



FCC PART 15E TEST REPORT No.23T04Z70626-03

for

Samsung Electronics Co., Ltd.

Multi-band GSM/WCDMA/LTE/5GNR Phone with Bluetooth, WLAN

Model Name: SM-M556B/DS

FCC ID: ZCASMM556B

with

Hardware Version: REV1.0

Software Version: M556B.001

Issued Date: 2024-01-11

Note:

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

Test Laboratory:

CTTL-Telecommunication Technology Labs, CAICT

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

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

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



REPORT HISTORY

Report Number	Revision	Description	Issue Date
23T04Z70626-03	Rev.0	1st edition	2024-01-11

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(BDA)

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

1.3. Testing Environment

Normal Temperature: 15-35°C
Relative Humidity: 20-75%

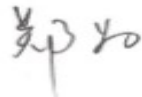
1.4. Project date

Testing Start Date: 2023-11-17
Testing End Date: 2024-01-11

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: Samsung Electronics Co., Ltd.
Address: 19 Chapin Rd., Building D Pine Brook, NJ 07058
Contact: Jenni Chun
Email: j1.chun@samsung.com
Telephone: +1-201-937-4203
Fax: /

2.2. Manufacturer Information

Company Name: Samsung Electronics Co., Ltd.
Address: Samsung R5, Maetan dong 129, Samsung ro
Youngtong gu, Suwon city 443 742, Korea
Contact: Sunghoon Cho
Email: ggobi.cho@samsung.com
Telephone: +82-10-2722-4159
Fax: /

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

3.1. About EUT

Description	Multi-band GSM/WCDMA/LTE/5GNR Phone with Bluetooth, WLAN
Model name	SM-M556B/DS
FCC ID	ZCASMM556B
WLAN Frequency Band	ISM Bands: -5150MHz~5250MHz -5250MHz~5350MHz -5470MHz~5725MHz
Type of modulation	OFDM/OFDMA
Antenna	Integral Antenna
Nominal Voltage	3.85V

3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version	Date of receipt
UT11a	2370626UT11a	REV1.0	M556B.001	2023-11-28
UT19a	2370626UT19a	REV1.0	M556B.001	2023-11-28

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

UT11a is used for Conduction test, UT19a is used for Radiation test.

3.3. Internal Identification of AE used during the test

AE ID*	Name	Model	Manufacturer
AE1	Battery	HQ-6887NAS	Ningde Amperex Technology Limited
AE2-1*	Adapter	EP-TA845	SoluM Co.,Ltd.
AE2-2*	Adapter	EP-T1510JWE	DONGYANG E&P INC
AE3-1	Date Cable1 C-C	EP-DN975BWE	ASAP TECHNOLOGY(JIANGXI) CO.,LTD.
AE3-2	Date Cable2 C-C	EP-DN975BWE	RFTECH ELECTRONICS (HUIZHOU) CO., LTD
AE4*	Date Cable3 C-A	EP-DR140AWE	CRESYN HANOI Co., Ltd
4.AE5*	Headset	QL6601A	Quancheng Electronics

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

*AE2-1, AE2-2, AE4 and A5 are not the AE for EUT, provided by the client for relevant tests.

4.1. General Description

The Equipment under Test (EUT) is a model of Multi-band GSM/WCDMA/LTE/5GNR Phone with Bluetooth, WLAN 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.

4.2. 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

5. Reference Documents

5.1. Documents supplied by applicant

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

5.2. 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

6. Laboratory Environment

Conducted RF performance testing is performed in shielding room.

EMC performance testing is performed in Semi-anechoic chamber.

7. Test Results

7.1. 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
Band edge compliance (Radiated)	15.209	/	P
Transmitter spurious emissions (Radiated)	15.407	/	P
AC Powerline Conducted Emission (150kHz- 30MHz)	15.407	/	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

7.2. 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.

7.3. 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	3.85V
Humidity	44%

8. 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	2024-07-04
2	Vector Signal Analyzer	FSW67	104051	Rohde & Schwarz	1 year	2024-03-06
3	LISN	ENV216	101200	R&S	1 year	2024-06-05
4	Test Receiver	ESCI	100344	R&S	1 year	2024-02-21
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	2024-06-29
2	Test Receiver	ESW44	103015	R&S	1 year	2024-01-14
3	Test Receiver	FSV40	101047	R&S	1 year	2024-07-25
4	Loop Antenna	HFH2-Z2	829324/007	R&S	1 year	2024-12-21
5	EMI Antenna	VULB9163	9163-235	Schwarzbeck	1 year	2024-06-10
6	EMI Antenna	3117	00119021	ETS-Lindgren	1 year	2024-06-24
7	EMI Antenna	LB-180400 -25-C-KF	21100840000 06	A-INFO	1 year	2024-03-02

AC Power Line Conducted Emission

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	LISN	ENV216	101459	R&S	1 year	2024-02-29
2	Test Receiver	ESCI	100766	R&S	1 year	2024-03-30

9. 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
$30\text{MHz} \leq f \leq 1\text{GHz}$	5.73
$1\text{GHz} \leq f \leq 18\text{GHz}$	5.58
$18\text{GHz} \leq f \leq 40\text{GHz}$	3.37

8.6 AC Power-line Conducted Emission

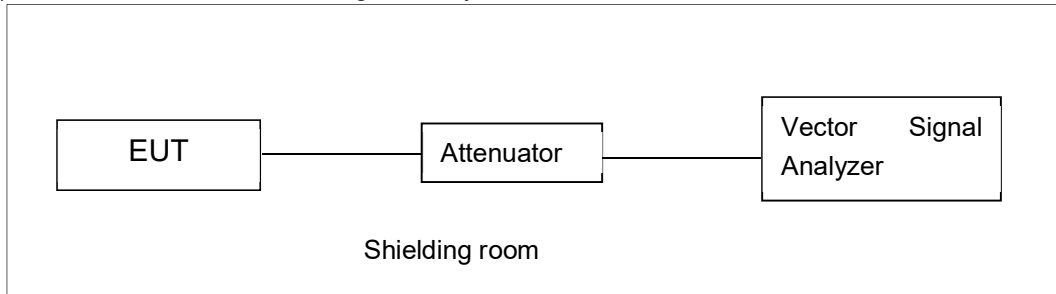
Measurement Uncertainty: 3.10dB, k=2

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 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 -1.8/-2.5dBi(ANT6/ANT10) and the value is supplied by the applicant or manufacturer.

A.2.2 Maximum output Power-Conducted

EUT ID: UT11a

Measurement Results:

SISO-ANT6

802.11a mode

Mode	Frequency	Test Result (dBm)							
		Data Rate (Mbps)							
		6	9	12	18	24	36	48	54
802.11a	5180MHz	14.80	14.19	13.63	14.24	14.29	12.33	12.34	12.33
	5200MHz	14.81	/	/	/	/	/	/	/
	5240MHz	15.54	/	/	/	/	/	/	/
	5260MHz	16.11	/	/	/	/	/	/	/
	5280MHz	15.80	/	/	/	/	/	/	/
	5320MHz	14.72	/	/	/	/	/	/	/
	5500MHz	15.36	/	/	/	/	/	/	/
	5580MHz	14.91	/	/	/	/	/	/	/
	5700MHz	15.66	/	/	/	/	/	/	/
	5720MHz	15.36	/	/	/	/	/	/	/

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	13.80	13.80	14.04	14.02	14.20	12.31	12.34	12.33
	5200MHz	/	/	/	/	14.85	/	/	/
	5240MHz	/	/	/	/	15.54	/	/	/
	5260MHz	/	/	/	/	16.06	/	/	/
	5280MHz	/	/	/	/	15.73	/	/	/
	5320MHz	/	/	/	/	15.66	/	/	/
	5500MHz	/	/	/	/	15.52	/	/	/
	5580MHz	/	/	/	/	15.03	/	/	/
	5700MHz	/	/	/	/	15.76	/	/	/
5720MHz	/	/	/	/	15.43	/	/	/	

The data rate MCS4 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	12.79	12.79	13.00	13.00	13.20	10.83	10.80	10.83	10.81
	5200MHz	/	/	/	/	13.90	/	/	/	/
	5240MHz	/	/	/	/	14.53	/	/	/	/
	5260MHz	/	/	/	/	15.08	/	/	/	/
	5280MHz	/	/	/	/	14.73	/	/	/	/
	5320MHz	/	/	/	/	14.64	/	/	/	/
	5500MHz	/	/	/	/	14.51	/	/	/	/
	5580MHz	/	/	/	/	14.08	/	/	/	/
	5700MHz	/	/	/	/	14.77	/	/	/	/
	5720MHz	/	/	/	/	14.45	/	/	/	/

The data rate MCS4 is selected as worst condition, and the following cases are performed with this condition.

802.11ax-HE20 mode

Mode	Channel	Test Result (dBm)											
		Data Rate											
		MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9	MCS 10	MCS 11
802.11ax (HE20)	5180MHz (Ch36)	12.42	12.45	12.50	12.42	12.67	10.28	10.26	10.29	10.30	10.30	10.29	10.27
	5200MHz (Ch40)	/	/	/	/	13.28	/	/	/	/	/	/	/
	5240MHz (Ch48)	/	/	/	/	14.02	/	/	/	/	/	/	/
	5260MHz (Ch52)	/	/	/	/	14.56	/	/	/	/	/	/	/
	5280MHz (Ch56)	/	/	/	/	14.25	/	/	/	/	/	/	/
	5320MHz (Ch64)	/	/	/	/	14.02	/	/	/	/	/	/	/
	5500MHz (Ch100)	/	/	/	/	13.94	/	/	/	/	/	/	/
	5580MHz (Ch116)	/	/	/	/	13.39	/	/	/	/	/	/	/
	5700MHz (Ch140)	/	/	/	/	14.18	/	/	/	/	/	/	/
	5720MHz (Ch144)	/	/	/	/	13.41	/	/	/	/	/	/	/

The data rate MCS4 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	13.98	13.98	13.58	13.59	13.68	12.74	12.72	12.69
	5230MHz	14.77	/	/	/	/	/	/	/
	5270MHz	15.32	/	/	/	/	/	/	/
	5310MHz	14.89	/	/	/	/	/	/	/
	5510MHz	13.94	/	/	/	/	/	/	/
	5550MHz	14.31	/	/	/	/	/	/	/
	5670MHz	14.55	/	/	/	/	/	/	/
	5710MHz	13.70	/	/	/	/	/	/	/

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	13.50	13.46	13.13	13.13	13.25	11.30	11.33	11.35	11.36	11.37
	5230MHz	14.36	/	/	/	/	/	/	/	/	/
	5270MHz	14.89	/	/	/	/	/	/	/	/	/
	5310MHz	14.49	/	/	/	/	/	/	/	/	/
	5510MHz	13.03	/	/	/	/	/	/	/	/	/
	5550MHz	13.75	/	/	/	/	/	/	/	/	/
	5670MHz	13.98	/	/	/	/	/	/	/	/	/
	5710MHz	13.63	/	/	/	/	/	/	/	/	/

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

802.11ax-HE40 mode

Mode	Channel	Test Result (dBm)											
		Data Rate											
		MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9	MCS 10	MCS 11
802.11ax (HE40)	5190MHz (Ch38)	12.96	13.03	12.91	12.88	13.17	10.74	10.71	10.70	10.75	10.74	10.72	10.70
	5230MHz (Ch46)	/	/	/	/	14.00	/	/	/	/	/	/	/
	5270MHz (Ch54)	/	/	/	/	14.55	/	/	/	/	/	/	/
	5310MHz (Ch62)	/	/	/	/	14.13	/	/	/	/	/	/	/
	5510MHz (Ch102)	/	/	/	/	13.00	/	/	/	/	/	/	/
	5550MHz (Ch110)	/	/	/	/	13.53	/	/	/	/	/	/	/
	5670MHz (Ch134)	/	/	/	/	13.76	/	/	/	/	/	/	/
	5710MHz (Ch142)	/	/	/	/	13.42	/	/	/	/	/	/	/

The data rate MCS4 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	14.07	14.08	12.93	12.92	13.03	10.60	10.61	10.61	10.60	10.60
	5290MHz	/	15.41	/	/	/	/	/	/	/	/
	5530MHz	/	14.63	/	/	/	/	/	/	/	/
	5610MHz	/	13.98	/	/	/	/	/	/	/	/
	5690MHz	/	13.97	/	/	/	/	/	/	/	/

The data rate MCS1 is selected as worst condition, and the following cases are performed with this condition.

802.11ax-HE80 mode

Mode	Channel	Test Result (dBm)											
		Data Rate											
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11
802.11ax (HE80)	5210MHz (Ch42)	12.92	12.87	11.93	11.92	11.95	9.95	10.07	10.07	10.05	10.09	10.07	10.07
	5290MHz (Ch58)	14.81	/	/	/	/	/	/	/	/	/	/	/
	5530MHz (Ch106)	11.45	/	/	/	/	/	/	/	/	/	/	/
	5610MHz (Ch122)	13.32	/	/	/	/	/	/	/	/	/	/	/
	5690MHz (Ch138)	13.77	/	/	/	/	/	/	/	/	/	/	/

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

802.11ax-HE160 mode

Mode	Channel	Test Result (dBm)											
		Data Rate											
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11
802.11ax (HE160)	5250MHz (Ch50)	12.46	12.46	11.82	11.81	12.11	11.17	11.16	11.14	11.15	11.17	11.17	11.18
	5570MHz (Ch114)	11.04	/	/	/	/	/	/	/	/	/	/	/

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

SISO-ANT10
802.11a mode

Mode	Frequency	Test Result (dBm)							
		Data Rate (Mbps)							
		6	9	12	18	24	36	48	54
802.11a	5180MHz	13.07	13.07	12.27	12.88	12.96	10.85	10.86	10.90
	5200MHz	12.96	/	/	/	/	/	/	/
	5240MHz	14.04	/	/	/	/	/	/	/
	5260MHz	14.63	/	/	/	/	/	/	/
	5280MHz	15.32	/	/	/	/	/	/	/
	5320MHz	14.27	/	/	/	/	/	/	/
	5500MHz	14.72	/	/	/	/	/	/	/
	5580MHz	14.15	/	/	/	/	/	/	/
	5700MHz	14.04	/	/	/	/	/	/	/
5720MHz	14.02	/	/	/	/	/	/	/	

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	12.23	12.24	12.55	12.54	12.80	10.71	10.73	10.71
	5200MHz	/	/	/	/	13.18	/	/	/
	5240MHz	/	/	/	/	14.36	/	/	/
	5260MHz	/	/	/	/	14.94	/	/	/
	5280MHz	/	/	/	/	15.62	/	/	/
	5320MHz	/	/	/	/	16.09	/	/	/
	5500MHz	/	/	/	/	14.94	/	/	/
	5580MHz	/	/	/	/	14.34	/	/	/
	5700MHz	/	/	/	/	14.27	/	/	/
5720MHz	/	/	/	/	14.27	/	/	/	

The data rate MCS4 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	11.34	11.33	11.61	11.51	11.87	9.24	9.23	9.21	9.25
	5200MHz	/	/	/	/	13.24	/	/	/	/
	5240MHz	/	/	/	/	13.40	/	/	/	/
	5260MHz	/	/	/	/	13.95	/	/	/	/
	5280MHz	/	/	/	/	14.69	/	/	/	/
	5320MHz	/	/	/	/	15.17	/	/	/	/
	5500MHz	/	/	/	/	13.98	/	/	/	/
	5580MHz	/	/	/	/	13.25	/	/	/	/
	5700MHz	/	/	/	/	13.36	/	/	/	/
	5720MHz	/	/	/	/	13.21	/	/	/	/

The data rate MCS4 is selected as worst condition, and the following cases are performed with this condition.

802.11ax-HE20 mode

Mode	Channel	Test Result (dBm)											
		Data Rate											
		MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9	MCS 10	MCS 11
802.11ax (HE20)	5180MHz (Ch36)	10.82	10.84	10.75	10.76	11.00	8.43	8.46	8.47	8.48	8.47	8.48	8.44
	5200MHz (Ch40)	/	/	/	/	11.37	/	/	/	/	/	/	/
	5240MHz (Ch48)	/	/	/	/	12.51	/	/	/	/	/	/	/
	5260MHz (Ch52)	/	/	/	/	13.06	/	/	/	/	/	/	/
	5280MHz (Ch56)	/	/	/	/	13.80	/	/	/	/	/	/	/
	5320MHz (Ch64)	/	/	/	/	14.31	/	/	/	/	/	/	/
	5500MHz (Ch100)	/	/	/	/	13.29	/	/	/	/	/	/	/
	5580MHz (Ch116)	/	/	/	/	12.57	/	/	/	/	/	/	/
	5700MHz (Ch140)	/	/	/	/	12.64	/	/	/	/	/	/	/
	5720MHz (Ch144)	/	/	/	/	12.77	/	/	/	/	/	/	/

The data rate MCS4 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	12.35	12.37	11.97	11.94	12.09	11.01	10.99	11.01
	5230MHz	/	13.52	/	/	/	/	/	/
	5270MHz	/	14.62	/	/	/	/	/	/
	5310MHz	/	15.11	/	/	/	/	/	/
	5510MHz	/	13.48	/	/	/	/	/	/
	5550MHz	/	13.97	/	/	/	/	/	/
	5670MHz	/	13.01	/	/	/	/	/	/
	5710MHz	/	13.38	/	/	/	/	/	/

The data rate MCS1 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	11.72	11.71	11.36	11.36	11.56	9.39	9.37	9.38	9.40	9.38
	5230MHz	12.95	/	/	/	/	/	/	/	/	/
	5270MHz	14.01	/	/	/	/	/	/	/	/	/
	5310MHz	14.57	/	/	/	/	/	/	/	/	/
	5510MHz	12.45	/	/	/	/	/	/	/	/	/
	5550MHz	13.43	/	/	/	/	/	/	/	/	/
	5670MHz	12.49	/	/	/	/	/	/	/	/	/
	5710MHz	12.88	/	/	/	/	/	/	/	/	/

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

802.11ax-HE40 mode

Mode	Channel	Test Result (dBm)											
		Data Rate											
		MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9	MCS 10	MCS 11
802.11ax (HE40)	5190MHz (Ch38)	12.13	12.15	11.99	12.01	12.32	9.70	9.70	9.72	9.73	9.72	9.70	9.69
	5230MHz (Ch46)	/	/	/	/	13.21	/	/	/	/	/	/	/
	5270MHz (Ch54)	/	/	/	/	13.91	/	/	/	/	/	/	/
	5310MHz (Ch62)	/	/	/	/	13.89	/	/	/	/	/	/	/
	5510MHz (Ch102)	/	/	/	/	12.34	/	/	/	/	/	/	/
	5550MHz (Ch110)	/	/	/	/	13.85	/	/	/	/	/	/	/
	5670MHz (Ch134)	/	/	/	/	13.01	/	/	/	/	/	/	/
	5710MHz (Ch142)	/	/	/	/	12.70	/	/	/	/	/	/	/

The data rate MCS4 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	12.67	12.69	11.36	11.36	11.52	8.99	9.00	8.98	9.01	9.03
	5290MHz	/	14.84	/	/	/	/	/	/	/	/
	5530MHz	/	14.17	/	/	/	/	/	/	/	/
	5610MHz	/	12.98	/	/	/	/	/	/	/	/
	5690MHz	/	13.32	/	/	/	/	/	/	/	/

The data rate MCS1 is selected as worst condition, and the following cases are performed with this condition.

802.11ax-HE80 mode

Mode	Channel	Test Result (dBm)											
		Data Rate											
		MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9	MCS 10	MCS 11
802.11ax (HE80)	5210MHz (Ch42)	11.69	11.71	10.59	10.56	10.65	8.77	8.76	8.76	8.75	8.75	8.76	8.76
	5290MHz (Ch58)	/	14.11	/	/	/	/	/	/	/	/	/	/
	5530MHz (Ch106)	/	11.02	/	/	/	/	/	/	/	/	/	/
	5610MHz (Ch122)	/	13.07	/	/	/	/	/	/	/	/	/	/
	5690MHz (Ch138)	/	12.66	/	/	/	/	/	/	/	/	/	/

The data rate MCS1 is selected as worst condition, and the following cases are performed with this condition.

802.11ax-HE160 mode

Mode	Channel	Test Result (dBm)											
		Data Rate											
		MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9	MCS 10	MCS 11
802.11ax (HE160)	5250MHz (Ch50)	11.29	11.30	10.67	10.66	11.01	10.09	10.09	10.10	10.07	10.09	10.08	10.07
	5570MHz (Ch114)	/	11.31	/	/	/	/	/	/	/	/	/	/

The data rate MCS1 is selected as worst condition, and the following cases are performed with this condition.

MIMO
802.11n-HT20 mode

Mode	Frequency	Test Result (dBm)							
		Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
802.11n (HT20)	5180MHz	13.53	13.51	13.71	13.63	13.80	11.79	11.82	11.79
	5200MHz	/	/	/	/	14.27	/	/	/
	5240MHz	/	/	/	/	14.63	/	/	/
	5260MHz	/	/	/	/	15.07	/	/	/
	5280MHz	/	/	/	/	15.08	/	/	/
	5320MHz	/	/	/	/	15.46	/	/	/
	5500MHz	/	/	/	/	15.90	/	/	/
	5580MHz	/	/	/	/	15.08	/	/	/
	5700MHz	/	/	/	/	14.46	/	/	/
	5720MHz	/	/	/	/	14.63	/	/	/

The data rate MCS4 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	12.60	12.57	12.83	12.64	12.99	10.42	10.41	10.42	10.43
	5200MHz	/	/	/	/	13.48	/	/	/	/
	5240MHz	/	/	/	/	13.86	/	/	/	/
	5260MHz	/	/	/	/	14.29	/	/	/	/
	5280MHz	/	/	/	/	14.27	/	/	/	/
	5320MHz	/	/	/	/	14.69	/	/	/	/
	5500MHz	/	/	/	/	14.85	/	/	/	/
	5580MHz	/	/	/	/	14.06	/	/	/	/
	5700MHz	/	/	/	/	13.67	/	/	/	/
	5720MHz	/	/	/	/	13.79	/	/	/	/

The data rate MCS4 is selected as worst condition, and the following cases are performed with this condition.

802.11ax-HE20 mode

Mode	Channel	Test Result (dBm)											
		Data Rate											
		MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9	MCS 10	MCS 11
802.11ax (HE20)	5180MHz (Ch36)	12.64	12.64	12.68	12.66	12.90	10.41	10.45	10.43	10.44	10.45	10.43	10.43
	5200MHz (Ch40)	/	/	/	/	13.51	/	/	/	/	/	/	/
	5240MHz (Ch48)	/	/	/	/	13.46	/	/	/	/	/	/	/
	5260MHz (Ch52)	/	/	/	/	13.76	/	/	/	/	/	/	/
	5280MHz (Ch56)	/	/	/	/	13.45	/	/	/	/	/	/	/
	5320MHz (Ch64)	/	/	/	/	13.70	/	/	/	/	/	/	/
	5500MHz (Ch100)	/	/	/	/	14.96	/	/	/	/	/	/	/
	5580MHz (Ch116)	/	/	/	/	14.34	/	/	/	/	/	/	/
	5700MHz (Ch140)	/	/	/	/	13.77	/	/	/	/	/	/	/
	5720MHz (Ch144)	/	/	/	/	14.06	/	/	/	/	/	/	/

The data rate MCS4 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	13.54	13.54	13.11	12.94	13.23	12.34	12.31	12.31
	5230MHz	14.03	/	/	/	/	/	/	/
	5270MHz	14.67	/	/	/	/	/	/	/
	5310MHz	14.91	/	/	/	/	/	/	/
	5510MHz	15.27	/	/	/	/	/	/	/
	5550MHz	14.60	/	/	/	/	/	/	/
	5670MHz	13.70	/	/	/	/	/	/	/
	5710MHz	14.24	/	/	/	/	/	/	/

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	13.12	13.08	12.68	12.64	12.78	10.71	10.72	10.70	10.74	10.74
	5230MHz	13.53	/	/	/	/	/	/	/	/	/
	5270MHz	14.07	/	/	/	/	/	/	/	/	/
	5310MHz	14.34	/	/	/	/	/	/	/	/	/
	5510MHz	14.88	/	/	/	/	/	/	/	/	/
	5550MHz	14.33	/	/	/	/	/	/	/	/	/
	5670MHz	13.91	/	/	/	/	/	/	/	/	/
	5710MHz	14.28	/	/	/	/	/	/	/	/	/

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

802.11ax-HE40 mode

Mode	Channel	Test Result (dBm)											
		Data Rate											
		MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9	MCS 10	MCS 11
802.11ax (HE40)	5190MHz (Ch38)	13.18	13.18	13.08	13.01	13.28	10.77	10.78	10.79	10.77	10.78	10.77	10.77
	5230MHz (Ch46)	/	/	/	/	13.30	/	/	/	/	/	/	/
	5270MHz (Ch54)	/	/	/	/	13.69	/	/	/	/	/	/	/
	5310MHz (Ch62)	/	/	/	/	13.86	/	/	/	/	/	/	/
	5510MHz (Ch102)	/	/	/	/	15.20	/	/	/	/	/	/	/
	5550MHz (Ch110)	/	/	/	/	14.48	/	/	/	/	/	/	/
	5670MHz (Ch134)	/	/	/	/	13.48	/	/	/	/	/	/	/
	5710MHz (Ch142)	/	/	/	/	14.02	/	/	/	/	/	/	/

The data rate MCS4 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	14.57	14.55	13.33	13.34	13.45	11.04	11.03	11.02	11.03	11.03
	5290MHz	14.84	/	/	/	/	/	/	/	/	/
	5530MHz	15.94	/	/	/	/	/	/	/	/	/
	5610MHz	14.92	/	/	/	/	/	/	/	/	/
	5690MHz	14.54	/	/	/	/	/	/	/	/	/

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

802.11ax-HE80 mode

Mode	Channel	Test Result (dBm)											
		Data Rate											
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11
802.11ax (HE80)	5210MHz (Ch42)	13.86	13.84	12.87	12.85	12.95	11.01	10.99	10.98	10.97	11.00	10.98	10.96
	5290MHz (Ch58)	14.07	/	/	/	/	/	/	/	/	/	/	/
	5530MHz (Ch106)	15.22	/	/	/	/	/	/	/	/	/	/	/
	5610MHz (Ch122)	14.27	/	/	/	/	/	/	/	/	/	/	/
	5690MHz (Ch138)	14.21	/	/	/	/	/	/	/	/	/	/	/

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

802.11ax-HE160 mode

Mode	Channel	Test Result (dBm)											
		Data Rate											
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11
802.11ax (HE160)	5250MHz (Ch50)	11.66	11.67	11.12	11.11	11.42	10.45	10.43	10.41	10.45	10.45	10.44	10.36
	5570MHz (Ch114)	/	11.34	/	/	/	/	/	/	/	/	/	/

The data rate MCS1 is selected as worst condition, and the following cases are performed with this condition.

11ax-RU

SISO-ANT6

802.11ax-HE20 mode

Mode	Channel	Test Result (dBm)											
		Data Rate											
		MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9	MCS 10	MCS 11
RU26-L	5180MHz (Ch36)	6.48	6.45	6.49	6.49	6.50	6.48	6.46	6.47	6.45	6.46	6.41	6.47
	5200MHz (Ch40)	/	/	/	/	6.47	/	/	/	/	/	/	/
	5240MHz (Ch48)	/	/	/	/	6.78	/	/	/	/	/	/	/
	5260MHz (Ch52)	/	/	/	/	6.6	/	/	/	/	/	/	/
	5280MHz (Ch56)	/	/	/	/	6.67	/	/	/	/	/	/	/
	5320MHz (Ch64)	/	/	/	/	6.59	/	/	/	/	/	/	/
RU26-R	5500MHz (Ch100)	/	/	/	/	7.5	/	/	/	/	/	/	/
	5580MHz (Ch116)	/	/	/	/	6.94	/	/	/	/	/	/	/
	5700MHz (Ch140)	/	/	/	/	5.52	/	/	/	/	/	/	/
	5720MHz (Ch144)	/	/	/	/	5.22	/	/	/	/	/	/	/

The data rate MCS4 is selected as worst condition, and the following cases are performed with this condition.

802.11ax-HE20 mode

Mode	Channel	Test Result (dBm)											
		Data Rate											
		MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9	MCS 10	MCS 11
RU52-L	5180MHz (Ch36)	8.50	8.44	8.48	8.47	8.51	8.47	8.47	8.49	8.46	8.51	8.46	8.46
	5200MHz (Ch40)	/	/	/	/	8.55	/	/	/	/	/	/	/
	5240MHz (Ch48)	/	/	/	/	8.78	/	/	/	/	/	/	/
	5260MHz (Ch52)	/	/	/	/	8.54	/	/	/	/	/	/	/
	5280MHz (Ch56)	/	/	/	/	8.72	/	/	/	/	/	/	/
	5320MHz (Ch64)	/	/	/	/	8.56	/	/	/	/	/	/	/
RU52-R	5500MHz (Ch100)	/	/	/	/	10.46	/	/	/	/	/	/	/
	5580MHz (Ch116)	/	/	/	/	9.9	/	/	/	/	/	/	/
	5700MHz (Ch140)	/	/	/	/	8.32	/	/	/	/	/	/	/
	5720MHz (Ch144)	/	/	/	/	8.11	/	/	/	/	/	/	/

The data rate MCS4 is selected as worst condition, and the following cases are performed with this condition.

802.11ax-HE20 mode

Mode	Channel	Test Result (dBm)											
		Data Rate											
		MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9	MCS 10	MCS 11
RU106-L	5180MHz (Ch36)	10.10	10.08	10.10	10.11	10.12	10.08	10.10	10.06	10.08	9.99	9.98	10.08
	5200MHz (Ch40)	/	/	/	/	10.18	/	/	/	/	/	/	/
	5240MHz (Ch48)	/	/	/	/	10.30	/	/	/	/	/	/	/
	5260MHz (Ch52)	/	/	/	/	10.14	/	/	/	/	/	/	/
	5280MHz (Ch56)	/	/	/	/	10.31	/	/	/	/	/	/	/
	5320MHz (Ch64)	/	/	/	/	10.17	/	/	/	/	/	/	/
RU106-R	5500MHz (Ch100)	/	/	/	/	9.55	/	/	/	/	/	/	/
	5580MHz (Ch116)	/	/	/	/	9.07	/	/	/	/	/	/	/
	5700MHz (Ch140)	/	/	/	/	7.28	/	/	/	/	/	/	/
	5720MHz (Ch144)	/	/	/	/	7.34	/	/	/	/	/	/	/

The data rate MCS4 is selected as worst condition, and the following cases are performed with this condition.

SISO-ANT10
802.11ax-HE20 mode

Mode	Channel	Test Result (dBm)											
		Data Rate											
		MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9	MCS 10	MCS 11
RU26-L	5180MHz (Ch36)	5.46	5.44	5.40	5.43	5.48	5.49	5.42	5.43	5.44	5.43	5.46	5.44
	5200MHz (Ch40)	/	/	/	/	/	5.08	/	/	/	/	/	/
	5240MHz (Ch48)	/	/	/	/	/	5.98	/	/	/	/	/	/
	5260MHz (Ch52)	/	/	/	/	/	6.39	/	/	/	/	/	/
	5280MHz (Ch56)	/	/	/	/	/	6.27	/	/	/	/	/	/
	5320MHz (Ch64)	/	/	/	/	/	6.8	/	/	/	/	/	/
RU26-R	5500MHz (Ch100)	/	/	/	/	/	6.93	/	/	/	/	/	/
	5580MHz (Ch116)	/	/	/	/	/	6.69	/	/	/	/	/	/
	5700MHz (Ch140)	/	/	/	/	/	5.43	/	/	/	/	/	/
	5720MHz (Ch144)	/	/	/	/	/	5.55	/	/	/	/	/	/

The data rate MCS5 is selected as worst condition, and the following cases are performed with this condition.

802.11ax-HE20 mode

Mode	Channel	Test Result (dBm)											
		Data Rate											
		MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9	MCS 10	MCS 11
RU52-L	5180MHz (Ch36)	6.92	7.00	6.97	6.97	7.02	6.97	6.96	6.97	6.97	7.00	6.98	6.98
	5200MHz (Ch40)	/	/	/	/	6.67	/	/	/	/	/	/	/
	5240MHz (Ch48)	/	/	/	/	7.82	/	/	/	/	/	/	/
	5260MHz (Ch52)	/	/	/	/	7.86	/	/	/	/	/	/	/
	5280MHz (Ch56)	/	/	/	/	7.76	/	/	/	/	/	/	/
	5320MHz (Ch64)	/	/	/	/	8.21	/	/	/	/	/	/	/
RU52-R	5500MHz (Ch100)	/	/	/	/	10.02	/	/	/	/	/	/	/
	5580MHz (Ch116)	/	/	/	/	9.56	/	/	/	/	/	/	/
	5700MHz (Ch140)	/	/	/	/	8.52	/	/	/	/	/	/	/
	5720MHz (Ch144)	/	/	/	/	8.58	/	/	/	/	/	/	/

The data rate MCS4 is selected as worst condition, and the following cases are performed with this condition.

802.11ax-HE20 mode

Mode	Channel	Test Result (dBm)											
		Data Rate											
		MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9	MCS 10	MCS 11
RU106-L	5180MHz (Ch36)	8.82	8.85	8.79	8.81	8.84	8.84	8.79	8.82	8.83	8.81	8.83	8.80
	5200MHz (Ch40)	/	8.46	/	/	/	/	/	/	/	/	/	/
	5240MHz (Ch48)	/	9.38	/	/	/	/	/	/	/	/	/	/
	5260MHz (Ch52)	/	9.41	/	/	/	/	/	/	/	/	/	/
	5280MHz (Ch56)	/	9.41	/	/	/	/	/	/	/	/	/	/
	5320MHz (Ch64)	/	9.87	/	/	/	/	/	/	/	/	/	/
RU106-R	5500MHz (Ch100)	/	8.86	/	/	/	/	/	/	/	/	/	/
	5580MHz (Ch116)	/	8.68	/	/	/	/	/	/	/	/	/	/
	5700MHz (Ch140)	/	7.43	/	/	/	/	/	/	/	/	/	/
	5720MHz (Ch144)	/	7.25	/	/	/	/	/	/	/	/	/	/

The data rate MCS1 is selected as worst condition, and the following cases are performed with this condition.

MIMO
802.11ax-HE20 mode

Mode	Channel	Test Result (dBm)											
		Data Rate											
		MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9	MCS 10	MCS 11
RU26-L	5180MHz (Ch36)	6.85	6.88	6.93	6.92	6.97	6.90	6.89	6.89	6.93	6.92	6.92	6.96
	5200MHz (Ch40)	/	/	/	/	6.72	/	/	/	/	/	/	/
	5240MHz (Ch48)	/	/	/	/	7.23	/	/	/	/	/	/	/
	5260MHz (Ch52)	/	/	/	/	7.22	/	/	/	/	/	/	/
	5280MHz (Ch56)	/	/	/	/	7.25	/	/	/	/	/	/	/
	5320MHz (Ch64)	/	/	/	/	7.43	/	/	/	/	/	/	/
RU26-R	5500MHz (Ch100)	/	/	/	/	7.96	/	/	/	/	/	/	/
	5580MHz (Ch116)	/	/	/	/	7.49	/	/	/	/	/	/	/
	5700MHz (Ch140)	/	/	/	/	6.16	/	/	/	/	/	/	/
	5720MHz (Ch144)	/	/	/	/	6.20	/	/	/	/	/	/	/

The data rate MCS4 is selected as worst condition, and the following cases are performed with this condition.

802.11ax-HE20 mode

Mode	Channel	Test Result (dBm)											
		Data Rate											
		MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9	MCS 10	MCS 11
RU52-L	5180MHz (Ch36)	8.67	8.66	8.71	8.67	8.67	8.69	8.66	8.69	8.66	8.65	8.66	8.67
	5200MHz (Ch40)	/	/	8.50	/	/	/	/	/	/	/	/	/
	5240MHz (Ch48)	/	/	9.00	/	/	/	/	/	/	/	/	/
	5260MHz (Ch52)	/	/	9.19	/	/	/	/	/	/	/	/	/
	5280MHz (Ch56)	/	/	9.13	/	/	/	/	/	/	/	/	/
	5320MHz (Ch64)	/	/	9.36	/	/	/	/	/	/	/	/	/
RU52-R	5500MHz (Ch100)	/	/	9.98	/	/	/	/	/	/	/	/	/
	5580MHz (Ch116)	/	/	9.48	/	/	/	/	/	/	/	/	/
	5700MHz (Ch140)	/	/	8.18	/	/	/	/	/	/	/	/	/
	5720MHz (Ch144)	/	/	8.04	/	/	/	/	/	/	/	/	/

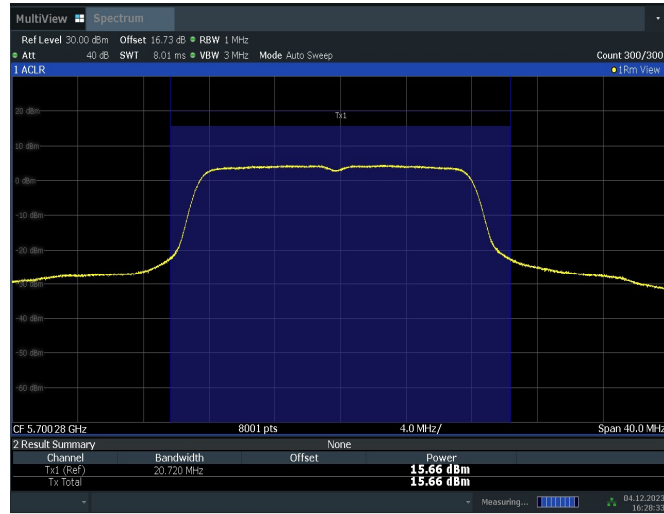
The data rate MCS2 is selected as worst condition, and the following cases are performed with this condition.

802.11ax-HE20 mode

Mode	Channel	Test Result (dBm)											
		Data Rate											
		MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9	MCS 10	MCS 11
RU106-L	5180MHz (Ch36)	10.68	10.68	10.66	10.67	10.68	10.68	10.67	10.67	10.68	10.66	10.67	10.67
	5200MHz (Ch40)	10.47	/	/	/	/	/	/	/	/	/	/	/
	5240MHz (Ch48)	11.02	/	/	/	/	/	/	/	/	/	/	/
	5260MHz (Ch52)	11.00	/	/	/	/	/	/	/	/	/	/	/
	5280MHz (Ch56)	11.08	/	/	/	/	/	/	/	/	/	/	/
	5320MHz (Ch64)	11.20	/	/	/	/	/	/	/	/	/	/	/
RU106-R	5500MHz (Ch100)	12.00	/	/	/	/	/	/	/	/	/	/	/
	5580MHz (Ch116)	11.63	/	/	/	/	/	/	/	/	/	/	/
	5700MHz (Ch140)	10.24	/	/	/	/	/	/	/	/	/	/	/
	5720MHz (Ch144)	10.17	/	/	/	/	/	/	/	/	/	/	/

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 99%



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Maximum output Power: 11a 5700 ANT6

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: UT11a

Measurement Results:

TestMode	Antenna	Frequency[MHz]	Result [dBm/MHz]	Verdict
11A	Ant6	5180	3.55	PASS
		5200	4.33	PASS
		5240	4.24	PASS
		5260	4.52	PASS
		5280	4.10	PASS
		5320	3.51	PASS
		5500	5.32	PASS
		5580	4.56	PASS
		5700	3.21	PASS
		5720	3.68	PASS
11N20SISO	Ant6	5180	3.39	PASS
		5200	3.70	PASS
		5240	3.53	PASS
		5260	4.29	PASS
		5280	4.05	PASS
		5320	4.38	PASS
		5500	5.04	PASS
		5580	3.86	PASS
		5700	2.77	PASS
		5720	3.73	PASS
11N40SISO	Ant6	5190	0.32	PASS
		5230	-0.11	PASS
		5270	0.53	PASS
		5310	1.01	PASS
		5510	0.73	PASS
		5550	0.49	PASS
		5670	-0.57	PASS
		5710	-0.12	PASS
11AC80SISO	Ant6	5210	-3.30	PASS
		5290	-2.19	PASS
		5530	-0.95	PASS

		5610	-2.64	PASS
		5690	-3.60	PASS
11AX160SISO	Ant6	5250	-8.22	PASS
		5570	-8.40	PASS
11N20MIMO	Ant6	5180	0.00	PASS
	Ant10	5180	-2.25	PASS
	total	5180	2.03	PASS
	Ant6	5200	0.39	PASS
	Ant10	5200	-1.90	PASS
	total	5200	2.40	PASS
	Ant6	5240	0.63	PASS
	Ant10	5240	-0.99	PASS
	total	5240	2.91	PASS
	Ant6	5260	1.14	PASS
	Ant10	5260	0.22	PASS
	total	5260	3.71	PASS
	Ant6	5280	0.67	PASS
	Ant10	5280	-0.11	PASS
	total	5280	3.31	PASS
	Ant6	5320	1.00	PASS
	Ant10	5320	0.89	PASS
	total	5320	3.96	PASS
	Ant6	5500	1.80	PASS
	Ant10	5500	0.53	PASS
	total	5500	4.22	PASS
	Ant6	5580	0.99	PASS
	Ant10	5580	-0.36	PASS
	total	5580	3.38	PASS
	Ant6	5700	-0.22	PASS
	Ant10	5700	-0.41	PASS
	total	5700	2.70	PASS
	Ant6	5720	0.09	PASS
	Ant10	5720	-0.25	PASS
	total	5720	2.93	PASS
11N40MIMO	Ant6	5190	-2.75	PASS
	Ant10	5190	-5.46	PASS
	total	5190	-0.89	PASS
	Ant6	5230	-3.22	PASS
	Ant10	5230	-4.12	PASS
	total	5230	-0.64	PASS
	Ant6	5270	-2.74	PASS
	Ant10	5270	-3.18	PASS
	total	5270	0.06	PASS

	Ant6	5310	-2.19	PASS
	Ant10	5310	-2.76	PASS
	total	5310	0.54	PASS
	Ant6	5510	-1.73	PASS
	Ant10	5510	-3.25	PASS
	total	5510	0.59	PASS
	Ant6	5550	-2.64	PASS
	Ant10	5550	-3.65	PASS
	total	5550	-0.11	PASS
	Ant6	5670	-3.58	PASS
	Ant10	5670	-4.16	PASS
	total	5670	-0.85	PASS
	Ant6	5710	-3.14	PASS
	Ant10	5710	-3.68	PASS
	total	5710	-0.39	PASS
11AC80MIMO	Ant6	5210	-5.49	PASS
	Ant10	5210	-7.57	PASS
	total	5210	-3.40	PASS
	Ant6	5290	-5.38	PASS
	Ant10	5290	-6.02	PASS
	total	5290	-2.68	PASS
	Ant6	5530	-4.57	PASS
	Ant10	5530	-5.65	PASS
	total	5530	-2.07	PASS
	Ant6	5610	-6.04	PASS
	Ant10	5610	-7.13	PASS
	total	5610	-3.54	PASS
	Ant6	5690	-6.76	PASS
	Ant10	5690	-6.84	PASS
	total	5690	-3.79	PASS
11AX160MIMO	Ant6	5250	-11.45	PASS
	Ant10	5250	-12.15	PASS
	total	5250	-8.78	PASS
	Ant6	5570	-11.48	PASS
	Ant10	5570	-12.09	PASS
	total	5570	-8.76	PASS

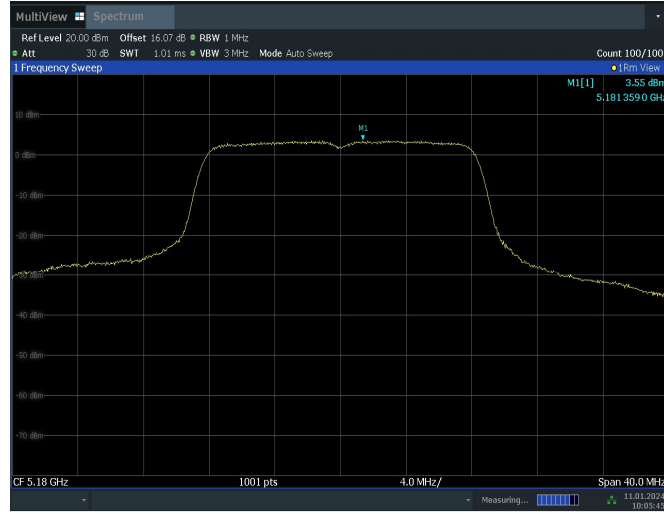
11ax-RU

Test	Antenna	Frequency[MHz]	Ru	Ru	Result	Verdict
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Mode			Size	Index	[dBm/MHz]			
11AX20SISO	Ant6	5180	26Tone	RU0	3.02	PASS		
			52Tone	RU37	2.33	PASS		
			106Tone	RU53	0.88	PASS		
		5200	26Tone	RU0	3.77	PASS		
			52Tone	RU37	3.05	PASS		
			106Tone	RU53	1.61	PASS		
		5240	26Tone	RU0	3.67	PASS		
			52Tone	RU37	2.95	PASS		
			106Tone	RU53	1.24	PASS		
		5260	26Tone	RU0	4.25	PASS		
			52Tone	RU37	3.61	PASS		
			106Tone	RU53	1.95	PASS		
		5280	26Tone	RU0	3.76	PASS		
			52Tone	RU37	5.95	PASS		
			106Tone	RU53	1.56	PASS		
		5320	26Tone	RU0	4.53	PASS		
			52Tone	RU37	3.55	PASS		
			106Tone	RU53	2.27	PASS		
		5500	26Tone	RU8	4.85	PASS		
			52Tone	RU40	5.02	PASS		
			106Tone	RU54	1.19	PASS		
		5580	26Tone	RU8	3.77	PASS		
			52Tone	RU40	4.06	PASS		
			106Tone	RU54	0.37	PASS		
		5700	26Tone	RU8	3.31	PASS		
			52Tone	RU40	3.27	PASS		
			106Tone	RU54	-0.57	PASS		
		5720	26Tone	RU8	0.67	PASS		
			52Tone	RU40	0.85	PASS		
			106Tone	RU54	-3.34	PASS		
		11AX20MIMO	Ant6	5180	26Tone	RU0	1.07	PASS
					52Tone	RU37	-0.03	PASS
					106Tone	RU53	-0.83	PASS
			Ant10	5180	26Tone	RU0	-0.75	PASS
					52Tone	RU37	-1.59	PASS
					106Tone	RU53	-2.96	PASS
total	5180		26Tone	RU0	3.26	PASS		
			52Tone	RU37	2.27	PASS		
			106Tone	RU53	1.24	PASS		
Ant6	5200		26Tone	RU0	2.01	PASS		
			52Tone	RU37	0.84	PASS		
			106Tone	RU53	-0.03	PASS		

	Ant10	5200	26Tone	RU0	-0.38	PASS
			52Tone	RU37	-1.01	PASS
			106Tone	RU53	-2.37	PASS
	total	5200	26Tone	RU0	3.99	PASS
			52Tone	RU37	3.02	PASS
			106Tone	RU53	1.97	PASS
	Ant6	5240	26Tone	RU0	1.65	PASS
			52Tone	RU37	0.54	PASS
			106Tone	RU53	-0.08	PASS
	Ant10	5240	26Tone	RU0	0.54	PASS
			52Tone	RU37	-0.22	PASS
			106Tone	RU53	-1.34	PASS
	total	5240	26Tone	RU0	4.14	PASS
			52Tone	RU37	3.19	PASS
			106Tone	RU53	2.35	PASS
	Ant6	5260	26Tone	RU0	2.34	PASS
			52Tone	RU37	1.43	PASS
			106Tone	RU53	0.46	PASS
	Ant10	5260	26Tone	RU0	1.23	PASS
			52Tone	RU37	0.58	PASS
			106Tone	RU53	-0.69	PASS
	total	5260	26Tone	RU0	4.83	PASS
			52Tone	RU37	4.04	PASS
			106Tone	RU53	2.93	PASS
Ant6	5280	26Tone	RU0	1.91	PASS	
		52Tone	RU37	0.92	PASS	
		106Tone	RU53	0.01	PASS	
Ant10	5280	26Tone	RU0	1.65	PASS	
		52Tone	RU37	0.80	PASS	
		106Tone	RU53	-0.56	PASS	
total	5280	26Tone	RU0	4.79	PASS	
		52Tone	RU37	3.87	PASS	
		106Tone	RU53	2.74	PASS	
Ant6	5320	26Tone	RU0	2.33	PASS	
		52Tone	RU37	1.61	PASS	
		106Tone	RU53	0.57	PASS	
Ant10	5320	26Tone	RU0	1.87	PASS	
		52Tone	RU37	1.28	PASS	
		106Tone	RU53	-0.14	PASS	
total	5320	26Tone	RU0	5.12	PASS	
		52Tone	RU37	4.46	PASS	
		106Tone	RU53	3.24	PASS	
Ant6	5500	26Tone	RU8	2.51	PASS	

			52Tone	RU40	1.77	PASS
			106Tone	RU54	0.94	PASS
	Ant10	5500	26Tone	RU8	1.75	PASS
			52Tone	RU40	1.06	PASS
			106Tone	RU54	-0.04	PASS
	total	5500	26Tone	RU8	5.16	PASS
			52Tone	RU40	4.44	PASS
			106Tone	RU54	3.49	PASS
	Ant6	5580	26Tone	RU8	1.67	PASS
			52Tone	RU40	0.97	PASS
			106Tone	RU54	-0.01	PASS
	Ant10	5580	26Tone	RU8	0.94	PASS
			52Tone	RU40	-0.09	PASS
			106Tone	RU54	-0.76	PASS
	total	5580	26Tone	RU8	4.33	PASS
			52Tone	RU40	3.48	PASS
			106Tone	RU54	2.64	PASS
	Ant6	5700	26Tone	RU8	0.92	PASS
			52Tone	RU40	0.13	PASS
			106Tone	RU54	-0.68	PASS
	Ant10	5700	26Tone	RU8	1.08	PASS
			52Tone	RU40	0.13	PASS
			106Tone	RU54	-0.55	PASS
	total	5700	26Tone	RU8	4.01	PASS
			52Tone	RU40	3.14	PASS
			106Tone	RU54	2.40	PASS
	Ant6	5720	26Tone	RU8	-1.23	PASS
			52Tone	RU40	-2.67	PASS
			106Tone	RU54	-3.58	PASS
	Ant10	5720	26Tone	RU8	-1.49	PASS
			52Tone	RU40	-2.45	PASS
			106Tone	RU54	-3.17	PASS
	total	5720	26Tone	RU8	1.65	PASS
			52Tone	RU40	0.45	PASS
			106Tone	RU54	-0.36	PASS
				RU8	1.16	PASS
			52Tone	RU37	0.62	PASS
				RU40	0.43	PASS
			106Tone	RU53	-0.49	PASS
				RU54	-0.67	PASS



Peak Power Spectral Density:11a 5180 ANT6

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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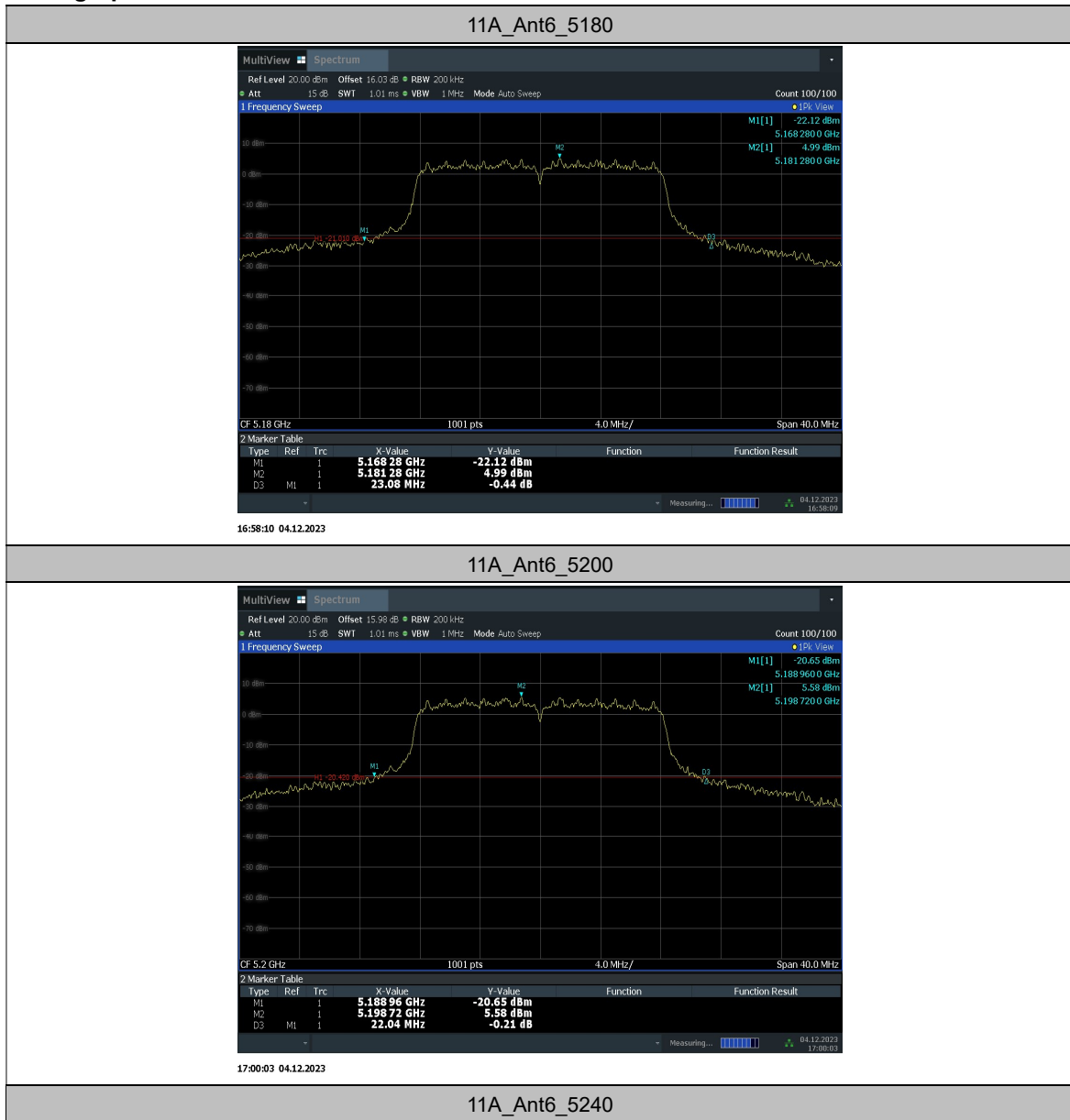
EUT ID: UT11a

TestMode	Antenna	Frequency[MHz]	26db EBW [MHz]	FL[MHz]	FH[MHz]	Verdict
11A	Ant6	5180	23.08	5168.28	5191.36	---
		5200	22.04	5188.96	5211.00	---
		5240	23.12	5229.24	5252.36	---
		5260	23.36	5249.00	5272.36	---
		5280	23.76	5268.60	5292.36	---
		5320	23.32	5309.24	5332.56	---
		5500	21.20	5489.84	5511.04	---
		5580	21.44	5568.88	5590.32	---
		5700	20.40	5689.88	5710.28	---
		5720	25.32	5708.04	5733.36	---
11N20SISO	Ant6	5180	22.52	5168.60	5191.12	---
		5200	22.88	5187.64	5210.52	---
		5240	22.44	5228.60	5251.04	---
		5260	27.72	5243.28	5271.00	---
		5280	29.08	5262.04	5291.12	---
		5320	23.64	5307.40	5331.04	---
		5500	22.12	5489.44	5511.56	---
		5580	28.36	5562.72	5591.08	---
		5700	21.96	5688.68	5710.64	---
		5720	32.12	5707.12	5739.24	---
11N40SISO	Ant6	5190	61.36	5153.28	5214.64	---
		5230	73.76	5192.56	5266.32	---
		5270	75.92	5233.44	5309.36	---
		5310	63.44	5273.68	5337.12	---
		5510	41.60	5489.20	5530.80	---
		5550	45.76	5525.04	5570.80	---
		5670	51.12	5640.16	5691.28	---
		5710	56.16	5679.92	5736.08	---
11AC80SISO	Ant6	5210	135.04	5138.00	5273.04	---
		5290	139.04	5217.52	5356.56	---
		5530	106.72	5474.48	5581.20	---
		5610	115.36	5547.28	5662.64	---
		5690	102.08	5629.84	5731.92	---
11AX160SISO	Ant6	5250	167.36	5166.16	5333.52	---
		5570	178.56	5474.64	5653.20	---
11N20MIMO	Ant6	5180	22.68	5168.64	5191.32	---
	Ant10	5180	21.72	5169.20	5190.92	---

	Ant6	5200	23.32	5187.72	5211.04	---
	Ant10	5200	21.32	5189.36	5210.68	---
	Ant6	5240	22.40	5228.60	5251.00	---
	Ant10	5240	21.56	5229.28	5250.84	---
	Ant6	5260	25.52	5245.84	5271.36	---
	Ant10	5260	21.60	5249.20	5270.80	---
	Ant6	5280	26.36	5264.92	5291.28	---
	Ant10	5280	21.48	5269.24	5290.72	---
	Ant6	5320	24.52	5306.48	5331.00	---
	Ant10	5320	22.32	5309.40	5331.72	---
	Ant6	5500	26.68	5488.60	5515.28	---
	Ant10	5500	26.32	5488.56	5514.88	---
	Ant6	5580	28.60	5567.08	5595.68	---
	Ant10	5580	24.04	5568.48	5592.52	---
	Ant6	5700	23.12	5688.84	5711.96	---
	Ant10	5700	21.52	5689.20	5710.72	---
Ant6	5720	24.00	5709.04	5733.04	---	
Ant10	5720	21.88	5709.12	5731.00	---	
11N40MIMO	Ant6	5190	54.00	5156.48	5210.48	---
	Ant10	5190	40.08	5170.00	5210.08	---
	Ant6	5230	51.04	5199.68	5250.72	---
	Ant10	5230	40.24	5209.92	5250.16	---
	Ant6	5270	51.44	5239.36	5290.80	---
	Ant10	5270	40.32	5249.84	5290.16	---
	Ant6	5310	47.44	5282.96	5330.40	---
	Ant10	5310	40.56	5289.68	5330.24	---
	Ant6	5510	46.88	5483.60	5530.48	---
	Ant10	5510	40.80	5489.52	5530.32	---
	Ant6	5550	41.84	5528.72	5570.56	---
	Ant10	5550	40.64	5529.68	5570.32	---
	Ant6	5670	40.80	5649.68	5690.48	---
	Ant10	5670	40.48	5649.60	5690.08	---
	Ant6	5710	41.12	5689.60	5730.72	---
	Ant10	5710	40.64	5689.68	5730.32	---
11AC80MIMO	Ant6	5210	105.44	5147.28	5252.72	---
	Ant10	5210	83.20	5168.56	5251.76	---
	Ant6	5290	102.24	5230.64	5332.88	---
	Ant10	5290	83.04	5248.72	5331.76	---
	Ant6	5530	105.76	5466.64	5572.40	---
	Ant10	5530	82.88	5488.08	5570.96	---
	Ant6	5610	106.08	5546.32	5652.40	---
	Ant10	5610	82.88	5568.24	5651.12	---
Ant6	5690	83.68	5648.40	5732.08	---	

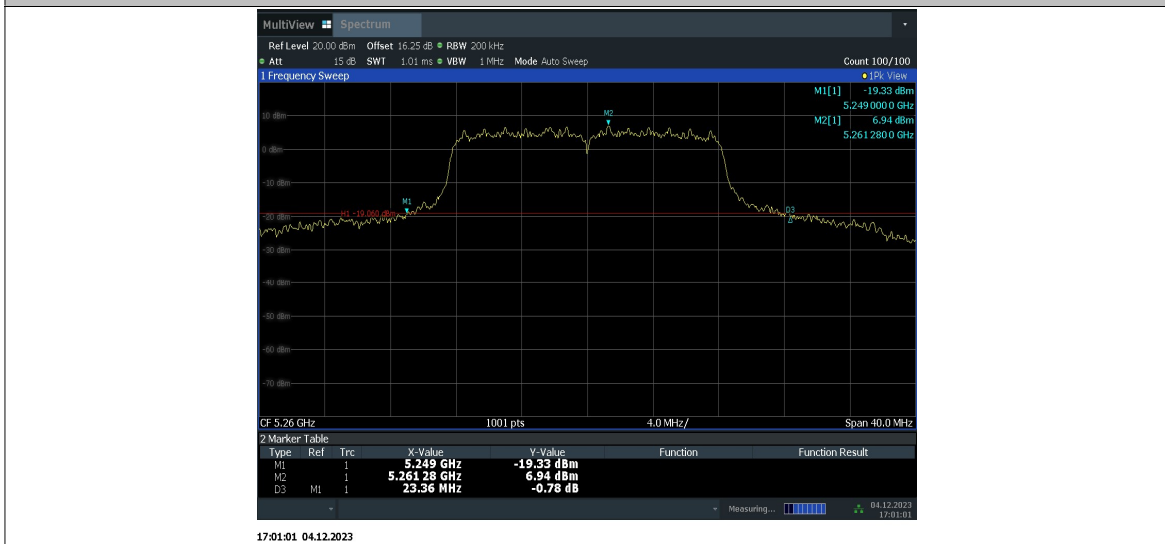
	Ant10	5690	82.88	5648.56	5731.44	---
11AX160MIMO	Ant6	5250	167.36	5166.16	5333.52	---
	Ant10	5250	167.04	5166.80	5333.84	---
	Ant6	5570	167.68	5485.52	5653.20	---
	Ant10	5570	167.04	5485.84	5652.88	---

Test graphs as below:

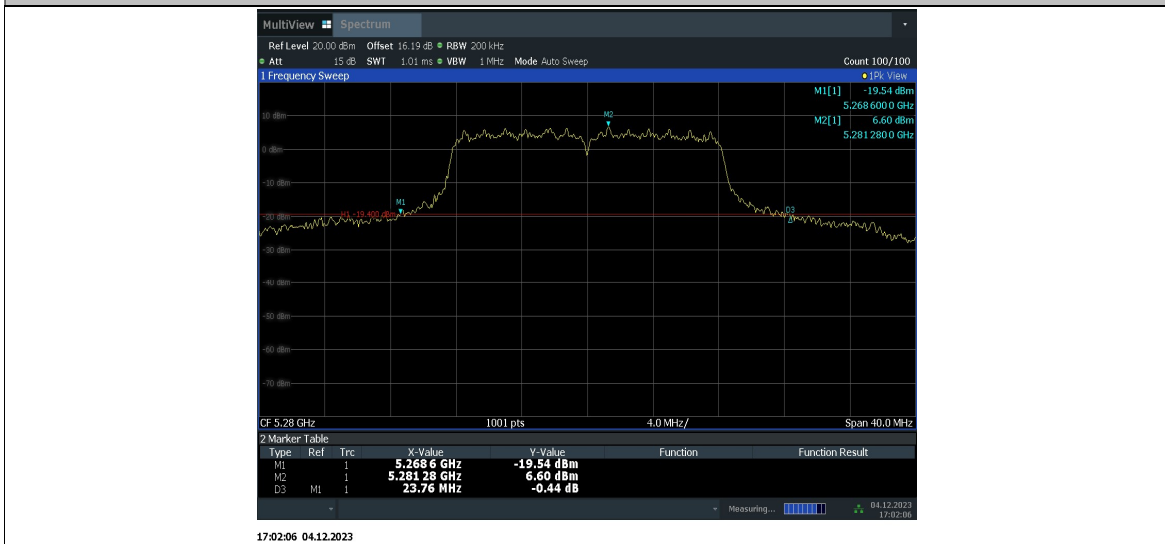




11A_Ant6_5260



11A_Ant6_5280

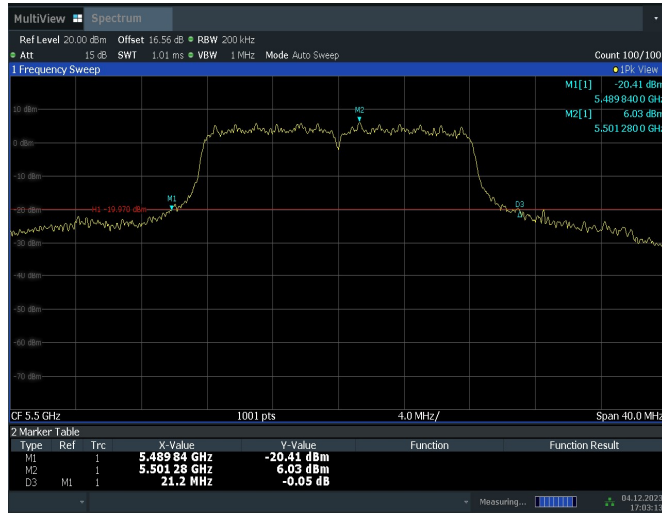


11A_Ant6_5320



17:02:38 04.12.2023

11A_Ant6_5500



17:03:14 04.12.2023

11A_Ant6_5580



11A_Ant6_5700



11A_Ant6_5720

