FCC RADIO TEST REPORT
FCC ID: 2ABX7Z66

Product： Bluetooth Keyboard

Trade Name： N/A

Model Name： Z66

Serial Model： N/A

Prepared for

SHEN ZHEN NICE TECH TECHNOLOGY CO.,LTD

3rd floor, North Yong-Fa High-Tech Industrial Park E, New Bu-Chong Village,Shajing Town,Bao'an District,Shenzhen.China

Prepared by

Shenzhen STONE Testing Technology Co.,Ltd.

F/6, Bldg.12, Zhongxing Industrial City, Chuangye Rd., Nanshan District Shenzhen P.R. China

TEST RESULT CERTIFICATION

Applicant's name	:	SHEN ZHEN NICE TECH TECHNOLOGY CO.,LTD
Address	:	3rd floor, North Yong-Fa High-Tech Industrial Park E, New Bu-Chong Village,Shajing Town,Bao'an District,Shenzhen.China
Manufacture's Name	:	SHEN ZHEN NICE TECH TECHNOLOGY CO.,LTD
Address	:	3rd floor, North Yong-Fa High-Tech Industrial Park E, New Bu-Chong Village,Shajing Town,Bao'an District,Shenzhen.China

Product description

Product name	:	Bluetooth Keyboard
Model and/or type reference	:	Z66
Serial Model：		N/A
Rating(s)	:	DC 3.7V
Standards	:	FCC Part15.249
Test procedure		ANSI C63.4-2003

This device described above has been tested by STT, 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	:	22 Feb. 2014 ~03 Mar. 2014
Date of Issue	:	03 Mar. 2014
Test Result	:	**Pass**

Testing Engineer : Eric Wang

(Eric Wang)

Technical Manager : Jerry You

(Jerry You)

Authorized Signatory : Jack Yu

(Jack yu)

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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	

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1.1 TEST FACILITY

Shenzhen STONE Testing Technology Co.,Ltd.
Add. : F/1, Bldg.12, Zhongxing Industrial City, Chuangye Rd., Nanshan District Shenzhen China
FCC Registration No.: 323508; IC Registration No.: 11043A

1.2 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	±1.38dB
2	RF power,conducted	±0.16dB
3	Spurious emissions,conducted	±0.21dB
4	All emissions,radiated(<1G)	±4.68dB
5	All emissions,radiated(>1G)	±4.89dB
6	Temperature	±0.5°C
7	Humidity	±2%

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

<table>
<tr><td>Equipment</td><td>Bluetooth Keyboard</td></tr>
<tr><td>Trade Name</td><td>N/A</td></tr>
<tr><td>Model Name</td><td>Z66</td></tr>
<tr><td>Serial Model</td><td>N/A</td></tr>
<tr><td>Model Difference</td><td>N/A</td></tr>
<tr><td>Product Description</td><td>The EUT is a Bluetooth Keyboard

<table><tr><td>Operation Frequency:</td><td>2402MHz-2480MHz</td></tr><tr><td>Modulation Type:</td><td>GFSK, Π/4-DQPSK, 8-DPSK</td></tr><tr><td>Antenna Designation:</td><td>FPCB Antenna</td></tr><tr><td>Antenna Gain(Peak)</td><td>0 dBi</td></tr><tr><td>EIRP</td><td>87.67dbuv/m@3m(AVG)</td></tr></table>
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.</td></tr>
<tr><td>Channel List</td><td>Please refer to the Note 2.</td></tr>
<tr><td>Adapter</td><td>N/A</td></tr>
<tr><td>Battery</td><td>DC 3.7V</td></tr>
</table>

Note:

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

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2.

Channel List					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	2402	27	2429	54	2456
01	2403	28	2430	55	2457
02	2404	29	2431	56	2458
03	2405	30	2432	57	2459
04	2406	31	2433	58	2460
05	2407	32	2434	59	2461
06	2408	33	2435	60	2462
07	2409	34	2436	61	2463
08	2410	35	2437	62	2464
09	2411	36	2438	63	2465
10	2412	37	2439	64	2466
11	2413	38	2440	65	2467
12	2414	39	2441	66	2468
13	2415	40	2442	67	2469
14	2416	41	2443	68	2470
15	2417	42	2444	69	2471
16	2418	43	2445	70	2472
17	2419	44	2446	71	2473
18	2420	45	2447	72	2474
19	2421	46	2448	73	2475
20	2422	47	2449	74	2476
21	2423	48	2450	75	2477
22	2424	49	2451	76	2478
23	2425	50	2452	77	2479
24	2426	51	2453	78	2480
25	2427	52	2454		
26	2428	53	2455		

3.

Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
1	N/A	N/A	PCB Antenna	N/A	0	Antenna

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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	CH1
Mode 2	CH39
Mode 3	CH79

For Radiated Emission	
Final Test Mode	Description
Mode 1	CH1
Mode 2	CH39
Mode 3	CH79

Note:

(1) The measurements are performed at the highest, middle, lowest available channels.

(2) The EUT use new battery.

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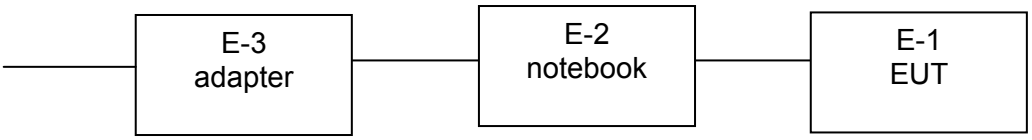
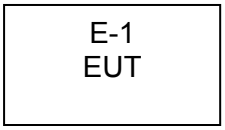
2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Conducted Spurious Emission Test



Radiated Spurious Emission Test



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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	Bluetooth Keyboard	N/A	Z66	N/A	EUT
E-2	Notebook	Dell	1400	D33651478	
E-3	Adapter	Dell	SZ19002000as	N/A	

Item	Shielded Type	Ferrite Core	Length	Note

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	Bilog Antenna	TESEQ	CBL6111D	31216	Jul. 06, 2013	Jul. 05, 2014	1 year
2	Test Cable	N/A	R-01	N/A	Dec. 25, 2013	Dec. 24, 2014	1 year
3	Test Cable	N/A	R-02	N/A	Dec. 25, 2013	Dec. 24, 2014	1 year
4	EMI Test Receiver	R&S	ESCI-7	101318	Jul. 06, 2013	Jul. 05, 2014	1 year
5	Antenna Mast	EM	SC100_1	N/A	N/A	N/A	N/A
6	Turn Table	EM	SC100	060531	N/A	N/A	N/A
7	50Ω Switch	Anritsu Corp	MP59B	6200983705	Jul. 06, 2013	Jul. 05, 2014	1 year
8	Spectrum Analyzer	Aglient	E4407B	MY45108040	Jul. 06, 2013	Jul. 05, 2014	1 year
9	Horn Antenna	EM	EM-AH-10180	2011071402	Jul. 06, 2013	Jul. 05, 2014	1 year
10	Amplifier	EM	EM-30180	060538	Jul. 06, 2013	Jul. 05, 2014	1 year

Conduction Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	LISN	R&S	ENV216	101313	Jul. 06, 2013	Jul. 05, 2014	1 year
2	LISN	SCHWARZBECK	NNLK 8129	8129245	Dec. 25, 2013	Dec. 24, 2014	1 year
3	Pulse Limiter	SCHWARZBECK	VTSD 9561F	9716	Dec. 25, 2013	Dec. 24, 2014	1 year
4	50Ω Switch	ANRITSU CORP	MP59B	6200983704	Jul. 06, 2013	Jul. 05, 2014	1 year
5	Test Cable	N/A	C01	N/A	Jul. 06, 2013	Jul. 05, 2014	1 year
6	Test Cable	N/A	C02	N/A	Jul. 06, 2013	Jul. 05, 2014	1 year
7	Test Cable	N/A	C03	N/A	Jul. 06, 2013	Jul. 05, 2014	1 year
8	Passive Voltage Probe	ESH2-Z3	R&S	100196	Jul. 06, 2013	Jul. 05, 2014	1 year
9	Absorbing Clamp	R&S	MDS-21	100423	Jul. 06, 2013	Jul. 05, 2014	1 year

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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.

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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

`

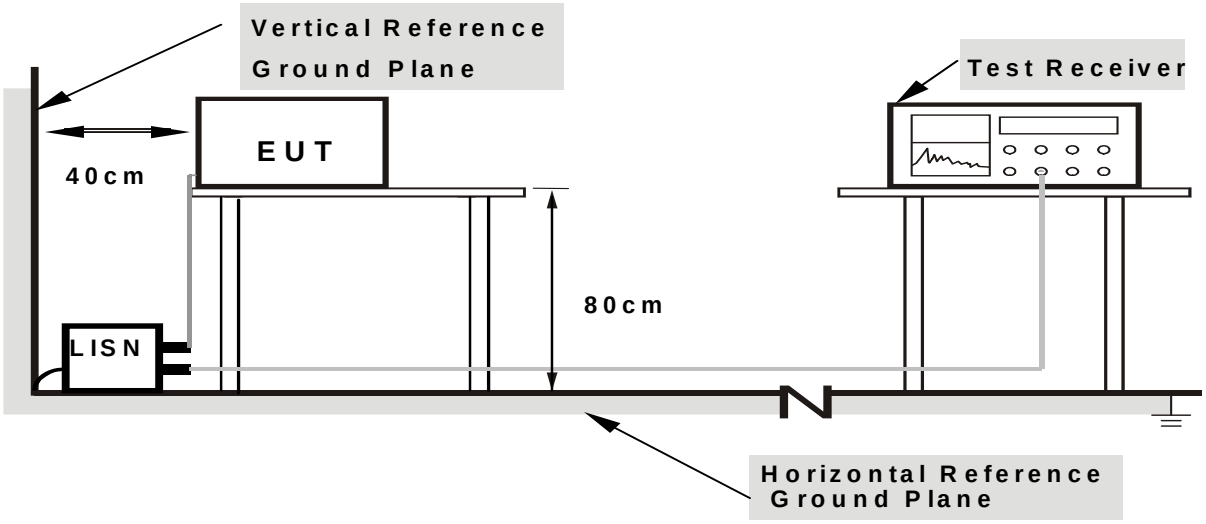
3.3.2 TEST PROCEDURE

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



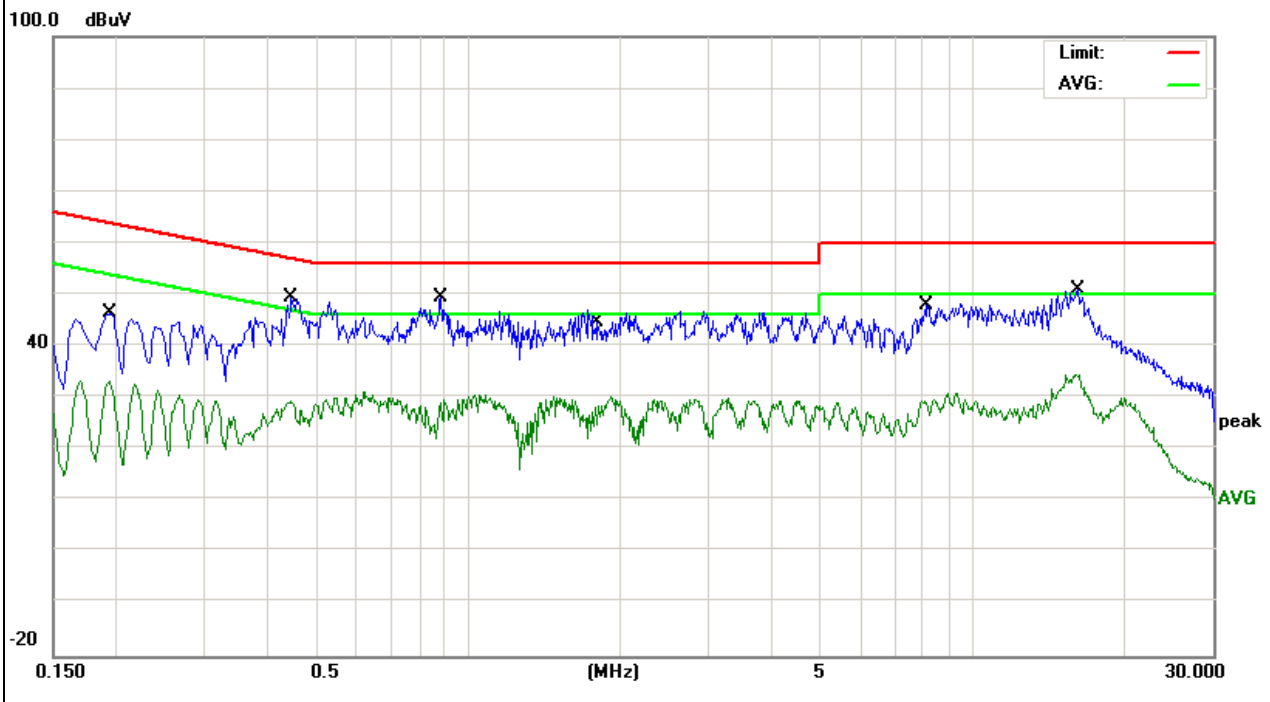
Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

3.2.5 TEST RESULT

EUT：	Bluetooth Keyboard	Model Name. ：	Z66
Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	1010hPa	Test Date：	2014-02-25
Test Mode：	Link	Phase：	L
Test Voltage ：	DC 5V from PC AC 120V/60Hz		

Freq. (MHz)	Reading (dBuV)	Factor (dBuV)	Measurement (dBuV)	Limit (dBuV)	Over (dB)	Detector
0.1940	36.96	9.51	46.47	63.86	-17.39	QP
0.1940	23.85	9.51	33.36	53.86	-20.50	AVG
0.4460	40.03	9.51	49.54	56.95	-7.41	QP
0.4460	19.71	9.51	29.22	46.95	-17.73	AVG
0.8820	39.93	9.53	49.46	56.00	-6.54	QP
0.8820	20.21	9.53	29.74	46.00	-16.26	AVG
1.8100	37.42	9.55	46.97	56.00	-9.03	QP
1.8100	18.93	9.55	28.48	46.00	-17.52	AVG
8.1178	38.21	9.69	47.90	60.00	-12.10	QP
8.1178	20.08	9.69	29.77	50.00	-20.23	AVG
16.2139	40.94	9.95	50.89	60.00	-9.11	QP
16.2139	24.62	9.95	34.57	50.00	-15.43	AVG

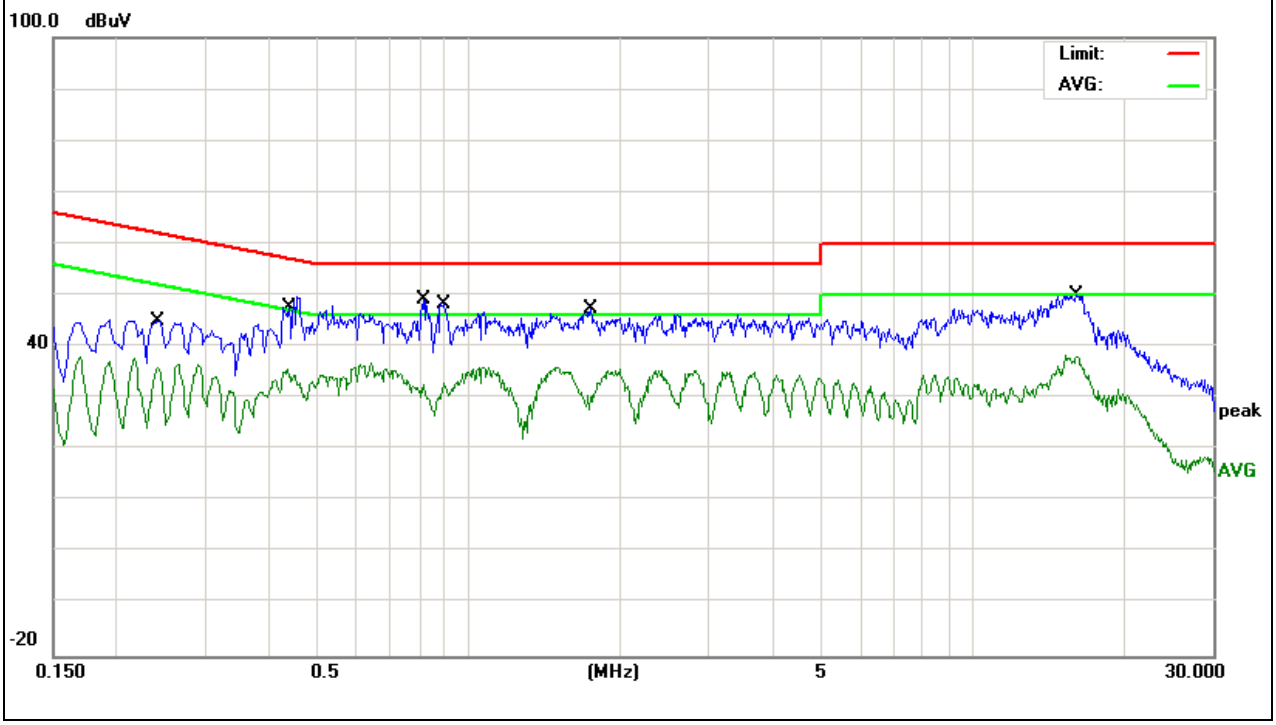
Remark:
Factor = Insertion Loss + Cable Loss.



EUT：	Bluetooth Keyboard	Model Name. ：	Z66
Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	1010hPa	Test Date：	2014-02-25
Test Mode：	Link	Phase：	N
Test Voltage ：	DC 5V from PC AC 120V/60Hz		

Freq. (MHz)	Reading (dBuV)	Factor (dBuV)	Measurement (dBuV)	Limit (dBuV)	Over (dB)	Detector
0.2420	35.52	9.50	45.02	62.02	-17.00	QP
0.2420	26.55	9.50	36.05	52.02	-15.97	AVG
0.4420	38.15	9.52	47.67	57.02	-9.35	QP
0.4420	26.05	9.52	35.57	47.02	-11.45	AVG
0.8139	39.61	9.54	49.15	56.00	-6.85	QP
0.8139	23.20	9.54	32.74	46.00	-13.26	AVG
0.8980	38.88	9.55	48.43	56.00	-7.57	QP
0.8980	23.48	9.55	33.03	46.00	-12.97	AVG
1.7500	37.90	9.56	47.46	56.00	-8.54	QP
1.7500	23.50	9.56	33.06	46.00	-12.94	AVG
16.1459	40.17	9.91	50.08	60.00	-9.92	QP
16.1459	28.15	9.91	38.06	50.00	-11.94	AVG

Remark:
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
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:

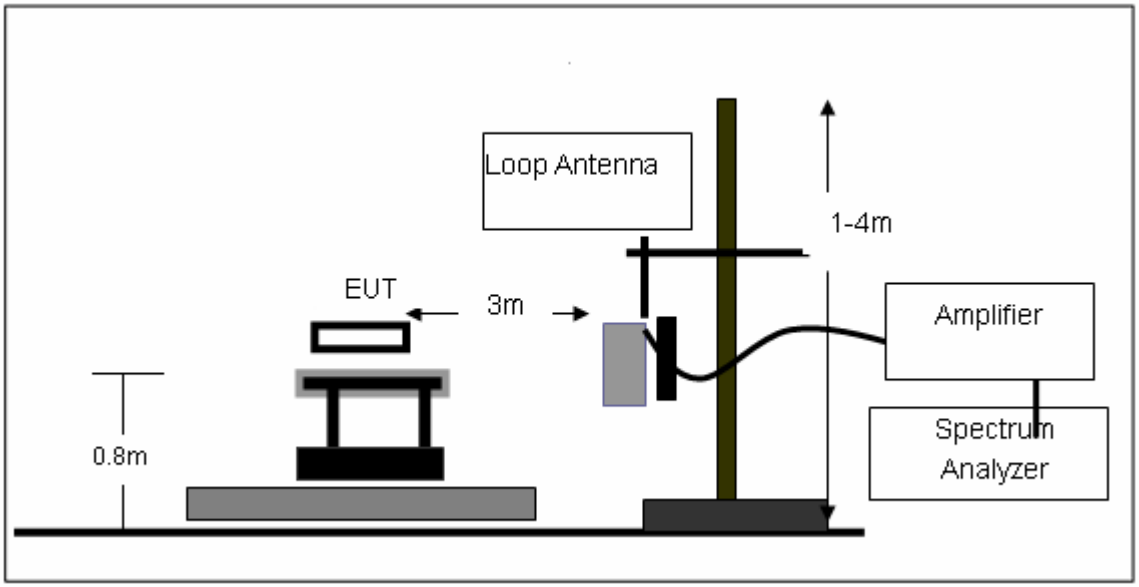
Both horizontal and vertical antenna polarities were tested
and performed pretest to three orthogonal axis. The worst case emissions were reported

3.4.3 DEVIATION FROM TEST STANDARD

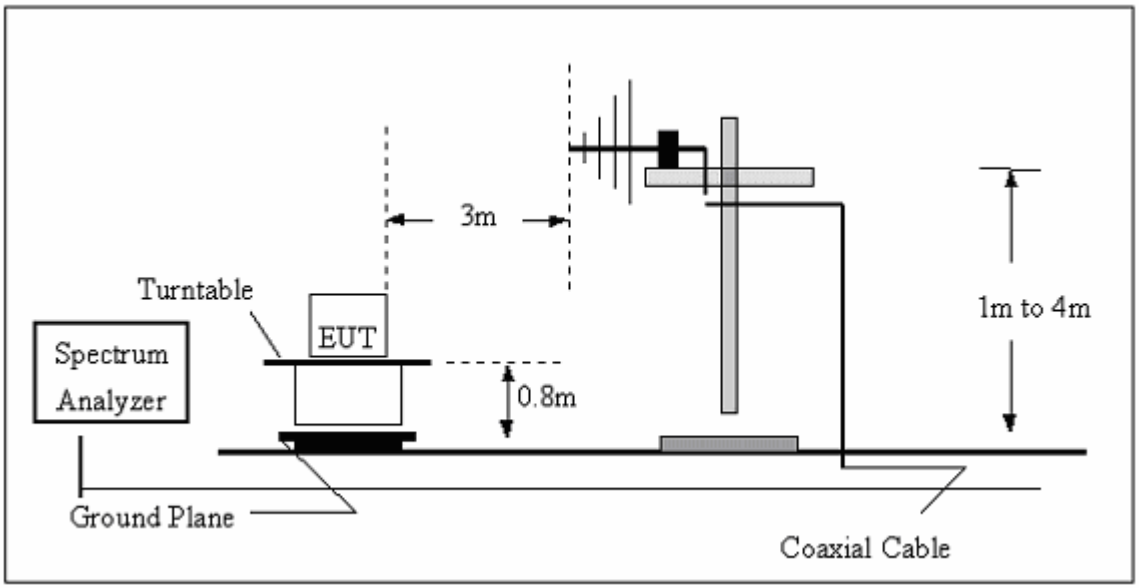
No deviation

3.4.4 TEST SETUP

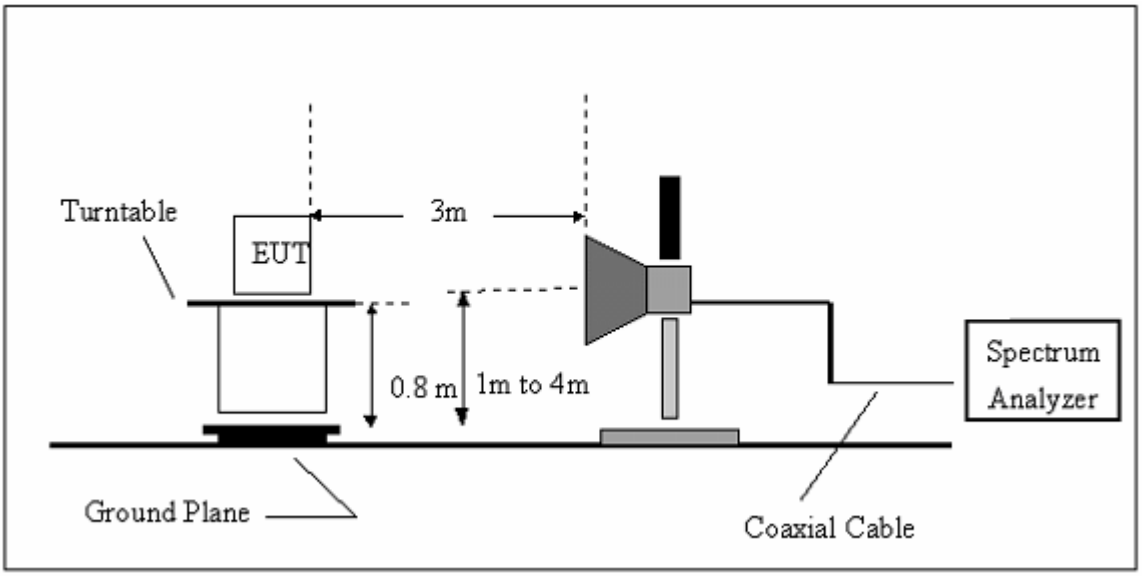
（A）Radiated Emission Test-Up Frequency Below 30MHz



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



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



3.4.5 TEST RESULTS (BELOW 30MHz)

EUT：	Bluetooth Keyboard	Model Name. ：	Z66
Temperature：	20 ℃	Relative Humidtity：	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 (specific distance/test distance)(dB);
Limit line = specific limits(dBuv) + distance extrapolation factor.

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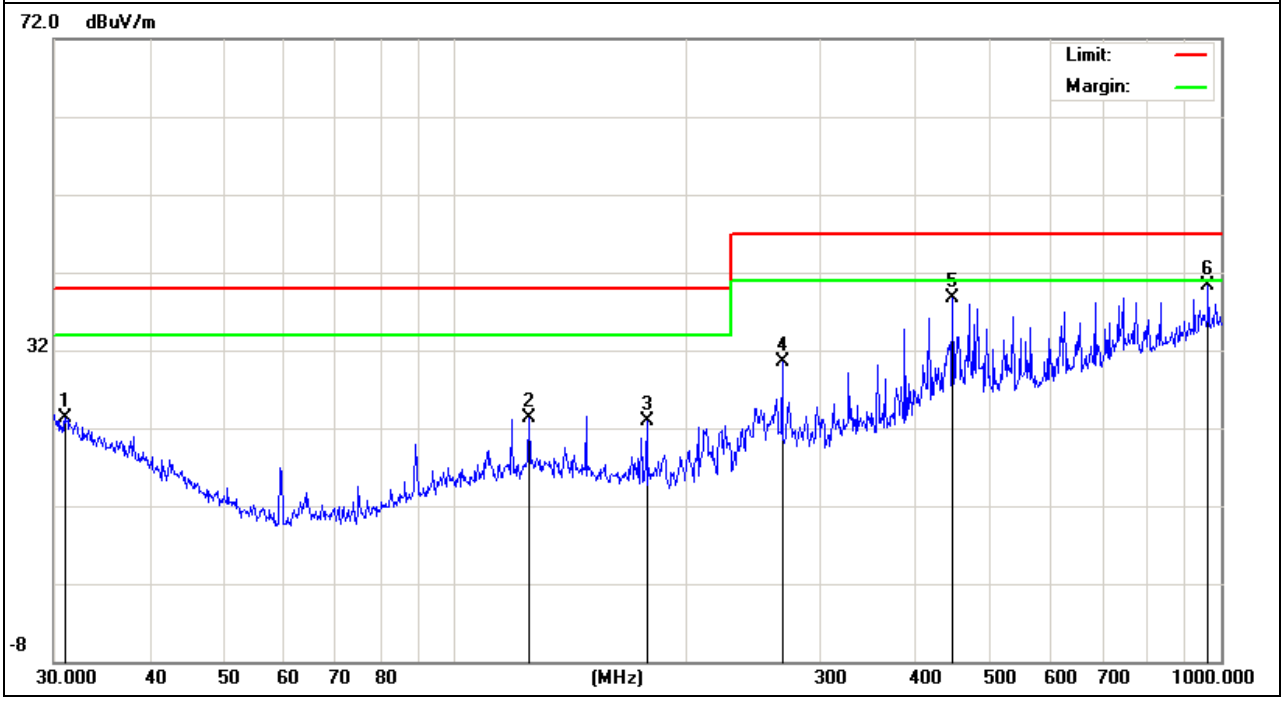
3.4.6 TEST RESULTS (BETWEEN 30 – 1000 MHZ)

EUT：	Bluetooth Keyboard	Model Name ：	Z66
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX	Polarization：	Vertical

Freq. (MHz)	Reading (dBuV)	Factor (dBuV)	Measurement (dBuV)	Limit (dBuV)	Over (dB)	Detector
31.0704	5.42	17.86	23.28	40.00	-16.72	QP
125.0066	11.03	12.21	23.24	40.00	-16.76	QP
178.1325	12.88	10.07	22.95	40.00	-17.05	QP
267.5455	16.20	14.30	30.50	47.00	-16.50	QP
446.4141	19.44	19.18	38.62	47.00	-8.38	QP
962.1621	10.34	29.87	40.21	47.00	-6.79	QP

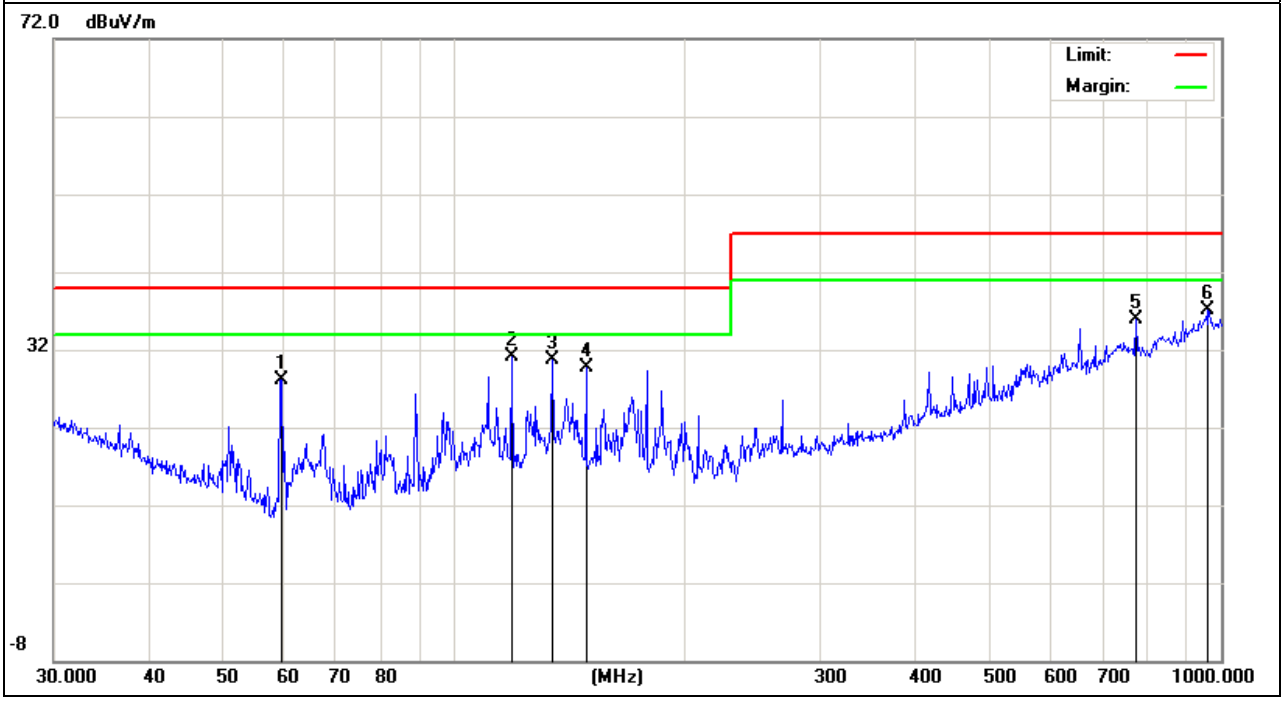
Remark:
Factor = Antenna Factor + Cable Loss.



EUT：	Bluetooth Keyboard	Model Name ：	Z66
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX	Polarization：	Horizontal

Freq. (MHz)	Reading (dBuV)	Factor (dBuV)	Measurement (dBuV)	Limit (dBuV)	Over (dB)	Detector
59.4405	22.79	5.38	28.17	40.00	-11.83	QP
118.6013	19.04	12.05	31.09	40.00	-8.91	QP
134.0882	18.40	12.24	30.64	40.00	-9.36	QP
148.4410	17.91	11.83	29.74	40.00	-10.26	QP
774.1584	9.78	26.16	35.94	47.00	-11.06	QP
962.1622	7.27	29.87	37.14	47.00	-9.86	QP

Remark:
Factor = Antenna Factor + Cable Loss.



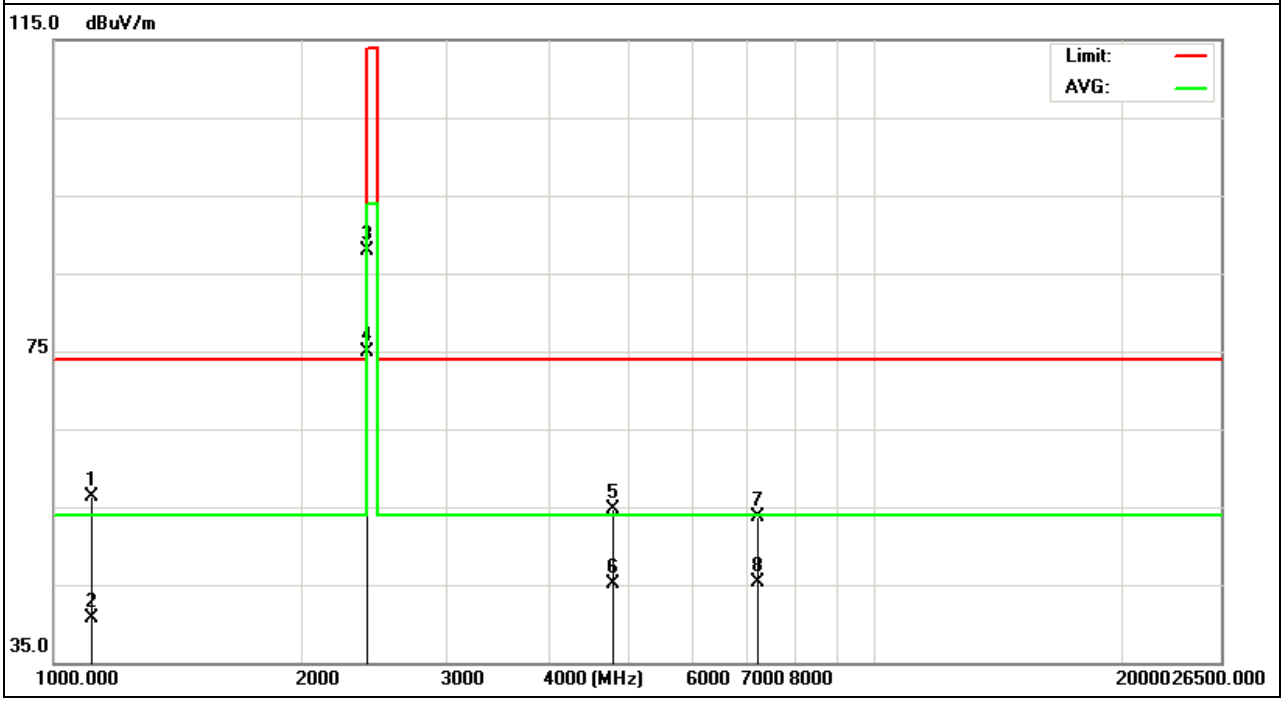
3.4.7 TEST RESULTS (ABOVE 1000 MHZ)

GFSK

EUT：	Bluetooth Keyboard	Model Name ：	Z66
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX-CH1	Polarization：	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
1111	61.24	-5.02	56.22	74	-17.78	peak
1111	45.74	-5.02	40.72	54	-13.28	AVG
2402	88.67	-0.69	87.98	114.0 0	-26.02	peak
2402	75.67	-0.69	74.98	94	-19.02	AVG
4804.12	44.35	10.4	54.75	74	-19.25	peak
4804.12	34.71	10.4	45.11	54	-8.89	AVG
7208.12	41.37	12.39	53.76	74	-20.24	peak
7208.12	32.87	12.39	45.26	54	-8.74	AVG

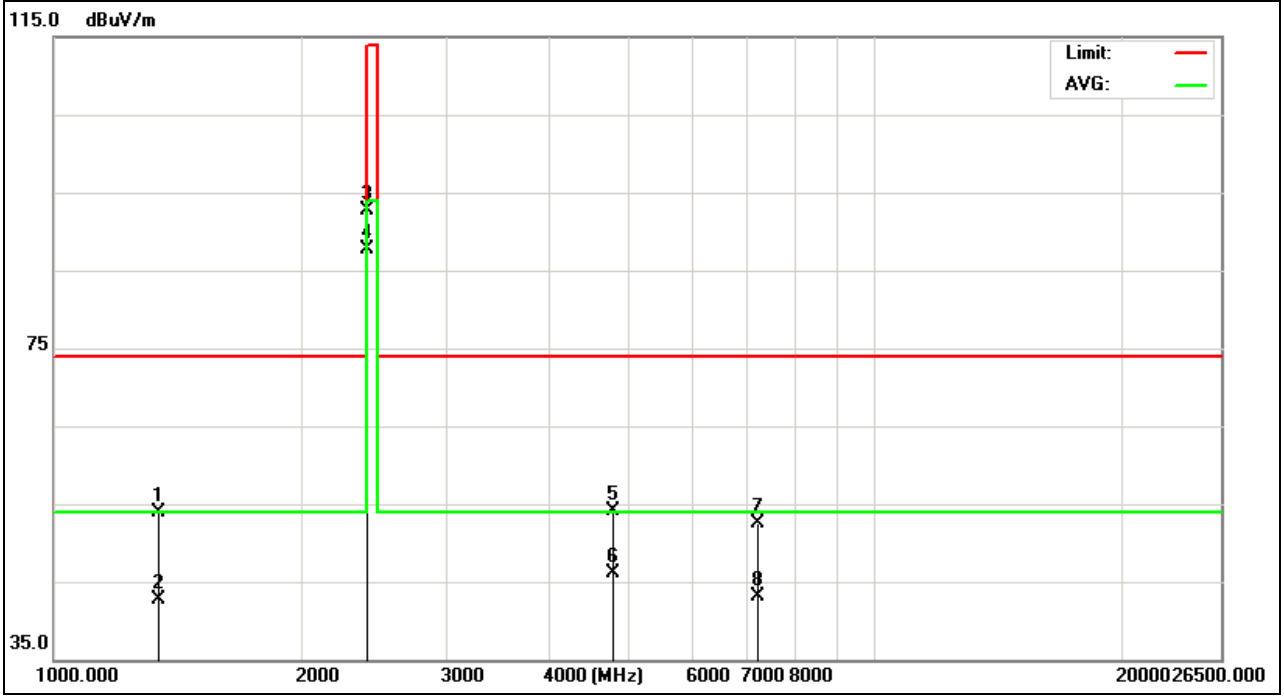
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT：	Bluetooth Keyboard	Model Name ：	Z66
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX-CH1	Polarization：	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
1342.27	57.75	-3.78	53.97	74	-20.03	peak
1342.27	46.42	-3.78	42.64	54	-11.36	AVG
2402.02	93.37	-0.69	92.68	114.0 0	-21.32	peak
2402.02	88.36	-0.69	87.67	94	-6.33	AVG
4804.25	43.74	10.4	54.14	74	-19.86	peak
4804.25	35.68	10.4	46.08	54	-7.92	AVG
7206.11	40.11	12.39	52.5	74	-21.5	peak
7206.11	30.78	12.39	43.17	54	-10.83	AVG

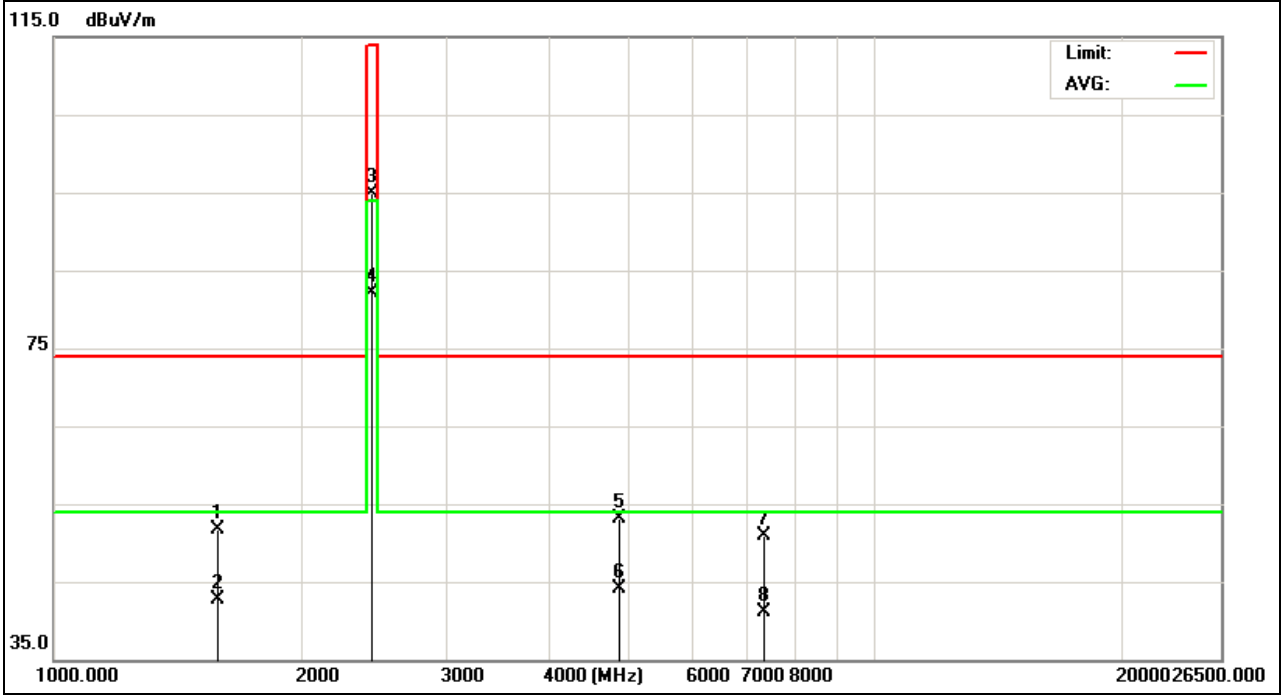
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT：	Bluetooth Keyboard	Model Name ：	Z66
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX-CH39	Polarization：	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
1578.27	55.24	-3.52	51.72	74	-22.28	peak
1578.27	46.27	-3.52	42.75	54	-11.25	AVG
2440.19	95.62	-0.64	94.98	114.0 0	-19.02	peak
2440.19	82.75	-0.64	82.11	94	-11.89	AVG
4880.38	42.82	10.37	53.19	74	-20.81	peak
4880.38	33.67	10.37	44.04	54	-9.96	AVG
7320.68	38.18	12.76	50.94	74	-23.06	peak
7320.68	28.43	12.76	41.19	54	-12.81	AVG

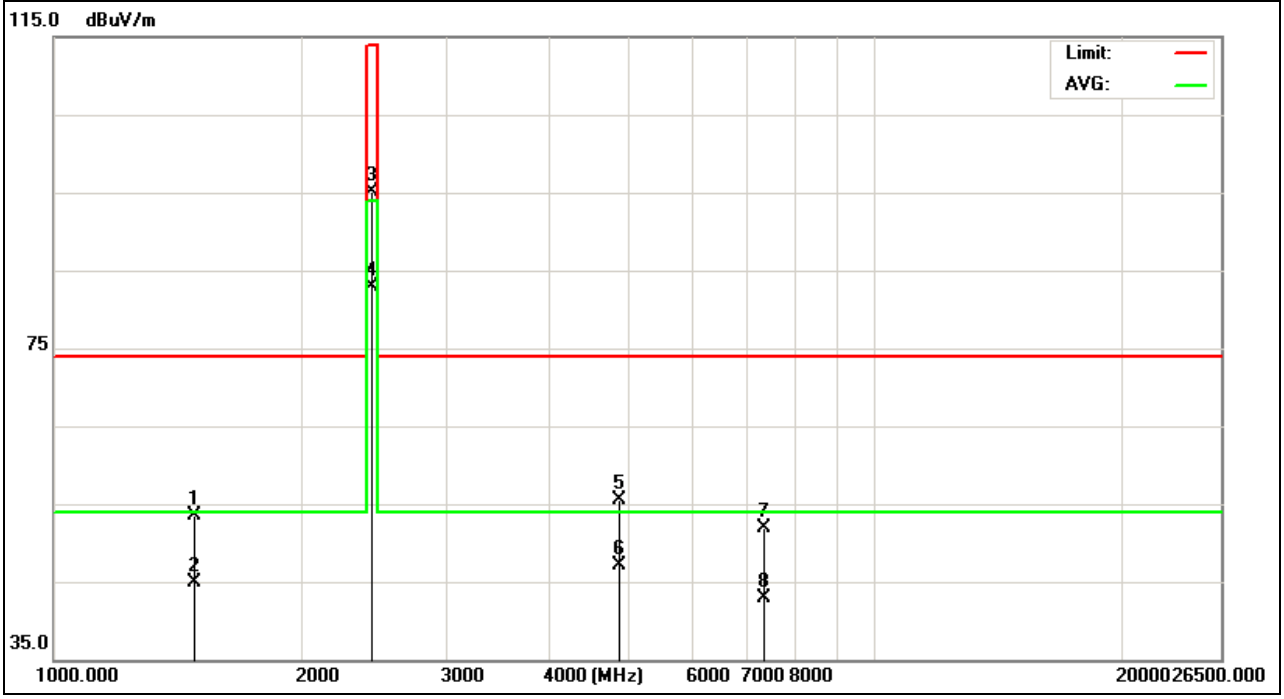
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT：	Bluetooth Keyboard	Model Name ：	Z66
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX-CH39	Polarization：	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
1478.36	57.35	-3.79	53.56	74	-20.44	peak
1478.36	48.67	-3.79	44.88	54	-9.12	AVG
2440.19	95.74	-0.64	95.1	114.0 0	-18.9	peak
2440.19	83.64	-0.64	83	94	-11	AVG
4880.38	45.17	10.37	55.54	74	-18.46	peak
4880.38	36.66	10.37	47.03	54	-6.97	AVG
7320.68	39.21	12.76	51.97	74	-22.03	peak
7320.68	30.21	12.76	42.97	54	-11.03	AVG

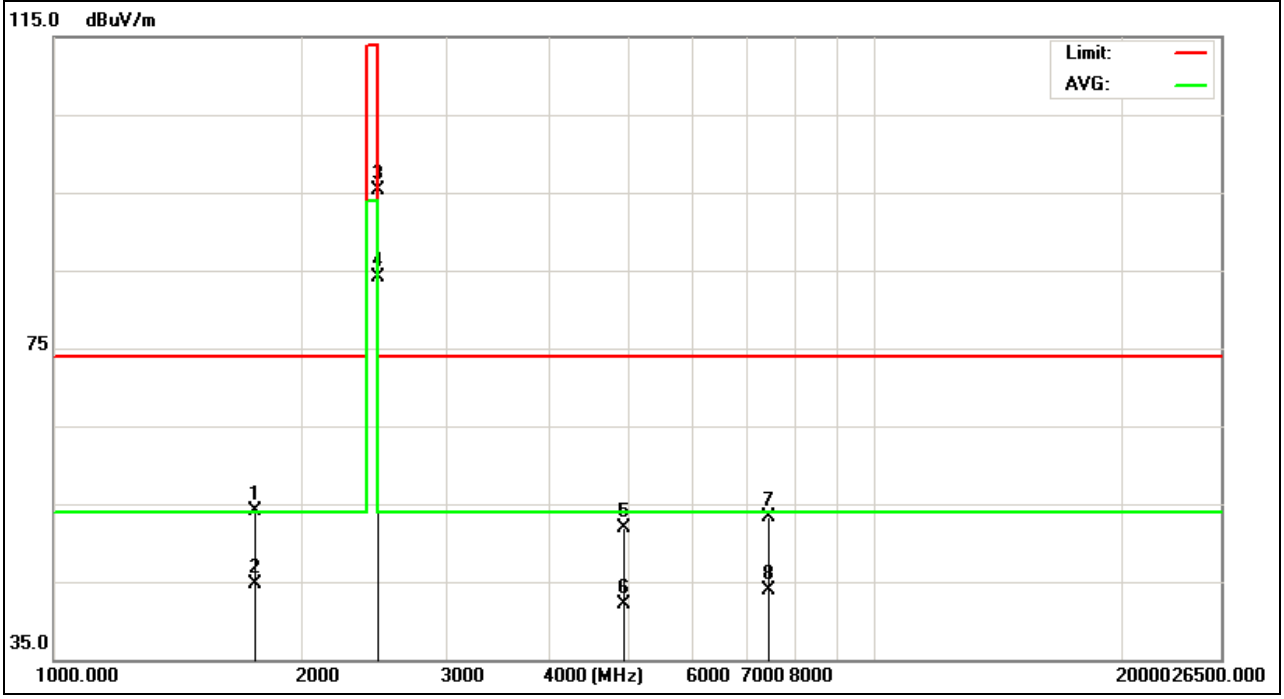
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT：	Bluetooth Keyboard	Model Name ：	Z66
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX-CH79	Polarization：	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
1754.888	56.72	-2.54	54.18	74	-19.82	peak
1754.888	47.28	-2.54	44.74	54	-9.26	AVG
2480.32	95.74	-0.49	95.25	114.0 0	-18.75	peak
2480.32	84.66	-0.49	84.17	94	-9.83	AVG
4960.64	41.37	10.45	51.82	74	-22.18	peak
4960.64	31.66	10.45	42.11	54	-11.89	AVG
7440.96	40.05	13.16	53.21	74	-20.79	peak
7440.96	30.75	13.16	43.91	54	-10.09	AVG

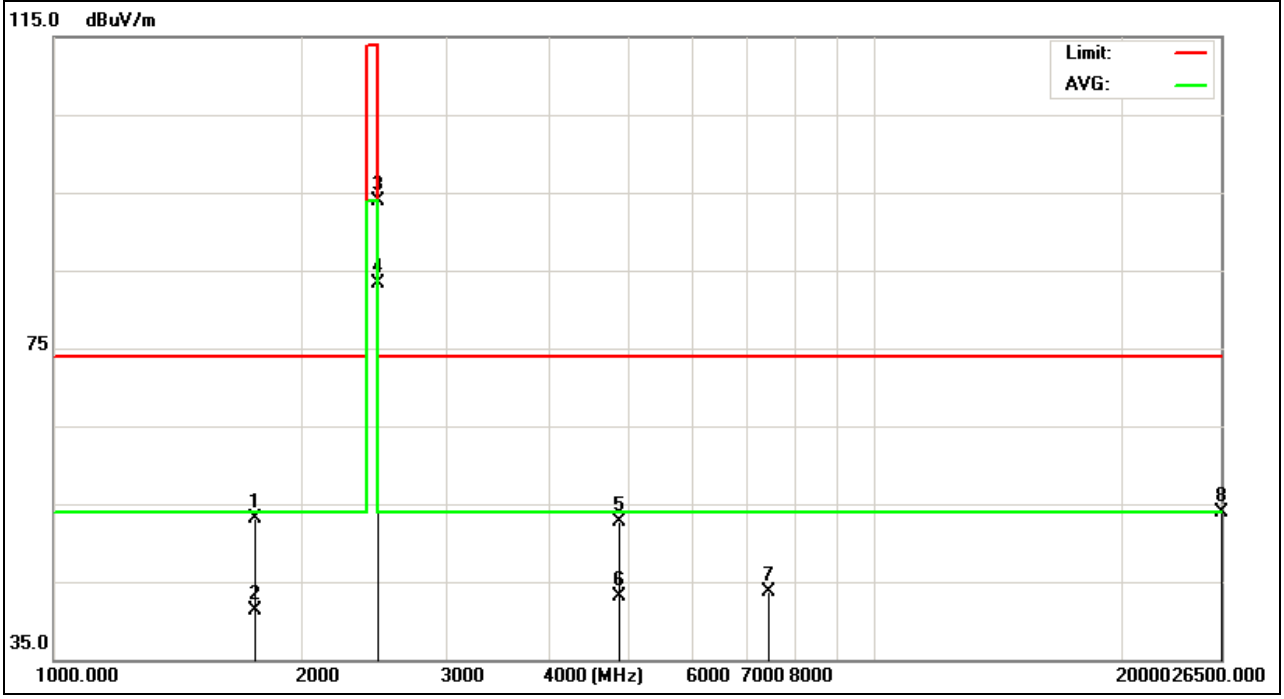
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT：	Bluetooth Keyboard	Model Name ：	Z66
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX-CH79	Polarization：	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
1754.16	55.58	-2.54	53.04	74	-20.96	peak
1754.16	43.87	-2.54	41.33	54	-12.67	AVG
2480.32	94.36	-0.49	93.87	114.0 0	-20.13	peak
2480.32	83.71	-0.49	83.22	94	-10.78	AVG
4880.64	42.35	10.37	52.72	74	-21.28	peak
4880.64	32.67	10.37	43.04	54	-10.96	AVG
7440.96	30.61	13.16	43.77	54	-10.23	AVG
74440.96 0	53.86	0	53.86	74	-20.14	peak

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

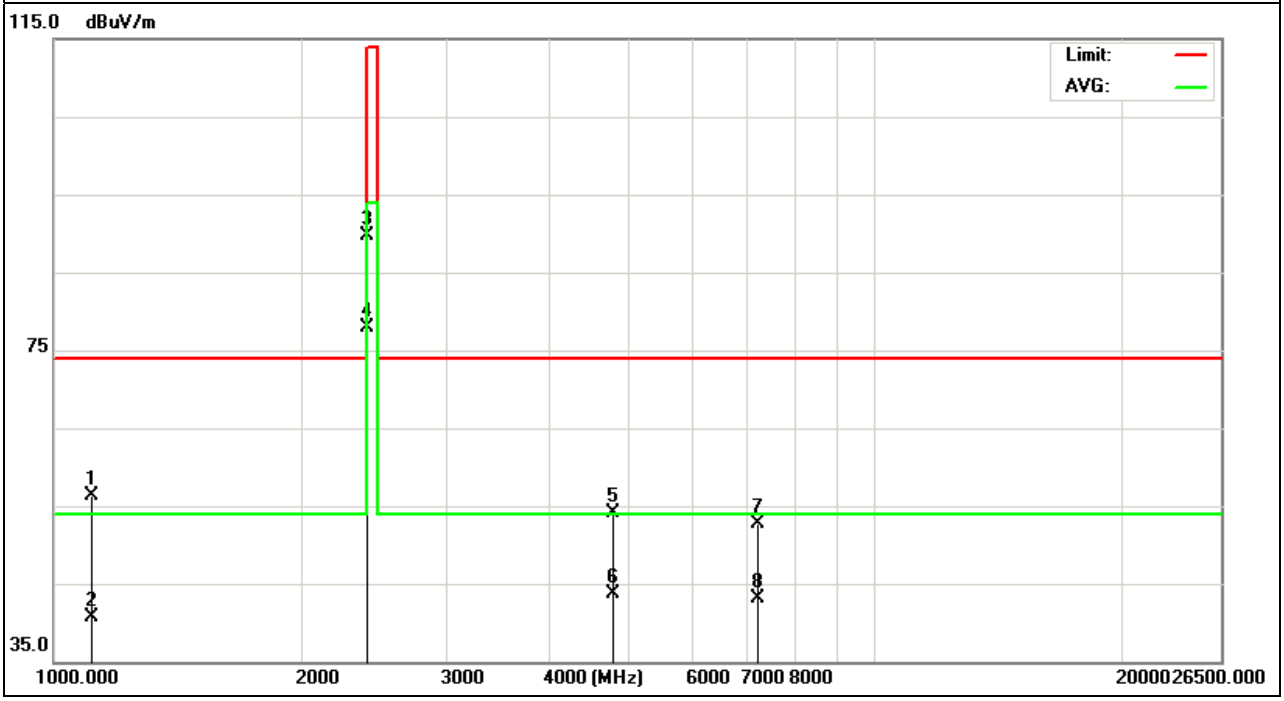


Π/4-DQPSK

EUT：	Bluetooth Keyboard	Model Name ：	Z66
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX-CH1	Polarization：	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
1111.57	61.23	-5.01	56.22	74	-17.78	peak
1111.57	45.73	-5.01	40.72	54	-13.28	AVG
2402	90.35	-0.69	89.66	114.0 0	-24.34	peak
2402	81.66	-0.69	80.97	94	-13.03	AVG
4804.12	43.72	10.4	54.12	74	-19.88	peak
4804.12	33.25	10.4	43.65	54	-10.35	AVG
7208.12	40.37	12.39	52.76	74	-21.24	peak
7208.12	30.74	12.39	43.13	54	-10.87	AVG

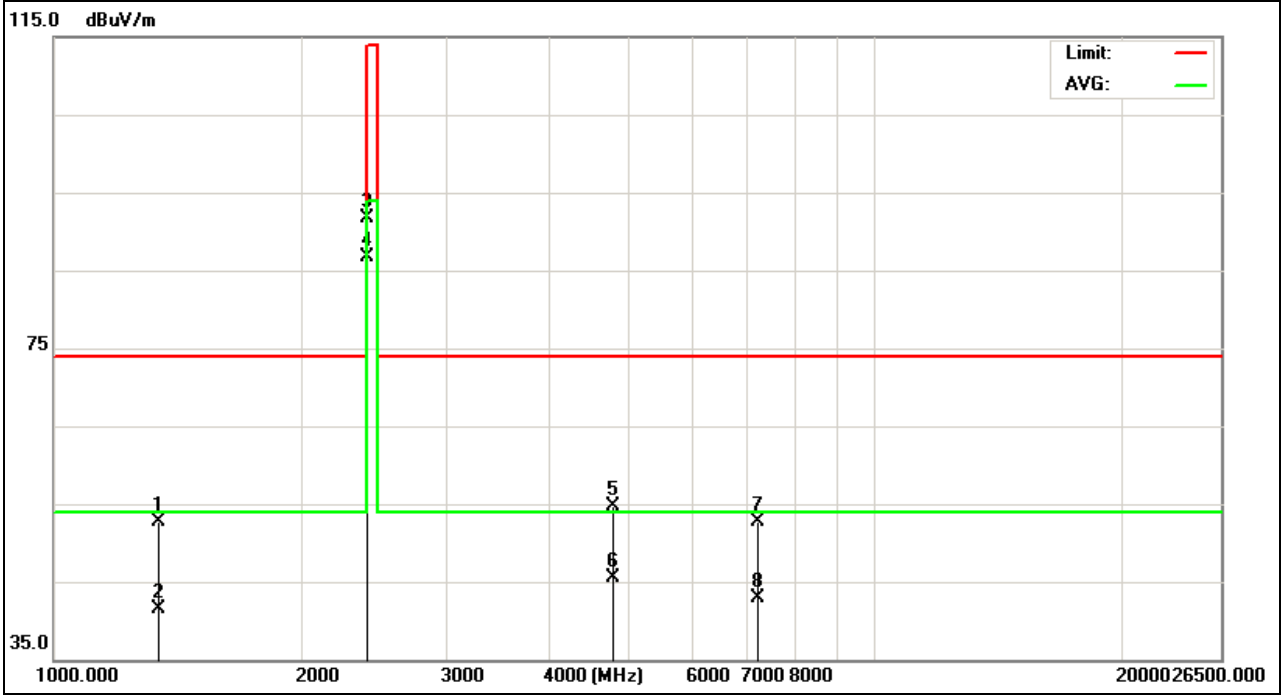
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT：	Bluetooth Keyboard	Model Name ：	Z66
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX-CH1	Polarization：	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
1342.27	56.57	-3.78	52.79	74	-21.21	peak
1342.27	45.27	-3.78	41.49	54	-12.51	AVG
2402.02	92.35	-0.69	91.66	114.0 0	-22.34	peak
2402.02	87.32	-0.69	86.63	94	-7.37	AVG
4804.25	44.25	10.4	54.65	74	-19.35	peak
4804.25	35.17	10.4	45.57	54	-8.43	AVG
7206.11	40.37	12.39	52.76	74	-21.24	peak
7206.11	30.44	12.39	42.83	54	-11.17	AVG

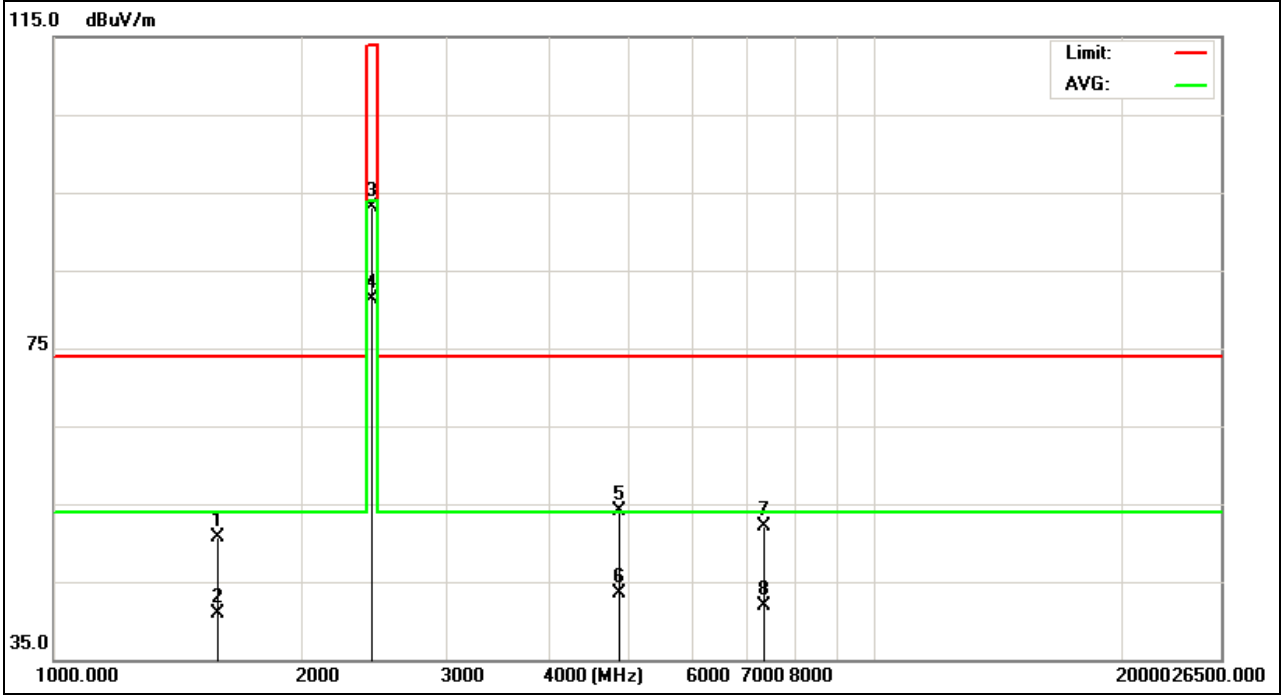
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT：	Bluetooth Keyboard	Model Name ：	Z66
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX-CH39	Polarization：	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
1578.27	54.13	-3.52	50.61	74	-23.39	peak
1578.27	44.37	-3.52	40.85	54	-13.15	AVG
2440.19	93.75	-0.64	93.11	114.0 0	-20.89	peak
2440.19	81.87	-0.64	81.23	94	-12.77	AVG
4880.38	43.74	10.37	54.11	74	-19.89	peak
4880.38	33.15	10.37	43.52	54	-10.48	AVG
7320.68	39.38	12.76	52.14	74	-21.86	peak
7320.68	29.18	12.76	41.94	54	-12.06	AVG

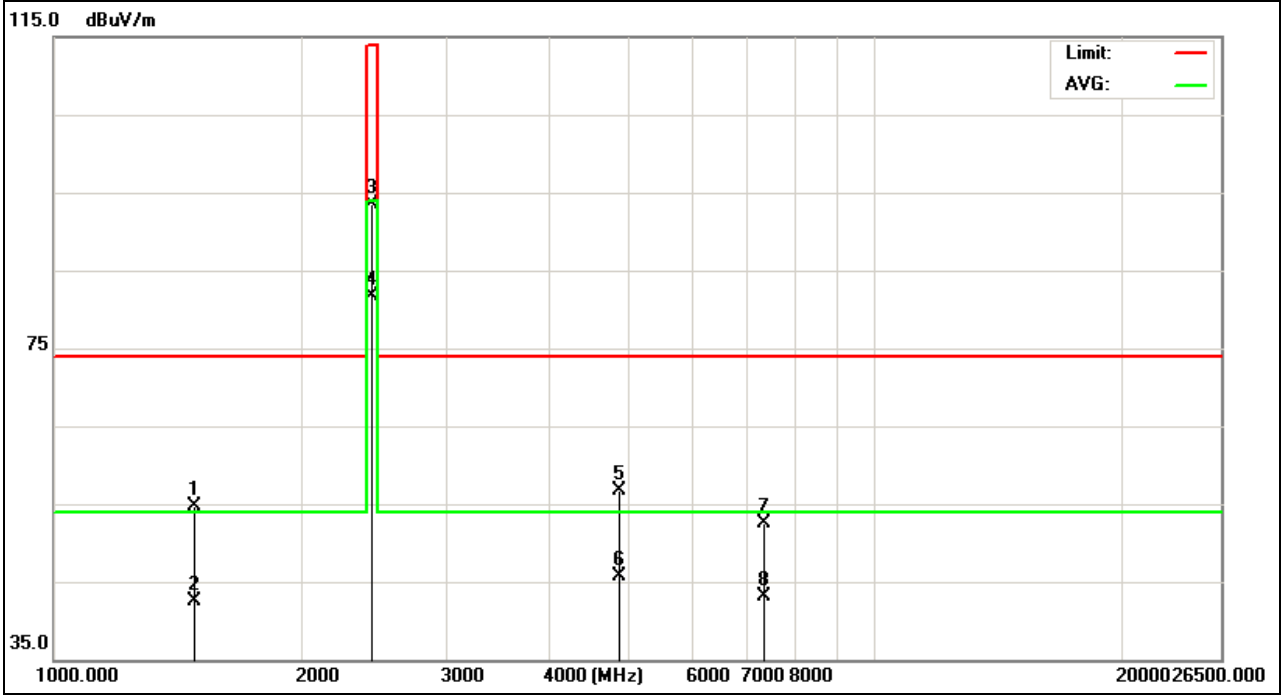
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT：	Bluetooth Keyboard	Model Name ：	Z66
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX-CH39	Polarization：	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
1478.36	58.58	-3.79	54.79	74	-19.21	peak
1478.36	46.27	-3.79	42.48	54	-11.52	AVG
2440.19	94.17	-0.64	93.53	114.0 0	-20.47	peak
2440.19	82.33	-0.64	81.69	94	-12.31	AVG
4880.38	46.41	10.37	56.78	74	-17.22	peak
4880.38	35.28	10.37	45.65	54	-8.35	AVG
7320.68	39.68	12.76	52.44	74	-21.56	peak
7320.68	30.28	12.76	43.04	54	-10.96	AVG

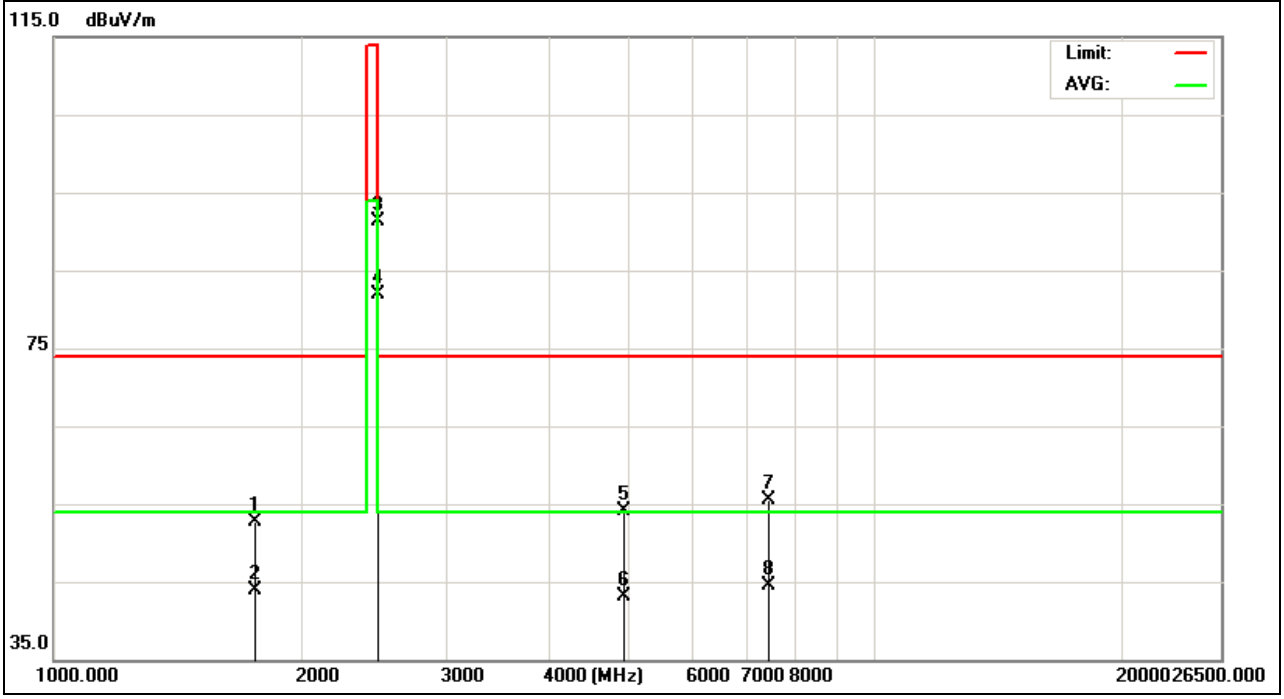
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT：	Bluetooth Keyboard	Model Name ：	Z66
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX-CH79	Polarization：	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
1758.24	55.22	-2.53	52.69	74	-21.31	peak
1758.24	46.37	-2.53	43.84	54	-10.16	AVG
2480.32	91.71	-0.49	91.22	114.0 0	-22.78	peak
2480.32	82.37	-0.49	81.88	94	-12.12	AVG
4960.64	43.67	10.45	54.12	74	-19.88	peak
4960.64	32.72	10.45	43.17	54	-10.83	AVG
7440.96	42.37	13.16	55.53	74	-18.47	peak
7440.96	31.27	13.16	44.43	54	-9.57	AVG

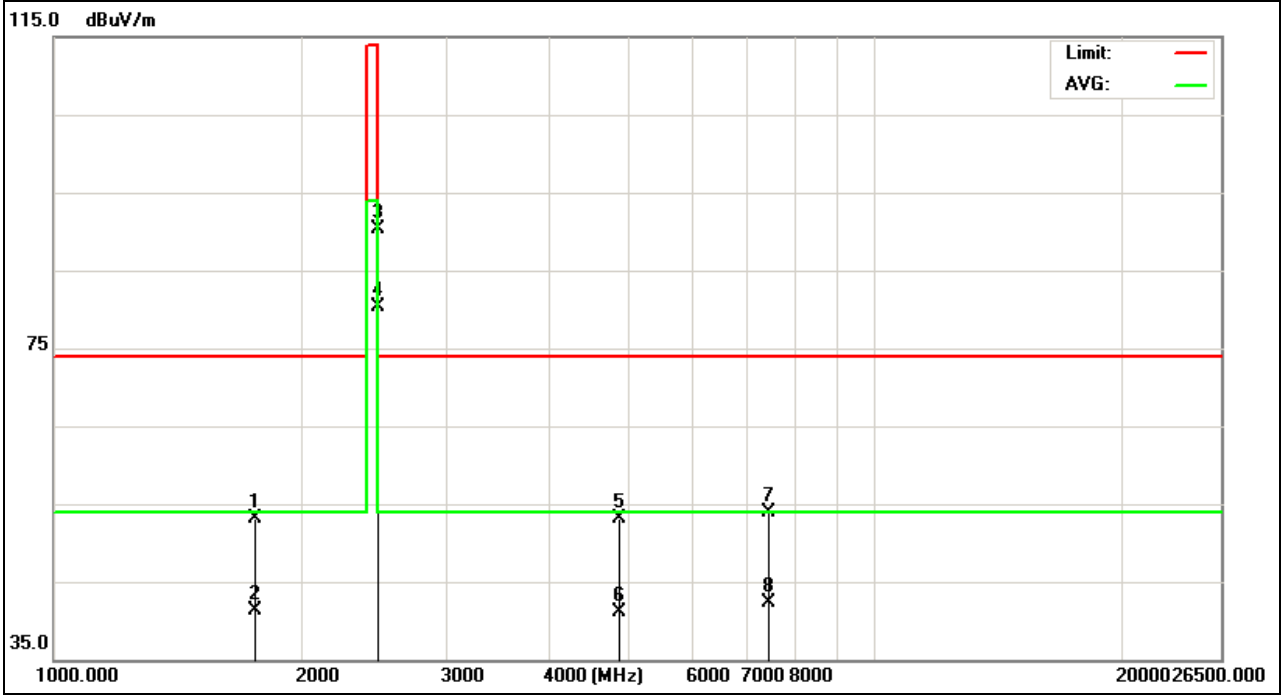
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT：	Bluetooth Keyboard	Model Name ：	Z66
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX-CH79	Polarization：	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
1754.16	55.58	-2.54	53.04	74	-20.96	peak
1754.16	43.87	-2.54	41.33	54	-12.67	AVG
2480.32	90.78	-0.49	90.29	114.0 0	-23.71	peak
2480.32	80.75	-0.49	80.26	94	-13.74	AVG
4880.64	42.75	10.37	53.12	74	-20.88	peak
4880.64	30.67	10.37	41.04	54	-12.96	AVG
7440.96	40.77	13.16	53.93	74	-20.07	peak
7440.96	29.17	13.16	42.33	54	-11.67	AVG

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

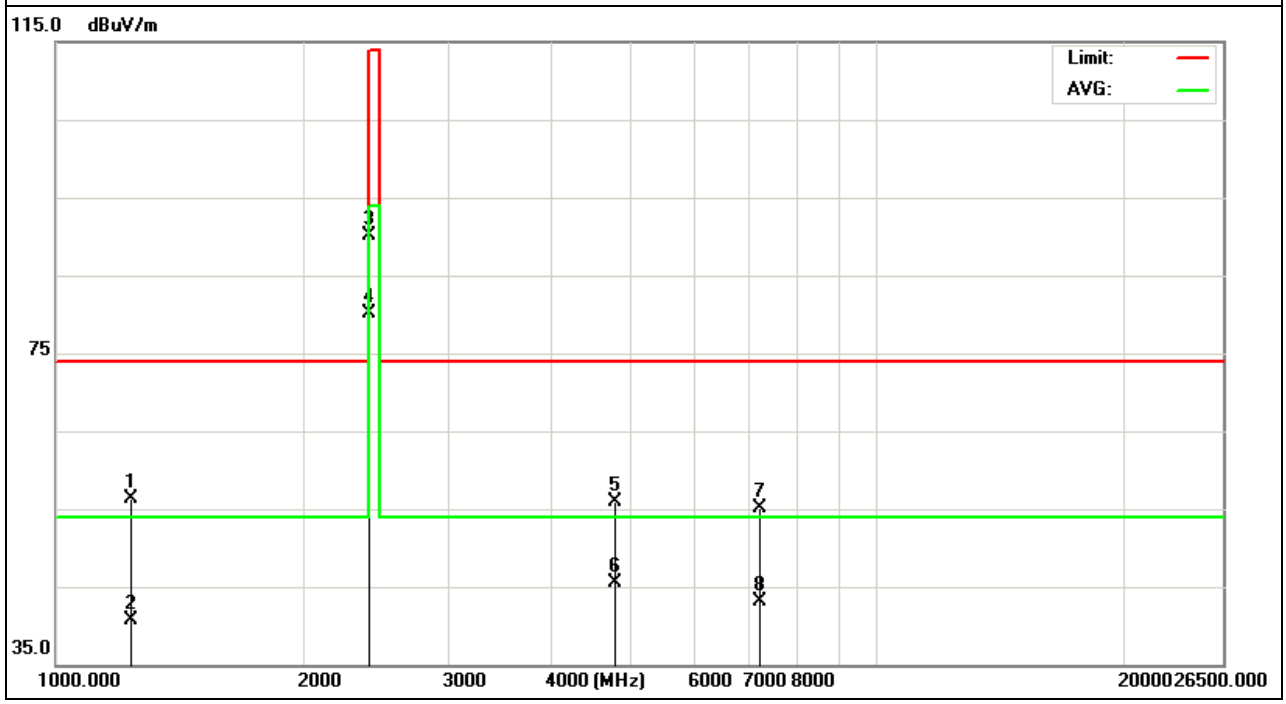


8-DPSK

EUT：	Bluetooth Keyboard	Model Name ：	Z66
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX-CH1	Polarization：	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
1235.14	60.08	-3.86	56.22	74	-17.78	peak
1235.14	44.58	-3.86	40.72	54	-13.28	AVG
2402	90.75	-0.69	90.06	114.0 0	-23.94	peak
2402	80.76	-0.69	80.07	94	-13.93	AVG
4804.12	45.47	10.4	55.87	74	-18.13	peak
4804.12	35.07	10.4	45.47	54	-8.53	AVG
7208.12	42.77	12.39	55.16	74	-18.84	peak
7208.12	30.75	12.39	43.14	54	-10.86	AVG

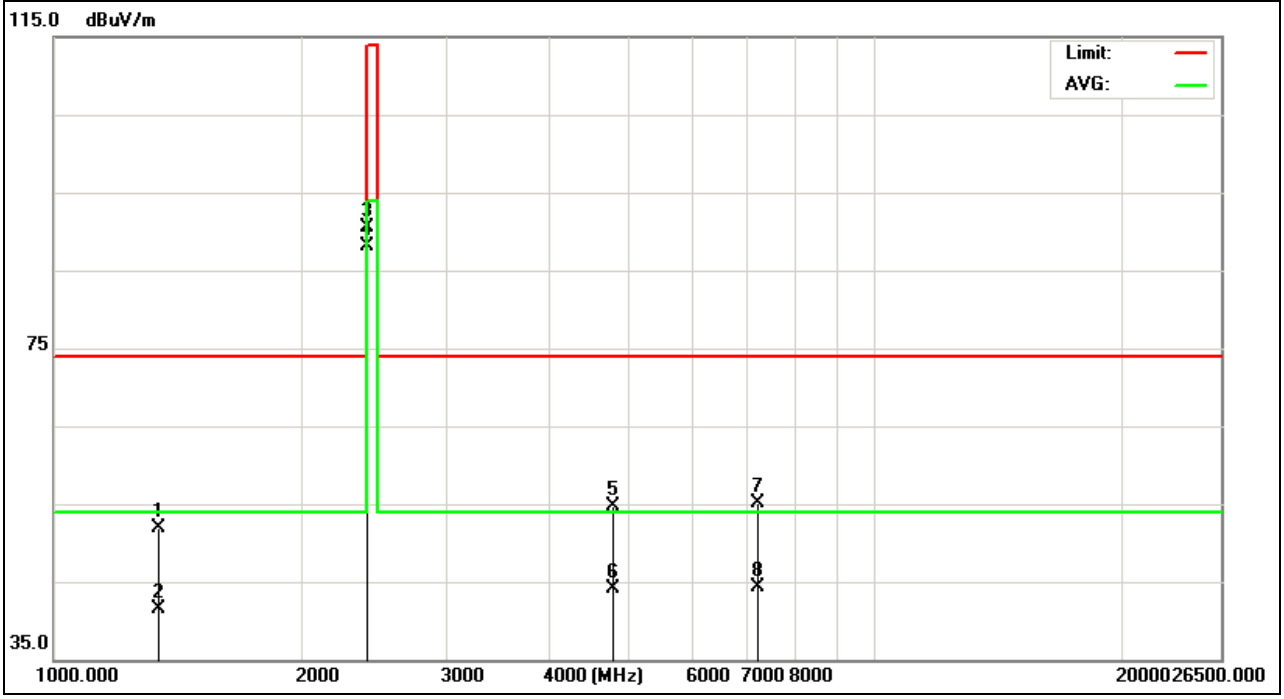
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT：	Bluetooth Keyboard	Model Name ：	Z66
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX-CH1	Polarization：	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
1342.27	55.75	-3.78	51.97	74	-22.03	peak
1342.27	45.23	-3.78	41.45	54	-12.55	AVG
2402.02	91.27	-0.69	90.58	114.0 0	-23.42	peak
2402.02	82.74	-0.69	82.05	94	-11.95	AVG
4804.25	44.37	10.4	54.77	74	-19.23	peak
4804.25	33.67	10.4	44.07	54	-9.93	AVG
7206.11	42.75	12.39	55.14	74	-18.86	peak
7206.11	31.87	12.39	44.26	54	-9.74	AVG

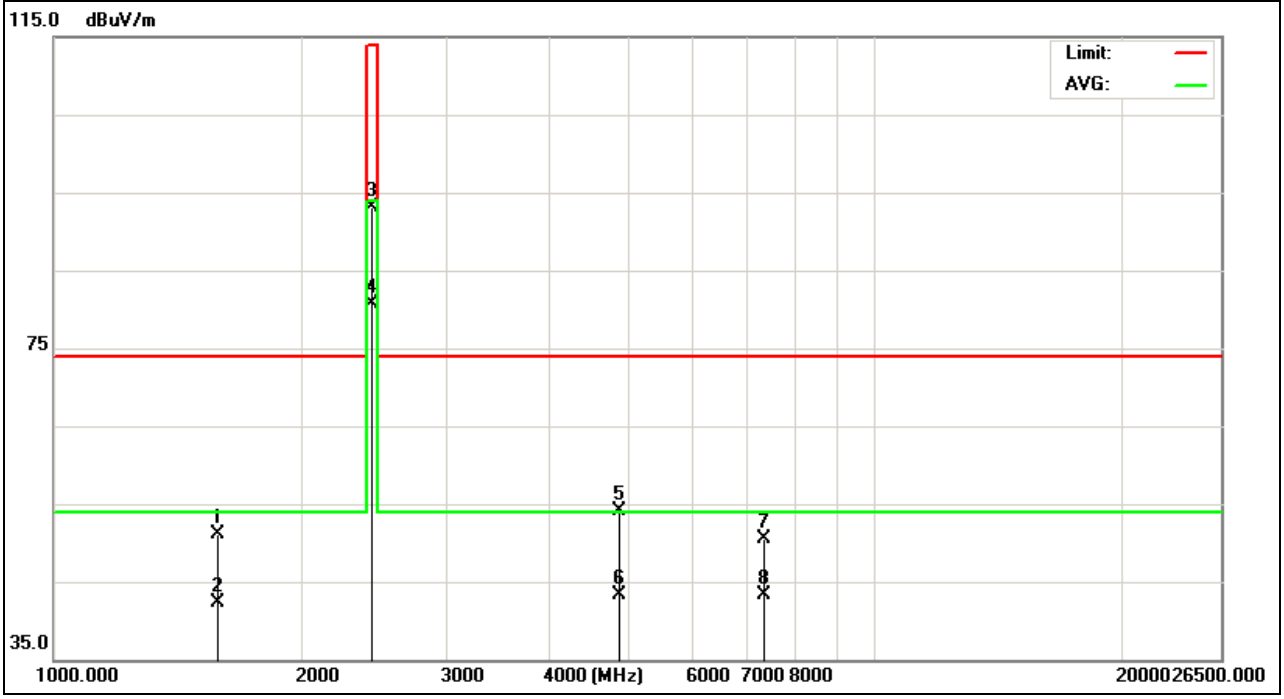
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT：	Bluetooth Keyboard	Model Name ：	Z66
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX-CH39	Polarization：	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
1578.27	54.67	-3.52	51.15	74	-22.85	peak
1578.27	45.87	-3.52	42.35	54	-11.65	AVG
2440.19	93.72	-0.64	93.08	114.0 0	-20.92	peak
2440.19	81.37	-0.64	80.73	94	-13.27	AVG
4880.38	43.77	10.37	54.14	74	-19.86	peak
4880.38	32.87	10.37	43.24	54	-10.76	AVG
7320.68	37.68	12.76	50.44	74	-23.56	peak
7320.68	30.44	12.76	43.2	54	-10.8	AVG

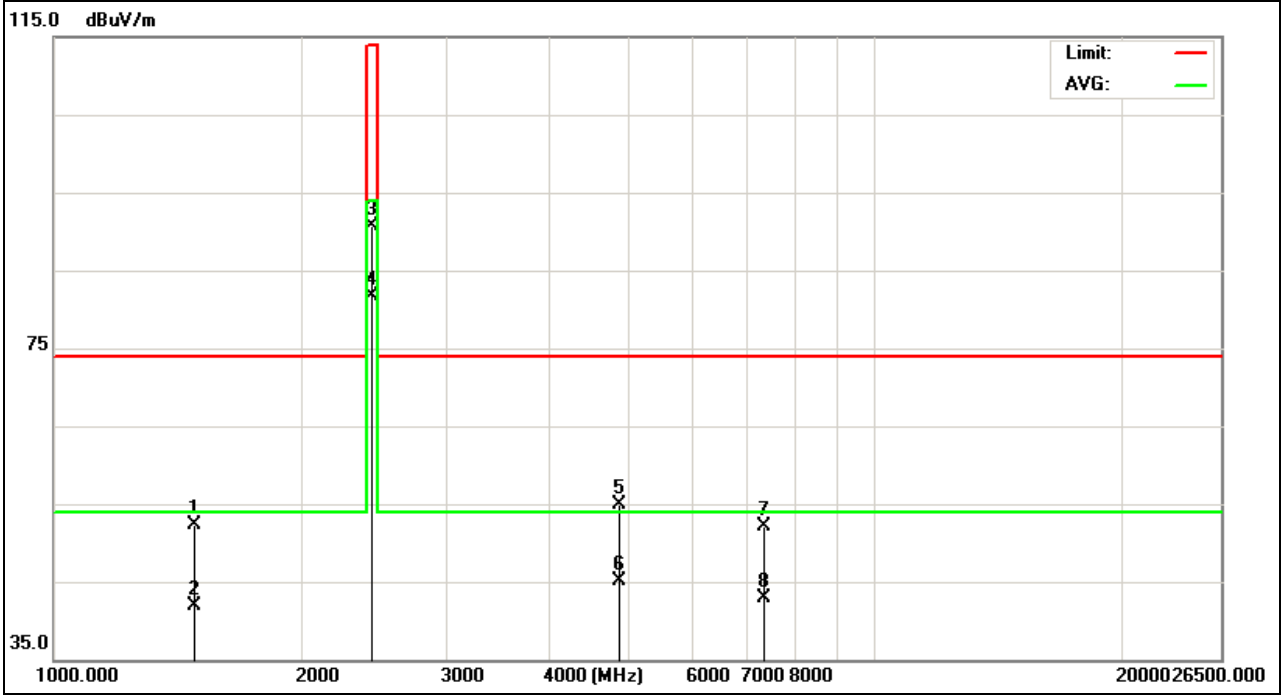
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT：	Bluetooth Keyboard	Model Name ：	Z66
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX-CH39	Polarization：	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
1478.36	56.17	-3.79	52.38	74	-21.62	peak
1478.36	45.72	-3.79	41.93	54	-12.07	AVG
2440.19	91.33	-0.64	90.69	114.0 0	-23.31	peak
2440.19	82.35	-0.64	81.71	94	-12.29	AVG
4880.38	44.52	10.37	54.89	74	-19.11	peak
4880.38	34.67	10.37	45.04	54	-8.96	AVG
7320.68	39.38	12.76	52.14	74	-21.86	peak
7320.68	30.12	12.76	42.88	54	-11.12	AVG

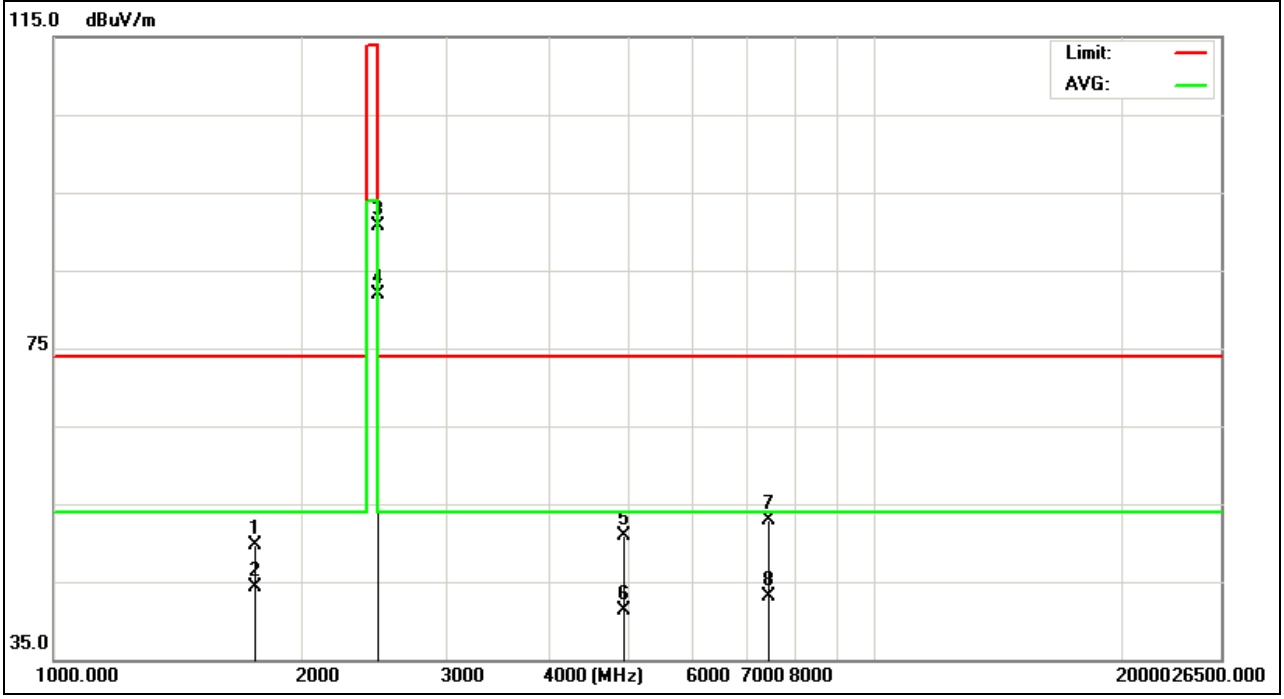
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT：	Bluetooth Keyboard	Model Name ：	Z66
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX-CH79	Polarization：	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
1754.888	52.34	-2.54	49.8	74	-24.2	peak
1754.888	46.75	-2.54	44.21	54	-9.79	AVG
2480.32	91.25	-0.49	90.76	114.0 0	-23.24	peak
2480.32	82.37	-0.49	81.88	94	-12.12	AVG
4960.64	40.37	10.45	50.82	74	-23.18	peak
4960.64	30.77	10.45	41.22	54	-12.78	AVG
7440.96	39.67	13.16	52.83	74	-21.17	peak
7440.96	29.87	13.16	43.03	54	-10.97	AVG

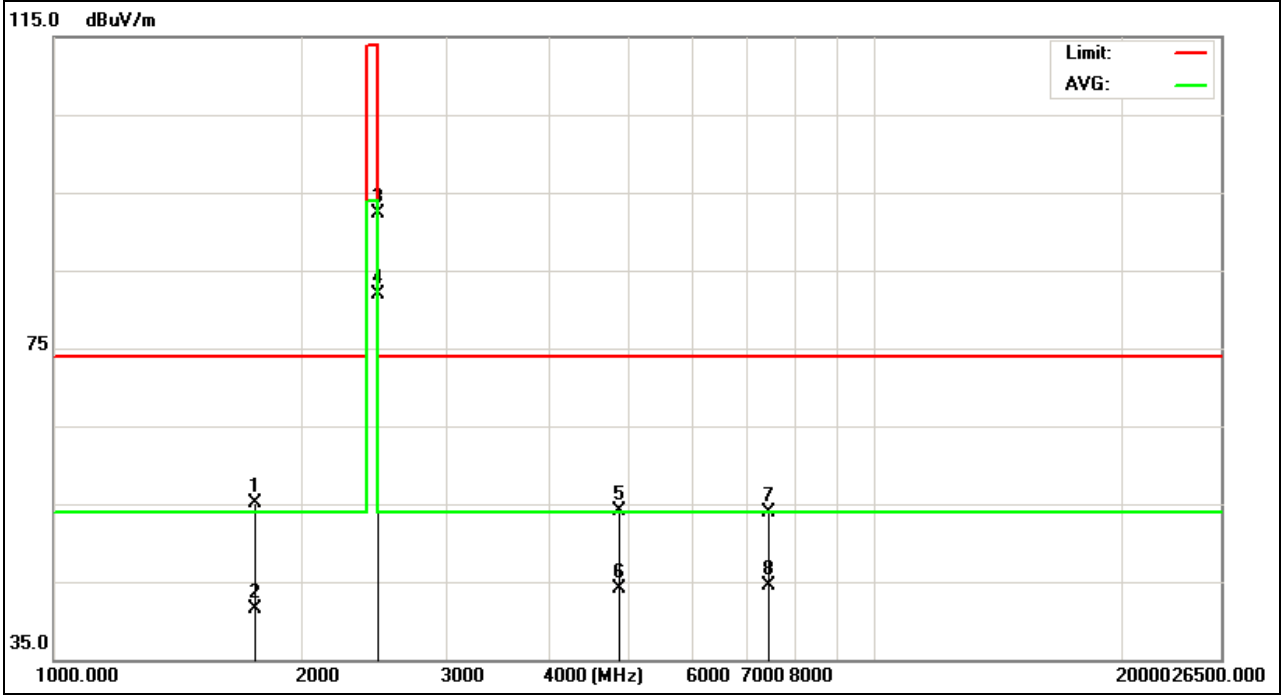
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT：	Bluetooth Keyboard	Model Name ：	Z66
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX-CH79	Polarization：	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
1754.16	57.58	-2.54	55.04	74	-18.96	peak
1754.16	44.06	-2.54	41.52	54	-12.48	AVG
2480.32	92.71	-0.49	92.22	114.0 0	-21.78	peak
2480.32	82.32	-0.49	81.83	94	-12.17	AVG
4880.64	43.77	10.37	54.14	74	-19.86	peak
4880.64	33.81	10.37	44.18	54	-9.82	AVG
7440.96	40.7	13.16	53.86	74	-20.14	peak
7440.96	31.29	13.16	44.45	54	-9.55	AVG

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



3.4.8 TEST RESULTS (RESTRICTED BANDS REQUIREMENTS)

EUT：	Bluetooth Keyboard	Model Name ：	Z66
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC 3.7V

Frequency Band	Delta Peak to band emission(Non-FHSS) (dBc)	Delta Peak to band emission(FHSS) (dBc)	＞Limit (dBc)	Result
1Mbps				
Left-band	44.22	48.43	20	Pass
Right-band	48.97	49.32	20	Pass
2Mbps				
Left-band	49.56	49.44	20	Pass
Right-band	50.34	51.34	20	Pass
3Mbps				
Left-band	47.56	49.91	20	Pass
Right-band	49.26	49.77	20	Pass

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type	Comment
1Mbps(Non-FHSS)							
2390	63.76	-13.06	50.7	74	-23.3	peak	Vertical
2390	64.78	-13.06	51.72	74	-22.28	peak	Horizontal
2483.5	58.56	-12.78	45.78	74	-28.22	peak	Vertical
2483.5	58.94	-12.78	46.16	74	-27.84	peak	Horizontal
2Mbps(Non-FHSS)							
2390	58.87	-13.06	45.81	74	-28.19	peak	Vertical
2390	62.63	-13.06	49.57	74	-24.43	peak	Horizontal
2483.5	60.54	-12.78	47.76	74	-26.24	peak	Vertical
2483.5	62.65	-12.78	49.87	74	-24.13	peak	Horizontal
3Mbps(Non-FHSS)							
2390	64.76	-13.06	51.7	74	-22.3	peak	Vertical
2390	65.78	-13.06	52.72	74	-21.28	peak	Horizontal
2483.5	62.58	-12.78	49.8	74	-24.2	peak	Vertical
2483.5	63.63	-12.78	50.85	74	-23.15	peak	Horizontal

Note: Test method to see chapter 3.2 . WhenPK value is lower than the Average value limit, average

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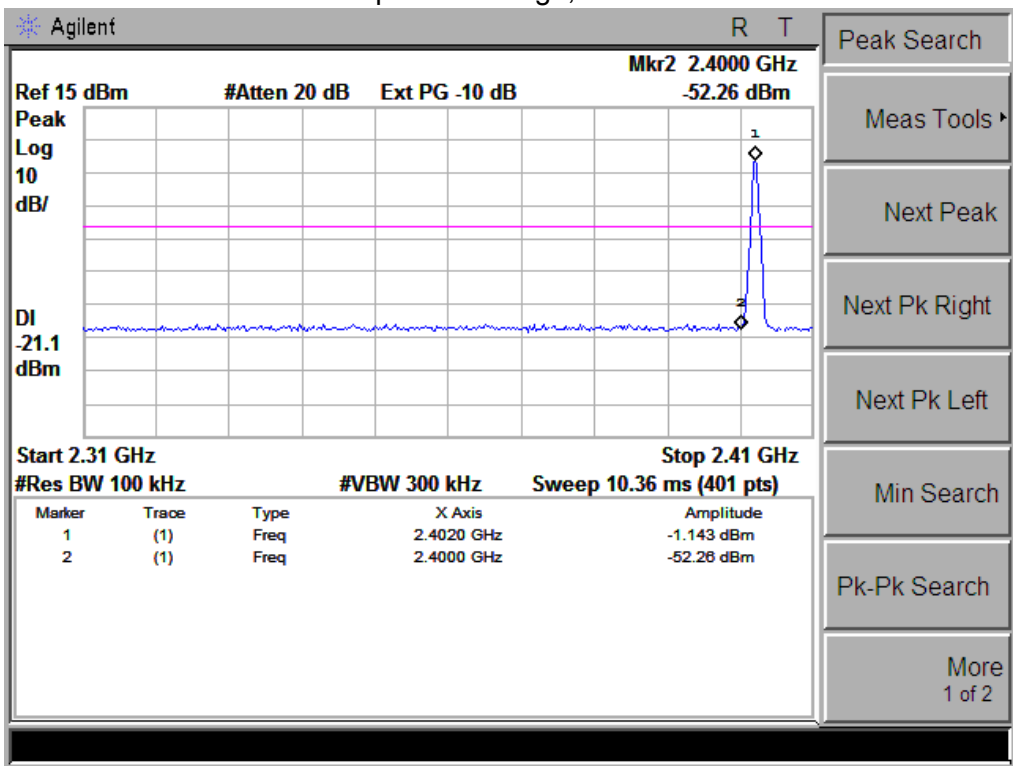
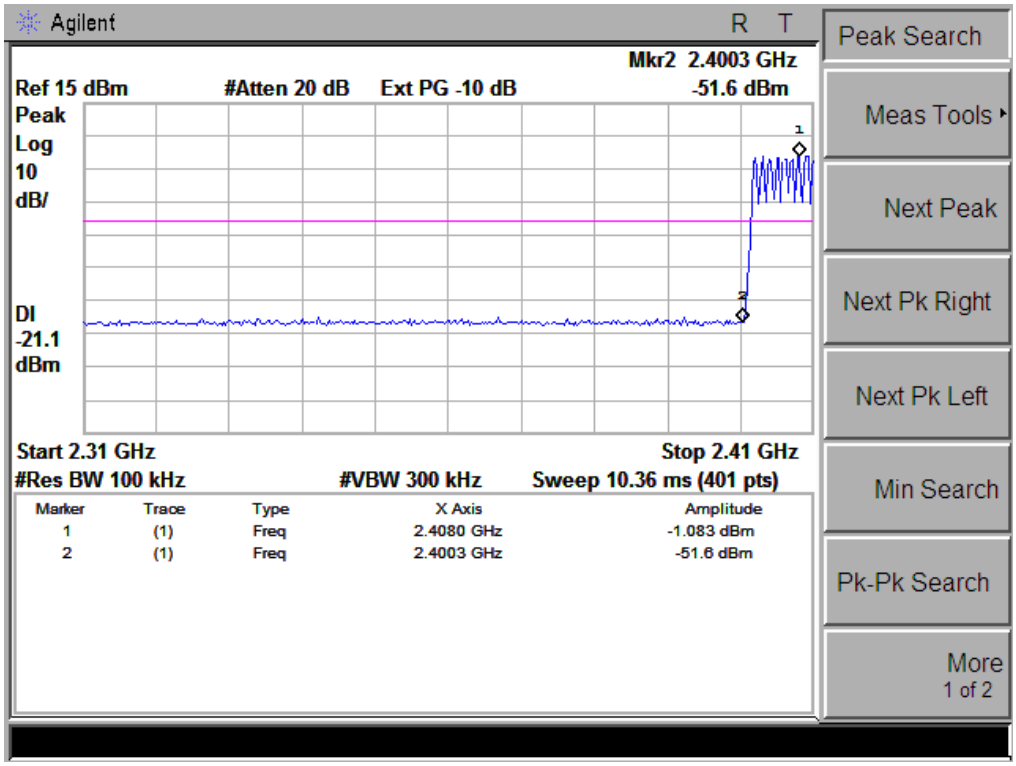
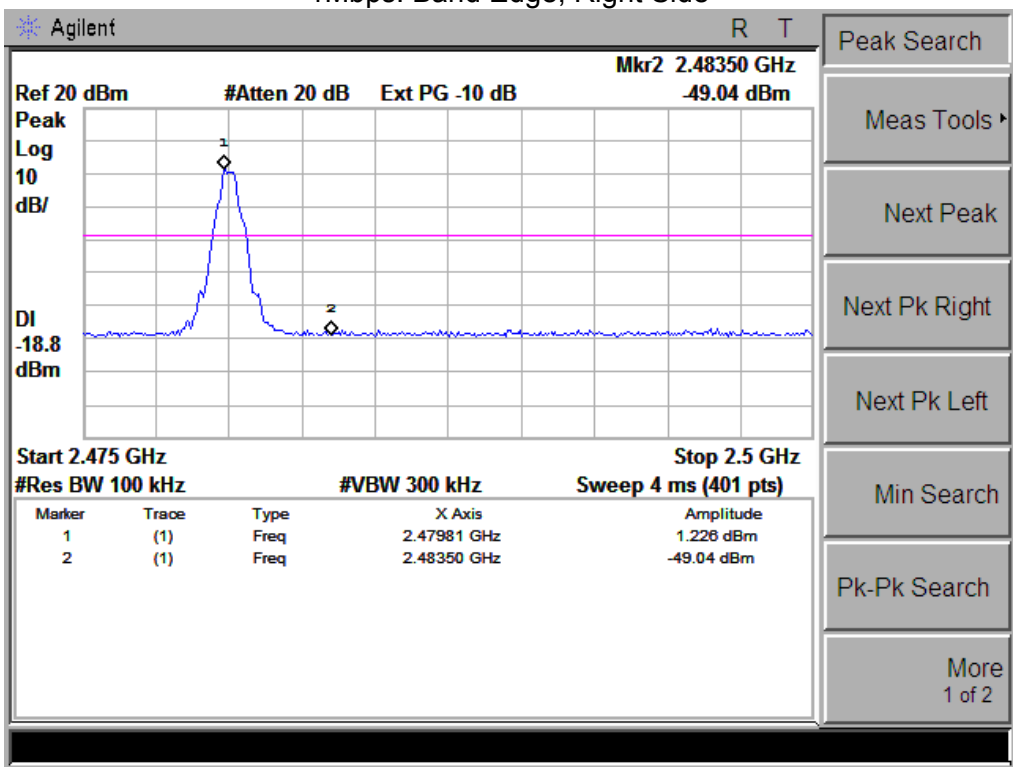
didn't record.

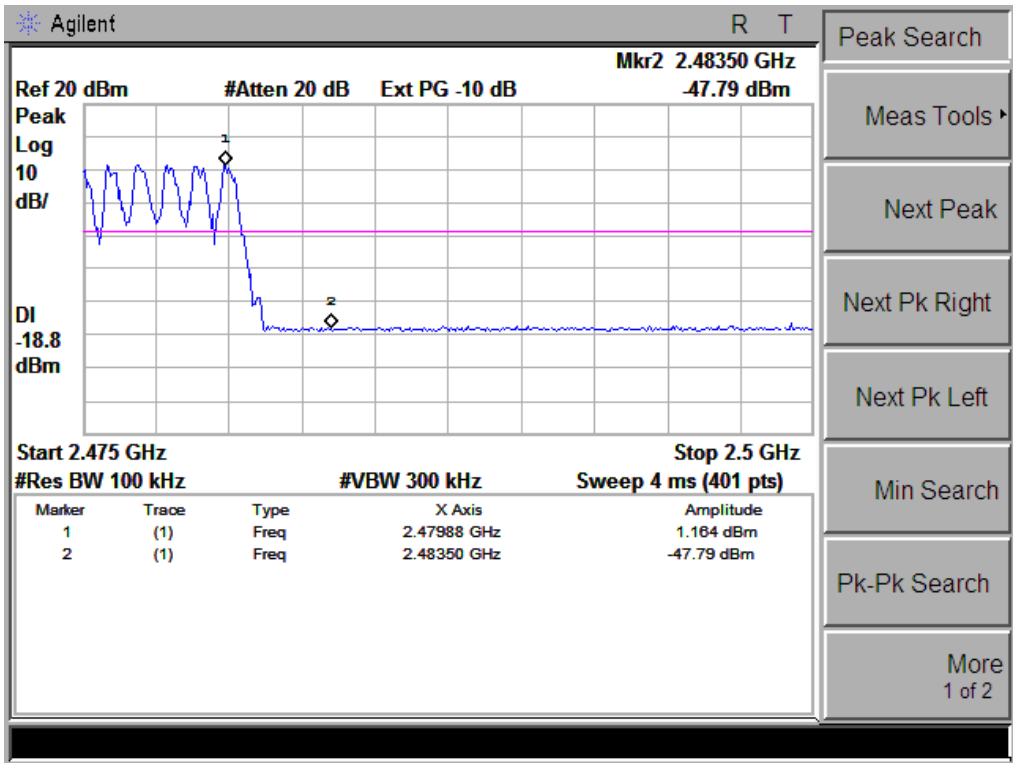
1Mbps: Band Edge, Left Side



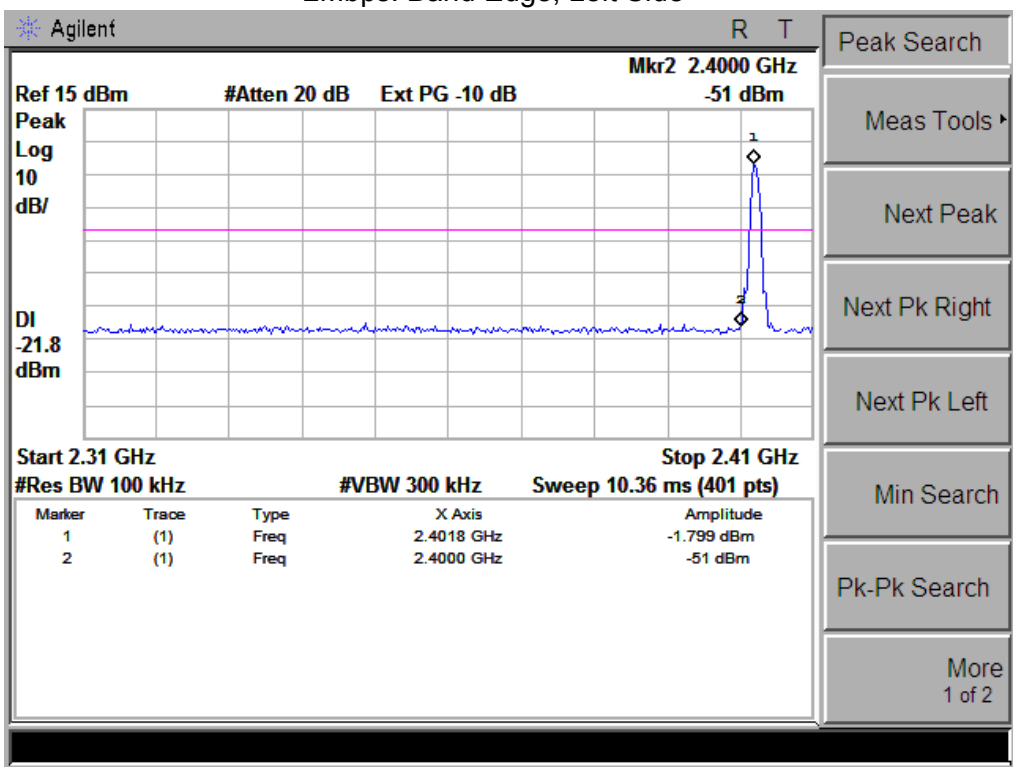


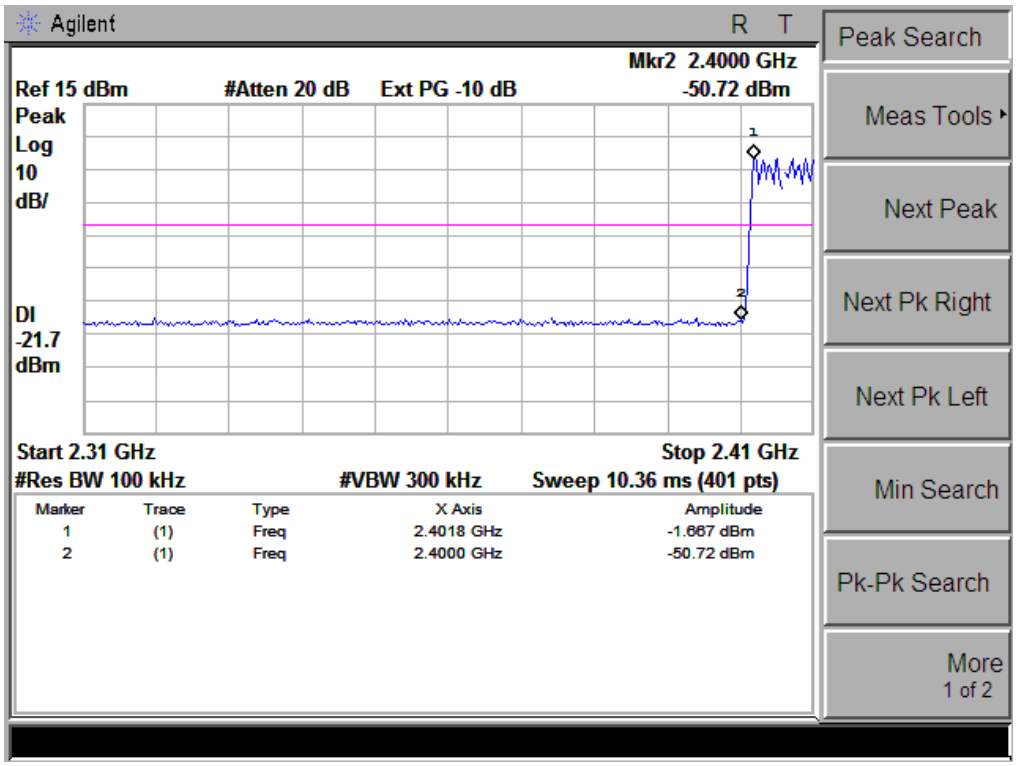
1Mbps: Band Edge, Right Side



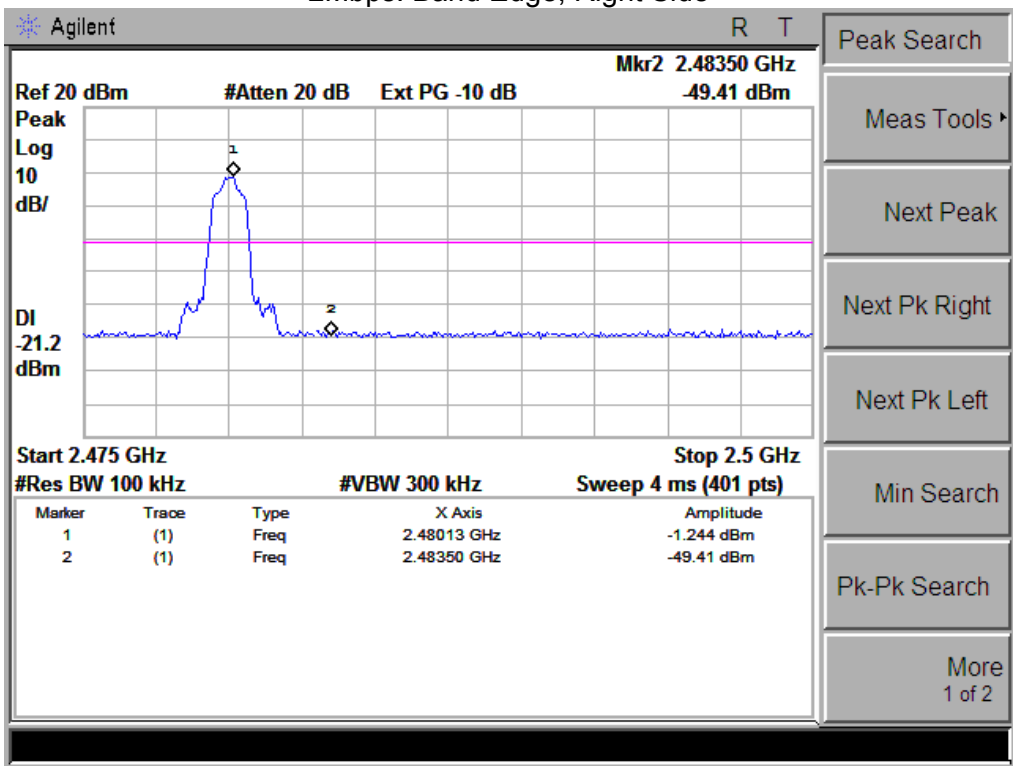


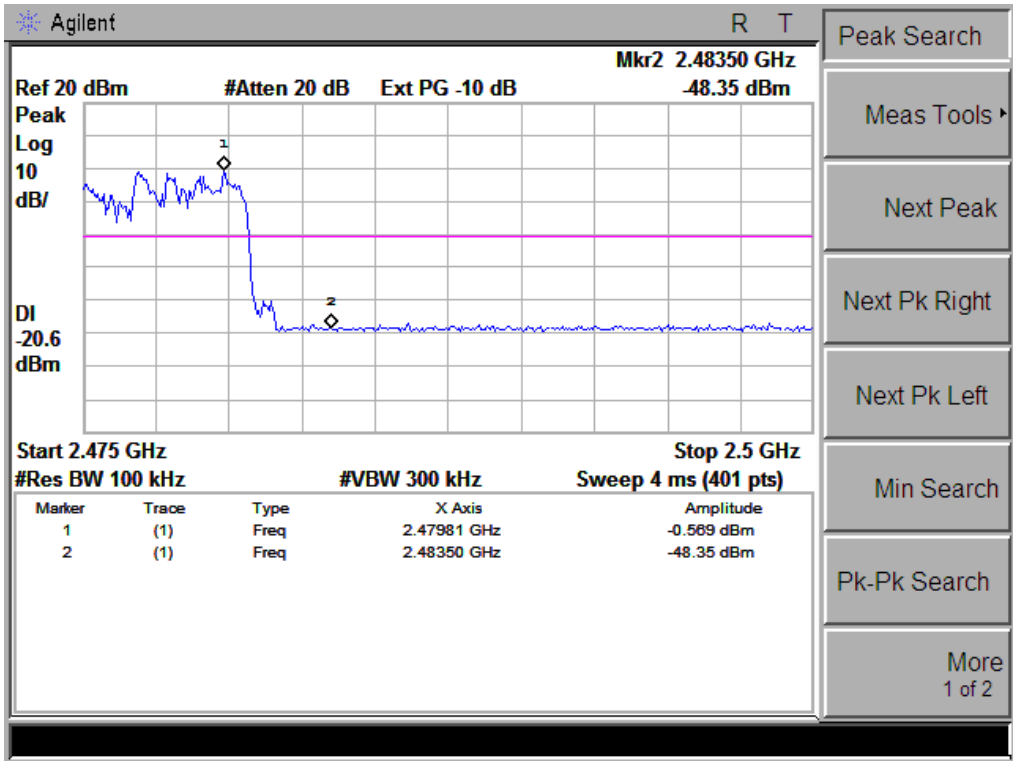
2Mbps: Band Edge, Left Side



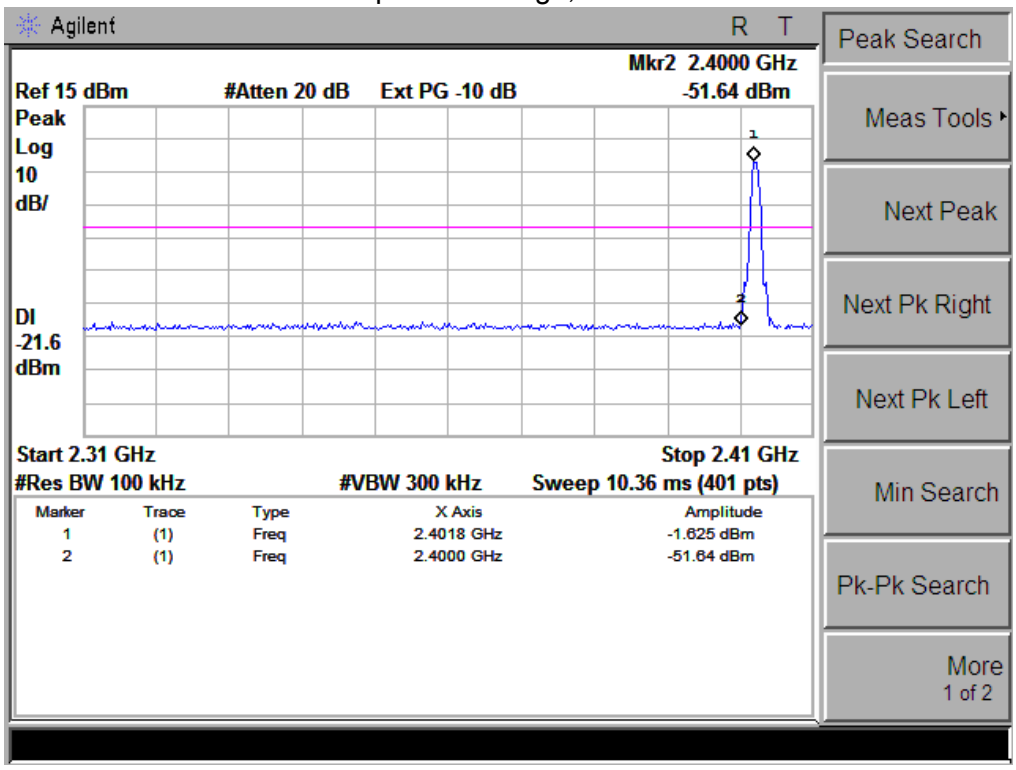


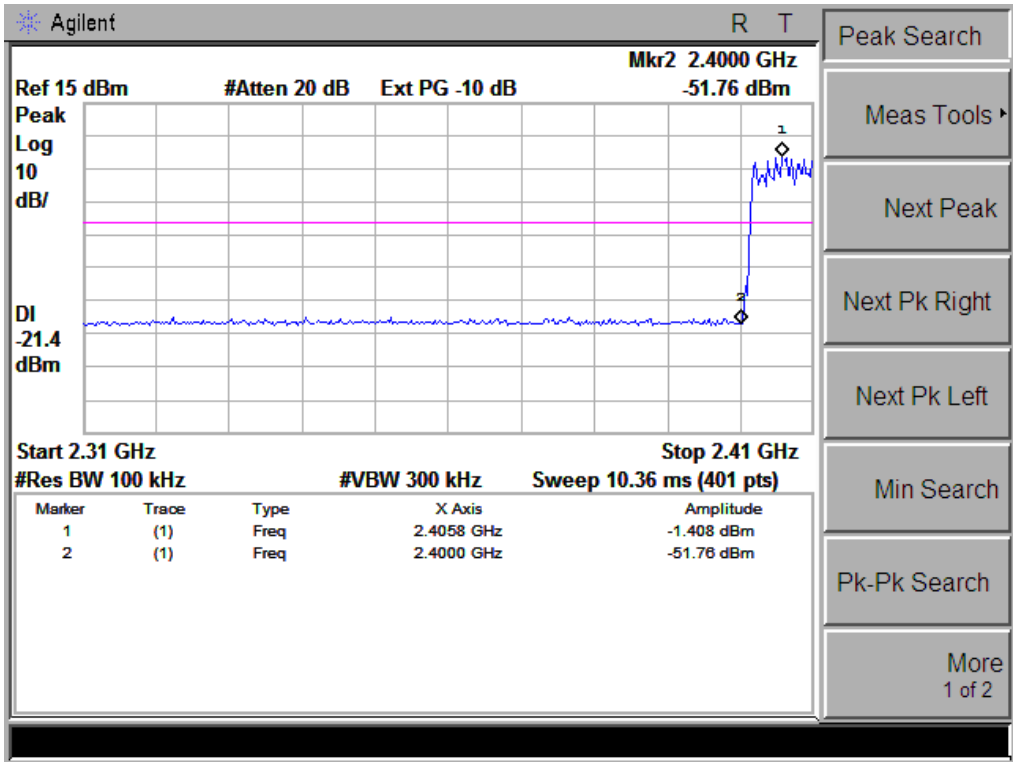
2Mbps: Band Edge, Right Side



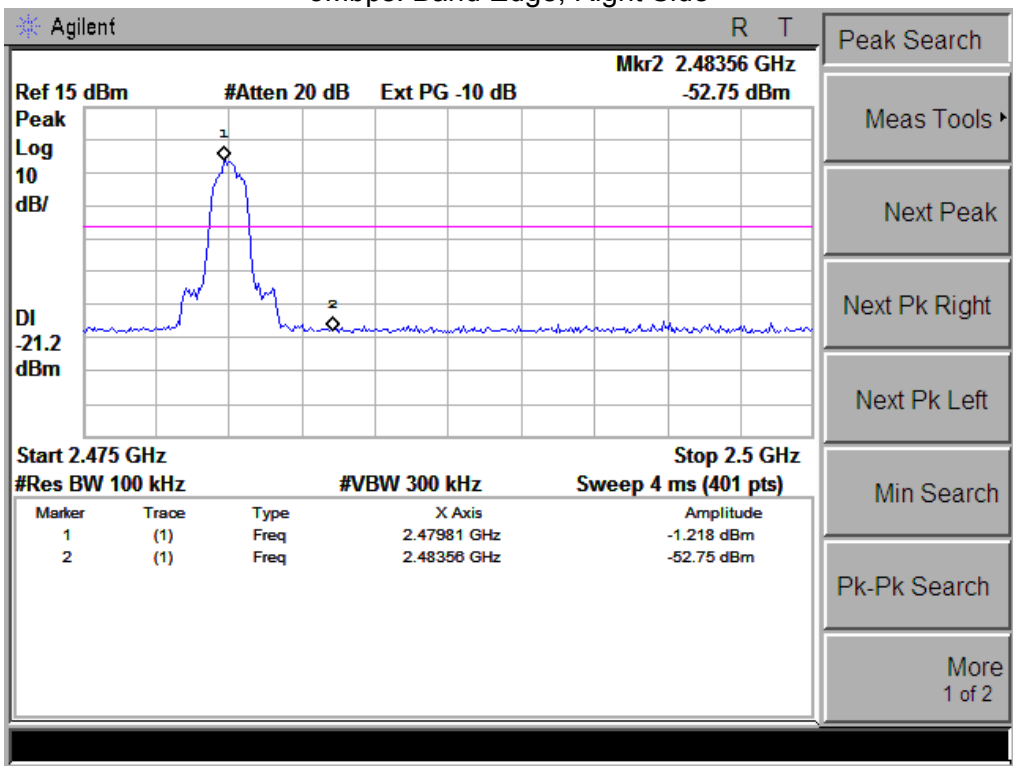


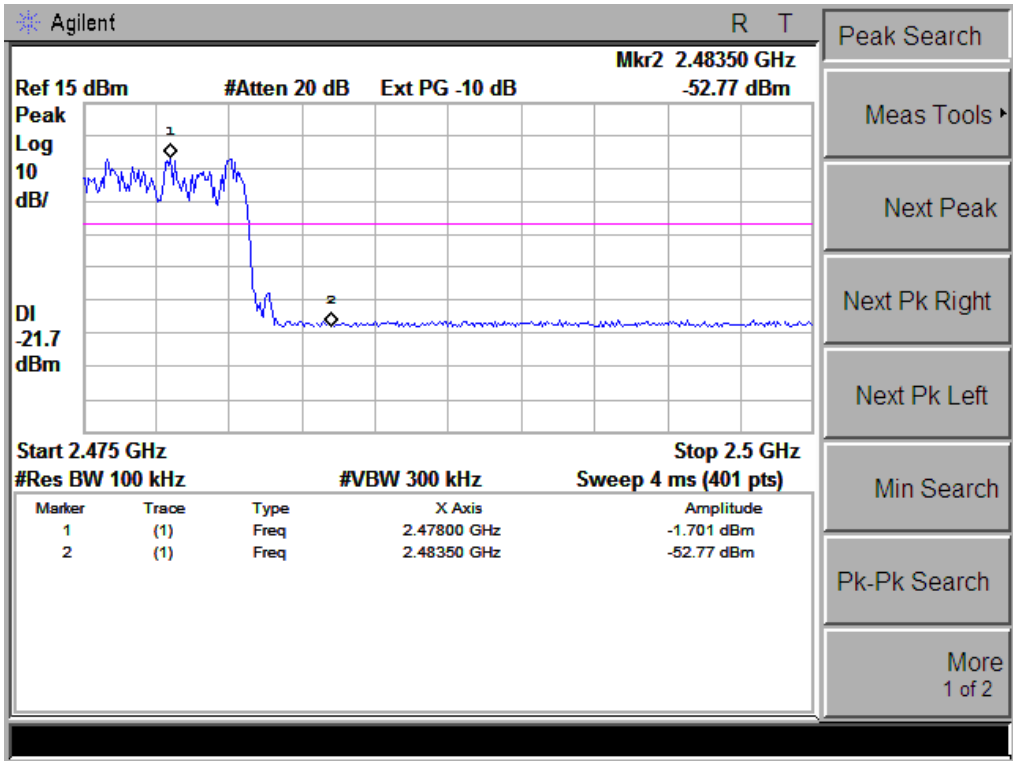
3Mbps: Band Edge, Left Side





3Mbps: Band Edge, Right Side





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≧RBW, Sweep time = Auto.

4.2 DEVIATION FROM STANDARD

No deviation.

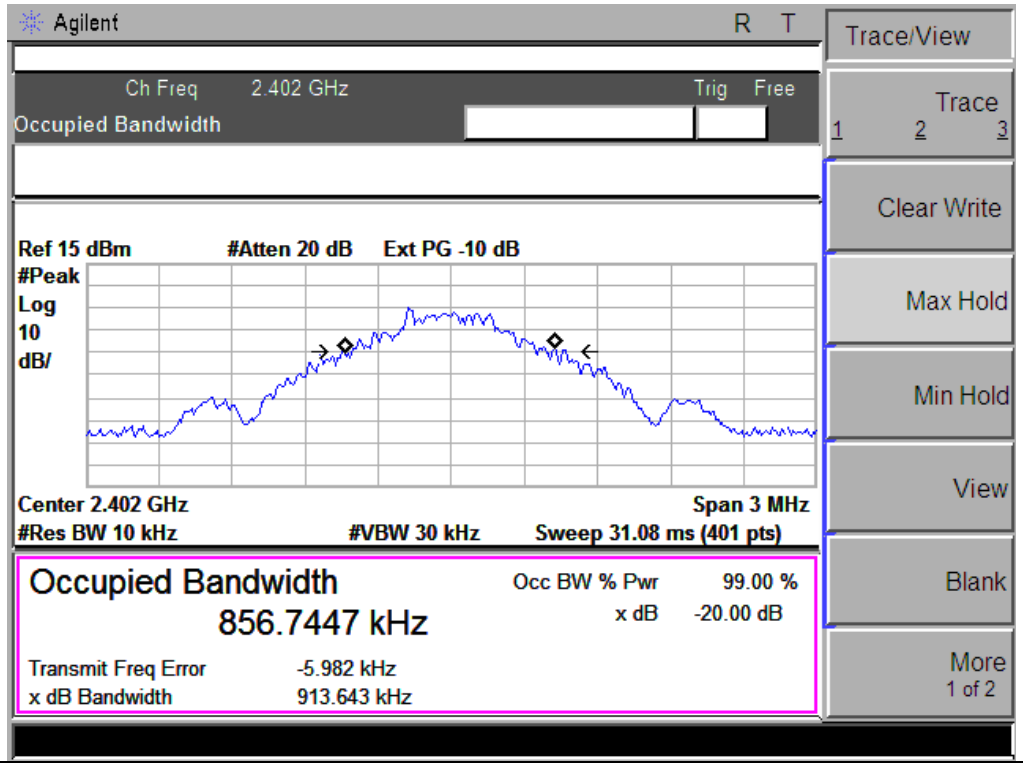
4.3 TEST SETUP

4.4 TEST RESULTS

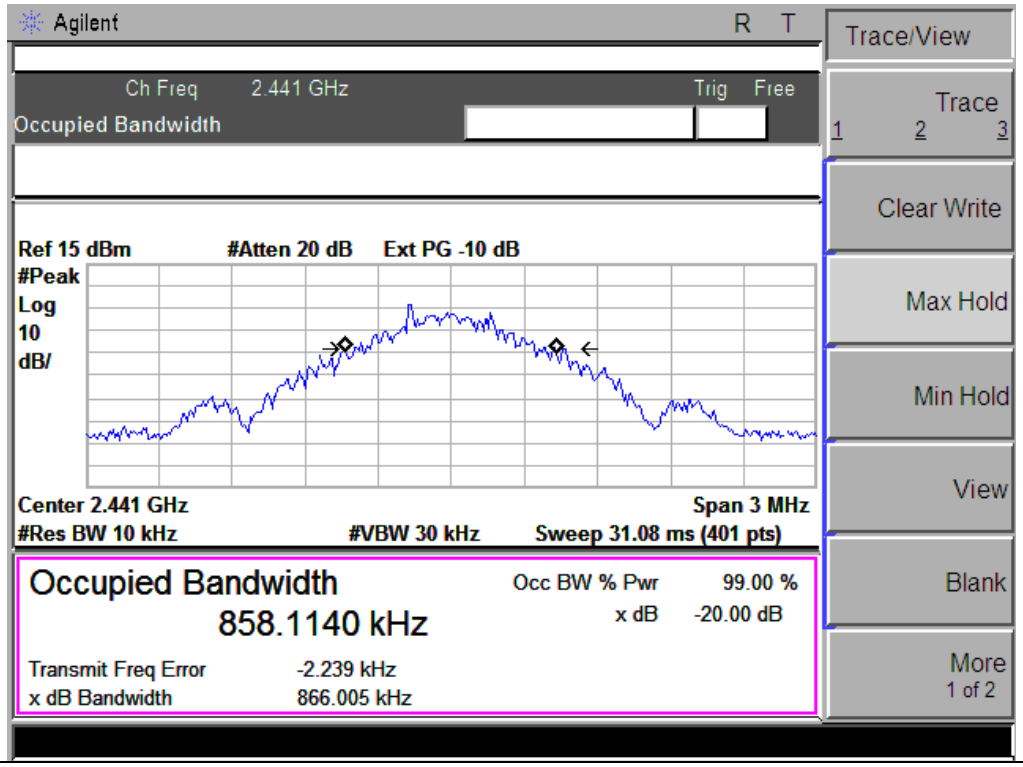
EUT：	Bluetooth Keyboard	Model Name ：	Z66
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	CH00 / CH39 /C78**(1Mbps)**		

Frequency	20dB Bandwidth (kHz)	Result
2402 MHz	913.643	**PASS**
2441 MHz	866.005	**PASS**
2480 MHz	865.995	**PASS**

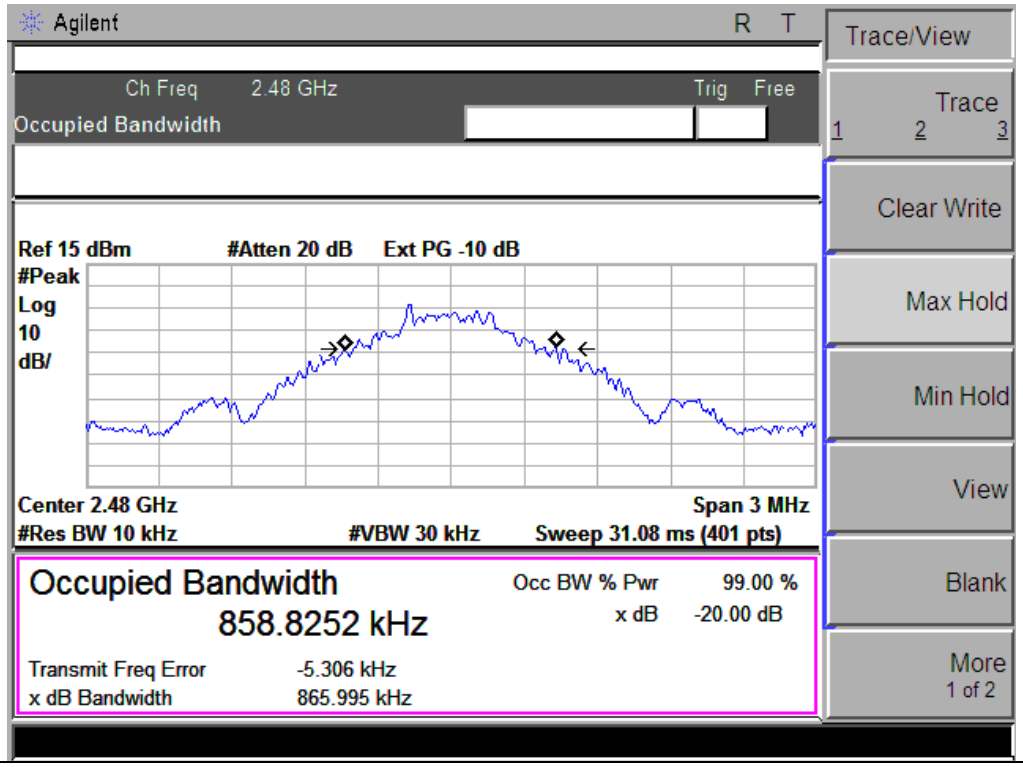
CH00 -1Mbps



CH39 -1Mbps



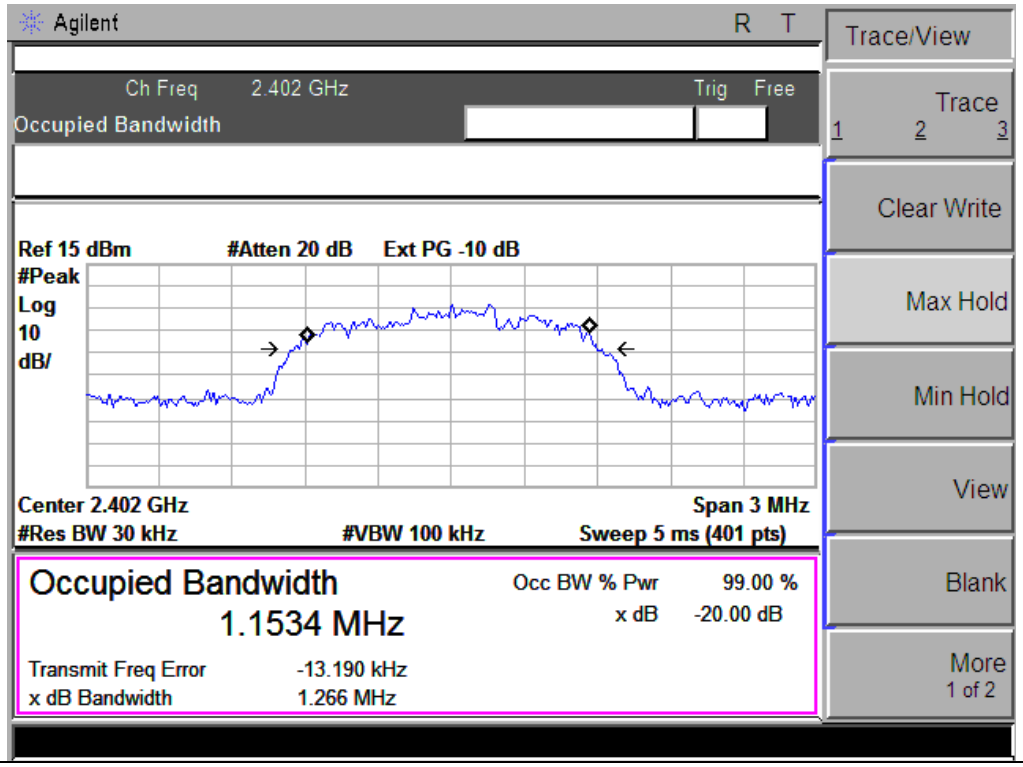
CH78 -1Mbps



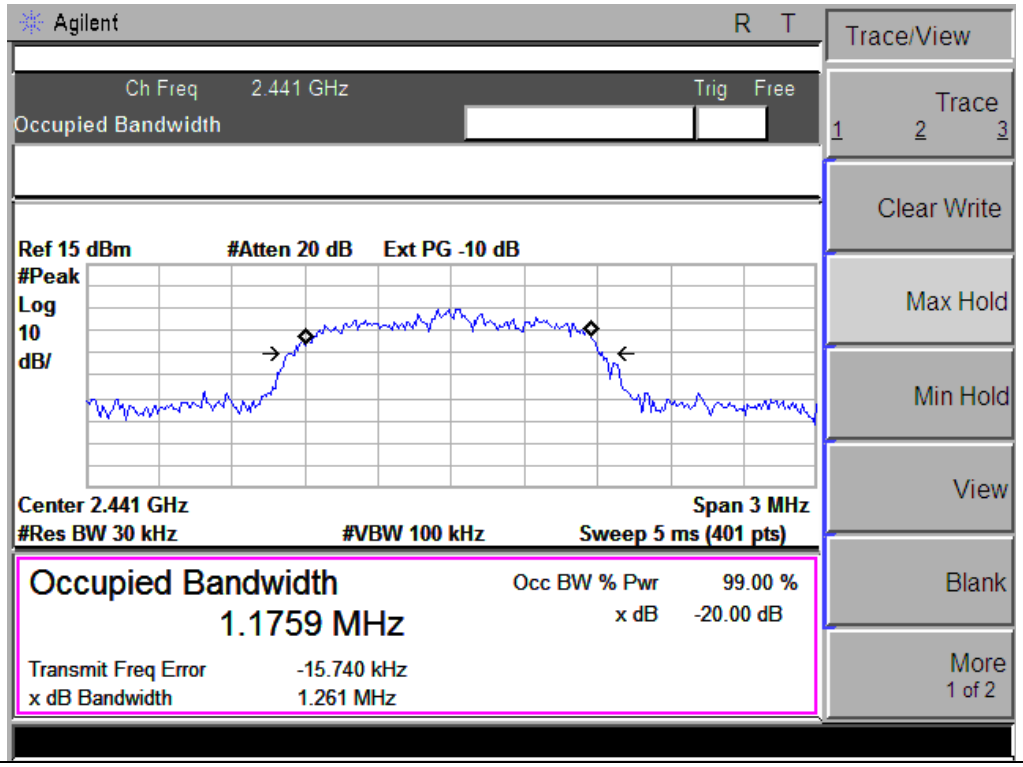
EUT：	Bluetooth Keyboard	Model Name ：	Z66
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	CH00 / CH39 /C78**(2Mbps)**		

Frequency	20dB Bandwidth (MHz)	Result
2402 MHz	1.266	**PASS**
2441 MHz	1.261	**PASS**
2480 MHz	1.269	**PASS**

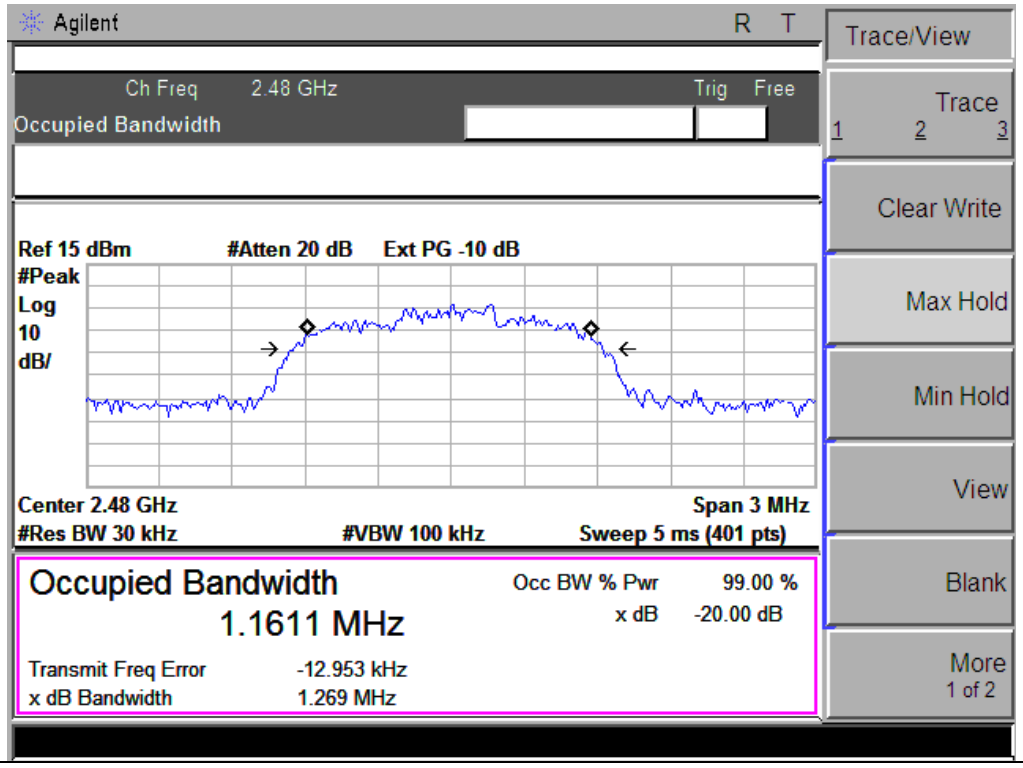
CH00 -2Mbps



CH39 -2Mbps



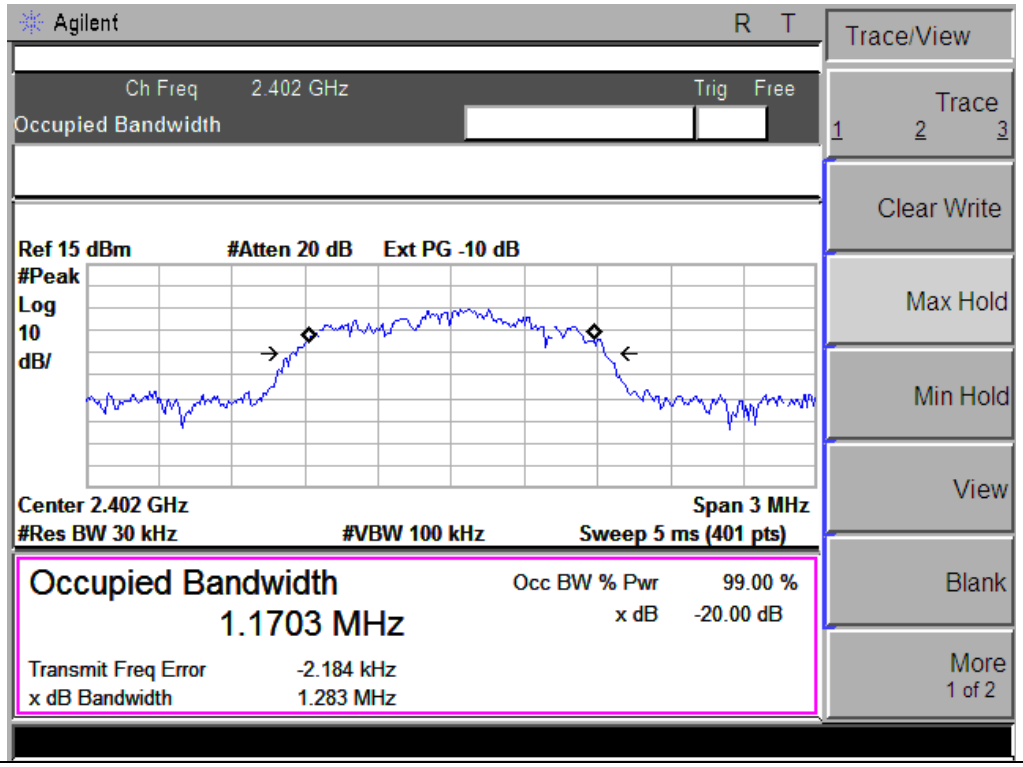
CH78 -2Mbps



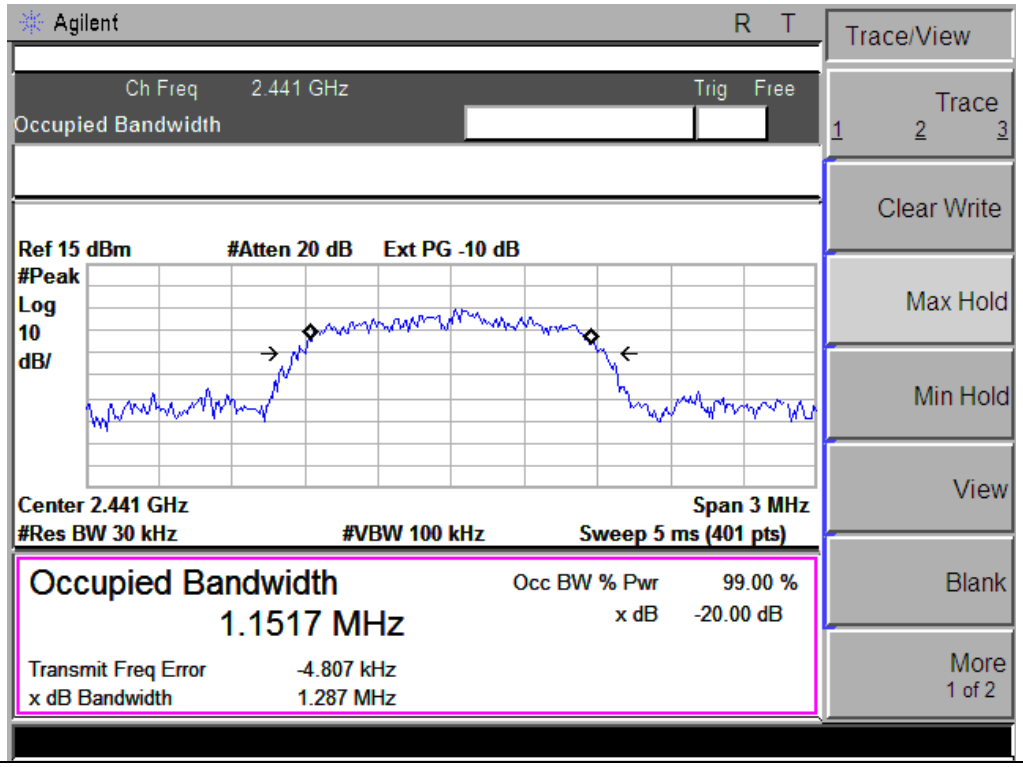
EUT：	Bluetooth Keyboard	Model Name ：	Z66
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	CH00 / CH39 /C78**(3Mbps)**		

Frequency	20dB Bandwidth (MHz)	Result
2402 MHz	1.283	**PASS**
2441 MHz	1.287	**PASS**
2480 MHz	1.257	**PASS**

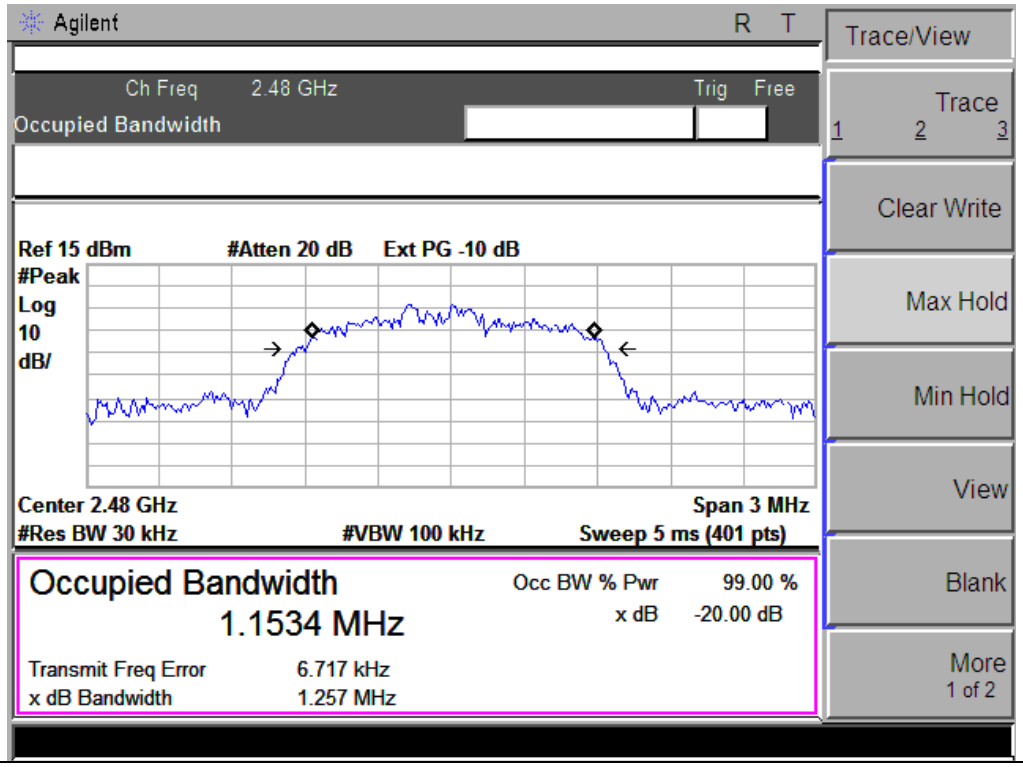
CH00 -3Mbps



CH39 -3Mbps

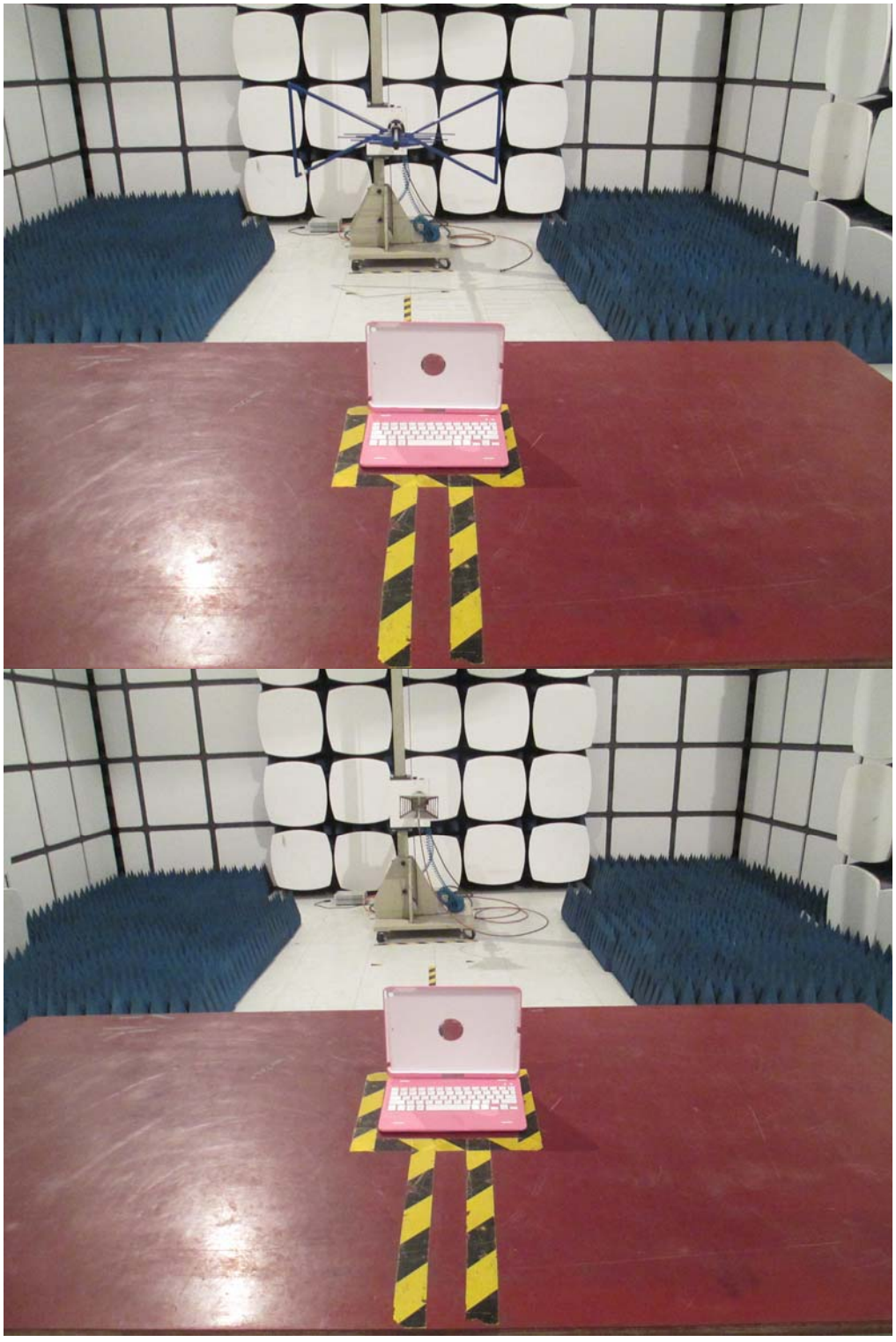


CH78 -3Mbps



5. EUT TEST PHOTO

Radiated Measurement Photos



Conducted Measurement Photos

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