FCC ID
TEST REPORT

for

wired keyboard

MODEL: JK31UATH, JK21UATH, JK02UAH, JK31UAH, 2C－SK02H2, 2C－SK31H2, 2C－SISK31H2, 2C－SK21H2

FCC ID: ZLM-JK31UATH

Test Report Number: BCT1000101094JN
Issued Date: May 23, 2011

Issued for

SHENZHEN WUCHUAN NET TECH CO., LTD.
Gaoxinqi Industrial Park, 1Liuxian Road, District 67 Baoan, Shenzhen, China. 518102#

Issued by:

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Revision History of report

Rev.	Issue No.	Revisions	Effect Page	Revised By
00	BCT1000101094JN	Initial Issue	ALL	Kallen Wang

TABLE OF CONTENTS

1 TEST RESULT CERTIFICATION

Product:	wired keyboard
Model:	JK31UATH, JK21UATH, JK02UAH, JK31UAH, 2C－SK02H2, 2C－SK31H2, 2C－SISK31H2, 2C－SK21H2
Trade Mark:	N/A
Applicant:	**SHENZHEN WUCHUAN NET TECH CO., LTD.** Gaoxinqi Industrial Park, 1Liuxian Road, District 67 Baoan, Shenzhen, China. 518102#
Factory	**SHENZHEN GAOXINQI TECHNOLOGY CO.,LTD.** Gaoxinqi Industrial Park, 1Liuxian Road, District 67 Baoan, Shenzhen, China. 518102#
Tested Date:	May 6, 2011 -May 23, 2011
Test Voltage:	DC 5V(PC)

APPLICABLE STANDARDS	
STANDARD	**TEST RESULT**
FCC PART 15B	No non-compliance noted
ANSI C63.4: 2003	No non-compliance noted

Note: 1. The test result judgment is decided by the limit of measurement standard
2. The information of measurement uncertainty is available upon the customer's request.

The above equipment has been tested by Shenzhen BCT Technology Co., Ltd. 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.

Tested By: Davis ma _____ ***Date:*** ***May 23, 2011***

(Davis Ma)

Check By: Merry Zhao _____ ***Date:*** ***May 23, 2011***

(Merry Zhao)

Approved By: Lisa Zhu _____ ***Date:*** ***May 23, 2011***

(Lisa Zhu)

2 TEST RESULT SUMMARY

Test Item	Test Result
Conduct Emission	Pass
Radiation Emission	Pass

Note: 1. The test result judgment is decided by the limit of test standard
2. The information of measurement uncertainty is available upon the customer's request.
3. N/A means to no applicable.

3 EUT DESCRIPTION

Product	wired keyboard
Brand Name	N/A
Model	JK31UATH, JK21UATH, JK02UAH, JK31UAH, 2C－SK02H2, 2C－SK31H2, 2C－SISK31H2, 2C－SK21H2
Applicant	SHENZHEN WUCHUAN NET TECH CO., LTD.
Serial Number	N/A
EUT Power Rating	DC 5V(PC)
Temperature Range(Operating)	15-35℃
Operating Frequency	N/A

N/A mean to no applicable

I/O PORT

I/O PORT TYPES	Q'TY	TESTED WITH
USB PORT	1	1

Models difference

All models have the same constructions, circuit diagram and PCB layout. Only model name and plastic shell are different.

4 TEST METHODOLOGY

4.1 DECISION OF FINAL TEST MODE

The EUT was tested together with the thereinafter additional components, and a configuration, which produced the worst emission levels, was selected and recorded in this report.

The following test mode(s) were scanned during the preliminary test:

Pre-Test Mode		
Emission	Conducted Emission	Mode : Running
	Radiated Emission	Mode : Running

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

The Worst Test Mode		
Emission	Conducted Emission	Mode : Running
	Radiated Emission	Mode : Running

4.2 EUT SYSTEM OPERATION

1. Set up EUT with the relative support equipments.

2.Make sure the EUT normal operation during the test.

5 SETUP OF EQUIPMENT UNDER TEST

5.1 DESCRIPTION OF SUPPORT UNITS

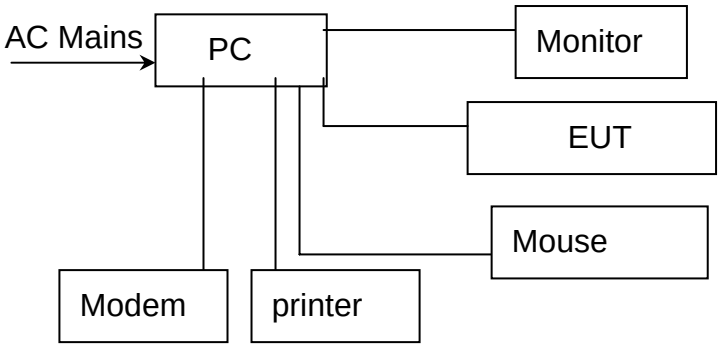
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

No.	Equipment	Model No.	Serial No.	FCC ID	Trade Name	Data Cable	Power Cord
1	PC	dx2700	CNG7140T7P	N/A	HP	Unshielded 1.6m	N/A
2	Monitor	HPL1706V	CND74535YZ	N/A	HP	Unshielded 1.6m	N/A
3	Keyboard	SK-2880	435302-AA1	N/A	HP	Unshielded 1.6m	N/A
4	Mouse	M-SAW83A	HCA31707689	N/A	HP	Unshielded 1.6m	N/A
5	Laser Jet5L	C3941A	JPTVOB2337	N/A	HP	Unshielded 1.6m	N/A
6	Modem	SW108SMD	N/A	N/A	N/A	Unshielded 1.6m	N/A

Note:

1) All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2) Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

5.2 CONFIGURATION OF SYSTEM UNDER TEST



(EUT: wired keyboard)

6 FACILITIES AND ACCREDITATIONS

6.1 FACILITIES

The test site used to collect the radiated data is located on the address of
emitel (Shenzhen) Limited
(FCC Registered Test Site Number: 746887) on
Building 2, 171 Meihua Road, Futian District, Shenzhen, 518049 China
The Test Site is constructed and calibrated to meet the FCC requirements.

6.2 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	450kHz~30MHz		+/- 3.59dB
Radiated emissions	Horizontal	30MHz ~ 200MHz	+/- 4.77dB
		200MHz ~1000MHz	+/- 4.93dB
	Vertical	30MHz ~ 200MHz	+/- 5.04dB
		200MHz ~1000MHz	+/- 4.93dB

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

7 CONDUCTED EMISSION MEASUREMENT

7.1 LIMITS

FREQUENCY (MHz)	LIMIT(dBuV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30.0	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 0.50 MHz.
(3) All emanations from EUT or system, shall not exceed the level of field strengths specified above.

7.2 TEST INSTRUMENTS

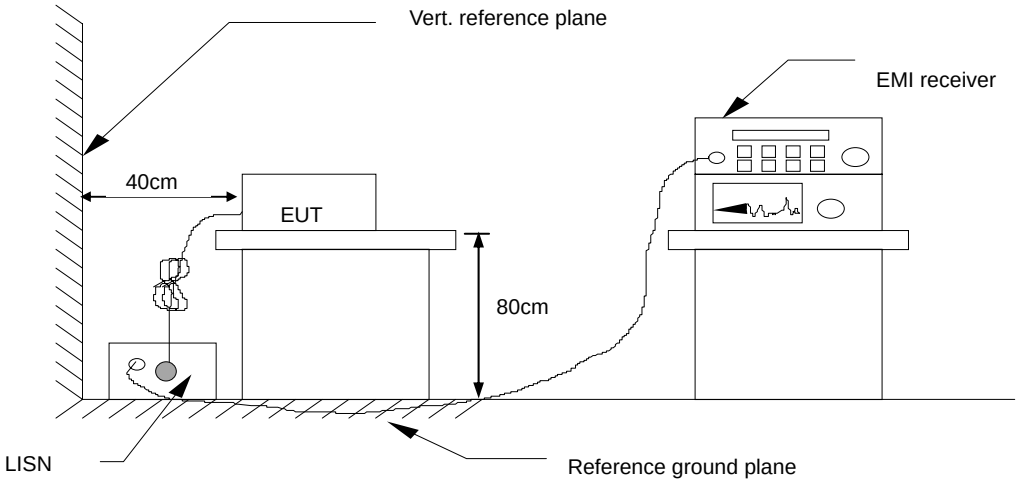
Conducted Emission Shielding Room Test Site (843)				
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
EMI Test Receiver	R&S	ESCI	100005	06/24/2011
LISN	AFJ	LS16	16010222119	09/29/2011
LISN(EUT)	Mestec	AN3016	04/10040	09/28/2011

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).
2. N.C.R = No Calibration Request.

7.3 TEST PROCEDURES

The EUT was put on a wooden table which was 0.8metre high above the ground and connected to the AC mains through a Artificial Mains Network (A.M.N). The mains lead in excess of 1 m separating the EUT from the AMN was folded back and forth parallel to the lead so as to form a bundle with a length of 0.3m to 0.4m. The EUT was kept 0.4m from any other earthed conducting surface. Both sides of AC line were checked to find out the maximum conducted emission levels according to the test procedure during conducted emission test.
The bandwidth of the test receiver (ESCI) was set at 9KHz.
The frequency range from 150 KHz to 30 MHz was investigated.
The test data of the worst-case condition(s) was recorded.

7.4 TEST SETUP

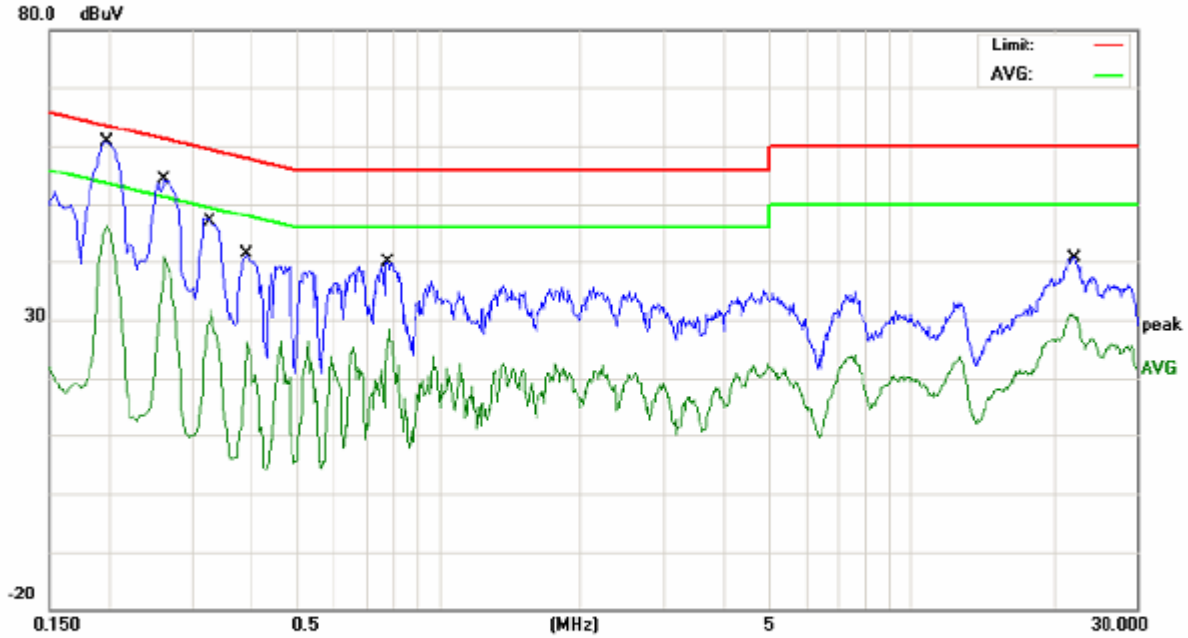


For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

7.5. TEST RESULTS

PASS

Conducted Emission Measurement



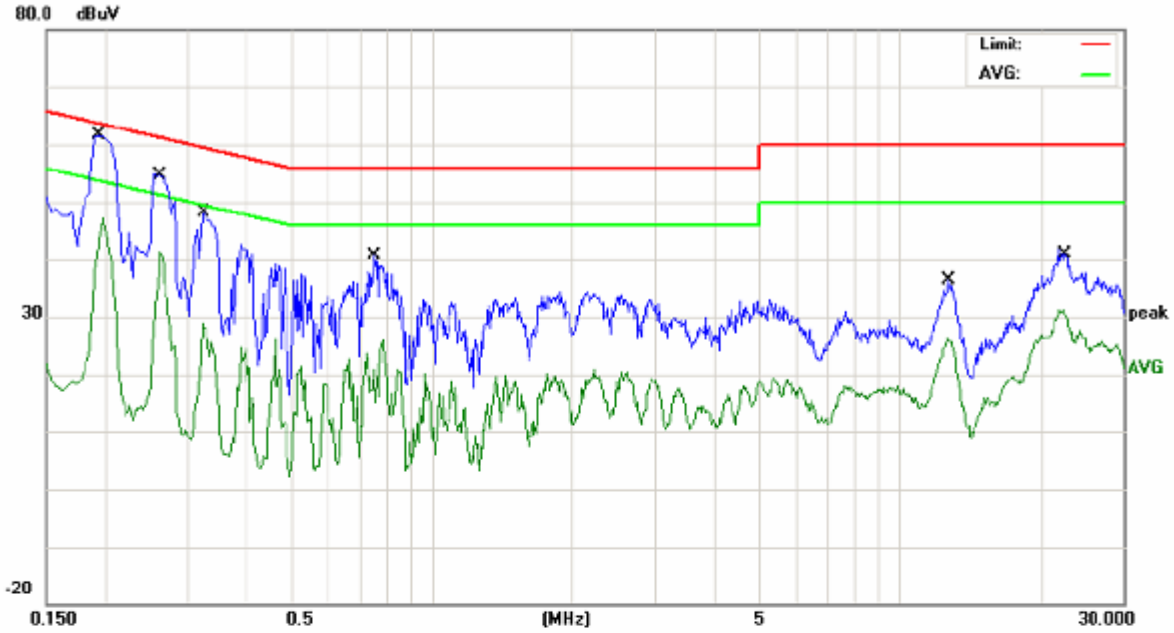
Site 843 Shielded Room Phase: *L1* Temperature: 26

Limit: FCC Part 15 B Conduction(QP) Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1980	47.70	10.70	58.40	63.69	-5.29	QP	
2		0.1980	32.67	10.70	43.37	53.69	-10.32	AVG	
3		0.2620	40.85	10.81	51.66	61.36	-9.70	QP	
4		0.2620	26.74	10.81	37.55	51.36	-13.81	AVG	
5		0.3303	33.47	10.82	44.29	59.44	-15.15	QP	
6		0.3303	18.51	10.82	29.33	49.44	-20.11	AVG	
7		0.3899	27.84	10.72	38.56	58.06	-19.50	QP	
8		0.3899	10.28	10.72	21.00	48.06	-27.06	AVG	
9		0.7820	26.81	10.38	37.19	56.00	-18.81	QP	
10		0.7820	15.02	10.38	25.40	46.00	-20.60	AVG	
11		22.2540	24.33	10.30	34.63	60.00	-25.37	QP	
12		22.2540	18.48	10.30	28.78	50.00	-21.22	AVG	

':Maximum data x:Over limit !:over margin 〈Reference Only

Conducted Emission Measurement



Site 843 Shielded Room Phase: *N* Temperature: 26

Limit: FCC Part 15 B Conduction(QP) Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1940	49.09	10.67	59.76	63.86	-4.10	QP	
2		0.1940	32.12	10.67	42.79	53.86	-11.07	AVG	
3		0.2630	41.58	10.81	52.39	61.33	-8.94	QP	
4		0.2630	27.15	10.81	37.96	51.33	-13.37	AVG	
5		0.3260	34.85	10.83	45.68	59.55	-13.87	QP	
6		0.3260	17.83	10.83	28.66	49.55	-20.89	AVG	
7		0.7580	25.03	10.40	35.43	56.00	-20.57	QP	
8		0.7580	6.66	10.40	17.06	46.00	-28.94	AVG	
9		12.7500	20.36	10.43	30.79	60.00	-29.21	QP	
10		12.7500	14.31	10.43	24.74	50.00	-25.26	AVG	
11		22.5660	24.51	10.30	34.81	60.00	-25.19	QP	
12		22.5660	18.50	10.30	28.80	50.00	-21.20	AVG	

*:Maximum data x:Over limit I:over margin 〈Reference Only

8 RADIATED EMISSION MEASUREMENT

8.1. LIMITS OF RADIATED EMISSION MEASUREMENT

Maximum permissible level of Radiated Emission measured at 3 meter

FREQUENCY (MHz)	dBuV/m (At 3m)
	Class B
30~88	40.00
88~216	43.50
216~960	46.00
960~1000	54.00
>1000	PK:74;AV:54

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

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

(3) The limit below 1GHz use QP detector

8.2. TEST INSTRUMENTS

966 Chamber				
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
EMI Test Receiver	ROHDE&SCHWARZ	ESCI	100005	09/24/2011
Spectrum Analyzer	R&S	FSU	100114	09/24/2011
Pre Amplifier	H.P.	HP8447E	2945A02715	09/24/2011
Pre-Amplifier	Compliance	PAM0118	1360976	09/24/2011
Bilog Antenna	SUNOL Sciences	JB3	A021907	09/24/2011
Horn Antenna	Compliance	CE18000	001	09/24/2011
Cable	TIME MICROWAVE	LMR-400	N-TYPE04	09/24/2011
Cable	TIME MICROWAVE	--	--	09/24/2011
Signal generator	HP	8657B	101059-999	09/24/2011
System-Controller	CCS	N/A	N/A	N.C.R
Turn Table	CCS	N/A	N/A	N.C.R
Antenna Tower	CCS	N/A	N/A	N.C.R

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to International system of unit (SI).

2. N.C.R = No Calibration Request.

8.3.TEST PROCEDURES

The EUT was placed on a turn table which was 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was set 3 meters away from the receiving antenna which was mounted on a antenna tower. At the frequency band of 30MHz to 1GHz,The measuring antenna moved up and down to find out the maximum emission level. It moved from 1 to 4 m for horizontal and vertical polarizations. The broadband antenna (calibrated by dipole antenna) was used as a receiving antenna. At the frequency band of 1GHz to 2GHz,The measuring antenna moved from 1 to 4 m for horizontal and vertical polarization. The horn antenna was used as a receiving antenna.

The resolution bandwidth and video bandwidth of the test receiver was 120 KHz and 300KHz for Quasi-peak detection at frequency below 1GHz.

The resolution bandwidth and video bandwidth of the test receiver was1MHz and 3MHz for Peak emssion mesurement above 1GHz .

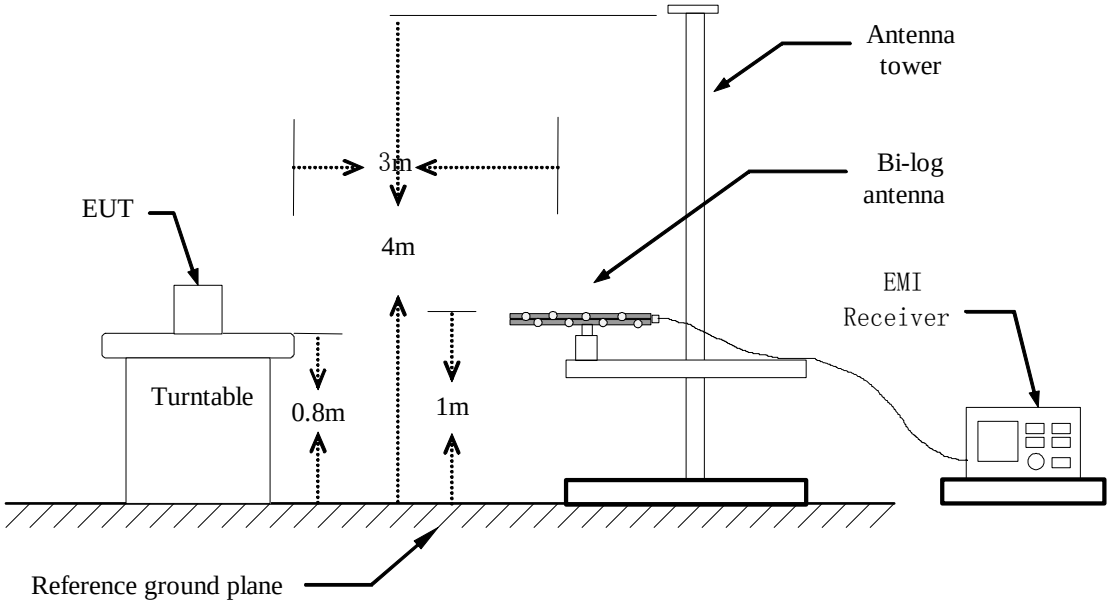
The resolution bandwidth of the test receiver was 1MHz and the video bandwidth are
10Hz for Average emssion mesurement above 1GHz .

The EUT was tested in Chamber Site.

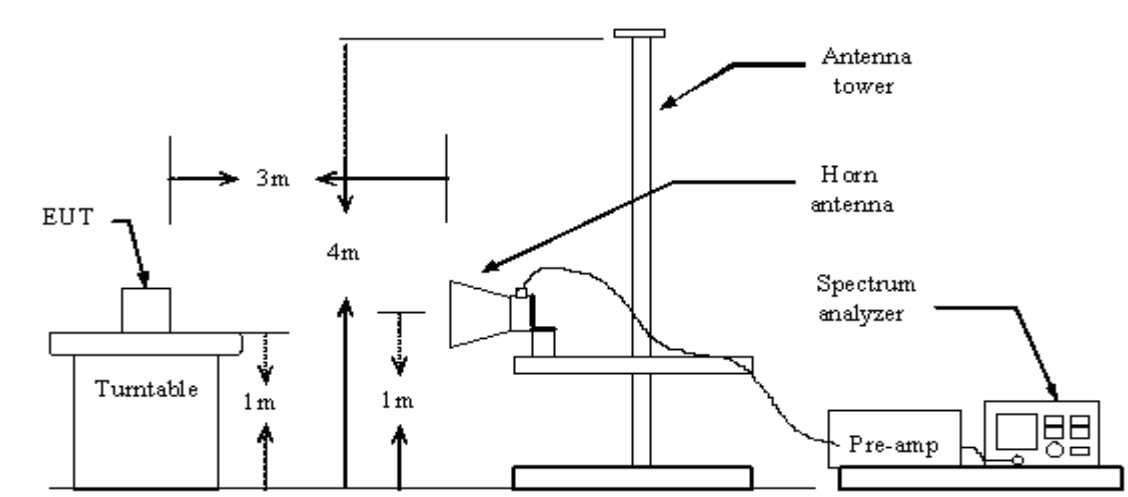
The test data of the worst case condition(s) was reported on the following pages.

8.4. TEST SETUP

Below 1GHz



Abover 1GHz



8.5.TEST RESULTS

Model No.	JK31UATH	Test Mode	RUNNING（worse case）
Environmental Conditions	25°C, 55% RH	Test Result	Pass

Frequency (MHz)	Ant. Pol.	Corr.Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin	Note	Result
74.6200	H	-12.03	34.55	40.00	-6.45	QP	Pass
148.34	H	-6.83	31.56	43.50	-12.94	QP	Pass
223.03	H	-5.90	36.34	46.00	-10.66	QP	Pass
259.89	H	-4.52	35.54	46.00	-11.46	QP	Pass
296.75	H	-3.64	34.25	46.00	-12.75	QP	Pass
1238.00	H	26.51	45.50	74.00	-29.5	Peak	Pass
1238.00	H	26.51	--	54.00	--	AV	Pass
74.62	V	-11.64	30.82	40.00	-8.18	QP	Pass
200.72	V	-3.27	30.94	43.50	-11.56	QP	Pass
259.89	V	-3.60	30.43	46.00	-14.57	QP	Pass
296.75	V	-1.70	28.90	46.00	-16.1	QP	Pass
401.51	V	1.19	28.25	46.00	-16.75	QP	Pass
1200.00	V	26.50	47.53	74.00	-25.47	Peak	Pass
1200.00	V	26.50	--	54.00	--	AV	Pass

Note: 1. Level = Correction factor + Meter Reading
2. Correction factor=antenna factor + cable loss - preamplifier gain.
3. – means to the measure is no necessary,due to the PK value comply with AV limits.