Bluetooth Radio Test Report

FCC ID: O8E-BT1000

This report concerns (check one) : ■ **Original Grant** □ **Class II Change**

Issued Date	:	Jun. 29, 2012
Project No.	:	1205207
Equipment	:	Bluetooth audio receive Dongle - BT1000
Model Name	:	BT1000
Applicant	:	KWorld computer Co., LTD
Address	:	6F, No. 113, Jian 2nd Rd. Jhonghe Dist., New Taipie City 235

Tested by: Neutron Engineering Inc. EMC Laboratory
Date of Receipt: May 30, 2012
Date of Test: May 30, 2012 ~ Jun. 29, 2012

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Testing Laboratory
0659

Declaration

Neutron represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with the standards traceable to National Measurement Laboratory (**NML**) of **R.O.C**., or National Institute of Standards and Technology (**NIST**) of **U.S.A.**

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1. CERTIFICATION

Equipment :	Bluetooth audio receive Dongle - BT1000
Brand Name :	KRATOR
Model Name :	BT1000
Applicant :	KWorld computer Co., LTD
Date of Test :	May 30, 2012 ~ Jun. 29, 2012
Standards :	FCC Part15, Subpart C / ANCI C63.4: 2009

The above equipment has been tested and found compliance with the requirement of the relative standards by Neutron Engineering Inc. EMC Laboratory.
The test data, data evaluation, and equipment configuration contained in our test report (Ref No. NEI-FCCP-1-1205207) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of NVLAP and TAF according to the ISO-17025 quality assessment standard and technical standard(s).

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

Standard Section	Test Item	Judgment	Remark
15.207	Conducted Emission	PASS	
15.247 (c)	Antenna conducted Spurious Emission	PASS	
15.247 (a)(1)	Hopping Channel Separation	PASS	
15.247 (b)	Peak Output Power	PASS	
15.247 (c)	Radiated Spurious Emission	PASS	
15.247 (b)(1)	Number of Hopping Frequency	PASS	
15.247 (a)(1)	Dwell Time	PASS	
15.205	Restricted Bands	PASS	
15.203	Antenna Requirement	PASS	
1.1307 1.1310 2.1091 2.1093	RF Exposure Compliance	PASS	

NOTE:

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

(2) Portable device; SAR report is required.

2.1 TEST FACILITY

The test facilities used to collect the test data in this report:

C02: (VCCI RN: C-3477; FCC RN: 614388; FCC DN: TW1054)
1F., No. 61, Ln. 77, Sing-ai Rd., Neihu Dist., Taipei City 114, Taiwan (R.O.C.)

CB08: (VCCI RN: G-91; FCC RN: 614388; FCC DN: TW1054;
IC Assigned Code: 4428C-1)
1F., No. 61, Ln. 77, Sing-ai Rd., Neihu Dist., Taipei City 114, Taiwan (R.O.C.)

2.2 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**%.
The measurement instrumentation uncertainty considerations contained in CISPR 16-4-2.
A. Conducted Measurement :

Test Site	Method	Measurement Frequency Range	U，(dB)	NOTE
C02	ANSI	150 kHz ~ 30 MHz	2.59	

B. Radiated Measurement :

Test Site	Item	Measurement Frequency Range		Uncertainty	NOTE
CB08	Radiated Emission at 3m	Horizontal Polarization	30 - 00MHz	3.35 dB	
			200 - 1000MHz	.11 dB	
			1 - 18GHz	3.97 dB	
			18 - 40GHz	4.01 dB	
		Vertical Polarization	30 - 200MHz	3.22 dB	
			200 - 1000MHz	3.24 dB	
			1 - 18GHz	4.05 dB	
			18 - 40GHz	4.04 dB	

Our calculated Measurement Instrumentation Uncertainty is shown in the tables above. These are our U_{lab} values in CISPR 16-4-2 terminology.
Since Table 1 of CISPR 16-4-2 has values of measurement instrumentation uncertainty, called U_{CISPR}, as follows:

Conducted Disturbance (mains port) – 150 kHz – 30 MHz : 3.6 dB
Radiated Disturbance (electric field strength on an open area test site or alternative test site) – 30 MHz – 1000 MHz : 5.2 dB

It can be seen that our U_{lab} values are smaller than U_{CISPR}.

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	Bluetooth audio receive Dongle - BT1000
Brand Name	KRATOR
Model Name	BT1000
OEM Brand/Model Name	ACME / ACME BT1000; KWORLD / KWORLD BT 1000; KEIAN / KB1000
Model Difference	For Marketing Purpose.
Product Description	The EUT is a Bluetooth audio receive Dongle - BT1000. Operation Frequency: 2402~2480 MHz Modulation Type: FHSS(GFSK/ π /4 PSK/ 8DPSK) Bit Rate of Transmitter: 1/2/3 Mbps Number Of Channel: Please see Note 2. Antenna Designation: Please see Note 3. Antenna Gain(Peak): Please see Note 3. Maximum Peak Output Power: 1 Mbps: 2.65dBm 3 Mbps: 3.69dBm 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.
Power Source	Supplied from PC USB port.
Power Rating	I/P: DC 5V
Products Covered	Please refer to the User's Manual
Connecting I/O Port(s)	N/A
EUT Modification(s)	N/A

Note:

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

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)
1	N/A	N/A	Printed	N/A	-10.82

3.2 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 Test Mode	Description
Mode 1	Bluetooth / 1 Mbps / CH00, CH39, CH78
Mode 2	Bluetooth / 3 Mbps / CH00, CH39, CH78

For Conducted Test	
Final Test Mode	Description
Mode 1	Bluetooth / 1 Mbps / CH39

For Radiated Emission (30MHz – 1000MHz)	
Final Test Mode	Description
Mode 1	Bluetooth / 1 Mbps / CH39

For Radiated Emission (Above 1000MHz-Transmit)	
Final Test Mode	Description
Mode 1	Bluetooth / 1 Mbps / CH00, CH39, CH78
Mode 2	Bluetooth / 3 Mbps / CH00, CH39, CH78

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

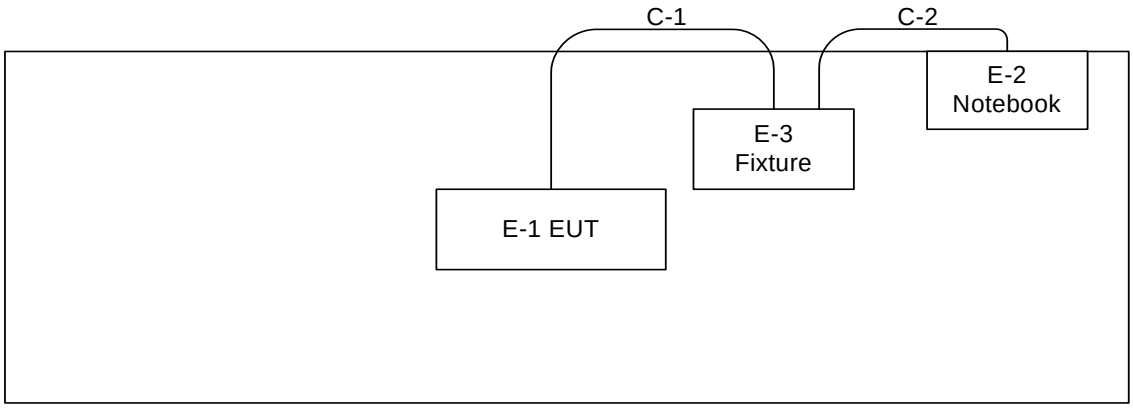
3.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters of FHSS

Data Rate	1 Mbps		
Test software Version	RF Control Kit v1.0		
Frequency	2402 MHz	2441 MHz	2480 MHz
Power Parameters	3	3	3

Data Rate	3 Mbps		
Test software Version	RF Control Kit v1.0		
Frequency	2402 MHz	2441 MHz	2480 MHz
Power Parameters	3	3	3

3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



C-1 Data Cable
C-2 RS232 Cable

3.5 DESCRIPTION OF SUPPORT UNITS

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

Item	Equipment	Mfr/Brand	Model/Type No.	IC ID	Series No.	Note
E-1	Bluetooth audio receive Dongle - BT1000	KRATOR	BT1000	O8E-BT1000	N/A	EUT
E-2	Notebook PC	DELL	PP18L	DOC	PF329 A01	
E-3	Fixture	N/A	N/A	N/A	N/A	

Item	Shielded Type	Ferrite Core	Length	Note
C-1	NO	NO	0.3M	-
C-2	YES	NO	1.7M	

Note:
(1) The support equipment was authorized by Declaration of Conformity (DOC).

4. EMC EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

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

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

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.

(3) The test result calculated as following:
Measurement Value = Reading Level + Correct Factor
Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor(if use)
Margin Level = Measurement Value – Limit Value

4.1.2 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	TWO-LINE V-NETWORK	R&S	ENV216	101050	Apr. 17, 2012
2	LISN	EMCO	3816/2	00042991	Mar. 13, 2012
3	Test Cable	TIMES	CFD300-NL	130	Jun. 17, 2011
4	EMI Test Receiver	R&S	ESCI	100082	Mar. 06, 2012

Remark: “N/A” denotes No Model Name, No Serial No. or No Calibration specified.

4.1.3 TEST PROCEDURE

a. The EUT was placed 0.8 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.

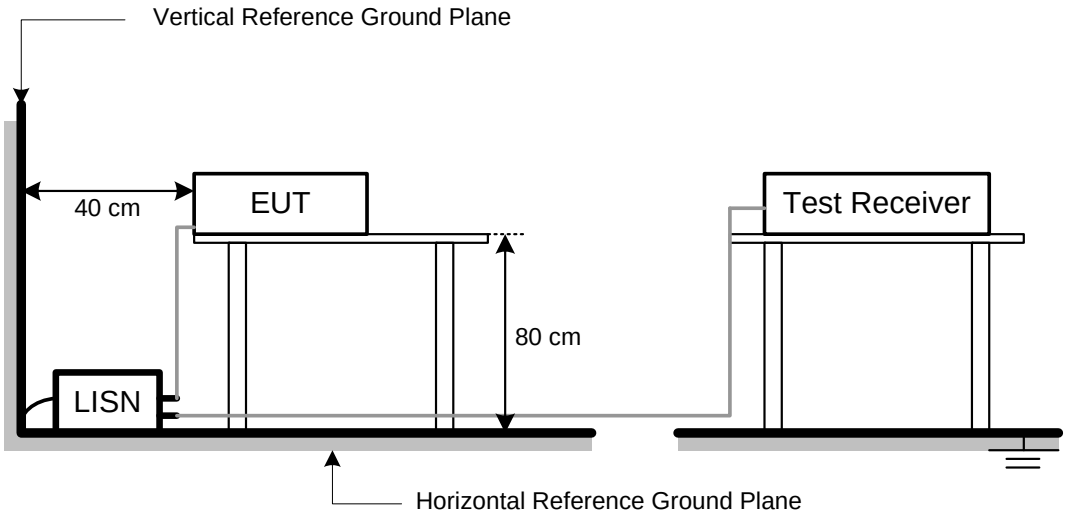
NOTE:

a. Reading in which marked as Peak, QP or AVG means measurements by using are Quasi-Peak or Average Mode with Detector BW=9 kHz; SPA setting in RBW=10 kHz, VBW =10 kHz, Swp. Time = 0.2 sec./ MHz.
b. All readings are Peak Mode value unless otherwise stated QP or AVG in column of Note. If the Peak or QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only Peak or QP Mode was measured, but AVG Mode didn't perform.

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



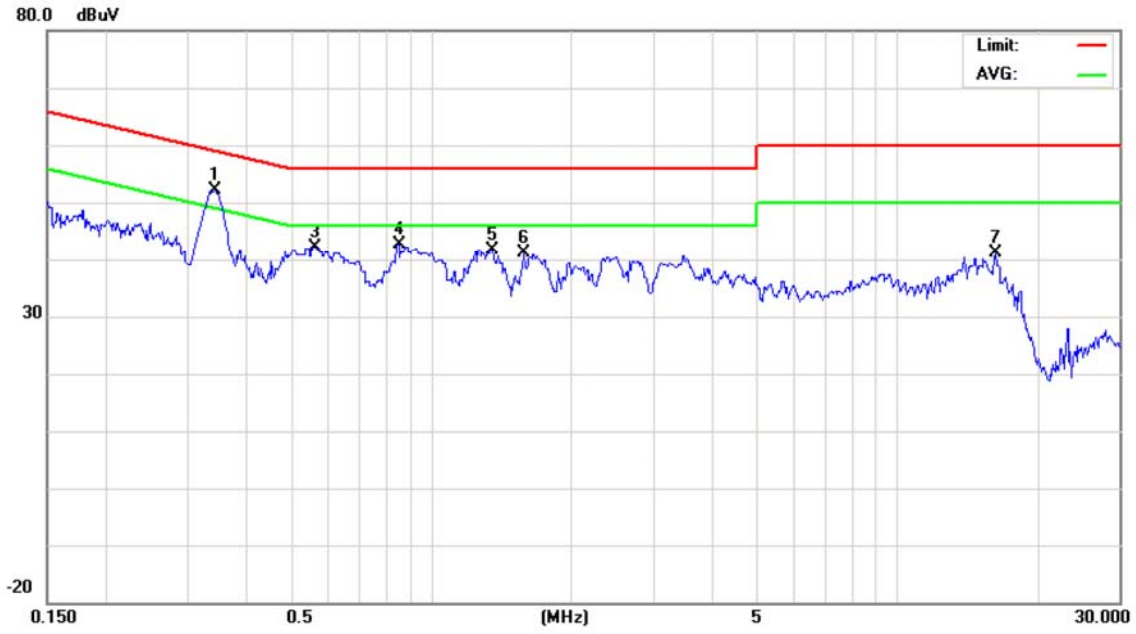
4.1.6 EUT OPERATING CONDITIONS

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

4.1.7 TEST RESULTS

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name :	BT1000
Temperature：	24°C	Relative Humidity :	48%
Test Voltage：	AC 120V/60Hz		
Test Mode ：	Bluetooth / 1 Mbps / CH39		

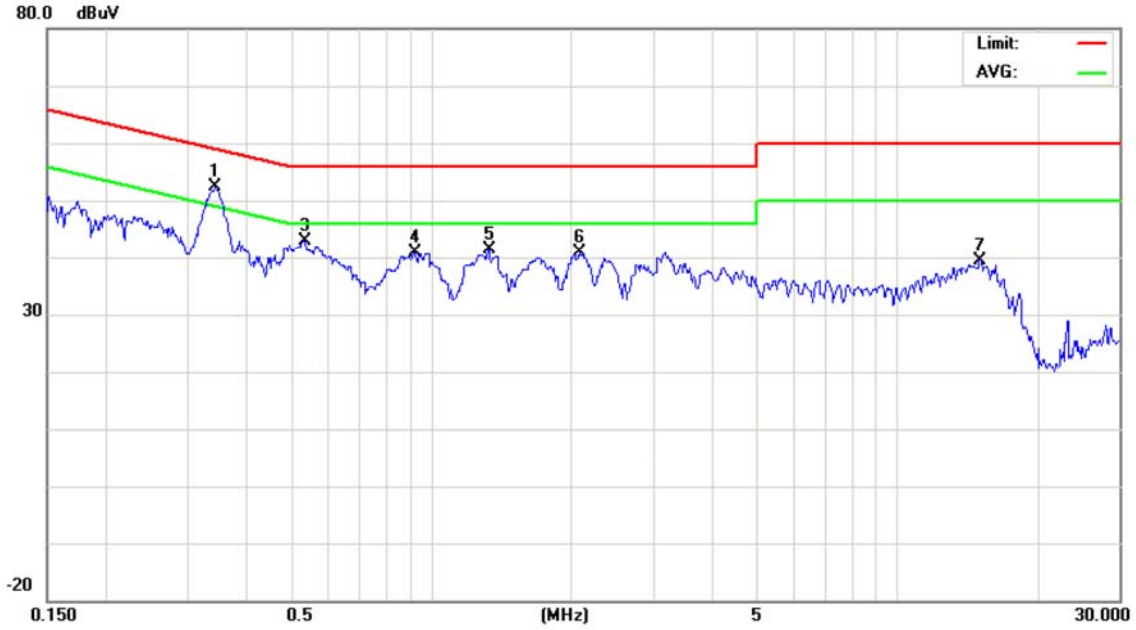
Phase: Line



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.3424	42.63	9.61	52.24	59.14	-6.90	peak	
2	*	0.3424	34.85	9.61	44.46	49.14	-4.68	AVG	
3		0.5630	32.61	9.63	42.24	56.00	-13.76	peak	
4		0.8510	32.91	9.62	42.53	56.00	-13.47	peak	
5		1.3459	31.95	9.62	41.57	56.00	-14.43	peak	
6		1.5799	31.54	9.63	41.17	56.00	-14.83	peak	
7		16.2500	31.19	9.89	41.08	60.00	-18.92	peak	

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name :	BT1000
Temperature：	24°C	Relative Humidity :	48%
Test Voltage：	AC 120V/60Hz		
Test Mode ：	Bluetooth / 1 Mbps / CH39		

Phase: Neutral



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.3438	42.70	9.61	52.31	59.11	-6.80	peak	
2	*	0.3438	34.35	9.61	43.96	49.11	-5.15	AVG	
3		0.5360	33.14	9.62	42.76	56.00	-13.24	peak	
4		0.9230	31.37	9.60	40.97	56.00	-15.03	peak	
5		1.3280	31.71	9.61	41.32	56.00	-14.68	peak	
6		2.0750	31.22	9.64	40.86	56.00	-15.14	peak	
7		15.0000	29.60	9.90	39.50	60.00	-20.50	peak	

4.2 RADIATED EMISSION MEASUREMENT

4.2.1 RADIATED EMISSION LIMITS (Frequency Range 9KHz-1000MHz)

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on15.205(a), then the 15.209(a) limit in the table below has to be followed.

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

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Class A (dBuV/m) (at 3m)		Class B (dBuV/m) (at 3m)	
	PEAK	AVERAGE	PEAK	AVERAGE
Above 1000	80	60	74	54

Notes:

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

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

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

(4) The test result calculated as following:
Measurement Value = Reading Level + Correct Factor
Correct Factor = Antenna Factor + Cable Loss – Amplifier Gain(if use)
Margin Level = Measurement Value – Limit Value

4.2.2 MEASUREMENT INSTRUMENTS LIST ANS SETTING

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-40	100129	Oct. 06, 2012
2	Horn Antenna	Schwarzbeck	BBHA 9120	D-325	Dec. 15, 2012
3	Microwave Pre_amplifier	Agilent	8449B	3008A01714	Apr. 17, 2013
4	Microflex Cable	N/A	N/A	1m	May. 14, 2013
5	Microflex Cable	AISI	S104-SMAP-1	10m	May. 14, 2013
6	Microflex Cable	N/A	N/A	3m	May. 14, 2013
7	Test Cable	N/A	LMR-400	966_12m	May. 15, 2013
8	Test Cable	N/A	LMR-400	966_3m	May. 15, 2013
9	Pre-Amplifier	EMC	EMC-330	980001	May. 31, 2013
10	Log-Bicon Antenna	Schwarzbeck	VULB9168-352	9168-352	Jun. 12, 2013
11	Horn Antenna	Schwarzbeck	BBHA 9170	187	Dec. 18, 2012

Remark: “N/A” denotes No Model Name, No Serial No. or No Calibration specified.

Spectrum Parameter	**Setting**
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 10Hz for Average
RB / VB (other emission)	100KHz / 100KHz 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

4.2.3 TEST PROCEDURE

a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
f. For the actual test configuration, please refer to the related Item –EUT Test Photos.
g. The testing follows the guidelines in ANSI C63.4: 2009 and FCC Public Notice DA 00-705 Measurement Guidelines. In case the emission is fail due to the used RBW / VBW is too wide, marker-delta method of FCC Public Notice DA 00-705 will be followed.

NOTE: (30-1000MHz)

a. Reading in which marked as QP or Peak means measurements by using are Quasi-Peak Mode with Detector BW=120 kHz.
b. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn‘t perform.

NOTE: (Above 1000MHz)

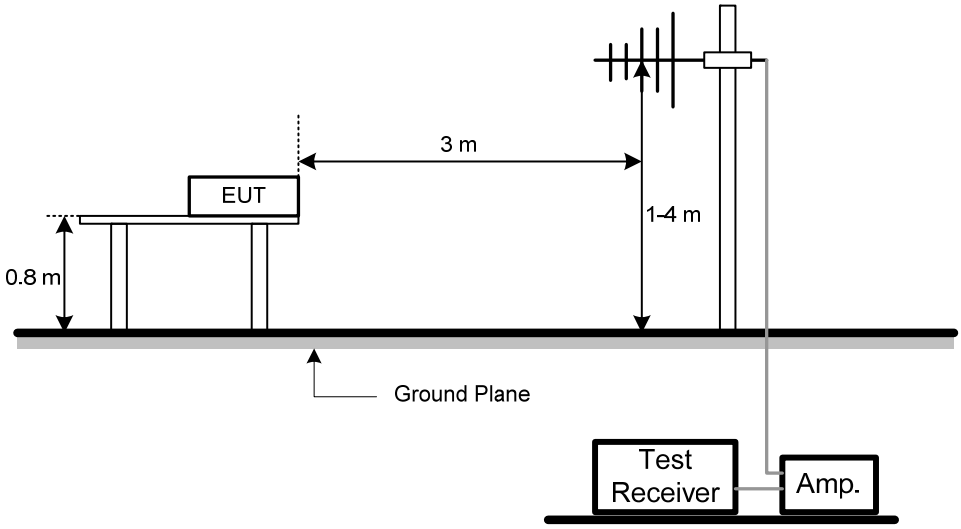
a. Reading in which marked as Peak means measurements by using are Peak Mode with instrument setting in RBW= 1 MHz, VBW= 1 MHz.
Reading in which marked as AV means measurements by using are Average Mode with instrument setting in RBW= 1 MHz, VBW= 10 Hz.
b. All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn‘t perform.

4.2.4 DEVIATION FROM TEST STANDARD

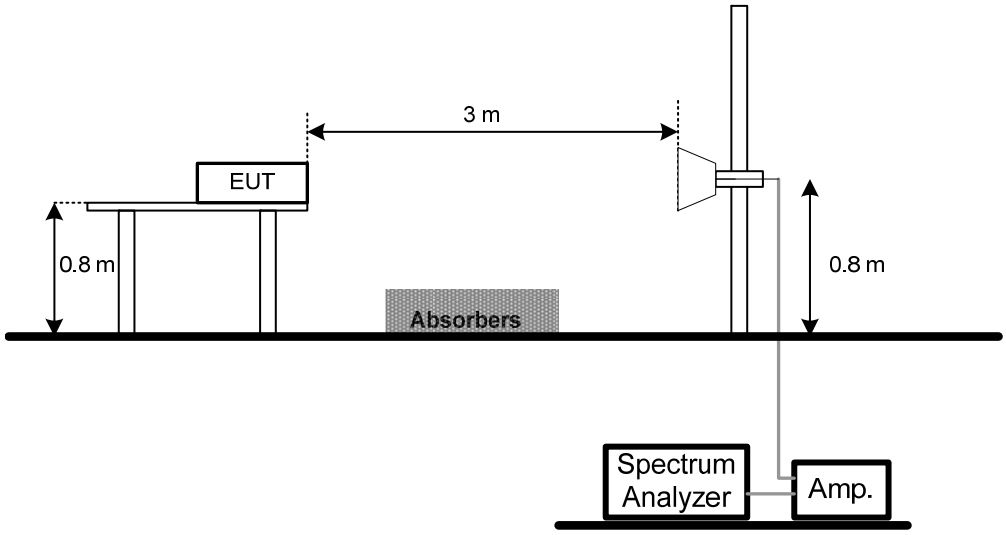
No deviation

4.2.5 TEST SETUP

Below 1 GHz



Above 1 GHz



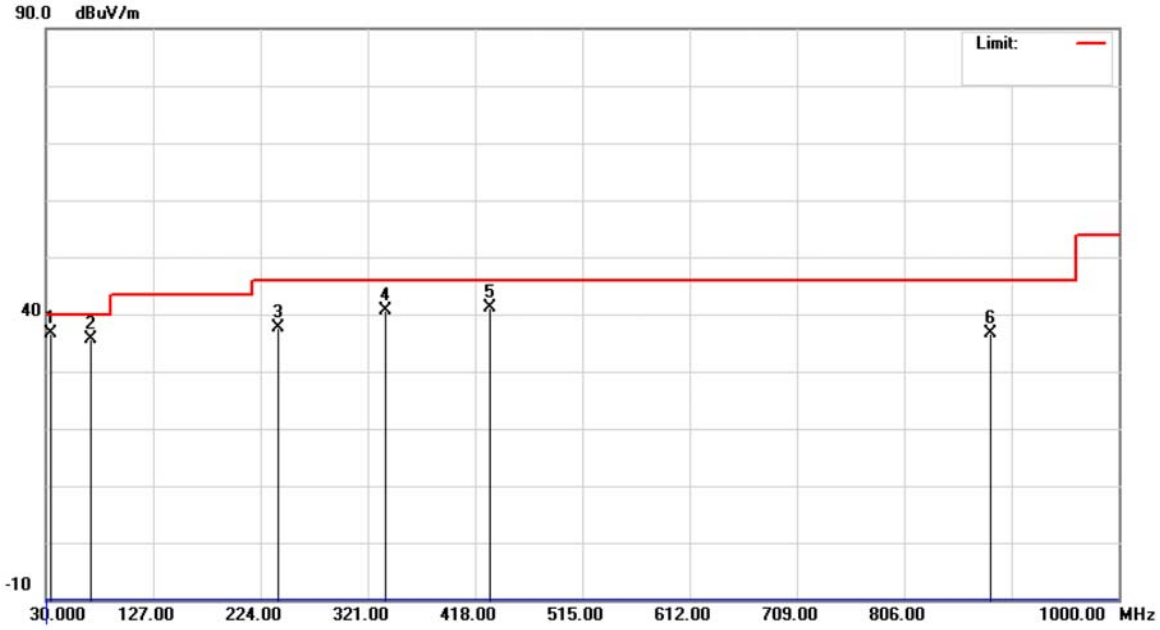
4.2.6 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **4.1.6** Unless otherwise a special operating condition is specified in the follows during the testing.

4.2.7 TEST RESULTS-BETWEEN 30MHZ - 1000MHZ - TX

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz		
Test Mode ：	Bluetooth / 1 Mbps / CH39		

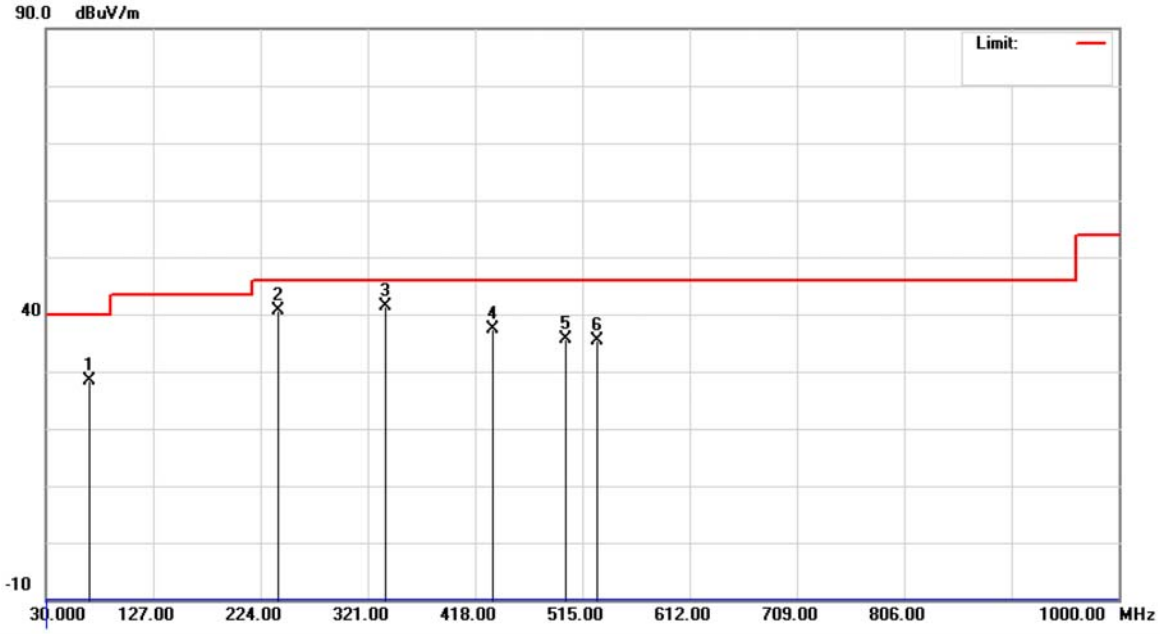
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	33.8800	56.99	-20.24	36.75	40.00	-3.25	peak	
2		70.7399	57.31	-21.62	35.69	40.00	-4.31	peak	
3		239.5200	58.44	-20.84	37.60	46.00	-8.40	peak	
4		336.5199	58.40	-17.65	40.75	46.00	-5.25	peak	
5		431.5799	56.29	-15.27	41.02	46.00	-4.98	peak	
6		883.5999	43.77	-7.10	36.67	46.00	-9.33	peak	

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz		
Test Mode ：	Bluetooth / 1 Mbps / CH39		

Polarization: Horizontal

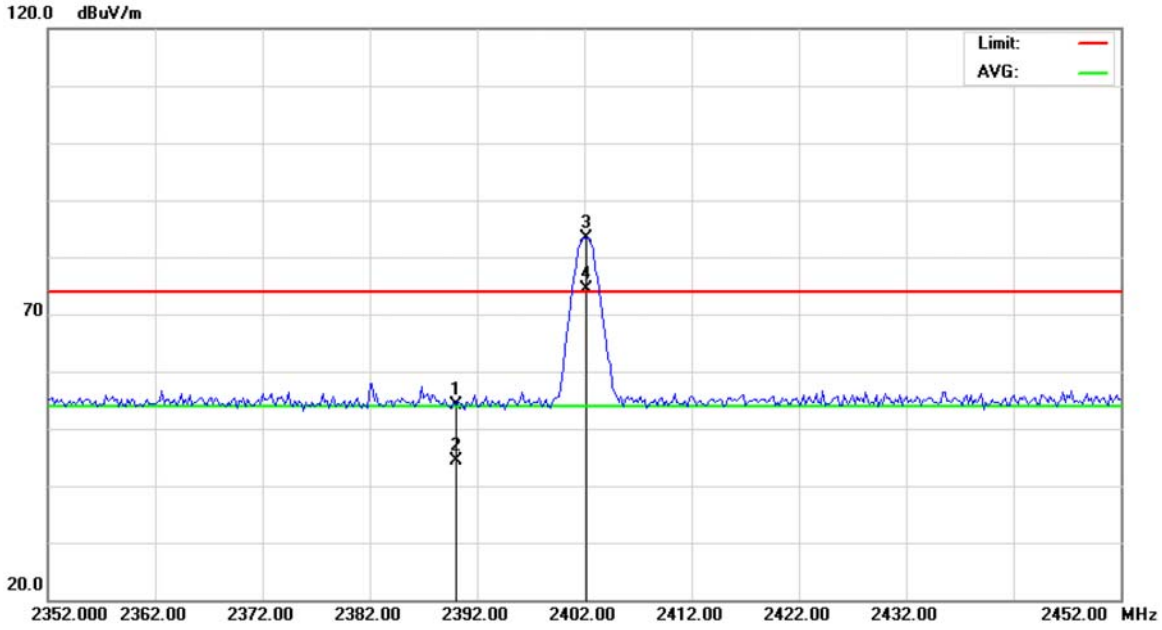


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		68.8000	49.50	-21.21	28.29	40.00	-11.71	peak	
2		239.5200	61.42	-20.84	40.58	46.00	-5.42	peak	
3	*	336.5199	59.15	-17.65	41.50	46.00	-4.50	peak	
4		433.5199	52.60	-15.22	37.38	46.00	-8.62	peak	
5		499.4800	49.51	-13.97	35.54	46.00	-10.46	peak	
6		528.5800	48.76	-13.35	35.41	46.00	-10.59	peak	

4.2.8 TEST RESULTS - ABOVE 1000MHZ - TX

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity :	60%
Test Voltage :	AC 120V/60Hz	Orthogonal Axes:	X
Test Mode ：	Bluetooth / 1 Mbps / CH00		

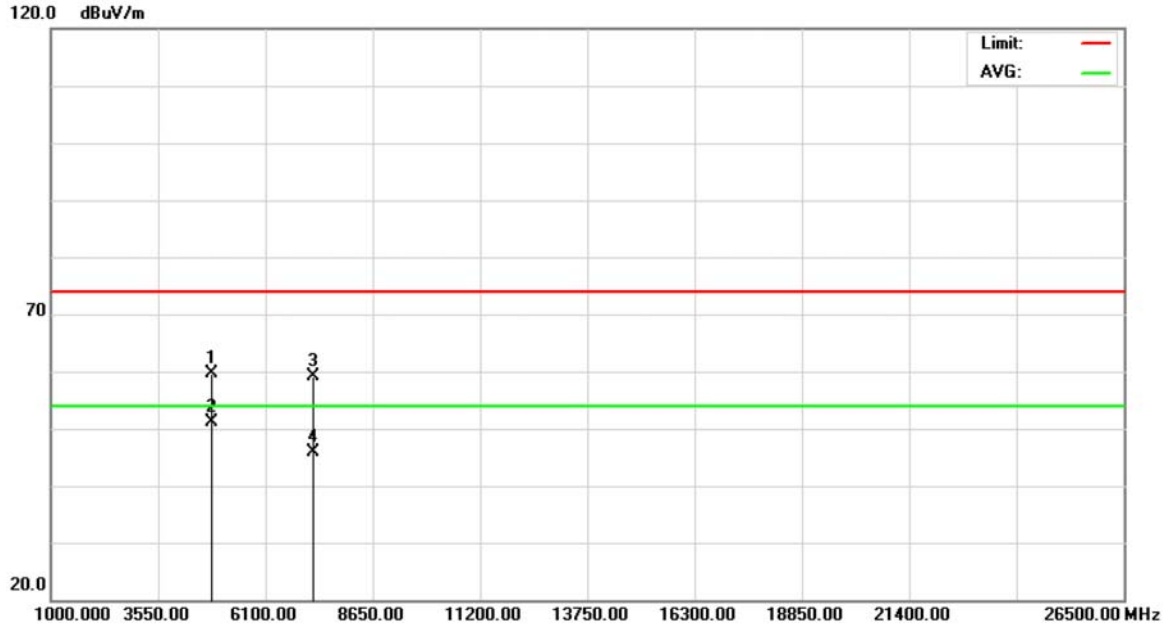
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	20.73	33.42	54.15	74.00	-19.85	peak	
2		2390.000	10.87	33.42	44.29	54.00	-9.71	AVG	
3	X	2402.200	49.97	33.49	83.46	74.00	9.46	peak	
4	*	2402.200	41.00	33.49	74.49	54.00	20.49	AVG	

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Orthogonal Axes:	X
Test Mode ：	Bluetooth / 1 Mbps / CH00		

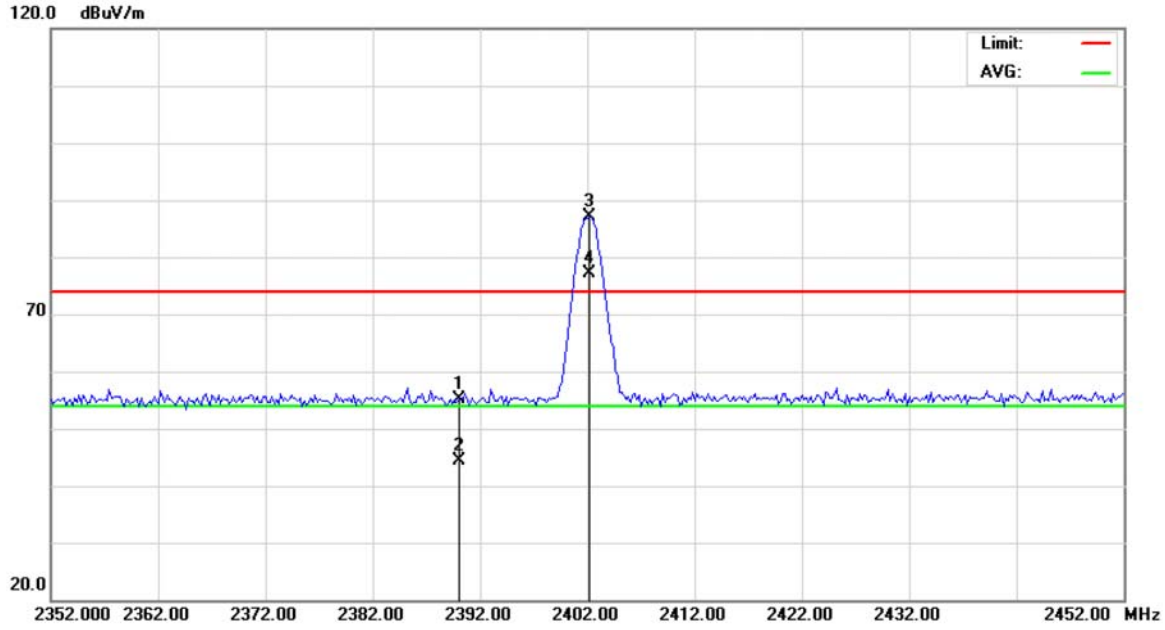
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4803.880	52.11	7.41	59.52	74.00	-14.48	peak	
2	*	4804.010	43.70	7.41	51.11	54.00	-2.89	AVG	
3		7206.210	44.26	14.79	59.05	74.00	-14.95	peak	
4		7206.210	31.06	14.79	45.85	54.00	-8.15	AVG	

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Orthogonal Axes:	X
Test Mode ：	Bluetooth / 1 Mbps / CH00		

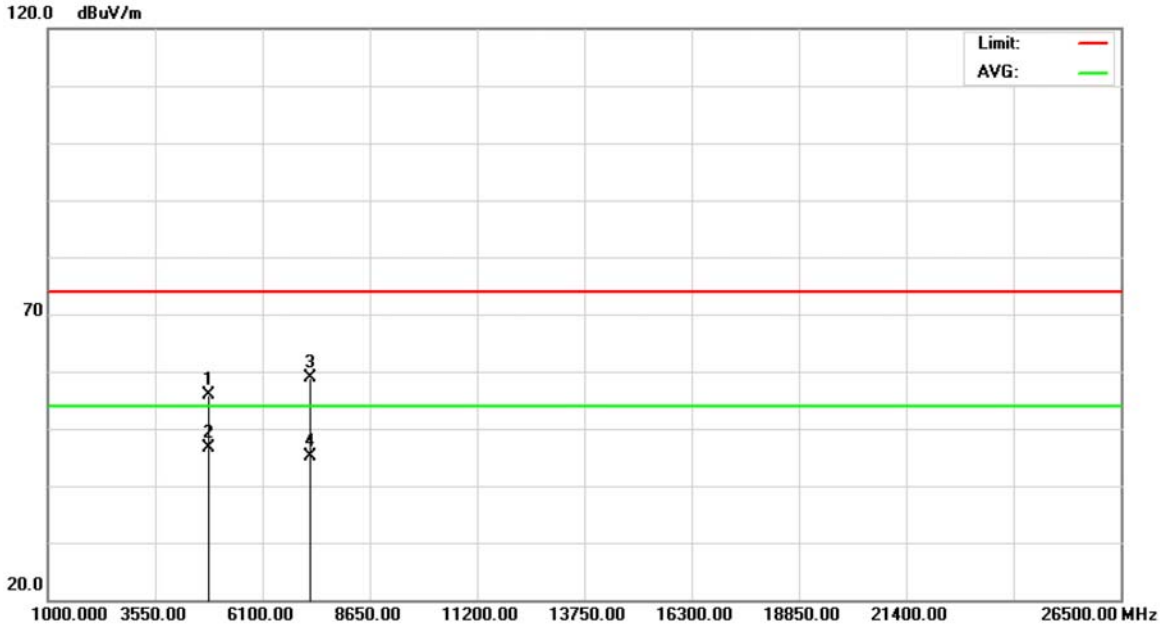
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	21.71	33.42	55.13	74.00	-18.87	peak	
2		2390.000	10.85	33.42	44.27	54.00	-9.73	AVG	
3	X	2402.200	53.54	33.49	87.03	74.00	13.03	peak	
4	*	2402.200	43.68	33.49	77.17	54.00	23.17	AVG	

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Orthogonal Axes:	X
Test Mode ：	Bluetooth / 1 Mbps / CH00		

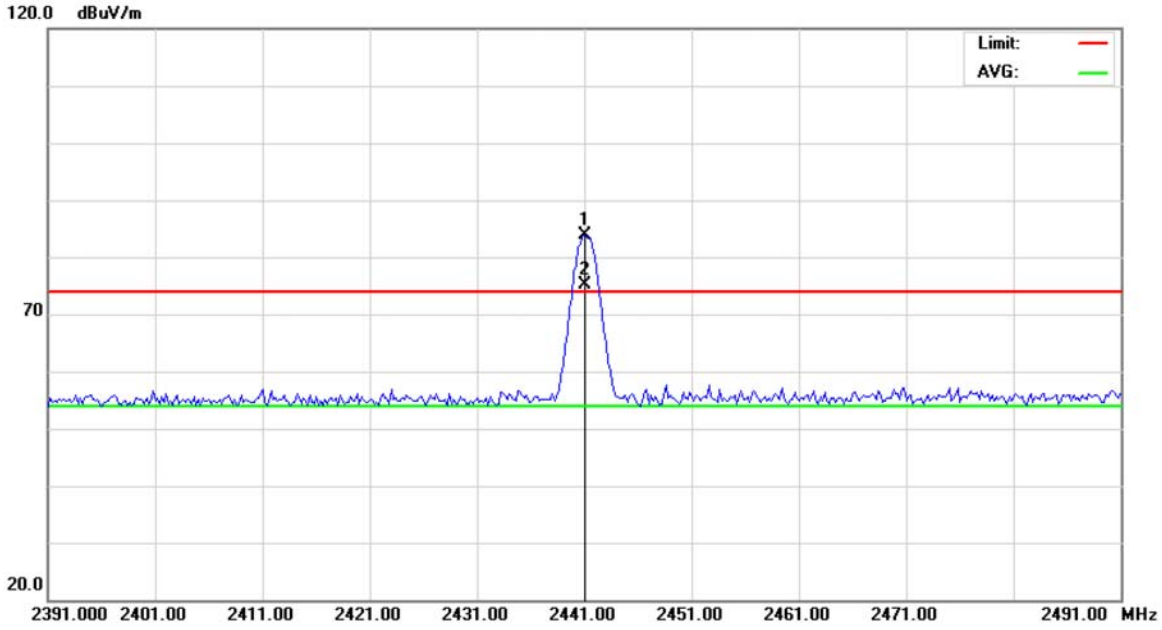
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4803.990	48.55	7.41	55.96	74.00	-18.04	peak	
2	*	4803.990	39.14	7.41	46.55	54.00	-7.45	AVG	
3		7206.250	44.05	14.79	58.84	74.00	-15.16	peak	
4		7206.250	30.38	14.79	45.17	54.00	-8.83	AVG	

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Orthogonal Axes:	X
Test Mode ：	Bluetooth / 1 Mbps / CH39		

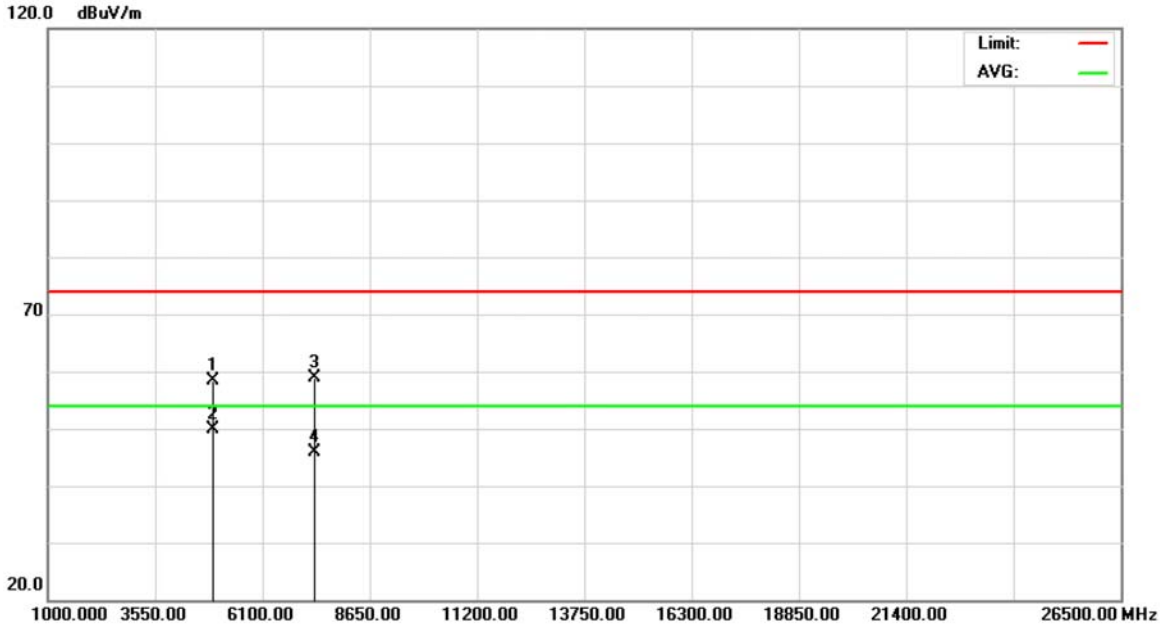
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2441.000	50.07	33.69	83.76	74.00	9.76	peak	
2	*	2441.000	41.42	33.69	75.11	54.00	21.11	AVG	

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Orthogonal Axes:	X
Test Mode ：	Bluetooth / 1 Mbps / CH39		

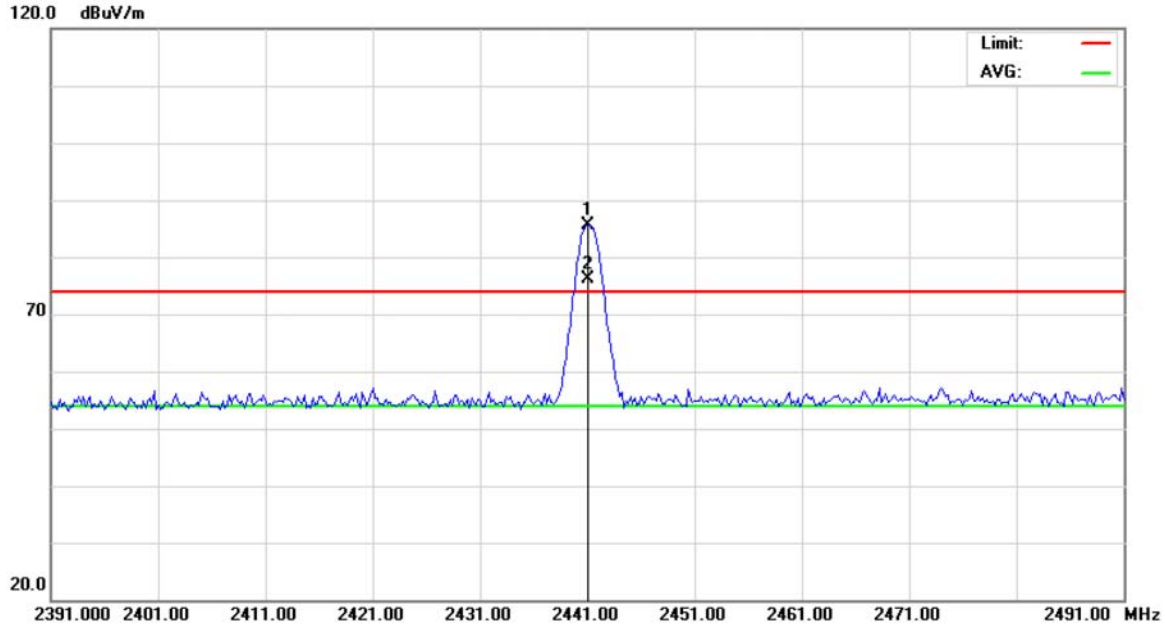
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4882.000	50.60	7.70	58.30	74.00	-15.70	peak	
2	*	4882.000	42.06	7.70	49.76	54.00	-4.24	AVG	
3		7322.890	43.78	15.10	58.88	74.00	-15.12	peak	
4		7322.890	30.81	15.10	45.91	54.00	-8.09	AVG	

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Orthogonal Axes:	X
Test Mode ：	Bluetooth / 1 Mbps / CH39		

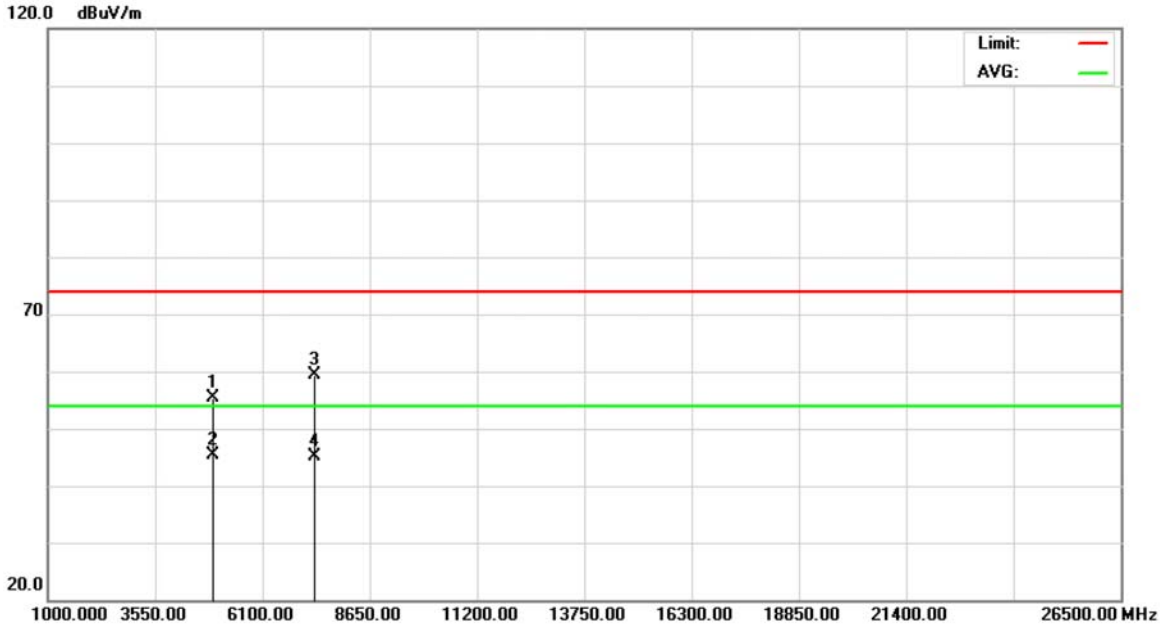
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2441.000	51.88	33.69	85.57	74.00	11.57	peak	
2	*	2441.000	42.33	33.69	76.02	54.00	22.02	AVG	

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Orthogonal Axes:	X
Test Mode ：	Bluetooth / 1 Mbps / CH39		

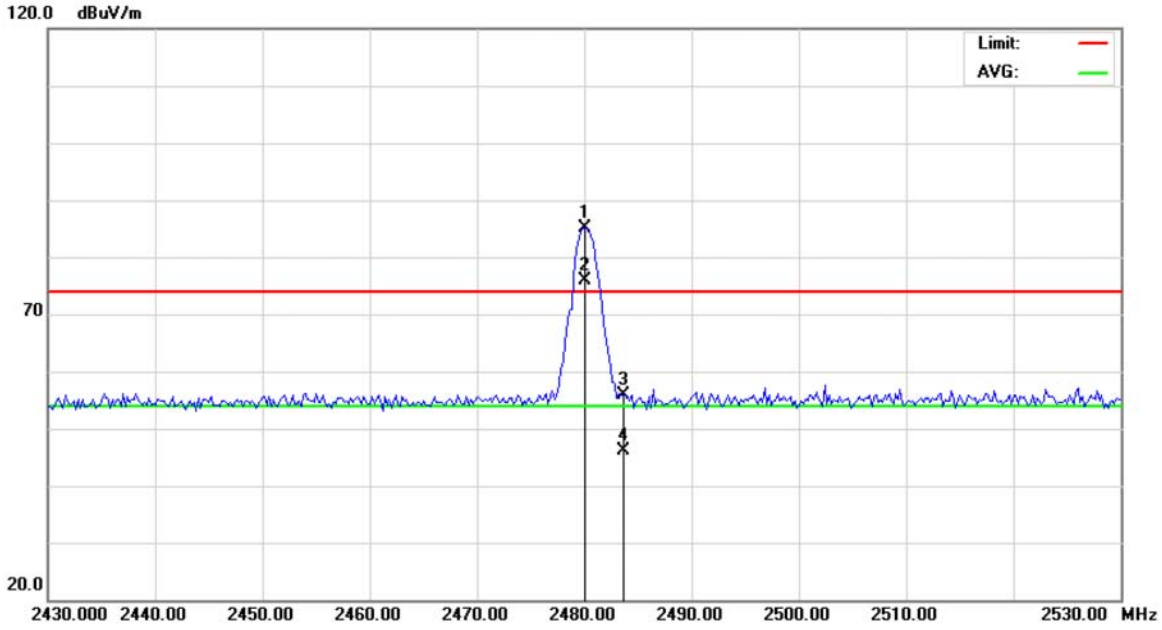
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4882.010	47.65	7.70	55.35	74.00	-18.65	peak	
2	*	4882.010	37.80	7.70	45.50	54.00	-8.50	AVG	
3		7322.760	44.28	15.10	59.38	74.00	-14.62	peak	
4		7322.760	29.94	15.10	45.04	54.00	-8.96	AVG	

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Orthogonal Axes:	X
Test Mode ：	Bluetooth / 1 Mbps / CH78		

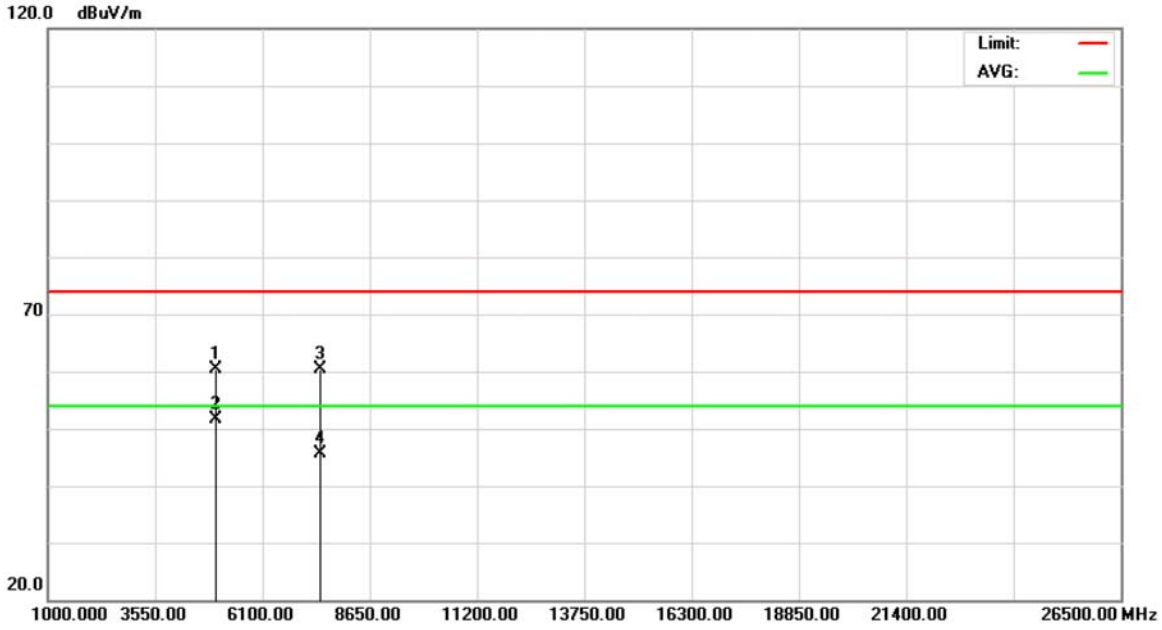
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2480.000	51.27	33.90	85.17	74.00	11.17	peak	
2	*	2480.000	41.86	33.90	75.76	54.00	21.76	AVG	
3		2483.500	21.87	33.92	55.79	74.00	-18.21	peak	
4		2483.500	12.20	33.92	46.12	54.00	-7.88	AVG	

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Orthogonal Axes:	X
Test Mode ：	Bluetooth / 1 Mbps / CH78		

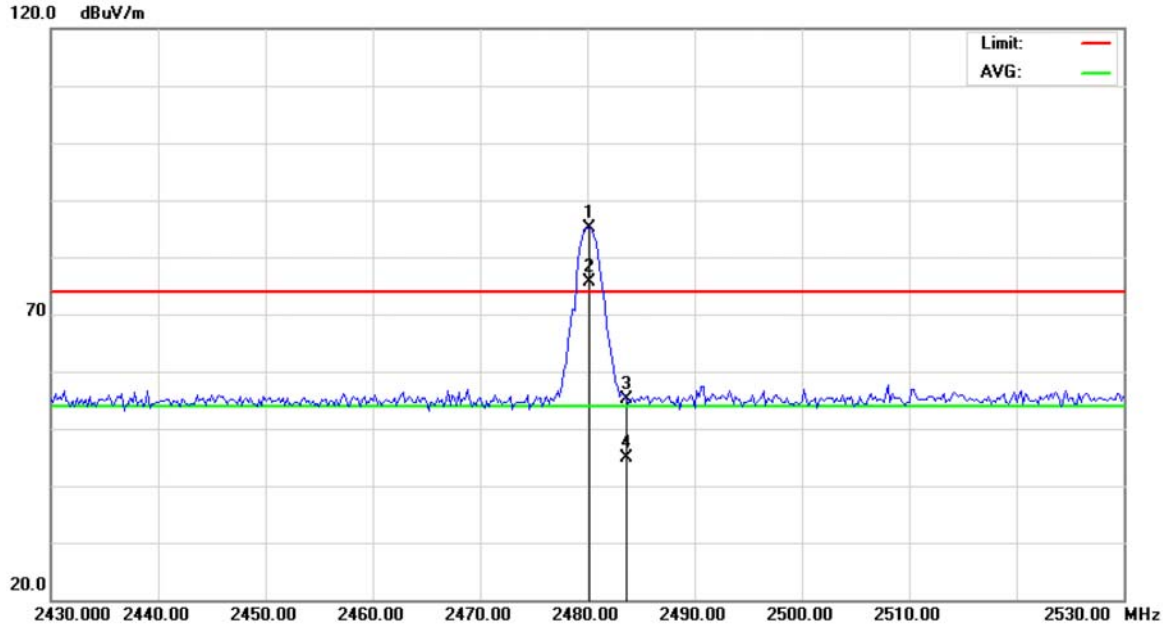
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4959.920	52.37	7.98	60.35	74.00	-13.65	peak	
2	*	4959.920	43.55	7.98	51.53	54.00	-2.47	AVG	
3		7439.180	44.98	15.40	60.38	74.00	-13.62	peak	
4		7439.180	30.31	15.40	45.71	54.00	-8.29	AVG	

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Orthogonal Axes:	X
Test Mode ：	Bluetooth / 1 Mbps / CH78		

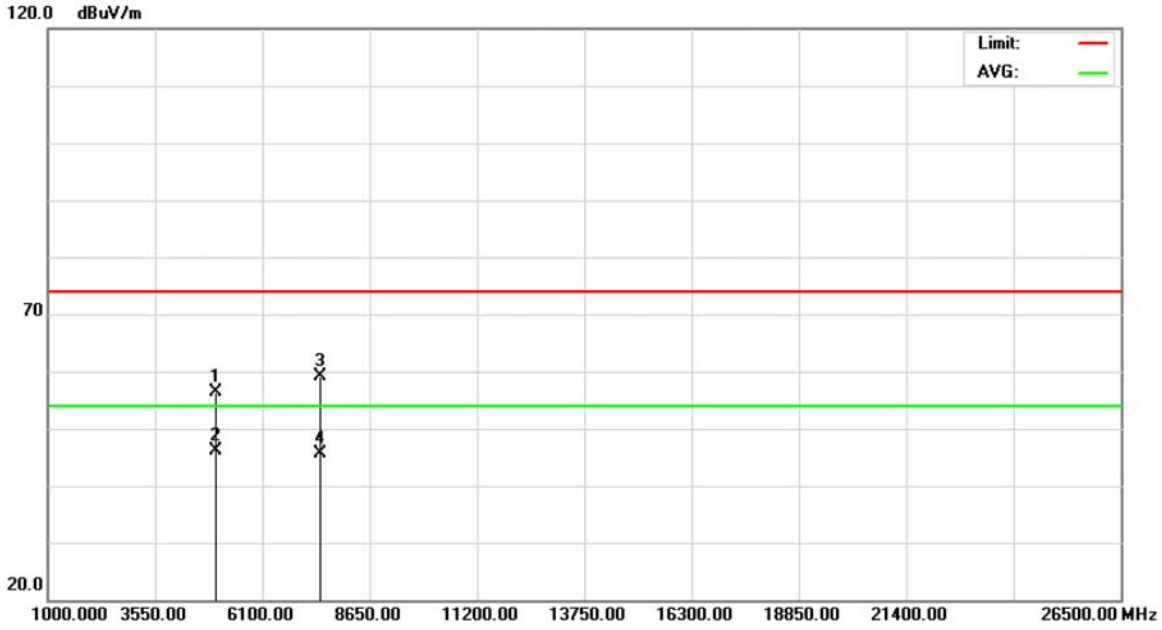
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2480.200	51.22	33.90	85.12	74.00	11.12	peak	
2	*	2480.200	41.70	33.90	75.60	54.00	21.60	AVG	
3		2483.500	21.28	33.92	55.20	74.00	-18.80	peak	
4		2483.500	11.02	33.92	44.94	54.00	-9.06	AVG	

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Orthogonal Axes:	X
Test Mode ：	Bluetooth / 1 Mbps / CH78		

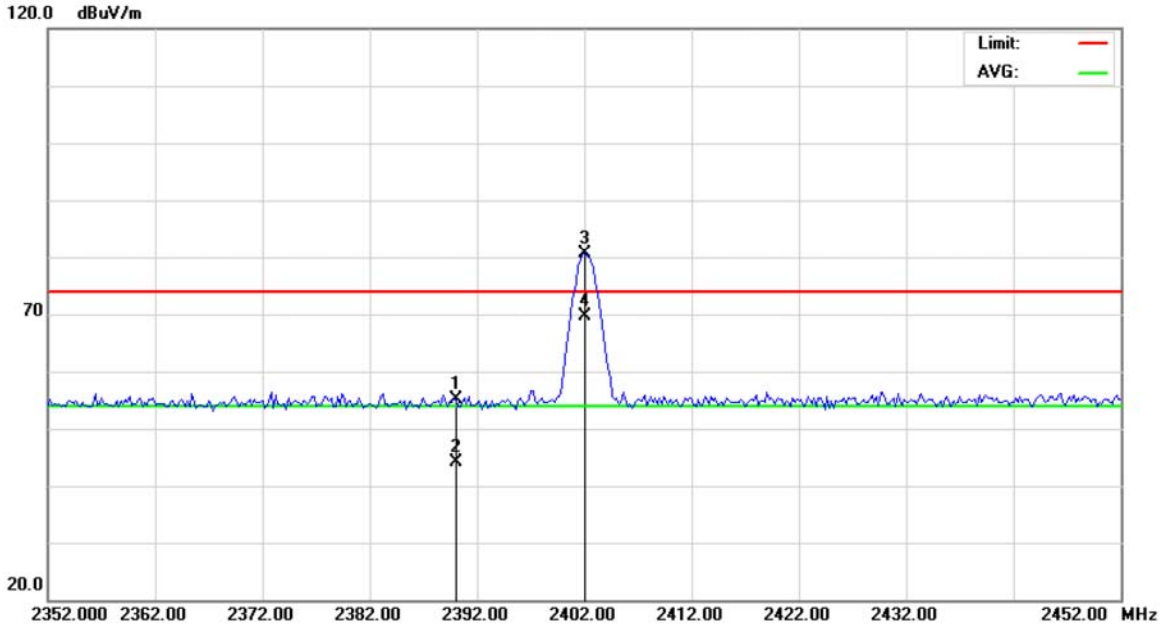
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4959.950	48.29	7.98	56.27	74.00	-17.73	peak	
2	*	4959.950	38.22	7.98	46.20	54.00	-7.80	AVG	
3		7437.440	43.82	15.40	59.22	74.00	-14.78	peak	
4		7439.260	30.25	15.40	45.65	54.00	-8.35	AVG	

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Orthogonal Axes:	X
Test Mode ：	Bluetooth / 3 Mbps / CH00		

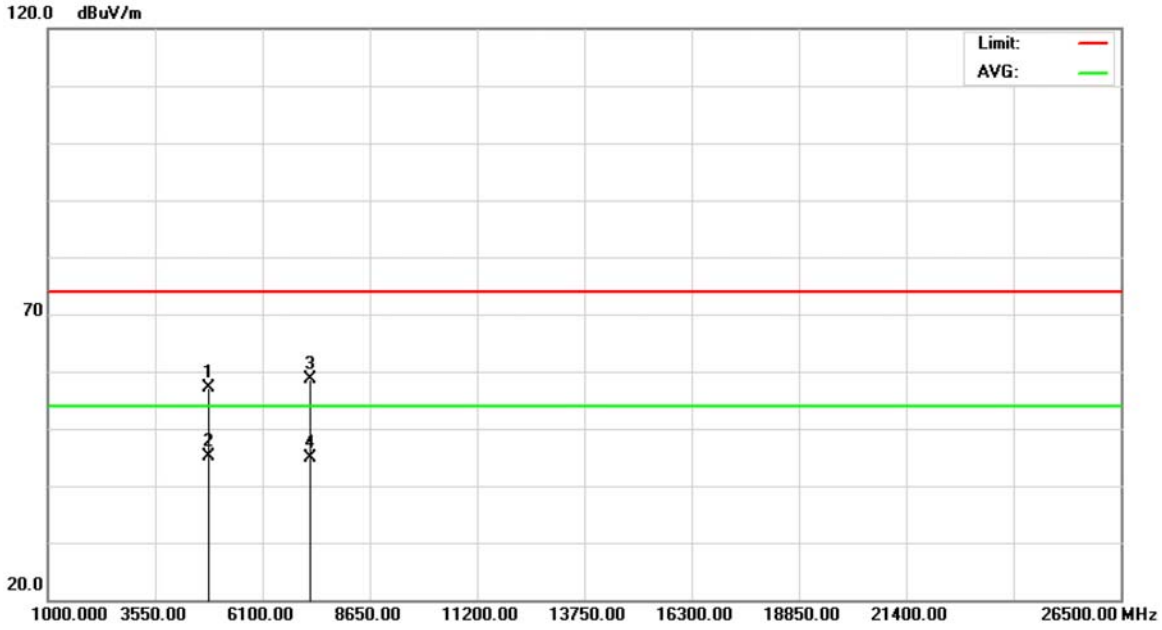
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	21.81	33.42	55.23	74.00	-18.77	peak	
2		2390.000	10.83	33.42	44.25	54.00	-9.75	AVG	
3	X	2402.000	47.03	33.49	80.52	74.00	6.52	peak	
4	*	2402.000	36.22	33.49	69.71	54.00	15.71	AVG	

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Orthogonal Axes:	X
Test Mode ：	Bluetooth / 3 Mbps / CH00		

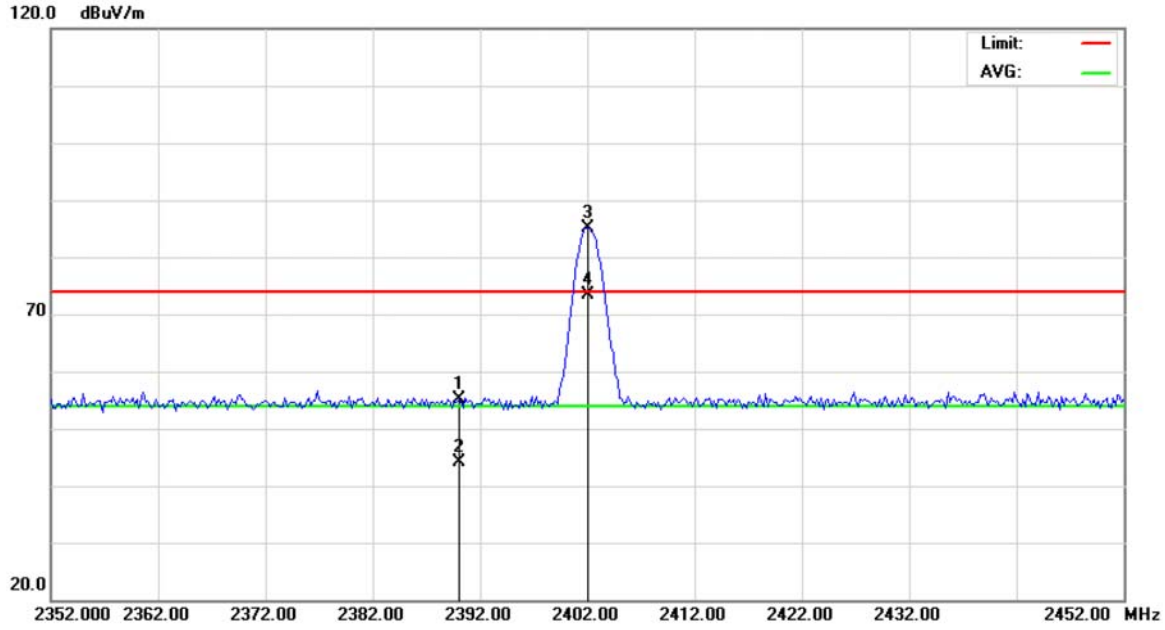
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4804.030	49.62	7.41	57.03	74.00	-16.97	peak	
2	*	4804.030	37.81	7.41	45.22	54.00	-8.78	AVG	
3		7206.170	43.80	14.79	58.59	74.00	-15.41	peak	
4		7206.170	30.11	14.79	44.90	54.00	-9.10	AVG	

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Orthogonal Axes:	X
Test Mode ：	Bluetooth / 3 Mbps / CH00		

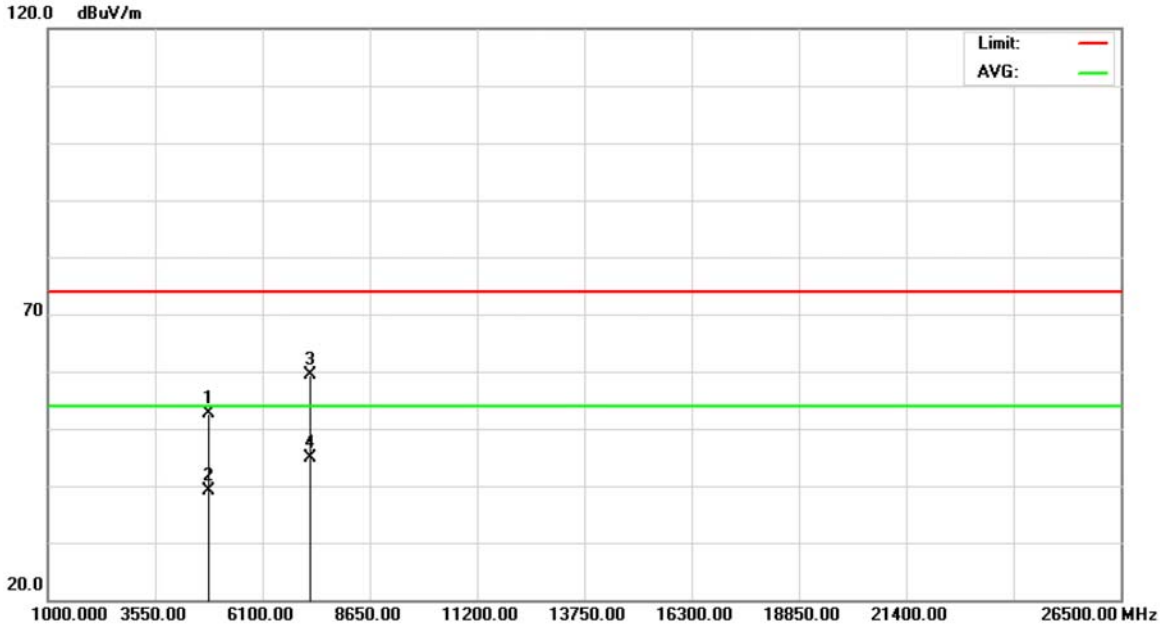
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	21.80	33.42	55.22	74.00	-18.78	peak	
2		2390.000	10.82	33.42	44.24	54.00	-9.76	AVG	
3	X	2402.000	51.73	33.49	85.22	74.00	11.22	peak	
4	*	2402.000	39.99	33.49	73.48	54.00	19.48	AVG	

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Orthogonal Axes:	X
Test Mode ：	Bluetooth / 3 Mbps / CH00		

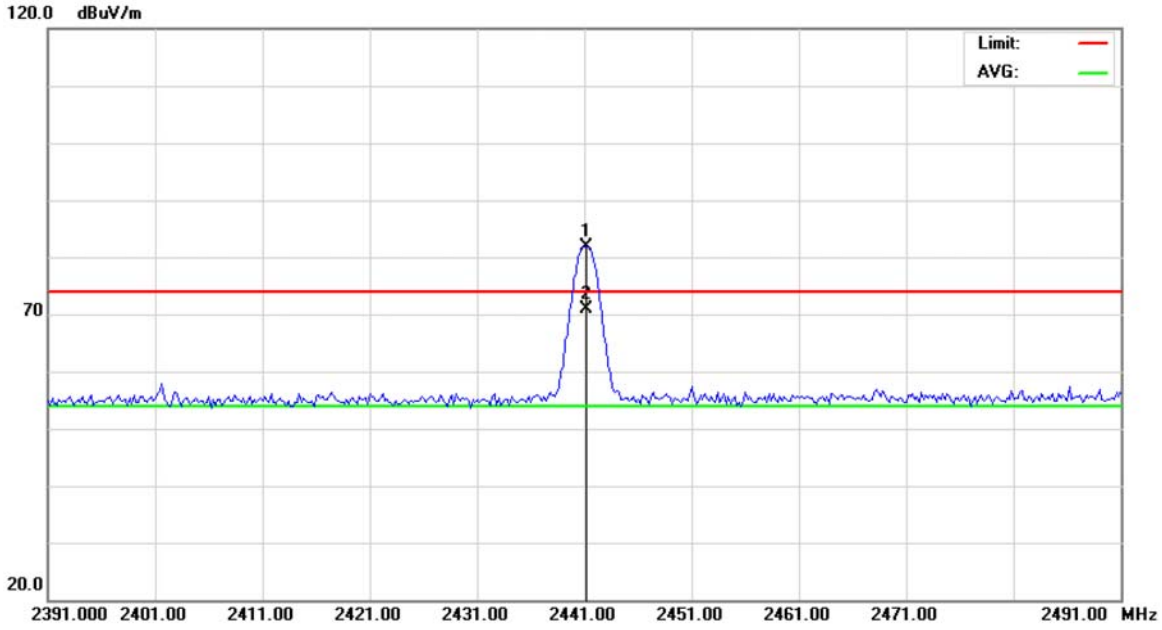
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4803.950	45.17	7.41	52.58	74.00	-21.42	peak	
2		4803.950	31.70	7.41	39.11	54.00	-14.89	AVG	
3		7206.290	44.71	14.79	59.50	74.00	-14.50	peak	
4	*	7206.290	30.05	14.79	44.84	54.00	-9.16	AVG	

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Orthogonal Axes:	X
Test Mode ：	Bluetooth / 3 Mbps / CH39		

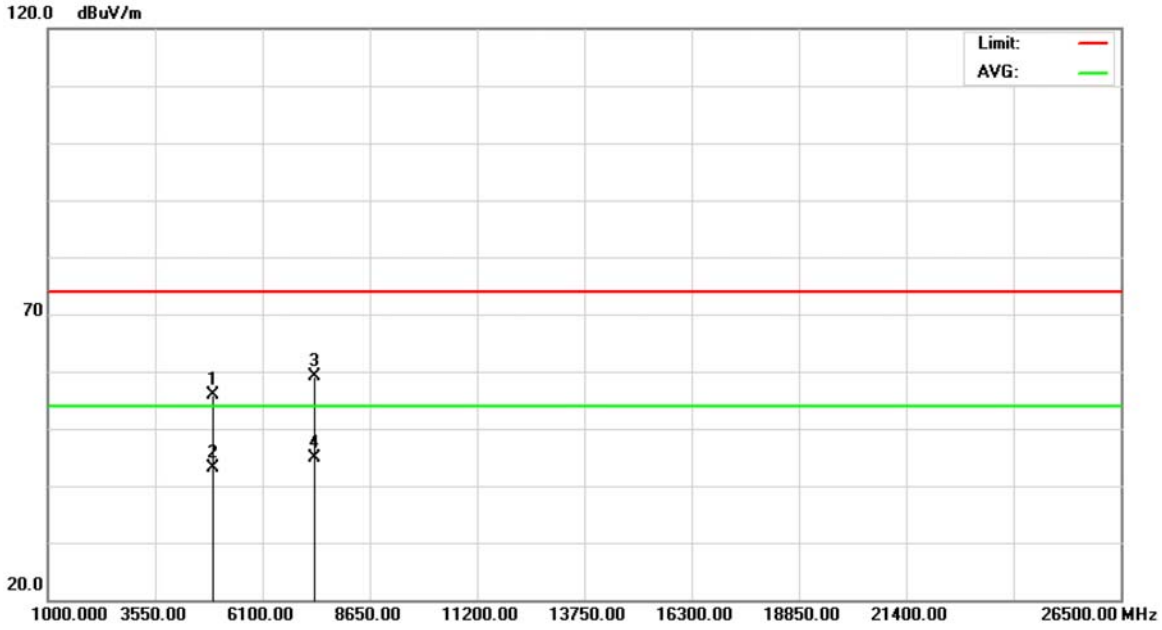
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2441.200	48.28	33.70	81.98	74.00	7.98	peak	
2	*	2441.200	37.14	33.70	70.84	54.00	16.84	AVG	

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Orthogonal Axes:	X
Test Mode ：	Bluetooth / 3 Mbps / CH39		

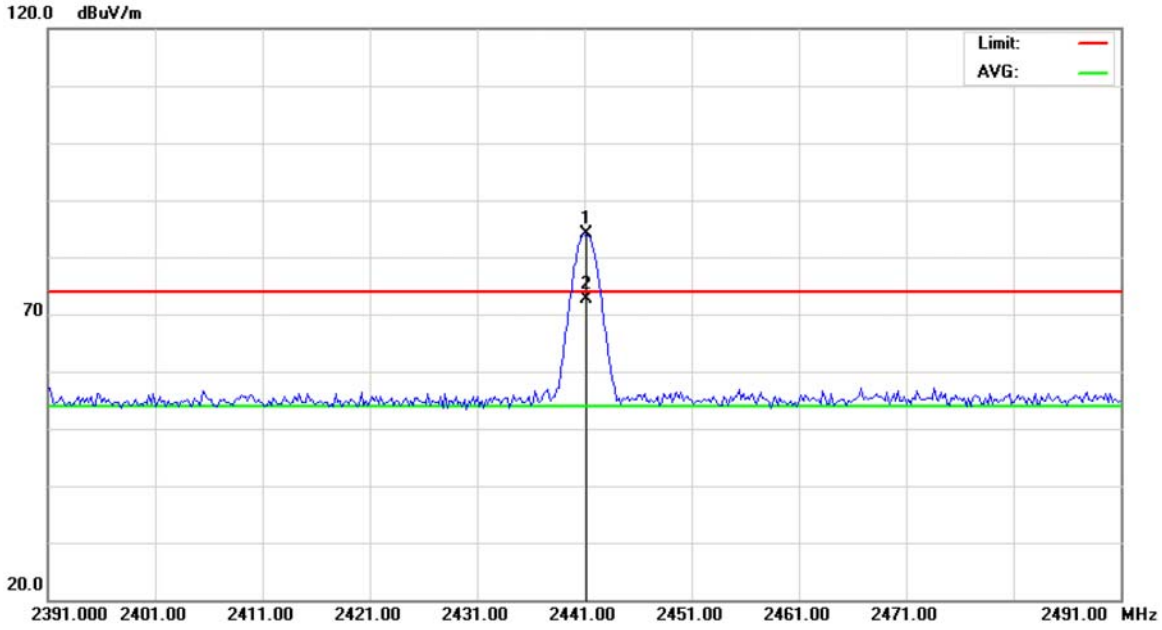
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4881.950	48.10	7.69	55.79	74.00	-18.21	peak	
2		4881.950	35.48	7.69	43.17	54.00	-10.83	AVG	
3		7323.230	43.96	15.10	59.06	74.00	-14.94	peak	
4	*	7323.230	29.73	15.10	44.83	54.00	-9.17	AVG	

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Orthogonal Axes:	X
Test Mode ：	Bluetooth / 3 Mbps / CH39		

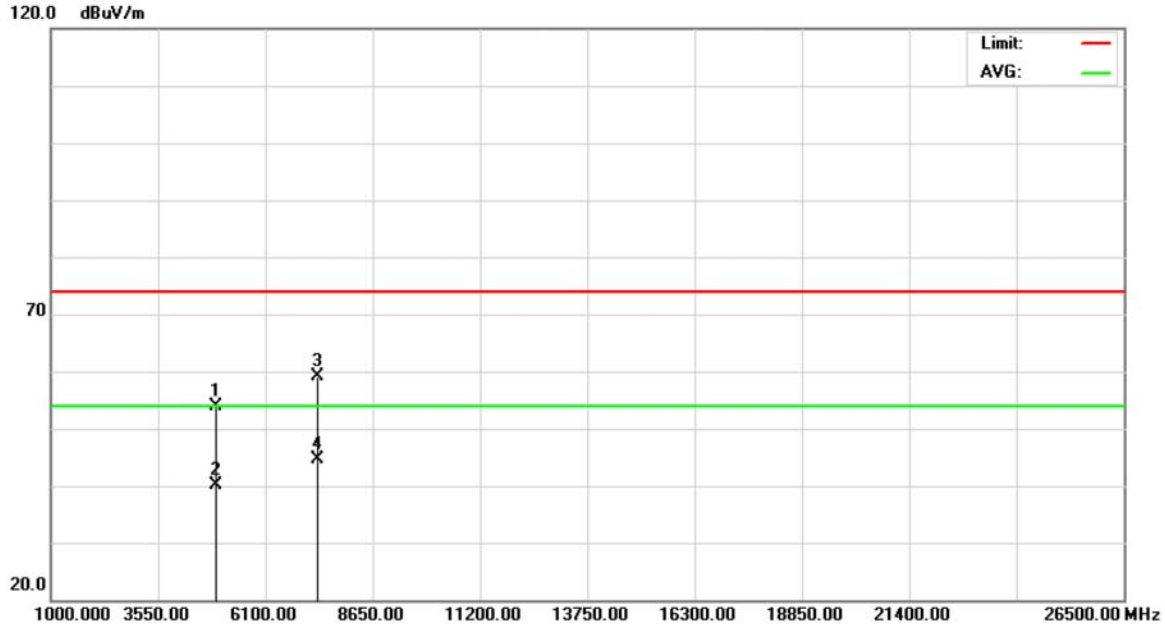
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2441.200	50.38	33.70	84.08	74.00	10.08	peak	
2	*	2441.200	38.91	33.70	72.61	54.00	18.61	AVG	

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Orthogonal Axes:	X
Test Mode ：	Bluetooth / 3 Mbps / CH39		

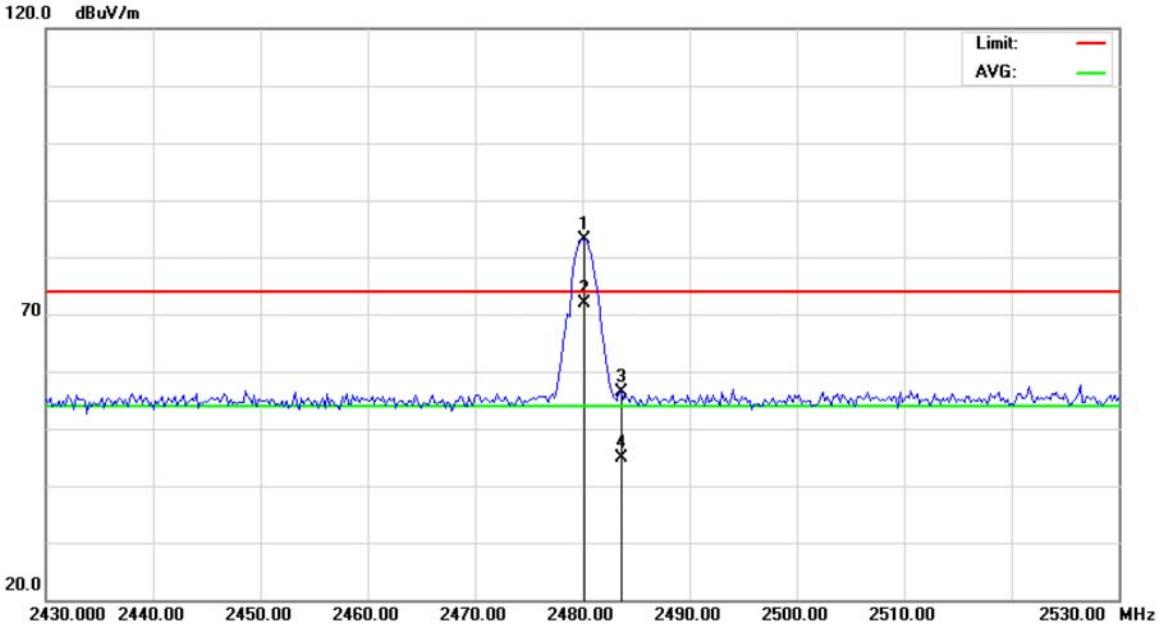
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4881.930	46.23	7.69	53.92	74.00	-20.08	peak	
2		4881.930	32.53	7.69	40.22	54.00	-13.78	AVG	
3		7322.520	44.09	15.09	59.18	74.00	-14.82	peak	
4	*	7322.520	29.65	15.09	44.74	54.00	-9.26	AVG	

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Orthogonal Axes:	X
Test Mode ：	Bluetooth / 3 Mbps / CH78		

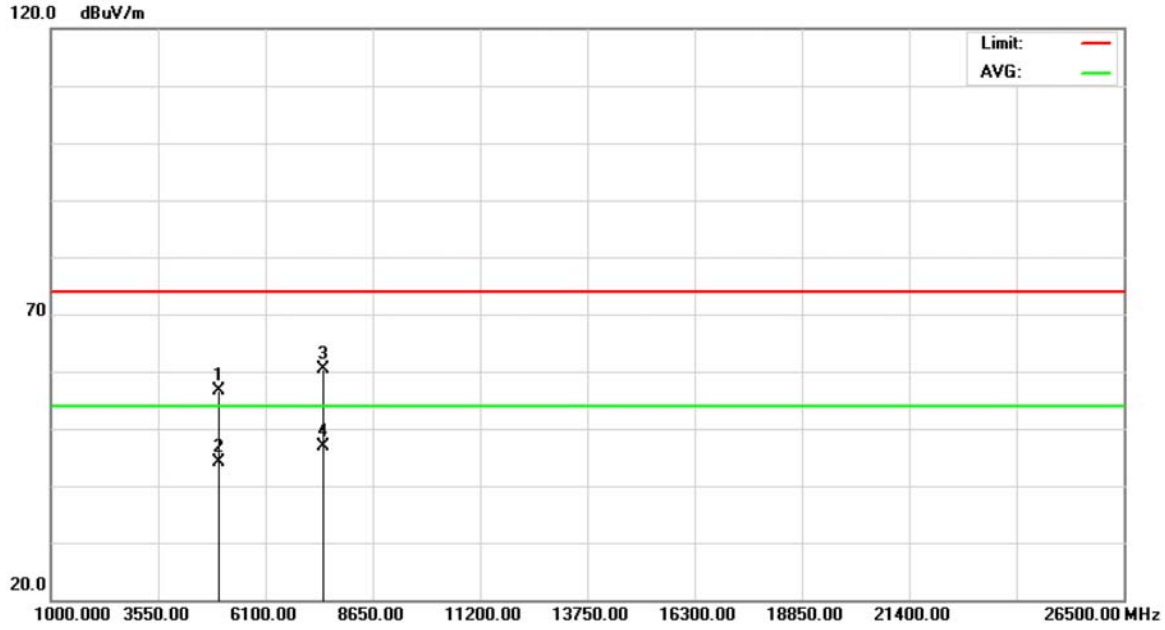
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2480.200	49.20	33.90	83.10	74.00	9.10	peak	
2	*	2480.200	38.09	33.90	71.99	54.00	17.99	AVG	
3		2483.500	22.44	33.92	56.36	74.00	-17.64	peak	
4		2483.500	10.90	33.92	44.82	54.00	-9.18	AVG	

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Orthogonal Axes:	X
Test Mode ：	Bluetooth / 3 Mbps / CH78		

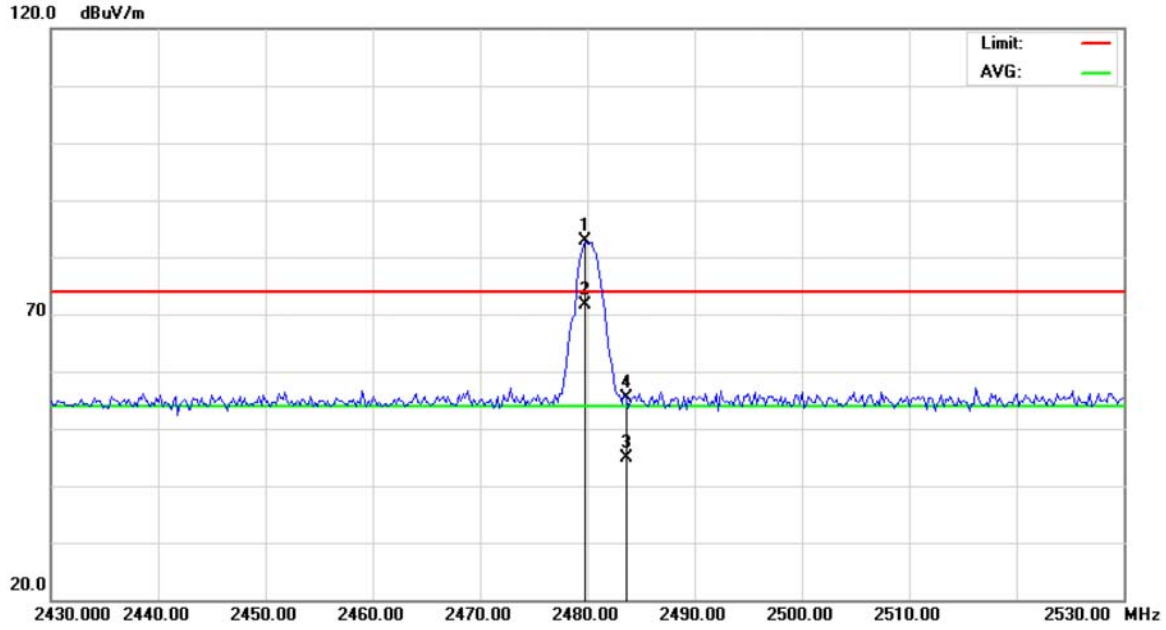
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4959.950	48.67	7.98	56.65	74.00	-17.35	peak	
2		4959.950	36.22	7.98	44.20	54.00	-9.80	AVG	
3		7439.170	45.10	15.40	60.50	74.00	-13.50	peak	
4	*	7439.170	31.54	15.40	46.94	54.00	-7.06	AVG	

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Orthogonal Axes:	X
Test Mode ：	Bluetooth / 3 Mbps / CH78		

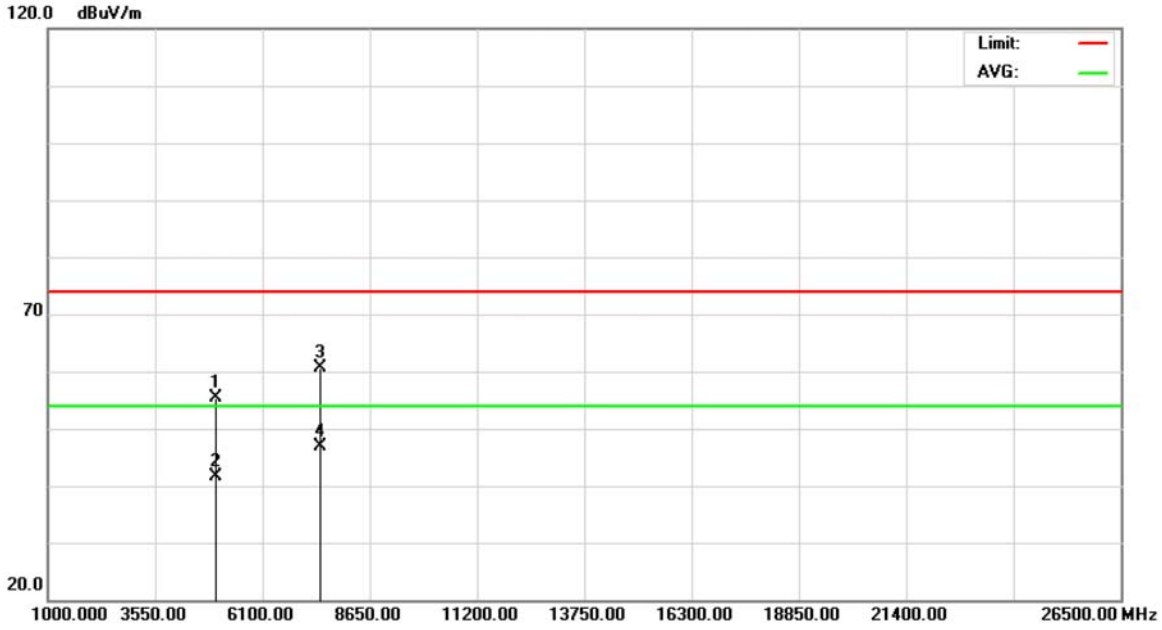
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2479.800	48.96	33.90	82.86	74.00	8.86	peak	
2	*	2479.800	37.79	33.90	71.69	54.00	17.69	AVG	
3		2483.500	10.93	33.92	44.85	74.00	-29.15	peak	
4	X	2483.500	21.41	33.92	55.33	54.00	1.33	AVG	

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Orthogonal Axes:	X
Test Mode ：	Bluetooth / 3 Mbps / CH78		

Polarization: Horizontal

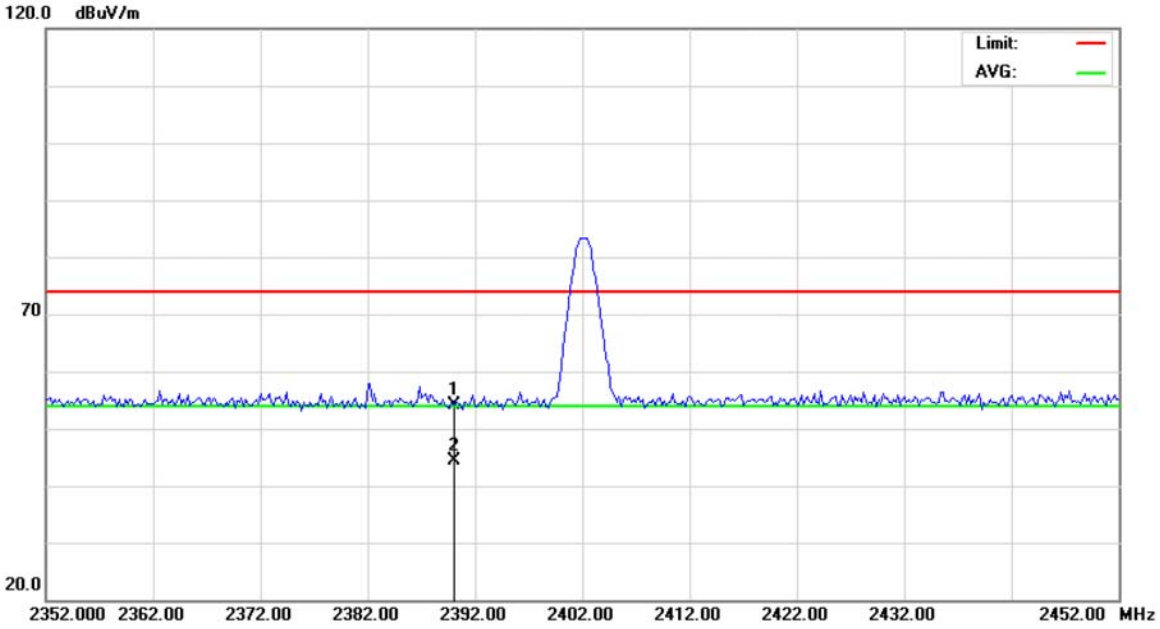


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4960.150	47.37	7.98	55.35	74.00	-18.65	peak	
2		4960.150	33.61	7.98	41.59	54.00	-12.41	AVG	
3		7439.290	45.24	15.40	60.64	74.00	-13.36	peak	
4	*	7439.290	31.51	15.40	46.91	54.00	-7.09	AVG	

4.2.9 TEST RESULTS-Restricted Bands Requirements

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Orthogonal Axes:	X
Test Mode ：	Bluetooth / 1 Mbps		
Note：	The transmitter was setup to transmit at the lowest channel and the field strength was measured at 2310-2390 MHz.		

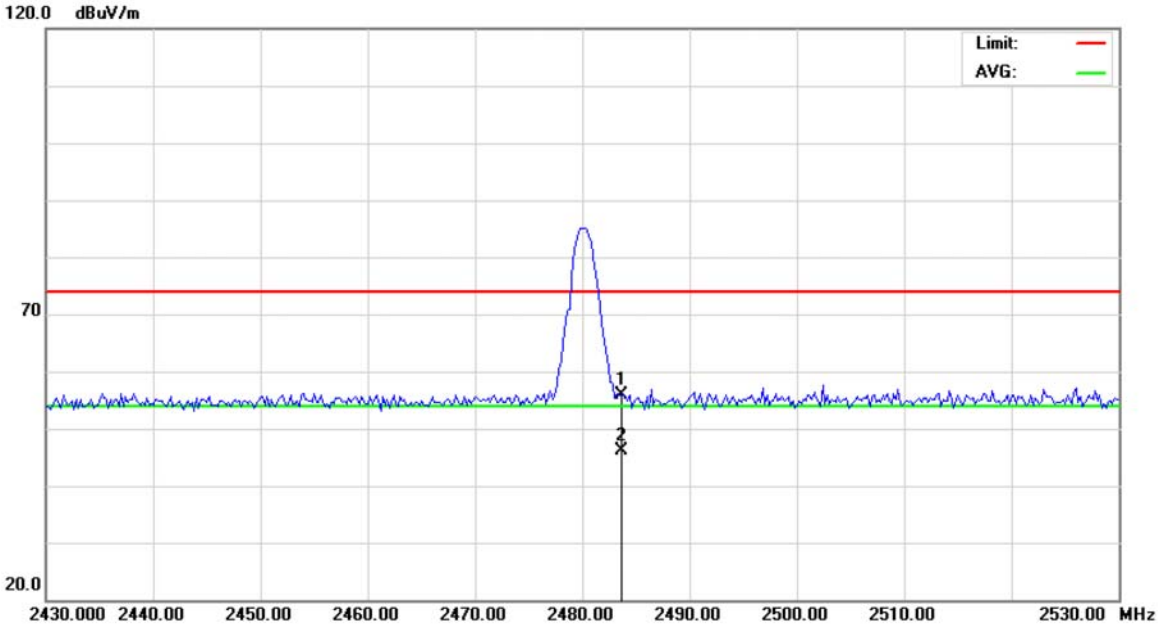
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	20.73	33.42	54.15	74.00	-19.85	peak	
2	*	2390.000	10.87	33.42	44.29	54.00	-9.71	AVG	

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Orthogonal Axes:	X
Test Mode ：	Bluetooth / 1 Mbps		
Note：	The transmitter was setup to transmit at the highest channel and the field strength was measured at 2483.5-2500 MHz.		

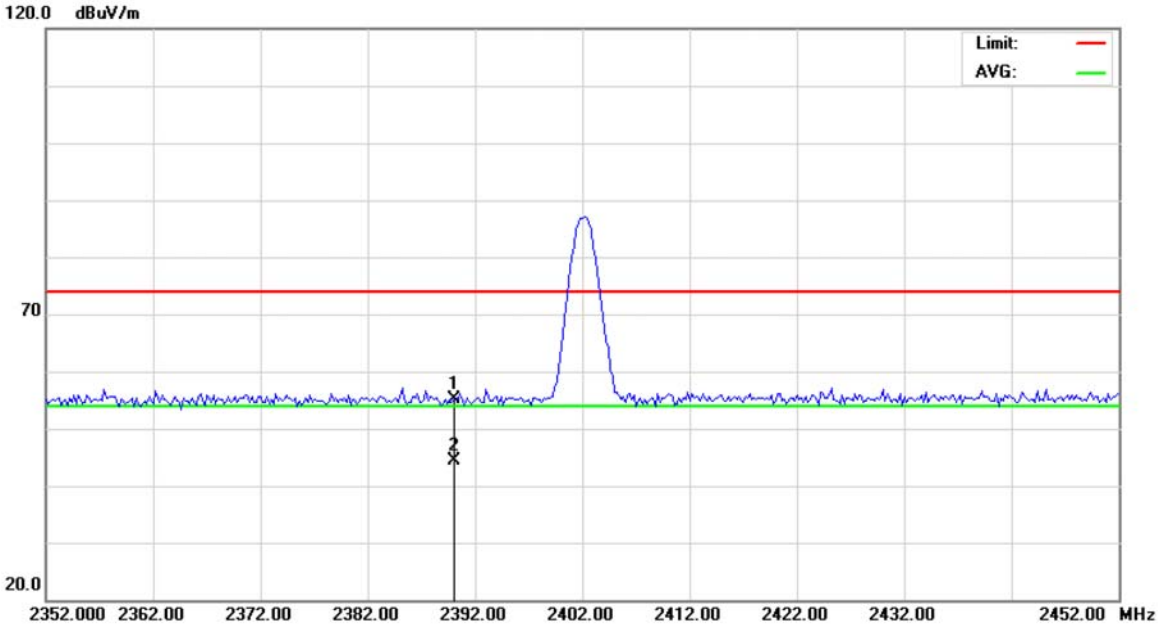
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2483.500	21.87	33.92	55.79	74.00	-18.21	peak	
2	*	2483.500	12.20	33.92	46.12	54.00	-7.88	AVG	

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Orthogonal Axes:	X
Test Mode ：	Bluetooth / 1 Mbps		
Note：	The transmitter was setup to transmit at the lowest channel and the field strength was measured at 2310-2390 MHz.		

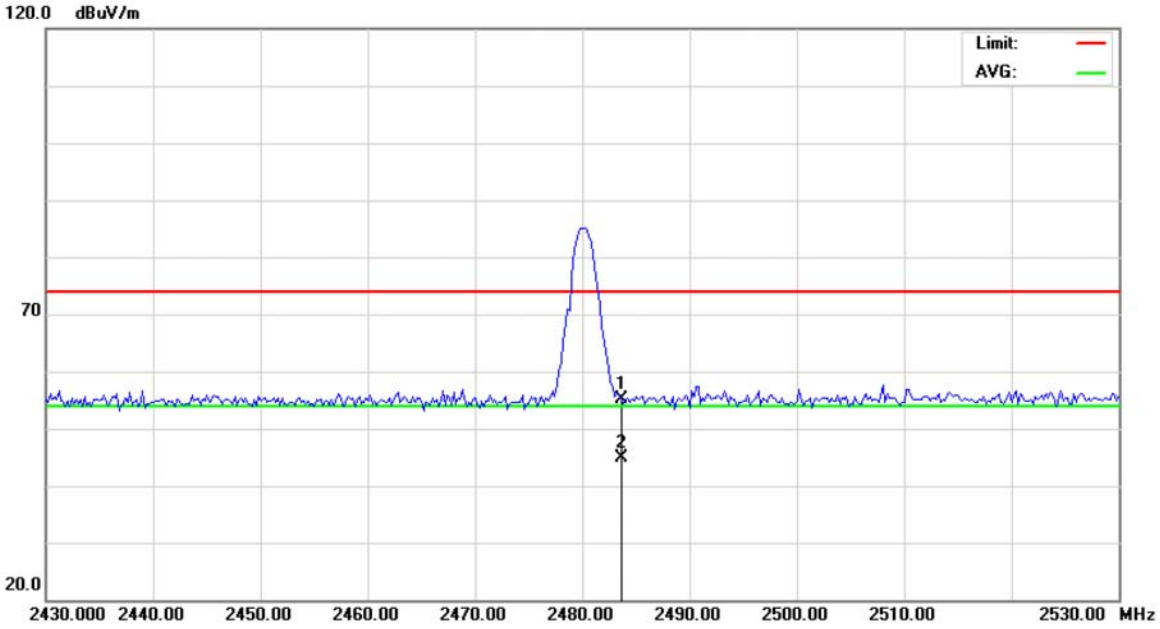
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	21.71	33.42	55.13	74.00	-18.87	peak	
2	*	2390.000	10.85	33.42	44.27	54.00	-9.73	AVG	

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Orthogonal Axes:	X
Test Mode ：	Bluetooth / 1 Mbps		
Note：	The transmitter was setup to transmit at the highest channel and the field strength was measured at 2483.5-2500 MHz.		

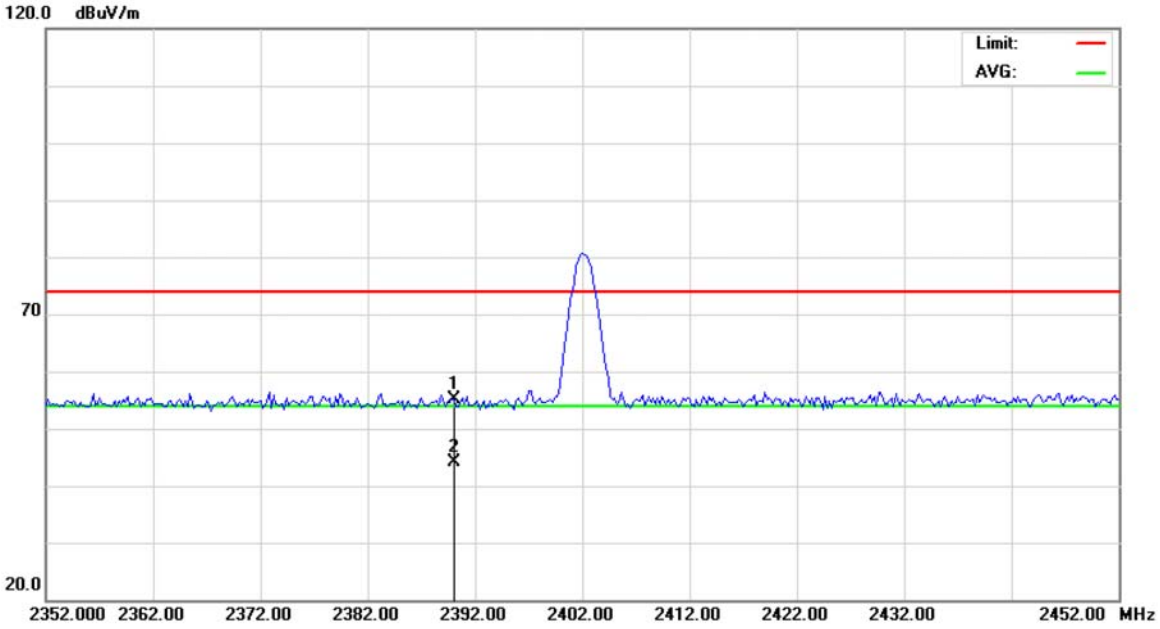
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2483.500	21.28	33.92	55.20	74.00	-18.80	peak	
2	*	2483.500	11.02	33.92	44.94	54.00	-9.06	AVG	

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Orthogonal Axes:	X
Test Mode ：	Bluetooth / 3 Mbps		
Note：	The transmitter was setup to transmit at the lowest channel and the field strength was measured at 2310-2390 MHz.		

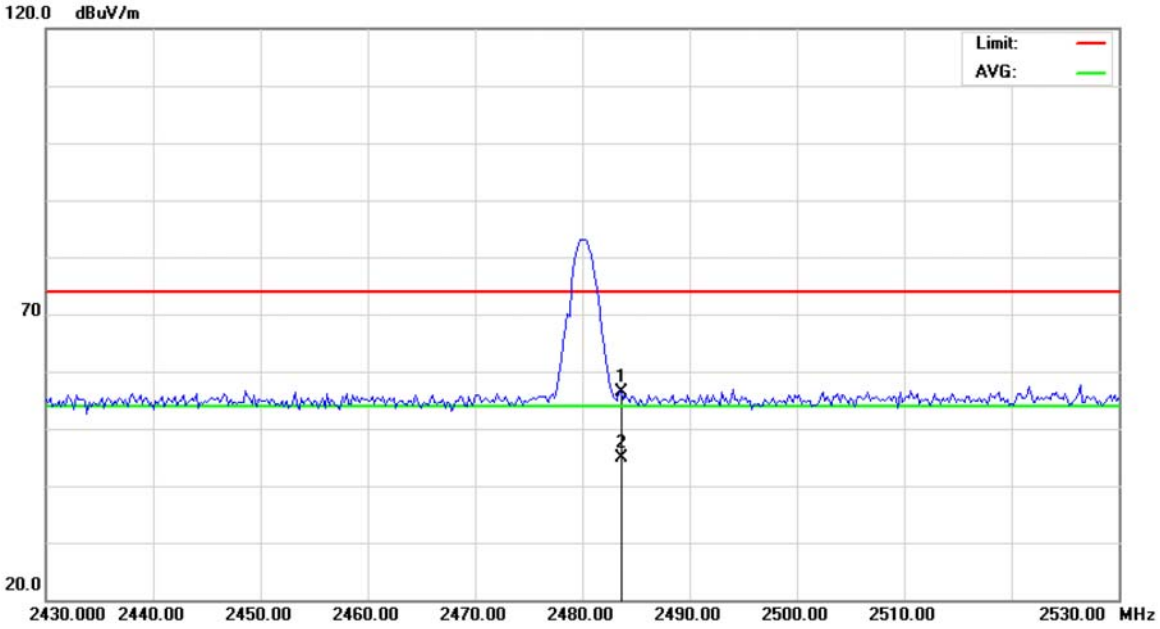
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	21.81	33.42	55.23	74.00	-18.77	peak	
2	*	2390.000	10.83	33.42	44.25	54.00	-9.75	AVG	

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Orthogonal Axes:	X
Test Mode ：	Bluetooth / 3 Mbps		
Note：	The transmitter was setup to transmit at the highest channel and the field strength was measured at 2483.5-2500 MHz.		

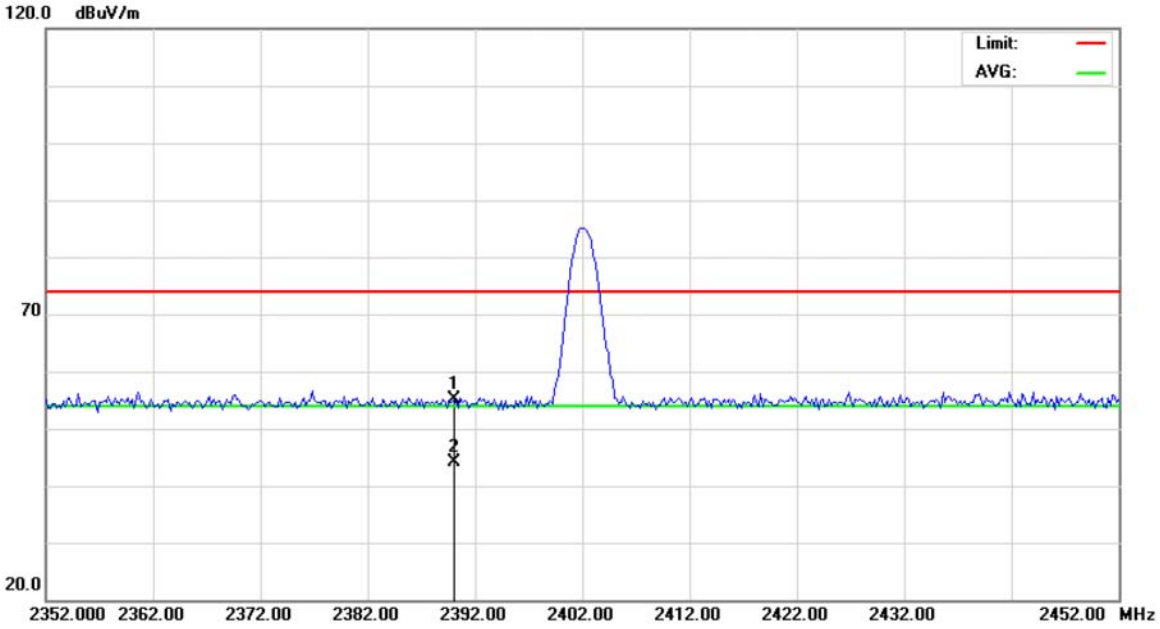
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2483.500	22.44	33.92	56.36	74.00	-17.64	peak	
2	*	2483.500	10.90	33.92	44.82	54.00	-9.18	AVG	

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Orthogonal Axes:	X
Test Mode ：	Bluetooth / 3 Mbps		
Note：	The transmitter was setup to transmit at the lowest channel and the field strength was measured at 2310-2390 MHz.		

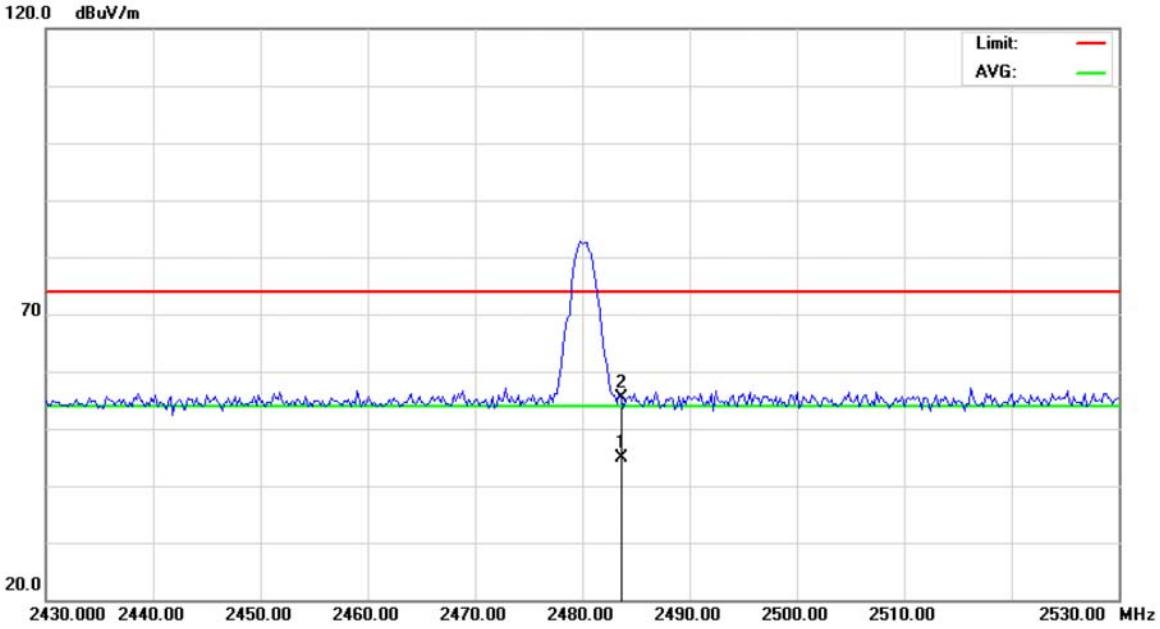
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	21.80	33.42	55.22	74.00	-18.78	peak	
2	*	2390.000	10.82	33.42	44.24	54.00	-9.76	AVG	

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Orthogonal Axes:	X
Test Mode ：	Bluetooth / 3 Mbps		
Note：	The transmitter was setup to transmit at the highest channel and the field strength was measured at 2483.5-2500 MHz.		

Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2483.500	10.93	33.92	44.85	74.00	-29.15	peak	
2	*	2483.500	21.41	33.92	55.33	54.00	1.33	AVG	

5. NUMBER OF HOPPING CHANNEL

5.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C			
Section	Test Item	Frequency Range (MHz)	Result
15.247 (a)(1)(ii)	Number of Hopping Channel	2400-2483.5	PASS

5.1.1 MEASUREMENT INSTRUMENTS LIST AND SETTING

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-40	100129	Oct. 06, 2012

Remark: ” N/A” denotes No Model Name, Serial No. or No Calibration specified.

Spectrum Parameters	Setting
Attenuation	Auto
Span Frequency	> Operating Frequency Range
RB	100 kHz
VB	100 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

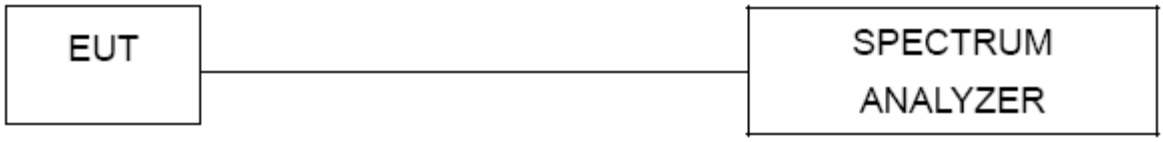
5.1.2 TEST PROCEDURE

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=100KHz, Sweep time = Auto.

5.1.3 DEVIATION FROM STANDARD

No deviation.

5.1.4 TEST SETUP



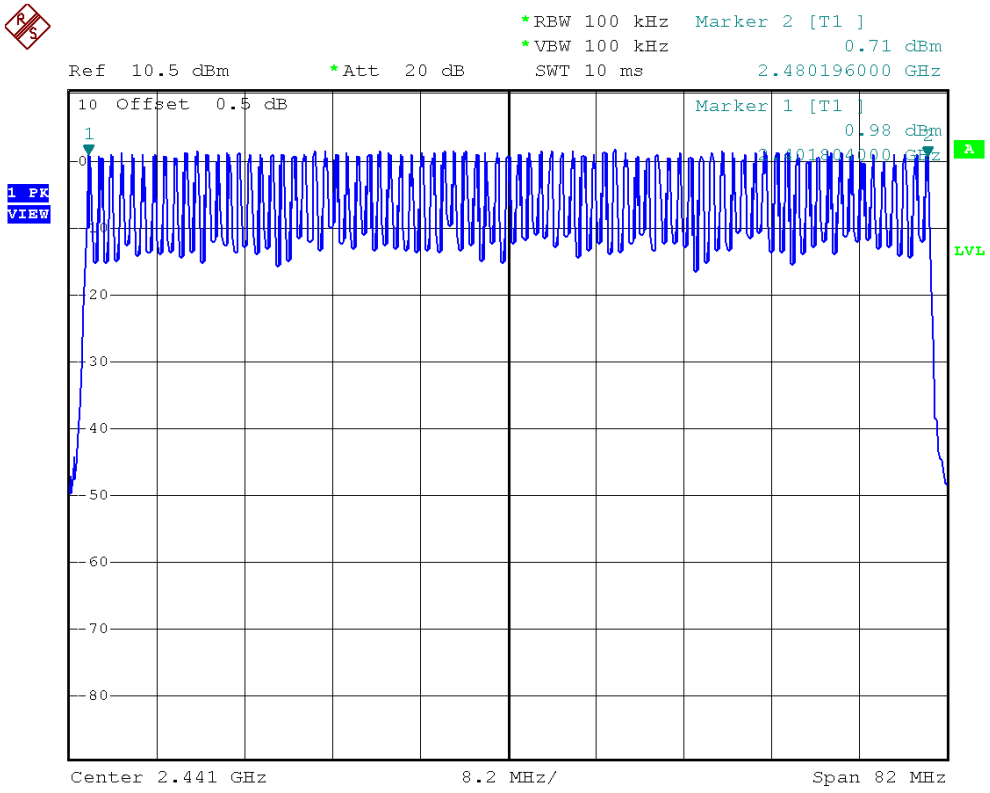
5.1.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

5.1.6 TEST RESULTS

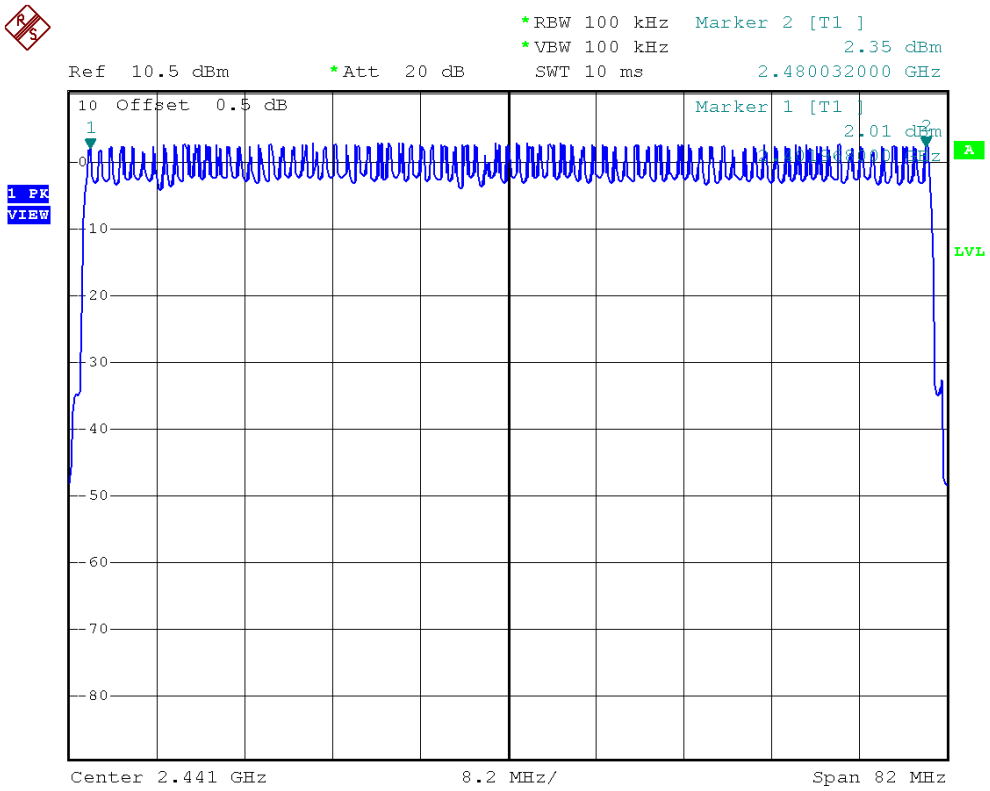
EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage ：	AC 120V/60Hz		
Test Mode ：	Bluetooth / 1 Mbps		

Number of Hopping Channel	79



EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage ：	AC 120V/60Hz		
Test Mode ：	Bluetooth / 3 Mbps		

Number of Hopping Channel	79



6. AVERAGE TIME OF OCCUPANCY

6.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247 (a)(1)(ii)	Average Time of Occupancy	< = 0.4 sec (a 30 second period)	2400-2483.5	PASS

6.1.1 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-40	100129	Oct. 06, 2012

Remark: “N/A” denotes No Model Name, No Serial No. or No Calibration specified.

6.1.2 TEST PROCEDURE

a. The transmitter output (antenna port) was connected to the spectrum analyser
b. Set RBW of spectrum analyzer to 100kHz and VBW to 100kHz.
c. Use a video trigger with the trigger level set to enable triggering only on full pulses.
d. Sweep Time is more than once pulse time.
e. Set the center frequency on any frequency would be measure and set the frequency span to zero span.
f. Measure the maximum time duration of one single pulse.
g. Set the EUT for DH5, DH3 and DH1 packet transmitting.
h. Measure the maximum time duration of one single pulse.
i. DH5 Packet permit maximum 1600/ 79 / 6 = 3.37 hops per second in each channel (5 time slots RX, 1 time slot TX). So, the dwell time is the time duration of the pulse times 3.37 x 31.6 = 106.6 within 31.6 seconds.
j. DH3 Packet permit maximum 1600 / 79 / 4 = 5.06 hops per second in each channel (3 time slots RX, 1 time slot TX). So, the dwell time is the time duration of the pulse times 5.06 x 31.6 = 160 within 31.6 seconds.
k. DH1 Packet permit maximum 1600 / 79 /2 = 10.12 hops per second in each channel (1 time slot RX, 1 time slot TX). So, the dwell time is the time duration of the pulse times 10.12 x 31.6 = 320 within 31.6 seconds.

6.1.3 DEVIATION FROM STANDARD

No deviation.

6.1.4 TEST SETUP

6.1.5 EUT OPERATION CONDITIONS

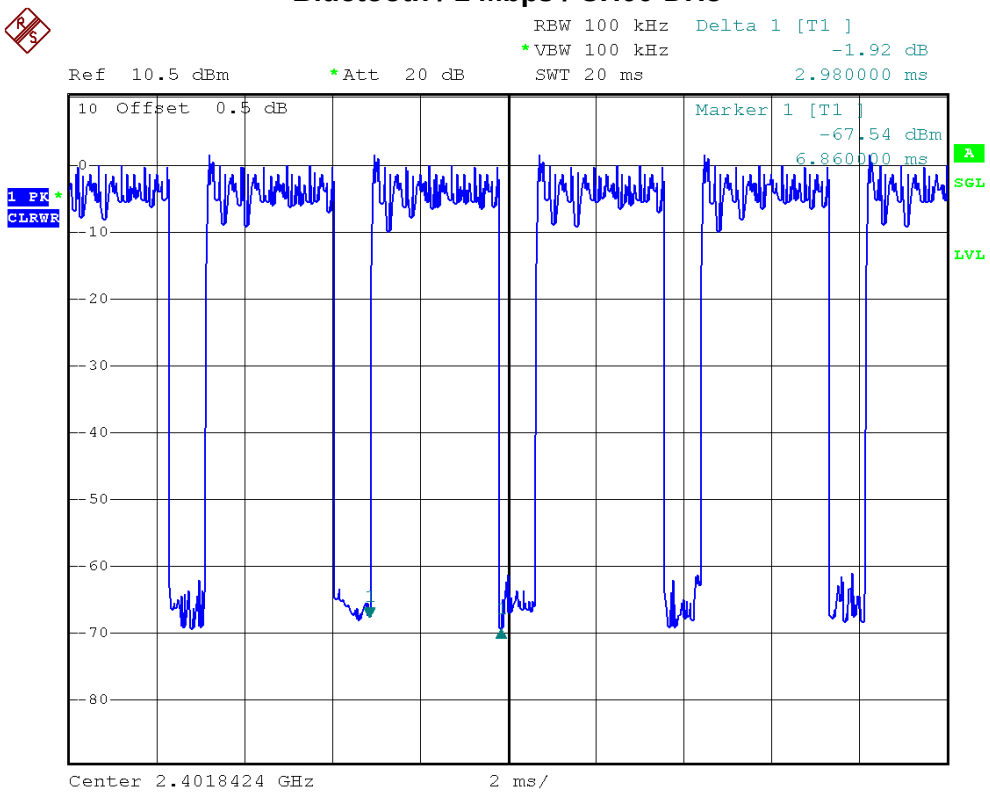
The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

6.1.6 TEST RESULTS

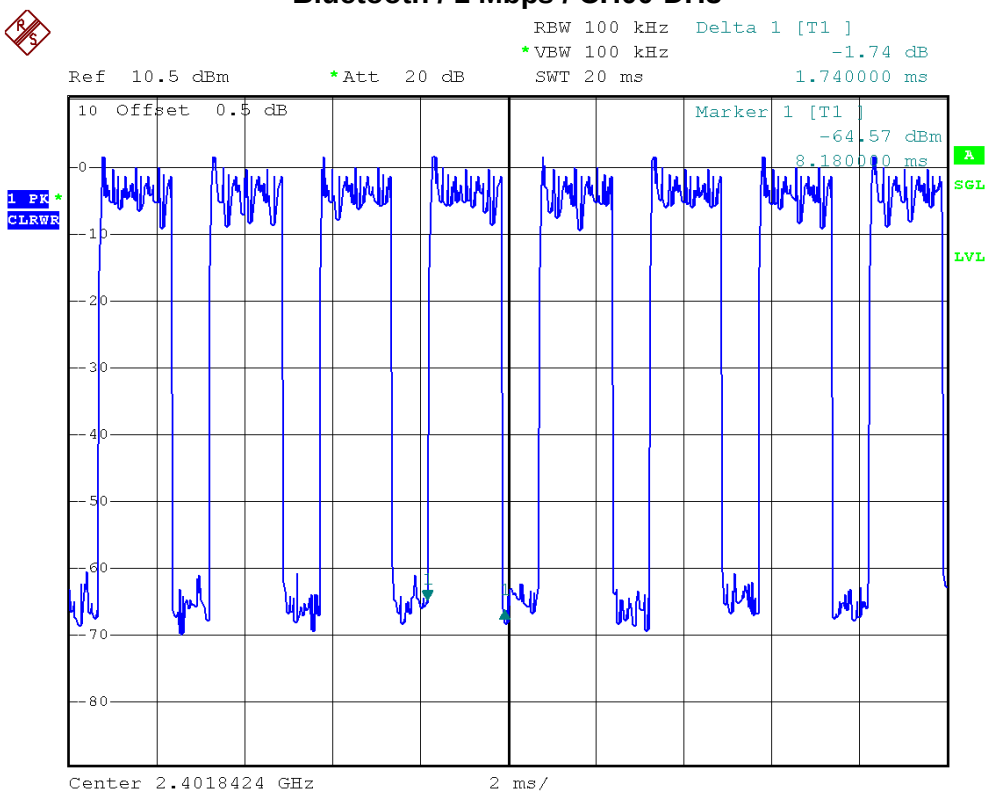
EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage ：	AC 120V/60Hz		
Test Mode ：	Bluetooth / 1 Mbps / CH00-DH5/DH3/DH1		

Data Packet	Frequency	Pulse Duration (ms)	Dwell Time (s)	Limits (s)
DH5	2402 MHz	2.9800	0.3179	0.4000
DH3	2402 MHz	1.7400	0.2784	0.4000
DH1	2402 MHz	0.4600	0.1472	0.4000

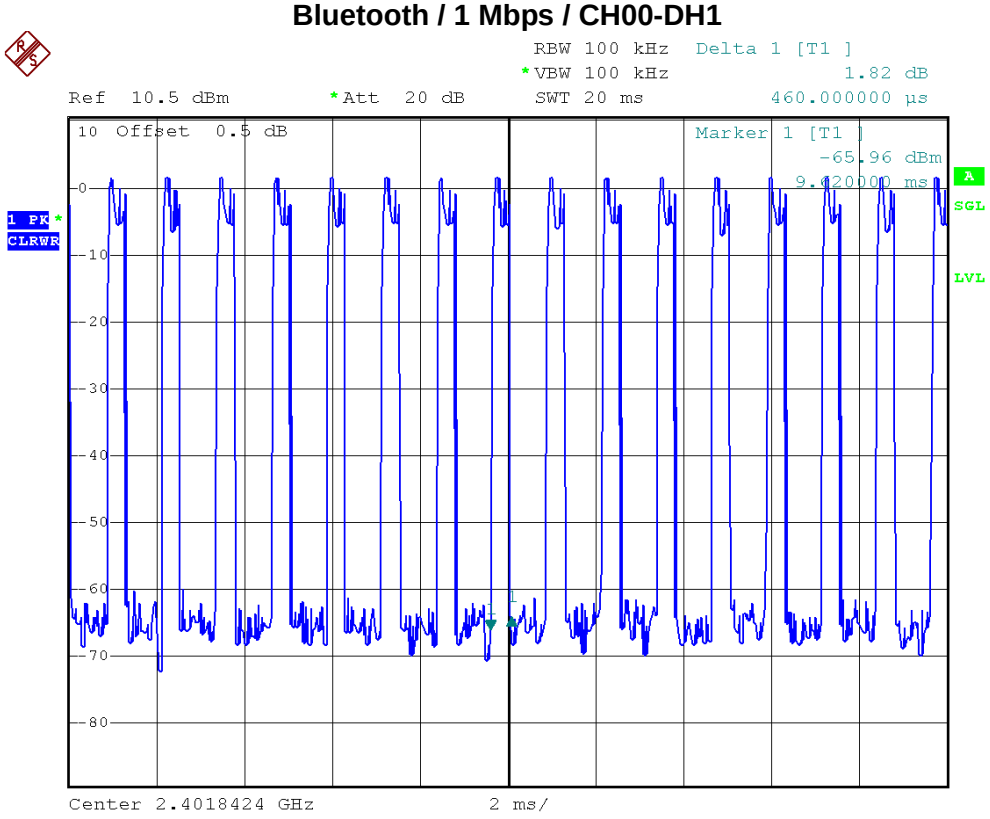
Bluetooth / 1 Mbps / CH00-DH5



Bluetooth / 1 Mbps / CH00-DH3



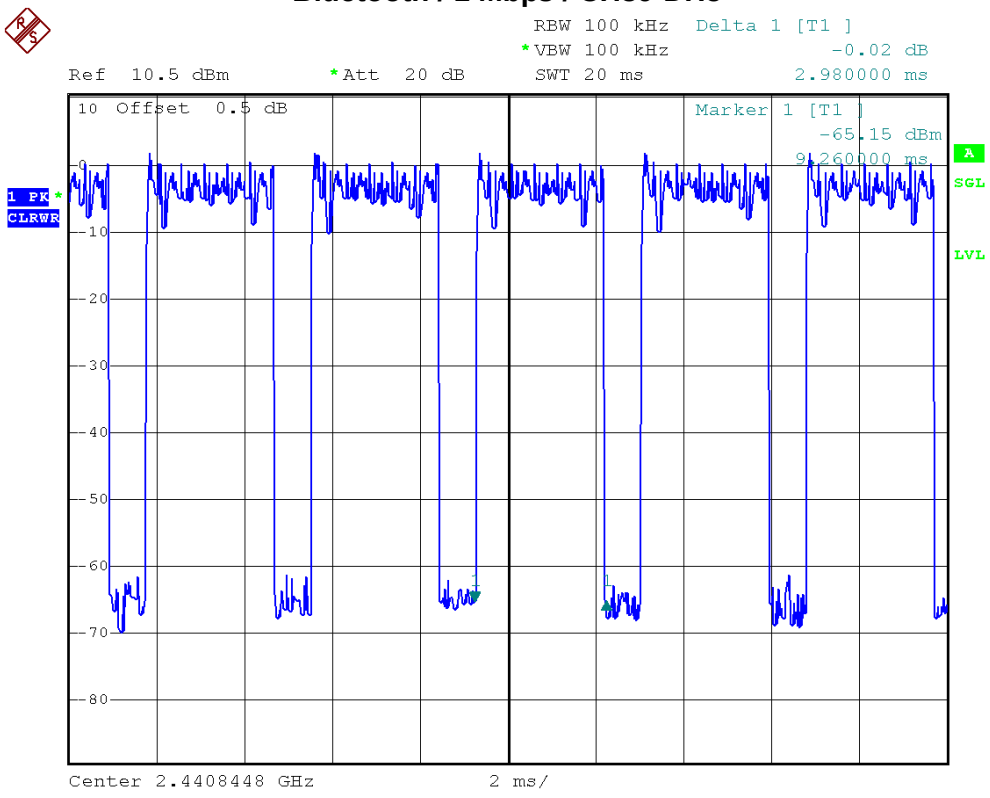
Bluetooth / 1 Mbps / CH00-DH1



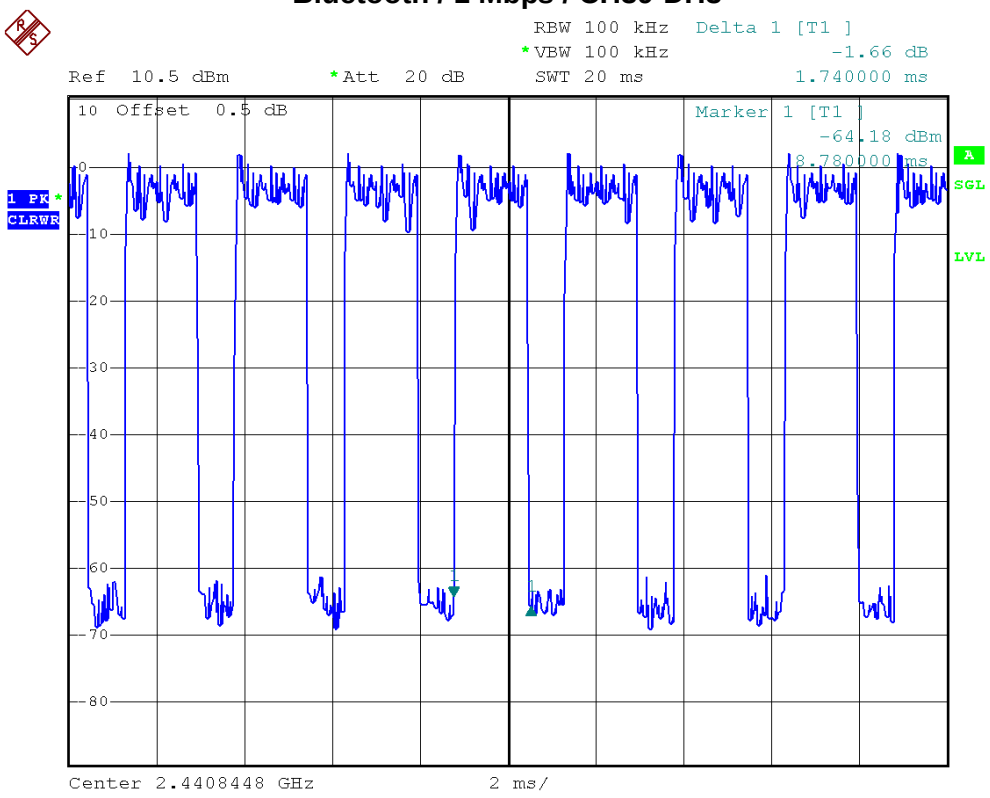
EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage ：	AC 120V/60Hz		
Test Mode ：	Bluetooth / 1 Mbps / CH39-DH5/DH3/DH1		

Data Packet	Frequency	Pulse Duration (ms)	Dwell Time (s)	Limits (s)
DH5	2441 MHz	2.9800	0.3179	0.4000
DH3	2441 MHz	1.7400	0.2784	0.4000
DH1	2441 MHz	0.4600	0.1472	0.4000

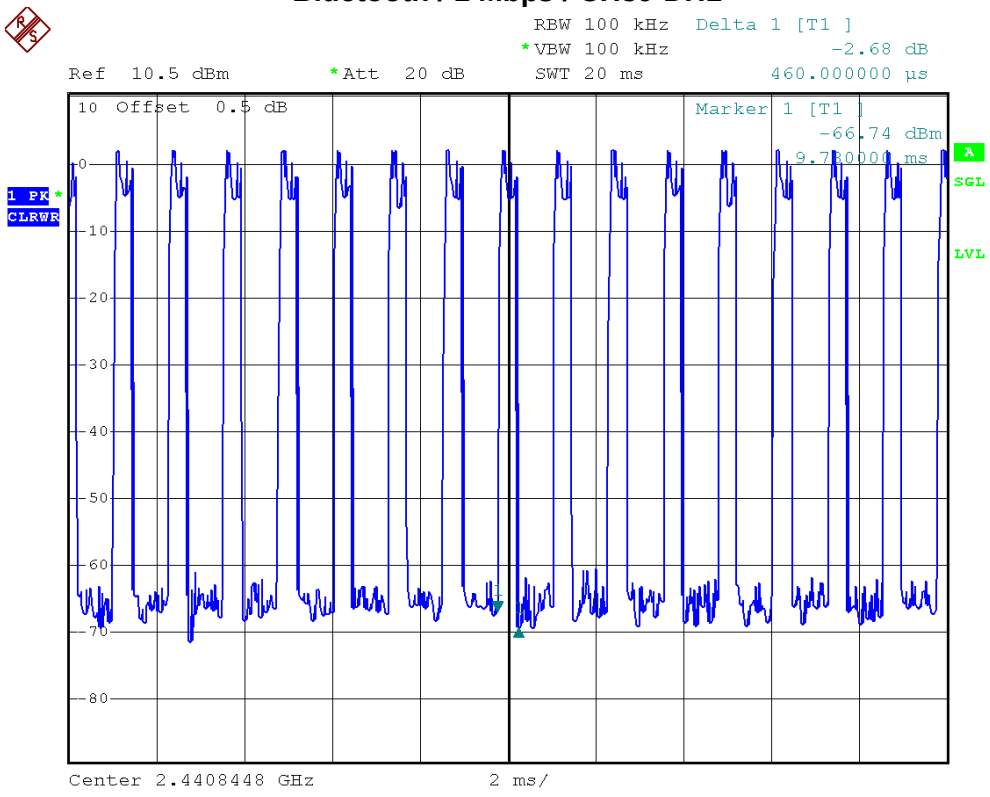
Bluetooth / 1 Mbps / CH39-DH5



Bluetooth / 1 Mbps / CH39-DH3



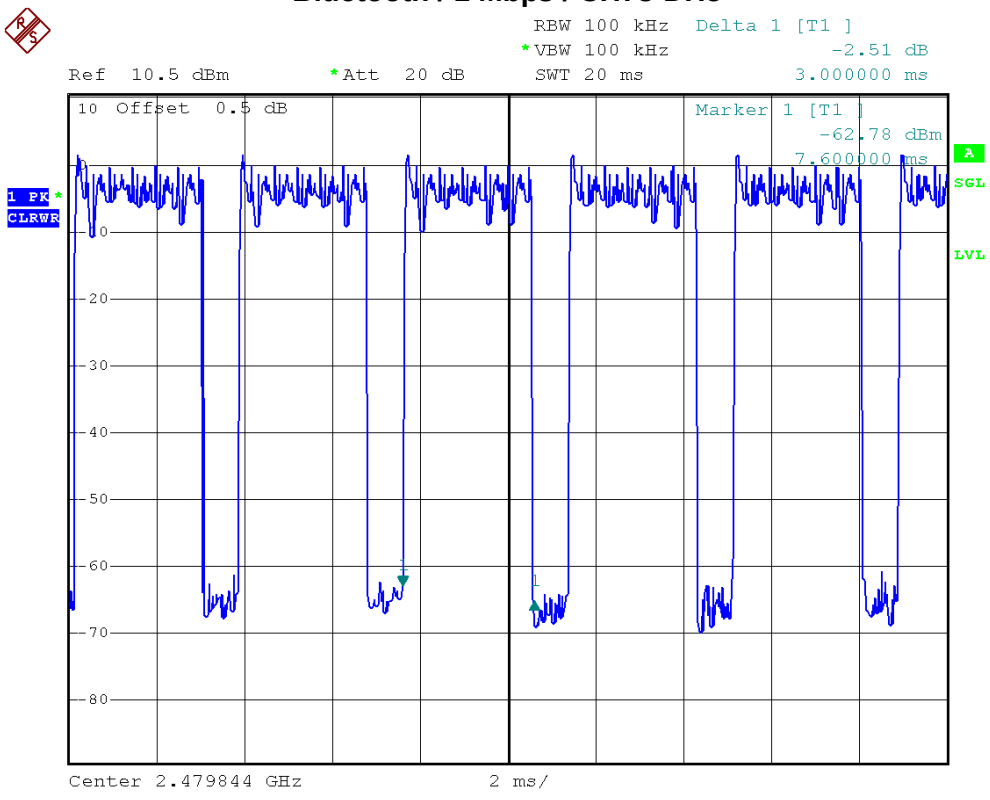
Bluetooth / 1 Mbps / CH39-DH1



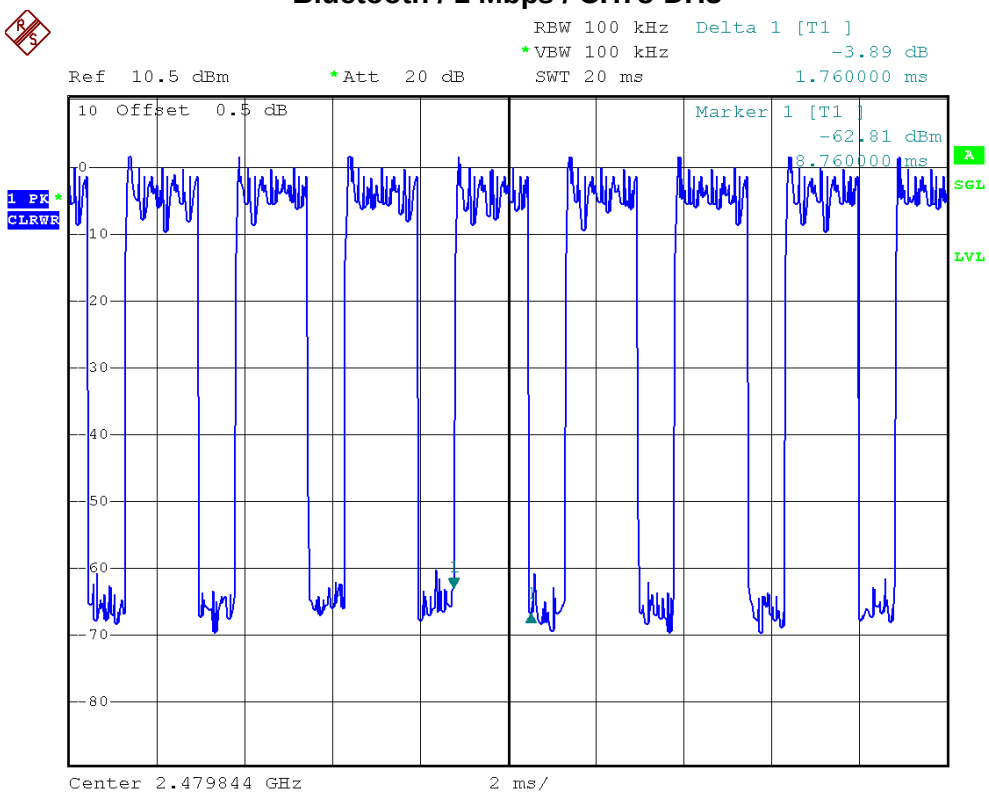
EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage ：	AC 120V/60Hz		
Test Mode ：	Bluetooth / 1 Mbps / CH78-DH5/DH3/DH1		

Data Packet	Frequency	Pulse Duration (ms)	Dwell Time (s)	Limits (s)
DH5	2480 MHz	3.0000	0.3200	0.4000
DH3	2480 MHz	1.7600	0.2816	0.4000
DH1	2480 MHz	0.4800	0.1536	0.4000

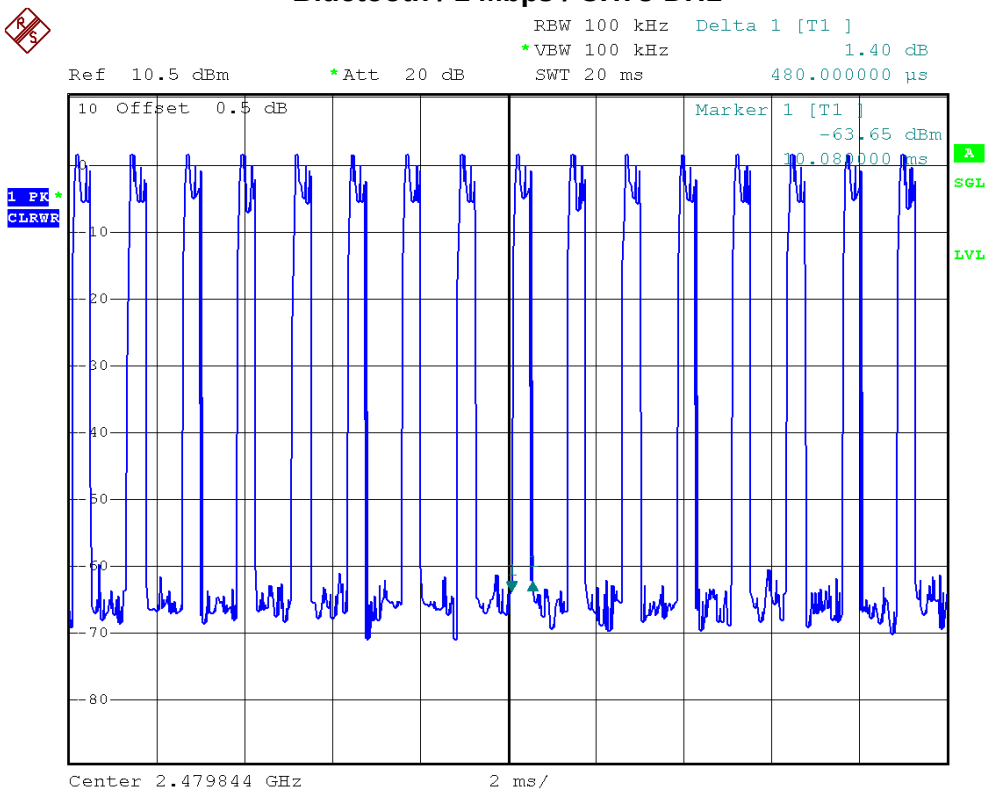
Bluetooth / 1 Mbps / CH78-DH5



Bluetooth / 1 Mbps / CH78-DH3



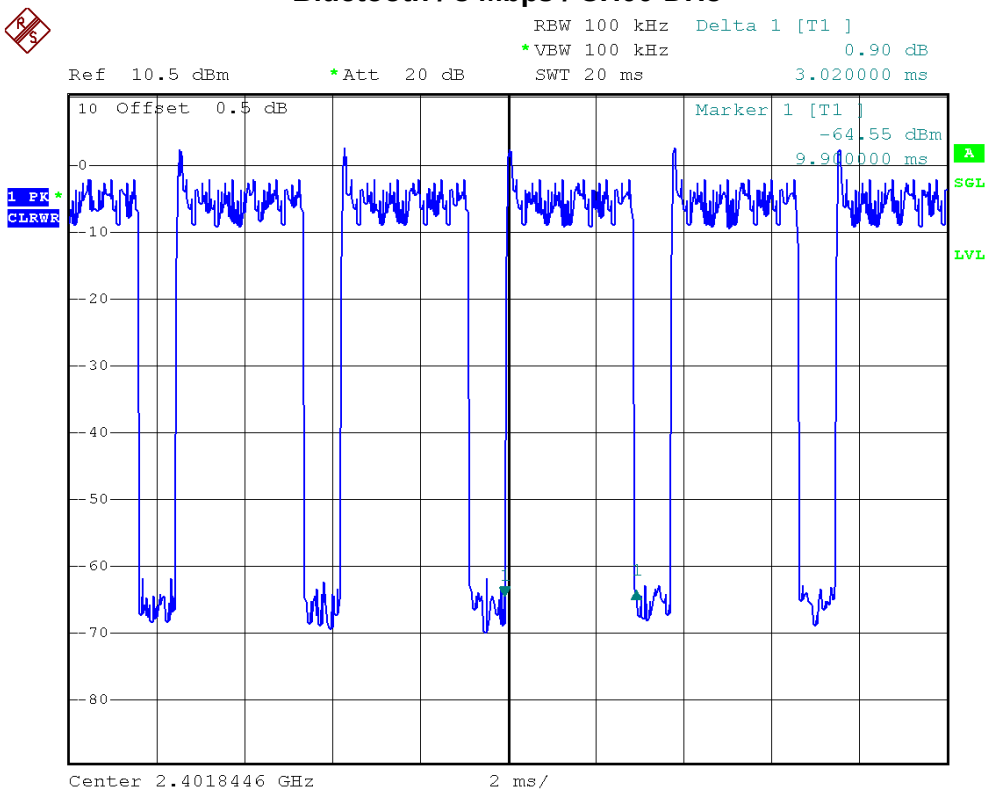
Bluetooth / 1 Mbps / CH78-DH1



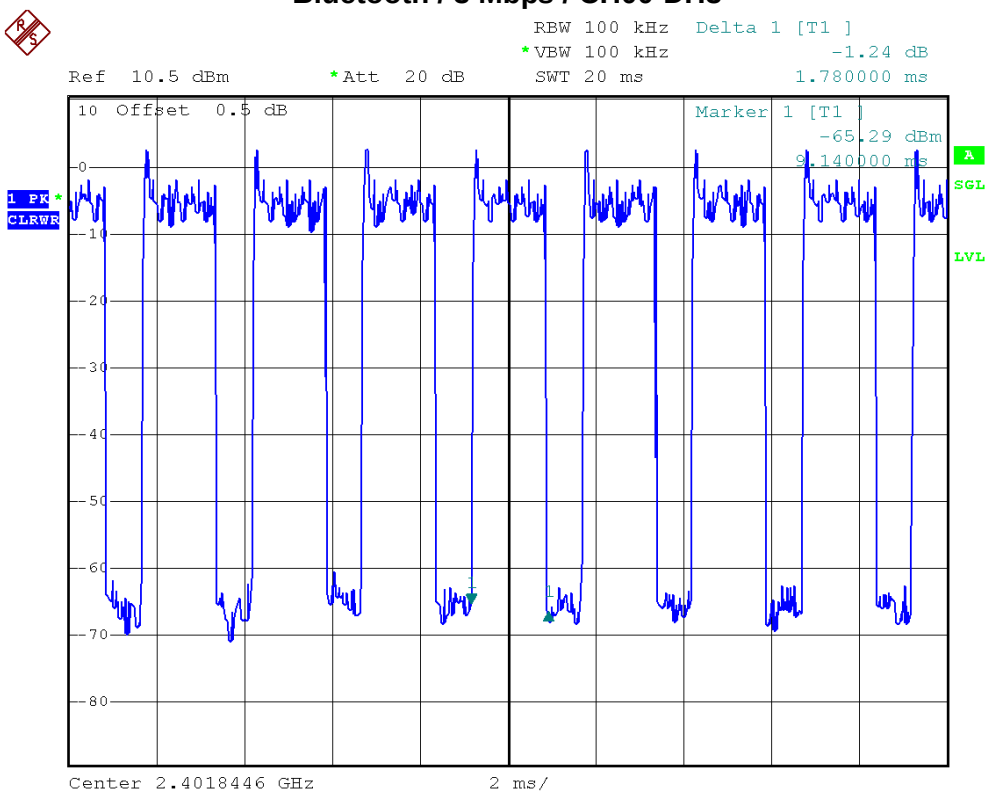
EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage ：	AC 120V/60Hz		
Test Mode ：	Bluetooth / 3 Mbps / CH00-DH5/DH3/DH1		

Data Packet	Frequency	Pulse Duration (ms)	Dwell Time (s)	Limits (s)
DH5	2402 MHz	3.0200	0.3221	0.4000
DH3	2402 MHz	1.7800	0.2848	0.4000
DH1	2402 MHz	0.5000	0.1600	0.4000

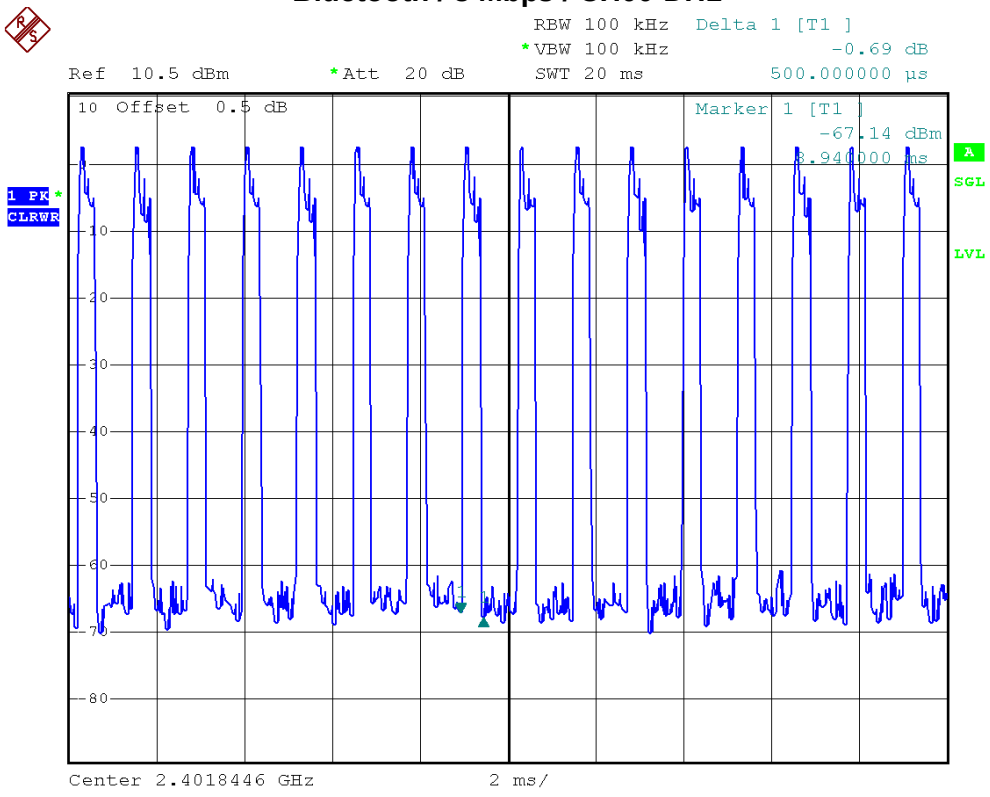
Bluetooth / 3 Mbps / CH00-DH5



Bluetooth / 3 Mbps / CH00-DH3



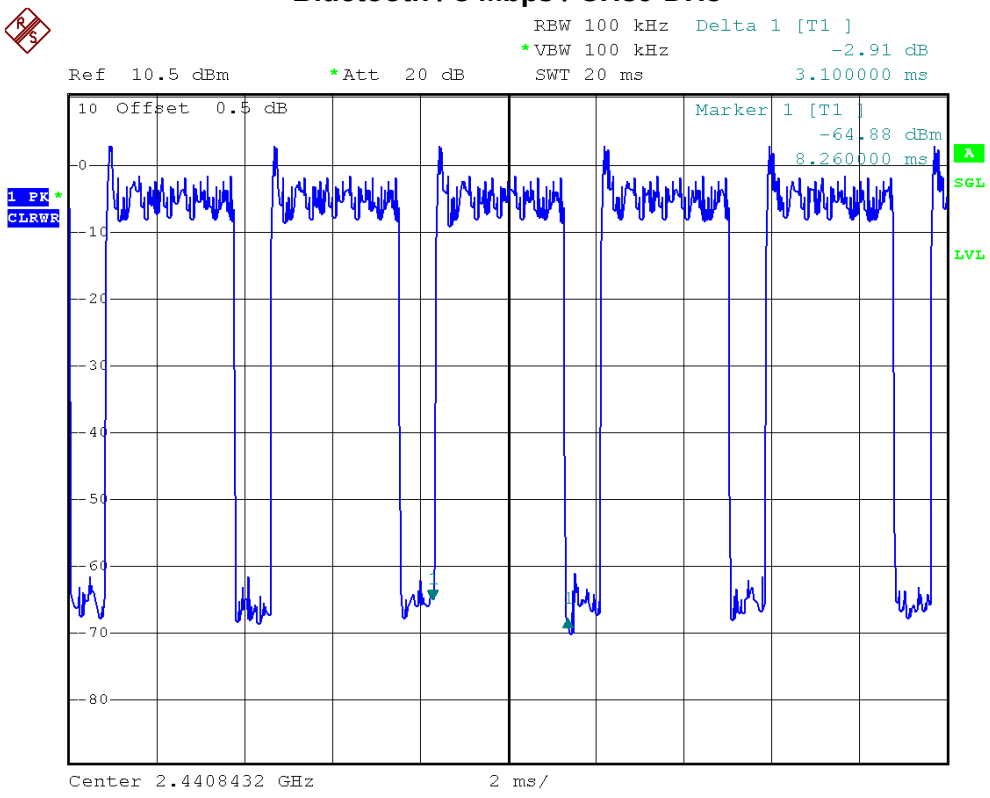
Bluetooth / 3 Mbps / CH00-DH1



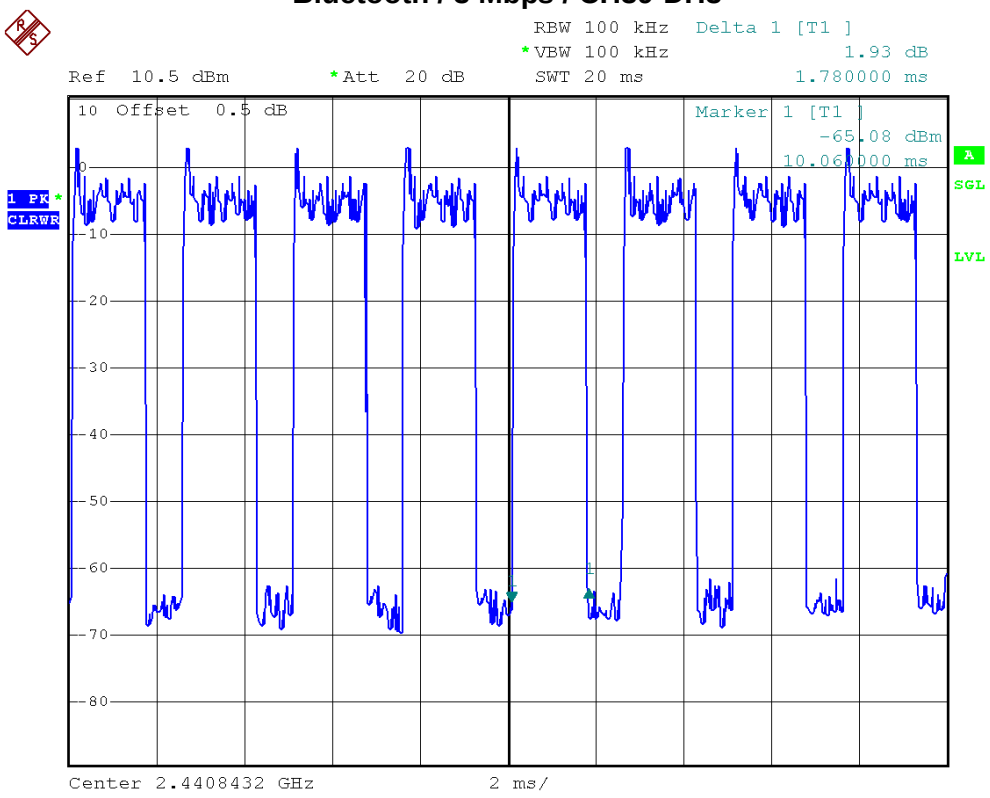
EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage ：	AC 120V/60Hz		
Test Mode ：	Bluetooth / 3 Mbps / CH39-DH5/DH3/DH1		

Data Packet	Frequency	Pulse Duration (ms)	Dwell Time (s)	Limits (s)
DH5	2441 MHz	3.1000	0.3307	0.4000
DH3	2441 MHz	1.7800	0.2848	0.4000
DH1	2441 MHz	0.5400	0.1728	0.4000

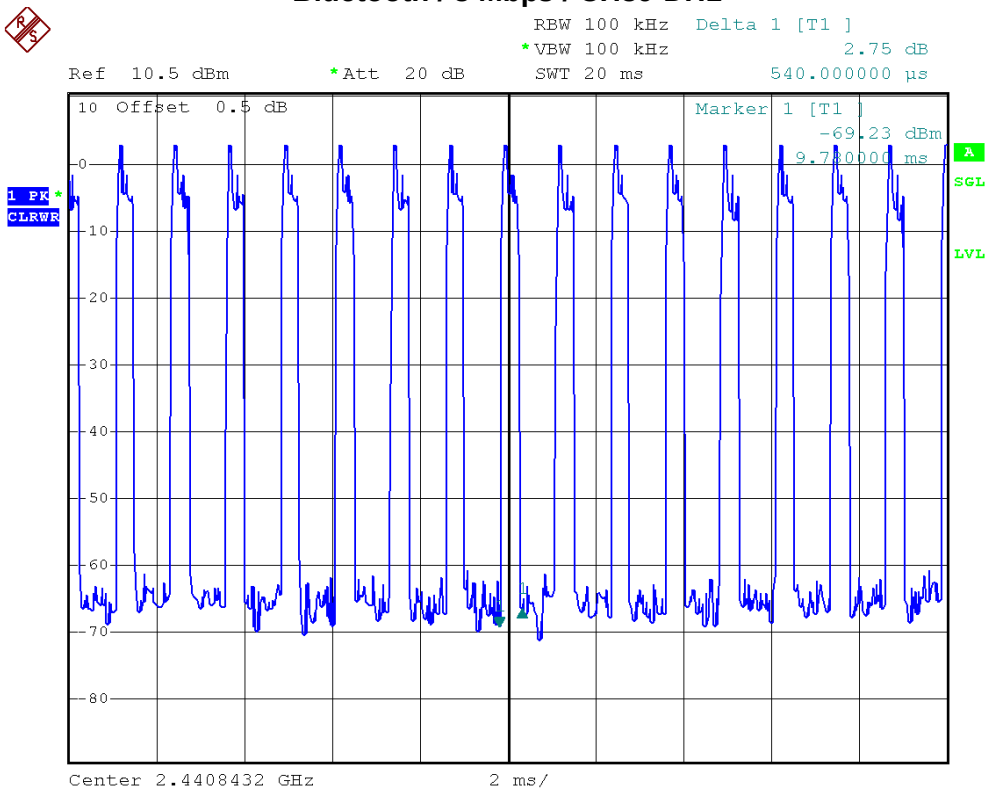
Bluetooth / 3 Mbps / CH39-DH5



Bluetooth / 3 Mbps / CH39-DH3



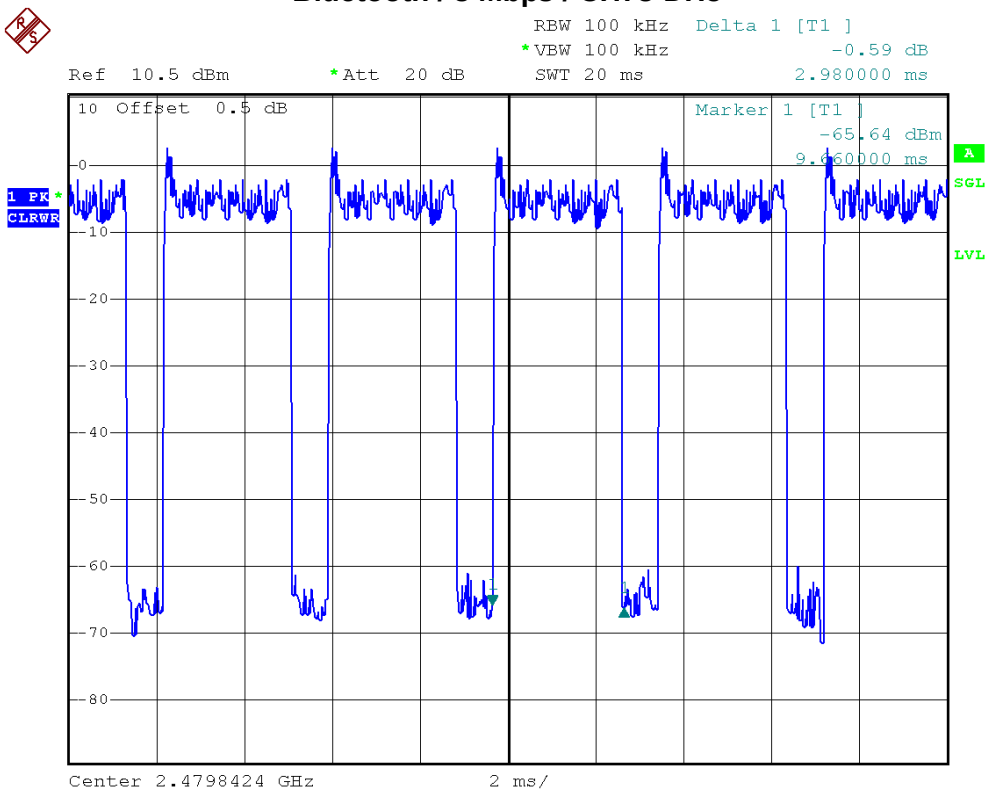
Bluetooth / 3 Mbps / CH39-DH1



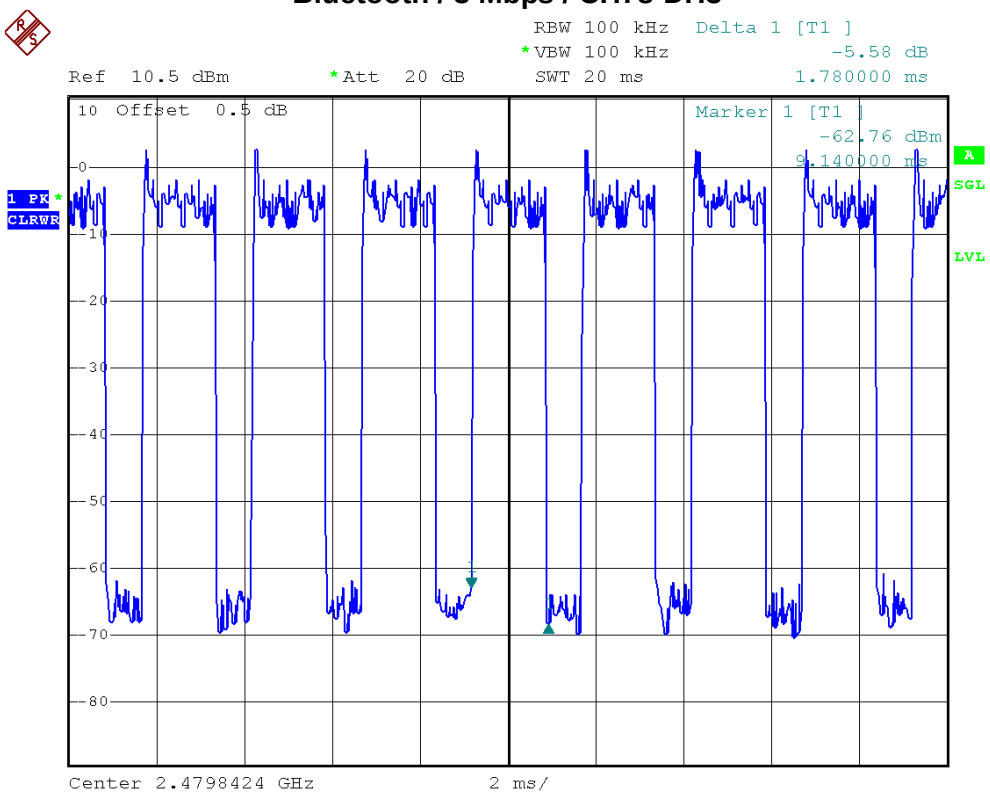
EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage ：	AC 120V/60Hz		
Test Mode ：	Bluetooth / 3 Mbps / CH78-DH5/DH3/DH1		

Data Packet	Frequency	Pulse Duration (ms)	Dwell Time (s)	Limits (s)
DH5	2480 MHz	2.9800	0.3179	0.4000
DH3	2480 MHz	1.7800	0.2848	0.4000
DH1	2480 MHz	0.5400	0.1728	0.4000

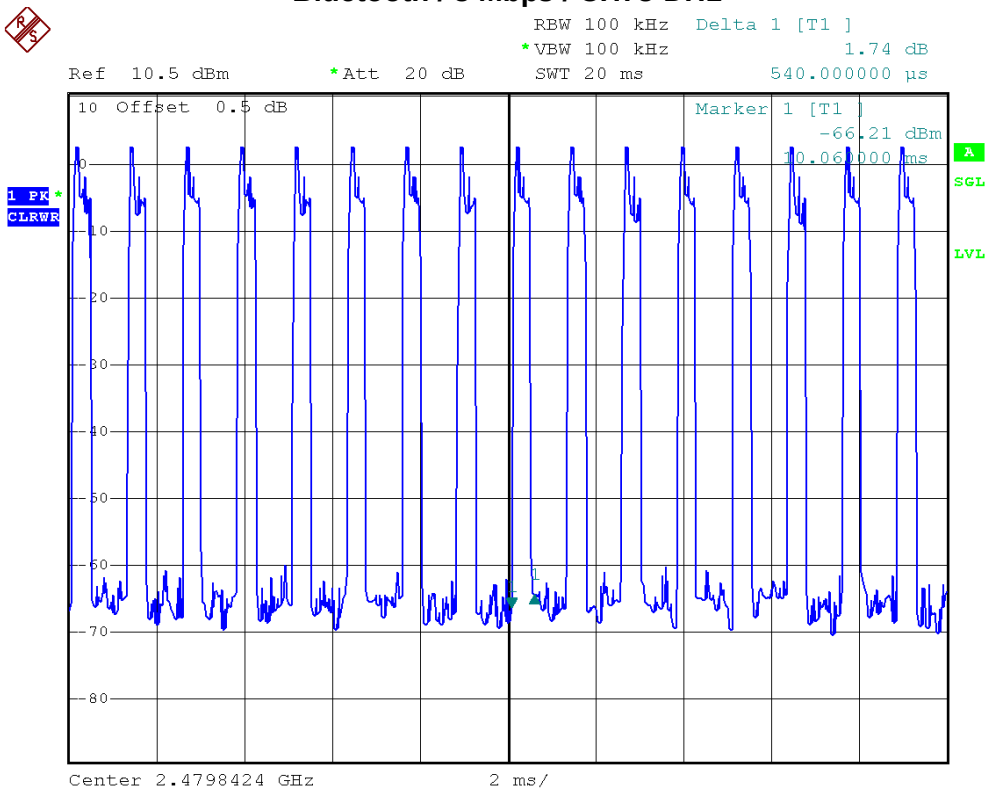
Bluetooth / 3 Mbps / CH78-DH5



Bluetooth / 3 Mbps / CH78-DH3



Bluetooth / 3 Mbps / CH78-DH1



7. HOPPING CHANNEL SEPARATION MEASUREMENT & BANDWITH TEST

7.1 APPLIED PROCEDURES / LIMIT

Frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater.

7.1.1 MEASUREMENT INSTRUMENTS LIST AND SETTING

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-40	100129	Oct. 06, 2012

Remark: “N/A” denotes No Model Name, No Serial No. or No Calibration specified.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	> Measurement Bandwidth or Channel Separation
RB	30 kHz (20dB Bandwidth) / 100 kHz (Channel Separation)
VB	100 kHz (20dB Bandwidth) / 300 kHz (Channel Separation)
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

7.1.2 TEST PROCEDURE

a. The transmitter output (antenna port) was connected to the spectrum analyser in peak hold mode.
b. The resolution bandwidth of 30 kHz and the video bandwidth of 100 kHz were utilised for 20 dB bandwidth measurement.
c. The resolution bandwidth of 100 kHz and the video bandwidth of 300 kHz were utilised for channel separation measurement.

7.1.3 DEVIATION FROM STANDARD

No deviation.

7.1.4 TEST SETUP

7.1.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

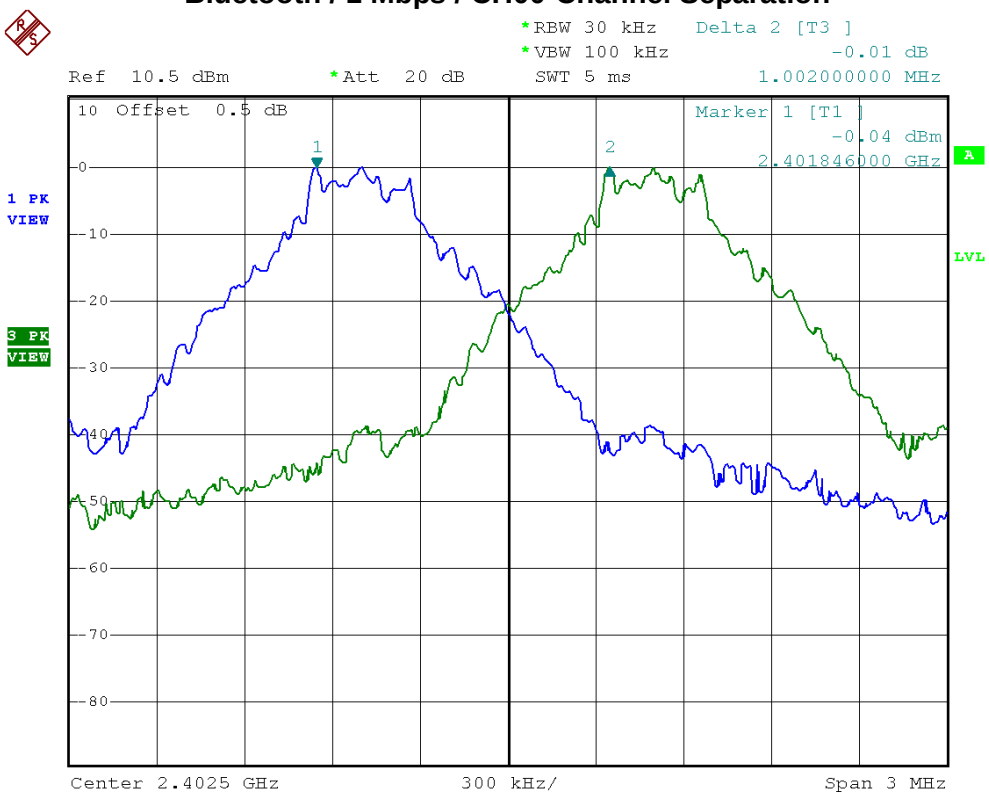
7.1.6 TEST RESULTS

EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage ：	AC 120V/60Hz		
Test Mode ：	Bluetooth / 1 Mbps / CH00, CH39, CH78		

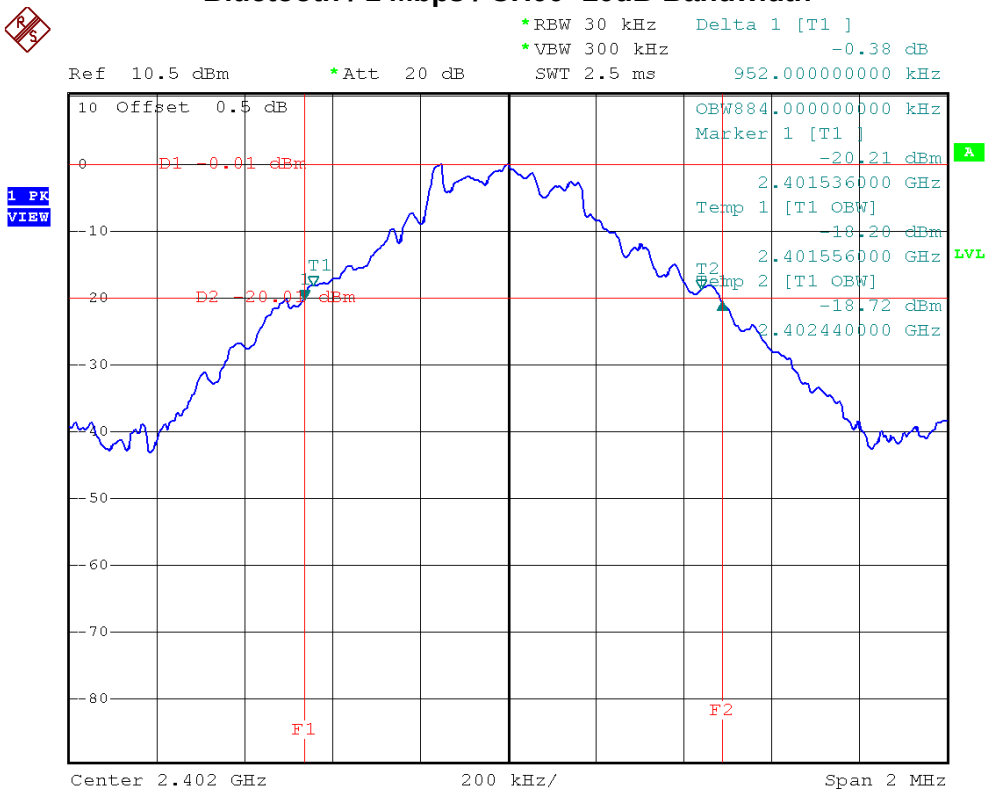
Frequency	Channel Separation (MHz)	99% Occupied BW (MHz)	20 dB Bandwidth (MHz)	Two-thirds of the 20 dB Bandwidth	Result
2402 MHz	1.00	0.884	0.952	0.635	**PASS**
2441 MHz	1.00	0.872	0.940	0.626	**PASS**
2480 MHz	1.01	0.872	0.948	0.632	**PASS**

Ch. Separation Limits: >25 KHz or >2/3 of 20dB bandwidth

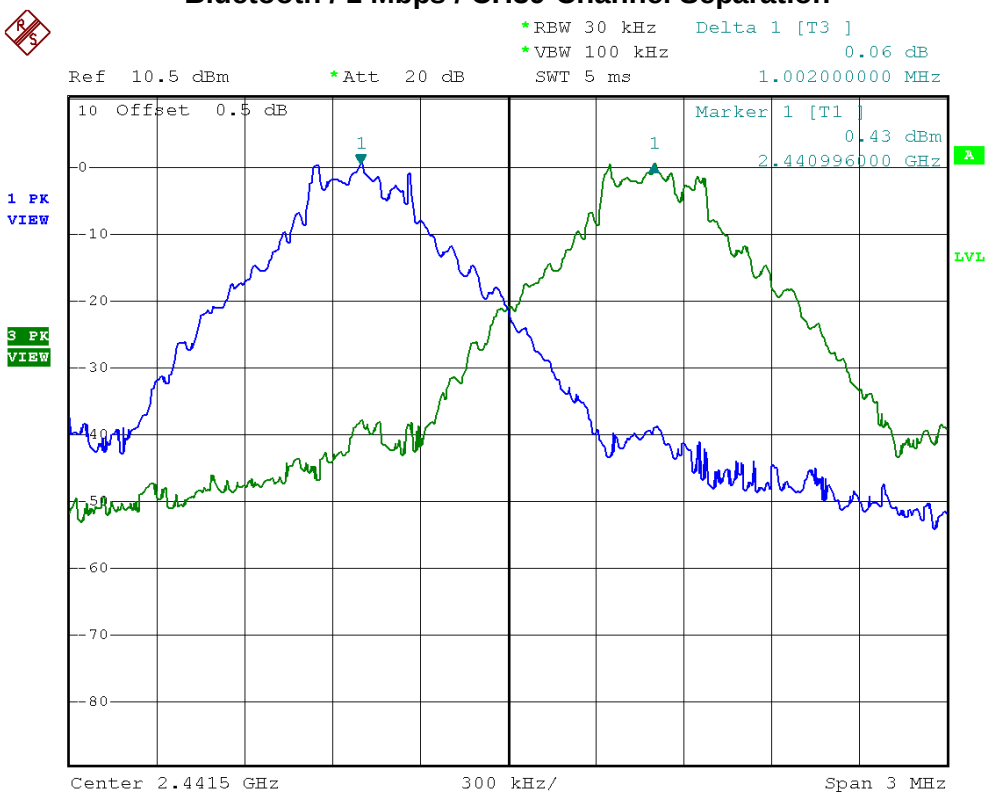
Bluetooth / 1 Mbps / CH00-Channel Separation



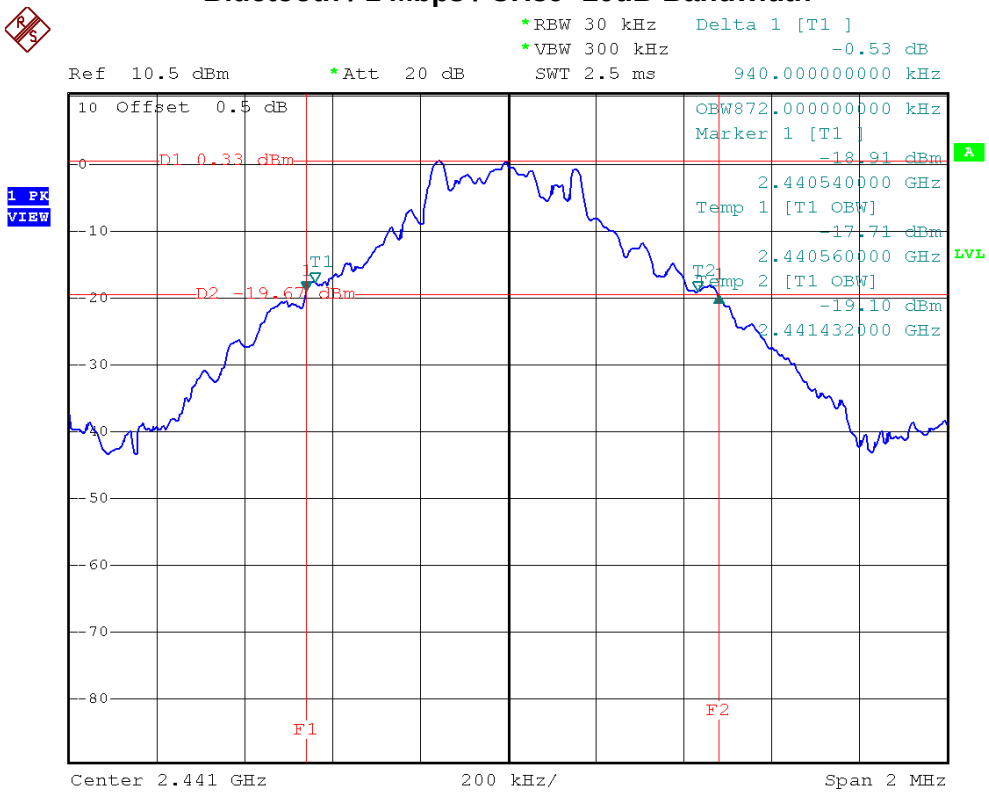
Bluetooth / 1 Mbps / CH00- 20dB Bandwidth



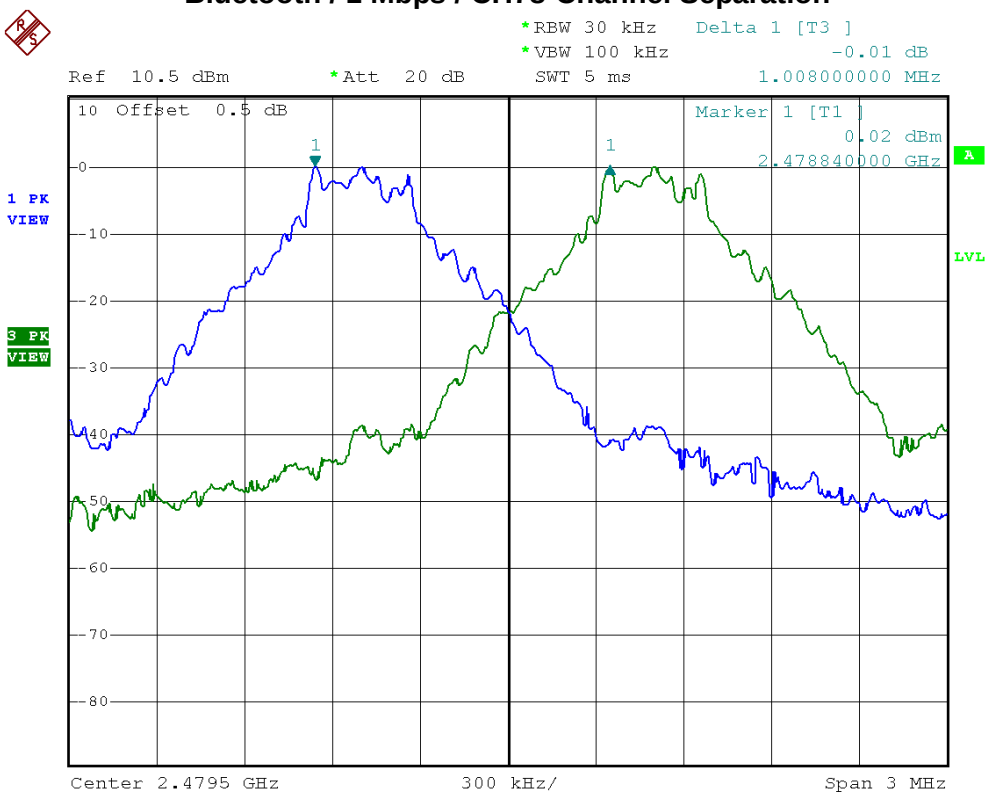
Bluetooth / 1 Mbps / CH39-Channel Separation



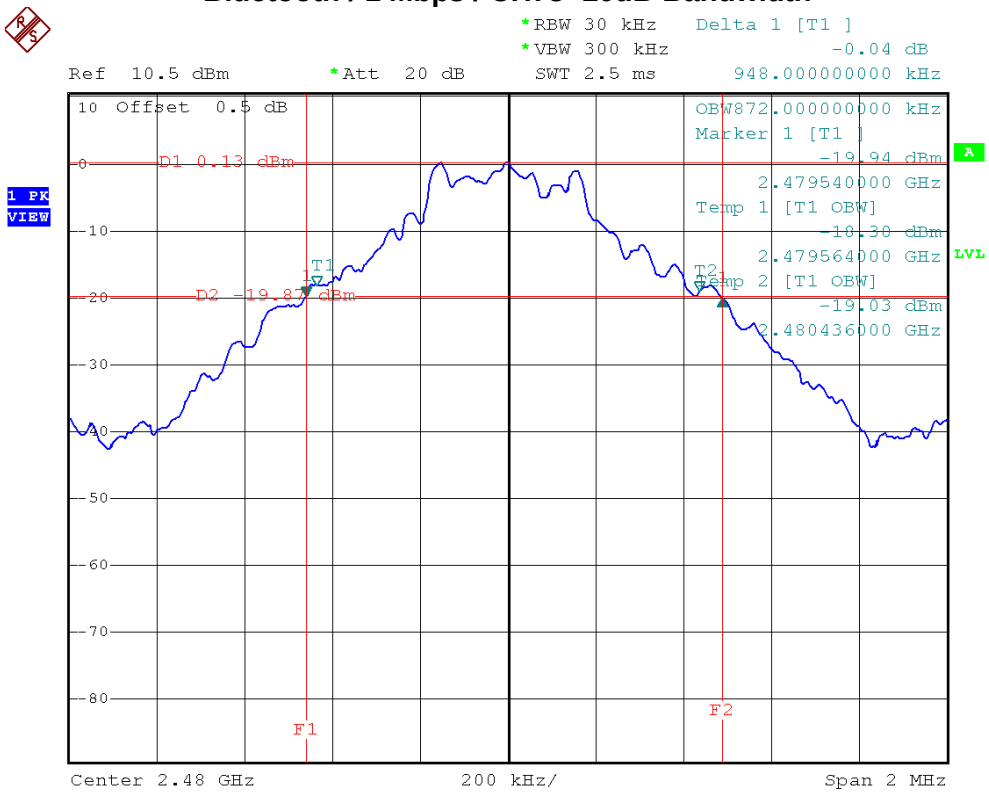
Bluetooth / 1 Mbps / CH39- 20dB Bandwidth



Bluetooth / 1 Mbps / CH78-Channel Separation



Bluetooth / 1 Mbps / CH78- 20dB Bandwidth

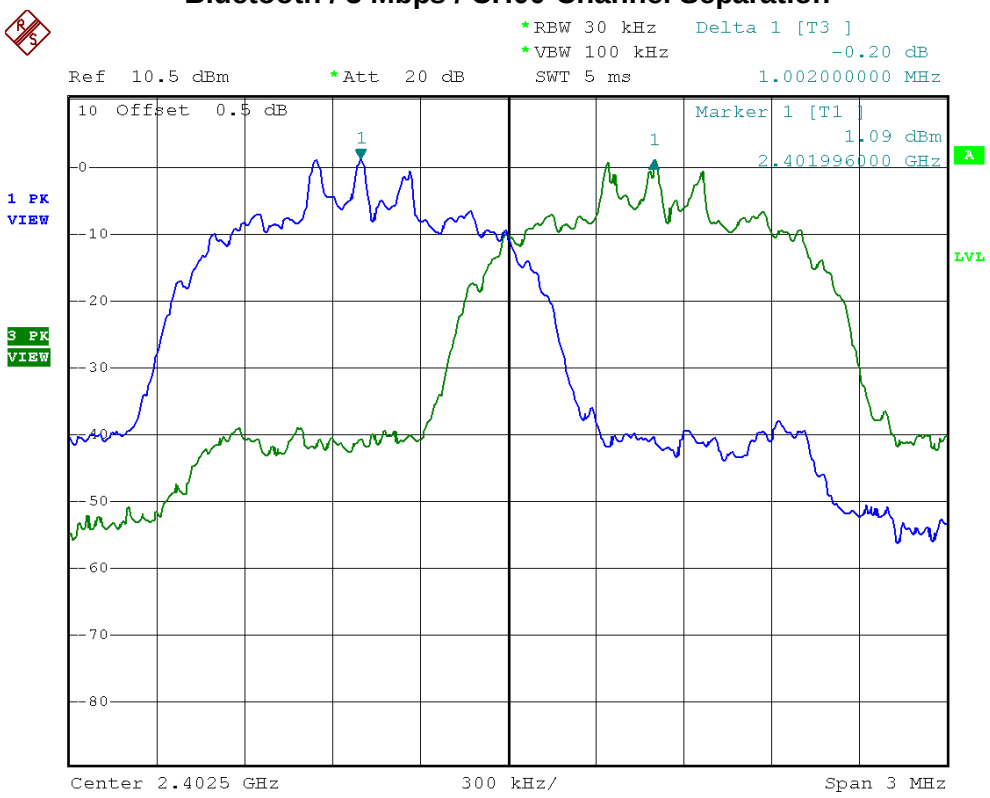


EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage ：	AC 120V/60Hz		
Test Mode ：	Bluetooth / 3 Mbps / CH00, CH39, CH78		

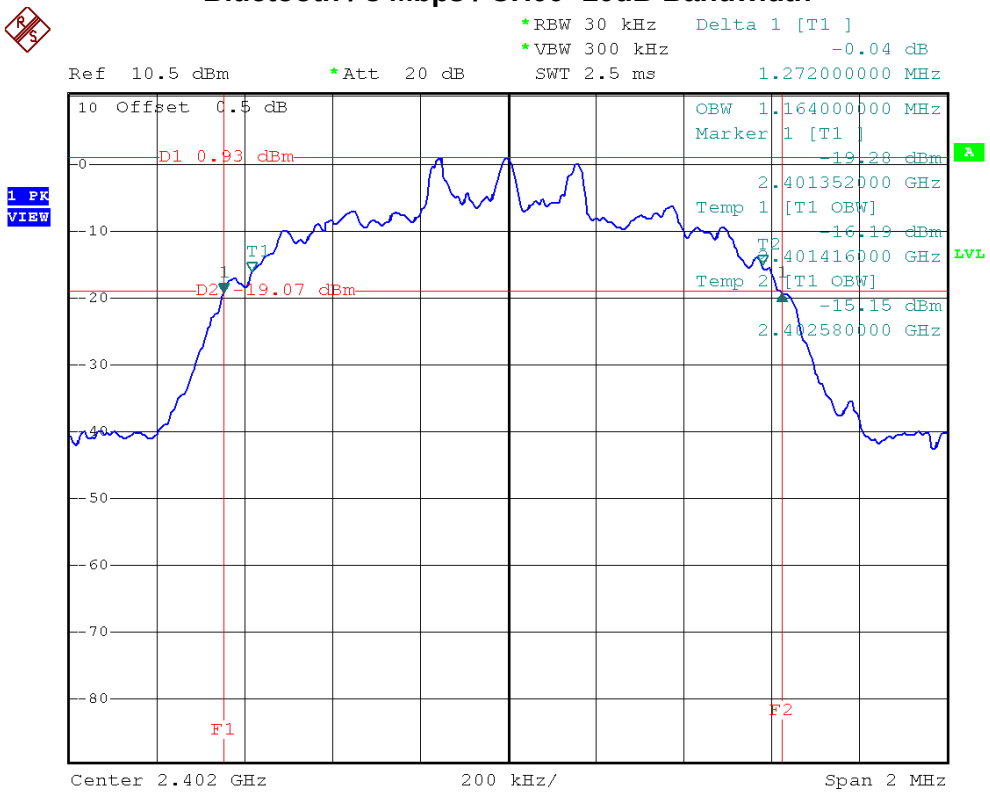
Frequency	Channel Separation (MHz)	99% Occupied BW (MHz)	20 dB Bandwidth (MHz)	Two-thirds of the 20 dB Bandwidth	Result
2402 MHz	1.00	1.164	1.272	0.848	**PASS**
2441 MHz	1.00	1.164	1.264	0.843	**PASS**
2480 MHz	1.00	1.160	1.268	0.845	**PASS**

Ch. Separation Limits: >25 KHz or >2/3 of 20dB bandwidth

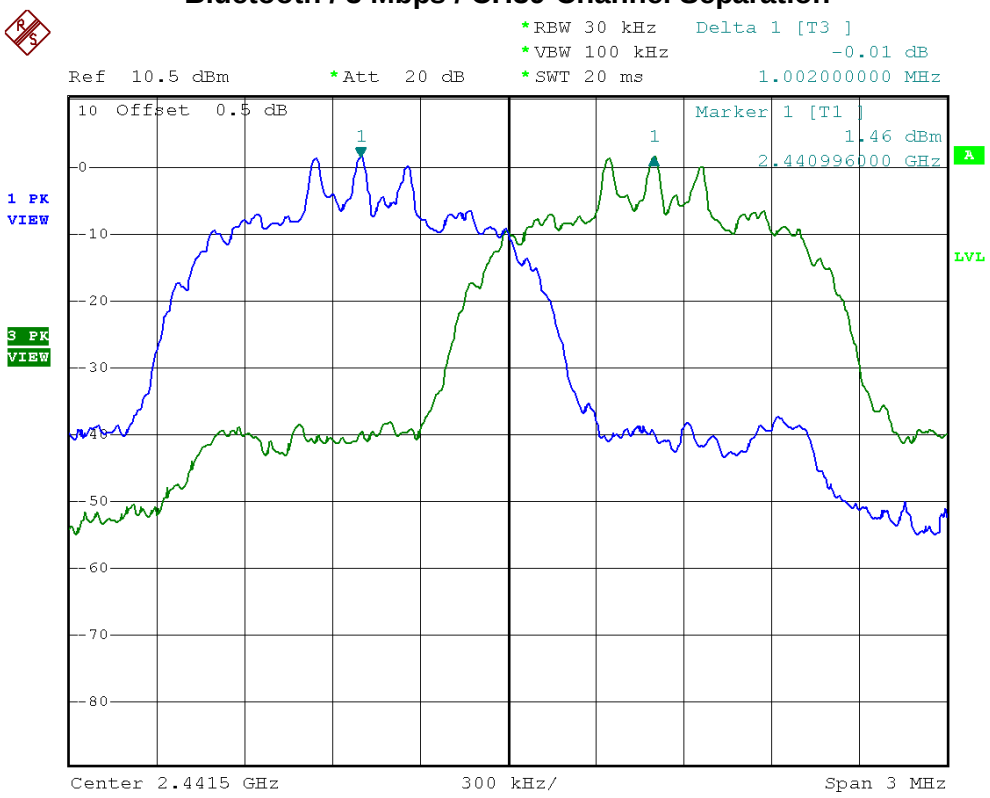
Bluetooth / 3 Mbps / CH00-Channel Separation



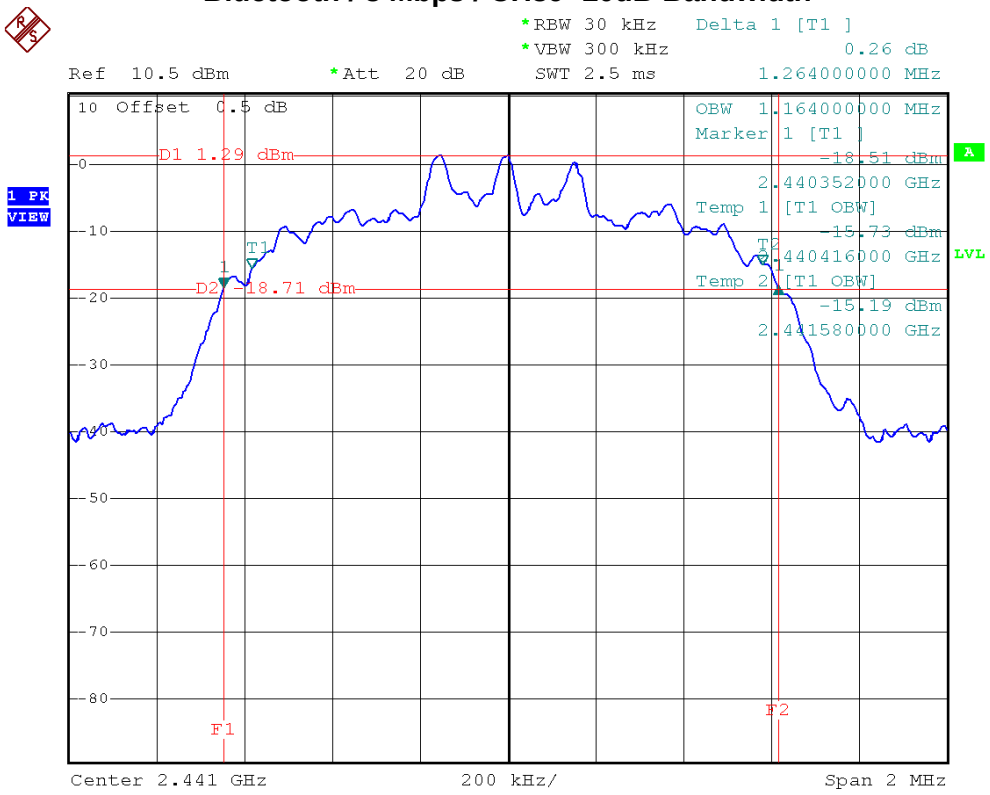
Bluetooth / 3 Mbps / CH00- 20dB Bandwidth



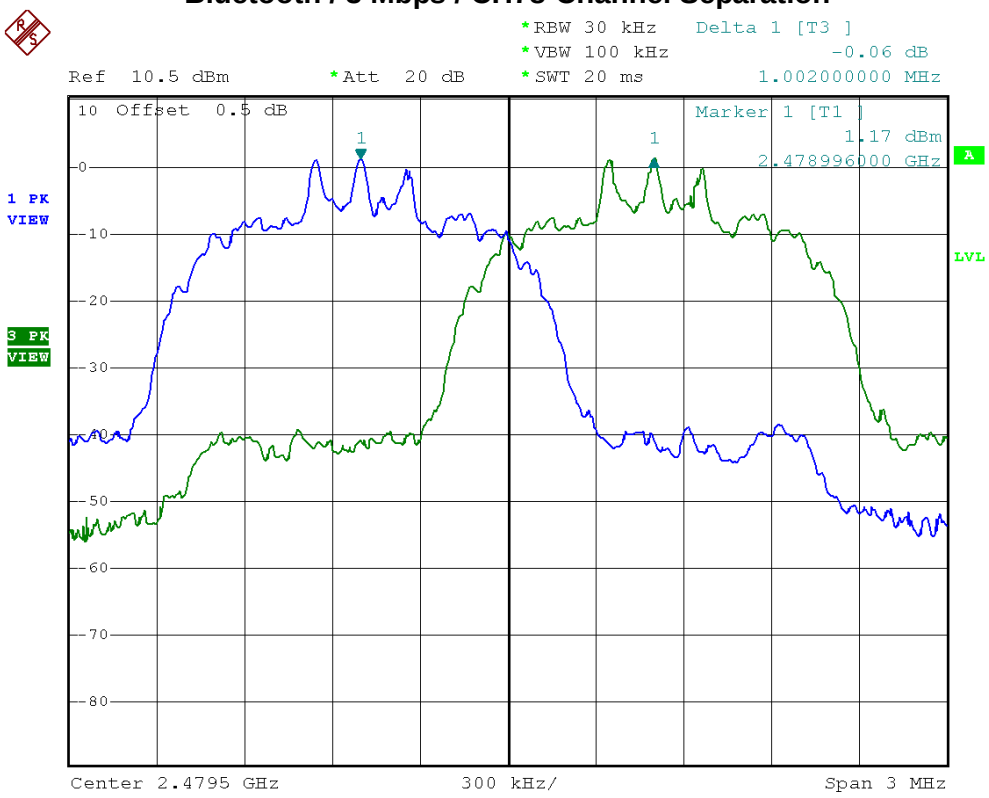
Bluetooth / 3 Mbps / CH39-Channel Separation



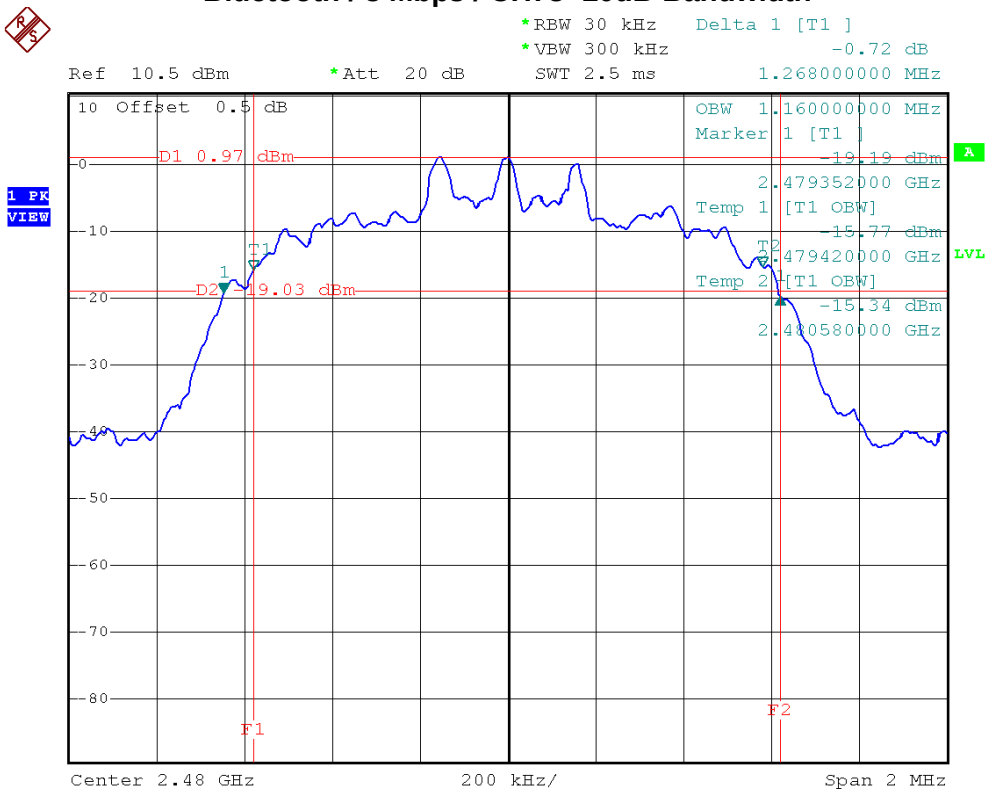
Bluetooth / 3 Mbps / CH39- 20dB Bandwidth



Bluetooth / 3 Mbps / CH78-Channel Separation



Bluetooth / 3 Mbps / CH78- 20dB Bandwidth



8. PEAK OUTPUT POWER TEST

8.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247 (b)(1)	Peak Output Power	1 watt or 30dBm	2400-2483.5	PASS

8.1.1 MEASUREMENT INSTRUMENTS LIST AND SETTING

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-40	100129	Oct. 06, 2012

Remark: “N/A” denotes No Model Name, No Serial No. or No Calibration specified.

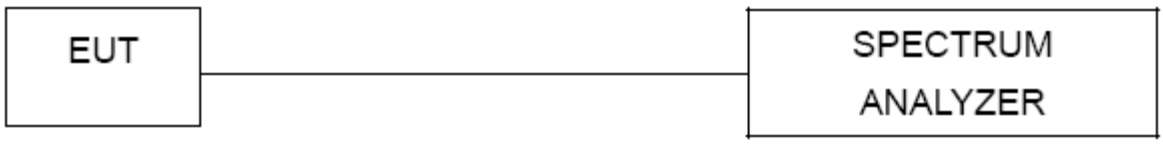
8.1.2 TEST PROCEDURE

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= 3MHz, VBW= 3MHz, Sweep time = Auto.

8.1.3 DEVIATION FROM STANDARD

No deviation.

8.1.4 TEST SETUP



8.1.5 EUT OPERATION CONDITIONS

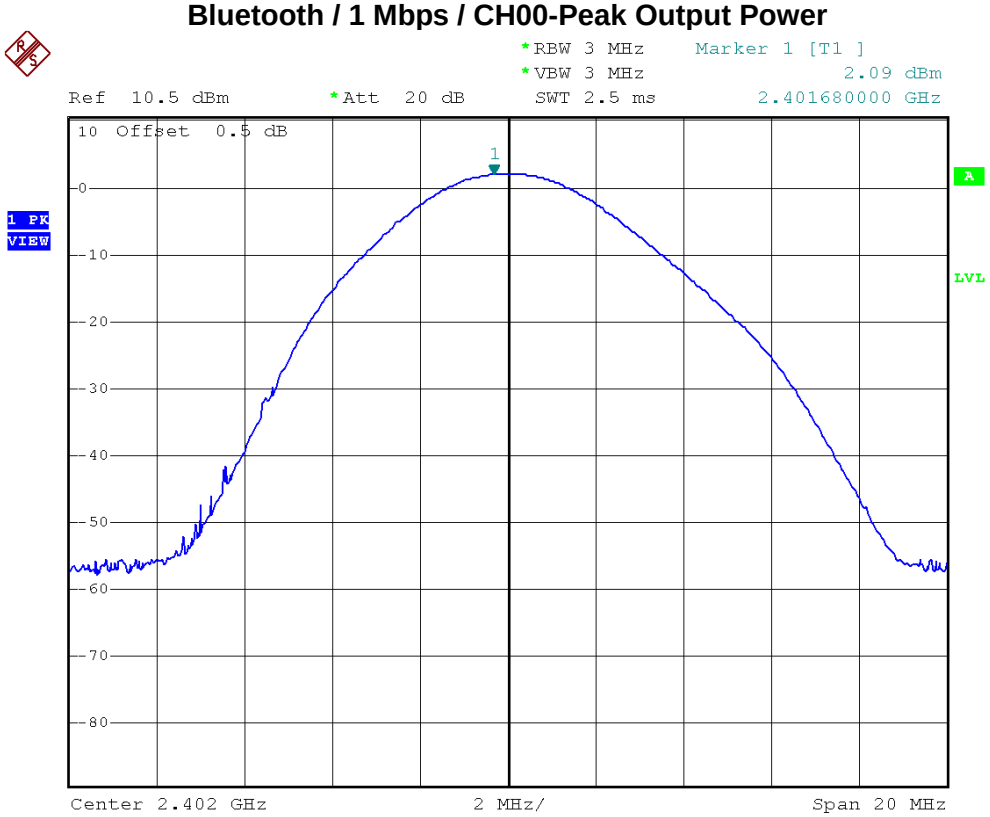
The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

8.1.6 TEST RESULTS

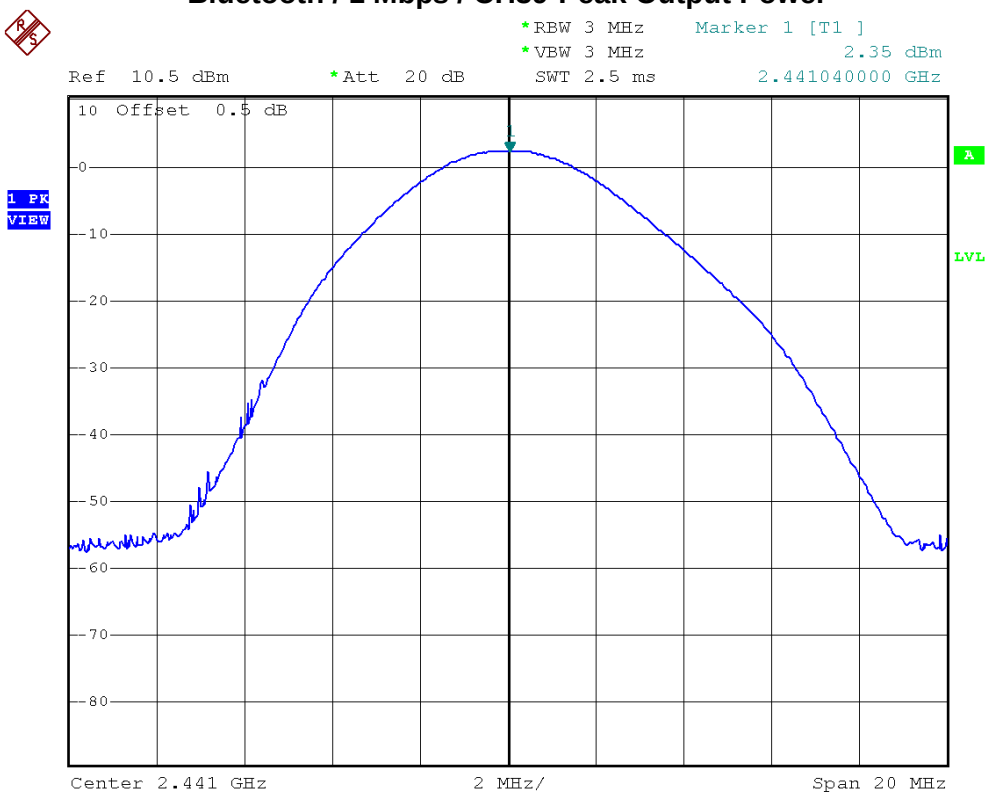
EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage ：	AC 120V/60Hz		
Test Mode ：	Bluetooth / 1 Mbps / CH00, CH39, CH78		

Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
2402	2.50	30	1
2441	2.50	30	1
2480	2.65	30	1

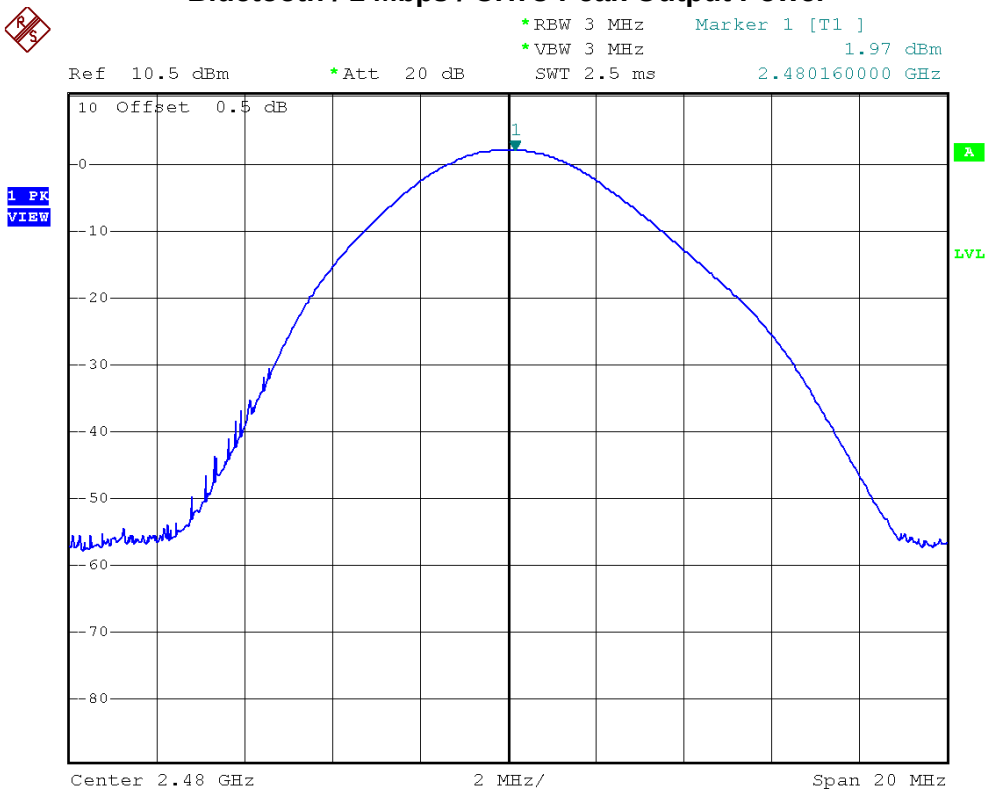
Bluetooth / 1 Mbps / CH00-Peak Output Power



Bluetooth / 1 Mbps / CH39-Peak Output Power



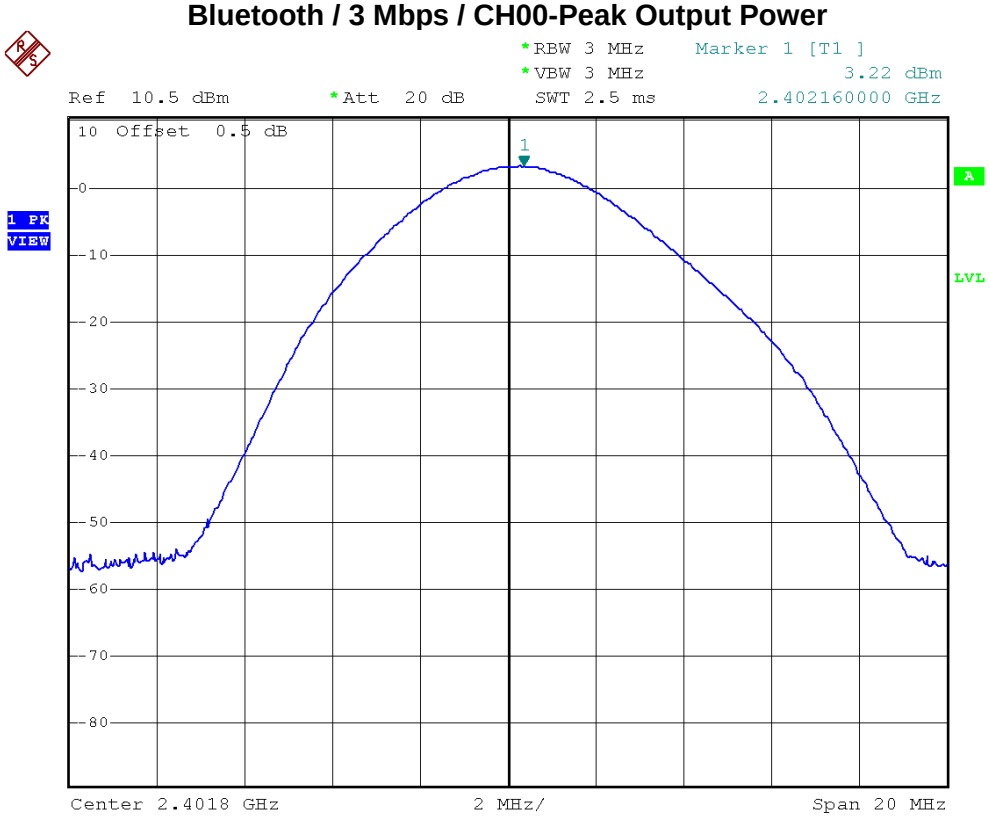
Bluetooth / 1 Mbps / CH78-Peak Output Power



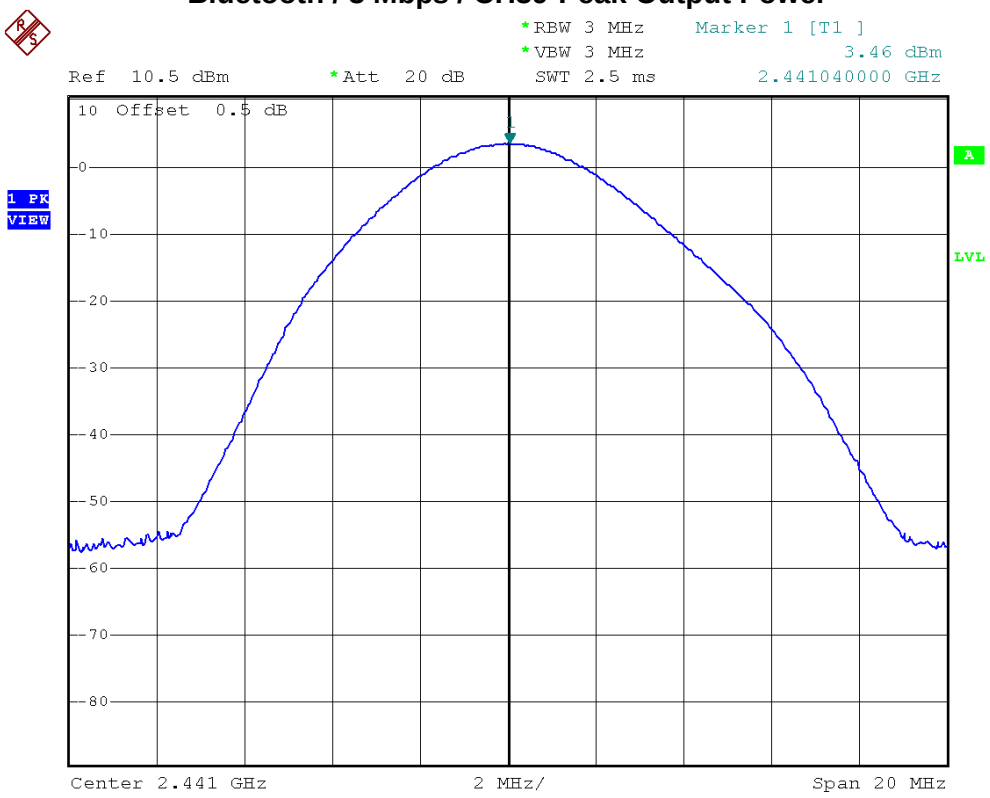
EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage ：	AC 120V/60Hz		
Test Mode ：	Bluetooth / 3 Mbps / CH00, CH39, CH78		

Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
2402	3.69	30	1
2441	3.60	30	1
2480	3.63	30	1

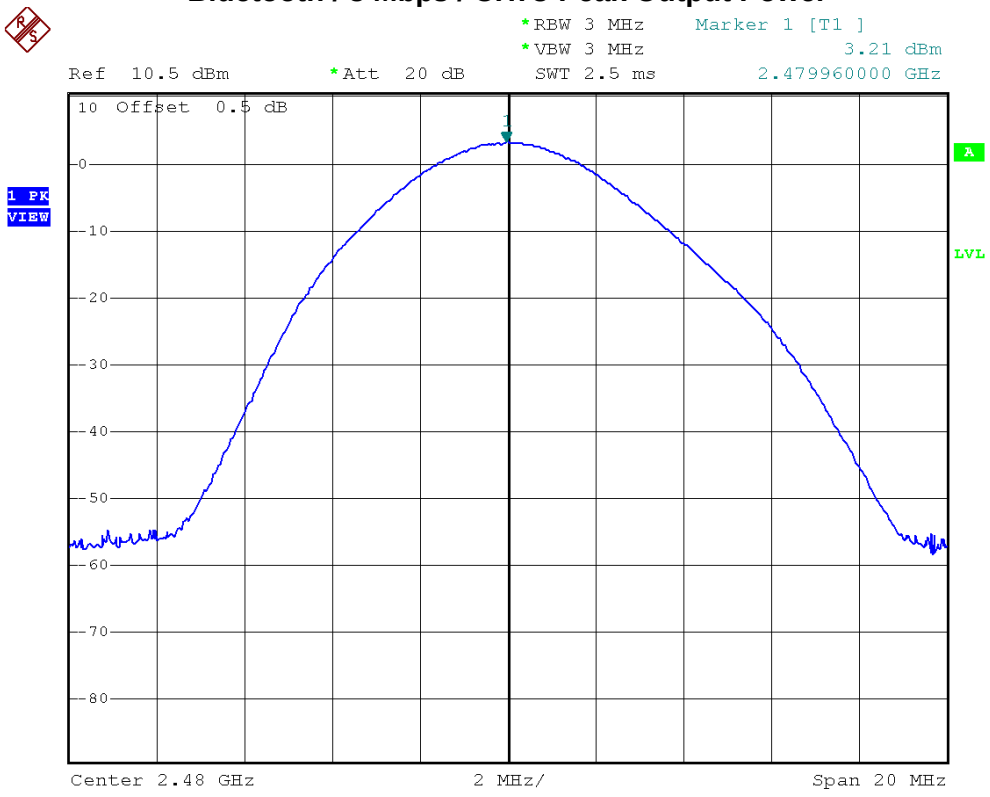
Bluetooth / 3 Mbps / CH00-Peak Output Power



Bluetooth / 3 Mbps / CH39-Peak Output Power



Bluetooth / 3 Mbps / CH78-Peak Output Power



9. ANTENNA CONDUCTED SPURIOUS EMISSION

9.1 APPLIED PROCEDURES / LIMIT

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

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

9.1.1 MEASUREMENT INSTRUMENTS LIST AND SETTING

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-40	100129	Oct. 06, 2012

Remark: “N/A” denotes No Model Name, No Serial No. or No Calibration specified.

The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	100 MHz
RB / VB (emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 10Hz for Average
RB / VB (other emission)	100 KHz /100 KHz for Peak

9.1.2 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=100KHz, Sweep time = Auto.

9.1.3 DEVIATION FROM STANDARD

No deviation.

9.1.4 TEST SETUP

9.1.5 EUT OPERATION CONDITIONS

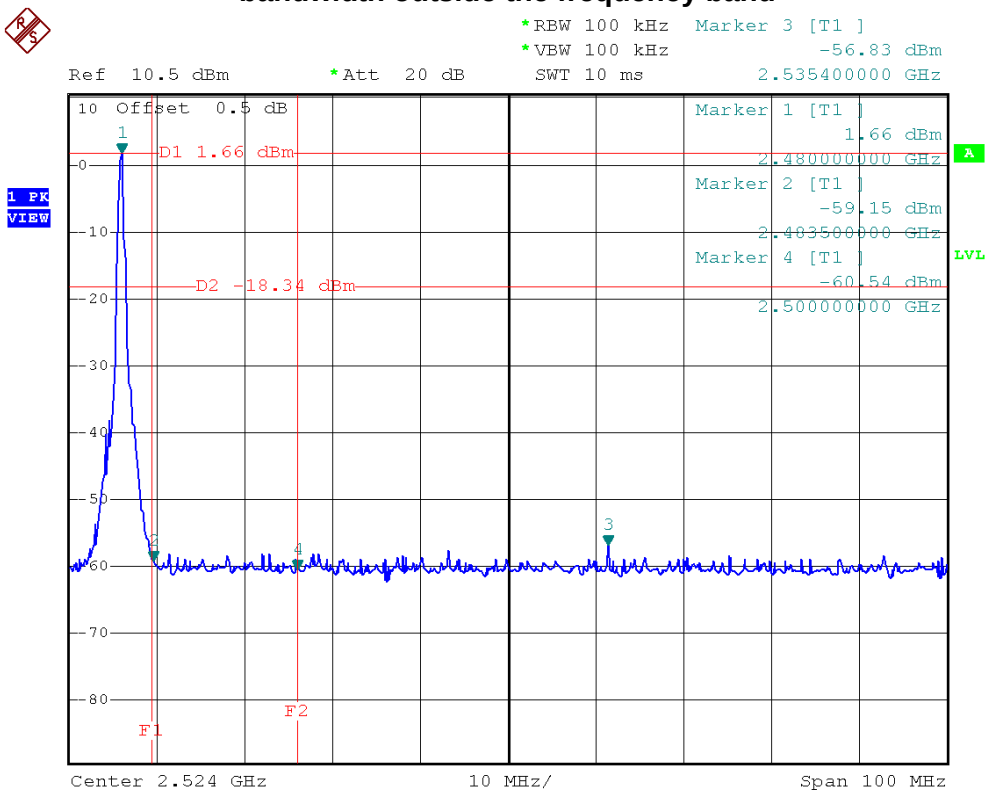
The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

9.1.6 TEST RESULTS

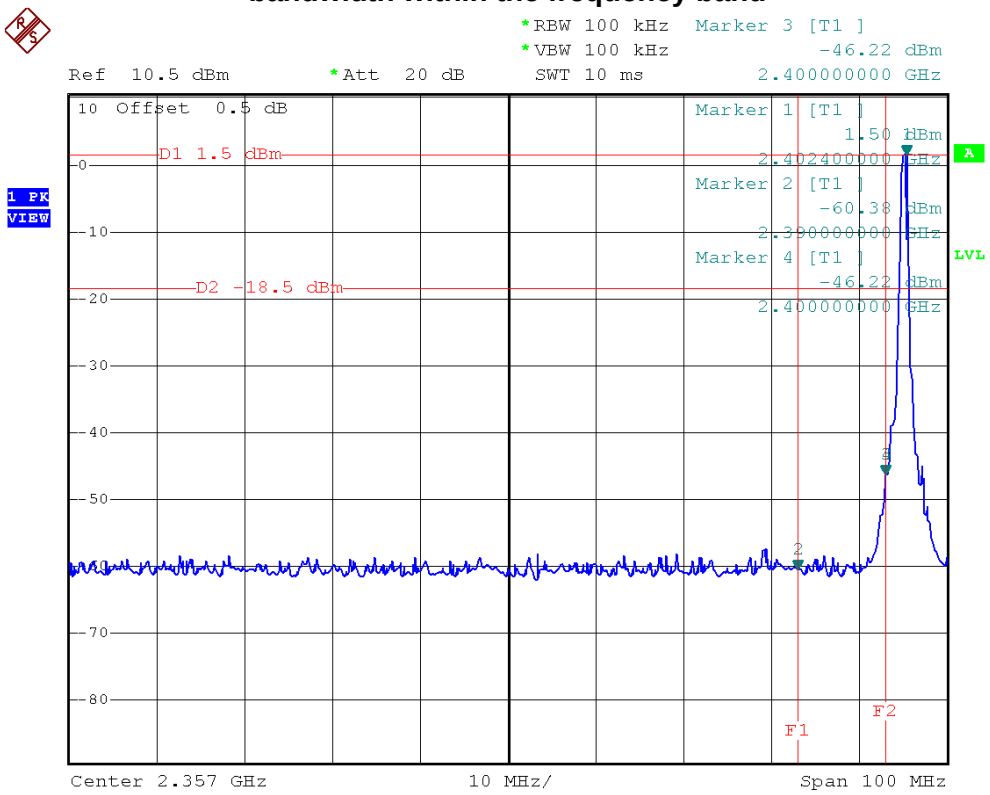
EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage ：	AC 120V/60Hz		
Test Mode ：	Bluetooth / 1 Mbps / CH00, CH39, CH78		

The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
2535.4	-56.83	2400	-46.22
Result			
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.			

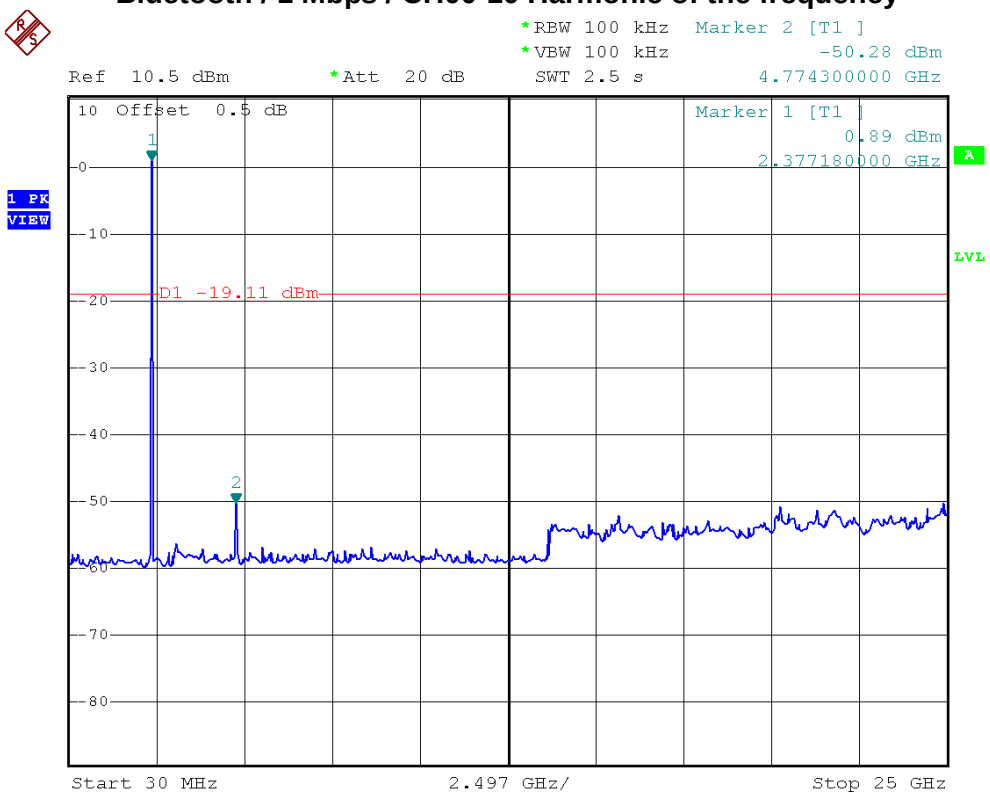
Bluetooth / 1 Mbps / CH00-The max. radio frequency power in any 100kHz bandwidth outside the frequency band



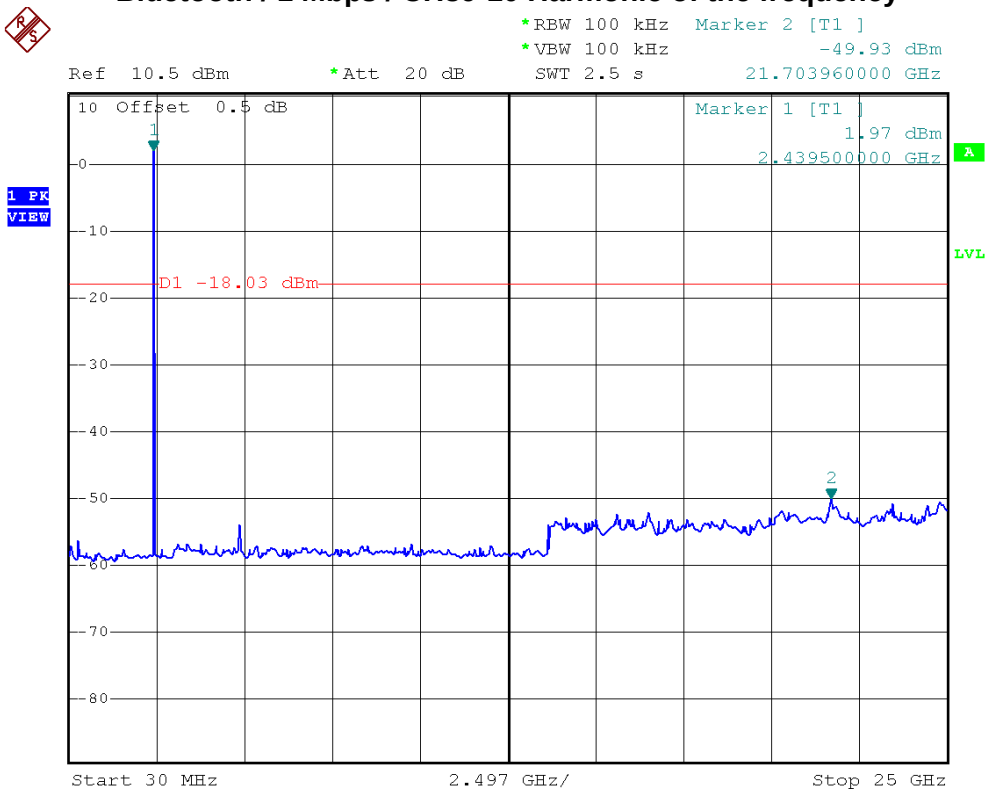
Bluetooth / 1 Mbps / CH78-The max. radio frequency power in any 100 kHz bandwidth within the frequency band



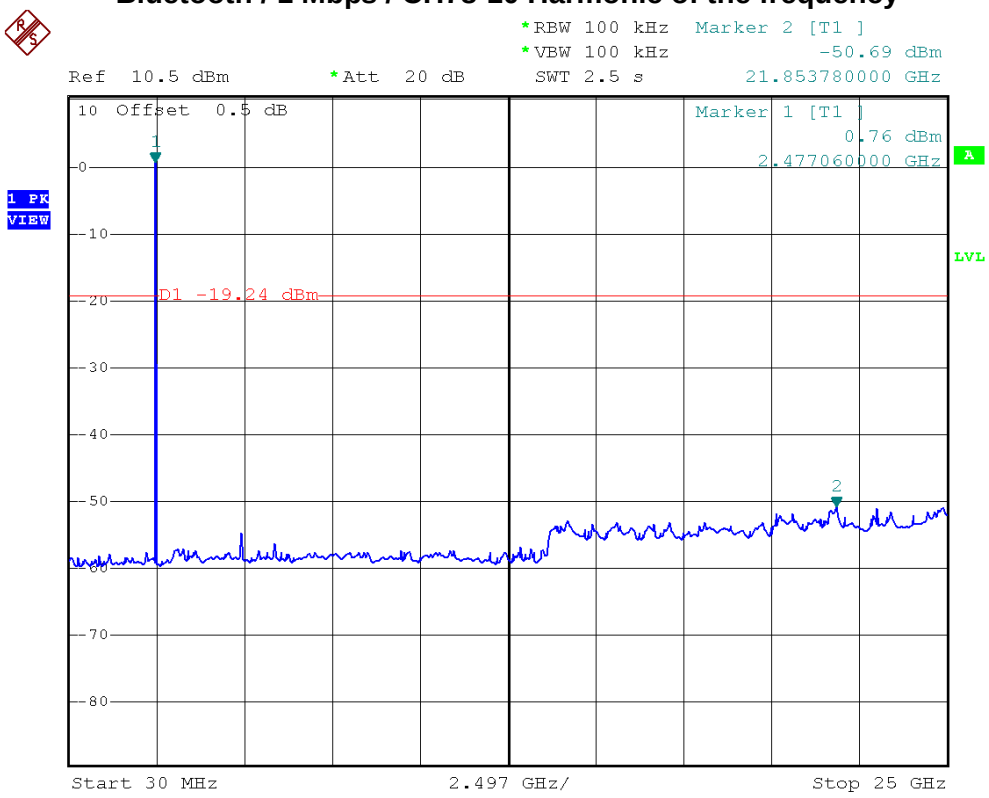
Bluetooth / 1 Mbps / CH00-10 Harmonic of the frequency



Bluetooth / 1 Mbps / CH39-10 Harmonic of the frequency



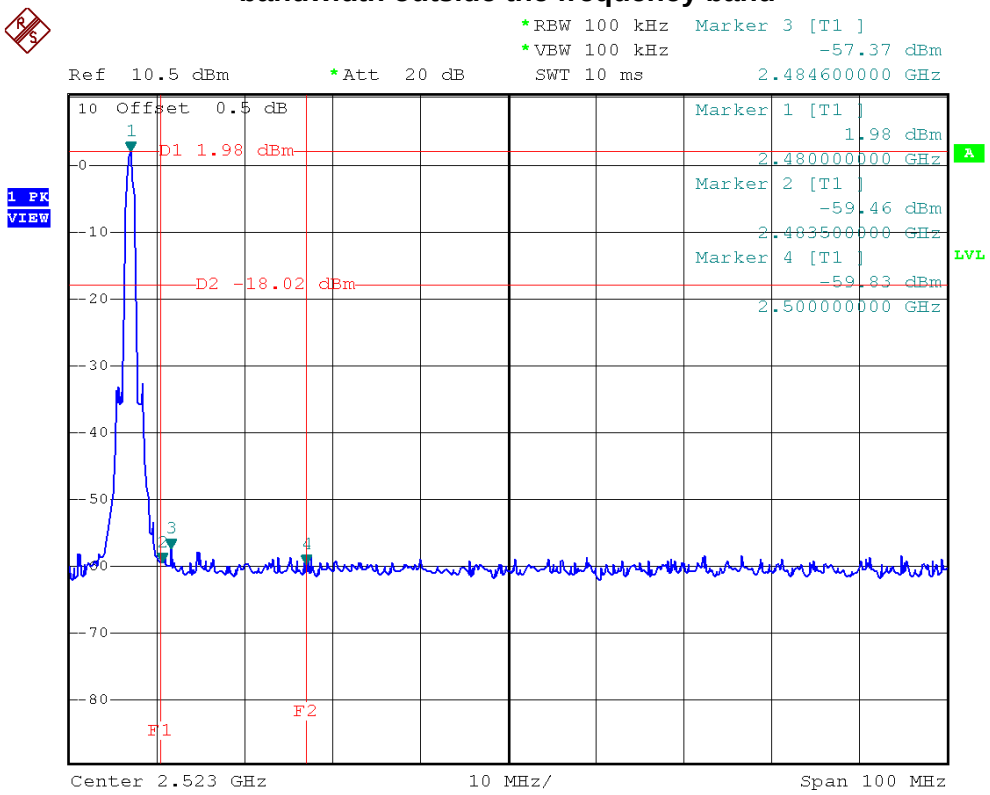
Bluetooth / 1 Mbps / CH78-10 Harmonic of the frequency



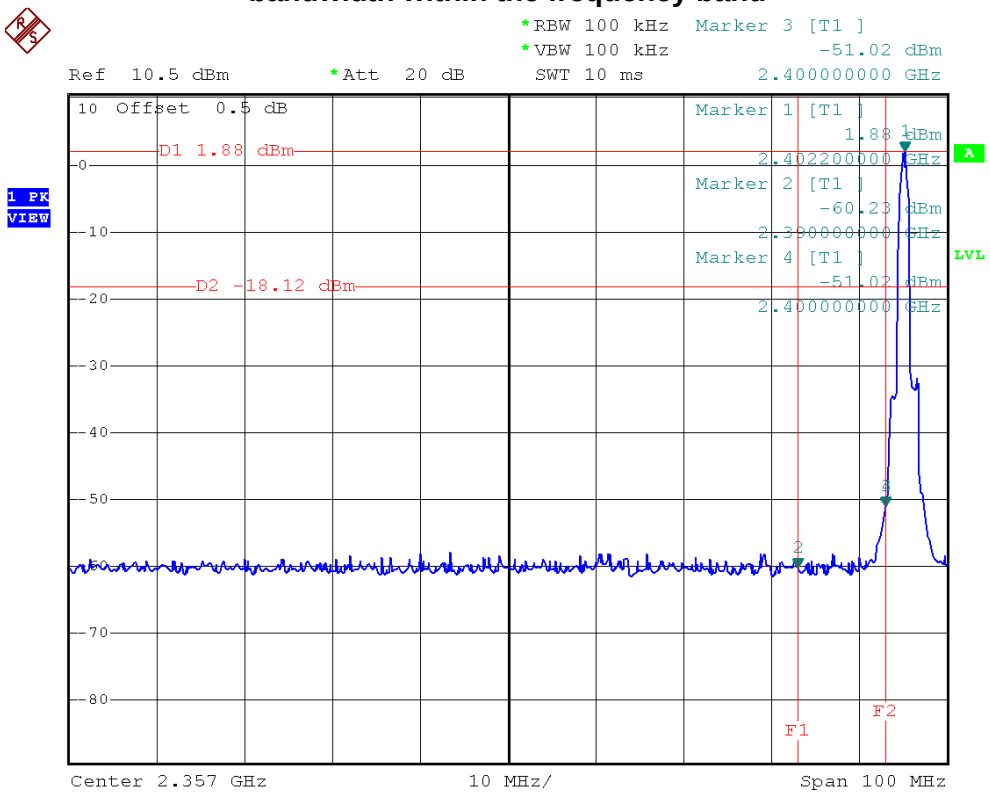
EUT：	Bluetooth audio receive Dongle - BT1000	Model Name ：	BT1000
Temperature：	26°C	Relative Humidity：	60%
Test Voltage ：	AC 120V/60Hz		
Test Mode ：	Bluetooth / 3 Mbps / CH00, CH39, CH78		

The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
2484.6	-57.37	2400	-51.02
Result			
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.			

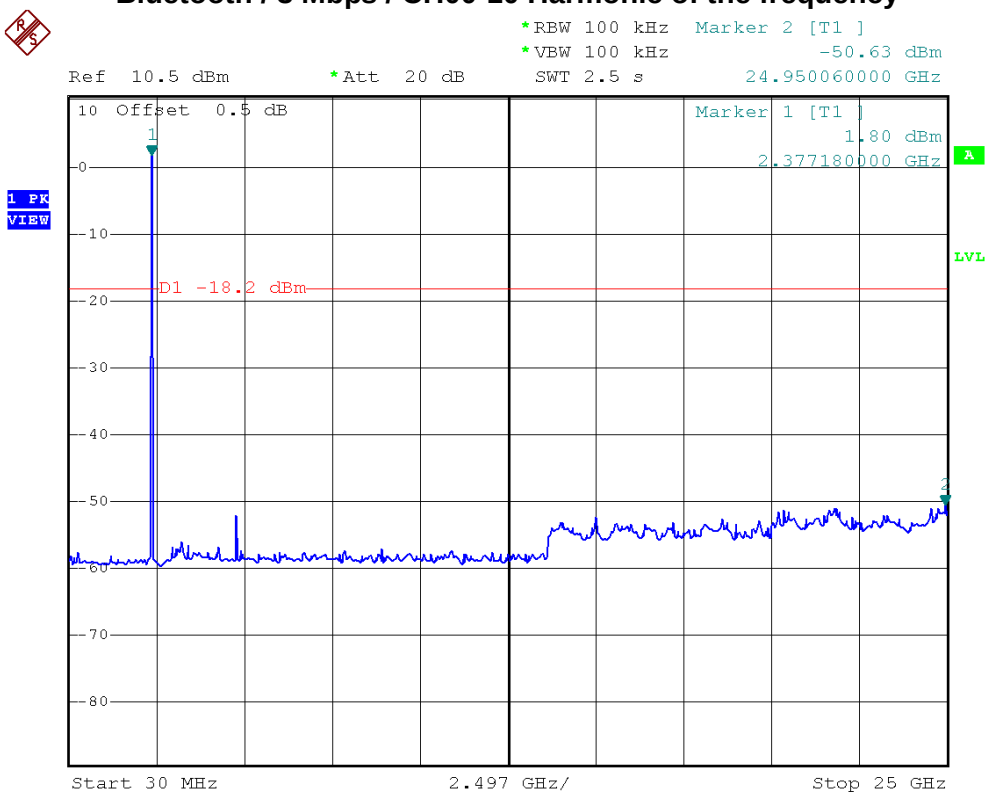
Bluetooth / 3 Mbps / CH00-The max. radio frequency power in any 100kHz bandwidth outside the frequency band



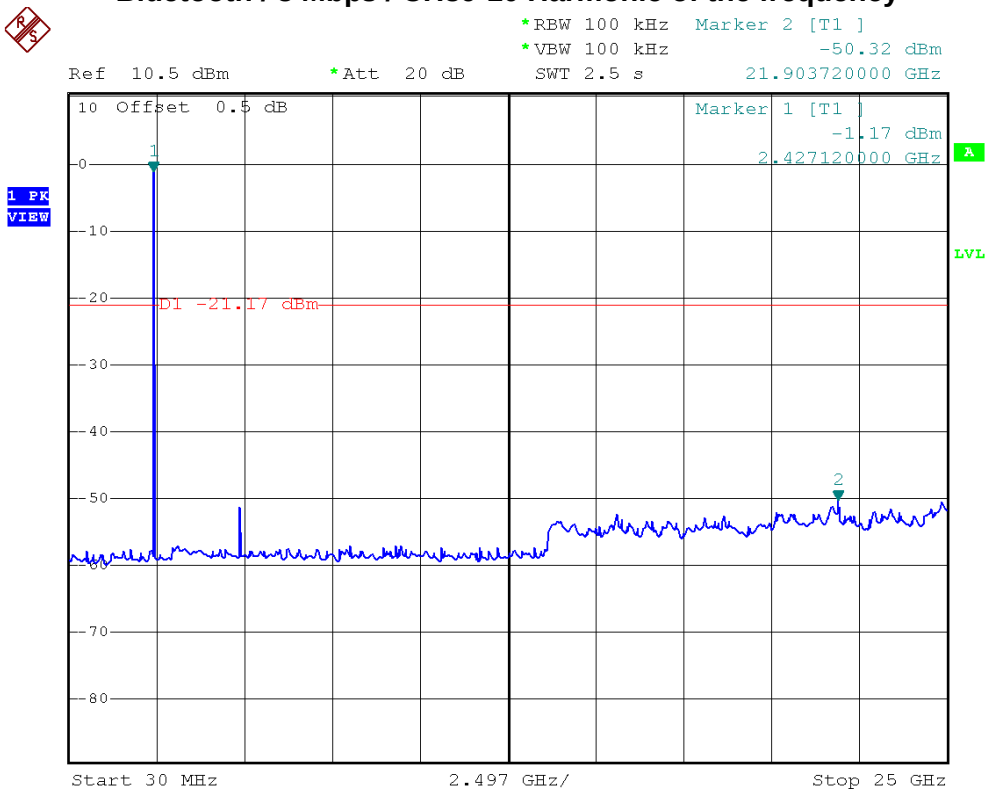
Bluetooth / 3 Mbps / CH78-The max. radio frequency power in any 100 kHz bandwidth within the frequency band



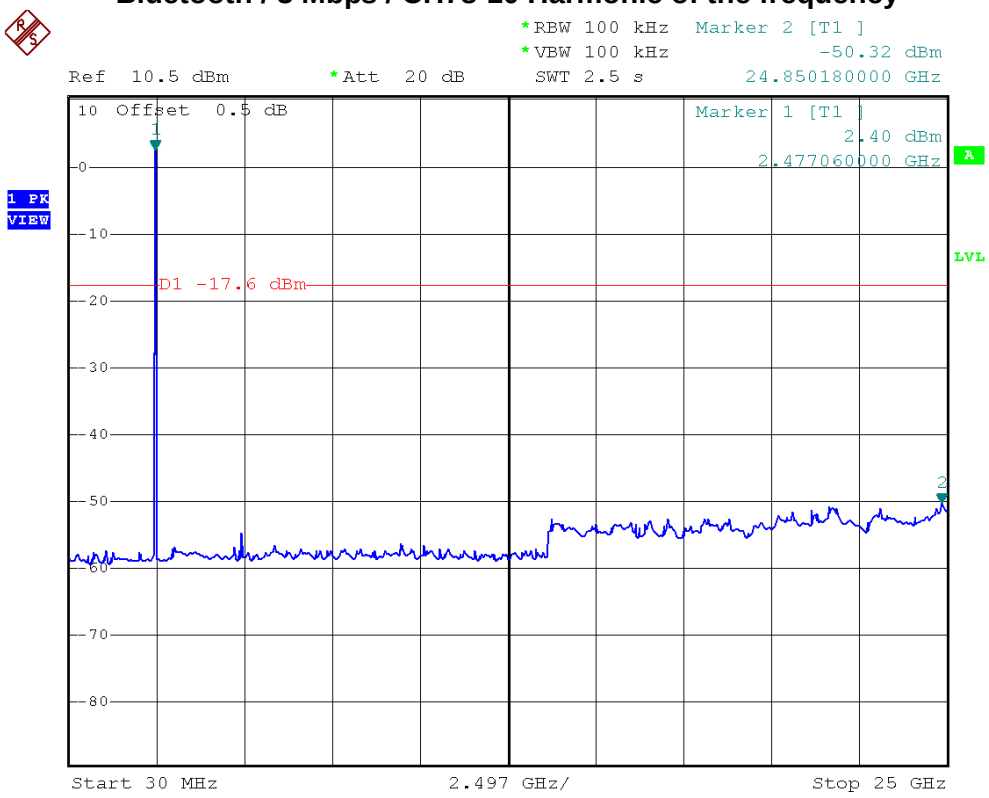
Bluetooth / 3 Mbps / CH00-10 Harmonic of the frequency



Bluetooth / 3 Mbps / CH39-10 Harmonic of the frequency



Bluetooth / 3 Mbps / CH78-10 Harmonic of the frequency



10. RF EXPOSURE TEST

10.1 Applied procedures / limit

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device.

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm^2)	Averaging Time $\|E\|^2$,$\|H\|^2$or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm^2)	Averaging Time $\|E\|^2$,$\|H\|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz ; *Plane-wave equivalent power density

10.1.1 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Power Meter	Anritsu	ML2495A	1128008	Jul. 13, 2012
2	Power Meter Sensor	Anritsu	MA2411B	1126001	Jul. 18, 2012

Remark: “N/A” denotes No Model Name, No Serial No. or No Calibration specified.

10.1.2 MPE CALCULATION METHOD

E (V/m) $= \frac{\sqrt{30 \times P \times G}}{d}$ Power Density: *Pd* (W/m²) $= \frac{E^2}{377}$

E = Electric field (V/m)

P = Peak RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

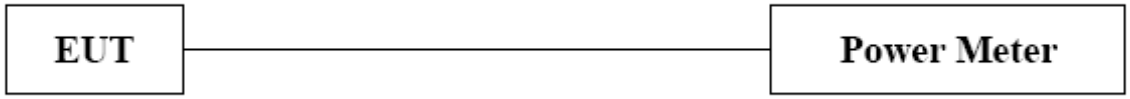
Pd $= \frac{30 \times P \times G}{377 \times d^2}$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained

10.1.3 DEVIATION FROM STANDARD

No deviation.

10.1.4 TEST SETUP



10.1.5 EUT OPERATION CONDITIONS

The power is too low, so no RF calculations are needed.