FCC Test Report

Report No.: AGC00653160504FE04

FCC ID	:	2AFD9EXPLORERX
APPLICATION PURPOSE	:	Original Equipment
PRODUCT DESIGNATION	:	mobile phone
BRAND NAME	:	Ufone
MODEL NAME	:	EXPLORER X
CLIENT	:	MOVEON TECHNOLOGY LIMITED
DATE OF ISSUE	:	June 03, 2016
STANDARD(S) TEST PROCEDURE(S)	:	FCC Part 15.247 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	/	June 03, 2016	Valid	Original Report

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Applicant	MOVEON TECHNOLOGY LIMITED		
Address	world trade plaza-A block #3201-3202 Fuhong Road, Futian		
Manufacturer	MOVEON TECHNOLOGY LIMITED		
Address	world trade plaza-A block #3201-3202 Fuhong Road, Futian		
Product Designation	mobile phone		
Brand Name	Ufone		
Test Model	EXPLORER X		
Date of test	May 24, 2016 to May 26, 2016		
Deviation	None		
Condition of Test Sample	Normal		
Report Template	AGCRT-US-BGN/RF		

1. VERIFICATION OF CONFORMITY

We hereby certify that:

The above equipment was tested by Dongguan Precise Testing Service 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 C63.10 (2013) 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.

Vota Zhang Tested By Dota Zhang(Zhang Jianfeng) June 03, 2016 BONG xie **Reviewed By** Bart Xie(Xie Xiaobin) June 03, 2016 Solya 2h Approved By Solger Zhang(Zhang Hongyi) June 03, 2016 Authorized Officer

2. GENERAL INFORMATION

2.1. PRODUCT DESCRIPTION

The EUT is designed as "mobile phone". It is designed by way of utilizing the DSSS and OFDM technology to achieve the system operation.

Operation Frequency 2.412 GHz~2.462GHz				
Output Power	IEEE 802.11b:11.69dBm; IEEE 802.11g:10.12dBm;			
	IEEE 802.11n(20):9.43dBm; IEEE 802.11n(40):8.41dBm			
Modulation	DSSS(DBPSK/DQPSK/CCK);OFDM(BPSK/QPSK/16-QAM/64-QAM)			
Number of channels	11			
Hardware Version	5110DW_MM1_V10			
Software Version	5110DW_C2_06.A1.160518.L1.6580L.FWVGA.DS88.B125			
Antenna Designation	PIFA Antenna			
Antenna Gain	0.4dBi			
Power Supply	DC3.7V by Built-in Li-ion Battery			

A major technical description of EUT is described as following

2.2. TABLE OF CARRIER FREQUENCYS

Frequency Band	Channel Number	Frequency
	1	2412 MHZ
	2	2417 MHZ
	3	2422 MHZ
	4	2427 MHZ
	5	2432 MHZ
2400~2483.5MHZ	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

MCS Index	Nss Modulatio	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

2.3. IEEE 802.11N MODULATION SCHEME

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: 2AFD9EXPLORERX** 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 C63.10 (2013). 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:

EUT	Accessory
-----	-----------

5.2. EQUIPMENT USED IN EUT SYSTEM

Item	Equipment	Model No.	ID or Specification	Note
1	Mobile Phone	EXPLORER X	FCC ID: 2AFD9EXPLORERX	EUT
2	Adapter	EXPLORER X	DC5V /1000mA	Accessory
3	Battery	EXPLORER X	DC3.7V/ 1700 mAh	Accessory
4	Earphone	N/A	N/A	Accessory
5	USB Cable	N/A	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	Dongguan Precise Testing Service Co., Ltd.
Location	Building D,Baoding Technology Park,Guangming Road2,Dongcheng District, Dongguan, Guangdong, China,
FCC Registration No.	371540
Description	The test site is constructed and calibrated to meet the FCC requirements in documents ANSI C63.10:2013.

ALL TEST EQUIPMENT LIST

FOR RADIATED EMISSION TEST (BELOW 1GHZ)

Radiated Emission Test Site					
Name of Equipment	Manufacturer	Model Number	Serial Number	Last Calibration	Due Calibration
EMI Test Receiver	Rohde & Schwarz	ESCI	101417	July 4, 2015	July 3, 2016
Trilog Broadband Antenna (25M-1GHz)	SCHWARZBECK	VULB9160	9160-3355	July 4, 2015	July 3, 2016
Signal Amplifier	SCHWARZBECK	BBV 9475	9745-0013	July 4, 2015	July 3, 2016
RF Cable	SCHWARZBECK	AK9515E	96221	July 4, 2015	July 3, 2016
3m Anechoic Chamber	CHENGYU	966	PTS-001	June 6, 2015	June 5, 2016
MULTI-DEVICE Positioning Controller	Max-Full	MF-7802	MF780208339	N/A	N/A
Active loop antenna (9K-30MHz)	Schwarzbeck	FMZB1519	1519-038	June 6, 2015	June 5, 2016
Spectrum analyzer	Agilent	E4407B	MY46185649	June 6, 2015	June 5, 2016
Power Probe	R&S	NRP-Z23	100323	July 25,2015	July 24,2016
RF attenuator	N/A	RFA20db	68	N/A	N/A

FOR RADIATED EMISSION TEST (1GHZ ABOVE)

Radiated Emission Test Site					
Name of Equipment	Manufacturer	Model Number	Serial Number	Last Calibration	Due Calibration
EMI Test Receiver	Rohde & Schwarz	ESCI	101417	July 4, 2015	July 3, 2016
Horn Antenna (1G-18GHz)	SCHWARZBECK	BBHA9120D	9120D-1246	July 11, 2015	July 10, 2016
Spectrum Analyzer	Agilent	E4411B	MY4511453	July 4, 2015	July 3, 2016
Signal Amplifier	SCHWARZBECK	BBV 9718	9718-269	July 7, 2015	July 6, 2016
RF Cable	SCHWARZBECK	AK9515H	96220	July 8, 2015	July 7, 2016
3m Anechoic Chamber	CHENGYU	966	PTS-001	June 6, 2015	June 5, 2016
MULTI-DEVICE Positioning Controller	Max-Full	MF-7802	MF780208339	N/A	N/A

Horn Ant (18G-40GH	lz) Schwarzbe	ck	BBHA 9170)	9170-181	June 6, 2015	June 5, 2016
Power Probe	R&S		NRP-Z23		100323	July 25,2015	July 24,2016
RF attenuator	N/A		RFA20db		68	N/A	N/A
	C	condu	cted Emissio	ו Te	st Site		
Name of Equipment	Manufacturer	Мо	del Number	Se	rial Number	Last Calibration	Due Calibration
EMI Test Receiver	Rohde & Schwarz		ESCI		101417	July 4, 2015	July 3, 2016
Artificial Mains Network	Narda		L2-16B	00	0WX31025	July 8, 2015	July 7, 2016
Artificial Mains Network (AUX)	Narda		L2-16B	00	00WX31026	July 8, 2015	July 7, 2016
RF Cable	SCHWARZBECK	ļ	AK9515E		96222	July 4, 2015	July 3, 2016
Shielded Room	CHENGYU		843		PTS-002	June 6,2015	June 5,2016

7. OUTPUT POWER

7.1. MEASUREMENT PROCEDURE

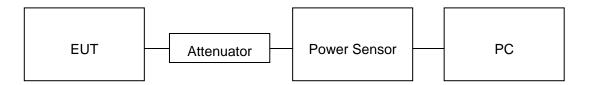
For max average conducted output power test:

- 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	11.69	30	Pass
2.437	11.58	30	Pass
2.462	11.61	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	10.12	30	Pass
2.437	10.07	30	Pass
2.462	10.06	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	9.43	30	Pass
2.437	9.40	30	Pass
2.462	9.39	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	8.41	30	Pass
2.437	8.32	30	Pass
2.452	8.36	30	Pass

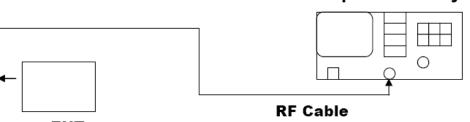
8. 6DB BANDWIDTH

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 \ge 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)



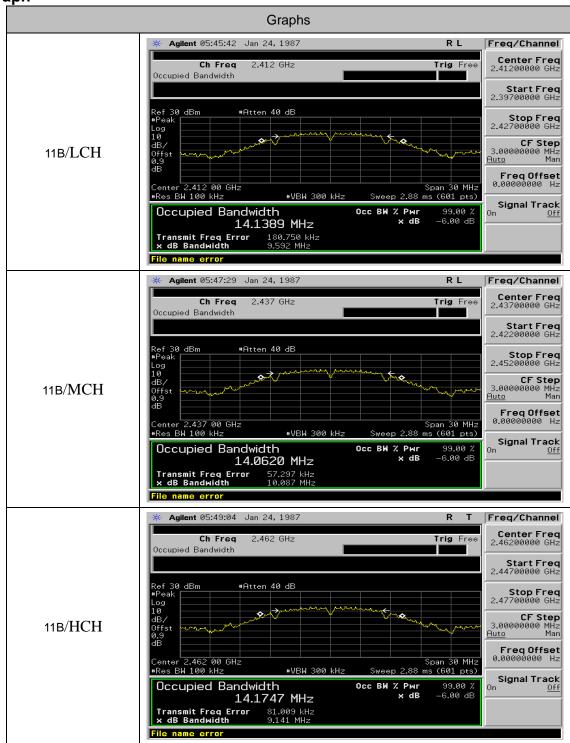
EUT

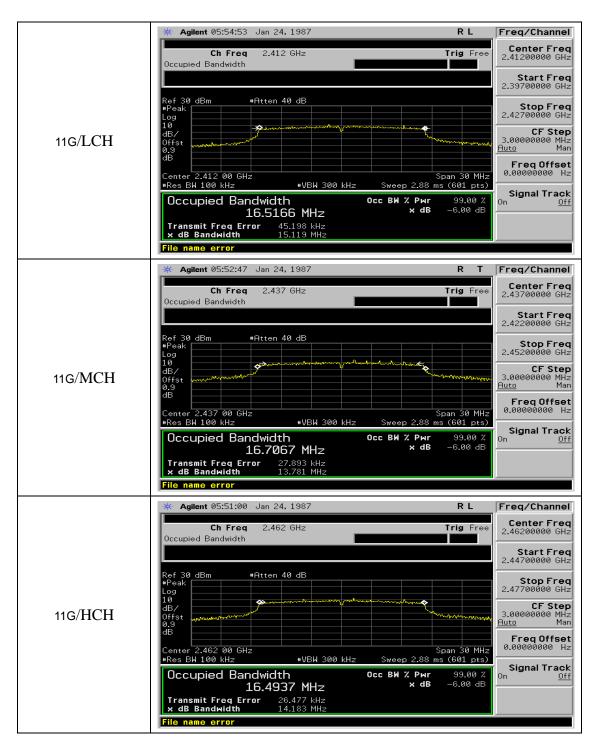
8.3. LIMITS AND MEASUREMENT RESULTS

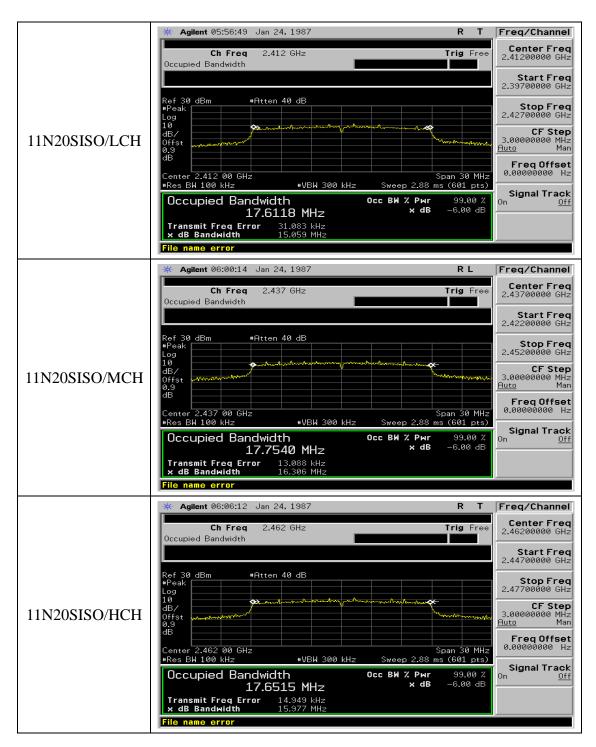
Mode	Channel	6dB Bandwidth [MHz]	OBW [MHz]	Verdict
11B	LCH	9.59	14.14	PASS
11B	MCH	10.09	14.06	PASS
11B	HCH	9.14	14.17	PASS
11G	LCH	15.12	16.52	PASS
11G	MCH	13.78	16.71	PASS
11G	HCH	14.18	16.49	PASS
11N20SISO	LCH	15.06	17.61	PASS
11N20SISO	MCH	16.31	17.75	PASS
11N20SISO	HCH	15.98	17.65	PASS
11N40SISO	LCH	35.24	35.78	PASS
11N40SISO	MCH	35.28	36.18	PASS
11N40SISO	HCH	35.31	35.90	PASS

Spectrum Analyzer











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)

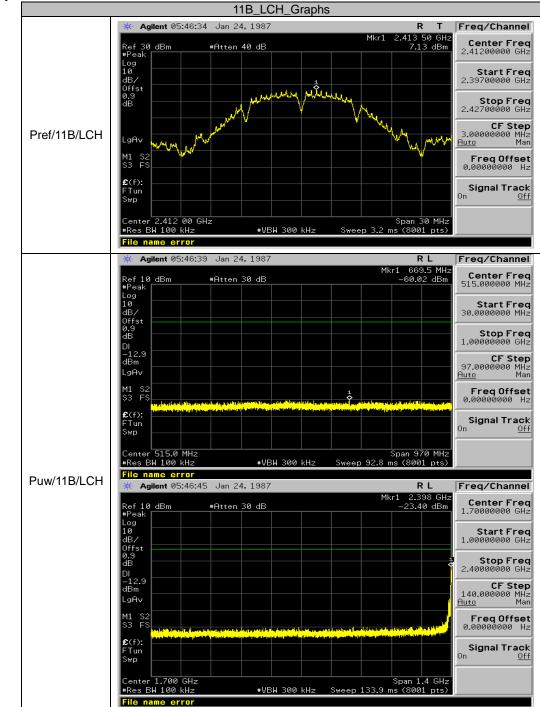
The same as described in section 8.2.

9.3. MEASUREMENT EQUIPMENT USED

The same as described in section 6.

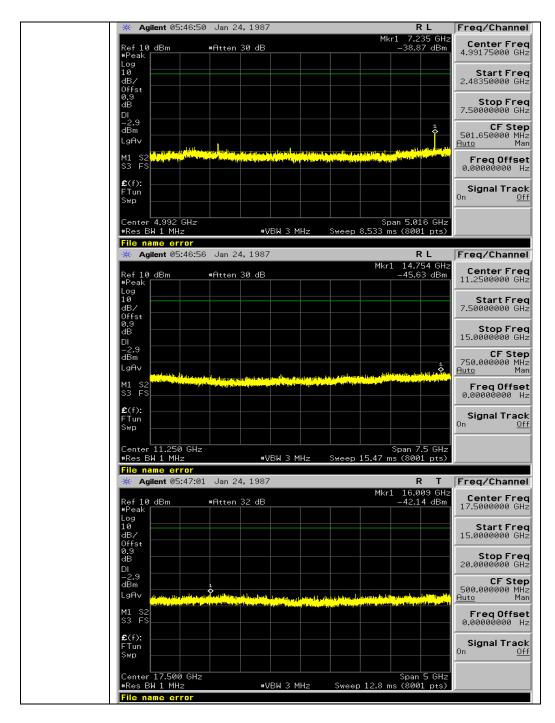
9.4. LIMITS AND MEASUREMENT RESULT

LIMITS AND MEASUREMENT RESULT				
Appliechie Limite	Measurement Result			
Applicable Limits	Test Data	Criteria		
In any 100 KHz Bandwidth Outside the	At least -20dBc than the limit			
frequency band in which the spread spectrum	Specified on the BOTTOM	PASS		
intentional radiator is operating, the radio frequency	Channel			
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 TOP Channel	PASS		

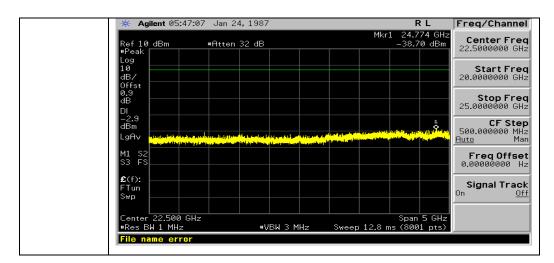


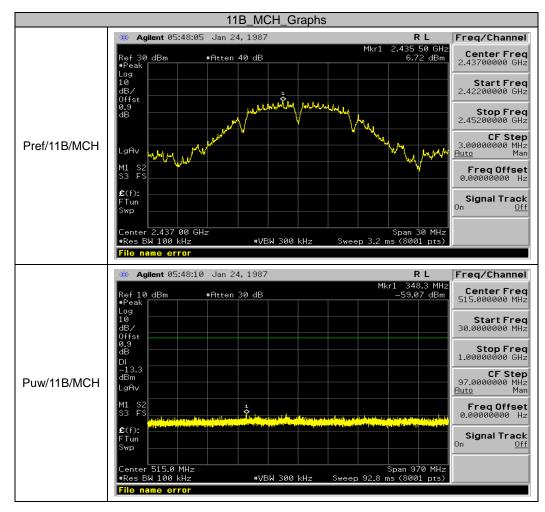
Test Graph

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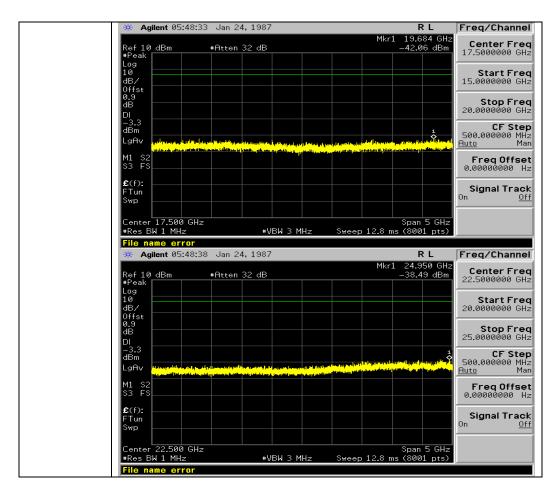


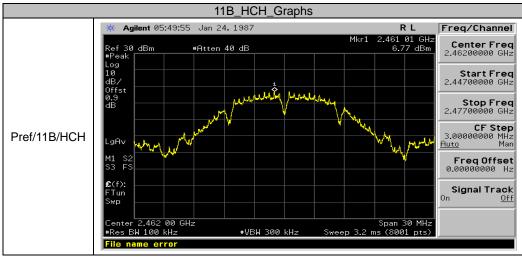


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Agilent 05:48	:16 Jan 24, 1987	R T Mkr1 2.399 Gi	Hz
Ref 10 dBm #Peak	#Atten 30 dB	-56.51 dB	Center Fi 1.70000000
Log 10			Start Fi
dB/ Offst 0.9			1.00000000
dB DI			Stop Fi 2.40000000
–13.3 dBm			CF S
LgAv			<u>Auto</u>
M1 S2 S3 FS	an a	Landstyn synty i nysyn y genesar ryw llwyr y fel y ywddin martyr an llwfae d af wyr ann f	Freq Off 0.00000000
€(f): <mark>http://decomposite</mark> FTun	a dini da a na ang ang ang ang ang ang ang ang a	an a	Signal Tra
Swp			On
Center 1.700 GH: #Res BW 100 kHz		Span 1.4 GH Hz Sweep 133.9 ms (8001 pts	
File name error		.nz Sweep 155.5 ms (oud) p(s	
🔆 Agilent 05:48	:22 Jan 24, 1987	R L Mkr1 7.309 GI	Freq/Chan
Ref 10 dBm #Peak	#Atten 30 dB	-41.05 dB	
Log			Start F
HB/ Dffst 0.9			2.48350000
dB DI			Stop F 7.5000000
–3.3 dBm		1	CF S
.gAv			Auto
M1 S2 S3 FS			Freq Off 0.00000000
£(f):			Signal Tr
Swp			On
Center 4.992 GH		Span 5.016 GH	
#Res BW 1 MHz File name error	#VBW 3 M⊢	łz – Śweep 8.533 ms (8001 pts	
-	:27 Jan 24, 1987	R L	Freq/Chan
Ref 10 dBm #Peak	#Atten 30 dB	Mkr1 14.960 G –44.15 dB	
HPeak Log 10			Start F
dB/ Offst			7.50000000
dB			Stop F 15.000000
DI			CF S
dBm		مريح بالبانية المريطة مستأنيان والمراجع والمريح	4 750.000000 Auto
LgAv			Freq Off
M1 S2 S3 FS			0.0000000
M1 S2 S3 FS £(f):			0.00000000 Signal Tra
M1 S2 S3 FS £(f):		Span 7.5 GH	0.00000000 Signal Tra

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		00 Jan 24, 1987		RT	Freq/Channel
	Ref 10 dBm #Peak	#Atten 30 dB		Mkr1 501.3 MHz -57.94 dBm	Center Fred 515.000000 MHz
	Log 10 dB/ 0ffst				Start Fred 30.0000000 MHz
	0.9 dB DI				Stop Fred 1.00000000 GHz
	-13.2 dBm LgAv				CF Step 97.0000000 MHz Auto Mar
	M1 S2 S3 FS	ageneration of the state of the		Anter constant in Constant in the Constant in the	Freq Offset 0.00000000 Ha
	£(f): FTun Swp			Madina for son and a failed of a strateging it with	Signal Tracl On <u>Of</u>
	Center 515.0 MHz		20 kU=	Span 970 MHz	
	#Res BW 100 kHz File name error M Agilent 05:50:0	#VBW 3	00 kHz Sweep	92.8 ms (8001 pts) R L	
	Se Aglient 03.30.0	06 Jan 24, 1987		Mkr1 2.216 GHz	Freq/Channe
	Ref 10 dBm #Peak Log	#Atten 30 dB		-58.24 dBm	Center Fred 1.70000000 GH
	10 dB/ Offst				Start Fred 1.00000000 GH
	0.9 dB DI				Stop Fred 2.40000000 GH
Puw/11B/HCH	-13.2 dBm LgAv				CF Step 140.000000 MH Auto Ma
	M1 S2 S3 FS	t i fan de fan it strad fan de fan fan de	a tangan ang di pangan kana kana kana kana kana kana kana		Freq Offse 0.00000000 Hi
	€(f): FTun Swp		<mark>han sud laise a shin hai (lai, hissa thin h</mark>	الالان من	Signal Track
	Center 1.700 GHz			Span 1.4 GHz	
	#Res BW 100 kHz File name error	#VBW 3	00 kHz Sweep 1	.33.9 ms (8001 pts)	
	-	.2 Jan 24, 1987		R L	Freq/Channe
				Mkr1 2.484 GHz	
	Ref 10 dBm #Peak Log	#Atten 30 dB		-37.97 dBm	Center Fre 4.99175000 GH
	10 dB/ Offst				Start Free 2.48350000 GH
	0.9 dB DI				Stop Fred 7.50000000 GH
	−3.2 1 dBm ∳ LgAv				CF Step 501.650000 MH <u>Auto</u> Ma
	M1 S2 S3 FS				Freq Offse 0.00000000 Hi
	£(f): FTun Swp				Signal Tracl
	Center 4.992 GHz			Span 5.016 GHz	
	#Res BW 1 MHz	#VBW (3 MHz Sweep 8	3.533 ms (8001 pts)	
	File name error				

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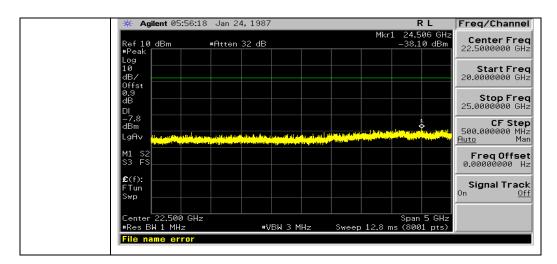
* Agilent 05:50:	17 Jan 24, 1987		RI	
Ref 10 dBm	#Atten 30 dB		Mkr1 14.962 –45.97	dBm Center Fr
#Peak				11.2500000 (
Log 10				Start Fr
dB/ Offst				7.50000000
dB				Stop Fr
DI I I				15.0000000
-3.2 dBm				CF St
LgAv				1 750.000000 I ♦ Auto
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\$3 FS				0.00000000
ɛ (f):				Signal Tra
FTun Swp				On On
Center 11.250 GH		1.2 MU=	Span 7.5	
#Res BW 1 MHz File name error	#VBF	I3 MHz Swee	p 15.47 ms (8001	9057
-	22 Jan 24,1987		RI	
Ref 10 dBm	#Atten 32 dB		Mkr1 19.558 –42.35	dBm Lenter Fr
#Peak Log				17.5000000
10				Start Fr
dB/				15.0000000
0.9 dB				Stop Fr
DI				20.0000000
-3.2 dBm			1	CF St 500.000000
LgAv	is in the loss them where this states in a	history of addition of a solid base	فألأتهم الموجعالية وتقصيل ومرالقا ورالي	Auto
M1 S2		فيالغ المبير ويتلفين والثلاث ومعجائز الا		Freq Offs
\$3 FS				0.00000000
£(f): FTun				Signal Tra
Swp				0n
Center 17.500 GH			Span 5	CUE
#Res BW 1 MHz		I3 MHz Swe	5 span 2.8 ms (8001	
File name error				
Agilent 05:50:	28 Jan 24,1987		R I Mkr1 24.094	
Ref 10 dBm	#Atten 32 dB		-37.85	
*Peak Log				
10 dB/				Start Fr 20.0000000
Offst 🛛				20.0000000
0.9 dB				Stop Fr
DI -3.2				25.0000000
dBm				CF St
EQUIP COMPLEX				Auto
M1 S2				Freq Offs
\$3 F\$				0.00000000
£(f): FTun				Signal Tra
Swp				0n
Center 22.500 GH		I3 MHz Swe	Span 5 ep 12.8 ms (8001	GHZ nts)
#Res BW 1 MHz	#VDP			

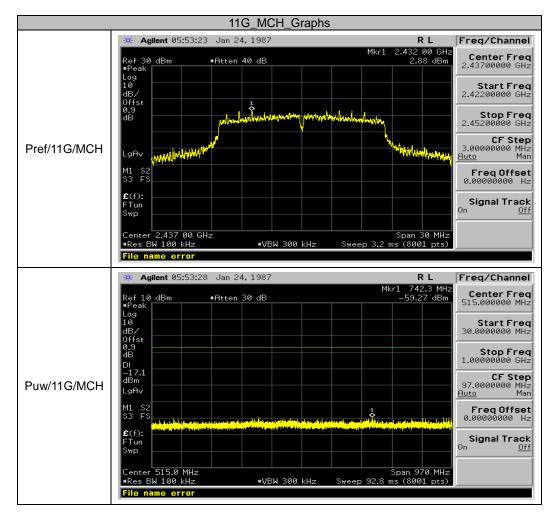
	11G_LCH_Graphs	6
	₩ Agilent 05:55:45 Jan 24, 1987	R T Freq/Channel
	Ref 30 dBm #Atten 40 dB #Peak	Mkr1 2.410 72 GHz 2.23 dBm 2.41200000 GHz
	Log 10 dB/ 0ffst <u>1</u>	Start Freq 2.39700000 GHz
	dB	
Pref/11G/LCH	LgAv M1 S2	CF Step 3.00000000 MHz <u>Auto</u> Man
	£(f):	Freq Offset 0.00000000 Hz Signal Track
	FTun Swp	0n <u>0ff</u>
	Center 2.412 00 GHz #Res BW 100 kHz #VBW 300 kHz File name error	Span 30 MHz Sweep 3.2 ms (8001 pts)
	🗰 Agilent 05:55:50 Jan 24, 1987	R L Freq/Channel
	Ref 10 dBm #Atten 30 dB #Peak Log	Mkr1 720.2 MHz -59.58 dBm 515.000000 MHz
	10 dB/ 0ffst 0.9	Start Freq 30.0000000 MHz
	dB DI -17.8	Stop Freq 1.0000000 GHz CF Step
	dBm LgAv M1 S2	97.0000000 MHz <u>Auto</u> Man
	S3 FS $\mathcal{E}(f)$: $\mathcal{E}(f)$:	Freq Offset O.00000000 Hz Signal Track
	Center 515.0 MHz	Span 970 MHz
	#Res BW 100 kHz #VBW 300 kHz	Sweep 92.8 ms (8001 pts)
Puw/11G/LCH	File name error	R L Freq/Channel
	Ref 10 dBm #Atten 30 dB	Mkr1 2.399 GHz -26.42 dBm 1.70000000 GHz
	•Peak Log 10 dB/	Start Freq 1.0000000 GHz
	0ffst 0.9 dB DI	Stop Freq 2.4000000 GHz
	-17.8 dBm LgAv	CF Step 140.000000 MHz <u>Auto</u> Man
	M1 S2 S3 FS depile the to a second with the second with the second with the second second second second second second second	Freq Offset 0.00000000 Hz
	£(f): FTun Swp	On Off
	Center 1.700 GHz #Res BW 100 kHz #VBW 300 kHz File name error	Span 1.4 GHz Sweep 133.9 ms (8001 pts)

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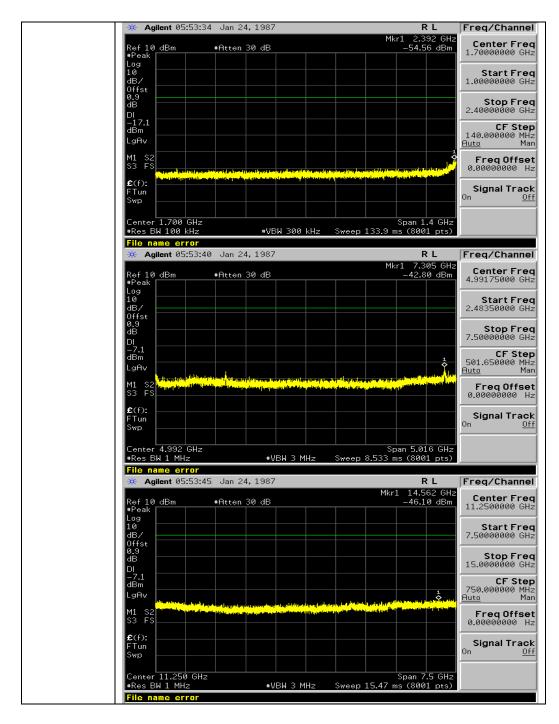
🔆 Agilent 05:56	02 Jan 24,198	:7		RL	Freq/Channe
Ref 10 dBm	#Atten 30 dE	3	Mk	r1 7.239 GHz -43.19 dBm	Center Fre
#Peak Log					4.99175000 GF
10 dB/					Start Fre
dB/ Offst 0.9					2.48350000 GH
dB					Stop Fre 7.5000000 GH
-7.8					
dBm					CF Ste 501.650000 MH
LgAv				All and the first first	<u>Auto</u> Ma
M1 S2	The second s	واعلواء الأمقر وترتقط أأخلص لمر	and the second second second	Contraction of the second distance	Freq Offse 0.00000000
£(f):					0.00000000 1
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бмр					
Center 4.992 GH:	2		 	pan 5.016 GHz	
#Res BW 1 MHz	+	VBW 3 MHz	Sweep 8.533 r	ns (8001 pts)	
File name error Agilent 05:56	07 Jan 24, 198	:7		RL	Freq/Chann
			Mk	r1 7.803 GHz	Center Fre
Ref 10 dBm #Peak	#Atten 30 dE	5		-44.85 dBm	11.2500000 G
Log 10					Start Fre
dB/ Offst					7.50000000 GI
0.9 dB					Stop Fre
					15.0000000 GI
DI _7.8 dBm					CF Ste
LgAv			م رايين م	distance date subjects	750.000000 MI <u>Auto</u> M
M1 S2				i dia da biliti i si dan janditi i s	Freq Offse
\$3 FS					0.00000000
£(f): FTun					Signal Trac
Swp					0n <u>(</u>
Center 11.250 G				Span 7.5 GHz	
*Res BW 1 MHz		VBW 3 MHz	Sweep 15.47 r		
File name error M Agilent 05:56	12 Jan 24, 198	:7		RT	Freq/Channe
			Mkr	1 16.311 GHz	
Ref 10 dBm #Peak	#Atten 32 dE	3		-41.66 dBm	Center Fre 17.5000000 GF
Log 10					Start Fre
dB/					15.0000000 G
0ffst 0.9					Stop Fre
dB DI					20.0000000 G
-7.8	1				CF Ste
LgAv dependenteler	out a la di anti a campianne	and and the state of the state of the	a line of the second	aphilitika and a horse	500.000000 MI <u>Auto</u> M
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FTun Swp					0n <u>0</u>
Center 17.500 G				Span 5 GHz	
#Res BW 1 MHz		VBW 3 MHz	Sweep 12.8 r	ns (8001 nts)	

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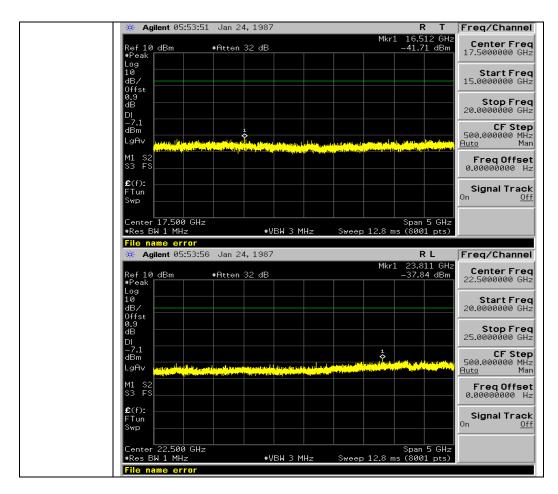


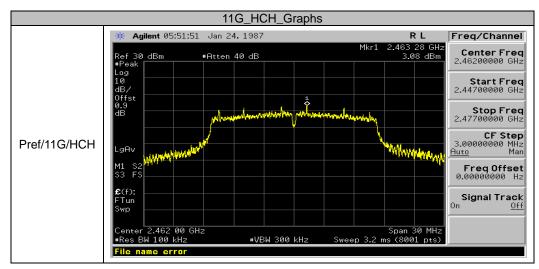


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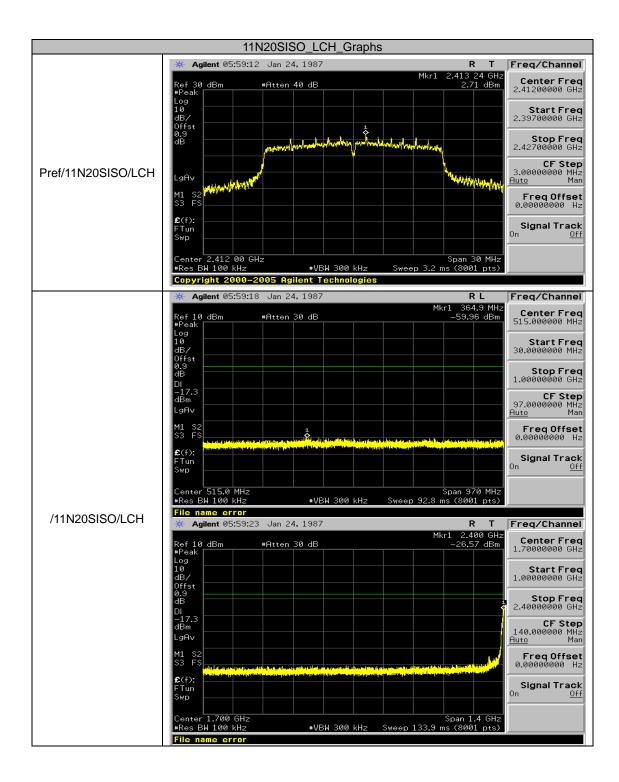


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	Agilent 05:51	:57 Jan 24, 1987	R L	Freq/Channel
	Ref 10 dBm #Peak	#Atten 30 dB	Mkr1 342.3 MHz -59.50 dBm	Center Freq 515.000000 MHz
	Log 10			Start Freq
	dB/ Offst 0.9			30.0000000 MHz
	dB DI			Stop Freq 1.00000000 GHz
	-16.9 dBm LgAv			CF Step 97.0000000 MHz
	м1 со			Auto Man Freq Offset
	S3 FS		an Alexa y Lefit Man any an file (Mark Sherra) (an Alexa shardara) any any ana ang Alexa (Legit Lefit y Ang Jang ang California Sherra) ang ang ang ang Alexa Sherra (Sherra Sherra Sherra Sherr	0.00000000 Hz
	FTun Swp			Signal Track ^{On <u>Off</u>}
	Center 515.0 MH		Span 970 MHz	
	#Res BW 100 kHz File name error		lz Sweep 92.8 ms (8001 pts)	
	- Agilent 05:52	2:02 Jan 24, 1987	R L Mkr1 2.382 GHz	Freq/Channel
	Ref 10 dBm #Peak	#Atten 30 dB	-54.59 dBm	Center Freq 1.70000000 GHz
	Log 10 dB/ Offst			Start Freq 1.00000000 GHz
	0.9 dB DI			Stop Freq 2.40000000 GHz
Puw/11G/HCH	-16.9 dBm LgAv			CF Step 140.000000 MHz Auto Man
	M1 \$2		1	Freq Offset
	£(f):	steren faller i den selen som en s Er statistick for en som en An en som en		Signal Track
	FTun Swp			On <u>Off</u>
	Center 1.700 GH #Res BW 100 kHz		Span 1.4 GHz Iz Sweep 133.9 ms (8001 pts)	
	File name error	r		ν
	- Agilent 05:52	2:08 Jan 24, 1987	R L Mkr1 2.484 GHz	Freq/Channel
	Ref 10 dBm #Peak Log	#Atten 30 dB	-26.22 dBm	Center Freq 4.99175000 GHz
	10 dB/ Offst			Start Freq 2.48350000 GHz
	0.9 dB DI			Stop Freq 7.5000000 GHz
	-6.9 dBm			CF Step 501.650000 MHz
	LgAv M1 S2			Auto Man Freq Offset
	M1 S2 S3 FS			0.00000000 Hz
	£(f): FTun Swp			Signal Track ^{On <u>Off</u>}
	Center 4.992 GH	z	Span 5.016 GHz	

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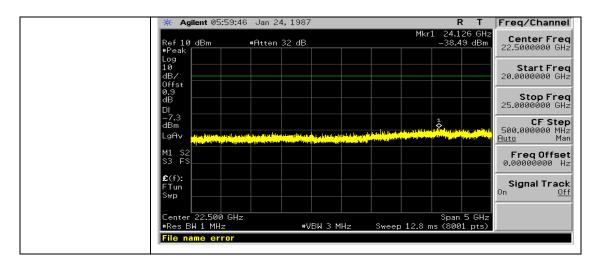
Agilent 05:52:	:14 Jan 24, 1987		R L	Freq/Chann
Ref 10 dBm	#Atten 30 dB	Μ	kr1 14.838 GHz -44.99 dBm	Center Fre
Peak				11.2500000 GH
9				Start Fre
dB/ Dffst				7.50000000 GH
9				Stop Fre
				15.0000000 GH
-6.9 Bm				CF Ste
gAv				750.000000 MH <u>Auto</u> Mi
11 S2			A state of the second stat	Freq Offse
3 FS				0.00000000
(f):				Signal Trac
Tun Swp				0n <u>0</u>
Center 11.250 GH #Res BW 1 MHz	Hz #VBWI3 №	1Hz – Sween 15.43	Span 7.5 GHz 7 ms (8001 pts)	
File name error				,
🗰 Agilent 05:52:	:19 Jan 24, 1987		RL	Freq/Channe
Ref 10 dBm	#Atten 32 dB	M	kr1 19.873 GHz -41.58 dBm	Center Fre
#Peak			11.30 dbii	17.5000000 GI
Log 10				Start Fre
B/				15.0000000 GH
Offst 0.9 dB				Stop Fre
וח ו				20.0000000 GI
-6.9 dBm			1	CF Ste
	el el sud e dels fén lliges horen il e se lajor	l		<u>Auto</u> M
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£(f): FTun				Signal Trac
Swp				0n <u>C</u>
Center 17.500 GH #Res BW 1 MHz	+z #VBW 3 №	1Hz Sweep <u>12.</u> 8	Span 5 GHz 3 ms (8001 pts)	
File name error				
Agilent 05:52:	:25 Jan 24, 1987		RL	Freq/Chann
Ref 10 dBm	#Atten 32 dB	M	kr1 23.921 GHz -38.43 dBm	Center Fre
•Peak _og				22.5000000 GI
10				Start Fre
dB/				20.0000000 GI
0.9 dB				Stop Fre
DI				25.0000000 GI
dBm				CF Ste 500.000000 MI
LgAv seedstate	دور برایال بر او باز میلود از این این از از مارو از میلود از میلود از میلود. مراجع در از سیس می ماداند از میلود از مان میلود میدود و زیر است.		Adapted in the second in the second in the	Auto M
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Center 22.500 GH #Res BW 1 MHz	HZ #VBW 3 M	1Hz Sween 123	Span 5 GHz 3 ms (8001 pts)	

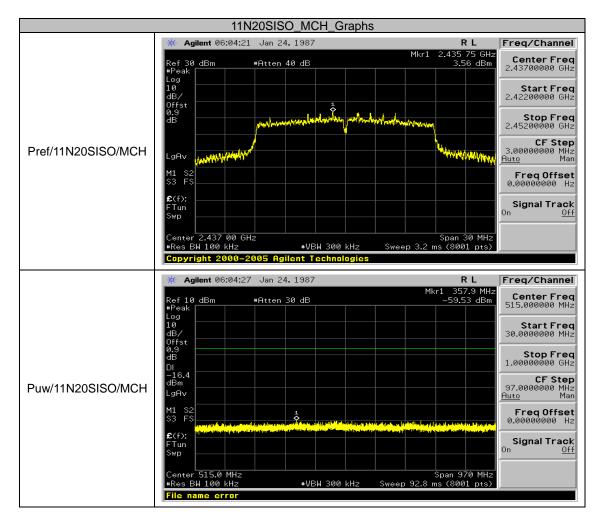


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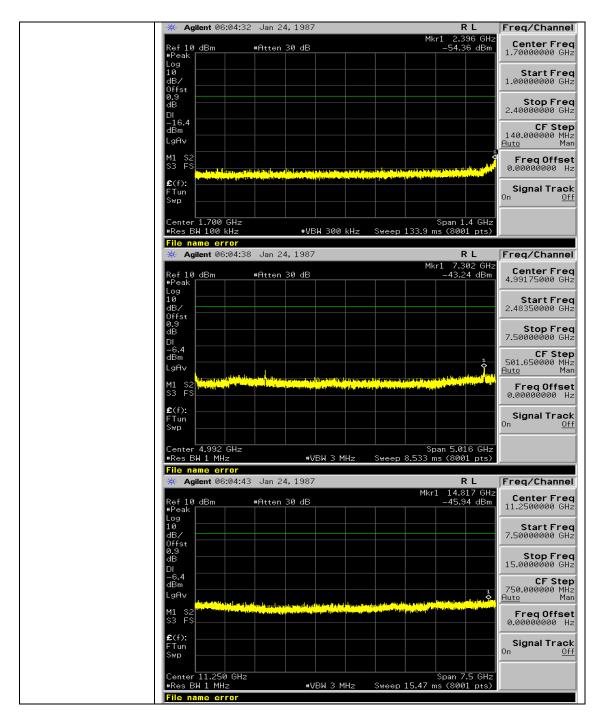
🔆 Agilent 0	5:59:29 Jan 24, 1987	R L	Freq/Channel
Ref 10 dBm #Peak	#Atten 30 dB	Mkr1 7.234 GHz -41.62 dBm	Center Freq 4.99175000 GHz
Log 10 dB/			Start Freq 2.48350000 GHz
0ffst 0.9 dB			Stop Freq 7.5000000 GHz
DI -7.3 dBm		1	CF Step 501.650000 MHz
LgAv M1 S2			Auto Man
\$3 F\$	l ta të ^{kënde} l kandini a dhe këndere, dhe ta kandare dey popularitë në part të		0.00000000 Hz
FTun Swp			Signal Track On <u>Off</u>
Center 4.992 #Res BW 1 M	2GHz Hz #VBW 3 MHz	Span 5.016 GHz Sweep 8.533 ms (8001 pts)	
File name e	rror		,
Agilent 0	15:59:35 Jan 24, 1987	R T Mkr1 7.532 GHz	Freq/Channel
Ref 10 dBm #Peak Log	#Atten 30 dB	-45.17 dBm	Center Freq 11.2500000 GHz
10 dB/ Offst			Start Freq 7.50000000 GHz
0.9 dB DI			Stop Freq 15.0000000 GHz
-7.3 dBm LgAv ∲			CF Step 750.000000 MHz Auto Man
M1 S2			Auto Man Freq Offset 0.00000000 Hz
£(f):			Signal Track
Swp			On <u>Off</u>
Center 11.25 #Res BW 1 M		Span 7.5 GHz Sweep 15.47 ms (8001 pts)	
File name e			
🔆 Agilent 0	15:59:40 Jan 24, 1987	R L Mkr1 18.749 GHz	Freq/Channel
Ref 10 dBm #Peak	#Atten 32 dB	-41.35 dBm	Center Freq 17.5000000 GHz
Log 10 dB/			Start Freq 15.0000000 GHz
0ffst Ø.9 dB			Stop Freq 20.0000000 GHz
DI -7.3 dBm		1	CF Step
LgAv John	y de seure de la fille de la ser des la serie de la desenvolui y la serie de serie de serie de la serie de la s La serie de s		500.000000 MHz <u>Auto</u> Man
M1 S2 S3 FS			FreqOffset 0.00000000 Hz
£(f): FTun Swp			On Signal Track
Center 17.50	00 GHz	Span 5 GHz	
#Res BW 1 M	Hz #VBW 3 MHz	Sweep 12.8 ms (8001 pts)	
File name e	rror		

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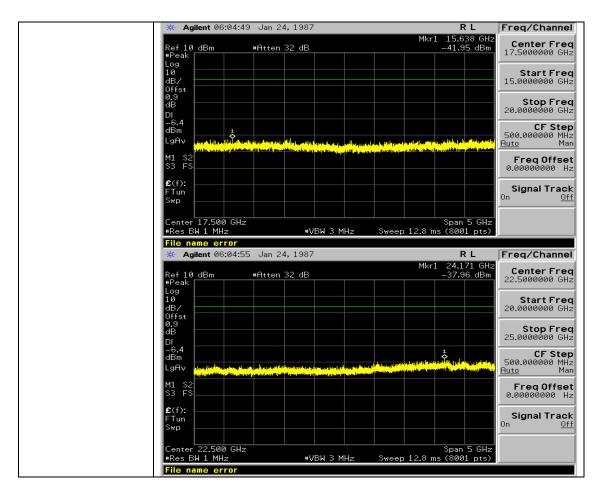


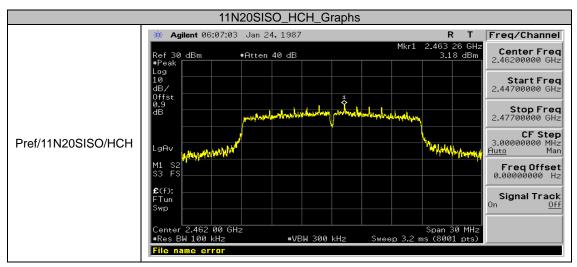


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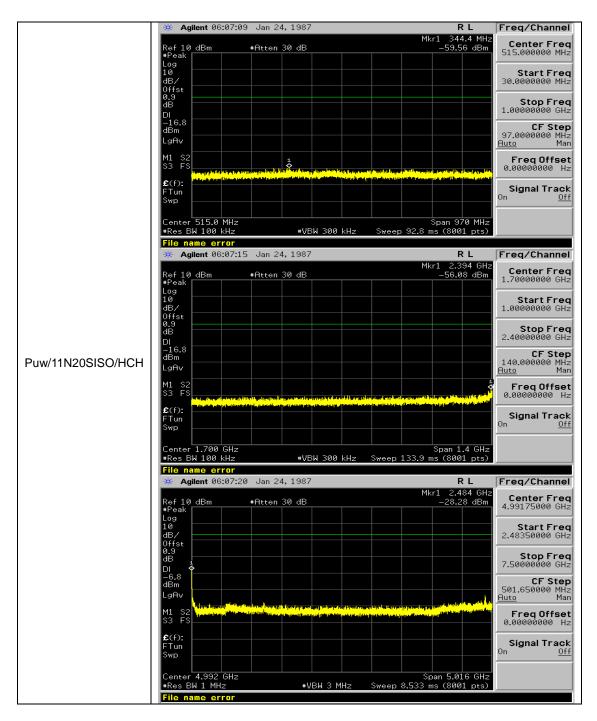


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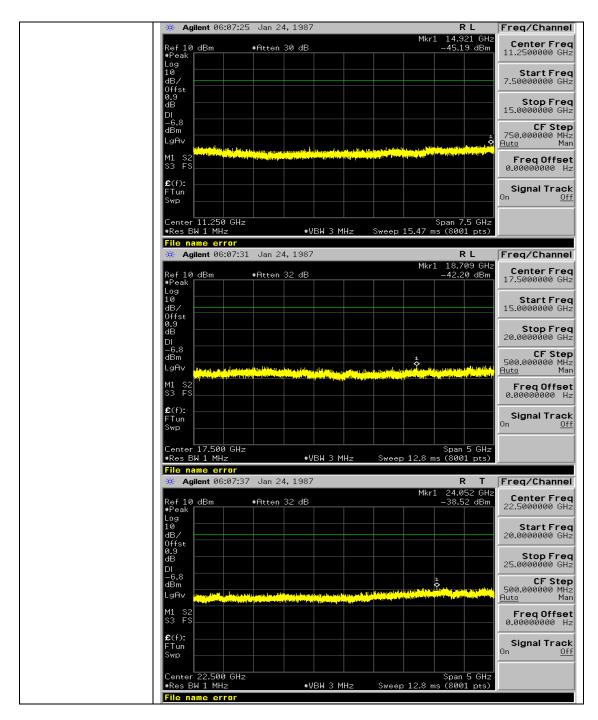


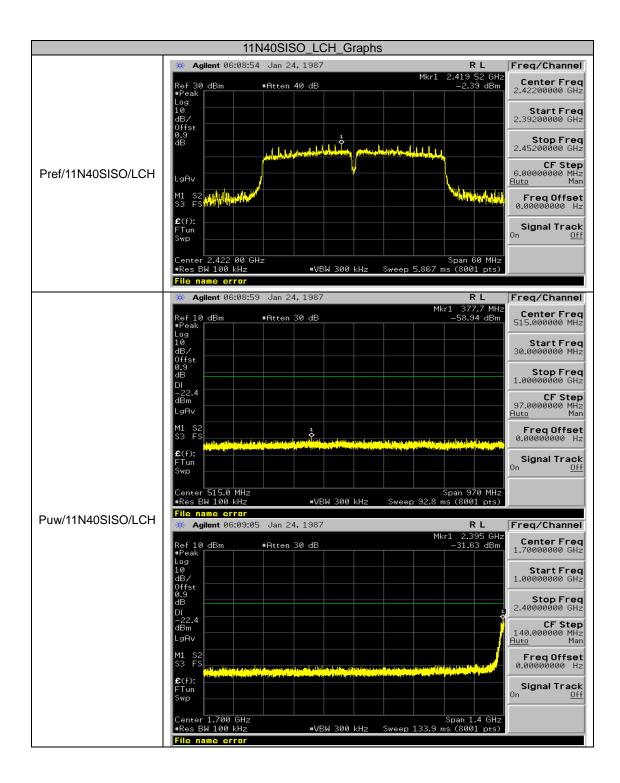


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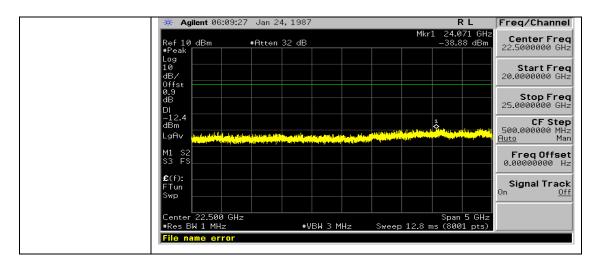


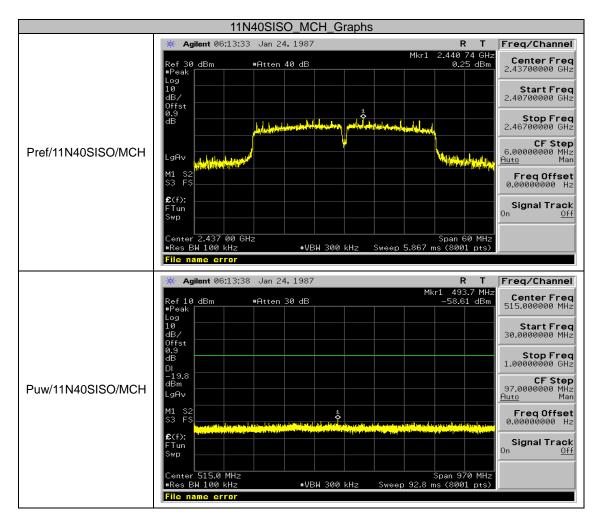


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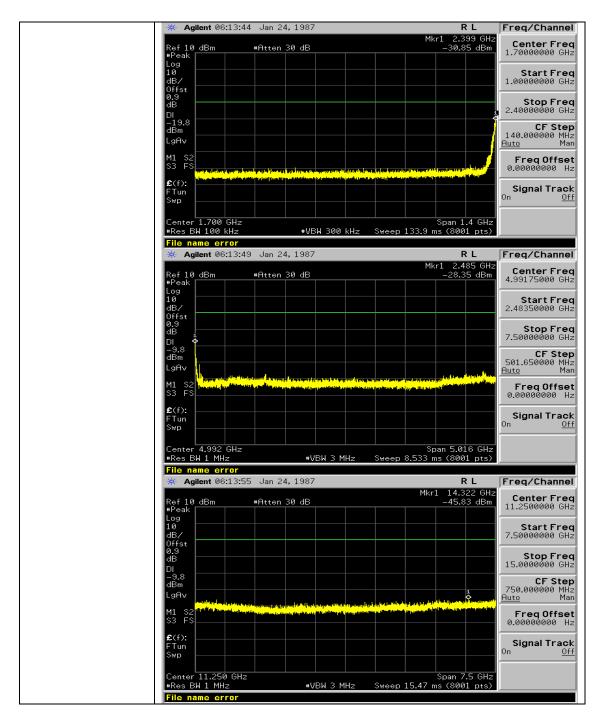
ef 10 dBm •Atten 30 dB -42.53 dBm Lenter Fre 22	🔆 Agilent 06:03	9:11 Jan 24, 198	7		RT	Freq/Channe
Peak 4.391/5000 G Peak Peak Peak	Ref 10 dBm	#Atten 30 dB			Mkr1 7.256 GHz -42 53 dBm	Center Free
Age A	#Peak Log					4.99175000 GH
frat Stop Freq April April	10					Start Free
3 12.4 12.5 12.4 12.5 12.4 12.5 12.4 12.5 12.4 12.5 12.4 12.5 12.4 12.5 12.4 12.5 12.4 12.5 12.4 12.5 12.4 12.5 12.4 12.5 12.4 12.5 12.4 12.5 12.4 12.5 12.4 12.5 12.4 12.5 12.4 12.5 12.4 12.4 12.4 12.4 12.4 12.4 12.4 12.4 12.4 12.4 12.4 12.4 12.4 12.4 12.4 12.4 12.4 12.4 <t< td=""><td>Offst</td><td></td><td></td><td></td><td></td><td>2.48350000 GH</td></t<>	Offst					2.48350000 GH
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Res BH 1 MHz •VEW 3 MHz Sweep 8,533 ms (8001 pts) Ide name error Freq/Chann. C Aglient 06:09:16 Jan 24, 1987 R T Freq/Chann. Center Fre Start Fre Start Fre Start Fre Star	Swp					
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Mkr1 14.834 GHz Park -43.47 dBm Park -44.39 dBm			7		RT	Freq/Channe
1 10 dbm	Rof 10 dBm	#8++on 30 dR				Center Fre
Start Freq Start Freq Start Freq S	#Peak				-45.47 GDM	11.2500000 GH
first Stop Fre 3 Stop Fre 3 Stop Fre 3 FS 4 Stop Fre 4 Stop Fre 5 Stop Fre 6 Agilent 06:09:21 Jan 24, 1987 8 Stat Fre 8 Stat Fre 9 Stat Fre 1 Stat Fre 1 Stat Fre	10					Start Fre
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Bm Freq Offse 9RV attribute duile dependent in the process of the proces of the process of the process of the proces of the	DI I					15.0000000 GH
afty	-12.4 dBm				1	CF Ste
3 FS 0.000000000 G(): Tun 0.000000000 wp enter 11.250 GHz Span 7.5 GHz Res BW 1 MHz *VBW 3 MHz Sweep 15.47 ms (8001 pts) Ide name error Freq/Channe Ge Aglient 06:09:21 Jan 24, 1987 R L Sef 10 dBm *Atten 32 dB -42.39 dBm Poak -42.39 dBm Start Freq 500.000000 M Start Freq 20.0000000 M Start Freq 500.000000 M Start Freq 500.000000 M Start Freq 500.000000 M Br Start Freq Start Freq 500.000000 M Start Freq 500.000000 M Start Freq 500.000000 M Br Start Freq Start Freq 500.000000 M Br Start Freq Start Freq 500.000000 M Br Start Freq Start Freq 500.000000 M	LgAv		متريد المريحا	والمروف والمتحد والمرود والمرود		
(f): Tun Signal Trac wp Signal Trac Signal Trac enter 11.250 GHz Span 7.5 GHz Res BW 1 MHz #VBW 3 MHz Sweep 15.47 ms (8001 pts) ile name error Agilent 06:09:21 Jan 24, 1987 R L ef 10 dBm #Atten 32 dB -42.39 dBm ef 10 dBm #Atten 32 dB -42.39 dBm Start Free Start Free 20.0000000 G Start Free 12.4 Start Free 13 FS SF (f): Signal Trac 14 Start Free 15 Signal Trac 16 Signal Trac 17 Start Free	M1 S2				an die Marine ander ander ander ander	Freq Offse
Tun Signal Frac wp Signal Frac enter 11.250 GHz Span 7.5 GHz Res BM 1 MHz •VBW 3 MHz Sweep 15.47 ms (8001 pts) Ile name error Mkr1 19.571 GHz ef 10 dBm •Atten 32 dB -42.39 dBm Page Aglient 06:09:21 Jan 24, 1987 R L Freq/Channe Center Fre 7.5000000 G -42.39 dBm B Start Fre Start Fre Start Fre Stop Fre 20.000000 G Start Fre Stop Fre 20.000000 G Muto Markendeled Miller Miller Action Andres and Miller Action Andres Miller Action Miller B Stop Fre Stop Fre 20.0000000 G Stop Fre Stop Fre Signal Trac On G Signal Trac G Signal Trac G Signal Trac Stop Fre Signal Trac G Signal Trac <						0.00000000 H
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Interest 20 Interest 20 Interest 20 Interest 20	_				Mkr1 19.571 GHz	
0 3/ 5 5 5 5 1 5 0	Ref 10 dBm •Peak	#Atten 32 dB			-42.39 dBm	17.5000000 GH
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12.4 1 <td>dB</td> <td></td> <td></td> <td></td> <td></td> <td>Stop Fre</td>	dB					Stop Fre
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Tun Mp Signal Frac						0.00000000
enter 17.500 GHz Span 5 GHz	£(f):					Signal Trac
enter 17.500 GHz Span 5 GHz Res BW 1 MHz #VBW 3 MHz Sweep 12.8 ms (800 <u>1</u> pts)	Swp					0n <u>01</u>
Res BW 1 MHz #VBW 3 MHz Sweep 12.8 ms (8001 pts)						
	Contor 17 E00 C	:U⇒				

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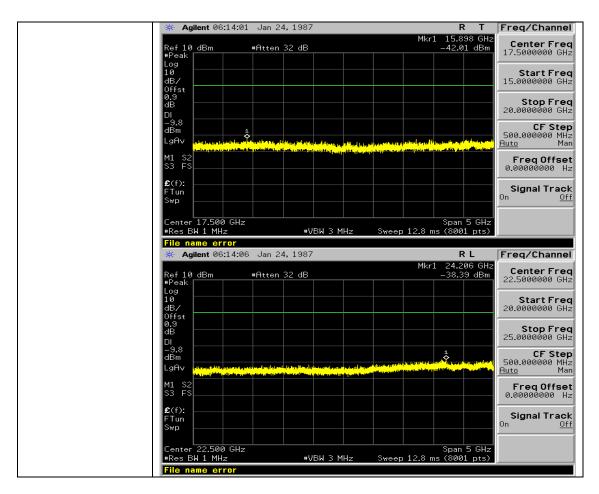


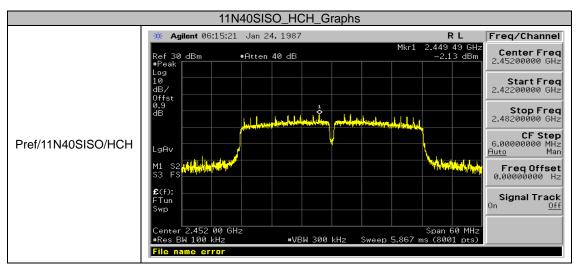


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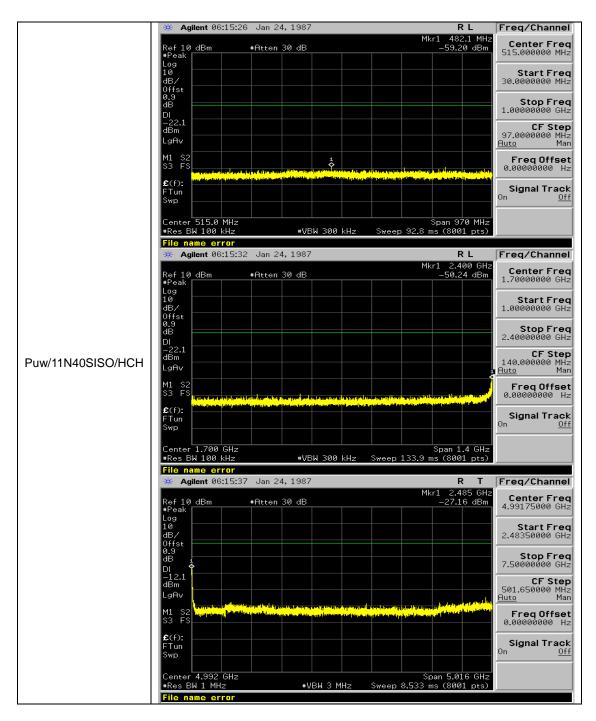


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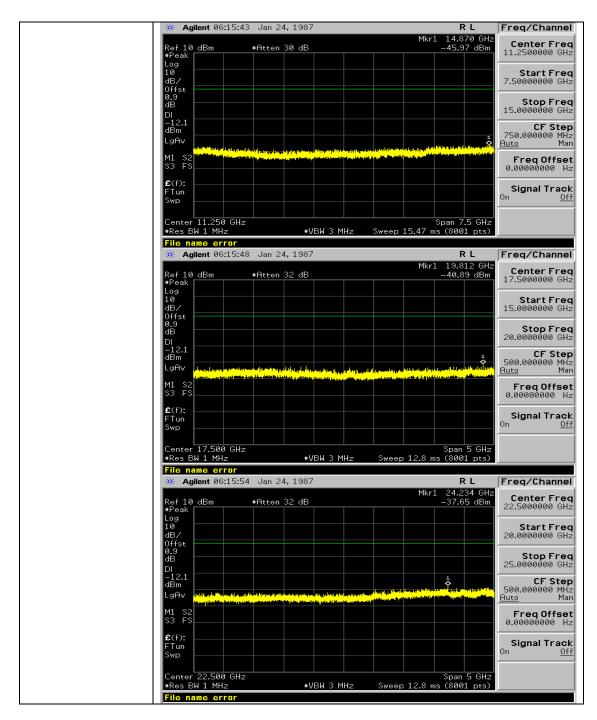




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10. MAXIMUM CONDUCTED OUTPUT POWER SPECTRAL DENSITY

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)

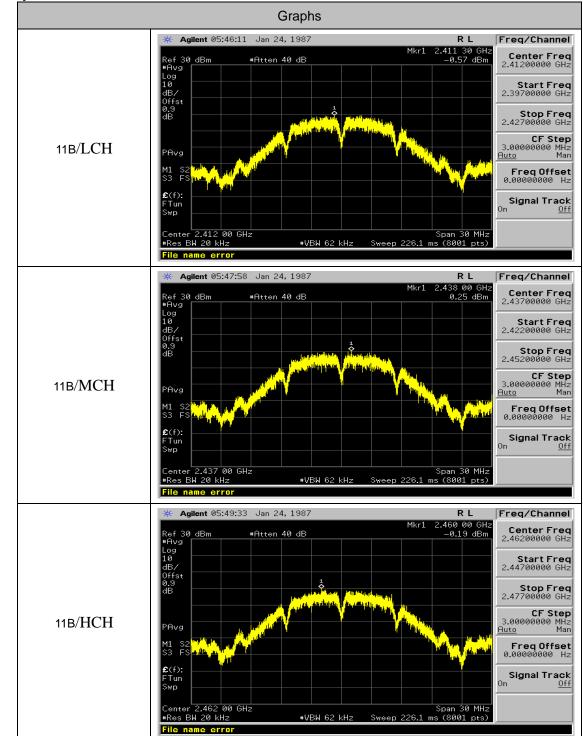
Refer To Section 8.2.

10.3 MEASUREMENT EQUIPMENT USED

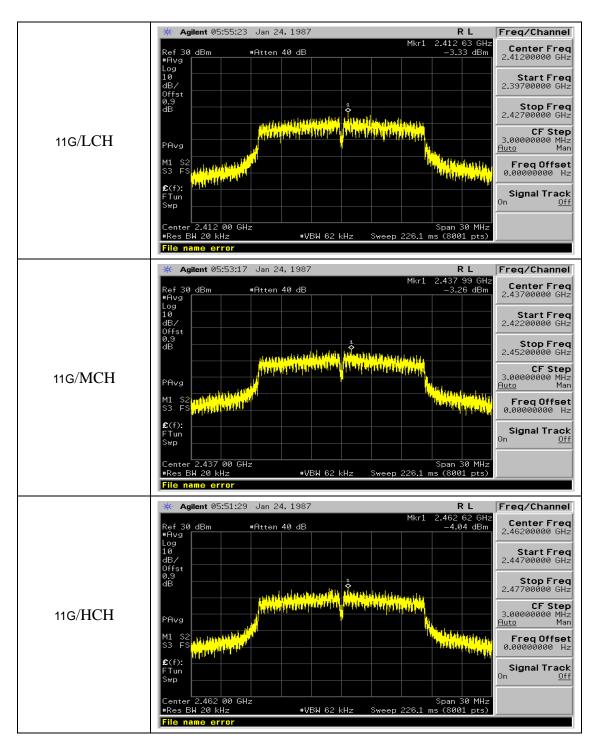
Refer To Section 6.

10.4 LIMITS AND MEASUREMENT RESULT

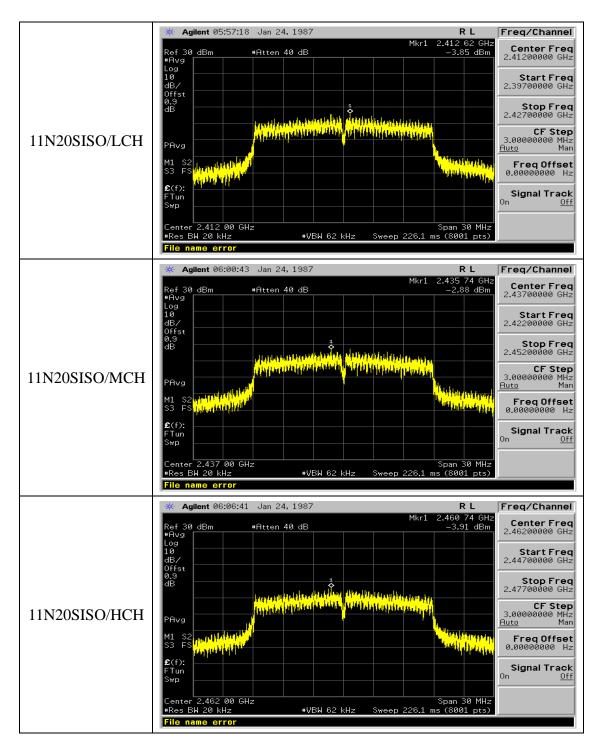
Mode	Channel	Av.PSD [dBm/20kHz]	Limit[dBm/3kHz]	Verdict
11B	LCH	-0.57	8	PASS
11B	MCH	0.25	8	PASS
11B	HCH	-0.19	8	PASS
11G	LCH	-3.33	8	PASS
11G	MCH	-3.26	8	PASS
11G	HCH	-4.04	8	PASS
11N20SISO	LCH	-3.85	8	PASS
11N20SISO	MCH	-2.88	8	PASS
11N20SISO	HCH	-3.91	8	PASS
11N40SISO	LCH	-10.78	8	PASS
11N40SISO	MCH	-8.55	8	PASS
11N40SISO	HCH	-11.75	8	PASS

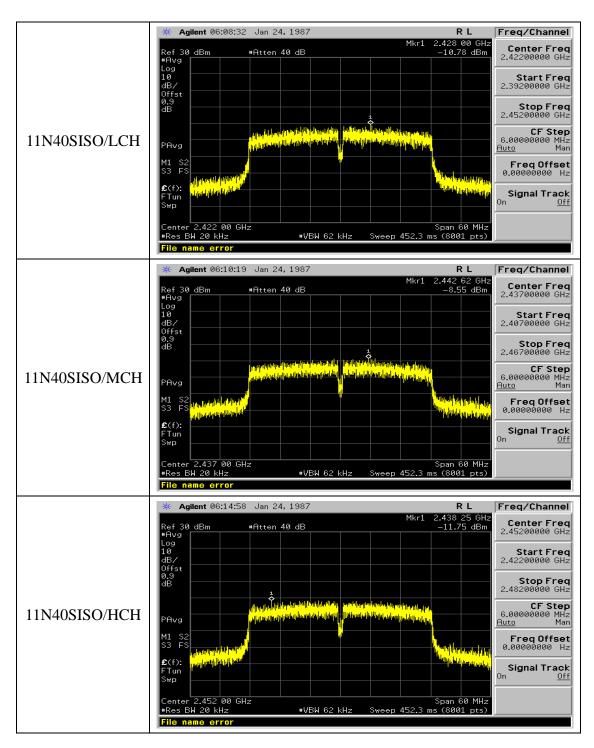


Test Graph



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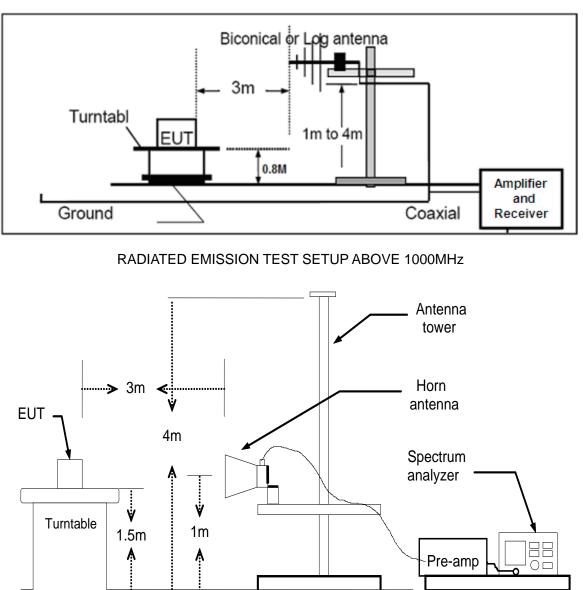


11. RADIATED EMISSION

11.1. MEASUREMENT PROCEDURE

- 1. Configure the EUT according to ANSI C63.10. 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. The EUT was placed on the top of the turntable 1.5 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.
- 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

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.

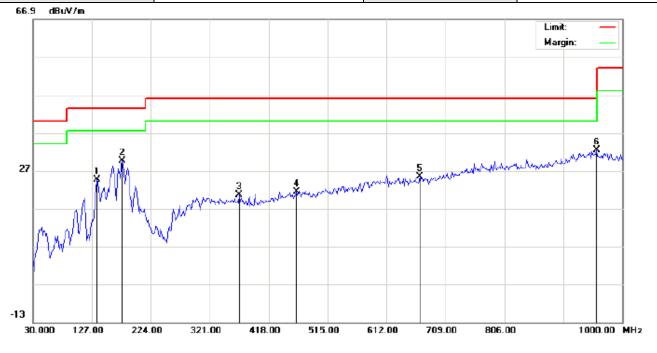
11.4. TEST RESULT

RADIATED EMISSION BELOW 30MHZ

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

RADIATED EMISSION BELOW 1GHZ

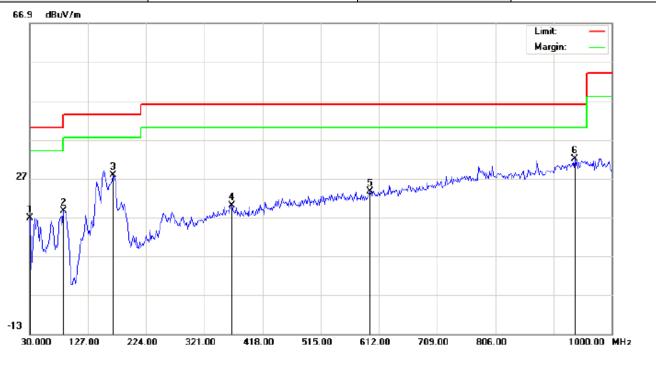
EUT	mobile phone	Model Name	EXPLORER X
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2412MHZ	Antenna	Horizontal



Site: site #1 Limit: FCC Class B 3M Radiation EUT: mobile phone M/N: EXPLORER X Mode: Low Channel TX Note: Polarization: *Horizontal* Power: AC 120V/60Hz Distance: 3m Temperature: 23.1 Humidity: 53.6 %

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		135.0833	11.75	12.90	24.65	43.50	-18.85	peak			
2		177.1167	18.62	10.96	29.58	43.50	-13.92	peak			
3		369.5000	1.69	18.87	20.56	46.00	-25.44	peak			
4		463.2667	0.64	20.73	21.37	46.00	-24.63	peak			
5		666.9667	1.03	24.30	25.33	46.00	-20.67	peak			
6	*	957.9667	2.48	29.92	32.40	46.00	-13.60	peak			

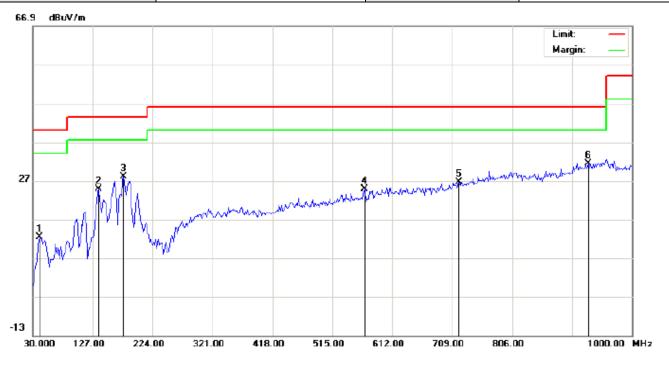
EUT	mobile phone Model Name		EXPLORER X
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2412MHZ	Antenna	Vertical



Site: site #1 Limit: FCC Class B 3M Radiation EUT: mobile phone M/N: EXPLORER X Mode: Low Channel TX Note: Polarization: Vertical Power: AC 120V/60Hz Distance: 3m Temperature: 23.1 Humidity: 53.6 %

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		30.0000	20.98	-4.20	16.78	40.00	-23.22	peak			
2		86.5833	14.48	4.16	18.64	40.00	-21.36	peak			
3		169.0333	13.12	14.76	27.88	43.50	-15.62	peak			
4		366.2667	1.12	18.85	19.97	46.00	-26.03	peak			
5		597.4500	0.93	22.72	23.65	46.00	-22.35	peak			
6	*	938.5667	2.32	29.68	32.00	46.00	-14.00	peak			

EUT	JT mobile phone I		EXPLORER X	
Temperature	25°C	Relative Humidity	55.4%	
Pressure	960hPa	Test Voltage	Normal Voltage	
Test Mode	802.11b with date rate 1 2437MHZ	Antenna	Horizontal	



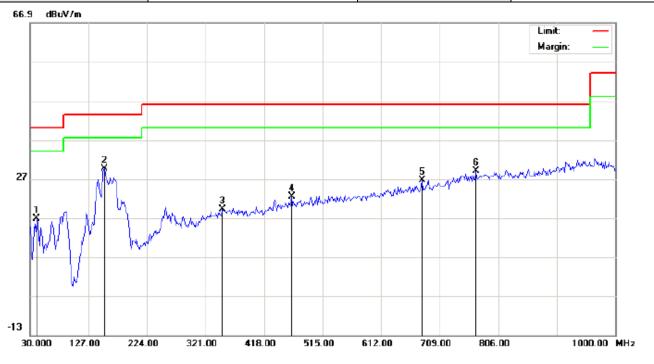
Site: site #1 Limit: FCC Class B 3M Radiation EUT: mobile phone M/N: EXPLORER X Mode: Middle Channel TX Note: Polarization: *Horizontal* Power: AC 120V/60Hz

Distance: 3m

Temperature: 23.1 Humidity: 53.6 %

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	•	MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		41.3167	0.67	11.81	12.48	40.00	-27.52	peak			
2		136.7000	11.24	13.66	24.90	43.50	-18.60	peak			
3		177.1167	17.02	10.96	27.98	43.50	-15.52	peak			
4		566.7333	1.95	22.90	24.85	46.00	-21.15	peak			
5		720.3167	0.92	25.78	26.70	46.00	-19.30	peak			
6	*	928.8667	1.95	29.41	31.36	46.00	-14.64	peak			

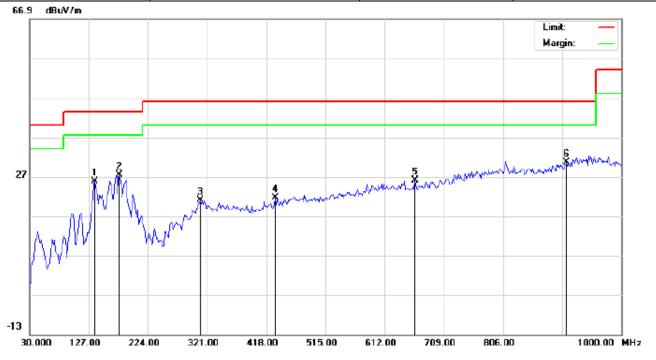
EUT	mobile phone Model Name		EXPLORER X
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2437MHZ	Antenna	Vertical



Site: site #1 Limit: FCC Class B 3M Radiation EUT: mobile phone M/N: EXPLORER X Mode: Middle Channel TX Note: Polarization: Vertical Power: AC 120V/60Hz Distance: 3m Temperature: 23.1 Humidity: 53.6 %

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height		Comment
	•	MHz	dBu∨	dB/m	dBu∀/m	dBuV/m	dB		cm	degree	
1		41.3167	8.04	8.81	16.85	40.00	-23.15	peak			
2	*	152.8667	14.39	15.28	29.67	43.50	-13.83	peak			
3		348.4833	0.47	18.64	19.11	46.00	-26.89	peak			
4		463.2667	1.68	20.73	22.41	46.00	-23.59	peak			
5		679.9000	1.94	24.65	26.59	46.00	-19.41	peak			
6		768.8167	2.14	26.89	29.03	46.00	-16.97	peak			

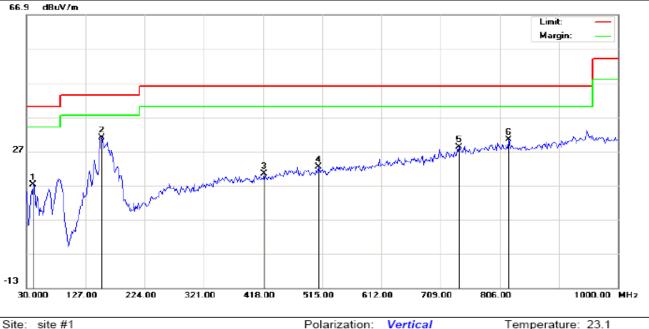
EUT	mobile phone	Model Name	EXPLORER X
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2462MHZ	Antenna	Horizontal



Site: site #1 Limit: FCC Class B 3M Radiation EUT: mobile phone M/N: EXPLORER X Mode: High Channel TX Note: Polarization: *Horizontal* Power: AC 120V/60Hz Distance: 3m Temperature: 23.1 Humidity: 53.6 %

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	•	MHz	dBu∀	dB/m	dBu∀/m	dBu∀/m	dB		cm	degree	
1		136.7000	12.21	13.66	25.87	43.50	-17.63	peak			
2		177.1167	16.35	10.96	27.31	43.50	-16.19	peak			
3		309.6833	4.88	16.05	20.93	46.00	-25.07	peak			
4		432.5500	1.57	20.06	21.63	46.00	-24.37	peak			
5		662.1167	1.83	24.17	26.00	46.00	-20.00	peak			
6	*	909.4667	1.73	28.87	30.60	46.00	-15.40	peak			

EUT	mobile phone	Model Name	EXPLORER X
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2462MHZ	Antenna	Vertical



Limit: FCC Class B 3M Radiation EUT: mobile phone M/N: EXPLORER X Mode: High Channel TX Note: Polarization: Vertical Power: AC 120V/60Hz Distance: 3m Temperature: 23.1 Humidity: 53.6 %

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∨	dB/m	dBuV/m	dBu∀/m	dB		cm	degree	
1		41.3167	8.39	8.81	17.20	40.00	-22.80	peak			
2	*	152.8667	15.82	15.28	31.10	43.50	-12.40	peak			
3		419.6167	0.69	19.67	20.36	46.00	-25.64	peak			
4		508.5333	1.06	21.36	22.42	46.00	-23.58	peak			
5		739.7167	1.86	26.33	28.19	46.00	-17.81	peak			
6		820.5500	3.07	27.32	30.39	46.00	-15.61	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 case is 11b Mode)

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector	Commont					
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре	Comment					
	, , , , , , , , , , , , , , , , , , ,	()	TX 11b 2412M	· · /	()	,,						
4824.092	46.26	10.44	56.7	74	-17.3	Pk	Horizontal					
4824.092	31.17	10.44	41.61	54	-12.39	AV	Horizontal					
7236.127	43.23	10.39	53.62	74	-20.38	pk	Horizontal					
7236.127	33.19	10.39	43.58	54	-10.42	AV	Horizontal					
4824.098	49.72	10.39	60.11	74	-13.89	Pk	Vertical					
4824.082	33.29	10.39	43.68	54	-10.32	AV	Vertical					
7236.110	48.31	10.68	58.99	74	-15.01	Pk	Vertical					
7236.054	30.18	10.68	40.86	54	-13.14	AV	Vertical					
TX 11b 2437MHz												
4874.072	49.27	10.39	59.66	74	-14.34	Pk	Horizontal					
4874.108	33.39	10.39	43.78	54	-10.22	AV	Horizontal					
7311.092	48.28	12.68	60.96	74	-13.04	Pk	Horizontal					
7311.131	30.37	12.68	43.05	54	-10.95	AV	Horizontal					
4874.098	49.62	10.39	60.01	74	-13.99	Pk	Vertical					
4874.044	33.17	10.39	43.56	54	-10.44	AV	Vertical					
7311.145	48.26	12.68	60.94	74	-13.06	Pk	Vertical					
7311.104	30.47	12.68	43.15	54	-10.85	AV	Vertical					
			TX 11b 2462M	Hz								
4924.128	49.21	10.39	59.6	74	-14.4	pk	Horizontal					
4924.083	33.03	10.39	43.42	54	-10.58	AV	Horizontal					
7386.071	48.08	12.68	60.76	74	-13.24	pk	Horizontal					
7386.134	30.15	12.68	42.83	54	-11.17	AV	Horizontal					
4924.042	49.69	10.39	60.08	74	-13.92	pk	Vertical					
4924.060	33.43	10.39	43.82	54	-10.18	AV	Vertical					
7386.051	48.21	12.68	60.89	74	-13.11	pk	Vertical					
7386.054	30.08	12.68	42.76	54	-11.24	AV	Vertical					

RADIATED EMISSION ABOVE 1GHZ

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

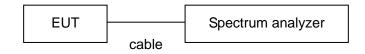
b)Set RBW=100kHz,VBW=300kHz

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	Meter Reading	Factor	Emission Level	Limits	Margin	Detector	Comment
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре	
			TX 11b 2	2412MHz			
2399.9	78.21	-13	65.21	74	-8.79	peak	Horizontal
2399.9	59.16	-13	46.16	54	-7.84	AVG	Horizontal
2400	79.39	-12.99	66.4	74	-7.6	peak	Horizontal
2400	58.78	-12.99	45.79	54	-8.21	AVG	Horizontal
2399.9	79.25	-12.97	66.28	74	-7.72	peak	Vertical
2399.9	59.17	59.17 -12.97 46.2 54 -7.8		AVG	Vertical		
2400	2400 79.32 -12.		66.38	74	-7.62	peak	Vertical
2400	59.69	-12.94	46.75	54	-7.25	AVG	Vertical
			TX 11b 2	2462MHz			
2483.5	78.45	-12.78	65.67	74	-8.33	peak	Horizontal
2483.5	58.62	-12.78	45.84	54	-8.16	AVG	Horizontal
2483.6	78.13	-12.77	65.36	74	-8.64	peak	Horizontal
2483.6	58.12	-12.77	45.35	54	-8.65	AVG	Horizontal
2483.5	79.29	-12.76	66.53	74	-7.47	peak	Vertical
2483.5	5 57.31 -12.76 44.55 54		54	-9.45	AVG	Vertical	
2483.6	78.69	-12.72	65.97 74 -8.03		-8.03	peak	Vertical
2483.6	58.15	-12.72	45.43	54	-8.57	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

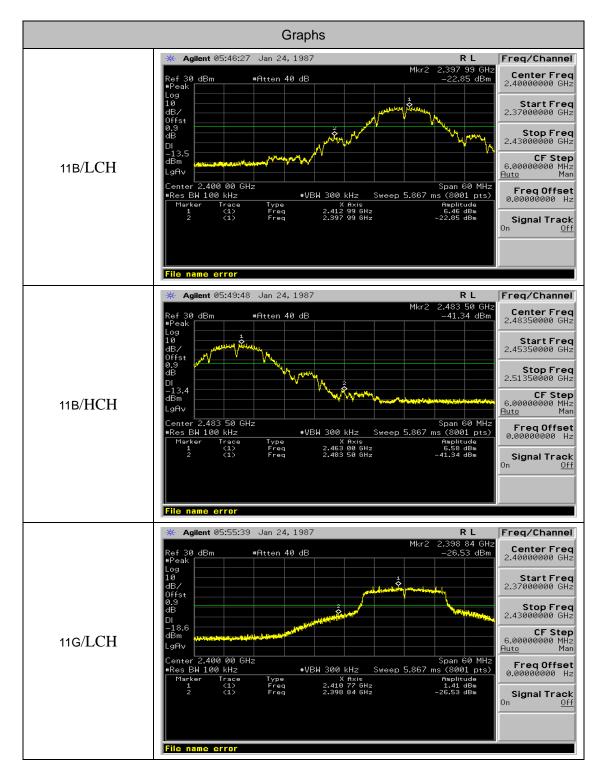
Margin= Emission Level -Limit.

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

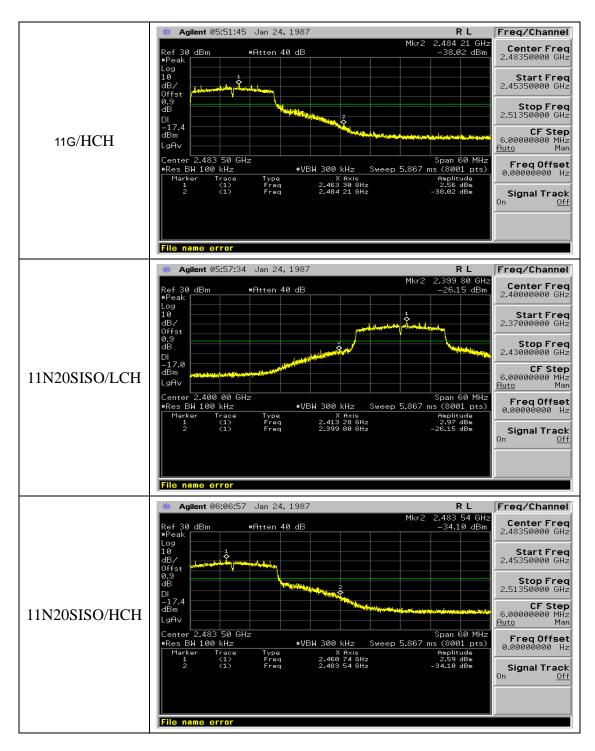
Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdi ct
11B	LCH	6.46	-22.85	-13.54	PASS
11B	HCH	6.58	-41.34	-13.42	PASS
11G	LCH	1.41	-26.53	-18.59	PASS
11G	HCH	2.56	-38.02	-17.44	PASS
11N20SISO	LCH	2.97	-26.15	-17.03	PASS
11N20SISO	HCH	2.59	-34.1	-17.41	PASS
11N40SISO	LCH	-2.42	-29.44	-22.42	PASS
11N40SISO	HCH	-2.1	-30.8	-22.1	PASS

12.4. Conducted Test Result

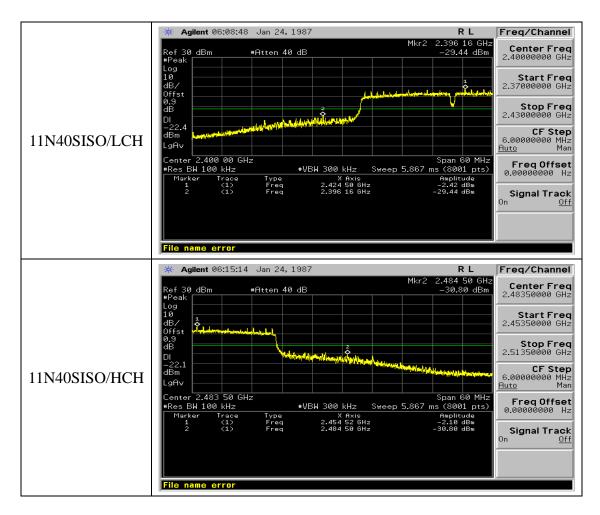
Test Graph



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13. FCC LINE CONDUCTED EMISSION TEST

13.1. LIMITS OF LINE CONDUCTED EMISSION TEST

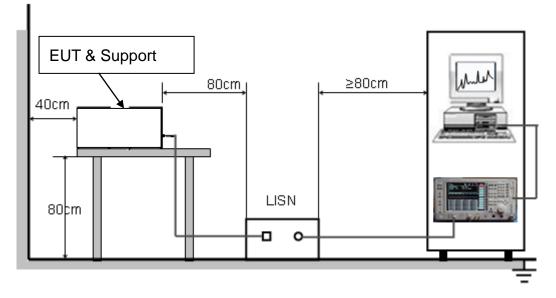
Frequency	Maximum RF Line Voltage							
Frequency	Q.P.(dBuV)	Average(dBuV)						
150kHz~500kHz	66-56	56-46						
500kHz~5MHz	56	46						
5MHz~30MHz	60	50						

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

- 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 C63.10 (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 C63.10.
- 3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
- 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.
- 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.

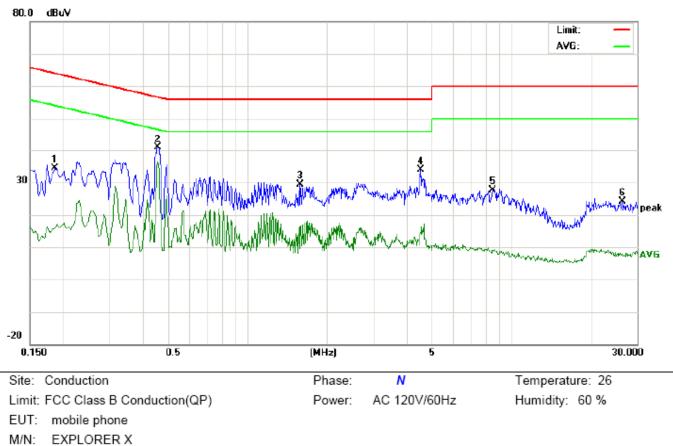
80.0 dBuV Limit: AVG: 4 X 5 30 peak AVG -20 30.000 0.150 0.5 (MHz) 5 Site: Conduction Phase: L1 Temperature: 26 Limit: FCC Class B Conduction(QP) Power: AC 120V/60Hz Humidity: 60 % EUT: mobile phone EXPLORER X M/N: Mode: Normal Operating(WIFI)

13.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST

Note:

No.	Freq.	(upur)		(dBuV) Factor (dBuV)			Limit M (dBuV)			Margin (dB)		Comment		
	(MHz)	Peak	QP	AVG	dB	Peak	QP	AVG	QP	AVG	QP	AVG		
1	0.2540	24.77		7.56	10.27	35.04		17.83	61.62	51.62	-26.58	-33.79	Ρ	
2	0.4620	28.33		20.17	10.37	38.70		30.54	56.66	46.66	-17.96	-16.12	Ρ	
3	1.2179	20.88		4.60	10.37	31.25		14.97	56.00	46.00	-24.75	-31.03	Ρ	
4	2.8540	25.33		2.29	10.51	35.84		12.80	56.00	46.00	-20.16	-33.20	Ρ	
5	4.5858	19.06		3.69	10.22	29.28		13.91	56.00	46.00	-26.72	-32.09	Ρ	
6	7.8619	15.66		-1.61	10.34	26.00		8.73	60.00	50.00	-34.00	-41.27	Ρ	

LINE CONDUCTED EMISSION TEST LINE 1-L



Line Conducted Emission Test Line 2-N

Mode: Normal Operating(WIFI)

Note:

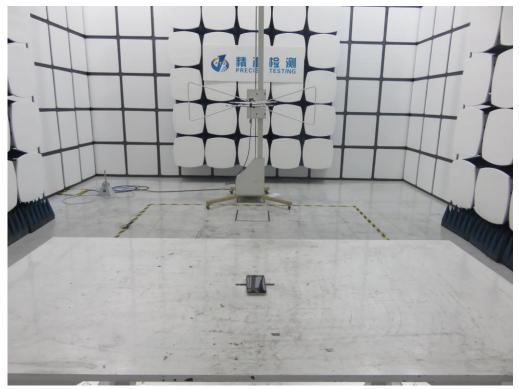
No.	Freq.	Rea	ding_Level (dBuV)		Correct Measureme Factor (dBuV)			t Limit (dBuV)		Margin (dB)		P/F	Comment	
	(MHz)	Peak	QP	AVG	dB	Peak	QP	AVG	QP	AVG	QP	AVG		
1	0.1874	23.72		6.28	10.20	33.92		16.48	64.15	54.15	-30.23	-37.67	Ρ	
2	0.4580	30.54		26.07	10.37	40.91		36.44	56.73	46.73	-15.82	-10.29	Ρ	
3	1.5900	19.07		5.68	10.35	29.42		16.03	56.00	46.00	-26.58	-29.97	Ρ	
4	4.5458	23.68		4.48	10.21	33.89		14.69	56.00	46.00	-22.11	-31.31	Р	
5	8.5059	17.33		-1.12	10.34	27.67		9.22	60.00	50.00	-32.33	-40.78	Ρ	
6	26.3099	14.08		-2.32	10.11	24.19		7.79	60.00	50.00	-35.81	-42.21	Р	

APPENDIX A: PHOTOGRAPHS OF TEST SETUP

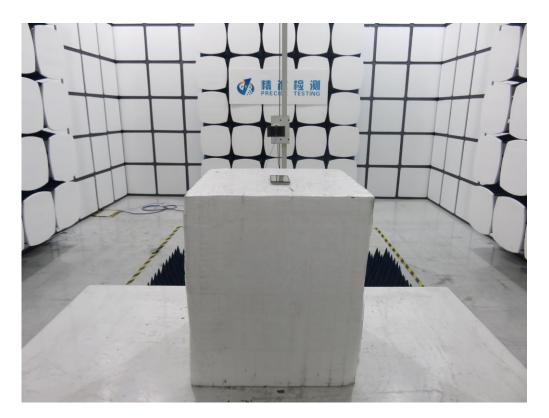
FCC LINE CONDUCTED EMISSION TEST SETUP



FCC RADIATED EMISSION TEST SETUP



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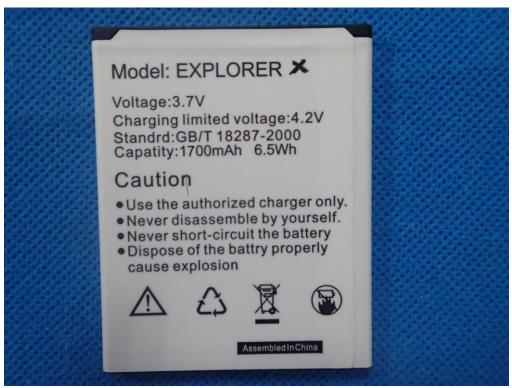


APPENDIX B: PHOTOGRAPHS OF EUT

TOTAL VIEW OF EUT

THE LABEL OF ADAPTER





THE LABEL OF BATTERY

TOP VIEW OF EUT





BOTTOM VIEW OF EUT

FRONT VIEW OF EUT

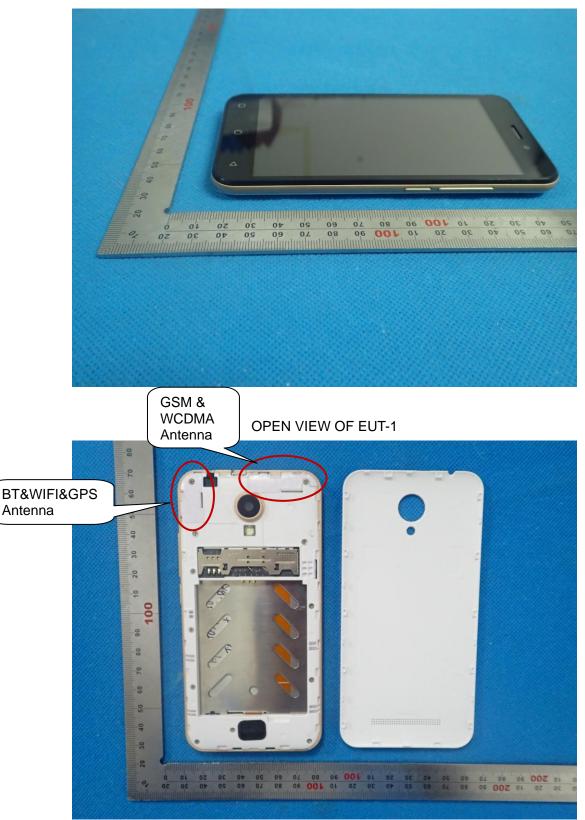




BACK VIEW OF EUT

LEFT VIEW OF EUT





RIGHT VIEW OF EUT



OPEN VIEW OF EUT-2

OPEN VIEW OF EUT-3



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INTERNAL VIEW OF EUT-1

INTERNAL VIEW OF EUT-2



----END OF REPORT----