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Dates of Tests: January 02 ~ February 08, 2013  
 Test Report S/N: LR500111302C  
 Test Site : LTA Co., Ltd.

## CERTIFICATION OF COMPLIANCE

FCC ID.

**VUJAT911**

APPLICANT

**ATID CO., Ltd.**

FCC Classification	:	Licensed Portable Transmitter Worn on body (PCT)
Manufacturing Description	:	Industrial PDA
Manufacturer	:	ATID CO., Ltd.
Model name	:	AT911
Varient Model name	:	Smart Eagle
Test Device Serial No.:	:	Identical prototype
Rule Part(s)	:	§24(E), §22(H), §2
TX Frequency Range	:	824.2 ~ 848.8 MHz (GSM850)/1850.2 ~ 1909.8 MHz (PCS1900) : 826.40~846.60 MHz (Cellular WCDMA) : 1852.4~1907.6 MHz (PCS WCDMA)
RX Frequency Range	:	869.2 ~ 893.8 MHz (GSM850)/1930.2 ~ 1989.8 MHz (PCS1900) : 1932.4~1987.6 MHz (Cellular WCDMA) : 871.40~891.60 MHz (PCS WCDMA)
RF Output Power	:	1.82 W ERP GSM850/ 0.29 W EIRP PCS1900 : 0.45 W ERP Cellular WCDMA/ 0.10 W EIRP PCS WCDMA

This test report is issued under the authority of:

Kyu-Hyun Lee, Manager

The test was supervised by:

Jung-Moo Her, Test Engineer

This test result only responds to the tested sample. It is not allowed to copy this report even partly without the allowance of the test laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.



NVLAP LAB Code.: 200723-0

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## 1. General information's

### **1-1 Test Performed**

Company name : LTA Co., Ltd.  
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 Web site : <http://www.ltalab.com>  
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Quality control in the testing laboratory is implemented as per ISO/IEC 17025 which is the “General requirements for the competents of calibration and testing laboratory”.

### **1-2 Accredited agencies**

LTA Co., Ltd. is approved to perform EMC testing by the following agencies:

Agency	Country	Accreditation No.	Validity	Reference
NVLAP	U.S.A	200723-0	2013-09-30	ECT accredited Lab.
RRL	KOREA	KR0049	2013-04-24	EMC accredited Lab.
FCC	U.S.A	610755	2014-04-27	FCC filing
FCC	U.S.A	649054	2013-04-13	FCC CAB
VCCI	JAPAN	R2133(10m), C2307	2014-06-21	VCCI registration
VCCI	JAPAN	T-2009	2013-12-23	VCCI registration
VCCI	JAPAN	G-563	2015-05-28	VCCI registration
IC	CANADA	5799A-1	2015-06-21	IC filing

## 2. Information's about test item

### **2-1 Client & Manufacturer**

Company name : ATID Co., Ltd  
 Address : #1210 Byuksan/Gyungin digital valley II #481-10 Gasan-Dong  
 Gumchon-Gu Seoul KOREA  
 Tel / Fax : Tel : 82-2-544-1436 / Fax : 82-2-544-1438

### **2-2 Equipment Under Test (EUT)**

Trade name : ATID  
 Model name : AT911  
 Variant Model name : Smart Eagle  
 Serial number : Identical prototype  
 Date of receipt : December 05, 2012  
 EUT condition : Pre-production, not damaged  
 GSM/WCDMA Module : Cinterion Wireless Module "PH8-P"  
 Antenna type : PIFA Antenna(HWI-GWMQ-AT911)/  
                   : -0.386dBi@GSM850, Cellular WCDMA  
                   : 1.687dBi@PCS1900, PCS WCDMA  
 RF output power : 1.82 W ERP GSM850 (32.60dBm)  
                   : 0.29 W EIRP PCS1900 (24.60dBm)  
                   : 0.45 W ERP Cellular WCDMA (26.50dBm)  
                   : 0.10 W EIRP PCS WCDMA (19.80dBm)  
 Modulation : GMSK, 8PSK, QPSK  
 Power Source : 3.7 Vdc from Battery (Li-Ion Polymer Battery)  
 Power for Adaptor. : Input: 100-240VAC, 0.3A                   Output: 5.0VDC, 2A  
 Firmware version : V 1.0

**2-3 Tested frequency**

Frequency	Ch.	GSM 850	Ch	PCS1900
Low frequency (MHz)	128	824.2	512	1850.2
Middle frequency (MHz)	190	836.6	661	1880.0
High frequency (MHz)	251	848.8	810	1909.8

Frequency	Ch.	Cellular WCDMA	Ch	PCS WCDMA
Low frequency (MHz)	4132	826.4	9262	1852.4
Middle frequency (MHz)	4182	836.4	9400	1880.0
High frequency (MHz)	4233	846.6	9538	1907.6

**2.4 Test conditions**

Temperature	: +15~35 °C	Humidity	: 30~65 %RH
Pressure	: 860~1030 mbar	Operating mode	: Air link mode

### 3. Test Report

#### 3.1 Summary of tests

FCC Part Section(s)	Parameter	Test Condition	Status (note 1)
22.913(a)(2)	Effective radiated power	Radiated	C
24.232(c)	Effective isotropic radiated power		C
2.1053 22.917(a) 24.238(a)	Spurious radiated emission		C
15.209	Field Strength of Harmonics		C
15.207	AC Conducted Emissions	Line Conducted	C

Note 1: C=Complies NC=Not Complies NT=Not Tested NA=Not Applicable

Note 2: The data in this test report are traceable to the national or international standards.

The sample was tested according to the following specification:

ANSI C-63.4-2003

### 3.2 Technical Characteristics Test

#### 3.3.1 Conducted Output Power

Band	Frequency	GSM	GPRS Data			
			GPRS	GPRS	EGPRS	EGPRS
			1 Tx Slot	2 Tx Slot	1 Tx Slot	2 Tx Slot
			(MHz)	(dBm)	(dBm)	(dBm)
GSM850	824.2	32.24	32.00	29.28	25.94	24.81
	836.6	32.05	31.79	29.05	26.41	25.71
	848.8	32.12	31.82	28.94	26.36	25.63
PCS1900	1950.2	28.49	28.34	25.55	23.78	22.73
	1880.0	27.95	28.17	25.10	22.61	21.81
	1909.8	28.41	27.72	24.75	23.27	22.67

Mode		WCDMA(dBm)		
Subtests				
BAND	Channel			
V	4132	23.14		
	4182	23.32		
	4233	23.41		
II	9262	23.60		
	9400	23.36		
	9538	23.20		

Mode		HSDPA(dBm)			
Subtests		1	2	3	4
BAND	Channel				
V	4132	22.33	21.62	20.63	20.50
	4182	22.13	21.55	20.67	20.60
	4233	22.22	21.61	20.76	20.64
II	9262	23.40	23.12	22.15	21.89
	9400	23.41	22.56	21.85	21.77
	9538	23.53	22.79	22.24	22.28

We found out the test mode with the highest power level after we analyzer all the data rates. So we chose GSM850/PCS1900/WCDMAV/WCDMA II as a representative

### 3.2.2 Effective Radiated Power Output

#### **Effective Radiated Power Output Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:**

The EUT was placed on a wooden turn table 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. For GSM signals, an average detector is used, with RBW=VBW=3MHz, SPAN=10MHz. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same receive spectrum analyzer reading. The conducted power at the terminals of the dipole is measured. The ERP is recorded.

### 3.2.2 Radiation Spurious and Harmonic Emissions

#### **Effective Radiated Power Output Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:**

Radiation and harmonic emissions are measured outdoors at our 3-meter test range. The equipment under test is placed on a wooden turntable 3-meters from the receive antenna. The receive antenna height and turntable rotations were adjusted for the highest reading on the receive spectrum analyzer. The Spectrum was investigated from 30MHz to the 10<sup>th</sup> Harmonic of the fundamental. A peak detector is used. With RBW=VBW=1MHz. The value that we could measure was only reported. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator with the level of the signal generator being adjusted to obtain the same receive spectrum analyzer reading. This level is recorded. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

**Effective Radiated Power Output (GSM850)**

Measurement Data: GSM850

Channel	Frequency (MHz)	TEST CONDITIONS		Power Step: 5	
		Ref. level (dBm)	Pol. (H/V)	ERP (dBm)	ERP (W)
128	824.2	1.00	V	32.60	1.82
190	836.6	0.72	V	32.10	1.62
251	848.8	0.89	V	32.40	1.74

*Note 1:* Radiated measurements at 3 meters by Substitution Method.**Equivalent Isotropic Radiated Power (PCS1900)**

Measurement Data: PCS1900

Channel	Frequency (MHz)	TEST CONDITIONS		Power Step: 0	
		Ref. level (dBm)	Pol. (H/V)	EIRP (dBm)	EIRP (W)
512	1850.2	-15.76	V	24.60	0.29
661	1880.0	-16.15	V	23.90	0.25
810	1909.8	-15.91	V	24.10	0.26

*Note 2:* Radiated measurements at 3 meters by Substitution Method.**Effective Radiated Power Output (Cellular WCDMA)**

Measurement Data: Cellular WCDMA

Channel	Frequency (MHz)	TEST CONDITIONS			
		Ref. level (dBm)	Pol. (H/V)	ERP (dBm)	ERP (W)
4132	826.4	-9.12	V	25.70	0.37
4182	836.4	-8.96	V	26.10	0.41
4233	846.6	-8.81	V	26.50	0.45

*Note 1:* Radiated measurements at 3 meters by Substitution Method.**Equivalent Isotropic Radiated Power (PCS WCDMA)**

Measurement Data: PCS WCDMA

Channel	Frequency (MHz)	TEST CONDITIONS			
		Ref. level (dBm)	Pol. (H/V)	EIRP (dBm)	EIRP (W)
9262	1852.4	-20.82	V	19.80	0.10
9400	1880.0	-20.98	V	19.70	0.09
9538	1907.6	-21.15	V	19.50	0.09

*Note 2:* Radiated measurements at 3 meters by Substitution Method.

### 3.3.3 Field Strength of spurious Radiation

OPERATING FREQUENCY : 824.2 MHz  
 CHANNEL : 128(Low)  
 MEASURED OUTPUT POWER : 32.24 dBm = 1.67 W  
 MODULATION : GSM850  
 DISTANCE : 3 meters  
 LIMIT :  $43 + 10 \log_{10} (W)$  = 45.24 dBc

Freq. (MHz)	LEVEL@ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	CORRECT GENERATOR LEVEL (dBm)	POL (H/V)	RESULT (dBc)	MARGIN (dB)
1650	0.42	9.40	-34.30	V	57.56	12.32
-	-	-	-	-	-	

*Note1:* Radiated measurements at 3 meters by Substitution Method.

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## 3.3.3 Field Strength of spurious Radiation

--- Continue

OPERATING FREQUENCY : 836.6 MHz

CHANNEL : 190(Mid)

MEASURED OUTPUT POWER : 32.24 dBm = 1.67 W

MODULATION : GSM850

DISTANCE : 3 meters

LIMIT :  $43 + 10 \log_{10} (W) = 45.24$  dBc

Freq. (MHz)	LEVEL@ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	CORRECT GENERATOR LEVEL (dBm)	POL (H/V)	RESULT (dBc)	MARGIN (dB)
1670	0.42	9.40	-33.70	V	56.96	11.72
-	-	-	-	-	-	

*Note1:* Radiated measurements at 3 meters by Substitution Method.

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## 3.3.3 Field Strength of spurious Radiation

--- Continue

OPERATING FREQUENCY : 848.8 MHz

CHANNEL : 251(High)

MEASURED OUTPUT POWER : 32.24 dBm = 1.67 W

MODULATION : GSM850

DISTANCE : 3 meters

LIMIT :  $43 + 10 \log_{10} (W) = 45.24$  dBc

Freq. (MHz)	LEVEL@ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	CORRECT GENERATOR LEVEL (dBm)	POL (H/V)	RESULT (dBc)	MARGIN (dB)
1690	0.42	9.4	-40.8	V	64.06	18.82
-	-	-	-	-	-	

*Note1:* Radiated measurements at 3 meters by Substitution Method.

--- Blank ---

OPERATING FREQUENCY : 1850.2 MHz

CHANNEL : 512(Low)

MEASURED OUTPUT POWER : 28.49 dBm = 0.71 W

MODULATION : PCS1900

DISTANCE : 3 meters

LIMIT :  $43 + 10 \log_{10} (W) =$  41.49 dBc

FREQ. (MHz)	LEVEL@ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	CORRECT GENERATOR LEVEL (dBm)	POL (H/V)	RESULT (dBc)	MARGIN (dB)
3707	0.63	10.20	-48.10	V	67.02	25.53
-	-	-	-	-	-	

Note1: Radiated measurements at 3 meters by Substitution Method.

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## 3.3.3 Field Strength of spurious Radiation

--- Continue

OPERATING FREQUENCY : 1880.0 MHz

CHANNEL : 661(Mid)

MEASURED OUTPUT POWER : 28.49 dBm = 0.71 W

MODULATION : PCS1900

DISTANCE : 3 meters

LIMIT :  $43 + 10 \log_{10} (W) = 41.49$  dBc

FREQ. (MHz)	LEVEL@ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	CORRECT GENERATOR LEVEL (dBm)	POL (H/V)	RESULT (dBc)	MARGIN (dB)
3765	0.63	10.20	-54.40	V	73.32	31.83
-	-	-	-	-	-	

*Note1:* Radiated measurements at 3 meters by Substitution Method.

--- Blank ---

## 3.3.3 Field Strength of spurious Radiation

--- Continue

OPERATING FREQUENCY : 1909.8 MHz

CHANNEL : 810 (High)

MEASURED OUTPUT POWER : 28.49 dBm = 0.71 W

MODULATION : PCS1900

DISTANCE : 3 meters

LIMIT :  $43 + 10 \log_{10} (W)$  = 41.49 dBc

Freq. (MHz)	LEVEL@ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	CORRECT GENERATOR LEVEL (dBm)	POL (H/V)	RESULT (dBc)	MARGIN (dB)
3813	0.63	10.20	-53.70	V	72.62	31.13
-	-	-	-	-	-	

*Note1:* Radiated measurements at 3 meters by Substitution Method.

--- Blank ---

### 3.3.3 Field Strength of spurious Radiation

OPERATING FREQUENCY : 826.4 MHz  
 CHANNEL : 4132(Low)  
 MEASURED OUTPUT POWER : 23.41 dBm = 0.22 W  
 MODULATION : Cellular WCDMA  
 DISTANCE : 3 meters  
 LIMIT :  $43 + 10 \log_{10} (W)$  = 36.41 dBc

Freq. (MHz)	LEVEL@ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	CORRECT GENERATOR LEVEL (dBm)	POL (H/V)	RESULT (dBc)	MARGIN (dB)
1648	0.42	9.40	-27.40	V	41.83	5.42
-	-	-	-	-	-	

*Note1:* Radiated measurements at 3 meters by Substitution Method.

--- Blank ---

## 3.3.3 Field Strength of spurious Radiation

--- Continue

OPERATING FREQUENCY : 836.4 MHz

CHANNEL : 4182(Mid)

MEASURED OUTPUT POWER : 23.41 dBm = 0.22 W

MODULATION : Cellular WCDMA

DISTANCE : 3 meters

LIMIT :  $43 + 10 \log_{10} (W) = 36.41$  dBc

Freq. (MHz)	LEVEL@ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	CORRECT GENERATOR LEVEL (dBm)	POL (H/V)	RESULT (dBc)	MARGIN (dB)
1673	0.42	9.40	-30.40	V	44.83	8.42
-	-	-	-	-	-	

*Note1:* Radiated measurements at 3 meters by Substitution Method.

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## 3.3.3 Field Strength of spurious Radiation

--- Continue

OPERATING FREQUENCY : 846.6 MHz

CHANNEL : 4233(High)

MEASURED OUTPUT POWER : 23.41 dBm = 0.22 W

MODULATION : Cellular WCDMA

DISTANCE : 3 meters

LIMIT :  $43 + 10 \log_{10} (W) = 36.41$  dBc

Freq. (MHz)	LEVEL@ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	CORRECT GENERATOR LEVEL (dBm)	POL (H/V)	RESULT (dBc)	MARGIN (dB)
1697	0.42	9.40	-32.30	V	46.73	10.32
-	-	-	-	-	-	

*Note1:* Radiated measurements at 3 meters by Substitution Method.

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OPERATING FREQUENCY : 1852.4 MHz

CHANNEL : 9262(Low)

MEASURED OUTPUT POWER : 23.60 dBm = 0.23 W

MODULATION : PCS WCDMA

DISTANCE : 3 meters

LIMIT :  $43 + 10 \log_{10} (W)$  = 36.60 dBc

FREQ. (MHz)	LEVEL@ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	CORRECT GENERATOR LEVEL (dBm)	POL	RESULT (dBc)	MARGIN (dB)
3700	0.63	10.20	-48.30	V	62.33	25.73
-	-	-	-	-	-	

Note1: Radiated measurements at 3 meters by Substitution Method.

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## 3.3.3 Field Strength of spurious Radiation

--- Continue

OPERATING FREQUENCY : 1880.0 MHz

CHANNEL : 9400(Mid)

MEASURED OUTPUT POWER : 23.60 dBm = 0.23 W

MODULATION : PCS WCDMA

DISTANCE : 3 meters

LIMIT :  $43 + 10 \log_{10} (W) = 36.60$  dBc

Freq. (MHz)	LEVEL@ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	CORRECT GENERATOR LEVEL (dBm)	POL (H/V)	RESULT (dBc)	MARGIN (dB)
3759	0.63	10.20	-44.20	V	58.23	21.63
-	-	-	-	-	-	

*Note1:* Radiated measurements at 3 meters by Substitution Method.

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## 3.3.3 Field Strength of spurious Radiation

--- Continue

OPERATING FREQUENCY : 1907.6 MHz

CHANNEL : 9538 (High)

MEASURED OUTPUT POWER : 23.60 dBm = 0.23 W

MODULATION : PCS WCDMA

DISTANCE : 3 meters

LIMIT :  $43 + 10 \log_{10} (W)$  = 36.60 dBc

Freq. (MHz)	LEVEL@ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	CORRECT GENERATOR LEVEL (dBm)	POL (H/V)	RESULT (dBc)	MARGIN (dB)
3819	0.63	10.20	-41.40	V	55.43	18.83
-	-	-	-	-	-	

*Note1:* Radiated measurements at 3 meters by Substitution Method.

--- Blank ---

### 3.2.4 Field Strength

#### Procedure:

The EUT was placed on a 0.8m high wooden table inside a shielded enclosure. An antenna was placed near the EUT and measurements of frequencies and amplitudes of field strengths were recorded for reference during final measurements. For final radiated testing, measurements were performed in OATS. Measurements were performed with the EUT oriented in 3 orthogonal axis and rotated 360 degrees to determine worst-case orientation for maximum emissions.

The spectrum analyzer is set to:

Center frequency = the worst channel

Frequency Range = 30 MHz ~ 10<sup>th</sup> harmonic.

RBW = 100 kHz ( 30MHz ~ 1 GHz)  
= 1 MHz (1 GHz ~ 10<sup>th</sup> harmonic )

VBW ≥ RBW

Span = 100 MHz

Detector function = Quasi-peak

Trace = max hold

Sweep = auto

#### Measurement Data: Complies

→ No other emissions were detected are a level greater than 20dB below limit.

#### Minimum Standard: FCC Part 15.109

Frequency (MHz)	Limit (uV/m) @ 10m
0.009 ~ 0.490	2400/F (kHz) @ 300m
0.490 ~ 1.705	24000/F (kHz) @ 30m
1.705 ~ 30	30 @ 30m
30 ~ 88	90
88 ~ 216	150
216 ~ 960	210
Above 960	300

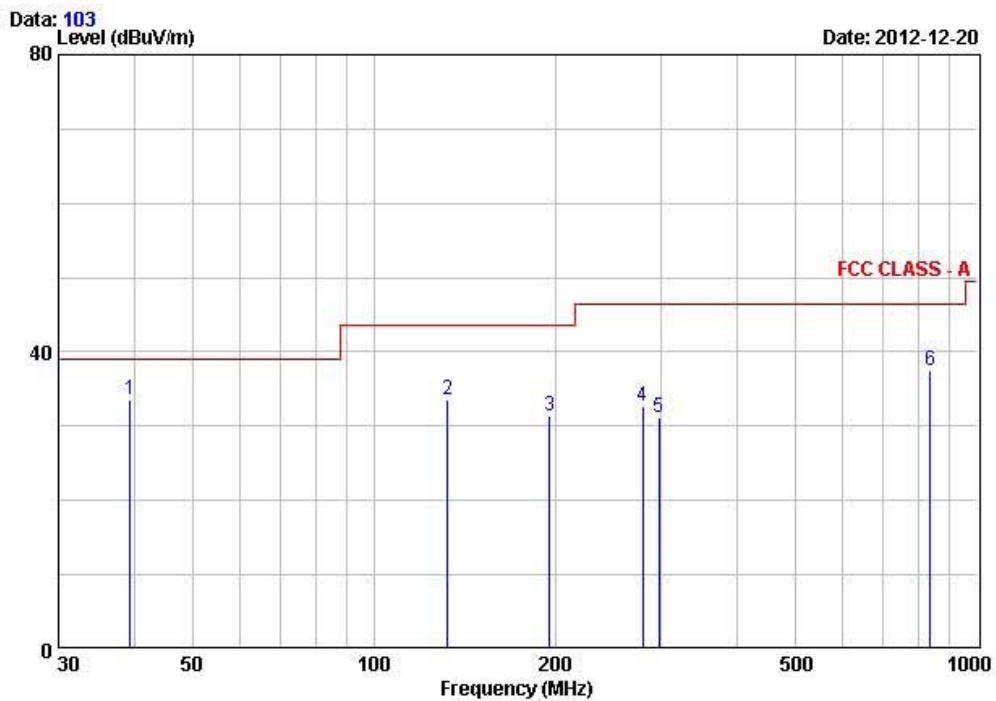
\*\* Except as provided in 15.209(g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88MHz, 174-216MHz or 470-806MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g. 15.231 and 15.241.

Radiated Emissions –WCDMA mode

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EUT/Model No.: AT911 TEST MODE: WCDMA mode

Temp Humi : 1 / 26 Tested by: PARK.H.W



Freq MHz	Reading dBuV/m	C.F dB/m	Result dBuV/m	Limit QP		Margin dB	Height cm	Angle deg	Polarity
				dBuV/m	dB				
1 39.47	49.87	-16.39	33.48	39.00	5.52	100	76	VERTICAL	
2 132.45	48.14	-14.54	33.60	43.50	9.90	400	55	HORIZONTAL	
3 195.47	47.21	-15.86	31.35	43.50	12.15	100	89	VERTICAL	
4 279.14	45.10	-12.33	32.77	46.40	13.63	100	87	VERTICAL	
5 297.14	42.70	-11.63	31.07	46.40	15.33	369	294	HORIZONTAL	
6 838.14	36.51	1.03	37.54	46.40	8.86	138	27	VERTICAL	

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

## APPENDIX

### TEST EQUIPMENT USED FOR TESTS

	<b>Description</b>	<b>Model No.</b>	<b>Serial No.</b>	<b>Manufacturer</b>	<b>Interval</b>	<b>Last Cal. Date</b>
1	Spectrum Analyzer (~30GHz)	FSV-30	100757	R&S	1 year	2013-01-15
2	Spectrum Analyzer (~2.9GHz)	8594E	3649A03649	HP	2 year	2012-03-26
3	Signal Generator (~3.2GHz)	8648C	3623A02597	HP	1 year	2012-03-26
4	Signal Generator (1~20GHz)	83711B	US34490456	HP	1 year	2012-03-26
5	Attenuator (3dB)	8491A	37822	HP	2 year	2012-09-22
6	Attenuator (10dB)	8491A	63196	HP	2 year	2012-09-22
7	Test Receiver (~30MHz)	ESHS10	828404/009	R&S	1 year	2012-03-26
8	EMI Test Receiver (~7GHz)	ESCI7	100722	R&S	1 year	2012-09-22
9	RF Amplifier (~1.3GHz)	8447D	2439A09058	HP	2 year	2012-09-22
10	RF Amplifier (1~18GHz)	8449B	3008A02126	HP	2 year	2012-03-26
11	Horn Antenna (1~18GHz)	BBHA 9120D	9120D122	SCHWARZBECK	2 year	2012-12-21
12	Horn Antenna (18 ~ 40GHz)	SAS-574	154	Schwarzbeck	2 year	2012-03-15
13	Horn Antenna (18 ~ 40GHz)	SAS-574	155	Schwarzbeck	2 year	2012-03-15
14	TRILOG Antenna	VULB 9160	9160-3172	SCHWARZBECK	2 year	2012-09-20
15	Hygro-Thermograph	THB-36	0041557-01	ISUZU	1 year	2012-09-26
16	Splitter (SMA)	ZFSC-2-2500	SF617800326	Mini-Circuits	-	-
17	Power Divider	11636A	6243	HP	2 year	2012-09-22
18	DC Power Supply	6622A	3448A03079	HP	-	-
19	Frequency Counter	5342A	2826A12411	HP	1 year	2012-03-26
20	Power Meter	EPM-441A	GB32481702	HP	1 year	2012-03-26
21	Power Sensor	8481A	US41030291	HP	1 year	2012-09-22
22	Audio Analyzer	8903B	3729A18901	HP	1 year	2012-09-22
23	Modulation Analyzer	8901B	3749A05878	HP	1 year	2012-09-22
24	TEMP & HUMIDITY Chamber	YJ-500	LTAS06041	JinYoung Tech	1 year	2012-09-22
25	Stop Watch	HS-3	601Q09R	CASIO	2 year	2012-03-26
26	LISN	ENV216	100408	R&S	1 year	2012-09-22
27	UNIVERSAL RADIO COMMUNICATION TESTER	CMU200	106243	R&S	2 year	2012-06-27
28	Highpass Filter	WHKX1.5/15G-10SS	74	Wainwright Instruments	-	-
29	Highpass Filter	WHKX3.0/18G-10SS	118	Wainwright Instruments	-	-