



FCC RADIO TEST REPORT

FCC ID: 2ACVKKC-KBR101K

Product : Dual-model RF & Bluetooth keyboard with touchpad

Trade Name : N/A

Model Name : KC-KBR101

Serial Model : N/A

Report No. : NTEK-2014NT0618929F2

Prepared for

Kano Computing Limited

69-89 Mile End Road, London, E1 4TT, United Kingdom

Prepared by

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TEST RESULT CERTIFICATION

Applicant's name : Kano Computing Limited
Address : 69-89 Mile End Road, London, E1 4TT, United Kingdom
Manufacturer's Name..... : Shenzhen Riitek Technology CO.,Ltd.
Address : A1-4,A Zone,Baoyunda Logistic Center, Avenue Xixiang, BaoAn District, Shenzhen,China

Product description

Product name : Dual-model RF & Bluetooth keyboard with touchpad
Model and/or type reference : KC-KBR101
Serial Model : N/A
Rating(s)..... : DC 3.7V

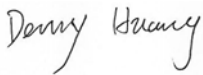
Standards : FCC Part15.249 01 Oct. 2013

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

This device described above has been tested by NTEK, 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.

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Date of Test :
Date (s) of performance of tests : 18 Jun. 2014 ~10 Jul. 2014
Date of Issue..... : 10 Jul. 2014
Test Result..... : **Pass**

Testing Engineer : 
Denny Huang

Technical Manager : 
(Brown Lu)

Authorized Signatory : 
(Bill Yao)

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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	

1.1 TEST FACILITY

NTEK Testing Technology Co., Ltd

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

FCC FRN Registration No.:238937; IC Registration No.:9270A-1

CNAS Registration No.:L5516

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	Dual-model RF & Bluetooth keyboard with touchpad	
Trade Name	N/A	
Model Name	KC-KBR101	
Serial Model	N/A	
Model Difference	N/A	
Product Description	The EUT is a Dual-model RF & Bluetooth keyboard with touchpad	
	Operation Frequency:	2401MHz-2480MHz
	Modulation Type:	GFSK
	Antenna Designation:	PCB Antenna
	Antenna Gain(Peak)	1.0 dBi
	EIRP	83.20dBuv/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	N/A	
Battery	DC3.7V, 850mAh	

Note:

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

2.

Channel	Frequency (MHz)
01	2401
02	2407
03	2410
04	2414
05	2421
06	2428
07	2435
08	2437
09	2440
10	2441
11	2442
12	2467
13	2468
14	2480

3.

Table for Filed Antenna

Ant .	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
1	N/A	N/A	PCB Antenna	N/A	1.0	Antenna

2.2 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	Link Mode
Mode 2	TX CH 01
Mode 3	TX CH 09
Mode 4	TX CH 14

For Conducted Emission	
Final Test Mode	Description
Mode 1	Link Mode

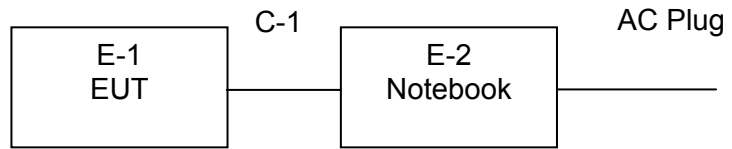
For Radiated Emission	
Final Test Mode	Description
Mode 1	Link Mode
Mode 2	TX CH 01
Mode 3	TX CH 09
Mode 4	TX CH 14

Note:

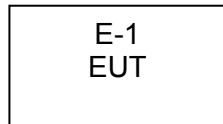
- (1) The measurements are performed at the highest, middle, lowest available channels.
- (2) The EUT use new battery.

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	Dual-model RF & Bluetooth keyboard with touchpad	N/A	KC-KBR101	N/A	EUT
E-2	Notebook	DELL	PP10L	N/A	

Item	Shielded Type	Ferrite Core	Length	Note
C-1	NO	NO	30cm	

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.	Calibrated until
1	Spectrum Analyzer	Agilent	E4407B	160400005	Jul. 06. 2015
2	Test Receiver	R&S	ESPI	101318	Jul. 06. 2015
3	Bilog Antenna	TESEQ	CBL6111D	31216	Jul. 06. 2015
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264416	Jul. 06. 2015
5	Spectrum Analyzer	ADVANTEST	R3132	150900201	Jul. 06. 2015
6	Horn Antenna	EM	EM-AH-10180	2011071402	Jul. 06. 2015
7	Horn Ant	Schwarzbeck	BBHA 9170	9170-181	Jul. 06. 2015
8	Amplifier	EM	EM-30180	060538	Jul. 06. 2015
9	Loop Antenna	ARA	PLA-1030/B	1029	Jul. 06. 2015
10	Power Meter	R&S	NRVS	100696	Jul. 06. 2015

Conduction Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Test Receiver	R&S	ESCI	101160	Jul. 06. 2015
2	LISN	R&S	ENV216	101313	Jul. 06. 2015
3	LISN	EMCO	3816/2	00042990	Jul. 06. 2015
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264417	Jul. 06. 2015
5	Passive Voltage Probe	R&S	ESH2-Z3	100196	Jul. 06. 2015
6	Absorbing clamp	R&S	MOS-21	100423	Jul. 06. 2015

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 EUT antenna is PCB Antenna. It comply with the standard requirement.

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

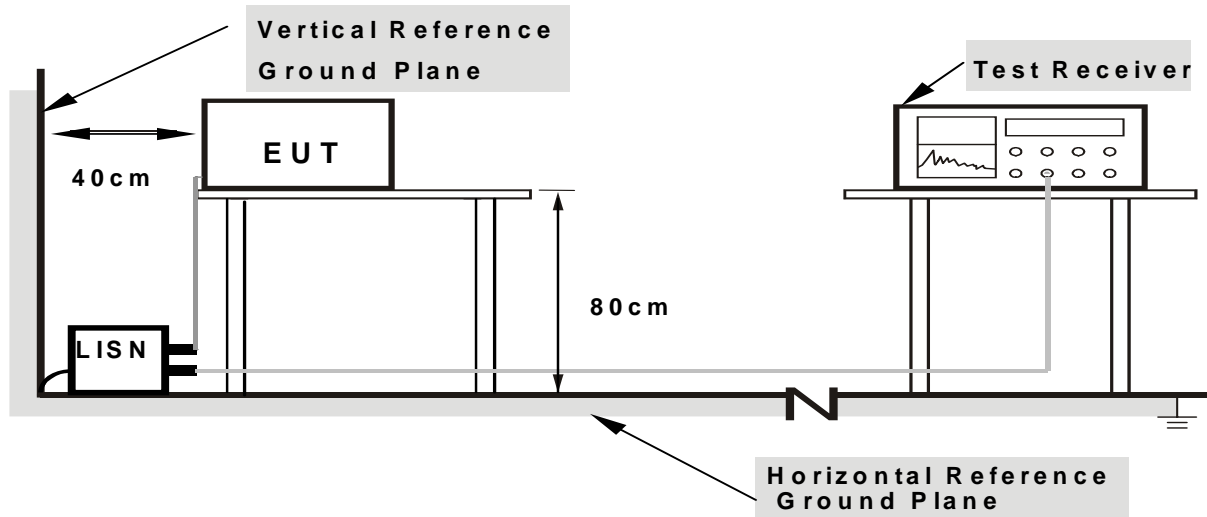
3.3.2 TEST PROCEDURE

- 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.

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 cm from other units and other metal planes

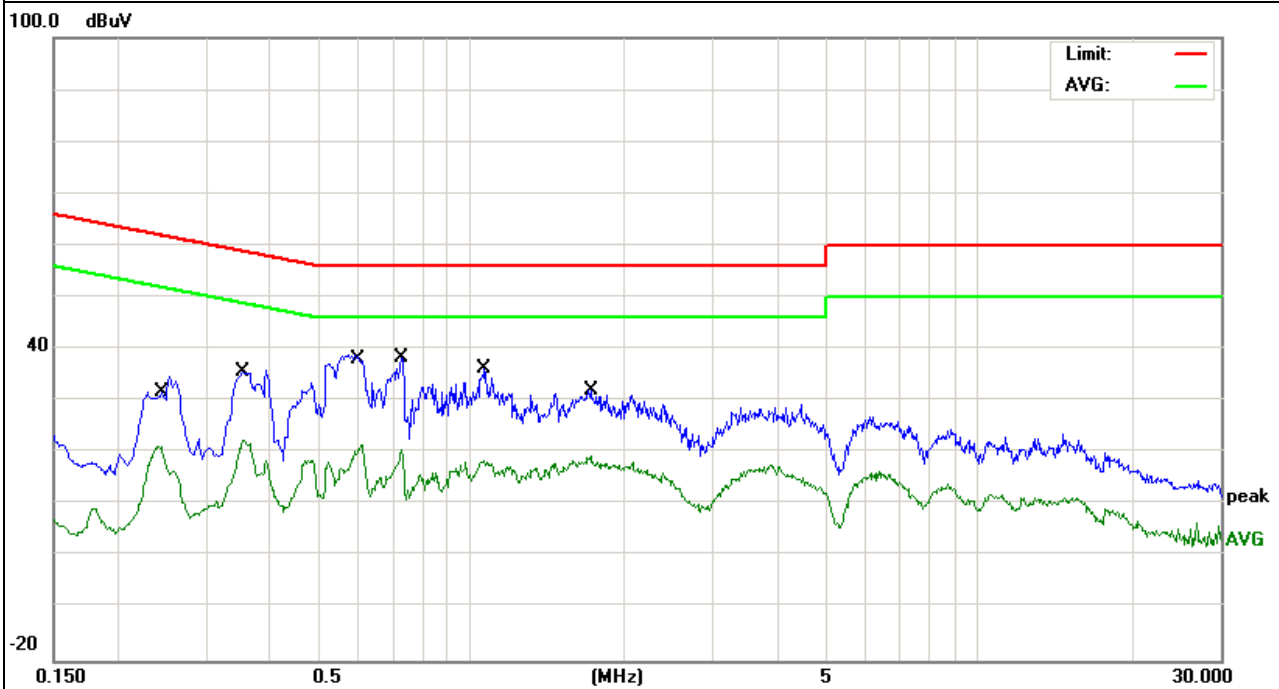
3.2.5 TEST RESULT

EUT :	Dual-model RF & Bluetooth keyboard with touchpad	Model Name. :	KC-KBR101
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Phase :	L
Test Voltage :	DC 5.0V from adapter AC 120V/60Hz	Test Mode :	Mode 1

Frequency (MHz)	Reading Level (dBμV)	Correct Factor (dB)	Measure-ment (dBμV)	Limits (dBμV)	Margin (dB)	Remark
0.2419	31.87	0.00	31.87	62.03	-30.16	QP
0.2419	21.32	0.00	21.32	52.03	-30.71	AVG
0.3537	35.58	0.00	35.58	58.87	-23.29	QP
0.3537	22.37	0.00	22.37	48.87	-26.50	AVG
0.6097	38.90	0.00	38.90	56.00	-17.10	QP
0.6097	21.52	0.00	21.52	46.00	-24.48	AVG
0.7298	38.35	0.00	38.35	56.00	-17.65	QP
0.7298	20.72	0.00	20.72	46.00	-25.28	AVG
1.0580	36.17	0.00	36.17	56.00	-19.83	QP
1.0580	18.63	0.00	18.63	46.00	-27.37	AVG
1.7217	32.09	0.00	32.09	56.00	-23.91	QP
1.7217	19.33	0.00	19.33	46.00	-26.67	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

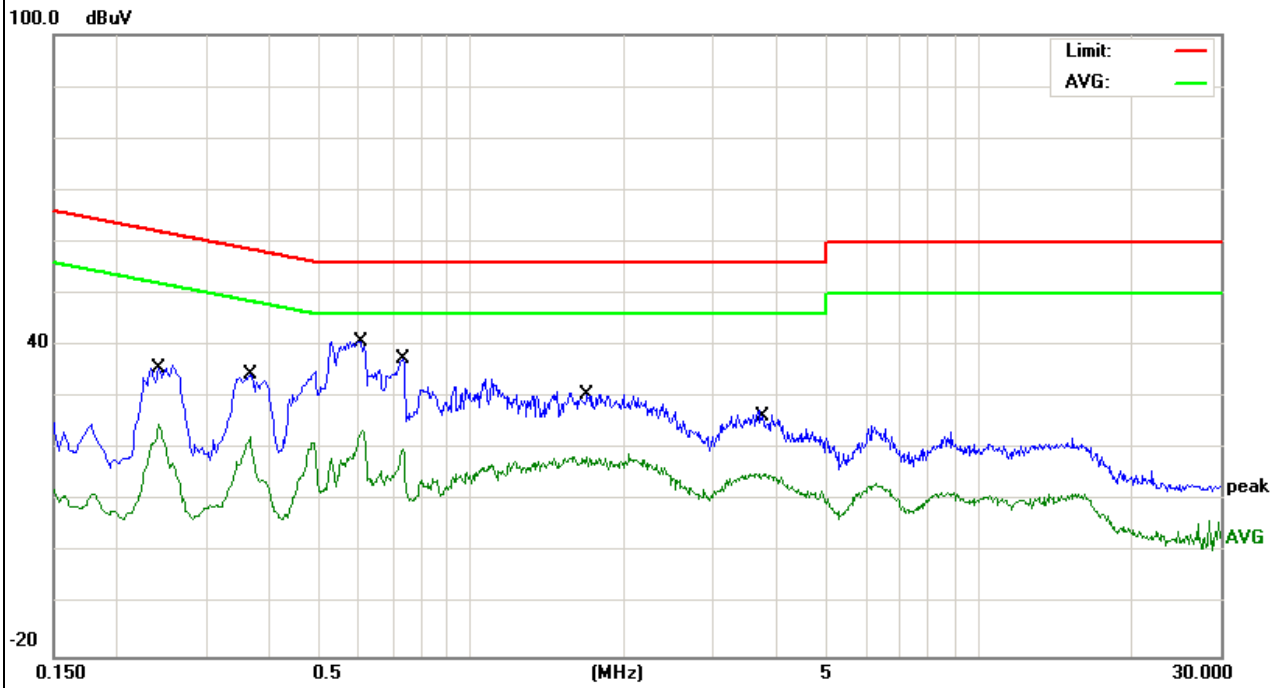


EUT :	Dual-model RF & Bluetooth keyboard with touchpad	Model Name. :	KC-KBR101
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Phase :	N
Test Voltage :	DC 5.0V from adapter AC 120V/60Hz	Test Mode :	Mode 1

Frequency (MHz)	Reading Level (dBμV)	Correct Factor (dB)	Measurement (dBμV)	Limits (dBμV)	Margin (dB)	Remark
0.2419	35.74	0.00	35.74	62.03	-26.29	QP
0.2419	24.80	0.00	24.80	52.03	-27.23	AVG
0.3659	34.42	0.00	34.42	58.59	-24.17	QP
0.3659	22.40	0.00	22.40	48.59	-26.19	AVG
0.6058	40.85	0.00	40.85	56.00	-15.15	QP
0.6097	23.54	0.00	23.54	46.00	-22.46	AVG
0.7338	37.38	0.00	37.38	56.00	-18.62	QP
0.7338	19.99	0.00	19.99	46.00	-26.01	AVG
1.6855	18.67	0.00	18.67	46.00	-27.33	AVG
1.6855	30.49	0.00	30.49	56.00	-25.51	QP
3.7820	27.44	0.00	27.44	56.00	-28.56	QP
3.7820	15.39	0.00	15.39	46.00	-30.61	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.



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
Frequency (MHz)	Limit (dBuV)	
30~88	40	3
88~216	43.5	3
216~960	46	3
960 -10000	54.00	3
*902 - 928	94.00	3

Note:

- (1) The tighter limit applies at the band edges.
- (2) Emission level (dBuV/m)=20log Emission level (uV/m).
- (3) *Note: This is the limit for the fundamental frequency.

LIMITS OF RADIATED EMISSION MEASUREMENT (FCC 15.249)

Frequency of Emission (MHz)	Field Strength of fundamental ((millivolts /meter)	Field Strength of Harmonics (microvolts/meter)
902-928	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

During the radiated emission test, the Spectrum Analyzer was set with the following configurations:

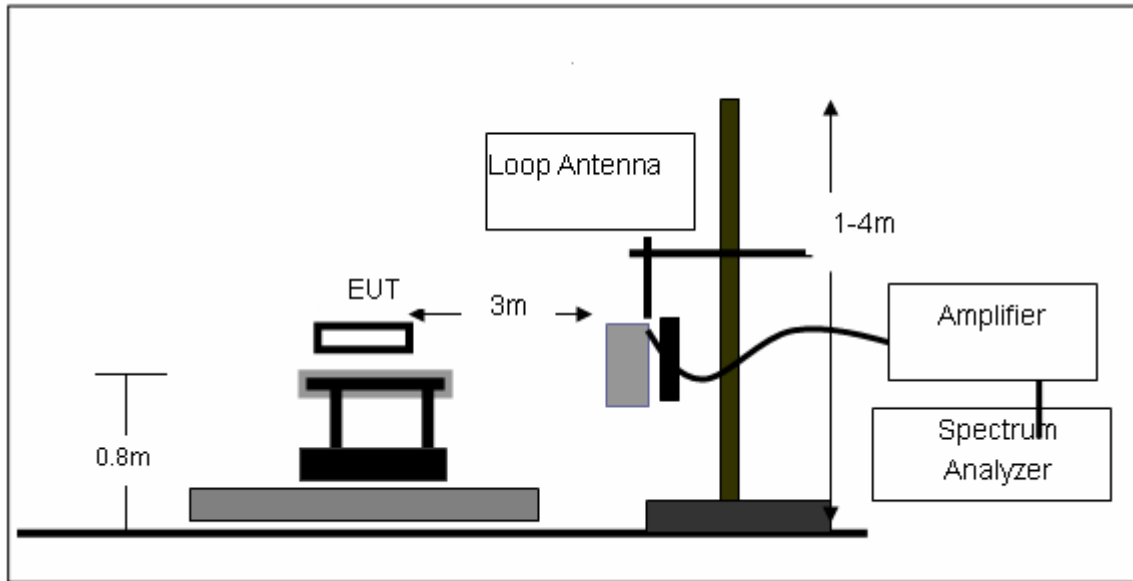
Frequency Band (MHz)	Function	Resolution bandwidth	Video Bandwidth
30 to 1000	Peak	100 kHz	100 kHz
Above 1000	Peak	1 MHz	1 MHz
	Average	1 MHz	10 Hz

3.4.3 DEVIATION FROM TEST STANDARD

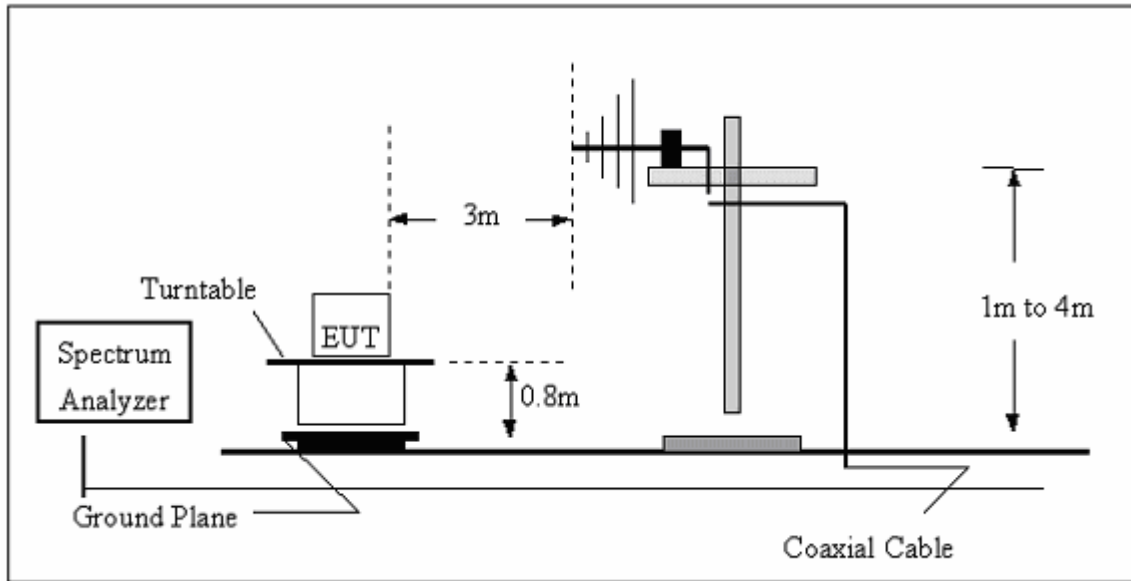
No deviation

3.4.4 TEST SETUP

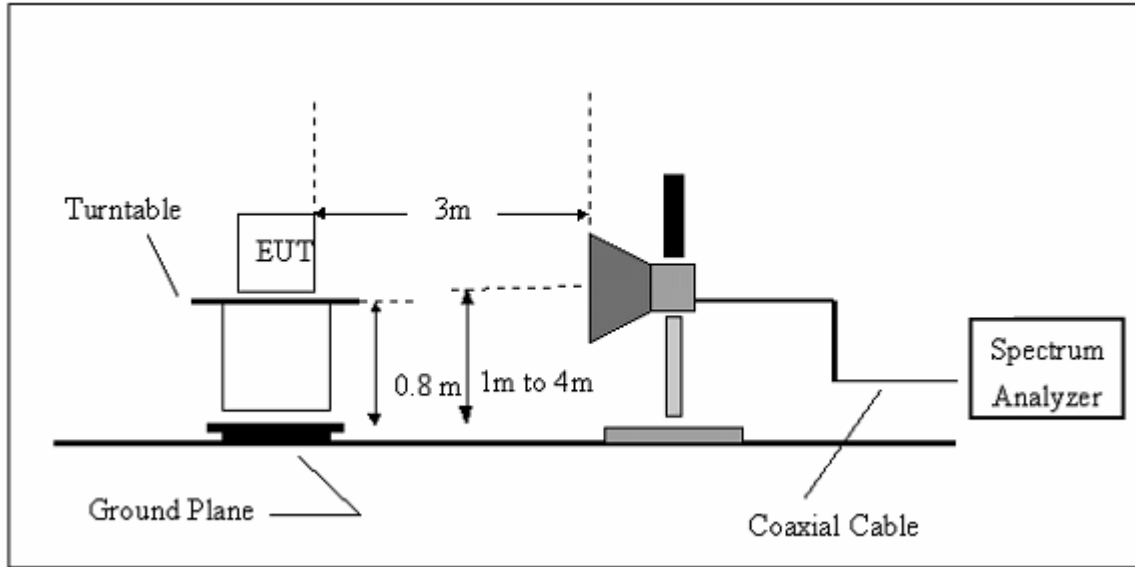
(A) Radiated Emission Test-Up Frequency Below 30MHz



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



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



3.4.5 TEST RESULTS (BLOW 30MHz)

EUT :	Dual-model RF & Bluetooth keyboard with touchpad	Model Name. :	KC-KBR101
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V
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 = $20 \log (\text{specific distance}/\text{test distance})(\text{dB})$;

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

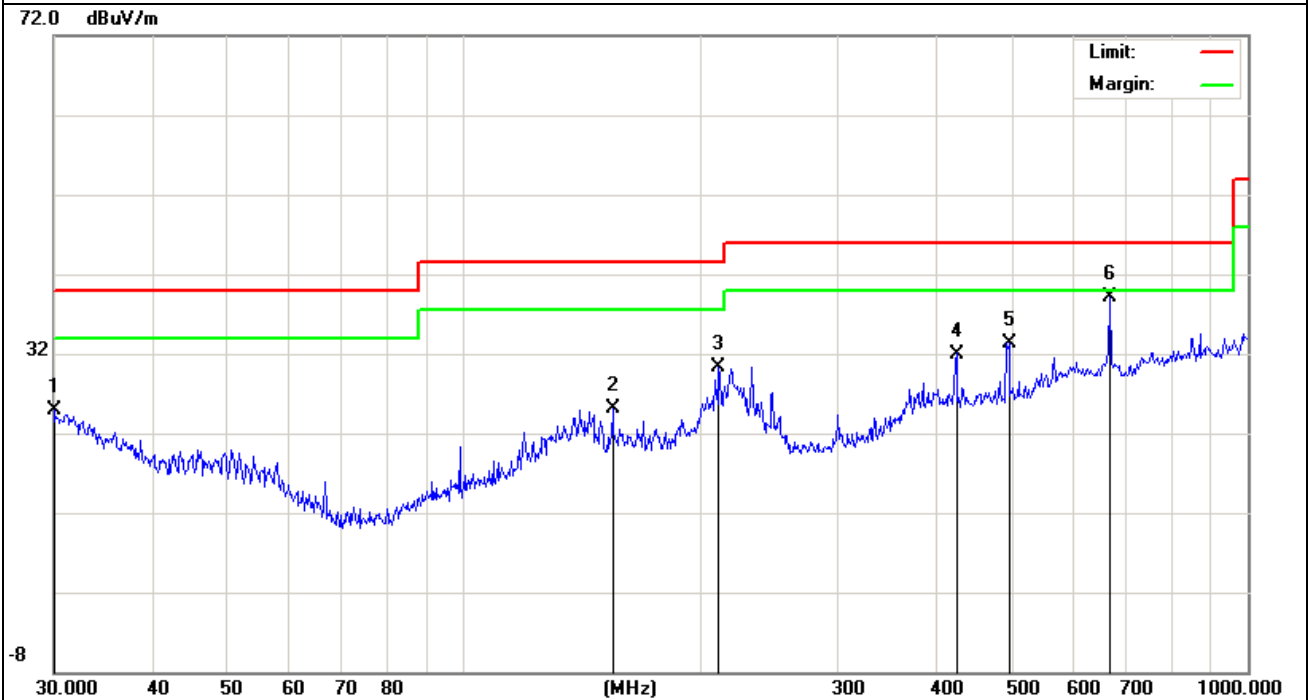
3.4.6 TEST RESULTS (BETWEEN 30 – 1000 MHZ)

EUT :	Dual-model RF & Bluetooth keyboard with touchpad	Model Name :	KC-KBR101
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V
Test Mode :	TX	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBµV)	Factor (dB)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	Remark
154.8204	14.75	10.45	25.20	43.50	-18.30	QP
211.5263	18.74	11.56	30.30	43.50	-13.20	QP
425.0280	13.19	18.81	32.00	46.00	-14.00	QP
495.9343	13.09	20.21	33.30	46.00	-12.70	QP
668.1422	15.24	23.91	39.15	46.00	-6.85	QP

Remark:

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

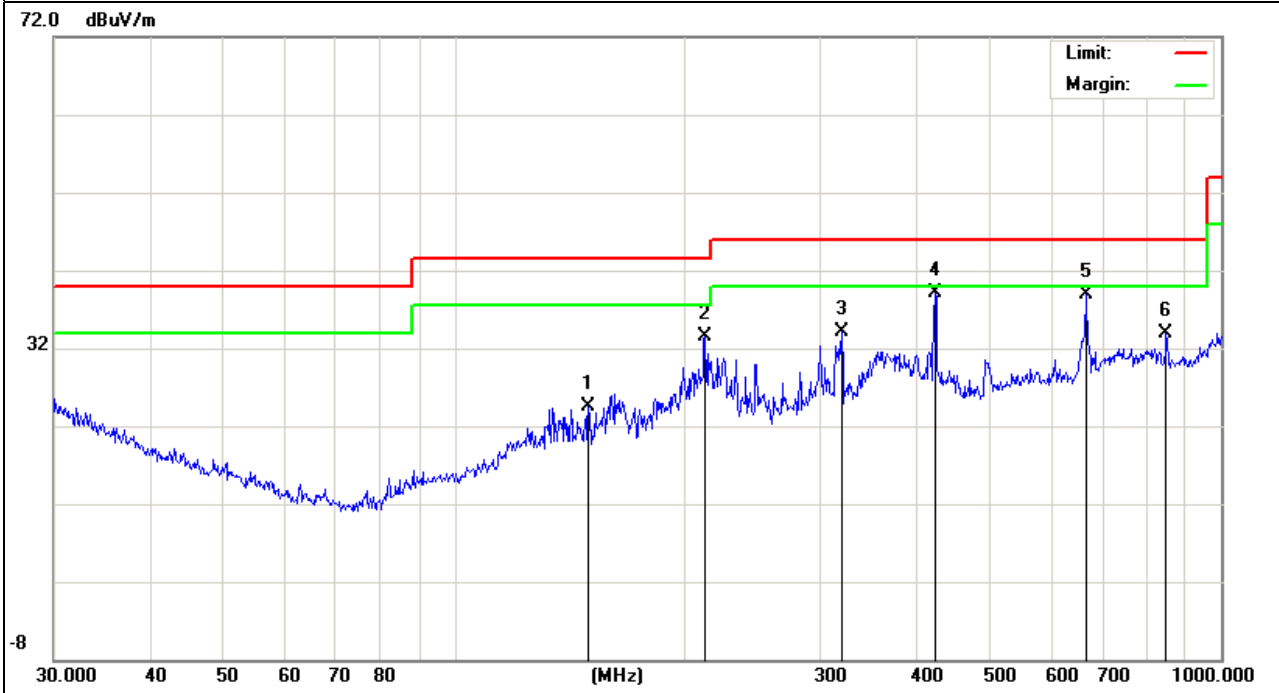


EUT :	Dual-model RF & Bluetooth keyboard with touchpad	Model Name :	KC-KBR101
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V
Test Mode :	TX	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
149.4857	13.99	10.46	24.45	43.50	-19.05	QP
212.2693	21.80	11.61	33.41	43.50	-10.09	QP
319.9370	19.07	14.98	34.05	46.00	-11.95	QP
423.5403	20.25	18.78	39.03	46.00	-6.97	QP
665.8034	14.98	23.85	38.83	46.00	-7.17	QP
848.0561	6.71	27.24	33.95	46.00	-12.05	QP

Remark:

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

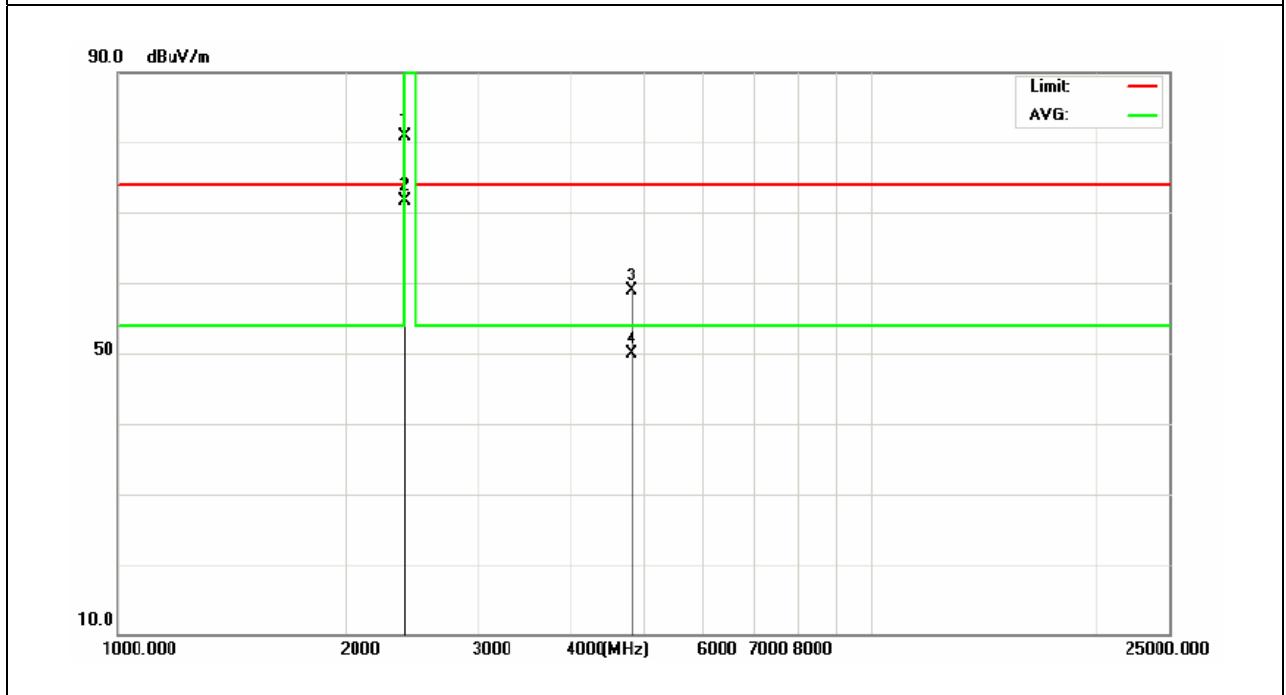


3.4.7 TEST RESULTS (ABOVE 1000 MHZ)

EUT :	Dual-model RF & Bluetooth keyboard with touchpad	Model Name :	KC-KBR101
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V
Test Mode :	TX-2401MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBµV)	Factor (dB)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	Detector Type
2401.369	93.89	-12.99	80.90	114.00	-33.10	peak
2401.369	84.77	-12.99	71.78	94.00	-22.22	AVG
4802.412	62.56	-3.65	58.91	74.00	-15.09	peak
4802.412	53.64	-3.65	49.99	54.00	-4.01	AVG

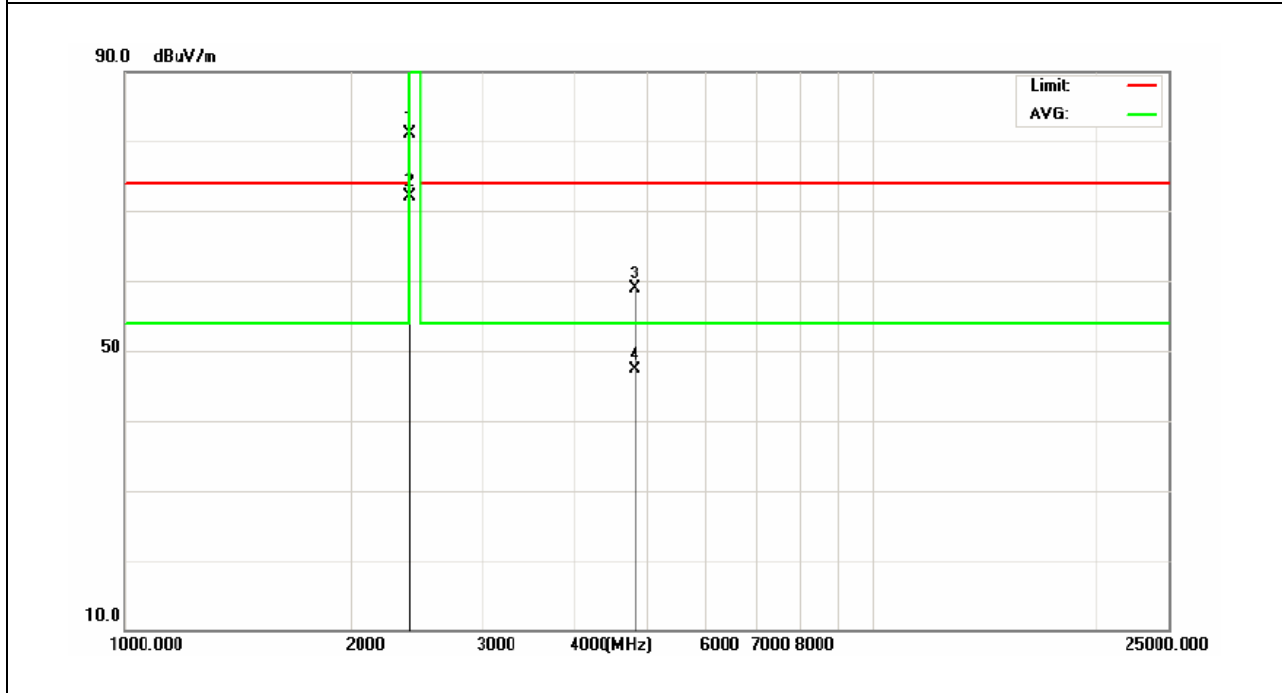
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Dual-model RF & Bluetooth keyboard with touchpad	Model Name :	KC-KBR101
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V
Test Mode :	TX-2401MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2401.436	94.09	-12.99	81.10	114.00	-32.90	peak
2401.436	85.17	-12.99	72.18	94.00	-21.82	AVG
4802.315	62.50	-3.65	58.85	74.00	-15.15	peak
4802.315	50.91	-3.65	47.26	54.00	-6.74	AVG

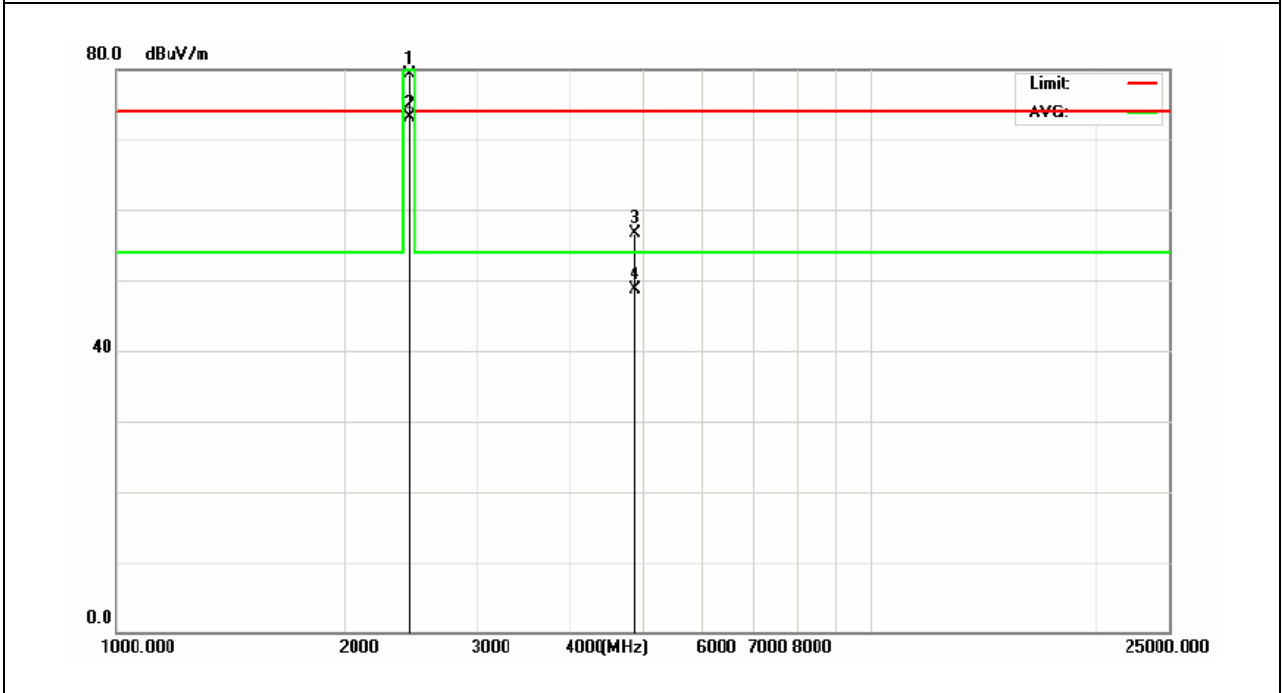
Remark:
 Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Dual-model RF & Bluetooth keyboard with touchpad	Model Name :	KC-KBR101
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V
Test Mode :	TX-2440MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBµV)	Factor (dB)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	Detector Type
2440.728	92.34	-12.94	79.40	114.00	-34.60	peak
2440.728	86.11	-12.94	73.17	94.00	-20.83	AVG
4880.856	60.47	-3.67	56.80	74.00	-17.20	peak
4880.856	52.41	-3.67	48.74	54.00	-5.26	AVG

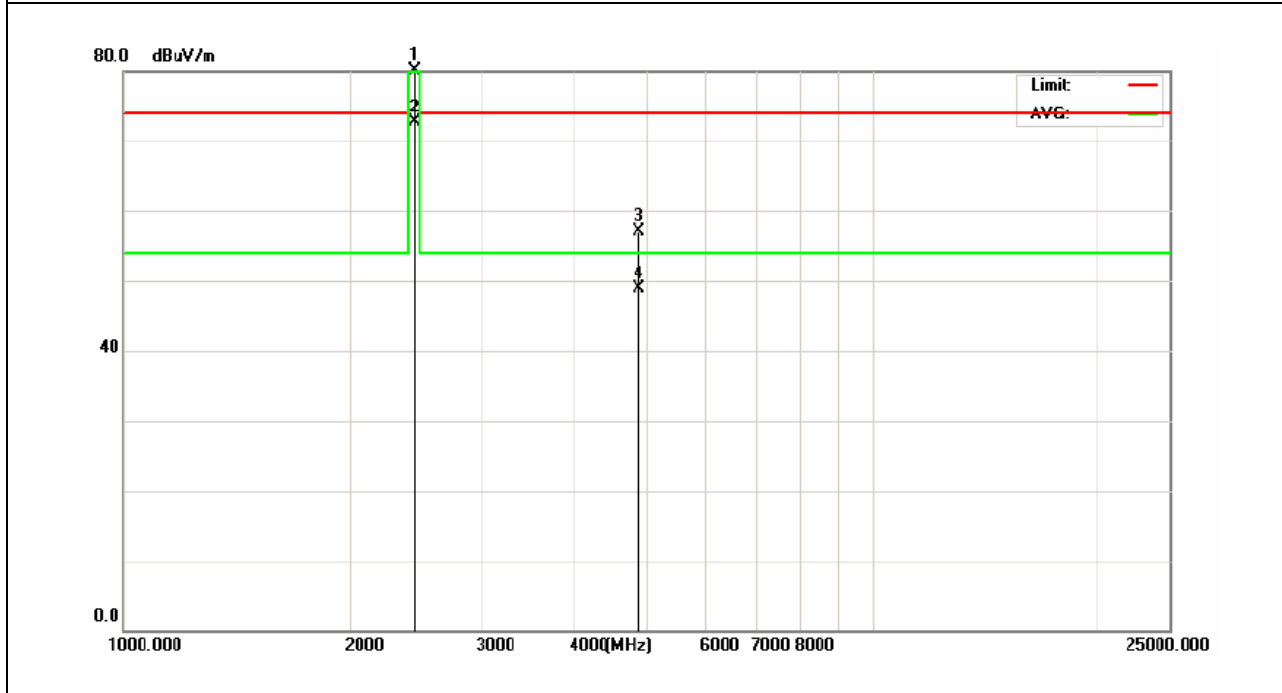
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Dual-model RF & Bluetooth keyboard with touchpad	Model Name :	KC-KBR101
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V
Test Mode :	TX-2440MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2440.728	93.04	-12.94	80.10	114.00	-33.90	peak
2440.728	85.66	-12.94	72.72	94.00	-21.28	AVG
4880.862	60.77	-3.67	57.10	74.00	-16.90	peak
4880.862	52.53	-3.67	48.86	54.00	-5.14	AVG

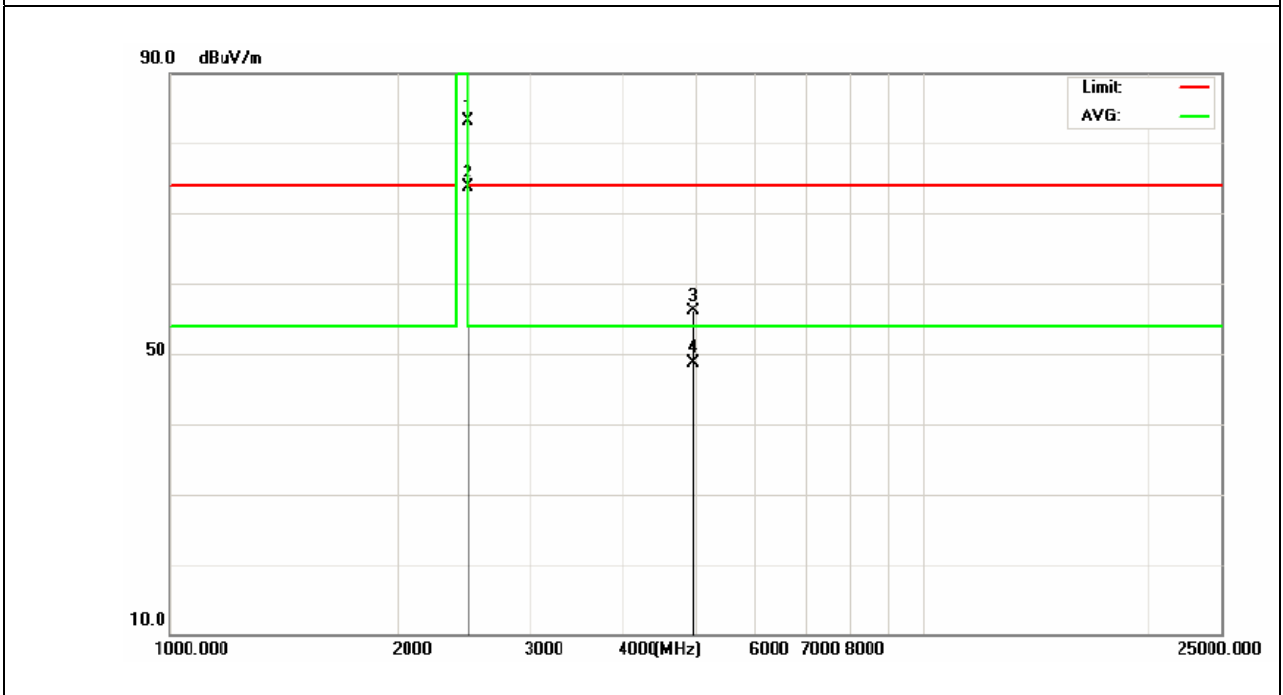
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Dual-model RF & Bluetooth keyboard with touchpad	Model Name :	KC-KBR101
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V
Test Mode :	TX-2480MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2480.083	95.99	-12.79	83.20	114.00	-30.80	peak
2480.083	86.43	-12.79	73.64	94.00	-20.36	AVG
4960.077	59.69	-3.59	56.10	74.00	-17.90	peak
4960.077	52.33	-3.59	48.74	54.00	-5.26	AVG

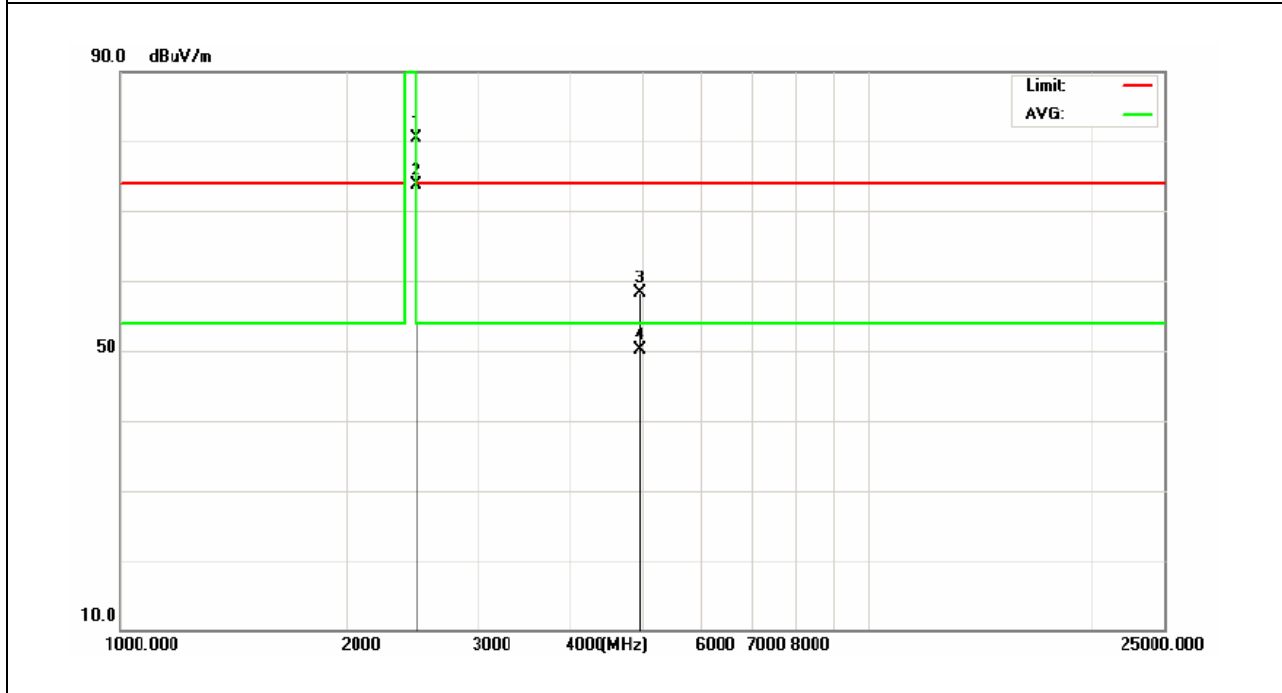
Remark:
 Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Dual-model RF & Bluetooth keyboard with touchpad	Model Name :	KC-KBR101
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V
Test Mode :	TX-2480MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2480.069	93.29	-12.79	80.50	114.00	-33.50	peak
2480.069	86.47	-12.79	73.68	94.00	-20.32	AVG
4960.081	61.99	-3.59	58.40	74.00	-15.60	peak
4960.081	53.71	-3.59	50.12	54.00	-3.88	AVG

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

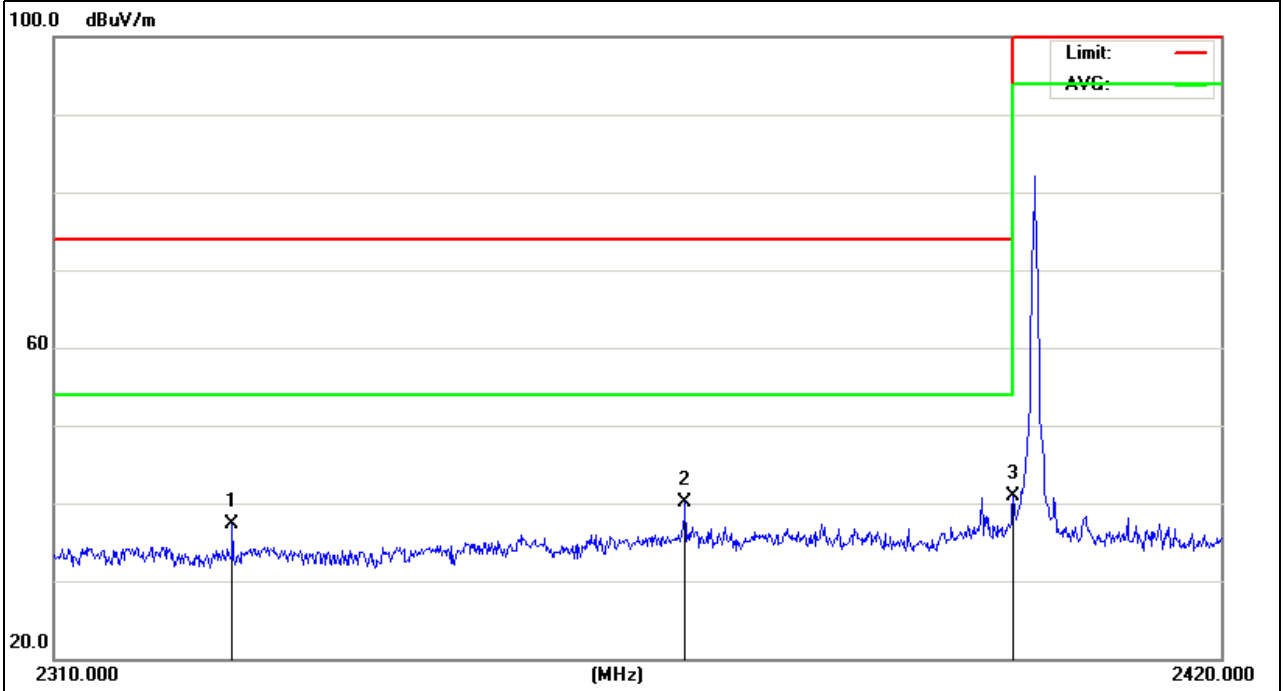


3.4.8 TEST RESULTS (RESTRICTED BANDS REQUIREMENTS)

EUT :	Dual-model RF & Bluetooth keyboard with touchpad	Model Name :	KC-KBR101
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V
Test Mode :	TX-2401MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBµV)	Factor (dB)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	Detector Type
2326.500	50.47	-13.07	37.40	74.00	-36.60	peak
2368.960	53.36	-13.21	40.15	74.00	-33.85	peak
2400.000	53.89	-12.99	40.90	74.00	-33.10	peak

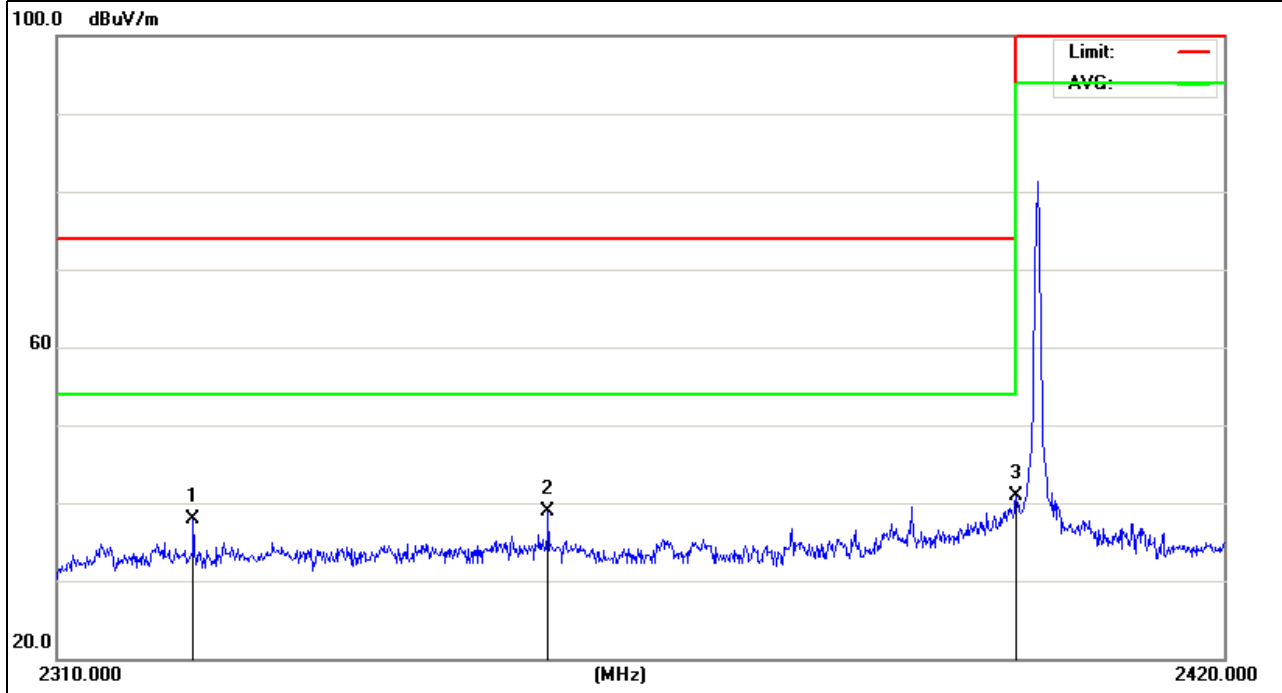
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Dual-model RF & Bluetooth keyboard with touchpad	Model Name :	KC-KBR101
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V
Test Mode :	TX-2401MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2322.650	51.02	-13.04	37.98	74.00	-36.02	peak
2355.760	52.17	-13.30	38.87	74.00	-35.13	peak
2400.000	53.81	-12.99	40.82	74.00	-33.18	peak

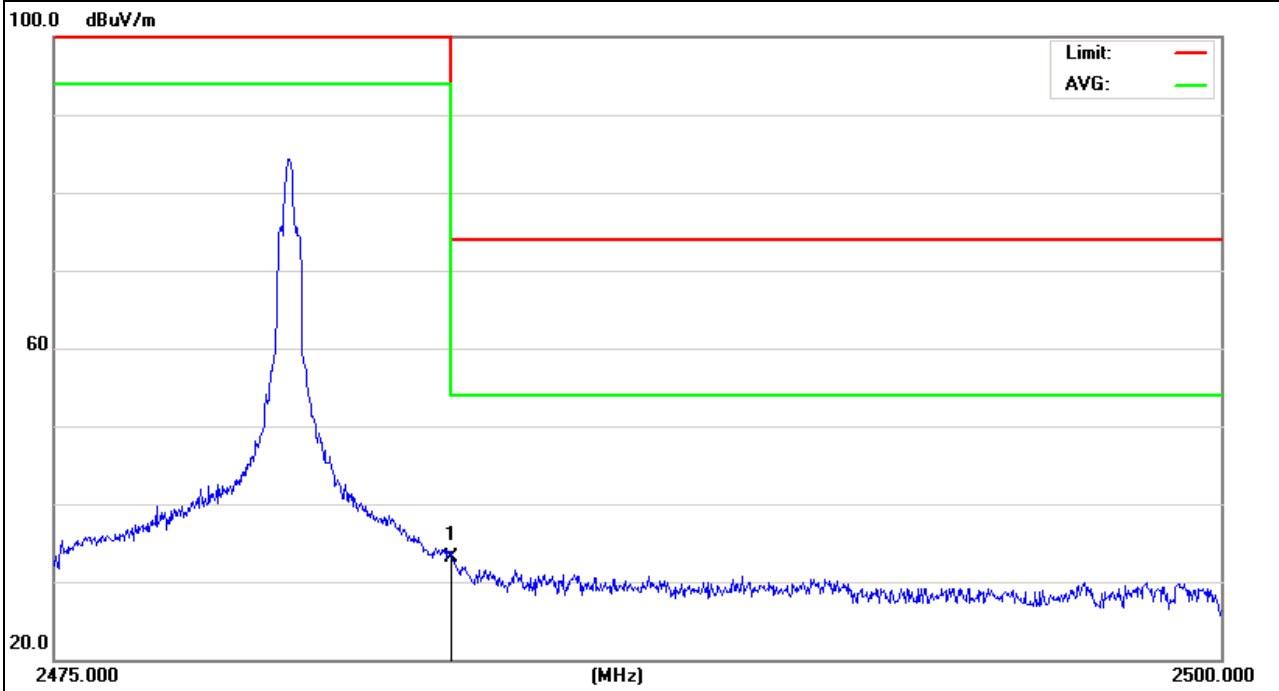
Remark:
 Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Dual-model RF & Bluetooth keyboard with touchpad	Model Name :	KC-KBR101
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V
Test Mode :	TX-2480MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBµV)	Factor (dB)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	Detector Type
2483.50	45.96	-12.78	33.18	74.00	-40.82	peak

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

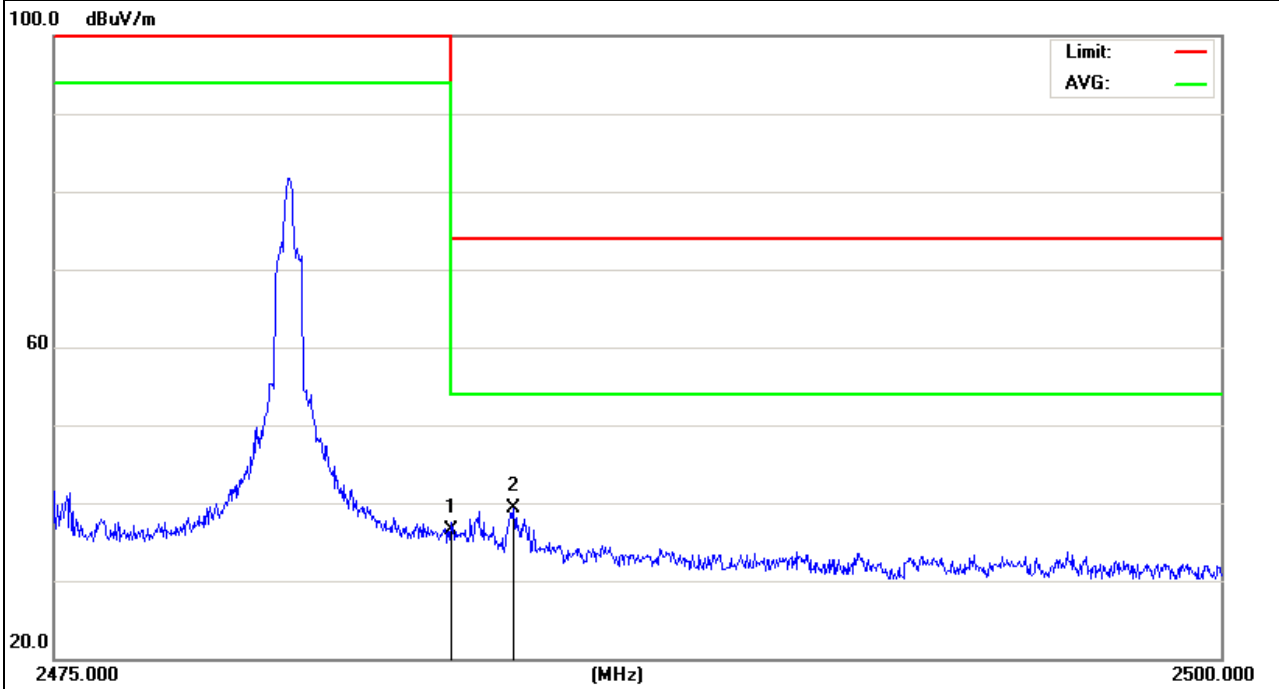


EUT :	Dual-model RF & Bluetooth keyboard with touchpad	Model Name :	KC-KBR101
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.7V
Test Mode :	TX-2480MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2483.500	49.26	-12.78	36.48	74.00	-37.52	peak
2484.825	52.17	-12.78	39.39	74.00	-34.61	peak

Remark:

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



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= 100KHz, VBW \geq RBW, Sweep time = Auto.

4.2 DEVIATION FROM STANDARD

No deviation.

4.3 TEST SETUP

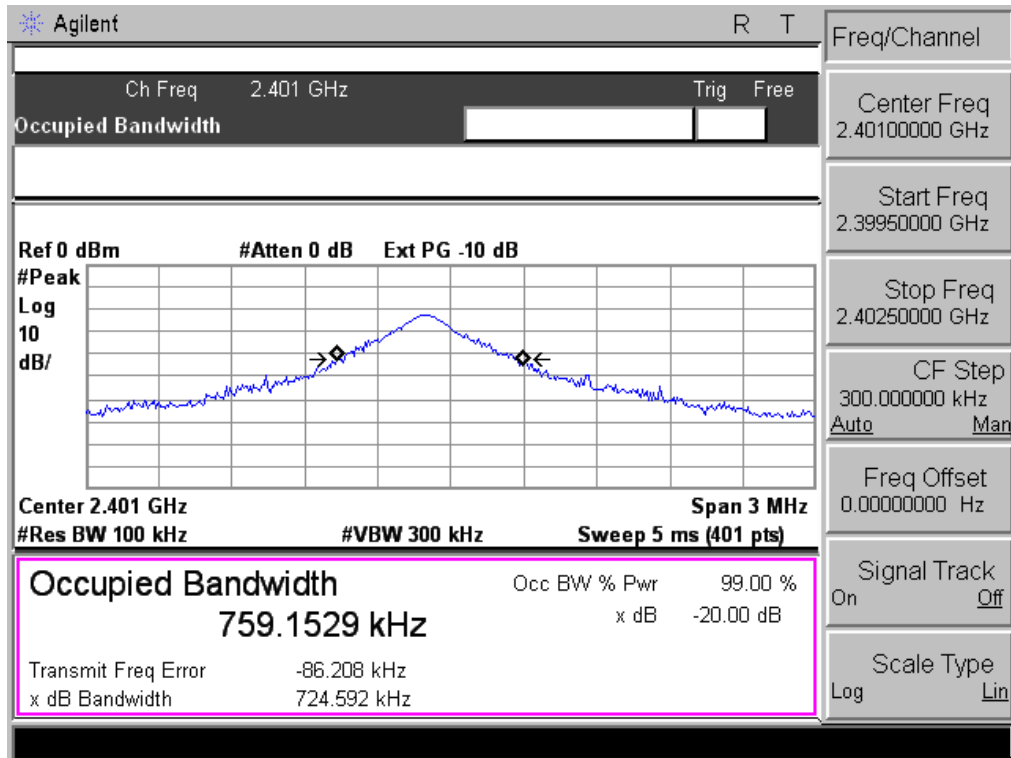


4.4 TEST RESULTS

EUT :	Dual-model RF & Bluetooth keyboard with touchpad	Model Name :	KC-KBR101
Temperature :	26 °C	Relative Humidity :	53%
Pressure :	1020 hPa	Test Power :	DC 3.7V
Test Mode :	TX		

Frequency (MHz)	20 dBc Bandwidth (MHz)	99% Bandwidth (MHz)
2401	0.7246	0.7592
2440	0.5643	0.6304
2480	0.6459	0.6271

The Lowest Channel:2401MHz



The Middle Channel: 2440MHz

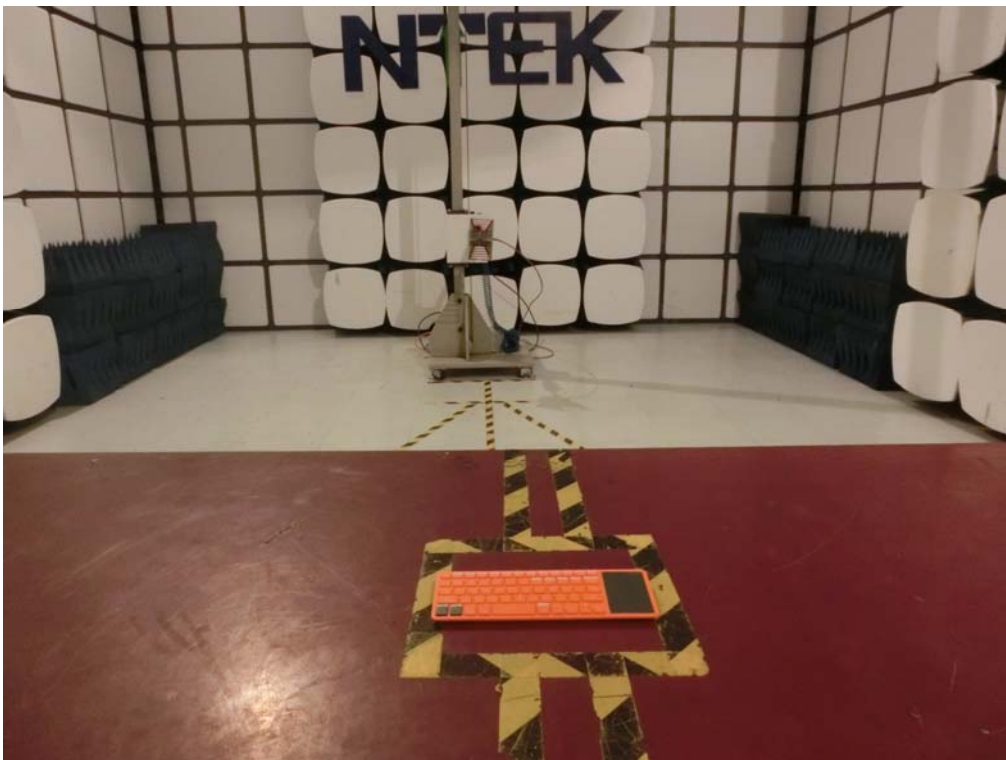
Agilent		R	T	Freq/Channel	
Ch Freq 2.44 GHz		Trig Free		Center Freq 2.44000000 GHz	
Occupied Bandwidth				Start Freq 2.43850000 GHz	
Ref 0 dBm #Atten 0 dB Ext PG -10 dB				Stop Freq 2.44150000 GHz	
				CF Step 300.000000 kHz Auto Man	
Center 2.44 GHz Span 3 MHz				Freq Offset 0.00000000 Hz	
#Res BW 100 kHz #VBW 300 kHz Sweep 5 ms (401 pts)				Signal Track On Off	
Occupied Bandwidth 630.3581 kHz		Occ BW % Pwr 99.00 %		Scale Type Log Lin	
x dB Bandwidth 564.261 kHz		x dB -20.00 dB			
Transmit Freq Error -104.701 kHz					

The HIGH Channel: 2480MHz

Agilent		R	T	Freq/Channel	
Ch Freq 2.48 GHz		Trig Free		Center Freq 2.48000000 GHz	
Occupied Bandwidth				Start Freq 2.47850000 GHz	
Ref 0 dBm #Atten 0 dB Ext PG -10 dB				Stop Freq 2.48150000 GHz	
				CF Step 300.000000 kHz Auto Man	
Center 2.48 GHz Span 3 MHz				Freq Offset 0.00000000 Hz	
#Res BW 100 kHz #VBW 300 kHz Sweep 5 ms (401 pts)				Signal Track On Off	
Occupied Bandwidth 627.1170 kHz		Occ BW % Pwr 99.00 %		Scale Type Log Lin	
x dB Bandwidth 645.939 kHz		x dB -20.00 dB			
Transmit Freq Error -107.783 kHz					

5. EUT TEST PHOTO

Radiated Measurement Photos



CONDUCTED EMISSION Photos

