



**SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch**

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Report No.: SZEM150600342201
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FCC REPORT

Application No: SZEM1506003422CR
Applicant: Edifier International Limited
Manufacturer: DongGuan Edifier Technology Co., Ltd.
Factory: SMSC Singapore
Product Name: 5.8G Wireless Audio Transceiver/Receiver Module
Model No.(EUT): DWHP83
Trade Mark: EDIFIER
FCC ID: Z9G-EDF24
Standards: 47 CFR Part 15, Subpart E (2014)
Date of Receipt: 2015-06-15
Date of Test: 2015-06-19 to 2015-07-07
Date of Issue: 2015-07-08

Test Result:	PASS *
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. * In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Jack Zhang
EMC Laboratory Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

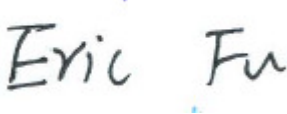


The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. All test results in this report can be traceable to National or International Standards.

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2 Version

Revision Record				
Version	Chapter	Date	Modifier	Remark
00		2015-07-08		Original

Authorized for issue by:				
				
				2015-07-07
Tested By		(Eric Fu) /Project Engineer		Date
				
				2015-07-08
Prepared By		(Hedy Wen) /Clerk		Date
				
				2015-07-08
Checked By		(Owen Zhou) /Reviewer		Date



3 Test Summary

Test Item	Test Requirement	Test method	Result
Antenna Requirement	47 CFR Part 15 Section 15.203	ANSI C63.10 2009	PASS
AC Power Line Conducted Emission	47 CFR Part 15 Section 15.207	ANSI C63.10 2009	PASS
Duty Cycle	FCC KDB 789033 D02 General UNIT Test Procedures New Rules v01	ANSI C63.10 2009	--
Conducted Peak Output Power	47 CFR Part 15 Section 15.407(a)	FCC KDB 789033 D02 General UNIT Test Procedures New Rules v01	PASS
6dB Occupied Bandwidth	47 CFR Part 15 Section 15.407(a)	FCC KDB 789033 D02 General UNIT Test Procedures New Rules v01	PASS
26 dB Emission Bandwidth & 99% Occupied Bandwidth	47 CFR Part 15 Section 15.407(a)	FCC KDB 789033 D02 General UNIT Test Procedures New Rules v01	PASS
Power Spectral Density	47 CFR Part 15 Section 15.407(a)	FCC KDB 789033 D02 General UNIT Test Procedures New Rules v01	PASS
Radiated Spurious Emissions	47 CFR Part 15 Section 15.407(a)	FCC KDB 789033 D02 General UNIT Test Procedures New Rules v01	PASS
Restricted bands around fundamental frequency (Radiated Emission)	47 CFR Part 15 Section 15.407(b)	FCC KDB 789033 D02 General UNIT Test Procedures New Rules v01	PASS



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5 General Information

5.1 Client Information

Applicant:	Edifier International Limited
Address of Applicant:	Room 2207-9 Tower Two, Lippo Centre, 89 Queensway, HongKong -- -- China
Manufacturer:	DongGuan Edifier Technology Co., Ltd.
Address of Manufacturer:	No.2 Gongyedong Road, Songshan Lake Sci&Tech Industry Park, Dongguan, Guangdong 523808, PR.China.
Factory:	SMSC Singapore
Address of Factory:	No.2 Gongyedong Road, Songshan Lake Sci&Tech Industry Park, Dongguan, Guangdong 523808, PR.China

5.2 General Description of EUT

Product Name:	5.8G Wireless Audio Transceiver/Receiver Module
Model No.:	DWHP83
Trade Mark:	EDIFIER
Operation Frequency:	5725MHz to 5850MHz
Type of Modulation:	QPSK
Sample Type:	Portable production
Antenna Type:	Integral
Antenna Gain:	3.2dBi
DC Cable:	150cm (unshielded)
Number of Transmitter Chains:	2 (Only 'one' antenna is selected for use at any one time)
Supply Voltage:	DC 3.3V
Adapter:	Model: ADT-12120CH Input: AC 100-240~ 50/60Hz 0.7A Output: DC 12V = 1A

Channel Frequency (dynamic or fixed allocation)			
Channel	1	2	3
Frequency	5736MHz	5762MHz	5814MHz



5.3 Test Environment and Mode

Operating Environment:	
Temperature:	25.0 °C
Humidity:	52 % RH
Atmospheric Pressure:	1005 mbar
Test mode:	
Transmitting mode:	Keep the EUT in transmitting mode with all kind of modulation and all kind of data rate.

5.4 Description of Support Units

The EUT has been tested independent unit.

5.5 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch E&E Lab,
No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, Guangdong, China.
518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.



5.6 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **CNAS (No. CNAS L2929)**

CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

- **VCCI**

The 10m Semi-anechoic chamber and Shielded Room (7.5m x 4.0m x 3.0m) of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-823, R-4188, T-1153 and C-2383 respectively.

- **FCC – Registration No.: 556682**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 556682.

- **Industry Canada (IC)**

Two 3m Semi-anechoic chambers of SGS-CSTC Standards Technical Services Co., Ltd. have been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 4620C-2.

5.7 Deviation from Standards

None.

5.8 Abnormalities from Standard Conditions

None.

5.9 Other Information Requested by the Customer

None.





5.10 Equipment List

Conducted Emission					
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Due date (yyyy-mm-dd)
1	Shielding Room	ZhongYu Electron	GB-88	SEL0042	2016-05-13
2	LISN	Rohde & Schwarz	ENV216	SEL0152	2015-10-24
3	LISN	ETS-LINDGREN	3816/2	SEL0021	2016-05-13
4	8 Line ISN	Fischer Custom Communications Inc.	FCC-TLISN-T8-02	SEL0162	2015-08-30
5	4 Line ISN	Fischer Custom Communications Inc.	FCC-TLISN-T4-02	SEL0163	2015-08-30
6	2 Line ISN	Fischer Custom Communications Inc.	FCC-TLISN-T2-02	SEL0164	2015-08-30
7	EMI Test Receiver	Rohde & Schwarz	ESCI	SEL0022	2016-05-13
8	Coaxial Cable	SGS	N/A	SEL0025	2016-05-13
9	DC Power Supply	Zhao Xin	RXN-305D	SEL0117	2015-10-24
10	Humidity/ Temperature Indicator	Shanghai Qixiang	ZJ1-2B	SEL0103	2015-10-24
11	Barometer	Chang Chun	DYM3	SEL0088	2016-05-13



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RE in Chamber					
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Due date (yyyy-mm-dd)
1	3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEL0017	2016-05-13
2	EMI Test Receiver	Agilent Technologies	N9038A	SEL0312	2015-09-16
3	EMI Test software	AUDIX	E3	SEL0050	N/A
4	BiConiLog Antenna (26-3000MHz)	ETS-LINDGREN	3142C	SEL0015	2015-10-24
5	Double-ridged horn (1-18GHz)	ETS-LINDGREN	3117	SEL0006	2015-10-24
6	Horn Antenna (18-26GHz)	ETS-LINDGREN	3160	SEL0076	2015-10-24
7	Pre-amplifier (0.1-1300MHz)	Agilent Technologies	8447D	SEL0053	2016-05-13
8	Pre-Amplifier (0.1-26.5GHz)	Compliance Directions Systems Inc.	PAP-0126	SEL0168	2015-10-24
9	Coaxial cable	SGS	N/A	SEL0027	2016-05-13
10	Coaxial cable	SGS	N/A	SEL0189	2016-05-13
11	Coaxial cable	SGS	N/A	SEL0121	2016-05-13
12	Coaxial cable	SGS	N/A	SEL0178	2016-05-13
13	Band filter	Amindeon	82346	SEL0094	2016-05-13
14	Barometer	Chang Chun	DYM3	SEL0088	2016-05-13
15	DC Power Supply	Zhao Xin	RXN-305D	SEL0117	2015-10-24
16	Humidity/ Temperature Indicator	Shanghai Qixiang	ZJ1-2B	SEL0103	2015-10-24
17	Signal Generator (10M-27GHz)	Rohde & Schwarz	SMR27	SEL0067	2016-05-13
18	Signal Generator	Rohde & Schwarz	SMY01	SEL0155	2015-10-24
19	Loop Antenna	Beijing Daze	ZN30401	SEL0203	2016-05-13

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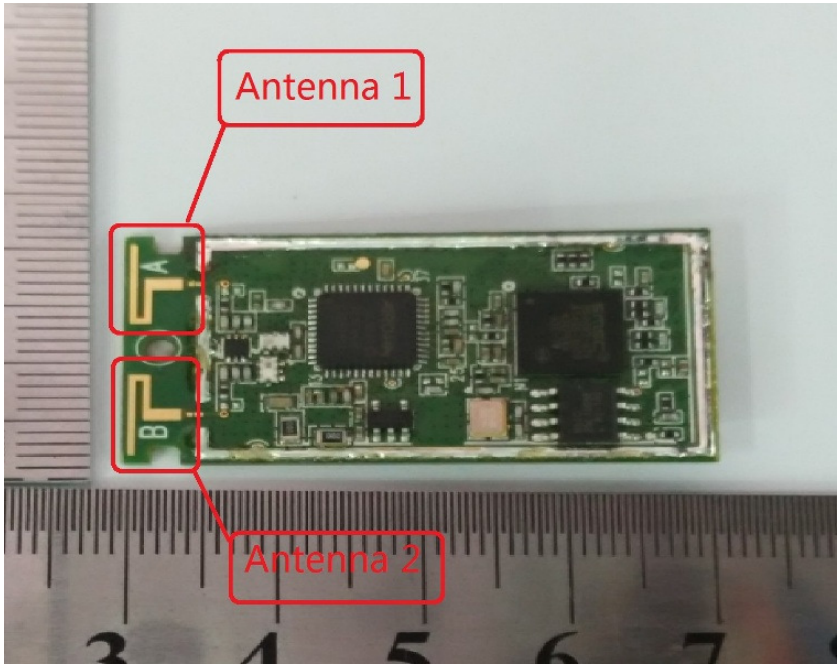
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RF connected test					
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Due date (yyyy-mm-dd)
1	DC Power Supply	Zhao Xin	RXN-305D	SEL0117	2015-10-24
2	Humidity/ Temperature Indicator	HYGRO	ZJ1-2B	SEL0033	2015-10-24
3	Spectrum Analyzer	Rohde & Schwarz	FSP	SEL0154	2015-10-24
4	Coaxial cable	SGS	N/A	SEL0178	2016-05-13
5	Coaxial cable	SGS	N/A	SEL0179	2016-05-13
6	Barometer	ChangChun	DYM3	SEL0088	2016-05-13
7	Signal Generator	Rohde & Schwarz	SML03	SEL0068	2016-04-25
8	Band filter	amideon	82346	SEL0094	2016-05-13
9	POWER METER	R & S	NRVS	SEL0144	2015-10-24
10	Attenuator	Beijin feihang taida	TST-2-6dB	SEL0205	2016-04-25
11	Power Divider(splitter)	Agilent Technologies	11636B	SEL0130	2015-10-24

Note: The calibration interval is one year, all the instruments are valid.

6 Test results and Measurement Data

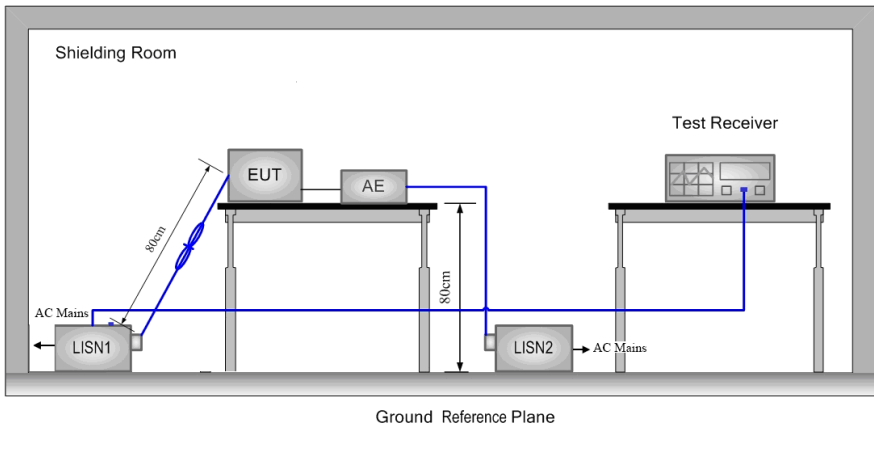
6.1 Antenna Requirement

Standard requirement:	47 CFR Part 15C Section 15.203
<p>15.203 requirement:</p> <p>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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.</p>	
EUT Antenna:	
<p>The antenna is integrated antenna and no consideration of replacement. The best case gain of the antenna is 3.2dBi.</p>	



6.2 Conducted Emissions

Test Requirement:	47 CFR Part 15C Section 15.207		
Test Method:	ANSI C63.10: 2009		
Test Frequency Range:	150kHz to 30MHz		
Limit:	Frequency range (MHz)	Limit (dBuV)	
		Quasi-peak	Average
	0.15-0.5	66 to 56*	56 to 46*
	0.5-5	56	46
	5-30	60	50
* Decreases with the logarithm of the frequency.			
Test Procedure:	<ol style="list-style-type: none">1) The mains terminal disturbance voltage test was conducted in a shielded room.2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a $50\Omega/50\mu\text{H} + 5\Omega$ linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane.4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10: 2009 on conducted measurement.		

Test Setup:	
Exploratory Test Mode:	Transmitting with all kind of data rates at lowest, middle and highest channel.
Final Test Mode:	Through Pre-scan, find the lowest rate at lowest channel is the worst case. Only the worst case is recorded in the report.
Instruments Used:	Refer to section 5.10 for details.
Test Results:	Pass



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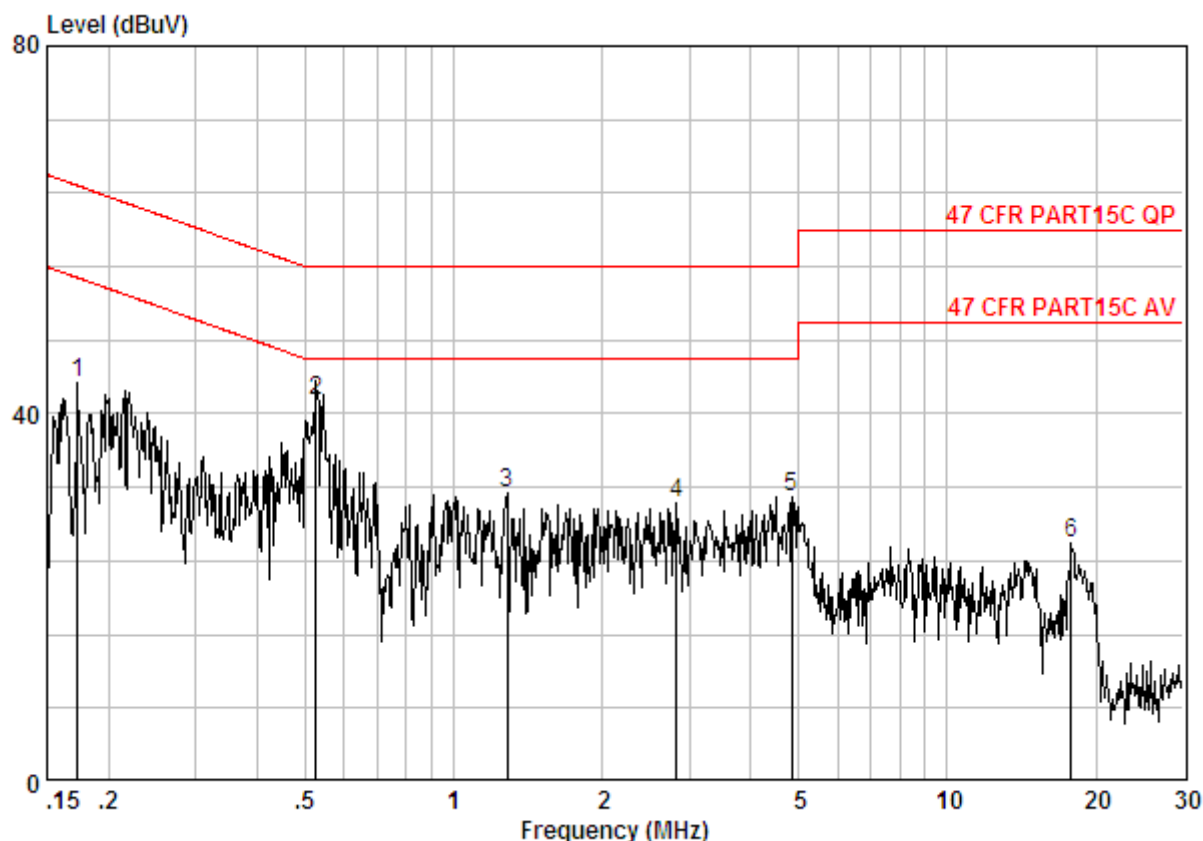
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Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector.

Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

Live Line:



Site : Shielding Room
Condition : 47 CFR PART15C AV CE LINE
Job No. : 3422CR
Test Mode : TX mode

	Freq	Cable	LISN	Read	Limit	Over	
	MHz	Loss	Factor	Level	Line	Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB
1	0.17307	0.02	9.82	33.49	43.34	54.81	-11.47 Peak
2 @	0.52654	0.01	9.86	31.62	41.49	46.00	-4.51 Peak
3	1.282	0.02	9.91	21.38	31.31	46.00	-14.69 Peak
4	2.824	0.02	10.01	20.37	30.41	46.00	-15.59 Peak
5	4.848	0.01	10.11	20.77	30.90	46.00	-15.10 Peak
6	17.849	0.02	10.24	15.71	25.97	50.00	-24.03 Peak

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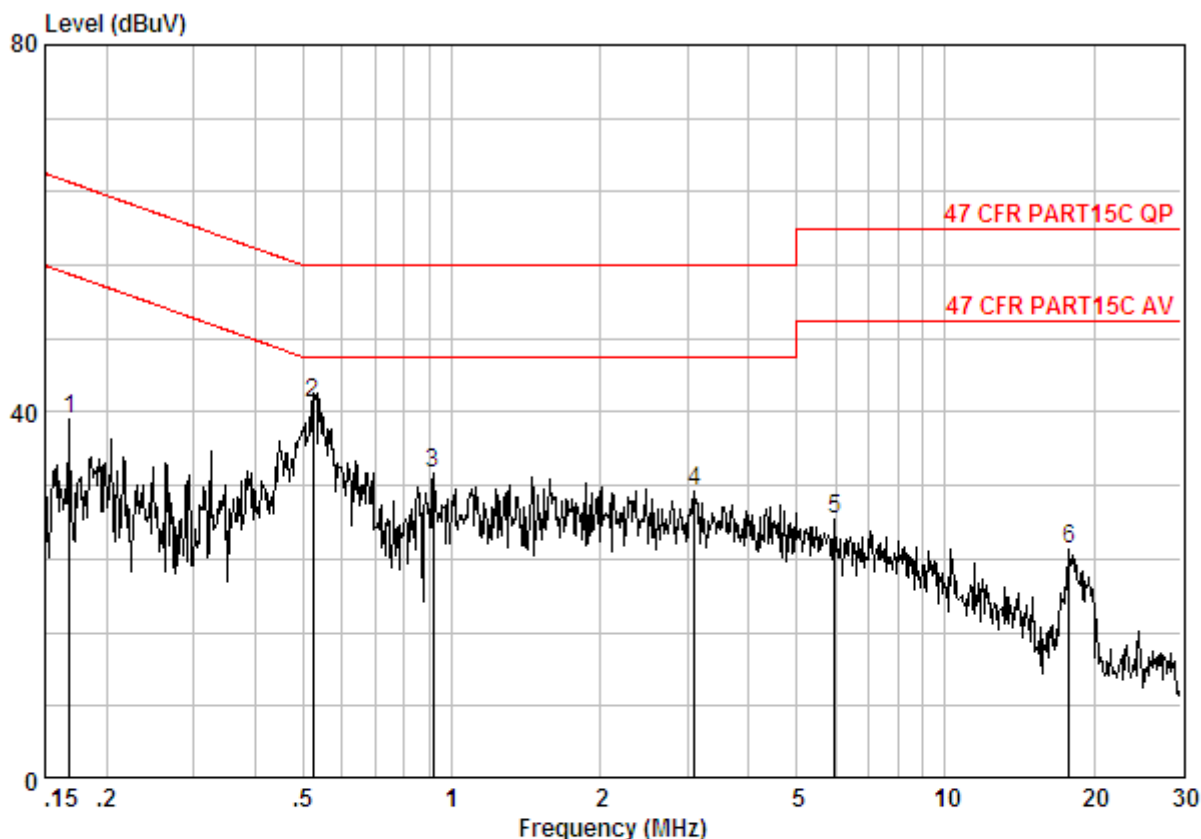


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Neutral Line:



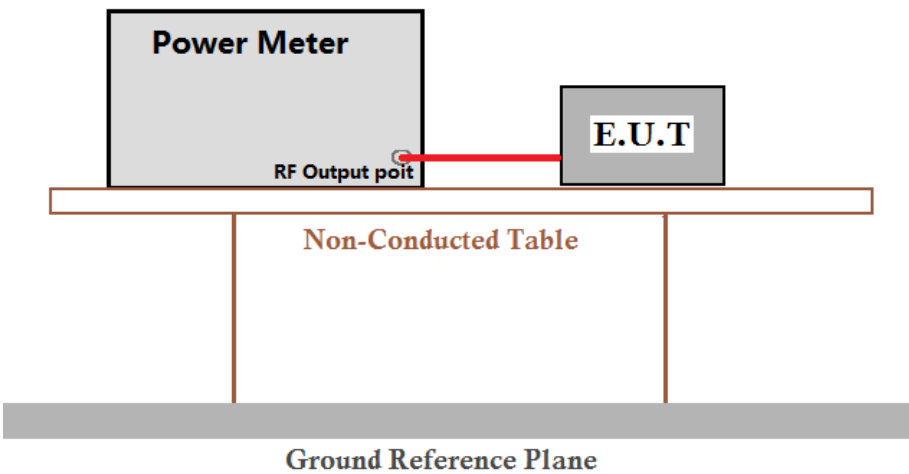
Site : Shielding Room
Condition : 47 CFR PART15C AV CE NEUTRAL
Job No. : 3422CR
Test Mode : TX mode

	Freq	Cable	LISN	Read	Limit	Over	
	MHz	Loss	Factor	Level	Line	Limit	Remark
		dB		dBuV	dBuV	dBuV	
1	0.16854	0.02	9.81	29.47	39.30	55.03	-15.73 Peak
2	0.52376	0.01	9.89	31.14	41.05	46.00	-4.95 Peak
3	0.91842	0.02	10.01	23.31	33.34	46.00	-12.66 Peak
4	3.107	0.02	10.12	21.19	31.33	46.00	-14.67 Peak
5	5.961	0.01	10.13	18.17	28.31	50.00	-21.69 Peak
6	17.849	0.02	10.32	14.65	24.98	50.00	-25.02 Peak

Notes:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level = Receiver Reading + LISN Factor + Cable Loss.

6.3 Duty Cycle

Test Requirement:	47 CFR Part 15C 15.407 and 789033 D02 General UNII Test Procedures New Rules v01, Section (B)
Test Method:	ANSI C63.10: 2009
Test Setup:	
Limit:	N/A
Exploratory Test Mode:	Transmitting with all kind of data rates.
Final Test Mode:	Through Pre-scan, find the lowest rate is the worst case of QPSK mode. Only the worst case is recorded in the report.
Instruments Used:	Refer to section 5.10 for details.
Test Results:	Pass

Measurement Data

Antenna 1 and 2

QPSK mode			
Test channel	On time	Period	Duty Cycle
Middle	100	100	1



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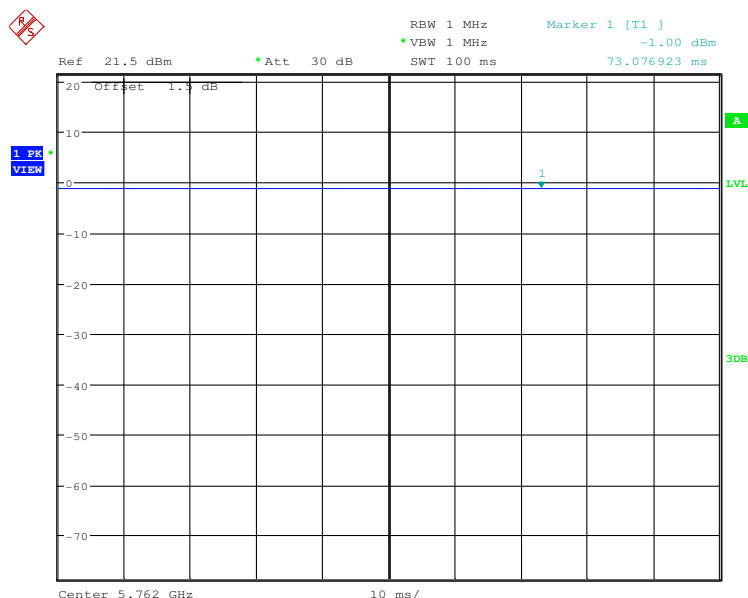
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Test plot as follows:

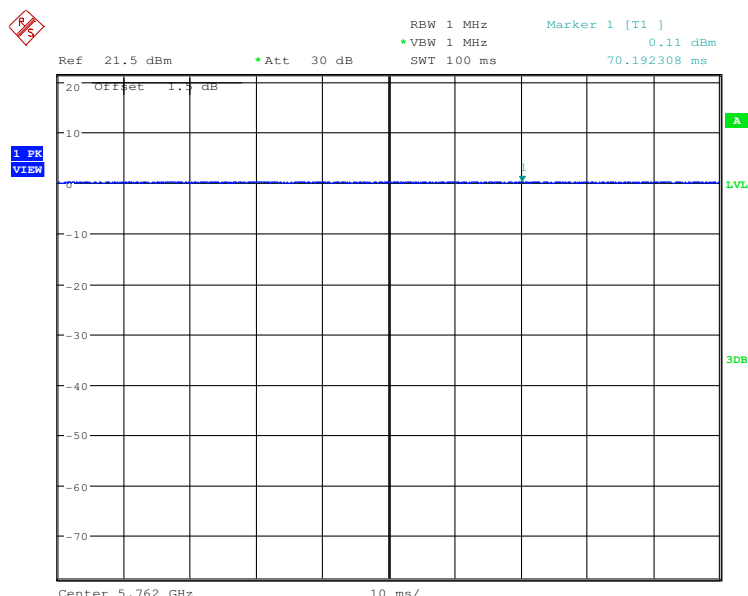
Antenna 1

Test mode:	QPSK mode	Test channel:	Middle
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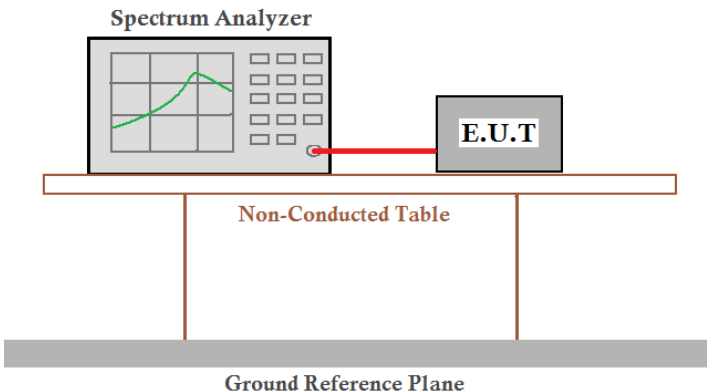
Antenna 2

Test mode:	QPSK mode	Test channel:	Middle
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6.4 Conducted Output Power

Test Requirement:	47 CFR Part 15C Section 15.407 (a)
Test Method:	KDB662911 D01 Multiple Transmitter Output v02r01 KDB789033 D02 General UNII Test Procedures New Rules v01 Section E, 3, a
Test Setup:	 <p><i>Remark:</i> Offset the High-Frequency cable loss 1.5dB in the spectrum analyzer.</p>
Test Instruments:	Refer to section 5.10 for details.
Exploratory Test Mode:	Transmitting with all kind of data rates.
Final Test Mode:	Through Pre-scan, find the lowest rate is the worst case of QPSK mode. Only the worst case is recorded in the report.
Limit:	30dBm
Test Results:	<p>Pass</p> <p><i>Remark:</i> 1. Conducted output power= measurement power+10log(1/x) X is duty cycle=1, so 10log(1/1)=0 Conducted output power= measurement power</p>

Measurement Data:

QPSK mode				
Test Channel	Conducted Output Power (dBm)		Limit (dBm)	Result
	Antenna 1	Antenna 2		
Lowest	4.88	6.10	30.00	Pass
Middle	5.89	7.05	30.00	Pass
Highest	8.26	8.32	30.00	Pass



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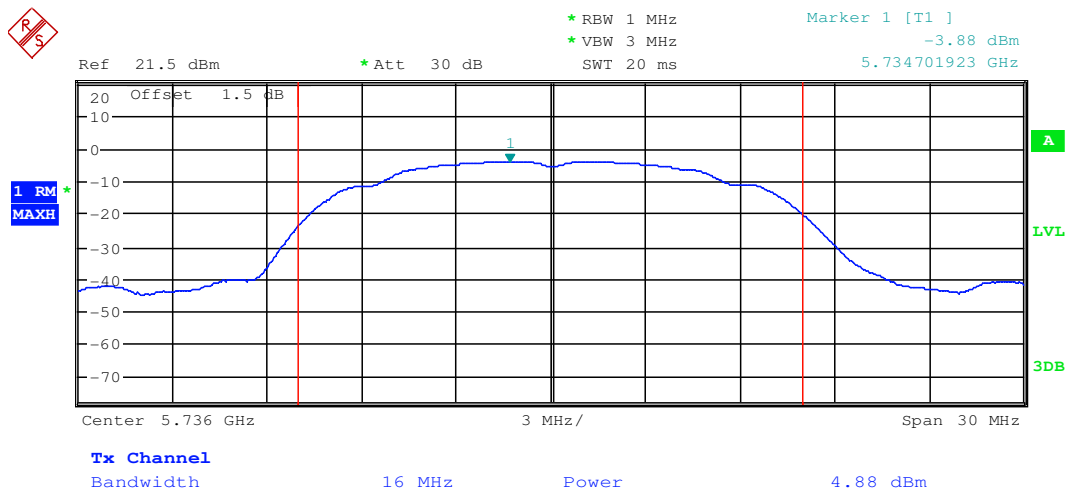
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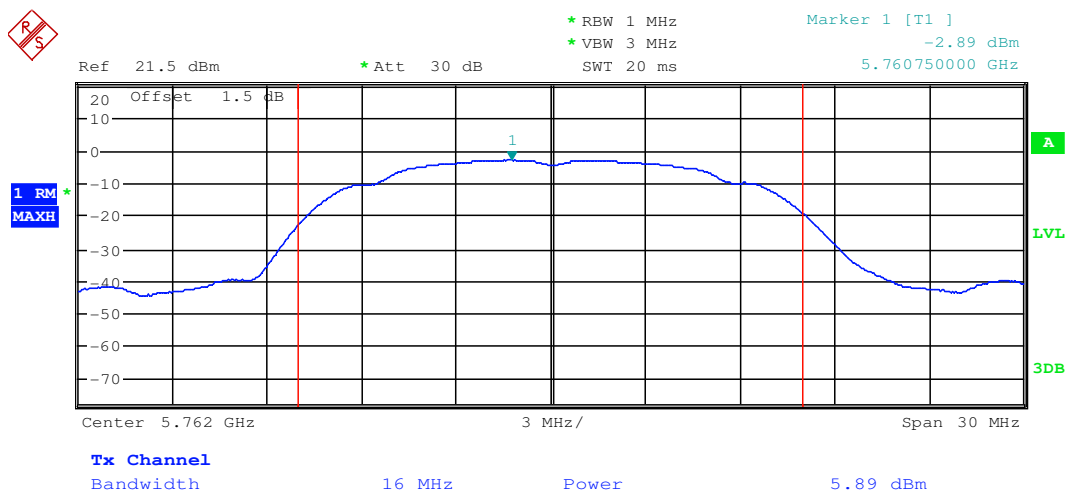
Test plot as follows:

Antenna 1

Test mode:	QPSK mode	Test channel:	Lowest
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Test mode:	QPSK mode	Test channel:	Middle
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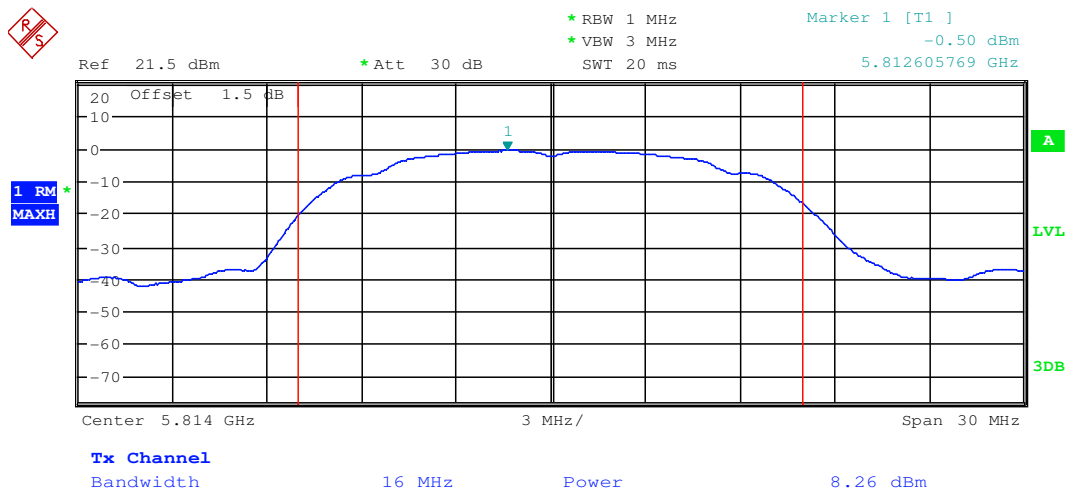


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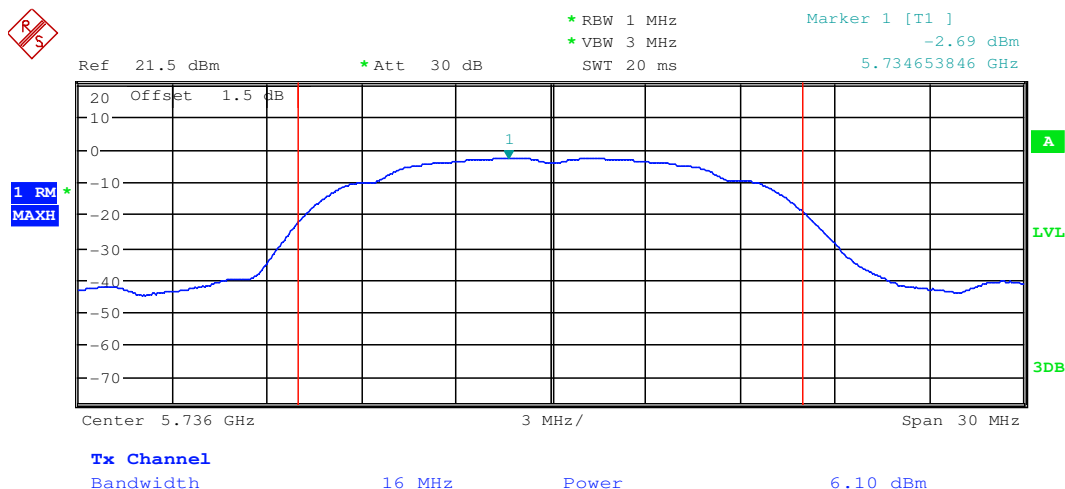
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Test mode:	QPSK mode	Test channel:	Highest
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Antenna 2

Test mode:	QPSK mode	Test channel:	Lowest
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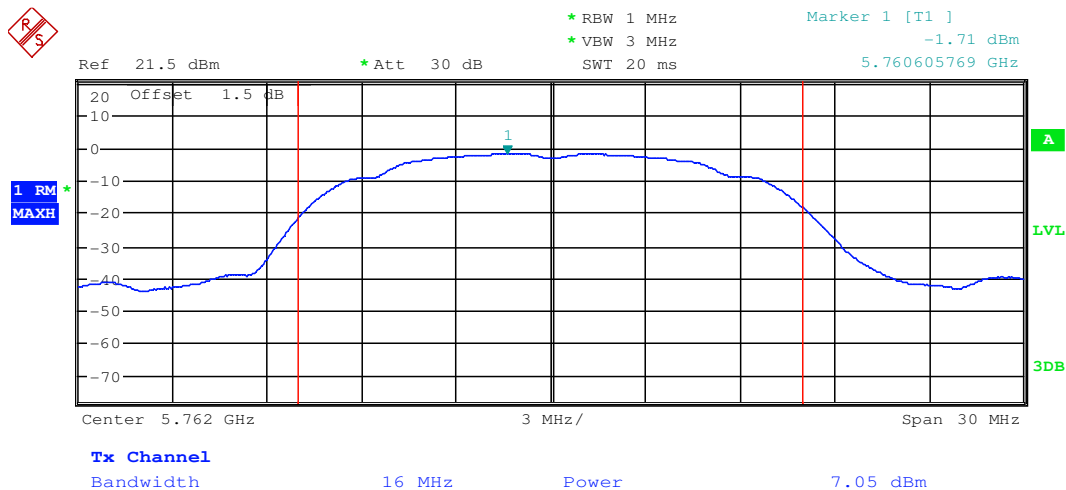


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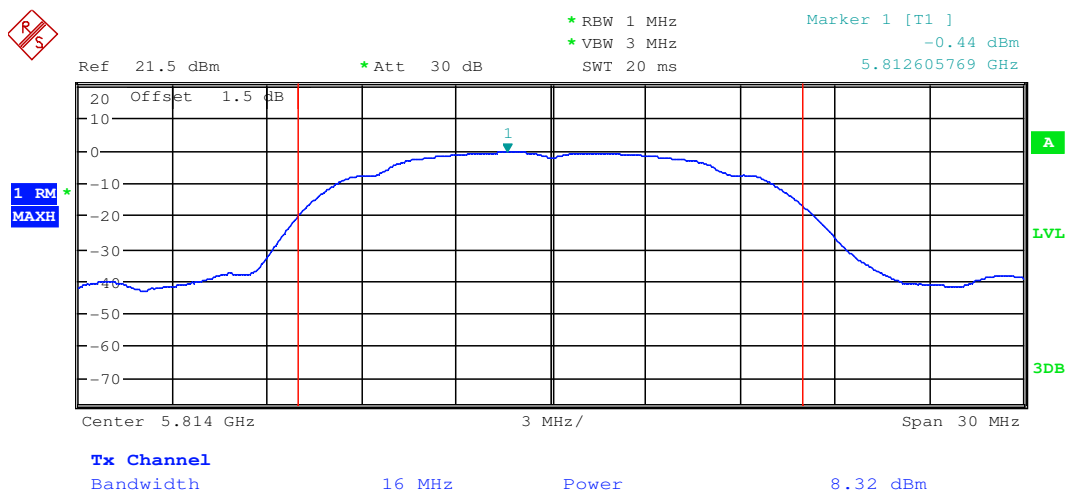
Report No.: SZEM150600342201

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Test mode:	QPSK mode	Test channel:	Middle
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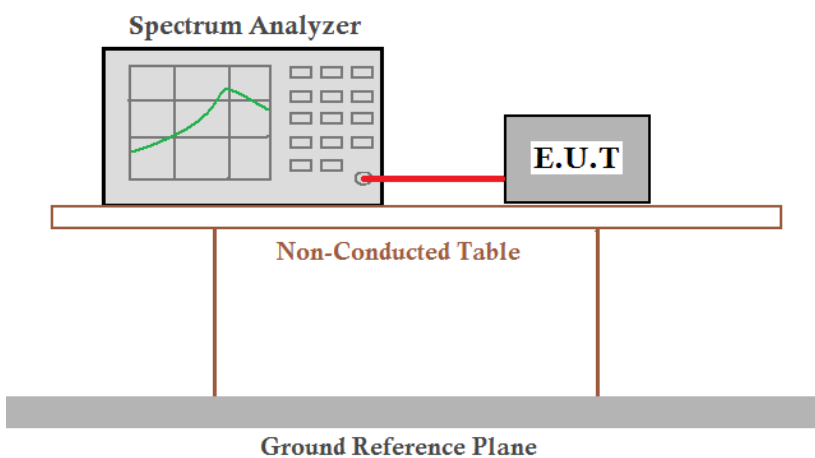


Test mode:	QPSK mode	Test channel:	Highest
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6.5 26dB Emission Bandwidth and 99% Occupied Bandwidth

Test Requirement:	47 CFR Part 15C Section 15.407 (a)
Test Method:	KDB662911 D01 Multiple Transmitter Output v02r01 KDB789033 D02 General UNII Test Procedures New Rules v01 Section C, 1 and Section D
Test Setup:	 <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected via a red cable to an E.U.T. (Equipment Under Test). Both are placed on a Non-Conducted Table. Below the table is a Ground Reference Plane.</p>
Instruments Used:	Refer to section 5.10 for details.
Exploratory Test Mode:	Transmitting with all kind of data rates.
Final Test Mode:	Through Pre-scan, find the lowest rate is the worst case of QPSK mode. Only the worst case is recorded in the report.
Limit:	No restriction limits.
Test Results:	Pass

Measurement Data:

Antenna 1

QPSK mode		
Test channel	26dB Emission Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
Lowest	16.875	13.942
Middle	16.875	13.942
Highest	16.827	13.942

Antenna 2

QPSK mode		
Test channel	26dB Emission Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
Lowest	16.827	13.942
Middle	16.875	13.894
Highest	16.827	13.894



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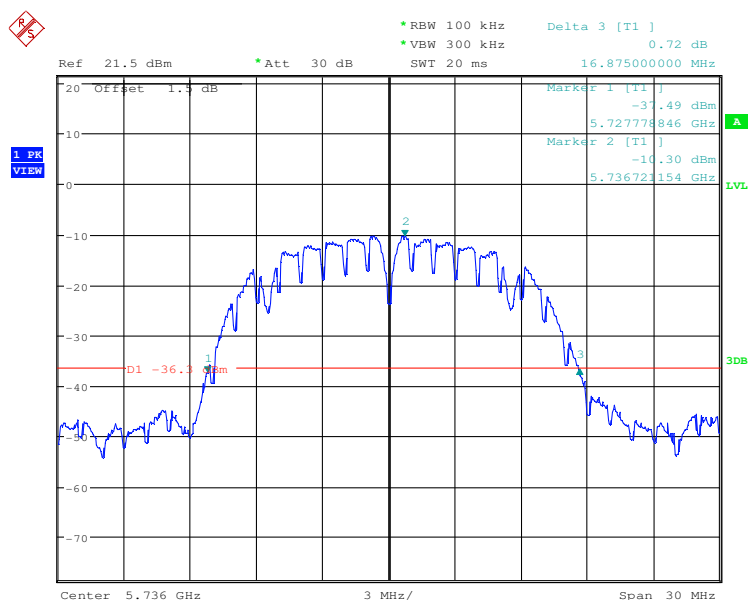
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26dB Emission Bandwidth

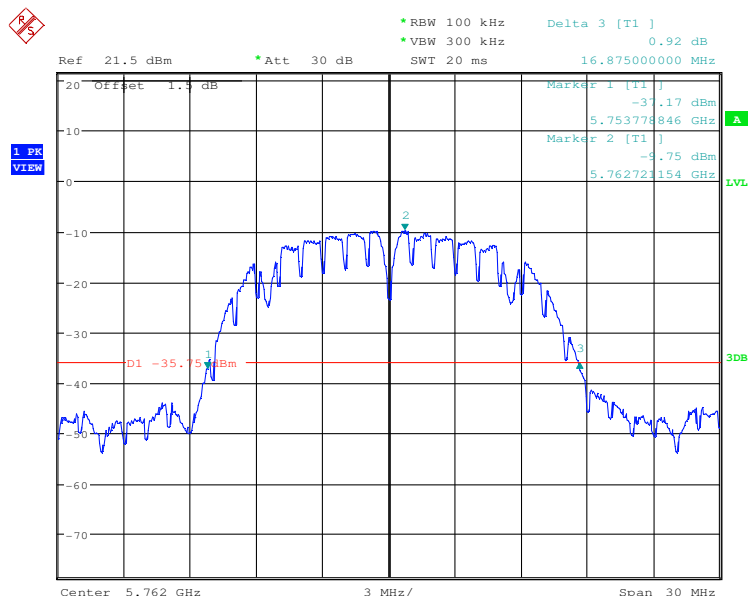
Test plot as follows:

Antenna 1

Test mode:	QPSK mode	Test channel:	Lowest
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Test mode:	QPSK mode	Test channel:	Middle
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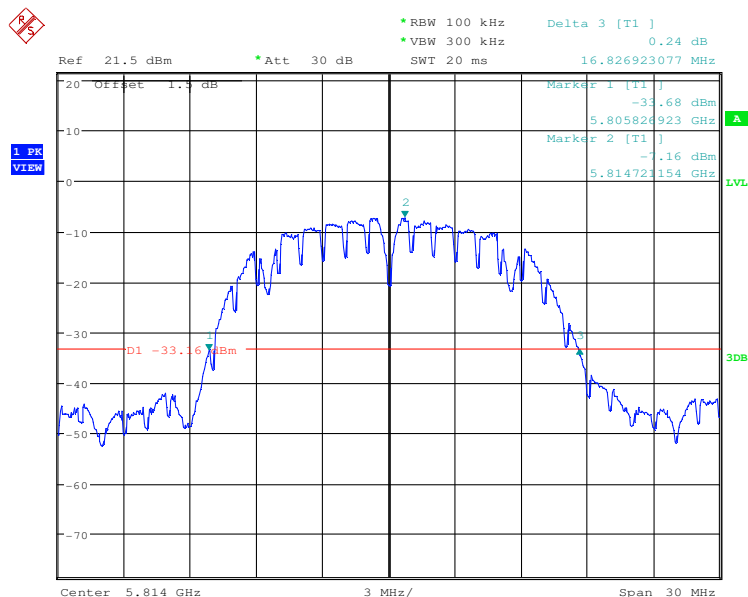


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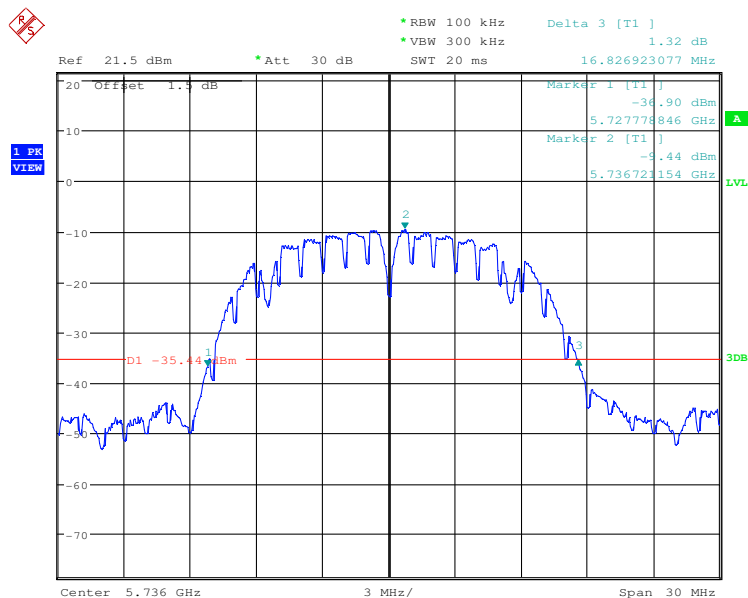
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Test mode:	QPSK mode	Test channel:	Highest
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Antenna 2

Test mode:	QPSK mode	Test channel:	Lowest
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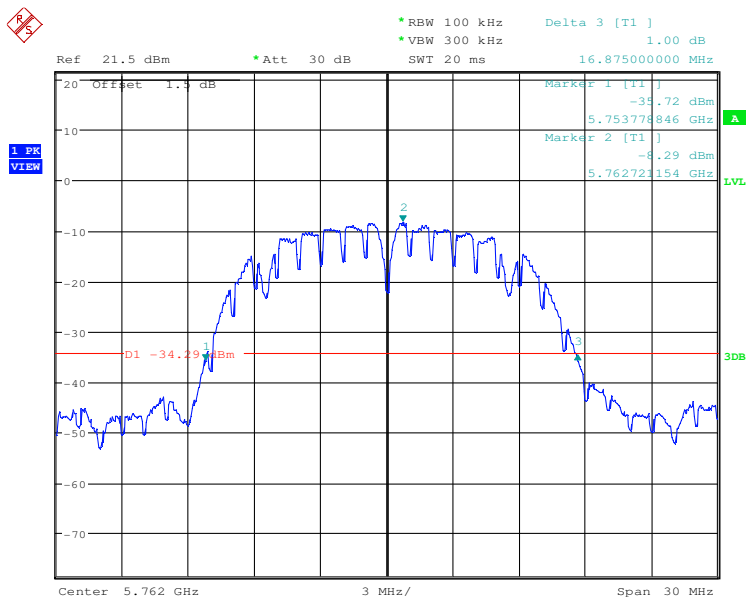


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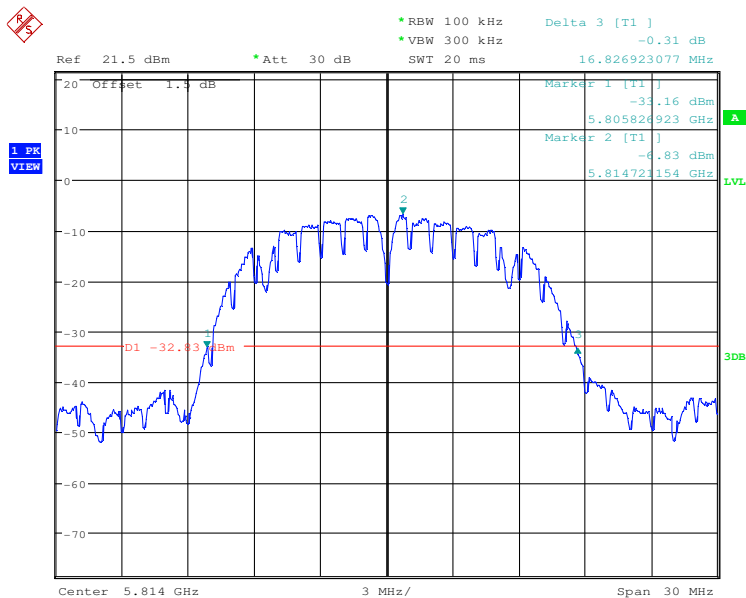
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Test mode:	QPSK mode	Test channel:	Middle
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Test mode:	QPSK mode	Test channel:	Highest
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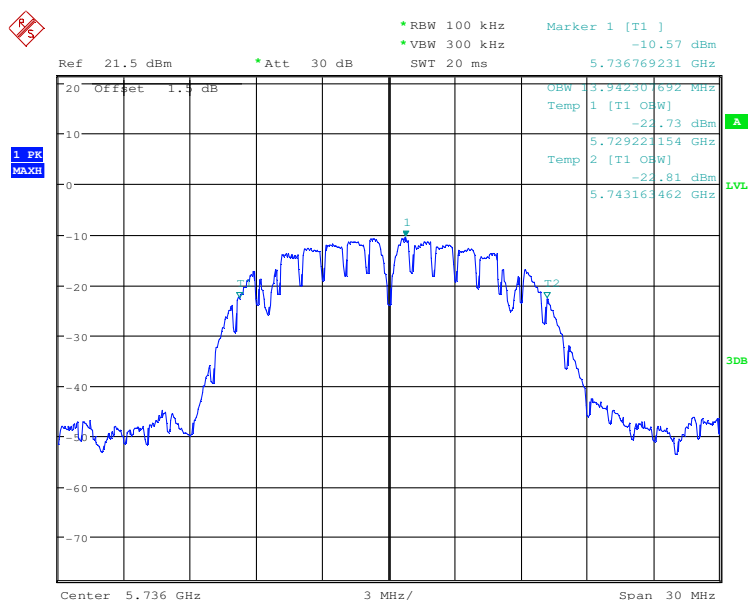
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99% Occupied Bandwidth

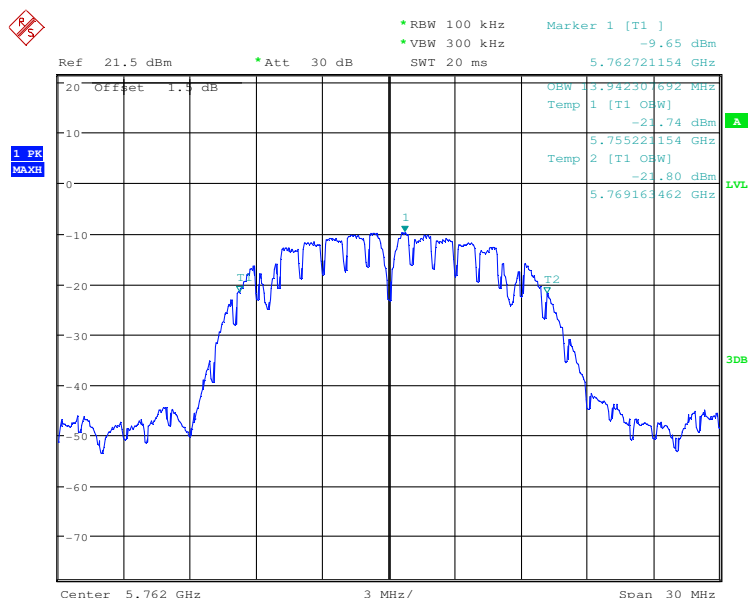
Test plot as follows:

Antenna 1

Test mode:	QPSK mode	Test channel:	Lowest
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Test mode:	QPSK mode	Test channel:	Middle
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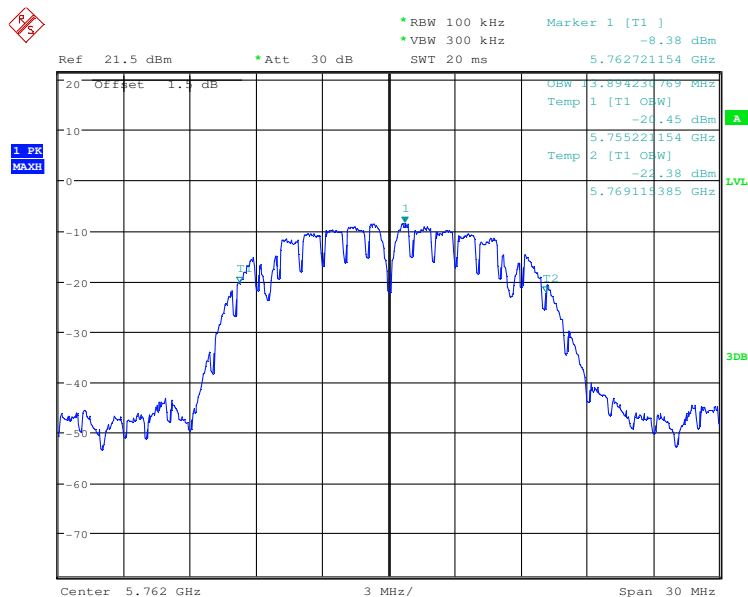


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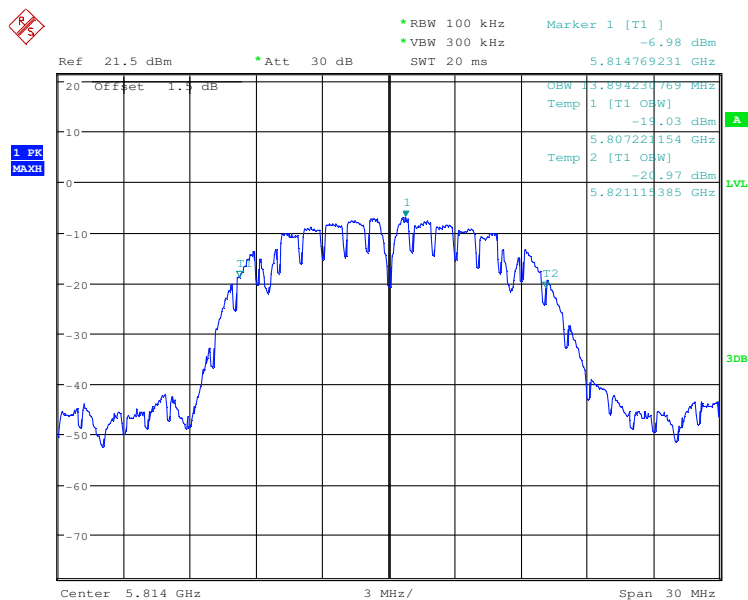
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Test mode:	QPSK mode	Test channel:	Middle
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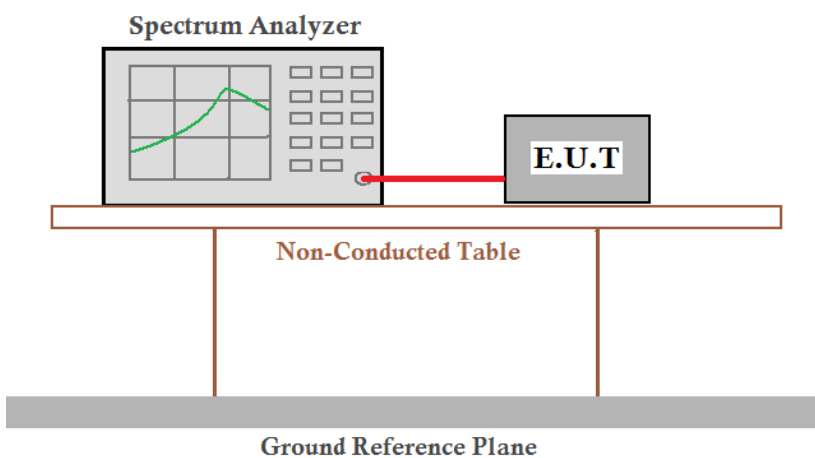


Test mode:	QPSK mode	Test channel:	Highest
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6.6 6dB Emission Bandwidth

Test Requirement:	47 CFR Part 15C Section 15.407 (e)
Test Method:	KDB662911 D01 Multiple Transmitter Output v02r01 KDB789033 D02 General UNII Test Procedures New Rules v01 Section C, 2
Test Setup:	
Instruments Used:	Refer to section 5.10 for details.
Exploratory Test Mode:	Transmitting with all kind of data rates.
Final Test Mode:	Through Pre-scan, find the lowest rate is the worst case of QPSK mode. Only the worst case is recorded in the report.
Limit:	≥ 500 kHz
Test Results:	Pass

Measurement Data:

Antenna 1

QPSK mode			
Test channel	6dB Occupy Bandwidth (MHz)	Limit (kHz)	Result
Lowest	9.952	≥ 500	Pass
Middle	9.952	≥ 500	Pass
Highest	9.952	≥ 500	Pass

Antenna 2

QPSK mode			
Test channel	6dB Occupy Bandwidth (MHz)	Limit (kHz)	Result
Lowest	9.952	≥ 500	Pass
Middle	9.952	≥ 500	Pass
Highest	9.952	≥ 500	Pass



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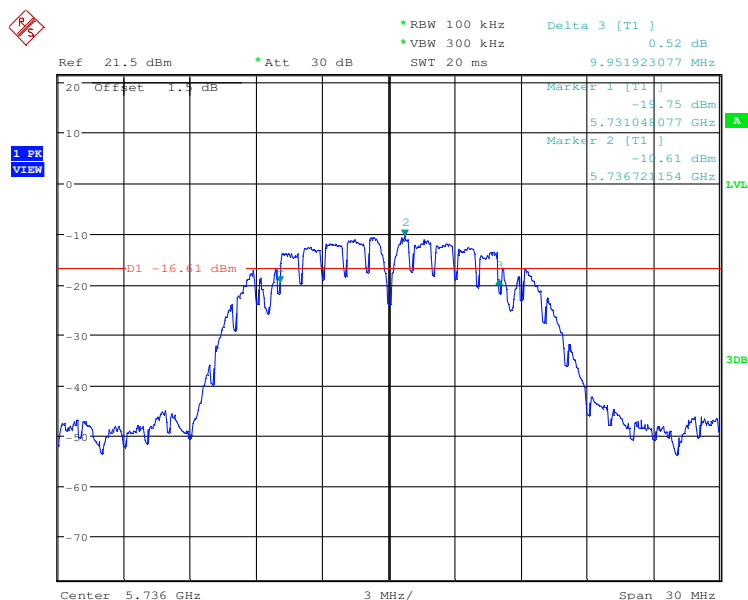
Report No.: SZEM150600342201

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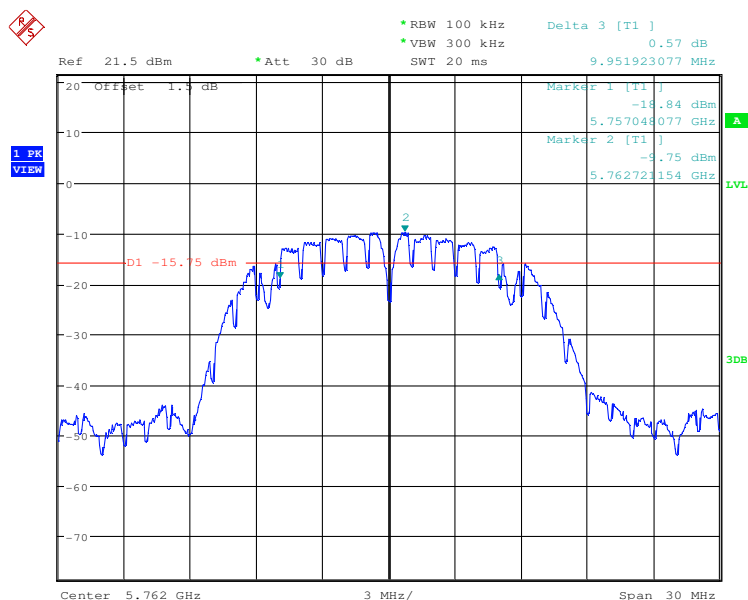
Test plot as follows:

Antenna 1

Test mode:	QPSK mode	Test channel:	Lowest
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Test mode:	QPSK mode	Test channel:	Middle
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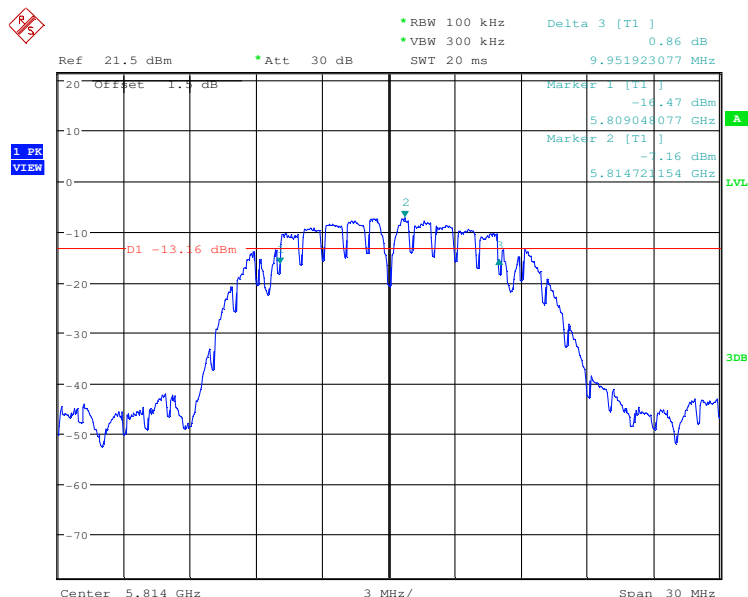


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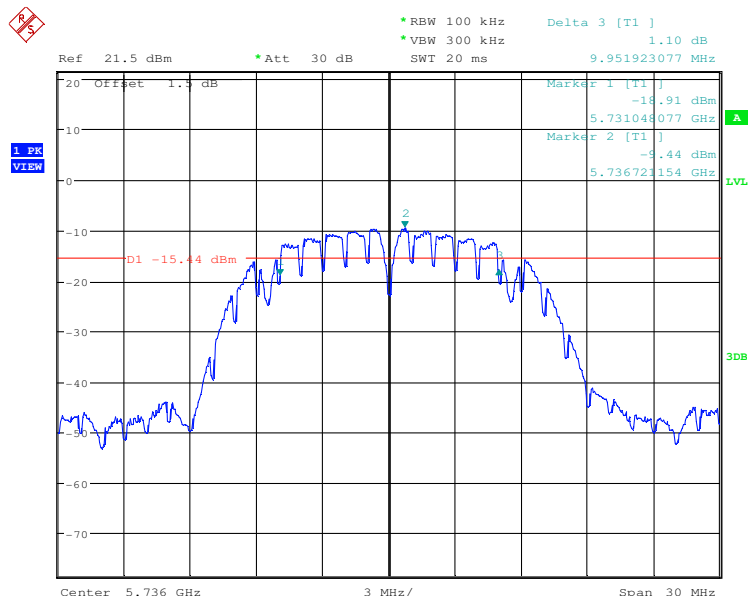
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Test mode:	QPSK mode	Test channel:	Highest
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Antenna 2

Test mode:	QPSK mode	Test channel:	Lowest
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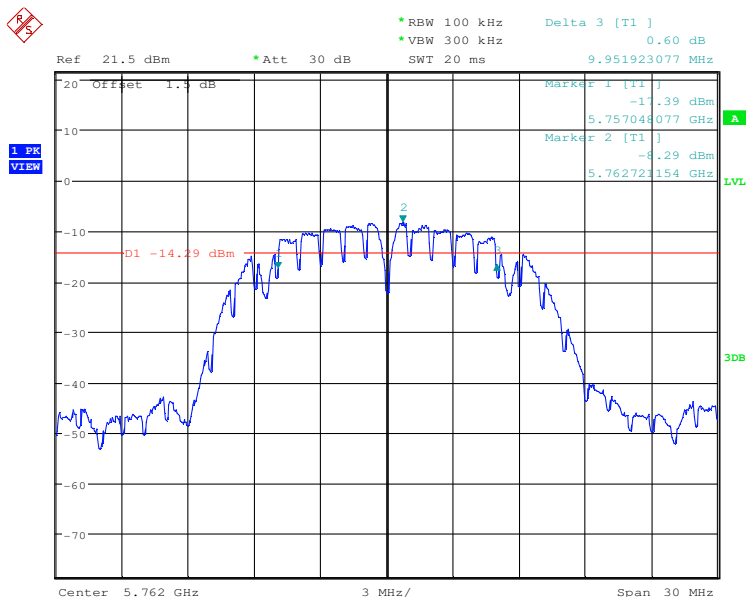


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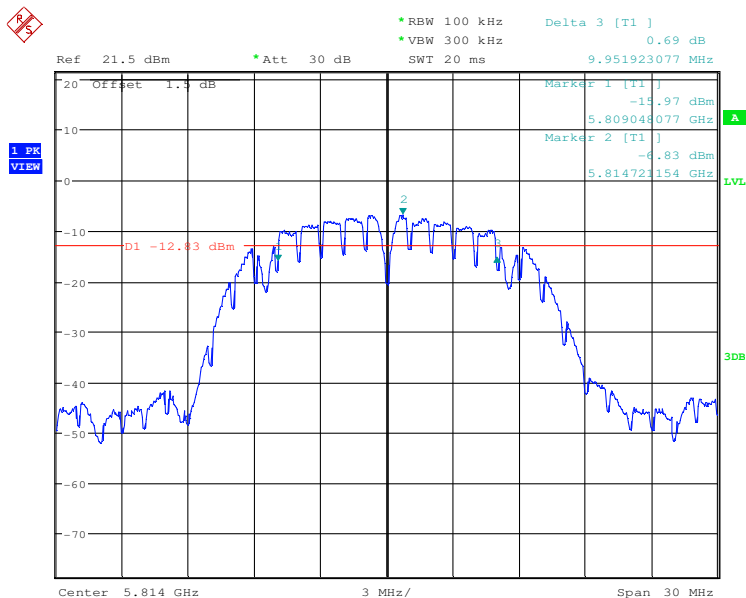
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Test mode:	QPSK mode	Test channel:	Middle
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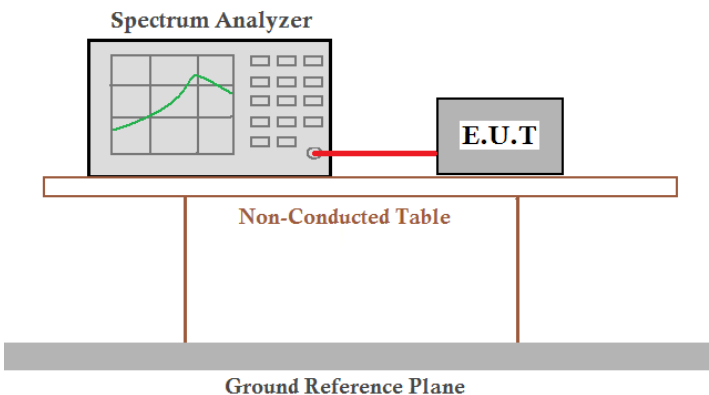


Test mode:	QPSK mode	Test channel:	Highest
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6.7 Power Spectral Density

Test Requirement:	47 CFR Part 15C Section 15.407 (a)
Test Method:	KDB662911 D01 Multiple Transmitter Output v02r01 KDB789033 D02 General UNII Test Procedures New Rules v01, Section F
Test Setup:	 <p><i>Remark:</i> Offset the High-Frequency cable loss 1.5dB in the spectrum analyzer.</p>
Test Instruments:	Refer to section 5.10 for details.
Exploratory Test Mode:	Transmitting with all kind of data rates.
Final Test Mode:	Through Pre-scan, find the lowest rate is the worst case of QPSK mode. Only the worst case is recorded in the report.
Limit:	≤30.00dBm/500kHz
Test Results:	Pass

Measurement Data:

QPSK mode				
Test channel	Power Spectral Density (dBm/500kHz)		Limit (dBm/500kHz)	Result
	Antenna 1	Antenna 2		
Lowest	-2.80	-1.86	≤30dBm/500kHz	Pass
Middle	-1.69	-0.68	≤30dBm/500kHz	Pass
Highest	0.66	0.76	≤30dBm/500kHz	Pass



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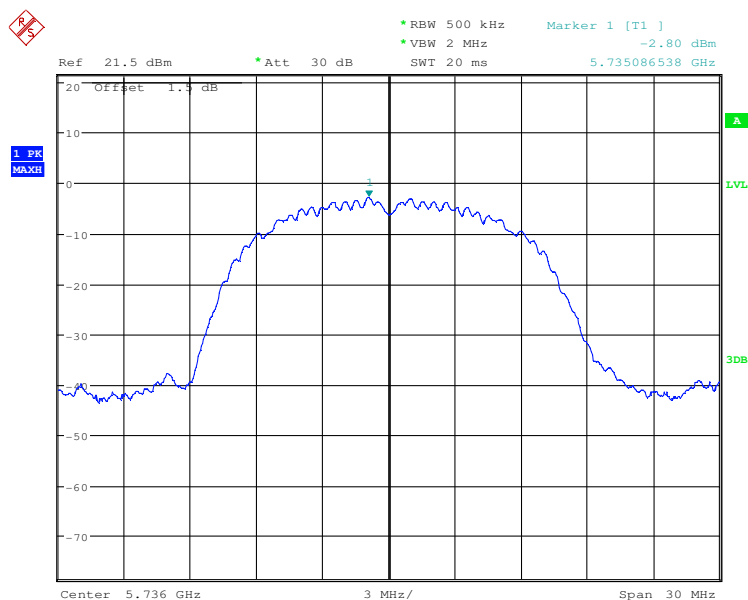
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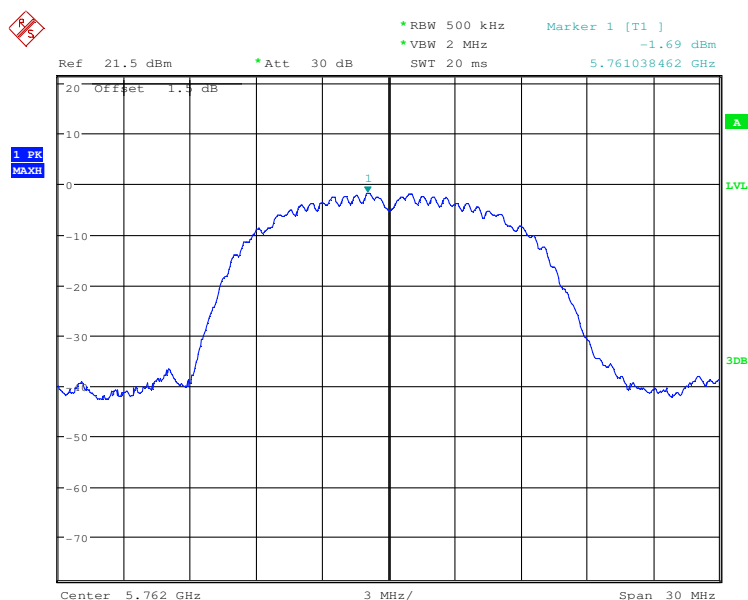
Test plot as follows:

Antenna 1

Test mode:	QPSK mode	Test channel:	Lowest
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Test mode:	QPSK mode	Test channel:	Middle
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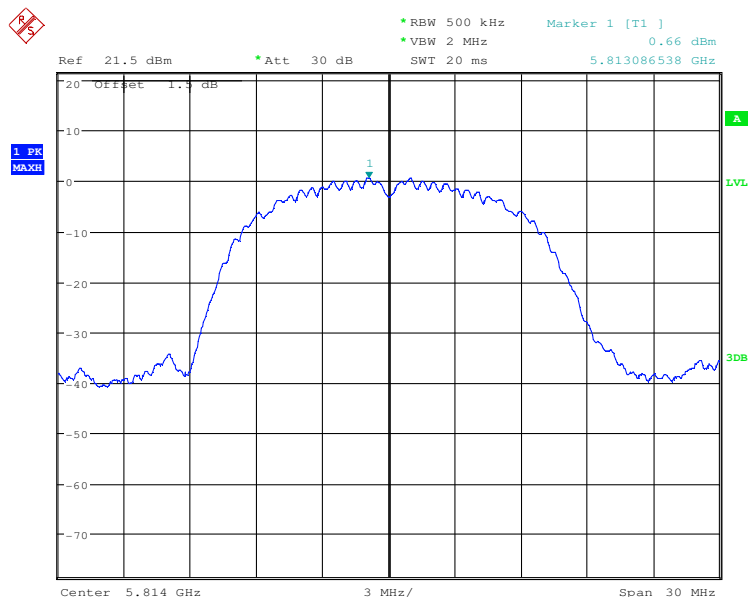


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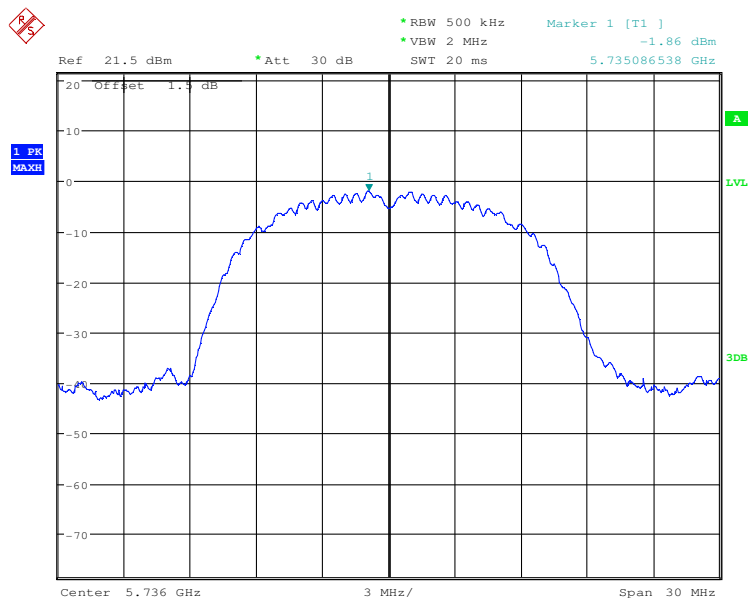
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Test mode:	QPSK mode	Test channel:	Highest
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Antenna 2

Test mode:	QPSK mode	Test channel:	Lowest
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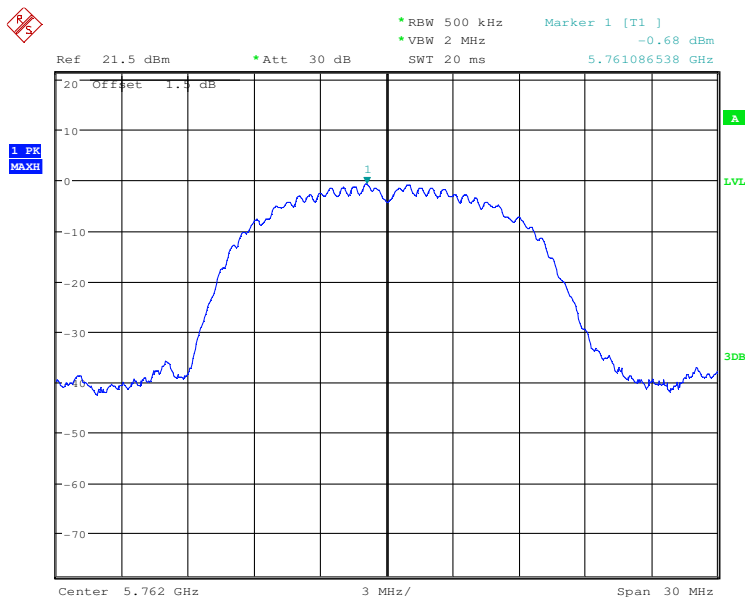


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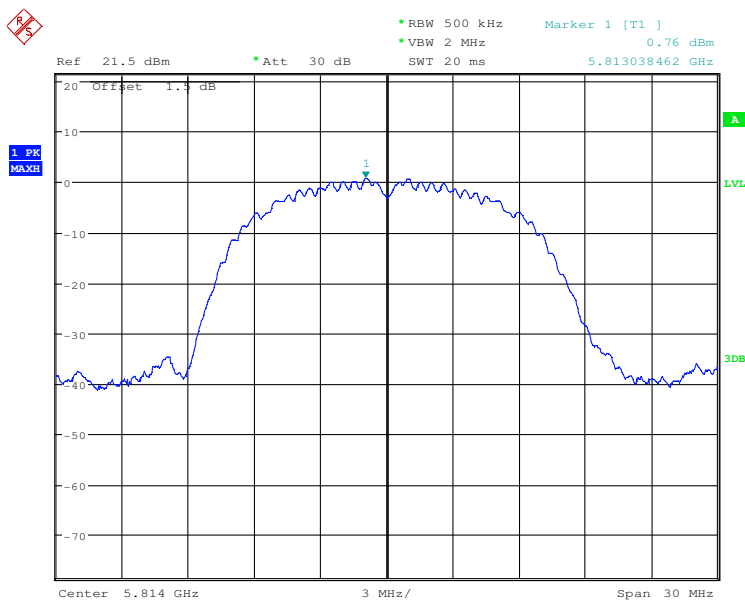
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Test mode:	QPSK mode	Test channel:	Middle
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Test mode:	QPSK mode	Test channel:	Highest
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6.8 Radiated Spurious Emissions

Test Requirement:	47 CFR Part 15C Section 15.407 (b) and 15.205 and 15.209				
Test Method:	ANSI C63.10 2009				
Test Site:	Measurement Distance: 3m (Semi-Anechoic Chamber)				
Receiver Setup:	Frequency	Detector	RBW	VBW	Remark
	0.009MHz-0.090MHz	Peak	10kHz	30kHz	Peak
	0.009MHz-0.090MHz	Average	10kHz	30kHz	Average
	0.090MHz-0.110MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
	0.110MHz-0.490MHz	Peak	10kHz	30kHz	Peak
	0.110MHz-0.490MHz	Average	10kHz	30kHz	Average
	0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
	30MHz-1GHz	Quasi-peak	100 kHz	300kHz	Quasi-peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
		Peak	1MHz	10Hz	Average
Limit:	Frequency	Field strength (microvolt/meter)	Limit (dBuV/m)	Remark	Measurement distance (m)
	0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
	0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
	1.705MHz-30MHz	30	-	-	30
	30MHz-88MHz	100	40.0	Quasi-peak	3
	88MHz-216MHz	150	43.5	Quasi-peak	3
	216MHz-960MHz	200	46.0	Quasi-peak	3
	960MHz-1GHz	500	54.0	Quasi-peak	3
	Above 1GHz	500	54.0	Average	3
Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.					



Test Setup:

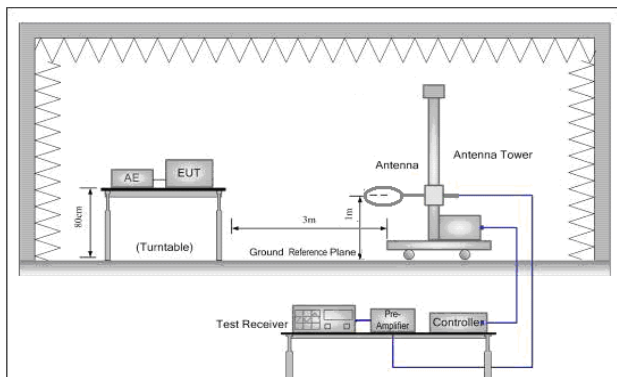


Figure 1. Below 30MHz

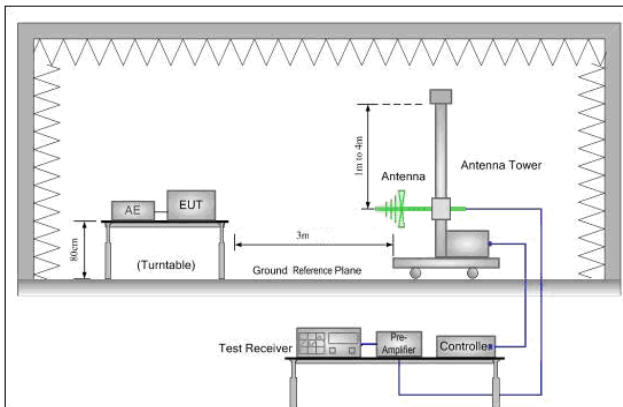


Figure 2. 30MHz to 1GHz

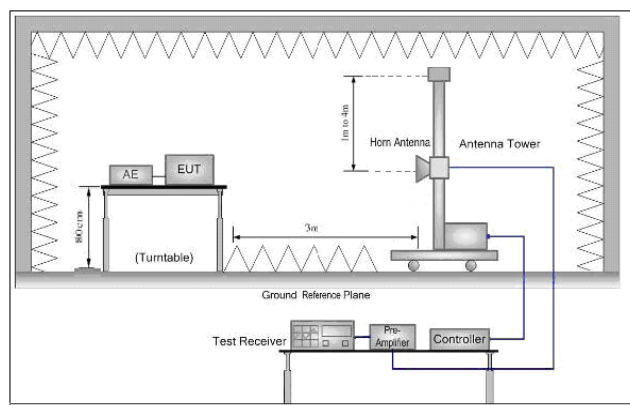


Figure 3. Above 1 GHz

Test Procedure:

- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.



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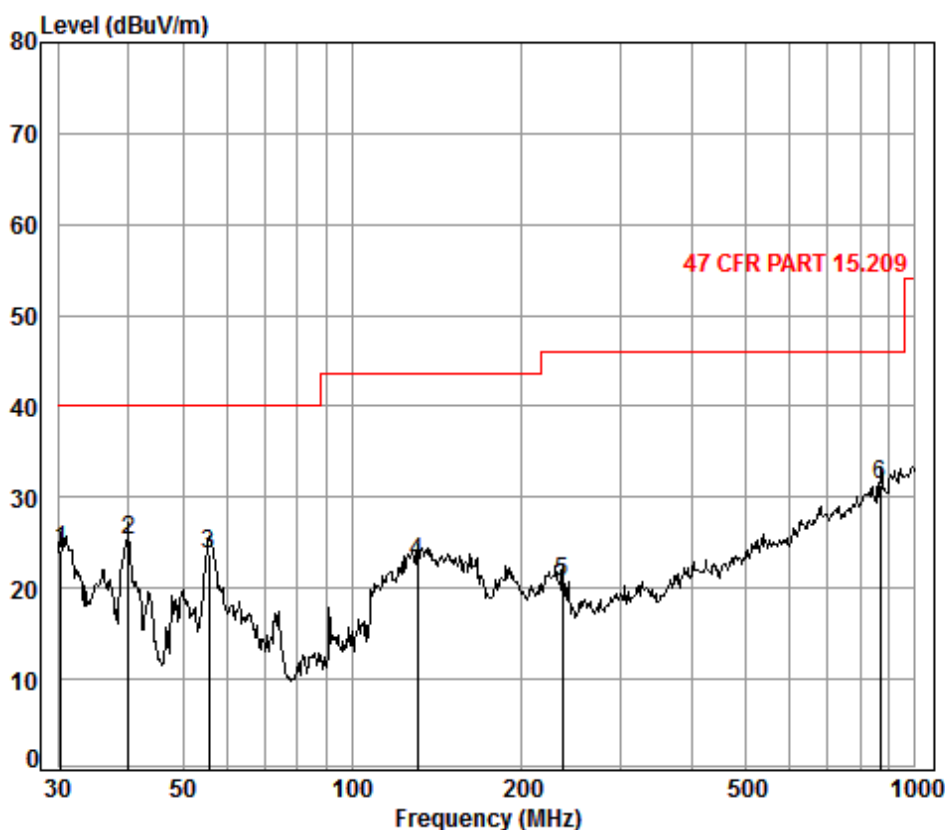
	<ul style="list-style-type: none">g. Test the EUT in the lowest channel ,the middle channel ,the Highest channelh. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode,And found the X axis positioning which it is worse case.i. Repeat above procedures until all frequencies measured was complete.
Exploratory Test Mode:	Transmitting with all kind of data rates.
Final Test Mode:	Through Pre-scan, find the lowest rate is the worst case of QPSK mode. Only the worst case is recorded in the report.
Instruments Used:	Refer to section 5.10 for details.
Test Results:	Pass



6.8.1 Transmitter emission below 1GHz

30MHz~1GHz (QP)

Test mode:	Transmitting mode	Vertical
------------	-------------------	----------



Condition: 47 CFR PART 15.209 3m VERTICAL

Job No. : 3422CR

Mode : TX

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	30.42	0.60	18.46	27.36	32.43	24.13	40.00	-15.87
2	39.99	0.60	13.10	27.32	38.86	25.24	40.00	-14.76
3	55.61	0.80	7.86	27.28	42.33	23.71	40.00	-16.29
4	130.38	1.28	7.72	27.01	40.90	22.89	43.50	-20.61
5	236.64	1.61	11.87	26.58	33.85	20.75	46.00	-25.25
6	866.09	3.48	22.79	26.96	32.03	31.34	46.00	-14.66

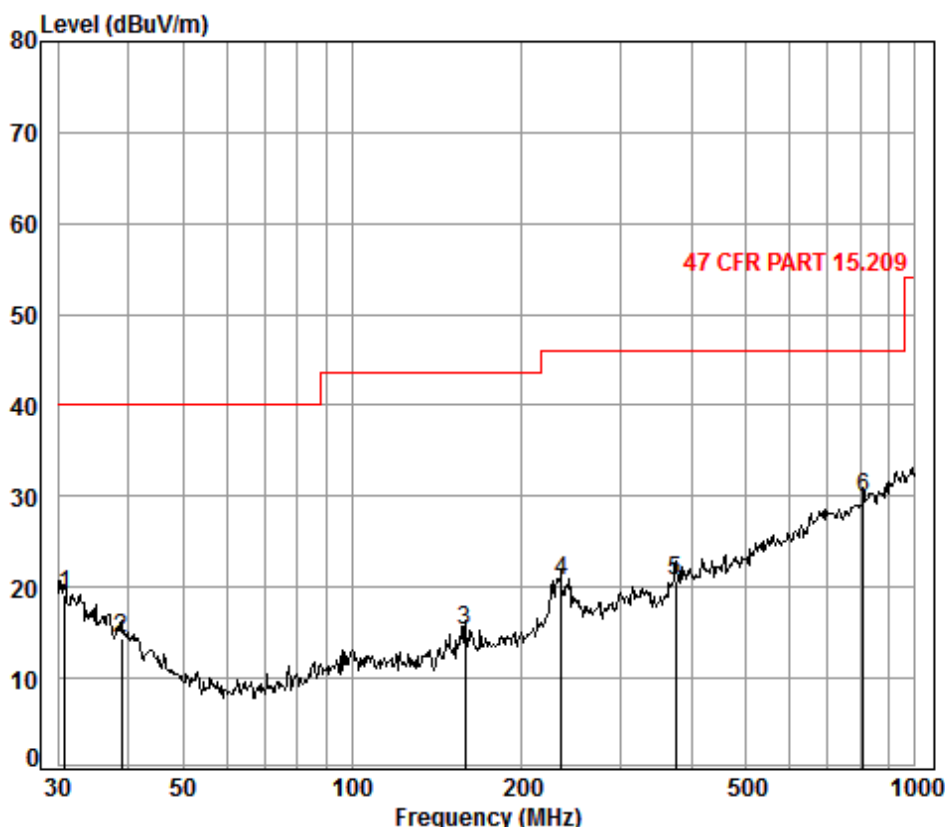


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Test mode:	Transmitting mode	Horizontal
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Condition: 47 CFR PART 15.209 3m Horizontal

Job No. : 3422CR

Mode : TX

	Freq	Cable	Ant	Preamp	Read	Limit	Over
	MHz	Loss	Factor	Factor	Level	Line	Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dB
1	30.85	0.60	18.22	27.35	27.81	19.28	40.00 -20.72
2	38.89	0.60	13.72	27.32	27.43	14.43	40.00 -25.57
3	158.67	1.33	9.52	26.86	31.37	15.36	43.50 -28.14
4	234.99	1.60	11.82	26.58	33.87	20.71	46.00 -25.29
5	375.94	2.14	16.01	26.97	29.62	20.80	46.00 -25.20
6	810.27	3.26	22.22	27.23	31.68	29.93	46.00 -16.07

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6.8.2 Transmitter emission above 1GHz

Antenna 1

7GHz-18GHz

Worse case mode:		QPSK(lowest rate)		Test channel:		Lowest	Remark:	Peak
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamplifier Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
8067.000	-27.20	36.40	0.00	36.90	46.10	74.00	-27.90	Vertical
9508.000	-25.10	37.30	0.00	34.80	47.00	74.00	-27.00	Vertical
11246.000	-22.80	37.50	0.00	34.30	49.00	74.00	-25.00	Vertical
12775.000	-23.90	38.20	0.00	34.40	48.70	74.00	-25.30	Vertical
15107.000	-22.40	40.60	0.00	34.60	52.80	74.00	-21.20	Vertical
17340.000	-19.90	43.10	0.00	33.10	56.30	74.00	-17.70	Vertical
8056.000	-27.20	36.30	0.00	36.90	46.00	74.00	-28.00	Horizontal
9508.000	-25.10	37.30	0.00	36.30	48.50	74.00	-25.50	Horizontal
11213.000	-23.10	37.50	0.00	34.20	48.60	74.00	-25.40	Horizontal
12654.000	-23.10	38.10	0.00	34.20	49.20	74.00	-24.80	Horizontal
14931.000	-22.70	40.50	0.00	34.90	52.70	74.00	-21.30	Horizontal
17318.000	-20.00	43.10	0.00	33.00	56.10	74.00	-17.90	Horizontal

Worse case mode:		QPSK(lowest rate)		Test channel:		Lowest	Remark:	Average
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamplifier Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
17340.000	-19.90	43.10	0.00	19.90	43.10	54.00	-10.90	Vertical
17318.000	-20.00	43.10	0.00	19.70	42.80	54.00	-11.20	Horizontal

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Worse case mode:		QPSK(lowest rate)		Test channel:		Middle	Remark:	Peak
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamplifier Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
8067.000	-27.20	36.40	0.00	36.10	45.30	74.00	-28.70	Vertical
9420.000	-25.10	37.40	0.00	35.00	47.30	74.00	-26.70	Vertical
11224.000	-23.00	37.50	0.00	34.30	48.80	74.00	-25.20	Vertical
13600.000	-23.60	38.80	0.00	34.00	49.20	74.00	-24.80	Vertical
15591.000	-22.10	41.10	0.00	34.40	53.40	74.00	-20.60	Vertical
17362.000	-19.80	43.20	0.00	32.00	55.40	74.00	-18.60	Vertical
8155.000	-27.10	36.50	0.00	36.60	46.00	74.00	-28.00	Horizontal
9530.000	-25.10	37.20	0.00	34.90	47.00	74.00	-27.00	Horizontal
11521.000	-23.30	37.70	0.00	34.80	49.20	74.00	-24.80	Horizontal
13908.000	-22.60	39.20	0.00	34.70	51.30	74.00	-22.70	Horizontal
15745.000	-22.10	41.10	0.00	34.20	53.20	74.00	-20.80	Horizontal
17604.000	-20.70	43.60	0.00	34.60	57.50	74.00	-16.50	Horizontal

Worse case mode:		QPSK(lowest rate)		Test channel:		Middle	Remark:	Average
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamplifier Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
17362.000	-19.80	43.20	0.00	19.90	43.30	54.00	-10.70	Vertical
17604.000	-20.70	43.60	0.00	20.90	43.80	54.00	-10.20	Horizontal

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Worse case mode:		QPSK(lowest rate)		Test channel:		Highest	Remark:	Peak
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
8155.000	-27.10	36.50	0.00	36.00	45.40	74.00	-28.60	Vertical
9530.000	-25.10	37.20	0.00	34.90	47.00	74.00	-27.00	Vertical
11631.000	-23.40	37.70	0.00	34.20	48.50	74.00	-25.50	Vertical
13886.000	-22.70	39.20	0.00	34.90	51.40	74.00	-22.60	Vertical
15624.000	-22.10	41.10	0.00	34.50	53.50	74.00	-20.50	Vertical
17615.000	-20.70	43.60	0.00	34.20	57.10	74.00	-16.90	Vertical
8144.000	-27.10	36.50	0.00	36.60	46.00	74.00	-28.00	Horizontal
9640.000	-25.10	37.20	0.00	34.60	46.70	74.00	-27.30	Horizontal
11631.000	-23.40	37.70	0.00	36.70	51.00	74.00	-23.00	Horizontal
13897.000	-22.70	39.20	0.00	34.60	51.10	74.00	-22.90	Horizontal
15602.000	-22.10	41.10	0.00	34.90	53.90	74.00	-20.10	Horizontal
17604.000	-20.70	43.60	0.00	34.10	57.00	74.00	-17.00	Horizontal

Worse case mode:		QPSK(lowest rate)		Test channel:		Highest	Remark:	Average
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
17615.000	-20.70	43.60	0.00	21.00	43.90	54.00	-10.10	Vertical
17604.000	-20.70	43.60	0.00	20.90	43.80	54.00	-10.20	Horizontal

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Antenna 2

7GHz-18GHz

Worse case mode:		QPSK(lowest rate)		Test channel:		Lowest		Remark:	Peak
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamplifier Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	
8166.000	-27.20	36.50	0.00	36.70	46.00	74.00	-28.00	Vertical	
9541.000	-25.10	37.20	0.00	35.00	47.10	74.00	-26.90	Vertical	
11521.000	-23.30	37.70	0.00	33.60	48.00	74.00	-26.00	Vertical	
13919.000	-22.50	39.20	0.00	35.30	52.00	74.00	-22.00	Vertical	
15558.000	-22.20	41.10	0.00	34.70	53.60	74.00	-20.40	Vertical	
17516.000	-20.50	43.40	0.00	34.70	57.60	74.00	-16.40	Vertical	
8067.000	-27.20	36.40	0.00	36.60	45.80	74.00	-28.20	Horizontal	
9431.000	-25.10	37.40	0.00	35.00	47.30	74.00	-26.70	Horizontal	
11466.000	-23.30	37.60	0.00	36.50	50.80	74.00	-23.20	Horizontal	
13600.000	-23.60	38.80	0.00	34.00	49.20	74.00	-24.80	Horizontal	
15591.000	-22.10	41.10	0.00	35.00	54.00	74.00	-20.00	Horizontal	
17296.000	-20.10	43.10	0.00	32.40	55.40	74.00	-18.60	Horizontal	

Worse case mode:		QPSK(lowest rate)		Test channel:		Lowest		Remark:	Average
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamplifier Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	
17516.000	-20.50	43.40	0.00	19.80	42.70	54.00	-11.30	Vertical	
17296.000	-20.10	43.10	0.00	19.50	42.50	54.00	-11.50	Horizontal	

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Worse case mode:		QPSK(lowest rate)		Test channel:		Middle	Remark:	Peak
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
8067.000	-27.20	36.40	0.00	37.10	46.30	74.00	-27.70	Vertical
9519.000	-25.10	37.20	0.00	34.80	46.90	74.00	-27.10	Vertical
11521.000	-23.30	37.70	0.00	33.60	48.00	74.00	-26.00	Vertical
13435.000	-23.70	38.60	0.00	34.00	48.90	74.00	-25.10	Vertical
15602.000	-22.10	41.10	0.00	34.70	53.70	74.00	-20.30	Vertical
17637.000	-20.70	43.60	0.00	34.70	57.60	74.00	-16.40	Vertical
8067.000	-27.20	36.40	0.00	36.70	45.90	74.00	-28.10	Horizontal
9519.000	-25.10	37.20	0.00	34.60	46.70	74.00	-27.30	Horizontal
11521.000	-23.30	37.70	0.00	38.50	52.90	74.00	-21.10	Horizontal
13600.000	-23.60	38.80	0.00	33.70	48.90	74.00	-25.10	Horizontal
15602.000	-22.10	41.10	0.00	34.60	53.60	74.00	-20.40	Horizontal
17604.000	-20.70	43.60	0.00	34.20	57.10	74.00	-16.90	Horizontal

Worse case mode:		QPSK(lowest rate)		Test channel:		Middle	Remark:	Average
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
17637.000	-20.70	43.60	0.00	21.10	44.00	54.00	-10.00	Vertical
17604.000	-20.70	43.60	0.00	20.90	43.80	54.00	-10.20	Horizontal

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Worse case mode:		QPSK(lowest rate)		Test channel:		Highest	Remark:	Peak
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
8166.000	-27.20	36.50	0.00	36.60	45.90	74.00	-28.10	Vertical
9750.000	-25.00	37.30	0.00	35.00	47.30	74.00	-26.70	Vertical
11631.000	-23.40	37.70	0.00	35.20	49.50	74.00	-24.50	Vertical
13919.000	-22.50	39.20	0.00	35.60	52.30	74.00	-21.70	Vertical
15822.000	-21.70	41.20	0.00	34.20	53.70	74.00	-20.30	Vertical
17626.000	-20.70	43.60	0.00	33.70	56.60	74.00	-17.40	Vertical
8122.000	-27.10	36.40	0.00	36.60	45.90	74.00	-28.10	Horizontal
9519.000	-25.10	37.20	0.00	34.40	46.50	74.00	-27.50	Horizontal
11631.000	-23.40	37.70	0.00	41.80	56.10	74.00	-17.90	Horizontal
13424.000	-23.70	38.60	0.00	34.60	49.50	74.00	-24.50	Horizontal
15602.000	-22.10	41.10	0.00	34.80	53.80	74.00	-20.20	Horizontal
17637.000	-20.70	43.60	0.00	34.40	57.30	74.00	-16.70	Horizontal

Worse case mode:		QPSK(lowest rate)		Test channel:		Highest	Remark:	Average
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
17626.000	-20.70	43.60	0.00	21.10	44.00	54.00	-10.00	Vertical
11631.000	-23.40	37.70	0.00	27.20	41.50	54.00	-12.50	Horizontal
17637.000	-20.70	43.60	0.00	21.20	44.10	54.00	-9.90	Horizontal

Remark:

1) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

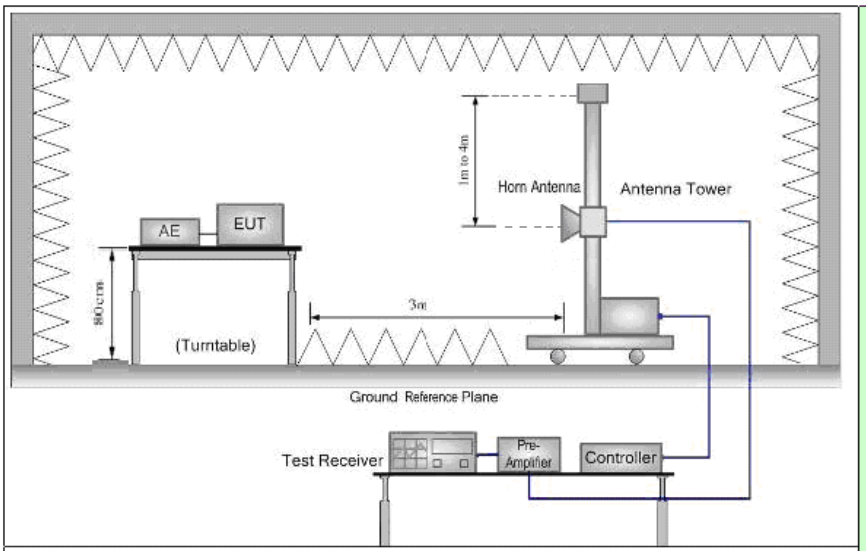
Final Test Level = Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor

2) Scan from 9KHz to 60GHz, The disturbance above 18GHz and below 7GHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported .



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6.9 Restricted bands around fundamental frequency

Test Requirement:	47 CFR Part 15C Section 15.407
Test Method:	ANSI C63.10 2009
Test Site:	Measurement Distance: 3m (Semi-Anechoic Chamber)
Limit:	For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of -27 dBm/MHz.
Test Setup:	



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Test Procedure:	<ul style="list-style-type: none">a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.f. Place a marker at the end of the restricted band closest to the transmit frequency to show compliance. Also measure any emissions in the restricted bands. Save the spectrum analyzer plot. Repeat for each power and modulation for lowest and highest channelg. Test the EUT in the lowest channel , the Highest channelh. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, And found the X axis positioning which it is worse case.i. Repeat above procedures until all frequencies measured was complete.
Exploratory Test Mode:	Transmitting with all kind of data rates.
Final Test Mode:	Through Pre-scan, find the lowest rate is the worst case of QPSK mode. Only the worst case is recorded in the report.
Instruments Used:	Refer to section 5.10 for details.
Test Results:	Pass



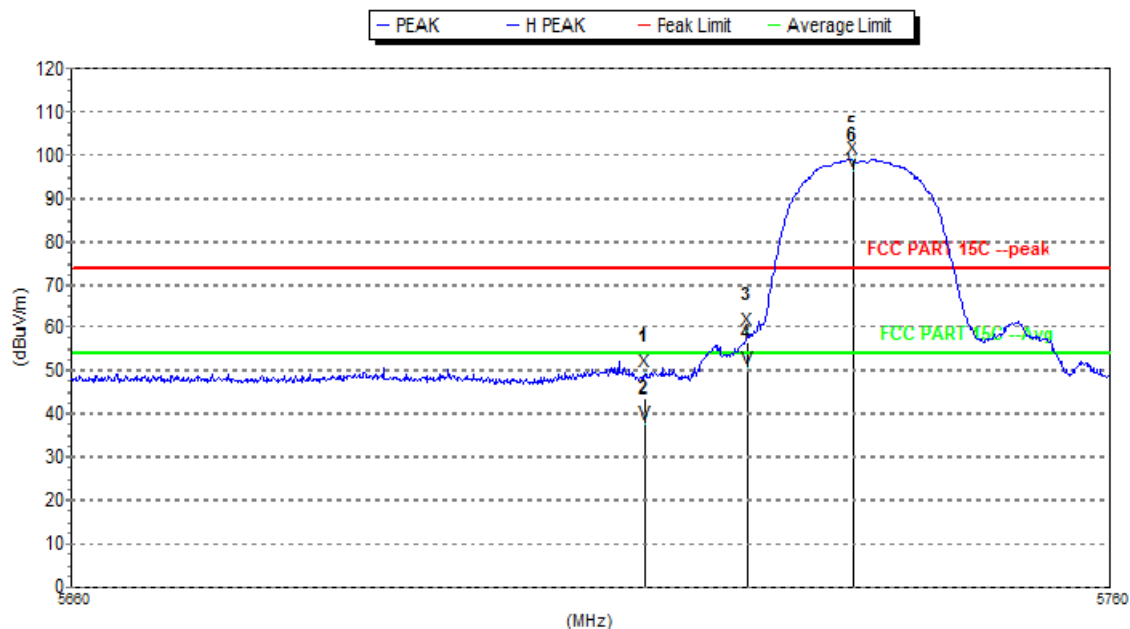
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Test plot as follows:

Antenna 1



Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Ant.F.(dB/m)	Amp.G.(dB)	Cbl.L.(dB)	Pol.
Peak:								
1	5715	49.7	74.0	24.3	34.3	0.0	-30.5	H
3	5725	59.4	74.0	14.6	34.2	0.0	-30.5	H
5	5735.000	99.3	74.0	-25.3	34.2	0.0	-30.5	H
Avg								
2	5715	37.6	54.0	16.4	34.3	0.0	-30.5	H
4	5725	50.7	54.0	3.3	34.2	0.0	-30.5	H
6	5735.000	96.3	54.0	-42.3	34.2	0.0	-30.5	H

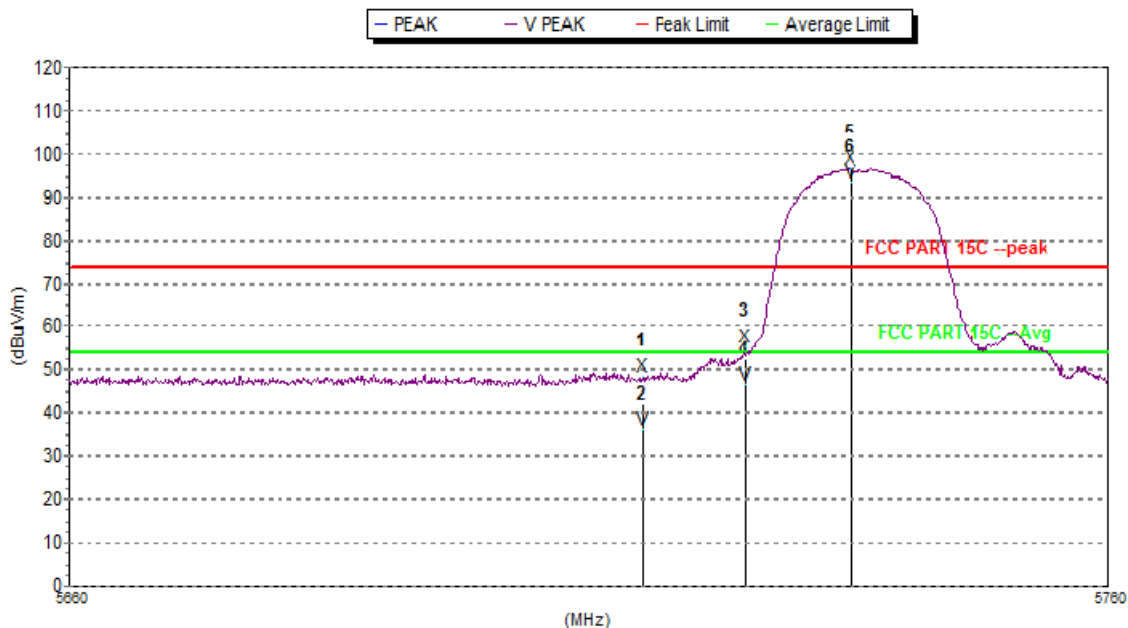
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Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Ant.F.(dB/m)	Amp.G.(dB)	Cbl.L.(dB)	Pol.
Peak:								
1	5715	48.7	74.0	25.3	34.3	0.0	-30.5	V
3	5725	55.3	74.0	18.7	34.2	0.0	-30.5	V
5	5735.000	96.7	74.0	-22.7	34.2	0.0	-30.5	V
Avg								
2	5715	36.1	54.0	17.9	34.3	0.0	-30.5	--
4	5725	46.4	54.0	7.6	34.2	0.0	-30.5	V
6	5735.000	93.5	54.0	-39.5	34.2	0.0	-30.5	V

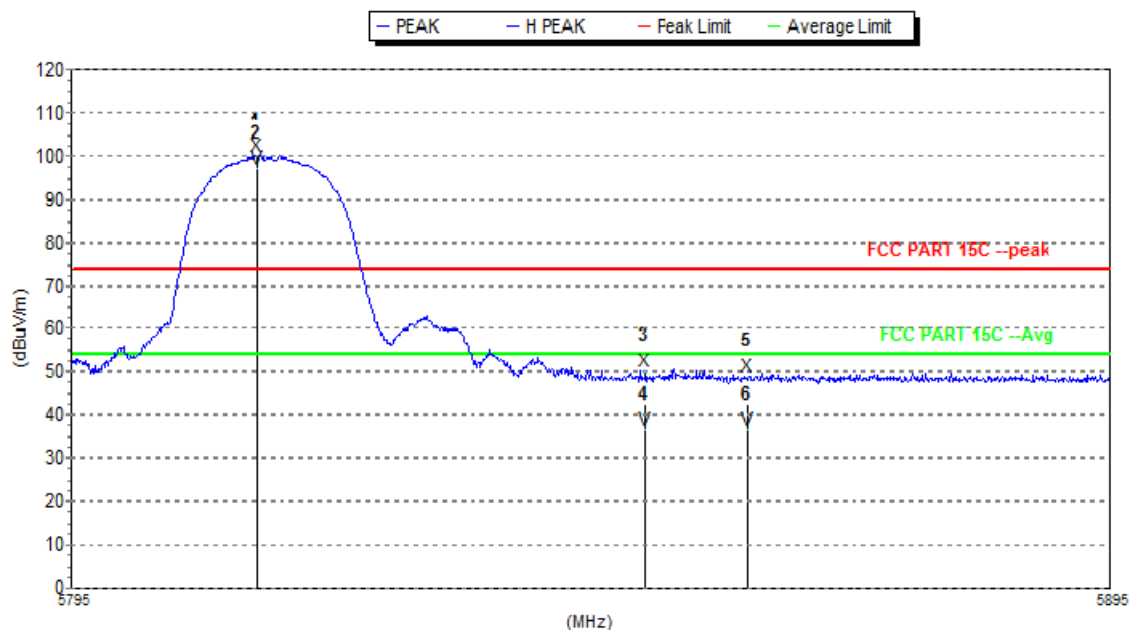
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Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Ant.F.(dB/m)	Amp.G.(dB)	Cbl.L.(dB)	Pol.
Peak:								
1	5812.800	99.9	74.0	-25.9	34.3	0.0	-30.5	H
3	5850	50.0	74.0	24.0	34.4	0.0	-30.5	H
5	5860	49.1	74.0	24.9	34.4	0.0	-30.5	H
Avg								
2	5812.800	97.0	54.0	-43.0	34.3	0.0	-30.5	H
4	5850	36.4	54.0	17.6	34.4	0.0	-30.5	--
6	5860	36.5	54.0	17.5	34.5	0.0	-30.5	H

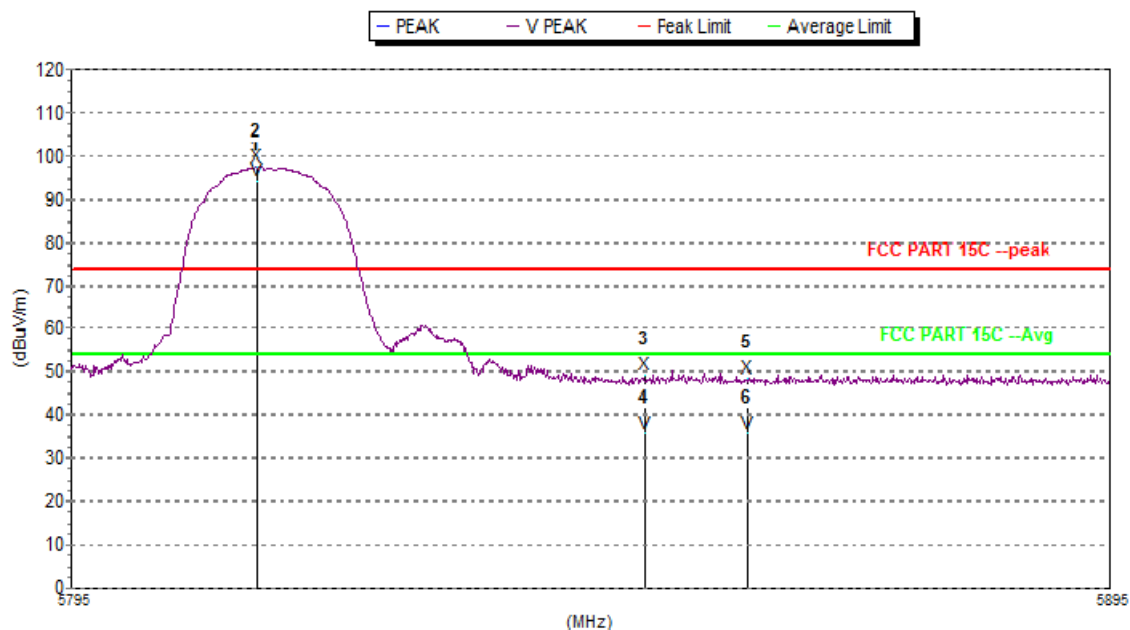
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Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Ant.F.(dB/m)	Amp.G.(dB)	Cbl.L.(dB)	Pol.
Peak:								
2	5812.800	97.5	74.0	-23.5	34.3	0.0	-30.5	V
3	5850	49.2	74.0	24.8	34.4	0.0	-30.5	V
5	5860	48.6	74.0	25.4	34.5	0.0	-30.5	V
Avg								
1	5812.800	94.5	54.0	-40.5	34.3	0.0	-30.5	--
4	5850	35.9	54.0	18.1	34.4	0.0	-30.5	V
6	5860	35.6	54.0	18.4	34.5	0.0	-30.5	V

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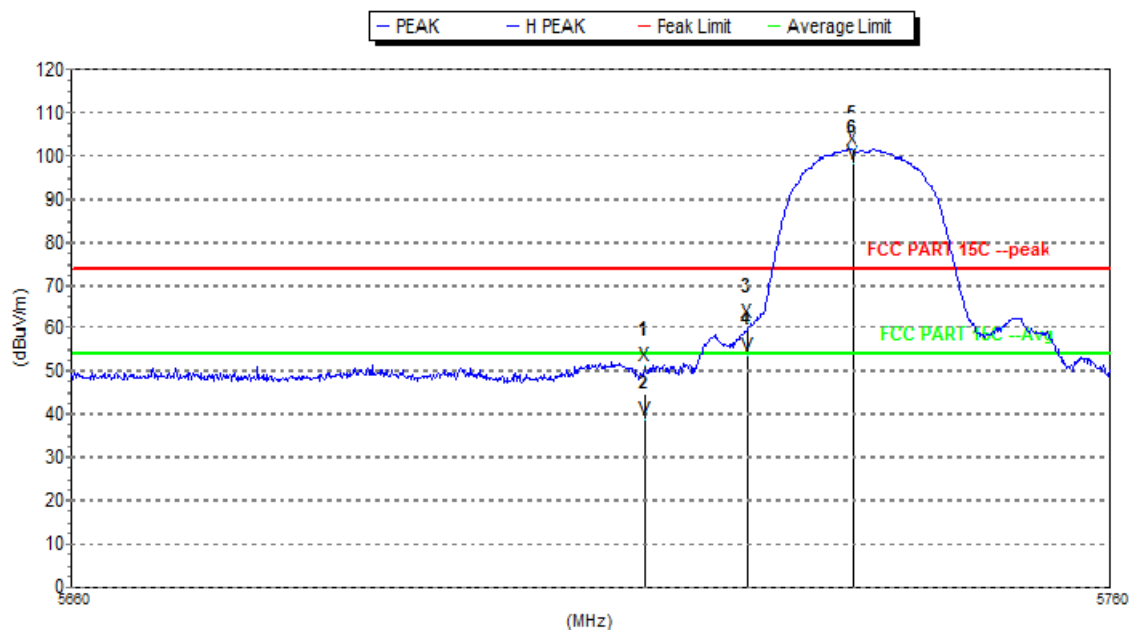


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Antenna 2



Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Ant.F.(dB/m)	Amp.G.(dB)	Cbl.L.(dB)	Pol.
Peak:								
1	5715	51.3	74.0	22.7	34.3	0.0	-30.5	H
3	5725	61.4	74.0	12.6	34.2	0.0	-30.5	H
5	5735.100	101.5	74.0	-27.5	34.2	0.0	-30.5	H
Avg								
2	5715	39.1	54.0	14.9	34.3	0.0	-30.5	H
4	5725	53.6	54.0	0.4	34.2	0.0	-30.5	H
6	5735.100	98.4	54.0	-44.4	34.2	0.0	-30.5	H

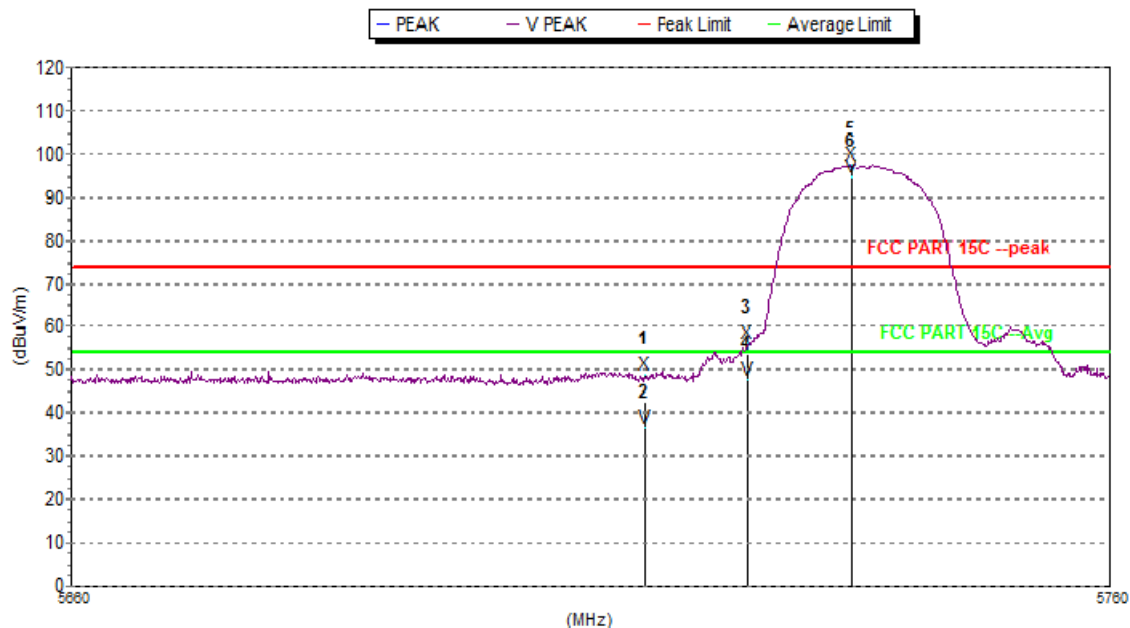
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Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Ant.F.(dB/m)	Amp.G.(dB)	Cbl.L.(dB)	Pol.
Peak:								
1	5715	48.8	74.0	25.2	34.3	0.0	-30.5	V
3	5725	56.0	74.0	18.0	34.2	0.0	-30.5	V
5	5734.900	97.5	74.0	-23.5	34.2	0.0	-30.5	V
Avg								
2	5715	36.6	54.0	17.4	34.3	0.0	-30.5	V
4	5725	47.6	54.0	6.4	34.2	0.0	-30.5	V
6	5734.900	94.6	54.0	-40.6	34.2	0.0	-30.5	V

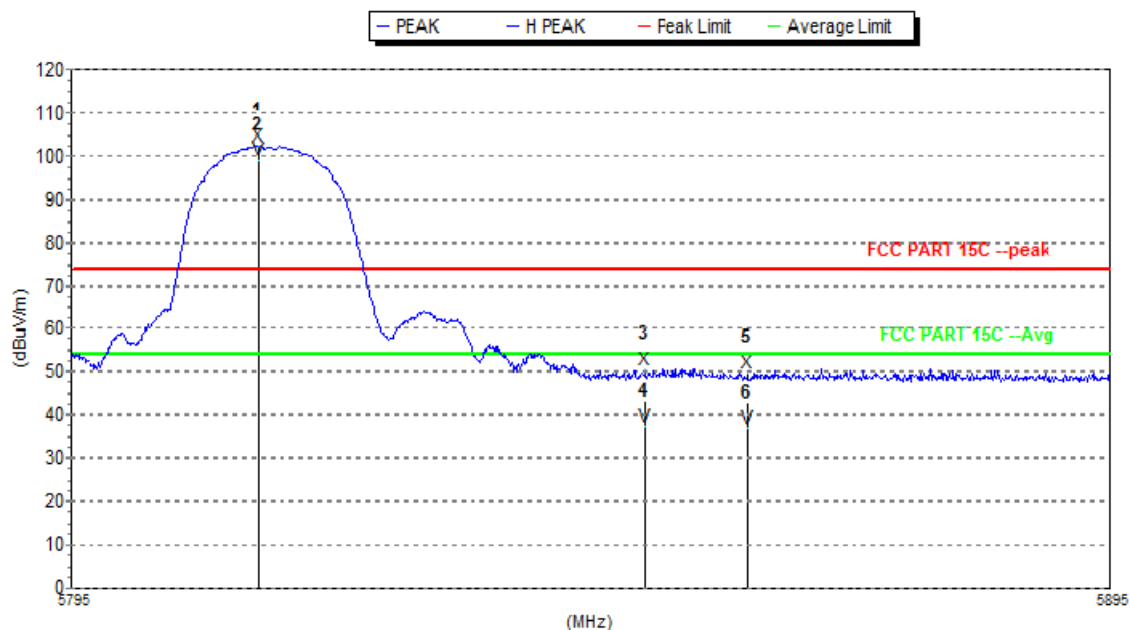
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Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Ant.F.(dB/m)	Amp.G.(dB)	Cbl.L.(dB)	Pol.
Peak:								
1	5812.900	102.4	74.0	-28.4	34.3	0.0	-30.5	H
3	5850	50.5	74.0	23.5	34.4	0.0	-30.5	H
5	5860	49.7	74.0	24.3	34.5	0.0	-30.5	H
Avg								
2	5812.900	99.1	54.0	-45.1	34.3	0.0	-30.5	H
4	5850	37.3	54.0	16.7	34.4	0.0	-30.5	H
6	5860	36.9	54.0	17.1	34.5	0.0	-30.5	H

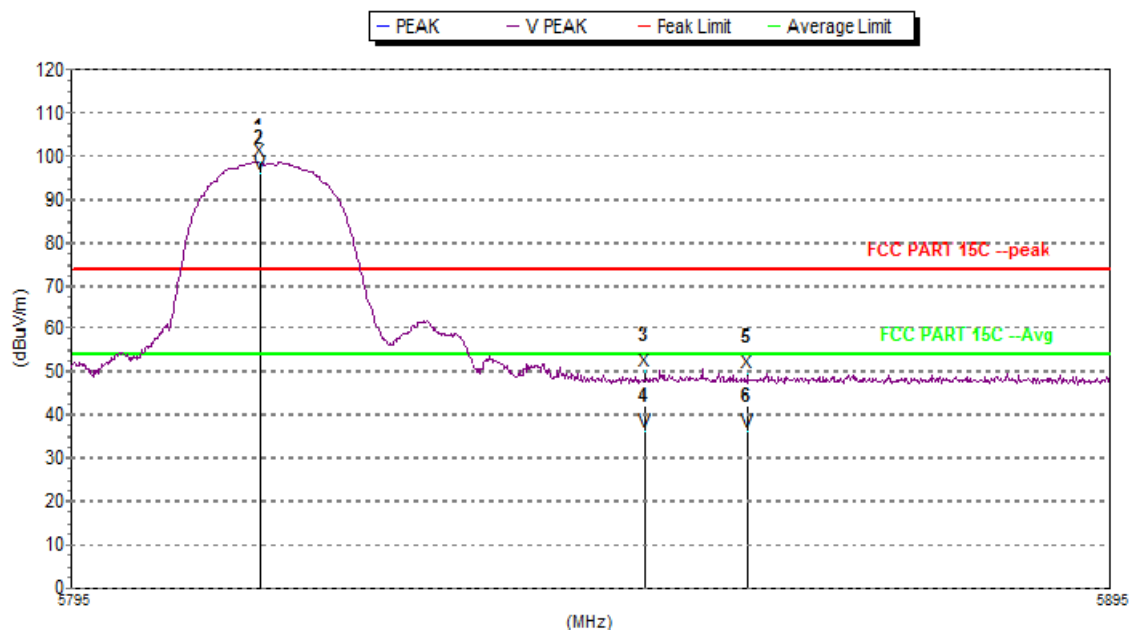
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Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Ant.F.(dB/m)	Amp.G.(dB)	Cbl.L.(dB)	Pol.
Peak:								
1	5813.100	98.9	74.0	-24.9	34.3	0.0	-30.5	V
3	5850	50.1	74.0	23.9	34.4	0.0	-30.5	V
5	5860	49.9	74.0	24.1	34.5	0.0	-30.5	V
Avg								
2	5813.100	95.9	54.0	-41.9	34.3	0.0	-30.5	V
4	5850	36.1	54.0	17.9	34.4	0.0	-30.5	V
6	5860	36.0	54.0	18.0	34.5	0.0	-30.5	V

Note:

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor



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7 Photographs - EUT Test Setup

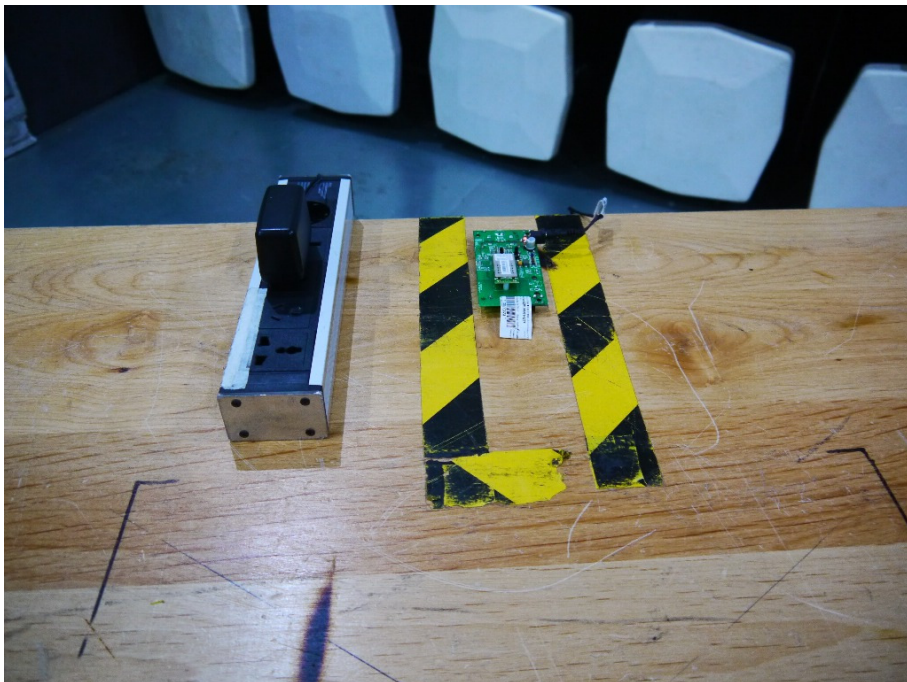
Test model No.: DWHP83

7.1 Conducted Emission



7.2 Radiated Spurious Emission





8 Photographs - EUT Constructional Details

Test model No.: DWHP83

