FCC Test Report

Report No.: AGC08739161201FE05

FCC ID	:	2AK43RD-601
APPLICATION PURPOSE	:	Original Equipment
PRODUCT DESIGNATION	:	DLP Smart Projector
BRAND NAME	:	Rigal
MODEL NAME	:	RD-601, RD-602, RD-603, RD-604, RD-605, RD-606, RD-607, RD-608, RD-609, RD-610, RD-611, RD-612, RD-613, RD-614, RD-615, RD-616, RD-617, RD-618, RD-619, RD-620, RD-621, RD-622, RD-623, RD-624, RD-625, RD-626, RD-627, RD-628, RD-629, RD-630
CLIENT	:	Guangzhou Rigal Electronics Co., Ltd.
DATE OF ISSUE	:	Jan. 11, 2017
STANDARD(S) TEST PROCEDURE(S)	:	FCC Part 15.247 KDB 558074 v03r05
REPORT VERSION	:	V1.0
		Compliano



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Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Jan. 11, 2017	Valid	Original Report

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I. VERIFICATION OF CO			
Applicant	Guangzhou Rigal Electronics Co., Ltd.		
Address	Floor 1, Floor 2, Floor 3, Factory Building, NO.30, The north of Hongmiandadao, Xiuquan Street, Huadu District, Guangzhou China		
Manufacturer	turer Guangzhou Rigal Electronics Co., Ltd.		
Address	Floor 1, Floor 2, Floor 3, Factory Building, NO.30, The north of Hongmiandadao, Xiuquan Street, Huadu District, Guangzhou China		
Product Designation	DLP Smart Projector		
Brand Name	Rigal		
Test Model	RD-601		
Series Model	RD-602, RD-603, RD-604, RD-605, RD-606, RD-607, RD-608, RD-609, RD-610, RD-611, RD-612, RD-613, RD-614, RD-615, RD-616, RD-617, RD-618, RD-619, RD-620, RD-621, RD-622, RD-623, RD-624, RD-625, RD-626, RD-627, RD-628, RD-629, RD-630		
Model Difference	All the same except the model name.		
Date of test	Jan. 09, 2017 to Jan. 11, 2017		
Deviation	None		
Condition of Test Sample Normal			
Test Result	Pass		
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 radiated emission limits of FCC Rules Part 15.247.



2. GENERAL INFORMATION

2.1. PRODUCT DESCRIPTION

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

A major technical description of EUT is described as following

Operation Frequency	2.412 GHz~2.462GHz		
Output Power	IEEE 802.11b:15.29dBm; IEEE 802.11g:14.41dBm;		
	IEEE 802.11n(20):14.06dBm; IEEE 802.11n(40):9.59dBm		
Modulation	DSSS(DBPSK/DQPSK/CCK);OFDM(BPSK/QPSK/16-QAM/64-QAM)		
Number of channels	11		
Hardware Version	ZY-8S31A-MAIN-V2		
Software Version	N/A		
Antenna Designation	Fixed Antenna		
Number of transmit chain	2		
Antenna Gain	2dBi		
Power Supply	DC 19V by adapter		

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	Modulation	R	NBPSC	NCI	NCBPS NDBPS		rate(I	ata Abps) nsGl	
					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: 2AK43RD-601** 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 v03r05.

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: +/- 3.18dB Radiated measurement: +/- 3.91dB

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: Transm	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

ltem	Equipment	Model No.	ID or Specification	Remark
1	DLP Smart Projector	RD-601	2AK43RD-601	EUT
2	Adapter	FJ-SW1903420D	DC19V/3.42A	Marketed with EUT

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

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 C63.4:2014.

ALL TEST EQUIPMENT LIST

	Radiated Emission Test Site					
Name of Equipment	Manufacturer	Model Number	Serial Number	Last Calibration	Due Calibration	
EMI Test Receiver	Rohde & Schwarz	ESCI	101417	July 3, 2016	July 2, 2017	
Trilog Broadband Antenna (25M-1GHz)	SCHWARZBECK	VULB9160	9160-3355	July 3, 2016	July 2, 2017	
Signal Amplifier	SCHWARZBECK	BBV 9475	9745-0013	July 3, 2016	July 2, 2017	
RF Cable	SCHWARZBECK	AK9515E	96221	July 3, 2016	July 2, 2017	
3m Anechoic Chamber	CHENGYU	966	PTS-001	June 3, 2016	June 2, 2017	
MULTI-DEVICE Positioning Controller	Max-Full	MF-7802	MF780208339	N/A	N/A	
Active loop antenna (9K-30MHz)	Schwarzbeck	FMZB1519	1519-038	June 3, 2016	June 2, 2017	
Spectrum analyzer	Agilent	E4407B	MY46185649	June 3, 2016	June 2, 2017	
Power Sensor	Agilent	U2021XA	MY55050474	June 3, 2016	June 2, 2017	
Horn Antenna (1G-18GHz)	SCHWARZBECK	BBHA9120D	9120D-1246	June 3, 2016	June 2, 2017	
Horn Ant (18G-40GHz)	Schwarzbeck	BBHA 9170	9170-181	June 3, 2016	June 2, 2017	

Conducted Emission Test Site						
Name of Equipment	Manufacturer	Model Number	Serial Number	Last Calibration	Due Calibration	
EMI Test Receiver	Rohde & Schwarz	ESCI	101417	July 3, 2016	July 2, 2017	
Artificial Mains Network	Narda	L2-16B	000WX31025	July 3, 2016	July 2, 2017	
Artificial Mains Network (AUX)	Narda	L2-16B	000WX31026	July 3, 2016	July 2, 2017	
RF Cable	SCHWARZBECK	AK9515E	96222	July 3, 2016	July 2, 2017	
Shielded Room	CHENGYU	843	PTS-002	June 3, 2016	June 2, 2017	

7. OUTPUT POWER

7.1. MEASUREMENT PROCEDURE

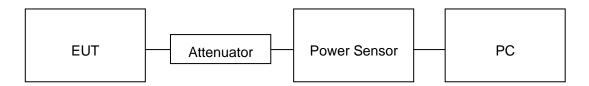
For average power test:

- 1. Connect EUT RF output port to power sensor through an RF attenuator.
- 2. Connect the power sensor 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 558074v03r05 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 Chain 0 (dBm)	Average Power Chain 1 (dBm)	Average Power Total (dBm)	Applicable Limits (dBm)	Pass or Fail
2.412	12.36	11.85	15.12	30	Pass
2.437	12.42	12.13	15.29	30	Pass
2.462	12.16	11.72	14.96	30	Pass

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

Frequency (GHz)	Average Power Chain 0 (dBm)	Average Power Chain 1 (dBm)	Average Power Total (dBm)	Applicable Limits (dBm)	Pass or Fail
2.412	11.25	11.07	14.17	30	Pass
2.437	11.47	11.33	14.41	30	Pass
2.462	11.35	11.16	14.27	30	Pass

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

Frequency (GHz)	Average Power Chain 0 (dBm)	Average Power Chain 1 (dBm)	Average Power Total (dBm)	Applicable Limits (dBm)	Pass or Fail
2.412	10.98	10.86	13.93	30	Pass
2.437	11.16	10.94	14.06	30	Pass
2.462	10.75	10.52	13.65	30	Pass

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

Frequency (GHz)	Average Power Chain 0 (dBm)	Average Power Chain 1 (dBm)	Average Power Total (dBm)	Applicable Limits (dBm)	Pass or Fail
2.422	6.52	6.15	9.35	30	Pass
2.437	6.74	6.41	9.59	30	Pass
2.452	6.33	5.89	9.13	30	Pass

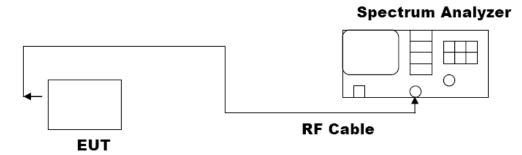
8.6 DB BANDWIDTH

8.1. MEASUREMENT PROCEDURE

- 1. Connect EUT RF output port 1(antenna 0) 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.
- 5. Repeat test from step 1 to step 4 for RF output port 2(antenna 1).

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

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



8.3. LIMITS AND MEASUREMENT RESULTS

TEST ITEM	6DB BANDWIDTH
TEST MODE	802.11b with data rate 1

	LIMITS AND MEAS	UREMENT RESULT			
Annlinghin Limite		Applicable Limits			
Applicable Limits	Test Data (MHz) Criteria				
	Low Channel	10.02	PASS		
>500KHZ	Middle Channel	10.02	PASS		
	High Channel	10.02	PASS		

TEST ITEM	6DB BANDWIDTH
TEST MODE	802.11g with data rate 6

	LIMITS AND MEAS	UREMENT RESULT				
Annlinghla Limita		Applicable Limits				
Applicable Limits	Test Da	ita (MHz)	Criteria			
	Low Channel	15.12	PASS			
>500KHZ	Middle Channel	15.12	PASS			
	High Channel	15.14	PASS			

TEST ITEM	6DB BANDWIDTH
TEST MODE	802.11n 20 with data rate 6.5

	LIMITS AND MEAS	UREMENT RESULT				
Applicable Limite	Applicable Limits					
Applicable Limits	Test Da	ta (MHz)	Criteria			
	Low Channel	15.13	PASS			
>500KHZ	Middle Channel	15.12	PASS			
	High Channel	16.01	PASS			

TEST ITEM	6DB BANDWIDTH
TEST MODE	802.11n 40 with data rate 13.5

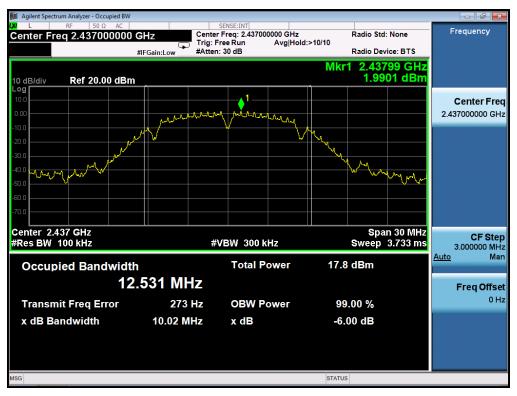
	LIMITS AND MEAS	UREMENT RESULT				
Annlinghla Limita	Applicable Limits					
Applicable Limits	Test Da	Criteria				
	Low Channel	35.17	PASS			
>500KHZ	Middle Channel	35.17	PASS			
	High Channel	35.18	PASS			

Note : Two transmit antennas had been tested, the antenna 0 was the worst case and record in the test report.



802.11b TEST RESULT TEST PLOT OF BANDWIDTH FOR LOW CHANNEL

TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL

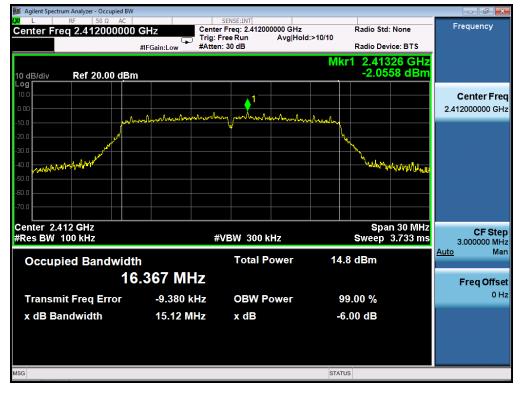


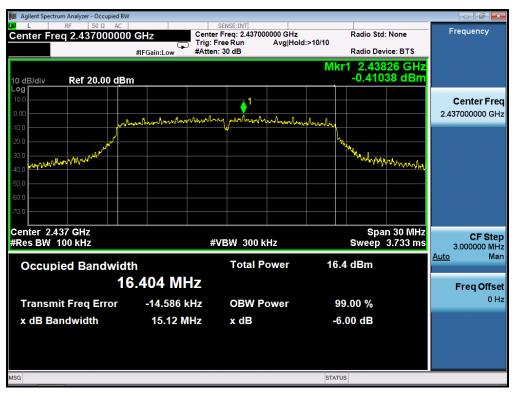


TEST PLOT OF BANDWIDTH FOR HIGH CHANNEL

802.11g TEST RESULT

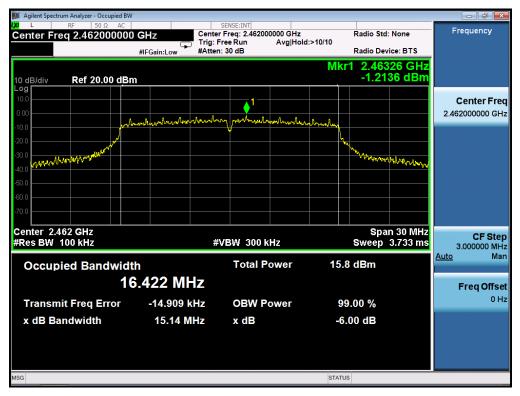
TEST PLOT OF BANDWIDTH FOR LOW CHANNEL





TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL

TEST PLOT OF BANDWIDTH FOR HIGH CHANNEL



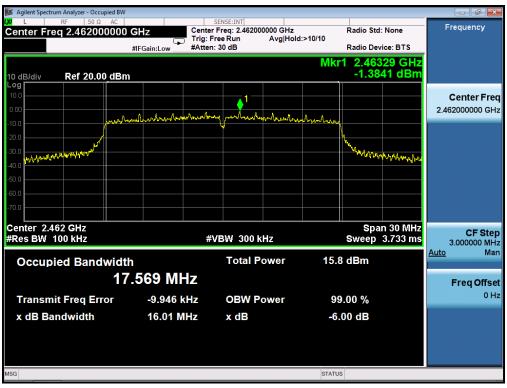


802.11n (20) TEST RESULT

TEST PLOT OF BANDWIDTH FOR LOW CHANNEL

TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL

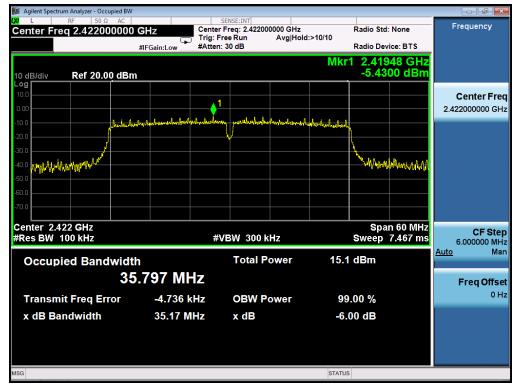
Agilent Spectrum Analyzer - Occupied BW				
Center Freq 2.43700000	GHz Center	SENSE:INT Freq: 2.437000000 GHz	Radio Std: None	Frequency
	#IFGain:Low #Atten	ree Run Avg Hold:> :30 dB	10/10 Radio Device: BTS	
Def 20.00 dBr			Mkr1 2.43823 GH -0.93663 dBn	z
10 dB/div Ref 20.00 dBr	n			
10.0				Center Freq
0.00	mannaman	m portunition mentioned	munl	2.437000000 GHz
-10.0		¥		
-20.0			North and a second seco	
-30.0 white white white and a second			Munnuhanan	
-50.0				
-60.0				
-70.0				_
Center 2.437 GHz			On an 20 Mil	
#Res BW 100 kHz	#\	/BW 300 kHz	Span 30 MH Sweep 3.733 m	CF Step 3.000000 MHz
				Auto Man
Occupied Bandwidt		Total Power	16.4 dBm	
17	7.553 MHz			Freq Offset
Transmit Freq Error	-14.717 kHz	OBW Power	99.00 %	0 Hz
x dB Bandwidth	15.12 MHz	x dB	-6.00 dB	
MSG			STATUS	

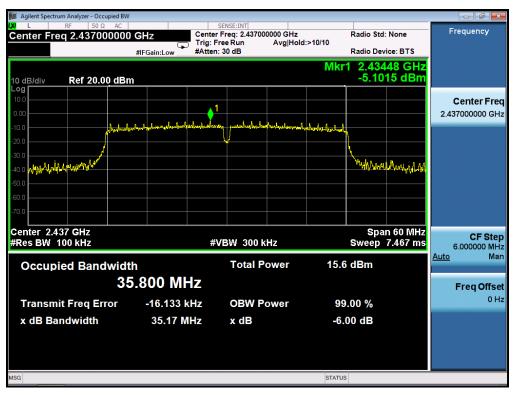


TEST PLOT OF BANDWIDTH FOR HIGH CHANNEL

802.11n (40) TEST RESULT

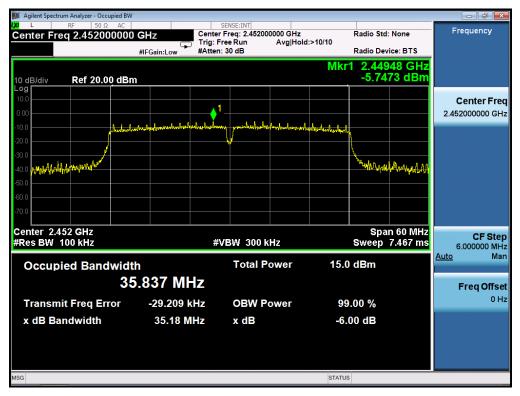
TEST PLOT OF BANDWIDTH FOR LOW CHANNEL





TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL

TEST PLOT OF BANDWIDTH FOR HIGH CHANNEL



9. CONDUCTED SPURIOUS EMISSION

9.1. MEASUREMENT PROCEDURE

- 1. Connect EUT RF output port 1(antenna 0) 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.
- 4. Repeat test from step 1 to step 3 for RF output port 2(antenna 1).
- 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)

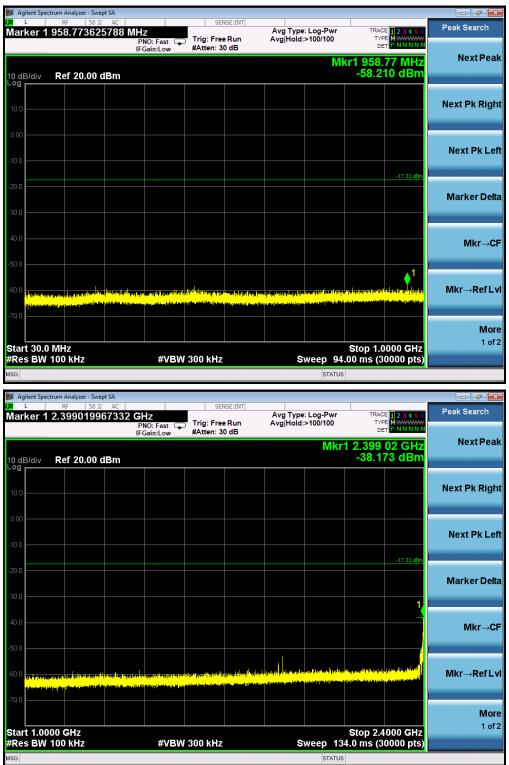
The same as described in section 8.2.

9.3. MEASUREMENT EQUIPMENT USED

The same as described in section 6.

9.4. LIMITS AND MEASUREMENT RESULT

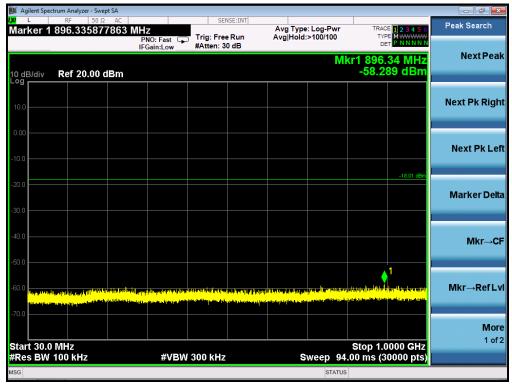
LIMITS AND MEA	SUREMENT RESULT			
Angliaghta Limita	Measurement Result			
Applicable Limits	Test Data	Criteria		
In any 100 KHz Bandwidth Outside the	At least -20dBc than the limit			
frequency band in which the spread spectrum	Specified on the BOTTOM	PASS		
intentional radiator is operating, the radio 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.	At least -20dBc than the limit	PASS		
In addition, radiation emissions which fall in the	Specified on the TOP Channel	PASS		
restricted bands, as defined in §15.205(a), must also				
comply with the radiated emission limits specified				
in§15.209(a))				



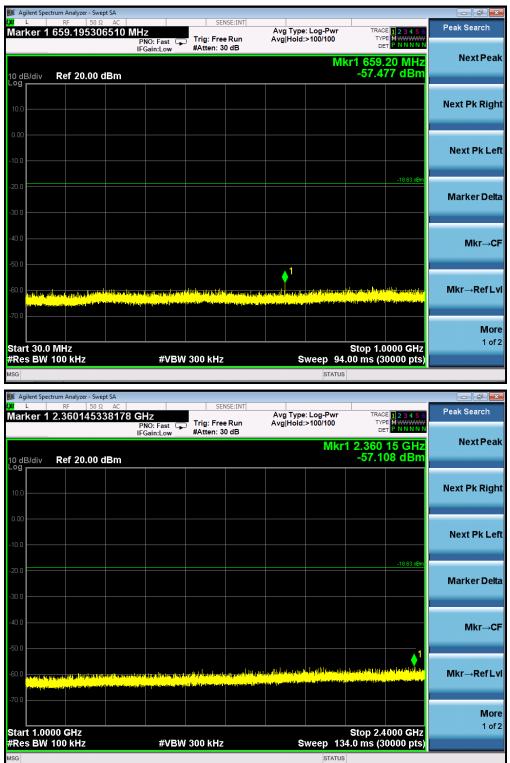
TEST PLOT OF OUT OF BAND EMISSIONS WITH THE WORST CASE OF 802.11b FOR MODULATION IN LOW CHANNEL

🎉 Agilent Spectrum A									
Marker 1 24.9	50 Ω AC 924191923064	GHz PNO: Fast		Run	Avg Type Avg Hold:	: Log-Pwr >100/100	TYP	E 1 2 3 4 5 6 E MWWWWW	Peak Search
10 dB/div Re	f 20.00 dBm	IFGain:Low	#Atten: 30) dB		Mkr	1 24.92	4 2 GHz 78 dBm	Next Peak
10.0									Next Pk Right
-10.0									Next Pk Lef
-20.0								-17.32 dBm	Marker Delta
-40.0		10 1 Audum	a (pager ^{balla} rea)			, NN			Mkr→Cf
-60.0									Mkr→RefLv
-70.0		4) (D)))				50	Stop 2	5.00 GHz	More 1 of 2
#Res BW 1.0 F	VINZ	#VBW	3.0 MHz		s	STATUS	· ·	0000 pts)	

TEST PLOT OF OUT OF BAND EMISSIONS THE WORST CASE OF 802.11b FOR MODULATION IN MIDDLE CHANNEL



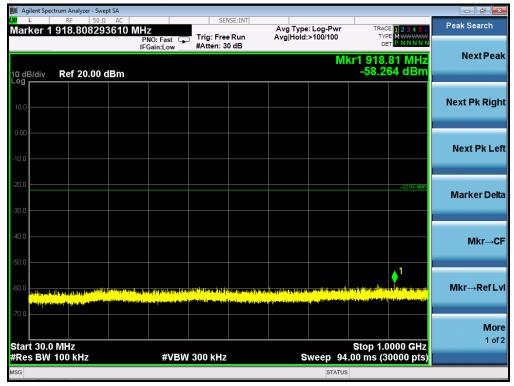
Agilent Spe	ctrum Analyzer - 3 RF 5	Swept SA 0 Ω AC		SEI	NSE:INT					
larker 1	2.161152	2038401 (GHZ PNO: Fast	Trig: Free		Avg Type Avg Hold	e: Log-Pwr :>100/100	1 Y	E 1 2 3 4 5 6 E M WWW T P N N N N	Peak Search
			IFGain:Low	#Atten: 3	0 dB		Mkr		15 GHz	NextPea
0 dB/div	Ref 20.0	0 dBm					IVINI	-56.9	41 dBm	
^{og}										
10.0										Next Pk Rig
0.00										Next Pk Le
10.0										NEXL PK L
20.0									-18.01 dBm	
20.0										Marker De
30.0										
40.0										
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itart 1.00								Stop 2.4	1000 GHz	
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SG	100 kHz	Swept SA	#VBV	V 300 kHz		S			:0000 pts)	
SG Ø Agilent Spe Ø L	ctrum Analyzer - RF 5	0Ω AC			NSE:INT	Avg Type	STATUS	TRAC	E 1 2 3 4 5 6	Peak Search
SG Ø Agilent Spe Ø L	ctrum Analyzer - RF 5	0Ω AC 98796627		SE	NSE:INT	Avg Type	STATUS	TRAC	20000 pts) E 1 2 3 4 5 6 M W W W W	Peak Search
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SG L Marker 1 0 dB/div	ctrum Analyzer - RF 5	0 Ω AC 98796627	GHz PNO: Fast	SEI	NSE:INT	Avg Type	STATUS 2: Log-Pwr :>100/100	ткас Түй 1 24.86	Е <mark>]] 2 3 4 5</mark> 6 Е М ууууу Т Р N N N N	Peak Search
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sg Agilent Spe L Aarker 1 0 dB/div 9 10 0	ctrum Analyzer - RF 5 24.8678	0 Ω AC 98796627	GHz PNO: Fast	SEI	NSE:INT	Avg Type	STATUS 2: Log-Pwr :>100/100	ткас Түй 1 24.86	E 123456 PH WWWW PNNNN 79GHz	Peak Search Next Pea Next Pk Rig
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SG Agilent Spec L Aarker 1 10.0 10.0 10.0 10.0	ctrum Analyzer - RF 5 24.8678	0 Ω AC 98796627	GHz PNO: Fast	SEI	NSE:INT	Avg Type	STATUS 2: Log-Pwr :>100/100	ткас Түй 1 24.86	E 123456 E M WWWW 7 9 GHz 99 dBm	Peak Search Next Pea Next Pk Rig Next Pk Lu
Ga Agilent Spec L L G dB/div 9 10.0 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	ctrum Analyzer - RF 5 24.8678	0 Ω AC 98796627	GHz PNO: Fast	SEI	NSE:INT	Avg Type	STATUS 2: Log-Pwr :>100/100	ткас Түй 1 24.86	E 123456 E M WWWW 7 9 GHz 99 dBm	Peak Search Next Pea Next Pk Rig Next Pk Lu
GG	ctrum Analyzer - RF 5 24.8678	0 Ω AC 98796627	GHz PNO: Fast	SEI	NSE:INT e Run 0 dB	Avg Type Avg Hold	e: Log-Pwr :>100/100 Mikr	TRACTOR TVI DI 1 24.86 -38.2	E 123456 E MWWWWW F P NNNN 7 9 GHz 99 dBm -1801 dBm	Peak Search Next Pea Next Pk Rig Next Pk Lo Marker De
G Agilent Spe L J Iarker 1 0 0B/div 0 0 0 00 0 00 0 00 0 00 0 00 0 00 0 0	Ctrum Analyzer - 5 24.86789 Ref 20.0	0 Ω AC 28796627 0 dBm	GHz PNO: Fast	Trig: Free #Atten: 3	NSE:INT e Run 0 dB	Avg Type Avg Hold	ELOG-Pwr >100/100	TRACTOR TVI DI 1 24.86 -38.2	E 123456 E MWWWWW F P NNNN 7 9 GHz 99 dBm -1801 dBm	Peak Search Next Pea Next Pk Rig Next Pk Lo Marker De
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SG Agilent Spe L Aarker 1 10.0 0.00 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	Ctrum Analyzer - 5 24.86789 Ref 20.0	0 Ω AC 28796627 0 dBm	GHz PNO: Fast	Trig: Free #Atten: 3	NSE:INT e Run 0 dB	Avg Type Avg Hold	ELOG-Pwr >100/100	TRACTOR TVI DI 1 24.86 -38.2	E 123456 E MWWWWW F P NNNN 7 9 GHz 99 dBm -1801 dBm	Peak Search Next Pea Next Pk Rig Next Pk Lo Marker De Mkr→C
GG GIE/div G G GIE/div G G GIE/div G G GIE/div G G GIE/div G G G G G G G G G G G G G G G G G G G	Ctrum Analyzer - 5 Ref 20.0	0 Ω AC 28796627 0 dBm	GHz PNO: Fast	Trig: Free #Atten: 3	NSE:INT e Run 0 dB	Avg Type Avg Hold	ELOG-Pwr >100/100	1 24.86 -38.2	E 123456 E MWWWWW F P NNNN 7 9 GHz 99 dBm -1801 dBm	Peak Search Next Pea



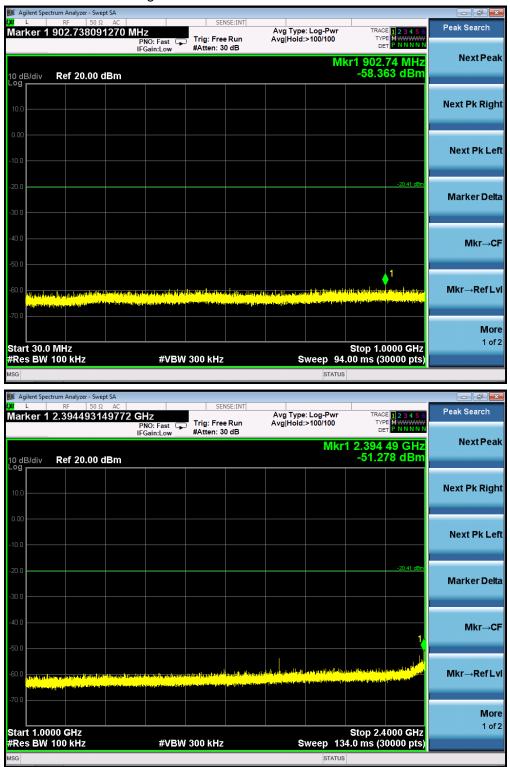
TEST PLOT OF OUT OF BAND EMISSIONS THE WORST CASE OF 802.11b FOR MODULATION IN HIGH CHANNEL

🎉 Agilent Spe	ctrum Analyzer - Swep									
Marker 1	RF 50 Ω 24.8618941		GHz		ISE:INT		: Log-Pwr	TRAC	CE 1 2 3 4 5 6	Peak Search
			NO: Fast 🖵 Gain:Low	Trig: Free #Atten: 3		Avg Hold:	>100/100	TYP		
10 dB/div	Ref 20.00 d	IBm					Mkr	1 24.86	1 9 GHz 92 dBm	NextPeak
	Kei 20.00 u									
10.0										Next Pk Righ
10.0										
0.00										
										Next Pk Lef
-10.0										
-20.0									-18.63 dBm	
										Marker Delt
-30.0									1	
-40.0								A Stated		Mkr→Ci
dia bia	tolitorer, th			المراقعة والمتحمي والمراجع	ALL ALL ALL					WIKI→CI
-50.0				and the state of the	in alle alle alle alle alle alle alle all					
-60.0										Mkr→RefLv
-70.0										
										More 1 of 2
Start 2.48 #Res BW			#VBM	3.0 MHz		9	ween 58	Stop 2	5.00 GHz 0000 pts)	1 01.
MSG			~ • E • •	0.011112			STATUS	, ·	outo proj	
	-									

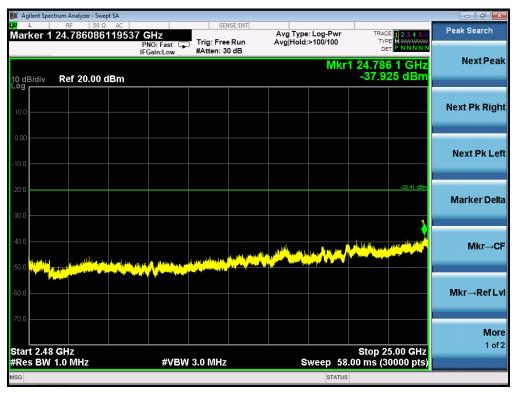
TEST PLOT OF OUT OF BAND EMISSIONS WITH THE WORST CASE OF 802.11g FOR MODULATION IN LOW CHANNEL



Agilent Spe	RF 50			SEI	NSE:INT					Peak Search
larker 1	2.399766	-	PNO: Fast 🔾	Trig: Free		Avg Type Avg Hold	e: Log-Pwr :>100/100	TRAC TYP	E 1 2 3 4 5 6 E M WWWWW T P N N N N N	Peak Search
0 dB/div	Ref 20.00		FGain:Low	#Atten: 3	0 08		Mkr	2.399	77 GHz 21 dBm	Next Pea
og 10.0										Next Pk Rig
0.00										
0.0										Next Pk Lo
0.0									-22.05 dBm	Marker De
0.0									1	Mkr→(
0.0									, the life	
		anim in the second s	ale i surà respecte ll'ar	n da pel ana da tang d			, daga kalang sa daga sa Manang sa dipakang sa dipak Manang sa dipakang sa dipak			Mkr→RefL
								Stop 24	000 GHz	M 0 1 o
								JUU 2. 4		
	000 GHz 100 kHz		#VBW	V 300 kHz		s	weep 134	1.0 ms (3	0000 pts)	
			#VBW	V 300 kHz		S	Sweep 134 STATUS	1.0 ms (3	0000 pts)	
Res BW	100 kHz	vept SA	#VBW	V 300 kHz		S		1.0 ms (3	0000 pts)	
Res BW	100 kHz ctrum Analyzer - Sw RF 50	Ω AC			NSE:INT		STATUS	1.0 ms (3	0000 pts)	Peak Search
Res BW SG (Agilent Spe	100 kHz	Ω AC 6370879	GHz PNO: Fast	Trig: Free	NSE:INT	Avg Type		1.0 ms (3	E 1 2 3 4 5 6 E MWWWWW	
Res BW	100 kHz ctrum Analyzer - Sv RF 50 24.83862	Ω AC 6370879 Π	GHz	SEI	NSE:INT	Avg Type	STATUS e: Log-Pwr :>100/100	1.0 ms (3	0000 pts) = 123456 = M T P NNNN = 6 GHz	Peak Search
Agilent Spe	100 kHz ctrum Analyzer - Sw RF 50	Ω AC 6370879 Π	GHz PNO: Fast	Trig: Free	NSE:INT	Avg Type	STATUS e: Log-Pwr :>100/100	1.0 ms (3	0000 pts) E 1 2 3 4 5 6 E M WWWW T P N N N N	Peak Search
Agilent Spe L arker 1	100 kHz ctrum Analyzer - Sv RF 50 24.83862	Ω AC 6370879 Π	GHz PNO: Fast	Trig: Free	NSE:INT	Avg Type	STATUS e: Log-Pwr :>100/100	1.0 ms (3	0000 pts) = 123456 = M T P NNNN = 6 GHz	Peak Search Next Pe
Agilent Spe L G arker 1 0 dB/div	100 kHz ctrum Analyzer - Sv RF 50 24.83862	Ω AC 6370879 Π	GHz PNO: Fast	Trig: Free	NSE:INT	Avg Type	STATUS e: Log-Pwr :>100/100	1.0 ms (3	0000 pts) = 123456 = M T P NNNN = 6 GHz	Peak Search Next Pe Next Pk Rig
Agilent Spectrum	100 kHz ctrum Analyzer - Sv RF 50 24.83862	Ω AC 6370879 Π	GHz PNO: Fast	Trig: Free	NSE:INT	Avg Type	STATUS e: Log-Pwr :>100/100	1.0 ms (3	0000 pts) = 123456 = M T P NNNN = 6 GHz	Peak Search Next Pe Next Pk Rig
Res BW G Agilent Spe L G G G G G G G G G G G G G G G G G G	100 kHz ctrum Analyzer - Sv RF 50 24.83862	Ω AC 6370879 Π	GHz PNO: Fast	Trig: Free	NSE:INT	Avg Type	STATUS e: Log-Pwr :>100/100	1.0 ms (3	0000 pts) 123456 E M State 1 2 NNNN 3 6 GHz 02 dBm	Peak Search Next Pe Next Pk Rig Next Pk Li
Agilent Spe L arker 1 arker 1 0 dB/div 9 9 0.0 0.0 0.0	100 kHz ctrum Analyzer - Sv RF 50 24.83862	Ω AC 6370879 Π	GHZ PNO: Fast Gain:Low	Trig: Free	NSE:INT e Run 0 dB	Avg Type Avg Hold	STATUS	I.0 ms (3	0000 pts)	Peak Search Next Pe Next Pk Rig Next Pk L Marker De
Res BW G Agilent Spe L Agilent	100 kHz ctrum Analyzer - Sv RF 50 24.83862	Ω AC 6370879 Π	GHz PNO: Fast	Trig: Free	NSE:INT e Run 0 dB	Avg Type Avg Hold	STATUS	I.0 ms (3	0000 pts)	Peak Search Next Pe Next Pk Rig Next Pk L Marker De
Res BW G Agilet Spe C Agilet Sp	100 kHz ctrum Analyzer - Su RF 50 24.838622 Ref 20.00	Ω AC 6370879 Π	GHZ PNO: Fast Gain:Low	Trig: Free	NSE:INT e Run 0 dB	Avg Type Avg Hold	STATUS	I.0 ms (3	0000 pts)	Peak Search Next Pe Next Pk Rig Next Pk Lu Marker De Mkr-4
Res BW G Agilent Spe C Agilent	100 kHz ctrum Analyzer - Su RF 50 24.83862 Ref 20.00 	Ω AC 6370879 Π	GHZ PNO: Fast Gain:Low	Trig: Free	NSE:INT e Run 0 dB	Avg Type Avg Hold	STATUS	I.O ms (3	0000 pts)	Peak Search Next Pea Next Pk Rig Next Pk Lu Marker De Mkr→C
Res BW G Agilet Spe arker 1 arker 1 0 dB/div 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0	100 kHz ctrum Analyzer - Su RF 50 24.83862 Ref 20.00 	Ω AC 6370879 Π	GHZ PNO: Fast Gain:Low	Trig: Free	NSE:INT	Avg Type Avg Hold	STATUS	1.0 ms (3	0000 pts)	Peak Search Next Peak Next Pk Rig Next Pk Lo Marker De Mkr→Ref L Mkr→Ref L

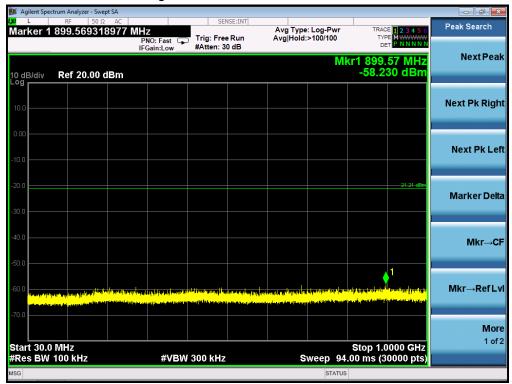


TEST PLOT OF OUT OF BAND EMISSIONS THE WORST CASE OF 802.11g FOR MODULATION IN MIDDLE CHANNEL

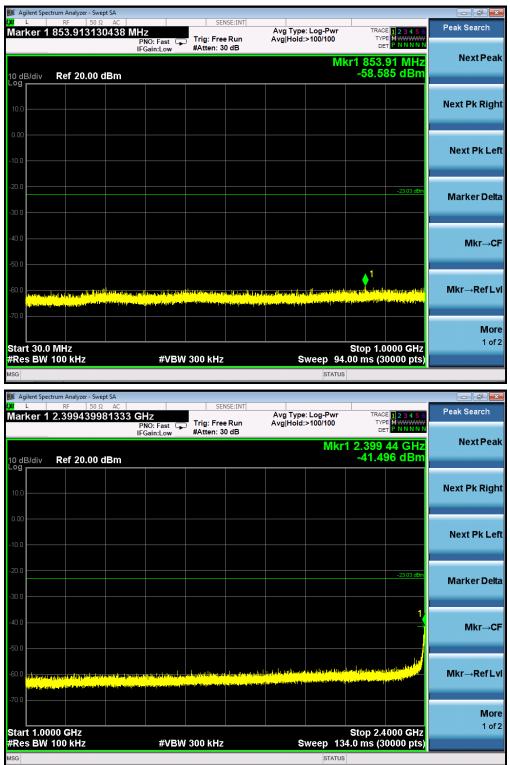


TEST PLOT OF OUT OF BAND EMISSIONS THE WORST CASE

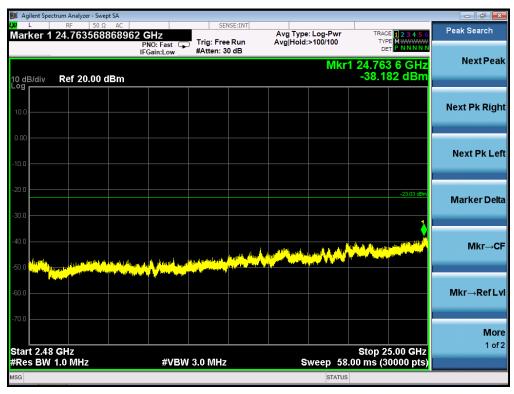
OF 802.11g FOR MODULATION IN HIGH CHANNEL



Agilent Spe	ctrum Analyzer - S RF 50	Ω AC		SEI	NSE:INT					
larker 1	2.381986	066202 0	GHZ PNO: Fast ⊂	Trig: Free	e Run	Avg Type Avg Hold	e: Log-Pwr :>100/100	111	E 1 2 3 4 5 6 E MWWWW	Peak Search
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.og										
10.0										Next Pk Rig
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10.0										NCALFRE
20.0									21.21 dBm	
20.0										Marker De
30.0										
40.0										
										Mkr→0
50.0										
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	00 GHz 100 kHz		#VBW	V 300 kHz		s	weep 13	2.4 Stop 4.0 ms	1000 GHz :0000 pts)	
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Res BW		wept SA	#VBW	V 300 kHz		S		4.0 ms (3	1000 GHz 10000 pts)	
Res BW SG Agilent Spe	100 kHz ctrum Analyzer - S RF 50	Ω AC		SEI	NSE:INT	Avg Type	STATUS	44.0 ms (3	:0000 pts) ≊ 112 3 4 5 6	Peak Search
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Res BW	100 kHz ctrum Analyzer - S RF 50 2.487252	2875096 C	SHZ PNO: Fast	SEP	NSE:INT	Avg Type	STATUS 2: Log-Pwr :>100/100	4.0 ms (3	E 123456 MWWWW PNNNN 7 3 GHz	Peak Search
Res BW GG Agilent Spe L Iarker 1 0 dB/div	100 kHz ctrum Analyzer - S RF 50	2875096 C	SHZ PNO: Fast	SEP	NSE:INT	Avg Type	STATUS 2: Log-Pwr :>100/100	4.0 ms (3	20000 pts)	Peak Search
Agilent Spe Agilent Spe Agilent Spe Agilent Spe Agilent Spe Agilent Spe Agilent Spe	100 kHz ctrum Analyzer - S RF 50 2.487252	2875096 C	SHZ PNO: Fast	SEP	NSE:INT	Avg Type	STATUS 2: Log-Pwr :>100/100	4.0 ms (3	E 123456 MWWWW PNNNN 7 3 GHz	Peak Search Next Pea
Res BW sg Agilent Spe L Iarker 1 0 dB/div	100 kHz ctrum Analyzer - S RF 50 2.487252	2875096 C	SHZ PNO: Fast	SEP	NSE:INT	Avg Type	STATUS 2: Log-Pwr :>100/100	4.0 ms (3	E 123456 MWWWW PNNNN 7 3 GHz	Peak Search Next Pea
Res BW sg Agilent Spe A L Iarker 1 0 dB/div	100 kHz ctrum Analyzer - S RF 50 2.487252	2875096 C	SHZ PNO: Fast	SEP	NSE:INT	Avg Type	STATUS 2: Log-Pwr :>100/100	4.0 ms (3	E 123456 MWWWW PNNNN 7 3 GHz	Peak Search Next Pea
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Res BW s a Agilent Spe Agilent	100 kHz ctrum Analyzer - S RF 50 2.487252	2875096 C	SHZ PNO: Fast	SEP	NSE:INT	Avg Type	STATUS 2: Log-Pwr :>100/100	4.0 ms (3	E 123456 MWWWW PNNNN 7 3 GHz	Peak Search Next Pea Next Pk Rig Next Pk Lu
Res BW s a Agilent Spe Agilent	100 kHz ctrum Analyzer - S RF 50 2.487252	2875096 C	SHZ PNO: Fast	SEP	NSE:INT	Avg Type Avg Hold	E Log-Pwr >100/100	44.0 ms (3	21 21 21 dBe	Peak Search Next Pea Next Pk Rig Next Pk Lu
Res BW sq Agient Spe A	100 kHz ctrum Analyzer - S RF 50 2.487252	2875096 C	SHZ PNO: Fast	SEP	NSE:INT	Avg Type Avg Hold	E Log-Pwr >100/100	44.0 ms (3	21 21 21 dBe	Peak Search Next Pea Next Pk Rig Next Pk Lu Marker De
Res BW s q Agient Spe Agien	100 kHz ctrum Analyzer - S RF 50 2.487252 Ref 20.00	2875096 C	SHZ PNO: Fast	Trig: Free #Atten: 3	NSE:INT	Avg Type Avg Hold	STATUS 2: Log-Pwr :>100/100	44.0 ms (3	21 21 21 dBe	Peak Search Next Pea Next Pk Rig Next Pk Lu Marker De
Agient Speed Agient Speed Agient Speed Agient Speed Agient Speed Agient Speed Agient Speed Agient Speed 10.0	100 kHz ctrum Analyzer - S RF 50 2.487252 Ref 20.00	2 0 0 AC 1875096 (0 dBm	SHZ PNO: Fast	Trig: Free #Atten: 3	NSE:INT e Run 0 dB	Avg Type Avg Hold	STATUS 2: Log-Pwr :>100/100	44.0 ms (3	21 21 21 dBe	Peak Search Next Pea Next Pk Rig Next Pk Lo Marker De Mkr→0
Res BW sg Agilent Spe	100 kHz ctrum Analyzer - S RF 50 2.487252 Ref 20.00	2 0 0 AC 1875096 (0 dBm	SHZ PNO: Fast	Trig: Free #Atten: 3	NSE:INT e Run 0 dB	Avg Type Avg Hold	STATUS 2: Log-Pwr :>100/100	44.0 ms (3	21 21 21 dBe	
Agilent Speed Agilent Speed Agilent Speed Arker 1 O dB/div 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 <	100 kHz ctrum Analyzer - S RF 50 2.487252 Ref 20.00	2 0 0 AC 1875096 (0 dBm	SHZ PNO: Fast	Trig: Free #Atten: 3	NSE:INT e Run 0 dB	Avg Type Avg Hold	STATUS 2: Log-Pwr :>100/100	44.0 ms (3	21 21 21 dBe	Peak Search Next Pea Next Pk Rig Next Pk Lo Marker De Mkr→0
Res BW s q Agient Spe L Agient Spe L G G G G G G G G G G G G G G G G G G	100 kHz ctrum Analyzer - S RF 50 2.487252 Ref 20.00	2 0 0 AC 1875096 (0 dBm	SHZ PNO: Fast	Trig: Free #Atten: 3	NSE:INT e Run 0 dB	Avg Type Avg Hold	STATUS 2: Log-Pwr :>100/100	44.0 ms (3	21 21 21 dBe	Peak Search Next Pea Next Pk Rig Next Pk Lo Marker De Mkr→C Mkr→Ref L
Res BW s a Agient Spe C Agient Spe C C C C C C C C C C C C C C C C C C C	100 kHz	2 0 0 AC 1875096 (0 dBm	SHZ PNO: Fast FGain:Low	Trig: Free #Atten: 3	NSE:INT e Run 0 dB	Avg Type Avg Hold	E: Log-Pwr >100/100	44.0 ms (3	21 21 21 dBe	Peak Search Next Pea Next Pk Rig Next Pk Lo Marker De Mkr→0



TEST PLOT OF OUT OF BAND EMISSIONS WITH THE WORST CASE OF 802.11n20 FOR MODULATION IN LOW CHANNEL

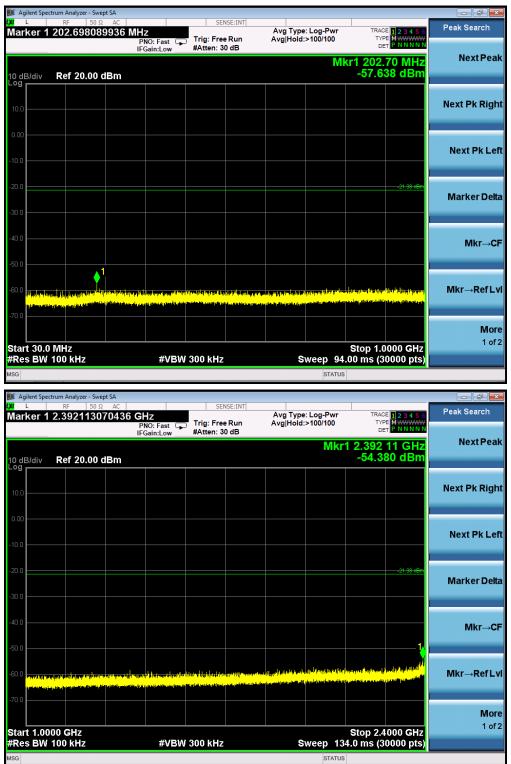


TEST PLOT OF OUT OF BAND EMISSIONS THE WORST CASE

OF 802.11n20 FOR MODULATION IN MIDDLE CHANNEL

🊺 Agiler	nt Spectru	um Analy: RF	zer - Swep 50 Ω					une turi					
Marke	er 1 8			328 N		Fast 🖵			Avg Type Avg Hold:	:: Log-Pwr :>100/100	TYP	E 1 2 3 4 5 6 E M WWWWW T P N N N N N	Peak Search
10 dB/c	div	Ref 2	0.00 d	Bm	II Ouli					M	kr1 835. -58.9	03 MHz 10 dBm	Next Pea
10.0													Next Pk Righ
0.00													Next Pk Le
20.0 _												-20.93 dBm	Marker Del
40.0 —													Mkr→C
50.0						nan kafilinda Lyda sikanaka	क्रम्बेन्द्र म् विद्वार्थित् विश्वयु	i ta 1 Ta 20 Million (a lucitori da lucitori Ta 20 Million (a lucitori da lucitori	THE TRANSPORT	an fi an fi da su ta		u yi da sa sa ka ku ku ku ku ya sa yu	Mkr→RefL
70.0													Mor 1 of
	30.0 M BW 1	VIHZ 00 KH	z			#VBW	300 kHz		S	weep 94	Stop 1.0 .00 ms (3	0000 GHz 0000 pts)	
ISG										STATUS			

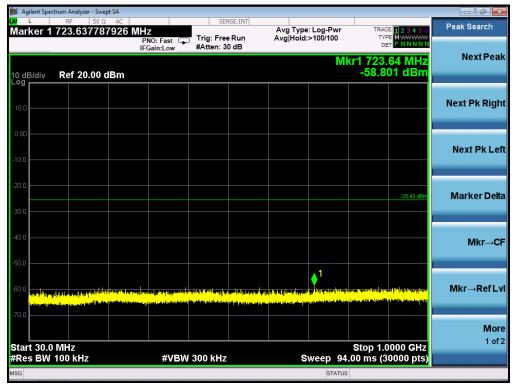
📕 Agilent Spe 🚺 L		50 Ω AC		SEN	NSE:INT					
larker 1	2.35697	1899063	GHz PNO: Fast	Trig: Free	Run		e: Log-Pwr :>100/100	TRAC TYF	E 1 2 3 4 5 6 E M WWWWW T P N N N N N	Peak Search
			IFGain:Low	#Atten: 3	0 dB					NextPe
) dB/div	Ref 20.0	0 dBm					MKC	-52.6	97 GHz 16 dBm	
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					ية المناط	L. d. forstand and	Repto the trabulit lite	ال بالعاديد ا		Mkr→RefL
U.U. High (1) of	andarah (1996) Alian (1996) Alian (1996)	nan filmi politika na ingin na na fangasi na hana si in	nyen er bisker fild fare og forset filde Reder som er ser ser som er	a international distant A statementation and some an	na ang ing ing ing ing ing ing ing ing ing i		- day plate to the design of	ing a line barbor of	Make of the state	WIKI →REI L
′0.0										
										Mo
tart 1.0	000 GHz							Stop 2.4	000 GHz	1 0
Res BW	100 kHz		#VBW	/ 300 kHz		S	weep 134	l.0 ms (3	0000 pts)	
			#VBW	/ 300 kHz		S	status	l.0 ms (3	0000 pts)	
Res BW	100 kHz		#VBW			S		l.0 ms (3	0000 pts)	
Res BW 5G (Agilent Spe	100 kHz ctrum Analyzer - RF	Swept SA 50 Ω AC 70045668	B GHz	SEN	VSE:INT	Avg Type	STATUS	TRAC	E 11 2 3 4 5 5	Peak Search
Res BW 5G (Agilent Spe	100 kHz ctrum Analyzer - RF	50 Ω AC		SEN	NSE:INT		STATUS e: Log-Pwr :>100/100	TRAC TYP DE	E] 2 3 4 5 6 E M WWWW T P N N N N N	
Res BW	100 kHz ctrum Analyzer RF 24.8303	50 Ω AC 70045668	B GHz PNO: Fast G	SEM → Trig: Free	NSE:INT	Avg Type	STATUS e: Log-Pwr :>100/100	TRAC TYP DE 24.83		Peak Search
Agilent Spe	100 kHz ctrum Analyzer - RF	50 Ω AC 70045668	B GHz PNO: Fast G	SEM → Trig: Free	NSE:INT	Avg Type	STATUS e: Log-Pwr :>100/100	TRAC TYP DE 24.83	E] 2 3 4 5 6 E M WWWW T P N N N N N	Peak Search
Res BW	100 kHz ctrum Analyzer RF 24.8303	50 Ω AC 70045668	B GHz PNO: Fast G	SEM → Trig: Free	NSE:INT	Avg Type	STATUS e: Log-Pwr :>100/100	TRAC TYP DE 24.83		Peak Search Next Pea
Res BW	100 kHz ctrum Analyzer RF 24.8303	50 Ω AC 70045668	B GHz PNO: Fast G	SEM → Trig: Free	NSE:INT	Avg Type	STATUS e: Log-Pwr :>100/100	TRAC TYP DE 24.83		Peak Search Next Pea
Res BW	100 kHz ctrum Analyzer RF 24.8303	50 Ω AC 70045668	B GHz PNO: Fast G	SEM → Trig: Free	NSE:INT	Avg Type	STATUS e: Log-Pwr :>100/100	TRAC TYP DE 24.83		Peak Search Next Pea
Res BW	100 kHz ctrum Analyzer RF 24.8303	50 Ω AC 70045668	B GHz PNO: Fast G	SEM → Trig: Free	NSE:INT	Avg Type	STATUS e: Log-Pwr :>100/100	TRAC TYP DE 24.83		Peak Search Next Pea Next Pk Rig
Res BW Gallent Spe L Gallent Spe Larker 1 0 dB/div 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	100 kHz ctrum Analyzer RF 24.8303	50 Ω AC 70045668	B GHz PNO: Fast G	SEM → Trig: Free	NSE:INT	Avg Type	STATUS e: Log-Pwr :>100/100	TRAC TYP DE 24.83		Peak Search Next Pea Next Pk Rig
Res BW G Agilent Spe L Agilent Spe L Agilent Agilent Spe L	100 kHz ctrum Analyzer RF 24.8303	50 Ω AC 70045668	B GHz PNO: Fast G	SEM → Trig: Free	NSE:INT	Avg Type	STATUS e: Log-Pwr :>100/100	TRAC TYP DE 24.83	е 123456 е минит т Римини 0 4 GHz 76 dBm	Peak Search Next Pea Next Pk Rig
Res BW G G G G G G G G G G G G G G G G G G G	100 kHz ctrum Analyzer RF 24.8303	50 Ω AC 70045668	B GHz PNO: Fast G	SEM → Trig: Free	NSE:INT	Avg Type	STATUS e: Log-Pwr :>100/100	TRAC TYP DE 24.83		Peak Search Next Pea Next Pk Rig Next Pk Lo
Res BW G G G G G G G G G G G G G G G G G G G	100 kHz ctrum Analyzer RF 24.8303	50 Ω AC 70045668	B GHz PNO: Fast G	SEM → Trig: Free	NSE:INT	Avg Type	STATUS e: Log-Pwr :>100/100	TRAC TYP DE 24.83	е 123456 е минит т Римини 0 4 GHz 76 dBm	Peak Search Next Pea Next Pk Rig Next Pk Lo
Res BW G Agilent Spe L Iarker 1 OdB/div O	100 kHz ctrum Analyzer RF 24.8303	50 Ω AC 70045668	B GHz PNO: Fast G	SEM → Trig: Free	NSE:INT	Avg Type	STATUS e: Log-Pwr :>100/100	TRAC TYP DE 24.83	е 123456 е минит т Римини 0 4 GHz 76 dBm	Peak Search Next Pea Next Pk Rig Next Pk Lu
Res BW G Agilent Spe L Iarker 1 OdB/div O	100 kHz ctrum Analyzer RF 24.8303	50 Ω AC 70045668	B GHz PNO: Fast G	Trig: Free #Atten: 31	ISE:INT	Avg Type Avg Hold	STATUS 2: Log-Pwr :>100/100 Mkr1	TRAC TYP DE 24.83	E 123456 E MANNAN O 4 GHz 76 dBm	Peak Search Next Pea Next Pk Rig Next Pk Lu Marker De
Res BW Galacia	100 kHz ctrum Analyzer RF 24.8303	50 Ω AC 70045668	B GHz PNO: Fast G	Trig: Free #Atten: 31	ISE:INT	Avg Type	STATUS 2: Log-Pwr :>100/100 Mkr1	TRAC TYF DE 24.831 -37.0	E 123456 E MANNAN O 4 GHz 76 dBm	Peak Search Next Pea Next Pk Rig Next Pk Lu Marker De
Res BW Galacia	100 kHz ctrum Analyzer RF 24.8303	50 Ω AC 70045668	3 GHz PNO: Fast IFGain:Low	Trig: Free #Atten: 31	ISE:INT	Avg Type Avg Hold	STATUS 2: Log-Pwr :>100/100 Mkr1	TRAC TYF DE 24.831 -37.0	E 123456 E MANNAN O 4 GHz 76 dBm	Peak Search Next Pea Next Pk Rig Next Pk Lo Marker De
Res BW s a a a a a a a a a a a a a a a a a a	100 kHz ctrum Analyzer RF 24.8303	50 Ω AC 70045668	3 GHz PNO: Fast IFGain:Low	Trig: Free #Atten: 31	ISE:INT	Avg Type Avg Hold	STATUS 2: Log-Pwr :>100/100 Mkr1	TRAC TYF DE 24.831 -37.0	E 123456 E MANNAN O 4 GHz 76 dBm	Peak Search Next Per Next Pk Rig Next Pk Lu Marker De Mkr→0
Res BW s a Agilent Spe C Agile	100 kHz ctrum Analyzer RF 24.8303	50 Ω AC 70045668	3 GHz PNO: Fast IFGain:Low	Trig: Free #Atten: 31	ISE:INT	Avg Type Avg Hold	STATUS 2: Log-Pwr :>100/100 Mkr1	TRAC TYF DE 24.831 -37.0	E 123456 E MANNAN O 4 GHz 76 dBm	Peak Search Next Pea Next Pk Rig Next Pk Lo Marker De Mkr→0
Res BW s a a a a a a a a a a a a a a a a a a	100 kHz ctrum Analyzer RF 24.8303	50 Ω AC 70045668	3 GHz PNO: Fast IFGain:Low	Trig: Free #Atten: 31	ISE:INT	Avg Type Avg Hold	STATUS 2: Log-Pwr :>100/100 Mkr1	TRAC TYF DE 24.831 -37.0	E 123456 E MANNAN O 4 GHz 76 dBm	Peak Search Next Pea Next Pk Rig Next Pk Lo Marker De Mkr→C
Res BW G G Agient Spe C G G G G G G G G G G G G G G G G G G	100 kHz	50 Ω AC 70045668	3 GHz PNO: Fast IFGain:Low	Trig: Free #Atten: 31	ISE:INT	Avg Type Avg Hold	STATUS 2: Log-Pwr :>100/100 Mkr1	TRAC TYF DE 24.830 -37.0	E 1 2 3 4 5 6 E M WWWW T P NNNNN 0 4 GHz 76 dBm 20.93 dbn 20.93 dbn	Peak Search Next Pea Next Pk Rig Next Pk Lu Marker De Mkr→Ref L Mo
Res BW G Agient Spe L Agient Sp	100 kHz	50 Ω AC 70045668	B CHZ PNO: Fast IFGain:Low	Trig: Free #Atten: 31	ISE:INT	Avg Type Avg Hold	STATUS 2: Log-Pwr :>100/100 Mkr1	TRAC TVF 24.830 -37.0	E 1 2 3 4 5 6 E MINISTO D 4 GHz 76 dBm	

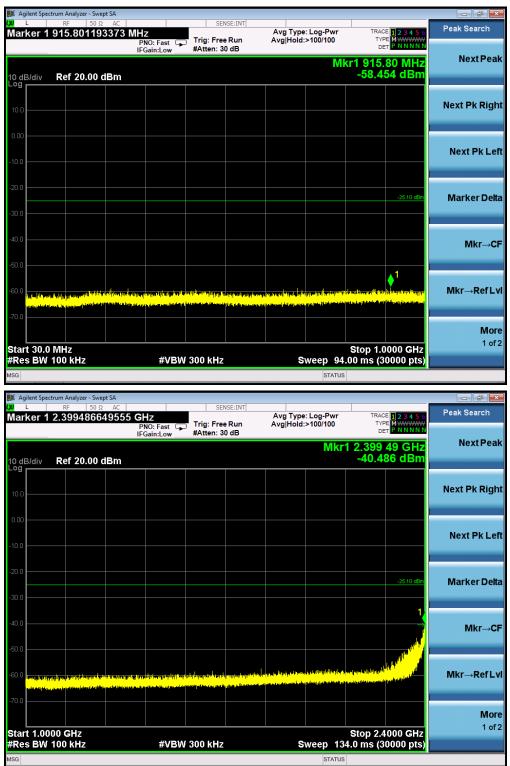


TEST PLOT OF OUT OF BAND EMISSIONS THE WORST CASE OF 802.11n20 FOR MODULATION IN HIGH CHANNEL

📜 Agilent Spec	ctrum Analyzer - Swep									
Marker 1	RF 50 Ω 2.48350000				ISE:INT		: Log-Pwr	TRAC	E 1 2 3 4 5 6	Peak Search
			NO: Fast 🕞 Gain:Low	Trig: Free #Atten: 3		Avg Hold:	:>100/100	DE		
10 dB/div Log	Ref 20.00 d	IBm					Mk	r1 2.48 -30.8	3 5 GHz 15 dBm	NextPeak
10.0										Next Pk Righ
0.00										Next Pk Lef
20.0									-21:38 dBm	Marker Delta
40.0	Les market for	a katu i	A. metalen in	an an bathanka da d	ay and a disable of	والمتهاليني	a di sind			Mkr→Cl
50.0										Mkr→RefLv
70.0 Start 2.48								Stop 2	5.00 GHz	Mor 1 of 2
#Res BW	1.0 MHz		#VBW	3.0 MHz		S	weep 58	.00 ms (3	0000 pts)	
SG							STATUS			

TEST PLOT OF OUT OF BAND EMISSIONS WITH THE WORST CASE OF 802.11n40 FOR MODULATION IN LOW CHANNEL





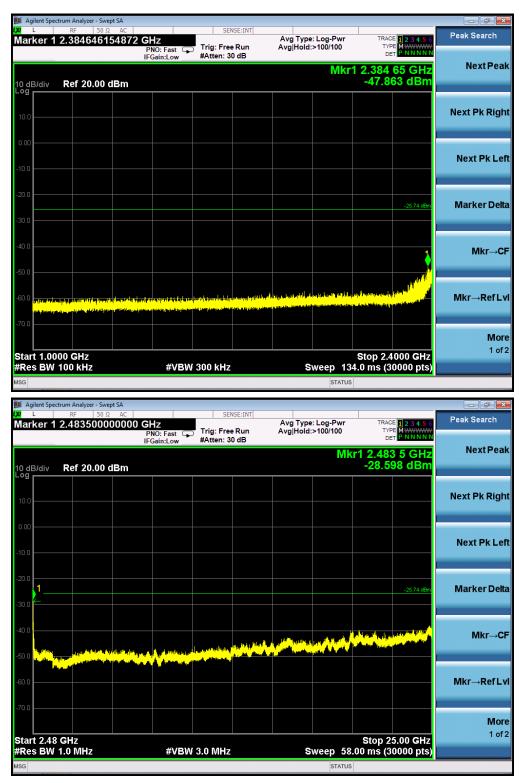
TEST PLOT OF OUT OF BAND EMISSIONS THE WORST CASE OF 802.11n40 FOR MODULATION IN MIDDLE CHANNEL



TEST PLOT OF OUT OF BAND EMISSIONS THE WORST CASE

OF 802.11n40 FOR MODULATION IN HIGH CHANNEL

	ctrum Analyzer - Swept RF 50 Ω 231.087702	AC 1923 MH P	Z NO:Fast Ģ_ Gain:Low			Avg Type Avg Hold:	: Log-Pwr >100/100	TYP	E 1 2 3 4 5 6 E M WWWW T P N N N N	Peak Search
10 dB/div	Ref 20.00 di						MI	(r1 231. -58.5	09 MHz 96 dBm	NextPeak
10.0										Next Pk Righ
-10.0										Next Pk Lef
-20.0									-25.74 dBm	Marker Delt
40.0										Mkr→C
	and the property of the second se		aliensisten al source and a source of the so	linger för förstand och som	11 and 11 and 11 and 11		Tylel a para a hâ bir A tânga da angla a da da b	n () () () () () () () () () () () () ()	ethaddarffyrthaniga Maleiradalyn felad	Mkr→RefLv
-70.0										Mor 1 of
Start 30.0 #Res BW			#VBW	300 kHz		S	weep 94	Stop 1.0 .00 ms (3	0000 GHz 0000 pts)	



Note: The 100kHz RBW used in the conducted spurious test from 2.4835GHz to 25GHz may result in long measuring times, To avoid such long measuring times, the 1MHz RBW can be used for pre-test. If the emission level exceeded the limit at one or more frequencies, the 100kHz RBW would be used for final test at the special frequency. Two transmit antennas had been tested, the antenna 0 was the worst case and record in the test report.

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-1 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

TEST ITEM	POWER PECTRAL DENSITY
TEST MODE	802.11b with data rate 1

Channel No.	Power density Chain 0 (dBm/3kHz)	Power density Chain 1 (dBm/3kHz)	Power density Total (dBm/3kHz)	Limit (dBm/3kHz)	Result
Low Channel	-11.315	-11.875	-8.576	8	Pass
Middle Channel	-11.074	-11.426	-8.236	8	Pass
High Channel	-11.257	-11.771	-8.496	8	Pass

TEST ITEM	POWER PECTRAL DENSITY
TEST MODE	802.11g with data rate 6

Channel No.	Power density Chain 0 (dBm/3kHz)	Power density Chain 1 (dBm/3kHz)	Power density Total (dBm/3kHz)	Limit (dBm/3kHz)	Result
Low Channel	-12.964	-13.185	-10.063	8	Pass
Middle Channel	-12.754	-12.913	-9.822	8	Pass
High Channel	-12.769	-12.966	-9.856	8	Pass

TEST ITEM	POWER PECTRAL DENSITY
TEST MODE	802.11n 20 with data rate 6.5

Channel No.	Power density Chain 0 (dBm/3kHz)	Power density Chain 1 (dBm/3kHz)	Power density Total (dBm/3kHz)	Limit (dBm/3kHz)	Result
Low Channel	-13.851	-14.254	-11.038	8	Pass
Middle Channel	-13.674	-13.911	-10.781	8	Pass
High Channel	-13.718	-13.975	-10.834	8	Pass

TEST ITEM	POWER PECTRAL DENSITY
TEST MODE	802.11n 40 with data rate 13.5

Channel No.	Power density Chain 0 (dBm/3kHz)	Power density Chain 1 (dBm/3kHz)	Power density Total (dBm/3kHz)	Limit (dBm/3kHz)	Result
Low Channel	-17.542	-17.869	-14.692	8	Pass
Middle Channel	-17.318	-17.522	-14.409	8	Pass
High Channel	-17.457	-17.913	-14.669	8	Pass

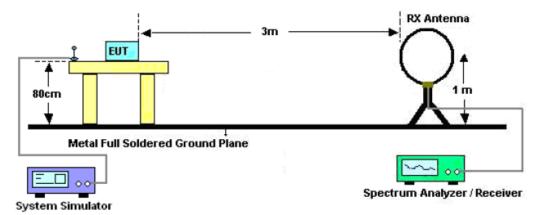
11. RADIATED EMISSION

11.1. MEASUREMENT PROCEDURE

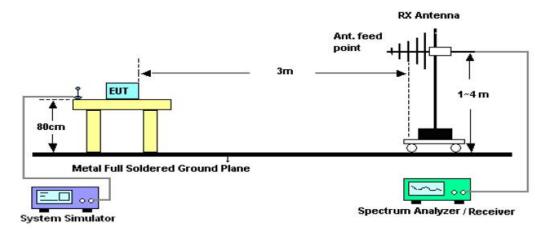
- 1. The EUT was placed on the top of the turntable 0.8 or 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
- 2. Power on the EUT and all the supporting units. The turntable was rotated 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. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
- 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

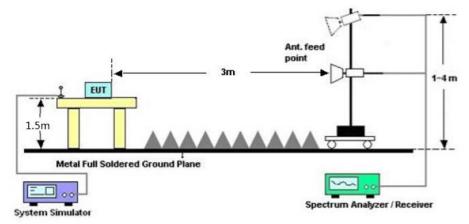
Radiated Emission Test-Setup Frequency Below 30MHz



RADIATED EMISSION TEST SETUP 30MHz-1000MHz



RADIATED EMISSION TEST SETUP ABOVE 1000MHz



11.3. LIMITS AND MEASUREMENT RESULT

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

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

Note: All modes were tested For restricted band radiated emission,

the test records reported below are the worst result compared to other modes.

11.4. TEST RESULT

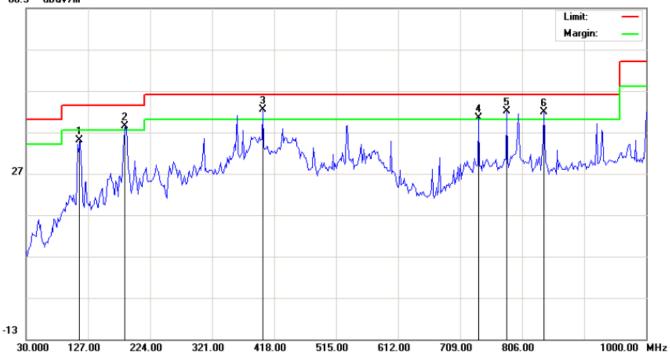
RADIATED EMISSION BELOW 30MHZ

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

RADIATED EMISSION BELOW 1GHZ

EUT	DLP Smart Projector	Model Name	RD-601
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2412MHZ	Antenna	Horizontal



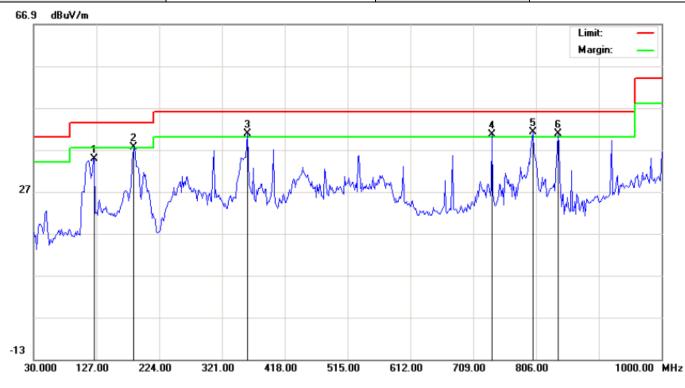


No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		114.0665	27.84	7.23	35.07	43.50	-8.43	peak			
2	İ	185.1999	27.17	11.31	38.48	43.50	-5.02	peak			
3	*	400.2167	23.24	19.08	42.32	46.00	-3.68	peak			
4	İ	738.1000	14.05	26.29	40.34	46.00	-5.66	peak			
5	İ	781.7500	14.91	27.07	41.98	46.00	-4.02	peak			
6	ļ	839.9500	14.46	27.31	41.77	46.00	-4.23	peak			

RESULT: PASS

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EUT	DLP Smart Projector	Model Name	RD-601
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2412MHZ	Antenna	Vertical



No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height		Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		123.7667	26.40	8.43	34.83	43.50	-8.67	peak			
2	İ	185.1999	24.86	12.75	37.61	43.50	-5.89	peak			
3	ļ	359.8000	21.91	18.80	40.71	46.00	-5.29	peak			
4	İ	738.1000	14.40	26.29	40.69	46.00	-5.31	peak			
5	*	801.1499	13.80	27.32	41.12	46.00	-4.88	peak			
6	İ	839.9500	13.49	27.31	40.80	46.00	-5.20	peak			

RESULT: PASS

Note:

1. Factor=Antenna Factor + Cable loss, Margin=Measurement-Limit.

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

3. The two antennas transmit simultaneously for radiated emission.

4. All test modes had been pre-tested. The 802.11b at low channel is the worst case and recorded in the report.

RADIATED EMISSION ABOVE 1GHZ

EUT	DLP Smart Projector	Model Name	RD-601
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2412MHZ	Antenna	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type			
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type			
4824.107	46.12	3.72	49.84	74	-24.16	peak			
4824.107	40.56	3.72	44.28	54	-9.72	AVG			
7236.100	42.33	8.15	50.48	74	-23.52	peak			
7236.098	37.69	8.15	45.84	54	-8.16	AVG			
Domorku									
Remark:									
actor = Ante	enna Factor + Ca	able Loss – F	Pre-amplifier.						

EUT	DLP Smart Projector	Model Name	RD-601
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2412MHZ	Antenna	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
4824.117	46.15	3.72	49.87	74	-24.13	peak
4824.032	40.53	3.72	44.25	54	-9.75	AVG
7236.023	43.74	8.15	51.89	74	-22.11	peak
7236.097	38.12	8.15	46.27	54	-7.73	AVG
Remark:						
actor = Ante	enna Factor + Ca	ble Loss – F	Pre-amplifier.			

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EUT	DLP Smart Projector	Model Name	RD-601
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2437MHZ	Antenna	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type			
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value rype			
4874.036	47.55	3.75	51.3	74	-22.7	peak			
4874.064	42.64	3.75	46.39	54	-7.61	AVG			
7311.063	42.16	8.16	50.32	74	-23.68	peak			
7311.066	36.83	8.16	44.99	54	-9.01	AVG			
Remark:									
Factor = Ante	actor = Antenna Factor + Cable Loss – Pre-amplifier.								

EUT	DLP Smart Projector	Model Name	RD-601
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2437MHZ	Antenna	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type			
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type			
4874.042	47.54	3.75	51.29	74	-22.71	peak			
4874.041	42.61	3.75	46.36	54	-7.64	AVG			
7311.041	41.55	8.16	49.71	74	-24.29	peak			
7311.063	36.74	8.16	44.9	54	-9.1	AVG			
Remark:									
Factor = Ante	actor = Antenna Factor + Cable Loss – Pre-amplifier.								

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EUT	DLP Smart Projector	Model Name	RD-601	
Temperature	25°C	Relative Humidity	55.4%	
Pressure	960hPa	Test Voltage	Normal Voltage	
Test Mode	802.11b with date rate 1 2462MHZ	Antenna	Horizontal	

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type	
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type	
4924.094	48.15	3.81	51.96	74	-22.04	peak	
4924.051	42.33	3.81	46.14	54	-7.86	AVG	
7386.117	43.54	8.19	51.73	74	-22.27	peak	
7386.119	37.61	8.19	45.8	54	-8.2	AVG	
Remark:							
Factor = Ante	enna Factor + Ca	able Loss – F	Pre-amplifier.				

EUT	DLP Smart Projector	Model Name	RD-601
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2462MHZ	Antenna	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type	
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type	
4924.030	47.22	3.81	51.03	74	-22.97	peak	
4924.069	41.18	3.81	44.99	54	-9.01	AVG	
7386.066	42.43	8.19	50.62	74	-23.38	peak	
7386.023	37.58	8.19	45.77	54	-8.23	AVG	
Remark:							
-actor = Ante	enna Factor + Ca	able Loss – F	Pre-amplifier.				

RESULT: PASS

Note:

Other emissions from 1G to 25 GHz are considered as ambient noise. No recording in the test report. Factor = Antenna Factor + Cable loss - Amplifier gain, Over=Measure-Limit.

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

All test modes had been pre-tested. The 802.11b mode is the worst case and recorded in the report. The two antennas transmit simultaneously for radiated emission.

12. BAND EDGE EMISSION

12.1. MEASUREMENT PROCEDURE

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

The two antennas transmit simultaneously for the band edge emission.

12.2. TEST SET-UP

same as 11.2

Note:

1. Factor=Antenna Factor + Cable loss - Amplifier gain. Field Strength=Factor + Reading level 2. The factor had been edited in the "Input Correction" of the Spectrum Analyzer. So the Amplitude of test plots is equal to Reading level plus the Factor in dB. Use the A dB(μ V) to represent the Amplitude. Use the F dB(μ V/m) to represent the Field Strength. So A=F.