TEST REPORT

FCC ID: 2AFNIG710

Applicant	:	BU TECHNOLOGY SAS
Address	:	Calle 16# 5-56 centro comercial el diamante 2 local 201 cali Colombia

Equipment under Test (EUT):

Name	:	Tablet PC
Model	:	G710

Standards : FCC PART 15, SUBPART C: 2014 (Section 15.247)
ANSI C63.4:2014; ANSI C63.10:2013

Report No	:	T1850961 03
Date of Test	:	July 28- August 20, 2015
Date of Issue	:	August 21, 2015

Test Result : PASS

In the configuration tested, the EUT complied with the standards specified above
Authorized Signature

(Mark Zhu)
Manager

Contents

1. General Information

1.1. Description of Device (EUT)

EUT	:	TABLET PC
Trade Name	:	
Model No.	:	G710
DIFF.	:	N/A
Trade mark	:	N/A
Power supply	:	DC 3.7V Supply by battery
Adapter	:	Manufacturer: NIL Model No.:XJX-001-13
Radio Technology	:	BT3.0+EDR
Operation frequency	:	2402-2480MHz
Modulation	:	GFSK, π/4 DQPSK,8-DPSK
Antenna Type	:	Integrated Antenna, max gain 0dBi.
Applicant	:	BU TECHNOLOGY SAS
Address	:	Calle 16# 5-56 centro comercial el diamante 2 local 201 cali Colombia
Manufacturer	:	SHENZHEN YEPO TIME ELECTRONICS CO.,LTD
Address	:	2F,Bldg B, Chuangye Park, Phoenix 3th Industrial Zone, Fuyong Street, Bao'an District, Shenzhen, China.

1.2. Accessories of device (EUT)

Description	:	Adapter
Manufacturer	:	NIL
Model No.	:	XJX-001-13
Input	:	AC 100-240V, 50-60Hz
Output	:	5.0V DC, 1300mA

1.3. Test Lab information

Shenzhen Alpha Product Testing Co., Ltd
Building B, East Area of Nanchang Second, Industrial Zone, Gushu 2nd Road,
Bao'an, Shenzhen, China

August 11, 2014 File on Federal Communication Commission
Registration Number: 203110

July 18, 2014 Certificated by IC
Registration Number: 12135A

2. Summary of test

2.1. Summary of test result

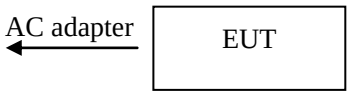
Description of Test Item	Standard	Results
Maximum Peak Output Power	FCC Part 15: 15.247(b)(1) ANSI C63.4 :2013	PASS
Bandwidth	FCC Part 15: 15.215 ANSI C63.4 :2013	PASS
Carrier Frequency Separation	FCC Part 15: 15.247(a)(1) ANSI C63.4 :2013	PASS
Number Of Hopping Channel	FCC Part 15: 15.247(a)(1)(iii) ANSI C63.4 :2013	PASS
Dwell Time	FCC Part 15: 15.247(a)(1)(iii) ANSI C63.4 :2013	PASS
Radiated Emission	FCC Part 15: 15.209 FCC Part 15: 15.247(d) ANSI C63.4 :2013	PASS
Band Edge Compliance	FCC Part 15: 15.247(d) ANSI C63.4 :2013	PASS
Power Line Conducted Emissions	FCC Part 15: 15.207 ANSI C63.4 :2013	PASS
Antenna requirement	FCC Part 15: 15.203	PASS
Note: Test with engineer mode.		

2.2. Assistant equipment used for test

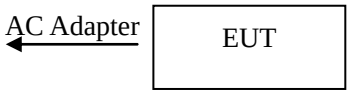
Description	:	N/A
Manufacturer	:	N/A
Model No.	:	N/A
Remark: FCC DOC approved		

2.3. Block Diagram

1, For radiated emissions test: EUT was placed on a turn table, which is 0.8 meter high above ground. EUT was be set into BT test mode by engineer mode before test.



2, For Power Line Conducted Emissions Test: EUT was connected to notebook by 1.5m USB line



2.4. Test mode

The engineer mode was used to control EUT work in Continuous TX mode, and select test channel, wireless mode.

Tested mode, channel, and data rate information		
Mode	Channel	Frequency (MHz)
GFSK	Low :CH1	2402
	Middle: CH40	2441
	High: CH79	2480

Tested mode, channel, and data rate information		
Mode	Channel	Frequency (MHz)
π /4 DQPSK	Low :CH1	2402
	Middle: CH40	2441
	High: CH79	2480

Tested mode, channel, and data rate information		
Mode	Channel	Frequency (MHz)
8- DPSK	Low :CH1	2402
	Middle: CH40	2441
	High: CH79	2480

2.5. Test Conditions

Temperature range	21-25℃
Humidity range	40-75%
Pressure range	86-106kPa

2.6. Measurement Uncertainty (95% confidence levels, k=2)

Item	MU	Remark
Uncertainty for Power point Conducted Emissions Test	2.42dB	
Uncertainty for Radiation Emission test in 3m chamber (below 30MHz)	2.13 dB	Polarize: V
	2.57dB	Polarize: H
Uncertainty for Radiation Emission test in 3m chamber (30MHz to 1GHz)	3.54dB	Polarize: V
	4.1dB	Polarize: H
Uncertainty for Radiation Emission test in 3m chamber (1GHz to 25GHz)	2.08dB	Polarize: H
	2.56dB	Polarize: V
Uncertainty for radio frequency	1×10-9	
Uncertainty for conducted RF Power	0.65dB	
Uncertainty for temperature	0.2℃	
Uncertainty for humidity	1%	
Uncertainty for DC and low frequency voltages	0.06%	

2.7. Test Equipment

Equipment	Manufacture	Model No.	Serial No.	Cal. Due day	Cal Interval
3m Semi-Anechoic	ETS-LINDGREN	N/A	SEL0017	2016.01.19	1Year
Spectrum analyzer	Agilent	E4407B	MY49510055	2016.01.19	1Year
Receiver	R&S	ESCI	101165	2016.01.19	1Year
Bilog Antenna	SCHWARZBECK	VULB 9168	9168-438	2017.01.21	2Year
Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D(1201)	2017.01.21	2Year
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170 D(1432)	2017.01.21	2Year
Active Loop Antenna	Beijing Daze	ZN30900A	SEL0097	2016.01.19	1Year
Cable	Resenberger	SUCOFLEX 104	MY6562/4	2016.01.19	1Year
Cable	Resenberger	SUCOFLEX 104	309972/4	2016.01.19	1Year
Cable	Resenberger	SUCOFLEX 104	329112/4	2016.01.19	1Year
L.I.S.N.#1	Schwarzbeck	NSLK8126	8126466	2016.01.19	1Year
L.I.S.N.#2	ROHDE&SCHWARZ	ENV216	101043	2016.01.19	1 Year
Power Meter	Anritsu	ML2487A	6K00001491	2016.01.19	1Year
Power sensor	Anritsu	ML2491A	32516	2016.01.19	1Year
Pre-amplifier	SCHWARZBECK	BBV9743	9743-019	2016.01.19	1Year
Pre-amplifier	Quietek	AP-180C	CHM-0602012	2016.01.19	1Year

3. Maximum Peak Output power

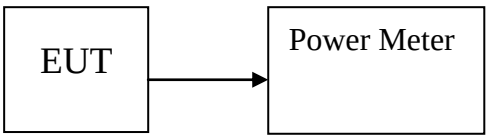
3.1. Limit

Please refer section15.247.

3.2. Test Procedure

The transmitter output is connected to the RF Power Meter. The RF Power Meter is set to the peak power detection.

3.3. Test Setup



3.4. Test Result

EUT: TABLET PC M/N: G710					
Test date: 2015-08-19		Test site: RF site		Tested by: Peter	
Mode	Freq (MHz)	PK Output Power (dBm)	PK Output Power (mW)	Limit (dBm)	Margin (dB)
GFSK	2402	2.12	1.629	21	18.880
	2441	1.95	1.567	21	19.050
	2480	1.88	1.542	21	19.120
π /4 DQPSK,	2402	1.30	1.349	21	19.700
	2441	1.29	1.346	21	19.710
	2480	1.26	1.337	21	19.740
8- DPSK	2402	1.41	1.384	21	19.590
	2441	1.36	1.368	21	19.640
	2480	1.31	1.352	21	19.690
Conclusion: PASS					

4. Bandwidth

4.1. Limit

Please refer section15.247.

4.2. Test Procedure

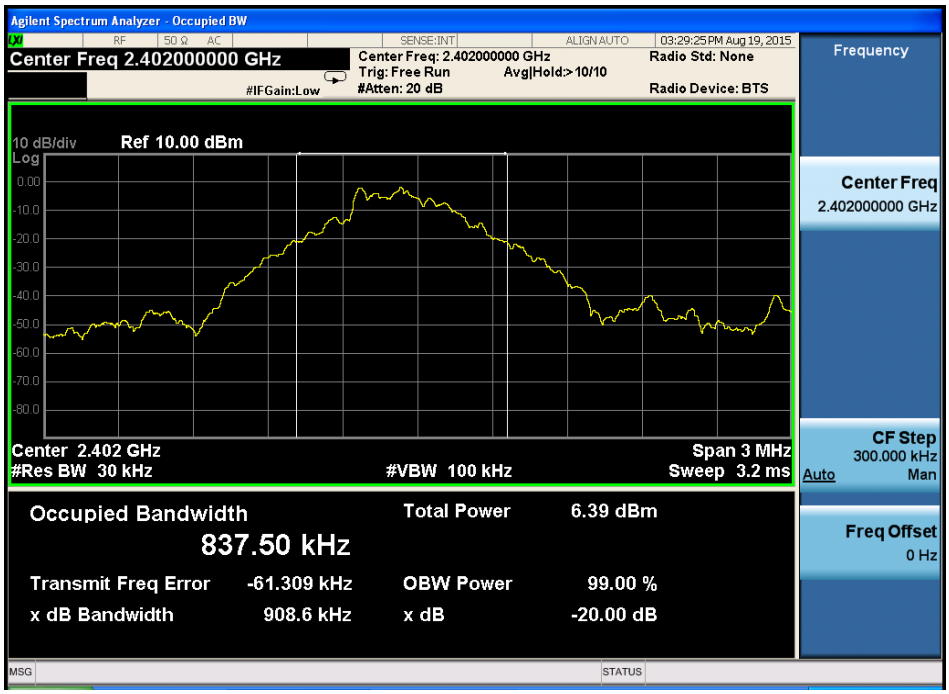
The transmitter output was coupled to a spectrum analyzer via a antenna. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 30 kHz RBW and 100 kHz VBW. The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

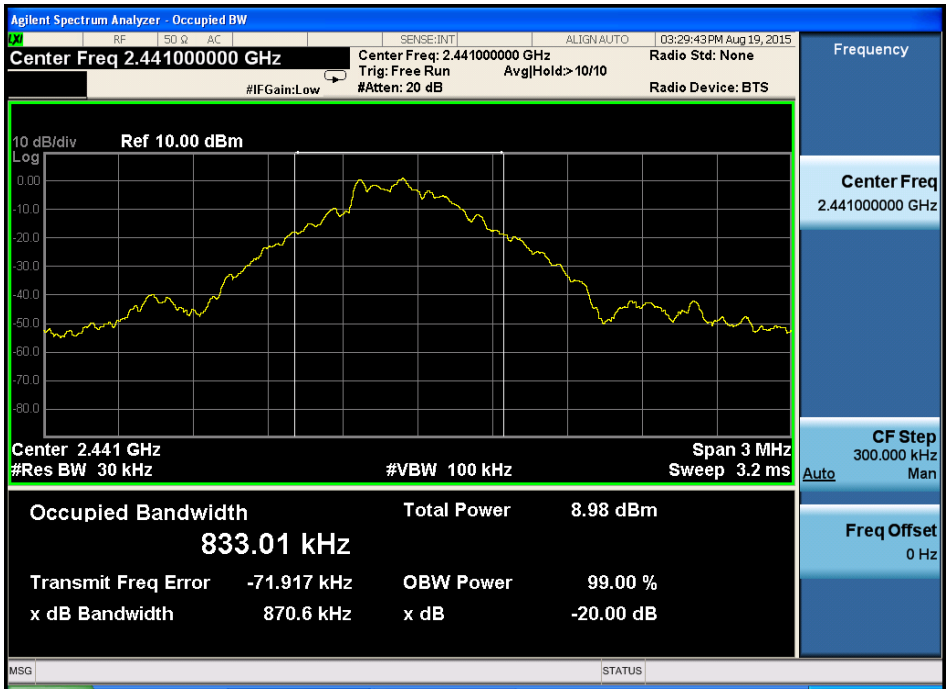
4.3. Test Result

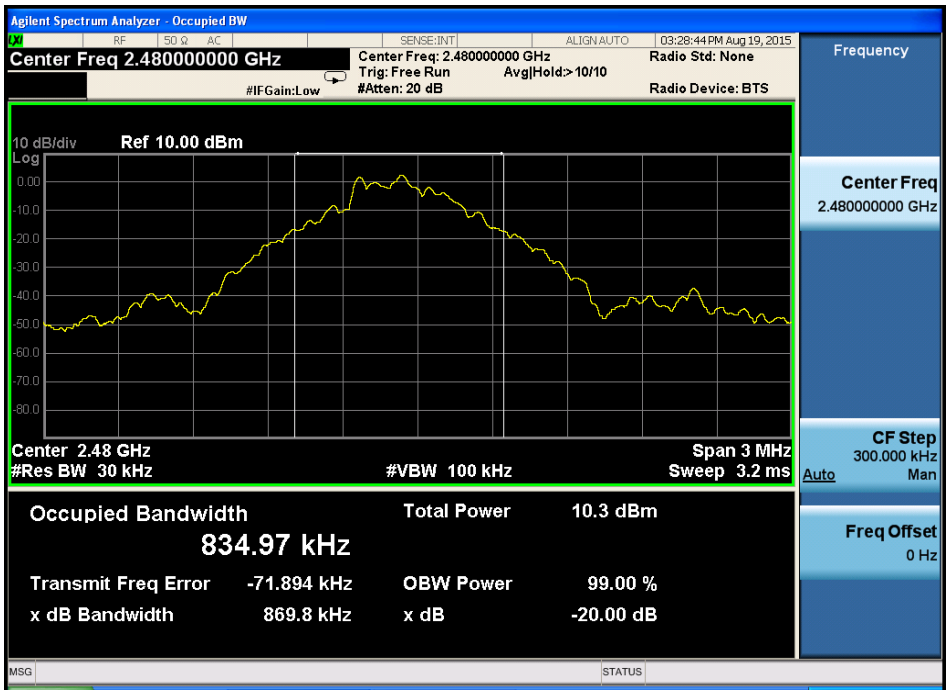
EUT: TABLET PC		M/N: G710		
Test date: 2015-08-19		Test site: RF site	Tested by: Peter	
Mode	Freq (MHz)	20dB Bandwidth (kHz)	Limit	Conclusion
GFSK	2402	908.6	-	PASS
	2441	870.6	-	PASS
	2480	869.8	-	PASS
π /4 DQPSK	2402	1220	-	PASS
	2441	1223	-	PASS
	2480	1222	-	PASS
8- DPSK	2402	1203	-	PASS
	2441	1211	-	PASS
	2480	1208	-	PASS

Original Test data

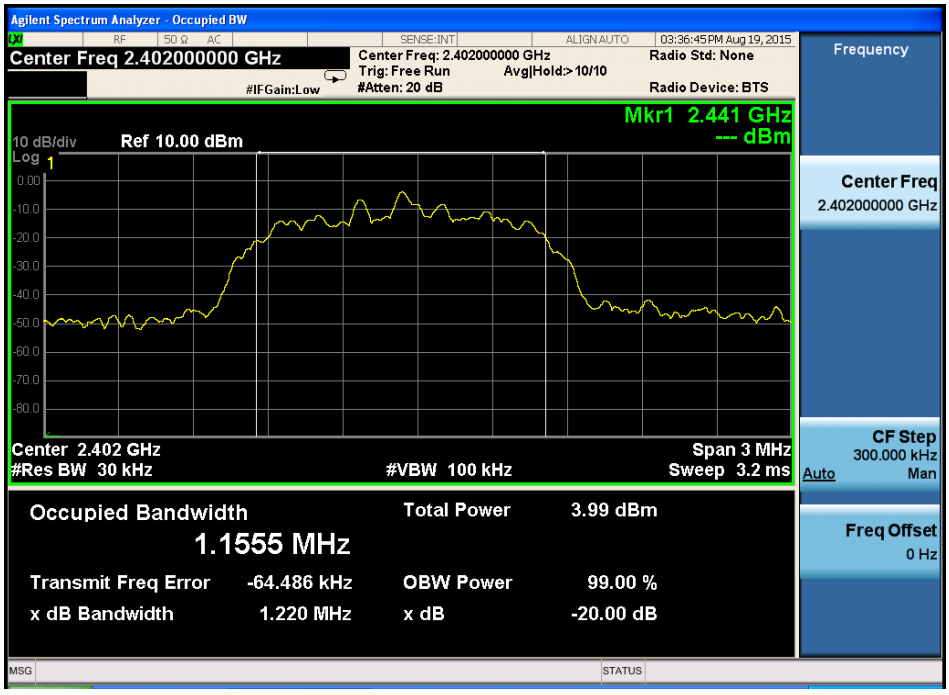
GFSK:

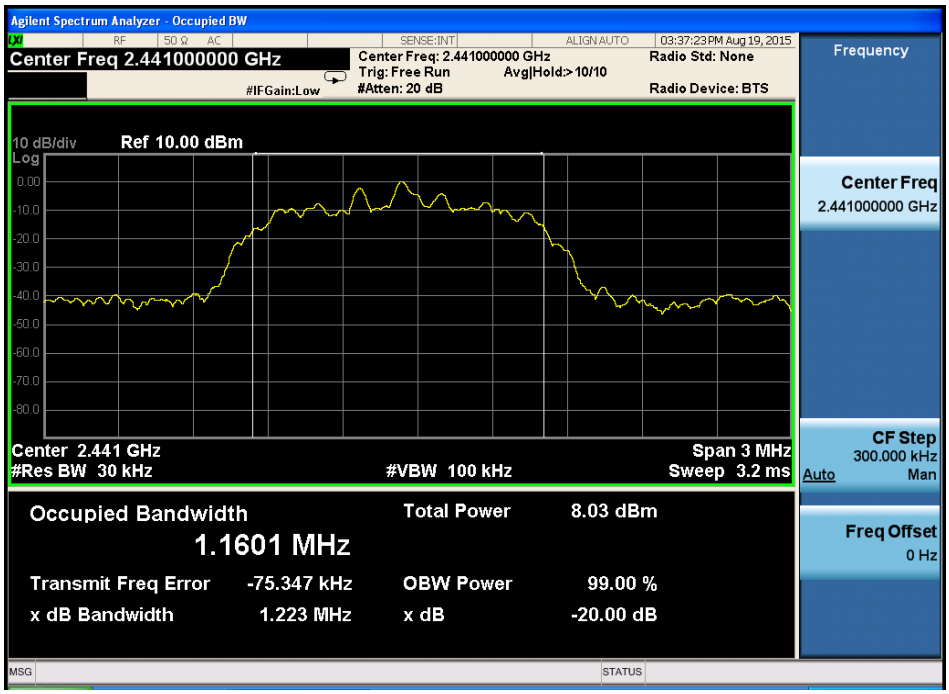


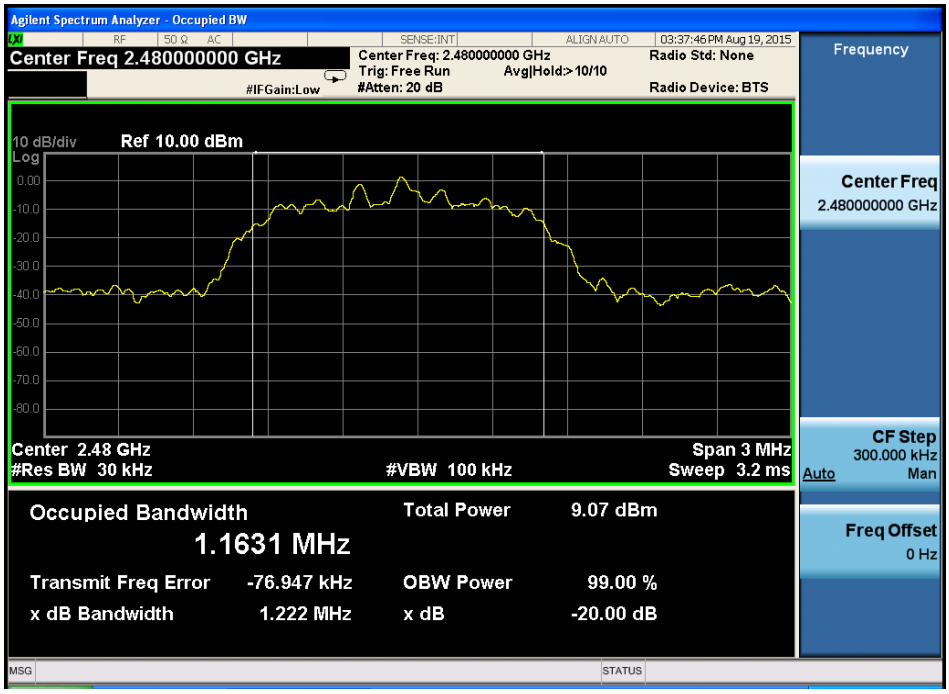



Agilent Spectrum Analyzer - Occupied BW
Center Freq 2.480000000 GHz
Center Freq: 2.480000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#IFGain:Low
#Atten: 20 dB
Radio Std: None
Radio Device: BTS
03:28:44 PM Aug 19, 2015
Frequency
10 dB/div
Log
Ref 10.00 dBm
Center 2.48 GHz
#Res BW 30 kHz
#VBW 100 kHz
Span 3 MHz
Sweep 3.2 ms
Occupied Bandwidth
834.97 kHz
Total Power 10.3 dBm
Transmit Freq Error -71.894 kHz
OBW Power 99.00 %
x dB Bandwidth 869.8 kHz
x dB -20.00 dB
Center Freq
2.480000000 GHz
CF Step
300.000 kHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

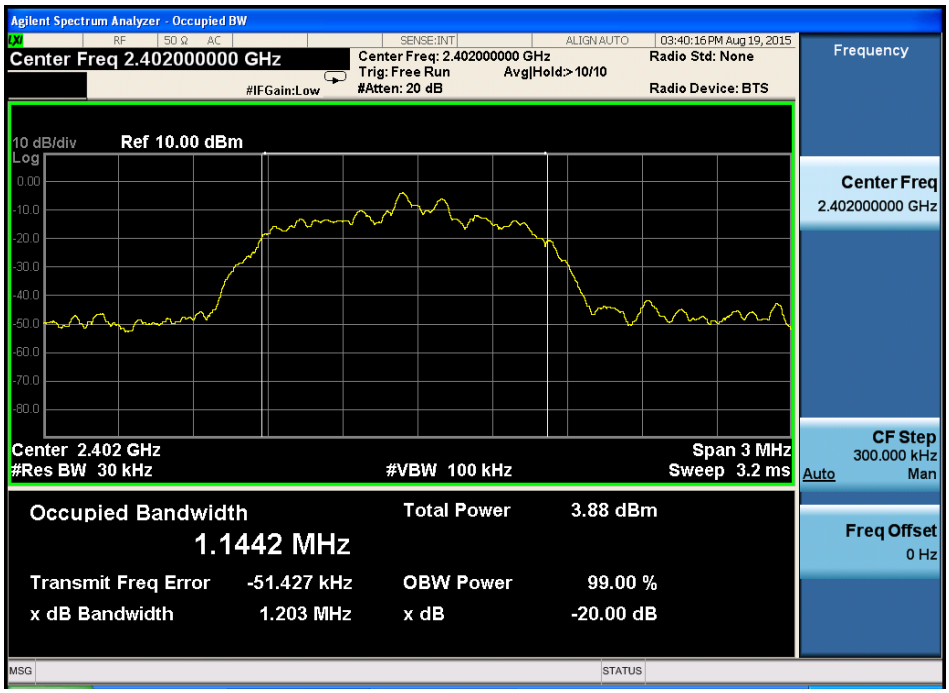
π /4 DQPSK

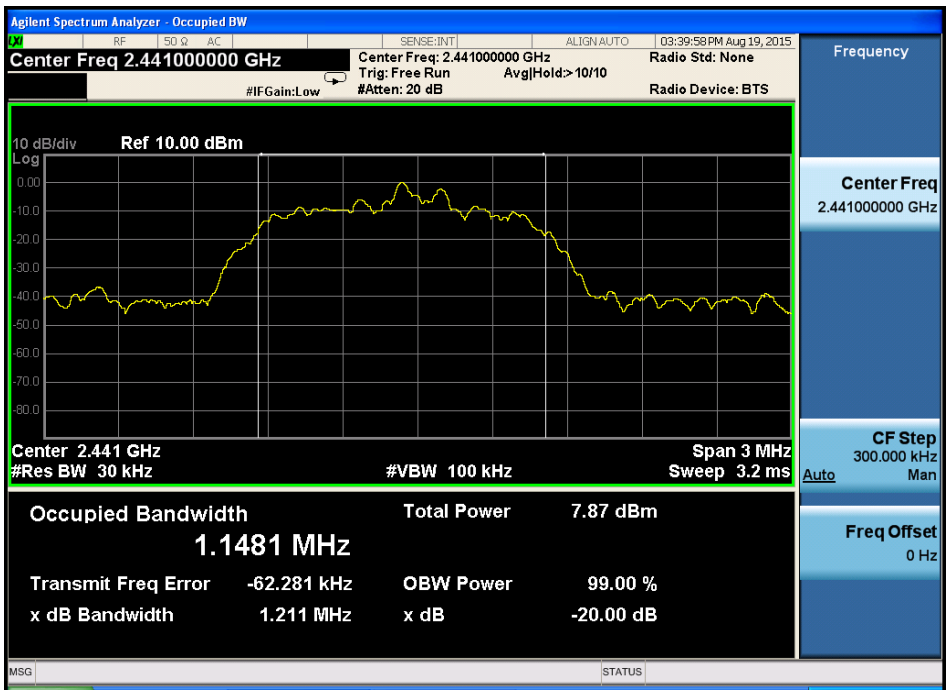

Agilent Spectrum Analyzer - Occupied BW
Center Freq 2.402000000 GHz
Center Freq: 2.402000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#IFGain:Low
#Atten: 20 dB
Radio Std: None
Radio Device: BTS
03:36:45 PM Aug 19, 2015
Frequency
Mkr1 2.441 GHz
--- dBm
10 dB/div
Log
Ref 10.00 dBm
Center 2.402 GHz
#Res BW 30 kHz
#VBW 100 kHz
Span 3 MHz
Sweep 3.2 ms
Occupied Bandwidth
1.1555 MHz
Total Power 3.99 dBm
Transmit Freq Error -64.486 kHz
OBW Power 99.00 %
x dB Bandwidth 1.220 MHz
x dB -20.00 dB
Center Freq
2.402000000 GHz
CF Step
300.000 kHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

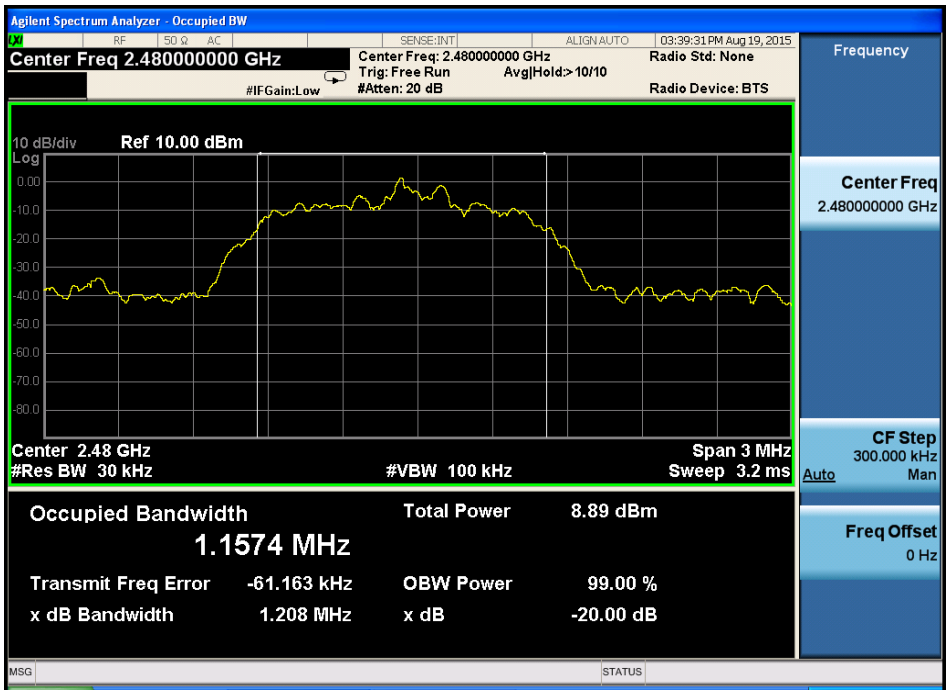

Agilent Spectrum Analyzer - Occupied BW
RF 50 Ω AC
SENSE:INT
ALIGN AUTO
03:37:23 PM Aug 19, 2015
Center Freq 2.441000000 GHz
Center Freq: 2.441000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#IFGain:Low
#Atten: 20 dB
Radio Std: None
Radio Device: BTS
Frequency
10 dB/div
Log
Ref 10.00 dBm
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
Center 2.441 GHz
#Res BW 30 kHz
#VBW 100 kHz
Span 3 MHz
Sweep 3.2 ms
Occupied Bandwidth
1.1601 MHz
Total Power 8.03 dBm
Transmit Freq Error -75.347 kHz
OBW Power 99.00 %
x dB Bandwidth 1.223 MHz
x dB -20.00 dB
Center Freq
2.441000000 GHz
CF Step
300.000 kHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS


Agilent Spectrum Analyzer - Occupied BW
RF 50 Ω AC
SENSE:INT
ALIGN AUTO
03:37:46 PM Aug 19, 2015
Center Freq 2.480000000 GHz
Center Freq: 2.480000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#IFGain:Low
#Atten: 20 dB
Radio Std: None
Radio Device: BTS
Frequency
10 dB/div
Log
Ref 10.00 dBm
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
Center 2.48 GHz
#Res BW 30 kHz
#VBW 100 kHz
Span 3 MHz
Sweep 3.2 ms
Occupied Bandwidth
1.1631 MHz
Total Power 9.07 dBm
Transmit Freq Error -76.947 kHz
OBW Power 99.00 %
x dB Bandwidth 1.222 MHz
x dB -20.00 dB
Center Freq
2.480000000 GHz
CF Step
300.000 kHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

8- DPSK


Agilent Spectrum Analyzer - Occupied BW
Center Freq 2.402000000 GHz
Center Freq: 2.402000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 20 dB
#IFGain:Low
Radio Std: None
Radio Device: BTS
03:40:16 PM Aug 19, 2015
Frequency
10 dB/div
Ref 10.00 dBm
Log
Center Freq
2.402000000 GHz
Center 2.402 GHz
#Res BW 30 kHz
#VBW 100 kHz
Span 3 MHz
Sweep 3.2 ms
CF Step
300.000 kHz
Auto
Man
Occupied Bandwidth
1.1442 MHz
Total Power
3.88 dBm
Transmit Freq Error
-51.427 kHz
OBW Power
99.00 %
x dB Bandwidth
1.203 MHz
x dB
-20.00 dB
Freq Offset
0 Hz
MSG
STATUS


Agilent Spectrum Analyzer - Occupied BW
Center Freq 2.441000000 GHz
Center Freq: 2.441000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 20 dB
#IFGain:Low
Radio Std: None
Radio Device: BTS
03:39:58 PM Aug 19, 2015
Frequency
10 dB/div
Ref 10.00 dBm
Log
Center Freq
2.441000000 GHz
Center 2.441 GHz
#Res BW 30 kHz
#VBW 100 kHz
Span 3 MHz
Sweep 3.2 ms
CF Step
300.000 kHz
Auto
Man
Occupied Bandwidth
1.1481 MHz
Total Power
7.87 dBm
Transmit Freq Error
-62.281 kHz
OBW Power
99.00 %
x dB Bandwidth
1.211 MHz
x dB
-20.00 dB
Freq Offset
0 Hz
MSG
STATUS


Agilent Spectrum Analyzer - Occupied BW
RF 50 Ω AC
SENSE:INT
ALIGN AUTO
03:39:31 PM Aug 19, 2015
Center Freq 2.480000000 GHz
Center Freq: 2.480000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#IFGain:Low
#Atten: 20 dB
Radio Std: None
Radio Device: BTS
Frequency
10 dB/div
Log
Ref 10.00 dBm
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
Center Freq
2.480000000 GHz
Center 2.48 GHz
#Res BW 30 kHz
#VBW 100 kHz
Span 3 MHz
Sweep 3.2 ms
CF Step
300.000 kHz
Auto
Man
Occupied Bandwidth
1.1574 MHz
Total Power 8.89 dBm
Freq Offset
0 Hz
Transmit Freq Error -61.163 kHz
OBW Power 99.00 %
x dB Bandwidth 1.208 MHz
x dB -20.00 dB
MSG
STATUS

5. Carrier Frequency Separation

5.1. Limit

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, 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, provided the systems operate with an output power no greater than 125 mW

5.2. Test Procedure

The transmitter output was coupled to a spectrum analyzer via a antenna. The carrier frequency was measured by spectrum analyzer with 30 kHz RBW and 100 kHz VBW.

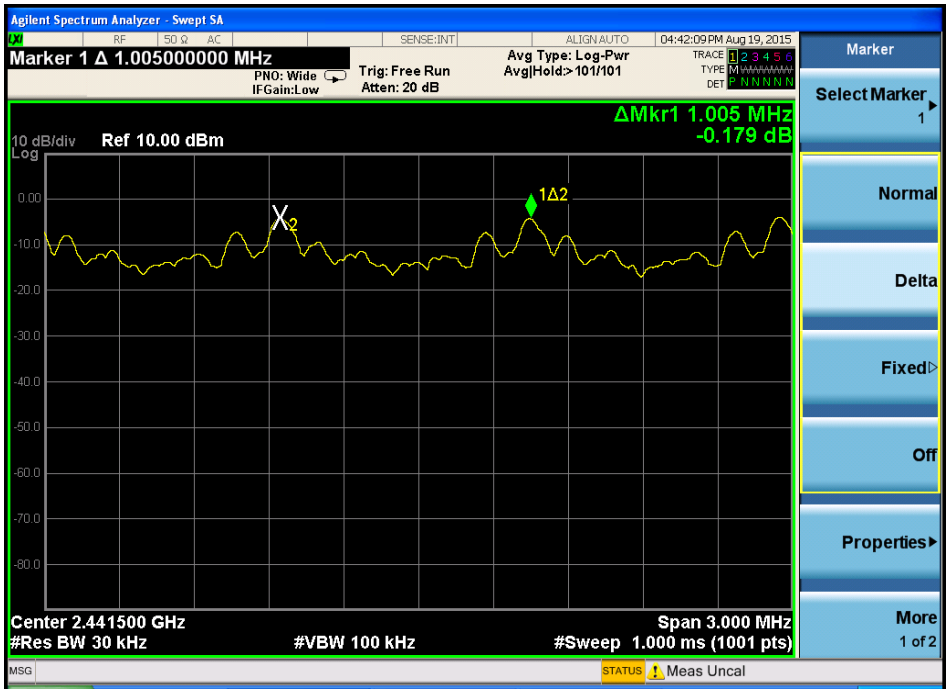
5.3. Test Result

EUT: TABLET PC M/N: G710				
Test date: 2015-08-19		Test site: RF site	Tested by: Peter	
Mode/Channel	Channel separation (kHz)	20dB Bandwidth (kHz)	Limit (kHz) 2/3 20dB bandwidth	Conclusion
GFSK	1002	870.6	580.4	PASS
π /4 DQPSK	1005	1223	815	PASS
8- DPSK	1002	1211	807	PASS

Orginal test data for channel separation

GFSK

π /4 DQPSK



8- DPSK


Agilent Spectrum Analyzer - Swept SA
Marker 1 Δ 1.002000000 MHz
PNO: Wide
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>101/101
04:43:11 PM Aug 19, 2015
ΔMkr1 1.002 MHz
0.092 dB
10 dB/div
Log
Ref 10.00 dBm
1Δ2
Center 2.441500 GHz
#Res BW 30 kHz
#VBW 100 kHz
Span 3.000 MHz
#Sweep 1.000 ms (1001 pts)
Trace/Detector
Select Trace 1
Clear Write
Trace Average
Max Hold
Min Hold
View Blank Trace On
More 1 of 3
Meas Uncal

6. Number of Hopping Channel

6.1. Limit

Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels

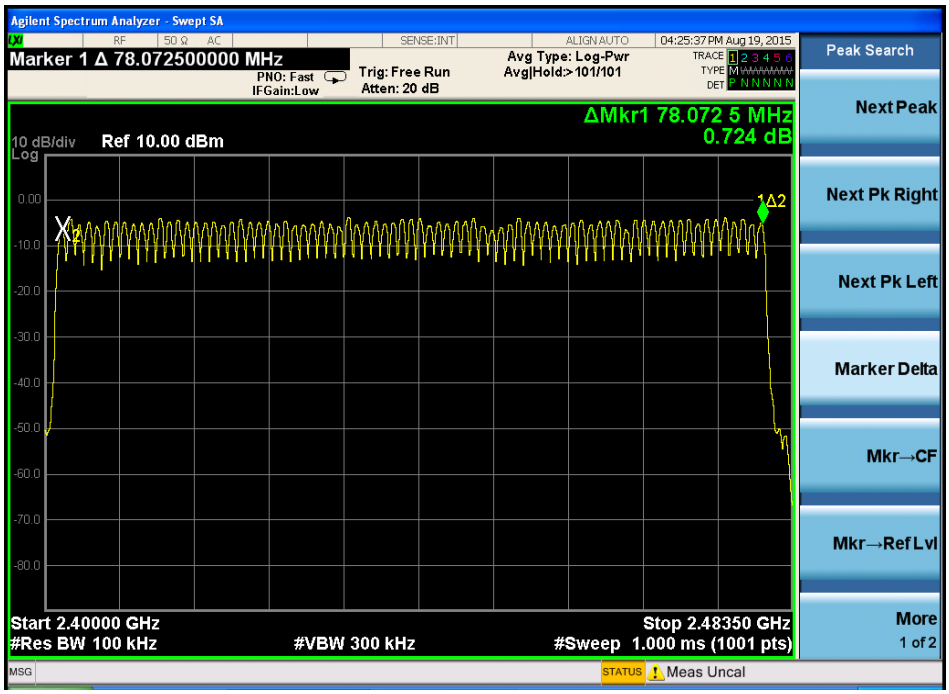
6.2. Test Procedure

The transmitter output was coupled to a spectrum analyzer via a antenna. The number of hopping channel was measured by spectrum analyzer with 300 kHz RBW and 1MHz VBW.

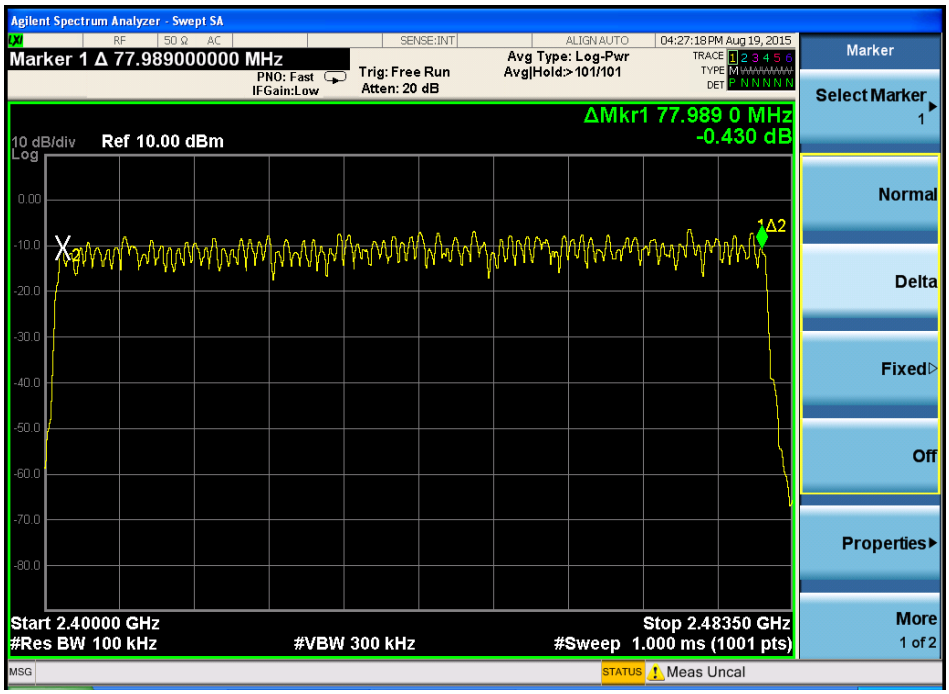
6.3. Test Result

EUT: TABLET PC M/N: G710			
Test date: 2015-08-19	Test site: RF site	Tested by: Peter	
Mode	Number of hopping channel	Limit	Conclusion
GFSK	79	>15	PASS
π /4 DQPSK	79	>15	PASS
8- DPSK	79	>15	PASS

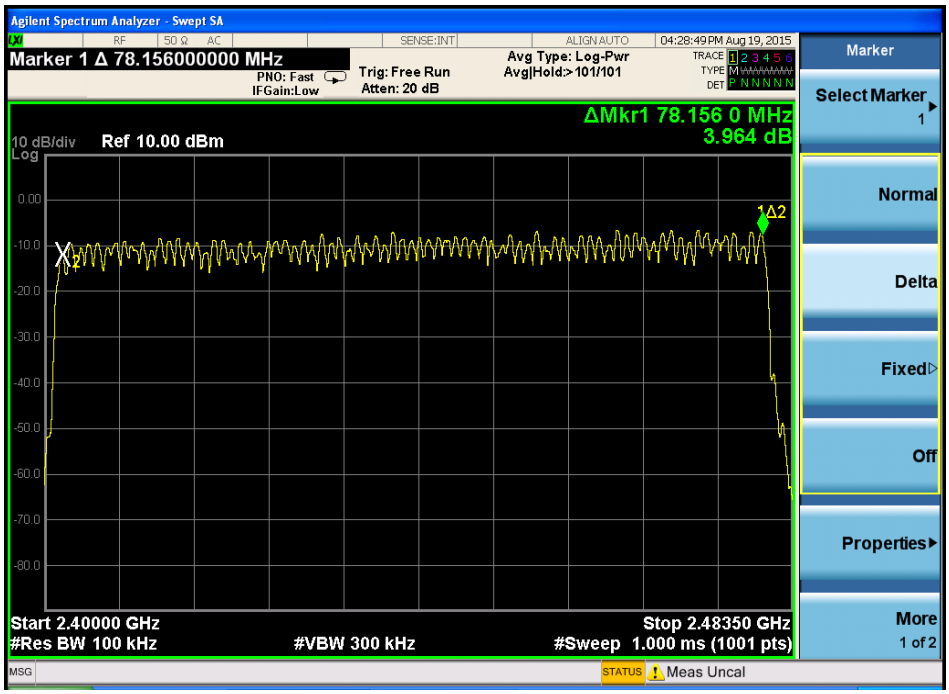
Original test data for hopping channel number
GFSK



π /4 DQPSK



8- DPSK


Agilent Spectrum Analyzer - Swept SA
Marker 1 Δ 78.156000000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>101/101
04:28:49 PM Aug 19, 2015
ΔMkr1 78.156 0 MHz
3.964 dB
10 dB/div
Log
Ref 10.00 dBm
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
Start 2.40000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 2.48350 GHz
#Sweep 1.000 ms (1001 pts)
Marker
Select Marker
1
Normal
Delta
Fixed
Off
Properties
More
1 of 2
MSG
STATUS
Meas Uncal

7. Dwell Time

7.1. Test limit

Please refer section15.247.

7.2. Test Procedure

7.2.1. Place the EUT on the table and set it in transmitting mode.

7.2.2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.

7.2.3. Set center frequency of spectrum analyzer = operating frequency.

7.2.4. Set the spectrum analyzer as RBW, VBW=1MHz, Span = 0Hz, Sweep = auto.

7.2.5. Repeat above procedures until all frequency measured was complete.

7.3. Test Results

PASS.

Detailed information please see the following page.

EUT: TABLET PC M/N: G710						
Test date: 2015-08-19		Test site: RF site		Tested by: Peter		
Mode	Data Packet	Frequency (MHz)	Pulse Duration (ms)	Dwell Time (s)	Limit (s)	Conclusion
GFSK	DH1	2441	0.384	0.246	<0.4	PASS
	DH3	2441	1.152	0.246	<0.4	PASS
	DH5	2441	2.880	0.369	<0.4	PASS
π /4 DQPSK	DH1	2441	0.384	0.246	<0.4	PASS
	DH3	2441	1.152	0.246	<0.4	PASS
	DH5	2441	2.888	0.370	<0.4	PASS
8- DPSK	DH1	2441	0.392	0.251	<0.4	PASS
	DH3	2441	1.648	0.352	<0.4	PASS
	DH5	2441	2.892	0.370	<0.4	PASS

Note: 1 A period time = 0.4 (s) * 79 = 31.6(s)

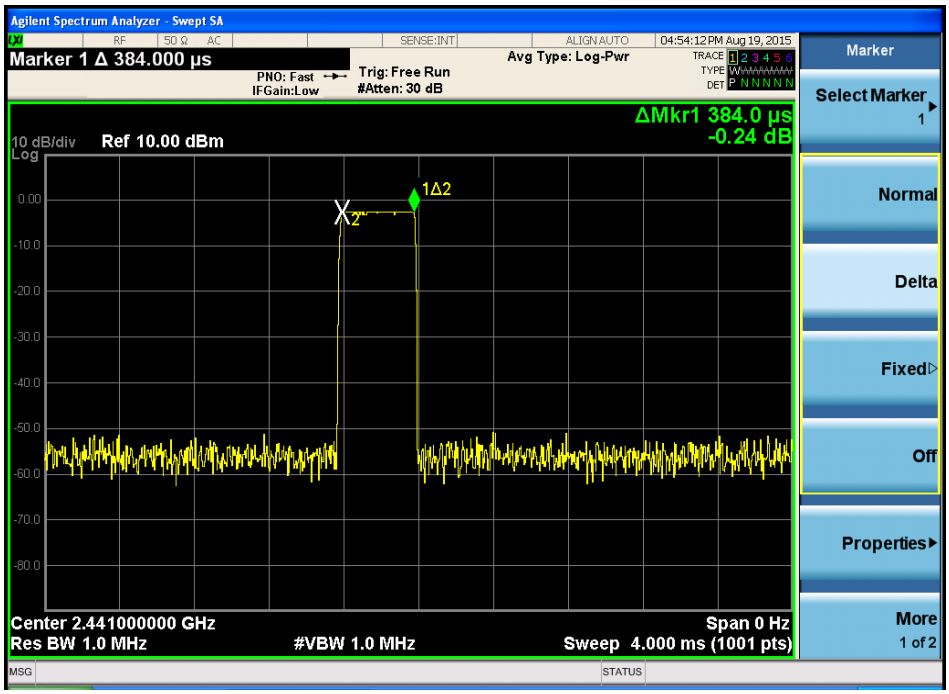
2 DH1 time slot = Pulse Duration * (1600/(1*79)) * A period time

DH3 time slot = Pulse Duration * (1600/(3*79)) * A period time

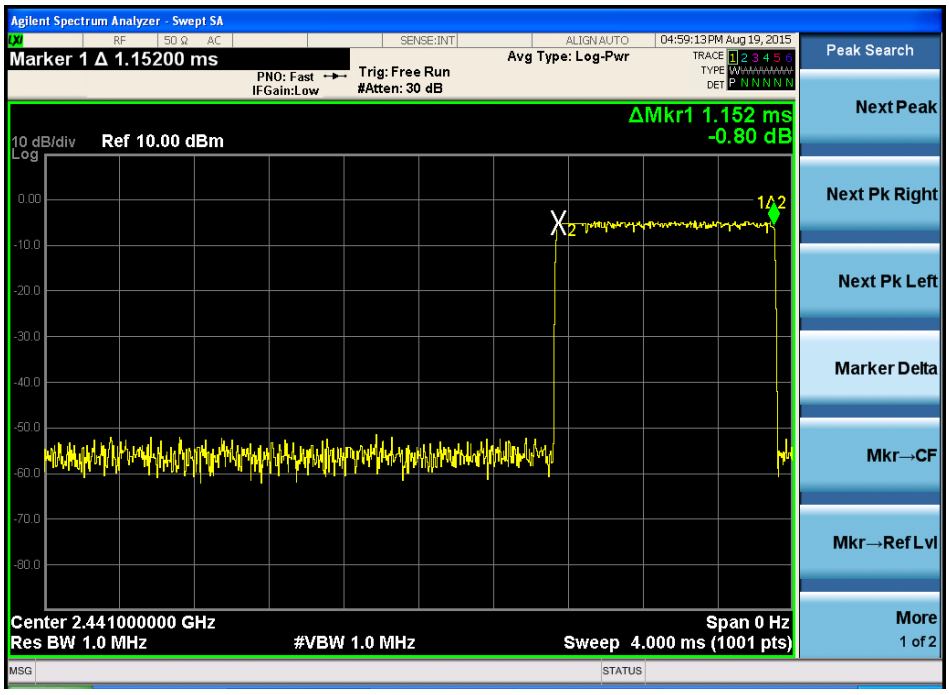
DH5 time slot = Pulse Duration * (1600/(5*79)) * A period time

GFSK

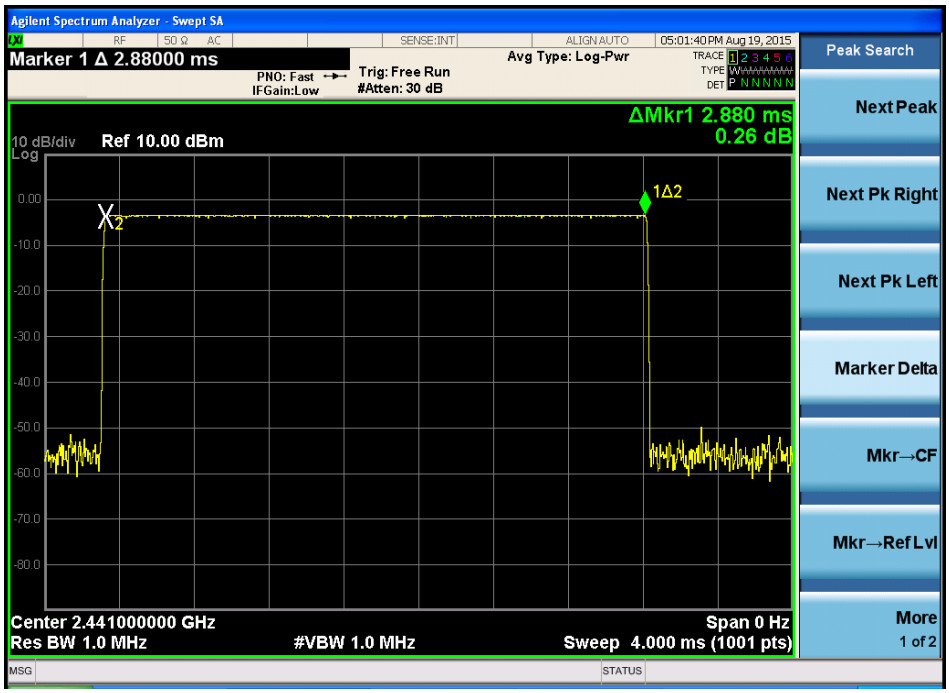
DH1:


Agilent Spectrum Analyzer - Swept SA
Marker 1 Δ 384.000 µs
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
04:54:12 PM Aug 19, 2015
ΔMkr1 384.0 µs
-0.24 dB
10 dB/div
Log
Ref 10.00 dBm
1Δ2
Center 2.441000000 GHz
Res BW 1.0 MHz
#VBW 1.0 MHz
Span 0 Hz
Sweep 4.000 ms (1001 pts)
Marker
Select Marker
Normal
Delta
Fixed
Off
Properties
More
1 of 2
MSG
STATUS

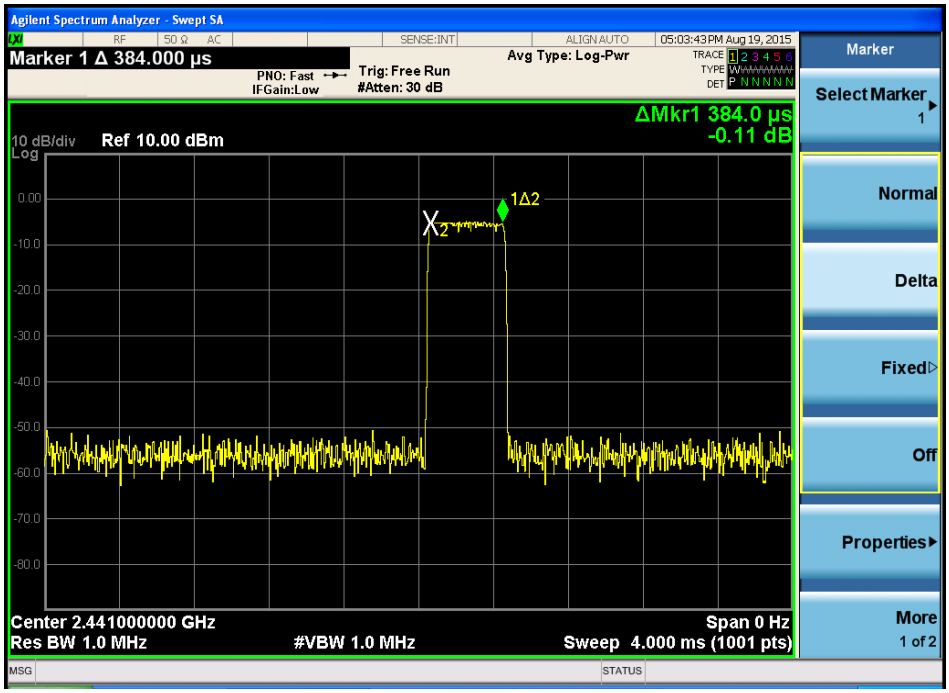
DH3:


Agilent Spectrum Analyzer - Swept SA
Marker 1 Δ 1.15200 ms
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
04:59:13 PM Aug 19, 2015
ΔMkr1 1.152 ms
-0.80 dB
10 dB/div
Log
Ref 10.00 dBm
1Δ2
Center 2.441000000 GHz
Res BW 1.0 MHz
#VBW 1.0 MHz
Span 0 Hz
Sweep 4.000 ms (1001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2
MSG
STATUS

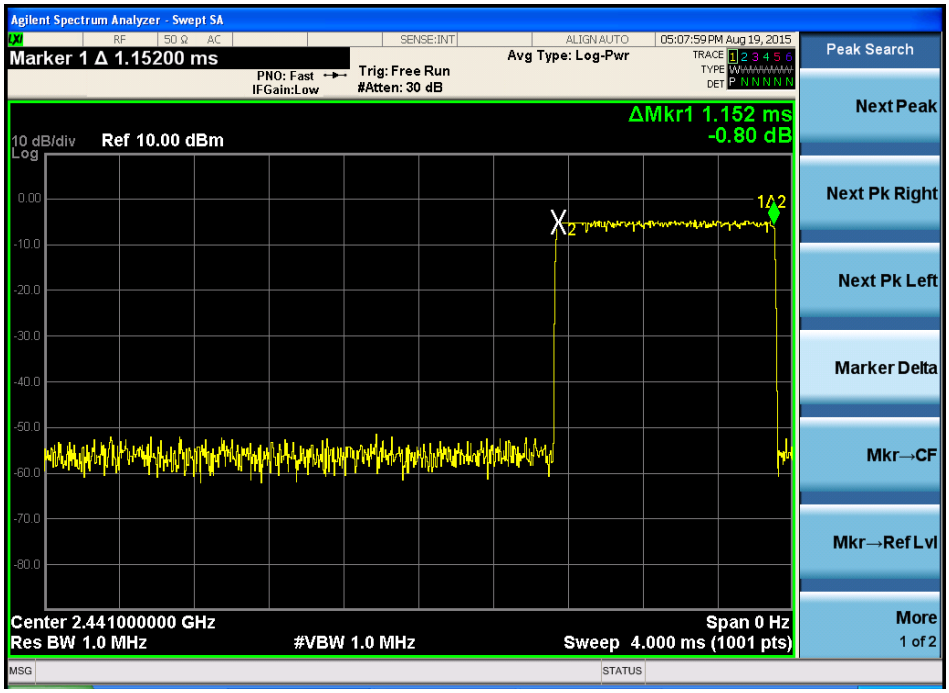
DH5



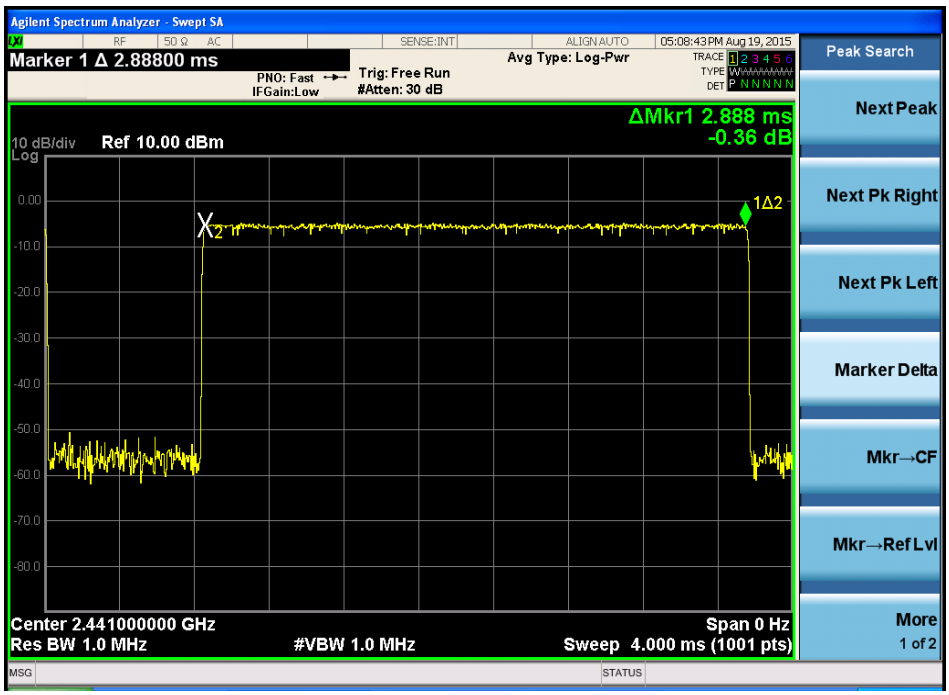
π /4 DQPSK
DH1



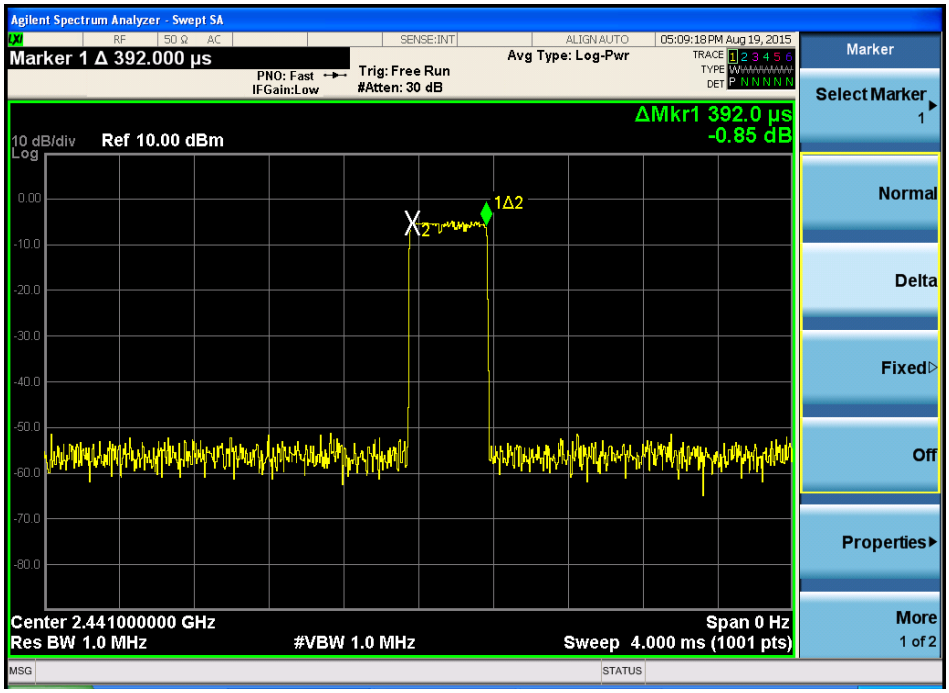
DH3

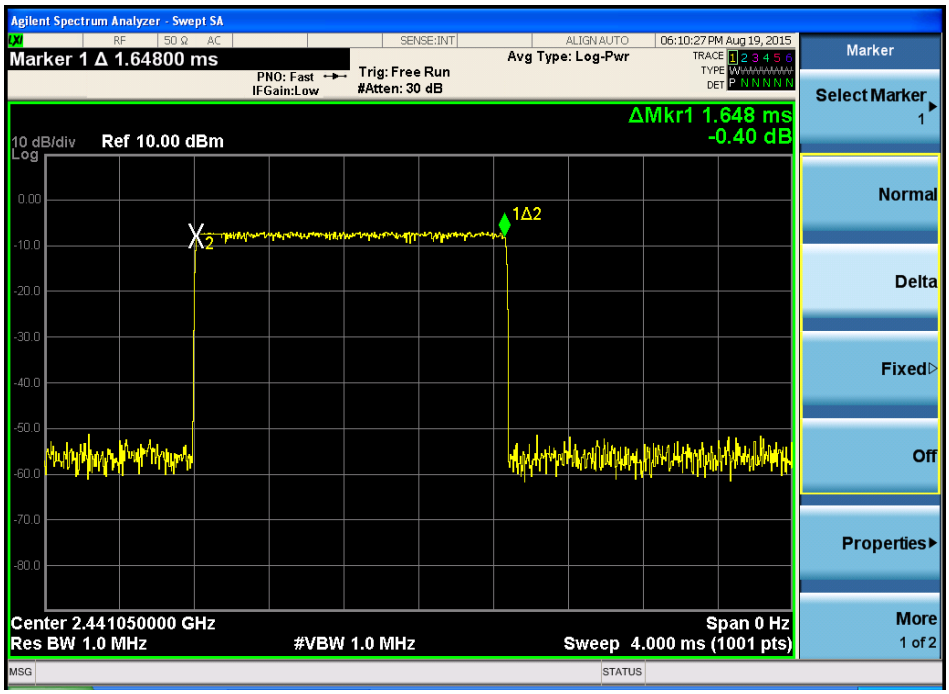

Agilent Spectrum Analyzer - Swept SA
Marker 1 Δ 1.15200 ms
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
05:07:59 PM Aug 19, 2015
ΔMkr1 1.152 ms
-0.80 dB
10 dB/div
Log
Ref 10.00 dBm
Center 2.441000000 GHz
Res BW 1.0 MHz
#VBW 1.0 MHz
Span 0 Hz
Sweep 4.000 ms (1001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

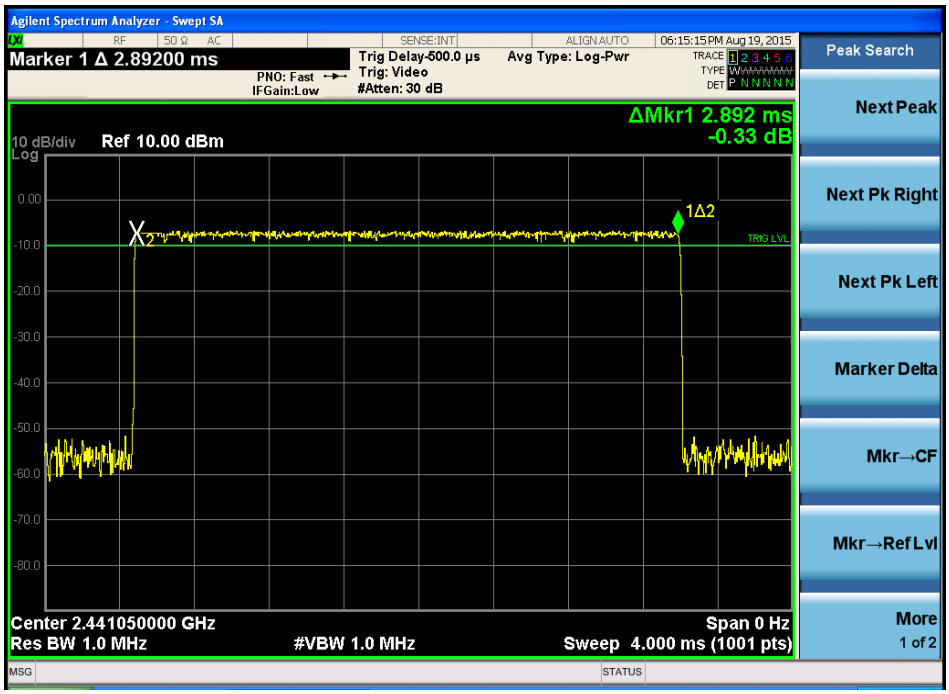
DH5


Agilent Spectrum Analyzer - Swept SA
Marker 1 Δ 2.88800 ms
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
05:08:43 PM Aug 19, 2015
ΔMkr1 2.888 ms
-0.36 dB
10 dB/div
Log
Ref 10.00 dBm
Center 2.441000000 GHz
Res BW 1.0 MHz
#VBW 1.0 MHz
Span 0 Hz
Sweep 4.000 ms (1001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

8- DPSK:


Agilent Spectrum Analyzer - Swept SA
Marker 1 Δ 392.000 µs
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
05:09:18 PM Aug 19, 2015
ΔMkr1 392.0 µs
-0.85 dB
10 dB/div
Log
Ref 10.00 dBm
1Δ2
Center 2.441000000 GHz
Res BW 1.0 MHz
#VBW 1.0 MHz
Span 0 Hz
Sweep 4.000 ms (1001 pts)
Marker
Select Marker
Normal
Delta
Fixed
Off
Properties
More
1 of 2
MSG
STATUS


Agilent Spectrum Analyzer - Swept SA
Marker 1 Δ 1.64800 ms
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
06:10:27 PM Aug 19, 2015
ΔMkr1 1.648 ms
-0.40 dB
10 dB/div
Log
Ref 10.00 dBm
1Δ2
Center 2.441050000 GHz
Res BW 1.0 MHz
#VBW 1.0 MHz
Span 0 Hz
Sweep 4.000 ms (1001 pts)
Marker
Select Marker
Normal
Delta
Fixed
Off
Properties
More
1 of 2
MSG
STATUS


Agilent Spectrum Analyzer - Swept SA
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
06:15:15 PM Aug 19, 2015
Marker 1 Δ 2.89200 ms
PNO: Fast
IFGain:Low
Trig Delay-500.0 µs
Trig: Video
#Atten: 30 dB
Avg Type: Log-Pwr
TRACE 1 2 3 4 5 6
TYPE WWWWW
DET P N N N N
ΔMkr1 2.892 ms
-0.33 dB
10 dB/div
Log
Ref 10.00 dBm
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
1Δ2
TRIG LVL
Center 2.441050000 GHz
Res BW 1.0 MHz
#VBW 1.0 MHz
Span 0 Hz
Sweep 4.000 ms (1001 pts)
MSG
STATUS
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

8. Radiated emissions

8.1. Limit

All the emissions appearing within FCC restricted frequency bands shall not exceed the limits shown in FCC, all the other emissions shall be at least 20dB below the fundamental emissions, or comply with FCC limits.

FCC Restricted frequency band

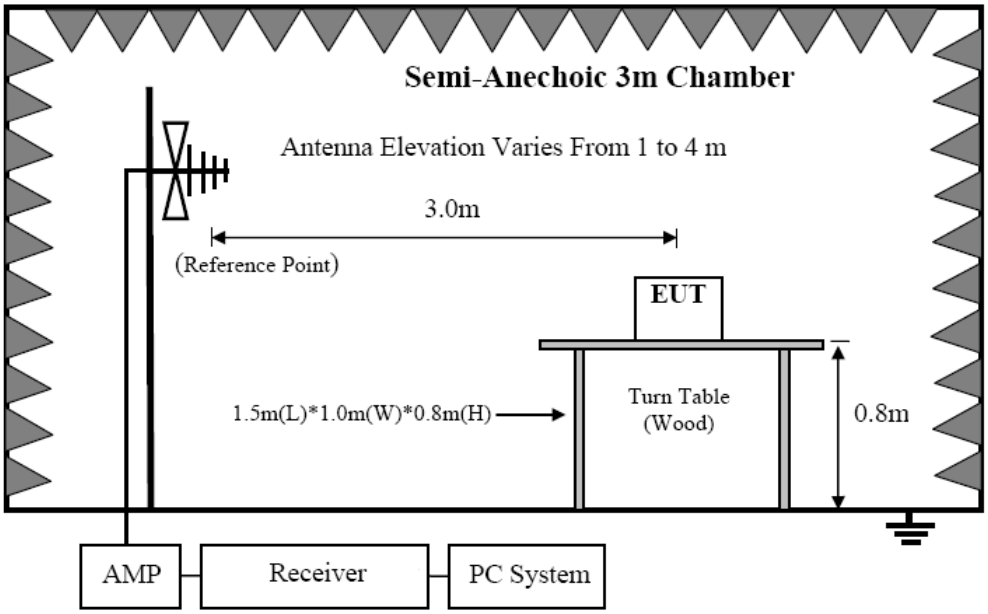
MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
[1]0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 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	([2])

FCC Limit

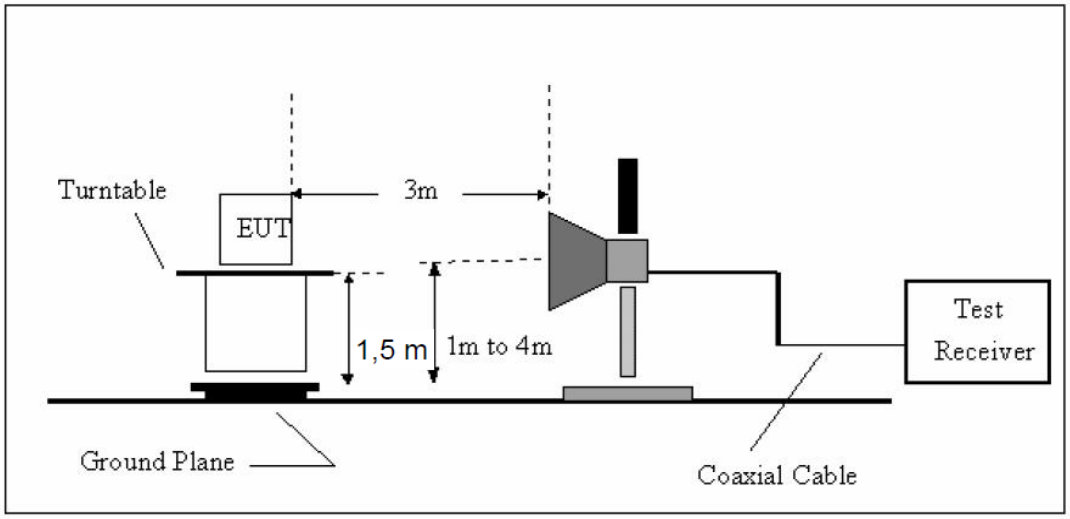
FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		μV/m	dB(μV)/m
0.009-0.490	300	2400/F(KHz)	/
0.490-1.705	30	24000/F(KHz)	/
1.705-30	30	30	29.5
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	74.0 dB(μV)/m (Peak) 54.0 dB(μV)/m (Average)	

8.2. Block Diagram of Test setup

8.2.1 In 3m Anechoic Chamber Test Setup Diagram for below 1GHz



8.2.2 In 3m Anechoic Chamber Test Setup Diagram for frequency above 1GHz



Note: For harmonic emissions test an appropriate high pass filter was inserted in the input port of AMP.

8.3. Test Procedure

(1) EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber for below 1GHz testing, and 150 cm for above 1GHz testing.
(2) Setup EUT and simulator as shown in section 1.4 and 6.1
(3) Test antenna was located 3m from the EUT on an adjustable mast. Below pre-scan procedure was first performed in order to find prominent radiated emissions.
(a) Change work frequency or channel of device if practicable.
(b) Change modulation type of device if practicable.
(c) Rotated EUT though three orthogonal axes to determine the attitude of EUT arrangement produce highest emissions
(4) Spectrum frequency from 9 kHz to 25GHz (tenth harmonic of fundamental frequency) was investigated
(5) For final emissions measurements at each frequency of interest, the EUT were rotated and the antenna height was varied between 1m and 4m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.4 2014 on Radiated Emission test.
(6) For emissions above 1GHz, both Peak and Average level were measured with Spectrum Analyzer, and the RBW is set at 1MHz, VBW is set at 3MHz for Peak measure; RBW is set at 1MHz, VBW is set at 10Hz for Average measure.

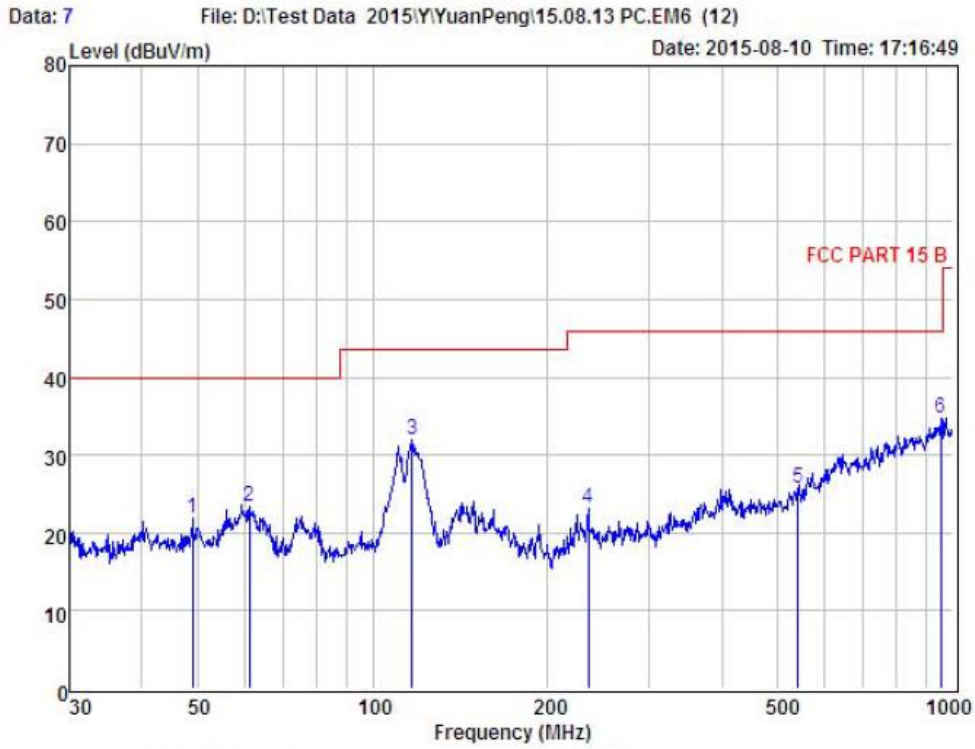
8.4. Test Result

We have scanned the 10th harmonic from 9 kHz to the EUT.
Detailed information please see the following page.

From 9 kHz to 30 MHz: Conclusion: PASS

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

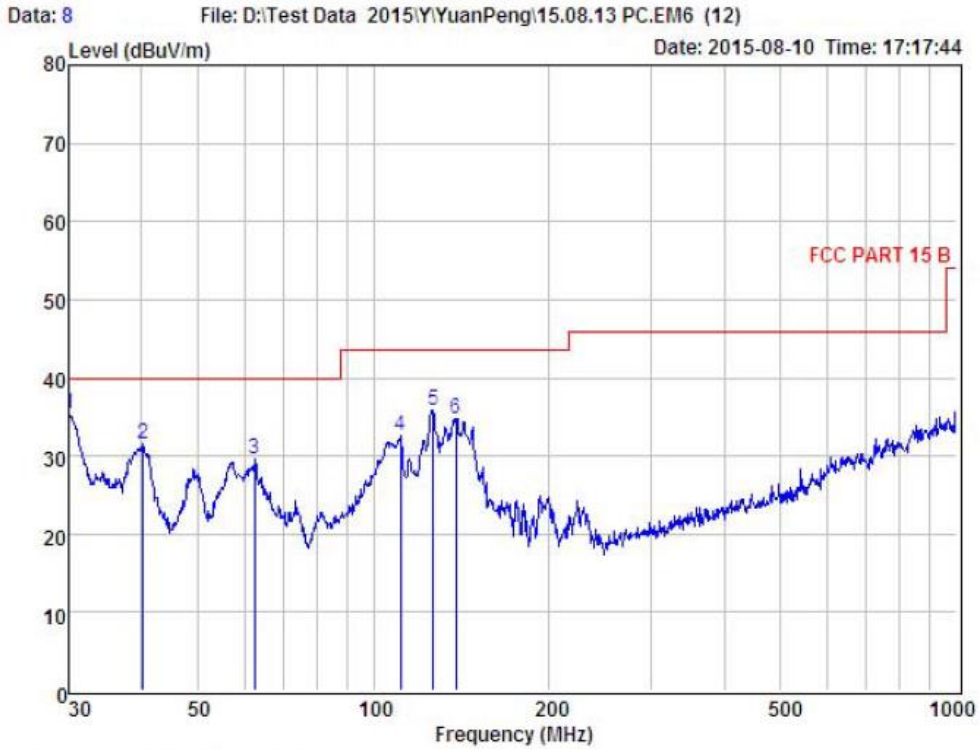
From 30MHz to 1000MHz: Conclusion: PASS



Condition : FCC PART 15 B 3m POL: HORIZONTAL
EUT :
Model No :
Test Mode : BT
Power :
Test Engineer :
Remark :
Temp : 24.2℃
Hum : 54%

Item	Freq	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Level	Limit	Margin	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dBuV	
1	48.84	38.49	13.54	30.25	0.09	21.87	40.00	-18.13	Peak
2	61.35	41.83	12.36	30.90	0.17	23.46	40.00	-16.54	Peak
3	116.95	49.48	11.87	29.74	0.37	31.98	43.50	-11.52	Peak
4	234.99	39.56	11.35	28.15	0.46	23.22	46.00	-22.78	Peak
5	541.37	34.46	17.22	26.98	1.01	25.71	46.00	-20.29	Peak
6	952.09	35.60	22.15	24.97	1.99	34.77	46.00	-11.23	Peak

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss



Condition : FCC PART 15 B 3m POL: VERTICAL
EUT :
Model No :
Test Mode : BT
Power :
Test Engineer :
Remark :
Temp : 24.2℃
Hum : 54%

Item	Freq	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Level	Limit	Margin	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dBuV	
1	30.00	53.07	13.22	30.98	0.03	35.34	40.00	-4.66	Peak
2	40.28	48.21	14.07	30.85	0.18	31.61	40.00	-8.39	Peak
3	62.43	47.81	12.36	30.72	0.19	29.64	40.00	-10.36	Peak
4	111.35	50.72	11.32	29.89	0.44	32.59	43.50	-10.91	Peak
5	126.77	52.31	12.57	29.53	0.42	35.77	43.50	-7.73	Peak
6	138.39	50.46	13.37	29.36	0.38	34.85	43.50	-8.65	Peak

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

1GHz—25GHz Radiated emission test result									
EUT: TABLET PC M/N: G710									
Power: DC 3.7V From battery									
Test date: 2015-08-19 Test site: 3m Chamber Tested by: Peter									
Test mode: GFSK Tx CH1 2402MHz									
Antenna polarity: Vertical									
No	Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4804	41.79	33.95	10.18	34.26	51.66	74	22.34	PK
2	4804	32.41	33.95	10.18	34.26	42.28	54	11.72	AV
3	7206	/							
4	9608	/							
5	12010	/							
Antenna Polarity: Horizontal									
1	4804	42.68	33.95	10.18	34.26	52.55	74	21.45	PK
2	4804	31.62	33.95	10.18	34.26	41.49	54	12.51	AV
3	7206	/							
4	9608	/							
5	12010	/							
Note: 1, Measuring frequency from 1GHz to 25GHz 2, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK 3, Result = Read level + Antenna factor + cable loss-Amp factor 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.									

1GHz—25GHz Radiated emission test result									
EUT: TABLET PC M/N: G710									
Power: DC 3.7V From battery									
Test date: 2015-08-19 Test site: 3m Chamber Tested by: Peter									
Test mode: GFSK Tx CH40 2441MHz									
Antenna polarity: Vertical									
No	Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4882	42.44	33.93	10.2	34.29	52.28	74	21.72	PK
2	4882	32.24	33.93	10.2	34.29	42.08	54	11.92	AV
3	7323	/							
4	9764	/							
5	12205	/							
Antenna Polarity: Horizontal									
1	4882	42.27	33.93	10.2	34.29	52.11	74	21.89	PK
2	4882	31.82	33.93	10.2	34.29	41.66	54	12.34	AV
3	7323	/							
4	9764	/							
5	12205	/							
Note: 1, Measuring frequency from 1GHz to 25GHz 2, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK 3, Result = Read level + Antenna factor + cable loss-Amp factor 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.									

1GHz—25GHz Radiated emission test result									
EUT: TABLET PC M/N: G710									
Power: DC 3.7V From battery									
Test date: 2015-08-19 Test site: 3m Chamber Tested by: Peter									
Test mode: GFSK Tx CH79 2480MHz									
Antenna polarity: Vertical									
No	Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960	42.72	33.98	10.22	34.25	52.67	74	21.33	PK
2	4960	31.94	33.98	10.22	34.25	41.89	54	12.11	AV
3	7440	/							
4	9920	/							
5	12400	/							
Antenna Polarity: Horizontal									
1	4960	42.67	33.98	10.22	34.25	52.62	74	21.38	PK
2	4960	32.09	33.98	10.22	34.25	42.04	54	11.96	AV
3	7440	/							
4	9920	/							
5	12400	/							
Note: 1, Measuring frequency from 1GHz to 25GHz 2, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK 3, Result = Read level + Antenna factor + cable loss-Amp factor 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.									

1GHz—25GHz Radiated emission test result									
EUT: TABLET PC M/N: G710									
Power: DC 3.7V From battery									
Test date: 2015-08-19 Test site: 3m Chamber Tested by: Peter									
Test mode: π/4 DQPSK Tx CH1 2402MHz									
Antenna polarity: Vertical									
No	Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4804	42.25	33.95	10.18	34.26	52.12	74	21.88	PK
2	4804	31.74	33.95	10.18	34.26	41.61	54	12.39	AV
3	7206	/							
4	9608	/							
5	12010	/							
Antenna Polarity: Horizontal									
1	4804	42.27	33.95	10.18	34.26	52.14	74	21.86	PK
2	4804	32.02	33.95	10.18	34.26	41.89	54	12.11	AV
3	7206	/							
4	9608	/							
5	12010	/							
Note: 1, Measuring frequency from 1GHz to 25GHz 2, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK 3, Result = Read level + Antenna factor + cable loss-Amp factor 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.									

1GHz—25GHz Radiated emission test result									
EUT: TABLET PC M/N: G710									
Power: DC 3.7V From battery									
Test date: 2015-08-19 Test site: 3m Chamber Tested by: Peter									
Test mode: π/4 DQPSK Tx CH40 2441MHz									
Antenna polarity: Vertical									
No	Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4882	42.37	33.93	10.2	34.29	52.21	74	21.79	PK
2	4882	31.95	33.93	10.2	34.29	41.79	54	12.21	AV
3	7323	/							
4	9764	/							
5	12205	/							
Antenna Polarity: Horizontal									
1	4882	42.37	33.93	10.2	34.29	52.21	74	21.79	PK
2	4882	31.74	33.93	10.2	34.29	41.58	54	12.42	AV
3	7323	/							
4	9764	/							
5	12205	/							
Note: 1, Measuring frequency from 1GHz to 25GHz 2, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK 3, Result = Read level + Antenna factor + cable loss-Amp factor 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.									

1GHz—25GHz Radiated emission test result									
EUT: TABLET PC M/N: G710									
Power: DC 3.7V From battery									
Test date: 2015-08-19 Test site: 3m Chamber Tested by: Peter									
Test mode: π/4 DQPSK Tx CH79 2480MHz									
Antenna polarity: Vertical									
No	Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960	42.42	33.98	10.22	34.25	52.37	74	21.63	PK
2	4960	32.27	33.98	10.22	34.25	42.22	54	11.78	AV
3	7440	/							
4	9920	/							
5	12400	/							
Antenna Polarity: Horizontal									
1	4960	42.8	33.98	10.22	34.25	52.75	74	21.25	PK
2	4960	32.37	33.98	10.22	34.25	42.32	54	11.68	AV
3	7440	/							
4	9920	/							
5	12400	/							

Note:
1, Measuring frequency from 1GHz to 25GHz
2, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
3, Result = Read level + Antenna factor + cable loss-Amp factor
4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

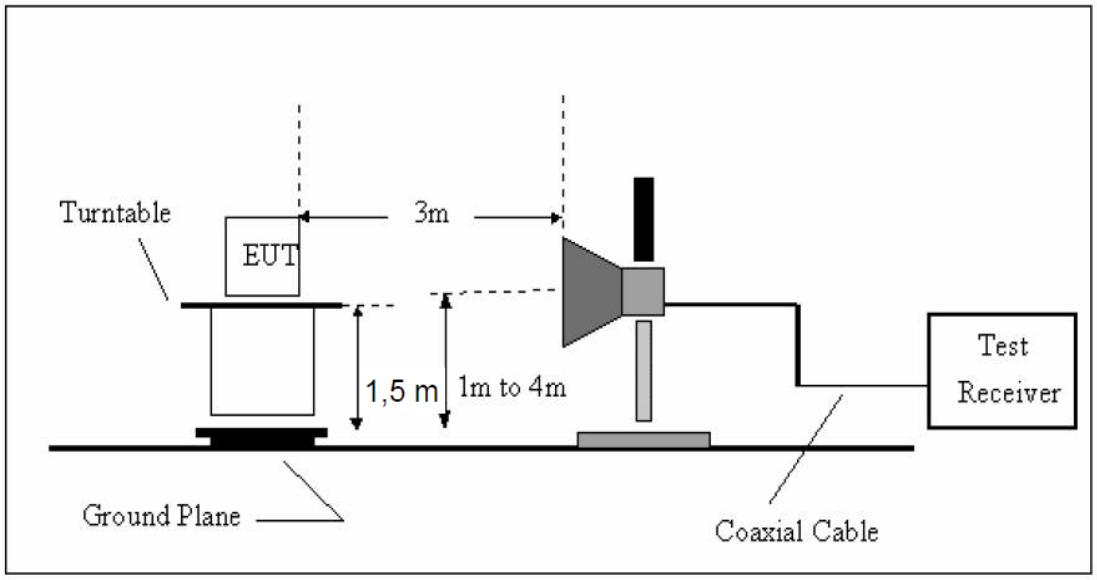
1GHz—25GHz Radiated emission test result									
EUT: Bluetooth earphone M/N: MDS-800X									
Power: DC 5.0V From notebook									
Test date: 2015-01-07 Test site: 3m Chamber Tested by: Peter									
Test mode: 8- DQPSK Tx CH1 2402MHz									
Antenna polarity: Vertical									
No	Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4804	42.41	33.95	10.18	34.26	52.28	74	21.72	PK
2	4804	31.8	33.95	10.18	34.26	41.67	54	12.33	AV
3	7206	/							
4	9608	/							
5	12010	/							
Antenna Polarity: Horizontal									
1	4804	42.09	33.95	10.18	34.26	51.96	74	22.04	PK
2	4804	31.46	33.95	10.18	34.26	41.33	54	12.67	AV
3	7206	/							
4	9608	/							
5	12010	/							
Note: 1, Measuring frequency from 1GHz to 25GHz 2, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK 3, Result = Read level + Antenna factor + cable loss-Amp factor 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.									

1GHz—25GHz Radiated emission test result									
EUT: Bluetooth earphone M/N: MDS-800X									
Power: DC 5.0V From notebook									
Test date: 2015-01-07 Test site: 3m Chamber Tested by: Peter									
Test mode: 8- DQPSK Tx CH40 2441MHz									
Antenna polarity: Vertical									
No	Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4882	42.22	33.93	10.2	34.29	52.06	74	21.94	PK
2	4882	31.89	33.93	10.2	34.29	41.73	54	12.27	AV
3	7323	/							
4	9764	/							
5	12205	/							
Antenna Polarity: Horizontal									
1	4882	42.4	33.93	10.2	34.29	52.24	74	21.76	PK
2	4882	32.01	33.93	10.2	34.29	41.85	54	12.15	AV
3	7323	/							
4	9764	/							
5	12205	/							
Note: 1, Measuring frequency from 1GHz to 25GHz 2, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK 3, Result = Read level + Antenna factor + cable loss-Amp factor 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.									

1GHz—25GHz Radiated emission test result									
EUT: Bluetooth earphone M/N: MDS-800X									
Power: DC 5.0V From notebook									
Test date: 2015-01-07 Test site: 3m Chamber Tested by: Peter									
Test mode: 8- DQPSK Tx CH79 2480MHz									
Antenna polarity: Vertical									
No	Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960	42.02	33.98	10.22	34.25	51.97	74	22.03	PK
2	4960	41.24	33.98	10.22	34.25	51.19	54	2.81	AV
3	7440	/							
4	9920	/							
5	12400	/							
Antenna Polarity: Horizontal									
1	4960	42.34	33.98	10.22	34.25	52.29	74	21.71	PK
2	4960	31.71	33.98	10.22	34.25	41.66	54	12.34	AV
3	7440	/							
4	9920	/							
5	12400	/							
Note: 1, Measuring frequency from 1GHz to 25GHz 2, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK 3, Result = Read level + Antenna factor + cable loss-Amp factor 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.									

9. Band Edge Compliance

9.1. Block Diagram of Test Setup



9.2. Limit

All the lower and upper band-edges emissions appearing within restricted frequency bands shall not exceed the limits shown in FCC, all the other emissions outside operation shall be at least 20dB below the fundamental emissions, or comply with FCC limits.

9.3. Test Procedure

All restriction band and non- restriction band have been tested, only worse case is reported.

9.4. Test Result

PASS. (See below detailed test data)

Radiated measurement:

GFSK (CH Low)

Band Edge Test result								
EUT: TABLET PC M/N: G710								
Power: DC 3.7V From battery								
Test date: 2015-06-09 Test site: 3m Chamber Tested by: Peter								
Test mode: Tx CH Low 2402MHz								
Antenna polarity: Vertical								
Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2390	41.38	27.62	3.92	34.97	37.95	74	36.05	**PK**
2390	--	27.62	3.92	34.97	--	54	--	AV
Antenna Polarity: Horizontal								
2390	42.77	27.62	3.92	34.97	39.34	74	34.66	**PK**
2390	--	27.62	3.92	34.97	--	54	--	AV

Note:
1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
3, Result = Read level + Antenna factor + cable loss-Amp factor
4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

GFSK (CH High)

Band Edge Test result								
EUT: TABLET PC M/N: G710								
Power: DC 3.7V From battery								
Test date: 2015-06-09 Test site: 3m Chamber Tested by: Peter								
Test mode: Tx CH High 2480MHz								
Antenna polarity: Vertical								
Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2483.5	42.98	27.89	4	34.97	39.9	74	34.1	**PK**
2483.5		--	--	--	--	54	--	AV
Antenna Polarity: Horizontal								
2483.5	44.15	27.89	4	34.97	41.07	74	32.93	**PK**
2483.5		--	--	--	--	54	--	AV
Note: 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK 3, Result = Read level + Antenna factor + cable loss-Amp factor 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.								

π/4 DQPSK (CH Low)

Band Edge Test result								
EUT: TABLET PC M/N: G710								
Power: DC 3.7V From battery								
Test date: 2015-06-09 Test site: 3m Chamber Tested by: Peter								
Test mode: Tx CH Low 2402MHz								
Antenna polarity: Vertical								
Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2390	41.52	27.62	3.92	34.97	38.09	74	35.91	**PK**
2390	--	27.62	3.92	34.97	--	54	--	AV
Antenna Polarity: Horizontal								
2390	42.68	27.62	3.92	34.97	39.25	74	34.75	**PK**
2390	--	27.62	3.92	34.97	--	54	--	AV
Note: 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK 3, Result = Read level + Antenna factor + cable loss-Amp factor 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.								

π /4 DQPSK (CH High)

Band Edge Test result								
EUT: TABLET PC M/N: G710								
Power: DC 3.7V From battery								
Test date: 2015-06-09 Test site: 3m Chamber Tested by: Peter								
Test mode: Tx CH High 2480MHz								
Antenna polarity: Vertical								
Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2483.5	42.33	27.89	4	34.97	39.25	74	34.75	PK
2483.5		--	--	--	--	54	--	AV
Antenna Polarity: Horizontal								
2483.5	44.52	27.89	4	34.97	41.44	74	32.56	PK
2483.5		--	--	--	--	54	--	AV

8- DPSK (CH Low)

Band Edge Test result								
EUT: TABLET PC M/N: G710								
Power: DC 3.7V From battery								
Test date: 2015-06-09 Test site: 3m Chamber Tested by: Peter								
Test mode: Tx CH Low 2402MHz								
Antenna polarity: Vertical								
Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2390	42.43	27.62	3.92	34.97	39	74	35	**PK**
2390	--	27.62	3.92	34.97	--	54	--	AV
Antenna Polarity: Horizontal								
2390	43.27	27.62	3.92	34.97	39.84	74	34.16	**PK**
2390	--	27.62	3.92	34.97	--	54	--	AV

Note:
1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
3, Result = Read level + Antenna factor + cable loss-Amp factor
4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

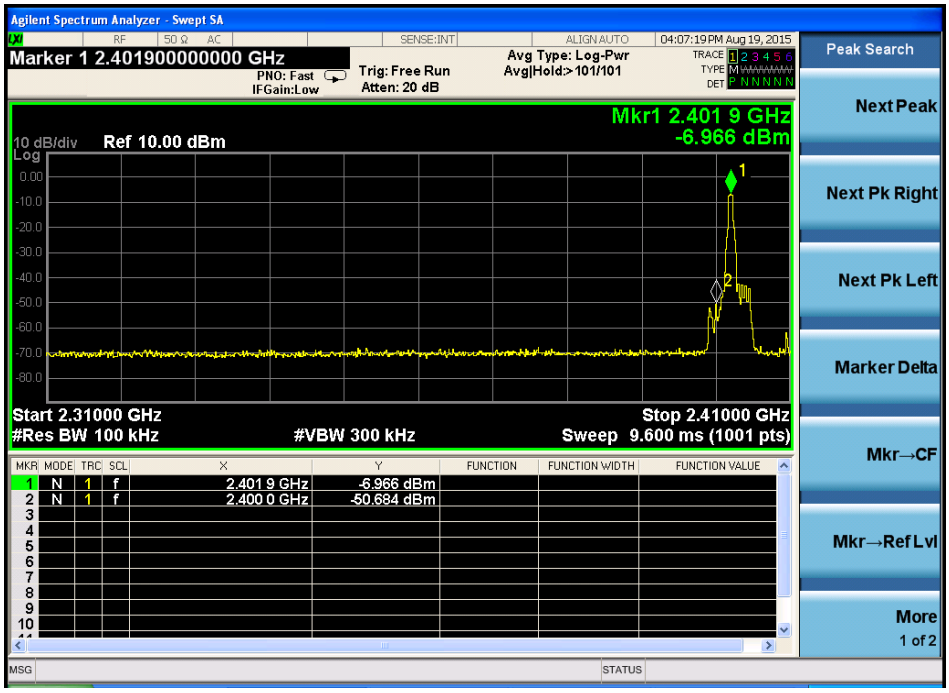
8- DPSK (CH High)

Band Edge Test result								
EUT: TABLET PC M/N: G710								
Power: DC 3.7V From battery								
Test date: 2015-06-09 Test site: 3m Chamber Tested by: Peter								
Test mode: Tx CH High 2480MHz								
Antenna polarity: Vertical								
Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2483.5	41.28	27.89	4	34.97	38.2	74	35.8	**PK**
2483.5		--	--	--	--	54	--	AV
Antenna Polarity: Horizontal								
2483.5	43.32	27.89	4	34.97	40.24	74	33.76	**PK**
2483.5		--	--	--	--	54	--	AV
Note: 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK 3, Result = Read level + Antenna factor + cable loss-Amp factor 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.								

Conducted measurement:

GFSK

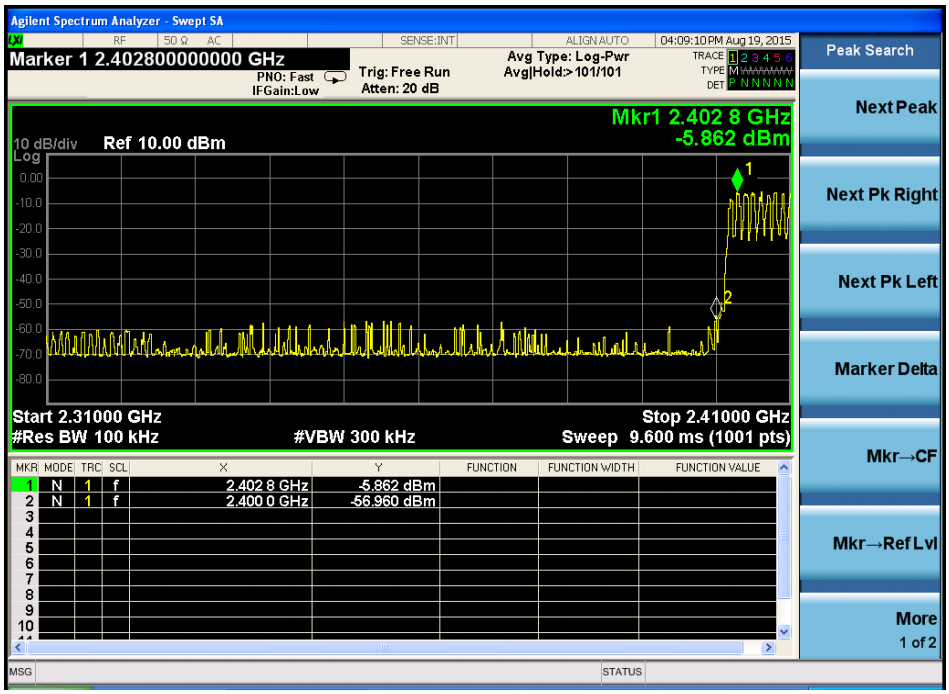
CH Low:



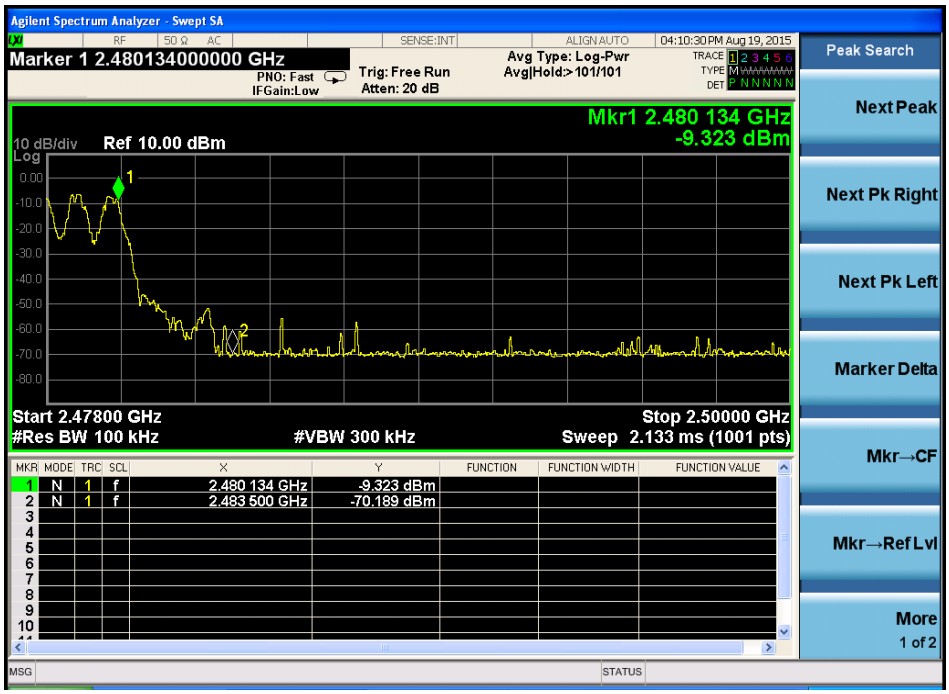
CH High:

Hopping

Lower band edge:

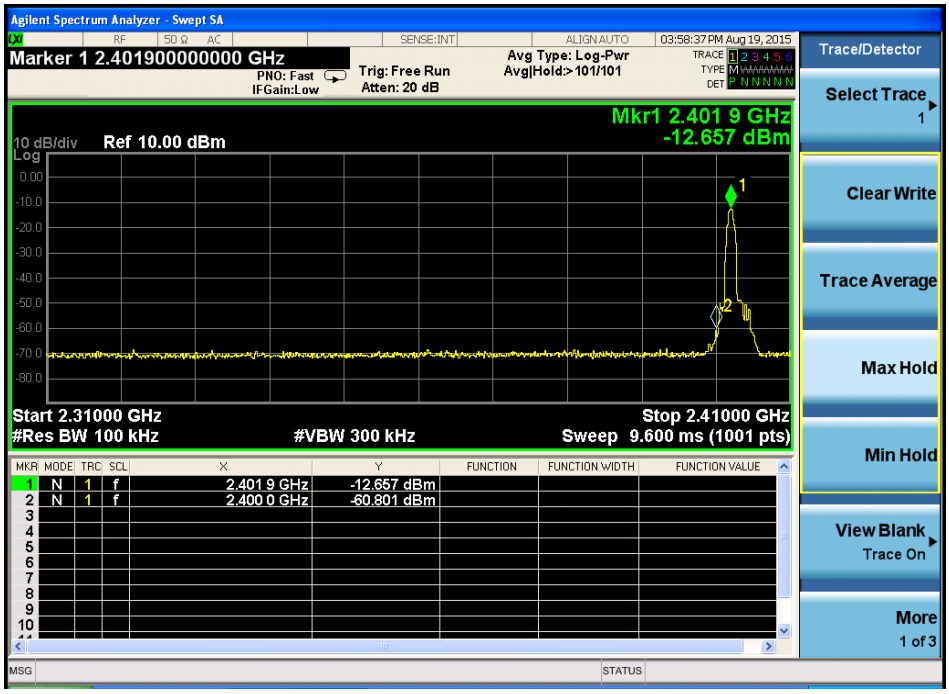


Higher band edge:

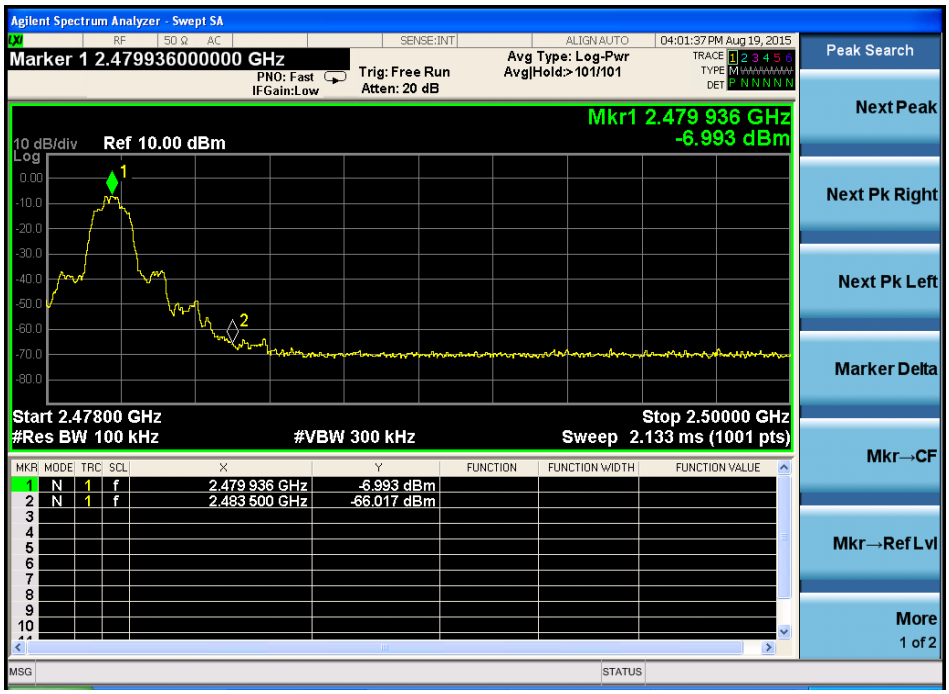


π /4 DQPSK

CH Low:

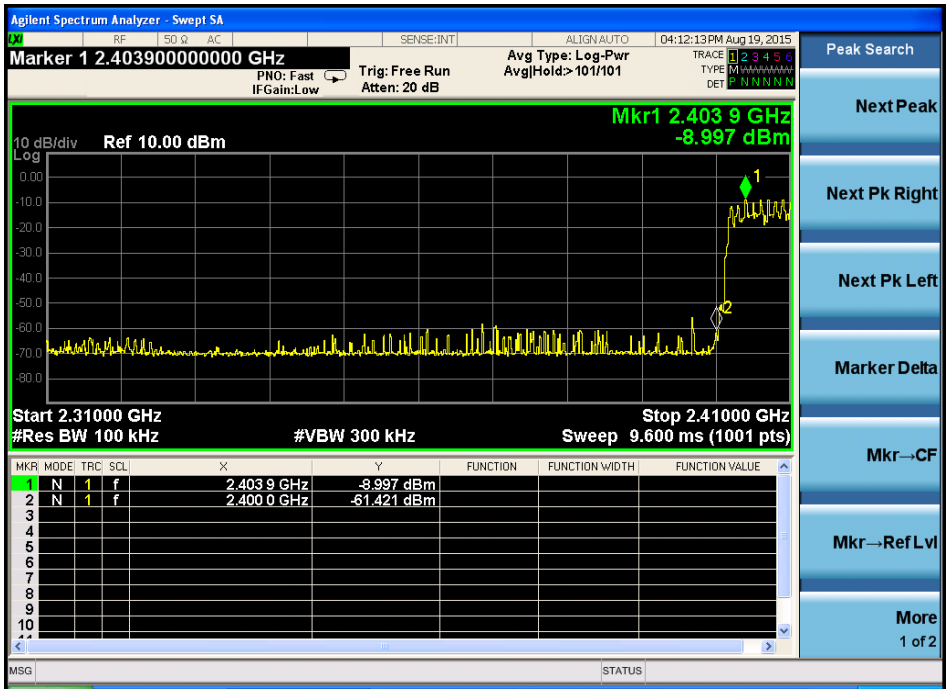


CH High:

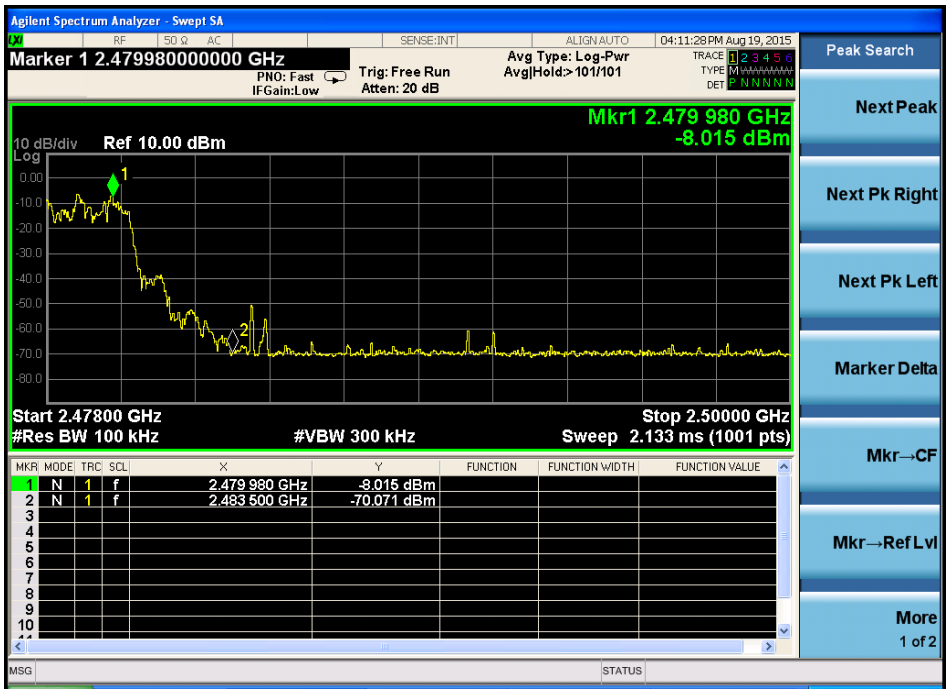


Hopping

Lower band edge:

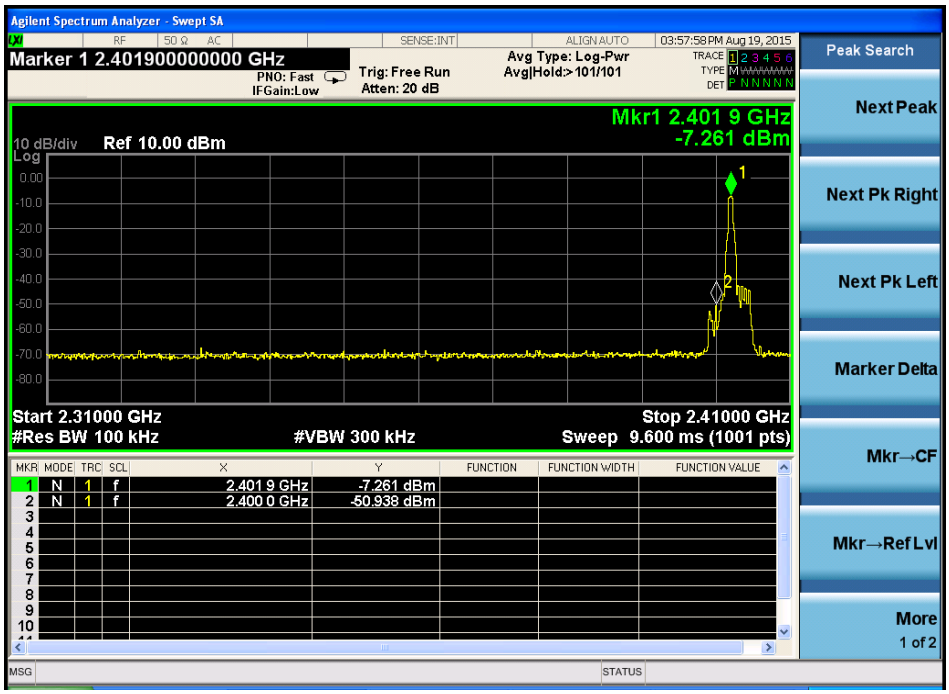


Higher band edge:

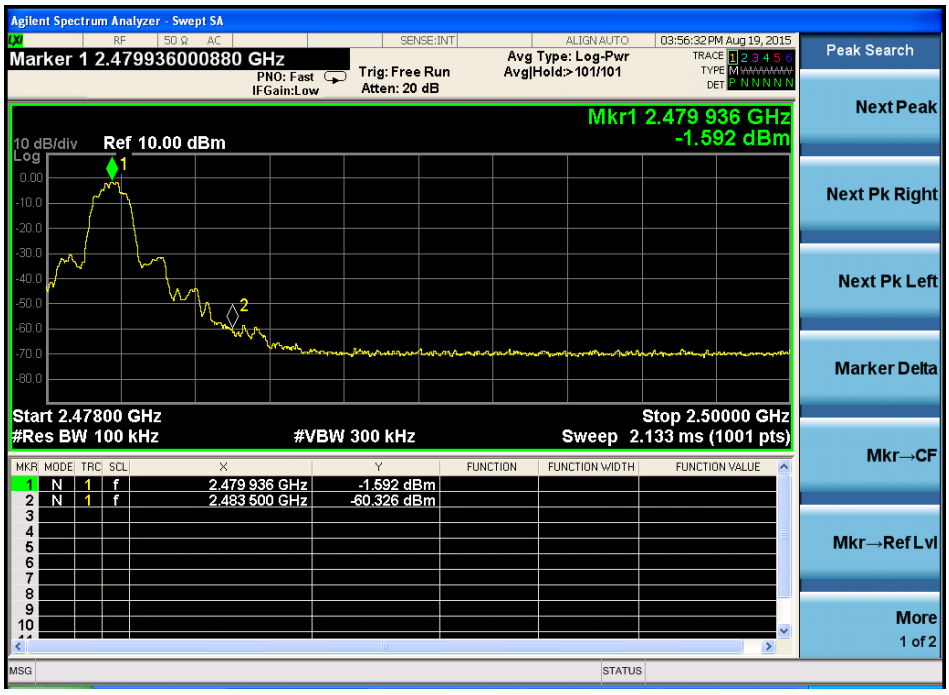


8- DPSK:

CH Low:

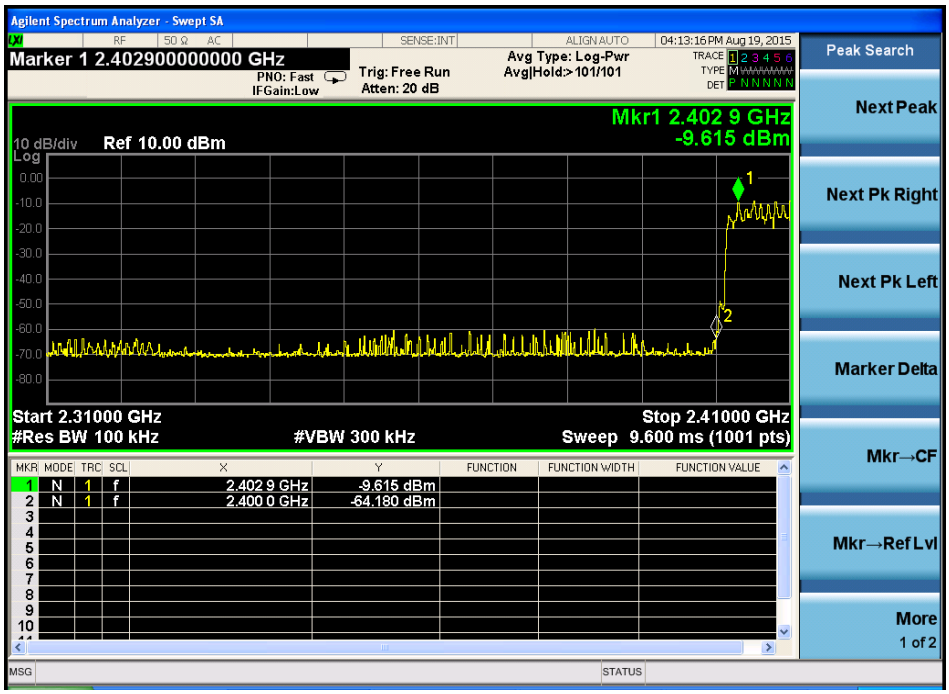


CH High:

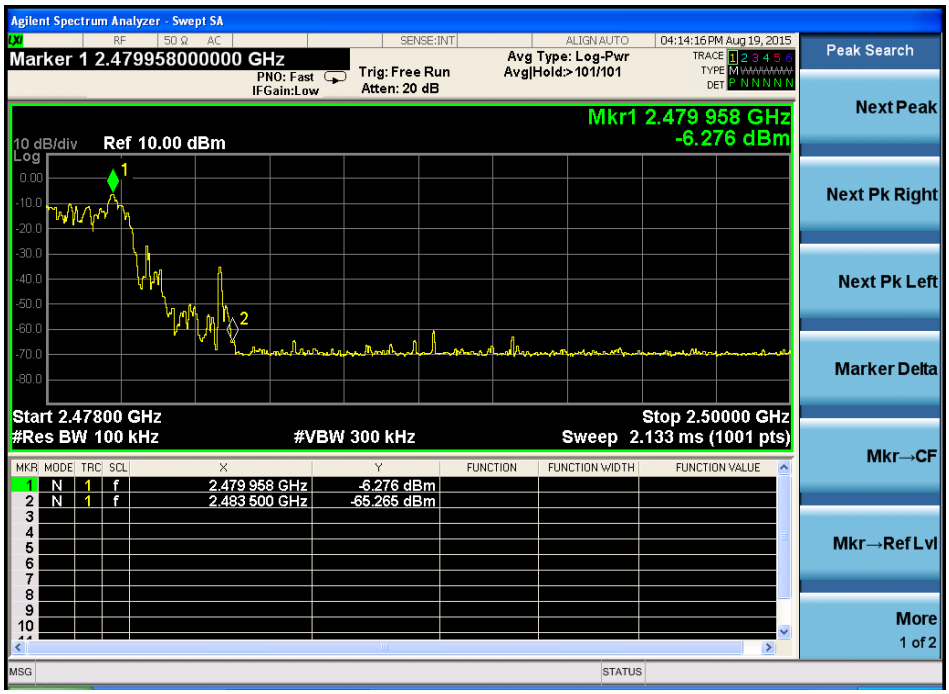


Hopping

Lower band edge:

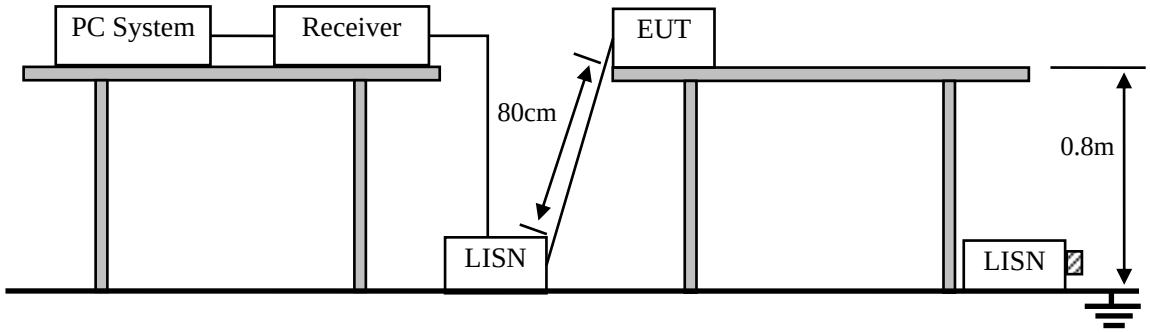


Higher band edge:



10. Power Line Conducted Emissions

10.1. Block Diagram of Test Setup



:50Ω Terminator

10.2. Limit

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

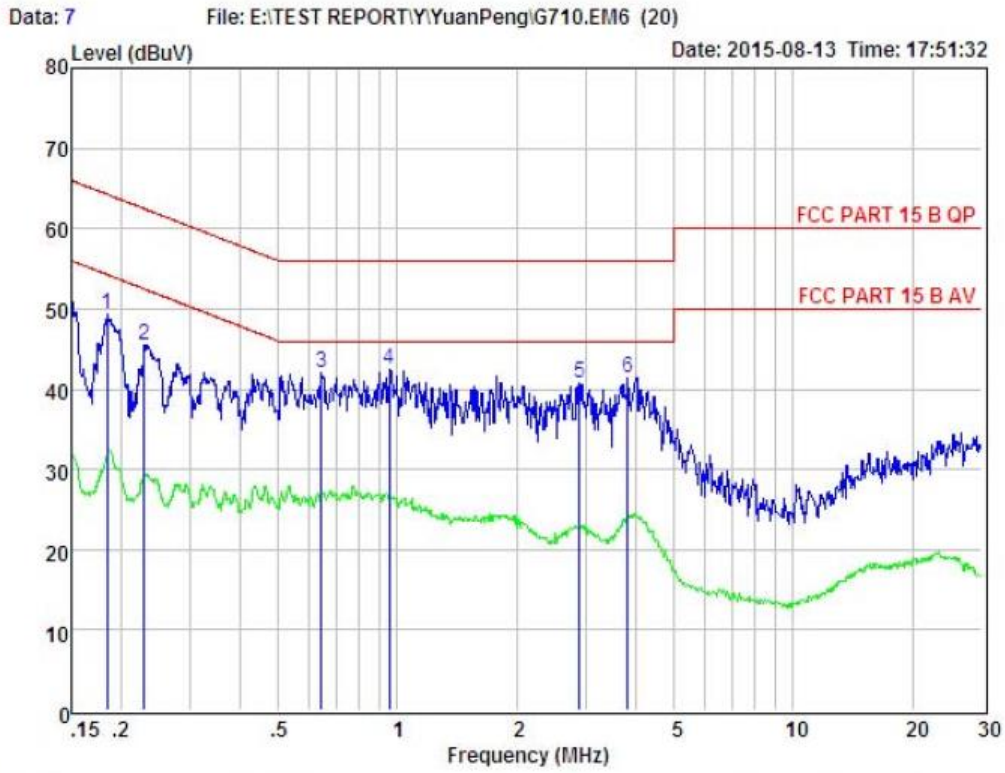
Notes: 1. * Decreasing linearly with logarithm of frequency.
2. The lower limit shall apply at the transition frequencies.

10.3. Test Procedure

(1) The EUT was placed on a non-metallic table, 80cm above the ground plane.
(2) Setup the EUT and simulator as shown in 10.1
(3) The EUT Power connected to the power mains through a power adapter and a line impedance stabilization network (L.I.S.N1). The other peripheral devices power cord connected to the power mains through a line impedance stabilization network (L.I.S.N2), this provided a 50-ohm coupling impedance for the EUT (Please refer to the block diagram of the test setup and photographs). Both sides of power line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.4 2014 on conducted Emission test.
(4) The bandwidth of test receiver is set at 10 kHz.
(5) The frequency range from 150 kHz to 30MHz is checked.

10.4.Test Result

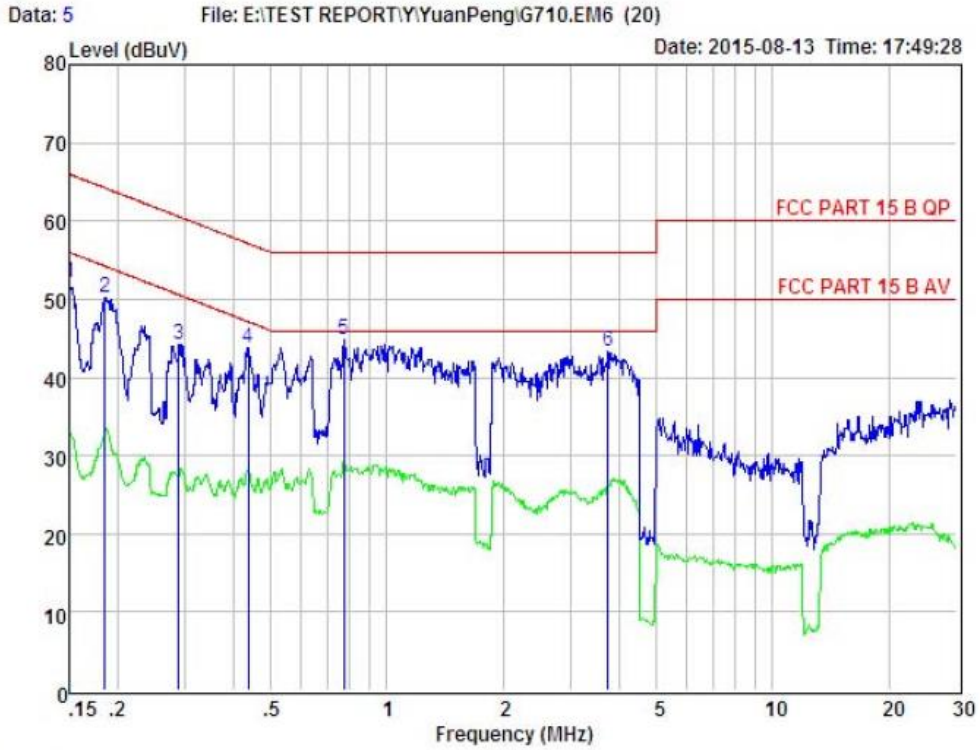
PASS. (See below detailed test data)



Condition : FCC PART 15 B QP POL: LINE Temp:25.7 ℃ Hum:51 %
EUT :
Model No : G710
Test Mode : BT
Power : DC 5V from adapter AC 120V/60Hz
Test Engineer:
Remark :

Item	Freq	Read	LISN Factor	Preamp Factor	Cable Lose	Level	Limit	Margin	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dBuV	
1	0.184	39.45	0.03	-9.72	0.10	49.30	64.28	-14.98	Peak
2	0.229	35.66	0.03	-9.72	0.10	45.51	62.48	-16.97	Peak
3	0.644	32.28	0.03	-9.72	0.10	42.13	56.00	-13.87	Peak
4	0.953	32.55	0.04	-9.71	0.10	42.40	56.00	-13.60	Peak
5	2.884	30.91	0.07	-9.70	0.12	40.80	56.00	-15.20	Peak
6	3.820	31.58	0.08	-9.69	0.12	41.47	56.00	-14.53	Peak

Remarks: Level = Read + LISN Factor - Preamp Factor + Cable loss



Condition : FCC PART 15 B QP POL: NEUTRAL Temp:25.7 ℃ Hum:51 %
EUT :
Model No : G710
Test Mode : BT
Power : DC 5V from adapter AC 120V/60Hz
Test Engineer:
Remark :

Item	Freq	Read	LISN Factor	Preamp Factor	Cable Lose	Level	Limit	Margin	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dBuV	
1	0.150	42.26	0.03	-9.72	0.10	52.11	66.00	-13.89	Peak
2	0.185	40.36	0.03	-9.72	0.10	50.21	64.24	-14.03	Peak
3	0.288	34.39	0.03	-9.72	0.10	44.24	60.59	-16.35	Peak
4	0.437	33.97	0.03	-9.72	0.10	43.82	57.11	-13.29	Peak
5	0.775	35.04	0.00	-9.71	0.10	44.85	56.00	-11.15	Peak
6	3.740	33.42	0.08	-9.69	0.12	43.31	56.00	-12.69	Peak

Remarks: Level = Read + LISN Factor - Preamp Factor + Cable loss

Note: If QP Result comply with AV limit, AV Result is deemed to comply with AV limit

11. Antenna Requirements

11.1. Limit

For intentional device, according to FCC, 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. And according to FCC, if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

11.2. Result

The antennas used for this product are PCB Antenna for Bluetooth, no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is only 0 dBi .

12. Test setup photos

Please refer to test setup photo document.

13. Photos of EUT

Please refer to EUT photo document.

---------END OF THE REPORT-------