Radiated Emission Test Data

1. VERIFICATION OF CONFORMITY

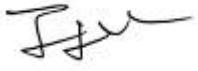
Equipment Under Test:	Mobile internet device
Brand Name:	N/A
Model Number:	PT07101-46-XXX(X=a-z,0-9,A-Z)
Series Model Number:	PTT-726A, ETOOS 700C, R73A
Difference description:	The series models are different in model name with the same functions.
FCC ID:	PTT-726A
Applicant:	Win Accord Ltd. 12F., No. 225, Sec. 5, Nanjing E. Rd., Songshan Dist, Taipei City 105, Taiwan
Manufacturer:	Win Accord Ltd. Guangdong Nanhai Road,Nanshan District, Shenzhen City, Garden City,1079 7th Floor,Block A, Cyber Tower
Technical Standards:	47 CFR Part 15 Subpart C
File Number:	MOST111007F3
Date of test:	November. 10,2011 ~ November. 30, 2011
Deviation:	None
Condition of Test Sample:	Normal
Test Result:	PASS

The above equipment was tested by *MOST* for compliance with the requirements set forth in FCC rules and the Technical Standards mentioned above. This said equipment in the configuration described in this report shows the maximum emission levels emanating from equipment and the level of the immunity endurance of the equipment are within the compliance requirements.

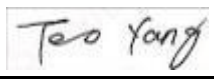
The test results of this report relate only to the tested sample identified in this report.

Tested by (+ signature): 

Zhang Ling November. 30, 2011

Review by (+ signature): 

July Wen November. 30, 2011

Approved by (+ signature): 

Terry Yang November. 30, 2011

2. GENERAL INFORMATION

2.1 Product Information

Description:	Mobile internet device
Model Name:	PT07101-46-XXX(X=a-z,0-9,A-Z)
Series Number:	PTT-726A, ETOOS 700C, R73A
Model Difference description:	Only the color and model name is different.
Frequency Range:	WCDMA Band II:1850MHz – 1910MHz
Transmit Power(ERP)	SHUPA Band II: 23.15 dBm (Max,)
Modulation Technique:	QPSK
Antenna Type:	PIFA Antenna
Antenna Gain:	2.5dBi
Power Supply:	DC 5V by AC/DC adapter 100~240V 50/60Hz DC 3.7V by battery
Temperature Range:	-20°C ~ +50°C

NOTE:

1. For a more detailed features description about the EUT, please refer to User's Manual.

2.2 Objective

The objective of the report is to perform tests according to 47 CFR Part 15 Subpart B for the EUT FCC ID Certification:

No.	Identity	Document Title
1	47 CFR Part 15(10-1-05 Edition)	Radio Frequency Devices

2.3 Test Standards and Results

Test items and the results are as bellow:

No.	Section	Description	Result	Date of Test
1	15.209	Radiated Emission	PASS	2011-11-22

Note: 1. The test result judgment is decided by the limit of measurement standard
2. The information of measurement uncertainty is available upon the customer's request.

2.4 Environmental Conditions

During the measurement the environmental conditions were within the listed ranges:

- Temperature: 15-35ºC
- Humidity: 30-60 %
- Atmospheric pressure: 86-106 kPa

3. TEST FACILITY

3.1TEST FACILITY

Test Site:	Compliance Certification Services Inc. (Kun shan) Laboratory
Location:	No.10 Weiye Rd, Innovation park, Eco&Tec, Development Zone, Kunshan City, Jiangsu, China
Description:	There is one 3m semi-anechoic an area test sites and two line conducted labs for final test. The Open Area Test Sites and the Line Conducted labs are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4:2009 and CISPR 16 requirements. The FCC Registration Number is **424105.**
Site Filing:	The site description is on file with the Federal Communications Commission, 7435 Oakland Mills Road, Columbia, MD 21046.
Instrument Tolerance:	All measuring equipment is in accord with ANSI C63.4:2009 and CISPR 16 requirements that meet industry regulatory agency and accreditation agency requirement.
Ground Plane:	Two conductive reference ground planes were used during the Line Conducted Emission, one in vertical and the other in horizontal. The dimensions of these ground planes are as below. The vertical ground plane was placed distancing 40 cm to the rear of the wooden test table on where the EUT and the support equipment were placed during test. The horizontal ground plane projected 50 cm beyond the footprint of the EUT system and distanced 80 cm to the wooden test table. For Radiated Emission Test, one horizontal conductive ground plane extended at least 1m beyond the periphery of the EUT and the largest measuring antenna, and covered the entire area between the EUT and the antenna.

3.2 GENERAL TEST PROCEDURES

EUT Function and Test Mode

The EUT has been tested under normal operating（TX）and standby（RX）condition.

The field strength of radiation emission was measured in the following position: EUT stand-up position (Y axis), lie-down position (X, Z axis).

The following data show only with the worst case setup.

The worst case of Y axis was reported.

Based on client request, all normal using modes of the normal function were tested but only the worst test data of the worst mode is reported by this report.

4. TEST EQUIPMENT LIST

Radiated Emission (Test Site A (10m chamber) for 30MHz-1GHz)				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
EMI Test Receiver	R&S	ESCI	100002	05/13/2012
EMI Test Receiver	R&S	ESCI	100209	05/13/2012
Bilog Antenna	Sunol	JB1	A110204	06/24/2012
Bilog Antenna	Sunol	JB1	A110204-3	06/24/2012
Pre-Amplifier	Anritsu	MH648A	M64192	05/13/2012
Pre-Amplfier	MINI	ZFL-1000VH2	d041703	11/04/2012
System Controller	Sunol	SC99V	121501-1	N.C.R.
Turn Table	Sunol	FM3022HS	N/A	N.C.R.
Antenna Mast	Sunol	TWR 99-4	121501-3	N.C.R.
Test Software	EZ-EMC			

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. N.C.R = No Calibration Request.

Radiated Emission (3M Semi Anechoic Chamber (977) For 1 GHz -18GHz)				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	US44300398	05/13/2012
EMI Test Receiver	R&S	ESPI	100507	05/13/2012
Pre-Amplfier	MINI	ZFL-1000VH2	d041702	05/13/2012
Pre-Amplfier	Miteq	AFS42-00102650-42-10P-42	1010176	05/13/2012
Bilog Antenna	Sunol	JB1	A110204-2	06/24/2012
Horn-antenna	SCHWARZBECK	BBHA9120D	D:267	06/08/2012
Turn Table	CT	CT123	4165	N.C.R
Antenna Tower	CT	CTERG23	3256	N.C.R
Controller	CT	CT1OO	95637	N.C.R
Test Software	EZ-EMC			

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.N.C.R = No Calibration Request.

NOTE: *Equipments listed above have been calibrated and are in the period of validation.*

5.Radiated Emission

5.1 Definition

According to FCC section 15.247(d), radiated emission outside the frequency band attenuation below the general limits specified in § 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

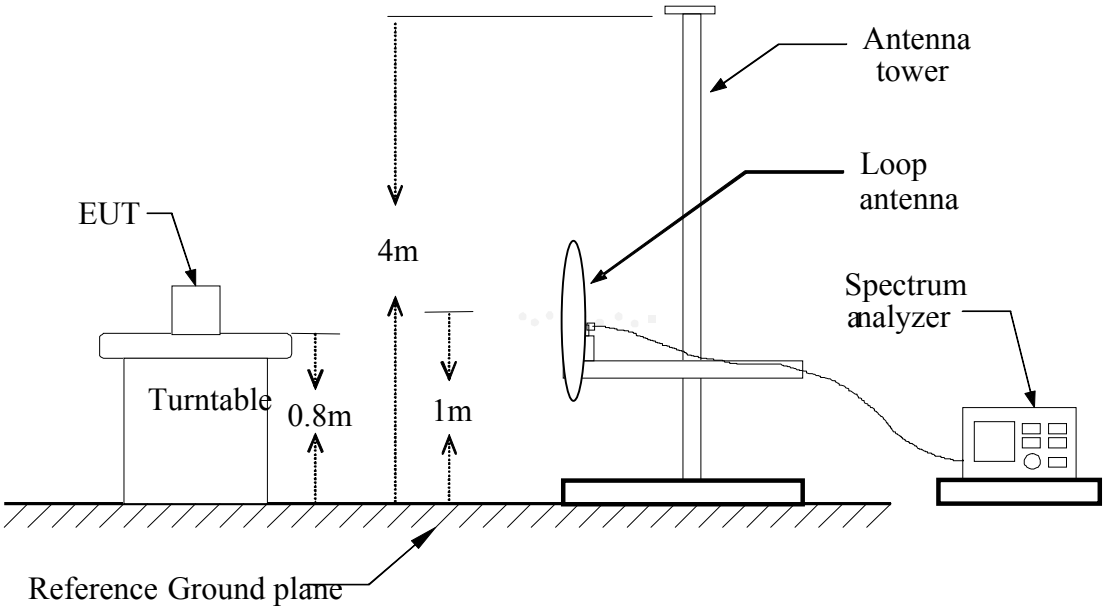
According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

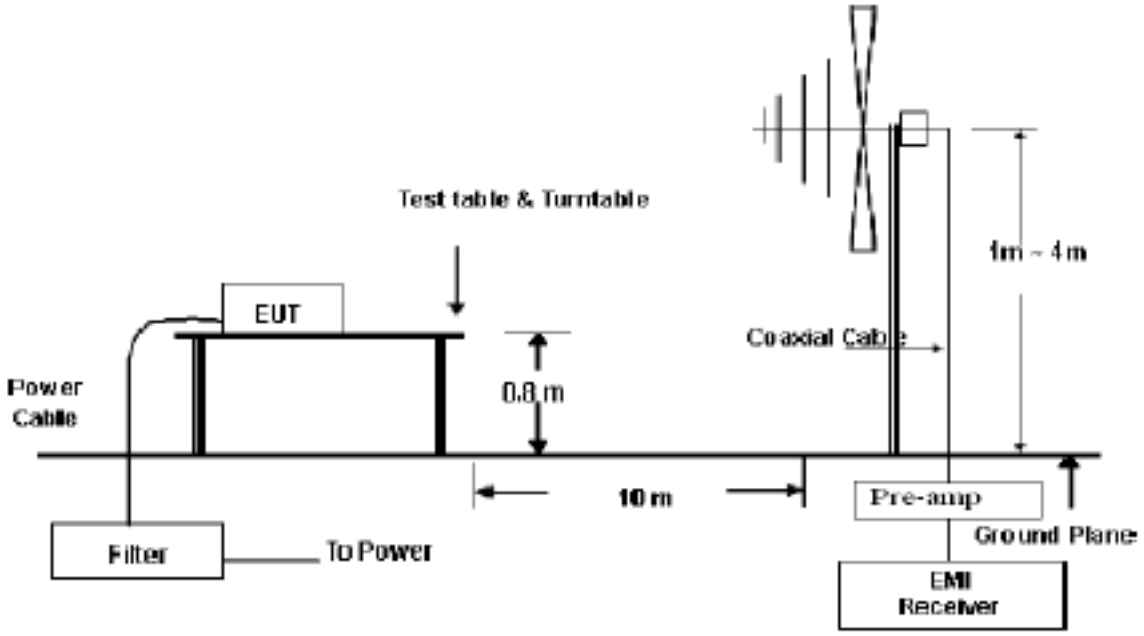
As shown in FCC section 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector. When average radiated emission measurements are specified in this part, including emission measurements below 1000MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit for the frequency being investigated unless a different peak emission limit is otherwise specified in the rules.

5.2 Test Description

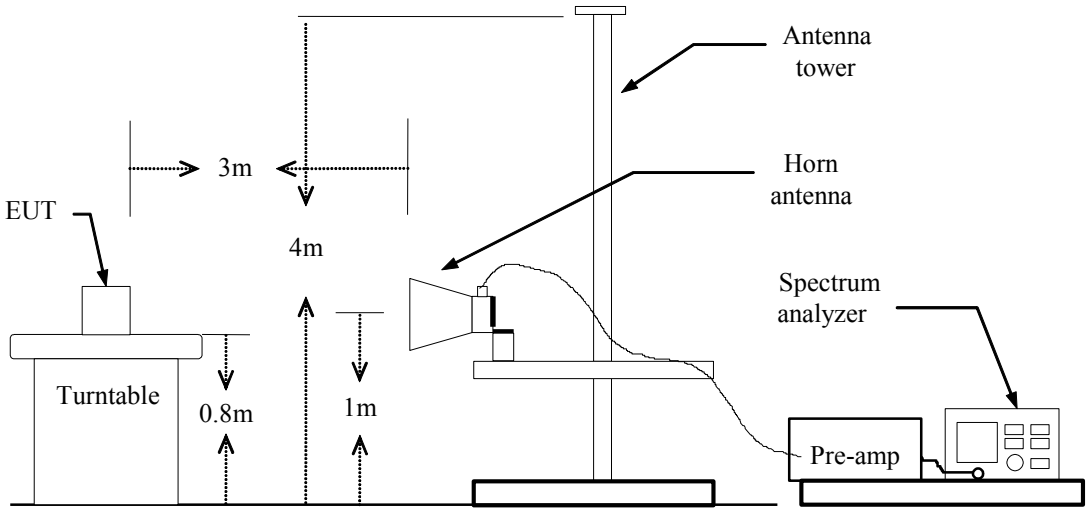
A. Test Setup:



Blow 1GHz:



Above 1GHz:



B. Test procedures

1. The EUT is placed on a turntable, which is 0.8m above ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Set the spectrum analyzer in the following setting as:

   Below 1GHz: RBW=100 kHz / VBW=300 kHz / Sweep=AUTO

   Above 1GHz : (a) PEAK: RBW=VBW=1MHz / Sweep=AUTO
   (b) AVERAGE: RBW=1MHz / VBW=10Hz / Sweep=AUTO
7. Repeat above procedures until the measurements for all frequencies are complete.

5.3 Test Result

WCDMA Band II-EIRP Power:

Frequency (MHz)	Ant.Pol H/V	Peak EIRP (dBm)	Reading (dBm)	Ant./CL CF (dB)
1852.4	H	23.08	55.37	-32.29
1880.0	H	23.15	53.60	-30.45
1907.6	H	23.01	54.59	-31.58
1852.4	V	22.98	52.11	-29.13
1880.0	V	23.04	53.29	-30.25
1907.6	V	22.96	54.98	-32.02

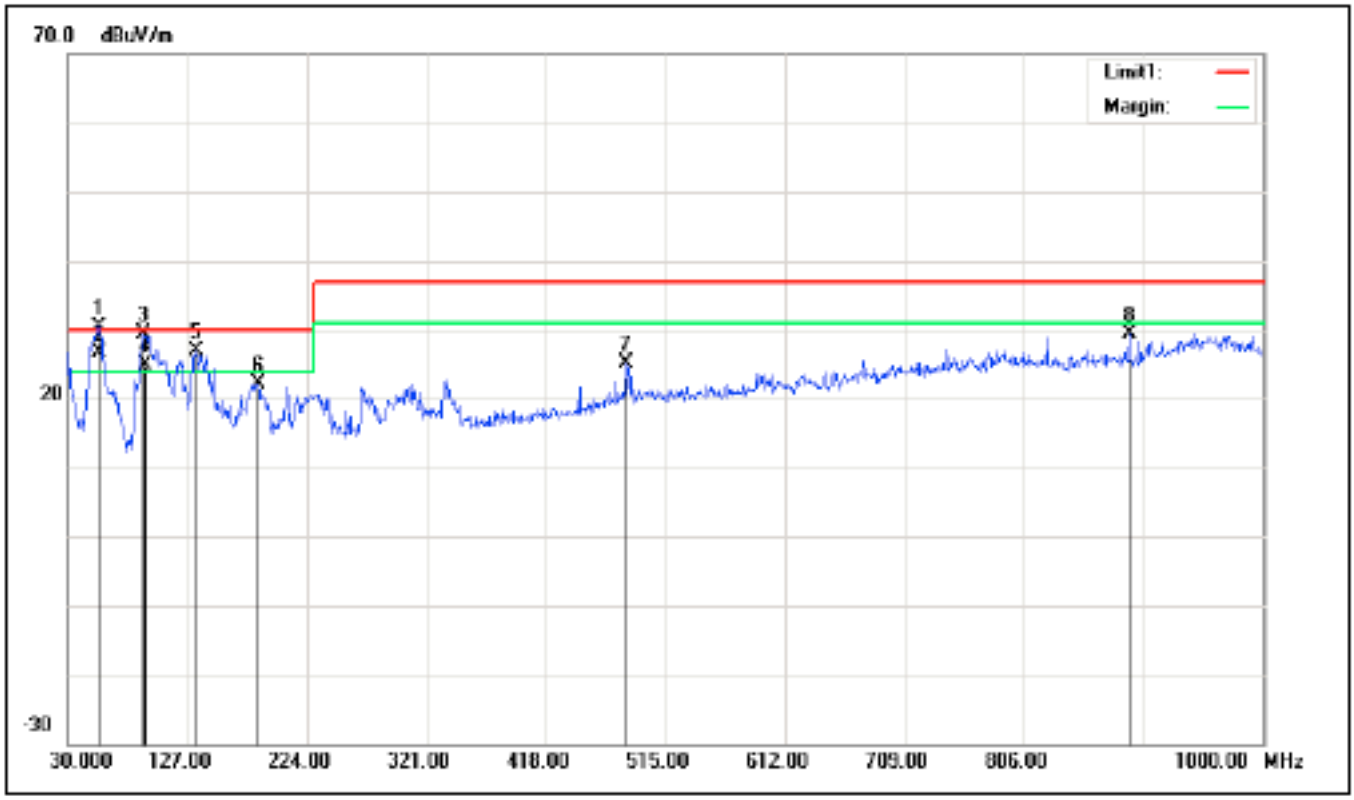
Form 9KHz to 30MHz:

Frequency (MHz)	Ant.Pol H/V	Peak Reading (dBuv)	AV Reading (dBuv)	Ant./CL CF (dB)	Actual Fs		Peak Limit (dBuv/m)	AV Limit (dBuv/m)	AV Margin (dB)
					Peak (dBuv/m)	AV (dBuv/m)			
H									>20
V									>20

-No detected in below 30MHz.

Below 1 GHz

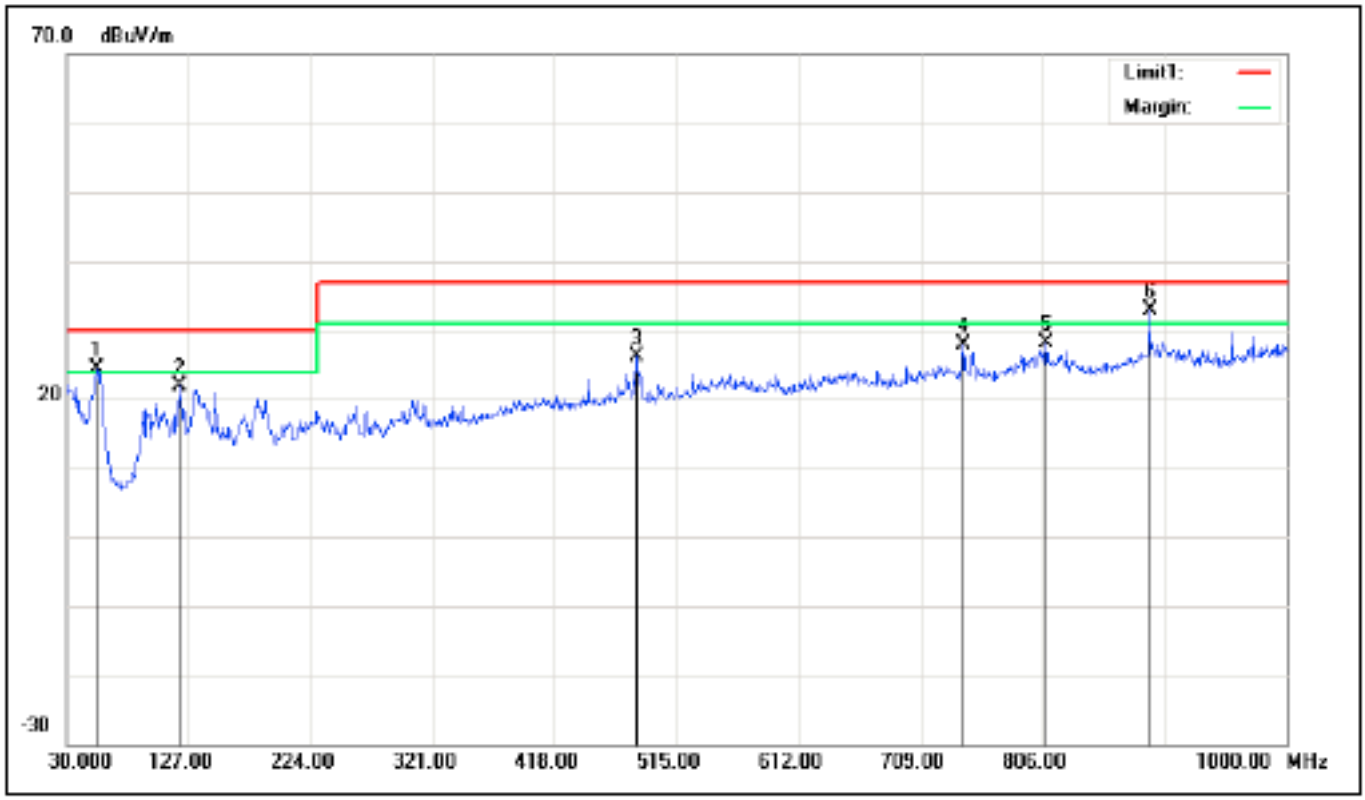
Ant.Polar:Vertical *(10m Limit)*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Height	Degree	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	( )	
1	55.2200	44.76	-14.33	30.43	30.00	0.43	100	186	peak
2	55.8600	40.95	-14.34	26.61	30.00	-3.39	299	188	QP
3	91.1100	42.85	-13.55	29.30	30.00	-0.70	100	268	peak
4	92.5900	37.97	-13.18	24.79	30.00	-5.21	100	268	QP
5	133.7900	33.66	-6.84	26.82	30.00	-3.18	100	225	peak
6	184.2300	30.69	-8.53	22.16	30.00	-7.84	100	329	peak
7	482.9900	27.28	-2.26	25.02	37.00	-11.98	399	128	peak
8	891.3600	24.97	4.37	29.34	37.00	-7.66	300	268	peak

Note: 1. The other emission levels were very low against the limit.

Ant. Polar:Horizontal (10m Limit)

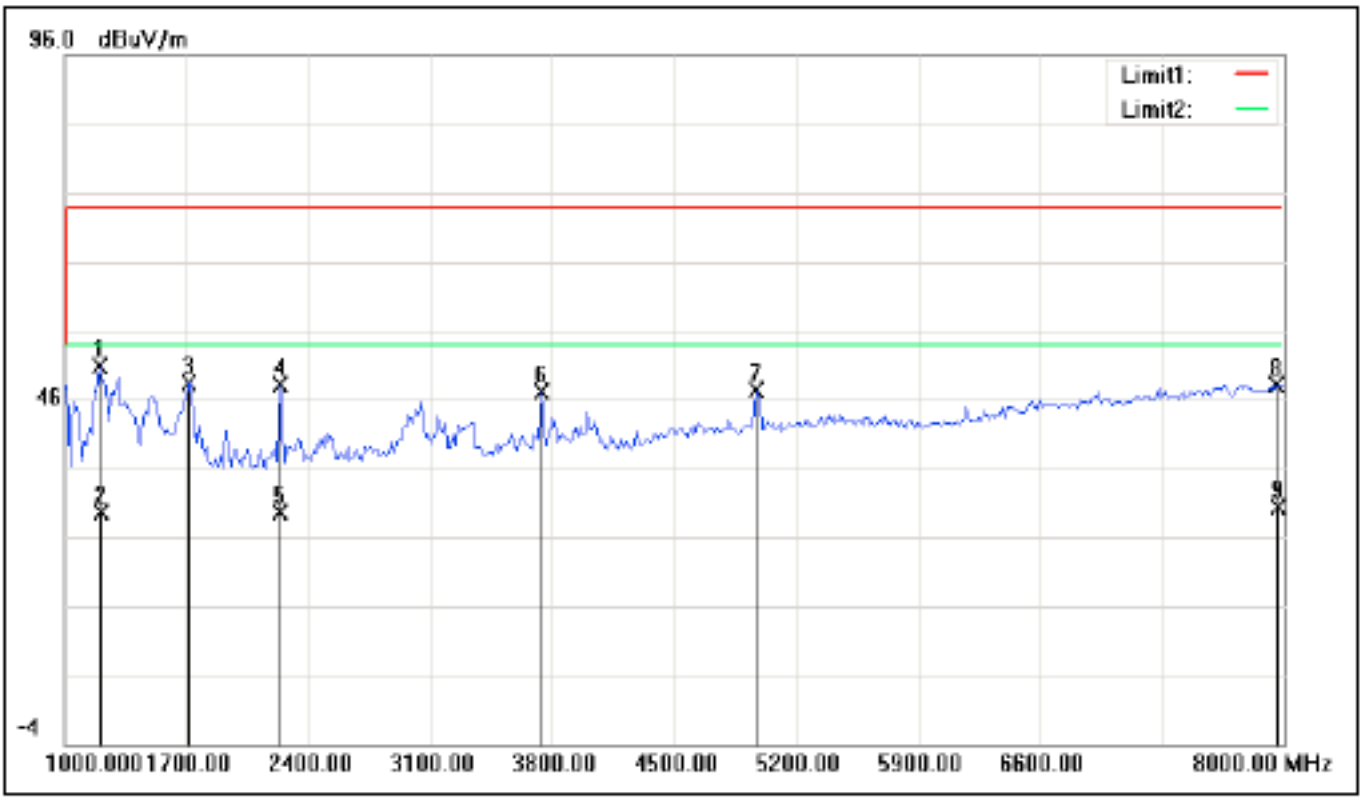


No.	Frequency	Reading	Correct	Result	Limit	Margin	Height	Degree	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	( )	
1	53.2600	36.12	-11.71	24.41	30.00	-5.59	400	251	peak
2	119.2400	32.63	-10.79	21.84	30.00	-8.16	400	263	peak
3	482.9900	30.58	-4.34	26.24	37.00	-10.76	200	148	peak
4	742.9500	28.24	-0.25	27.99	37.00	-9.01	100	59	peak
5	808.9100	27.32	0.91	28.23	37.00	-8.77	100	236	peak
6	891.3600	30.51	2.35	32.86	37.00	-4.14	100	301	peak

Note: 1. The other emission levels were very low against the limit.

Above 1 GHz

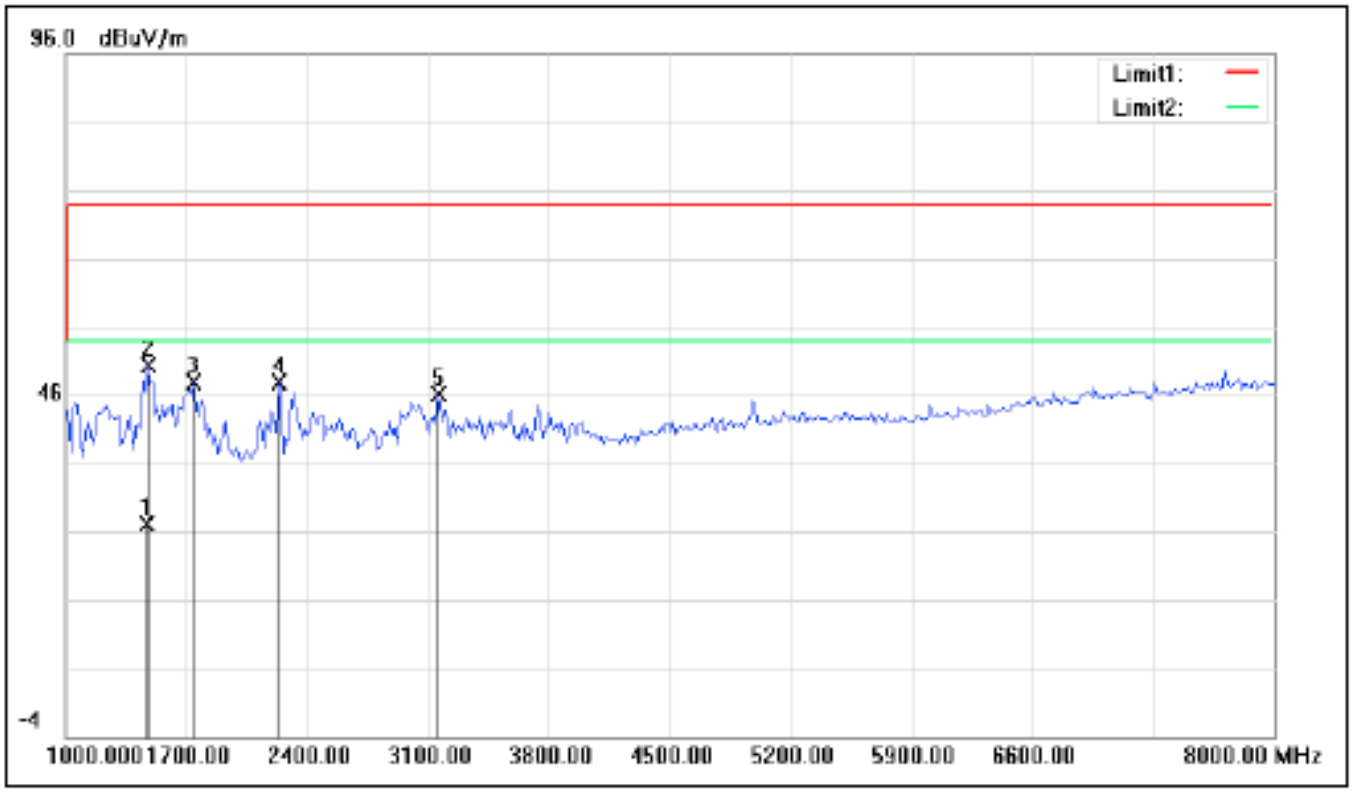
Ant.Polar:Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Height	Degree	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)	
1	1196.393	68.48	-17.68	50.80	74.00	-23.20	100	195	peak
2	1206.313	47.29	-17.65	29.64	54.00	-24.36	100	193	AVG
3	1715.431	64.85	-16.46	48.39	74.00	-25.61	100	154	peak
4	2234.469	63.34	-15.27	48.07	74.00	-25.93	100	24	peak
5	2239.659	44.91	-15.27	29.64	54.00	-24.36	100	20	AVG
6	3735.471	57.48	-10.44	47.04	74.00	-26.96	100	359	peak
7	4969.940	53.97	-6.60	47.37	74.00	-26.63	100	167	peak
8	7957.916	47.94	0.22	48.16	74.00	-25.84	100	67	peak
9	7963.347	30.23	0.23	30.46	54.00	-23.54	100	64	AVG

Note: 1. The other emission levels were very low against the limit.

Ant. Polar:Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Height	Degree	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)	
1	1475.211	43.92	-16.81	27.11	54.00	-26.89	100	119	AVG
2	1476.954	67.22	-16.80	50.42	74.00	-23.58	100	117	peak
3	1743.487	64.38	-16.43	47.95	74.00	-26.05	100	191	peak
4	2234.469	63.16	-15.27	47.89	74.00	-26.11	100	154	peak
5	3160.321	58.37	-12.12	46.25	74.00	-27.75	100	237	peak

Note: 1. The other emission levels were very low against the limit.

------END OF REPORT------