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FCC REPORT

Application No: SZEM1509005762CR

Applicant: BEWELL CONNECT CORP

Manufacturer:SHENZHEN HEAL THCARE ELECTRONIC TECHNOLOGY CO., LTD.Factory:SHENZHEN HEAL THCARE ELECTRONIC TECHNOLOGY CO., LTD.

Product Name: MyScale ANALYZER

Model No.(EUT): BW-SC2W

Add Model No.: FG9556W, BW-SC2B, FG9556B

Trade Mark: Bewell connect

S/N: BW-SC2W-PP-A1.1-020, BW-SC2W-PP-A1.1-021

FCC ID: 2AF8T-BW-SC2

Standards: 47 CFR Part 15, Subpart C (2014)

Date of Receipt: 2015-09-15

Date of Test: 2015-09-18 to 2015-09-30

Date of Issue: 2015-10-21

Test Result: PASS *

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.

^{*} In the configuration tested, the EUT complied with the standards specified above.



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2 Version

Revision Record						
Version	Chapter	Date	Modifier	Remark		
00		2015-10-21		Original		

Prepared By	(Venus Wu) /Clerk	2015-10-21 Date
	Venus Wu	
Tested By	(Benson Wang) /Project Engineer	Date
	Benson Wang	2015-09-30
Authorized for issue by:		



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3 Test Summary

Test Item	Test Requirement	Test method	Result
Antenna Requirement	47 CFR Part 15, Subpart C Section 15.203/15.247 (c)	ANSI C63.10 2009	PASS
Conducted Peak Output Power	47 CFR Part 15, Subpart C Section 15.247 (b)(3)	ANSI C63.10 2009 & KDB 558074 D01 DTS Meas Guidance v03r03 (June 09, 2014)	PASS
6dB Occupied Bandwidth	47 CFR Part 15, Subpart C Section 15.247 (a)(2)	ANSI C63.10 2009 & KDB 558074 D01 DTS Meas Guidance v03r03 (June 09, 2014)	PASS
Power Spectral Density	47 CFR Part 15, Subpart C Section 15.247 (e)	ANSI C63.10 2009 & KDB 558074 D01 DTS Meas Guidance v03r03 (June 09, 2014)	PASS
Band-edge for RF Conducted Emissions	47 CFR Part 15, Subpart C Section 15.247(d)	ANSI C63.10 2009 & KDB 558074 D01 DTS Meas Guidance v03r03 (June 09, 2014)	PASS
RF Conducted Spurious Emissions	47 CFR Part 15, Subpart C Section 15.247(d)	ANSI C63.10 2009 & KDB 558074 D01 DTS Meas Guidance v03r03 (June 09, 2014)	PASS
Radiated Spurious Emissions 47 CFR Part 15, Subpart C Section 15.205/15.209		ANSI C63.10 2009 & KDB 558074 D01 DTS Meas Guidance v03r03 (June 09, 2014)	PASS
Restricted bands around fundamental frequency (Radiated Emission)	47 CFR Part 15, Subpart C Section 15.205/15.209	ANSI C63.10 2009 & KDB 558074 D01 DTS Meas Guidance v03r03 (June 09, 2014)	PASS

Remark:

Model No.: BW-SC2W, FG9556W, BW-SC2B, FG9556B

Only the model BW-SC2W was tested, since the electrical circuit design, layout, components used and internal wiring were identical for all above models. Only different on model name, color and client.



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5 General Information

5.1 Client Information

Applicant:	BEWELL CONNECT CORP
Address of Applicant:	SUITE 410 - 185 ALEWIFE BROOK PARKWAY COMBRIDGE, MA 02138 - USA
Manufacturer:	SHENZHEN HEAL THCARE ELECTRONIC TECHNOLOGY CO., LTD.
Address of Manufacturer:	Block 48, Changxing Industrial Zone, ChangZhen, Gongming Town, Guangming District, Shenzhen, Guangdong, China 518132
Factory:	SHENZHEN HEAL THCARE ELECTRONIC TECHNOLOGY CO., LTD.
Address of Factory:	Block 48, Changxing Industrial Zone, ChangZhen, Gongming Town, Guangming District, Shenzhen, Guangdong, China 518132

5.2 General Description of EUT

Product Name:	MyScale ANALYZER	
Model No.:	BW-SC2W	
Trade Mark:	Bewell connect	
Carrier Frequency:	2.402GHz~2.480GHz	
Bluetooth Version:	V4.0 BLE Single mode	
Sample Type:	Portable production	
Test Power Grade:	Class II	
Antenna Gain:	0dBi	
Antenna Type:	Integral	
Battery:	6.0V DC (4 X 1.5V "AAA" Size Batteries)	



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Operation Frequency each of channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
0	2402MHz	10	2422MHz	20	2442MHz	30	2462MHz
1	2404MHz	11	2424MHz	21	2444MHz	31	2464MHz
2	2406MHz	12	2426MHz	22	2446MHz	32	2466MHz
3	2408MHz	13	2428MHz	23	2448MHz	33	2468MHz
4	2410MHz	14	2430MHz	24	2450MHz	34	2470MHz
5	2412MHz	15	2432MHz	25	2452MHz	35	2472MHz
6	2414MHz	16	2434MHz	26	2454MHz	36	2474MHz
7	2416MHz	17	2436MHz	27	2456MHz	37	2476MHz
8	2418MHz	18	2438MHz	28	2458MHz	38	2478MHz
9	2420MHz	19	2440MHz	29	2460MHz	39	2480MHz

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Channel	Frequency	
The lowest channel (CH0)	2402MHz	
The middle channel (CH19)	2440MHz	
The highest channel (CH39)	2480MHz	



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5.3 Test Environment

Operating Environment:				
Temperature:	25.0 °C			
Humidity:	55% RH			
Atmospheric Pressure:	1010mbar			

5.4 Description of Support Units

The EUT has been tested independent unit.

5.5 Test Location

All tests were performed at:

 ${\tt SGS-CSTC\ Standards\ Technical\ Services\ Co.,\ Ltd.,\ Shenzhen\ Branch\ E\&E\ Lab,}$

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.



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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.

· A2LA (Certificate No. 3816.01)

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

VCCI

The 10m Semi-anechoic chamber and Shielded Room 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)

The 3m Semi-anechoic chambers and the 10m Semi-anechoic chambers of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab have been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 4620C-2, 4620C-3.

5.7 Deviation from Standards

None.

5.8 Abnormalities from Standard Conditions

None.

5.9 Other Information Requested by the Customer

None.



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5.10 Equipment List

RE in Chamber						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. date (yyyy-mm-dd)	Cal.Due date (yyyy-mm-dd)
1	3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEL0017	2015-05-13	2016-05-13
2	EMI Test Receiver	Agilent Technologies	N9038A	SEL0312	2015-09-16	2016-09-16
3	EMI Test software	AUDIX	E3	SEL0050	N/A	N/A
4	BiConiLog Antenna (26-3000MHz)	ETS-LINDGREN	3142C	SEL0015	2014-11-15	2017-11-15
5	Double-ridged horn (1-18GHz)	ETS-LINDGREN	3117	SEL0006	2015-10-17	2016-10-17
6	Horn Antenna (18-26GHz)	ETS-LINDGREN	3160	SEL0076	2014-11-24	2017-11-24
7	Pre-amplifier (0.1-1300MHz)	Agilent Technologies	8447D	SEL0053	2015-05-13	2016-05-13
8	Pre-Amplifier (0.1-26.5GHz)	Compliance Directions Systems Inc.	PAP-0126	SEL0168	2015-10-17	2016-10-17
9	Coaxial cable	SGS	N/A	SEL0027	2015-05-13	2016-05-13
10	Coaxial cable	SGS	N/A	SEL0189	2015-05-13	2016-05-13
11	Coaxial cable	SGS	N/A	SEL0121	2015-05-13	2016-05-13
12	Coaxial cable	SGS	N/A	SEL0178	2015-05-13	2016-05-13
13	Band filter	Amindeon	82346	SEL0094	2015-05-13	2016-05-13
14	Barometer	Chang Chun	DYM3	SEL0088	2015-05-13	2016-05-13
15	DC Power Supply	Zhao Xin	RXN-305D	SEL0117	2015-10-09	2016-10-09
16	Humidity/ Temperature Indicator	Shanhai Qixiang	ZJ1-2B	SEL0103	2015-10-24	2016-10-24
17	Signal Generator (10M-27GHz)	Rohde & Schwarz	SMR27	SEL0067	2015-05-13	2016-05-13
18	Loop Antenna	Beijing Daze	ZN30401	SEL0203	2015-05-13	2016-05-13



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	RF connected test					
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. date (yyyy-mm-dd)	Cal.Due date (yyyy-mm-dd)
1	DC Power Supply	Zhao Xin	RXN-305D	SEL0117	2015-10-09	2016-10-09
2	Humidity/ Temperature Indicator	HYGRO	ZJ1-2B	SEL0033	2015-10-24	2016-10-24
3	Spectrum Analyzer	Rohde & Schwarz	FSP	SEL0154	2015-10-17	2016-10-17
4	Coaxial cable	SGS	N/A	SEL0178	2015-05-13	2016-05-13
5	Coaxial cable	SGS	N/A	SEL0179	2015-05-13	2016-05-13
6	Barometer	ChangChun	DYM3	SEL0088	2015-05-13	2016-05-13
7	Signal Generator	Rohde & Schwarz	SML03	SEL0068	2015-04-25	2016-04-25
8	POWER METER	R&S	NRVS	SEL0144	2015-10-09	2016-10-09
9	Attenuator	Beijin feihang taida	TST-2-6dB	SEL0205	2015-04-25	2016-04-25





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6 Test results and Measurement Data

6.1 Antenna Requirement

Standard requirement: 47 CFR Part 15C Section 15.203 /247(c)

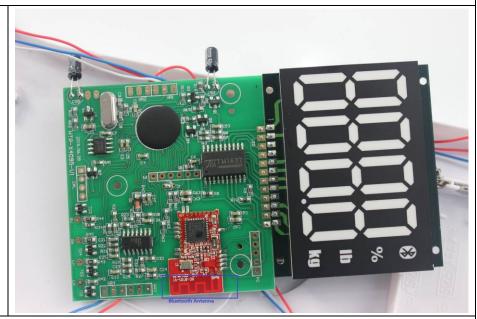
15.203 requirement:

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.

15.247(b) (4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

EUT Antenna:



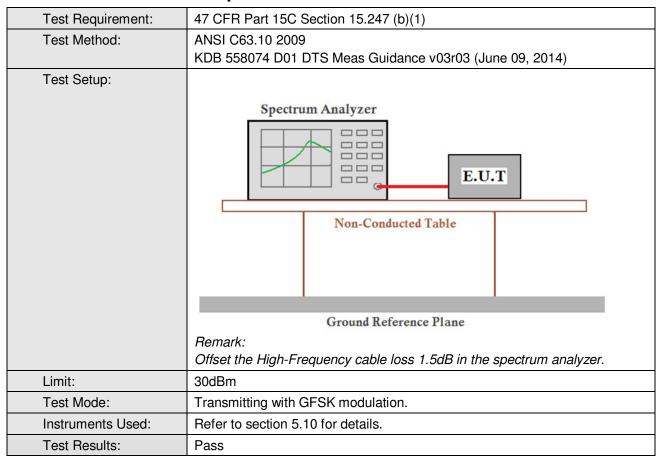
The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 0dBi.



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6.2 Conducted Peak Output Power



Measurement Data

mododromont Bata						
GFSK mode						
Test channel	Peak Output Power (dBm)	Limit (dBm)	Result			
Lowest	-1.86	30.00	Pass			
Middle	-3.49	30.00	Pass			
Highest	-4.71	30.00	Pass			

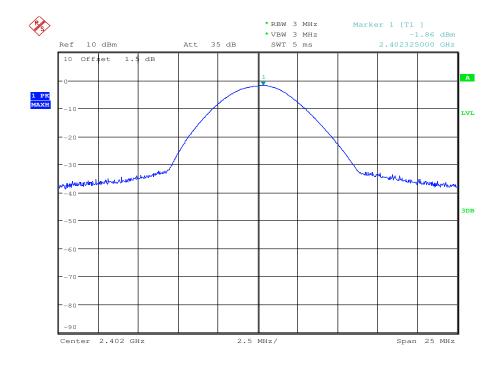


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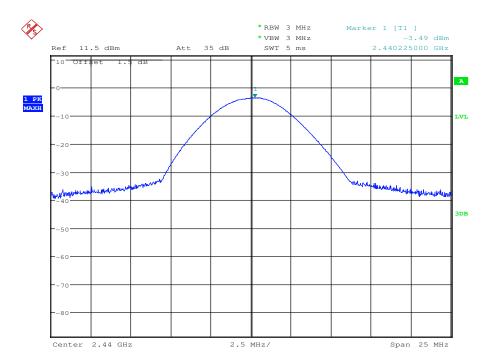
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Test plot as follows:

Test mode: GFSK Test channel: Lowest



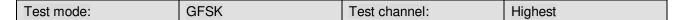


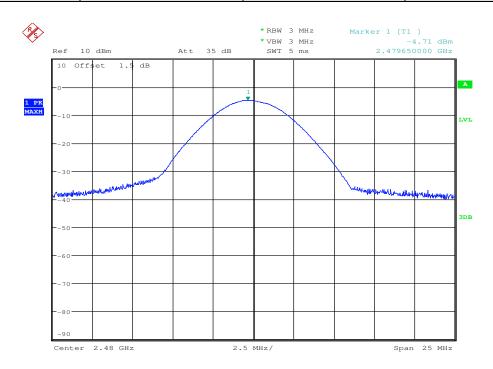




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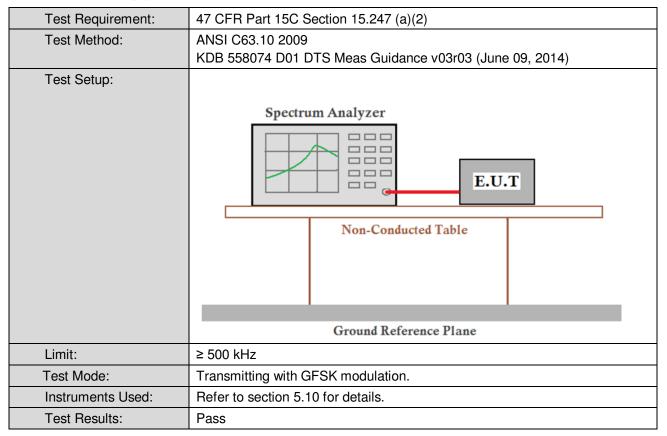




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6.3 6dB Occupy Bandwidth



Measurement Data

	GFSK mode		
Test channel	6dB Occupy Bandwidth (MHz)	Limit (kHz)	Result
Lowest	0.681	≥500	Pass
Middle	0.687	≥500	Pass
Highest	0.681	≥500	Pass

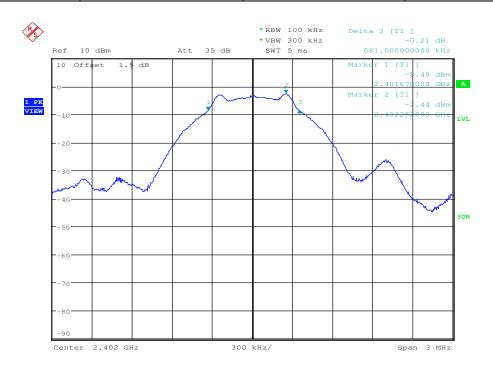


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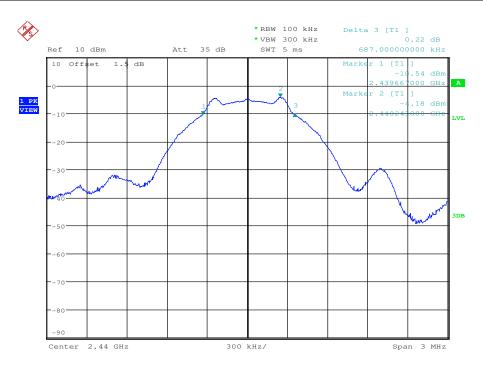
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Test plot as follows:

Test mode: GFSK Test channel: Lowest





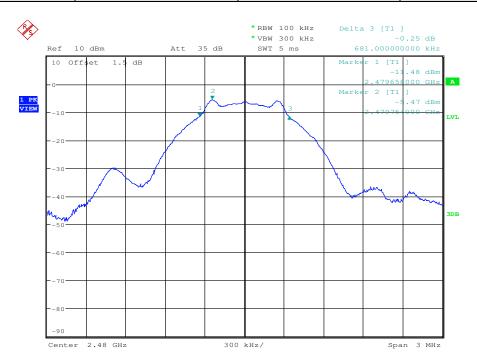




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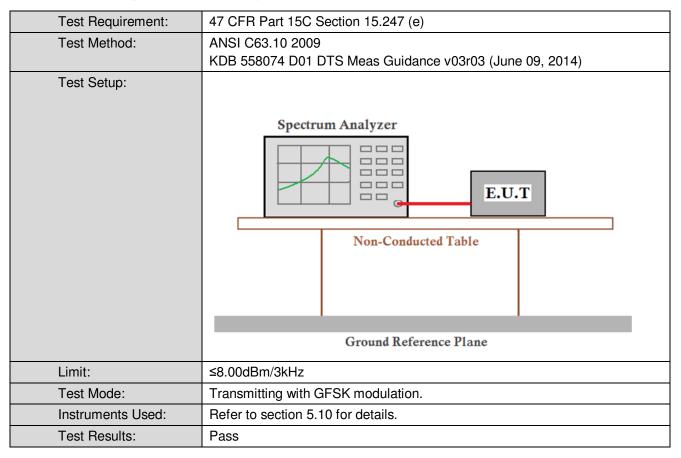




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6.4 Power Spectral Density



Measurement Data

	GFSK mode								
Test channel	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)	Result						
Lowest	-14.27	≤8.00	Pass						
Middle	-16.50	≤8.00	Pass						
Highest	-18.27	≤8.00	Pass						

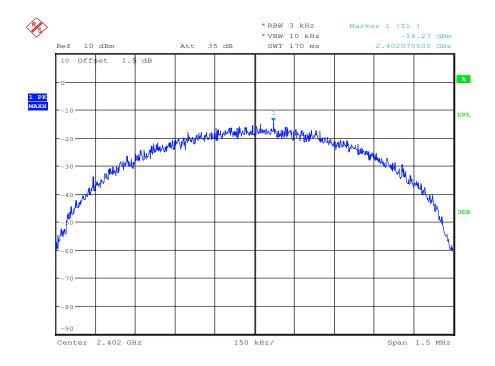


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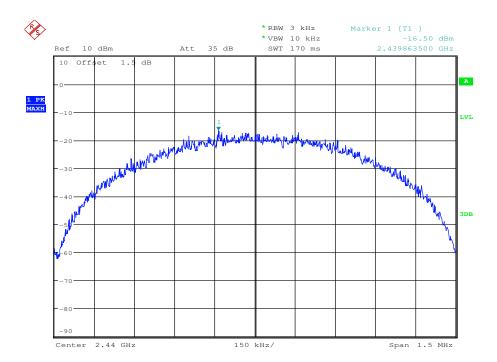
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Test plot as follows:

Test mode: GFSK Test channel: Lowest





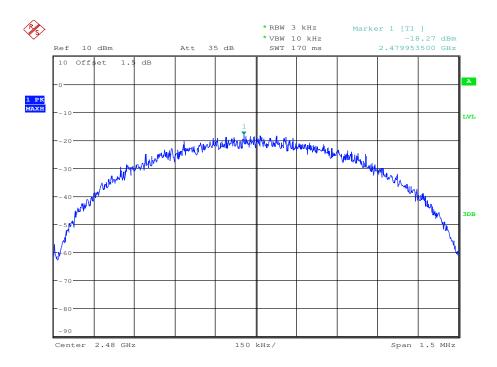




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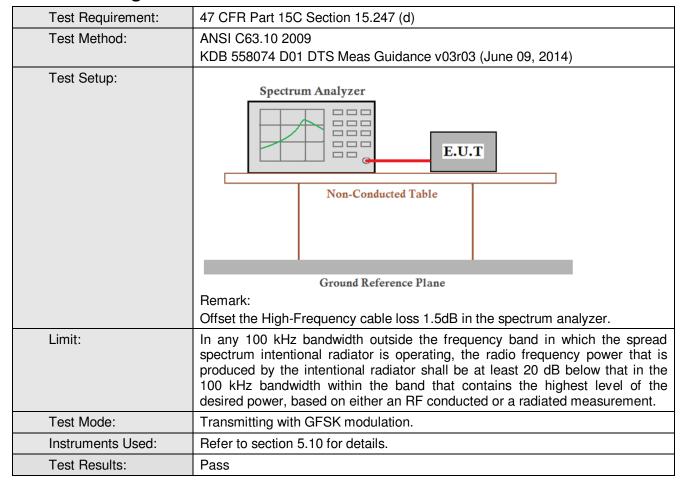




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6.5 Band-edge for RF Conducted Emissions



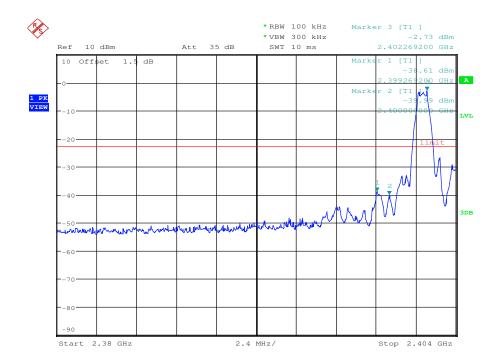


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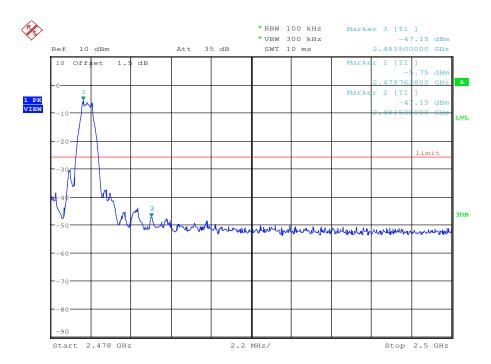
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Test plot as follows:

Test mode: GFSK Test channel: Lowest









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6.6 Spurious RF Conducted Emissions

Test Requirement:	47 CFR Part 15C Section 15.247 (d)					
Test Method:	ANSI C63.10 2009 KDB 558074 D01 DTS Meas Guidance v03r03 (June 09, 2014)					
Test Setup:	Spectrum Analyzer Non-Conducted Table Ground Reference Plane Remark:					
	Offset the High-Frequency cable loss 1.5dB in the spectrum analyzer.					
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.					
Test Mode:	Transmitting with GFSK modulation.					
Instruments Used:	Refer to section 5.10 for details.					
Test Results:	Pass					

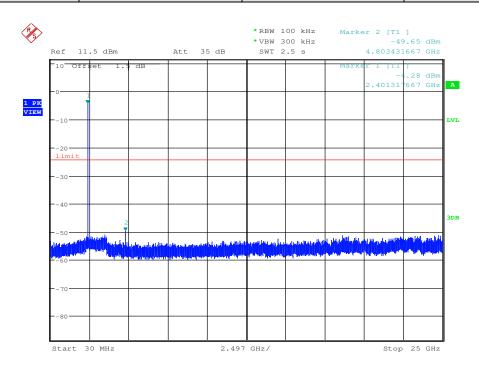


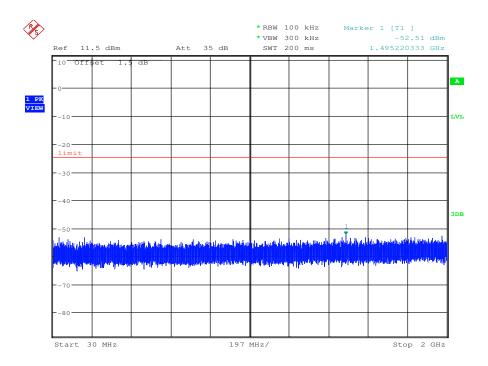
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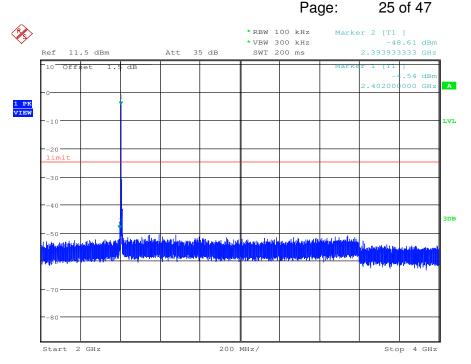
Test mode: GFSK Test channel: Lowest

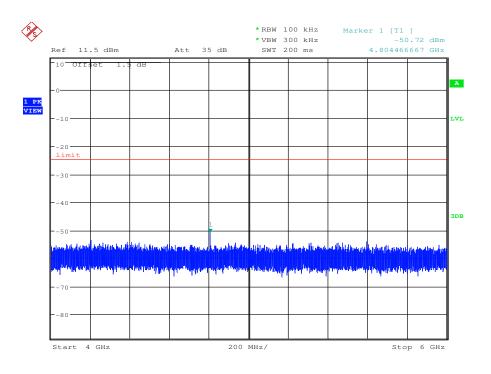






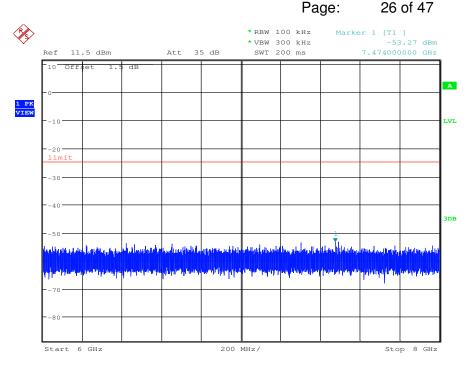
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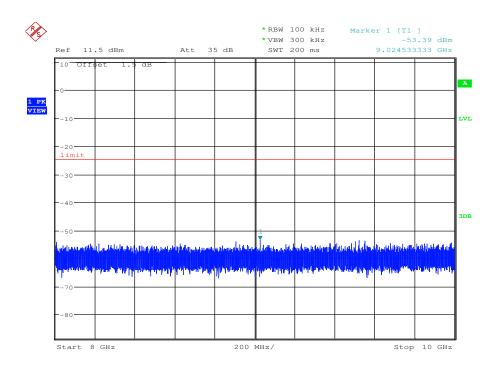






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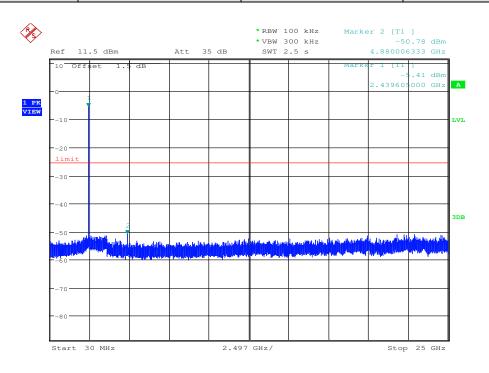


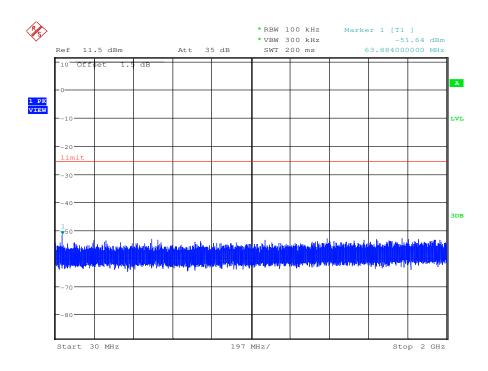


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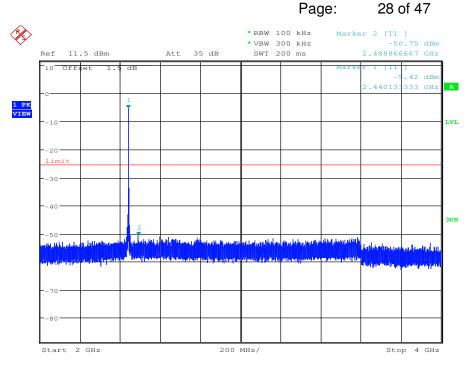


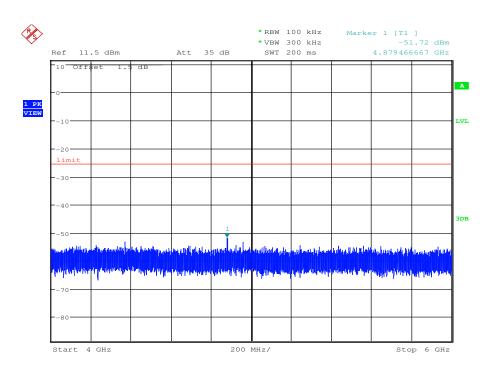






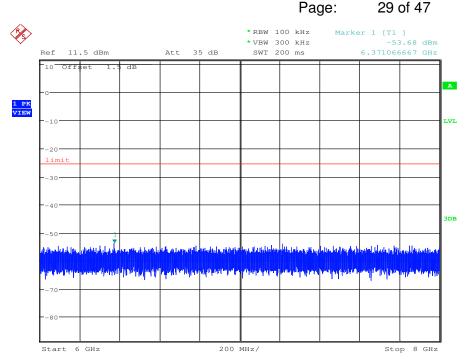
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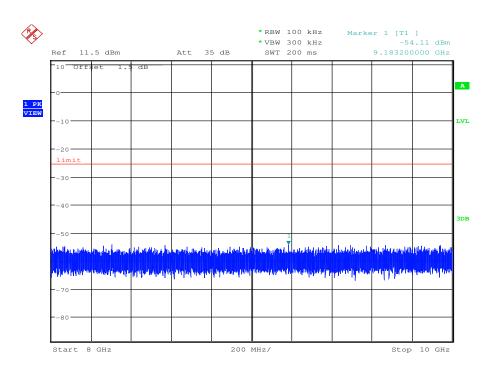






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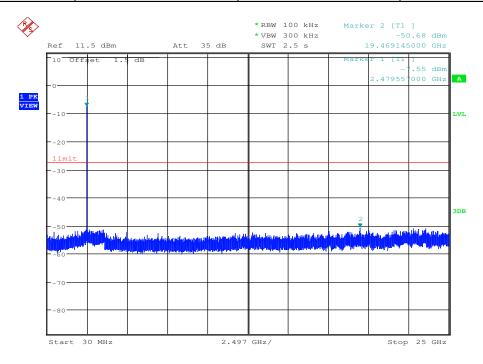


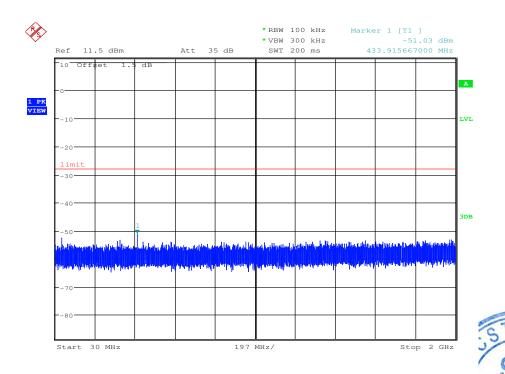


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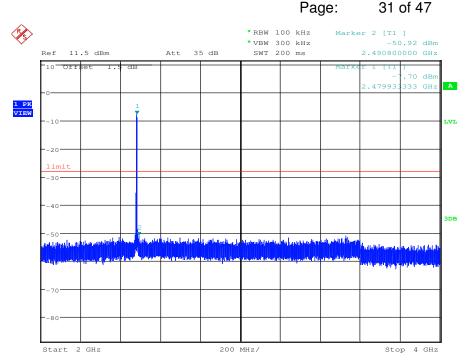


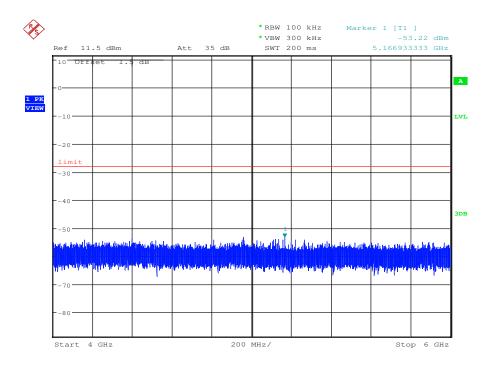






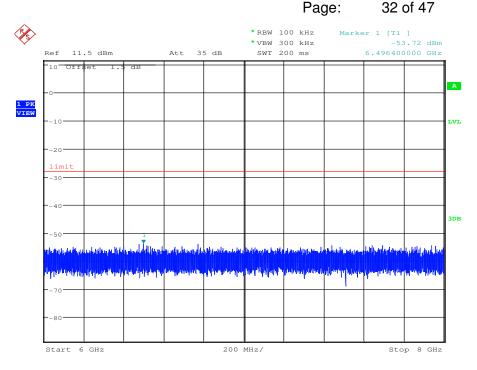
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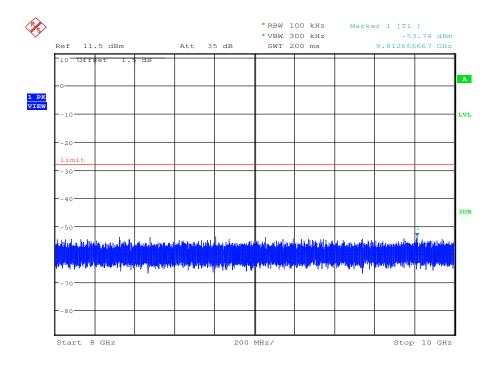






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Remark:

Pretest 9kHz to 25GHz, find the highest point when testing, so only the worst data were shown in the test report. Per FCC Part 15.33 (a) and 15.31 (o) ,The amplitude of spurious emissions from intentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this part.



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6.7 Radiated Spurious Emission

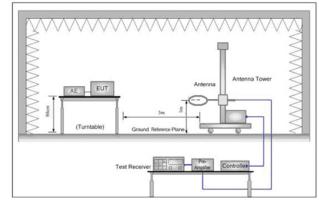
6.7.1 Spurious Emissions								
Test Requirement:	47 CFR Part 15C Section 15.209 and 15.205							
Test Method:	ANSI C63.10 2009							
	KDB 558074 D01 DTS	Mea	as Guidance v	03r03 (Ju	ne 09	, 2014)		
Test Site:	Measurement Distance	: 3n	n (Semi-Anech	noic Cham	iber)			
Receiver Setup:	Frequency		Detector	RBW	'	VBW	Remark	
	0.009MHz-0.090MH	Z	Peak	10kHz	z (3	30kHz	Peak	
	0.009MHz-0.090MH	Z	Average	10kHz	z 3	30kHz	Average	
	0.090MHz-0.110MH	Z	Quasi-peak	10kHz	z 3	30kHz	Quasi-peak	
	0.110MHz-0.490MH	z	Peak	10kHz	z (3	30kHz	Peak	
	0.110MHz-0.490MH	Z	Average	10kHz	2 3	30kHz	Average	
	0.490MHz -30MHz		Quasi-peak	10kHz	z 3	30kHz	Quasi-peak	
	30MHz-1GHz		Quasi-peak	100 kH	lz 3	00kHz	Quasi-peak	
	Above 1GHz		Peak	1MHz	<u>·</u> ;	3MHz	Peak	
	Above IGHZ		Peak	1MHz	2	10Hz	Average	
Limit:	Frequency		eld strength crovolt/meter)	Limit (dBuV/m)	Re	emark	Measureme distance (n	
	0.009MHz-0.490MHz	2	400/F(kHz)	-		-	300	
	0.490MHz-1.705MHz	24	1000/F(kHz)	-		-	30	
	1.705MHz-30MHz		30	-		-	30	
	30MHz-88MHz		100	40.0	Qua	ısi-peak	3	
	88MHz-216MHz		150	43.5	Qua	ısi-peak	3	
	216MHz-960MHz		200	46.0	Qua	ısi-peak	3	
	960MHz-1GHz		500	54.0	Qua	ısi-peak	3	
	Above 1GHz 500 54.0 Average 3							
	Note: 15.35(b), frequency emissions is limit applicable to the epeak emission level race	20c quip	IB above the oment under t	maximum est. This p	perm	itted ave	erage emissio	n



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Test Setup:



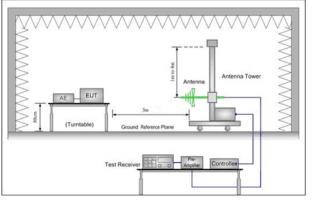


Figure 1. Below 30MHz

Figure 2. 30MHz to 1GHz

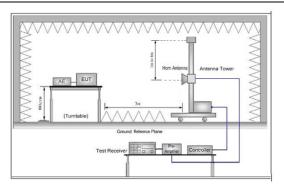


Figure 3. Above 1 GHz

Test Procedure:

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. 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 (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.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. 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.
- g. Test the EUT in the lowest channel (2402MHz),the middle channel (2440MHz),the Highest channel (2480MHz)
- h. The radiation measurements are performed in X, Y, Z axis positioning



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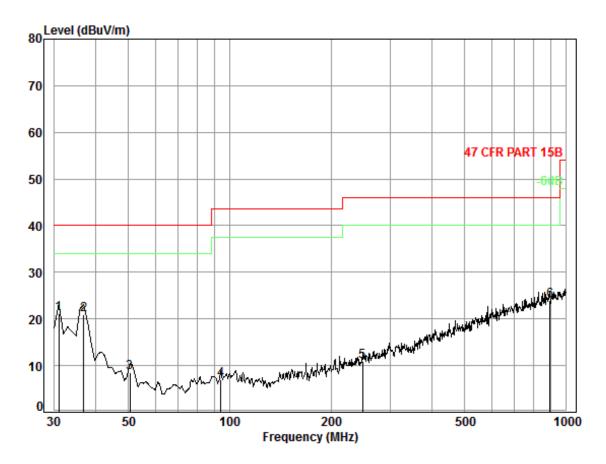
	for Transmitting mode, and found the X axis positioning which it is the worst case.i. Repeat above procedures until all frequencies measured was complete.
Exploratory Test	Transmitting with GFSK modulation.
Mode:	Transmitting mode
Final Test Mode:	Transmitting with GFSK modulation. Pretest the EUT at Transmitting mode. For below 1GHz part, through pre-scan, the worst case is the lowest channel. 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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Radiated Emission below 1GHz								
30MHz~1GHz (QP)								
Test mode:	Test mode: Transmitting mode Vertical							



Condition: 47 CFR PART 15B 3m 3142C Vertical

Job No. : 5762CR

Test mode: a

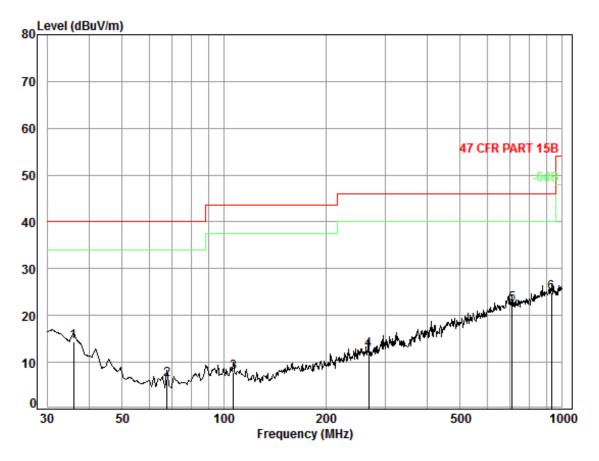
	Freq			Preamp Factor				Over Limit
	MHz	dB		dB				
1	30.96	0.60	18.16	27.35	29.83	21.24	40.00	-18.76
2	36.77	0.60	14.91	27.33	32.85	21.03	40.00	-18.97
3	50.41	0.80	8.64	27.29	26.25	8.40	40.00	-31.60
4	94.10	1.14	8.86	27.21	24.20	6.99	43.50	-36.51
5	248.55	1.67	12.25	26.54	23.51	10.89	46.00	-35.11
6	897.00	3.59	23.18	26.78	23.95	23.94	46.00	-22.06



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Test mode: Transmitting mode Horizontal



Condition: 47 CFR PART 15B 3m 3142C Horizontal

Job No. : 5762CR

Test mode: a

	Freq			Preamp Factor				Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	35.87	0.60	15.41	27.33	25.66	14.34	40.00	-25.66
2	67.91	0.80	6.96	27.25	25.78	6.29	40.00	-33.71
3	106.76	1.22	8.76	27.15	25.10	7.93	43.50	-35.57
4	268.49	1.76	12.67	26.49	24.66	12.60	46.00	-33.40
5	711.67	2.94	21.60	27.40	25.37	22.51	46.00	-23.49
6	932.27	3.63	23.30	26.61	24.49	24.81	46.00	-21.19



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Transmitter Emission above 1GHz								
Test mode:	(GFSK	Test	channel:	Lowest	Rema	ark:	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
3589.562	6.92	32.99	38.78	46.50	47.63	74	-26.37	Vertical
4804.000	6.42	34.70	39.24	51.24	53.12	74	-20.88	Vertical
5836.872	7.83	35.98	39.20	47.83	52.44	74	-21.56	Vertical
7206.000	8.92	35.63	39.07	45.71	51.19	74	-22.81	Vertical
9608.000	9.99	37.33	37.93	44.19	53.58	74	-20.42	Vertical
12350.530	11.14	39.14	39.00	41.27	52.55	74	-21.45	Vertical
3705.664	6.85	33.08	38.83	46.92	48.02	74	-25.98	Horizontal
4804.000	6.42	34.70	39.24	50.70	52.58	74	-21.42	Horizontal
5964.939	8.03	36.23	39.19	46.71	51.78	74	-22.22	Horizontal
7206.000	8.92	35.63	39.07	45.52	51.00	74	-23.00	Horizontal
9608.000	9.99	37.33	37.93	43.36	52.75	74	-21.25	Horizontal
12422.220	11.25	39.21	39.06	42.25	53.65	74	-20.35	Horizontal

Test mode:		GFSK	Tes	t channel:	Middle	Ren	nark:	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
3631.354	6.89	33.02	38.80	46.28	47.39	74	-26.61	Vertical
4880.000	6.58	34.78	39.26	51.27	53.37	74	-20.63	Vertical
5921.940	7.96	36.15	39.19	46.17	51.09	74	-22.91	Vertical
7320.000	9.07	35.51	39.06	45.91	51.43	74	-22.57	Vertical
9760.000	9.90	37.80	37.84	42.53	52.39	74	-21.61	Vertical
12015.620	10.63	38.72	38.71	42.38	53.02	74	-20.98	Vertical
3574.015	6.93	32.97	38.77	48.01	49.14	74	-24.86	Horizontal
4880.000	6.58	34.78	39.26	49.77	51.87	74	-22.13	Horizontal
6202.582	8.03	36.08	39.16	47.68	52.63	74	-21.37	Horizontal
7320.000	9.07	35.51	39.06	45.89	51.41	74	-22.59	Horizontal
9760.000	9.90	37.80	37.84	44.07	53.93	74	-20.07	Horizontal
12458.220	11.30	39.21	39.09	41.33	52.75	74	-21.25	Horizontal



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Test mode:		GFSK	Tes	t channel:	Highest	Rem	ark:	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
3641.878	6.89	33.03	38.80	47.30	48.42	74	-25.58	Vertical
4960.000	6.76	34.86	39.29	51.38	53.71	74	-20.29	Vertical
6175.716	8.04	36.11	39.17	46.76	51.74	74	-22.26	Vertical
7440.000	9.23	35.43	39.05	45.84	51.45	74	-22.55	Vertical
9920.000	9.81	38.27	37.75	42.75	53.08	74	-20.92	Vertical
12386.320	11.19	39.18	39.03	42.36	53.70	74	-20.30	Vertical
3647.151	6.88	33.04	38.81	46.30	47.41	74	-26.59	Horizontal
4960.000	6.76	34.86	39.29	48.23	50.56	74	-23.44	Horizontal
5999.562	8.08	36.30	39.18	47.02	52.22	74	-21.78	Horizontal
7440.000	9.23	35.43	39.05	46.14	51.75	74	-22.25	Horizontal
9920.000	9.81	38.27	37.75	43.53	53.86	74	-20.14	Horizontal
12476.260	11.33	39.22	39.10	41.77	53.22	74	-20.78	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 25GHz, the disturbance above 13GHz and below 30MHz 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.
- 3) As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. So, only the peak measurements were shown in the report.

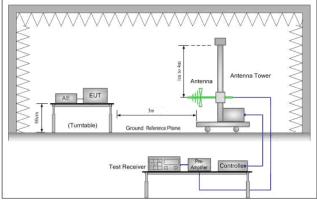


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6.8 Restricted bands around fundamental frequency

Test Requirement:	47 CFR Part 15C Section 15.209 and 15.205							
Test Method:	ANSI C63.10 2009							
	KDB 558074 D01 DTS Mea	s Guidance v03r03 (June	09, 2014)					
Test Site:	Measurement Distance: 3m	(Semi-Anechoic Chambe	r)					
Limit:	Frequency	Limit (dBuV/m @3m)	Remark					
	30MHz-88MHz	40.0	Quasi-peak Value					
	88MHz-216MHz	43.5	Quasi-peak Value					
	216MHz-960MHz	46.0	Quasi-peak Value					
	960MHz-1GHz	54.0	Quasi-peak Value					
	Above 1011-	54.0	Average Value					
	Above 1GHz	74.0	Peak Value					
		•						
Test Setup:								



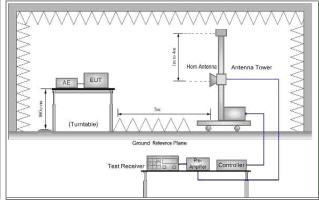


Figure 1. 30MHz to 1GHz

Test Procedure:

Figure 2. Above 1 GHz

a. The EUT was placed on the top of a rotating table 0.8 meters above

rest i locedule.	۵.	the ground at a 3 meter semi-anechoic camber. 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.
		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

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Specified Bandwidth with Maximum Hold Mode! C

transmit frequency to show compliance.

Place a marker at the end of the restricted band closest to

emissions in the restricted bands. Save the spectrum anal

Also



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	Repeat for each power and modulation for lowest and highest channel g. Test the EUT in the lowest channel, the Highest channel h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case. i. Repeat above procedures until all frequencies measured was complete.		
Exploratory Test Mode:	Transmitting with GFSK modulation. Transmitting mode		
Final Test Mode:	Transmitting with GFSK modulation. Pretest the EUT at Transmitting mode Only the worst case is recorded in the report.		
Instruments Used:	Refer to section 5.10 for details.		
Test Results:	Pass		

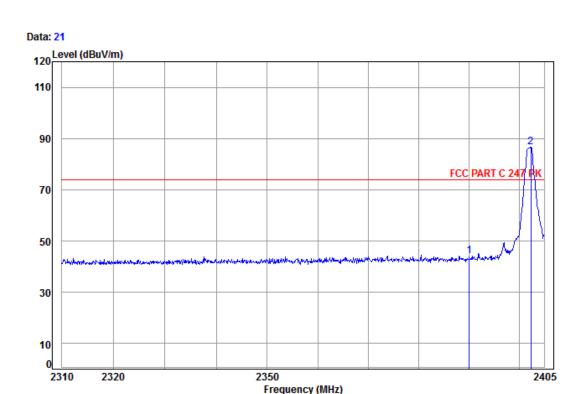


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Test plot as follows:

Test mode: GFSK Test channel: Lowest Remark: Peak Vertical



Site : chamber

Condition: FCC PART C 247 PK 3m Vertical

Job No: : 5762CR

Mode: : 2402 Band edge

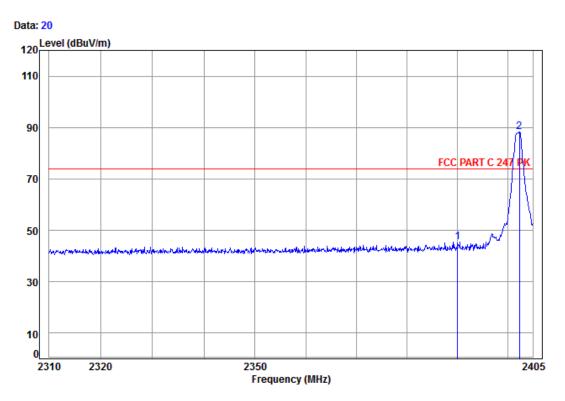
Cable Ant Preamp Limit 0ver Read Loss Factor Factor Limit Freq Level Level Line MHz dB dB/m dB dBuV dBuV/m dBuV/m 1 pk 2390.00 4.90 32.35 38.46 45.23 44.02 74.00 -29.98 4.92 32.41 38.46 87.84 86.71 74.00 12.71 2402.38



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Test mode:	GFSK	Test channel:	Lowest	Remark:	Peak	Horizontal
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Site : chamber

Condition: FCC PART C 247 PK 3m Horizontal

Job No: : 5762CR

Mode: : 2402 Band edge

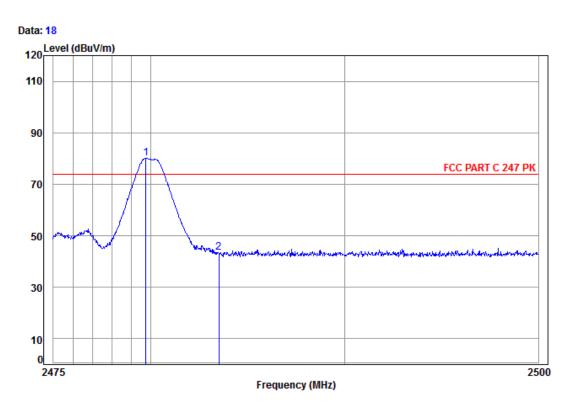
Cable Ant Preamp Read Limit 0ver Loss Factor Factor Level Level Line Limit MHz dB dB/m dBuV dBuV/m dBuV/m 1 pk 2390.00 4.90 32.35 38.46 46.78 45.57 74.00 -28.43 2 pp 2402.38 4.92 32.41 38.46 89.37 88.24 74.00 14.24



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	Test mode:	GFSK	Test channel:	Highest	Remark:	Peak	Vertical	
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Site : chamber

Condition: FCC PART C 247 PK 3m Vertical

Job No: : 5762CR

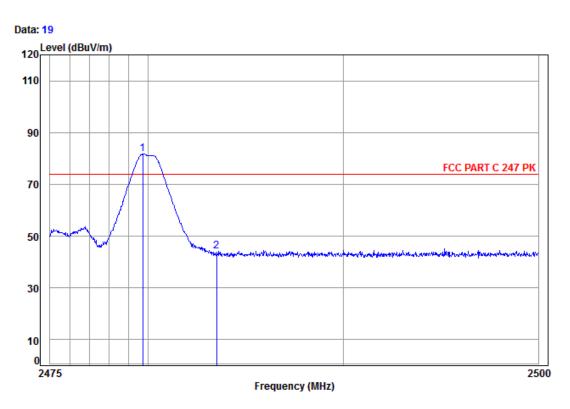
Mode: : 2480 Band edge

Cable Ant Preamp Read Limit 0ver Loss Factor Factor Line Limit Level Level MHz dB dB/m dB dBuV dBuV/m dBuV/m 1 pp 2479.76 5.02 32.44 38.47 81.18 80.17 74.00 6.17 2 pk 2483.50 5.03 32.44 38.47 44.65 43.65 74.00 -30.35



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Site : chamber

Condition: FCC PART C 247 PK 3m Horizontal

Job No: : 5762CR

Mode: : 2480 Band edge

Cable Ant Preamp 0ver Read Limit Limit Loss Factor Factor Level Level dBuV dBuV/m dBuV/m MHz dB/m 2479.73 5.02 32.44 38.47 82.72 81.71 74.00 7.71 5.03 32.44 38.47 45.21 44.21 74.00 -29.79 2 pk 2483.50

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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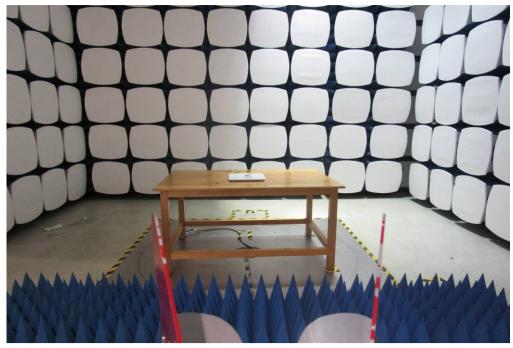
7 Photographs - EUT Test Setup

Test model No.: BW-SC2W

7.1 Radiated Emission



7.2 Radiated Spurious Emission





Report No.: SZEM150900576202

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8 Photographs - EUT Constructional Details

Test model No.: BW-SC2W

Refer to Appendix A - Photographs of EUT Constructional Details for SZEM1509005762CR.