APPLICATION FOR CERTIFICATION

On Behalf of

Perception Digital Technology (SZ) Ltd.

Bluetooth digital audio player

Model Number: PD3040XYBT/ZZAA

FCC ID: XJ7PD3040XYBT

Prepared for : Perception Digital Technology (SZ) Ltd.
Rm 708, West Block IET Bldg, South Area, Shenzhen
High-Tech Industrial Park, SZ, PRC

Prepared By : Audix Technology (Shenzhen) Co., Ltd.
No. 6, Ke Feng Rd., 52 Block,
Shenzhen Science & Industrial Park,
Nantou, Shenzhen, Guangdong, China

Tel: (0755) 26639496

Report Number : ACS-F09137
Date of Test : Jun.18, 2009
Date of Report : Jul.09, 2009

TABLE OF CONTENTS

TEST REPORT CERTIFICATION

Applicant	:	Perception Digital Technology (SZ) Ltd.
Manufacturer	:	SHENZHEN FEREX ELECTRONICS CO., LTD
EUT Description	:	Bluetooth digital audio player
FCC ID	:	XJ7PD3040XYBT

(A) MODEL NO. : PD3040XYBT/ZZAA
(B) SERIAL NO. : N/A
(C) POWER SUPPLY : DC 3.7V
(D) TEST VOLTAGE : DC 3.7V

Test Procedure Used:

FCC Rules and Regulations Part 15 Subpart C 2008

The device described above is tested by AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C limits both radiated and conducted emissions.

The test results are contained in this test report and AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. is assumed full responsibility for the accuracy and completeness of these tests. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of AUDIX TECHNOLOGY (SHENZHEN) CO., LTD.

Date of Test: Jun.18, 2009

Prepared by: Edie Huang
Edie Huang / Assistant

Reviewer: Jamy Yu
Jamy Yu / Senior Engineer

AUDIX® 信華科技(深圳)有限公司
Audix Technology (Shenzhen) Co., Ltd.
EMC 部門報告專用章
Stamp only for EMC Dept. Report
Signature: Ken Lu 7/30 09'

Approved & Authorized Signer:
Ken Lu / Manager

1. SUMMARY OF STANDARDS AND RESULTS

1.1.Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION		
Description of Test Item	**Standard**	**Results**
Power Line Conducted Emission Test	FCC Part 15: 15.207 ANSI C63.4: 2003 DA 00-705	N/A
Radiated Emission Test	FCC Part 15: 15.209 FCC Part 15: 15.247(d) ANSI C63.4: 2003 DA 00-705	PASS
Carrier Frequency Separation Test	FCC Part 15: 15.247(a)(1) DA 00-705	PASS
20dB Bandwidth Test	FCC Part 15: 15.215 DA 00-705	PASS
Number Of Hopping Frequency Test	FCC Part 15: 15.247(a)(1)(iii) DA 00-705	PASS
Dwell Time Test	FCC Part 15: 15.247(a)(1)(iii) DA 00-705	PASS
Maximum Peak Output Power Test	FCC Part 15: 15.247(b)(1) DA 00-705	PASS
Band Edge Compliance Test	FCC Part 15: 15.247(d) DA 00-705	PASS
Antenna requirement	FCC Part 15: 15.203	PASS
N/A is an abbreviation for Not Applicable.		

2. GENERAL INFORMATION

2.1.Description of Device (EUT)

Description	:	Bluetooth digital audio player
Model Number	:	PD3040XYBT/ZZAA Note: according exploratory test the worse case is device have FM function. So all the tests were performed with device have FM function version. XY is the Color: Black(BK), white(WH), blue(BL), light blue(LB), pink(PK), yellow(YW), green(GN), red(RD); ZZ is flash size: 01(1GB), 02(2GB), 04(4GB), 08(8GB) AA is FM option: FM(FM function); Absence(NO FM) Note: According exploratory test, the wores case is 2GB version. so all the tests were performed with 2GB version.
FCC ID	:	XJ7PD3040XYBT
Operation frequency	:	2.402GHz-----2.480GHz
Operation Channel	:	79 Channels
Modulation Technology	:	GFSK
Output power	:	2.86dBm (maximum measured)
Antenna Assembly Gain	:	Integrated PCB antenna with 0dBi gain (maximum)
Power Supply	:	DC 3.7V (Note: New batteries were used for all test)
Applicant	:	Perception Digital Technology (SZ) Ltd. Rm 708, West Block IET Bldg, South Area, Shenzhen High-Tech Industrial Park, SZ, PRC
Manufacturer	:	SHENZHEN FEREX ELECTRONICS CO., LTD BoJuQianNeng, Industrial Park, The Third Industrial District, LiSongLang, GongMing Town, ShenZhen, Guangdong, China
USB Cable	:	Unshielded, Detachable, 0.3m (with one core)
Earphone	:	Cable: Unshielded, Detachable, 0.5m
Date of Test	:	Jun.18, 2009
Date of Receipt	:	Jun.08, 2009
Sample Type	:	Prototype production

2.2.Test Facility

Site Description

Name of Firm	:	Audix Technology (Shenzhen) Co., Ltd. No. 6, Ke Feng Rd., 52 Block, Shenzhen Science & Industrial Park,Nantou, Shenzhen, Guangdong, China
3m Anechoic Chamber	:	Mar.31, 2009 File on Federal Communication Commission Registration Number: 90454
3m & 10m Anechoic Chamber	:	Jan. 31, 2007 File on Federal Communication Commission Registration Number: 794232
EMC Lab.	:	Accredited by DATech, German Registration Number: DAT-P-091/99-01 Feb. 02, 2009 Accredited by NVLAP, USA NVLAP Code: 200372-0 Apr. 01, 2009

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

Test Item	Uncertainty
Uncertainty for Conduction emission test in No. 1 Conduction	2.40dB
Uncertainty for Radiation Emission test in 3m chamber	3.78 dB (Polarize: V)
	4.20 dB (Polarize: H)
Uncertainty for Conduction Spurious emission test	2.10 dB
Uncertainty for Output power test	0.94 dB
Uncertainty for Temperature and humidity test	2%
	1℃
Uncertainty for Frequency range test	$1x10^{-9}$
Uncertainty for Bandwidth test	$1x10^{-9}$
Uncertainty for DC power test	0.042 %
Uncertainty for test site temperature and humidity	0.6℃
	3%

3. POWER LINE CONDUCTED EMISSION TEST

According to Paragraph (f) of FCC Part 15 section 15.207, Tests to demonstrate compliance with the conducted limits are not required for devices which only employ battery power for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines.

4. RADIATED EMISSION TEST

4.1.Test Equipment

Frequency rang: 30~1000MHz

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	3#Chamber	AUDIX	N/A	N/A	Dec.05,08	1 Year
2.	EMI Spectrum	Agilent	E4407B	MY41440292	May.08, 09	1 Year
3.	Test Receiver	Rohde & Schwarz	ESVS10	834468/011	May.08, 09	1 Year
4.	Amplifier	HP	8447D	2648A04738	May.08, 09	1 Year
5.	Bilog Antenna	Schaffner	CBL6111C	2598	Nov.10, 08	1 Year
6.	RF Cable	MIYAZAKI	8D-FB	3# Chamber No.1	May.08, 09	1 Year
7.	Coaxial Switch	Anritsu	MP59B	M73989	May.08, 09	1 Year

Frequency rang: above 1000MHz

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08, 09	1 Year
2.	Horn Antenna	EMCO	3115	9607-4877	May.27, 08	1.5 Year
3.	Horn Antenna	EMCO	3116	00060088	May.27, 08	1.5Year
4	Amplifier	Agilent	8449B	3008A02495	Nov.24, 08	1 Year
5	RF Cable	Hubersuhner	SUCOFLEX102	28620/2	May.08, 09	1 Year
6	RF Cable	Hubersuhner	SUCOFLEX102	271471/4	May.08, 09	1 Year
7	RF Cable	Hubersuhner	SUCOFLEX102	29086/2	May.08, 09	1 Year

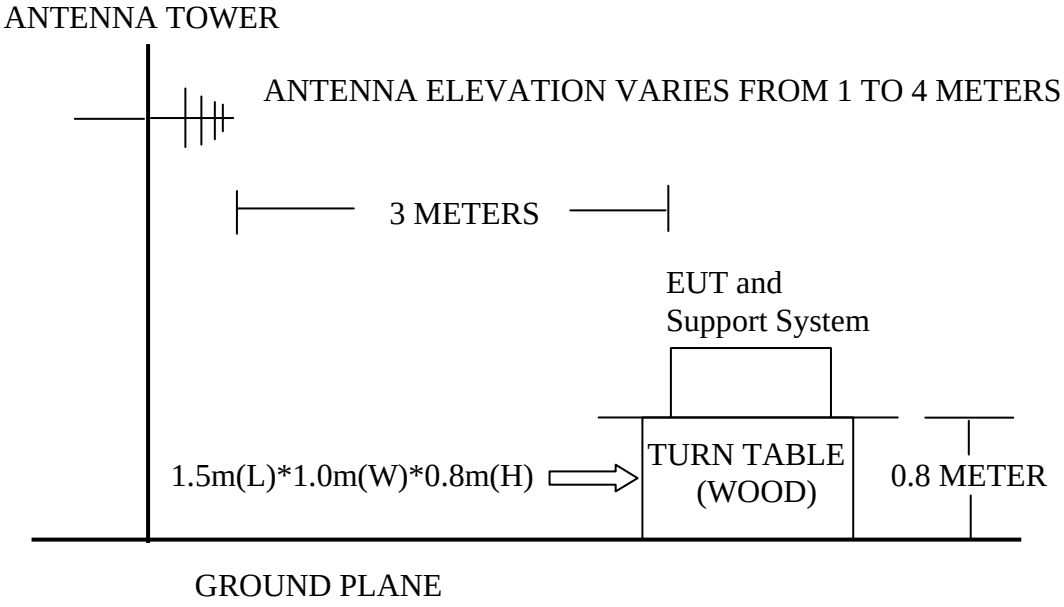
4.2.Block Diagram of Test Setup

4.2.1.Block diagram of connection between the EUT and simulators

EUT

(EUT: Bluetooth digital audio player)

4.2.2.In Anechoic Chamber



4.3.Radiated Emission Limit

4.3.1. 15.209 limits

FREQUENCY MHz	DISTANCE Meters	FIELD 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	74.0 dB(μV)/m (Peak) 54.0 dB(μV)/m (Average)	

Remark： (1) Emission level dBμV = 20 log Emission level μV/m

(2) The smaller limit shall apply at the cross point between two frequency bands.

(3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

4.3.2. 15.205 Restricted bands of operation

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])

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.

4.4.EUT Configuration on Test

The following equipment are installed on Radiated Emission Test to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

4.5.Operating Condition of EUT

4.5.1.Setup the EUT as shown in Section 4.2..

4.5.2.Let the EUT worked in test modes (Bluetooth Mode) and test it.

4.6.Test Procedure

EUT and its simulators are placed on a turn table, which is 0.8 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. Power on the EUT and let it working in test mode, then test it. EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna are set on test.

This test was performed with EUT in X, Y, Z position, and the worse case was found when EUT in X position as test photo indicated.

The bandwidth of the EMI test receiver (R&S ESVS10) is set at 120kHz for frequency range from 30MHz to 1000 MHz.

The bandwidth of the Spectrum's VBW is set at 1MHz and RBW is set at 1MHz for peak emissions measurement above 1GHz and 1MHz RBW, 10Hz VBW for average emissions measure above 1GHz

The frequency range from 30MHz to 10^{th} 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.

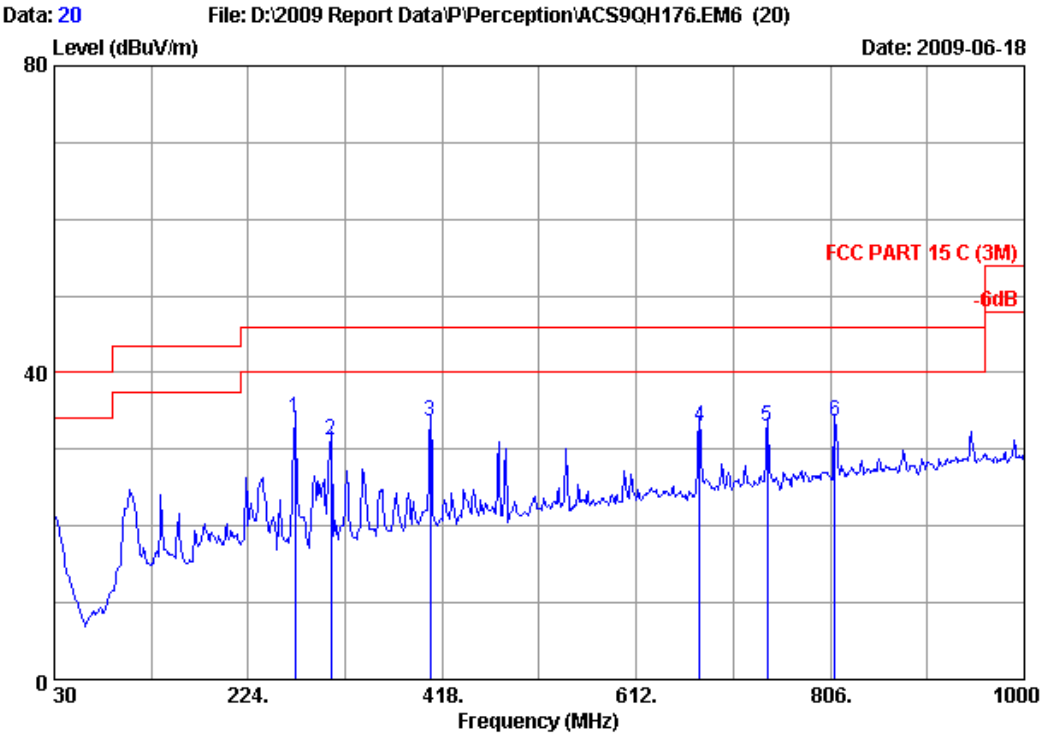
4.7. Radiated Emission Test Results

PASS.

All the emissions from 30MHz to 25 GHz are comply with 15.209 limits

Test Frequency: 30MHz-1000MHz

No.6,Ke Feng Road,Block 52,
Shenzhen Science&Industry Park
Nantou Shenzhen,Guangdong,China
Tel:+86-755-26639495
Fax:+86-755-26632877
Postcode:518057



Site no. : 3m Chamber Data no. : 20
Dis. / Ant. : 3m CBL6111C Ant. pol. : HORIZONTAL
Limit : FCC PART 15 C (3M)
Env. / Ins. : 24*C/56% Engineer : Cary Luo
EUT : Bluetooth digital audio player
Power Rating : DC 3.7V
Test Mode : Bluetooth mode
M/N:PD3040XYBT/ZZAA

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Emission Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	270.560	13.16	1.55	19.33	34.04	46.00	11.96	QP
2	306.450	13.70	1.78	15.78	31.26	46.00	14.74	QP
3	406.360	16.42	1.87	15.34	33.63	46.00	12.37	QP
4	675.050	20.28	2.64	10.12	33.04	46.00	12.96	QP
5	742.950	21.42	2.81	8.86	33.09	46.00	12.91	QP
6	810.850	21.87	3.02	8.75	33.64	46.00	12.36	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

No.6,Ke Feng Road,Block 52,
Shenzhen Science&Industry Park
Nantou Shenzhen,Guangdong,China
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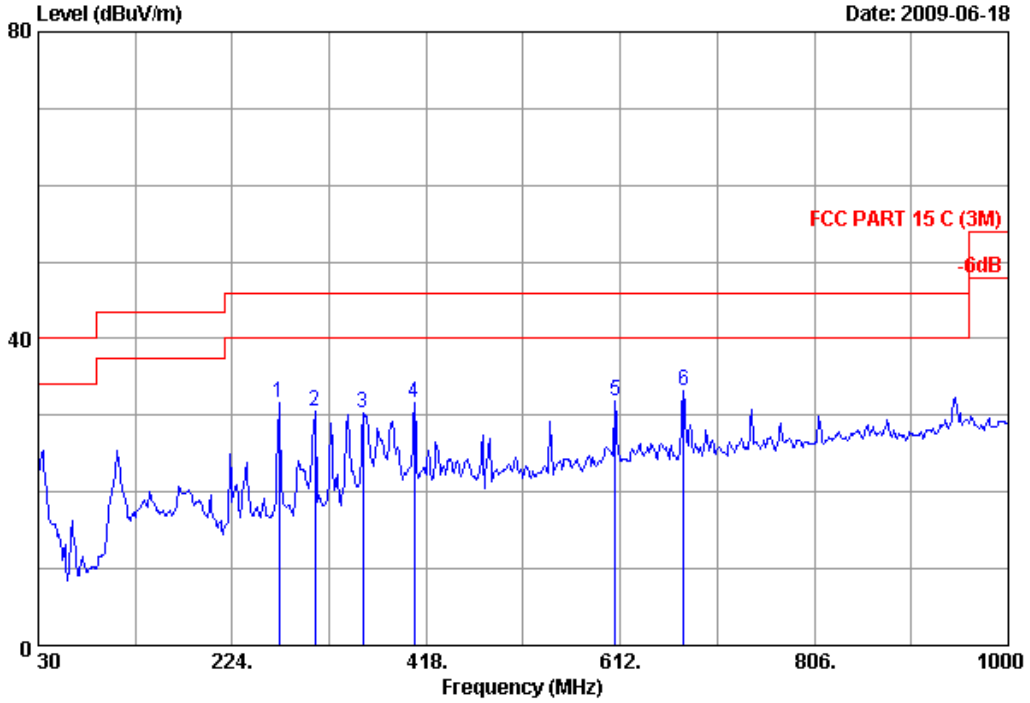

Site no. : 3m Chamber Data no. : 19
Dis. / Ant. : 3m CBL6111C Ant. pol. : VERTICAL
Limit : FCC PART 15 C (3M)
Env. / Ins. : 24*C/56% Engineer : Cary Luo
EUT : Bluetooth digital audio player
Power Rating : DC 3.7V
Test Mode : Bluetooth mode
M/N:PD3040XYBT/ZZAA

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	270.560	13.16	1.55	16.82	31.53	46.00	14.47	QP
2	306.450	13.70	1.78	15.08	30.56	46.00	15.44	QP
3	354.950	15.20	1.78	13.30	30.28	46.00	15.72	QP
4	406.360	16.42	1.87	13.35	31.64	46.00	14.36	QP
5	607.150	19.48	2.48	9.98	31.94	46.00	14.06	QP
6	675.050	20.28	2.64	10.35	33.27	46.00	12.73	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Test Frequency: 1GHz-18GHz

No.6 Ke Feng Road,Block 52,
ShenZhen Science & Industry Park
Noutou,ShenZhen,GuangDong,China
Tel:+86-755-26639495-7
Fax:+86-755-26632877
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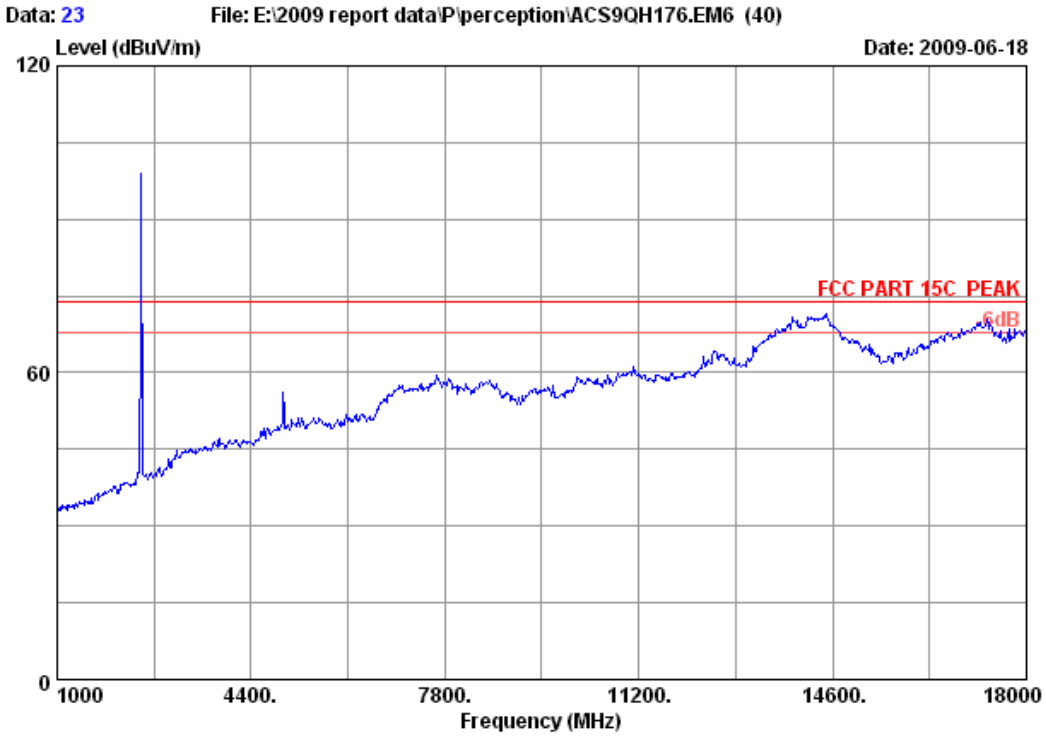

Site no.	: 3m Chamber	Data no.	: 23
Dis. / Ant.	: 3m 3115	Ant. pol.	: VERTICAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 23*C/54%	Engineer	:Alan Geng
EUT	: Bluetooth digital audio player		
Power	: DC 3.7V		
Test mode	: Tx-2480MHz		
M/N	: PD3040XYBT/ZZAA		

No.6 Ke Feng Road,Block 52,
ShenZhen Science & Industry Park
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Tel:+86-755-26639495-7
Fax:+86-755-26632877
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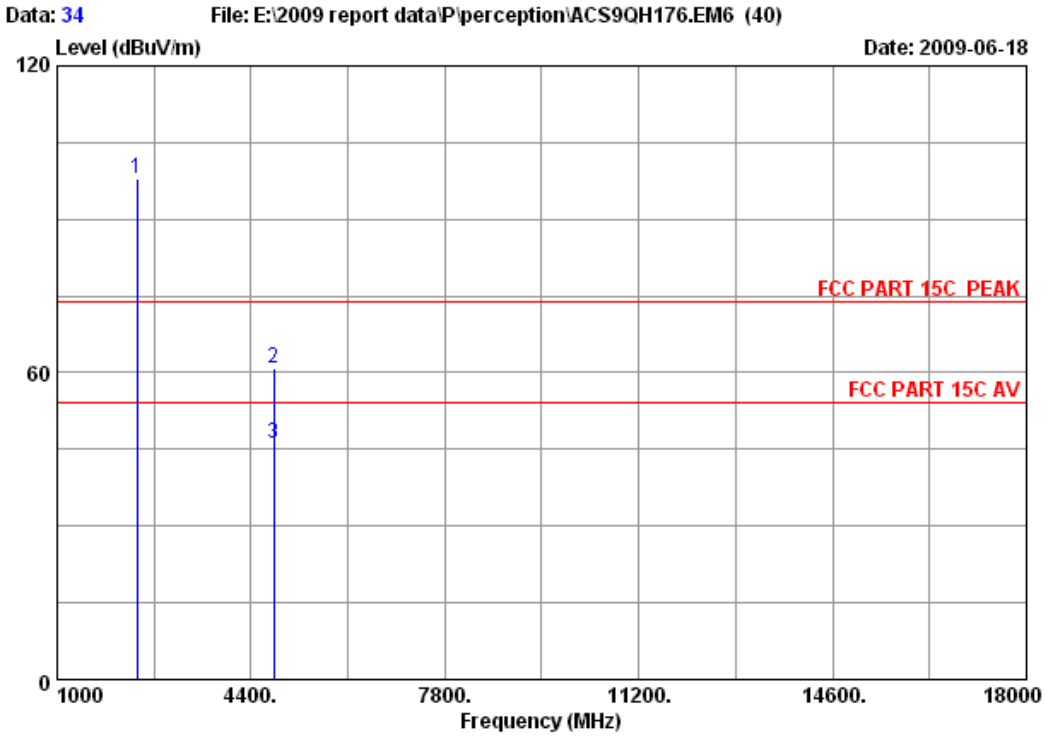

Site no. : 3m Chamber Data no. : 34
Dis. / Ant. : 3m 3115 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer :Alan Geng
EUT : Bluetooth digital audio player
Power : DC 3.7V
Test mode : Tx-2402MHz
M/N : PD3040XYBT/ZZAA

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2402.000	28.46	6.73	35.12	97.79	97.86	74.00	-23.86	Peak
2	4804.000	34.36	10.53	34.60	50.71	61.00	74.00	13.00	Peak
3	4804.000	34.36	10.53	34.60	35.97	46.26	54.00	7.74	Average

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

No.6 Ke Feng Road,Block 52,
ShenZhen Science & Industry Park
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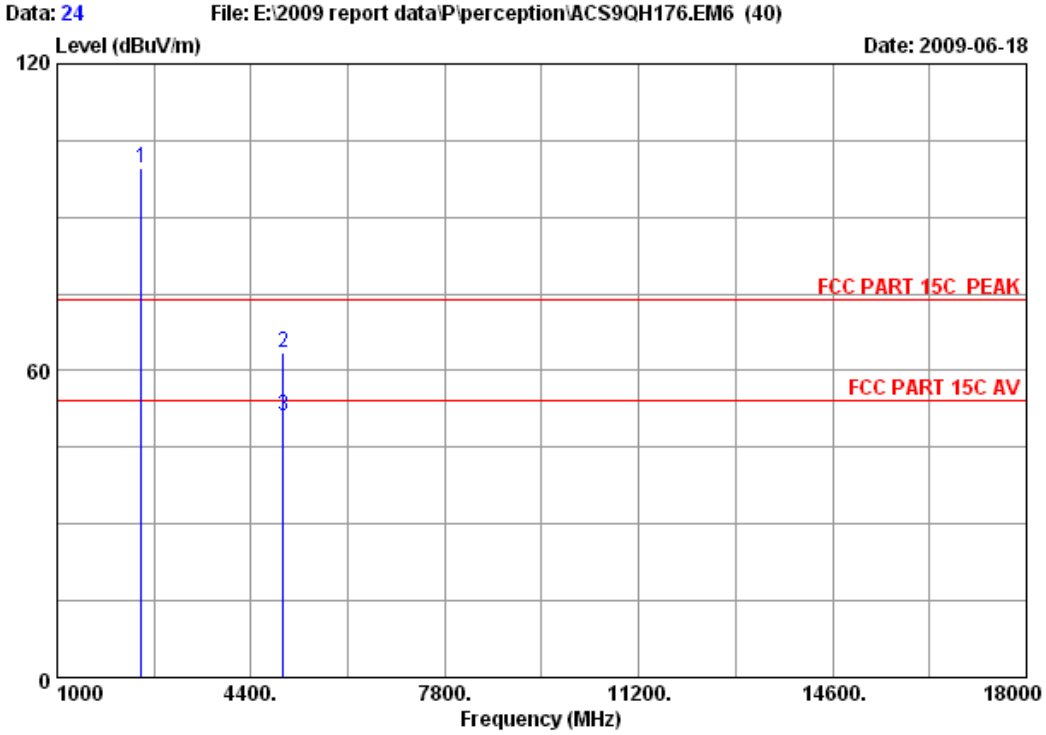

Site no. : 3m Chamber Data no. : 24
Dis. / Ant. : 3m 3115 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer :Alan Geng
EUT : Bluetooth digital audio player
Power : DC 3.7V
Test mode : Tx-2480MHz
M/N : PD3040XYBT/ZZAA

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2480.000	28.58	6.87	35.10	99.43	99.78	74.00	-25.78	Peak
2	4960.000	35.29	10.59	34.56	52.13	63.45	74.00	10.55	Peak
3	4960.000	35.29	10.59	34.56	39.71	51.03	54.00	2.97	Average

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

No.6 Ke Feng Road,Block 52,
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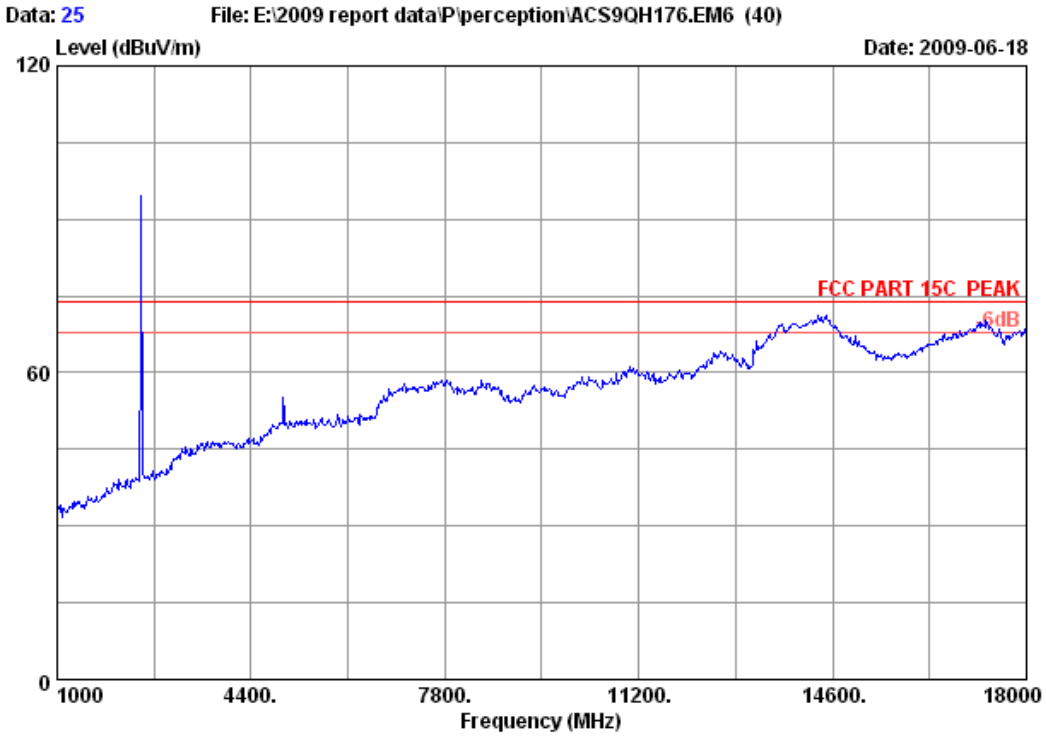

Site no.	: 3m Chamber	Data no.	: 25
Dis. / Ant.	: 3m 3115	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 23*C/54%	Engineer	:Alan Geng
EUT	: Bluetooth digital audio player		
Power	: DC 3.7V		
Test mode	: Tx-2480MHz		
M/N	: PD3040XYBT/ZZAA		

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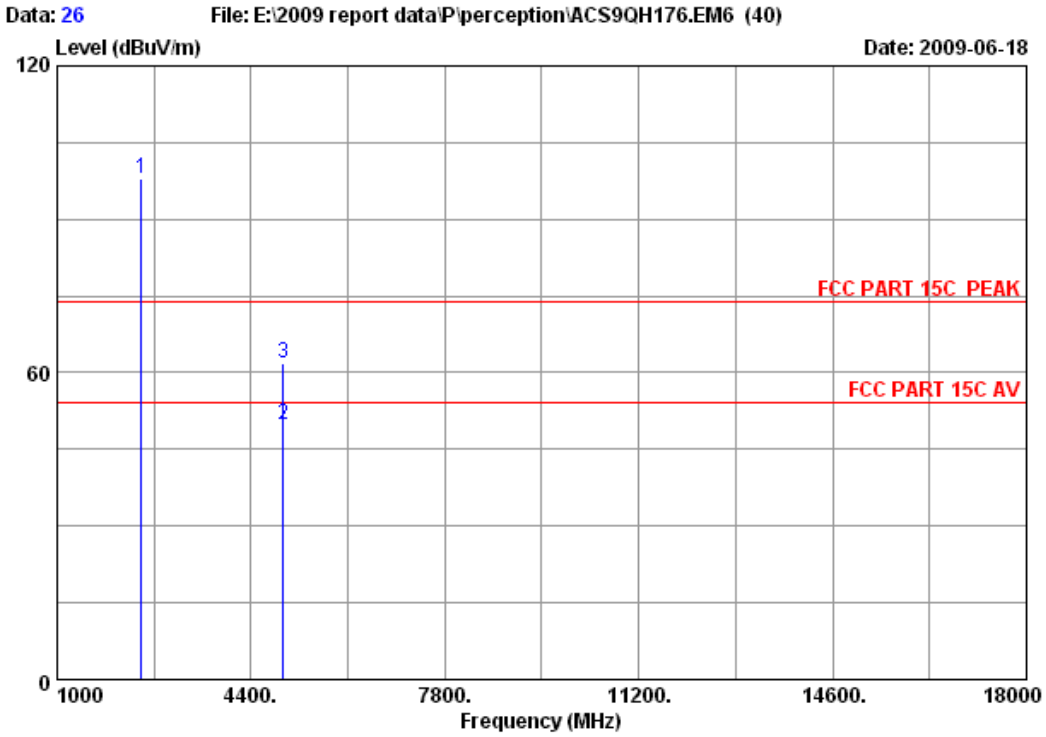

Site no. : 3m Chamber Data no. : 26
Dis. / Ant. : 3m 3115 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer :Alan Geng
EUT : Bluetooth digital audio player
Power : DC 3.7V
Test mode : Tx-2480MHz
M/N : PD3040XYBT/ZZAA

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2480.000	28.58	6.87	35.10	97.55	97.90	74.00	-23.90	Peak
2	4960.000	35.29	10.59	34.56	38.50	49.82	54.00	4.18	Average
3	4960.000	35.29	10.59	34.56	50.67	61.99	74.00	12.01	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

No.6 Ke Feng Road,Block 52,
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Noutou,ShenZhen,GuangDong,China
Tel:+86-755-26639495-7
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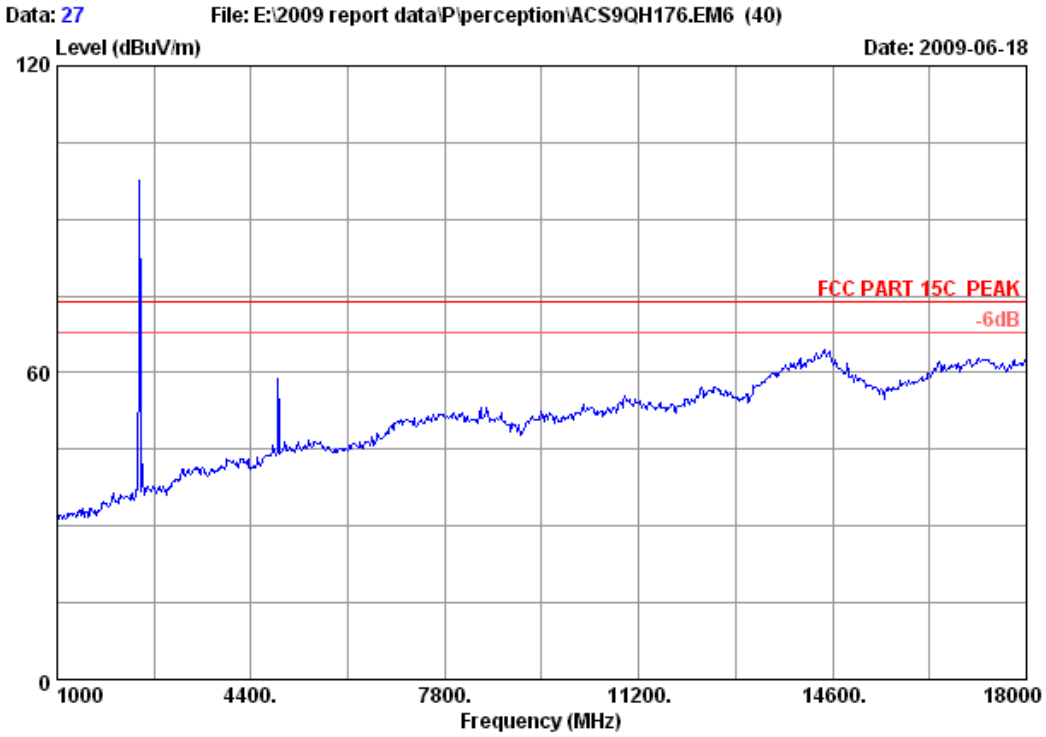

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Dis. / Ant.	: 3m 3115	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 23*C/54%	Engineer	:Alan Geng
EUT	: Bluetooth digital audio player		
Power	: DC 3.7V		
Test mode	: Tx-2441MHz		
M/N	: PD3040XYBT/ZZAA		

No.6 Ke Feng Road,Block 52,
ShenZhen Science & Industry Park
Noutou,ShenZhen,GuangDong,China
Tel:+86-755-26639495-7
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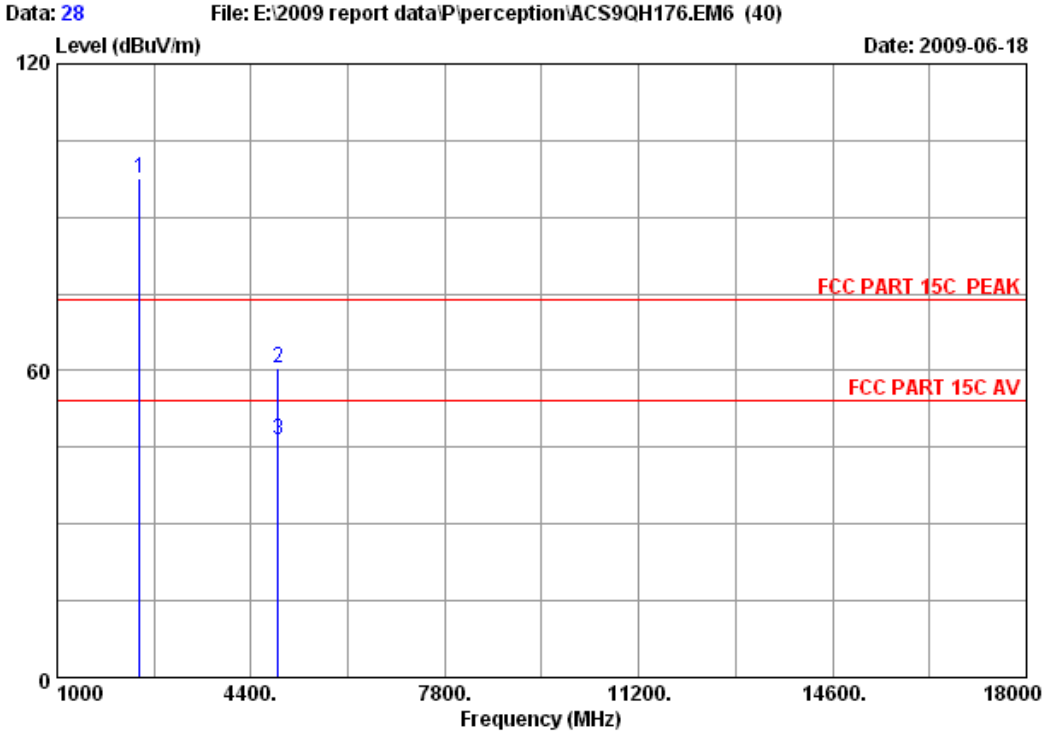

Site no. : 3m Chamber Data no. : 28
Dis. / Ant. : 3m 3115 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer :Alan Geng
EUT : Bluetooth digital audio player
Power : DC 3.7V
Test mode : Tx-2441MHz
M/N : PD3040XYBT/ZZAA

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2441.000	28.53	6.80	35.11	97.33	97.55	74.00	-23.55	Peak
2	4882.000	34.78	10.57	34.58	49.64	60.41	74.00	13.59	Peak
3	4882.000	34.78	10.57	34.58	35.85	46.62	54.00	7.38	Average

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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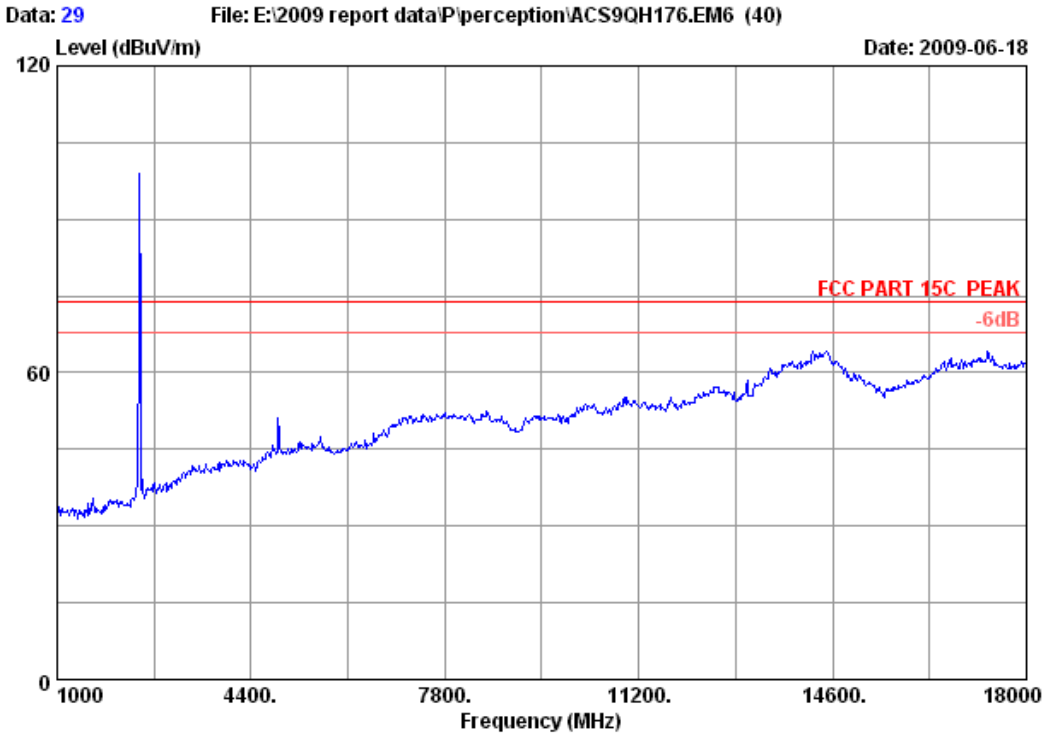
ShenZhen Science & Industry Park
Noutou,ShenZhen,GuangDong,China
Tel:+86-755-26639495-7
Fax:+86-755-26632877
Postcode:518057



Site no.	: 3m Chamber	Data no.	: 29
Dis. / Ant.	: 3m 3115	Ant. pol.	: VERTICAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 23*C/54%	Engineer	:Alan Geng
EUT	: Bluetooth digital audio player		
Power	: DC 3.7V		
Test mode	: Tx-2441MHz		
M/N	: PD3040XYBT/ZZAA		

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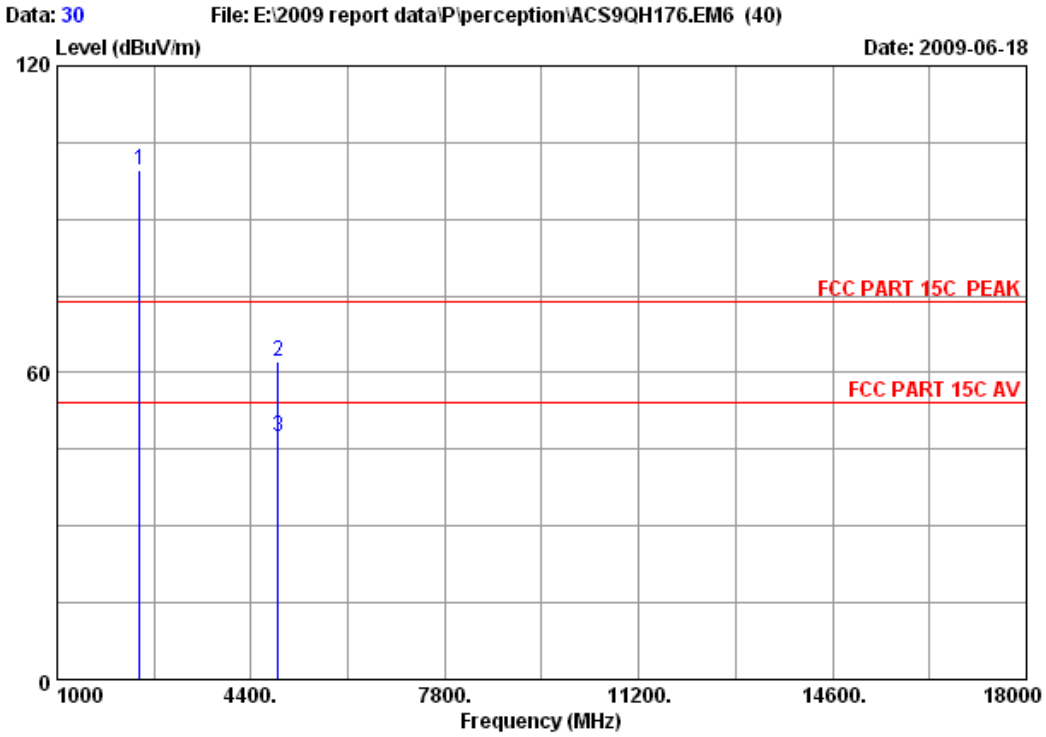
ShenZhen Science & Industry Park
Noutou,ShenZhen,GuangDong,China
Tel:+86-755-26639495-7
Fax:+86-755-26632877
Postcode:518057



Site no. : 3m Chamber Data no. : 30
Dis. / Ant. : 3m 3115 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer :Alan Geng
EUT : Bluetooth digital audio player
Power : DC 3.7V
Test mode : Tx-2441MHz
M/N : PD3040XYBT/ZZAA

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2441.000	28.53	6.80	35.11	99.53	99.75	74.00	-25.75	Peak
2	4882.000	34.78	10.57	34.58	51.31	62.08	74.00	11.92	Peak
3	4882.000	34.78	10.57	34.58	36.57	47.34	54.00	6.66	Average

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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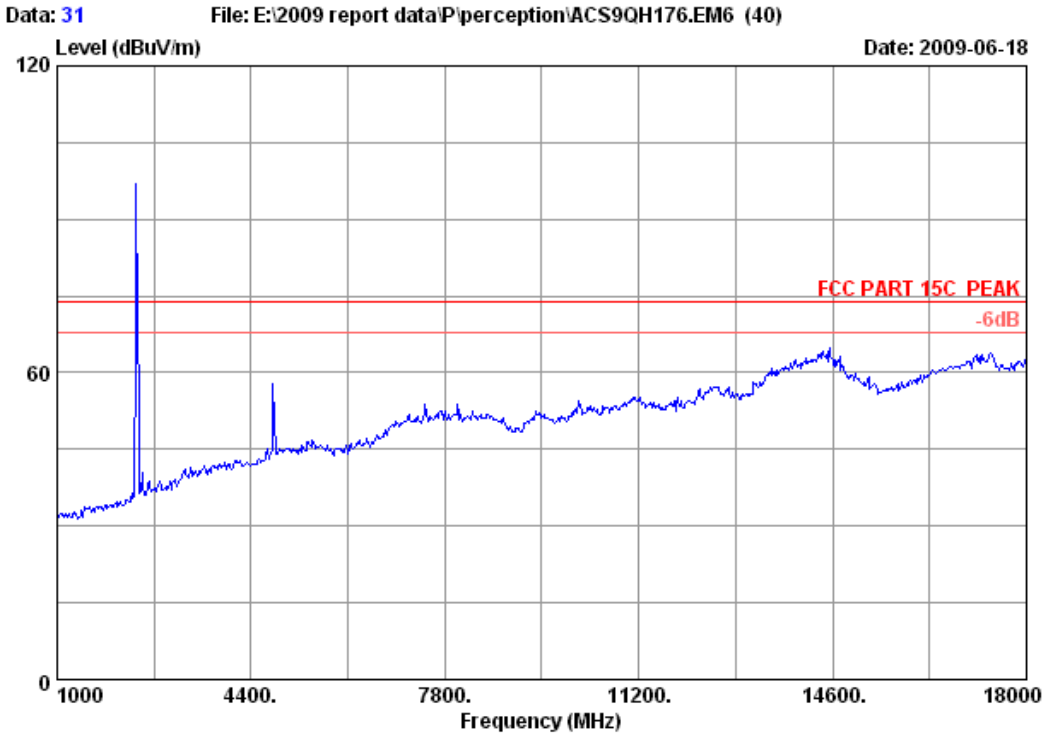
Fax:+86-755-26632877
Postcode:518057



Site no.	: 3m Chamber	Data no.	: 31
Dis. / Ant.	: 3m 3115	Ant. pol.	: VERTICAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 23*C/54%	Engineer	:Alan Geng
EUT	: Bluetooth digital audio player		
Power	: DC 3.7V		
Test mode	: Tx-2402MHz		
M/N	: PD3040XYBT/ZZAA		

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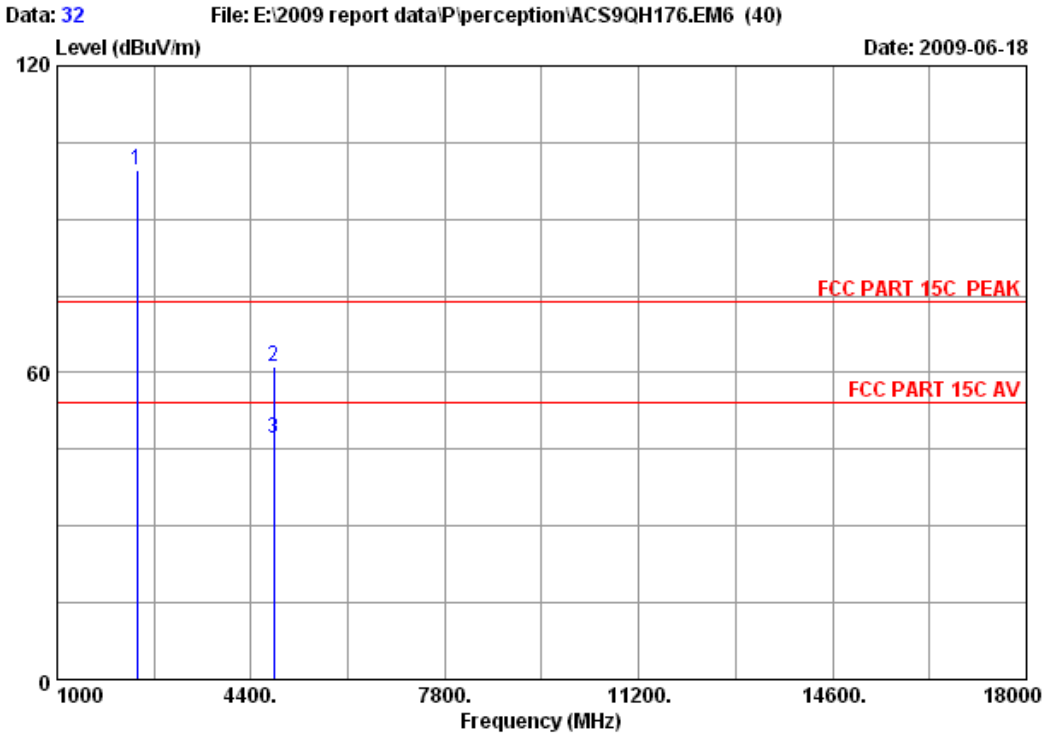
Noutou,ShenZhen,GuangDong,China
Tel:+86-755-26639495-7
Fax:+86-755-26632877
Postcode:518057



Site no. : 3m Chamber Data no. : 32
Dis. / Ant. : 3m 3115 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer :Alan Geng
EUT : Bluetooth digital audio player
Power : DC 3.7V
Test mode : Tx-2402MHz
M/N : PD3040XYBT/ZZAA

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2402.000	28.46	6.73	35.12	99.58	99.65	74.00	-25.65	Peak
2	4804.000	34.36	10.53	34.60	51.02	61.31	74.00	12.69	Peak
3	4804.000	34.36	10.53	34.60	36.95	47.24	54.00	6.76	Average

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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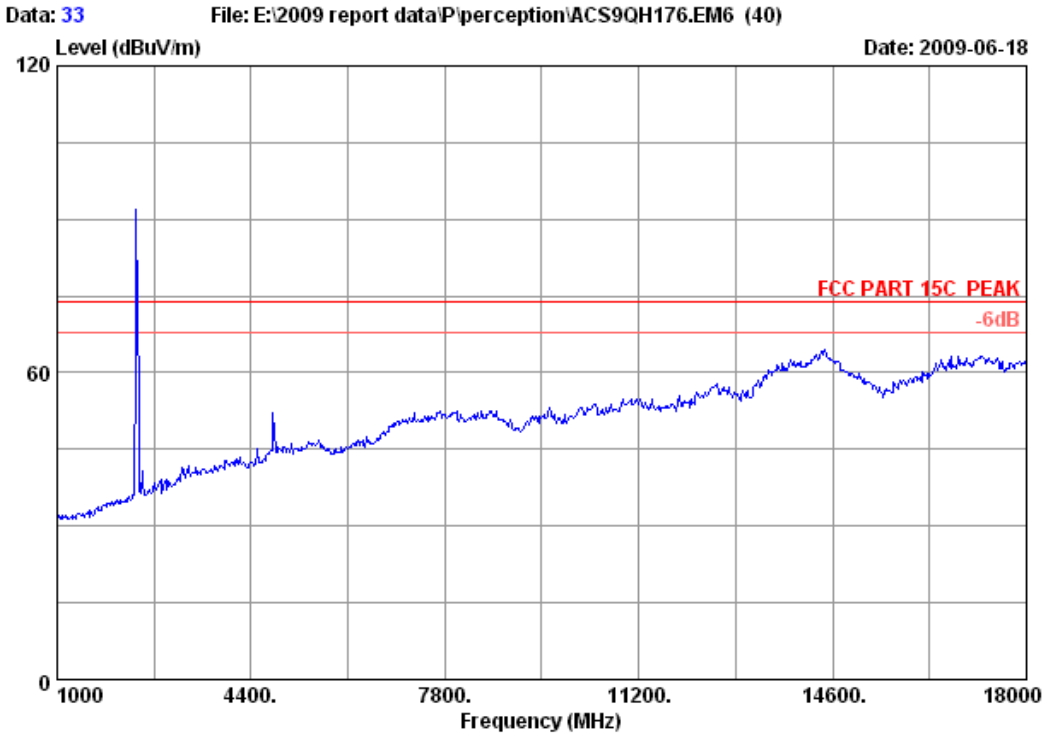
ShenZhen Science & Industry Park
Noutou,ShenZhen,GuangDong,China
Tel:+86-755-26639495-7
Fax:+86-755-26632877
Postcode:518057



Site no.	: 3m Chamber	Data no.	: 33
Dis. / Ant.	: 3m 3115	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 23*C/54%	Engineer	:Alan Geng
EUT	: Bluetooth digital audio player		
Power	: DC 3.7V		
Test mode	: Tx-2402MHz		
M/N	: PD3040XYBT/ZZAA		

5. CARRIER FREQUENCY SEPARATION TEST

5.1.Test Equipment

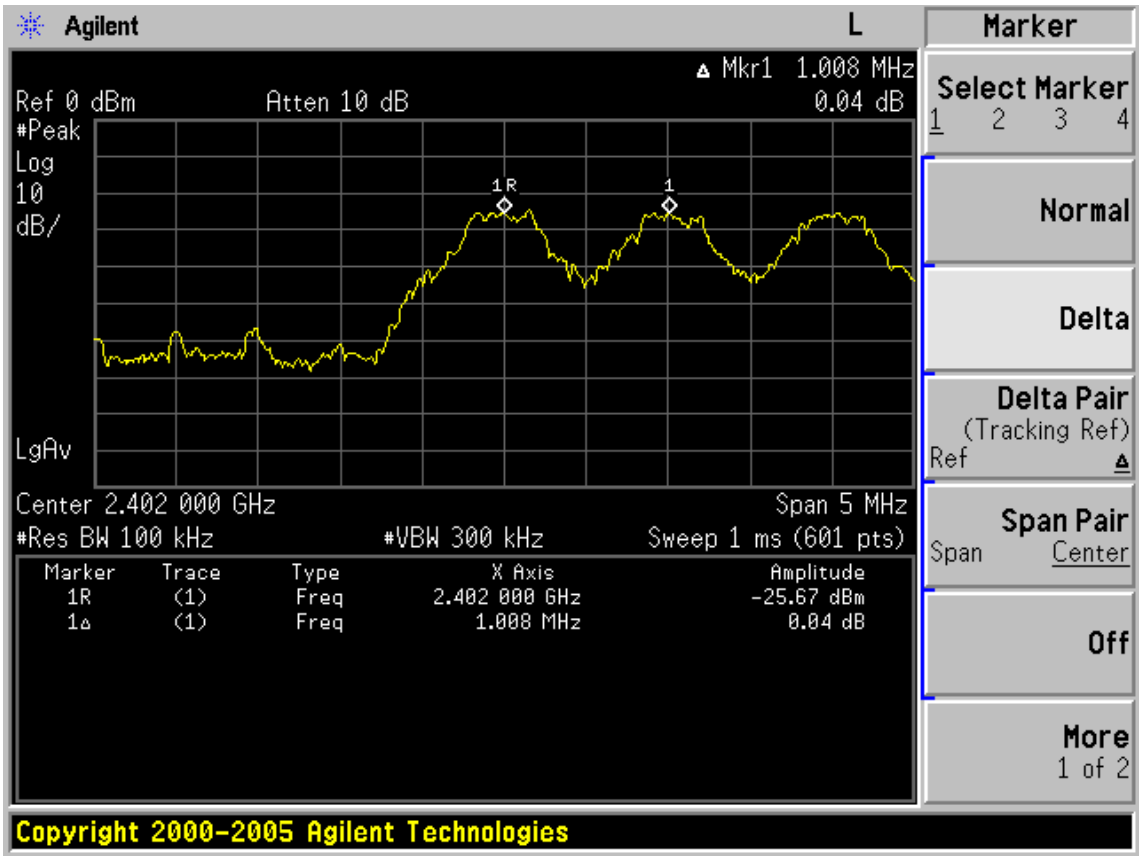
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4446A	US44300459	May,08, 09	1 Year
2	Attenuator	Agilent	8491B	MY39262165	May,08, 09	1 Year
3	RF Cable	Hubersuhner	SUCOFLEX 102	28618/2	May,08, 09	1Year

5.2.Limit

Frequency hopping systems shall have hopping channel carrier frequency separated by a minimum of 25kHz or the 20dB bandwidth of the hopping channel, whichever is greater.

5.3.Test Results

CH	Channel separation	Conclusion
Low	1.008MHz	PASS
Mid	1.020MHz	PASS
High	1.008MHz	PASS


Agilent
L
Marker
Mkr1 1.008 MHz
Ref 0 dBm
Atten 10 dB
0.04 dB
#Peak
Log
10
dB/
1R
1
LgAv
Center 2.402 000 GHz
Span 5 MHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 1 ms (601 pts)
Marker Trace Type X Axis Amplitude
1R (1) Freq 2.402 000 GHz -25.67 dBm
1Δ (1) Freq 1.008 MHz 0.04 dB
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
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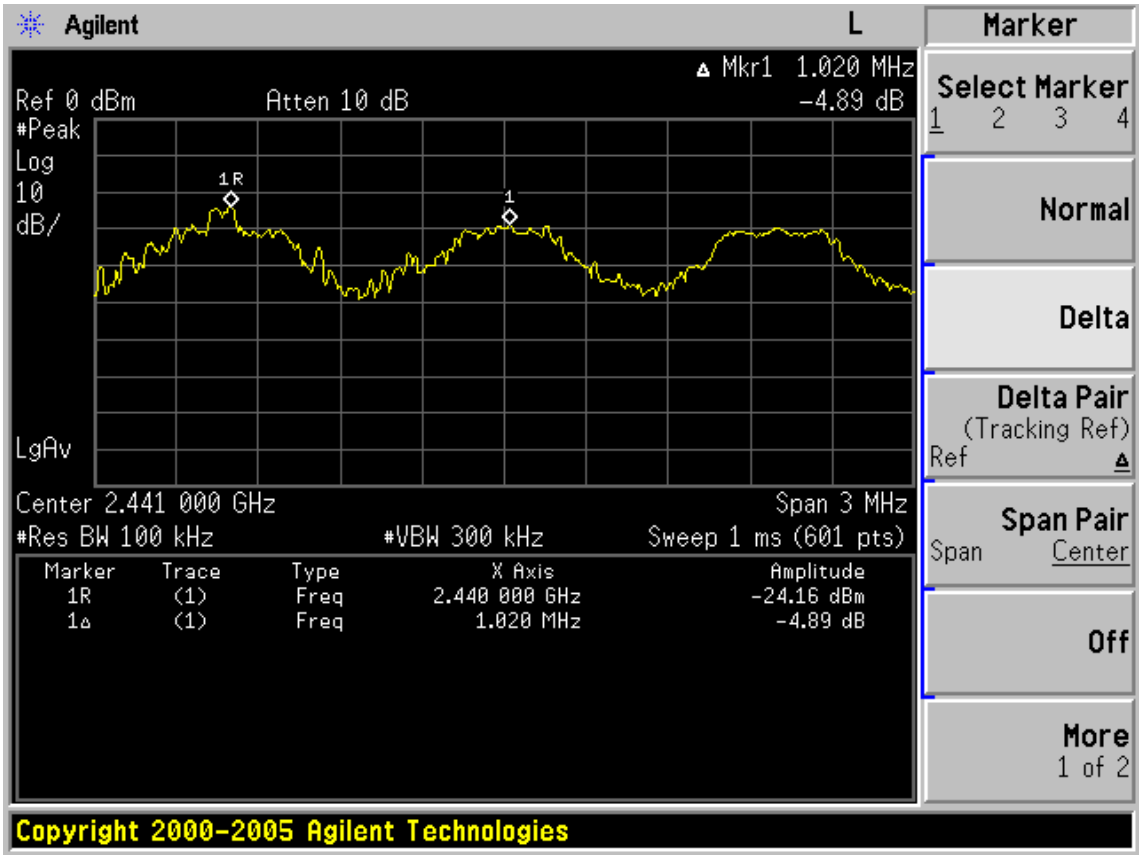
Agilent
L
Marker
Mkr1 1.020 MHz
Ref 0 dBm
Atten 10 dB
-4.89 dB
#Peak
Log
10
dB/
1R
1
LgAv
Center 2.441 000 GHz
Span 3 MHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 1 ms (601 pts)
Marker Trace Type X Axis Amplitude
1R (1) Freq 2.440 000 GHz -24.16 dBm
1Δ (1) Freq 1.020 MHz -4.89 dB
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
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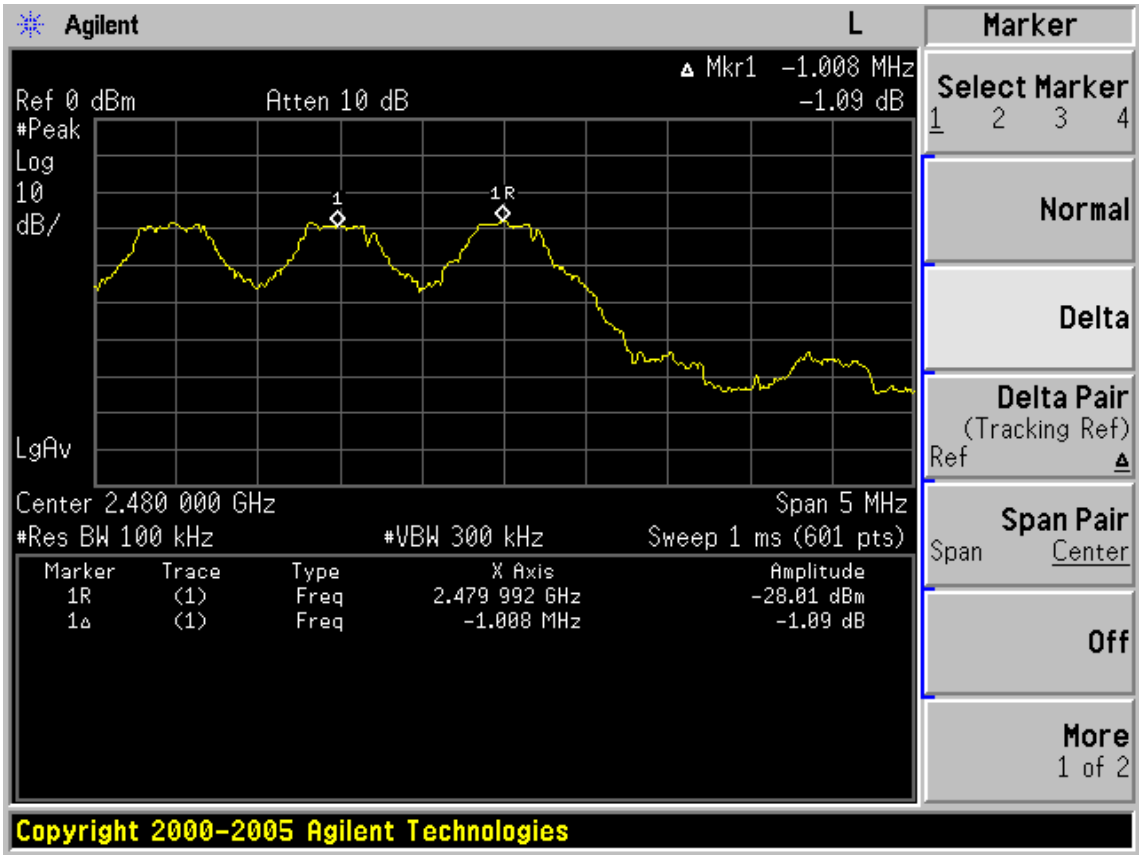
Agilent
L
Marker
Mkr1 -1.008 MHz
Ref 0 dBm
Atten 10 dB
-1.09 dB
#Peak
Log
10
dB/
LgAv
1
1R
Center 2.480 000 GHz
Span 5 MHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 1 ms (601 pts)
Marker Trace Type X Axis Amplitude
1R (1) Freq 2.479 992 GHz -28.01 dBm
1Δ (1) Freq -1.008 MHz -1.09 dB
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
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6. 20 DB BANDWIDTH TEST

6.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4446A	US44300459	May,08, 09	1 Year
2	Attenuator	Agilent	8491B	MY39262165	May,08, 09	1 Year
3	RF Cable	Hubersuhner	SUCOFLEX 102	28618/2	May,08, 09	1Year

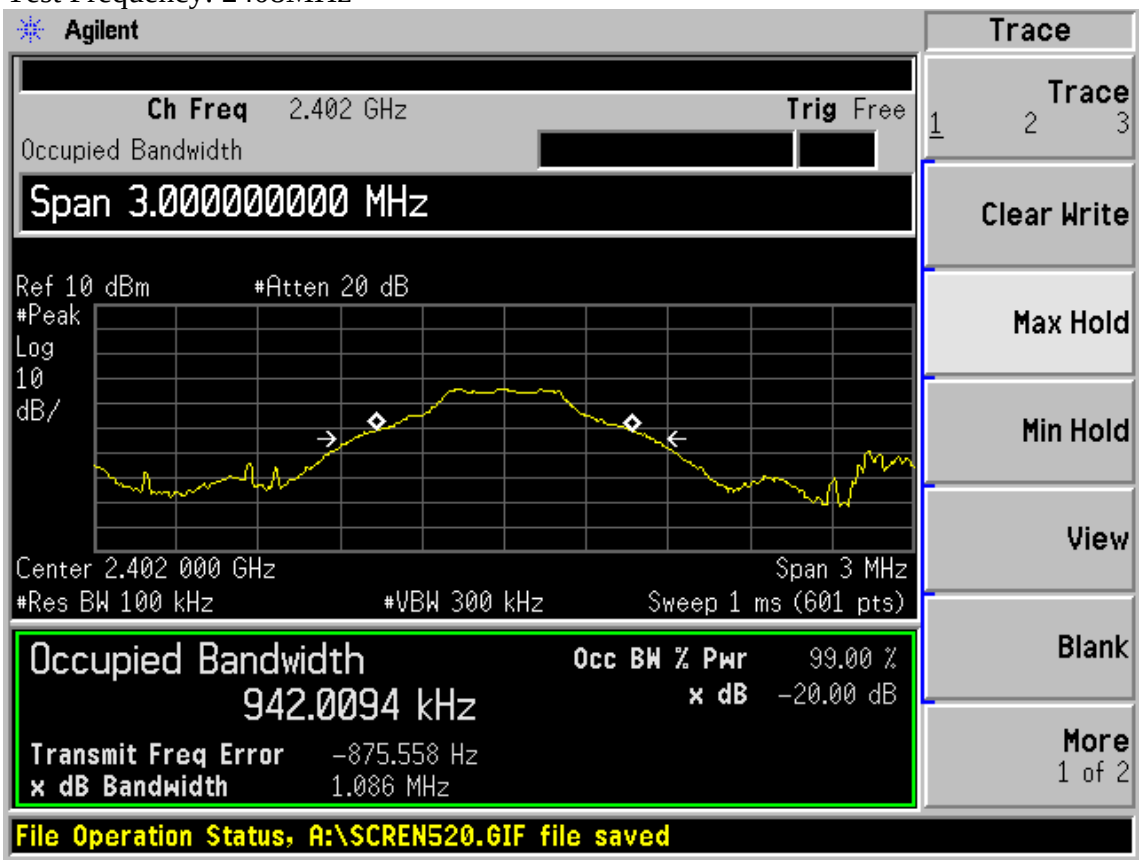
6.2. Limit

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

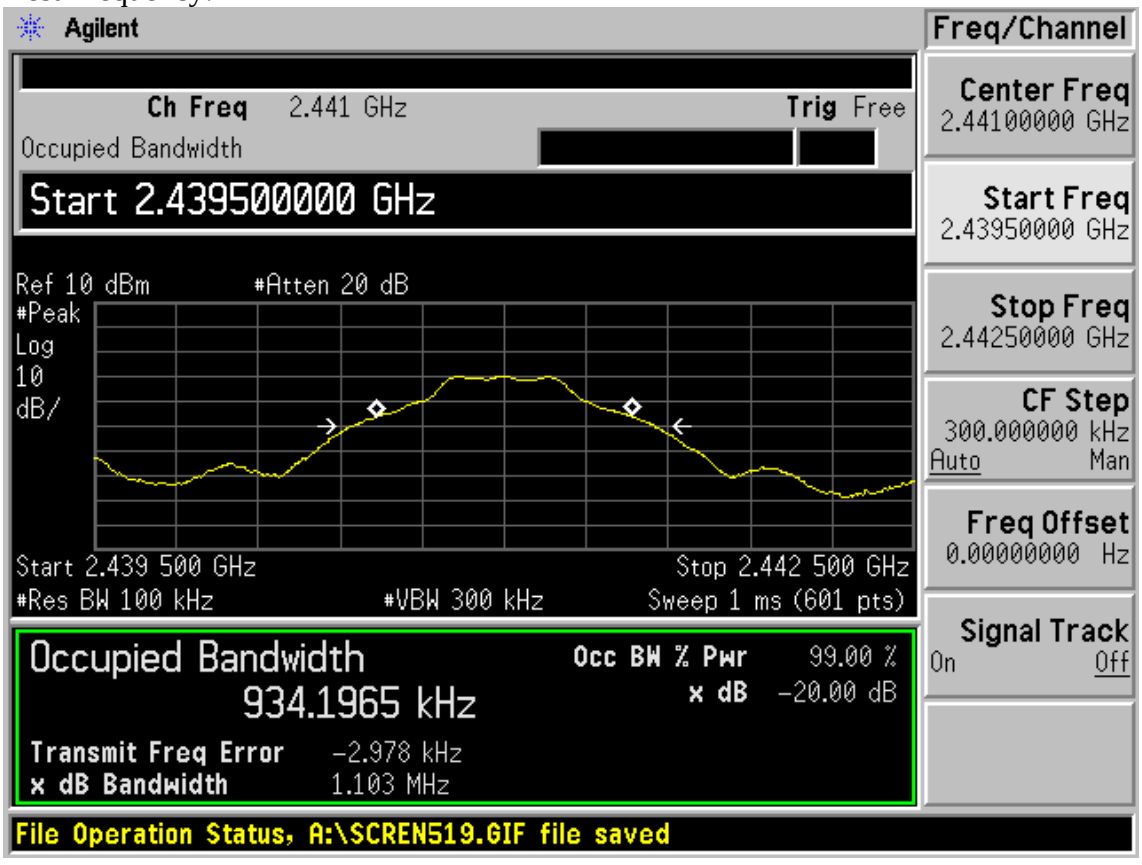
6.3. Test Results

CH	20dB Bandwidth (MHz)	Limit (MHz)	Conclusion
(Low)	1.086	---	PASS
(Mid)	1.103	---	PASS
(High)	1.091	---	PASS

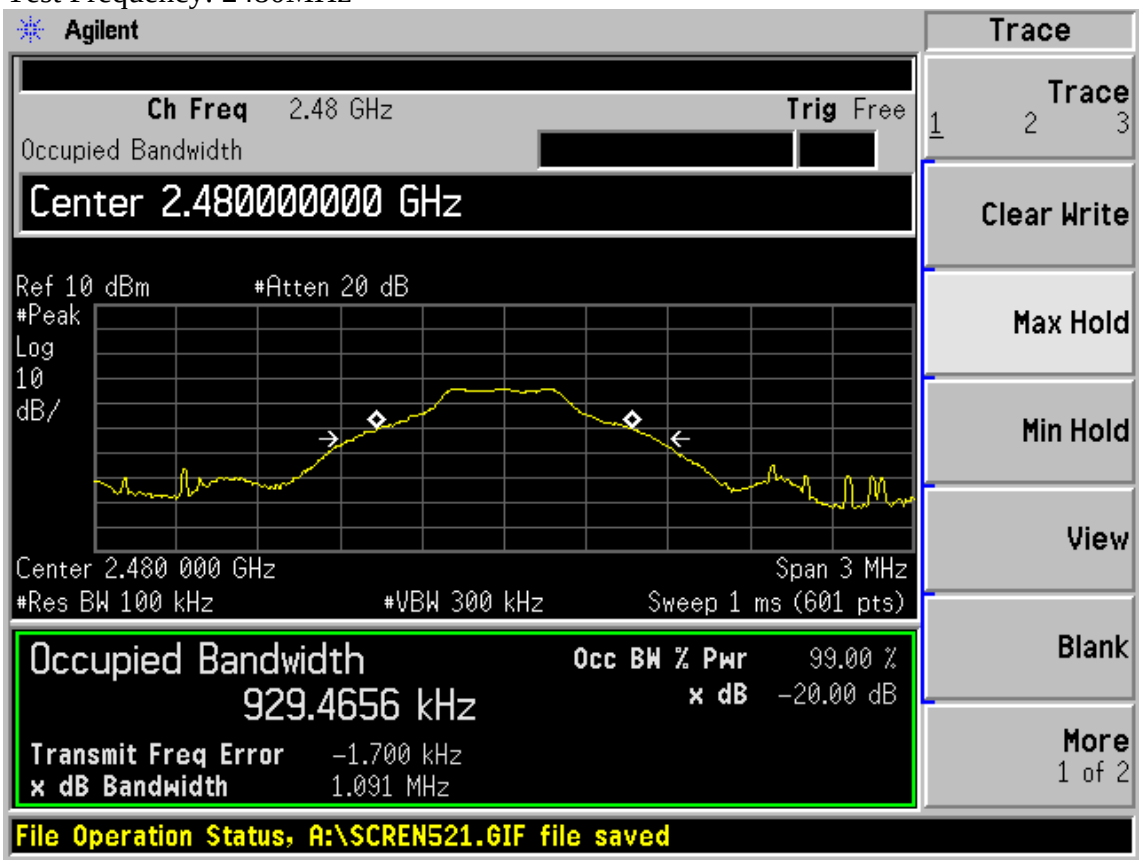
Test Frequency: 2408MHz



Test Frequency: 2441MHz



Test Frequency: 2480MHz



7. NUMBER OF HOPPING FREQUENCY TEST

7.1.Test Equipment

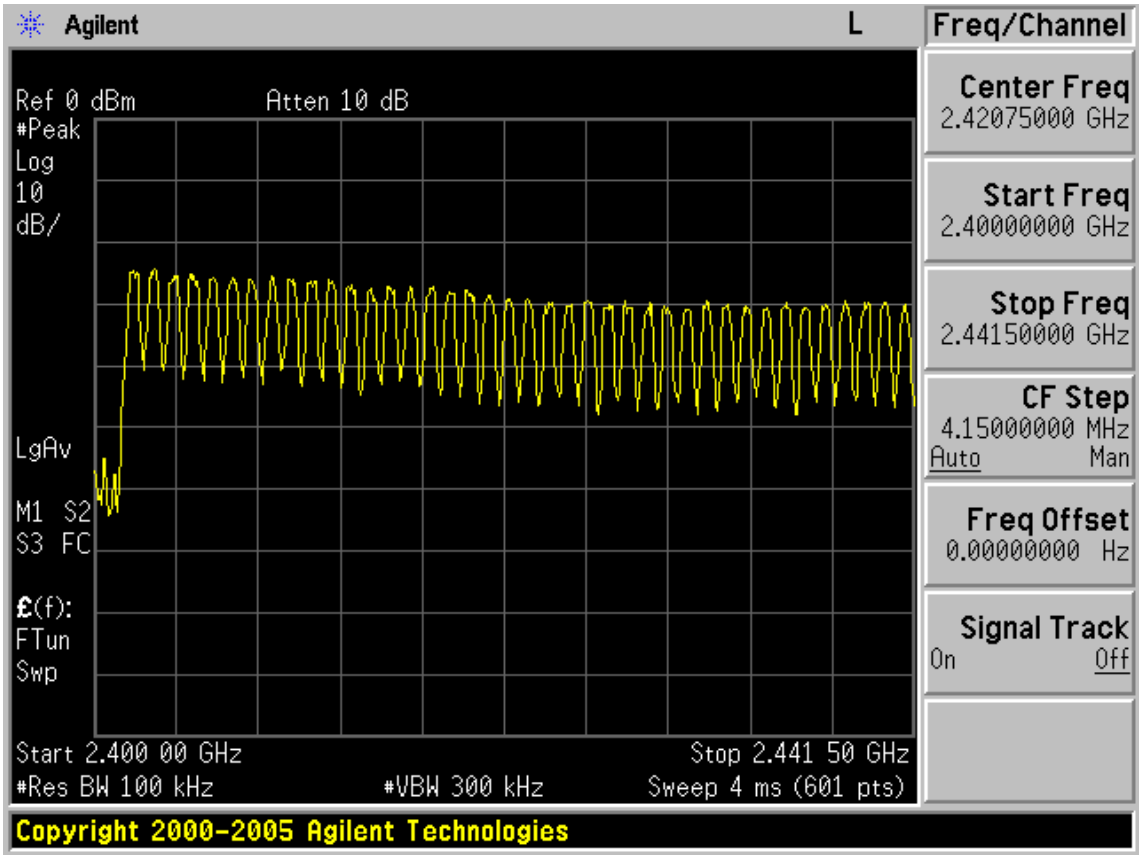
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4446A	US44300459	May,08, 09	1 Year
2	Attenuator	Agilent	8491B	MY39262165	May,08, 09	1 Year
3	RF Cable	Hubersuhner	SUCOFLEX 102	28618/2	May,08, 09	1Year

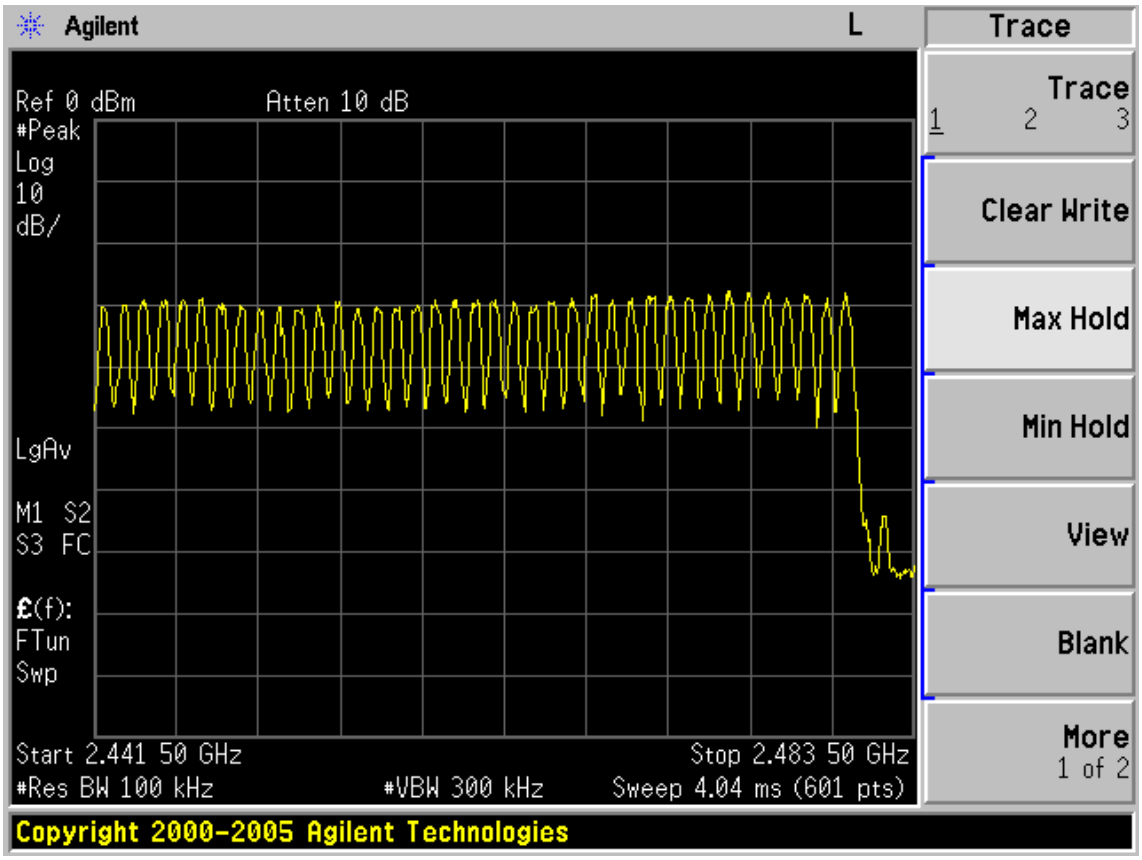
7.2.Limit

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

7.3.Test Results

Number of channel	Limit	Conclusion
79	>=15	PASS


Agilent
L
Freq/Channel
Ref 0 dBm
Atten 10 dB
#Peak
Log
10
dB/
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
2.42075000 GHz
Start Freq
2.40000000 GHz
Stop Freq
2.44150000 GHz
CF Step
4.15000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Start 2.400 00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 2.441 50 GHz
Sweep 4 ms (601 pts)
Copyright 2000-2005 Agilent Technologies


Agilent
L
Trace
Ref 0 dBm
Atten 10 dB
#Peak
Log
10
dB/
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
More
1 of 2
Start 2.441 50 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 2.483 50 GHz
Sweep 4.04 ms (601 pts)
Copyright 2000-2005 Agilent Technologies

8. DWELL TIME

8.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4446A	US44300459	May,08, 09	1 Year
2	Attenuator	Agilent	8491B	MY39262165	May,08, 09	1 Year
3	RF Cable	Hubersuhner	SUCOFLEX 102	28618/2	May,08, 09	1Year

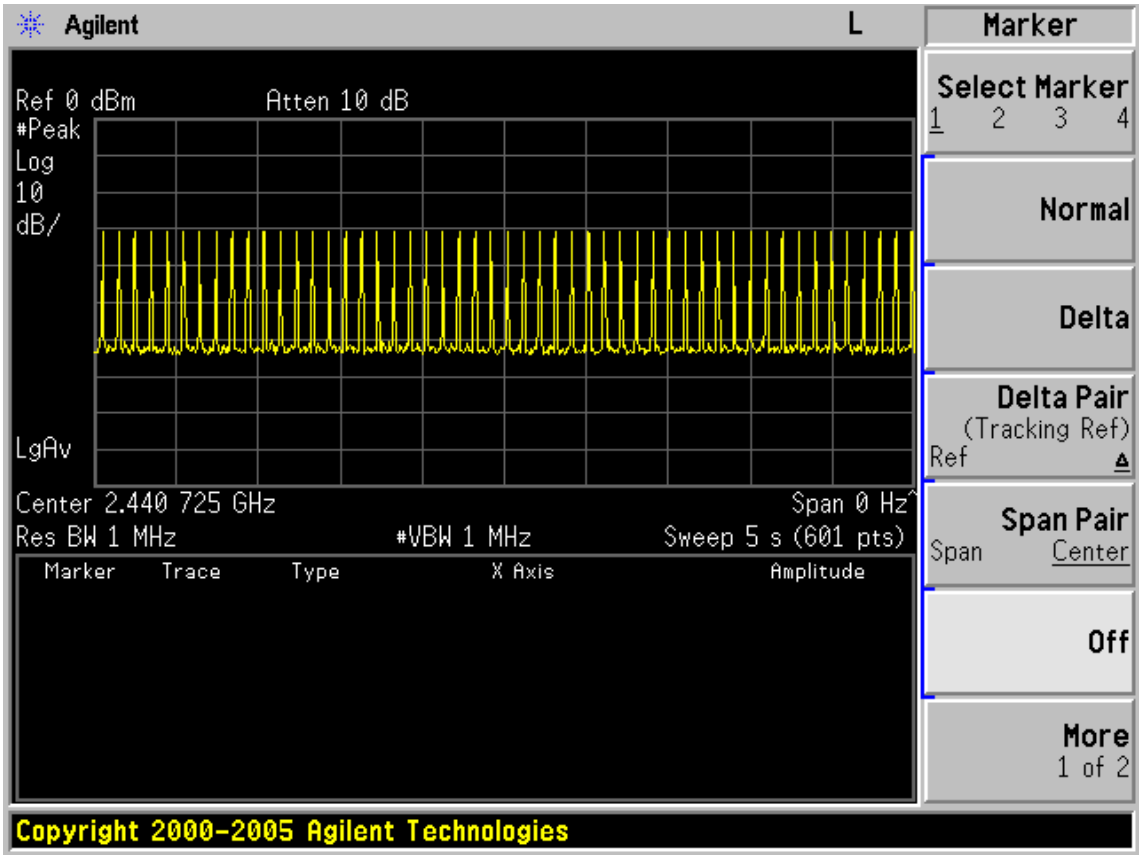
8.2.Limit

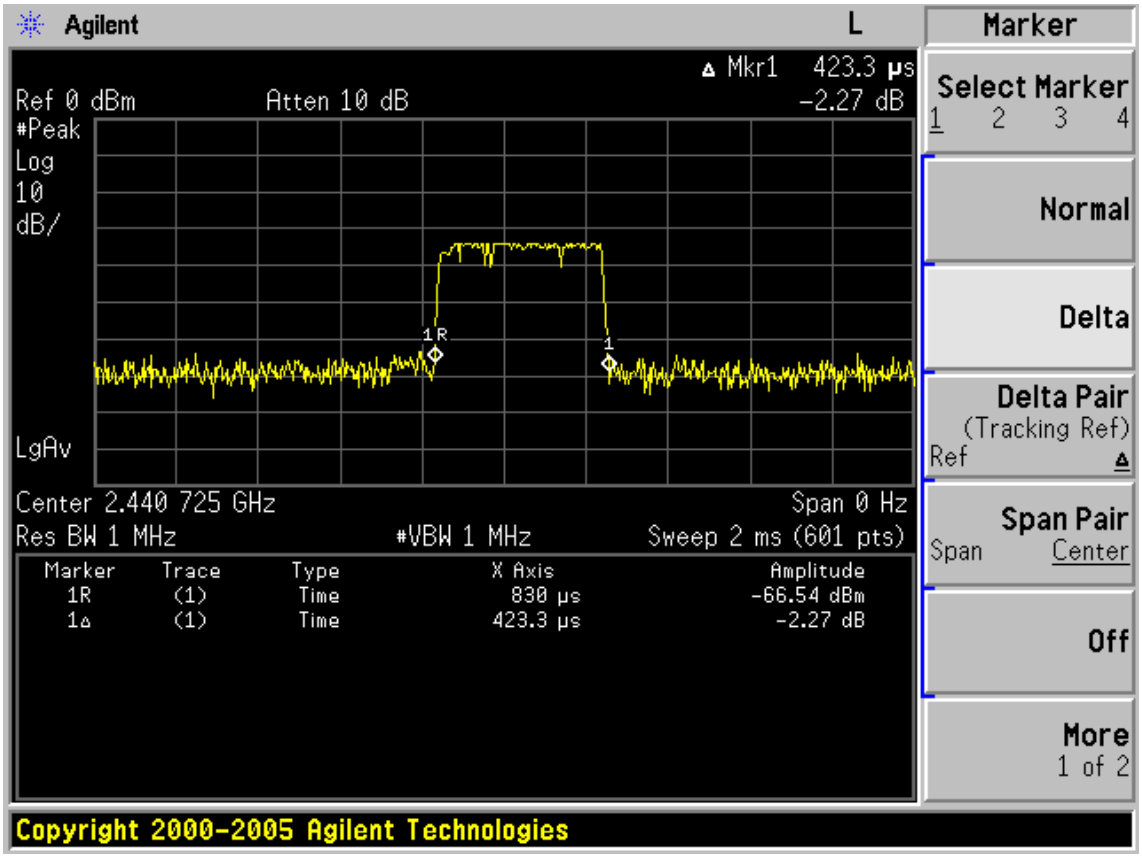
The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

8.3.Test Results

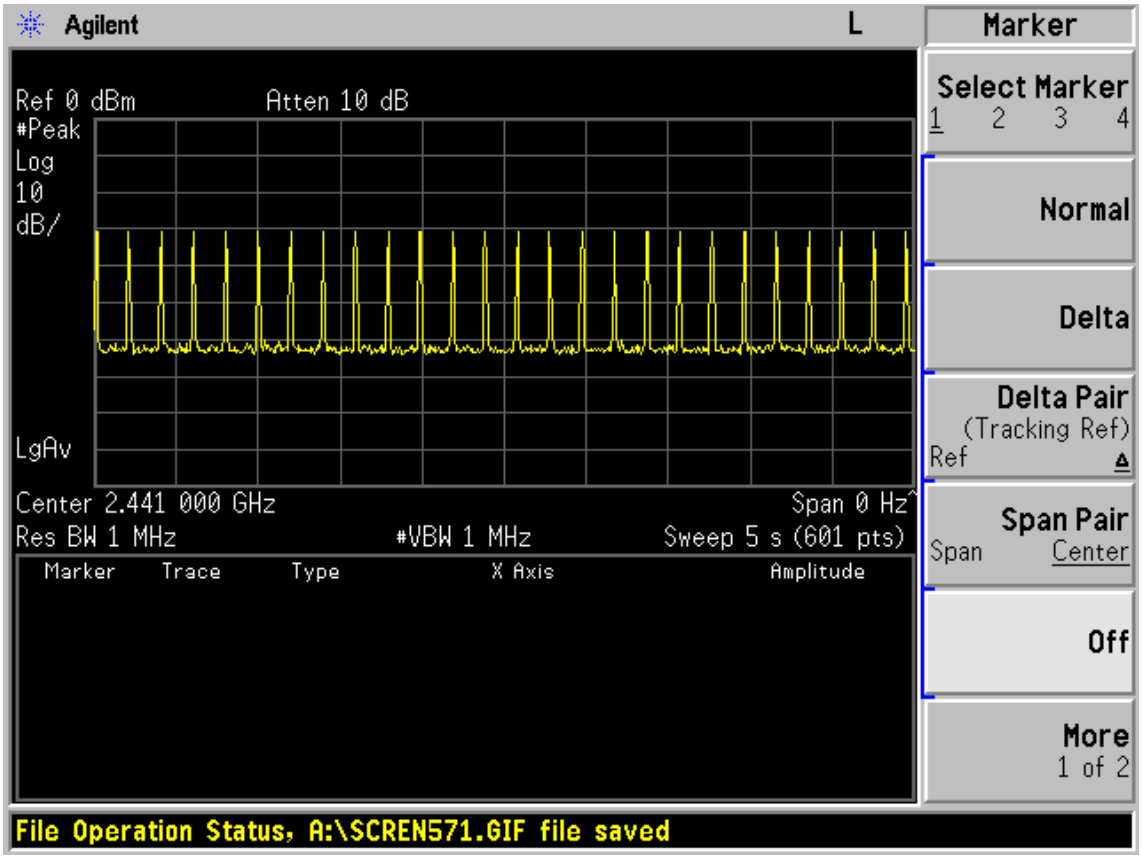
	dwell time	Limit	Conclusion
DH1	51hops/5s*0.4*79chanels*0.4233ms= 136.44ms	<400ms	PASS
DH3	26hops/5s*0.4*79chanels*1.692ms= 278.03ms	<400ms	PASS
DH5	17hops/5s*0.4*79chanels*2.947ms= 316.63ms	<400ms	PASS

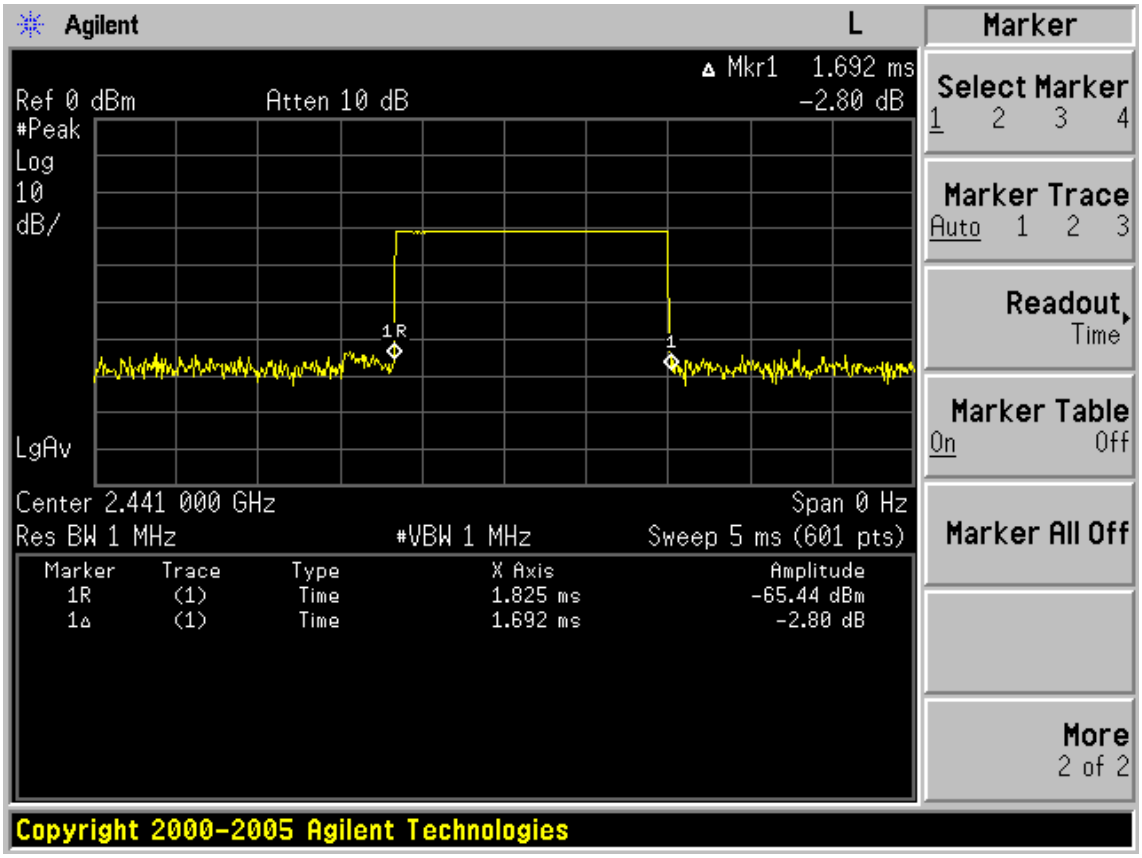
DH1:


Agilent
L
Marker
Ref 0 dBm
Atten 10 dB
#Peak
Log
10
dB/
LgAv
Center 2.440 725 GHz
Span 0 Hz
Res BW 1 MHz
#VBW 1 MHz
Sweep 5 s (601 pts)
Marker Trace Type X Axis Amplitude
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
Copyright 2000-2005 Agilent Technologies


Agilent
L
Marker
Δ Mkr1 423.3 µs
Ref 0 dBm
Atten 10 dB
-2.27 dB
#Peak
Log
10
dB/
1R
1
LgAv
Center 2.440 725 GHz
Span 0 Hz
Res BW 1 MHz
#VBW 1 MHz
Sweep 2 ms (601 pts)
Marker Trace Type X Axis Amplitude
1R (1) Time 830 µs -66.54 dBm
1Δ (1) Time 423.3 µs -2.27 dB
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
Copyright 2000-2005 Agilent Technologies

DH3:


Agilent
L
Marker
Ref 0 dBm
Atten 10 dB
#Peak
Log
10
dB/
LgAv
Center 2.441 000 GHz
Span 0 Hz
Res BW 1 MHz
#VBW 1 MHz
Sweep 5 s (601 pts)
Marker Trace Type X Axis Amplitude
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
File Operation Status, A:\SCREN571.GIF file saved


Agilent
L
Marker
Δ Mkr1 1.692 ms
Ref 0 dBm
Atten 10 dB
-2.80 dB
#Peak
Log
10
dB/
1R
1
LgAv
Center 2.441 000 GHz
Span 0 Hz
Res BW 1 MHz
#VBW 1 MHz
Sweep 5 ms (601 pts)
Marker Trace Type X Axis Amplitude
1R (1) Time 1.825 ms -65.44 dBm
1Δ (1) Time 1.692 ms -2.80 dB
Select Marker
1 2 3 4
Marker Trace
Auto 1 2 3
Readout
Time
Marker Table
On Off
Marker All Off
More
2 of 2
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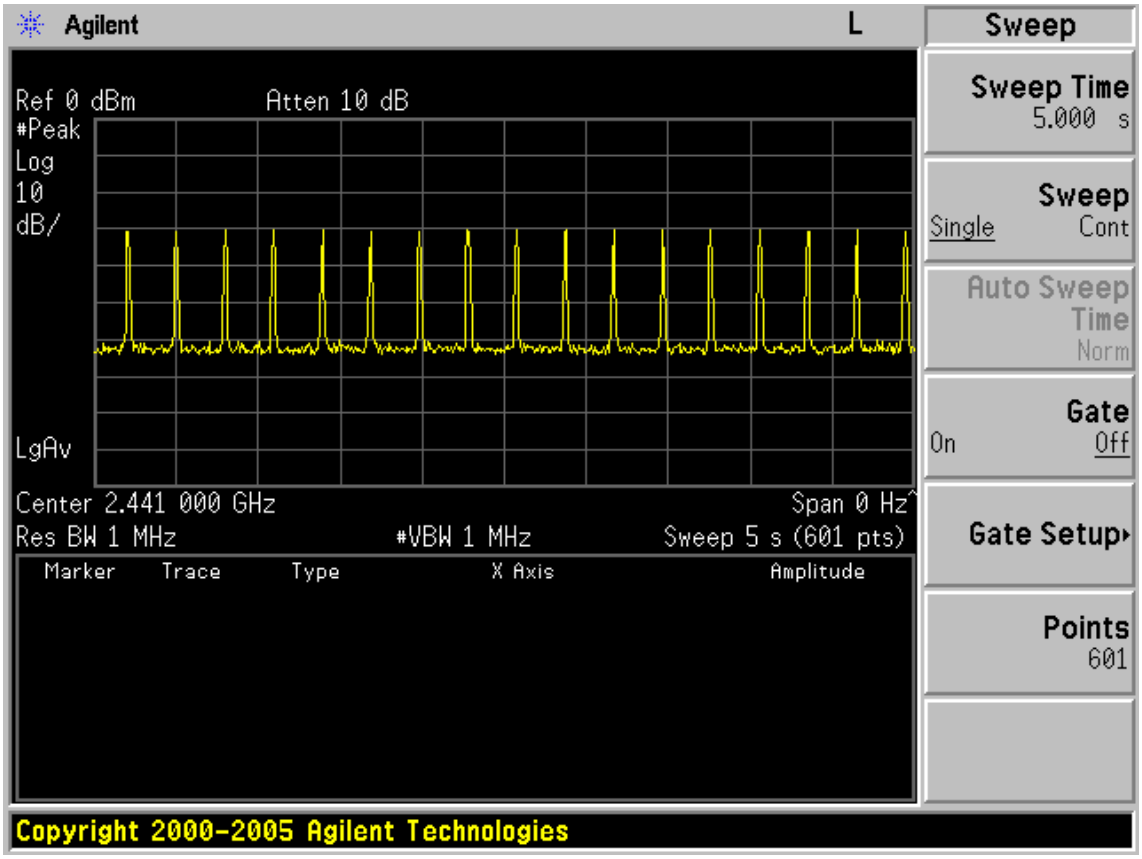
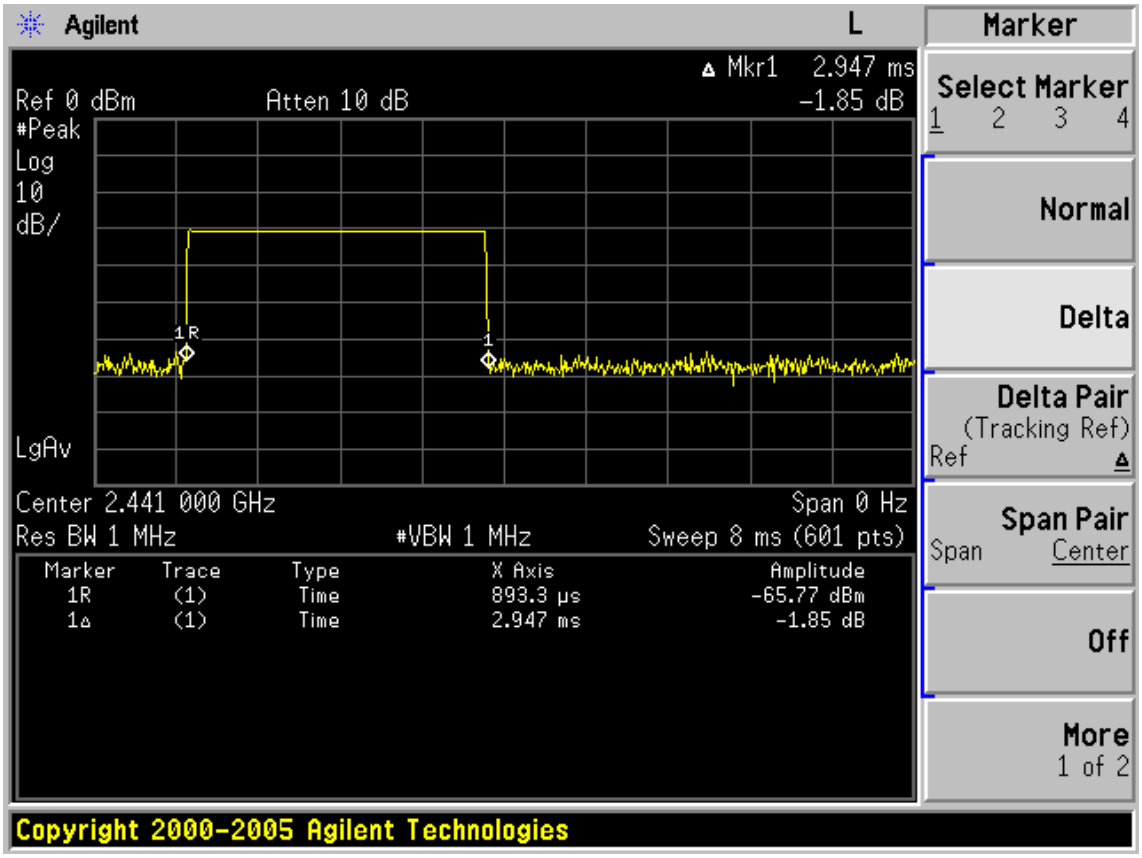
DH5:


Agilent
L
Sweep
Ref 0 dBm
Atten 10 dB
#Peak
Log
10
dB/
LgAv
Sweep Time
5.000 s
Sweep
Single
Cont
Auto Sweep Time
Norm
Gate
On
Off
Gate Setup
Points
601
Center 2.441 000 GHz
Span 0 Hz
Res BW 1 MHz
#VBW 1 MHz
Sweep 5 s (601 pts)
Marker
Trace
Type
X Axis
Amplitude
Copyright 2000-2005 Agilent Technologies


Agilent
L
Marker
Δ Mkr1 2.947 ms
Ref 0 dBm
Atten 10 dB
-1.85 dB
#Peak
Log
10
dB/
1R
1
LgAv
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span
Center
Off
More
1 of 2
Center 2.441 000 GHz
Span 0 Hz
Res BW 1 MHz
#VBW 1 MHz
Sweep 8 ms (601 pts)
Marker
Trace
Type
X Axis
Amplitude
1R
(1)
Time
893.3 µs
-65.77 dBm
1Δ
(1)
Time
2.947 ms
-1.85 dB
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9. MAXIMUM PEAK OUTPUT POWER TEST

9.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08, 09	1 Year
2.	Horn Antenna	EMCO	3115	9607-4877	May. 27, 08	1.5 Year
3.	Horn Antenna	EMCO	3115	9510-4580	May.10, 09	1.5 Year
4.	Signal Generator	HP	83732B	VS3449051	May.08, 09	1 Year
5.	Amplifier	Agilent	8449B	3008A02495	Nov.24.08	1 Year
6.	RF Cable	Hubersuhner	SUCOFLEX 102	28620/2	May.08, 09	1 Year
7.	RF Cable	Hubersuhner	SUCOFLEX 102	271471/4	May.08, 09	1 Year
8.	RF Cable	Hubersuhner	SUCOFLEX 102	29086/2	May.08, 09	1 Year
9.	RF Cable	Hubersuhner	SUCOFLEX 102	271473/4	May.08, 09	1 Year
10.	RF Cable	Hubersuhner	SUCOFLEX 102	29091/2	May.08, 09	1 Year

9.2.Limit

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, the e.i.r.p shall not exceed 4W.

9.3.Test Procedure

(1).The EUT was placed on a 0.8m high table in the chamber and turned on in continuously transmitting mode.

(2).The maximum fundamental emission (E) at 3m distance was measured and recorded with receive antenna in both vertical and horizontal by rotating the turntable and by moved up and down antenna,the test Spectrum Analyzer was set as below

RBW:1MHz (>20dB bandwidth of signal)
VBW:3MHz
Detector: Peak

(3). Calculate the transmitter's peak power using the following equation:

$$P = [(E*D)^2]/(30G)$$

E is the measured maximum fundamental field strength in V/m
G is the numeric gain of the transmitting antenna with reference to an isotropic radiator.
D is the distance in meters from which the field strength was measured.
P is the power in watts

9.4.Test Results

EUT: Bluetooth digital audio player			Test Date: 2009-6-18	
M/N: PD3040XYBT/ZZAA			Test site: RF Chamber	
Power: DC 3.7V			Engineer: Alan Geng	
Test mode: Tx Mode			Temperature/Humidity: 24℃/60%	
Antenna Gain:0dBi				
Freq (MHz)	Maximum fundamental emission (E) at 3m (dBuV/m)	Result (dBm)	Limit (dBm)	Margin (dB)
2402	99.65	4.42	30	25.58
2441	99.75	4.52	30	25.48
2480	99.78	4.55	30	25.45
Conclusion: PASS				

10.BAND EDGE COMPLIANCE TEST

10.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4446A	US44300459	May,08, 09	1 Year
2	Horn Antenna	EMCO	3115	9607-4877	May, 27, 08	1.5 Year
3	Amplifier	Agilent	8449B	3008A02495	Nov. 24.08	1 Year
4	RF Cable	Hubersuhner	SUCOFLEX 102	28620/2	May,08, 09	1 Year
5	RF Cable	Hubersuhner	SUCOFLEX 102	271471/4	May,08, 09	1 Year
6	RF Cable	Hubersuhner	SUCOFLEX 102	29086/2	May,08, 09	1 Year

10.2.Limit

All the lower and upper band-edges emissions appearing within 2310MHz to 2390MHz and 2483.5MHz to 2500MHz restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation frequency band 2400MHz to 2483.5MHz shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

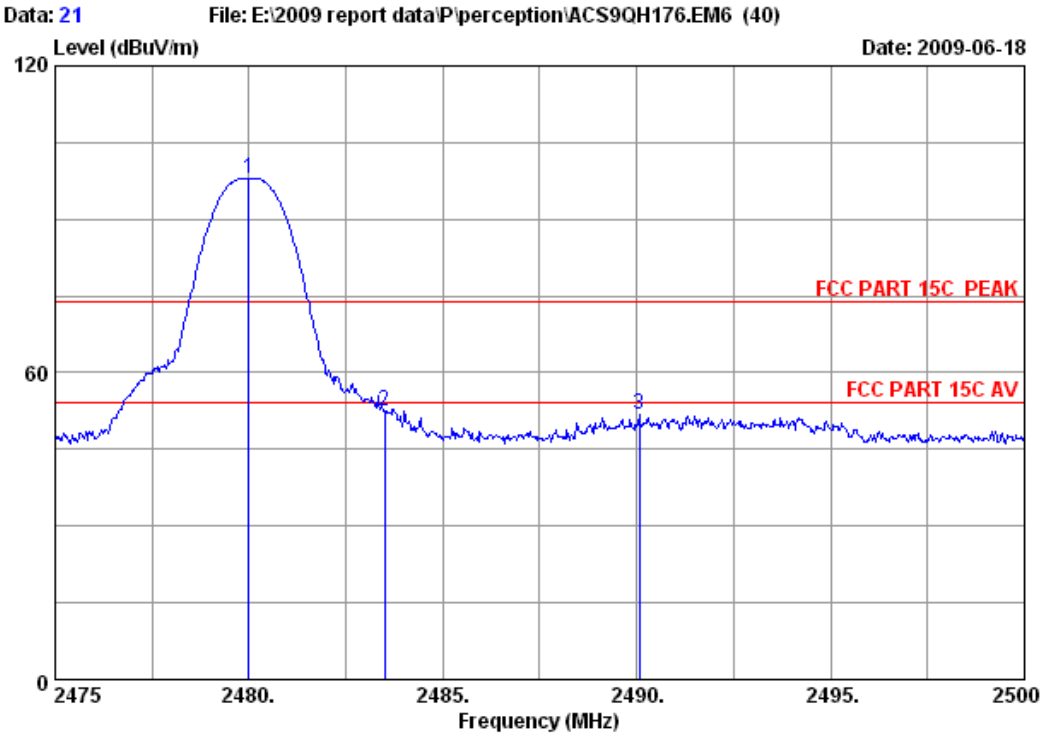
10.3.Test Produce

1. The EUT is placed on a turntable, which is 0.8m above the ground plane and worked at highest radiated power.
2. The turntable was rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.
4. Set the spectrum analyzer in the following setting in order to capture the lower and upperband-edges of the emission:
   (a) PEAK: RBW=VBW=1MHz / Sweep=AUTO
   (b) AVERAGE: RBW=1MHz / VBW=10Hz / Sweep=AUTO

10.4.Test Results

Pass (The testing data was attached in the next pages.)

No.6 Ke Feng Road,Block 52,
ShenZhen Science & Industry Park
Noutou,ShenZhen,GuangDong,China
Tel:+86-755-26639495-7
Fax:+86-755-26632877
Postcode:518057



Site no. : 3m Chamber Data no. : 21
Dis. / Ant. : 3m 3115 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Alan Geng
EUT : Bluetooth digital audio player
Power : DC 3.7V
Test mode : Tx-2480MHz-bandege
M/N : PD3040XYBT/ZZAA

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2480.000	28.58	6.87	35.10	97.53	97.88	74.00	-23.88	Peak
2	2483.500	28.58	6.87	35.10	52.29	52.64	74.00	21.36	Peak
3	2490.075	28.60	6.91	35.10	51.26	51.67	74.00	22.33	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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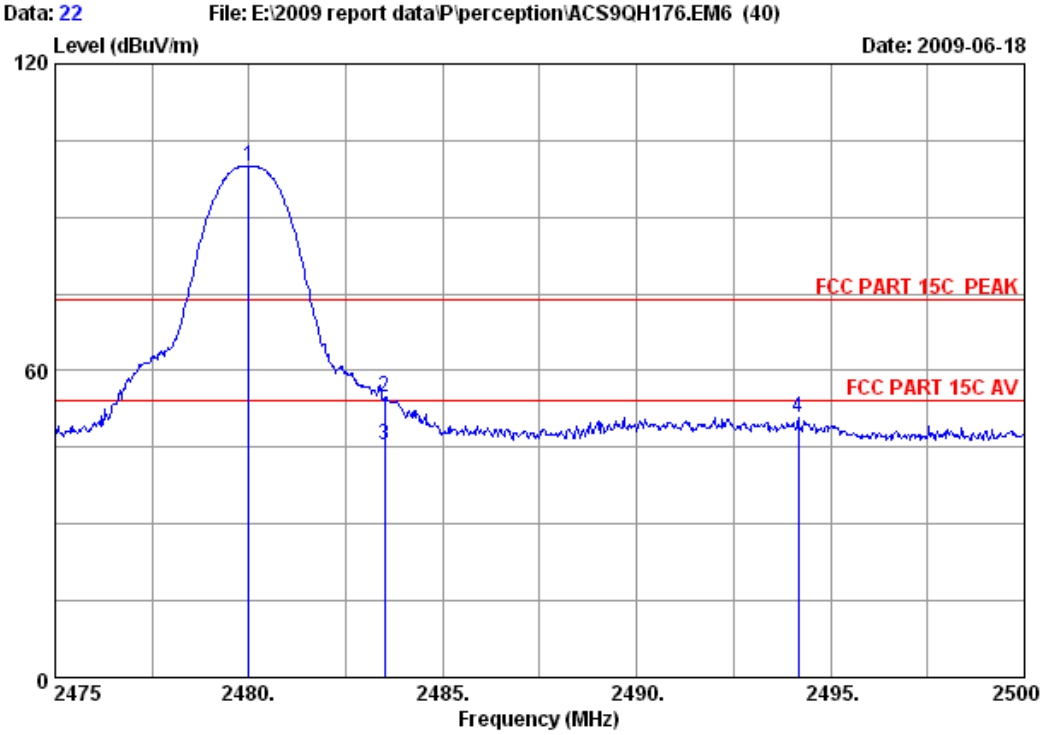

Site no. : 3m Chamber Data no. : 22
Dis. / Ant. : 3m 3115 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Alan Geng
EUT : Bluetooth digital audio player
Power : DC 3.7V
Test mode : Tx-2480MHz-bandege
M/N : PD3040XYBT/ZZAA

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2480.000	28.58	6.87	35.10	99.46	99.81	74.00	-25.81	Peak
2	2483.500	28.58	6.87	35.10	54.57	54.92	74.00	19.08	Peak
3	2483.500	28.58	6.87	35.10	45.27	45.62	74.00	28.38	Average
4	2494.175	28.60	6.91	35.10	50.38	50.79	74.00	23.21	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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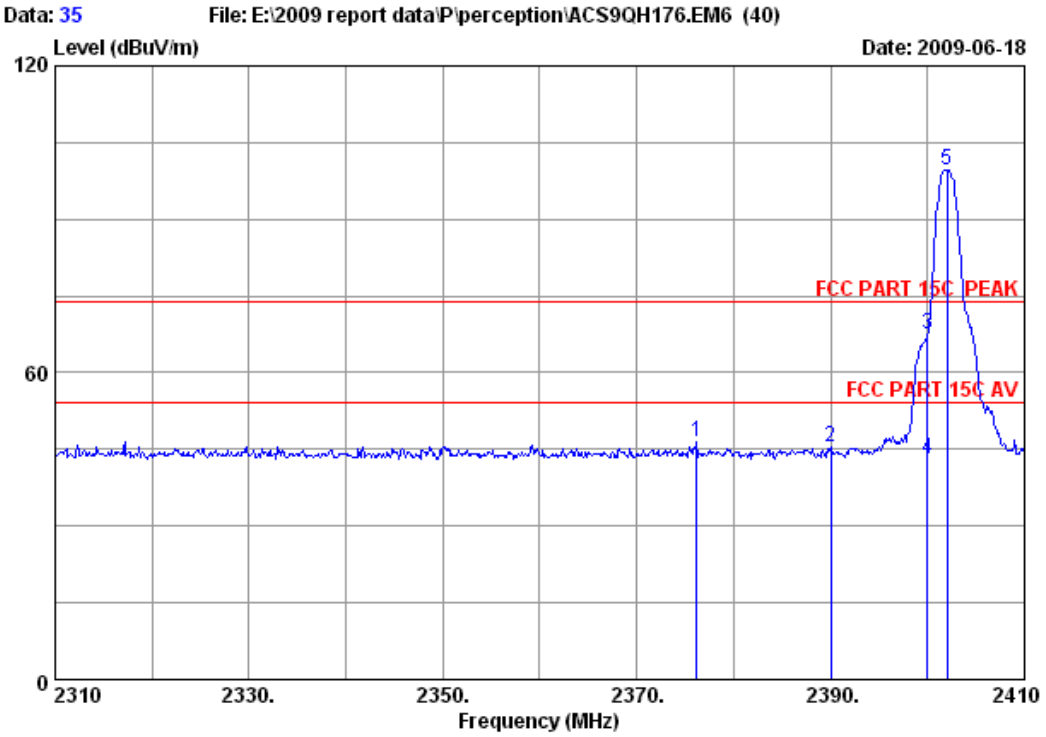

Site no. : 3m Chamber Data no. : 35
Dis. / Ant. : 3m 3115 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Alan Geng
EUT : Bluetooth digital audio player
Power : DC 3.7V
Test mode : Tx-2402MHz-bandege
M/N : PD3040XYBT/ZZAA

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2376.200	28.43	6.71	35.12	46.38	46.40	74.00	27.60	Peak
2	2390.000	28.46	6.71	35.12	45.28	45.33	74.00	28.67	Peak
3	2400.000	28.46	6.73	35.12	67.35	67.42	74.00	6.58	Peak
4	2400.000	28.46	6.73	35.12	43.00	43.07	54.00	10.93	Average
5	2402.000	28.46	6.73	35.12	99.59	99.66	74.00	-25.66	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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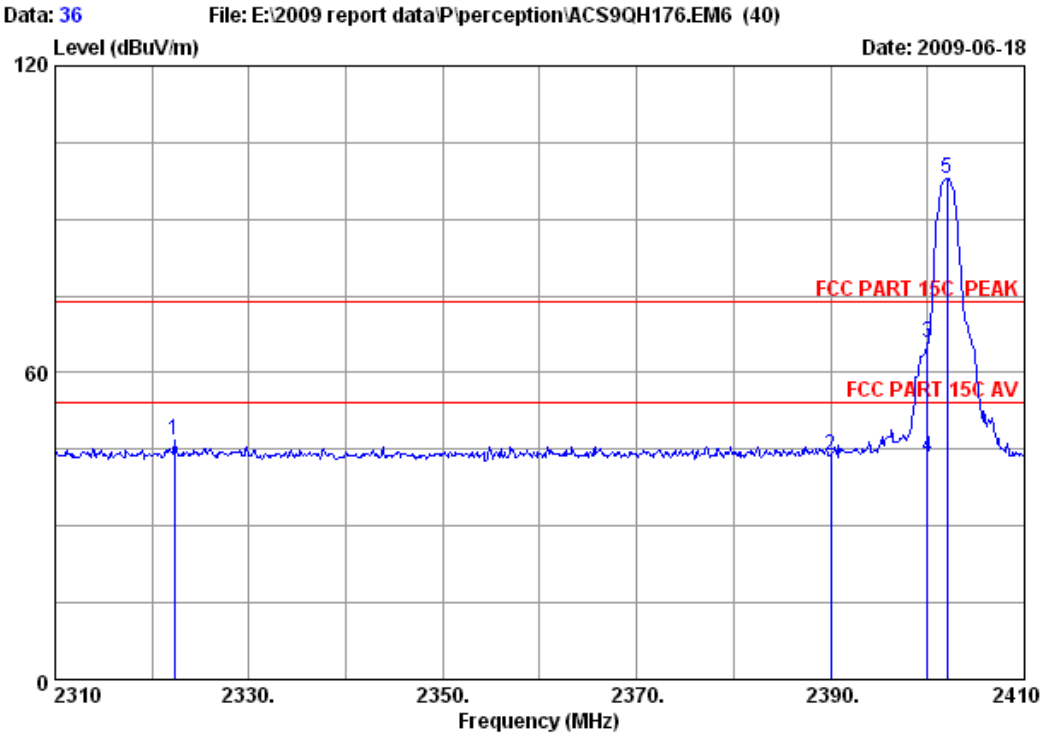

Site no. : 3m Chamber Data no. : 36
Dis. / Ant. : 3m 3115 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Alan Geng
EUT : Bluetooth digital audio player
Power : DC 3.7V
Test mode : Tx-2402MHz-bandege
M/N : PD3040XYBT/ZZAA

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2322.300	28.36	6.65	35.13	46.82	46.70	74.00	27.30	Peak
2	2390.000	28.46	6.71	35.12	43.64	43.69	74.00	30.31	Peak
3	2400.000	28.46	6.73	35.12	65.73	65.80	74.00	8.20	Peak
4	2400.000	28.46	6.73	35.12	43.26	43.33	54.00	10.67	Average
5	2402.000	28.46	6.73	35.12	97.73	97.80	74.00	-23.80	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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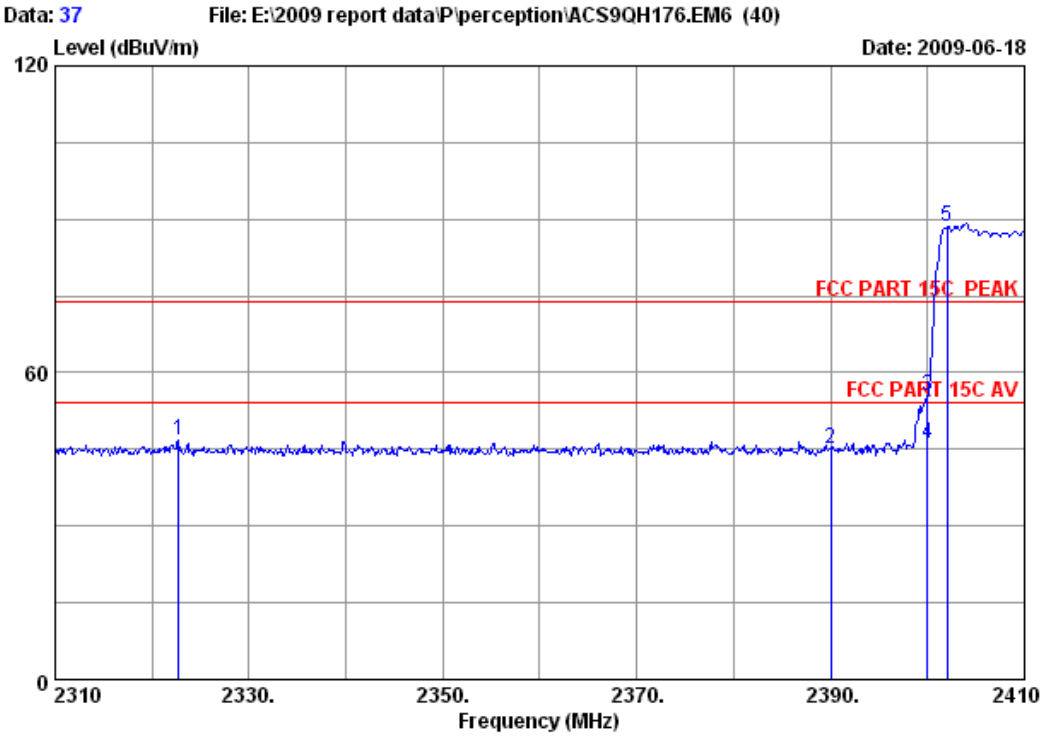

Site no. : 3m Chamber Data no. : 37
Dis. / Ant. : 3m 3115 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Alan Geng
EUT : Bluetooth digital audio player
Power : DC 3.7V
Test mode : Hopping bandege
M/N : PD3040XYBT/ZZAA

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2322.700	28.36	6.65	35.13	46.82	46.70	74.00	27.30	Peak
2	2390.000	28.46	6.71	35.12	45.19	45.24	74.00	28.76	Peak
3	2400.000	28.46	6.73	35.12	55.48	55.55	74.00	18.45	Peak
4	2400.000	28.46	6.73	35.12	46.18	46.25	54.00	7.75	Average
5	2402.000	28.46	6.73	35.12	88.35	88.42	74.00	-14.42	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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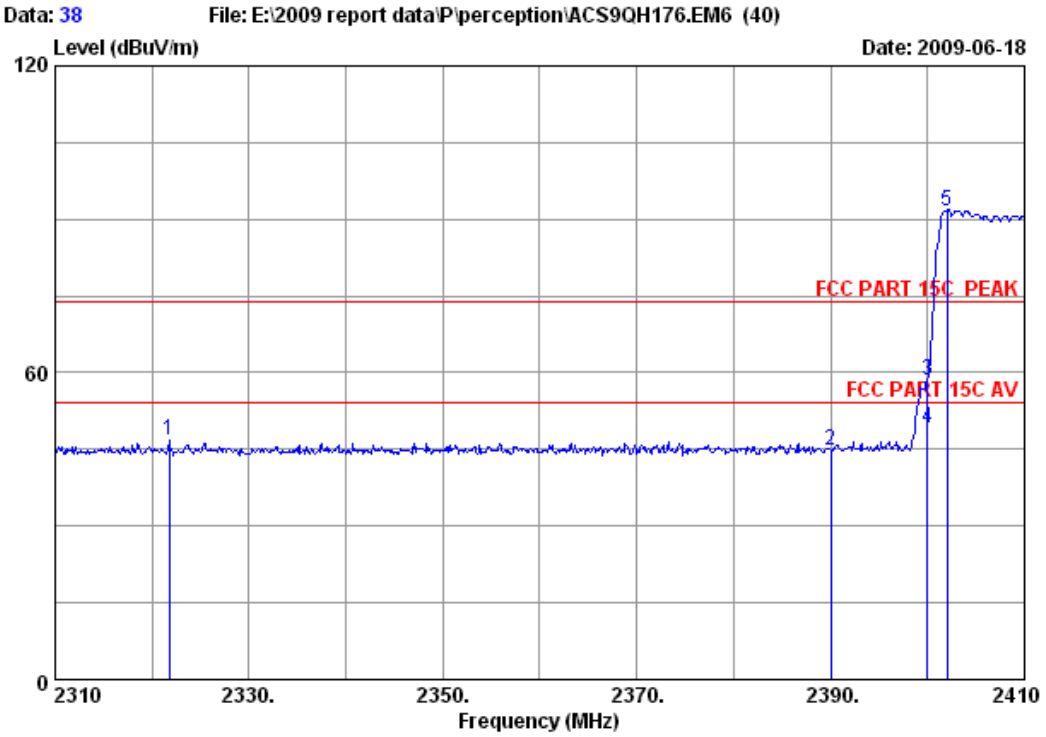

Site no. : 3m Chamber Data no. : 38
Dis. / Ant. : 3m 3115 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Alan Geng
EUT : Bluetooth digital audio player
Power : DC 3.7V
Test mode : Hopping bandege
M/N : PD3040XYBT/ZZAA

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2321.800	28.36	6.65	35.13	47.08	46.96	74.00	27.04	Peak
2	2390.000	28.46	6.71	35.12	44.78	44.83	74.00	29.17	Peak
3	2400.000	28.46	6.73	35.12	58.47	58.54	74.00	15.46	Peak
4	2400.000	28.46	6.73	35.12	49.17	49.24	54.00	4.76	Average
5	2402.000	28.46	6.73	35.12	91.68	91.75	74.00	-17.75	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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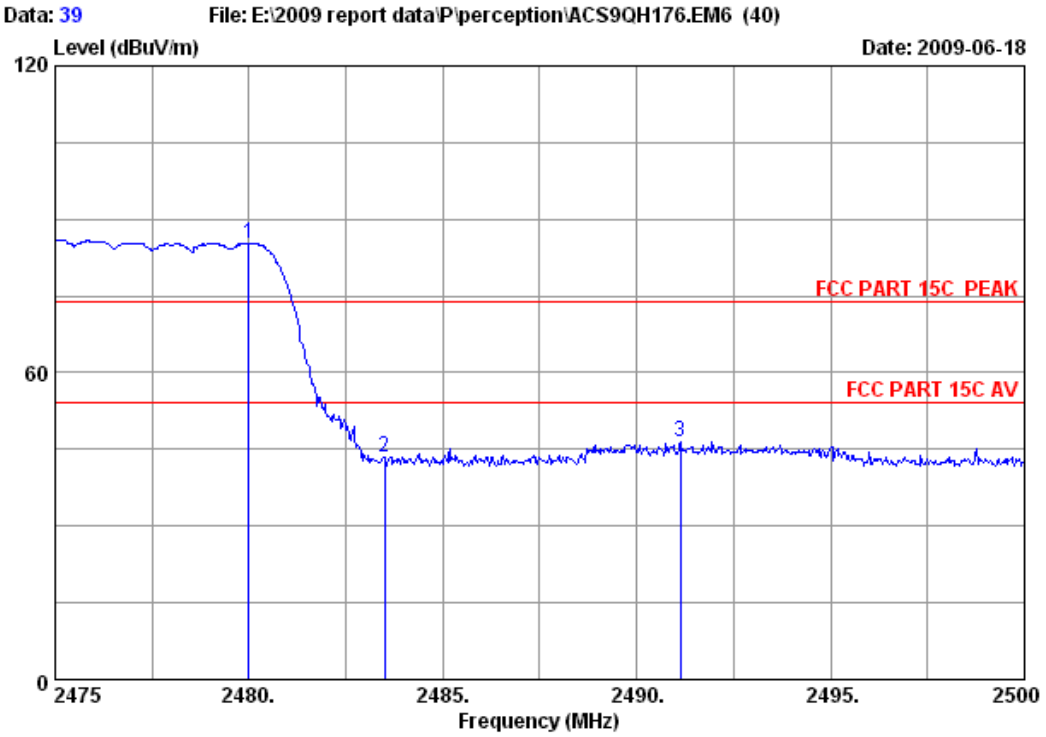

Site no. : 3m Chamber Data no. : 39
Dis. / Ant. : 3m 3115 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Alan Geng
EUT : Bluetooth digital audio player
Power : DC 3.7V
Test mode : Hopping bandege
M/N : PD3040XYBT/ZZAA

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2480.000	28.58	6.87	35.10	84.89	85.24	74.00	-11.24	Peak
2	2483.500	28.58	6.87	35.10	43.06	43.41	74.00	30.59	Peak
3	2491.125	28.60	6.91	35.10	45.91	46.32	74.00	27.68	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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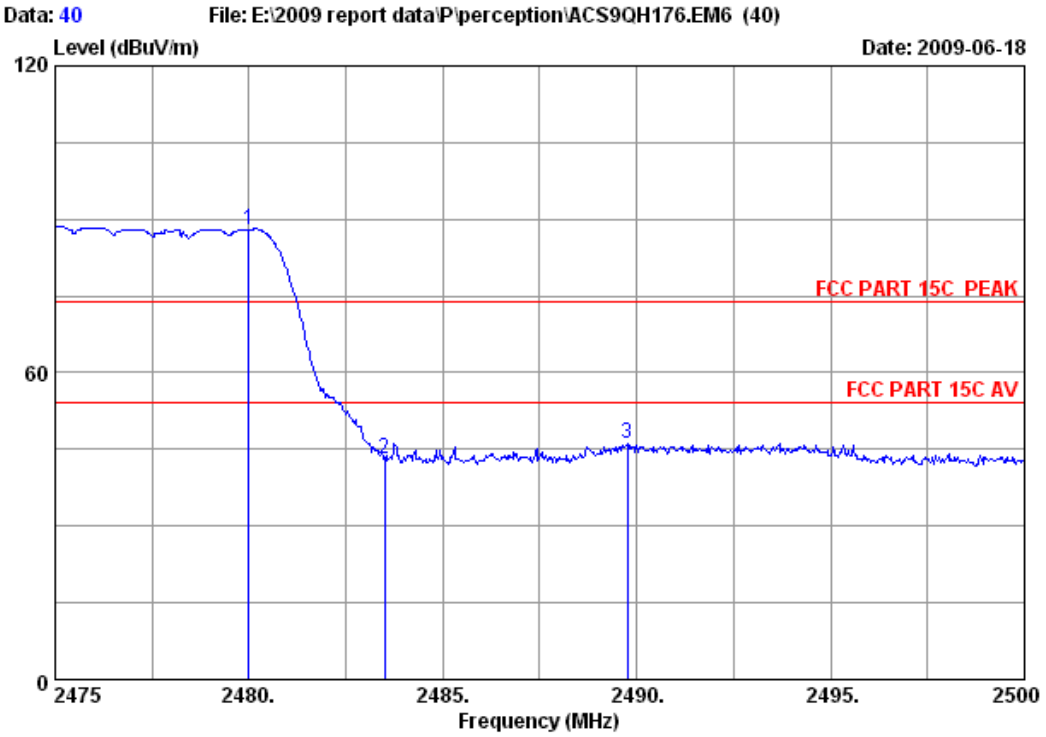

Site no. : 3m Chamber Data no. : 40
Dis. / Ant. : 3m 3115 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Alan Geng
EUT : Bluetooth digital audio player
Power : DC 3.7V
Test mode : Hopping bandege
M/N : PD3040XYBT/ZZAA

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dbuv)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2480.000	28.58	6.87	35.10	87.65	88.00	74.00	-14.00	Peak
2	2483.500	28.58	6.87	35.10	42.79	43.14	74.00	30.86	Peak
3	2489.750	28.60	6.91	35.10	45.70	46.11	74.00	27.89	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

11. ANTENNA REQUIREMENT

11.1 STANDARD APPLICABLE

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), 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 ANTENNA CONNECTED CONSTRUCTION

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

12.DEVIATION TO TEST SPECIFICATIONS

[NONE]