

FCC TEST REPORT(Bluetooth)
for
WeiHeng Digital Company Limited
Traveltek

Model Number:W1330Q,M13,WI1330Q
FCC ID: 2ACH9-W1330Q

Prepared for : WeiHeng Digital Company Limited
Address : Rm732, 3rd session, Build B, Mingyou Industrial
Products Exhibitionand Purchasing Center,
Baoyuan Road, Bao'an District,Shenzhen

Prepared by : Keyway Testing Technology Co., Ltd.
Address : Building 1, Baishun Industrial Zone, Zhangmutou Town,
Dongguan, Guangdong, China

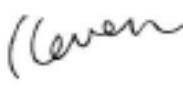
Tel: 86-769-8718 2258
Fax: 86-769-8718 1058

Report No. : TR17060352-E-001
Date of Test : Jul. 1-10, 2017
Date of Report : Jul. 11, 2017

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Keyway Testing Technology Co., Ltd.

Applicant:	WeiHeng Digital Company Limited		
Address:	Rm732, 3rd session, Build B, Mingyou Industrial Products Exhibitionand Purchasing Center, Baoyuan Road, Bao'an District,Shenzhen		
Manufacturer:	WeiHeng Digital Company Limited		
Address:	XinYu National High-tech Industrial Development Zone		
E.U.T:	Traveltek		
Model Number:	W1330Q,M13,WI1330Q		
Trade Name:	-----	Serial No.:	-----
Date of Receipt:	Jul.1, 2017	Date of Test:	Jul. 1-10, 2017
Test Specification:	FCC Part 15, Subpart C Section 15.247: 2016 ANSI C63.10:2013		
Test Result:	The equipment under test was found to be compliance with the requirements of the standards applied.		
Issue Date: Jul. 11, 2017			
Tested by:	Reviewed by:	Approved by:	
			
Keven Wu / Engineer	Mark Li / Supervisor	Andy Gao / Supervisor	
Other Aspects: None.			
Abbreviations: OK/P=passed fail/F=failed n.a/N=not applicable E.U.T=equipment under tested			
This test report is based on a single evaluation of one sample of above mentioned products. It is not permitted to be duplicated in extracts without written approval of Keyway Testing Technology Co., Ltd.			

1. TEST SUMMARY

Test Items	Test Requirement	Result
Conducted Emissions	15.207	PASS
Radiated Emissions	15.205(a)/15.209	PASS
20dB Bandwidth	15.247(a)(1)	PASS
Frequency Separation	15.247(a)(1)	PASS
Maximum Peak Output Power	15.247(b)(1)	PASS
Number of Hopping Frequency	15.247(a)(1)(iii)	PASS
Dwell time	15.247(a)(1)(iii)	PASS
Emissions from out of band	15.247(d)	PASS
Antenna Requirement	15.203	PASS

2.GENERAL PRODUCT INFORMATION

2.1. Product Function

Refer to Technical Construction Form and User Manual.

2.2. Description of Device (EUT)

Product Name:	Traveltek
Model No.:	W1330Q
Series models:	M13,WI1330Q
Model differences:	All the models are the same circuit and RF module, except the model names and colours
Operation Frequency:	2402MHz ~2480MHz
Channel numbers:	79 Channels
Channel spacing	1MHz
Modulation technology:	BT(1Mbps): GFSK BT EDR(2Mbps): π/4-DQPSK BT EDR(3Mbps): 8-DPSK
Bit Rate of Transmitter	1Mbps/2Mbps/3Mbps
Antenna Type:	FPCB Antenna
Antenna gain:	1dBi
Power supply:	DC 7.6V from battery or DC 12V from adapter
AC Adapter:	M/N:SWN024S-120200U1 INPUT:100-240V---50/60Hz 075A OUTPUT:DC 12V/2A

2.3. Difference between Model Numbers

None.

2.4. Independent Operation Modes

The basic operation modes are:

2.4.1. EUT work BT mode and Test mode as below:

Pretest Mode	Description
Mode 1	CH00
Mode 2	CH39
Mode 3	CH78
Mode 4	BT link

2.5. Test Supporting System

N/A.

2.6. Test Facilities

Lab Qualifications : 944 Shielded Room built by ETS-Lindgren, USA
Date of completion: March 28, 2011

966 Chamber built by ETS-Lindgren, USA
Date of completion: March 28, 2011

Certificated by TUV Rheinland, Germany.
Registration No.: UA 50207153
Date of registration: July 13, 2011

Certificated by UL, USA
Registration No.: 100567-237
Date of registration: September 1, 2011

Certificated by Intertek
Registration No.: 2011-RTL-L1-31
Date of registration: October 11, 2011

Certificated by Industry Canada
Registration No.: 9868A
Date of registration: December 8, 2011

Certificated by FCC, USA
Registration No.: 370994
Date of registration: February 21, 2012

Certificated by CNAS China
Registration No.: CNAS L5783
Date of registration: August 8, 2012

Name of Firm : Keyway Testing Technology Co., Ltd.

Site Location : Building 1, Baishun Industrial Zone, Zhangmutou
Town, Dongguan, Guangdong, China

2.7. List of Test and Measurement Instruments

2.7.1. For conducted emission at the mains terminals test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESCI	101156	Apr. 27,17	Apr. 27,18
Artificial Mains Network	Rohde&Schwarz	ENV216	101315	Apr. 27,17	Apr. 27,18
Artificial Mains Network (AUX)	Rohde&Schwarz	ENV216	101314	Apr. 27,17	Apr. 27,18
RF Cable	FUJIKURA	3D-2W	944 Cable	Apr. 27,17	Apr. 27,18

2.7.2. For radiated emission test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESCI	101156	Apr. 27,17	Apr. 27,18
System Simulator	Agilent	E5515C	GB43130245	Apr. 27,17	Apr. 27,18
Power Splitter	Weinschel	1506A	NW425	Apr. 27,17	Apr. 27,18
Bilog Antenna	ETS-LINDGREEN	3142D	135452	Apr. 27,17	Apr. 27,18
Spectrum Analyzer	Agilent	E4411B	MY4511304	Apr. 27,17	Apr. 27,18
Spectrum Analyzer	R&S	FSV40	132.1.3008K39 -100967	Apr. 27,17	Apr. 27,18
3m Semi-anechoic Chamber	ETS-LINDGREEN	966	KW01	Apr. 27,17	Apr. 27,18
Signal Amplifier	SONOMA	310	187016	Apr. 27,17	Apr. 27,18
Signal Amplifier	Agilent	8449B	3008A00251	Apr. 27,17	Apr. 27,18
RF Cable	IMRO	IMRO-400	966 Cable 1#	N/A	N/A
MULTI-DEVICE Controller	ETS-LINDGREEN	2090	126913	N/A	N/A
Horn Antenna	DAZE	ZN30701	11003	Apr. 27,17	Apr. 27,18
Horn Antenna	SCHWARZBECK	BBHA9170	9170-068	Apr. 27,17	Apr. 27,18
Spectrum Analyzer	Agilent	8593E	3911A04271	Apr. 27,17	Apr. 27,18
Spectrum Analyzer	Agilent	E4408B	MY44211125	Apr. 27,17	Apr. 27,18
Signal Amplifier	DAZE	ZN3380C	11001	Apr. 27,17	Apr. 27,18
High Pass filter	Micro	HPM50111	324216	Apr. 27,17	Apr. 27,18
Filter	COM-MW	ZBSF-C836.5-25-X	KW032	Apr. 27,17	Apr. 27,18
Filter	COM-MW	ZBSF-C1747.5-75-X2	KW035	Apr. 27,17	Apr. 27,18
Filter	COM-MW	ZBSF-MET60080-60-X2	KW037	Apr. 27,17	Apr. 27,18
DC Power Supply	LongWei	PS-305D	010964729	Apr. 27,17	Apr. 27,18
Constant temperature and humidity box	GF	GTH-800-40-1P	MAA9906-005	Apr. 27,17	Apr. 27,18
Splitter	Agilent	11636B	0025164	Apr. 27,17	Apr. 27,18
Loop Antenna	ARA	PLA-1030/B	1029	Apr. 22,17	Apr. 22,18
Power Meter	Anritsu	ML2495A	1204003	Apr. 24,17	Apr. 24,18
Power Sensor	Anritsu	MA2411B	1126150	Apr. 24,17	Apr. 24,18

3. TEST SET-UP AND OPERATION MODES

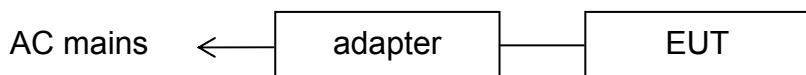
3.1. Principle of Configuration Selection

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the Operating Instructions.

3.2. Block Diagram of Test Set-up

System Diagram of Connections between EUT and Simulators

Conducted Emission:



Radiated Emission:



(EUT: Traveltek)

3.3. Test Operation Mode and Test Software

None.

3.4. Special Accessories and Auxiliary Equipment

None

3.5. Countermeasures to Achieve EMC Compliance

None.

3.6. Test Environment:

Ambient conditions in the test laboratory:

Items	Actual
Temperature (°C)	21~23
Humidity (%RH)	50~65

4. MAXIMUM PEAK OUTPUT POWER

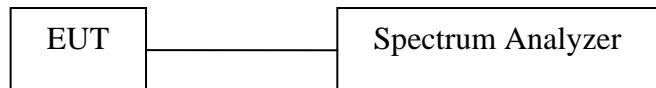
4.1. Limits

For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.

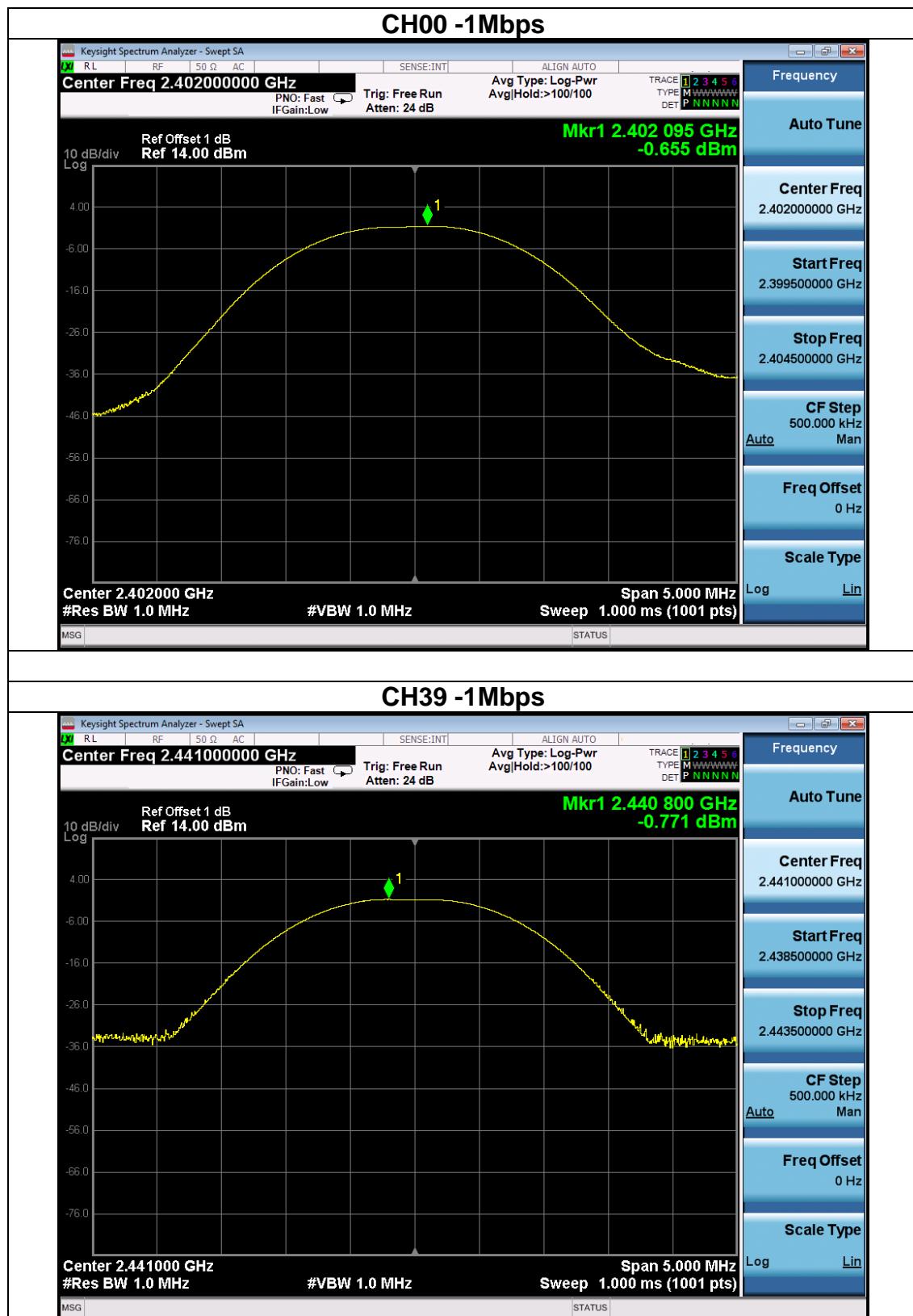
4.2. Test Procedure

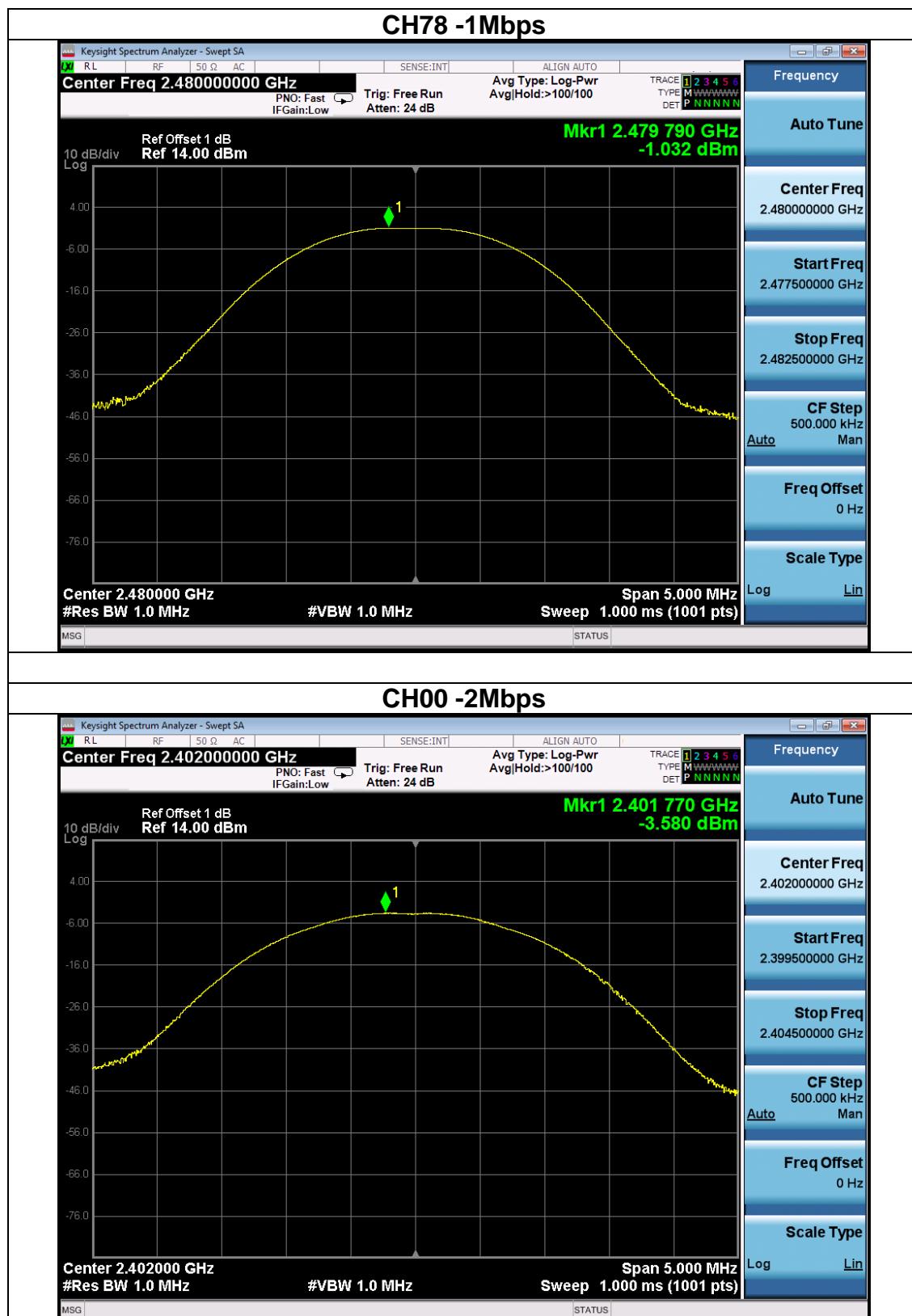
- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below
- b. Spectrum Setting : RBW > the 20 dB bandwidth of the emission being measured
Span = approximately 5 times the 20 dB bandwidth, centered on a hopping channel
 $VBW \geq RBW$
Sweep = auto
Detector function = peak
Trace = max hold

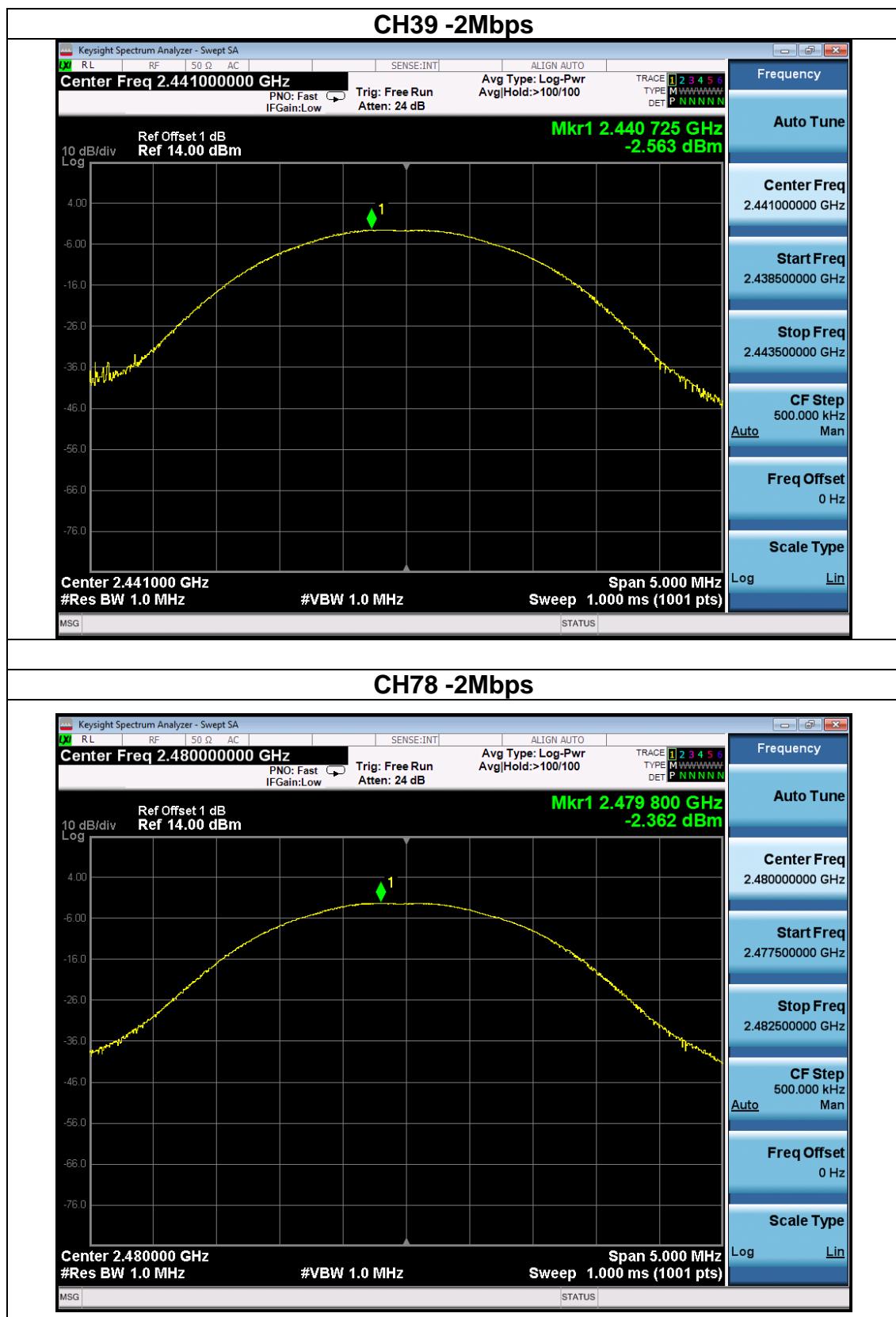
4.3. Test setup

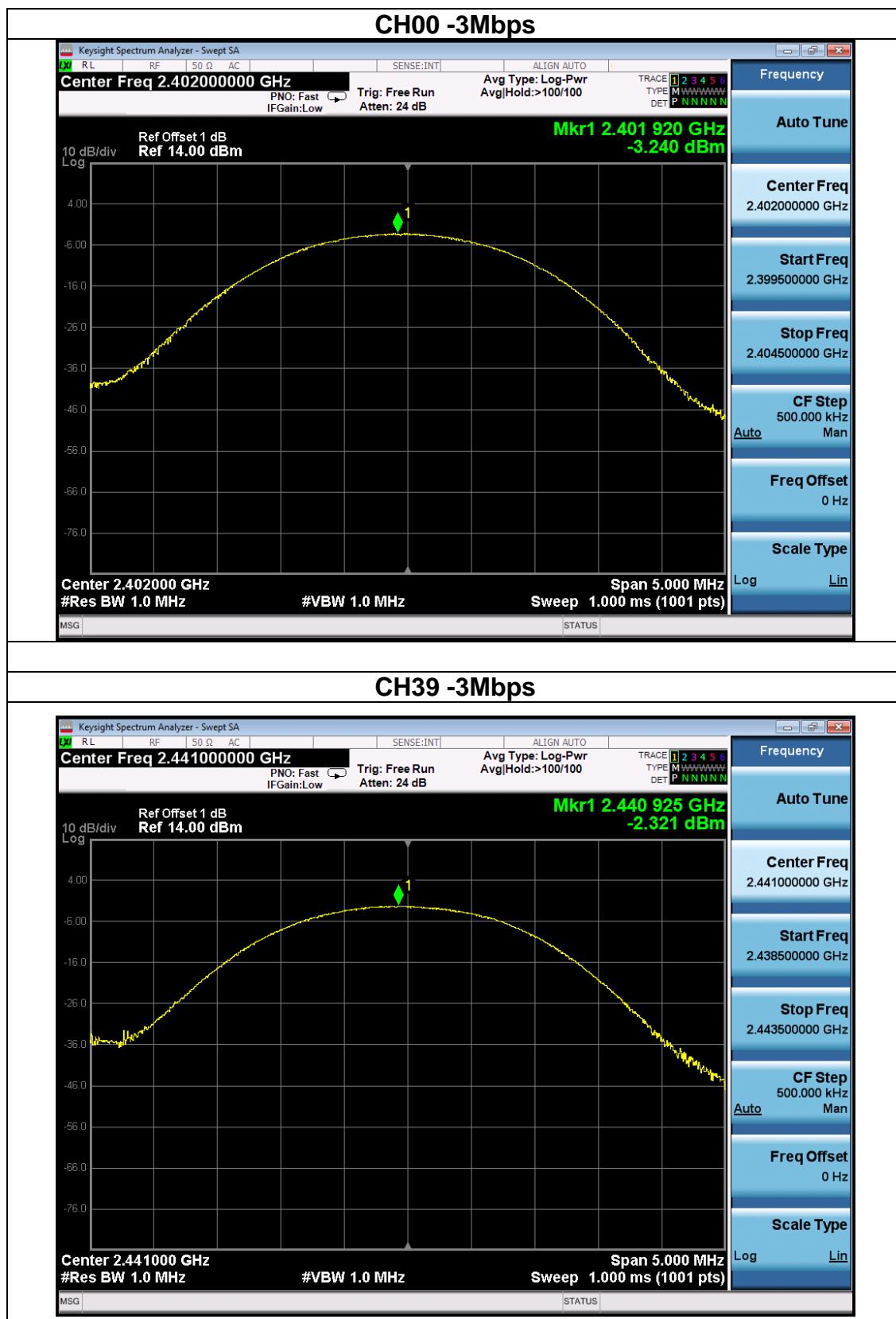


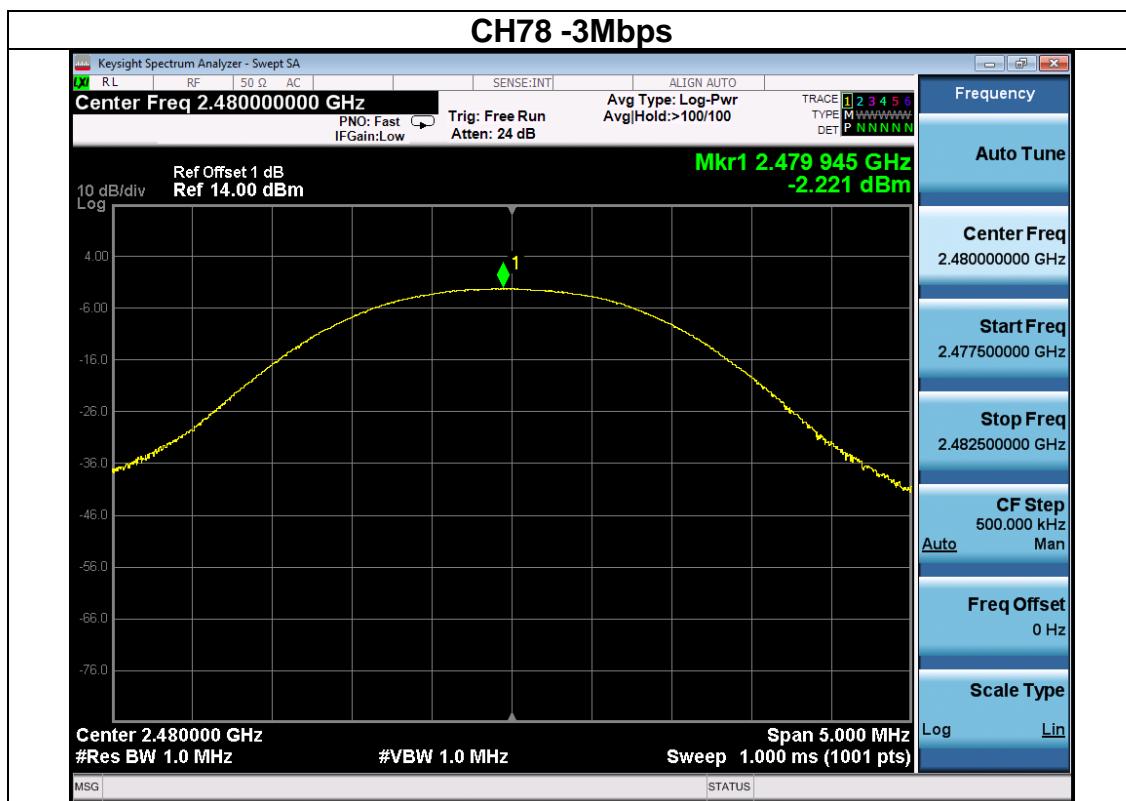
Test data			
1Mbps			
Test Channel	Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)
CH00	2402	-0.655	30
CH39	2441	-0.771	30
CH78	2480	-1.032	30
2Mbps			
CH00	2402	-3.580	20.96
CH39	2441	-2.563	20.96
CH78	2480	-2.362	20.96
3Mbps			
CH00	2402	-3.240	20.96
CH39	2441	-2.321	20.96
CH78	2480	-2.221	20.96











5. EMISSION TEST RESULTS

5.1. Conducted Emission at the Mains Terminals Test

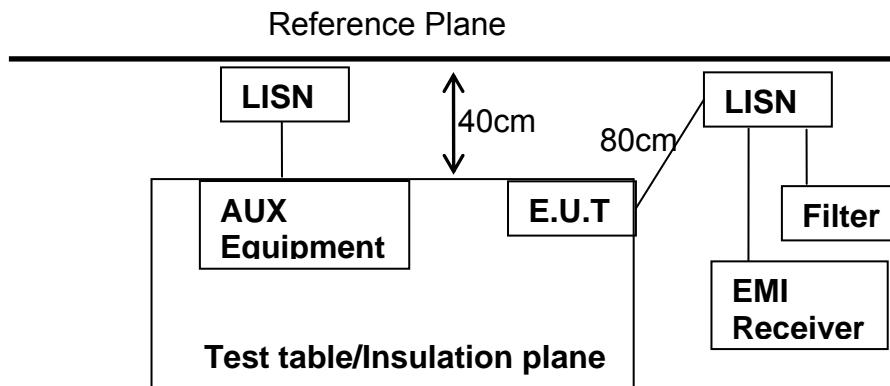
5.1.1. Limit 15.207 limits

Frequency	Limit (dBuV)	
MHz	Quasi-peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

NOTE: 1.The lower limit shall apply at the transition frequencies.
2.The limit decreases linearly with the logarithm of the frequency in the range 0,15 MHz to 0,50 MHz.

5.1.2. Test Setup

- 1.The EUT was put on a wooden table which was 0.8 m high above the ground and connected to the AC mains through the Artificial Mains Network (AMN). Where the mains cable supplied by the manufacture was longer than 0.8 m, the excess was folded back and forth parallel to the cable at the center so as to form a bundle no longer than 0.4 m.
- 2.The EUT was kept 0.4 m from any other earthed conducting surface. Both sides of AC line were checked to find out the maximum conducted emission levels according to the test procedure during the conducted emission test.
- 3.The frequency range from 150 kHz to 30 MHz was investigated.
- 4.The bandwidth of the test receiver was set at 9 kHz.
- 5.Pretest for all mode, The test data of the worst case condition(s) was reported on the following page.

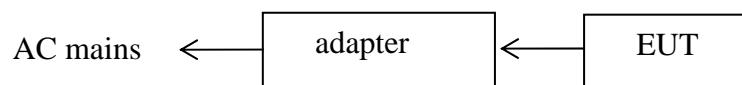


Remark: E.U.T. :Equipment Under Test

LISN: Line Impedance Stabilization Network

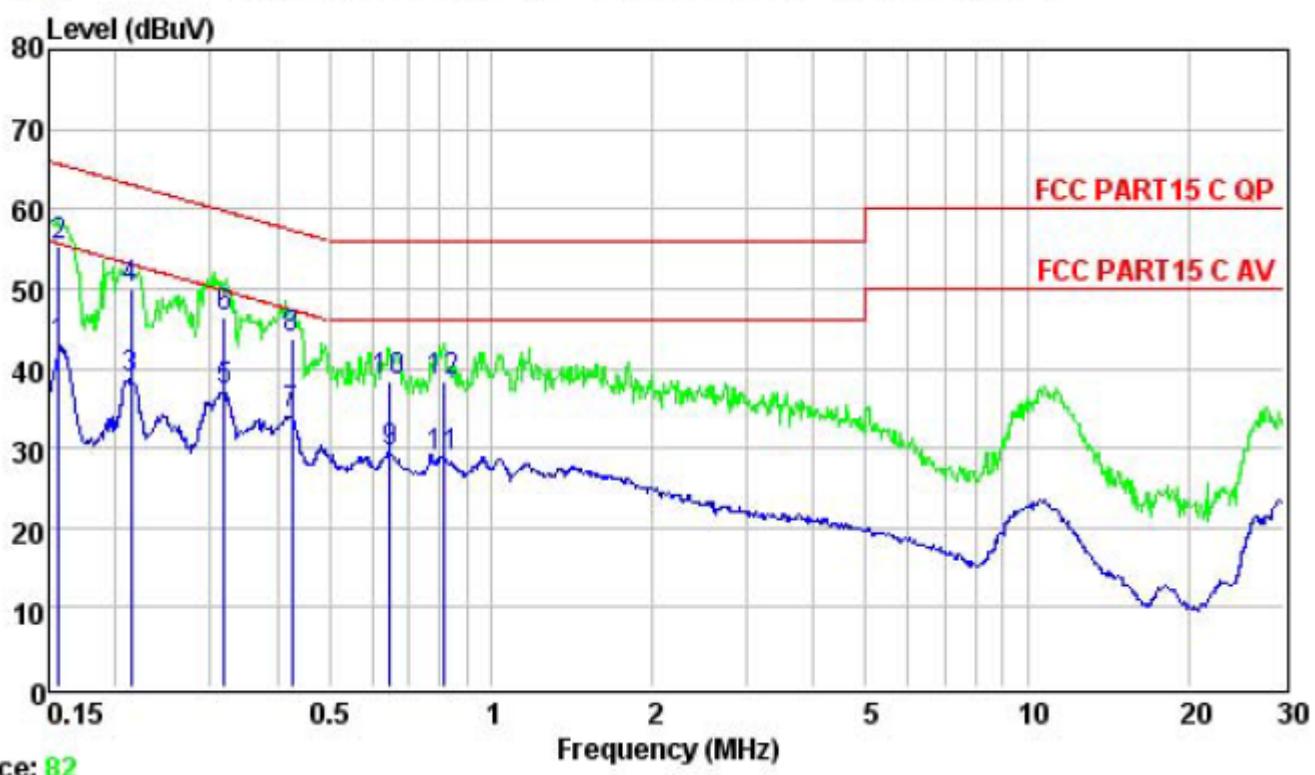
Test table height: 0.8m.

Test block



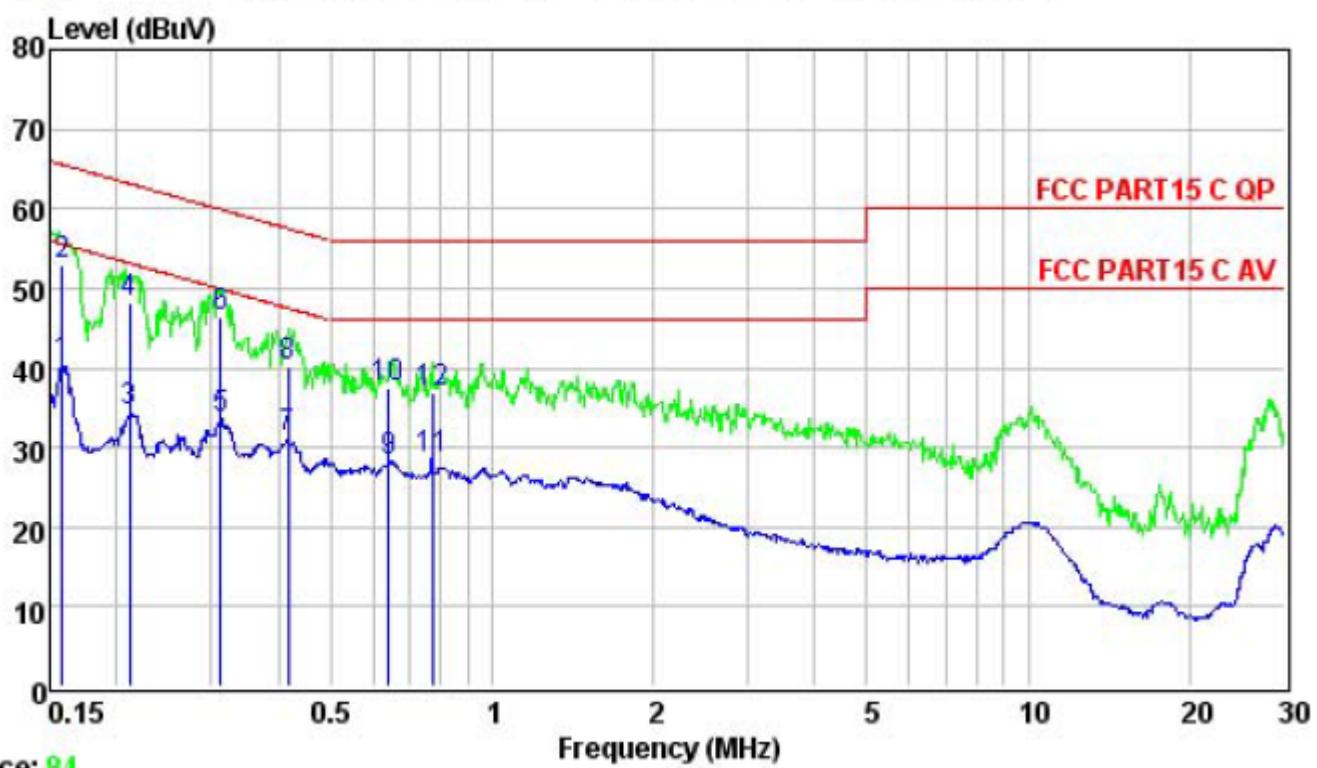
5.1.3. Test result

EUT :	Traveltek	Model Name :	W1330Q
Temperature :	20 °C	Relative Humidity :	54%
Pressure :	1010hPa	Phase :	L
Test Voltage :	DC 12V form Adapter AC 120V/60Hz	Test Mode :	Mode 4



Freq	Level	Limit		Over Limit	Remark
		Line	dBuV		
MHz	dBuV	dBuV	dB		
1	0.156	42.75	55.65	-12.90	Average
2	0.156	55.24	65.65	-10.41	QP
3	0.214	38.63	53.05	-14.42	Average
4	0.214	50.04	63.05	-13.01	QP
5	0.318	37.21	49.75	-12.54	Average
6	0.318	46.35	59.75	-13.40	QP
7	0.426	34.28	47.33	-13.05	Average
8	0.426	43.85	57.33	-13.48	QP
9	0.647	29.48	46.00	-16.52	Average
10	0.647	38.26	56.00	-17.74	QP
11	0.813	28.92	46.00	-17.08	Average
12	0.813	38.47	56.00	-17.53	QP

EUT :	Traveltek	Model Name :	W1330Q
Temperature :	20 °C	Relative Humidity :	54%
Pressure :	1010hPa	Phase :	N
Test Voltage :	DC 12V form Adapter AC 120V/60Hz	Test Mode :	Mode 4

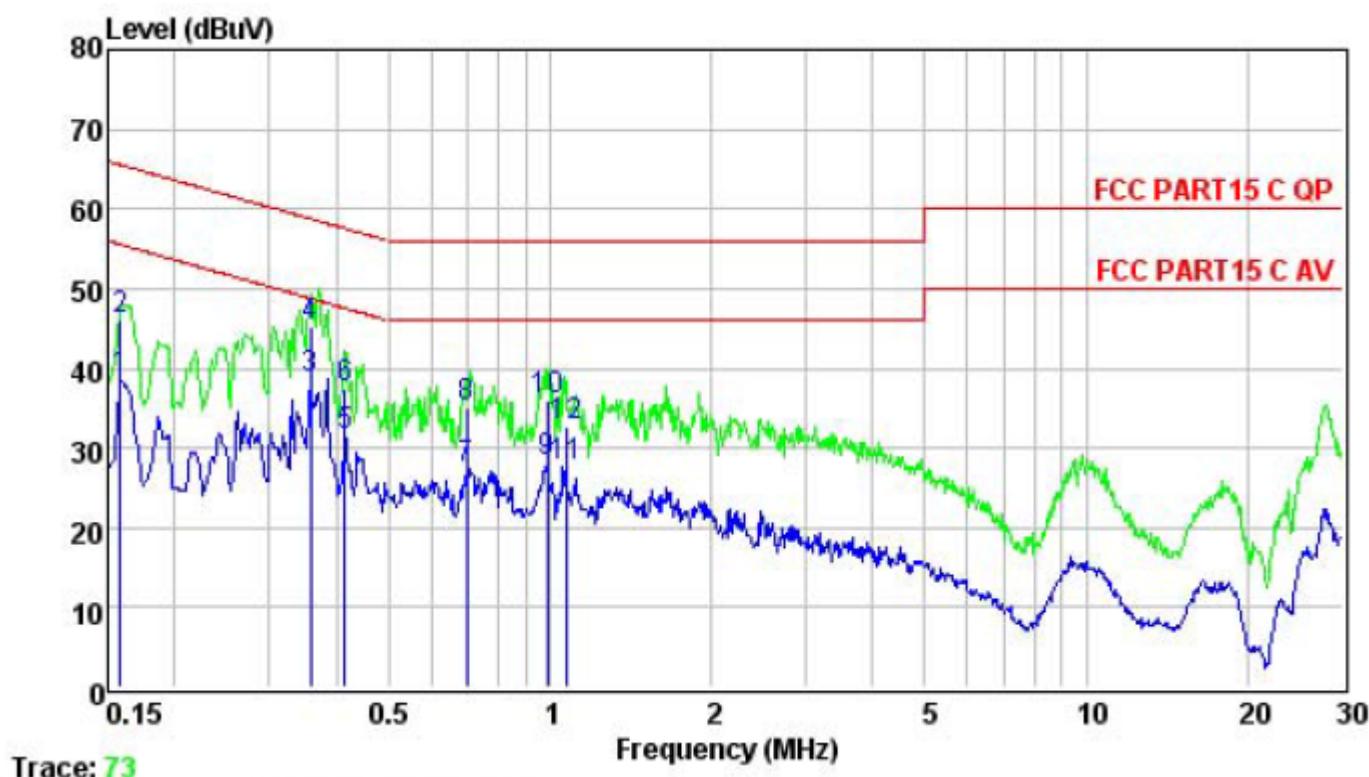


Trace: 84

Emissions Level (dBuV)

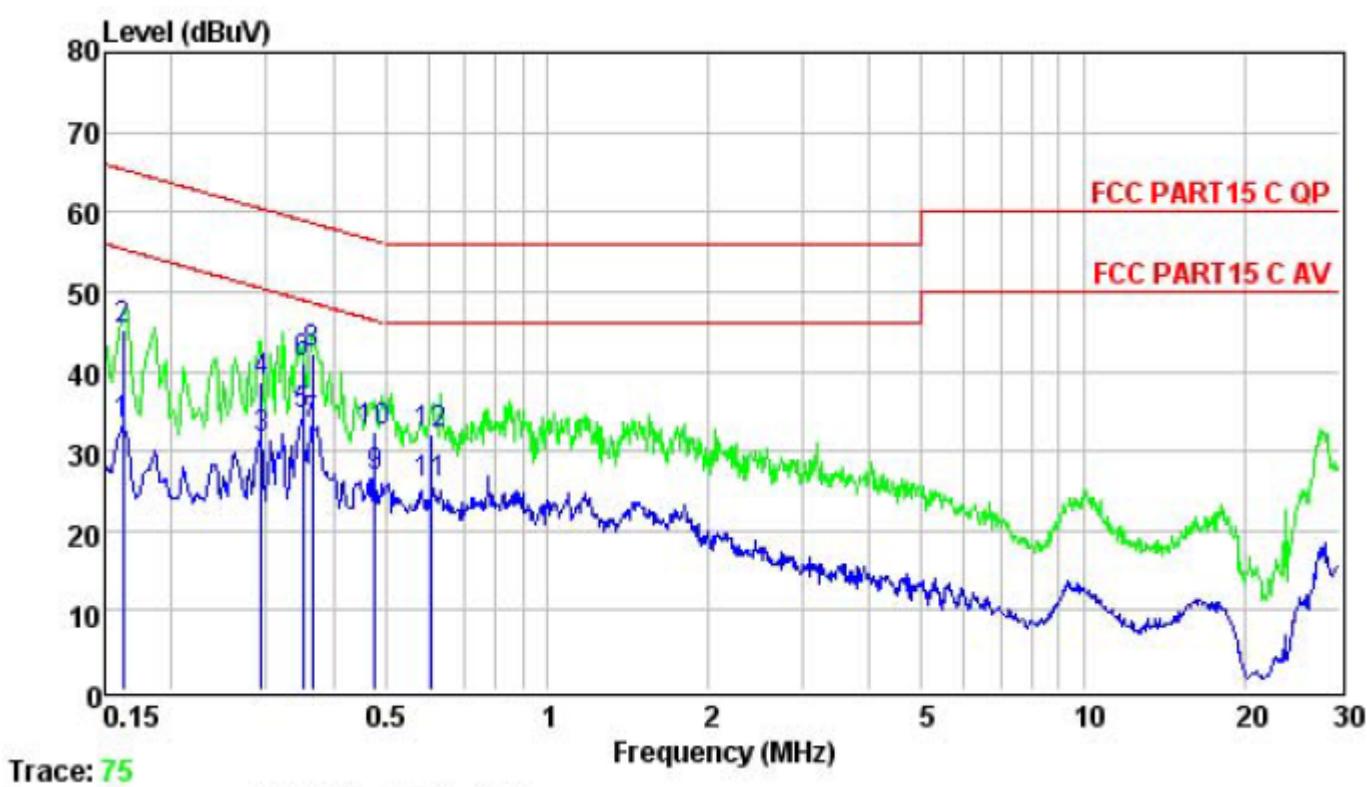
Freq	Level	Limit	Over	Remark
		Line	Limit	
	MHz	dBuV	dBuV	dB
1	0.158	40.46	55.56	-15.10 Average
2	0.158	53.06	65.56	-12.50 QP
3	0.212	34.39	53.14	-18.75 Average
4	0.212	48.27	63.14	-14.87 QP
5	0.312	33.74	49.93	-16.19 Average
6	0.312	46.30	59.93	-13.63 QP
7	0.417	31.14	47.51	-16.37 Average
8	0.417	40.09	57.51	-17.42 QP
9	0.641	28.21	46.00	-17.79 Average
10	0.641	37.48	56.00	-18.52 QP
11	0.775	28.66	46.00	-17.34 Average
12	0.775	36.94	56.00	-19.06 QP

EUT :	Traveltek	Model Name :	W1330Q
Temperature :	20 °C	Relative Humidity :	54%
Pressure :	1010hPa	Phase :	L
Test Voltage :	DC 12V form Adapter AC 240V/50Hz	Test Mode :	Mode 4



Freq	Level	Limit		Over	Remark
		Line	Limit		
MHz	dBuV	dBuV	dB		
1	0.158	38.69	55.56	-16.87	Average
2	0.158	46.24	65.56	-19.32	QP
3	0.358	38.53	48.78	-10.25	Average
4	0.358	45.17	58.78	-13.61	QP
5	0.415	31.38	47.55	-16.17	Average
6	0.415	37.54	57.55	-20.01	QP
7	0.701	27.39	46.00	-18.61	Average
8	0.701	34.95	56.00	-21.05	QP
9	0.989	28.28	46.00	-17.72	Average
10	0.989	35.94	56.00	-20.06	QP
11	1.071	27.68	46.00	-18.32	Average
12	1.071	32.67	56.00	-23.33	QP

EUT :	Traveltek	Model Name :	W1330Q
Temperature :	20 °C	Relative Humidity :	54%
Pressure :	1010hPa	Phase :	N
Test Voltage :	DC 12V form Adapter AC 240V/50Hz	Test Mode :	Mode 4



Freq	Level	Limit		Over Limit	Remark
		MHz	dBuV		
1	0.162	33.33	55.34	-22.01	Average
2	0.162	45.29	65.34	-20.05	QP
3	0.294	31.40	50.41	-19.01	Average
4	0.294	38.64	60.41	-21.77	QP
5	0.350	34.57	48.96	-14.39	Average
6	0.350	41.01	58.96	-17.95	QP
7	0.365	33.43	48.61	-15.18	Average
8	0.365	42.28	58.61	-16.33	QP
9	0.479	26.88	46.36	-19.48	Average
10	0.479	32.29	56.36	-24.07	QP
11	0.611	25.92	46.00	-20.08	Average
12	0.611	32.04	56.00	-23.96	QP

5.2. Radiated Emission Test

5.2.1. Limit 15.209 limits

Frequency MHz	Distance Meters	Filed Strengths Limit	
		µV/m	dB(µV)/m
30~88	3	100	40.0
88~216	3	150	43.5
216~960	3	200	46.0
960~1000	3	500	54.0
Above 1000	3	74.0dB(µV)/m(Peak) 54.0dB(µV)/m(Average)	

5.2.2. Restricted bands of operation

MHz	MHz	MHz	GHz
0.009-0.110	16.42-16.423	399.9-410	4.5-5.15
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	
All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.			

5.2.3. Test setup

The EUT was placed on a turn table which was 0.8 m above the ground blow 1G and 1.5m above 1G. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was set 3 m away from the receiving antenna which was mounted on an antenna tower. The measuring antenna moved up and down to find out the maximum emission level. It moved from 1 m to 4 m for both horizontal and vertical polarizations.

The EUT was tested in the Chamber Site. It was pre-scanned with a Peak detector from the spectrum, and all the final readings from the test receiver were measured with the Quasi-Peak detector.

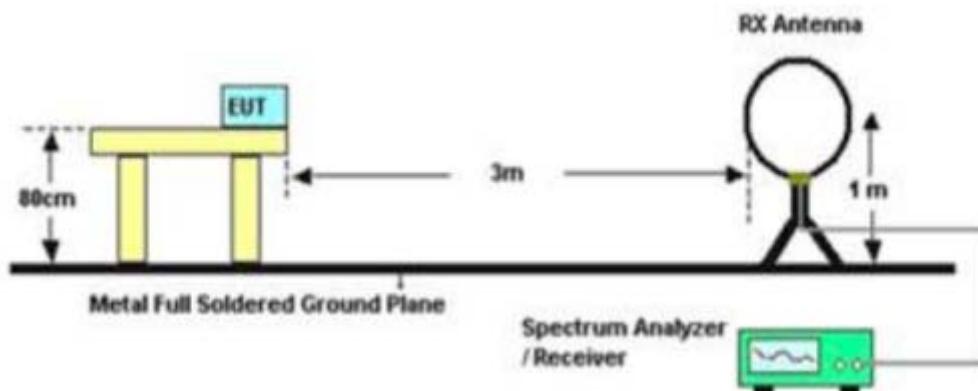
The bandwidth of the EMI test receiver is set at 120kHz for frequency range from 30MHz to 1000 MHz.

The bandwidth of the Spectrum's VBW is set at 3MHz and RBW is set at 1MHz for peak emissions measurement above 1GHz and 1MHz RBW, 10Hz VBW for average emissions measure above 1GHz, the EUT was placed on a turn table which was 1.5 m above the ground, for all test, used peak detector.

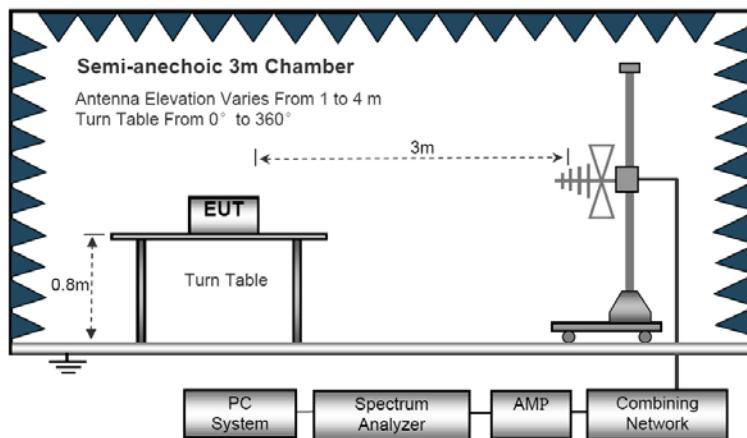
The frequency range from 30MHz to 10th harmonic (25GHz) are checked. and no any emissions were found from 18GHz to 25 GHz, So the radiated emissions from 18GHz to 25GHz were not record.

- Notes:
1. Emission Level = Antenna Factor + Cable Loss + Meter Reading-Preamp Factor.
 2. Measurement Uncertainty: ± 3.2 dB at a level of confidence of 95%.
 3. For emissions above 1GHz, if peak level comply with average limit, then the average level is deemed to comply with average limit.
 4. For emissions below 1GHz, pretest for all mode, The test data of the worst case condition(s) was reported on the following pages.
 5. EUT Pre-scan X/Y/Z orientation, only worst case is presented in the report (Z orientation).
 6. We pretest all modulation, The worst was GFSK, the worst data was show in the report.

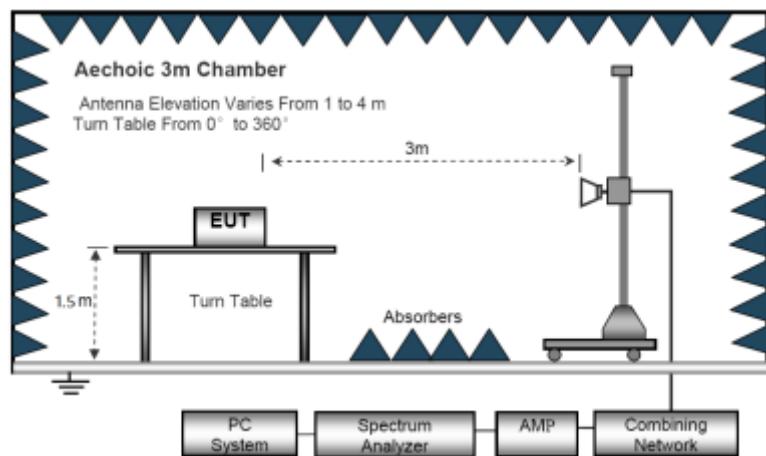
Radiated Emission Test-Up Frequency Below 30MHz



30MHz- 1GHz



Above 1GHz



EUT :	Traveltek	Model Name :	W1330Q
Temperature :	20 °C	Relative Humidity :	54%
Pressure :	1010hPa	Test Mode :	TX
Test Voltage :	DC 7.6V		

Below 30MHz

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

Note:

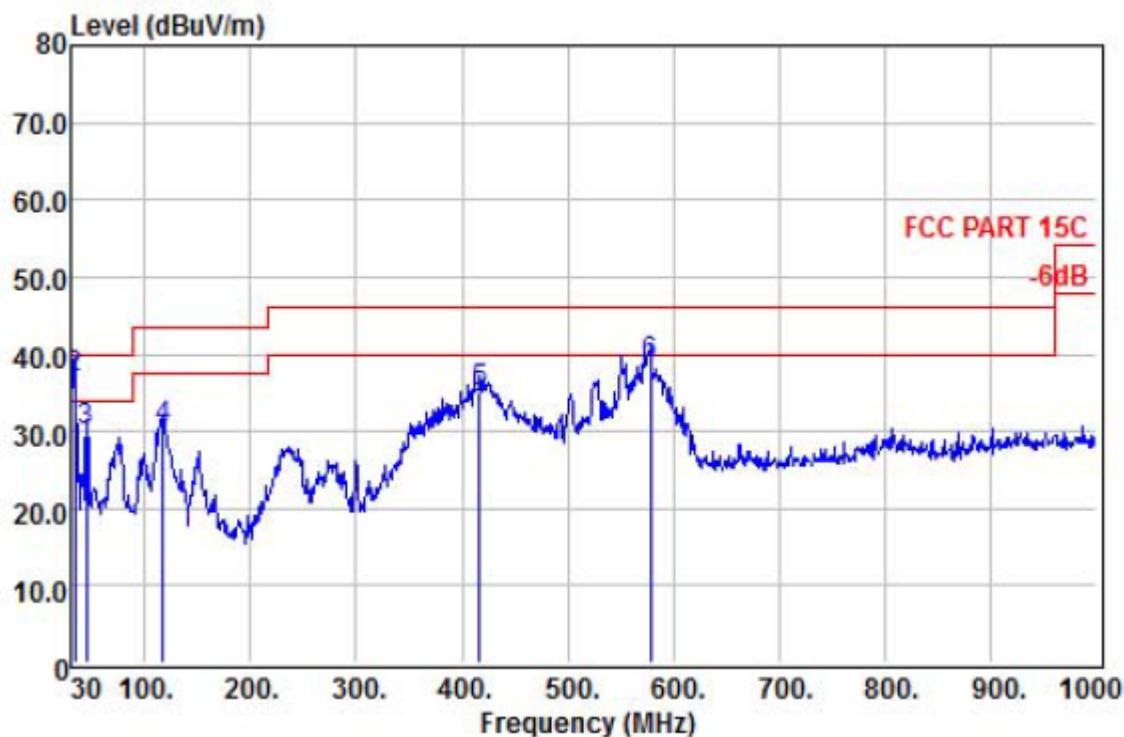
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor = $40 \log (\text{specific distance/test distance})$ (dB);

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

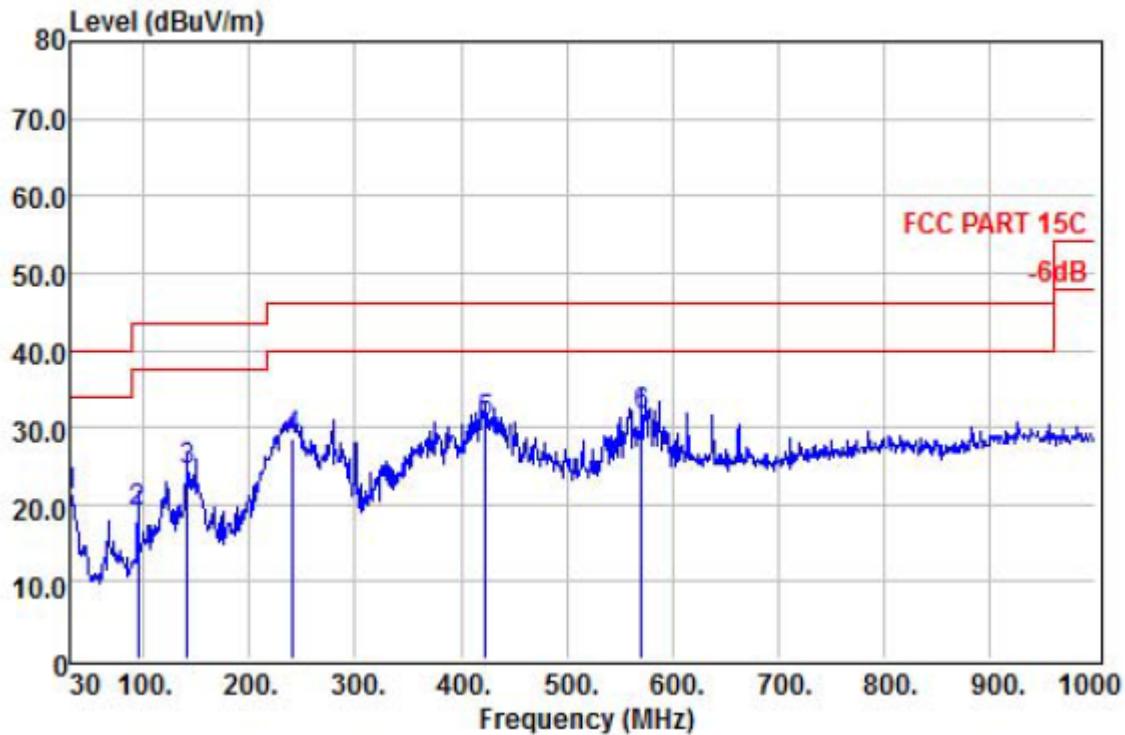
30MHz - 1GHz			
EUT :	Traveltek	Model Name :	W1330Q
Temperature :	20 °C	Relative Humidity :	54%
Pressure :	1010hPa	Test Mode :	TX-GFSK-2480
Test Voltage :	DC 7.6V		

Vertical



Freq	ReadAntenna		Cable		Limit Line	Over Limit	Remark
	MHz	Level	Factor	Loss			
	MHz	dBuV	dB/m	dB	dBuV/m	dBuV/m	dB
1 !	30.00	14.35	18.80	1.20	34.35	40.00	-5.65 QP
2 !	33.88	19.16	16.51	1.24	36.91	40.00	-3.09 QP
3	44.55	17.61	11.03	1.40	30.04	40.00	-9.96 QP
4	117.30	18.98	8.72	2.49	30.19	43.50	-13.31 QP
5	417.03	14.36	16.84	3.75	34.95	46.00	-11.05 QP
6	578.05	14.08	19.90	4.64	38.62	46.00	-7.38 QP

Horizontal



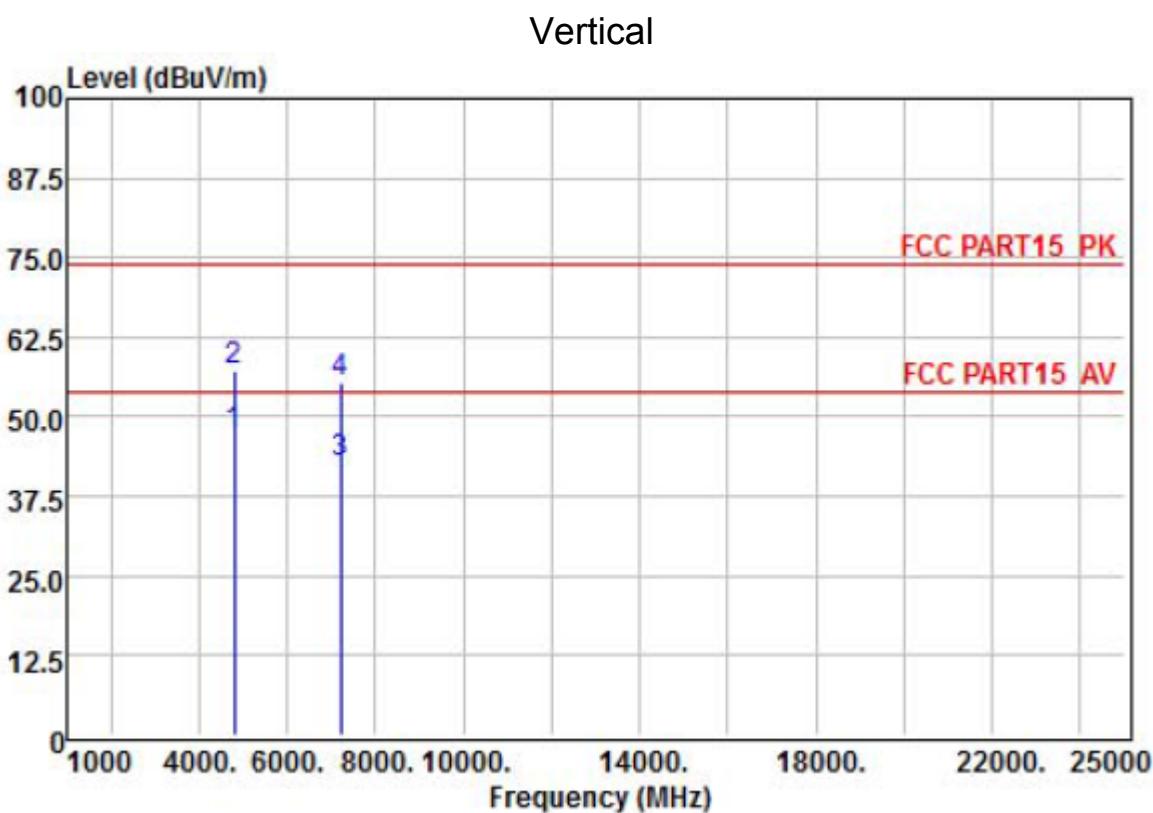
Freq	ReadAntenna		Cable		Limit	Over Line	Over Limit	Remark
	MHz	Level	Factor	Loss				
	MHz	dBuV	dB/m	dB	dBuV/m	dBuV/m	dB	
1	30.00	1.03	18.80	1.20	21.03	40.00	-18.97	QP
2	94.02	7.49	9.30	2.22	19.01	43.50	-24.49	QP
3	141.55	12.96	8.49	2.90	24.35	43.50	-19.15	QP
4	241.46	13.12	12.66	2.77	28.55	46.00	-17.45	QP
5	422.85	9.94	17.03	3.78	30.75	46.00	-15.25	QP
6	571.26	7.07	19.76	4.59	31.42	46.00	-14.58	QP

NOTE: 1. Absolute Level= ReadingLevel+antenna Factor+cable loss.

2. Over Limit= Absolute Level – Limit.

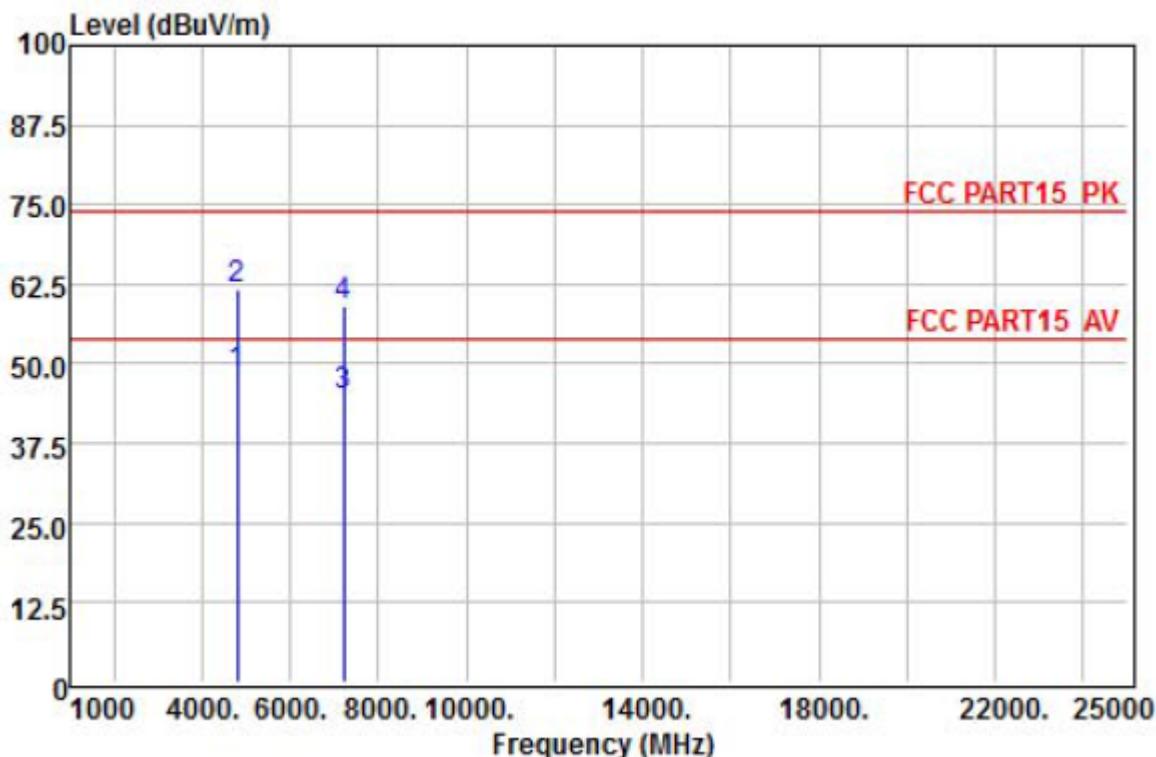
3. GFSK (CH78 channel) is the worst mode, only worst data is presented in the report.

Above 1GHz			
EUT :	Traveltek	Model Name :	W1330Q
Temperature :	20 °C	Relative Humidity :	54%
Pressure :	1010hPa	Test Mode :	1Mbps & CH00
Test Voltage :	DC 7.6V		



Freq	Read		Antenna	Preamp	Cable	Limit Level	Line Limit	Over Limit	Remark
	Level	Factor	Factor	Cable	dB				
	MHz	dBuV	dB/m	Loss	dB	dBuV/m	dBuV/m	dB	
1	4804.00	29.77	32.94	27.49	11.96	47.18	54.00	-6.82	Average
2	4804.00	39.75	32.94	27.49	11.96	57.16	74.00	-16.84	Peak
3	7206.00	16.79	37.28	27.94	16.61	42.74	54.00	-11.26	Average
4	7206.00	29.43	37.28	27.94	16.61	55.38	74.00	-18.62	Peak

Horizontal



	Freq	Read Level MHz	Antenna Factor dBuV	Preamp Factor dB	Cable Loss dB	Limit Line dBuV/m	Over Line dB	Over Limit Remark
		MHz	dBuV	dB/m	dB	dBuV/m	dBuV/m	dB
1	4804.00	30.98	32.94	27.49	11.96	48.39	54.00	-5.61 Average
2	4804.00	44.24	32.94	27.49	11.96	61.65	74.00	-12.35 Peak
3	7206.00	18.97	37.28	27.94	16.61	44.92	54.00	-9.08 Average
4	7206.00	32.99	37.28	27.94	16.61	58.94	74.00	-15.06 Peak

NOTE:1.Absolute Level= ReadingLevel+antenna Factor+cable loss-preamp factor.

2.Over Limit= Absolute Level – Limit.

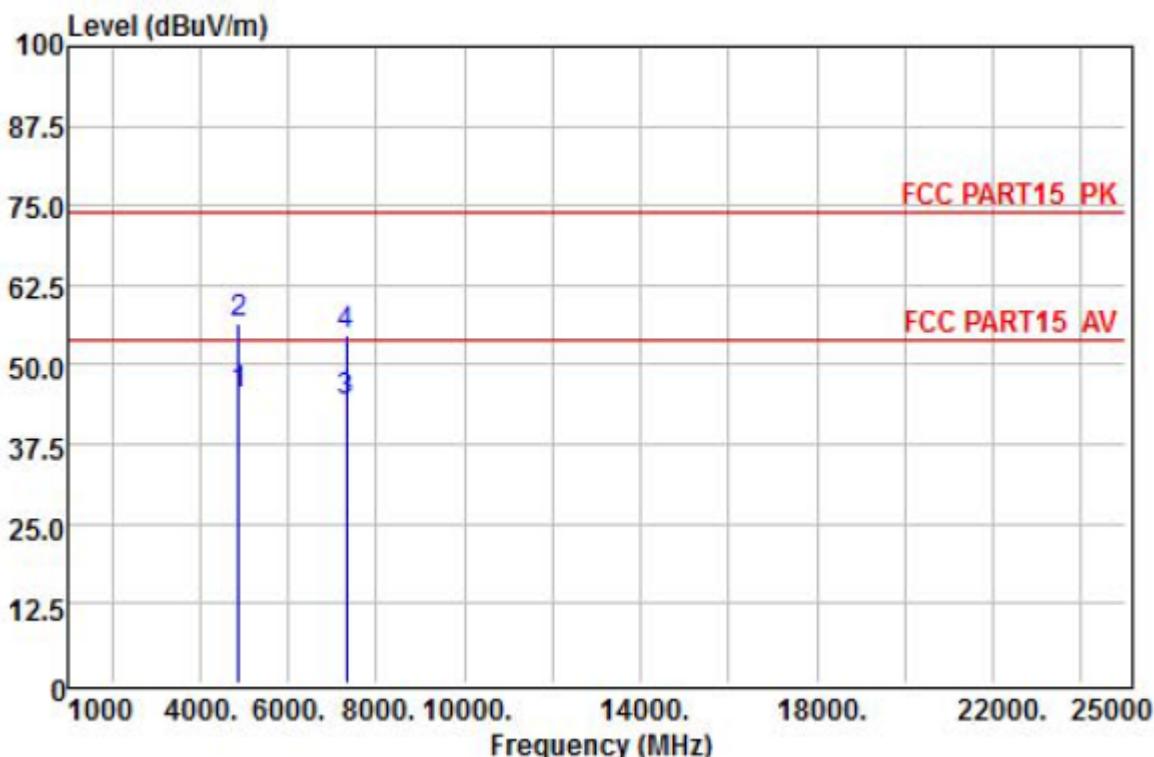
3.The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has not to be reported.

4.EUT Pre-scan X/Y/Z orientation, only worst case is presented in the report(Z orientation)

5.The GFSK is the worest mode.

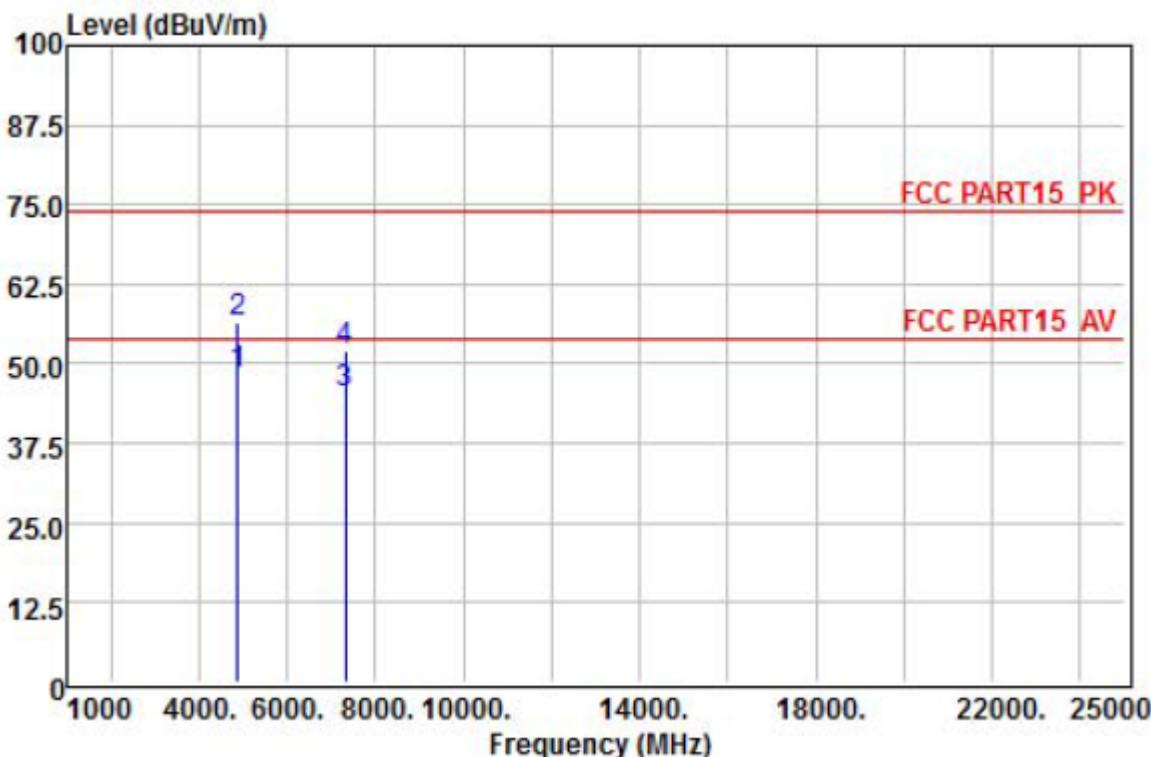
Above 1GHz			
EUT :	Traveltek	Model Name :	W1330Q
Temperature :	20 °C	Relative Humidity :	54%
Pressure :	1010hPa	Test Mode :	1Mbps & CH39
Test Voltage :	DC 7.6V		

Vertical



Freq	Read		Antenna	Preamplifier	Cable	Limit	Overline	Remark
	Level	Factor	Level	Factor	Cable			
	MHz	dBuV	dB/m		dB	dBuV/m	dBuV/m	dB
1	4882.00	27.57	33.11	27.53	12.14	45.29	54.00	-8.71 Average
2	4882.00	38.82	33.11	27.53	12.14	56.54	74.00	-17.46 Peak
3	7323.00	18.35	37.33	27.96	16.62	44.34	54.00	-9.66 Average
4	7323.00	28.59	37.33	27.96	16.62	54.58	74.00	-19.42 Peak

Horizontal



	Read	Antenna	Preamp	Cable		Limit	Over	
Freq	Level	Factor	Factor	Loss	Level	Line	Line	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	4882.00	30.75	33.11	27.53	12.14	48.47	54.00	-5.53 Average
2	4882.00	38.77	33.11	27.53	12.14	56.49	74.00	-17.51 Peak
3	7323.00	19.29	37.33	27.96	16.62	45.28	54.00	-8.72 Average
4	7323.00	26.19	37.33	27.96	16.62	52.18	74.00	-21.82 Peak

NOTE:1.Absolute Level= ReadingLevel+antenna Factor+cable loss-preamp factor.

2.Over Limit= Absolute Level – Limit.

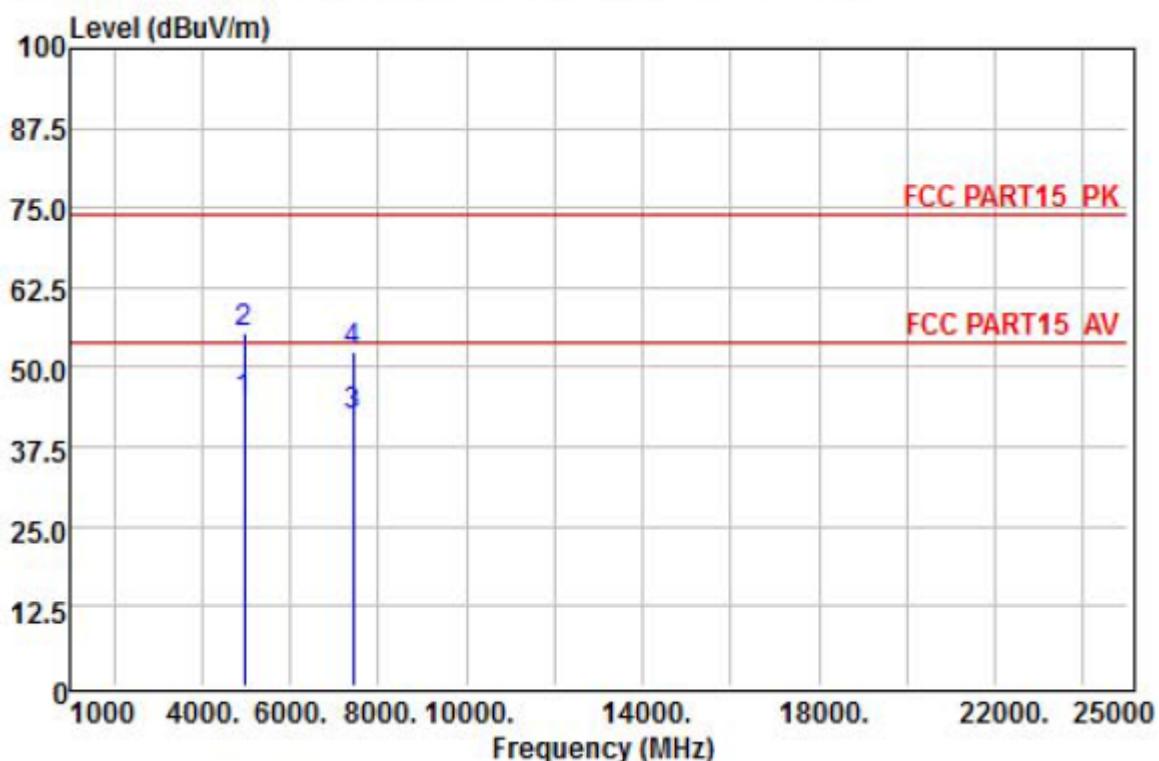
3.The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has not to be reported.

4.EUT Pre-scan X/Y/Z orientation, only worst case is presented in the report(Z orientation)

5.The GFSK is the worst mode.

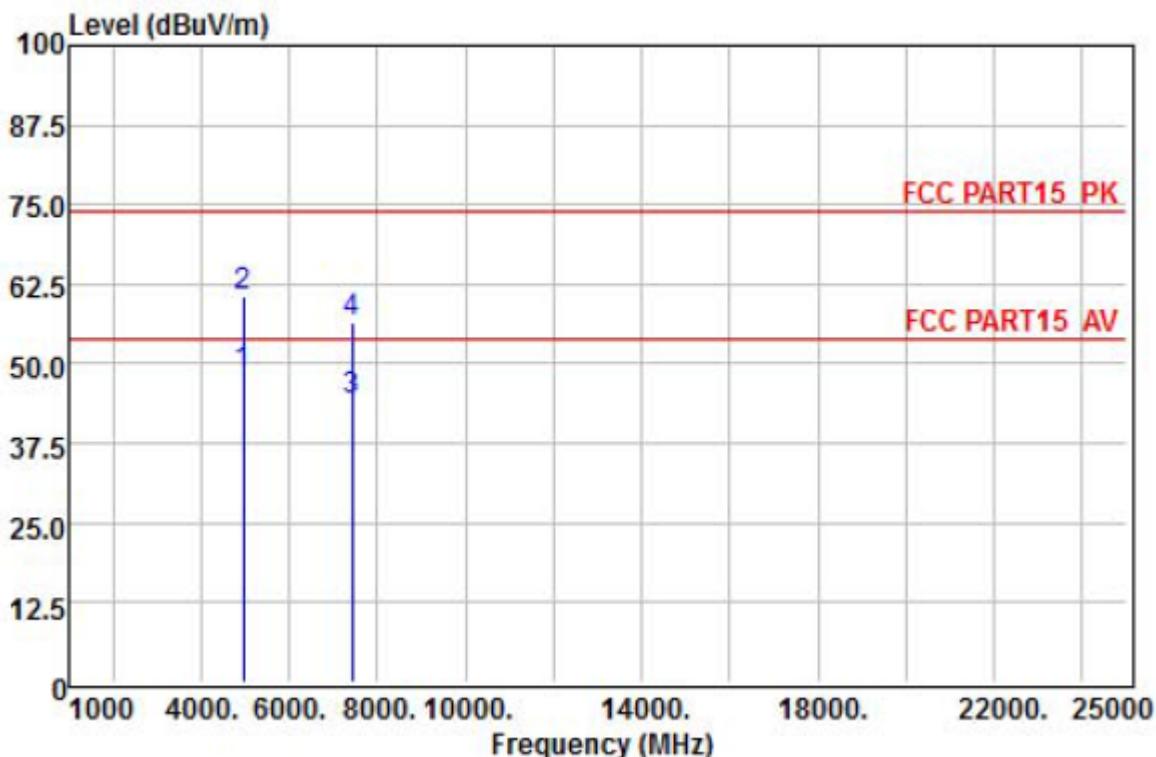
Above 1GHz			
EUT :	Traveltek	Model Name :	W1330Q
Temperature :	20 °C	Relative Humidity :	54%
Pressure :	1010hPa	Test Mode :	1Mbps & CH78
Test Voltage :	DC 7.6V		

Vertical



Freq	Read	Antenna	Preamp	Cable	Limit	Over	Remark	
	Level	Factor	Factor	Loss	Level	Line		
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	4960.00	26.39	33.32	27.58	12.36	44.49	54.00	-9.51 Average
2	4960.00	37.26	33.32	27.58	12.36	55.36	74.00	-18.64 Peak
3	7440.00	16.44	37.38	27.99	16.62	42.45	54.00	-11.55 Average
4	7440.00	26.58	37.38	27.99	16.62	52.59	74.00	-21.41 Peak

Horizontal



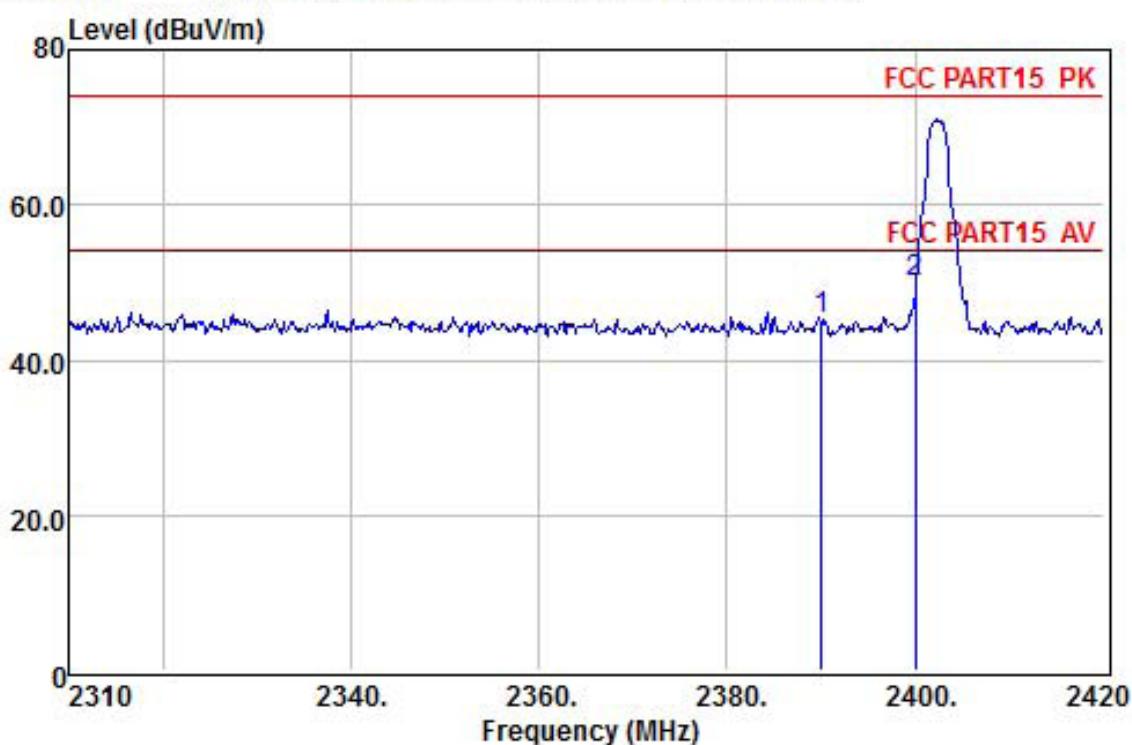
	Read	Antenna	Preamp	Cable		Limit	Over	
Freq	Level	Factor	Factor	Loss	Level	Line	Line	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	4960.00	30.28	33.32	27.58	12.36	48.38	54.00	-5.62 Average
2	4960.00	42.51	33.32	27.58	12.36	60.61	74.00	-13.39 Peak
3	7440.00	18.37	37.38	27.99	16.62	44.38	54.00	-9.62 Average
4	7440.00	30.36	37.38	27.99	16.62	56.37	74.00	-17.63 Peak

- NOTE:
1. Absolute Level = Reading Level + antenna Factor + cable loss - preamp factor.
 2. Over Limit = Absolute Level - Limit.
 3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has not to be reported.
 4. EUT Pre-scan X/Y/Z orientation, only worst case is presented in the report(Z orientation)
 5. The GFSK is the worst mode.

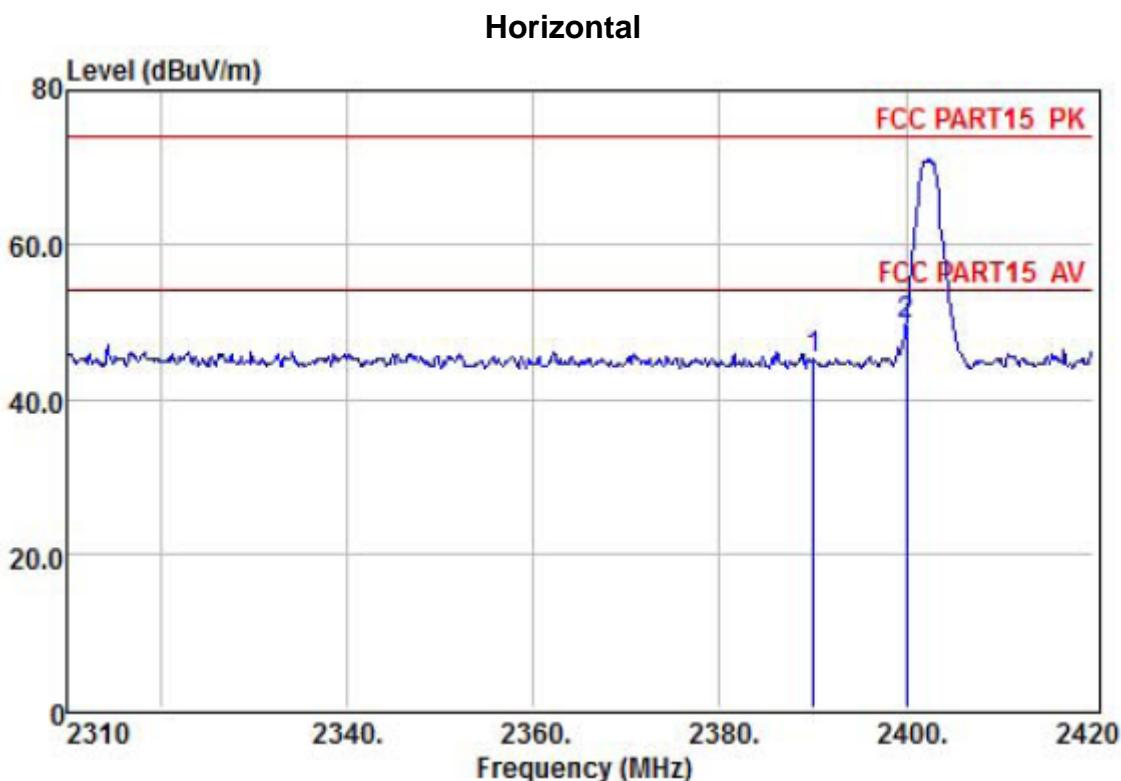
For radiated Bandedge test as follows:

1M bps			
EUT :	Traveltek	Model Name :	W1330Q
Temperature :	20 °C	Relative Humidity :	54%
Pressure :	1010hPa	Test Mode :	TX-2402
Test Voltage :	DC 7.6V		

Vertical



Freq	Preamp Factor	Read Level	Cable Antenna			Limit Line	Over Line	Remark
			Loss	Factor	Level			
MHz	dB	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	2390.00	26.32	35.60	7.34	28.72	45.34	74.00	-28.66 Peak
2	2400.00	26.32	40.26	7.34	28.72	50.00	74.00	-24.00 Peak



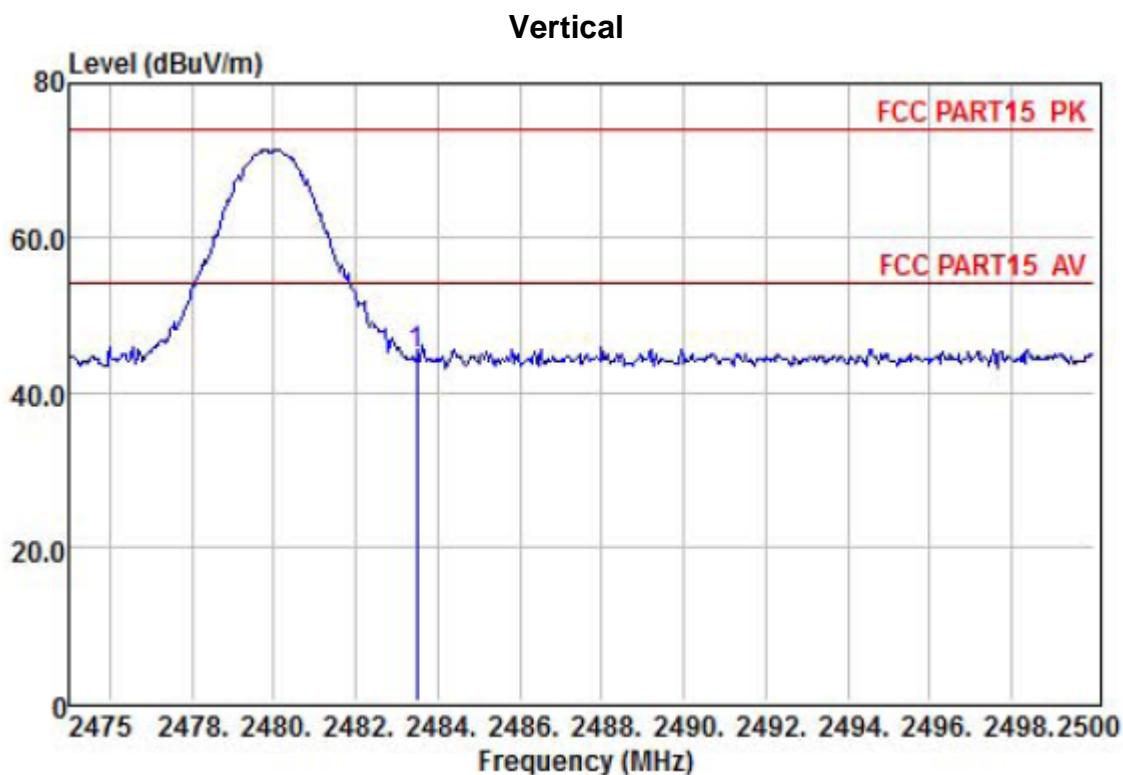
	Preamp Freq	Read Factor	Cable Loss	Antenna Factor	Limit Level	Over Line	Over Limit	Remark
	MHz	dB	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB
1	2390.00	26.32	35.61	7.34	28.72	45.35	74.00	-28.65 Peak
2	2400.00	26.32	39.88	7.34	28.72	49.62	74.00	-24.38 Peak

NOTE: 1. Absolute Level= Reading Level+antenna Factor+cable loss+preamp factor,
Over Limit= Absolute Level – Limit;

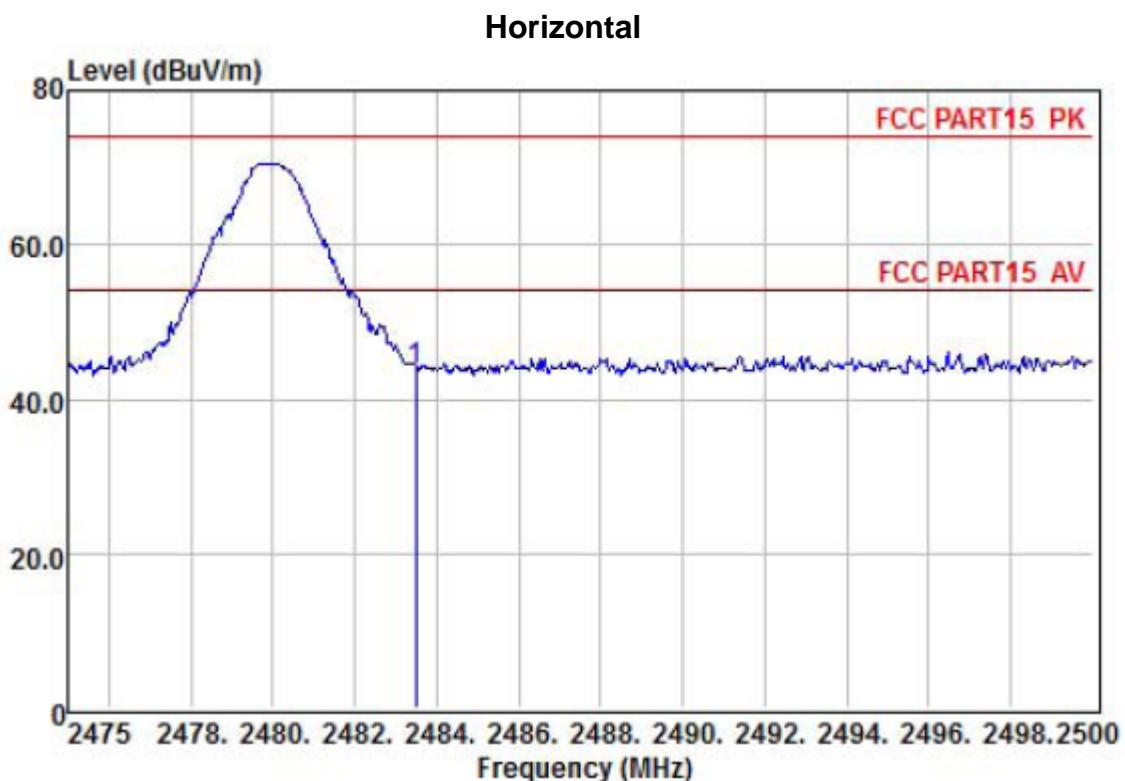
2. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has not to be reported.

3. If the PK measured levels comply with average limit, then the average level were deemed to comply with average limit.

1M bps			
EUT :	Traveltek	Model Name :	W1330Q
Temperature :	20 °C	Relative Humidity :	54%
Pressure :	1010hPa	Test Mode :	TX-2480
Test Voltage :	DC 7.6V		



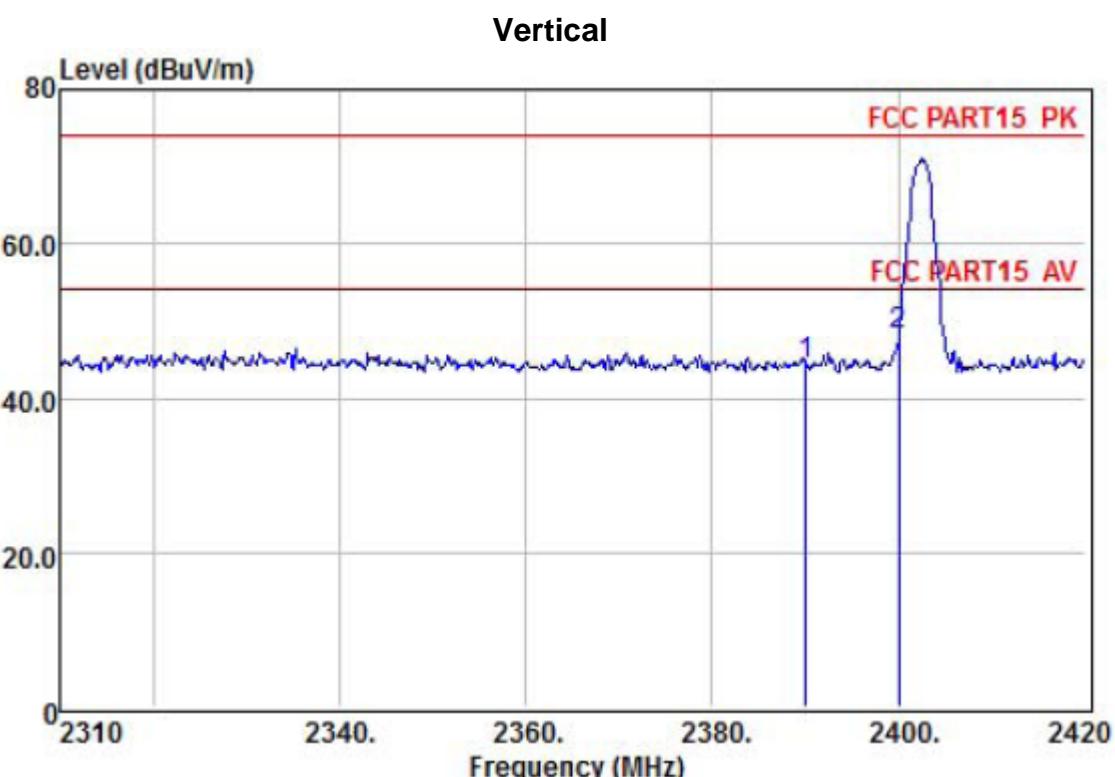
	Preamp Freq	Read Level	Cable Loss	Antenna Factor	Limit Level	Line Level	Over Line Limit	Over Line Remark
	MHz	dB	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB
1	2483.50	26.34	34.87	7.57	28.79	44.89	74.00	-29.11 Peak



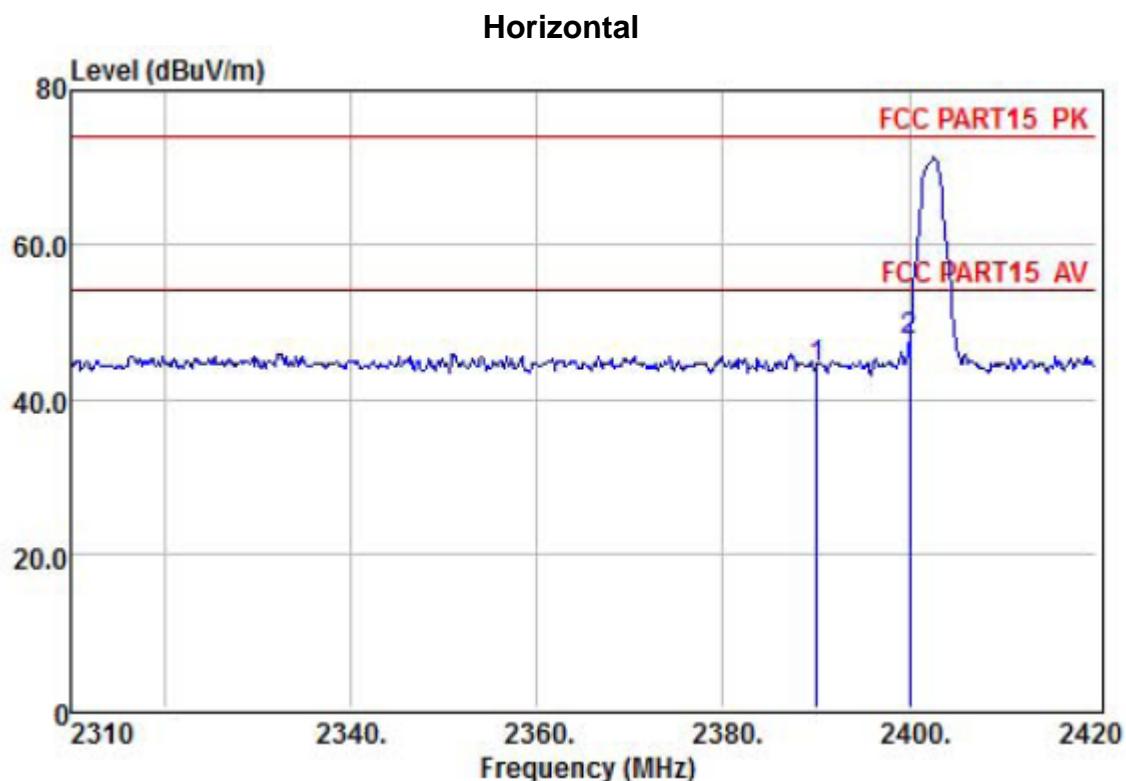
	Preamp Freq	Read Level	Cable Loss	Antenna Factor	Limit Level	Over Line Limit	Over Remark
	MHz	dB	dBuV	dB	dB/m	dBuV/m	dB
1	2483.50	26.34	33.84	7.57	28.79	43.86	74.00 -30.14 Peak

- NOTE: 1. Absolute Level= Reading Level+antenna Factor+cable loss+preamp factor,
 Over Limit= Absolute Level – Limit;
 2.The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has not to be reported.
 3.If the PK measured levels comply with average limit, then the average level were deemed to comply with average limit.

2M bps			
EUT :	Traveltek	Model Name :	W1330Q
Temperature :	20 °C	Relative Humidity :	54%
Pressure :	1010hPa	Test Mode :	TX-2402
Test Voltage :	DC 7.6V		



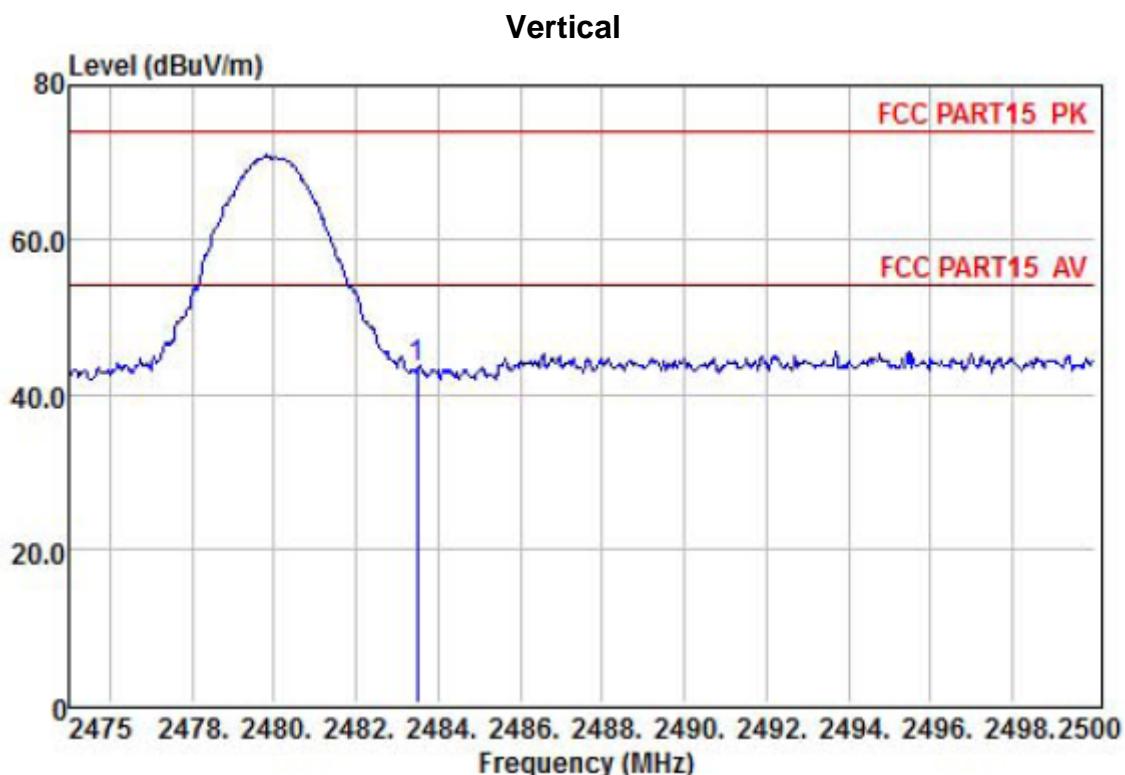
Freq	Preamp Factor	Read	Cable	Antenna	Limit Line	Over Limit	Remark	
		Level	Loss	Factor				
	MHz	dB	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB
1	2390.00	26.32	34.64	7.34	28.72	44.38	74.00	-29.62 Peak
2	2400.00	26.32	38.45	7.34	28.72	48.19	74.00	-25.81 Peak



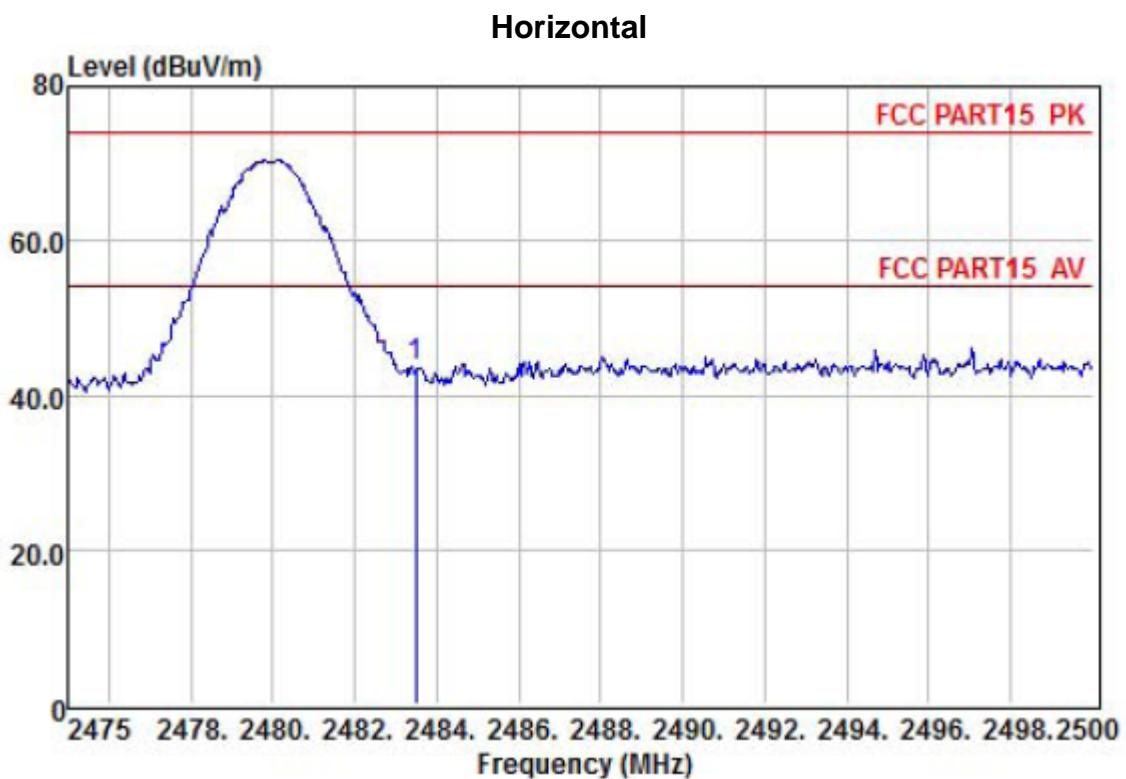
	Preamp Freq	Read Factor	Cable Loss	Antenna Factor	Limit Level	Over Line	Over Limit	Remark
	MHz	dB	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB
1	2390.00	26.32	34.37	7.34	28.72	44.11	74.00	-29.89 Peak
2	2400.00	26.32	37.85	7.34	28.72	47.59	74.00	-26.41 Peak

- NOTE: 1. Absolute Level= Reading Level+antenna Factor+cable loss+preamp factor,
 Over Limit= Absolute Level – Limit;
 2.The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has not to be reported.
 3.If the PK measured levels comply with average limit, then the average level were deemed to comply with average limit.

2M bps			
EUT :	Traveltek	Model Name :	W1330Q
Temperature :	20 °C	Relative Humidity :	54%
Pressure :	1010hPa	Test Mode :	TX-2480
Test Voltage :	DC 7.6V		



	Preamp Freq	Read Level	CableAntenna		Limit Line	Over Line Limit	Remark
			Factor	Loss Factor			
	MHz	dB	dBuV		dB	dBuV/m	dB
1	2483.50	26.34	33.29	7.57	28.79	43.31	74.00 -30.69 Peak



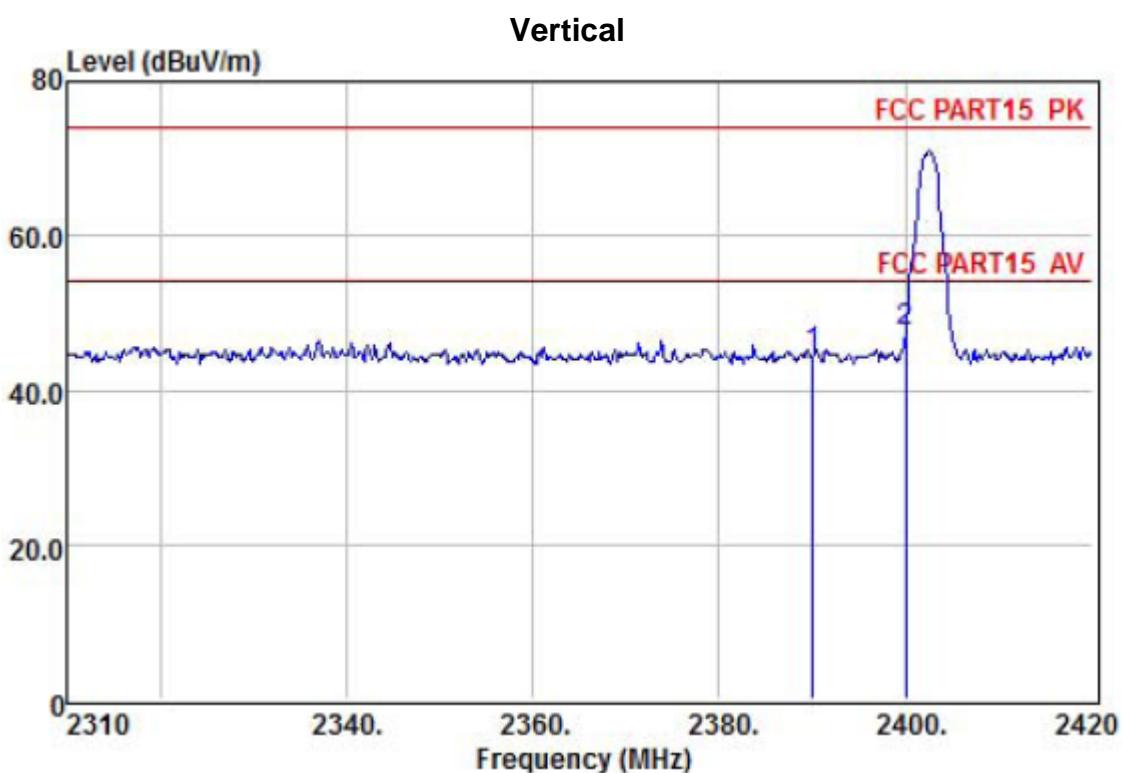
	Preamp Freq	Read Factor	Cable Level	Antenna Loss Factor	Limit Level	Over Line	Over Limit	Remark
	MHz	dB	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB
1	2483.50	26.34	33.82	7.57	28.79	43.84	74.00	-30.16 Peak

NOTE: 1. Absolute Level= Reading Level+antenna Factor+cable loss+preamp factor,
Over Limit= Absolute Level – Limit;

2.The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has not to be reported.

3.If the PK measured levels comply with average limit, then the average level were deemed to comply with average limit.

3M bps			
EUT :	Traveltek	Model Name :	W1330Q
Temperature :	20 °C	Relative Humidity :	54%
Pressure :	1010hPa	Test Mode :	TX-2402
Test Voltage :	DC 7.6V		



	Preamp Freq	Read Factor	Cable Loss	Antenna Factor	Limit Level	Line Level	Over Limit	Over Remark
	MHz	dB	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB
1	2390.00	26.32	34.78	7.34	28.72	44.52	74.00	-29.48 Peak
2	2400.00	26.32	37.90	7.34	28.72	47.64	74.00	-26.36 Peak