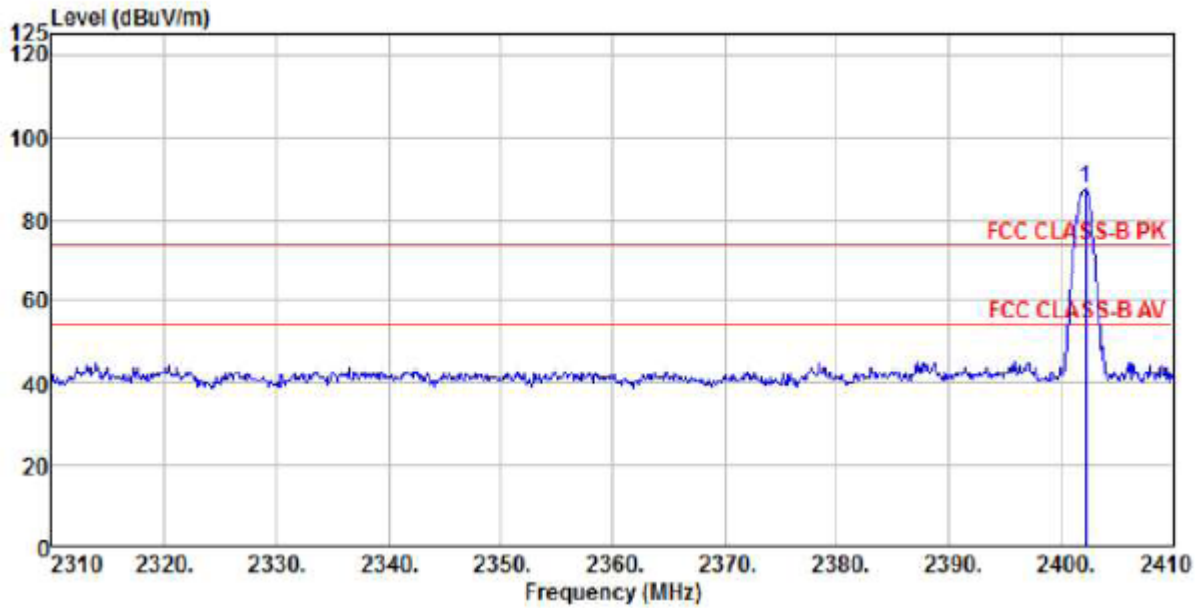


Detector mode: Peak

Polarity: Vertical

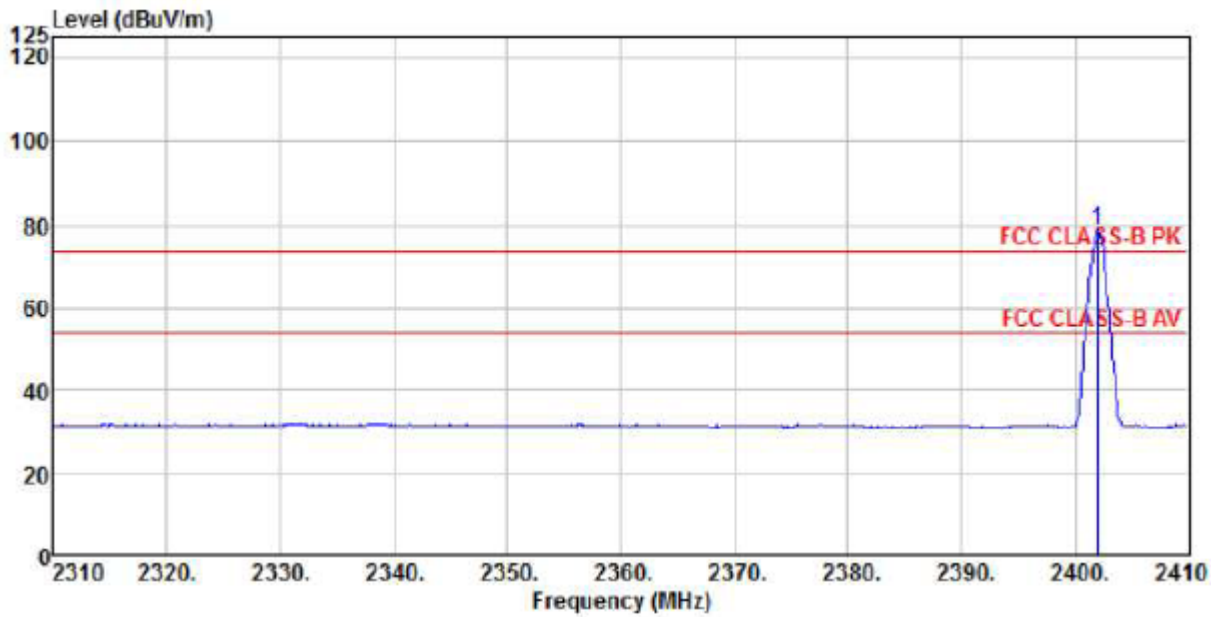


Site : chamber  
 Condition : FCC CLASS-B PK 3m BBHA9120D(943) VERTICAL  
 EUT :  
 Model Name :  
 Temp/Humi : 23 °C /52 %  
 Power Rating: AC 120V/60Hz  
 Mode : Pi/4-DPSK CH0  
 Memo :

	ReadAntenna	Cable	Preamp	Limit	Over		
Freq	Level	Factor	Loss	Factor	Level	Line	
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	
1 pp 2402.20	91.11	27.54	7.13	38.34	87.44	74.00	13.44 Peak

Detector mode: Average

Polarity: Horizontal

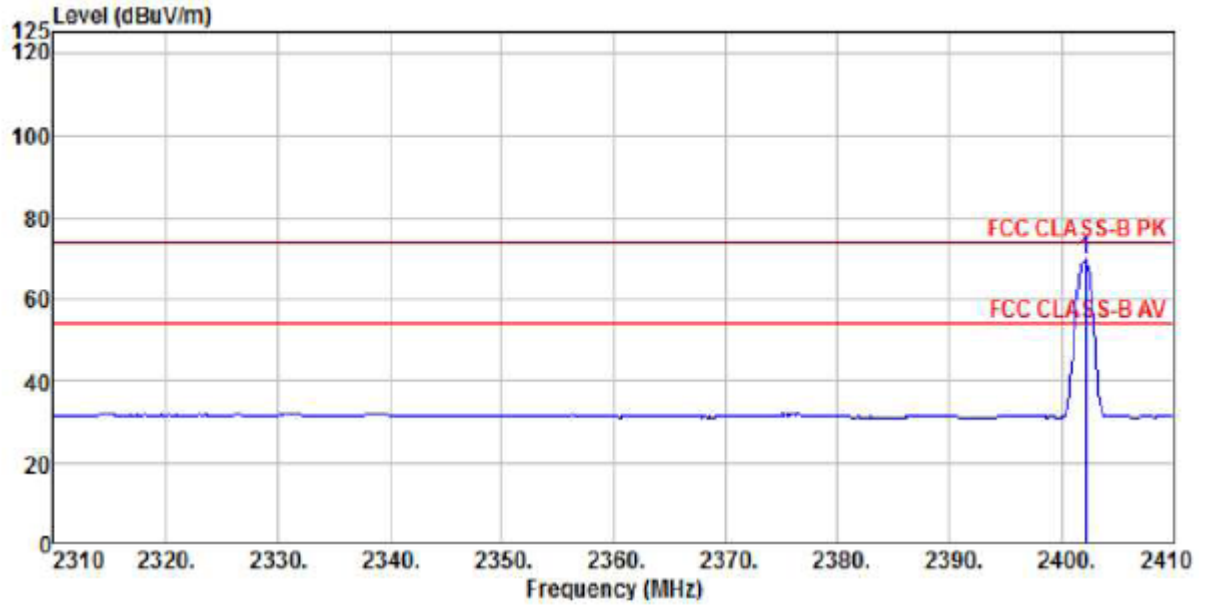


Site : chamber  
 Condition : FCC CLASS-B PK 3m BBHA9120D(943) HORIZONTAL  
 EUT :  
 Model Name :  
 Temp/Humi : 23 °C /52 %  
 Power Rating: AC 120V/60Hz  
 Mode : Pi/4-DPSK CH0  
 Memo :

	ReadAntenna	Cable	Preamp		Limit	Over		
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1 pp 2402.00	82.69	27.54	7.13	38.34	79.02	54.00	25.02	Average

Detector mode: Average

Polarity: Vertical



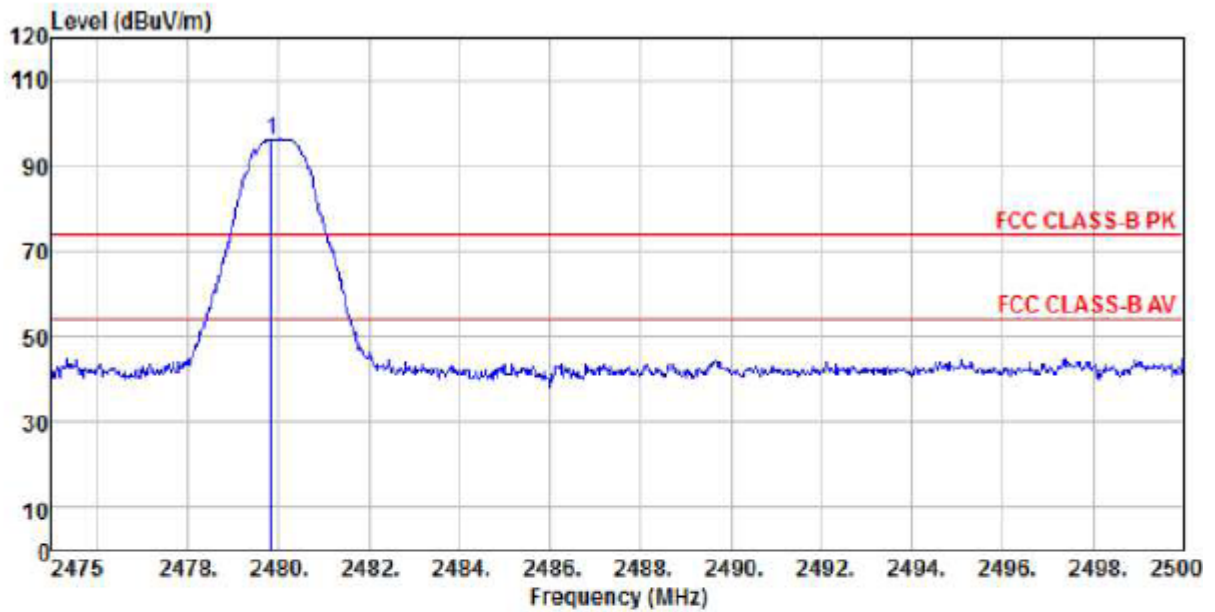
Site : chamber  
 Condition : FCC CLASS-B PK 3m BBHA9120D(943) VERTICAL  
 EUT :  
 Model Name :  
 Temp/Humi : 23 °C /52 %  
 Power Rating: AC 120V/60Hz  
 Mode : Pi/4-DPSK CH0  
 Memo :

	ReadAntenna	Cable	Preamp		Limit	Over		
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1 pp 2402.20	73.20	27.54	7.13	38.34	69.53	54.00	15.53	Average

**BT Π/4-DQPSK (High Channel)**

Detector mode: Peak

Polarity: Horizontal

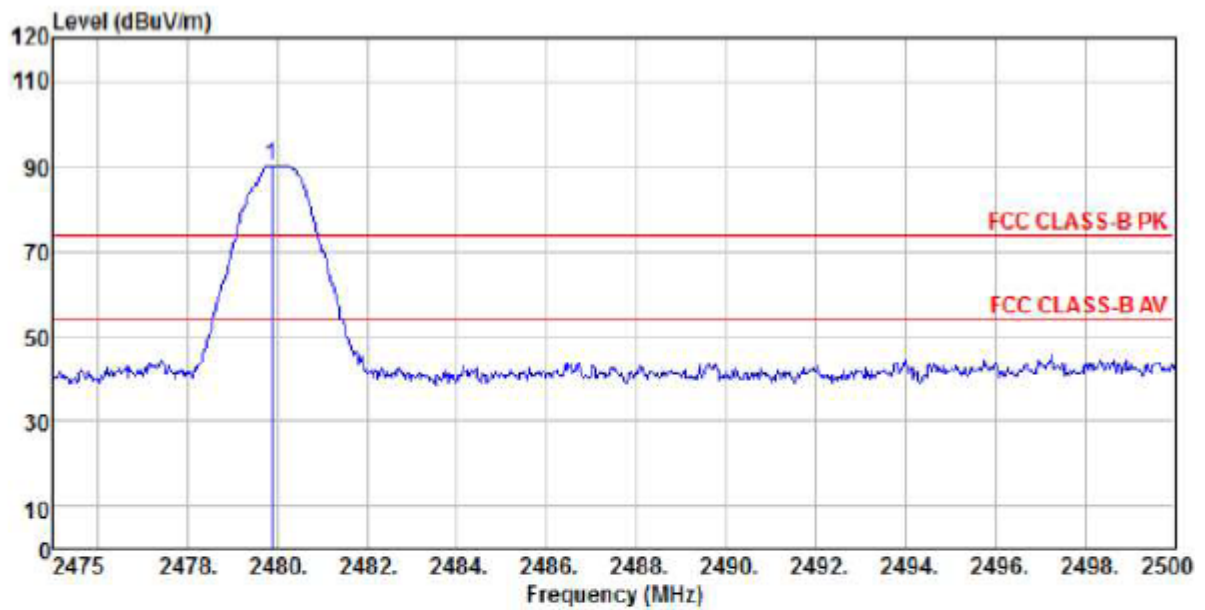


Site : chamber  
 Condition : FCC CLASS-B PK 3m BBHA9120D(943) HORIZONTAL  
 EUT :  
 Model Name :  
 Temp/Humi : 23 °C /52 %  
 Power Rating: AC 120V/60Hz  
 Mode : Pi/4-DPSK CH78  
 Memo :

	ReadAntenna	Cable	Preamp		Limit	Over		
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1 pp 2479.85	99.68	27.52	7.41	38.31	96.30	74.00	22.30	Peak

Detector mode: Peak

Polarity: Vertical

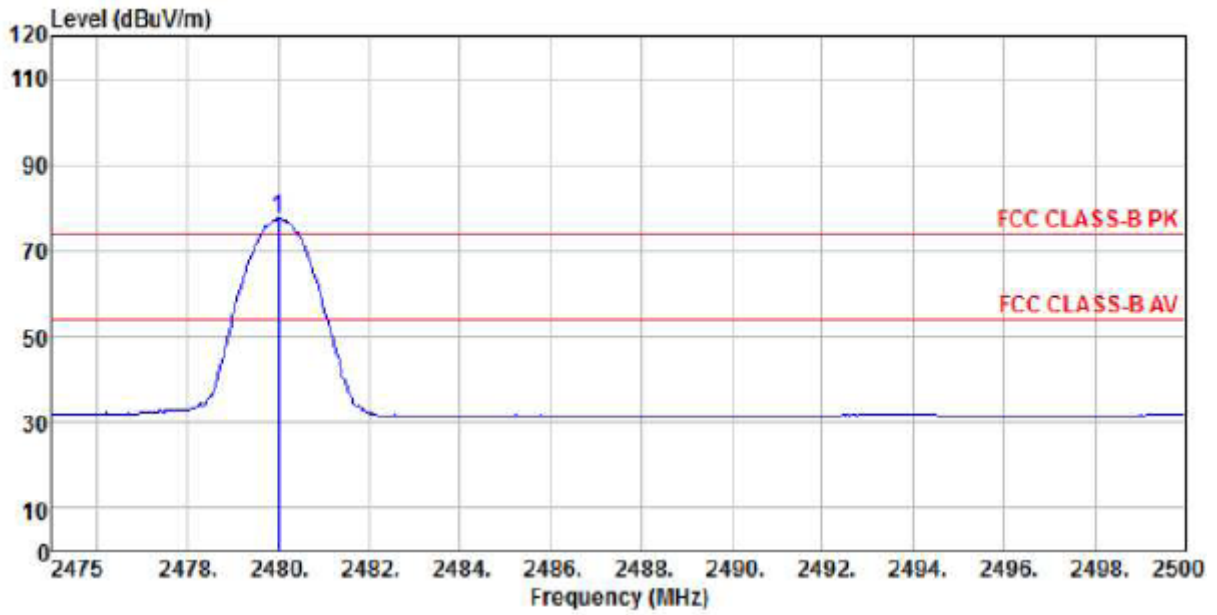


Site : chamber  
 Condition : FCC CLASS-B PK 3m DDIIA9120D(943) VERTICAL  
 EUT :  
 Model Name :  
 Temp/Humi : 23 °C /52 %  
 Power Rating: AC 120V/60Hz  
 Mode : Pi/4-DPSK CH78  
 Memo :

	ReadAntenna	Cable	Preamp		Limit	Over	
Freq	Level	Factor	Loss	Factor	Level	Line	Limit
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1 pp 2479.87	93.84	27.52	7.41	38.31	90.46	74.00	16.46 Peak

Detector mode: Average

Polarity: Horizontal

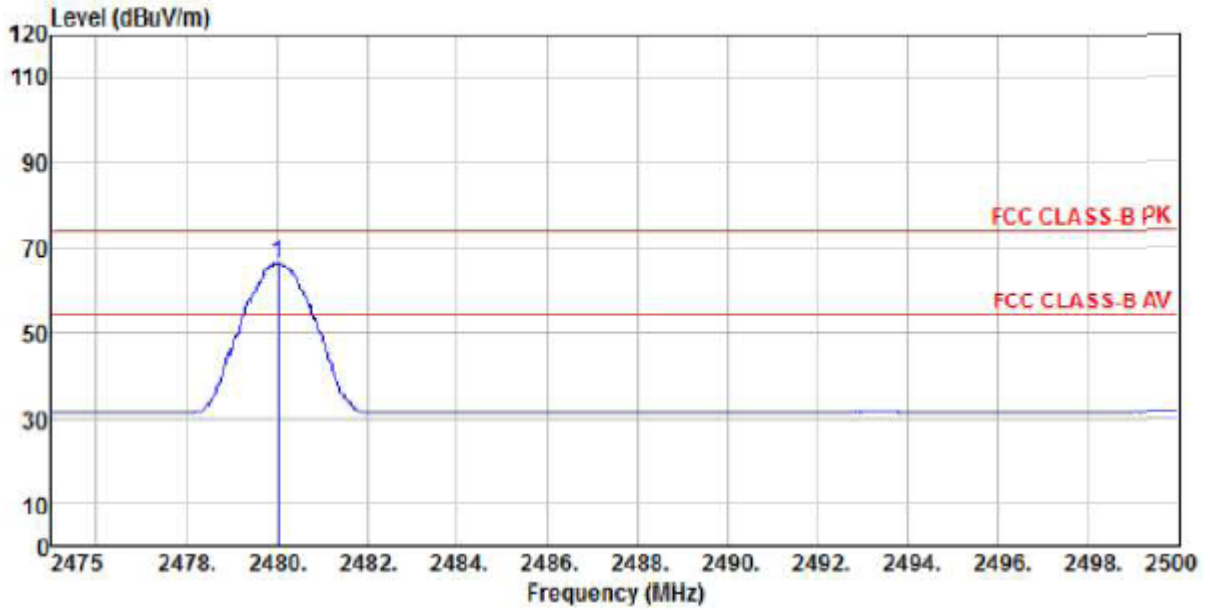


Site : chamber  
 Condition : FCC CLASS-B PK 3m BBHA9120D(943) HORIZONTAL  
 EUT :  
 Model Name :  
 Temp/Humi : 23 °C /52 %  
 Power Rating: AC 120V/60Hz  
 Mode : Pi/4-DPSK CH78  
 Memo :

	ReadAntenna	Cable	Preamp		Limit	Over		
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1 pp 2480.00	80.67	27.52	7.41	38.31	77.29	54.00	23.29	Average

Detector mode: Average

Polarity: Vertical



Site : chamber  
 Condition : FCC CLASS-B PK 3m BBHA9120D(943) VERTICAL  
 EUT :  
 Model Name :  
 Temp/Humi : 23 °C /52 %  
 Power Rating: AC 120V/60Hz  
 Mode : Pi/4-DPSK CH78  
 Memo :

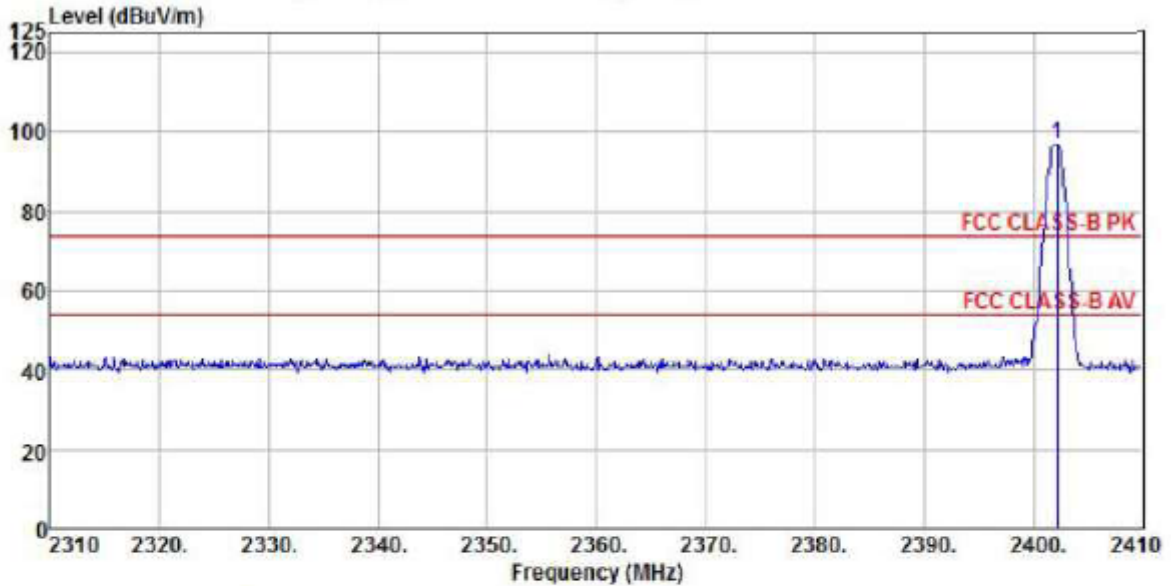
	ReadAntenna	Cable	Preamp	Limit	Over		
Freq	Level	Factor	Loss	Factor	Level	Line	
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	
1 pp 2480.03	69.82	27.52	7.41	38.31	66.44	54.00	12.44 Average



**BT 8-DPSK (Low Channel)**

Detector mode: Peak

Polarity: Horizontal



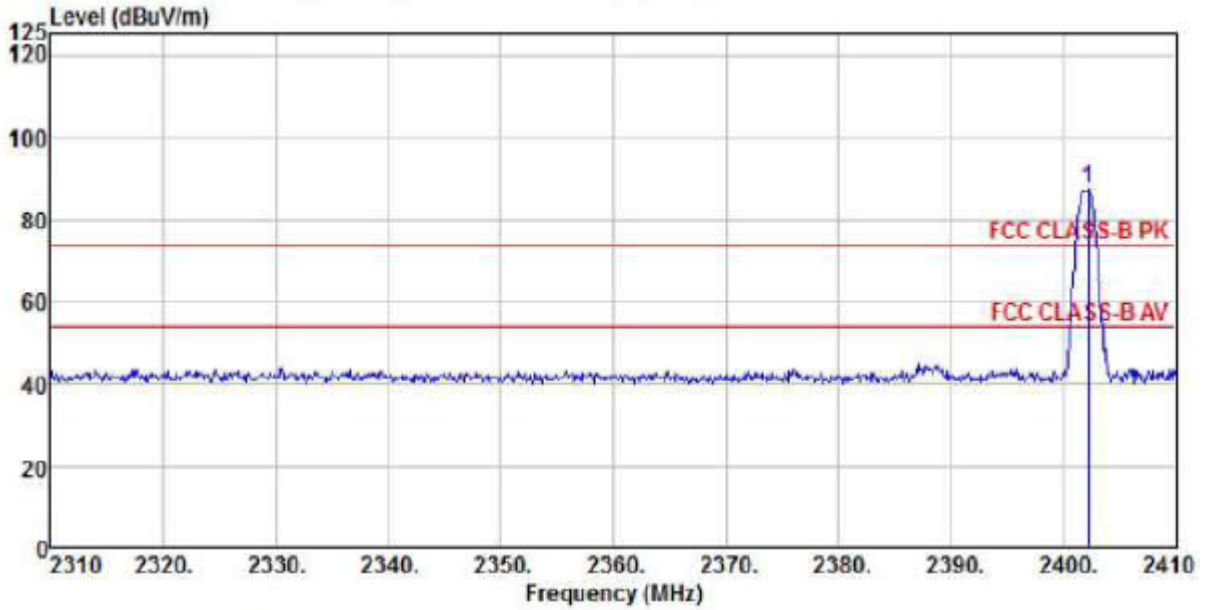
Site : chamber  
 Condition : FCC CLASS-B PK 3m BBHA9120D(943) HORIZONTAL  
 EUT :  
 Model Name :  
 Temp/Humi : 23 °C /52 %  
 Power Rating: AC 120V/60Hz  
 Mode : 8DPSK CH0  
 Memo :

	ReadAntenna	Cable	Preamp		Limit	Over	
Freq	Level	Factor	Loss	Factor	Level	Line	Limit Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1 pp 2402.20	100.72	27.54	7.13	38.34	97.05	74.00	23.05 Peak



Detector mode: Peak

Polarity: Vertical

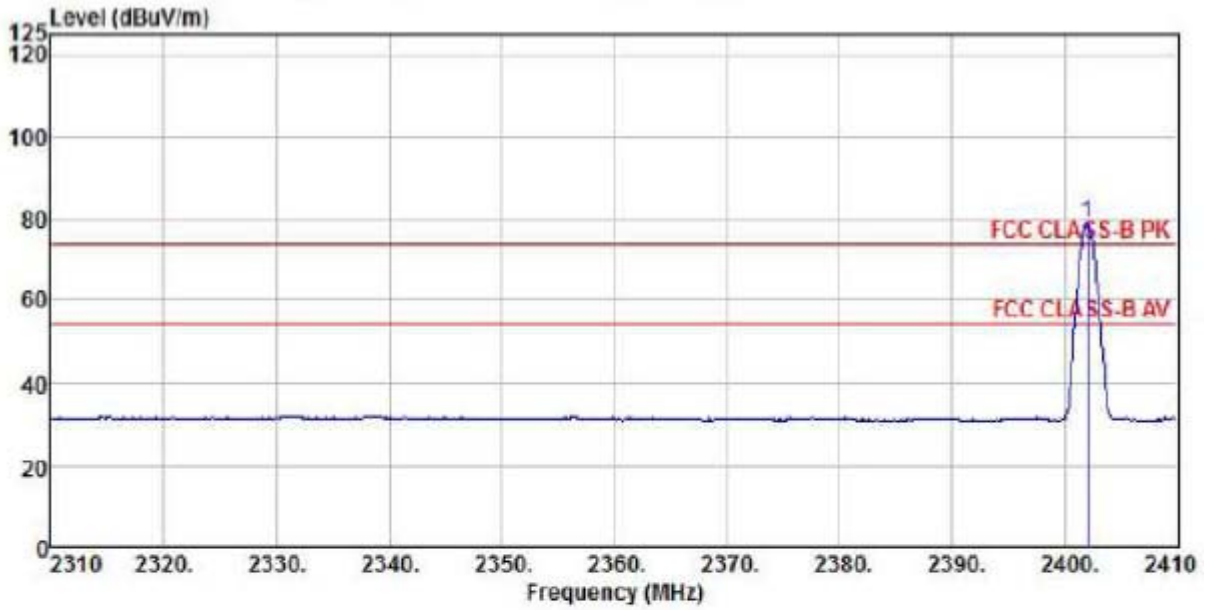


Site : chamber  
 Condition : FCC CLASS-B PK 3m BBHA9120D(943) VERTICAL  
 EUT :  
 Model Name :  
 Temp/Humi : 23 °C /52 %  
 Power Rating: AC 120V/60Hz  
 Mode : 8DPSK CH0  
 Memo :

	ReadAntenna	Cable	Preamp	Limit	Over			
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1 pp 2402.20	91.11	27.54	7.13	38.34	87.44	74.00	13.44	Peak

Detector mode: Average

Polarity: Horizontal

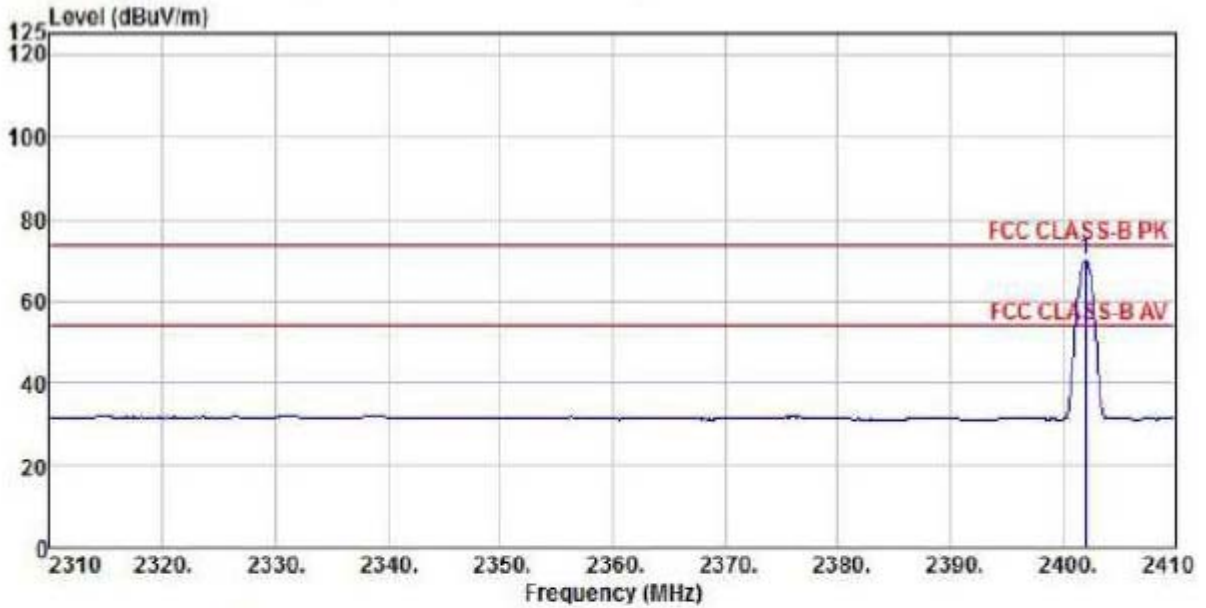


Site : chamber  
 Condition : FCC CLASS-B PK 3m BBHA9120D(943) HORIZONTAL  
 EUT :  
 Model Name :  
 Temp/Humi : 23 °C /52 %  
 Power Rating: AC 120V/60Hz  
 Mode : 8DPSK CH0  
 Memo :

	ReadAntenna	Cable	Preamp		Limit	Over		
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1 pp 2402.00	82.69	27.54	7.13	38.34	79.02	54.00	25.02	Average

Detector mode: Average

Polarity: Vertical



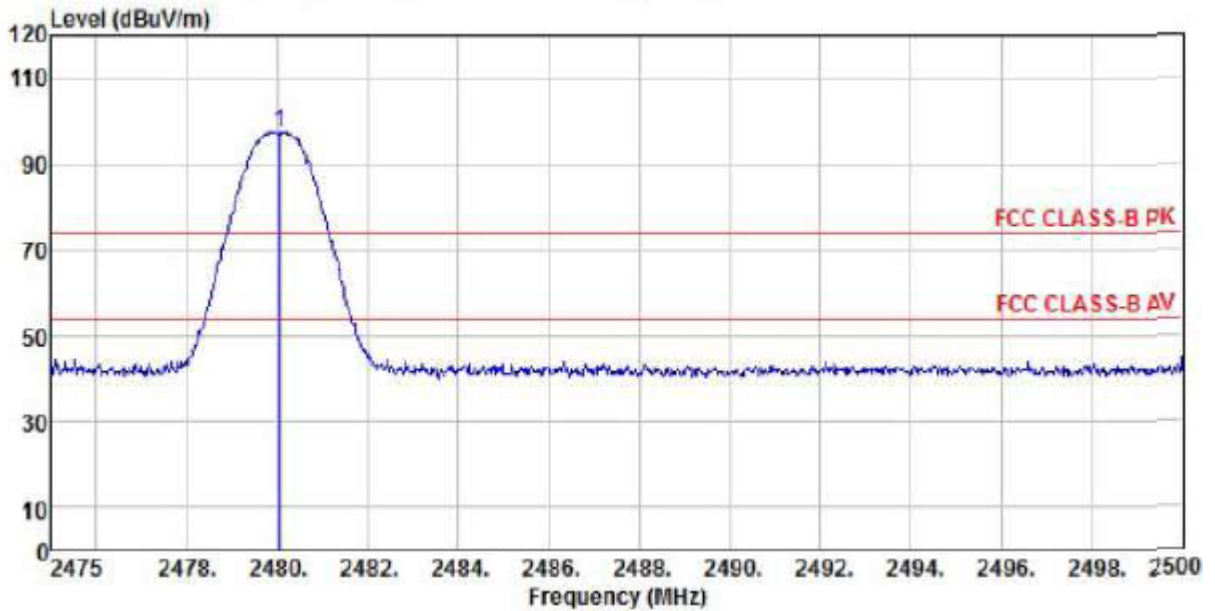
Site : chamber  
 Condition : FCC CLASS-B PK 3m BBHA9120D(943) VERTICAL  
 EUT :  
 Model Name :  
 Temp/Humi : 23 °C /52 %  
 Power Rating: AC 120V/60Hz  
 Mode : 8DPSK CH0  
 Memo :

1 pp	Freq	ReadAntenna		Cable Preamp		Limit	Over	Remark
		Level	Factor	Loss	Factor			
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
	2402.00	73.62	27.54	7.13	38.34	69.95	54.00	15.95 Average

**BT 8-DPSK (High Channel)**

Detector mode: Peak

Polarity: Horizontal

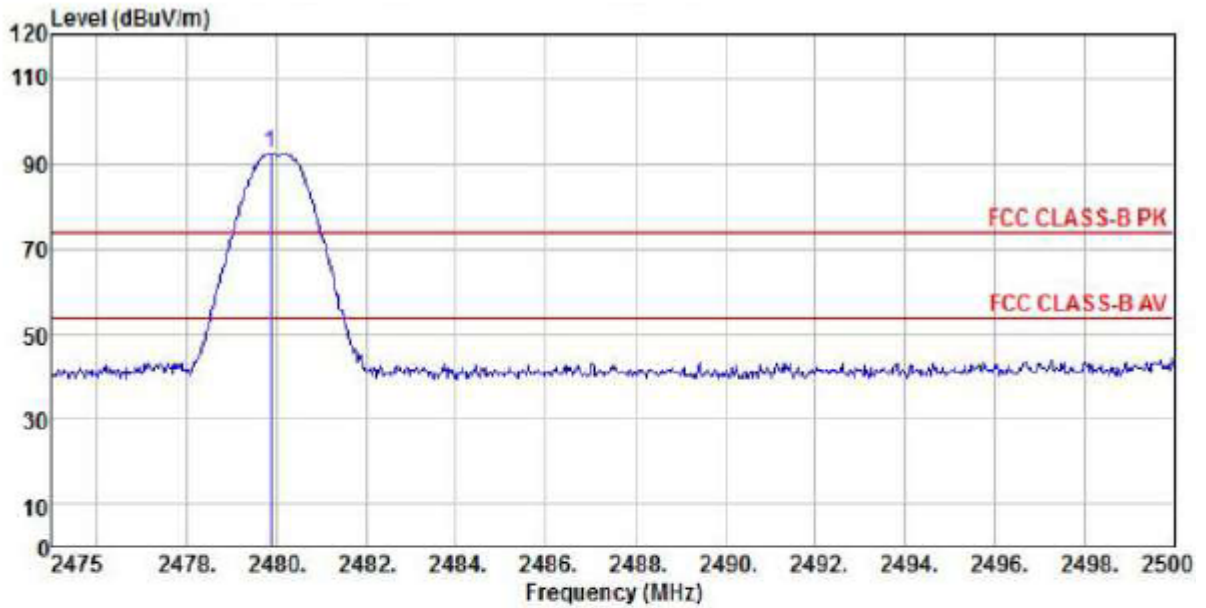


Site : chamber  
 Condition : FCC CLASS-B PK 3m BBHA9120D(943) HORIZONTAL  
 EUT :  
 Model Name :  
 Temp/Humi : 23 °C /52 %  
 Power Rating: AC 120V/60Hz  
 Mode : 8DPSK CH78  
 Memo :

	ReadAntenna	Cable	Preamp		Limit	Over	
Freq	Level	Factor	Loss	Factor	Level	Line	Limit Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1 pp 2480.05	100.72	27.52	7.41	38.31	97.34	74.00	23.34 Peak

Detector mode: Peak

Polarity: Vertical

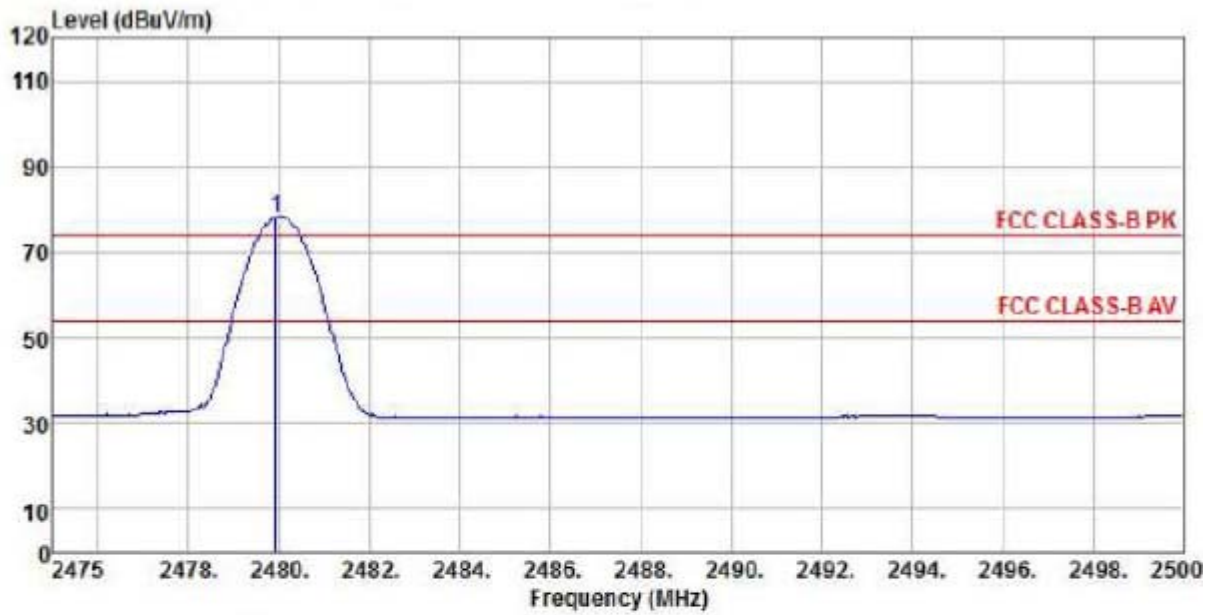


Site : chamber  
 Condition : FCC CLASS-B PK 3m BBHA9120D(943) VERTICAL  
 EUT :  
 Model Name :  
 Temp/Humi : 23 °C /52 %  
 Power Rating: AC 120V/60Hz  
 Mode : 8DPSK CH78  
 Memo :

	ReadAntenna	Cable	Preamp	Limit	Over			
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1 pp 2479.87	95.84	27.52	7.41	38.31	92.46	74.00	18.46	Peak

Detector mode: Average

Polarity: Horizontal



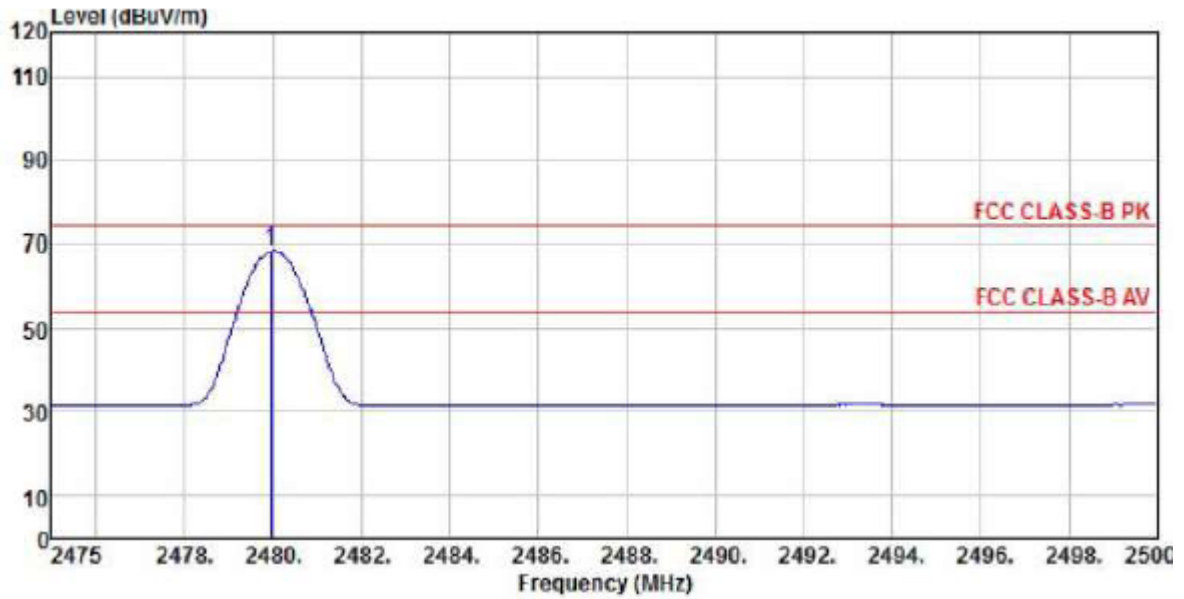
Site : chamber  
 Condition : FCC CLASS-B PK 3m BBHA9120D(943) HORIZONTAL  
 EUT :  
 Model Name :  
 Temp/Humi : 23 °C /52 %  
 Power Rating: AC 120V/60Hz  
 Mode : 8DPSK CH78  
 Memo :

	ReadAntenna	Cable	Preamp	Limit	Over		
Freq	Level	Loss	Factor	Line	Limit	Remark	
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	
1 pp 2479.93	81.52	27.52	7.41	38.31	78.14	54.00	24.14 Average



Detector mode: Average

Polarity: Vertical



Site : chamber  
 Condition : FCC CLASS-B PK 3m BBHA9120D(943) VERTICAL  
 EUT :  
 Model Name :  
 Temp/Humi : 23 °C / 52 %  
 Power Rating: AC 120V/60Hz  
 Mode : 8DPSK CH78  
 Memo :

	ReadAntenna	Cable	Preamp		Limit	Over		
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1 pp 2479.95	71.73	27.52	7.41	38.31	68.35	54.00	14.35	Average











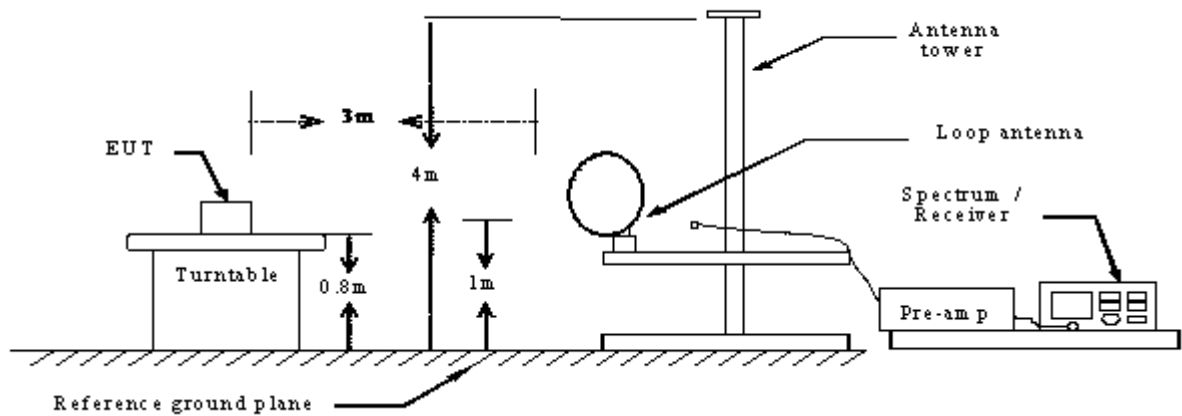




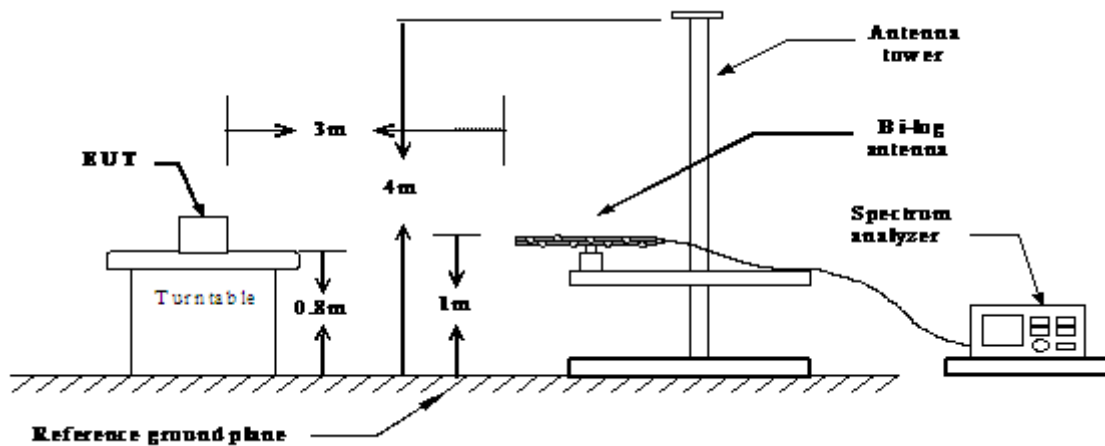
# 11. SPURIOUS EMISSIONS (RADIATION)

## 11.1 TEST SETUP

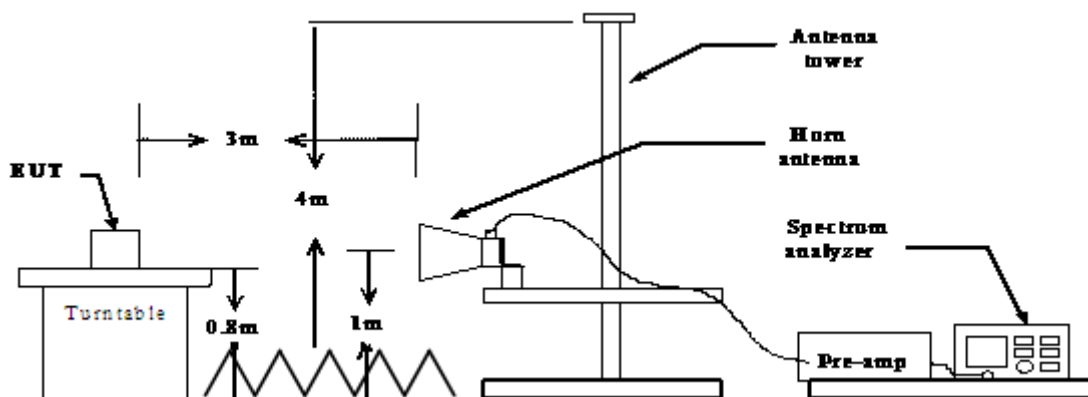
Radiated Spurious Measurement: below 30MHz



Radiated Spurious Measurement: below 1GHz



Radiated Spurious Measurement: above 1GHz





## 11.2 LIMITS

Frequency (MHz)	Limits (uV/m)	Limits(dBuV/m) At 3m	Measured Distance (m)
0.009-0.490	2400/F(KHz)	128.5-93.80	300
0.490-1.705	24000/F(KHz)	73.80-63.00	30
1.705-30.0	30	69.5	30
30~88	100	40	3
88~216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

Notes: the calculate formula for below 30MHz

$$L2 = 20\lg(L1) + 40\lg(d1/d2)$$

L2: is the specified limit in dB microvolts per metre at distance d2.

L1: is the specified limit in microvolts per metre at distance d1.

For example:

L1 = 2400/9 (uV/m), d1 = 300 (m), d2 = 3 (m), so L2 as follows:

$$20\lg(2400/9) + 40\lg(300/3) = 128.5(\text{dB}\mu\text{V/m})$$

## 11.3 TEST PROCEDURE

### Radiated Emission ( 9 kHz - 30 MHz ) :

Spurious emissions from the EUT are measured in the frequency range of 9 kHz to 30 MHz using a tuned receiver and a shielded loop antenna. The antenna was positioned 3 meters horizontally from the EUT. The RBW of the spectrum analyzer is set to 200Hz(measured frequency range was 9KHz~150KHz) or 9KHz(measured frequency range was 150KHz~30MHz). Measurements have been made in all three orthogonal axes and the shielded loop antenna was rotated to locate the maximum of the emissions. The emission limits are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz(these two bands employing a average detector)

### Radiated Emission ( 30 MHz - 1000 MHz ) :

According to description of ANSI C63.4: 2009 sec.13.4, the preliminary radiated emissions measurement were carried out. The preliminary radiated measurements were performed at the measurement distance that specified for compliance to determine the emission characteristics of the EUT. The EUT configuration (in X, Y and Z axis), cable configuration and mode of operation were determined for producing the maximum level of emissions. These configurations were used for the final radiated emissions measurements. The measurement is carried out using a spectrum analyzer or receiver. The Quasi-peak detector is used and RBW is set to 120kHz.The antenna height and turn table rotation is adjusted until the maximum power value is founded on spectrum analyzer or receiver.

**Radiated Emission (Above 1 GHz):**

According to description of ANSI C63.4: 2009 sec.13.4, the preliminary radiated emissions measurement were carried out. The preliminary radiated measurements were performed at the measurement distance that specified for compliance to determine the emission characteristics of the EUT. The EUT configuration (in X, Y and Z axis), cable configuration and mode of operation were determined for producing the maximum level of emissions. These configurations were used for the final radiated emissions measurements. The measurement is carried out using a spectrum analyzer or receiver. The spectrum analyzer scans from 1GHz to 25GHz (higher than the 10<sup>th</sup> harmonic of the carrier). The peak detector is used for Peak limit and RBW is set to 1MHz ,VBW  $\geq$  3RBW. The peak detector is used for Average limit and RBW is set to 1MHz ,VBW=1kHz is not smaller than 1/T, T = to the shortest pulse width. The antenna height and turn table rotation is adjusted until the maximum power value is founded on spectrum analyzer or receiver.

### 11.4 RESULTS & PERFORMANCE

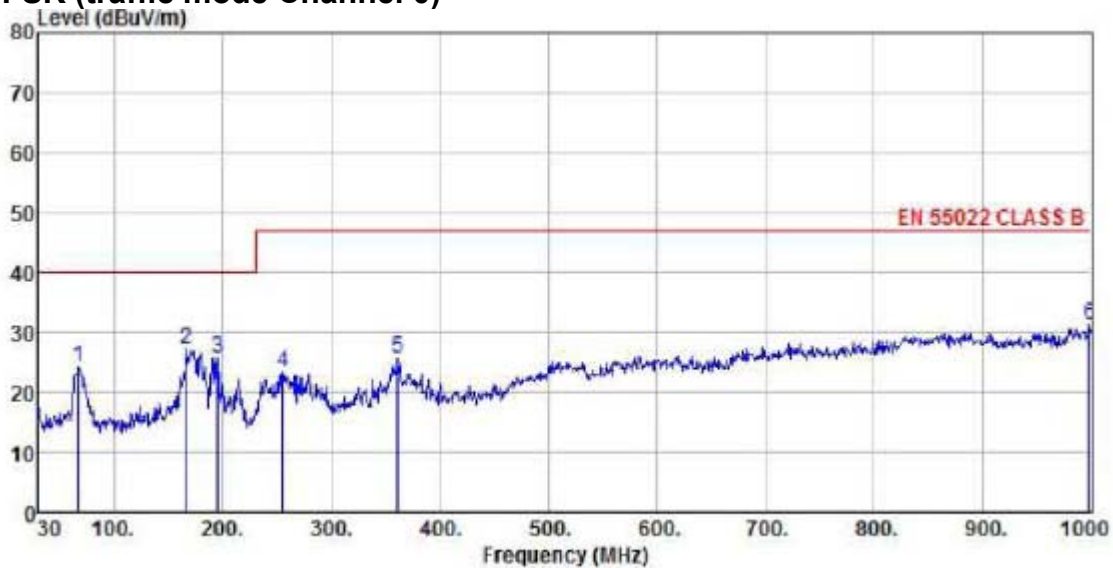
#### From 9kHz to 30MHz:

The test data was 20dB lower than the permissible limit was not recorded in the report.

#### From 30MHz to 1GHz:

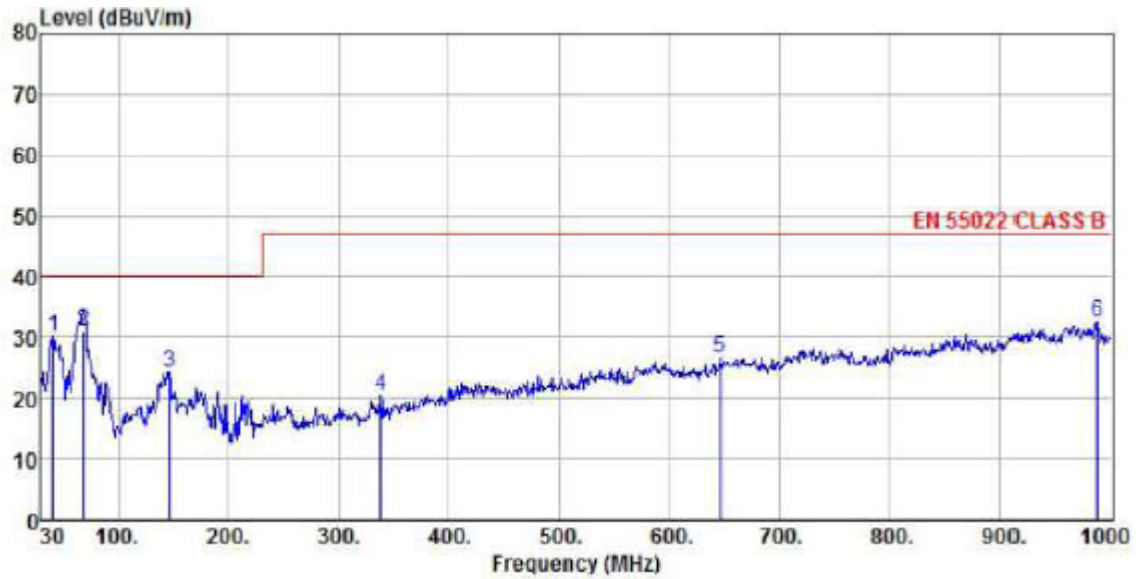
Only show the worst test data when EUT was operated on different mode.

#### BT GFSK (traffic mode Channel 0)



Site : chamber  
 Condition : EN 55022 CLASS B 3m VULB9160 HORIZONTAL  
 EUT :  
 Model Name :  
 Temp/Humi : 23 °C /52 %  
 Power Rating: AC 120V/60Hz  
 Mode : BT GFSK CH0  
 Memo :

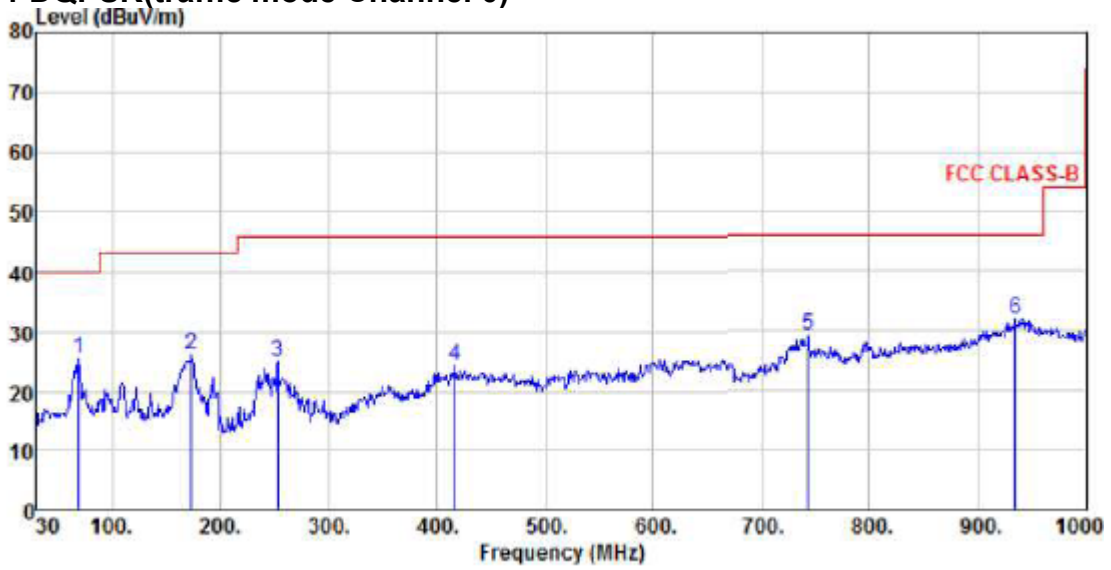
	ReadAntenna	Cable	Preamp		Limit	Over		
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	66.86	11.17	11.89	1.10	0.00	24.16	40.00	-15.84 Peak
2 pp	165.80	11.85	13.55	1.77	0.00	27.17	40.00	-12.83 Peak
3	194.90	13.12	10.81	1.89	0.00	25.82	40.00	-14.18 Peak
4	255.04	9.06	12.00	2.17	0.00	23.23	47.00	-23.77 Peak
5	360.77	8.64	14.39	2.66	0.00	25.69	47.00	-21.31 Peak
6	998.06	3.40	23.44	4.35	0.00	31.19	47.00	-15.81 Peak



Site : chamber  
 Condition : EN 55022 CLASS B 3m VULB9160 VERTICAL  
 EUT :  
 Model Name :  
 Temp/Humi : 23 °C /52 %  
 Power Rating: AC 120V/60Hz  
 Mode : BT GFSK CH0  
 Memo :

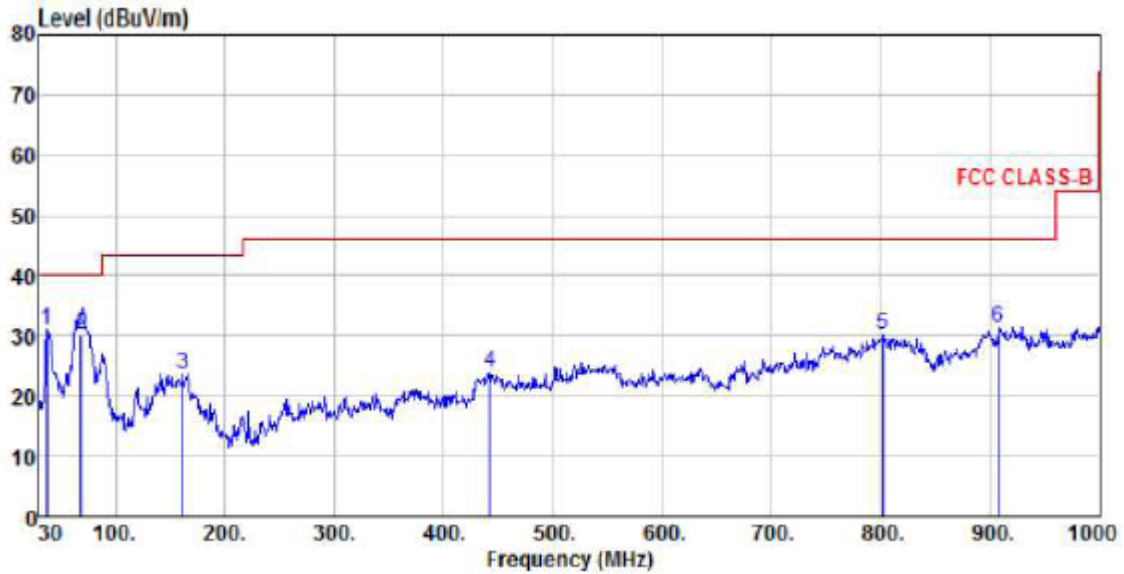
	Freq	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1 pk	40.67	16.65	12.71	0.83	0.00	30.19	40.00	-9.81	Peak
2 pp	68.68	18.53	11.44	1.11	0.00	31.08	40.00	-8.92	QP
3	146.40	8.94	13.68	1.63	0.00	24.25	40.00	-15.75	Peak
4	338.46	3.89	14.09	2.51	0.00	20.49	47.00	-26.51	Peak
5	645.95	3.50	19.53	3.53	0.00	26.56	47.00	-20.44	Peak
6	986.42	4.72	23.43	4.32	0.00	32.47	47.00	-14.53	Peak

**BT Π/4-DQPSK(traffic mode Channel 0)**



Site : chamber  
 Condition : FCC CLASS-B 3m VULB9160 HORIZONTAL  
 EUT :  
 Model Name :  
 Temp/Humi : 23 °C /52 %  
 Power Rating: AC 120V/60Hz  
 Mode : Pi/4-DPSK 1.0  
 Memo :

	Freq	ReadAntenna Level	Cable Factor	Preamp Loss	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	68.80	13.12	11.44	1.11	0.00	25.67	40.00	-14.33	Peak
2	172.59	11.36	12.97	1.86	0.00	26.19	43.50	-17.31	Peak
3	253.10	11.08	11.96	2.16	0.00	25.20	46.00	-20.80	Peak
4	416.06	6.11	15.62	2.83	0.00	24.56	46.00	-21.44	Peak
5	742.95	4.23	21.18	3.78	0.00	29.19	46.00	-16.81	Peak
6 pp	935.01	4.52	23.15	4.12	0.00	31.79	46.00	-14.21	Peak

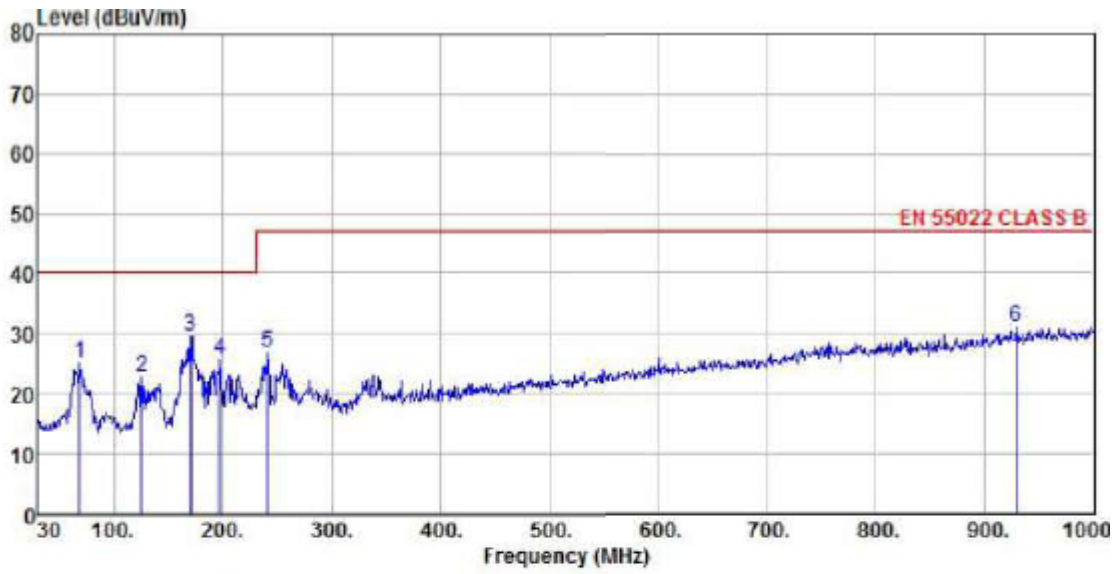


Site : chamber  
 Condition : FCC CLASS-B 3m VULB9160 VERTICAL  
 EUT :  
 Model Name :  
 Temp/Humi : 23 °C /52 %  
 Power Rating: AC 120V/60Hz  
 Mode : Pi/4-DPSK ch0  
 Memo :

	Freq	ReadAntenna Level	Cable Factor	Preamp Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	pp	36.79	17.78	12.51	0.77	0.00	31.06	40.00	-8.94 Peak
2	qp	68.78	17.57	11.44	1.11	0.00	30.12	40.00	-9.88 QP
3		160.95	8.20	13.77	1.69	0.00	23.66	43.50	-19.84 Peak
4		442.25	4.89	16.24	2.86	0.00	23.99	46.00	-22.01 Peak
5		802.12	4.63	21.77	3.81	0.00	30.21	46.00	-15.79 Peak
6		907.85	4.53	22.69	4.07	0.00	31.29	46.00	-14.71 Peak



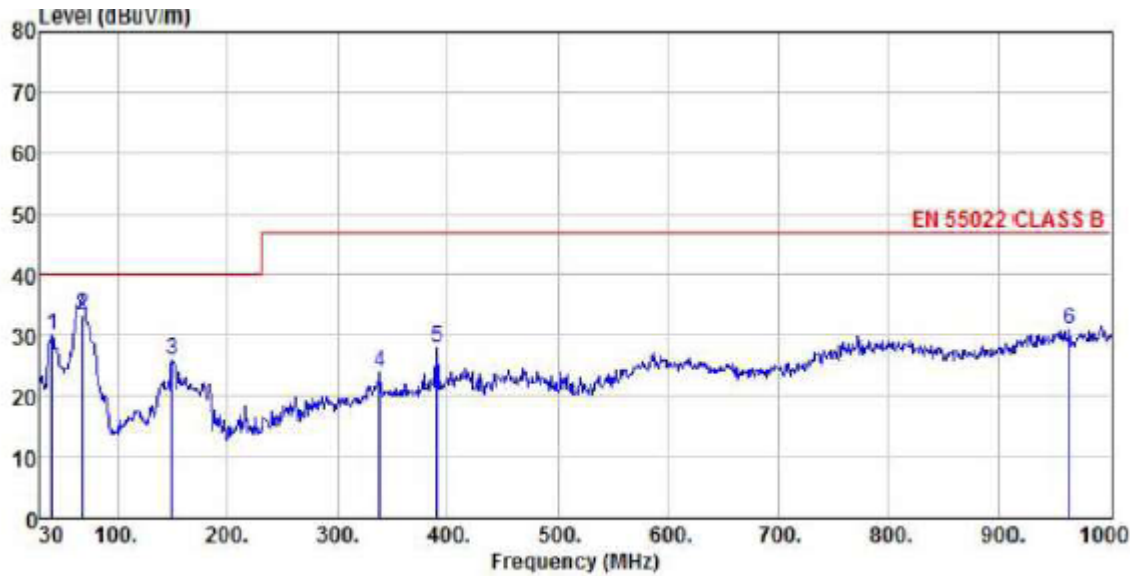
**BT 8-DPSK( traffic mode Channel 39)**



Site : chamber  
 Condition : EN 55022 CLASS B 3m VULB9160 HORIZONTAL  
 EUT :  
 Model Name :  
 Temp/Humi : 23 °C /52 %  
 Power Rating: AC 120V/60Hz  
 Mode : BT 8-DPSK CH39  
 Memo :

	Freq	ReadAntenna	Cable	Preamp	Limit	Over	Remark
	MHz	Level	Loss	Factor	Line	Limit	
		dBuV	dB	dB	dBuV/m	dB	
1	68.80	12.59	11.44	1.11	0.00	25.14	40.00 -14.86 Peak
2	125.06	8.91	12.39	1.53	0.00	22.83	40.00 -17.17 Peak
3 pp	169.68	14.38	13.33	1.84	0.00	29.55	40.00 -10.45 Peak
4	196.84	13.16	10.67	1.89	0.00	25.72	40.00 -14.28 Peak
5	240.49	13.06	11.71	2.12	0.00	26.89	47.00 -20.11 Peak
6	929.19	3.74	23.03	4.10	0.00	30.87	47.00 -16.13 Peak





Site : chamber  
 Condition : EN 55022 CLASS B 3m VULB9160 VERTICAL  
 EUT :  
 Model Name :  
 Temp/Humi : 23 °C /52 %  
 Power Rating: AC 120V/60Hz  
 Mode : BT 8-DPSK CH39  
 Memo :

	Freq	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1 pk	40.67	16.44	12.71	0.83	0.00	29.98	40.00	-10.02	Peak
2 pp	68.80	20.75	11.44	1.11	0.00	33.30	40.00	-6.70	QP
3	149.31	10.45	13.90	1.63	0.00	25.98	40.00	-14.02	Peak
4	338.46	7.26	14.09	2.51	0.00	23.86	47.00	-23.14	Peak
5	389.87	10.20	15.10	2.71	0.00	28.01	47.00	-18.99	Peak
6	962.17	3.45	23.43	4.21	0.00	31.09	47.00	-15.91	Peak

**From 1GHz to 25GHz:**

Only show the worst test data when EUT was operated on different mode.

EUT operation mode : BT GFSK(Ch0/Ch39/Ch78); BT  $\Pi/4$ -DQPSK(Ch0/Ch39/Ch78);

BT 8-DPSK(Ch0/Ch39/Ch78)

**BT GFSK traffic mode Ch78**

Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Antenna Polarity	Total (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
2480	77.30	-2.88	Horizontal	74.42	/	/	Peak
4966	47.54	5.23	H	52.77	74	21.23	Peak
7445	35.23	13.15	H	48.38	74	25.62	Peak
2480	75.38	-2.88	Vertical	72.50	/	/	Peak
4966	44.36	5.23	V	49.59	74	24.41	Peak
7445	33.41	12.85	V	46.26	74	27.74	Peak

Note: 1, Total=Reading+Correct factor

2, 2480 MHz was fundamental signal which can be ignored.

3, Average measurement was not performed if peak level were lower than the average limit.

4, Other harmonics are lower than background noise.

**BT  $\Pi/4$ -DQPSK traffic mode Ch39**

Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Antenna Polarity	Total (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
2441	75.49	-3.29	Horizontal	72.20	/	/	Peak
4880	48.33	5.02	H	53.35	74	20.65	Peak
7312	34.00	11.86	H	45.86	74	28.14	Peak
2441	72.35	-3.29	Vertical	69.06	/	/	Peak
4880	45.27	5.02	V	50.29	74	23.71	Peak
7312	31.89	12.36	V	44.25	74	29.75	Peak

Note: 1, Total=Reading+Correct factor

2, 2441MHz was fundamental signal which can be ignored.

3, Average measurement was not performed if peak level were lower than the average limit.

4, Other harmonics are lower than background noise.

**BT 8-DPSK traffic mode Ch39**

Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Antenna Polarity	Total (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
2441	72.89	-3.29	Horizontal	69.70	/	/	Peak
4882	46.17	5.02	H	51.19	74	22.81	Peak
7322	34.65	11.86	H	46.51	74	33.49	Peak
2441	70.00	-3.29	Vertical	66.71	/	/	Peak
4882	43.28	5.02	V	48.30	74	25.70	Peak
7322	30.11	12.36	V	42.47	74	31.53	Peak

Note: 1, Total=Reading+Correct factor

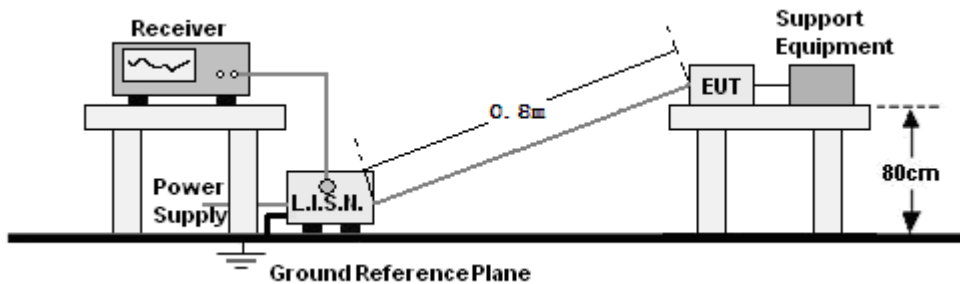
2, 2441MHz was fundamental signal which can be ignored.

3, Average measurement was not performed if peak level were lower than the average limit.

4, Other harmonics are lower than background noise.

## 12. AC POWER LINE CONDUCTED EMISSIONS

### 12.1 TEST SETUP



### 12.2 LIMITS

Frequency range (MHz)	Limits dB(μV)	
	Quasi-peak	Average
0,15 to 0,50	66 to 56	56 to 46
0,50 to 5	56	46
5 to 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 to 0.50 MHz.

### 12.3 TEST PROCEDURE

According to description of ANSI C63.4: 2009 sec.13.3, the AC power line preliminary conducted emissions measurements were carried out. The preliminary conducted measurements were performed using the spectrum analyzer to observe the emission characteristics of the EUT. The EUT configuration, cable configuration and mode of operation were determined for producing the maximum level of emissions. These configurations were used for final AC power line conducted emissions measurements. The EUT is placed on a non-metallic table 0.8m above the horizontal metal reference ground plane. The EUT is connected to LISN and LISN is connected to the reference ground. All other supplemental devices are connected with EUT through other LISN. The distance between EUT and LISN is 80cm. A radio link is established between EUT and the tester. The output power of the EUT is controlled by the tester and driven to maximum value. An initial pre-scan was performed on the live L line and neutral line with peak detector (9kHz RBW ). Both average detector and quasi-peak detector are performed at the frequencies with maximized peak emission. Conducted emissions were measured over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

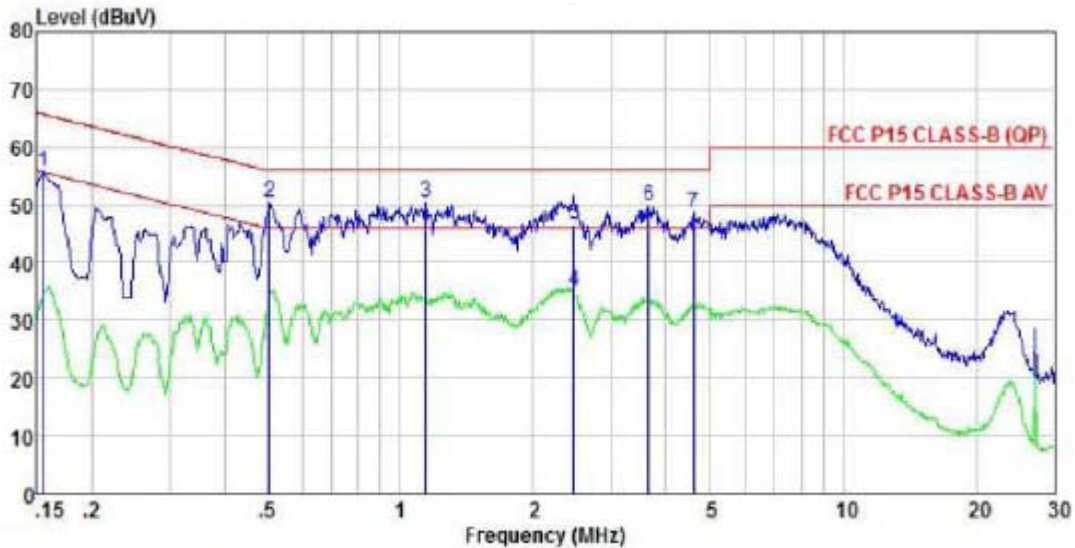
### 12.4 RESULTS & PERFORMANCE

Only show the worst test data when EUT was operated on different mode.

EUT work mode: BT GFSK(CH0/39/78); BT  $\Pi/4$ -DQPSK(CH0/39/78);  
 BT 8-DPSK(CH0/39/78)

GFSK traffic mode Ch0

Line

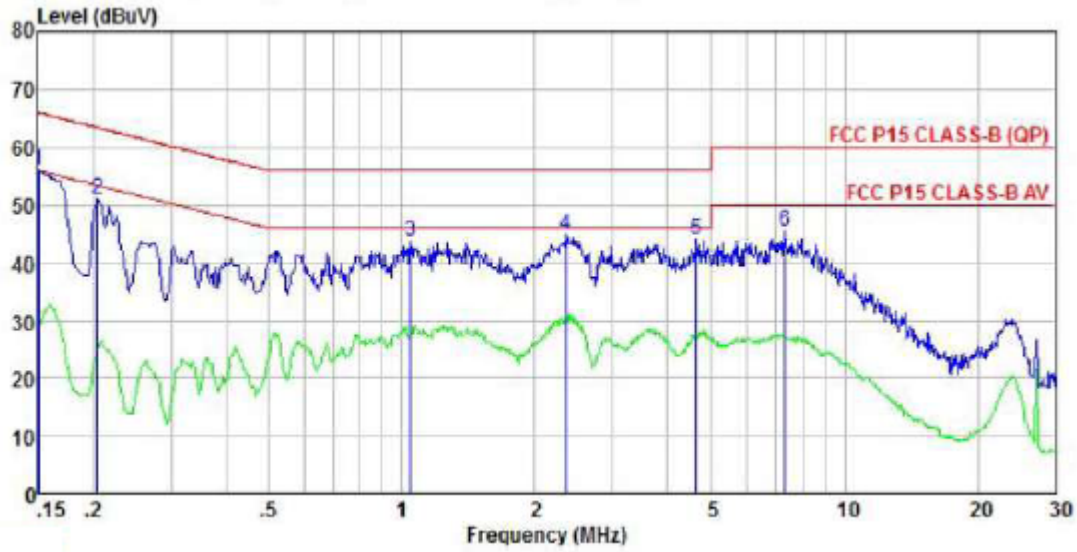


Site : chamber  
 Condition : FCC P15 CLASS-B (QP) ENV216(L)-20120730 LINE  
 EUT :  
 Model Name :  
 Temp/Humi : 23 °C /52 %  
 Power Rating: AC 120V/60Hz  
 Mode : BT GFSK CH0  
 Memo :

		Read	LISM	Cable	Preamp	Limit	Over	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB
1	0.15	45.29	10.38	0.09	0.00	55.76	65.74	-9.98 Peak
2	pp	0.50	39.93	10.56	0.10	0.00	50.59	56.00 -5.41 Peak
3	1.14	39.68	10.52	0.14	0.00	50.34	56.00 -5.66 Peak	
4	av	2.47	24.48	10.52	0.15	0.00	35.15	46.00 -10.85 Average
5	qp	2.47	35.92	10.52	0.15	0.00	46.59	56.00 -9.41 QP
6	3.66	39.24	10.52	0.14	0.00	49.90	56.00 -6.10 Peak	
7	4.62	37.94	10.52	0.14	0.00	48.60	56.00 -7.40 Peak	

**GFSK traffic mode Ch0**

**Neutral**



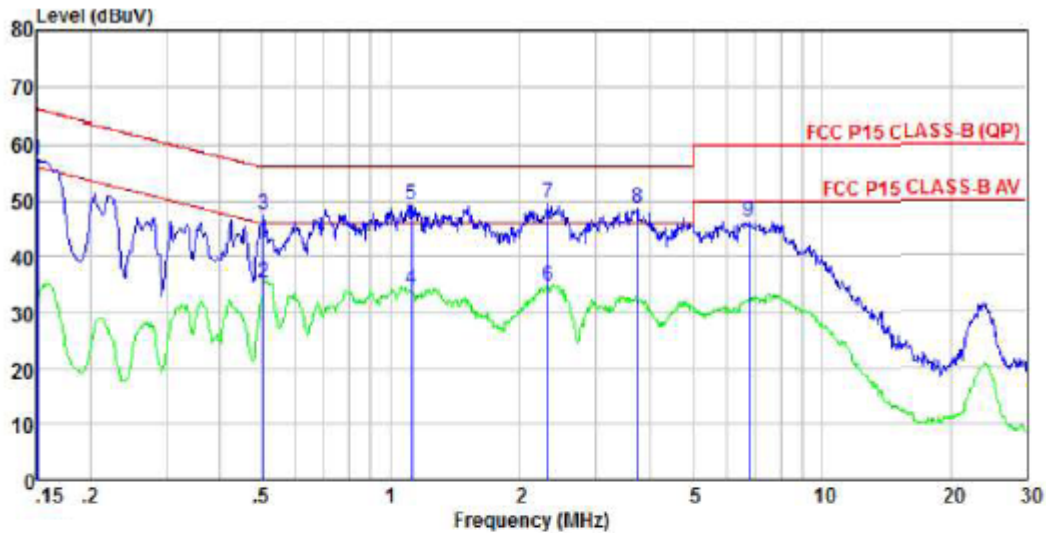
Site : chamber  
 Condition : FCC P15 CLASS-B (QP) ENV216(N)-20120730 NEUTRAL  
 EUT :  
 Model Name :  
 Temp/Humi : 23 °C /52 %  
 Power Rating: AC 120V/60Hz  
 Mode : BT GFSK CH0  
 Memo :

	Read Freq	Level	LISN Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB	
1	pp	0.15	45.59	10.29	0.09	0.00	55.97	66.00	-10.03 Peak
2		0.20	40.31	10.43	0.22	0.00	50.96	63.45	-12.49 Peak
3		1.04	33.16	10.31	0.14	0.00	43.61	56.00	-12.39 Peak
4		2.36	34.29	10.32	0.15	0.00	44.76	56.00	-11.24 Peak
5		4.65	33.48	10.32	0.14	0.00	43.94	56.00	-12.06 Peak
6		7.29	34.95	10.34	0.31	0.00	45.60	60.00	-14.40 Peak



Π/4-DQPSK; traffic mode; Ch39

Line

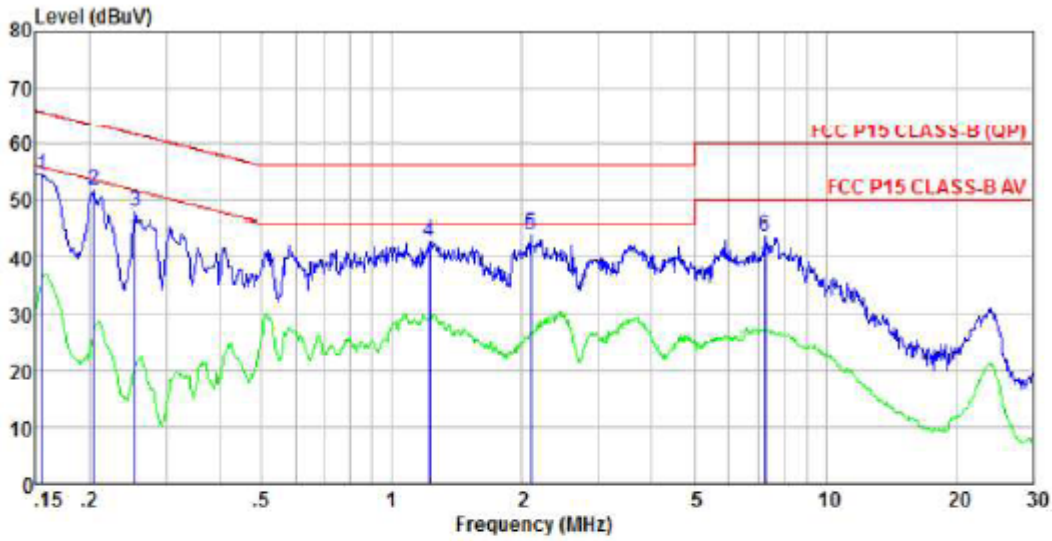


Site : chamber  
 Condition : FCC P15 CLASS-B (QP) ENV216(L)-20120730 LINE  
 EUT :  
 Model Name :  
 Temp/Humi : 23 °C /52 %  
 Power Rating: AC 120V/60Hz  
 Mode : Pi/4-DPSK ch39  
 Memo :

	Freq	Read Level	LISN Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB	
1	0.15	46.83	10.36	0.09	0.00	57.28	66.00	-8.72	Peak
2 av	0.50	24.62	10.56	0.10	0.00	35.28	46.00	-10.72	Average
3	0.50	36.83	10.56	0.10	0.00	47.49	56.00	-8.51	Peak
4	1.12	23.57	10.52	0.14	0.00	34.23	46.00	-11.77	Average
5	1.12	38.68	10.52	0.14	0.00	49.34	56.00	-6.66	Peak
6	2.32	24.29	10.52	0.15	0.00	34.96	46.00	-11.04	Average
7 pp	2.32	38.79	10.52	0.15	0.00	49.46	56.00	-6.54	Peak
8	3.72	38.14	10.52	0.14	0.00	48.80	56.00	-7.20	Peak
9	6.77	35.69	10.47	0.30	0.00	46.46	60.00	13.54	Peak

**Π/4-DQPSK; traffic mode; Ch39**

**Neutral**



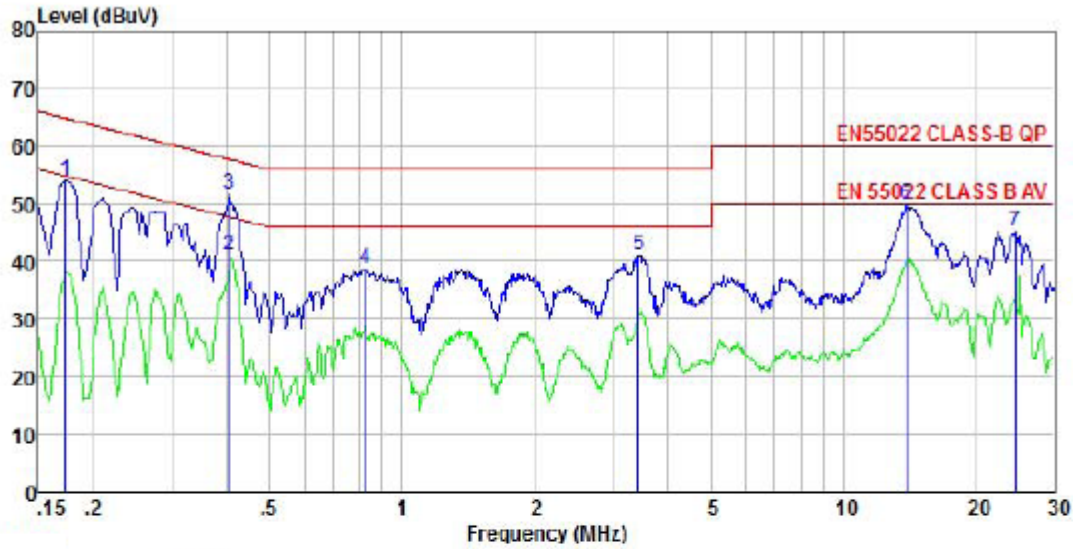
Site : chamber  
 Condition : FCC P15 CLASS-B (QP) ENV216(N)-20120730 NEUTRAL  
 EUT :  
 Model Name :  
 Temp/Humi : 23 °C /52 %  
 Power Rating: AC 120V/60Hz  
 Mode : Pi/4-DPSK ch39  
 Memo :

	Freq	Read Level	LISN Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB	
1	pp	0.15	43.97	10.29	0.09	0.00	54.35	65.74	-11.39 Peak
2		0.20	40.95	10.43	0.22	0.00	51.60	63.45	-11.85 Peak
3		0.25	37.19	10.43	0.20	0.00	47.82	61.60	-13.78 Peak
4		1.22	32.44	10.31	0.14	0.00	42.89	56.00	-13.11 Peak
5		2.10	33.65	10.31	0.15	0.00	44.11	56.00	-11.89 Peak
6		7.21	32.95	10.34	0.31	0.00	43.60	60.00	-16.40 Peak



**8-DPSK traffic mode Ch39**

**Line**

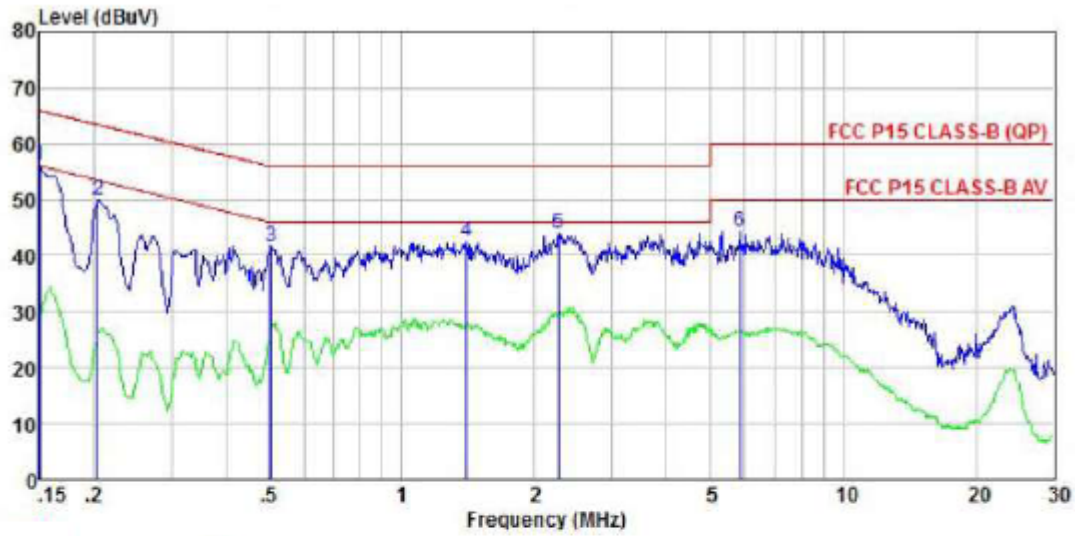


Site : chamber  
 Condition : EN55022 CLASS-B QP ENV216(L)-20120730 LINE  
 EUT :  
 Model Name :  
 Temp/Humi : 22°C /53 %  
 Power Rating: AC 230V/50Hz  
 Mode : BT 8DPSK CH39  
 Memo :

	Read Freq	Level	LISN Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB	
1	0.17	43.49	10.52	0.09	0.00	54.10	64.86	-10.76	Peak
2	0.41	30.29	10.54	0.14	0.00	40.97	47.73	-6.76	Average
3	0.41	40.94	10.54	0.14	0.00	51.62	57.73	-6.11	QP
4	0.83	28.07	10.45	0.13	0.00	38.65	56.00	-17.35	Peak
5	3.44	30.36	10.52	0.15	0.00	41.03	56.00	-14.97	Peak
6	13.91	39.12	10.50	0.20	0.00	49.82	60.00	-10.18	Peak
7	24.53	34.66	10.48	0.12	0.00	45.26	60.00	-14.74	Peak

**8-DPSK traffic mode Ch39**

**Neutral**



Site : chamber  
 Condition : FCC P15 CLASS-B (QP) ENV216(N)-20120730 NEUTRAL  
 EUT :  
 Model Name :  
 Temp/Humi : 23 °C /52 %  
 Power Rating: AC 120V/60Hz  
 Mode : BT 8DPSK CH39  
 Memo :

	Freq	Read Level	LISN Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB	
1 pp	0.15	45.61	10.29	0.09	0.00	55.99	66.00	-10.01	Peak
2	0.20	39.35	10.43	0.22	0.00	50.00	63.45	-13.45	Peak
3	0.50	31.22	10.42	0.10	0.00	41.74	56.00	-14.26	Peak
4	1.40	32.00	10.31	0.14	0.00	42.45	56.00	-13.55	Peak
5	2.27	33.58	10.32	0.15	0.00	44.05	56.00	-11.95	Peak
6	5.87	33.87	10.33	0.22	0.00	44.42	60.00	-15.58	Peak

## **APPENDIX 1 PHOTOGRAPHS OF TEST SETUP**

Please refer to the file named “i80 WXYZ RF Setup Photos”.

## **APPENDIX 2 PHOTOGRAPHS OF EUT**

Please refer to the files named “i80 WXYZ \_EUT External Photos” and “i80 WXYZ \_EUT Internal Photos”.

----End of the report----