

# FCC TEST REPORT (PART 22)

- REPORT NO.: RF141111C09
  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	Original release	Dec. 25, 2014



# **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 22, Subpart H

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

n

**, DATE :** Dec. 25, 2014

Dec. 25, 2014

DATE :

Rona Chen / Specialist

APPROVED BY

Sam Chen / Senior Project Engineer



# 2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

	APPLIED STANDARD: FCC Part 22 & Part 2					
STANDARD 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		Meet the requirement of limit.			
2.1053 22.917	Radiated Spurious Emissions		Meet the requirement of limit. Minimum passing margin is -21.92dB at 196.86MHz.			

# 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	150kHz~30MHz	2.44 dB
	30MHz ~ 200MHz	2.93 dB
Dedicted 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 ROHDE & SCHWARZ	ESCI	100744	Apr. 15, 2014	Apr. 14, 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 826.4MHz ~ 846.6MHz			
MAX. ERP POWER	WCDMA 125.03mW			
EMISSION DESIGNATOR	WCDMA	4M08F9W		
ANTENNA TYPE	Fixed Internal	Antenna		
I/O PORTS	Refer to users' 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

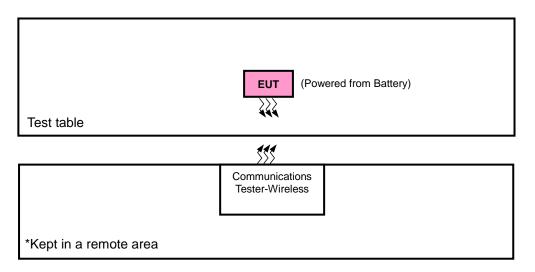
EUT CONFIGURE MODE	Description
А	EUT with Internal Antenna
В	EUT with External Antenna

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.

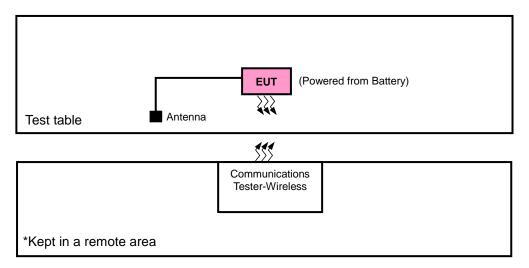


# 3.2 CONFIGURATION OF SYSTEM UNDER TEST

# FOR RADIATION EMISSION & E.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 X-plane for ERP and radiated emission. 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
А, В	ERP	4132 to 4233	4132, 4182, 4233	WCDMA
А	FREQUENCY STABILITY	4132 to 4233	4182	WCDMA
А	OCCUPIED BANDWIDTH	4132 to 4233	4132, 4182, 4233	WCDMA
А	BAND EDGE	4132 to 4233	4132, 4233	WCDMA
А	CONDUCTED EMISSION	4132 to 4233	4182	WCDMA
А, В	RADIATED EMISSION	4132 to 4233	4182	WCDMA

## **TEST CONDITION:**

TEST ITEM	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
ERP	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
BAND EDGE	26deg. C, 58%RH	3.2Vdc	David Ko
CONDUCTED EMISSION	26deg. C, 58%RH	3.2Vdc	David Ko
RADIATED EMISSION	25deg. C, 65%RH	3.2Vdc	Will Chen



# 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

#### **ERP MEASUREMENT:**

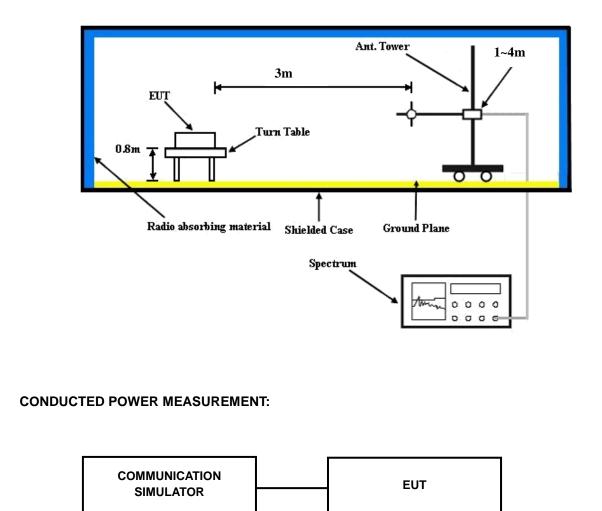
- a. All measurements were done at low, middle and high operational frequency range. RBW and VBW is 1MHz for GSM, GPRS & EDGE, 5MHz for WCDMA & CDMA, and 10MHz for LTE mode.
- b. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, 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. 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.

## CONDUCTED POWER MEASUREMENT:

The EUT was set up for the maximum power with GSM, GPRS, EDGE, WCDMA & CDMA & 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 ERP MEASUREMENT:





# 4.1.4 TEST RESULTS

# CONDUCTED OUTPUT POWER (dBm)

Band	WCDMA V					
Channel	4132	4182	4233			
Frequency (MHz)	826.4	836.4	846.6			
RMC 12.2K	23.21	23.14	23.23			
HSDPA Subtest-1	22.01	21.94	22.03			
HSDPA Subtest-2	22.00	21.93	22.02			
HSDPA Subtest-3	21.99	21.92	22.01			
HSDPA Subtest-4	22.01	21.94	22.03			
HSUPA Subtest-1	22.45	22.38	22.47			
HSUPA Subtest-2	20.48	20.41	20.50			
HSUPA Subtest-3	21.21	21.14	21.23			
HSUPA Subtest-4	20.11	20.04	20.13			
HSUPA Subtest-5	22.31	22.24	22.33			

# ERP POWER (dBm)

# MODE A

	WCDMA										
Plane Channel		Frequency (MHz)	LVL (dBm)	Correction Factor(dB)	ERP(dBm)	ERP(mW)	Polarization (H/V)				
	4132	826.4	-8.43	31.21	20.63	115.56	Н				
	4182	836.4	-8.18 31.30 20.97		20.97	125.03	Н				
x	4233	846.6	-8.43	31.22	20.64	115.93	Н				
^	4132	826.4	-18.22	31.50	11.13	12.98	V				
	4182	836.4	-17.47	31.12	11.50	14.12	V				
	4233	846.6	-18.00	31.92	11.77	15.04	V				

# MODE B

	WCDMA										
Plane Channel		Frequency (MHz)	LVL (dBm)	Correction Factor(dB)	ERP(dBm)	ERP(mW)	Polarization (H/V)				
	4132	826.4	-8.75	31.21	20.31	107.35	Н				
	4182	836.4	-8.77	31.30	20.38	109.14	Н				
x	4233	846.6	-8.28	31.22	20.79	120.01	Н				
^	4132	826.4	-15.68	31.50	13.67	23.30	V				
	4182	836.4	-15.01	31.12	13.96	24.87	V				
	4233	846.6	-16.39	31.92	13.38	21.79	V				



# 4.2 FREQUENCY STABILITY MEASUREMENT

## 4.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

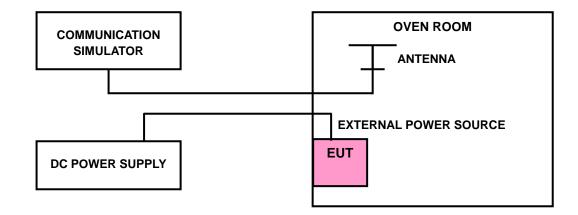
1.5 ppm is for base and fixed station. 2.5 ppm is for mobile station.

# 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  $\pm 0.5^{\circ}$ 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	0.002	2.5	
2.2	0.003	2.5	
3.6	0.005	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)	
<b>ТЕМР. (</b> ℃)	WCDMA	LIMIT (ppm)
-40	-0.005	2.5
-30	-0.002	2.5
-20	-0.003	2.5
-10	-0.006	2.5
0	-0.004	2.5
10	0.003	2.5
20	0.004	2.5
30	0.004	2.5
40	0.003	2.5
50	-0.002	2.5
60	-0.007	2.5
70	-0.003	2.5
80	-0.004	2.5
85	-0.005	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.

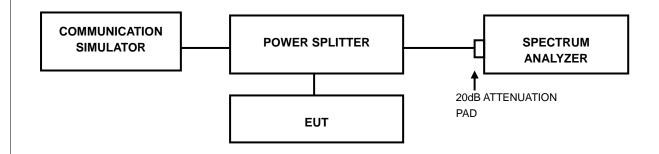


# 4.3 OCCUPIED BANDWIDTH MEASUREMENT

# 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

	FREQUENCY	99% OCCUPIED BANDWIDTH (MHz) 26dB BANDWIDTH (MH				
CHANNEL	(MHz)	WCDMA				
4132	826.4	4.0798	4.674			
4182	836.4	4.0833	4.691			
4233	846.6	4.0811	4.670			

		SPECTRU	M PLOT OF WOR	RST VALUE		
Agilent Spectru	m Analyzer - Occupied BW					
Center Fre	RF   50 Ω DC   eq 836.400000 MH	Z Center		ÂALIGN OFF z lold:>1/1	D8:33:04 PMNov 24, Radio Std: None Radio Device: BT	Frequency
10 dB/div	Ref Offset 15 dB Ref 30.00 dBm					
20.0 10.0		Jun manufacture and the second	and the state of t			Center Freq 836.400000 MHz
0.00						
-20.0 -30.0 -40.0	an abar an			Lawren	and the second and the second	are and a
-50.0						 CF Step
Center 830 #Res BW		#\	/BW 300 kHz		Span 10 N #Sweep 300	
Occup	Occupied Bandwidth Total Power 23.5 dBm 4.0833 MHz					
		518 Hz	OBW Power		9.00 %	
х ав ва	inawiath	4.691 MHz	x dB	-26	.00 dB	
NOG				STATUS		

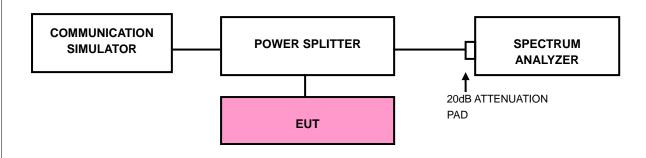


# 4.4 BAND EDGE MEASUREMENT

## 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 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. The center frequency of spectrum is the band edge frequency and span is 2MHz. RB of the spectrum is 13kHz and VB of the spectrum is 51kHz (CDMA).
- e. Record the max trace plot into the test report.



# 4.4.4 TEST RESULTS

		WCE	OMA			
CHANNEL	4132		CHANNEL	4233		
Agtent Spectrum Analyzer - Swept SA BF 50.2 DC SD/SET Marker 1 824.000000000 MHz PNO: Wide Trig: Free Ru	#Avg Type: RMS TRACE 1 2 3 4	2014 4 5 6 Peak Search	Agtent Spectrum Analyzer - Swept SA	SBNSE:INT] ALIGN OFF #Avg Type: RMS ig: Free Run	08:31:51 PMNov 24, 2014 TRACE 1 2 3 4 5 6 TYPE MWWWW DET A N N N N N	Peak Search
IFGain:Low #Atten: 30 dB Ref Offset 15 dB 10 dB/div Ref 30.00 dBm	Mkr1 824.000 Mi -22.49 dE	IHz NextPeak	IFGain:Low #A Ref Offset 15 dB 10 dB/div Ref 30.00 dBm	tten: 30 dB	r1 849.000 MHz -22.67 dBm	Next Peak
20.0		Next Pk Right	20.0			Next Pk Right
0.0		Next Pk Left	0.0			Next Pk Left
-10.0	-13.00	Marker Delta	-10.0	1	-13.00 dBm	Marker Delta
300		Mkr→CF	-30.0	Construction of the second sec		Mkr→CF
-50.0		Mkr→RefLvl	-50.0			Mkr→RefLvl
60.0 Center 824.000 MHz #Res BW 100 kHz #VBW 300 kHz	Span 5.000 M #Sweep 1.00 s (1001 p	More MHz 1 of 2 pts)	-800 Center 849.000 MHz #Res BW 100 kHz #VBW 300	0 kHz #Sweej	Span 5.000 MHz p 1.00 s (1001 pts)	More 1 of 2
MEG	STATUS		MSG	STATUS		



# 4.5 CONDUCTED SPURIOUS EMISSIONS

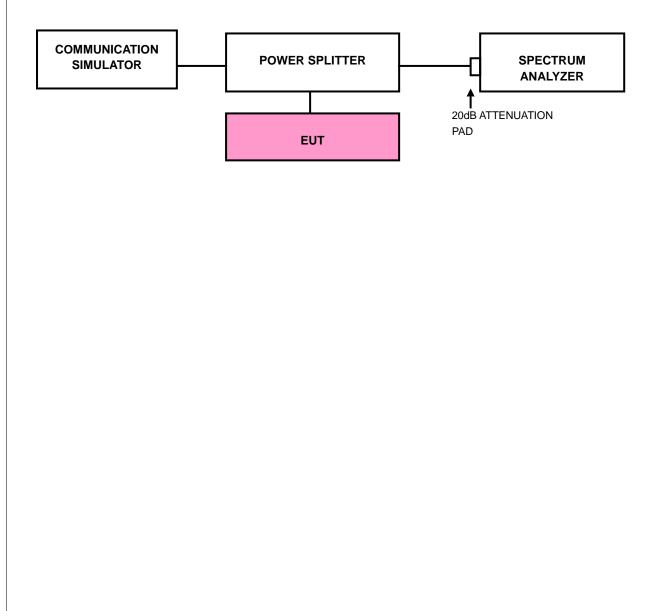
# 4.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

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 is 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 30 MHz to 9GHz. 10dB 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

						WCDI	AN				
					C	HANNE	L 4182				
Agilen	nt Spectr	um Analyzer -									
<mark>IXI</mark> Mar	kor 1		າΩ ເ⊂ 2416121 Gi	47		NSE:INT	Avg Type	ALIGN O		MNov 24, 2014 CE 1 2 3 4 5 6	Peak Search
mai		5.070522	Р	NO: Fast 😱	Trig: Free #Atten: 30				TY	PE MWWWWW ET P N N N N N	
				Gain:Low	#Atten: St	, an		R	Mkr1 3.87	8 3 GH7	Next Peak
10 dE	Ridiv	Ref Offset Ref 35.0						I,		53 dBm	
Lõg											
<b></b>											Next Pk Right
25.0											
15.0											
											Next Pk Left
5.00											NEXT R LER
-5.00											Marker Date
-15.0										-13.00 dBm	Marker Delta
-13.0											
-25.0					<b>1</b>						
			1.46	Hadret Martin Barret		J., . dans ar brahman	al. fond		المرور والمحمور والمحافظ ومرود		Mkr→CF
-35.0	والاعلى ورزر ور				a deter						
-45.0		and a second									
-45.0											Mkr→RefLvl
-55.0											
											Moro
Star	L t 30 N	1H7							Stop 9	.000 GHz	More 1 of 2
		1.0 MHz		#VBW	3.0 MHz		#S	weep	505.3 ms (2	20000 pts)	
MSG									ATUS		



# 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 is 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.R.P power 2.15dBi.

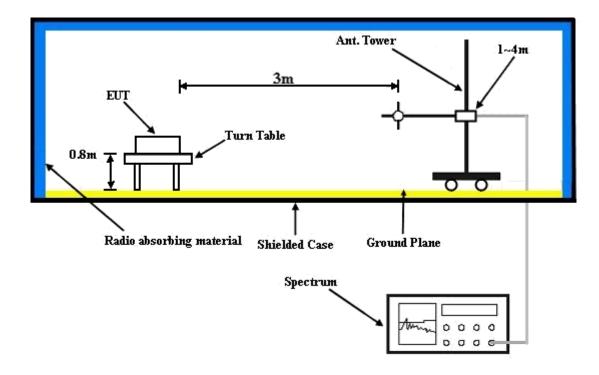
**NOTE:** The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

## 4.6.3 DEVIATION FROM TEST STANDARD

No deviation



# 4.6.4 TEST SETUP



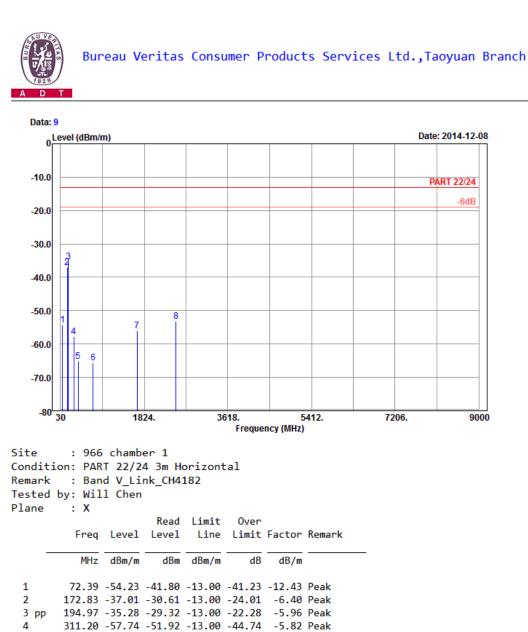
For the actual test configuration, please refer to the attached file (Test Setup Photo).



#### 4.6.5 TEST RESULTS

#### WCDMA:

**MODE A** 



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408.50 -65.11 -62.18 -13.00 -52.11 -2.93 Peak

727.00 -65.60 -64.71 -13.00 -52.60 -0.89 Peak

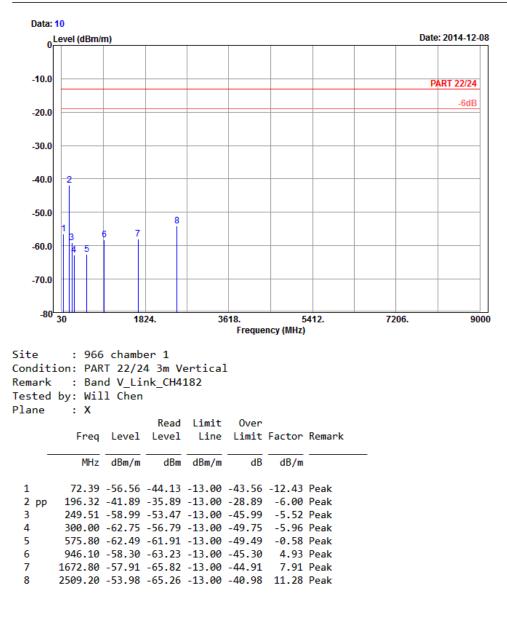
1672.80 -55.99 -63.90 -13.00 -42.99 7.91 Peak

2509.20 -53.21 -64.49 -13.00 -40.21 11.28 Peak





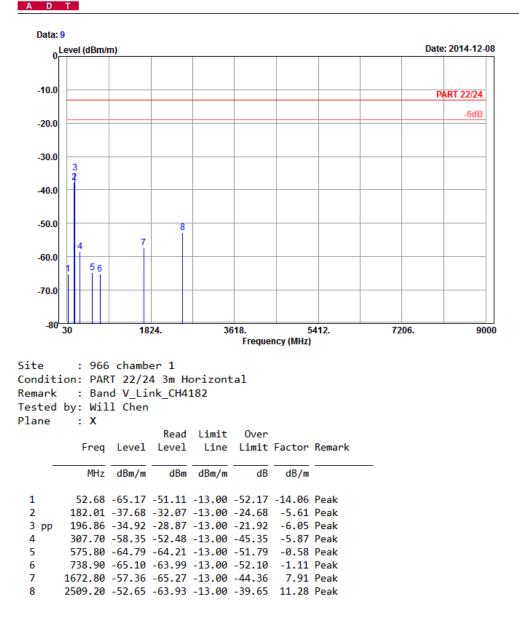
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#### **MODE B**

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#### Data: 10 0 Level (dBm/m) Date: 2014-12-08 -10.0 PART 22/24 -6dB -20.0 -30.0 -40.0 -50.0 7 -60.0 -70.0 -**80** 5412. 9000 7206. 30 1824. 3618. Frequency (MHz) Site : 966 chamber 1 Condition: PART 22/24 3m Vertical Remark : Band V\_Link\_CH4182 Tested by: Will Chen Plane : X Read Limit Over Freq Level Level Line Limit Factor Remark MHz dBm/m dBm dBm/m dB dB/m 1 36.75 -60.20 -49.86 -13.00 -47.20 -10.34 Peak 2 174.45 -44.58 -38.39 -13.00 -31.58 -6.19 Peak 3 рр 196.86 -39.61 -33.56 -13.00 -26.61 -6.05 Peak 303.50 -62.50 -56.59 -13.00 -49.50 -5.91 Peak 4 5 664.70 -61.79 -61.59 -13.00 -48.79 -0.20 Peak 944.00 -60.83 -65.67 -13.00 -47.83 4.84 Peak 6 1672.80 -56.49 -64.40 -13.00 -43.49 7.91 Peak 7

Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch



# **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:

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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.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.

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