FCC RF TEST REPORT

APPLICANT	:	Motorola Mobility LLC
EQUIPMENT	:	Mobile Cellular Phone
BRAND NAME	:	Motorola
MODEL NAME	:	XT2205-3
FCC ID	:	IHDT56AE8
STANDARD	:	FCC Part 15 Subpart E §15.407
CLASSIFICATION	:	15E 6 GHz Low Power Indoor Client (6XD)
TEST DATE(S)	:	Jun. 07, 2022

We, Sporton International Inc. (Kunshan), would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

This report contains data that were produced under subcontract by Sporton International Inc. (Shenzhen).

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. (Kunshan), the test report shall not be reproduced except in full.

Jason Jia

Approved by: Jason Jia

ACCREDITED
Cert #5145.02

Sporton International Inc. (Kunshan)
No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China

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History of this test report

Report No.	Version	Description	Issued Date
FR240834-01F	01	Initial issue of report	Jun. 20, 2022

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
4.1	15.407(a)(8)	Fundamental Maximum EIRP	Pass	-
4.2	15.407(b)	Unwanted Emissions	Pass	Under limit 5.97 dB at 48.430 MHz
4.3	15.203 15.407(a)	Antenna Requirement	Pass	-

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

1 General Description

1.1 Applicant

Motorola Mobility LLC
222 W,Merchandise Mart Plaza, Chicago IL 60654 USA

1.2 Manufacturer

Motorola Mobility LLC
222 W,Merchandise Mart Plaza, Chicago IL 60654 USA

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT2205-3
FCC ID	IHDT56AE8
IMEI Code	Radiation: 351397430011580
HW Version	DVT2
SW Version	S2ST32.37
EUT Stage	Identical Prototype

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Frequency Range	5955 MHz ~ 7095 MHz
Antenna Type / Gain	<Ant. 1> : Loop Antenna with gain -8.5 dBi <Ant. 2> : ILA Antenna with gain -8.5 dBi
Type of Modulation	802.11ax : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM / 1024QAM)

Remark:

1. The above EUT's information was declared by manufacturer. Please refer to Comments and Explanations in report summary.
2. For 20M Bandwidth, the CH233 (Center Frequency = 7115MHz) is not supported.
3. WLAN 6G Ant. 1 / Ant. 2 corresponding to EUT Photo Ant. 2 / Ant. 9.
4. 802.11ax support OFDMA full RU tone and partial RU tone, both full RU and partial RU-left (for low CH) and partial RU-right (for high CH) are tested for power/Radiated Spurious.
5. The EUT does not support channel puncturing mode.
6. This EUT supports STBC mode, not support CDD mode which controlled by MTK chipset software. This chipset support WIFI MIMO(2*2), and support STBC mode by manufacturer declared.

1.5 Specification of Accessory

Specification of Accessory				
AC Adapter 1	**Brand Name**	Motorola(Salom)	**Model Name**	MC-301
AC Adapter 2	**Brand Name**	Motorola(Acbel)	**Model Name**	MC-301
Battery	**Brand Name**	Motorola(ATL)	**Model Name**	NF50
USB Cable 1	**Brand Name**	Motorola(Saibao)	**Model Name**	SC18D13215
USB Cable 2	**Brand Name**	Motorola(Cabletech)	**Model Name**	SC18D13216
USB Cable 3	**Brand Name**	Motorola(Luxshare)	**Model Name**	SC18D13217

1.6 Modification of EUT

No modifications are made to the EUT during all test items.

1.7 Testing Location

Sporton International Inc. (Kunshan) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158 FAX : +86-512-57900958		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	03CH04-KS 03CH07-KS	CN1257	314309

Sporton International Inc. (Shenzhen) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Test Firm	Sporton International Inc. (Shenzhen)		
Test Site Location	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	TH01-SZ	CN1256	421272

Test data subcontracted: Conducted power of this report.

1.8 Test Software

Item	Site	Manufacture	Name	Version
1.	03CH04-KS	AUDIX	E3	6.2009-8-24a
2.	03CH07-KS	AUDIX	E3	6.2009-8-24al

1.9 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart E
- FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- FCC KDB 987594 D02 U-NII 6 GHz EMC Measurement v01
- FCC KDB 414788 D01 Radiated Test Site v01r01.
- FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ANSI C63.10-2013

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

2 Re-use of Measured Data

2.1 Introduction Section

This application re-uses data collected on a similar device. The subject device of this application (Model: XT2205-3, FCC ID: IHDT56AE8) is electrically identical to the reference device (Model: XT2205-1, XT2205-2, FCC ID: IHDT56AE7) for the portions of the circuitry corresponding to the data being re-used. Based on their similarity, the FCC Part 15E, U-NII-5,6,7,8 reuse the original model's result and do spot-check, following the FCC KDB 484596 D01 v01.

The applicant takes full responsibility that the test data as referenced in this report represent compliance for this FCC ID: IHDT56AE8 .

2.2 Model Difference Information

The **main** difference between FCC ID: IHDT56AE7 and FCC ID: IHDT56AE8 is as below:

- Add mmWave function.
- Remove some band

Other differences and all the details of similarity and difference can be found in the confidential documents (XT2205-3_Operational Description of Product Equality Declaration).

The re-used RF data includes the following bands provided in Appendix E (Sporton RF Report No. FR240834H for the reference device Model: XT2205-1, XT2205-2, FCC ID: IHDT56AE7).

2.3 Reference detail Section:

Rule Part	Equipment Class	Frequency Band (MHz)	Reference FCC ID(Parent)	Type Grant/ Permissive Change	Reference Title	FCC ID Filling (Variant)	Report Title/Section
15E	6XD	5925~7125	IHDT56AE7	Original Grant	FR240834H, FR240812	IHDT56AE8	All sections applicable except for RSE

2.4 Spot Check Verification Data Section

Conducted power/EIRP test for re-testing against the variant model based on the original model was performed in this filing.

Summary for power spot check for rule entry and technology is listed as below:

Test Item	Mode	IHDT56AE7 Parent Worst Result	IHDT56AE8 Variant Check Result	Difference (dB)
EIRP (dBm)	802.11ax HE20	9.08	8.82	0.26
	802.11ax HE40	9.02	8.35	0.67
	802.11ax HE80	9.71	9.02	0.69

Test Item	Mode	IHDT56AE7 Parent Worst Result (Adjusted Power) (dBm)	IHDT56AE8 Variant Check Result (Adjusted Power) (dBm)	Difference (dB)
CBP	UNII-5 BW80M CH Freq. 6145MHz	-62.21	-62.1	-0.11

Conclusion:
Based on the spot check test result, the test data from the original model is representative for the variant model. The power level spot check are shown within expected level compliant to limit line.

We are using power and EIRP measurements from the original parent model reports to list on the grant.

The same CBP detection mechanism/software/antenna gain is used in the variant. Hence, all test cases refer to parent report for CBP.

We confirm that the test data reuse policy of FCC KDB 484596 D01 Referencing Test Data v01 has been followed and the test data as referenced from the parent model report represents compliance with new FCC ID.

3 Test Configuration of Equipment Under Test

a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X plane) were recorded in this report.

3.1 Carrier Frequency and Channel

<U-NII-5, 6, 7, 8>

BW 20M	**Channel**	1	5	9	13	17	21	25	29
	Freq. (MHz)	5955	5975	5995	6015	6035	6055	6075	6095
BW 40M	**Channel**	3		11		19		27	
	Freq. (MHz)	5965		6005		6045		6085	
BW 80M	**Channel**	7				23			
	Freq. (MHz)	5985				6065			

BW 20M	**Channel**	33	37	41	45	49	53	57	61
	Freq. (MHz)	6115	6135	6155	6175	6195	6215	6235	6255
BW 40M	**Channel**	35		43		51		59	
	Freq. (MHz)	6125		6165		6205		6245	
BW 80M	**Channel**	39				55			
	Freq. (MHz)	6145				6225			

BW 20M	**Channel**	65	69	73	77	81	85	89	93
	Freq. (MHz)	6275	6295	6315	6335	6355	6375	6395	6415
BW 40M	**Channel**	67		75		83		91	
	Freq. (MHz)	6285		6325		6365		6405	
BW 80M	**Channel**	71				87			
	Freq. (MHz)	6305				6385			

BW 20M	**Channel**	97	101	105	109	113	117	121	125
	Freq. (MHz)	6435	6455	6475	6495	6515	6535	6555	6575
BW 40M	**Channel**	99		107		115		123	
	Freq. (MHz)	6445		6485		6525		6565	
BW 80M	**Channel**	103				119			
	Freq. (MHz)	6465				6545			

BW 20M	Channel	129	133	137	141	145	149	153	157
	Freq. (MHz)	6595	6615	6635	6655	6675	6695	6715	6735
BW 40M	Channel	131		139		147		155	
	Freq. (MHz)	6605		6645		6685		6725	
BW 80M	Channel	135				151			
	Freq. (MHz)	6625				6705			

BW 20M	Channel	161	165	169	173	177	181	185	189
	Freq. (MHz)	6755	6775	6795	6815	6835	6855	6875	6895
BW 40M	Channel	163		171		179		187	
	Freq. (MHz)	6765		6805		6845		6885	
BW 80M	Channel	167				183			
	Freq. (MHz)	6785				6865			

BW 20M	Channel	193	197	201	205	209	213	217	221
	Freq. (MHz)	6915	6935	6955	6975	6995	7015	7035	7055
BW 40M	Channel	195		203		211		219	
	Freq. (MHz)	6925		6965		7005		7045	
BW 80M	Channel	199				215			
	Freq. (MHz)	6945				7025			

BW 20M	Channel	225	229
	Freq. (MHz)	7075	7095
BW 40M	Channel	227	
	Freq. (MHz)	7085	

3.2 Test Mode

Final test modes are considering the modulation and worse data rates as below table.

Modulation	Data Rate
802.11ax HE20	MCS0
802.11ax HE40	MCS0
802.11ax HE80	MCS0

RSE Co-location
11ax (HE40)_CH227(Full RU) TX + 5GNR n5 Link

Remark: All test modes of the Radiated Spurious Emission (RSE) were tested; only the worse test data were reported, test mode as below,

1) 802.11ax HE20 full RU ch229_7095MHz and Partial RU ch229_106/54_7095MHz
2) 802.11ax HE40 full RU ch227_7085MHz and Partial RU ch227_242/62_7085MHz
3) 802.11ax HE80 full RU ch07_5985MHz and Partial RU ch215_484/66_7025MHz

Ch. #		UNII-5	UNII-6	UNII-7	UNII-8
		802.11ax HE20	802.11ax HE20	802.11ax HE20	802.11ax HE20
L	Low	001	097	117	189
M	Middle	045	105	149	209
H	High	093	113	181	229

Ch. #		UNII-5	UNII-6	UNII-7	UNII-8
		802.11ax HE40	802.11ax HE40	802.11ax HE40	802.11ax HE40
L	Low	003	099	123	195
M	Middle	043	-	147	203
H	High	091	107	179	227

Ch. #		UNII-5	UNII-6	UNII-7	UNII-8
		802.11ax HE80	802.11ax HE80	802.11ax HE80	802.11ax HE80
L	Low	007	103	135	199
M	Middle	039		151	-
H	High	087		167	215

3.3 Connection Diagram of Test System

EUT

This example is connection diagram of EUT test configurations.

For detail, please refer to test mode configuration and setup photographs for each test item.

3.4 EUT Operation Test Setup

For WLAN RF test items, an engineering test program was provided and enabled to make EUT continuously transmit.

4 Test Result

4.1 Maximum conducted Output Power and Fundamental Maximum EIRP Measurement

4.1.1 Limit of Fundamental Maximum EIRP

<FCC 14-30 CFR 15.407>

(a)(8) For client devices operating under the control of an indoor access point in the 5.925-7.125 GHz bands, the maximum e.i.r.p. over the frequency band of operation must not exceed 24 dBm.

4.1.2 Measuring Instruments

See list of measuring equipment of this test report.

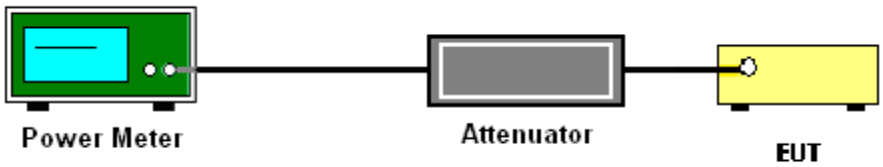
4.1.3 Test Procedures

The testing follows Method PM of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Method PM (Measurement using an RF average power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit continuously with a consistent duty cycle at its maximum power control level.
3. Measure the average power of the transmitter, and the average power is corrected with duty factor, 10 log(1/x), where x is the duty cycle.
4. For MIMO mode, the measure-and-sum technique should be used for measuring the in-band transmit power of a device.

4.1.4 Test Setup



4.1.5 Test Result of Fundamental Maximum EIRP

Please refer to Spot Check Verification Data Section.

4.2 Unwanted Emissions Measurement

This section is to measure unwanted emissions through radiated measurement for band edge spurious emissions and out of band emissions measurement.

4.2.1 Limit of Unwanted Emissions

(1) For transmitters operating within the 5.925-7.125 GHz band: Any emissions outside of the 5.925-7.125 GHz band must not exceed an e.i.r.p. of −27 dBm/MHz.

EIRP (dBm)	Field Strength at 3m (dBµV/m)
- 27 (RMS)	68.3
- 7 (Peak)	88.3

According 987594 D02 U-NII 6GHz EMC Measurement v01 section G:
Unwanted emissions outside of restricted bands are measured with a RMS detector.
In addition, 15.35(b) applies where the peak emissions must be limited to no more than 20 dB above the average limit

(2) Unwanted spurious emissions fallen in restricted bands shall comply with the general field strength limits as below table:

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

Note: The following formula is used to convert the EIRP to field strength.

$$E=\frac{1000000\sqrt{30P}}{3}$$ µV/m, where P is the eirp (Watts)

4.2.2 Measuring Instruments

See list of measuring equipment of this test report.

4.2.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Section G) Unwanted emissions measurement.

(1) Procedure for Unwanted Emissions Measurements Below 1000MHz

- RBW = 120 kHz
- VBW = 300 kHz
- Detector = Peak
- Trace mode = max hold

(2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz

- RBW = 1 MHz
- VBW ≥ 3 MHz
- Detector = Peak
- Sweep time = auto
- Trace mode = max hold

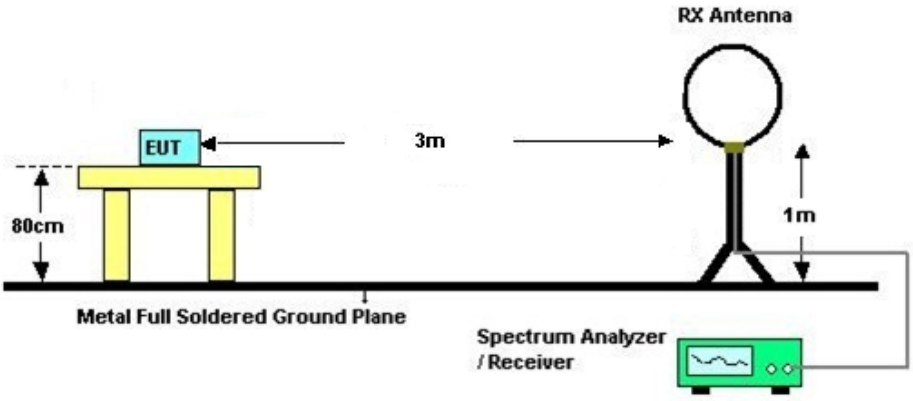
(3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz

- RBW = 1 MHz
- VBW = 10 Hz, when duty cycle is no less than 98 percent.
- VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

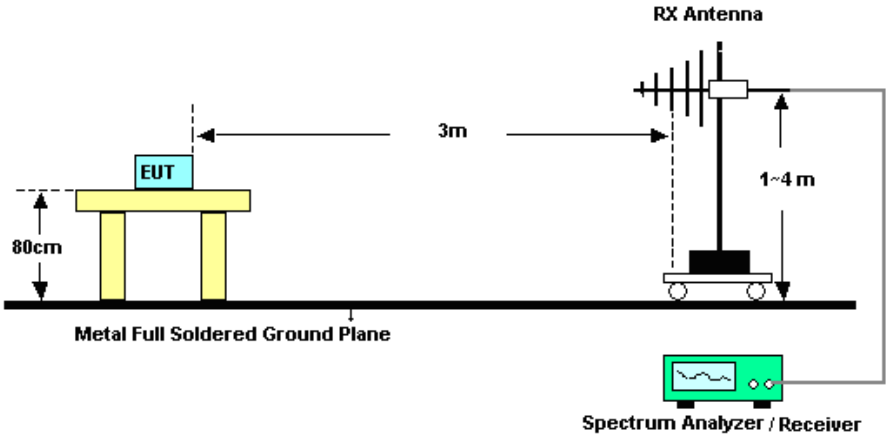
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

4.2.4 Test Setup

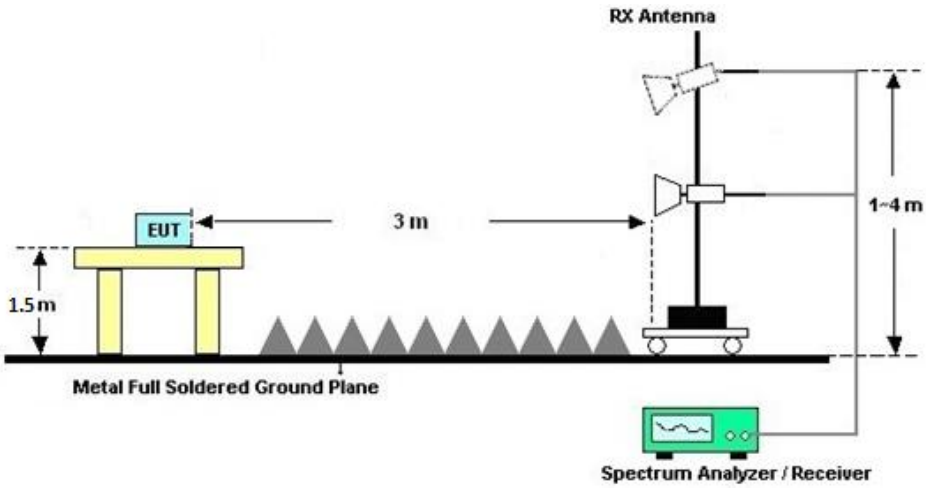
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



4.2.5 Test Results of Radiated Spurious Emissions (9 kHz ~ 30 MHz)

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

There is adequate comparison measurement of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.

4.2.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix A & B

4.2.7 Duty Cycle

Please refer to Appendix C.

4.2.8 Test Result of Radiated Spurious Emissions (30MHz ~ 10th Harmonic)

Please refer to Appendix A & B.

4.3 Antenna Requirements

4.3.1 Standard Applicable

§15.203: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

4.3.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used. The EUT complies with the requirement of 15.203.

4.3.3 Antenna Gain

<STBC Modes>

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

Basic methodology with N_{ANT} transmit antennas, each with the same directional gain G_{ANT} dBi, being driven by N_{ANT} transmitter outputs of equal power, and If all transmit signals are completely uncorrelated with each other,

Directional gain = G_{ANT}

	Ant. 1 (dBi)	Ant. 2 (dBi)	DG for Power (dBi)	DG for PSD (dBi)
U-NII-5	-8.50	-8.50	-8.50	-8.50
U-NII-6	-8.50	-8.50	-8.50	-8.50
U-NII-7	-8.50	-8.50	-8.50	-8.50
U-NII-8	-8.50	-8.50	-8.50	-8.50

5 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Pulse Power Senor	Anritsu	MA2411B	1339473	30MHz~40GHz	Dec. 28, 2021	Jun. 07, 2022	Dec. 27, 2022	Conducted (TH01-SZ)
Power Meter	Anritsu	ML2495A	1542004	50MHz Bandwidth	Dec. 28, 2021	Jun. 07, 2022	Dec. 27, 2022	Conducted (TH01-SZ)
EMI Test Receiver	R&S	ESR7	101403	9kHz~7GHz;Max 30dBm	Oct. 16, 2021	Jun. 07, 2022	Oct. 15, 2022	Radiation (03CH07-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55370528	10Hz-44G,MAX 30dB	Oct. 16, 2021	Jun. 07, 2022	Oct. 15, 2022	Radiation (03CH07-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Oct. 30, 2021	Jun. 07, 2022	Oct. 29, 2022	Radiation (03CH07-KS)
Bilog Antenna	TeseQ	CBL6111D	44483	30MHz-1GHz	Dec. 22, 2021	Jun. 07, 2022	Dec. 21, 2022	Radiation (03CH07-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75957	1GHz~18GHz	Oct. 30, 2021	Jun. 07, 2022	Oct. 29, 2022	Radiation (03CH07-KS)
high gain Amplifier	MITEQ	AMF-7D-00101800-30-10P	2025788	1Ghz-18Ghz	Jul. 30, 2021	Jun. 07, 2022	Jul. 29, 2023	Radiation (03CH07-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 05, 2022	Jun. 07, 2022	Jan. 04, 2023	Radiation (03CH07-KS)
Amplifier	SONOMA	310N	413740	9KHz-1GHz	Jan. 05, 2022	Jun. 07, 2022	Jan. 04, 2023	Radiation (03CH07-KS)
Amplifier	Keysight	83017A	MY53270316	500MHz~26.5GHz	Oct. 16, 2021	Jun. 07, 2022	Oct. 15, 2022	Radiation (03CH07-KS)
Amplifier	MITEQ	EM18G40GGA	060728	18~40GHz	Jan. 05, 2022	Jun. 07, 2022	Jan. 04, 2023	Radiation (03CH07-KS)
AC Power Source	Chroma	61601	616010002473	N/A	NCR	Jun. 07, 2022	NCR	Radiation (03CH07-KS)
Turn Table	MF	MF7802	N/A	0~360 degree	NCR	Jun. 07, 2022	NCR	Radiation (03CH07-KS)
Antenna Mast	MF	MF7802	N/A	1 m~4 m	NCR	Jun. 07, 2022	NCR	Radiation (03CH07-KS)
EMI Test Receiver	Keysight	N9038A	MY57290151	3Hz~8.5GHz;Max 30dBm	Jul. 12, 2021	Jun. 07, 2022	Jul. 11, 2022	Radiation (03CH04-KS)
EXA Spectrum Analyzer	Keysight	N9010B	MY57541079	10Hz-44G,MAX 30dB	Oct. 14, 2021	Jun. 07, 2022	Oct. 13, 2022	Radiation (03CH04-KS)
Horn Antenna	Schwarzbeck	BBHA9120D	1284	1GHz~18GHz	Oct. 18, 2021	Jun. 07, 2022	Oct. 18, 2022	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 05, 2022	Jun. 07, 2022	Jan. 04, 2023	Radiation (03CH04-KS)
high gain Amplifier	MITEQ	AMF-7D-00101800-30-10P	2025788	1Ghz-18Ghz	Jul. 30, 2021	Jun. 07, 2022	Jul. 29, 2022	Radiation (03CH04-KS)
Amplifier	Keysight	83017A	MY57280106	500MHz~26.5GHz	Oct. 12, 2021	Jun. 07, 2022	Oct. 11, 2022	Radiation (03CH04-KS)
Amplifier	MITEQ	EM18G40GGA	060728	18~40GHz	Jan. 05, 2022	Jun. 07, 2022	Jan. 04, 2023	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Jun. 07, 2022	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Jun. 07, 2022	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Jun. 07, 2022	NCR	Radiation (03CH04-KS)

NCR: No Calibration Required

6 Uncertainty of Evaluation

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz) <03CH07-KS>

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.0dB**

Uncertainty of Radiated Emission Measurement (1000 MHz ~ 40000 MHz) <03CH07-KS>

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.0dB**

Uncertainty of Radiated Emission Measurement (1000 MHz ~ 40000 MHz) <03CH04-KS>

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.1dB**

---------- THE END ----------

Appendix A. Radiated Spurious Emission

All test modes of the Radiated Spurious Emission (RSE) were tested; Only the worst results of each operation mode are shown in the report.

U-NII 5 - 5925-6425MHzMHz

WIFI 802.11ax HE80 Full RU (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE80 Full RU CH 07 5985MHz		5923.4	60.43	-27.87	88.3	43.57	35.2	11.48	29.82	100	38	P	H
		5912.2	50.73	-17.57	68.3	33.91	35.17	11.47	29.82	100	38	A	H
	*	5950	96.01	---	---	79.14	35.22	11.49	29.84	100	38	P	H
		5986	88.01	---	---	71.12	35.27	11.51	29.89	100	38	A	H
		5909.48	58.84	-29.46	88.3	42.02	35.17	11.47	29.82	357	26	P	V
		5925	48.48	-19.82	68.3	31.62	35.2	11.48	29.82	357	26	A	V
	*	5977	90.73	---	---	73.81	35.27	11.51	29.86	357	26	P	V
		5995	82.26	---	---	65.33	35.3	11.52	29.89	357	26	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

U-NII 5 5925~6425MHz

WIFI 802.11ax HE80 Full RU (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE80 Full RU CH 07 5985MHz		11968	45.14	-28.86	74	50.64	39.8	16.53	61.83	300	0	P	H
		11968	44.98	-29.02	74	50.48	39.8	16.53	61.83	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

U-NII 8 - 6875-7125MHzMHz

WIFI 802.11ax HE20 Full RU (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full RU CH 229 7095MHz		7128.52	59.64	-28.66	88.3	41.84	35.8	12.72	30.72	100	99	P	H
		7125	50.95	-17.35	68.3	33.17	35.8	12.7	30.72	100	99	A	H
	*	7093	102.91	---	---	85.15	35.8	12.67	30.71	100	99	P	H
		7093	94.19	---	---	76.43	35.8	12.67	30.71	100	99	A	H
		7143.56	59.25	-29.05	88.3	41.45	35.8	12.72	30.72	321	114	P	V
		7125	49.42	-18.88	68.3	31.64	35.8	12.7	30.72	321	114	A	V
	*	7093	95.04	---	---	77.28	35.8	12.67	30.71	321	114	P	V
		7093	90.01	---	---	72.25	35.8	12.67	30.71	321	114	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

U-NII 8 6875~7125MHz

WIFI 802.11ax HE20 Full RU (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full RU CH 229 7095MHz		14192	47.05	-41.25	88.3	53.02	39.93	18.09	63.99	300	0	P	H
		14192	46.39	-41.91	88.3	52.36	39.93	18.09	63.99	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

U-NII 8 6875~7125MHz

WIFI 802.11ax HE20 Partial RU 106/54 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Partial RU 106/54 CH 229 7095MHz		7126.28	62.65	-25.65	88.3	44.87	35.8	12.7	30.72	100	193	P	H
		7125.8	50.41	-17.89	68.3	32.63	35.8	12.7	30.72	100	193	A	H
		7102	101.21	---	---	83.44	35.8	12.68	30.71	100	193	P	H
		7102	90.74	---	---	72.97	35.8	12.68	30.71	100	193	A	H
		7206.28	58.77	-29.53	88.3	40.9	35.8	12.79	30.72	379	26	P	V
		7185.96	49.33	-18.97	68.3	31.48	35.8	12.77	30.72	378	26	A	V
		7102	95.09	---	---	77.32	35.8	12.68	30.71	378	26	P	V
		7102	88.89	---	---	71.12	35.8	12.68	30.71	378	26	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

U-NII 8 6875~7125MHz

WIFI 802.11ax HE40 Full RU (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Full RU CH 227 7085MHz		7129.98	67.5	-20.8	88.3	49.7	35.8	12.72	30.72	300	335	P	H
		7126.02	56.48	-11.82	68.3	38.7	35.8	12.7	30.72	300	335	A	H
	*	7084	99.07	---	---	81.31	35.8	12.67	30.71	300	335	P	H
		7084	89.92	---	---	72.16	35.8	12.67	30.71	300	335	A	H
		7125.84	61.79	-26.51	88.3	44.01	35.8	12.7	30.72	144	291	P	V
		7126.02	51.63	-16.67	68.3	33.85	35.8	12.7	30.72	144	291	A	V
	*	7093	91.25	---	---	73.49	35.8	12.67	30.71	144	291	P	V
		7093	84.61	---	---	66.85	35.8	12.67	30.71	144	291	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

U-NII 8 6875~7125MHz

WIFI 802.11ax HE40 Full RU (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Full RU CH 227 7085MHz		14168	45.52	-42.78	88.3	51.48	39.93	18.09	63.98	300	0	P	H
		14168	46.43	-41.87	88.3	52.39	39.93	18.09	63.98	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

U-NII 8 6875~7125MHz

WIFI 802.11ax HE40 Partial RU 242/62 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Partial RU 242/62 CH 227 7085MHz		7221.78	59.75	-28.55	88.3	41.89	35.8	12.79	30.73	134	157	P	H
		7124.94	49.36	-18.94	68.3	31.58	35.8	12.7	30.72	134	157	A	H
		7093	102.33	---	---	84.57	35.8	12.67	30.71	134	157	P	H
		7093	88.69	---	---	70.93	35.8	12.67	30.71	134	157	A	H
		7216.56	59.11	-29.19	88.3	41.25	35.8	12.79	30.73	319	76	P	V
		7176.78	48.82	-19.48	68.3	30.98	35.8	12.76	30.72	319	76	A	V
		7093	90.85	---	---	73.09	35.8	12.67	30.71	319	76	P	V
		7102	84.95	---	---	67.18	35.8	12.68	30.71	319	76	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

U-NII 8 6875~7125MHz

WIFI 802.11ax HE80 Partial RU 484/66 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE80 Partial RU 484/66 CH 215 7025MHz		7135.08	57.88	-30.42	88.3	40.08	35.8	12.72	30.72	164	259	P	H
		7136.52	49.86	-18.44	68.3	32.06	35.8	12.72	30.72	164	259	A	H
		7048	95.69	---	---	77.97	35.8	12.63	30.71	164	259	P	H
		7057	86.6	---	---	68.88	35.8	12.63	30.71	164	259	A	H
		7131.08	59.47	-28.83	88.3	41.67	35.8	12.72	30.72	330	167	P	V
		7139.24	49.69	-18.61	68.3	31.89	35.8	12.72	30.72	330	167	A	V
		7057	88.56	---	---	70.84	35.8	12.63	30.71	330	167	P	V
		7030	81.38	---	---	63.67	35.8	12.61	30.7	330	167	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

RSE Co-location

WIFI 802.11ax HE40 Full RB + 5GNR n5 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Full RB CH 227 7085MHz		7126.38	66.93	-21.37	88.3	55.58	35.39	12.57	36.61	100	23	P	H
		7126.2	53.41	-14.89	68.3	42.06	35.39	12.57	36.61	100	23	A	H
	*	7084	86.73	---	---	75.43	35.39	12.53	36.62	100	23	P	H
		7084	96.55	---	---	85.25	35.39	12.53	36.62	100	23	A	H
		7126.92	63.34	-24.96	88.3	51.99	35.39	12.57	36.61	273	237	P	V
		7126.02	50.1	-18.2	68.3	38.75	35.39	12.57	36.61	273	237	A	V
	*	7093	94.29	---	---	82.99	35.39	12.53	36.62	273	237	P	V
		7093	86.66	---	---	75.36	35.39	12.53	36.62	273	237	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

WIFI 802.11ax HE40 Full RB + 5GNR n5 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Full RB CH 227 7085MHz		14168	43.84	-44.46	88.3	50.93	38.8	18.09	63.98	100	360	P	H
		14168	43.9	-44.4	88.3	50.99	38.8	18.09	63.98	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission below 1GHz

WIFI 802.11ax HE40 Full RU (LF @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Full RU LF		30	22.68	-17.32	40	29.82	24.8	0.76	32.7	-	-	P	H
		48.43	21.2	-18.8	40	38.19	15	0.98	32.97	-	-	P	H
		87.23	25.01	-14.99	40	42.4	14	1.33	32.72	-	-	P	H
		161.92	21.91	-21.59	43.5	36.83	16.1	1.85	32.87	-	-	P	H
		299.66	23.79	-22.21	46	34.93	19.2	2.56	32.9	-	-	P	H
		742.95	30.04	-15.96	46	30.84	27.86	4.05	32.71	-	-	P	H
		30.97	33.29	-6.71	40	40.63	24.7	0.76	32.8	-	-	P	V
		48.43	34.03	-5.97	40	51.02	15	0.98	32.97	100	20	P	V
		62.98	31.9	-8.1	40	52.18	11.7	1.12	33.1	-	-	P	V
		86.26	31.48	-8.52	40	49.01	13.9	1.33	32.76	-	-	P	V
		110.51	28.16	-15.34	43.5	42.63	16.85	1.56	32.88	-	-	P	V
		214.3	25.32	-18.18	43.5	41.47	14.86	2.09	33.1	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

Note symbol

*	**Fundamental Frequency** which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
!	Test result is **over limit** line.
P/A	**P**eak or **A**verage
H/V	**H**orizontal or **V**ertical

A calculation example for radiated spurious emission is shown as below:

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

1. Path Loss(dB) = Cable loss(dB) + Filter loss(dB) + Attenuator loss(dB)
2. Level(dBμV/m) = Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
3. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)

= 43.54 (dBμV/m)

2. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

= -10.46(dB)

Both peak and average measured complies with the limit line, so test result is “PASS”.

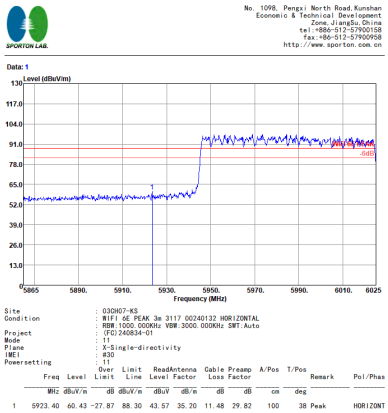
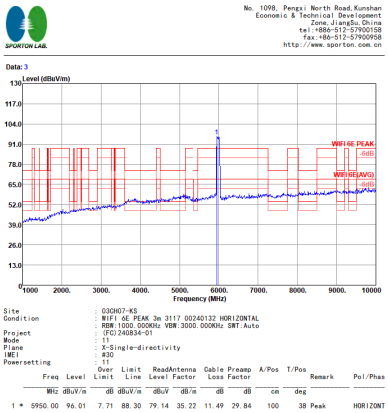
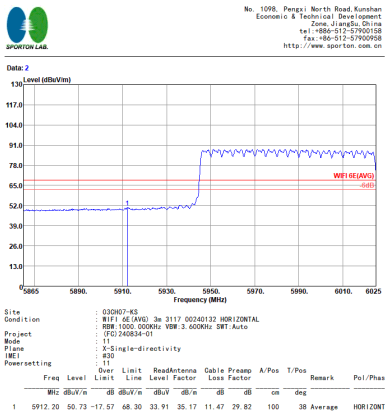
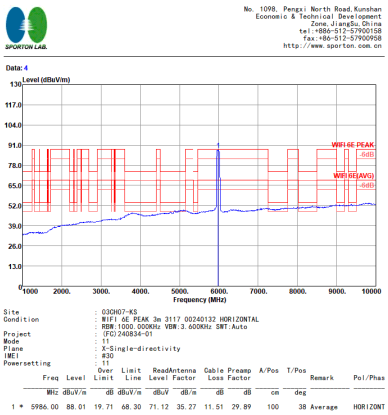
Appendix B. Radiated Spurious Emission

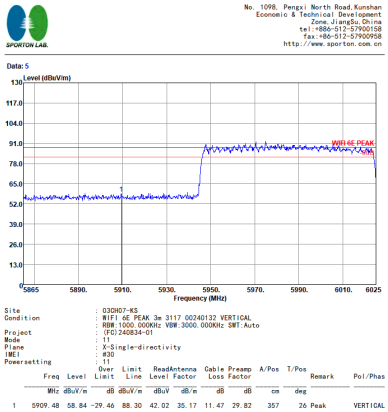
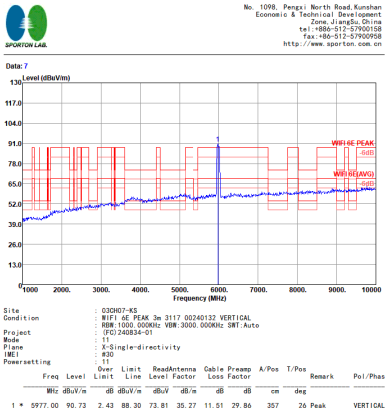
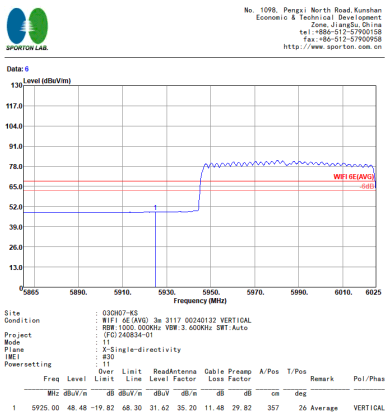
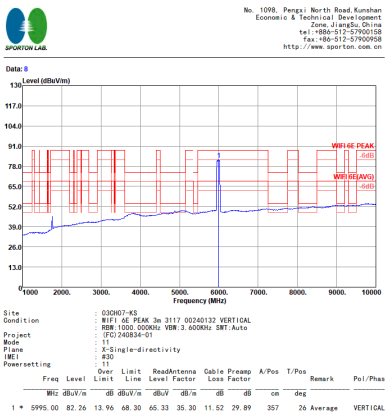
Note symbol

-L	**Low channel location**
-R	**High channel location**

U-NII 5 - 5925-6425MHzMHz

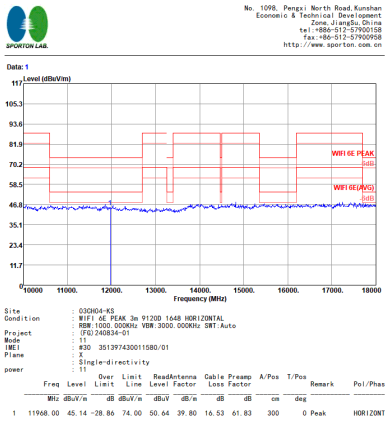
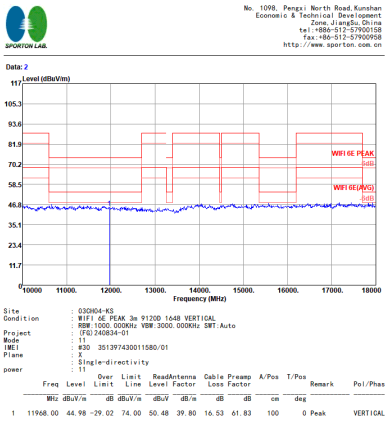
WIFI 802.11ax HE80 Full RU (Band Edge @ 3m)

WIFI	U-NII 5 - 5925-6425MHz Band Edge @ 3m	
ANT	802.11ax HE80 Full RU CH07 5985MHz	
1+2	Horizontal	Fundamental
Peak		
Avg.		

WIFI	U-NII 5 - 5925-6425MHz Band Edge @ 3m	
ANT	802.11ax HE80 Full RU CH07 5985MHz	
1+2	Vertical	Fundamental
Peak		
Avg.		

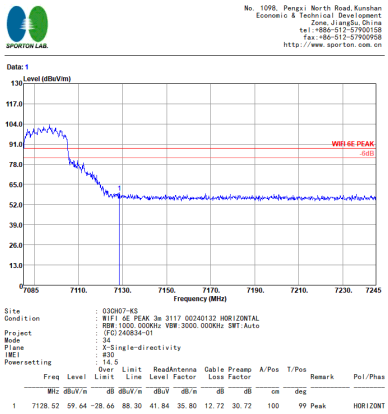
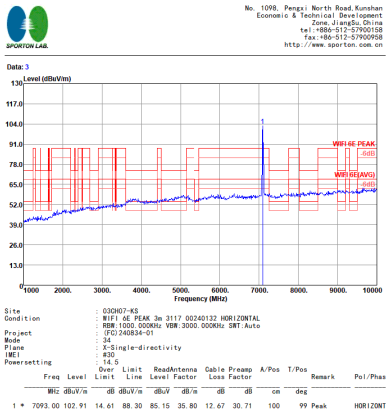
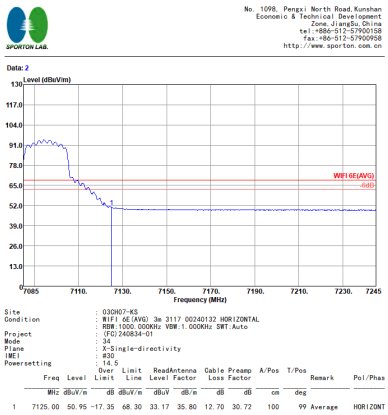
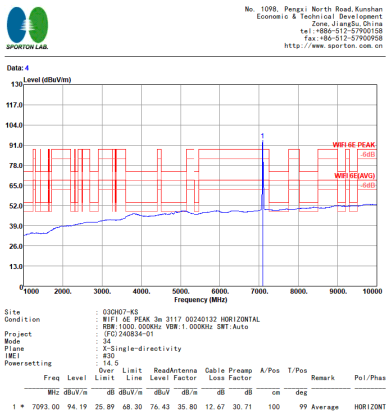
U-NII 5 - 5925-6425MHzMHz

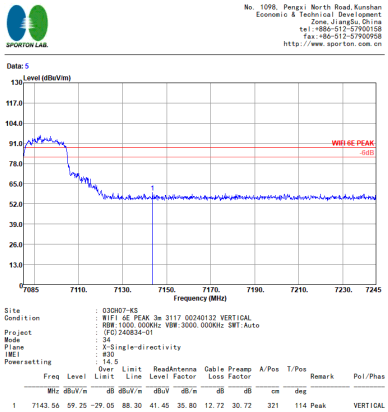
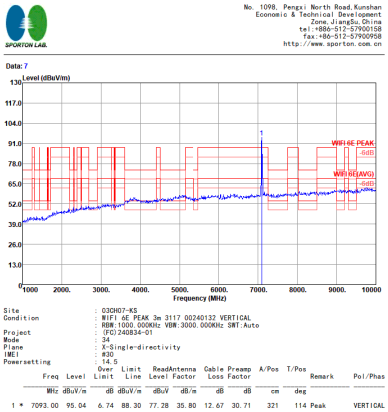
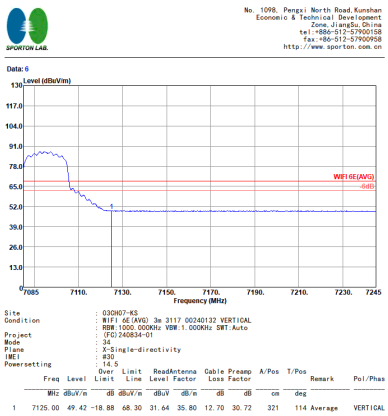
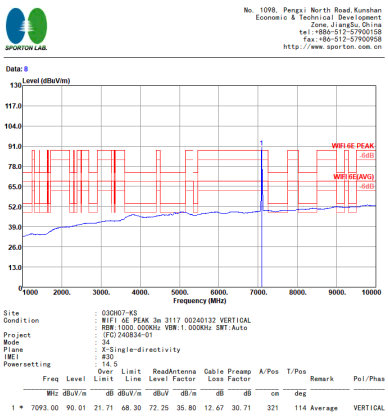
WIFI 802.11ax HE80 Full RU (Harmonic @ 3m)

WIFI	U-NII 5 - 5925-6425MHz Harmonic @ 3m	
ANT	802.11ax HE80 Full RU CH07 5985MHz	
1+2	Horizontal	Vertical
Peak Avg.		

U-NII 8 - 6875-7125MHzMHz

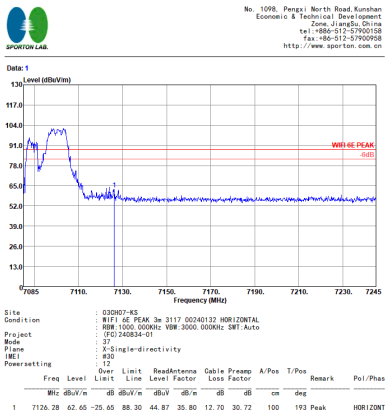
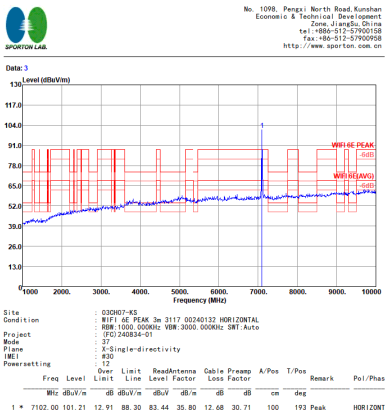
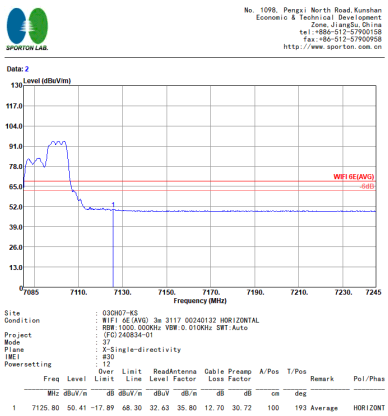
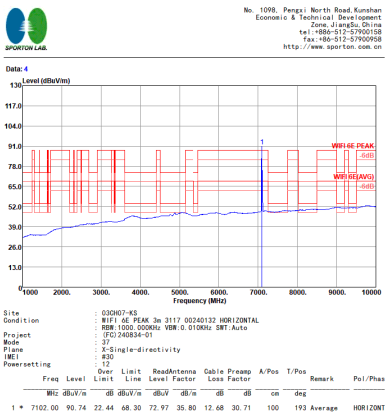
WIFI 802.11ax HE20 Full RU (Band Edge @ 3m)

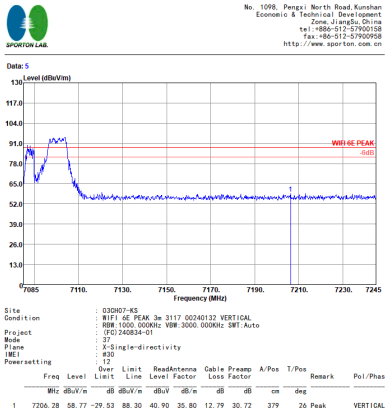
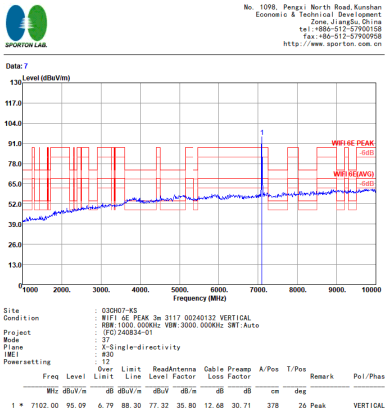
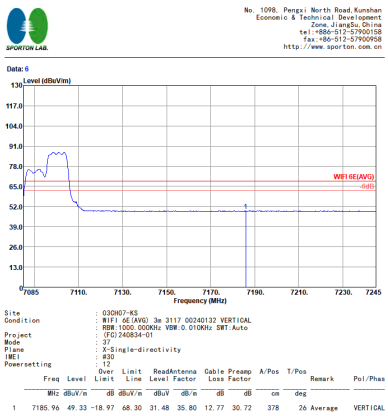
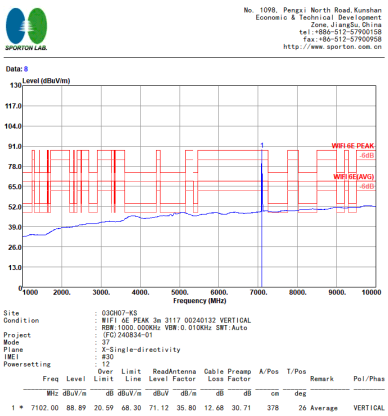
WIFI	U-NII 8 - 6875-7125MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full RU CH229 7095MHz	
1+2	Horizontal	Fundamental
Peak		
Avg.		

WIFI	U-NII 8 - 6875-7125MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full RU CH229 7095MHz	
1+2	Vertical	Fundamental
Peak		
Avg.		

U-NII 8 - 6875-7125MHzMHz

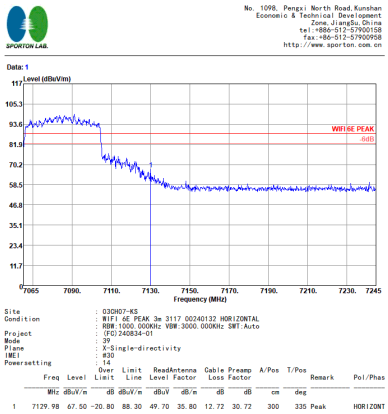
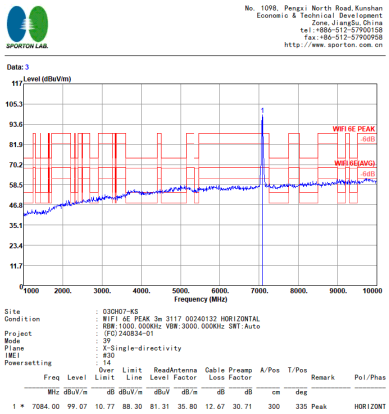
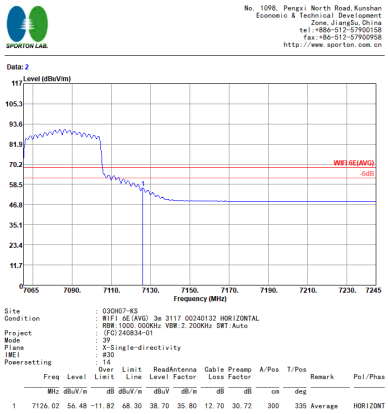
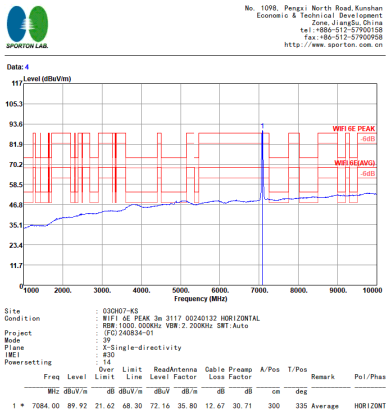
WIFI 802.11ax HE20 Partial RU 106/54 (Band Edge @ 3m)

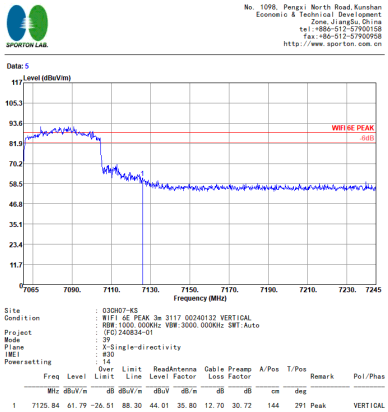
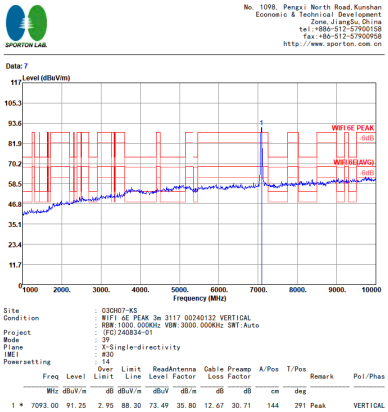
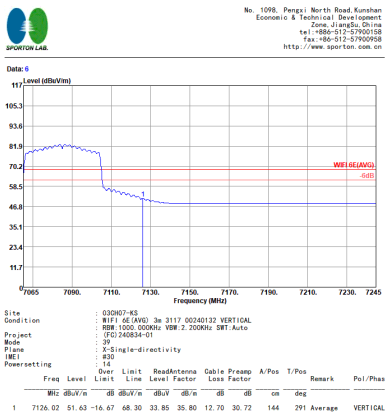
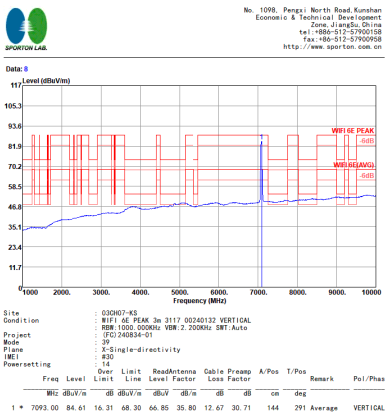
WIFI	U-NII 8 - 6875-7125MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial RU 106/54 CH229 7095MHz	
1+2	Horizontal	Fundamental
Peak		
Avg.		

WIFI	U-NII 8 - 6875-7125MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial RU 106/54 CH229 7095MHz	
1+2	Vertical	Fundamental
Peak		
Avg.		

U-NII 8 - 6875-7125MHzMHz

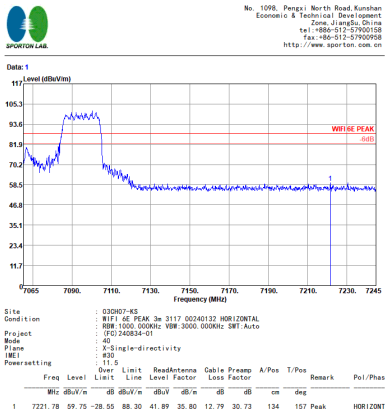
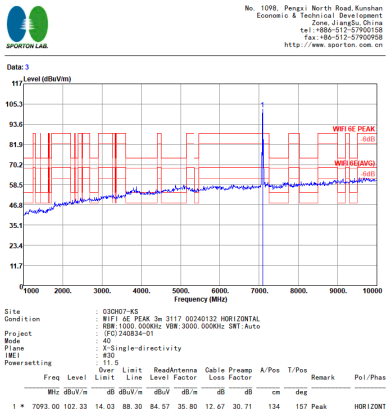
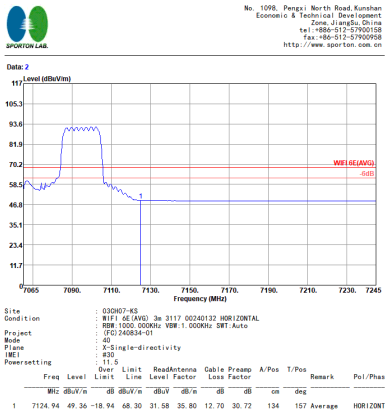
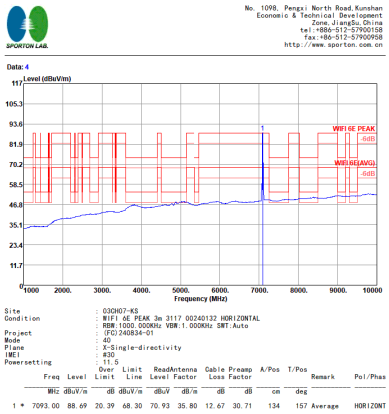
WIFI 802.11ax HE40 Full RU (Band Edge @ 3m)

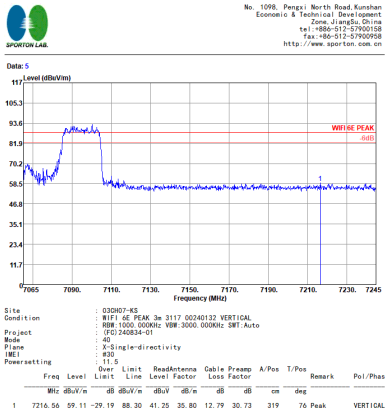
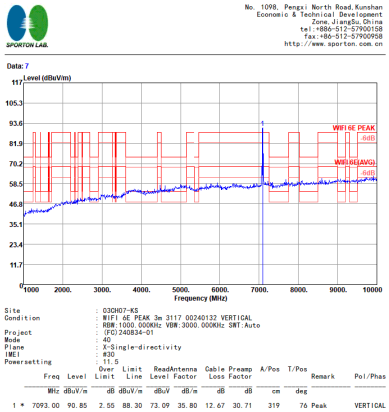
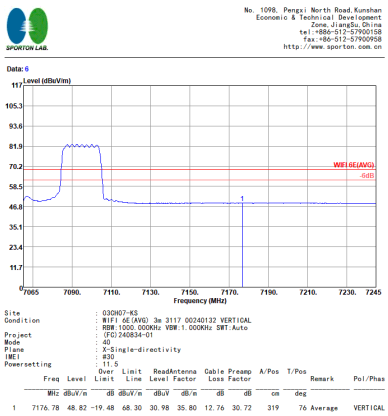
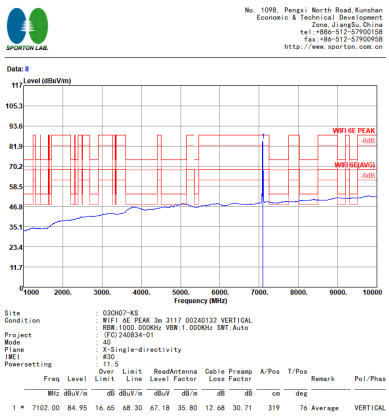
WIFI	U-NII 8 - 6875-7125MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full RU CH227 7085MHz	
1+2	Horizontal	Fundamental
Peak		
Avg.		

WIFI	U-NII 8 - 6875-7125MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full RU CH227 7085MHz	
1+2	Vertical	Fundamental
Peak		
Avg.		

U-NII 8 - 6875-7125MHzMHz

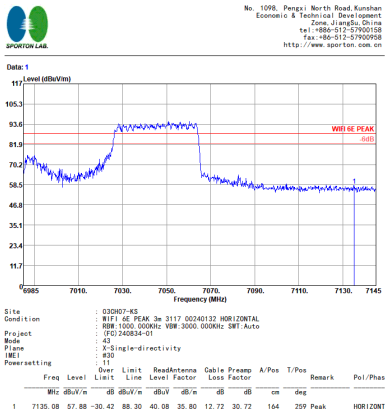
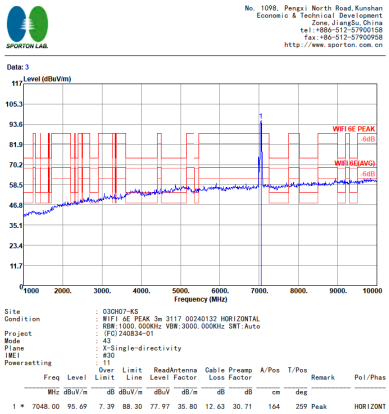
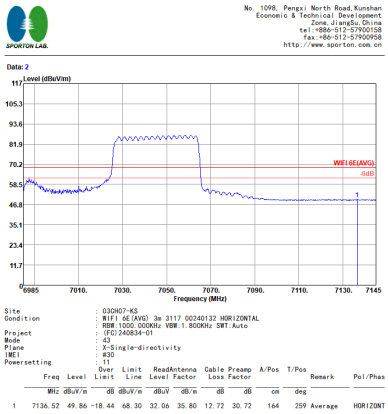
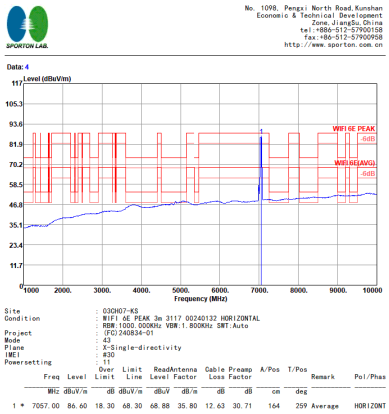
WIFI 802.11ax HE40 Partial RU 242/62 (Band Edge @ 3m)

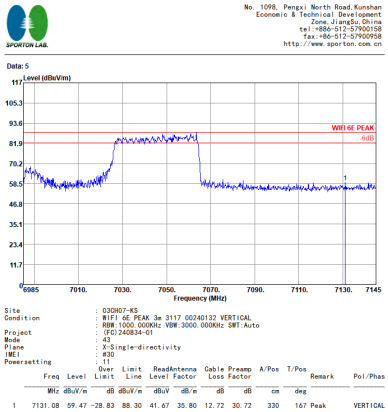
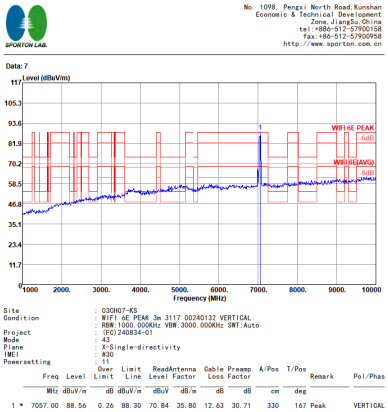
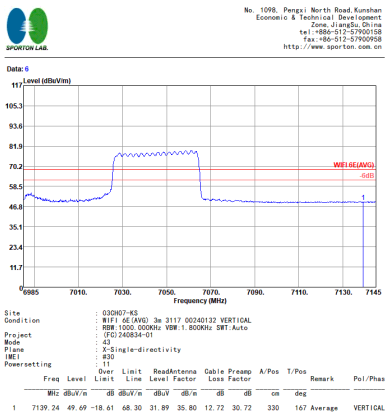
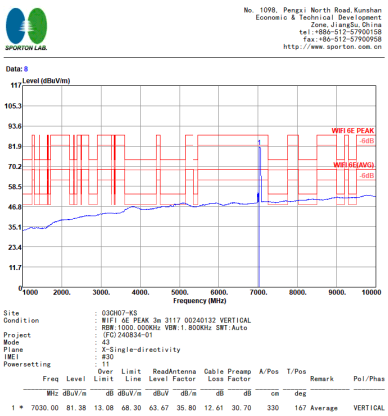
WIFI	U-NII 8 - 6875-7125MHz Band Edge @ 3m	
ANT	802.11ax HE40 Partial RU 242/62 CH227 7085MHz	
1+2	Horizontal	Fundamental
Peak		
Avg.		

WIFI	U-NII 8 - 6875-7125MHz Band Edge @ 3m	
ANT	802.11ax HE40 Partial RU 242/62 CH227 7085MHz	
1+2	Vertical	Fundamental
Peak		
Avg.		

U-NII 8 - 6875-7125MHzMHz

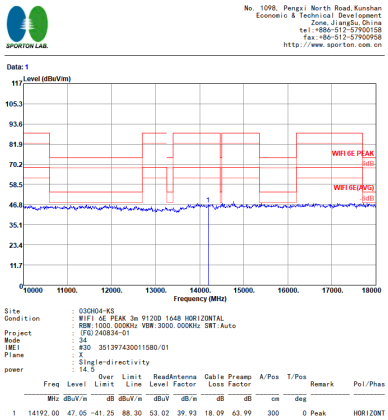
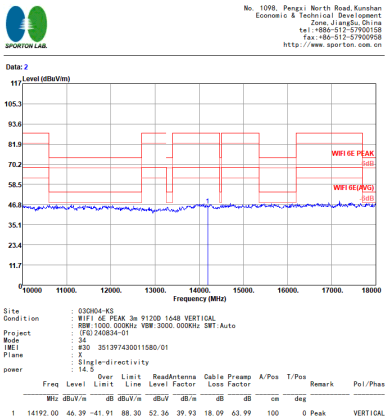
WIFI 802.11ax HE80 Partial RU 484/66 (Band Edge @ 3m)

WIFI	U-NII 8 - 6875-7125MHz Band Edge @ 3m	
ANT	802.11ax HE80 Partial RU 484/66 CH215 7025MHz	
1+2	Horizontal	Fundamental
Peak		
Avg.		

WIFI	U-NII 8 - 6875-7125MHz Band Edge @ 3m	
ANT	802.11ax HE80 Partial RU 484/66 CH215 7025MHz	
1+2	Vertical	Fundamental
Peak		
Avg.		

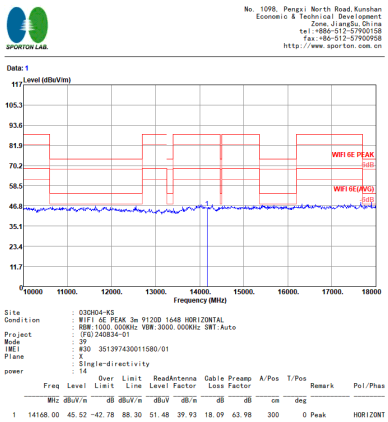
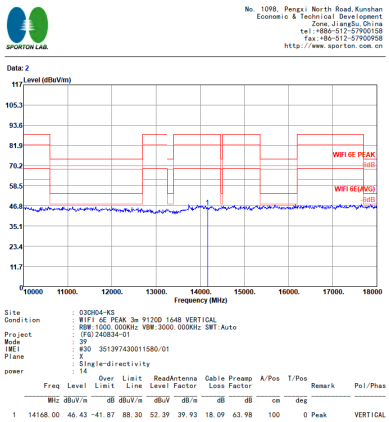
U-NII 8 - 6875-7125MHzMHz

WIFI 802.11ax HE20 Full RU (Harmonic @ 3m)

WIFI	U-NII 8 - 6875-7125MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full RU CH229 7095 MHz	
1+2	Horizontal	Vertical
Peak Avg.		

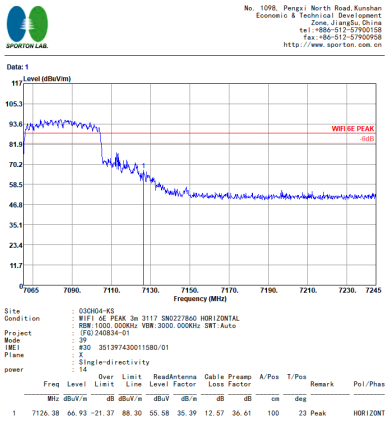
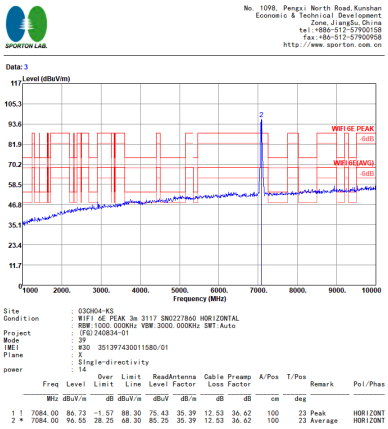
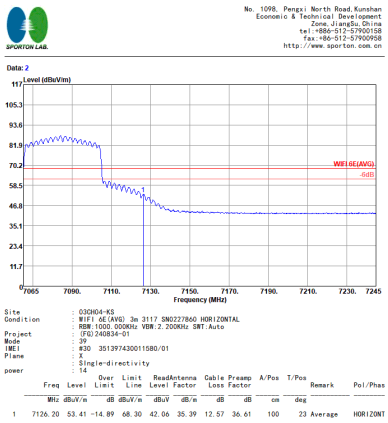
U-NII 8 - 6875-7125MHz

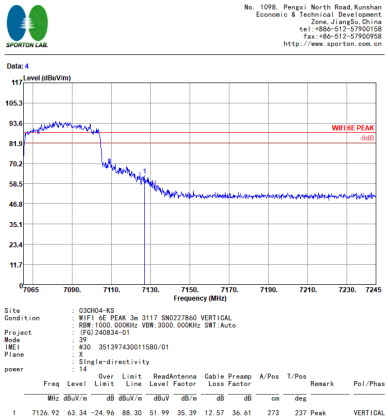
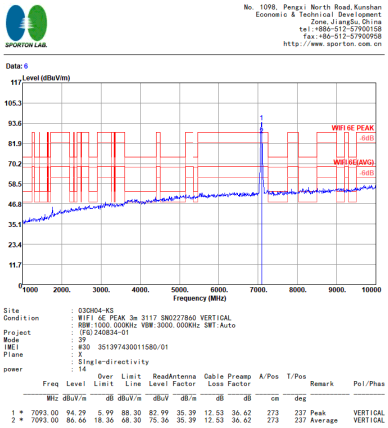
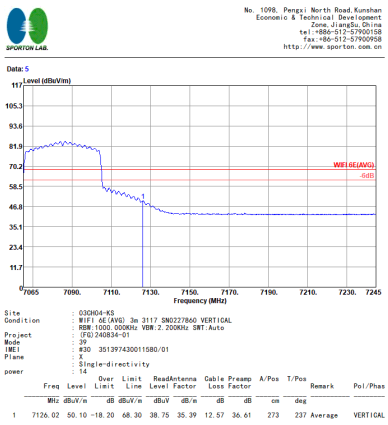
WIFI 802.11ax HE40 Full RU (Harmonic @ 3m)

WIFI	U-NII 8 - 6875-7125MHz Harmonic @ 3m	
ANT	802.11ax HE40 Full RU CH227 7085MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH04-KS Condition : WIFI 6E PEAK 3m 9120D 1648 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : (FG)240834-01 Mode : 39 IMEI : #30 351397430011580/01 Plane : X power : Single-directivity : 14 Freq Level Over Limit Limit ReadAntenna Level Factor Cable Preamp Loss Factor A/Pos T/Pos Remark Pol/Phas MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 14168.00 45.52 -42.78 88.30 51.48 39.93 18.09 63.98 300 0 Peak HORIZONT	 Site : 03CH04-KS Condition : WIFI 6E PEAK 3m 9120D 1648 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : (FG)240834-01 Mode : 39 IMEI : #30 351397430011580/01 Plane : X power : Single-directivity : 14 Freq Level Over Limit Limit ReadAntenna Level Factor Cable Preamp Loss Factor A/Pos T/Pos Remark Pol/Phas MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 14168.00 46.43 -41.87 88.30 52.39 39.93 18.09 63.98 100 0 Peak VERTICAL

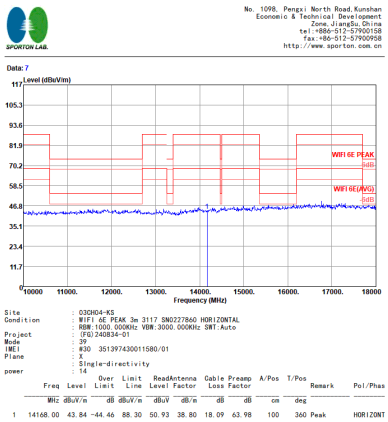
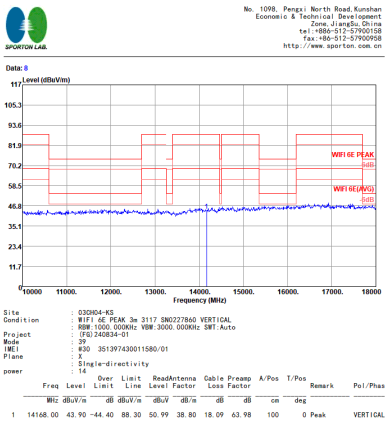
RSE Co-location

WIFI 802.11ax HE40 Full RB + 5G NR n5 (Band Edge @ 3m)

WIFI	U-NII 8 - 6875-7125MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full RB CH227 7085MHz	
1+2	Horizontal	Fundamental
Peak		
Avg.		

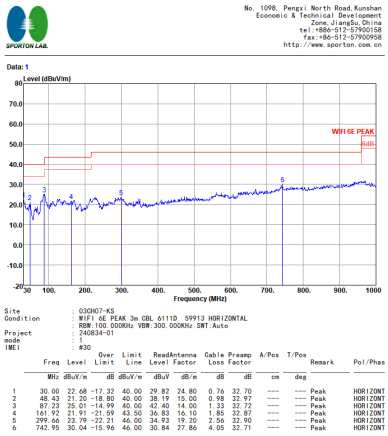
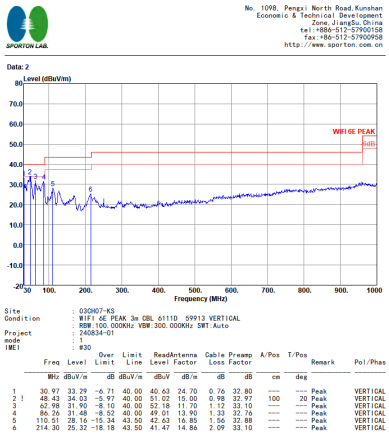
WIFI	U-NII 8 - 6875-7125MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full RB CH227 7085MHz	
1+2	Vertical	Fundamental
Peak		
Avg.		

WIFI 802.11ax HE40 Full RB + 5G NR n5 (Harmonic @ 3m)

WIFI	U-NII 8 - 6875-7125MHz Harmonic @ 3m	
ANT	802.11ax HE40 Full RB CH227 7085MHz	
1+2	Horizontal	Vertical
Peak Avg.		

Emission below 1GHz

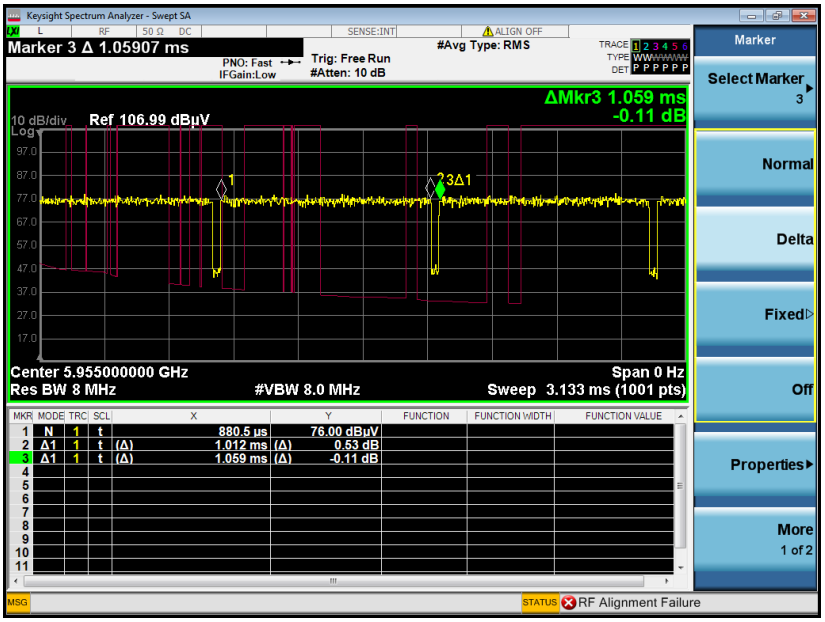
6GHz WIFI 802.11ax HE40 Full RU (LF)

WIFI	6GHz WIFI	
ANT	802.11ax HE40 Full RU LF	
1+2	Horizontal	Vertical
QP / Peak	 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark Pol/Phas MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 30.00 22.68 -17.32 40.00 29.82 24.80 0.76 32.70 --- --- Peak HORIZONT 2 48.43 21.20 -18.80 40.00 38.19 15.00 0.98 32.97 --- --- Peak HORIZONT 3 87.23 25.01 -14.99 40.00 42.40 14.00 1.33 32.72 --- --- Peak HORIZONT 4 161.92 21.91 -21.59 43.50 36.83 16.10 1.85 32.87 --- --- Peak HORIZONT 5 299.66 23.79 -22.21 46.00 34.93 19.20 2.56 32.90 --- --- Peak HORIZONT 6 742.95 30.04 -15.96 46.00 30.84 27.86 4.05 32.71 --- --- Peak HORIZONT	 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark Pol/Phas MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 30.97 33.29 -6.71 40.00 40.63 24.70 0.76 32.80 --- --- Peak VERTICAL 2 ! 48.43 34.03 -5.97 40.00 51.02 15.00 0.98 32.97 100 20 Peak VERTICAL 3 62.98 31.90 -8.10 40.00 52.18 11.70 1.12 33.10 --- --- Peak VERTICAL 4 86.26 31.48 -8.52 40.00 49.01 13.90 1.33 32.76 --- --- Peak VERTICAL 5 110.51 28.16 -15.34 43.50 42.63 16.85 1.56 32.88 --- --- Peak VERTICAL 6 214.30 25.32 -18.18 43.50 41.47 14.86 2.09 33.10 --- --- Peak VERTICAL	

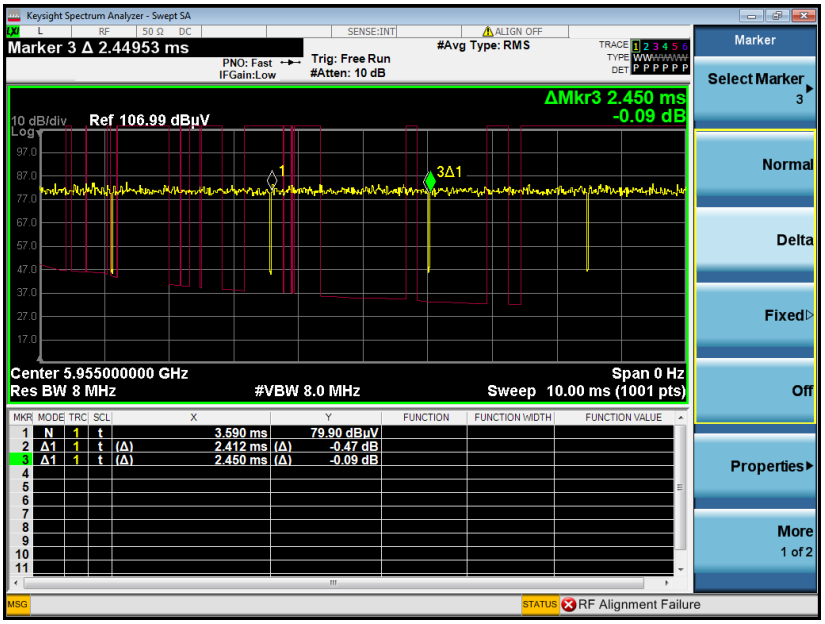
Appendix C. Duty Cycle Plots

Mode	Antenna	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
802.11ax HE20 Full RU	1+2	95.56	1.012	0.988	1kHz
802.11ax HE20 Partial RU106	1+2	98.45	-	-	10Hz
802.11ax HE40 Full RU	1+2	92.30	0.534	1.874	2.2kHz
802.11ax HE40 Partial RU242	1+2	96.00	1.080	0.926	1kHz
802.11ax HE80 Full RU	1+2	86.06	0.284	3.521	3.6kHz
802.11ax HE80 Partial RU484	1+2	92.88	0.574	1.742	1.8kHz

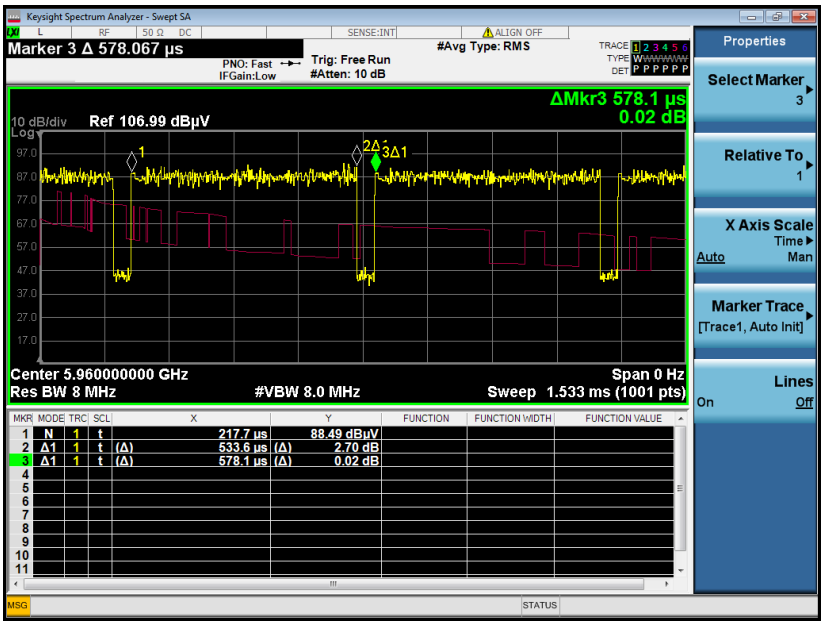
802.11ax HE20 Full RU



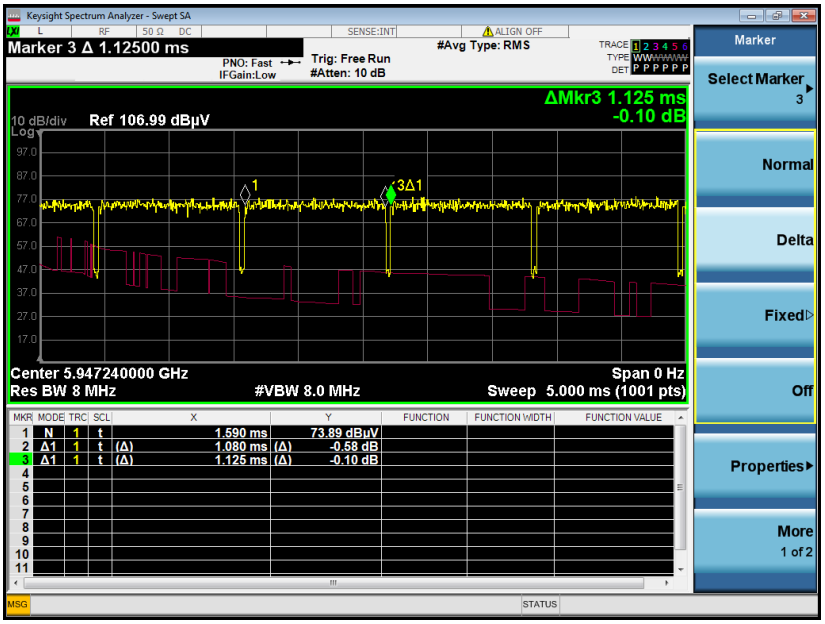
802.11ax HE20 Partial RU106



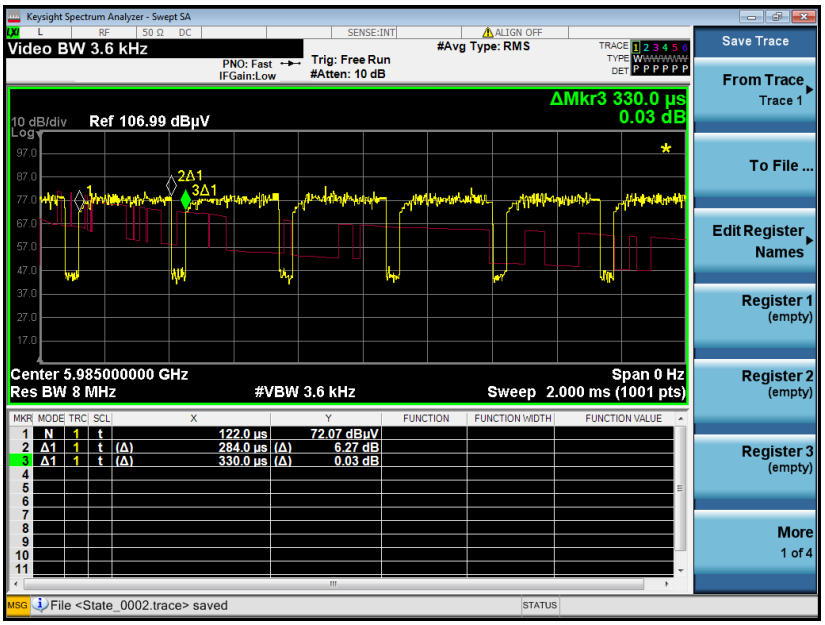
802.11ax HE40 Full RU



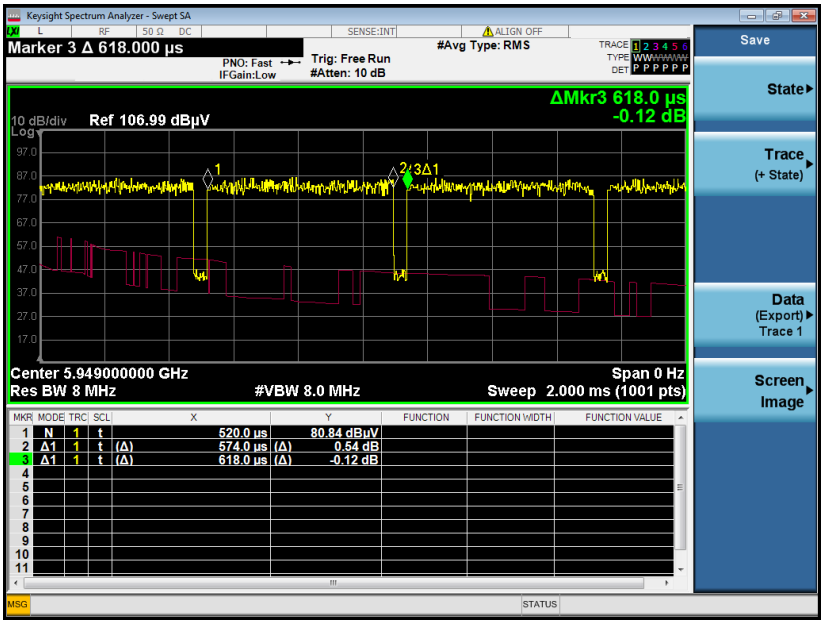
802.11ax HE40 Partial RU242



802.11ax HE80 Full RU



802.11ax HE80 Partial RU484



Appendix E. Reference Report

Please refer to Sporton report number FR240834H&FR240812 which is issued separately.