



FCC PART 15E TEST REPORT No.25T04Z100361-013

for

Luxshare Precision Limited

5G Mobile Phone

TMRV085G

FCC ID: 2BNRMTMRV085G

with

Hardware Version: V1.0

Software Version: TMRV085G_0.02.01

Issued Date: 2025-06-06

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.

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
25T04Z100361-013	Rev.0	1st edition	2025-04-23
25T04Z100361-013	Rev.1	update table of contents	2025-06-06

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

Location 1:CTTL(Gaolizhang Road)

Address: Cuihu Cloud Center, No.1, Gaolizhang Road, Wenquan,
Haidian District, Beijing, China

Radiated testing Location: 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 date

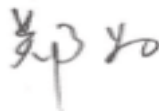
Testing Start Date: 2025-02-27

Testing End Date: 2025-04-15

1.5. Signature



Dong Jiaxuan
(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: Luxshare Precision Limited
Address: Suite 1621, 16/F., Ocean Centre, Harbour City, 5 Canton Road, Tsim
Sha Tsui, Kowloon.
Contact: Ri Sa
Email: Rui.Sha@luxshare-ict.com
Telephone: +8613917939276
Fax: /

2.2. Manufacturer Information

Company Name: Luxshare Precision Limited
Address: Suite 1621, 16/F., Ocean Centre, Harbour City, 5 Canton Road, Tsim
Sha Tsui, Kowloon.
Contact: Ri Sa
Email: Rui.Sha@luxshare-ict.com
Telephone: +8613917939276
Fax: /

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

3.1. About EUT

Description	5G Mobile Phone
Model name	TMRV085G
FCC ID	2BNRMTMRV085G
WLAN Frequency Band	ISM Bands: -5150MHz~5250MHz -5250MHz~5350MHz -5470MHz~5725MHz
Type of modulation	OFDM
Antenna	Integral Antenna
Nominal Voltage	3.87V

3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version	Date of receipt
UT98a	866690080001093 866690080002281	V1.0	TMRV085G_0.02.01	2025-03-05
UT99a	866690080001101 866690080002299	V1.0	TMRV085G_0.02.01	2025-03-05
UT58a	866690080000699 866690080001887	V1.0	TMRV085G_0.02.01	2025-03-05

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

UT58a is used for Conduction test, UT98a and UT99a are used for Radiation test.

3.3. Internal Identification of AE used during the test

AE ID*	Description	Model	Manufacturer
AE1	Battery1	TM002	Jiade Energy Technology(Zhuhai) Co.,Ltd.
AE2	Charger1	/	Provided by client for testing use only
AE3	USB Cable1	HX-WT-58	WASHIN

*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 5G Mobile Phone 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	FCC CFR 47, Part 15, Subpart C and E:	
	15.205 Restricted bands of operation;	2021
	15.207 Conducted limits;	
	15.209 Radiated emission limits, general requirements;	
ANSI C63.10	15.407 General technical requirements.	
	Methods of Measurement of Radio-Noise Emissions from	
UNII: KDB 789033	Low-Voltage Electrical and Electronic Equipment in the	2013
	Range of 9 kHz to 40 GHz	
D02	General U-NII Test Procedures New Rules v02r01	2017-12

Note:UNII: KDB 789033 D02 is not in the scope of ISO/IEC 17025 accreditation by A2LA.

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	3.87V
Humidity	44%

7. Test Facilities Utilized

Conducted test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	Vector Signal Analyzer	FSQ40	200089	Rohde & Schwarz	1 year	2025-08-11
2	Vector Signal Analyzer	FSW67	104051	Rohde & Schwarz	1 year	2025-04-30
3	Test Receiver	ESCI	100344	R&S	1 year	2026-04-01
4	LISN	ENV216	101200	R&S	1 year	2025-05-16
5	Attenuator	10dB/2W	/	Rosenberger	/	/
6	Shielding Room	S81	/	ETS-Lindgren	/	/

Radiated emission test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	Test Receiver	ESU26	100376	R&S	1 year	2025-06-06
2	EMI Antenna	VULB 9163	01177	SCHWARZBECK	1 year	2025-11-19
3	EMI Antenna	3117	00119021	ETS-Lindgren	1 year	2025-09-18
4	EMI Antenna	LB-180400 -25-C-KF	211008400 0006	A-INFO	1 year	2025-05-22
5	Spectrum Analyzer	FSV40	101047	R&S	1 year	2025-07-18

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

8.6 Radiated Unwanted Emission

Frequency Range	Uncertainty(dB) (k=2)
9kHz-30MHz	/
$30\text{MHz} \leq f \leq 1\text{GHz}$	5.73
$1\text{GHz} \leq f \leq 18\text{GHz}$	5.58
$18\text{GHz} \leq f \leq 40\text{GHz}$	3.37

8.7 AC Power-line Conducted Emission

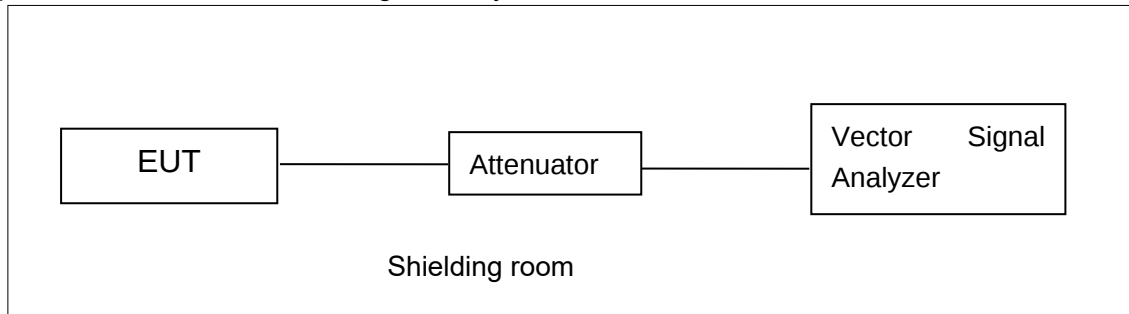
Measurement Uncertainty : 3.10dB,k=2

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 C63.10-2013 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 -2.17dBi and the value is supplied by the applicant or manufacturer.

A.2.2 Maximum output Power-Conducted

EUT ID: UT58a

Measurement Results:

802.11a mode

Mode	Frequency	Test Result (dBm)							
		Data Rate (Mbps)							
		6	9	12	18	24	36	48	54
802.11a	5180MHz	17.94	/	/	/	/	/	/	/
	5200MHz	18.15	/	/	/	/	/	/	/
	5240MHz	18.71	/	/	/	/	/	/	/
	5260MHz	18.17	/	/	/	/	/	/	/
	5280MHz	18.60	/	/	/	/	/	/	/
	5320MHz	18.15	/	/	/	/	/	/	/
	5500MHz	18.54	/	/	/	/	/	/	/
	5580MHz	18.50	/	/	/	/	/	/	/
	5700MHz	17.65	/	/	/	/	/	/	/
	5720MHz	18.36	/	/	/	/	/	/	/

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	18.02	/	/	/	/	/	/	/
	5200MHz	18.26	/	/	/	/	/	/	/
	5240MHz	18.74	/	/	/	/	/	/	/
	5260MHz	18.26	/	/	/	/	/	/	/
	5280MHz	18.75	/	/	/	/	/	/	/
	5320MHz	18.21	/	/	/	/	/	/	/
	5500MHz	18.56	/	/	/	/	/	/	/

	5580MHz	18.43	/	/	/	/	/	/	/
	5700MHz	16.62	/	/	/	/	/	/	/
	5720MHz	18.22	/	/	/	/	/	/	/

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	16.52	/	/	/	/	/	/	/	/
	5200MHz	16.68	/	/	/	/	/	/	/	/
	5240MHz	17.04	/	/	/	/	/	/	/	/
	5260MHz	16.94	/	/	/	/	/	/	/	/
	5280MHz	17.10	/	/	/	/	/	/	/	/
	5320MHz	16.75	/	/	/	/	/	/	/	/
	5500MHz	16.34	/	/	/	/	/	/	/	/
	5580MHz	16.14	/	/	/	/	/	/	/	/
	5700MHz	16.74	/	/	/	/	/	/	/	/
	5720MHz	15.75	/	/	/	/	/	/	/	/

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	15.71	/	/	/	/	/	/	/
	5230MHz	16.81	/	/	/	/	/	/	/
	5270MHz	16.93	/	/	/	/	/	/	/
	5310MHz	16.68	/	/	/	/	/	/	/
	5510MHz	16.58	/	/	/	/	/	/	/
	5550MHz	16.18	/	/	/	/	/	/	/
	5670MHz	16.63	/	/	/	/	/	/	/
	5710MHz	16.58	/	/	/	/	/	/	/

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	15.15	/	/	/	/	/	/	/	/	/
	5230MHz	15.80	/	/	/	/	/	/	/	/	/
	5270MHz	15.79	/	/	/	/	/	/	/	/	/
	5310MHz	15.57	/	/	/	/	/	/	/	/	/
	5510MHz	15.16	/	/	/	/	/	/	/	/	/
	5550MHz	15.20	/	/	/	/	/	/	/	/	/
	5670MHz	15.51	/	/	/	/	/	/	/	/	/
	5710MHz	15.41	/	/	/	/	/	/	/	/	/

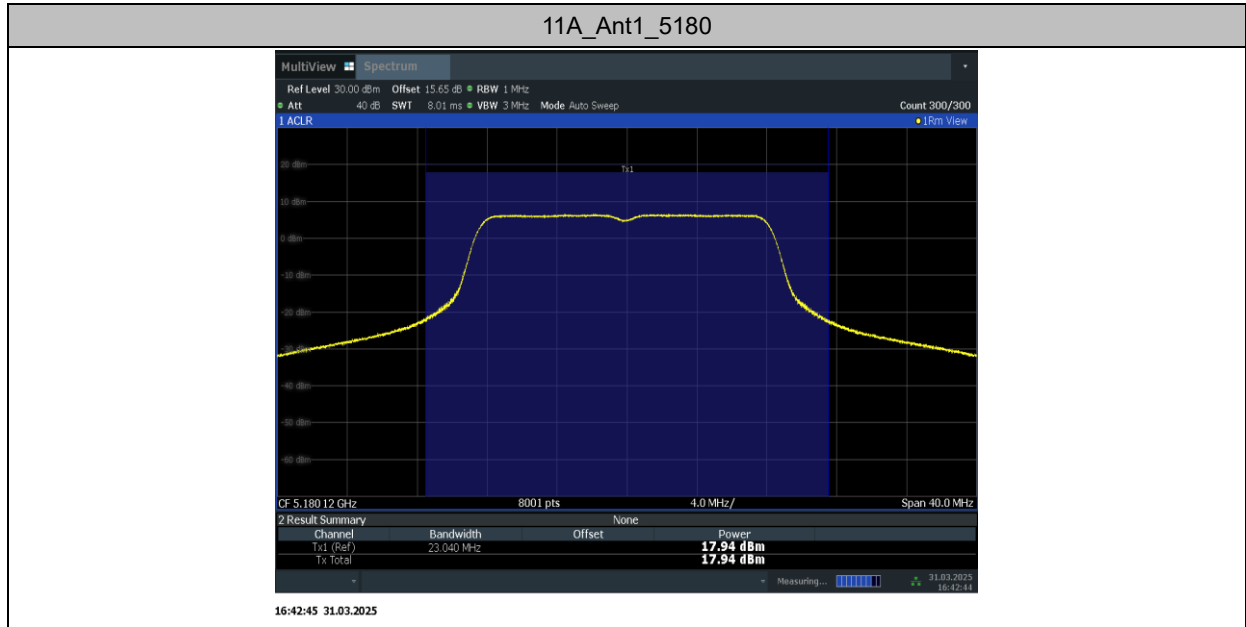
The data rate MCS0 is selected as worst condition, and the following cases are performed with this condition.

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	15.50	/	/	/	/	/	/	/	/	/
	5290MHz	15.69	/	/	/	/	/	/	/	/	/
	5530MHz	15.61	/	/	/	/	/	/	/	/	/
	5610MHz	15.03	/	/	/	/	/	/	/	/	/
	5690MHz	15.50	/	/	/	/	/	/	/	/	/

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%.



Maximum output Power

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

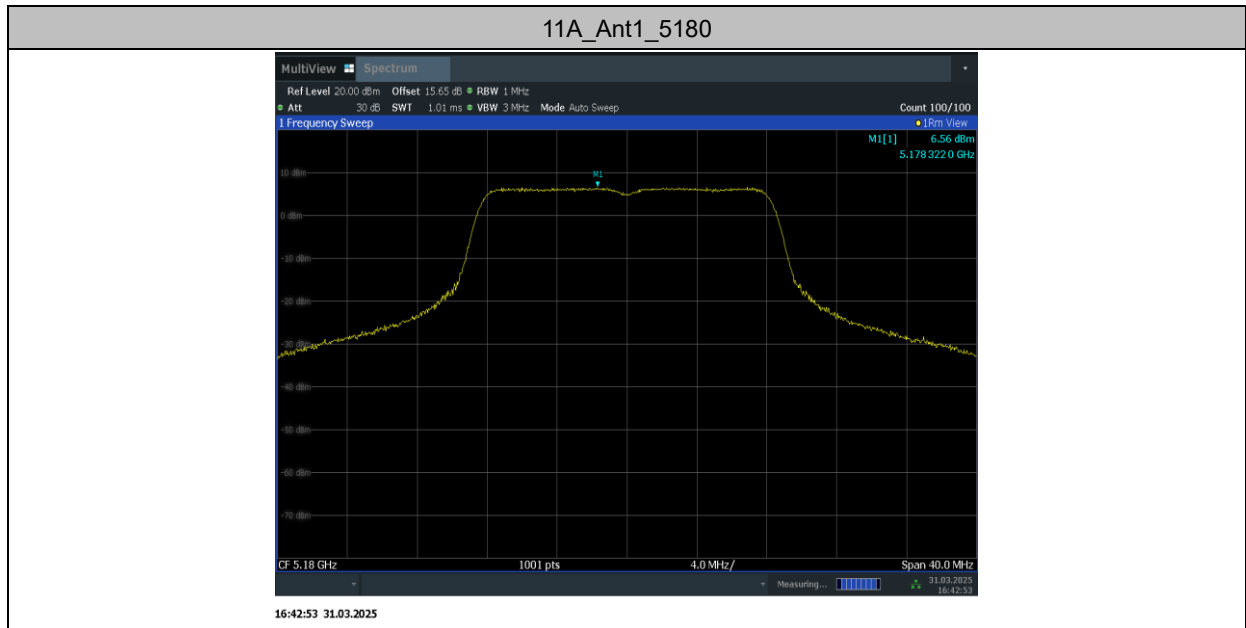
The output power measurement method Section F is made according to KDB 789033

EUT ID: UT58a

Measurement Results:

TestMode	Antenna	Frequency[MHz]	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant1	5180	6.56	≤11.00	PASS
		5200	6.96	≤11.00	PASS
		5240	7.41	≤11.00	PASS
		5260	6.61	≤11.00	PASS
		5280	7.38	≤11.00	PASS
		5320	6.88	≤11.00	PASS
		5500	7.22	≤11.00	PASS
		5580	7.25	≤11.00	PASS
		5700	6.46	≤11.00	PASS
		5720	8.05	≤11.00	PASS
11N20SISO	Ant1	5180	6.28	≤11.00	PASS
		5200	6.67	≤11.00	PASS
		5240	7.20	≤11.00	PASS
		5260	6.75	≤11.00	PASS
		5280	7.40	≤11.00	PASS
		5320	6.75	≤11.00	PASS
		5500	7.01	≤11.00	PASS
		5580	6.83	≤11.00	PASS
		5700	5.03	≤11.00	PASS
		5720	7.82	≤11.00	PASS
11N40SISO	Ant1	5190	1.24	≤11.00	PASS
		5230	2.57	≤11.00	PASS
		5270	2.82	≤11.00	PASS
		5310	2.27	≤11.00	PASS
		5510	2.12	≤11.00	PASS
		5550	1.43	≤11.00	PASS
		5670	2.29	≤11.00	PASS
		5710	2.45	≤11.00	PASS
11AC80SISO	Ant1	5210	-1.37	≤11.00	PASS
		5290	-1.80	≤11.00	PASS
		5530	-1.85	≤11.00	PASS

		5610	-2.76	≤ 11.00	PASS
		5690	-1.62	≤ 11.00	PASS



Peak Power Spectral Density

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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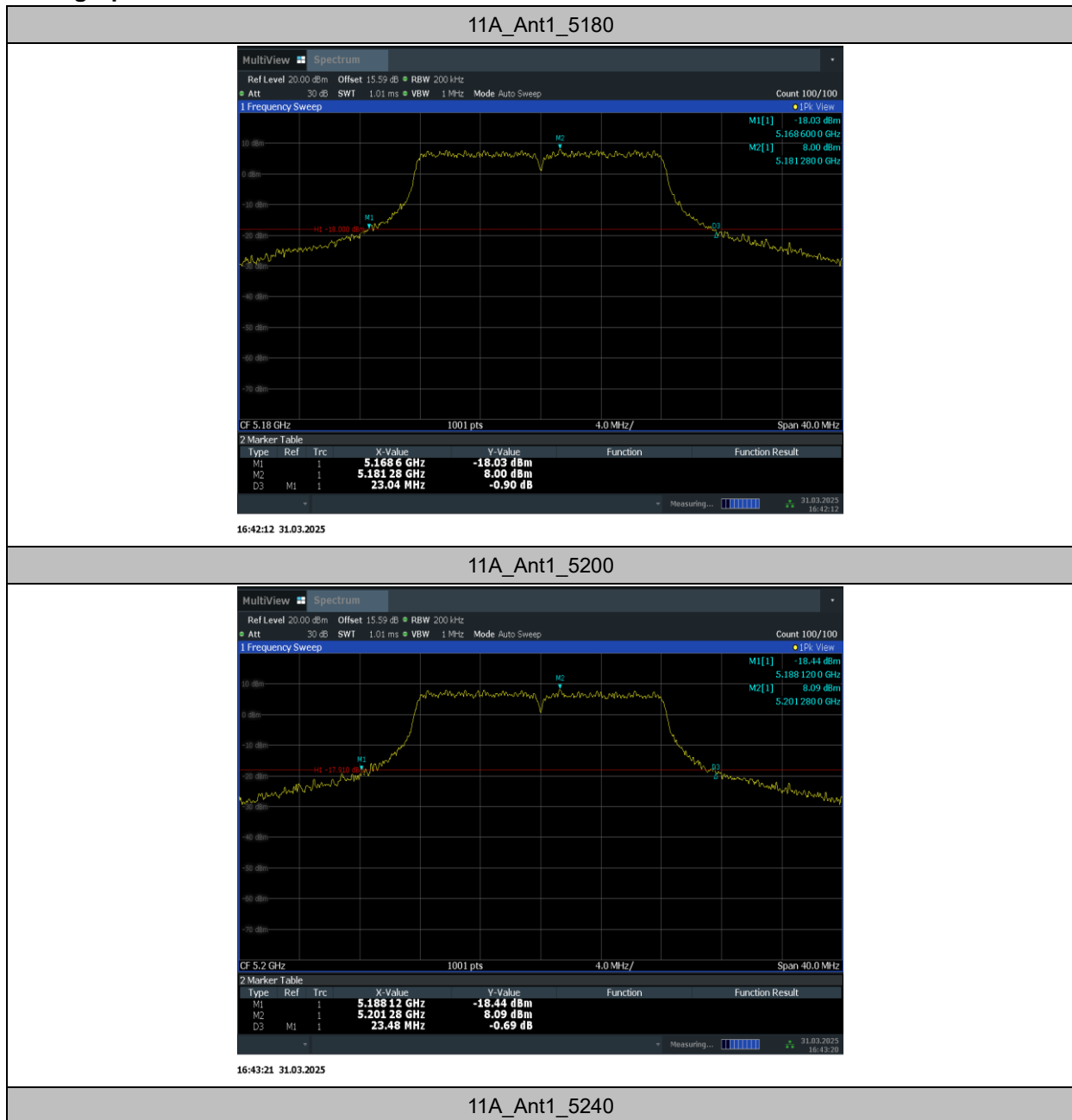
EUT ID: UT58a

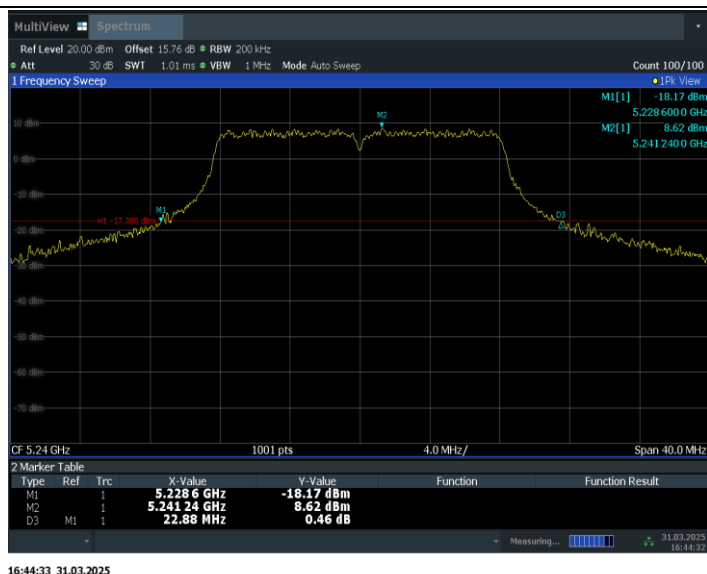
Measurement Result:

TestMode	Antenna	Frequency[MHz]	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	23.04	5168.60	5191.64	---	---
		5200	23.48	5188.12	5211.60	---	---
		5240	22.88	5228.60	5251.48	---	---
		5260	25.20	5246.72	5271.92	---	---
		5280	23.72	5268.16	5291.88	---	---
		5320	23.68	5308.16	5331.84	---	---
		5500	25.32	5487.12	5512.44	---	---
		5580	26.48	5566.72	5593.20	---	---
		5700	24.68	5687.84	5712.52	---	---
		5720	25.04	5706.96	5732.00	---	---
11N20SISO	Ant1	5180	24.20	5168.16	5192.36	---	---
		5200	24.16	5188.20	5212.36	---	---
		5240	23.96	5228.08	5252.04	---	---
		5260	25.36	5247.48	5272.84	---	---
		5280	23.92	5268.44	5292.36	---	---
		5320	26.12	5307.64	5333.76	---	---
		5500	25.76	5488.00	5513.76	---	---
		5580	24.92	5567.40	5592.32	---	---
		5700	26.20	5687.32	5713.52	---	---
		5720	27.48	5706.88	5734.36	---	---
11N40SISO	Ant1	5190	42.88	5168.48	5211.36	---	---
		5230	43.28	5208.24	5251.52	---	---
		5270	42.88	5248.56	5291.44	---	---
		5310	42.96	5288.48	5331.44	---	---
		5510	42.80	5488.56	5531.36	---	---
		5550	42.72	5528.56	5571.28	---	---
		5670	42.88	5648.64	5691.52	---	---
		5710	42.80	5688.72	5731.52	---	---
11AC80SISO	Ant1	5210	86.88	5166.96	5253.84	---	---
		5290	86.88	5246.80	5333.68	---	---

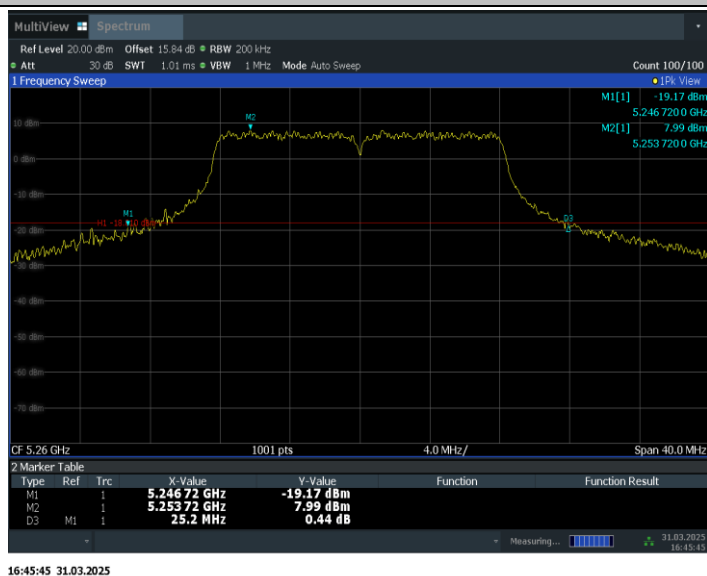
		5530	86.72	5486.96	5573.68	---	---
		5610	85.92	5567.12	5653.04	---	---
		5690	86.08	5647.28	5733.36	---	---

Test graphs as below:

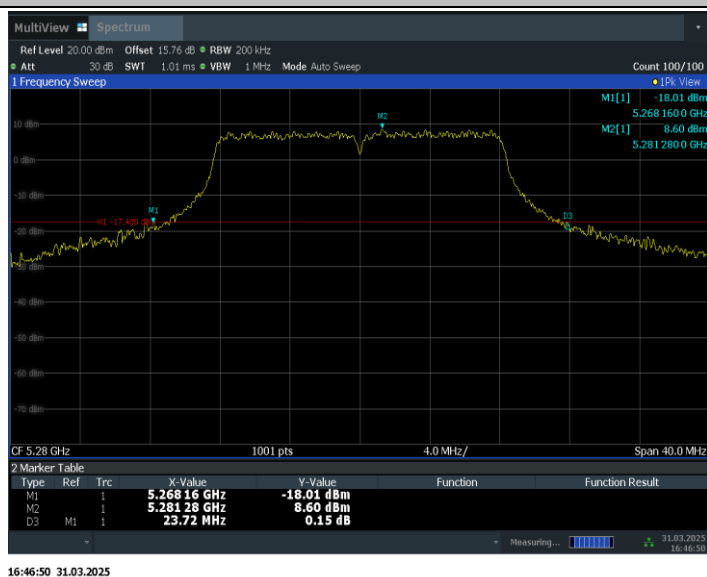




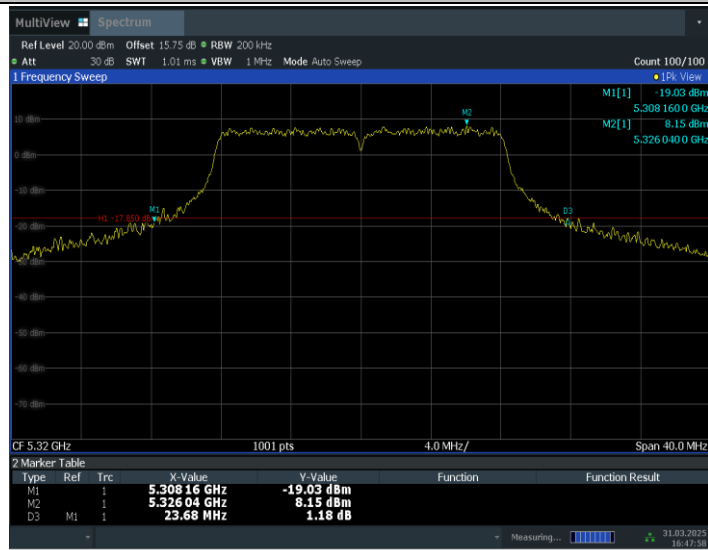
11A_Ant1_5260



11A_Ant1_5280

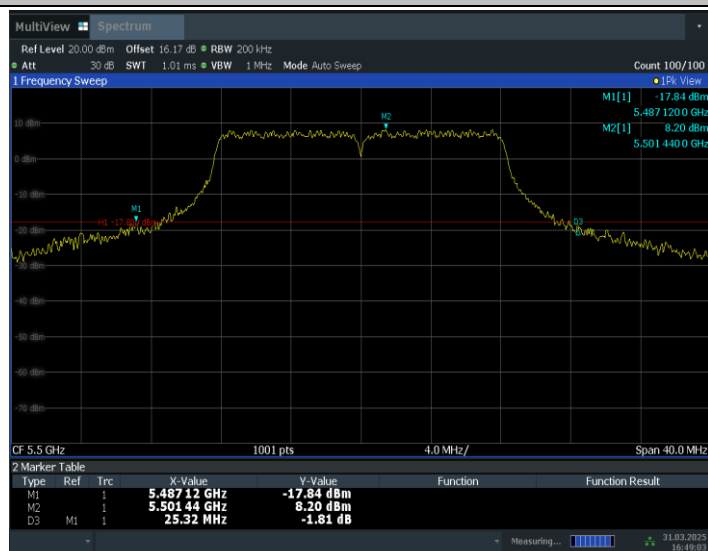


11A_Ant1_5320



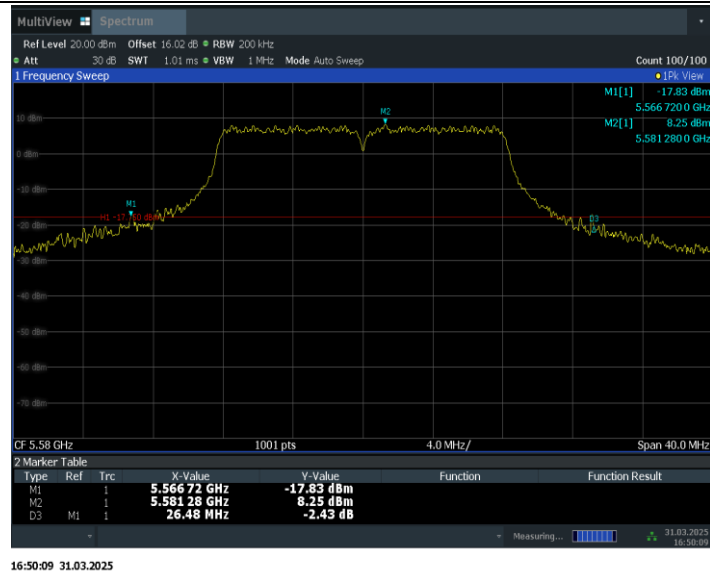
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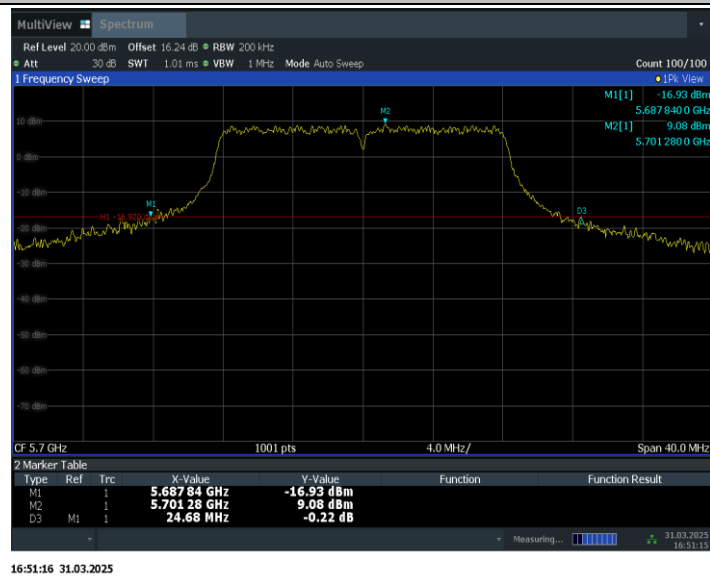


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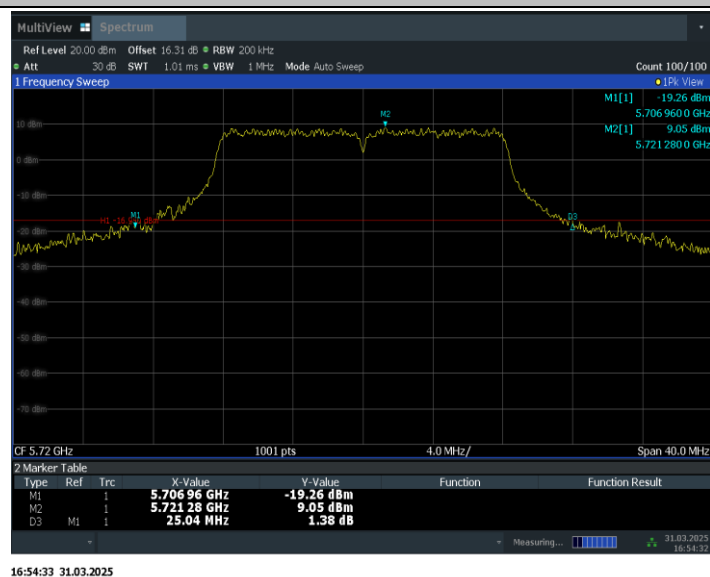
11A_Ant1_5580



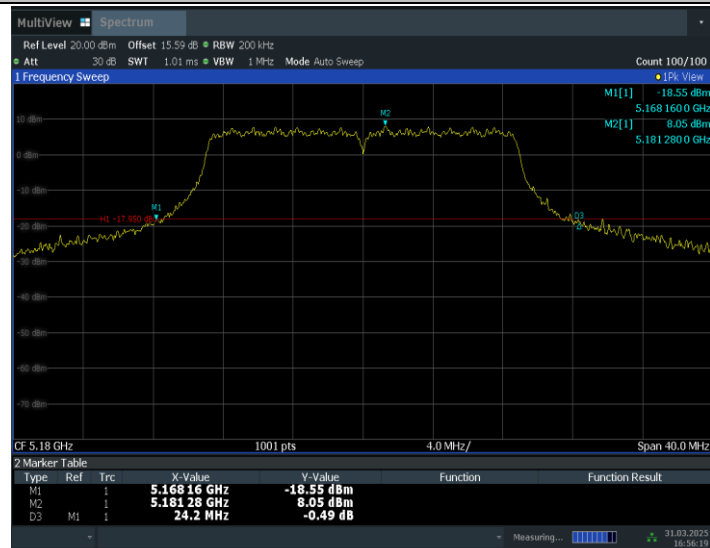
11A_Ant1_5700



11A_Ant1_5720

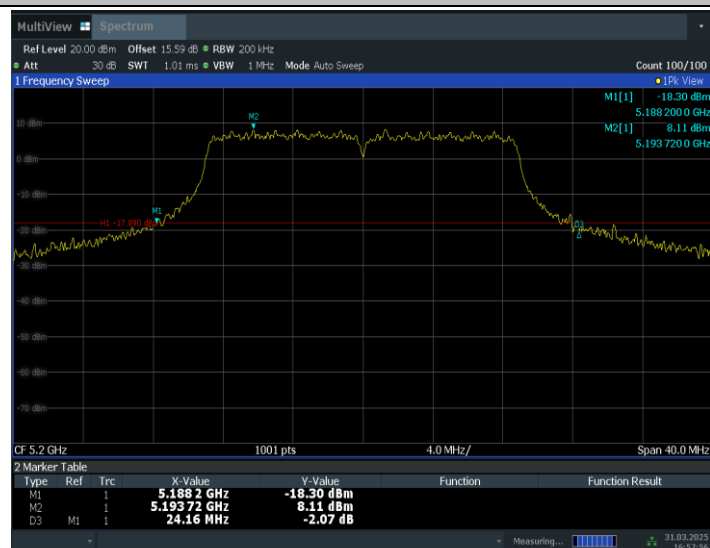


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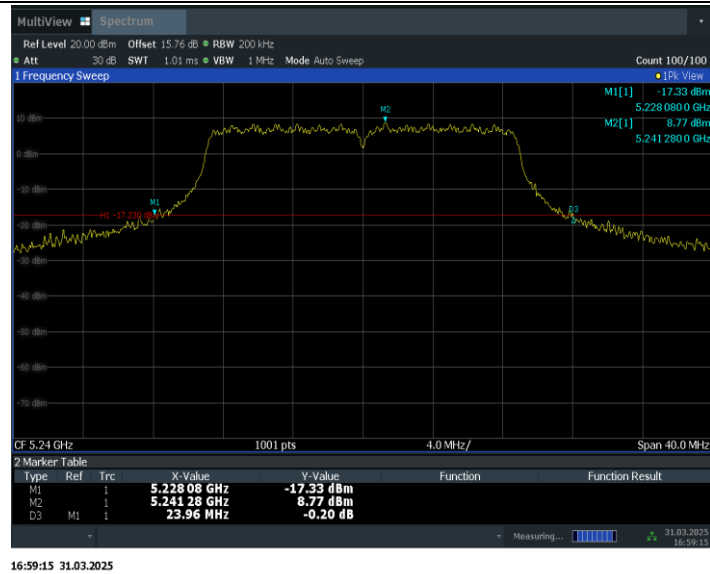
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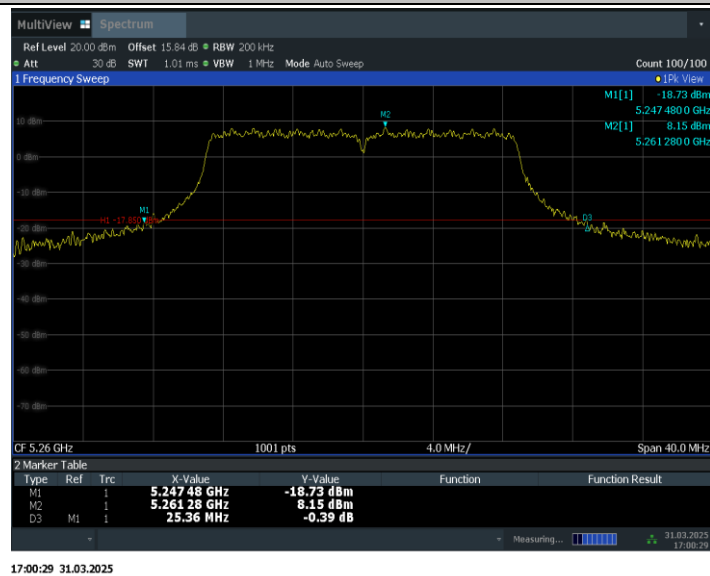


16:57:56 31.03.2025

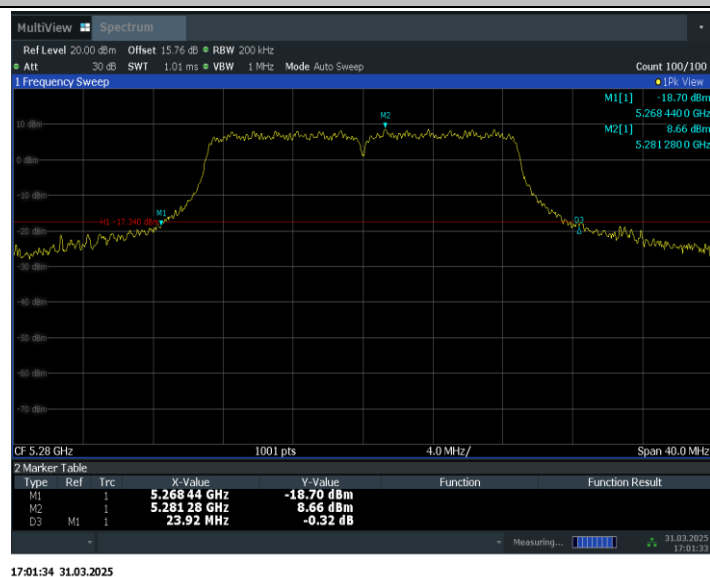
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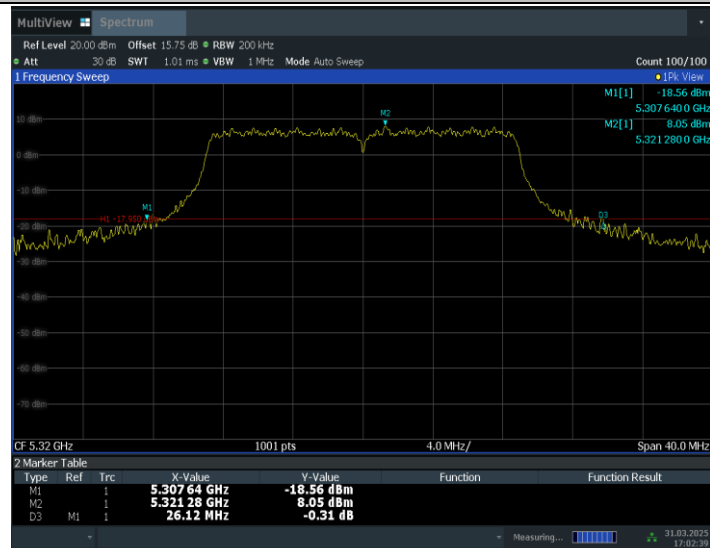
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11N20SISO_Ant1_5280

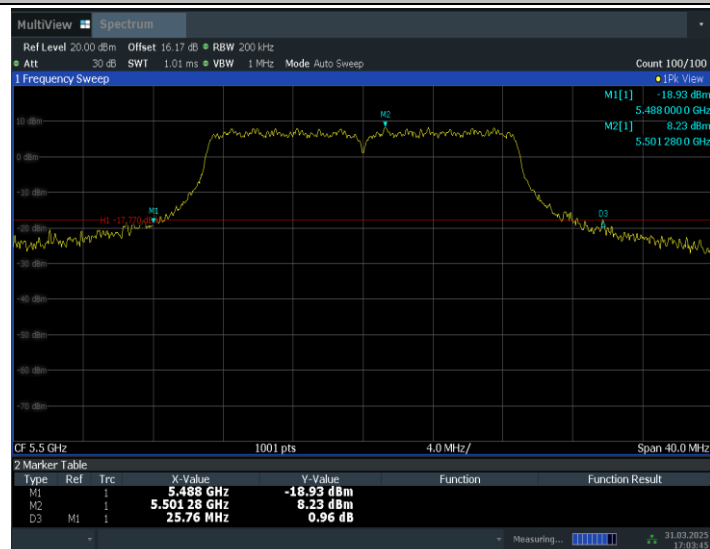


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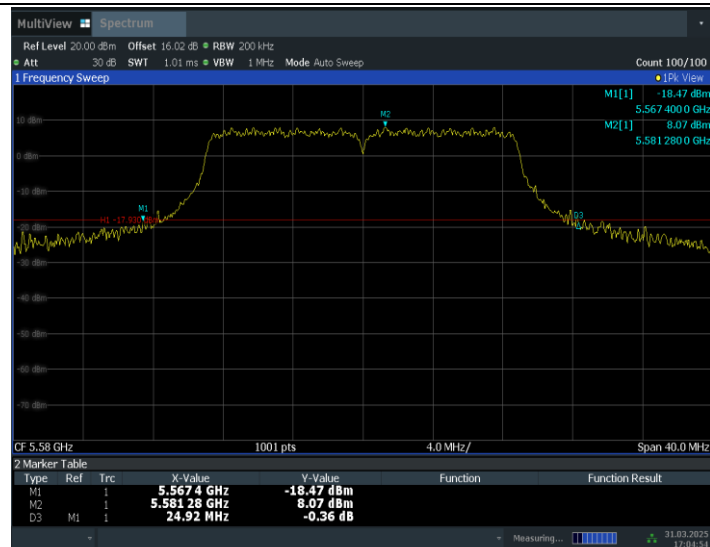
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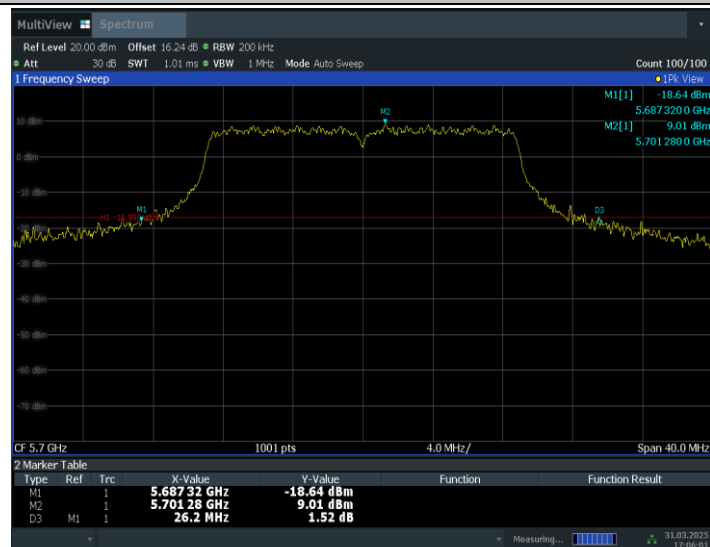
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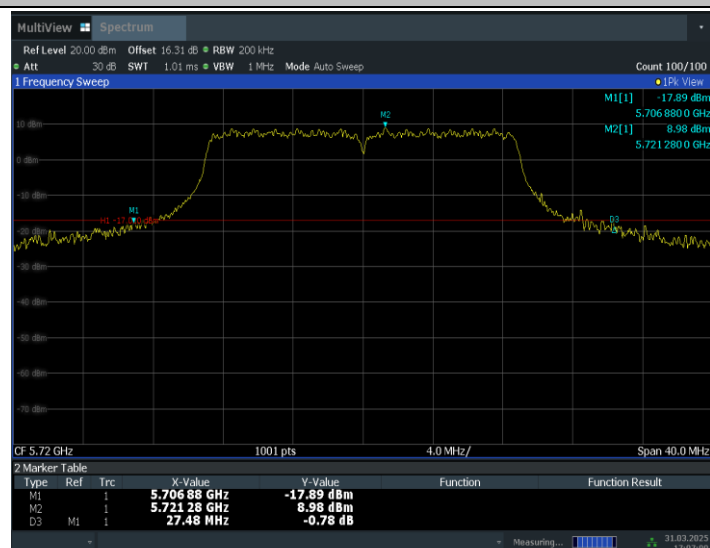
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11N20SISO_Ant1_5700



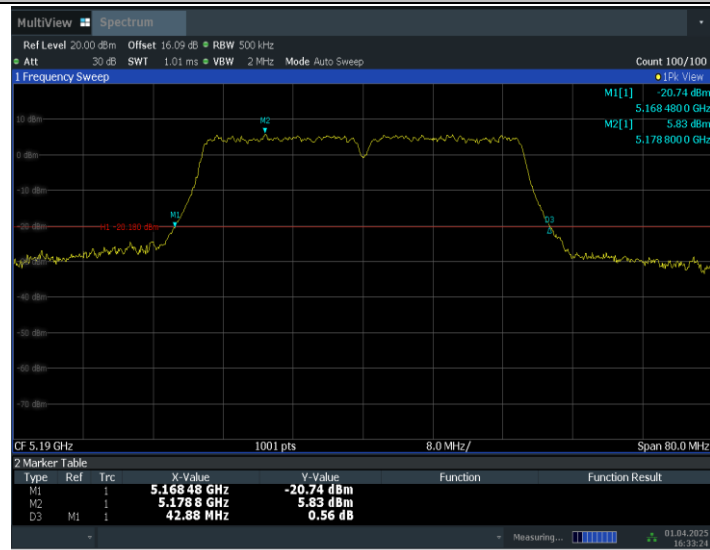
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11N20SISO_Ant1_5720



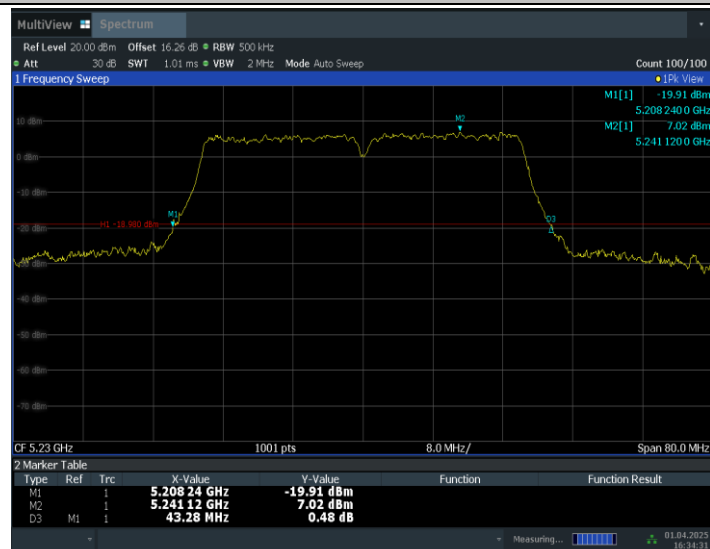
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11N40SISO_Ant1_5190



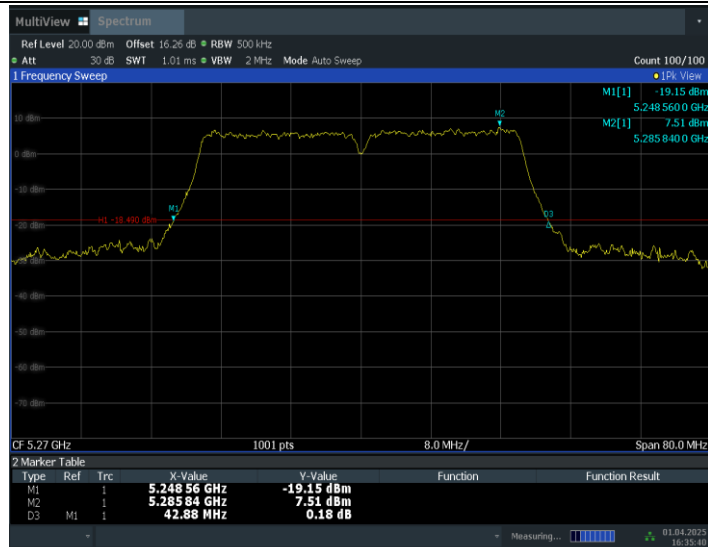
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11N40SISO_Ant1_5230



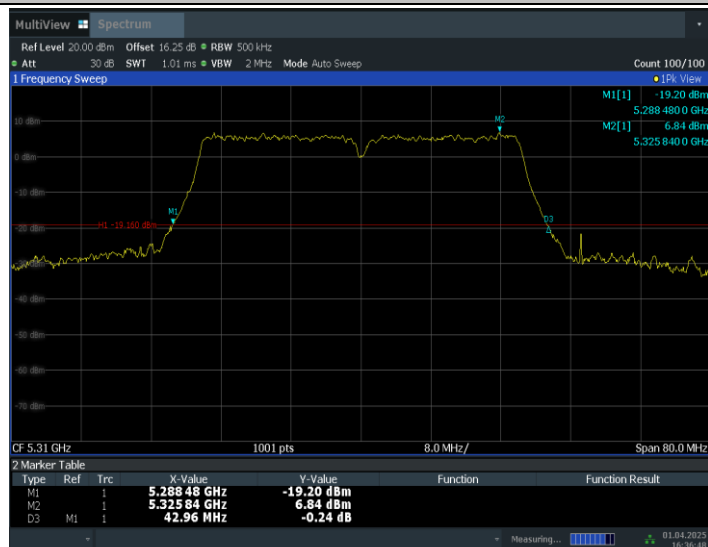
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11N40SISO_Ant1_5270



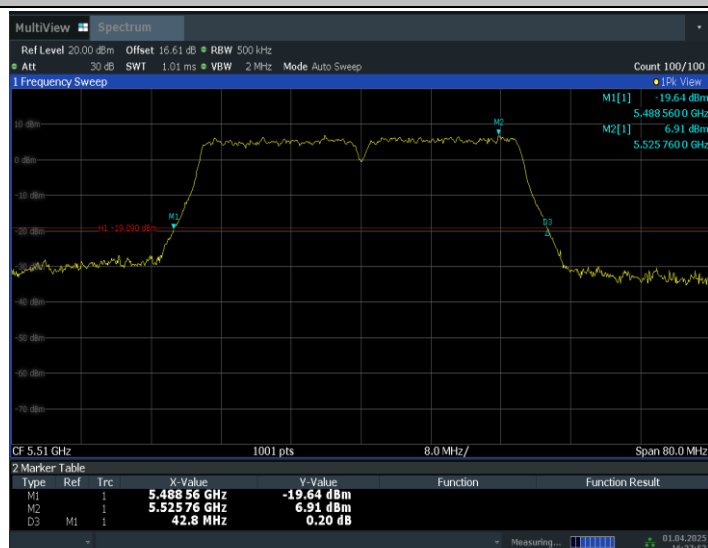
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11N40ISO_Ant1_5310



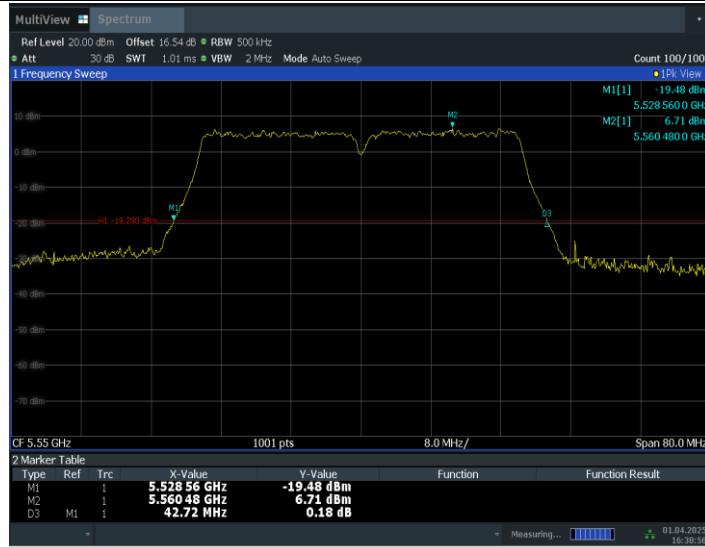
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11N40ISO_Ant1_5510



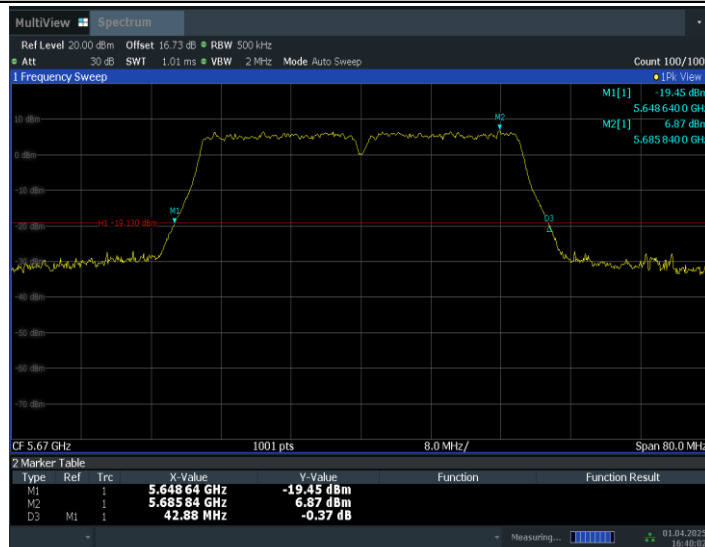
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11N40SISO_Ant1_5550



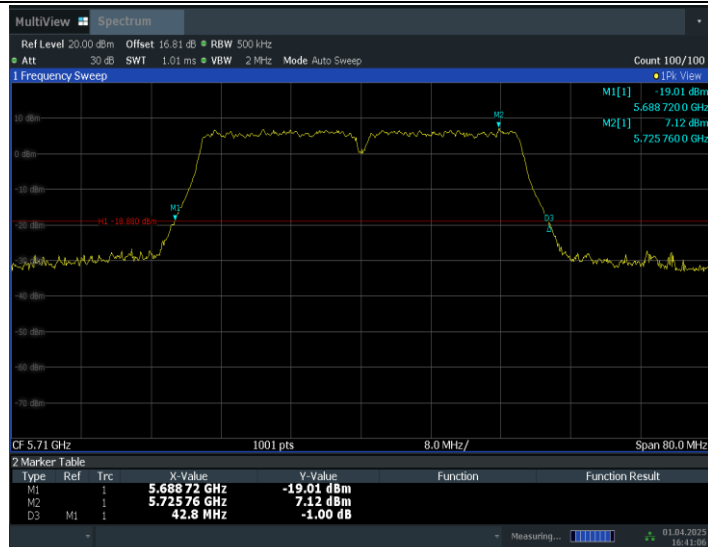
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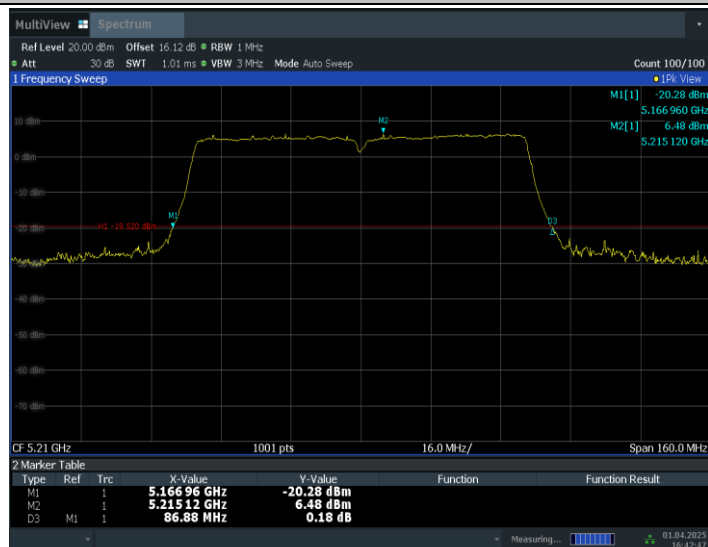
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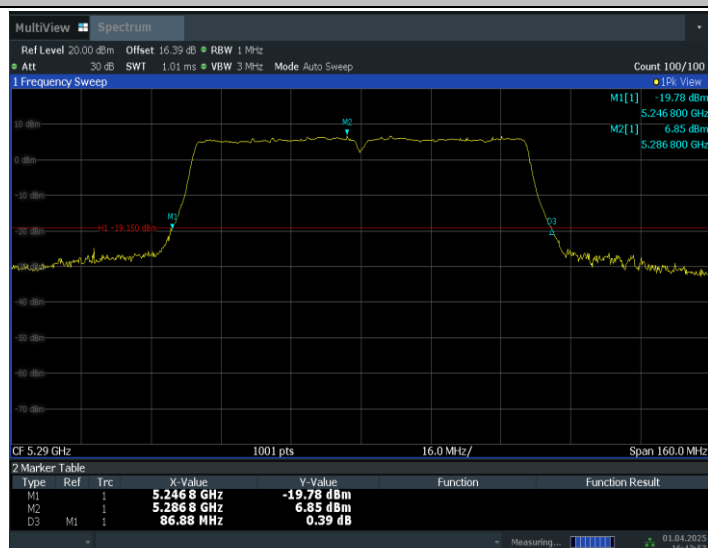
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11AC80SISO_Ant1_5210



16:42:47 01.04.2025

11AC80SISO_Ant1_5290



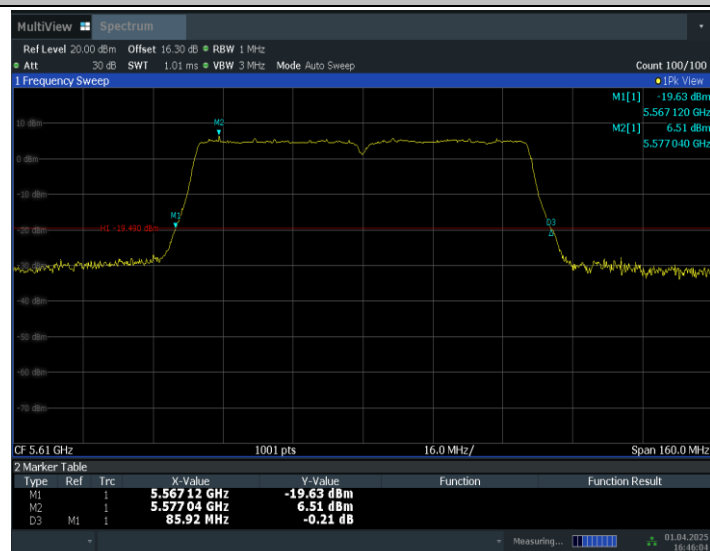
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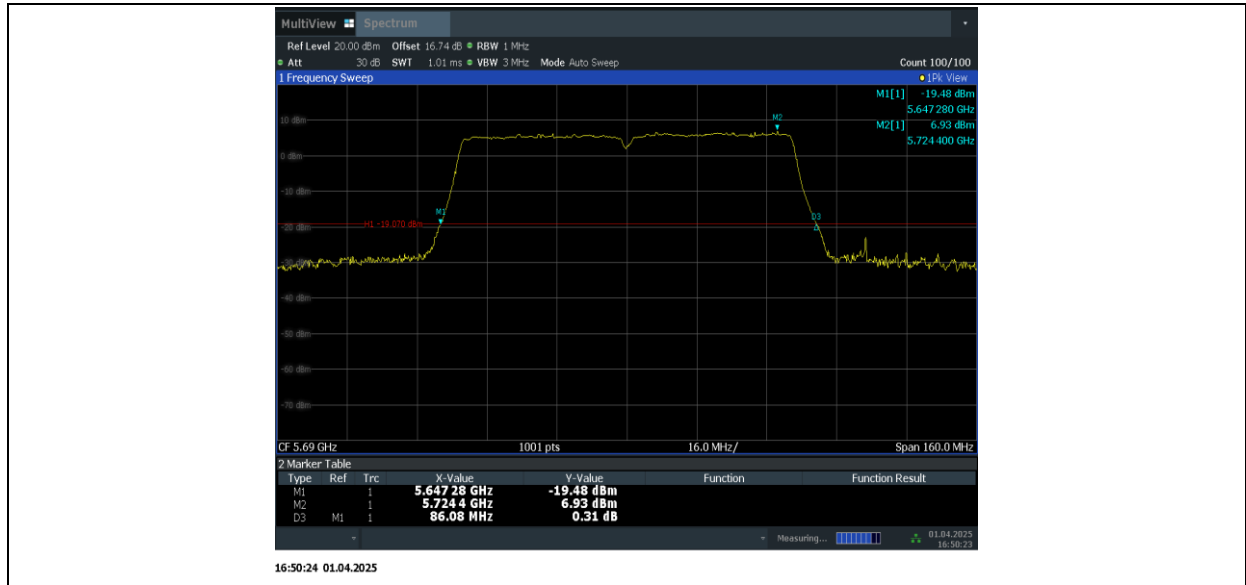
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11AC80SISO_Ant1_5610



16:46:04 01.04.2025

11AC80SISO_Ant1_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

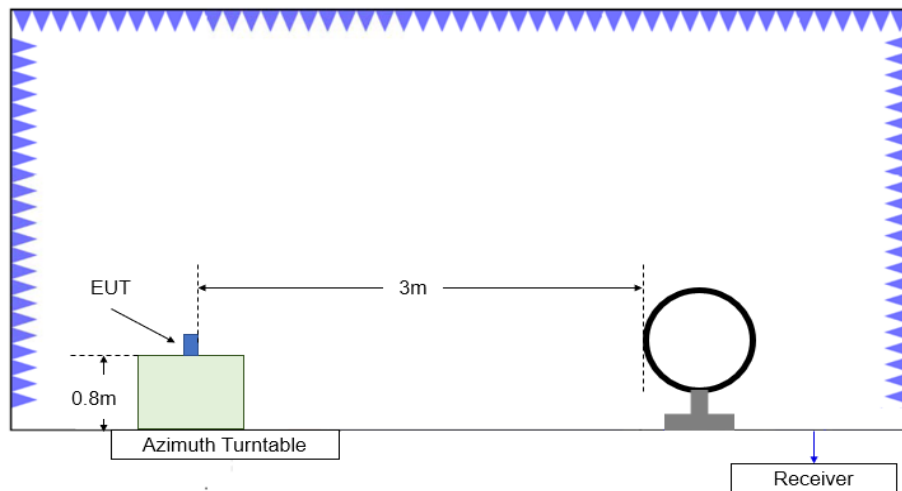


Figure A.5.1. Test Site Diagram (9kHz-30MHz)

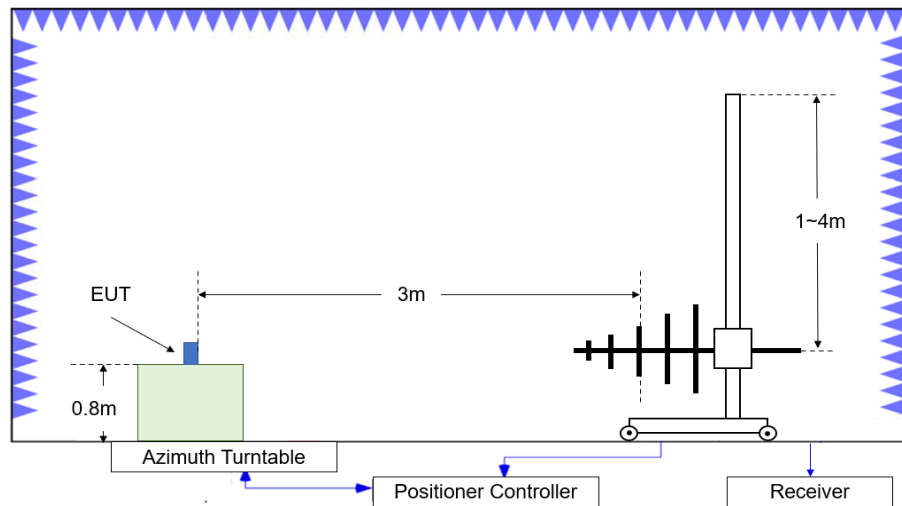


Figure A.5.2. Test Site Diagram (30MHz-1GHz)

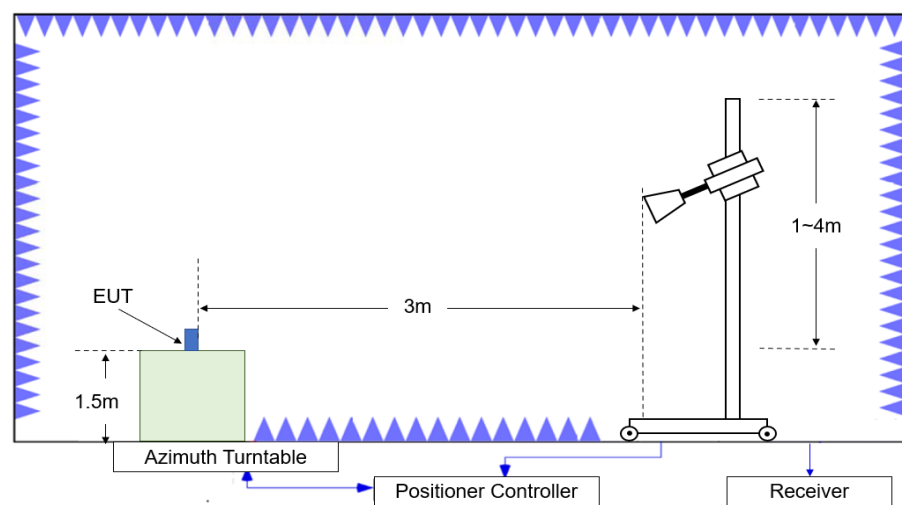


Figure A.5.3. Test Site Diagram (1GHz-40GHz)

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. The test is carried out on both vertical and horizontal polarization and only maximization result of both polarizations is kept.
5. EUT in each of three orthogonal axis emissions had been tested out only the worst case (axis data) recorded in the report.
6. Measurement frequencies were performed from 9 kHz to the 10th harmonic of highest fundamental frequency or 40GHz, whichever is lower.
7. No spurious emissions were detected within 20dB of the limit below 30MHz. OFS and semi-chamber comparison testing had been performed and the result came out very similar. (KDB 414788)

Measurement Results:

Average Results:

802.11a

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)
5350.000	47.26	-23.09	34.10	36.25	54.00	6.74	V
5351.450	46.54	-23.06	34.11	35.50	54.00	7.46	V
10639.900	34.72	-29.12	37.64	26.21	54.00	19.28	H
15960.050	38.81	-23.44	40.84	21.41	54.00	15.19	H
17780.550	38.68	-21.34	40.58	19.44	54.00	15.32	V
17885.050	39.05	-20.97	40.51	19.51	54.00	14.95	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)
5454.100	45.53	-22.55	34.48	33.60	54.00	8.47	V
5459.800	45.64	-22.48	34.46	33.66	54.00	8.36	V
11000.150	35.15	-28.94	37.90	26.19	54.00	18.85	H
16001.850	39.09	-23.39	40.81	21.67	54.00	14.91	V
17887.250	39.21	-20.97	40.51	19.67	54.00	14.79	V
17949.400	39.18	-20.86	40.55	19.49	54.00	14.82	H

802.11n-HT20

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)
5149.100	48.49	-23.15	34.00	37.64	54.00	5.51	V
5149.900	48.89	-23.16	34.00	38.05	54.00	5.11	V
12337.200	36.54	-27.24	38.90	24.87	54.00	17.46	H
15539.850	38.37	-24.38	40.40	22.35	54.00	15.63	V
17792.650	38.83	-21.34	40.59	19.59	54.00	15.17	H
17886.150	39.07	-20.97	40.51	19.53	54.00	14.93	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)
5350.000	48.17	-23.09	34.10	37.16	54.00	5.83	V
5350.800	47.83	-23.07	34.10	36.80	54.00	6.17	V
10639.900	34.51	-29.12	37.64	25.99	54.00	19.49	V
15960.050	39.04	-23.44	40.84	21.64	54.00	14.96	V
17788.250	38.88	-21.33	40.59	19.63	54.00	15.12	V
17886.700	39.09	-20.97	40.51	19.55	54.00	14.91	H

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)
5454.100	45.61	-22.55	34.48	33.68	54.00	8.39	V
5459.800	45.74	-22.48	34.46	33.76	54.00	8.26	V
7332.750	33.73	-31.01	35.63	29.11	54.00	20.27	V
11000.150	35.17	-28.94	37.90	26.21	54.00	18.83	V
16006.250	39.20	-23.47	40.82	21.85	54.00	14.80	V
17885.050	39.30	-20.97	40.51	19.76	54.00	14.70	V

802.11n-HT40

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)
5149.550	50.11	-23.16	34.00	39.26	54.00	3.89	V
5149.950	50.38	-23.16	34.00	39.54	54.00	3.62	V
12332.250	36.66	-27.25	38.90	25.01	54.00	17.34	H
15570.100	37.93	-24.28	40.40	21.81	54.00	16.07	H
17886.150	39.15	-20.97	40.51	19.60	54.00	14.85	V
17948.850	39.06	-20.89	40.55	19.40	54.00	14.94	H

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)
5350.100	48.07	-23.09	34.10	37.06	54.00	5.93	V
5350.400	47.98	-23.08	34.10	36.96	54.00	6.02	V
10620.100	34.33	-29.25	37.62	25.95	54.00	19.67	V
15929.800	38.63	-23.86	40.87	21.62	54.00	15.37	H
17877.350	38.86	-21.05	40.52	19.39	54.00	15.14	H
17949.950	38.83	-20.83	40.55	19.11	54.00	15.17	H

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)
5459.800	46.51	-22.48	34.46	34.53	54.00	7.49	V
5459.900	46.54	-22.48	34.46	34.56	54.00	7.46	V
7346.500	34.92	-30.82	35.69	30.06	54.00	19.08	H
11019.950	34.82	-28.91	37.88	25.86	54.00	19.18	H
15989.200	39.19	-23.33	40.81	21.71	54.00	14.81	V
17886.700	39.20	-20.97	40.51	19.66	54.00	14.80	V

802.11ac-HT20

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)
5149.800	45.98	-23.16	34.00	35.14	54.00	8.02	V
5149.950	46.02	-23.16	34.00	35.18	54.00	7.98	V
12331.150	36.67	-27.26	38.90	25.02	54.00	17.33	V
15539.850	38.56	-24.38	40.40	22.54	54.00	15.44	H
17881.750	39.41	-20.96	40.52	19.85	54.00	14.59	H
17949.950	39.45	-20.83	40.55	19.72	54.00	14.55	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)
5350.150	45.23	-23.09	34.10	34.22	54.00	8.77	V
5350.480	45.16	-23.08	34.10	34.14	54.00	8.84	V
10639.900	34.63	-29.12	37.64	26.12	54.00	19.37	V
15960.050	38.79	-23.44	40.84	21.39	54.00	15.21	H
17882.300	39.30	-20.96	40.52	19.74	54.00	14.70	V
17948.850	39.35	-20.89	40.55	19.70	54.00	14.65	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)
5459.400	45.93	-22.48	34.46	33.95	54.00	8.07	V
5459.550	45.88	-22.48	34.46	33.90	54.00	8.12	V
7332.750	33.78	-31.01	35.63	29.16	54.00	20.22	V
11000.000	35.09	-28.94	37.90	26.14	54.00	18.91	V
16164.800	39.03	-22.65	40.97	20.71	54.00	14.97	V
17886.000	39.77	-20.97	40.51	20.23	54.00	14.23	H

802.11ac-HT40

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)
5149.850	49.93	-23.16	34.00	39.09	54.00	4.07	V
5150.000	50.00	-23.16	34.00	39.16	54.00	4.00	V
10630.800	34.21	-29.06	37.63	25.63	54.00	19.79	H
15570.000	37.90	-24.28	40.40	21.79	54.00	16.10	V
17889.600	39.90	-20.98	40.51	20.37	54.00	14.10	H
17953.200	39.78	-20.87	40.55	20.10	54.00	14.22	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)
5350.100	46.77	-23.09	34.10	35.76	54.00	7.23	V
5350.200	46.75	-23.09	34.10	35.74	54.00	7.25	V
10620.000	34.10	-29.25	37.62	25.73	54.00	19.90	H
15930.000	38.69	-23.86	40.87	21.68	54.00	15.31	H
17887.600	39.82	-20.98	40.51	20.28	54.00	14.18	V
17952.800	39.68	-20.86	40.55	19.99	54.00	14.32	H

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)
5459.400	46.09	-22.48	34.46	34.12	54.00	7.91	V
5459.900	46.18	-22.48	34.46	34.19	54.00	7.82	V
7346.500	35.09	-30.82	35.69	30.23	54.00	18.91	V
11020.000	34.73	-28.91	37.88	25.77	54.00	19.27	V
16099.200	38.96	-23.49	41.10	21.35	54.00	15.04	H
17892.400	39.84	-21.02	40.51	20.36	54.00	14.16	H

802.11ac-HT80

Channel 42

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)
5144.750	50.35	-23.10	34.00	39.45	54.00	3.65	V
5145.300	50.29	-23.11	34.00	39.40	54.00	3.71	V
10692.400	34.68	-28.92	37.69	25.92	54.00	19.32	V
15630.000	38.02	-24.00	40.46	21.56	54.00	15.98	V
17892.000	39.81	-21.02	40.51	20.32	54.00	14.19	V
17949.200	39.91	-20.87	40.55	20.24	54.00	14.09	V

Channel 58

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)
5350.200	47.15	-23.09	34.10	36.14	54.00	6.85	V
5350.400	47.12	-23.08	34.10	36.10	54.00	6.88	V
10634.000	34.14	-29.08	37.63	25.59	54.00	19.86	V
15870.000	39.21	-23.11	40.87	21.45	54.00	14.79	V
17885.600	39.82	-20.97	40.51	20.28	54.00	14.18	V
17949.600	39.73	-20.85	40.55	20.03	54.00	14.27	V

Channel 106

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)
5459.550	48.59	-22.48	34.46	36.61	54.00	5.41	V
5459.900	48.65	-22.48	34.46	36.67	54.00	5.35	V
7372.900	33.68	-31.53	35.70	29.50	54.00	20.32	H
11060.000	35.16	-28.82	37.84	26.14	54.00	18.84	V
16102.000	39.22	-23.50	41.10	21.63	54.00	14.78	V
17847.600	39.87	-21.25	40.55	20.57	54.00	14.13	V

PEAK Results:

802.11a

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)
5350.016	64.36	-23.09	34.10	53.35	74.00	9.64	H
5352.904	63.69	-23.02	34.11	52.60	74.00	10.31	V
10639.900	48.31	-29.12	37.64	39.79	74.00	25.69	H
15960.050	51.47	-23.44	40.84	34.07	74.00	22.53	H
16949.500	53.56	-22.22	41.25	34.53	68.20	14.64	H
17105.700	54.12	-22.31	40.99	35.44	68.20	14.08	H

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)
5468.267	65.23	-22.25	34.43	53.04	68.20	2.97	H
5469.842	67.82	-22.20	34.42	55.60	68.20	0.38	V
11000.150	47.43	-28.94	37.90	38.47	74.00	26.57	H
16500.150	52.43	-22.71	41.10	34.04	68.20	15.77	V
16616.200	53.56	-22.43	41.32	34.67	68.20	14.64	V
17350.450	53.49	-21.86	40.75	34.61	68.20	14.71	H

802.11n-HT20

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)
5146.475	65.21	-23.12	34.00	54.33	74.00	8.79	H
5149.257	65.49	-23.15	34.00	54.65	74.00	8.51	H
10359.950	46.76	-29.14	37.42	38.48	68.20	21.44	V
15539.850	49.67	-24.38	40.40	33.65	74.00	24.33	V
16684.400	53.30	-22.58	41.38	34.49	68.20	14.90	V
17539.100	53.18	-20.71	40.76	33.13	68.20	15.02	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)
5351.365	66.82	-23.06	34.11	55.78	74.00	7.18	H
5351.514	66.74	-23.06	34.11	55.69	74.00	7.26	H
10639.900	46.71	-29.12	37.64	38.19	74.00	27.29	H
15960.050	49.92	-23.44	40.84	32.52	74.00	24.08	H
17013.300	54.08	-22.12	41.09	35.11	68.20	14.12	V
17552.300	53.84	-21.54	40.75	34.64	68.20	14.36	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)
5466.400	67.05	-22.30	34.43	54.91	68.20	1.15	V
5466.812	66.86	-22.29	34.43	54.71	68.20	1.34	H
11000.150	47.32	-28.94	37.90	38.37	74.00	26.68	V
16500.150	51.48	-22.71	41.10	33.09	68.20	16.72	V
17008.350	53.41	-22.14	41.09	34.46	68.20	14.79	H
17472.550	54.10	-21.81	40.77	35.14	68.20	14.10	V

802.11n-HT40

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)
5147.500	68.59	-23.13	34.00	57.72	74.00	5.41	V
5147.962	68.48	-23.14	34.00	57.62	74.00	5.52	H
10379.750	46.34	-29.20	37.46	38.09	68.20	21.86	V
15570.100	50.44	-24.28	40.40	34.32	74.00	23.56	V
16739.950	53.05	-22.85	41.40	34.50	68.20	15.16	H
17700.000	54.00	-21.90	40.50	35.40	74.00	20.00	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)
5351.541	64.93	-23.05	34.11	53.88	74.00	9.07	V
5351.784	65.04	-23.05	34.11	53.98	74.00	8.96	V
7079.750	47.54	-31.38	35.62	43.30	68.20	20.66	V
10620.100	46.83	-29.25	37.62	38.45	74.00	27.17	H
15929.800	51.51	-23.86	40.87	34.50	74.00	22.49	V
16632.150	53.27	-22.60	41.33	34.53	68.20	14.93	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)
5467.533	64.08	-22.27	34.43	51.91	68.20	4.12	V
5469.888	64.77	-22.20	34.42	52.55	68.20	3.43	H
11019.950	47.91	-28.91	37.88	38.95	74.00	26.09	H
16529.850	50.96	-22.53	41.16	32.33	68.20	17.24	V
16667.350	53.15	-22.42	41.37	34.20	68.20	15.05	V
17337.800	53.28	-21.91	40.76	34.43	68.20	14.92	V

802.11ac-HT20

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)
5147.087	63.39	-23.13	34.00	52.52	74.00	10.61	H
5149.660	62.93	-23.16	34.00	52.09	74.00	11.07	H
10359.950	46.87	-29.14	37.42	38.59	68.20	21.33	H
15539.850	50.23	-24.38	40.40	34.20	74.00	23.77	V
16408.300	53.50	-22.80	40.92	35.38	68.20	14.70	H
17540.200	53.81	-20.64	40.76	33.69	68.20	14.39	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)
5353.998	60.49	-22.99	34.12	49.37	74.00	13.51	V
5357.333	65.81	-22.91	34.13	54.59	74.00	8.19	V
7092.950	47.62	-31.20	35.67	43.14	68.20	20.58	V
10639.900	47.30	-29.12	37.64	38.79	74.00	26.70	V
15960.050	51.03	-23.44	40.84	33.63	74.00	22.97	H
16689.900	53.26	-22.60	41.39	34.48	68.20	14.94	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)
5468.125	61.11	-22.25	34.43	48.93	68.20	7.09	H
5469.738	61.92	-22.20	34.42	49.71	68.20	6.28	V
11000.700	48.40	-28.95	37.90	39.45	74.00	25.60	H
16500.150	51.62	-22.71	41.10	33.24	68.20	16.58	H
17133.750	54.85	-22.22	40.97	36.10	68.20	13.35	V
17537.450	53.67	-20.88	40.76	33.79	68.20	14.53	V

802.11ac-HT40

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)
5147.280	66.91	-23.13	34.00	56.04	74.00	7.09	V
5148.663	66.97	-23.15	34.00	56.12	74.00	7.03	H
10379.750	47.58	-29.20	37.46	39.32	68.20	20.62	V
15570.100	50.96	-24.28	40.40	34.84	74.00	23.04	H
16950.050	53.82	-22.21	41.25	34.79	68.20	14.38	V
17522.050	53.63	-21.71	40.78	34.56	68.20	14.57	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)
5351.015	64.59	-23.07	34.10	53.56	74.00	9.41	V
5351.257	61.28	-23.06	34.11	50.24	74.00	12.72	H
10619.550	47.13	-29.26	37.62	38.77	74.00	26.87	H
15929.800	51.32	-23.86	40.87	34.31	74.00	22.68	V
17238.250	54.40	-22.37	40.86	35.91	68.20	13.80	H
17662.300	54.30	-21.25	40.58	34.97	68.20	13.90	H

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)
5469.752	62.44	-22.20	34.42	50.22	68.20	5.76	H
5469.850	63.12	-22.20	34.42	50.90	68.20	5.08	H
11019.950	47.39	-28.91	37.88	38.42	74.00	26.61	V
16530.950	51.46	-22.56	41.16	32.86	68.20	16.74	H
17221.175	53.98	-22.18	40.88	35.28	68.20	14.22	H
17541.850	53.93	-20.78	40.76	33.95	68.20	14.27	H

802.11ac-HT80

Channel 42

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)
5148.750	65.09	-23.15	34.00	54.23	74.00	8.91	V
5149.590	64.61	-23.16	34.00	53.77	74.00	9.39	V
10421.550	47.30	-29.32	37.50	39.13	68.20	20.90	V
15628.950	51.67	-24.03	40.46	35.25	74.00	22.33	V
16688.800	54.00	-22.60	41.39	35.21	68.20	14.20	H
16981.400	53.90	-22.18	41.16	34.92	68.20	14.30	H

Channel 58

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)
5352.068	63.26	-23.04	34.11	52.19	74.00	10.74	V
5352.135	62.23	-23.04	34.11	51.16	74.00	11.77	V
10579.950	48.55	-28.83	37.58	39.80	68.20	19.66	H
15869.850	52.65	-23.12	40.87	34.89	74.00	21.35	V
17435.700	53.86	-21.70	40.74	34.82	68.20	14.34	V
17635.900	53.90	-21.59	40.63	34.86	68.20	14.30	H

Channel 106

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)
5467.488	63.48	-22.27	34.43	51.32	68.20	4.72	H
5468.695	63.00	-22.23	34.43	50.81	68.20	5.20	V
11059.550	48.85	-28.83	37.84	39.84	74.00	25.15	V
16591.450	53.10	-22.30	41.28	34.11	68.20	15.10	H
17329.550	54.34	-22.12	40.77	35.69	68.20	13.86	V
17352.100	54.16	-21.87	40.75	35.29	68.20	14.04	H

Conclusion: PASS

Band edge compliance

Mode	Channel	Test Results	Conclusion
802.11a	5180 MHz	Fig.1	P
	5320 MHz	Fig.2	P
	5500 MHz	Fig.3	P
	5700 MHz	Fig.4	P
802.11n HT20	5180 MHz	Fig.5	P
	5320 MHz	Fig.6	P
	5500 MHz	Fig.7	P
	5700 MHz	Fig.8	P
802.11n HT40	5190 MHz	Fig.9	P
	5310 MHz	Fig.10	P
	5510 MHz	Fig.11	P
	5670 MHz	Fig.12	P
802.11ac HT20	5180 MHz	Fig.13	P
	5320 MHz	Fig.14	P
	5500 MHz	Fig.15	P
	5700 MHz	Fig.16	P
802.11ac HT40	5190 MHz	Fig.17	P
	5310 MHz	Fig.18	P
	5510 MHz	Fig.19	P
	5670 MHz	Fig.20	P
802.11ac HT80	5210MHz	Fig.21	P
	5290MHz	Fig.22	P
	5530MHz	Fig.23	P
	5610MHz	Fig.24	P

Conclusion: PASS

Test graphs as below:

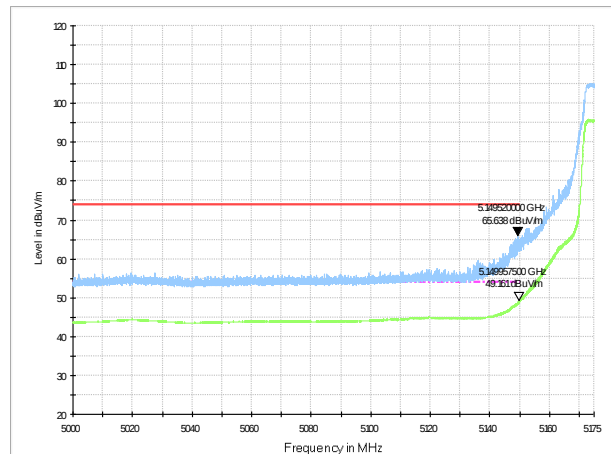


Fig. 1 Band Edges (802.11a Ch36, 5180MHz)

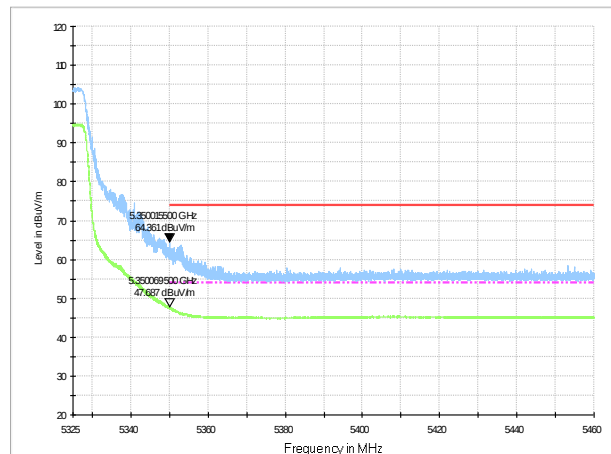


Fig. 2 Band Edges (802.11a Ch64, 5320MHz)

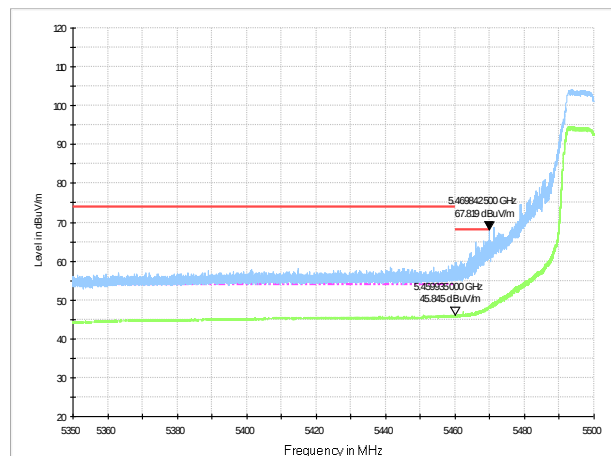


Fig. 3 Band Edges (802.11a Ch100, 5500MHz)

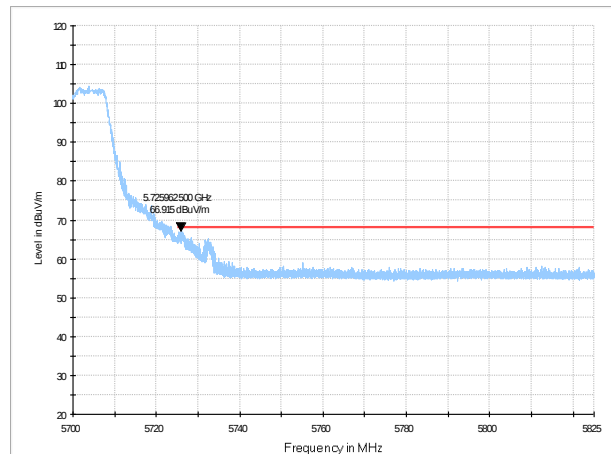


Fig. 4 Band Edges (802.11a Ch140, 5700MHz)

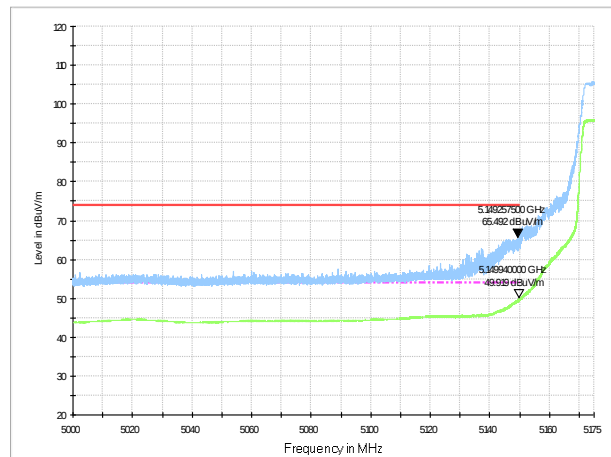


Fig. 5 Band Edges (802.11n-HT20 Ch36, 5180MHz)

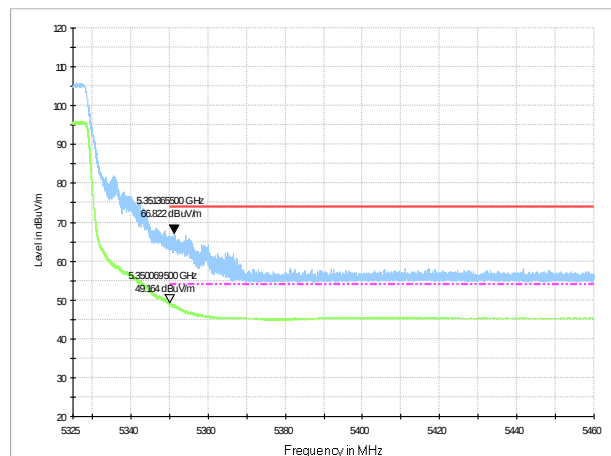


Fig. 6 Band Edges (802.11n-HT20 Ch64, 5320MHz)

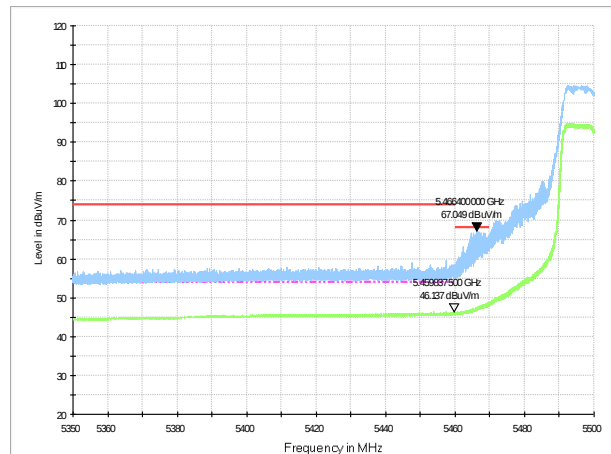


Fig. 7 Band Edges (802.11n-HT20 Ch100, 5500MHz)

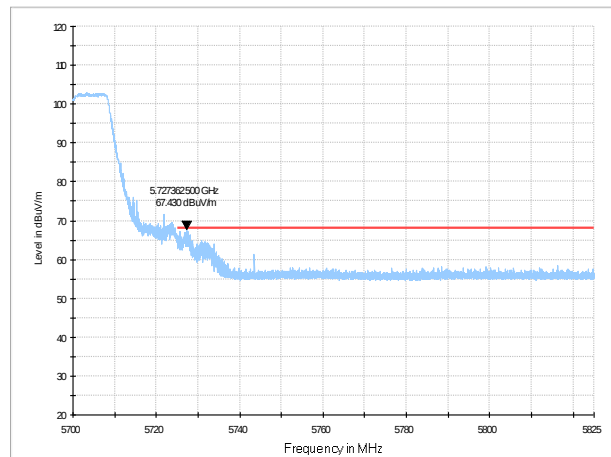


Fig. 8 Band Edges (802.11n-HT20 Ch140, 5700MHz)

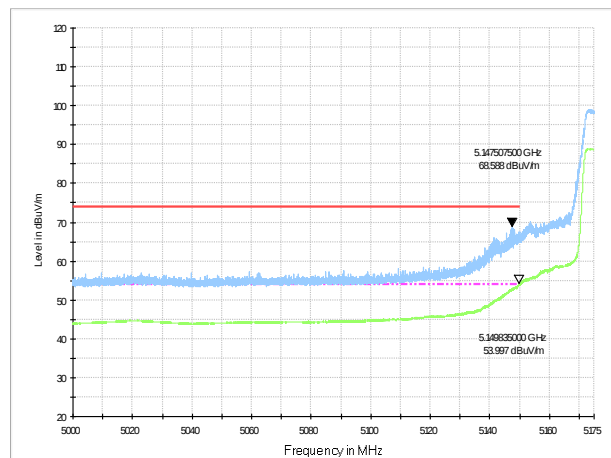


Fig. 9 Band Edges (802.11n-HT40 Ch38, 5190MHz)

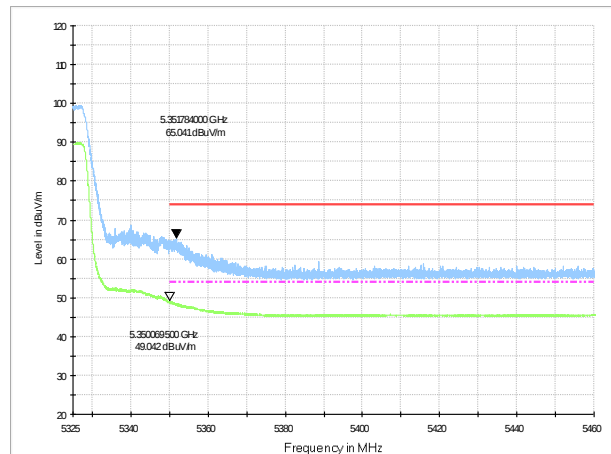


Fig. 10 Band Edges (802.11n-HT40 Ch62, 5310MHz)

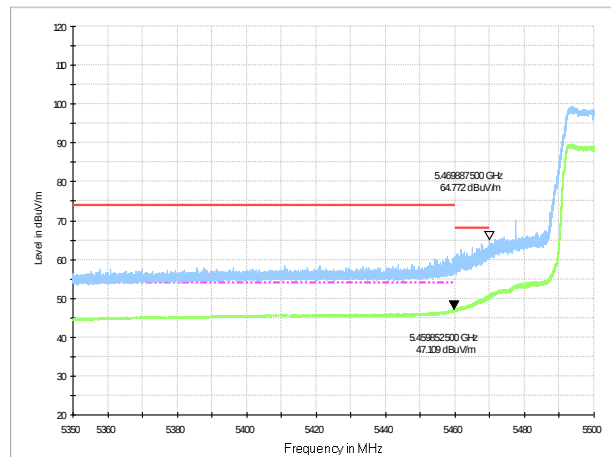


Fig. 11 Band Edges (802.11n-HT40 Ch102, 5510MHz)

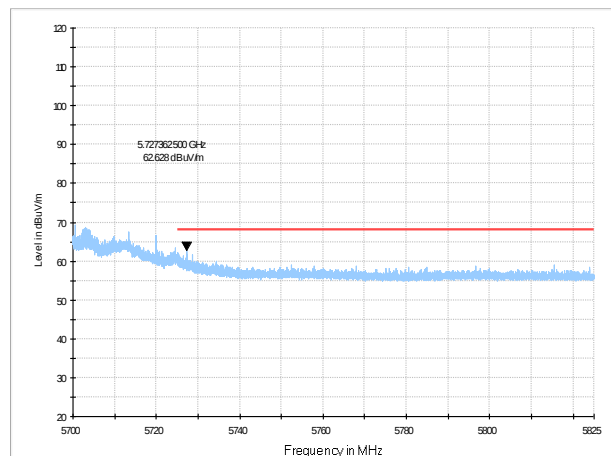


Fig. 12 Band Edges (802.11n-HT40 Ch134, 5670MHz)

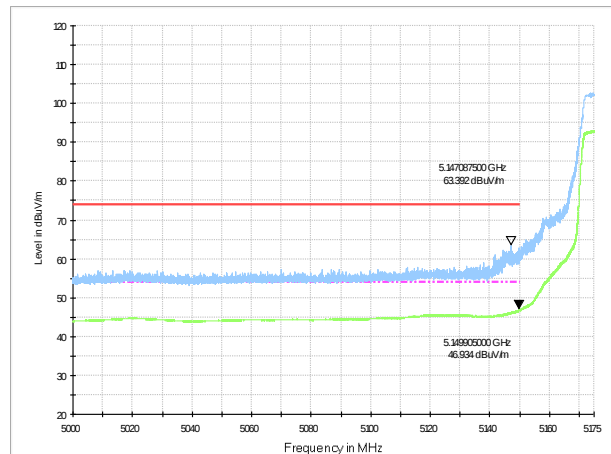


Fig. 13 Band Edges (802.11ac-HT20 Ch36, 5180MHz)

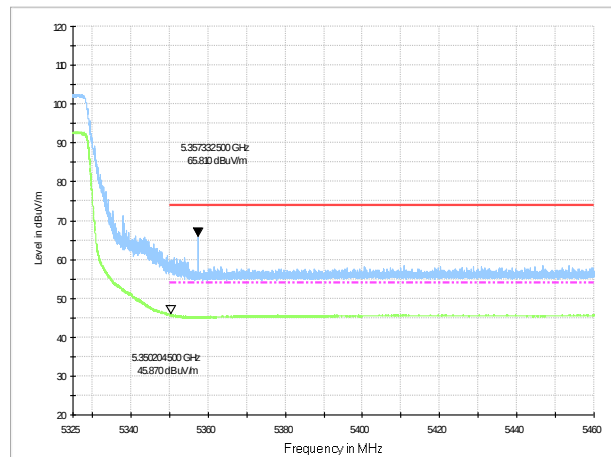


Fig. 14 Band Edges (802.11ac-HT20 Ch64, 5320MHz)

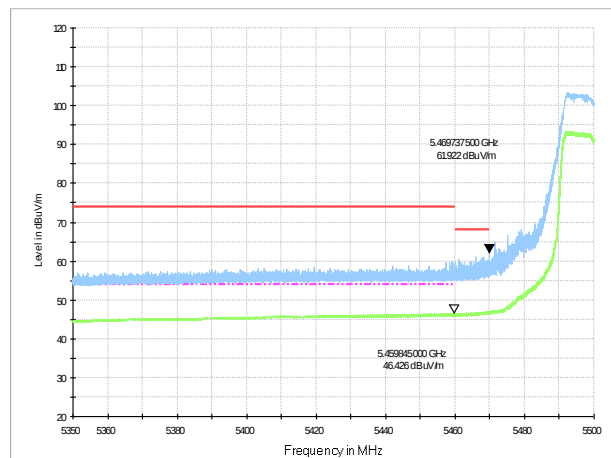


Fig. 15 Band Edges (802.11ac-HT20 Ch100, 5500MHz)

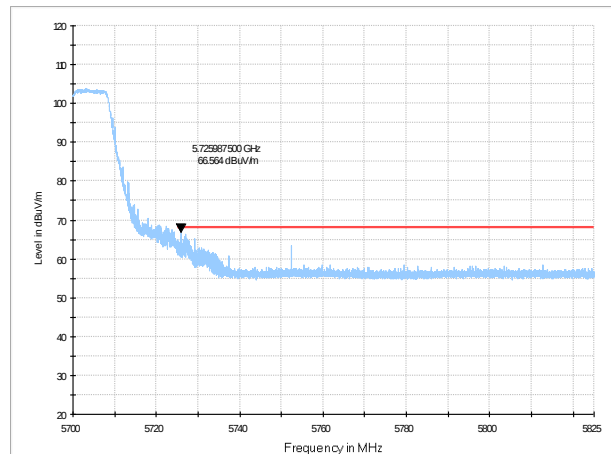


Fig. 16 Band Edges (802.11ac-HT20 Ch140, 5700MHz)

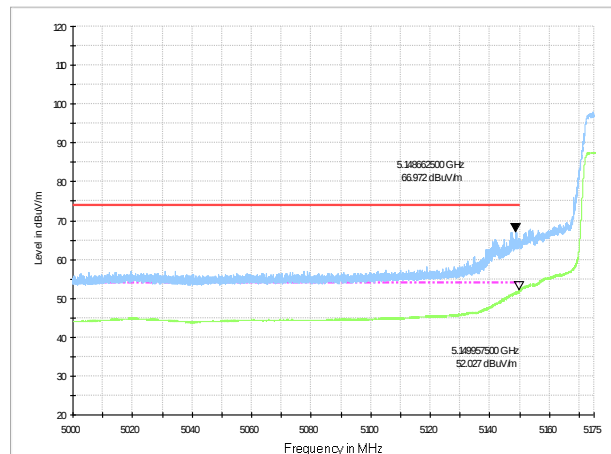


Fig. 17 Band Edges (802.11ac-HT40 Ch38, 5190MHz)

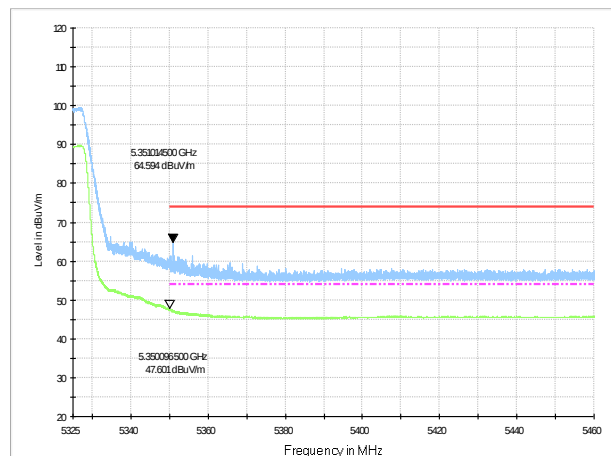


Fig. 18 Band Edges (802.11ac-HT40 Ch62, 5310MHz)

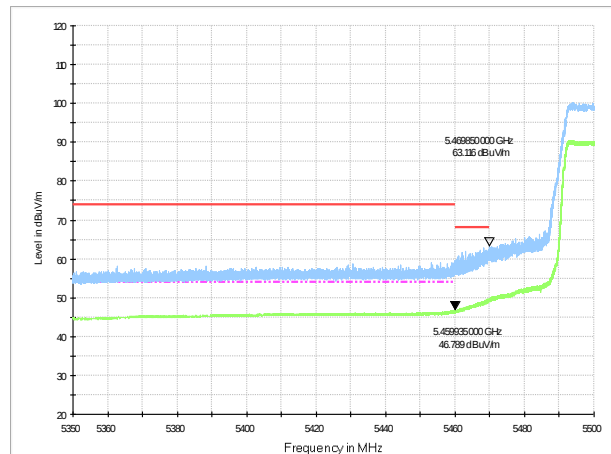


Fig. 19 Band Edges (802.11ac-HT40 Ch102, 5510MHz)

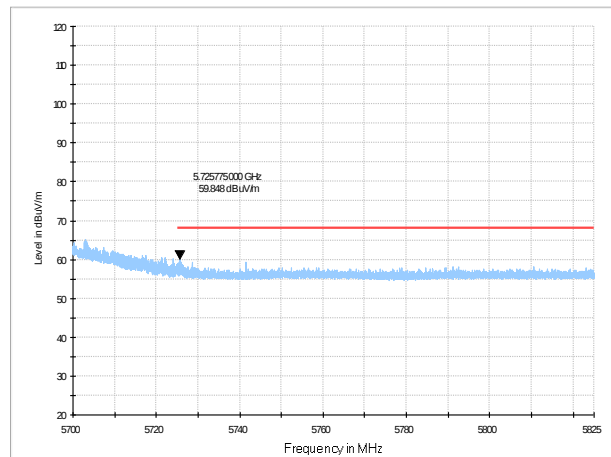


Fig. 20 Band Edges (802.11ac-HT40 Ch134, 5670MHz)

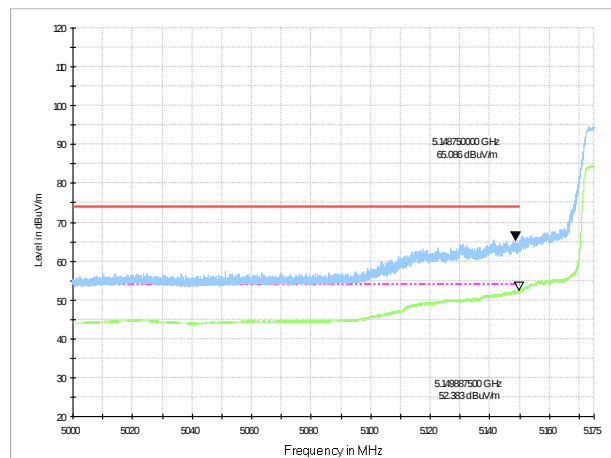


Fig. 21 Band Edges (802.11ac-HT80 Ch42 , 5210MHz)

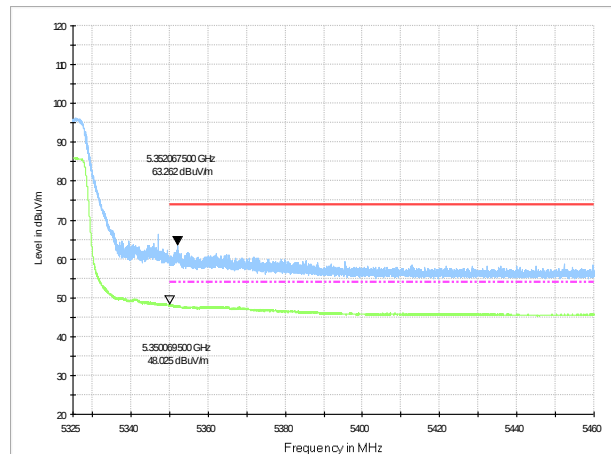


Fig. 22 Band Edges (802.11ac-HT80 Ch58, 5290MHz)

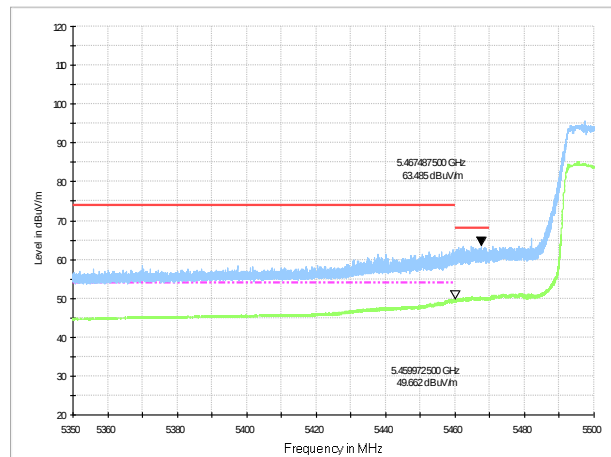


Fig. 23 Band Edges (802.11ac-HT80 Ch106, 5530MHz)

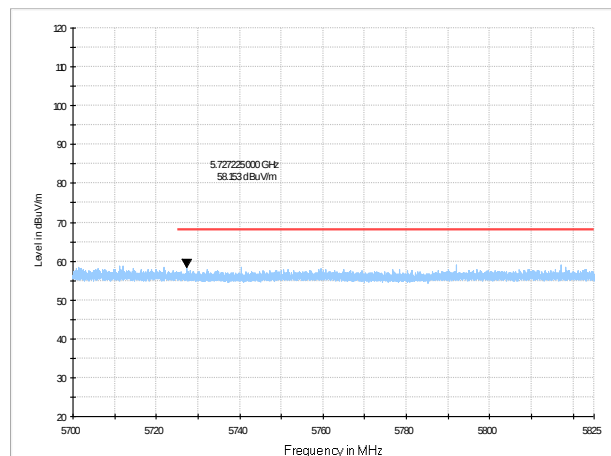


Fig. 24 Band Edges (802.11ac-HT80 Ch122, 5610MHz)

A.6. AC Powerline Conducted Emission (150kHz- 30MHz)

A.6.1 Summary

All AC line conducted spurious emissions are measured with a receiver connected to a grounded LISN while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates and modes were investigated for conducted spurious emissions. Only the conducted emissions of the configuration that produced the worst case emissions are reported in this section

A.6.2 Method of Measurement

See Clause 6.2 of ANSI C63.10 specifically.

See Clause 4 and Clause 5 of ANSI C63.10 generally.

The conducted emissions from the AC port of the EUT are measured in a shielding room. The EUT is connected to a Line Impedance Stabilization Network (LISN). An overview sweep with peak detection was performed. The measurements were performed with a quasi-peak detector and if required, an average detector.

The conducted emission measurements were made with the following detector of the test receiver: Quasi-Peak / Average Detector.

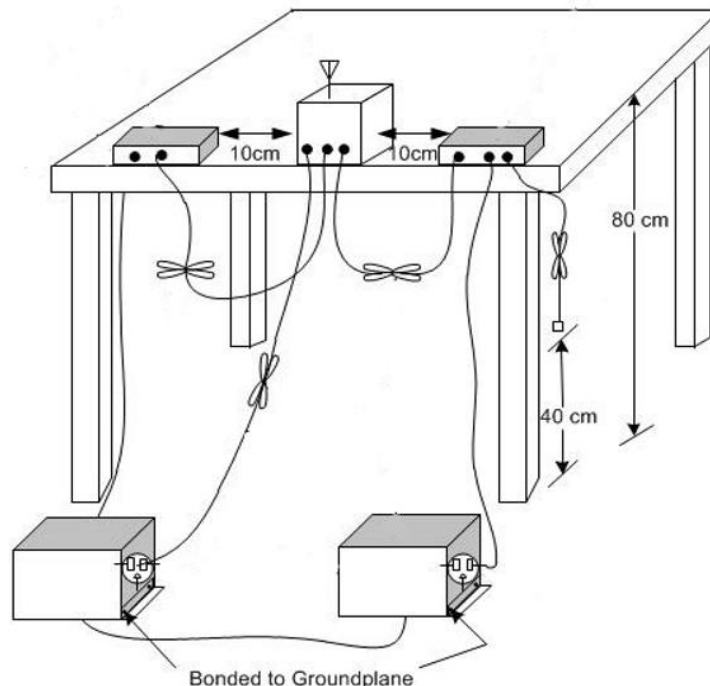
The measurement bandwidth is:

Frequency of Emission (MHz)	RBW/IF bandwidth
0.15-30	9kHz

A.6.3 Test Condition

Voltage (V)	Frequency (Hz)
120	60

A.6.4 Test setup



Measurement Result and limit:

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Result (dBμV)		Conclusion
		With charger		
		11a mode	Idle	
0.15 to 0.5	66 to 56	Fig.25	Fig.26	P
0.5 to 5	56			
5 to 30	60			

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

WLAN (Average Limit)

Frequency range (MHz)	Average Limit (dBμV)	Result (dBμV)		Conclusion
		With charger		
		11a mode	Idle	
0.15 to 0.5	56 to 46	Fig.25	Fig.26	P
0.5 to 5	46			
5 to 30	50			

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

Conclusion: PASS
Test graphs as below:

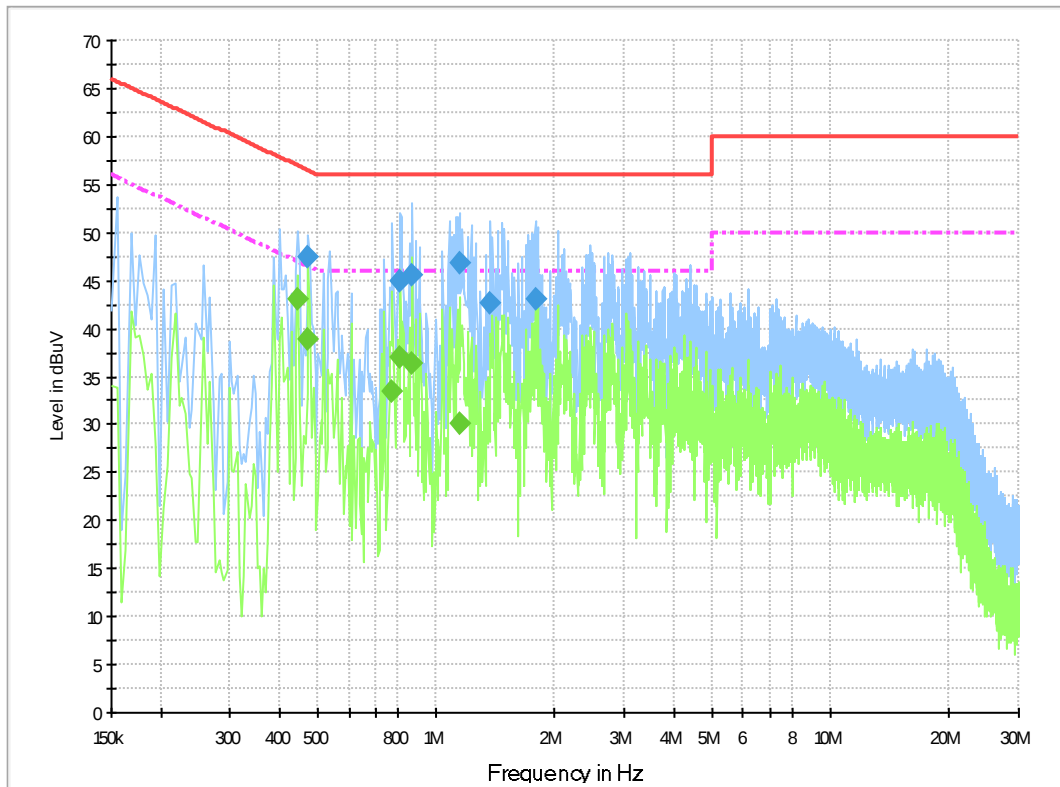


Fig.25 Conducted Emission(802.11a, Ch40, TX)

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.474000	47.4	2000.0	9.000	On	L1	20.1	9.1	56.4	
0.811500	44.9	2000.0	9.000	On	L1	20.0	11.1	56.0	
0.870000	45.5	2000.0	9.000	On	L1	19.9	10.5	56.0	
1.144500	46.9	2000.0	9.000	On	L1	19.9	9.1	56.0	
1.374000	42.6	2000.0	9.000	On	L1	19.9	13.4	56.0	
1.783500	43.0	2000.0	9.000	On	L1	19.8	13.0	56.0	

Final Result 2

Frequency (MHz)	CAverage (dBμV)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.447000	43.0	2000.0	9.000	On	L1	20.1	3.9	46.9	
0.474000	38.9	2000.0	9.000	On	L1	20.1	7.6	46.4	
0.775500	33.4	2000.0	9.000	On	L1	20.0	12.6	46.0	
0.811500	37.0	2000.0	9.000	On	L1	20.0	9.0	46.0	
0.870000	36.4	2000.0	9.000	On	L1	19.9	9.6	46.0	
1.149000	30.2	2000.0	9.000	On	N	20.0	15.8	46.0	

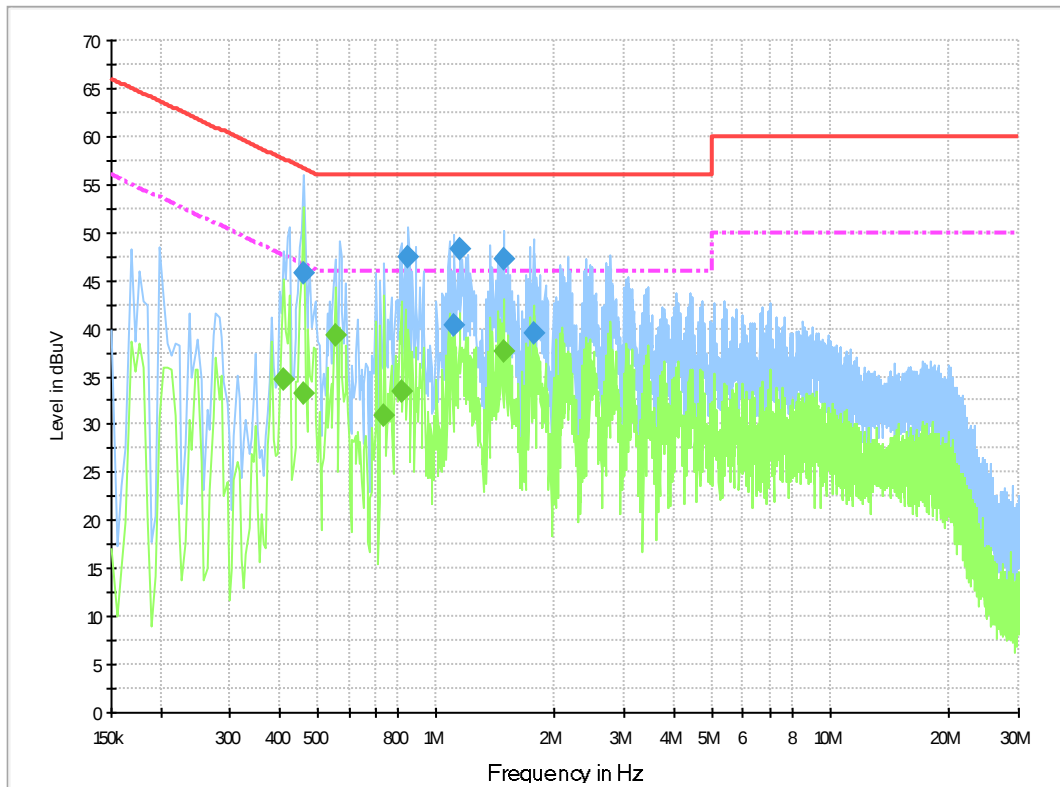


Fig.26 Conducted Emission(802.11a, IDLE)

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.460500	45.7	2000.0	9.000	On	L1	20.1	11.0	56.7	
0.847500	47.3	2000.0	9.000	On	L1	19.9	8.7	56.0	
1.108500	40.3	2000.0	9.000	On	N	20.0	15.7	56.0	
1.149000	48.4	2000.0	9.000	On	L1	19.9	7.6	56.0	
1.486500	47.3	2000.0	9.000	On	L1	19.9	8.7	56.0	
1.761000	39.5	2000.0	9.000	On	N	20.0	16.5	56.0	

Final Result 2

Frequency (MHz)	CAverage (dBμV)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.411000	34.7	2000.0	9.000	On	L1	20.0	12.9	47.6	
0.460500	33.3	2000.0	9.000	On	L1	20.1	13.4	46.7	
0.555000	39.2	2000.0	9.000	On	L1	20.0	6.8	46.0	
0.739500	30.8	2000.0	9.000	On	N	20.1	15.2	46.0	
0.816000	33.4	2000.0	9.000	On	N	20.1	12.6	46.0	
1.486500	37.7	2000.0	9.000	On	L1	19.9	8.4	46.0	