FCC PART 15 B, CLASS B

TEST REPORT

For

Star Computer Group

2175 NORTHWEST 115TH AVE. DORAL, FL 33172, USA

FCC ID: Q34-A1000

Report Type:	**Product Type:**
Original Report	Mobile Phone

Test Engineer:	Candy Li
Report Number:	RSZ130427004-00A
Report Date:	2013-05-16
Reviewed By:	Sula Huang RF Leader
Prepared By:	Bay Area Compliance Laboratories Corp. (Shenzhen) 6/F, the 3rd Phase of WanLi Industrial Building ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China Tel: +86-755-33320018 Fax: +86-755-33320008 www.baclcorp.com.cn

TABLE OF CONTENTS

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *Star Computer Group*'s product, model number: *A1000 (FCC ID: Q34-A1000)* or the "EUT" in this report was a *Mobile Phone*, which was measured approximately: 102 mm (L) x 45.5 mm (W) x 14 mm (H), rated input voltage: DC 3.7 V Li-ion battery, the highest operating frequency is 260 MHz.

** All measurement and test data in this report was gathered from production sample serial number: 123456789 (Assigned by the applicant). The EUT supplied by the applicant was received on 2013-04-27.*

Objective

This test report is prepared on behalf of *Star Computer Group* in accordance with Part 2-Subpart J, Part 15-Subparts A and B of the Federal Communication Commissions rules.

The objective of the manufacturer is to determine the compliance of the EUT with FCC Part 15 B.

Related Submittal(s)/Grant(s)

Part 22H/24E PCE and Part 15.247 DSS submissions with FCC ID: Q34-A1000.

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China.

Test site at Bay Area Compliance Laboratories Corp. (Shenzhen) has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on December 06, 2010. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2009.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 382179. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in a manufacturer testing fashion.

EUT operation mode: Downloading (data transforms with computer)

EUT Exercise Software

“winthrax” exercise software was used.

Equipment Modifications

No modification was made to the EUT tested.

Support Equipment List and Details

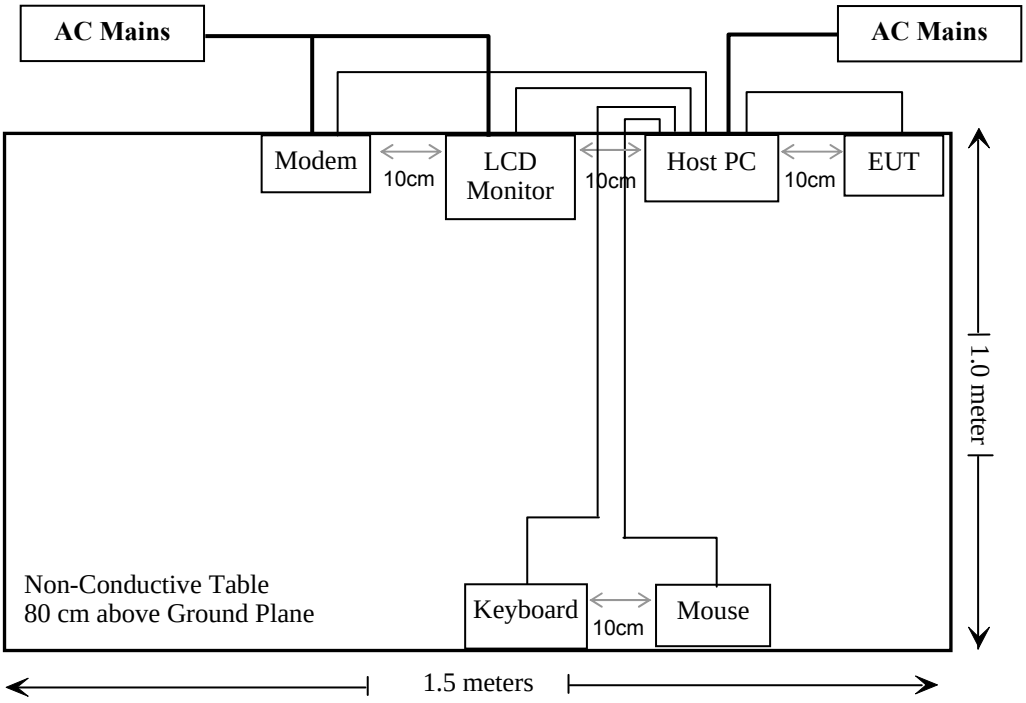
Manufacturer	Description	Model	Serial Number
DELL	PC	VOSTRO 220S	127BP2X
DELL	Keyboard	L100	CNORH656658907BL05DC
DELL	Mouse	MOC5UO	G1900NKD
DELL	LCD Monitor	E178WFPC	CN-OWY564-64180-7C4-2SQH
SAST	Modem	AEM-2100	0293

External I/O Cable

Cable Description	Length (m)	From/Port	To
Shielding Detachable USB Cable	1.5	Host PC	Mouse
Shielding Detachable Serial Cable	1.2	Host PC	Modem
Shielding Detachable K/B Cable	1.5	Host PC	Keyboard
Shielding Detachable VGA Cable	1.5	Host PC	LCD Monitor
Shielding Detachable USB Cable	1.0	EUT	Host PC

Block Diagram of Test Setup

For conducted emission



SUMMARY OF TEST RESULTS

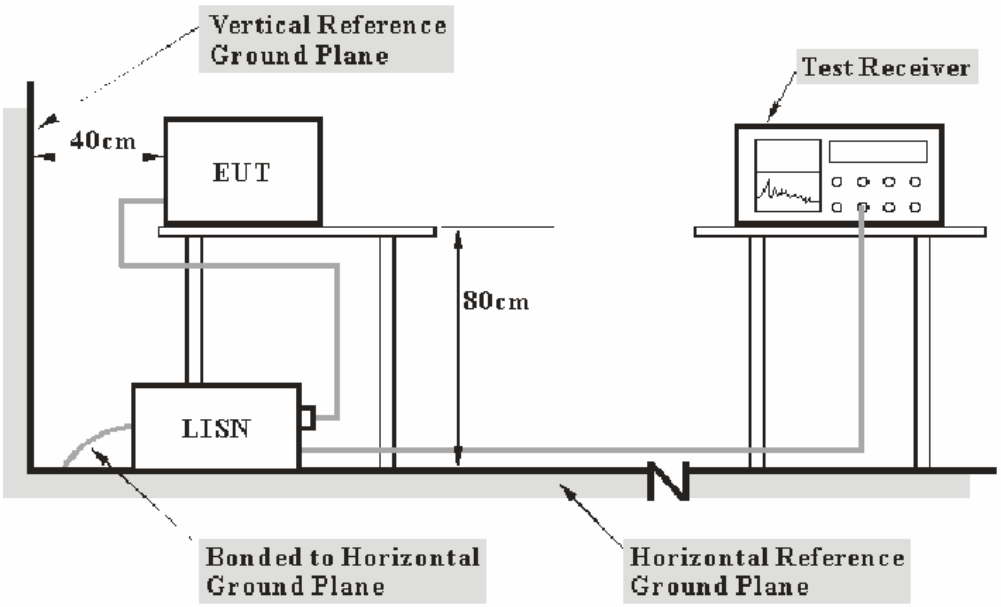
FCC Rules	Description of Test	Results
§15.107	AC Line Conducted Emissions	Compliance
§15.109	Radiated Spurious Emissions	Compliance

FCC §15.107 – AC LINE CONDUCTED EMISSIONS

Applicable Standard

According to FCC §15.107

EUT Setup



Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The measurement procedure of EUT setup is according with per ANSI C63.4-2009. The related limit was specified in FCC Part 15.107 Class B.

The spacing between the peripherals was 10 cm.

The host PC was connected to a 120 VAC/60 Hz power source.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

Test Procedure

During the conducted emission test, the host PC was connected to the LISN and the other relevant equipments were conncected to the AC power

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the Quasi-peak and average detection mode.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCI	101122	2012-08-08	2013-08-08
Rohde & Schwarz	1st LISN	ESH2-Z5	892107/021	2012-08-22	2013-08-21
COM-POWER	2nd LISN	LI-200	12208	NCR	NCR
BACL	CE Test software	BACL-CE	V1.0	-	-

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

Corrected Factor & Margin Calculation

The Corrected factor is calculated by adding LISN/ISN VDF (Voltage Division Factor) and Cable Loss and. The basic equation is as follows:

Correction Factor = LISN VDF + Cable Loss

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7 dB below the limit. The equation for margin calculation is as follows:

Margin = Limit – Corrected Amplitude

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Part 15.107, with the worst margin reading of:

8.7 dB at **8.448574 MHz** in the **Line** conducted mode

Test Data

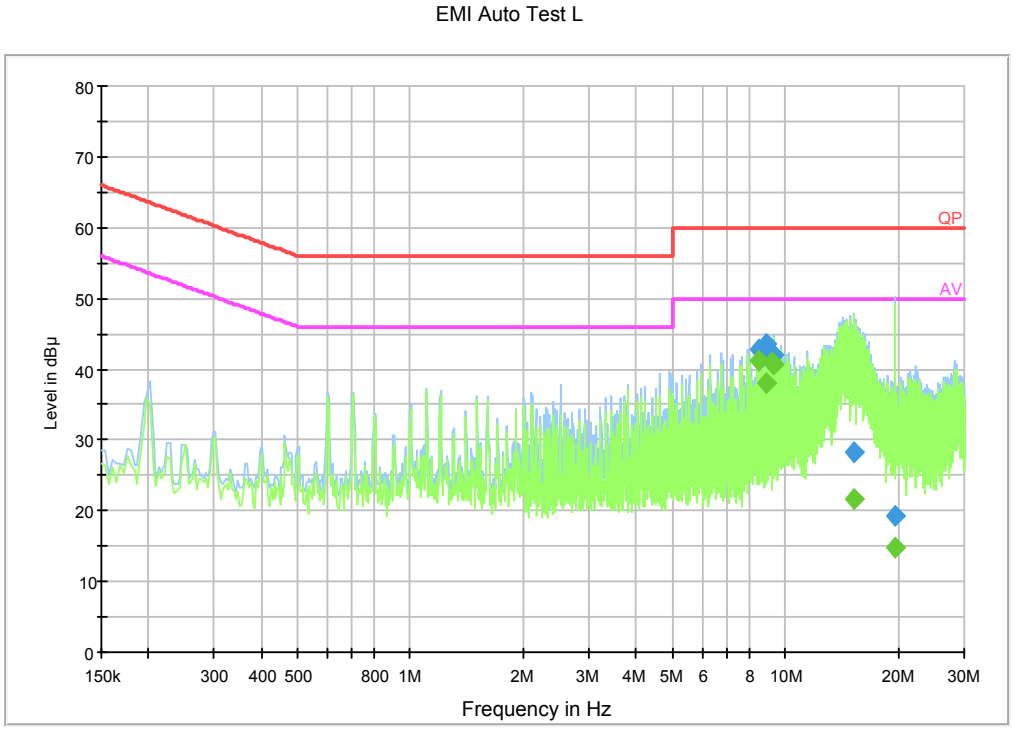
Environmental Conditions

Temperature:	25 ℃
Relative Humidity:	55 %
ATM Pressure:	100.0 kPa

The testing was performed by Candy Li on 2013-05-14.

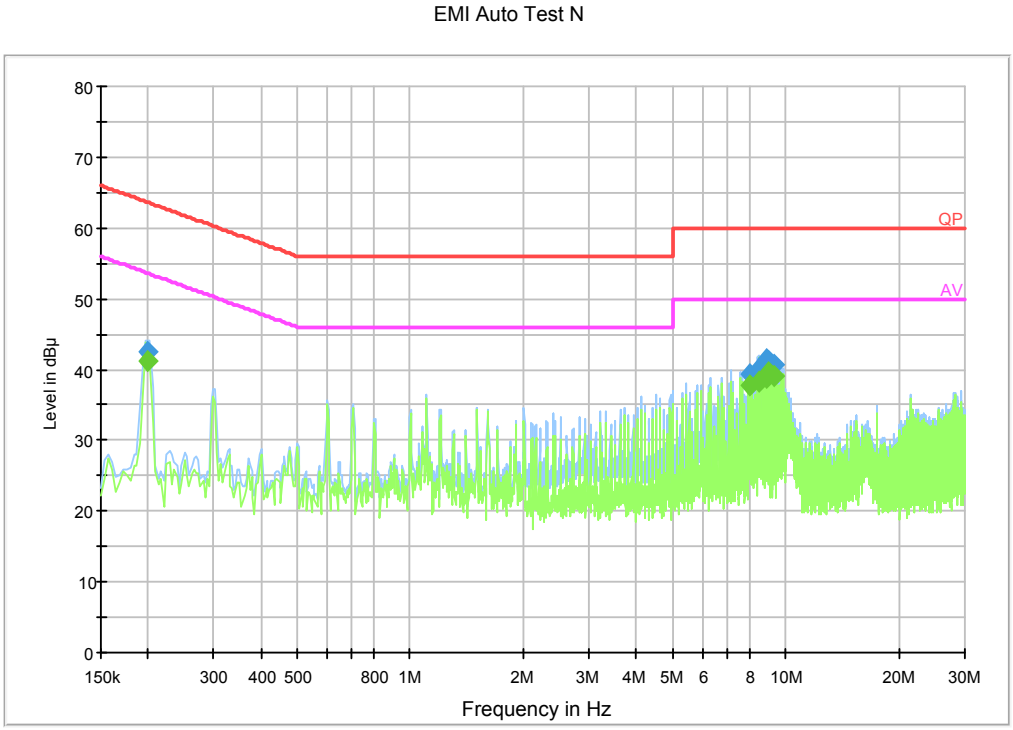
EUT Operation Mode: Downloading (data transforms with Computer)

AC 120V/60 Hz, Line



Frequency (MHz)	Corrected Amplitude (dBµV)	Corrected Factor (dB)	Limit (dBµV)	Margin (dB)	Remark (PK/ QP/Ave)
8.448574	41.3	0.6	50.0	8.7	Ave.
9.254147	41.0	0.7	50.0	9.0	Ave.
9.355281	40.6	0.7	50.0	9.4	Ave.
8.849222	38.1	0.7	50.0	11.9	Ave.
8.849222	43.5	0.7	60.0	16.5	QP
8.448574	42.8	0.6	60.0	17.2	QP
9.254147	42.1	0.7	60.0	17.9	QP
9.355281	41.9	0.7	60.0	18.1	QP
15.285749	21.7	1.0	50.0	28.3	Ave.
15.285749	28.1	1.0	60.0	31.9	QP
19.683150	14.7	1.0	50.0	35.3	Ave.
19.683150	19.3	1.0	60.0	40.7	QP

AC 120V/60 Hz, Neutral



Frequency (MHz)	Corrected Amplitude (dBµV)	Corrected Factor (dB)	Limit (dBµV)	Margin (dB)	Remark (PK/ QP/Ave)
8.952621	39.5	0.6	50.0	10.5	Ave.
9.354955	39.2	0.6	50.0	10.8	Ave.
8.849768	38.8	0.6	50.0	11.2	Ave.
8.450798	38.2	0.6	50.0	11.8	Ave.
8.046530	37.8	0.6	50.0	12.2	Ave.
0.200042	41.3	0.4	53.6	12.4	Ave.
8.849768	41.3	0.6	60.0	18.7	QP
8.952621	41.1	0.6	60.0	18.9	QP
9.354955	40.6	0.6	60.0	19.4	QP
8.450798	40.2	0.6	60.0	19.8	QP
8.046530	39.3	0.6	60.0	20.7	QP
0.200042	42.6	0.4	63.6	21.0	QP

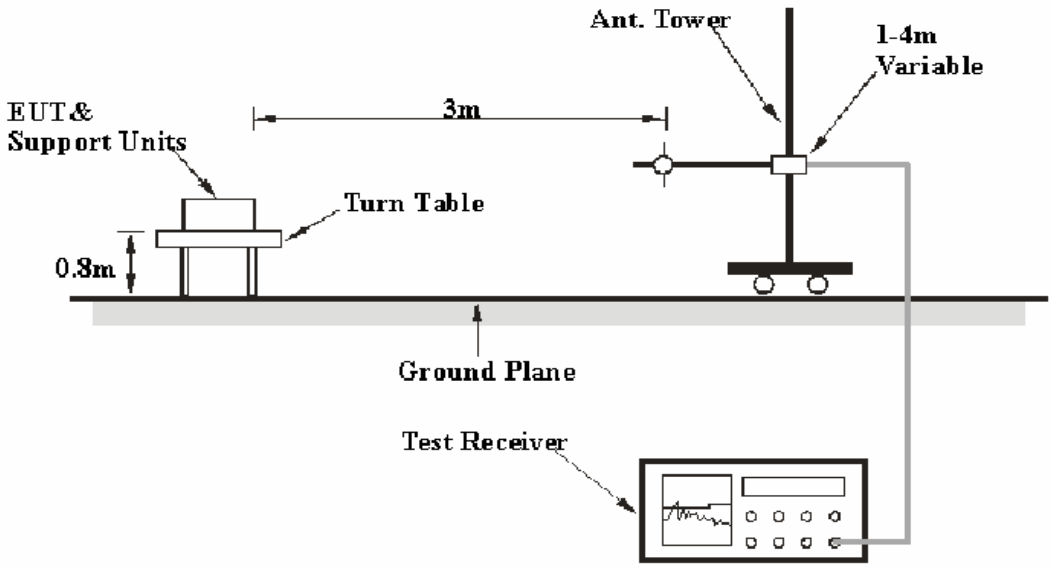
Note:
1) Correction Factor =LISN/ISN VDF (Voltage Division Factor) + Cable Loss
The corrected factor has been input into the transducer of the test software.
2) Corrected Amplitude = Reading + Correction Factor
3) Margin = Limit – Corrected Amplitude

FCC §15.109 - RADIATED SPURIOUS EMISSIONS

Applicable Standard

FCC §15.109

EUT Setup



The radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.4-2009. The specification used was the FCC Part 15.109 Class B limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

The host PC was connected to a 120 VAC/60 Hz power source.

EMI Test Receiver Setup

The system was investigated from 30 MHz to 2 GHz.

During the radiated emission test, the EMI test receiver was set with the following configurations:

Frequency Range	RBW	Video B/W	IF B/W	Detector
30 MHz – 1000 MHz	100 kHz	300 kHz	120 kHz	QP
Above 1 GHz	1MHz	3 MHz	/	PK
	1MHz	10 Hz	/	Ave.

Test Procedure

For the radiated emissions test, the host PC and relevant equipments were connected to AC floor outlet.

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
HP	Amplifier	HP8447E	1937A01046	2012-08-09	2013-08-08
Rohde & Schwarz	EMI Test Receiver	ESCI	101122	2012-08-08	2013-08-07
Sunol Sciences	Broadband Antenna	JB1	A040904-2	2011-11-28	2014-11-27
Mini-Circuits	Amplifier	ZVA-213+	N/A	2012-11-24	2013-11-23
Sunol Sciences	Horn Antenna	DRH-118	A052304	2011-12-01	2014-11-30
Rohde & Schwarz	Signal Analyzer	FSIQ26	8386001028	2012-11-24	2013-11-23
R&S	Auto test Software	EMC32	V6.30	-	-

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

Corrected Amplitude = Meter Reading + Antenna Factor + Cable Loss - Amplifier Gain

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7 dB means the emission is 7 dB below the limit. The equation for margin calculation is as follows:

Margin = Limit – Corrected Amplitude

Test Results Summary

According to the data in the following table, the EUT complied with the FCC §15.109 Class B, with the worst margin reading of:

2.0 dB at **203.976650 MHz** in the **Vertical** polarization

Test Data

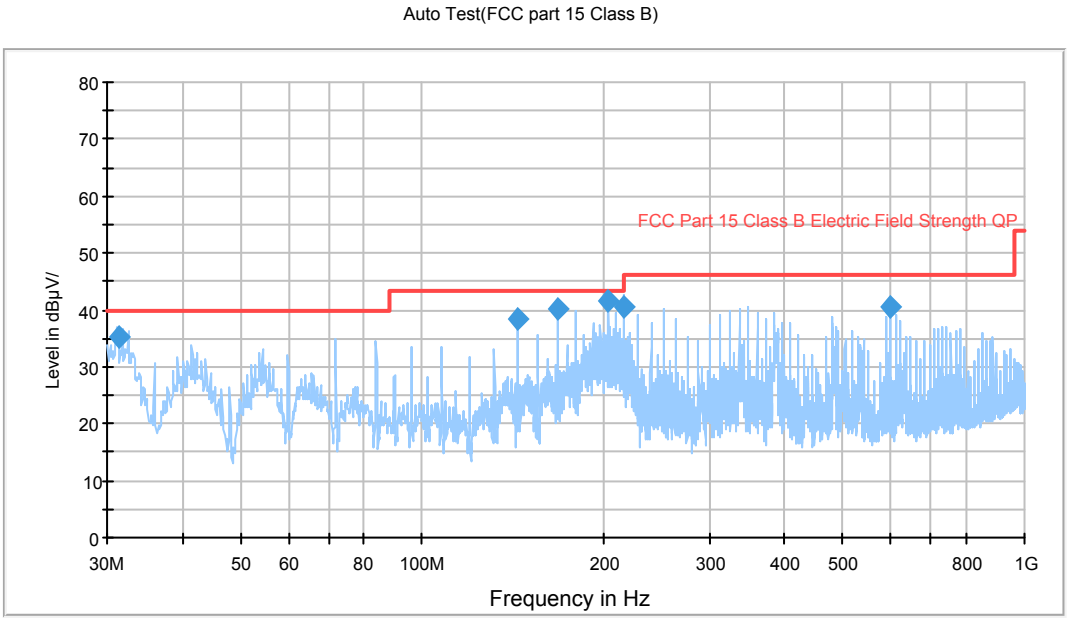
Environmental Conditions

Temperature:	25 ℃
Relative Humidity:	55 %
ATM Pressure:	100.0 kPa

The testing was performed by Candy Li on 2013-05-14.

EUT Operation Mode: Downloading (data transforms with Computer)

1) 30 MHz ~ 1000 MYHz:



Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity	Turntable Position (Degree)	Correction Factor (dB/m)	Limit (dBµV/m)	Margin (dB)
203.976650	41.5	106.0	V	2.0	-16.2	43.5	2.0
167.997200	40.3	210.0	H	258.0	-15.5	43.5	3.2
31.342350	35.4	105.0	V	176.0	-7.8	40.0	4.6
144.011450	38.5	179.0	H	181.0	-14.5	43.5	5.0
599.979750	40.6	105.0	H	309.0	-9.4	46.0	5.4
216.037850	40.4	125.0	V	3.0	-16.4	46.0	5.6

2) Above 1 GHz:

Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB)	Corrected Amplitude (dBµV/m)	FCC Part 15.109	
	Reading (dBµV)	Detector (PK/QP/Ave.)		Height (m)	Polar (H/V)			Limit (dBµV/m)	Margin (dB)
1964.2	33.89	Ave.	236	1.1	V	3.07	36.96	54	17.04
1388.3	34.42	Ave.	20	1.4	V	0.68	35.10	54	18.90
1964.2	31.04	Ave.	144	1.2	H	3.07	34.11	54	19.89
1388.3	32.39	Ave.	329	1.3	H	0.68	33.07	54	20.93
1964.2	49.65	PK	236	1.1	V	3.07	52.72	74	21.28
1388.3	50.22	PK	20	1.4	V	0.68	50.90	74	23.10
1964.2	47.71	PK	144	1.2	H	3.07	50.78	74	23.22
1388.3	49.54	PK	329	1.3	H	0.68	50.22	74	23.78

Note:
1) Corrected Amplitude = Corrected Factor + Reading
2) Corrected Factor=Antenna factor (RX) + Cable loss – Amplifier factor
3) Margin = Limit - Corrected Amplitude

******* END OF REPORT *******