20	40.27	54.00	7.35	V

Channel 100

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17994.500	40.67	-29.59	45.95	24.31	54.00	13.33	H
17982.400	40.46	-29.59	45.95	24.10	54.00	13.54	H
13303.550	36.00	-31.40	40.60	26.80	54.00	18.00	V
14480.550	35.72	-29.56	41.90	23.38	54.00	18.28	V
5459.905	42.73	-27.49	34.20	36.02	54.00	11.27	V
5459.890	42.61	-27.49	34.20	35.90	54.00	11.39	V

Channel 116

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17998.90	40.55	-29.59	45.95	24.19	54.00	13.45	V
17974.70	40.50	-29.59	45.95	24.14	54.00	13.50	H
13311.25	35.87	-31.40	40.60	26.67	54.00	18.13	H
14483.30	35.81	-29.56	41.90	23.47	54.00	18.19	H
11736.60	34.28	-32.71	39.20	27.79	54.00	19.72	H
11832.30	34.07	-32.73	39.15	27.65	54.00	19.93	V

Channel 140

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17972.500	40.66	-29.59	45.95	24.30	54.00	13.34	H
17993.950	40.40	-29.59	45.95	24.04	54.00	13.60	V
14490.450	36.04	-29.56	41.90	23.70	54.00	17.96	V
14491.000	35.87	-29.56	41.90	23.53	54.00	18.13	H
10859.350	34.32	-33.07	38.50	28.89	54.00	19.68	V
11927.450	34.20	-32.53	39.10	27.63	54.00	19.80	H

Channel 144

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17996.700	40.72	-29.59	45.95	24.36	54.00	13.28	V
17998.350	40.57	-29.59	45.95	24.21	54.00	13.43	V
14484.950	35.74	-29.56	41.90	23.40	54.00	18.26	H
14492.650	35.73	-29.56	41.90	23.39	54.00	18.27	H
10850.550	34.59	-33.07	38.50	29.16	54.00	19.41	V
10857.700	34.57	-33.07	38.50	29.14	54.00	19.43	V

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Channel 36

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17990.100	40.57	-29.59	45.95	24.21	54.00	13.43	H
17993.950	40.53	-29.59	45.95	24.17	54.00	13.47	H
13298.600	35.70	-31.40	40.60	26.50	54.00	18.30	V
14497.050	35.69	-29.56	41.90	23.35	54.00	18.31	V
5149.880	42.97	-28.00	34.00	36.97	54.00	11.03	V
5148.960	42.65	-28.00	34.00	36.65	54.00	11.35	V

Channel 40

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17995.050	40.83	-29.59	45.95	24.47	54.00	13.17	V
17974.700	40.44	-29.59	45.95	24.08	54.00	13.56	H
14492.650	35.60	-29.56	41.90	23.26	54.00	18.40	H
14481.100	35.56	-29.56	41.90	23.22	54.00	18.44	V
10748.250	33.97	-32.42	38.45	27.94	54.00	20.03	V
11844.400	33.89	-32.73	39.15	27.47	54.00	20.11	V

Channel 48

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17993.400	40.69	-29.59	45.95	24.33	54.00	13.31	V
17975.800	40.47	-29.59	45.95	24.11	54.00	13.53	H
13331.050	36.07	-31.19	40.65	26.61	54.00	17.93	V
13294.750	35.73	-31.40	40.60	26.53	54.00	18.27	V
10865.400	34.15	-33.07	38.50	28.72	54.00	19.85	V
11413.750	34.08	-32.58	39.00	27.66	54.00	19.92	V

Channel 52

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17990.100	40.52	-29.59	45.95	24.16	54.00	13.48	H
17993.950	40.50	-29.59	45.95	24.14	54.00	13.50	V
14480.000	35.80	-29.56	41.90	23.46	54.00	18.20	V
14491.550	35.72	-29.56	41.90	23.38	54.00	18.28	V
11853.750	34.30	-32.73	39.15	27.88	54.00	19.70	V
11822.950	34.27	-32.09	39.20	27.16	54.00	19.73	V

Channel 56

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17983.500	40.43	-29.59	45.95	24.07	54.00	13.57	V
17997.800	40.39	-29.59	45.95	24.03	54.00	13.61	V
14484.400	35.75	-29.56	41.90	23.41	54.00	18.25	V
14498.700	35.75	-29.56	41.90	23.41	54.00	18.25	V
11863.650	34.31	-32.73	39.15	27.89	54.00	19.69	H
11822.950	34.25	-32.09	39.20	27.14	54.00	19.75	H

Channel 64

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17993.400	40.62	-29.59	45.95	24.26	54.00	13.38	H
17998.900	40.45	-29.59	45.95	24.09	54.00	13.55	V
13322.800	35.96	-31.19	40.65	26.50	54.00	18.04	H
13314.000	35.81	-31.40	40.60	26.61	54.00	18.19	V
5350.224	47.22	-27.82	34.20	40.84	54.00	6.78	V
5350.416	47.08	-27.82	34.20	40.70	54.00	6.92	V

Channel 100

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17986.800	40.84	-29.59	45.95	24.48	54.00	13.16	V
17973.600	40.53	-29.59	45.95	24.17	54.00	13.47	H
13298.050	35.98	-31.40	40.60	26.78	54.00	18.02	V
13295.850	35.64	-31.40	40.60	26.44	54.00	18.36	V
5458.930	43.82	-27.49	34.20	37.11	54.00	10.18	V
5459.995	43.52	-27.49	34.20	36.81	54.00	10.48	V

Channel 116

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17981.85	40.58	-29.59	45.95	24.22	54.00	13.42	H
17998.90	40.46	-29.59	45.95	24.10	54.00	13.54	V
14473.40	35.73	-29.56	41.90	23.39	54.00	18.27	V
13290.35	35.70	-31.40	40.60	26.50	54.00	18.30	V
11875.20	34.34	-32.73	39.15	27.92	54.00	19.66	V
11825.70	34.15	-32.09	39.20	27.04	54.00	19.85	V

Channel 140

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17997.800	40.47	-29.59	45.95	24.11	54.00	13.53	V
17993.400	40.28	-29.59	45.95	23.92	54.00	13.72	H
14488.800	35.89	-29.56	41.90	23.55	54.00	18.11	V
13307.400	35.73	-31.40	40.60	26.53	54.00	18.27	V
11874.100	34.35	-32.73	39.15	27.93	54.00	19.65	H
11298.250	34.25	-32.41	38.70	27.96	54.00	19.75	V

Channel 144

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17982.950	40.84	-29.59	45.95	24.48	54.00	13.16	V
17990.650	40.58	-29.59	45.95	24.22	54.00	13.42	H
14495.950	36.11	-29.56	41.90	23.77	54.00	17.89	V
14492.650	35.88	-29.56	41.90	23.54	54.00	18.12	H
10859.350	34.37	-33.07	38.50	28.94	54.00	19.63	V
11916.450	34.29	-32.53	39.10	27.72	54.00	19.71	V

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Channel 38

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17986.250	40.43	-29.59	45.95	24.07	54.00	13.57	V
17991.200	40.40	-29.59	45.95	24.04	54.00	13.60	H
13332.700	35.71	-31.19	40.65	26.25	54.00	18.29	V
14497.050	35.71	-29.56	41.90	23.37	54.00	18.29	V
5149.220	45.13	-28.00	34.00	39.13	54.00	8.87	V
5149.540	44.46	-28.00	34.00	38.46	54.00	9.54	V

Channel 46

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17985.700	40.63	-29.59	45.95	24.27	54.00	13.37	V
17972.500	40.32	-29.59	45.95	23.96	54.00	13.68	V
14488.800	35.80	-29.56	41.90	23.46	54.00	18.20	V
14494.850	35.70	-29.56	41.90	23.36	54.00	18.30	V
11300.450	34.17	-32.41	38.70	27.88	54.00	19.83	V
11825.700	34.11	-32.09	39.20	27.00	54.00	19.89	H

Channel 54

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17989.550	39.95	-29.59	45.95	23.59	54.00	14.05	H
17995.600	39.88	-29.59	45.95	23.52	54.00	14.12	H
14482.750	34.68	-29.56	41.90	22.34	54.00	19.32	V
13304.650	34.34	-31.40	40.60	25.14	54.00	19.66	V
11869.150	32.98	-32.73	39.15	26.56	54.00	21.02	V
11865.300	32.50	-32.73	39.15	26.08	54.00	21.50	V

Channel 62

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17992.850	39.78	-29.59	45.95	23.42	54.00	14.22	V
17981.850	39.69	-29.59	45.95	23.33	54.00	14.31	V
14485.500	34.62	-29.56	41.90	22.28	54.00	19.38	V
14477.250	34.51	-29.56	41.90	22.17	54.00	19.49	H
5350.272	45.96	-27.82	34.20	39.58	54.00	8.04	V
5350.624	45.66	-27.82	34.20	39.28	54.00	8.34	V

Channel 102

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17987.35	40.49	-29.59	45.95	24.13	54.00	13.51	H
17967.00	40.36	-29.59	45.95	24.00	54.00	13.64	V
13301.90	35.66	-31.40	40.60	26.46	54.00	18.34	V
13309.05	35.60	-31.40	40.60	26.40	54.00	18.40	V
5458.92	43.64	-27.49	34.20	36.93	54.00	10.36	V
5459.55	43.63	-27.49	34.20	36.92	54.00	10.37	V

Channel 118

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17969.75	41.16	-29.59	45.95	24.80	54.00	12.84	V
17993.95	40.36	-29.59	45.95	24.00	54.00	13.64	V
13303.55	35.88	-31.40	40.60	26.68	54.00	18.12	V
14495.40	35.76	-29.56	41.90	23.42	54.00	18.24	V
11918.10	34.54	-32.53	39.10	27.97	54.00	19.46	V
11893.35	34.16	-32.53	39.10	27.59	54.00	19.84	V

Channel 134

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17994.50	40.55	-29.59	45.95	24.19	54.00	13.45	V
17987.90	40.49	-29.59	45.95	24.13	54.00	13.51	H
14478.35	35.69	-29.56	41.90	23.35	54.00	18.31	H
14477.25	35.64	-29.56	41.90	23.30	54.00	18.36	H
11396.15	34.36	-32.58	39.00	27.94	54.00	19.64	V
10854.95	34.24	-33.07	38.50	28.81	54.00	19.76	H