

FCC Test Report

Report No. : 1812C60432312501

Applicant : Beijing Sillion Technology Corp.,LTD.

Address : 5 Floor, Building A, No.3 Longyu North St.,
Changping District, Beijing, 102200, China

Product Name : RFID module

Report Date : 2026-09-20

Shenzhen Anbotek Compliance Laboratory Limited



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TEST REPORT

Applicant : Beijing Silion Technology Corp.,LTD.
Manufacturer : Beijing Silion Technology Corp.,LTD.
Product Name : RFID module
Model No. : SIM9300
Trade Mark : N/A
Rating(s) : Input: 5V=3A

Test Standard(s) : 47 CFR Part 15.247

Test Method(s) : ANSI C63.10-2020+Cor.1-2023+C63.10a-2024+Errata to C63.10a-2024

The device described above is tested by Shenzhen Anbotek Compliance Laboratory Limited to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and Shenzhen Anbotek Compliance Laboratory Limited is assumed full of responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT (Equipment Under Test) is technically compliant with the 47 CFR Part 15.247 requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of Shenzhen Anbotek Compliance Laboratory Limited.

Date of Receipt 2026-07-28

Date of Test 2026-07-28 to 2026-09-08

Prepared By



(Lene Chen)

Approved & Authorized Signer



(Jules Guo)

Revision History

Report Version	Description	Issued Date
R00	Original Issue.	2026-09-20

1. General Information

1.1. Client Information

Applicant	:	Beijing Silion Technology Corp.,LTD.
Address	:	5 Floor, Building A, No.3 Longyu North St., Changping District, Beijing, 102200, China
Manufacturer	:	Beijing Silion Technology Corp.,LTD.
Address	:	5 Floor, Building A, No.3 Longyu North St., Changping District, Beijing, 102200, China
Factory	:	Beijing Silion Technology Corp.,LTD.
Address	:	5 Floor, Building A, No.3 Longyu North St., Changping District, Beijing, 102200, China

1.2. Description of Device (EUT)

Product Name	:	RFID module
Model No.	:	SIM9300
Trade Mark	:	N/A
Test Power Supply	:	DC 5V via Debug board
Test Sample No.	:	1-2-1(Normal Sample), 1-2-2(Engineering Sample)
Adapter	:	N.A.
RF Specification		
Operation Mode	:	☐ DSSS ☒ FHSS
Support Bandwidth	:	☒ 125KHz ☐ 250KHz ☐ 500KHz
Operation Frequency	:	902.75~927.25MHz
Number of Channel	:	50 Channels
Modulation Type	:	ASK
Antenna Type	:	External Antenna
Antenna Gain(Peak)	:	6.26dBi
Remark: (1) All of the RF specification are provided by customer. (2) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual. (3) The antennas cannot be used at the same time. (4) During the test, pre-scan all antenna test and only show the test data of the worst case in this report.		

1.3. Auxiliary Equipment Used During Test

Title	Manufacturer	Model No.	Serial No.
Debug board	/	/	/

1.4. Description of Test Modes

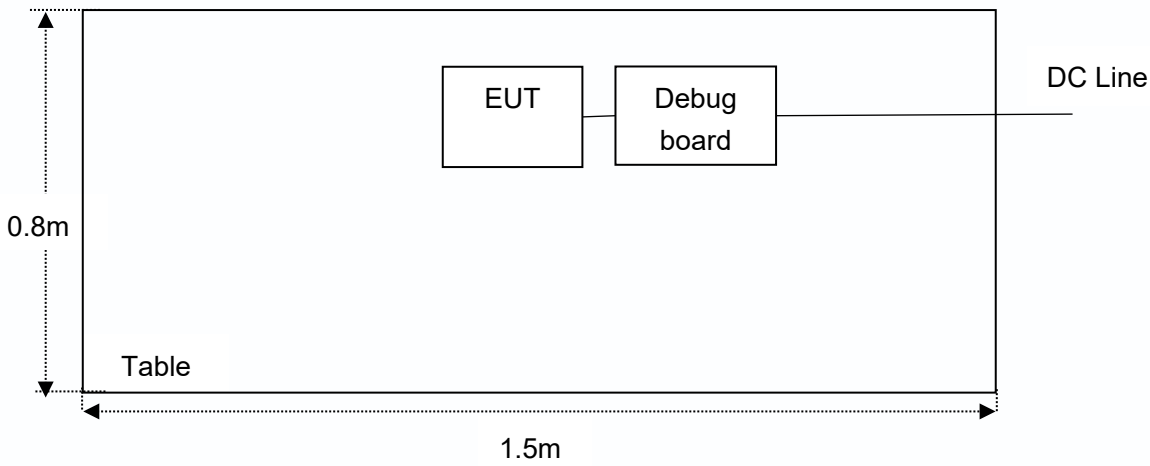
Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)
01	902.75	02	903.25	03	903.75	04	904.25	05	904.75
06	905.25	07	905.75	08	906.25	09	906.75	10	907.25
11	907.75	12	908.25	13	908.75	14	909.25	15	909.75
16	910.25	17	910.75	18	911.25	19	911.75	20	912.25
21	912.75	22	913.25	23	913.75	24	914.25	25	914.75
26	915.25	27	915.75	28	916.25	29	916.75	30	917.25
31	917.75	32	918.25	33	918.75	34	919.25	35	919.75
36	920.25	37	920.75	38	921.25	39	921.75	40	922.25
41	922.75	42	923.25	43	923.75	44	924.25	45	924.75
46	925.25	47	925.75	48	926.25	49	926.75	50	927.25

Note:

1. The engineering test program was provided and the EUT was programmed to be in continuously transmitting mode.
2. EUT was tested with Channel 01, 29 and 50.

1.5. Description Of Test Setup

RE



1.6. Test Equipment List

20dB Bandwidth

Maximum Conducted Output Power

Carrier Frequencies Separation

Number of Hopping Frequencies

Dwell Time

Emissions in non-restricted frequency bands

Item	Equipment	Manufacturer	Model No.	Last Cal.	Cal.Due Date
1	MXG RF Vector Signal Generator	Agilent	N5182A	2025-12-29	2026-12-28
2	Constant Temperature Humidity Chamber	ZHONGJIAN	ZJ-HWHS80B	2026-06-08	2027-06-07
3	Signal Generator	Agilent	E4421B	2025-12-29	2026-12-28
4	DC Power Supply	IVYTECH	IV3605	2026-06-08	2027-06-07
5	RF Control Unit	Tonscend	JS0806-2	2026-06-08	2027-06-07
6	Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	2025-12-29	2026-12-28
7	MXA Spectrum Analysis	KEYSIGHT	N9020A	2025-12-29	2026-12-28
8	RF Test software	Toscend	JS1120-3	/	/

Radiation Spurious Emission (above 1GHz)

Band Edge (Radiated)

Item	Equipment	Manufacturer	Model No.	Last Cal.	Cal.Due Date
1	EMI Test Receiver(RE2/3#)	Rohde & Schwarz	ESR26	2025-12-30	2026-12-29
2	EMI Preamplifier	SKET Electronic	LNPA-0118G-45	2025-12-30	2026-12-29
3	Double Ridged Horn Antenna	SCHWARZBECK	BBHA 9120D	2025-10-27	2028-10-26
4	EMI Test Software EZ-EMC	SHURPLE	N/A	/	/
5	Horn Antenna	A-INFO	LB-180400-KF	2024-01-22	2027-01-21
6	Spectrum Analyzer	Rohde & Schwarz	FSV40-N	2025-12-29	2026-12-28
7	Amplifier	Talent Microwave	TLLA18G40G-53-30	2026-01-05	2027-01-04

Radiation Spurious Emission (below 1GHz)					
Item	Equipment	Manufacturer	Model No.	Last Cal.	Cal.Due Date
1	EMI Test Receiver(RE2/3#)	Rohde & Schwarz	ESR26	2025-12-30	2026-12-29
2	Pre-amplifier	SONOMA	310N	2025-12-30	2026-12-29
3	Bilog Broadband Antenna	Schwarzbeck	VULB9163	2025-10-26	2028-10-25
4	Loop Antenna (9K-30M)	Schwarzbeck	FMZB1519B	2025-09-05	2026-09-04
5	EMI Test Software EZ-EMC	SHURPLE	N/A	/	/

1.7. Measurement Uncertainty

Parameter	Uncertainty
Conducted emissions (AMN 150kHz~30MHz)	2.8dB
Dwell Time	2%
Occupied Bandwidth	552Hz
Conducted Output Power	0.84dB
Conducted Spurious Emission	1.24dB
Radiated spurious emissions (Below 30MHz)	3.14dB
Radiated spurious emissions (30MHz~1GHz)	Horizontal: 4.44dB; Vertical: 4.82dB
Radiated spurious emissions (above 1GHz)	1G-6GHz: 4.64dB; 6G-18GHz: 4.82dB 18G-40GHz: 5.62dB
The measurement uncertainty and decision risk evaluated according to AB/WI-RF-F-032. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

1.8. Additional Instructions

Power level setup in software: ModuleReaderManager

Operation Band:

Mode	Channel(MHz)	Power level	Transmitting type
RFID	902.75	default	data pack TX
RFID	914.75	default	data pack TX
RFID	927.25	default	data pack TX

1.9. Description of Test Facility

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

FCC-Registration No.: 279531

Shenzhen Anbotek Compliance Laboratory Limited, 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. 279531.

Test Location

Shenzhen Anbotek Compliance Laboratory Limited.

Sogood Industrial Zone Laboratory & 1/F. of Building D, Sogood Science and Technology Park, Sanwei Community, Hangcheng Subdistrict, Bao'an District, Shenzhen, Guangdong, China.

1.10. Disclaimer

1. The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.
2. The test report is invalid if there is any evidence and/or falsification.
3. The effect that the results relate only to the items tested.
4. This document may not be altered or revised in any way unless done so by Anbotek and all revisions are duly noted in the revisions section.
5. This report shall not be reproduced except in full without approval of the anbotek.
6. The authenticity of the information provided by the customer is the responsibility of the customer and the laboratory is not responsible for its authenticity.
7. The data in this report will be synchronized with the corresponding national market supervision and management departments and cross-border e-commerce platforms as required by regulatory agencies.
8. Unless otherwise specified, use the binary decision rule of simple acceptance ($w=0$) for conformity determination with reference to ILAC-G8:09/2019.

2. Summary of Test Results

Standard Section	Test Item	Result
15.203/15.247(c)	Antenna Requirement	PASS
15.207	Conducted Emission	N/A
15.205/15.209	Spurious Emission	PASS
15.247(b)(2)	Conducted Peak Output Power	PASS
15.247(a)(1)(i)	20dB Occupied Bandwidth	PASS
15.247(a)(1)	Carrier Frequencies Separation	PASS
15.247(a)(1)(i)	Hopping Channel Number	PASS
15.247(a)(1)(i), 15.247(f)	Dwell Time	PASS
15.247(d)	Band Edge	PASS
Remark: "N/A" is an abbreviation for Not Applicable.		

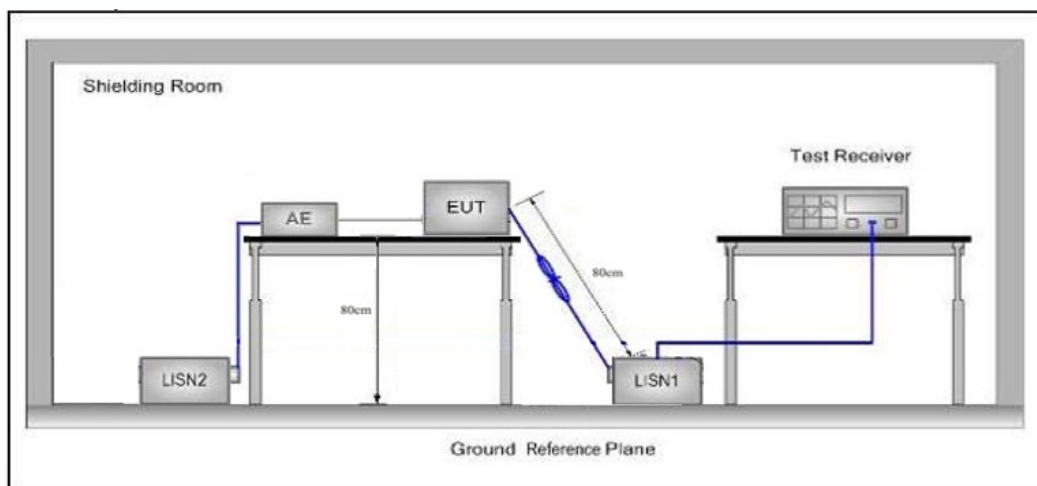
3. Conducted Emission Test

3.1. Test Standard and Limit

Test Standard	FCC Part15 Section 15.207		
Test Limit	Frequency	Maximum RF Line Voltage (dBuV)	
		Quasi-peak Level	Average Level
	150kHz~500kHz	66 ~ 56 *	56 ~ 46 *
	500kHz~5MHz	56	46
	5MHz~30MHz	60	50

Remark: (1) *Decreasing linearly with logarithm of the frequency.
(2) The lower limit shall apply at the transition frequency.

3.2. Test Setup



3.3. Test Procedure

The EUT system is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to FCC ANSI C63.10-2020+Cor.1-2023+C63.10a-2024+Errata to C63.10a-2024 on Conducted Emission Measurement.

The bandwidth of test receiver (ESCI) set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

3.4. Test Data

Not Applicable. The EUT is powered by DC 5V, so there is no need to conduct this test.

4. Radiation Spurious Emission and Band Edge

4.1. Test Standard and Limit

Test Standard	FCC Part15 C Section 15.209 and 15.205				
Test Limit	Frequency (MHz)	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~1000MHz	500	54.0	Quasi-peak	3
	Above 1000MHz	500	54.0	Average	3
		-	74.0	Peak	3

Remark:

(1)The lower limit shall apply at the transition frequency.

(2) 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.

4.2. Test Setup

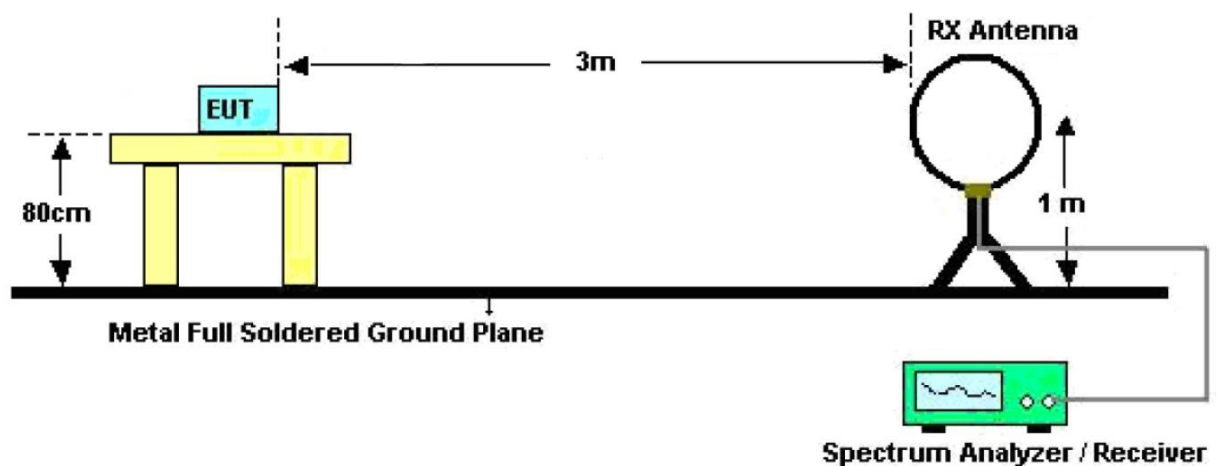


Figure 1. Below 30MHz

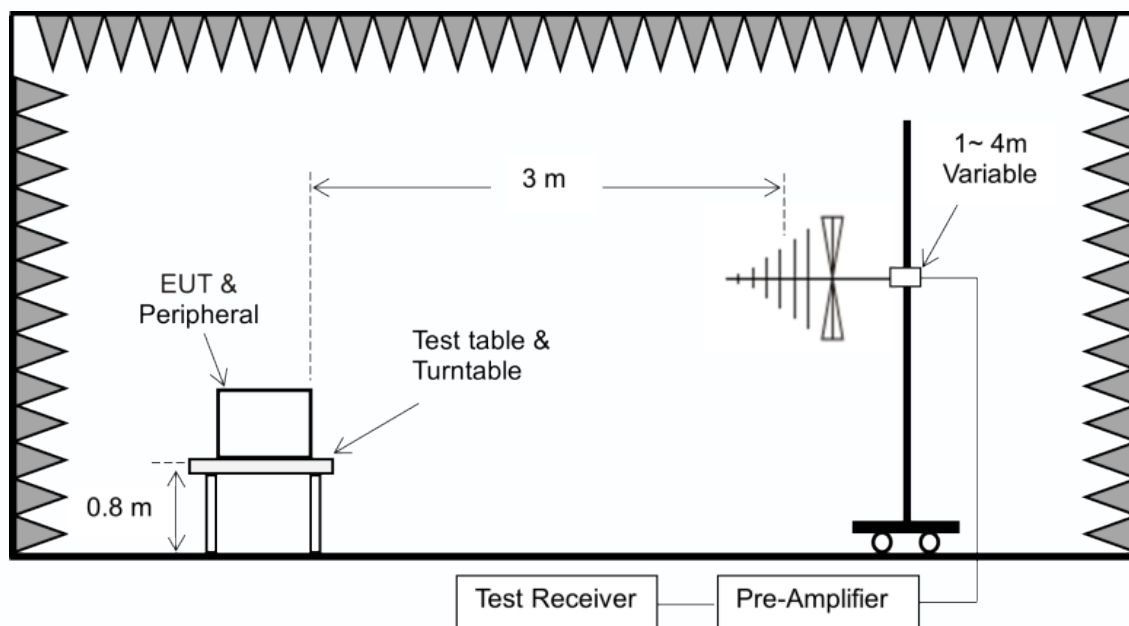


Figure 2. 30MHz to 1GHz

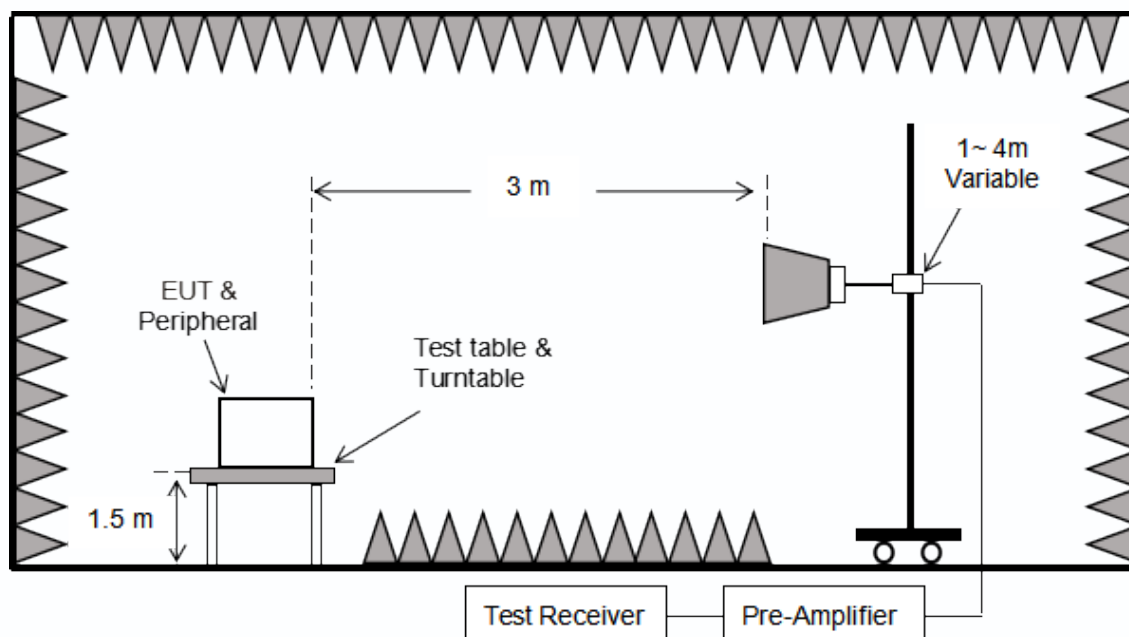


Figure 3. Above 1 GHz

4.3. Test Procedure

For below 1GHz: The EUT is placed on a turntable, which is 0.8m above the ground plane.

For above 1GHz: The EUT is placed on a turntable, which is 1.5m above the ground plane.

The turn table can rotate 360 degrees to determine the position of the maximum emission level. The

EUT is set 3 meters away from the receiving antenna which is mounted on a antenna tower. The antenna can be moved up and down from 1 to 4 meters to find out the maximum emission level.

Rotated the EUT through three orthogonal axes to determine the maximum emissions, both horizontal and vertical polarization of the antenna are set on test. The EUT is tested in 9*6*6 Chamber. The

device is evaluated in xyz orientation.

For the radiated emission test above 1GHz:

Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.

For 9kHz to 150kHz, Set the spectrum analyzer as:

RBW = 200Hz, VBW =1kHz, Detector= Quasi-Peak, Trace mode= Max hold, Sweep- auto couple.

For 150kHz to 30MHz, Set the spectrum analyzer as:

RBW = 9KHz, VBW =30kHz, Detector= Quasi-Peak, Trace mode= Max hold, Sweep- auto couple.

For 30MHz to 1000MHz, Set the spectrum analyzer as:

RBW = 100kHz, VBW =300kHz,Detector= Quasi-Peak, Trace mode= Max hold, Sweep- auto couple.

For above 1GHz,Set the spectrum analyzer as:

RBW =1MHz, VBW =1MHz, Detector= Peak, Trace mode= Max hold, Sweep- auto couple.

RBW =1MHz, VBW =10Hz, Detector= Average, Trace mode= Max hold, Sweep- auto couple.

4.4. Test Data

PASS

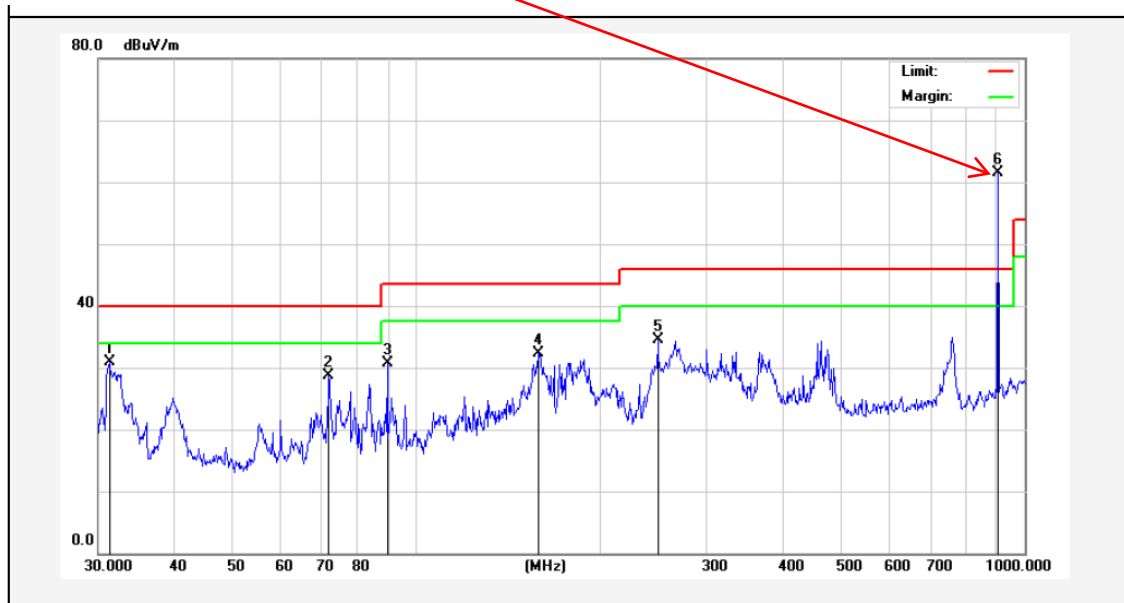
During the test, Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the X-axis is the worst case.

The test results of 9kHz-30MHz was attenuated more than 20dB below the permissible limits, so the results don't record in the report.

During the test, pre-scan all modes, only the worst case is recorded in the report.

Test Results (30~1000MHz)

Test Mode: Low Channel_902.75MHz
Power Source: DC 5V via Debug board
Polarization: Horizontal
Temp.(°C)/Hum.(%RH): 19.6°C/62%RH
Fundamental



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Remark
1	31.2893	50.53	-19.66	30.87	40.00	-9.13	QP	
2	71.8320	51.11	-22.35	28.76	40.00	-11.24	QP	
3	89.5899	50.46	-19.76	30.70	43.50	-12.80	QP	
4	158.6677	54.59	-22.35	32.24	43.50	-11.26	QP	
5	249.4250	52.98	-18.39	34.59	46.00	-11.41	QP	
6	902.7500	68.16	-6.66	61.50	/	/	peak	

Remark: Result=Reading+Factor Over Limit=Result-Limit

Test Results (30~1000MHz)

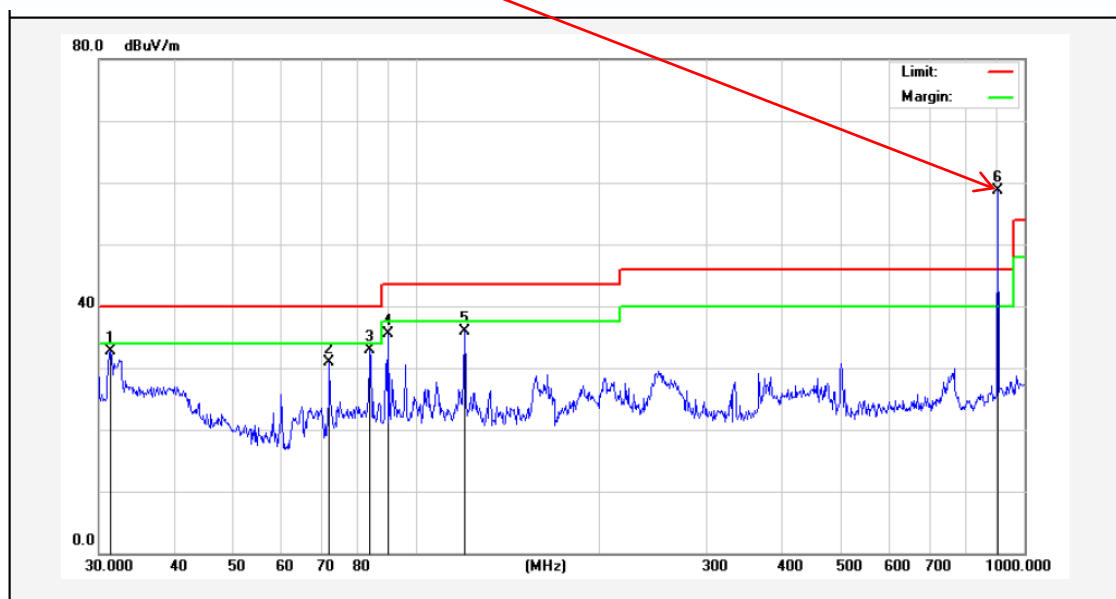
Test Mode: Low Channel_902.75MHz

Power Source: DC 5V via Debug board

Polarization: Vertical

Temp.(°C)/Hum.(%RH): 19.6°C/62%RH

Fundamental



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Remark
1	31.2893	52.35	-19.66	32.69	40.00	-7.31	QP	
2	71.8320	53.35	-22.35	31.00	40.00	-9.00	QP	
3	83.8156	54.97	-22.00	32.97	40.00	-7.03	QP	
4	89.9047	55.16	-19.62	35.54	43.50	-7.96	QP	
5	119.8556	56.79	-20.88	35.91	43.50	-7.59	QP	
6	902.7500	65.32	-6.66	58.66	/	/	peak	

Remark: Result=Reading+Factor

Over Limit=Result-Limit

Test Results (1GHz-25GHz)

Test channel: Lowest						
Peak value:						
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	polarization
1805.50	31.98	17.31	49.29	74.00	-24.71	Vertical
2708.25	32.99	20.70	53.69	74.00	-20.31	Vertical
3611.00	34.90	22.46	57.36	74.00	-16.64	Vertical
4513.75	*			74.00		Vertical
5416.50	*			74.00		Vertical
1805.50	32.28	17.31	49.59	74.00	-24.41	Horizontal
2708.25	32.80	20.70	53.50	74.00	-20.50	Horizontal
3611.00	30.82	22.46	53.28	74.00	-20.72	Horizontal
4513.75	*			74.00		Horizontal
5416.50	*			74.00		Horizontal
Average value:						
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	polarization
1805.50	21.36	17.31	38.67	54.00	-15.33	Vertical
2708.25	22.02	20.70	42.72	54.00	-11.28	Vertical
3611.00	23.92	22.46	46.38	54.00	-7.62	Vertical
4513.75	*			54.00		Vertical
5416.50	*			54.00		Vertical
1805.50	20.63	17.31	37.94	54.00	-16.06	Horizontal
2708.25	21.86	20.70	42.56	54.00	-11.44	Horizontal
3611.00	20.13	22.46	42.59	54.00	-11.41	Horizontal
4513.75	*			54.00		Horizontal
5416.50	*			54.00		Horizontal

Test Results (1GHz-25GHz)

Test channel: Middle						
Peak value:						
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	polarization
1829.50	32.00	17.42	49.42	74.00	-24.58	Vertical
2744.25	32.84	20.76	53.60	74.00	-20.40	Vertical
3659.00	33.91	22.47	56.38	74.00	-17.62	Vertical
4573.75	*			74.00		Vertical
5488.50	*			74.00		Vertical
1829.50	31.98	17.42	49.40	74.00	-24.60	Horizontal
2744.25	32.79	20.76	53.55	74.00	-20.45	Horizontal
3659.00	30.52	22.47	52.99	74.00	-21.01	Horizontal
4573.75	*			74.00		Horizontal
5488.50	*			74.00		Horizontal
Average value:						
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	polarization
1829.50	21.09	17.42	38.51	54.00	-15.49	polarization
2744.25	22.12	20.76	42.88	54.00	-11.12	Vertical
3659.00	23.78	22.47	46.25	54.00	-7.75	Vertical
4573.75	*			54.00		Vertical
5488.50	*			54.00		Vertical
1829.50	20.54	17.42	37.96	54.00	-16.04	Vertical
2744.25	21.42	20.76	42.18	54.00	-11.82	Horizontal
3659.00	20.64	22.47	43.11	54.00	-10.89	Horizontal
4573.75	*			54.00		Horizontal
5488.50	*			54.00		Horizontal

Test Results (1GHz-25GHz)

Test channel: Highest						
Peak value:						
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	polarization
1855.50	32.27	17.53	49.80	74.00	-24.20	Vertical
2783.25	32.85	20.85	53.70	74.00	-20.30	Vertical
3711.00	34.46	22.49	56.95	74.00	-17.05	Vertical
4638.75	*			74.00		Vertical
5566.50	*			74.00		Vertical
1855.50	32.05	17.53	49.58	74.00	-24.42	Horizontal
2783.25	32.82	20.85	53.67	74.00	-20.33	Horizontal
3711.00	31.20	22.49	53.69	74.00	-20.31	Horizontal
4638.75	*			74.00		Horizontal
5566.50	*			74.00		Horizontal
Average value:						
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	polarization
1855.50	22.21	17.53	39.74	54.00	-14.26	Vertical
2783.25	23.13	20.85	43.98	54.00	-10.02	Vertical
3711.00	24.33	22.49	46.82	54.00	-7.18	Vertical
4638.75	*			54.00		Vertical
5566.50	*			54.00		Vertical
1855.50	21.98	17.53	39.51	54.00	-14.49	Horizontal
2783.25	22.79	20.85	43.64	54.00	-10.36	Horizontal
3711.00	20.54	22.49	43.03	54.00	-10.97	Horizontal
4638.75	*			54.00		Horizontal
5566.50	*			54.00		Horizontal

Remark:

1.Result =Reading + Factor

2. Test frequency are from 1GHz to 25GHz, "*"means the test results were attenuated more than 20dB below the permissible limits, so the results don't record in the report.

Radiated Band Edge:

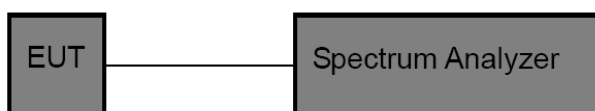
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Det. Mode	polarization
902.0000	48.94	-6.67	42.27	46.00	-3.73	QP	Horizontal
928.0000	47.94	-6.32	41.62	46.00	-4.38	QP	Horizontal
902.0000	46.37	-6.67	39.70	46.00	-6.30	QP	Vertical
928.0000	46.74	-6.32	40.42	46.00	-5.58	QP	Vertical

5. Maximum Peak Output Power Test

5.1. Test Standard and Limit

Test Standard	FCC Part15 C Section 15.247 (b)(2)
Test Limit	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.

5.2. Test Setup



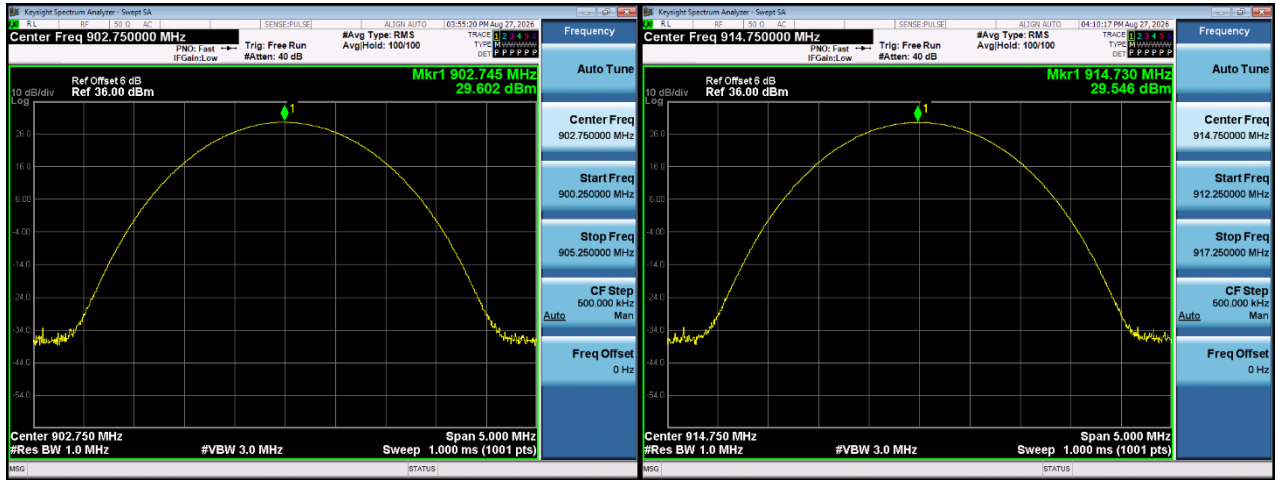
5.3. Test Procedure

1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above,
2. Spectrum Setting:
 - RBW > the 20 dB bandwidth of the emission being measured
 - Span = approximately 5 times the 20 dB bandwidth, centered on a hopping channel
 - VBW ≥ RBW
 - Sweep = auto
 - Detector function = peak
 - Trace = max hold

5.4. Test Data

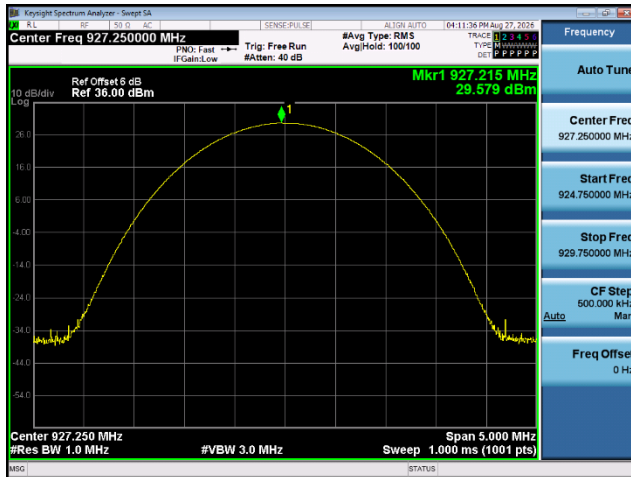
Temperature:	24.8 °C	Humidity:	60 %	Atmospheric Pressure:	101 kPa
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Test Channel	Peak Power output (dBm)	Limit (dBm)	Results
Low	29.602	30.00	PASS
Middle	29.546	30.00	PASS
High	29.579	30.00	PASS



Low Channel

Mid Channel



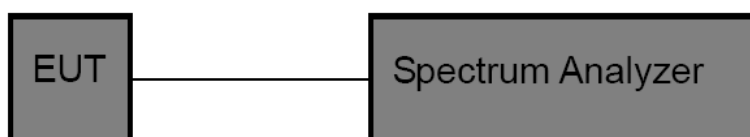
High Channel

6. 20dB Occupy Bandwidth Test

6.1. Test Standard

Test Standard	FCC Part15 C Section 15.247 (a)(1)(i)
Limit	Less than 250KHz

6.2. Test Setup



6.3. Test Procedure

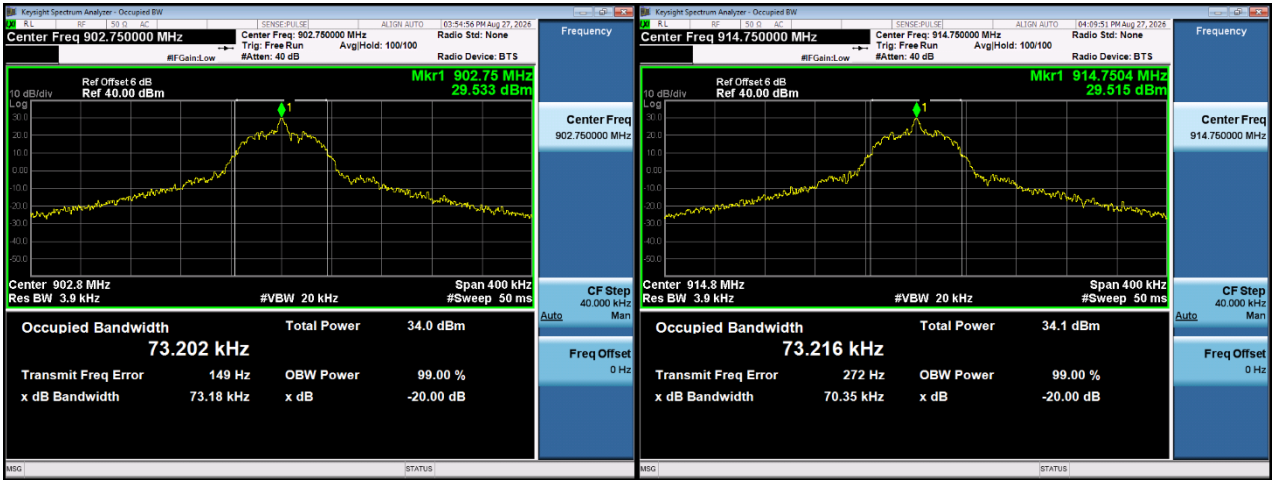
Using the following spectrum analyzer settings:

1. Span= approximately 2 to 5 times the OBW.
2. Set the RBW =1%~5% of the OBW.
3. Set the VBW $\geq$ RBW.
4. Sweep time = auto couple.
5. Detector function = peak.
6. Trace mode = max hold.
7. Allow trace to fully stabilize.

6.4. Test Data

Temperature:	24.8 °C	Humidity:	60 %	Atmospheric Pressure:	101 kPa
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Test Channel	Bandwidth (kHz)	Limit (kHz)	Results
Low	73.18	≤ 250	PASS
Middle	70.35	≤ 250	PASS
High	73.17	≤ 250	PASS



Low Channel

Mid Channel



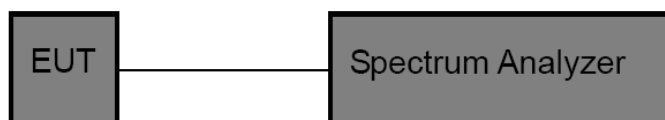
High Channel

7. Carrier Frequency Separation Test

7.1. Test Standard and Limit

Test Standard	FCC Part15 C Section 15.247 (a)(1)
Test Limit	> 25 kHz or the 20 dB bandwidth whichever is greater.

7.2. Test Setup



7.3. Test Procedure

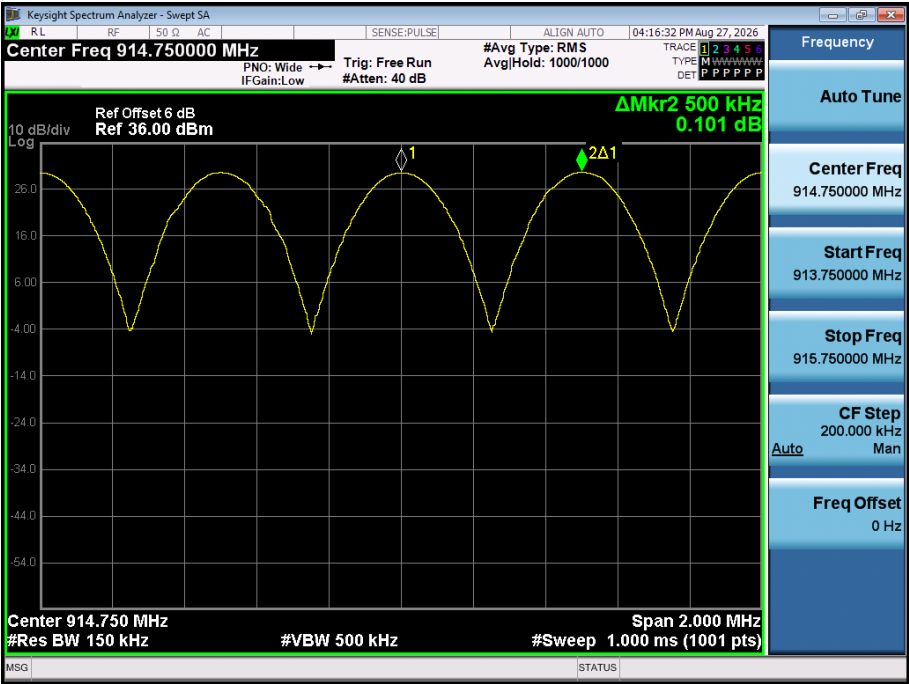
The EUT must have its hopping function enabled. Using the following spectrum analyzer settings:

1. Span= Wide enough to capture the peaks of two adjacent channels
2. Set the RBW =approximately 30% of the channel spacing.
3. Set the VBW $\geq$ RBW.
4. Sweep time = auto couple.
5. Detector function = peak.
6. Trace mode = max hold.
7. Allow trace to fully stabilize.

7.4. 7.4. Test Data

Temperature:	24.8 °C	Humidity:	60 %	Atmospheric Pressure:	101 kPa
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Mode	Frequency (MHz)	Separation Read Value (kHz)	Limit (kHz)	Result
Hopping	914.75	500.0	>73.18	PASS



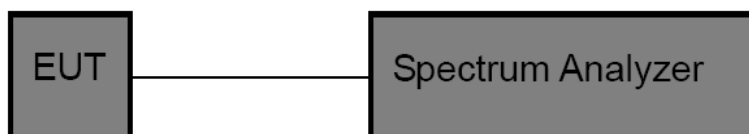
Hopping

8. Number of Hopping Channel Test

8.1. Test Standard and Limit

Test Standard	FCC Part15 C Section 15.247(a)(1)(i)
Test Limit	≥ 50 channels for 20 dB bandwidth less than 250KHz ≥ 25 channels for 20 dB bandwidth greater than 250KHz

8.2. Test Setup



8.3. Test Procedure

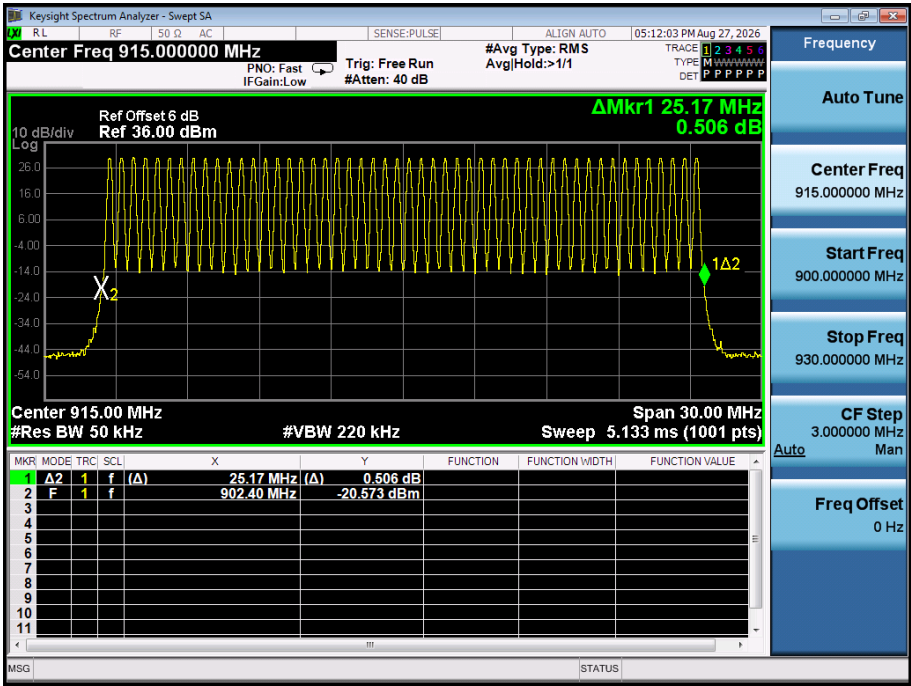
The EUT must have its hopping function enabled. Using the following spectrum analyzer setting:

1. Span= the frequency band of operation
2. Set the RBW = less than 30% of the channel spacing or the 20 dB bandwidth, whichever is smaller.
3. Set the VBW $\geq$ RBW.
4. Sweep time = auto couple.
5. Detector function = peak.
6. Trace mode = max hold.
7. Allow trace to fully stabilize.

8.4. Test Data

Temperature:	24.8 °C	Humidity:	60 %	Atmospheric Pressure:	101 kPa
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Hopping Channel Frequency Range	Quantity of Hopping Channel	Quantity of Hopping Channel
902-928MHz	50	≥ 50



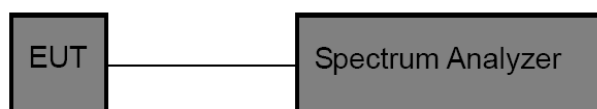
Hopping

9. Dwell Time Test

9.1. Test Standard and Limit

Test Standard	FCC Part15 C Section 15.247(a)(1)(i), 15.247(f)
Test Limit	15.247(a)(1)(i): 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. 15.247(f): For the purposes of this section, hybrid systems are those that employ a combination of both frequency hopping and digital modulation techniques. The frequency hopping operation of the hybrid system, with the direct sequence or digital modulation operation turned-off, shall have an average time of occupancy on any frequency not to exceed 0.4 seconds within a time period in seconds equal to the number of hopping frequencies employed multiplied by 0.4

9.2. Test Setup



9.3. Test Procedure

The EUT must have its hopping function enabled. Use the following spectrum analyzer settings:

1. Span= zero span, centered on a hopping channel
2. Set the RBW = 100KHz.
3. Set the VBW = 300KHz.
4. Sweep time = as necessary to capture the entire dwell time per hopping channel.
5. Detector function = peak.
6. Trace mode = clear write.

9.4. Test Data

Temperature:	24.8 °C	Humidity:	60 %	Atmospheric Pressure:	101 kPa
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Requirement	Ton1 Pulse width (ms)	Ton1 Hops [Num]	Ton2 Pulse width (ms)	Ton2 Hops [Num]	Observe Period(s)	Dwell time (ms)	Limit (s)	Result
15.247(a)(1)(i)	6.523	1	80.52	2	20.00	167.563	0.40	PASS

Ton1 (ms)

Ton2 (ms)

Hopping

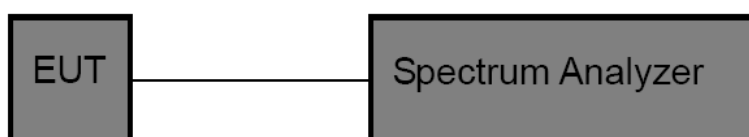
Remark:
Dwell time(ms)=Ton1+Ton2*2

10. 100kHz Bandwidth of Frequency Band Edge Requirement

10.1. Test Standard and Limit

Test Standard	FCC Part15 C Section 15.247 (d)
Test Limit	in any 100 kHz bandwidth outside the frequency bands in which the spread spectrum 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, In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in 15.209(a).

10.2. Test Setup



10.3. Test Procedure

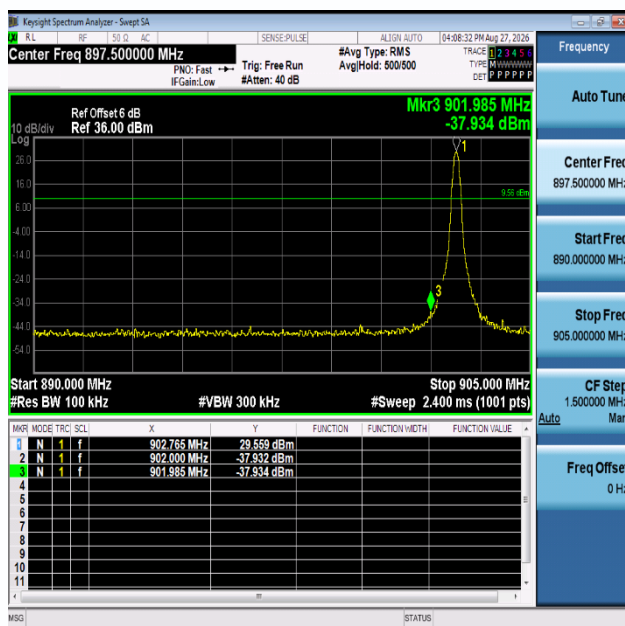
The EUT must have its hopping/Non-hopping function enabled. Using the following spectrum analyzer setting:

1. Set the RBW = 100kHz.
2. Set the VBW = 300kHz.
3. Sweep time = auto couple.
4. Detector function = peak.
5. Trace mode = max hold.
6. Allow trace to fully stabilize.

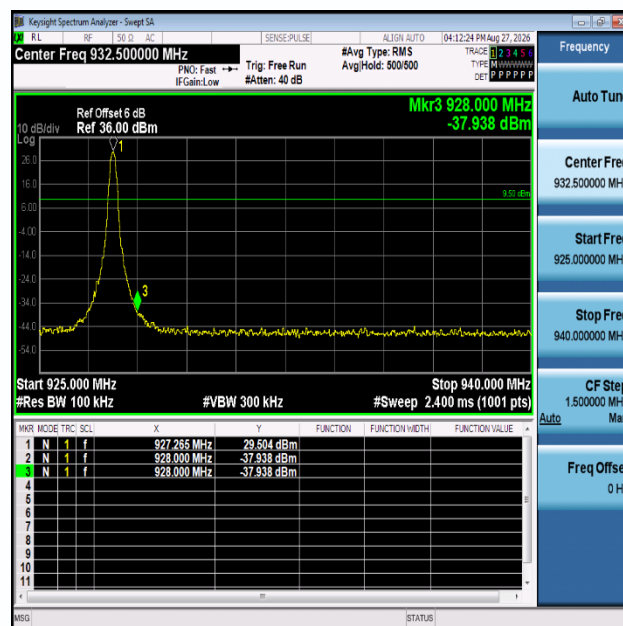
10.4. Test Data

Temperature:	24.8 °C	Humidity:	60 %	Atmospheric Pressure:	101 kPa
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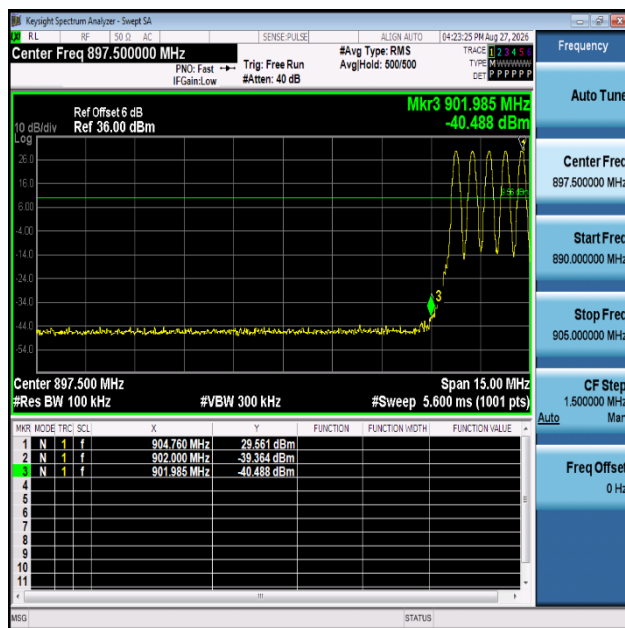
Band edge measurements



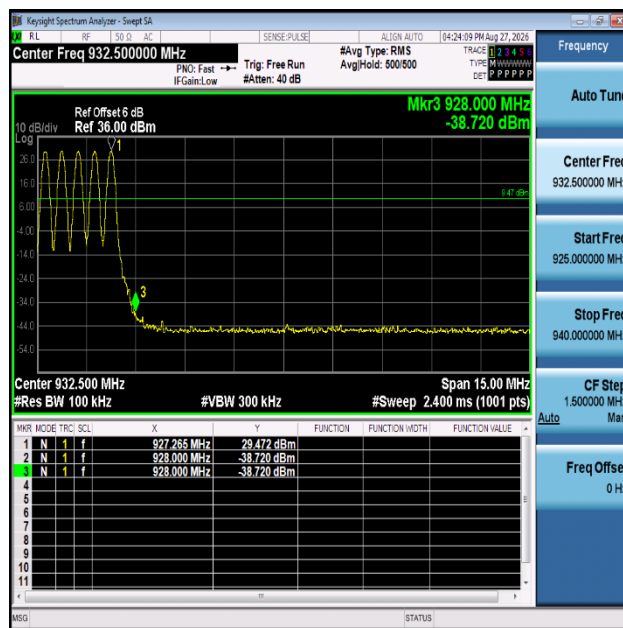
For Low channel Non-Hopping Mode



For High channel Non-Hopping Mode

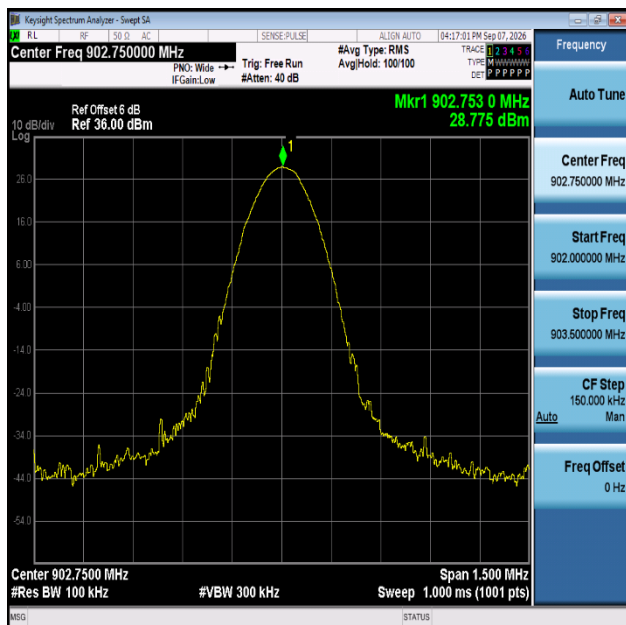


For Low channel Hopping Mode

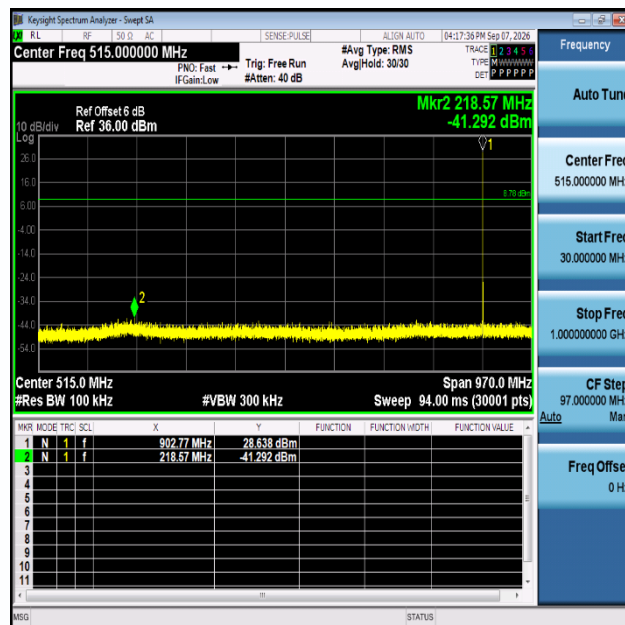


For High channel Hopping Mode

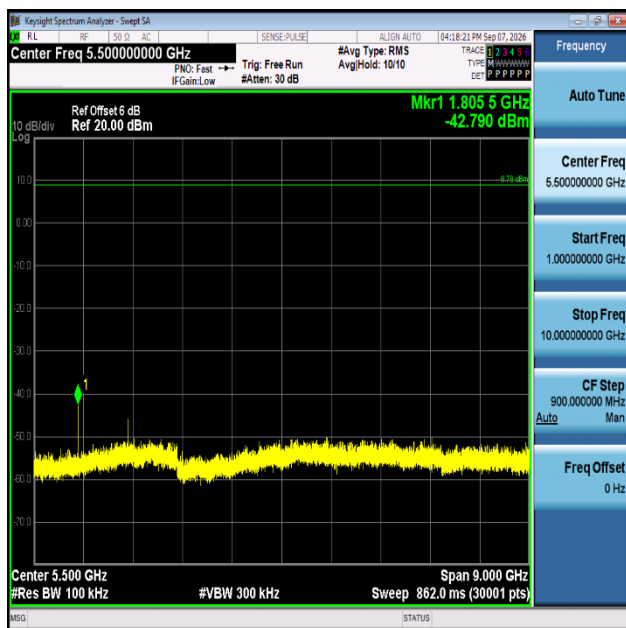
Conducted Emission Method



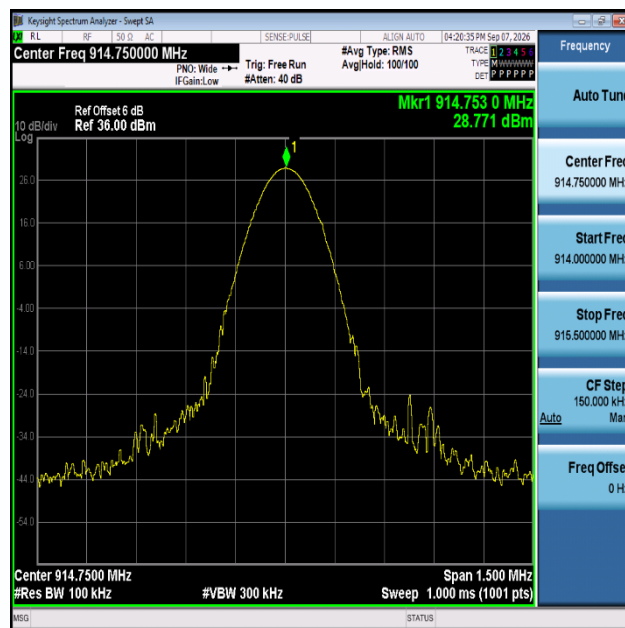
900M-Ant1-902.750~Reference-PASS



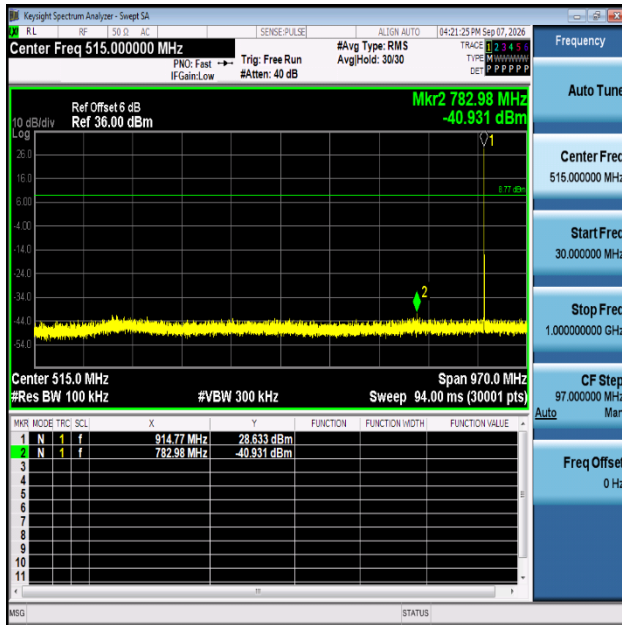
900M-Ant1-902.75-30~1000-PASS



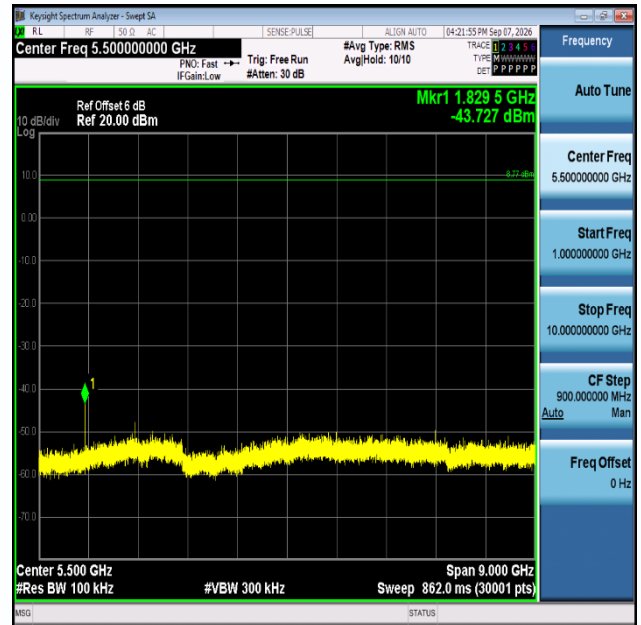
900M-Ant1-902.75-1000~26500-PASS



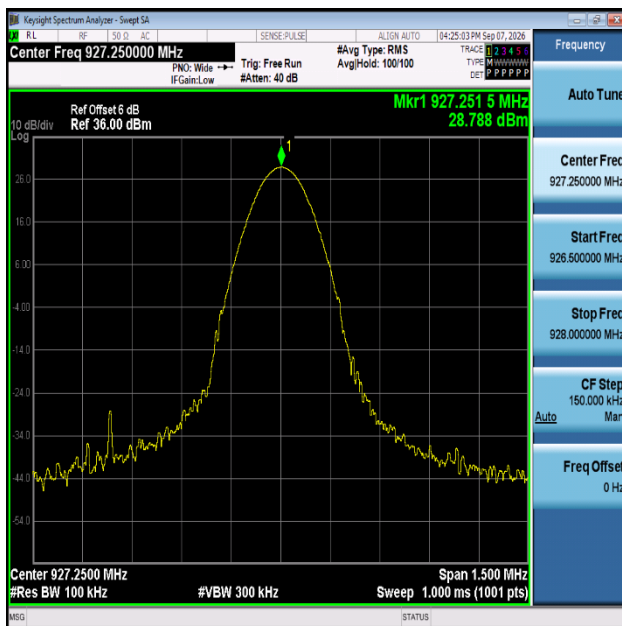
900M-Ant1-914.750~Reference-PASS



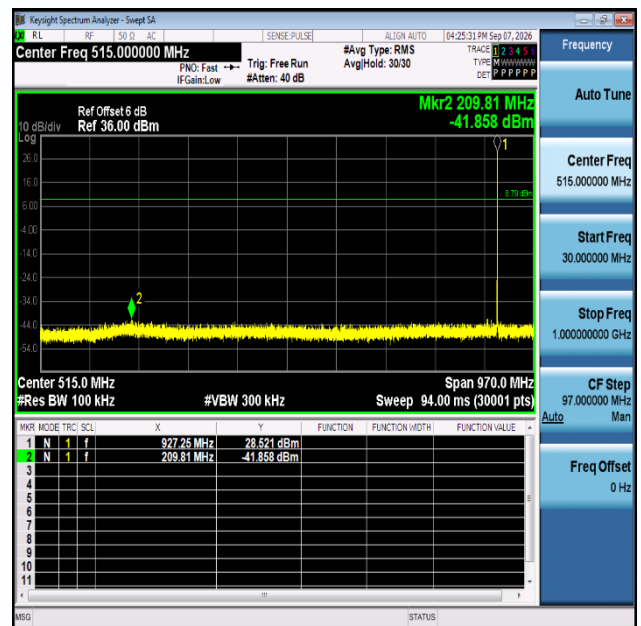
900M-Ant1-914.75-30~1000-PASS



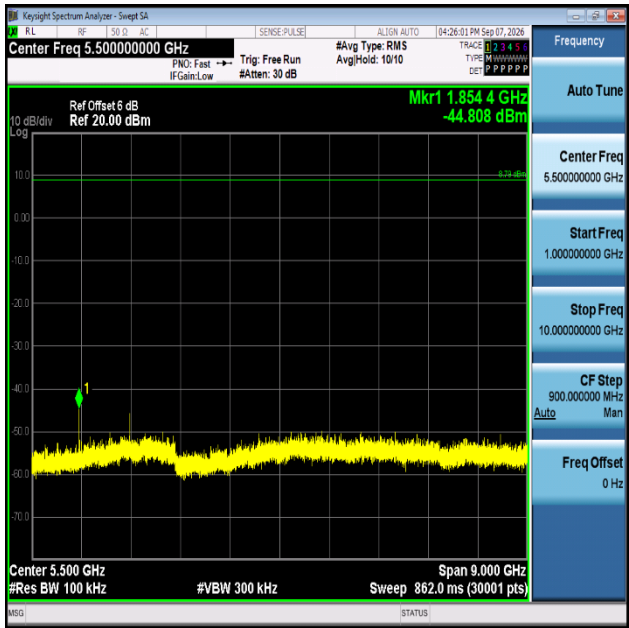
900M-Ant1-914.75-1000~26500-PASS



900M-Ant1-927.25-0~Reference-PASS



900M-Ant1-927.25-30~1000-PASS



900M-Ant1-927.25-1000~26500-PASS

11. Antenna Requirement

11.1. Test Standard and Requirement

Test Standard	FCC Part15 Section 15.203 /247(c)
Requirement	1) 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. 2) 15.247(c) (1)(i) requirement: Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

11.2. Antenna Connected Construction

The antenna is External Antenna, and the best case gain of the antenna is 6.26dBi. It complies with the standard requirement.

APPENDIX I -- TEST SETUP PHOTOGRAPH

Please refer to separated files Appendix I -- Test Setup Photograph_RF

APPENDIX II -- EXTERNAL PHOTOGRAPH

Please refer to separated files Appendix II -- External Photograph

APPENDIX III -- INTERNAL PHOTOGRAPH

Please refer to separated files Appendix III -- Internal Photograph

----- End of Report -----

