





EMC TEST REPORT

Applicant:	Nubia Technology Co., Ltd.
Address:	10/F, Tower A, Hans Innovation Mansion, North Ring Rd., No. 9018, Hi-Tech Industrial Park, Nanshan District, Shenzhen, P.R.China

Manufacturer or Supplier	Nubia Technology Co., Ltd.
Address	10/F, Tower A, Hans Innovation Mansion, North Ring Rd., No. 9018, Hi-Tech Industrial Park, Nanshan District, Shenzhen, P.R.China
Product	LTE Digital Mobile Phone
Brand Name	nubia
Model Name	NX597J
FCC ID	2AHJO-NX597J
Date of tests	Apr. 27, 2017 ~ May. 02, 2017

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

◯ ANSI C63.4:2014

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

Issued by Harry Li	Approved by Sam Tung
Engineer / Mobile Department	Manager / Mobile Department
Harry	roto
Date: May 02, 2017	Date: May 02, 2017

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

Bureau Veritas Shenzhen Co., Ltd. Dongguan Branch

No. 34, Chenwulu Section, Guantai Rd., Houjie Town, Dongguan City, Guangdong 523942, China

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



TABLE OF CONTENTS

RELEAS	E CONTROL RECORD	3
1 GEN	IERAL INFORMATION	4
1.1	GENERAL DESCRIPTION OF EUT	4
	SUMMARY OF TEST RESULTS	
1.3	MEASUREMENT UNCERTAINTY	6
1.4	DESCRIPTION OF TEST MODES	7
	DESCRIPTION OF SUPPORT UNITS	
1.6	CONFIGURATION OF SYSTEM UNDER TEST	9
2 EMIS	SSION TEST	11
21 C	ONDUCTED EMISSION MEASUREMENT	11
2.1 0		11
212		
2.1.3		
2.1.4		
2.1.5		
2.1.6	EUT OPERATING CONDITIONS	13
2.1.7		14
2.2	RADIATED EMISSION MEASUREMENT	16
2.2.1	I LIMITS OF RADIATED EMISSION MEASUREMENT	16
2.2.2	2 TEST INSTRUMENTS	18
2.2.3		
2.2.4	4 DEVIATION FROM TEST STANDARD	20
2.2.5		
2.2.6	S EUT OPERATING CONDITIONS	21
2.2.7	7 TEST RESULTS	22
	ENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO	

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



RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FV170410W004	Original release	May 02, 2017

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	LTE Digital Mobile Phone		
BRAND NAME	nubia		
MODEL NAME	NX597J		
NOMINAL VOLTAGE	5.0Vdc (adapter or host equipment) 3.8Vdc (Li-ion, battery)		
BATTERY	Brand Name: ZTE Model Name: Li3830T43P6h856337 Power Rating: DC 3.8V, 3000mAh, Li-ion		
	WLAN	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM	
	BT_LE	DTS	
	Bluetooth	GFSK, π/4-DQPSK, 8DPSK	
MODULATION TYPE	GSM/EDGE	GMSK, 8PSK	
	WCDMA	BPSK/QPSK	
	LTE	QPSK/16QAM	
	WLAN	2412 ~ 2462MHz for 11b/g/n(HT20) 2422 ~ 2452MHz for 11n(HT40)	
	Bluetooth/BT_LE	2402MHz ~ 2480MHz	
	GSM/EDGE	824.2MHz ~ 848.8MHz (FOR GSM 850) 1850.2MHz ~ 1909.8MHz (FOR PCS 1900)	
OPERATING FREQUENCY	WCDMA	1852.4MHz ~ 1907.6MHz (FOR WCDMA Band 826.4MHz ~ 846.6MHz (FOR WCDMA Band 5	
	LTE	1850.7MHz ~ 1909.3MHz (FOR LTE Band 2) 1710.7MHz ~ 1754.3MHz (FOR LTE Band 4) 824.7MHz ~ 848.3MHz (FOR LTE Band 5) 2502.5MHz ~ 2567.5MHz (FOR LTE Band 7) 699.7MHz ~ 715.3MHz (FOR LTE Band 12) 706.5MHz ~ 713.5MHz (FOR LTE Band 17)	
HW VERSION	MB6735_05A_V1BMB_B		
SW VERSION	NX597J_USCommon_7.00		
I/O PORTS	Refer to user's manual		
CABLE	USB cable: non-shielded, detachable, 1.0m		

Bureau Veritas Shenzhen Co., Ltd. Dongguan Branch

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



ACCESSORY	Defende nede ee heleer
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:	nubia
MODEL:	STC-A515A-Z
INPUT:	AC 100-240V, 300mA
OUTPUT:	DC 5V, 1500mA

3. The EUT matched the following USB cable:

USB CABLE	
BRAND:	LIXUN
MODEL:	ZXMT1511003
SIGNAL LINE:	1.0 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

Email: customerservice.dg@cn.bureauveritas.com

Report Version 1



1.2 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	
FCC Part 15, Subpart B, Class B ANSI C63.4:2014	Conducted Test Radiated Emission Test (30MHz ~ 1GHz)	PASS	Meets limits minimum passing margin is -18.89dB at 0.516000MHz. Meets Class B Limit Minimum passing margin is -4.63dB at 797.27MHz	
	Radiated Emission Test (Above 1GHz)	PASS	Meets Class B Limit Minimum passing margin is -15.55dB at 3360MHz	

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	+/-2.70dB
Dedicted envisere	30MHz ~ 1GHz	+/-4.06dB
Radiated emissions	1GHz ~ 18GHz	+/-4.58dB



1.4 DESCRIPTION OF TEST MODES

Test Mode	Test Condition		
	Radiated emission test		
1	GSM850 Idle+ Adapter+ Earphone+ USB cable+ BT Idle+ WIFI Idle(2.4G)+ GPS Rx+ SMI2+ Back camera on		
2	GSM1900 Idle+ Adapter+ Earphone+ USB cable+ BT Idle+ WIFI Idle(2.4G)+ GPS Rx + SIM2 + Front camera on		
3	WCDMA850 Idle + Adapter+ Earphone+ USB cable+ BT Idle+ WIFI Idle(2.4G)+ GPS Rx+ SIM1 + FM Rx		
4	WCDMA1900 Idle + Adapter+ Earphone+ USB cable+ BT Idle+ WIFI Idle(2.4G)+ GPS Rx + SIM1 +MPEG4		
5	LTE B2 Idle + Adapter+ Earphone+ USB cable+ BT Idle+ WIFI Idle(2.4G)+ GPS Rx + SIM1		
6	LTE B4 Idle + Adapter+ Earphone+ USB cable+ BT Idle+ WIFI Idle(2.4G)+ GPS Rx + SIM1		
7	LTE B5 Idle + Adapter+ Earphone+ USB cable+ BT Idle+ WIFI Idle(2.4G)+ GPS Rx + SIM1		
8	LTE B7 Idle + Adapter + Earphone+ USB cable+ BT Idle+ WIFI Idle(2.4G)+ GPS Rx+ + SIM1		
9	LTE B12 Idle + Adapter + Earphone+ USB cable+ BT Idle+ WIFI Idle(2.4G)+ GPS Rx+SIM1		
10	LTE B17 Idle + USB Link + Earphone+ USB cable+ BT Idle+ WIFI Idle(2.4G)+ GPS Rx+SIM1		
	Conducted emission test		
1	GSM850 Idle+ Adapter+ Earphone+ USB cable+ BT Idle+ WIFI Idle(2.4G)+ GPS Rx+ SMI2+ Back camera on		
2	GSM1900 Idle+ Adapter+ Earphone+ USB cable+ BT Idle+ WIFI Idle(2.4G)+ GPS Rx + SIM2 + Front camera on		
3	WCDMA850 Idle + Adapter+ Earphone+ USB cable+ BT Idle+ WIFI Idle(2.4G)+ GPS Rx+ SIM1 + FM Rx		
4	WCDMA1900 Idle + Adapter+ Earphone+ USB cable+ BT Idle+ WIFI Idle(2.4G)+ GPS Rx + SIM1 +MPEG4		
5	LTE B2 Idle + Adapter+ Earphone+ USB cable+ BT Idle+ WIFI Idle(2.4G)+ GPS Rx + SIM1		
6	LTE B4 Idle + Adapter+ Earphone+ USB cable+ BT Idle+ WIFI Idle(2.4G)+ GPS Rx + SIM1		
7	LTE B5 Idle + Adapter+ Earphone+ USB cable+ BT Idle+ WIFI Idle(2.4G)+ GPS Rx + SIM1		
8	LTE B7 Idle + Adapter + Earphone+ USB cable+ BT Idle+ WIFI Idle(2.4G)+ GPS Rx+ + SIM1		
9	LTE B12 Idle + Adapter + Earphone+ USB cable+ BT Idle+ WIFI Idle(2.4G)+ GPS Rx+SIM1		
10	LTE B17 Idle + USB Link + Earphone+ USB cable+ BT Idle+ WIFI Idle(2.4G)+ GPS Rx+SIM1		

NOTE:

- 1. For conducted emission test, test mode 2 was the worst case and only this mode was presented in this report.
- 2. For radiated emission test, test mode 10 was the worst case and only this mode was presented in this report.

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

No. 34, Chenwulu Section, Guantai Rd., Houjie Town, Dongguan City, Guangdong 523942, China



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

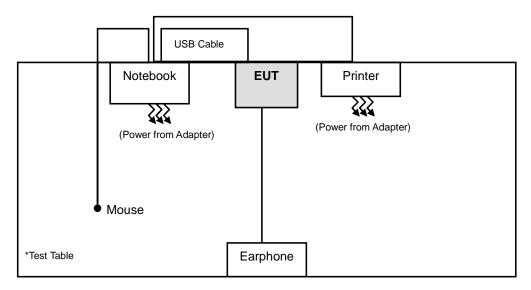
NO.	PRODUCT	BRAND	MODEL NO. SERIAL NO.		FCC ID
1	Wireless AP	ABOCOM	OCOM WR224GR 06		N/A
2	Notebook	DELL	E6420	9H12FS1	N/A
3	Printer	HP	hp LaserJet 1300	CNSJF75989	N/A
4	Mouse	DELL	M056UOA	01688082	N/A
5	Earphone	N/A	N/A	N/A	N/A

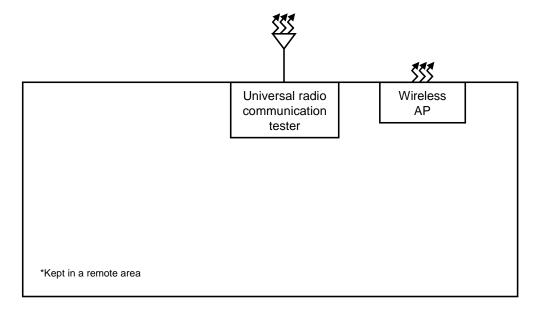
NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	N/A
2	DC Line: Unshielded, Undetachable, 2.0m
3	USB Line: Shielded, Detachable 1.5m;
4	USB Line: Unshielded, Undetachable 1.8m;
5	N/A



1.6 CONFIGURATION OF SYSTEM UNDER TEST

Test configuration 1

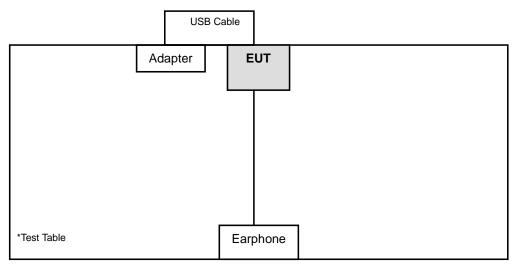


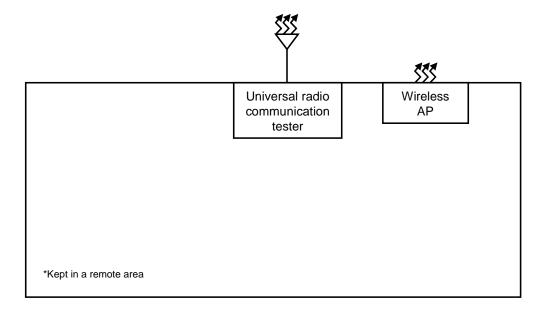


Tel.: +86 769 8593 5656 Fax: +86 769 8593 1080



Test configuration 2





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



EMISSION TEST

CONDUCTED EMISSION MEASUREMENT

LIMITS OF CONDUCTED EMISSION MEASUREMENT 2.1.1

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	ESR7	101494	Apr. 01,17	Mar. 31,18
Artificial Mains Network	Rohde&Schwarz	ENV216	101173	Mar. 03,17	Mar. 02,18
Artificial Mains Network	Rohde&Schwarz	ESH3-Z5	100317	Apr. 01,17	Mar. 31,18
Voltage probe	SCHWARZBECK	TK 9421	TK 9421-176	Nov. 25,16	Nov. 24,17
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.
 - 3. The FCC Site Registration No. is 502831.



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

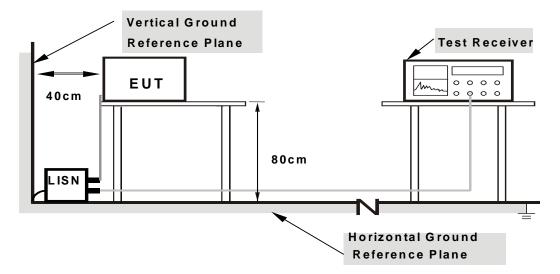
No deviation.

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

China Fax: +



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



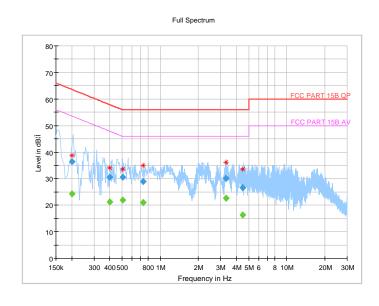
2.1.7 TEST RESULTS

TEST VOLTAGE	DC 5V From Adapter Input 120 Vac, 60 Hz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
ENVIRONMENTAL CONDITIONS	24deg. C, 55RH	TESTED BY	Alex Chen

Frequency (MHz)	QuasiPeak (dB¦ÌV)	CAverage (dB¦ÌV)	Limit (dB¦ÌV)	Margin (dB)	Line	Filter	Corr. (dB)
0.202000		24.15	53.53	-29.38	L	ON	9.7
0.202000	36.33		63.53	-27.20	L	ON	9.7
0.400000		21.25	47.85	-26.60	L	ON	9.7
0.400000	30.60		57.85	-27.25	L	ON	9.7
0.508000		21.91	46.00	-24.09	L	ON	9.7
0.508000	30.44		56.00	-25.56	L	ON	9.7
0.736000		20.98	46.00	-25.02	L	ON	9.7
0.736000	28.98		56.00	-27.02	L	ON	9.7
3.312000		22.59	46.00	-23.41	L	ON	9.7
3.312000	30.02		56.00	-25.98	L	ON	9.7
4.468000		16.38	46.00	-29.62	L	ON	9.7
4.468000	26.66		56.00	-29.34	L	ON	9.7

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.



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

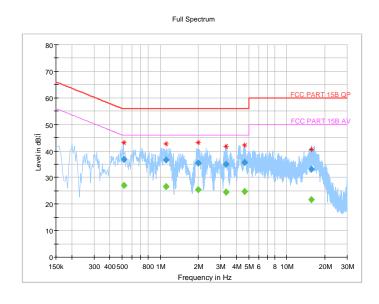


TEST VOLTAGE			Quasi-Peak (QP) / Average (AV), 9 kHz
ENVIRONMENTAL CONDITIONS	24deg. C, 55RH	TESTED BY	Alex Chen

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.516000		27.11	46.00	-18.89	N	ON	10.1
0.516000	36.85		56.00	-19.15	N	ON	10.1
1.114000		26.69	46.00	-19.31	N	ON	9.9
1.114000	36.73		56.00	-19.27	N	ON	9.9
2.000000		25.35	46.00	-20.65	N	ON	9.8
2.000000	35.53		56.00	-20.47	N	ON	9.8
3.304000		24.47	46.00	-21.53	N	ON	9.8
3.304000	35.08		56.00	-20.92	N	ON	9.8
4.624000		24.75	46.00	-21.25	N	ON	9.8
4.624000	35.60		56.00	-20.40	N	ON	9.8
15.540000		21.59	50.00	-28.41	N	ON	9.9
15.540000	33.12		60.00	-26.88	N	ON	9.9

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

2.2 RADIATED 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	33.0	47	37			
960-1000	49.5	43.5	47	31			
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)			CISPR 22, Class A	CISPR 22, Class B			
30-88	49.5	40					
88-216	54	43.5	50.5	40.5			
216-230	56.9	46					
230-960	56.9	40	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	Avg: 54			
			Peak: 80	Peak: 74			



Frequency Range (For unintentional radiators)

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)	
Below 1.705	30	
1.705-108	1000	
108-500	2000	
500-1000	5000	
Above 1000	5 th harmonic of the highest frequency or 40GHz, whichever is lower	

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.

Page 17 of 26



2.2.2 TEST INSTRUMENTS

Frequency range below1GHz

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESCI	100962	Feb. 20,17	Feb. 19,18
EMI Test Receiver	Rohde&Schwarz	ESCI	101418	Feb. 20,17	Feb. 19,18
Trilog-Broadband	SCHWARZBECK	VIII B 9168	9168-554	Nov. 13,16	Nov. 12,17
Antenna	CONTINUEDECIN	VOLD 0100	0100 001	1101. 10,10	1101. 12,17
Trilog-Broadband	SCHWARZBECK	VIII B 9168	9168-555	Nov. 20,16	Nov. 19, 17
Antenna	COLIVITATEDECIN	VOLD 5100	3100 000	1404. 20, 10	1404. 15, 17
Signal Amplifier	Agilent	8447D	2944A10488	Jun. 25,16	Jun. 24,17
Signal Amplifier	Agilent	8447D	2944A11174	Jun. 25,16	Jun. 24,17
10m Semi-anechoic	CHANGLING	21.4m*12.1m*8	NSEMCOOS	Mar. 12,16	Mar. 11,18
Chamber	CHANGLING	.8m	NSLIVICOU	IVIAI. 12,10	iviai. 11,10
Test Software	ADT	ADT_Radiated	N/A	N/A	N/A
iest Soitwale	ולטו	_V8.7.x	N/ /\	N/ /\	1 W/ A

Frequency range above 1GHz

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Horn Antenna	ETS-Lindgren	3117	00085519	Dec. 30,15	Dec. 29,17
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170242	Mar. 02,17	Mar. 01,18
Signal and Spectrum Analyzer	Rohde&Schwarz	FSV40	101003	Apr. 01,17	Mar. 31,18
Broadband Preamplifier	SCHWARZBECK	BBV9718	266	Mar. 21,17	Mar. 20,18
Pre-Amplifier (100MHz-26.5G Hz)	EMCI	EMC 012645	980077	May 04,16	May 03,17
Pre-Amplifier (18GHz-40GHz)	EMCI	EMC 184045	980102	Nov. 04,16	Nov. 03,17

NOTE: 1. The test was performed in 10m 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 502831.

Page 18 of 26



2.2.3 TEST PROCEDURE

<Frequency Range below 1GHz>

The basic test procedure was in accordance with ANSI C63.4:2014 (section 12).

- a. 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 of the highest radiation.
- b. The EUT was set 3 meters 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 1 meter to 4 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.
- 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 1GHz.

NOTE:

- 1. The resolution bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
- 2. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
- 3. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) (if the raw value not contains the amplifier);
- 4. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) Amplifier Gain(dB) (if the raw value contains the amplifier).
- 5. Margin value = Emission level Limit value.

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

Email: customerservice.dg@cn.bureauveritas.com

Page 19 of 26



<Frequency Range above 1GHz>

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter fully-anechoic chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters 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.
- 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 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 and video bandwidth of test receiver/spectrum analyzer is 3MHz 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.

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

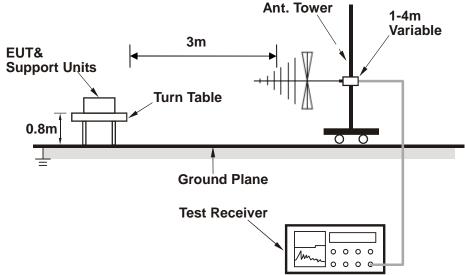
Email: customerservice.dg@cn.bureauveritas.com

Page 20 of 26

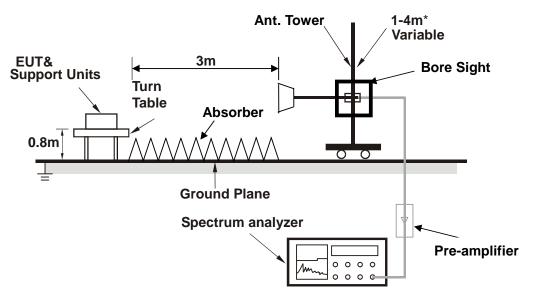


2.2.5 TEST SETUP

<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.

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

Email: customerservice.dg@cn.bureauveritas.com

Page 21 of 26

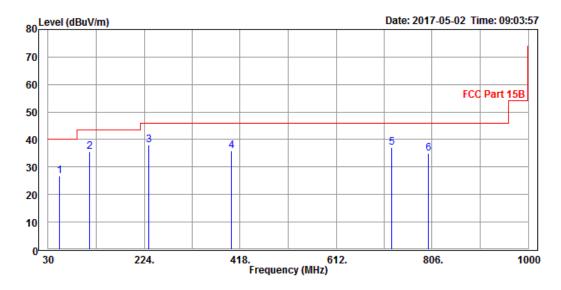


2.2.7 TEST RESULTS

TEST VOLTAGE	DC 5V From Adapter Input 120 Vac, 60 Hz	FREQUENCY RANGE	30-1000 MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 58 %RH	DETECTOR FUNCTION & RESOLUTION BANDWIDTH	Quasi-Peak , 120 kHz
TESTED BY	Tony Zou		

	ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK	
52.31	26.87	56.66	40.00	-13.13	6.48	1.10	37.37	200	50	QP	
113.42	35.67	63.47	43.50	-7.83	7.53	1.63	36.96	200	112	QP	
232.73	38.01	60.58	46.00	-7.99	11.61	2.35	36.53	200	156	QP	
399.57	36.00	52.39	46.00	-10.00	17.18	3.15	36.72	200	90	QP	
723.55	36.99	46.96	46.00	-9.01	23.08	4.37	37.42	200	250	QP	
798.24	34.91	44.86	46.00	-11.09	23.00	4.67	37.62	200	72	QP	

- 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

Email: customerservice.dg@cn.bureauveritas.com

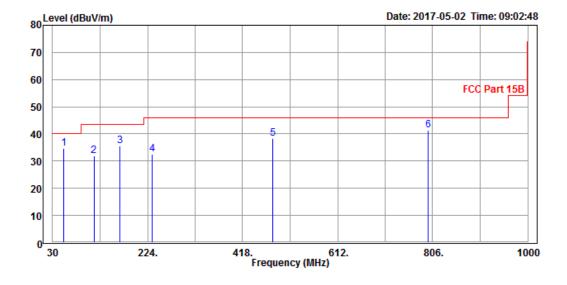
Report Version 1



TEST VOLTAGE	DC 5V From Adapter Input 120 Vac, 60 Hz	FREQUENCY RANGE	30-1000 MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 58 %RH	DETECTOR FUNCTION & RESOLUTION BANDWIDTH	Quasi-Peak , 120 kHz
TESTED BY	Tony Zou		

	ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK	
53.28	34.54	64.32	40.00	-5.46	6.47	1.11	37.36	100	355	QP	
114.39	31.97	59.78	43.50	-11.53	7.50	1.64	36.95	100	45	QP	
166.77	35.52	60.17	43.50	-7.98	10.10	1.97	36.72	100	125	QP	
232.73	32.69	55.26	46.00	-13.31	11.61	2.35	36.53	100	176	QP	
480.08	38.47	53.82	46.00	-7.53	18.16	3.40	36.91	100	240	QP	
797.27	41.37	51.31	46.00	-4.63	23.00	4.67	37.61	100	64	QP	

- 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

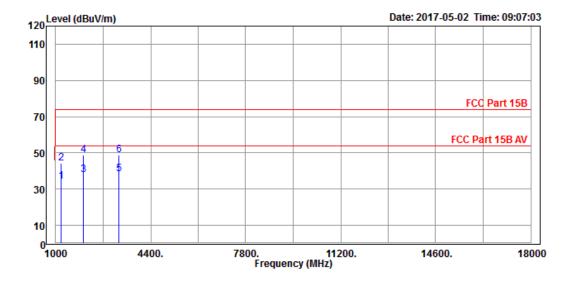


TEST VOLTAGE	DC 5V From Adapter Input 120 Vac, 60 Hz	FREQUENCY RANGE	1-18 GHz
ENVIRONMENTAL CONDITIONS	20deg. C, 58 %RH	DETECTOR FUNCTION & RESOLUTION BANDWIDTH	Peak/Average, 1 MHz
TESTED BY	Tony Zou		

	ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK	
1205	34.26	47.99	54.00	-19.74	29.00	5.63	48.36	100	96	Average	
1205	44.36	58.09	74.00	-29.64	29.00	5.63	48.36	100	96	Peak	
2000	37.69	46.69	54.00	-16.31	31.90	7.45	48.35	100	210	Average	
2000	48.75	57.75	74.00	-25.25	31.90	7.45	48.35	100	210	Peak	
3250	38.24	44.08	54.00	-15.76	32.95	9.58	48.37	100	60	Average	
3250	48.75	54.59	74.00	-25.25	32.95	9.58	48.37	100	90	Peak	

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 18GHz.
- 4. Only emissions significantly above equipment noise floor are reported.



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

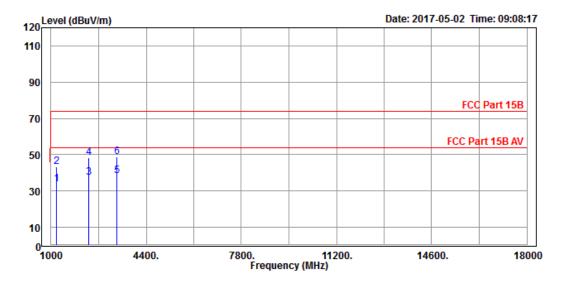


TEST VOLTAGE	DC 5V From Adapter Input 120 Vac, 60 Hz	FREQUENCY RANGE	1-18 GHz
ENVIRONMENTAL CONDITIONS	20deg. C, 58 %RH	DETECTOR FUNCTION & RESOLUTION BANDWIDTH	Peak/Average, 1 MHz
TESTED BY	Tony Zou		

	ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK	
1200	33.96	47.70	54.00	-20.04	29.00	5.62	48.36	100	63	Average	
1200	43.53	57.27	74.00	-30.47	29.00	5.62	48.36	100	63	Peak	
2350	37.25	45.23	54.00	-16.75	32.25	8.08	48.31	100	156	Average	
2350	48.25	56.23	74.00	-25.75	32.25	8.08	48.31	100	156	Peak	
3360	38.45	44.13	54.00	-15.55	32.97	9.74	48.39	100	245	Average	
3360	48.76	54.44	74.00	-25.24	32.97	9.74	48.39	100	245	Peak	

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 18GHz.
- 4. Only emissions significantly above equipment noise floor are reported.



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



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---

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