



FCC 47 CFR PART 15 SUBPART B TEST REPORT

for

LE910-NVG

MODEL:LE910-NVG, LE910-SVG

Test Report Number:
T140415W01-D

Issued for

Telit Communications S.p.A.

Via Stazione di Prosecco 5/B
34010 Sgonico, Trieste - Italy.

Issued By:

Compliance Certification Services Inc.

Wugu Laboratory

No.11, Wugong 6th Rd., Wugu Dist.,
New Taipei City 24891, Taiwan. (R.O.C.)

TEL: 886-2-2299-9720

FAX: 886-2-2299-9721

E-Mail: service@ccsrf.com

Issued Date: June 19, 2014



Note: This report shall not be reproduced except in full, without the written approval of Compliance Certification Services Inc. This document may be altered or revised by Compliance Certification Services Inc. personnel only, and shall be noted in the revision section of the document. The client should not use it to claim product endorsement by TAF, A2LA, NIST or any government agencies. The test results in the report only apply to the tested sample.



Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	June 19, 2014	Initial Issue	ALL	Doris Chu



TABLE OF CONTENTS

1	TEST RESULT CERTIFICATION	4
2	EUT DESCRIPTION.....	5
3	TEST METHODOLOGY	6
3.1.	DECISION OF FINAL TEST MODE.....	6
3.2.	EUT SYSTEM OPERATION	6
4	SETUP OF EQUIPMENT UNDER TEST	7
4.1.	DESCRIPTION OF SUPPORT UNITS.....	7
4.2.	CONFIGURATION OF SYSTEM UNDER TEST	8
5	FACILITIES AND ACCREDITATIONS	9
5.1.	FACILITIES	9
5.2.	ACCREDITATIONS.....	9
5.3.	MEASUREMENT UNCERTAINTY	10
6	CONDUCTED EMISSION MEASUREMENT	11
6.1.	LIMITS OF CONDUCTED EMISSION MEASUREMENT	11
6.2.	TEST INSTRUMENTS	11
6.3.	TEST PROCEDURES.....	12
6.4.	TEST SETUP	13
6.5.	DATA SAMPLE:	13
6.6.	TEST RESULTS.....	14
7	RADIATED EMISSION MEASUREMENT	22
7.1.	LIMITS OF RADIATED EMISSION MEASUREMENT	22
7.2.	TEST INSTRUMENTS	24
7.3.	TEST PROCEDURES.....	26
7.4.	TEST SETUP	27
7.5.	DATA SAMPLE:	28
7.6.	TEST RESULTS.....	29
8	PHOTOGRAPHS OF THE TEST CONFIGURATION.....	45
APPENDIX 1 - PHOTOGRAPHS OF EUT		



1 TEST RESULT CERTIFICATION

Product:	LE910-NVG
Model:	LE910-NVG, LE910-SVG
Brand:	Telit
Applicant:	Telit Communications S.p.A. Via Stazione di Prosecco 5/B 34010 Sgonico, Trieste - Italy
Manufacturer:	Telit Communications S.p.A. Via Stazione di Prosecco 5/B 34010 Sgonico, Trieste - Italy
Tested:	May 10 ~ June 19, 2014
Test Voltage:	120Vac, 60Hz

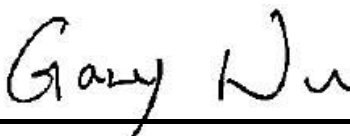
EMISSION			
Standard	Item	Result	Remarks
FCC 47 CFR Part 15 Subpart B, ICES-003 Issue 5-2012 ANSI C63.4-2009	Conducted (Power Port)	PASS	Meet Class B limit
	Radiated	PASS	Meet Class B limit

Note: 1. The statements of test result on the above are decided by the request of test standard only; the measurement uncertainties are not factored into this compliance determination.
2. The information of measurement uncertainty is available upon the customer's request.

Deviation from Applicable Standard
None

The above equipment has been tested by Compliance Certification Services Inc., and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Approved by:



Gary Wu
Section Manager

Reviewed by:



Angel Cheng
Section Manager



2 EUT DESCRIPTION

Product	LE910-NVG
Brand Name	Telit
Model	LE910-NVG, LE910-SVG
Applicant	Telit Communications S.p.A.
Identify Number	T140415W01
Received Date	April 15, 2014
EUT Power Rating	DC 3.8V powered from Host device.

Note:

1. Client consigns only one sample to test (model number: LE910-NVG). Therefore, the testing Lab. just guarantees the unit, which has been tested.
2. Difference of the two model numbers (list on this report) is identical, please see as below:

Model Number	Difference
LE910-NVG	SVG is the same as NVG but with 3G technology disabled by SW. Their HW is identical
LE910-SVG	

I/O Port

I/O PORT TYPES	Q'TY	TESTED WITH
1). Single Port	1	1
2). SIM Slot	1	1



3 TEST METHODOLOGY

3.1. DECISION OF FINAL TEST MODE

1. The following test modes were scanned during the preliminary test:

Pre-Test Mode
Mode 1 : WCDMA Band II
Mode 2 : WCDMA Band V
Mode 3 : LTE Band IV
Mode 4 : LTE Band XIII

2. After the preliminary scan, the following test mode was found to produce the highest emission level.

Final Test Mode		
Emission	Conducted Emission	Mode 1 ~ 4
	Radiated Emission	Mode 1 ~ 4

Then, the above highest emission mode of the configuration of the EUT and cable was chosen for all final test items.

3.2. EUT SYSTEM OPERATION

- 1 Setup the EUT and simulators as shown on 4.2.
- 2 Turn on the power of all equipment.
- 3 Turn on the Hyper terminal and Enter the script.
- 4 The EUT will receive the RF signal source and sustained action.
- 5 Adjust to the test mode, and begin the test.

Note: Test program is self-repeating throughout the test.



4 SETUP OF EQUIPMENT UNDER TEST

4.1. 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.

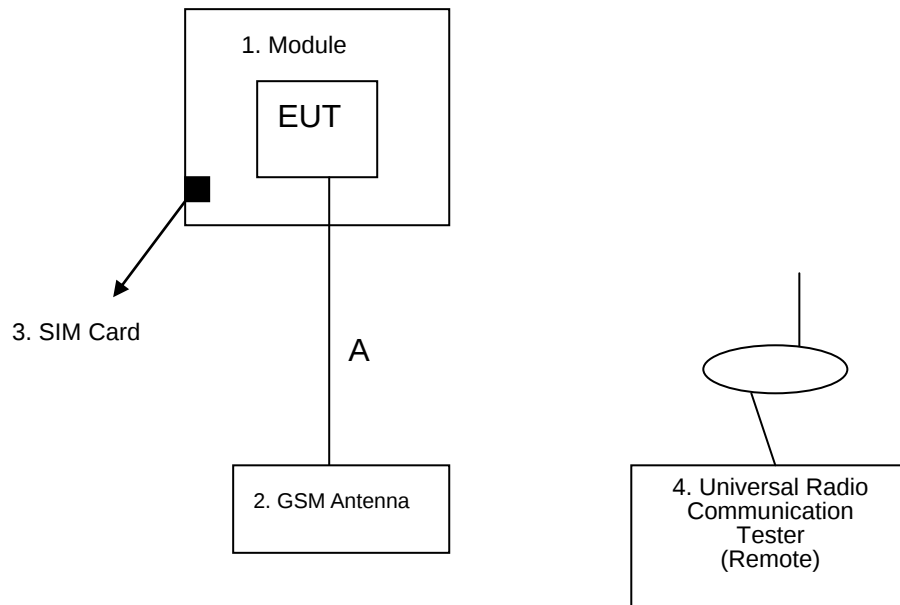
No.	Equipment	Trade Name	Model No.	Serial No.	FCC ID / BSMI ID	Power Cord
1.	Module	N/A	N/A	N/A	N/A	N/A
2.	Antenna	N/A	N/A	N/A	N/A	N/A
3.	SIM Card	N/A	N/A	N/A	N/A	N/A
4.	Universal Radio Communication Tester (Remote)	R & S	CMU 200	N/A	N/A	Non-shielded 1.8m

No.	Cable Name	Unit	Shielded	Length	With Core
(A)	Antenna Cable	1	☐ Shielded, ☒ Non	1.8 m	☐ With Core, ☒ Non

Note: Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.



4.2. CONFIGURATION OF SYSTEM UNDER TEST





5 FACILITIES AND ACCREDITATIONS

5.1. FACILITIES

All measurement facilities used to collect the measurement data are located at:

- ☒ No.11, Wugong 6th Rd., Wugu Dist., New Taipei City 24891, Taiwan. (R.O.C.)
- ☒ No.139, Wugong Rd., Wugu Dist., New Taipei City 24891, Taiwan (R.O.C.)
- ☐ No.81-1, Lane 210, Bade 2nd Rd., Lujhu Township, Taoyuan County 33841, TAIWAN, R.O.C.
- ☐ No.163-1, Jhongsheng Rd., Sindian City, Taipei County 23151, Taiwan.

The sites are constructed in conformance with the requirements of ANSI C63.4 and CISPR 22. All receiving equipment conforms to CISPR 16-1-1, CISPR 16-1-2, CISPR 16-1-3, CISPR 16-1-4, CISPR 16-1-5.

5.2. ACCREDITATIONS

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

Taiwan	TAF (TAF 1309)
USA	A2LA (0824.01)

The measuring facility of laboratories has been authorized or registered by the following approval agencies.

Canada	Industry Canada (3M Semi Anechoic Chamber: IC 2324G-1 / IC 2324G-2 / 2324J-1 / 2324J-2 to perform)
Norway	Nemko
Japan	VCCI 966 Chamber C: Radiated emissions: 30 MHz -1000 MHz: R-3282 / Above 1GHz: G-146 10M Chamber: Radiated emissions: 30 MHz -1000 MHz: R-3283 / Above 1GHz: G-147 Conducted Emission B: C-3700 / T-1839
USA	FCC (3M Semi Anechoic Chamber (FCC MRA: TW1039) to perform FCC Part 15 measurements)

Copies of granted accreditation certificates are available for downloading from our web site, <http://www.ccsrf.com>



5.3. 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	9kHz~30MHz	± 1.2575 dB
Radiated emissions	30~200MHz	± 3.9163 dB
	200~1000MHz	± 3.9030 dB
	Above 1GHz	± 2.5208 dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

Consistent with industry standard (e.g. CISPR 22:2008, clause 11, Measurement Uncertainty) determining compliance with the limits shall be based on the results of the compliance measurement. Consequently the measured emissions being less than the maximum allowed emission result in this being a compliant test or passing test.

The acceptable measurement uncertainty value without requiring revision of the compliance statement is based on conducted and radiated emissions being less than U_{CISPR} which is 3.6dB and 5.2dB respectively. CCS values (called U_{Lab} in CISPR 16-4-2) is less than U_{CISPR} as shown in the table above. Therefore, MU need not be considered for compliance.



6 CONDUCTED EMISSION MEASUREMENT

6.1. LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79	66	66 - 56	56 - 46
0.50 - 5.0	73	60	56	46
5.0 - 30.0	73	60	60	50

NOTE:

- (1) The lower limit shall apply at the transition frequencies.
- (2) The limit decreases in line with the logarithm of the frequency in the range 0.15 to 0.50 MHz.
- (3) All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

6.2. TEST INSTRUMENTS

Conducted Emission Room #B				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
EMI Test Receiver	R&S	ESCI	101073	07/30/2014
LISN	R&S	ENV216	101054	06/04/2015
LISN	EMCO	3825/2	9106-1809	07/02/2014
ISN	FCC	FCC-TLISN-T2-02-09	100105	07/29/2014
ISN	FCC	FCC-TLISN-T4-02-09	20395	05/22/2015
ISN	FCC	FCC-TLISN-T8-02-09	100106	07/30/2014
Capacitive Voltage Probe	FCC	F-CVP-1	100185	03/23/2015
Test S/W	CCS-3A1-CE			

Note:

The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.



6.3. TEST PROCEDURES (please refer to measurement standard or CCS SOP PA-031)

Procedure of Preliminary Test

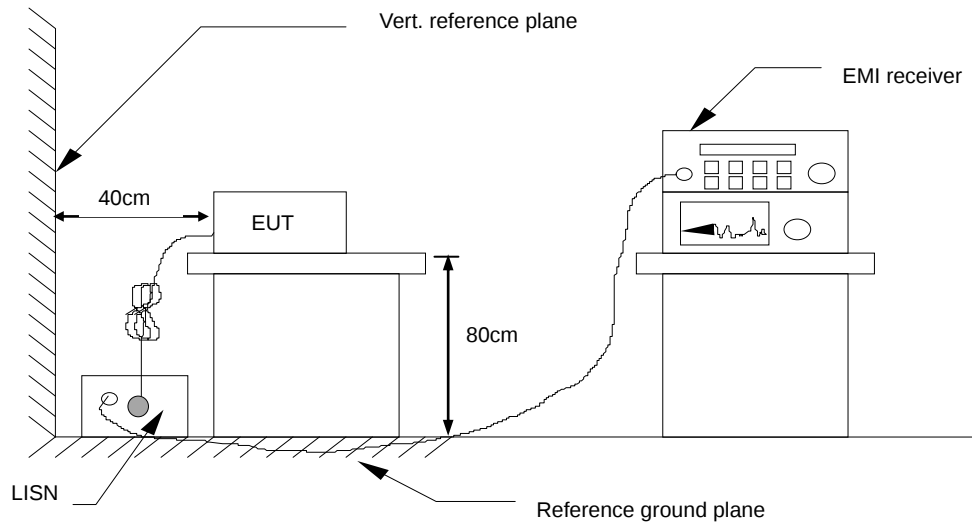
- The EUT and support equipment, if needed, were set up as per the test configuration to simulate typical usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.4 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor standing equipment, it is placed on the ground plane, which has a 12 mm non-conductive covering to insulate the EUT from the ground plane.
- All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
- The test equipment EUT installed by AC 120VAC/60Hz main power, through a Line Impedance Stabilization Network (LISN), which was supplied power source and was grounded to the ground plane.
- All support equipment power by from a second LISN.
- The test program of the EUT was started. Emissions were measured on each current carrying line of the EUT using an EMI Test Receiver connected to the LISN powering the EUT.
- The Receiver scanned from 150kHz to 30MHz for emissions in each of the test modes.
- During the above scans, the emissions were maximized by cable manipulation.
- The test mode(s) described in Item 3.1 were scanned during the preliminary test.
- After the preliminary scan, we found the test mode described in Item 3.1 producing the highest emission level.
- The worst configuration of EUT and cable of the above highest emission level were recorded for reference of the final test.

Procedure of Final Test

- EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test.
- A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit.
- The test data of the worst-case condition(s) was recorded.



6.4. TEST SETUP



- For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

6.5. DATA SAMPLE:

Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark
x.xx	43.95	33.00	10.00	53.95	43.00	56.00	46.00	-2.05	-3.00	Pass

Frequency (MHz) = Emission frequency in MHz

Reading (dBuV) = Uncorrected Analyzer/Receiver reading + Insertion loss of LISN, if it > 0.5 dB

Correction Factor (dB) = LISN Factor + Cable Loss

Result (dBuV) = Raw reading converted to dBuV and CF added

Limit (dBuV) = Limit stated in standard

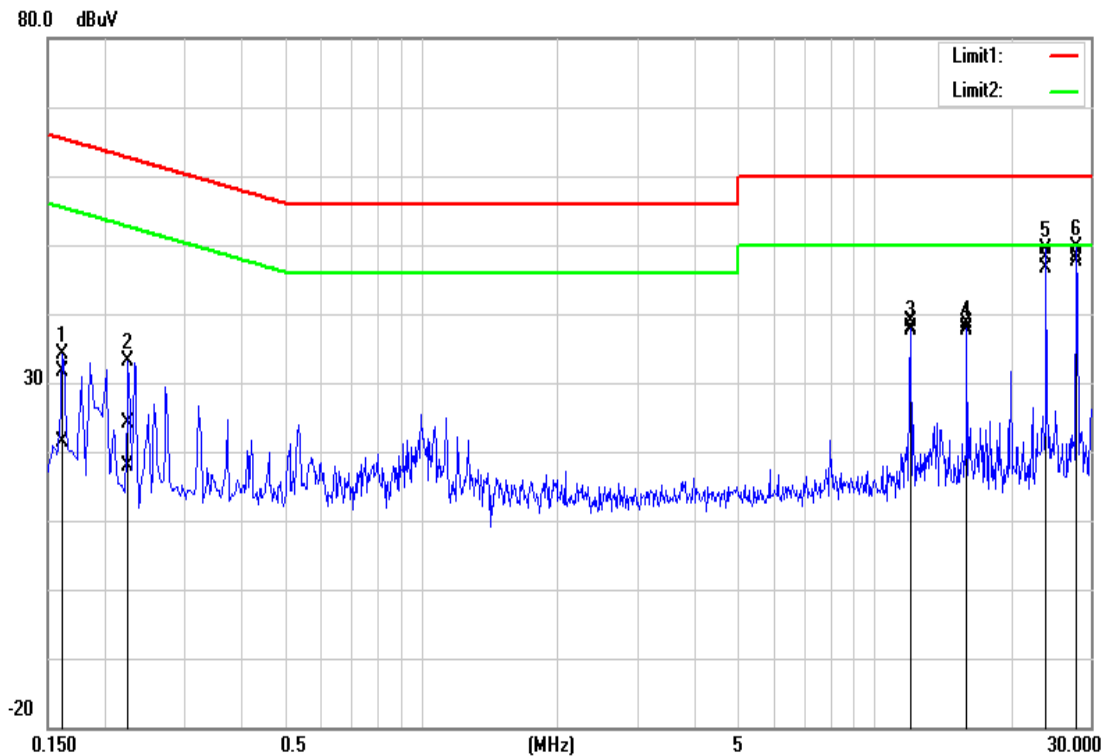
Margin (dB) = Result (dBuV) – Limit (dBuV)



6.6. TEST RESULTS

CCS Conduction Test

Model No.	LE910-NVG	Test Date	2014/6/19
Environmental Conditions	24°C, 50% RH	Test Mode	Mode 1
Tested by	Moore Cheng	Line	L1



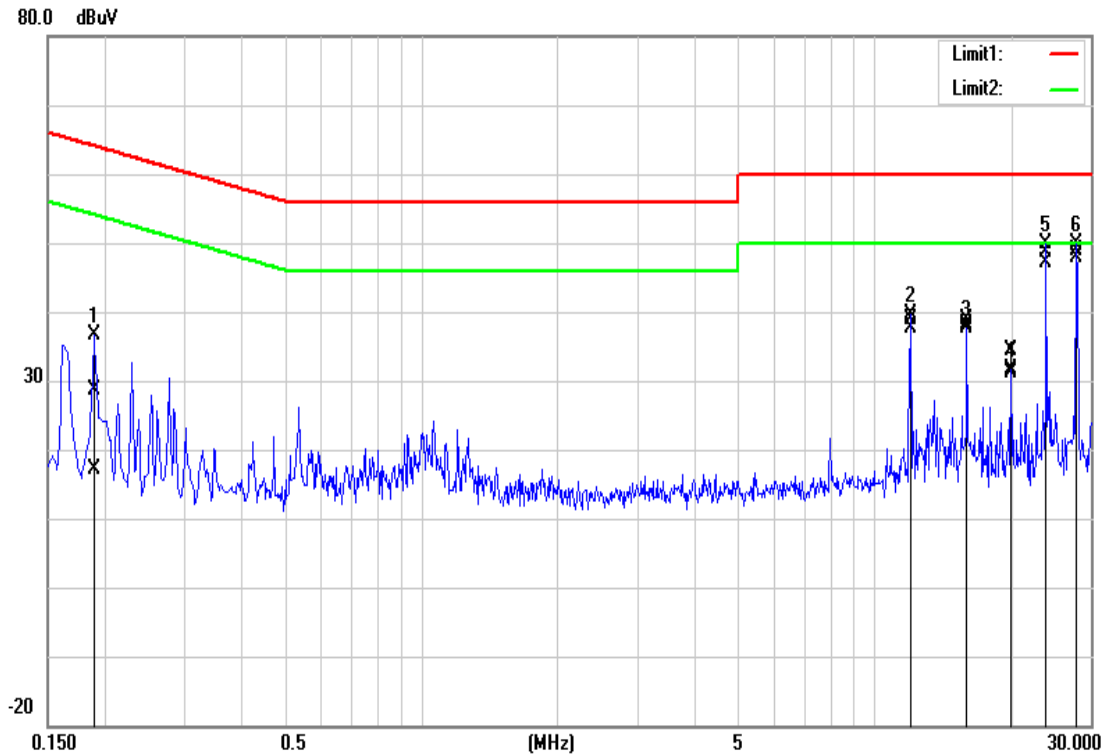
NO.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark (Pass/Fail)
1	0.1620	22.05	11.80	9.66	31.71	21.46	65.36	55.36	-33.65	-33.90	Pass
2	0.2266	14.46	8.30	9.62	24.08	17.92	62.57	52.57	-38.49	-34.65	Pass
3	12.0020	28.94	27.66	9.98	38.92	37.64	60.00	50.00	-21.08	-12.36	Pass
4	16.0020	28.60	27.60	10.00	38.60	37.60	60.00	50.00	-21.40	-12.40	Pass
5	24.0020	38.21	36.63	9.97	48.18	46.60	60.00	50.00	-11.82	-3.40	Pass
6*	28.0020	38.57	37.77	9.92	48.49	47.69	60.00	50.00	-11.51	-2.31	Pass

REMARKS: L1 = Line One (Live Line)



CCS Conduction Test

Model No.	LE910-NVG	Test Date	2014/6/19
Environmental Conditions	24°C, 50% RH	Test Mode	Mode 1
Tested by	Moore Cheng	Line	L2



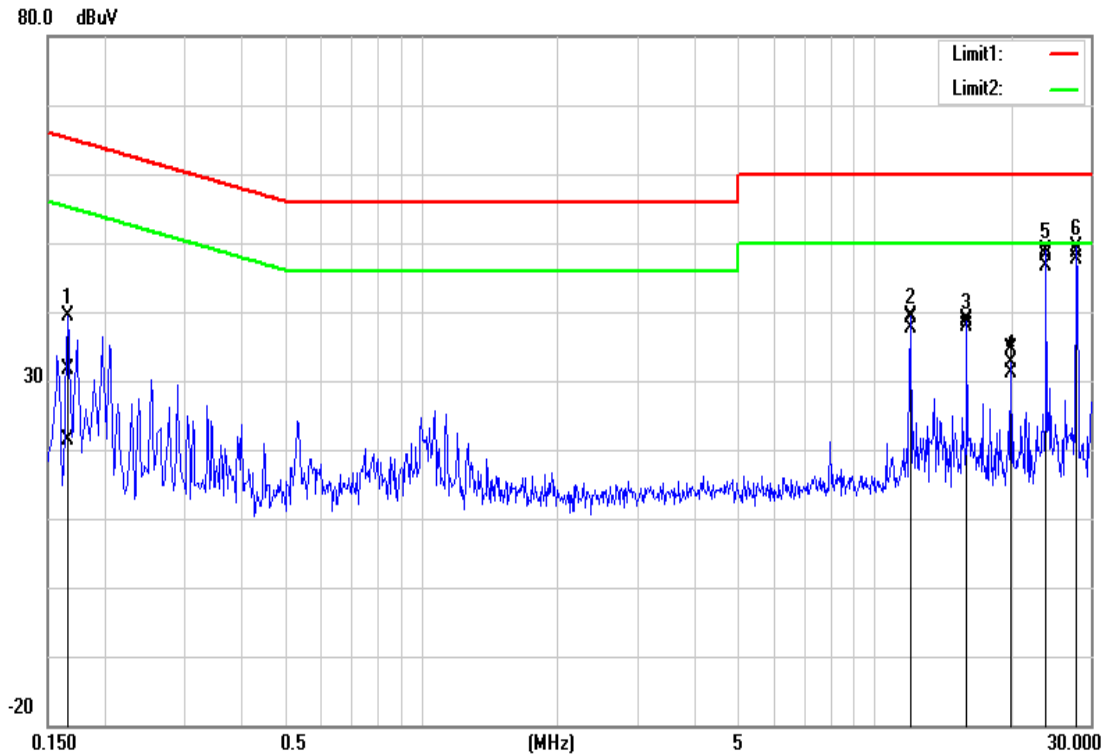
NO.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark (Pass/Fail)
1	0.1900	18.86	7.53	9.68	28.54	17.21	64.03	54.04	-35.49	-36.83	Pass
2	12.0020	28.92	27.69	10.02	38.94	37.71	60.00	50.00	-21.06	-12.29	Pass
3	16.0020	28.87	27.98	10.04	38.91	38.02	60.00	50.00	-21.09	-11.98	Pass
4	20.0020	24.43	21.12	10.05	34.48	31.17	60.00	50.00	-25.52	-18.83	Pass
5	24.0020	38.47	37.00	10.05	48.52	47.05	60.00	50.00	-11.48	-2.95	Pass
6*	28.0020	38.95	37.82	10.05	49.00	47.87	60.00	50.00	-11.00	-2.13	Pass

REMARKS: L2 = Line Two (Neutral Line)



CCS Conduction Test

Model No.	LE910-NVG	Test Date	2014/6/19
Environmental Conditions	24°C, 50% RH	Test Mode	Mode 2
Tested by	Moore Cheng	Line	L1



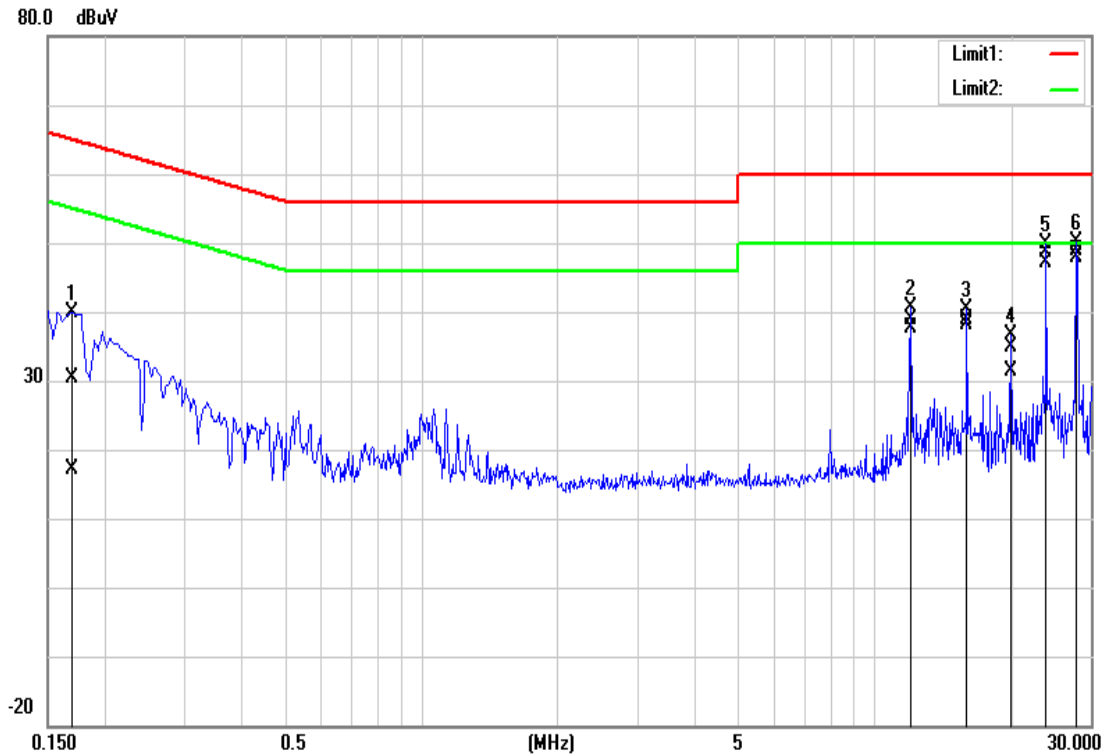
NO.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark (Pass/Fail)
1	0.1660	22.01	11.71	9.65	31.66	21.36	65.15	55.16	-33.49	-33.80	Pass
2	12.0020	29.06	27.65	9.98	39.04	37.63	60.00	50.00	-20.96	-12.37	Pass
3	16.0020	28.82	27.85	10.00	38.82	37.85	60.00	50.00	-21.18	-12.15	Pass
4	20.0020	24.52	21.07	10.03	34.55	31.10	60.00	50.00	-25.45	-18.90	Pass
5	24.0020	38.15	36.63	9.97	48.12	46.60	60.00	50.00	-11.88	-3.40	Pass
6*	28.0020	38.69	37.76	9.92	48.61	47.68	60.00	50.00	-11.39	-2.32	Pass

REMARKS: L1 = Line One (Live Line)



CCS Conduction Test

Model No.	LE910-NVG	Test Date	2014/6/19
Environmental Conditions	24°C, 50% RH	Test Mode	Mode 2
Tested by	Moore Cheng	Line	L2



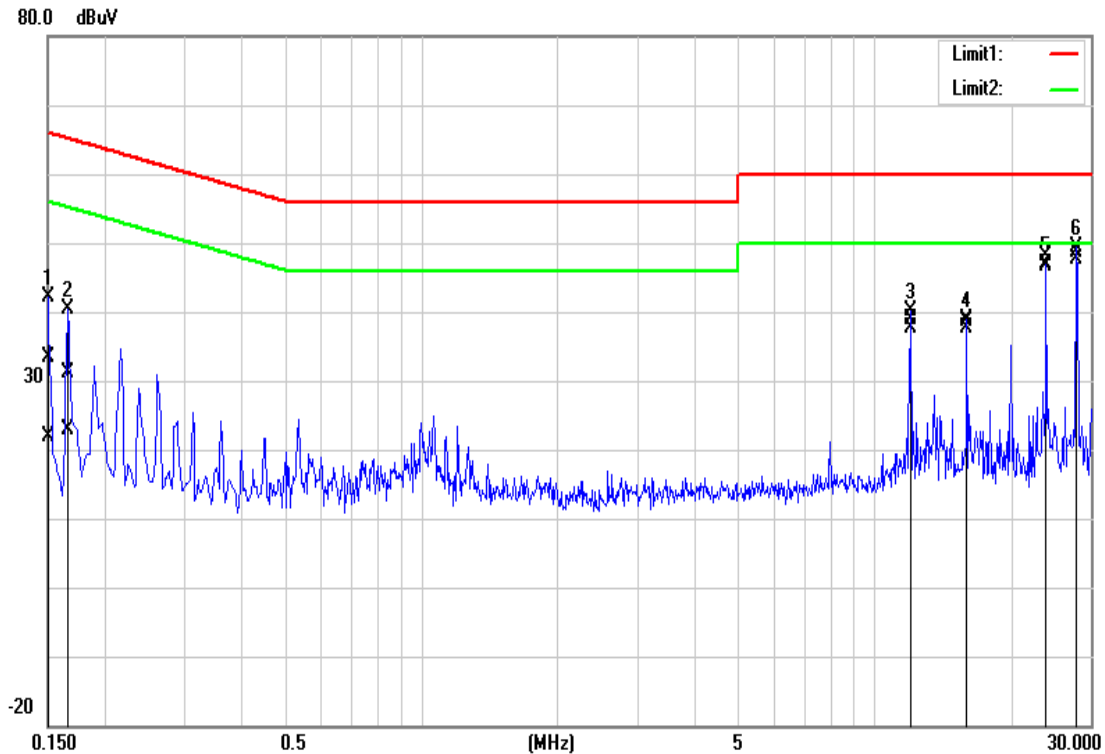
NO.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark (Pass/Fail)
1	0.1700	20.59	7.34	9.70	30.29	17.04	64.96	54.96	-34.67	-37.92	Pass
2	12.0020	28.94	27.62	10.02	38.96	37.64	60.00	50.00	-21.04	-12.36	Pass
3	16.0020	28.78	28.00	10.04	38.82	38.04	60.00	50.00	-21.18	-11.96	Pass
4	20.0020	24.79	21.38	10.05	34.84	31.43	60.00	50.00	-25.16	-18.57	Pass
5	24.0020	38.58	37.00	10.05	48.63	47.05	60.00	50.00	-11.37	-2.95	Pass
6*	28.0020	38.90	37.89	10.05	48.95	47.94	60.00	50.00	-11.05	-2.06	Pass

REMARKS: L2 = Line Two (Neutral Line)



CCS Conduction Test

Model No.	LE910-NVG	Test Date	2014/6/19
Environmental Conditions	24°C, 50% RH	Test Mode	Mode 3
Tested by	Moore Cheng	Line	L1



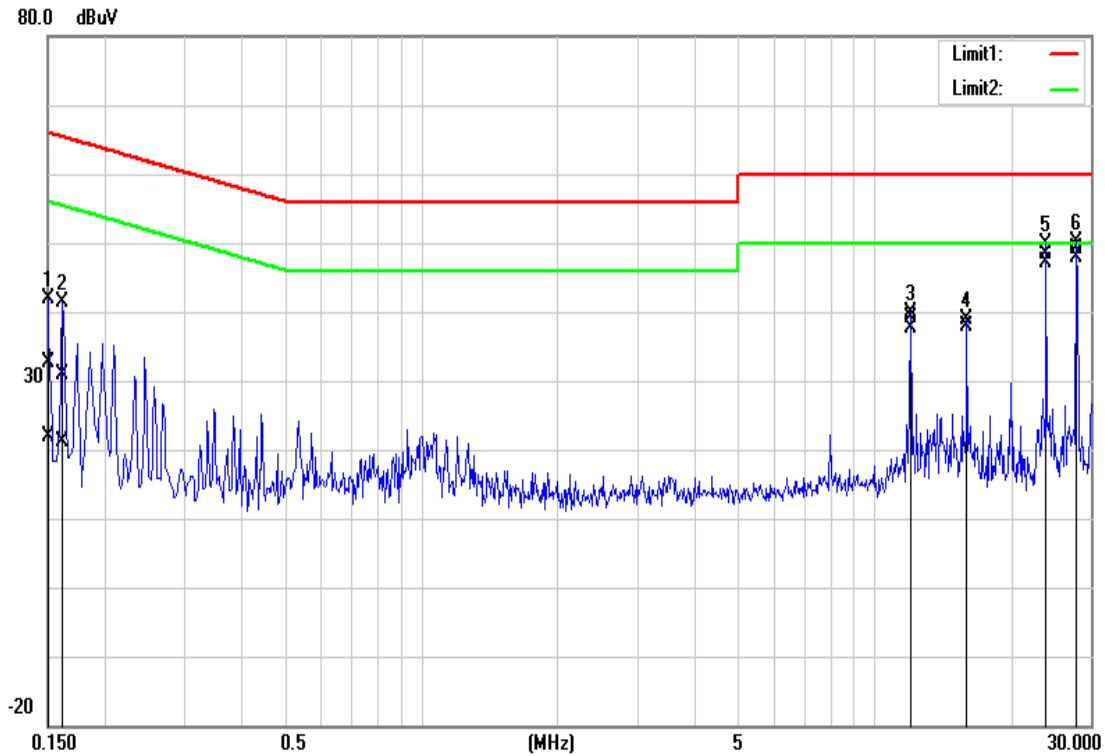
NO.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark (Pass/Fail)
1	0.1500	23.64	12.30	9.67	33.31	21.97	65.99	56.00	-32.68	-34.03	Pass
2	0.1660	21.36	13.14	9.65	31.01	22.79	65.15	55.16	-34.14	-32.37	Pass
3	12.0020	28.89	27.66	9.98	38.87	37.64	60.00	50.00	-21.13	-12.36	Pass
4	16.0020	28.58	27.61	10.00	38.58	37.61	60.00	50.00	-21.42	-12.39	Pass
5	24.0020	38.07	36.65	9.97	48.04	46.62	60.00	50.00	-11.96	-3.38	Pass
6*	28.0020	38.70	37.77	9.92	48.62	47.69	60.00	50.00	-11.38	-2.31	Pass

REMARKS: L1 = Line One (Live Line)



CCS Conduction Test

Model No.	LE910-NVG	Test Date	2014/6/19
Environmental Conditions	24°C, 50% RH	Test Mode	Mode 3
Tested by	Moore Cheng	Line	L2



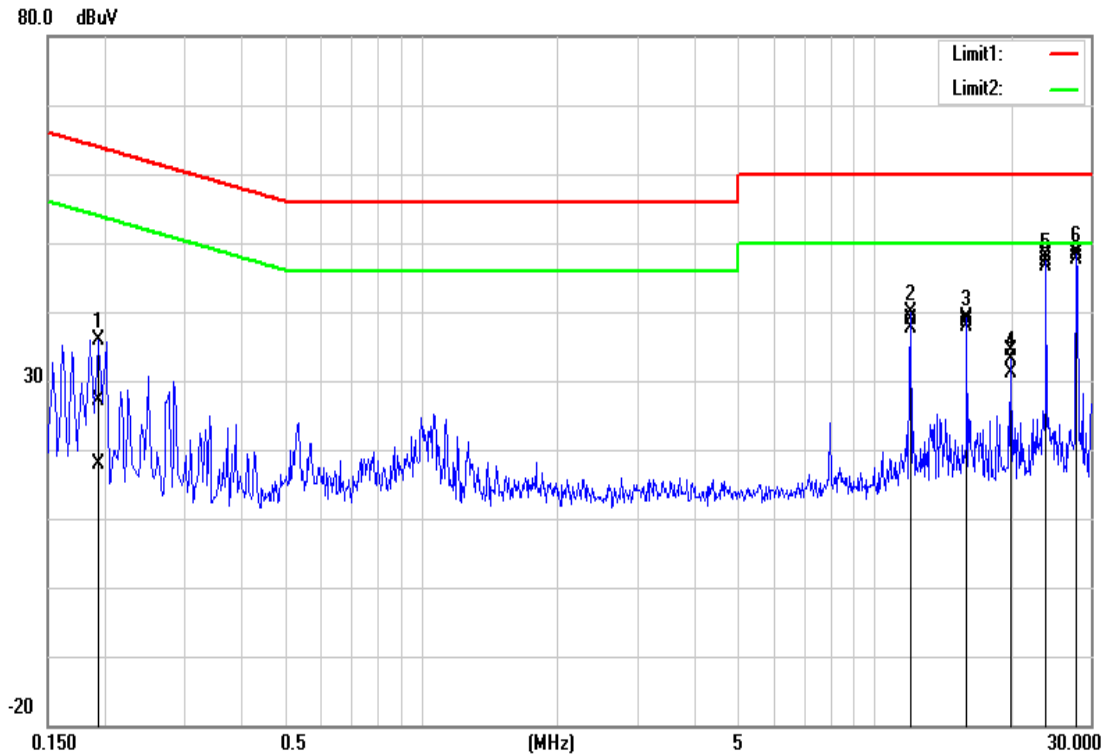
NO.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark (Pass/Fail)
1	0.1500	23.01	12.19	9.72	32.73	21.91	65.99	56.00	-33.26	-34.09	Pass
2	0.1620	21.29	11.50	9.71	31.00	21.21	65.36	55.36	-34.36	-34.15	Pass
3	12.0020	29.03	27.73	10.02	39.05	37.75	60.00	50.00	-20.95	-12.25	Pass
4	16.0020	28.80	27.78	10.04	38.84	37.82	60.00	50.00	-21.16	-12.18	Pass
5	24.0020	38.42	37.03	10.05	48.47	47.08	60.00	50.00	-11.53	-2.92	Pass
6*	28.0020	39.06	37.85	10.05	49.11	47.90	60.00	50.00	-10.89	-2.10	Pass

REMARKS: L2 = Line Two (Neutral Line)



CCS Conduction Test

Model No.	LE910-NVG	Test Date	2014/6/19
Environmental Conditions	24°C, 50% RH	Test Mode	Mode 4
Tested by	Moore Cheng	Line	L1



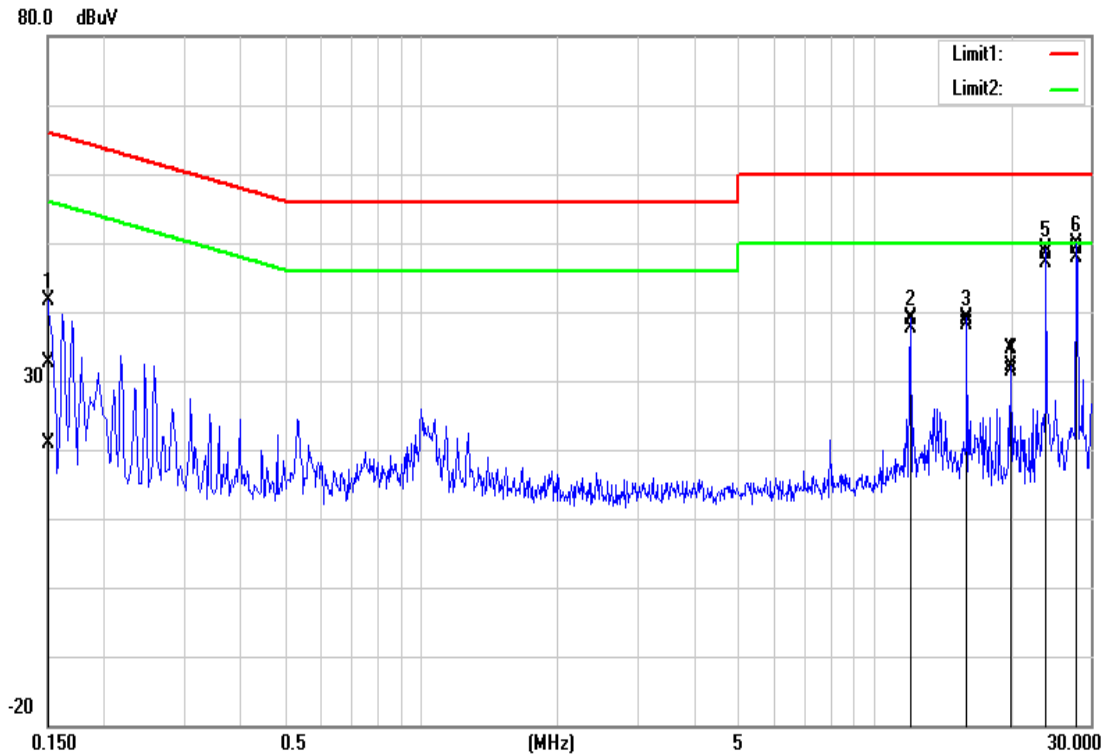
NO.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark (Pass/Fail)
1	0.1940	17.55	8.24	9.63	27.18	17.87	63.86	53.86	-36.68	-35.99	Pass
2	12.0020	28.94	27.60	9.98	38.92	37.58	60.00	50.00	-21.08	-12.42	Pass
3	16.0020	28.72	27.82	10.00	38.72	37.82	60.00	50.00	-21.28	-12.18	Pass
4	20.0020	24.46	21.16	10.03	34.49	31.19	60.00	50.00	-25.51	-18.81	Pass
5	24.0020	38.09	36.61	9.97	48.06	46.58	60.00	50.00	-11.94	-3.42	Pass
6*	28.0020	38.69	37.77	9.92	48.61	47.69	60.00	50.00	-11.39	-2.31	Pass

REMARKS: L1 = Line One (Live Line)



CCS Conduction Test

Model No.	LE910-NVG	Test Date	2014/6/19
Environmental Conditions	24°C, 50% RH	Test Mode	Mode 4
Tested by	Moore Cheng	Line	L2



NO.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark (Pass/Fail)
1	0.1500	22.83	11.26	9.72	32.55	20.98	66.00	56.00	-33.45	-35.02	Pass
2	12.0020	28.86	27.61	10.02	38.88	37.63	60.00	50.00	-21.12	-12.37	Pass
3	16.0020	28.86	27.97	10.04	38.90	38.01	60.00	50.00	-21.10	-11.99	Pass
4	20.0020	24.46	21.38	10.05	34.51	31.43	60.00	50.00	-25.49	-18.57	Pass
5	24.0020	38.38	36.99	10.05	48.43	47.04	60.00	50.00	-11.57	-2.96	Pass
6*	28.0020	39.09	37.84	10.05	49.14	47.89	60.00	50.00	-10.86	-2.11	Pass

REMARKS: L2 = Line Two (Neutral Line)



7 RADIATED EMISSION MEASUREMENT

7.1. LIMITS OF RADIATED EMISSION MEASUREMENT

According to FCC Part 15.33 (b), for an unintentional radiator, including a digital device, the spectrum shall be investigated from the lowest radio frequency signal generated or used in the device, without going below the lowest frequency for which a radiated emission limit is specified, up to the frequency shown in the following table:

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.75	30
1.75-108	1000
108-500	2000
500-1000	5000
Above 1000	5 th harmonic of the highest frequency or 40GHz, whichever is lower

Below 1GHz (for digital device)

FREQUENCY (MHz)	dBuV/m (At 10m)	
	Class A	Class B
30 ~ 230	40	30
230 ~ 1000	47	37

Limit tables for non-digital device:

Class A Radiated Emission limit at 10m (for others)

Frequency (MHz)	Field Strength Limit (uV/m)Q.P.	Field Strength Limit (dBuV/m)Q.P.
30 - 88	90	39
88 - 216	150	43.5
216 – 960	210	46.4
Above 960	300	49.5

Class B Radiated Emission limit at 3m (for others)

Frequency (MHz)	Field Strength Limit (uV/m)Q.P.	Field Strength Limit (dBuV/m)Q.P.
30 - 88	100	40
88 - 216	150	43.5
216 – 960	200	46
Above 960	500	54

**Above 1GHz (for all device)**

Frequency (MHZ)	Class A (dBuV/m) (At 10m)		Class B (dBuV/m) (At 3m)	
	Average	Peak	Average	Peak
Above 1000	49.5	69.5	54	74

NOTE: (1) The lower limit shall apply at the transition frequencies.

(2) Emission level (dBuV/m) = 20 log Emission level (uV/m).

(3) The measurement above 1GHz is at close-in distances 3m, and determine the limit **L₂** corresponding to the close-in distance **d₂** by applying the following relation: **L₂ = L₁ (d₁/d₂)**, where **L₁** is the specified limit in microvolts per metre (**uV/m**) at the distance **d₁ (10m)**, **L₂** is the new limit for distance **d₂ (3m)**.

So the new Class A limit above 1GHz at 3m is as following table:

Frequency (MHZ)	Class A (dBuV/m) (At 3m)	
	Average	Peak
Above 1000	60	80



7.2. TEST INSTRUMENTS

Wugu 10M Chamber				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	MY48250297	10/02/2014
EMI Test Receiver	R&S	ESCI	100961	09/04/2014
EMI Test Receiver	R&S	ESCI	100962	09/04/2014
Pre-Amplifier	HP	8447D	2944A07754	05/05/2015
Pre-Amplifier	HP	8447D	2944A08150	05/05/2015
Pre-Amplifier	EMC	EMC012645	980056	05/05/2015
Pre-Amplifier	MITEQ	AMF-6F-260400-40-8P	985646	08/08/2014
Bilog Antenna	TESEQ	CBL 6112D	31674	09/09/2014
Bilog Antenna	TESEQ	CBL6112D	31675	09/09/2014
Horn Antenna	EMCO	3117	55167	01/08/2015
Horn Antenna	EMCO	3116	26370	01/06/2015
Coaxial Cable	Huber+Suhner	104PEA	33948/4PEA	05/05/2015
Coaxial Cable	Huber+Suhner	104PEA	33949/4PEA	05/05/2015
Coaxial Cable	Huber+Suhner	104	330026/4	05/05/2015
Coaxial Cable	Huber+Suhner	104	330029/4	05/05/2015
Coaxial Cable	Huber+Suhner	104	329382/4	05/05/2015
Coaxial Cable	Huber+Suhner	104	330028/4	05/05/2015
Turn Table	CCS	CC-T-1F	N/A	N.C.R
Antenna Tower	CCS	CC-A-1F	N/A	N.C.R
Controller	CCS	CC-C-1F	N/A	N.C.R
Antenna Tower	Sunol Sciences	TLT2	031010-5	N.C.R.
Controller	Sunol Sciences	SC104V	031010-1	N.C.R.
Site NSA	CCS	N/A	N/A	11/22/2014
Site VSWR	CCS	N/A	N/A	11/28/2014
Test S/W	EZ-EMC (CCS-3A1RE)			

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.



Wugu 966 Chamber C				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4407B	MY44212679	02/23/2015
EMI Test Receiver	R&S	ESCI	100960	11/19/2014
Bilog Antenna	Sunol Sciences	JB1	A100209-1	09/09/2014
Horn Antenna	EMCO	3117	00055163	01/06/2015
Pre-Amplifier	MITEQ	1625-3000	1490938	05/05/2015
Pre-Amplifier	EMC	EMC051845	980040	05/05/2015
Coaxial Cable	Huber+Suhner	104PEA	34376/4PEA	05/05/2015
Coaxial Cable	Huber+Suhner	104PEA	33954/4PEA	05/05/2015
Coaxial Cable	Huber+Suhner	104PEA	34418/4PEA	05/05/2015
Turn Table	CCS	CC-T-1F	N/A	N.C.R
Antenna Tower	CCS	CC-A-1F	N/A	N.C.R
Controller	CCS	CC-C-1F	N/A	N.C.R
Site NSA	CCS	N/A	N/A	10/29/2014
Site VSWR	CCS	N/A	N/A	11/27/2014
Test S/W	EZ-EMC (CCS-3A1RE)			

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.



7.3. TEST PROCEDURES (please refer to measurement standard or CCS SOP PA-031)

The basic test procedure was in accordance with ANSI C63.4-2009 and ICES-003: 2004.

Frequency range 30MHz ~ 1GHz

1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter semi-anechoic chamber room. The table was rotated 360 degrees to determine the position.
2. The EUT was set 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3. The height of antenna is varied from one meter to four meter above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was turned to heights for 1 meter to 4 meters and the turn table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1GHz.

NOTE: The resolution bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.

Frequency range above 1GHz

1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber room. The table was rotated 360 degrees to determine the position.
2. The EUT was set 3 meters away from the directional antenna, which was pointed towards the source of the emission within the EUT. This could be done by either pointing the antenna at an angle towards the source of the emission, or by rotating the EUT, in both height and polarization, to maximize the measured emission.
3. The height of antenna can be varied from one meter to four meters, the height of adjustment depends on the EUT height and the antenna 3 dB beamwidth both, to detect the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was turned to heights and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1GHz.

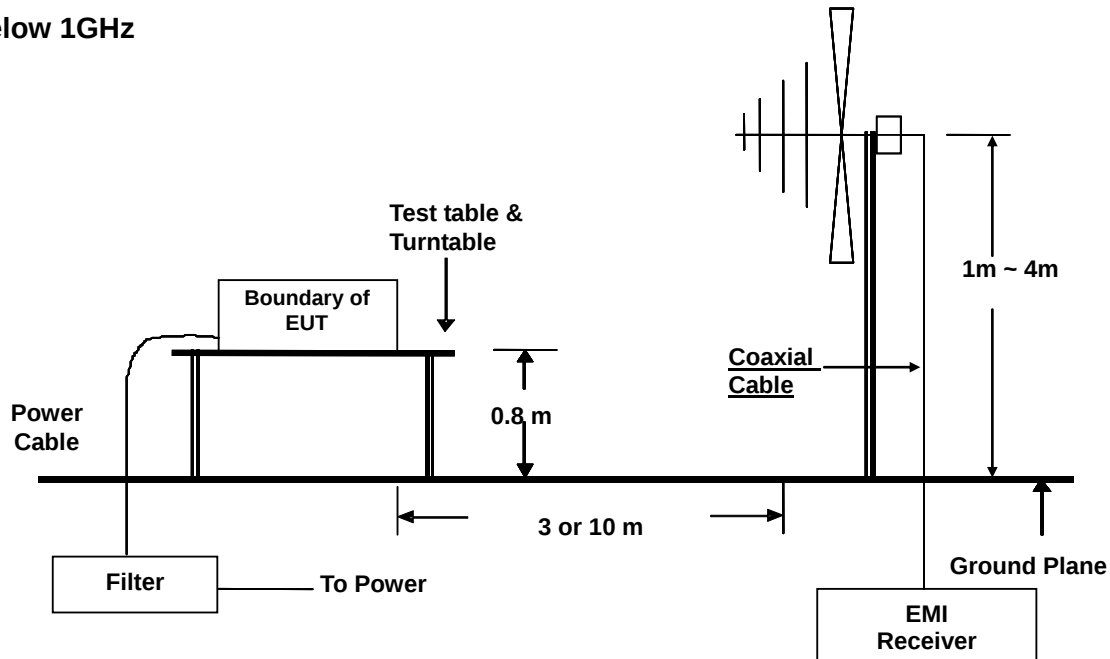
NOTE:

1. The resolution bandwidth is 1MHz and video bandwidth of test spectrum analyzer is 1 MHz for peak detection at above 1GHz. The resolution bandwidth is 1MHz and video bandwidth of test spectrum analyzer is 100Hz for average detection at frequency above 1 GHz.
2. For measurement of frequency above 1GHz, the EUT was set 3 meters away from the directional antenna.

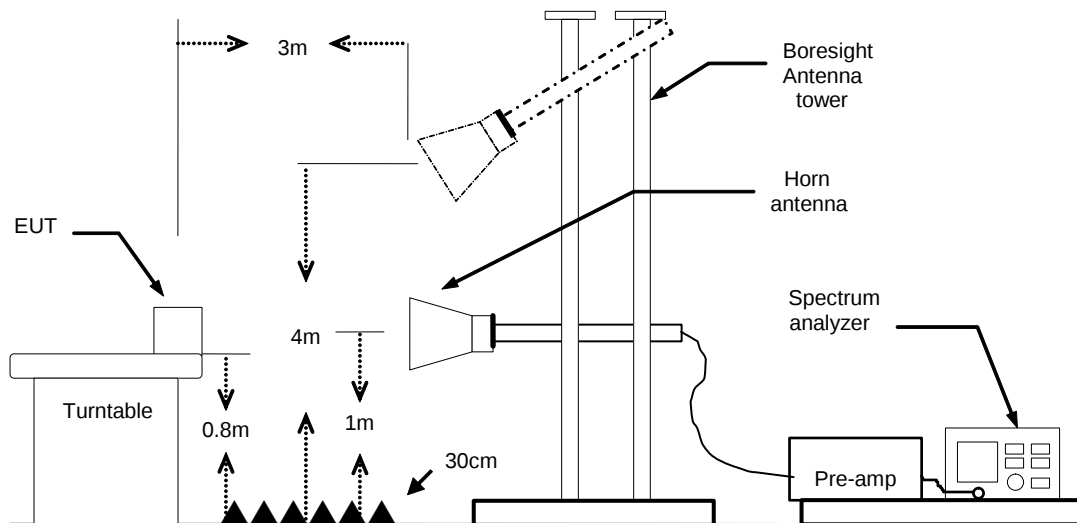


7.4. TEST SETUP

Below 1GHz



Above 1GHz



- For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

**7.5. DATA SAMPLE:****Below 1GHz**

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
xx.xx	16.49	9.86	26.35	30.00	-3.65	116.00	101.00	QP

Above 1GHz

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
xx.xx	60.80	-14.59	46.21	74.00	-27.79	200	351	peak
xx.xx	52.05	-13.17	38.88	54.00	-15.12	200	135	AVG

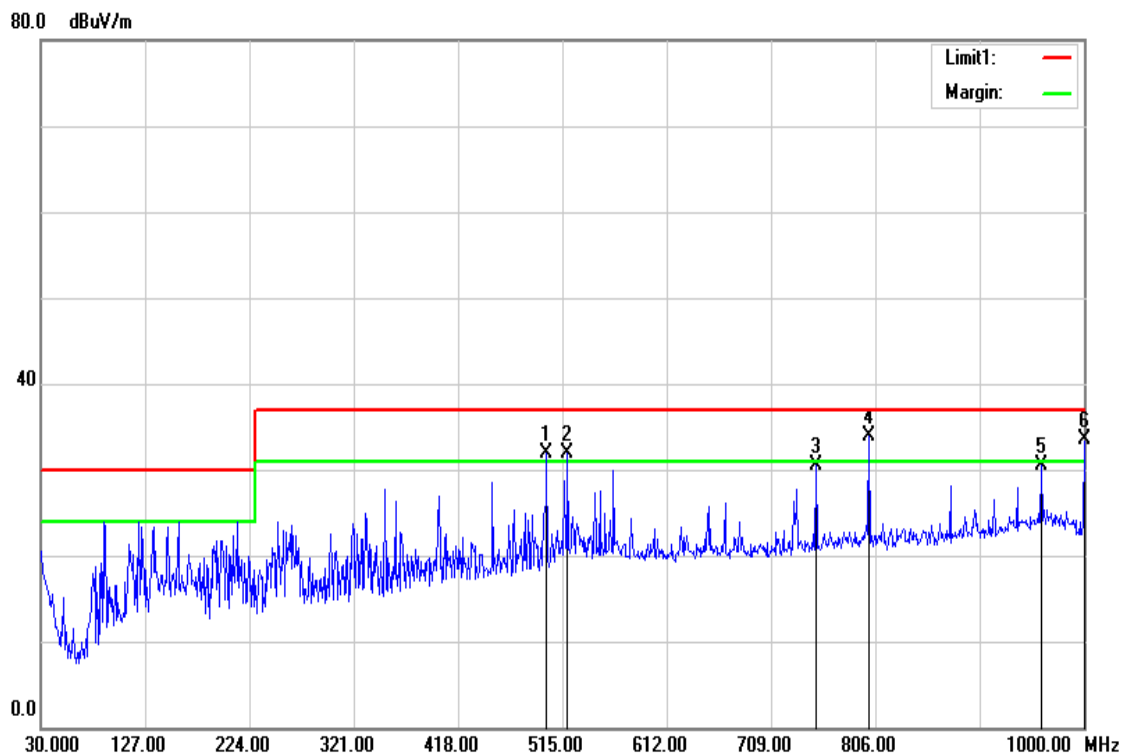
Frequency (MHz) = Emission frequency in MHz
Reading (dBuV) = Uncorrected Analyzer / Receiver reading
Correction Factor (dB/m) = Antenna factor + Cable loss – Amplifier gain
Result (dBuV/m) = Reading (dBuV) + Corr. Factor (dB/m)
Limit (dBuV/m) = Limit stated in standard
Margin (dB) = Result (dBuV/m) – Limit (dBuV/m)
Q.P. = Quasi-Peak



7.6. TEST RESULTS

Below 1000MHz

Model No.	LE910-NVG	Test Mode	Mode 1
Environmental Conditions	26°C, 60% RH	Test Date	2014/5/10
Antenna Pole	Vertical	Antenna Distance	10m
Detector Function	Quasi-peak.	Tested by	Jimmy Chou
Standard	FCC CLASS B W/ CISPR 22 CLASS B LIMIT		



No.	Frequency (MHz)	Reading (dBuV)	Correction Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	500.4500	36.61	-4.79	31.82	37.00	-5.18	200	359	QP
2	519.8500	36.08	-4.19	31.89	37.00	-5.11	100	360	QP
3	750.7100	32.28	-1.69	30.59	37.00	-6.41	100	360	QP
4	800.1800	34.77	-0.85	33.92	37.00	-3.08	100	284	QP
5	960.2300	28.91	1.52	30.43	37.00	-6.57	100	151	QP
6	1000.0000	32.31	1.19	33.50	37.00	-3.50	100	360	QP

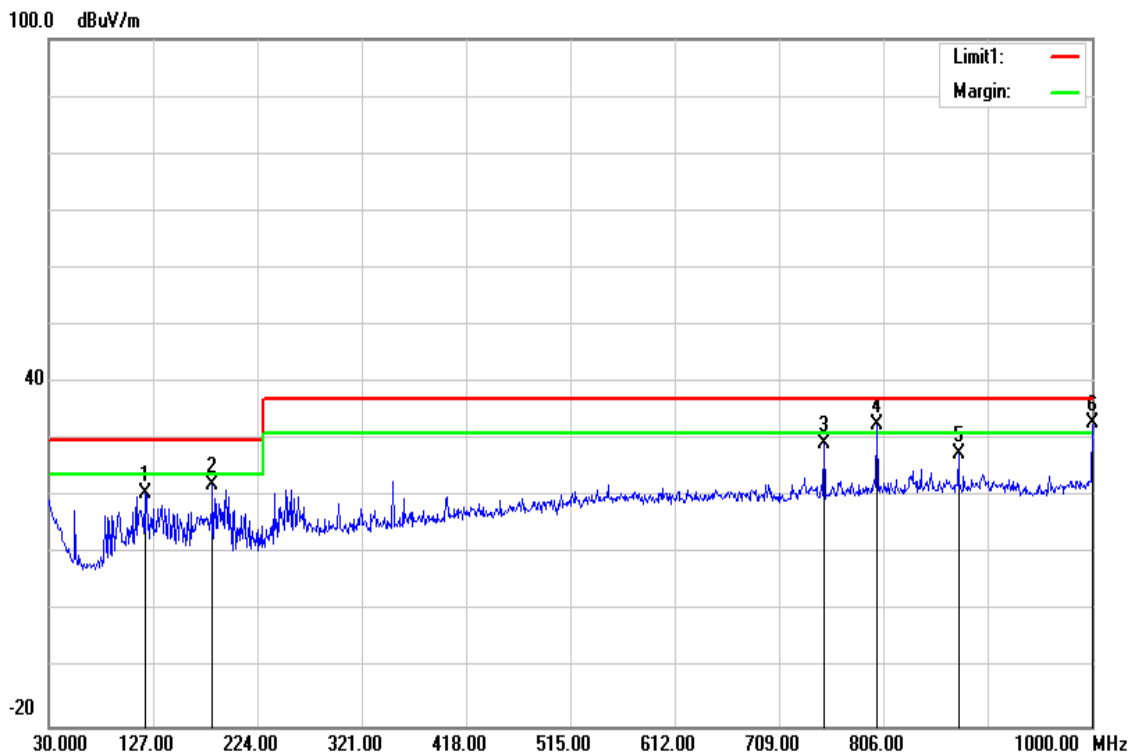
REMARKS:

- The other emission levels were very low against the limit.
- 30MHz to 1000MHz test is Applicable CISPR 22 standard.



Below 1000MHz

Model No.	LE910-NVG	Test Mode	Mode 1
Environmental Conditions	26°C, 60% RH	Test Date	2014/5/10
Antenna Pole	Horizontal	Antenna Distance	10m
Detector Function	Quasi-peak.	Tested by	Jimmy Chou
Standard	FCC CLASS B W/ CISPR 22 CLASS B LIMIT		



No.	Frequency (MHz)	Reading (dBuV)	Correction Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	119.2400	32.67	-12.03	20.64	30.00	-9.36	400	170	QP
2	182.2900	36.45	-14.33	22.12	30.00	-7.88	400	326	QP
3	750.7100	32.30	-2.94	29.36	37.00	-7.64	399	360	QP
4	800.1800	34.93	-2.34	32.59	37.00	-4.41	299	0	QP
5	875.8400	28.80	-1.29	27.51	37.00	-9.49	200	276	QP
6	1000.0000	32.68	0.25	32.93	37.00	-4.07	200	256	QP

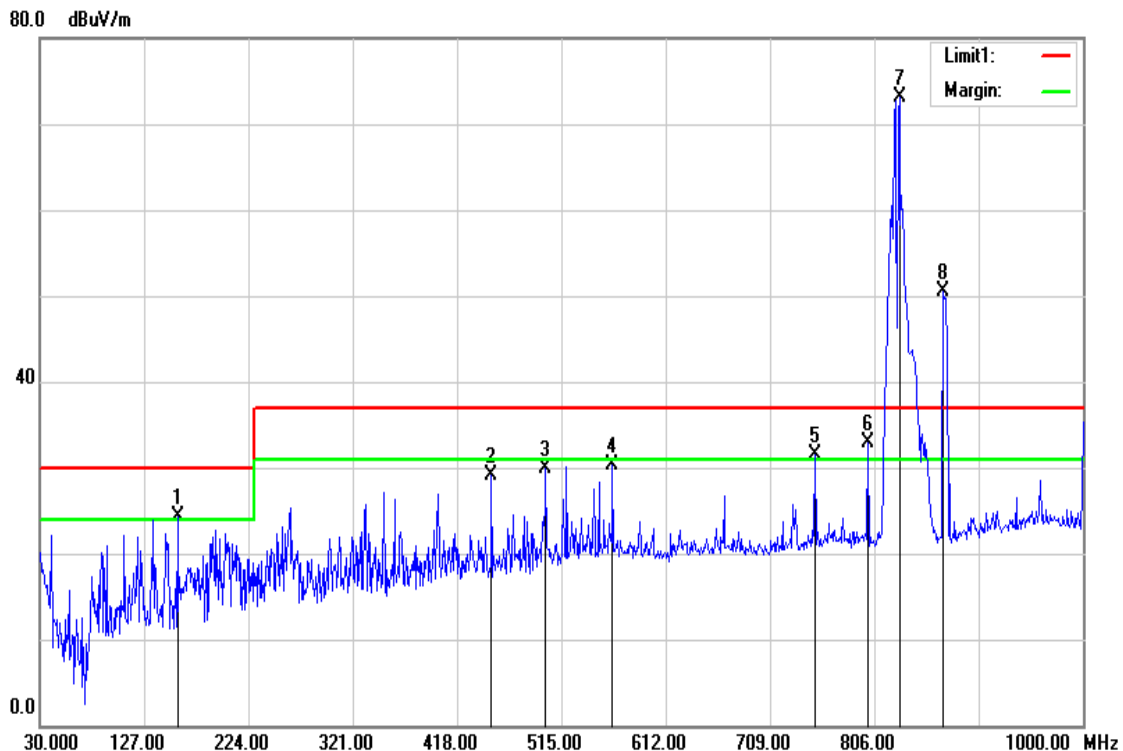
REMARKS:

1. The other emission levels were very low against the limit.
2. 30MHz to 1000MHz test is Applicable CISPR 22 standard



Below 1000MHz

Model No.	LE910-NVG	Test Mode	Mode 2
Environmental Conditions	26°C, 60% RH	Test Date	2014/5/10
Antenna Pole	Vertical	Antenna Distance	10m
Detector Function	Quasi-peak.	Tested by	Jimmy Chou
Standard	FCC CLASS B W/ CISPR 22 CLASS B LIMIT		



No.	Frequency (MHz)	Reading (dBuV)	Correction Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	158.0400	37.25	-12.96	24.29	30.00	-5.71	100	308	QP
2	450.0100	34.90	-5.70	29.20	37.00	-7.80	100	308	QP
3	500.4500	34.68	-4.79	29.89	37.00	-7.11	100	360	QP
4	562.5300	33.61	-3.28	30.33	37.00	-6.67	123	360	QP
5	750.7100	33.11	-1.69	31.42	37.00	-5.58	100	263	QP
6	800.1800	33.84	-0.85	32.99	37.00	-4.01	400	300	QP
7	829.2800	73.71	-0.63	73.08	37.00	36.08	400	294	UL
8	870.0200	50.78	-0.27	50.51	37.00	13.51	200	61	DL

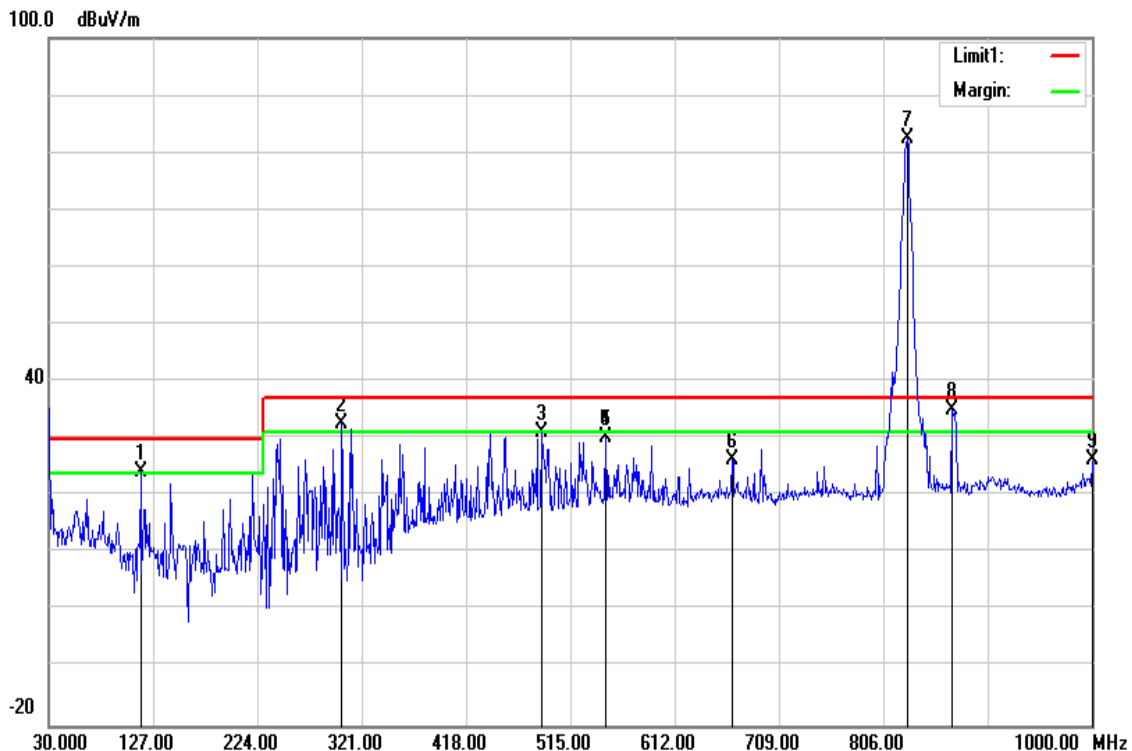
REMARKS:

1. The other emission levels were very low against the limit.
2. 30MHz to 1000MHz test is Applicable CISPR 22 standard.
3. UL: the transmitting signal of Universal Radio Communication Tester
4. DL: the receiving signal of Universal Radio Communication Tester.



Below 1000MHz

Model No.	LE910-NVG	Test Mode	Mode 2
Environmental Conditions	26°C, 60% RH	Test Date	2014/5/10
Antenna Pole	Horizontal	Antenna Distance	10m
Detector Function	Quasi-peak.	Tested by	Jimmy Chou
Standard	FCC CLASS B W/ CISPR 22 CLASS B LIMIT		



No.	Frequency (MHz)	Reading (dBuV)	Correction Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	115.3600	36.49	-12.31	24.18	30.00	-5.82	100	287	QP
2	302.5700	41.98	-9.41	32.57	37.00	-4.43	300	182	QP
3	488.8100	37.05	-6.00	31.05	37.00	-5.95	100	173	QP
4	547.9800	34.61	-4.37	30.24	37.00	-6.76	100	250	QP
5	547.9800	34.61	-4.37	30.24	37.00	-6.76	100	250	QP
6	665.3500	30.12	-3.82	26.30	37.00	-10.70	100	81	QP
7	828.3100	84.32	-1.95	82.37	37.00	45.37	400	0	UL
8	870.0200	36.46	-1.37	35.09	37.00	-1.91	300	64	DL
9	1000.0000	26.16	0.25	26.41	37.00	-10.59	200	297	QP

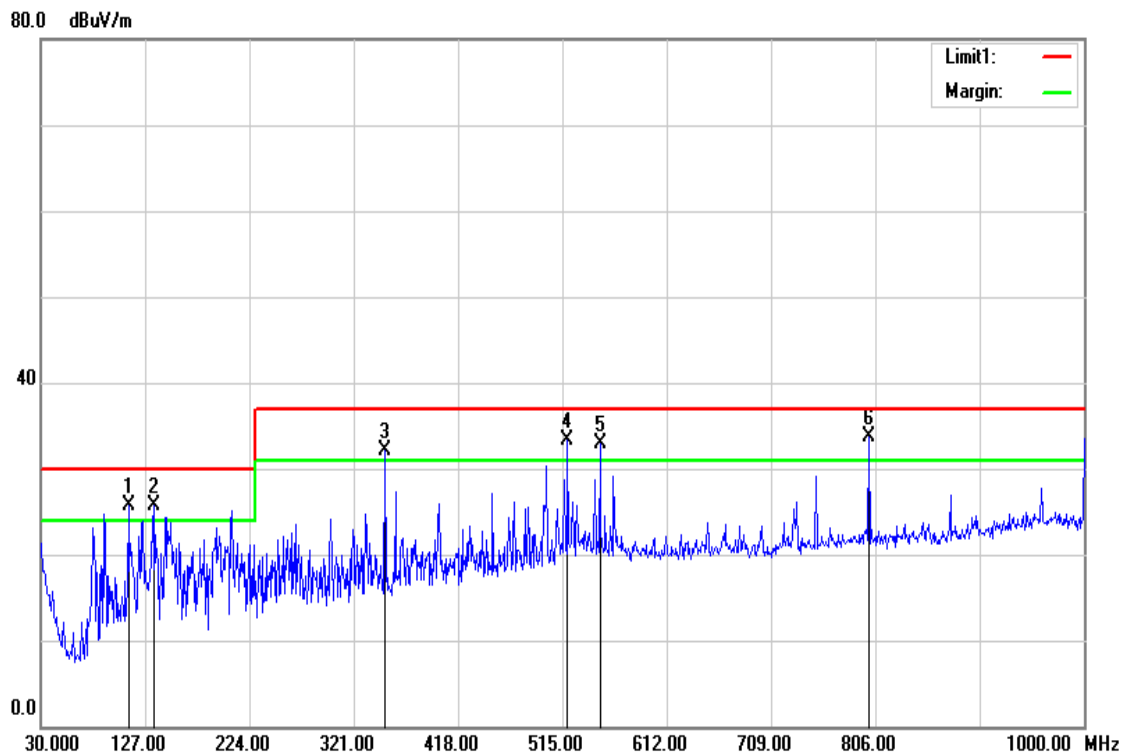
REMARKS:

1. The other emission levels were very low against the limit.
2. 30MHz to 1000MHz test is Applicable CISPR 22 standard
3. UL: the transmitting signal of Universal Radio Communication Tester
4. DL: the receiving signal of Universal Radio Communication Tester.



Below 1000MHz

Model No.	LE910-NVG	Test Mode	Mode 3
Environmental Conditions	26°C, 60% RH	Test Date	2014/5/10
Antenna Pole	Vertical	Antenna Distance	10m
Detector Function	Quasi-peak.	Tested by	Jimmy Chou
Standard	FCC CLASS B W/ CISPR 22 CLASS B LIMIT		



No.	Frequency (MHz)	Reading (dBuV)	Correction Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	111.4800	37.63	-11.99	25.64	30.00	-4.36	200	55	QP
2	135.7300	37.57	-11.80	25.77	30.00	-4.23	100	149	QP
3	350.1000	39.56	-7.50	32.06	37.00	-4.94	100	277	QP
4	519.8500	37.57	-4.19	33.38	37.00	-3.62	100	356	QP
5	549.9200	36.20	-3.26	32.94	37.00	-4.06	100	0	QP
6	800.1800	34.47	-0.85	33.62	37.00	-3.38	100	285	QP

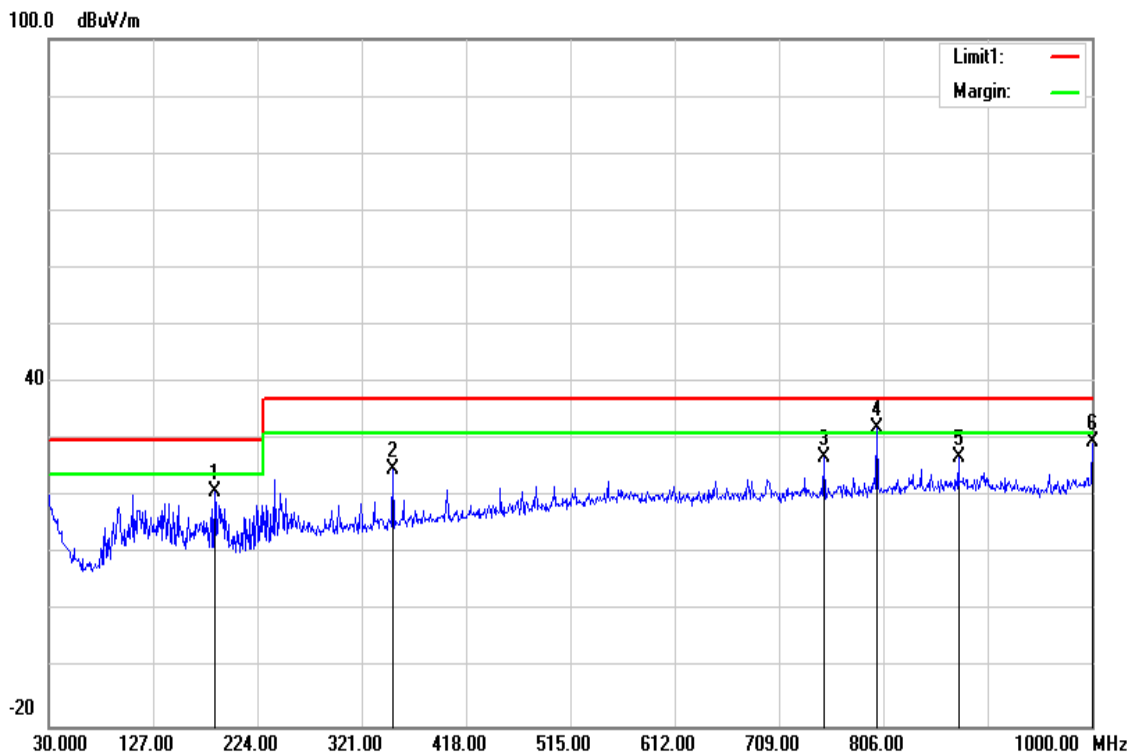
REMARKS:

1. The other emission levels were very low against the limit.
2. 30MHz to 1000MHz test is Applicable CISPR 22 standard.



Below 1000MHz

Model No.	LE910-NVG	Test Mode	Mode 3
Environmental Conditions	26°C, 60% RH	Test Date	2014/5/10
Antenna Pole	Horizontal	Antenna Distance	10m
Detector Function	Quasi-peak.	Tested by	Jimmy Chou
Standard	FCC CLASS B W/ CISPR 22 CLASS B LIMIT		



No.	Frequency (MHz)	Reading (dBuV)	Correction Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	184.2300	35.22	-14.29	20.93	30.00	-9.07	399	263	QP
2	350.1000	33.37	-8.45	24.92	37.00	-12.08	399	45	QP
3	750.7100	29.83	-2.94	26.89	37.00	-10.11	399	12	QP
4	800.1800	34.34	-2.34	32.00	37.00	-5.00	318	360	QP
5	875.8400	28.20	-1.29	26.91	37.00	-10.09	262	0	QP
6	1000.0000	29.38	0.25	29.63	37.00	-7.37	200	259	QP

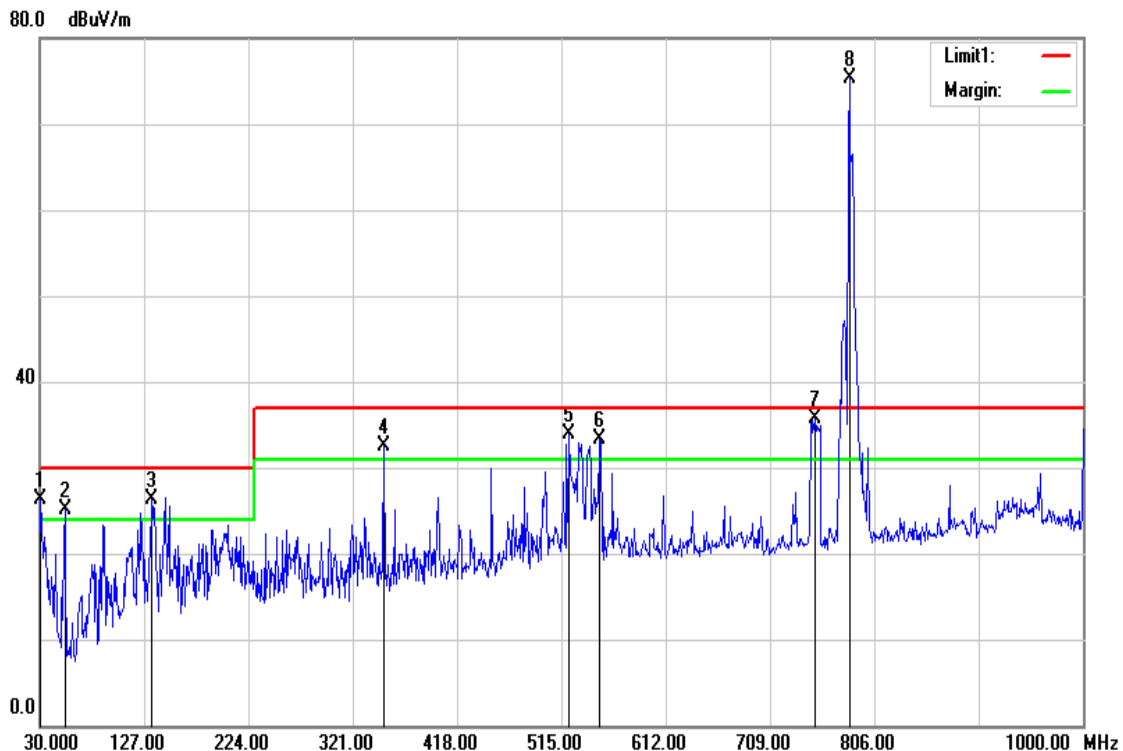
REMARKS:

1. The other emission levels were very low against the limit.
2. 30MHz to 1000MHz test is Applicable CISPR 22 standard



Below 1000MHz

Model No.	LE910-NVG	Test Mode	Mode 4
Environmental Conditions	26°C, 60% RH	Test Date	2014/5/10
Antenna Pole	Vertical	Antenna Distance	10m
Detector Function	Quasi-peak.	Tested by	Jimmy Chou
Standard	FCC CLASS B W/ CISPR 22 CLASS B LIMIT		



No.	Frequency (MHz)	Reading (dBuV)	Correction Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	30.9700	33.12	-6.74	26.38	30.00	-3.62	100	356	QP
2	53.2800	42.04	-16.92	25.12	30.00	-4.88	100	305	QP
3	133.7900	38.04	-11.73	26.31	30.00	-3.69	100	167	QP
4	350.1000	40.09	-7.50	32.59	37.00	-4.41	100	282	QP
5	521.7900	37.96	-4.12	33.84	37.00	-3.16	100	61	QP
6	550.8900	36.63	-3.26	33.37	37.00	-3.63	100	200	QP
7	750.7100	37.45	-1.69	35.76	37.00	-1.24	200	259	DL
8	782.7200	76.38	-1.14	75.24	37.00	38.24	200	191	UL

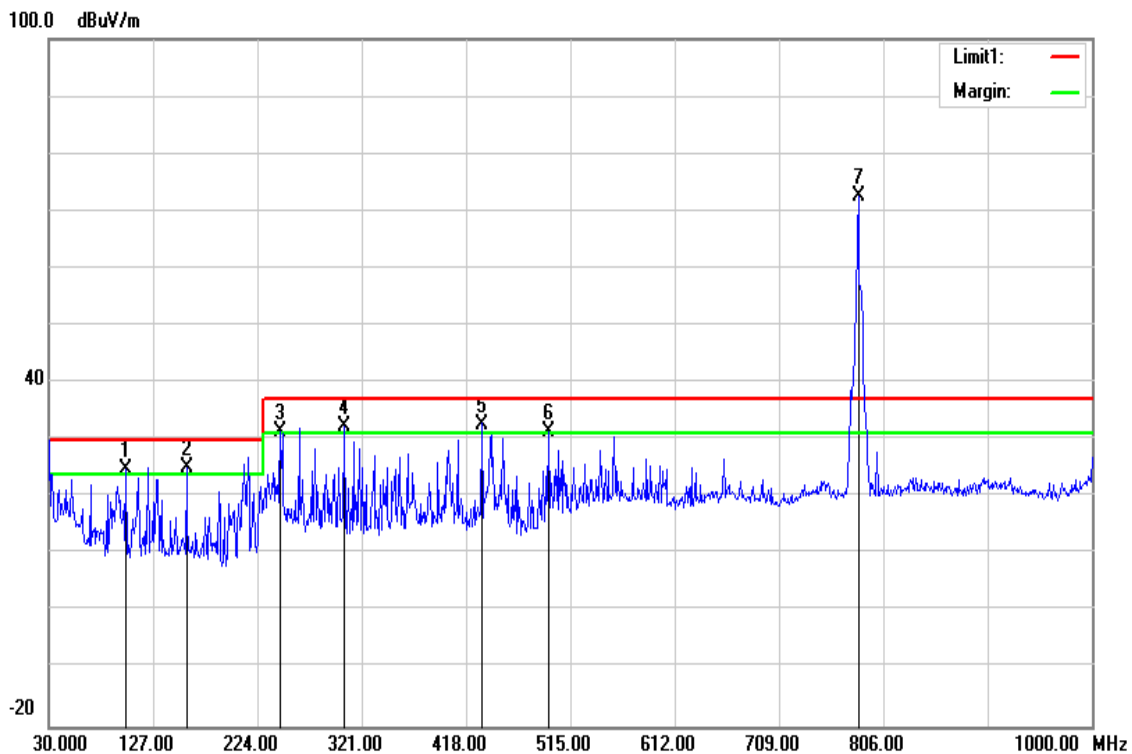
REMARKS:

1. The other emission levels were very low against the limit.
2. 30MHz to 1000MHz test is Applicable CISPR 22 standard.
3. UL: the transmitting signal of Universal Radio Communication Tester
4. DL: the receiving signal of Universal Radio Communication Tester.



Below 1000MHz

Model No.	LE910-NVG	Test Mode	Mode 4
Environmental Conditions	26°C, 60% RH	Test Date	2014/5/10
Antenna Pole	Horizontal	Antenna Distance	10m
Detector Function	Quasi-peak.	Tested by	Jimmy Chou
Standard	FCC CLASS B W/ CISPR 22 CLASS B LIMIT		



No.	Frequency (MHz)	Reading (dBuV)	Correction Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	101.7800	38.02	-13.27	24.75	30.00	-5.25	400	345	QP
2	158.0400	38.86	-13.76	25.10	30.00	-4.90	400	216	QP
3	245.3400	42.49	-11.05	31.44	37.00	-5.56	399	167	QP
4	304.5100	41.79	-9.37	32.42	37.00	-4.58	299	36	QP
5	432.5500	39.74	-6.94	32.80	37.00	-4.20	100	168	QP
6	494.6300	37.32	-5.90	31.42	37.00	-5.58	100	73	QP
7	782.7200	75.13	-2.54	72.59	37.00	35.59	100	256	UL

REMARKS:

1. The other emission levels were very low against the limit.
2. 30MHz to 1000MHz test is Applicable CISPR 22 standard
3. UL: the transmitting signal of Universal Radio Communication Tester
4. DL: the receiving signal of Universal Radio Communication Tester.

**Above 1000MHz**

Model No.	LE910-NVG	Test Mode	Mode 1
Environmental Conditions	21°C, 58% RH	Test Date	2014/5/10
Antenna Pole	Vertical	Antenna Distance	3m
Highest frequency generated or used	1.9GHz	Upper frequency	9.5GHz
Detector Function	Average & Peak	Tested by	Jimmy Chou

No.	Frequency (MHz)	Reading (dBuV)	Correction Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	6269.837	37.00	0.09	37.09	54.00	-16.91	100	50	AVG
2	6270.000	49.37	0.09	49.46	74.00	-24.54	100	50	peak
3	8776.913	36.10	3.29	39.39	54.00	-14.61	100	71	AVG
4	8777.500	48.47	3.29	51.76	74.00	-22.24	100	71	peak
5	10689.650	33.53	7.53	41.06	54.00	-12.94	100	81	AVG
6	10690.000	46.35	7.53	53.88	74.00	-20.12	100	81	peak
7	12687.500	44.55	11.78	56.33	74.00	-17.67	100	153	peak
8	12687.525	31.42	11.78	43.20	54.00	-10.80	100	153	AVG
9	15617.500	31.75	13.27	45.02	54.00	-8.98	100	193	AVG
10	15620.000	44.00	13.28	57.28	74.00	-16.72	100	193	peak
11	17489.625	29.91	16.20	46.11	54.00	-7.89	100	245	AVG
12	17490.000	42.44	16.21	58.65	74.00	-15.35	100	245	peak

REMARKS:

1. The other emission levels were very low against the limit.
2. Margin (dB) = Result (dBuV/m) – Limit (dBuV/m)



Model No.	LE910-NVG	Test Mode	Mode 1
Environmental Conditions	21°C, 58% RH	Test Date	2014/5/10
Antenna Pole	Horizontal	Antenna Distance	3m
Highest frequency generated or used	1.9GHz	Upper frequency	9.5GHz
Detector Function	Average & Peak	Tested by	Jimmy Chou

No.	Frequency (MHz)	Reading (dBuV)	Correction Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	6395.938	35.55	0.29	35.84	54.00	-18.16	100	0	AVG
2	6397.500	49.24	0.29	49.53	74.00	-24.47	200	0	peak
3	8777.500	48.63	3.29	51.92	74.00	-22.08	100	359	peak
4	8778.263	35.83	3.29	39.12	54.00	-14.88	100	359	AVG
5	11157.500	45.56	8.80	54.36	74.00	-19.64	200	39	peak
6	11158.950	32.54	8.81	41.35	54.00	-12.65	100	38	AVG
7	12857.500	44.54	12.04	56.58	74.00	-17.42	100	248	peak
8	12858.100	30.90	12.04	42.94	54.00	-11.06	100	248	AVG
9	15364.288	31.69	13.13	44.82	54.00	-9.18	100	161	AVG
10	15365.000	44.00	13.13	57.13	74.00	-16.87	100	136	peak
11	17105.750	30.63	15.65	46.28	54.00	-7.72	100	299	AVG
12	17107.500	43.09	15.65	58.74	74.00	-15.26	100	299	peak

REMARKS:

1. The other emission levels were very low against the limit.
2. $\text{Margin (dB)} = \text{Result (dBuV/m)} - \text{Limit (dBuV/m)}$

**Above 1000MHz**

Model No.	LE910-NVG	Test Mode	Mode 2
Environmental Conditions	21°C, 58% RH	Test Date	2014/5/10
Antenna Pole	Vertical	Antenna Distance	3m
Highest frequency generated or used	1.9GHz	Upper frequency	9.5GHz
Detector Function	Average & Peak	Tested by	Jimmy Chou

No.	Frequency (MHz)	Reading (dBuV)	Correction Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	9583.675	32.88	4.99	37.87	54.00	-16.13	100	318	AVG
2	9585.000	44.60	4.99	49.59	74.00	-24.41	100	318	peak
3	12005.000	30.87	10.24	41.11	54.00	-12.89	100	267	AVG
4	12007.500	41.97	10.26	52.23	74.00	-21.77	100	267	peak
5	12984.487	29.38	12.23	41.61	54.00	-12.39	100	123	AVG
6	12985.000	42.30	12.23	54.53	74.00	-19.47	100	123	peak
7	14513.775	29.88	12.46	42.34	54.00	-11.66	100	92	AVG
8	14515.000	41.66	12.46	54.12	74.00	-19.88	100	92	peak
9	15365.000	42.02	13.13	55.15	74.00	-18.85	100	174	peak
10	15365.063	30.21	13.13	43.34	54.00	-10.66	100	174	AVG
11	16850.000	29.85	15.28	45.13	54.00	-8.87	100	308	AVG
12	16852.500	42.39	15.28	57.67	74.00	-16.33	100	308	peak

REMARKS:

1. The other emission levels were very low against the limit.
2. $\text{Margin (dB)} = \text{Result (dBuV/m)} - \text{Limit (dBuV/m)}$



Model No.	LE910-NVG	Test Mode	Mode 2
Environmental Conditions	21°C, 58% RH	Test Date	2014/5/10
Antenna Pole	Horizontal	Antenna Distance	3m
Highest frequency generated or used	1.9GHz	Upper frequency	9.5GHz
Detector Function	Average & Peak	Tested by	Jimmy Chou

No.	Frequency (MHz)	Reading (dBuV)	Correction Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	7927.500	47.82	2.06	49.88	74.00	-24.12	100	51	peak
2	7928.175	37.53	2.06	39.59	54.00	-14.41	100	51	AVG
3	9585.000	46.66	4.99	51.65	74.00	-22.35	100	248	peak
4	9587.400	33.98	4.99	38.97	54.00	-15.03	100	248	AVG
5	11240.350	32.36	8.93	41.29	54.00	-12.71	100	62	AVG
6	11242.500	44.33	8.94	53.27	74.00	-20.73	100	62	peak
7	12815.000	43.10	11.97	55.07	74.00	-18.93	100	51	peak
8	12815.737	32.17	11.97	44.14	54.00	-9.86	100	51	AVG
9	16085.325	31.45	13.60	45.05	54.00	-8.95	100	308	AVG
10	16087.500	42.72	13.61	56.33	74.00	-17.67	100	308	peak
11	17107.500	42.28	15.65	57.93	74.00	-16.07	100	51	peak
12	17107.500	30.70	15.65	46.35	54.00	-7.65	100	51	AVG

REMARKS:

1. The other emission levels were very low against the limit.
2. Margin (dB) = Result (dBuV/m) – Limit (dBuV/m)

**Above 1000MHz**

Model No.	LE910-NVG	Test Mode	Mode 3
Environmental Conditions	21°C, 58% RH	Test Date	2014/5/10
Antenna Pole	Vertical	Antenna Distance	3m
Highest frequency generated or used	1.9GHz	Upper frequency	9.5GHz
Detector Function	Average & Peak	Tested by	Jimmy Chou

No.	Frequency (MHz)	Reading (dBuV)	Correction Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	9924.513	35.09	5.80	40.89	54.00	-13.11	100	136	AVG
2	9925.000	47.07	5.80	52.87	74.00	-21.13	100	136	peak
3	11412.500	44.62	9.23	53.85	74.00	-20.15	100	136	peak
4	11413.212	31.98	9.23	41.21	54.00	-12.79	100	136	AVG
5	12857.350	30.99	12.04	43.03	54.00	-10.97	100	359	AVG
6	12857.500	44.53	12.04	56.57	74.00	-17.43	100	359	peak
7	14726.200	31.21	12.60	43.81	54.00	-10.19	100	310	AVG
8	14727.500	43.44	12.60	56.04	74.00	-17.96	100	310	peak
9	16172.175	31.77	13.85	45.62	54.00	-8.38	100	85	AVG
10	16172.500	43.98	13.85	57.83	74.00	-16.17	100	85	peak
11	17192.500	43.09	15.78	58.87	74.00	-15.13	100	34	peak
12	17193.813	30.57	15.78	46.35	54.00	-7.65	100	34	AVG

REMARKS:

1. The other emission levels were very low against the limit.
2. $\text{Margin (dB)} = \text{Result (dBuV/m)} - \text{Limit (dBuV/m)}$



Model No.	LE910-NVG	Test Mode	Mode 3
Environmental Conditions	21°C, 58% RH	Test Date	2014/5/10
Antenna Pole	Horizontal	Antenna Distance	3m
Highest frequency generated or used	1.9GHz	Upper frequency	9.5GHz
Detector Function	Average & Peak	Tested by	Jimmy Chou

No.	Frequency (MHz)	Reading (dBuV)	Correction Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	11115.000	45.52	8.72	54.24	74.00	-19.76	100	238	peak
2	11115.987	32.59	8.73	41.32	54.00	-12.68	100	238	AVG
3	12602.500	44.72	11.65	56.37	74.00	-17.63	100	268	peak
4	12604.850	31.50	11.65	43.15	54.00	-10.85	100	268	AVG
5	15067.038	31.18	12.85	44.03	54.00	-9.97	100	187	AVG
6	15067.500	43.02	12.85	55.87	74.00	-18.13	100	187	peak
7	16212.712	31.38	13.96	45.34	54.00	-8.66	100	320	AVG
8	16215.000	43.65	13.97	57.62	74.00	-16.38	100	320	peak
9	16809.550	31.21	15.22	46.43	54.00	-7.57	100	105	AVG
10	16810.000	43.59	15.22	58.81	74.00	-15.19	100	105	peak
11	17532.162	30.22	16.27	46.49	54.00	-7.51	100	248	AVG
12	17532.500	41.75	16.27	58.02	74.00	-15.98	100	248	peak

REMARKS:

1. The other emission levels were very low against the limit.
2. Margin (dB) = Result (dBuV/m) – Limit (dBuV/m)

**Above 1000MHz**

Model No.	LE910-NVG	Test Mode	Mode 4
Environmental Conditions	21°C, 58% RH	Test Date	2014/5/10
Antenna Pole	Vertical	Antenna Distance	3m
Highest frequency generated or used	1.9GHz	Upper frequency	9.5GHz
Detector Function	Average & Peak	Tested by	Jimmy Chou

No.	Frequency (MHz)	Reading (dBuV)	Correction Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	13026.138	29.79	12.19	41.98	54.00	-12.02	100	205	AVG
2	13027.500	43.14	12.19	55.33	74.00	-18.67	100	205	peak
3	14557.500	43.22	12.49	55.71	74.00	-18.29	100	122	peak
4	14560.000	30.14	12.49	42.63	54.00	-11.37	100	122	AVG
5	15363.112	30.16	13.13	43.29	54.00	-10.71	100	71	AVG
6	15365.000	42.38	13.13	55.51	74.00	-18.49	100	71	peak
7	16130.000	42.48	13.73	56.21	74.00	-17.79	100	154	peak
8	16130.413	29.81	13.73	43.54	54.00	-10.46	100	154	AVG
9	16979.338	30.45	15.48	45.93	54.00	-8.07	100	82	AVG
10	16980.000	41.87	15.48	57.35	74.00	-16.65	100	82	peak
11	17745.000	41.40	16.61	58.01	74.00	-15.99	100	41	peak
12	17746.200	29.08	16.61	45.69	54.00	-8.31	100	41	AVG

REMARKS:

1. The other emission levels were very low against the limit.
2. Margin (dB) = Result (dBuV/m) – Limit (dBuV/m)



Model No.	LE910-NVG	Test Mode	Mode 4
Environmental Conditions	21°C, 58% RH	Test Date	2014/5/10
Antenna Pole	Horizontal	Antenna Distance	3m
Highest frequency generated or used	1.9GHz	Upper frequency	9.5GHz
Detector Function	Average & Peak	Tested by	Jimmy Chou

No.	Frequency (MHz)	Reading (dBuV)	Correction Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	12856.850	30.89	12.04	42.93	54.00	-11.07	100	359	AVG
2	12857.500	43.30	12.04	55.34	74.00	-18.66	100	359	peak
3	14472.500	41.58	12.37	53.95	74.00	-20.05	100	289	peak
4	14474.188	29.99	12.37	42.36	54.00	-11.64	100	289	AVG
5	15194.050	31.25	12.98	44.23	54.00	-9.77	100	63	AVG
6	15195.000	43.31	12.98	56.29	74.00	-17.71	100	63	peak
7	16215.000	43.13	13.97	57.10	74.00	-16.90	100	350	peak
8	16216.612	31.24	13.98	45.22	54.00	-8.78	100	350	AVG
9	16937.500	43.37	15.42	58.79	74.00	-15.21	100	186	peak
10	16938.263	30.62	15.42	46.04	54.00	-7.96	100	186	AVG
11	17742.838	30.20	16.60	46.80	54.00	-7.20	100	74	AVG
12	17745.000	42.30	16.61	58.91	74.00	-15.09	100	74	peak

REMARKS:

1. The other emission levels were very low against the limit.
2. Margin (dB) = Result (dBuV/m) – Limit (dBuV/m)