FCC PART 15B, CLASS B

TEST REPORT

For

SWAGTEK

10205 NW 19th Street, STE 101, Miami, FL33172, United States

FCC ID: O55401417

Report Type:	**Product Type:**
Original Report	4 inch Smart Phone

Report Number:	RSZ170410002-00A
Report Date:	2017-06-16
Reviewed By:	Oscar Ye Engineer
Prepared By:	Bay Area Compliance Laboratories Corp. (Kunshan) No.248 Chenghu Road, Kunshan, Jiangsu province, China Tel: +86-0512-86175000 Fax: +86-0512-88934268 www.baclcorp.com.cn

TABLE OF CONTENTS

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *SWAGTEK's* product, model number: *X4V (FCC ID: O55401417, Brand: LOGIC, iSWAG,)* or the "EUT" in this report was a *4 inch Smart Phone,* which was measured approximately: 12.4 cm (L) × 6.5 cm (W) × 1.07 cm (H), rated with input voltage: DC 3.7V rechargeable Li-ion battery or DC 5.0V from adapter. The highest operating frequency is 2480MHz.

Adapter Information:
Input: AC100-240V, 50/60Hz, 0.2 A
Output: DC5.0V, 700mA

Notes: This series products model: LOGIC X4V, iSWAG Univrs, iSWAG Univrs-T, UNONU UM 400 and X4V are identical; they have the identical schematics, only named differently. Model X4V was selected for fully testing, the detailed information can be referred to the declaration which was stated and guaranteed by the applicant.

**All measurement and test data in this report was gathered from production sample serial number: 1700635 (Assigned by BACL, Kunshan).The EUT supplied by the applicant was received on 2017-04-10.*

Objective

This test report is prepared on behalf of *SWAGTEK i*n accordance with Part 2-Subpart J, Part 15-Subparts A, 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)

FCC Part 15.247 DSS, Part 15.247 DTS and FCC Part 22H & 24E PCE submissions with FCC ID: O55401417.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2014, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

All emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Kunshan). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Measurement Uncertainty

Item		Uncertainty
AC Power Lines Conducted Emissions		±3.26 dB
Radiated emission	30MHz~1GHz	±5.91dB
	Above 1G	±4.92dB

Test Facility

The test site used by Bay Area Compliance Laboratories Corp. (Kunshan) to collect test data is located on the No.248 Chenghu Road, Kunshan, Jiangsu province, China.

Test site at Bay Area Compliance Laboratories Corp. (Kunshan) 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 November 06, 2014. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2014.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 815570. 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 transfer with computer)

EUT Exercise Software

"BurnIn test v5.3" exercise software was used.

Special Accessories

No special accessory.

Equipment Modifications

No modification was made to the EUT tested.

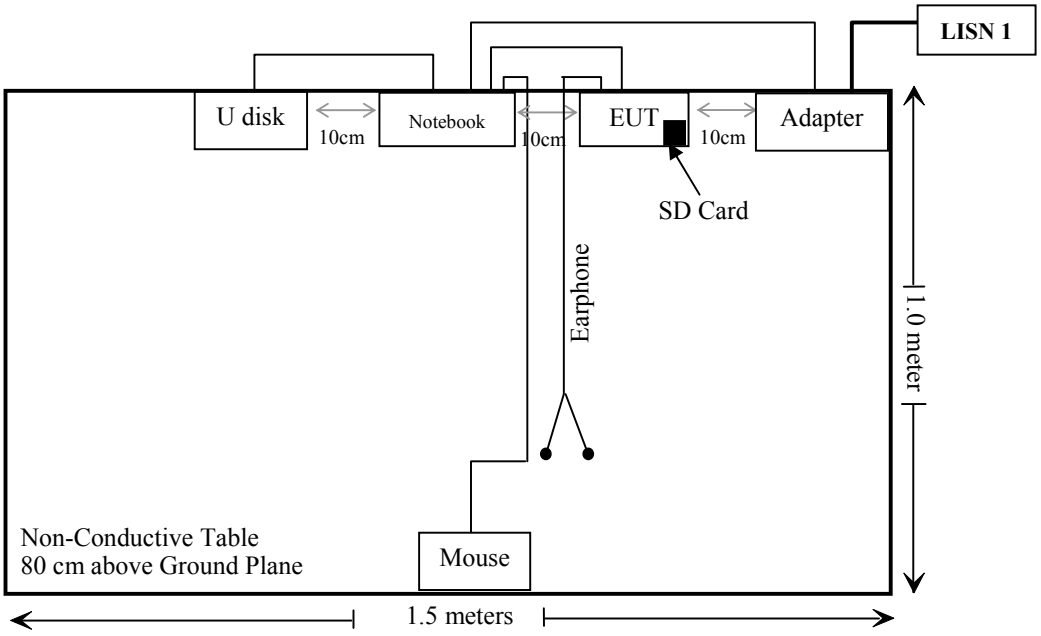
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
DELL	Notebook	E6410	GYXJ3A00 JSD2
DELL	Mouse	MOC5UO	G1900NKD
DELL	Adapter	LA90PM130	CN-06C3W2-72438-6BT-194A-A03
Kingston	U disk	4 GB	N/A

External I/O Cable

Cable Description	Length (m)	From/Port	To
Un-Shielding Detachable USB Cable	1.5	PC	U disk
Un-Shielding Detachable USB Cable	1.5	PC	Mouse
Un-shielding Detachable USB Cable	1.0	EUT	PC
Un-shielding Detachable AC Cable	0.9	Adapter	LISN 1
Un-shielding Un-detachable DC Cable	0.9	Adapter	PC

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

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

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
AC Line Conducted Emission Test					
Rohde & Schwarz	EMI Test Receiver	ESCS30	834115/007	2016-11-25	2017-11-25
Rohde & Schwarz	LISN	ESH3-Z5	862770/011	2016-10-10	2017-10-10
Rohde & Schwarz	Pulse limiter	ESH3-Z2	879940/0058	2016-06-19	2017-06-18
MICRO-COAX	Coaxial line	UFB-293B-1-0480-50X50	97F0173	2016-09-08	2017-09-08
Rohde & Schwarz	CE Test software	EMC 32	V 09.10.0	NCR	NCR
Radiated Emission Test					
Sonoma Instrunent	Amplifier	330	171377	2016-10-21	2017-10-21
Rohde & Schwarz	EMI Test Receiver	ESCI	100195	2016-11-25	2017-11-25
Sunol Sciences	Broadband Antenna	JB3	A090314-2	2016-01-09	2019-01-08
Narda	Pre-amplifier	AFS42-00101800	2001270	2016-09-08	2017-09-08
EMCO	Horn Antenna	3116	00084159	2016-10-18	2019-10-17
Rohde & Schwarz	Signal Analyzer	FSIQ26	100048	2016-11-25	2017-11-25
ETS	Horn Antenna	3115	6229	2016-01-11	2019-01-10
R&S	Auto test Software	EMC32	V 09.10.0	NCR	NCR
haojintech	Coaxial Cable	Cable-1	001	2016-12-12	2017-12-12
haojintech	Coaxial Cable	Cable-2	002	2016-12-12	2017-12-12
haojintech	Coaxial Cable	Cable-3	003	2016-12-12	2017-12-12
MICRO-COAX	Coaxial Cable	Cable-4	004	2016-12-12	2017-12-12
MICRO-COAX	Coaxial Cable	Cable-5	005	2016-12-12	2017-12-12

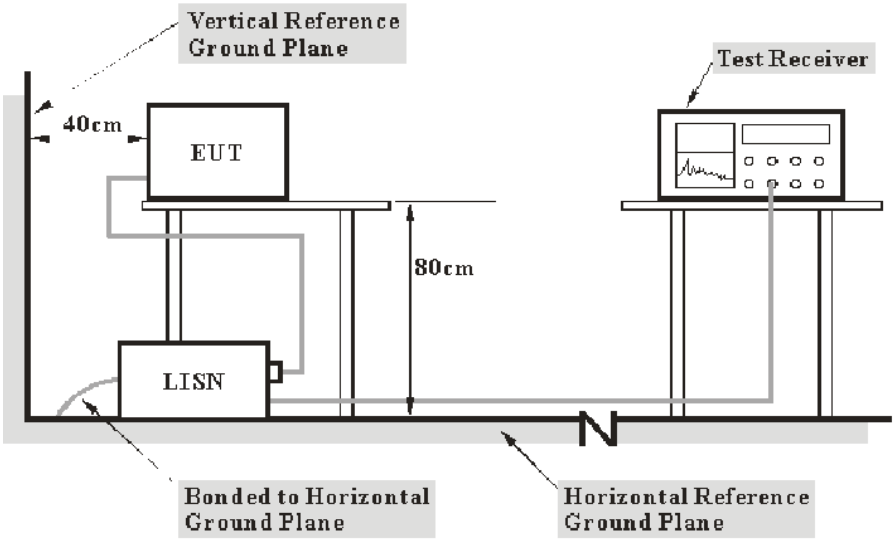
*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Kunshan) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI)

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 C63.4-2014. The related limit was specified in FCC Part 15.107 Class B.

The spacing between the peripherals was 10 cm.

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 adaptor of PC was connected to the LISN.

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.

Corrected Factor & Margin Calculation

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

Correction Factor = LISN VDF + Cable Loss + Transient Limiter Attenuation

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 recorded data in following table, the EUT complied with the FCC Part 15.107.

Refer to CISPR16-4-2:2011 and CISPR 16-4-1:2009, the measured level is in compliance with the limit if

$$L_m + U_{(Lm)} \leq L_{lim} + U_{cispr}$$

In BACL., $U_{(Lm)}$ is less than U_{cispr}, if L_m is less than L_{lim}, it implies that the EUT complies with the limit.

Test Data

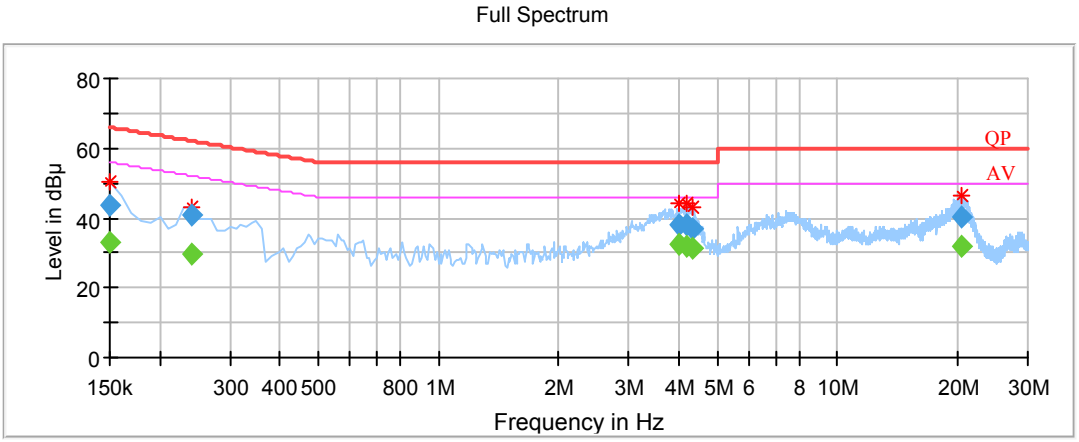
Environmental Conditions

Temperature:	24 ℃
Relative Humidity:	48 %
ATM Pressure:	101.0 kPa

The testing was performed by Layne Li on 2017-04-23.

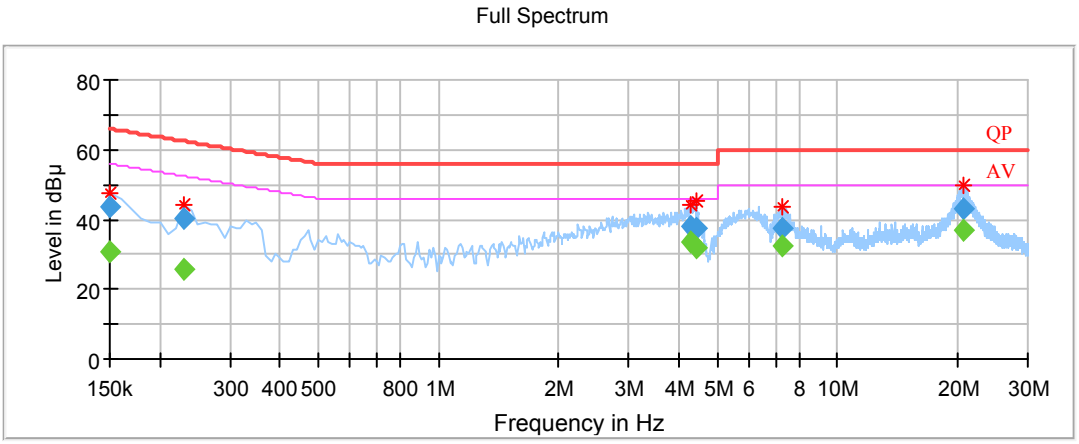
EUT Operation Mode: Downloading

AC 120V/60 Hz, Line



Frequency (MHz)	QuasiPeak (dBµV)	Average (dB µ V)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.150000	---	32.82	9.000	L1	10.1	23.18	56.00	Compliance
0.150000	43.66	---	9.000	L1	10.1	22.34	66.00	Compliance
0.240000	---	29.38	9.000	L1	10.0	22.72	52.10	Compliance
0.240000	40.73	---	9.000	L1	10.0	21.37	62.10	Compliance
4.010000	---	32.49	9.000	L1	9.9	13.51	46.00	Compliance
4.010000	38.19	---	9.000	L1	9.9	17.81	56.00	Compliance
4.170000	---	32.06	9.000	L1	9.9	13.94	46.00	Compliance
4.170000	37.92	---	9.000	L1	9.9	18.08	56.00	Compliance
4.330000	---	31.16	9.000	L1	9.9	14.84	46.00	Compliance
4.330000	36.96	---	9.000	L1	9.9	19.04	56.00	Compliance
20.550000	---	32.15	9.000	L1	10.4	17.85	50.00	Compliance
20.550000	40.42	---	9.000	L1	10.4	19.58	60.00	Compliance

AC 120V/60 Hz, Neutral



Frequency (MHz)	QuasiPeak (dBµV)	Average (dB µ V)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.150000	---	30.94	9.000	N	10.1	25.06	56.00	Compliance
0.150000	43.44	---	9.000	N	10.1	22.56	66.00	Compliance
0.230000	---	25.55	9.000	N	10.1	26.90	52.45	Compliance
0.230000	40.10	---	9.000	N	10.1	22.35	62.45	Compliance
4.290000	---	33.32	9.000	N	9.9	12.68	46.00	Compliance
4.290000	38.27	---	9.000	N	9.9	17.73	56.00	Compliance
4.420000	---	31.68	9.000	N	9.9	14.32	46.00	Compliance
4.420000	37.36	---	9.000	N	9.9	18.64	56.00	Compliance
7.240000	---	32.41	9.000	N	9.9	17.59	50.00	Compliance
7.240000	37.35	---	9.000	N	9.9	22.65	60.00	Compliance
20.740000	---	36.82	9.000	N	10.2	13.18	50.00	Compliance
20.740000	43.14	---	9.000	N	10.2	16.86	60.00	Compliance

Note:
1) Correction Factor =LISN VDF (Voltage Division Factor) + Cable Loss + Transient Limiter Attenuation
2) Corrected Amplitude = Reading + Correction Factor
3) Margin = Limit – Corrected Amplitude

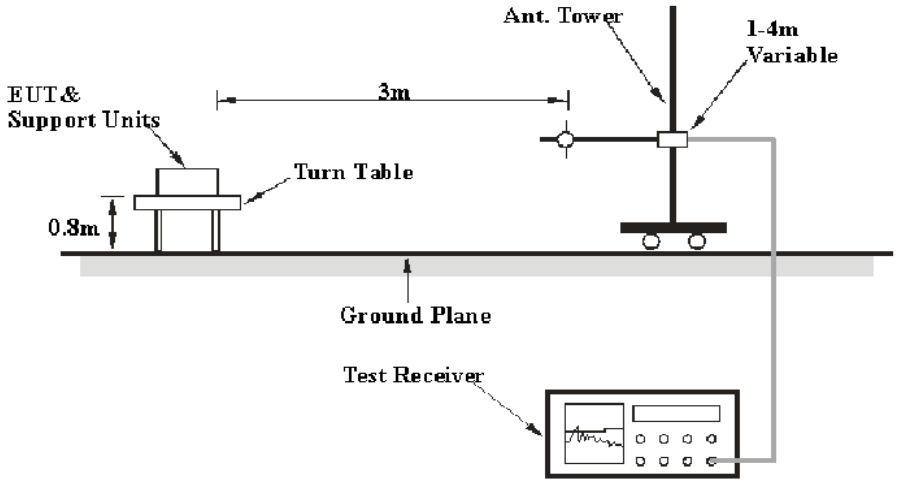
FCC §15.109 - RADIATED SPURIOUS EMISSIONS

Applicable Standard

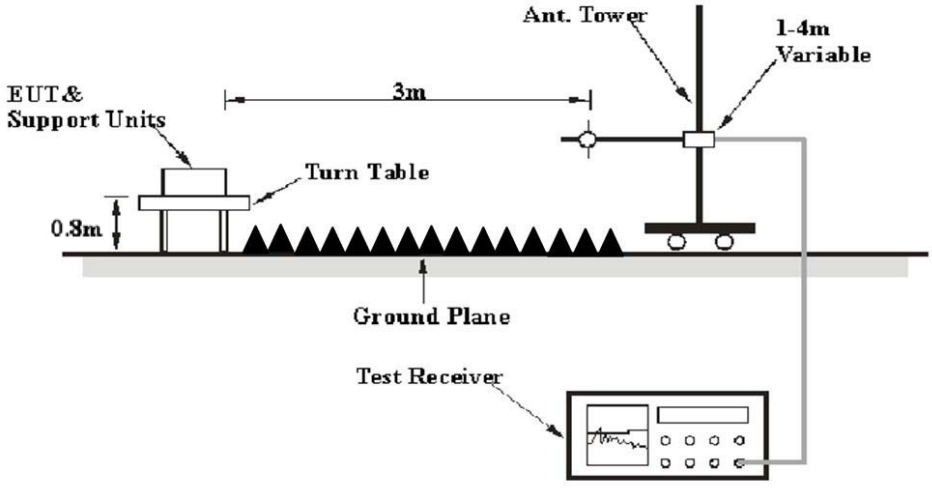
FCC §15.109

EUT Setup

Below 1 GHz:



Above 1GHz:



The radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.4-2014. 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.

EMI Test Receiver Setup

The system was investigated from 30 MHz to 12.4GHz.

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

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

All data was recorded in the Quasi-peak detector mode from 30 MHz to 1 GHz and PK and average detector modes for frequencies above 1 GHz.

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,

Refer to CISPR16-4-2:2011 and CISPR 16-4-1:2009, the measured level is in compliance with the limit if

$$L_m + U_{(Lm)} \leq L_{lim} + U_{cispr}$$

In BACL, $U_{(Lm)}$ is less than U_{cispr}, if L_m is less than L_{lim}, it implies that the EUT complies with the limit.

Test Data

Environmental Conditions

Temperature:	24 ℃
Relative Humidity:	48 %
ATM Pressure:	101.0 kPa

The testing was performed by Layne Li on 2017-05-23.

EUT Operation Mode: Downloading

30 MHz~12.4 GHz

Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor （dB/m）	Corrected Amplitude (dBuV/m)	FCC Part 15B	
	Reading (dBμV)	Detector (PK/QP/Ave.)		Height (m)	Polar (H / V)			Limit (dBuV/m)	Margin (dB)
30.05	31.88	QP	54	1.2	V	-4.98	26.90	40	13.10
163.13	41.34	QP	280	1.0	V	-12.31	29.03	43.5	14.47
320.04	32.93	QP	265	1.3	H	-10.37	22.56	46	23.44
464.56	36.26	QP	88	1.1	V	-7.21	29.05	46	16.95
633.00	32.85	QP	68	1.1	V	-5.02	27.83	46	18.17
848.97	34.81	QP	86	2.1	V	-1.59	33.22	46	12.78
1335.63	59.59	PK	187	1.7	V	-10.66	48.93	74	25.07
1335.63	43.37	Ave.	187	1.7	V	-10.66	32.71	54	21.29
1547.48	58.77	PK	105	1.6	V	-9.46	49.31	74	24.69
1547.48	42.48	Ave.	105	1.6	V	-9.46	33.02	54	20.98

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

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