



FCC RADIO TEST REPORT

FCC ID: 2AA6JKXPH

Product : Wireless video door phone (Indoor Monitor)

Trade Name : KONX

Model Name : KX7001, KX3501, PH3501, PH7001,
KX7002, PH7002

Serial Model : N/A

Report No. : BZT-2013NT1021070F

Prepared for

KONX INTERNATIONAL LIMITED

Floor 2, Block A, Yili Science & Technology Park, Huan Guan South Road,
Guanlan Town, Long Hua District, ShenZhen GuangDong, China

Prepared by

BZT Testing Technology Co., Ltd.

1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street,
Bao'an District, Shenzhen P.R. China

TEST RESULT CERTIFICATION

Applicant's name : KONX INTERNATIONAL LIMITED

Address : Floor 2, Block A, Yili Science & Technology Park, Huan Guan South Road, Guanlan Town, Long Hua District, ShenZhen Guangdong, China

Manufacture's Name : KONX INTERNATIONAL LIMITED

Address : Floor 2, Block A, Yili Science & Technology Park, Huan Guan South Road, Guanlan Town, Long Hua District, ShenZhen Guangdong, China

Product description

Product name..... : Wireless video door phone (Indoor Monitor)

Model and/or type reference : KX7001, KX3501, PH3501, PH7001, KX7002, PH7002

Serial Model : N/A

Rating(s)..... : DC 3.7V from battery or DC 5V from adapter with AC 120V/60Hz

Standards : FCC Part15.249

Test procedure..... ANSI C63.4-2003

This device described above has been tested byBZT, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

This report shall not be reproduced except in full, without the written approval ofBZT, this document may be altered or revised byBZT, personal only, and shall be noted in the revision of the document.

Date of Test..... :

Date (s) of performance of tests..... : 16 October. 2013 ~22 October. 2013

Date of Issue..... : 23 October. 2013

Test Result..... : **Pass**

Testing Engineer : Apple Huang
(Apple Huang)

Technical Manager : Tom Zhang
(Tom Zhang)

Authorized Signatory : Bovey Yang
(Bovey Yang)

Table of Contents	Page
1 . SUMMARY OF TEST RESULTS	4
1.1 TEST FACILITY	5
1.2 MEASUREMENT UNCERTAINTY	5
2 . GENERAL INFORMATION	6
2.1 GENERAL DESCRIPTION OF EUT	6
2.2 DESCRIPTION OF TEST MODES	8
2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	9
2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)	10
2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS	11
3 . ANTENNA REQUIREMENT	12
3.1 STANDARD REQUIREMENT	12
3.2 EUT ANTENNA	12
3.3 CONDUCTED EMISSION MEASUREMENT	13
3.3.1 POWER LINE CONDUCTED EMISSION LIMITS	13
3.3.2 TEST PROCEDURE	14
3.3.3 DEVIATION FROM TEST STANDARD	14
3.3.4 TEST SETUP	14
3.2.5 TEST RESULT	15
3.4 RADIATED EMISSION MEASUREMENT	17
3.4.1 RADIATED EMISSION LIMITS	17
3.4.2 TEST PROCEDURE	18
3.4.3 DEVIATION FROM TEST STANDARD	18
3.4.4 TEST SETUP	19
3.4.5 TEST RESULTS (BLOW 30MHZ)	21
3.4.6 TEST RESULTS (BETWEEN 30 – 1000 MHZ)	22
3.4.7 TEST RESULTS (ABOVE 1000 MHZ)	24
3.4.8 TEST RESULTS (RESTRICTED BANDS REQUIREMENTS)	27
4 . BANDWIDTH TEST	35
4.1 TEST PROCEDURE	35
4.2 DEVIATION FROM STANDARD	35
4.3 TEST SETUP	35
4.4 TEST RESULTS	36
5 . EUT TEST PHOTO	39
APPENDIX-PHOTOGRAPHS OF EUT CONSTRUCTIONAL DETAILS	

1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15, Subpart C (15.249)			
Standard Section	Test Item	Judgment	Remark
15.207	Conducted Emission	Pass	
15.203	Antenna Requirement	Pass	
15.249	Radiated Spurious Emission	Pass	
15.205	Band Edge Emission	Pass	
15.249	Occupied Bandwidth	Pass	

NOTE:

(1)" N/A" denotes test is not applicable in this Test Report

1.1 TEST FACILITY

BZT Testing Technology Co., Ltd

Add. : 1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen P.R. China.

FCC Registered No.: 701733

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded 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	$\pm 1.38\text{dB}$
2	RF power,conducted	$\pm 0.16\text{dB}$
3	Spurious emissions,conducted	$\pm 0.21\text{dB}$
4	All emissions,radiated(<1G)	$\pm 4.68\text{dB}$
5	All emissions,radiated(>1G)	$\pm 4.89\text{dB}$
6	Temperature	$\pm 0.5^{\circ}\text{C}$
7	Humidity	$\pm 2\%$

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	Wireless video door phone (Indoor Monitor)	
Trade Name	KONX	
Model Name	KX7001, KX3501, PH3501, PH7001, KX7002, PH7002	
Serial Model	N/A	
Model Difference	All model's the function, software and electric circuit are the same, only with a product color and model named different, test mode is KX7001.	
Product Description	The EUT is a Wireless video door phone (Indoor Monitor)	
	Operation Frequency:	2402~2480MHz
	Modulation Type:	GFSK
	Antenna Designation:	Internal antenna
	Antenna Gain(Peak)	1.25 dBi
	EIRP	90.15 dbuv/m@3m
	Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.	
Channel List	Please refer to the Note 2.	
Adapter	Output: DC 5V	
Battery	DC 3.7V	

Note:

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

2.

Channel List					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2402	28	2429	55	2456
02	2403	29	2430	56	2457
03	2404	30	2431	57	2458
04	2405	31	2432	58	2459
05	2406	32	2433	59	2460
06	2407	33	2434	60	2461
07	2408	34	2435	61	2462
08	2409	35	2436	62	2463
09	2410	36	2437	63	2464
10	2411	37	2438	64	2465
11	2412	38	2439	65	2466
12	2413	39	2440	66	2467
13	2414	40	2441	67	2468
14	2415	41	2442	68	2469
15	2416	42	2443	69	2470
16	2417	43	2444	70	2471
17	2418	44	2445	71	2472
18	2419	45	2446	72	2473
19	2420	46	2447	73	2474
20	2421	47	2448	74	2475
21	2422	48	2449	75	2476
22	2423	49	2450	76	2477
23	2424	50	2451	77	2478
24	2425	51	2452	78	2479
25	2426	52	2453	79	2480
26	2427	53	2454		
27	2428	54	2455		

3.

Table for Filed Antenna

Ant .	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
1	N/A	N/A	Internal antenna	NA	1.25	Antenna

2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generated from EUT, the test system was pre-scanning tested based on the consideration of following EUT operation mode or test configuration mode which possibly 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	CH1
Mode 2	CH40
Mode 3	CH79
Mode 4	Link Mode

For Conducted Emission	
Final Test Mode	Description
Mode 4	Link Mode

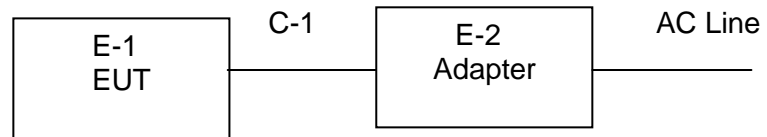
For Radiated Emission	
Final Test Mode	Description
Mode 1	CH1
Mode 2	CH40
Mode 3	CH79

Note:

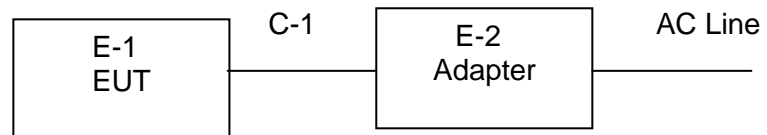
- (1) The measurements are performed at the highest, middle, lowest available channels.
- (2) The EUT use new battery.

2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Conducted Emission Test



Radiated Spurious Emission Test



2.4 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
E-1	Wireless video door phone (Indoor Monitor)	N/A	KX7001	N/A	EUT
E-2	Adapter	N/A	SK-01G-0500100U	N/A	

Item	Shielded Type	Ferrite Core	Length	Note
C-1	NO	NO	1.2m	

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.

2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Spectrum Analyzer	Agilent	E4407B	MY45108040	2012.07.06	Jul. 05. 2014	1 year
2	Test Receiver	R&S	ESPI	101318	2012.07.06	Jul. 05. 2014	1 year
3	Bilog Antenna	TESEQ	CBL6111D	31216	2012.07.06	Jul. 05. 2014	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264416	2012.07.06	Jul. 05. 2014	1 year
5	Spectrum Analyzer	ADVANTEST	R3132	150900201	2012.07.06	Jul. 05. 2014	1 year
6	Horn Antenna	EM	EM-AH-10180	2011071402	2012.07.06	Jul. 05. 2014	1 year
7	Horn Ant	Schwarzbeck	BBHA 9170	9170-181	2012.07.06	Jul. 05. 2014	1 year
8	Amplifier	EM	EM-30180	060538	2012.07.06	Jul. 05. 2014	1 year
9	Loop Antenna	ARA	PLA-1030/B	1029	2012.07.06	Jul. 05. 2014	1 year
10	Power Meter	R&S	NRVS	100696	2012.07.06	Jul. 05. 2014	1 year
11	Power Sensor	R&S	URV5-Z4	0395.1619.05	2012.07.06	Jul. 05. 2014	1 year

Conduction Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Test Receiver	R&S	ESCI	101160	2012.07.06	Jul. 05. 2014	1 year
2	LISN	R&S	ENV216	101313	2012.07.06	Jul. 05. 2014	1 year
3	LISN	EMCO	3816/2	00042990	2012.07.06	Jul. 05. 2014	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264417	2012.07.06	Jul. 05. 2014	1 year
5	Passive Voltage Probe	R&S	ESH2-Z3	100196	2012.07.06	Jul. 05. 2014	1 year
6	Absorbing clamp	R&S	MOS-21	100423	2012.07.06	Jul. 05. 2014	1 year

3. ANTENNA REQUIREMENT

3.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

3.2 EUT ANTENNA

The antennas used in this product are detachable antenna, using a reverse SMA connector (Provided by non-manufacturers will use the product can not work), The maximum Gain of the antenna is 1.25dBi, fulfill the requirement of this section.

3.3 CONDUCTED EMISSION MEASUREMENT

3.3.1 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			66 - 56 *	56 - 46 *	CISPR
0.50 -5.0			56.00	46.00	CISPR
5.0 -30.0			60.00	50.00	CISPR

0.15 -0.5			66 - 56 *	56 - 46 *	LP002.
0.50 -5.0			56.00	46.00	LP002.
5.0 -30.0			60.00	50.00	LP002.

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

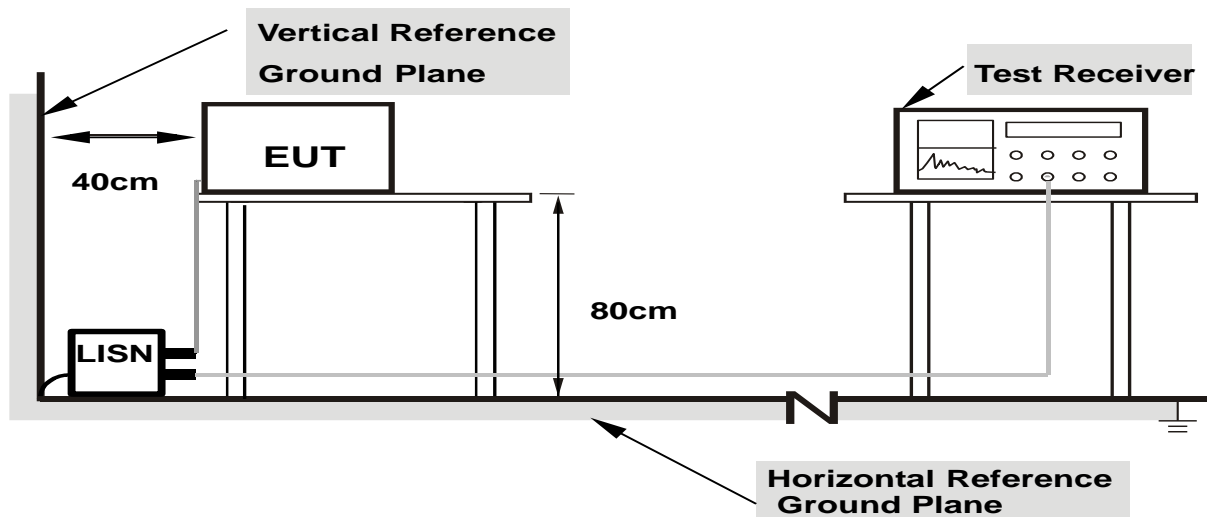
3.3.2 TEST PROCEDURE

- 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.
- 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.
- 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.
- LISN at least 80 cm from nearest part of EUT chassis.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.3.3 DEVIATION FROM TEST STANDARD

No deviation

3.3.4 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

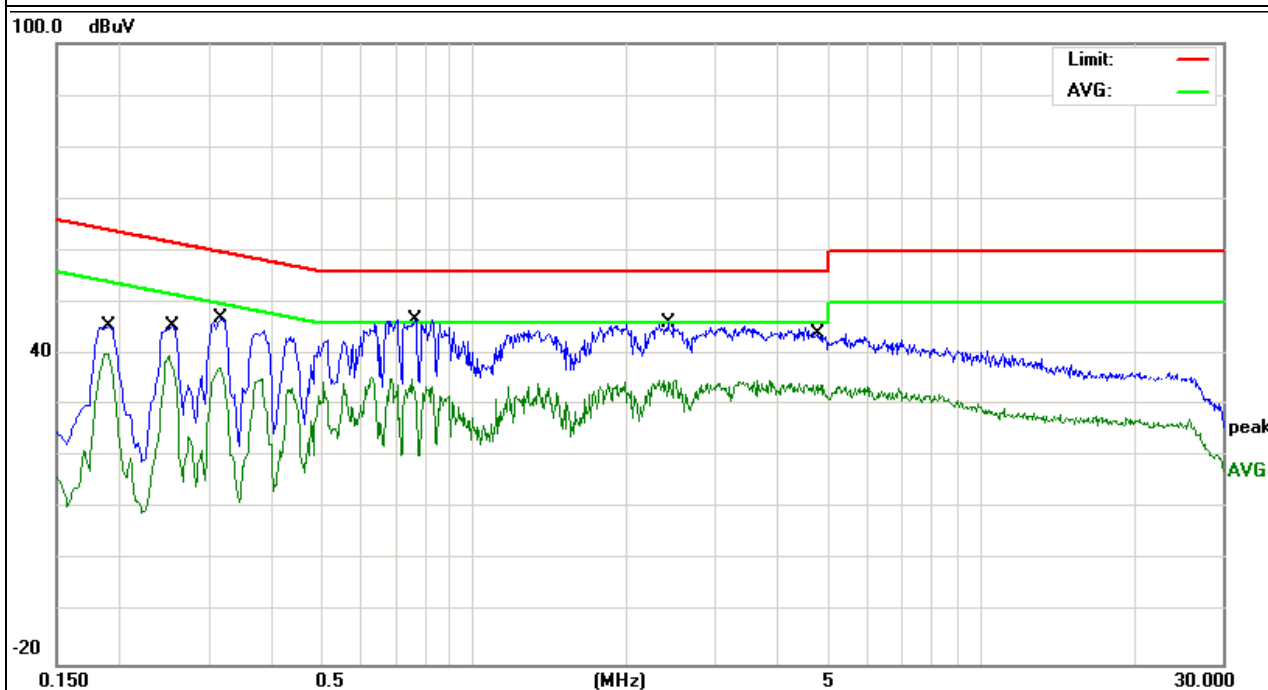
3.2.5 TEST RESULT

EUT :	Wireless video door phone (Indoor Monitor)	Model Name. :	KX7001
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from adapter with AC 120V/60Hz
Test Mode :	Mode 4	Phase :	L

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
0.19	34.68	10.83	45.51	64.03	-18.52	QP
0.254	34.65	10.82	45.47	61.62	-16.15	QP
0.318	36.13	10.91	47.04	59.76	-12.72	QP
0.766	36.31	10.53	46.84	56	-9.16	QP
0.766	24.45	10.53	34.98	46	-11.02	AVG
2.41	35.59	10.53	46.12	56	-9.88	QP
2.41	24.32	10.53	34.85	46	-11.15	AVG
4.7819	33.44	10.64	44.08	56	-11.92	QP

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.

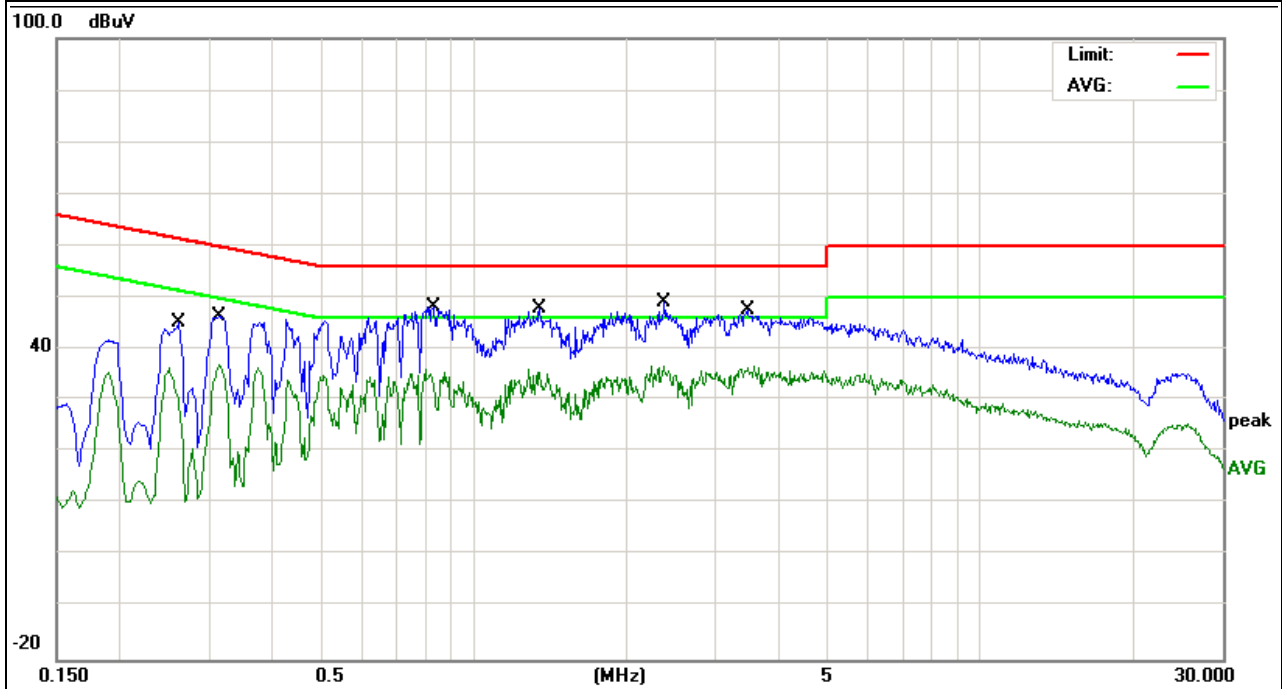


EUT :	Wireless video door phone (Indoor Monitor)	Model Name. :	KX7001
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from adapter with AC 120V/60Hz
Test Mode :	Mode 4	Phase :	N

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
0.262	34.33	10.95	45.28	61.36	-16.08	QP
0.314	35.68	10.84	46.52	59.86	-13.34	QP
0.834	37.78	10.52	48.3	56	-7.7	QP
0.834	25.1	10.52	35.62	46	-10.38	AVG
1.35	37.47	10.52	47.99	56	-8.01	QP
1.35	25.11	10.52	35.63	46	-10.37	AVG
2.378	38.74	10.53	49.27	56	-6.73	QP
2.378	26.21	10.53	36.74	46	-9.26	AVG
3.47	36.95	10.57	47.52	56	-8.48	QP
3.47	26.35	10.57	36.92	46	-9.08	AVG

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.



3.4 RADIATED EMISSION MEASUREMENT

3.4.1 Radiated Emission Limits (FCC 15.209)

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

Note:

- (1) The tighter limit applies at the band edges.
- (2) Emission level (dBuV/m)=20log Emission level (uV/m).

LIMITS OF RADIATED EMISSION MEASUREMENT (FCC 15.249)

Frequency of Emission (MHz)	Field Strength of fundamental ((millivolts /meter)	Field Strength of Harmonics (microvolts/meter)
2400 - 2483.5	50	500

Notes:

- (1) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

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

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

3.4.2 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 3m 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.
- 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:

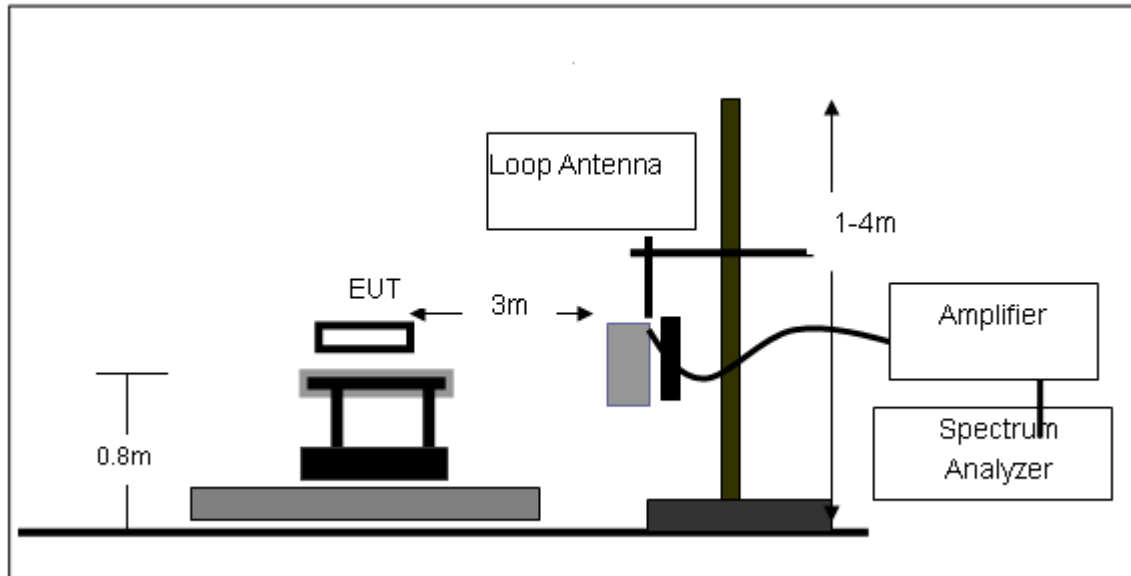
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

3.4.3 DEVIATION FROM TEST STANDARD

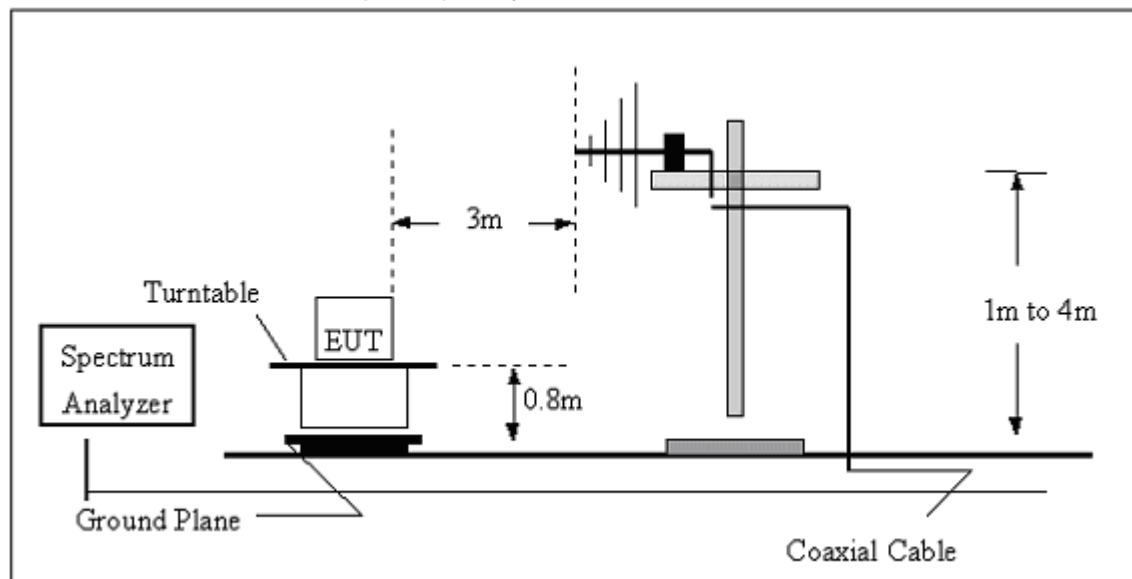
No deviation

3.4.4 TEST SETUP

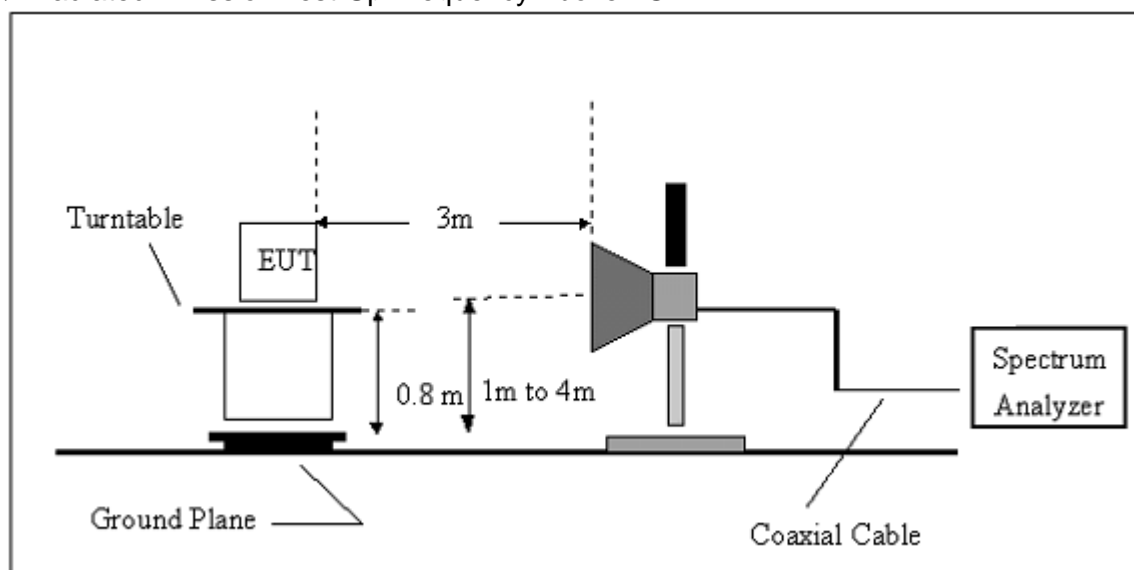
(A) Radiated Emission Test-Up Frequency Below 30MHz



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



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



3.4.5 TEST RESULTS (BLOW 30MHz)

EUT :	Wireless video door phone (Indoor Monitor)	Model Name. :	KX7001
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from adapter with AC 120V/60Hz
Test Mode :	TX	Polarization :	--

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	PASS
--	--	--	--	PASS

NOTE:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor = $20 \log (\text{specific distance/test distance})$ (dB);

Limit line = specific limits(dBuv) + distance extrapolation factor.

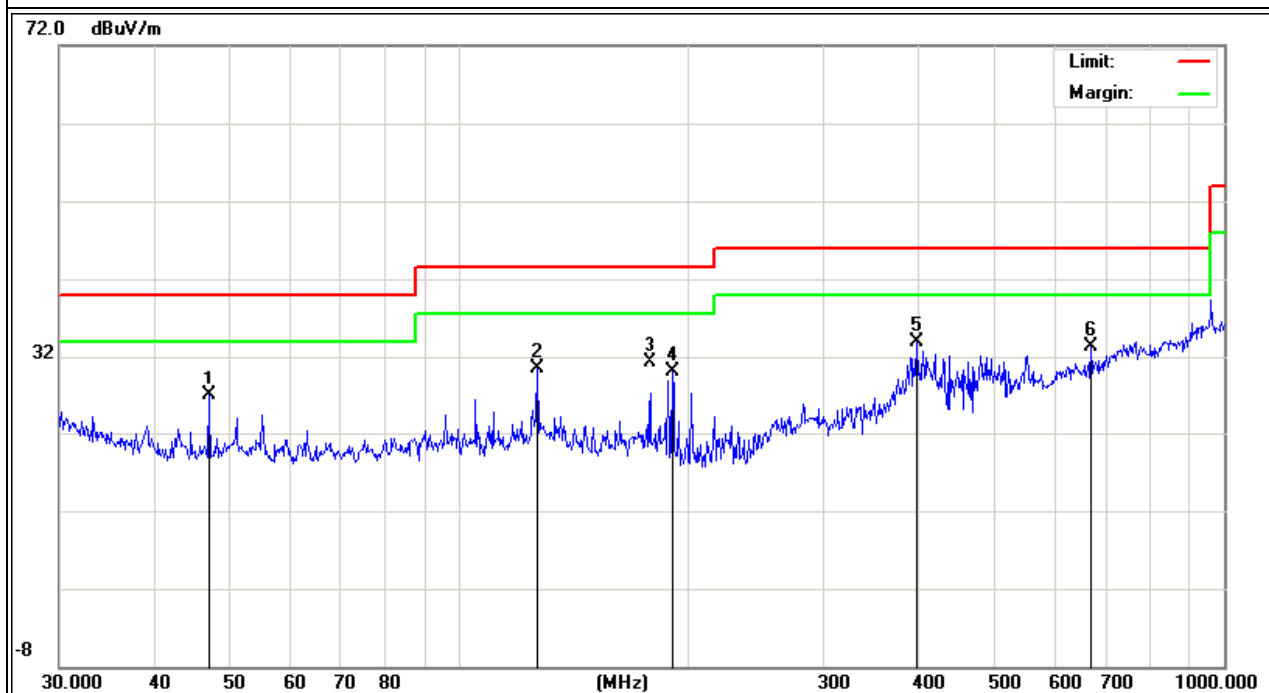
3.4.6 TEST RESULTS (BETWEEN 30 – 1000 MHZ)

EUT :	Wireless video door phone (Indoor Monitor)	Model Name :	KX7001
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from adapter with AC 120V/60Hz
Test Mode :	TX	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
46.9947	17.31	9.62	26.93	40	-13.07	QP
126.3285	18.31	12.21	30.52	43.5	-12.98	QP
177.5089	21.22	10.07	31.29	43.5	-12.21	QP
190.405	21.14	9.01	30.15	43.5	-13.35	QP
396.2412	15.84	18.05	33.89	46	-12.11	QP
670.4891	9.54	23.85	33.39	46	-12.61	QP

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.

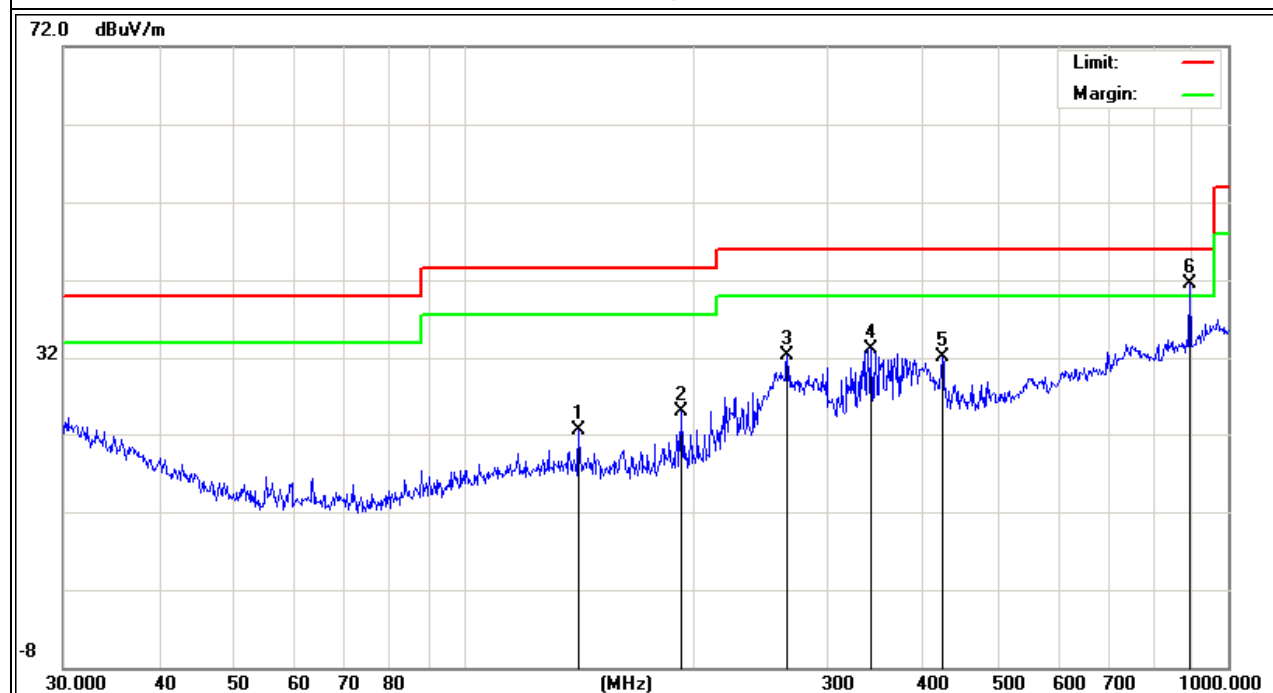


EUT :	Wireless video door phone (Indoor Monitor)	Model Name :	KX7001
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from adapter with AC 120V/60Hz
Test Mode :	TX	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
141.3298	10.3	12.13	22.43	43.5	-21.07	QP
193.0945	15.98	8.98	24.96	43.5	-18.54	QP
265.6757	17.9	14.46	32.36	46	-13.64	QP
341.9786	16.91	16.19	33.1	46	-12.90	QP
423.5403	13.11	18.94	32.05	46	-13.95	QP
890.7278	13.97	27.46	41.43	46	-4.57	QP

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.



3.4.7 TEST RESULTS (ABOVE 1000 MHZ)

EUT :	Wireless video door phone (Indoor Monitor)	Model Name :	KX7001
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from adapter with AC 120V/60Hz
Test Mode :	TX /2402MHz	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2402	102.17	-12.99	89.18	114.0 0	-24.82	peak
2402	94.32	-12.99	81.33	94	-12.67	AVG
4804	57.99	-3.57	54.42	74	-19.58	peak
4804	45.82	-3.57	42.25	54	-11.75	AVG
9608	54.59	1.78	56.37	74	-17.63	peak
9608	40.74	1.78	42.52	54	-11.48	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

No emission detected above 18GHz.

EUT :	Wireless video door phone (Indoor Monitor)	Model Name :	KX7001
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from adapter with AC 120V/60Hz
Test Mode :	TX /2402MHz	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2402	100.71	-12.99	87.72	114.0 0	-26.28	peak
2402	93.25	-12.99	80.26	94	-13.74	AVG
4804	60.17	-3.59	56.58	74	-17.42	peak
4804	46.83	-3.59	43.24	54	-10.76	AVG
7206	56.67	-0.96	55.71	74	-18.29	peak
7206	43.48	-0.96	42.52	54	-11.48	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

No emission detected above 18GHz.

EUT :	Wireless video door phone (Indoor Monitor)	Model Name :	KX7001
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from adapter with AC 120V/60Hz
Test Mode :	TX /2441 MHz	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2441	99.60	-12.93	86.67	114.0 0	-27.33	peak
2441	93.07	-12.93	80.14	94	-13.86	AVG
4882	60.01	-3.55	56.46	74	-17.54	peak
4882	45.63	-3.55	42.08	54	-11.92	AVG
7323	55.64	-0.72	54.92	74	-19.08	peak
7323	41.29	-0.72	40.57	54	-13.43	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

No emission detected above 18GHz.

EUT :	Wireless video door phone (Indoor Monitor)	Model Name :	KX7001
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from adapter with AC 120V/60Hz
Test Mode :	TX /2441 MHz	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2441	102.01	-12.93	89.08	114.0 0	-24.92	peak
2441	94.76	-12.93	81.83	94	-12.17	AVG
4882	58.01	-3.55	54.46	74	-19.54	peak
4882	45.17	-3.55	41.62	54	-12.38	AVG
7323	57.08	-0.72	56.36	74	-17.64	peak
7323	42.83	-0.72	42.11	54	-11.89	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

No emission detected above 18GHz.

EUT :	Wireless video door phone (Indoor Monitor)	Model Name :	KX7001
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from adapter with AC 120V/60Hz
Test Mode :	TX /2480 MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2480	99.71	-12.92	86.79	114.0 0	-27.21	peak
2480	94.43	-12.92	81.51	94	-12.49	AVG
4960	59.81	-3.55	56.26	74	-17.74	peak
4960	45.92	-3.55	42.37	54	-11.63	AVG
7440	56.09	-0.68	55.41	74	-18.59	peak
7440	42.22	-0.68	41.54	54	-12.46	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

No emission detected above 18GHz.

EUT :	Wireless video door phone (Indoor Monitor)	Model Name :	KX7001
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from adapter with AC 120V/60Hz
Test Mode :	TX /2480 MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2480	103.07	-12.92	90.15	114.0 0	-23.85	peak
2480	95.88	-12.92	82.96	94	-11.04	AVG
4960	59.74	-3.8	55.94	74	-18.06	peak
4960	45.06	-3.8	41.26	54	-12.74	AVG
7440	55.75	-0.68	55.07	74	-18.93	peak
7440	43.11	-0.68	42.43	54	-11.57	AVG

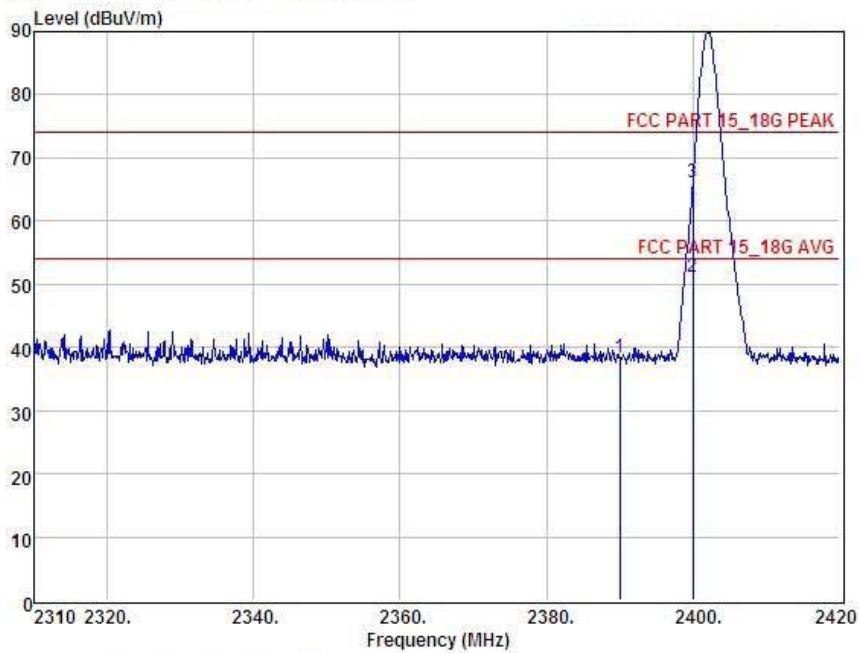
Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

No emission detected above 18GHz.

3.4.8 TEST RESULTS (RESTRICTED BANDS REQUIREMENTS)

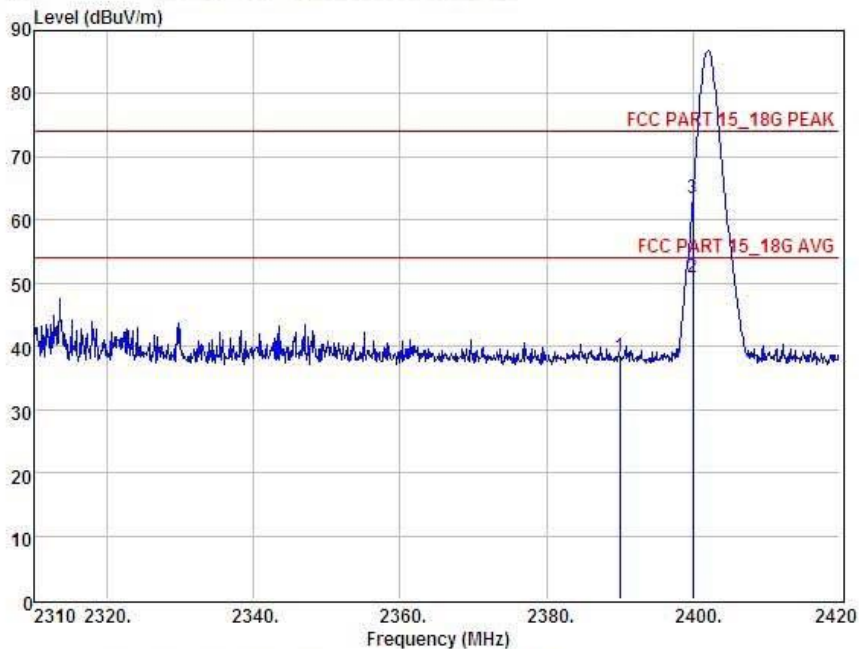
EUT :	Wireless video door phone (Indoor Monitor)	Model Name :	KX7001
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from adapter with AC 120V/60Hz
Test Mode :	TX /2402MHz	Polarization :	Vertical



Condition : FCC PART 15_18G PEAK 3m POL: VERTICAL									
Item	Freq	Read	Antenna	Preamp	Cable	Level	Limit	Margin	Remark
	MHz	dBuV	Factor	Factor	Loss	dBuV	dBuV	dBuV	
			dB	dB	dB				
1	2390.00	41.90	27.62	34.97	3.92	38.47	74.00	-35.53	Peak
2	2400.00	54.45	27.62	34.97	3.94	51.04	54.00	-2.96	Average
3	2400.00	69.64	27.62	34.97	3.94	66.23	74.00	-7.77	Peak

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

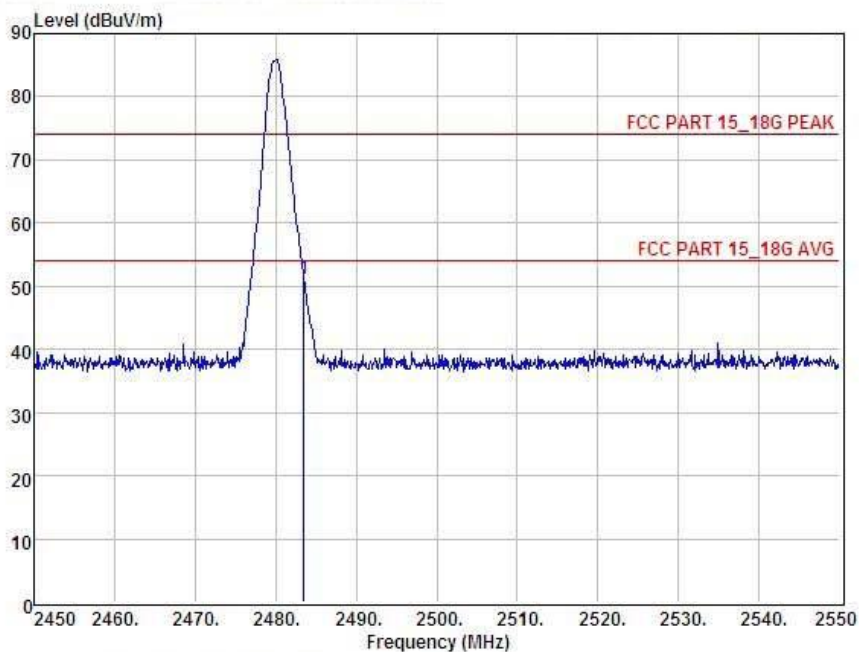
EUT :	Wireless video door phone (Indoor Monitor)	Model Name :	KX7001
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from adapter with AC 120V/60Hz
Test Mode :	TX /2402MHz	Polarization :	Horizontal



Condition		: FCC PART 15_18G PEAK 3m				POL: HORIZONTAL			
Item	Freq	Read	Antenna	Preamp	Cable	Level	Limit	Margin	Remark
	MHz	dBuV	Factor	Factor	Loss	dBuV	dBuV	dBuV	
			dB	dB	dB				
1	2390.00	41.68	27.62	34.97	3.92	38.25	74.00	-35.75	Peak
2	2400.00	54.28	27.62	34.97	3.94	50.87	54.00	-3.13	Average
3	2400.00	66.92	27.62	34.97	3.94	63.51	74.00	-10.49	Peak

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

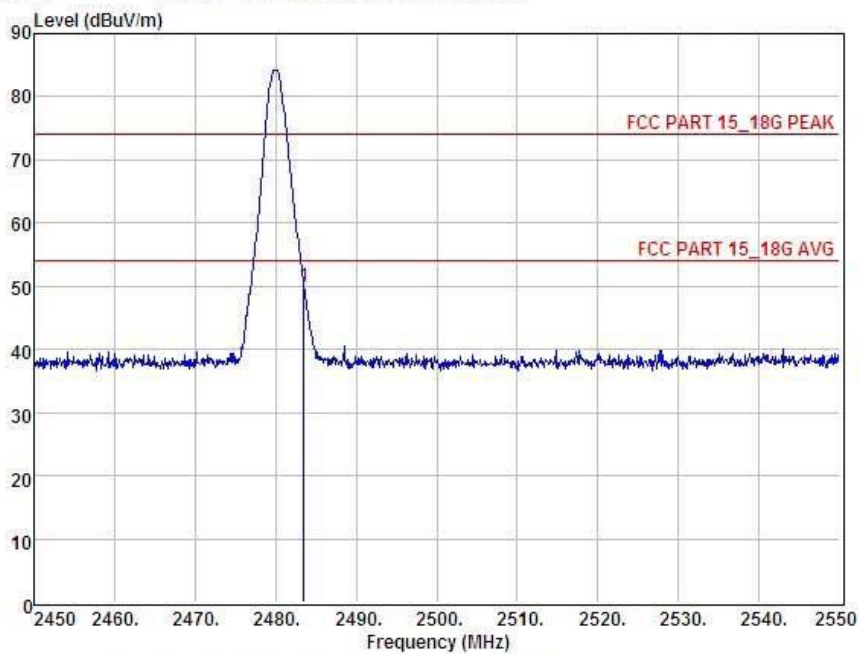
EUT :	Wireless video door phone (Indoor Monitor)	Model Name :	KX7001
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from adapter with AC 120V/60Hz
Test Mode :	TX /2480MHz	Polarization :	Vertical



Condition		: FCC PART 15_18G PEAK 3m				POL: VERTICAL			
Item	Freq	Read	Antenna	Preamp	Cable	Level	Limit	Margin	Remark
	MHz	dBuV	Factor	Factor	Loss	dBuV	dBuV	dBuV	
			dB	dB	dB				
1	2483.50	54.61	27.59	34.97	4.00	51.23	74.00	-22.77	Peak

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

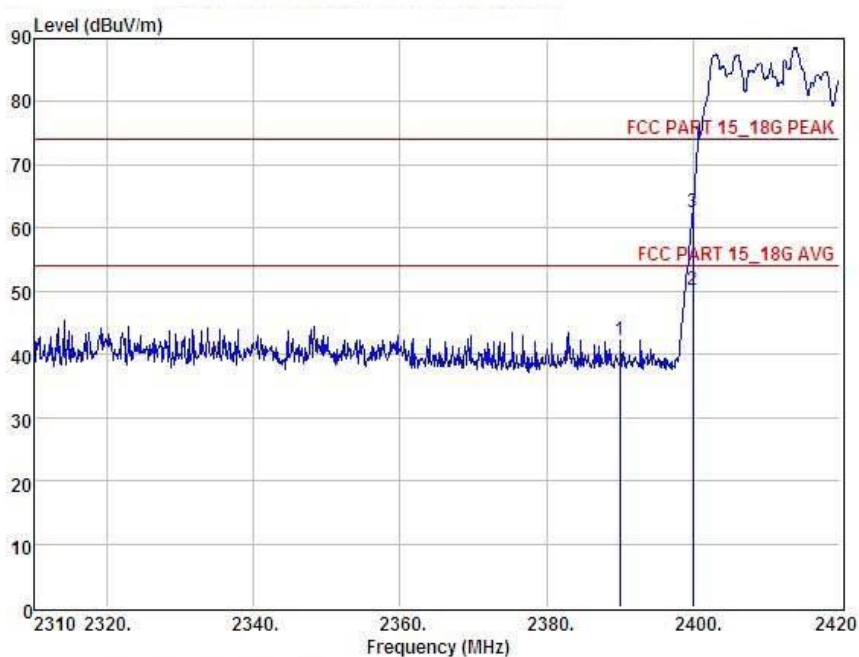
EUT :	Wireless video door phone (Indoor Monitor)	Model Name :	KX7001
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from adapter with AC 120V/60Hz
Test Mode :	TX /2480MHz	Polarization :	Horizontal



Condition		: FCC PART 15_18G PEAK 3m				POL: HORIZONTAL			
Item	Freq	Read	Antenna	Preamp	Cable	Level	Limit	Margin	Remark
	MHz	dBuV	Factor	Factor	Loss	dBuV	dBuV	dBuV	
			dB	dB	dB				
1	2483.50	53.41	27.59	34.97	4.00	50.03	74.00	-23.97	Peak

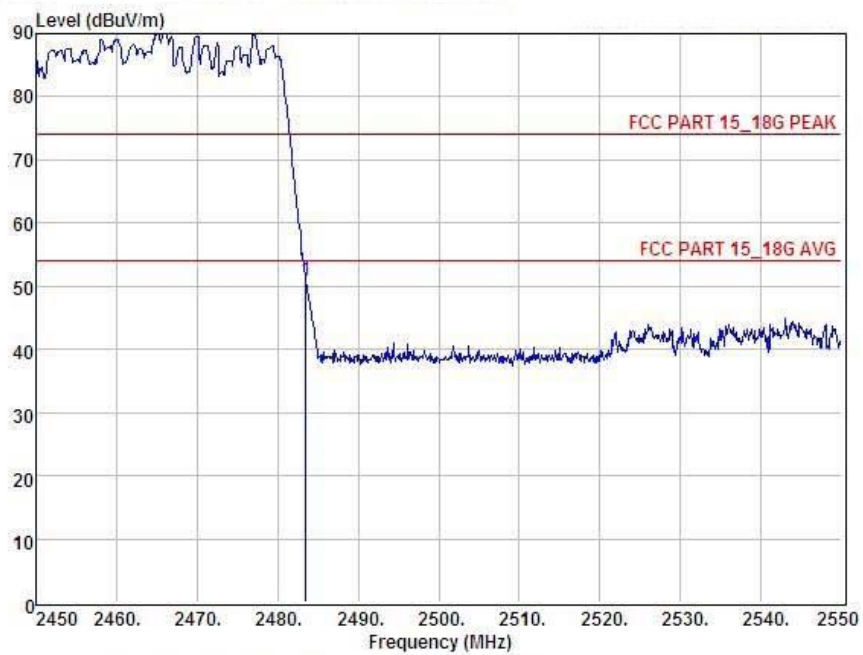
Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

EUT :	Wireless video door phone (Indoor Monitor)	Model Name :	KX7001
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from adapter with AC 120V/60Hz
Test Mode :	TX /Hopping	Polarization :	Vertical



Condition		: FCC PART 15_18G PEAK 3m				POL: VERTICAL			
Item	Freq	Read	Antenna	Preamp	Cable	Level	Limit	Margin	Remark
	MHz	dBuV	Factor	Factor	Loss	dBuV	dBuV	dBuV	
			dB	dB	dB				
1	2390.00	45.56	27.62	34.97	3.92	42.13	74.00	-31.87	Peak
2	2400.00	53.59	27.62	34.97	3.94	50.18	54.00	-3.82	Average
3	2400.00	65.95	27.62	34.97	3.94	62.54	74.00	-11.46	Peak

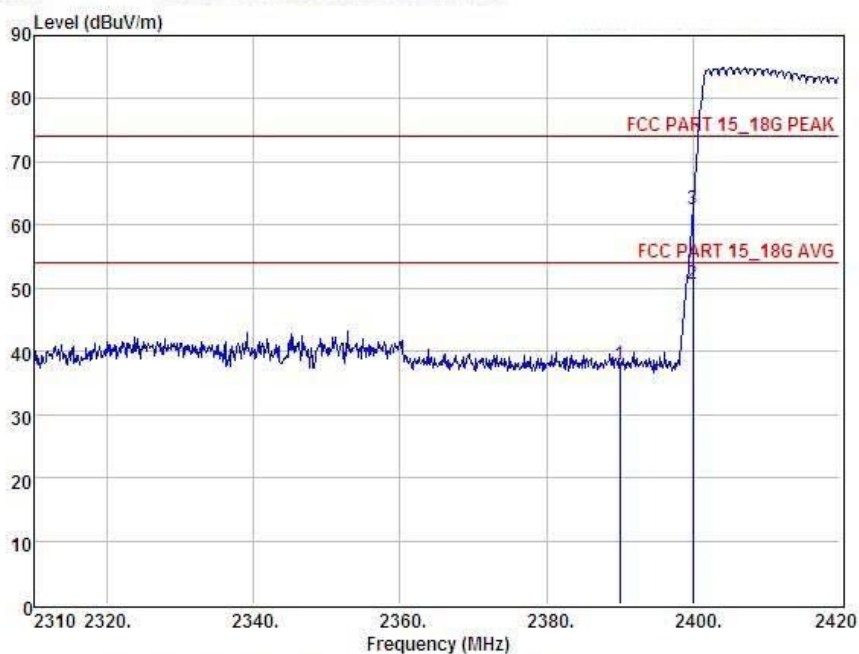
Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss



Condition : FCC PART 15_18G PEAK 3m POL: VERTICAL									
Item	Freq	Read	Antenna	Preamp	Cable	Level	Limit	Margin	Remark
	MHz	dBuV	Factor	Factor	Loss	dBuV	dBuV	dBuV	
			dB	dB	dB				
1	2483.50	54.33	27.59	34.97	4.00	50.95	74.00	-23.05	Peak

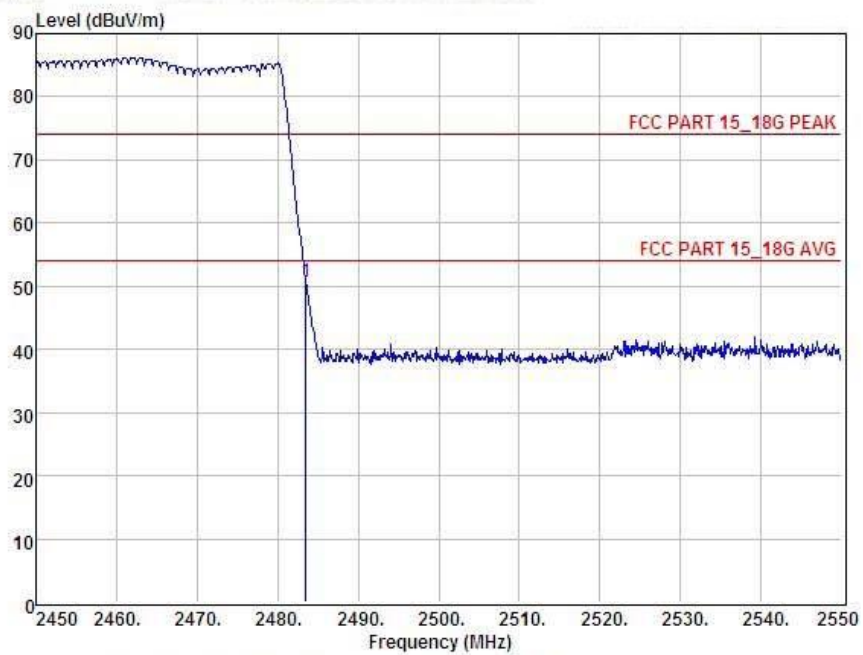
Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

EUT :	Wireless video door phone (Indoor Monitor)	Model Name :	KX7001
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V from adapter with AC 120V/60Hz
Test Mode :	TX /Hopping	Polarization :	Horizontal



Condition		: FCC PART 15_18G PEAK 3m					POL: HORIZONTAL			
Item	Freq	Read	Antenna	Preamp	Cable	Level	Limit	Margin	Remark	
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dBuV		
1	2390.00	41.33	27.62	34.97	3.92	37.90	74.00	-36.10	Peak	
2	2400.00	54.14	27.62	34.97	3.94	50.73	54.00	-3.27	Average	
3	2400.00	65.80	27.62	34.97	3.94	62.39	74.00	-11.61	Peak	

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss



Condition : FCC PART 15_18G PEAK 3m. POL: HORIZONTAL									
Item	Freq	Read	Antenna	Preamp	Cable	Level	Limit	Margin	Remark
	MHz	Level	Factor	Factor	Loss	dBuV	dBuV	dBuV	
		dBuV	dB	dB	dB				
1	2483.50	54.11	27.59	34.97	4.00	50.73	74.00	-23.27	Peak

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

4. BANDWIDTH TEST

4.1 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting : RBW= 30KHz, VBW=100KHz, Sweep time = Auto.

4.2 DEVIATION FROM STANDARD

No deviation.

4.3 TEST SETUP

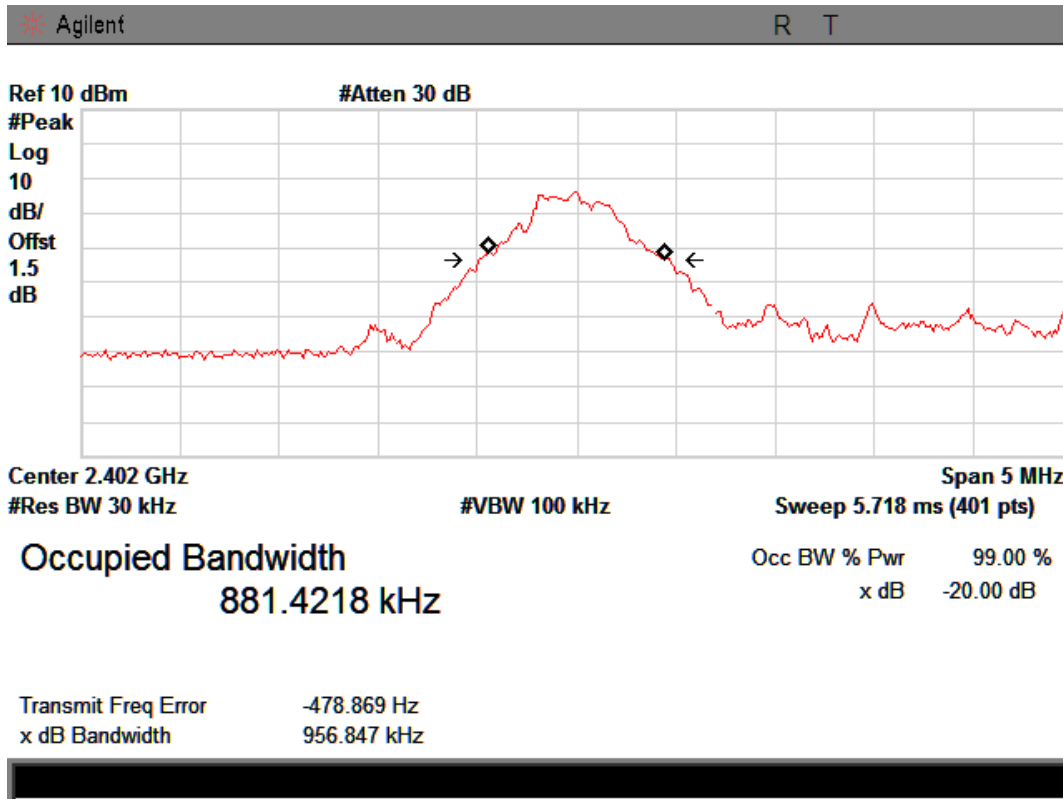


4.4 TEST RESULTS

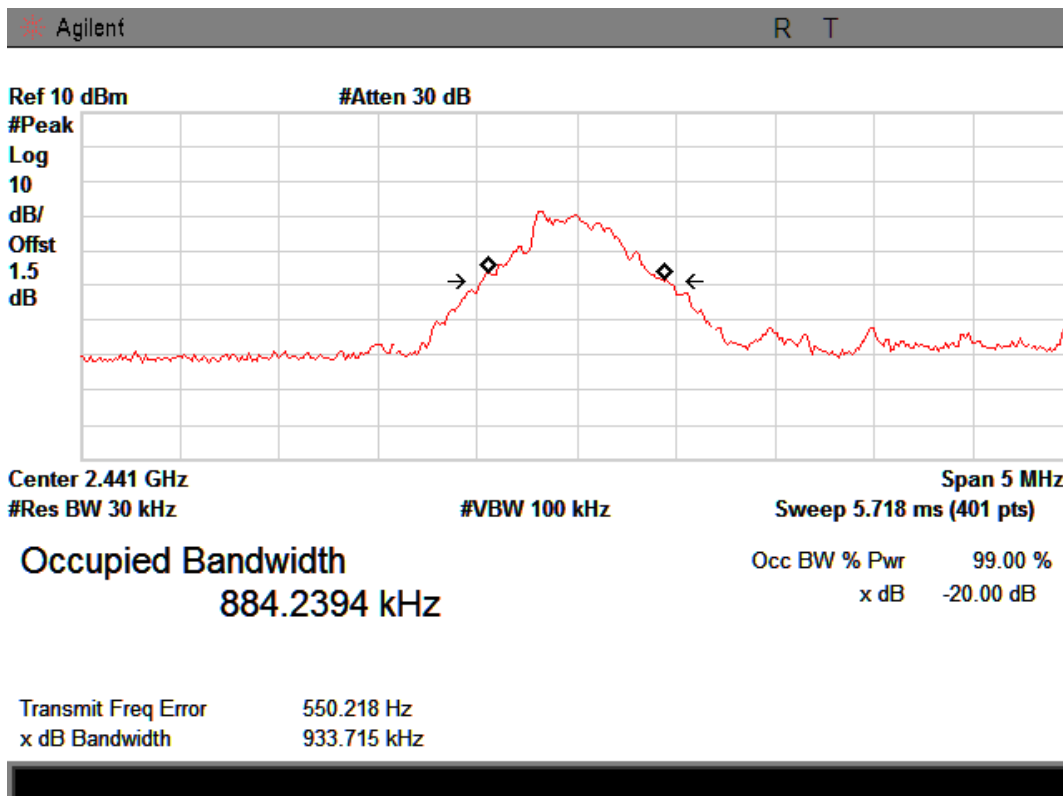
EUT :	Wireless video door phone (Indoor Monitor)	Model Name :	KX7001
Temperature :	26 °C	Relative Humidity :	53%
Pressure :	1020 hPa	Test Power :	DC 5V from adapter with AC 120V/60Hz
Test Mode :	TX CH 1/40/79		

Test Channel	Frequency (MHz)	20 dBc Bandwidth (MHz)
CH01	2402	0.957
CH40	2441	0.934
CH79	2480	0.967

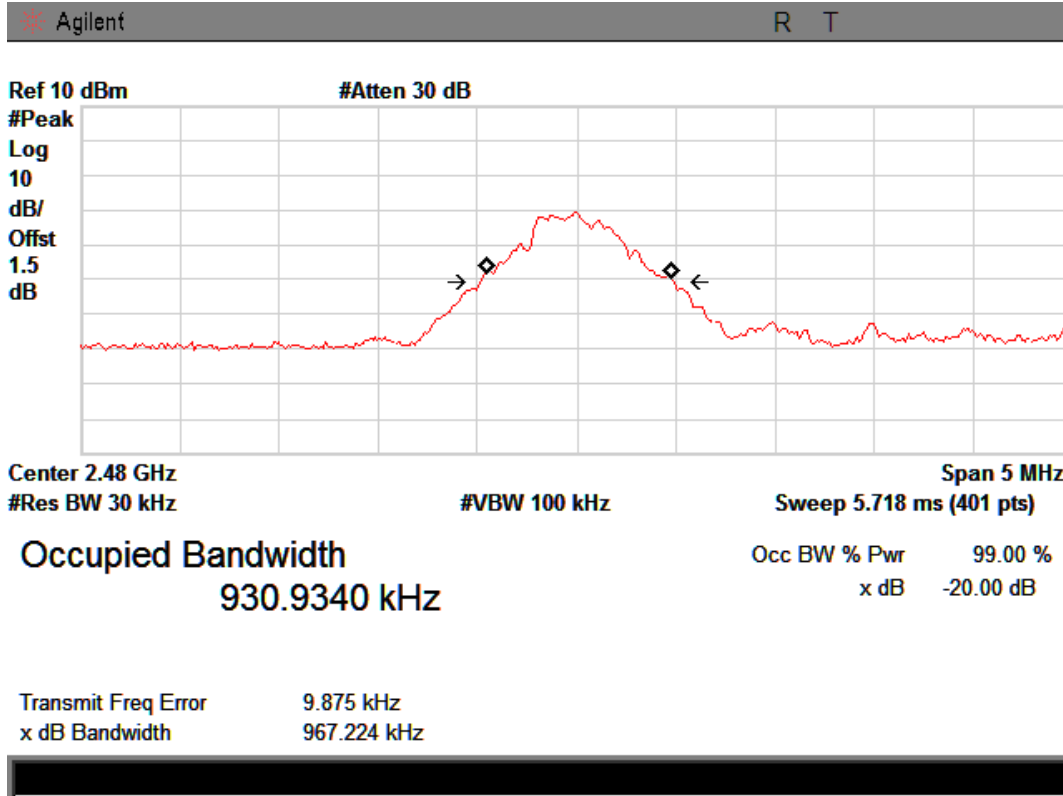
The Lowest Channel: 2402MHz



The Middle Channel: 2441MHz

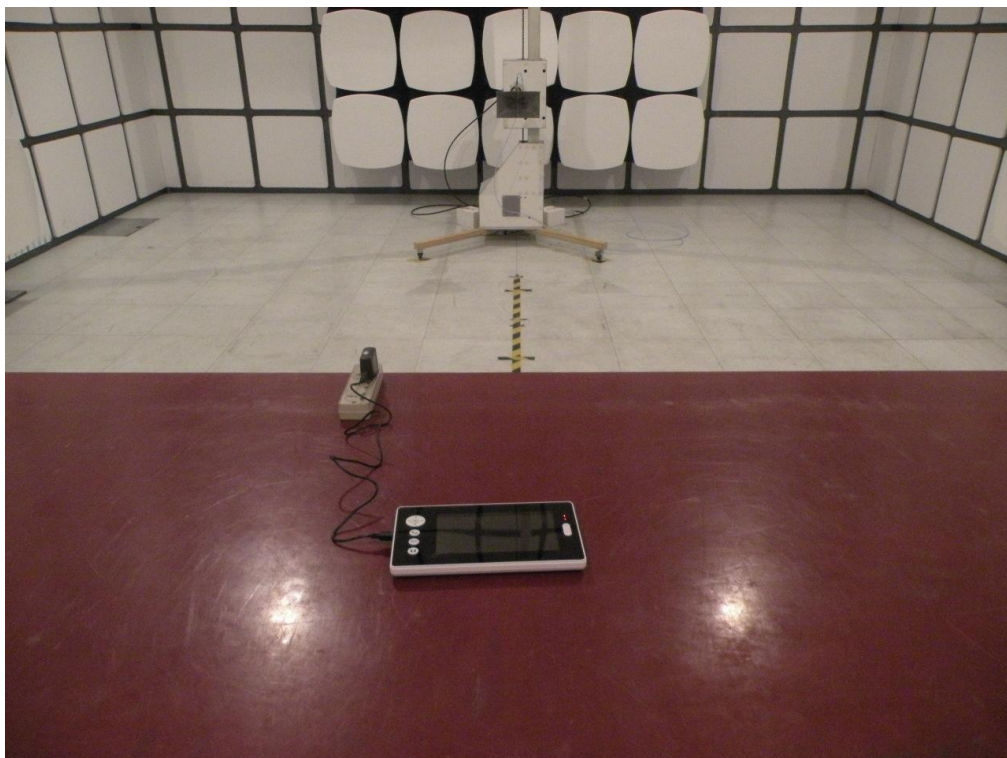
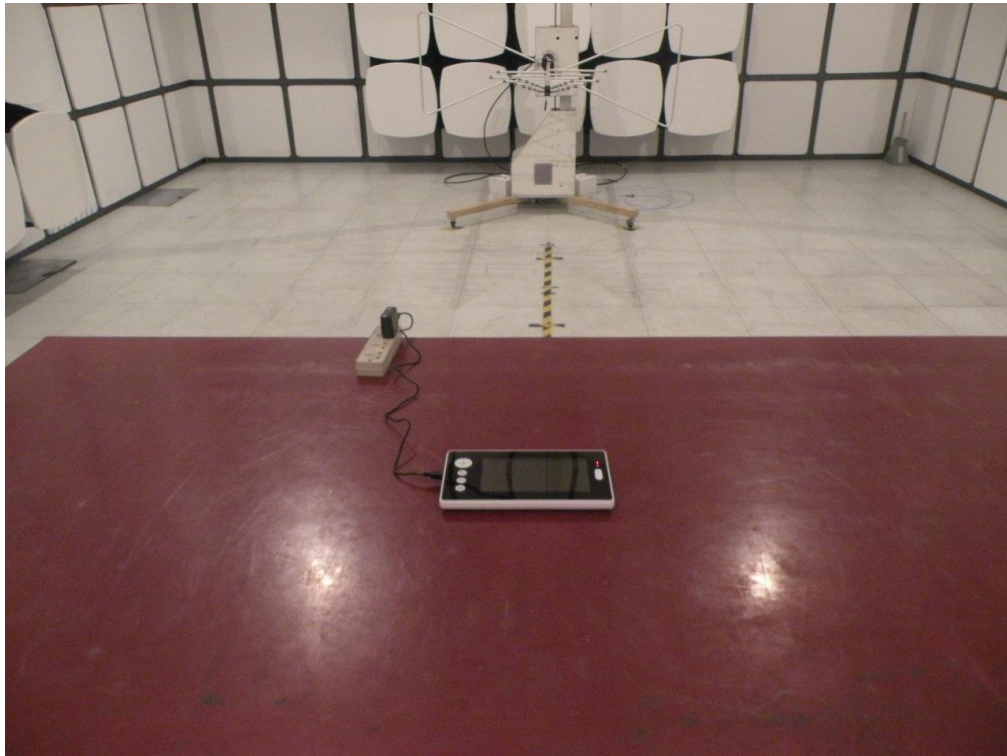


The High Channel:2480MHz



5. EUT TEST PHOTO

Radiated Measurement Photos(worst case position)



Comducted Measurement Photos(worst case position)

