FCC Test Report

Report No.: AGC00119150303FE04

FCC ID	:	BRCPC7095ME
APPLICATION PURPOSE	:	Original Equipment
PRODUCT DESIGNATION	:	tablet pc
BRAND NAME	:	Kinwei, Titan
MODEL NAME	:	PC7095ME(Series model name please see attached list on page 6)
CLIENT	:	Kintech Co., Ltd.
DATE OF ISSUE	:	Apr.28, 2015
STANDARD(S) **TEST PROCEDURE(S)**	:	FCC Part 15.247 KDB 558074 v03r02
REPORT VERSION	:	V1.0

Attestation of ***G***lobal ***C***ompliance (Shenzhen) Co., Ltd

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Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Apr.28, 2015	Valid	Original Report

TABLE OF CONTENTS

1. VERIFICATION OF CONFORMITY 5
2. GENERAL INFORMATION 6
2.1. PRODUCT DESCRIPTION 7
2.2. TABLE OF CARRIER FREQUENCYS 7
2.3. IEEE 802.11N MODULATION SCHEME 8
2.4. RELATED SUBMITTAL(S) / GRANT (S) 8
2.5. TEST METHODOLOGY 8
2.6. SPECIAL ACCESSORIES 8
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 13
7.1. MEASUREMENT PROCEDURE 13
7.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION) 14
7.3. LIMITS AND MEASUREMENT RESULT 15
8. 6DB BANDWIDTH 17
8.1. MEASUREMENT PROCEDURE 17
8.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION) 17
8.3. LIMITS AND MEASUREMENT RESULTS 17
9. CONDUCTED SPURIOUS EMISSION 22
9.1. MEASUREMENT PROCEDURE 22
9.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION) 22
9.3. MEASUREMENT EQUIPMENT USED 22
9.4. LIMITS AND MEASUREMENT RESULT 22
10. MAXIMUM CONDUCTED OUTPUT POWER SPECTRAL DENSITY 51
10.1 MEASUREMENT PROCEDURE 51
10.2 TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION) 51
10.3 MEASUREMENT EQUIPMENT USED 51
10.4 LIMITS AND MEASUREMENT RESULT 51

11. RADIATED EMISSION 56
11.1. MEASUREMENT PROCEDURE 56
11.2. TEST SETUP 57
11.3. LIMITS AND MEASUREMENT RESULT 58
11.4. TEST RESULT 58
12. BAND EDGE EMISSION 66
12.1. MEASUREMENT PROCEDURE 66
12.2. TEST SET-UP 66
12.3. Radiated Test Result 67
12.4. Conducted Test Result 68
13. FCC LINE CONDUCTED EMISSION TEST 72
13.1. LIMITS OF LINE CONDUCTED EMISSION TEST 72
13.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST 72
13.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST 73
13.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST 73
13.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST 74
APPENDIX A: PHOTOGRAPHS OF TEST SETUP 76
APPENDIX B: PHOTOGRAPHS OF EUT 77

1. VERIFICATION OF CONFORMITY

Applicant	Kintech Co., Ltd.
Address	1F-5F, Bldg 22, Chen Tian Industral Zone, Xi Xiang, Bao An District, Shenzhen, Guang Dong, China
Manufacturer	Kintech Co., Ltd
Address	1F-5F, Bldg 22, Chen Tian Industral Zone, Xi Xiang, Bao An District, Shenzhen, Guang Dong, China
Product Designation	tablet pc
Brand Name	Kinwei, Titan
Test Model	PC7095ME
Series Model	Series model name please see attached list on page 6
Difference description	All the same except for the model name.
Date of test	Apr.20,2015 to Apr.27,2015
Deviation	None
Condition of Test Sample	Normal
Report Template	AGCRT-US-BGN/RF

We hereby certify that:

The above equipment was tested by Attestation of Global Compliance (Shenzhen) 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	Matt Zhang	Apr.28, 2015
Checked By	Kidd Yang	Apr.28, 2015
Authorized By	Solger Zhang	Apr.28, 2015

ATTACHED LIST

Series model	PC7095, PC7095Y, PCXXXXME(XXXX represents 0000~9999), PCXXXX(XXXX represents 0000~9999), PCXXXXY(XXXX represents 0000~9999; Y represents A~Z), KW-PC7095X, KW-PC7095, KW-PCXXXXX(XXXX represents 0000~9999), KW-PCXXXX(XXXX represents 0000~9999), PC7099ME, PC7099, PC7099Y, PCXXXXME(XXXX represents 0000~9999), PCXXXX(XXXX represents 0000~9999), PCXXXXY(XXXX represents 0000~9999; Y represents A~Z), KW-PC7099X, KW-PC7099, KW-PCXXXXX(XXXX represents 0000~9999), KW-PCXXXX(XXXX represents 0000~9999)

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:9.86dBm; IEEE 802.11g:8.43dBm; IEEE 802.11n(20):8.19dBm; IEEE 802.11n(40):6.48dBm
Modulation	DSSS(DBPSK/DQPSK/CCK);OFDM(BPSK/QPSK/16-QAM/64-QAM)
Number of channels	11
Hardware Version	PX6S706 REV:1.1
Software Version	F719-SG-2015-04-15
Antenna Designation	Integrated Antenna
Antenna Gain	1.0dBi
Power Supply	DC3.7V by Built-in Li-ion Battery

2.2. TABLE OF CARRIER FREQUENCYS

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: BRCPC7095ME** 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

NO.	TEST MODE DESCRIPTION
1	Low channel TX
2	Middle channel TX
3	High channel TX
4	Normal operating
Note: Transmit by 802.11b with Date rate (1/2/5.5/11) Transmit by 802.11g with Date rate (6/9/12/18/24/36/48/54) Transmit by 802.11n (20MHz) with Date rate (6.5/13/19.5/26/39/52/58.5/65) Transmit by 802.11n (40MHz) with Date rate (13.5/27/40.5/54/81/108/121.5/135)	

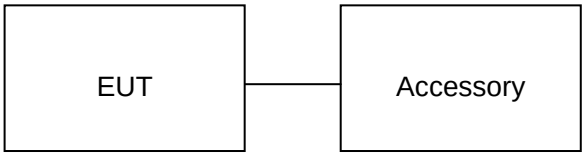
Note:

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	Note
1	tablet pc	PC7095ME	FCC ID: BRCPC7095ME	EUT
2	Adapter	JKY0212-0502000UL	5V/2A	Accessory
3	Battery	N/A	DC3.7V / 2800mAh	Accessory
4	Earphone	PC7095ME	N/A	Accessory
5	USB Cable	PC7095ME	N/A	Accessory

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	Compliance Certification Services (Shenzhen) Inc.
Location	No.10-1 Mingkeda Logistics park, No.18, Huanguan South Rd.,Guan Lan Town, Baoan District, Shenzhen, China
Description	Test Firm Registration Number: 441872

ALL TEST EQUIPMENT LIST

Description	Manufacturer	Model	S/N	Cal. Date	Cal. Due
Power Sensor	R&S	NRP-Z23	100323	07/25/2014	07/24/2015
PC	HP	4-1220TX	MY45100361	--	--
RF attenuator	N/A	RFA20db	68	07/25/2014	07/24/2015
Spectrum Analyzer	Agilent	E4440A	US41421290	02/17/2015	02/16/2016
Amplifier	EM	EM30180	0607030	02/17/2015	02/16/2016
Horn Antenna	EM	EM-AH-10180	67	02/17/2015	02/16/2016
Horn Antenna	A.H. Systems Inc.	SAS-574	N/A	07/25/2014	07/24/2015
EMI Test Receiver	Rohde & Schwarz	ESCI	100694	07/25/2014	07/24/2015
WIDEBAND REQUENCY ANTENNA	SCHWARZBECK	VULB9168	26	08/16/2014	08/15/2015
Loop Antenna	A.H.	SAS-526B	SEL0097	05/10/2014	05/09/2015
LISN	R&S	ESH3-Z5	8389791009	07/25/2014	07/24/2015
Radiation Cable 1	Sat	RE1	R003	06/04/2014	06/03/2015
Radiation Cable 2	Sat	RE2	R002	06/04/2014	06/03/2015
Conduction Cable	Sat	CE1	C001	06/04/2014	06/03/2015

Radiated Emission Test Site 966(2)					
Name of Equipment	**Manufacturer**	**Model Number**	**Serial Number**	**Last Calibration**	**Due Calibration**
PSA Series Spectrum Analyzer	Agilent	E4446A	US44300399	03/01/2015	03/01/2016
EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCI	100783	03/09/2015	03/08/2016
Amplifier	MITEQ	AM-1604-3000	1123808	03/18/2015	03/17/2016
High Noise Amplifier	Agilent	8449B	3008A01838	03/18/2015	03/17/2016
Board-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170-497	07/10/2014	07/09/2015
Bilog Antenna	SCHAFFNER	CBL6143	5082	03/01/2015	03/01/2016
Horn Antenna	SCHWARZBECK	BBHA9120	D286	03/01/2015	03/01/2016
Loop Antenna	COM-POWER	AL-130	121044	09/27/2014	09/26/2015
Turn Table	N/A	N/A	N/A	N.C.R	N.C.R
Controller	Sunol Sciences	SC104V	022310-1	N.C.R	N.C.R
Controller	CT	N/A	N/A	N.C.R	N.C.R
Temp. / Humidity Meter	Anymetre	JR913	N/A	02/28/2015	02/27/2016
Antenna Tower	SUNOL	TLT2	N/A	N.C.R	N.C.R
Test S/W	FARAD	LZ-RF / CCS-SZ-3A2			

Conducted Emission Test Site					
Name of Equipment	**Manufacturer**	**Model Number**	**Serial Number**	**Last Calibration**	**Due Calibration**
EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCI	100783	03/09/2015	03/08/2016
LISN(EUT)	ROHDE&SCHWARZ	ENV216	101543-WX	03/09/2015	03/08/2016
LISN	EMCO	3825/2	8901-1459	03/09/2015	03/08/2016
Temp. / Humidity Meter	VICTOR	HTC-1	N/A	03/04/2015	03/03/2016
Test S/W	FARAD	EZ-EMC/ CCS-3A1-CE			

7. OUTPUT POWER

7.1. MEASUREMENT PROCEDURE

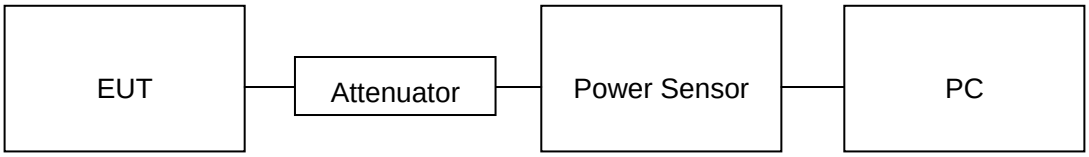
For max average conducted output power test:

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	9.86	30	Pass
2.437	9.77	30	Pass
2.462	9.75	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	8.43	30	Pass
2.437	8.34	30	Pass
2.462	8.29	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	8.19	30	Pass
2.437	8.15	30	Pass
2.462	8.10	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	6.44	30	Pass
2.452	6.39	30	Pass

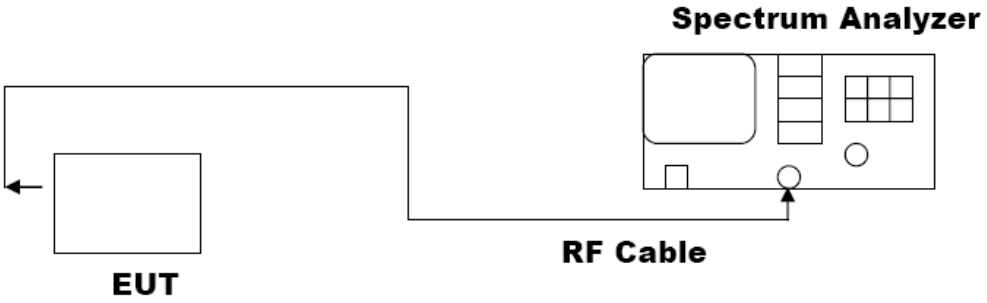
8. 6DB BANDWIDTH

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⩾3×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.

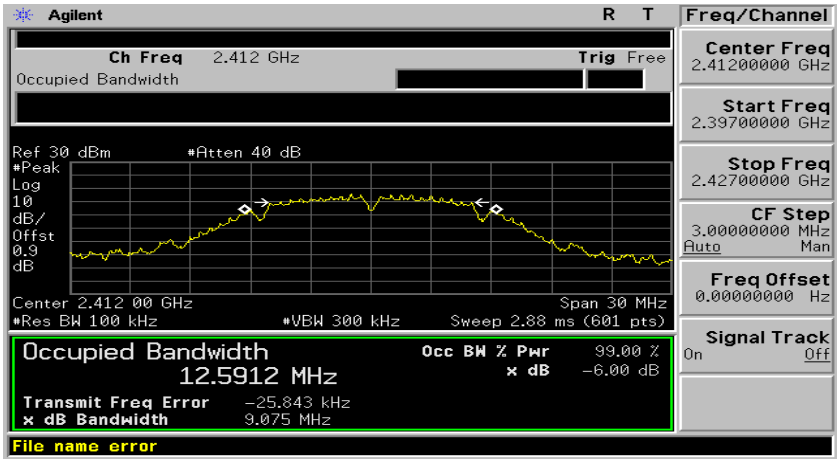
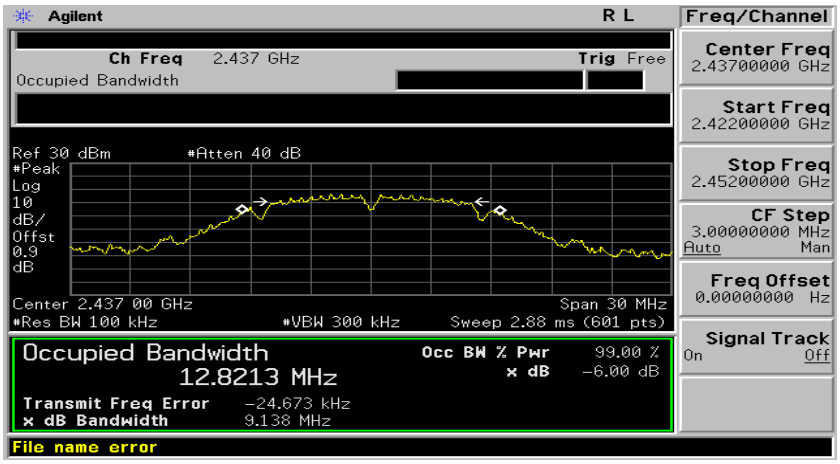
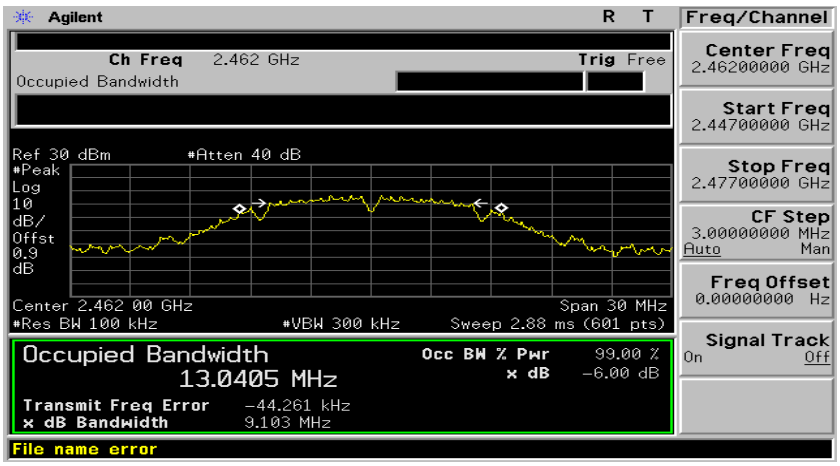
8.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

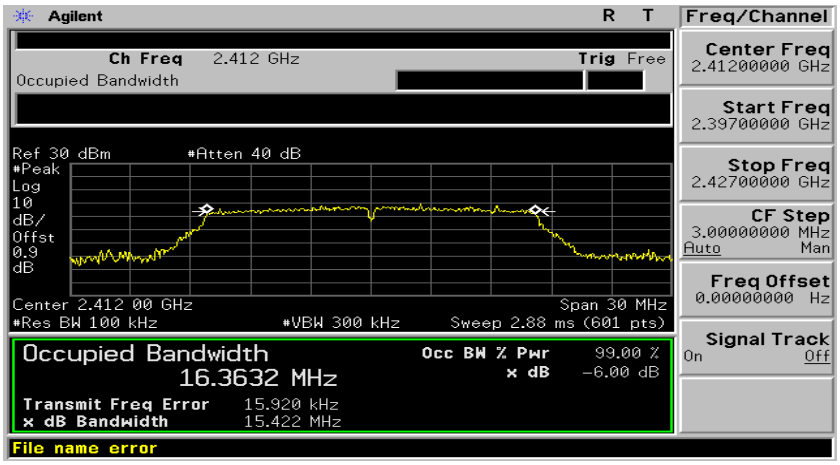
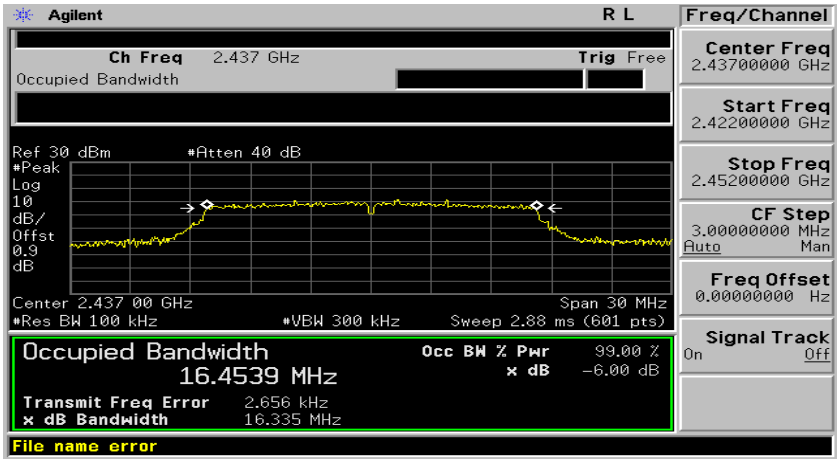
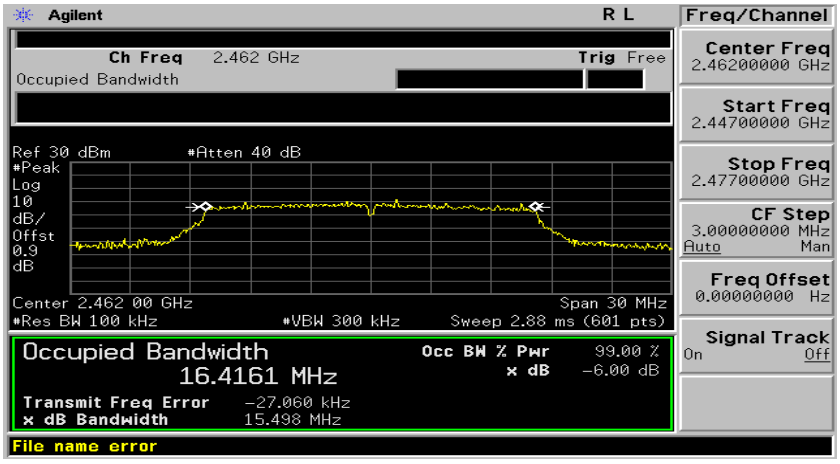


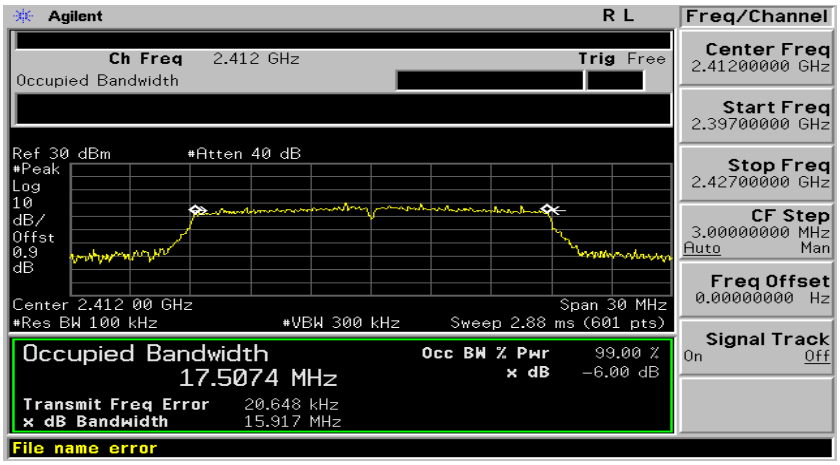
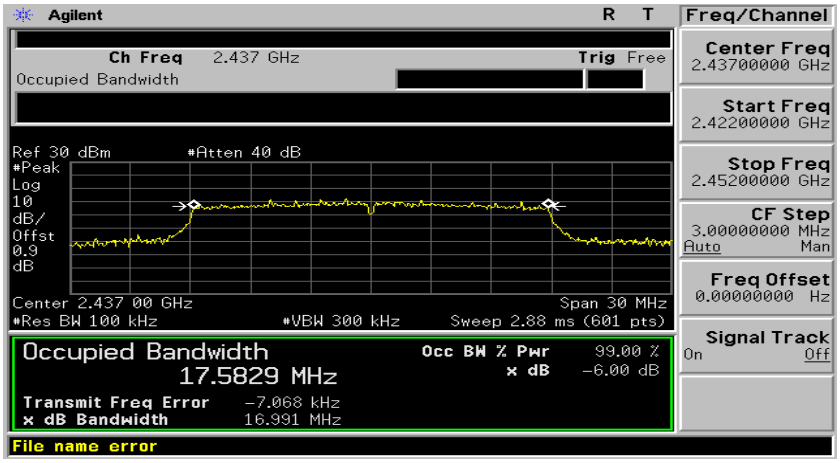
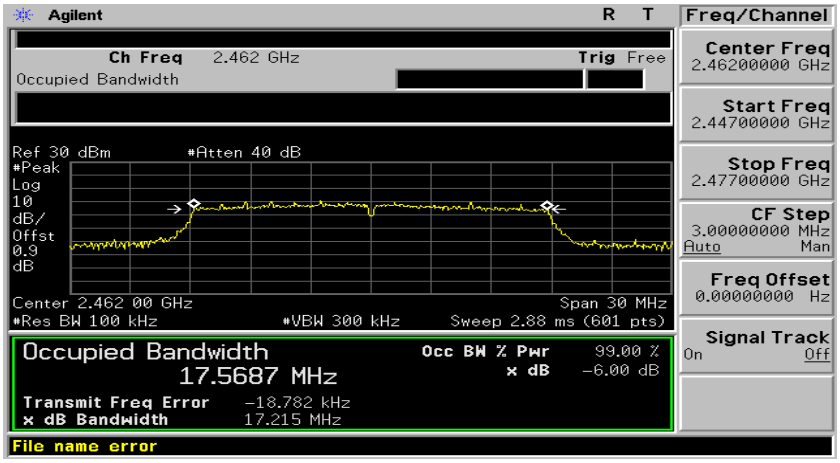
8.3. LIMITS AND MEASUREMENT RESULTS

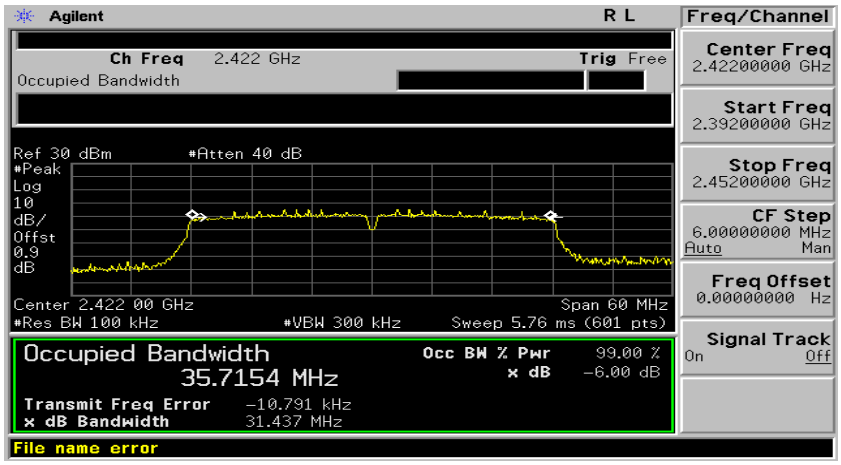
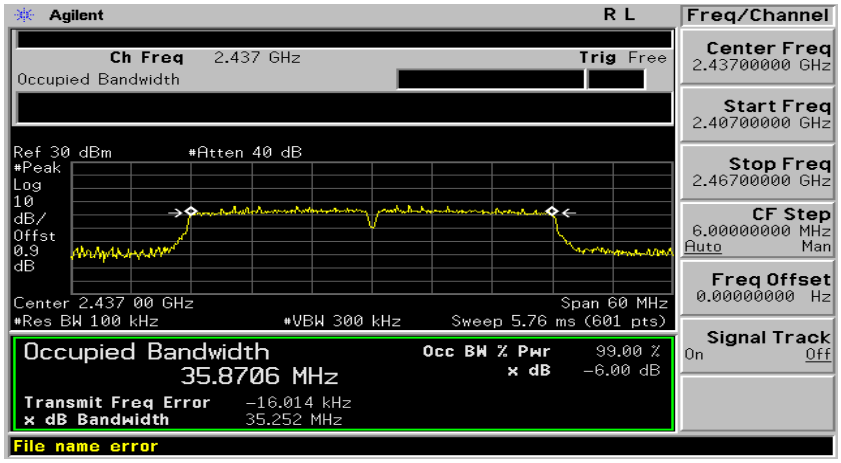
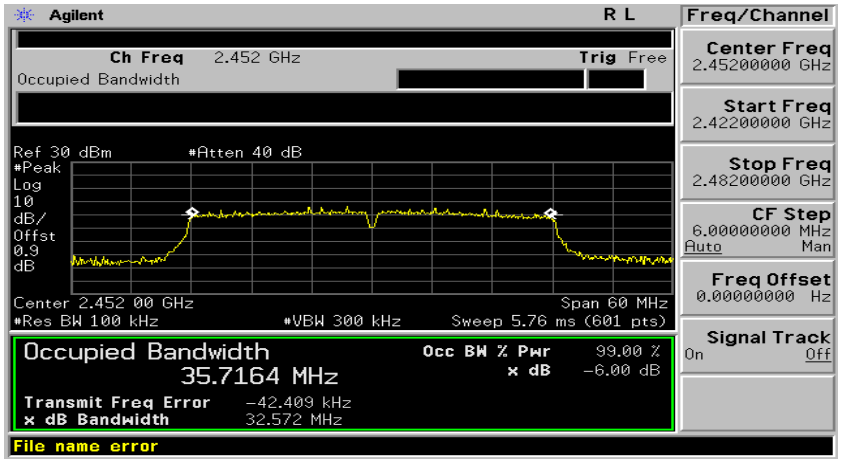
Mode	Channel	6dB Bandwidth [MHz]	OBW [MHz]	Verdict
11B	LCH	9.08	12.59	PASS
11B	MCH	9.14	12.82	PASS
11B	HCH	9.10	13.04	PASS
11G	LCH	15.42	16.36	PASS
11G	MCH	16.34	16.45	PASS
11G	HCH	15.50	16.42	PASS
11N20SISO	LCH	15.92	17.51	PASS
11N20SISO	MCH	16.99	17.58	PASS
11N20SISO	HCH	17.21	17.57	PASS
11N40SISO	LCH	31.44	35.72	PASS
11N40SISO	MCH	35.25	35.87	PASS
11N40SISO	HCH	32.57	35.72	PASS

Test Graph

Graphs	
11B/LCH	
11B/MCH	
11B/HCH	

11G/LCH	
11G/MCH	
11G/HCH	

11N20SISO/LCH	
11N20SISO/MCH	
11N20SISO/HCH	

11N40SISO/LCH	
11N40SISO/MCH	
11N40SISO/HCH	

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.

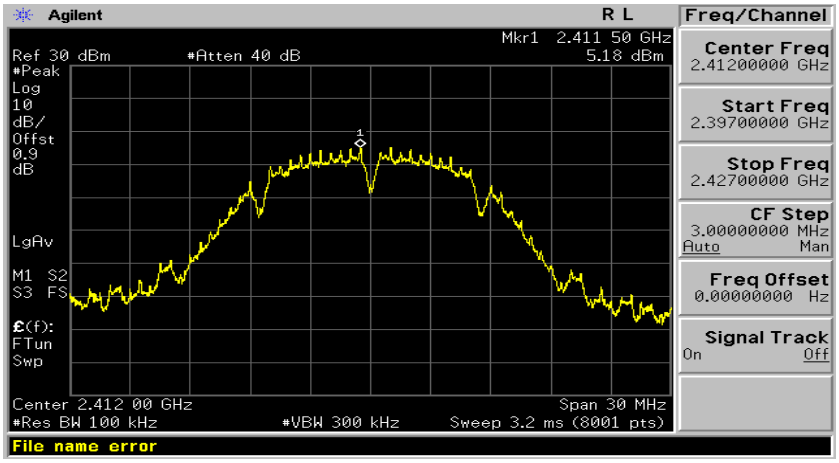
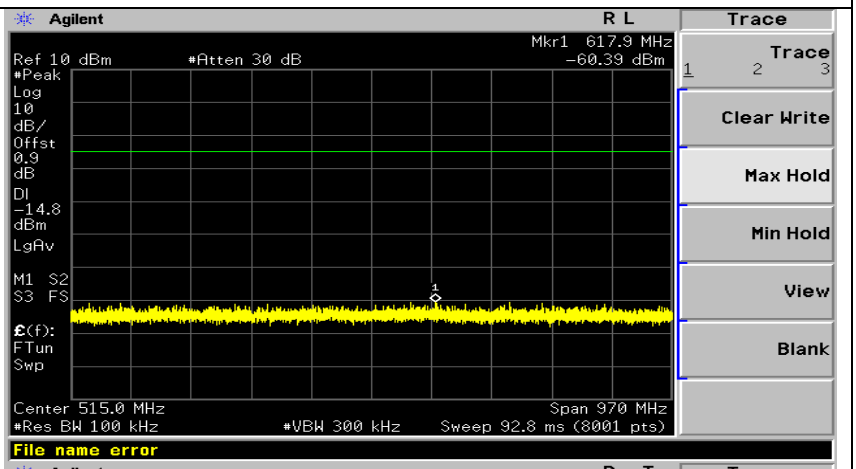
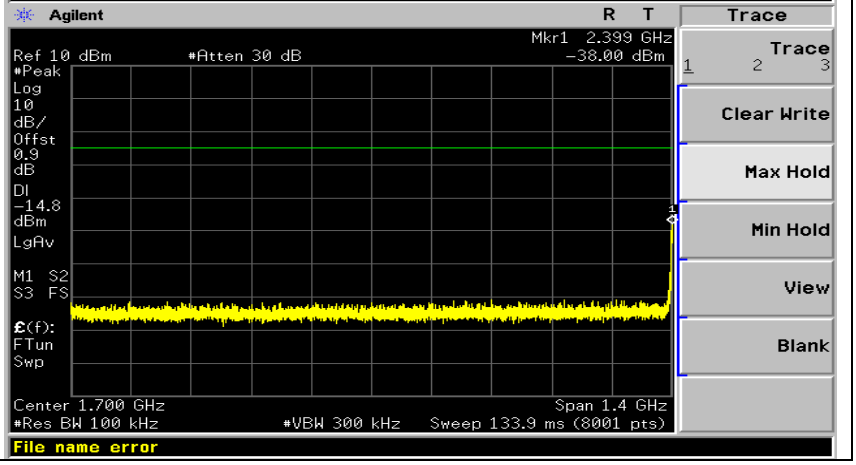
9.3. MEASUREMENT EQUIPMENT USED

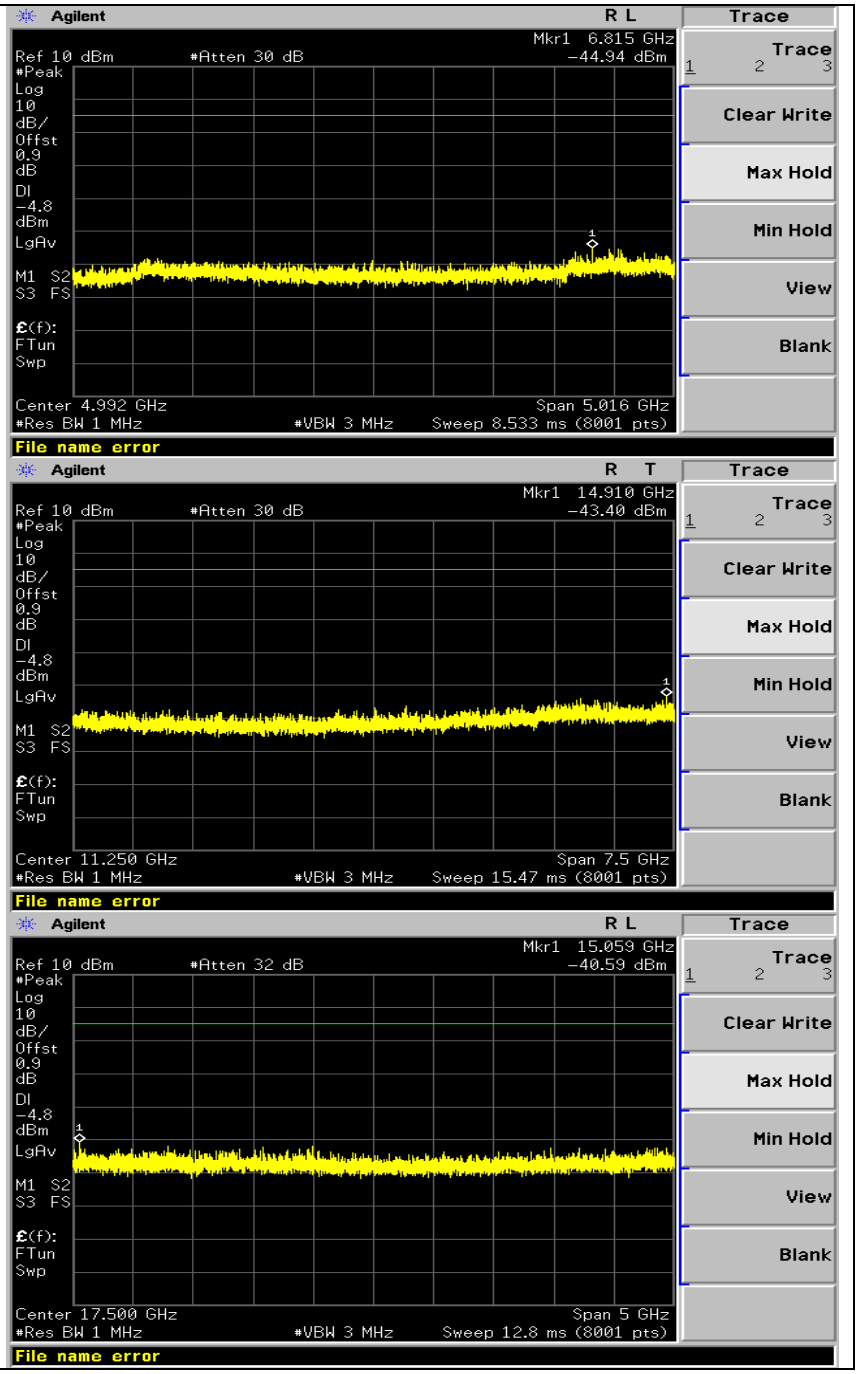
The same as described in section 6.

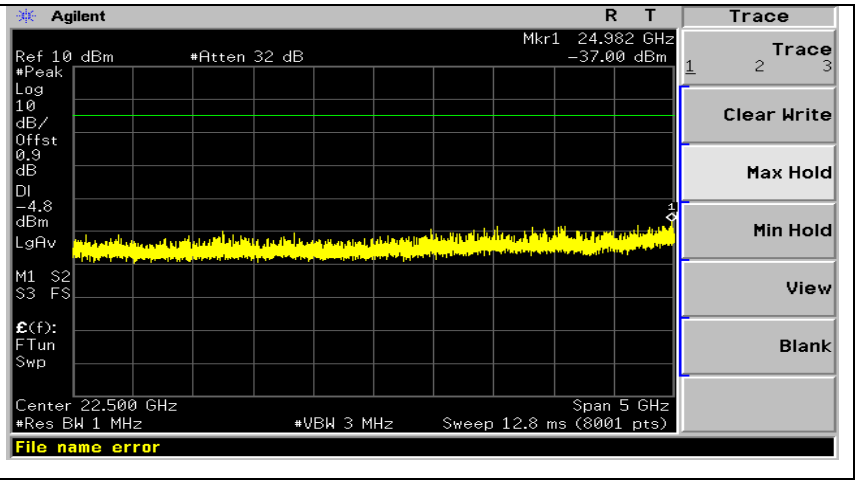
9.4. LIMITS AND MEASUREMENT RESULT

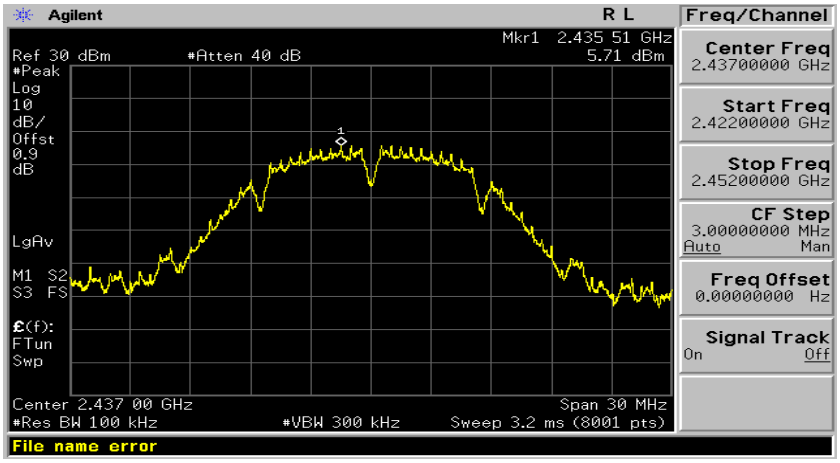
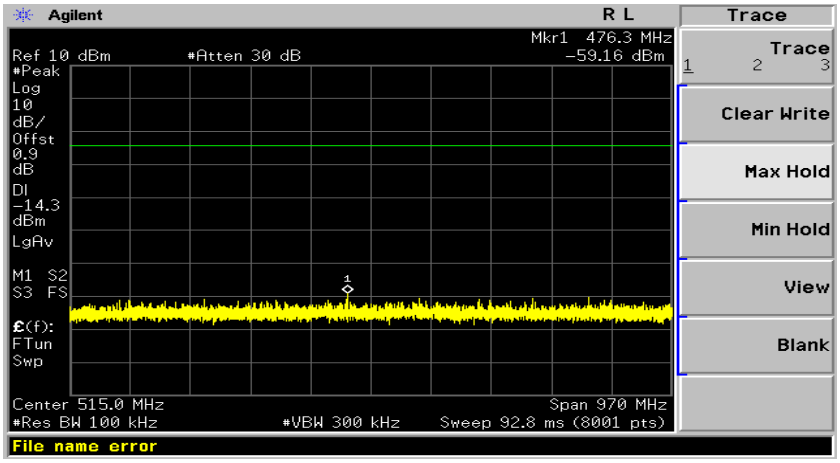
LIMITS AND MEASUREMENT RESULT		
Applicable Limits	**Measurement Result**	
	Test Data	**Criteria**
In any 100 KHz Bandwidth Outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produce by the intentional radiator shall be at least 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

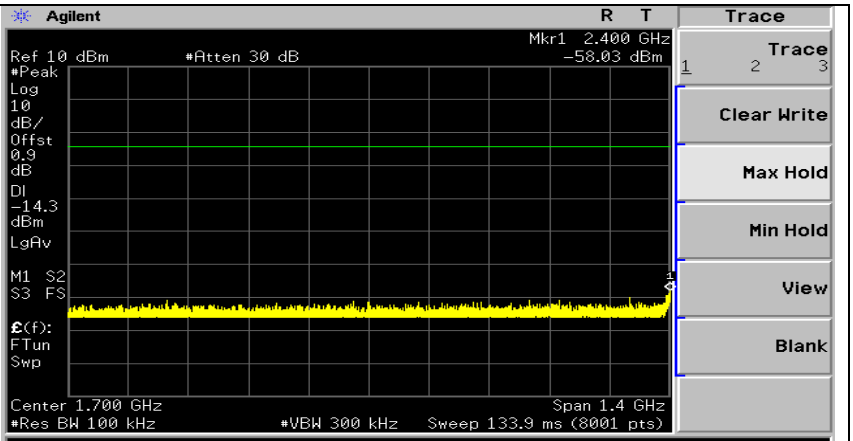
Test Graph

11B_LCH_Graphs	
Pref/11B/LCH	
Puw/11B/LCH	 

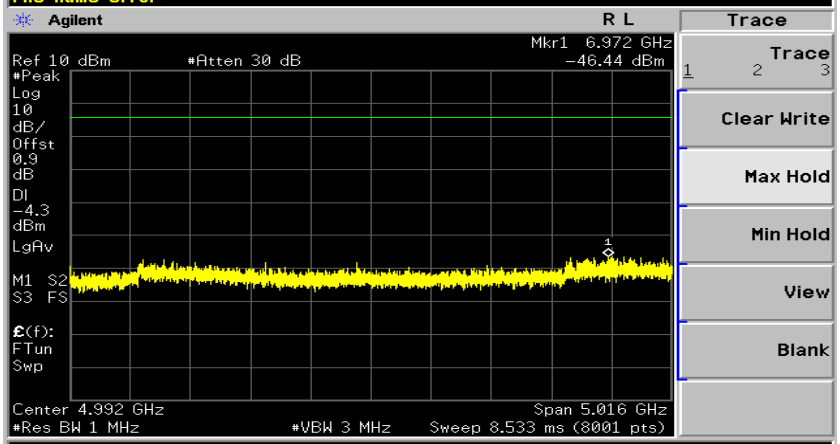

Agilent
R L
Trace
Mkr1 6.815 GHz
Ref 10 dBm
#Atten 30 dB
-44.94 dBm
#Peak
Log
10
dB/
Offst
0.9
dB
Dl
-4.8
dBm
LgAv
M1 S2
S3 FS
£(f):
FTun
Swp
Center 4.992 GHz
Span 5.016 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 8.533 ms (8001 pts)
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
File name error
Agilent
R T
Trace
Mkr1 14.910 GHz
Ref 10 dBm
#Atten 30 dB
-43.40 dBm
Center 11.250 GHz
Span 7.5 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 15.47 ms (8001 pts)
File name error
Agilent
R L
Trace
Mkr1 15.059 GHz
Ref 10 dBm
#Atten 32 dB
-40.59 dBm
Center 17.500 GHz
Span 5 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 12.8 ms (8001 pts)
File name error



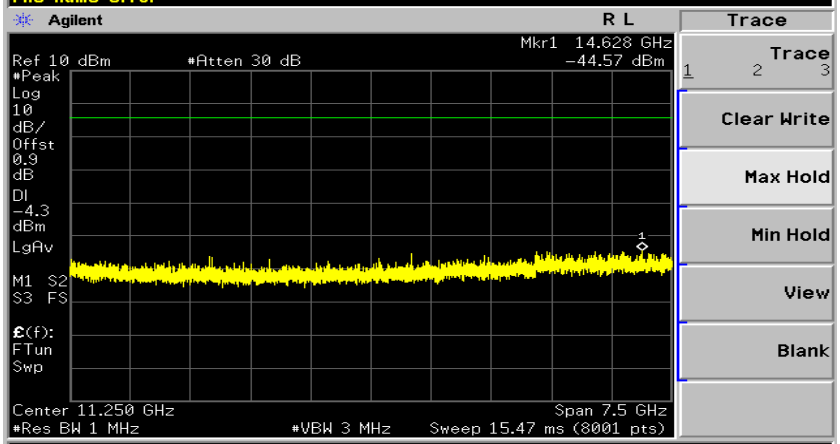
11B_MCH_Graphs	
Pref/11B/MCH	
Puw/11B/MCH	



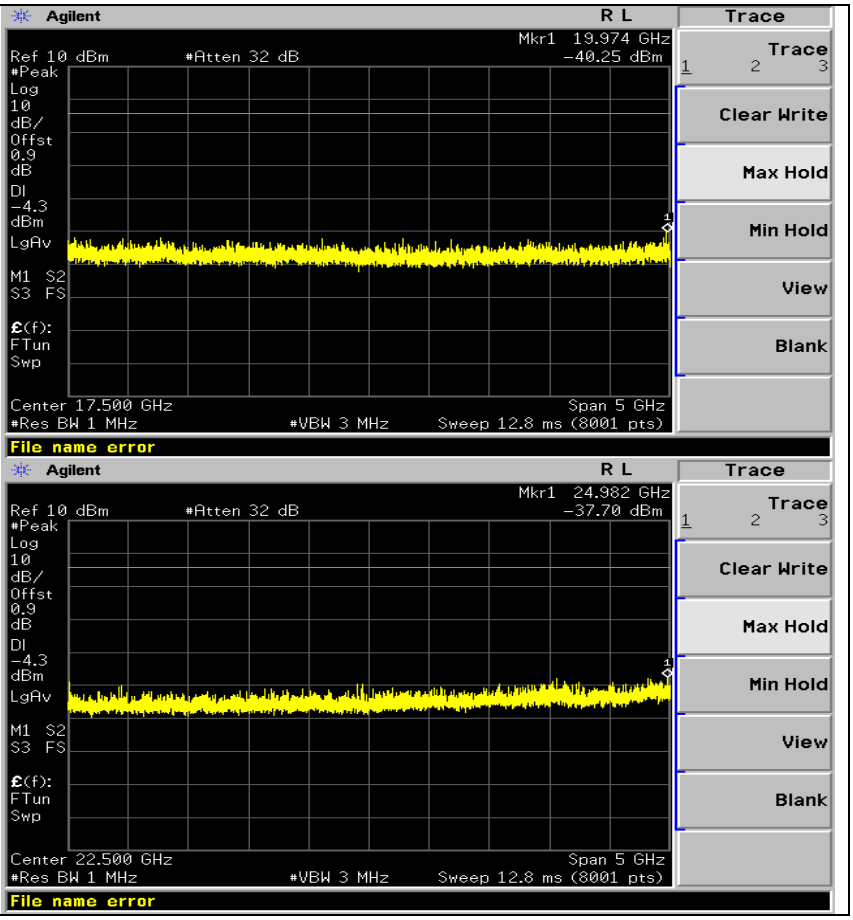
File name error

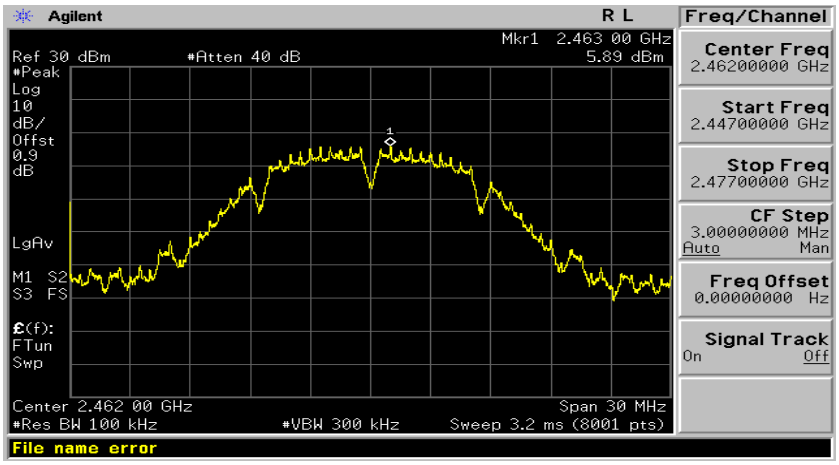


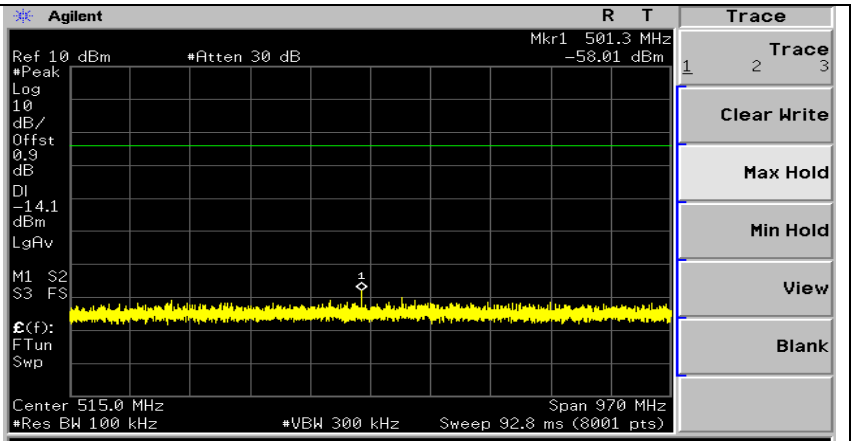
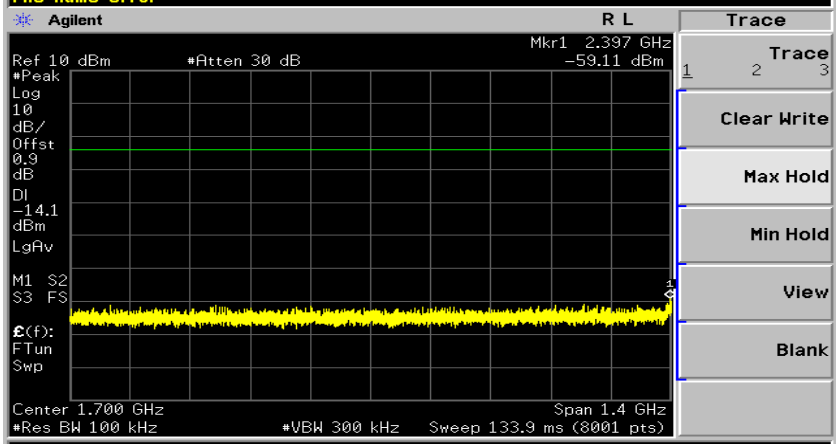
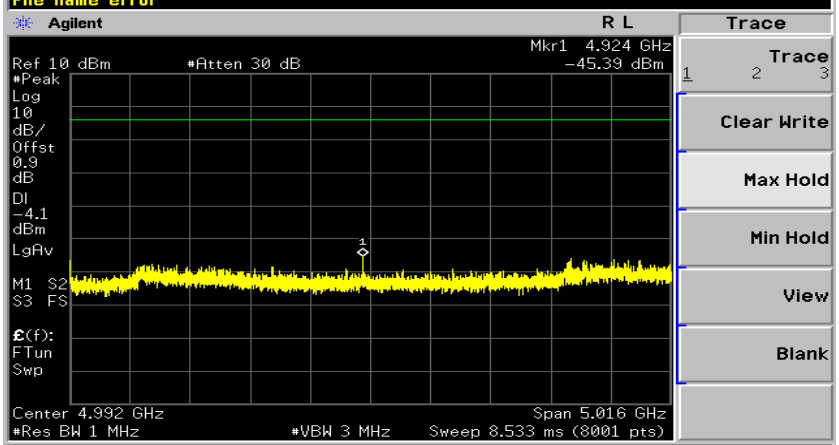
File name error

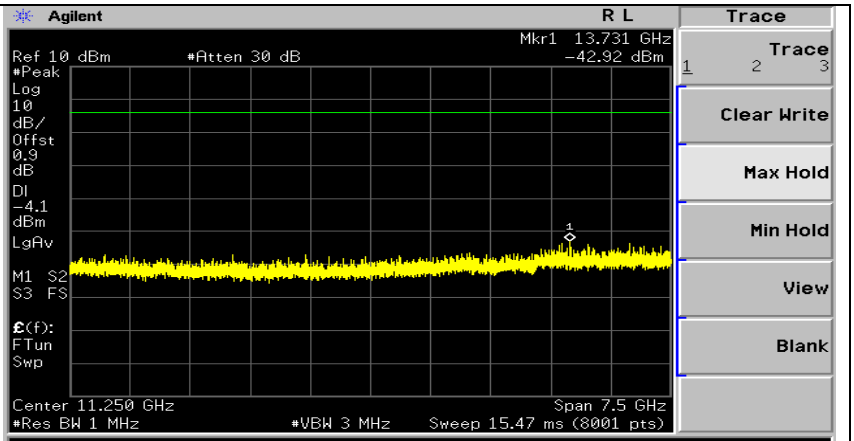


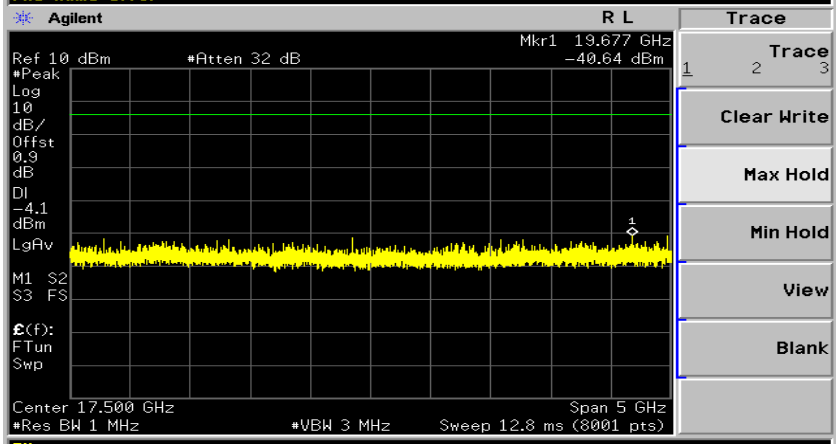
File name error

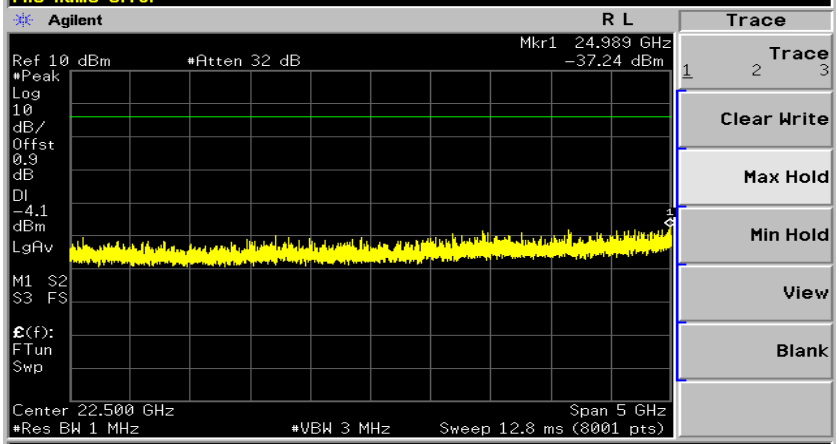


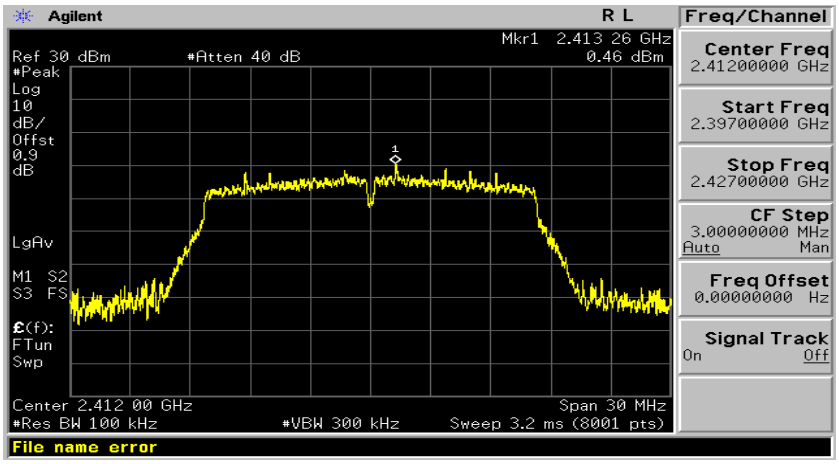
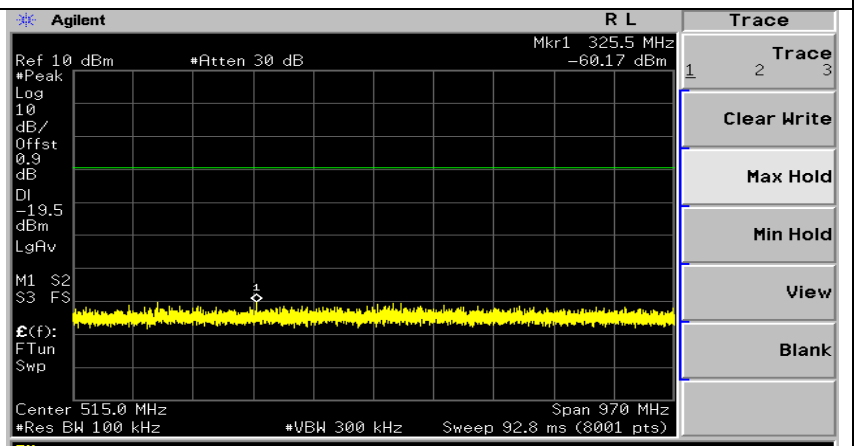
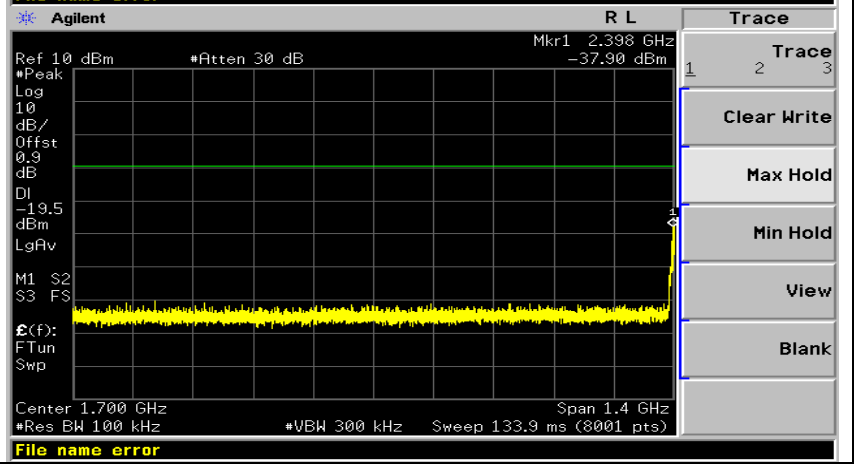
11B_HCH_Graphs	
Pref/11B/HCH	

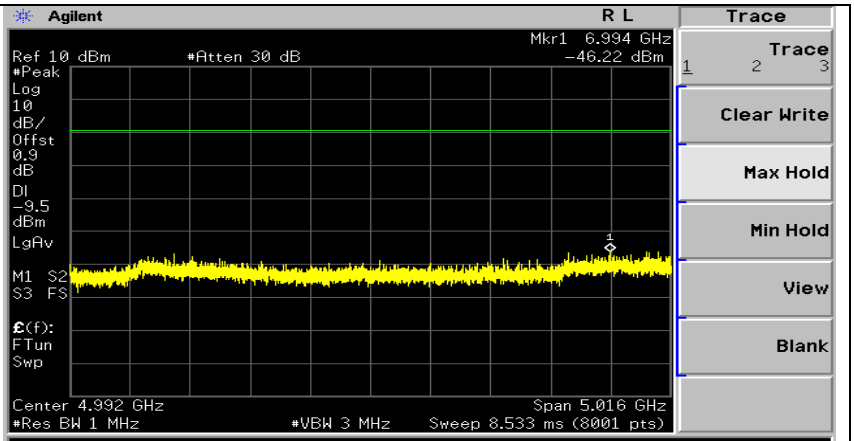
Puw/11B/HCH	 Agilent R T Trace Mkr1 501.3 MHz Ref 10 dBm #Atten 30 dB -58.01 dBm #Peak Log 10 dB/ Offst 0.9 dB Dl -14.1 dBm LgAv M1 S2 S3 FS £(f): FTun Swp Center 515.0 MHz Span 970 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 92.8 ms (8001 pts) Trace 1 2 3 Clear Write Max Hold Min Hold View Blank File name error  Agilent R L Trace Mkr1 2.397 GHz Ref 10 dBm #Atten 30 dB -59.11 dBm #Peak Log 10 dB/ Offst 0.9 dB Dl -14.1 dBm LgAv M1 S2 S3 FS £(f): FTun Swp Center 1.700 GHz Span 1.4 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 133.9 ms (8001 pts) Trace 1 2 3 Clear Write Max Hold Min Hold View Blank File name error  Agilent R L Trace Mkr1 4.924 GHz Ref 10 dBm #Atten 30 dB -45.39 dBm #Peak Log 10 dB/ Offst 0.9 dB Dl -4.1 dBm LgAv M1 S2 S3 FS £(f): FTun Swp Center 4.992 GHz Span 5.016 GHz #Res BW 1 MHz #VBW 3 MHz Sweep 8.533 ms (8001 pts) Trace 1 2 3 Clear Write Max Hold Min Hold View Blank File name error

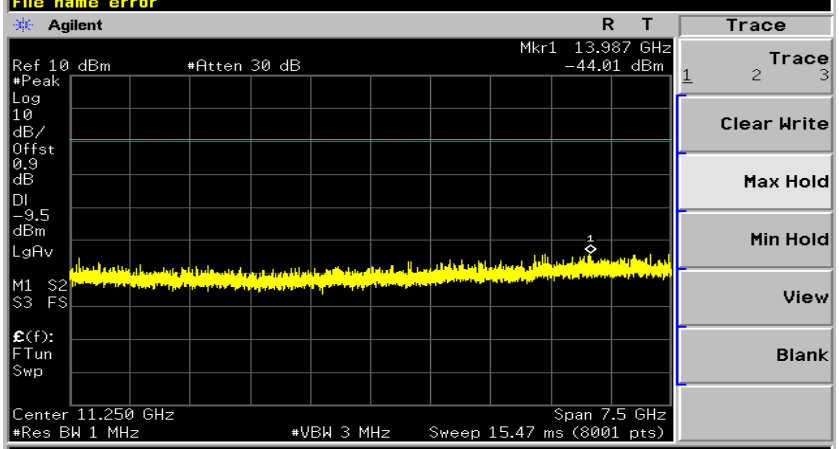

Agilent
R L
Trace
Mkr1 13.731 GHz
Ref 10 dBm
#Atten 30 dB
-42.92 dBm
#Peak
Log
10
dB/
Offst
0.9
dB
Dl
-4.1
dBm
LgAv
M1 S2
S3 FS
£(f):
FTun
Swp
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
Center 11.250 GHz
Span 7.5 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 15.47 ms (8001 pts)
File name error

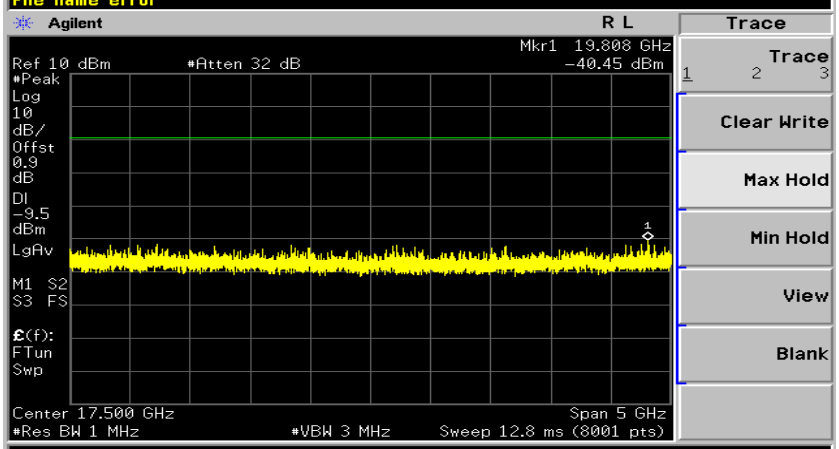

Agilent
R L
Trace
Mkr1 19.677 GHz
Ref 10 dBm
#Atten 32 dB
-40.64 dBm
#Peak
Log
10
dB/
Offst
0.9
dB
Dl
-4.1
dBm
LgAv
M1 S2
S3 FS
£(f):
FTun
Swp
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
Center 17.500 GHz
Span 5 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 12.8 ms (8001 pts)
File name error

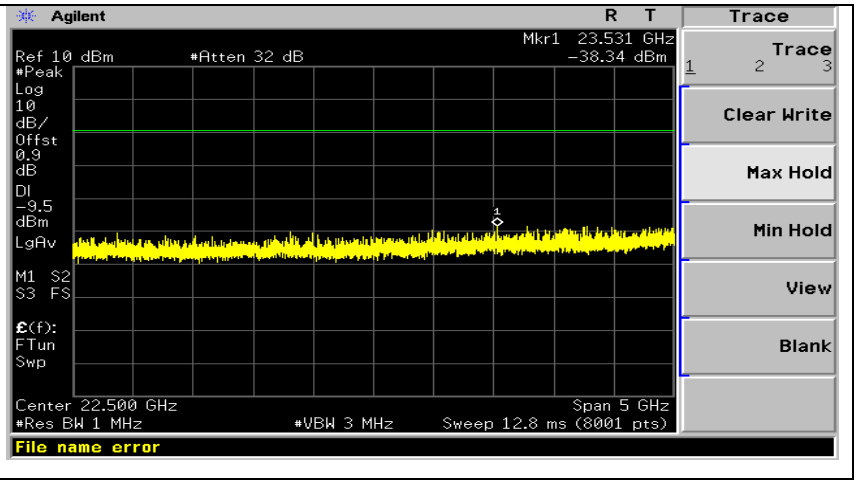

Agilent
R L
Trace
Mkr1 24.989 GHz
Ref 10 dBm
#Atten 32 dB
-37.24 dBm
#Peak
Log
10
dB/
Offst
0.9
dB
Dl
-4.1
dBm
LgAv
M1 S2
S3 FS
£(f):
FTun
Swp
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
Center 22.500 GHz
Span 5 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 12.8 ms (8001 pts)
File name error

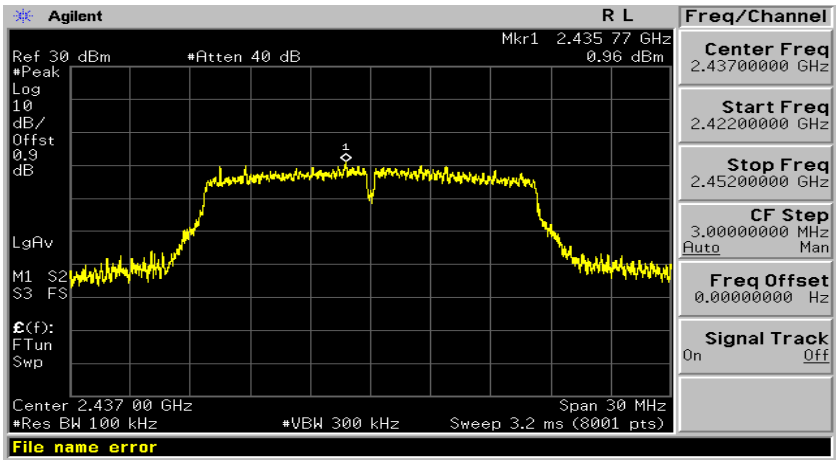
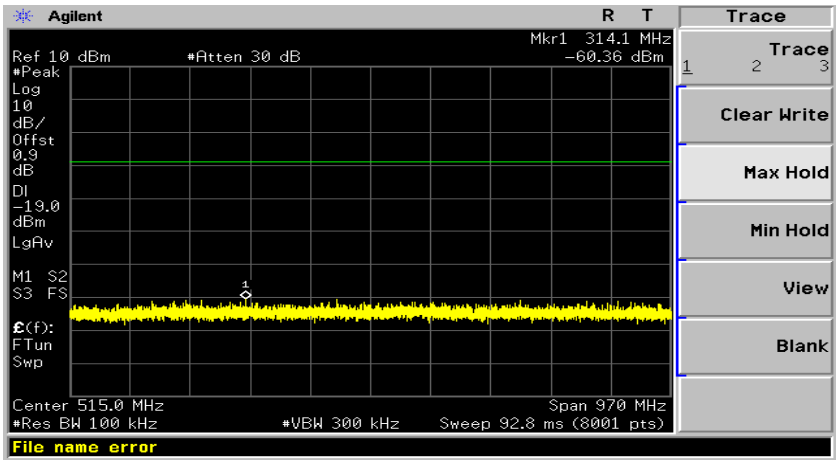
11G_LCH_Graphs	
Pref/11G/LCH	
Puw/11G/LCH	 

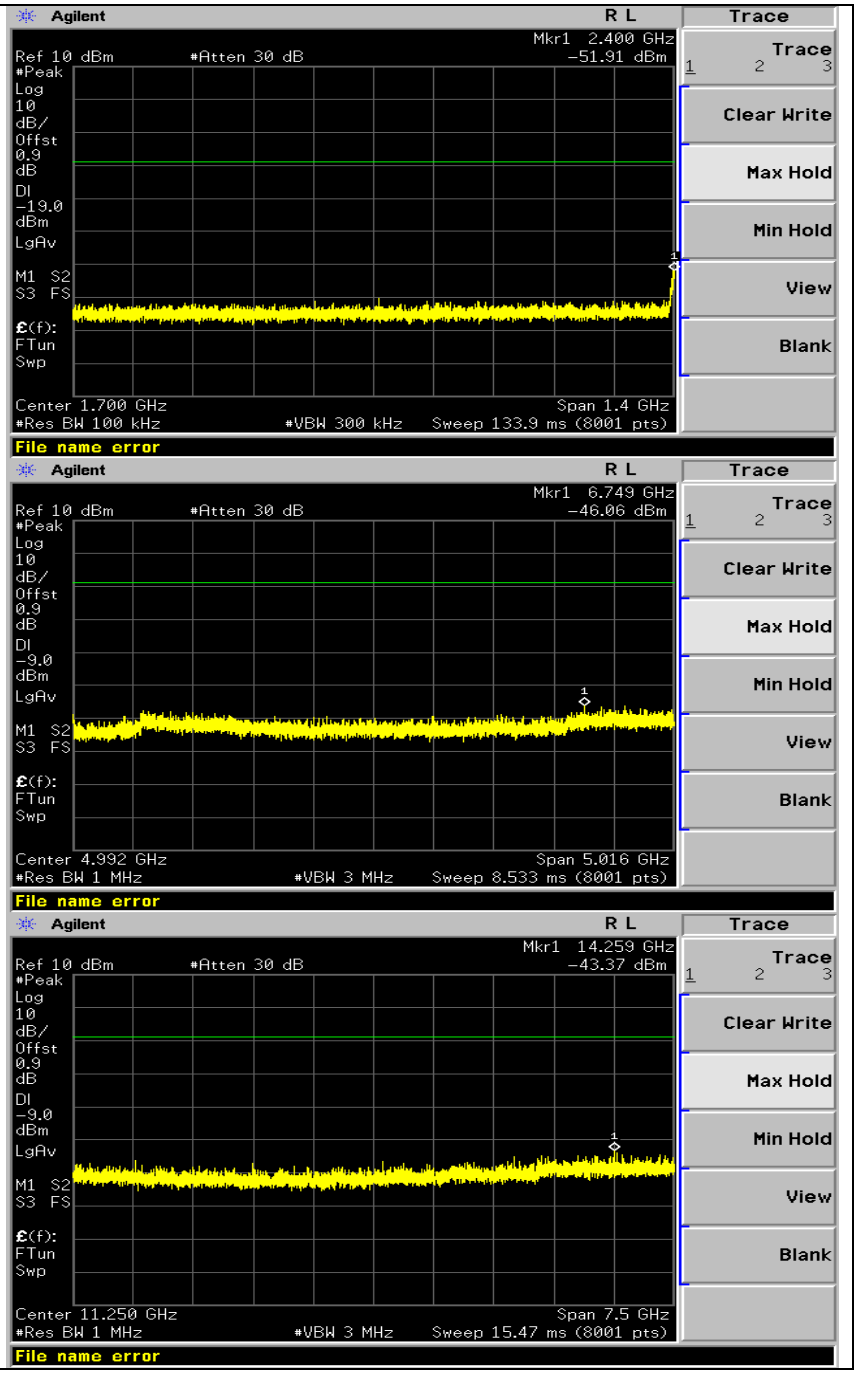

Agilent
R L
Trace
Mkr1 6.994 GHz
Ref 10 dBm
#Atten 30 dB
-46.22 dBm
#Peak
Log
10
dB/
Offst
0.9
dB
Dl
-9.5
dBm
LgAv
M1 S2
S3 FS
£(f):
FTun
Swp
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
Center 4.992 GHz
Span 5.016 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 8.533 ms (8001 pts)
File name error

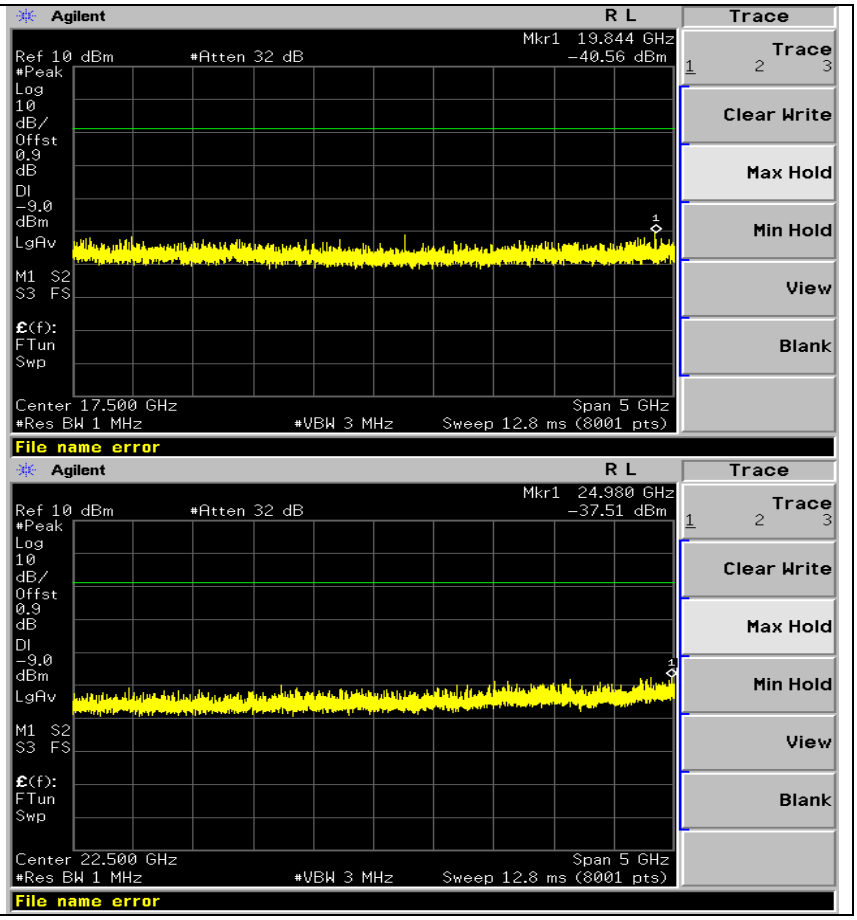

Agilent
R T
Trace
Mkr1 13.987 GHz
Ref 10 dBm
#Atten 30 dB
-44.01 dBm
#Peak
Log
10
dB/
Offst
0.9
dB
Dl
-9.5
dBm
LgAv
M1 S2
S3 FS
£(f):
FTun
Swp
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
Center 11.250 GHz
Span 7.5 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 15.47 ms (8001 pts)
File name error

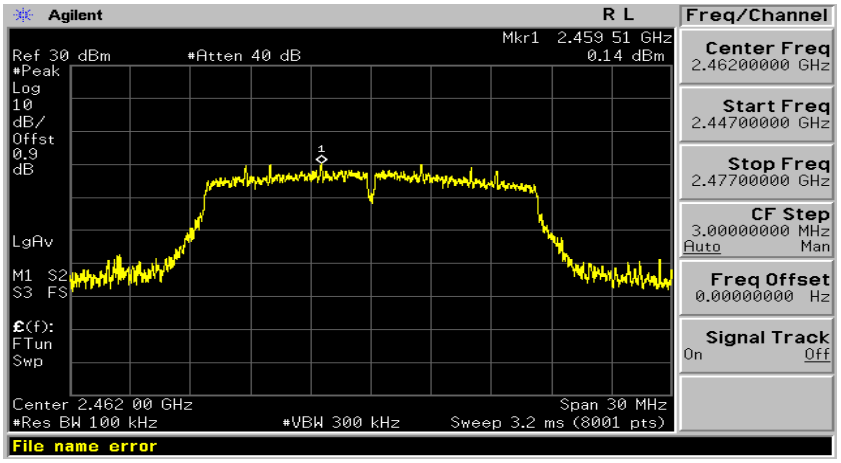

Agilent
R L
Trace
Mkr1 19.808 GHz
Ref 10 dBm
#Atten 32 dB
-40.45 dBm
#Peak
Log
10
dB/
Offst
0.9
dB
Dl
-9.5
dBm
LgAv
M1 S2
S3 FS
£(f):
FTun
Swp
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
Center 17.500 GHz
Span 5 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 12.8 ms (8001 pts)
File name error

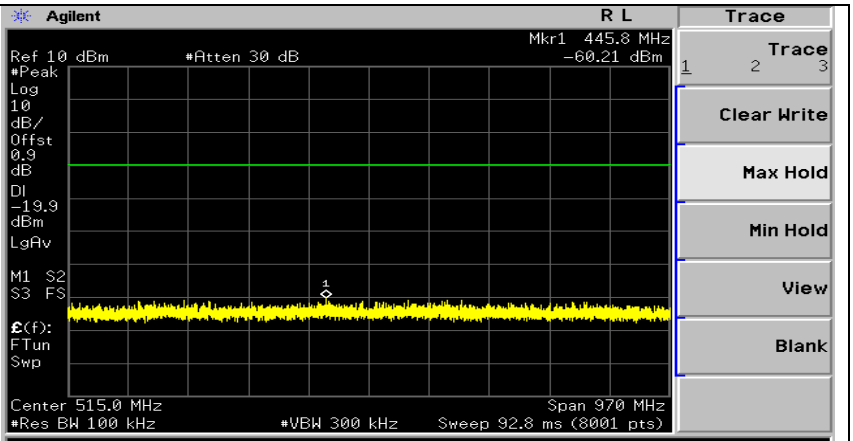
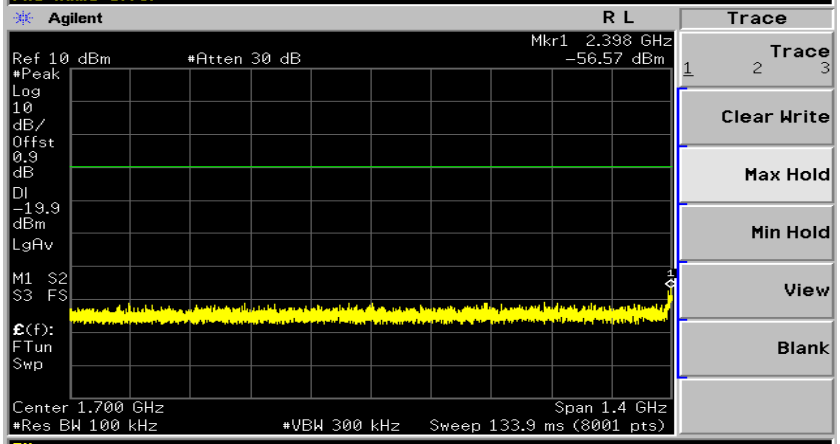
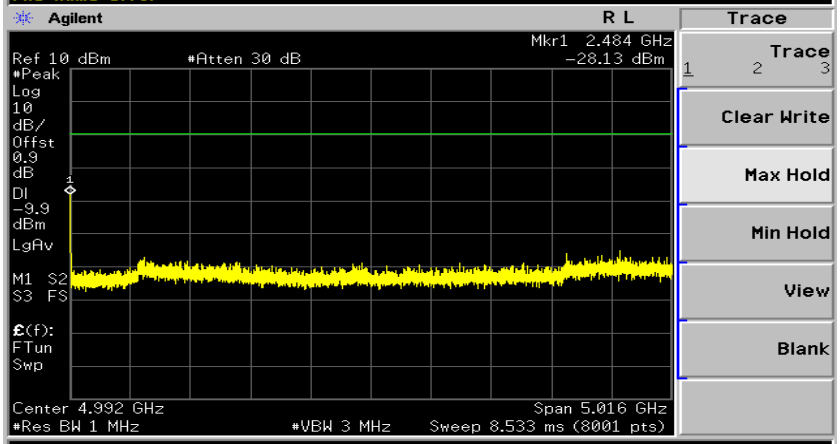
	

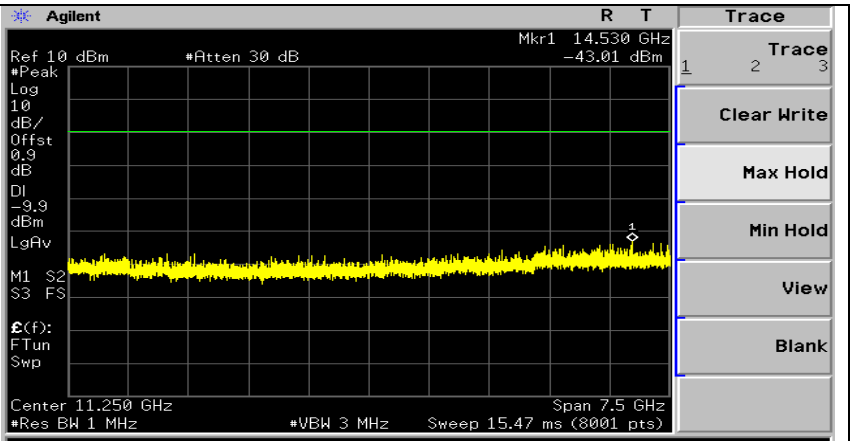
11G_MCH_Graphs	
Pref/11G/MCH	
Puw/11G/MCH	

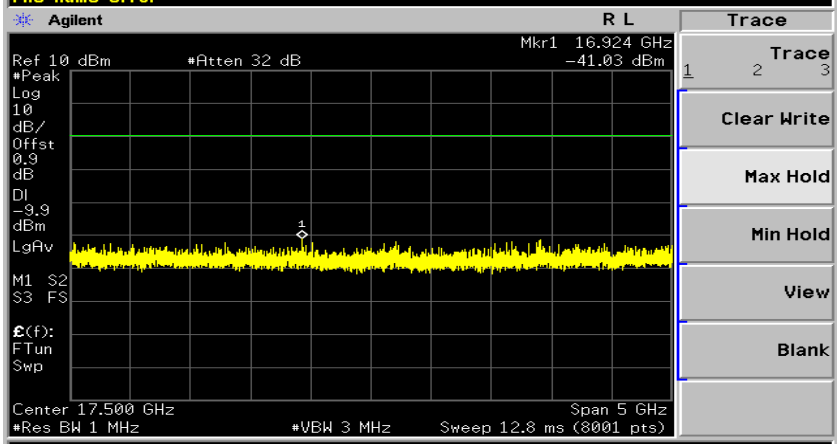

Agilent
R L
Trace
Mkr1 2.400 GHz
Ref 10 dBm
#Atten 30 dB
-51.91 dBm
#Peak
Log
10
dB/
Offst
0.9
dB
Dl
-19.0
dBm
LgAv
M1 S2
S3 FS
£(f):
FTun
Swp
Center 1.700 GHz
Span 1.4 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 133.9 ms (8001 pts)
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
File name error
Agilent
R L
Trace
Mkr1 6.749 GHz
Ref 10 dBm
#Atten 30 dB
-46.06 dBm
#Peak
Log
10
dB/
Offst
0.9
dB
Dl
-9.0
dBm
LgAv
M1 S2
S3 FS
£(f):
FTun
Swp
Center 4.992 GHz
Span 5.016 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 8.533 ms (8001 pts)
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
File name error
Agilent
R L
Trace
Mkr1 14.259 GHz
Ref 10 dBm
#Atten 30 dB
-43.37 dBm
#Peak
Log
10
dB/
Offst
0.9
dB
Dl
-9.0
dBm
LgAv
M1 S2
S3 FS
£(f):
FTun
Swp
Center 11.250 GHz
Span 7.5 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 15.47 ms (8001 pts)
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
File name error

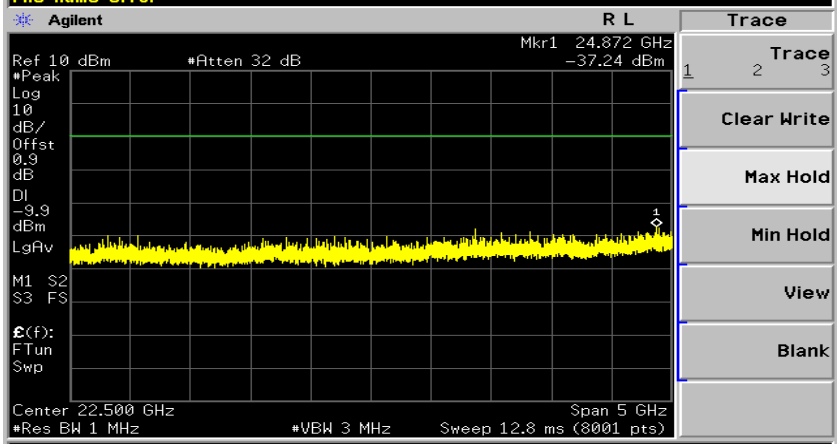


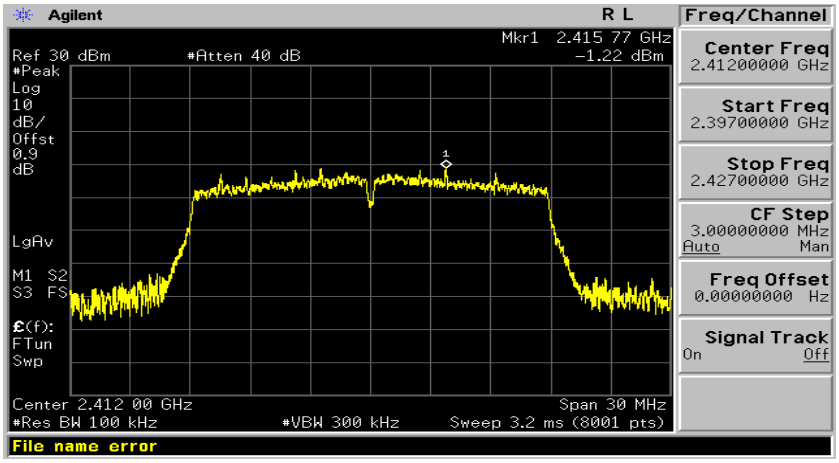
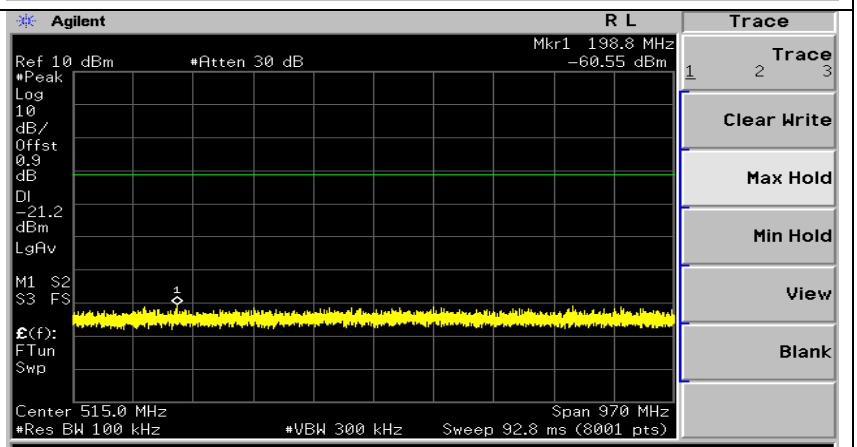
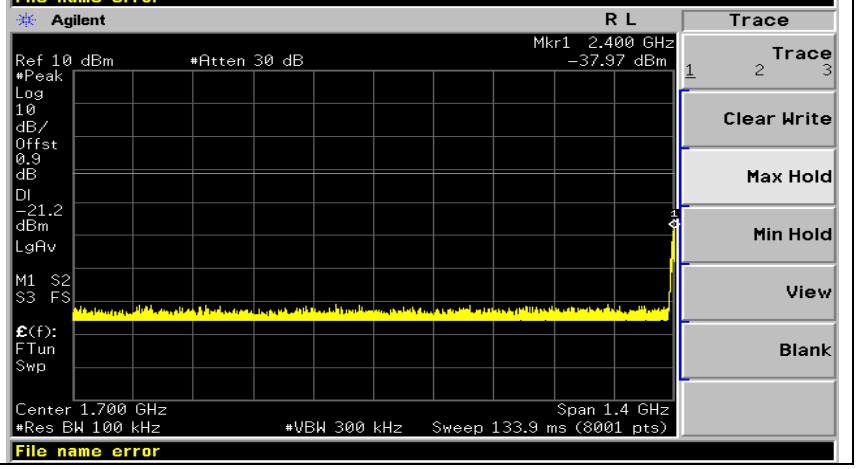
11G_HCH_Graphs	
Pref/11G/HCH	

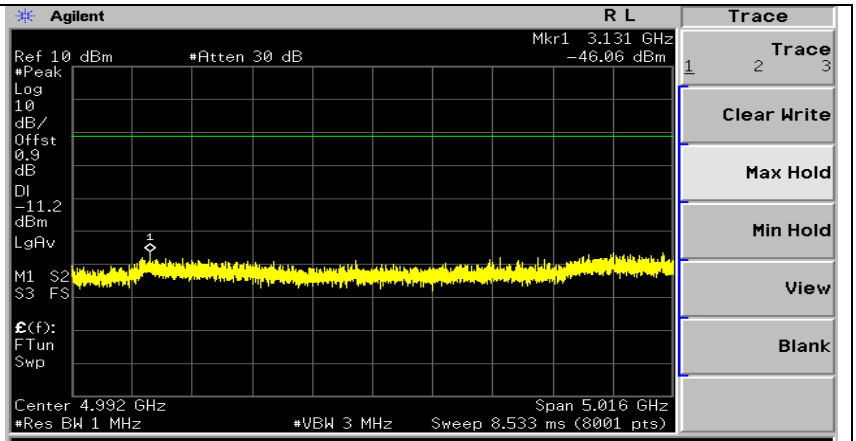
Puw/11G/HCH	 Agilent R L Trace Mkr1 445.8 MHz Ref 10 dBm #Atten 30 dB -60.21 dBm #Peak Log 10 dB/ Offst 0.9 dB DI -19.9 dBm LgAv M1 S2 S3 FS £(f): FTun Swp Center 515.0 MHz Span 970 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 92.8 ms (8001 pts) Trace 1 2 3 Clear Write Max Hold Min Hold View Blank File name error  Agilent R L Trace Mkr1 2.398 GHz Ref 10 dBm #Atten 30 dB -56.57 dBm #Peak Log 10 dB/ Offst 0.9 dB DI -19.9 dBm LgAv M1 S2 S3 FS £(f): FTun Swp Center 1.700 GHz Span 1.4 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 133.9 ms (8001 pts) Trace 1 2 3 Clear Write Max Hold Min Hold View Blank File name error  Agilent R L Trace Mkr1 2.484 GHz Ref 10 dBm #Atten 30 dB -28.13 dBm #Peak Log 10 dB/ Offst 0.9 dB DI -9.9 dBm LgAv M1 S2 S3 FS £(f): FTun Swp Center 4.992 GHz Span 5.016 GHz #Res BW 1 MHz #VBW 3 MHz Sweep 8.533 ms (8001 pts) Trace 1 2 3 Clear Write Max Hold Min Hold View Blank File name error

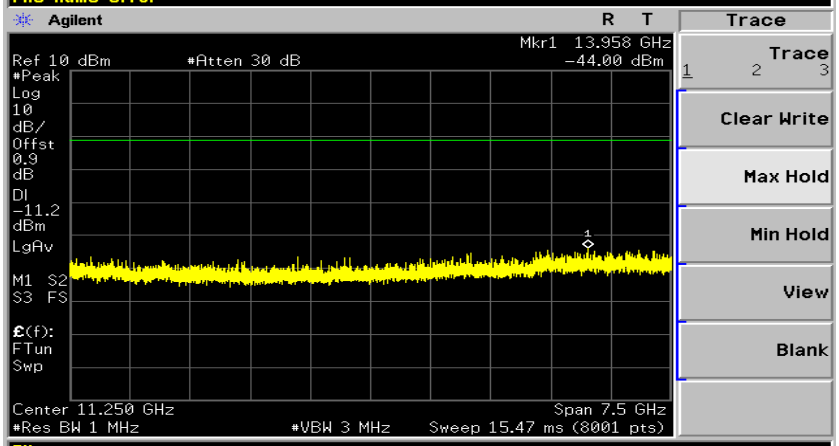

Agilent
R T
Trace
Mkr1 14.530 GHz
Ref 10 dBm
#Atten 30 dB
-43.01 dBm
#Peak
Log
10
dB/
Offst
0.9
dB
Dl
-9.9
dBm
LgAv
M1 S2
S3 FS
£(f):
FTun
Swp
Center 11.250 GHz
Span 7.5 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 15.47 ms (8001 pts)
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
File name error

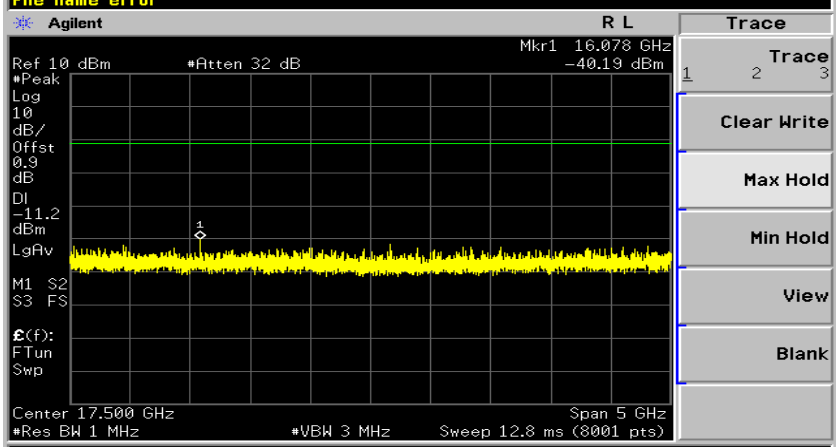

Agilent
R L
Trace
Mkr1 16.924 GHz
Ref 10 dBm
#Atten 32 dB
-41.03 dBm
#Peak
Log
10
dB/
Offst
0.9
dB
Dl
-9.9
dBm
LgAv
M1 S2
S3 FS
£(f):
FTun
Swp
Center 17.500 GHz
Span 5 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 12.8 ms (8001 pts)
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
File name error

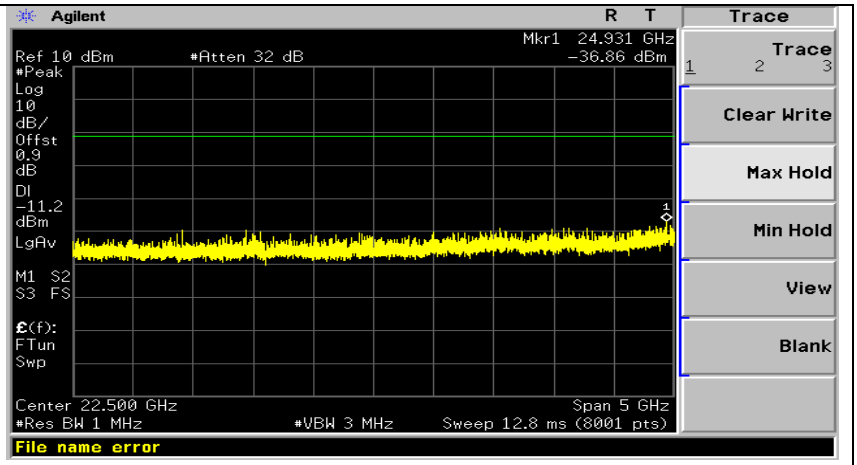

Agilent
R L
Trace
Mkr1 24.872 GHz
Ref 10 dBm
#Atten 32 dB
-37.24 dBm
#Peak
Log
10
dB/
Offst
0.9
dB
Dl
-9.9
dBm
LgAv
M1 S2
S3 FS
£(f):
FTun
Swp
Center 22.500 GHz
Span 5 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 12.8 ms (8001 pts)
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
File name error

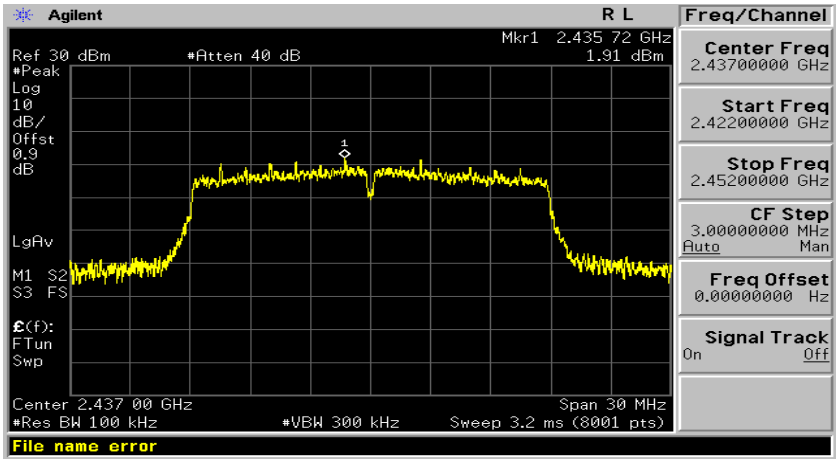
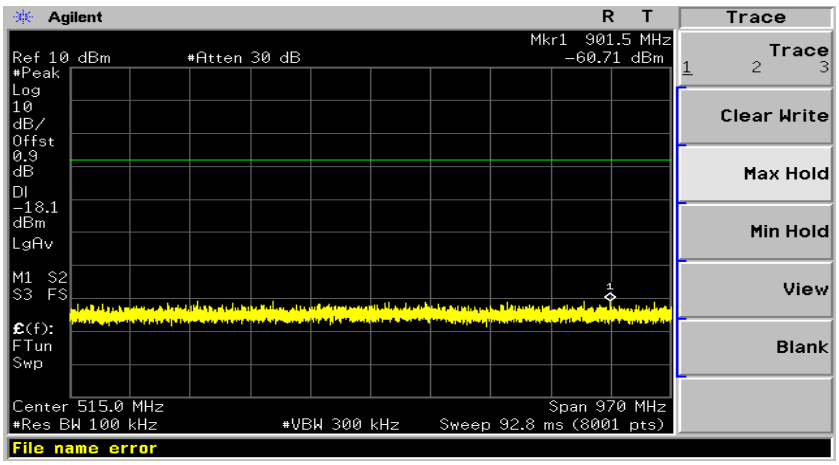
11N20SISO_LCH_Graphs	
Pref/11N20SISO/LCH	
/11N20SISO/LCH	 

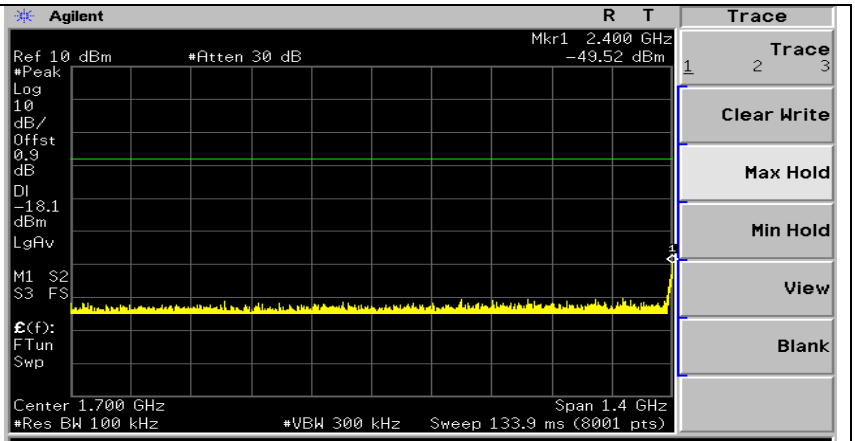

Agilent
R L
Trace
Mkr1 3.131 GHz
Ref 10 dBm
#Atten 30 dB
-46.06 dBm
#Peak
Log
10
dB/
Offst
0.9
dB
Dl
-11.2
dBm
LgAv
M1 S2
S3 FS
£(f):
FTun
Swp
Center 4.992 GHz
Span 5.016 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 8.533 ms (8001 pts)
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
File name error


Agilent
R T
Trace
Mkr1 13.958 GHz
Ref 10 dBm
#Atten 30 dB
-44.00 dBm
#Peak
Log
10
dB/
Offst
0.9
dB
Dl
-11.2
dBm
LgAv
M1 S2
S3 FS
£(f):
FTun
Swp
Center 11.250 GHz
Span 7.5 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 15.47 ms (8001 pts)
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
File name error

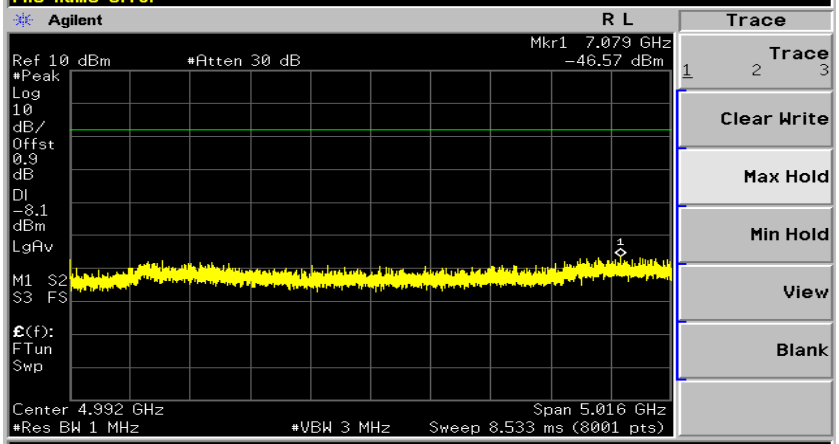

Agilent
R L
Trace
Mkr1 16.078 GHz
Ref 10 dBm
#Atten 32 dB
-40.19 dBm
#Peak
Log
10
dB/
Offst
0.9
dB
Dl
-11.2
dBm
LgAv
M1 S2
S3 FS
£(f):
FTun
Swp
Center 17.500 GHz
Span 5 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 12.8 ms (8001 pts)
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
File name error

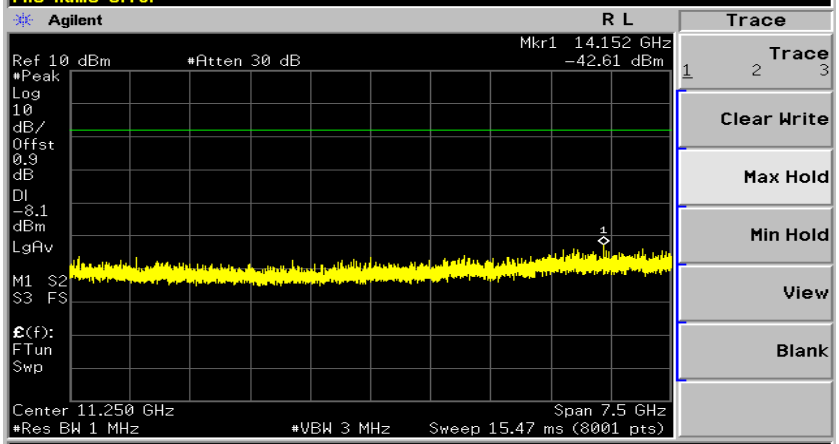
11N20SISO_MCH_Graphs	
Pref/11N20SISO/MCH	
Puw/11N20SISO/MCH	



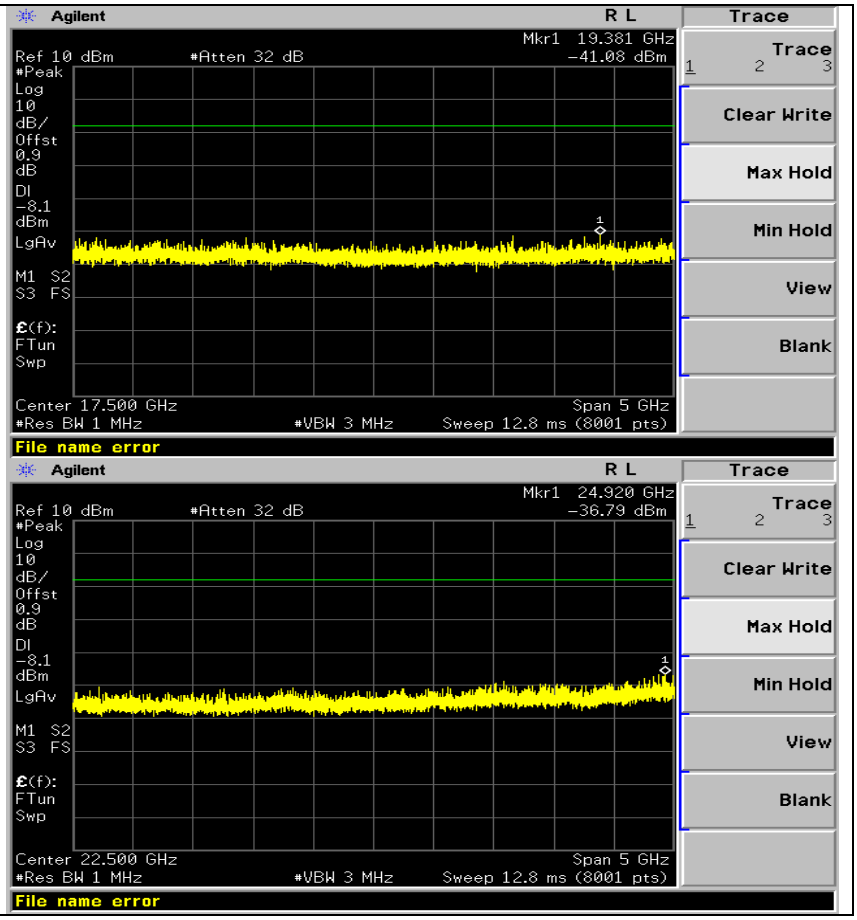
File name error

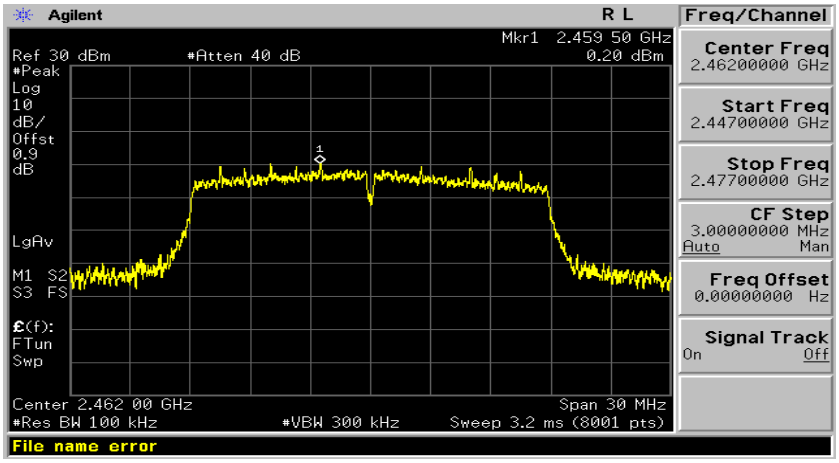


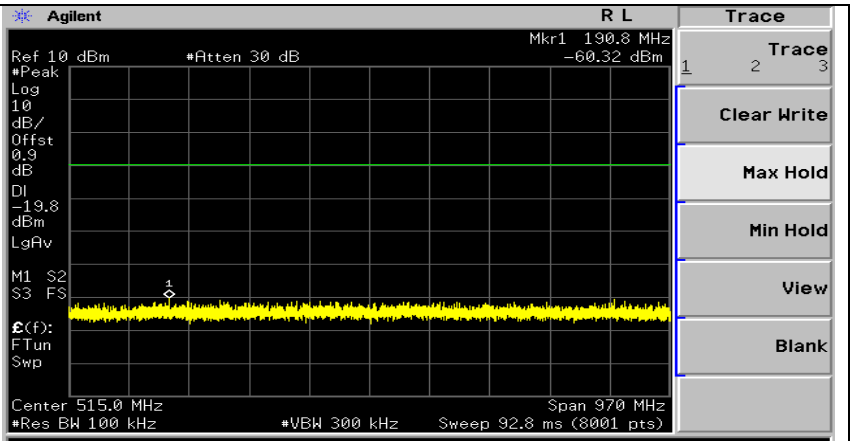
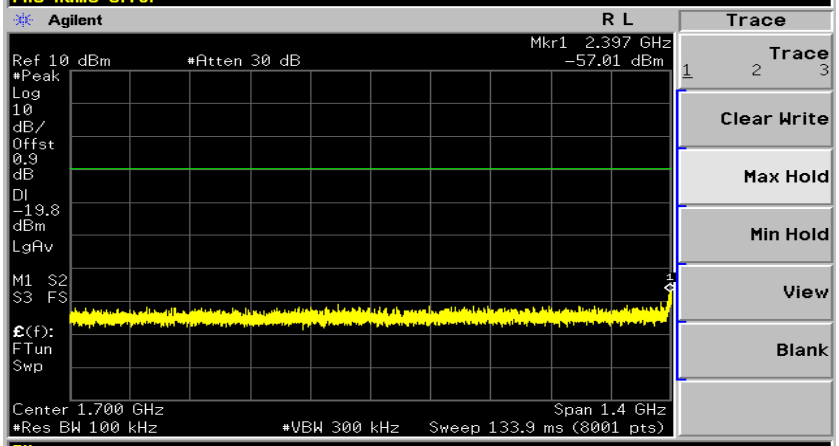
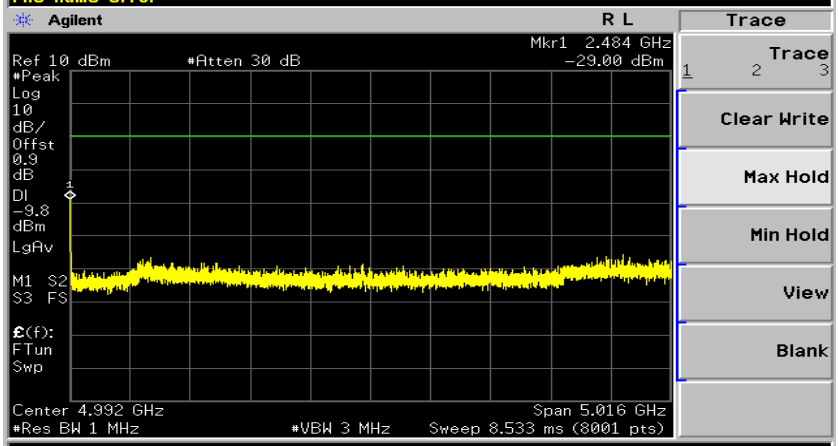
File name error

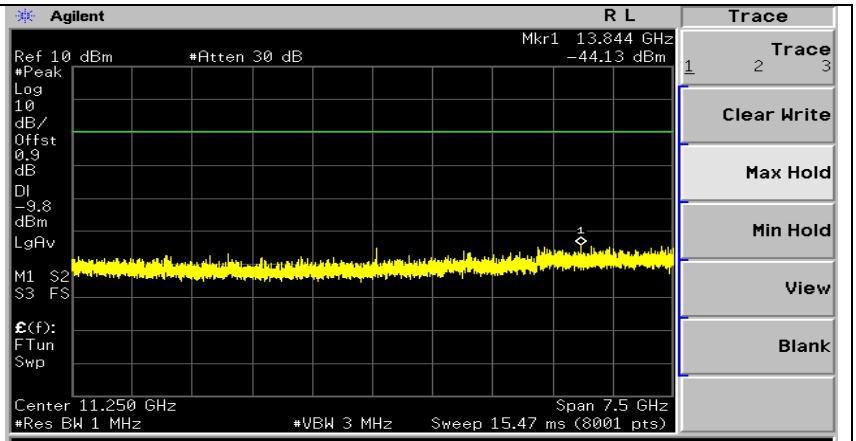


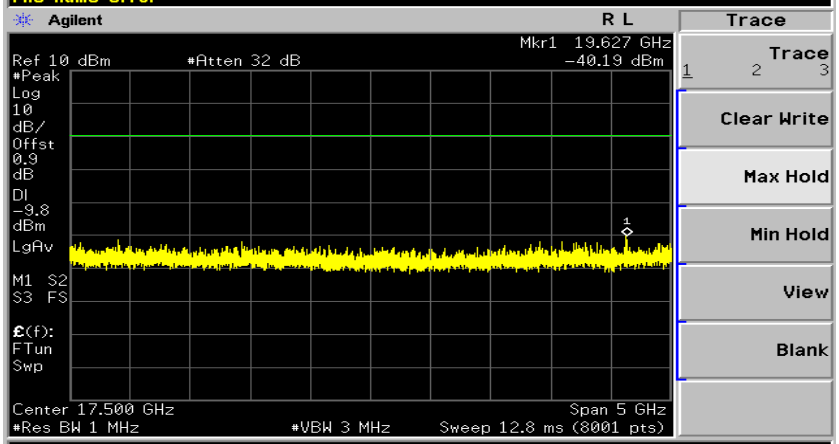
File name error

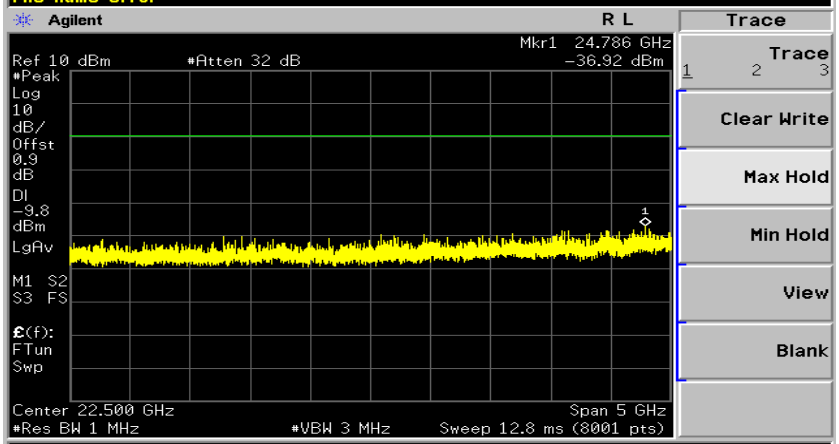


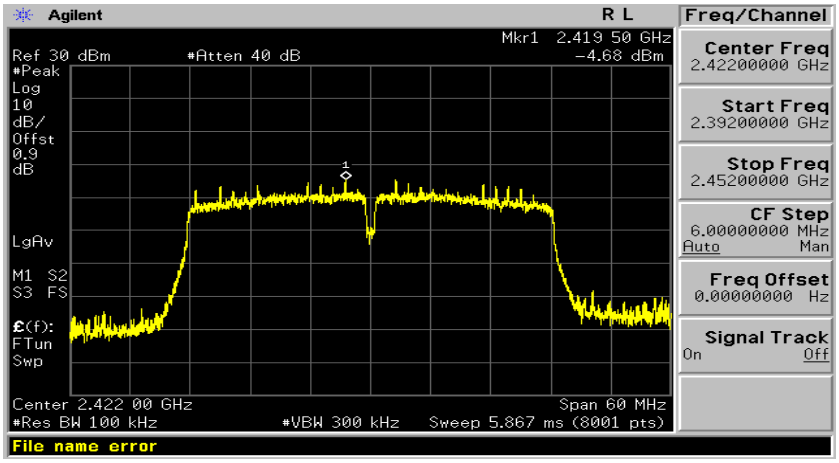
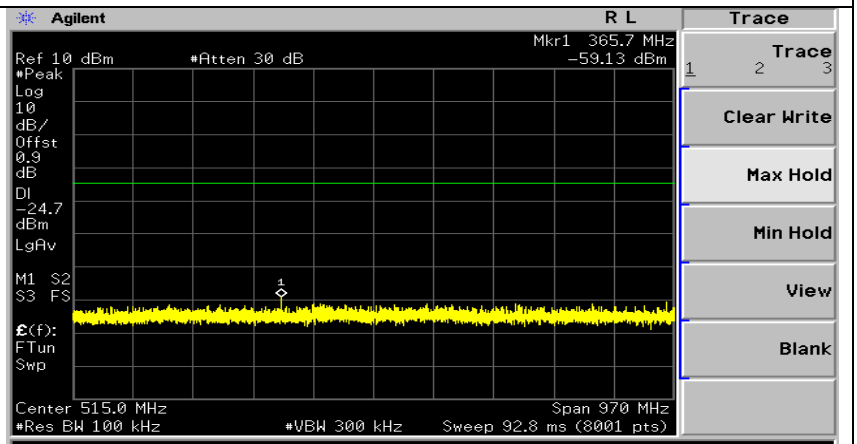
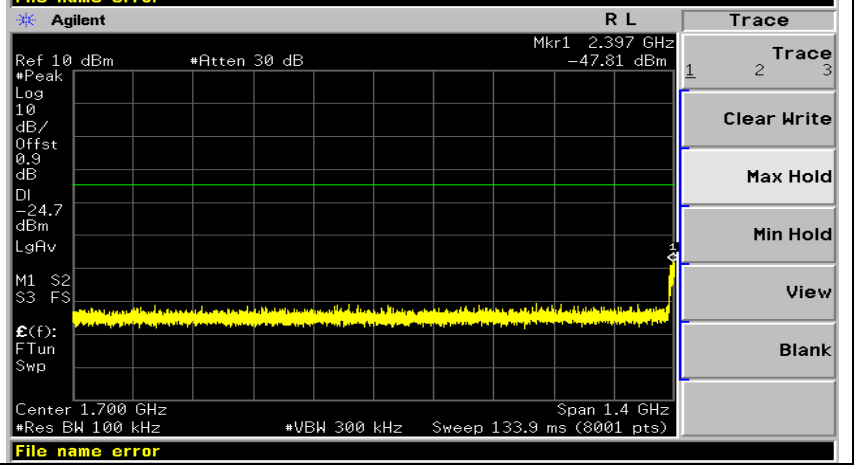
11N20SISO_HCH_Graphs	
Pref/11N20SISO/HCH	

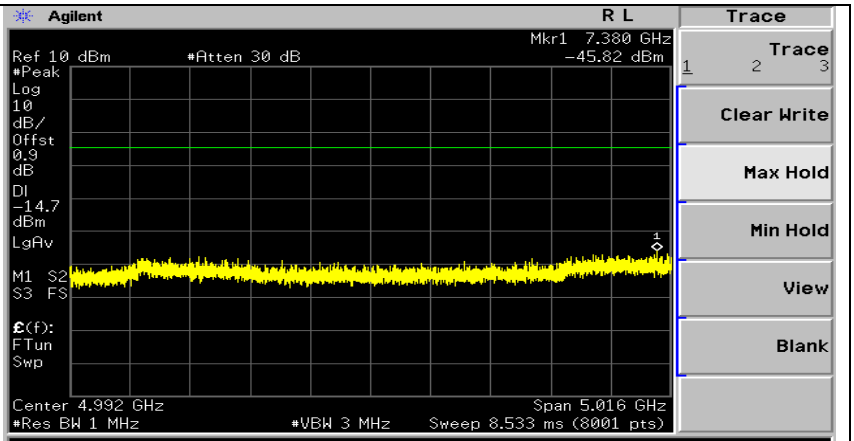
Puw/11N20SISO/HCH	  

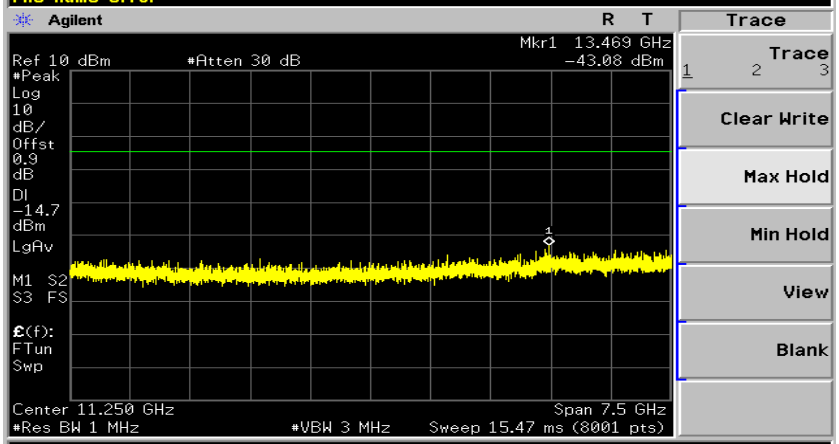

Agilent
R L
Trace
Mkr1 13.844 GHz
Ref 10 dBm
#Atten 30 dB
-44.13 dBm
#Peak
Log
10
dB/
Offst
0.9
dB
Dl
-9.8
dBm
LgAv
M1 S2
S3 FS
£(f):
FTun
Swp
Center 11.250 GHz
Span 7.5 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 15.47 ms (8001 pts)
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
File name error

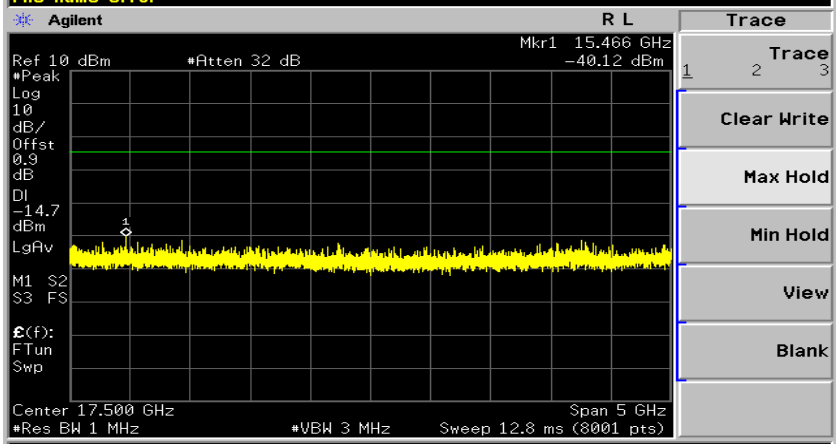

Agilent
R L
Trace
Mkr1 19.627 GHz
Ref 10 dBm
#Atten 32 dB
-40.19 dBm
#Peak
Log
10
dB/
Offst
0.9
dB
Dl
-9.8
dBm
LgAv
M1 S2
S3 FS
£(f):
FTun
Swp
Center 17.500 GHz
Span 5 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 12.8 ms (8001 pts)
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
File name error

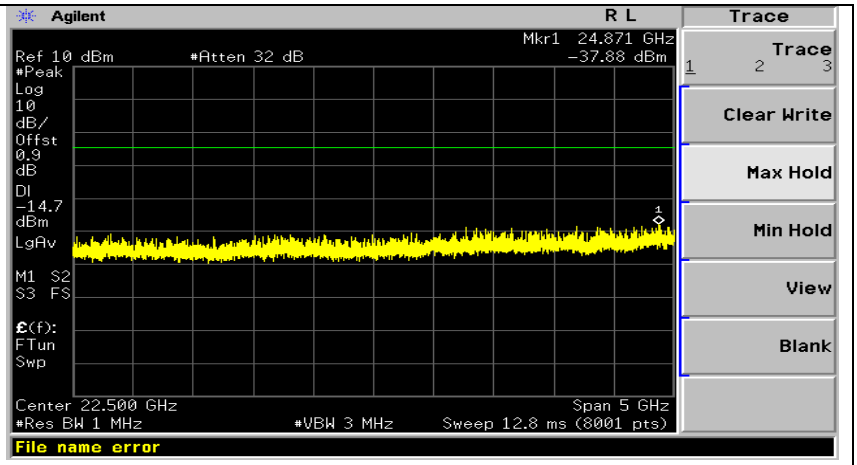

Agilent
R L
Trace
Mkr1 24.786 GHz
Ref 10 dBm
#Atten 32 dB
-36.92 dBm
#Peak
Log
10
dB/
Offst
0.9
dB
Dl
-9.8
dBm
LgAv
M1 S2
S3 FS
£(f):
FTun
Swp
Center 22.500 GHz
Span 5 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 12.8 ms (8001 pts)
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
File name error

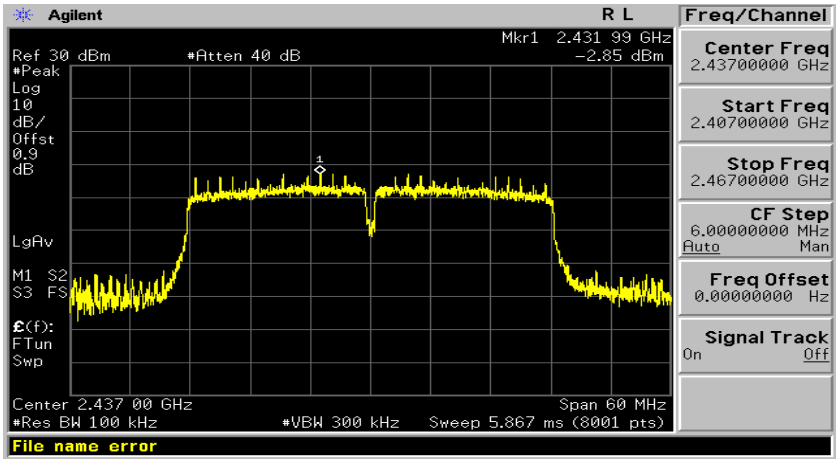
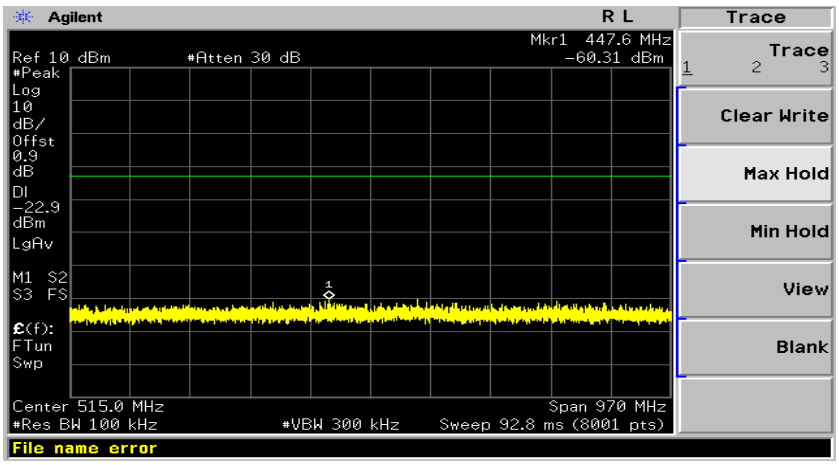
11N40SISO_LCH_Graphs	
Pref/11N40SISO/LCH	
Puw/11N40SISO/LCH	 

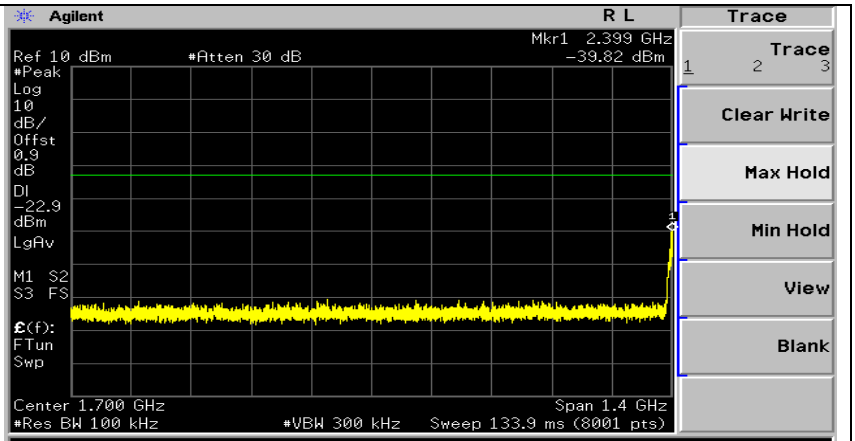

Agilent
R L
Trace
Mkr1 7.380 GHz
Ref 10 dBm
#Atten 30 dB
-45.82 dBm
#Peak
Log
10
dB/
Offst
0.9
dB
Dl
-14.7
dBm
LgAv
M1 S2
S3 FS
£(f):
FTun
Swp
Center 4.992 GHz
Span 5.016 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 8.533 ms (8001 pts)
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
File name error


Agilent
R T
Trace
Mkr1 13.469 GHz
Ref 10 dBm
#Atten 30 dB
-43.08 dBm
#Peak
Log
10
dB/
Offst
0.9
dB
Dl
-14.7
dBm
LgAv
M1 S2
S3 FS
£(f):
FTun
Swp
Center 11.250 GHz
Span 7.5 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 15.47 ms (8001 pts)
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
File name error

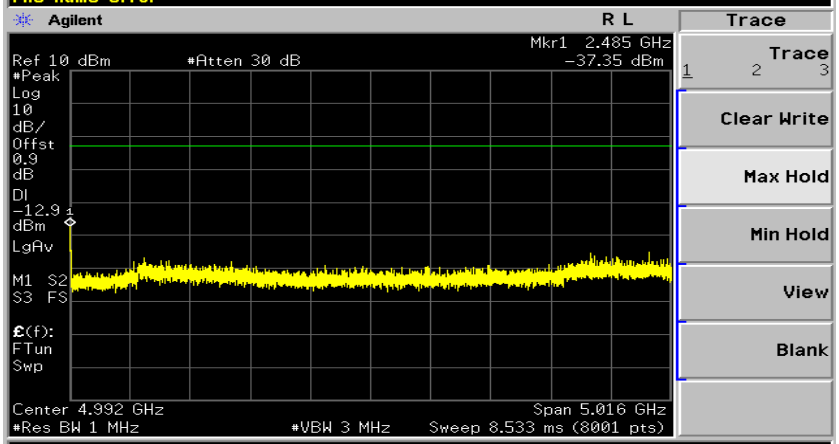

Agilent
R L
Trace
Mkr1 15.466 GHz
Ref 10 dBm
#Atten 32 dB
-40.12 dBm
#Peak
Log
10
dB/
Offst
0.9
dB
Dl
-14.7
dBm
LgAv
M1 S2
S3 FS
£(f):
FTun
Swp
Center 17.500 GHz
Span 5 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 12.8 ms (8001 pts)
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
File name error

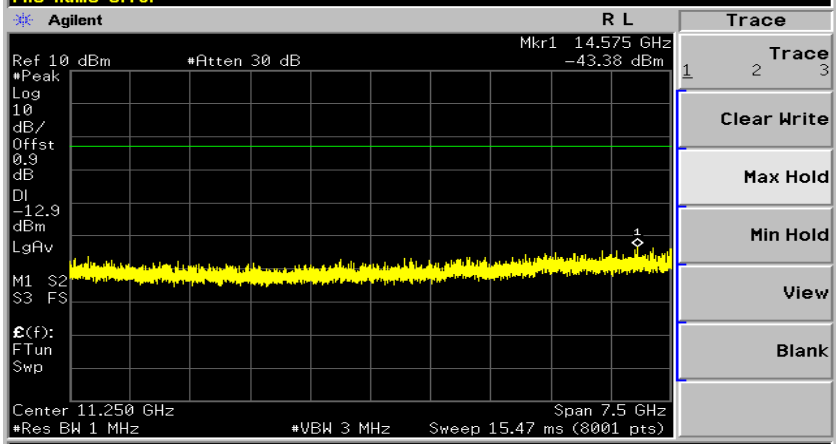
11N40SISO_MCH_Graphs	
Pref/11N40SISO/MCH	
Puw/11N40SISO/MCH	



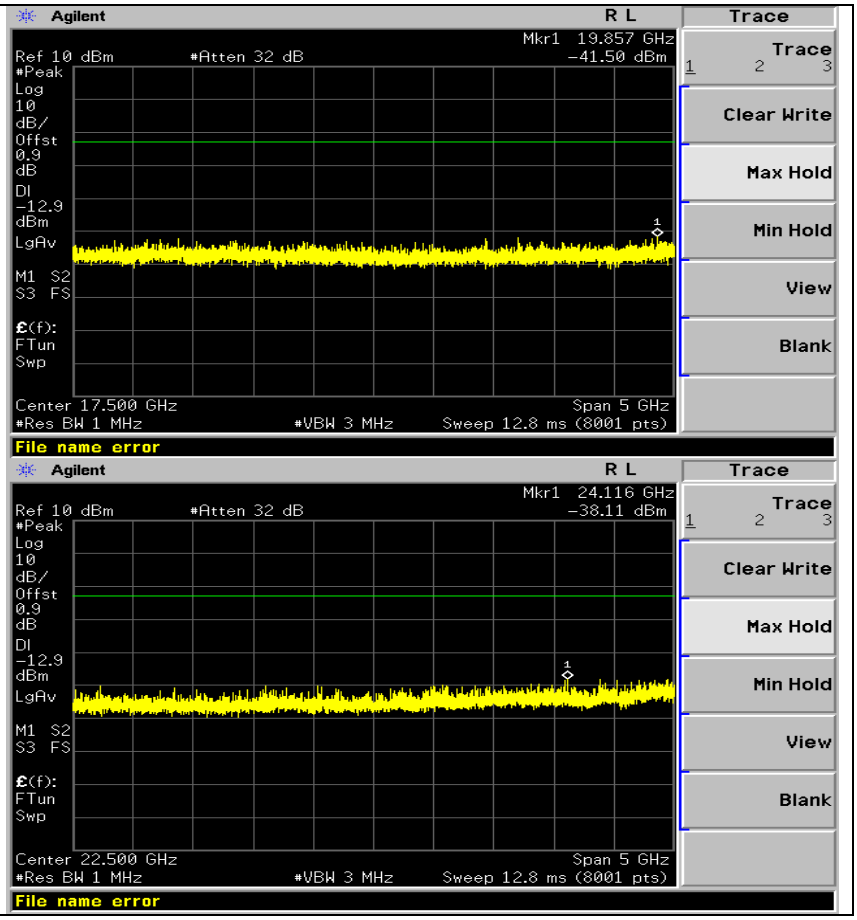
File name error

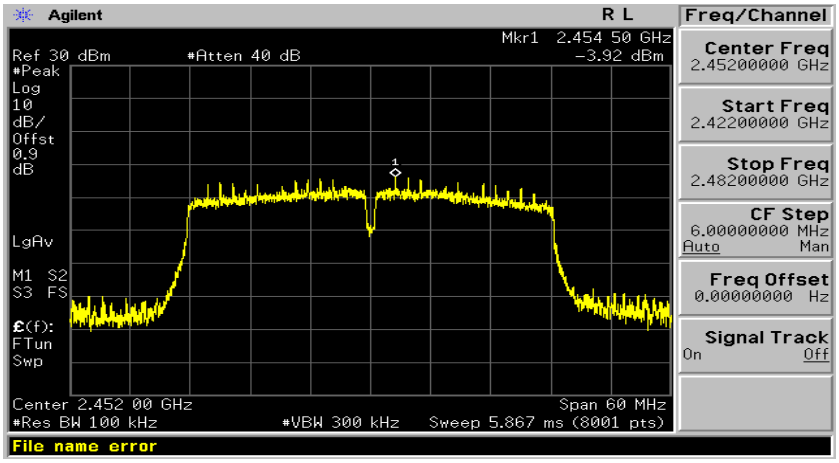


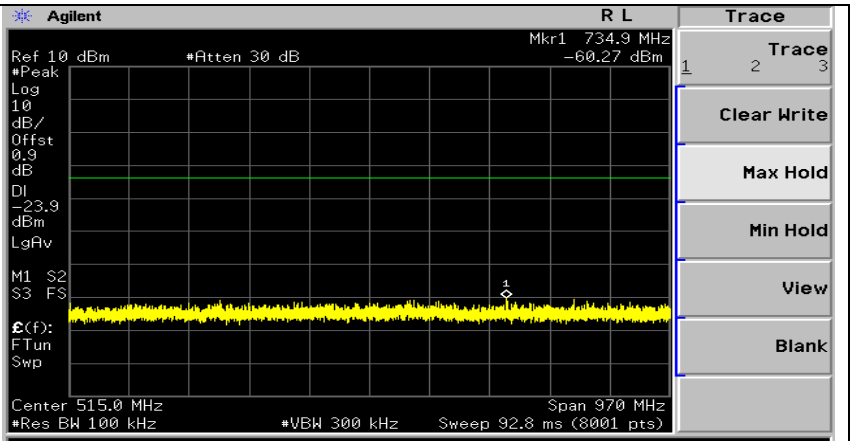
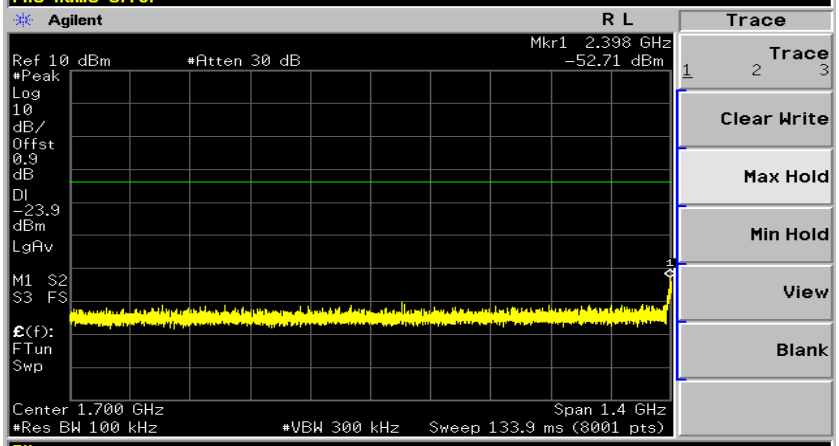
File name error

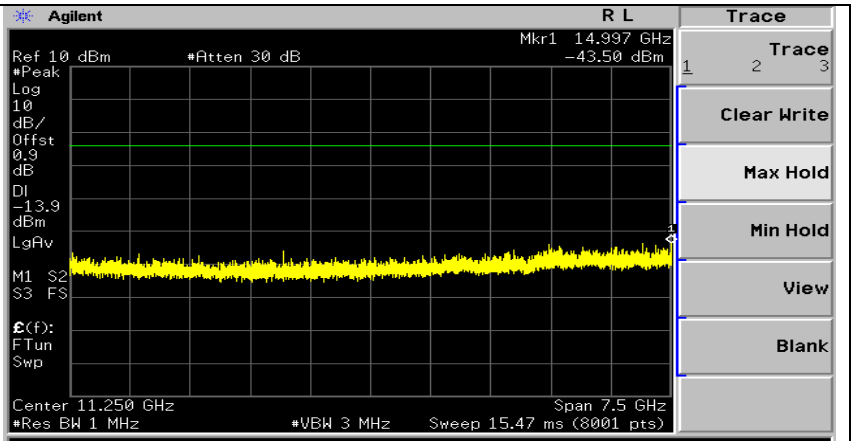


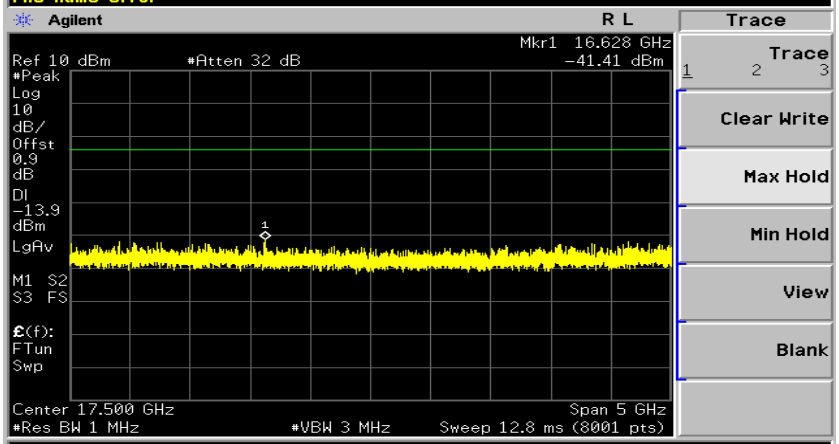
File name error

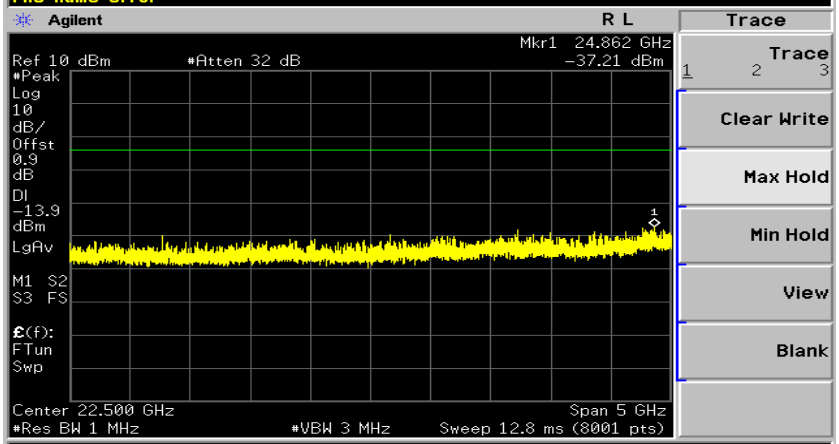


11N40SISO_HCH_Graphs	
Pref/11N40SISO/HCH	

Puw/11N40SISO/HCH	 Agilent R L Trace Mkr1 734.9 MHz Ref 10 dBm #Atten 30 dB -60.27 dBm #Peak Log 10 dB/ Offst 0.9 dB Dl -23.9 dBm LgAv M1 S2 S3 FS £(f): FTun Swp Trace 1 2 3 Clear Write Max Hold Min Hold View Blank Center 515.0 MHz Span 970 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 92.8 ms (8001 pts) File name error 


Agilent
R L
Trace
Mkr1 14.997 GHz
Ref 10 dBm
#Atten 30 dB
-43.50 dBm
#Peak
Log
10
dB/
Offst
0.9
dB
Dl
-13.9
dBm
LgAv
M1 S2
S3 FS
£(f):
FTun
Swp
Center 11.250 GHz
Span 7.5 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 15.47 ms (8001 pts)
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
File name error


Agilent
R L
Trace
Mkr1 16.628 GHz
Ref 10 dBm
#Atten 32 dB
-41.41 dBm
#Peak
Log
10
dB/
Offst
0.9
dB
Dl
-13.9
dBm
LgAv
M1 S2
S3 FS
£(f):
FTun
Swp
Center 17.500 GHz
Span 5 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 12.8 ms (8001 pts)
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
File name error


Agilent
R L
Trace
Mkr1 24.862 GHz
Ref 10 dBm
#Atten 32 dB
-37.21 dBm
#Peak
Log
10
dB/
Offst
0.9
dB
Dl
-13.9
dBm
LgAv
M1 S2
S3 FS
£(f):
FTun
Swp
Center 22.500 GHz
Span 5 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 12.8 ms (8001 pts)
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
File name error

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.

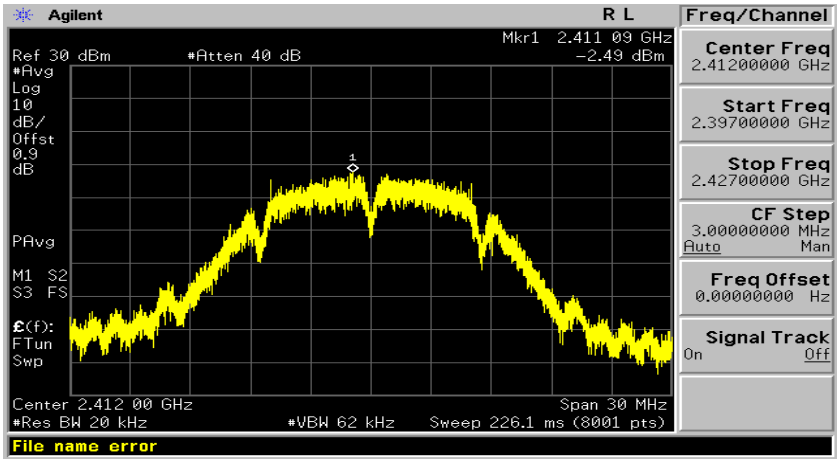
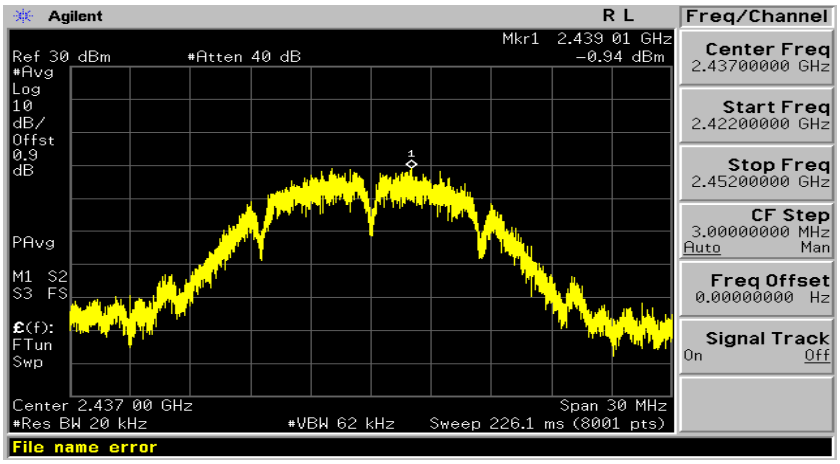
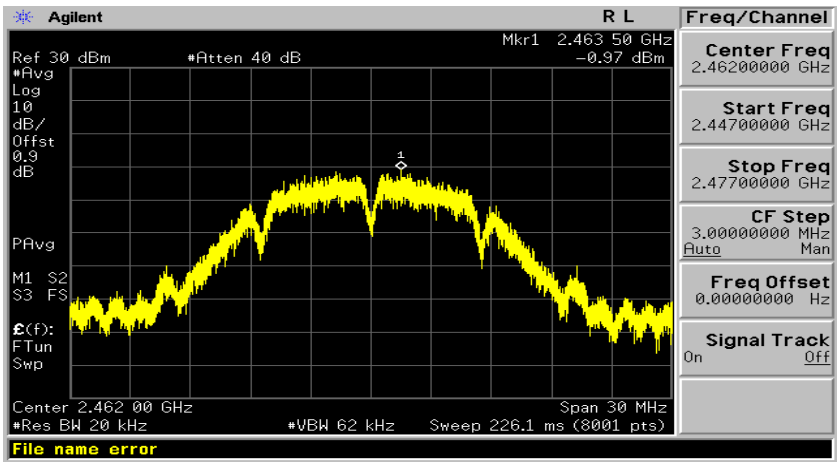
10.3 MEASUREMENT EQUIPMENT USED

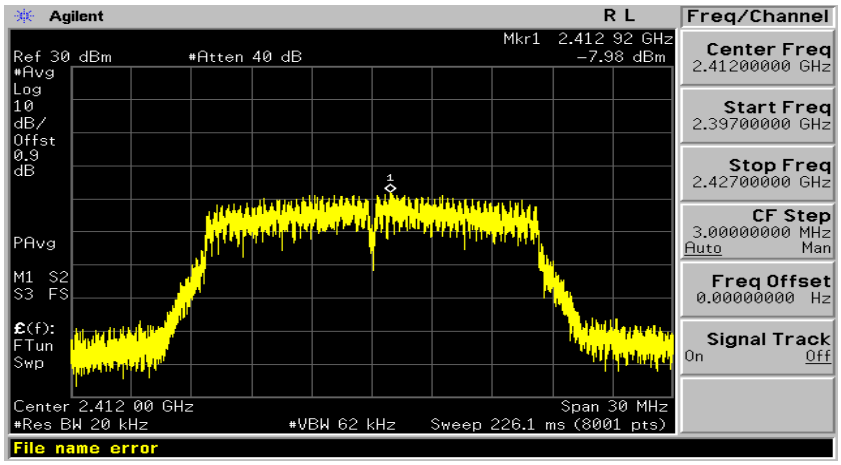
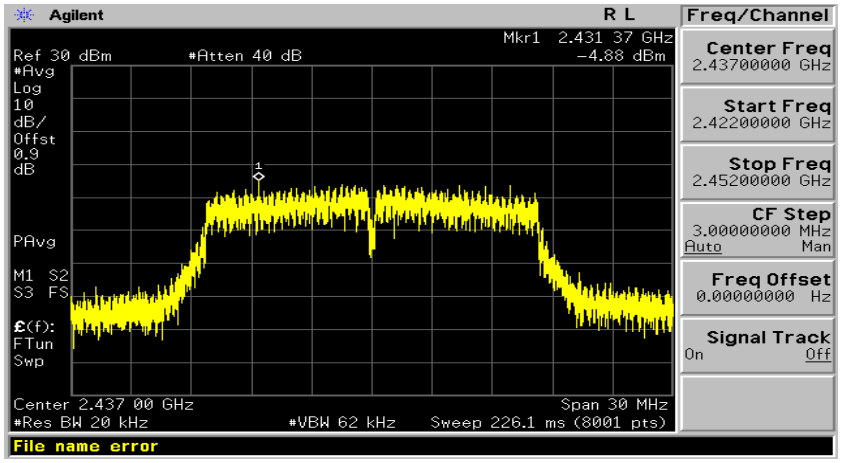
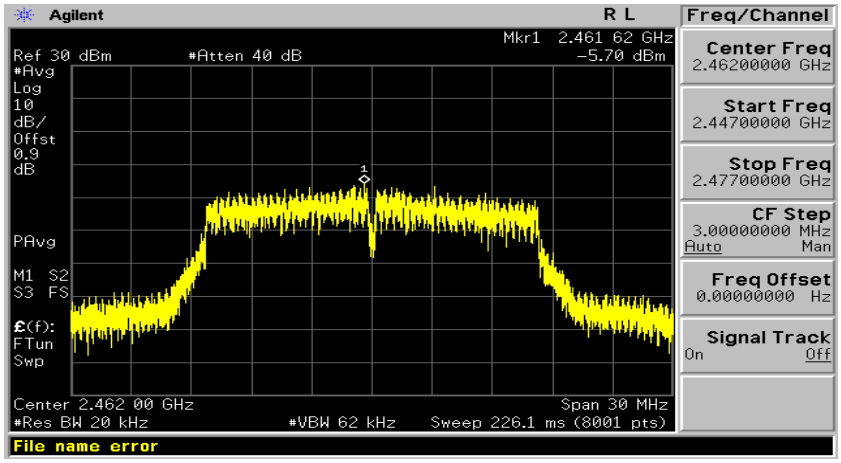
Refer To Section 6.

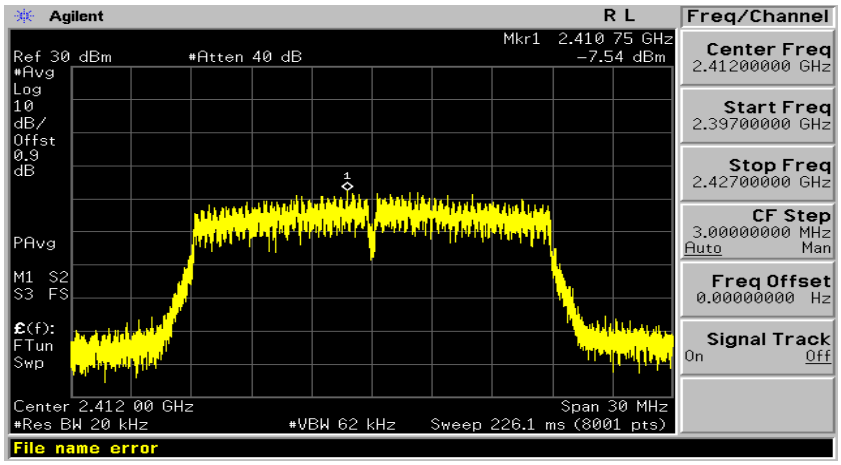
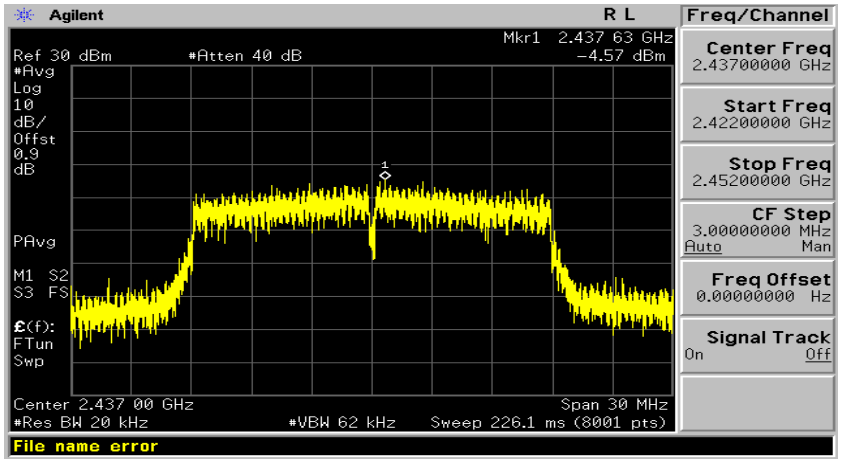
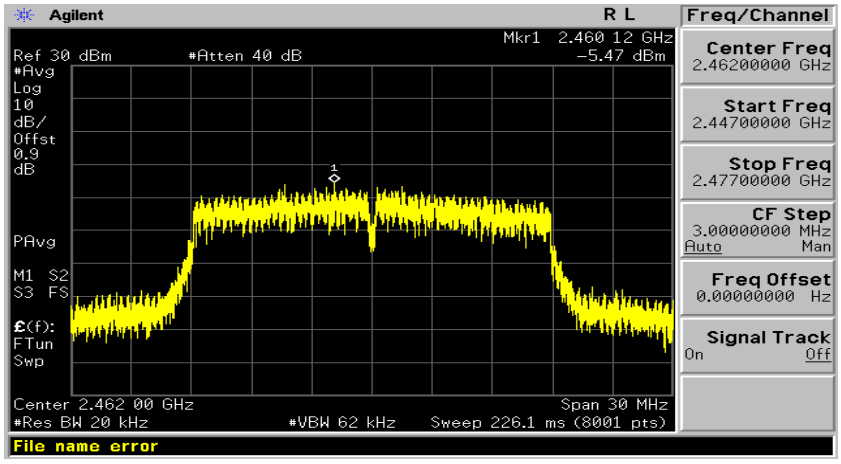
10.4 LIMITS AND MEASUREMENT RESULT

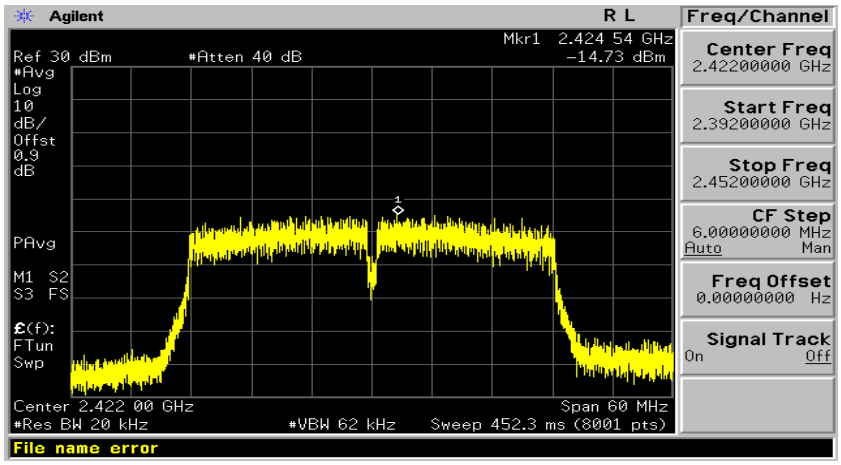
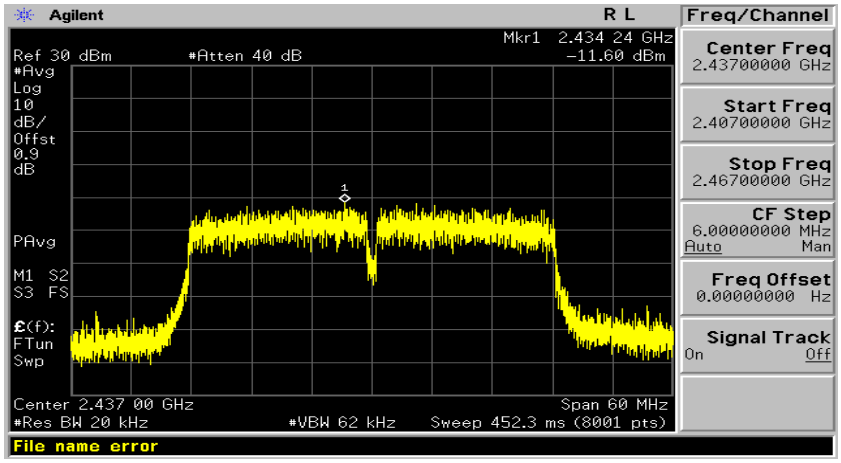
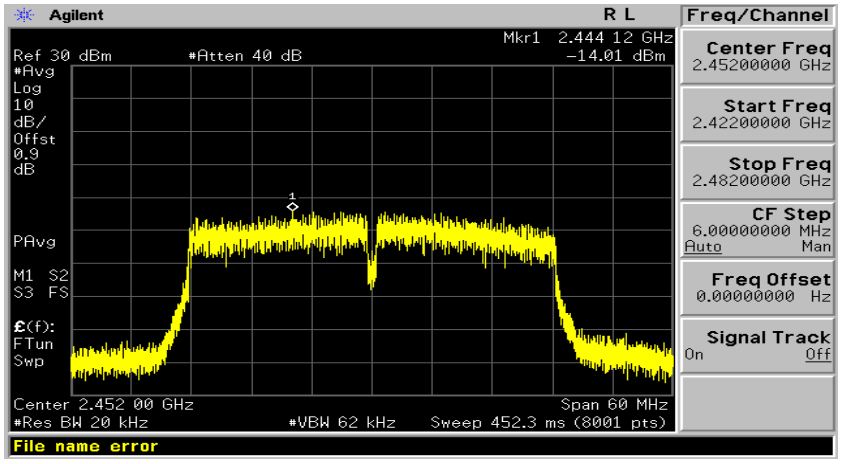
Mode	Channel	Av.PSD [dBm/20kHz]	Limit[dBm/3kHz]	Verdict
11B	LCH	-2.49	8	PASS
11B	MCH	-0.94	8	PASS
11B	HCH	-0.97	8	PASS
11G	LCH	-7.98	8	PASS
11G	MCH	-4.88	8	PASS
11G	HCH	-5.7	8	PASS
11N20SISO	LCH	-7.54	8	PASS
11N20SISO	MCH	-4.57	8	PASS
11N20SISO	HCH	-5.47	8	PASS
11N40SISO	LCH	-14.73	8	PASS
11N40SISO	MCH	-11.6	8	PASS
11N40SISO	HCH	-14.01	8	PASS

Test Graph

Graphs	
11B/LCH	
11B/MCH	
11B/HCH	

11G/LCH	
11G/MCH	
11G/HCH	

11N20SISO/LCH	
11N20SISO/MCH	
11N20SISO/HCH	

11N40SISO/LCH	
11N40SISO/MCH	
11N40SISO/HCH	

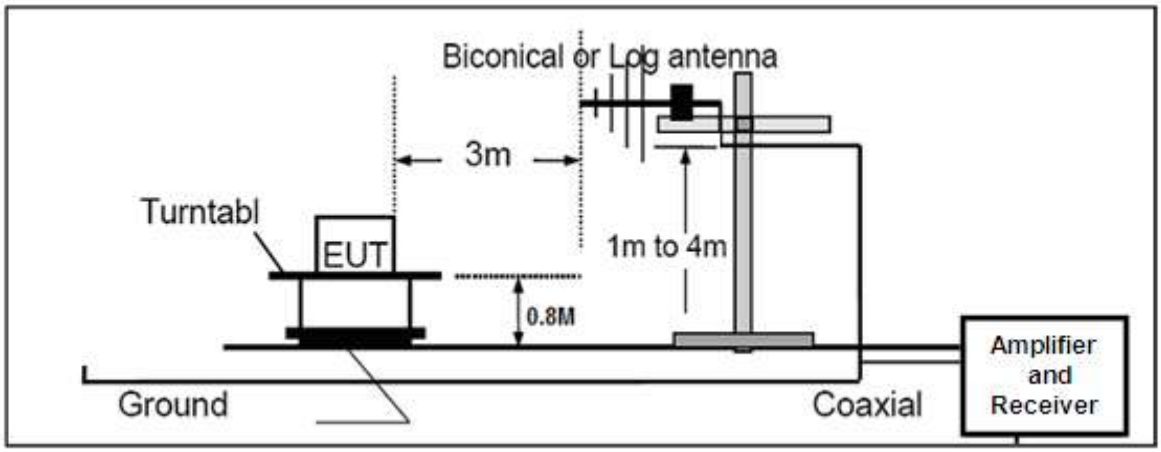
11. RADIATED EMISSION

11.1. MEASUREMENT PROCEDURE

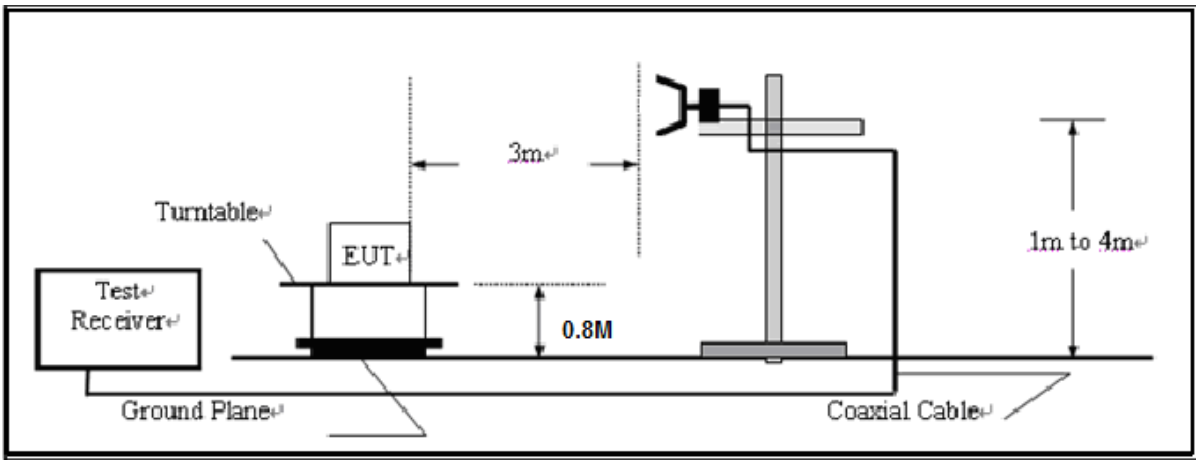
1. Configure the EUT according to ANSI C63.4. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting 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

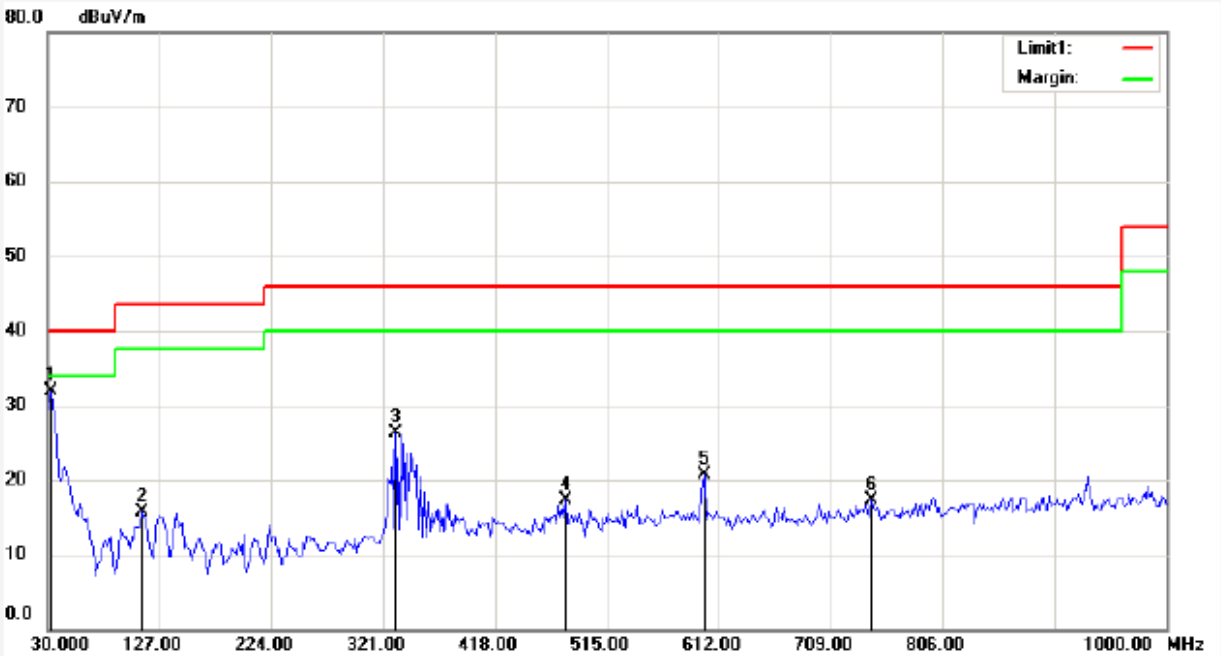
RADIATED EMISSION BELOW 30MHZ

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

RADIATED EMISSION BELOW 1GHZ

Job No.:	20150422	Probe :	Horizontal
Standard:	FCC Part15 Class B (30-1000MHz)	Tested Distance:	3m
Test item:	Radiation Test	Power Source:	DC 3V
Temp.(C)/Hum.(%RH):	24 (C) / 52 %RH	Date: 2015-4-22	Time: 17:08:47
Company:		EUT:	
Model:	PC7095ME	Test By :	JIMMY

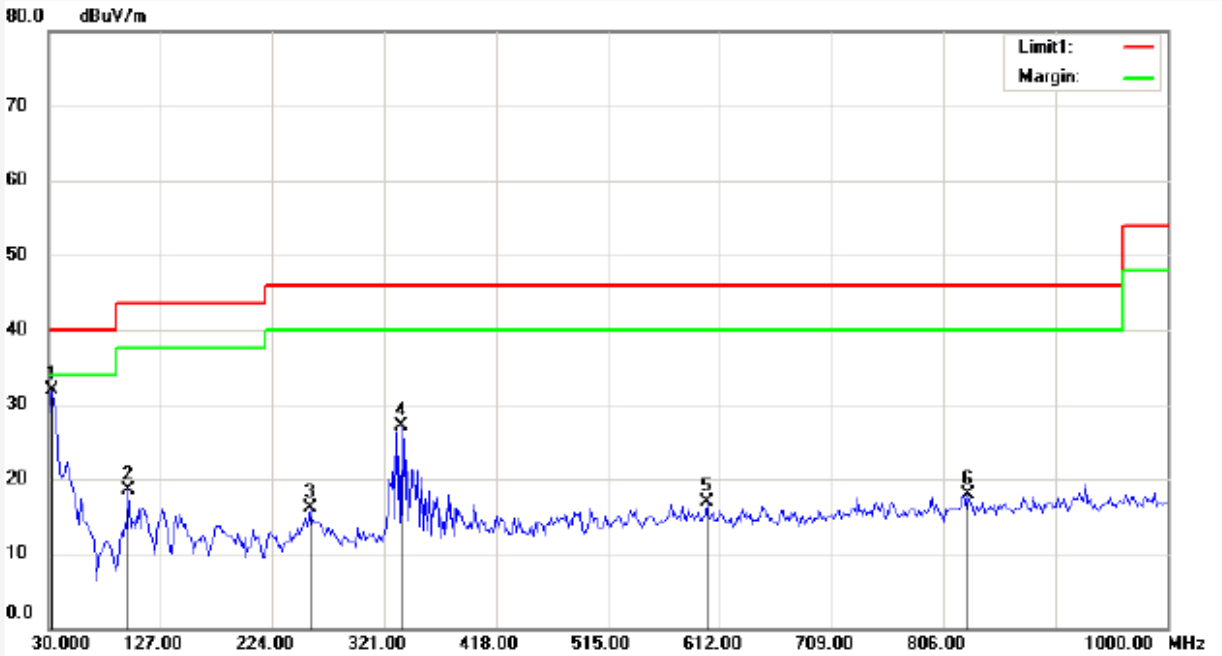
Test Mode: WIFI 11B 2412



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (deg.)	Height (cm)	Remark
1*	33.2333	45.52	-13.64	31.88	40.00	-8.12	---	---	peak
2	112.4500	37.33	-21.66	15.67	43.50	-27.83	---	---	peak
3	332.3167	44.66	-18.34	26.32	46.00	-19.68	---	---	peak
4	479.4333	31.65	-14.38	17.27	46.00	-28.73	---	---	peak
5	599.0667	33.64	-12.89	20.75	46.00	-25.25	---	---	peak
6	744.5667	28.57	-11.28	17.29	46.00	-28.71	---	---	peak

Job No.:	20150422	Probe :	Vertical
Standard:	FCC Part15 Class B (30-1000MHz)	Tested Distance:	3m
Test item:	Radiation Test	Power Source:	DC 3V
Temp.(C)/Hum.(%RH):	24 (C) / 52 %RH	Date: 2015-4-22 Time: 17:10:27	
Company:		EUT:	
Model:	PC7095ME	Test By :	JIMMY

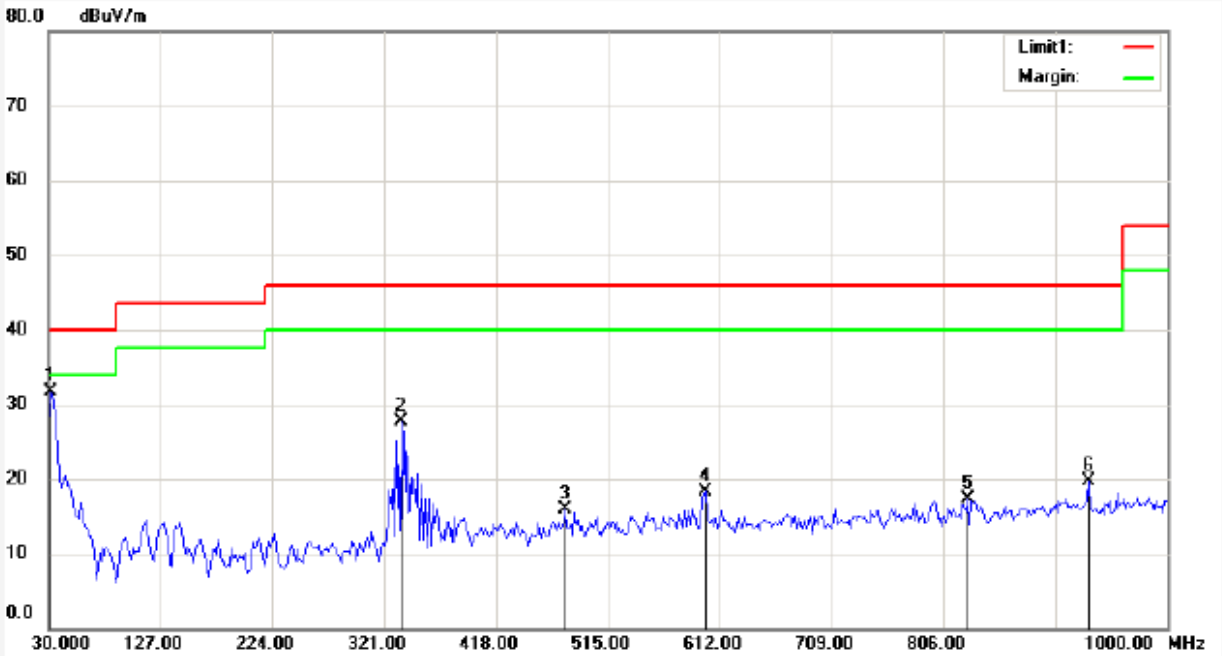
Test Mode: WIFI 11B 2412



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (deg.)	Height (cm)	Remark
1*	33.2333	45.52	-13.64	31.88	40.00	-8.12	---	---	peak
2	99.5167	42.22	-23.73	18.49	43.50	-25.01	---	---	peak
3	256.3333	36.39	-20.34	16.05	46.00	-29.95	---	---	peak
4	335.5500	45.33	-18.26	27.07	46.00	-18.93	---	---	peak
5	600.6833	29.74	-12.85	16.89	46.00	-29.11	---	---	peak
6	827.0167	28.44	-10.52	17.92	46.00	-28.08	---	---	peak

Job No.:	20150422	Probe :	Horizontal
Standard:	FCC Part15 Class B (30-1000MHz)	Tested Distance:	3m
Test item:	Radiation Test	Power Source:	DC 3V
Temp.(C)/Hum.(%RH):	24 (C) / 52 %RH	Date: 2015-4-22 Time: 17:12:40	
Company:		EUT:	
Model:	PC7095ME	Test By :	JIMMY

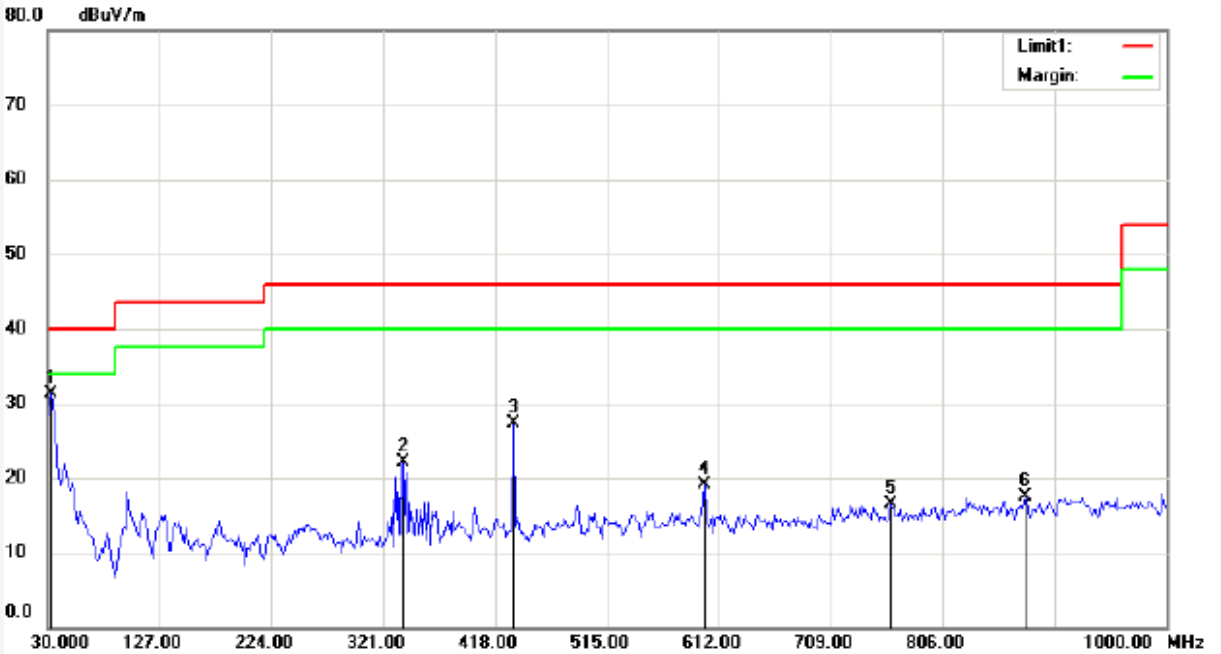
Test Mode: WIFI 11B 2437



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (deg.)	Height (cm)	Remark
1*	31.6167	44.30	-12.61	31.69	40.00	-8.31	---	---	peak
2	335.5500	45.95	-18.26	27.69	46.00	-18.31	---	---	peak
3	477.8167	30.27	-14.44	15.83	46.00	-30.17	---	---	peak
4	599.0667	31.23	-12.89	18.34	46.00	-27.66	---	---	peak
5	827.0167	27.85	-10.52	17.33	46.00	-28.67	---	---	peak
6	932.1000	29.36	-9.69	19.67	46.00	-26.33	---	---	peak

Job No.:	20150422	Probe :	Vertical
Standard:	FCC Part15 Class B (30-1000MHz)	Tested Distance:	3m
Test item:	Radiation Test	Power Source:	DC 3V
Temp.(C)/Hum.(%RH):	24 (C) / 52 %RH	Date: 2015-4-22 Time: 17:12:05	
Company:		EUT:	
Model:	PC7095ME	Test By :	JIMMY

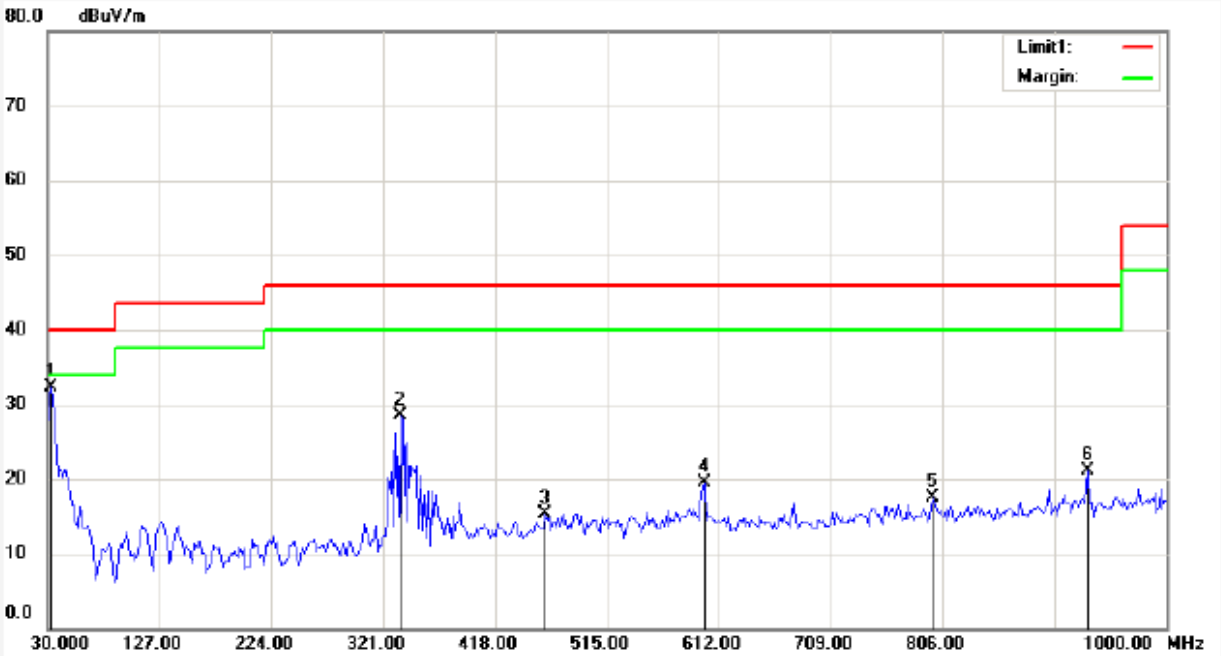
Test Mode: WIFI 11B 2437



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (deg.)	Height (cm)	Remark
1*	33.2333	44.94	-13.64	31.30	40.00	-8.70	---	---	peak
2	338.7833	40.36	-18.18	22.18	46.00	-23.82	---	---	peak
3	434.1667	42.95	-15.63	27.32	46.00	-18.68	---	---	peak
4	599.0667	31.99	-12.89	19.10	46.00	-26.90	---	---	peak
5	760.7333	27.63	-11.04	16.59	46.00	-29.41	---	---	peak
6	877.1333	27.51	-10.06	17.45	46.00	-28.55	---	---	peak

Job No.:	20150422	Probe :	Horizontal
Standard:	FCC Part15 Class B (30-1000MHz)	Tested Distance:	3m
Test item:	Radiation Test	Power Source:	DC 3V
Temp.(C)/Hum.(%RH):	24 (C) / 52 %RH	Date: 2015-4-22 Time: 17:13:17	
Company:		EUT:	
Model:	PC7095ME	Test By :	JIMMY

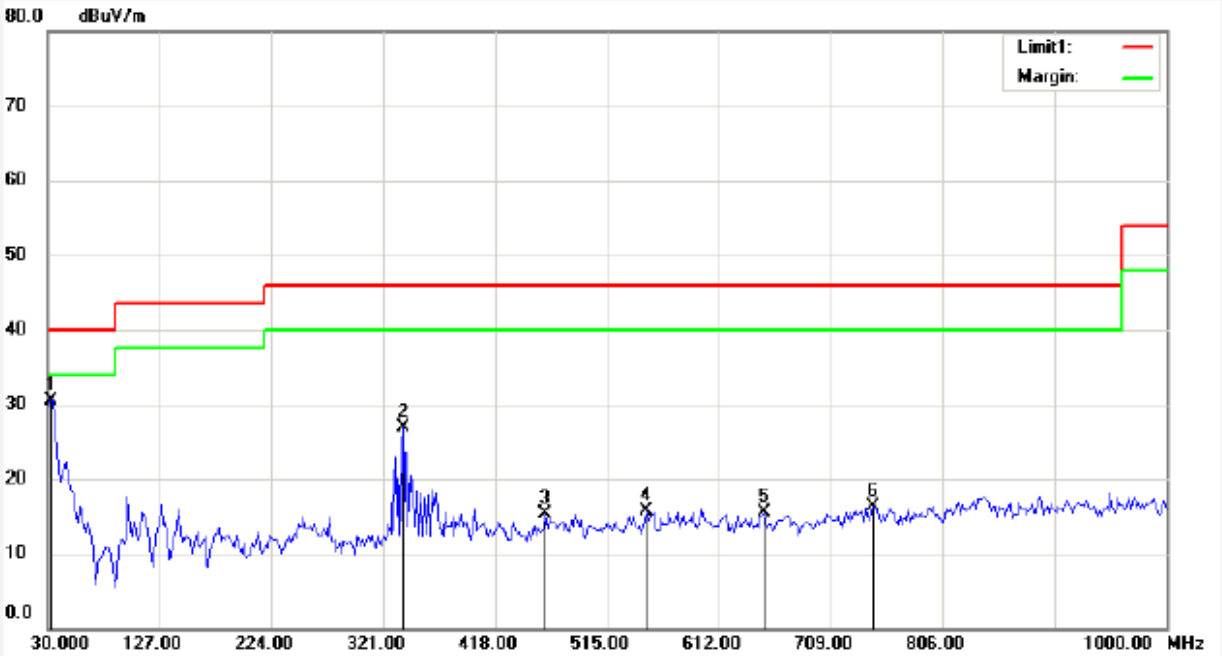
Test Mode: WIFI 11B 2462



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (deg.)	Height (cm)	Remark
1*	33.2333	45.91	-13.64	32.27	40.00	-7.73	---	---	peak
2	335.5500	46.79	-18.26	28.53	46.00	-17.47	---	---	peak
3	461.6500	30.46	-15.10	15.36	46.00	-30.64	---	---	peak
4	599.0667	32.39	-12.89	19.50	46.00	-26.50	---	---	peak
5	797.9167	28.60	-11.13	17.47	46.00	-28.53	---	---	peak
6	932.1000	30.75	-9.69	21.06	46.00	-24.94	---	---	peak

Job No.:	20150422	Probe :	Vertical
Standard:	FCC Part15 Class B (30-1000MHz)	Tested Distance:	3m
Test item:	Radiation Test	Power Source:	DC 3V
Temp.(C)/Hum.(%RH):	24 (C) / 52 %RH	Date: 2015-4-22 Time: 17:14:06	
Company:		EUT:	
Model:	PC7095ME	Test By :	JIMMY

Test Mode: WIFI 11B 2462



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (deg.)	Height (cm)	Remark
1*	33.2333	44.13	-13.64	30.49	40.00	-9.51	---	---	peak
2	338.7833	45.03	-18.18	26.85	46.00	-19.15	---	---	peak
3	461.6500	30.47	-15.10	15.37	46.00	-30.63	---	---	peak
4	548.9500	28.85	-13.12	15.73	46.00	-30.27	---	---	peak
5	650.8000	27.99	-12.51	15.48	46.00	-30.52	---	---	peak
6	746.1833	27.48	-11.25	16.23	46.00	-29.77	---	---	peak

RESULT: PASS

Note: 1. Factor=Antenna Factor + Cable loss, Margin= Result -Limit.

2. The “Factor” value can be calculated automatically by software of measurement system.

3. 30MHz~1GHz:(Scan with 11b,11g,11n, the worst casw is 11b Mode)

RADIATED EMISSION ABOVE 1GHZ

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type	Comment
TX 11b 2412MHz							
4824.147	46.67	10.44	57.11	74	-16.89	Pk	Horizontal
4824.147	31.29	10.44	41.73	54	-12.27	AV	Horizontal
7236.079	43.18	12.39	55.57	74	-18.43	pk	Horizontal
7236.079	33.37	12.39	45.76	54	-8.24	AV	Horizontal
4824.071	49.61	10.39	60	74	-14	Pk	Vertical
4824.062	33.27	10.39	43.66	54	-10.34	AV	Vertical
7236.107	48.73	12.68	61.41	74	-12.59	Pk	Vertical
7236.071	30.42	12.68	43.1	54	-10.9	AV	Vertical
TX 11b 2437MHz							
4874.046	49.27	10.39	59.66	74	-14.34	Pk	Horizontal
4874.134	33.38	10.39	43.77	54	-10.23	AV	Horizontal
7311.132	48.26	12.68	60.94	74	-13.06	Pk	Horizontal
7311.076	30.61	12.68	43.29	54	-10.71	AV	Horizontal
4874.106	49.61	10.39	60	74	-14	Pk	Vertical
4874.068	33.94	10.39	44.33	54	-9.67	AV	Vertical
7311.094	48.32	12.68	61	74	-13	Pk	Vertical
7311.068	30.67	12.68	43.35	54	-10.65	AV	Vertical
TX 11b 2462MHz							
4924.136	49.38	10.39	59.77	74	-14.23	pk	Horizontal
4924.092	33.49	10.39	43.88	54	-10.12	AV	Horizontal
7386.117	48.22	12.68	60.9	74	-13.1	pk	Horizontal
7386.068	30.64	12.68	43.32	54	-10.68	AV	Horizontal
4924.105	49.68	10.39	60.07	74	-13.93	pk	Vertical
4924.046	33.75	10.39	44.14	54	-9.86	AV	Vertical
7386.146	48.34	12.68	61.02	74	-12.98	pk	Vertical
7386.096	30.28	12.68	42.96	54	-11.04	AV	Vertical

RESULT: PASS

Note: 1~25GHz scan with 11b. No recording in the test report at least have 20dB margin.

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

Emission Level = Meter Reading + Factor

Margin = Emission Leve - Limit

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 bang edge

a)The transmitter output was connected to the spectrum analyzer

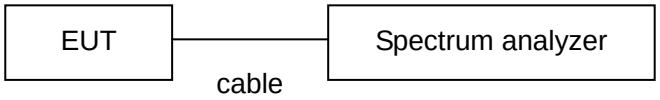
b)Set RBW=100kHz,VBW=300kHz

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

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type	Comment
TX 11b 2412MHz							
2399.900	80.64	-13	67.64	74	-6.36	peak	Horizontal
2399.900	61.75	-13	48.75	54	-5.54	AVG	Horizontal
2400.000	82.74	-12.99	69.75	74	-4.41	peak	Horizontal
2400.000	61.16	-12.99	48.17	54	-5.74	AVG	Horizontal
2399.900	81.27	-13	68.27	74	-5.73	peak	Vertical
2399.900	61.18	-13	48.18	54	-5.82	AVG	Vertical
2400.000	78.83	-12.99	65.84	74	-8.16	peak	Vertical
2400.000	59.49	-12.99	46.5	54	-7.5	AVG	Vertical
TX 11b 2462MHz							
2483.500	78.62	-12.78	65.84	74	-8.16	peak	Horizontal
2483.500	60.72	-12.78	47.94	54	-6.06	AVG	Horizontal
2483.600	79.18	-12.77	66.41	74	-7.59	peak	Horizontal
2483.600	60.29	-12.78	47.51	54	-6.49	AVG	Horizontal
2483.500	77.29	-12.78	64.51	74	-9.49	peak	Vertical
2483.500	60.47	-12.78	47.69	54	-6.31	AVG	Vertical
2483.600	78.28	-12.77	65.51	74	-8.49	peak	Vertical
2483.600	59.71	-12.77	46.94	54	-7.06	AVG	Vertical

RESULT: PASS

Note: Scan with 11b,11g,11n, the worst casw is 11b Mode

Factor=Antenna Factor + Cable loss - Amplifier gain,

Emission Level = Meter Reading + Factor

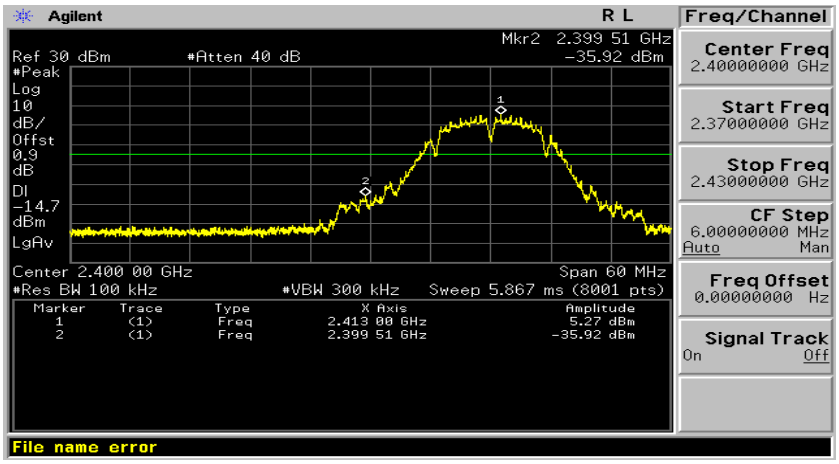
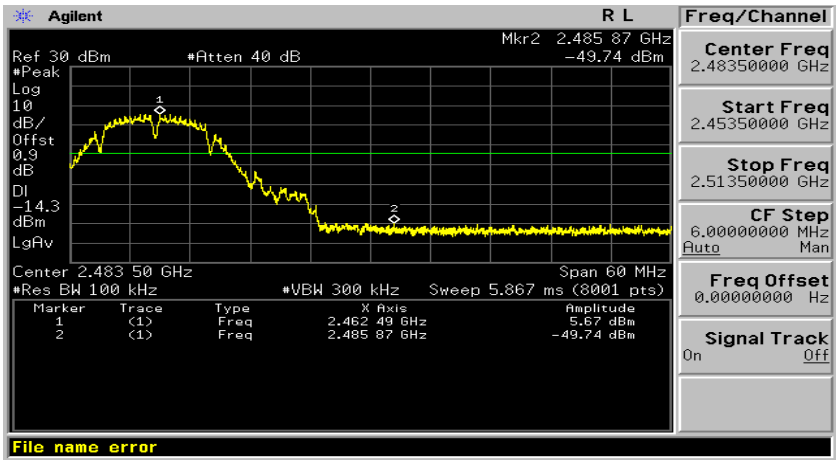
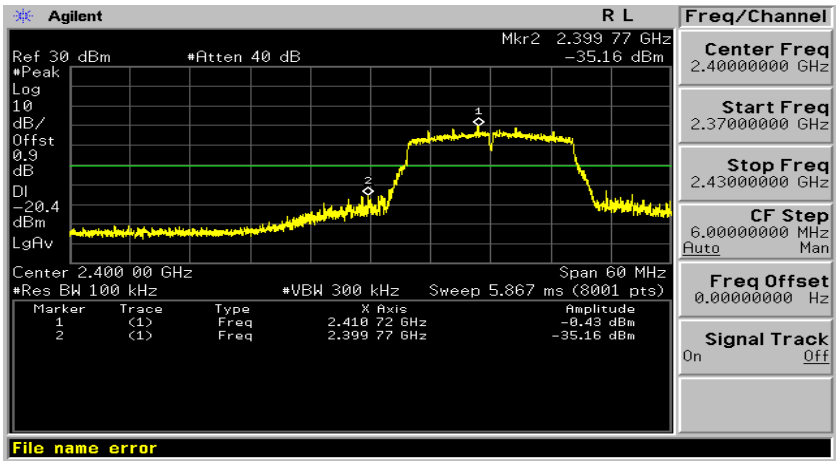
Margin= Emission Level -Limit.

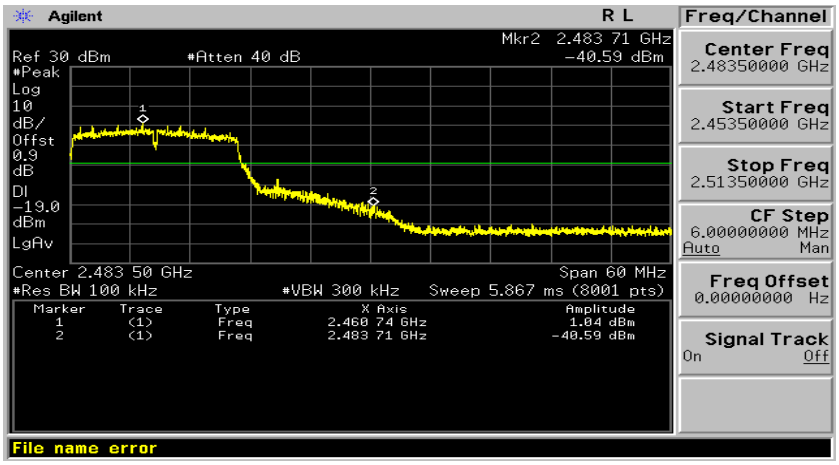
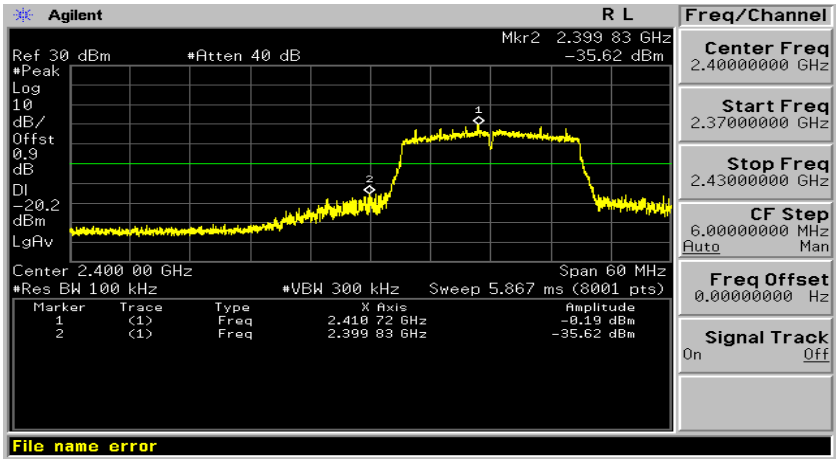
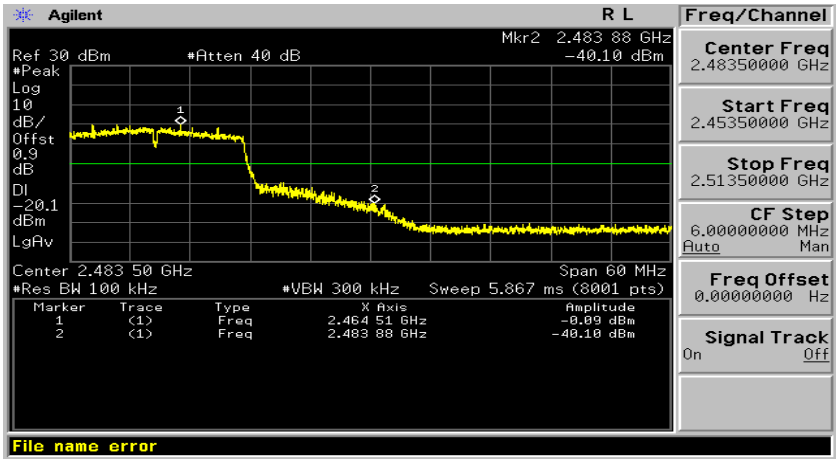
The “Factor” value can be calculated automatically by software of measurement system.

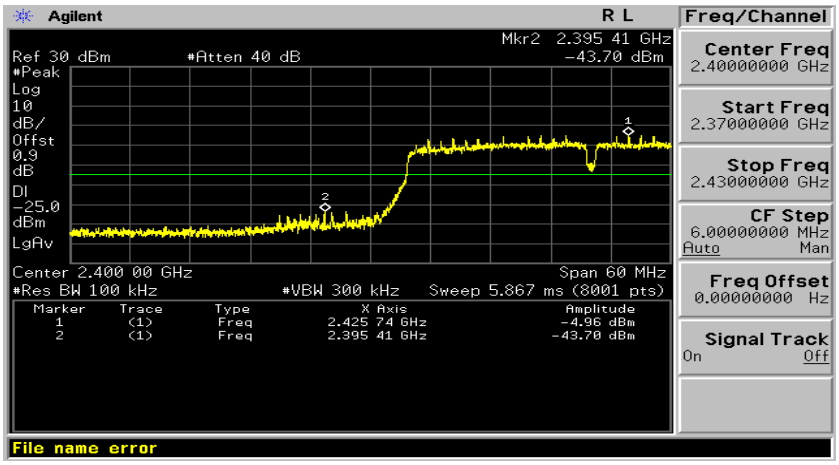
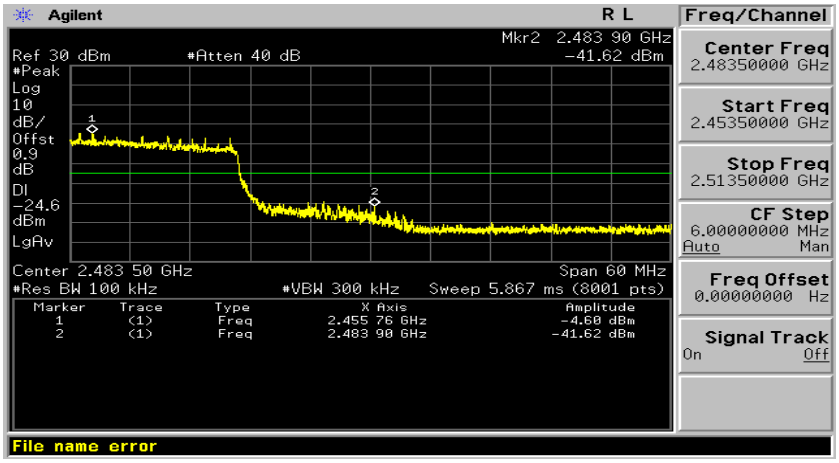
12.4. Conducted Test Result

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	5.27	-35.92	-14.73	PASS
11B	HCH	5.67	-49.74	-14.33	PASS
11G	LCH	-0.43	-35.16	-20.43	PASS
11G	HCH	1.04	-40.59	-18.96	PASS
11N20SISO	LCH	-0.19	-35.62	-20.19	PASS
11N20SISO	HCH	-0.09	-40.1	-20.09	PASS
11N40SISO	LCH	-4.96	-43.7	-24.96	PASS
11N40SISO	HCH	-4.6	-41.62	-24.6	PASS

Test Graph

Graphs	
11B/LCH	
11B/HCH	
11G/LCH	

11G/HCH	
11N20SISO/LCH	
11N20SISO/HCH	

11N40SISO/LCH	
11N40SISO/HCH	

13. FCC LINE CONDUCTED EMISSION TEST

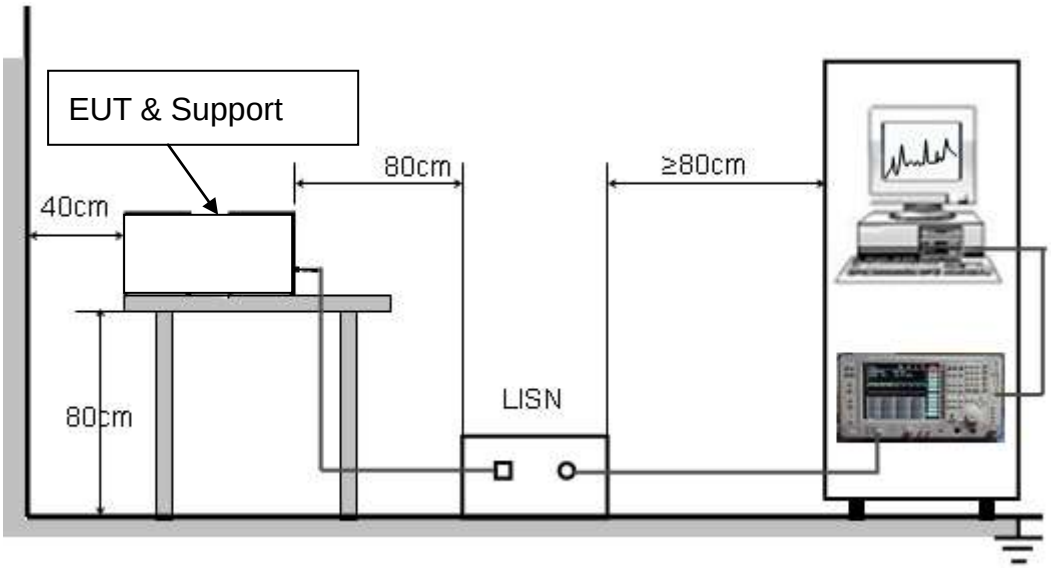
13.1. LIMITS OF LINE CONDUCTED EMISSION TEST

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/60Hzpower 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.

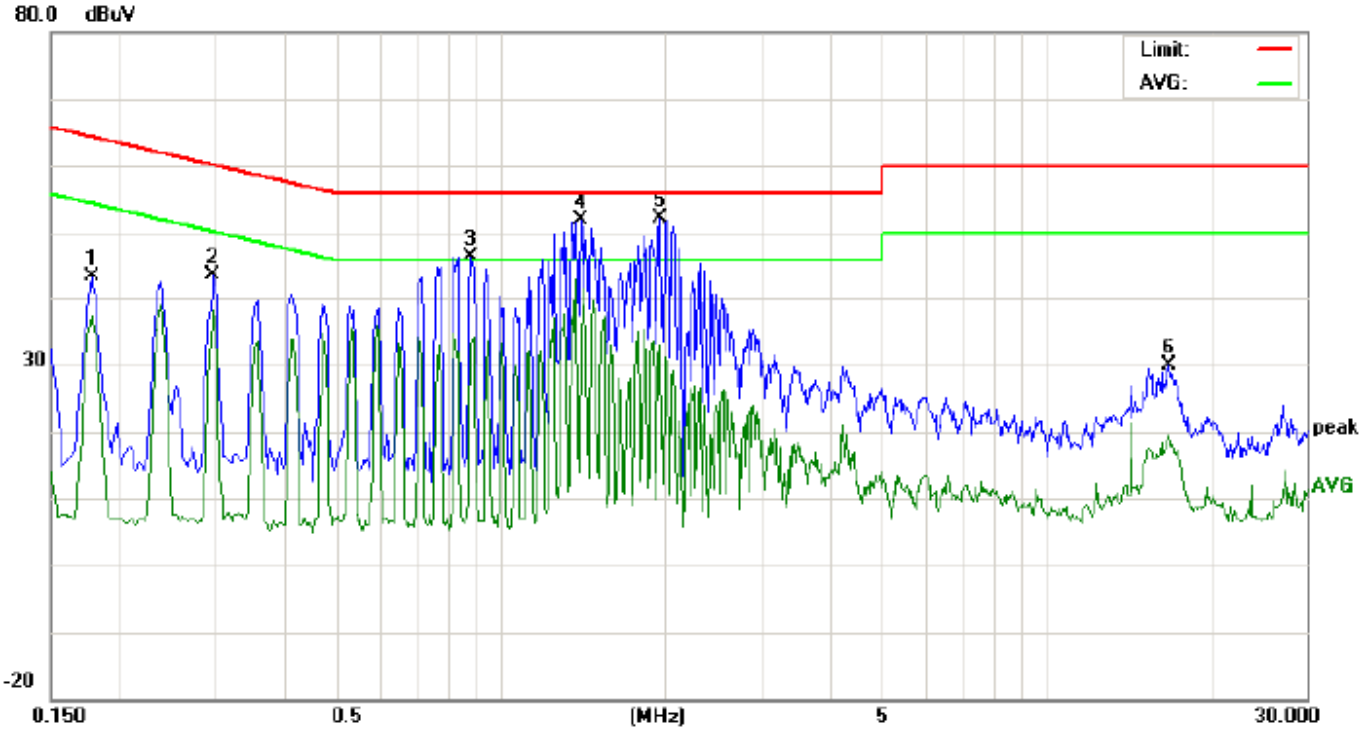
13.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST

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

LINE CONDUCTED EMISSION TEST LINE 1-L

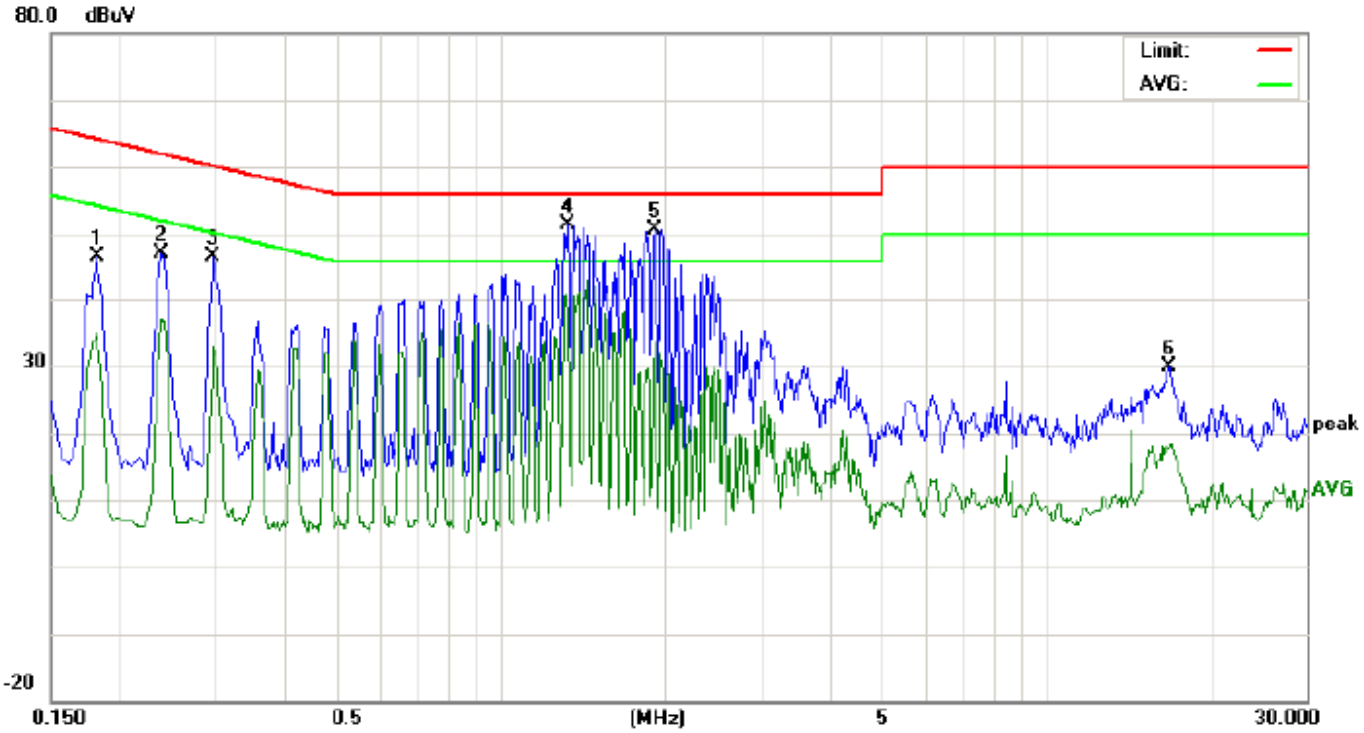
Job No.:	20150422	Date: 2015-4-22	
Company:		Time: 18:16:44	
Standard:	FCC Class B Conduction(QP)	Temp.(C)/Hum.(%):	26(C) / 60 %
Test item:	Conduction Test	EUT:	
Line :	L1	Test Voltage	AC 120V/60Hz
Model:	PC7095ME	Test By :	
Description:	Normal Operating(WIFI)		



No.	Freq. (MHz)	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment
		Peak	QP	AVG	dB	Peak	QP	AVG	QP	AVG	QP	AVG		
1	0.1780	33.09		27.19	10.19	43.28		37.38	64.57	54.57	-21.29	-17.19	P	
2	0.2980	33.27		27.81	10.29	43.56		38.10	60.30	50.30	-16.74	-12.20	P	
3	0.8820	36.03		22.24	10.39	46.42		32.63	56.00	46.00	-9.58	-13.37	P	
4	1.4100	41.56		22.91	10.38	51.94		33.29	56.00	46.00	-4.06	-12.71	P	
5	1.9500	41.83		22.52	10.24	52.07		32.76	56.00	46.00	-3.93	-13.24	P	
6	16.7500	19.77		9.32	10.12	29.89		19.44	60.00	50.00	-30.11	-30.56	P	

Line Conducted Emission Test Line 2-N

Job No.:	20150422	Date: 2015-4-22	
Company:		Time: 18:13:36	
Standard:	FCC Class B Conduction(QP)	Temp.(C)/Hum.(%):	26(C) / 60 %
Test item:	Conduction Test	EUT:	
Line :	N	Test Voltage	AC 120V/60Hz
Model:	PC7095ME	Test By :	
Description:	Normal Operating(WIFI)		

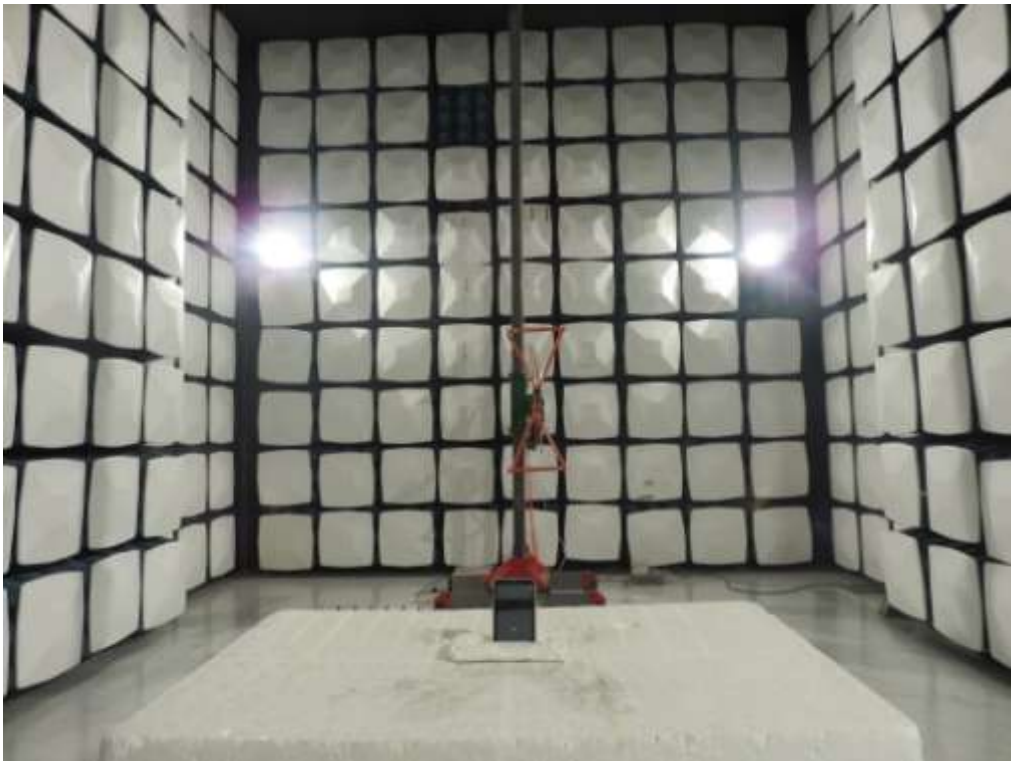


No.	Freq. (MHz)	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment
		Peak	QP	AVG	dB	Peak	QP	AVG	QP	AVG	QP	AVG		
1	0.1819	36.32		24.58	10.20	46.52		34.78	64.39	54.39	-17.87	-19.61	P	
2	0.2380	36.80		26.60	10.26	47.06		36.86	62.16	52.16	-15.10	-15.30	P	
3	0.2980	36.40		22.50	10.29	46.69		32.79	60.30	50.30	-13.61	-17.51	P	
4	1.3260	41.02		26.79	10.38	51.40		37.17	56.00	46.00	-4.60	-8.83	P	
5	1.9140	40.47		23.49	10.25	50.72		33.74	56.00	46.00	-5.28	-12.26	P	
6	16.7540	19.67		7.47	10.13	29.80		17.60	60.00	50.00	-30.20	-32.40	P	

APPENDIX A: PHOTOGRAPHS OF TEST SETUP

FCC LINE CONDUCTED EMISSION TEST SETUP

FCC RADIATED EMISSION TEST SETUP

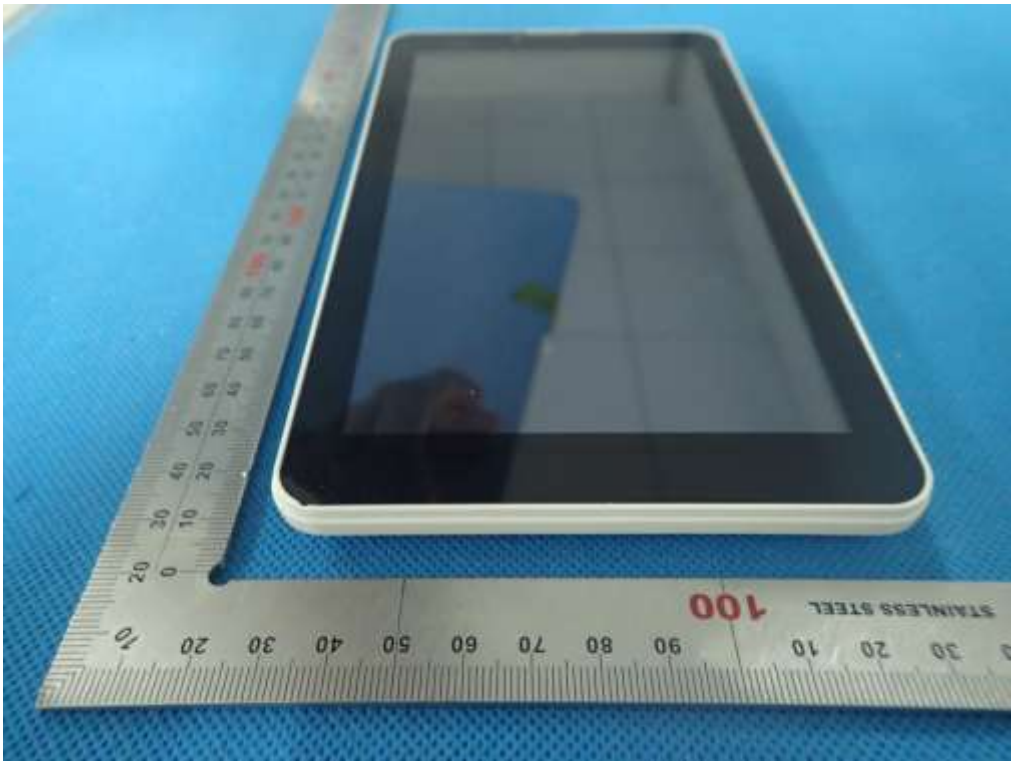


APPENDIX B: PHOTOGRAPHS OF EUT

TOTAL VIEW OF EUT

TOP VIEW OF EUT

BOTTOM VIEW OF EUT

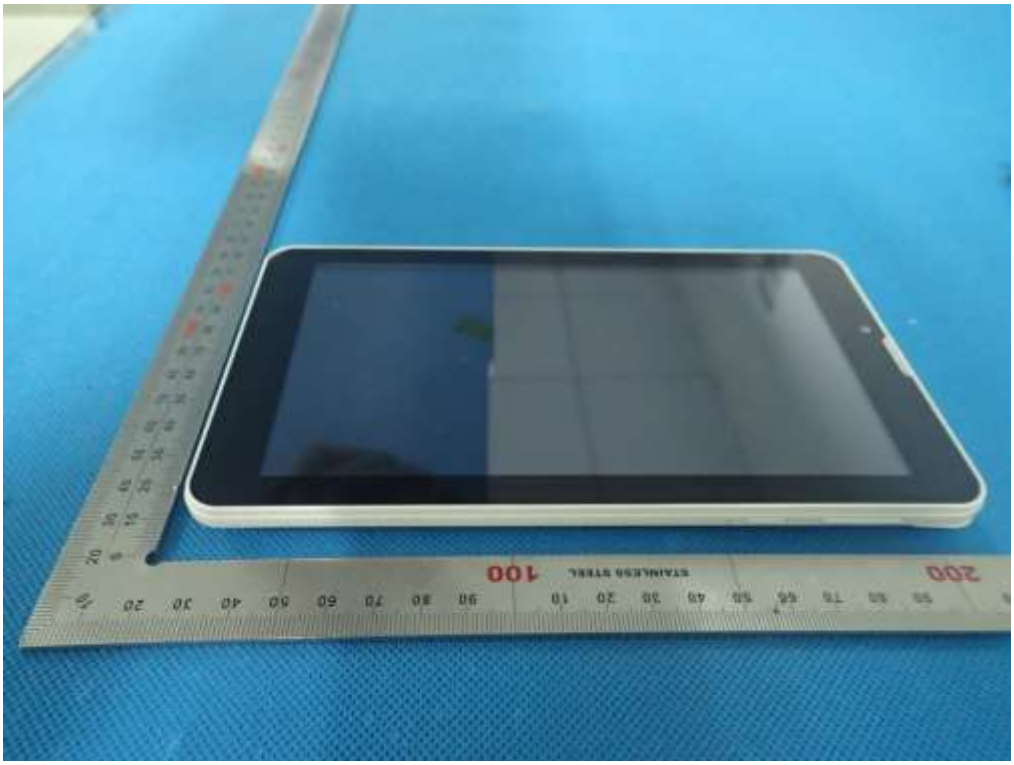


FRONT VIEW OF EUT

BACK VIEW OF EUT

LEFT VIEW OF EUT

RIGHT VIEW OF EUT



OPEN VIEW OF EUT-1

OPEN VIEW OF EUT-2

OPEN VIEW OF EUT-3

INTERNAL VIEW OF EUT-1

INTERNAL VIEW OF EUT-2

----END OF REPORT----