

# FCC TEST REPORT (PART 24)

**REPORT NO.:** RF141111C09-1

MODEL NO.: AS1/AS1E

FCC ID: YA7-ATPT1436

**RECEIVED:** Nov. 11, 2014

**TESTED:** Nov. 24, 2014 ~ Dec. 08, 2014

**ISSUED:** Dec. 25, 2014

**APPLICANT:** ATrack Technology Inc.

ADDRESS: 3F., No. 88, Sec. 1, Neihu Rd., Neihu Dist., Taipei

City 11493 Taiwan (R.O.C.)

**ISSUED BY:** Bureau Veritas Consumer Products Services

(H.K.) Ltd., Taoyuan Branch

LAB ADDRESS: No. 47-2, 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
RF141111C09-1	Original release	Dec. 25, 2014

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# 1 CERTIFICATION

**PRODUCT:** Car Tracker

MODEL: AS1/AS1E

**BRAND**: ATrack

**APPLICANT:** ATrack Technology Inc.

**TESTED:** Nov. 24, 2014 ~ Dec. 08, 2014

**TEST SAMPLE:** Identical Prototype

STANDARDS: FCC Part 24, Subpart E

The above equipment (model: AS1/AS1E) 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: Dec. 25, 2014

Rona Chen / Specialist

APPROVED BY: Dec. 25, 2014

Sam Chen / Senior Project Engineer



# **2 SUMMARY OF TEST RESULTS**

The EUT has been tested according to the following specifications:

	APPLIED STANDARD: FCC Part 24 & Part 2					
STANDARD TEST TYPE		RESULT	REMARK			
2.1046 24.232	Equivalent Isotropically Radiated Power	PASS	Meet the requirement of limit.			
2.1055 24.235	Frequency Stability	PASS	Meet the requirement of limit.			
2.1049 24.238(b)	Occupied Bandwidth		Meet the requirement of limit.			
24.232(d)	Peak to average ratio	PASS	Meet the requirement of limit.			
24.238(b)	) Band Edge Measurements		Meet the requirement of limit.			
2.1051 24.238	Conducted Spurious Emissions	PASS	Meet the requirement of limit.			
2.1053 24.238	Radiated Spurious Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -21.88dB at 193.89MHz.			

## 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	MEASUREMENT FREQUENCY	
Conducted emissions 150kHz~30MHz		2.44 dB
	30MHz ~ 200MHz	2.93 dB
Radiated emissions	200MHz ~1000MHz	2.95 dB
Radiated emissions	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 Agilent	N9038A	MY51210203	Jan. 17, 2014	Jan. 16, 2015
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Dec. 21, 2013	Dec. 20, 2014
BILOG Antenna SCHWARZBECK	VULB9168	9168-472	Feb. 27. 2014	Feb. 26, 2015
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-969	Feb. 19, 2014	Feb. 18, 2015
HORN Antenna SCHWARZBECK	BBHA 9170	9170-480	Dec. 18, 2013	Dec. 17, 2014
Preamplifier EMCI	EMC 012645	980115	Dec. 26, 2013	Dec. 25, 2014
Preamplifier EMCI	EMC 184045	980116	Jan. 13, 2014	Jan. 12, 2015
Preamplifier EMCI	EMC 330H	980112	Dec. 27, 2013	Dec. 26, 2014
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	309219/4 2950114	Oct. 18, 2014	Oct. 17, 2015
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	250130/4	Oct. 18, 2014	Oct. 17, 2015
RF signal cable Worken	RG-213	NA	Nov. 07, 2014	Nov. 06, 2015
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
Power Splitter Woken	2-18GHz 2Way SMA Fwd.:30W/Rev.:2W Isolated Power	COM412W5E3	Apr. 17, 2014	Apr. 16, 2015
JFW 20dB attenuation	50HF-020-SMA	NA	NA	NA
Communications Tester-Wireless	E5515C	MY52102544	Sep. 11, 2014	Sep. 10, 2015

**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 HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
- 4. The FCC Site Registration No. is 690701.
- 5. The IC Site Registration No. is IC 7450F-10.



# **3 GENERAL INFORMATION**

# 3.1 GENERAL DESCRIPTION OF EUT

EUT	Car Tracker	Car Tracker		
MODEL NO.	AS1/AS1E			
POWER SUPPLY	3.2Vdc (batter	ry)		
MODULATION TYPE	WCDMA	BPSK		
FREQUENCY RANGE	WCDMA	<b>WCDMA</b> 1852.4MHz ~ 1907.6MHz		
MAX. EIRP POWER	<b>WCDMA</b> 242.10mW			
EMISSION DESIGNATOR	WCDMA 4M09F9W			
ANTENNA TYPE	Fixed Internal	Fixed Internal Antenna , Fixed External Antenna		
I/O PORTS	Refer to users	s' manual		
DATA CABLE	N/A			
ACCESSORY DEVICES	Refer to NOT	E as below		

## NOTE:

1. The EUT contains following accessory devices.

ITEM	BRAND	MODEL	SPECIFICATION
Battery	East Trans	ER14505M-4	3.2Vdc

2. This EUT contains two configurations as below

EUT CONFIGURE MODE	Description
А	EUT with Internal Antenna
В	EUT with External Antenna

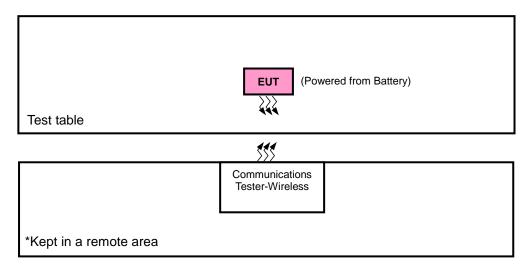
3. The above EUT information was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.



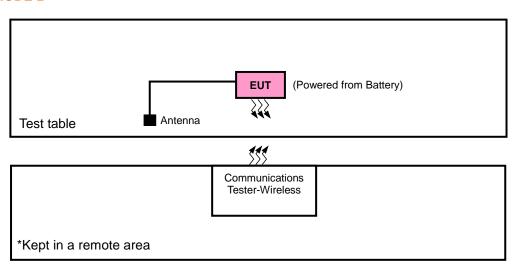
# 3.2 CONFIGURATION OF SYSTEM UNDER TEST

#### FOR RADIATION EMISSION & E.I.R.P. TEST

# **MODE A**



## **MODE B**





# 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	COMMUNICATIONS TESTER-WIRELESS	Agilent	8960 Series 10	MY53201073	N/A
2	ANTENNA	N/A	N/A	N/A	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	N/A
2	5m shielded cable w/o core

#### NOTE:

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



## 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 for EIRP and radiated emission for MODE A, Y-plane for EIRP and X-axis for radiated emission for MODE B. Following channel(s) was (were) selected for the final test as listed below:

#### **WCDMA MODE**

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	MODE
A, B	EIRP	9262 to 9538	9262, 9400, 9538	WCDMA
А	FREQUENCY STABILITY	9262 to 9538	9400	WCDMA
Α	OCCUPIED BANDWIDTH	9262 to 9538	9262, 9400, 9538	WCDMA
Α	PEAK TO AVERAGE RATIO	9262 to 9538	9262, 9400, 9538	WCDMA
Α	BAND EDGE	9262 to 9538	9262, 9538	WCDMA
А	CONDUCTED EMISSION	9262 to 9538	9400	WCDMA
A, B	RADIATED EMISSION	9262 to 9538	9400	WCDMA

## **TEST CONDITION:**

TEST ITEM	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
EIRP	26deg. C, 58%RH	3.2Vdc	David Ko
FREQUENCY STABILITY	26deg. C, 58%RH	3.2Vdc	David Ko
OCCUPIED BANDWIDTH	26deg. C, 58%RH	3.2Vdc	David Ko
PEAK TO AVERAGE RATIO	26deg. C, 58%RH	3.2Vdc	David Ko
BAND EDGE	26deg. C, 58%RH	3.2Vdc	David Ko
CONDUCTED EMISSION	26deg. C, 58%RH	3.2Vdc	Will Chen
RADIATED EMISSION	25deg. C, 65%RH	3.2Vdc	David Ko



## 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 24 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 and portable stations are limited to 2 watts EIRP.

#### 4.1.2 TEST PROCEDURES

#### **EIRP MEASUREMENT:**

- a. All measurements were done at low, middle and high operational frequency range. RBW and VBW is 1MHz for GSM, GPRS & EDGE, 5MHz for CDMA & WCDMA, and 10MHz for LTE 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.

#### CONDUCTED POWER MEASUREMENT:

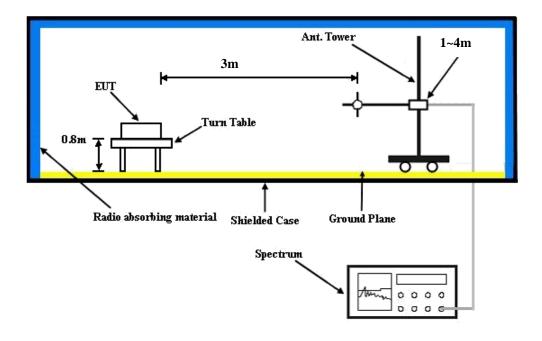
The EUT was set up for the maximum power with GSM, GPRS, EDGE & WCDMA & LTE link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

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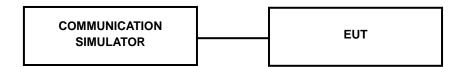


# 4.1.3 TEST SETUP

# **EIRP MEASUREMENT:**



# **CONDUCTED POWER MEASUREMENT:**





# 4.1.4 TEST RESULTS

# **CONDUCTED OUTPUT POWER (dBm)**

Band	WCDMA II					
Channel	9262	9400	9538			
Frequency (MHz)	1852.4	1880.0	1907.6			
RMC 12.2K	22.64	22.55	22.36			
HSDPA Subtest-1	21.46	21.37	21.18			
HSDPA Subtest-2	21.48	21.39	21.20			
HSDPA Subtest-3	21.47	21.38	21.19			
HSDPA Subtest-4	21.45	21.36	21.17			
HSUPA Subtest-1	21.92	21.83	21.64			
HSUPA Subtest-2	21.03	20.94	20.75			
HSUPA Subtest-3	20.83	20.74	20.55			
HSUPA Subtest-4	20.35	20.26	20.07			
HSUPA Subtest-5	21.89	21.80	21.61			

# **EIRP POWER (dBm)**

# **MODE A**

			W	/CDMA			
Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor(dB)	EIRP(dBm)	EIRP(mW)	Polarization (H/V)
	9262	1852.4	-21.49	44.70	23.21	209.41	Н
	9400	1880.0	-20.86	44.70	23.84	242.10	Н
v	9538	1907.6	-21.32	44.57	23.25	211.49	Н
ı	9262	1852.4	-21.62	44.27	22.65	184.08	V
	9400	1880.0	-22.43	44.87	22.44	175.39	V
	9538	1907.6	-22.33	44.61	22.28	169.16	V

# **MODE B**

			W	/CDMA			
Plane	Channel	Frequency (MHz)	LVL (dBm)	Correction Factor(dB)	EIRP(dBm)	EIRP(mW)	Polarization (H/V)
	9262	1852.4	-21.53	44.70	23.17	207.49	Н
	9400	1880.0	-21.63	44.70	23.07	202.77	Н
v	9538	1907.6	-21.33	44.57	23.24	211.01	Н
ĭ	9262	1852.4	-22.37	44.27	21.90	154.88	V
	9400	1880.0	-23.03	44.87	21.84	152.76	V
	9538	1907.6	-22.69	44.61	21.92	155.70	V



#### 4.2 FREQUENCY STABILITY MEASUREMENT

#### 4.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

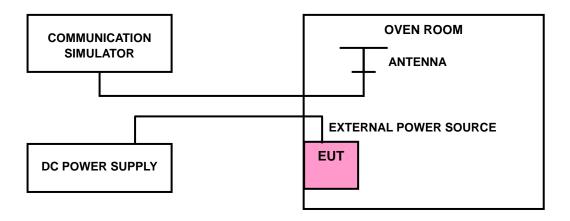
The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

#### **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

	FREQUENCY ERROR (ppm)	
VOLTAGE (Volts)	WCDMA	LIMIT (ppm)
3.2	0.001	2.5
2.2	0.002	2.5
3.6	0.001	2.5

**NOTE:** The applicant defined the normal working voltage of the battery is from 2.2Vdc to 3.6Vdc.

## FREQUENCY ERROR vs. TEMPERATURE

	FREQUENCY ERROR (ppm)	
TEMP. (°C)	WCDMA	LIMIT (ppm)
-40	0.002	2.5
-30	0.001	2.5
-20	0.001	2.5
-10	-0.004	2.5
0	0.002	2.5
10	0.001	2.5
20	-0.001	2.5
30	-0.001	2.5
40	-0.002	2.5
50	-0.001	2.5
60	-0.003	2.5
70	-0.001	2.5
80	-0.003	2.5
85	-0.002	2.5

## Note:

- 1. The applicant declared that the normal operating temperature of the EUT is from -40°C to 85°C.
- 2. The EUT would shut down automatically as below -40°C.

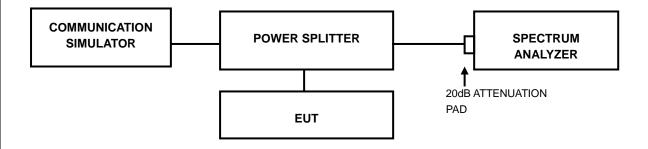


## 4.3 OCCUPIED BANDWIDTH MEASUREMENT

## **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.

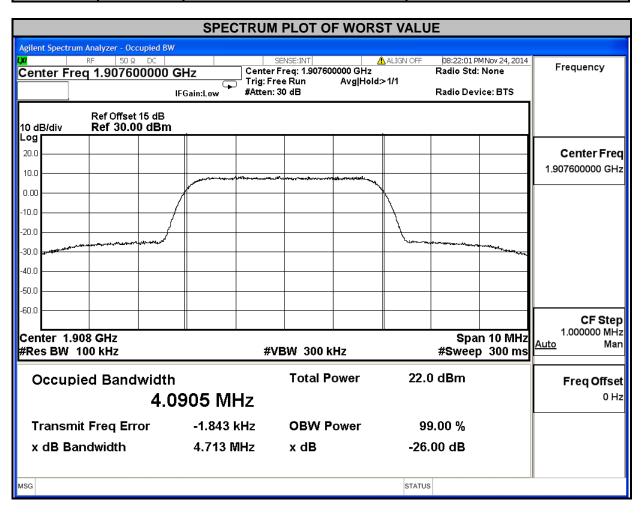
#### 4.3.2 TEST SETUP





## 4.3.3 TEST RESULTS

CHANNE	EDECHENOV	99% OCCUPIED BANDWIDTH (MHz)	26dB BANDWIDTH (MHz)			
CHANNEL	FREQUENCY	WCDMA				
9262	1852.4	4.0776	4.666			
9400	1880.0	4.0852	4.679			
9538	1907.6	4.0905	4.713			



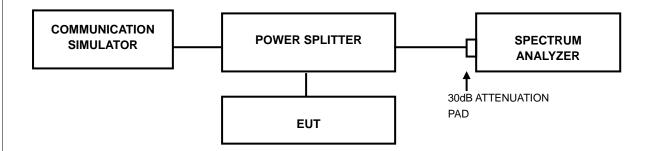


## 4.4 PEAK TO AVERAGE RATIO

## 4.4.1 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.

## 4.4.2 TEST SETUP



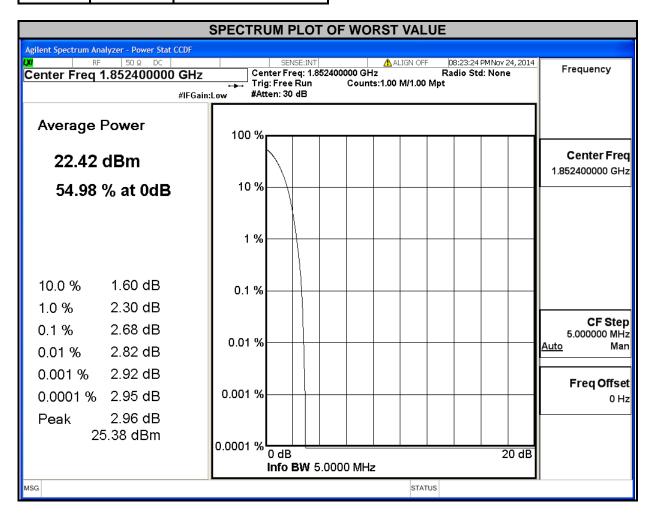
#### 4.4.3 TEST PROCEDURES

- 1. Set resolution/measurement bandwidth ≥ 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%.



#### 4.4.4 TEST RESULTS

CHANNEL	FREQUENCY	PEAK TO AVERAGE RATIO (dB)
	(MHz)	WCDMA
9262	1852.4	2.68
9400	1880.0	2.67
9538	1907.6	2.46



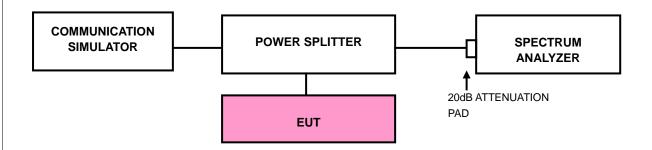


#### 4.5 BAND EDGE MEASUREMENT

#### 4.5.1 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.

#### 4.5.2 TEST SETUP

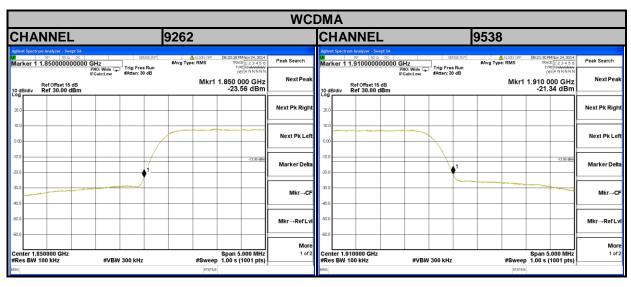


#### 4.5.3 TEST PROCEDURES

- 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 1MHz. RB of the spectrum is 3kHz and VB of the spectrum is 10kHz (GSM/GPRS/EDGE).
- c. The center frequency of spectrum is the band edge frequency and span is 5MHz. RB of the spectrum is 100kHz and VB of the spectrum is 300kHz (WCDMA/LTE).
- d. Record the max trace plot into the test report.



## 4.5.4 TEST RESULTS





#### 4.6 CONDUCTED SPURIOUS EMISSIONS

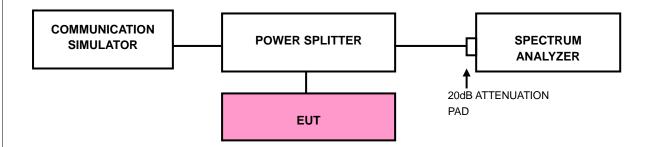
#### 4.6.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

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 is equal to -13dBm.

#### 4.6.2 TEST PROCEDURE

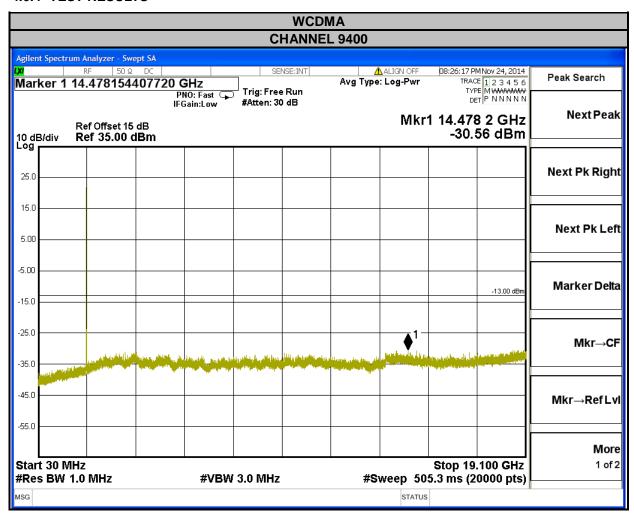
- a. The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.
- b. Measuring frequency range is from 30 MHz to 19.1GHz. 10dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz is used for conducted emission measurement.

#### 4.6.3 TEST SETUP





## 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 -13dBm.

#### 4.7.2 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.R.P power 2.15dBi.

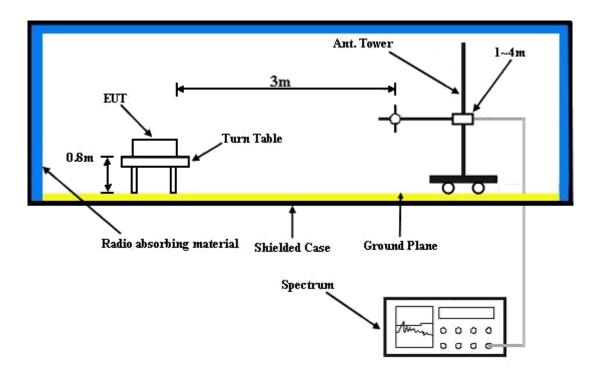
**NOTE:** The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

#### 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).



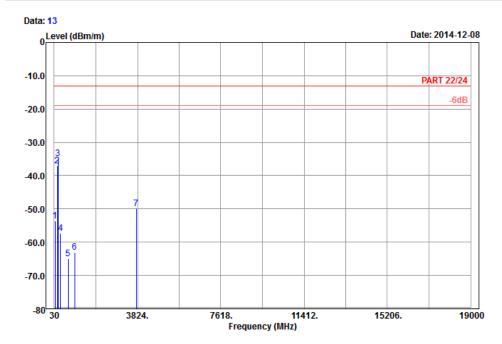
## 4.7.5 TEST RESULTS

## WCDMA:

# **MODE A**



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch



Site : 966 chamber 1

Condition: PART 22/24 3m Horizontal Remark : Band II\_Link\_CH9400

Tested by: Will Chen

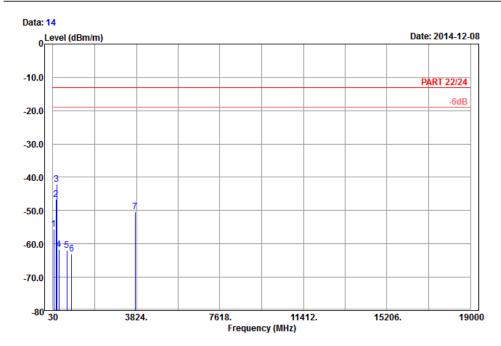
Plane : Y

				Kead	Limit	Over		
		Freq	Level	Level	Line	Limit	Factor	Remark
	_	MHz	dBm/m	dBm	dBm/m	dB	dB/m	
1		72.39	-53.70	-41.27	-13.00	-40.70	-12.43	Peak
2		173.91	-37.08	-30.78	-13.00	-24.08	-6.30	Peak
3	pp	194.97	-34.95	-28.99	-13.00	-21.95	-5.96	Peak
4		311.90	-57.28	-51.47	-13.00	-44.28	-5.81	Peak
5		664.70	-64.95	-64.75	-13.00	-51.95	-0.20	Peak
6		964.30	-62.94	-68.09	-13.00	-49.94	5.15	Peak
7		3760.00	-49.83	-65.97	-13.00	-36.83	16.14	Peak





# Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch



Site : 966 chamber 1

Condition: PART 22/24 3m Vertical Remark : Band II\_Link\_CH9400

Tested by: Will Chen

Plane : Y

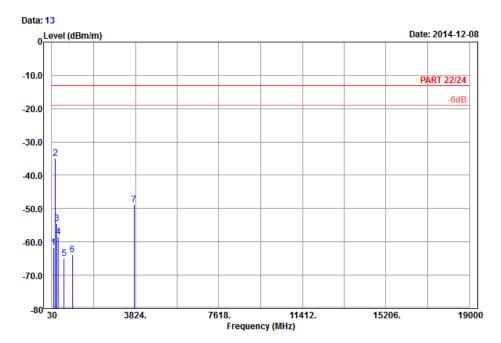
			Read	Limit	0ver		
	Freq	Level	Level	Line	Limit	Factor	Remark
_							
	MHz	dBm/m	dBm	dBm/m	dB	dB/m	
1	72.12	-55.68	-43.16	-13.00	-42.68	-12.52	Peak
2	171.21	-46.58	-40.08	-13.00	-33.58	-6.50	Peak
3 pp	197.13	-42.06	-36.01	-13.00	-29.06	-6.05	Peak
4	305.60	-61.70	-55.81	-13.00	-48.70	-5.89	Peak
5	666.80	-61.82	-61.61	-13.00	-48.82	-0.21	Peak
6	881.70	-63.05	-65.41	-13.00	-50.05	2.36	Peak
7	3760.00	-50.30	-66.44	-13.00	-37.30	16.14	Peak



## **MODE B**



# Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch



Site : 966 chamber 1

Condition: PART 22/24 3m Horizontal Remark : Band II\_Link\_CH9400

Tested by: Will Chen

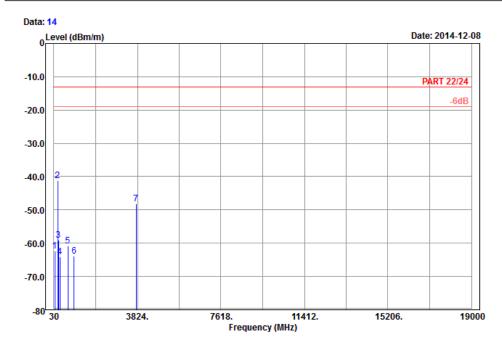
Plane : X

		Frea	Level	Read Level	Limit Line	Over limit	Factor	Remark
		MHz	dBm/m	dBm	dBm/m	dB	dB/m	
		400.30	64 70	F0 6F	43.00	40.70	0.07	
	1	108.30	-61./2	-52.65	-13.00	-48./2	-9.0/	Peak
	2 pp	193.89	-34.88	-28.97	-13.00	-21.88	-5.91	Peak
	3	250.32	-54.45	-48.94	-13.00	-41.45	-5.51	Peak
4	4	311.90	-58.39	-52.58	-13.00	-45.39	-5.81	Peak
	5	575.80	-65.04	-64.46	-13.00	-52.04	-0.58	Peak
1	6	967.80	-63.93	-69.10	-13.00	-50.93	5.17	Peak
	7	3760.00	-48.91	-65.05	-13.00	-35.91	16.14	Peak





# Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch



Site : 966 chamber 1

Condition: PART 22/24 3m Vertical Remark : Band II\_Link\_CH9400

Tested by: Will Chen

Plane : X

			Read	Limit	0ver		
	Freq	Level	Level	Line	Limit	Factor	Remark
	MHz	dBm/m	dBm	dBm/m	dB	dB/m	
1	69.15	-62.31	-49.49	-13.00	-49.31	-12.82	Peak
2 pp	198.21	-41.21	-35.12	-13.00	-28.21	-6.09	Peak
3	233.31	-59.15	-53.42	-13.00	-46.15	-5.73	Peak
4	300.00	-64.02	-58.06	-13.00	-51.02	-5.96	Peak
5	664.00	-60.80	-60.60	-13.00	-47.80	-0.20	Peak
6	943.30	-63.95	-68.79	-13.00	-50.95	4.84	Peak
7	3760.00	-48.26	-64.40	-13.00	-35.26	16.14	Peak



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.

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

Linko EMC/RF Lab: Hsin Chu EMC/RF/Telecom Lab:

Tel: 886-2-26052180 Tel: 886-3-5935343 Fax: 886-2-26051924 Fax: 886-3-5935342

## Hwa Ya EMC/RF/Safety Lab:

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

Email: <a href="mailto:service.adt@tw.bureauveritas.com">service.adt@tw.bureauveritas.com</a>
Web Site: <a href="mailto:www.bureauveritas-adt.com">www.bureauveritas-adt.com</a>

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 were made to the EUT by the lab during the test.
END

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