TEST REPORT

FCC ID: 2AIZN-X6511E

Product: Mobile Phone

Model No.: X6511E

Additional Model No.: N/A

Trade Mark: Infinix

Report No.: WSCT-A2LA-R&E211100558A-15B

Issued Date: 10 December 2021

Issued for:

INFINIX MOBILITY LIMITED
FLAT 39 8/F BLOCK D WAH LOK INDUSTRIAL CENTRE 31-35 SHAN MEI STREET
FOTAN NT

Issued By:

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1. GENERAL INFORMATION

Product:	Mobile Phone
Model No.:	X6511E
Additional Model:	N/A
Applicant:	INFINIX MOBILITY LIMITED
Address:	FLAT 39 8/F BLOCK D WAH LOK INDUSTRIAL CENTRE 31-35 SHAN MEI STREET FOTAN NT
Manufacturer:	SHENZHEN TECNO TECHNOLOGY CO.,LTD.
Address:	101,Building 24,Waijing Industrial Park,Fumin Community,Fucheng Street,Longhua District,Shenzhen City,P.R.China
Data of receipt	19 November 2021
Date of Test:	19 November 2021 to 09 December 2021
Applicable Standards:	FCC Rules Part15 Subpart B.

The above equipment has been tested by World Standardization Certification & Testing Group 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: Wang Xiang ***(Wang Xiang)***

Check By: Pu Shixi ***(Pu Shixi)***

Approved By: ***(Wang Fengbing)***

Date: 10 December 2021

World Standardization Certification & Testing Group (Shenzhen) Co., Ltd. WSCT

1. GENERAL INFORMATION

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Model No.:	X6511E
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Applicant:	INFINIX MOBILITY LIMITED
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2.1. TEST DESCRIPTION

2.1.1 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y ± U**，where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**，providing a level of confidence of approximately **95** %。

No.	Item	Uncertainty
1	Conducted Emission Test	±3.2dB
2	RF power, conducted	±0.16dB
3	Spurious emissions, conducted	±0.21dB
4	All emissions, radiated(<1G)	±4.7dB
5	All emissions, radiated(>1G)	±4.7dB
6	Temperature	±0.5°C
7	Humidity	±2%

2.1.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

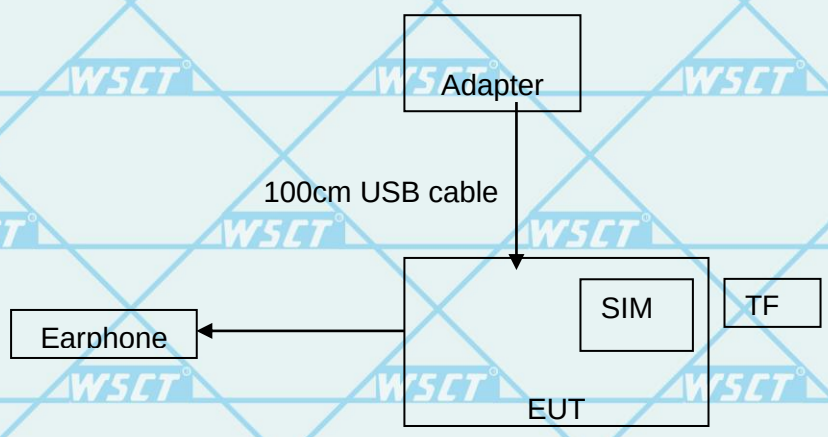
Pretest Mode	Description
Mode 1	Video Recording
Model 2	Video Playing
Mode 3	Exchange data with computer
Mode 4	GPS
Mode 5	FM

For Conducted Emission	
Final Test Mode	Test with Keyboard and Mouse
Mode 1	Video Recording
Model 2	Video Playing
Mode 3	Exchange data with computer
Mode 4	GPS
Mode 5	FM

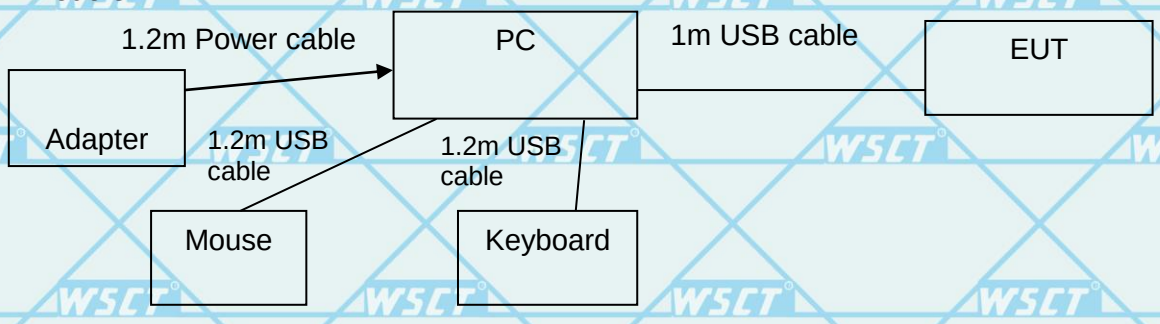
For Radiated Emission	
Final Test Mode	Test with Keyboard and Mouse
Mode 1	Video Recording
Model 2	Video Playing
Mode 3	Exchange data with computer
Mode 4	GPS
Mode 5	FM

2.1.3 CONFIGURATION OF SYSTEM UNDER TEST

Mode 1&2&4&5:



Mode 3:



(EUT: Mobile Phone)

I/O Port of EUT			
I/O Port Type	**Q'TY**	**Cable**	**Tested with**
Power	1	1m USB cable, unshielded	1
Earphone	1	1m USB cable, unshielded	1

2.1.4 DESCRIPTION OF SUPPORT UNITS (CONDUCTED MODE)

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.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
1	Adapter	/	U100XSA	/	/
2	Keyboard	HP	SK-2880	435302-AA-	/
3	Mouse	DELL	MS111-1	/	/

Note:

(1) The support equipment was authorized by Declaration of Confirmation.
(2) For detachable type I/O cable should be specified the length in cm in『Length』column.

3. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 , Subpart B			
Standard Section	Test Item	Judgment	Remark
15.107	CONDUCTED EMISSION	PASS	
15.109	RADIATED EMISSION	PASS	

NOTE:

(1)" N/A" denotes test is not applicable in this test report.

4. MEASUREMENT INSTRUMENTS

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibrated	Calibrated until
ESCI Test Receiver	R&S	ESCI	100005	11/05/2021	11/04/2022
LISN	AFJ	LS16	16010222119	11/05/2021	11/04/2022
LISN(EUT)	Mestec	AN3016	04/10040	11/05/2021	11/04/2022
pre-amplifier	CDSI	PAP-1G18-38	--	11/05/2021	11/04/2022
System Controller	CT	SC100	-	11/05/2021	11/04/2022
Bi-log Antenna	Chase	CBL6111C	2576	11/05/2021	11/04/2022
Spectrum analyzer	R&S	FSU26	200409	11/05/2021	11/04/2022
Horn Antenna	SCHWARZBECK	9120D	1141	11/05/2021	11/04/2022
Bi-log Antenna	SCHWAREBECK	VULB9163	9163/340	11/05/2021	11/04/2022
Pre Amplifier	H.P.	HP8447E	2945A02715	11/05/2021	11/04/2022
9*6*6 Anechoic	--	--	--	11/05/2021	11/04/2022

5. EMC EMISSION TEST

5.1 CONDUCTED EMISSION MEASUREMENT

5.1.1 POWER LINE CONDUCTED EMISSION Limits (Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)		Standard
	Quasi-peak	Average	Quasi-peak	Average	
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	73.00	60.00	56.00	46.00	FCC
5.0 -30.0	73.00	60.00	60.00	50.00	FCC

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

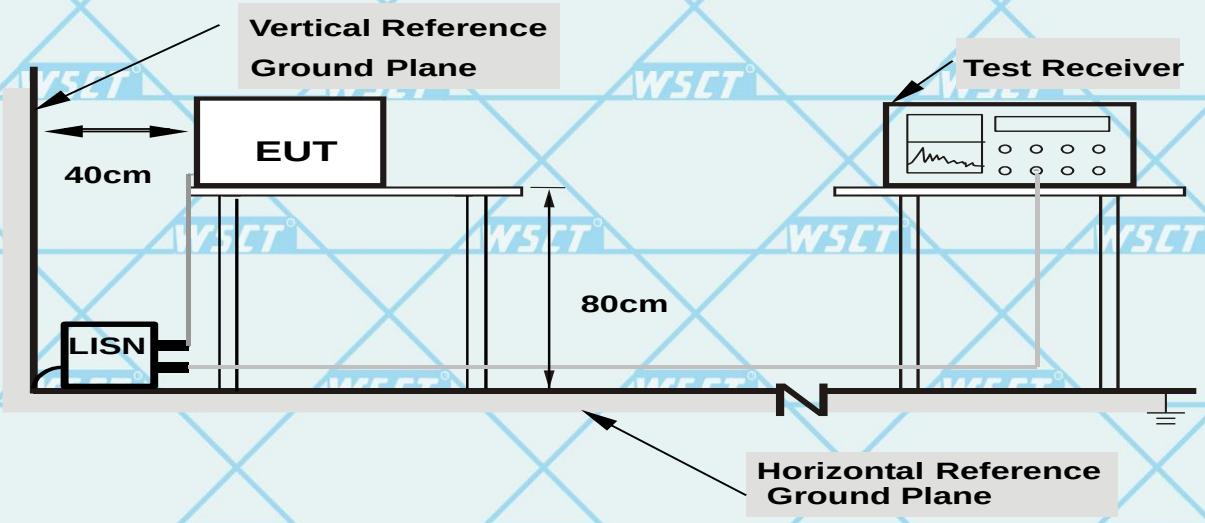
5.1.2 TEST PROCEDURE

a. The EUT was placed 0.4 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
d. LISN at least 80 cm from nearest part of EUT chassis.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

5.1.3 DEVIATION FROM TEST STANDARD

No deviation

5.1.4 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

5.1.5 EUT OPERATING CONDITIONS

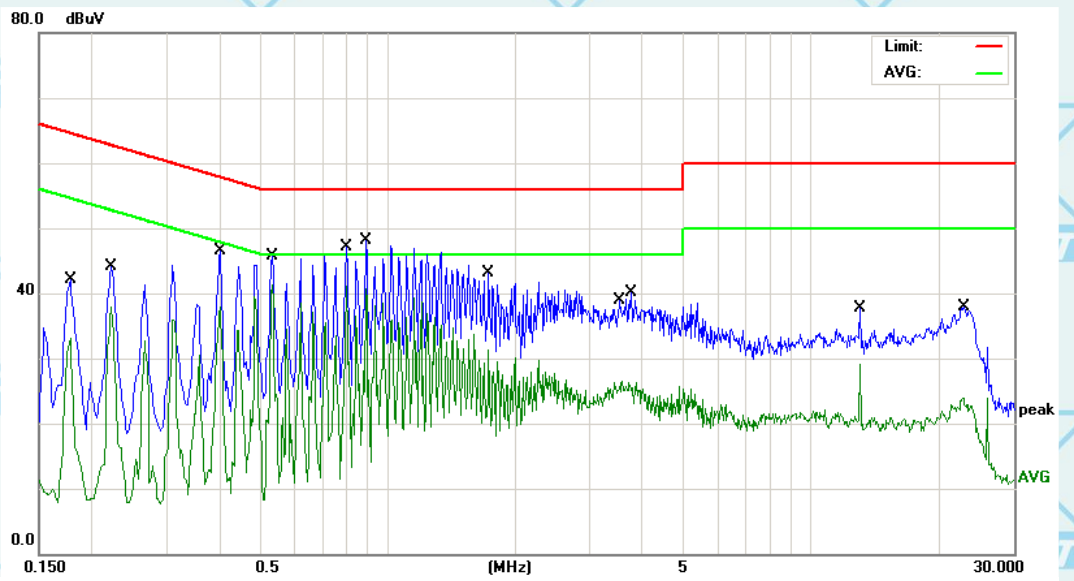
The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

5.1.6 TEST RESULTS

This is the worst pattern data

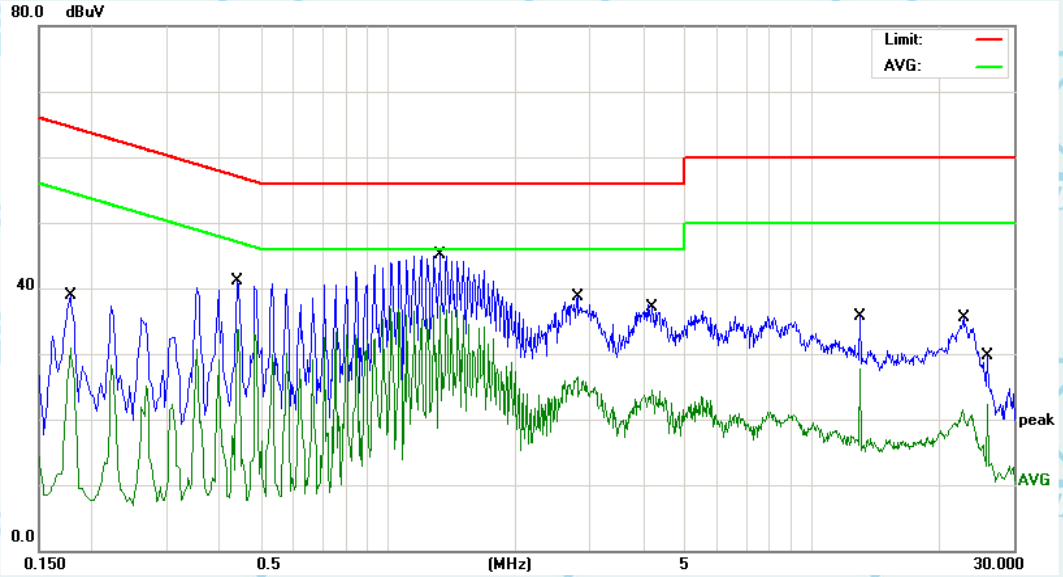
Temperature	26 ℃	Relative Humidity	54%
Pressure	1010hPa	Phase	L/N
Test Mode	Mode 3		

L:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.1780	31.61	10.41	42.02	64.57	-22.55	QP
2		0.2220	27.56	10.41	37.97	52.74	-14.77	AVG
3		0.4020	35.99	10.45	46.44	57.81	-11.37	QP
4	*	0.5340	30.74	10.47	41.21	46.00	-4.79	AVG
5		0.7980	30.69	10.49	41.18	46.00	-4.82	AVG
6		0.8860	37.53	10.50	48.03	56.00	-7.97	QP
7		1.7300	20.66	10.62	31.28	46.00	-14.72	AVG
8		3.5700	15.88	10.68	26.56	46.00	-19.44	AVG
9		3.7540	29.50	10.68	40.18	56.00	-15.82	QP
10		12.9980	26.73	10.95	37.68	60.00	-22.32	QP
11		22.8540	26.80	11.01	37.81	60.00	-22.19	QP
12		22.8540	12.92	11.01	23.93	50.00	-26.07	AVG

N:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.1780	28.55	10.41	38.96	64.57	-25.61	QP
2		0.1780	20.40	10.41	30.81	54.57	-23.76	AVG
3		0.4420	30.71	10.46	41.17	57.02	-15.85	QP
4		0.4420	23.23	10.46	33.69	47.02	-13.33	AVG
5		1.3300	34.52	10.56	45.08	56.00	-10.92	QP
6	*	1.3300	26.80	10.56	37.36	46.00	-8.64	AVG
7		2.7980	27.94	10.67	38.61	56.00	-17.39	QP
8		2.7980	15.78	10.67	26.45	46.00	-19.55	AVG
9		4.1820	13.87	10.68	24.55	46.00	-21.45	AVG
10		13.0020	24.72	10.95	35.67	60.00	-24.33	QP
11		22.8420	24.54	11.01	35.55	60.00	-24.45	QP
12		26.0020	11.31	10.98	22.29	50.00	-27.71	AVG

5.2 RADIATED EMISSION MEASUREMENT

5.2.1 Radiated Emission Limits (Frequency Range 9kHz-1000MHz)

The field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Limit (dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

(1) The limit for radiated test was performed according to FCC PART 15B.

(2) The tighter limit applies at the band edges.

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

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / 1Hz for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

5.2.2 TEST PROCEDURE

a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

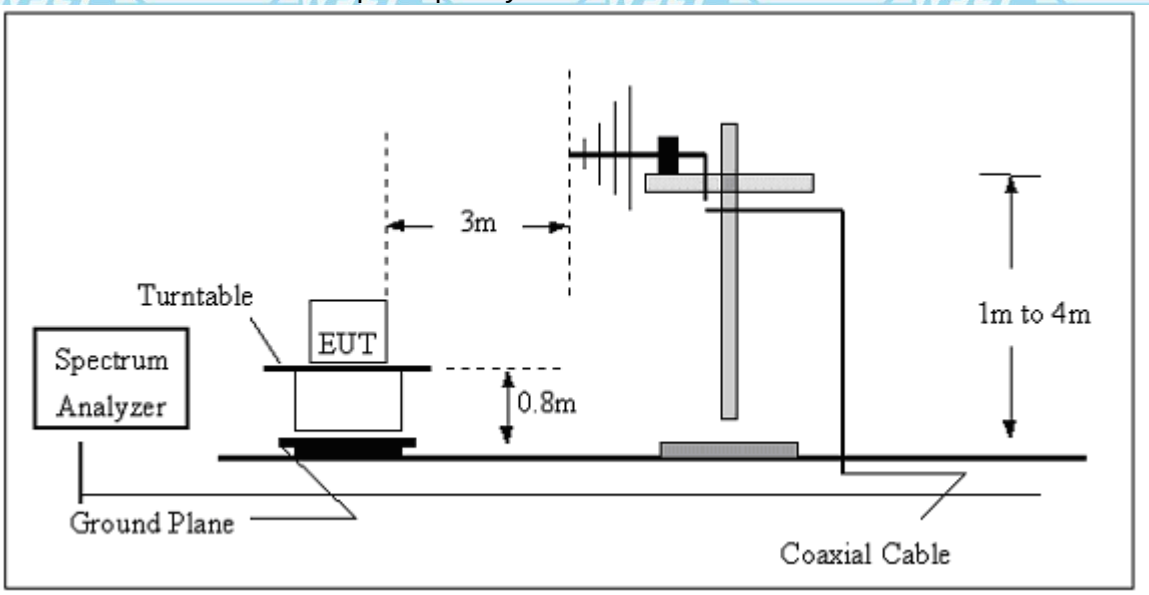
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

5.2.3 DEVIATION FROM TEST STANDARD

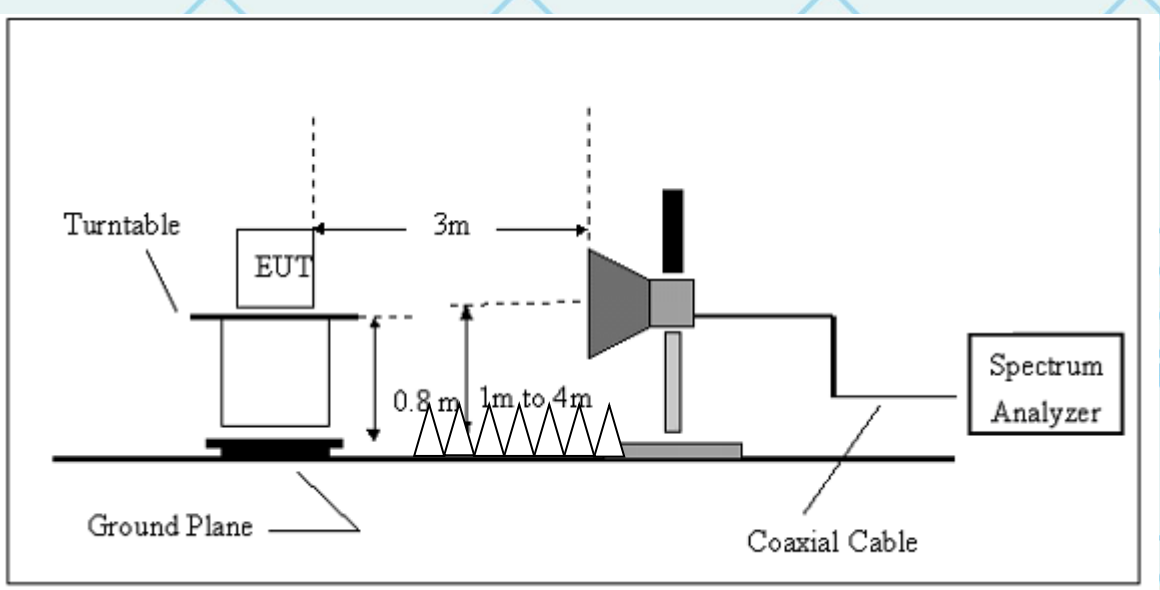
No deviation

5.2.4 TEST SETUP

（A）Radiated Emission Test-Up Frequency 30MHz~1GHz



（B）Radiated Emission Test-Up Frequency Above 1GHz



5.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

5.2.5.1 TEST RESULTS (Between 30M – 1000 MHz)

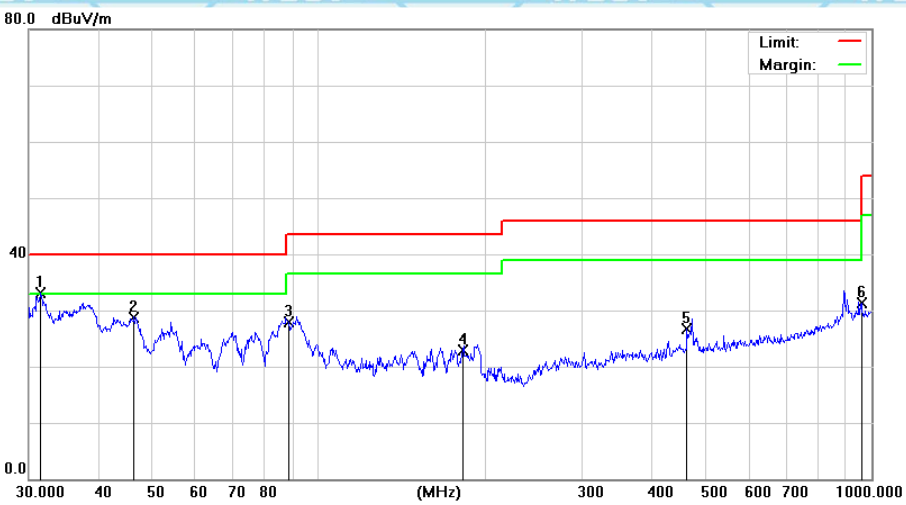
This is the worst pattern data

Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Polarization :	Horizontal/Vertical
Test Mode	Mode 3		

H:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1	*	30.3173	24.62	4.67	29.29	40.00	-10.71	QP
2		53.8818	32.27	-5.48	26.79	40.00	-13.21	QP
3		90.2205	32.85	-5.87	26.98	43.50	-16.52	QP
4		159.7844	30.09	-5.77	24.32	43.50	-19.18	QP
5		345.5952	24.87	-1.66	23.21	46.00	-22.79	QP
6		993.0114	22.86	7.19	30.05	54.00	-23.95	QP

V:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1	*	31.5095	28.96	4.22	33.18	40.00	-6.82	QP
2		46.5030	31.73	-2.93	28.80	40.00	-11.20	QP
3		88.6524	34.08	-6.08	28.00	43.50	-15.50	QP
4		182.5592	30.04	-7.07	22.97	43.50	-20.53	QP
5		463.9696	26.62	0.08	26.70	46.00	-19.30	QP
6		958.7943	24.72	6.57	31.29	46.00	-14.71	QP

5.2.5.2 TEST RESULTS (1GHz to 25GHz)

This is the worst pattern data

Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 3

Freq. (MHz)	Ant. Pol.	Emission Level(dBuV)		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
1454.55	V	57.91	38.97	74	54	-16.09	-15.03
2498.92	V	57.84	39.20	74	54	-16.16	-14.80
1605.88	H	57.88	39.10	74	54	-16.12	-14.90
2453.22	H	57.55	39.01	74	54	-16.45	-14.99

Remark:
All emissions not reported were more than 20dB below the specified limit or in the noise floor.
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
All the x/y/z orientation has been investigated, and only worst case is presented in this report.

---END OF REPORT---