

Dedistad	Funianiau.	Manarinamanh
Radiated	Emission	Measurement

Reading Correct Measure-Over No. Mk. Freq. Limit Level Factor ment MHz dBuV dB dBuV dBuV dB Detector Comment 22.37 AVG 12010.00 19.52 41.89 54.00 -12.11 1 14412.00 2 20.30 27.50 47.80 54.00 -6.20 AVG *

 *:Maximum data
 x:Over limit
 !:over margin
 •Reference Only

 File :skype(12-09-2006)rf(REPO\Data :#37
 Page: 1
 Engineer Signature:



3.6.3 Open Field Radiated Emissions (Subpart B&C)

The highest peak values of radiated emissions from the EUT at various antenna heights, antenna polarization, EUT orientation, etc. are recorded on the following

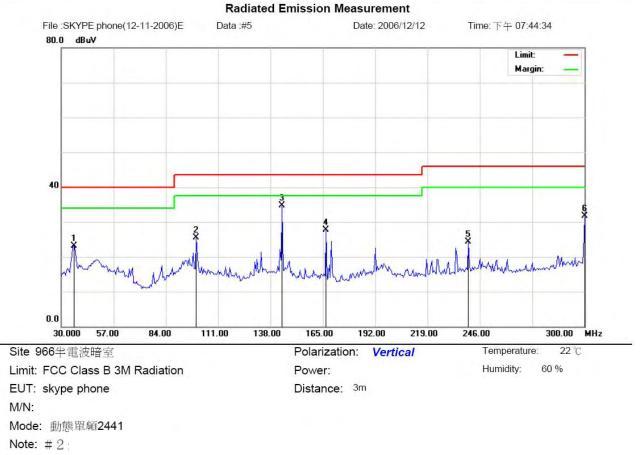
Applicant	: AIRUS TECHNOLOGY CO., LTD
Model No	: VAH200
EUT	: BLUETOOTH SKYPE PHONE
Test Mode	: CH39 2441.000 (Local Frequency:2441.000 MHz)
Test Date	: 12/12/2006

Please refer to next pager of detail testing data.

Notes:

- 1. Margin= Amplitude Limits
- 2. Distance of Measurement: 3 Meter (30-1000MHz) & (1-10GHz) ,1 Meter (10-26.5GHz)
- 3. Height of table for EUT placed: 0.8 Meter.
- 4. ANT= Antenna height.
- 5. Amplitude= Reading Amplitude Amplifier gain + Cable loss + Antenna factor (Auto calculate in spectrum analyzer)
- 6. The EUT was worst case on X axis after pretest on X & Y & Z axis setting .
- 7. The testing data only show below 18GHz's data because measure data above 18GHz was only ambit noise.
- 8. All frequencies from 30MHz to 26.5GHz have been tested





No.	Mk.	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over			
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment	
1		36.4799	35.88	-12.81	23.07	40.00	-16.93	peak		
2		99.6599	37.24	-11.78	25.46	43.50	-18.04	peak		
3	*	143.9399	50.91	-16.22	34.69	43.50	-8.81	peak		
4		166.6200	42.98	-15.34	27.64	43.50	-15.86	peak		
5	-	240.0600	35.65	-11.43	24.22	46.00	-21.78	peak		
6		300.0000	41.59	-9.98	31.61	46.00	-14.39	peak		
		And a first free dates					and the second second			

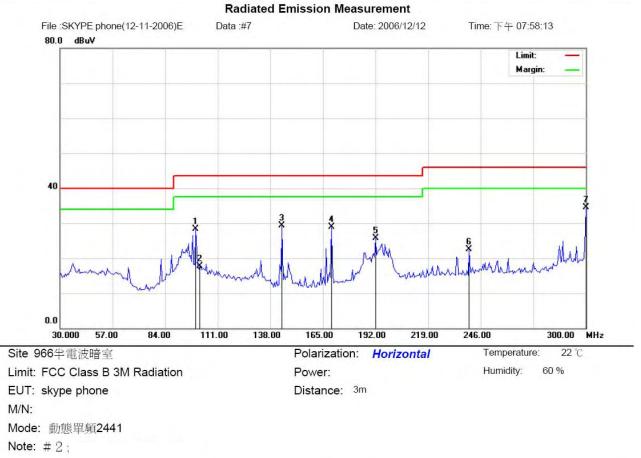
*:Maximum data x:Over limit !:over margin

•Reference Only

File :SKYPE phone(12-11-2006)E\Data :#5

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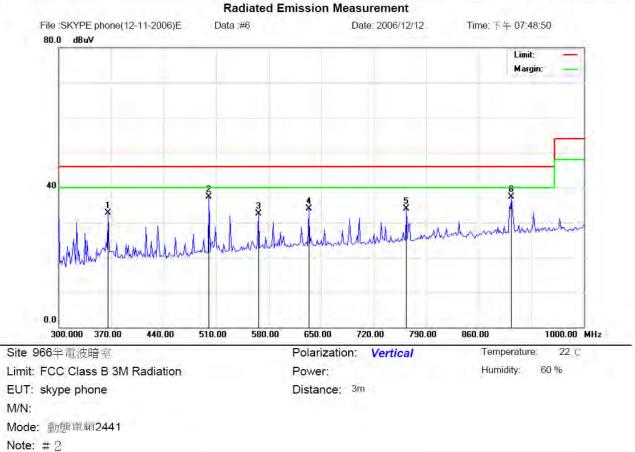


No.	Mk.	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		99.6600	40.07	-11.78	28.29	43.50	-15.21	peak	
2		101.8200	29.67	-11.88	17.79	43.50	-25.71	peak	
3		143.9400	45.43	-16.22	29.21	43.50	-14.29	peak	
4		169.3200	44.38	-15.40	28.98	43.50	-14.52	peak	
5		192.0000	38.94	-13.26	25.68	43.50	-17.82	peak	
6		240.0600	33.91	-11.43	22.48	46.00	-23.52	peak	
7	*	300.0000	44.52	-9.98	34.54	46.00	-11.46	peak	

*:Maximum data x:Over limit !:over margin

File :SKYPE phone(12-11-2006)E\Data :#7





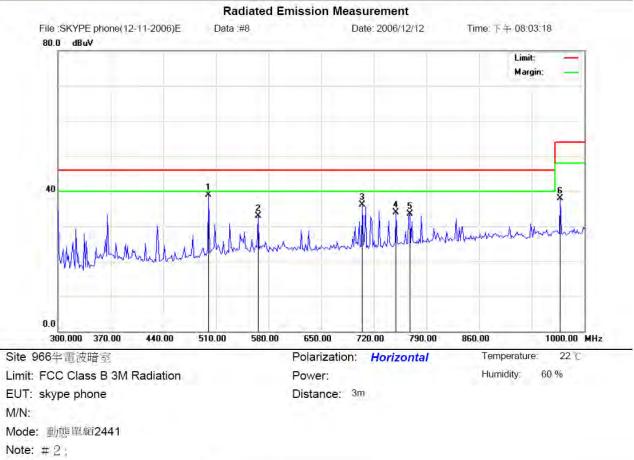
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		C 33. #
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		365.8000	41.24	-8.63	32.61	46.00	-13.39	peak	
2	3	500.2000	44.41	-7.16	37.25	46.00	-8.75	peak	
3	9	566.0000	38.22	-5.63	32.59	46.00	-13.41	peak	
4		633.2000	38.28	-4.36	33.92	46.00	-12.08	peak	
5	1.7	763.4000	36.76	-2.87	33.89	46.00	-12.11	peak	
6	*	903.4000	37.65	-0.29	37.36	46.00	-8.64	peak	
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*:Maximum data x:Over limit !:over margin

Reference Only

File :SKYPE phone(12-11-2006)E\Data :#6 Page: 1 Engineer Signature:



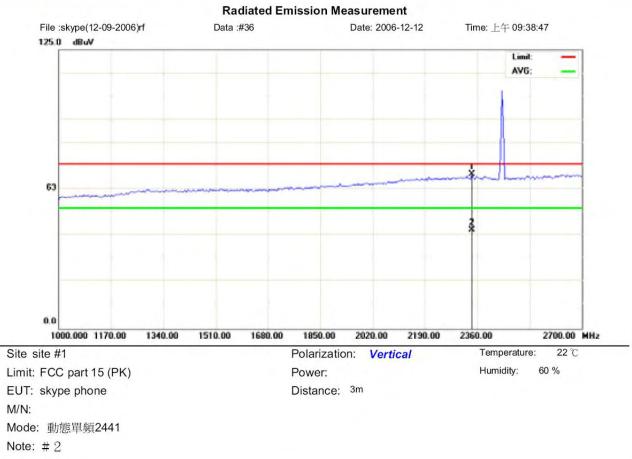


No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	500.2000	46.08	-7.16	38.92	46.00	-7.08	peak	
2		566.0000	38.59	-5.63	32.96	46.00	-13.04	peak	
3		704.6000	40.12	-4.00	36.12	46.00	-9.88	peak	
4		749.4000	36.93	-3.11	33.82	46.00	-12.18	peak	
5	1	767.6000	36.29	-2.72	33.57	46.00	-12.43	peak	
6	l.i	967.8000	37.23	0.71	37.94	54.00	-16.06	peak	

*:Maximum data x:Over limit !:over margin

File :SKYPE phone(12-11-2006)E\Data :#8





No.	Mk	. Freq.	Reading Level	Factor	Measure- ment	Limit	Over			
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment	
1	*	2343.000	68.95	0.22	69.17	74.00	-4.83	peak		
2		2343.000	43.93	0.22	44.15	54.00	-9.85	AVG		

*:Maximum data x:Over limit !:over margin

File :skype(12-09-2006)rf\Data :#36

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File :skype(12-09-2006)rf(REPO Data :#26 Date 2006-12-12 Time: 上午 09:39:41 120.0 dBu¥ Limit: AVG: 60 1 0.0 1000.000 1170.00 1510.00 1680.00 1850.00 1340.00 2020.00 2190.00 2700.00 MHz 2360.00 Temperature: 22 °C Site opensite #1 Polarization: Vertical Limit: FCC part 15 (PK) Humidity: 60 % Power: EUT: skype phone Distance: 3m M/N: Mode: 動態單頻2441

Radiated Emission Measurement

Note: Average mode(RBW:1MHz , VBW:10Hz)

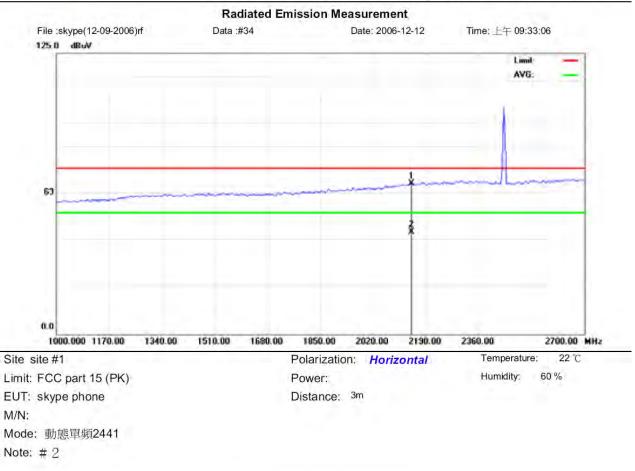
No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over			
		MHz	dBu∀	dB	dBuV	dBuV	dB	Detector	Comment	
1	*	2343.000	43.93	0.22	44.15	54.00	-9.85	AVG		

*:Maximum data x:Over limit !:over margin

Reference Only

File :skype(12-09-2006)rf(REPO\Data :#26 Page: 1 Engineer Signature:





No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	2143.250	67.00	-0.03	66.97	74.00	-7.03	peak	
2	1.12	2143.250	45.51	-0.03	45.48	54.00	-8.52	AVG	

*:Maximum data x:Over limit !:over margin

Reference Only

File :skype(12-09-2006)rf\Data :#34

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Radiated Emission Measurement

Mk.	Freq.	Readi Leve		rrect	Measu		Limit	Over						
e: Ave	rage mo	de(RBV	V:1MHz	. VBW	:10Hz)									
e: 動	態單頻24	41												
: skyp	be phone						Distan	ce: 3n	1					
t: FCC	c part 15	(PK)					Power				Hu	midity:	60 %	
opens	site #1						Polariz	zation:	Horizo	ntal	Ter	mperature:	22 °C	
10	00,000 11	0.00	1340.00	1510.	00 1	680.00	1850	.00 2	020.00	2190.00	2360.00	£ 2	2700.00	MHz
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60											_			
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												AVG:	-	1
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 File:skype(12-09-2006)rf(REPO
 Data:#25
 Date: 2006-12-12
 Time: 上午 09:34:01

*:Maximum data x:Over limit !:over margin

Reference Only

File :skype(12-09-2006)rf(REPO\Data :#25 Page: 1 Engineer Signature:

2143.250

1 *

45.51

-0.03

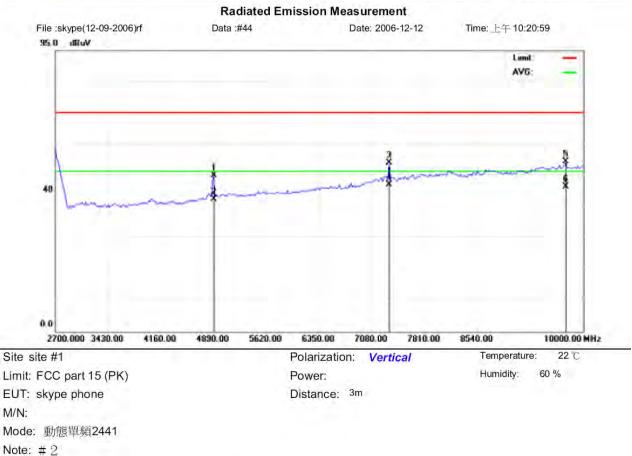
45,48

54.00

-8.52

AVG



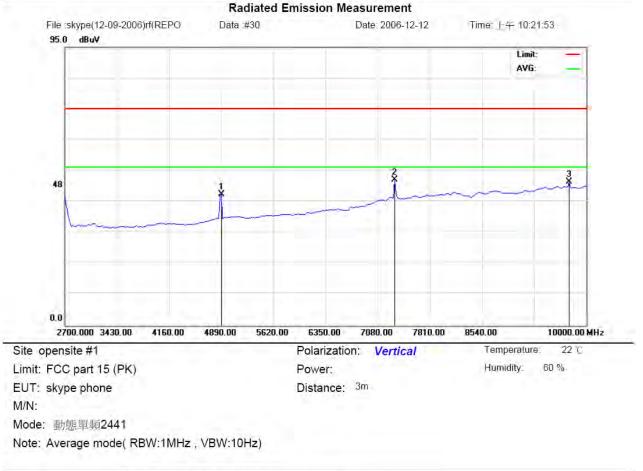


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	4	4890.000	45.23	7.73	52.96	74.00	-21.04	peak	
2	4	4890.000	36.97	7.73	44.70	54.00	-9.30	AVG	
3		7317.250	43.71	13.45	57.16	74.00	-16.84	peak	
4	*	7317.250	36.26	13.45	49.71	54.00	-4.29	AVG	
5	4	9762.750	39.80	17.70	57.50	74.00	-16.50	peak	
6		9762.750	31.26	17.70	48.96	54.00	-5.04	AVG	

*:Maximum data x:Over limit !:over margin

File :skype(12-09-2006)rf\Data :#44





No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over			
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment	
1		4890.000	36.97	7.73	44.70	54.00	-9.30	AVG		
2	*	7317.250	36.26	13.45	49.71	54.00	-4.29	AVG		
3		9762.750	31.26	17.70	48.96	54.00	-5.04	AVG		

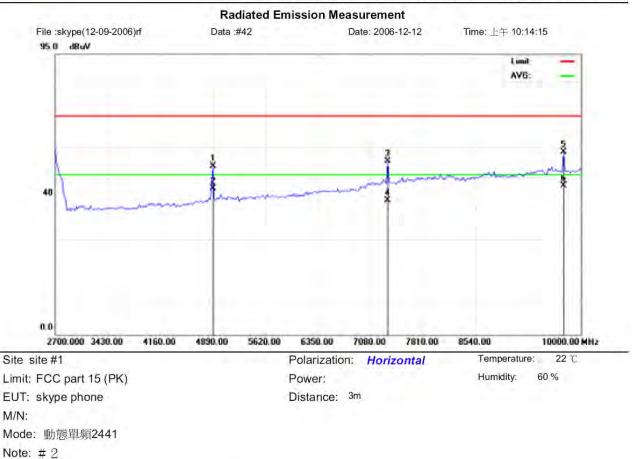
*:Maximum data x:Over limit !:over margin

Reference Only

File :skype(12-09-2006)rf(REPO\Data :#30

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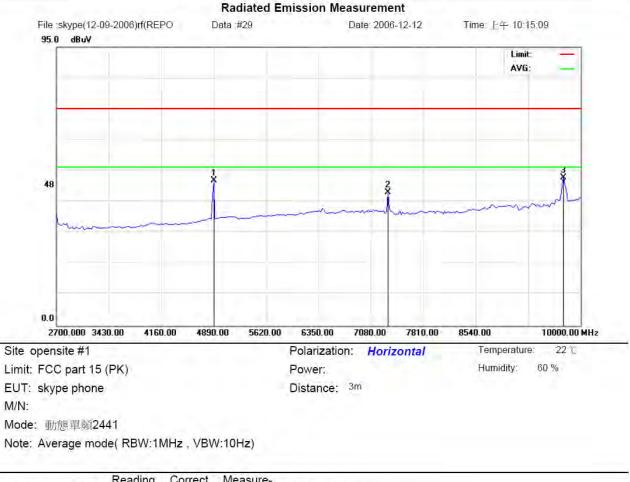
No. M	lk. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
-	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	4890.000	49.48	7.73	57.21	74.00	-16.79	peak	
2	4890.000	41.70	7.73	49.43	54.00	-4.57	AVG	
3	7317.250	45.28	13.45	58.73	74.00	-15.27	peak	
4	7317.250	32.05	13.45	45.50	54.00	-8.50	AVG	
5	9762.750	44.17	17.70	61.87	74.00	-12.13	peak	
6 *	9762.750	32.84	17.70	50.54	54.00	-3.46	AVG	

*:Maximum data x:Over limit !:over margin

Reference Only

File :skype(12-09-2006)rf\Data :#42





No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over			
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment	
1	4	1890.000	41.70	7.73	49.43	54.00	-4.57	AVG		
2	7	317.250	32.05	13.45	45.50	54.00	-8.50	AVG		
3	* 9	762.750	32.84	17.70	50.54	54.00	-3.46	AVG		

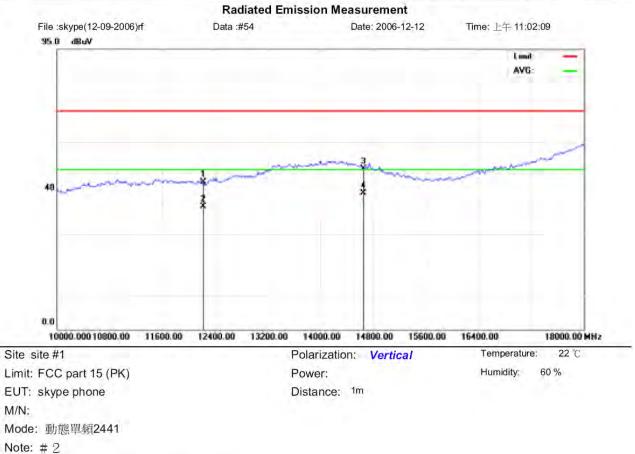
*:Maximum data x:Over limit !:over margin

•Reference Only

File :skype(12-09-2006)rf(REPO\Data :#29

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No.	Mk.	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over			
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment	
1		12205.00	37.48	12.62	50.10	74.00	-23.90	peak		
2	1	12205.00	29.01	12.62	41.63	54.00	-12.37	AVG		
3		14646.00	37.38	17.05	54.43	74.00	-19.57	peak		
4	*	14646.00	29.20	17.05	46.25	54.00	-7.75	AVG		

*:Maximum data x:Over limit !:over margin

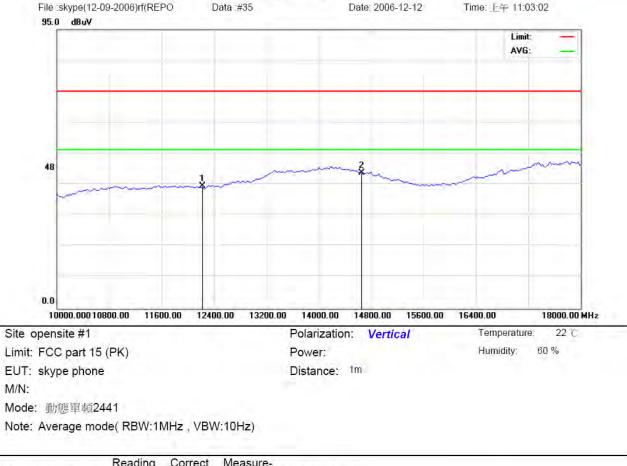
Reference Only

File :skype(12-09-2006)rf\Data :#54

Page: 1 Engineer Signature:



#### Radiated Emission Measurement



No.	М	lk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
			MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		12	2205.00	19.47	22.16	41.63	54.00	-12.37	AVG	
2	*	14	4646.00	19.66	26.59	46.25	54.00	-7.75	AVG	

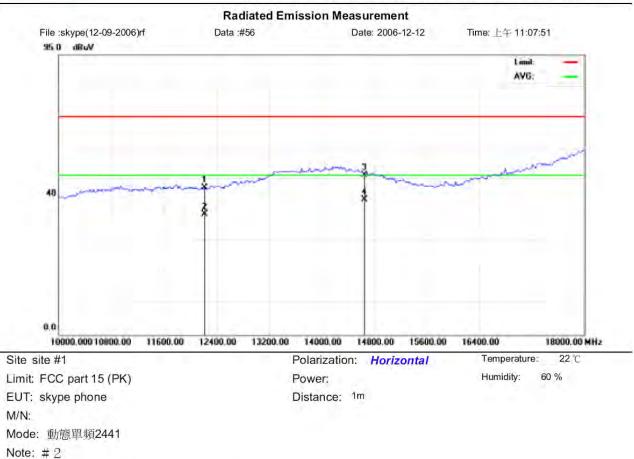
*:Maximum data x:Over limit !:over margin

Reference Only

File :skype(12-09-2006)rf(REPO\Data :#35

Page: 1





No.	Mk.	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		12205.00	37.37	12.62	49.99	74.00	-24.01	peak	
2	1.4	12205.00	28.37	12.62	40.99	54.00	-13.01	AVG	
3	1.00	14646.00	37.21	17.05	54.26	74.00	-19.74	peak	
4	*	14646.00	28.99	17.05	46.04	54.00	-7.96	AVG	

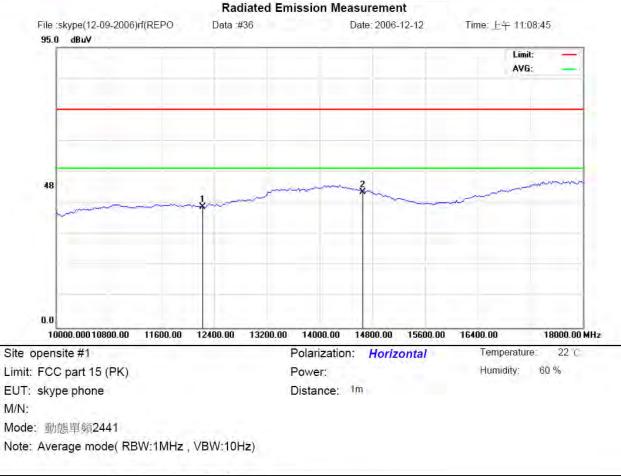
*:Maximum data x:Over limit !:over margin

Reference Only

File :skype(12-09-2006)rf\Data :#56

Page: 1 Engineer Signature





No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over			
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment	
1		12205.00	18.83	22.16	40.99	54.00	-13.01	AVG		
2	*	14646.00	19.45	26.59	46.04	54.00	-7.96	AVG		

*:Maximum data x:Over limit !:over margin

•Reference Only

File :skype(12-09-2006)rf(REPO\Data :#36 Page: 1 Engineer Signature:



## 3.6.4 Open Field Radiated Emissions (Subpart B&C)

The highest peak values of radiated emissions from the EUT at various antenna heights, antenna polarization, EUT orientation, etc. are recorded on the following.

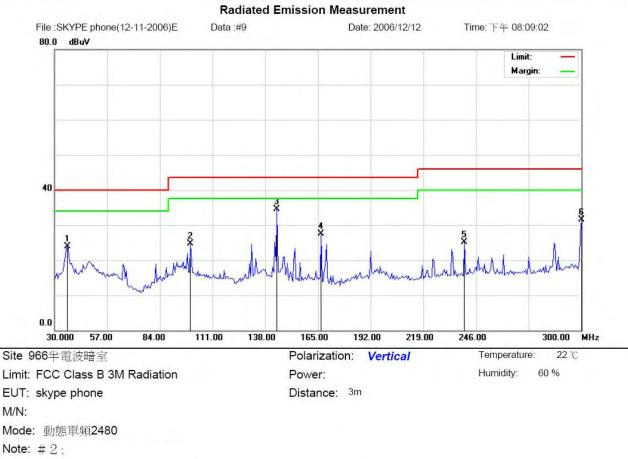
Applicant	: AIRUS TECHNOLOGY CO., LTD
Model No	: VAH200
EUT	: BLUETOOTH SKYPE PHONE
Test Mode	: CH78 2480.000 (Local Frequency: 2480.000 MHz)
Test Date	: 12/12/2006

Please refer to next pager of detail testing data.

Notes:

- 1. Margin= Amplitude Limits
- 2. Distance of Measurement: 3 Meter (30-1000MHz) & (1-10GHz) ,1 Meter (10-26.5GHz)
- 3. Height of table for EUT placed: 0.8 Meter.
- 4. ANT= Antenna height.
- 5. Amplitude= Reading Amplitude Amplifier gain + Cable loss + Antenna factor (Auto calculate in spectrum analyzer)
- 6. The EUT was worst case on X axis after pretest on X & Y & Z axis setting .
- 7. The testing data only show below 18GHz's data because measure data above 18GHz was only ambit noise.
- 8. All frequencies from 30MHz to 26.5GHz have been tested





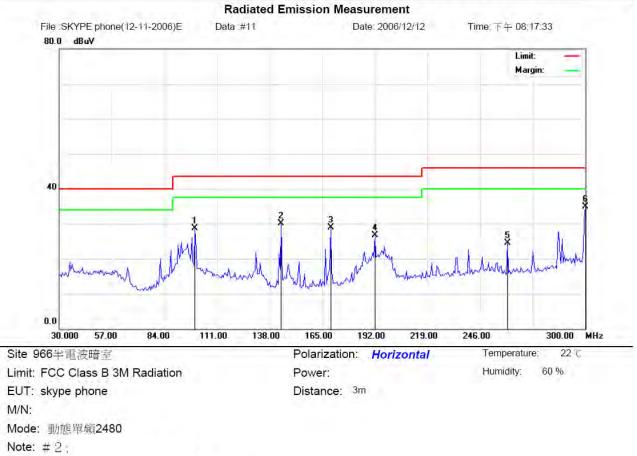
No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over			
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment	
1		36.4799	36.66	-12.81	23.85	40.00	-16.15	peak		
2		99.6600	36.58	-11.78	24.80	43.50	-18.70	peak		
3	*	143.9400	50.74	-16.22	34.52	43.50	-8.98	peak		
4		166.6200	42.91	-15.34	27.57	43.50	-15.93	peak		
5		240.0600	36.48	-11.43	25.05	46.00	-20.95	peak		
6		300.0000	41.50	-9.98	31.52	46.00	-14.48	peak		

*:Maximum data x:Over limit !:over margin

File :SKYPE phone(12-11-2006)E\Data :#9

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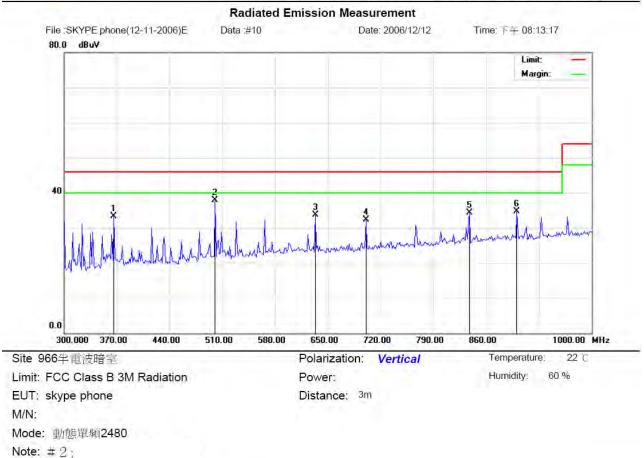
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	1.1		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment	
1	L	99.6600	40.58	-11.78	28.80	43.50	-14.70	peak		
2		143.9400	46.42	-16.22	30.20	43.50	-13.30	peak		
3		169.3200	44.34	-15.40	28.94	43.50	-14.56	peak		
4		192.0000	39.89	-13.26	26.63	43.50	-16.87	peak		
5	- 3	260.0400	35.69	-11.24	24.45	46.00	-21.55	peak		
6	* :	300.0000	44.98	-9.98	35.00	46.00	-11.00	peak		
_										

*:Maximum data x:Over limit !:over margin

Reference Only

File :SKYPE phone(12-11-2006)E\Data :#11 Page: 1 Engineer Signature:





No.	Mk	k. Fi	req.	Reading Level	Correct Factor	Measure- ment	Limit	Over			
		M	Hz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment	
1	ja i	365.8	000	41.92	-8.63	33.29	46.00	-12.71	peak		
2	*	500.2	000	45.09	-7.16	37.93	46.00	-8.07	peak		
3	177	633.2	000	38.02	-4.36	33.66	46.00	-12.34	peak		
4		700.4	000	36.13	-3.87	32.26	46.00	-13.74	peak		
5	10.1	837.6	000	35.80	-1.40	34.40	46.00	-11.60	peak		
6		900.6	000	35.08	-0.36	34.72	46.00	-11.28	peak		

*:Maximum data x:Over limit !:over margin

File :SKYPE phone(12-11-2006)E\Data :#10

Page: 1



**Radiated Emission Measurement** File :SKYPE phone(12-11-2006)E Data :#12 Date: 2006/12/12 Time:下午 08:21:50 80.0 dBuV Limit: Margin: 40 5 0.0 300.000 370.00 440.00 510.00 580.00 650.00 720.00 790.00 860.00 1000.00 MHz Site 966半電波暗室 Polarization: Horizontal Temperature: 22 °C Limit: FCC Class B 3M Radiation Humidity: 60 % Power: EUT: skype phone Distance: 3m M/N: Mode: 動態單頻2480 Note: # 2 ;

	Level	Factor	Measure- ment	Limit	Over			
MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment	
323.8000	43.01	-9.65	33.36	46.00	-12.64	peak		
363.0000	42.04	-8.76	33.28	46.00	-12.72	peak		
500.2000	45.85	-7.16	38.69	46.00	-7.31	peak	-	
700.4000	35.13	-3.87	31.26	46.00	-14.74	peak		
766.2000	36.56	-2.78	33.78	46.00	-12.22	peak		
067 9000	30.33	0.71	31.04	54.00	-22.96	peak		
	967.8000	1981, 266, 277, 277, 277, 277, 277, 277, 277						

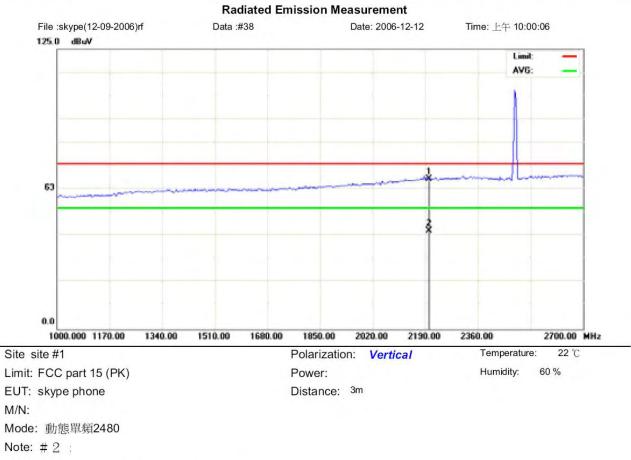
 *:Maximum data
 x:Over limit
 !:over margin
 •Reference Only

 File :SKYPE phone(12-11-2006)E\Data :#12
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 Engineer Signature:

 Test Report No : 0701FR14
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No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	2202.750	66.62	0.50	67.12	74.00	-6.88	peak	
2		2202.750	43.51	0.50	44.01	54.00	-9.99	AVG	

*:Maximum data x:Over limit !:over margin

File :skype(12-09-2006)rf\Data :#38

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# Limit: AV6:

 File :skype(12-09-2006)rf(REPO
 Data :#27
 Date: 2006-12-12
 Time: 上午 10:01:00

 120.0
 dBuV

Radiated Emission Measurement

0.0 1000.000 1170.00 1340.00 1510.00 1680.00 1850.00 2020.00 2190.00 2360.00 2700.00 MHz Site opensite #1 Polarization: Vertical Temperature: 22 C Humidity: 60 % Limit: FCC part 15 (PK) Power: EUT: skype phone Distance: 3m M/N: Mode: 動態單頻2480 Note: Average mode( RBW:1MHz , VBW:10Hz)

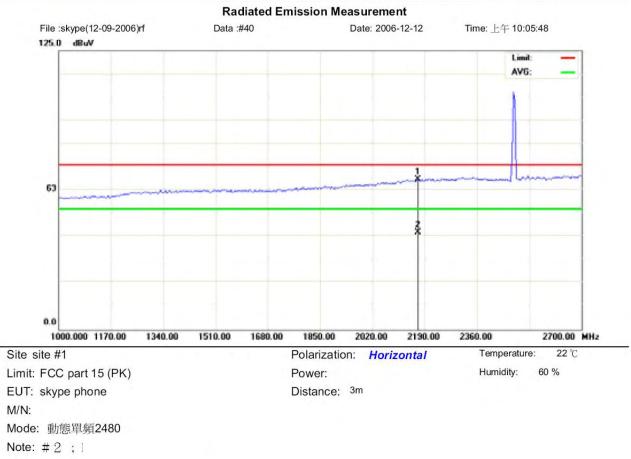
No. Mł	c. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over			
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment	
1 *	2202.750	43.51	0.50	44.01	54.00	-9.99	AVG		

*:Maximum data x:Over limit !:over margin

Reference Only

File :skype(12-09-2006)rf(REPO\Data :#27 Page: 1 Engineer Signature:

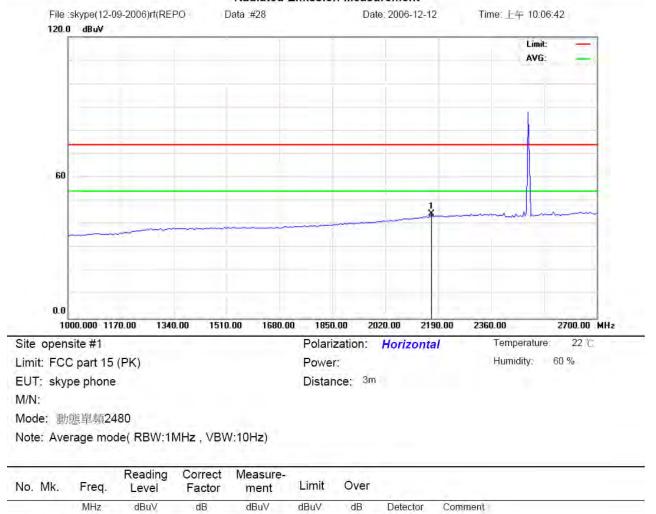




No.	Mk	k. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	2168.750	67.14	0.14	67.28	74.00	-6.72	peak	
2		2168.750	43.51	0.14	43.65	54.00	-10.35	AVG	

*:Maximum data	x:Over limit	:over margin			<ul> <li>Reference Only</li> </ul>
File :skype(12-09	-2006)rf\Data :‡	<i>‡40</i>	Page: 1	Engineer Signature:	





-10.35

peak

54.00

Radiated Emission Measurement

*:Maximum data x:Over limit !:over margin

43.51

0.14

43.65

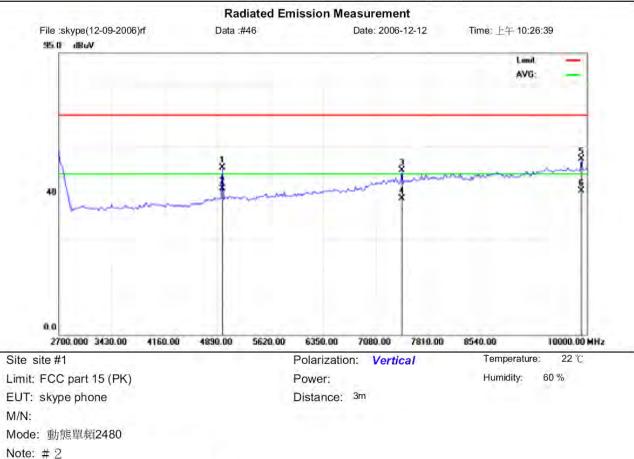
Reference Only

File :skype(12-09-2006)rf(REPO\Data :#28 Page: 1 Engineer Signature:

1 *

2168.750





No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over			
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment	
1		4963.000	48.49	7.81	56.30	74.00	-17.70	peak		
2	*	4963.000	41.49	7.81	49.30	54.00	-4.70	AVG		
3		7445.000	41.73	13.67	55.40	74.00	-18.60	peak		
4		7445.000	32.36	13.67	46.03	54.00	-7.97	AVG		
5		9927.000	41.51	17.78	59.29	74.00	-14.71	peak		
6		9927.000	30.70	17.78	48.48	54.00	-5.52	AVG		

*:Maximum data x:Over limit !:over margin

Reference Only

File :skype(12-09-2006)rf\Data :#46 Page: 1 Engineer Signature:



#### Radiated Emission Measurement

		-							Limit:	-
							ì		AVG:	-
48			×	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~			~~~		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
0.0 2700.000 34	30.00 416	D.00 4890	.00 5620.0		1.1.2	80.00	7810.00	8540.00		10000.00 MHz
opensite #1					zation:	Vertica			nperature	
it: FCC part 15	Sec. 19			Powe				Hui	nidity:	60 %
F: skype phone				Dista	nce: 3m					
t.										
	180									
le: 動態單頻24	and many set of	MHZ VRV	/:10Hz)							
le: 動態單頻24 e: Average mo	de( RBW:1	WI12, VUV								
e: Average mo	Reading	Correct	Measure-	Limit	Over		_			
				Limit	Over dB	Detecto	Con	nment		

 File :skype(12-09-2006)rf(REPO
 Data :#31
 Date: 2006-12-12
 Time: 上午 10:27:33

 95.0
 dBuV

*:Maximum data x:Over limit !:over margin

32.36

30.70

13.67

17.78

Reference Only

File :skype(12-09-2006)rf(REPO\Data :#31 Page: 1 Engineer Signature:

46.03

48.48

54.00

54.00

-7.97

-5.52

AVG

AVG

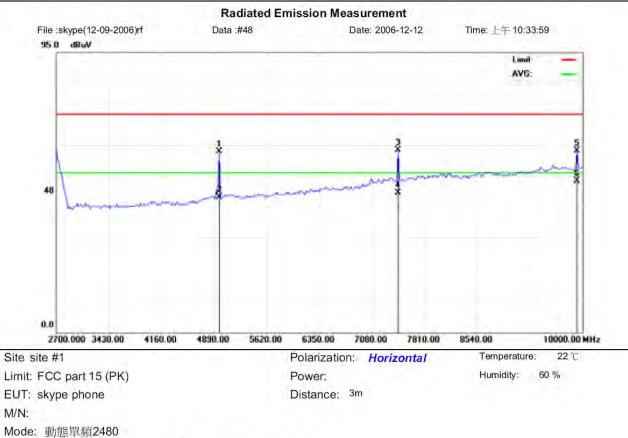
2

3

7445.000

9927.000





Note: # 2 (9927M高度:144cm);

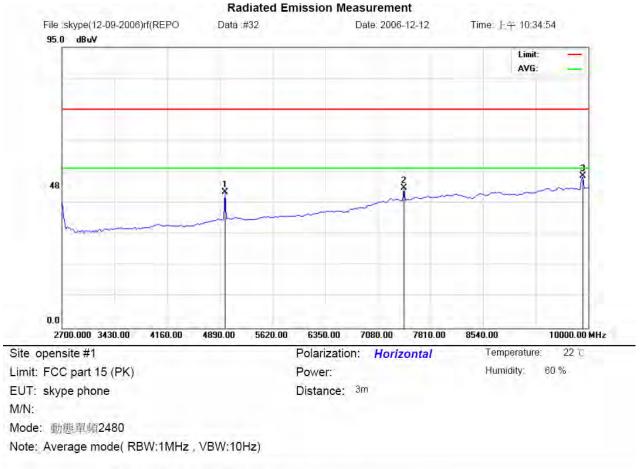
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over			
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment	
1	4	4963.000	53.60	7.81	61.41	74.00	-12.59	peak		
2		4963.000	38.15	7.81	45.96	54.00	-8.04	AVG		
3	,	7445.000	48.17	13.67	61.84	74.00	-12.16	peak		
4		7445.000	33.67	13.67	47.34	54.00	-6.66	AVG		
5	(	9927.000	43.96	17.78	61.74	74.00	-12.26	peak		
6	* (	9927.000	33.75	17.78	51.53	54.00	-2.47	AVG		

*:Maximum data x:Over limit !:over margin

•Reference Only

File :skype(12-09-2006)rf\Data :#48





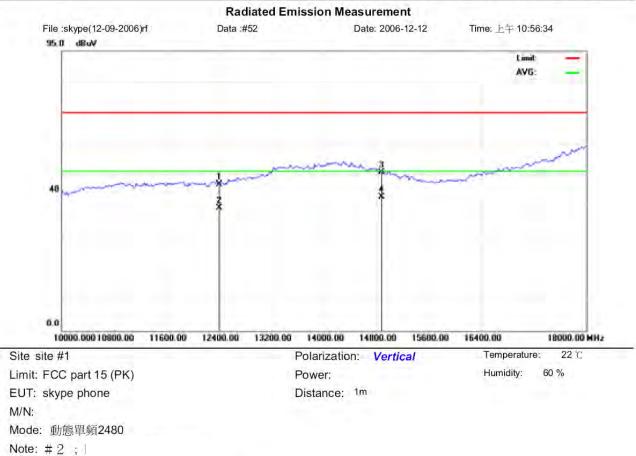
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over			
-		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment	
1		4963.000	38.15	7.81	45.96	54.00	-8.04	AVG		
2		7445.000	33.67	13.67	47.34	54.00	-6.66	AVG		
3	*	9927.000	33.75	17.78	51.53	54.00	-2.47	AVG		

*:Maximum data x:Over limit !:over margin

Reference Only

File :skype(12-09-2006)rf(REPO\Data :#32 Page: 1 Engineer Signature:





No.	Mk.	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	173	12400.00	37.25	12.44	49.69	74.00	-24.31	peak	
2	1.1.2	12400.00	29.30	12.44	41.74	54.00	-12.26	AVG	
3	10	14880.00	37.81	16.07	53.88	74.00	-20.12	peak	
4	*	14880.00	29.32	16.07	45.39	54.00	-8.61	AVG	

*:Maximum data x:Over limit !:over margin

File :skype(12-09-2006)rf\Data :#52

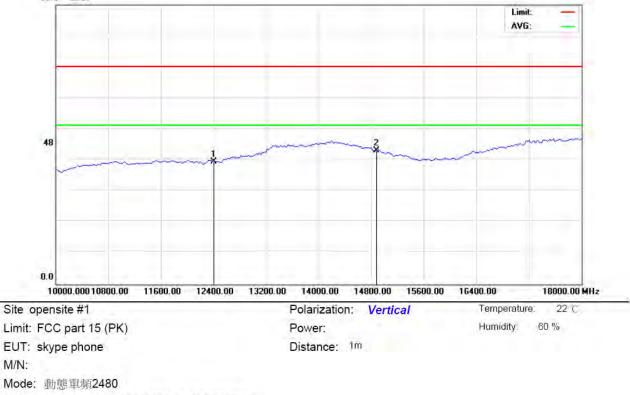
Page: 1 Engineer Signature:

•Reference Only



#### Radiated Emission Measurement

File :skype(12-09-2006)rf(REPO Data #34 Date: 2006-12-12 Time: 上午 10:57:28 95.0 dBuV



Note: Average mode( RBW:1MHz , VBW:10Hz)

No.	M	1k.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over			
		-	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment	
1		12	2400.00	19.76	21.98	41.74	54.00	-12.26	AVG		
2	*	14	4880.00	19.78	25.61	45.39	54.00	-8.61	AVG		

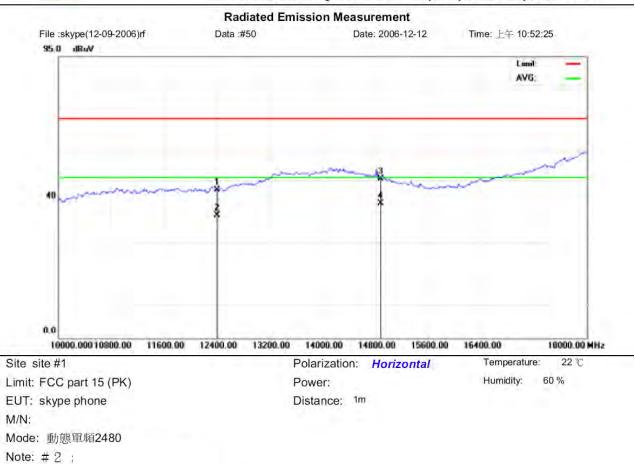
*:Maximum data x:Over limit !:over margin

•Reference Only

File :skype(12-09-2006)rf(REPO\Data :#34

Page: 1





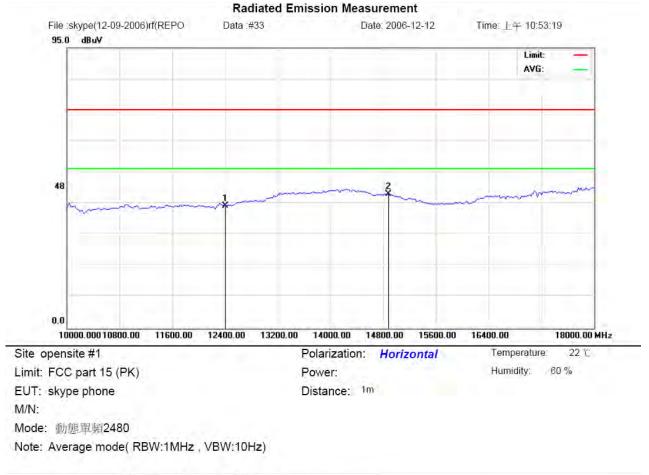
No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	1.1	12400.00	37.49	12.44	49.93	74.00	-24.07	peak	
2		12400.00	28.99	12.44	41.43	54.00	-12.57	AVG	
3		14880.00	37.77	16.07	53.84	74.00	-20.16	peak	
4	*	14880.00	29.35	16.07	45.42	54.00	-8.58	AVG	

*:Maximum data x:Over limit !:over margin

Reference Only

 File :skype(12-09-2006)rf\Data :#50
 Page: 1
 Engineer Signature:





No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over			
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment	
1		12400.00	19.45	21.98	41.43	54.00	-12.57	AVG		
2	*	14880.00	19.81	25.61	45.42	54.00	-8.58	AVG		

*:Maximum data x:Over limit I:over margin

•Reference Only

File :skype(12-09-2006)rf(REPO\Data :#33 Page: 1 Engineer Signature:



# 4. Maximum Conducted Output Power Requirements

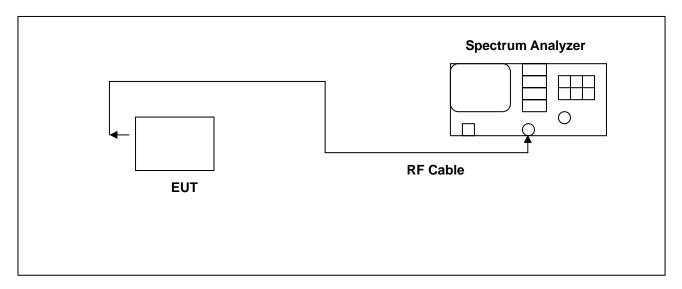
# 4.1 Test Condition & Setup:

The tests below are run with the EUT's transmitter set at high power in TX mode. The EUT is needed to force selection of output power level and channel number. While testing, EUT was set to transmit continuously. Remove the Subjective device's antenna and connect the RF output port to spectrum analyzer. The maximum peak output power shall not exceed 1 watt.

Use a direct connection between the antenna port of transmitter and the spectrum Analyzer, for prevent the spectrum analyzer input attenuation 40-50 dB. Set the RBW Bandwidth of the emission or use a channel power meter mode.

For antennas with gains of 6 dBi or less, maximum allowed transmitter output is 1 watt (+30 dBm). For antennas with gains greater than 6 dBi, transmitter output level must be decreased by an amount equal to (GAIN - 6)/3 dBm.

The antenna port of the EUT was connected to the input of a power meter. Power was read directly and cable loss correction was added to the reading to obtain power at the EUT antenna terminals.



# 4.2 Test Instruments Configuration:



Describe	Manufacturer	Model	Serial Number	Calibr	ation
Describe	Manufacturer	Woder	Senai Number	Cal. Date	Due Date
Spectrum Analyzer	Agilent	E4445A	MY45300744	May. 09, 2006	May. 09, 2007

## 4.4 Test Result:

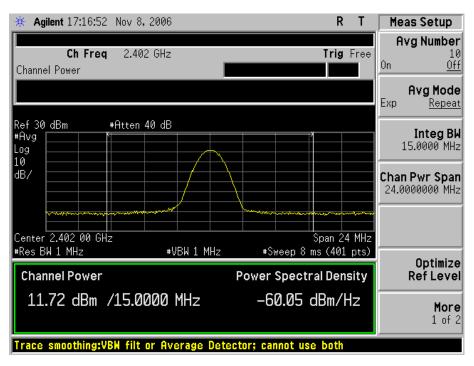
Frequency (MHz)	Output (dBm)	Required Limit
2402	11.72	<30dBm
2441	11.11	<30dBm
2480	10.23	<30dBm

Note: Test Graphs See next page.

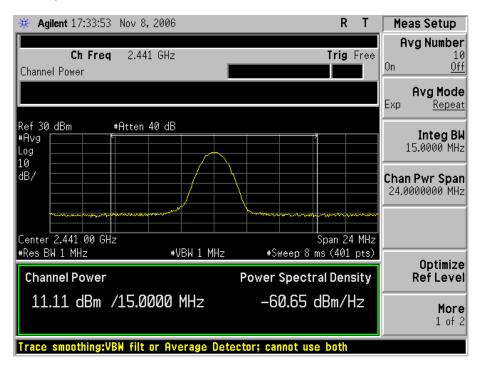


### 4.5 Test Graphs

#### FHSS CH00 (2402MHz)

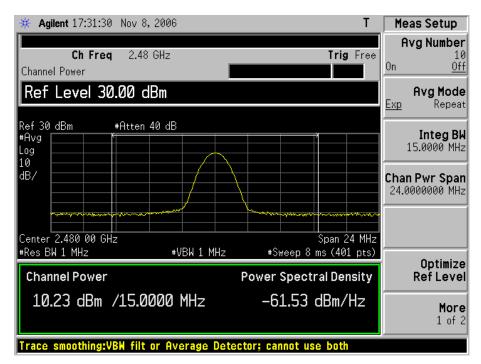


#### FHSS CH39 (2441MHz)





#### FHSS CH78 (2480MHz)





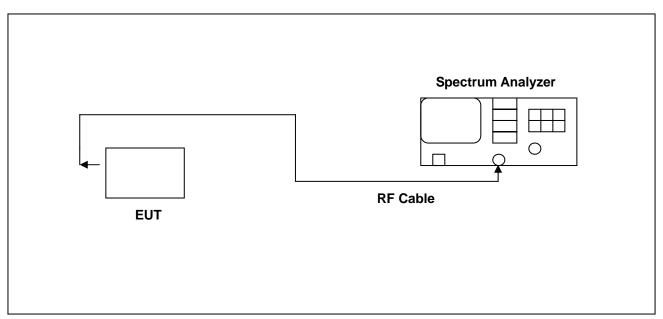
## 5. Minimum 20dB RF Bandwidth Requirements

### 5.1 Test Condition & Setup:

The RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 10dB passive attenuator. A fully charged battery was used for the supply voltage. The Bluetooth frequency hopping function of the EUT was enabled. The spectrum analyzer used the following settings:

- 1. Span = approx. 2 to 3 times the 20dB bandwidth, centered on a hopping frequency
- 2. RBW  $\geq$  1% of the 20dB span
- 3. VBW  $\geq$  RBW
- 4. Sweep = auto
- 5. Detector function = peak
- 6. Trace = max hold

The trace was allowed to stabilize. The EUT was transmitting at its maximum data rate. The marker-to-peak function was used to set the marker to the peak of the emission. The marker-delta function was used to measure 20dB down one side of the emission. The marker-delta function and marker was moved to the other side of the emission until it was even with the reference marker. The marker-delta reading at this point was the 20dB bandwidth of the emission.





Describe	Manufacturer	Model	Serial Number	Calibr	ation
Describe	Manufacturer	Woder	viodei Seriai Number		Due Date
Spectrum Analyzer	Agilent	E4445A	MY45300744	May. 09, 2006	May. 09, 2007

## 5.4 Test Result:

Frequency (MHz)	Min. 26dB Bandwidth (KHz)	Required Limit
2402	720	<1MHz
2441	720	<1MHz
2480	700	<1MHz

Note: Test Graphs See next page.



### 5.5 Test Graphs

#### FHSS CH00 (2412MHz)



#### FHSS CH39 (2441MHz)





#### FHSS CH78 (2480MHz)





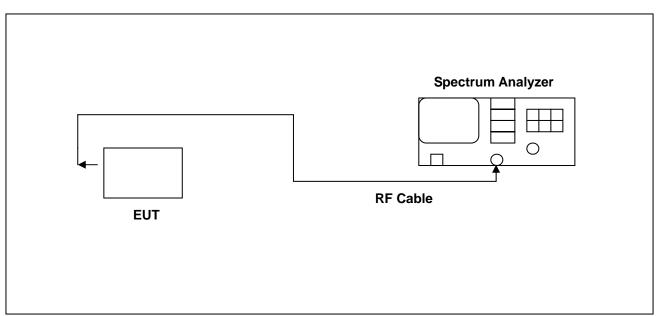
# 6. Carrier Frequency Separation Requirements

### 6.1 Test Condition & Setup:

The RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 10dB passive attenuator. A fully charged battery was used for the supply voltage. The Bluetooth transmitter of the V6 had its hopping function enabled. The following spectrum analyzer settings were used:

- 1. Span = wide enough to capture the peaks of two adjacent channels
- 2. Resolution (or IF) Bandwidth (RBW)  $\geq$  1% of the span
- 3. Video (or Average) Bandwidth (VBW)  $\geq$  RBW
- 4. Sweep = auto
- 5. Detector function = peak
- 6. Trace = max hold

The trace was allowed to stabilize. The marker-delta function was used todetermine the separation between the peaks of the adjacent channels.





Describe	Manufacturer	Model	Serial Number	Calib	ration
Describe	Manufacturer	woder	Senai Number	Cal. Date	Due Date
Spectrum Analyzer	Agilent	E4445A	MY45300744	May. 09, 2006	May. 09, 2007
Attenuator	RADIALL	R41572000	0603033073	NA	NA

## 6.4 Test Result:

Carrier I	Frequency Separation	on Measure:		1MHz
₩ Agilent 18:54:4	3 Nov 8, 2006			T Marker
Ref 30 dBm	Atten 40 dB		▲ Mkr1 -1.000 0.04	MHz 4 dB 1 2 3 4
Peak Log 10 dB/		1R		Norma
-Marker				Delta
LgAv 0.04 (				Cracking Ref
M1 S2 S3 FC AA				Span Pair Span <u>Cente</u>
£(f): FTun Swp				Of
Center 2.480 000   #Res BW 300 kHz		300 kHz #\$	Span 3 Sweep 5 ms (601	



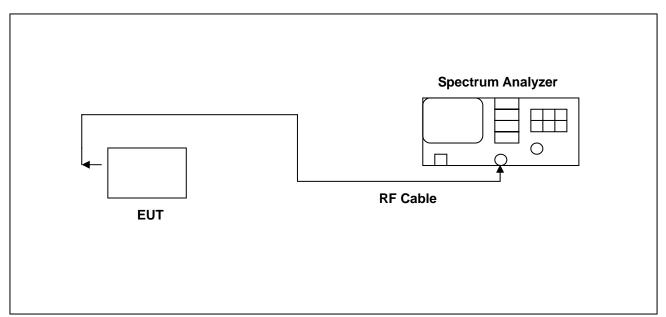
# 7. Number of Hopping Requirements

### 7.1 Test Condition & Setup:

The RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 10dB passive attenuator. A fully charged battery was used for the supply voltage. The Bluetooth frequency hopping function of the EUT was enabled. The spectrum analyzer used the following settings:

- 1. Span = the frequency band of operation
- 2. RBW  $\geq$  1% of the span
- 3. VBW  $\geq$  RBW
- 4. Sweep = auto
- 5. Detector function = peak
- 6. Trace = max hold

The trace was allowed to stabilize.





Describe	Manufacturer	Model	Serial Number	Calib	ration
Describe	Manufacturer	Woder	Senai Number	Cal. Date	Due Date
Spectrum Analyzer	Agilent	E4445A	MY45300744	May. 09, 2006	May. 09, 2007
Attenuator	RADIALL	R41572000	0603033073	NA	NA

### 7.4 Test Result:

	70011
Number of Hopping Measure :	79CH

Note: Test Graphs See next page.



🔆 Agilent 19:05:54 Nov 8	,2006			R	Т	Trace
Ref 20 dBm #Atten	30 dB		Mkr2	2.441 4 9.57	9 GHz dBm 1	<b>Trace</b>
Log <b>*</b> 10 dB/	v~~~~	*****		2	~~	Clear Write
						Max Hold
LgAv						Min Hold
V1 S2 S3 FC AA						Viev
€(f): FTun Swp						Blani
Start 2.398 00 GHz #Res BW 1 MHz Copyright 2000-2005 Ag			Stop #Sweep 4	2.447 00 ms (601		More 1 of 2

# 7.5 Test Graphs (CH0~CH39 & CH40~CH78)

🔆 Agilent 19:16:40 Nov 8,	2006	Т	Trace
Ref 20 dBm #Atten		Mkr2 2.480 00 GHz 10.76 dBm	<b>Trace</b> <u>1</u> 2 3
Log 10 dB/	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	mmmm kank	Clear Write
Marker			Max Hold
2.48000000 LgAv 10.76 dBm	GHz	———— <mark>М</mark> и	Min Hold
V1 S2 S3 FC AA			View
£(f): FTun Swp			Blank
Start 2.435 00 GHz #Res BW 1 MHz	#VBW 3 MHz	Stop 2.485 24 GHz #Sweep 4 ms (601 pts)	More 1 of 2
Copyright 2000-2005 Ag			



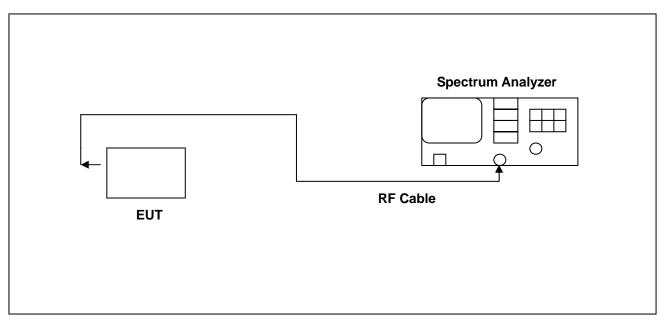
# 8. Time of Occupancy (Dwell Time) Requirements

### 8.1 Test Condition & Setup:

The RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 10dB passive attenuator. A fully charged battery was used for the supply voltage. The Bluetooth hopping function of the EUT was enabled. The following spectrum analyzer settings were used:

- 1. Span = zero span, centered on a hopping channel
- 2. RBW = 1 MHz
- 3. VBW  $\geq$  RBW
- 4. Sweep = as necessary to capture the entire dwell time per hopping channel
- 5. Detector function = peak
- 6. Trace = max hold

The marker-delta function was used to determine the dwell time.





Describe	Manufacturer	Model	Serial Number	Calib	ration
Describe	Manufacturer	Woder	Senai Number	Cal. Date	Due Date
Spectrum Analyzer	Agilent	E4445A	MY45300744	May. 09, 2006	May. 09, 2007
Attenuator	RADIALL	R41572000	0603033073	NA	NA

## 8.4 Test Result (DH1 Mode):

Cycle Calculate	79CH * 0.4 = 31.6 (sec)
The EUT Hopping Number per Sec	1600 times/sec
Each Channel Dwell Times per Sec	800/79CH = 10.13(times/sec)
Each Channel Dwell Times (1)	0.450 ms (sec)
Each Channel Dwell Times on Cycle(2)	31.6 * 10.13 = 320.108(times)
Dwell Times on Cycle (1) * (2)	144.0486 ms (sec)
LIMIT(msec)	< = 400

Note: RB=1MHz ; VB=1MHz ; SPAN=0MHz ; Sweep Time=20msec