FCC Test Report

Report No.: AGC00688140801FE04

FCC ID	:	UOSAM517
APPLICATION PURPOSE	:	Original Equipment
PRODUCT DESIGNATION	:	mobile phone
BRAND NAME	:	AMGOO
MODEL NAME	:	AM517
CLIENT	:	AMGOO TELECOM (Shenzhen) CO., LTD.
DATE OF ISSUE	:	Sept.09, 2014
STANDARD(S) TEST PROCEDURE(S)	:	FCC Part 15.247 KDB 558074 v03r02
REPORT VERSION	:	V1.0

Attestation of Global Compliance (Shenzhen) Co., Ltd

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Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes	
V1.0	/	Sept.09, 2014	Valid	Original Report	

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Applicant	AMGOO TELECOM (Shenzhen) CO., LTD.
Address	3/F, Block R2-A(North), Gaoxin S. Ave. 4th,Hi-Tech Industrial Park, Nanshan District, Shenzhen, China
Manufacturer	AMGOO TELECOM (Shenzhen) CO., LTD.
Address	3/F, Block R2-A(North),Gaoxin S. Ave. 4th, Hi-Tech Industrial Park, Nanshan District, Shenzhen, China
Product Designation	mobile phone
Brand Name	AMGOO
Test Model	AM517
Date of test	Sept.01, 2014 to Sept.05, 2014
Deviation	None
Condition of Test Sample	Normal
Report Template	AGCRT-US-BGN/RF

1. VERIFICATION OF CONFORMITY

We hereby certify that:

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

Prepared By

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2. GENERAL INFORMATION

2.1. PRODUCT DESCRIPTION

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

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Operation Frequency	2.412 GHz~2.462GHz			
Output Bower	IEEE 802.11b:11.67dBm; IEEE 802.11g:9.41dBm;			
Output Power	IEEE 802.11n(20):9.38dBm; IEEE 802.11n(40):6.59dBm			
Modulation	DSSS(DBPSK/DQPSK/CCK);OFDM(BPSK/QPSK/16-QAM/64-QAM)			
Number of channels	11			
Hardware Version	TMBIC			
Software Version	AMGOO-AM517-HN-QB25D-7402A-6572V1.0.0B03			
Antenna Designation	Integrated Antenna			
Antenna Gain	0.8 dBi			
Power Supply	DC3.7V by Built-in Li-ion Battery			

A major technical description of EUT is described as following

2.2. TABLE OF CARRIER FREQUENCYS

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

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

2.3. IEEE 802.11N MODULATION SCHEME

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

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

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

This submittal(s) (test report) is intended for **FCC ID: UOSAM517** filing to comply with the FCC Part 15 requirements.

2.5. TEST METHODOLOGY

Both conducted and radiated testing was performed according to the procedures in ANSI C63.4 (2003). Radiated testing was performed at an antenna to EUT distance 3 meters. Others testing (listed at item 5.3) was performed according to the procedures in ECC Part 15.247 rules KE

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

2.6. SPECIAL ACCESSORIES

Refer to section 5.2.

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2.7. EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.

3. MEASUREMENT UNCERTAINTY

Conducted measurement: +/- 2.75dB Radiated measurement: +/- 3.2dB

4. DESCRIPTION OF TEST MODES

NO.	TEST MODE DESCRIPTION			
1	Low channel TX			
2	Middle channel TX			
3	High channel TX			
4	Normal operating			
Note: Transmit by 802.11b with Date rate (1/2/5.5/11) Transmit by 802.11g with Date rate (6/9/12/18/24/36/48/54) Transmit by 802.11g (20MHz) with Date rate (6 5/13/19 5/26/30/52/58 5/65)				

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	mobile phone	AM517	FCC ID:UOSAM517	EUT
2	Adapter	CH4	DC5V / 600mA	Accessory
3	Battery	AM517	DC3.7V / 1400 mAh	Accessory
4	Earphone	AM517	N/A	Accessory
5	USB Cable	AM517	N/A	Accessory

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

5.3. SUMMARY OF TEST RESULTS

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

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

6. TEST FACILITY

Site	Attestation of Global Compliance (Shenzhen) Co., Ltd	
Location	2/F., Building 2, No.1-No.4, Chaxi Sanwei Technical Industrial Park, Gushu, Xixiang, Bao'an District, Shenzhen, Guangdong, China	
Description	The test site is constructed and calibrated to meet the FCC requirements in documents ANSI C63.4:2003.	

ALL TEST EQUIPMENT LIST

Description	Manufacturer	Model	S/N	Cal. Date	Cal. Due
Power Probe	R&S	NRP-Z23	100323	07/25/2014	07/24/2015
Power Meter	Agilent	N1911A	MY45100361	04/20/2014	04/20/2015
RF attenuator	N/A	RFA20db	68	N/A	N/A
Spectrum Analyzer	Agilent	E4440A	US41421290	07/25/2014	07/24/2015
Amplifier	EM	EM30180	0607030	02/27/2014	02/26/2015
Horn Antenna	EM	EM-AH-10180	67	04/19/2014	04/18/2015
Horn Antenna	A.H. Systems Inc.	SAS-574		07/25/2014	07/24/2015
EMI Test Receiver	Rohde & Schwarz	ESCI	100694	07/25/2014	07/24/2015
Biological Antenna	A.H. Systems Inc.	SAS-521-4	26	06/06/2014	06/05/2015
Loop Antenna	A.H.	SAS-526B	264	07/13/2014	07/12/2015
LISN	R&S	ESH3-Z5	8389791009	07/25/2014	07/24/2015
Radiation Cable 1	Sat	RE1	R003	06/04/2014	06/03/2015
Radiation Cable 2	Sat	RE2	R002	06/04/2014	06/03/2015
Conduction Cable	Sat	CE1	C001	06/04/2014	06/03/2015

7. PEAK OUTPUT POWER

7.1. MEASUREMENT PROCEDURE

For peak power test:

- 1. Use a direct connection between the antenna port of the transmitter and the power meter, through suitable attenuation
- 2. Set the bandwidth of the power meter is 40MHz
- 3. Record the peak value

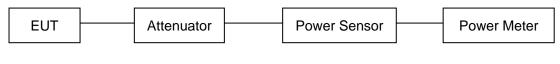
For average power test:

- 1. Connect EUT RF output port to power probe through an RF attenuator.
- 2. Connect the power probe to the PC.
- 3. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
- 4. Record the maximum power from the software.
- 5. The maximum peak power shall be less 1 Watt (30dBm).

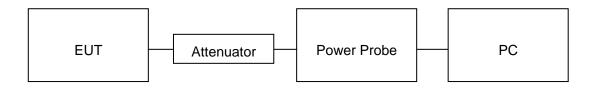
Note : The EUT was tested according to KDB 558074v03r02 for compliance to FCC 47CFR 15.247 requirements.

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

PEAK POWER TEST SETUP



AVERAGE POWER SETUP



7.3. LIMITS AND MEASUREMENT RESULT

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

	LIMITS AND MEASUREMENT RESULT			
Frequency (GHz)	Average Power (dBm)	Peak Power (dBm)	Applicable Limits (dBm)	Pass or Fail
2.412	9.46	11.44	30	Pass
2.437	9.69	11.67	30	Pass
2.462	9.15	11.13	30	Pass

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

LIMITS AND MEASUREMENT RESULT				
Frequency (GHz)	Average Power (dBm)	Peak Power (dBm)	Applicable Limits (dBm)	Pass or Fail
2.412	7.25	9.23	30	Pass
2.437	7.43	9.41	30	Pass
2.462	7.13	9.11	30	Pass

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

LIMITS AND MEASUREMENT RESULT				
Frequency (GHz)	Average Power (dBm)	Peak Power (dBm)	Applicable Limits (dBm)	Pass or Fail
2.412	7.23	9.21	30	Pass
2.437	7.4	9.38	30	Pass
2.462	7.1	9.08	30	Pass

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

	LIMITS AND MEASUREMENT RESULT			
Frequency (GHz)	Average Power (dBm)	Peak Power (dBm)	Applicable Limits (dBm)	Pass or Fail
2.422	4.54	6.52	30	Pass
2.437	4.61	6.59	30	Pass
2.452	4.34	6.32	30	Pass

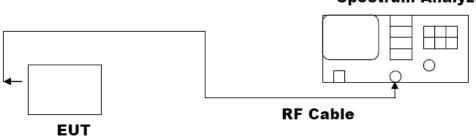
8. 6DB BANDWIDTH

8.1. MEASUREMENT PROCEDURE

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

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

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



Spectrum Analyzer

8.3. LIMITS AND MEASUREMENT RESULTS

TEST ITEM	6DB BANDWIDTH
TEST MODE	802.11b with data rate 11

LIMITS AND MEASUREMENT RESULT						
Annlinghla Limita	Applicable Limits					
Applicable Limits	Test Da	ta (MHz)	Criteria			
	Low Channel	9.584	PASS			
>500KHZ	Middle Channel	9.121	PASS			
	High Channel	9.595	PASS			

TEST ITEM	6DB BANDWIDTH
TEST MODE	802.11g with data rate 54

LIMITS AND MEASUREMENT RESULT							
Annlinghla Limita	Applicable Limits						
Applicable Limits	Test Da	Applicable Limits ata (MHz) C 15.166 15.102	Criteria				
	Low Channel	15.166	PASS				
>500KHZ	Middle Channel	15.102	PASS				
	High Channel	16.371	PASS				

TEST ITEM	6DB BANDWIDTH
TEST MODE	802.11n 20 with data rate 65

LIMITS AND MEASUREMENT RESULT						
Applicable Limite	Applicable Limits					
Applicable Limits	Test Da	ta (MHz)	Criteria			
	Low Channel	15.532	PASS			
>500KHZ	Middle Channel	Applicable Limits Data (MHz)	PASS			
	High Channel	15.149	PASS			

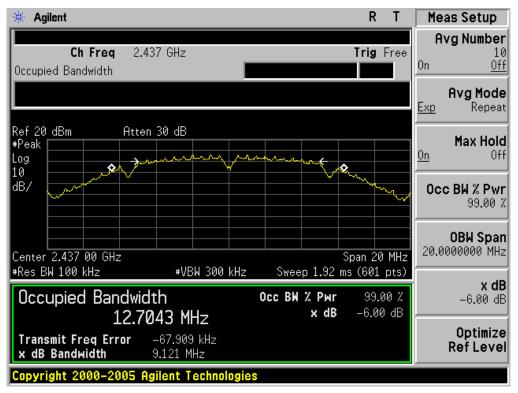
TEST ITEM	6DB BANDWIDTH
TEST MODE	802.11n 40 with data rate 135

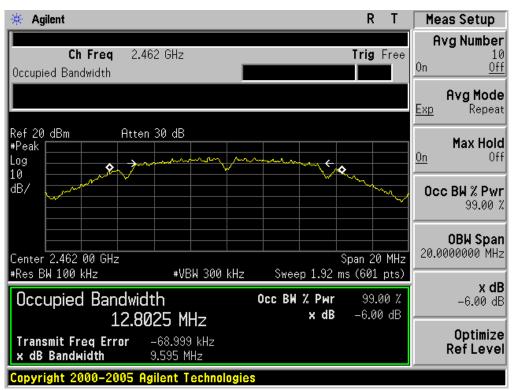
LIMITS AND MEASUREMENT RESULT							
Applicable Limite	Applicable Limits						
Applicable Limits	Test Da	ta (MHz)	Criteria				
		35.179	PASS				
>500KHZ	Middle Channel	35.260	PASS				
	High Channel	35.123	PASS				



802.11b TEST RESULT TEST PLOT OF BANDWIDTH FOR LOW CHANNEL

TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL

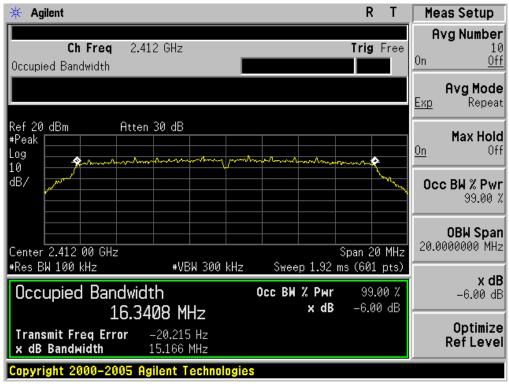


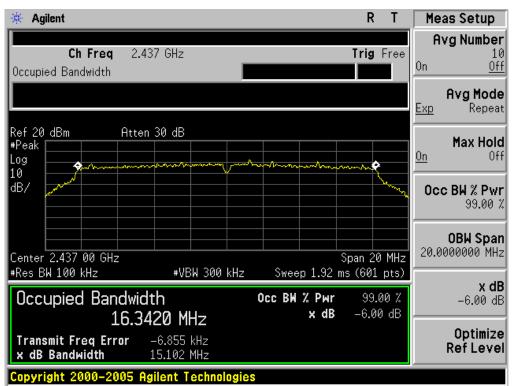


TEST PLOT OF BANDWIDTH FOR HIGH CHANNEL

802.11g TEST RESULT

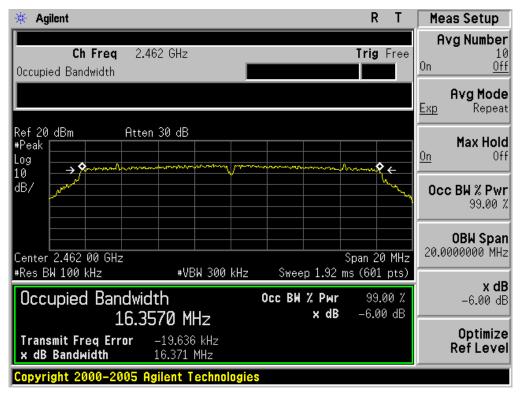
TEST PLOT OF BANDWIDTH FOR LOW CHANNEL





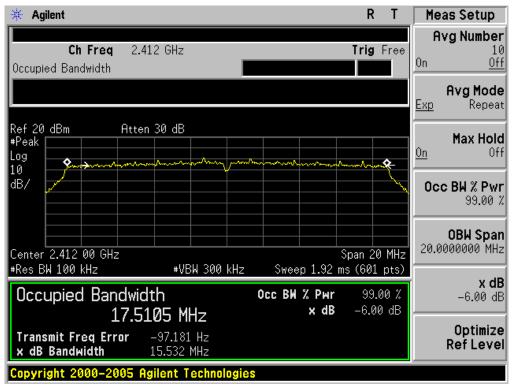
TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL

TEST PLOT OF BANDWIDTH FOR HIGH CHANNEL

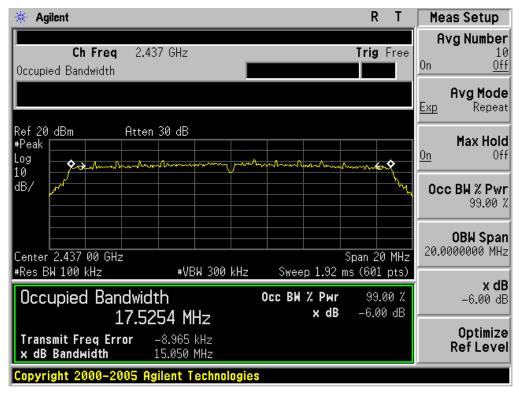


802.11n (20) TEST RESULT

TEST PLOT OF BANDWIDTH FOR LOW CHANNEL



TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL

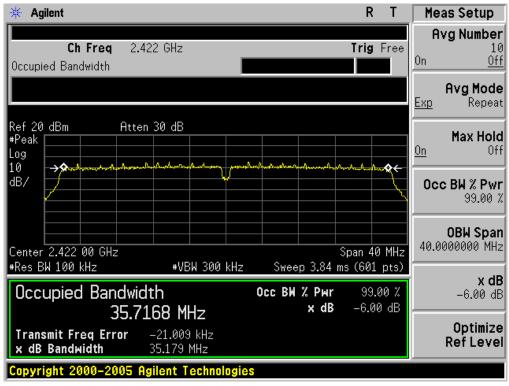


Ch Freq 2.462 GHz Trig Free Occupied Bandwidth	Avg Number 10 Off
	Avg Mode p Repeat
Ref 20 dBm Atten 30 dB #Peak Log 10 \$\$	Max Hold Off
	0cc BW % Pwr 99.00 %
Center 2.462 00 GHz Span 20 MHz Sweep 1.92 ms (601 pts)	OBW Span 0.0000000 MHz
Occupied Bandwidth Осс ВИ 2 Риг 99.00 % 17.5115 MHz × dB -6.00 dB	x dB –6.00 dB
Transmit Freq Error -8.106 kHz x dB Bandwidth 15.149 MHz Copyright 2000-2005 Agilent Technologies	Optimize RefLevel

TEST PLOT OF BANDWIDTH FOR HIGH CHANNEL

802.11n(40) TEST RESULT

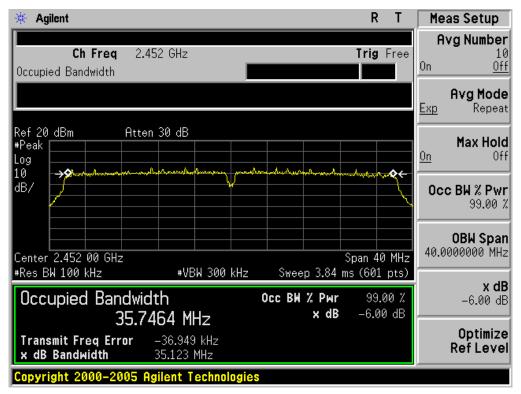
TEST PLOT OF BANDWIDTH FOR LOW CHANNEL



Log 10 dB/ On Off QDn 0 ff 0 cc BW % Pwr 99.00 % Center 2.437 00 GHz *Res BW 100 kHz *VBW 300 kHz Span 40 MHz Sweep 3.84 ms (601 pts) 0 BW Span 40.0000000 MHz Occ BW % Pwr 99.00 % 35.7605 MHz 0 cc BW % Pwr 99.00 % 99.00 %	* Agilent R T	Meas Setup
Ref 20 dBm Atten 30 dB *Peak Log 10 dB/ dB/ Center 2.437 00 GHz *Res BW 100 kHz *Res BW 100 kHz Transmit Freg Error -18.434 kHz Repeat Max Hold 0n 0Cc BW % Pwr 99.00 % Span 40 MHz Sweep 3.84 ms (601 pts) Ccc BW % Pwr 99.00 % × dB -6.00 dB Optimize Poti ovel		- 10
*Peak Log 10 dB/ Max Hold 0n Off 0n 0dB/ 0 Center 2.437 00 GHz *Res BW 100 kHz *VBW 300 kHz Span 40 MHz *Res BW 100 kHz *VBW 300 kHz Syseep 3.84 ms (601 pts) 00000000 MHz Cccupied Bandwidth 35.7605 MHz 0cc BW % Pwr Sweep 3.84 ms (601 pts) Coccupied Bandwidth 35.7605 MHz 0cc BW % Pwr Sweep 3.84 ms (601 pts) Coccupied Bandwidth 35.7605 MHz 0cc BW % Pwr Sweep 3.84 ms (601 pts)		
Image: Conterned by the second sec	#Peak	
Center 2.437 00 GHz Span 40 MHz 40.000000 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 3.84 ms (601 pts) 40.000000 MHz Occupied Bandwidth Occ BW % Pwr 99.00 % × dB -6.00 dB 35.7605 MHz × dB -6.00 dB Optimize Transmit Freg Error -18.434 kHz Optimize Optimize		
Occupied Bandwidth Occ BW % Pwr 99.00 % 35.7605 MHz x dB -6.00 dB Optimize Optimize Transmit Freg Error -18.434 kHz		
Transmit Freq Error -18.434 kHz Optimize	Occupied Bandwidth Occ BM % Pwr 99.00 %	
	Transmit Freq Error -18.434 kHz	Optimize RefLevel

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 to the Spectrum Analyzer through an RF attenuator
- 2, Set the EUT Work on the top, the middle and the bottom operation frequency individually.
- 3. Set SPA Trace 1 Max hold, then View.
- Note: The EUT was tested according to KDB 558074 for compliance to FCC 47CFR 15.247 requirements. Owing to satisfy the requirements of the number of measurement points, we set the RBW=1MHz, VBW>RBW, scan up through 10th harmonic, and consider the tested results as the worst case, if the tested results conform to the requirement, we can deem that the real tested results(set the RBW=100KHz, VBW>RBW) are conform to the requirement.

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

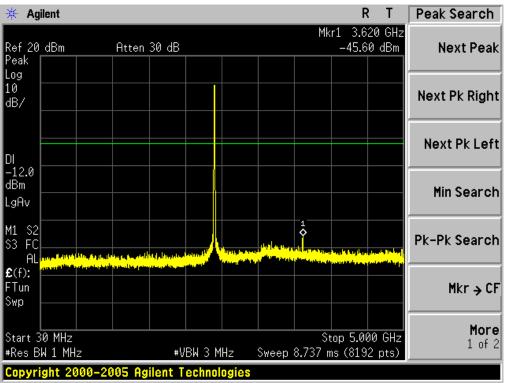
The same as described in section 8.2.

9.3. MEASUREMENT EQUIPMENT USED

The same as described in section 6.

9.4. LIMITS AND MEASUREMENT RESULT

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



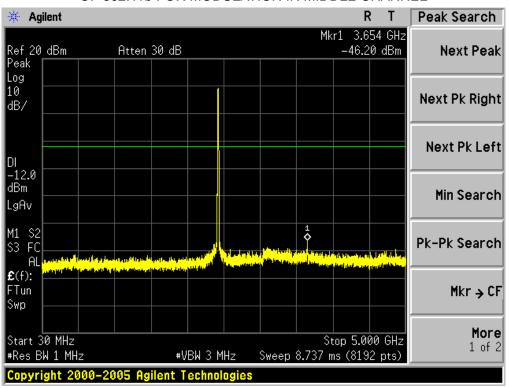
TEST PLOT OF OUT OF BAND EMISSIONS WITH THE WORST CASE OF 802.11b FOR MODULATION IN LOW CHANNEL

🔆 Agil	ent							F	T	Peak Search
Ref 20 Peak	dBm	Atten	30 dB				Mk		03 GHz 8 dBm	Next Peak
Log 10 dB/										Next Pk Right
DI										Next Pk Left
-12.0 dBm LgAv										Min Search
I 01 "	salaha dag Mili ka dagal Ta Marika ka kata ata ka	a dia serie di serie							alara dalara da	Pk-Pk Search
£ (f): - FTun Swp -										Mkr → CF
Start 5. #Res BW	000 GHz 1 MHz		#V	BW 3 M	Hz	Sweep	Sto 12.01 m		00 GHz 2 pts)	More 1 of 2
Copyrig	aht 2000	-2005 Ag	ilent T	echnol	ogies					

Dago	27	of	60
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🔆 Agilent		R	T Peak Search
Ref 20 dBm Peak	Atten 30 dB	Mkr1 16.108 -46.39 d	
Log 10 dB/			Next Pk Right
			Next Pk Left
-12.0 dBm LgAv			Min Search
M1 S2 S3 FC grad dual to the AL and the second	The second		Pk-Pk Search
£(f): FTun Swp			Mkr → CF
Start 12.000 GHz #Res BW 1 MHz	#VBW 3 MHz	Stop 19.000 (Sweep 14.2 ms (8192 p	

🔆 Agilent								F	۲	Peak Search
Ref 20 dBi Peak	n	Atten	30 dB				Mkr		106 GH: 59 dBm	
Log 10 dB/										Next Pk Right
										Next Pk Left
-12.0 dBm LgAv								1		Min Search
M1 S2 S3 FC							and the block of the			Pk-Pk Search
£ (f): FTun Swp										Mkr → CF
Start 19.0 #Res BW 1			#\	ви з м	Hz	Sweep		p 25.0 ns (819		
Copyright	2000-20	05 Ag	ilent T	echnol	ogies					

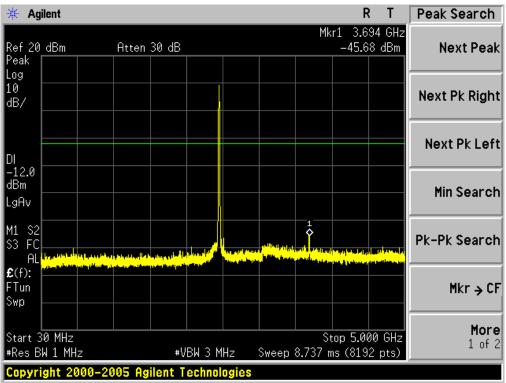


TEST PLOT OF OUT OF BAND EMISSIONS OF 802.11b FOR MODULATION IN MIDDLE CHANNEL

🔆 Agi	ilent							F	₹ T	Peak Search
Ref 20 Peak	dBm	Atten	30 dB				Mk		13 GHz 1 dBm	Next Peak
Log 10 dB/										Next Pk Right
DI										Next Pk Left
-12.0 dBm LgAv										Min Search
M1 S2 S3 FC AL	denti se proti si se co	Justs of		la stal a star			a destinant in particular		ngan Tènganan Ingan Tèngkanan	Pk-Pk Search
€(f): FTun Swp										Mkr → CF
	.000 GHz W 1 MHz		#V	ВМ З М	Hz	Sweep	Sto 12.01 m		00 GHz 2 pts)	More 1 of 2
Copyri	ght 200	0-2005 As	ilent T	echnol	ogies					

🔆 Agilent		RT	Peak Search
Ref 20 dBm Peak	Atten 30 dB	.5.476 GHz 46.94 dBm	Next Peak
Log 10 dB/			Next Pk Right
DI			Next Pk Left
-12.0 dBm LgAv			Min Search
AL	يا يو منه المراجع المراجع ومنه المراجع والمراجع والمراجع ومنه ومنها المراجع ومنه ومنها ومراجع ومراجع ومراجع وم مراجع منهم ومنه ومراجع	, st landin at a start f	Pk-Pk Search
£(f): FTun Swp			Mkr → CF
Start 12.000 GHz #Res BW 1 MHz	#VBW 3 MH	9.000 GHz 8192 pts)	More 1 of 2

🔆 Agi	ilent								R	Т	Peak Search
Ref 20 Peak	dBm		Atten	30 dB				Mkr:		47 GHz 6 dBm	Next Peak
Log 10 dB/											Next Pk Right
DI											Next Pk Left
−12.0 dBm LgAv								1			Min Search
M1 S2 S3 FC AL				(den de fel d	tinit, a tu <mark>l</mark> t Tarti a tur	hudened bit				hay ahy	Pk-Pk Search
€(f): FTun Swp											Mkr → CF
	9.000 G W 1 MHz			#V	вм з м	Hz	Sweep		ip 25.00 ns (819)		More 1 of 2
Copyri	ght 20(00-20	005 Ag	ilent T	echnol	ogies					



TEST PLOT OF OUT OF BAND EMISSIONS

OF 802.11b FOR MODULATION IN HIGH CHANNEL

🔆 Agi	ilent					R	Т	Peak Search
Ref 20 Peak	dBm	Atten 30 dB			Mkr	1 7.82 -47.76		Next Peak
Log 10 dB/								Next Pk Right
DI -12.0								Next Pk Left
dBm LgAv								Min Search
L (1)			1 National Angle Marsh	d Charlen and State and State Million and State and State	dan kanala Tabuna tabuna			Pk-Pk Search
£(f): FTun Swp								Mkr → CF
	.000 GHz W 1 MHz	#V	BW 3 MHz	Sweep 1		5 12.000 s (8192		More 1 of 2
#Res Bl	W 1 MHz	#V 905 Agilent T						

🔆 Agi	ilent								F	2 T	Peak Search
Ref 20 Peak	dBm		Atten	30 dB				Mkr:		88 GHz 9 dBm	Next Peak
Log 10 dB/											Next Pk Right
DI											Next Pk Left
−12.0 dBm LgAv											Min Search
M1 S2 S3 FC AL				(1999) de Alesse Regeler de Jacob				at biles at the			Pk-Pk Search
£(f): F⊤un Swp											Mkr → CF
Start 1 #Res B				#V	ви з м	Hz	Sweep	Sto 14.2 m		00 GHz 2 pts)	More 1 of 2
Copyri	ght 20	00-20)05 Ag	ilent T	echnol	ogies					

🔆 Agi	ilent								F	₹ T	Peak Search
Ref 20 Peak	dBm		Atten	30 dB				Mkr:		39 GHz 3 dBm	Next Peak
Log 10 dB/											Next Pk Right
DI											Next Pk Left
-12.0 dBm LgAv									1		Min Search
M1 S2 S3 FC AL	ha abdiration paratication	at ha fa an a ha sa Ng ng ng Kangalang									Pk-Pk Search
€(f): FTun Swp											Mkr → CF
Start 1 #Res Bl				#V	ВИЗМ	 Hz	Sweep	Sto 15.29 m		00 GHz 2 pts)	More 1 of 2
Copyri	ght 21	000-20)05 Ag	ilent T	echnol	ogies					

10. MAXIMUM CONDUCTED OUTPUT PEAK 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 PKPSD in the KDB 558074 item 10.2 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.	PSD (dBm)	Limit (dBm)	Result
Low Channel	-8.96	8	Pass
Middle Channel	-8.63	8	Pass
High Channel	-9.26	8	Pass

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

Channel No.	PSD (dBm)	Limit (dBm)	Result
Low Channel	-15.11	8	Pass
Middle Channel	-12.55	8	Pass
High Channel	-14.98	8	Pass

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

Channel No.	PSD (dBm)	Limit (dBm)	Result
Low Channel	-12.22	8	Pass
Middle Channel	-13.22	8	Pass
High Channel	-15.09	8	Pass

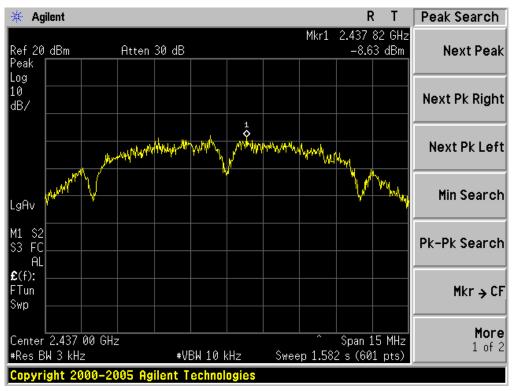
TEST ITEM	POWER PECTRAL DENSITY
TEST MODE	802.11n 40 with data rate 13.5

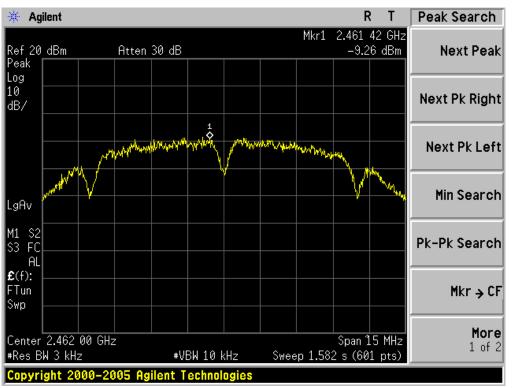
Channel No.	PSD (dBm)	Limit (dBm)	Result
Low Channel	-19.74	8	Pass
Middle Channel	-17.7	8	Pass
High Channel	-20.07	8	Pass



802.11b TEST RESULT TEST PLOT OF SPECTRAL DENSITY FOR LOW CHANNEL

TEST PLOT OF SPECTRAL DENSITY FOR MIDDLE CHANNEL

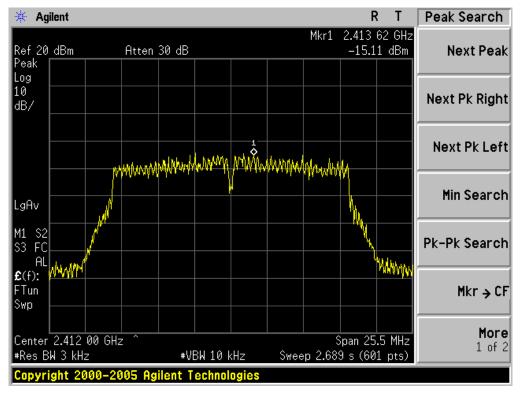


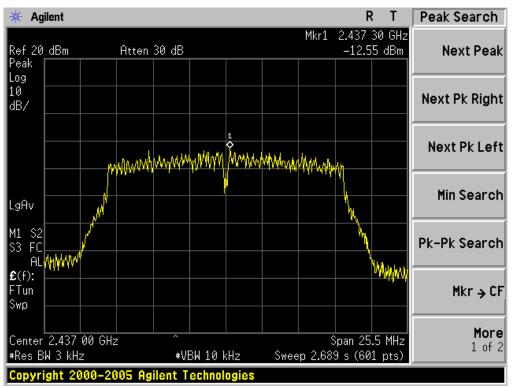


TEST PLOT OF SPECTRAL DENSITY FOR HIGH CHANNEL

802.11g TEST RESULT

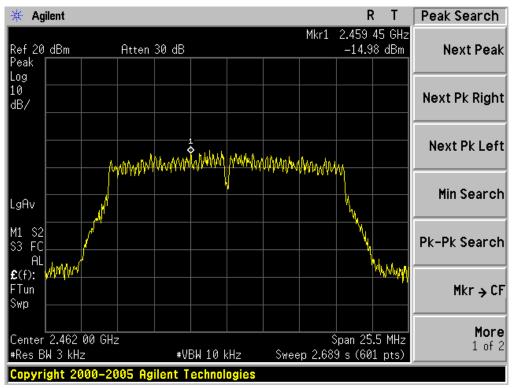
TEST PLOT OF SPECTRAL DENSITY FOR LOW CHANNEL

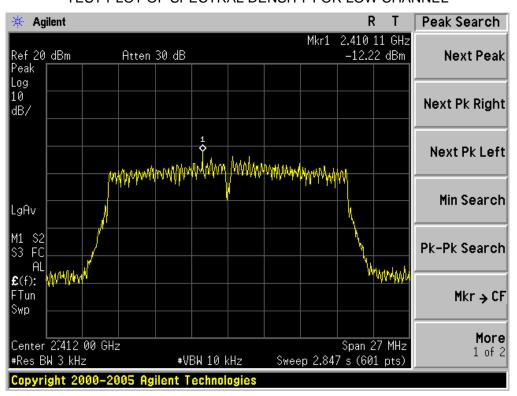




TEST PLOT OF SPECTRAL DENSITY FOR MIDDLE CHANNEL

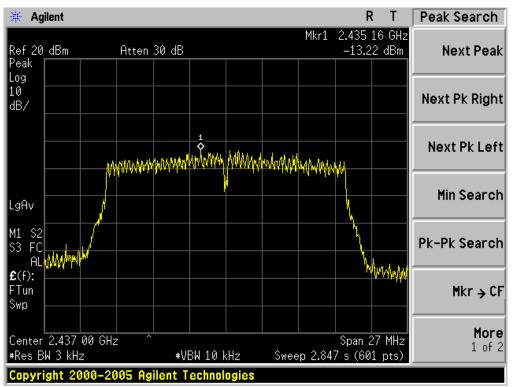
TEST PLOT OF SPECTRAL DENSITY FOR HIGH CHANNEL

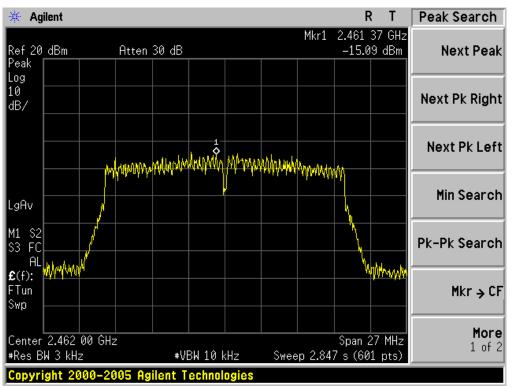




802.11n 20 TEST RESULT TEST PLOT OF SPECTRAL DENSITY FOR LOW CHANNEL

TEST PLOT OF SPECTRAL DENSITY FOR MIDDLE CHANNEL

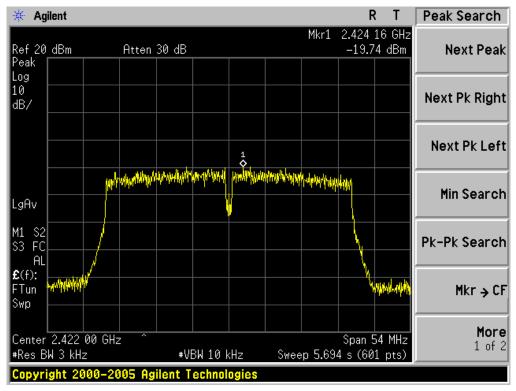


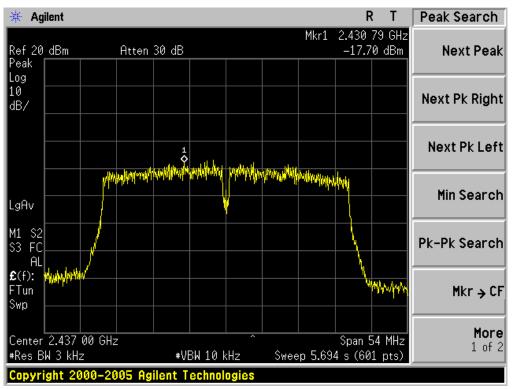


TEST PLOT OF SPECTRAL DENSITY FOR HIGH CHANNEL

802.11n 40 TEST RESULT

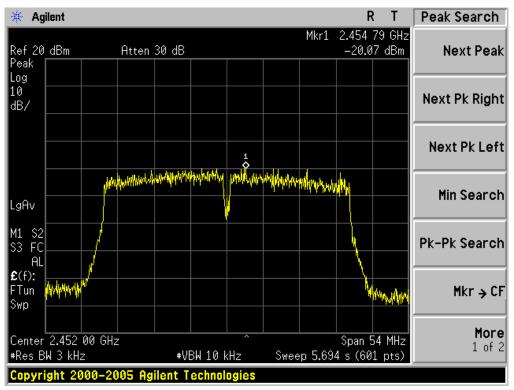
TEST PLOT OF SPECTRAL DENSITY FOR LOW CHANNEL





TEST PLOT OF SPECTRAL DENSITY FOR MIDDLE CHANNEL

TEST PLOT OF SPECTRAL DENSITY FOR HIGH CHANNEL



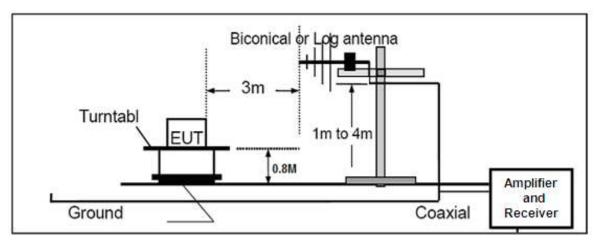
11. RADIATED EMISSION

11.1. MEASUREMENT PROCEDURE

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

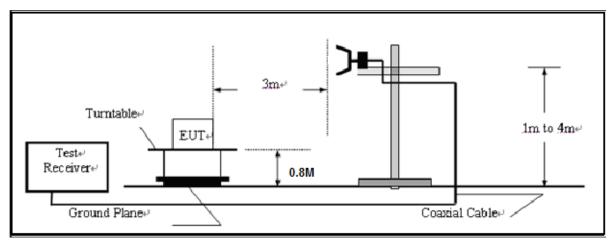
10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High - Low scan is not required in this case.

11.2. TEST SETUP



RADIATED EMISSION TEST SETUP 30MHz-1000MHz





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.

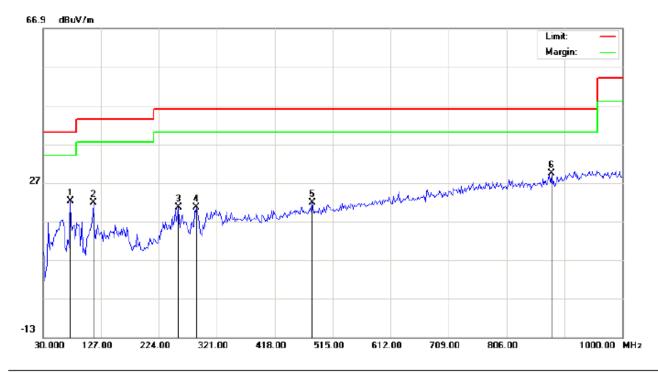
11.4. TEST RESULT

RADIATED EMISSION BELOW 30MHZ

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

RADIATED EMISSION BELO	W 1GHZ
------------------------	--------

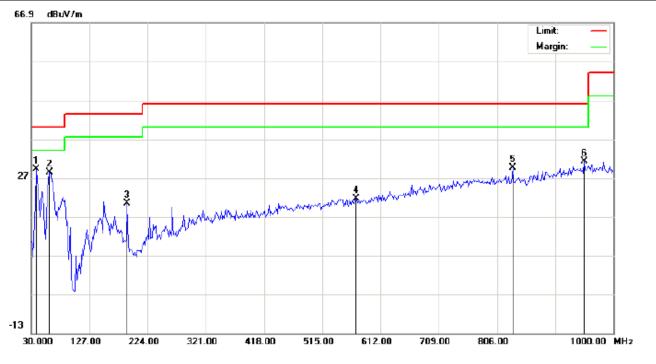
EUT mobile phone		Model Name	AM517	
Temperature	25°C	Relative Humidity	55.4%	
Pressure	960hPa	Test Voltage	Normal Voltage	
Test Mode	802.11b with date rate 1 2412MHZ	Antenna	Horizontal	



Site: site #1 Limit: FCC Class B 3M Radiation EUT: Mobile Phone M/N: AM517 Mode: Low Channel TX Note: Polarization: *Horizontal* Power: AC 120V/60Hz Distance: 3m Temperature: 26 Humidity: 60 %

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height		Comment
	•	MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		75.2667	12.15	10.02	22.17	40.00	-17.83	peak			
2		114.0667	10.29	11.45	21.74	43.50	-21.76	peak			
3		256.3333	6.44	14.09	20.53	46.00	-25.47	peak			
4		287.0500	5.61	15.02	20.63	46.00	-25.37	peak			
5		481.0500	0.95	20.93	21.88	46.00	-24.12	peak			
6	*	881.9833	1.25	28.14	29.39	46.00	-16.61	peak			

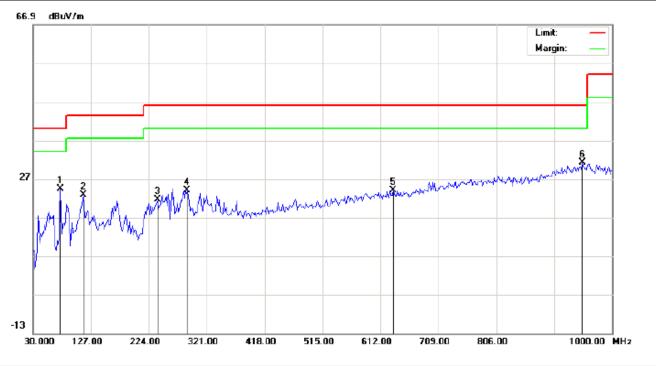
EUT	mobile phone	Model Name	AM517	
Temperature	25°C	Relative Humidity	55.4%	
Pressure	960hPa	Test Voltage	Normal Voltage	
Test Mode	802.11b with date rate 1 2412MHZ	Antenna	Vertical	



Site: site #1 Limit: FCC Class B 3M Radiation EUT: Mobile Phone M/N: AM517 Mode: Low Channel TX Note: Polarization: Vertical Power: AC 120V/60Hz Distance: 3m Temperature: 26 Humidity: 60 %

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBuV/m	dB		cm	degree	
1	*	38.0833	22.86	6.39	29.25	40.00	-10.75	peak			
2		60.7167	20.46	7.87	28.33	40.00	-11.67	peak			
3		190.0500	8.83	11.52	20.35	43.50	-23.15	peak			
4		571.5833	-0.93	22.59	21.66	46.00	-24.34	peak			
5		831.8667	2.22	27.31	29.53	46.00	-16.47	peak			
6		951.5000	1.29	29.99	31.28	46.00	-14.72	peak			

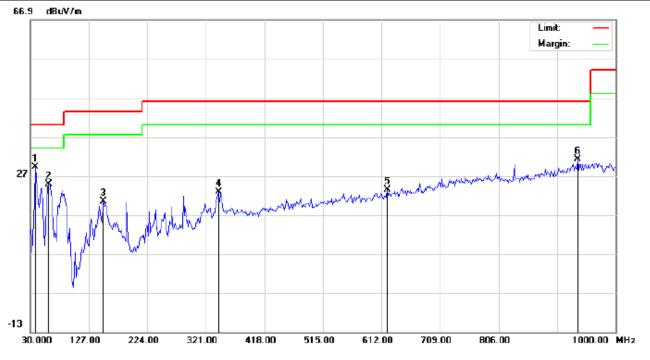
EUT	mobile phone	Model Name	AM517	
Temperature	25°C	Relative Humidity	55.4%	
Pressure	960hPa	Test Voltage	Normal Voltage	
Test Mode	802.11b with date rate 1 2437MHZ	Antenna	Horizontal	



Site: site #1 Limit: FCC Class B 3M Radiation EUT: Mobile Phone M/N: AM517 Mode: Middle Channel TX Note: Polarization: *Horizontal* Power: AC 120V/60Hz Distance: 3m Temperature: 26 Humidity: 60 %

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height		Comment
	-	MHz	dBu∀	dB/m	dBu∀/m	dBu∀/m	dB		cm	degree	
1		75.2667	14.42	10.02	24.44	40.00	-15.56	peak			
2		114.0667	11.34	11.45	22.79	43.50	-20.71	peak			
3		238.5500	8.14	13.46	21.60	46.00	-24.40	peak			
4		288.6666	9.02	15.07	24.09	46.00	-21.91	peak			
5		633.0167	0.29	23.81	24.10	46.00	-21.90	peak			
6	*	949.8833	1.20	30.00	31.20	46.00	-14.80	peak			

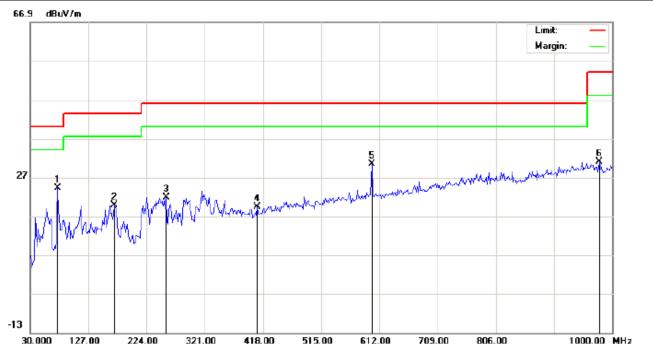
EUT	mobile phone	Model Name	AM517	
Temperature	25°C	Relative Humidity	55.4%	
Pressure	960hPa	Test Voltage	Normal Voltage	
Test Mode	802.11b with date rate 1 2437MHZ	Antenna	Vertical	



Site: site #1 Limit: FCC Class B 3M Radiation EUT: Mobile Phone M/N: AM517 Mode: Middle Channel TX Note: Polarization: Vertical Power: AC 120V/60Hz Distance: 3m Temperature: 26 Humidity: 60 %

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	•	MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1	*	38.0833	22.77	6.39	29.16	40.00	-10.84	peak			
2		60.7167	16.92	7.87	24.79	40.00	-15.21	peak			
3		151.2500	5.19	15.27	20.46	43.50	-23.04	peak			
4		342.0167	4.67	18.21	22.88	46.00	-23.12	peak			
5		621.7000	0.12	23.22	23.34	46.00	-22.66	peak			
6		936.9500	1.66	29.64	31.30	46.00	-14.70	peak			

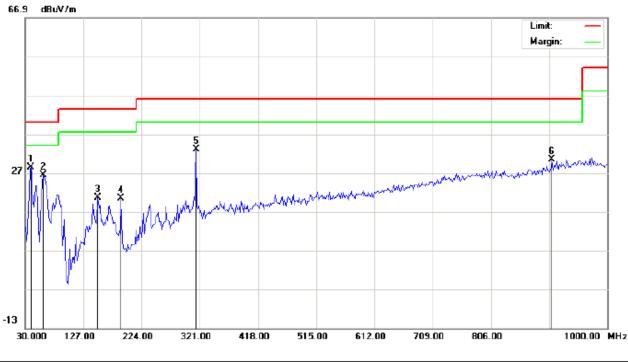
EUT	mobile phone	Model Name	AM517	
Temperature	25°C	Relative Humidity	55.4%	
Pressure	960hPa	Test Voltage	Normal Voltage	
Test Mode	802.11b with date rate 1 2462MHZ	Antenna	Horizontal	



Site: site #1 Limit: FCC Class B 3M Radiation EUT: Mobile Phone M/N: AM517 Mode: High Channel TX Note: Polarization: *Horizontal* Power: AC 120V/60Hz Distance: 3m Temperature: 26 Humidity: 60 %

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	1 1
	-	MHz	dBu∨	dB/m	dBu∀/m	dBuV/m	dB		cm	degree	
1		75.2667	14.19	10.02	24.21	40.00	-15.79	peak			
2		170.6500	6.80	13.06	19.86	43.50	-23.64	peak			
3		256.3333	7.80	14.09	21.89	46.00	-24.11	peak			
4		408.3000	0.14	19.32	19.46	46.00	-26.54	peak			
5	*	599.0667	6.77	23.71	30.48	46.00	-15.52	peak			
6		978.9833	1.27	29.72	30.99	54.00	-23.01	peak			

EUT	mobile phone	Model Name	AM517
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2462MHZ	Antenna	Vertical



Site: site #1 Limit: FCC Class B 3M Radiation EUT: Mobile Phone M/N: AM517 Mode: High Channel TX Note: Polarization: Vertical Power: AC 120V/60Hz Distance: 3m Temperature: 26 Humidity: 60 %

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1	*	39.7000	19.95	8.51	28.46	40.00	-11.54	peak			
2		60.7167	18.54	7.87	26.41	40.00	-13.59	peak			
3		151.2500	5.35	15.27	20.62	43.50	-22.88	peak			
4		190.0500	8.96	11.52	20.48	43.50	-23.02	peak			
5		314.5333	16.55	16.38	32.93	46.00	-13.07	peak			
6		907.8500	1.64	28.83	30.47	46.00	-15.53	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.

EUT	mobile phone	Model Name	AM517	
Temperature25°C		Relative Humidity	55.4%	
Pressure	960hPa	Test Voltage	Normal Voltage	
Test Mode	802.11b with date rate 1 2412MHZ	Antenna	Horizontal	
116.0 dBuV/m				
	2		Limit: — AVG: —	

RADIATED EMISSION ABOVE 1GHZ

36.0 1000.000 1500.00 2000.00 2500.00 3000.00 3500.00 4000.00 4500.00 5000.00 6000.00 MHz Site: site #1 Polarization: Horizontal Temperature: 26 Limit: FCC Class B 3M Radiation above 1GHZ(PK) Power: Humidity: 60 %

Distance: 3m

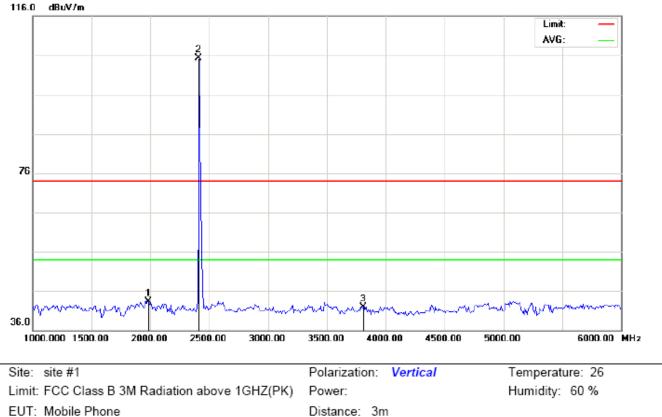
EUT: Mobile Phone M/N: AM517

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Mode: 802.11b Low Channel TX Note:

Antenna Table Reading Measurement Freq. Factor Limit Over Mk Height Degree No. Detector Comment MHz dBu∨ dB/m dBuV/m dBu∀/m dB cm degree -15.12 44.39 1 1525.000 59.51 74.00 -29.61 peak -9.67 2 * 2412.000 114.78 105.11 74.00 31.11 peak 3 5108.333 44.04 -1.80 42.24 74.00 -31.76 peak

EUT	mobile phone	Model Name	AM517
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2412MHZ	Antenna	Vertical



M/N: AM517

Mode: 802.11b Low Channel TX Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		1983.333	53.59	-10.29	43.30	74.00	-30.70	peak			
2	*	2412.000	115.07	-9.67	105.40	74.00	31.40	peak			
3		3808.333	47.95	-5.99	41.96	74.00	-32.04	peak			

RESULT: PASS

Note: The other modes radiation emissions have more than 20dB margin.

All modes radiation emission from 6GHz to 25GHz at least have 20dB margin.

Factor = Antenna Factor + Cable loss - Amplifier gain, Over=Measure-Limit.

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

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12. BAND EDGE EMISSION

12.1. MEASUREMENT PROCEDURE

1)Radiated restricted band edge measurements

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

2)Conducted Emissions at the bang edge

a)The transmitter output was connected to the spectrum analyzer

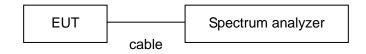
b)Set RBW=100kHz,VBW=300kHz

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

12.2. TEST SET-UP

Radiated same as 11.2

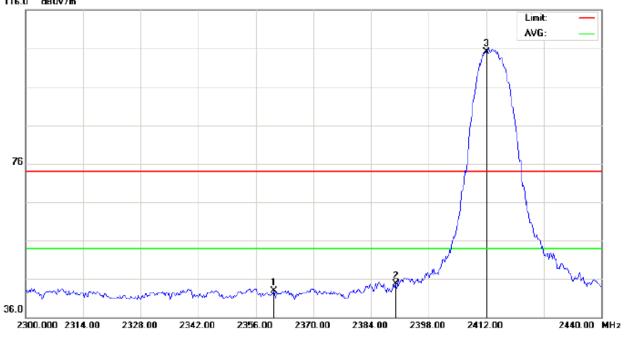
Conducted set up



12.3. Radiated Test Result

EUT	mobile phone	Model Name	AM517
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with data rate 1 2412MHZ	Antenna	Horizontal

116.0 dBuV/m



Site: site #1

Limit: FCC Class B 3M Radiation above 1GHZ(PK)

EUT: Mobile Phone

M/N: AM517

Mode: 802.11b Low Channel TX Note: Power: Distance: 3m

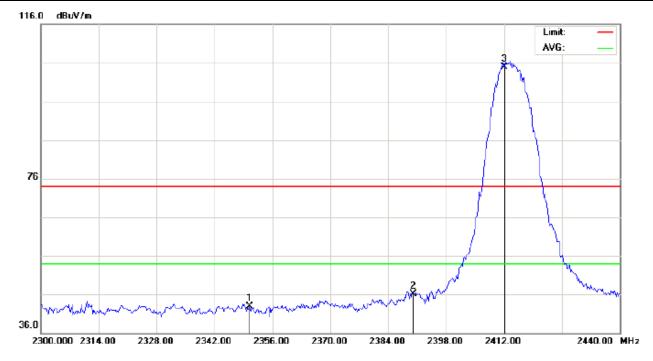
Polarization: Horizontal

Temperature: 26 Humidity: 60 %

Distance: 3r

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Table Height Degree		Comment
	-	MHz	dBu∨	dB/m	dBuV/m	dBu∀/m	dB		cm	degree	
1		2360.433	52.61	-9.72	42.89	74.00	-31.11	peak			
2		2390.000	54.40	-9.69	44.71	74.00	-29.29	peak			
3	*	2412.000	114.86	-9.67	105.19	74.00	31.19	peak			

EUT	mobile phone	Model Name	AM517	
Temperature	25°C	Relative Humidity	55.4%	
Pressure	960hPa	Test Voltage	Normal Voltage	
Test Mode	802.11b with data rate 1 2412MHZ	Antenna	Vertical	



Site: site #1 Limit: FCC Class B 3M Radiation above 1GHZ(PK) EUT: Mobile Phone

M/N: AM517

Mode: 802.11b Low Channel TX Note:

Table Antenna Factor Freq. Reading Measurement Limit Over Mk Height Degree No. Detector Comment MHz dBu∨ dB/m dBuV/m dBu∀/m dB degree cm 1 2350.400 52.71 -9.73 42.98 74.00 -31.02 peak 2 2390.000 -27.92 55.77 -9.69 46.08 74.00 peak 3 2412.000 114.58 -9.67 104.91 74.00 30.91 peak

Power:

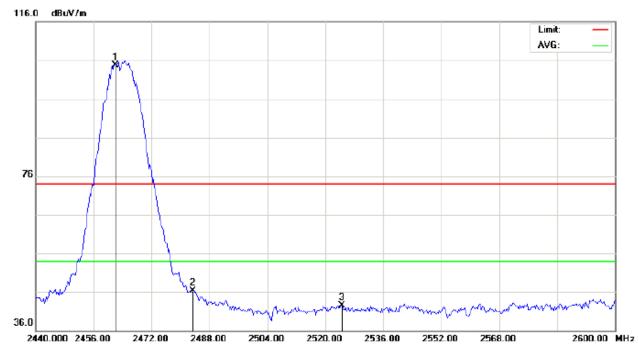
Distance: 3m

Polarization: Vertical

Temperature: 26

Humidity: 60 %

EUT	mobile phone	Model Name	AM517
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with data rate 1 2462MHZ	Antenna	Horizontal



Site: site #1

Limit: FCC Class B 3M Radiation above 1GHZ(PK)

Freq.

MHz

2462.000

2483.500

2524.533

EUT: Mobile Phone

M/N: AM517

Mode: 802.11b High Channel TX Note:

Reading

dBu∨

114.39

55.81

52.02

Factor

dB/m

-9.61

-9.59

-9.51

Power:

Temperature: 26

Comment

Distance: 3m

Limit

dBuV/m

74.00

74.00

74.00

Measurement

dBuV/m

104.78

46.22

42.51

RESULT: PASS

Mk

*

No.

1 2

3

Over

dB

30.78

-27.78

-31.49

Detector

peak

peak

peak

Antenna

Height

cm

Table

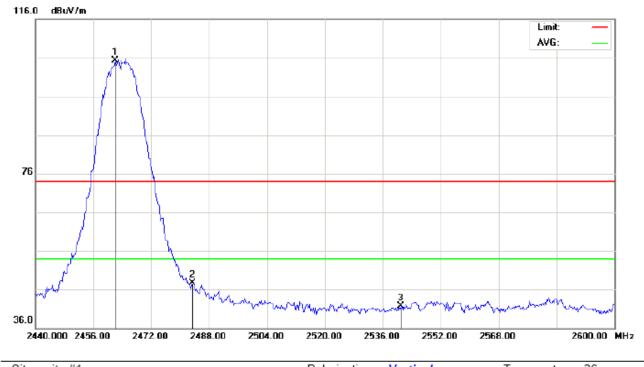
Degree

degree

Polarization: Horizontal

Humidity: 60 %

EUT	mobile phone	Model Name	AM517
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with data rate 1 2462MHZ	Antenna	Vertical



Site: site #1Polarization: VerticalTemperature: 26Limit: FCC Class B 3M Radiation above 1GHZ(PK)Power:Humidity: 60 %EUT: Mobile PhoneDistance: 3mM/N: AM517Mode: 802.11b High Channel TXNote:Vertical

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	-	MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1	*	2462.000	114.92	-9.61	105.31	74.00	31.31	peak			
2		2483.500	57.22	-9.59	47.63	74.00	-26.37	peak			
3		2541.067	51.15	-9.47	41.68	74.00	-32.32	peak			

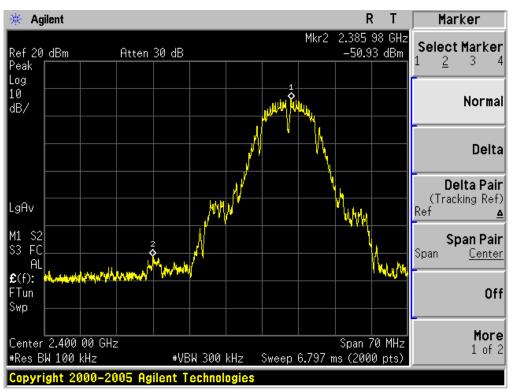
RESULT: PASS

Note: The other modes radiation emission have enough 20dB margin.

Factor = Antenna Factor + Cable loss - Amplifier gain, Over=Measure-Limit.

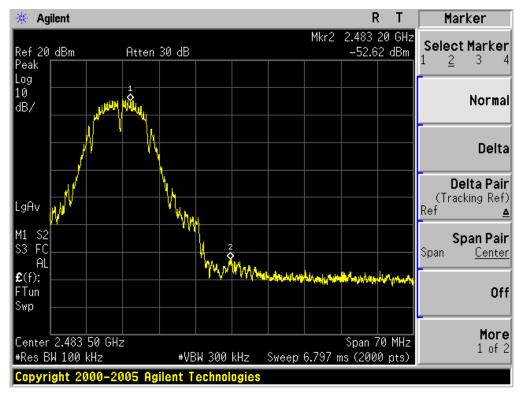
The "Factor" value can be calculated automatically by software of measurement system.

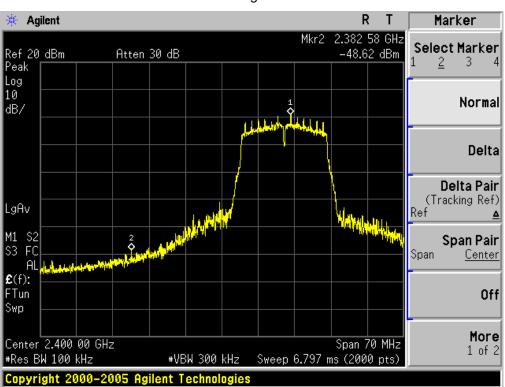
12.4. Conducted Test Result



802.11b-CH1

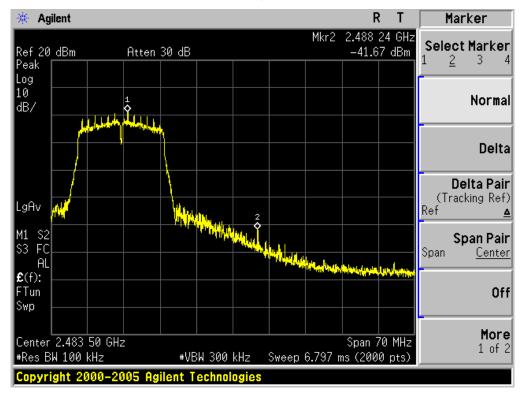
802.11b-CH11

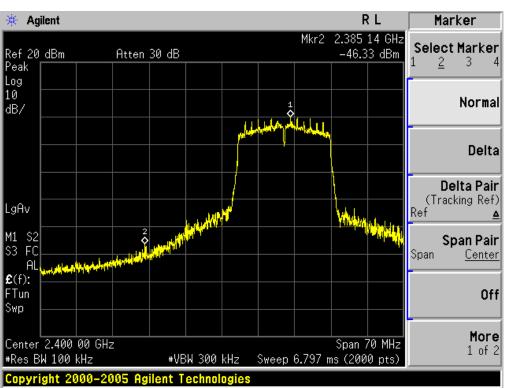




802.11g- CH1

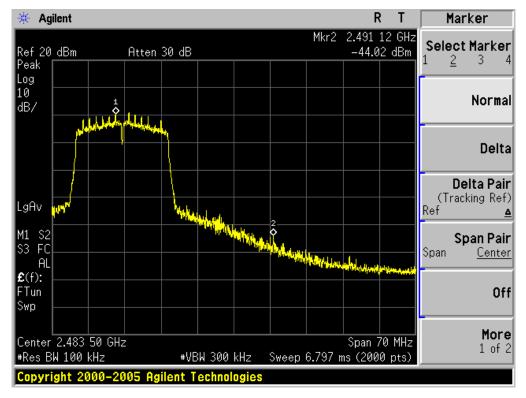
802.11g- CH11





802.11n-CH1

802.11n-CH11



13. FCC LINE CONDUCTED EMISSION TEST

13.1. LIMITS OF LINE CONDUCTED EMISSION TEST

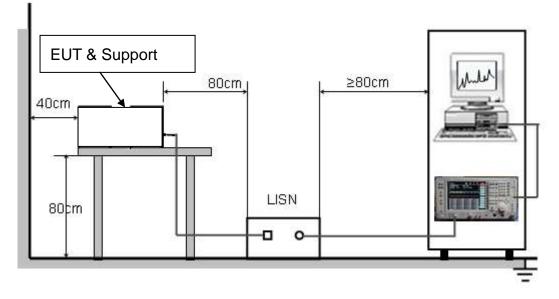
Frequency	Maximum RF Line Voltage					
Frequency	Q.P.(dBuV)	Average(dBuV)				
150kHz~500kHz	66-56	56-46				
500kHz~5MHz	56	46				
5MHz~30MHz	60	50				

Note:

1. The lower limit shall apply at the transition frequency.

2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.

13.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST



13.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST

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

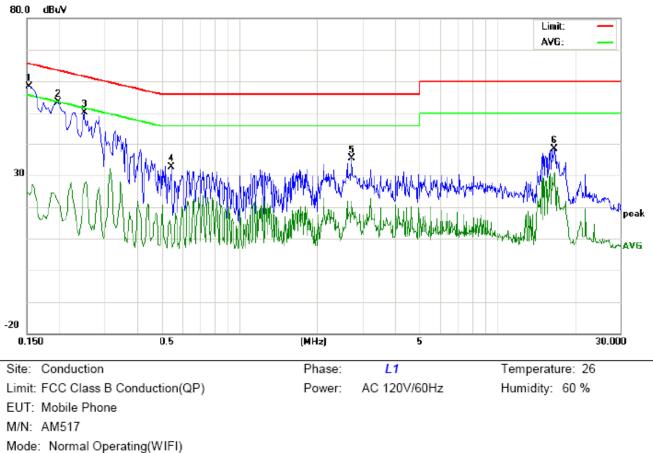
Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

13.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST

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

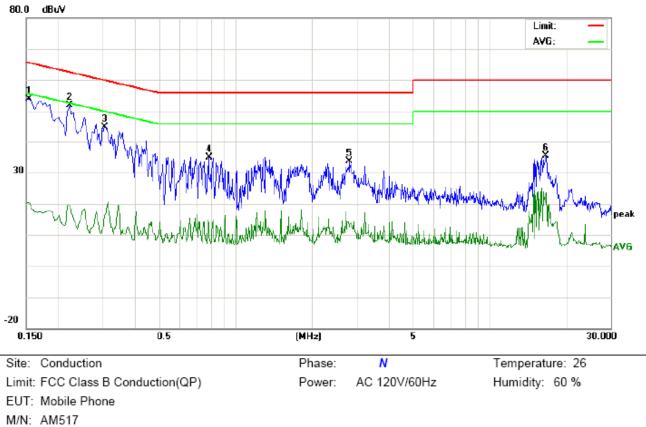
13.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST





mode.	110
Note:	

No.	Freq. (MHz)	Reading_Level (dBuV)		Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment	
		Peak	QP	AVG	dB	Peak	QP	AVG	QP	AVG	QP	AVG		
1	0.1539	48.35		14.45	10.16	58.51		24.61	65.78	55.78	-7.27	-31.17	Ρ	
2	0.1980	43.27		11.13	10.21	53.48		21.34	63.69	53.69	-10.21	-32.35	Ρ	
3	0.2500	39.91		16.96	10.27	50.18		27.23	61.75	51.75	-11.57	-24.52	Ρ	
4	0.5460	22.24		-1.39	10.36	32.60		8.97	56.00	46.00	-23.40	-37.03	Ρ	
5	2.7260	24.93		11.30	10.48	35.41		21.78	56.00	46.00	-20.59	-24.22	Р	
6	16.6900	28.21		20.47	10.12	38.33		30.59	60.00	50.00	-21.67	-19.41	Р	



Line Conducted Emission Test Line 2-N

Mode: Normal Operating(WIFI)

Note:

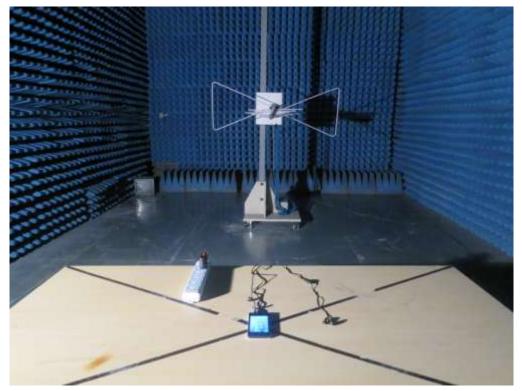
	Freq.	Reading_Level (dBuV)		Correct Factor				Limit (dBuV)		Margin (dB)		P/F	Comment	
	(MHz)	Peak	QP	AVG	dB	Peak	QP	AVG	QP	AVG	QP	AVG	• • •	
1	0.1539	43.65		10.26	10.16	53.81		20.42	65.78	55.78	-11.97	-35.36	Р	
2	0.2220	41.52		9.19	10.24	51.76		19.43	62.74	52.74	-10.98	-33.31	Р	
3	0.3060	43.46		9.88	10.29	53.75		20.17	60.08	50.08	-6.33	-29.91	Р	
4	0.7860	24.46		3.28	10.29	34.75		13.57	56.00	46.00	-21.25	-32.43	Р	
5	2.8179	23.15		2.95	10.51	33.66		13.46	56.00	46.00	-22.34	-32.54	Р	
6	16.6900	25.36		13.32	10.12	35.48		23.44	60.00	50.00	-24.52	-26.56	Р	

APPENDIX A: PHOTOGRAPHS OF TEST SETUP

FCC LINE CONDUCTED EMISSION TEST SETUP

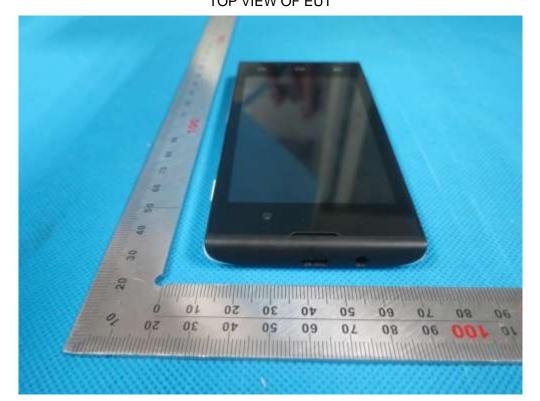


FCC RADIATED EMISSION TEST SETUP





TOP VIEW OF EUT



APPENDIX B: PHOTOGRAPHS OF EUT





BOTTOM VIEW OF EUT



BACK VIEW OF EUT

LEFT VIEW OF EUT





OPEN VIEW OF EUT-1

RIGHT VIEW OF EUT

0 1 a -8 0.02

OPEN VIEW OF EUT-2

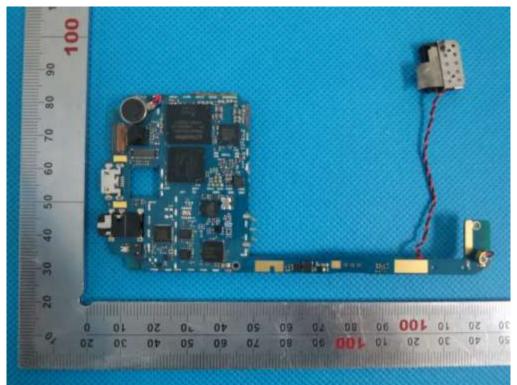
OPEN VIEW OF EUT-3



SALAS HILLING 10 100 30 80 20 30 50 10 100 30 Or Ó.

INTERNAL VIEW OF EUT-1

INTERNAL VIEW OF EUT-2



----END OF REPORT----