FCC PART 15E
TEST REPORT
No.23T04Z70626-04

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

©Copyright. All rights reserved by CTTL.

REPORT HISTORY

Report Number	Revision	Description	Issue Date
23T04Z70626-04	Rev.0	1st edition	2024-01-11

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

. ©Copyright. All rights reserved by CTTL.

CONTENTS

CONTENTS 3

1. TEST LABORATORY 5

1.1. INTRODUCTION & ACCREDITATION 5
1.2. TESTING LOCATION 5
1.3. TESTINGENVIRONMENT 5
1.4. PROJECT DATE 5
1.5. SIGNATURE 5

2. CLIENT INFORMATION 6

2.1. APPLICANT INFORMATION 6
2.2. MANUFACTURER INFORMATION 6

3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT (AE) 7

3.1. ABOUT EUT 7
3.2. INTERNAL IDENTIFICATION OF EUT USED DURING THE TEST 7
3.3. INTERNAL IDENTIFICATION OF AE USED DURING THE TEST 7
3.4. GENERAL DESCRIPTION 7

4. REFERENCE DOCUMENTS 8

4.1. DOCUMENTS SUPPLIED BY APPLICANT 8
4.2. REFERENCE DOCUMENTS FOR TESTING 8

5. LABORATORY ENVIRONMENT 8

6. TEST RESULTS 9

6.1. SUMMARY OF TEST RESULTS 9
6.2. STATEMENTS 9
6.3. TEST CONDITIONS 9

7. TEST FACILITIES UTILIZED 10

8. MEASUREMENT UNCERTAINTY 11

8.1. TRANSMITTER OUTPUT POWER 11
8.2. PEAK POWER SPECTRAL DENSITY 11
8.3. 6DB EMISSION BANDWIDTH 11
8.4. BAND EDGES COMPLIANCE 11
8.5. SPURIOUS EMISSIONS 11
8.6. AC POWER-LINE CONDUCTED EMISSION 11

ANNEX A: MEASUREMENT RESULTS 12

A.1. MEASUREMENT METHOD 12
A.2. MAXIMUM PEAK OUTPUT POWER 13
A.2.1 ANTENNA GAIN 13

. ©Copyright. All rights reserved by CTTL.

A.2.2. MAXIMUM AVERAGE OUTPUT POWER-CONDUCTED 13
A.3. PEAK POWER SPECTRAL DENSITY 38
A.4. 6DB EMISSION BANDWIDTH 42
A.5. TRANSMITTER SPURIOUS EMISSION 52
A.5.1 TRANSMITTER SPURIOUS EMISSION - RADIATED 52
A.6. BAND EDGES COMPLIANCE 75
A6.1 BAND EDGES - RADIATED 75
A.7. AC POWERLINE CONDUCTED EMISSION 90

ANNEX B: EUT PARAMETERS 94

ANNEX C: ACCREDITATION CERTIFICATE 94

. ©Copyright. All rights reserved by CTTL.

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. TestingEnvironment

Normal Temperature: 15-35°C

Relative Humidity: 20-75%

1.4. Project date

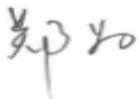
Testing Start Date: 2023-11-17

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)

. ©Copyright. All rights reserved by CTTL.

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:	/

. ©Copyright. All rights reserved by CTTL.

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 Band: 5725MHz~5850MHz
Type of modulation	OFDM/OFDMA
Nominal Voltage	3.85V

3.2. Internal Identification of EUT used during the test

EUT ID*	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
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.

3.4. General Description

Equipment Under Test (EUT) is a model of Multi-band GSM/WCDMA/LTE/5GNR Phone with Bluetooth, WLAN with integrated antenna. It consists of normal options: Battery and Charger.
Manual and specifications of the EUT were provided to fulfil the test.
Samples undergoing test were selected by the Client.

. ©Copyright. All rights reserved by CTTL.

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; 15.209 Radiated emission limits, general requirements; 15.407 General technical requirements	2021
ANSI C63.10	Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	2013
UNII: KDB 789033 D02	General U-NII Test Procedures New Rules v02r01	2017-12

5. Laboratory Environment

Conducted RF performance testing is performed in shielding room.

EMC performance testing is performed in Semi-anechoic chamber.

. ©Copyright. All rights reserved by CTTL.

6. Test Results

6.1. Summary of Test Results

SUMMARY OF MEASUREMENT RESULTS	Sub-clause of Part15E	Sub-clause of IC	Verdict
Maximum Peak Output Power	15.407 (a)	/	**P**
Peak Power Spectral Density	15.407 (a)	/	**P**
Occupied 6dB Bandwidth	15.407 (e)	/	**P**
Band Edges Compliance - Conducted& Radiated	15.407 (b)	/	**P**
Transmitter Spurious Emission - Radiated	15.407, 15.205, 15.209	/	**P**
AC Powerline Conducted Emission	15.107, 15.207	/	**P**

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	3.85V
Humidity	44%

. ©Copyright. All rights reserved by CTTL.

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	2024-07-04
2	Vector Signal Analyzer	FSW67	104051	Rohde & Schwarz	1 year	2024-03-06
3	LISN	ENV216	101200	Rohde & Schwarz	1 year	2024-06-05
4	Test Receiver	ESCI	100344	Rohde & Schwarz	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	2110084000006	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

. ©Copyright. All rights reserved by CTTL.

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. 6dB 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)
30MHz ≤ f ≤ 2GHz	1.22
2GHz ≤ f ≤3.6GHz	1.22
3.6GHz ≤ f ≤8GHz	1.22
8GHz ≤ f ≤12.75GHz	1.51
12.75GHz ≤ f ≤26GHz	1.51
26GHz ≤ f ≤40GHz	1.59

Radiated (k=2)

Frequency Range	Uncertainty(dB)
9kHz-30MHz	4.92
30MHz ≤ f ≤ 1GHz	5.73
1GHz ≤ f ≤18GHz	5.58
18GHz ≤ f ≤40GHz	3.37

8.6. AC Power-line Conducted Emission

Measurement Uncertainty: 3.10dB, k=2

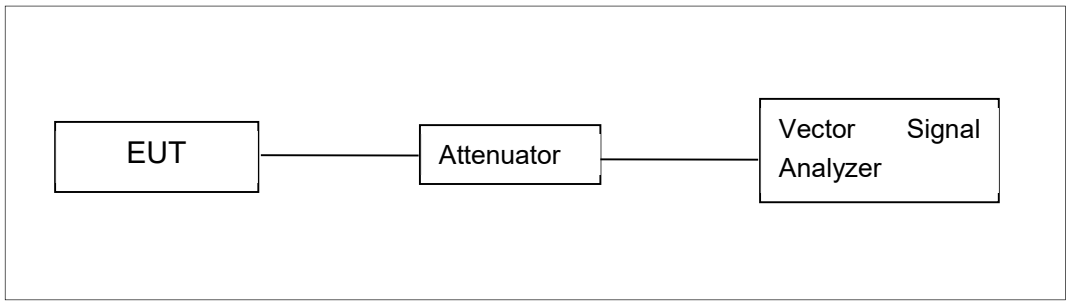
. ©Copyright. All rights reserved by CTTL.

ANNEX A: MEASUREMENT 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.

. ©Copyright. All rights reserved by CTTL.

A.2. Maximum Peak Output Power

Measurement Limit and Method:

Standard	Limit (dBm)
FCC CRF Part 15.407(a)	< 30

Set span to encompass the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.
Set RBW = 1 MHz.
Set VBW ≥ 3 MHz.
Number of points in sweep ≥ 2 × span / RBW.
Sweep time = auto.
Detector = power averaging (rms)
Trace average at least 100 traces in power averaging (rms) mode; however, the number of traces to be averaged shall be increased above 100 as needed to ensure that the average accurately represents the true average over the on and off periods of the transmitter.
Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument's band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at 1 MHz intervals extending across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal. Add 10 log (1/x), where x is the duty cycle

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 Average Output Power-Conducted

EUT ID: UT11a

Measurement Results:

SISO-ANT6
802.11a mode

Mode	Data Rate (Mbps)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11a	6	12.73	/	/
	9	12.78	/	/
	12	12.23	/	/
	18	12.94	/	/
	24	13.00	13.32	13.45
	36	12.99	/	/
	48	12.99	/	/

. ©Copyright. All rights reserved by CTTL.

	54	13.00	/	/

The data rate 24Mbps is selected as worst condition, and the following cases are performed with this condition.

802.11n-HT20 mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11n(20MHz)	MCS0	12.38	/	/
	MCS1	12.37	/	/
	MCS2	12.73	/	/
	MCS3	12.72	/	/
	MCS4	12.96	/	/
	MCS5	12.14	/	/
	MCS6	12.99	13.37	13.45
	MCS7	12.99	/	/

The data rate MCS6 is selected as worst condition, and the following cases are performed with this condition.

802.11ac-HT20 mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11ac(20MHz)	MCS0	12.28	/	/
	MCS1	12.35	/	/
	MCS2	12.66	/	/
	MCS3	12.64	/	/
	MCS4	12.93	13.61	13.64
	MCS5	11.35	/	/
	MCS6	11.35	/	/
	MCS7	11.36	/	/
	MCS8	11.36	/	/

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

. ©Copyright. All rights reserved by CTTL.

802.11ax-HE20 mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11ax(20MHz)	MCS0	12.49	/	/
	MCS1	12.54	/	/
	MCS2	12.72	13.39	13.34
	MCS3	12.70	/	/
	MCS4	10.90	/	/
	MCS5	10.84	/	/
	MCS6	10.96	/	/
	MCS7	10.93	/	/
	MCS8	10.95	/	/
	MCS9	10.94	/	/
	MCS10	10.90	/	/
	MCS11	10.92	/	/

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

802.11n-HT40 mode

Mode	Data Rate (Index)	Test Result (dBm)	
		5755MHz (Ch151)	5795MHz (Ch159)
802.11n(40MHz)	MCS0	13.26	/
	MCS1	13.27	13.53
	MCS2	12.92	/
	MCS3	13.14	/
	MCS4	13.17	/
	MCS5	13.16	/
	MCS6	13.10	/
	MCS7	13.10	/

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

. ©Copyright. All rights reserved by CTTL.

802.11ac-HT40 mode

Mode	Data Rate (Index)	Test Result (dBm)	
		5755MHz (Ch151)	5795MHz (Ch159)
802.11ac(40MHz)	MCS0	13.07	/
	MCS1	13.09	/
	MCS2	13.71	13.54
	MCS3	12.70	/
	MCS4	12.94	/
	MCS5	11.90	/
	MCS6	11.53	/
	MCS7	11.52	/
	MCS8	11.56	/
	MCS9	11.53	/

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

802.11ax-HE40 mode

Mode	Data Rate (Index)	Test Result (dBm)	
		5755MHz (Ch151)	5795MHz (Ch159)
802.11ax(40MHz)	MCS0	12.75	/
	MCS1	12.79	/
	MCS2	12.64	/
	MCS3	12.62	/
	MCS4	12.91	13.89
	MCS5	11.02	/
	MCS6	11.04	/
	MCS7	11.00	/
	MCS8	11.03	/
	MCS9	10.97	/
	MCS10	11.02	/
	MCS11	11.01	/

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

. ©Copyright. All rights reserved by CTTL.

802.11ac-HT80 mode

Mode	Data Rate (Index)	Test Result (dBm) 5775MHz (Ch155)
802.11ac(80MHz)	MCS0	13.80
	MCS1	13.79
	MCS2	12.62
	MCS3	12.62
	MCS4	12.79
	MCS5	10.76
	MCS6	10.77
	MCS7	10.78
	MCS8	10.77
	MCS9	10.79

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

802.11ax-HE80 mode

Mode	Data Rate (Index)	Test Result (dBm) 5775MHz (Ch155)
802.11ax(80MHz)	MCS0	13.72
	MCS1	13.66
	MCS2	12.71
	MCS3	12.71
	MCS4	12.84
	MCS5	10.81
	MCS6	10.82
	MCS7	10.81
	MCS8	10.81
	MCS9	10.82
	MCS10	10.82
	MCS11	10.80

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

. ©Copyright. All rights reserved by CTTL.

SISO-ANT10

802.11a mode

Mode	Data Rate (Mbps)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11a	6	12.81	/	/
	9	12.83	/	/
	12	12.30	/	/
	18	12.90	/	/
	24	12.94	12.84	12.66
	36	12.93	/	/
	48	12.92	/	/
	54	12.93	/	/

The data rate 24Mbps is selected as worst condition, and the following cases are performed with this condition.

802.11n-HT20 mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11n(20MHz)	MCS0	12.49	/	/
	MCS1	12.47	/	/
	MCS2	12.73	/	/
	MCS3	12.76	/	/
	MCS4	12.96	/	/
	MCS5	12.95	/	/
	MCS6	12.97	12.91	12.69
	MCS7	12.96	/	/

The data rate MCS6 is selected as worst condition, and the following cases are performed with this condition.

. ©Copyright. All rights reserved by CTTL.

802.11ac-HT20 mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11ac(20MHz)	MCS0	12.47	/	/
	MCS1	12.46	/	/
	MCS2	12.76	/	/
	MCS3	12.76	/	/
	MCS4	13.00	12.89	12.68
	MCS5	11.41	/	/
	MCS6	11.41	/	/
	MCS7	11.44	/	/
	MCS8	11.40	/	/

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

802.11ax-HE20 mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11ax(20MHz)	MCS0	12.70	/	/
	MCS1	12.70	/	/
	MCS2	12.80	/	/
	MCS3	12.78	/	/
	MCS4	13.02	12.82	12.72
	MCS5	11.01	/	/
	MCS6	11.05	/	/
	MCS7	11.05	/	/
	MCS8	11.03	/	/
	MCS9	11.08	/	/
	MCS10	11.01	/	/
	MCS11	11.04	/	/

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

. ©Copyright. All rights reserved by CTTL.

802.11n-HT40 mode

Mode	Data Rate (Index)	Test Result (dBm)	
		5755MHz (Ch151)	5795MHz (Ch159)
802.11n(40MHz)	MCS0	13.19	13.06
	MCS1	13.16	/
	MCS2	12.74	/
	MCS3	12.74	/
	MCS4	12.69	/
	MCS5	12.72	/
	MCS6	12.70	/
	MCS7	12.71	/

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

802.11ac-HT40 mode

Mode	Data Rate (Index)	Test Result (dBm)	
		5755MHz (Ch151)	5795MHz (Ch159)
802.11ac(40MHz)	MCS0	13.21	13.05
	MCS1	13.18	/
	MCS2	12.71	/
	MCS3	12.74	/
	MCS4	12.70	/
	MCS5	11.20	/
	MCS6	11.21	/
	MCS7	11.19	/
	MCS8	11.19	/
	MCS9	11.21	/

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

. ©Copyright. All rights reserved by CTTL.

802.11ax-HE40 mode

Mode	Data Rate (Index)	Test Result (dBm)	
		5755MHz (Ch151)	5795MHz (Ch159)
802.11ax(40MHz)	MCS0	12.80	12.87
	MCS1	12.77	/
	MCS2	12.64	/
	MCS3	12.64	/
	MCS4	12.77	/
	MCS5	10.84	/
	MCS6	10.82	/
	MCS7	10.85	/
	MCS8	10.86	/
	MCS9	10.85	/
	MCS10	10.84	/
	MCS11	10.86	/

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

802.11ac-HT80 mode

Mode	Data Rate (Index)	Test Result (dBm)
		5775MHz (Ch155)
802.11ac(80MHz)	MCS0	14.03
	MCS1	14.02
	MCS2	12.78
	MCS3	12.79
	MCS4	12.81
	MCS5	10.89
	MCS6	10.92
	MCS7	10.91
	MCS8	10.90
	MCS9	10.91

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

. ©Copyright. All rights reserved by CTTL.

802.11ax-HE80 mode

Mode	Data Rate (Index)	Test Result (dBm) 5775MHz (Ch155)
802.11ax(80MHz)	MCS0	13.88
	MCS1	13.89
	MCS2	12.81
	MCS3	12.82
	MCS4	12.83
	MCS5	10.91
	MCS6	10.94
	MCS7	10.92
	MCS8	10.90
	MCS9	10.94
	MCS10	10.96
	MCS11	10.94

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

MIMO

802.11n-HT20 mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11n(20MHz)	MCS0	14.81	/	/
	MCS1	14.79	/	/
	MCS2	15.00	/	/
	MCS3	14.99	/	/
	MCS4	15.23	15.54	15.54
	MCS5	13.22	/	/
	MCS6	13.23	/	/
	MCS7	13.22	/	/

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

. ©Copyright. All rights reserved by CTTL.

802.11ac-HT20 mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11ac(20MHz)	MCS0	13.77	/	/
	MCS1	13.76	/	/
	MCS2	14.03	/	/
	MCS3	14.02	/	/
	MCS4	14.24	14.49	14.51
	MCS5	11.77	/	/
	MCS6	11.76	/	/
	MCS7	11.75	/	/
	MCS8	11.75	/	/

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

802.11ax-HE20 mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11ax(20MHz)	MCS0	13.47	/	/
	MCS1	13.48	/	/
	MCS2	13.57	/	/
	MCS3	13.54	/	/
	MCS4	13.80	14.13	14.15
	MCS5	11.34	/	/
	MCS6	11.35	/	/
	MCS7	11.36	/	/
	MCS8	11.37	/	/
	MCS9	11.39	/	/
	MCS10	11.37	/	/
	MCS11	11.36	/	/

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

. ©Copyright. All rights reserved by CTTL.

802.11n-HT40 mode

Mode	Data Rate (Index)	Test Result (dBm)	
		5755MHz (Ch151)	5795MHz (Ch159)
802.11n(40MHz)	MCS0	14.63	/
	MCS1	14.65	14.82
	MCS2	14.28	/
	MCS3	14.27	/
	MCS4	14.41	/
	MCS5	13.30	/
	MCS6	13.27	/
	MCS7	13.27	/

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

802.11ac-HT40 mode

Mode	Data Rate (Index)	Test Result (dBm)	
		5755MHz (Ch151)	5795MHz (Ch159)
802.11ac(40MHz)	MCS0	14.16	/
	MCS1	14.27	14.38
	MCS2	13.68	/
	MCS3	13.67	/
	MCS4	13.83	/
	MCS5	11.74	/
	MCS6	11.75	/
	MCS7	11.77	/
	MCS8	11.78	/
	MCS9	11.78	/

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

. ©Copyright. All rights reserved by CTTL.

802.11ax-HE40 mode

Mode	Data Rate (Index)	Test Result (dBm)	
		5755MHz (Ch151)	5795MHz (Ch159)
802.11ax(40MHz)	MCS0	13.80	/
	MCS1	13.83	/
	MCS2	13.66	/
	MCS3	13.63	/
	MCS4	13.89	14.14
	MCS5	11.37	/
	MCS6	11.37	/
	MCS7	11.38	/
	MCS8	11.36	/
	MCS9	11.36	/
	MCS10	11.36	/
	MCS11	11.32	/

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

802.11ac-HT80 mode

Mode	Data Rate (Index)	Test Result (dBm)
		5775MHz (Ch155)
802.11ac(80MHz)	MCS0	14.50
	MCS1	14.48
	MCS2	13.42
	MCS3	13.39
	MCS4	13.51
	MCS5	11.04
	MCS6	11.04
	MCS7	11.02
	MCS8	11.03
	MCS9	11.02

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

. ©Copyright. All rights reserved by CTTL.

802.11ax-HE80 mode

Mode	Data Rate (Index)	Test Result (dBm) 5775MHz (Ch155)
802.11ax(80MHz)	MCS0	13.90
	MCS1	13.88
	MCS2	12.89
	MCS3	12.95
	MCS4	13.06
	MCS5	11.07
	MCS6	11.07
	MCS7	11.06
	MCS8	11.07
	MCS9	11.06
	MCS10	11.05
	MCS11	11.07

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

. ©Copyright. All rights reserved by CTTL.

11ax-RU
SISO-ANT6

802.11ax-HE20
RU26-L mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11ax(20MHz) RU26-L	MCS0	5.07	/	/
	MCS1	5.14	/	/
	MCS2	5.13	/	/
	MCS3	5.05	/	/
	MCS4	5.06	/	/
	MCS5	5.15	6.08	6.39
	MCS6	5.15	/	/
	MCS7	5.13	/	/
	MCS8	5.02	/	/
	MCS9	5.13	/	/
	MCS10	5.15	/	/
	MCS11	5.10	/	/

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

. ©Copyright. All rights reserved by CTTL.

802.11ax-HE20
RU26-R mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11ax(20MHz) RU26-R	MCS0	5.43	/	/
	MCS1	5.43	/	/
	MCS2	5.44	/	/
	MCS3	5.37	/	/
	MCS4	5.46	6.08	6.07
	MCS5	5.39	/	/
	MCS6	5.33	/	/
	MCS7	5.33	/	/
	MCS8	5.38	/	/
	MCS9	5.36	/	/
	MCS10	5.37	/	/
	MCS11	5.34	/	/

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

802.11ax-HE20
RU52-L mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11ax(20MHz) RU52-L	MCS0	7.16	8.15	8.45
	MCS1	7.16	/	/
	MCS2	7.14	/	/
	MCS3	7.16	/	/
	MCS4	7.13	/	/
	MCS5	7.15	/	/
	MCS6	7.15	/	/
	MCS7	7.14	/	/
	MCS8	7.13	/	/
	MCS9	7.15	/	/
	MCS10	7.15	/	/
	MCS11	7.13	/	/

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

. ©Copyright. All rights reserved by CTTL.

802.11ax-HE20
RU52-R mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11ax(20MHz) RU52-R	MCS0	7.46	8.19	8.10
	MCS1	7.36	/	/
	MCS2	7.45	/	/
	MCS3	7.45	/	/
	MCS4	7.43	/	/
	MCS5	7.46	/	/
	MCS6	7.44	/	/
	MCS7	7.45	/	/
	MCS8	7.44	/	/
	MCS9	7.45	/	/
	MCS10	7.45	/	/
	MCS11	7.45	/	/

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

802.11ax-HE20
RU106-L mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11ax(20MHz) RU106-L	MCS0	9.21	/	/
	MCS1	9.23	/	/
	MCS2	9.22	/	/
	MCS3	9.22	/	/
	MCS4	9.24	10.20	10.40
	MCS5	9.24	/	/
	MCS6	9.23	/	/
	MCS7	9.21	/	/
	MCS8	9.22	/	/
	MCS9	9.22	/	/
	MCS10	9.19	/	/
	MCS11	9.22	/	/

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

. ©Copyright. All rights reserved by CTTL.

802.11ax-HE20
RU106-R mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11ax(20MHz) RU106-R	MCS0	9.44	/	/
	MCS1	9.49	10.15	10.23
	MCS2	9.47	/	/
	MCS3	9.44	/	/
	MCS4	9.48	/	/
	MCS5	9.46	/	/
	MCS6	9.45	/	/
	MCS7	9.49	/	/
	MCS8	9.49	/	/
	MCS9	9.47	/	/
	MCS10	9.45	/	/
	MCS11	9.45	/	/

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

SISO-ANT10
802.11ax-HE20
RU26-L mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11ax(20MHz) RU26-L	MCS0	5.86	/	/
	MCS1	5.93	/	/
	MCS2	5.94	/	/
	MCS3	5.87	/	/
	MCS4	5.97	6.06	6.47
	MCS5	5.94	/	/
	MCS6	5.94	/	/
	MCS7	5.88	/	/
	MCS8	5.95	/	/
	MCS9	5.95	/	/
	MCS10	5.93	/	/
	MCS11	5.85	/	/

. ©Copyright. All rights reserved by CTTL.

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

802.11ax-HE20
RU26-R mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11ax(20MHz) RU26-R	MCS0	5.98	/	/
	MCS1	5.95	/	/
	MCS2	5.99	6.08	6.09
	MCS3	5.96	/	/
	MCS4	5.97	/	/
	MCS5	5.97	/	/
	MCS6	5.95	/	/
	MCS7	5.96	/	/
	MCS8	5.95	/	/
	MCS9	5.98	/	/
	MCS10	5.97	/	/
	MCS11	5.97	/	/

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

802.11ax-HE20
RU52-L mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11ax(20MHz) RU52-L	MCS0	8.10	7.68	8.02
	MCS1	8.04	/	/
	MCS2	8.09	/	/
	MCS3	8.06	/	/
	MCS4	8.08	/	/
	MCS5	8.05	/	/
	MCS6	8.08	/	/
	MCS7	8.08	/	/
	MCS8	8.04	/	/

. ©Copyright. All rights reserved by CTTL.

	MCS9	8.08	/	/
	MCS10	8.07	/	/
	MCS11	8.10	/	/

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

802.11ax-HE20
RU52-R mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11ax(20MHz) RU52-R	MCS0	8.11	/	/
	MCS1	8.11	/	/
	MCS2	8.14	/	/
	MCS3	8.06	/	/
	MCS4	8.18	7.70	7.63
	MCS5	8.10	/	/
	MCS6	8.10	/	/
	MCS7	8.11	/	/
	MCS8	8.11	/	/
	MCS9	8.13	/	/
	MCS10	8.12	/	/
	MCS11	8.13	/	/

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

. ©Copyright. All rights reserved by CTTL.

802.11ax-HE20
RU106-L mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11ax(20MHz) RU106-L	MCS0	9.56	/	/
	MCS1	9.53	/	/
	MCS2	9.54	/	/
	MCS3	9.57	/	/
	MCS4	9.55	/	/
	MCS5	9.57	/	/
	MCS6	9.59	9.67	10.11
	MCS7	9.58	/	/
	MCS8	9.58	/	/
	MCS9	9.53	/	/
	MCS10	9.57	/	/
	MCS11	9.55	/	/

The data rate MCS6 is selected as worst condition, and the following cases are performed with this condition.

802.11ax-HE20
RU106-R mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11ax(20MHz) RU106-R	MCS0	9.62	/	/
	MCS1	9.63	9.70	9.82
	MCS2	9.60	/	/
	MCS3	9.61	/	/
	MCS4	9.61	/	/
	MCS5	9.62	/	/
	MCS6	9.61	/	/
	MCS7	9.60	/	/
	MCS8	9.59	/	/
	MCS9	9.61	/	/
	MCS10	9.61	/	/
	MCS11	9.58	/	/

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

. ©Copyright. All rights reserved by CTTL.

MIMO
802.11ax-HE20
RU26-L mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11ax(20MHz) RU26-L	MCS0	6.43	/	/
	MCS1	6.50	6.95	7.39
	MCS2	6.47	/	/
	MCS3	6.45	/	/
	MCS4	6.42	/	/
	MCS5	6.48	/	/
	MCS6	6.48	/	/
	MCS7	6.47	/	/
	MCS8	6.45	/	/
	MCS9	6.44	/	/
	MCS10	6.47	/	/
	MCS11	6.48	/	/

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

802.11ax-HE20
RU26-R mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11ax(20MHz) RU26-R	MCS0	6.56	6.96	7.02
	MCS1	6.56	/	/
	MCS2	6.54	/	/
	MCS3	6.51	/	/
	MCS4	6.53	/	/
	MCS5	6.53	/	/
	MCS6	6.50	/	/
	MCS7	6.54	/	/
	MCS8	6.55	/	/
	MCS9	6.52	/	/
	MCS10	6.52	/	/
	MCS11	6.55	/	/

. ©Copyright. All rights reserved by CTTL.

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

802.11ax-HE20
RU52-L mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11ax(20MHz) RU52-L	MCS0	8.24	/	/
	MCS1	8.21	/	/
	MCS2	8.24	/	/
	MCS3	8.23	/	/
	MCS4	8.22	/	/
	MCS5	8.26	/	/
	MCS6	8.28	8.73	9.15
	MCS7	8.24	/	/
	MCS8	8.24	/	/
	MCS9	8.25	/	/
	MCS10	8.21	/	/
	MCS11	8.27	/	/

The data rate MCS6 is selected as worst condition, and the following cases are performed with this condition.

802.11ax-HE20
RU52-R mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11ax(20MHz) RU52-R	MCS0	8.30	/	/
	MCS1	8.30	/	/
	MCS2	8.34	/	/
	MCS3	8.29	/	/
	MCS4	8.31	/	/
	MCS5	8.33	/	/
	MCS6	8.30	/	/
	MCS7	8.35	/	/
	MCS8	8.33	/	/

. ©Copyright. All rights reserved by CTTL.

	MCS9	8.31	/	/
	MCS10	8.30	/	/
	MCS11	8.35	8.68	8.85

The data rate MCS11 is selected as worst condition, and the following cases are performed with this condition.

802.11ax-HE20
RU106-L mode

Mode	**Data Rate (Index)**	**Test Result (dBm)**		
		5745MHz (Ch149)	**5785MHz (Ch157)**	**5825MHz (Ch165)**
802.11ax(20MHz) RU106-L	MCS0	10.56	10.79	11.16
	MCS1	10.46	/	/
	MCS2	10.54	/	/
	MCS3	10.49	/	/
	MCS4	10.55	/	/
	MCS5	10.50	/	/
	MCS6	10.53	/	/
	MCS7	10.52	/	/
	MCS8	10.53	/	/
	MCS9	10.54	/	/
	MCS10	10.52	/	/
	MCS11	10.50	/	/

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

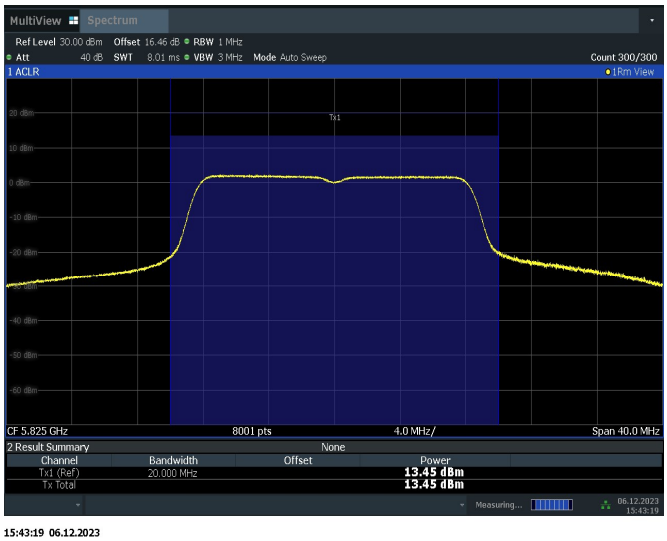
. ©Copyright. All rights reserved by CTTL.

802.11ax-HE20
RU106-R mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11ax(20MHz) RU106-R	MCS0	10.59	/	/
	MCS1	10.58	/	/
	MCS2	10.63	/	/
	MCS3	10.61	/	/
	MCS4	10.60	/	/
	MCS5	10.58	/	/
	MCS6	10.62	/	/
	MCS7	10.62	/	/
	MCS8	10.60	/	/
	MCS9	10.54	/	/
	MCS10	10.65	10.83	10.94
	MCS11	10.64	/	/

The data rate MCS10 is selected as worst condition, and the following cases are performed with this condition.

The duty cycle of all mode are 99%



15:43:19 06.12.2023

Maximum output Power：11a 24Mbps 5825 ANT6

Conclusion: PASS

. ©Copyright. All rights reserved by CTTL.

A.3. Peak Power Spectral Density

Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.407(a)	< 30 dBm/500 kHz

Set span to encompass the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.
Set RBW = 500 kHz.
Set VBW ≥ 3 MHz.
Number of points in sweep ≥ 2 × span / RBW.
Sweep time = auto.
Detector = power averaging (rms)
Trace average at least 100 traces in power averaging (rms) mode; however, the number of traces to be averaged shall be increased above 100 as needed to ensure that the average accurately represents the true average over the on and off periods of the transmitter. Use the peak search function on the instrument to find the peak of the spectrum and record its value. Add 10 log (1/x), where x is the duty cycle.

Measurement Uncertainty:

Measurement Uncertainty	0.75dB

EUT ID: UT11a

Measurement Results:

SISO-ANT10

TestMode	Antenna	Frequency[MHz]	Result [dBm/MHz]	Verdict
11A	Ant10	5745	0.97	PASS
		5785	0.97	PASS
		5825	0.47	PASS
11AC40SISO	Ant10	5755	-3.58	PASS
		5795	-3.95	PASS
11AC80SISO	Ant10	5775	-6.39	PASS
11AX20SISO	Ant10	5745	-1.17	PASS
		5785	-1.48	PASS
		5825	-1.90	PASS
11N20MIMO	Ant6	5745	-2.37	PASS
	Ant10	5745	-2.86	PASS
	total	5745	0.40	PASS
	Ant6	5785	-1.76	PASS
	Ant10	5785	-2.95	PASS
	total	5785	0.70	PASS
	Ant6	5825	-1.97	PASS
	Ant10	5825	-3.14	PASS
	total	5825	0.49	PASS

. ©Copyright. All rights reserved by CTTL.

11N40MIMO	Ant6	5755	-6.12	PASS
	Ant10	5755	-6.54	PASS
	total	5755	-3.31	PASS
	Ant6	5795	-5.87	PASS
	Ant10	5795	-6.76	PASS
	total	5795	-3.28	PASS
11AC80MIMO	Ant6	5775	-9.39	PASS
	Ant10	5775	-9.46	PASS
	total	5775	-6.41	PASS

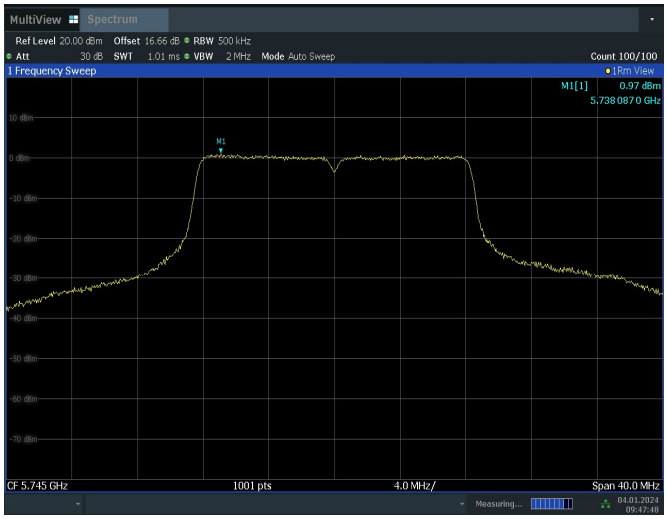
MIMO

Test Mode	Antenna	Frequency[MHz]	Ru Size	Ru Index	Result [dBm/MHz]	Verdict
11AX20SISO	Ant6	5745	26Tone	RU0	0.46	PASS
				RU8	0.41	PASS
			52Tone	RU37	-0.24	PASS
				RU40	-0.50	PASS
			106Tone	RU53	-1.11	PASS
				RU54	-1.22	PASS
		5785	26Tone	RU0	1.12	PASS
				RU8	0.61	PASS
			52Tone	RU37	0.19	PASS
				RU40	0.07	PASS
			106Tone	RU53	-0.38	PASS
				RU54	-1.09	PASS
		5825	26Tone	RU0	1.00	PASS
				RU8	0.72	PASS
			52Tone	RU37	0.27	PASS
				RU40	0.21	PASS
			106Tone	RU53	-0.66	PASS
				RU54	-0.76	PASS
11AX20MIMO						
	Ant6	5745	26Tone	RU0	-1.41	PASS
				RU8	-1.54	PASS
			52Tone	RU37	-2.45	PASS
				RU40	-3.04	PASS
			106Tone	RU53	-3.15	PASS
				RU54	-3.56	PASS
	Ant10	5745	26Tone	RU0	-1.60	PASS
				RU8	-1.93	PASS
			52Tone	RU37	-2.48	PASS
				RU40	-2.83	PASS
			106Tone	RU53	-3.49	PASS

. ©Copyright. All rights reserved by CTTL.

				RU54	-3.75	PASS
	total	5745	26Tone	RU0	1.51	PASS
				RU8	1.28	PASS
			52Tone	RU37	0.55	PASS
				RU40	0.08	PASS
			106Tone	RU53	-0.31	PASS
				RU54	-0.64	PASS
	Ant6	5785	26Tone	RU0	-0.55	PASS
				RU8	-1.53	PASS
			52Tone	RU37	-1.90	PASS
				RU40	-2.62	PASS
			106Tone	RU53	-2.50	PASS
				RU54	-3.34	PASS
	Ant10	5785	26Tone	RU0	-1.56	PASS
				RU8	-2.07	PASS
			52Tone	RU37	-2.59	PASS
				RU40	-3.22	PASS
			106Tone	RU53	-3.45	PASS
				RU54	-4.03	PASS
	total	5785	26Tone	RU0	1.98	PASS
				RU8	1.22	PASS
			52Tone	RU37	0.78	PASS
				RU40	0.10	PASS
			106Tone	RU53	0.06	PASS
				RU54	-0.66	PASS
	Ant6	5825	26Tone	RU0	-0.80	PASS
				RU8	-1.32	PASS
			52Tone	RU37	-1.95	PASS
				RU40	-2.12	PASS
			106Tone	RU53	-3.01	PASS
				RU54	-2.96	PASS
	Ant10	5825	26Tone	RU0	-1.82	PASS
				RU8	-2.46	PASS
			52Tone	RU37	-2.89	PASS
				RU40	-3.10	PASS
			106Tone	RU53	-4.05	PASS
				RU54	-4.54	PASS
	total	5825	26Tone	RU0	1.73	PASS
				RU8	1.16	PASS
			52Tone	RU37	0.62	PASS
				RU40	0.43	PASS
			106Tone	RU53	-0.49	PASS
				RU54	-0.67	PASS

. ©Copyright. All rights reserved by CTTL.



09:47:48 04.01.2024

Peak Power Spectral Density:11a 5745 ANT10

Conclusion: PASS

. ©Copyright. All rights reserved by CTTL.

A.4. 6dB Emission Bandwidth

Measurement Limit:

Standard	Limit (kHz)
FCC 47 CFR Part 15.407 (e)	≥ 500

Set RBW = 100 kHz.

Set the video bandwidth (VBW) ≥ 3 × RBW.

Detector = Peak.

Trace mode = max hold.

Sweep = auto couple.

Allow the trace to stabilize.

Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

Measurement Uncertainty:

Measurement Uncertainty	60.80Hz

EUT ID: EUT11a

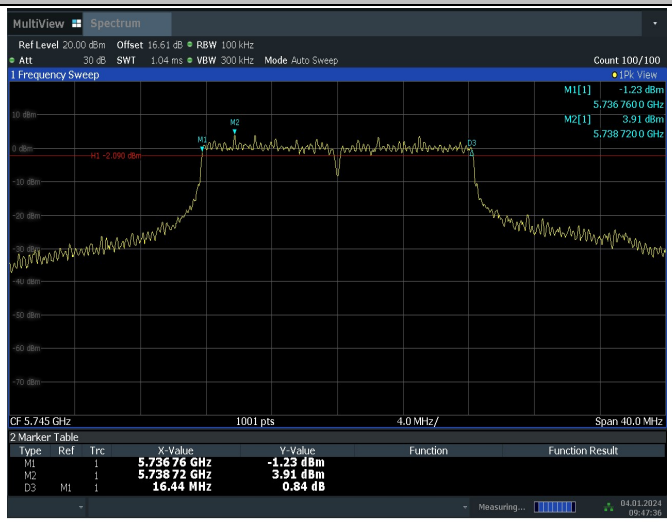
Measurement Result:

TestMode	Antenna	Frequency[MHz]	6db EBW [MHz]	FL[MHz]	FH[MHz]	Verdict
11A	Ant10	5745	16.44	5736.76	5753.20	PASS
		5785	16.48	5776.76	5793.24	PASS
		5825	16.48	5816.76	5833.24	PASS
11AC40SISO	Ant10	5755	36.32	5736.84	5773.16	PASS
		5795	35.68	5776.84	5812.52	PASS
11AC80SISO	Ant10	5775	76.32	5736.76	5813.08	PASS
11AX20SISO	Ant10	5745	19.12	5735.44	5754.56	PASS
		5785	19.12	5775.44	5794.56	PASS
		5825	19.08	5815.44	5834.52	PASS
11N20MIMO	Ant6	5745	17.72	5736.12	5753.84	PASS
	Ant10	5745	17.72	5736.12	5753.84	PASS
	Ant6	5785	17.72	5776.12	5793.84	PASS
	Ant10	5785	17.80	5776.08	5793.88	PASS
	Ant6	5825	17.72	5816.12	5833.84	PASS
	Ant10	5825	17.72	5816.12	5833.84	PASS
11N40MIMO	Ant6	5755	36.32	5736.84	5773.16	PASS
	Ant10	5755	36.00	5736.84	5772.84	PASS
	Ant6	5795	36.40	5776.76	5813.16	PASS
	Ant10	5795	35.68	5776.84	5812.52	PASS
11AC80MIMO	Ant6	5775	66.24	5738.68	5804.92	PASS
	Ant10	5775	75.68	5736.76	5812.44	PASS

. ©Copyright. All rights reserved by CTTL.

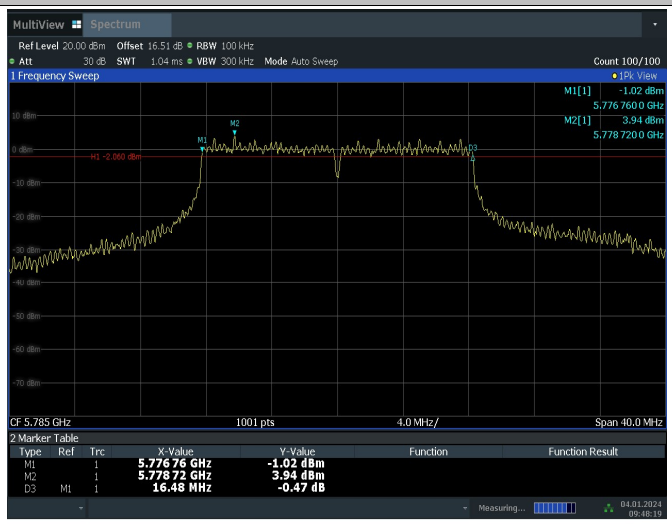
Test graphs as below:

11A_Ant10_5745



09:47:36 04.01.2024

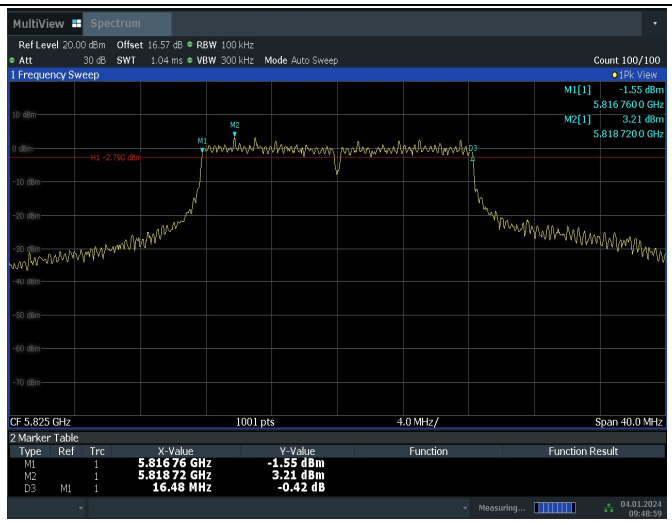
11A_Ant10_5785



09:48:19 04.01.2024

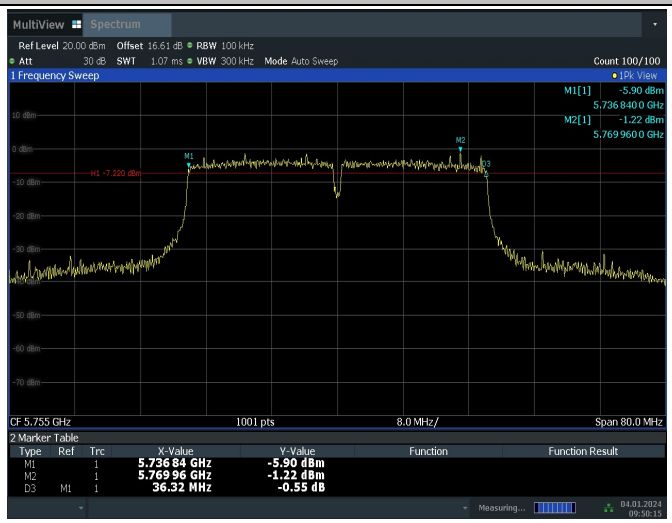
11A_Ant10_5825

. ©Copyright. All rights reserved by CTTL.



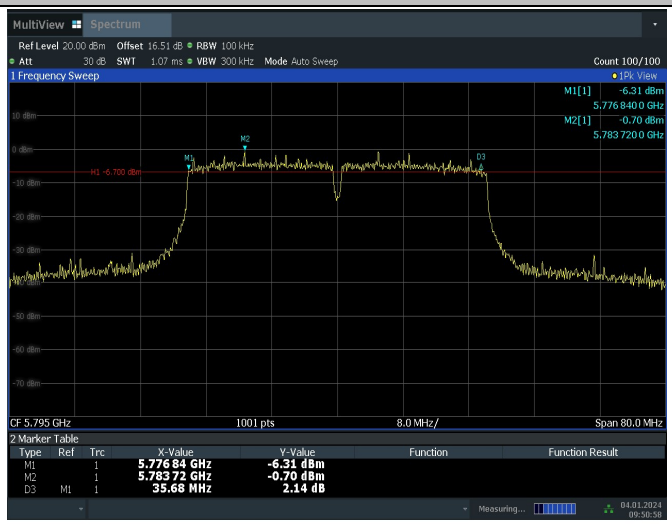
09:48:59 04.01.2024

11AC40SISO_Ant10_5755



09:50:16 04.01.2024

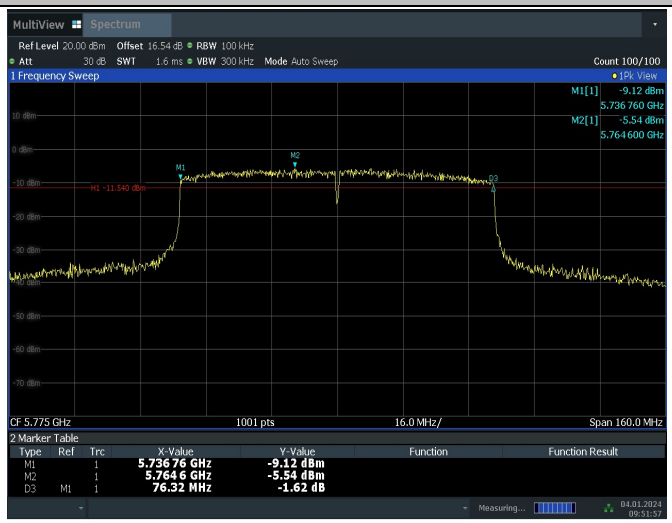
11AC40SISO_Ant10_5795



09:50:59 04.01.2024

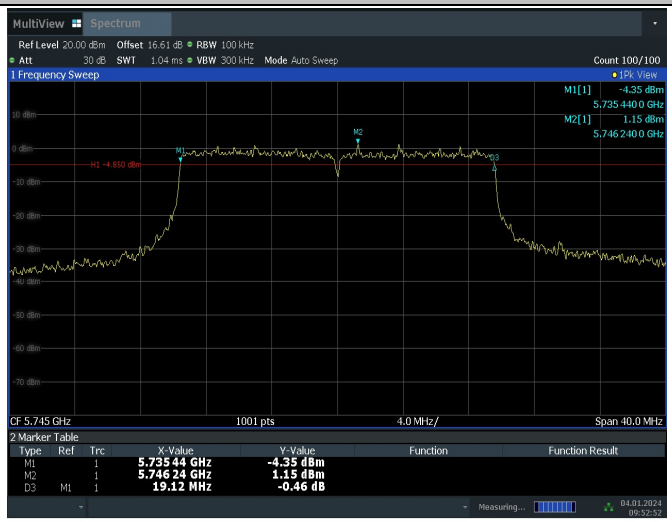
. ©Copyright. All rights reserved by CTTL.

11AC80SISO_Ant10_5775



09:51:58 04.01.2024

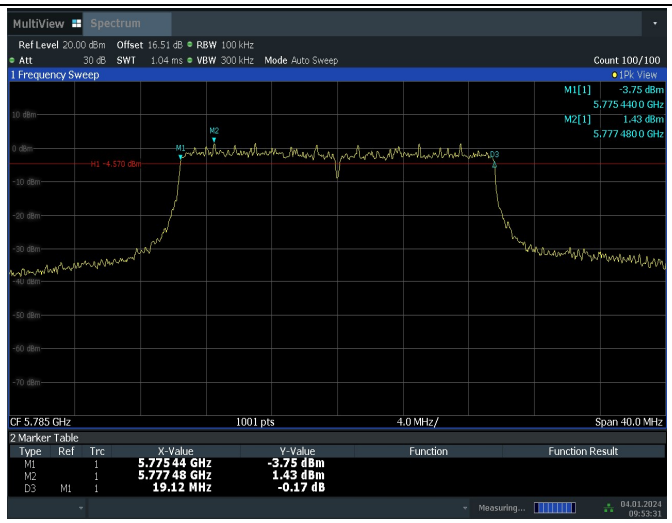
11AX20SISO_Ant10_5745



09:52:52 04.01.2024

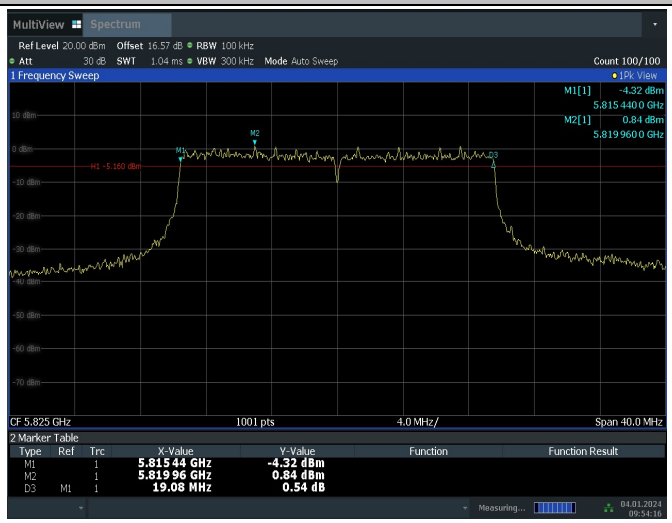
11AX20SISO_Ant10_5785

. ©Copyright. All rights reserved by CTTL.



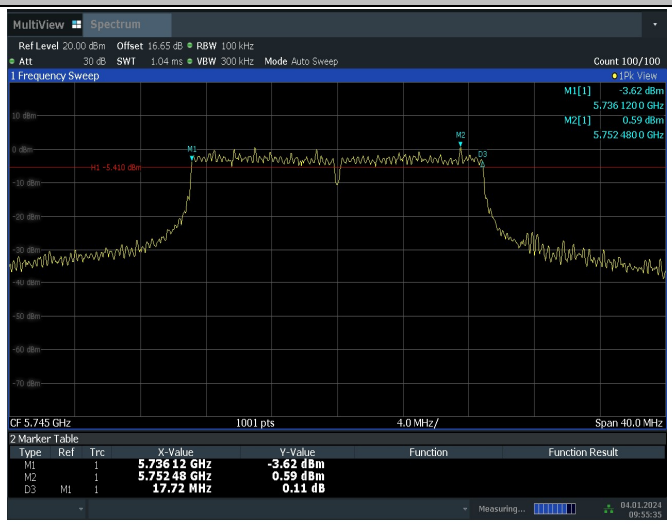
09:53:31 04.01.2024

11AX20SISO_Ant10_5825



09:54:17 04.01.2024

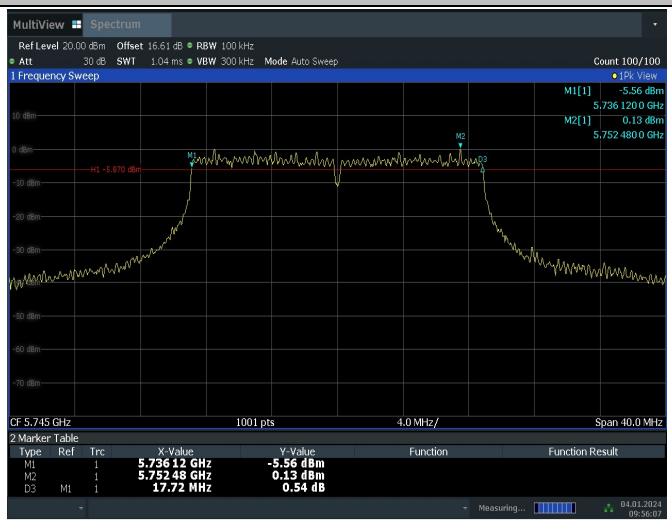
11N20MIMO_Ant6_5745



09:55:35 04.01.2024

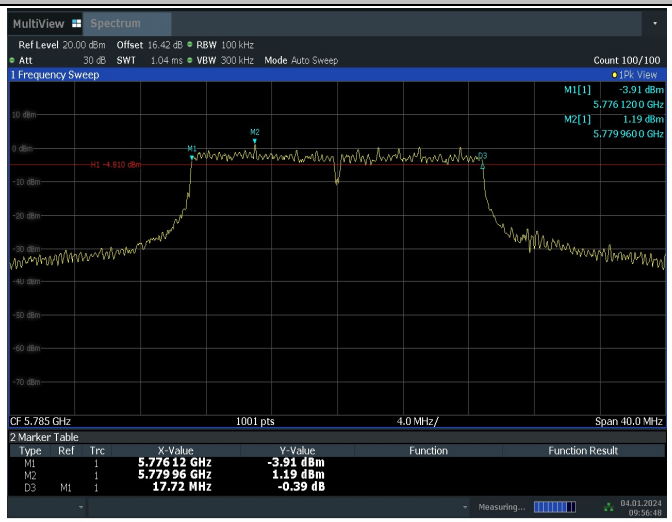
. ©Copyright. All rights reserved by CTTL.

11N20MIMO_Ant10_5745



09:56:08 04.01.2024

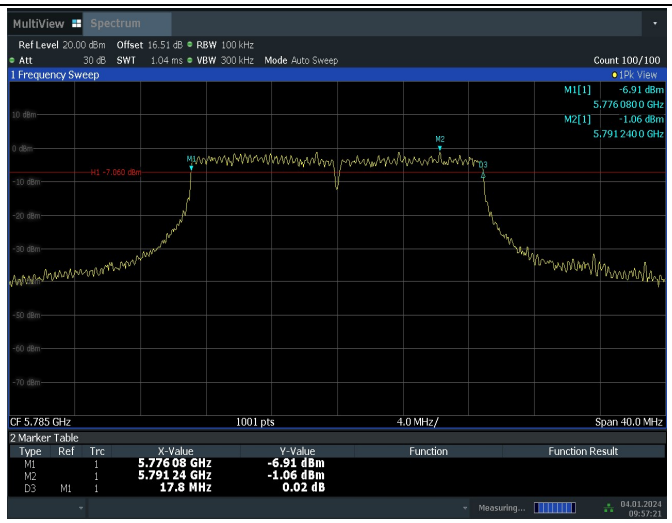
11N20MIMO_Ant6_5785



09:56:48 04.01.2024

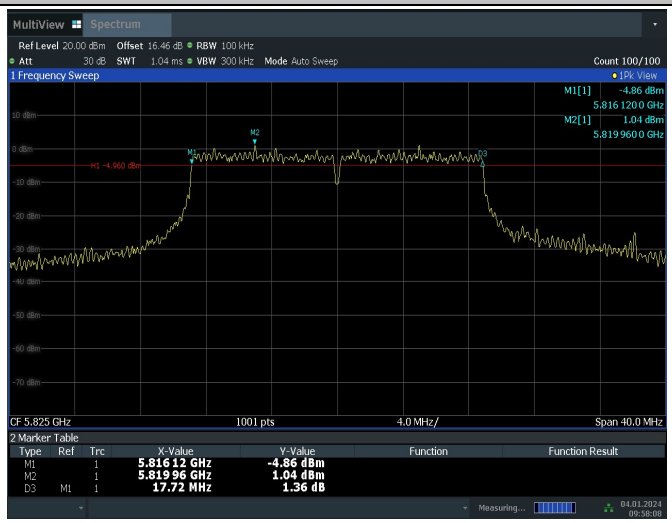
11N20MIMO_Ant10_5785

. ©Copyright. All rights reserved by CTTL.



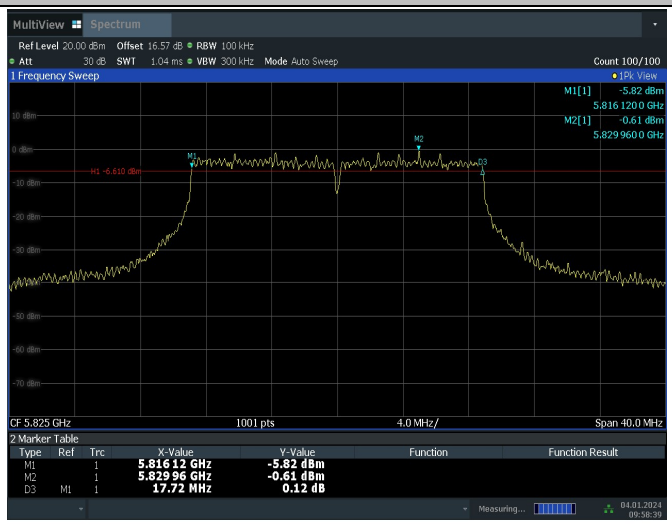
09:57:22 04.01.2024

11N20MIMO_Ant6_5825



09:58:09 04.01.2024

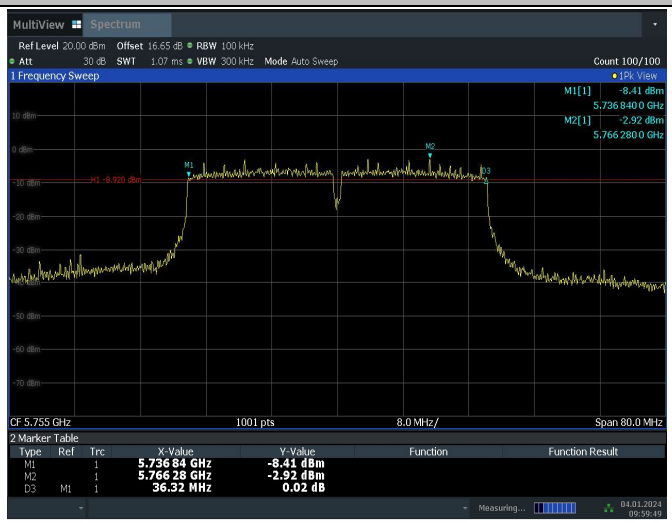
11N20MIMO_Ant10_5825



09:58:40 04.01.2024

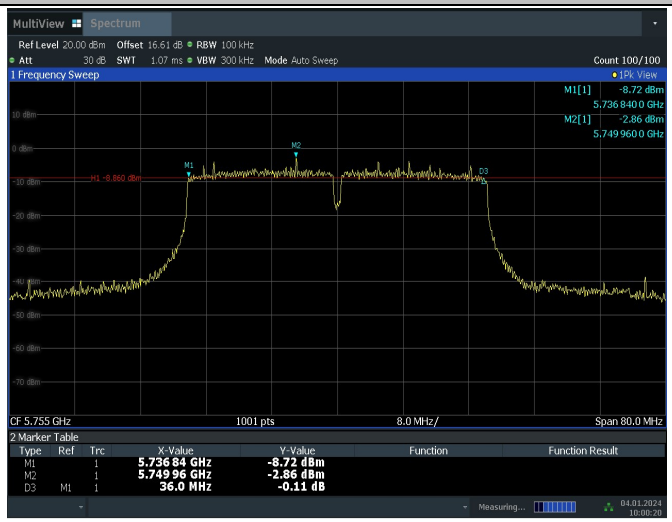
. ©Copyright. All rights reserved by CTTL.

11N40MIMO_Ant6_5755



09:59:49 04.01.2024

11N40MIMO_Ant10_5755



10:00:21 04.01.2024

11N40MIMO_Ant6_5795

. ©Copyright. All rights reserved by CTTL.