

Report No.: SUCR250500042202

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### **TEST REPORT**

**Application No.:** SUCR2505000422AT

Applicant: Shanghai Sunmi Technology Co.,Ltd.

**Address of Applicant:** Room 505, No. 388, Song Hu Road, Yang Pu District, Shanghai, China

Shanghai Sunmi Technology Co.,Ltd. Manufacturer:

Room 505, No. 388, Song Hu Road, Yang Pu District, Shanghai, China Address of Manufacturer:

**EUT Description:** Wireless Data Terminal

Model No.: TFB1A Trade Mark: SUNMI

FCC ID: 2AH25M3WH

Standards: FCC 47 CFR Part 2, Subpart J

FCC 47 CFR Part 15, Subpart C

May 13, 2025 **Date of Receipt:** 

**Date of Test:** May 10, 2025 to May 29, 2025

Date of Issue: June 11, 2025

Test Result: PASS \*

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Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

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In the configuration tested, the EUT detailed in this report complied with the standards specified



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### Version

Revision Record							
Version Description Date Remark							
01	Original	June 11, 2025	/				

Authorized for issue by:		
Tested By	Hayley Zhang	
	Hayley Zhang / Project Manager	
Approved By	Cloud Peng	
	Cloud Peng/Technical Manager	



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### 1 Test Summary

Test Item	FCC Rule No.	Test Method	Test Result	Result	
Antenna Requirement	15.203/15.247(b)		Clause 3.1	PASS	
AC Power Line Conducted Emission	15.207	ANSI C63.10 2013 Section 6.2	Clause 3.2	PASS	
Duty cycle		ANSI C63.10 2013 Section 11.6	Clause 3.3		
Conducted Output Power	15.247 (b)(3)	ANSI C63.10 2013 Section11.9.1.3	Clause 3.4		
DTS (6 dB) Bandwidth & 99% Occupied Bandwidth	15.247 (a)(2)	ANSI C63.10 2013 Section 11.8 Option 2 / 6.9.3	Clause 3.5	Reference report SUCR250200007202	
Power Spectral Density	15.247 (e)	ANSI C63.10 2013 Section 11.10.2	Clause 3.6	SUCR250200007202	
Band-edge for RF Conducted Emissions	15.247(d)	ANSI C63.10 2013 Section 11.13.3	Clause 3.7		
RF Conducted Spurious Emissions	15.247(d)	ANSI C63.10 2013 Section 11.11	Clause 3.8		
Radiated Spurious Emissions 15.205/15.209		ANSI C63.10 2013 Section 11.12	Clause 3.9	PASS	
Restricted bands around fundamental frequency (Radiated Emission)	15.205/15.209	ANSI C63.10 2013 Section 11.12	Clause 3.10	PASS	

#### Remark:

This test report (Report No.: SUCR250500042202) is based on the original test report (Report No.: SUCR250200007202).

Review this report and original report, this report just changing the parts according to the declaration letter from client.

Considering to the difference, pre-scan were performed on the sample in this report to find the items which can be influential to the result in the original test report for fully retest.

Therefore in this report only the ac power line conducted emission and radiated spurious emissions based on the worst case of the original report with report number SUCR250200007202 and other test data in this report are based on the previous report with report number SUCR250200007202.



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#### 2 General Information

#### 2.1 Details of Client

Applicant:	Shanghai Sunmi Technology Co.,Ltd.
Address of Applicant:	Room 505,No.388,Song Hu Road,Yang Pu District,Shanghai,China
Manufacturer:	Shanghai Sunmi Technology Co.,Ltd.
Address of Manufacturer:	Room 505,No.388,Song Hu Road,Yang Pu District,Shanghai,China

#### 2.2 Test Location

Company:	SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.
Address:	South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone
Post code:	215000
Test engineer:	Ives Cheng, King-p Li

### 2.3 Test Facility

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

• A2LA (Certificate No. 6336.01)

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 6336.01.

• Innovation, Science and Economic Development Canada

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0120.

IC#: 27594.

• FCC –Designation Number: CN1312

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. has been recognized as an

accredited testing laboratory. Designation Number: CN1312.

Test Firm Registration Number: 717327



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### 2.4 General Description of EUT

Hardware Version:	V1.3					
Software Version:	T602AA_EVT_14.0_SUNMI_202503131820.00-00					
Power Supply:	3.87V from battery					
Operation Frequency:	2400MHz~2483.5MHz fc = 2402 MHz + N * 2 MHz, where: -fc = "Operating Frequency" in MHz, -N = "Channel Number" with the range from 0 to 39.					
Bluetooth version:	Bluetooth V5.3					
Modulation Type:	GFSK					
Number of Channel:	40					
Dotos Turo*:	⊠Provided by client					
Rates Type*:	1M PHY 2M PHY					
Antenna Type:	FPC Antenna					
	2.01dBi					
Antenna Gain:	Note: The antenna gain are derived from the gain information report provided by the manufacturer.					
RF Cable:	1dB					
Remark:						
As above information is provided and confirmed by the applicant, SGS is not liable to the accuracy						

As above information is provided and confirmed by the applicant. SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.



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Operation Frequency of each 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

#### Remark:

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					
BLE 1M:						
The Lowest channel(CH0)	2402MHz					
The Middle channel(CH19)	2440MHz					
The Highest channel(CH39)	2480MHz					
BLE 2	PM:					
The Lowest channel(CH1)	2404MHz					
The Middle channel(CH19)	2440MHz					
The Highest channel(CH38)	2478MHz					



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#### 2.5 Test Environment

Environment Parameter	101 kPa Selected Values During Tests			
Relative Humidity	44-46 % RH Ambient			
Value	Temperature(℃) Voltage(V)			
NTNV	22~23	3.87		
Remark:				

NV: Normal VoltageNT: Normal Temperature

### 2.6 Description of Support Units

The EUT has been tested as an independent unit.



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## 3 Equipment List

Conduction Test Equipment							
Equipment Manufacturer Model No. Inventory No. Cal Date Cal Du							
Test receiver	ROHDE&SCHWARZ	ESR7	SUWI-01-10-01	1/15/2025	1/14/2026		
Temperature and humidity meter	MingGao	TH101B	SUWI-01-01-06	2/13/2025	2/12/2026		
Artificial network	ROHDE&SCHWARZ	ENV216	SUWI-01-19-03	5/8/2025	5/7/2026		
Artificial network	ROHDE&SCHWARZ	ENV216	SUWI-01-19-04	5/8/2025	5/7/2026		
Measurement	Tonscend	JS32-CE	SUWI-02-09-05	NCR	NCR		
Software	Tonscend	4.0.0.2	30771-02-09-05	NCR	NCK		



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9*6*6 Test Equipment							
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date		
Semi-Anechoic Chamber	Brilliant-emc	N/A	SUWI-04-02-01	6/3/2023	6/2/2026		
Temperature and humidity meter	MingGao	TH101B	SUWI-01-01-05	2/13/2025	2/12/2026		
Signal Analyzer	ROHDE&SCHWARZ	FSW43	SUWI-01-02-04	1/20/2025	1/19/2026		
Signal Analyzer	KEYSIGHT	N9020A	SUWI-01-02-07	11/21/2024	11/20/2025		
Test receiver	ROHDE&SCHWARZ	ESR7	SUWI-01-10-01	1/15/2025	1/14/2026		
Receiving antenna	SCHWRZBECK MESS- ELEKTRONIK	VULB 9168	SUWI-01-11-04	8/22/2024	8/21/2026		
Receiving antenna	SCHWRZBECK MESS- ELEKTRONIK	BBHA 9120D	SUWI-01-11-02	5/7/2025	5/6/2027		
Receiving antenna	SCHWRZBECK MESS- ELEKTRONIK	BBHA 9170	SUWI-01-11-03	5/7/2025	5/6/2027		
Active Loop Antenna	SCHWRZBECK MESS- ELEKTRONIK	FMZB 1519B	SUWI-01-21-01	5/7/2025	5/6/2027		
Amplifier	Tonscend	TAP9K3G40	SUWI-01-14-01	1/16/2025	1/15/2026		
Amplifier	Tonscend	TAP01018050	SUWI-01-14-02	1/16/2025	1/15/2026		
Amplifier	Tonscend	TAP18040048	SUWI-01-14-03	1/20/2025	1/19/2026		
Measurement Software	Tonscend	JS32-RE V4.0.0.0	SUWI-02-09-04	NCR	NCR		

Remark: NCR=No Calibration Requirement.

\*Note:The RSE was tested from 2025/03/08 to 2025/03/13.



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

No.	Item	Measurement Uncertainty		
1	Total RF power, conducted	±0.54dB		
2	RF power density, conducted	±1.03dB		
3	Spurious emissions, conducted	±0.54dB		
4	Radio Frequency	1%		
5	Duty Cycle	±0.37%		
6	Occupied Bandwidth	1%		
7	Conduction Emission	± 2.90dB (150kHz to 30MHz)		
		± 3.13dB (9k -30MHz)		
0	Dadiated Emission	± 4.8dB (30M -1GHz)		
8	Radiated Emission	± 4.8dB (1GHz to 18GHz)		
		± 4.80dB (Above 18GHz)		

#### Remark:

The U<sub>lab</sub> (lab Uncertainty) is less than U<sub>cispr/ETSI</sub> (CISPR/ETSI Uncertainty), so the test results

- compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;

- non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.



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#### 5 Test results and Measurement Data

#### 5.1 Antenna Requirement

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

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.

The antenna is FPC Antenna and no consideration of replacement. The best case gain of the antenna is 2.01 dBi.

Note:

The antenna gain are derived from the gain information report provided by the manufacturer. Remark:

As above information is provided and confirmed by the applicant. SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.



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### 5.2 AC Power Line Conducted Emissions

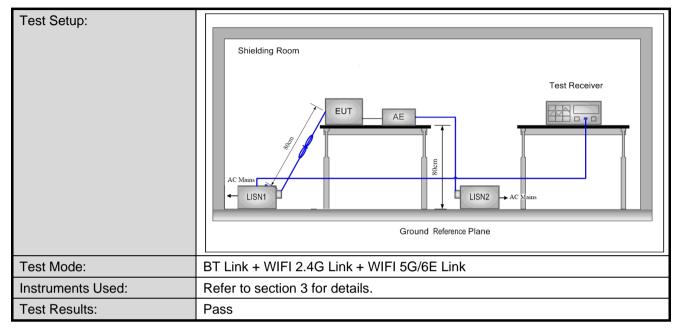
Test Requirement:	47 CFR Part 15C Sectio	n 15.207					
Test Method:	ANSI C63.10: 2013 Sect	tion 6.2					
Test Frequency Range:	150kHz to 30MHz						
Receiver Setup:	RBW = 9kHz, VBW = 30kHz						
Limit:	F (NALL)	Limit (d	BuV)				
	Frequency range(MHz)	Quasi-peak	Average				
	0.15-0.5	66 to 56*	56 to 46*				
	0.5-5	56	46				
	5-30	60	50				
	* Decreases with the log	arithm of the frequency.					
Test Procedure:	room.  2) The EUT was connect Impedance Stabilizat impedance. The pow connected to a secon plane in the same was multiple socket outlet single LISN provided  3) The tabletop EUT was ground reference plat placed on the horizor  4) The test was performed the EUT shall be 0.4 vertical ground reference plane. The unit under test and be mounted on top of the the closest points of the and associated equip  5) In order to find the material and all of the interface.	ted to AC power source throuse ion Network) which provides are cables of all other units of ad LISN 2, which was bonded by as the LISN 1 for the unit be strip was used to connect me the rating of the LISN was not a placed upon a non-metallic me. And for floor-standing arrantal ground reference plane. The formation of the vertical ground reference plane was bonded to the LISN 1 was placed 0.8 m from the LISN 1 and the EUT. All of the LISN 1 and the EUT.	igh a LISN 1 (Line a 50Ω/50μH + 5Ω linear the EUT were It to the ground reference being measured. A ultiple power cables to a cot exceeded. It table 0.8m above the angement, the EUT was rence plane. The rear of enterence plane. The horizontal ground in the boundary of the plane for LISNs is distance was between other units of the EUT in the LISN 2.				



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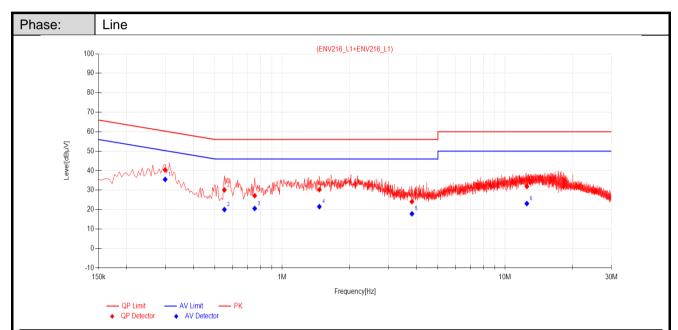
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#### Measurement Data

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.



Final	Final Data List											
NO.	Frequency [MHz]	Factor [dB]	QP Reading [dBµV]	QP Value [dBµV]	QP Limit [dBµV]	QP Margin [dB]	AV Reading [dBµV]	AV Value [dBµV]	AV Limit [dBµV]	AV Margin [dB]	Verdict	
1	0.2985	10.05	30.32	40.37	60.28	19.91	25.43	35.48	50.28	14.80	PASS	
2	0.5505	10.07	20.00	30.07	56.00	25.93	9.92	19.99	46.00	26.01	PASS	
3	0.7530	10.05	17.09	27.14	56.00	28.86	10.50	20.55	46.00	25.45	PASS	
4	1.4685	9.91	20.32	30.23	56.00	25.77	11.59	21.50	46.00	24.50	PASS	
5	3.8220	9.83	14.24	24.07	56.00	31.93	7.98	17.81	46.00	28.19	PASS	
6	12.5295	9.81	22.03	31.84	60.00	28.16	13.26	23.07	50.00	26.93	PASS	

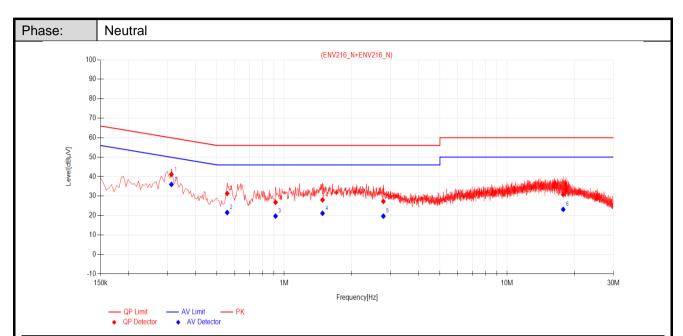
#### Remark:

- 1. The following Quasi-Peak and Average measurements were performed on the EUT:
- 2. Value =Reading[dBµV] + Factor(Lisn factor[dB] + cable loss[dB]).
- 3. Margin = Limit[ $dB\mu V$ ] Value[ $dB\mu V$ ]



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Final	Data List										
NO.	Frequency [MHz]	Factor [dB]	QP Reading [dBµV]	QP Value [dBµV]	QP Limit [dBµV]	QP Margin [dB]	AV Reading [dBµV]	AV Value [dBµV]	AV Limit [dBµV]	AV Margin [dB]	Verdict
1	0.3120	10.07	31.03	41.10	59.92	18.82	25.90	35.97	49.92	13.95	PASS
2	0.5550	10.07	21.26	31.33	56.00	24.67	11.45	21.52	46.00	24.48	PASS
3	0.9150	9.98	16.79	26.77	56.00	29.23	9.70	19.68	46.00	26.32	PASS
4	1.4865	9.94	18.07	28.01	56.00	27.99	11.20	21.14	46.00	24.86	PASS
5	2.7870	9.88	17.37	27.25	56.00	28.75	9.77	19.65	46.00	26.35	PASS
6	17.8710	9.71	21.07	30.78	60.00	29.22	13.43	23.14	50.00	26.86	PASS

#### Remark:

- 1. The following Quasi-Peak and Average measurements were performed on the EUT:
- 2. Value =Reading[dBµV] + Factor(Lisn factor[dB] + cable loss[dB]).
- 3. Margin = Limit[dBµV] Value[dBµV]



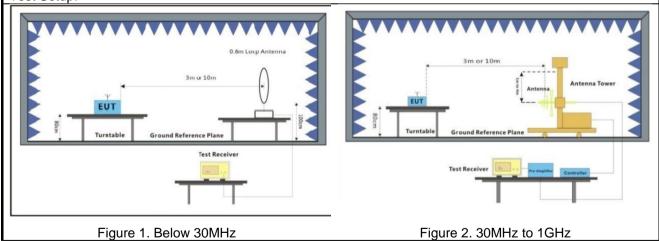
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### 5.3 Radiated Spurious Emissions

Test Requirement:	47 CFR Part 15C Section	47 CFR Part 15C Section 15.209 and 15.205							
Test Method:	ANSI C63.10 :2013 Sec	ANSI C63.10 :2013 Section 11.12							
Test Site:	Measurement Distance:	3m (Semi-Anecho	ic Chamber)	1					
Test Frequency:	9kHz ~ 25GHz								
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				
	Remark: 15.35(b),Unles	s otherwise specifi	ed, the limit	on peak radio f	requency				
	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:





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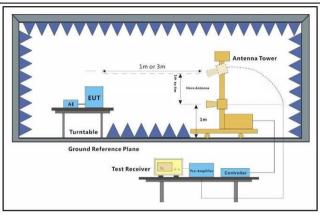


Figure 3. Above 1 GHz

#### Test Procedure:

- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.
- For above 1GHz, the EUT was placed on the top of a rotating table 1.5 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 (Distance from antenna to EUT is 1m for measurements >18GHz).
- c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- d. 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.
- e. 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.
- f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- g. Test the EUT in the lowest channel, the middle 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 worse case.
- i. Repeat above procedures until all frequencies measured was complete.
- j. The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported
- k. The disturbance above 18GHz was very low, and the harmonics were the highest point could be found when testing, so only the harmonics had been displayed.
- I. At a measurement distance of 1 meter the limit line was increased by 20\*LOG(3/1) = 9.54 dB.

#### Test Configuration:

Measurements below 30MHz

- RBW = 10 kHz
- VBW = 30 kHz
- Detector = Peak & Average & Quasi-peak
- Trace mode = max hold

Measurements Below 1000MHz

- RBW = 120 kHz
- VBW = 300 kHz



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	Detector = Quasi-peak
	Trace mode = max hold
	Peak Measurements Above 1000 MHz
	• RBW = 1 MHz
	• VBW ≥ 3 MHz
	Detector = Peak
	Sweep time = auto
	Trace mode = max hold
	Average Measurements Above 1000MHz
	• RBW = 1 MHz
	VBW = 10 Hz, when duty cycle is no less than 98 percent.
	<ul> <li>VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum</li> </ul>
	transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
Exploratory Test	Transmitting with GFSK modulation.
Mode:	Charge + Transmitting mode.
Final Test Mode:	Transmitting with GFSK modulation.
	Pretest the EUT at Charge + Transmitting mode,
	For below 1GHz part, through pre-scan all channels, but only the worst case is
	recorded in the report.
Instruments Used:	Refer to section 3 for details
Test Results:	Pass
The detailed test data	see: Appendix



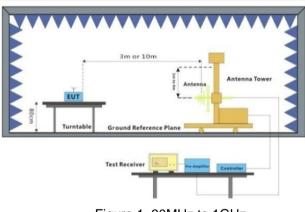
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#### 5.4 Restricted bands around fundamental frequency

Test Requirement:	47 CFR Part 15C Section 15	47 CFR Part 15C Section 15.209 and 15.205							
Test Method:	ANSI C63.10: 2013 Section	ANSI C63.10: 2013 Section 11.12							
Test Site:	Measurement Distance: 3m	(Semi-Anechoic Cham	ber)						
Limit:	Frequency	Limit (dBuV/m)	Remark						
	30MHz-88MHz	40.0	Quasi-peak						
	88MHz-216MHz	43.5	Quasi-peak						
	216MHz-960MHz	46.0	Quasi-peak						
	960MHz-1GHz	54.0	Quasi-peak						
	Above 1CHz	54.0	Average Value						
	Above 1GHz	74.0	Peak Value						

#### Test Setup:



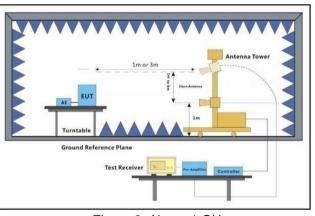


Figure 1. 30MHz to 1GHz

Figure 2. Above 1 GHz

#### Test Procedure:

- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 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.
- c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- d. 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.
- e. 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.
- f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- g. 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 channel



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h. Test the EUT in the lowest channel , the Highest channel i. 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. j. Repeat above procedures until all frequencies measured was complete.  Test Configuration:  Measurements Below 1000MHz RBW = 120 kHz VBW = 300 kHz Detector = Quasi-peak Trace mode = max hold Peak Measurements Above 1000 MHz RBW = 1 MHz VBW ≥ 3 MHz Detector = Peak Sweep time = auto Trace mode = max hold Average Measurements Above 1000MHz RBW = 1 MHz VBW ≥ 1 MHz VBW ≥ 1 MHz VBW ≥ 1 MHz Trace mode = max hold Average Measurements Above 1000MHz RBW = 1 MHz Trace mode = max hold Average Measurements Above 1000MHz RBW = 1 MHz Trace mode = max hold Average Measurements Above 1000MHz RBW = 1 MHz Trace mode = max hold Average Measurements Above 1000MHz RBW = 1 MHz Trace mode = max hold Average Measurements Above 1000MHz RBW = 1 MHz Trace mode = max hold Average Measurements Above 1000MHz RBW = 1 MHz Trace mode = max hold Average Measurements Above 1000MHz RBW = 1 MHz Trace mode = max hold Average Measurements Above 1000MHz RBW = 1 MHz Trace mode = max hold Average Measurements Above 1000MHz RBW = 1 MHz Trace mode = max hold Average Measurements Above 1000MHz Trace mode = max hold Average Measurements Above 1000MHz Trace mode = max hold Average Measurements Above 1000 MHz Trace mode = max hold Average Measurements Above 1000 MHz Trace mode = max hold Average Measurements Above 1000 MHz Trace mode = max hold Average Measurements Above 1000 MHz Trace mode = max hold Average Measurements Above 1000 MHz Trace mode = max hold Average Measurements expected = max hold Average Measurements Above 1000 MHz Trace mode = max hold Average Measurements Above 1000 MHz Trace mode = max hold Average Measurements expected = max		
<ul> <li>RBW = 120 kHz</li> <li>VBW = 300 kHz</li> <li>Detector = Quasi-peak</li> <li>Trace mode = max hold</li> <li>Peak Measurements Above 1000 MHz</li> <li>RBW = 1 MHz</li> <li>VBW ≥ 3 MHz</li> <li>Detector = Peak</li> <li>Sweep time = auto</li> <li>Trace mode = max hold</li> <li>Average Measurements Above 1000MHz</li> <li>RBW = 1 MHz</li> <li>VBW ≥ 1 MHz</li> <li>VBW ≥ 10 Hz, when duty cycle is no less than 98 percent.</li> <li>VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.</li> <li>Exploratory Test Mode:</li> <li>Transmitting with GFSK modulation. Charge + Transmitting mode.</li> <li>Final Test Mode:</li> <li>Transmitting with GFSK modulation. Pretest the EUT at Charge + Transmitting mode. Only the worst case is recorded in the report.</li> <li>Instruments Used:</li> <li>Refer to section 3 for details</li> <li>Test Results:</li> </ul>		<ol> <li>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.</li> </ol>
Charge + Transmitting mode.  Final Test Mode: Transmitting with GFSK modulation. Pretest the EUT at Charge + Transmitting mode. Only the worst case is recorded in the report.  Instruments Used: Refer to section 3 for details  Test Results: Pass	Test Configuration:	<ul> <li>RBW = 120 kHz</li> <li>VBW = 300 kHz</li> <li>Detector = Quasi-peak</li> <li>Trace mode = max hold</li> <li>Peak Measurements Above 1000 MHz</li> <li>RBW = 1 MHz</li> <li>VBW ≥ 3 MHz</li> <li>Detector = Peak</li> <li>Sweep time = auto</li> <li>Trace mode = max hold</li> <li>Average Measurements Above 1000MHz</li> <li>RBW = 1 MHz</li> <li>VBW = 10 Hz, when duty cycle is no less than 98 percent.</li> <li>VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its</li> </ul>
Pretest the EUT at Charge + Transmitting mode. Only the worst case is recorded in the report.  Instruments Used: Refer to section 3 for details  Test Results: Pass	Exploratory Test Mode:	
Test Results: Pass	Final Test Mode:	Pretest the EUT at Charge + Transmitting mode.
	Instruments Used:	Refer to section 3 for details
The detailed test data see: Appendix	Test Results:	Pass
r r r r r r r r r r r r r r r r r r r	The detailed test data see	: Appendix



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### 6 Photographs - Setup Photos

Refer to Appendix A.2 BT&WIFI&NFC Setup Photos.



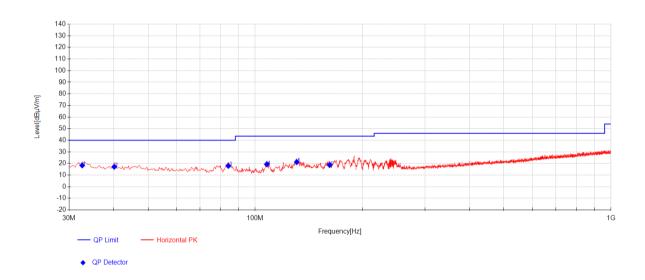
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### 7 Appendix

**Radiated Spurious Emissions** 

**Worst case Mode:** 

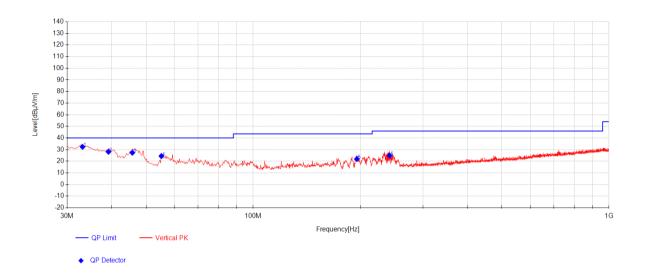


Final	Final Data List									
NO.	Frequenc y [MHz]]	Reading [dBµV]	Factor [dB]	AF [dB/m]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Polarity		
1	32.6675	34.23	-33.98	18.10	18.35	40.00	21.65	Horizontal		
2	40.185	32.26	-33.86	18.80	17.20	40.00	22.80	Horizontal		
3	84.0775	36.54	-33.31	14.71	17.94	40.00	22.06	Horizontal		
4	107.8425	36.85	-33.02	15.52	19.35	43.50	24.15	Horizontal		
5	130.88	36.24	-32.83	17.80	21.21	43.50	22.29	Horizontal		
6	161.92	32.06	-32.53	19.10	18.63	43.50	24.87	Horizontal		



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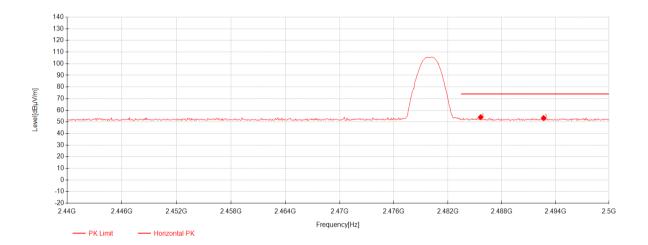


Final	Final Data List										
NO.	Frequenc y [MHz]]	Reading [dBµV]	Factor [dB]	AF [dB/m]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Polarity			
1	33.1525	48.25	-33.98	18.12	32.39	40.00	7.61	Vertical			
2	39.215	43.36	-33.87	18.64	28.13	40.00	11.87	Vertical			
3	45.7625	42.06	-33.76	19.05	27.35	40.00	12.65	Vertical			
4	55.22	39.86	-33.62	18.20	24.44	40.00	15.56	Vertical			
5	195.6275	38.86	-32.28	15.34	21.91	43.50	21.59	Vertical			
6	241.7025	40.25	-32.02	16.67	24.89	46.00	21.11	Vertical			



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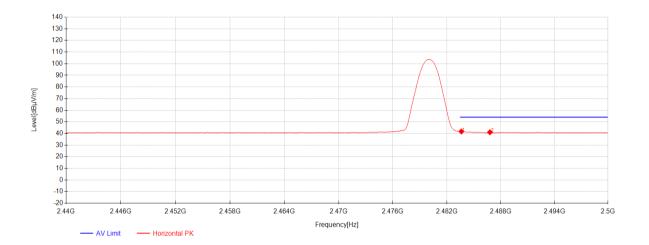


Data	Data List									
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/ m]	Margin [dB]	Polarity		
1	2485.66	49.91	27.37	-23.27	54.01	74.00	19.99	Horizontal		
2	2492.68	49.15	27.38	-23.26	53.27	74.00	20.73	Horizontal		



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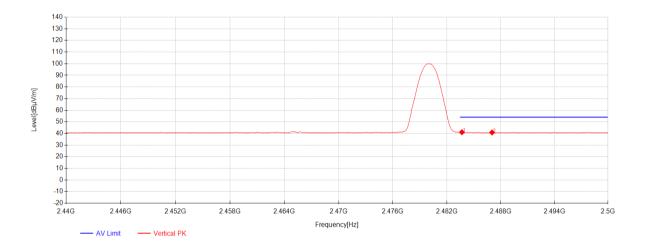


Data	Data List									
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/ m]	Margin [dB]	Polarity		
1	2483.62	37.63	27.36	-23.27	41.72	54.00	12.28	Horizontal		
2	2486.8	36.96	27.37	-23.27	41.06	54.00	12.94	Horizontal		



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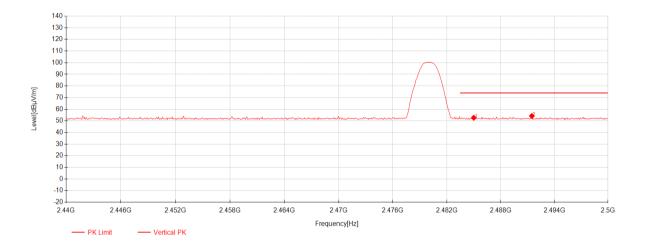


Data	Data List									
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/ m]	Margin [dB]	Polarity		
1	2483.68	37.02	27.36	-23.27	41.11	54.00	12.89	Vertical		
2	2487.04	36.79	27.37	-23.27	40.89	54.00	13.11	Vertical		



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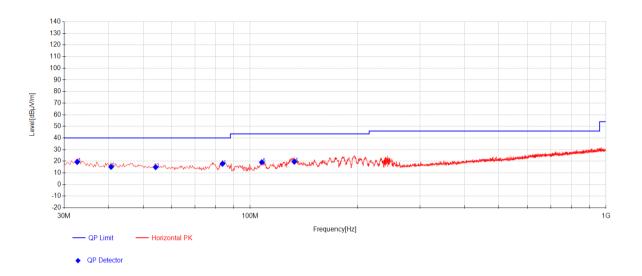


Data	Data List									
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/ m]	Margin [dB]	Polarity		
1	2485	48.58	27.37	-23.27	52.68	74.00	21.32	Vertical		
2	2491.48	50.07	27.38	-23.27	54.19	74.00	19.81	Vertical		



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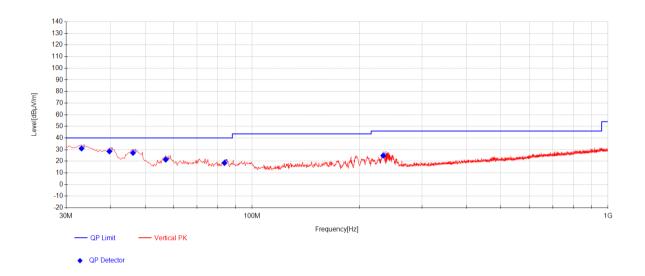


Final	Data List							
NO.	Frequenc y [MHz]]	Reading [dBµV]	Factor [dB]	AF [dB/m]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Polarity
1	32.6675	35.26	-33.98	18.10	19.38	40.00	20.62	Horizontal
2	40.67	30.21	-33.85	18.80	15.16	40.00	24.84	Horizontal
3	54.25	30.43	-33.63	18.13	14.92	40.00	25.08	Horizontal
4	83.5925	36.51	-33.31	14.62	17.82	40.00	22.18	Horizontal
5	107.8425	36.63	-33.02	15.52	19.13	43.50	24.37	Horizontal
6	133.0625	34.19	-32.82	18.20	19.57	43.50	23.93	Horizontal



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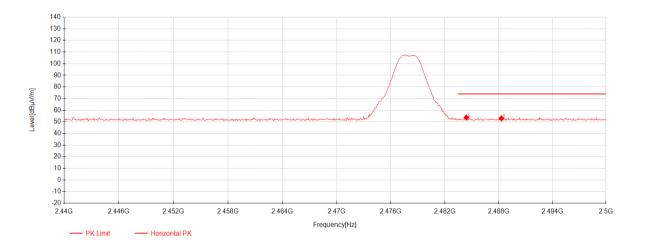


Final	Data List							
NO.	Frequenc y [MHz]]	Reading [dBµV]	Factor [dB]	AF [dB/m]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Polarity
1	33.1525	46.85	-33.98	18.12	30.99	40.00	9.01	Vertical
2	39.7	43.63	-33.87	18.74	28.50	40.00	11.50	Vertical
3	46.2475	41.86	-33.75	19.05	27.16	40.00	12.84	Vertical
4	57.16	36.99	-33.59	18.04	21.43	40.00	18.57	Vertical
5	83.5925	37.21	-33.31	14.62	18.52	40.00	21.48	Vertical
6	233.4575	40.32	-32.08	16.57	24.81	46.00	21.19	Vertical



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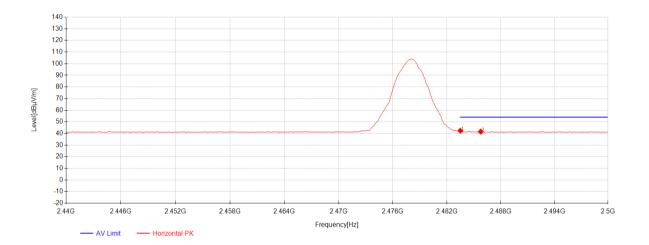


Data	Data List									
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/ m]	Margin [dB]	Polarity		
1	2484.4	49.60	27.37	-23.27	53.70	74.00	20.30	Horizontal		
2	2488.3	48.90	27.37	-23.27	53.01	74.00	20.99	Horizontal		



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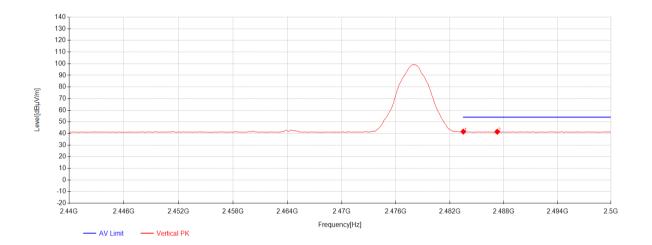


Data	Data List									
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/ m]	Margin [dB]	Polarity		
1	2483.5	38.28	27.36	-23.27	42.37	54.00	11.63	Horizontal		
2	2485.78	37.48	27.37	-23.27	41.58	54.00	12.42	Horizontal		



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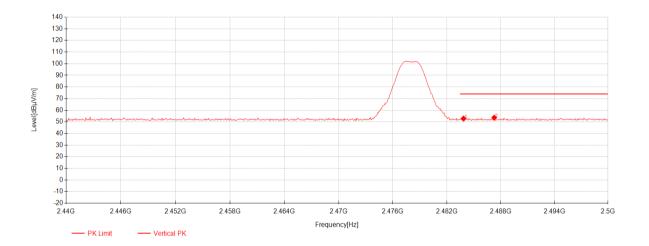


Data	Data List									
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/ m]	Margin [dB]	Polarity		
1	2483.5	37.51	27.36	-23.27	41.60	54.00	12.40	Vertical		
2	2487.28	37.41	27.37	-23.27	41.51	54.00	12.49	Vertical		



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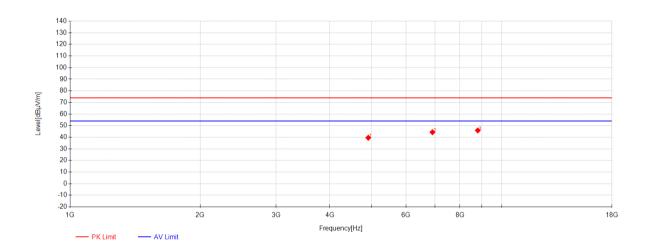
Data	Data List									
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/ m]	Margin [dB]	Polarity		
1	2483.86	48.77	27.36	-23.27	52.86	74.00	21.14	Vertical		
2	2487.28	49.51	27.37	-23.27	53.61	74.00	20.39	Vertical		



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# Restricted bands around fundamental frequency BLE 1M\_Channel 39

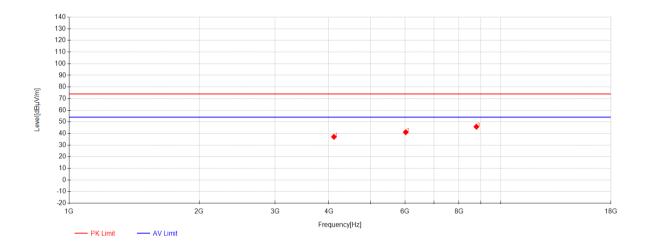


Data	Data List									
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/ m]	Margin [dB]	Polarity		
1	4906	47.81	32.99	-41.22	39.59	74.00	34.41	Horizontal		
2	6909.5	46.71	35.96	-38.33	44.34	74.00	29.66	Horizontal		
3	8797	43.30	37.50	-34.92	45.88	74.00	28.12	Horizontal		



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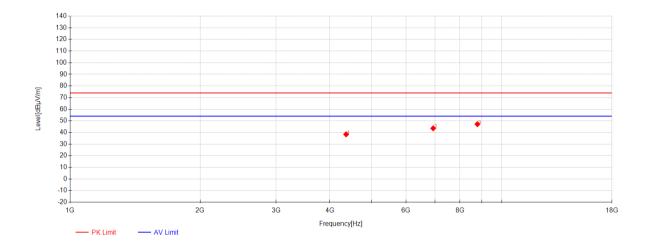


Data List									
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/ m]	Margin [dB]	Polarity	
1	4107	48.07	31.47	-42.41	37.13	74.00	36.87	Vertical	
2	6023	46.44	34.85	-40.20	41.09	74.00	32.91	Vertical	
3	8779	43.33	37.49	-35.01	45.81	74.00	28.19	Vertical	



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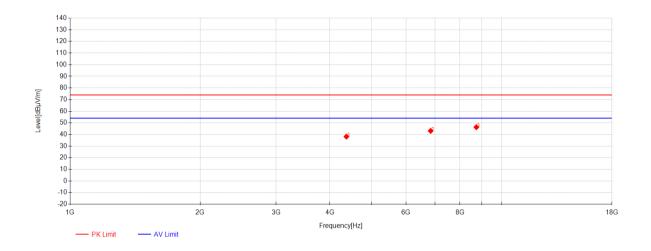
Data	Data List									
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/ m]	Margin [dB]	Polarity		
1	4359	48.63	31.87	-42.10	38.40	74.00	35.60	Horizontal		
2	6935	45.96	35.97	-38.35	43.59	74.00	30.41	Horizontal		
3	8781	44.65	37.49	-35.00	47.14	74.00	26.86	Horizontal		



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#### **BLE 2M\_Channel 38**



Data	Data List									
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/ m]	Margin [dB]	Polarity		
1	4366	48.37	31.89	-42.11	38.15	74.00	35.85	Vertical		
2	6842	45.57	35.94	-38.41	43.10	74.00	30.90	Vertical		
3	8730	44.09	37.47	-35.27	46.28	74.00	27.72	Vertical		

---End of Report---