FCC TEST REPORT

(PART 22)

REPORT NO.:	RF120327C08-4
MODEL NO.:	F-10D
FCC ID:	VQK-F10D
RECEIVED:	Mar. 27, 2012
TESTED:	Apr. 06 ~ May 09, 2012
ISSUED:	May 17, 2012

APPLICANT:	FUJITSU LIMITED
ADDRESS:	1-1, Kamikodanaka 4-chome, Nakahara-ku, Kawasaki 211-8588, Japan

ISSUED BY:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
LAB ADDRESS:	No. 47, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan (R.O.C.)
TEST LOCATION:	No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF120327C08-4	Original release	May 17, 2012

1 CERTIFICATION

PRODUCT:	Mobile Phone
MODEL:	F-10D
BRAND:	Xi
APPLICANT:	FUJITSU LIMITED
TESTED:	Apr. 06 ~ May 09, 2012
TEST SAMPLE:	ENGINEERING SAMPLE
STANDARDS:	**FCC PART 22, Subpart H**

The above equipment (model: F-10D) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch,** and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : _____ , **DATE:** May 17, 2012
Polly Chien / Specialist

APPROVED BY : _____ , **DATE:** May 17, 2012
Gary Chang / Technical Manager

2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 22 & Part 2			
STANDARD SECTION	**TEST TYPE**	**RESULT**	**REMARK**
2.1046 22.913 (a)	Effective radiated power	PASS	Meet the requirement of limit.
2.1055 22.355	Frequency Stability	PASS	Meet the requirement of limit.
2.1049	Occupied Bandwidth	PASS	Meet the requirement of limit.
22.917	Band Edge Measurements	PASS	Meet the requirement of limit.
2.1051 22.917	Conducted Spurious Emissions	PASS	Meet the requirement of limit.
2.1053 22.917	Radiated Spurious Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -29.0dB at 30.00MHz.

2.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	FREQUENCY	UNCERTAINTY
Conducted emissions	9kHz~30MHz	2.44 dB
Radiated emissions	30MHz ~ 200MHz	3.34 dB
	200MHz ~1000MHz	3.35 dB
	1GHz ~ 18GHz	2.26 dB
	18GHz ~ 40GHz	1.94 dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

2.2 TEST SITE AND INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESIB7	100212	Aug. 02, 2011	Aug. 01, 2012
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100041	Jul. 21, 2011	Jul. 20, 2012
BILOG Antenna SCHWARZBECK	VULB9168	9168-472	Dec. 20, 2011	Dec. 19, 2012
HORN Antenna SCHWARZBECK	9120D	209	Aug. 25, 2011	Aug. 24, 2012
HORN Antenna SCHWARZBECK	BBHA 9170	148	Jul. 20, 2011	Jul. 19, 2012
Preamplifier Agilent	8447D	2944A10633	Oct. 29, 2011	Oct. 28, 2012
Preamplifier Agilent	8449B	3008A01964	Oct. 29, 2011	Oct. 28, 2012
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	250723/4	Aug. 30, 2011	Aug. 29, 2012
RF signal cable HUBER+SUHNNER	SUCOFLEX 106	12738/6+309224/4	Aug. 30, 2011	Aug. 29, 2012
Software ADT.	ADT_Radiated_ V7.6.15.9.2	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA	NA
Antenna Tower Controller inn-co GmbH	CO2000	017303	NA	NA
Turn Table ADT.	TT100	TT93021703	NA	NA
Turn Table Controller ADT.	SC100	SC93021703	NA	NA
Communication Tester R&S	CMU200	104484	Dec. 30, 2011	Dec. 29, 2012
Standard Temperature & Humidity Chamber WIT	MHU-225AU	920842	Jun. 15, 2011	Jun. 14, 2012
Mini-Circuits Power Splitter	ZN2PD-9G	NA	May 25, 2011	May 24, 2012
JFW 20dB attenuation	50HF-020-SMA	NA	NA	NA

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

2. The test was performed in HwaYa Chamber 3.

3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.

4. The FCC Site Registration No. is 988962.

5. The IC Site Registration No. is IC 7450F-3.

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	Mobile Phone
MODEL NO.	F-10D
POWER SUPPLY	3.7Vdc (Li-ion battery) 5.0Vdc (Adapter)
MODULATION TYPE	**GSM, GPRS:** GMSK **WCDMA :** BPSK
FREQUENCY RANGE	**GSM, GPRS:** 824.2MHz ~ 848.8MHz **WCDMA:** 826.4MHz ~ 846.6MHz
MAX. ERP POWER	**GSM:** 23.7dBm (0.2344Watts) **GPRS:** 23.5dBm (0.2239Watts) **WCDMA:** 15.5dBm (0.0355Watts)
MULTI-SLOTS CLASS	8
WCDMA RELEASE VERSION	6
ANTENNA TYPE	λ/4 Monopole antenna with -7.65dBi gain
DATA CABLE	NA
I/O PORTS	Refer to user's manual
ACCESSORY DEVICES	Battery

NOTE:

1. The EUT consumes power from the following internal Li-ion battery and wireless charger.

BATTERY	
BRAND	Fujitsu Limited
MODEL	F27
RATING	3.7Vdc, 1800mAh, 6.7Wh

WIRELESS CHARGER	
BRAND:	NTTdocomo
MODEL:	TA08017-B141
INPUT:	12Vdc, 650mA
OUTPUT:	5W MAX

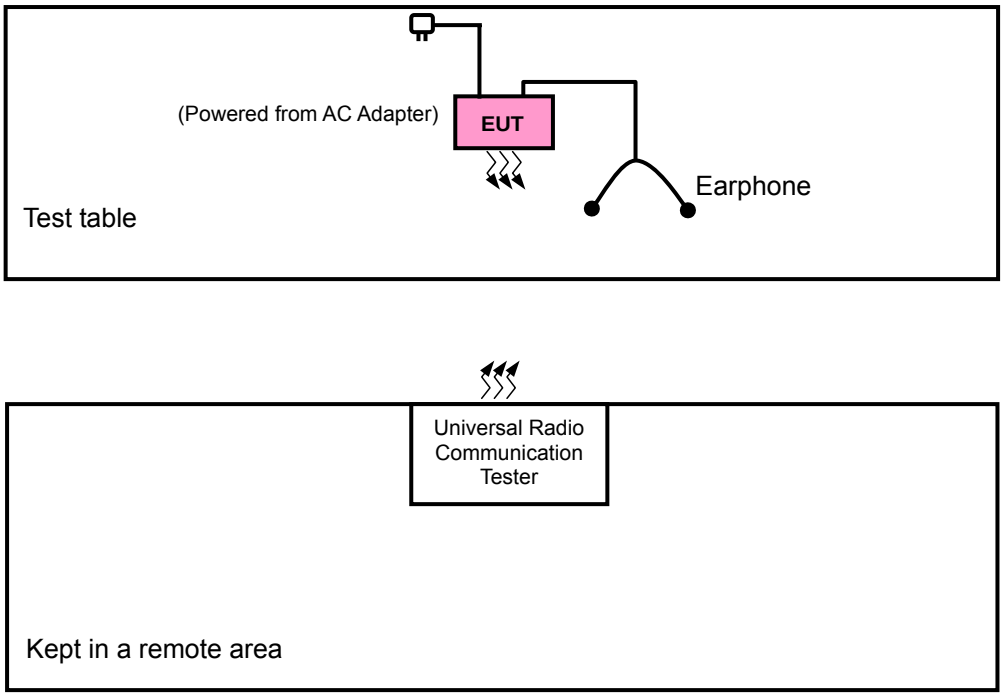
ADAPTER (FOR WIRELESS CHARGER)	
BRAND:	NTTdocomo
MODEL:	TA08017-B142
INPUT:	100-240Vac, 50-60Hz, 18-24VA
OUTPUT:	12Vdc, 650mA
POWER LINE:	2m non-shielded cable with 1 core

2. The following accessory is for support units only.

PRODUCT	BRAND	MODEL	DESCRIPTION
Adapter	NTTdocomo	TA08017-B219	I/P: 100-240Vac, 50/60Hz, 0.22A O/P: 5.0Vdc, 1.8A
USB cable	NA	NA	1.1m non-shielded cable without core

3. SW version is R20.4e.
4. HW version is V2.1.0.
5. IMEI Code: 352137050015977, 352137050008741.
6. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 CONFIGURATION OF SYSTEM UNDER TEST



3.3 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	EARPHONE	HTC	NA	NA	NA

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	1.2m audio cable.

NOTE: All power cords of the above support units are non shielded (1.8m).

3.4 TEST ITEM AND TEST CONFIGURATION

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports
The worst case was found when positioned on Y-plane. Following channel(s) was (were) selected for the final test as listed below:

GSM MODE

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	MODE
ERP	128 to 251	128, 190, 251	GSM, GPRS
FREQUENCY STABILITY	128 to 251	128	GSM
OCCUPIED BANDWIDTH	128 to 251	128, 190, 251	GSM, GPRS
BAND EDGE	128 to 251	128, 251	GSM, GPRS
CONDCUDETED EMISSION	128 to 251	128, 190, 251	GSM, GPRS
RADIATED EMISSION BELOW 1 GHz	128 to 251	128	GSM
RADIATED EMISSION ABOCE 1 GHz	128 to 251	128, 190, 251	GSM

WCDMA MODE

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	MODE
ERP	4132 to 4233	4132, 4182, 4233	WCDMA
FREQUENCY STABILITY	4132 to 4233	4182	WCDMA
OCCUPIED BANDWIDTH	4132 to 4233	4132, 4182, 4233	WCDMA, HSDPA, HSUPA
BAND EDGE	4132 to 4233	4132, 4233	WCDMA, HSDPA, HSUPA
CONDCUDETED EMISSION	4132 to 4233	4132, 4182, 4233	WCDMA, HSDPA, HSUPA
RADIATED EMISSION BELOW 1 GHz	4132 to 4233	4132	WCDMA, HSDPA, HSUPA
RADIATED EMISSION ABOCE 1 GHz	4132 to 4233	4132, 4182, 4233	WCDMA
		4132	HSDPA, HSUPA

TEST CONDITION:

TEST ITEM	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
ERP	25deg. C, 65%RH	3.7Vdc	Mark Liao
FREQUENCY STABILITY	26deg. C, 65%RH	3.7Vdc	Mark Liao
OCCUPIED BANDWIDTH	26deg. C, 65%RH	3.7Vdc	Mark Liao
BAND EDGE	26deg. C, 65%RH	3.7Vdc	Mark Liao
CONDCUDETED EMISSION	26deg. C, 65%RH	3.7Vdc	Mark Liao
RADIATED EMISSION	25deg. C, 65%RH	3.7Vdc	Aska Huang, Hura Yang

3.5 EUT OPERATING CONDITIONS

The EUT makes a call to the communication simulator. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency

3.6 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC 47 CFR Part 2

FCC 47 CFR Part 22

ANSI/TIA/EIA-603-C 2004

NOTE: All test items have been performed and recorded as per the above standards.

4 TEST TYPES AND RESULTS

4.1 OUTPUT POWER MEASUREMENT

4.1.1 LIMITS OF OUTPUT POWER MEASUREMENT

Mobile / Portable station are limited to 7 watts e.r.p.

4.1.2 TEST PROCEDURES

EIRP / ERP MEASUREMENT:

a. All measurements were done at low, middle and high operational frequency range. RWB and VBW is 1MHz for GSM, GPRS and 5MHz for WCDMA mode.

b. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.

c. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a tx cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value " of step b. Record the power level of S.G

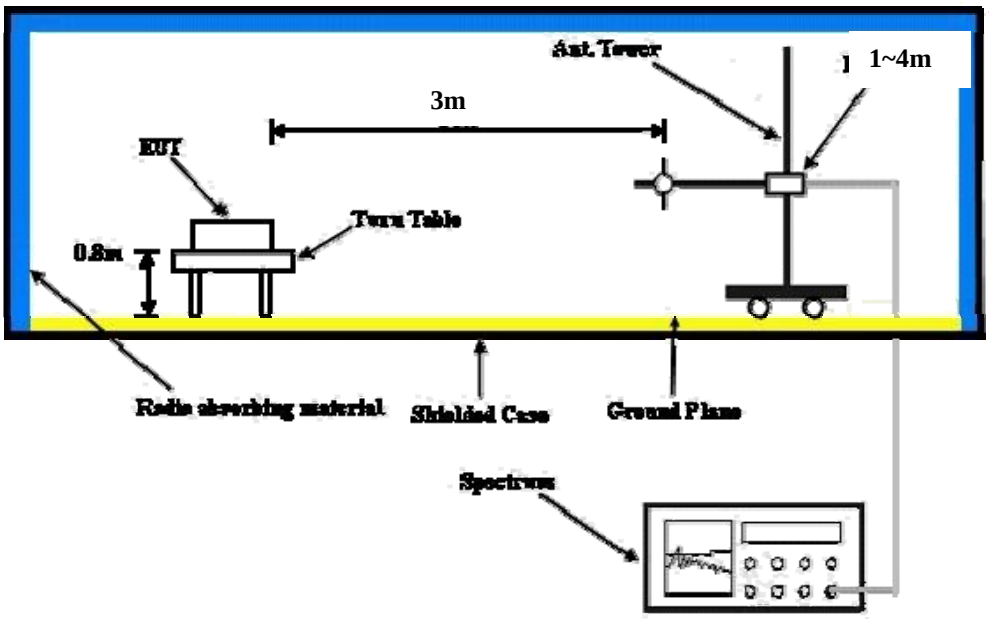
d. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn.E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, E.R.P power = E.I.P.R power - 2.15dBi.

CONDUCTED POWER MEASUREMENT:

The EUT was set up for the maximum power with GSM, GPRS & WCDMA link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

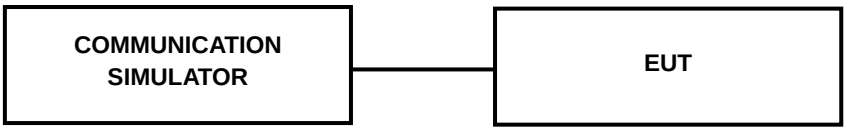
4.1.3 TEST SETUP

EIRP / ERP MEASUREMENT:



For the actual test configuration, please refer to the attached file (Test Setup Photo).

CONDUCTED POWER MEASUREMENT:



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.1.4 TEST RESULTS

CONDUCTED OUTPUT POWER (dBm)

Band	GSM850		
Channel	128	190	251
Frequency (MHz)	824.2	836.6	848.8
GSM	32.52	32.61	32.11
GPRS 8	32.50	32.58	32.09

Band	WCDMA V		
Channel	4132	4182	4233
Frequency (MHz)	826.4	836.4	846.6
RMC 12.2K	23.74	23.57	23.48
HSDPA Subtest-1	23.64	23.57	23.48
HSDPA Subtest-2	22.63	22.45	22.42
HSDPA Subtest-3	22.64	22.54	22.38
HSDPA Subtest-4	22.63	22.47	22.38
HSUPA Subtest-1	23.62	23.69	23.60
HSUPA Subtest-2	21.24	20.96	21.03
HSUPA Subtest-3	21.22	21.28	20.98
HSUPA Subtest-4	21.18	21.04	20.99
HSUPA Subtest-5	23.06	22.91	22.87

ERP POWER

FOR GSM MODE:

MODE	TX channel 128						
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	824.2	-7.6	25.8	0.0	23.7	38.5	-14.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	824.2	-11.6	19.9	0.0	17.8	38.5	-20.8

MODE	TX channel 190						
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	836.6	-7.7	25.0	0.0	22.9	38.5	-15.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	836.6	-11.8	20.5	0.0	18.4	38.5	-20.1

MODE	TX channel 251						
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	848.8	-7.4	25.0	0.5	23.4	38.5	-15.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	848.8	-12.5	20.4	0.5	18.8	38.5	-19.8

NOTE: ERP (dBm) = S.G Power Value (dBm) + Correction Factor (dB)-2.15dB.

FOR GPRS MODE:

MODE	TX channel 128						
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	824.2	-7.8	25.6	0.0	23.5	38.5	-15.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	824.2	-11.4	20.1	0.0	18.0	38.5	-20.5

MODE	TX channel 189						
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	836.6	-7.9	24.8	0.0	22.7	38.5	-15.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	836.6	-11.5	20.8	0.0	18.7	38.5	-19.8

MODE	TX channel 251						
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	848.8	-7.7	24.7	0.5	23.1	38.5	-15.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	848.8	-12.9	20.0	0.5	18.4	38.5	-20.1

NOTE: ERP (dBm) = S.G Power Value (dBm) + Correction Factor (dB)-2.15dB.

FOR WCDMA MODE:

MODE	TX channel 4132						
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	826.4	-15.7	17.6	0.0	15.5	38.5	-23.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	826.4	-20.9	10.7	0.0	8.5	38.5	-30.0

MODE	TX channel 4182						
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	836.4	-15.4	17.3	0.0	15.2	38.5	-23.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	836.4	-21.0	11.3	0.0	9.2	38.5	-29.4

MODE	TX channel 4233						
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	846.6	-15.4	17.4	0.0	15.2	38.5	-23.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	846.6	-27.1	11.5	0.0	9.3	38.5	-29.1

NOTE: ERP (dBm) = S.G Power Value (dBm) + Correction Factor (dB)-2.15dB.

4.2 FREQUENCY STABILITY MEASUREMENT

4.2.1 LIMITS OF FREQUENCY STABILIITY MEASUREMENT

1.5 ppm is for base and fixed station. 2.5 ppm is for mobile station.

4.2.2 TEST PROCEDURE

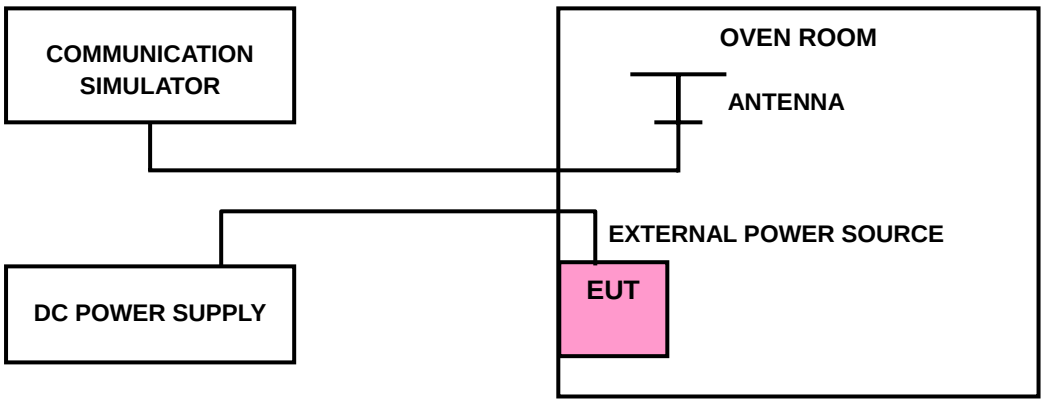
a. Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.

b. EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.

c. The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the ±0.5℃ during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

NOTE: The frequency error was recorded frequency error from the communication simulator.

4.2.3 TEST SETUP



4.2.4 TEST RESULTS

FREQUENCY ERROR vs. VOLTAGE

VOLTAGE (Volts)	FREQUENCY ERROR (ppm)		LIMIT (ppm)
	GSM	WCDMA	
4.29	-0.019	-0.023	2.5
3.51	-0.016	-0.013	2.5

NOTE: The applicant defined the normal working voltage of the battery is from 3.51Vdc to 4.29Vdc.

FREQUENCY ERROR vs. TEMPERATURE

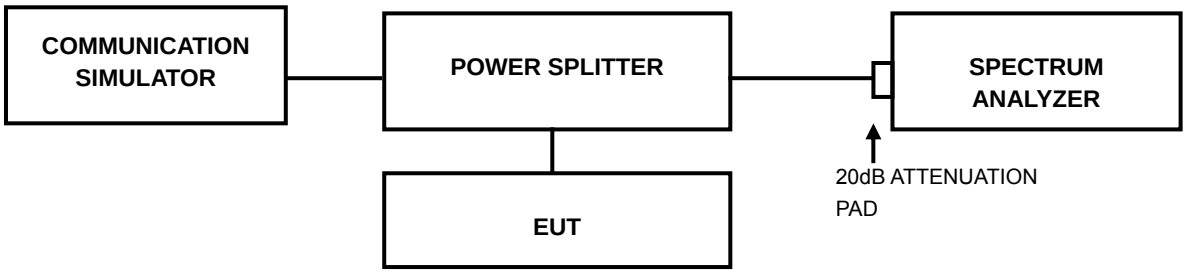
TEMP. (℃)	FREQUENCY ERROR (ppm)		LIMIT (ppm)
	GSM	WCDMA	
55	-0.023	-0.026	2.5
50	-0.019	-0.024	2.5
40	-0.017	-0.022	2.5
30	-0.016	-0.018	2.5
20	-0.013	-0.016	2.5
10	-0.010	-0.011	2.5
0	-0.007	-0.006	2.5
-10	-0.004	-0.002	2.5
-20	-0.011	-0.007	2.5
-30	-0.014	-0.012	2.5

4.3 OCCUPIED BANDWIDTH MEASUREMENT

4.3.1 TEST PROCEDURES

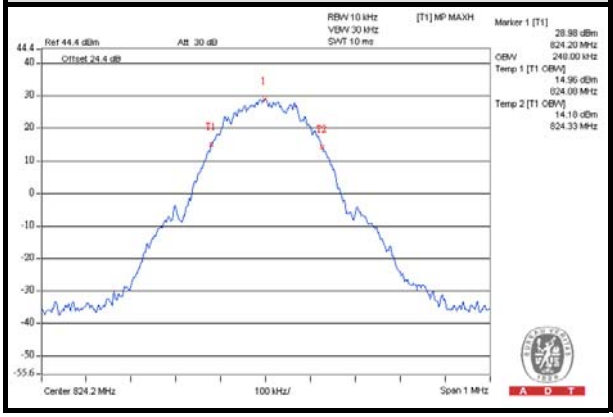
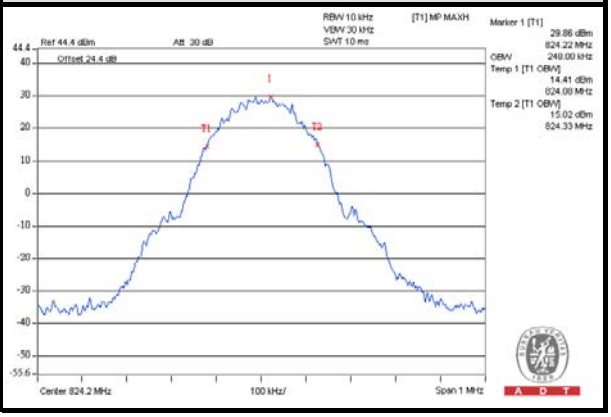
The EUT makes a call to the communication simulator. All measurements were done at low, middle and high operational frequency range. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.

4.3.2 TEST SETUP



4.3.3 TEST RESULTS

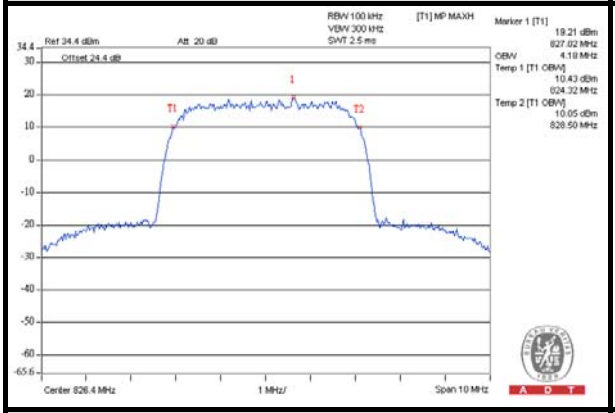
CHANNEL	FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH (kHz)	
		GSM	GPRS
128	824.2	248	248
190	836.6	246	242
251	848.8	244	244

SPECTRUM PLOT OF WORST VALUE	
GSM	GPRS
	

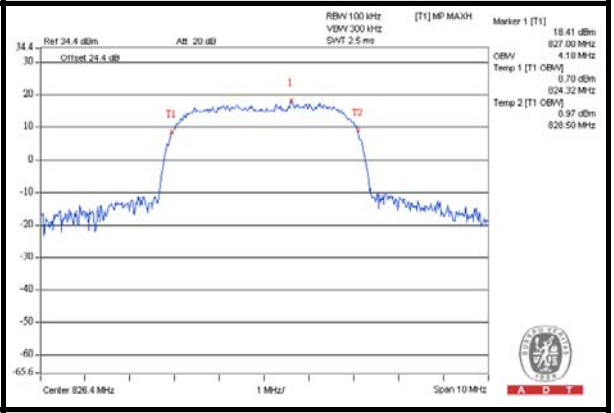
CHANNEL	FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH (MHz)		
		WCDMA	HSDPA	HSUPA
4132	826.4	4.18	4.18	4.16
4182	836.4	4.16	4.18	4.16
4233	846.6	4.16	4.16	4.14

SPECTRUM PLOT OF WORST VALUE

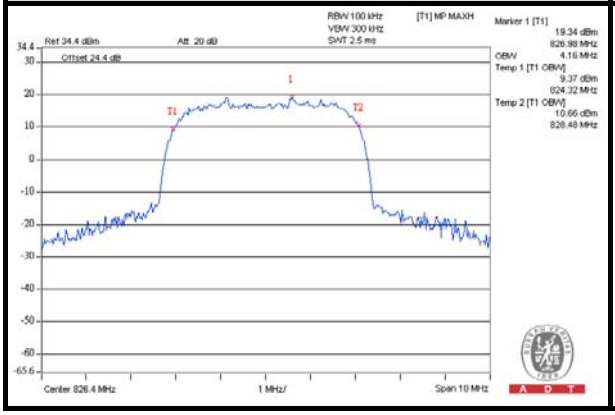
WCDMA



HSDPA



HSUPA

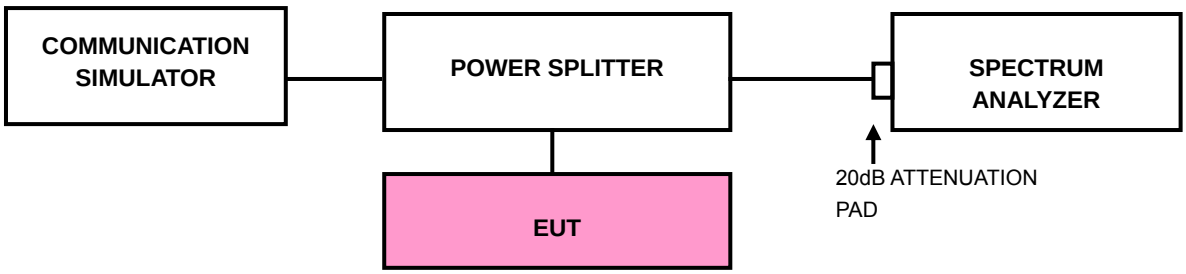


4.4 BAND EDGE MEASUREMENT

4.4.1 LIMITS OF BAND EDGE MEASUREMENT

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 + 10 log(P) dB. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

4.4.2 TEST SETUP



4.4.3 TEST PROCEDURES

a. All measurements were done at low and high operational frequency range.

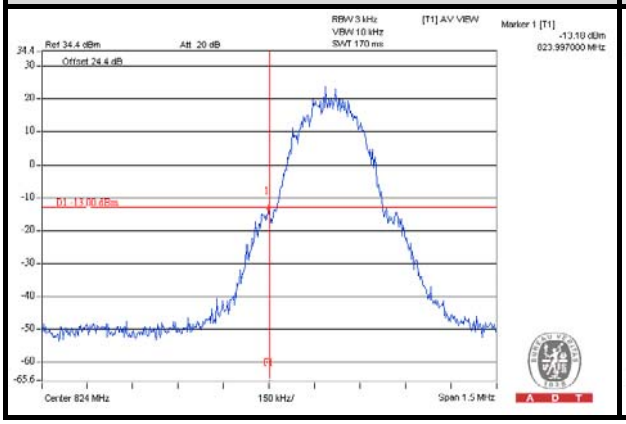
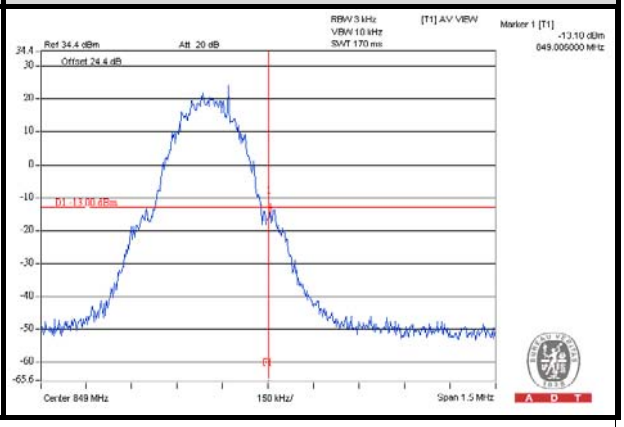
b. The center frequency of spectrum is the band edge frequency and span is 1.5 MHz. RB of the spectrum is 3kHz and VB of the spectrum is 10kHz (GSM/GPRS).

c. The center frequency of spectrum is the band edge frequency and span is 10MHz. RB of the spectrum is 100kHz and VB of the spectrum is 300kHz (WCDMA).

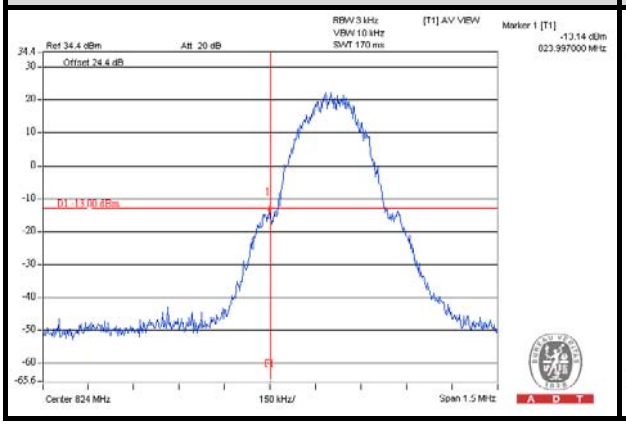
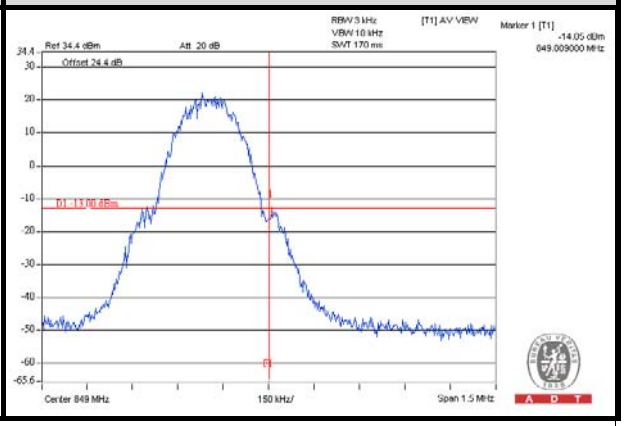
d. Record the max trace plot into the test report.

4.4.4 TEST RESULTS

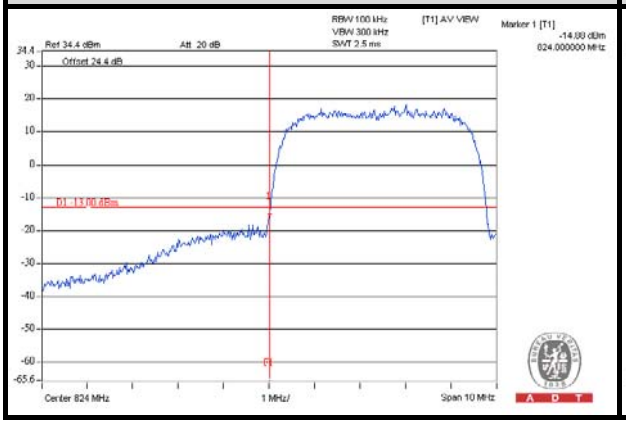
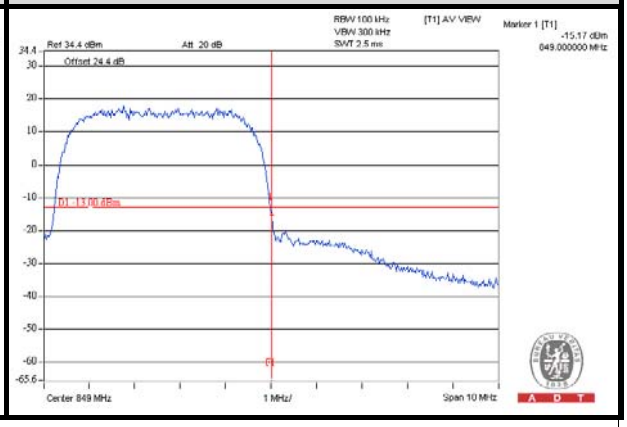
FOR GSM MODE:

CHANNEL 128	CHANNEL 251
	

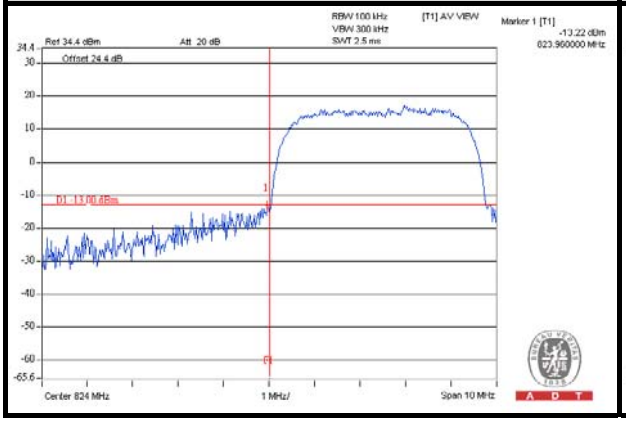
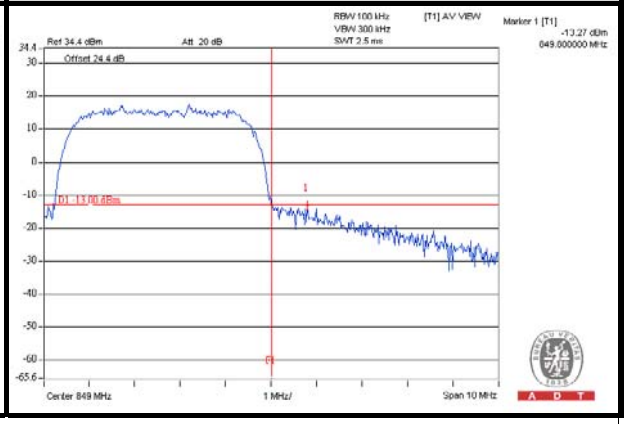
FOR GPRS MODE:

CHANNEL 128	CHANNEL 251
	

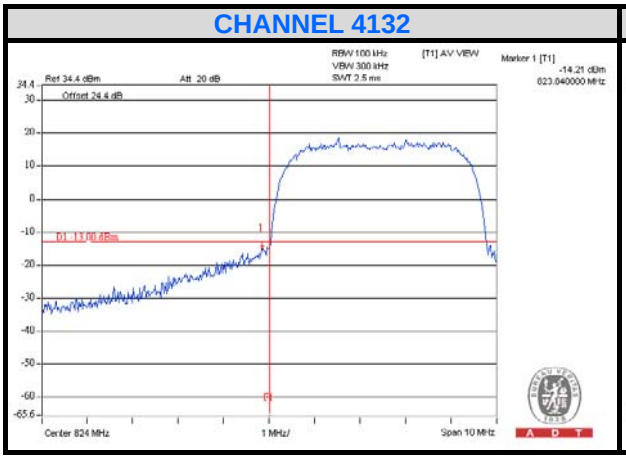
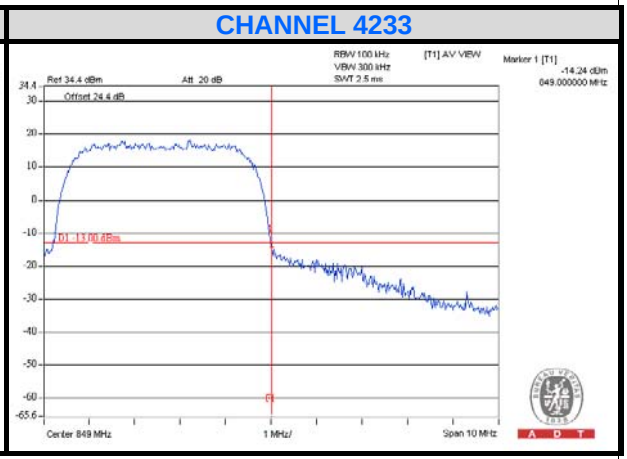
FOR WCDMA MODE:

CHANNEL 4132	CHANNEL 4233
	

FOR HSDPA MODE:

CHANNEL 4132	CHANNEL 4233
	

FOR HSUPA MODE:

CHANNEL 4132	CHANNEL 4233
	

4.5 CONDUCTED SPURIOUS EMISSIONS

4.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

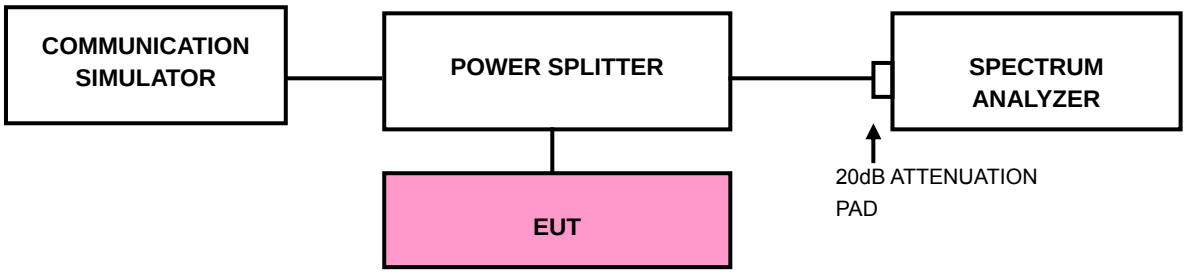
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit equal to –13dBm.

4.5.2 TEST PROCEDURE

a. The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.

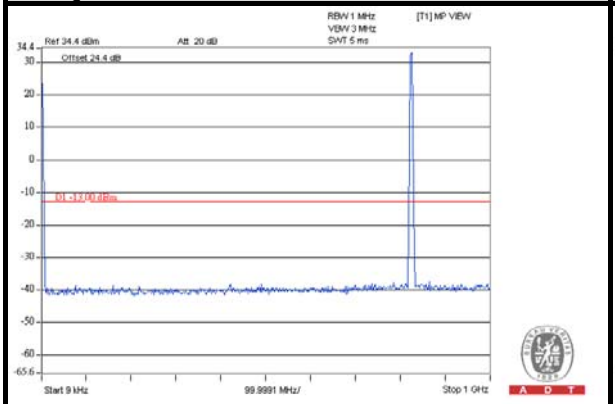
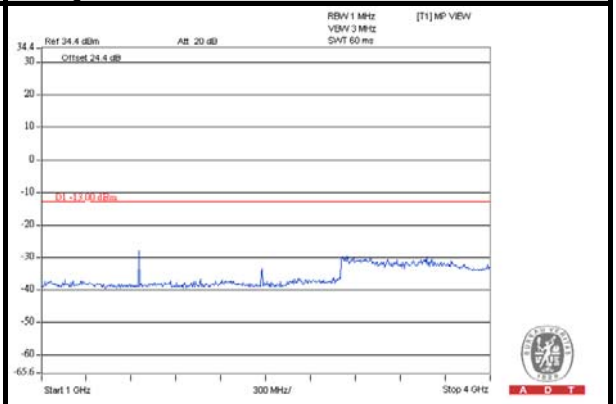
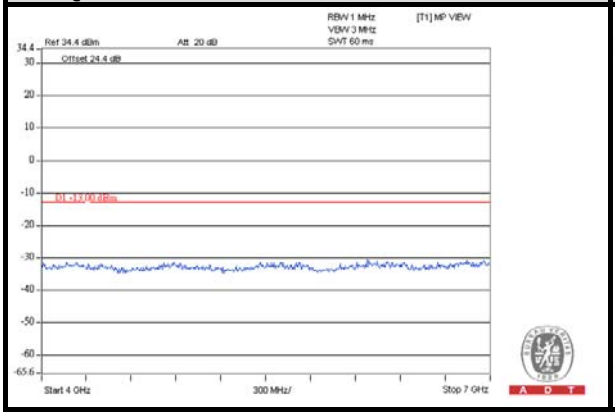
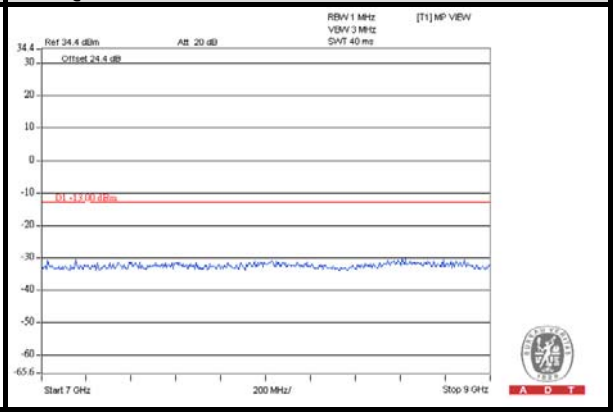
b. Measuring frequency range is from 9 kHz to 9GHz. 20dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz is used for conducted emission measurement.

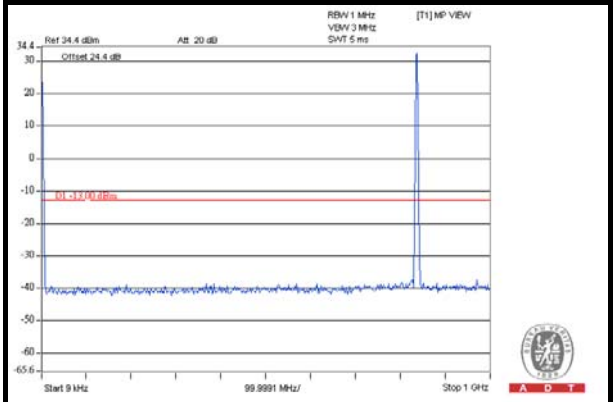
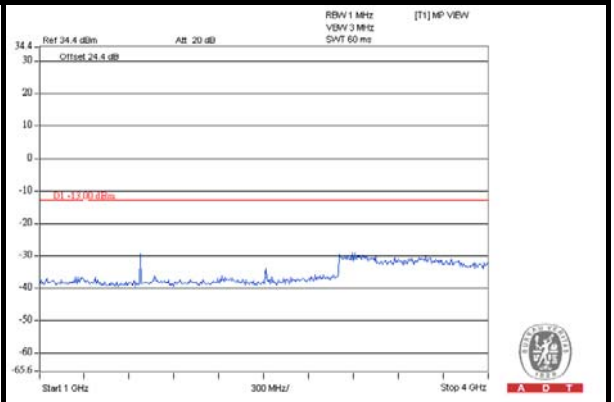
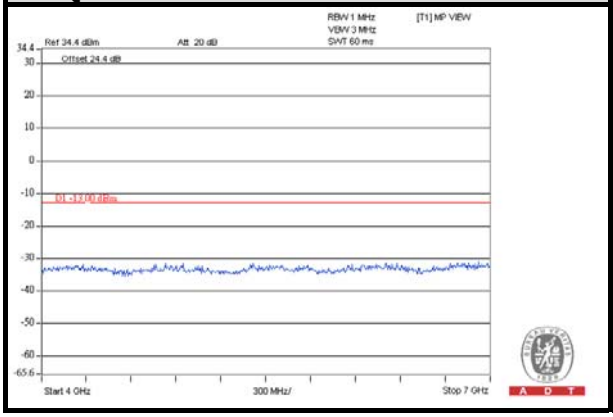
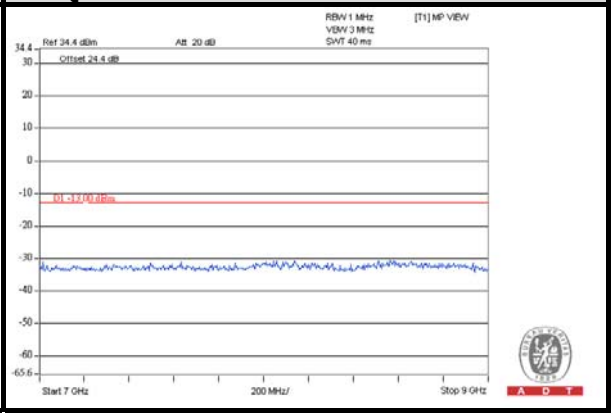
4.5.3 TEST SETUP

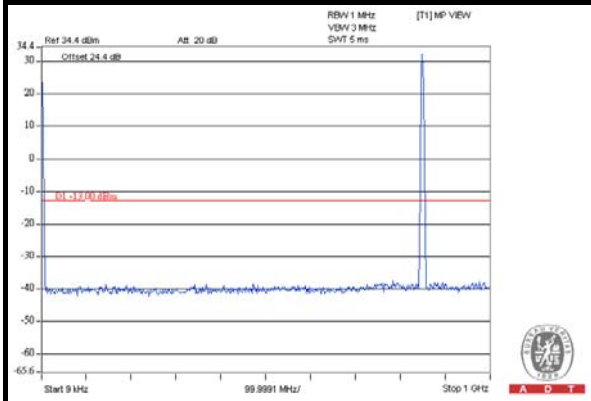
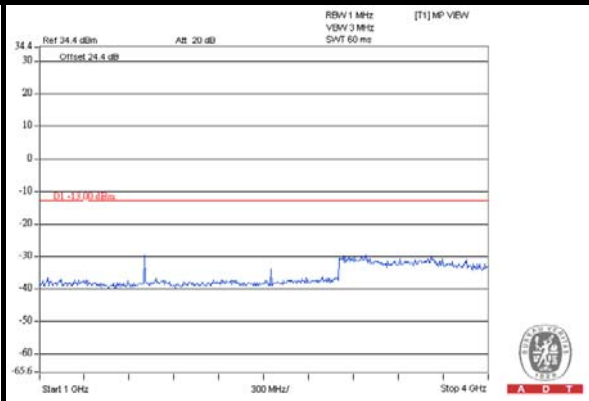
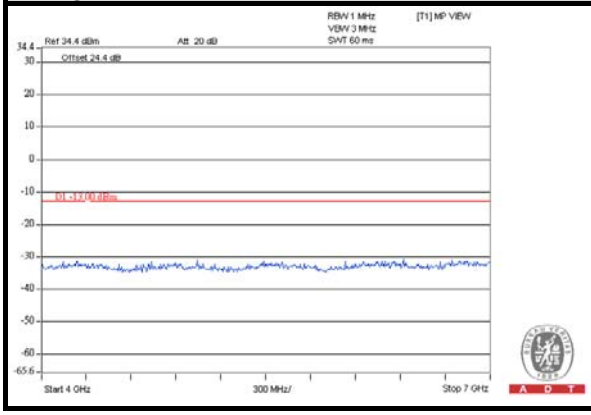
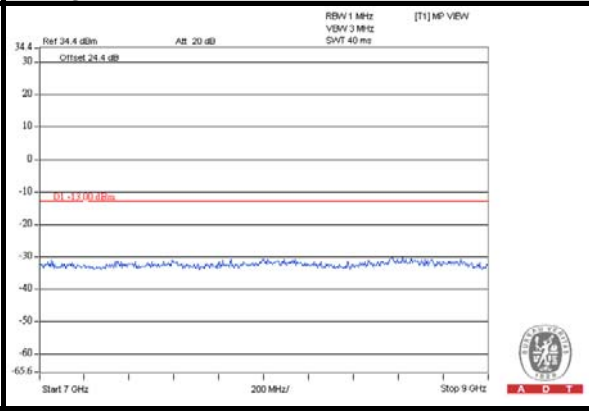


4.5.4 TEST RESULTS

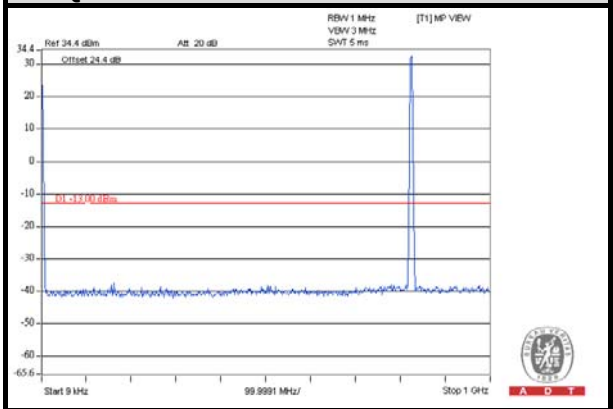
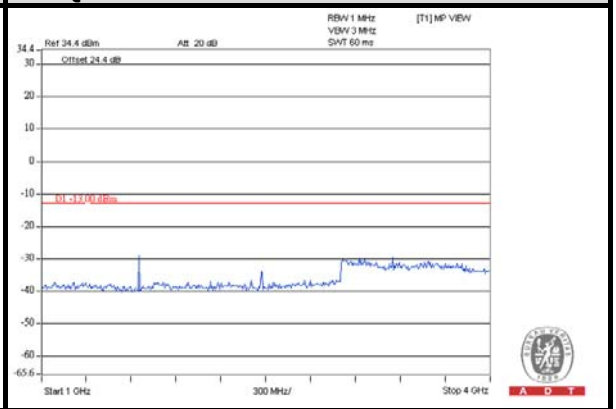
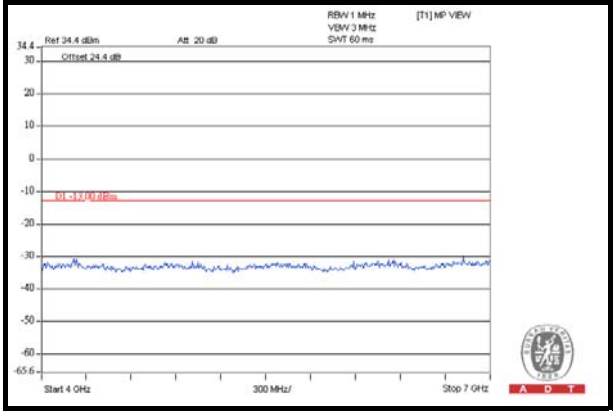
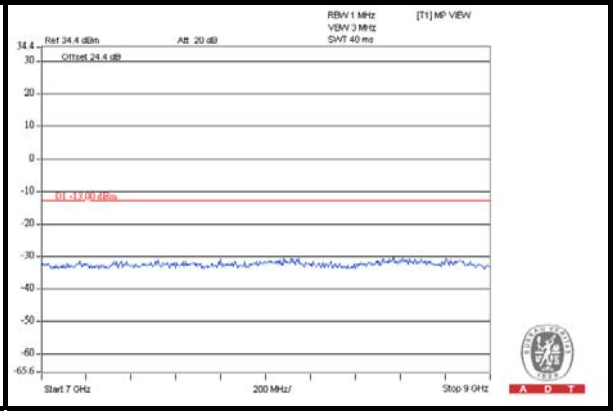
FOR GSM MODE:

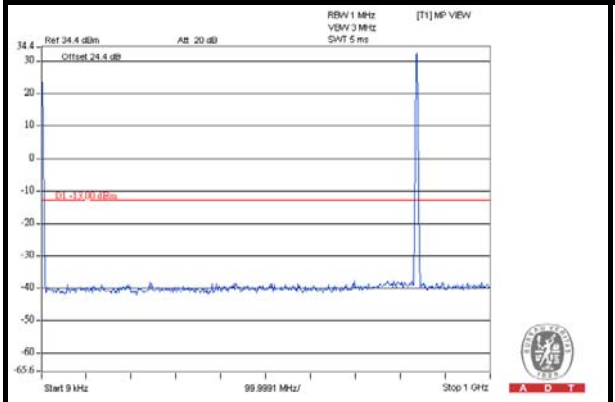
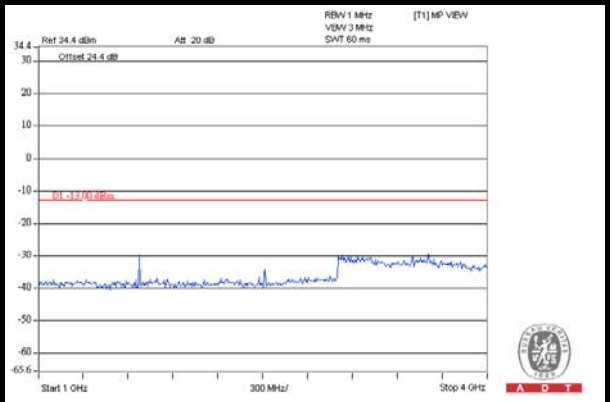
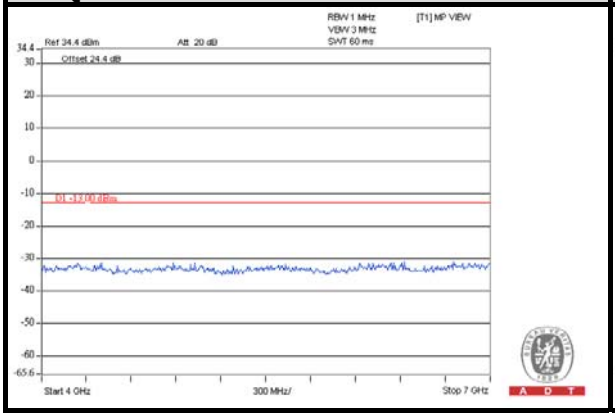
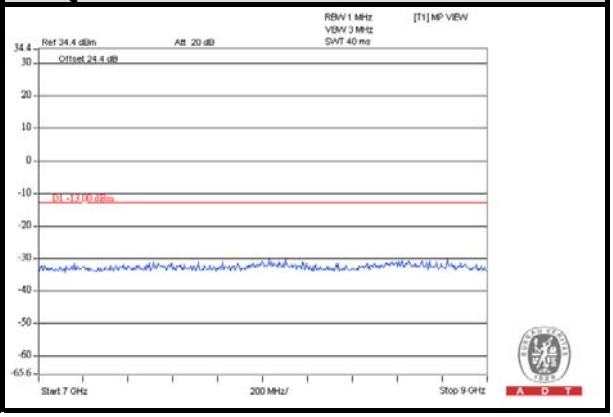
CHANNEL 128	
FREQUENCY RANGE: 9kHz~1GHz	**FREQUENCY RANGE: 1GHz~4GHz**
	
FREQUENCY RANGE: 4GHz~7GHz	**FREQUENCY RANGE: 7GHz~9GHz**
	

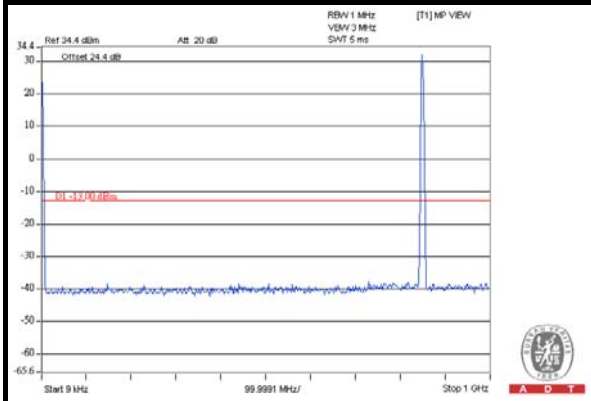
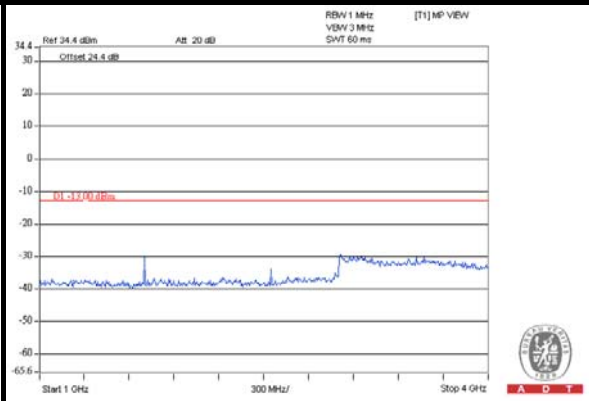
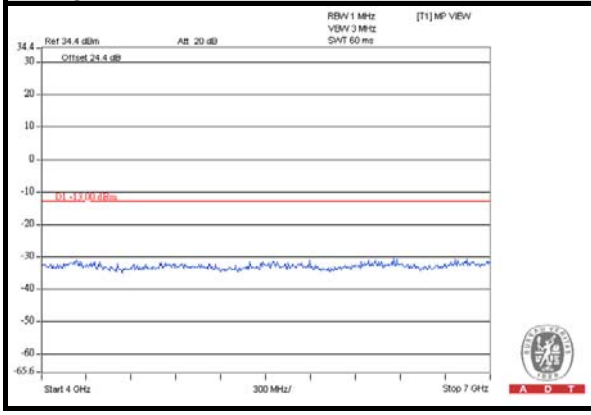
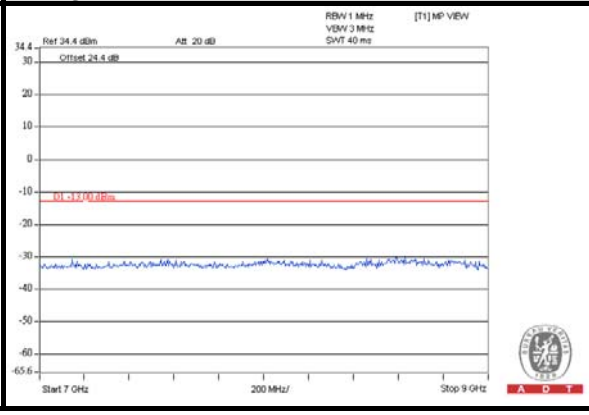
CHANNEL 190	
FREQUENCY RANGE: 9kHz~1GHz	**FREQUENCY RANGE: 1GHz~4GHz**
	
FREQUENCY RANGE: 4GHz~7GHz	**FREQUENCY RANGE: 7GHz~9GHz**
	

CHANNEL 251	
FREQUENCY RANGE: 9kHz~1GHz	**FREQUENCY RANGE: 1GHz~4GHz**
	
FREQUENCY RANGE: 4GHz~7GHz	**FREQUENCY RANGE: 7GHz~9GHz**
	

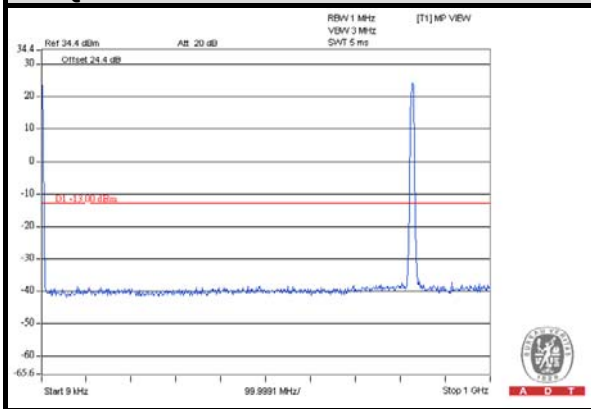
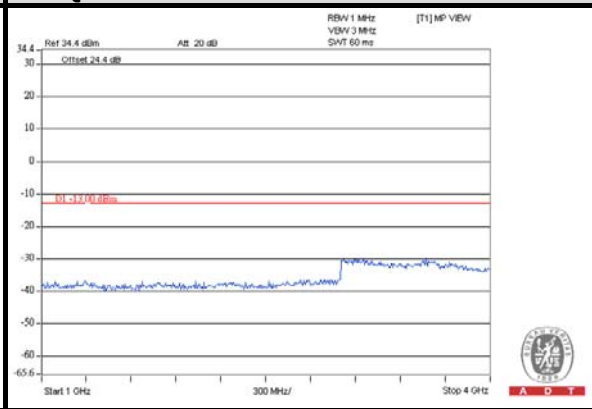
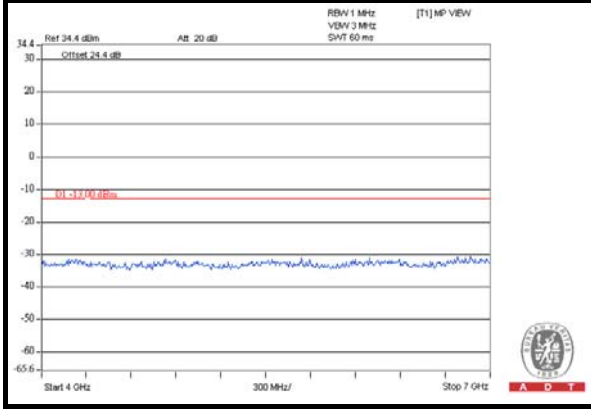
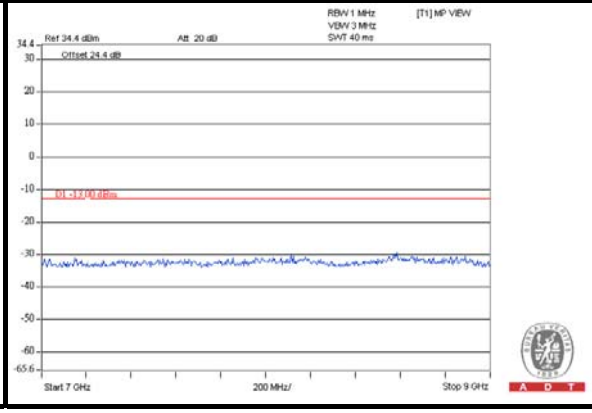
FOR GPRS MODE:

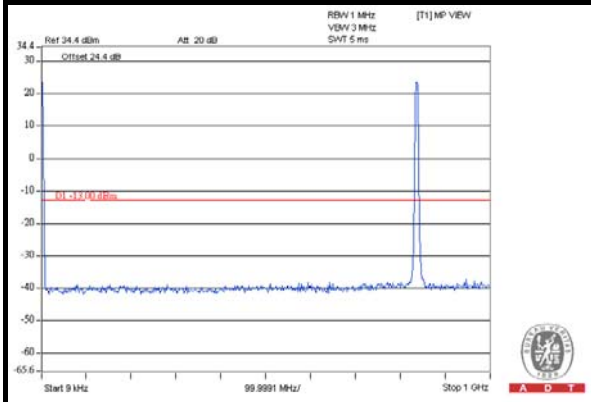
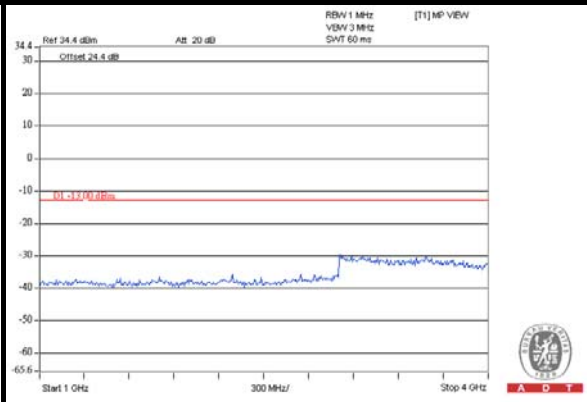
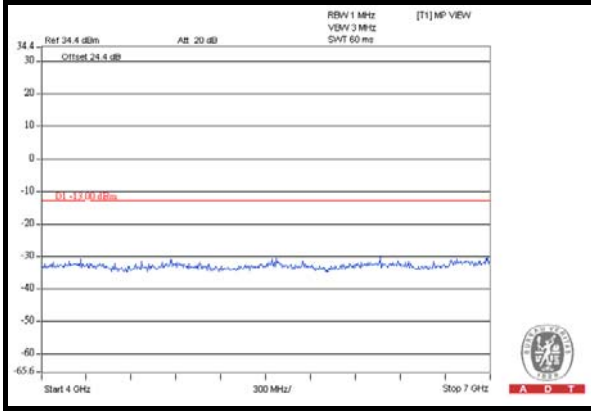
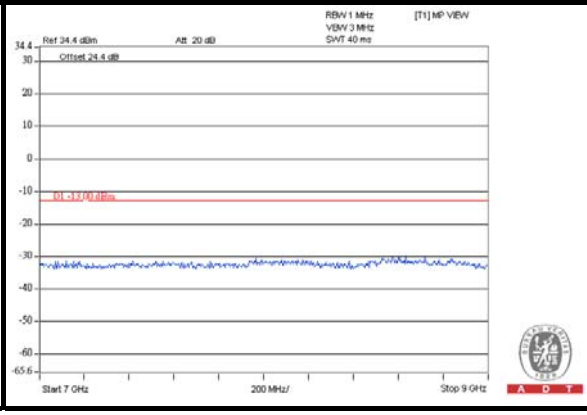
CHANNEL 128	
FREQUENCY RANGE: 9kHz~1GHz	**FREQUENCY RANGE: 1GHz~4GHz**
	
FREQUENCY RANGE: 4GHz~7GHz	**FREQUENCY RANGE: 7GHz~9GHz**
	

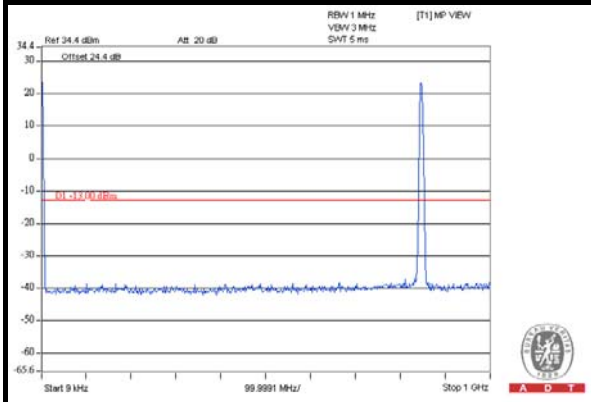
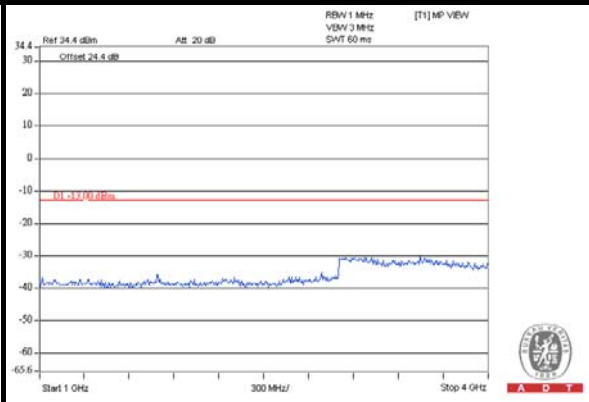
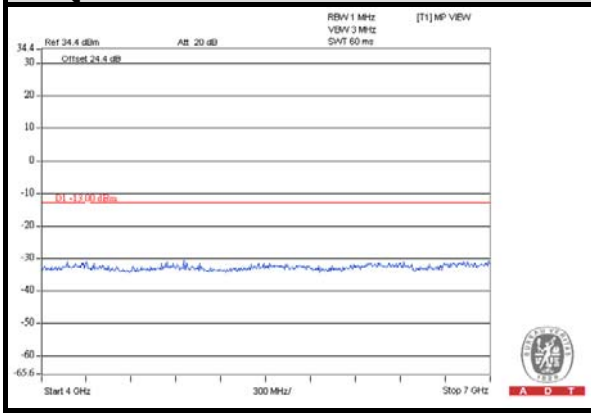
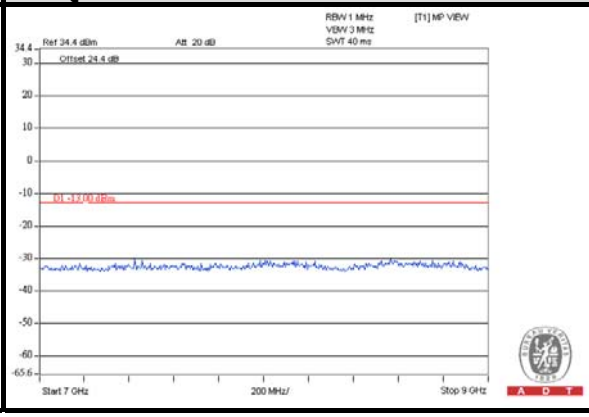
CHANNEL 190	
FREQUENCY RANGE: 9kHz~1GHz	**FREQUENCY RANGE: 1GHz~4GHz**
	
FREQUENCY RANGE: 4GHz~7GHz	**FREQUENCY RANGE: 7GHz~9GHz**
	

CHANNEL 251	
FREQUENCY RANGE: 9kHz~1GHz	**FREQUENCY RANGE: 1GHz~4GHz**
	
FREQUENCY RANGE: 4GHz~7GHz	**FREQUENCY RANGE: 7GHz~9GHz**
	

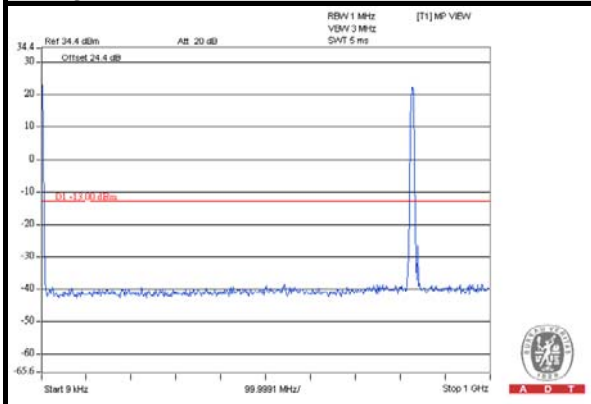
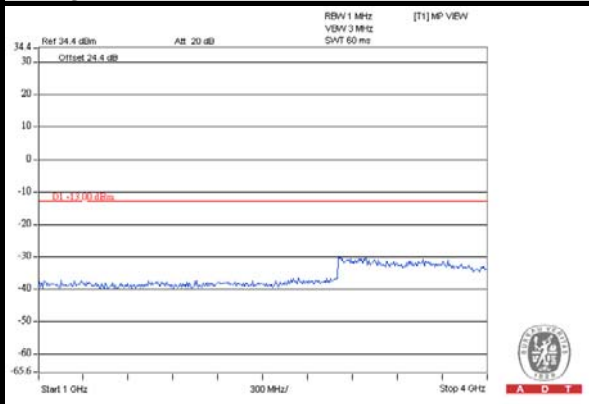
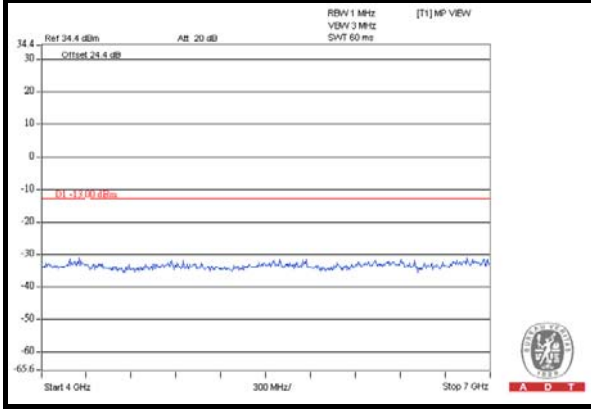
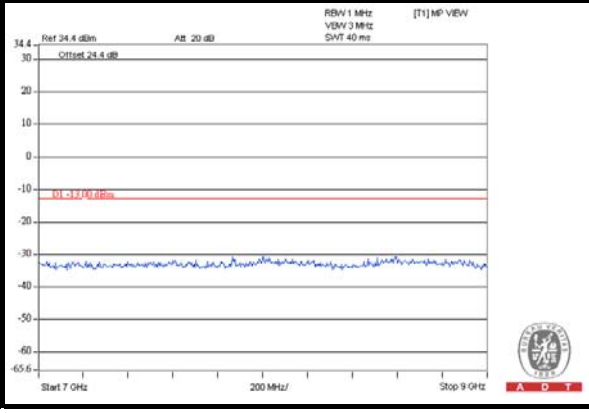
FOR WCDMA MODE:

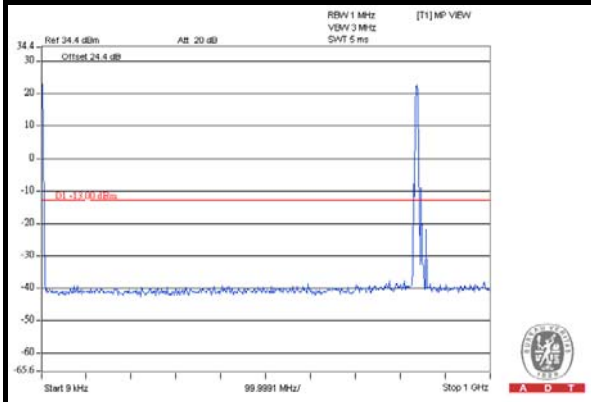
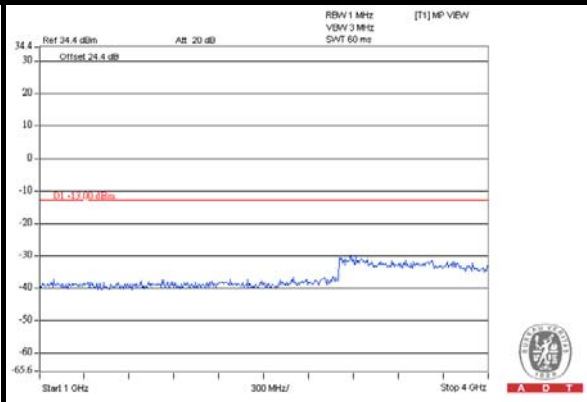
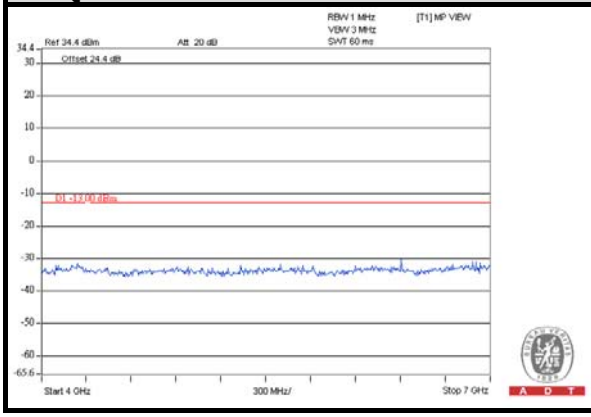
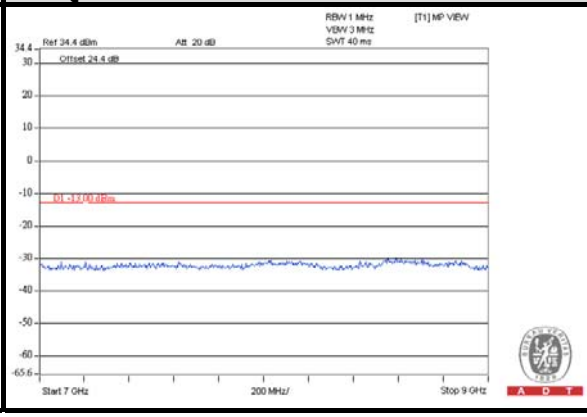
CHANNEL 4132	
FREQUENCY RANGE : 9kHz~1GHz	**FREQUENCY RANGE : 1GHz~4GHz**
	
FREQUENCY RANGE : 4GHz~7GHz	**FREQUENCY RANGE :7GHz~9GHz**
	

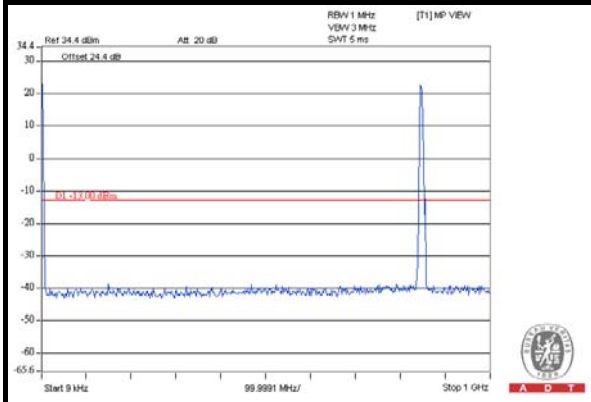
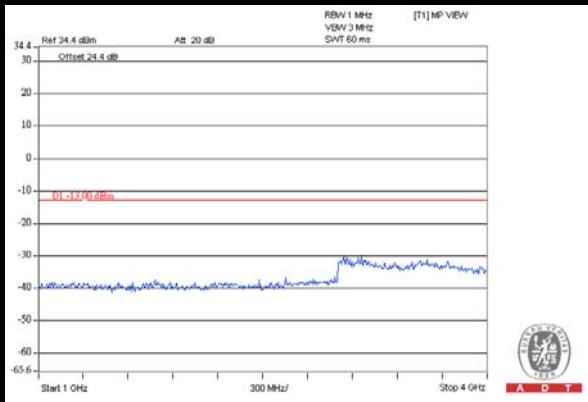
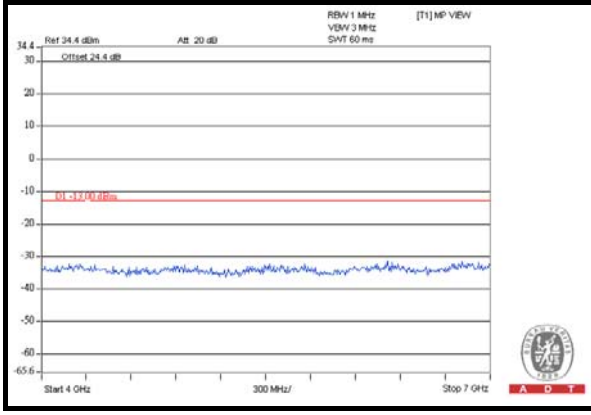
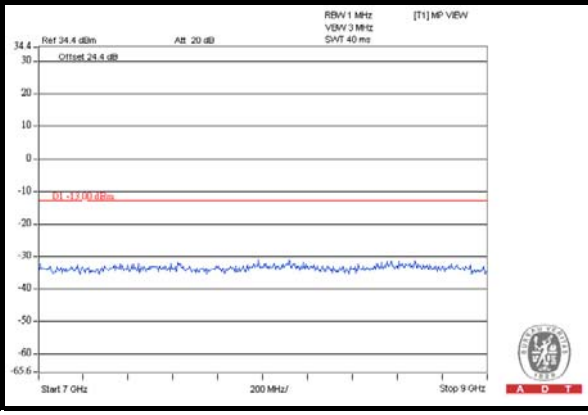
CHANNEL 4182	
FREQUENCY RANGE : 9kHz~1GHz	**FREQUENCY RANGE : 1GHz~4GHz**
	
FREQUENCY RANGE : 4GHz~7GHz	**FREQUENCY RANGE :7GHz~9GHz**
	

CHANNEL 4233	
FREQUENCY RANGE : 9kHz~1GHz	**FREQUENCY RANGE : 1GHz~4GHz**
	
FREQUENCY RANGE : 4GHz~7GHz	**FREQUENCY RANGE :7GHz~9GHz**
	

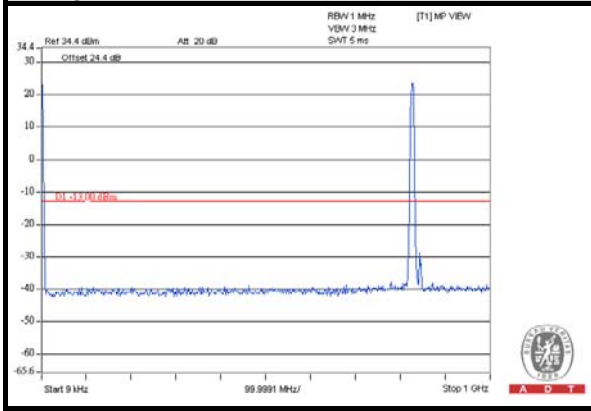
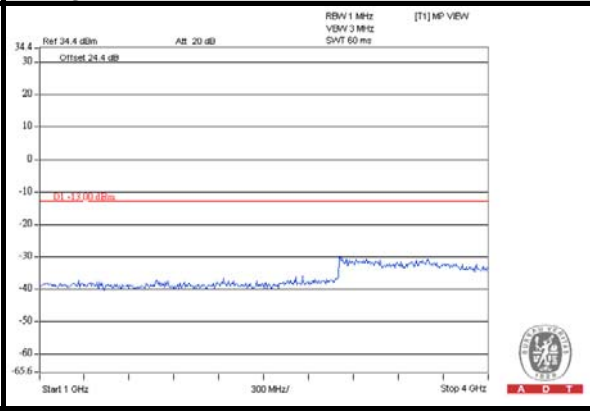
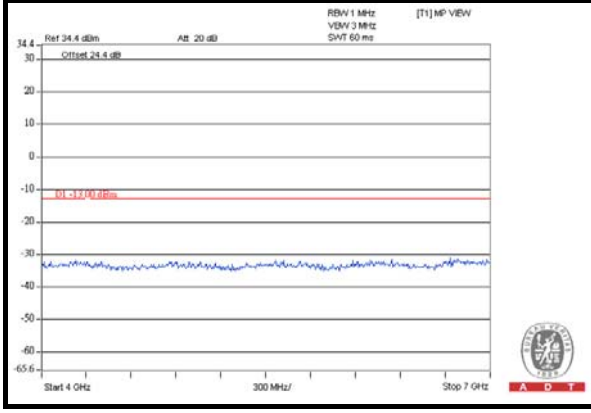
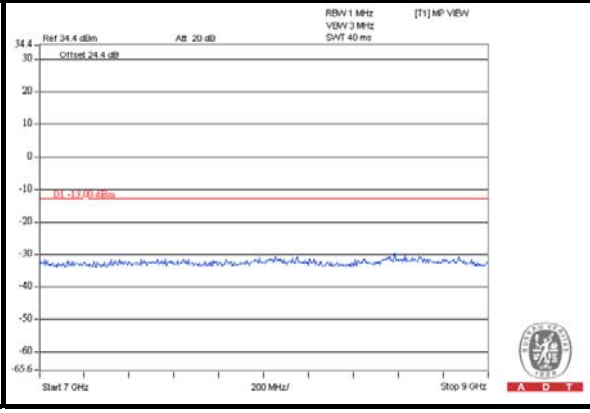
FOR HSDPA MODE:

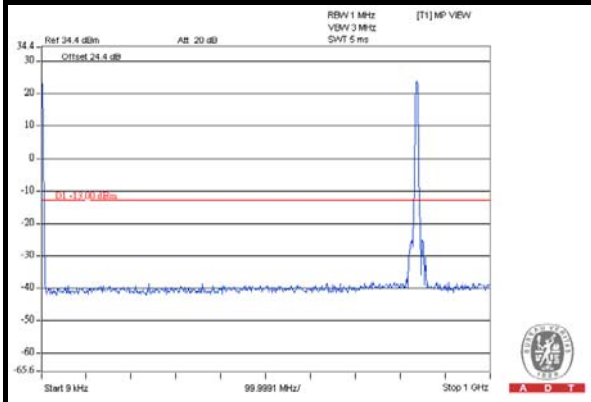
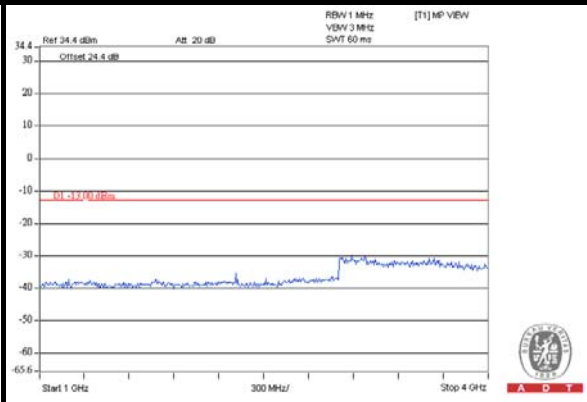
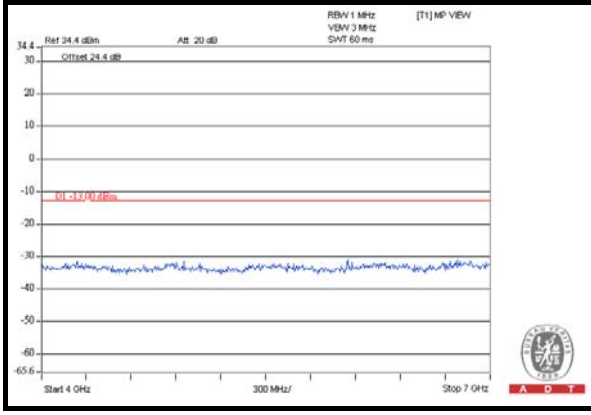
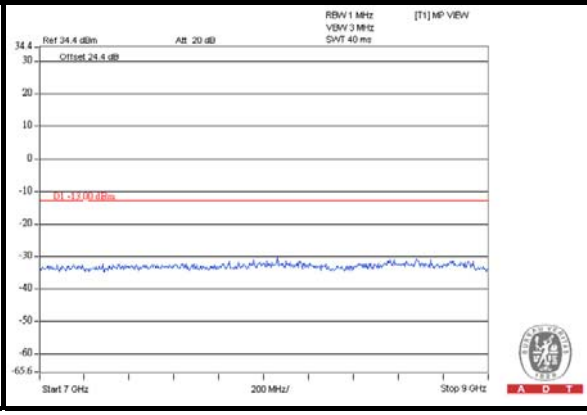
CHANNEL 4132	
FREQUENCY RANGE : 9kHz~1GHz	**FREQUENCY RANGE : 1GHz~4GHz**
	
FREQUENCY RANGE : 4GHz~7GHz	**FREQUENCY RANGE :7GHz~9GHz**
	

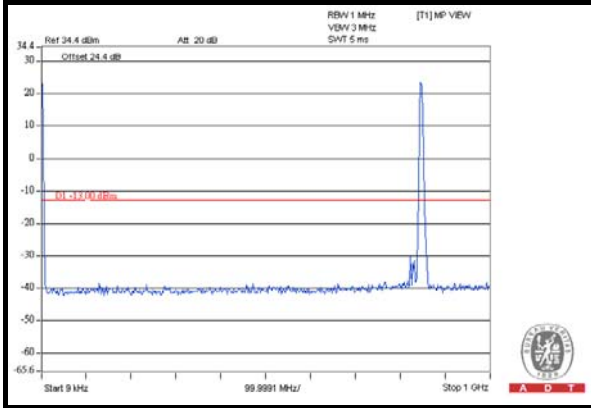
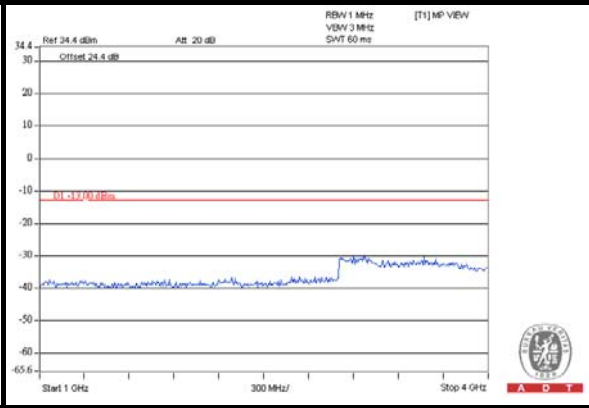
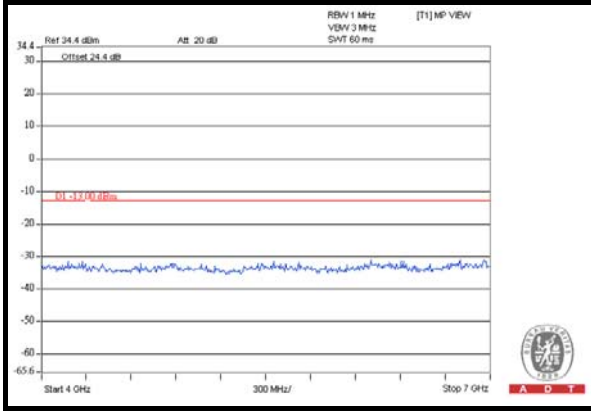
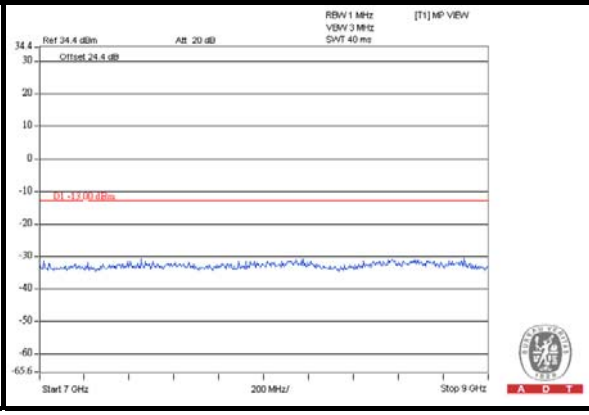
CHANNEL 4182	
FREQUENCY RANGE : 9kHz~1GHz	**FREQUENCY RANGE : 1GHz~4GHz**
	
FREQUENCY RANGE : 4GHz~7GHz	**FREQUENCY RANGE :7GHz~9GHz**
	

CHANNEL 4233	
FREQUENCY RANGE : 9kHz~1GHz	FREQUENCY RANGE : 1GHz~4GHz
	
FREQUENCY RANGE : 4GHz~7GHz	FREQUENCY RANGE :7GHz~9GHz
	

FOR HSUPA MODE:

CHANNEL 4132	
FREQUENCY RANGE : 9kHz~1GHz	**FREQUENCY RANGE : 1GHz~4GHz**
	
FREQUENCY RANGE : 4GHz~7GHz	**FREQUENCY RANGE :7GHz~9GHz**
	

CHANNEL 4182	
FREQUENCY RANGE : 9kHz~1GHz	**FREQUENCY RANGE : 1GHz~4GHz**
	
FREQUENCY RANGE : 4GHz~7GHz	**FREQUENCY RANGE :7GHz~9GHz**
	

CHANNEL 4233	
FREQUENCY RANGE : 9kHz~1GHz	**FREQUENCY RANGE : 1GHz~4GHz**
	
FREQUENCY RANGE : 4GHz~7GHz	**FREQUENCY RANGE :7GHz~9GHz**
	

4.6 RADIATED EMISSION MEASUREMENT

4.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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 + 10 log(P) dB. The emission limit equal to –13dBm.

4.6.2 TEST PROCEDURES

a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.

b. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value " of step a. Record the power level of S.G

c. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn.

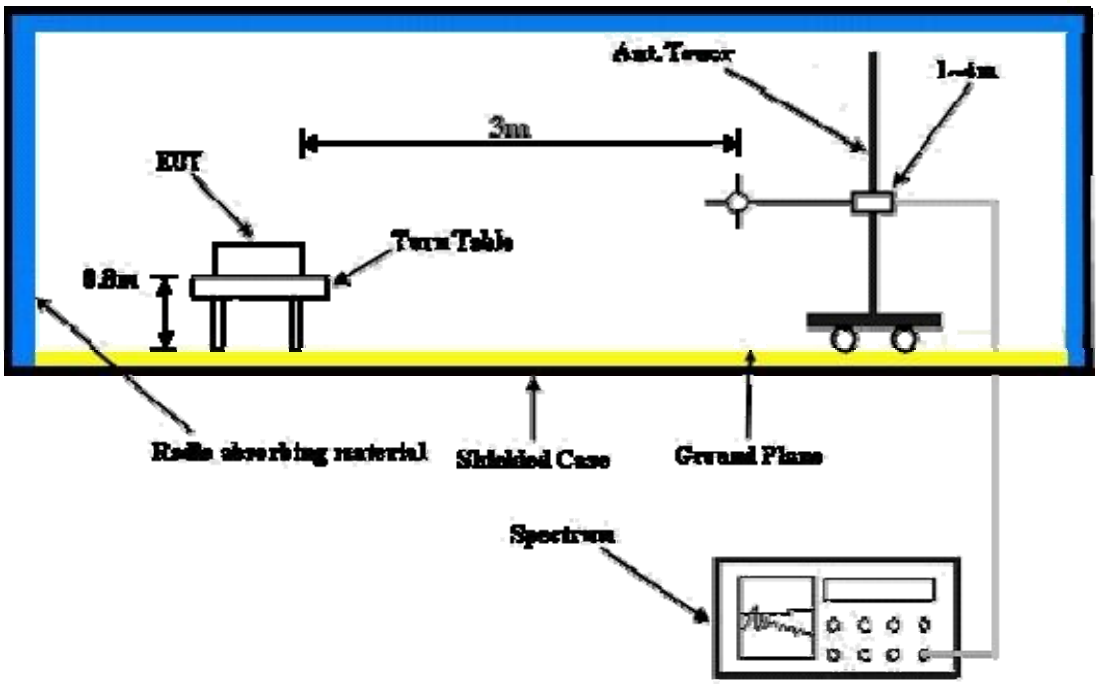
d. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, E.R.P power = E.I.P.R power - 2.15dBi.

NOTE: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

4.6.3 DEVIATION FROM TEST STANDARD

No deviation

4.6.4 TEST SETUP



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.6.5 TEST RESULTS

Below 1GHz

FOR GSM MODE:

MODE	TX channel 128	**FREQUENCY RANGE**	Below 1000MHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	**INPUT POWER**	120Vac, 60 Hz
TESTED BY	Aska huang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	31.94	-53.6	-41.2	-12.4	-55.8	-13.0	-42.8
2	88.32	-55.9	-56.6	0.7	-58.0	-13.0	-45.0
3	173.85	-52.2	-54.3	2.1	-54.4	-13.0	-41.4
4	220.50	-48.2	-53.6	5.4	-50.4	-13.0	-37.4
5	265.21	-62.2	-67.5	5.3	-64.4	-13.0	-51.4
6	624.83	-65.0	-69.6	4.6	-67.2	-13.0	-54.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	**30.00**	**-39.9**	**-27.3**	**-12.6**	**-42.0**	**-13.0**	**-29.0**
2	47.49	-47.1	-36.9	-10.2	-49.2	-13.0	-36.2
3	94.15	-54.5	-55.5	1.0	-56.6	-13.0	-43.6
4	216.61	-57.3	-62.8	5.5	-59.4	-13.0	-46.4
5	278.82	-67.3	-72.5	5.2	-69.5	-13.0	-56.5
6	644.27	-67.3	-72.1	4.8	-69.5	-13.0	-56.5

REMARKS:

1. Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

FOR WCDMA MODE:

MODE	TX channel 4132	**FREQUENCY RANGE**	Below 1000MHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	**INPUT POWER**	120Vac, 60 Hz
TESTED BY	Haru Yang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	31.94	-57.3	-40.9	-12.4	-55.4	-13.0	-42.4
2	88.32	-58.3	-65.9	0.7	-67.4	-13.0	-54.4
3	129.14	-59.0	-64.9	0.0	-67.1	-13.0	-54.1
4	175.79	-58.3	-65.8	2.4	-65.5	-13.0	-52.5
5	214.67	-58.0	-69.5	5.5	-66.2	-13.0	-53.2
6	624.83	-65.0	-67.7	4.6	-65.2	-13.0	-52.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	31.94	-48.8	-43.4	-12.4	-57.9	-13.0	-44.9
2	47.49	-50.8	-46.6	-10.2	-58.9	-13.0	-45.9
3	88.32	-56.7	-60.1	0.7	-61.5	-13.0	-48.5
4	168.02	-67.7	-68.2	1.4	-69.0	-13.0	-56.0
5	208.84	-64.5	-72.5	5.5	-69.2	-13.0	-56.2
6	727.86	-67.6	-65.5	4.9	-62.8	-13.0	-49.8

REMARKS:

1. Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

FOR HSDPA MODE:

MODE	TX channel 4132	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Aska Huang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	35.83	-57.7	-41.8	-11.9	-55.9	-13.0	-42.9
2	41.66	-58.5	-43.7	-11.1	-56.9	-13.0	-43.9
3	88.47	-58.3	-65.8	0.7	-67.2	-13.0	-54.2
4	113.59	-59.6	-66.3	0.0	-68.5	-13.0	-55.5
5	129.58	-59.0	-64.9	0.0	-67.1	-13.0	-54.1
6	175.82	-58.2	-65.7	2.4	-65.5	-13.0	-52.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	31.85	-48.8	-43.5	-12.4	-58.0	-13.0	-45.0
2	47.53	-50.8	-46.6	-10.2	-58.9	-13.0	-45.9
3	89.18	-56.7	-60.2	0.9	-61.4	-13.0	-48.4
4	156.35	-68.3	-67.0	0.0	-69.2	-13.0	-56.2
5	220.50	-64.8	-73.0	5.4	-69.8	-13.0	-56.8
6	389.62	-67.5	-72.2	5.2	-69.2	-13.0	-56.2

REMARKS:

1. Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

FOR HSUPA MODE:

MODE	TX channel 4132	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Aska Huang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	32.02	-57.1	-40.7	-12.4	-55.2	-13.0	-42.2
2	88.64	-58.5	-66.1	0.8	-67.5	-13.0	-54.5
3	113.52	-59.7	-66.4	0.0	-68.6	-13.0	-55.6
4	129.26	-58.9	-64.8	0.0	-67.0	-13.0	-54.0
5	175.26	-58.3	-65.6	2.3	-65.5	-13.0	-52.5
6	214.57	-57.9	-69.4	5.5	-66.0	-13.0	-53.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	37.78	-50.1	-44.6	-11.6	-58.4	-13.0	-45.4
2	47.52	-50.9	-46.7	-10.2	-59.0	-13.0	-46.0
3	88.28	-56.5	-60.0	0.7	-61.4	-13.0	-48.4
4	168.26	-67.4	-67.9	1.4	-68.7	-13.0	-55.7
5	221.21	-64.8	-72.9	5.4	-69.7	-13.0	-56.7
6	381.84	-68.7	-73.6	5.2	-70.6	-13.0	-57.6

REMARKS:

1. Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Above 1GHz

FOR GSM MODE:

MODE	Channel 128	**FREQUENCY RANGE**	Above 1000MHz
INPUT POWER	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	25deg. C, 65%RH
TESTED BY	Haru Yang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	1648.4	-59.8	-60.4	5.5	-57.0	-13.0	-44.0
2	2472.6	-62.7	-60.5	6.4	-56.2	-13.0	-43.2
3	3296.8	-78.1	-74.4	6.9	-69.7	-13.0	-56.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	1648.4	-58.0	-60.5	5.5	-57.1	-13.0	-44.1
2	2472.6	-68.6	-66.2	6.4	-61.9	-13.0	-48.9
3	3296.8	-78.4	-75.1	6.9	-70.4	-13.0	-57.4

REMARKS:

1. ERP(dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor = gain of substitution antenna + cable loss

MODE	Channel 190	**FREQUENCY RANGE**	Above 1000MHz
INPUT POWER	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	25deg. C, 65%RH
TESTED BY	Haru Yang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	1672.4	-59.7	-60.3	5.5	-56.9	-13.0	-43.9
2	2508.8	-62.4	-60.0	6.4	-55.8	-13.0	-42.8
3	3345.2	-78.9	-75.2	6.9	-70.5	-13.0	-57.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	1672.8	-56.4	-58.8	5.5	-55.4	-13.0	-42.4
2	2509.2	-67.3	-64.9	6.4	-60.6	-13.0	-47.6
3	3345.6	-74.5	-71.0	6.9	-66.2	-13.0	-53.2

REMARKS:

1. ERP(dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor = gain of substitution antenna + cable loss

MODE	Channel 251	**FREQUENCY RANGE**	Above 1000MHz
INPUT POWER	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	25deg. C, 65%RH
TESTED BY	Haru Yang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	1697.6	-60.2	-61.0	5.6	-57.5	-13.0	-44.5
2	2546.4	-61.7	-59.1	6.4	-54.9	-13.0	-41.9
3	3395.2	-78.3	-74.7	7.0	-69.9	-13.0	-56.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	1697.6	-55.5	-57.9	5.6	-54.4	-13.0	-41.4
2	2546.4	-64.3	-62.0	6.4	-57.8	-13.0	-44.8
3	3395.2	-73.8	-70.3	7.0	-65.5	-13.0	-52.5

REMARKS:

1. ERP(dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor = gain of substitution antenna + cable loss

FOR WCDMA MODE:

MODE	Channel 4132	**FREQUENCY RANGE**	Above 1000MHz
INPUT POWER	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	25deg. C, 65%RH
TESTED BY	Haru Yang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	1652.8	-66.4	-67.0	5.5	-63.6	-13.0	-50.6
2	2479.2	-71.2	-69.0	6.4	-64.8	-13.0	-51.8
3	3305.6	-72.7	-69.0	6.9	-64.2	-13.0	-51.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	1652.8	-67.8	-70.3	5.5	-67.0	-13.0	-54.0
2	2479.2	-72.8	-70.4	6.4	-66.2	-13.0	-53.2
3	3305.6	-75.6	-72.2	6.9	-67.5	-13.0	-54.5

REMARKS:

1. ERP(dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor = gain of substitution antenna + cable loss

MODE	Channel 4182	**FREQUENCY RANGE**	Above 1000MHz
INPUT POWER	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	25deg. C, 65%RH
TESTED BY	Haru Yang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	1672.8	-67.7	-68.3	5.5	-65.0	-13.0	-52.0
2	2509.2	-71.4	-69.0	6.4	-64.8	-13.0	-51.8
3	3345.6	-73.1	-69.4	6.9	-64.7	-13.0	-51.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	1672.8	-69.6	-72.0	5.5	-68.7	-13.0	-55.7
2	2509.2	-73.2	-70.8	6.4	-66.6	-13.0	-53.6
3	3345.6	-76.7	-73.2	6.9	-68.5	-13.0	-55.5

REMARKS:

1. ERP(dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor = gain of substitution antenna + cable loss

MODE	Channel 4233	**FREQUENCY RANGE**	Above 1000MHz
INPUT POWER	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	25deg. C, 65%RH
TESTED BY	Haru Yang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	1693.2	-64.4	-65.2	5.6	-61.8	-13.0	-48.8
2	2539.8	-74.8	-72.2	6.4	-68.0	-13.0	-55.0
3	3386.4	-78.0	-74.4	7.0	-69.6	-13.0	-56.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	1693.2	-66.1	-68.6	5.6	-65.2	-13.0	-52.2
2	2539.8	-74.7	-72.3	6.4	-68.1	-13.0	-55.1
3	3386.4	-77.3	-73.8	7.0	-69.0	-13.0	-56.0

REMARKS:

1. ERP(dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor = gain of substitution antenna + cable loss

FOR HSDPA MODE:

MODE	Channel 4132	FREQUENCY RANGE	Above 1000MHz
INPUT POWER	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH
TESTED BY	Haru Yang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1652.8	-66.9	-67.5	5.5	-64.2	-13.0	-51.2
2	2479.2	-71.9	-69.7	6.4	-65.5	-13.0	-52.5
3	3305.6	-73.4	-69.7	6.9	-65.0	-13.0	-52.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1652.8	-68.2	-70.7	5.5	-67.4	-13.0	-54.4
2	2479.2	-73.5	-71.1	6.4	-66.9	-13.0	-53.9
3	3305.6	-76.7	-73.3	6.9	-68.6	-13.0	-55.6

REMARKS:

1. ERP(dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor = gain of substitution antenna + cable loss

FOR HSUPA MODE:

MODE	Channel 4132	FREQUENCY RANGE	Above 1000MHz
INPUT POWER	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH
TESTED BY	Haru Yang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1652.8	-67.2	-67.8	5.5	-64.5	-13.0	-51.5
2	2479.2	-72.1	-69.9	6.4	-65.7	-13.0	-52.7
3	3305.6	-73.2	-69.5	6.9	-64.8	-13.0	-51.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1652.8	-68.5	-71.0	5.5	-67.7	-13.0	-54.7
2	2479.2	-73.6	-71.2	6.4	-67.0	-13.0	-54.0
3	3305.6	-76.3	-72.9	6.9	-68.2	-13.0	-55.2

REMARKS:

1. ERP(dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor = gain of substitution antenna + cable loss

5 PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).

6 INFORMATION ON THE TESTING LABORATORIES

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

Copies of accreditation and authorization certificates of our laboratories obtained from approval agencies can be downloaded from our web site: www.adt.com.tw/index.5.phtml. If you have any comments, please feel free to contact us at the following:

Linko EMC/RF Lab:
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Web Site: www.adt.com.tw

The address and road map of all our labs can be found in our web site also.

7 APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.

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