
FCC Test Report

Report No.: AGC00119150104FE04

FCC ID : BRCPC1021
APPLICATION PURPOSE : Original Equipment
PRODUCT DESIGNATION : tablet pc
BRAND NAME : Kinwei, Titan
MODEL NAME : PC1021ME
CLIENT : Kintech Co., Ltd.
DATE OF ISSUE : 24 Mar. 2015
STANDARD(S) : FCC Part 15.247
TEST PROCEDURE(S) : KDB 558074 v03r02
REPORT VERSION : V1.0

Attestation of Global Compliance (Shenzhen) Co., Ltd



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Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	24 Mar. 2015	Valid	Original Report

TABLE OF CONTENTS

1. VERIFICATION OF CONFORMITY	5
2. GENERAL INFORMATION	6
2.1. PRODUCT DESCRIPTION	6
2.2. TABLE OF CARRIER FREQUENCIES	6
2.3. IEEE 802.11N MODULATION SCHEME	7
2.4. RELATED SUBMITTAL(S) / GRANT (S)	7
2.5. TEST METHODOLOGY	7
2.6. SPECIAL ACCESSORIES	7
2.7. EQUIPMENT MODIFICATIONS	8
3. MEASUREMENT UNCERTAINTY	9
4. DESCRIPTION OF TEST MODES	9
5. SYSTEM TEST CONFIGURATION	10
5.1. CONFIGURATION OF EUT SYSTEM	10
5.2. EQUIPMENT USED IN EUT SYSTEM	10
5.3. SUMMARY OF TEST RESULTS	10
6. TEST FACILITY	11
7. OUTPUT POWER	12
7.1. MEASUREMENT PROCEDURE	12
7.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)	13
7.3. LIMITS AND MEASUREMENT RESULT	14
8. 6DB BANDWIDTH	16
8.1. MEASUREMENT PROCEDURE	16
8.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)	16
8.3. LIMITS AND MEASUREMENT RESULTS	16
9. CONDUCTED SPURIOUS EMISSION	21
9.1. MEASUREMENT PROCEDURE	21
9.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)	21
9.3. MEASUREMENT EQUIPMENT USED	21
9.4. LIMITS AND MEASUREMENT RESULT	21
10. MAXIMUM CONDUCTED OUTPUT POWER SPECTRAL DENSITY	50
10.1 MEASUREMENT PROCEDURE	50
10.2 TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)	50
10.3 MEASUREMENT EQUIPMENT USED	50
10.4 LIMITS AND MEASUREMENT RESULT	50

11. RADIATED EMISSION 55
11.1. MEASUREMENT PROCEDURE 55
11.2. TEST SETUP 56
11.3. LIMITS AND MEASUREMENT RESULT 57
11.4. TEST RESULT 57

12. BAND EDGE EMISSION 72
12.1. MEASUREMENT PROCEDURE..... 72
12.2. TEST SET-UP 72
12.3. Radiated Test Result 73
12.4. Conducted Test Result 81

13. FCC LINE CONDUCTED EMISSION TEST 85
13.1. LIMITS OF LINE CONDUCTED EMISSION TEST 85
13.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST 85
13.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST 86
13.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST 86
13.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST 87

APPENDIX A: PHOTOGRAPHS OF TEST SETUP 89
APPENDIX B: PHOTOGRAPHS OF EUT 91

1. VERIFICATION OF CONFORMITY

Applicant	Kintech Co., Ltd.
Address	1F-5F, Bldg 22, Chen Tian Industrial Zone, Xi Xiang, Bao An District, Shenzhen, Guang Dong, China
Manufacturer	Kintech Co., Ltd.
Address	1F-5F, Bldg 22, Chen Tian Industrial Zone, Xi Xiang, Bao An District, Shenzhen, Guang Dong, China
Product Designation	tablet pc
Brand Name	Kinwei, Titan
Test Model	PC1021ME
Series Model	PC1021Y,PCXXXX(XXXX represents0000~9999), PCXXXXME(XXXX represents0000~9999),PCXXXXY(XXXX represents0000~9999;Yrepresents A~Z),KW-PC1021I,KW-PC1021,KW-PC1021J, KW-PCXXXXI(XXXX represents0000~9999),KW-PCXXXX(XXXX represents0000~9999),KW-PCXXXXJ(XXXX represents0000~9999)
Difference description	All the same except for the model name.
Date of test	17 Mar. 2015 ~23 Mar. 2015
Report Template	AGCRT-US-BGN/RF

We hereby certify that:

The above equipment was tested by Shenzhen STS Test Services Co., Ltd. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4 (2003) and the energy emitted by the sample EUT tested as described in this report is in compliance with requirement of FCC Part 15 Rules requirement.

Prepared By

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Matt Zhang 24 Mar. 2015

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Kidd Yang 24 Mar. 2015

Authorized By

Solger Zhang

Solger Zhang 24 Mar. 2015

2. GENERAL INFORMATION

2.1. PRODUCT DESCRIPTION

The EUT is designed as “tablet pc”. It is designed by way of utilizing the DSSS and OFDM technology to achieve the system operation.

A major technical description of EUT is described as following

Operation Frequency	2.412 GHz~2.462GHz
Output Power	IEEE 802.11b:13.28dBm; IEEE 802.11g:10.27dBm; IEEE 802.11n(20):9.99dBm; IEEE 802.11n(40):7.66dBm
Modulation	DSSS(DBPSK/DQPSK/CCK);OFDM(BPSK/QPSK/16-QAM/64-QAM)
Number of channels	11
Hardware Version	P102A-MB-V1.0.0
Software Version	P102_VJC031_20150124
Antenna Designation	Integrated Antenna
Antenna Gain	0dBi
Power Supply	DC3.7V by Built-in Li-ion Battery

2.2. TABLE OF CARRIER FREQUENCIES

Frequency Band	Channel Number	Frequency
2400~2483.5MHZ	1	2412 MHZ
	2	2417 MHZ
	3	2422 MHZ
	4	2427 MHZ
	5	2432 MHZ
	6	2437 MHZ
	7	2442 MHZ
	8	2447 MHZ
	9	2452 MHZ
	10	2457 MHZ
	11	2462 MHZ

Note: For 20MHZ bandwidth system use Channel 1 to Channel 11
For 40MHZ bandwidth system use Channel 3 to Channel 9

2.3. IEEE 802.11N MODULATION SCHEME

MCS Index	Nss	Modulation	R	NBPSC	NCBPS		NDBPS		Data rate(Mbps)	
									800nsGI	
					20MHz	40MHz	20MHz	40MHz	20MHz	40MHz
0	1	BPSK	1/2	1	52	108	26	54	6.5	13.5
1	1	QPSK	1/2	2	104	216	52	108	13.0	27.0
2	1	QPSK	3/4	2	104	216	78	162	19.5	40.5
3	1	16-QAM	1/2	4	208	432	104	216	26.0	54.0
4	1	16-QAM	3/4	4	208	432	156	324	39.0	81.0
5	1	64-QAM	2/3	6	312	648	208	432	52.0	108.0
6	1	64-QAM	3/4	6	312	648	234	489	58.5	121.5
7	1	64-QAM	5/6	6	312	648	260	540	65.0	135.0

Symbol	Explanation
NSS	Number of spatial streams
R	Code rate
NBPSC	Number of coded bits per single carrier
NCBPS	Number of coded bits per symbol
NDBPS	Number of data bits per symbol
GI	Guard interval

2.4. RELATED SUBMITTAL(S) / GRANT (S)

This submittal(s) (test report) is intended for **FCC ID: BRCPC1021** filing to comply with the FCC Part 15 requirements.

2.5. TEST METHODOLOGY

Both conducted and radiated testing was performed according to the procedures in ANSI C63.4 (2003). Radiated testing was performed at an antenna to EUT distance 3 meters.

Others testing (listed at item 5.3) was performed according to the procedures in FCC Part 15.247 rules KDB 558074 D01 DTS Meas Guidance v03r02.

2.6. SPECIAL ACCESSORIES

Refer to section 5.2.

2.7. EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.

3. MEASUREMENT UNCERTAINTY

Conducted measurement: +/- 2.75dB

Radiated measurement: +/- 3.2dB

4. DESCRIPTION OF TEST MODES

Pretest Mode	Description
Mode 1	802.11b CH1/ CH6/ CH11
Mode 2	802.11g CH1/ CH6/ CH11
Mode 3	802.11n(20)CH1/ CH6/ CH11
Mode 4	802.11n(40) CH3/ CH6/ CH9
Mode 5	Link Mode

For Conducted Emission	
Final Test Mode	Description
Mode 5	Link Mode

For Radiated Emission	
Final Test Mode	Description
Mode 1	802.11b CH1/ CH6/ CH11
Mode 2	802.11g CH1/ CH6/ CH11
Mode 3	802.11n CH1/ CH6/ CH11
Mode 4	802.11n(40) CH3/ CH6/ CH9
Mode 5	Link Mode

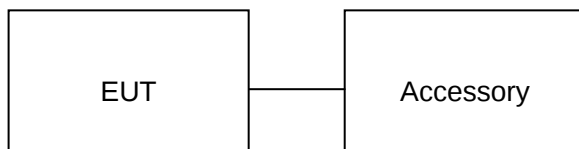
Note:

1. The EUT has been set to operate continuously on the lowest, middle and highest operation frequency Individually, and the eut is operating at its maximum duty cycle>or equal 98%
2. All modes under which configure applicable have been tested and the worst mode test data recording in the test report, if no other mode data.
3. For Radiated Emission, 3axis were chosen for testing for each applicable mode.

5. SYSTEM TEST CONFIGURATION

5.1. CONFIGURATION OF EUT SYSTEM

Configure:



5.2. EQUIPMENT USED IN EUT SYSTEM

Item	Equipment	Model No.	ID or Specification	Remark
1	tablet pc	PC1021ME	BRCPC1021	EUT
2	Adapter	JKY0212-0502000UL	DC5V/2A	Accessory
3	USB Cable	N/A	N/A	Accessory
4	Laptop	Dell	INSPIRON	A.E

Note: All the accessories have been used during the test in conduction emission test.

5.3. SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
§15.247	Output Power	Compliant
§15.247	6 dB Bandwidth	Compliant
§15.247	Conducted Spurious Emission	Compliant
§15.247	Maximum Conducted Output Power SPECTRAL Density	Compliant
§15.209	Radiated Emission	Compliant
§15.247	Band Edges	Compliant
§15.207	Line Conduction Emission	Compliant

Note: The EUT received power from DC3.7V lithium battery.

6. TEST FACILITY

Site	Shenzhen STS Test Services Co., Ltd.
Location	1/F, Building 2, Zhuoke Science Park, Chongqing Road, Fuyong, Baoan District, Shenzhen, China.
Description	FCC Registration No.: 842334; IC Registration No.: 12108A-1

ALL TEST EQUIPMENT LIST

Radiation Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Spectrum Analyzer	Agilent	E4407B	MY50140340	2014.10.25	2015.10.24
Test Receiver	R&S	ESCI	101427	2014.10.25	2015.10.24
Bilog Antenna	TESEQ	CBL6111D	34678	2014.10.27	2015.10.26
Horn Antenna	R&S	9120D	152265	2014.10.27	2015.10.26
Horn Ant	Schwarzbeck	BBHA 9170	9170-181	2014.07.06	2015.07.05
Amplifier	Agilent	8449B	60538	2014.10.25	2015.10.24
Loop Antenna	ARA	PLA-1030/B	1029	2014.06.08	2015.06.07
Power Meter	Anritsu	ML2495A	1204003	2014.10.25	2015.10.24
Power Sensor	Anritsu	MA2411B	100309	2014.10.25	2015.10.24
Low frequency cable	MURATA	R-03	130627	2014.10.25	2015.10.24
High frequency cable	HARBOUR	R-02	FL0000175	2014.10.25	2015.10.24

Conduction Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Test Receiver	R&S	ESCI	102086	2014.10.25	2015.10.24
LISN	R&S	ENV216	101242	2014.10.25	2015.10.24
LISN	EMCO	3810/2NM	000-23625	2014.10.25	2015.10.24
Conduction Cable	HUBER+SUHNER	C01	N/A	2014.10.25	2015.10.24

7. OUTPUT POWER

7.1. MEASUREMENT PROCEDURE

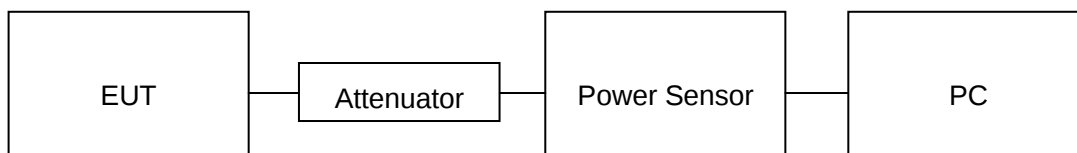
For max average conducted output power test:

1. Connect EUT RF output port to power probe through an RF attenuator.
2. Connect the power probe to the PC.
3. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
4. Record the maximum power from the software.

Note : The EUT was tested according to KDB 558074v03r02 for compliance to FCC 47CFR 15.247 requirements.

7.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

AVERAGE POWER SETUP



7.3. LIMITS AND MEASUREMENT RESULT

TEST ITEM	OUTPUT POWER
TEST MODE	802.11b with data rate 1

Frequency (GHz)	Average Power (dBm)	Applicable Limits (dBm)	Pass or Fail
2.412	13.00	30	Pass
2.437	12.69	30	Pass
2.462	13.28	30	Pass

TEST ITEM	OUTPUT POWER
TEST MODE	802.11g with data rate 6

Frequency (GHz)	Average Power (dBm)	Applicable Limits (dBm)	Pass or Fail
2.412	9.01	30	Pass
2.437	10.27	30	Pass
2.462	9.47	30	Pass

TEST ITEM	OUTPUT POWER
TEST MODE	802.11n 20 with data rate 6.5

Frequency (GHz)	Average Power (dBm)	Applicable Limits (dBm)	Pass or Fail
2.412	8.54	30	Pass
2.437	9.99	30	Pass
2.462	9.15	30	Pass

TEST ITEM	OUTPUT POWER
TEST MODE	802.11n 40 with data rate 13.5

Frequency (GHz)	Average Power (dBm)	Applicable Limits (dBm)	Pass or Fail
2.422	6.48	30	Pass
2.437	7.66	30	Pass
2.452	7.05	30	Pass

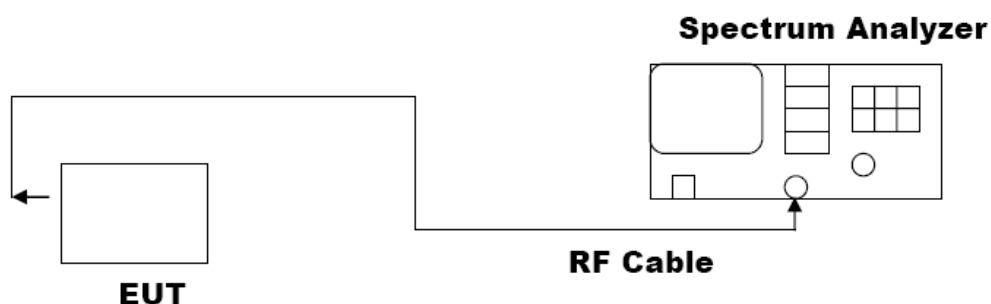
8. 6DB BANDWIDTH

8.1. MEASUREMENT PROCEDURE

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
3. Set SPA Centre Frequency = Operation Frequency, RBW= 100 KHz, VBW $\geq 3 \times$ RBW.
4. Set SPA Trace 1 Max hold, then View.

Note: The EUT was tested according to KDB 558074 for compliance to FCC 47CFR 15.247 requirements.

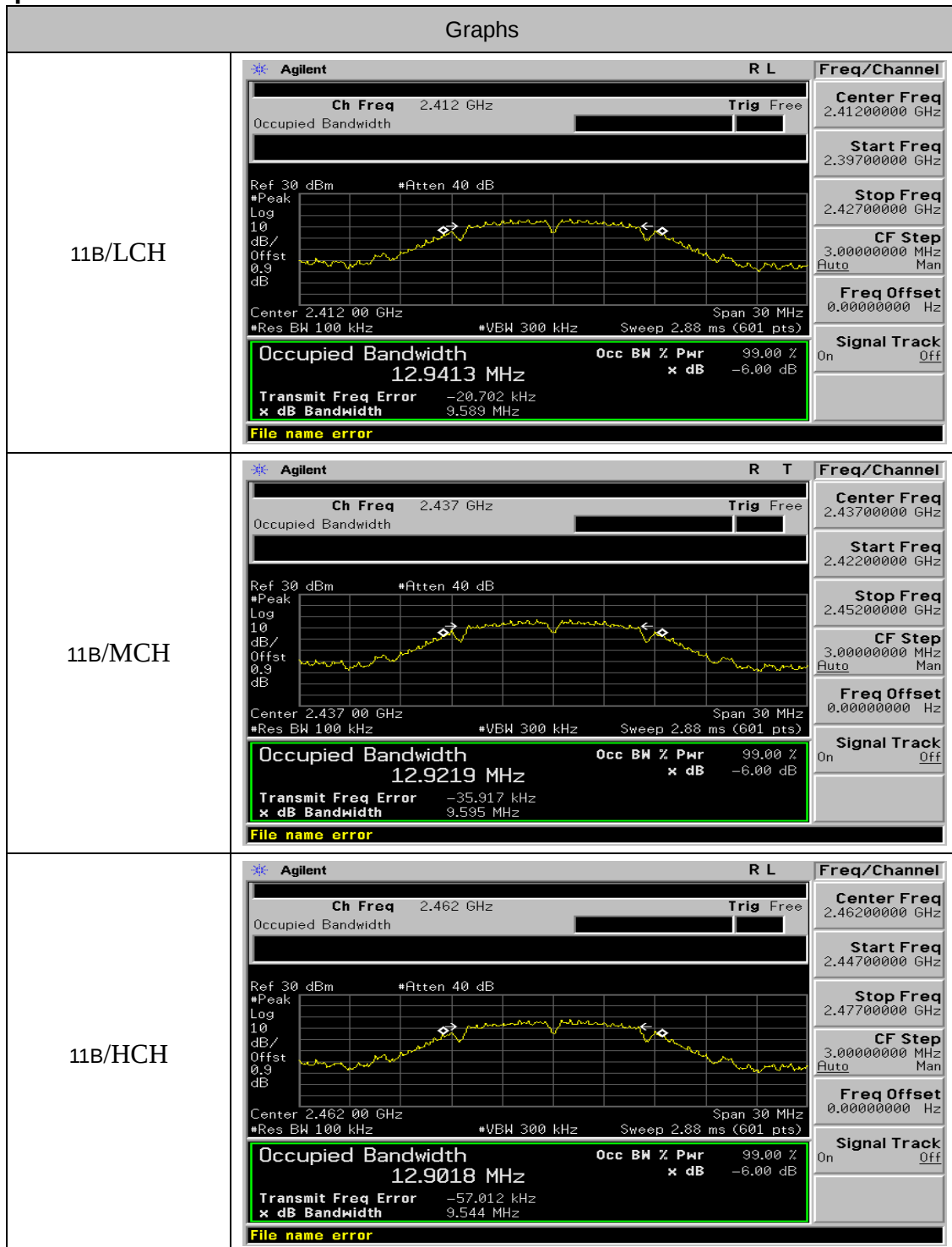
8.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)



8.3. LIMITS AND MEASUREMENT RESULTS

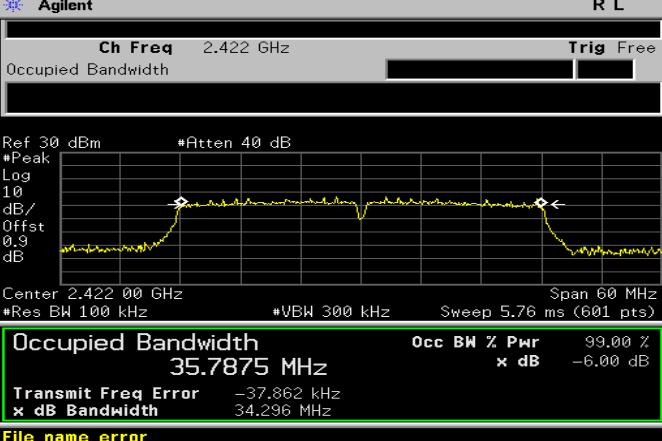
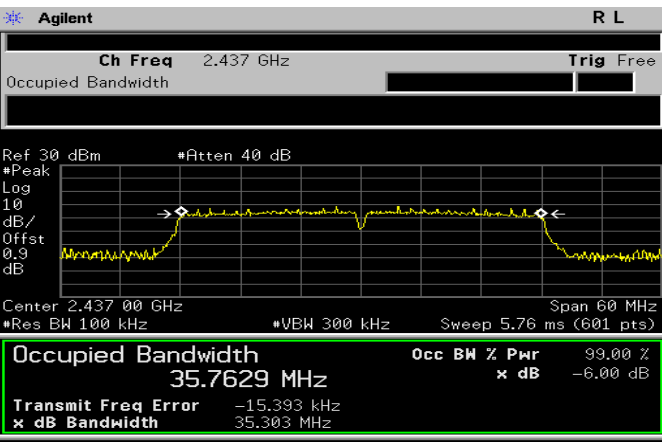
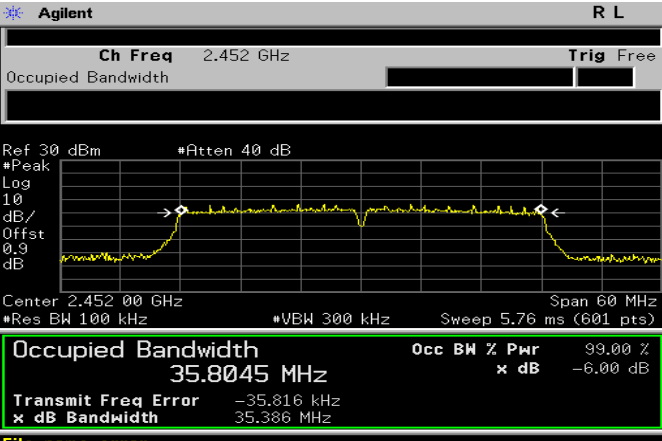
Mode	Channel	6dB Bandwidth [MHz]	OBW [MHz]	Verdict
11B	LCH	9.59	12.94	PASS
11B	MCH	9.59	12.92	PASS
11B	HCH	9.54	12.90	PASS
11G	LCH	12.42	16.37	PASS
11G	MCH	15.28	16.38	PASS
11G	HCH	12.98	16.36	PASS
11N20SISO	LCH	16.34	17.54	PASS
11N20SISO	MCH	14.76	17.54	PASS
11N20SISO	HCH	15.07	17.52	PASS
11N40SISO	LCH	34.30	35.79	PASS
11N40SISO	MCH	35.30	35.76	PASS
11N40SISO	HCH	35.39	35.80	PASS

Test Graph



11G/LCH	Agilent R L Freq/Channel Ch Freq 2.412 GHz Trig Free Occupied Bandwidth Ref 30 dBm *Atten 40 dB *Peak Log 10 dB/Offst 0.9 dB Center 2.412 00 GHz *Res BW 100 kHz *VBW 300 kHz Sweep 2.88 ms (601 pts) Span 30 MHz Occupied Bandwidth 16.3667 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error -821.954 Hz x dB Bandwidth 12.419 MHz File name error Center Freq 2.41200000 GHz Start Freq 2.39700000 GHz Stop Freq 2.42700000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
11G/MCH	Agilent R L Freq/Channel Ch Freq 2.437 GHz Trig Free Occupied Bandwidth Ref 30 dBm *Atten 40 dB *Peak Log 10 dB/Offst 0.9 dB Center 2.437 00 GHz *Res BW 100 kHz *VBW 300 kHz Sweep 2.88 ms (601 pts) Span 30 MHz Occupied Bandwidth 16.3752 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error -3.693 kHz x dB Bandwidth 15.279 MHz File name error Center Freq 2.43700000 GHz Start Freq 2.42200000 GHz Stop Freq 2.45200000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
11G/HCH	Agilent R L Freq/Channel Ch Freq 2.462 GHz Trig Free Occupied Bandwidth Ref 30 dBm *Atten 40 dB *Peak Log 10 dB/Offst 0.9 dB Center 2.462 00 GHz *Res BW 100 kHz *VBW 300 kHz Sweep 2.88 ms (601 pts) Span 30 MHz Occupied Bandwidth 16.3619 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error -6.863 kHz x dB Bandwidth 12.985 MHz File name error Center Freq 2.46200000 GHz Start Freq 2.44700000 GHz Stop Freq 2.47700000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

11N20SISO/LCH	Agilent R L Freq/Channel Ch Freq 2.412 GHz Trig Free Occupied Bandwidth Ref 30 dBm *Atten 40 dB *Peak Log 10 dB/ Offst 0.9 dB Center 2.412 00 GHz *Res BW 100 kHz *VBW 300 kHz Sweep 2.88 ms (601 pts) Span 30 MHz Occupied Bandwidth 17.5397 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error 3.506 kHz x dB Bandwidth 16.337 MHz File name error Center Freq 2.41200000 GHz Start Freq 2.39700000 GHz Stop Freq 2.42700000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
11N20SISO/MCH	Agilent R L Freq/Channel Ch Freq 2.437 GHz Trig Free Occupied Bandwidth Ref 30 dBm *Atten 40 dB *Peak Log 10 dB/ Offst 0.9 dB Center 2.437 00 GHz *Res BW 100 kHz *VBW 300 kHz Sweep 2.88 ms (601 pts) Span 30 MHz Occupied Bandwidth 17.5435 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error -1.090 kHz x dB Bandwidth 14.758 MHz File name error Center Freq 2.43700000 GHz Start Freq 2.42200000 GHz Stop Freq 2.45200000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
11N20SISO/HCH	Agilent R T Freq/Channel Ch Freq 2.462 GHz Trig Free Occupied Bandwidth Ref 30 dBm *Atten 40 dB *Peak Log 10 dB/ Offst 0.9 dB Center 2.462 00 GHz *Res BW 100 kHz *VBW 300 kHz Sweep 2.88 ms (601 pts) Span 30 MHz Occupied Bandwidth 17.5237 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error 2.736 kHz x dB Bandwidth 15.075 MHz File name error Center Freq 2.46200000 GHz Start Freq 2.44700000 GHz Stop Freq 2.47700000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

11N40SISO/LCH	 Agilent R L Ch Freq 2.422 GHz Trig Free Occupied Bandwidth Ref 30 dBm #Atten 40 dB Log 10 dB/Offst 0.9 dB Center 2.422 00 GHz Span 60 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 5.76 ms (601 pts) Occupied Bandwidth 35.7875 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error -37.862 kHz x dB Bandwidth 34.296 MHz File name error Freq/Channel Center Freq 2.42200000 GHz Start Freq 2.39200000 GHz Stop Freq 2.45200000 GHz CF Step 6.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
11N40SISO/MCH	 Agilent R L Ch Freq 2.437 GHz Trig Free Occupied Bandwidth Ref 30 dBm #Atten 40 dB Log 10 dB/Offst 0.9 dB Center 2.437 00 GHz Span 60 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 5.76 ms (601 pts) Occupied Bandwidth 35.7629 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error -15.393 kHz x dB Bandwidth 35.303 MHz File name error Freq/Channel Center Freq 2.43700000 GHz Start Freq 2.40700000 GHz Stop Freq 2.46700000 GHz CF Step 6.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
11N40SISO/HCH	 Agilent R L Ch Freq 2.452 GHz Trig Free Occupied Bandwidth Ref 30 dBm #Atten 40 dB Log 10 dB/Offst 0.9 dB Center 2.452 00 GHz Span 60 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 5.76 ms (601 pts) Occupied Bandwidth 35.8045 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error -35.816 kHz x dB Bandwidth 35.386 MHz File name error Freq/Channel Center Freq 2.45200000 GHz Start Freq 2.42200000 GHz Stop Freq 2.48200000 GHz CF Step 6.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

9. CONDUCTED SPURIOUS EMISSION

9.1. MEASUREMENT PROCEDURE

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
3. Set SPA Trace 1 Max hold, then View.

Note: The EUT was tested according to KDB 558074 for compliance to FCC 47CFR 15.247 requirements.

Owing to satisfy the requirements of the number of measurement points, we set the RBW=1MHz, VBW > RBW, scan up through 10th harmonic, and consider the tested results as the worst case, if the tested results conform to the requirement, we can deem that the real tested results(set the RBW=100KHz, VBW > RBW) are conform to the requirement.

9.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

The same as described in section 8.2.

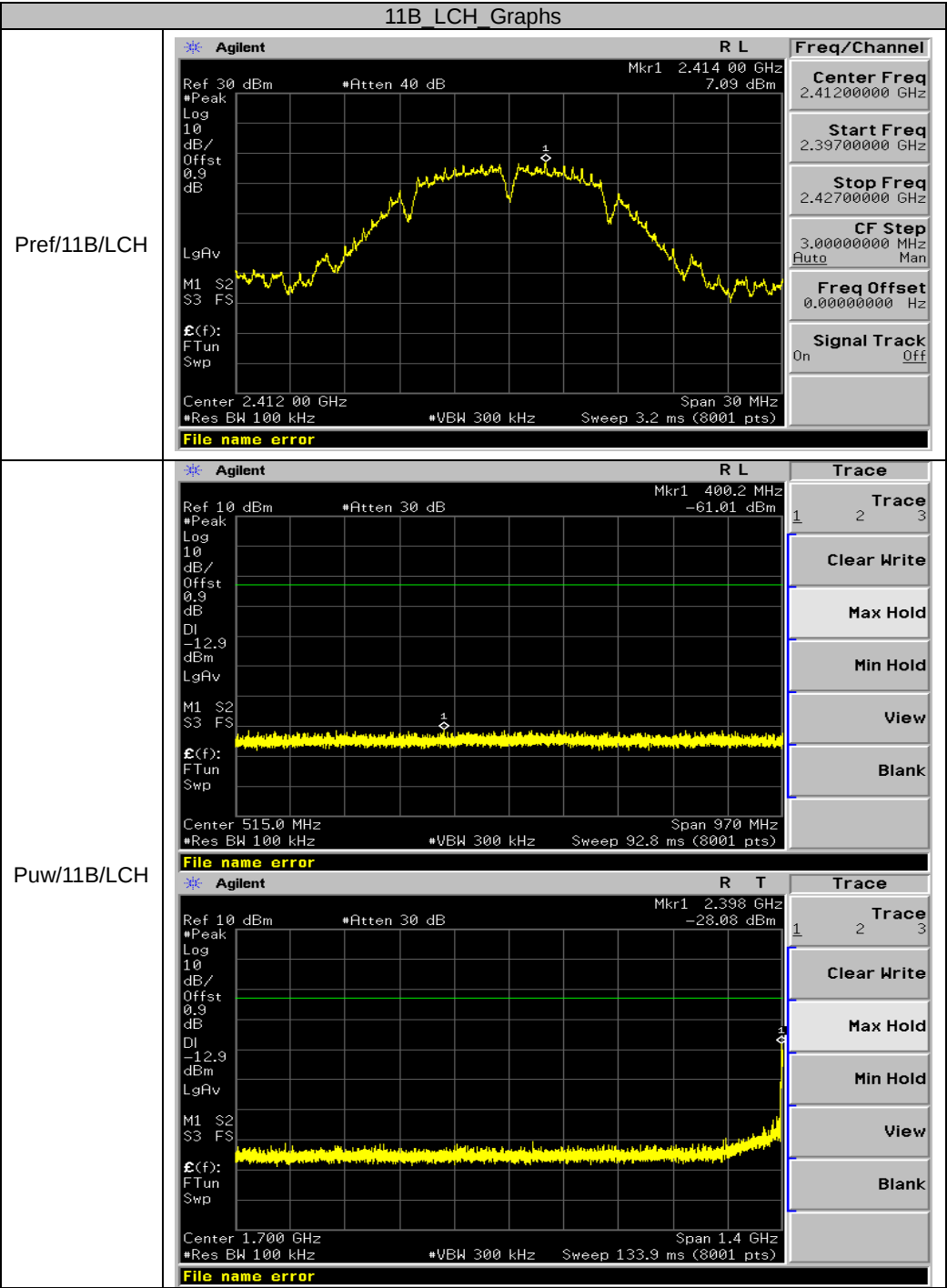
9.3. MEASUREMENT EQUIPMENT USED

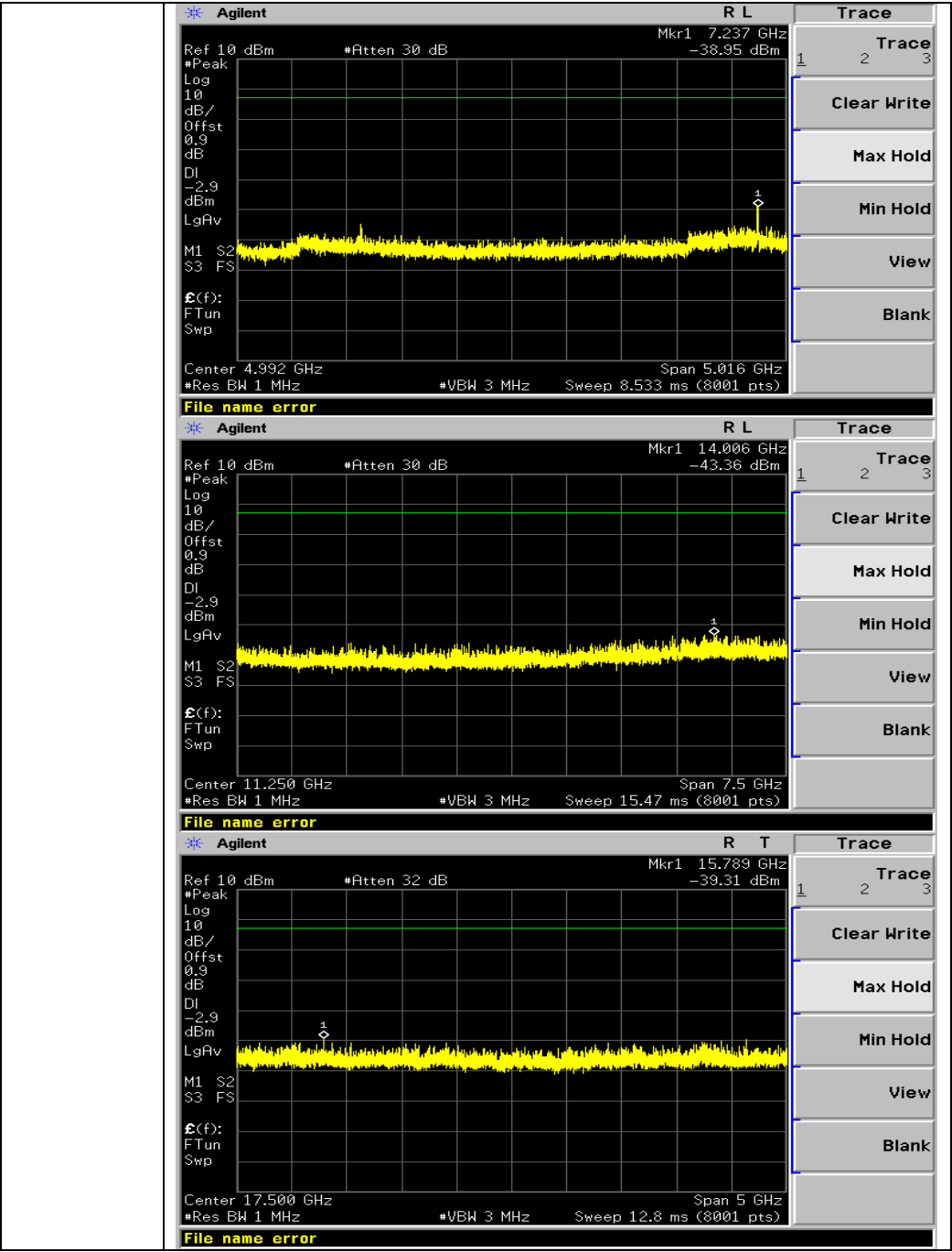
The same as described in section 6.

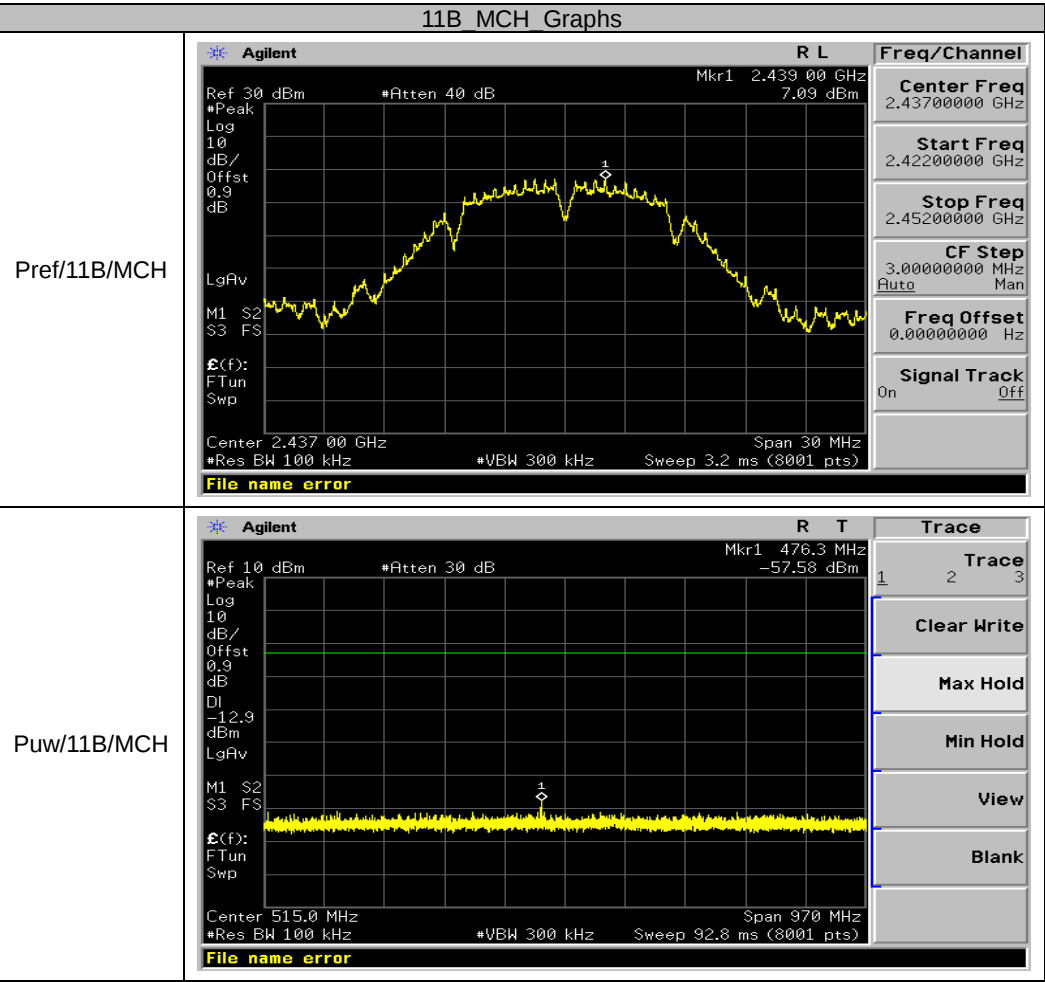
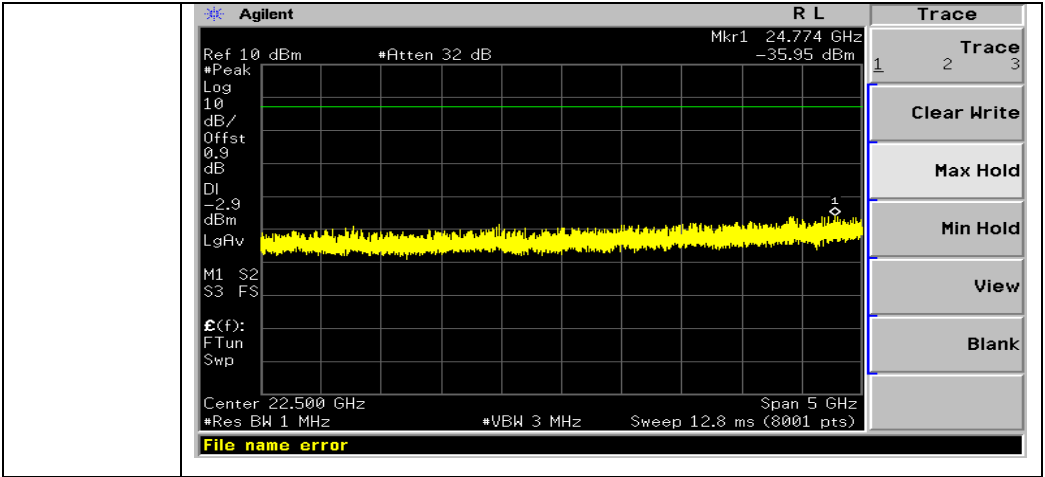
9.4. LIMITS AND MEASUREMENT RESULT

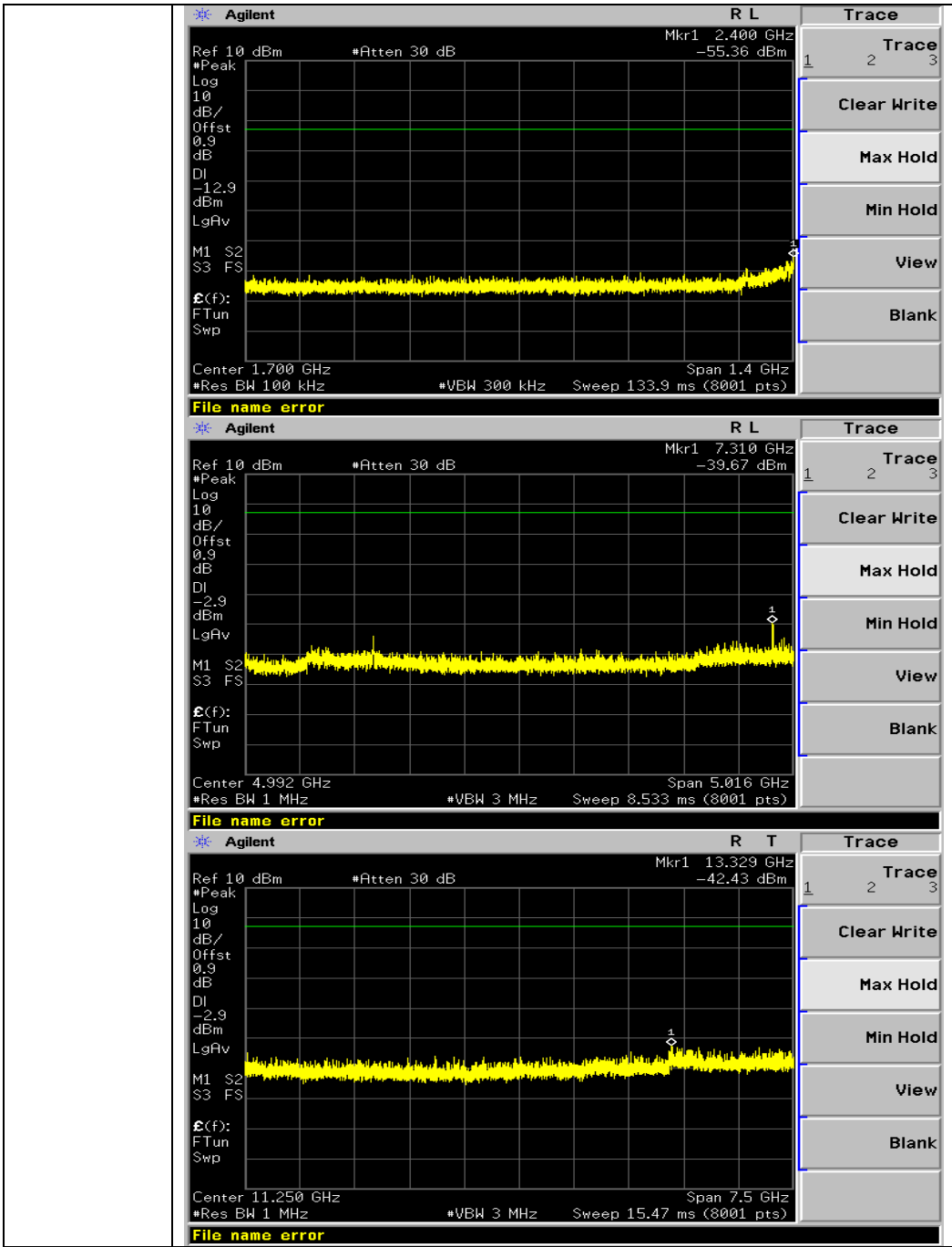
LIMITS AND MEASUREMENT RESULT		
Applicable Limits	Measurement Result	
	Test Data	Criteria
In any 100 KHz Bandwidth Outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produce by the intentional radiator shall be at least 20 dB below that in 100KHz bandwidth within the band that contains the highest level of the desired power. In addition, radiation emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in§15.209(a))	At least -20dBc than the limit Specified on the BOTTOM Channel	PASS
	At least -20dBc than the limit Specified on the TOP Channel	PASS

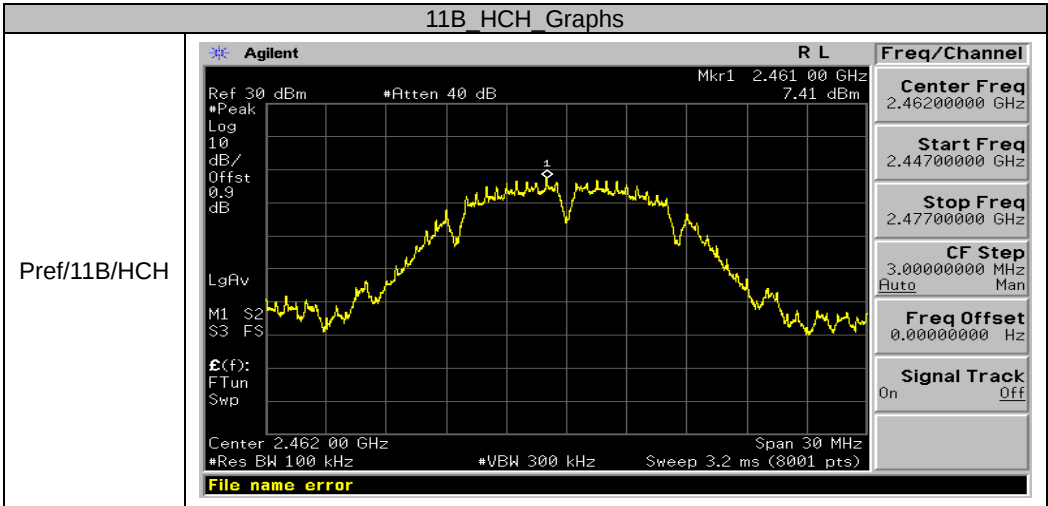
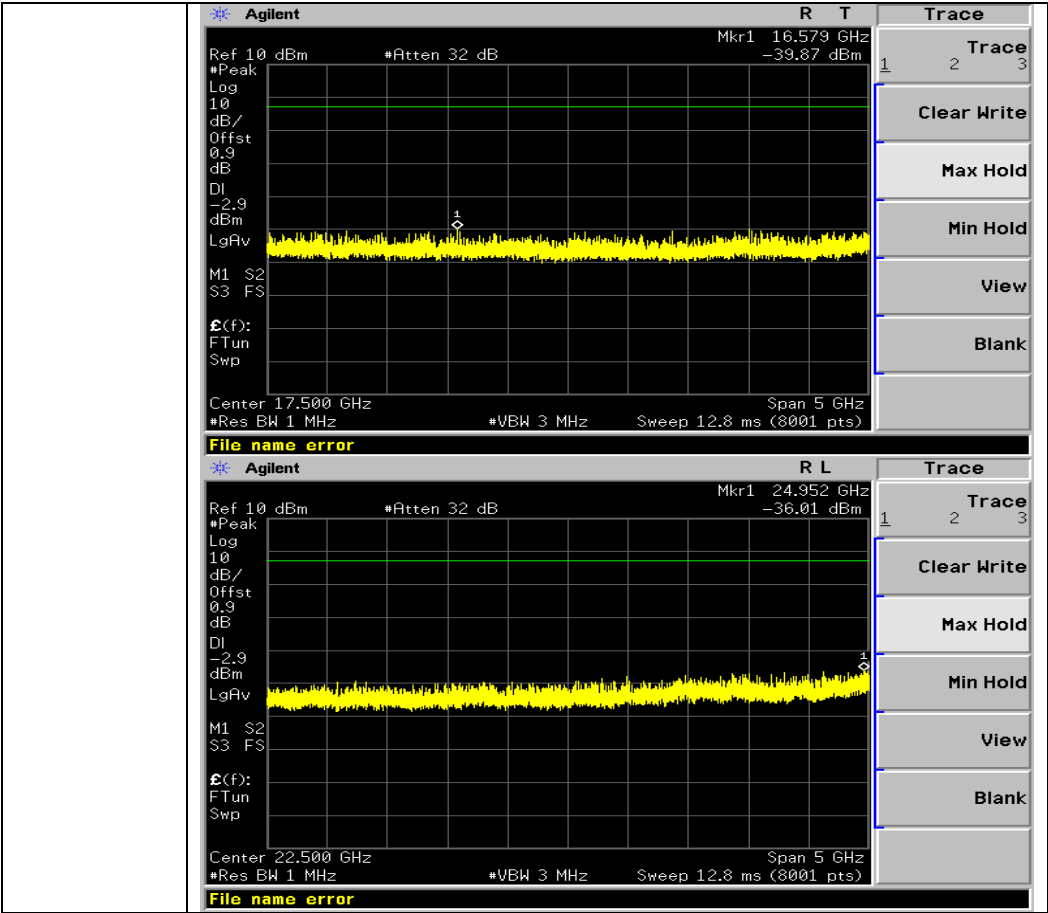
Test Graph

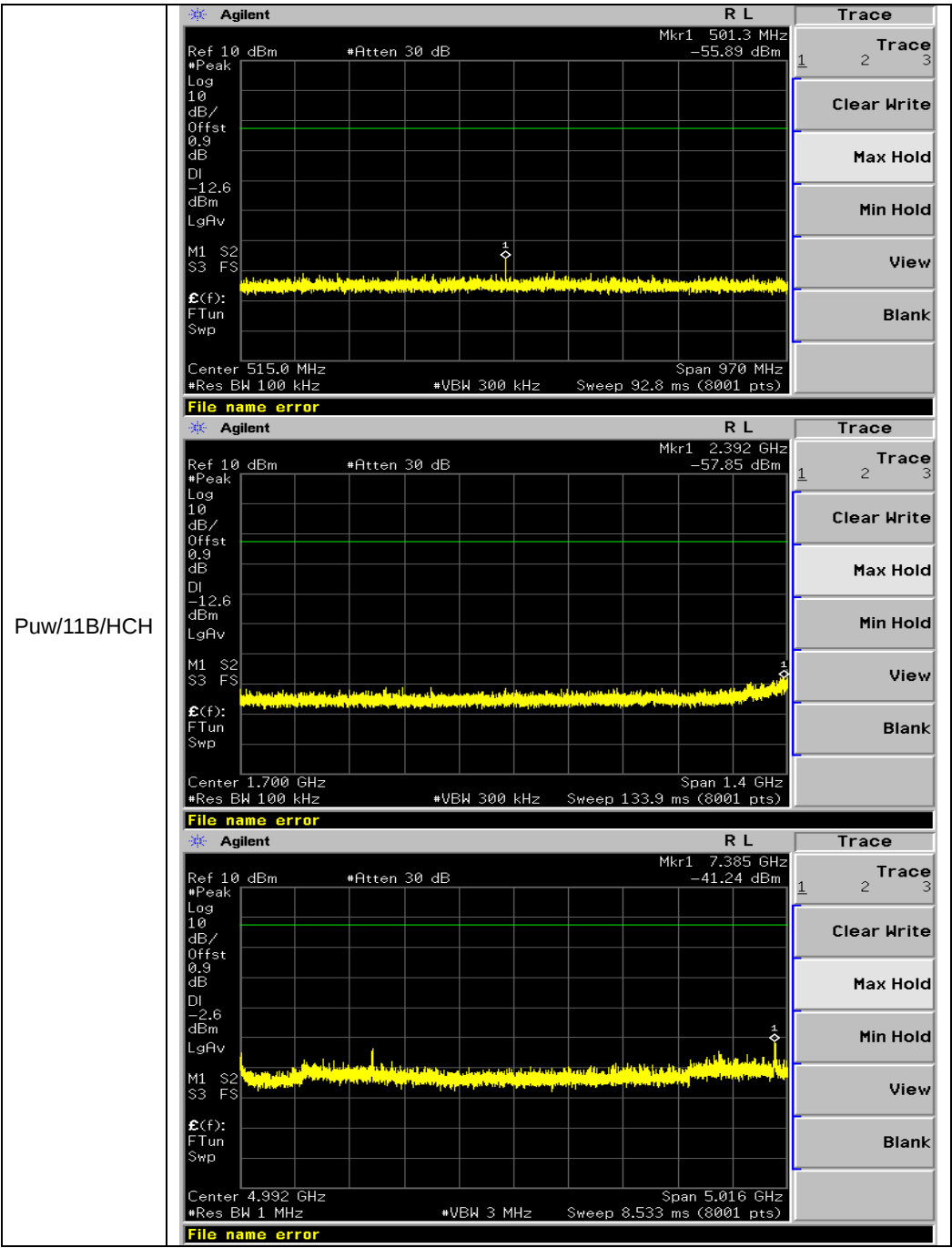




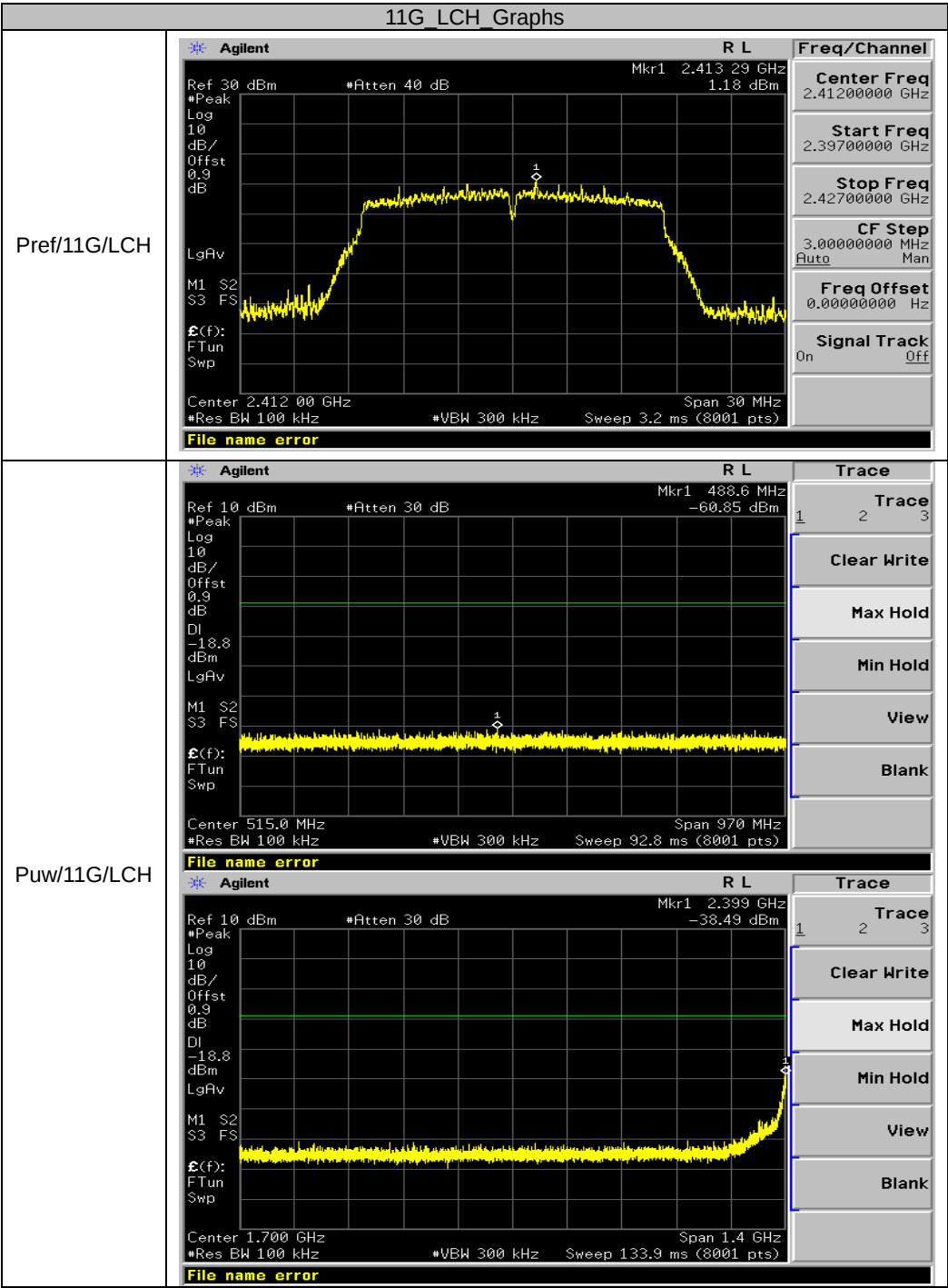




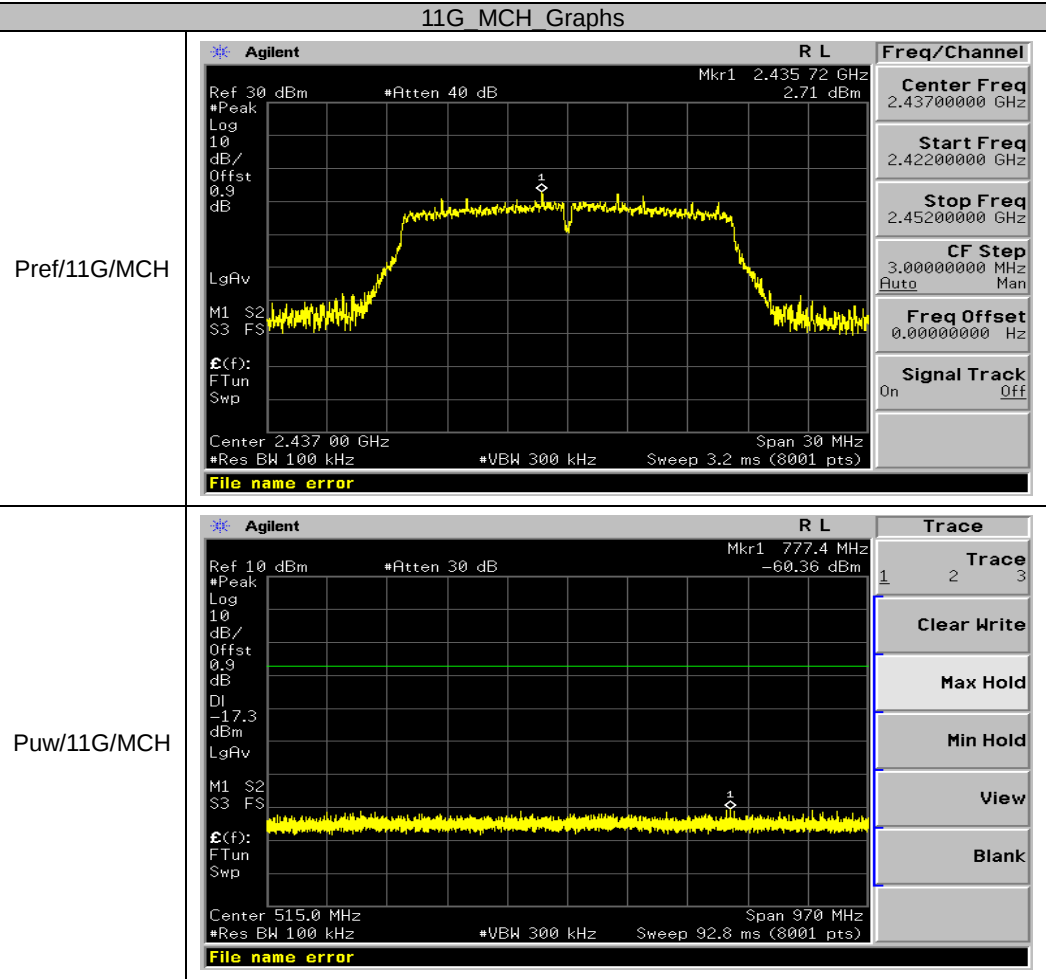
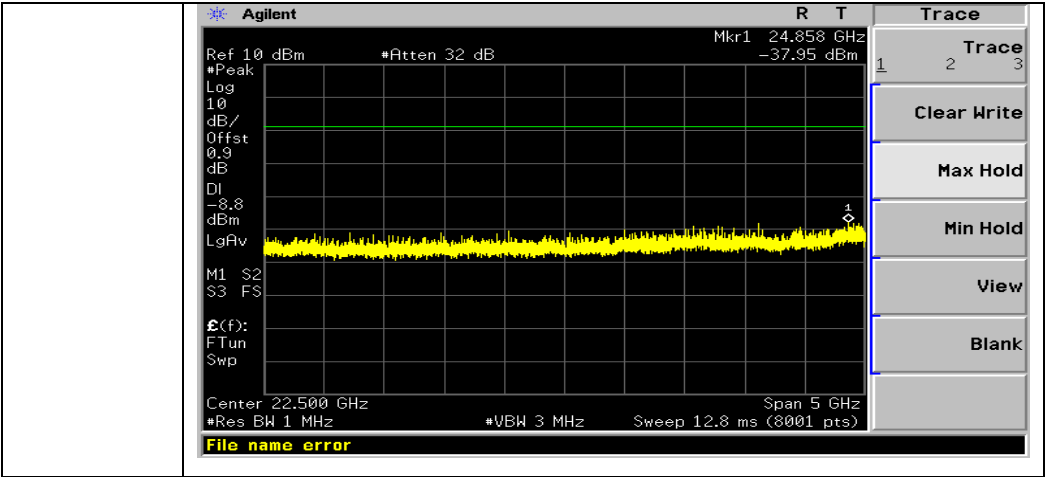


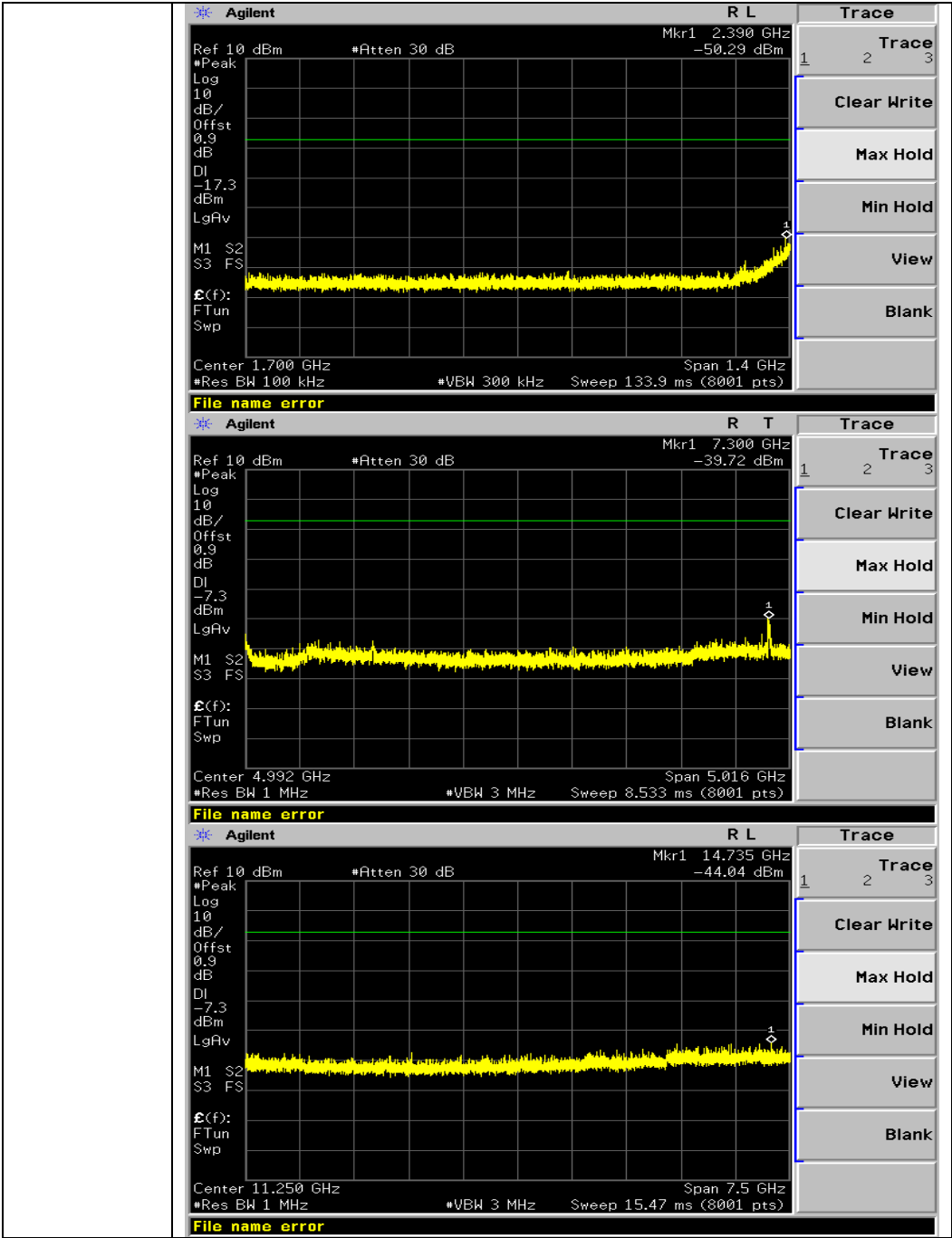


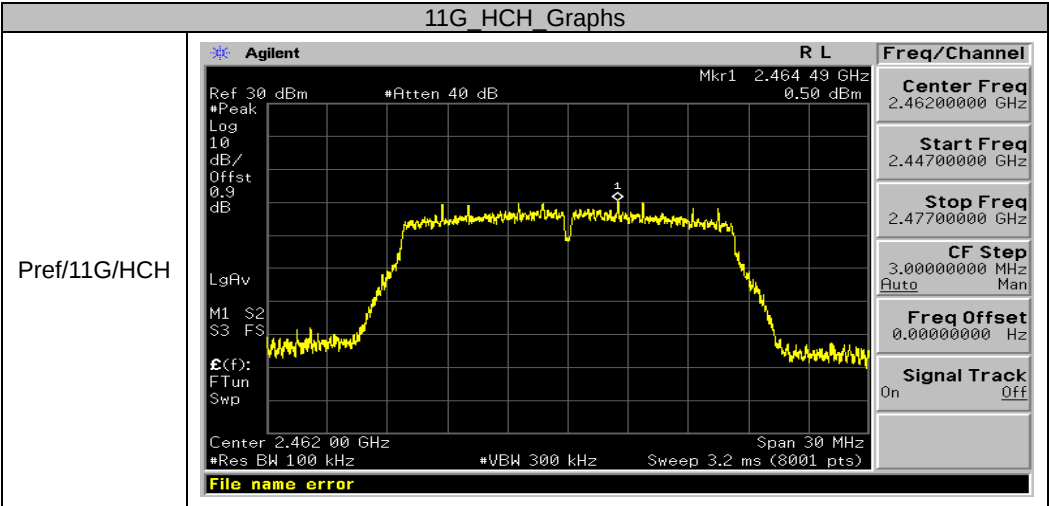
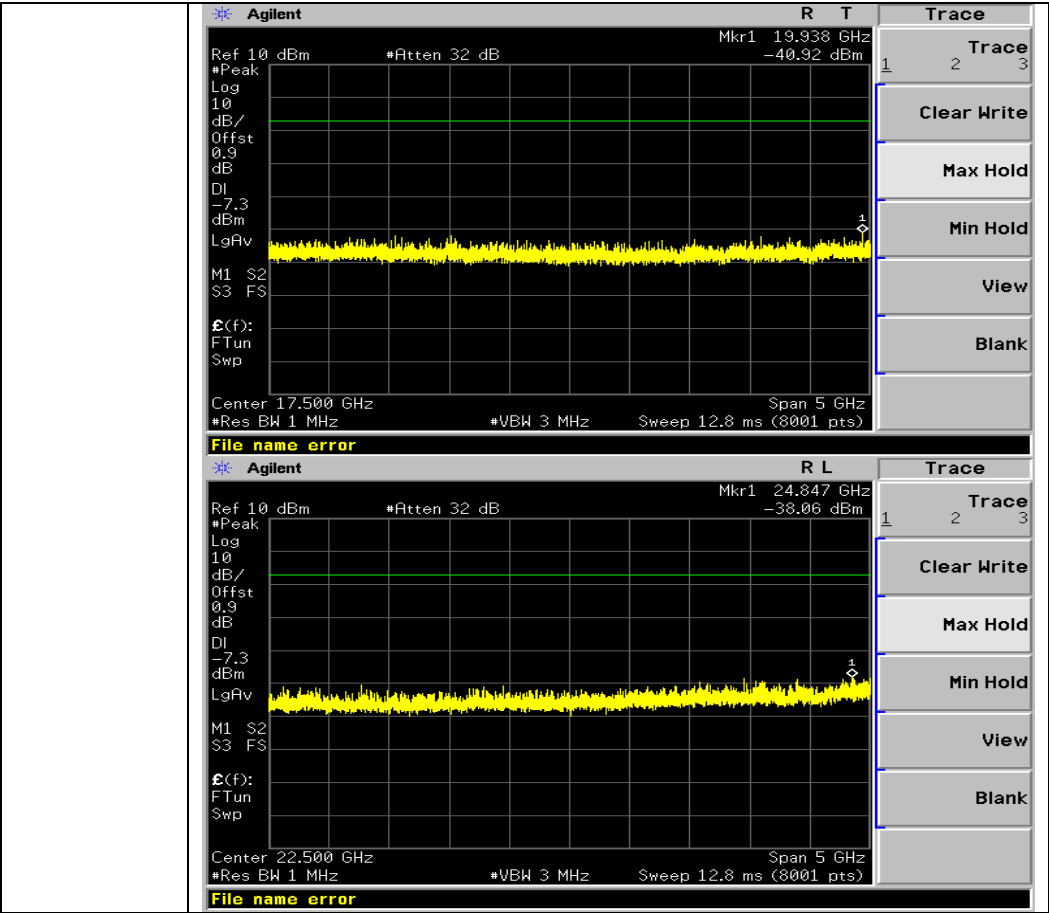


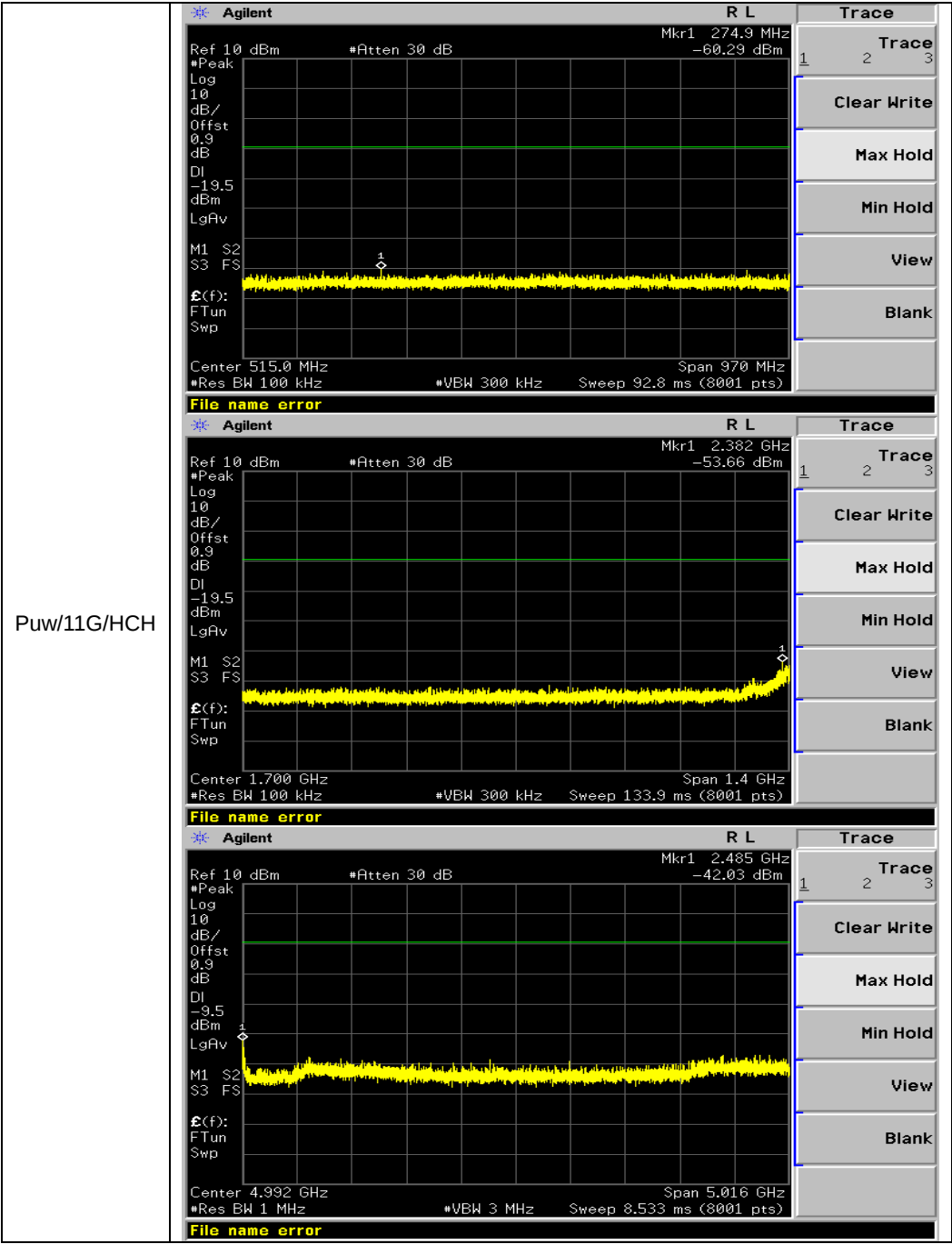


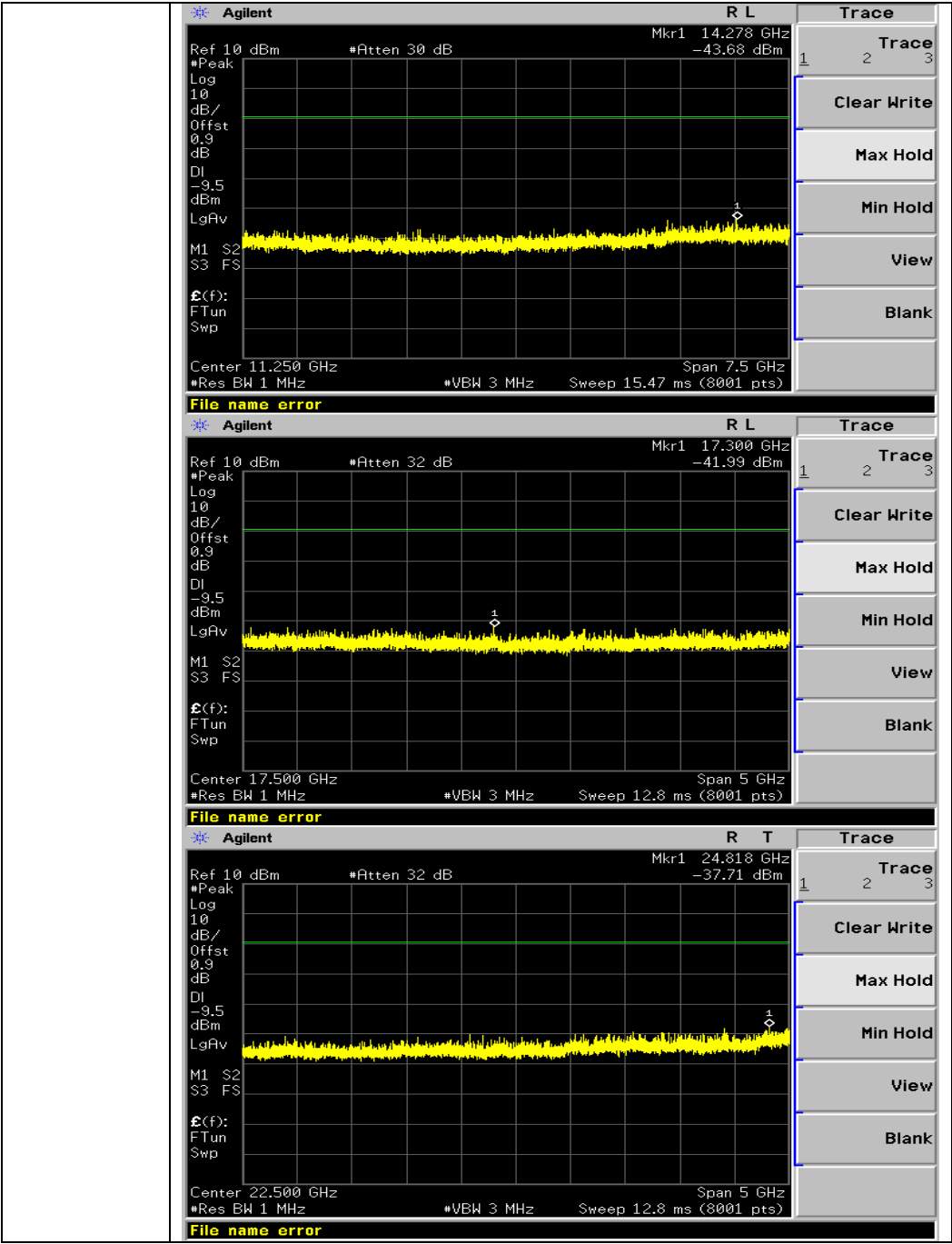


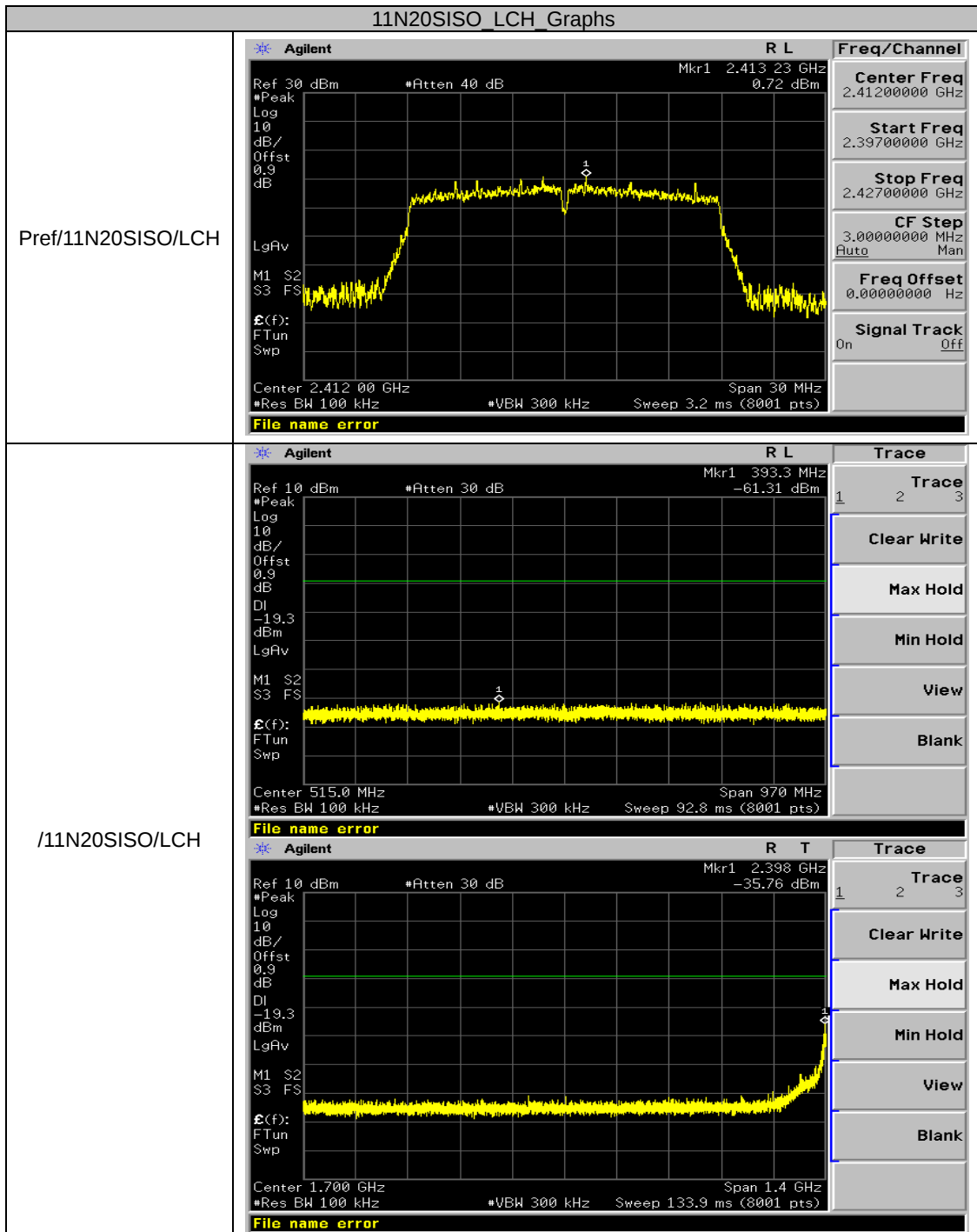




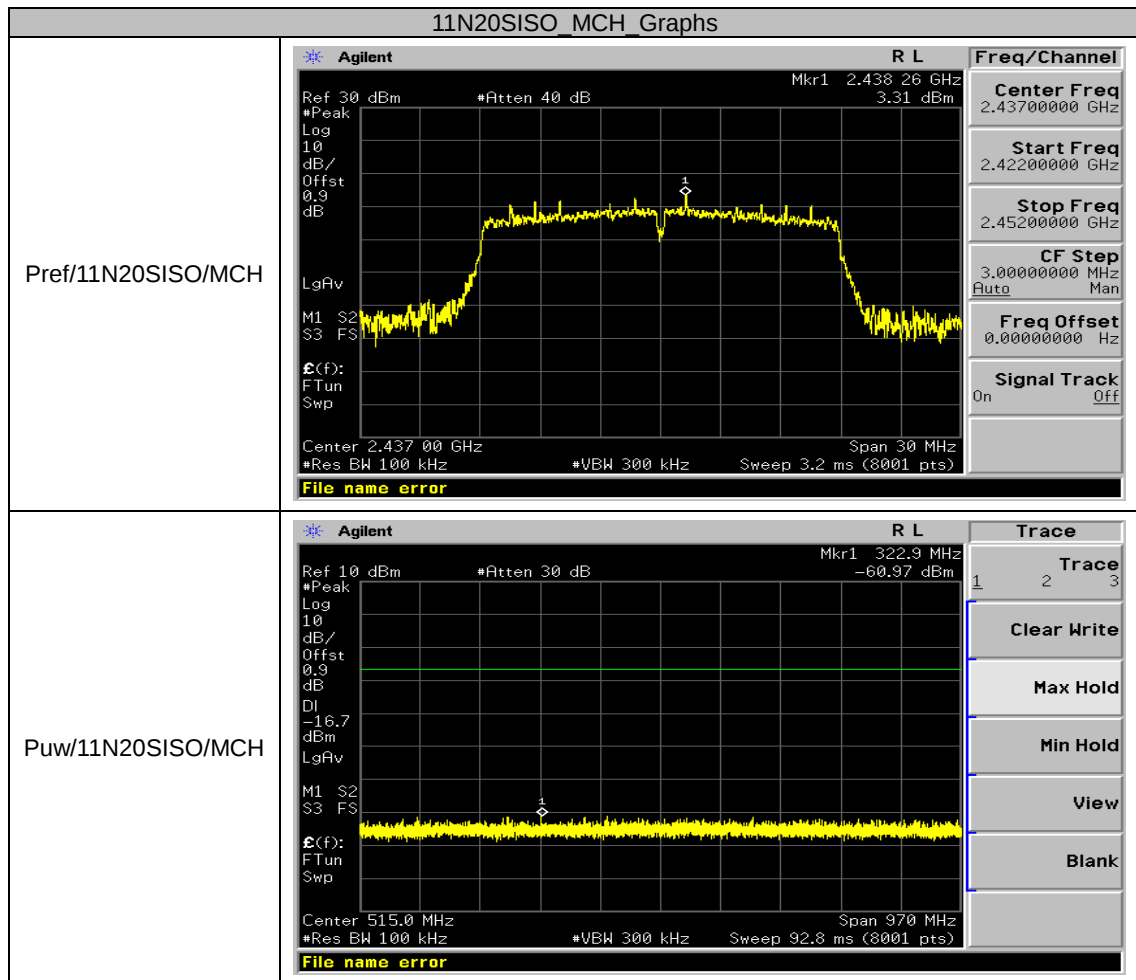
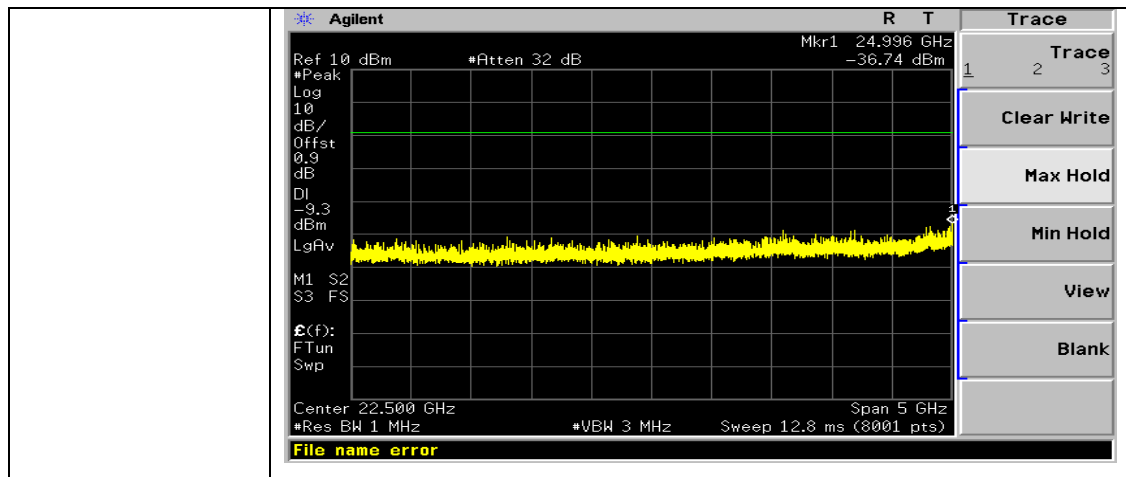


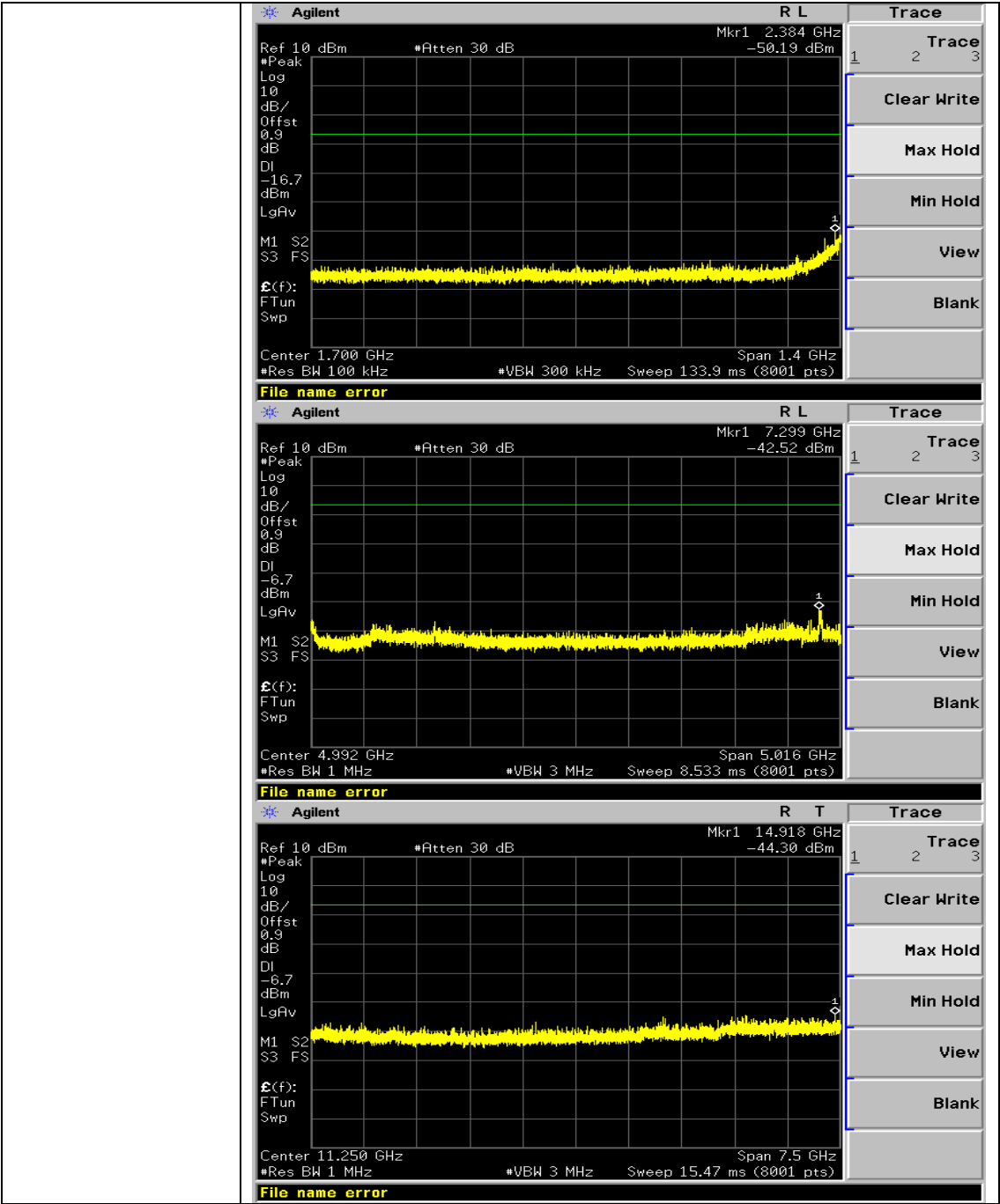


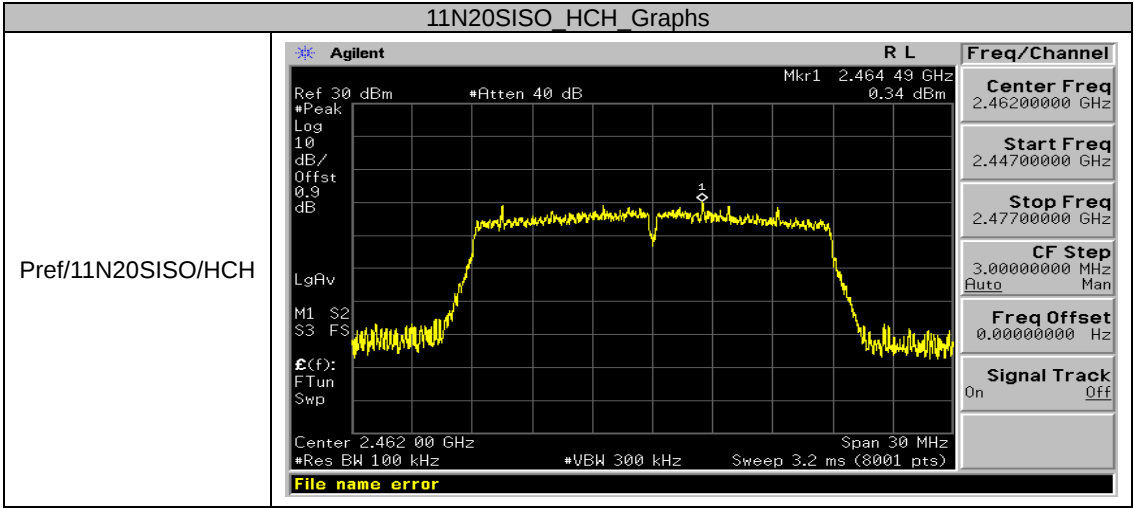
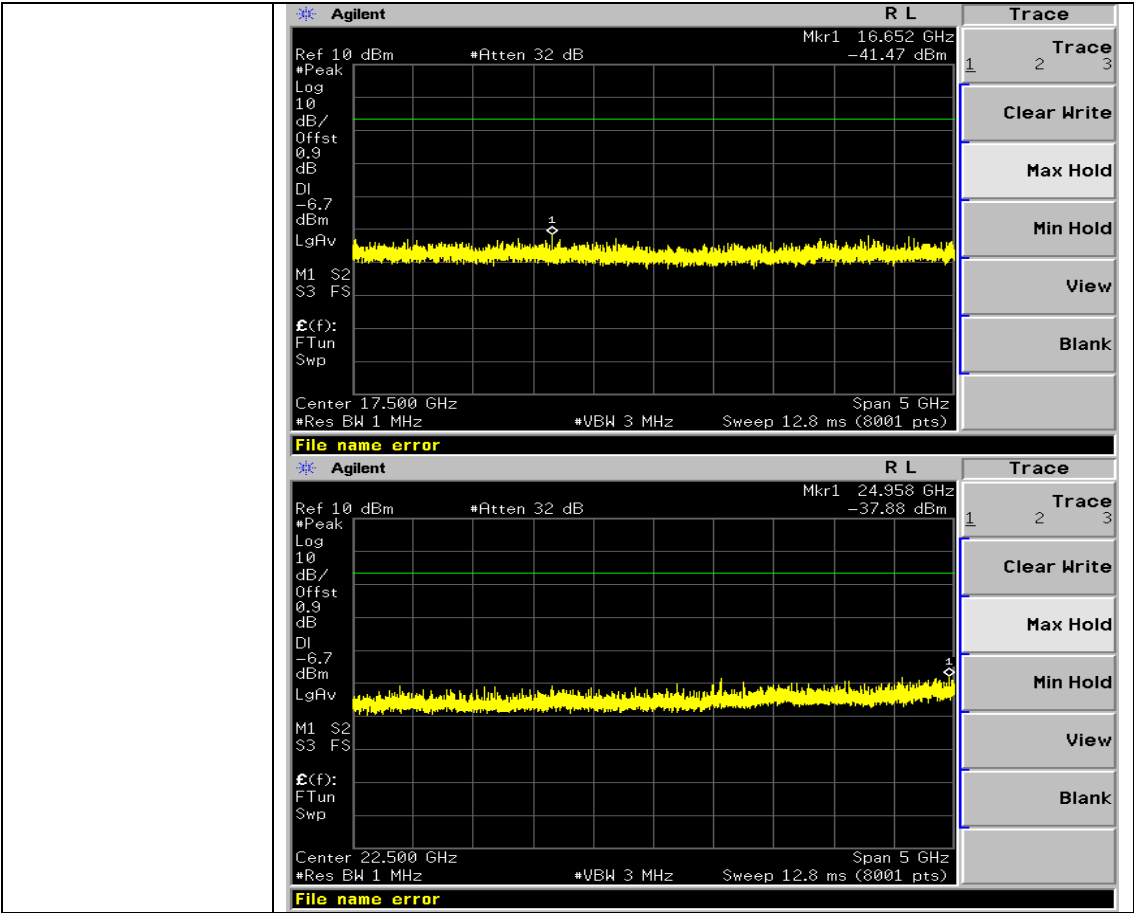


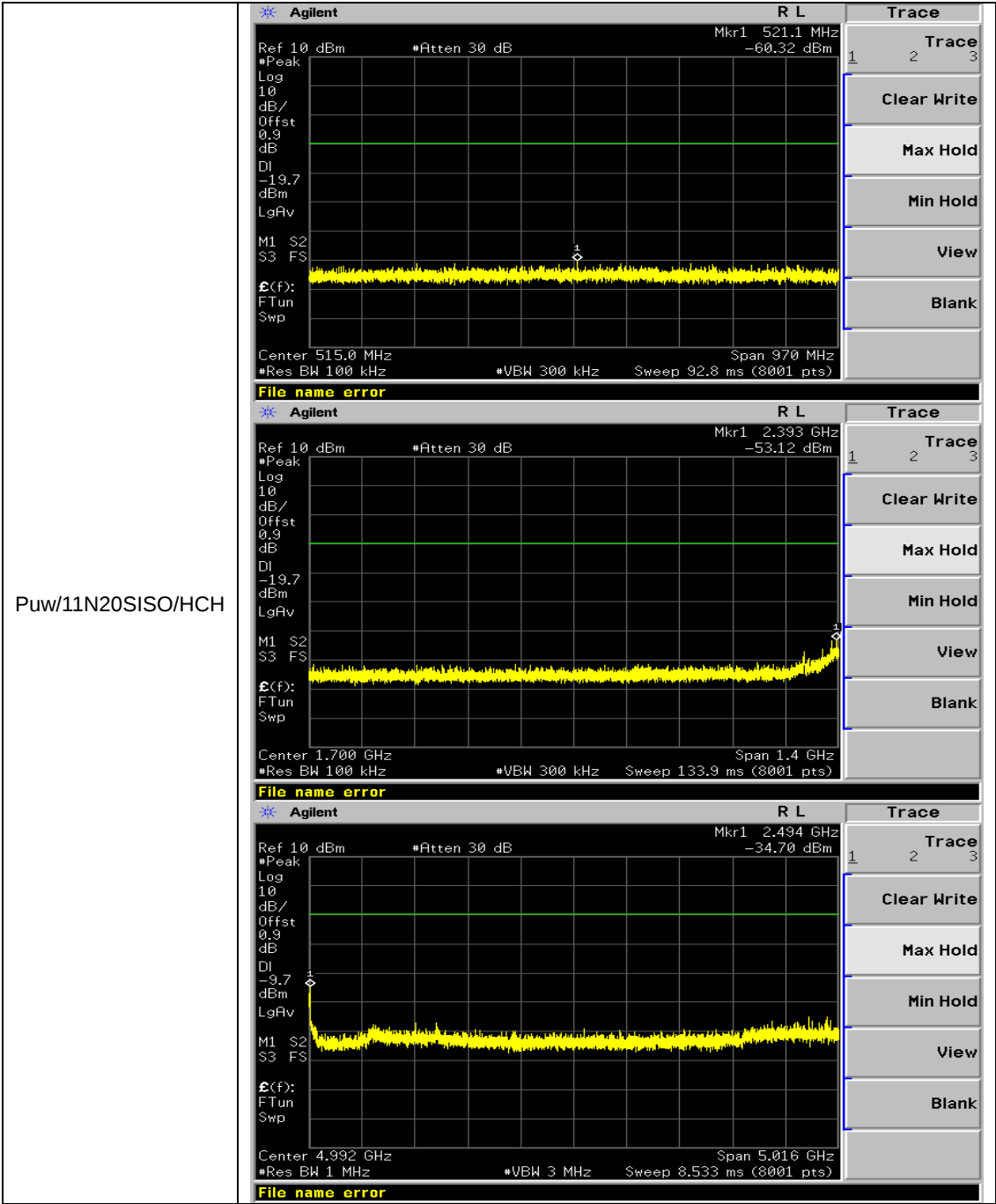


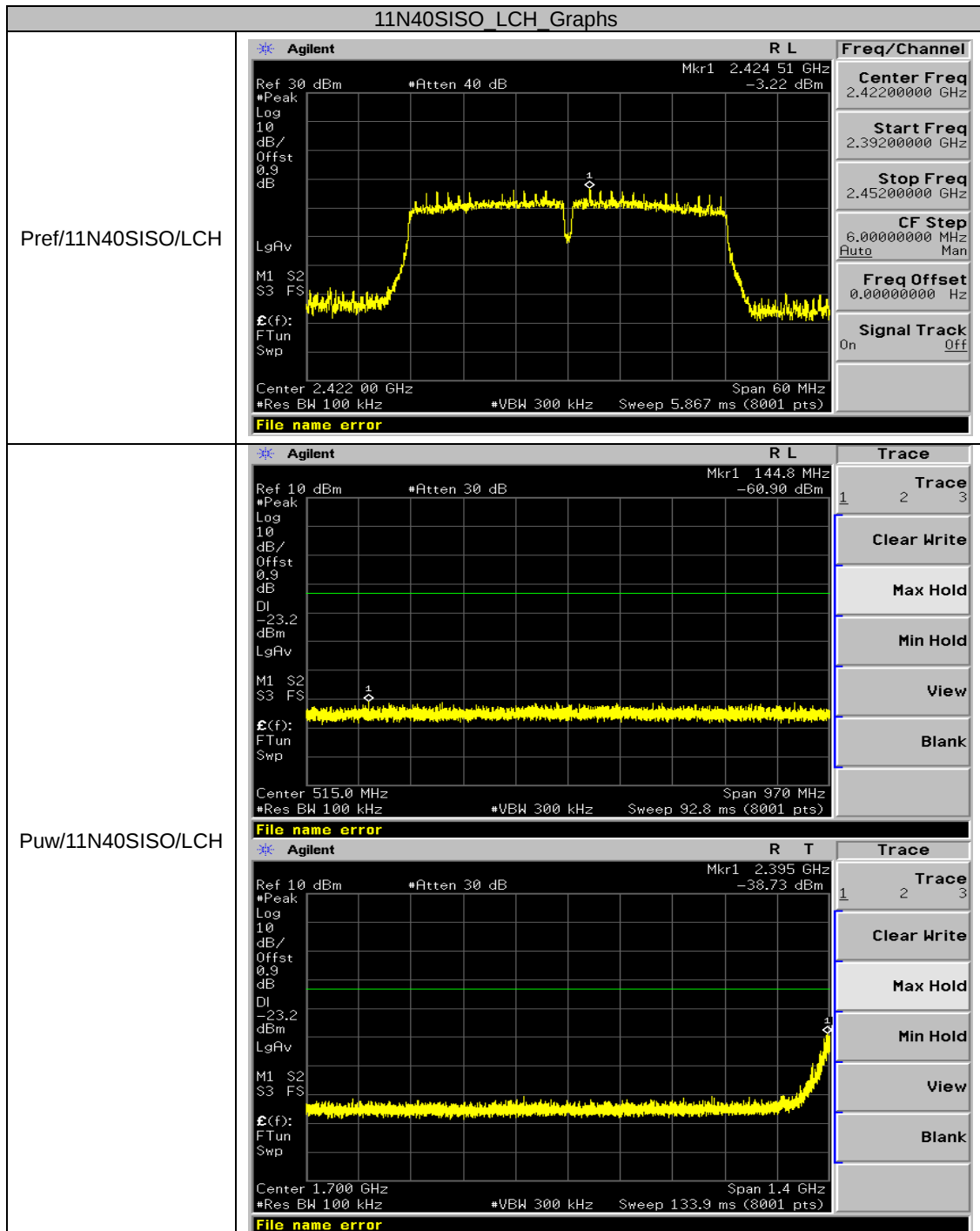


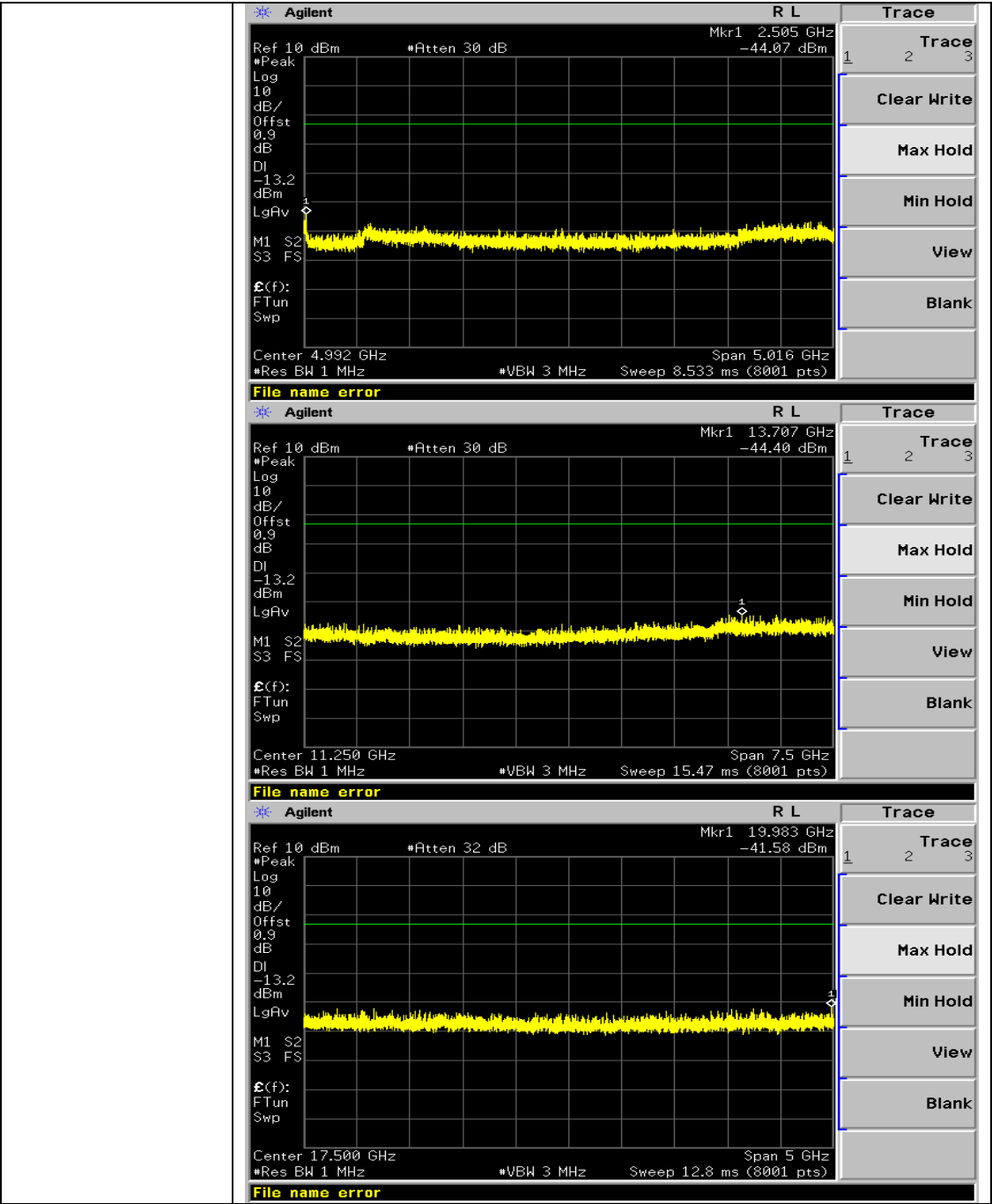


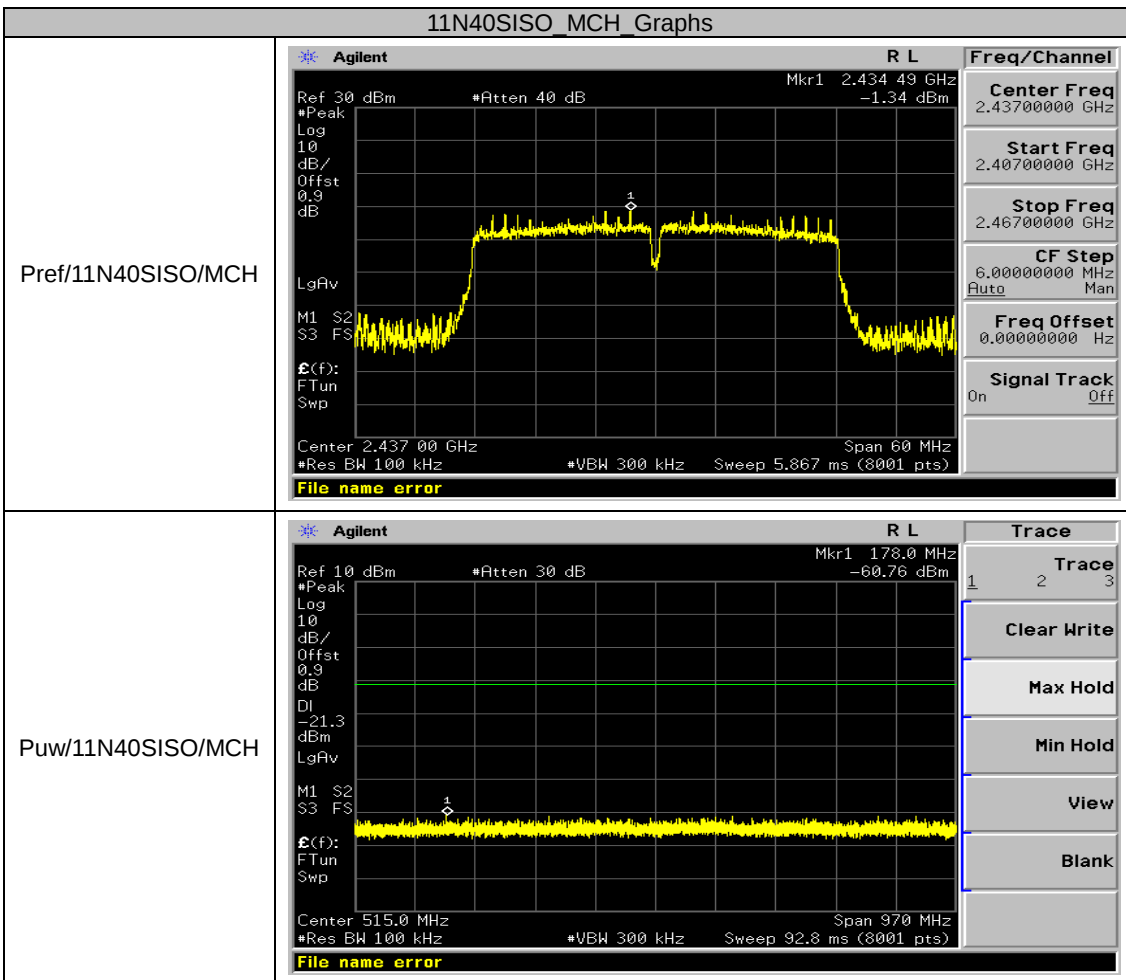
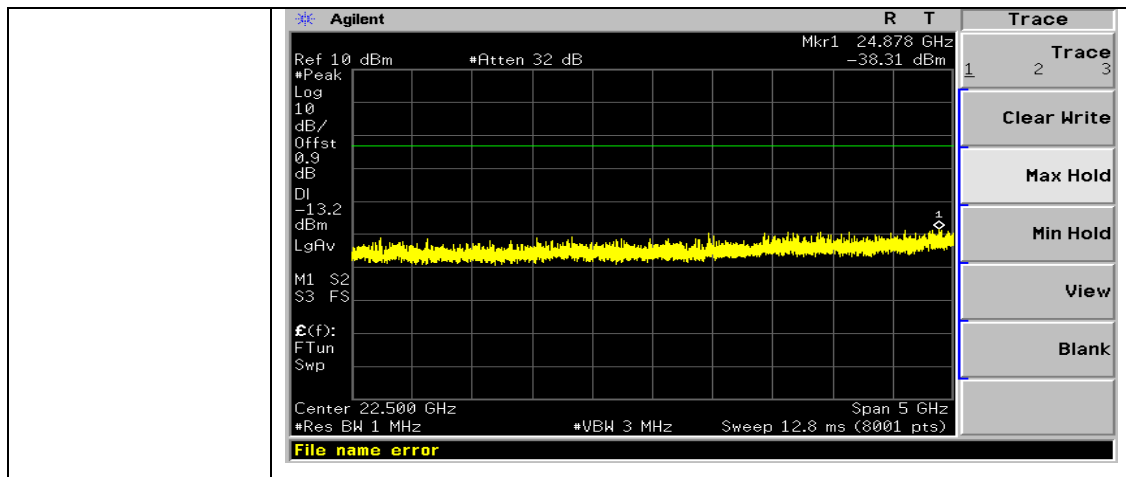


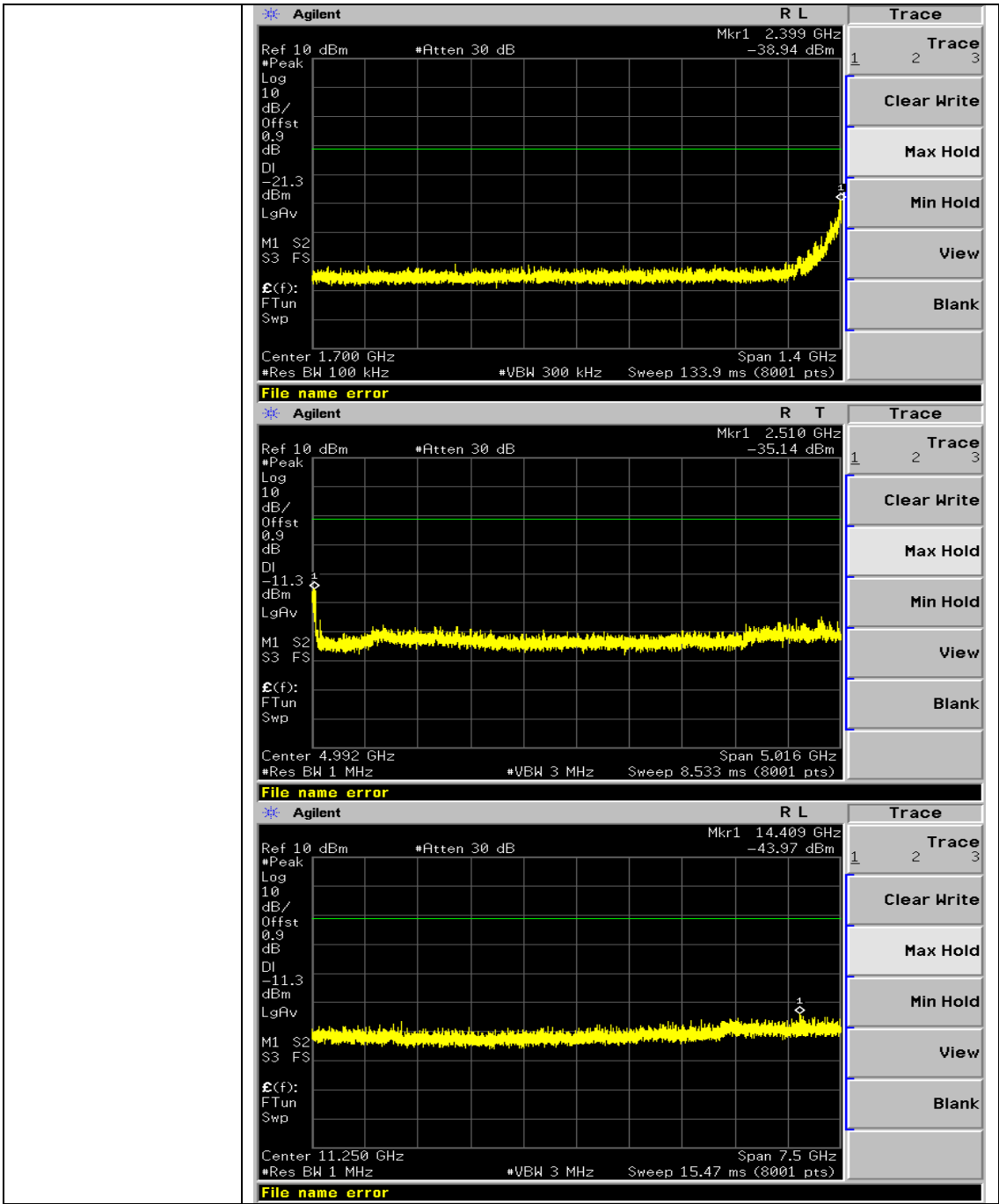


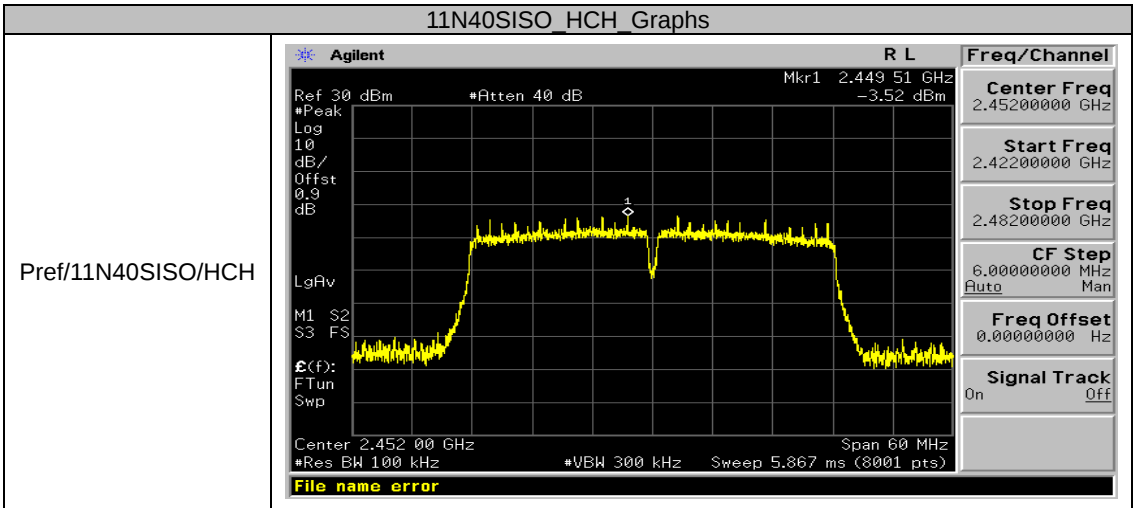
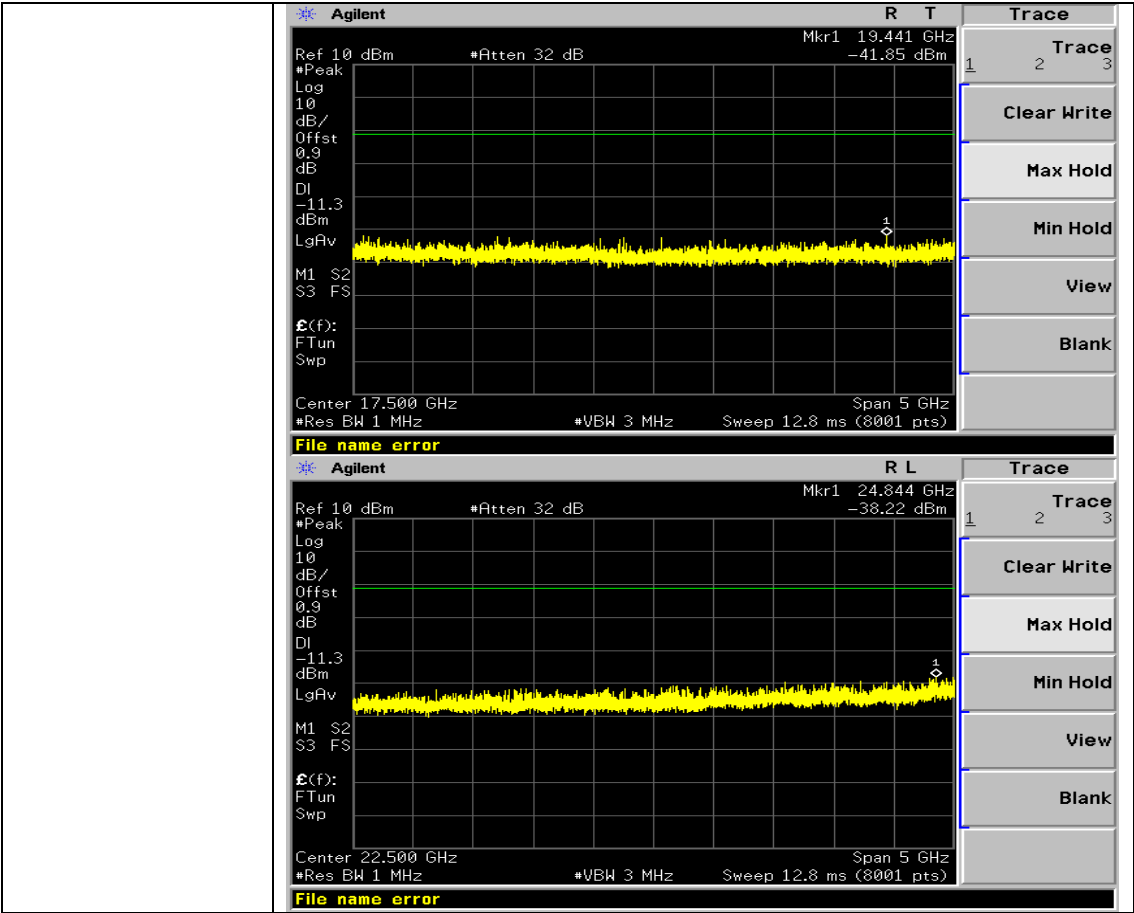


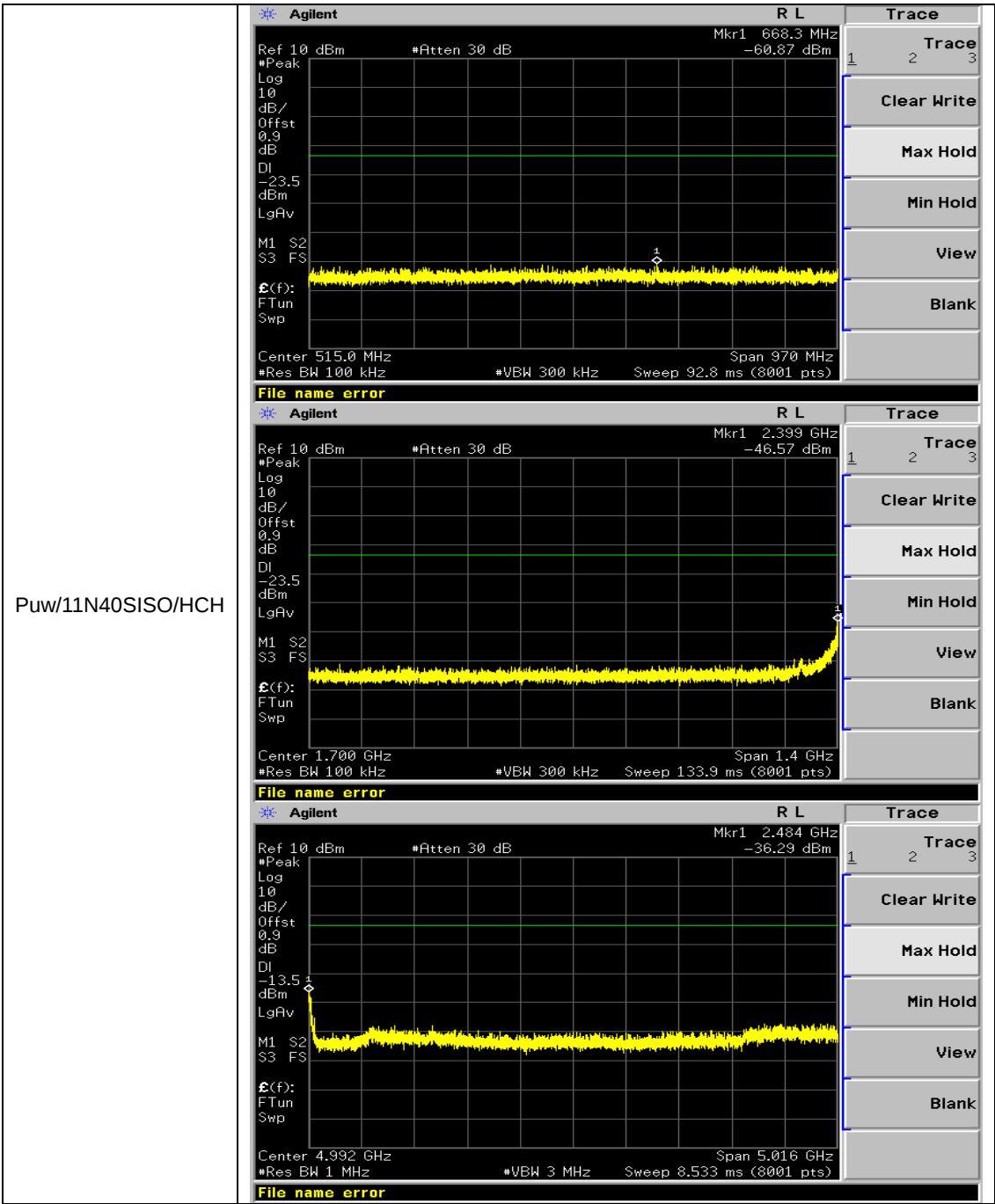


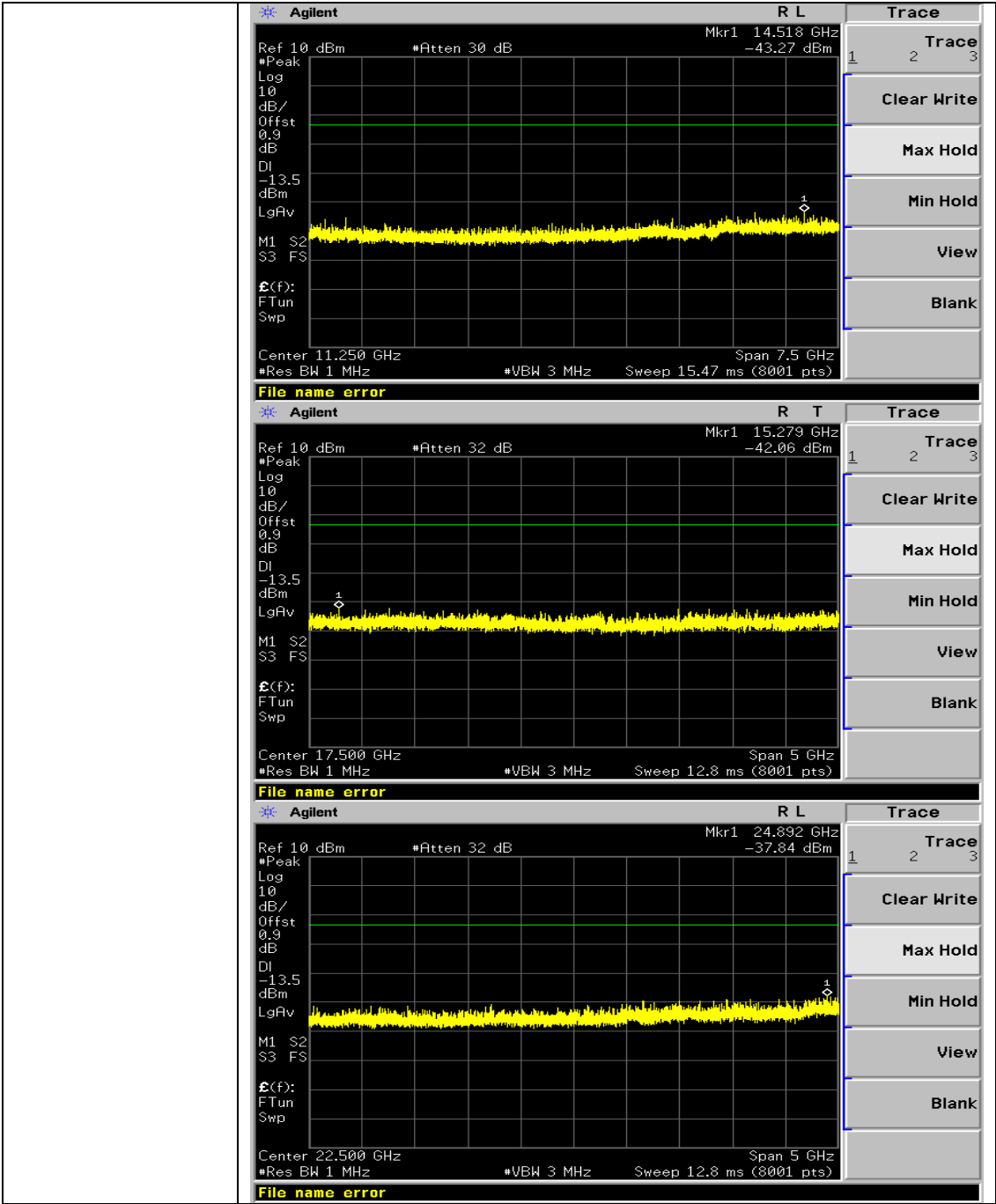












10. MAXIMUM CONDUCTED OUTPUT POWER SPECTRAL DENSITY

10.1 MEASUREMENT PROCEDURE

- (1). Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- (2). Set the EUT Work on the top, the middle and the bottom operation frequency individually.
- (3). Set SPA Trace 1 Max hold, then View.

Note: The method of AVGPSD in the KDB 558074 item 10.3 was used in this testing.

10.2 TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

Refer To Section 8.2.

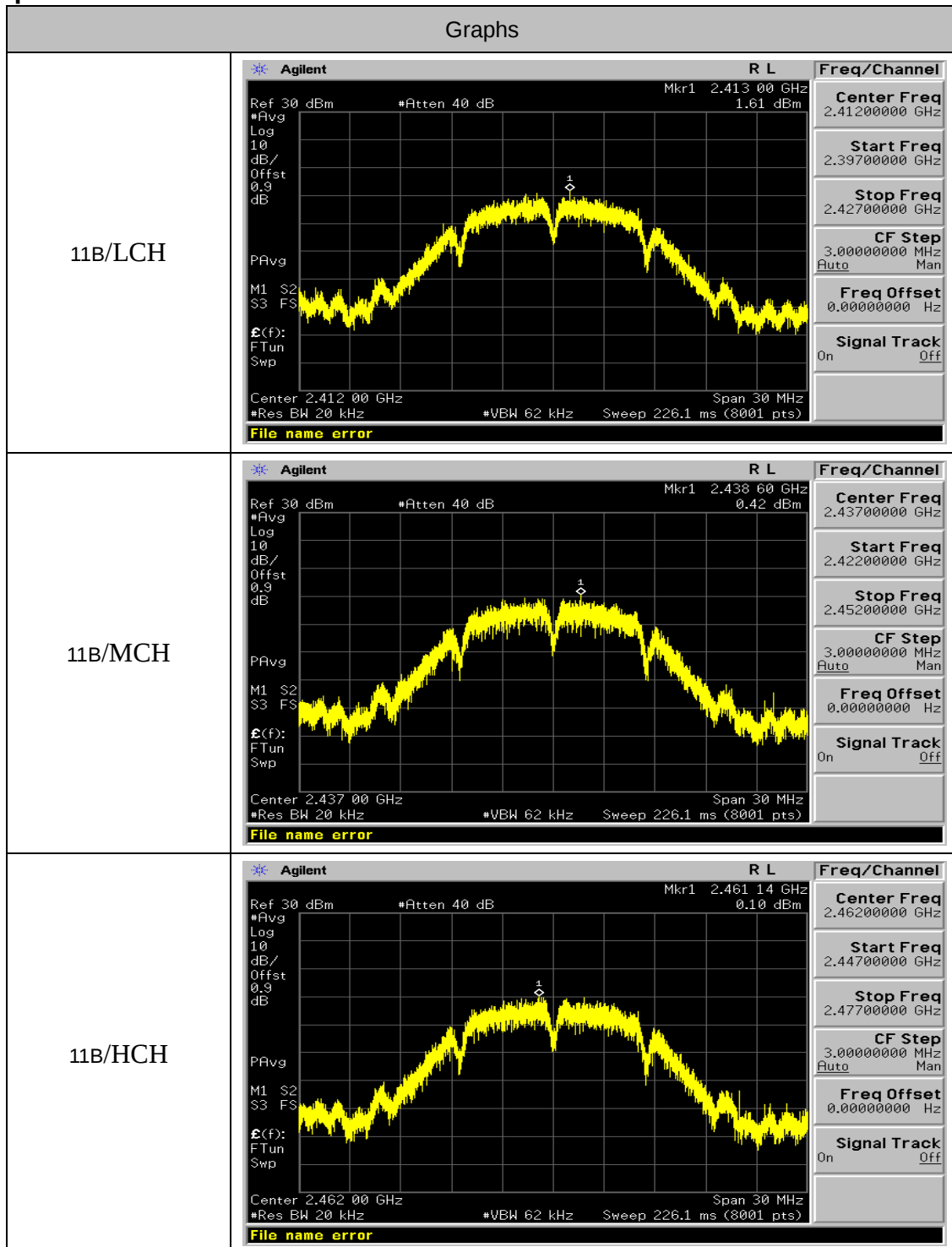
10.3 MEASUREMENT EQUIPMENT USED

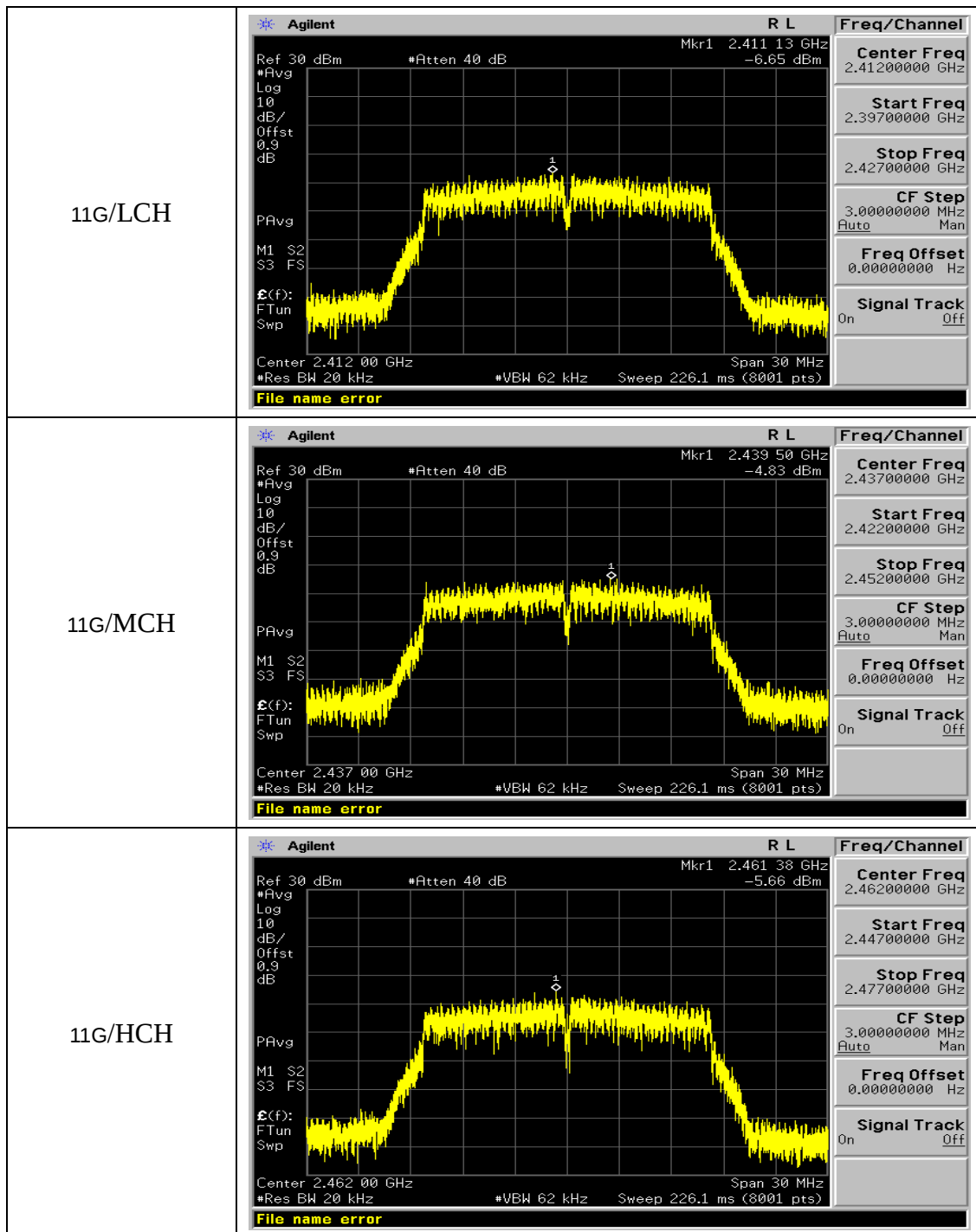
Refer To Section 6.

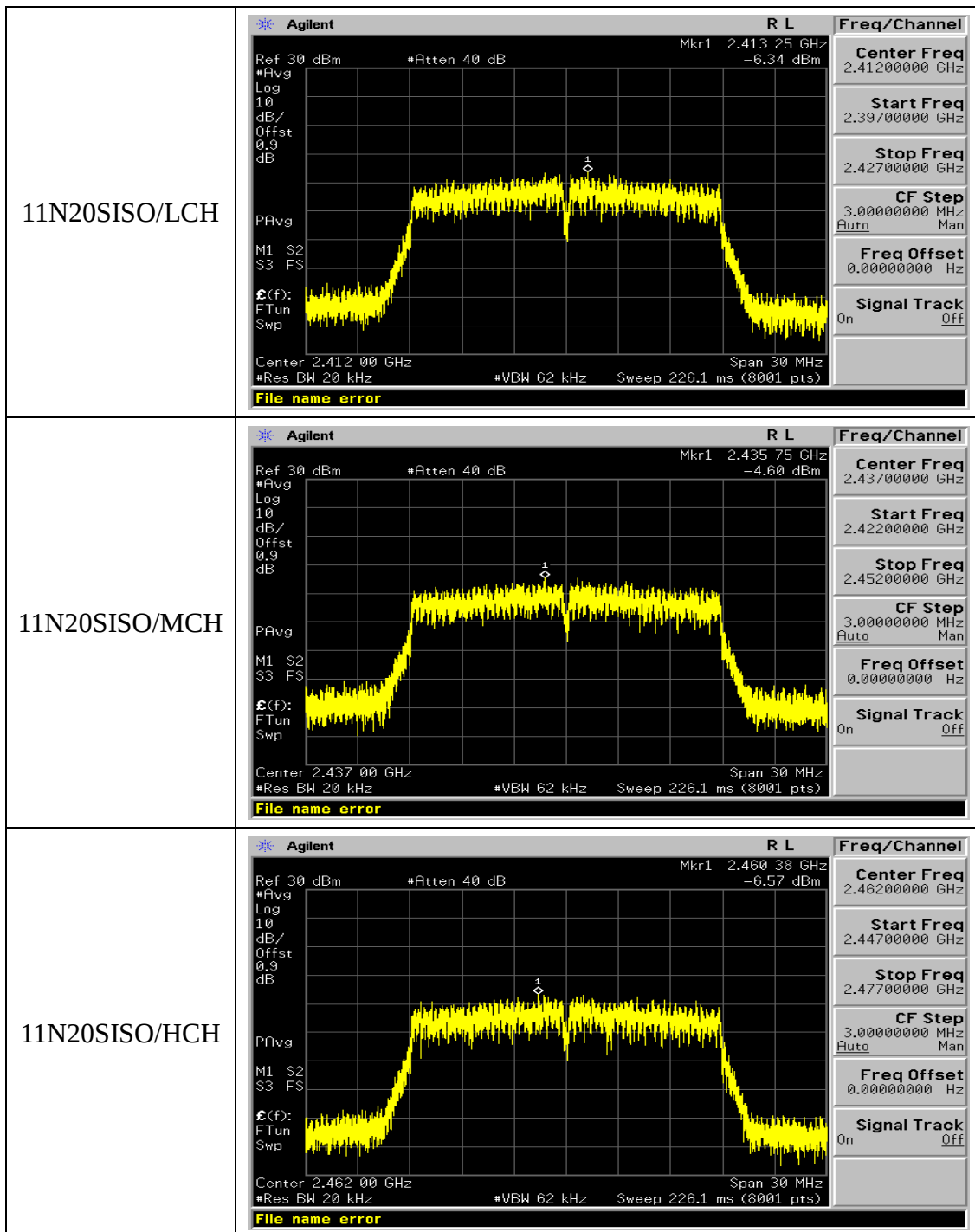
10.4 LIMITS AND MEASUREMENT RESULT

Mode	Channel	Av.PSD [dBm/20kHz]	Limit[dBm/3kHz]	Verdict
11B	LCH	1.61	8	PASS
11B	MCH	0.42	8	PASS
11B	HCH	0.1	8	PASS
11G	LCH	-6.65	8	PASS
11G	MCH	-4.83	8	PASS
11G	HCH	-5.67	8	PASS
11N20SISO	LCH	-6.34	8	PASS
11N20SISO	MCH	-4.6	8	PASS
11N20SISO	HCH	-6.57	8	PASS
11N40SISO	LCH	-13.45	8	PASS
11N40SISO	MCH	-10.66	8	PASS
11N40SISO	HCH	-12.54	8	PASS

Test Graph









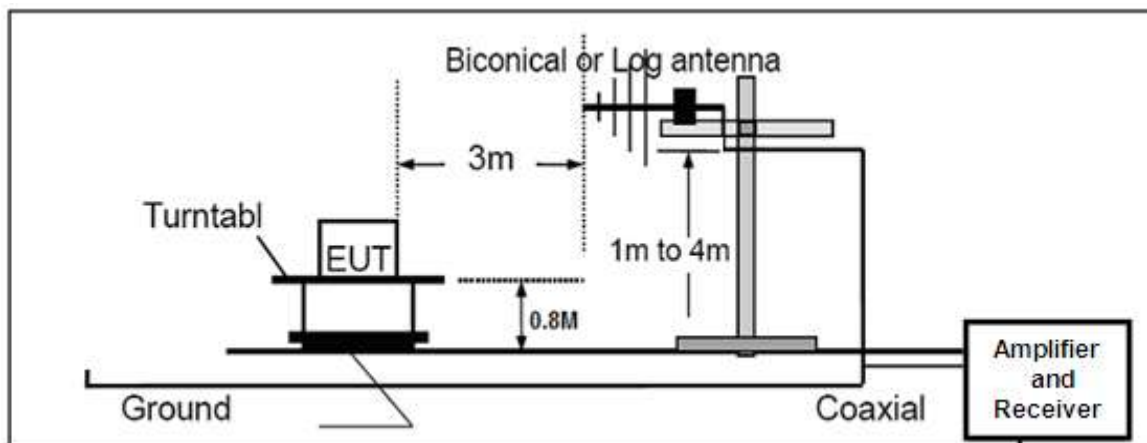
11. RADIATED EMISSION

11.1. MEASUREMENT PROCEDURE

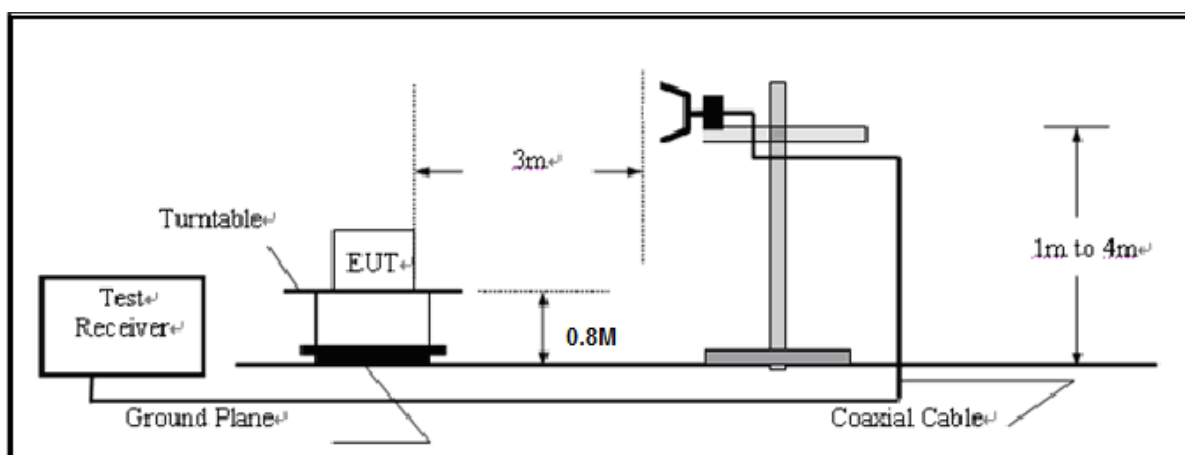
1. Configure the EUT according to ANSI C63.4. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. For emissions above 1GHz, use 1MHz VBW and RBW for peak reading. Then 1MHz RBW and 10Hz VBW for average reading in spectrum analyzer.
7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High - Low scan is not required in this case.

11.2. TEST SETUP

RADIATED EMISSION TEST SETUP 30MHz-1000MHz



RADIATED EMISSION TEST SETUP ABOVE 1000MHz



11.3. LIMITS AND MEASUREMENT RESULT

15.209(a) Limit in the below table has to be followed

Frequencies (MHz)	Field Strength (micorvolts/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: All modes were tested For restricted band radiated emission,
the test records reported below are the worst result compared to other modes.

11.4. TEST RESULT

RADIATED EMISSION BELOW 30MHZ

No emission found between lowest internal used/generated frequencies to 30MHz.

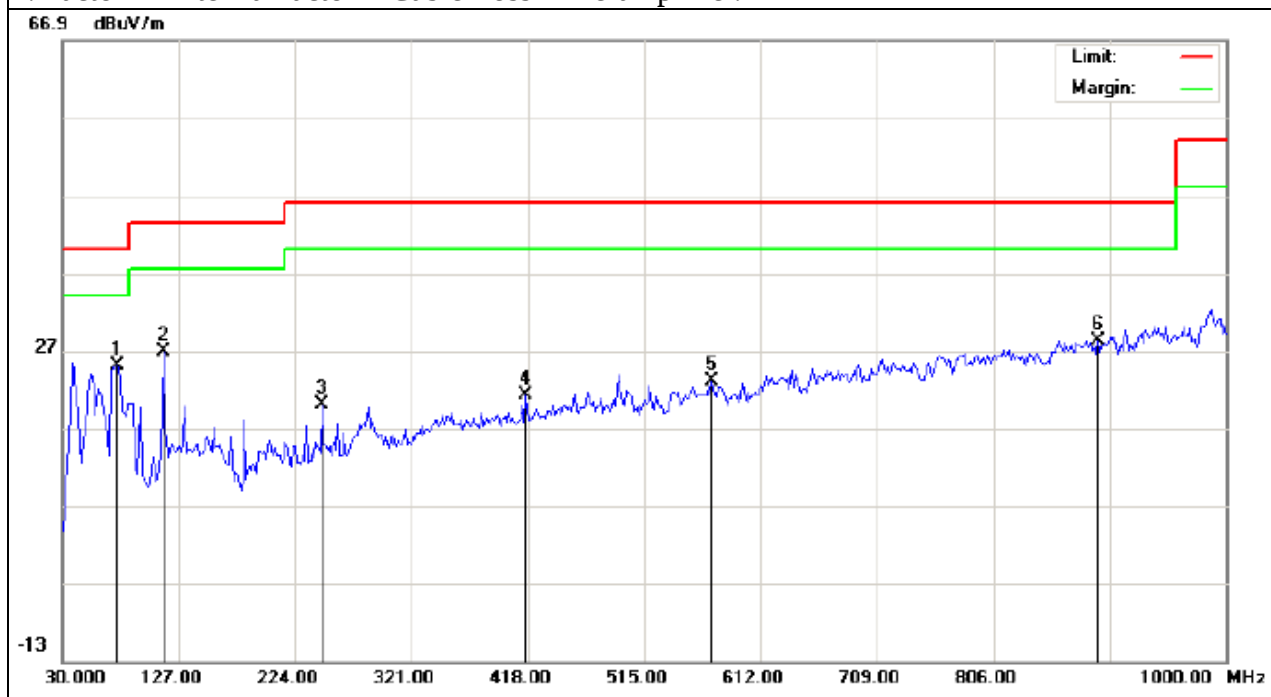
RADIATED EMISSION BELOW 1GHZ

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	Link mode	Polarization :	Horizontal

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1	*	75.2667	15.03	10.02	25.05	40.00	-14.95	peak			
2		114.0667	15.32	11.45	26.77	43.50	-16.73	peak			
3		246.6333	6.17	13.77	19.94	46.00	-26.06	peak			
4		416.3833	1.67	19.57	21.24	46.00	-24.76	peak			
5		571.5833	-0.04	23.02	22.98	46.00	-23.02	peak			
6		893.3000	-0.15	28.44	28.29	46.00	-17.71	peak			

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.



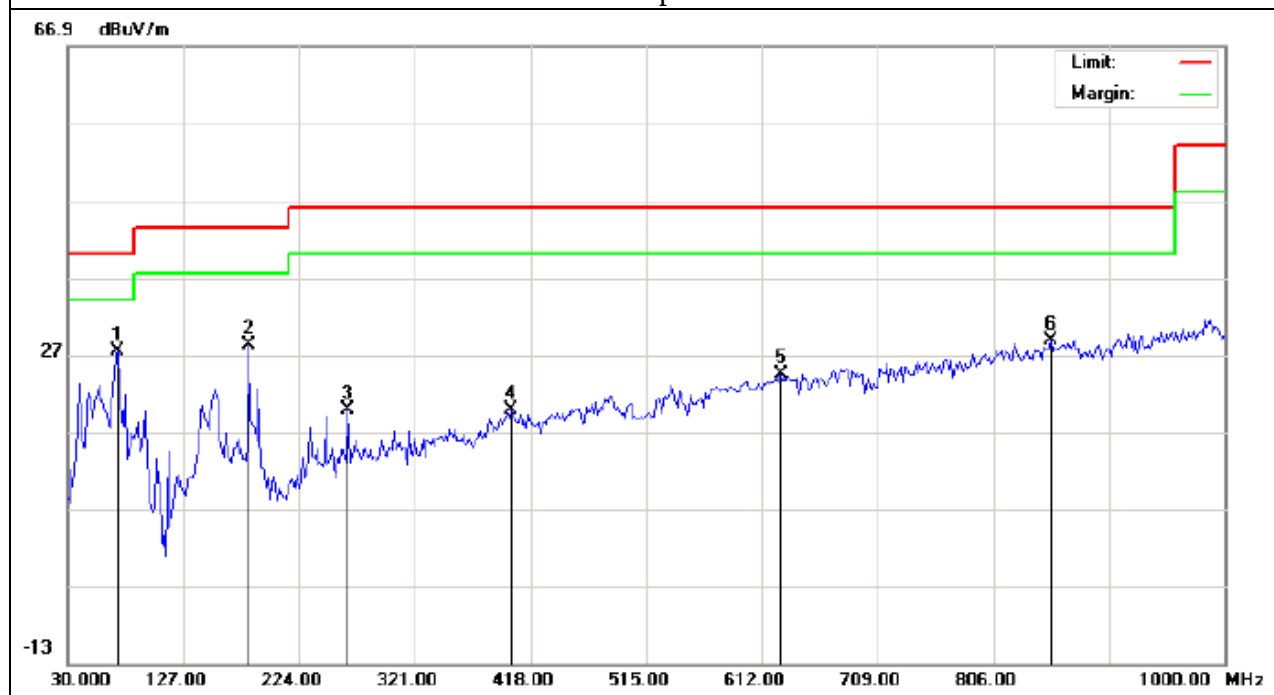
RESULT: PASS

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	Link mode	Polarization :	Vertical

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1	*	72.0333	23.73	3.76	27.49	40.00	-12.51	peak			
2		181.9667	14.55	13.57	28.12	43.50	-15.38	peak			
3		264.4167	5.54	14.34	19.88	46.00	-26.12	peak			
4		401.8333	0.60	19.13	19.73	46.00	-26.27	peak			
5		628.1667	1.00	23.36	24.36	46.00	-21.64	peak			
6		854.5000	1.47	27.43	28.90	46.00	-17.10	peak			

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.



RESULT: PASS

RADIATED EMISSION ABOVE 1GHZ

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH1 (802.11b Mode)/2412	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4824.062	46.61	10.44	57.05	74	-16.95	peak
4824.062	31.83	10.44	42.27	54	-11.73	AVG
7236.084	43.59	12.39	55.98	74	-18.02	peak
7236.084	33.47	12.39	45.86	54	-8.14	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH1 (802.11b Mode)/2412	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4824.067	49.69	10.39	60.08	74	-13.92	peak
4824.095	33.73	10.39	44.12	54	-9.88	AVG
7236.136	48.84	12.68	61.52	74	-12.48	peak
7236.117	30.72	12.68	43.4	54	-10.6	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH6 (802.11b Mode)/2437	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.048	49.66	10.39	60.05	74	-13.95	peak
4874.114	33.59	10.39	43.98	54	-10.02	AVG
7311.082	48.47	12.68	61.15	74	-12.85	peak
7311.140	30.32	12.68	43	54	-11	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH6 (802.11b Mode)/2437	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.078	49.64	10.39	60.03	74	-13.97	peak
4874.063	33.27	10.39	43.66	54	-10.34	AVG
7311.064	48.63	12.68	61.31	74	-12.69	peak
7311.082	30.57	12.68	43.25	54	-10.75	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH11 (802.11b Mode)/2462	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924.113	49.82	10.39	60.21	74	-13.79	peak
4924.050	33.79	10.39	44.18	54	-9.82	AVG
7386.129	48.61	12.68	61.29	74	-12.71	peak
7386.063	30.26	12.68	42.94	54	-11.06	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH11 (802.11b Mode)/2462	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924.107	49.83	10.39	60.22	74	-13.78	peak
4924.040	33.49	10.39	43.88	54	-10.12	AVG
7386.137	48.37	12.68	61.05	74	-12.95	peak
7386.106	30.45	12.68	43.13	54	-10.87	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH1 (802.11g Mode)/2412	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824.132	46.61	10.44	57.05	74	-16.95	peak
4824.064	36.49	10.44	46.93	54	-7.07	AVG
7236.110	42.38	12.39	54.77	74	-19.23	peak
7236.087	28.22	12.39	40.61	54	-13.39	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH1 (802.11g Mode)/2412	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824.087	46.81	10.44	57.25	74	-16.75	peak
4824.124	36.47	10.44	46.91	54	-7.09	AVG
7236.096	46.24	12.39	58.63	74	-15.37	peak
7236.119	28.87	12.39	41.26	54	-12.74	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH6 (802.11g Mode)/2437	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.106	45.83	10.4	56.23	74	-17.77	peak
4874.045	26.74	10.4	37.14	54	-16.86	AVG
7311.089	44.39	12.75	57.14	74	-16.86	peak
7311.160	25.27	12.75	38.02	54	-15.98	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH6 (802.11g Mode)/2437	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.113	48.67	10.4	59.07	74	-14.93	peak
4874.076	35.49	10.4	45.89	54	-8.11	AVG
7311.049	48.27	12.75	61.02	74	-12.98	peak
7311.134	33.62	12.75	46.37	54	-7.63	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH11 (802.11g Mode)/2462	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924.118	49.57	10.39	59.96	74	-14.04	peak
4924.103	33.28	10.39	43.67	54	-10.33	AVG
7386.064	48.61	12.68	61.29	74	-12.71	peak
7386.138	30.39	12.68	43.07	54	-10.93	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH11(802.11g Mode)/2462	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924.109	46.22	10.39	56.61	74	-17.39	peak
4924.067	34.48	10.39	44.87	54	-9.13	AVG
7386.034	46.62	12.68	59.3	74	-14.7	peak
7386.077	33.37	12.68	46.05	54	-7.95	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH1(802.11n Mode)/20MHz	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824.131	46.64	10.44	57.08	74	-16.92	peak
4824.111	36.29	10.44	46.73	54	-7.27	AVG
7236.034	42.37	12.39	54.76	74	-19.24	peak
7236.092	28.49	12.39	40.88	54	-13.12	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH1(802.11n Mode)/20MHz	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824.109	46.73	10.44	57.17	74	-16.83	peak
4824.110	37.61	10.44	48.05	54	-5.95	AVG
7236.071	51.86	12.39	64.25	74	-9.75	peak
7236.058	31.27	12.39	43.66	54	-10.34	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH6(802.11n Mode)/20MHz	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.067	51.77	10.4	62.17	74	-11.83	peak
4874.085	32.61	10.4	43.01	54	-10.99	AVG
7311.055	48.29	12.75	61.04	74	-12.96	peak
7311.038	27.23	12.75	39.98	54	-14.02	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH6(802.11n Mode)/20MHz	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.069	48.72	10.4	59.12	74	-14.88	peak
4874.107	32.61	10.4	43.01	54	-10.99	AVG
7311.129	47.28	12.75	60.03	74	-13.97	peak
7311.153	26.29	12.75	39.04	54	-14.96	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH11(802.11n Mode)/20MHz	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924.107	50.67	10.39	61.06	74	-12.94	peak
4924.079	35.45	10.39	45.84	54	-8.16	AVG
7386.161	49.86	12.68	62.54	74	-11.46	peak
7386.134	31.12	12.68	43.8	54	-10.2	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH11(802.11n Mode)/20MHz	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924.109	51.55	10.39	61.94	74	-12.06	peak
4924.142	35.73	10.39	46.12	54	-7.88	AVG
7386.101	42.64	12.68	55.32	74	-18.68	peak
7386.085	28.82	12.68	41.5	54	-12.5	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH3(802.11n Mode)/40MHz	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4844.155	47.57	10.5	58.07	74	-15.93	peak
4844.149	31.95	10.5	42.45	54	-11.55	AVG
7266.255	48.86	12.5	61.36	74	-12.64	peak
7266.223	31.32	12.5	43.82	54	-10.18	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH3(802.11n Mode)/40MHz	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4844.229	47.49	10.5	57.99	74	-16.01	peak
4844.263	30.81	10.5	41.31	54	-12.69	AVG
7266.207	48.46	12.5	60.96	74	-13.04	peak
7266.237	29.25	12.5	41.75	54	-12.25	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH6(802.11n Mode)/40MHz	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.195	48.44	10.4	58.84	74	-15.16	peak
4874.141	33.67	10.4	44.07	54	-9.93	AVG
7311.122	47.43	12.75	60.18	74	-13.82	peak
7311.104	32.51	12.75	45.26	54	-8.74	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH6(802.11n Mode)/40MHz	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.502	47.83	10.4	58.23	74	-15.77	peak
4874.498	34.64	10.4	45.04	54	-8.96	AVG
7311.613	46.53	12.75	59.28	74	-14.72	peak
7311.629	35.41	12.75	48.16	54	-5.84	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH9(802.11n Mode)/40MHz	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4904.268	49.86	10.29	60.15	74	-13.85	peak
4904.283	35.32	10.29	45.61	54	-8.39	AVG
7356.229	48.44	12.79	61.23	74	-12.77	peak
7356.150	31.67	12.79	44.46	54	-9.54	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH9(802.11n Mode)/40MHz	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4904.064	50.49	10.29	60.78	74	-13.22	peak
4904.128	34.62	10.29	44.91	54	-9.09	AVG
7356.377	48.41	12.79	61.2	74	-12.8	peak
7356.333	32.39	12.79	45.18	54	-8.82	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

12. BAND EDGE EMISSION

12.1. MEASUREMENT PROCEDURE

1) Radiated restricted band edge measurements

The radiated restricted band edge measurements are measured with an EMI test receiver connected to the receive antenna while the EUT is transmitting

2) Conducted Emissions at the band edge

a) The transmitter output was connected to the spectrum analyzer

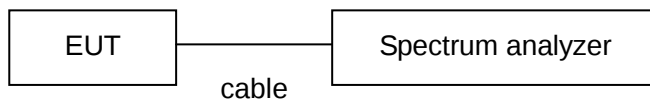
b) Set RBW=100kHz, VBW=300kHz

c) Suitable frequency span including 100kHz bandwidth from band edge

12.2. TEST SET-UP

Radiated same as 11.2

Conducted set up



12.3. Radiated Test Result

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH1(802.11b Mode)	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
2399.900	80.66	-13	67.66	74	-6.34	peak
2399.900	61.42	-13	48.42	54	-5.54	AVG
2400.000	82.68	-12.99	69.69	74	-4.41	peak
2400.000	61.29	-12.99	48.3	54	-5.74	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH1(802.11b Mode)	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
2399.900	81.78	-13	68.78	74	-5.22	peak
2399.900	61.71	-13	48.71	54	-5.29	AVG
2400.000	78.94	-12.99	65.95	74	-8.05	peak
2400.000	59.49	-12.99	46.5	54	-7.5	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH11(802.11b Mode)	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
2483.500	78.43	-12.78	65.65	74	-8.35	peak
2483.500	60.81	-12.78	48.03	54	-5.97	AVG
2483.600	79.67	-12.77	66.9	74	-7.1	peak
2483.600	60.35	-12.78	47.57	54	-6.43	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH11(802.11b Mode)	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
2483.500	77.49	-12.78	64.71	74	-9.29	peak
2483.500	60.28	-12.78	47.5	54	-6.5	AVG
2483.600	78.47	-12.77	65.7	74	-8.3	peak
2483.600	59.62	-12.77	46.85	54	-7.15	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH1(802.11g Mode)	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2399.900	76.69	-13	63.69	74	-10.31	peak
2399.900	59.97	-13	46.97	54	-7.03	AVG
2400.000	78.26	-12.99	65.27	74	-8.73	peak
2400.000	58.18	-12.99	45.19	54	-8.81	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH1(802.11gMode)	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2399.900	77.49	-13	64.49	74	-9.51	peak
2399.900	60.52	-13	47.52	54	-6.48	AVG
2400.000	78.49	-12.99	65.5	74	-8.5	peak
2400.000	62.61	-12.99	49.62	54	-4.38	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH11(802.11g Mode)	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.500	77.33	-12.78	64.55	74	-9.45	peak
2483.500	63.82	-12.78	51.04	54	-2.96	AVG
2483.600	76.47	-12.77	63.7	74	-10.3	peak
2483.600	61.61	-12.77	48.84	54	-5.16	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH11(802.11g Mode)	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.500	76.35	-12.78	63.57	74	-10.43	peak
2483.500	60.62	-12.78	47.84	54	-6.16	AVG
2483.600	75.84	-12.77	63.07	74	-10.93	peak
2483.600	61.49	-12.77	48.72	54	-5.28	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH1(802.11n Mode)/20MHz	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2399.900	76.59	-13	63.59	74	-10.41	peak
2399.900	58.67	-13	45.67	54	-8.33	AVG
2400.000	78.48	-12.99	65.49	74	-8.51	peak
2400.000	58.19	-12.99	45.2	54	-8.8	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH1(802.11n Mode)/20M	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2399.900	77.69	-13	64.69	74	-9.31	peak
2399.900	58.47	-13	45.47	54	-8.53	AVG
2400.000	76.82	-12.99	63.83	74	-10.17	peak
2400.000	59.73	-12.99	46.74	54	-7.26	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH11(802.11n Mode)/20MHz	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.500	77.66	-12.78	64.88	74	-9.12	peak
2483.500	56.82	-12.78	44.04	54	-9.96	AVG
2483.600	75.45	-12.77	62.68	74	-11.32	peak
2483.600	57.73	-12.77	44.96	54	-9.04	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH11(802.11n Mode)/20MHz	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.500	73.29	-12.78	60.51	74	-13.49	peak
2483.500	59.38	-12.78	46.6	54	-7.4	AVG
2483.600	73.74	-12.78	60.96	74	-13.04	peak
2483.600	59.63	-12.78	46.85	54	-7.15	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH3(802.11n Mode)/40M	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2399.900	77.84	-13	64.84	74	-9.16	peak
2399.900	58.67	-13	45.67	54	-8.33	AVG
2400.000	77.45	-12.99	64.46	74	-9.54	peak
2400.000	59.79	-12.99	46.8	54	-7.2	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH3(802.11n Mode)/40MHz	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2399.900	80.91	-13	67.91	74	-6.09	peak
2399.900	55.64	-13	42.64	54	-11.36	AVG
2400.000	78.48	-12.99	65.49	74	-8.51	peak
2400.000	55.62	-12.99	42.63	54	-11.37	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH9(802.11n Mode)/40MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
2483.500	76.47	-12.78	63.69	74	-10.31	peak
2483.500	59.29	-12.78	46.51	54	-7.49	AVG
2483.600	77.31	-12.77	64.54	74	-9.46	peak
2483.600	61.24	-12.77	48.47	54	-5.53	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT :	tablet pc	Model Name :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V from battery
Test Mode :	CH9(802.11n Mode)/40MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
2483.500	77.48	-12.78	64.7	74	-9.3	peak
2483.500	60.37	-12.78	47.59	54	-6.41	AVG
2483.600	78.19	-12.78	65.41	74	-8.59	peak
2483.600	59.61	-12.78	46.83	54	-7.17	AVG

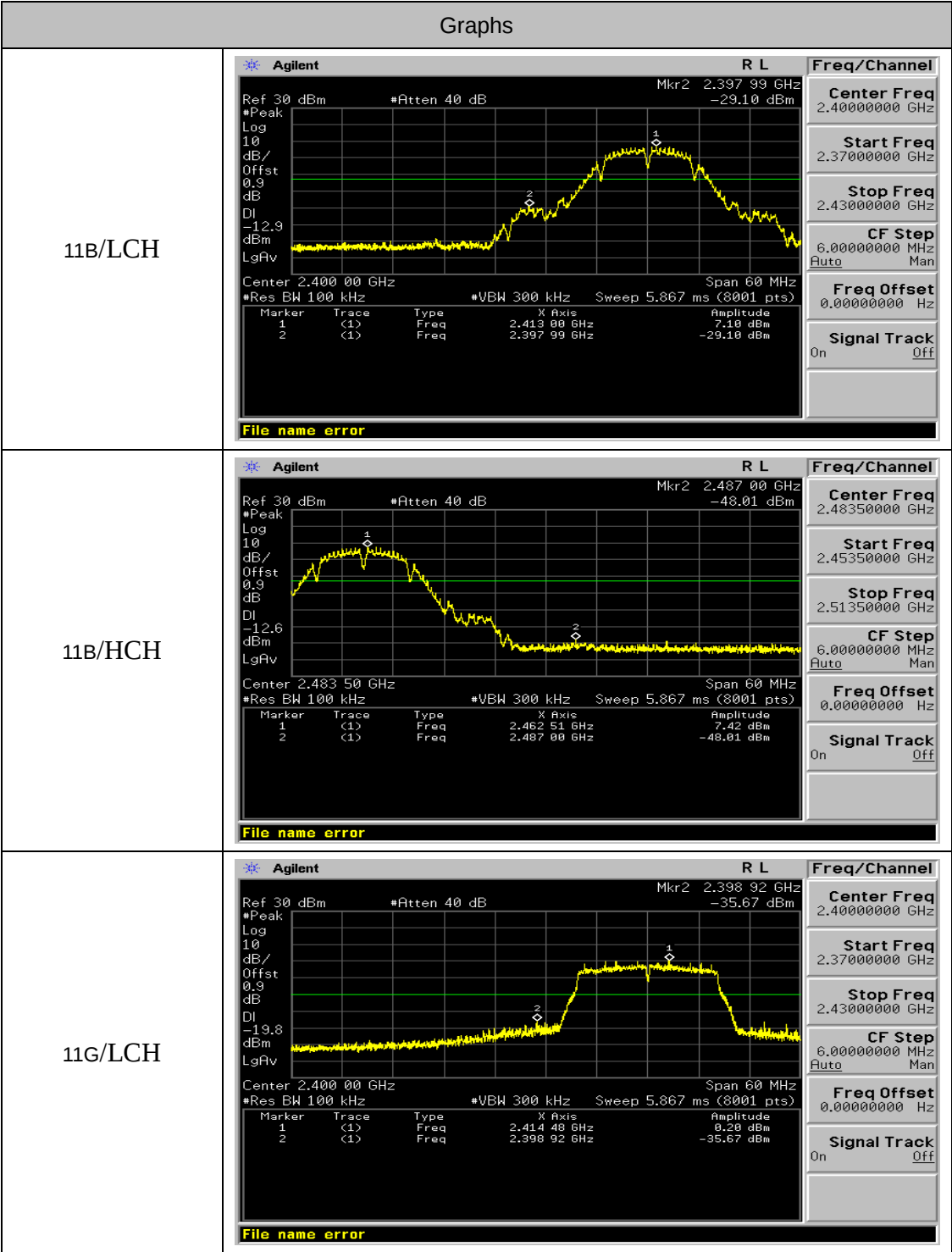
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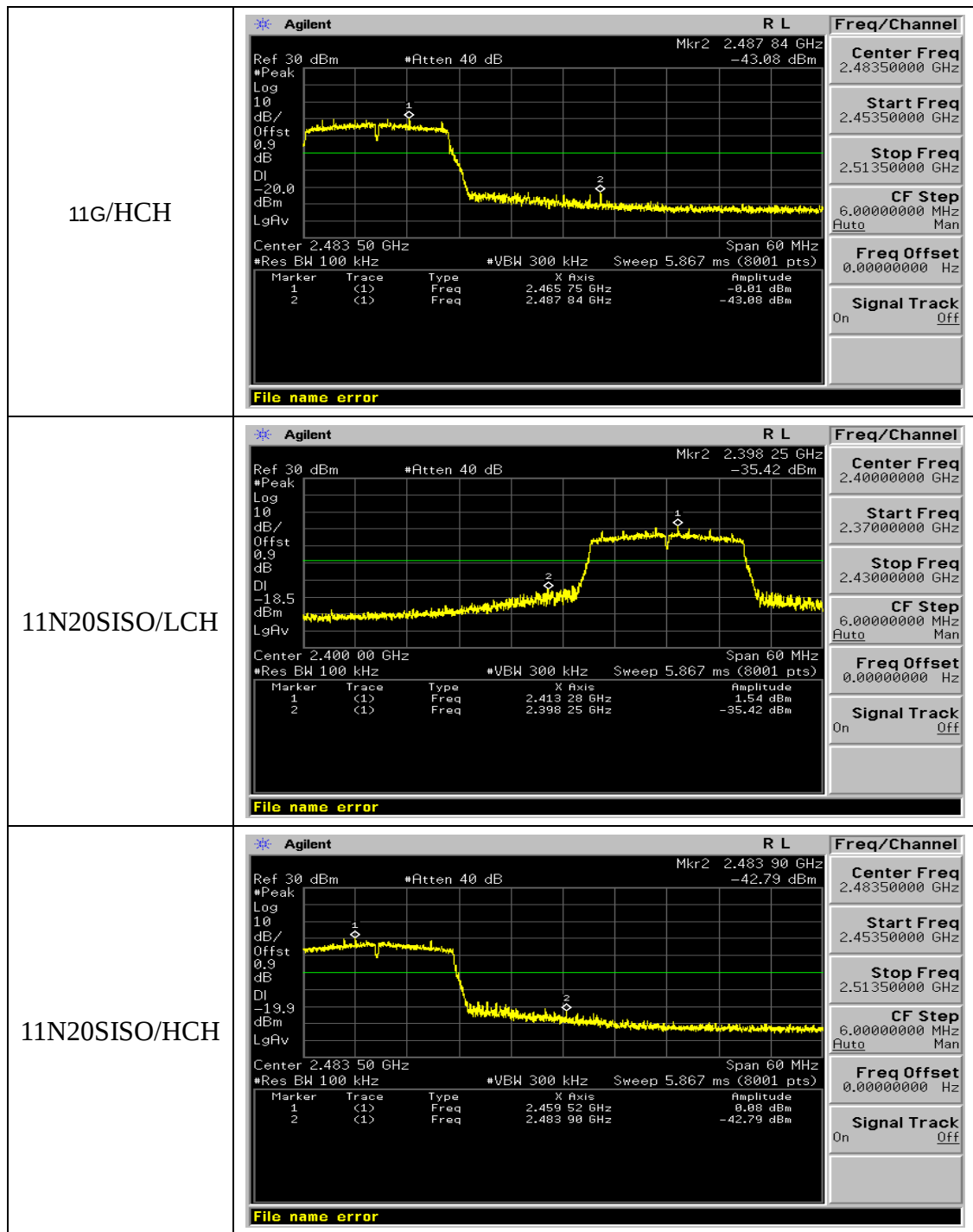
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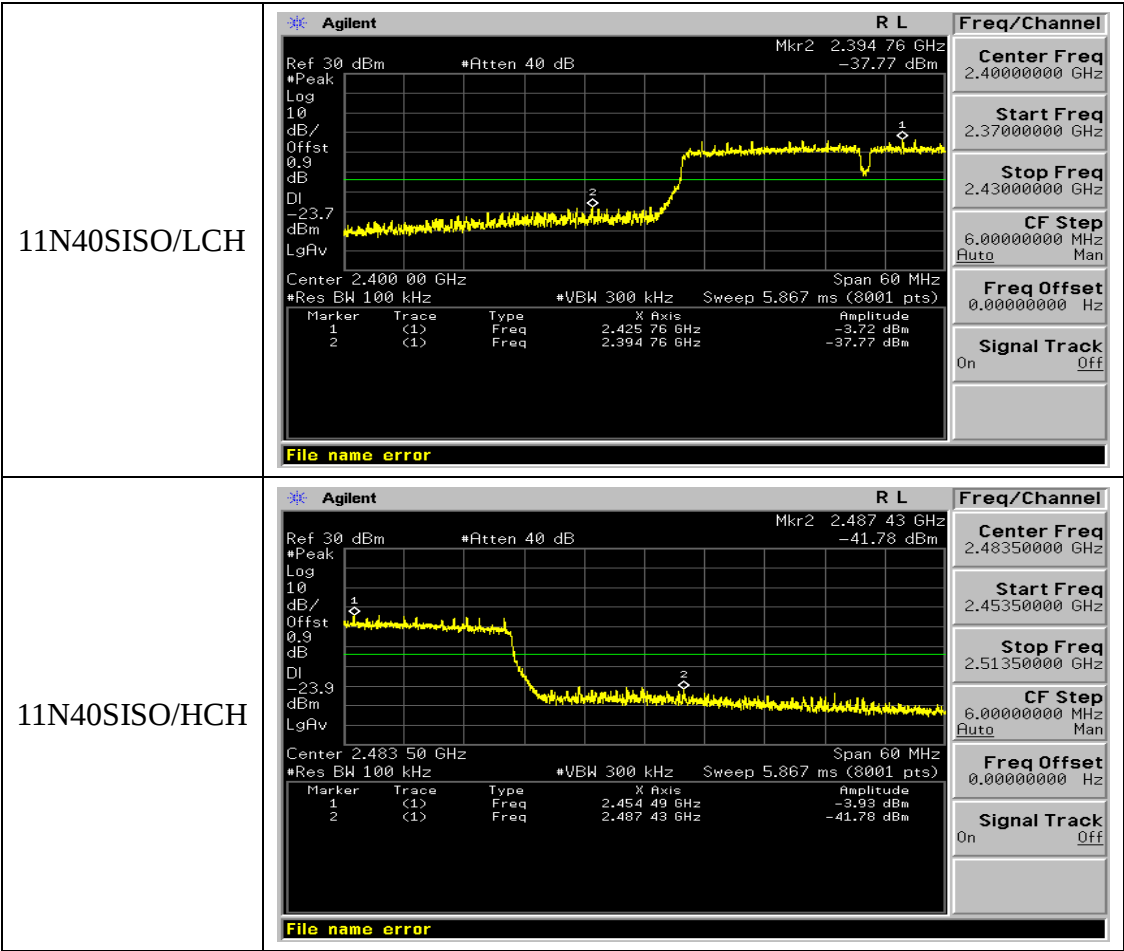
12.4. Conducted Test Result

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	7.1	-29.1	-12.9	PASS
11B	HCH	7.42	-48.01	-12.58	PASS
11G	LCH	0.2	-35.67	-19.8	PASS
11G	HCH	-0.01	-43.08	-20.01	PASS
11N20SISO	LCH	1.54	-35.42	-18.46	PASS
11N20SISO	HCH	0.08	-42.8	-19.92	PASS
11N40SISO	LCH	-3.73	-37.77	-23.73	PASS
11N40SISO	HCH	-3.93	-41.78	-23.93	PASS

Test Graph







13. FCC LINE CONDUCTED EMISSION TEST

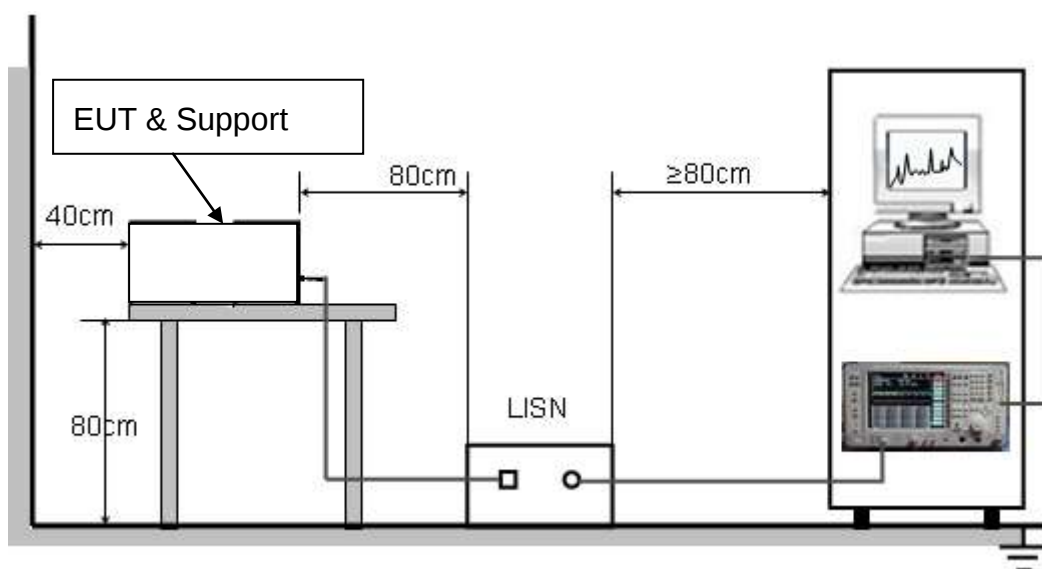
13.1. LIMITS OF LINE CONDUCTED EMISSION TEST

Frequency	Maximum RF Line Voltage	
	Q.P.(dBuV)	Average(dBuV)
150kHz~500kHz	66-56	56-46
500kHz~5MHz	56	46
5MHz~30MHz	60	50

Note:

1. The lower limit shall apply at the transition frequency.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.

13.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST



13.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST

1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.4 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
2. Support equipment, if needed, was placed as per ANSI C63.4.
3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
4. All support equipments received AC120V/60Hz power from a LISN, if any.
5. The EUT received charging voltage by adapter which received 120V/60Hz power by a LISN..
6. The test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
7. Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
8. During the above scans, the emissions were maximized by cable manipulation.
9. The test mode(s) were scanned during the preliminary test.

Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

13.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST

1. EUT and support equipment was set up on the test bench as per step 2 of the preliminary test.
2. A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less -2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.
3. The test data of the worst case condition(s) was reported on the Summary Data page.

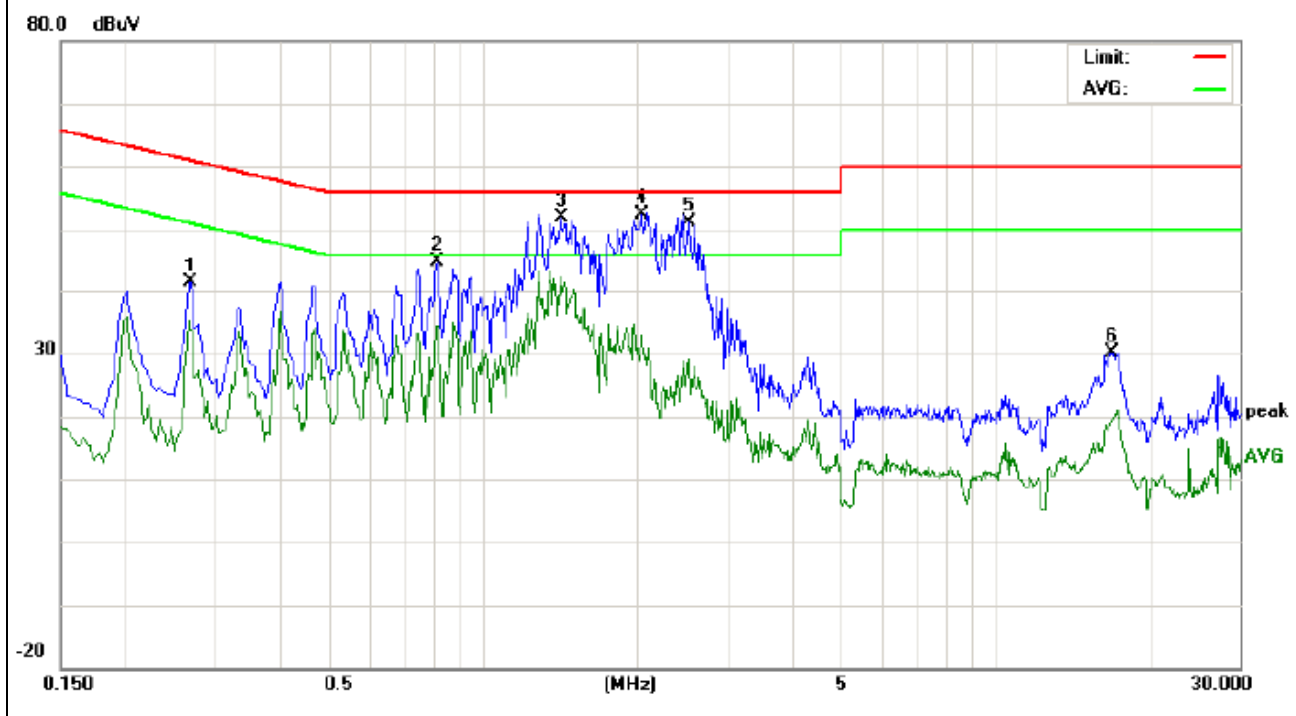
13.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST

EUT :	tablet pc	Model Name. :	PC1021ME
Temperature :	23 °C	Relative Humidity :	50%
Pressure :	1010hPa	Phase :	L
Test Voltage :	DC 5V from Adapter AC 120V/60Hz	Test Mode :	Link Mode

No.	Freq. (MHz)	Reading_Level (dBuV)			Correct Factor dB	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment
		Peak	QP	AVG		Peak	QP	AVG	QP	AVG	QP	AVG		
1	0.2700	31.20		23.42	10.28	41.48		33.70	61.12	51.12	-19.64	-17.42	P	
2	0.8139	34.67		24.12	10.30	44.97		34.42	56.00	46.00	-11.03	-11.58	P	
3	1.4220	41.56		31.64	10.38	51.94		42.02	56.00	46.00	-4.06	-3.98	P	
4	2.0340	42.08		22.60	10.23	52.31		32.83	56.00	46.00	-3.69	-13.17	P	
5	2.5180	40.81		18.75	10.43	51.24		29.18	56.00	46.00	-4.76	-16.82	P	
6	16.9140	20.11		9.01	10.13	30.24		19.14	60.00	50.00	-29.76	-30.86	P	

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

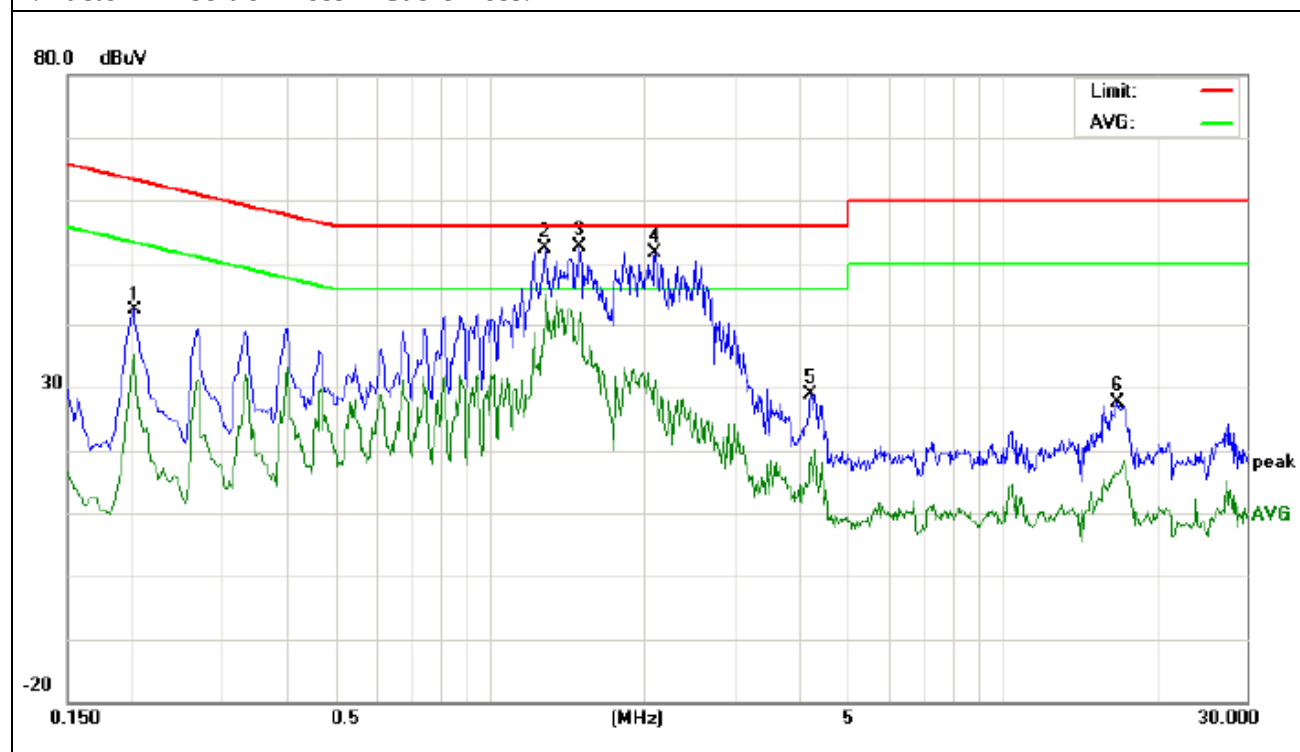


EUT :	tablet pc	Model Name. :	PC1021ME
Temperature :	23 °C	Relative Humidity :	50%
Pressure :	1010hPa	Phase :	N
Test Voltage :	DC 5V from Adapter AC 120V/60Hz	Test Mode :	Link Mode

No.	Freq. (MHz)	Reading_Level (dBuV)			Correct Factor dB	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment
		Peak	QP	AVG		Peak	QP	AVG	QP	AVG	QP	AVG		
1	0.2020	32.07		24.87	10.22	42.29		35.09	63.52	53.52	-21.23	-18.43	P	
2	1.2860	42.00		33.00	10.38	52.38		43.38	56.00	46.00	-3.62	-2.62	P	
3	1.5020	42.18		29.57	10.38	52.56		39.95	56.00	46.00	-3.44	-6.05	P	
4	2.1060	41.46		20.96	10.26	51.72		31.22	56.00	46.00	-4.28	-14.78	P	
5	4.2260	18.67		8.45	10.33	29.00		18.78	56.00	46.00	-27.00	-27.22	P	
6	16.7979	17.41		6.22	10.13	27.54		16.35	60.00	50.00	-32.46	-33.65	P	

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.



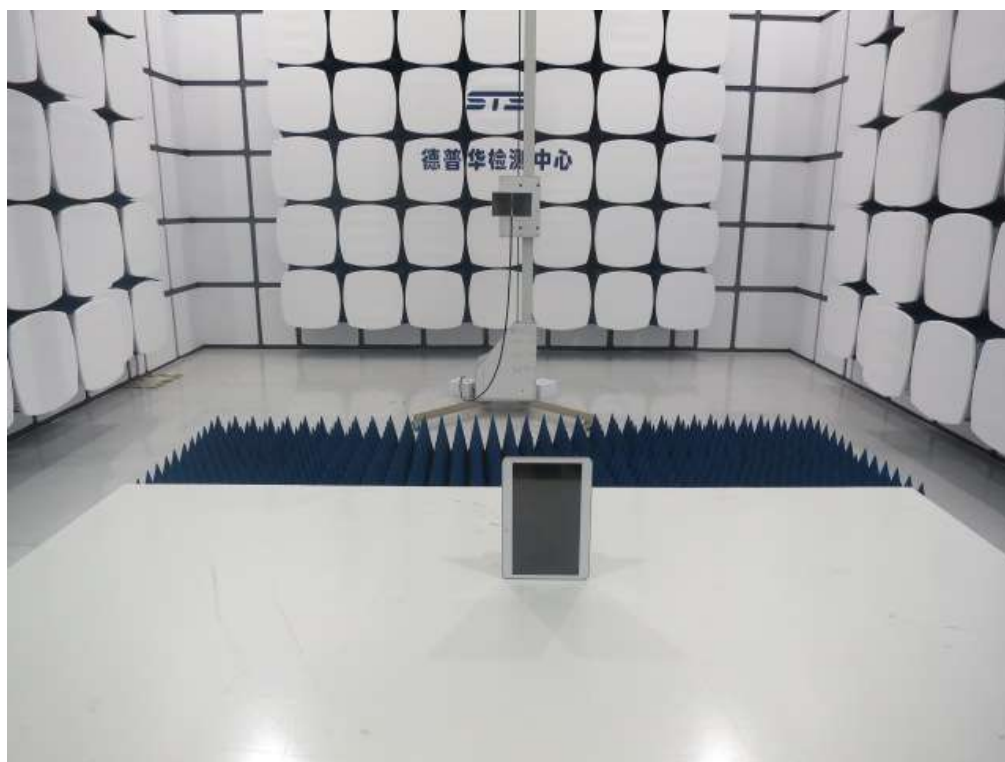
APPENDIX A: PHOTOGRAPHS OF TEST SETUP

FCC LINE CONDUCTED EMISSION TEST SETUP



FCC RADIATED EMISSION TEST SETUP



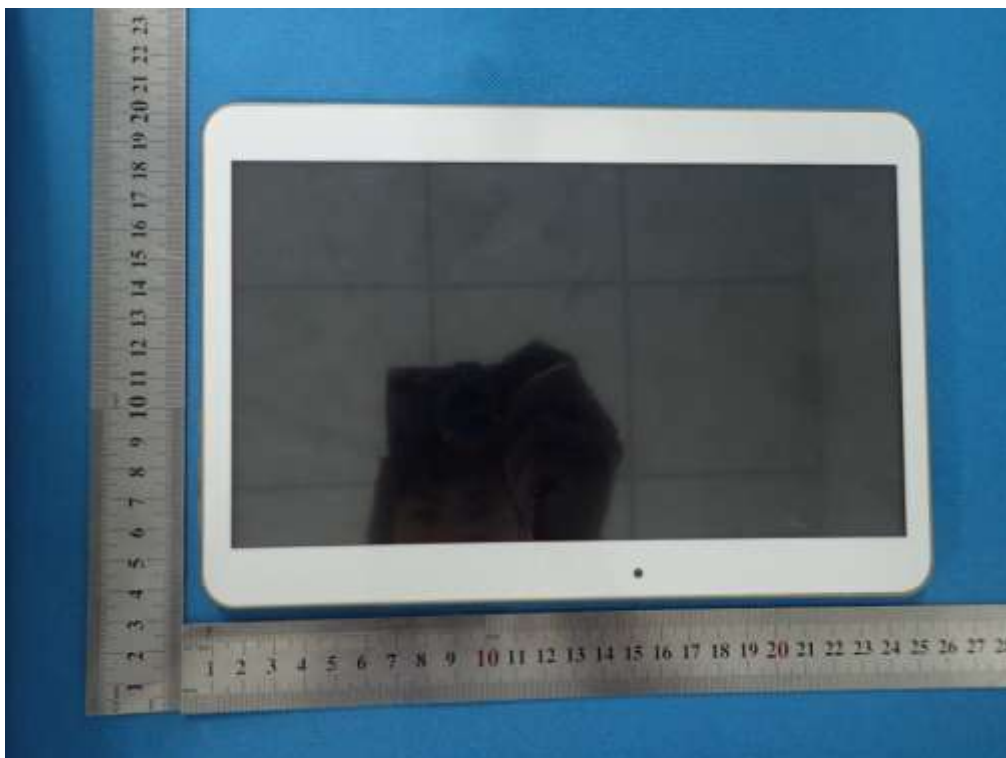


APPENDIX B: PHOTOGRAPHS OF EUT

TOTAL VIEW OF EUT



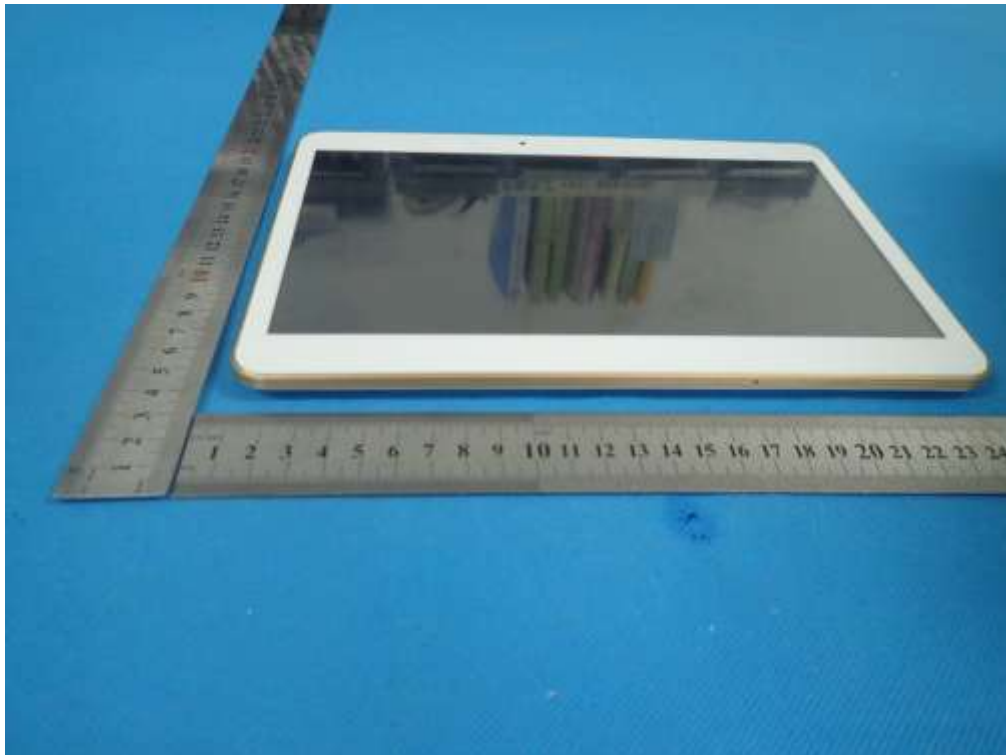
TOP VIEW OF EUT



BOTTOM VIEW OF EUT



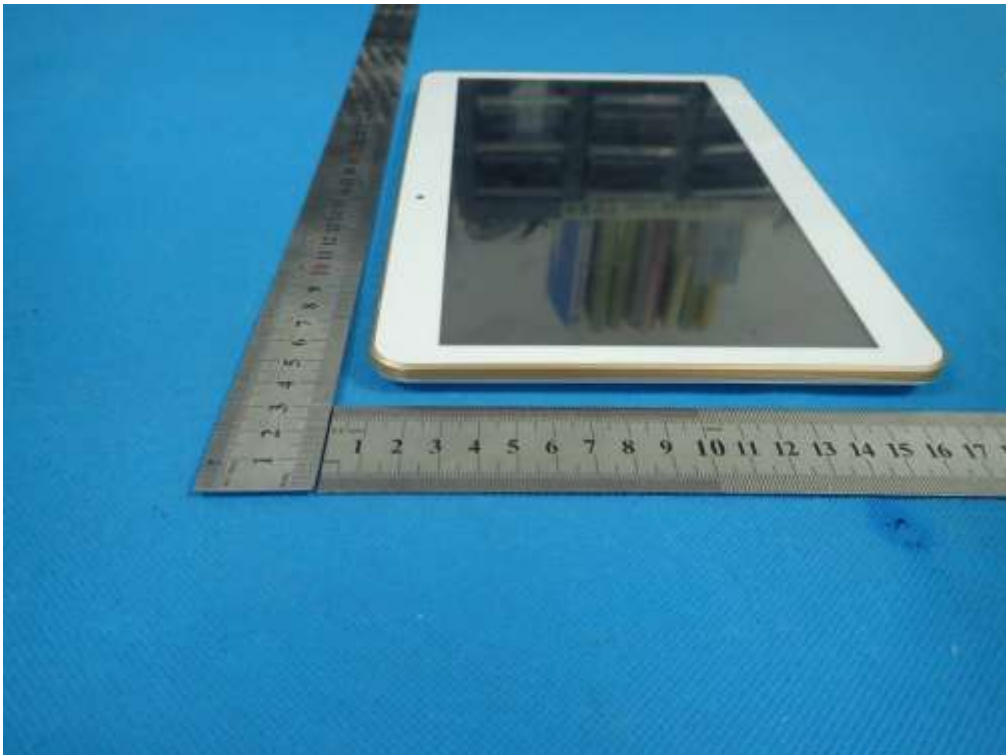
FRONT VIEW OF EUT



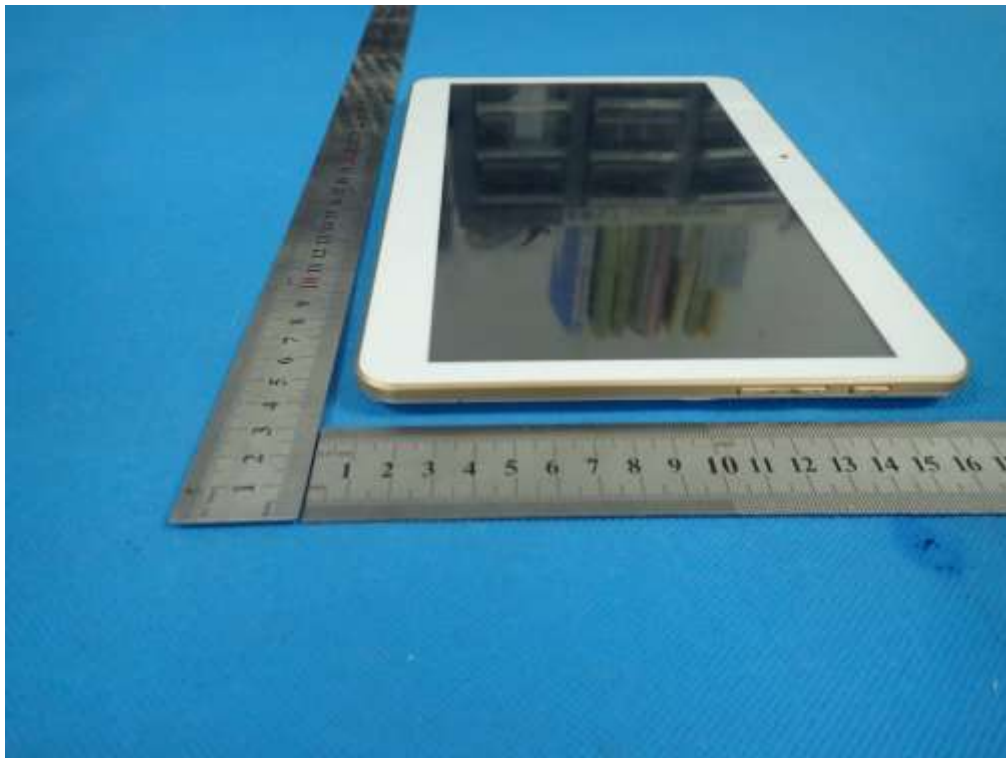
BACK VIEW OF EUT



LEFT VIEW OF EUT



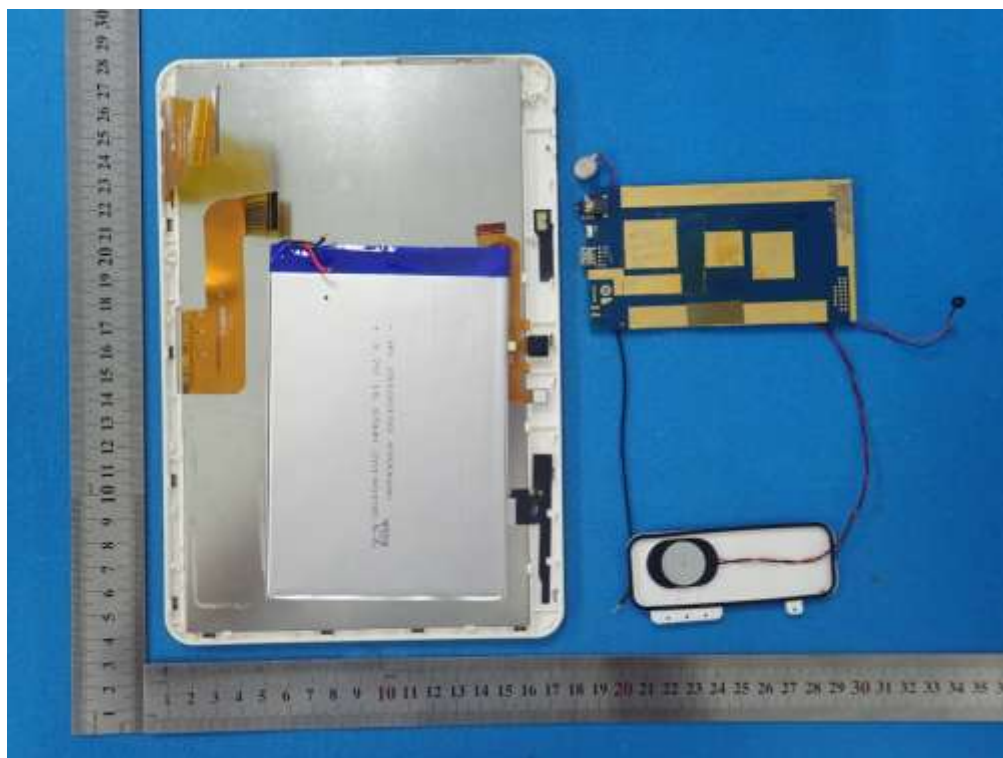
RIGHT VIEW OF EUT



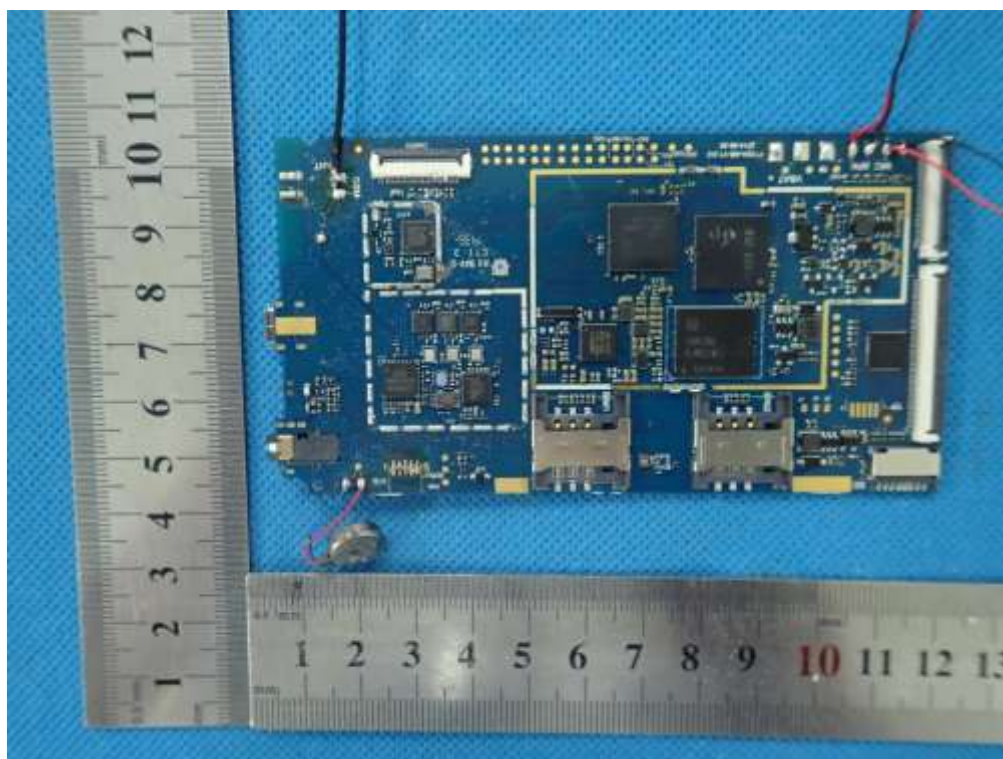
INTERNAL VIEW OF EUT-1



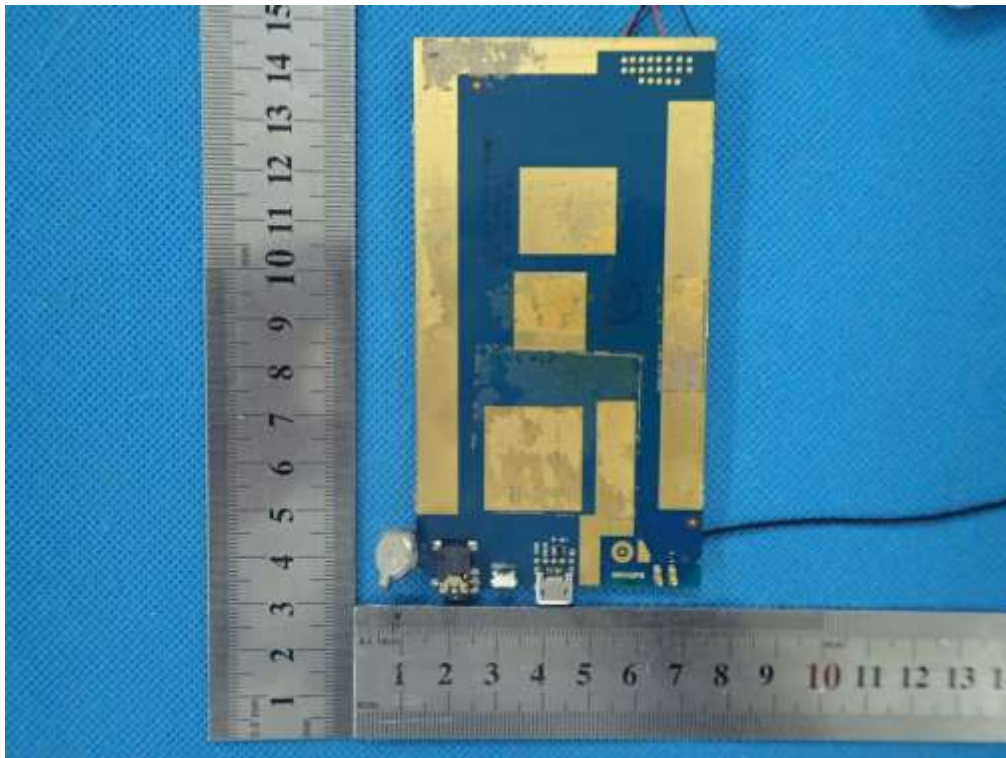
INTERNAL VIEW OF EUT-2



INTERNAL VIEW OF EUT-3



INTERNAL VIEW OF EUT-4



----END OF REPORT----