



# **EMC TEST REPORT**

Applicant:	Corporativo Lanix S.A. de C.V.
Address:	Carretera Internacional Hermosillo-Nogales Km 8.5,Hermosillo Sonora, Mexico

Manufacturer or Supplier	Tinno Mobile Technology Corp.
Address	4/F., H-3 Building, OCT Eastern Industrial Park. NO.1 XiangShan East Road., Nan Shan District, Shenzhen, P.R. China.
Product	smartphone
Brand Name	LANIX
Model Name	llium L1050
FCC ID	ZC4L1050
Date of tests	Dec. 09, 2015 ~ Dec. 21, 2015

The submitted sample of the above equipment has been tested for according to the requirements of the following standards:

**ANSI C63.4:2009** 

#### CONCLUSION: The submitted sample was found to **COMPLY** with the test requirement

Tested by Amyee Qian	Approved by William Chung
Engineer / Mobile Department	Manager / Mobile Department
Amy	Willing

Date: Dec. 22, 2015

This report is for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents. Unless specific mention, the uncertainty of measurement has been explicitly taken into account to declare the compliance or non-compliance to the specification

Tel.: +86 769 8593 5656 Fax: +86 769 8593 1080



# **Table of Contents**

RELEASE	CONTROL RECORD	3
1 GENE	RAL INFORMATION	4
1.1 G	ENERAL DESCRIPTION OF EUT	4
	UMMARY OF TEST RESULTS	
1.3 M	IEASUREMENT UNCERTAINTY	6
	ESCRIPTION OF TEST MODES	
	ESCRIPTION OF SUPPORT UNITS	
1.6 C	ONFIGURATION OF SYSTEM UNDER TEST	9
2 EMISS	SION TEST	. 10
2.1 C	ONDUCTED EMISSION MEASUREMENT	. 10
2.1.1	LIMITS OF CONDUCTED EMISSION MEASUREMENT	
2.1.2	TEST INSTRUMENTS	
2.1.3	TEST PROCEDURES	11
2.1.4	DEVIATION FROM TEST STANDARD	11
2.1.5	TEST SETUP	
2.1.6	EUT OPERATING CONDITIONS	. 12
2.1.7	TEST RESULTS	
	ADIATED EMISSION MEASUREMENT	
2.2.1	LIMITS OF RADIATED EMISSION MEASUREMENT	
2.2.2	TEST INSTRUMENTS	_
2.2.3	TEST PROCEDURE	
2.2.4	DEVIATION FROM TEST STANDARD	
2.2.5	TEST SETUP	
2.2.6	EUT OPERATING CONDITIONS	
2.2.7	TEST RESULTS	19
3 APPE	NDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT	7 22

Tel.: +86 769 8593 5656 Fax: +86 769 8593 1080



# **RELEASE CONTROL RECORD**

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FV151208W002	Original release	Dec. 22, 2015

No. 34, Chenwulu Section, Guantai Rd., Houjie Town, Dongguan City, Guangdong 523942, China Tel.: +86 769 8593 5656 Fax: +86 769 8593 1080



# 1 GENERAL INFORMATION

# 1.1 GENERAL DESCRIPTION OF EUT

PRODUCT	smartphone		
MODEL NAME	llium L1050		
NOMINAL VOLTAGE	5.0Vdc (adapter or host equipment) 3.8Vdc (Li-ion)		
BATTERY	Brand Name: LANIX Model Name: Ilium L1050-BAT Power Rating: DC 3.8V, 2820mAh, Li-ion		
	WLAN	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM	
	Bluetooth	GFSK, π/4-DQPSK, 8DPSK	
MODULATION TYPE	GPS	C/A code	
	GSM	GMSK, 8PSK	
	WCDMA	BPSK/QPSK	
	LTE	QPSK/16QAM	
	WLAN	2412~2462MHz for 11b/g/n(HT20) 2422~2452MHz for 11n(HT40)	
	Bluetooth	2402MHz~2480MHz	
	GPS	1575.42MHz	
OPERATING	GSM	824.2MHz ~ 848.8MHz (FOR GSM 850) 1850.2MHz ~ 1909.8MHz (FOR PCS 1900)	
FREQUENCY	WCDMA	1852.4MHz ~ 1907.6MHz (FOR WCDMA 850) 826.4MHz ~ 846.6MHz (FOR WCDMA 1900)	
	LTE	1850MHz ~ 1910MHz (FOR LTE Band2) 1710MHz ~ 1755MHz (FOR LTE Band4) 2500MHz ~ 2570MHz (FOR LTE Band7) 704MHz ~ 716MHz (FOR LTE Band17)	
HW Version	V1.0		
SW Version	Ilium L1050_TELCEL_SW_01		
I/O PORTS	Refer to user's manual		
CABLE	USB Cable: Shielded, Detachable, 1.0m		
	Earphone Cable: Shielded, Detachable, 1.2m		
ACCESSORY DEVICES	Refer to note as below		

#### NOTE:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.

2. The EUT was powered by the following adapter:

ADAPTER	· · · · · · · · · · · · · · · · · · ·
BRAND:	LANIX

Tel.: +86 769 8593 5656 Fax: +86 769 8593 1080



MODEL:	Ilium L1050-C
INPUT:	AC 100-240V, 150mA
OUTPUT:	DC 5V, 1000mA

3. The EUT matched the following USB cable and Earphone:

The Let materies the fellowing Cob cable and Larphone.			
USB CABLE			
BRAND: LANIX			
MODEL:	TBD		
SIGNAL LINE:	1.0 METER		

EARPHONE		
BRAND:	LANIX	
MODEL:	Ilium L1050	
SIGNAL LINE:	1.2 METER	

4. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.

Tel.: +86 769 8593 5656 Fax: +86 769 8593 1080



### **SUMMARY OF TEST RESULTS**

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 15, Subpart B				
Standard Section Test Item		Result	Remark	
	Conducted Test	PASS	Meets limits minimum passing margin is -6.48dB at 2.316000 MHz	
FCC Part 15, Subpart B, Class B	Radiated Emission Test (30MHz ~ 1GHz)	PASS	Meets Class B Limit Minimum passing margin is -1.02dB at 533.43 MHz	
	Radiated Emission Test (Above 1GHz)	PASS	Meets Class B Limit Minimum passing margin is -5.13dB at 5828MHz	

#### 1.3 **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:

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

MEASUREMENT	FREQUENCY	UNCERTAINTY
Conducted emissions	150kHz ~ 30MHz	+/-2.66dB
Dedicted emissions	30MHz ~ 1GHz	+/-4.06dB
Radiated emissions	1GHz ~ 18GHz	+/-4.58dB

Guangdong 523942, China

Fax: +86 769 8593 1080

Tel.: +86 769 8593 5656



# 1.4 DESCRIPTION OF TEST MODES

Test Mode	Test Condition					
	Radiated emission test					
1	GSM850 Idle+ Adapter + USB cable+ Camera+Battery+ Earphone +BT Idle + Wifi Idle(2.4G)					
2	PCS1900 Idle + USB Link + USB cable + MPEG 4+ Battery + Earphone +BT Idle + Wifi Idle (2.4G)					
3	LTE B2 Idle+ Adapter + USB cable+ Battery+ Earphone +BT Idle + Wifi Idle(2.4G)+ GPS Rx					
4	LTE B4 Idle + Adapter + USB cable+ Battery+ Earphone +BT Idle + Wifi Idle(2.4G)+ GPS Rx					
5	LTE B7 Idle + Adapter + USB cable+ Battery+ Earphone +BT Idle + Wifi Idle(2.4G)+ GPS Rx					
6	LTE B17 Idle + Adapter + USB cable+ Battery+ Earphone +BT Idle + Wifi Idle(2.4G)+ GPS Rx					
7	WCDMA Band II Idle + Adapter + USB cable+ Battery+ Earphone +BT Idle + Wifi Idle(2.4G)+ GPS Rx					
8	WCDMA Band V Idle + Adapter + USB cable+ Battery+ Earphone +BT Idle + Wifi Idle(2.4G)+ GPS Rx					
	Conducted emission test					
1	GSM850 Idle+ Adapter + USB cable+ Camera+Battery+ Earphone +BT Idle + Wifi Idle(2.4G)					
2	PCS1900 Idle + Adapter + USB cable + MPEG 4+ Battery + Earphone +BT Idle + Wifi Idle (2.4G)					
3	LTE B2 Idle+ Adapter + USB cable+ Battery+ Earphone +BT Idle + Wifi Idle(2.4G)+ GPS Rx					
4	LTE B4 Idle + Adapter + USB cable+ Battery+ Earphone +BT Idle + Wifi Idle(2.4G)+ GPS Rx					
5	LTE B7 Idle + Adapter + USB cable+ Battery+ Earphone +BT Idle + Wifi Idle(2.4G)+ GPS Rx					
6	LTE B17 Idle + Adapter + USB cable+ Battery+ Earphone +BT Idle + Wifi Idle(2.4G)+ GPS Rx					
7	WCDMA Band II Idle + Adapter + USB cable+ Battery+ Earphone +BT Idle + Wifi Idle(2.4G)+ GPS Rx					
8	WCDMA Band V Idle + Adapter + USB cable+ Battery+ Earphone +BT Idle + Wifi Idle(2.4G)+ GPS Rx					

#### NOTE:

- 1. For conducted emission test, test mode 1 was the worst case and only this mode was presented in this report.
- 2. For radiated emission test, test mode 2 was the worst case and only this mode was presented in this report.

Tel.: +86 769 8593 5656 Fax: +86 769 8593 1080



#### 1.5 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.

#### **FOR EMISSION TESTS**

NO.	PRODUCT	RODUCT BRAND MODEL NO. SERIAL NO.		FCC ID	
1	Universal Radio Communication Tester	R&S	CMU200	123259	N/A
2	Wireless AP	ABOCOM	WR224GR	060500749P	D43064
3	Bluetooth Earphone	FAP00	H6080	12098	N/A
4	Notebook	DELL	E6420	9H12FS1	N/A
5	Mouse	DELL	M056UOA	01688082	N/A
6	Printer	HP	hp LaserJet 1300	CNSJF75989	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	N/A
2	N/A
3	N/A
4	DC Line: Unshielded, Undetachable, 2.0m
5	USB Line: Unshielded, Undetachable 1.8m;
6	USB Line: Shielded, Detachable 1.5m;

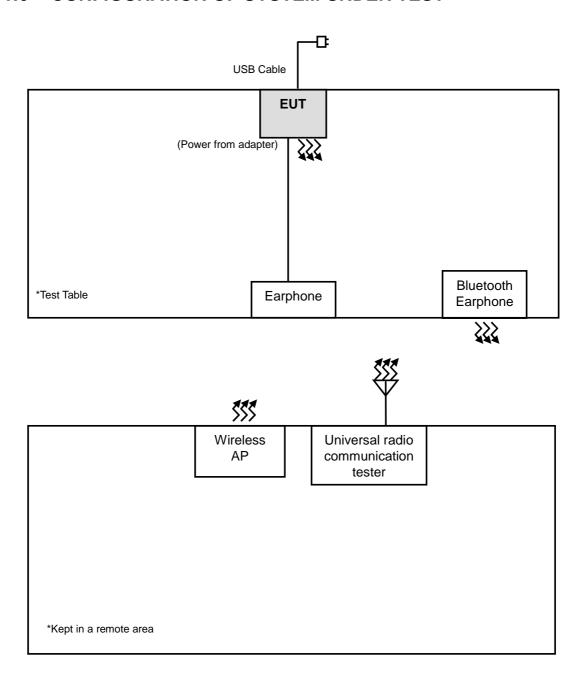
#### NOTE:

- 1. All power cords of the above support units are non shielded (1.8m).
- 2. Items 3-4 acted as communication partners.

Tel.: +86 769 8593 5656 Fax: +86 769 8593 1080



## 1.6 CONFIGURATION OF SYSTEM UNDER TEST



Tel.: +86 769 8593 5656 Fax: +86 769 8593 1080



#### 2 EMISSION TEST

#### 2.1 CONDUCTED EMISSION MEASUREMENT

#### 2.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

TEST STANDARD: FCC Part 15, Subpart B (Section: 15.107)

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dBµV)		
	Quasi-peak	Average	
0.15 ~ 0.5	66 to 56	56 to 46	
0.5 ~ 5	56	46	
5 ~ 30	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 of 0.15 to 0.50MHz.
- 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.

#### 2.1.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESCS30	100340	May 11,15	May 10,16
Artificial Mains Network	Rohde&Schwarz	ENV216	101173	April 25,15	April 24,16
Artificial Mains Network	Rohde&Schwarz	ESH3-Z5	100317	April 25,15	April 24,16
Test software	ADT	ADT_Cond_V7.3.7	N/A	N/A	N/A

**NOTE:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.

2. The test was performed in Dongguan Shielded Room 553.

Tel.: +86 769 8593 5656 Fax: +86 769 8593 1080



#### 2.1.3 TEST PROCEDURES

- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150 kHz to 30MHz was searched. Emission levels under (Limit 20dB) were not recorded.

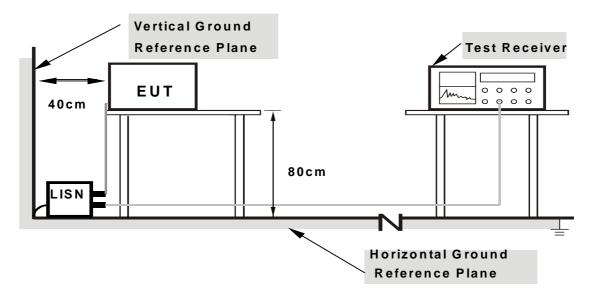
**NOTE:** All modes of operation were investigated and the worst-case emissions are reported.

#### 2.1.4 DEVIATION FROM TEST STANDARD

No deviation.



#### 2.1.5 TEST SETUP



Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

For the actual test configuration, please refer to the attached file (Test Setup Photo).

### 2.1.6 EUT OPERATING CONDITIONS

- a. Turned on the power and connected of all equipment.
- b. EUT was operated according to the use type described in the manufacturer's specifications or the user's manual.

Tel.: +86 769 8593 5656 Fax: +86 769 8593 1080



## 2.1.7 TEST RESULTS

#### **CONDUCTED WORST-CASE DATA:**

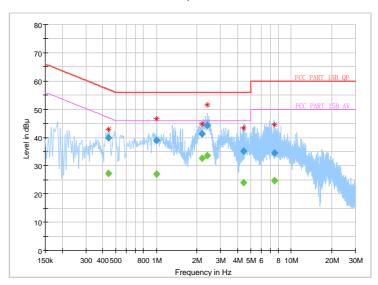
TEST VOLTAGE	DC 5V From Adapter Input 120 Vac, 50 Hz	6dB BANDWIDTH	9 kHz
ENVIRONMENTAL CONDITIONS	22 deg. C, 50% RH	TESTED BY	Ai zhong

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.440000		27.21	47.06	-19.85	L	ON	9.7
0.440000	39.98		57.06	-17.08	L	ON	9.7
1.008000		27.07	46.00	-18.93	L	ON	9.7
1.008000	38.90		56.00	-17.10	L	ON	9.7
2.180000		32.63	46.00	-13.37	L	ON	9.7
2.180000	41.28		56.00	-14.72	L	ON	9.7
2.384000		33.58	46.00	-12.42	L	ON	9.7
2.384000	44.23		56.00	-11.77	L	ON	9.7
4.456000		23.97	46.00	-22.03	L	ON	9.7
4.456000	35.29		56.00	-20.71	L	ON	9.7
7.492000		24.67	50.00	-25.33	L	ON	9.8
7.492000	34.42		60.00	-25.58	L	ON	9.8

**REMARKS:** 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.

- 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
- 3. The emission levels of other frequencies were very low against the limit.
- 4. Margin value = Emission level Limit value
- 5. Correction factor = Insertion loss + Cable loss
- 6. Emission Level = Correction Factor + Reading Value.





Tel.: +86 769 8593 5656 Fax: +86 769 8593 1080



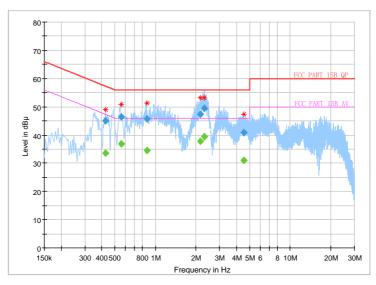
TEST VOLTAGE	DC 5V From Adapter Input 120 Vac, 50 Hz	6dB BANDWIDTH	9 kHz
ENVIRONMENTAL CONDITIONS	22 deg. C, 50% RH	TESTED BY	Ai zhong

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.428000		33.70	47.29	-13.59	N	ON	10.1
0.428000	45.08		57.29	-12.21	N	ON	10.1
0.560000		36.90	46.00	-9.10	N	ON	10.1
0.560000	46.43		56.00	-9.57	N	ON	10.1
0.864000		34.59	46.00	-11.41	N	ON	9.9
0.864000	45.83		56.00	-10.17	N	ON	9.9
2.162000		37.74	46.00	-8.26	N	ON	9.8
2.162000	47.33		56.00	-8.67	N	ON	9.8
2.316000		39.41	46.00	-6.59	N	ON	9.8
2.316000	49.52		56.00	-6.48	N	ON	9.8
4.544000		31.00	46.00	-15.00	N	ON	9.8
4.544000	40.81		56.00	-15.19	N	ON	9.8

**REMARKS:** 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.

- 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
- 3. The emission levels of other frequencies were very low against the limit.
- 4. Margin value = Emission level Limit value
- 5. Correction factor = Insertion loss + Cable loss
- 6. Emission Level = Correction Factor + Reading Value.





Tel.: +86 769 8593 5656 Fax: +86 769 8593 1080



### 2.2RADIATED EMISSION MEASUREMENT

# 2.2.1 Limits of Radiated Emission Measurement TEST STANDARD: FCC Part 15, Subpart B (Section: 15.109)

Emissions radiated outside of the specified bands, shall be according to the general radiated limits as following:

Radiated Emissions Limits at 10 meters (dBµV/m)							
Frequencies (MHz)	FCC 15B/ ICES-003, Class A	CISPR 22, Class A	CISPR 22, Class B				
30-88	39	29.5					
88-216	43.5	33.1	40	30			
216-230	46.4	35.6					
230-960	40.4	33.6	47	37			
960-1000	49.5	43.5	47	37			
1000-3000	Avg: 49.5	Avg: 43.5	Not defined	Not defined			
3000+	Peak: 69.5	Peak: 63.5	Not defined	Not defined			

Radiated Emissions Limits at 3 meters (dBµV/m)							
Frequencies (MHz)	FCC 15B / ICES-003, Class A	CISPR 22, Class A	CISPR 22, Class B				
30-88	49.5	40					
88-216	54	43.5	50.5	40.5			
216-230	FC 0	46					
230-960	56.9	46	57.5	47.5			
960-1000	60	54	57.5	47.5			
1000-3000			Avg: 56	Avg: 50			
	Avg: 60	Avg: 54	Peak: 76	Peak: 70			
3000+	Peak: 80	Peak: 74	Avg: 60 Peak: 80	Avg: 54 Peak: 74			

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

- 2. Emission level  $(dBuV/m) = 20 \log Emission level (uV/m)$ .
- 3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.
- 4. QP detector shall be applied if not specified.

Tel.: +86 769 8593 5656 Fax: +86 769 8593 1080

Bureau Veritas Shenzhen Co., Ltd. Dongguan Branch



### 2.2.2 Test Instruments

For frequency below 1G

r or modulation for							
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.		
EMI Test Receiver	Rohde&Schwarz	ESR7	101494	Apr. 27,15	Apr. 26,16		
Bilog Antenna	Teseq	CBL 6111D	30643	Jul. 16, 15	Jul. 15, 16		
Amplifier (9kHz-1GHz)	SONOMA	310D	186955	Mar. 04,15	Mar. 03, 16		
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	NSEMC003	Apr. 19,14	Apr. 18,16		
Test software	ADT	ADT_Radiated _V7.6.15.9.2	N/A	N/A	N/A		

Frequency range above 1GHz

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Horn Antenna	ETS-Lindgren	3117	00062558	May 30,14	May 29,16
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170242	Feb. 13,14	Feb. 12,17
Signal and Spectrum Analyzer	Rohde&Schwarz	FSV40	101094	Apr 23,15	Apr 22,16
Pre-Amplifier (0.5~18GHz)	SCHWARZBECK	BBV 9718	9718-266	Mar 26,14	Mar 25,16
Pre-Amplifier (18GHz-40GHz)				Nov. 19,15	Nov. 18,16
Test Software	ADT	ADT_Radiated_ V7.6.15.9.2	N/A	N/A	N/A

**NOTE:** 1. The test was performed in 966m Chamber.

- 2. The calibration interval of the above test instruments is 12 months or 24 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
- 3. The FCC Site Registration No. is 494399.

Tel.: +86 769 8593 5656 Fax: +86 769 8593 1080



#### 2.2.3 Test Procedure

The basic test procedure was in accordance with ANSI C63.4:2009 (section 12).

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters Semi-anechoic chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters (below 1GHz) and 3 meters (above 1GHz) away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters 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. The bore sight should be used during the test above 1GHz.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- The test receiver/spectrum was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz.

#### NOTE:

- 1. The resolution bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
- 2. The resolution bandwidth is 1MHz and video bandwidth of test receiver/spectrum analyzer is 3MHz for Peak detection at frequency above 1GHz. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz for Average detection (AV) at frequency above 1GHz.
- 3. For measurement of frequency above 1000 MHz, the EUT was set 3 meters away from the receiver antenna.
- 4. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
- 5. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) (if the raw value not contains the amplifier);
- 6. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) Amplifier Gain(dB) (if the raw value contains the amplifier).
- 7. Margin value = Emission level Limit value.

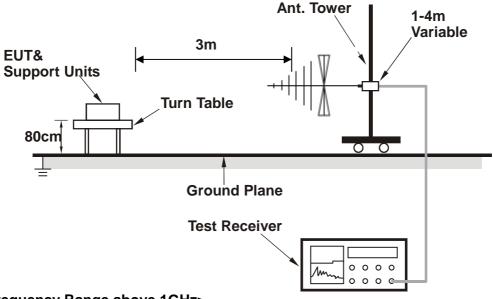
#### 2.2.4 DEVIATION FROM TEST STANDARD

No deviation.

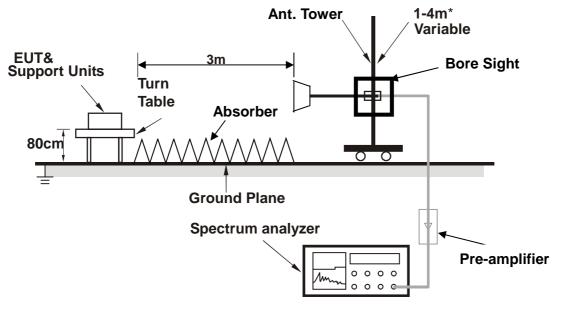


# 2.2.5 Test Setup

#### <Frequency Range below 1GHz>



<Frequency Range above 1GHz>



\*: depends on the EUT height and the antenna 3dB beamwidth both, refer to section 7.3 of CISPR 16-2-3.

#### 2.2.6 EUT OPERATING CONDITIONS

Same as item 2.1.6.

Dongguan Branch

Tel.: +86 769 8593 5656 Fax: +86 769 8593 1080

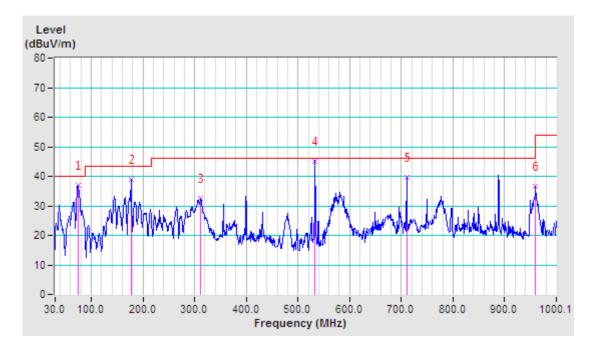


### 2.2.7 TEST RESULTS

TEST VOLTAGE	DC 5V From Adapter Input 120 Vac, 50 Hz	FREQUENCY RANGE	30-1000 MHz
ENVIRONMENTAL CONDITIONS	22 deg. C, 68% RH	DETECTOR FUNCTION & BANDWIDTH	Quasi-Peak , 120 kHz
TESTED BY	Alex Chen		

	ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M									
	Freq.	Correction	Raw	Emission	Limit	Margin	Antenna	Table		
No.	(MHz)	Factor	Value	Level	(dBuV/m)	(dB)	Height	Angle		
	(IVITZ)	(dB/m)	(dBuV)	(dBuV/m)	m)   (dbu v/iii)	(ub)	(cm)	(Degree)		
1	74.62	-34.12	71.09	36.97	40.00	-3.03	200	132		
2	177.44	-29.72	68.70	38.98	43.50	-4.52	200	279		
3	312.27	-25.24	57.71	32.47	46.00	-13.53	200	321		
4	533.43	-19.38	64.36	44.98	46.00	-1.02	200	92		
5	710.94	-14.98	54.73	39.75	46.00	-6.25	200	175		
6	960.23	-13.97	50.72	36.75	54.00	-17.25	200	88		

- **REMARKS:** 1. Peak detector quick scan is showed on the graph and final quasi-peak detector data is measured corresponding to relevant limit and recorded in the data table.
  - 2. Negative sign (-) in the margin column signify levels below the limit.
  - 3. Frequency range scanned: 30MHz to 1000MHz.
  - 4. Only emissions significantly above equipment noise floor are reported.



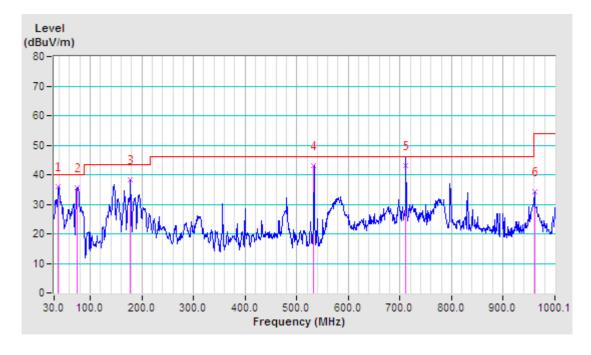
Tel.: +86 769 8593 5656 Fax: +86 769 8593 1080



TEST VOLTAGE	DC 5V From Adapter Input 120 Vac, 50 Hz	FREQUENCY RANGE	30-1000 MHz
ENVIRONMENTAL CONDITIONS	22 deg. C, 68% RH	DETECTOR FUNCTION & BANDWIDTH	Quasi-Peak , 120 kHz
TESTED BY	Alex Chen		

	ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M									
	Freq.	Correction	Raw	Emission	Limit (dBuV/m)	Morgin	Antenna	Table		
No.		Factor	Value	Level		Margin (dB)	Height	Angle		
	(MHz)	(dB/m)	(dBuV)	(dBuV/m)		(ub)	(cm)	(Degree)		
1	38.73	-30.49	66.51	36.02	40.00	-3.98	200	123		
2	75.59	-34.13	69.76	35.63	40.00	-4.37	200	134		
3	177.46	-29.72	68.10	38.38	43.50	-5.12	200	273		
4	533.48	-19.38	62.32	42.94	46.00	-3.06	200	301		
5	711.01	-14.98	58.19	43.21	46.00	-2.79	200	91		
6	960.33	-13.97	48.35	34.38	54.00	-19.62	200	205		

- **REMARKS:** 1. Peak detector quick scan is showed on the graph and final quasi-peak detector data is measured corresponding to relevant limit and recorded in the data table.
  - 2. Negative sign (-) in the margin column signify levels below the limit.
  - 3. Frequency range scanned: 30MHz to 1000MHz.
  - 4. Only emissions significantly above equipment noise floor are reported.



Tel.: +86 769 8593 5656 Fax: +86 769 8593 1080



TEST VOLTAGE	DC 5V From Adapter Input 120 Vac, 50 Hz	FREQUENCY RANGE	1-18 GHz
ENVIRONMENTAL CONDITIONS	22 deg. C, 68% RH	DETECTOR FUNCTION & BANDWIDTH	Peak/Average, 1 MHz
TESTED BY	Alex Chen		

	ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3M								
Frog	Freq.	Erog Correction	Raw	Emission	Limit	Margin	Antenna	Table	
No.	(MHz)	Factor	Value		(dBuV/m)	3	Height	Angle	
	(1011 12)	(dB/m)	dB/m)	(abav/iii)	(ub)	(cm)	(Degree)		
1	1595 PK	-12.52	59.71	47.19	74.00	-26.81	100	203	
2	1595 AV	-12.52	48.96	36.44	54.00	-17.56	100	203	
3	4587 PK	-2.75	52.73	49.98	74.00	-24.02	100	303	
4	4587 AV	-2.75	44.45	41.70	54.00	-12.30	100	303	
5	5845 PK	3.12	54.44	57.56	74.00	-16.44	100	82	
6	5845 AV	3.12	45.40	48.52	54.00	-5.48	100	82	

	ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
	Freq.	Correction	Raw	Emission	Limit	Morgin	Antenna	Table	
No.	(MHz)	Factor	Value	Level	(dBuV/m)	Margin	Height	Angle	
	(IVITZ)	(dB/m)	(dBuV)	(dBuV/m)	(ubuv/III)	(dB)	(cm)	(Degree)	
1	1595 PK	-12.52	58.91	46.39	74.00	-27.61	100	0	
2	1595 AV	-12.52	47.35	34.83	54.00	-19.17	100	111	
3	4179 PK	-3.63	53.35	49.72	74.00	-24.28	100	0	
4	4179 AV	-3.63	44.46	40.83	54.00	-13.17	100	201	
5	5828 PK	2.99	53.84	56.83	74.00	-17.17	100	0	
6	5828 AV	2.99	45.88	48.87	54.00	-5.13	100	331	

- **REMARKS:** 1. Peak detector quick scan is showed on the graph and final quasi-peak detector data is measured corresponding to relevant limit and recorded in the data table.
  - 2. Negative sign (-) in the margin column signify levels below the limit.
  - 3. Frequency range scanned: 1GHz to 6GHz.
  - 4. Only emissions significantly above equipment noise floor are reported.

Tel.: +86 769 8593 5656 Fax: +86 769 8593 1080

Email: customerservice.dg@cn.bureauveritas.com

Page 21 of 22



# 3 APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications were made to the EUT by the lab during the test.

---END---