

Report No. SH16050055W02

FCC RF TEST REPORT

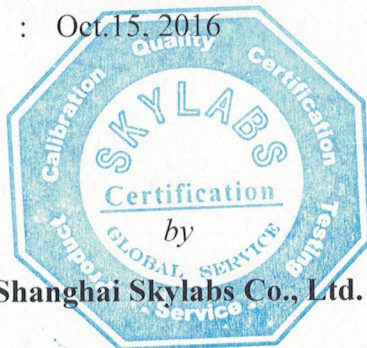
Issued to

Shanghai TopXGun Robotics Co.,Ltd.

For

900MHz Wireless Digital Radio

Model Name : 900M DATA-LINK-AIR
Trade Name : **TopXGun**
Brand Name : TopXGun
Standard : 47 CFR Part 15, Subpart C
ANSI C63.10-2013
FCC ID : AIUJTXG900DLA
Test date : Oct.11, 2016
Issue date : Oct.15, 2016



Tested by Wu Hongfei

Approved by Gm Yeyang

Review by Xiao dong Wei

The report refers only to the sample tested and does not apply to the bulk. This report is issued in confidence to the client and it will be strictly treated as such by the Shanghai Skylabs Co., Ltd. It may not be reproduced in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it or a certified copy thereof prepared by the Shanghai Skylabs Co., Ltd to his customer. Supplier or other persons directly concerned. Shanghai Skylabs Co., Ltd will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report. In the event of the improper use of the report, Shanghai Skylabs Co., Ltd reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



DIRECTORY

1.	General Information	4
1.1	Applicant	4
1.2	Manufacturer	4
1.3	Description of EUT	4
2.	Facilities and Accreditations	6
2.1	Test Facility	6
2.2	Environmental Conditions	6
2.3	Measurement Uncertainty	6
2.4	List of Equipments Used	7
3.	Test Standards and Results	8
4.	Test Conditions Setting	9
5.	47 CFR Part 15C requirements	10
5.1	Antenna requirement	10
6.	Test Result	11
6.1	Number of Hopping Frequency	11
6.2	Peak Output Power	16
6.3	20dB Bandwidth	20
6.4	Carried Frequency Separation	24
6.5	Time of Occupancy (Dwell time)	26
6.6	Conducted Spurious Emissions	29
6.7	Band Edge	34
6.8	Radiated Emission	37
Annex A	Photos of the EUT	41
Annex B	Photos of Setup	44

**Change History**

Issue	Date	Reason for change
1.0	Oct.15, 2016	First edition



1. General Information

1.1 Applicant

Shanghai TopXGun Robotics Co.,Ltd.


6F,NO.3 Chuqiao Cheng,NO.61 Andemeng Street,Yuhua District,Nanjing City,Jiangsu Province,China

1.2 Manufacturer

Shanghai TopXGun Robotics Co.,Ltd.

6F,NO.3 Chuqiao Cheng,NO.61 Andemeng Street,Yuhua District,Nanjing City,Jiangsu Province,China

1.3 Description of EUT

EUT Name.....: 900Mhz Wireless Digital Radio
Model Name: 900M DATA-LINK-AIR
Brand Name.....: TopXGun
Trade Name: 
Hardware Version: V1.0
Software Version: V1.0
Type of Equipment.....: Frequency Hopping System
Modulation Type: FSK (10 kbps), GMSK (200 kbps)
Frequency Range.....: 902 - 928 MHz
Channel Number.....: 10kbps: 64 channels; 200kbps: 64 channels
EUT Stage: Production Unit
Antenna Type.....: Half Wave Dipole Antenna
Antenna Gain.....: 2 dBi

NOTE 1:

The EUT is a Wireless Digital Radio. The EUT contains EUT operating at 902-928MHz ISM band. The lowest, middle, highest channel numbers of the EUT used and tested in this report are separately as below:

10kbps: CH0 (902.4MHz), CH33 (915.2MHz) and CH63 (927.6MHz).

200kbps: CH0 (902.4MHz), CH33 (915.2MHz) and CH63 (927.6MHz).

NOTE 2:

For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacture.



Channel and Center Frequency

No.	Channel No.	Center Frequency (MHz)	No.	Channel No.	Center Frequency (MHz)
1	0	902.4	33	32	915.2
2	1	902.8	34	33	915.6
3	2	903.2	35	34	916
4	3	903.6	36	35	916.4
5	4	904	37	36	916.8
6	5	904.4	38	37	917.2
7	6	904.8	39	38	917.6
8	7	905.2	40	39	918
9	8	905.6	41	40	918.4
10	9	906	42	41	918.8
11	10	906.4	43	42	919.2
12	11	906.8	44	43	919.6
13	12	907.2	45	44	920
14	13	907.6	46	45	920.4
15	14	908	47	46	920.8
16	15	908.4	48	47	921.2
17	16	908.8	49	48	921.6
18	17	909.2	50	49	922
19	18	909.6	51	50	922.4
20	19	910	52	51	922.8
21	20	910.4	53	52	923.2
22	21	910.8	54	53	923.6
23	22	911.2	55	54	924
24	23	911.6	56	55	924.4
25	24	912	57	56	924.8
26	25	912.4	58	57	925.2
27	26	912.8	59	58	925.6
28	27	913.2	60	59	926
29	28	913.6	61	60	926.4
30	29	914	62	61	926.8
31	30	914.4	63	62	927.2
32	31	914.8	64	63	927.6

The Modular hops to channel frequencies at the hopping rate set by manufacture with pseudo randomly hopping map. Each frequency is used equally on the average by transmitter, the receiver has the channel bandwidths hopping map and hops matching frequencies shift of transmitter synchronizing.



2. Facilities and Accreditations

2.1 Test Facility

Shanghai Skylabs Co., Ltd. is a third party testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L6644. A 9*6*6(m) fully anechoic chamber was used for the radiated spurious emissions test.

FCC registration: 196218

2.2 Environmental Conditions

Ambient temperature: 15~35°C

Relative humidity: 30~60%

Atmosphere pressure: 86-106kPa

2.3 Measurement Uncertainty

The uncertainty is calculated using the methods suggested in the "Guide to the Expression of Uncertainty in Measurement" (GUM) published by ISO.

Uncertainty of Conducted Emission: $\pm 1.76\text{dB}$

Uncertainty of Radiated Emission: $\pm 3.16\text{dB}$



2.4 List of Equipments Used

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSU26	200880	2016.6.17	1year
Attenuator	Resnet	10dB	(n.a.)	(n.a.)	(n.a.)
Full/Semi-Anechoic Chamber	CHENGYU	9.2×6.25×6.15m	SAR	2016.4.11	3year
EMI Test Receiver	R&S	ESCI7	100787	2016.1.28	1year
Test Antenna-Horn	Schwarzbeck	BBHA 9120D	9120D-1033	2016.7.24	1year
Test Antenna-Log	Schwarzbeck	VULB 9163	9163-561	2016.9.24	1year
Test Antenna-Loop	Rohde&Schwarz	FMZB 1519	1519-025	2016.9.21	1year
Power supplier	NF	ES2000S	9087735	2015.10.17	1year
RF Cable	(n.a.)	0~18GHz	(n.a.)	(n.a.)	(n.a.)
Pre-Amplifier	Schwarzbeck	BBV 9718	9718-224	2016. 9.10	1year
Laptop	ACER	Aspire4376ZG	LXPFY0C004 935291221601	(n.a.)	(n.a.)

NOTE:

Equipments listed above have been calibrated and are in the period of validation.



3. Test Standards and Results

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart C §15.247
- ANSI C63.10-2013

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.

Test items and the results are as bellow:

No	FCC Rules	Test Type	Result
1	15.247(a)(1)	Number of Hopping Frequency	PASS
2	15.247(b)(2)	Peak Output Power	PASS
3	15.247(a)(1)	20dB Bandwidth	PASS
4	15.247(a)(1)	Carrier Frequency Separation	PASS
5	15.247(a)(1)	Time of Occupancy (Dwell time)	PASS
6	15.247(d)	Conducted Spurious Emission	PASS
7	15.247(d)	Band Edge	PASS
8	15.207	Conducted Emission	N/A
9	15.247(d)	Radiated Emission	PASS
10	15.203 & 15.247(b)	Antenna Requirement	PASS

Note: the EUT is powered by battery carried by a drone and there is no possibility conduct to public utility (AC), so 15.207 Conducted Emission test item is not applicable.



4. Test Conditions Setting

The EUT has been powered by a laptop computer via a USB-TO-TIL, and configured by XCTU running on the laptop pursuant to ANSI C63.10-2013, its configuration operated is in a manner tended to maximize its emission characteristics in a typical application.

Frequency range investigated: conduction (150 kHz to 30 MHz), radiation (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

Pre-scanned tests were conducted to determine the final configuration from all possible combinations.

The following tables are showing the test modes as the worst cases and recorded in this report.

Data Rate / Modulation	Conducted Mode	Radiated Mode
10 kbps FSK	Channel 0_902.4 MHz	Channel 0_902.4 MHz
	Channel 33_915.2 MHz	Channel 33_915.2 MHz
	Channel 63_927.6 MHz	Channel 63_927.6 MHz
200 kbps FSK	Channel 0_902.4 MHz	Channel 0_902.4 MHz
	Channel 33_915.2 MHz	Channel 33_915.2 MHz
	Channel 63_927.6 MHz	Channel 63_927.6 MHz

Mode 1: Continuous Transmitting Mode

During the measurement, EUT is working in the continuous transmitting mode in appropriate Channel with Hopping Off.

Mode 2: Hopping On Mode

During the measurement, EUT is working in working condition hopping on transmitting mode laptop computer exchanges data with EUT.



5. 47 CFR Part 15C requirements

5.1 Antenna requirement

5.1.1 Applicable standard

According to FCC 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by 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 shall be considered sufficient to comply with the provisions of this section.

5.1.2 Result: Compliant

The antenna connector on the EUT is RP-SMA male conductor. Only the authorized antenna by manufacturer can be installed on the EUT. Please refer to internal photo file/external photo file.



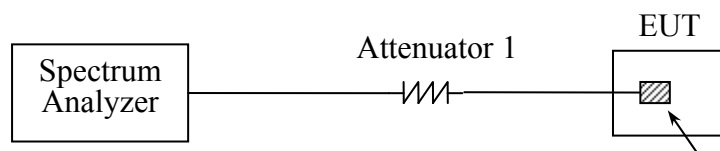
6. Test Result

6.1 Number of Hopping Frequency

6.1.1 Requirement

According to FCC section 15.247(a)(1)(i), For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

6.1.2 Test Setup



The EUT is connected to the Spectrum Analyzer (SA) with Attenuators. The RF load attached to the EUT antenna terminal is 50 Ohm; the path loss as the factor is calibrated to correct the reading.

Measurement setting, Mode 2: Hopping On Mode



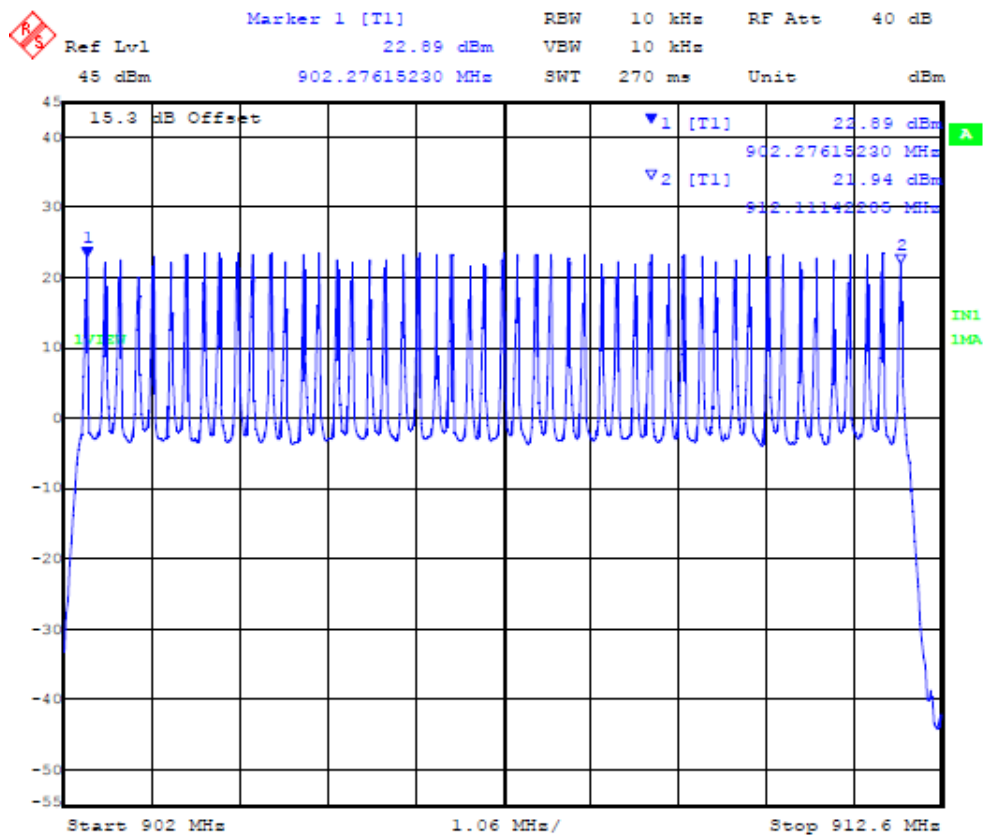
6.1.3 Test Result

The EUT operates at hopping-on test mode; the frequencies number employed is counted to verify the EUT's using the number of hopping frequency compliance to Hopping Sequence and Equal Usage of the channels.

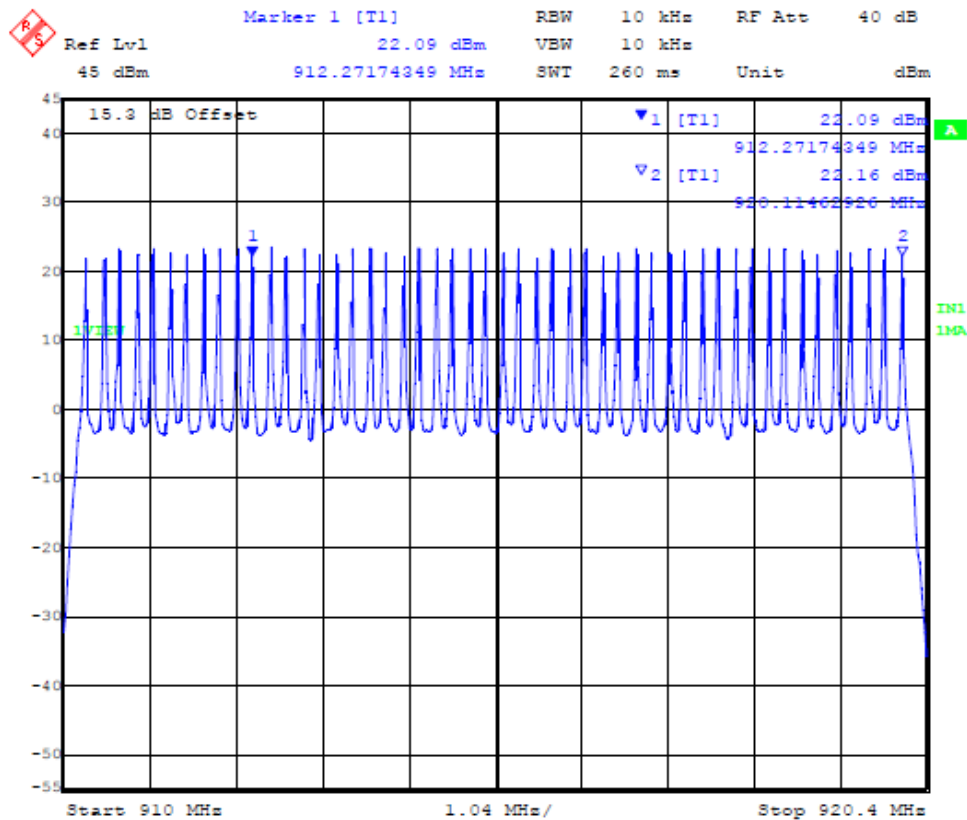
A. Test Verdict:

Data Rate	Frequency Block (MHz)	Measured Channel Numbers	Min. Limit	Refer to Plot	Verdict
10 kbps	902 - 928	64	25	Plot A1/A2/A3	PASS
200 kbps	902 - 928	64	25	Plot C1/C2/C3	PASS

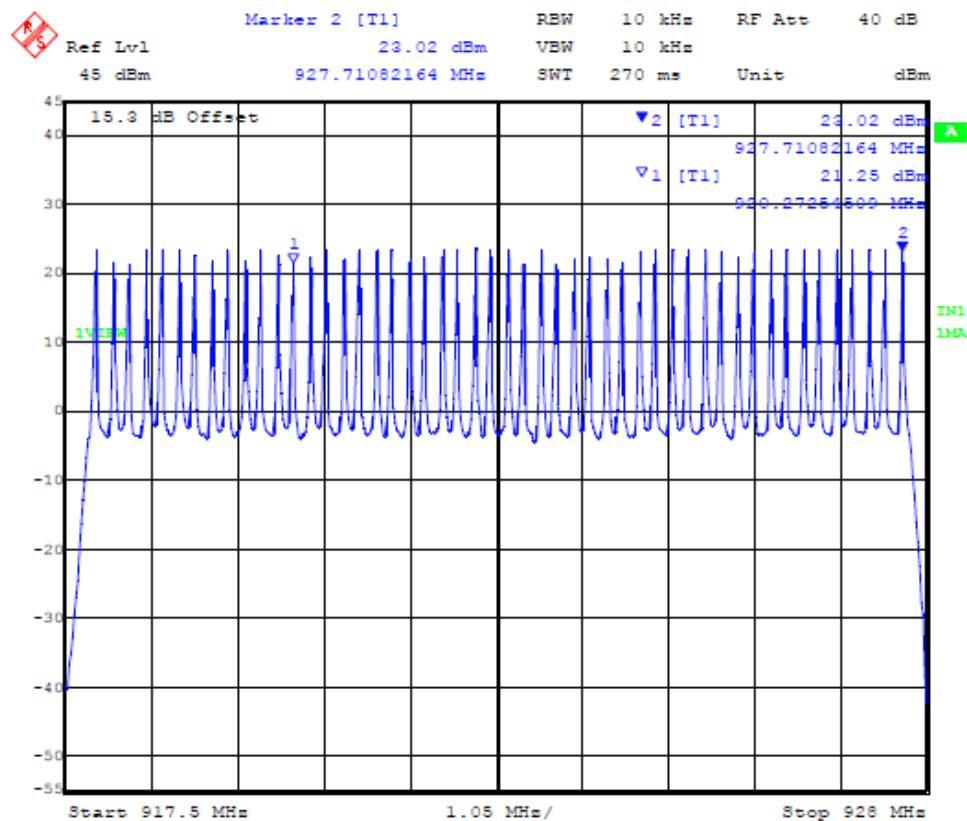
B. Test Plot:



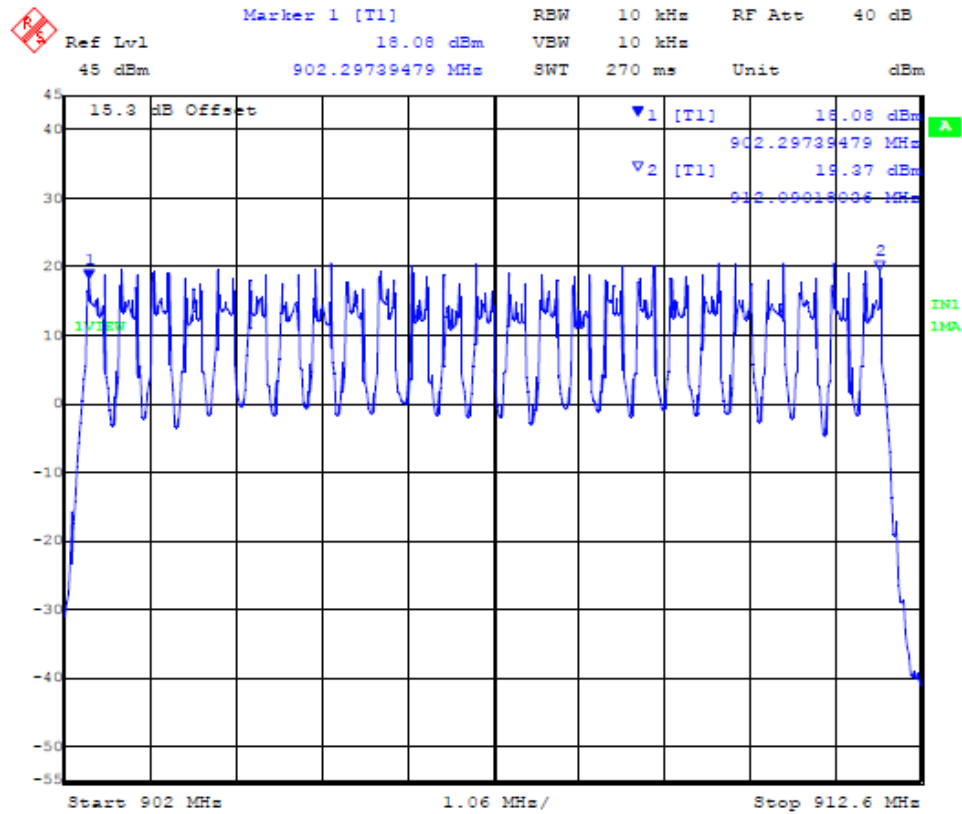
Plot A1 (10 kbps Number of Transmission Channels – Low Band)



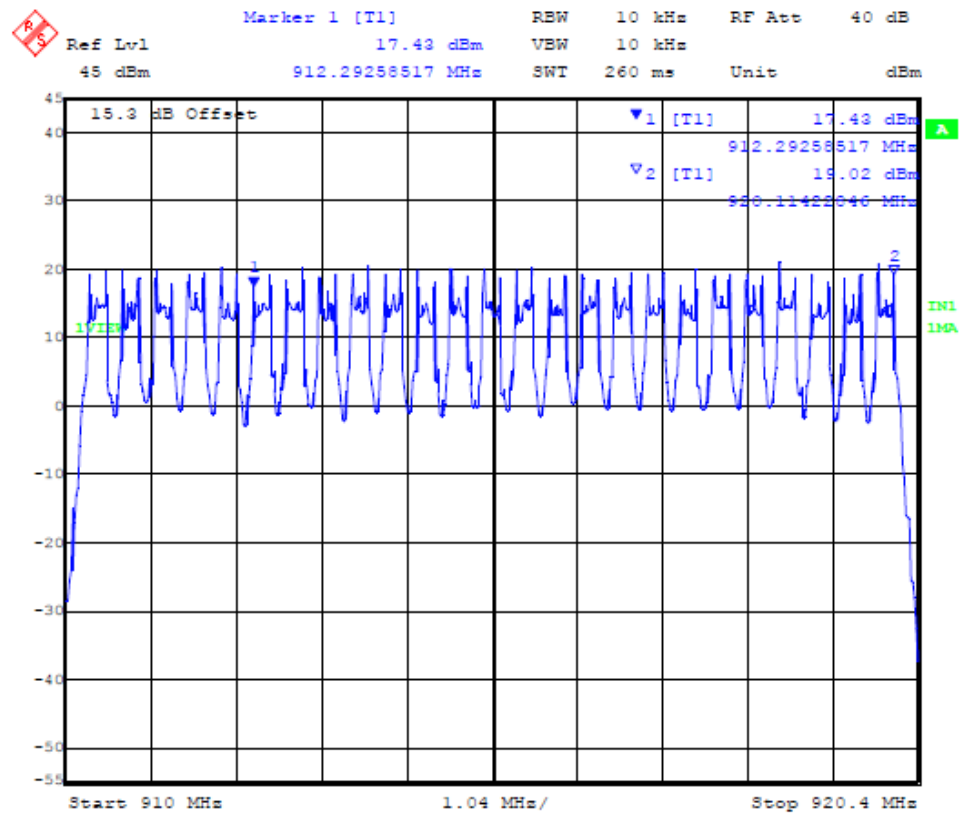
Plot A2 (10 kbps Number of Transmission Channels – Mid Band)



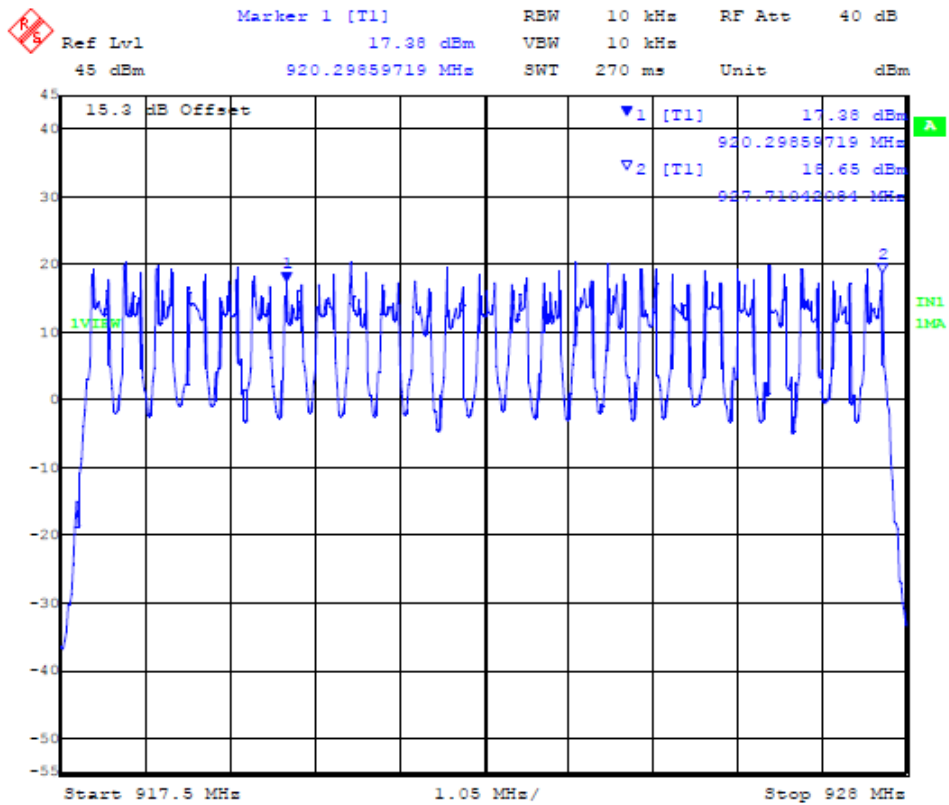
Plot A3 (10 kbps Number of Transmission Channels – Upper Band)



Plot C1 (200 kbps Number of Transmission Channels – Low Band)



Plot C2 (200 kbps Number of Transmission Channels – Mid Band)



Plot C3 (200 kbps Number of Transmission Channels – Upper Band)



6.2 Peak Output Power

6.2.1 Requirement

According to FCC section 15.247(b)(2), For frequency hopping systems operating in the 902-928 MHz band: 1 watt for systems employing at least 50 hopping channels; and 0.25 watts for systems employing less than 50 hopping channels, but at least 25 hopping channels, as permitted under paragraph (a)(1)(i) of this section.

6.2.2 Test Setup

See section 6.1.2 of this report.

Measurement setting , Mode 1: Continuous Transmitting Mode

6.2.3 Test Result

The EUT operates at hopping-off test mode. The lowest, middle and highest channels are selected to perform testing to verify the conducted RF output peak power of the EUT.

A. Test Verdict:

10kbps

Channel	Frequency (MHz)	Measured Output Peak Power		Limit		Verdict
		dBm	W	dBm	W	
0	902.4	24.29	0.26853	30	1	PASS
33	915.2	24.74	0.29648			PASS
63	927.6	24.54	0.28445			PASS

200kbps

Channel	Frequency (MHz)	Measured Output Peak Power		Limit		Verdict
		dBm	W	dBm	W	
0	902.4	23.96	0.24889	30	1	PASS
33	915.2	24.27	0.26730			PASS
63	927.6	24.09	0.25645			PASS



Ref Lvl 35 dBm 3.26 dBm 1 MHz 30 dB

900.71262525 MHz 3.26 dBm 1 MHz 30 dB

15.3 dB Offset

▼1 [T1] 3.26 dBm

900.71262525 MHz

CH FWR 24.29 dBm

CH BW 3.37474950 MHz

▼2 [T1] 23.28 dBm

902.28376754 MHz

△1 [T1] 0.12 dB

3.37474950 MHz

Center 902.4 MHz 400 kHz/ Span 4 MHz

[illegible]

Page 17 of 44







6.3 20dB Bandwidth

6.3.1 Definition

The 20dB bandwidth taking 99% the total RF output power.

6.3.2 Test Setup

See section 6.1.2 of this report.

Measurement setting, Mode 1: Continuous Transmitting Mode

6.3.3 Test Result

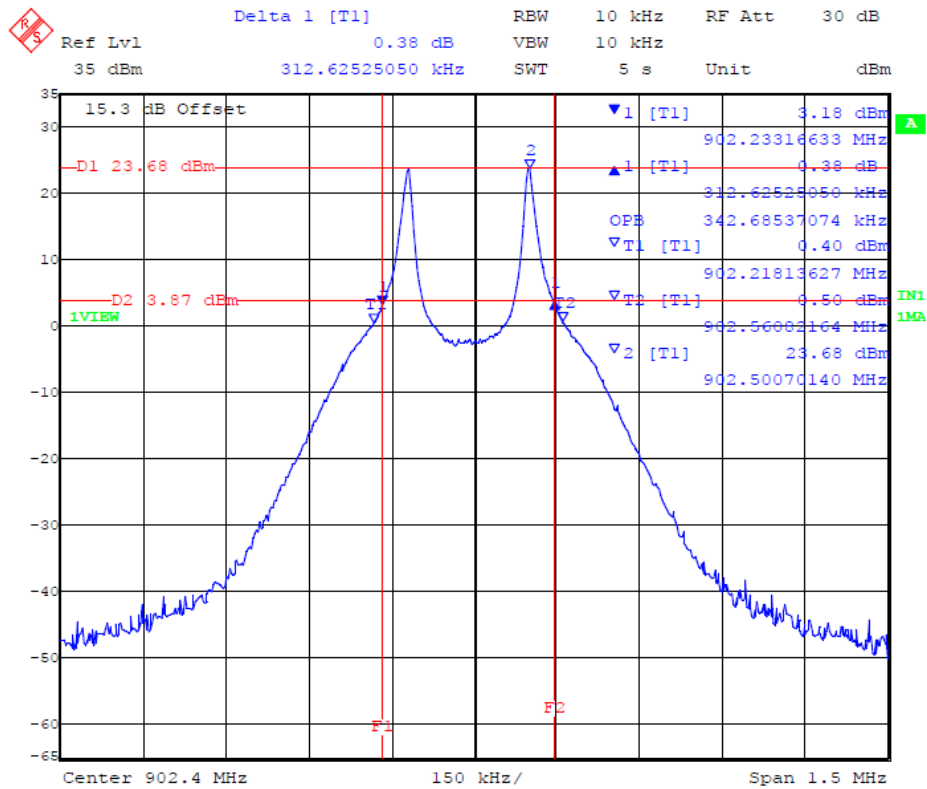
The lowest, middle and highest channels are selected to perform testing to record the 20dB bandwidth of the EUT.

A. Test Verdict

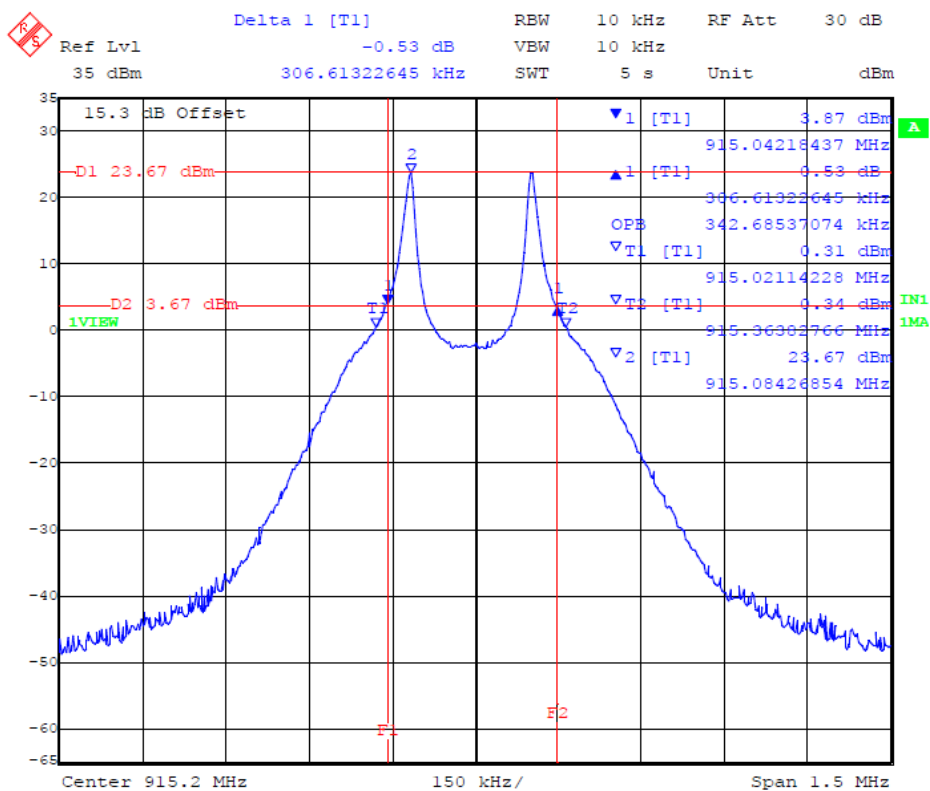
Data Rate	Channel	Frequency (MHz)	20dB Bandwidth (kHz)	Limit (kHz)	Refer to Plot
10kbps	0	902.4	312.625	<500	Plot A
	33	915.2	306.613		Plot B
	63	927.6	309.118		Plot C
200kbps	0	902.4	387.776		Plot G
	33	915.2	384.770		Plot H
	63	927.6	357.715		Plot I



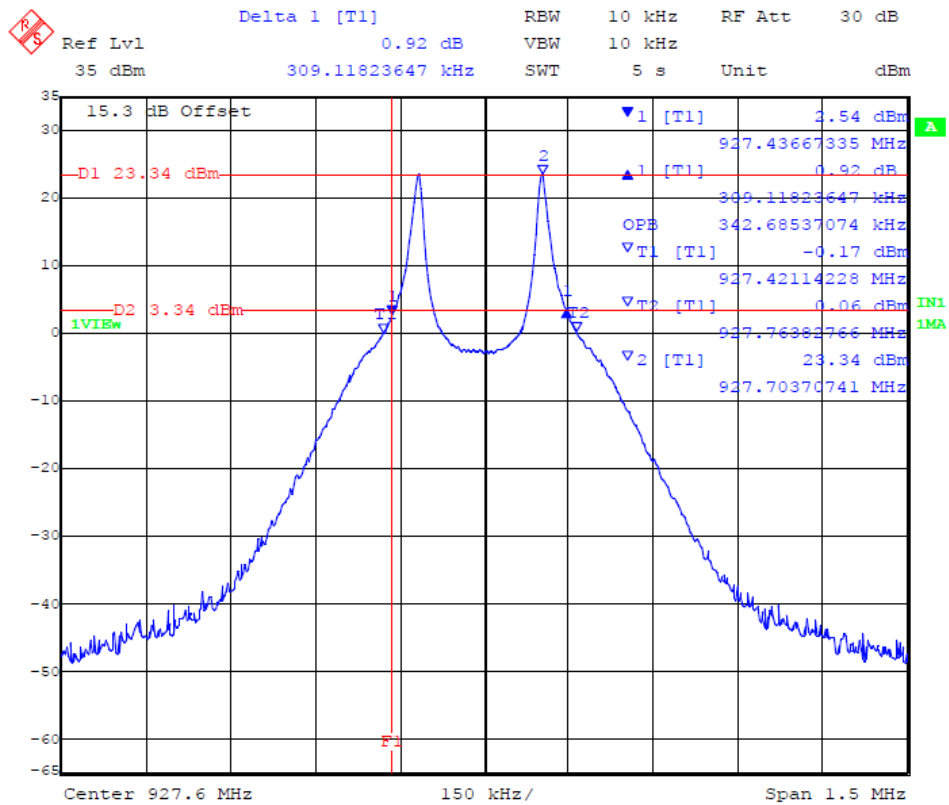
B. Test Plot:



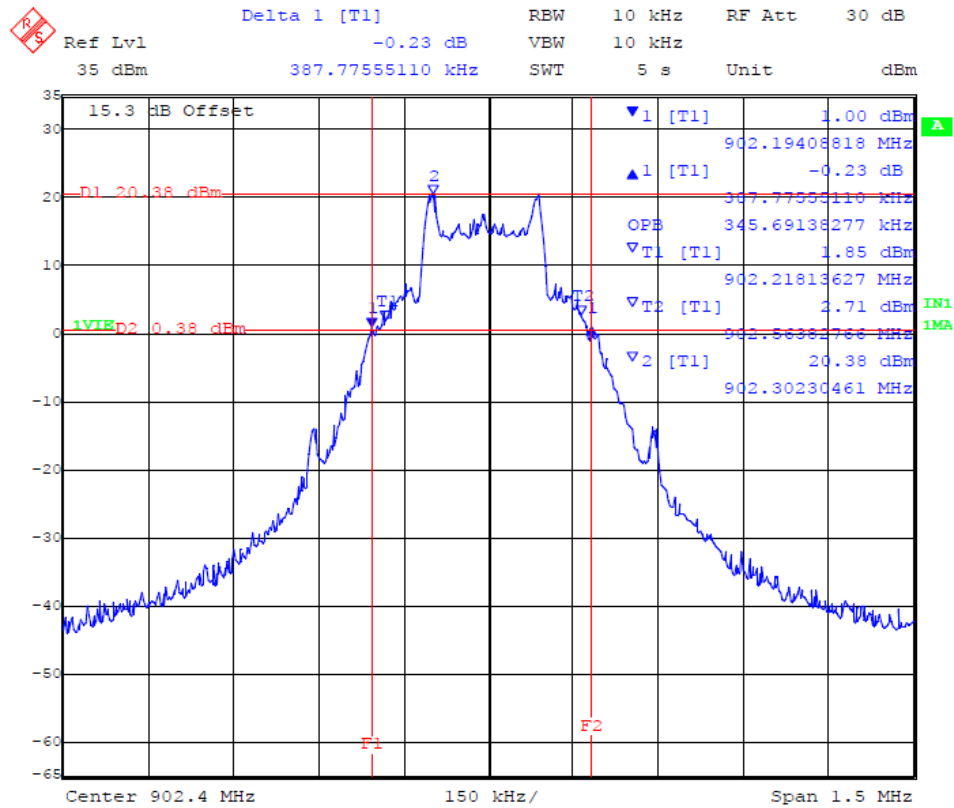
(Plot A: 10kbps Channel 0)



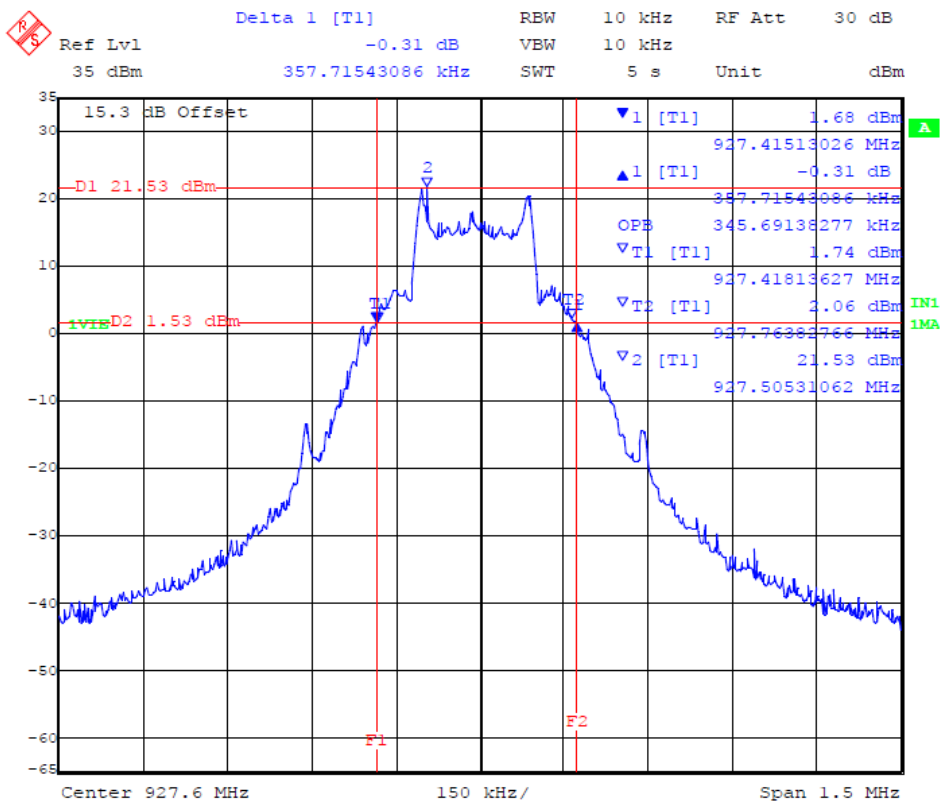
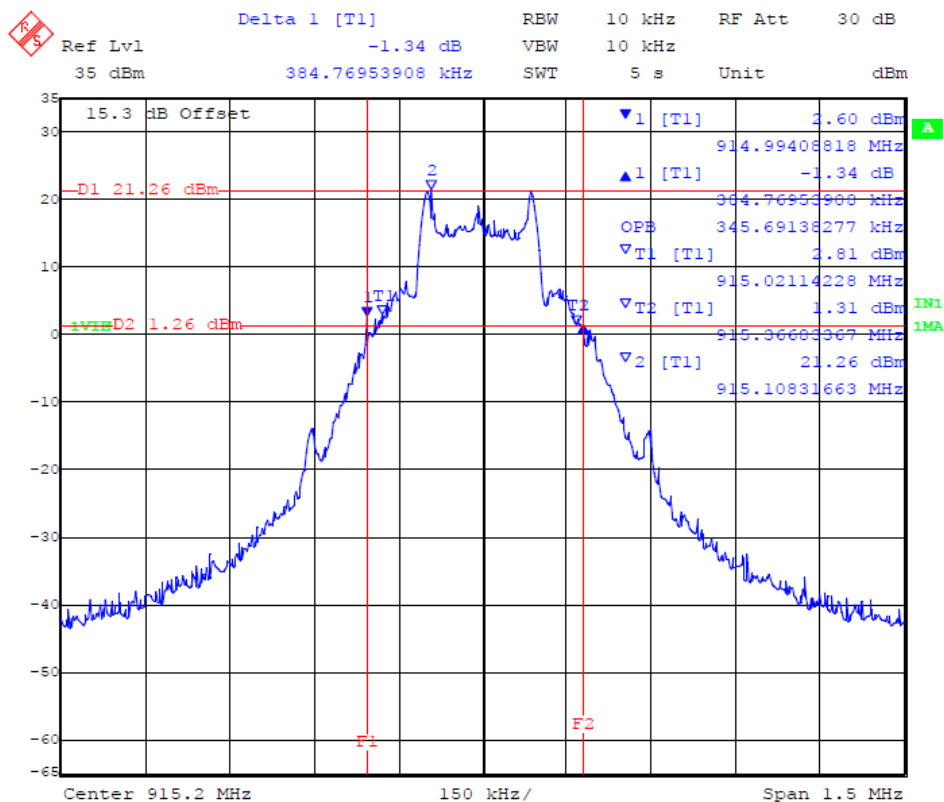
(Plot B: 10kbps Channel 33)



(Plot C: 10kbps Channel 63)



(Plot G: 200kbps Channel 0)





6.4 Carried Frequency Separation

6.4.1 Definition

According to FCC section 15.247(a)(1), frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25kHz or two-thirds of the 20dB bandwidth of the hopping channel, whichever is greater.

6.4.2 Test Setup

See section 6.1.2 of this report.

Measurement setting, Mode 2: Hopping On Mode

6.4.3 Test Result

The EUT operates at hopping-on test mode.

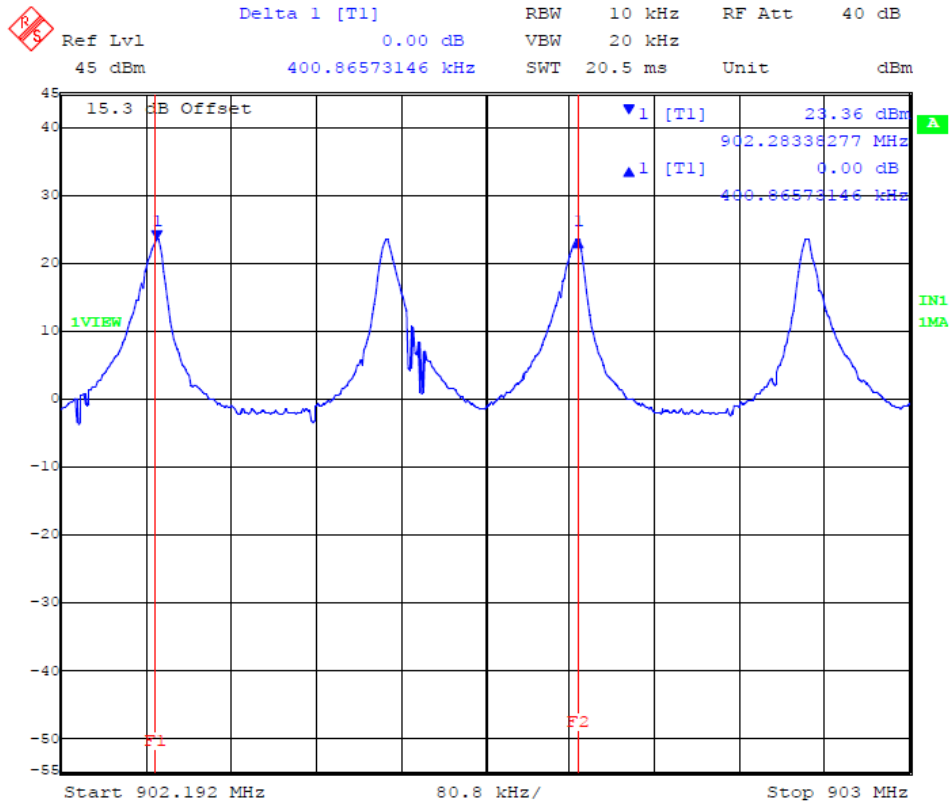
For any adjacent channels, the EUT does have hopping channel carrier frequencies separated by a minimum of 25kHz or two-thirds of the 20dB bandwidth of the hopping channel, whichever is greater. So, the verdict is PASS.

A. Test Verdict:

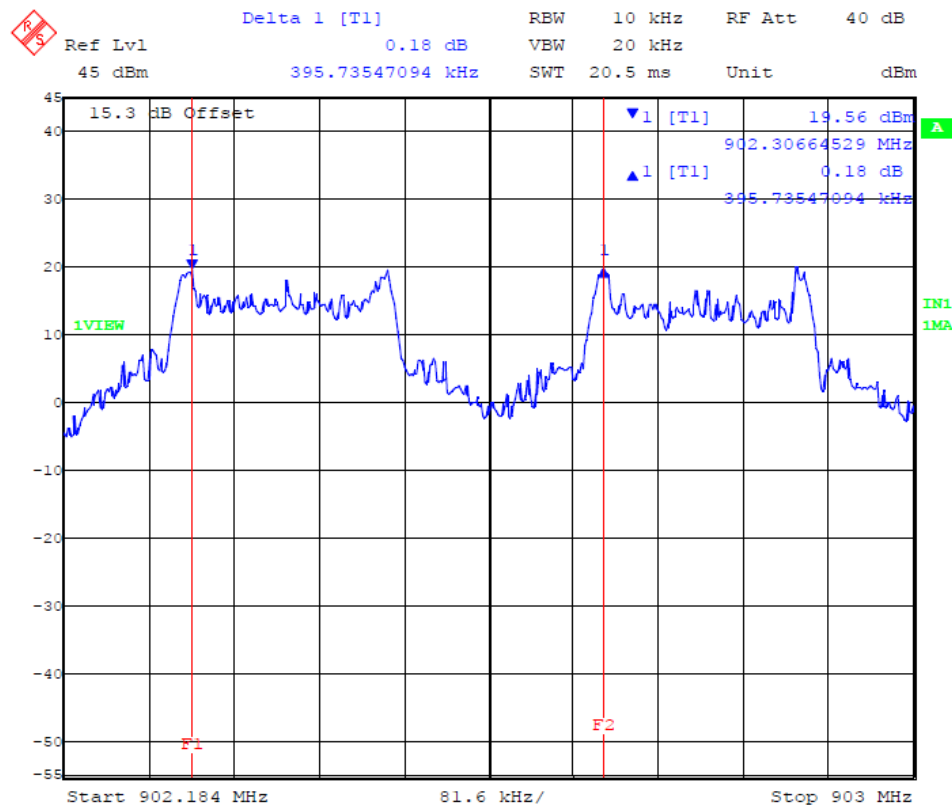
Data Rate	Carried Frequency Separation (KHz)	Limit (MHz)	Refer to Plot	Result
10kbps	400.866	0.025 or 2/3 the 20dB bandwidth	Plot A	PASS
200kbps	395.735	0.025 or 2/3 the 20dB bandwidth	Plot C	PASS



Test Plot:



(Plot A: 10kbps)



(Plot C: 200kbps)



6.5 Time of Occupancy (Dwell time)

6.5.1 Requirement

According to FCC section 15.247(a)(1)(i), For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

6.5.2 Test Setup

See section 6.1.2 of this report.

Measurement setting , Mode 1: Continuous Transmitting Mode

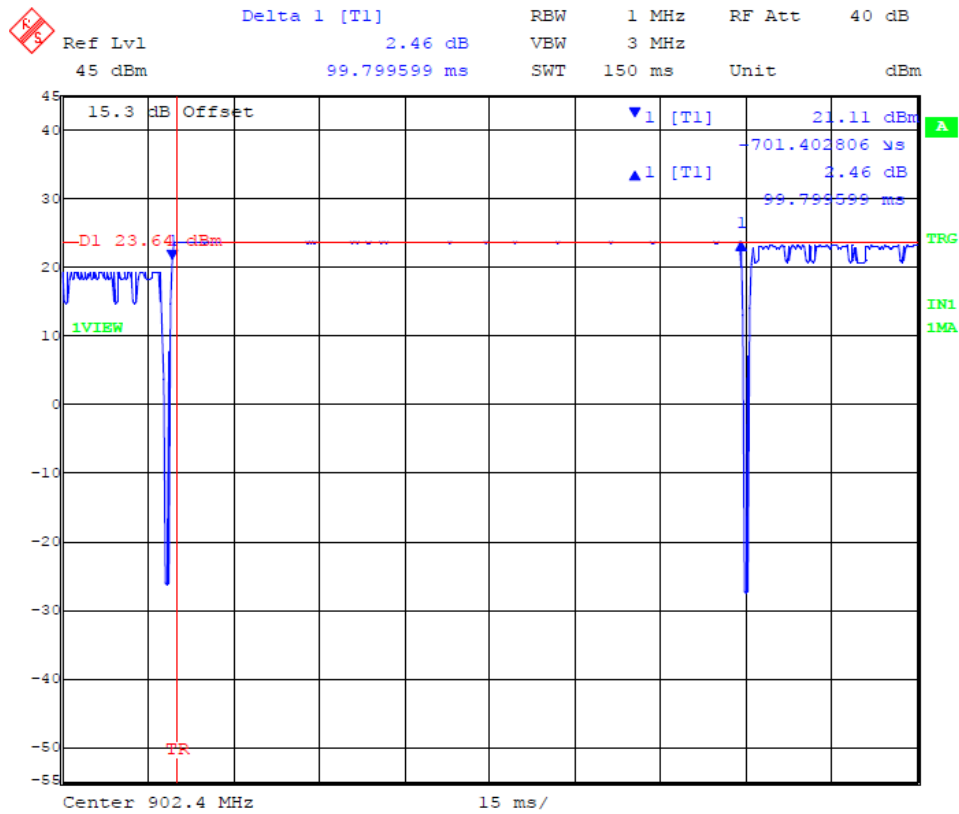
6.5.3 Test Result

A. Test Verdict:

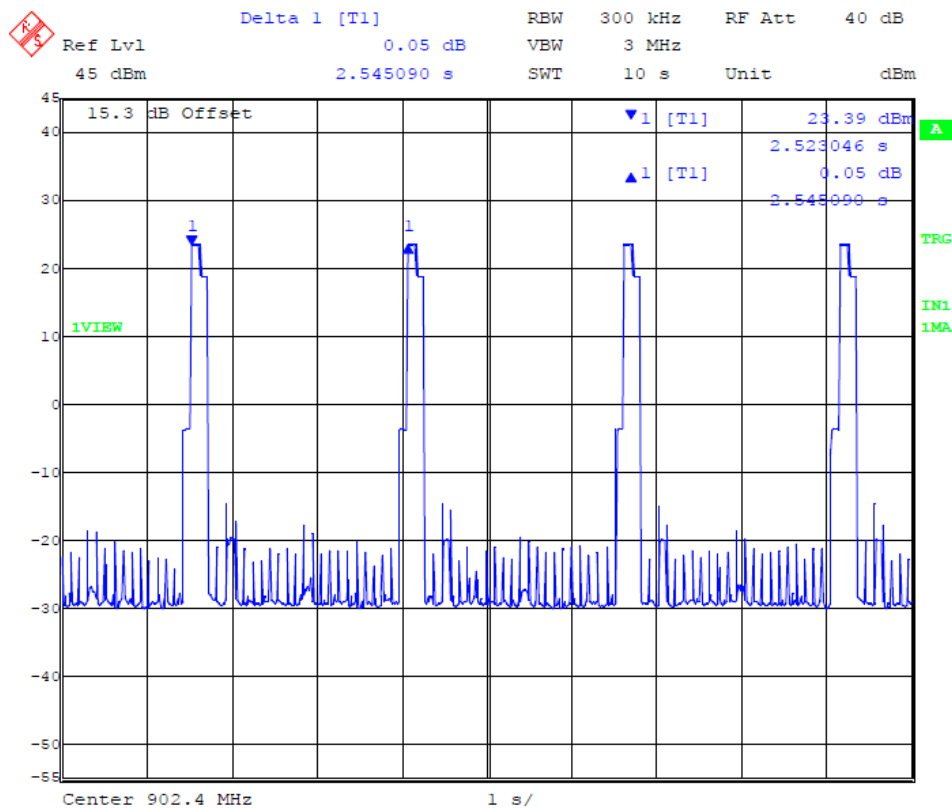
Data Rate	Channel	Channel Dwell Time (single channel) (ms)	Channel Occupancy within 10 Second Period (ms)	Plot	Limit (ms)	Result
10kbps	0	99.800	$4 \times 99.800 = 399.200$	Plot A1/A2	400	PASS
200kbps	0	99.449	$4 \times 99.449 = 397.796$	Plot C1/C2	400	PASS



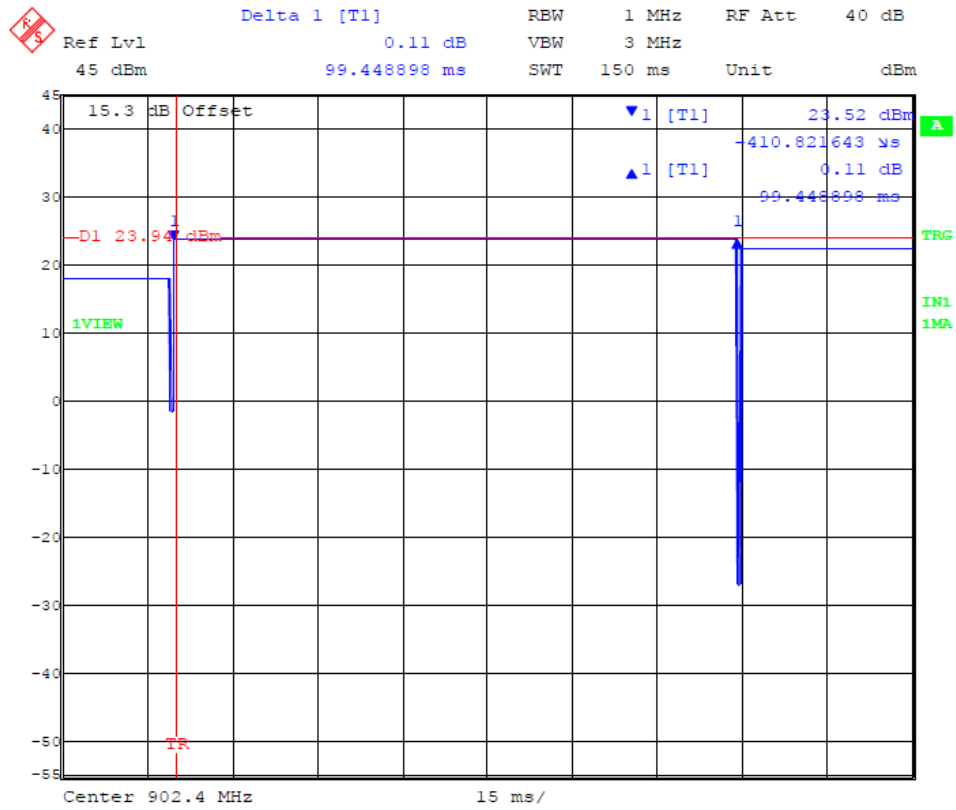
Test Plot:



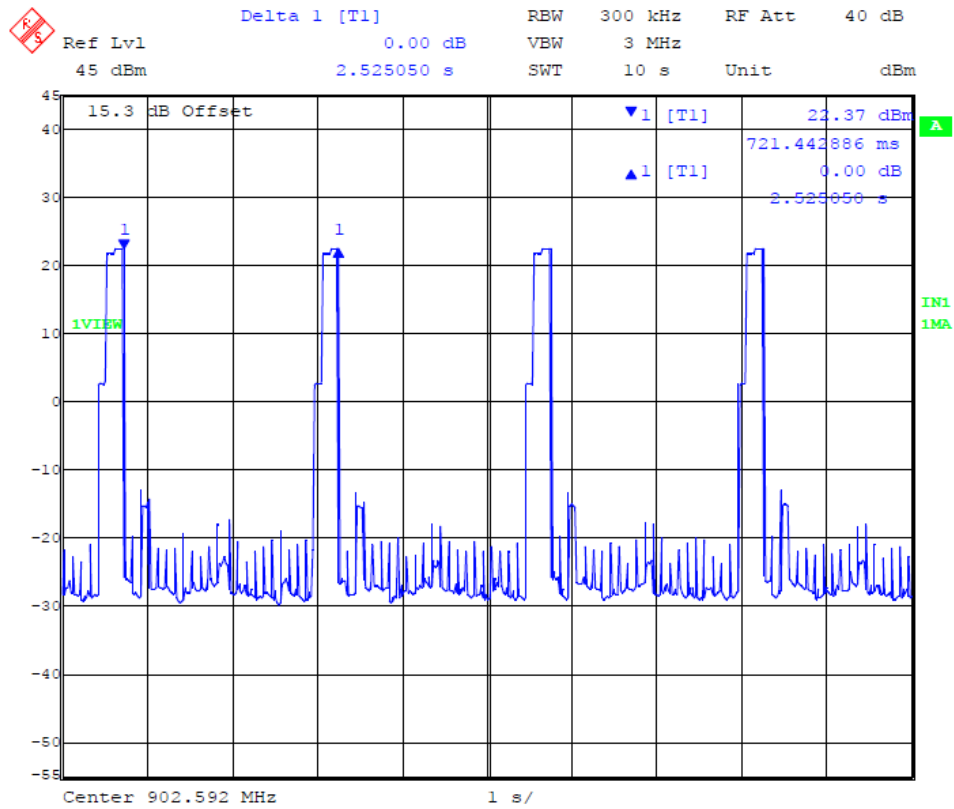
Plot A1: 10kbps



Plot A2: 10kbps



Plot C1: 200kbps



Plot C2: 200kbps



6.6 Conducted Spurious Emissions

6.6.1 Requirement

According to FCC section 15.247(d), in any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

6.6.2 Test Setup

See section 6.1.2 of this report.

Measurement setting , Mode 1: Continuous Transmitting Mode

6.6.3 Test Result

The EUT operates at hopping-off test mode. The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the spurious emissions.

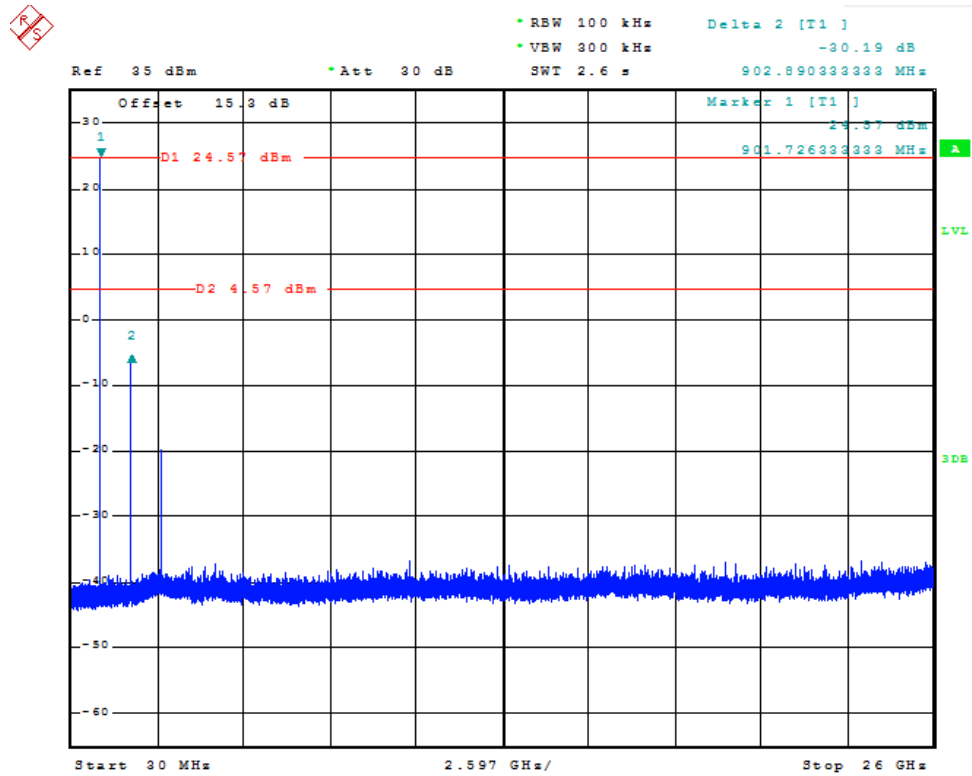
A. Test Verdict

Data rate: 10kbps

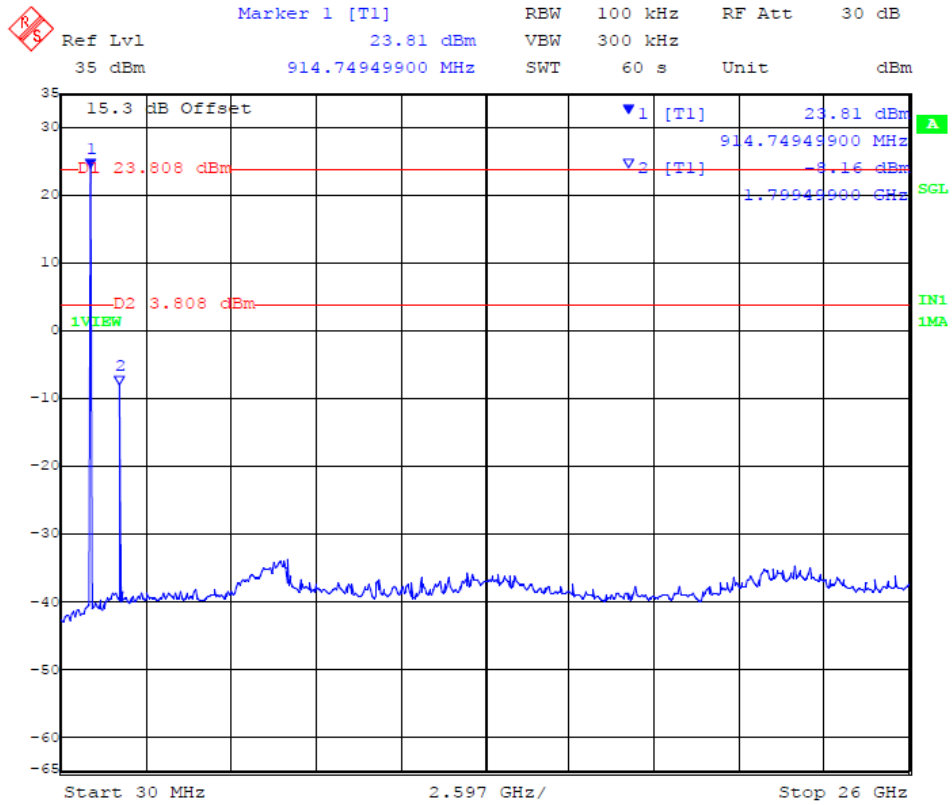
Channel	Frequency (MHz)	Measured Max Out of Band Emission (dBm)	Refer to Plot	Limit (dBm)		Result
				Carrier Level	Calculated -20dBc Limit	
0	902.4	-5.62	Plot A	24.57	4.57	PASS
33	915.2	-8.16	Plot B	23.81	3.81	PASS
63	927.6	-8.25	Plot C	23.42	3.42	PASS



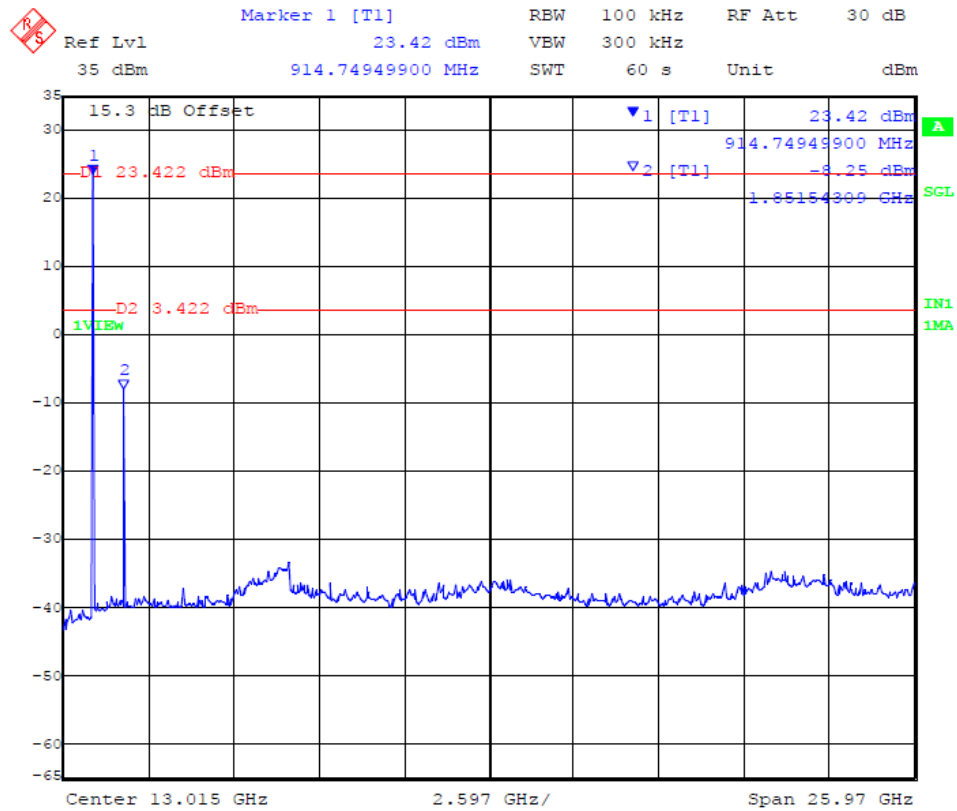
Test Plot



Plot A



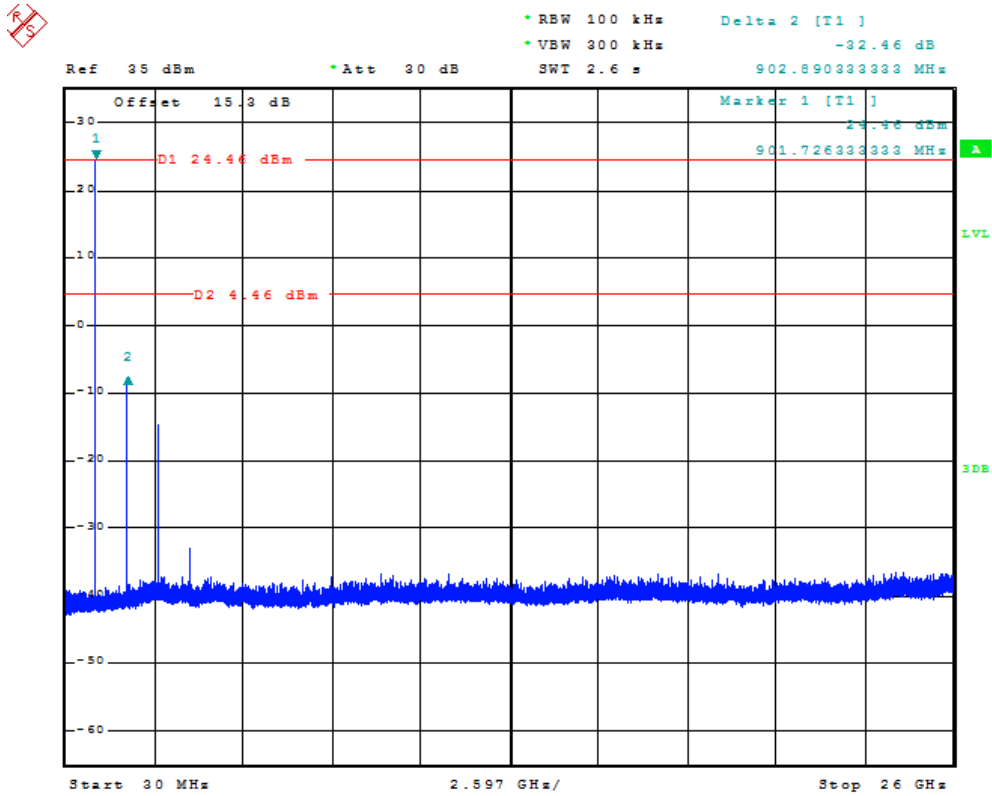
Plot B



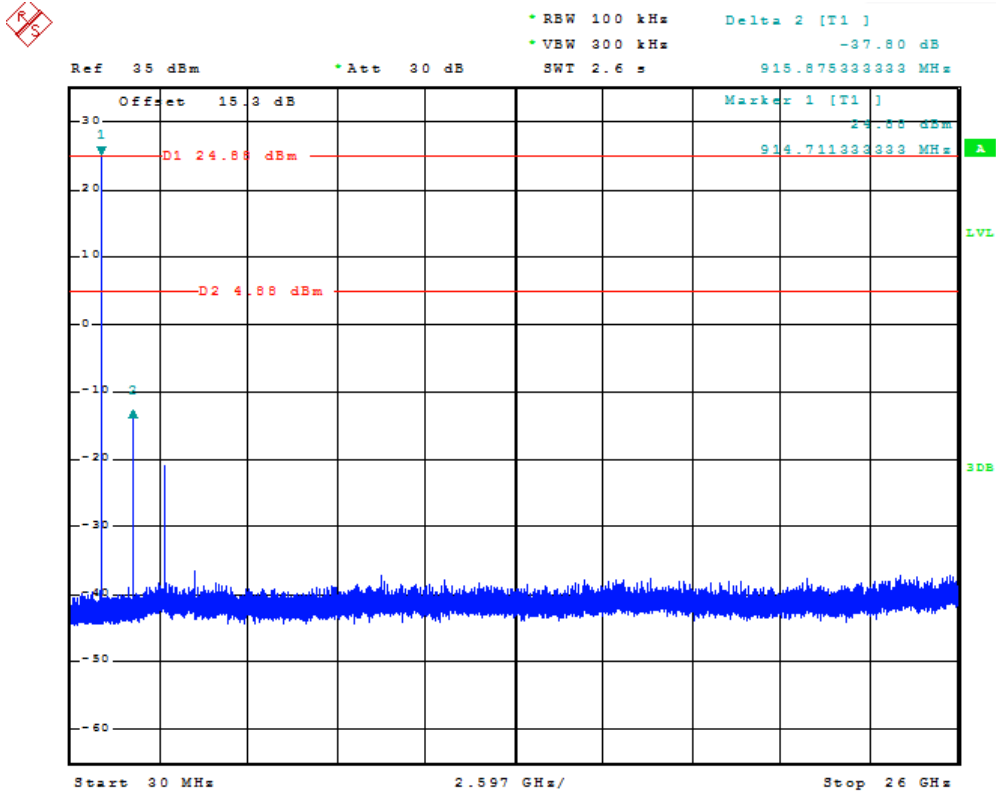
Plot C

Data rate: 200kbps

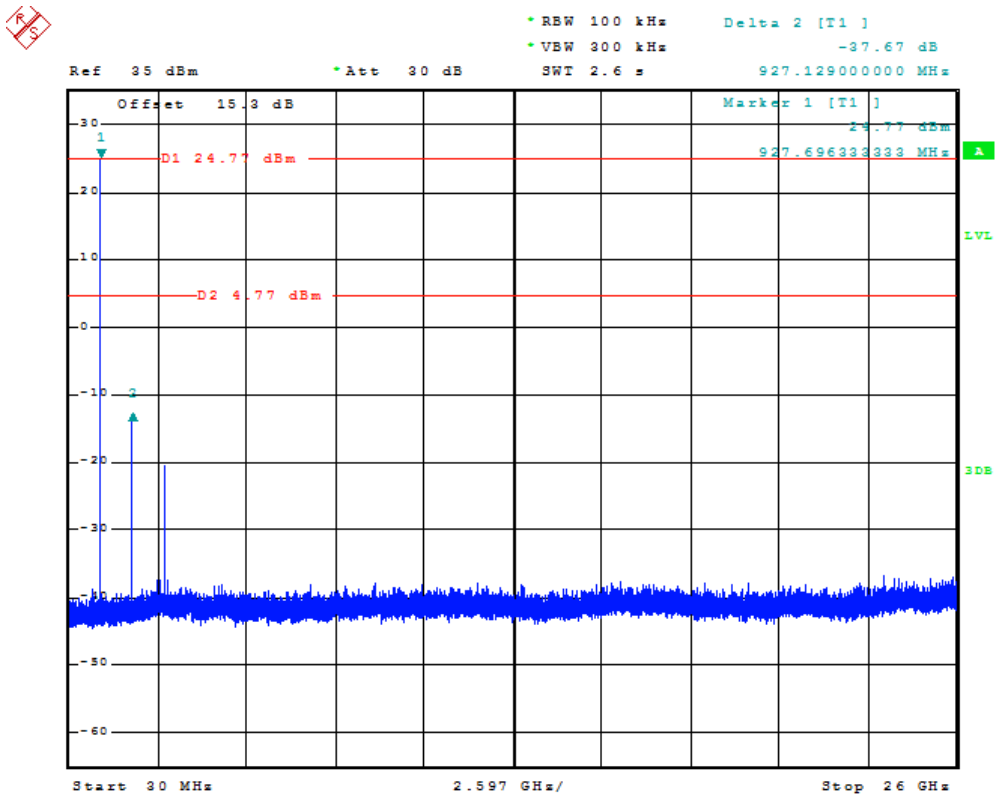
Channel	Frequency (MHz)	Measured Max Out of Band Emission (dBm)	Refer to Plot	Limit (dBm)		Result
				Carrier Level	Calculated -20dBc Limit	
0	902.4	-8.00	Plot D	24.46	4.46	PASS
33	915.2	-12.92	Plot E	24.88	4.88	PASS
63	927.6	-12.9	Plot F	24.77	4.77	PASS



Plot D



Plot E



Plot F



6.7 Band Edge

6.7.1 Requirement

According to FCC section 15.247(d), in any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

6.7.2 Test Setup

See section 6.1.2 of this report.

Measurement setting , Mode 1: Continuous Transmitting Mode

6.7.3

6.7.4 Test Result

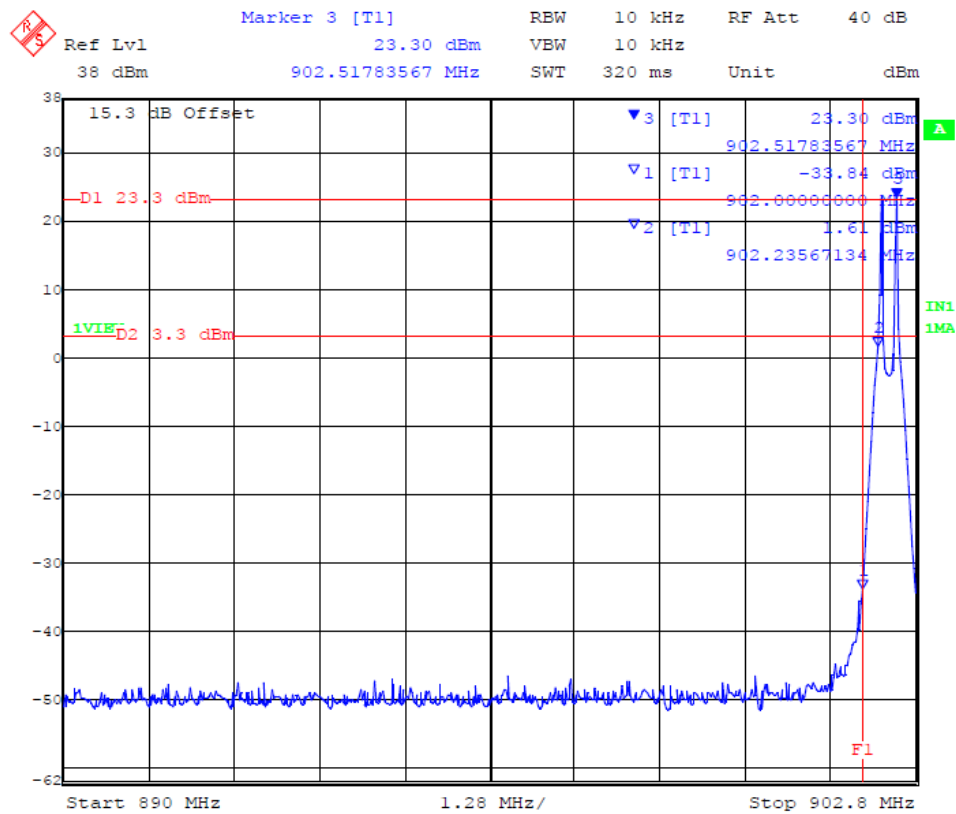
The EUT operates at both hopping-off test mode and hopping-on mode. The worst case (hopping-off mode) is recorded in the report. The lowest and highest channels are tested to verify the band edge emissions.

Data rate: 10kbps

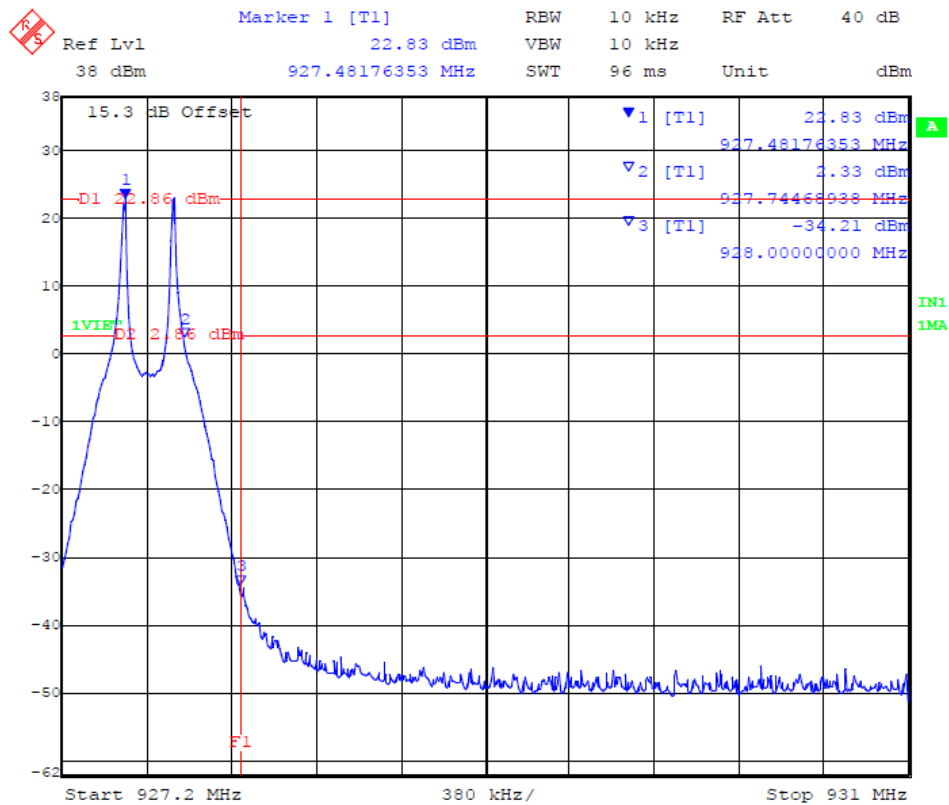
Channel	Frequency (MHz)	Band-edge Frequency (MHz)	Amplitude @ Band-edge (dBm)	Plot	Limit (dBm)	Result
0	902.4	902.0	-33.84	Plot A	3.30	PASS
63	927.6	928.0	-34.21	Plot B	2.86	PASS

Data rate: 200kbps

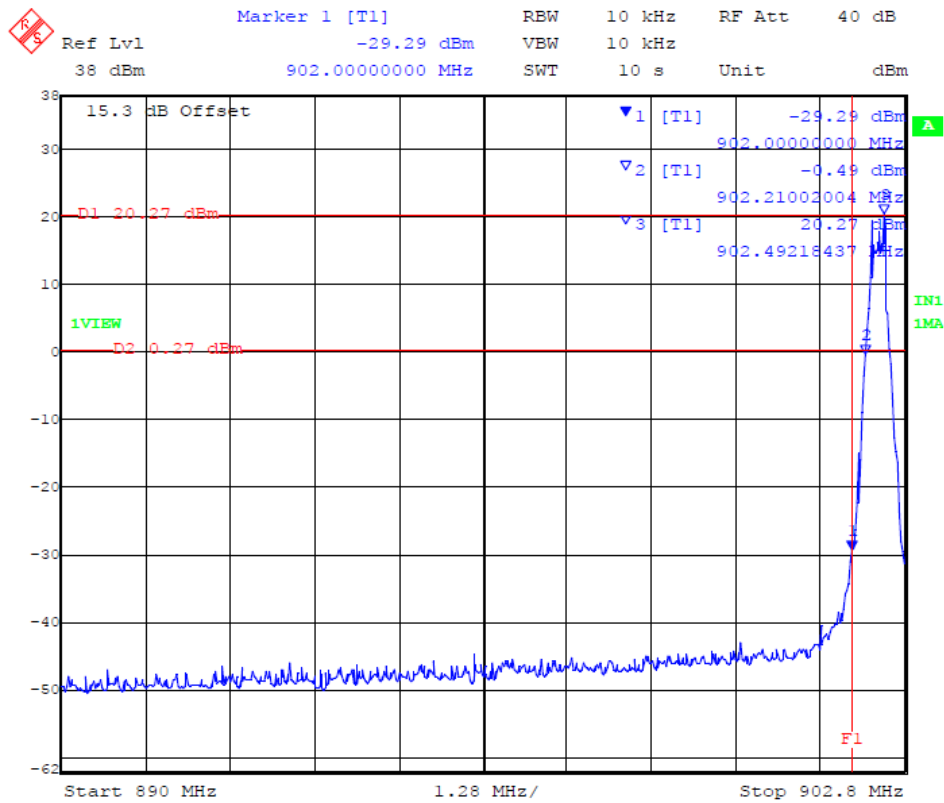
Channel	Frequency (MHz)	Band-edge Frequency (MHz)	Amplitude @ Band-edge (dBm)	Plot	Limit (dBm)	Result
0	902.4	902.0	-29.29	Plot E	0.27	PASS
63	927.6	928.0	-32.07	Plot F	-0.36	PASS



Plot A



Plot B



Plot E



Plot F



6.8 Radiated Emission

6.8.1 Requirement

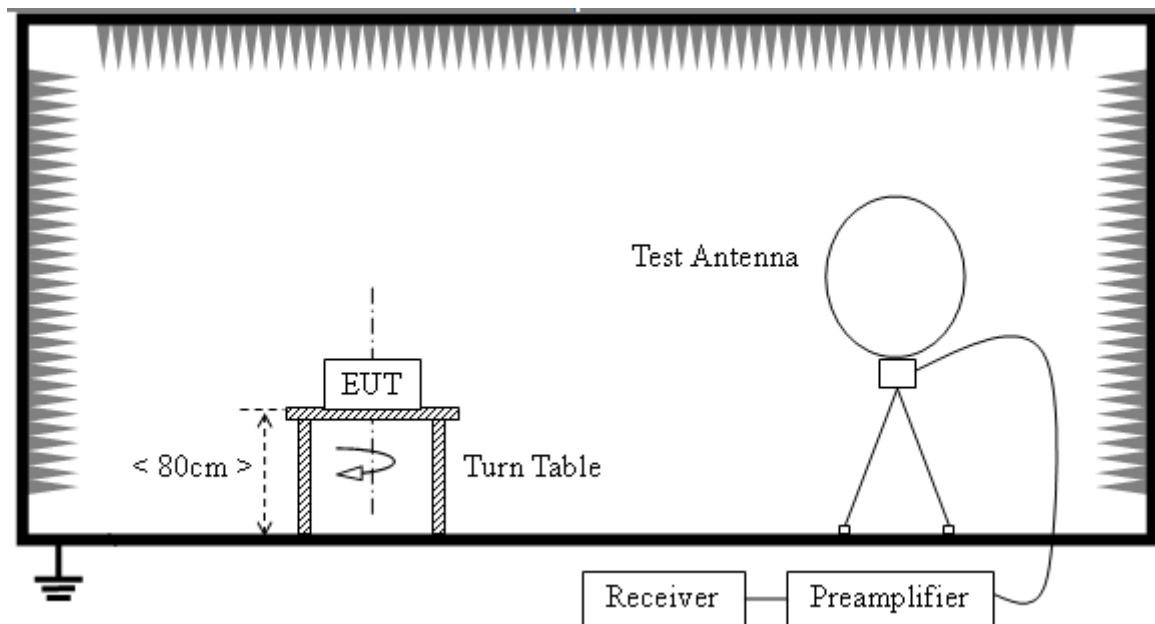
According to FCC section 15.247(c), radiated emission outside the frequency band attenuation below the general limits specified in FCC section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in FCC section 15.205(a), must also comply with the radiated emission limits specified in FCC section 15.209(a).

According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

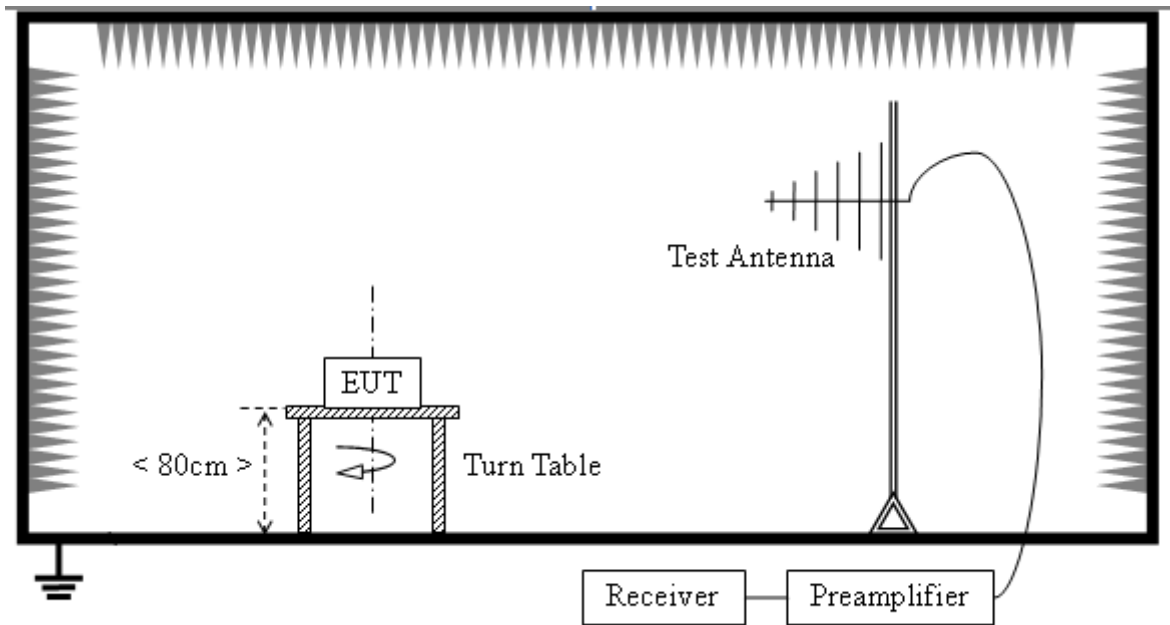
Frequency (MHz)	Field Strength ($\mu\text{V/m}$)	Measurement Distance (m)	Limit(dB $\mu\text{V/m}$)	Detector
0.009-0.490	2400/F(kHz)	300	/	/
0.490-1.705	24000/F(kHz)	30	/	/
1.705-30	30	30	/	/
30 - 88	100	3	40	QP
88 - 216	150	3	43.5	QP
216 - 960	200	3	46	QP
960 - 1000	500	3	54	QP
Above 1000	500	3	54	AV

In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), also should comply with the radiated emission limits specified in Section 15.209(a)(above table)

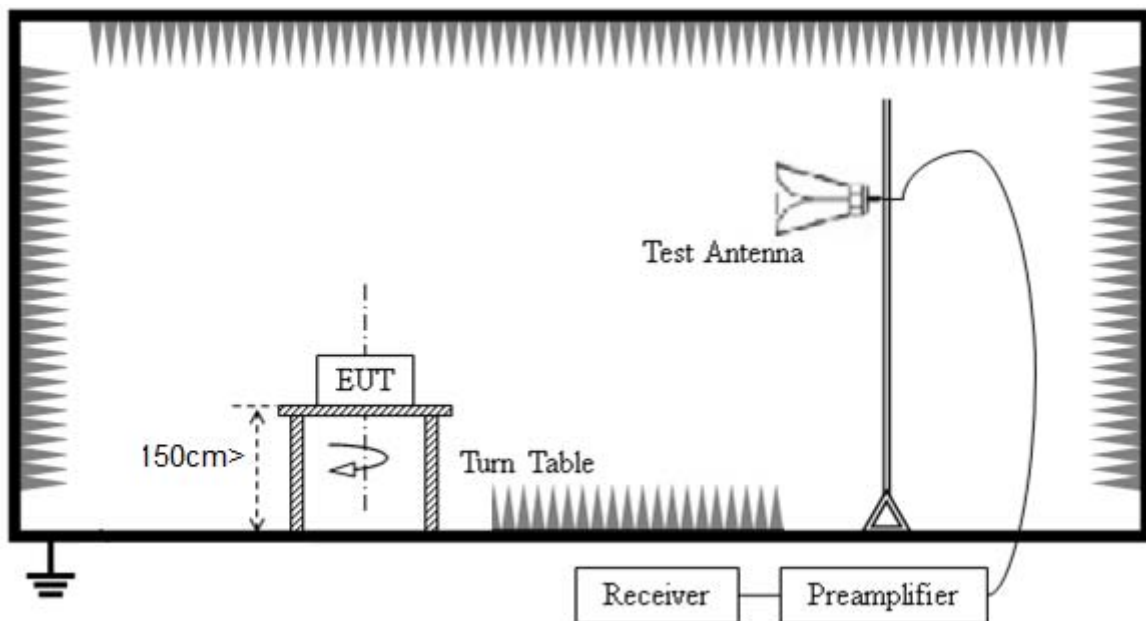
6.8.2 Test Setup



Radiated Emissions below 30MHz



Radiated Emissions 30-1000MHz



Radiated Emissions above 1000MHz

The test site semi-anechoic chamber has met the requirement of NSA tolerance 4dB according to the standards: ANSI C63.10 (2013). The EUT was set-up on insulator 80cm above the Ground Plane while RE test below 1GHz, and 150cm while RE test above 1GHz. The set-up and test methods were according to ANSI C63.10.



The EUT is located in a 3m Semi-Anechoic Chamber; the antenna factors, cable loss and so on of the site as factors are calculated to correct the reading. During the measurement, the EUT is activated and controlled by the software running on laptop, and is set to operate under hopping-off test mode transmitting packages at maximum power.

For the Test Antenna: In the frequency range above 30MHz, Bi-Log Test Antenna (30MHz to 1GHz) and Horn Test Antenna (above 1GHz) are used. Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength, the azimuth range of turntable was 0° to 360°, the receive antenna has two polarizations horizontal and vertical. When doing measurements above 1GHz, the EUT was placed within the 3dB beam width range of the horn antenna as recommended in ANSI C63.10 for Radiated Emissions and the worst-case data was presented.

Measurement setting, Mode 1: Continuous Transmitting Mode

Receiver Setting:

(9-150kHz): RBW=200Hz, VBW=1kHz, Detector: PK, Max Hold.

(0.15-30MHz): RBW=9kHz, VBW=30kHz, Detector: PK, Max Hold.

(30MHz-1GHz): RBW=120kHz, VBW=300kHz, Detector: QP, Max Hold.

(Above 1GHz): RBW=1MHz, VBW=3MHz, Detector: AV, Max Hold.

6.8.3 Test Result

A. Test Result for 9 kHz ~ 30 MHz:

Frequency (MHz)	Level (dBμV)	Over Limit (dB)	Limit Line (dBμV)	Remark
--	--	20	--	See Note

Note:

- The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.*
- Distance extrapolation factor = $40 \log (\text{specific distance} / \text{test distance})$ (dB);*
- Limit line = specific limits (dBμV) + distance extrapolation factor.*



B. Test Result for 30 MHz ~ 10th Harmonic

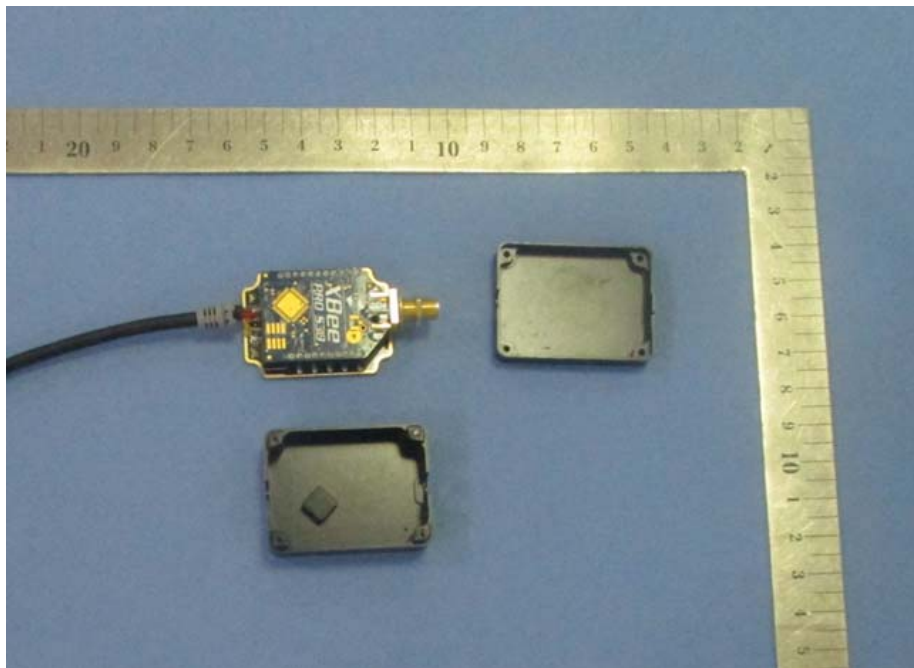
Frequency (MHz)	Level (dBμV)	Limit Line (dBμV)	Margin (dB)	Detector	Antenna Polarization	Result
191.75	23.86	43.50	19.64	QP	H	PASS
239.99	22.44	46.00	23.56	QP	H	PASS
601.43	26.78	46.00	19.22	QP	H	PASS
1226.62	36.65	74.00	37.35	Peak	H	PASS
1861.48	50.01	54.00	3.99	Average	H	PASS
1861.48	64.03	74.00	9.97	Peak	H	PASS
2432.00	28.96	54.00	25.04	Average	H	PASS
2432.00	35.90	74.00	38.10	Peak	H	PASS
2999.21	25.04	54.00	28.96	Average	H	PASS
2999.21	40.35	74.00	33.65	Peak	H	PASS
3587.75	37.01	74.00	36.99	Peak	H	PASS
4276.42	24.80	54.00	29.20	Average	H	PASS
4997.81	27.46	54.00	26.54	Average	H	PASS
5033.76	41.34	74.00	32.66	Peak	H	PASS
5957.15	27.08	54.00	26.92	Average	H	PASS
8900.01	30.54	54.00	23.46	Average	H	PASS
192.42	13.86	19.86	43.50	QP	V	PASS
239.99	15.44	20.44	46.00	QP	V	PASS
601.43	23.77	27.78	46.00	QP	V	PASS
1353.65	36.71	54.00	17.29	Average	V	PASS
1593.38	34.68	54.00	19.32	Average	V	PASS
1861.48	43.95	54.00	10.05	Average	V	PASS
2594.04	51.94	54.00	2.06	Average	V	PASS
5033.76	40.65	54.00	13.35	Average	V	PASS
5967.84	39.68	54.00	14.32	Average	V	PASS
8898.02	33.21	54.00	21.79	Average	V	PASS

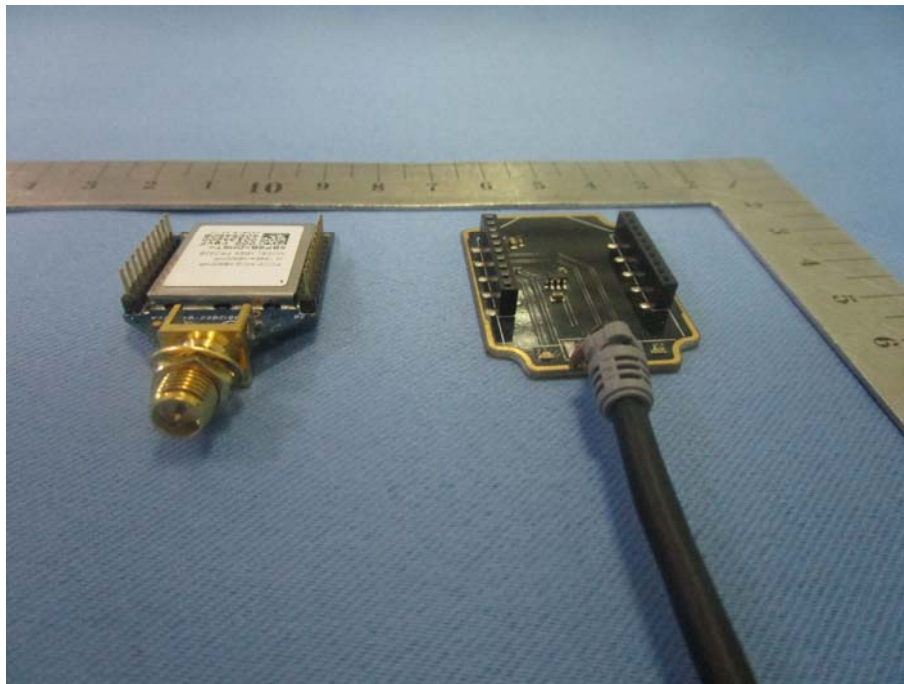
Note:

The worst case (10kbps, Channel 0:902.4MHz) is recorded in the report.



Annex A Photos of the EUT









Annex B Photos of Setup

1. Radiated Emission



**** END OF REPORT ****