

## FCC Test Report

### (PART 22)

**Report No.:** RF151125C02

**FCC ID:** YA7-ATVT1548

**Test Model:** AX9

**Received Date:** Nov. 25, 2015

**Test Date:** Nov. 26, 2015 ~ Dec. 01, 2015

**Issued Date:** Dec. 10, 2015

**Applicant:** Atrack Technology Inc.

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(R.O.C.)

**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

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(R.O.C.)

**Test Location (1):** 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.	Description	Date Issued
RF151125C02	Original Release	Dec. 10, 2015

## 1 Certificate of Conformity

**Product:** Vehicle telematics

**Brand:** ATrack Technology Inc.

**Test Model:** AX9

**Sample Status:** Identical Prototype

**Applicant:** Atrack Technology Inc.

**Test Date:** Nov. 26, 2015 ~ Dec. 01, 2015

**Standards:** FCC Part 22, Subpart H

The above equipment 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 :** Vera Huang, **Date:** Dec. 10, 2015

Vera Huang / Specialist

**Approved by :** Stanley Wu, **Date:** Dec. 10, 2015

Stanley Wu / Assistant Manager

## 2 Summary of Test Results

Applied Standard: FCC Part 22 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 22.913 (a)	Effective Radiated Power	Pass	Meet the requirement of limit.
---	Peak to Average Ratio	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 -1.95 dB at 2509.20 MHz.

### 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	Expended Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150 kHz ~ 30 MHz	2.44 dB
Radiated Emissions up to 1 GHz	30 MHz ~ 200 MHz	2.93 dB
	200 MHz ~ 1000 MHz	2.95 dB
Radiated Emissions above 1 GHz	1 GHz ~ 18 GHz	2.26 dB
	18 GHz ~ 40 GHz	1.94 dB

## 2.2 Test Site and Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver Agilent	N9038A	MY51210203	Jan. 21, 2015	Jan. 21, 2016
Spectrum Analyzer Agilent	N9010A	MY52220314	Sep. 03, 2015	Sep. 02, 2016
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Dec. 10, 2014	Dec. 09, 2015
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-969	Feb. 09, 2015	Feb. 09, 2016
Double Ridge Guide Horn Antenna EMCO	3115	5619	Feb. 11, 2015	Feb. 10, 2016
BILOG Antenna SCHWARZBECK	VULB 9168	9168-153	Feb. 04, 2015	Feb. 03, 2016
BILOG Antenna SCHWARZBECK	VULB9168	9168-472	Feb. 04, 2015	Feb. 04, 2016
Preamplifier EMCI	EMC 012645	980115	Dec. 12, 2014	Dec. 11, 2015
Preamplifier EMCI	EMC 184045	980116	Jan. 09, 2015	Jan. 08, 2016
Preamplifier EMCI	EMC 330H	980112	Dec. 27, 2014	Dec. 26, 2015
Power Meter Anritsu	ML2495A	1232002	Sep. 21, 2015	Sep. 20, 2016
Power Sensor Anritsu	MA2411B	1207325	Sep. 21, 2015	Sep. 20, 2016
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	309219/4 2950114	Oct. 12, 2015	Oct. 11, 2016
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	250130/4	Oct. 12, 2015	Oct. 11, 2016
RF Coaxial Cable Worken	8D-FB	Cable-Ch10-01	Oct. 12, 2015	Oct. 11, 2016
Software BV ADT	E3 6.120103	NA	NA	NA
Antenna Tower MF	MFA-440H	NA	NA	NA
Turn Table MF	MFT-201SS	NA	NA	NA
Antenna Tower & Turn Table Controller MF	MF-7802	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 10.  
 3. The horn antenna and preamplifier (model: EMC 184045) are used only for the measurement of emission frequency above 1 GHz if tested.  
 4. The FCC Site Registration No. is 690701.  
 5. The IC Site Registration No. is IC7450F-10.

### 3 General Information

#### 3.1 General Description of EUT

<b>Product</b>	Vehicle telematics	
<b>Brand</b>	ATrack Technology Inc.	
<b>Test Model</b>	AX9	
<b>Power Supply Rating</b>	12Vdc (DC Power Supply)	
<b>Modulation Type</b>	GPRS	GMSK
	EDGE	GMSK, 8PSK
	WCDMA	BPSK
<b>Frequency Range</b>	GPRS/EDGE	824.2 ~ 848.8 MHz
	WCDMA	826.4 ~ 846.6 MHz
<b>Max. ERP Power</b>	GPRS	781.63 mW
	EDGE	209.41 mW
	WCDMA	83.95 mW
<b>Emission Designator</b>	GPRS	245KGXW
	EDGE	244KG7W
	WCDMA	4M09F9W
<b>Antenna Type</b>	Fixed Internal Antenna	
<b>Accessory Device</b>	Refer to Note as below	
<b>Data Cable Supplied</b>	Refer to Note as below	

Note:

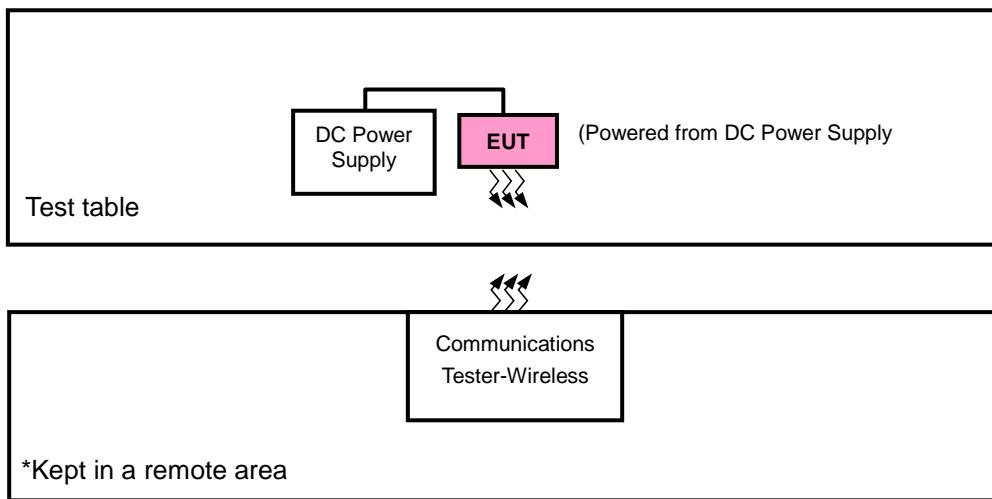
1. The EUT contains following accessory devices.

Product	Brand	Model	Description
Battery	East Trans Tech Co., Ltd.	AB01-0006	3.7Vdc, 100mAh
USB Cable	SHEN ZHEN BASITAI COMPUTER FITING CO., LTD.	N/A	1.2m shielded cable w/o core

2. 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

#### <Radiated Emission Test & E.R.P. Test>



#### 3.2.1 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.	Communications Tester-Wireless	Agilent	E5515C	MY52102544	N/A
2.	DC Power Supply	Topward	33010D	807748	N/A

No.	Signal Cable Description Of The Above Support Units
1.	N/A
2.	N/A

Note:

1. All power cords of the above support units are non-shielded (1.8m).
2. Item 1 acted as communication partner to transfer data.

### 3.3 Test Mode Applicability and Tested Channel Detail

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 as the table below. Following channel(s) was (were) selected for the final test as listed below:

Band	ERP	Radiated Emission
GSM	Z-plane	Z-axis
EDGE	Z-plane	Z-axis
WCDMA	Z-plane	Z-axis

#### GSM

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Mode
-	ERP	128 to 251	128, 189, 251	GPRS, EDGE
-	Frequency Stability	128 to 251	189	GPRS, EDGE
-	Occupied Bandwidth	128 to 251	128, 189, 251	GPRS, EDGE
-	Band Edge	128 to 251	128, 251	GPRS, EDGE
-	Peak to Average Ratio	128 to 251	128, 189, 251	GPRS, EDGE
-	Conducted Emission	128 to 251	189	GPRS, EDGE
-	Radiated Emission	128 to 251	189	GPRS, EDGE

#### WCDMA

EUT Configure 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
-	Band Edge	4132 to 4233	4132, 4233	WCDMA
-	Peak to Average Ratio	4132 to 4233	4132, 4182, 4233	WCDMA
-	Conducted Emission	4132 to 4233	4182	WCDMA
-	Radiated Emission	4132 to 4233	4182	WCDMA

**Test Condition:**

Test Item	Environmental Conditions	Input Power	Tested By
ERP	25 deg. C, 65 % RH	12Vdc	Gavin Wu
Frequency Stability	25 deg. C, 65 % RH	12Vdc	Carlos Chen
Occupied Bandwidth	25 deg. C, 65 % RH	12Vdc	Carlos Chen
Band Edge	25 deg. C, 65 % RH	12Vdc	Carlos Chen
Peak to Average Ratio	25 deg. C, 65 % RH	12Vdc	Carlos Chen
Conducted Emission	25 deg. C, 65 % RH	12Vdc	Carlos Chen
Radiated Emission	25 deg. C, 65 % RH	12Vdc	Gavin Wu

**3.4 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.

**3.5 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-D 2010**

**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:**

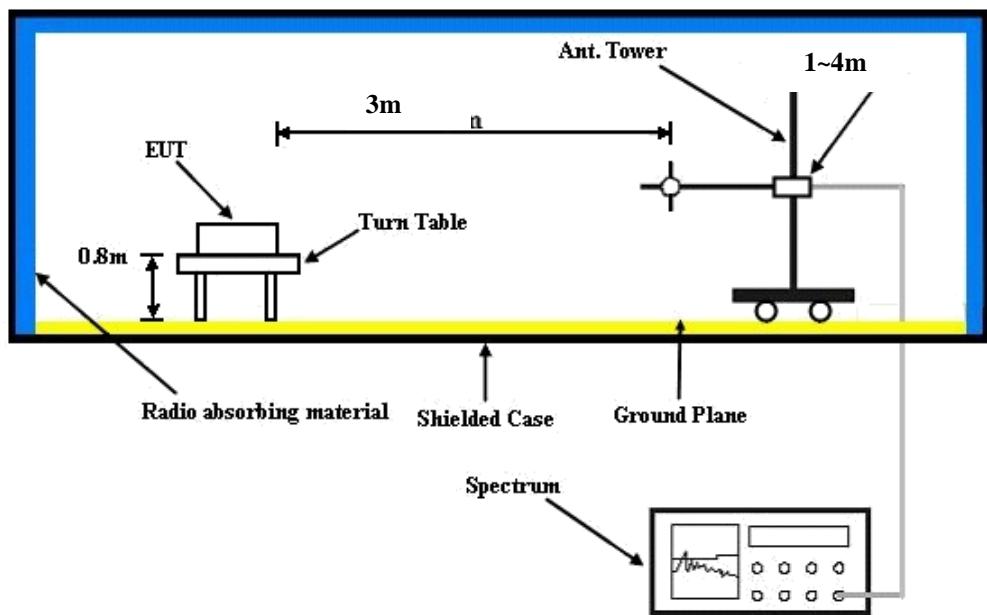
- a. All measurements were done at low, middle and high operational frequency range. RBW and VBW is 1 MHz for GSM, GPRS & EDGE, and 5 MHz for WCDMA and CDMA, and 10 MHz for LTE mode.
- b. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8 m height 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 1 m to 4 m 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.  $EIRP = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$ . E.R.P power can be calculated from E.I.R.P power by subtracting the gain of dipole, E.R.P power = E.I.P.R power - 2.15 dBi.

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

The EUT was set up for the maximum power with GSM, GPRS, EDGE, WCDMA, CDMA, and LTE 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.

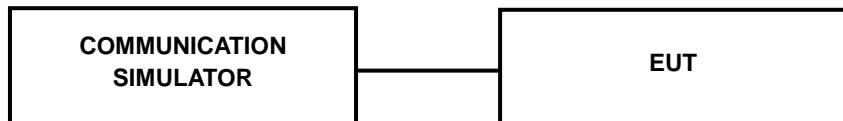
#### 4.1.3 Test Setup

##### EIRP / ERP Measurement:



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

##### Conducted Power Measurement:



#### 4.1.4 Test Results

##### Conducted Output Power (dBm)

Band	GSM850		
Channel	128	189	251
Frequency (MHz)	824.2	836.4	848.8
GPRS 8	33.40	33.39	33.43
GPRS 10	33.37	33.36	33.41
GPRS 11	32.56	32.60	32.61
GPRS 12	31.28	31.32	31.36
EDGE 8	27.86	27.90	27.93
EDGE 10	27.84	27.89	27.90
EDGE 11	27.81	27.87	27.86
EDGE 12	27.79	27.85	27.84

Band	WCDMA V		
Channel	4132	4182	4233
Frequency (MHz)	826.4	836.4	846.6
RMC 12.2K	23.48	23.89	23.36

**ERP Power (dBm)**

GPRS							
Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (mW)	Polarization (H/V)
Z	128	824.2	-1.54	32.62	28.93	781.63	H
	189	836.4	-1.78	32.52	28.59	722.77	
	251	848.8	-1.92	32.65	28.58	721.11	
	128	824.2	-5.97	32.76	24.64	291.07	V
	189	836.4	-5.87	32.39	24.37	273.53	
	251	848.8	-5.35	32.54	25.04	319.15	

**EDGE**

Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (mW)	Polarization (H/V)
Z	128	824.2	-7.26	32.62	23.21	209.41	H
	189	836.4	-7.36	32.52	23.01	199.99	
	251	848.8	-7.45	32.65	23.05	201.84	
	128	824.2	-11.75	32.76	18.86	76.91	V
	189	836.4	-11.89	32.39	18.35	68.39	
	251	848.8	-11.65	32.54	18.74	74.82	

**WCDMA**

Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (mW)	Polarization (H/V)
Z	4132	826.4	-11.58	32.62	18.89	77.45	H
	4182	836.4	-11.64	32.52	18.73	74.64	
	4233	846.6	-11.26	32.65	19.24	83.95	
	4132	826.4	-15.63	32.76	14.98	31.48	V
	4182	836.4	-15.27	32.39	14.97	31.41	
	4233	846.6	-15.22	32.54	15.17	32.89	

## 4.2 Frequency Stability Measurement

### 4.2.1 Limits of Frequency Stability Measurement

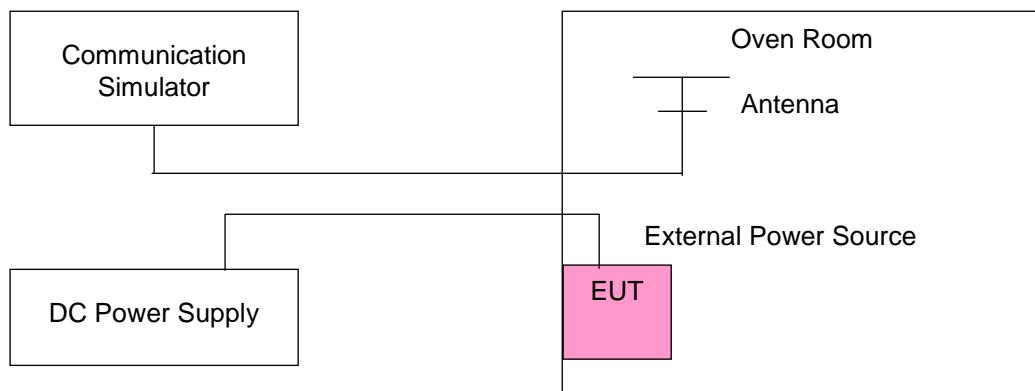
1.5 ppm is for base and fixed station. 2.5 ppm is for mobile station.

### 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  $\pm 0.5$  °C 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)
	GPRS	EDGE	WCDMA	
8	0.003	0.001	0.003	2.5
12	0.001	0.002	0.001	2.5
36	0.002	0.001	0.002	2.5

**NOTE:** The applicant defined the normal working voltage of the battery is from 8Vdc to 36Vdc.

##### Frequency Error vs. Temperature

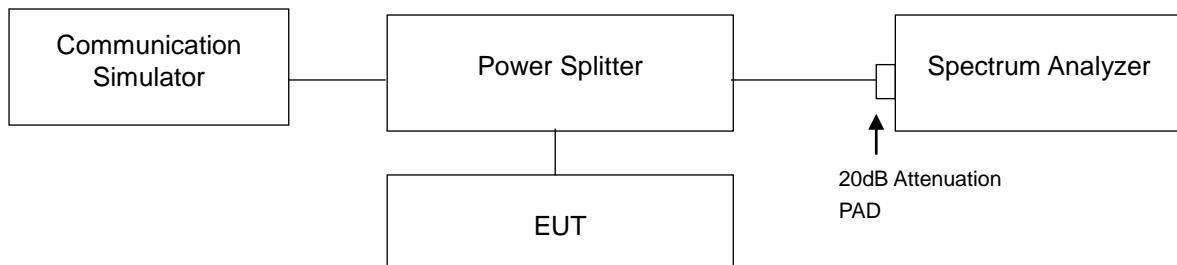
Temp. (°C)	Frequency Error (ppm)			Limit (ppm)
	GPRS	EDGE	WCDMA	
-30	0.0042	0.003	0.0053	2.5
-20	0.0019	0.002	0.0037	2.5
-10	0.0019	0.004	0.0047	2.5
0	0.0019	0.002	0.0007	2.5
10	0.0043	0.005	0.0002	2.5
20	-0.0019	-0.001	-0.0024	2.5
30	-0.0026	-0.003	-0.0048	2.5
40	-0.0006	-0.005	-0.0042	2.5
50	-0.0033	-0.004	-0.0007	2.5
60	-0.0004	-0.003	-0.0005	2.5

### 4.3 Occupied Bandwidth Measurement

#### 4.3.1 Test Procedure

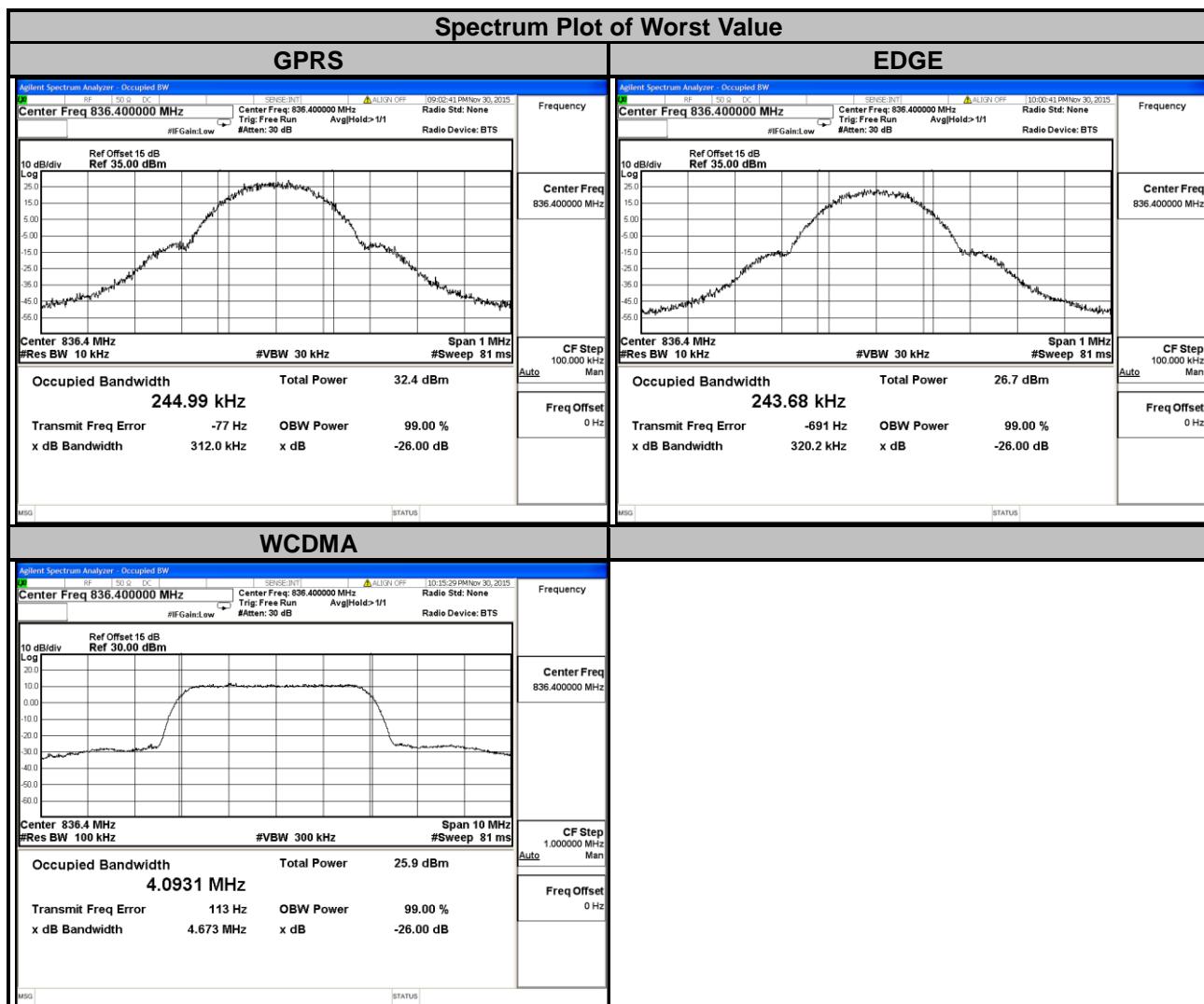
The EUT makes a call to the communication simulator. All measurements were done at low, middle and high operational frequency range. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. Use OBW measurement function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

#### 4.3.2 Test Setup



## 4.3.3 Test Result

Channel	Frequency (MHz)	99 % Occupied Bandwidth (kHz)		Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)
		GPRS	EDGE			WCDMA
128	824.2	244.08	243.15	4132	826.4	4.0878
189	836.4	244.99	243.68	4182	836.4	4.0931
251	848.8	243.98	243.12	4233	846.6	4.0790

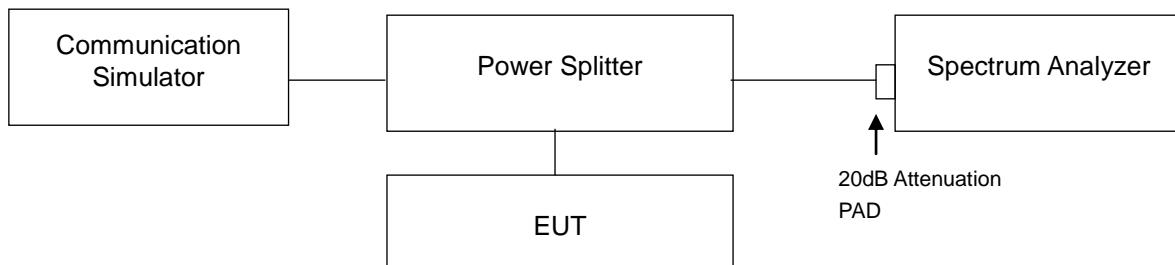


## 4.4 Band Edge Measurement

### 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.

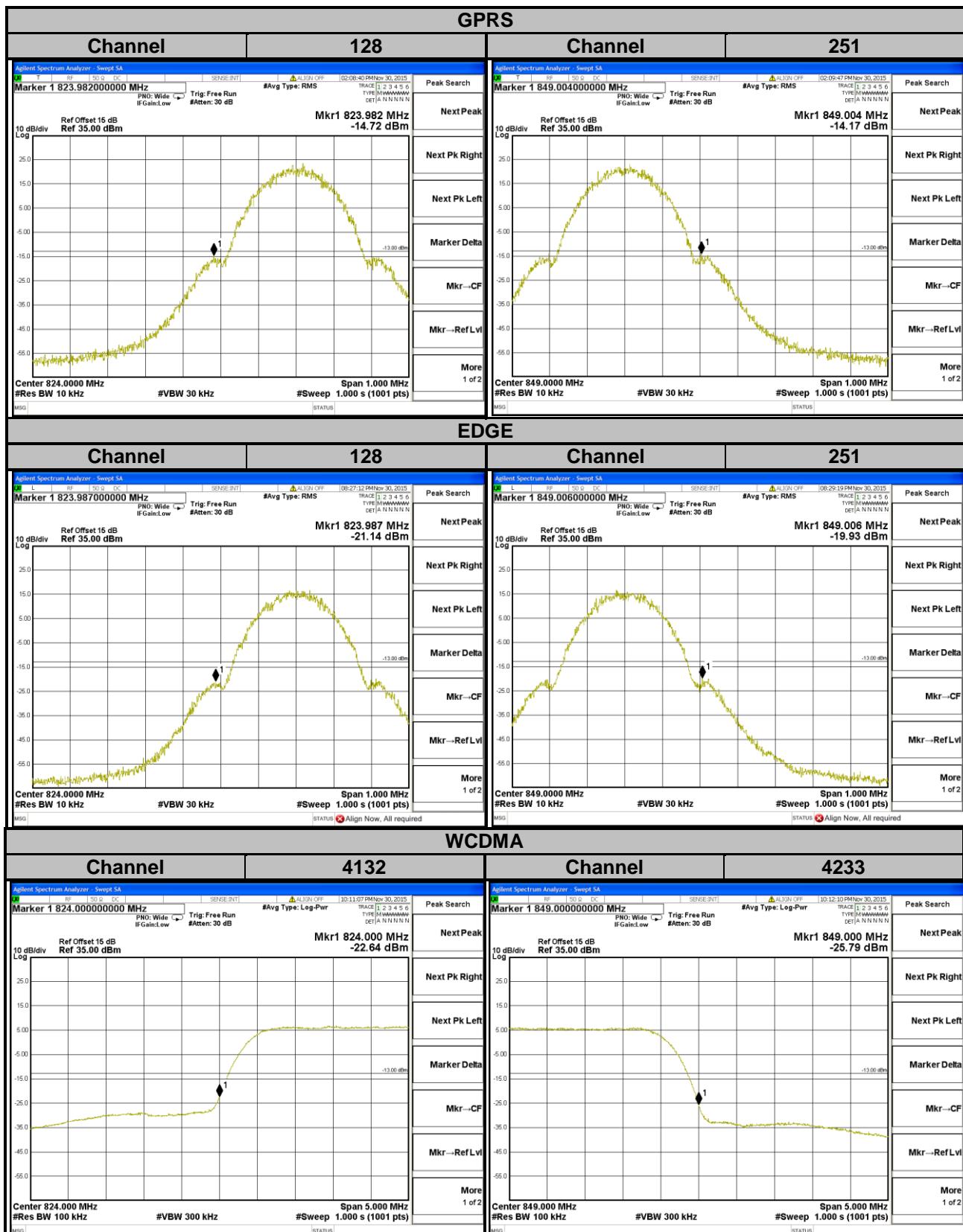
### 4.4.2 Test Setup



### 4.4.3 Test Procedures

- All measurements were done at low and high operational frequency range.
- The center frequency of spectrum is the band edge frequency and span is 1 MHz. RB of the spectrum is 10 kHz and VB of the spectrum is 30 kHz (GPRS/EDGE).
- The center frequency of spectrum is the band edge frequency and span is 5 MHz. RB of the spectrum is 100 kHz and VB of the spectrum is 300 kHz (WCDMA).
- Record the max trace plot into the test report.

## 4.4.4 Test Results

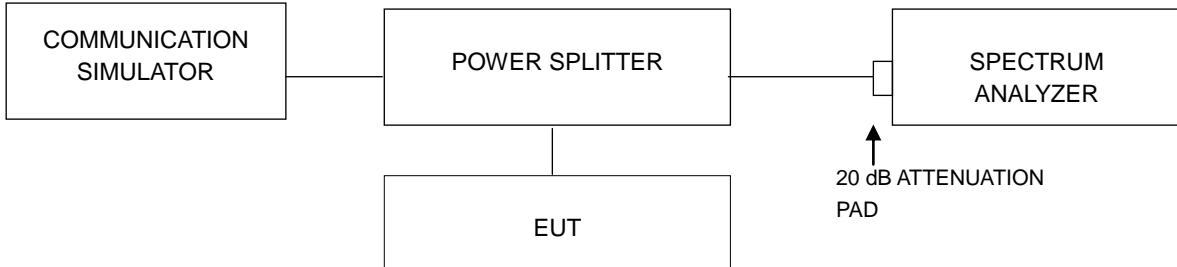


## 4.5 Peak to Average Ratio

### 4.5.1 Limits of Peak to Average Ratio Measurement

In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13 dB.

### 4.5.2 Test Setup

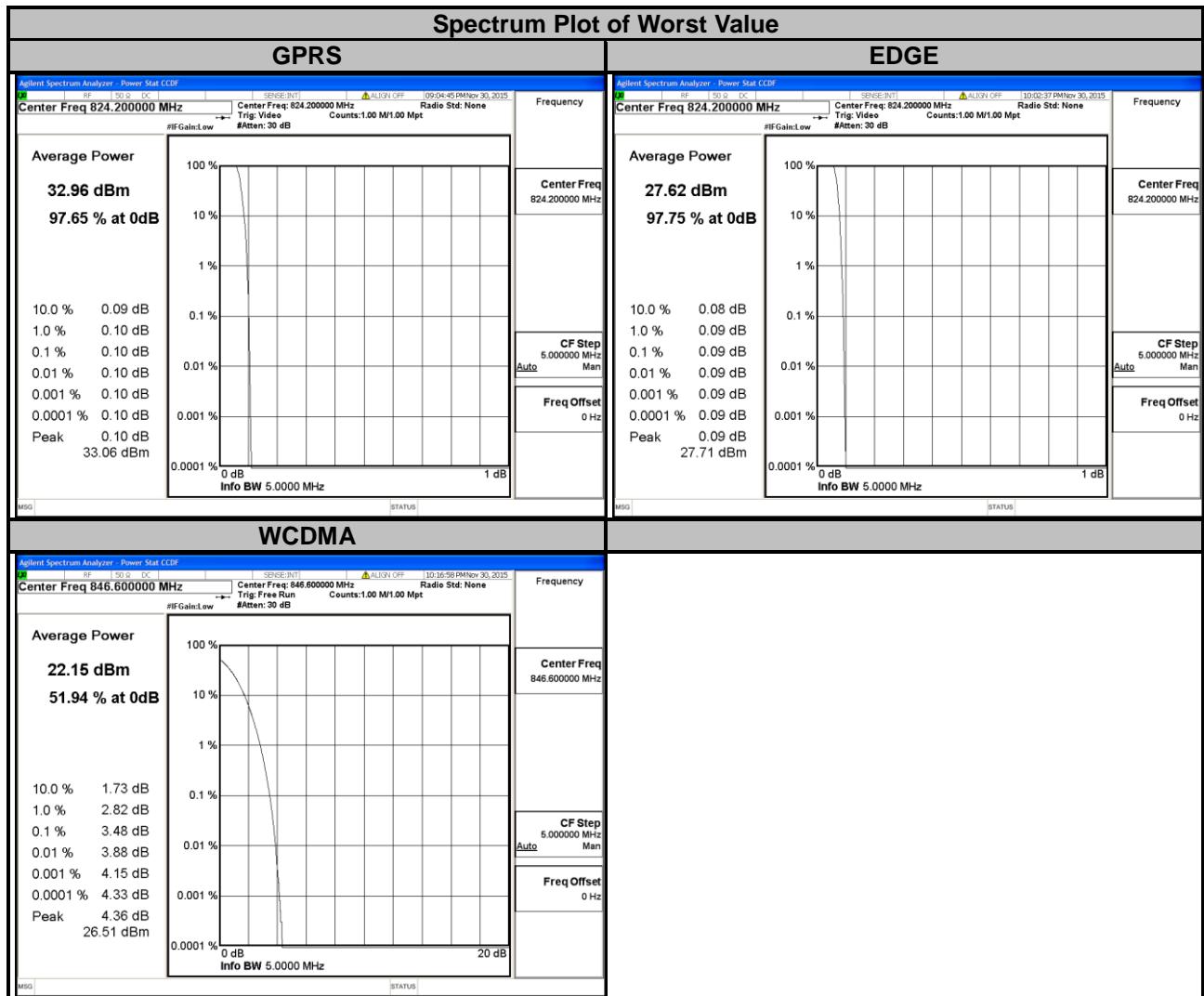


### 4.5.3 Test Procedures

1. Set resolution/measurement bandwidth  $\geq$  signal's occupied bandwidth;
2. Set the number of counts to a value that stabilizes the measured CCDF curve;
3. Record the maximum PAPR level associated with a probability of 0.1 %.

## 4.5.4 Test Results

Channel	Frequency (MHz)	Peak to Average Ratio (dB)		Channel	Frequency (MHz)	Peak to Average Ratio (dB)	
		GPRS	EDGE			WCDMA	
128	824.2	0.10	0.09	4132	826.4	3.28	
189	836.4	0.09	0.09	4182	836.4	3.38	
251	848.8	0.09	0.09	4233	846.6	3.48	

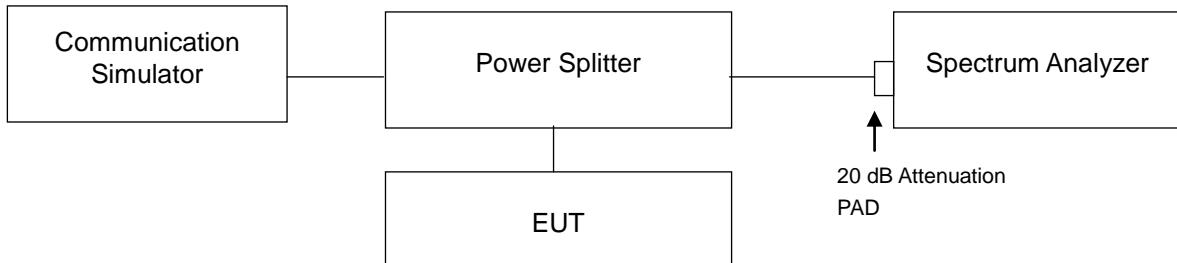


## 4.6 Conducted Spurious Emissions

### 4.6.1 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  $-13$  dBm.

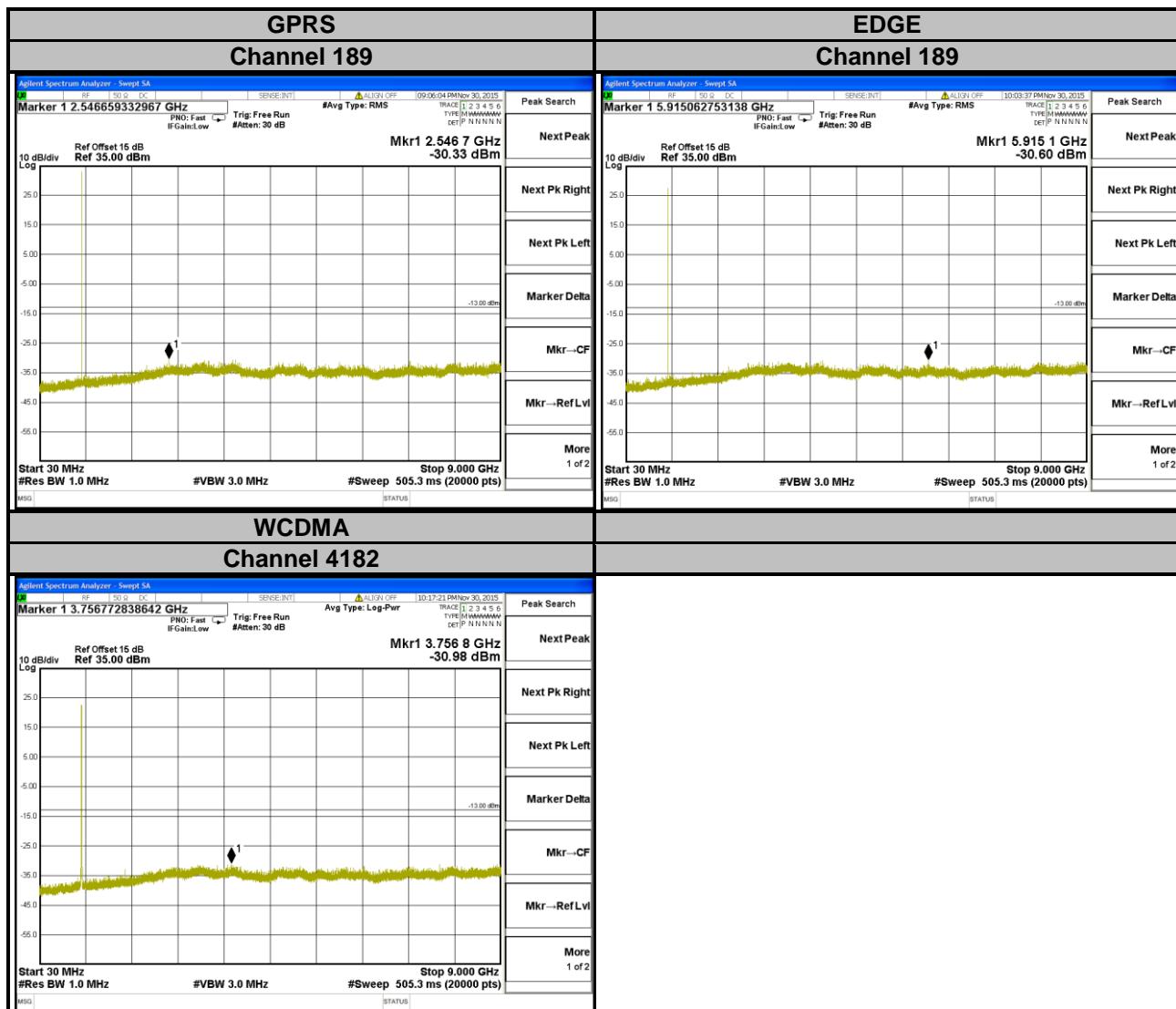
### 4.6.2 Test Setup



### 4.6.3 Test Procedure

- The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.
- Measuring frequency range is from 9 kHz to 9 GHz. 20 dB attenuation pad is connected with spectrum. RBW=1 MHz and VBW=3 MHz is used for conducted emission measurement.

#### 4.6.4 Test Results



## 4.7 Radiated Emission Measurement

### 4.7.1 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 is equal to -13 dBm.

### 4.7.2 Test Procedure

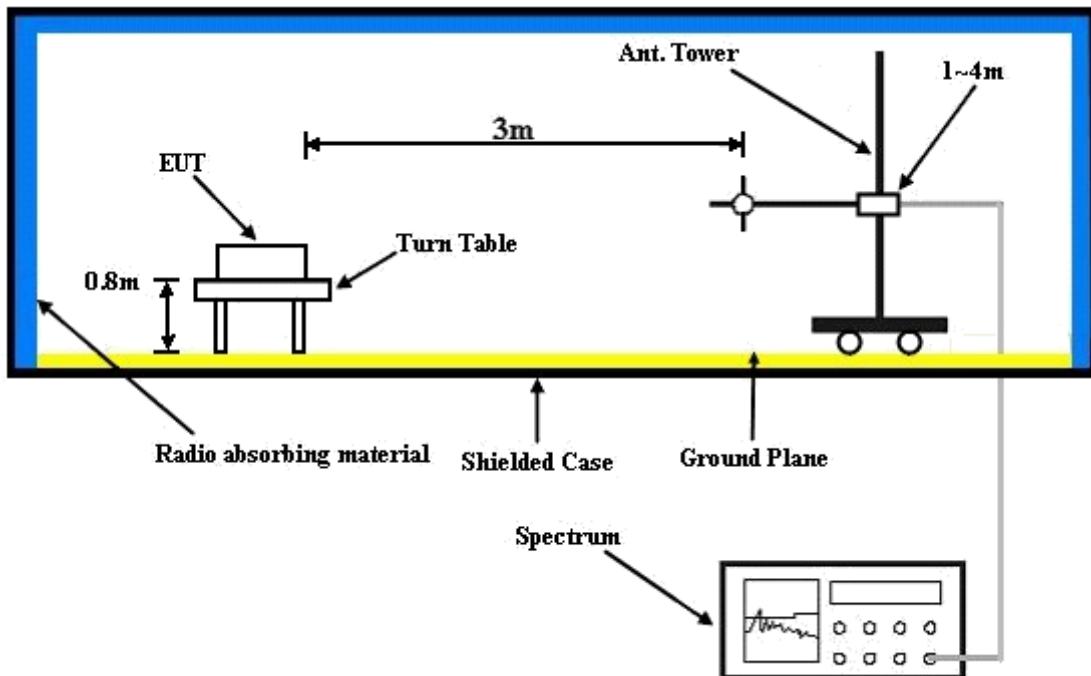
- a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8 m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height 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 from E.I.R.P power by subtracting the gain of dipole, E.R.P power = E.I.R.P power - 2.15 dBi.

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

### 4.7.3 Deviation from Test Standard

No deviation.

### 4.7.4 Test Setup



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

## 4.7.5 Test Results

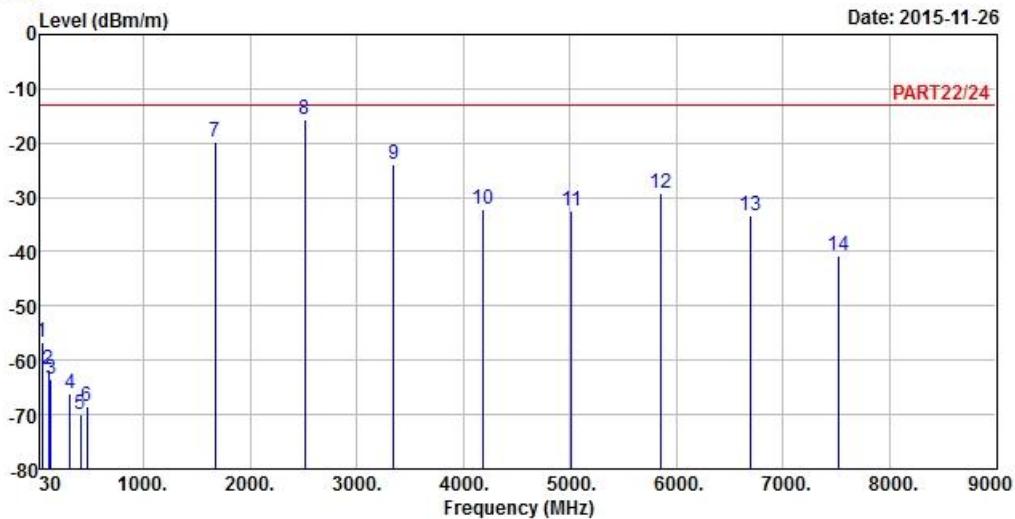
## GPRS:



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 9



Site : 966 Chamber 5

Condition: PART22/24 3m HORIZONTAL

Remark : GPRS 850

Tested by: Gavin Wu

Plane : Z

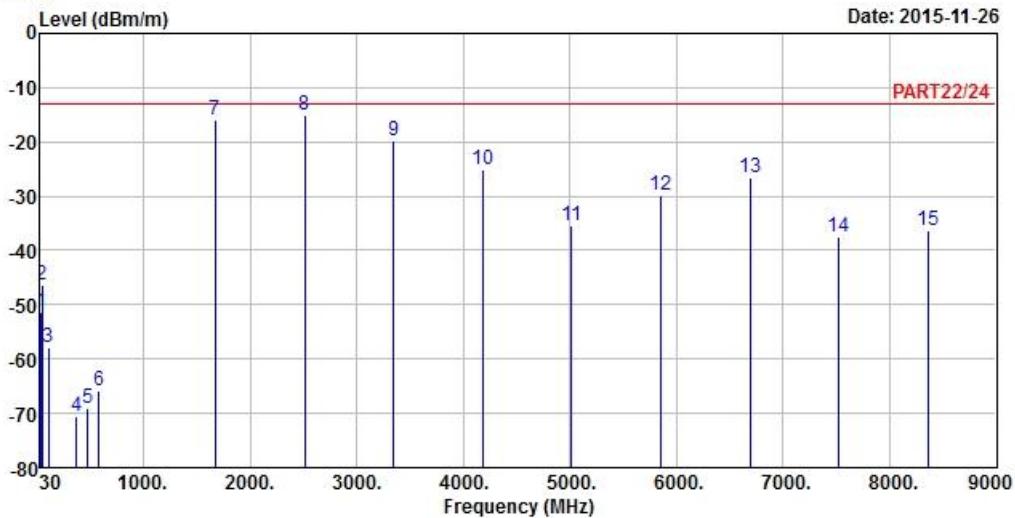
	Freq	Read Level	Limit Level	Over Line	Over Limit	Factor	Remark
	MHz	dBm/m	dBm	dBm/m	dB	dB/m	
1	44.04	-56.65	-55.18	-13.00	-43.65	-1.47	Peak
2	106.95	-61.73	-51.33	-13.00	-48.73	-10.40	Peak
3	133.41	-63.45	-54.77	-13.00	-50.45	-8.68	Peak
4	307.00	-66.24	-59.35	-13.00	-53.24	-6.89	Peak
5	405.00	-69.84	-63.94	-13.00	-56.84	-5.90	Peak
6	470.80	-68.56	-63.39	-13.00	-55.56	-5.17	Peak
7	1672.80	-19.71	-5.03	-13.00	-6.71	-14.68	Peak
8 pp	2509.20	-15.58	-4.67	-13.00	-2.58	-10.91	Peak
9	3345.60	-23.89	-14.35	-13.00	-10.89	-9.54	Peak
10	4182.00	-32.20	-25.58	-13.00	-19.20	-6.62	Peak
11	5018.40	-32.59	-29.36	-13.00	-19.59	-3.23	Peak
12	5854.80	-29.34	-29.08	-13.00	-16.34	-0.26	Peak
13	6691.20	-33.40	-36.48	-13.00	-20.40	3.08	Peak
14	7527.60	-40.82	-45.83	-13.00	-27.82	5.01	Peak



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

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Data: 10



Site : 966 Chamber 5  
 Condition: PART22/24 3m VERTICAL  
 Remark : GPRS 850  
 Tested by: Gavin Wu  
 Plane : Z

Freq	Level	Read	Limit	Over	Factor	Remark	
		MHz	dBm/m	dBm	dBm/m	dB	
1	38.91	-51.34	-51.44	-13.00	-38.34	0.10	Peak
2	44.31	-46.31	-44.32	-13.00	-33.31	-1.99	Peak
3	107.22	-57.72	-47.35	-13.00	-44.72	-10.37	Peak
4	371.40	-70.58	-64.47	-13.00	-57.58	-6.11	Peak
5	476.40	-69.11	-64.05	-13.00	-56.11	-5.06	Peak
6	577.20	-65.91	-64.19	-13.00	-52.91	-1.72	Peak
7	1672.80	-16.05	-1.37	-13.00	-3.05	-14.68	Peak
8 pp	2509.20	-14.95	-4.04	-13.00	-1.95	-10.91	Peak
9	3345.60	-19.78	-10.24	-13.00	-6.78	-9.54	Peak
10	4182.00	-24.95	-18.33	-13.00	-11.95	-6.62	Peak
11	5018.40	-35.51	-32.28	-13.00	-22.51	-3.23	Peak
12	5854.80	-29.94	-29.68	-13.00	-16.94	-0.26	Peak
13	6691.20	-26.50	-29.58	-13.00	-13.50	3.08	Peak
14	7527.60	-37.44	-42.45	-13.00	-24.44	5.01	Peak
15	8364.00	-36.21	-41.49	-13.00	-23.21	5.28	Peak

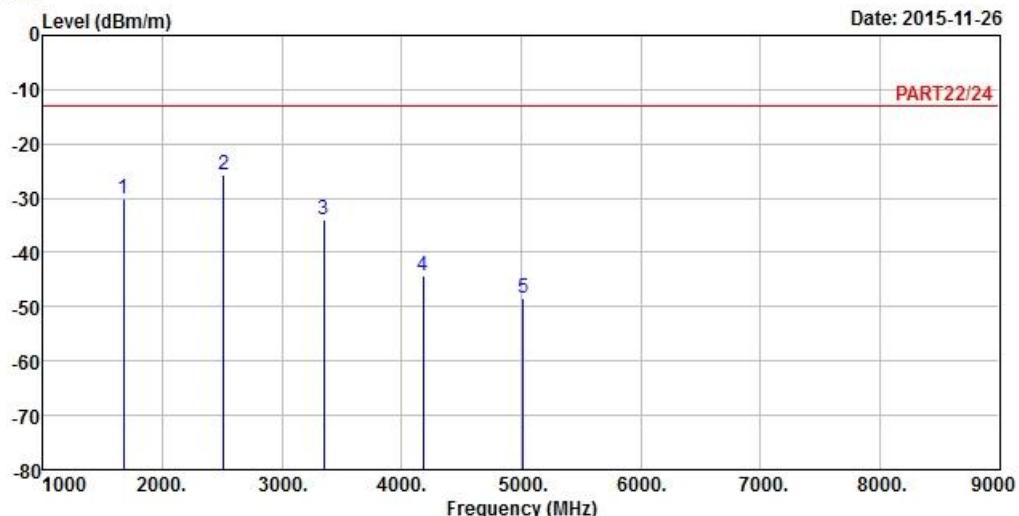
EDGE:



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

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Data: 7



Site : 966 Chamber 5

Condition: PART22/24 3m HORIZONTAL

Remark : EDGE 850

Tested by: Gavin Wu

Plane : Z

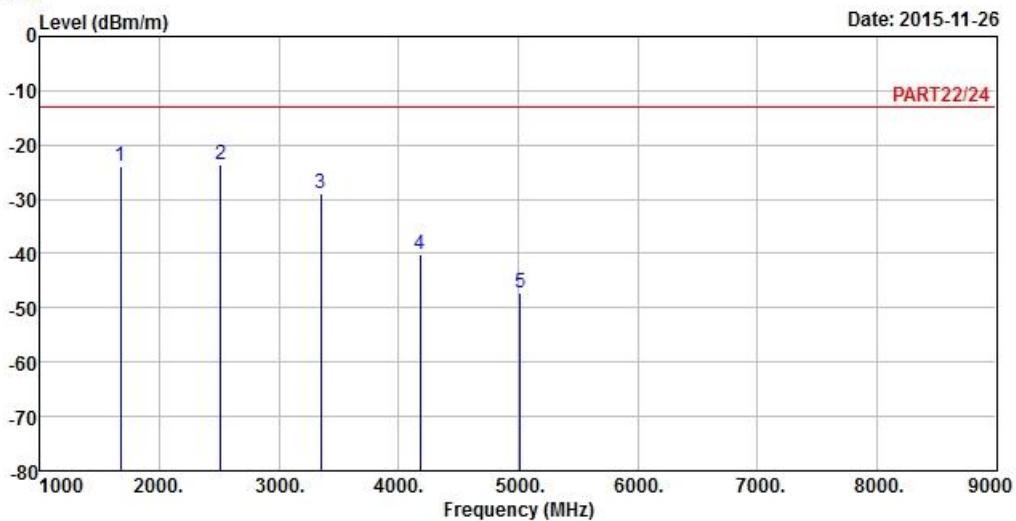
	Freq	Read Level	Limit Level	Over Line	Over Limit	Over Factor	Remark
	MHz	dBm/m	dBm	dBm/m	dB	dB/m	
1	1672.80	-30.17	-15.49	-13.00	-17.17	-14.68	Peak
2 pp	2509.20	-25.65	-14.74	-13.00	-12.65	-10.91	Peak
3	3345.60	-34.08	-24.54	-13.00	-21.08	-9.54	Peak
4	4182.00	-44.30	-37.68	-13.00	-31.30	-6.62	Peak
5	5018.40	-48.42	-45.19	-13.00	-35.42	-3.23	Peak



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

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Data: 8



Site : 966 Chamber 5

Condition: PART22/24 3m VERTICAL

Remark : EDGE 850

Tested by: Gavin Wu

Plane : Z

Freq	Level	Read	Limit	Over	Factor	Remark
		MHz	dBm/m	dBm	dBm/m	dB
1	1672.80	-23.91	-9.23	-13.00	-10.91	-14.68 Peak
2 pp	2509.20	-23.73	-12.82	-13.00	-10.73	-10.91 Peak
3	3345.60	-28.90	-19.36	-13.00	-15.90	-9.54 Peak
4	4182.00	-40.08	-33.46	-13.00	-27.08	-6.62 Peak
5	5018.40	-47.30	-44.07	-13.00	-34.30	-3.23 Peak

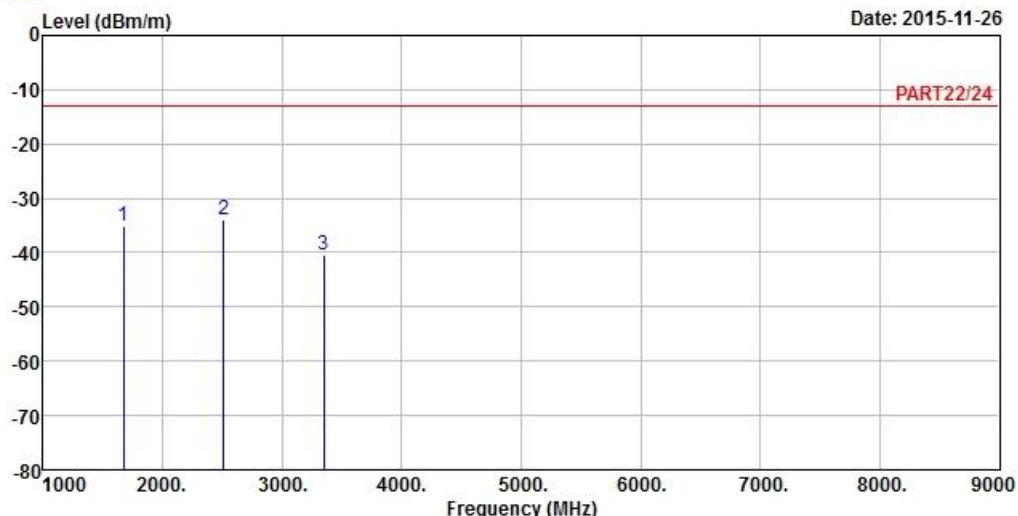
## WCDMA:



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

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Data: 7



Site : 966 Chamber 5

Condition: PART22/24 3m HORIZONTAL

Remark : WCDMA Band V

Tested by: Gavin Wu

Plane : Z

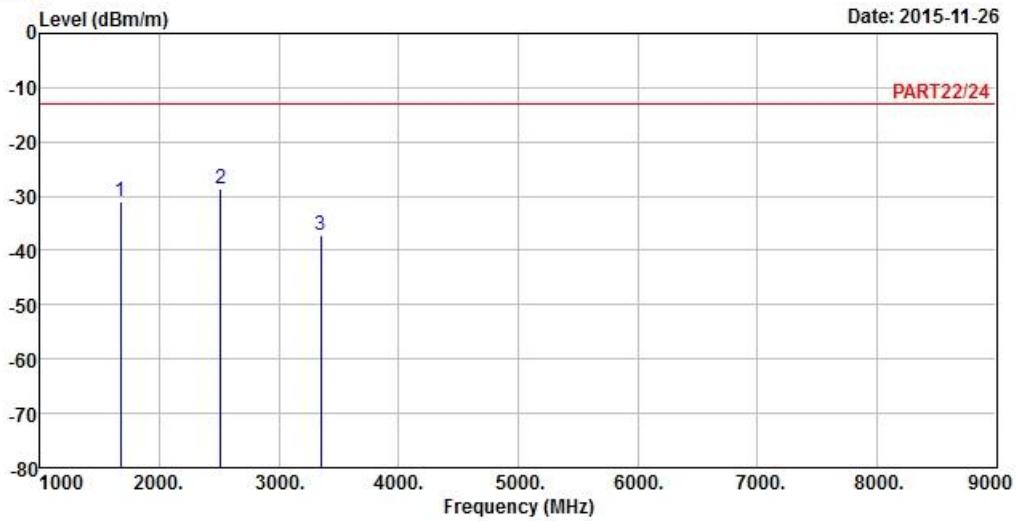
Freq	Level	Read		Limit	Over	Factor	Remark
		Line	dBm				
MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1672.80	-35.21	-20.53	-13.00	-22.21	-14.68	Peak
2 pp	2509.20	-34.05	-23.14	-13.00	-21.05	-10.91	Peak
3	3345.60	-40.49	-30.95	-13.00	-27.49	-9.54	Peak



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 8



Site : 966 Chamber 5

Condition: PART22/24 3m VERTICAL

Remark : WCDMA Band V

Tested by: Gavin Wu

Plane : Z

	Freq	Read Level	Limit Level	Over Line	Limit	Over Factor	Remark
	MHz	dBm/m	dBm	dBm/m	dB	dB/m	
1	1672.80	-31.05	-16.37	-13.00	-18.05	-14.68	Peak
2 pp	2509.20	-28.63	-17.72	-13.00	-15.63	-10.91	Peak
3	3345.60	-37.10	-27.56	-13.00	-24.10	-9.54	Peak

## 5 Pictures of Test Arrangements

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

## Appendix – 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.

If you have any comments, please feel free to contact us at the following:

**Linko EMC/RF Lab**

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Fax: 886-2-26051924

**Hsin Chu EMC/RF/Telecom Lab**

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Fax: 886-3-6668323

**Hwa Ya EMC/RF/Safety**

Tel: 886-3-3183232  
Fax: 886-3-3270892

**Email:** [service.adt@tw.bureauveritas.com](mailto:service.adt@tw.bureauveritas.com)

**Web Site:** [www.bureauveritas-adt.com](http://www.bureauveritas-adt.com)

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

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