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FCC Test Report

Report No.: AGC00529140203FE04

FCC ID	:	Y7WPLUMZ708
APPLICATION PURPOSE	:	Original Equipment
PRODUCT DESIGNATION	:	Tablet PC
BRAND NAME	:	plum
MODEL NAME	:	Z708
CLIENT	:	CLC Hong Kong Limited
DATE OF ISSUE	:	Feb. 15, 2014
STANDARD(S)	:	FCC Part 15 Rules
REPORT VERSION	:	V1.0

Attestation of Global Compliance (Shenzhen) Co., Ltd

mplian

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Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Feb. 15, 2014	Valid	Original Report

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Applicant	CLC Hong Kong Limited	
Address	2209, Concordia Plaza, North Tower, No.1 Science Museum Road, Tsim Sha Tsui East, Kowloon, Hong Kong	
Manufacturer	CLC Technology Co. Ltd.	
Address	Room 6G, Block C, NEO Building, Chegongmiao, Futian District, Shenzhen, P.R.China	
Product Designation Tablet PC		
Brand Name	plum	
Test Model Z708		
Date of test	Feb. 10, 2014 to Feb.13, 2014	
Deviation	None	
Condition of Test Sample	Normal	
Report Template	AGCRT-US-BGN/RF (2013-03-01)	

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 "Tablet". 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			

Operation Frequency	requency 2.412 GHz~2.462GHz	
Output Power	IEEE 802.11b:13.34dBm; IEEE 802.11g:9.77dBm;	
	IEEE 802.11n(20):9.87dBm; IEEE 802.11n(40):7.89dBm	
Modulation DSSS(DBPSK/DQPSK/CCK);OFDM(BPSK/QPSK/16-QAM/64-QAM		
Number of channels 11		
Hardware Version	YG-MG713(B3-3)JB	
Software Version	ALPS.JB.MP.V1.15	
Antenna Designation	Integrated Antenna	
Antenna Gain 1.2 dBi		
Power Supply	DC3.7V by Built-in Li-ion Battery	

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
2412~2462MHZ	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	BPS	NDI	BPS	rate(I	ata Mbps) 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: Y7WPLUMZ708** filing to comply with the FCC Part 15 requirements.

2.5. TEST METHODOLOGY

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

2.6. SPECIAL ACCESSORIES

Refer to section 5.2.

2.7. EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.

3. MEASUREMENT UNCERTAINTY

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

4. DESCRIPTION OF TEST MODES

NO.	TEST MODE DESCRIPTION				
1	Low channel TX				
2	Middle channel TX				
3	High channel TX				
4	Normal operating				
Note:					
Transmit by 802.11b with Date rate (1/2/5.5/11)					
Transmit by 802.11g with Date rate (6/9/12/18/24/36/48/54)					
Transm	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.

2. All modes under which configure applicable have been tested and the worst mode test data recording in the test report, if no other mode data.

3. For Radiated Emission, 3axis were chosen for testing for each applicable mode.

5. SYSTEM TEST CONFIGURATION

5.1. CONFIGURATION OF EUT SYSTEM

Configure:

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

5.2. EQUIPMENT USED IN EUT SYSTEM

Item	Equipment	Model No.	ID or Specification	Remark
1	Tablet PC	Z708	FCC ID: Y7WPLUMZ708	EUT
2	Adapter	WRP2U-050200U	DC5V /2A	Accessory
3	Battery	PL0355149P	DC3.7V/ 3000 mAh	Accessory
4	Earphone	Z708	N/A	Accessory
5	USB Cable	Z708	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	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	07/17/2013	07/16/2014
RF attenuator	N/A	RFA20db	68	N/A	N/A
Spectrum Analyzer	Agilent	E4440A	US41421290	07/17/2013	07/16/2014
Amplifier	EM	EM30180	0607030	07/17/2013	07/16/2014
Horn Antenna	EM	EM-AH-10180	67	04/21/2013	04/20/2014
Horn Antenna	A.H. Systems Inc.	SAS-574		07/17/2013	07/16/2014
EMI Test Receiver	Rohde & Schwarz	ESCI	100694	07/17/2013	07/16/2014
Biological Antenna	A.H. Systems Inc.	SAS-521-4	26	06/07/2013	06/06/2014
Loop Antenna	A.H.	SAS-526B	264	07/14/2013	07/13/2014
LISN	R&S	ESH3-Z5	8389791009	07/17/2013	07/16/2014

7. PEAK OUTPUT POWER

7.1. MEASUREMENT PROCEDURE

For peak power test:

- 1. The EUT was placed on a turn table which is 0.8m above ground plane.
- 2. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- 3. Set the EUT Work on the top, middle and the bottom operation frequency individually.
- 4. Use the following spectrum analyzer settings:

Set the RBW = 1 MHz Set the VBW \geq 3 RBW Set the span \geq 1.5 x DTS bandwidth Detector = peak Sweep time = auto couple Trace mode = max hold

- 5. Allow the trace to stabilize. Use the instrument's band/channel power measurement function with the band limits set equal to the DTS bandwidth edges.
- 6. Record the result form the Spectrum Analyzer.

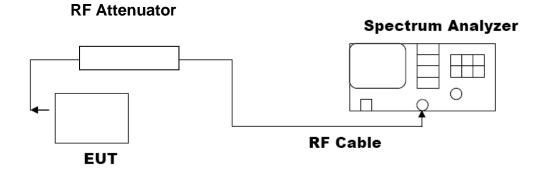
For average power test:

- 1. The EUT was placed on a table which is 0.8m above ground plane.
- 2. Connect EUT RF output port to power probe through an RF attenuator.
- 3. Connect the power probe to the PC.
- 4. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
- 5. Record the maximum power from the software.
- 6. The maximum peak power shall be less 1 Watt (30dBm).

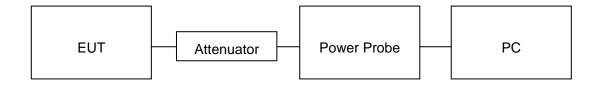
Note : The EUT was tested according to KDB 558074 for compliance to FCC 47CFR 15.247 requirements.

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

PEAK POWER TEST SETUP



AVERAGE POWER SETUP

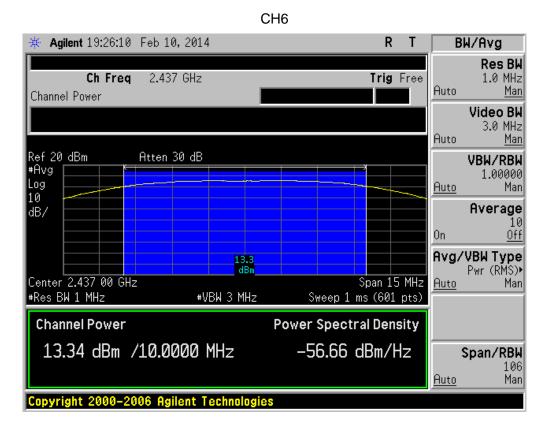


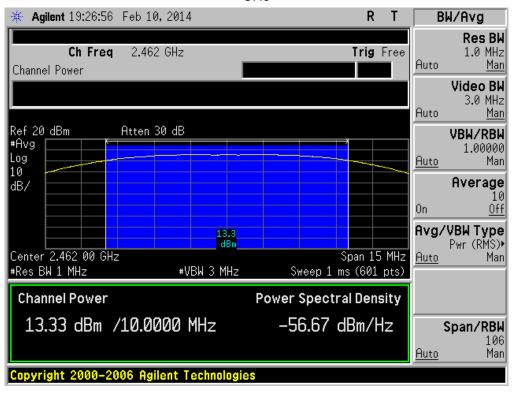
7.3. LIMITS AND MEASUREMENT RESULT

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	11	12.98	30	Pass		
2.437	11.36	13.34	30	Pass		
2.462	11.35	13.33	30	Pass		

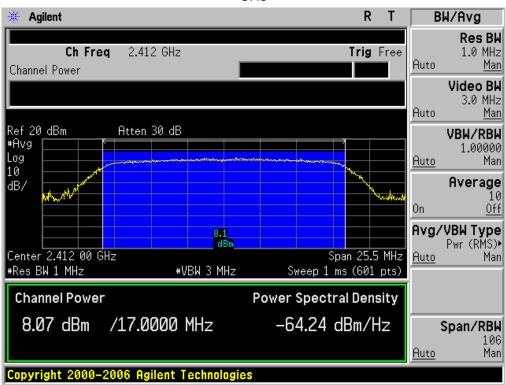
CH3		
🔆 Agilent 19:25:24 Feb 10, 2014	RT	BW/Avg
Ch Freq 2.412 GHz Channel Power	Trig Free	Res BW 1.0 MHz Auto <u>Man</u>
		Video BW 3.0 MHz Auto <u>Man</u>
Ref 20 dBm Atten 30 dB #Avg Log 10		VBW/RBW 1.00000 <u>Auto</u> Man
		Average 10 On <u>Off</u>
Center 2.412 00 GHz	Span 15 MHz	Avg/VBW Type Pwr (RMS)► Auto Man
#Res BW 1 MHz #VBW 3 MHz	Sweep 1 ms (601 pts)	
Channel Power Powe	er Spectral Density	
12.98 dBm /10.0000 MHz -	-57.02 dBm/Hz	Span/RBW 106 <u>Auto</u> Man
Copyright 2000-2006 Agilent Technologies		

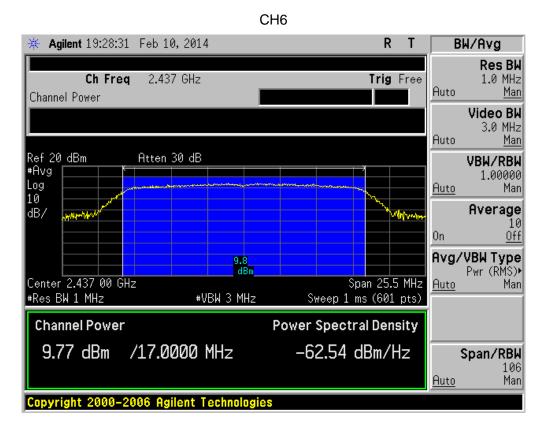


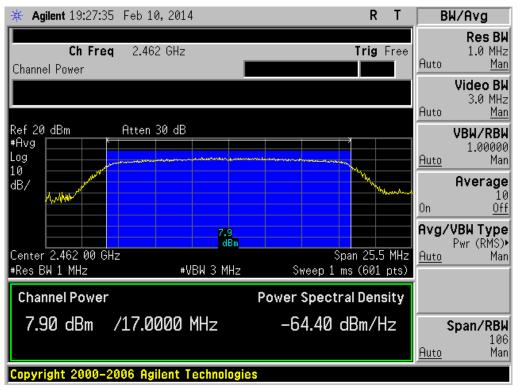


TEST ITEM	PEAK POWER
TEST MODE	802.11g with data rate 6

	LIMITS AND MEASUREMENT RESULT					
Frequency (GHz)	Average Power (dBm)	Peak Power (dBm)	Applicable Limits (dBm)	Pass or Fail		
2.412	6.09	8.07	30	Pass		
2.437	7.79	9.77	30	Pass		
2.462	5.92	7.9	30	Pass		

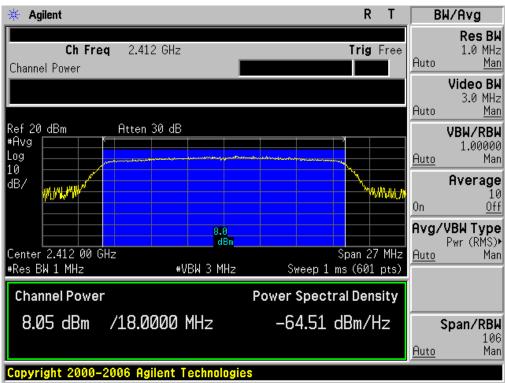


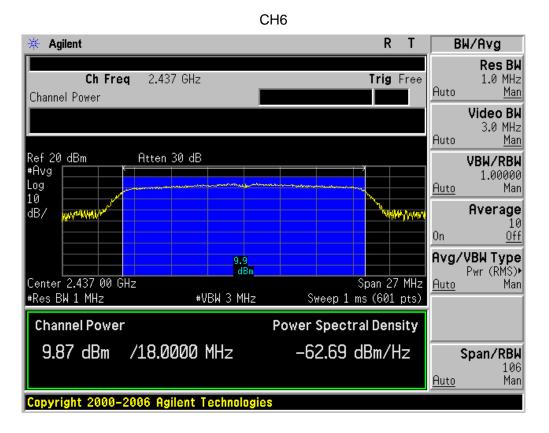


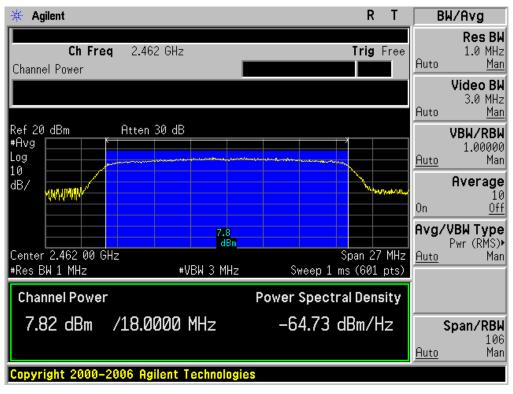


TEST ITEM	PEAK POWER
TEST MODE	802.11n 20 with data rate 6.5

	LIMITS AND MEASUREMENT RESULT					
Frequency (GHz)	Average Power (dBm)	Peak Power (dBm)	Applicable Limits (dBm)	Pass or Fail		
2.412	6.07	8.05	30	Pass		
2.437	7.89	9.87	30	Pass		
2.462	5.84	7.82	30	Pass		

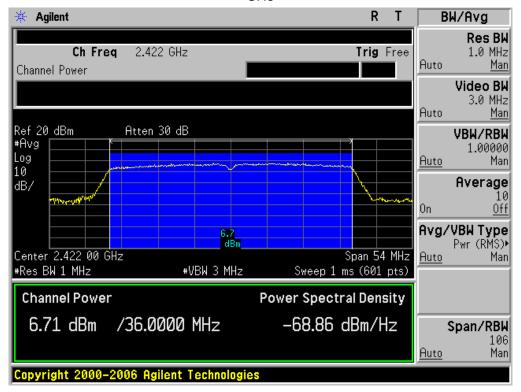


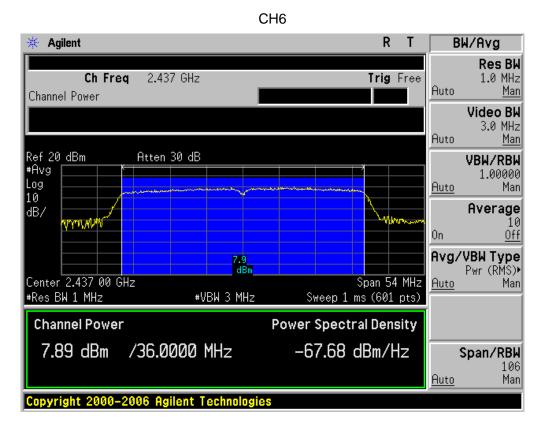


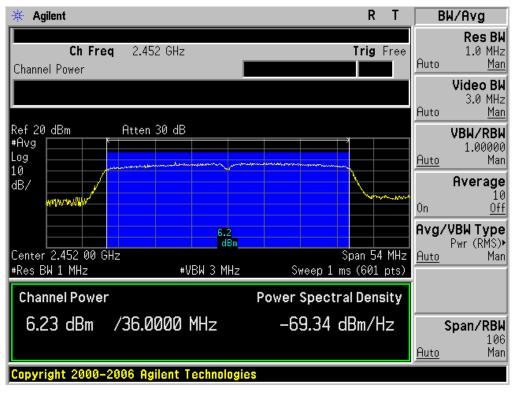


TEST ITEM	PEAK POWER
TEST MODE	802.11n 40 with data rate 13.5

LIMITS AND MEASUREMENT RESULT								
Frequency (GHz)	Pass or Fail							
2.422	4.73	6.71	30	Pass				
2.437	5.91	7.89	30	Pass				
2.452	4.25	6.23	30	Pass				







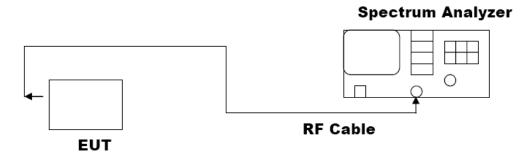
8. 6DB BANDWIDTH

8.1. MEASUREMENT PROCEDURE

- 1. The EUT was placed on a table which is 0.8m above ground plane.
- 2. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- 3. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
- 4. Set SPA Centre Frequency = Operation Frequency, RBW= 100 KHz, VBW \geq RBW.
- 5. Set SPA Trace 1 Max hold, then View.

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

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



8.3. LIMITS AND MEASUREMENT RESULTS

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

LIMITS AND MEASUREMENT RESULT						
Applicable Limite	Applicable Limits					
Applicable Limits	Test Da	Criteria				
	Low Channel	10.054	PASS			
>500KHZ	Middle Channel	9.618	PASS			
	High Channel	9.506	PASS			

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

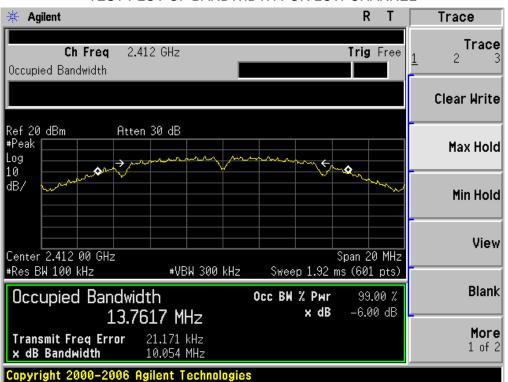
LIMITS AND MEASUREMENT RESULT						
Applicable Limite	Applicable Limits					
Applicable Limits	Test Da	Criteria				
	Low Channel	15.387	PASS			
>500KHZ	Middle Channel	15.447	PASS			
	High Channel	15.499	PASS			

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

LIMITS AND MEASUREMENT RESULT						
Annlinghla Limita	Applicable Limits					
Applicable Limits	Test Da	Criteria				
	Low Channel	15.113	PASS			
>500KHZ	Middle Channel	15.973	PASS			
	High Channel	16.686	PASS			

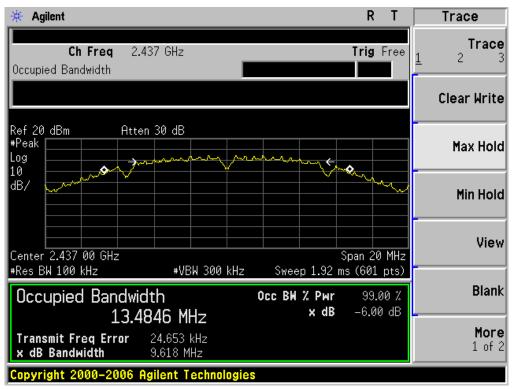
TEST ITEM	6DB BANDWIDTH
TEST MODE	802.11n 40 with data rate 135

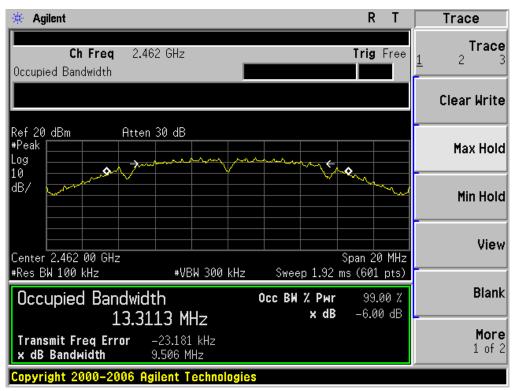
LIMITS AND MEASUREMENT RESULT						
Applicable Limite	Applicable Limits					
Applicable Limits	Test Da	Criteria				
	Low Channel	35.331	PASS			
>500KHZ	Middle Channel	35.329	PASS			
	High Channel	35.236	PASS			



802.11b TEST RESULT TEST PLOT OF BANDWIDTH FOR LOW CHANNEL

TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL

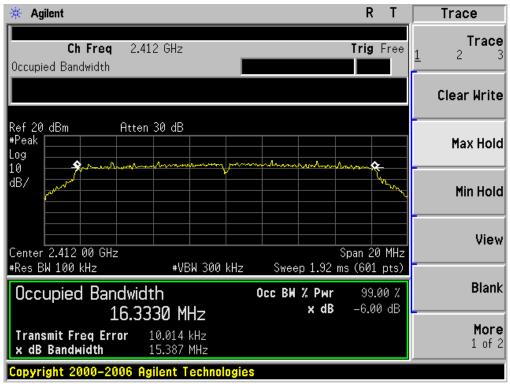


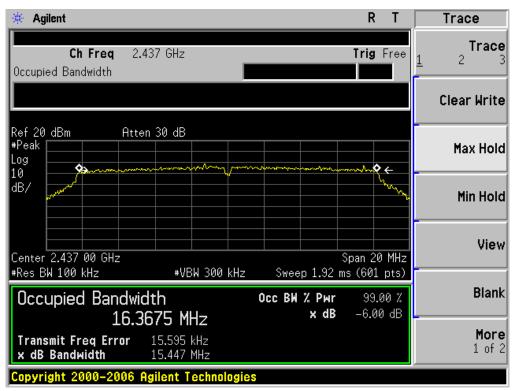


TEST PLOT OF BANDWIDTH FOR HIGH CHANNEL

802.11g TEST RESULT

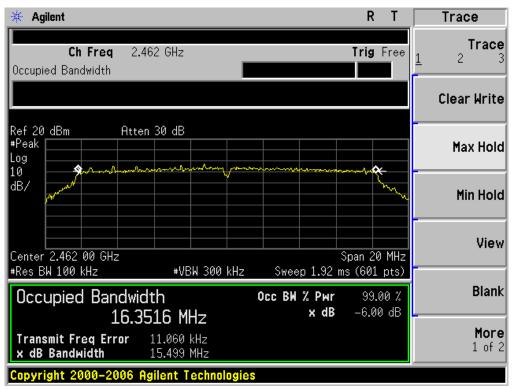
TEST PLOT OF BANDWIDTH FOR LOW CHANNEL

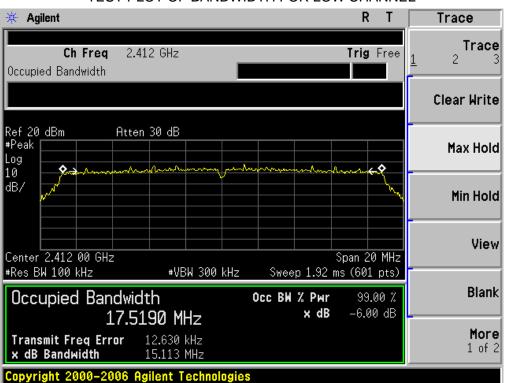




TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL

TEST PLOT OF BANDWIDTH FOR HIGH CHANNEL

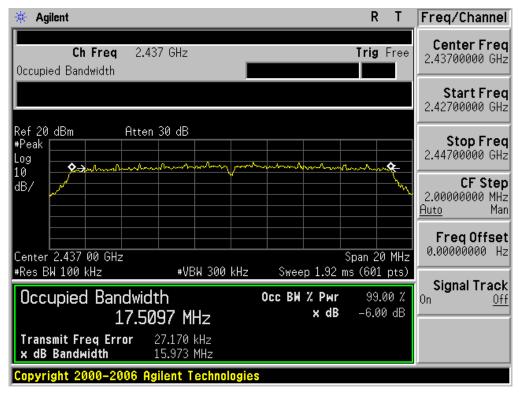


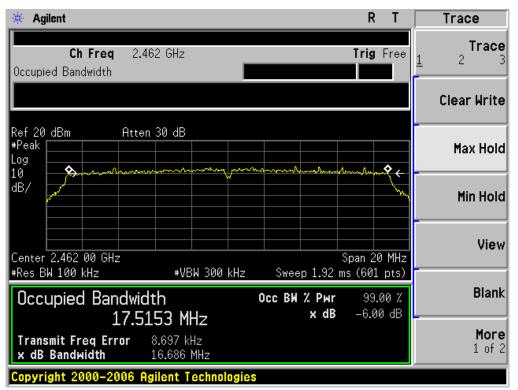


802.11n (20) TEST RESULT

TEST PLOT OF BANDWIDTH FOR LOW CHANNEL

TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL

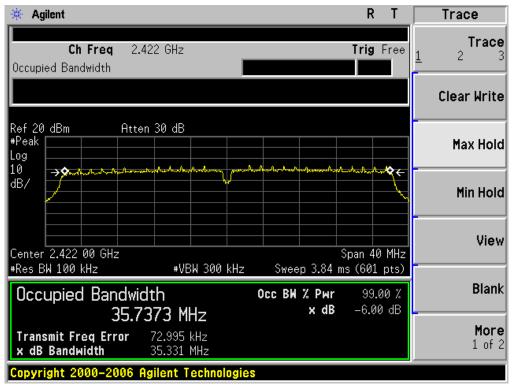


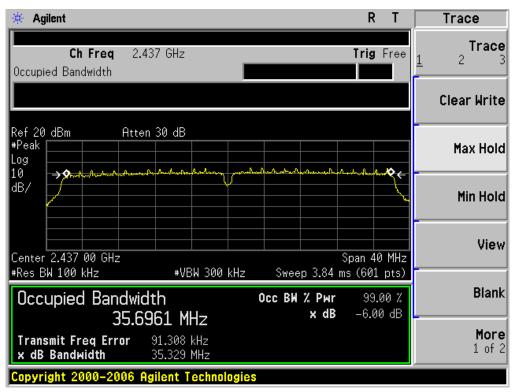


TEST PLOT OF BANDWIDTH FOR HIGH CHANNEL

802.11n(40) TEST RESULT

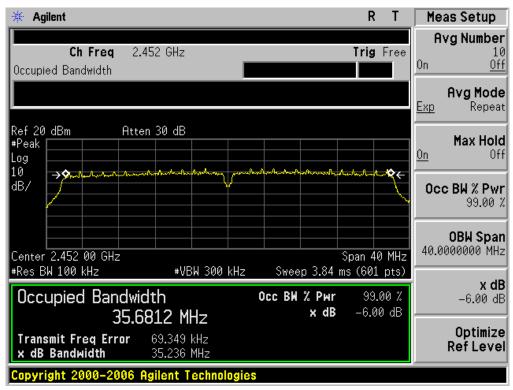
TEST PLOT OF BANDWIDTH FOR LOW CHANNEL





TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL

TEST PLOT OF BANDWIDTH FOR HIGH CHANNEL



9. CONDUCTED SPURIOUS EMISSION

9.1. MEASUREMENT PROCEDURE

- 1. The EUT was placed on a turn table which is 0.8m above ground plane.
- 2. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- 3, Set the EUT Work on the top, the middle and the bottom operation frequency individually.
- 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. Set RBW = 100 kHz, Set VBW > RBW, scan up through 10th harmonic.

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

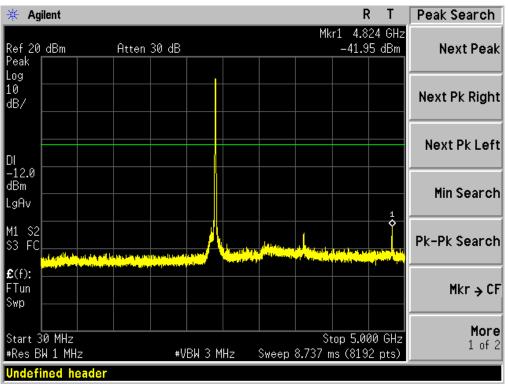
The same as described in section 8.2.

9.3. MEASUREMENT EQUIPMENT USED

The same as described in section 6.

9.4. LIMITS AND MEASUREMENT RESULT

LIMITS AND MEASUREMENT RESULT						
Applieghte 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				

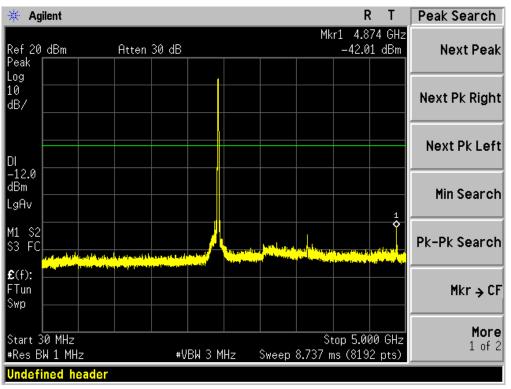


TEST PLOT OF OUT OF BAND EMISSIONS WITH THE WORST CASE OF 802.11b FOR MODULATION IN LOW CHANNEL

🔆 Agi	ilent								R	т	Marker
Ref 20 Peak	dBm		Atten	30 dB				Mk		36 GHz 6 dBm	Select Marker <u>1</u> 2 3 4
Log 10 dB/											Normal
DI 12.0											Delta
-12.0 dBm LgAv				1 \$							Delta Pair (Tracking Ref) Ref <u>▲</u>
M1 S2 S3 FC	d an a basa	n its in the second	a de la calabitation de la calabita				ilde poten <mark>t</mark> e e in	attende a bud	a stille a stille	ul patente	Span Pair Span <u>Center</u>
€(f): FTun Swp											Off
Start 5 #Res B	5.000 G W 1 MH			#V	BW 3 M	Hz	Sweep	Sto 12.01 m		00 GHz 2 pts)	More 1 of 2
Copyri	ght 20	00-20)05 Ag	ilent T	echnol	ogies					

🔆 Agilent				R	Т	Peak Search
	0		Mkr			
Ref 20 dBm Peak	Atten 30 dB			-46.22	dBm	Next Peak
Log						
10						Next Pk Right
dB/						
						Next Pk Left
-12.0 dBm						
LgAv						Min Search
M1 S2		the public state of the public state of the			اس مدالت	Pk-Pk Search
S3 FC shift in the second	۲۵ مادی اور این اور اور این اور	bet feine is de abbiet die ber	u fan de fan De fan de fan		and March	TK TK Jearon
£(f):						
FTun						Mkr → CF
Swp						
						More
Start 12.000 GHz				op 19.000		1 of 2
#Res BW 1 MHz	#V[3W 3 MHz	Sweep 14.2 r	ns (8192	pts)	1 0.1 2

🔆 Agi	ilent							F	? Т	Peak Search
Ref 20 Peak	dBm	Atten	30 dB				Mkr:		83 GHz 8 dBm	Next Peak
Log 10 dB/										Next Pk Right
DI -12.0										Next Pk Left
dBm LgAv									1	Min Search
M1 S2 S3 FC				Harristan,	ad les deb					Pk-Pk Search
€(f): FTun Swp										Mkr → CF
	9.000 GHz W 1 MHz		#VB	SM 3 MF	lz :	Sweep :	Sto 15.29 m		00 GHz 2 pts)	More 1 of 2
Copyri	ght 2000-	-2005 Ag	ilent Te	chnolo	gies					

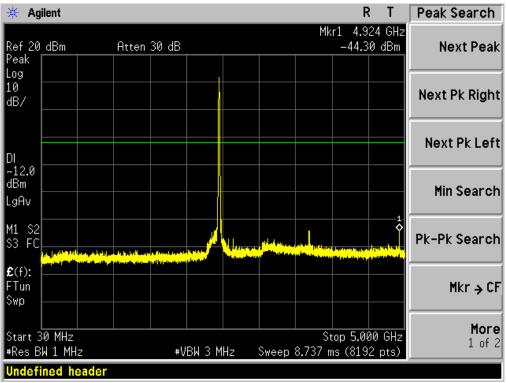


TEST PLOT OF OUT OF BAND EMISSIONS OF 802.11b FOR MODULATION IN MIDDLE CHANNEL

🔆 Ag	jilent								R	2 Т	Peak Search
Ref 20 Peak	dBm		Atten	30 dB				Mk		11 GHz 4 dBm	Next Peak
Log 10 dB/											Next Pk Right
DI -12.0											Next Pk Left
dBm LgAv											Min Search
M1 S2 S3 FC		utida (1945).	and distributed	iii i a siste		isia ata a l	a geodesia da	i in chintighni	i palita antatala	ka entra biet	Pk-Pk Search
£(f): F⊤un Swp											Mkr → CF
#Res B	5.000 GH			#V	BW 3 M	Hz	Sweep	Sto 12.01 n		00 GHz 2 pts)	More 1 of 2
Undefi	ined he	ader									

🔆 Agi	lent								R	Т	Peak Search
Ref20 Peak [dBm		Atten	30 dB				Mkr:	1 16.39 -46.09	58 GHz 8 dBm	Next Peak
Log 10 dB/											Next Pk Right
DI											Next Pk Left
-12.0 dBm LgAv											Min Search
M1 S2 S3 FC	a bandatada Manadatada	la an a di da	a dina kata bila ka Mana kata bila ka						da da a da ba	elle set al factor. Name a second	Pk-Pk Search
€(f): FTun Swp											Mkr → CF
Start 1 #Res Bl				#V	ВМЗМ	Hz	Sweep		p 19.00 ∖s (8192		More 1 of 2
			005 Ag	ilent T							

🔆 Agi	ilent								F	₹ T	Peak Search
Ref 20 Peak	dBm		Atten	30 dB				Mkr		64 GHz 7 dBm	
Log 10 dB/											Next Pk Right
DI											Next Pk Left
−12.0 dBm LgAv								1			Min Search
M1 S2 S3 FC			ار این میراند. بر در رواند م								Pk-Pk Search
€(f): FTun Swp											Mkr → CF
Start 1 #Res Bl				#\	/ ВМ З М	Hz	Sweep			00 GHz 2 pts)	More 1 of 2
Copyri	ght 20	00-20	005 Ag	ilent T	echnol						



TEST PLOT OF OUT OF BAND EMISSIONS

OF 802.11b FOR MODULATION IN HIGH CHANNEL

Mkr1 9.848 GHz Ref 20 dBm Atten 30 dB -37.22 dBm Peak	🔆 Agilent				RT	Peak Search
10 dB/ Next Pk Right DI Next Pk Left -12.0 Min Search dBm dBm LgAv 1 M1 S2 S3 FC S3 FC Min Search Start 5.000 GHz Stop 12.000 GHz	Peak 👘 👘	Atten 30 d	3	Mk		
DI	10					Next Pk Right
dBm						Next Pk Left
\$3 FC In the standard in the st	dBm			1 \$		Min Search
FTun Swp Mkr → CF Start 5.000 GHz More						Pk-Pk Search
Start 5.000 GHZ Stop 12.000 GHZ 1 of 2	FTun					Mkr → CF
Undefined header	#Res BW 1 MHz		#VBW 3 MHz			

🔆 Agi	ilent							R	Т	Peak Search
Ref20 Peak ∥	dBm	Atten	30 dB				Mkr:	1 16.5% -45.4	93 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			ed a context à sector de la sector de la sector	an dia dan kara ka Pransa ang ang			al a di dan publi Dan September			Pk-Pk Search
€(f): FTun Swp										Mkr → CF
	2.000 GHz W 1 MHz		#V	вы з м	Hz	Sweep		p 19.00 is (8192		More 1 of 2
Copyri	ght 2000-2	2005 Ag	ilent T	echnol	ogies					

🔆 Agi	ilent								F	? Т	Peak Search
Ref 20 Peak	dBm		Atten	30 dB				Mkr:		33 GHz 2 dBm	Next Peak
Log 10 dB/											Next Pk Right
DI -12.0											Next Pk Left
dBm LgAv										1	Min Search
M1 S2 S3 FC	a da ah Umah Ngasalati sa				allan Unuuh Manga dalar	يوالواللي وال منبع عرف وا	a parti a serie destru A parti a serie destru A parti a serie destru		an dari dari dari Maria dari dari dari Maria dari dari dari dari dari dari dari	line of the line where the second s	Pk-Pk Search
£ (f): FTun Swp											Mkr→CF
Start 1 #Res B				#V	ВМ З М	Hz	Sweep	Sto 15.29 m		00 GHz 2 pts)	More 1 of 2
Copyri	ght 20	00-20)05 Ag	ilent T	echnol	ogies					

10. MAXIMUM CONDUCTED OUTPUT POWER SPECTRAL DENSITY

10.1 MEASUREMENT PROCEDURE

- (1). The EUT was placed on a turn table which is 0.8m above ground plane.
- (2). Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- (3). Set the EUT Work on the top, the middle and the bottom operation frequency individually.
- (4). 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	-10.62	8	Pass
Middle Channel	-10.17	8	Pass
High Channel	-9.6	8	Pass

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

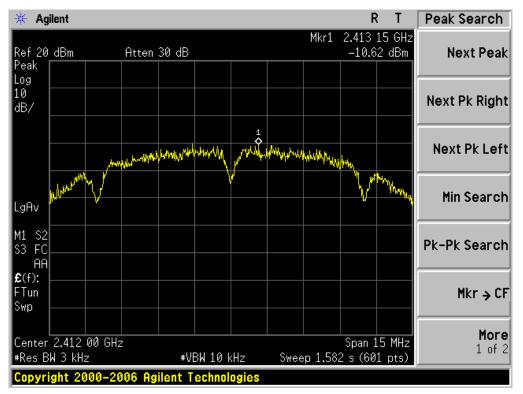
Channel No.	PSD (dBm)	Limit (dBm)	Result
Low Channel	-17.05	8	Pass
Middle Channel	-15.1	8	Pass
High Channel	-17.2	8	Pass

Channel No.	PSD (dBm)	Limit (dBm)	Result		
TEST MODE	802.11n 20 with data rate 6.5				
TEST ITEM	POWER PECTRAL DENSITY				

	(dBill)	(dBIII)	
Low Channel	-17.58	8	Pass
Middle Channel	-15.65	8	Pass
High Channel	-17.58	8	Pass

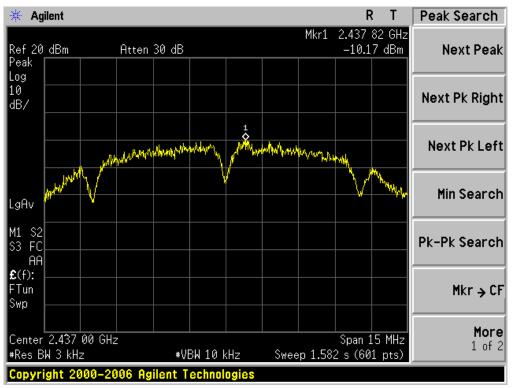
TEST ITEM	POWER PECTRAL DENSITY
TEST MODE	802.11n 40 with data rate 13.5

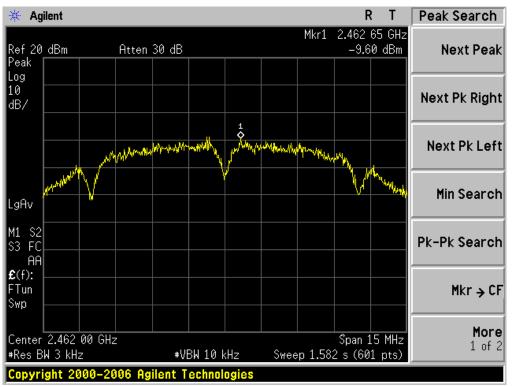
Channel No.	PSD (dBm)	Limit (dBm)	Result
Low Channel	-21.08	8	Pass
Middle Channel	-20.5	8	Pass
High Channel	-22.06	8	Pass



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

TEST PLOT OF SPECTRAL DENSITY FOR MIDDLE CHANNEL

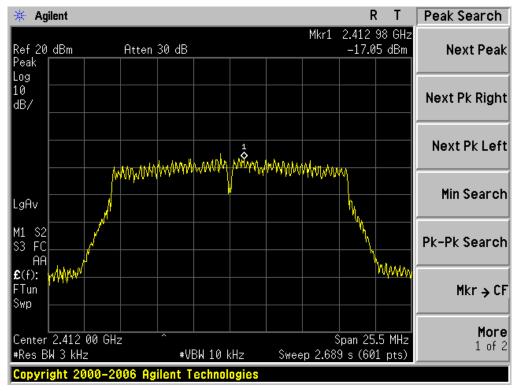


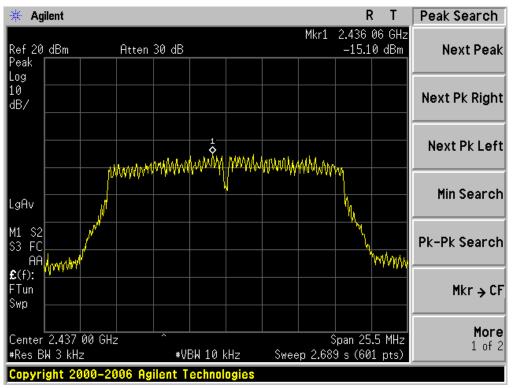


TEST PLOT OF SPECTRAL DENSITY FOR HIGH CHANNEL

802.11g TEST RESULT

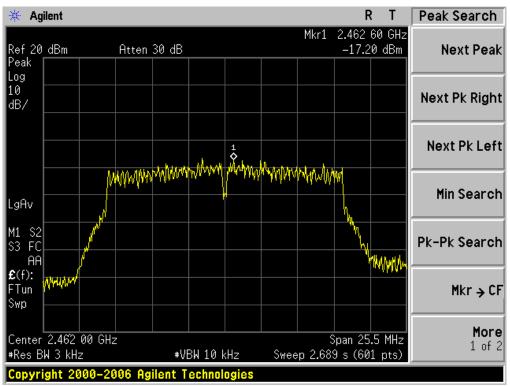
TEST PLOT OF SPECTRAL DENSITY FOR LOW CHANNEL

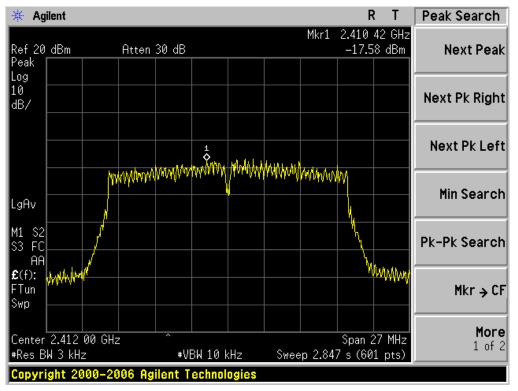




TEST PLOT OF SPECTRAL DENSITY FOR MIDDLE CHANNEL

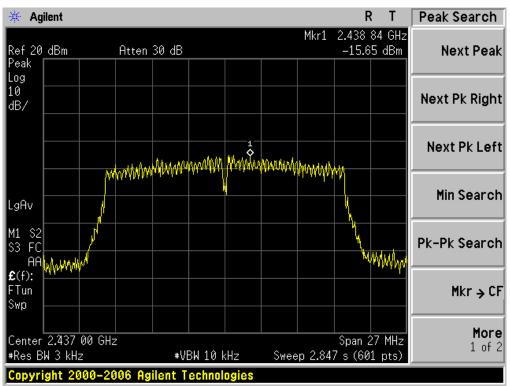
TEST PLOT OF SPECTRAL DENSITY FOR HIGH CHANNEL

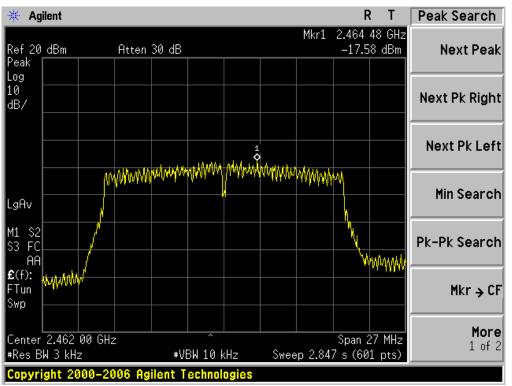




802.11n 20 TEST RESULT TEST PLOT OF SPECTRAL DENSITY FOR LOW CHANNEL

TEST PLOT OF SPECTRAL DENSITY FOR MIDDLE CHANNEL

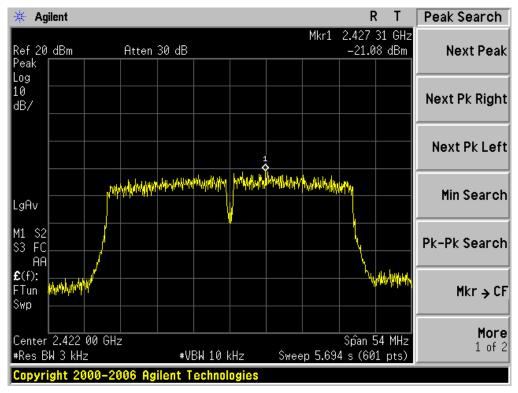


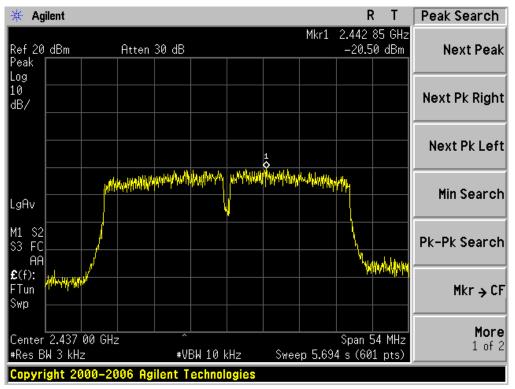


TEST PLOT OF SPECTRAL DENSITY FOR HIGH CHANNEL

802.11n 40 TEST RESULT

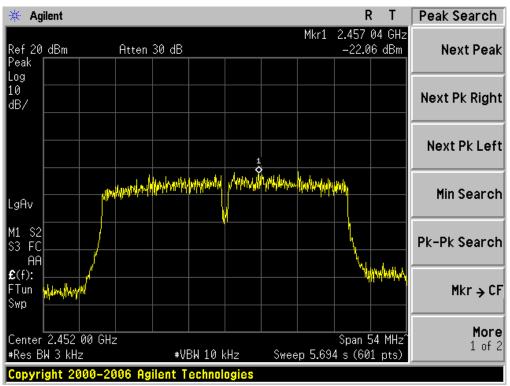
TEST PLOT OF SPECTRAL DENSITY FOR LOW CHANNEL





TEST PLOT OF SPECTRAL DENSITY FOR MIDDLE CHANNEL

TEST PLOT OF SPECTRAL DENSITY FOR HIGH CHANNEL



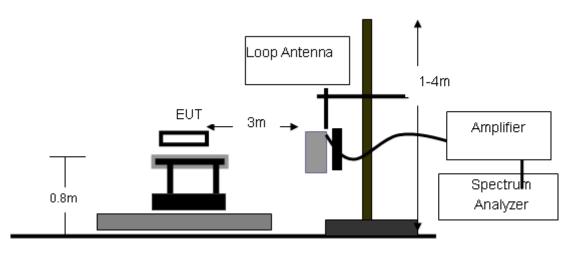
11. RADIATED EMISSION

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.

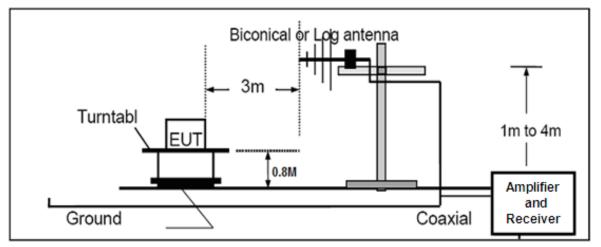
10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High - Low scan is not required in this case.

11.2. TEST SETUP

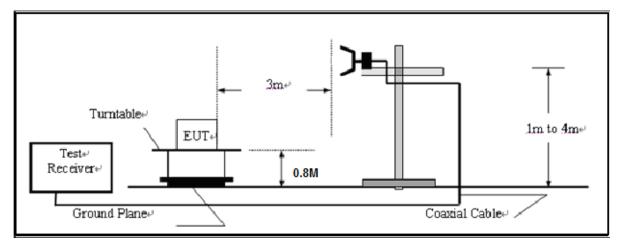


RADIATED EMISSION TEST SETUP BELOW 30MHz

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

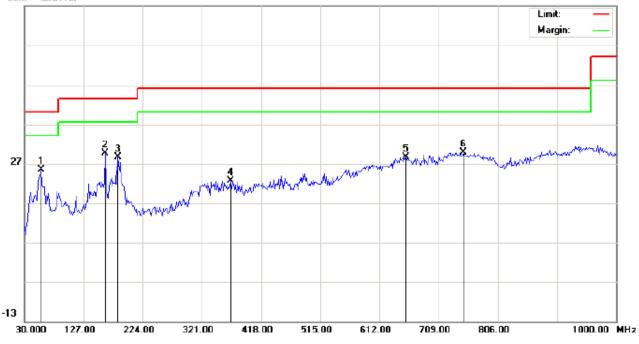
RADIATED EMISSION BELOW 30MHZ

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

RADIATED EMISSION BELOW 1GHZ

EUT	Tablet PC	Model Name	Z708
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: Tablet PC M/N: Z708 Mode: Low Channel TX Note:

Polarization: Horizontal Power:

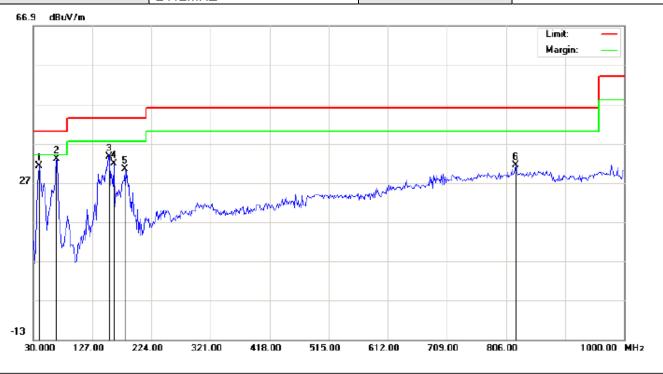
Temperature: 26 Humidity: 60 %

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		57.4831	14.20	11.17	25.37	40.00	-14.63	peak			
2	*	162.5663	14.84	14.78	29.62	43.50	-13.88	peak			
3		183.5833	17.31	11.24	28.55	43.50	-14.95	peak			
4		367.8833	3.69	18.86	22.55	46.00	-23.45	peak			
5		655.6499	4.53	24.00	28.53	46.00	-17.47	peak			
6		749.4166	3.10	26.61	29.71	46.00	-16.29	peak			

Distance:

Report No.: AGC00529140203FE04 Page 49 of 76

EUT	Tablet PC	Model Name	Z708
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2412MHZ	Antenna	Vertical



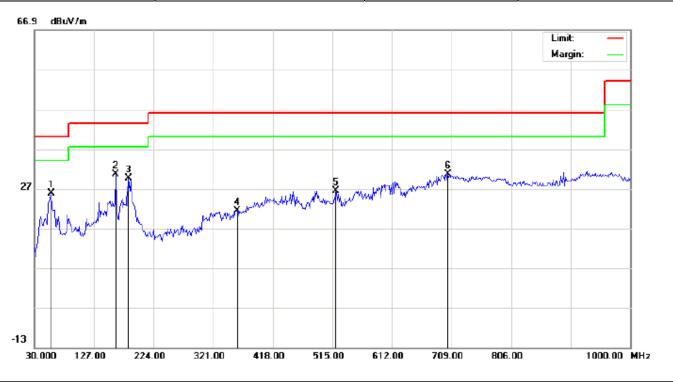
Site: site #1 Limit: FCC Class B 3M Radiation EUT: Tablet PC M/N: Z708 Mode: Low Channel TX Note: Polarization: Vertical Power: Temperature: 26 Humidity: 60 %

Distance:

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	22.60	8.51	31.11	40.00	-8.89	peak			
2	*	68.7998	28.33	4.73	33.06	40.00	-6.94	peak			
3		154.4833	18.41	15.29	33.70	43.50	-9.80	peak			
4		162.5663	16.72	15.17	31.89	43.50	-11.61	peak			
5		180.3497	16.41	13.98	30.39	43.50	-13.11	peak			
6		822.1666	4.10	27.32	31.42	46.00	-14.58	peak			

Report No.: AGC00529140203FE04 Page 50 of 76

EUT	Tablet PC Model Name		Z708
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2437MHZ	Antenna	Horizontal



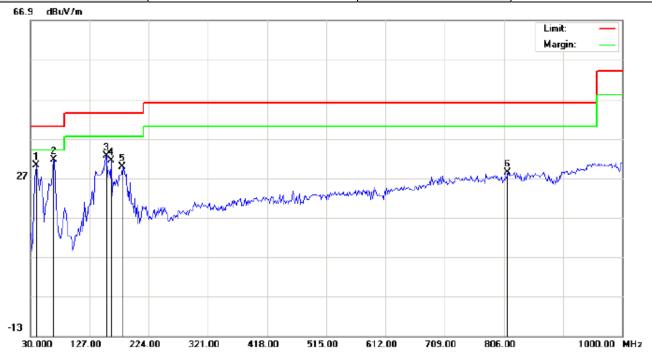
Site: site #1 Limit: FCC Class B 3M Radiation EUT: Tablet PC M/N: Z708 Mode: Middle Channel TX Note: Polarization: *Horizontal* Power: Temperature: 26 Humidity: 60 %

Distance:

Antenna Table Freq. Reading Factor Measurement Limit Over Mk Height Degree No. Detector Comment MHz dBu∨ dB/m dBuV/m dBuV/m dB cm degree 1 57.4831 14.70 25.87 40.00 -14.13 11.17 peak 162.5663 2 * 15.84 14.78 30.62 43.50 -12.88 peak 3 183.5833 18.31 11.24 29.55 43.50 -13.95 peak 4 359.8000 2.65 18.80 21.45 46.00 -24.55 peak 5 521.4664 4.75 21.71 26.46 46.00 -19.54 peak 6 702.5333 5.44 25.26 30.70 46.00 -15.30 peak

Report No.: AGC00529140203FE04 Page 51 of 76

EUT	Tablet PC	Model Name	Z708
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2437MHZ	Antenna	Vertical



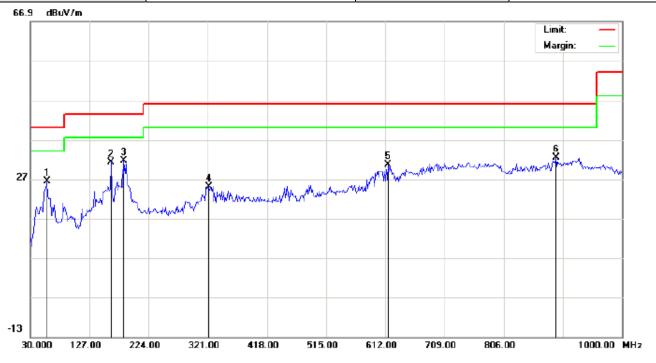
Site: site #1 Limit: FCC Class B 3M Radiation EUT: Tablet PC M/N: Z708 Mode: Middle Channel TX Note: Polarization: Vertical Power: Temperature: 26 Humidity: 60 %

Distance:

Antenna Table Freq. Reading Factor Measurement Limit Over Mk No. Detector Height Degree Comment MHz dBu∨ dB/m dBuV/m dBu∀/m dB degree cm 1 39.7000 21.60 8.51 30.11 40.00 -9.89 peak 2 4.73 31.56 68.7998 26.83 40.00 -8.44 peak 32.70 3 154.4833 17.41 15.29 43.50 -10.80 peak 4 162.5663 16.22 15.17 31.39 43.50 -12.11 peak 5 180.3497 29.89 15.91 13.98 43.50 -13.61 peak 27.32 28.37 6 812.4664 1.05 46.00 -17.63 peak

Report No.: AGC00529140203FE04 Page 52 of 76

EUT	Tablet PC	Model Name	Z708
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: Tablet PC M/N: Z708 Mode: High Channel TX Note: Polarization: *Horizontal* Power: 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		57.4831	15.20	11.17	26.37	40.00	-13.63	peak			
2		162.5663	16.34	14.78	31.12	43.50	-12.38	peak			
3	*	183.5833	20.31	11.24	31.55	43.50	-11.95	peak			
4		322.6166	8.12	16.92	25.04	46.00	-20.96	peak			
5		616.8500	6.89	23.77	30.66	46.00	-15.34	peak			
6		891.6833	4.08	28.39	32.47	46.00	-13.53	peak			

Distance:

Report No.: AGC00529140203FE04 Page 53 of 76

EUT	Tablet PC	Model Name	Z708
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2462MHZ	Antenna	Vertical



EUT: Tablet PC M/N: Z708 Mode: High Channel TX Note:

Distance:

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	21.60	8.51	30.11	40.00	-9.89	peak			
2	*	68.7998	26.83	4.73	31.56	40.00	-8.44	peak			
3		154.4833	19.41	15.29	34.70	43.50	-8.80	peak			
4		162.5663	18.72	15.17	33.89	43.50	-9.61	peak			
5		180.3497	16.41	13.98	30.39	43.50	-13.11	peak			
6		966.0498	-0.82	29.85	29.03	54.00	-24.97	peak			

RESULT: PASS

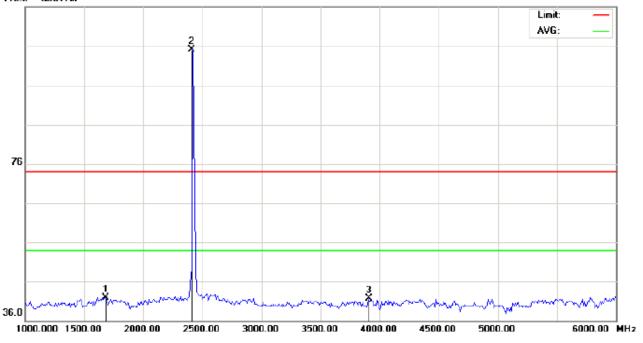
Note: 1. Factor=Antenna Factor + Cable loss, Margin=Measurement-Limit.

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

RADIATED EMISSION ABOVE 1GHZ

EUT	Tablet PC	Model Name	Z708
Temperature	25°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



 Site:
 site #1
 Polarization:
 Horizontal
 Temperature:
 26

 Limit:
 FCC Class B 3M Radiation above 1GHZ(PK)
 Power:
 Humidity:
 60 %

 EUT:
 Tablet PC
 Distance:
 3m

 M/N:
 Z708
 Mode:
 802.11b Low Channel TX

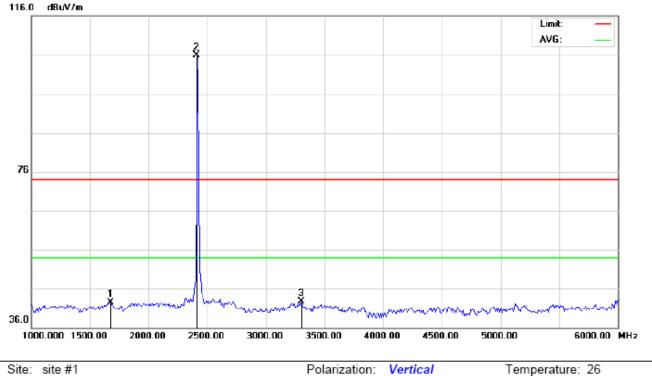
 Note:
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No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	•	MHz	dBu∀	dB/m	dBu\//m	dBuV/m	dB		cm	degree	
1		1683.333	55.43	-13.45	41.98	74.00	-32.02	peak			
2	*	2412.000	114.78	-9.67	105.11	74.00	31.11	peak			
3		3908.333	47.11	-5.37	41.74	74.00	-32.26	peak			

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Humidity: 60 %

EUT	Tablet PC Model Name		Z708
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2412MHZ	Antenna	Vertical



Limit: FCC Class B 3M Radiation above 1GHZ(PK) EUT: Tablet PC M/N: Z708 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	dBu∀/m	dBu∨/m	dB		cm	degree	
1		1675.000	55.96	-13.54	42.42	74.00	-31.58	peak			
2	*	2412.000	115.57	-9.67	105.90	74.00	31.90	peak			
3		3300.000	50.71	-8.08	42.63	74.00	-31.37	peak			

Power:

Distance: 3m

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.

12. BAND EDGE EMISSION

12.1. MEASUREMENT PROCEDURE

- 1. Set the EUT Work on the top, the bottom operation frequency individually.
- 2. Set SPA Start or Stop Frequency = Operation Frequency, RBW>=1%span, VBW>=RBW
- 3. The band edges was measured and recorded.

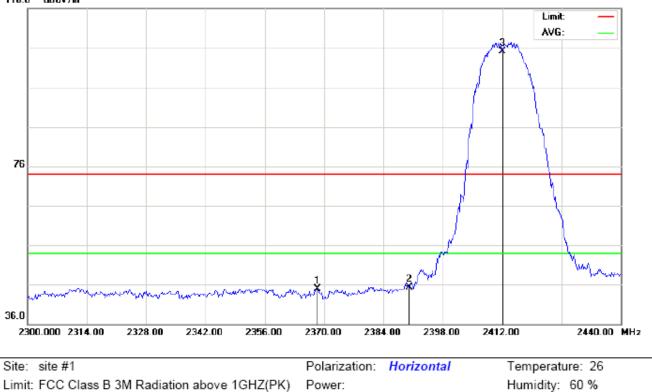
12.2. TEST SET-UP

Radiated same as 11.2

12.3. TEST RESULT

EUT	Tablet PC Model Name		Z708	
Temperature	25°C	Relative Humidity	55.4%	
Pressure	960hPa	Test Voltage	Normal Voltage	
Test Mode	802.11b with data rate 1 2412MHZ	Antenna	Horizontal	





EUT: Tablet PC

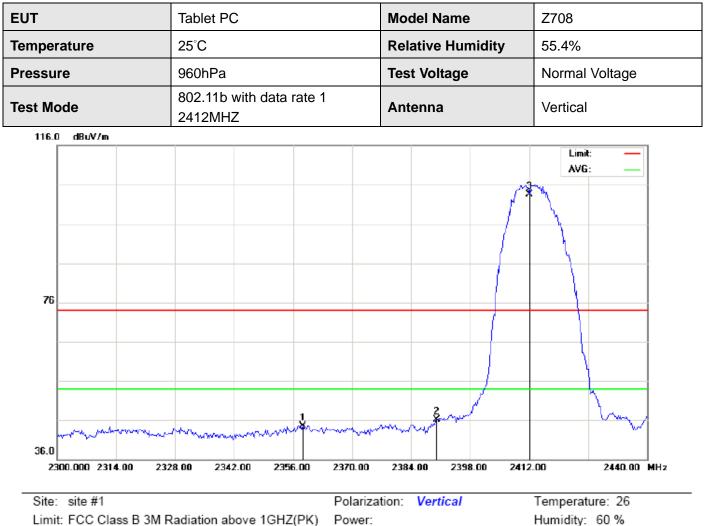
M/N: Z708

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		2368.367	54.70	-9.71	44.99	74.00	-29.01	peak			
2		2390.000	54.90	-9.69	45.21	74.00	-28.79	peak			
3	*	2412.000	114.86	-9.67	105.19	74.00	31.19	peak			

Distance: 3m

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EUT: Tablet PC

M/N: Z708

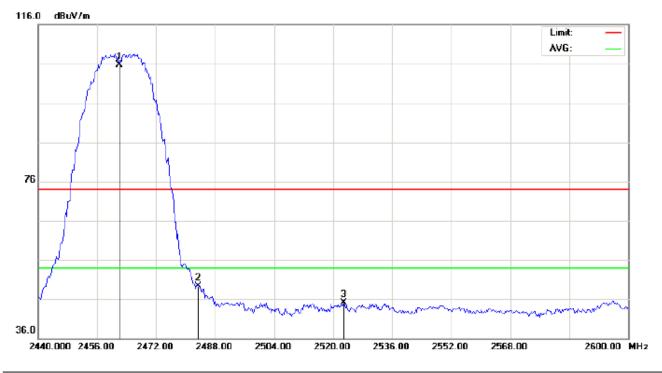
Mode: 802.11b Low Channel TX Note:

Distance: 3m

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		2358.333	54.25	-9.73	44.52	74.00	-29.48	peak			
2		2390.000	55.77	-9.69	46.08	74.00	-27.92	peak			
3	*	2412.000	113.08	-9.67	103.41	74.00	29.41	peak			

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EUT	Tablet PC	Model Name	Z708
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
 Polarization:
 Horizontal
 Temperature:
 26

 Limit:
 FCC Class B 3M Radiation above 1GHZ(PK)
 Power:
 Humidity:
 60 %

 EUT:
 Tablet PC
 Distance:
 3m

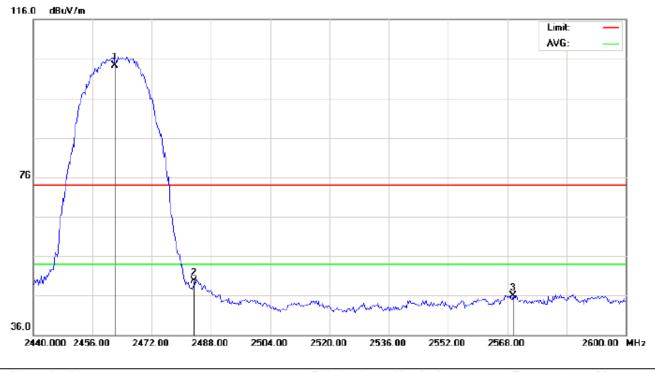
 M/N:
 Z708
 Mode:
 802.11b High Channel TX

 Note:
 Value
 Value
 Value

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	115.39	-9.61	105.78	74.00	31.78	peak			
2		2483.500	58.81	-9.59	49.22	74.00	-24.78	peak			
3		2522.933	54.65	-9.51	45.14	74.00	-28.86	peak			

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EUT	Tablet PC	Model Name	Z708
Temperature	25°C Relative Humidity		55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with data rate 1 2462MHZ	Antenna	Vertical



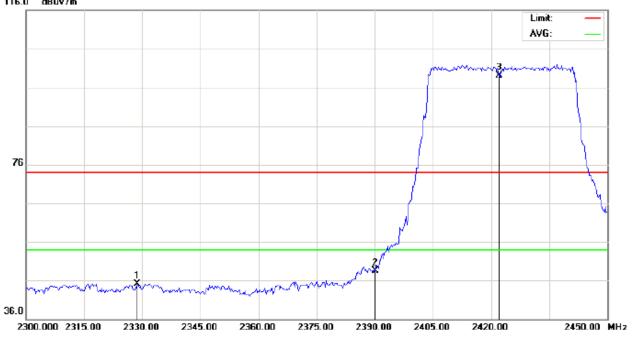
Site: site #1	Polarization: Vertical	Temperature: 26
Limit: FCC Class B 3M Radiation above 1GHZ(PK)	Power:	Humidity: 60 %
EUT: Tablet PC	Distance: 3m	
M/N: Z708		
Mode: 802.11b High Channel TX		
Note:		

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	*	2462.000	113.92	-9.61	104.31	74.00	30.31	peak			
2		2483.500	59.22	-9.59	49.63	74.00	-24.37	peak			
3		2569.600	55.24	-9.40	45.84	74.00	-28.16	peak			

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EUT	Tablet PC	Model Name	Z708
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11n 40 with data rate 13.5 2422MHZ	Antenna	Horizontal

116.0 dBuV/m



Site: site #1

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

Temperature: 26 Humidity: 60 %

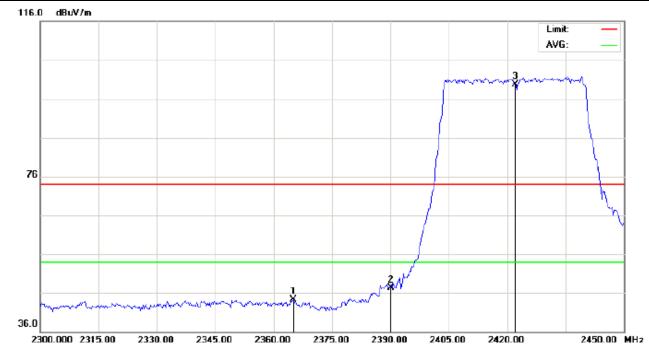
EUT: Tablet PC M/N: Z708 Mode: 802.11n(40) Low Channel TX Distance: 3m

Note:

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		2328.750	54.91	-9.76	45.15	74.00	-28.85	peak			
2		2390.000	58.21	-9.69	48.52	74.00	-25.48	peak			
3	*	2422.000	108.82	-9.66	99.16	74.00	25.16	peak			

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EUT	Tablet PC	Model Name	Z708	
Temperature	25°C	Relative Humidity	55.4%	
Pressure	960hPa	Test Voltage	Normal Voltage	
Test Mode	802.11n 40 with data rate 13.5 2422MHZ	Antenna	Vertical	



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

M/N: Z708

Mode: 802.11n(40) Low Channel TX Note: Polarization: Vertical Power: Distance: 3m Temperature: 26 Humidity: 60 %

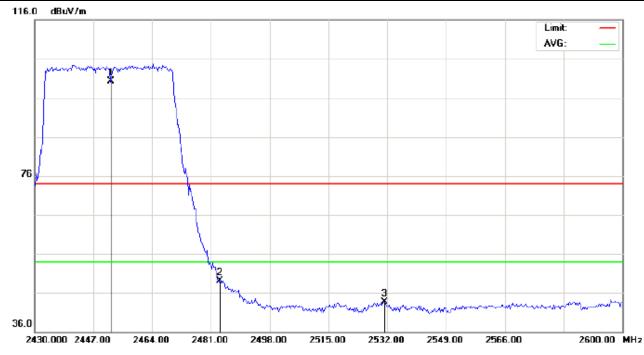
Antenna Table Reading Factor Measurement Limit Over Freq. Mk Height Degree No. Detector Comment MHz dBu∨ dB/m dBuV/m dBu∀/m dB degree cm 1 2365.000 54.10 -9.72 44.38 74.00 -29.62 peak 2 2390.000 47.21 56.90 -9.69 74.00 -26.79 peak 3 2422.000 109.37 -9.66 99.71 74.00 25.71 peak

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Temperature: 26

Humidity: 60 %

EUT	Tablet PC	Model Name	Z708
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11n 40 with data rate 13.5 2452MHZ	Antenna	Horizontal



Site: site #1

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

EUT: Tablet PC

M/N: Z708

Mode: 802.11n(40) High Channel TX

Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	•	MHz	dBu∨	dB/m	dBuV/m	dBu∀/m	dB		cm	degree	
1	*	2452.000	109.97	-9.62	100.35	74.00	26.35	peak			
2		2483.500	58.79	-9.59	49.20	74.00	-24.80	peak			
3		2531.150	53.27	-9.49	43.78	74.00	-30.22	peak			

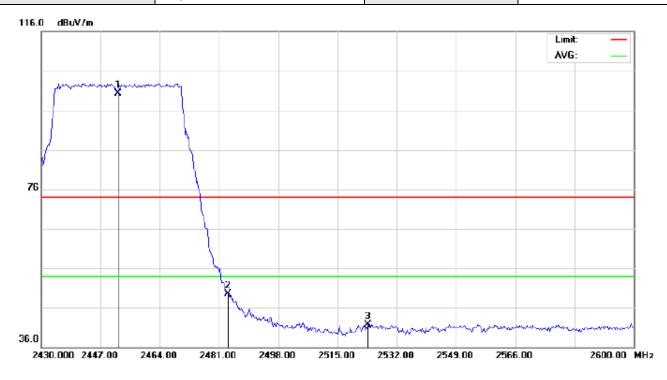
Power:

Distance: 3m

Polarization: Horizontal

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EUT	Tablet PC	Model Name	Z708		
Temperature	25°C Relative Humidity		55.4%		
Pressure	960hPa	Test Voltage	Normal Voltage		
Test Mode	802.11n 40 with data rate 13.5 2452MHZ	Antenna	Vertical		



 Site:
 site #1
 Polarization:
 Vertical
 Temperature:
 26

 Limit:
 FCC Class B 3M Radiation above 1GHZ(PK)
 Power:
 Humidity:
 60 %

 EUT:
 Tablet PC
 Distance:
 3m

 M/N:
 Z708

 Mode:
 802.11n(40) High Channel TX

 Note:
 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	*	2452.000	109.90	-9.62	100.28	74.00	26.28	peak			
2		2483.500	59.03	-9.59	49.44	74.00	-24.56	peak			
3		2523.783	51.20	-9.51	41.69	74.00	-32.31	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.

13. FCC LINE CONDUCTED EMISSION TEST

13.1. LIMITS OF LINE CONDUCTED EMISSION TEST

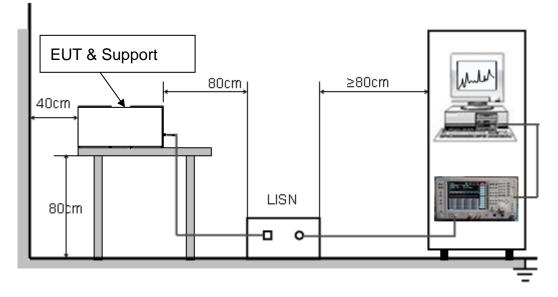
Frequency	Maximum RF Line Voltage							
Frequency	Q.P.(dBuV)	Average(dBuV)						
150kHz~500kHz	66-56	56-46						
500kHz~5MHz	56	46						
5MHz~30MHz	60	50						

Note:

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

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

13.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST



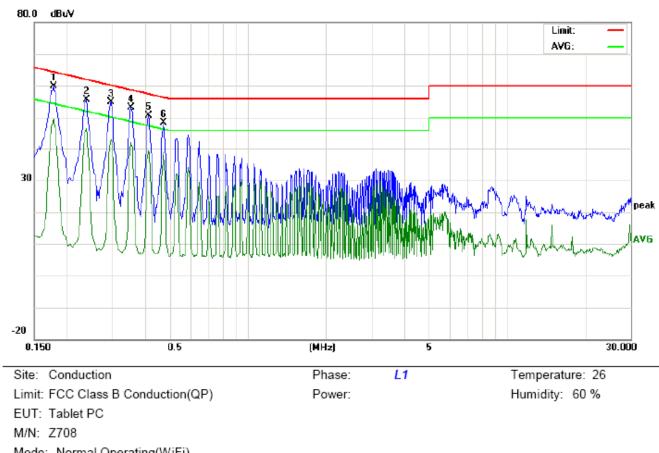
13.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST

- The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.4 (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.

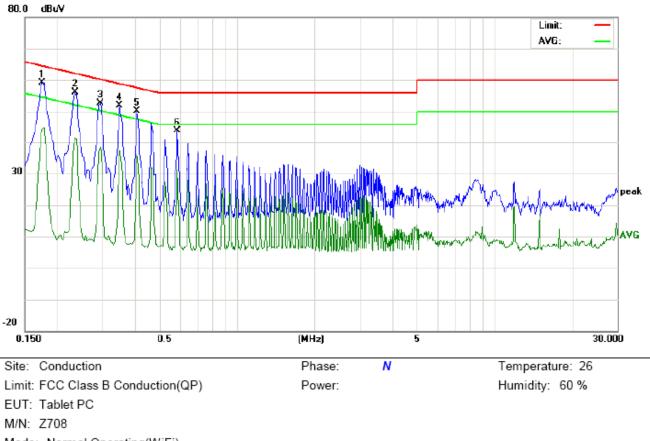


13.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST

Mode: Normal Operating(WiFi) Note:

	Freq.	Reading_Level (dBuV)		Correct Measurement Factor (dBuV)		Limit (dBuV)		Margin (dB)		P/F	Comment			
	(MHz)	Peak	QP	AVG	dB	Peak	QP	AVG	QP	AVG	QP	AVG		
1	0.1779	49.67		39.46	10.19	59.86		49.65	64.58	54.58	-4.72	-4.93	Р	
2	0.2379	45.38		36.35	10.26	55.64		46.61	62.17	52.17	-6.53	-5.56	Р	
3	0.2977	44.50		32.64	10.29	54.79		42.93	60.30	50.30	-5.51	-7.37	Р	
4	0.3537	42.90		31.44	10.31	53.21		41.75	58.87	48.87	-5.66	-7.12	Р	
5	0.4138	40.22		29.01	10.34	50.56		39.35	57.57	47.57	-7.01	-8.22	Р	
6	0.4737	37.92		28.58	10.38	48.30		38.96	56.45	46.45	-8.15	-7.49	Ρ	

LINE CONDUCTED EMISSION TEST LINE 1-L



Line Conducted Emission Test Line 2-N

Mode: Normal Operating(WiFi) Note:

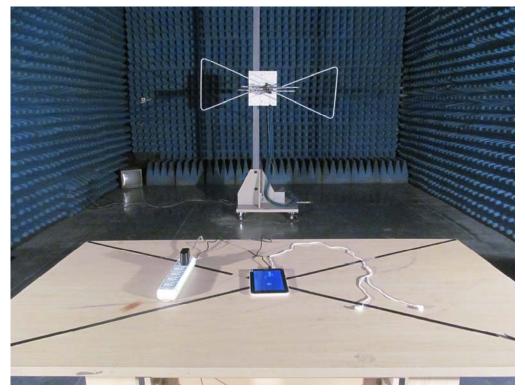
No.	Freq.	Reading_Level (dBuV)		Correct Factor				Limit (dBuV)		Margin (dB)		P/F	Comment	
	(MHz)	Peak	QP	AVG	dB	Peak	QP	AVG	QP	AVG	QP	AVG		Common
1	0.1737	48.85		34.17	10.19	59.04		44.36	64.78	54.78	-5.74	-10.42	Р	
2	0.2353	45.85		31.07	10.25	56.10		41.32	62.26	52.26	-6.16	-10.94	Р	
3	0.2938	42.28		28.08	10.29	52.57		38.37	60.41	50.41	-7.84	-12.04	Р	
4	0.3498	41.61		27.19	10.31	51.92		37.50	58.97	48.97	-7.05	-11.47	Р	
5	0.4098	39.69		25.68	10.34	50.03		36.02	57.65	47.65	-7.62	-11.63	Р	
6	0.5858	33.55		20.78	10.32	43.87		31.10	56.00	46.00	-12.13	-14.90	Р	

APPENDIX A: PHOTOGRAPHS OF TEST SETUP

FCC LINE CONDUCTED EMISSION TEST SETUP



FCC RADIATED EMISSION TEST SETUP





APPENDIX B: PHOTOGRAPHS OF EUT

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TOTAL VIEW OF EUT

TOP VIEW OF EUT





BOTTOM VIEW OF EUT

FRONT VIEW OF EUT





BACK VIEW OF EUT

LEFT VIEW OF EUT





RIGHT VIEW OF EUT

OPEN VIEW OF EUT-1

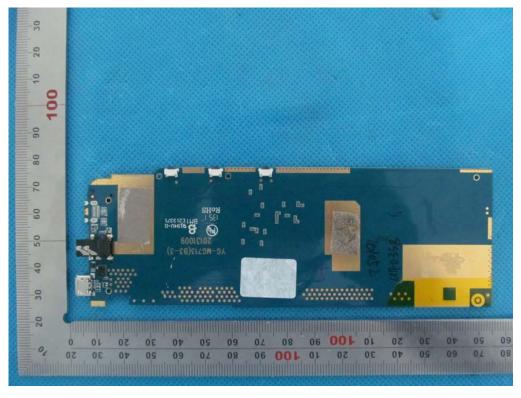




OPEN VIEW OF EUT-2

OPEN VIEW OF EUT-3

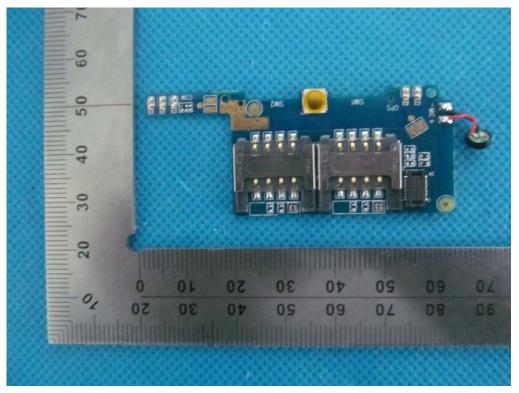




INTERNAL VIEW OF EUT-1

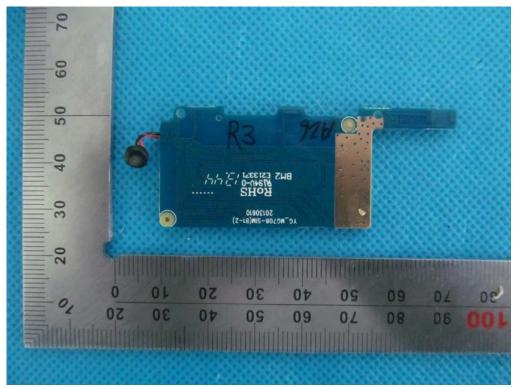
INTERNAL VIEW OF EUT-2





INTERNAL VIEW OF EUT-3

INTERNAL VIEW OF EUT-4



----END OF REPORT----