

TEST REPORT

No. I21N02048-WLAN

for

HMD global Oy

Tablet PC

Model Name: TA-1392

with

Hardware Version: V1.0

Software Version: 00WW_0_23B

FCC ID: 2AJOTTA-1392

Issued Date: 2021-09-10

Designation Number: CN1210

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of SAICT.

Test Laboratory:

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1. Summary of Test Report

1.1. Test Items

Product Name	Tablet PC
Model Name	TA-1392
Applicant's name	HMD global Oy
Manufacturer's Name	HMD global Oy

1.2. Test Standards

FCC CFR 47, Part 15, Subpart C 2019

1.3. Test Result

Pass

Please refer to "5.2. Test Results"

1.4. Testing Location

Address: Building G, Shenzhen International Innovation Center, No.1006 Shennan Road, Futian District, Shenzhen, Guangdong, P. R. China

1.5. Project data

Testing Start Date:	2021-07-01
Testing End Date:	2021-09-09

1.6. Signature

Lin Zechuang (Prepared this test report)

An Ran (Reviewed this test report)

Zhang Bojun (Approved this test report)





2. Client Information

2.1. Applicant Information

Company Name:	HMD global Oy
Address:	Bertel Jungin aukio 9, 02600 Espoo, Finland.
Contact Person	Rosario Casillo
E-Mail	Rosario Casillo@hmdglobal.com
Telephone:	+393 316272922
Fax:	/

2.2. Manufacturer Information

Company Name:	HMD global Oy
Address:	Bertel Jungin aukio 9, 02600 Espoo, Finland.
Contact Person	Rosario Casillo
E-Mail	Rosario Casillo@hmdglobal.com
Telephone:	+393 316272922
Fax:	/



3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

3.1. About EUT

Product Name	Tablet PC
Model Name	TA-1392
RF Protocol	IEEE 802.11 b/g/n-HT20/n-HT40
Operating Frequency	2412MHz~2462MHz
Number of Channels	11
Antenna Type	Integrated
Antenna Gain	0.8dBi
Power Supply	3.85V DC by Battery
FCC ID	2AJOTTA-1392
Condition of EUT as received	No abnormality in appearance

Note: Components list, please refer to documents of the manufacturer; it is also included in the original test record of Shenzhen Academy of Information and Communications Technology.

3.2. Internal Identification of EUT

EUT ID*	IMEI	HW Version	SW Version	Receive Date
UT04aa	4000TA1392L61500311	V1.0	00WW_0_23B	2021-07-01
UT08aa	4000TA1392L61500360	V1.0	00WW_0_23B	2021-07-01
UT06aa	4000TA1392L61500339	V1.0	00WW_0_23B	2021-07-01

*EUT ID: is used to identify the test sample in the lab internally.

UT04aa is used for conduction test, UT08aa is used for radiation test, and UT06aa is used for AC Power line Conducted Emission test.

3.3. Internal Identification of AE

AE ID*	Desci	ription	AE ID*	
AE1	Batter	ry	/	
AE2	Charg	ger	/	
AE3	Data (Cable	/	
AE1				
Model	E	EMT80		
Manufacturer	ŀ	HUNAN GAOYUAN E	SATTERY COMPANY LIMITED	
Capacity	8	3000mAh		
Nominal Voltage		5V		
AE2				
Model	(CH-21B		
Manufacturer	S	Shen zhen Tianyin Ele	ectronic Co.,Ltd	
AE3				
Model	/	,		
Manufacturer	5	Shen zhen baijundaE	lectronic Co.,Ltd	



*AE ID: is used to identify the test sample in the lab internally.

3.4. General Description

The Equipment under Test (EUT) is a model of Tablet PC with integrated antenna and battery. It consists of normal options: Lithium Battery and Charger.

Manual and specifications of the EUT were provided to fulfil the test.

Samples undergoing test were selected by the client.



4. <u>Reference Documents</u>

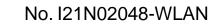
4.1. Documents supplied by applicant

EUT feature information is supplied by the applicant or manufacturer, which is the basis of testing.

4.2. Reference Documents for testing

The following documents listed in this section are referred for testing.

Reference	Title	Version
FCC Part15	FCC CFR 47, Part 15, Subpart C:	2019
	15.205 Restricted bands of operation;	
	15.209 Radiated emission limits, general requirements;	
	15.247 Operation within the bands 902–928MHz,	
	2400–2483.5 MHz, and 5725–5850 MHz	
ANSI C63.10	American National Standard of Procedures for Compliance	2013
	Testing of Unlicensed Wireless Devices	





5. Test Results

5.1. Testing Environment

Normal Temperature:	15~35°C
Relative Humidity:	20~75%

5.2. Test Results

No	Test cases	Sub-clause of Part 15C	Verdict
0	Antenna Requirement	15.203	Р
1	Maximum Output Power	15.247 (b)	Р
2	Peak Power Spectral Density	15.247 (e)	Р
3	6dB Bandwidth	15.247 (a)	Р
4	Band Edges Compliance	15.247 (d)	Р
5	Conducted Emission	15.247 (d)	Р
6	Radiated Emission	15.247, 15.205, 15.209	Р
7	AC Power line Conducted	15.207	Р

See **ANNEX A** for details.

5.3. Statements

SAICT has evaluated the test cases requested by the applicant/manufacturer as listed in section 5.2 of this report, for the EUT specified in section 3, according to the standards or reference documents listed in section 4.2.



6. Test Equipments Utilized

Conducted test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Due date	Calibration Period
1	Vector Signal Analyzer	FSV40	100903	Rohde & Schwarz	2021-12-30	1 year
2	RF Control Unit	JS0806-2	21C8060398	Tonscend	2022-05-09	1 year
3	Test Receiver	ESCI	100701	Rohde & Schwarz	2022-08-08	1 year
4	LISN	ENV216	102067	Rohde & Schwarz	2022-07-15	1 year

Radiated test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Due date	Calibration Period
1	Loop Antenna	HLA6120	35779	TESEQ	2022-04-25	3 years
2	BiLog Antenna	3142E	0224831	ETS-Lindgren	2024-05-27	3 years
3	Horn Antenna	3117	00066577	ETS-Lindgren	2022-04-02	3 years
4	Horn Antenna	QSH-SL-18 -26-S-20	17013	Q-par	2023-01-06	3 years
5	Horn Antenna	QSH-SL-8- 26-40-K-20	17014	Q-par	2023-01-06	3 years
6	Test Receiver	ESR7	101676	Rohde & Schwarz	2021-11-25	1 year
7	Spectrum Analyser	FSV40	101192	Rohde & Schwarz	2022-01-13	1 year
8	Chamber	FACT3-2.0	1285	ETS-Lindgren	2023-05-29	2 years

Test software

No.	Equipment	Manufacturer	Version
1	JS1120-3	Tonscend	2.6
2	EMC32	Rohde & Schwarz	10.50.40

EUT is engineering software provided by the customer to control the transmitting signal. The EUT was programmed to be in continuously transmitting mode.

Anechoic Chamber

Fully anechoic Chamber by ETS-Lindgren.



7. Laboratory Environment

Semi-anechoic chamber

Temperature	Min. = 15 °C, Max. = 35 °C		
Relative humidity	Min. = 20 %, Max. = 75 %		
Shielding effectiveness	0.014MHz-1MHz> 60 dB; 1MHz-18000MHz>90 dB		
Electrical insulation	> 2MΩ		
Ground system resistance	<4 Ω		
Normalised site attenuation (NSA)	<±4 dB, 3 m distance, from 30 to 1000 MHz		

Shielded room

Temperature	Min. = 15 °C, Max. = 35 °C		
Relative humidity	Min. = 20 %, Max. = 75 %		
Shielding effectiveness	0.014MHz-1MHz> 60 dB; 1MHz-1000MHz>90 dB		
Electrical insulation	> 2MΩ		
Ground system resistance	<4 Ω		

Fully-anechoic chamber

Temperature	Min. = 15 °C, Max. = 35 °C	
Relative humidity	Min. = 20 %, Max. = 75 %	
Shielding effectiveness	0.014MHz-1MHz> 60 dB; 1MHz-18000MHz>90 dB	
Electrical insulation	> 2MΩ	
Ground system resistance	<4 Ω	
Voltage Standing Wave Ratio (VSWR)	\leq 6 dB, from 1 to 18 GHz, 3 m distance	
Uniformity of field strength	Between 0 and 6 dB, from 80 to 6000 MHz	



8. <u>Measurement Uncertainty</u>

Test Name	Uncertainty (<i>k</i> =2)		
1. Maximum Peak Output Power	1.32dB		
2. Peak Power Spectral Density	2.32dB		
3. 6dB Bandwidth	66H	lz	
4. Band Edges Compliance	1.92	dB	
	30MHz≤f<1GHz	1.41dB	
5. Transmitter Spurious Emission - Conducted	1GHz≤f<7GHz	1.92dB	
5. Transmiller Spunous Emission - Conducted	7GHz≤f<13GHz	2.31dB	
	13GHz≤f≤26GHz	2.61dB	
	9kHz≤f<30MHz	1.74dB	
6 Transmitter Spurious Emission Redicted	30MHz≤f<1GHz	4.84dB	
6. Transmitter Spurious Emission - Radiated	1GHz≤f<18GHz	4.68dB	
	18GHz≤f≤40GHz	3.76dB	
7. AC Power line Conducted Emission	150kHz≤f≤30MHz	3.00dB	



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ANNEX A: Detailed Test Results

Test Configuration

The measurement is made according to ANSI C63.10.

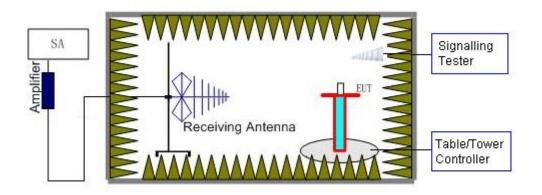
1) Conducted Measurements

- 1. Connect the EUT to the test system correctly.
- 2. Set the EUT to the required work mode.
- 3. Set the EUT to the required channel.
- 4. Set the spectrum analyzer to start measurement.
- 5. Record the values.



2) Radiated Measurements

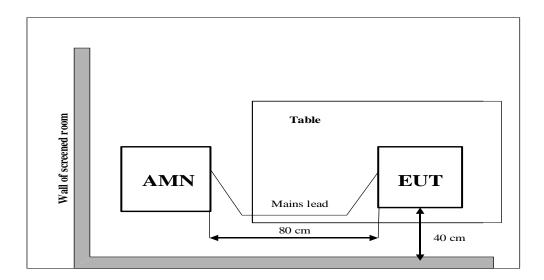
Test setup: EUT was placed on a 1.5 meter high non-conductive table at a 3 meter test distance from the receive antenna. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the EUT and adjusting the receiving antenna polarization.

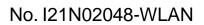




3) AC Power line Conducted Emission Measurement

For WLAN, the EUT is working under test mode. The EUT is commanded to operate at maximum transmitting power.







A.0 Antenna requirement

Measurement Limit:

Standard	Requirement			
	An intentional radiator shall be designed to ensure that no antenna other than that			
	furnished by the responsible party shall be used with the device. The use of a			
	permanently attached antenna or of an antenna that uses a unique coupling to the			
	intentional radiator shall be considered sufficient to comply with the provisions of			
	this section. The manufacturer may design the unit so that a broken antenna can			
	be replaced by the user, but the use of a standard antenna jack or electrical			
FCC CRF Part	connector is prohibited. This requirement does not apply to carrier current devices			
15.203	or to devices operated under the provisions of §15.211, §15.213, §15.217,			
	§15.219, or §15.221. Further, this requirement does not apply to intentional			
	radiators that must be professionally installed, such as perimeter protection			
	systems and some field disturbance sensors, or to other intentional radiators			
	which, in accordance with §15.31(d), must be measured at the installation site.			
	However, the installer shall be responsible for ensuring that the proper antenna is			
	employed so that the limits in this part are not exceeded.			

Conclusion: The Directional gains of antenna used for transmitting: 0.8dBi. The RF transmitter uses an integrate antenna without connector.



A.1 Maximum Output Power

Measurement of method: See ANSI C63.10-2013-Clause 11.9.2.3.2

Method AVGPM-G is a measurement using a gated RF average power meter.

Alternatively, measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Because the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

Measurement Limit:

Standard	Limit (dBm)	
FCC CRF Part 15.247(b)	< 30	

Measurement Results:

Mode	Channel	Frequency (MHz)	Average Conducted Power (dBm)	Conclusion
	CH 1	2412	15.89	Р
802.11b	CH 6	2437	15.65	Р
	CH 11	2462	14.12	Р
	CH 1	2412	15.22	Р
802.11g	CH 6	2437	15.17	Р
	CH 11	2462	15.74	Р
000 11 m	CH 1	2412	15.41	Р
802.11n- HT20	CH 6	2437	15.36	Р
	CH 11	2462	15.91	Р
000.11	CH 3	2422	15.57	Р
802.11n-	CH 6	2437	14.65	Р
HT40	CH 9	2452	14.11	Р

Note:

The data rate 1Mbps (11b mode), 6Mbps (11g mode) and MCS0 (11n mode) are selected as the Worst-Case. The following cases and test graphs are performed with this condition. The EUT was programmed to be in continuously transmitting mode and the transmit duty cycle is not less than 98%.



A.2 Peak Power Spectral Density

Measurement Limit:

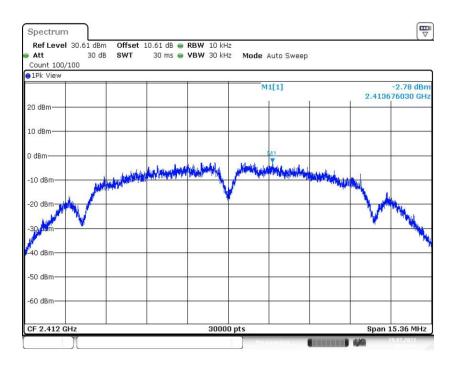
Standard	Limit (dBm/3 kHz)	
FCC CRF Part 15.247(e)	< 8 dBm/3 kHz	

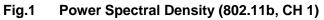
Measurement Results:

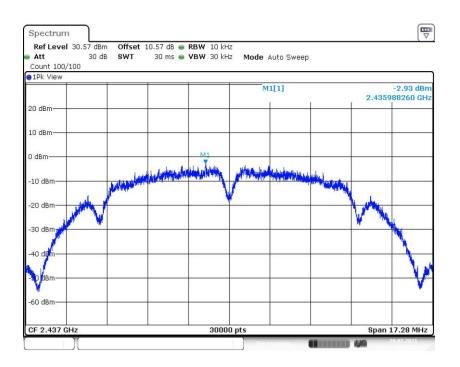
Mode	Channel	Frequency (MHz)	Test Result	s(dBm/3 kHz)	Conclusion
	CH 1	2412	Fig.1	-2.78	Р
802.11b	CH 6	2437	Fig.2	-2.93	Р
	CH 11	2462	Fig.3	-3.90	Р
	CH 1	2412	Fig.4	-5.40	Р
802.11g	CH 6	2437	Fig.5	-6.07	Р
	CH 11	2462	Fig.6	-4.60	Р
000 11 m	CH 1	2412	Fig.7	-4.51	Р
802.11n- HT20	CH 6	2437	Fig.8	-6.17	Р
ΠI20	CH 11	2462	Fig.9	-3.90	Р
000.44.5	CH 3	2422	Fig.10	-6.14	Р
802.11n- HT40	CH 6	2437	Fig.11	-7.48	Р
П140	CH 9	2452	Fig.12	-8.51	Р

See below for test graphs.

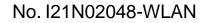




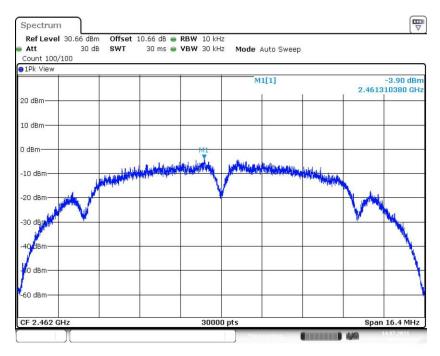




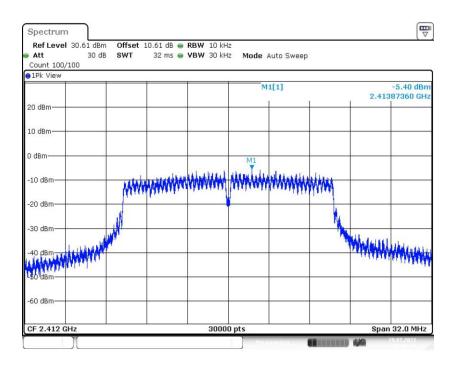


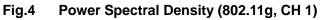






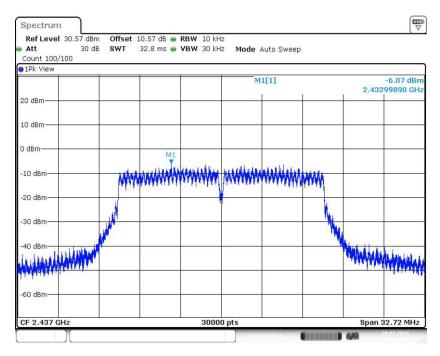




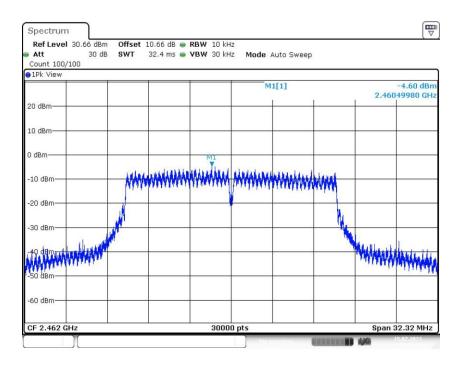








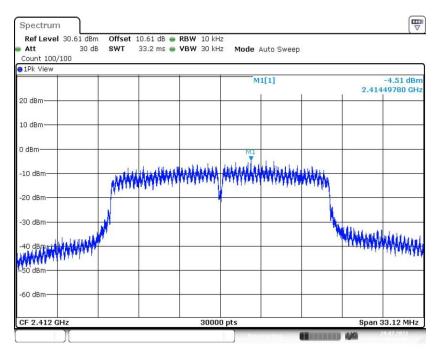




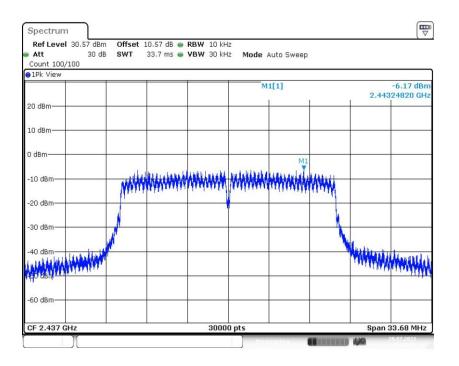




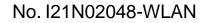




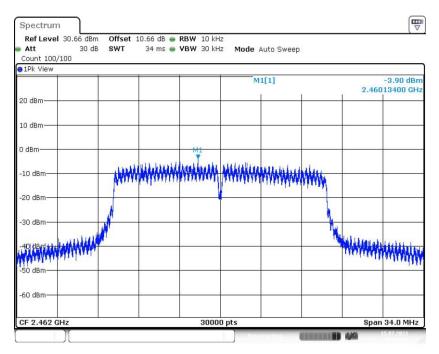




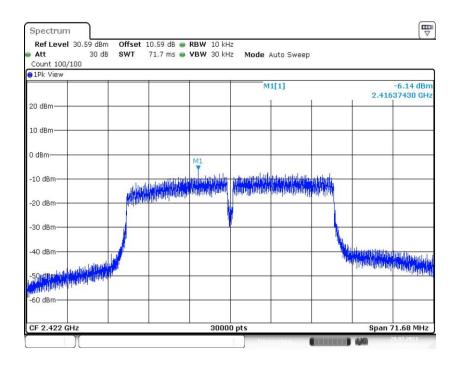




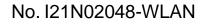




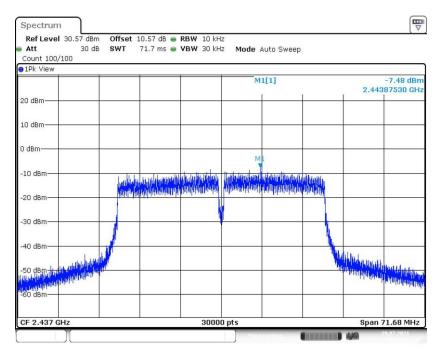




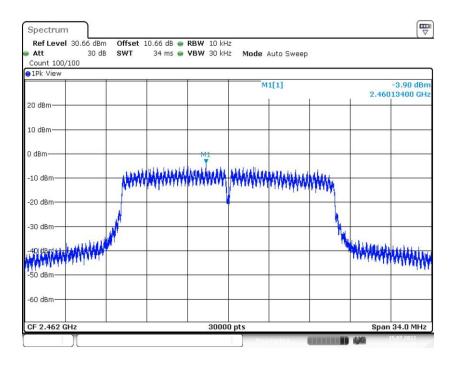
















A.3 6dB Bandwidth

Measurement Limit:

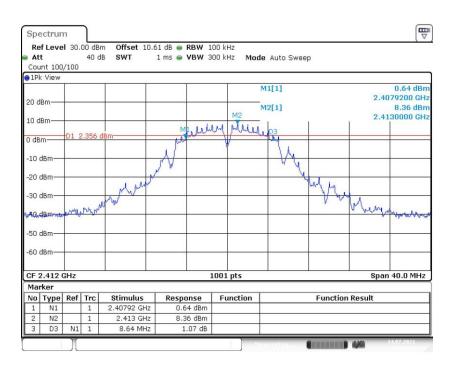
Standard	Limit (kHz)
FCC 47 CFR Part 15.247 (a)	≥ 500

Measurement Result:

Mode	Channel	Frequency (MHz)	Test Res	ults (kHz)	Conclusion
	CH 1	2412	Fig.13	8640	Р
802.11b	CH 6	2437	Fig.14	8640	Р
	CH 11	2462	Fig.15	8200	Р
	CH 1	2412	Fig.16	16000	Р
802.11g	CH 6	2437	Fig.17	16360	Р
	CH 11	2462	Fig.18	16160	Р
000 11n	CH 1	2412	Fig.19	16560	Р
802.11n- HT20	CH 6	2437	Fig.20	16840	Р
ПI20	CH 11	2462	Fig.21	17000	Р
000 11n	CH 3	2422	Fig.22	35840	Р
802.11n-	CH 6	2437	Fig.23	35840	Р
HT40	CH 9	2452	Fig.24	35600	Р

See below for test graphs.







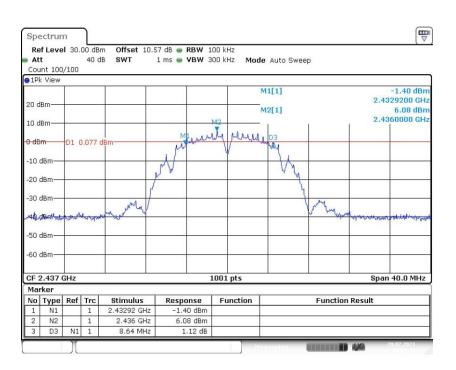
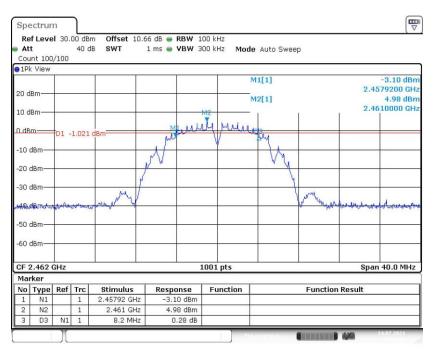


Fig.14 6dB Bandwidth (802.11b, CH 6)









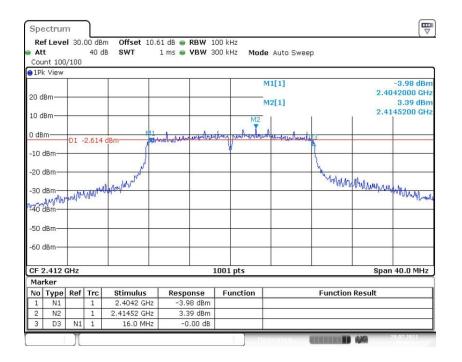
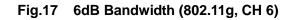


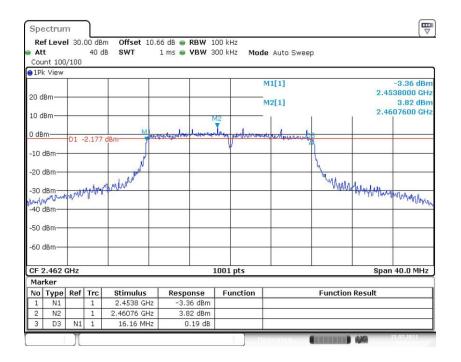
Fig.16 6dB Bandwidth (802.11g, CH 1)

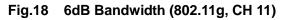


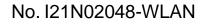


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2	N2		1	2.43952 GHz	2.94 dBm				
3	D3	N1	1	16.36 MHz	-0.72 dB				





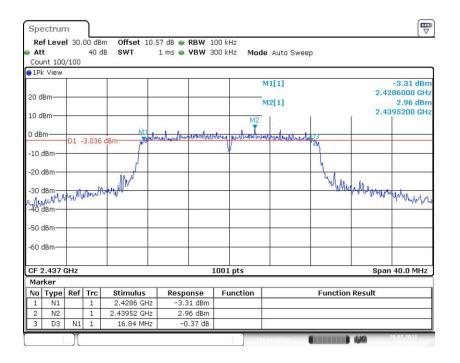




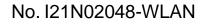


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							M1[1]	-3.07 dBr
20 d	Bm—						Sector Sector	2.4038800 GH
							M2[1]	2.94 dBr
10 d	Bm—	-		+ +	N	12	T 1	2.4107600 GH
				ML			17 10 10 11	
0 dB	m	D1 -	3.062	dBm	mprendrandhandhan	Man Mentheurora	My March March 1973	
-10	dBm—			T		Y	2	
10	John							
-20 (dBm—	-		¥			tut	
				marghet				Mary many mander and a series of the series
-30 (dBm-	MAN	Up4M	annon				Mar Mar Mala Mala Mark
40	WWW ~	1						
-40 1	звт—							
-50 (dBm							
-60 (dBm—	-						
CF 2	2.412 (GHz			. 1	.001 pts		Span 40.0 MHz
Mai	ker							
No	Туре	Ref	Trc	Stimulus	Response	Function	Fund	ction Result
1	N1		1	2.40388 GHz	-3.07 dBm			
2	N2		1	2.41076 GHz	2.94 dBm			
3	D3	N1	1	16.56 MHz	-0.49 dB			

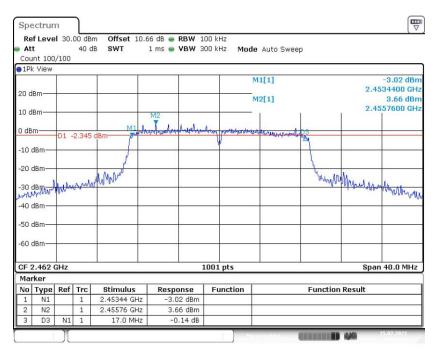




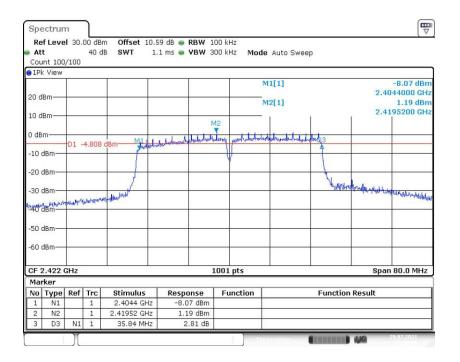












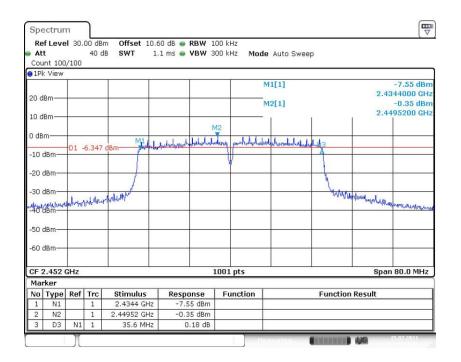




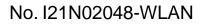


Spe	ctrun	n	ר							
Att			00 dBr 40 d		57 dB 👄 RBW 1 1 ms 👄 VBW 3		e Auto Swe	еер		
) 1Pk	View									
							M1[1]			-6.86 dBn 91600 GH
20 dB	-m			+			M2[1]			-0.18 dBn
10 dB	m									07600 GH
10 00						M2		1 1		
0 dBn	n	-		MILL		-	ortelanistation	1		
	_	D1 -	6.179	dBm	dubelonstrahoboliste	terring personalities and	and the work of the	alutal 3		
-10 d	Bm—					V	1			
-20 di	Bm—									
								X		
-30 di	Bm—		a satu	MMUMM				Winter	Mohhum	2000 A 1000
4114	Amerily	num	stronger.	nathingulation					MUNANUMATAWAN	hatelihelihelihe
-50 di	Bm—	-					-			
-60 dl	0.00									
-ou u	ып—									
CE 2	.437 (Hz			1	.001 pts			Snan	80.0 MHz
Mark										
	Type	Ref	Trc	Stimulus	Response	Function		Function	Result	
1	N1		1	2.41916 GHz	-6.86 dBm					
2	N2		1	2.44076 GHz	-0.18 dBm					
3	D3	N1	1	35.84 MHz	0.34 dB					











A.4 Band Edges Compliance

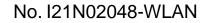
Measurement Limit:

Standard	Limit (dBm)
FCC 47 CFR Part 15.247 (d)	> 20

Measurement Result:

Mode	Channel	Frequency (MHz)	Test Resu	ults (dBm)	Conclusion
802.11b	CH1	2412	Fig.25	48.76	Р
002.11D	CH11	2462	Fig.26	51.11	Р
002.11 a	CH1	2412	Fig.27	28.71	Р
802.11g	CH11	2462	Fig.28	42.03	Р
802.11n-	CH1	2412	Fig.29	29.67	Р
HT20	CH11	2462	Fig.30	40.46	Р
802.11n-	CH3	2422	Fig.31	35.34	Р
HT40	CH9	2452	Fig.32	37.11	Р

See below for test graphs.





	ectrun				1	00.111-			7
At	f Leve	1 20.	00 aB 30 c		i1 dB 👄 RBW 1 3 ms 👄 VBW 3		de Auto Swi		
	nt 300	/300	30 0	10 3 WT 1.	3 IIIS 🖉 4 DW 3		ue Auto Swi	eeh	
	View								
					1	T.	M1[1]		6.88 dBr
10 d	Bm—						-		M1 2.411090 GH
							M2[1]		Mu-38.99 dB
) dB	m	-					-	1 0	2.00000 GH
10	dBm								1
10	aom	D1 -	13.12	0 dBm				1 11	l Pl
20	dBm—	-					-		
20	dBm								1
30								Mar	"tu
40	dBm—	-		+ +			-	M3	Ka
all ^a	much	um	hulu	manulan	houralnawing	inmoundab	munan	when were	•P
50	John								
60	dBm—								
70	dBm								
.70									
Sta	t 2.3 (GHz				691 pts			Stop 2.43 GHz
Ma	ker								
No	Туре	Ref	Trc	Stimulus	Response	Function		Function R	esult
1	N1		1	2.41109 GHz	6.88 dBm				
2	N2		1	2.4 GHz	-38.99 dBm				
3	N3 N4	_	1	2.39 GHz 2.399667 GHz	-47.22 dBm -41.88 dBm				
4	N4		1	51388001 GHS	-41.88 dBm				



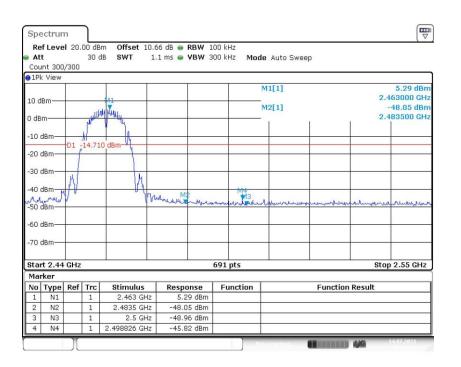


Fig.26 Band Edges (802.11b, CH 11)





10 dBm 2.414480 GH 0 dBm M2[1] 0 dBm M2[1] -10 dBm M2[1] -20 dBm M2 -20 dBm M2 -20 dBm M2 -20 dBm M2 -30 dBm M2 -30 dBm M2 -40 dBm M2 -30 dBm M2 -30 dBm M2 -30 dBm M2 -40 dBm M2 -70 dBm M2	Spe	ectrun	n	٦						
10 dBm M1[1] 3.43 dBr 10 dBm M2[1] 2.414480 GHz 0 dBm M2[1] M2[1] -20 dBm M2[1] M2[1] -30 dBm M3 M3 -40 dBm M3 M3 -50 dBm M3 M3 -60 dBm 691 pts Stop 2.43 GHz Marker M3 M4 1 N1 1 2.41448 GHz	At Cou	t int 300						de Auto Swee	p	X
-20 dBm 01 -16.570 dBm -30 dBm -30 dBm -40 dBm -40 dBm -40 dBm -40 dBm -50 dBm -40 dBm -60 dBm -40 dBm -70 dBm -40 dB	10 d	Bm							ىلىل ،	3.43 dBn 2.414480 GH ^{M1} -26.98 dBn LLA, D , 100 GH
40 dBm Model -50 dBm -60 dBm -60 dBm -60 dBm -70 dBm -60 dBm 1 N1 1 2.41448 GHz 3.43 dBm	-20	dBm—	D1 -	16.57	0 dBm				1	- Lung
.70 dBm	-40	dBm	erente	wheel-	andrum	maderial	where the way		and the second	
Marker No Type Ref Trc Stimulus Response Function Function Result 1 N1 1 2.41448 GHz 3.43 dBm										
No Type Ref Trc Stimulus Response Function Function Result 1 N1 1 2.41448 GHz 3.43 dBm			GHz		1 1		691 pts		A 15	Stop 2.43 GHz
	No	Туре	Ref				Function		Function Re	esult
3 N3 1 2.39 GHz -42.76 dBm 4 N4 1 2.399478 GHz -25.28 dBm	2 3	N2 N3		1 1	2.4 GHz 2.39 GHz	-26.98 dBm -42.76 dBm				



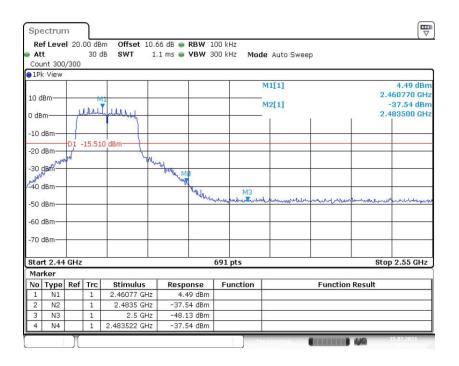
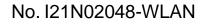
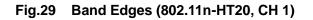


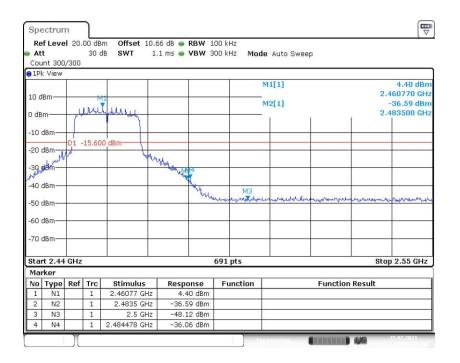
Fig.28 Band Edges (802.11g, CH 11)

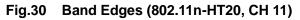


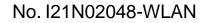


Spe	ectrun	n	٦						
At	f Leve t int 300		00 dB 30 d		.61 dB 👄 RBW 3 1.3 ms 👄 VBW 3		de Auto Swee	р	,
D 1 Pl	(View				31-45				
10 d	Bm						M1[1] M2[1]		3.86 dBr 2.414480 GH M1 27.53 dBr
0 dB	m						-	un l	M AND GOOD CH
-10	dBm—	01	16 14	0 dBm					
-20 (dBm—	01	10.14	o dom				M42/	theory
-30 (dBm—						-	alternation	
	dBm—						M3		
50	dBm-w	name	Mutun	howahaana	milliondracegovithilis	newallpartentione	ulallabrenth	-	
-60 (dBm—			+ +					
-70 (dBm—								
	t 2.3 (GHz			1.1.1	691 pts			Stop 2.43 GHz
	rker				1				
NO 1	Type N1	Ref	Trc 1	Stimulus 2.41448 GHz	Response 3.86 dBm	Function		Function Re	sult
2	N2		1	2.4 GHz	Conception Conception				
3	N3 N4		1	2.39 GHz 2.398725 GHz					
_		Υ					teesurion		29.07.2021



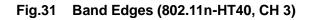








Spe	ectrun	n	٦								
At	f Leve t int 300		00 dB 30 d		59 dB 👄 RBW .3 ms 👄 VBW			de Auto Swee	p		
1P	k View										
								M1[1]			1.30 dBn
10 d	lBm—	-		+ +							7080 GH
								M2[1]			6.05 dBt
0 dB	m							- T	1	Mundit	they will
-10	dBm—									parte	
		-									U
-20	dBm-	D1 -	-18.70	0 dBm							
20	-In								Ma		
-30	dBm—							M	MA		
-40	dBm							the later	- NUMARO		
	M. LKAL		philased		a sector de la dest	a she ha		is a should will be more		1 1	
-50	dBm-		10.00			powned	and the star			1	
-60	dBm—										
-00	ubm										
-70	dBm—	-		-							
Sta	rt 2.3 (GHz		1 1		691	pts			Stop	2.43 GHz
Ma	rker										
No	Туре	Ref	Trc	Stimulus	Response	F	unction		Function	Result	
1	N1		1	2.42708 GHz	1.30 dB	m					
2	N2		1	2.4 GHz	-36.05 dB	m					
3	N3		1	2.39 GHz	-39.98 dB	m					
4	N4		1	2.397594 GHz	-34.04 dB	m					
_		11						teasuring	COLUMN TWO IS NOT	1.10	.07.2021



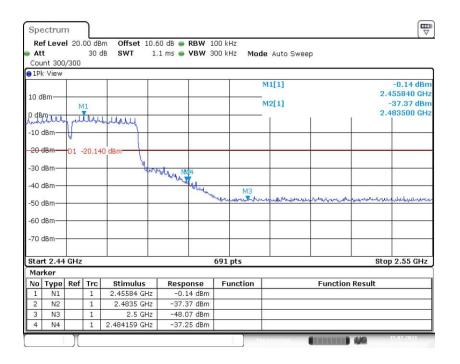


Fig.32 Band Edges (802.11n-HT40, CH 9)



A.5 Conducted Emission

Measurement Limit:

Standard	Limit (dBm)
FCC 47 CFR Part 15.247 (d)	30dBm below peak output power in 100kHz
FCC 47 CFR Fait 15.247 (u)	bandwidth

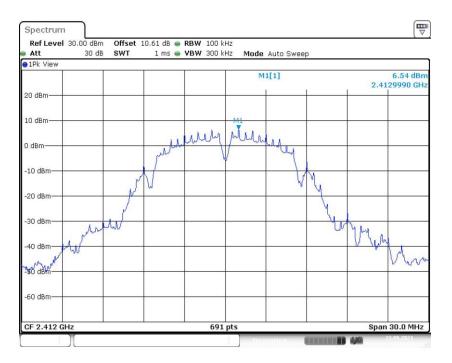
Measurement Results:

Mode	Channel	Frequency	Frequency	Test	Conclusion
lineuo		(MHz)	Range	Results	Conclusion
			2.412 GHz	Fig.33	Р
	CH 1	2412	30MHz -1GHz	Fig.34	Р
			1GHz-26.5GHz	Fig.35	Р
			2.437 GHz	Fig.36	Р
802.11b	CH 6	2437	30MHz -1GHz	Fig.37	Р
			1GHz-26.5GHz	Fig.38	Р
			2.462 GHz	Fig.39	Р
	CH 11	2462	30MHz -1GHz	Fig.40	Р
			1GHz-26.5GHz	Fig.41	Р
			2.412 GHz	Fig.42	Р
	CH 1	2412	30MHz -1GHz	Fig.43	Р
			1GHz-26.5GHz	Fig.44	Р
			2.437 GHz	Fig.45	Р
802.11g	CH 6	2437	30MHz -1GHz	Fig.46	Р
			1GHz-26.5GHz	Fig.47	Р
			2.462 GHz	Fig.48	Р
	CH 11	2462	30MHz -1GHz	Fig.49	Р
			1GHz-26.5GHz	Fig.50	Р
			2.412 GHz	Fig.51	Р
	CH 1	2412	30MHz -1GHz	Fig.52	Р
			1GHz-26.5GHz	Fig.53	Р
000 44 -			2.437 GHz	Fig.54	Р
802.11n-	CH 6	2437	30MHz -1GHz	Fig.55	Р
HT20			1GHz-26.5GHz	Fig.56	Р
			2.462 GHz	Fig.57	Р
	CH 11	2462	30MHz -1GHz	Fig.58	Р
			1GHz-26.5GHz	Fig.59	Р
			2.422 GHz	Fig.60	Р
	CH 3	2422	30MHz -1GHz	Fig.61	Р
802.11n-			1GHz-26.5GHz	Fig.62	Р
HT40			2.437 GHz	Fig.63	Р
	CH 6	2437	30MHz -1GHz	Fig.64	Р
			1GHz-26.5GHz	Fig.65	Р



		2.452 GHz	Fig.66	Р
CH 9	2452	30MHz -1GHz	Fig.67	Р
		1GHz-26.5GHz	Fig.68	Р

See below for test graphs. Conclusion: PASS





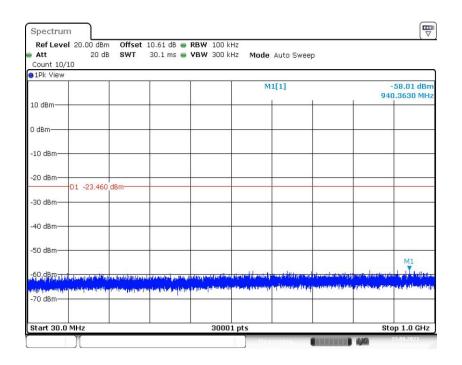
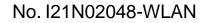


Fig.34 Conducted Spurious Emission (30MHz -1GHz, 802.11b, CH1)





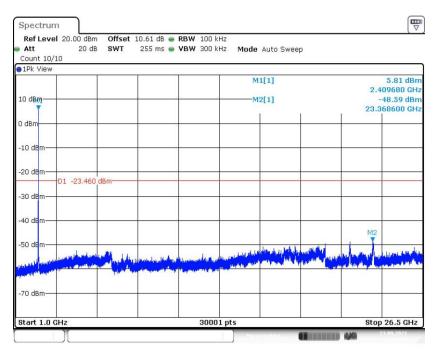


Fig.35 Conducted Spurious Emission (1GHz-26.5GHz, 802.11b, CH1)

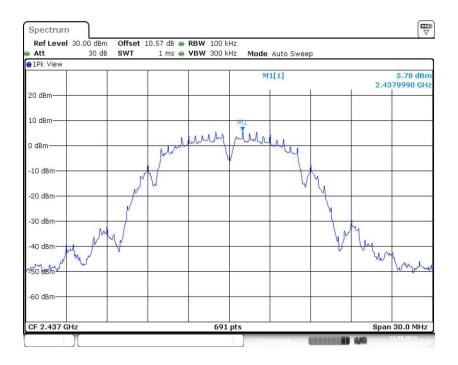


Fig.36 Conducted Spurious Emission (Center Frequency, 802.11b, CH6)





	el 20.00 dBm		10.57 dB 👄						
Att	20 dE	SWT	30.1 ms 👄	VBW 300 k	Hz Mode	Auto Swee	2		
Count 10/	10								
IFK VIEW					М	1[1]			-58.01 dBn 1.1250 MH;
10 dBm—									
0 dBm									
-10 dBm—									
-20 dBm	-D1 -24.220	dBm							
-30 dBm—	01 -24.220	dom							
-40 dBm—									
-50 dBm									N
60 dBm			and the second	HUMPHEN			tauly an an induced	-	
70 dBm—	a ha manahara an	angan angan ang	and a failed of the second	pleased spatting of the	naamaliya oo yadhiya ^{ja} h	ang <mark>secapating seca</mark>	a finanding pinana ya l	and all and and and final firms	and the second
Start 30.0				3000					p 1.0 GHz



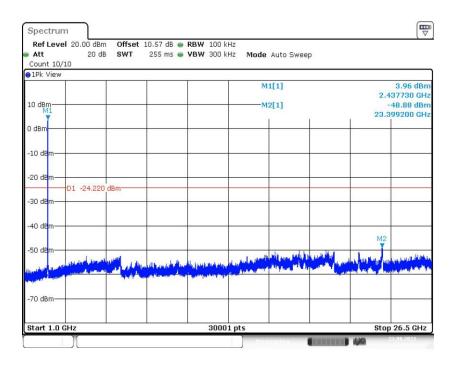
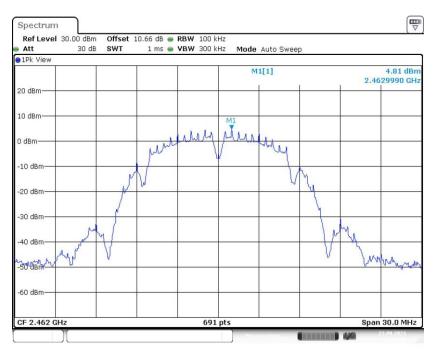


Fig.38 Conducted Spurious Emission (1GHz-26.5GHz, 802.11b, CH6)









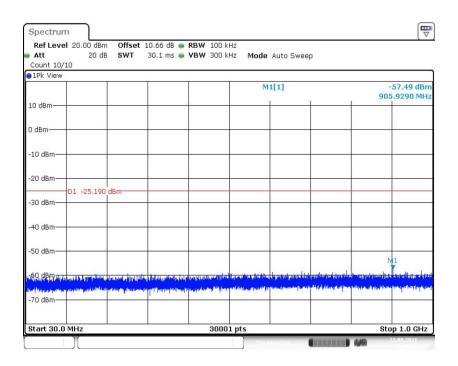


Fig.40 Conducted Spurious Emission (30MHz -1GHz, 802.11b, CH11)





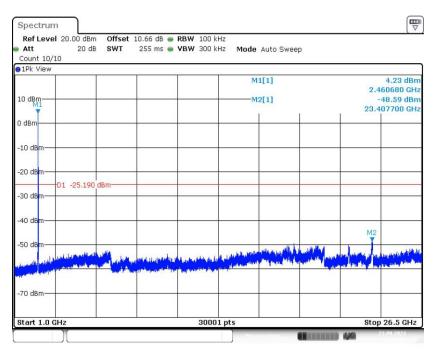


Fig.41 Conducted Spurious Emission (1GHz-26.5GHz, 802.11b, CH11)

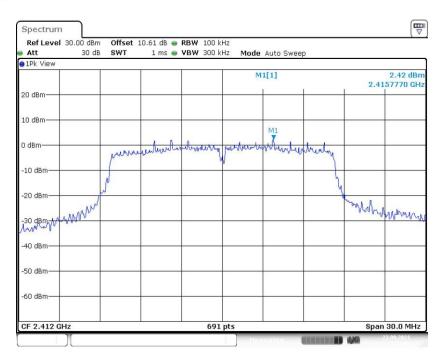


Fig.42 Conducted Spurious Emission (Center Frequency, 802.11g, CH1)





Ref Level 20.00 dBm Offset 10.6:	1 dB 🖷 RBW 100 kHz	
	. ms 👄 VBW 300 kHz 🛛 Mode Auto Sweep	
Count 10/10		
1Pk View		
	M1[1]	-58.24 dBn 909.9060 MH
10 dBm		909.9000 MH.
0 dBm		
-10 dBm		
-20 dBm		
-30 dBm		
40 dBm		
-50 dBm		
		1/11
60 dBm	in the second state of the	the south at a start when with a bland of
والمراجب أحرب والأرجاب والمعارفة أرجا والمترافظ والمراجع والمعارفة والمراجع والمراجع	erte angele parties a leger back parties and provide many provider an annual prior de the back of the back and the back	nation of particular descriptions and possible
70 dBm		
Start 30.0 MHz	30001 pts	Stop 1.0 GHz



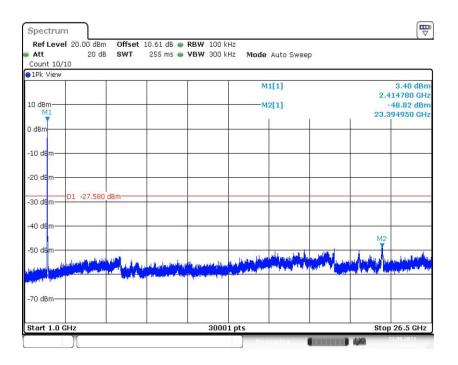
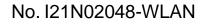


Fig.44 Conducted Spurious Emission (1GHz-26.5GHz, 802.11g, CH1)





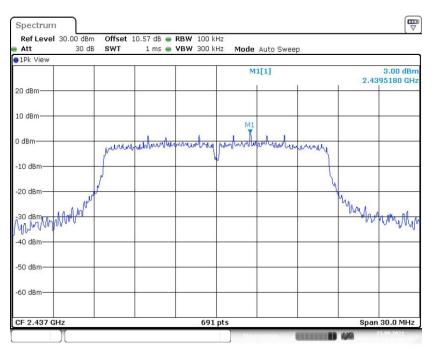


Fig.45 Conducted Spurious Emission (Center Frequency, 802.11g, CH6)

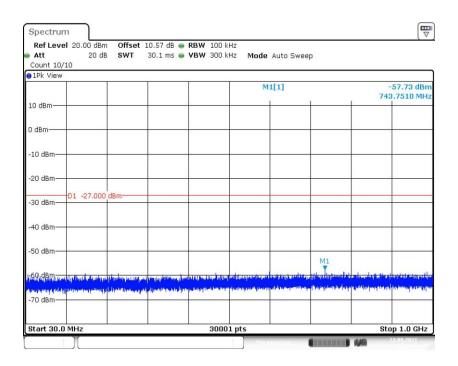


Fig.46 Conducted Spurious Emission (30MHz -1GHz, 802.11g, CH6)