# FCC Part22H&24E Test Report

Product Name : Notebook

Model No. : SZ900/SZ901

FCC ID : WXC-900901WBG

Applicant: FOXCONN INTERNATIONAL INC

Address : 2 TZU YU ST TU-CHENG, TAIPEI HSIEN 236

**TAIWAN** 

Date of Receipt : 2009/09/11

Issued Date : 2009/09/18

Report No. : 099S034R-HP-US-P07V01

Report Version : V3.0

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by CNLA, NVLAP, NIST or any agency of the Government.

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# **Test Report Certification**

Issued Date : 2009/09/18

Report No. : 099S034R-HP-US-P07V01

QuieTek

Product Name : Notebook

Applicant : FOXCONN INTERNATIONAL INC

Address : 2 TZU YU ST TU-CHENG, TAIPEI HSIEN 236 TAIWAN

Manufacturer : FOXCONN INTERNATIONAL INC

Address : 2 TZU YU ST TU-CHENG, TAIPEI HSIEN 236 TAIWAN

Model No. : SZ900/SZ901

FCC ID : WXC-900901WBG

EUT Voltage : AC 100-240V, 50/60Hz

Trade Name : FOXCONN

Applicable Standard : FCC CFR Title 47 Part 2, Part 22H&24E

Test Result : Complied

Performed Location : SuZhou EMC laboratory

No.99 Hongye Rd., Suzhou Industrial Park Loufeng Hi-Tech

Development Zone., SuZhou, China

TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098

FCC Registration Number: 800392

Documented By :

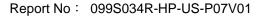
Alice Ni

Reviewed By : Marlinchen

( Marlin Chen )

Approved By :

Gene Chang )





### **Laboratory Information**

We, **QuieTek Corporation**, are an independent EMC and safety consultancy that was established the whole facility in our laboratories. The test facility has been accredited by the following accreditation Bodies in compliance with ISO 17025, EN 45001 and Guide 25:

Taiwan R.O.C. : BSMI, DGT, CNLA

Germany : TUV Rheinland

Norway : Nemko, DNV USA : FCC, NVLAP

Japan : VCCI

The related certificate for our laboratories about the test site and management system can be downloaded from QuieTek Corporation's Web Site: <a href="http://tw.quietek.com/modules/myalbum/">http://tw.quietek.com/modules/myalbum/</a>
The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site: <a href="http://www.quietek.com/">http://www.quietek.com/</a>

If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

#### **HsinChu Testing Laboratory:**

No.75-2, 3rd Lin, Wangye Keng, Yonghxing Tsuen, Qionglin Shiang, Hsinchu County 307, Taiwan, R.O.C.















#### **LinKou Testing Laboratory:**















#### **Suzhou Testing Laboratory:**















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#### 1. General Information

## 1.1. EUT Description

Product	Name	Notebook						
Trade Name		FOXCONN						
Model N	0.	SZ900/S	Z901					
FCC ID		WXC-90	0901WBG					
3G Mod	ule	EM770						
Working	Voltage	DC 3.3V						
	GPRS/EDGE  WCDMA R99  HSDPA R5	Band	UL Frequency (MHz)	DL Frequency (MHz)	Modulation			
		850	824~849	869~894	GMSK/8PSK			
Mode		1900	1850~1910	1930~1990	GMSK/8PSK			
Mode		Band	UL Frequency (MHz)	DL Frequency (MHz)	Modulation			
		II	1850~1910	1930~1990	QPSK			
		V	824~849	869~894	QPSK			
Channel	Control	Auto						
Antenna type		PIFA						
Antenna Gain		GSM850 Band: -0.29dBi						
		DCS1900	DCS1900 Band: 3.45dBi					

#### Note:

- 1. The product includes two models SZ900 and SZ901. SZ900 and SZ901 are only different from externally. The motherboard and the material are the same.
- 2. This report was based on 096S038R-HP-US-P07V01 due to antenna change. Low band antenna gain was -0.29dBi changing from 0.95dBi, and high band antenna gain was 3.45dBi changing from 2.55dBi. All of verification data were done over ERP, EIRP and spurious emission.

Component				
AC Adapter	Manufacturer: Darfon Electronics Corp.			
	Model: BA01-J			
	Input: 100-240V~, 50~60Hz, 1A			
	Output: 19V, 1.58A			



#### 1.2. Mode of Operation

QuieTek has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Test Mode
Mode 1: GPRS850
Mode 2: GPRS1900
Mode 3: EDGE850
Mode 4: EDGE1900
Mode 5: WCDMA/HSDPA Band V
Mode 6: WCDMA/HSDPA Band II

#### Note:

- 1. Regards to the frequency band operation: the lowest, middle and highest frequency of channel were selected to perform the test, then shown on this report.
- 2. This device is a composite device in accordance with Part 15 Subpart B regulations.



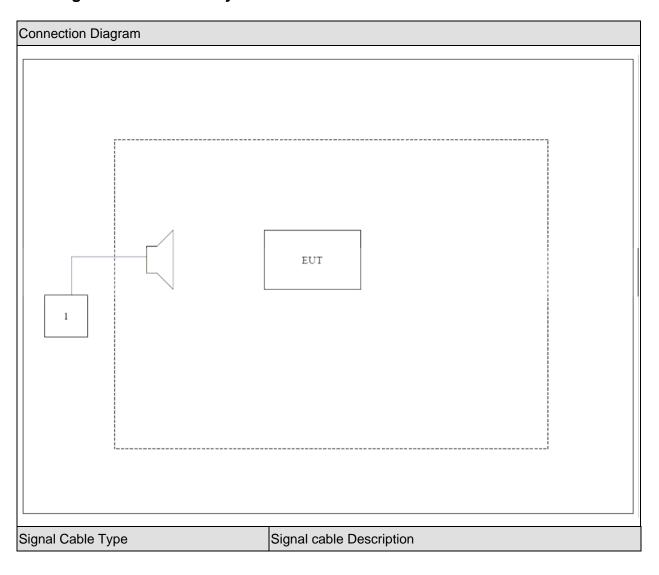
## **Tested System Details**

The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product		Manufacturer	Model No.	Serial No.	Power Cord
1	CMU200	R&S	CMU200	N/A	N/A



# 1.3. Configuration of Tested System





# 1.4. EUT Exercise Software

1	Setup the EUT and simulators as shown on above.
2	Turn on the power of all equipment.
3	EUT Communicate with CMU200, then select channel to test.



# 2. Technical Test

# 2.1. Summary of Test Result

No deviations from the test standards
Deviations from the test standards as below description:

# For GSM850 & WCDMA Band V (FCC Part 22H & Part 2)

Emission					
Performed Item	Normative References	Test	Deviation		
renomed item	Normative References	Performed	Deviation		
Peak Output Power	FCC Part 22.913(a)(2) and Part 2.1046	Yes	No		
Modulation Characteristic	FCC Part 2.1047(d)	No	N/A		
Occupied Bandwidth	FCC Part 2.1049	No	N/A		
Spurious Emission At Antenna	FCC Part 22.917(a) and Part 2.1049	No	N/A		
Terminals (+/- 1MHz)					
Spurious Emission	FCC Part 22.917(b) and Part 2.1051, 2.1053	Yes	No		
Frequency Stability Under	FCC Part 22.355 and 2.1055	No	N/A		
Temperature & Voltage					
Variations					

# For PCS1900 & WCDMA Band II (FCC Part 24E & Part 2)

Emission					
Performed Item	Normative References	Test Performed	Deviation		
Peak Output Power	FCC Part 24.232(b) and Part 2.1046	Yes	No		
Modulation Characteristic	FCC Part 2.1047(d)	No	N/A		
Occupied Bandwidth	FCC Part 24.238(b) and Part 2.1049	No	N/A		
Spurious Emission At Antenna Terminals (+/- 1MHz)	FCC Part 24.238(a) and Part 2.1049	No	N/A		
Spurious Emission	FCC Part 24.238(b) and Part 2.1051, 2.1053	Yes	No		
Frequency Stability Under Temperature & Voltage Variations	FCC Part 24.235 and 2.1055	No	N/A		

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# 2.2. Test Environment

Items	Required (IEC 68-1)	Actual	
Temperature (°C)	15-35	23	
Humidity (%RH)	25-75	52	
Barometric pressure (mbar)	860-1060	950-1000	



# 3. Peak Output Power

# 3.1. Test Equipment

Peak Output Power / AC-6

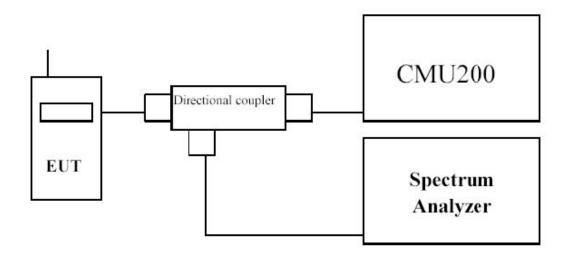
Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2009/06/10
Radio Communication Tester	R&S	CMU 200	106388	2008/10/21
Dual Directional Coupler	Agilent	778D	20160	2009/04/20
10dB Coaxial Coupler	Agilent	87300C	MY44300299	2009/04/20
PSG Analog S.G.	Agilent	E8257D	MY44321116	2009/06/11
Preamplifier	QuieTek	AP-025C	QT-AP005	2008/11/24
Preamplifier	QuieTek	AP-180C	CHM-0602013	2008/11/24
Bilog Type Antenna	Schaffner	CBL6141A	4278	2008/11/24
Half Wave Tuned Dipole Antenna	COM-POWER	AD-100	40137	2008/11/24
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	496	2008/11/24
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	499	2008/11/24
Coaxial Cable	Huber+Suhner	AC4-RL	06	2008/11/24
Coaxial Cable	Huber+Suhner	AC4-RH	07	2008/11/24
Coaxial Cable	Huber+Suhner	AC4-T	09	2008/11/24
Coaxial Cable	Huber+Suhner	AC4-RF-H	10	2008/11/24
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH007	2009/03/31

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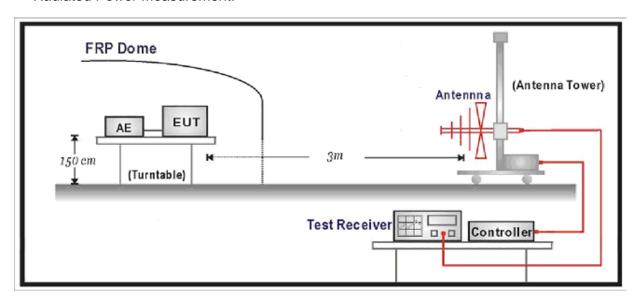


## 3.2. Test Setup

**Conducted Power Measurement:** 



Radiated Power Measurement:



#### 3.3. **Limit**

#### For FCC Part 22.913(a)(2):

The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

## For FCC Part 24.232(b):

The EIRP of mobile transmitters and auxiliary test transmitters must not exceed 2 Watts.



#### 3.4. Test Procedure

#### **Conducted Power Measurement:**

- a) Place the EUT on a bench and set it in transmitting mode.
- b) Connect a low loss RF cable from the antenna port to a spectrum analyzer and CMU200 by a Directional Couple.
- c) EUT Communicate with CMU200, then select a channel for testing.
- d) Add a correction factor to the display of spectrum, and then test.

#### **Radiated Power Measurement:**

- a) The EUT shall be placed at the specified height on a support, and in the position closest to normal use as declared by provider.
- b) The test antenna shall be oriented initially for vertical polarization and shall be chosen to correspond to the frequency of the transmitter
- c) The output of the test antenna shall be connected to the measuring receiver.
- d) The transmitter shall be switched on and the measuring receiver shall be tuned to the frequency of the transmitter under test.
- e) The test antenna shall be raised and lowered through the specified range of height until a maximum signal level is detected by the measuring receiver.
- f) The transmitter shall then be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.
- g) The test antenna shall be raised and lowered again through the specified range of height until a maximum signal level is detected by the measuring receiver.
- h) The maximum signal level detected by the measuring receiver shall be noted.
- i) The transmitter shall be replaced by a substitution antenna.
- j) The substitution antenna shall be orientated for vertical polarization and the length of the substitution antenna shall be adjusted to correspond to the frequency of the transmitter.
- k) The substitution antenna shall be connected to a calibrated signal generator.
- If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
- m) The test antenna shall be raised and lowered through the specified range of height to ensure that the maximum signal is received.
- n) The input signal to the substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, that is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuator setting of the measuring receiver.
- o) The measurement shall be repeated with the test antenna and the substitution antenna



- orientated for horizontal polarization.
- p) The measure of the effective radiated power is the larger of the two levels recorded at the input to the substitution antenna, corrected for gain of the substitution antenna if necessary.

## 3.5. Uncertainty

The measurement uncertainty is defined as for Conducted Power Measurement  $\pm$  1.2 dB, for Radiated Power Measurement  $\pm$  3.2 dB

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# 3.6. Test Result

## **GPRS 850**

Channel No.	Frequency (MHz)	Modulation	Conducted Output Power (dBm)	ERP (dBm)	Limit (dBm)	Result
128	824.2	GPRS	31.79	29.88	38.50	Pass
189	836.4	GPRS	31.62	29.72	38.50	Pass
251	848.8	GPRS	31.60	30.67	38.50	Pass

## EDGE850

Channel No.	Frequency (MHz)	Modulation	Conducted Output Power (dBm)	ERP (dBm)	Limit (dBm)	Result
128	824.2	8PSK	25.84	24.63	38.50	Pass
189	836.4	8PSK	25.85	24.76	38.50	Pass
251	848.8	8PSK	25.71	24.97	38.50	Pass

## GPRS1900

Channel No.	Frequency (MHz)	Modulation	Conducted Output Power (dBm)	EIRP (dBm)	Limit (dBm)	Result
512	1850.2	GPRS	28.62	32.24	33.00	Pass
661	1880.0	GPRS	28.53	32.02	33.00	Pass
810	1909.8	GPRS	28.49	32.04	33.00	Pass

## EDGE1900

Channel No.	Frequency (MHz)	Modulation	Conducted Output Power (dBm)	EIRP (dBm)	Limit (dBm)	Result
512	1850.2	8PSK	23.47	27.46	33.00	Pass
661	1880.0	8PSK	23.69	27.33	33.00	Pass
810	1909.8	8PSK	24.18	27.08	33.00	Pass

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# WCDMA/HSDPA FDD Band V

Channel No.	Frequency (MHz)	Modulation	Conducted Output Power (dBm)	ERP (dBm)	Limit (dBm)	Result
4132	826.4	QPSK	21.59	23.43	38.50	Pass
4182	836.4	QPSK	21.71	23.22	38.50	Pass
4233	846.6	QPSK	21.45	23.32	38.50	Pass

## WCDMA/HSDPA FDD Band II

Channel No.	Frequency (MHz)	Modulation	Conducted Output Power (dBm)	EIRP (dBm)	Limit (dBm)	Result
9262	1852.4	QPSK	21.96	25.43	33.00	Pass
9400	1880.0	QPSK	21.52	25.33	33.00	Pass
9538	1907.6	QPSK	21.26	25.12	33.00	Pass

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# GPRS850

Frequency	SA	Ant.Pol.	SG	Cable	Gain	ERP	Limit	Margin
(MHz)	Reading	(H/V)	Reading	Loss	(dBd)	(dBm)	(dBm)	(dB)
	(dBm)		(dBm)	(dB)				
Low Channel 128 (824.20MHz)								
824.20	13.841	Η	32.455	2.56	-0.02	29.875	38.50	-6.219
824.20	14.508	V	30.353	2.56	-0.02	27.773	38.50	-6.807
Middle Cha	nnel 189	(836.40MI	Hz)					
836.40	14.208	Η	32.206	2.59	0.10	29.716	38.50	-6.132
836.40	15.352	V	31.501	2.59	0.10	29.011	38.50	-6.743
High Chan	nel 251 (8	48.80MHz	2)					
848.80	14.664	Η	33.082	2.54	0.13	30.672	38.50	-5.866
848.80	15.386	V	31.530	2.54	0.13	29.120	38.50	-6.484

## EDGE850

Frequency	SA	Ant.Pol.	SG	Cable	Gain	ERP	Limit	Margin
(MHz)	Reading	(H/V)	Reading	Loss	(dBd)	(dBm)	(dBm)	(dB)
	(dBm)		(dBm)	(dB)				
Low Channel 128 (824.20MHz)								
824.20	6.999	Η	27.212	2.56	-0.02	24.632	38.50	-12.361
824.20	8.888	V	26.831	2.56	-0.02	24.251	38.50	-13.025
Middle Cha	nnel 189	(836.40MI	Hz)					
836.40	7.673	Η	27.246	2.59	0.10	24.756	38.50	-11.667
836.40	9.642	V	27.017	2.59	0.10	24.527	38.50	-13.053
High Chan	nel 251 (8	48.80MHz	2)					
848.80	10.449	Н	27.382	2.54	0.13	24.972	38.50	-11.881
848.80	12.166	V	26.967	2.54	0.13	24.557	38.50	-12.705



# GPRS1900

Frequency	SA	Ant.Pol.	SG	Cable	Gain	EIRP	Limit	Margin
(MHz)	Reading	(H/V)	Reading	Loss	(dBi)	(dBm)	(dBm)	(dB)
	(dBm)		(dBm)	(dB)				
Low Channel 512 (1850.20MHz)								
1850.20	40.736	Н	25.393	3.55	10.40	32.243	33.00	-0.757
1850.20	38.338	V	23.276	3.55	10.40	30.126	33.00	-2.874
Middle Cha	annel 661	(1880.00N	ИHz)					
1880.00	40.519	Η	25.124	3.53	10.43	32.024	33.00	-0.976
1880.00	38.163	V	23.106	3.53	10.43	30.006	33.00	-2.994
High Chan	nel 810 (1	909.80MH	lz)					
1909.80	40.320	Н	25.158	3.56	10.44	32.038	33.00	-0.962
1909.80	37.758	V	22.596	3.56	10.44	29.476	33.00	-3.524

## EDGE1900

Frequency	SA	Ant.Pol.	SG	Cable	Gain	EIRP	Limit	Margin
(MHz)	Reading	(H/V)	Reading	Loss	(dBi)	(dBm)	(dBm)	(dB)
	(dBm)		(dBm)	(dB)				
Low Channel 512 (1850.20MHz)								
1850.20	35.652	Η	20.612	3.55	10.40	27.462	33.00	-5.538
1850.20	33.538	V	18.174	3.55	10.40	25.024	33.00	-7.976
Middle Cha	annel 661	(1880.00N	ИHz)					
1880.00	34.750	Η	20.428	3.53	10.43	27.328	33.00	-5.672
1880.00	32.342	V	18.112	3.53	10.43	25.012	33.00	-7.988
High Chan	nel 810 (1	909.80MH	lz)					
1909.80	34.438	Н	20.204	3.56	10.44	27.084	33.00	-5.916
1909.80	31.843	V	17.888	3.56	10.44	24.768	33.00	-8.232



## WCDMA FDD V

Frequency	SA	Ant.Pol.	SG	Cable	Gain	ERP	Limit	Margin
(MHz)	Reading	(H/V)	Reading	Loss	(dBd)	(dBm)	(dBm)	(dB)
	(dBm)		(dBm)	(dB)				
Low Channel 4132 (826.40MHz)								
824.20	16.772	Н	26.006	2.56	-0.02	23.426	38.50	-15.074
824.20	14.233	V	24.264	2.56	-0.02	21.684	38.50	-16.816
Middle Cha	annel 4182	2 (836.40N	ИHz)					
836.40	16.441	Η	25.714	2.59	0.10	23.224	38.50	-15.276
836.40	14.372	V	23.966	2.59	0.10	21.476	38.50	-17.024
High Chan	nel 4233 (	846.60MF	lz)					
848.80	16.815	Η	25.729	2.54	0.13	23.319	38.50	-15.181
848.80	14.206	V	23.416	2.54	0.13	21.006	38.50	-17.494

## WCDMA FDD II

Frequency	SA	Ant.Pol.	SG	Cable	Gain	EIRP	Limit	Margin
(MHz)	Reading	(H/V)	Reading	Loss	(dBi)	(dBm)	(dBm)	(dB)
	(dBm)		(dBm)	(dB)				
Low Channel 9262 (1852.40MHz)								
1850.20	33.351	Η	18.582	3.55	10.40	25.432	33.00	-7.568
1850.20	31.206	V	16.167	3.55	10.40	23.017	33.00	-9.983
Middle Cha	annel 9400	(1880.00	MHz)					
1880.00	32.278	Η	18.429	3.53	10.43	25.329	33.00	-7.671
1880.00	30.546	V	15.787	3.53	10.43	22.687	33.00	-10.313
High Chan	nel 9538 (	1907.60M	Hz)					
1909.80	32.460	Η	18.237	3.56	10.44	25.117	33.00	-7.883
1909.80	30.242	V	15.779	3.56	10.44	22.659	33.00	-10.341



# 4. Spurious Emission

# 4.1. Test Equipment

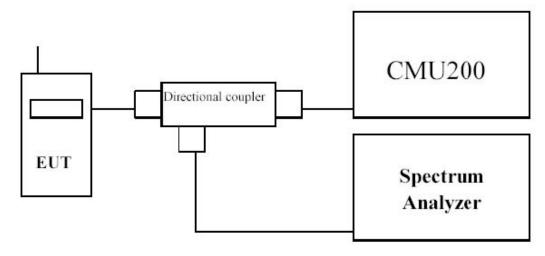
## Spurious Emission / AC-6

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2009/06/11
Radio Communication	R&S	CMU 200	106388	2008/10/21
Tester	rae	ONIO 200	100000	2000/10/21
Dual Directional Coupler	Agilent	778D	20160	2009/04/20
10dB Coaxial Coupler	Agilent	87300C	MY44300299	2009/04/20
PSG Analog S.G.	Agilent	E8257D	MY44321116	2009/06/10
Preamplifier	QuieTek	AP-025C	QT-AP005	2008/11/24
Preamplifier	QuieTek	AP-180C	CHM-0602013	2008/11/24
Bilog Type Antenna	Schaffner	CBL6141A	4278	2008/11/24
Half Wave Tuned Dipole	COM-POWER	AD-100	40137	2008/11/24
Antenna	COMPOVER	AD-100	40137	2006/11/24
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	496	2008/11/24
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	499	2008/11/24
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2008/11/24
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	295	2008/11/24
Coaxial Cable	Huber+Suhner	AC4-RL	06	2008/11/24
Coaxial Cable	Huber+Suhner	AC4-RH	07	2008/11/24
Coaxial Cable	Huber+Suhner	AC4-T	08	2008/11/24
Coaxial Cable	Huber+Suhner	AC4-RF-H	10	2008/11/24
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH007	2009/03/31

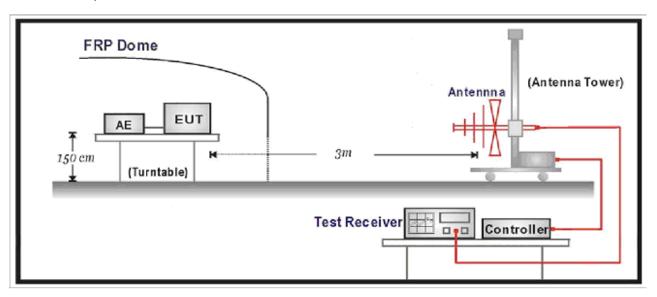


## 4.2. Test Setup

Conducted Spurious Measurement:



Radiated Spurious Measurement:



#### 4.3. Limit

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10log(P) dB.



#### 4.4. Test Procedure

#### **Conducted Spurious Measurement:**

- a) Place the EUT on a bench and set it in transmitting mode.
- b) Connect a low loss RF cable from the antenna port to a spectrum analyzer and CMU200 by a Directional Couple.
- c) EUT Communicate with CMU200, then select a channel for testing.
- d) Add a correction factor to the display of spectrum, and then test.
- e) The resolution bandwidth of the spectrum analyzer was set at 1 MHz, sufficient scans were taken to show the out of band Emission if any up to 10<sup>th</sup> harmonic.

#### **Radiated Spurious Measurement:**

- a) The EUT shall be placed at the specified height on a support, and in the position closest to normal use as declared by provider.
- b) The test antenna shall be oriented initially for vertical polarization and shall be chosen to correspond to the frequency of the transmitter
- c) The output of the test antenna shall be connected to the measuring receiver.
- d) The transmitter shall be switched on and the measuring receiver shall be tuned to the frequency of the transmitter under test.
- e) The test antenna shall be raised and lowered through the specified range of height until a maximum signal level is detected by the measuring receiver.
- f) The transmitter shall then be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.
- g) The test antenna shall be raised and lowered again through the specified range of height until a maximum signal level is detected by the measuring receiver.
- q) The maximum signal level detected by the measuring receiver shall be noted.
- h) The transmitter shall be replaced by a substitution antenna.
- The substitution antenna shall be orientated for vertical polarization and the length of the substitution antenna shall be adjusted to correspond to the frequency of the transmitter.
- j) The substitution antenna shall be connected to a calibrated signal generator.
- k) If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
- I) The test antenna shall be raised and lowered through the specified range of height to ensure that the maximum signal is received.
- m) The input signal to the substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, that is equal to the level noted while the



transmitter radiated power was measured, corrected for the change of input attenuator setting of the measuring receiver.

- n) The measurement shall be repeated with the test antenna and the substitution antenna orientated for horizontal polarization.
- The measure of the effective radiated power is the larger of the two levels recorded at the input to the substitution antenna, corrected for gain of the substitution antenna if necessary.
- p) The frequency range was checked up to 10<sup>th</sup> harmonic.

# 4.5. Uncertainty

The measurement uncertainty is defined as for Conducted Power Measurement  $\pm$  1.2 dB, for Radiated Power Measurement  $\pm$  3.2 dB



# 4.6. Test Result

Product	Notebook		
Test Item	Spurious Emission		
Test Mode	Mode 1: GSM850 GPRS Link		
Date of Test	2009/09/17	Test Site	AC-6

Frequency	SA Reading	Ant.Pol.	SG Reading	Cable	Gain	EIRP	Limit	Margin	
(MHz)	(dBm)	(H/V)	(dBm)	Loss (dB)	(dBi)	(dBm)	(dBm)	(dB)	
Low Chann	Low Channel 128 (824.20MHz)								
1648.40	-50.978	V	-69.006	3.28	9.75	-62.536	-13.00	-49.536	
2472.60	-39.951	V	-53.903	4.10	10.48	-47.523	-13.00	-34.523	
1648.40	-36.505	Н	-54.589	3.28	9.75	-48.119	-13.00	-35.119	
2472.60	-30.219	Н	-44.190	4.10	10.48	-37.810	-13.00	-24.810	
Middle Cha	annel 189 (836	6.40MHz	)						
1672.80	-38.852	V	-56.792	3.32	9.95	-50.162	-13.00	-37.162	
2509.20	-35.119	V	-49.596	3.81	10.62	-42.786	-13.00	-29.786	
1672.80	-34.639	Н	-52.535	3.32	9.95	-45.905	-13.00	-32.905	
2509.20	-30.480	Н	-44.869	3.81	10.62	-38.059	-13.00	-25.059	
High Chan	nel 251 (848.8	BOMHz)							
1697.60	-37.369	V	-55.110	3.35	10.06	-48.400	-13.00	-35.400	
2546.40	-36.636	V	-50.811	4.19	10.68	-44.321	-13.00	-31.321	
1697.60	-31.613	Н	-49.252	3.35	10.06	-42.542	-13.00	-29.542	
2546.40	-33.678	Н	-47.704	4.19	10.68	-41.214	-13.00	-28.214	



Product	Notebook		
Test Item	Spurious Emission		
Test Mode	Mode 2: GSM1900 GPRS Link		
Date of Test	2009/09/26	Test Site	AC-6

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Frequency	SA Reading	Ant.Pol.	SG Reading	Cable	Gain	EIRP	Limit	Margin	
(MHz)	(dBm)	(H/V)	(dBm)	Loss (dB)	(dBi)	(dBm)	(dBm)	(dB)	
Low Chann	Low Channel 512 (1850.20MHz)								
3700.40	-49.389	V	-60.195	4.78	12.69	-52.285	-13.00	-39.285	
5550.60	-39.791	V	-45.290	6.03	13.15	-38.170	-13.00	-25.170	
3700.40	-47.917	Н	-58.313	4.78	12.69	-50.403	-13.00	-37.403	
5550.60	-45.064	Η	-50.617	6.03	13.15	-43.497	-13.00	-30.497	
Middle Cha	annel 661 (188	30.00MH	z)						
3760.00	-49.771	V	-59.577	5.03	12.72	-51.887	-13.00	-38.887	
5640.00	-49.709	V	-55.122	5.93	13.14	-47.912	-13.00	-34.912	
3760.00	-49.020	Н	-58.861	5.03	12.72	-51.171	-13.00	-38.171	
5640.00	-51.010	Н	-56.570	5.93	13.14	-49.360	-13.00	-36.360	
High Chani	nel 810 (1909	.80MHz)							
3819.60	-51.180	V	-60.491	5.03	12.73	-52.791	-13.00	-39.791	
5729.40	-49.766	V	-55.016	6.20	13.11	-48.106	-13.00	-35.106	
3819.60	-50.483	Н	-60.168	5.03	12.73	-52.468	-13.00	-39.468	
5729.40	-49.369	Н	-54.609	6.20	13.11	-47.699	-13.00	-34.699	



Product	Notebook		
Test Item	Spurious Emission		
Test Mode	Mode 3: GSM850 EDGE Link		
Date of Test	2009/09/17	Test Site	AC-6

Frequency	SA Reading	Ant.Pol.	SG Reading	Cable	Gain	EIRP	Limit	Margin	
(MHz)	(dBm)	(H/V)	(dBm)	Loss (dB)	(dBi)	(dBm)	(dBm)	(dB)	
Low Chann	Low Channel 128 (824.20MHz)								
1648.40	-44.646	V	-62.706	3.28	9.75	-56.236	-13.00	-43.236	
2472.60	-44.482	V	-58.427	4.10	10.48	-52.047	-13.00	-39.047	
1648.40	-37.795	Н	-55.879	3.28	9.75	-49.409	-13.00	-36.409	
2472.60	-44.631	Н	-58.602	4.10	10.48	-52.222	-13.00	-39.222	
Middle Cha	annel 189 (836	6.40MHz	)						
1672.80	-49.980	V	-67.920	3.32	9.95	-61.290	-13.00	-48.290	
2509.20	-44.721	V	-59.198	3.81	10.62	-52.388	-13.00	-39.388	
1672.80	-40.762	Н	-58.658	3.32	9.95	-52.028	-13.00	-39.028	
2509.20	-44.397	Н	-58.786	3.81	10.62	-51.976	-13.00	-38.976	
High Chan	nel 251 (848.8	BOMHz)							
1697.60	-45.661	V	-63.402	3.35	10.06	-56.692	-13.00	-43.692	
2546.40	-44.263	V	-58.438	4.19	10.68	-51.948	-13.00	-38.948	
1697.60	-42.215	Н	-60.016	3.35	10.06	-53.306	-13.00	-40.306	
2546.40	-45.272	Н	-59.298	4.19	10.68	-52.808	-13.00	-39.808	



Product	Notebook		
Test Item	Spurious Emission		
Test Mode	Mode 4: GSM1900 EDGE Link		
Date of Test	2009/09/26	Test Site	AC-6

Frequency	SA Reading	Ant.Pol.	SG Reading	Cable	Gain	EIRP	Limit	Margin	
(MHz)	(dBm)	(H/V)	(dBm)	Loss (dB)	(dBi)	(dBm)	(dBm)	(dB)	
Low Chann	Low Channel 512 (1850.20MHz)								
3700.40	-51.473	V	-62.279	4.78	12.69	-54.369	-13.00	-41.369	
5550.60	-51.462	V	-56.839	6.03	13.15	-49.719	-13.00	-36.719	
3700.40	-51.399	I	-61.795	4.78	12.69	-53.885	-13.00	-40.885	
5550.60	-51.752	Н	-57.305	6.03	13.15	-50.185	-13.00	-37.185	
Middle Cha	annel 661 (188	30.00MH	z)						
3760.00	-51.036	<b>V</b>	-60.842	5.03	12.72	-53.152	-13.00	-40.152	
5640.00	-51.612	V	-57.025	5.93	13.14	-49.815	-13.00	-36.815	
3760.00	-51.835	Н	-61.676	5.03	12.72	-53.986	-13.00	-40.986	
5640.00	-52.118	I	-57.678	5.93	13.14	-50.468	-13.00	-37.468	
High Chan	nel 810 (1909	.80MHz)							
3819.60	-51.087	V	-60.533	5.03	12.73	-52.833	-13.00	-39.833	
5729.40	-51.663	V	-56.892	6.20	13.11	-49.982	-13.00	-36.982	
3819.60	-51.681	Н	-61.471	5.03	12.73	-53.771	-13.00	-40.771	
5729.40	-52.213	Н	-57.453	6.20	13.11	-50.543	-13.00	-37.543	



Product	Notebook		
Test Item	Spurious Emission		
Test Mode	Mode 5: WCDMA/HSDPA Band V Lir	nk	
Date of Test	2009/09/17	Test Site	AC-6

Frequency	SA Reading	Ant.Pol.	SG Reading	Cable	Gain	EIRP	Limit	Margin	
(MHz)	(dBm)	(H/V)	(dBm)	Loss (dB)	(dBi)	(dBm)	(dBm)	(dB)	
Low Chann	Low Channel 4132 (826.40MHz)								
1652.80	-50.464	V	-68.451	3.28	9.75	-61.981	-13.00	-48.981	
2479.20	-50.987	V	-64.958	4.10	10.48	-58.578	-13.00	-45.578	
1652.80	-46.721	Н	-64.715	3.28	9.75	-58.245	-13.00	-45.245	
2479.20	-47.102	Н	-61.078	4.10	10.48	-54.698	-13.00	-41.698	
Middle Cha	annel 4182 (83	36.40MH	z)						
1672.80	-49.931	V	-67.892	3.32	9.95	-61.262	-13.00	-48.262	
2509.20	-50.489	V	-64.963	3.81	10.62	-58.153	-13.00	-45.153	
1672.80	-47.996	Н	-65.917	3.32	9.95	-59.287	-13.00	-46.287	
2509.20	-48.035	I	-62.434	3.81	10.62	-55.624	-13.00	-42.624	
High Chan	nel 4233 (846	.60MHz)							
1693.20	-50.725	V	-68.576	3.35	10.06	-61.866	-13.00	-48.866	
2539.80	-50.321	V	-64.493	4.19	10.68	-58.003	-13.00	-45.003	
1693.20	-49.088	Н	-66.852	3.35	10.06	-60.142	-13.00	-47.142	
2539.80	-49.596	Н	-63.631	4.19	10.68	-57.141	-13.00	-44.141	



Product	Notebook	Notebook				
Test Item	Spurious Emission					
Test Mode	Mode 6: WCDMA/HSDPA Band II Lir	nk				
Date of Test	2009/09/26	Test Site	AC-6			

Frequency	SA Reading	Ant.Pol.	SG Reading	Cable	Gain	EIRP	Limit	Margin	
(MHz)	(dBm)	(H/V)	(dBm)	Loss (dB)	(dBi)	(dBm)	(dBm)	(dB)	
Low Chann	Low Channel 9262 (1852.40MHz)								
3704.80	-48.293	V	-59.099	4.78	12.69	-51.189	-13.00	-38.189	
5557.20	-50.080	V	-55.518	6.03	13.15	-48.398	-13.00	-35.398	
3704.80	-44.715	I	-55.111	4.78	12.69	-47.201	-13.00	-34.201	
5557.20	-52.245	Н	-57.783	6.03	13.15	-50.663	-13.00	-37.663	
Middle Cha	nnel 9400 (18	80.00M	Hz)						
3760.00	-42.072	V	-51.878	5.03	12.72	-44.188	-13.00	-31.188	
5640.00	-52.505	V	-57.927	5.93	13.14	-50.717	-13.00	-37.717	
3760.00	-37.687	Н	-47.528	5.03	12.72	-39.838	-13.00	-26.838	
5640.00	-51.744	Н	-57.304	5.93	13.14	-50.094	-13.00	-37.094	
High Chan	nel 9538 (190	7.60MHz	<u>z</u> )						
3815.20	-35.612	V	-44.923	5.03	12.73	-37.223	-13.00	-24.223	
5722.80	-51.738	V	-56.984	6.20	13.11	-50.074	-13.00	-37.074	
3815.20	-31.973	Н	-41.658	5.03	12.73	-33.958	-13.00	-20.958	
5722.80	-52.418	Н	-57.658	6.20	13.11	-50.748	-13.00	-37.748	