



FCC RADIO TEST REPORT

FCC ID: GV3M01308-D

Product Name:	Wireless Dongle
Trademark:	N/A
Model Number:	M01308-D
Prepared For :	ACCO Brands, Inc.
Address :	333 Twin Dolphin Drive, 6th Floor, Redwood Shores, California, United States
Prepared By :	Shenzhen BCTC Technology Co., Ltd.
Address :	No.101, Yousong Road, Longhua New District, Shenzhen, China Nanshan District, Shenzhen, China
Test Date:	Dec. 21 - Dec. 30, 2014
Date of Report :	Dec. 30, 2014
Report No.:	BCTC-141125625R

VERIFICATION OF COMPLIANCE

Applicant:	ACCO Brands, Inc.
Address	333 Twin Dolphin Drive, 6th Floor, Redwood Shores, California, United States
Manufacturer Name:	Kensington Computer Products Group
Address:	333, Twin Dolphin Drive, 6th Floor, Redwood Shores, CA 94065, USA
Product Description:	Wireless Dongle
Brand Name:	N/A
Model Name:	M01308-D
Model difference:	Model name is different
Test procedure	ANSI C63.4:2003, RSS-Gen Issue 3
Standards	FCC PART15.249, RSS-210 Issue 8

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Reviewer(Quality Manager):

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1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15, Subpart C (15.249) RSS-Gen Issue 3 & RSS-210 Issue 8			
Standard Section	Test Item	Judgment	Remark
15.207& 7.2.4	Conducted Emission	Pass	
15.203	Antenna Requirement	Pass	
15.249& A8.5	Radiated Spurious Emission	Pass	
15.249& A8.1	Occupied Bandwidth	Pass	
15.205& A8.5	Band Edge Emission	Pass	

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

1.1 TEST FACILITY

Shenzhen BCTC Technology Co., Ltd.

Add. : No.101,Yousong Road,Longhua New District, Shenzhen,China

FCC Registered No.: 187086

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately **95 %**.

No.	Item	Uncertainty
1	Conducted Emission Test	$\pm 1.38\text{dB}$
2	RF power,conducted	$\pm 0.16\text{dB}$
3	Spurious emissions,conducted	$\pm 0.21\text{dB}$
4	All emissions,radiated(<1G)	$\pm 4.68\text{dB}$
5	All emissions,radiated(>1G)	$\pm 4.89\text{dB}$
6	Temperature	$\pm 0.5^{\circ}\text{C}$
7	Humidity	$\pm 2\%$

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	Wireless Dongle
Trade Name	N/A
Model Name	M01308-D
Serial Model	N/A
Model Difference	N/A
Product Description	The EUT is a Wireless Dongle
	Operation Frequency: 2402~2480MHz
	Modulation Type: GFSK
	Antenna Designation: PCB Antenna
	Antenna Gain(Peak) 1.0 dBi
	EIRP 91.45dbuv/m@3m
	Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.
N/A	N/A
Power Rating	DC 5V from PC

Note:

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

2.

Channel	Frequency (MHz)
01	2402
02	2403
.....
40	2441
41	2442
.....
78	2479
79	2480

3.

Table for Filed Antenna

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

2.2 DESCRIPTION OF TEST MODES

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

Pretest Mode	Description
Mode 1	CH1
Mode 2	CH40
Mode 3	CH79
Mode 4	Charge Mode

For Conducted Emission	
Final Test Mode	Description
Mode 4	Charge Mode

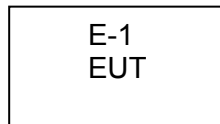
For Radiated Emission	
Final Test Mode	Description
Mode 1	CH1
Mode 2	CH40
Mode 3	CH79

Note:

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



2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED





2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

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

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	Wireless Dongle	N/A	M01308-D	N/A	EUT

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	Spectrum Analyzer	Agilent	E4407B	MY45108040	2014.07.06	2015.07.05	1 year
2	Test Receiver	R&S	ESPI	101318	2014.06.07	2015.06.06	1 year
3	Bilog Antenna	TESEQ	CBL6111D	31216	2014.07.06	2015.07.05	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264416	2014.06.07	2015.06.06	1 year
5	Spectrum Analyzer	ADVANTEST	R3132	150900201	2014.06.07	2015.06.06	1 year
6	Horn Antenna	EM	EM-AH-10180	2011071402	2014.07.06	2015.07.05	1 year
7	Horn Ant	Schwarzbeck	BBHA 9170	9170-181	2014.07.06	2015.07.05	1 year
8	Amplifier	EM	EM-30180	060538	2013.12.22	2014.12.21	1 year
8-1	Amplifier	EM	EM-30180	060538	2014.12.22	2015.12.21	1 year
9	Loop Antenna	ARA	PLA-1030/B	1029	2014.06.08	2015.06.07	1 year
10	Power Meter	R&S	NRVS	100696	2014.07.06	2015.07.05	1 year
11	Power Sensor	R&S	URV5-Z4	0395.1619.05	2014.07.06	2015.07.05	1 year
12	RF cables	R&S	N/A	N/A	2014.07.06	2015.07.05	1 year

Conduction Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Test Receiver	R&S	ESCI	101160	2014.06.06	2015.06.05	1 year
2	LISN	R&S	ENV216	101313	2014.08.24	2015.08.23	1 year
3	LISN	EMCO	3816/2	00042990	2014.08.24	2015.08.23	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264417	2014.06.07	2015.06.06	1 year
5	Passive Voltage Probe	R&S	ESH2-Z3	100196	2014.06.07	2015.06.06	1 year
6	Absorbing clamp	R&S	MOS-21	100423	2014.06.08	2015.06.07	1 year
7	RF cables	R&S	N/A	N/A	2014.07.06	2015.07.05	1 year



3. TEST RESULT

3.1 ANTENNA REQUIREMENT

3.1.1 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.

3.1.2 EUT ANTENNA

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

3.2 CONDUCTED EMISSION MEASUREMENT

3.2.1 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

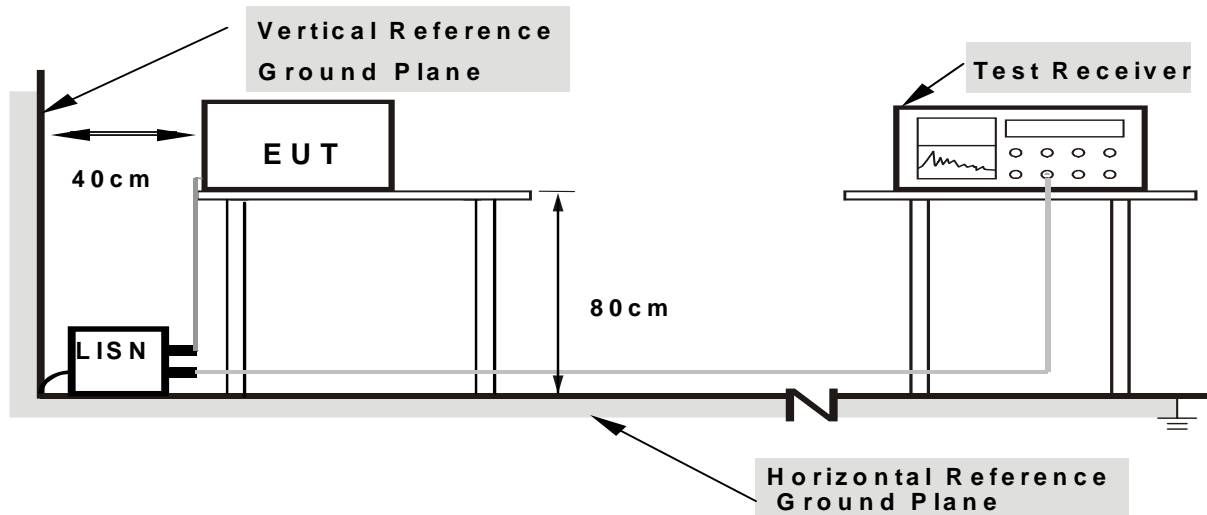
3.2.2 TEST PROCEDURE

- 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.

3.2.3 DEVIATION FROM TEST STANDARD

No deviation

3.2.4 TEST SETUP

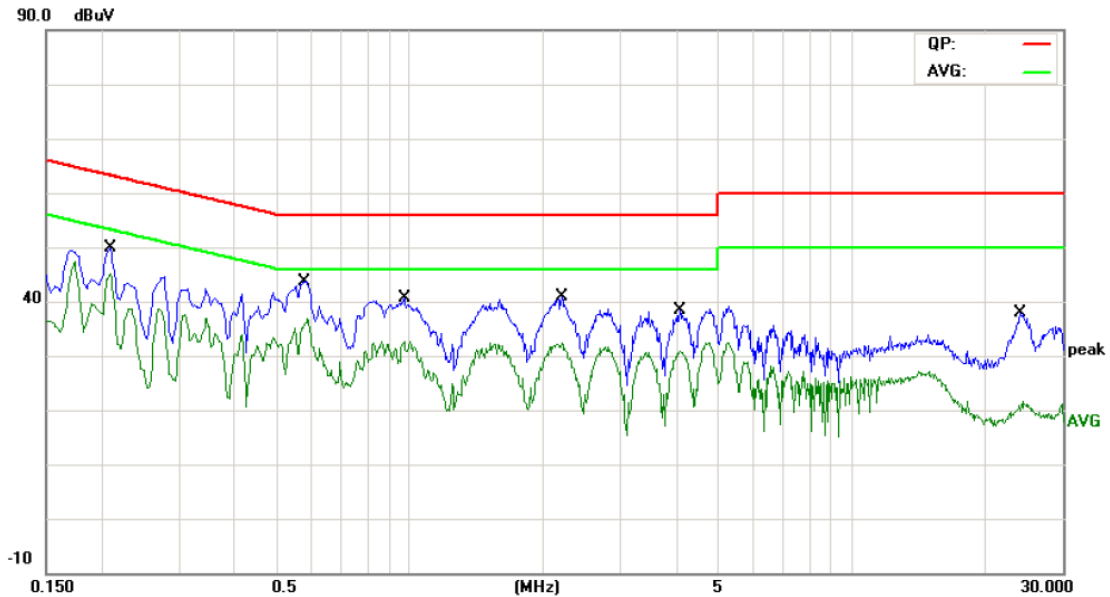


Note: 1. Support units were connected to second LISN.

2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

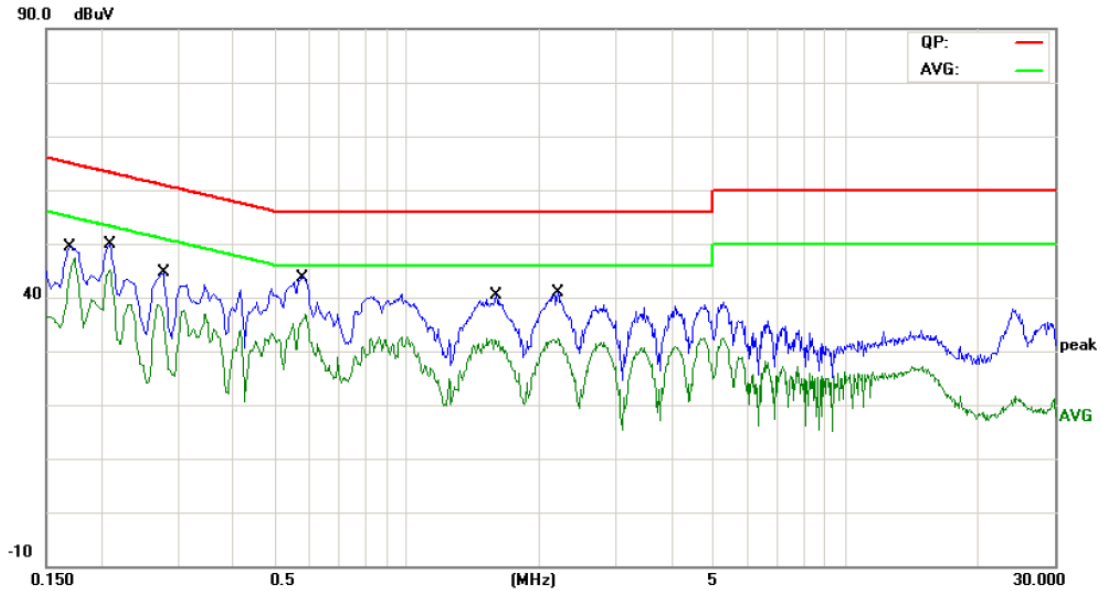
3.2.5 TEST RESULT

EUT :	Wireless Dongle	Model Name. :	M01308-D
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Test Date :	2014-12-06
Test Mode :	Data transmission	Phase :	L
Test Voltage :	DC 5V from PC 120V/60Hz		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1		0.2100	38.04	10.02	48.06	63.20	-15.14	QP
2	*	0.2100	34.70	10.02	44.72	53.20	-8.48	AVG
3		0.5780	32.94	10.06	43.00	56.00	-13.00	QP
4		0.5780	25.54	10.06	35.60	46.00	-10.40	AVG
5		0.9700	28.62	10.07	38.69	56.00	-17.31	QP
6		0.9700	22.27	10.07	32.34	46.00	-13.66	AVG
7		2.2060	25.55	10.05	35.60	56.00	-20.40	QP
8		2.2060	22.07	10.05	32.12	46.00	-13.88	AVG
9		4.0900	24.62	9.99	34.61	56.00	-21.39	QP
10		4.0900	20.83	9.99	30.82	46.00	-15.18	AVG
11		24.1340	21.57	10.16	31.73	60.00	-28.27	QP
12		24.1340	8.86	10.16	19.02	50.00	-30.98	AVG

EUT :	Wireless Dongle	Model Name. :	M01308-D
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Test Date :	2014-12-06
Test Mode :	Data transmission	Phase :	N
Test Voltage :	DC 5V from PC 120V/60Hz		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1		0.1700	36.13	10.12	46.25	64.96	-18.71	QP
2		0.1700	32.80	10.12	42.92	54.96	-12.04	AVG
3		0.2100	34.19	10.12	44.31	63.20	-18.89	QP
4		0.2100	31.60	10.12	41.72	53.20	-11.48	AVG
5		0.2779	26.02	10.09	36.11	60.88	-24.77	QP
6		0.2779	20.38	10.09	30.47	50.88	-20.41	AVG
7		0.5780	34.67	10.02	44.69	56.00	-11.31	QP
8	*	0.5780	27.28	10.02	37.30	46.00	-8.70	AVG
9		1.5940	27.36	10.10	37.46	56.00	-18.54	QP
10		1.5940	21.68	10.10	31.78	46.00	-14.22	AVG
11		2.2060	25.68	10.06	35.74	56.00	-20.26	QP
12		2.2060	22.42	10.06	32.48	46.00	-13.52	AVG

3.3 RADIATED EMISSION MEASUREMENT

3.3.1 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

3.3.2 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:

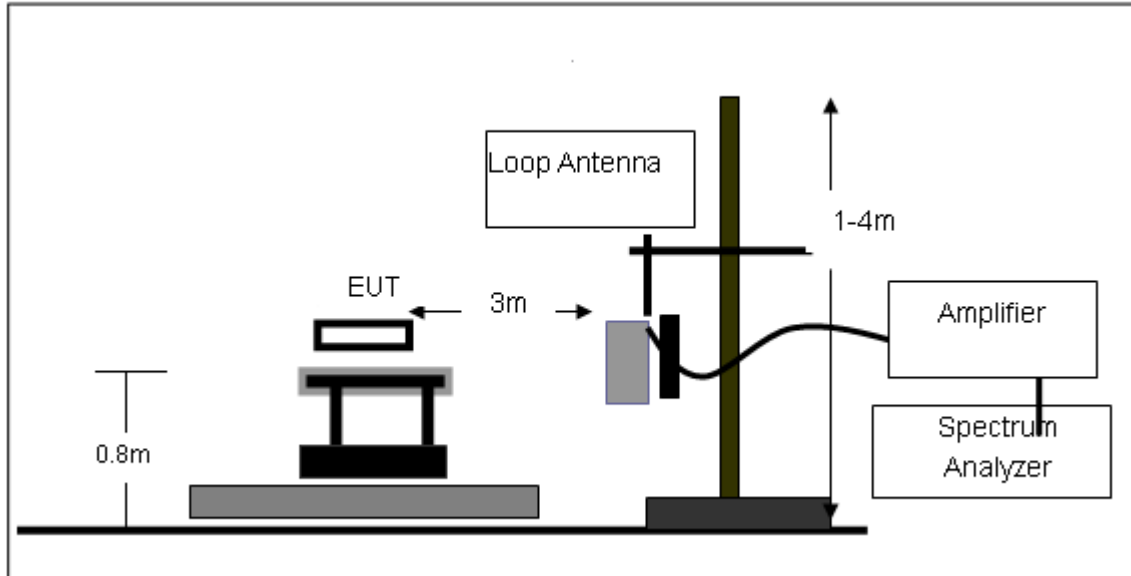
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

3.3.3 DEVIATION FROM TEST STANDARD

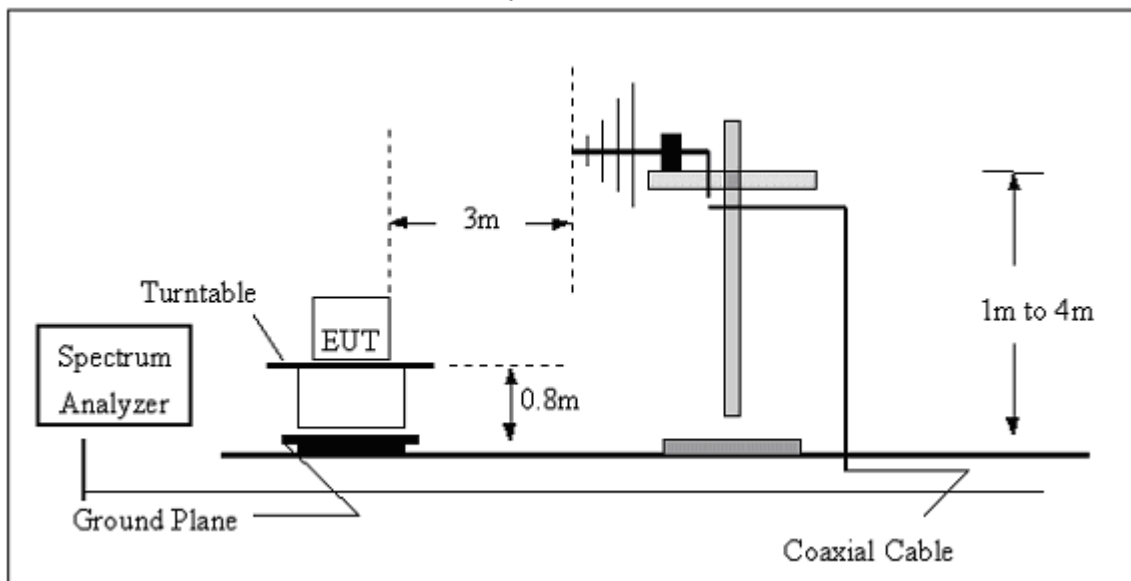
No deviation

3.3.4 TEST SETUP

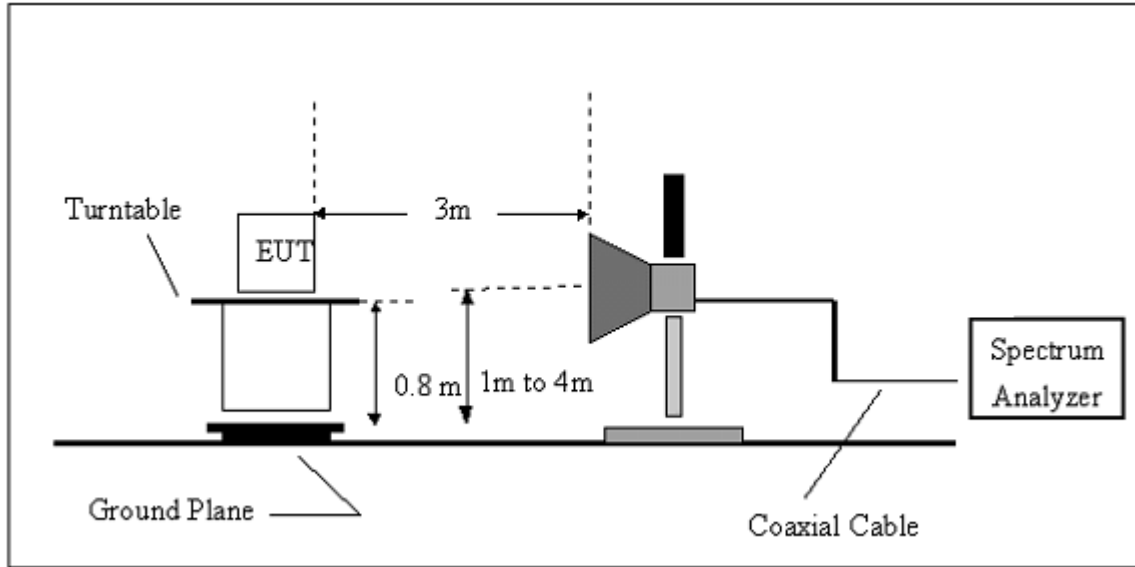
(A) Radiated Emission Test-Up Frequency Below 30MHz



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



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



3.3.5 TEST RESULTS (BLOW 30MHz)

EUT :	Wireless Dongle	Model Name. :	M01308-D
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
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 = $40 \log(\text{specific distance}/\text{test distance})$ (dB);

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

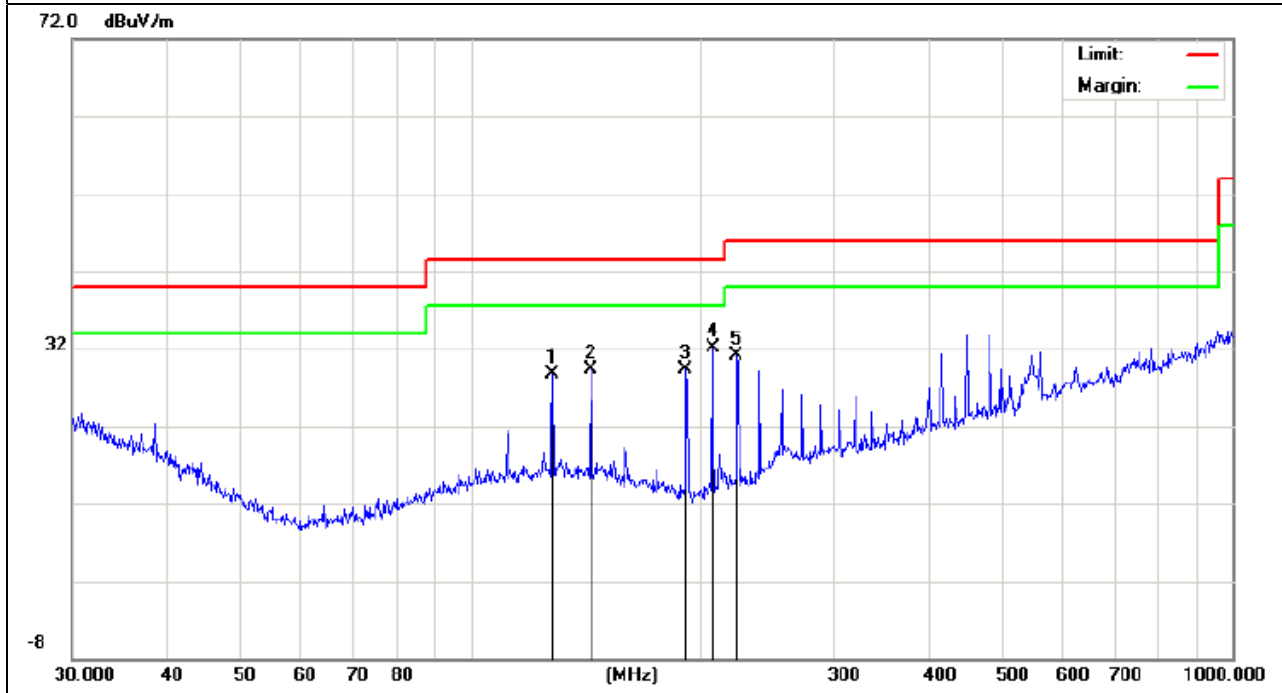
3.3.6 TEST RESULTS (BETWEEN 30 – 1000 MHZ)

EUT :	Wireless Dongle	Model Name :	M01308-D
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	TX	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBµV)	Factor (dB)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	Detector Type
128.11	16.72	11.91	28.63	43.50	-14.87	Quasi-Peak
143.83	17.44	11.93	29.37	43.50	-14.13	Quasi-Peak
191.74	20.59	8.72	29.31	43.50	-14.19	Quasi-Peak
207.85	22.94	9.14	32.08	43.50	-11.42	Quasi-Peak
223.73	20.90	10.18	31.08	46.00	-14.92	Quasi-Peak

Remark:

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



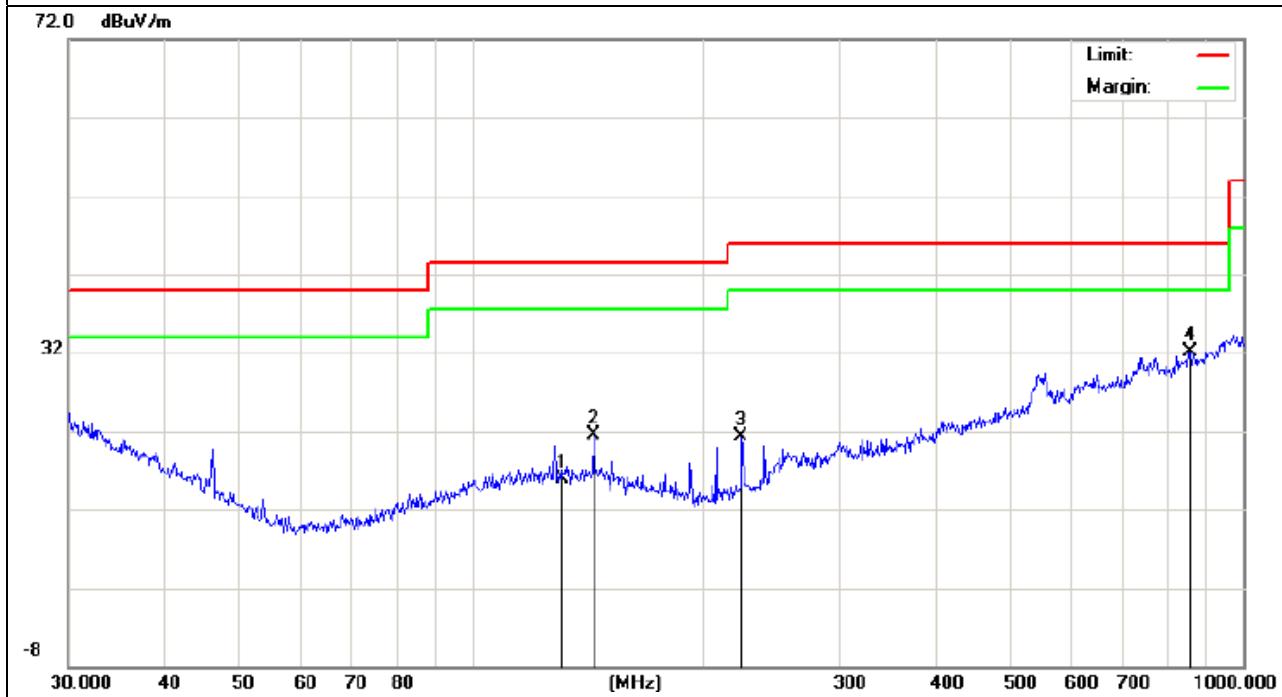


EUT :	Wireless Dongle	Model Name :	M01308-D
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	TX	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
131.29	3.89	11.93	15.82	43.50	-27.68	Quasi-Peak
143.82	9.54	11.93	21.47	43.50	-22.03	Quasi-Peak
223.73	11.13	10.18	21.31	46.00	-24.69	Quasi-Peak
854.02	6.72	25.47	32.19	46.00	-13.81	Quasi-Peak

Remark:

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

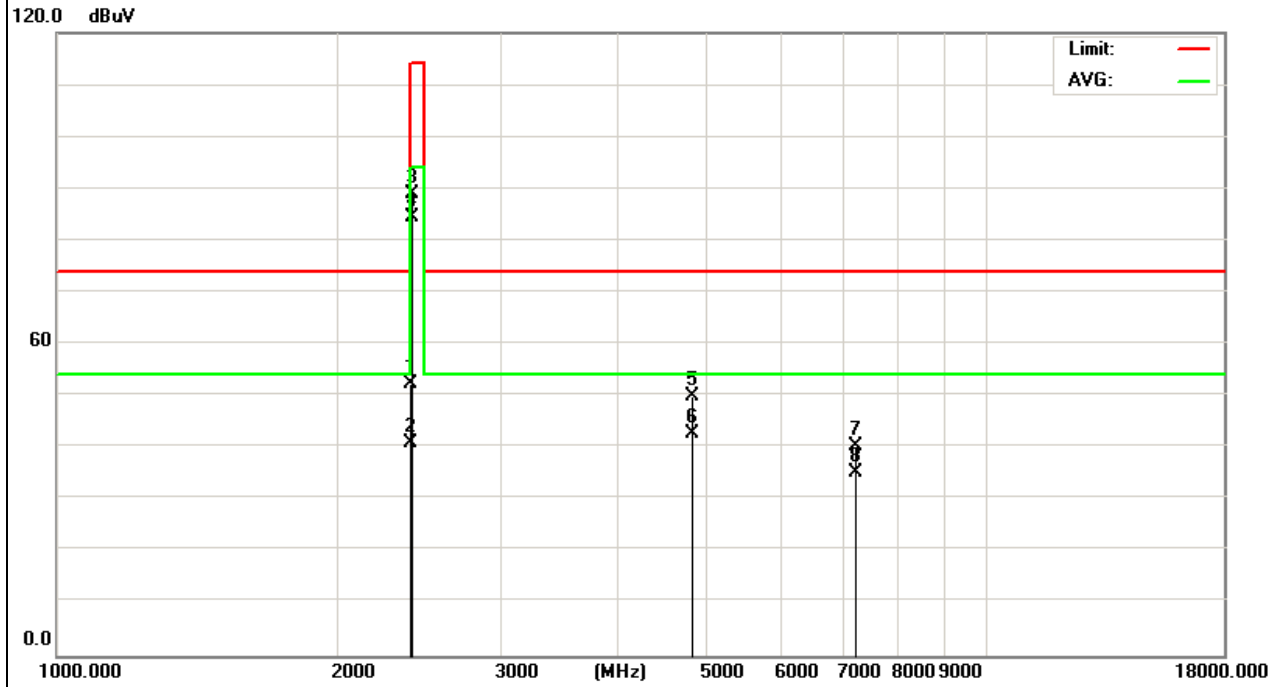


3.3.7 TEST RESULTS (ABOVE 1000 MHZ)

EUT :	Wireless Dongle	Model Name :	M01308-D
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	TX /2402MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2402	57.29	32.69	89.98	114.00	-24.02	peak
2402	51.56	32.69	84.25	94.00	-9.75	AVG
4804	6.62	44.02	50.64	74.00	-23.36	peak
4804	-0.59	44.02	43.43	54.00	-10.57	AVG
9608	-7.21	47.53	40.32	74.00	-33.68	peak
9608	-11.28	47.53	36.25	54.00	-17.75	AVG

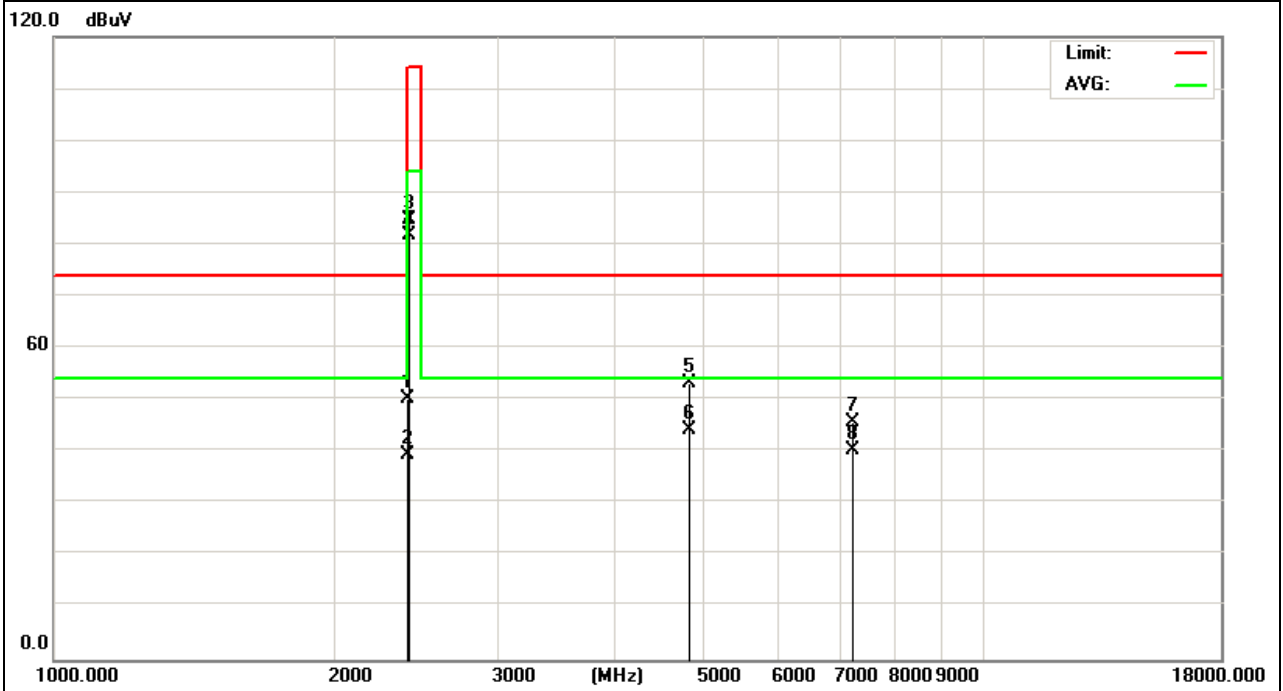
Remark:
 Factor = Antenna Factor + Cable Loss – Pre-amplifier.
 No emission above 18GHz.



EUT :	Wireless Dongle	Model Name :	M01308-D
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	TX /2402MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBµV)	Factor (dB)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	Detector Type
2402	53.95	32.69	86.64	114.00	-27.36	peak
2402	49.53	32.69	82.22	94.00	-11.78	AVG
4804	10.38	44.02	54.40	74.00	-19.60	peak
4804	-0.80	44.02	43.22	54.00	-10.78	AVG
7206	-1.07	47.53	46.46	74.00	-27.54	peak

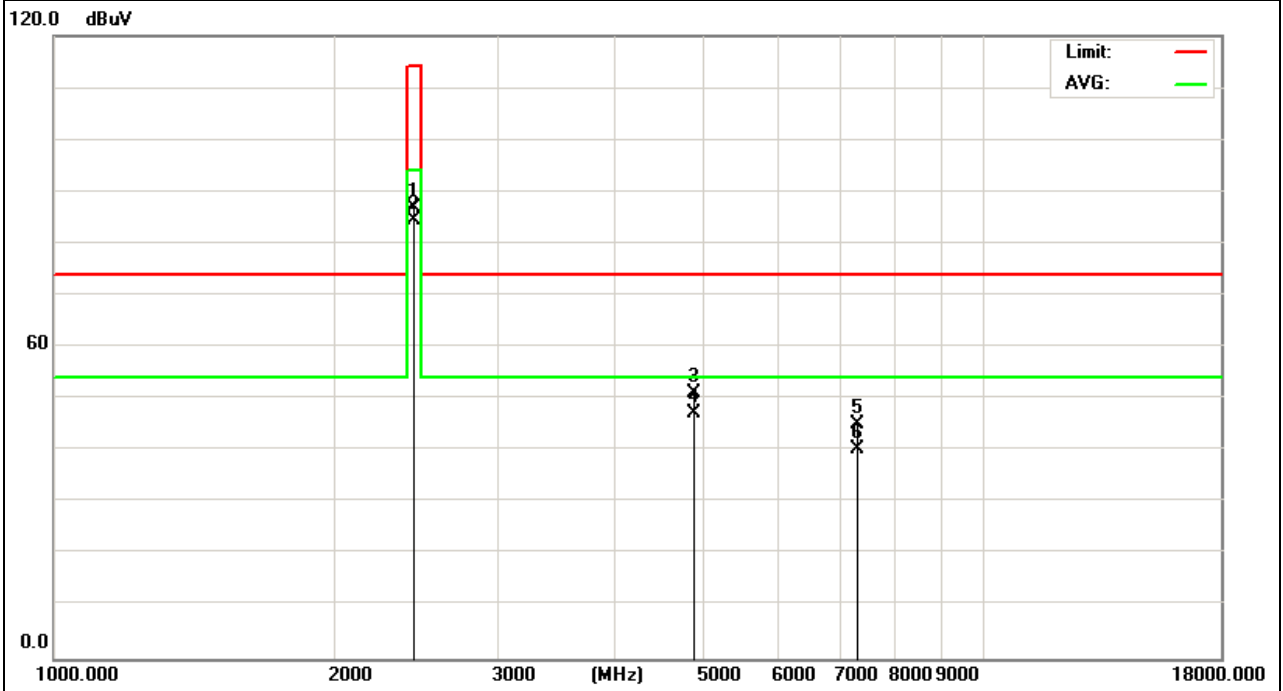
Remark:
 Factor = Antenna Factor + Cable Loss – Pre-amplifier.
 No emission above 18GHz.



EUT :	Wireless Dongle	Model Name :	M01308-D
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	TX /2441MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBµV)	Factor (dB)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	Detector Type
2441	54.01	33.21	87.22	114.00	-26.78	peak
2441	52.23	33.21	85.44	94.00	-8.56	AVG
4882	17.95	32.69	50.64	74.00	-23.36	peak
4882	13.56	32.69	46.25	54.00	-7.75	AVG
7323	2.89	42.21	45.10	74.00	-28.90	peak
7323	-1.09	42.21	41.12	54.00	-12.88	AVG

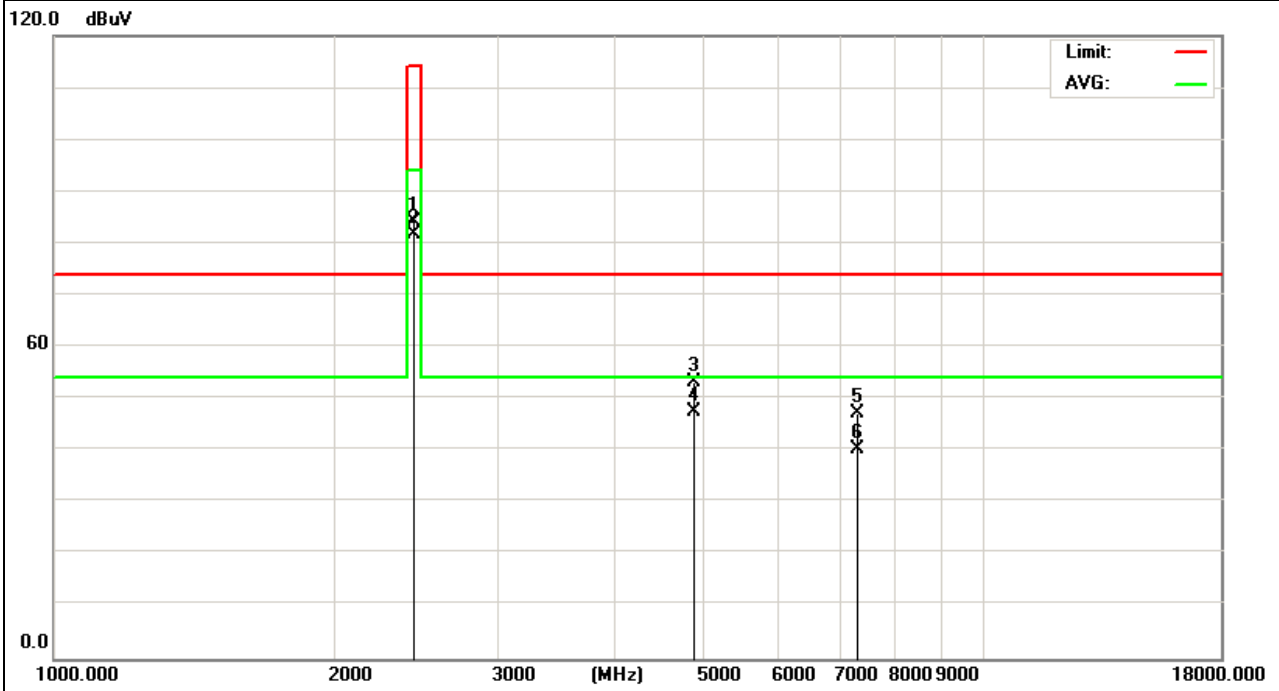
Remark:
 Factor = Antenna Factor + Cable Loss – Pre-amplifier.
 No emission above 18GHz.



EUT :	Wireless Dongle	Model Name :	M01308-D
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	TX /2441MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBµV)	Factor (dB)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	Detector Type
2441	53.11	33.21	86.32	114.00	-27.68	peak
2441	49.80	33.21	83.01	94.00	-10.99	AVG
4882	21.95	32.69	54.64	74.00	-19.36	peak
4882	15.52	32.69	48.21	54.00	-5.79	AVG
7323	4.90	42.21	47.11	74.00	-26.89	peak
7323	-2.09	42.21	40.12	54.00	-13.88	AVG

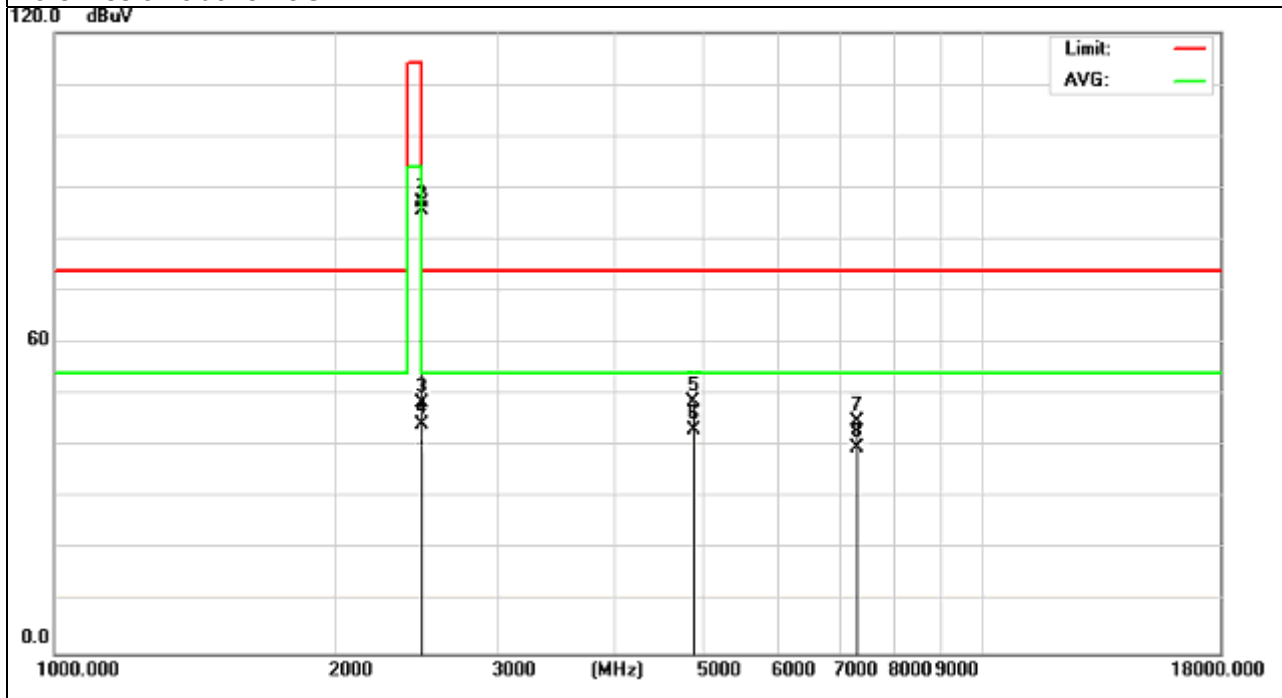
Remark:
 Factor = Antenna Factor + Cable Loss – Pre-amplifier.
 No emission above 18GHz.



EUT :	Wireless Dongle	Model Name :	M01308-D
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	TX /2480MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2480.00	58.83	31.22	90.05	114.00	-23.95	peak
2480.00	55.01	31.22	86.23	94.00	-7.77	AVG
2483.50	17.29	32.69	49.98	74.00	-24.02	peak
2483.50	11.75	32.69	44.44	54.00	-9.56	AVG
4960.00	9.52	40.12	49.64	74.00	-24.36	peak
4960.00	3.13	40.12	43.25	54.00	-10.75	AVG
7440.00	-0.90	46.22	45.32	74.00	-28.68	peak
7440.00	-5.93	46.22	40.29	54.00	-13.71	AVG

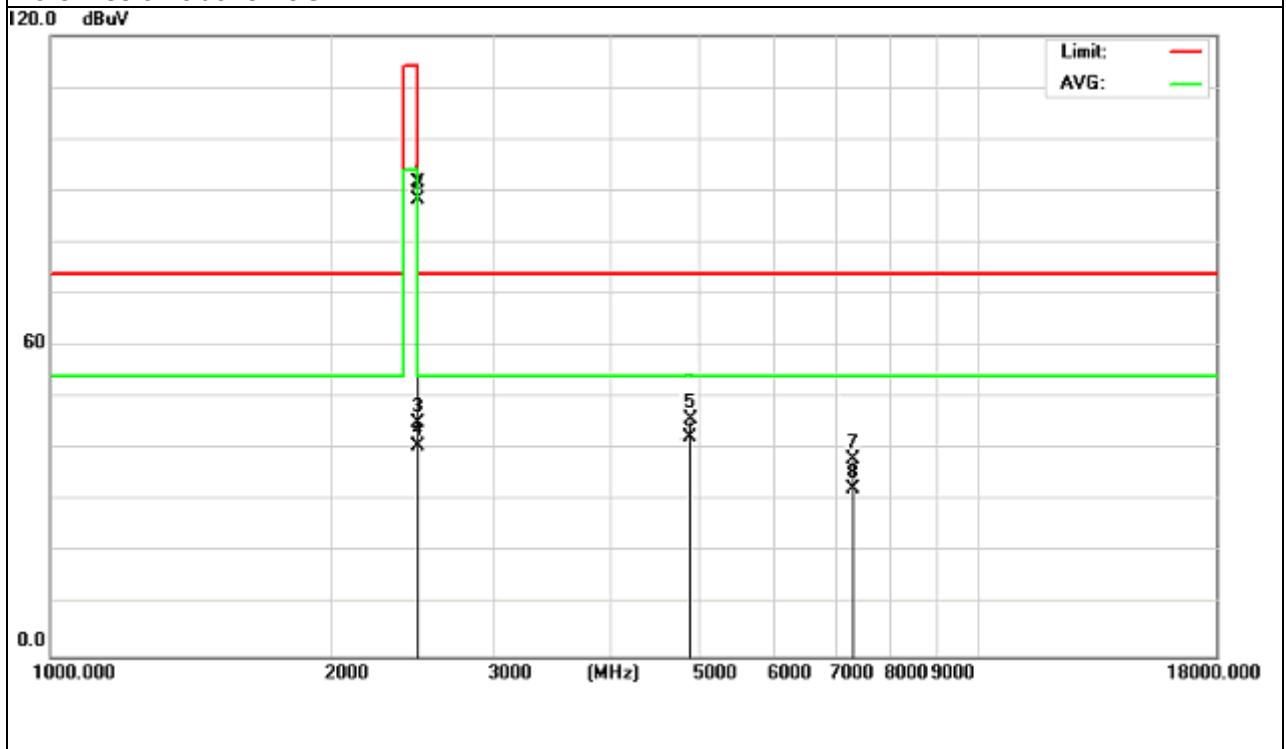
Remark:
 Factor = Antenna Factor + Cable Loss – Pre-amplifier.
 No emission above 18GHz.



EUT :	Wireless Dongle	Model Name :	M01308-D
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	TX /2480MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2480.00	60.23	31.22	91.45	114.00	-22.55	peak
2480.00	58.49	31.22	89.71	94.00	-4.29	AVG
2483.50	12.73	32.69	45.42	74.00	-28.58	peak
2483.50	8.62	32.69	41.31	54.00	-12.69	AVG
4960.00	6.34	40.12	46.46	74.00	-27.54	peak
4960.00	2.00	40.12	42.12	54.00	-11.88	AVG
7440.00	-6.78	46.22	39.44	74.00	-34.56	peak
7440.00	-12.91	46.22	33.31	54.00	-20.69	AVG

Remark:
 Factor = Antenna Factor + Cable Loss – Pre-amplifier.
 No emission above 18GHz.

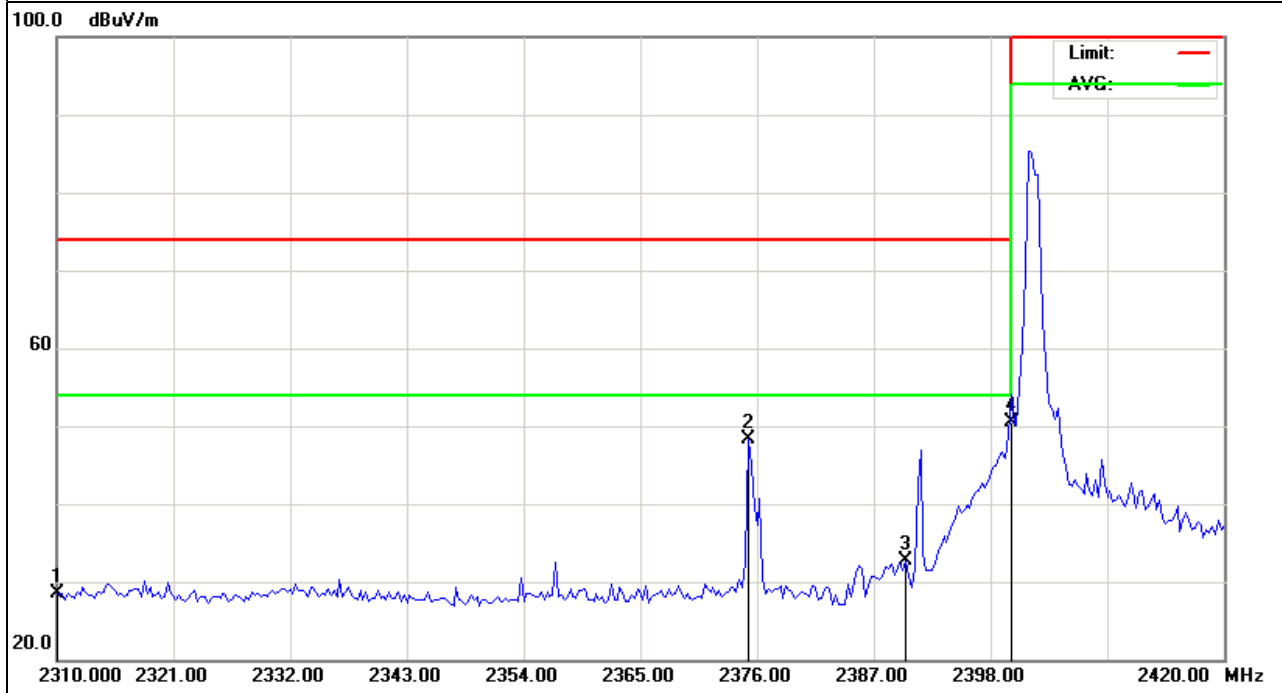


Band Edge Emission:

EUT :	Wireless Dongle	Model Name :	M01308-D
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	TX /2402MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2310	41.39	-12.89	28.5	74	-45.5	peak
2375.175	61.49	-13.16	48.33	74	-25.67	peak
2390	45.81	-13.06	32.75	74	-41.25	peak
2400	63.51	-12.99	50.52	74	-23.48	peak

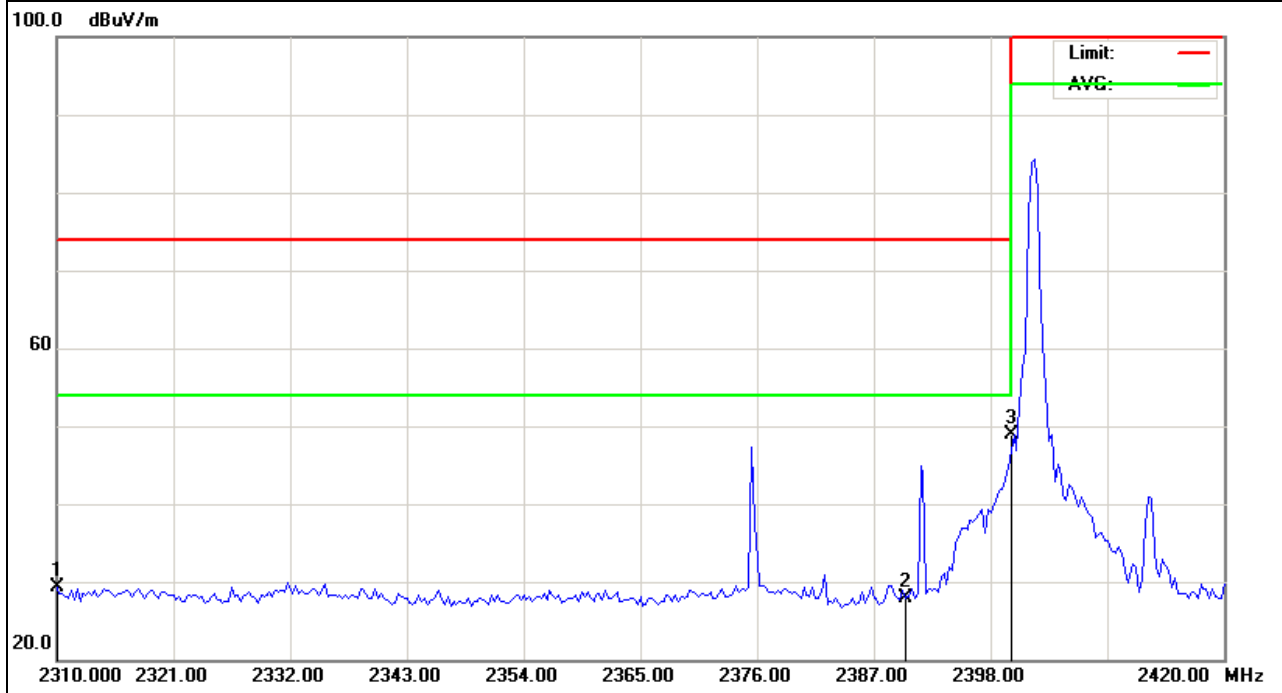
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Wireless Dongle	Model Name :	M01308-D
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	TX /2402MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2310	42.21	-12.89	29.32	74	-44.68	peak
2390	41.04	-13.06	27.98	74	-46.02	peak
2400	61.8	-12.99	48.81	74	-25.19	peak

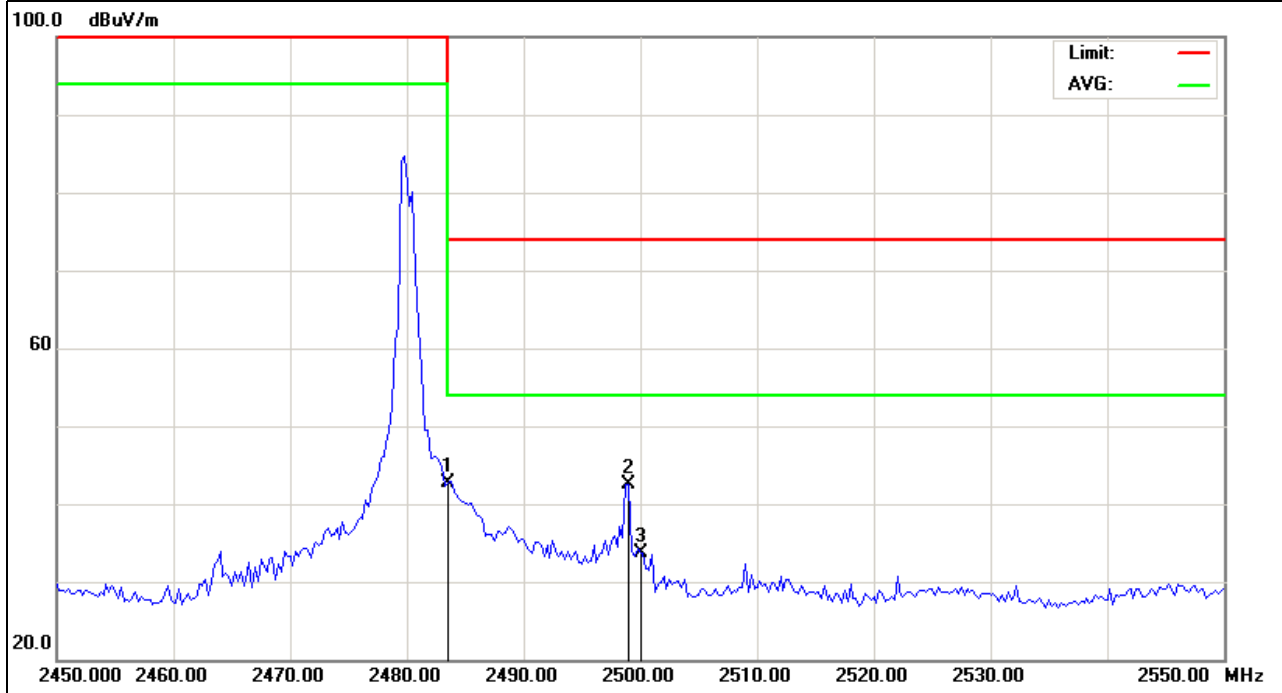
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Wireless Dongle	Model Name :	M01308-D
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	TX /2480MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBµV)	Factor (dB)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	Detector Type
2483.5	55.46	-12.78	42.68	74	-31.32	peak
2499	55.32	-12.72	42.6	74	-31.4	peak
2500	46.52	-12.72	33.8	74	-40.2	peak

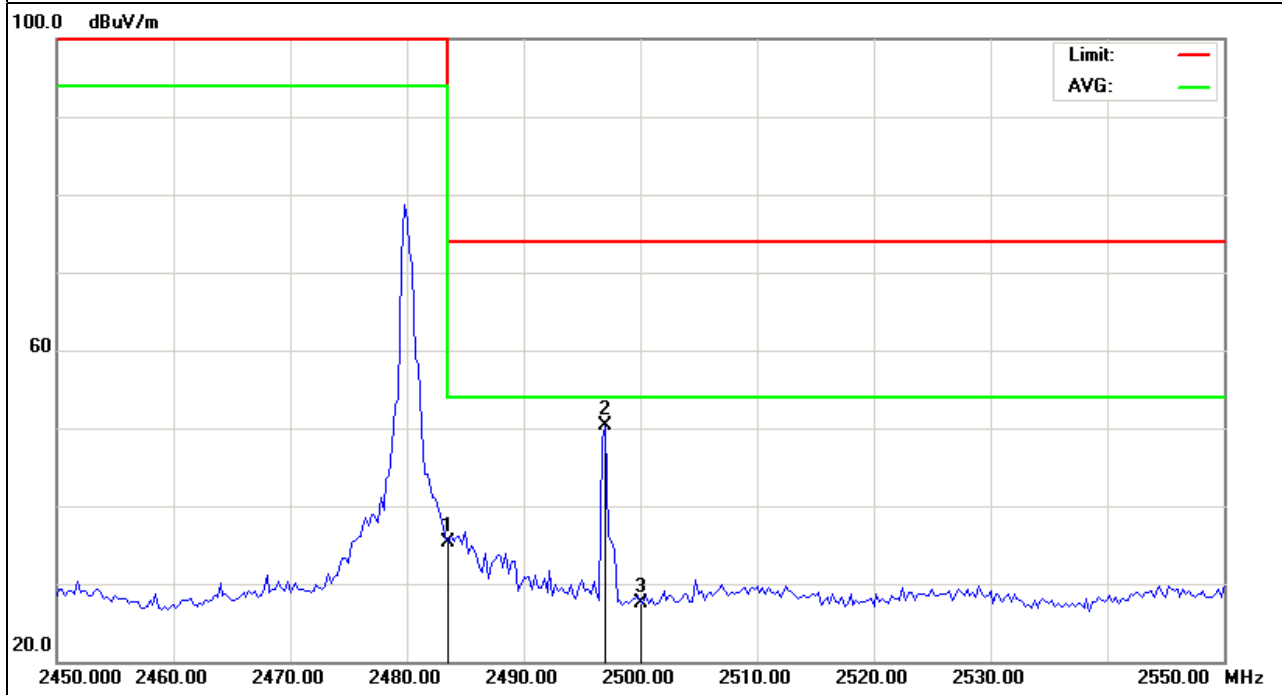
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT :	Wireless Dongle	Model Name :	M01308-D
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5.0V
Test Mode :	TX /2480MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBµV)	Factor (dB)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	Detector Type
2483.5	48.15	-12.78	35.37	74	-38.63	peak
2497	63.03	-12.73	50.3	74	-23.7	peak
2500	40.32	-12.72	27.6	74	-46.4	peak

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



4. BANDWIDTH TEST

4.1 TEST PROCEDURE

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

4.2 DEVIATION FROM STANDARD

No deviation.

4.3 TEST SETUP

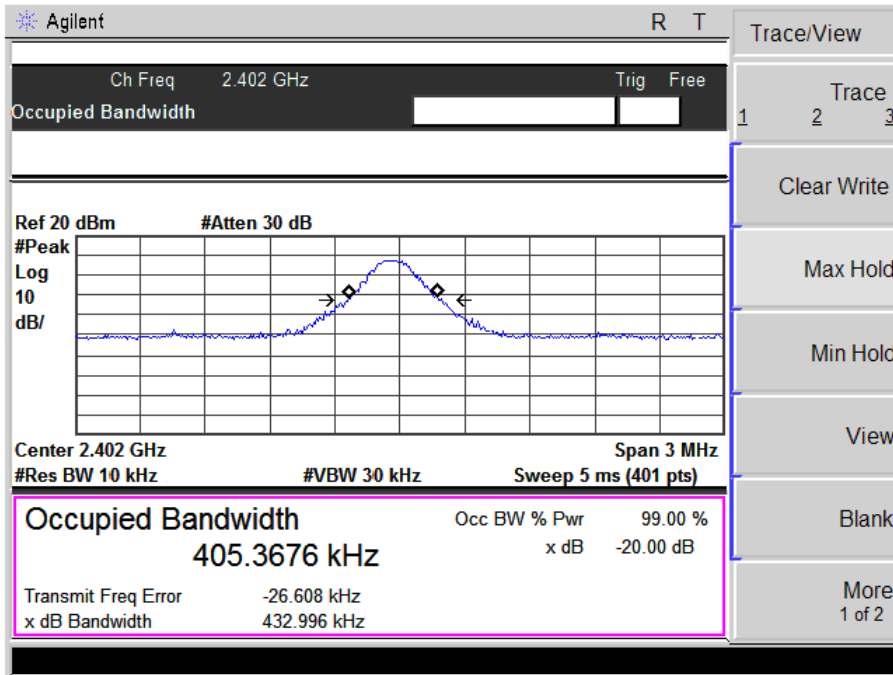


4.4 TEST RESULTS

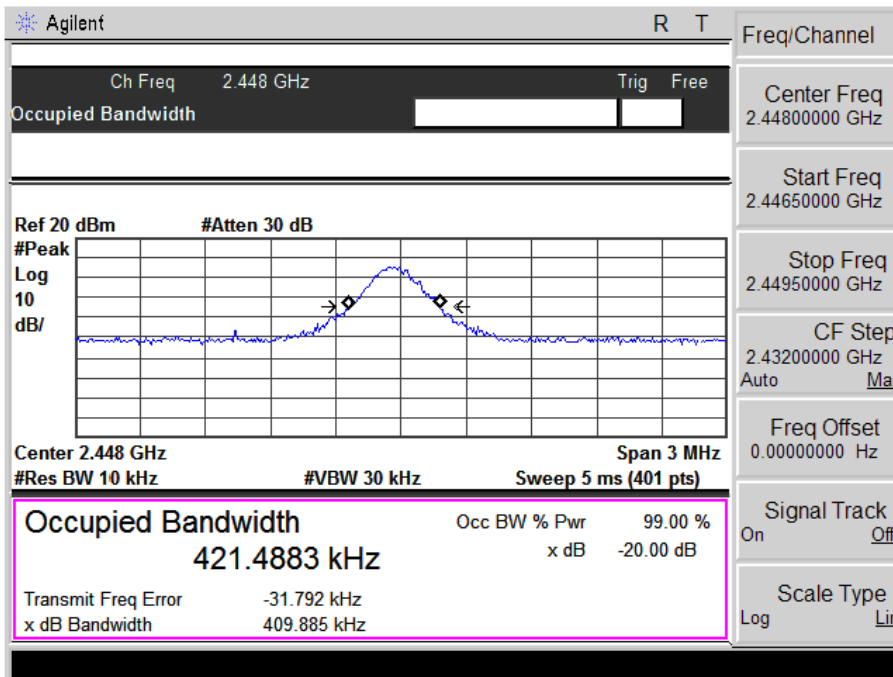
EUT :	Wireless Dongle	Model Name :	M01308-D
Temperature :	26 °C	Relative Humidity :	53%
Pressure :	1020 hPa	Test Power :	DC 5.0V
Test Mode :	TX CH 1/40/79		

Test Channel	Frequency (MHz)	20 dBc Bandwidth (MHz)	99% Bandwidth (MHz)
CH01	2402	0.433	0.405
CH40	2448	0.410	0.422
CH79	2480	0.415	0.453

The Lowest Channel: 2402MHz

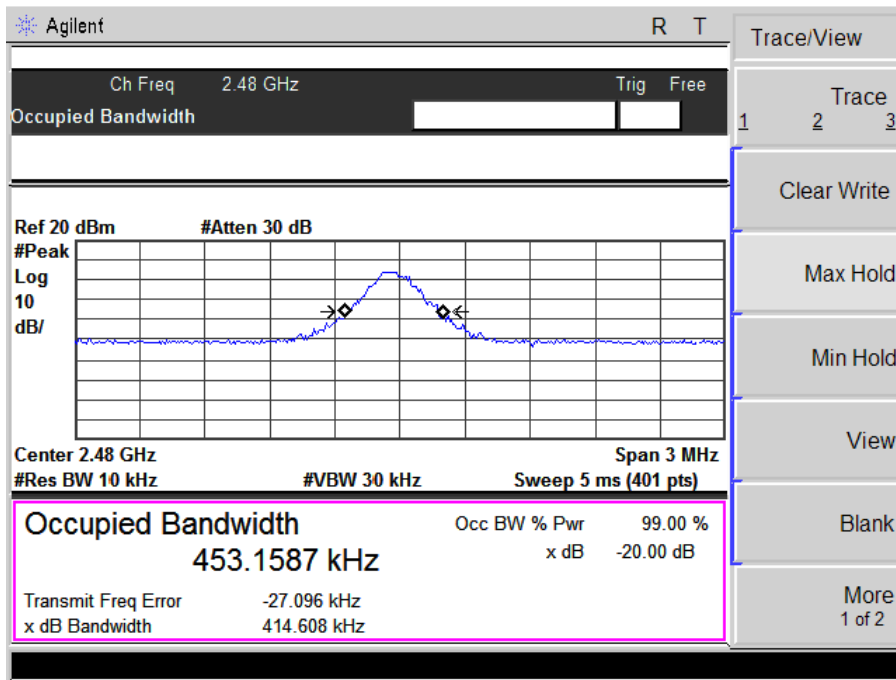


The Middle Channel: 2448MHz





The High Channel:2480MHz

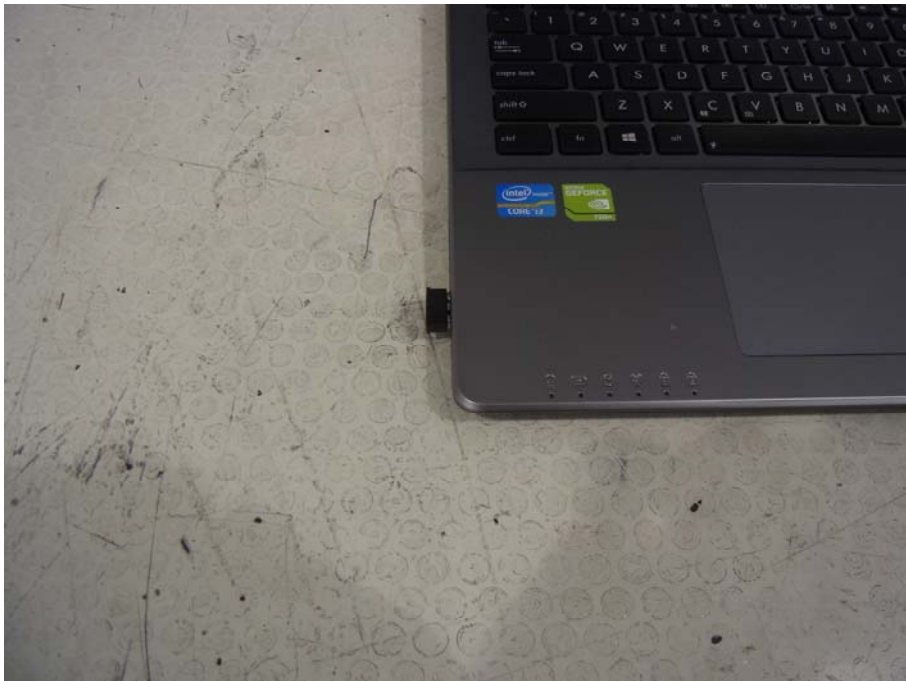


5. EUT TEST PHOTO

Radiated Measurement Photos



Conducted Measurement Photos





Conducted Measurement Photos



EUT PHOTO:



