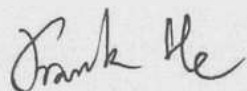
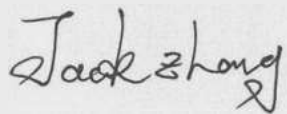




Test report No:
2090075R-RF-US-P06V03

FCC TEST REPORT & ISED TEST REPORT

Product Name	Barcode Scanner
Trademark	Honeywell
Model and /or type reference	8690i
FCC ID	HD5-8690A
IC	1693B-8690A
Applicant's name / address	HONEYWELL INTERNATIONAL INC Honeywell Safety and Productivity Solutions 9680 OLD BAILES RD FORT MILL SC 29707-7539,USA
Test method requested, standard	FCC CFR Title 47 Part 15 Subpart C Section 15.247 ANSI C63.10: 2013 KD558074 D01 15.247 Meas Guidance v05r02 RSS-Gen Issue 5 / RSS-247 Issue 2
Verdict Summary	IN COMPLIANCE
Documented by (name / position & signature)	Kitty Li/Project Assistant 
Reviewed by (name / position & signature)	Frank He/ Technical Supervisor 
Approved by (name / position & signature)	Jack Zhang/ Supervisor 
Date of issue	2020-10-13
Report template No	Template_FCC 15.247-RF-V1.0

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COMPETENCES AND GUARANTEES

DEKRA is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

DEKRA guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated in the report and it is based on the knowledge and technical facilities available at DEKRA at the time of performance of the test.

DEKRA is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

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GENERAL CONDITIONS

Test Location	No. 99, Hongye Road, Suzhou Industrial Park Suzhou, 215006, P.R. China
Date(receive sample)	Sept. 02, 2020
Date (start test)	Sept. 09, 2020
Date (finish test)	Sept. 28, 2020

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or Competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA.

ENVIRONMENTAL CONDITIONS

The climatic conditions during the tests are within the limits specified by the manufacturer for the operation of the EUT and the test equipment. The climatic conditions during the tests were within the following limits:

Ambient temperature	15 °C – 35 °C
Relative Humidity air	30% - 60%

If explicitly required in the basic standard or applied product / product family standard the climatic values are recorded and documented separately in this test report.

POSSIBLE TEST CASE VERDICTS

Test case does not apply to test object	N/A
Test object does meet requirement	P (Pass) / PASS
Test object does not meet requirement	F (Fail) / FAIL
Not measured	N/M

ABBREVIATIONS

For the purposes of the present document, the following abbreviations apply:

EUT	: Equipment Under Test
QP	: Quasi-Peak
CAV	: CISPR Average
AV	: Average
CDN	: Coupling Decoupling Network
SAC	: Semi-Anechoic Chamber
OATS	: Open Area Test Site
BW	: Bandwidth
AM	: Amplitude Modulation
PM	: Pulse Modulation
HCP	: Horizontal Coupling Plane
VCP	: Vertical Coupling Plane
U_N	: Nominal voltage
T_x	: Transmitter
R_x	: Receiver
N/A	: Not Applicable
N/M	: Not Measured

DOCUMENT HISTORY

Report No.	Version	Description	Issued Date
2090075R-RF-US-P06V03	V1.0	Initial issue of report.	2020-10-13

REMARKS AND COMMENTS

1. The equipment under test (EUT) does meet the essential requirements of the stated standard(s)/test(s).
2. These test results on a sample of the device are for the purpose of demonstrating Compliance with Part 15 Subpart C Paragraph 15.247, RSS-Gen Issue 5, RSS-247 Issue 2.
3. The measurement result is considered in conformance with the requirement if it is within the prescribed limit, It is not necessary to account the uncertainty associated with the measurement result.
4. The test results presented in this report relate only to the object tested.
5. The test report shall not be reproduced without the written approval of DEKRA Testing and Certification (Suzhou) Co., Ltd.
6. This report will not be used for social proof function in China market.
7. DEKRA declines any responsibility with the following test data provided by customer that may affect the validity of result:
 - Chapter 1.1 General Description of the Item(s);
 - Chapter 1.2 Antenna Informaion;
 - Chapter 1.3 Channel List.

USED EQUIPMENT

AC Power Line Conducted Emission / TR1

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
EMI Test Receiver	R&S	ESCI	100906	2020.04.20	2021.04.19
Two-Line V-Network	R&S	ENV216	101190	2019.12.28	2020.12.27
Two-Line V-Network	R&S	ENV216	101044	2019.12.28	2020.12.27
Current Probe	R&S	EZ-17	100678	2020.03.12	2021.04.11
50ohm Termination	SHX	TF2	07081402	2020.09.23	2021.09.22
50ohm Termination	SHX	TF2	07081403	2020.09.23	2021.09.22
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	N/A	N/A
Temperature/Humidity Meter	RTS	RTS-8S	TR1-TH	2020.08.13	2021.08.12
Coaxial Cable	Suhner	RG 223	TR1-C1	2020.08.13	2021.08.12
Coaxial Cable	Suhner	RG 223	TR1-C2	2020.08.13	2021.08.12
Dekra test software	Dekra	-	-	-	-

Emissions in non-restricted frequency bands/ Occupied Bandwidth/ Fundamental emission output power Power Spectral Density / TR8

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2020.08.15	2021.08.14
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2020.04.17	2021.04.16
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2020.08.15	2021.08.14
Temperature/Humidity Meter	RTS	RTS-8S	RF08	2020.08.13	2021.08.12
Dekra test software	Dekra	-	-	-	-

Radiated Emission(30MHz-1GHz) / AC3

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
EMI Test Receiver	R&S	ESCI	100573	2020.03.03	2021.03.02
Bilog Antenna	Teseq GmbH	CBL6112D	27611	2020.08.19	2021.08.18
Temperature/Humidity Meter	RTS	RTS-8S	AC2-TH	2020.08.13	2021.08.12
Coaxial Cable	Huber+Suhner	RG 214	AC2-C	2020.04.05	2021.04.04
Dekra test software	Dekra	-	-	-	-

Radiated Emission / AC5(1GHz-40GHz)(Chamber details)

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2020.05.08	2021.05.07
Preamplifier	Miteq	NSP1800-25	1364185	2020.05.06	2021.05.05
Preamplifier	QuieTek	AP-040G	CHM-0906001	2020.05.06	2021.05.05
DRG Horn	ETS-Lindgren	3117	00123988	2020.01.22	2021.01.21
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2020.08.13	2021.08.12
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2020.04.05	2021.04.04
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2020.04.05	2021.04.04
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	AC5-C3	2020.04.05	2021.04.04
Dekra test software	Dekra	-	-	-	-

UNCERTAINTY

Uncertainties have been calculated according to the DEKRA internal document. The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95% .

Test item	Uncertainty
AC Power Line Conducted Emission	9kHz~150kHz: 2.80dB 150kHz~30MHz: 2.40dB
Peak Power Output	± 1.27 dB
Radiated Emission(30MHz~1GHz)	Horizontal: 30MHz~200MHz: 3.50 dB 300MHz~1GHz: 3.60 dB Vertical: 30MHz~200MHz: 3.60 dB 300MHz~1GHz: 3.50 dB
Radiated Emission(1GHz~26.5GHz)	Horizontal: 1GHz~18GHz: 5.00 dB Vertical: 1GHz~18GHz: 4.80 dB
RF antenna conducted test	± 1.27 dB
Radiated Emission Band Edge	± 3.9 dB
DTS Bandwidth	± 150 Hz
Occupied Bandwidth	± 1 kHz
Power Density	± 1.27 dB

1 GENERAL INFORMATION

1.1 General Description of the Item(s)

Product Name	Barcode Scanner
Model No.	8690i
Trademark	Honeywell
FCC ID	HD5-8690A
IC	1693B-8690A
Manufacturer	1.HONEYWELL INTERNATIONAL INC Honeywell Safety and Productivity Solutions 2.Metro(Suzhou)Technologies Co.,Ltd
Manufacturer address	1. 9680 OLD BAILES RD FORT MILL SC 29707-7539,USA 2. No.221 Xinghai street China-Singapore Suzhou Industrial Park

Wireless specification.....	BLE				
Operating frequency range(s)	2400~2483.5MHz				
Type of Modulation.....	GFSK				
PHYS	☒	LE 1M	☐	LE 2M	☐ LE Coded S=2/8
Data Rate	☒	1Mbit/s	☐	2Mbit/s	☐ 500/125 Kbit/s
Number of channel.....	40				

Rated power supply	Voltage and Frequency	
	☐	AC: 220 – 240 V, 50/60 Hz
	☐	AC: 100 – 240 V, 50/60 Hz
	☐	DC: 5 V
	☒	Battery: 3.7 V
Mounting position	☐	Table top equipment
	☐	Wall/Ceiling mounted equipment
	☐	Floor standing equipment
	☒	Hand-held equipment
	☒	Other: Wearable equipment

1.2 Antenna Information

Antenna model / type number	N/A		
Antenna serial number	N/A		
Antenna Delivery	☒	1TX + 1RX	
	☐	2TX + 2RX	
	☐	Others:.....	
Antenna technology	☒	SISO	
	☐	MIMO	☐ CDD
	☐		Beam-forming
Antenna Type	☐	External	☐ Dipole
	☐		Sectorized
	☒	Internal	☐ Ceramic Chip
			☐ PIFA
			☒ PCB
			☐ Others:.....
Antenna Gain	0.8 dBi		

1.3 Channel List

Bluetooth Working Frequency of Each Channel: (For v5.0)							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
00	2402 MHz	01	2404 MHz	02	2406 MHz	03	2408 MHz
04	2410 MHz	05	2412 MHz	06	2414 MHz	07	2416 MHz
08	2418 MHz	09	2420 MHz	10	2422 MHz	11	2424 MHz
12	2426 MHz	13	2428 MHz	14	2430 MHz	15	2432 MHz
16	2434 MHz	17	2436 MHz	18	2438 MHz	19	2440 MHz
20	2442 MHz	21	2444 MHz	22	2446 MHz	23	2448 MHz
24	2450 MHz	25	2452 MHz	26	2454 MHz	27	2456 MHz
28	2458 MHz	29	2460 MHz	30	2462 MHz	31	2464 MHz
32	2466 MHz	33	2468 MHz	34	2470 MHz	35	2472 MHz
36	2474 MHz	37	2476 MHz	38	2478 MHz	39	2480 MHz

Note: The General Description of the Item , antenna information and Channel List for the EUT in clause 1 are provided and confirmed by the client.

2 DESCRIPTION OF TEST SETUP

2.1 Operating mode(s) used for tests

During the tests the following operating mode(s) has(have) been used.

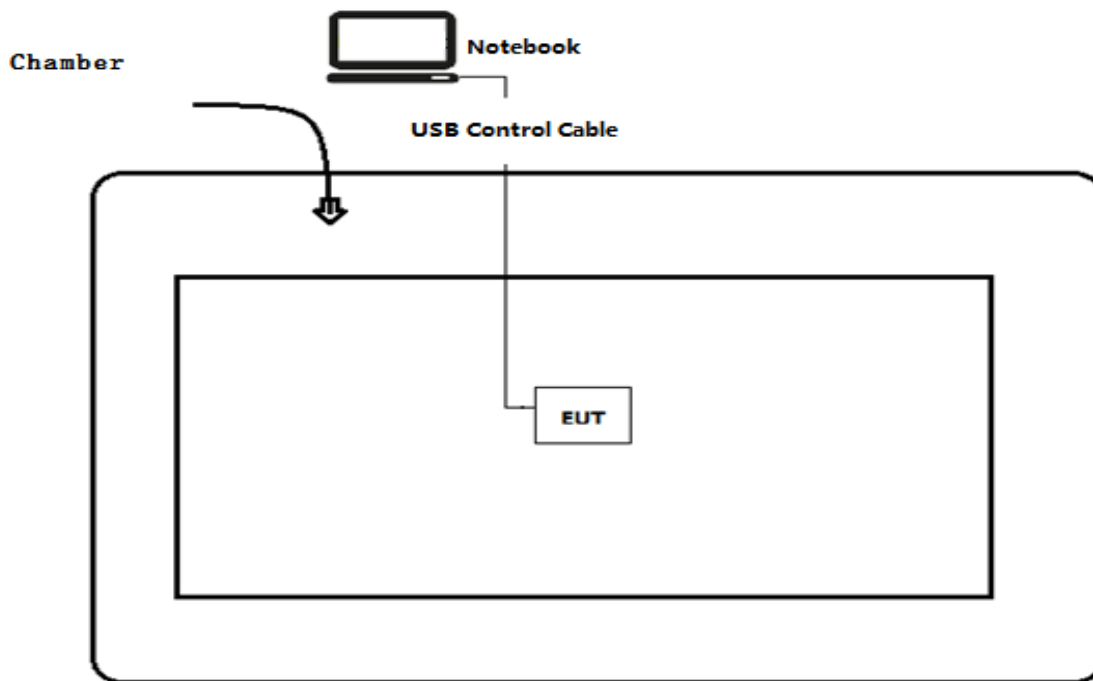
Test Mode For Bluetooth	Mode 1: Transmit by LE_1Mbps(GFSK_LE)
	Mode 2: Simultaneous transmission.

2.2 Auxiliary equipment / Test software for the EUT

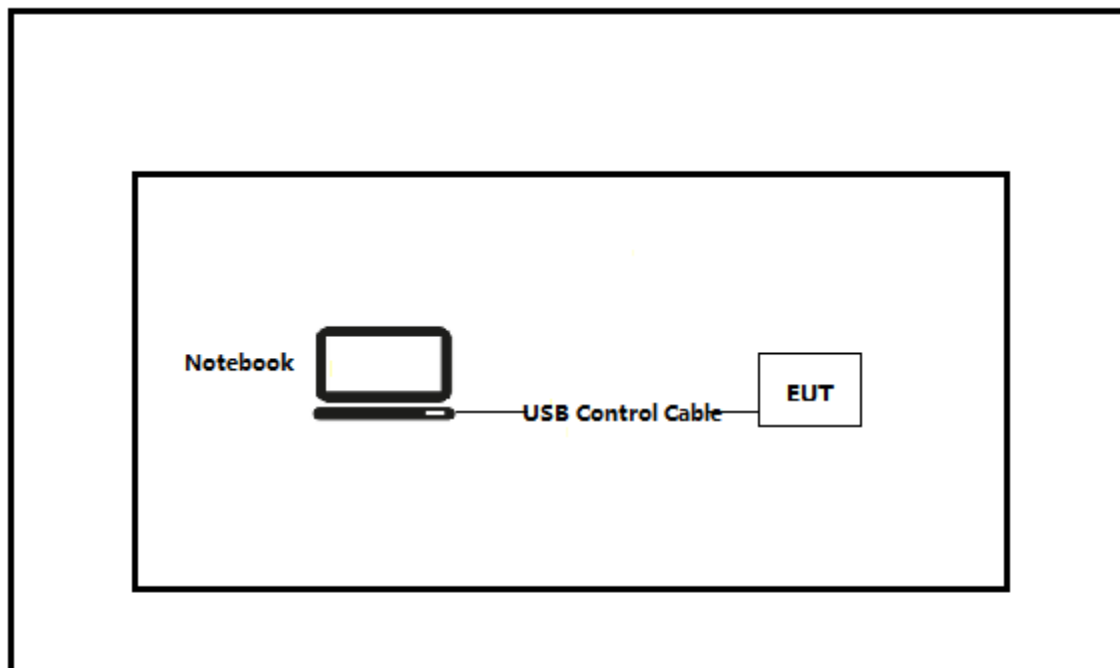
Auxiliary equipment	Type / Version	Manufacturer	Supplied by
Notebook	Think pad x220	Lenovo	Adapter
software	Type / Version	Manufacturer	Supplied by
Putty	0.71	N/A	N/A

2.3 Test Configuration / Block diagram used for tests

Test setup Diagram- Radiated Test



Test setup Diagram- Conducted test



2.4 Testing process

1	Setup the EUT as shown in Section 2.3.
2	Execute the Putty on the notebook.
3	Configure the test mode, the test channel, and the data rate.
4	Verify that the EUT works properly.

3 VERDICT SUMMARY SECTION

This chapter presents an overview of standards and results. Refer to the next chapters for details of measured test results and applied test levels.

3.1 Standards

Standard	Year	Description
FCC CFR Title 47 Part 15 Subpart C Section 15.247	2019	Operation within the bands 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz.
ANSI C63.10	2013	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
KDB 558074 D01 v05r02	2019	Guidance for performing compliance measurements on Digital Transmission System (DTS) operating under section 15.247
RSS-Gen Issue 5 Amendment 1	2019	General Requirements for Compliance of Radio Apparatus
RSS-247 Issue 2	2017	Digital Transmission Systems (DTSS), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices

3.2 Deviation(s) from the Standard(s) / Test Specification(s)

The following deviation(s) was / were made from the published requirements of the listed standards: N/A.

(Please define the deviations from the standard(s) if applicable)

3.3 Overview of results

For FCC

Requirement – Test case	Basic standard(s)	Verdict	Remark
AC Power Line Conducted Emission	FCC 15.207	PASS	---
Emissions in restricted frequency bands	FCC 15.247(b)(3)	PASS	---
Duty cycle	ANSI C63.10:2013	PASS	---
Emissions in non-restricted frequency bands	FCC 15.247(d), FCC 15.209	PASS	---
Radiated Emission Band Edge	FCC 15.247(d)	PASS	---
Fundamental emission output power	FCC 15.247(d), FCC 15.209	PASS	---
DTS Bandwidth	FCC 15.247(a)(2)	PASS	---
Power Spectral Density	FCC 15.247(e)	PASS	---
Antenna Requirement	FCC 15.203	PASS	---

For ISED

Requirement – Test case	Basic standard(s)	Verdict	Remark
AC Power Line Conducted Emission	RSS-Gen Issue 5 Section 8.8	PASS	---
Emissions in restricted frequency bands	RSS-Gen Issue 5 Section 8.9	PASS	---
Duty cycle	ANSI C63.10:2013	PASS	---
Emissions in non-restricted frequency bands	RSS-247 Issue 2 Section 5.5	PASS	---
Radiated Emission Band Edge	RSS-Gen Issue 5 Section 8.10	PASS	---
Fundamental emission output power	RSS-247 Issue 2 Section 5.4(d)	PASS	---
DTS Bandwidth	RSS-Gen Issue 5 Section 6.7	PASS	---
Power Spectral Density	RSS-247 Issue 2 Section 5.2(b)	PASS	---
Antenna Requirement	RSS-Gen Issue 5 Section 6.8	PASS	---

3.4 Test Facility

USA	:	FCC Designation Number: CN1199
CA	:	ISED CAB identifier: CN0040

4 TEST RESULTS

4.1 AC Power Line Conducted Emission

VERDICT: PASS

4.1.1 Limit

Standard	FCC Part 15 Subpart C Paragraph 15.207	
Frequency range [MHz]	Limit: QP [dB(μV) ¹⁾]	Limit: AV [dB(μV) ¹⁾]
0,15 - 0,50	66 - 56 ²⁾	56 - 46 ²⁾
0,50 - 5,0	56	46
5,0 - 30	60	50

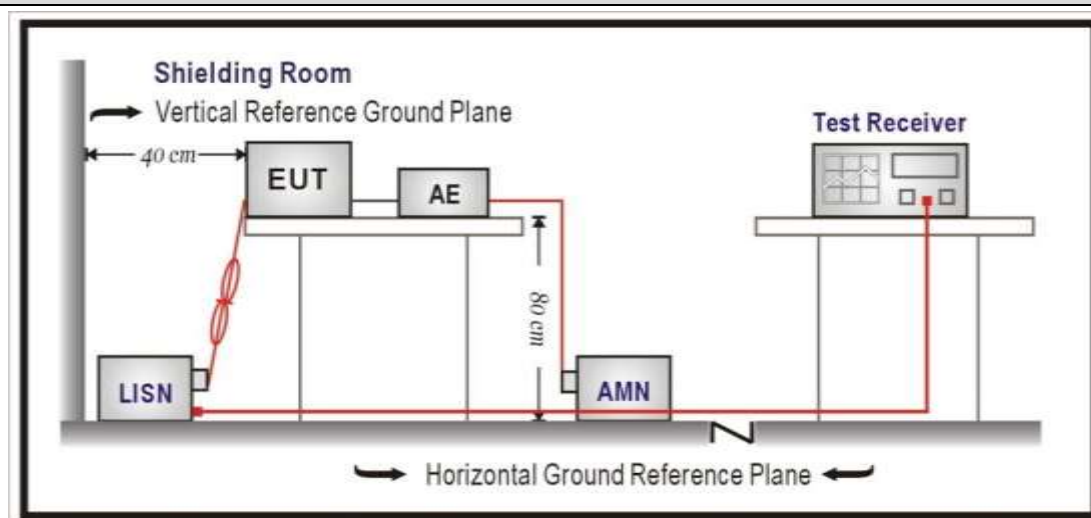
¹⁾ At the transition frequency, the lower limit applies.

²⁾ The limit decreases linearly with the logarithm of the frequency.

NOTE 1: The exclusion band for transmitters shall be considered for transmitters operating at frequencies below 30 MHz.

NOTE 2: Where the AC output port is directly connected (or via a circuit breaker) to the AC power input port of the EUT the AC power output port need not to be tested.

4.1.2 Test Setup

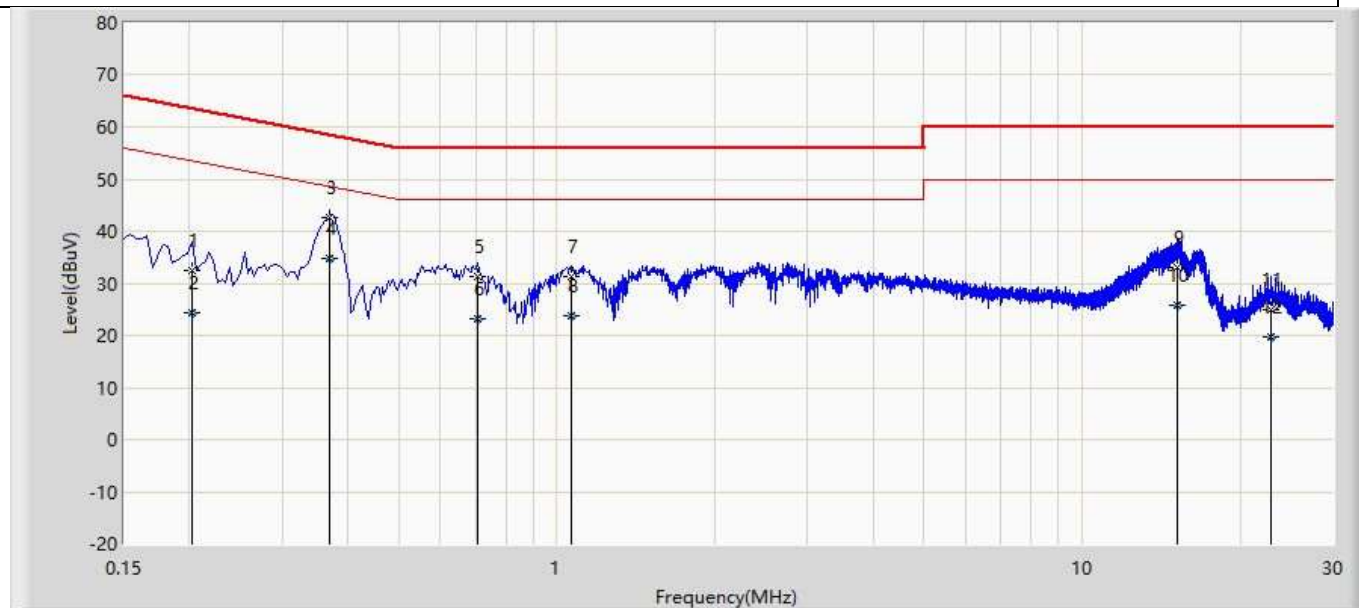


4.1.3 Test Procedure

	References Rule	Chapter	Item
☒	ANSI C63.10-2013	6.2	Standard test method for ac power-line conducted emissions from unlicensed wireless devices

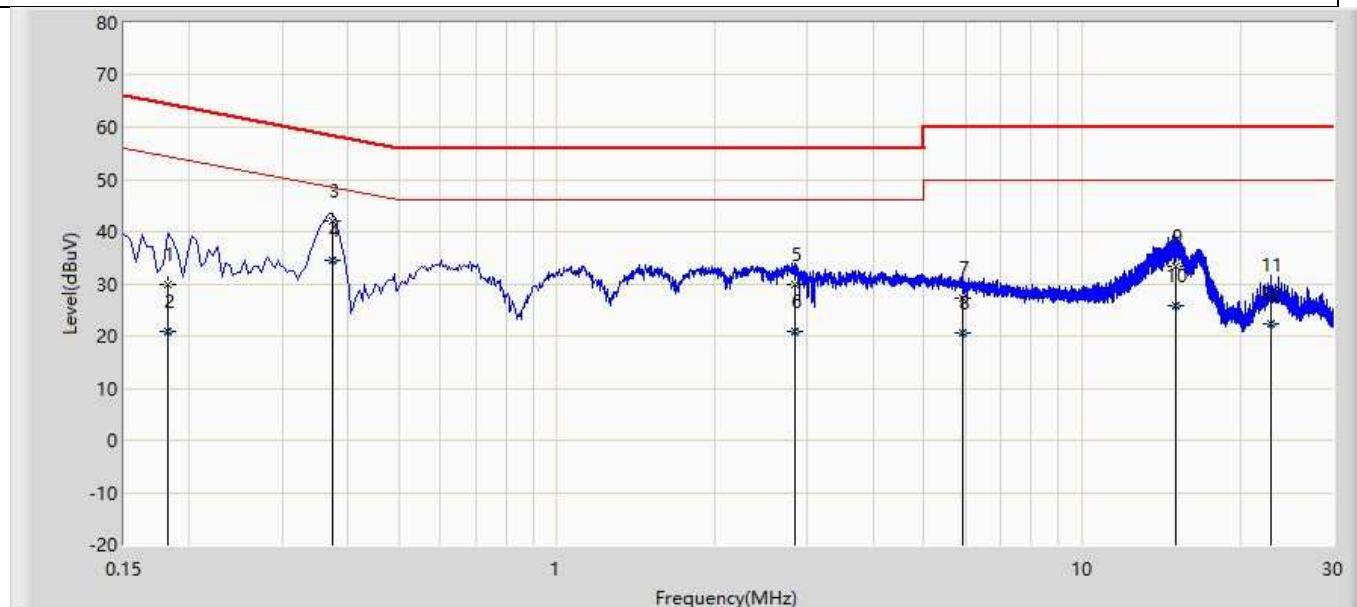
4.1.4 Test Data

Profile: 2090075R	Page No.: 9
Engineer: Pawn	
Site: TR1	Time: 2020/09/27 - 20:54
Limit: FCC_Part15.207_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101189(0.009-30MHz)	Polarity: Neutral
EUT: 8690i	Power: AC 120V/60Hz
Note:	



N o	Mar k	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		0.202	32.436	22.786	-31.092	63.528	9.650	QP
2		0.202	24.415	14.765	-29.113	53.528	9.650	AV
3		0.370	42.511	32.854	-15.990	58.501	9.657	QP
4	*	0.370	34.815	25.158	-13.686	48.501	9.657	AV
5		0.706	31.268	21.599	-24.732	56.000	9.669	QP
6		0.706	23.271	13.603	-22.729	46.000	9.669	AV
7		1.062	31.335	21.645	-24.665	56.000	9.690	QP
8		1.062	23.833	14.143	-22.167	46.000	9.690	AV
9		15.170	32.950	22.831	-27.050	60.000	10.120	QP
10		15.170	25.875	15.755	-24.125	50.000	10.120	AV
11		22.926	24.987	14.614	-35.013	60.000	10.374	QP
12		22.926	19.802	9.428	-30.198	50.000	10.374	AV

Profile: 2090075R	Page No.: 10
Engineer: Pawn	
Site: TR1	Time: 2020/09/27 - 21:00
Limit: FCC_Part15.207_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101189(0.009-30MHz)	Polarity: Line
EUT: 8690i	Power: AC 120V/60Hz
Note:	



N o	Mar k	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		0.182	29.946	20.274	-34.447	64.394	9.673	QP
2		0.182	20.988	11.315	-33.406	54.394	9.673	AV
3		0.374	41.931	32.250	-16.481	58.412	9.681	QP
4	*	0.374	34.435	24.754	-13.977	48.412	9.681	AV
5		2.834	29.928	20.168	-26.072	56.000	9.760	QP
6		2.834	20.955	11.195	-25.045	46.000	9.760	AV
7		5.902	27.350	17.493	-32.650	60.000	9.857	QP
8		5.902	20.683	10.826	-29.317	50.000	9.857	AV
9		15.074	33.364	23.235	-26.636	60.000	10.128	QP
10		15.074	25.770	15.642	-24.230	50.000	10.128	AV
11		22.906	27.762	17.377	-32.238	60.000	10.385	QP
12		22.906	22.398	12.012	-27.602	50.000	10.385	AV

4.2 Emissions in restricted frequency bands**VERDICT: PASS****4.2.1 Limit**

Standard		FCC Part 15 Subpart C Paragraph 15.207	
Restricted Bands of operation			
Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 – 0.110	16.42 – 16.423	399.9 – 410	4.5 – 5.15
0.495 – 0.505	16.69475 –16.69525	608 – 614	5.35 – 5.46
2.1735 – 2.1905	16.80425 – 16.80475	960 – 1240	7.25 – 7.75
4.125 – 4.128	25.5 – 25.67	1300 – 1427	8.025 – 8.5
4.17725 – 4.17775	37.5 – 38.25	1435 – 1626.5	9.0 – 9.2
4.20725 – 4.20775	73 – 74.6	1645.5 – 1646.5	9.3 – 9.5
6.215 – 6.218	74.8 – 75.2	1660 – 1710	10.6 – 12.7
6.26775 – 6.26825	108 – 121.94	1718.8 – 1722.2	13.25 – 13.4
6.31175 – 6.31225	123 – 138	2200 – 2300	14.47 – 14.5
8.291 – 8.294	149.9 – 150.05	2310 – 2390	15.35 – 16.2
8.362 – 8.366	156.52475 – 156.52525	2483.5 – 2500	17.7 – 21.4
8.37625 – 8.38675	156.7 – 156.9	2690 – 2900	22.01 – 23.12
8.81425 – 8.81475	162.0125 – 167.17	3260 – 3267	23.6 – 24.0
12.29 – 12.293	167.72 – 173.2	3332 – 3339	31.2 – 31.8
12.51975–12.52025	240 – 285	3345.8 – 3358	36.43 – 36.5
12.57675–12.57725	322 – 335.4	3600 – 4400	
13.36 – 13.41			
Restricted Bands of operation for IC			
0.090 - 0.110	13.36 - 13.41	960 - 1427	9.0 - 9.2
0.495 - 0.505	16.42 - 16.423	1435 - 1626.5	9.3 - 9.5
2.1735 - 2.1905	16.69475 - 16.69525	1645.5 - 1646.5	10.6 - 12.7
3.020 - 3.026	16.80425 - 16.80475	1660 - 1710	13.25 - 13.4
4.125 - 4.128	25.5 - 25.67	1718.8 - 1722.2	14.47 - 14.5
4.17725 - 4.17775	37.5 - 38.25	2200 - 2300	15.35 - 16.2
4.20725 - 4.20775	73 - 74.6	2310 - 2390	17.7 - 21.4
5.677 - 5.683	74.8 - 75.2	2483.5 - 2500	22.01 - 23.12
6.215 - 6.218	108 - 138	2655 - 2900	23.6 - 24.0
6.26775 - 6.26825	149.9 - 150.05	3260 - 3267	31.2 - 31.8
6.31175 - 6.31225	156.52475 - 156.52525	3332 - 3339	36.43 - 36.5
8.291 - 8.294	156.7 - 156.9	3345.8 - 3358	Above 38.6
8.362 - 8.366	162.0125 - 167.17	3500 - 4400	
8.37625 - 8.38675	167.72 - 173.2	4500 - 5150	
8.41425 - 8.41475	240 - 285	5350 - 5460	
12.29 - 12.293	322 - 335.4	7250 - 7750	
12.51975 - 12.52025	399.9 - 410	8025 - 8500	
12.57675 - 12.57725	608 - 614	--	

Restricted Band Emissions Limit

Frequency (MHz)	Field strength ($\mu\text{V/m}$)	Field strength ($\text{dB}\mu\text{V/m}$)	Measurement distance (m)
0.009 - 0.49	2400/F(kHz)	48.5 – 13.8	300 _(Note 1)
0.49 - 1.705	24000/F(kHz)	33.8 - 23	30 _(Note 1)
1.705 - 30	30	29.5	30 _(Note 1)
30 - 88	100	40	3 _(Note 2)
88 - 216	150	43.5	3 _(Note 2)
216 - 960	200	46	3 _(Note 2)
Above 960	500	54	3 _(Note 2)

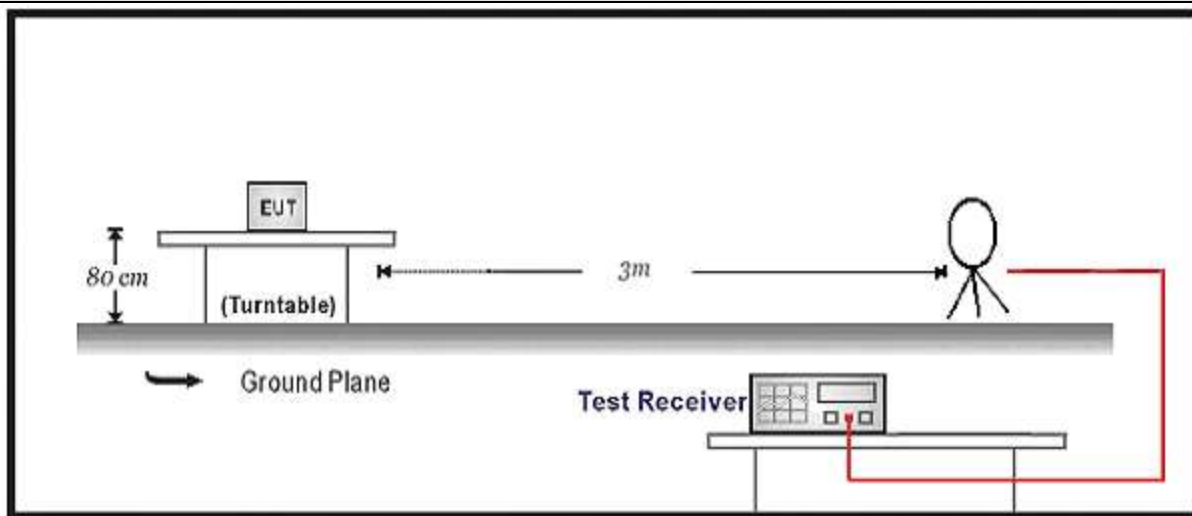
Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade).

Note 2: At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be measured at the distance employed can be detected by the measurement equipment.

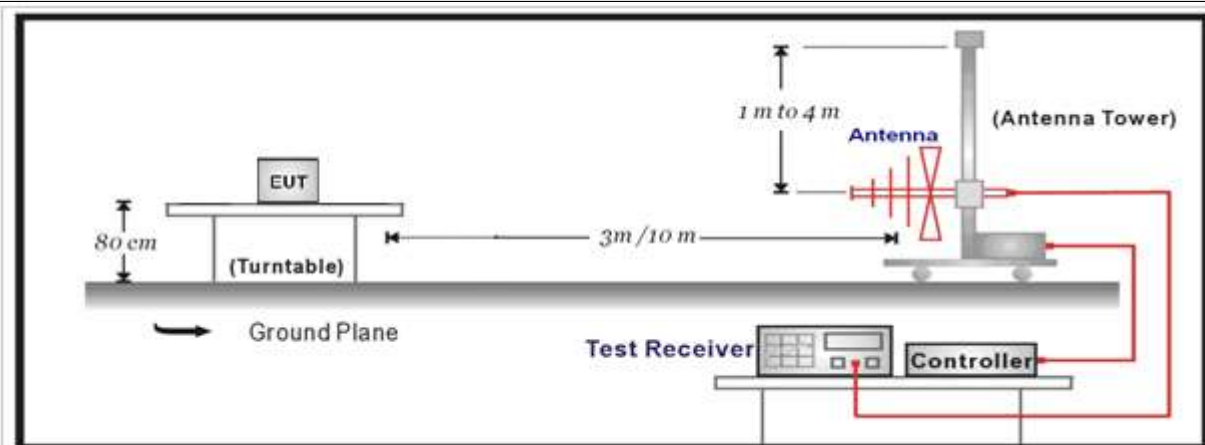
Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated that measurements at a distance of 30 meters or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).

4.2.2 Test Setup

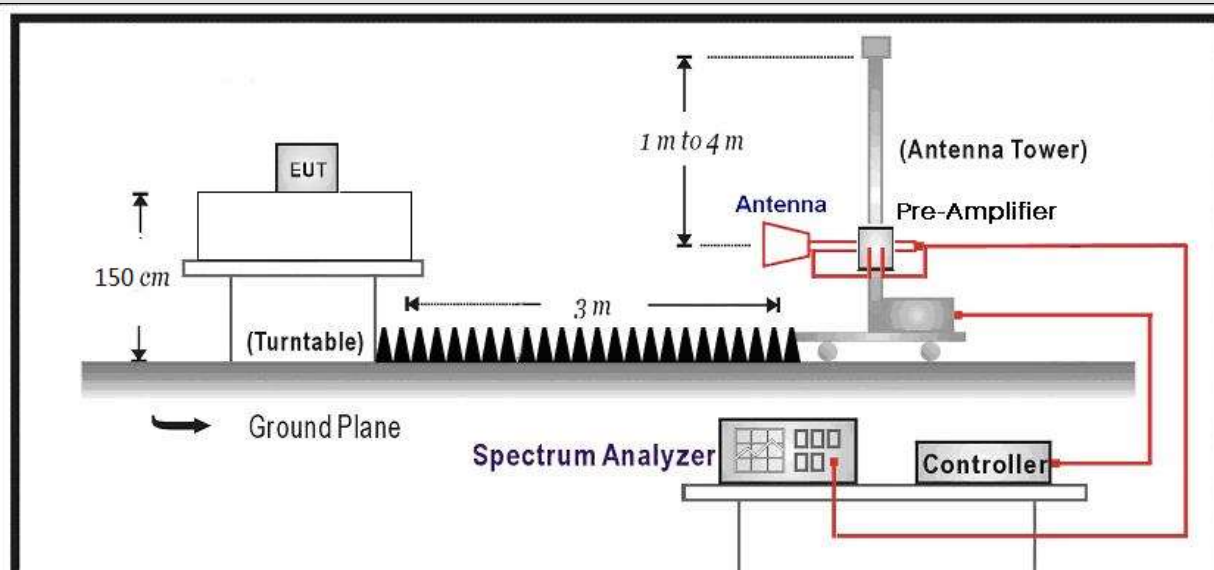
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



Above 1GHz Test Setup:

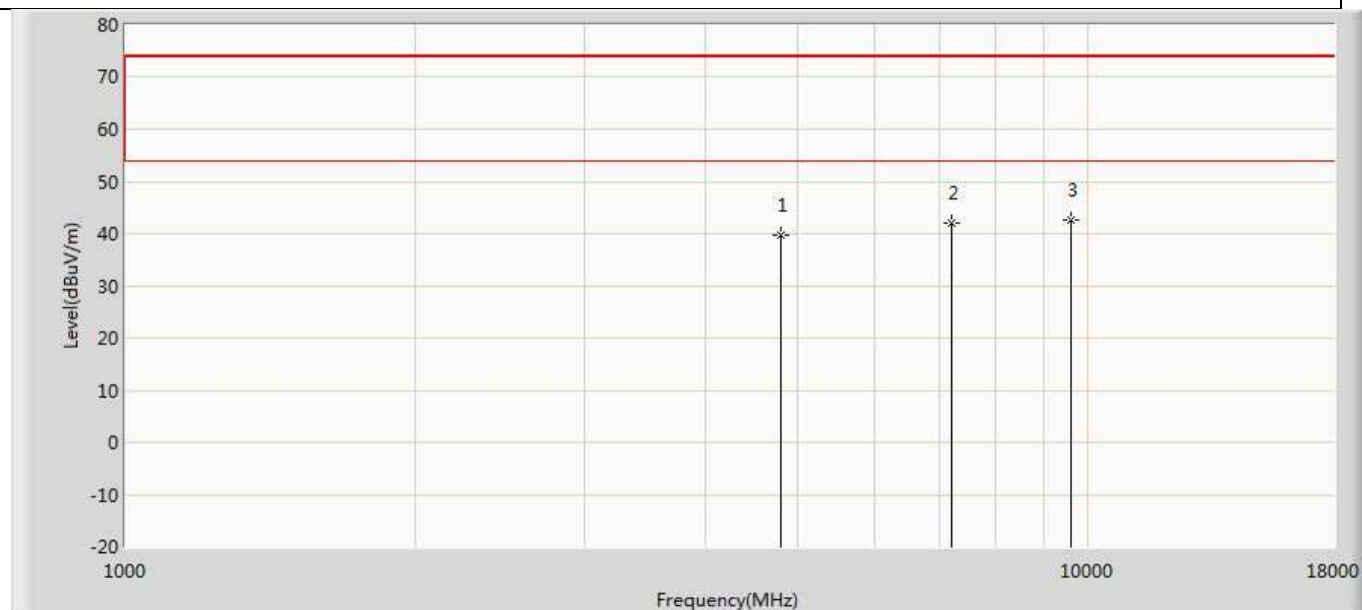


4.2.3 Test Procedure

	References Rule		Chapter	Description
☒	ANSI C63.10		11.12	Emissions in restricted frequency bands
	☒	ANSI C63.10	11.12.1	Radiated emission measurements
	☒	ANSI C63.10	11.12.2.7	Radiated spurious emission test
	☒	ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
	☒	ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
	☒	ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz

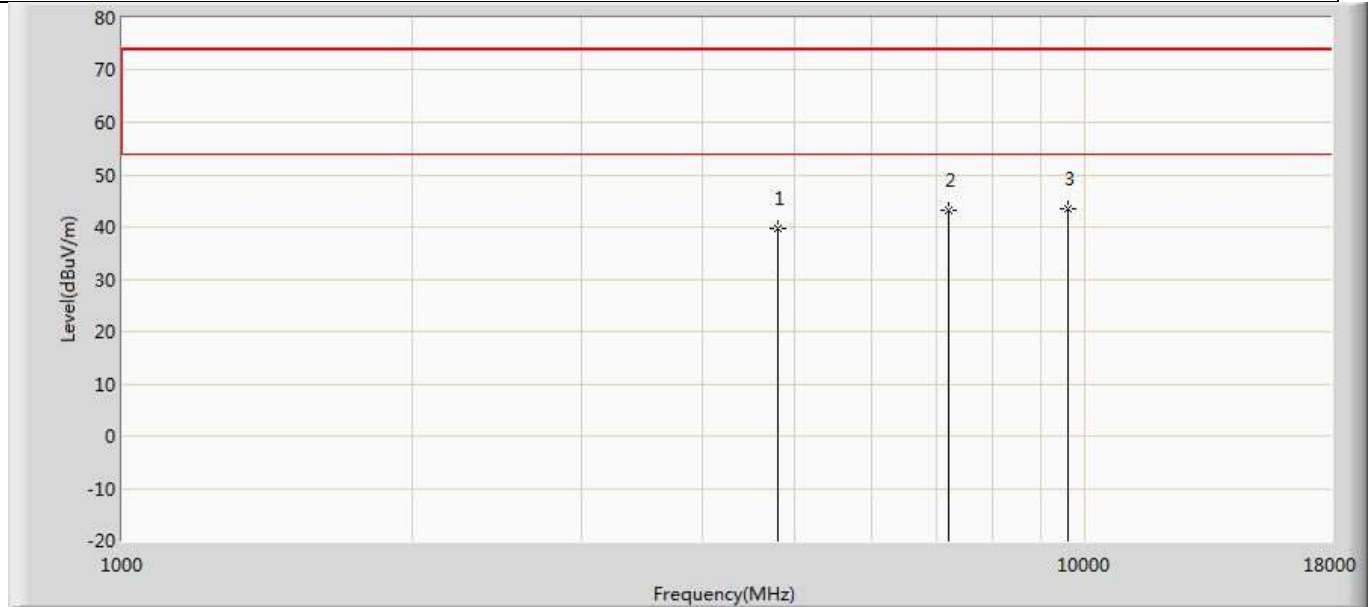
4.2.4 Test Data

Profile: 2090075R	Page No.: 43
Engineer: Yingfeiwang	
Site: AC5	Time: 2020/08/16 - 10:56
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 8960i	Power: Battery
Note: Mode 4:Transmit at 2402MHz by BLE	



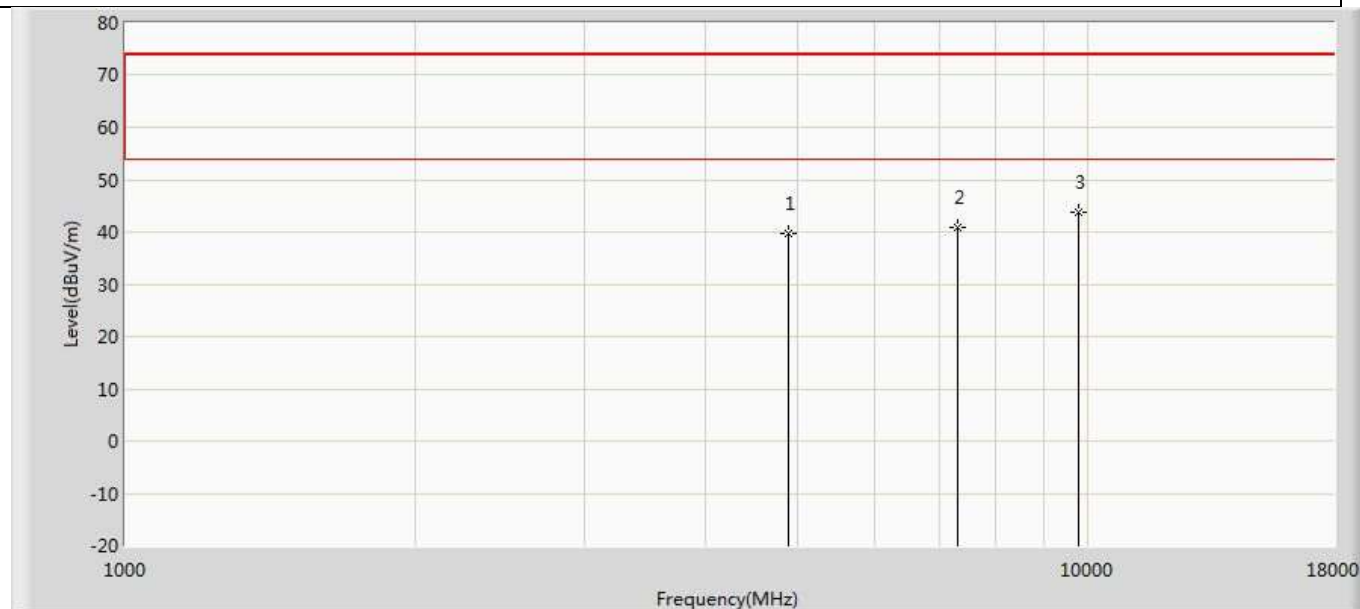
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	39.572	35.911	-34.428	74.000	3.662	PK
2		7206.000	41.946	35.283	-32.054	74.000	6.663	PK
3	*	9608.000	42.645	34.509	-31.355	74.000	8.137	PK

Profile: 2090075R	Page No.: 44
Engineer: Yingfeiwang	
Site: AC5	Time: 2020/08/16 - 10:59
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 8960i	Power: Battery
Note: Mode 4:Transmit at 2402MHz by BLE	



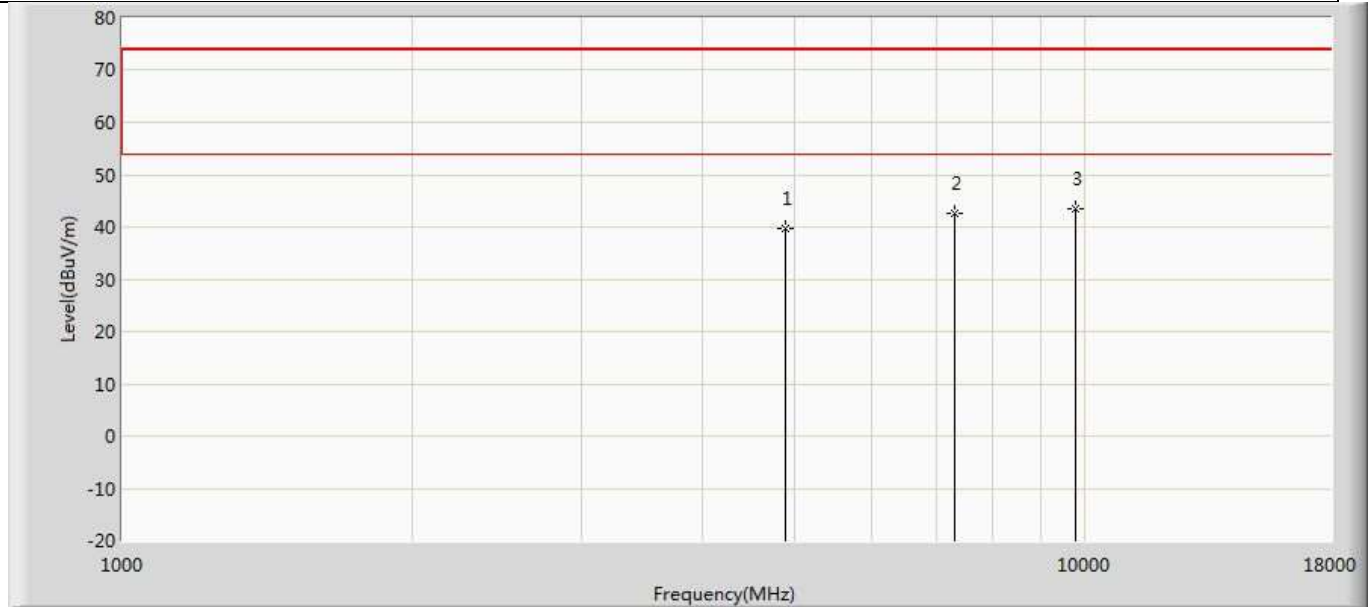
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	39.735	36.074	-34.265	74.000	3.662	PK
2		7206.000	43.278	36.615	-30.722	74.000	6.663	PK
3	*	9608.000	43.613	35.477	-30.387	74.000	8.137	PK

Profile: 2090075R	Page No.: 45
Engineer: Yingfeiwang	
Site: AC5	Time: 2020/08/16 - 11:01
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 8960i	Power: Battery
Note: Mode 4:Transmit at 2440MHz by BLE	



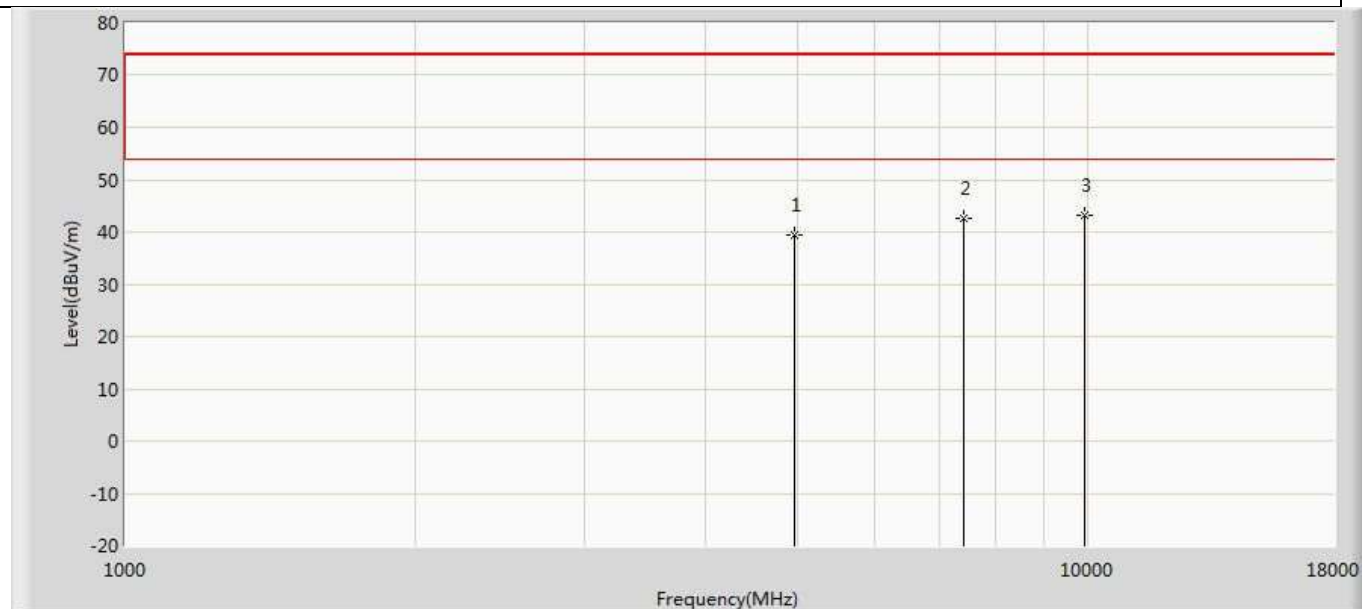
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	39.716	36.075	-34.284	74.000	3.640	PK
2		7320.000	40.946	34.261	-33.054	74.000	6.685	PK
3	*	9760.000	43.642	34.938	-30.358	74.000	8.704	PK

Profile: 2090075R	Page No.: 46
Engineer: Yingfeiwang	
Site: AC5	Time: 2020/08/16 - 11:05
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 8960i	Power: Battery
Note: Mode 4:Transmit at 2440MHz by BLE	



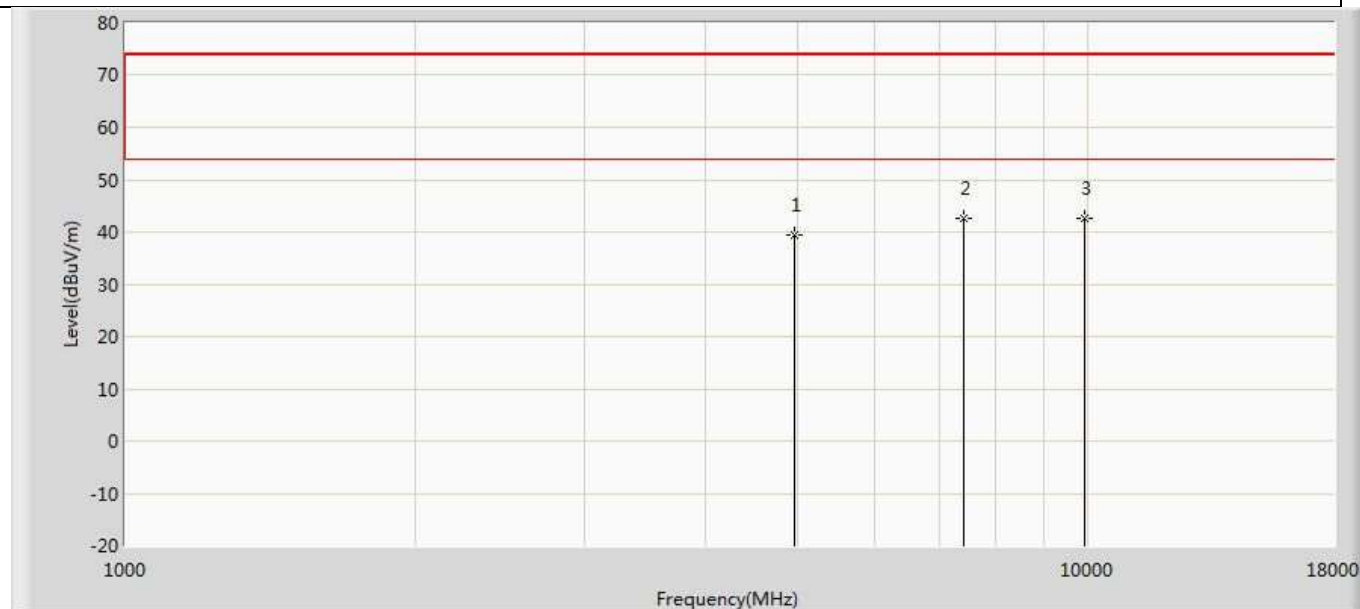
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	39.584	35.943	-34.416	74.000	3.640	PK
2		7320.000	42.581	35.896	-31.419	74.000	6.685	PK
3	*	9760.000	43.553	34.849	-30.447	74.000	8.704	PK

Profile: 2090075R	Page No.: 47
Engineer: Yingfeiwang	
Site: AC5	Time: 2020/08/16 - 11:09
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 8960i	Power: Battery
Note: Mode 4:Transmit at 2480MHz by BLE	



N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	39.418	35.807	-34.582	74.000	3.611	PK
2		7440.000	42.563	35.978	-31.437	74.000	6.585	PK
3	*	9920.000	43.164	34.439	-30.836	74.000	8.725	PK

Profile: 2090075R	Page No.: 48
Engineer: Yingfeiwang	
Site: AC5	Time: 2020/08/16 - 11:12
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 8960i	Power: Battery
Note: Mode 4:Transmit at 2480MHz by BLE	



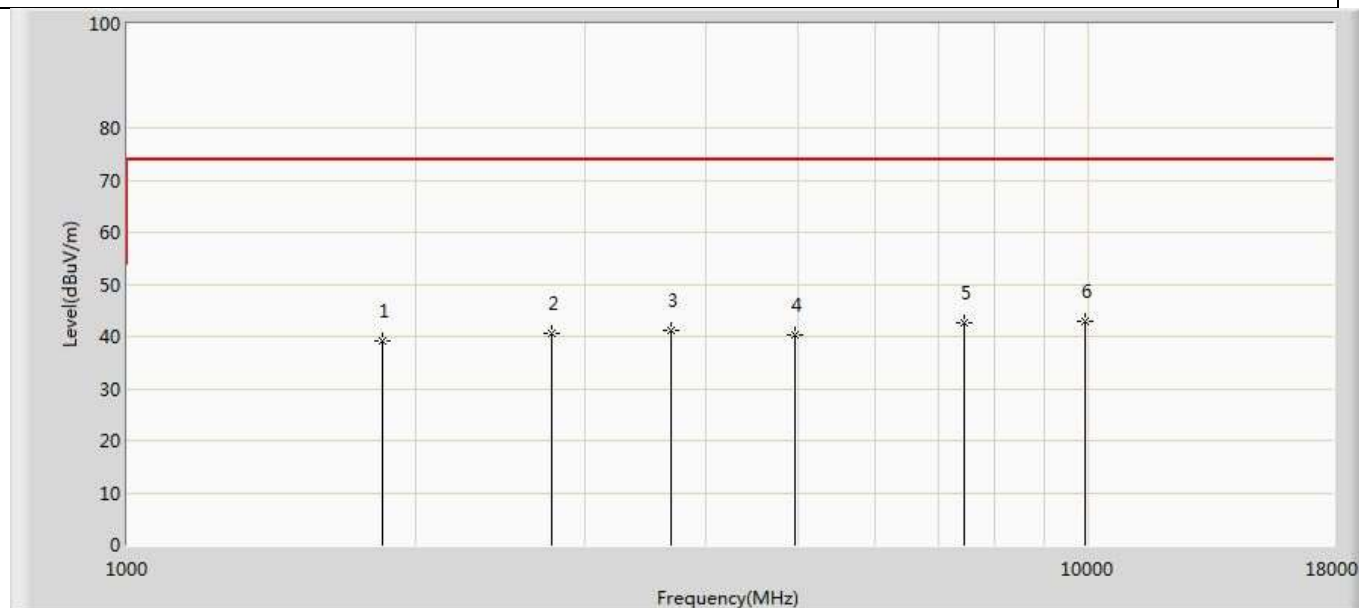
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	39.494	35.883	-34.506	74.000	3.611	PK
2		7440.000	42.501	35.916	-31.499	74.000	6.585	PK
3	*	9920.000	42.717	33.992	-31.283	74.000	8.725	PK

Note:

1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

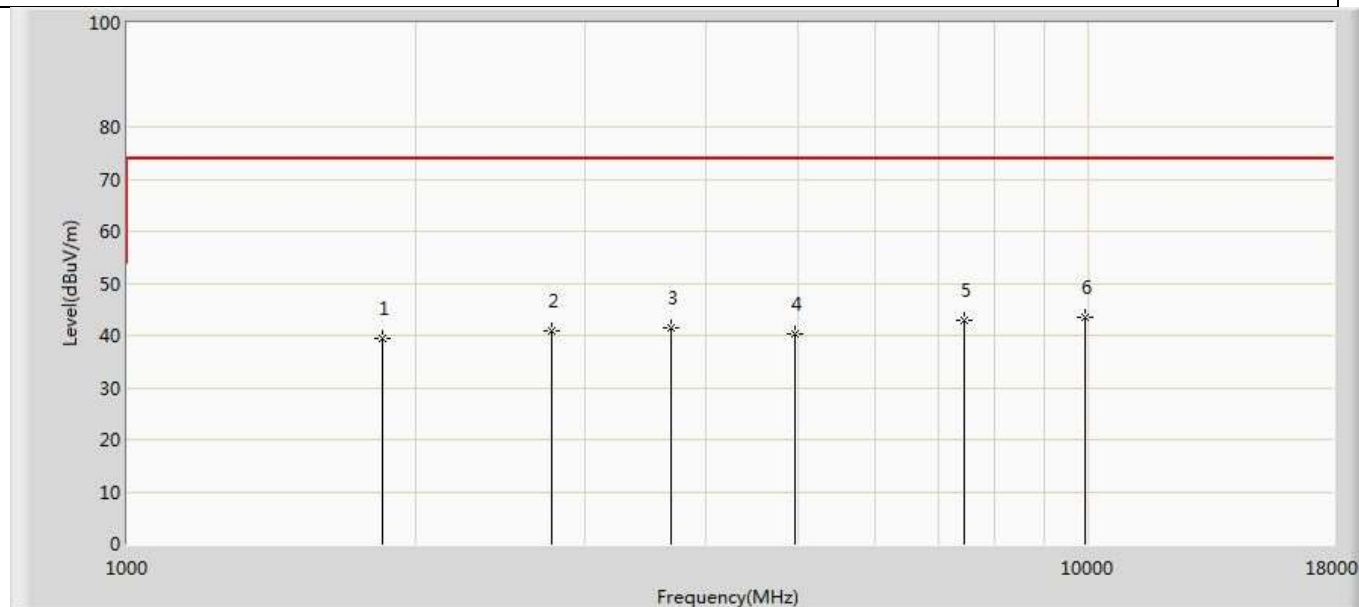
The worst case of Simultaneous transmission:

Profile: 2090075R	Page No.: 7
Engineer: Yingfei.wang	
Site: AC5AC5	Time: 2020/09/22 - 16:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 8690i	Power: Battery
Note: Mode 2 : Transmit at 2480 MHz by BLE and 920.75 MHz by RFID	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		1841.500	39.267	39.035	-34.733	74.000	0.233	PK
2		2762.250	40.531	38.692	-33.469	74.000	1.838	PK
3		3683.000	41.226	37.316	-32.774	74.000	3.910	PK
4		4960.000	40.194	35.409	-33.806	74.000	4.784	PK
5		7440.000	42.688	34.637	-31.312	74.000	8.051	PK
6	*	9920.000	42.834	32.939	-31.166	74.000	9.894	PK

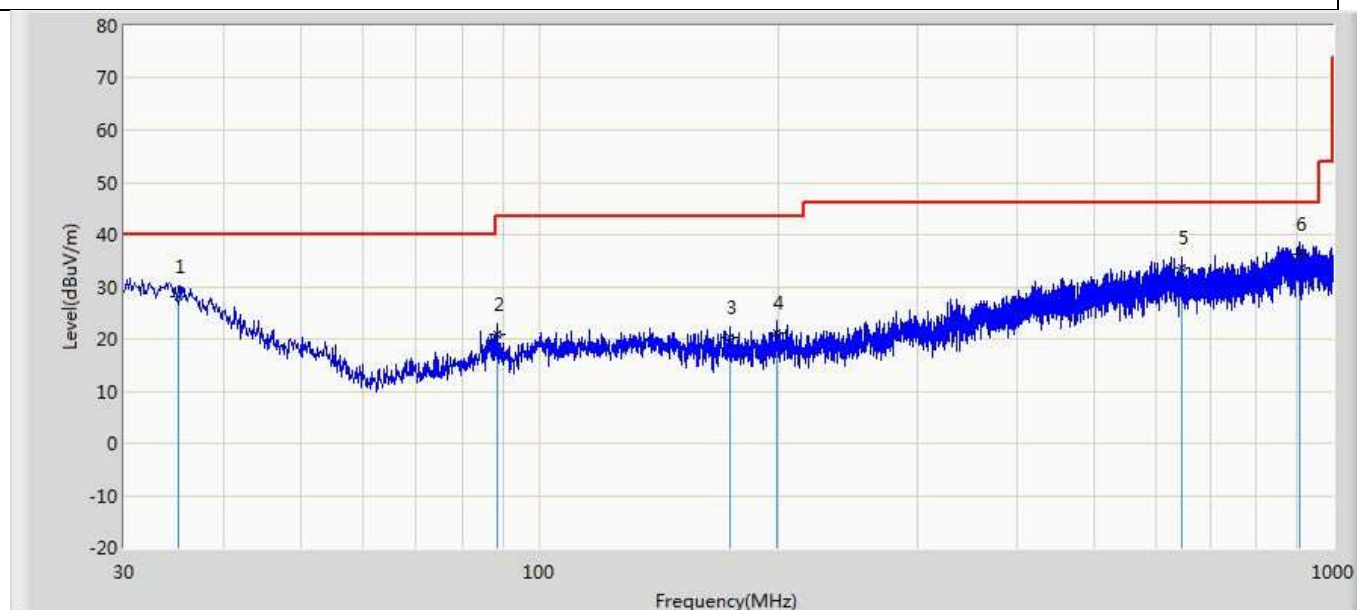
Profile: 2090075R	Page No.: 8
Engineer: Yingfei.wang	
Site: AC5AC5	Time: 2020/09/22 - 16:46
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 8690i	Power: Battery
Note: Mode 2 : Transmit at 2480 MHz by BLE and 920.75 MHz by RFID	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		1841.500	39.517	39.285	-34.483	74.000	0.233	PK
2		2762.250	40.739	38.900	-33.261	74.000	1.838	PK
3		3683.000	41.435	37.525	-32.565	74.000	3.910	PK
4		4960.000	40.332	35.547	-33.668	74.000	4.784	PK
5		7440.000	42.903	34.852	-31.097	74.000	8.051	PK
6	*	9920.000	43.453	33.558	-30.547	74.000	9.894	PK

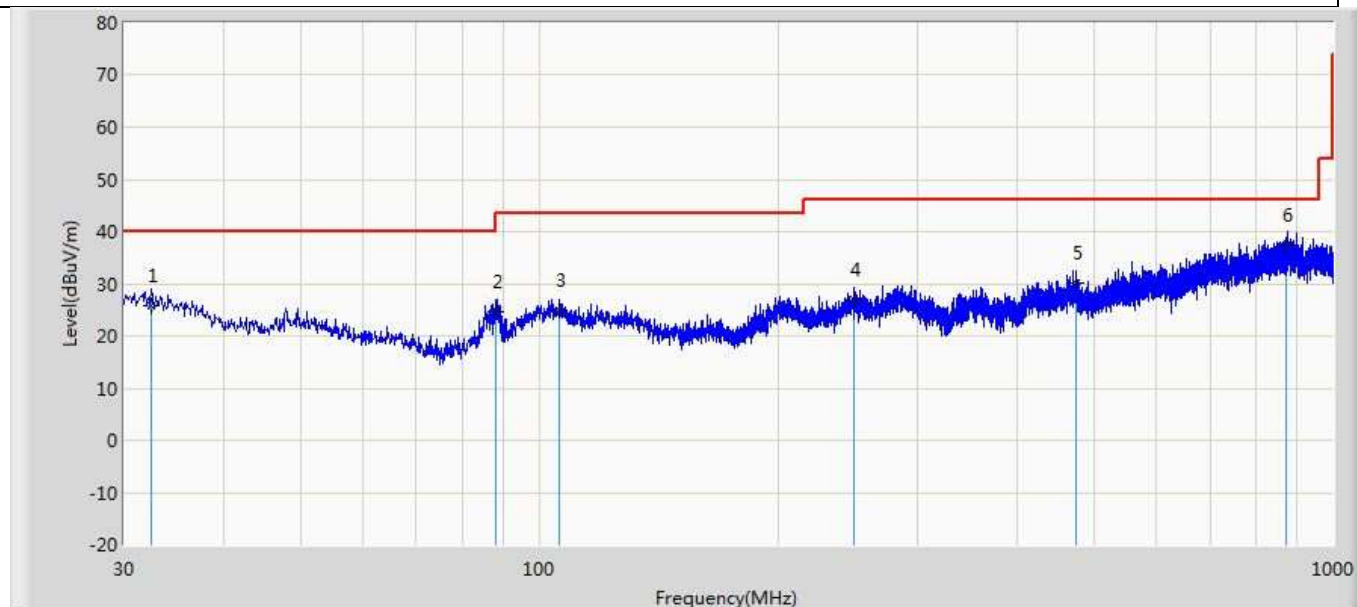
The worst case of Radiated Emission below 1GHz:

Profile: 2090075R	Page No.: 1
Engineer: Yingfei.Wang	
Site: AC2	Time: 2020/09/22 - 20:16
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: AC2_3M(30-1000M)	Polarity: Horizontal
EUT: 8690i	Power: Battery
Note: Mode 1	



N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		35.092	28.076	1.258	-11.924	40.000	26.817	QP
2		88.564	20.749	6.987	-22.751	43.500	13.762	QP
3		174.045	20.218	3.123	-23.282	43.500	17.095	QP
4		199.023	21.161	3.458	-22.339	43.500	17.703	QP
5		644.616	33.668	5.485	-12.332	46.000	28.183	QP
6	*	906.759	36.172	3.458	-9.828	46.000	32.714	QP

Profile: 2090075R	Page No.: 2
Engineer: Yingfei.Wang	
Site: AC2	Time: 2020/09/22 - 20:28
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: AC2_3M(30-1000M)	Polarity: Vertical
EUT: 8690i	Power: Battery
Note: Mode 1	



N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		32.425	25.903	2.698	-14.097	40.000	23.205	QP
2		88.200	24.643	7.984	-18.857	43.500	16.659	QP
3		106.024	25.019	3.012	-18.481	43.500	22.007	QP
4		248.977	26.901	2.589	-19.099	46.000	24.312	QP
5		475.473	30.098	3.984	-15.902	46.000	26.114	QP
6	*	873.051	37.397	4.516	-8.603	46.000	32.881	QP

Note:

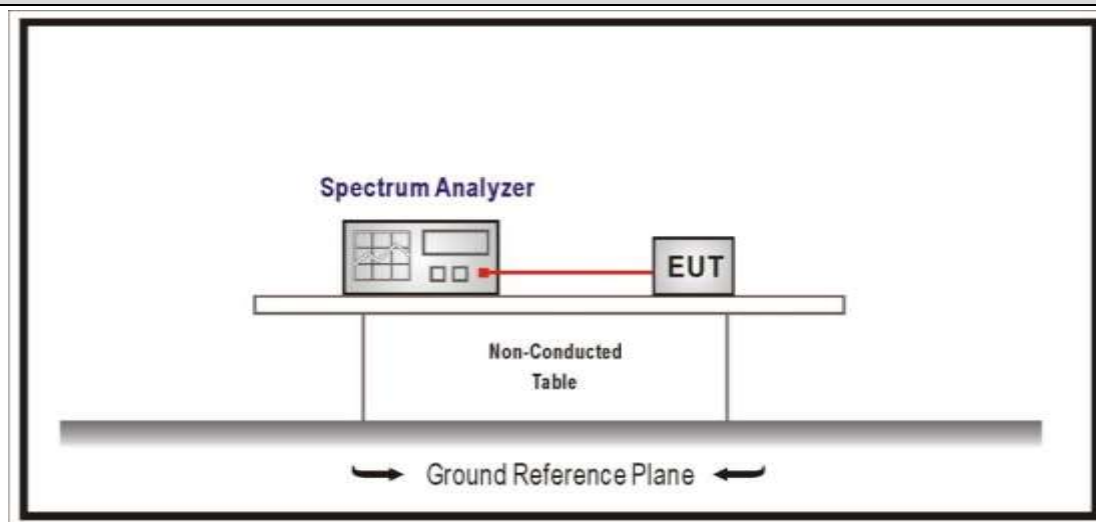
1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

4.3 Emissions in non-restricted frequency band**VERDICT: PASS****4.3.1 Limit**

Standard	FCC Part 15 Subpart C Paragraph 15.247(d)
RF Output power (Detection methods)	Limit(dB)
RF Output power(Average detector)	30dBc(Note1)
RF Output power(PK detector)	20dBc(Note2)

Note 1: If maximum conducted (average) output power was used to demonstrate compliance as described in 9.2, then the peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 30 dBc).

Note 2: If the maximum peak conducted output power procedure was used, then the peak output power measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 20 dBc).

4.3.2 Test Setup**4.3.3 Test Procedure**

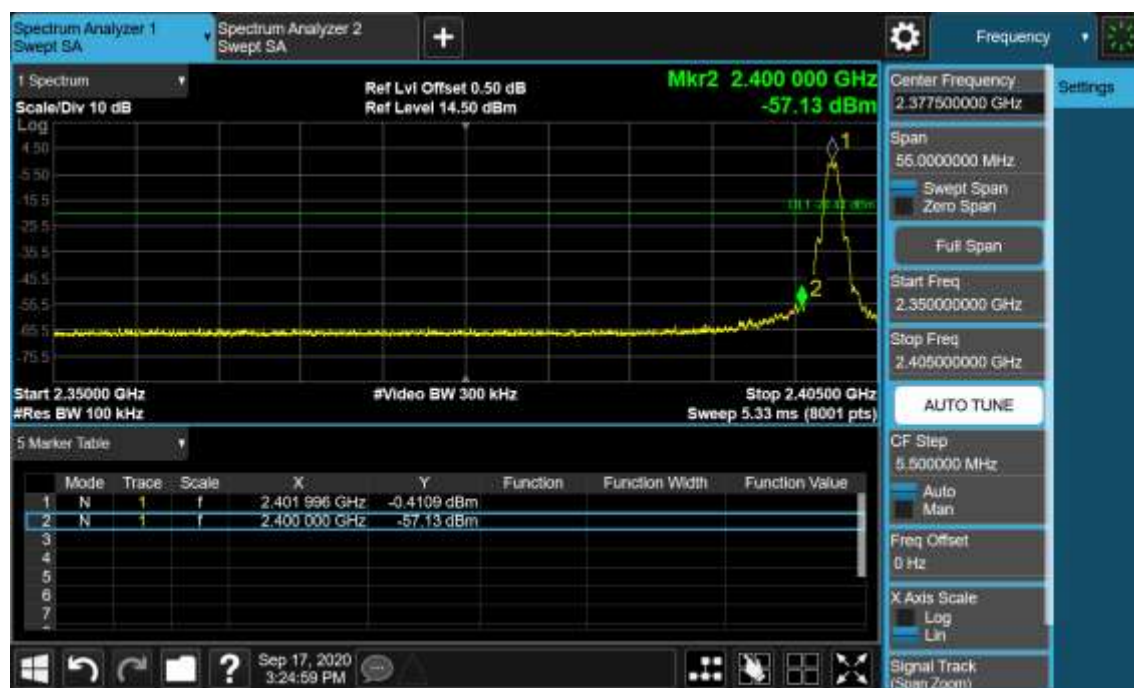
References Rule		Chapter	Description
☒	ANSI C63.10	11.11	Emissions in non-restricted frequency bands
☒	ANSI C63.10	11.11.1	General
☒	ANSI C63.10	11.11.2	Reference level measurement
☒	ANSI C63.10	11.11.3	Emission level measurement

4.3.4 Test Data

Mode	Channel	Test Frequency (MHz)	Maximum In-Band PSD[a] (dBm/100kHz)	Frequency (MHz)	Out-Band PSD[b] (dBm/100kHz)	[a]-[b] (dB)	Limit (dB)	Result
1	00	2402	-0.411	2400	-57.13	56.719	>20	Pass
	39	2480	0.047	2500	-66.16	66.207	>20	Pass

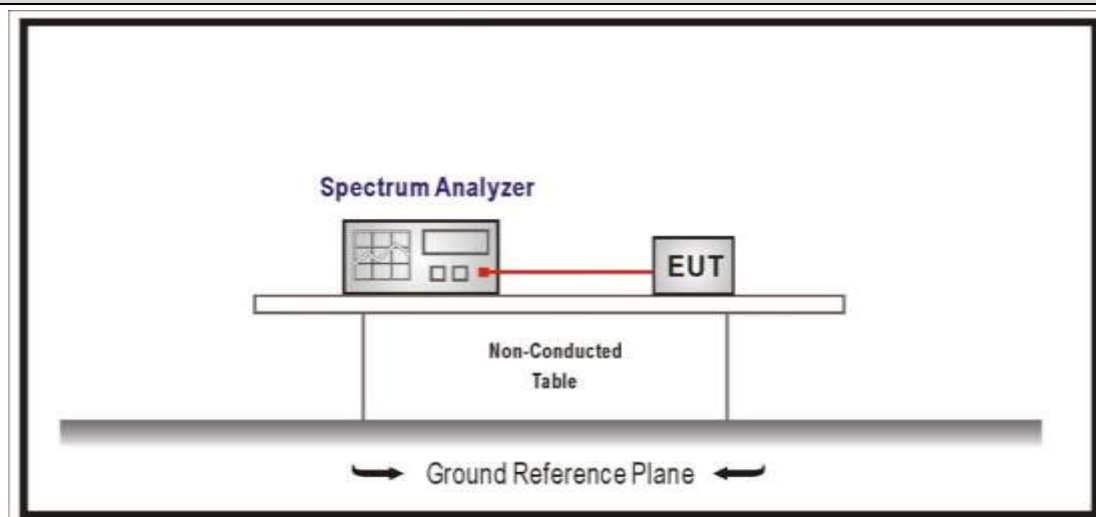
Note : The worst case of Emissions in non-restricted frequency band as below:

Mode 1 / CH00(2402MHz)



4.4 Duty cycle**VERDICT: PASS****4.4.1 Limit**

N/A

4.4.2 Test Setup**4.4.3 Test Procedure**

References Rule		Chapter	Description
☒	ANSI C63.10	11.6	Duty cycle (D), transmission duration (T), and maximum power control level

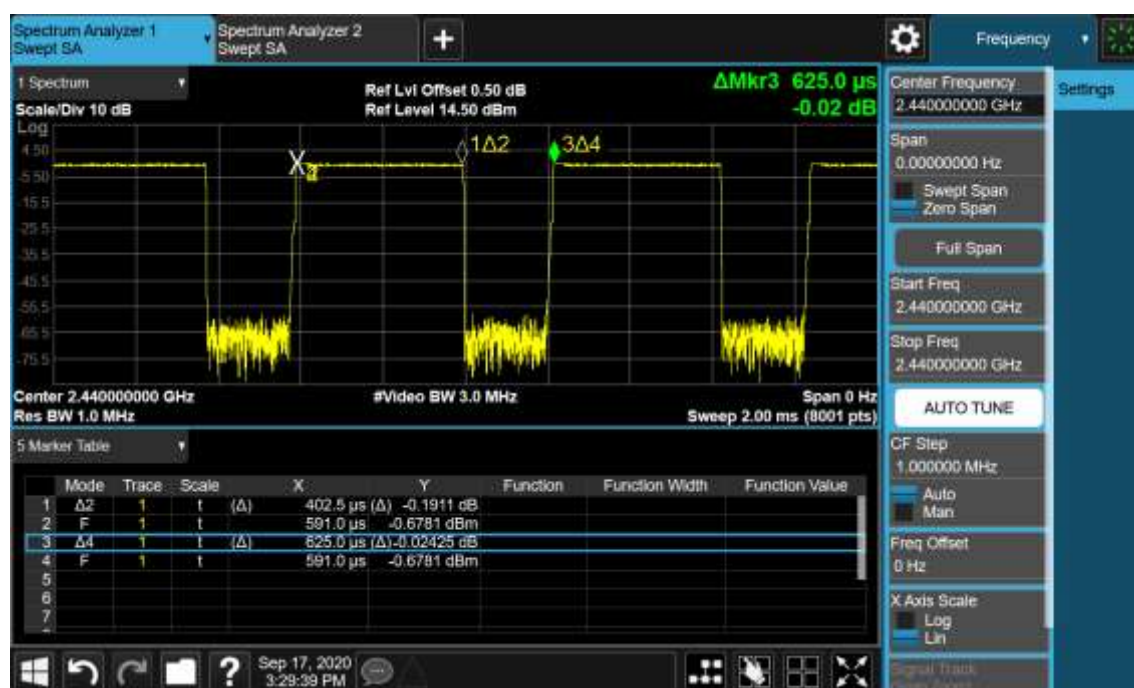
4.4.4 Test Data

Test Mode	Tx On (ms)	Tx Off (ms)	VBW (kHz)	Tx On + Tx Off (ms)	Duty Cycle
Mode 1	0.403	0.222	2.5	0.625	64.48%

Note 1: T means 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.

Note 2: According to KDB 558074, when test for Radiated Emission Band Edge and Radiated Emission, for average detector set: $VBW \geq 1/T$ will be used.

Mode 1 CH19 2440MHz



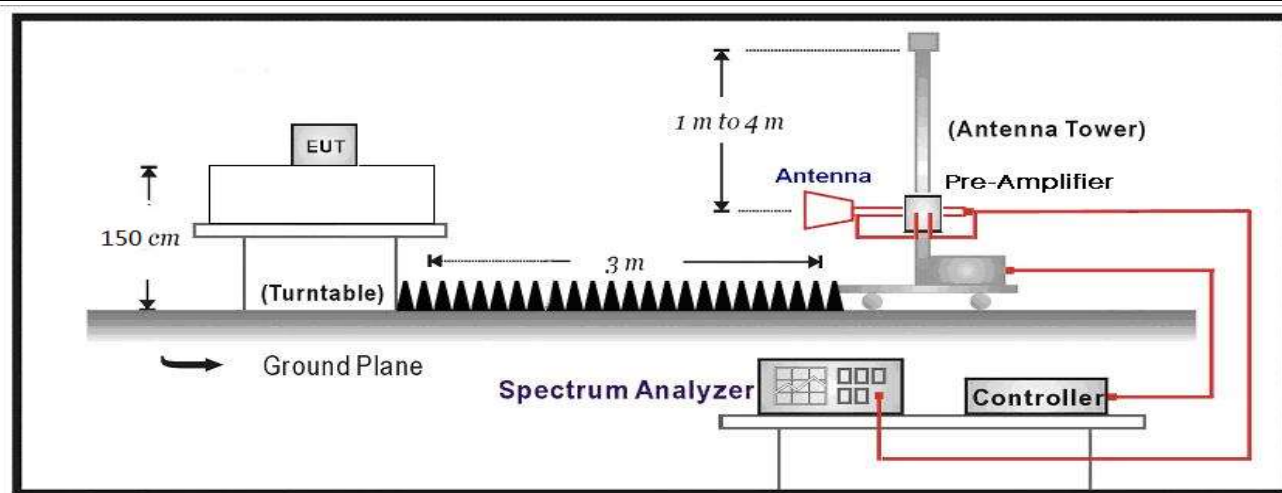
4.5 Radiated Emission Band Edge**VERDICT: PASS****4.5.1 Limit**

Standard		FCC Part 15 Subpart C Paragraph 15.247(d) , 15.209		
Frequency bands (MHz)	Detector	Limit (dB μ V/m)	RBW (MHz)	Distance (m)
2310-2390	PK	74	1	3
2483.5-2500	AV	54	1	3

Note: The field strength of emissions appearing within these frequency bands shall not exceed the limits.

4.5.2 Test Setup

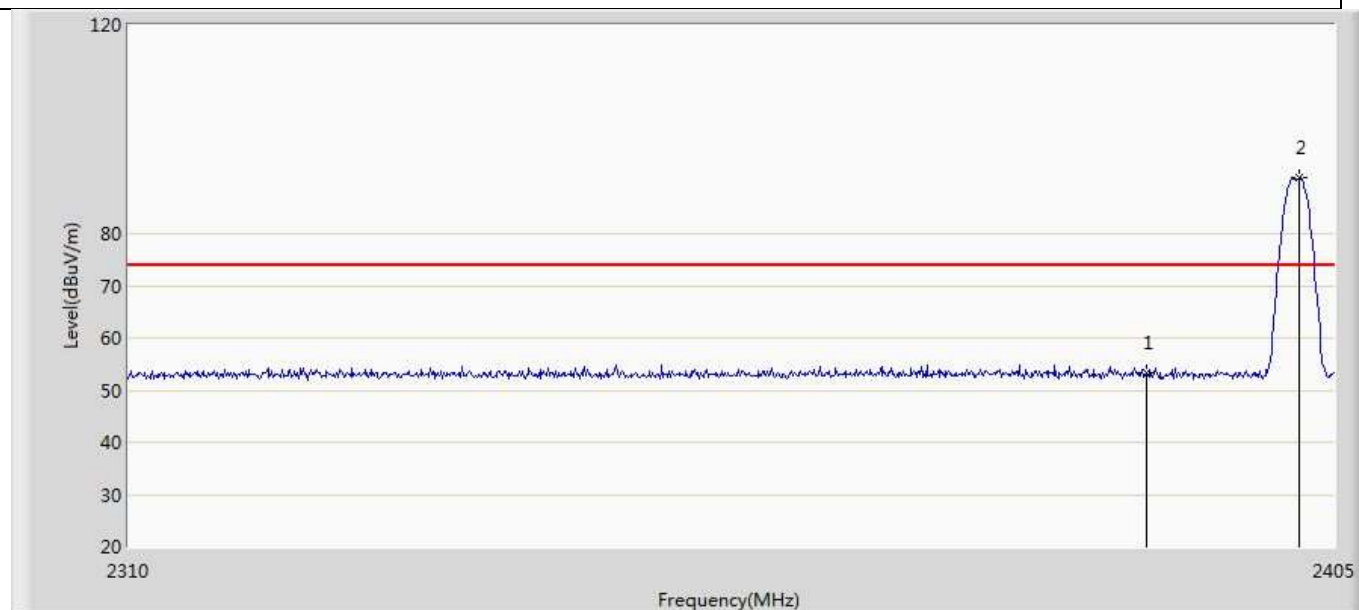
Above 1GHz Test Setup:

**4.5.3 Test Procedure**

	References Rule	Chapter	Description
☒	ANSI C63.10	6.10	Band-edge testing
☒	☒ ANSI C63.10	6.10.5	Restricted-band band-edge measurements
☐	☐ ANSI C63.10	6.10.6	Marker-delta method
☒	ANSI C63.10	11.12	Emissions in restricted frequency bands
☒	☒ ANSI C63.10	11.12.1	Radiated emission measurements
☒	☒ ANSI C63.10	11.12.2.7	Radiated spurious emission test
☐	ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
☐	ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
☒	ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz

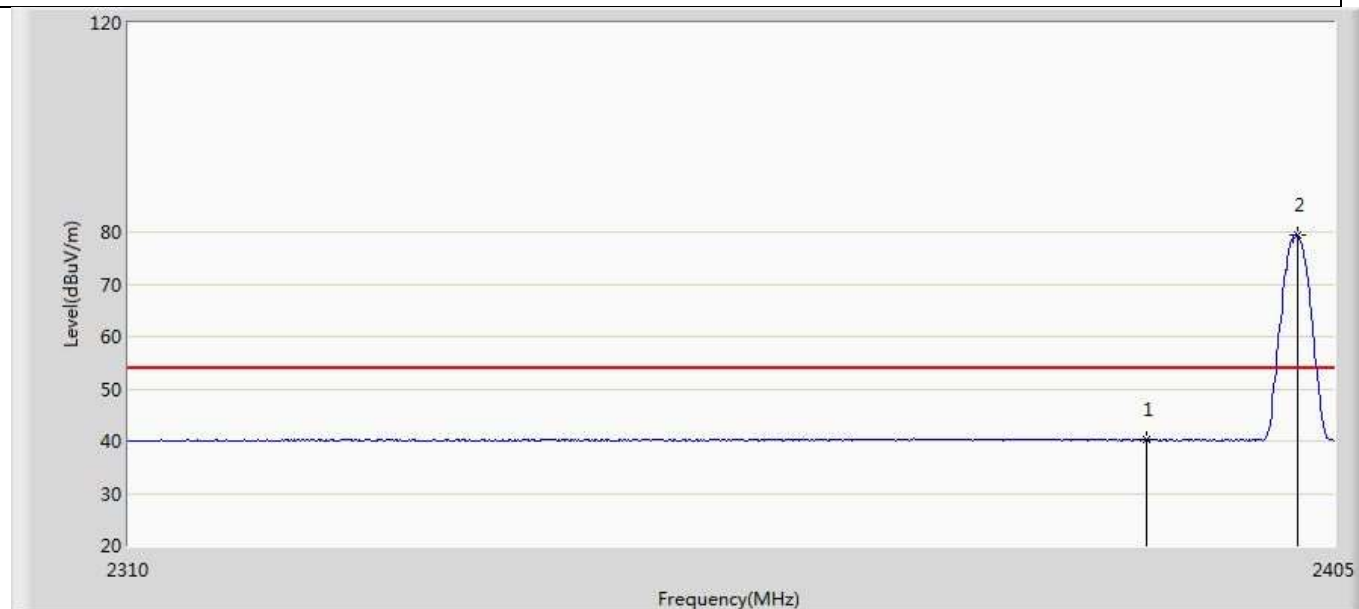
4.5.4 Test Data

Profile: 2090075R	Page No.: 25
Engineer: YULIU	
Site: AC5	Time: 2020/04/28 - 21:36
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 8960i	Power: Battery
Note: Mode 4:Transmit at 2402MHz by BLE	



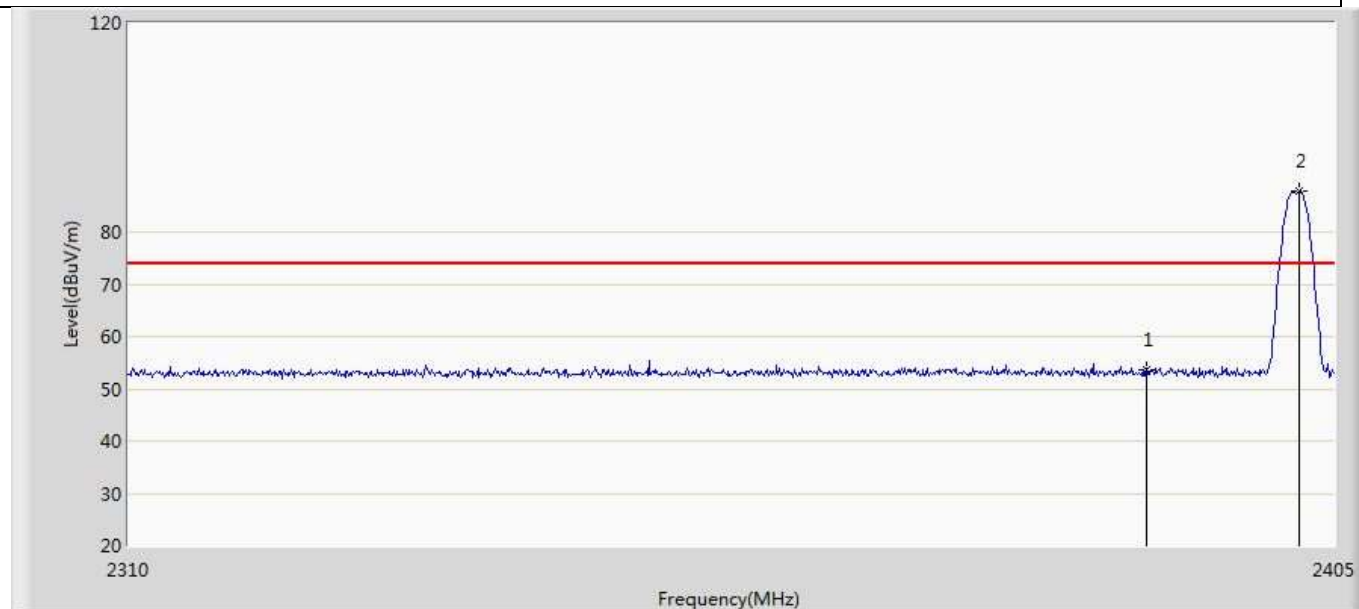
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	53.230	17.915	-20.770	74.000	35.315	PK
2	*	2402.245	90.647	55.335	16.647	74.000	35.312	PK

Profile: 2090075R	Page No.: 26
Engineer: YULIU	
Site: AC5	Time: 2020/04/28 - 21:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 8960i	Power: Battery
Note: Mode 4:Transmit at 2402MHz by BLE	



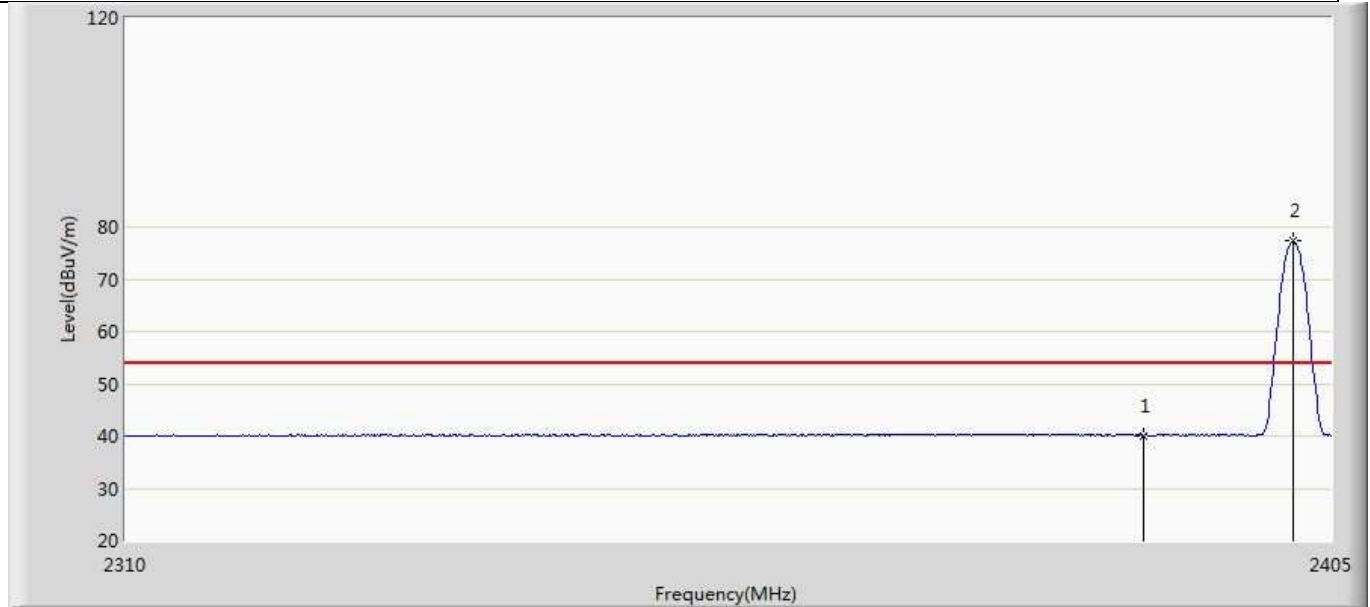
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	40.166	4.851	-13.834	54.000	35.315	AV
2	*	2402.055	79.307	43.995	25.307	54.000	35.312	AV

Profile: 2090075R	Page No.: 27
Engineer: YULIU	
Site: AC5	Time: 2020/04/28 - 21:42
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 8960i	Power: Battery
Note: Mode 4:Transmit at 2402MHz by BLE	



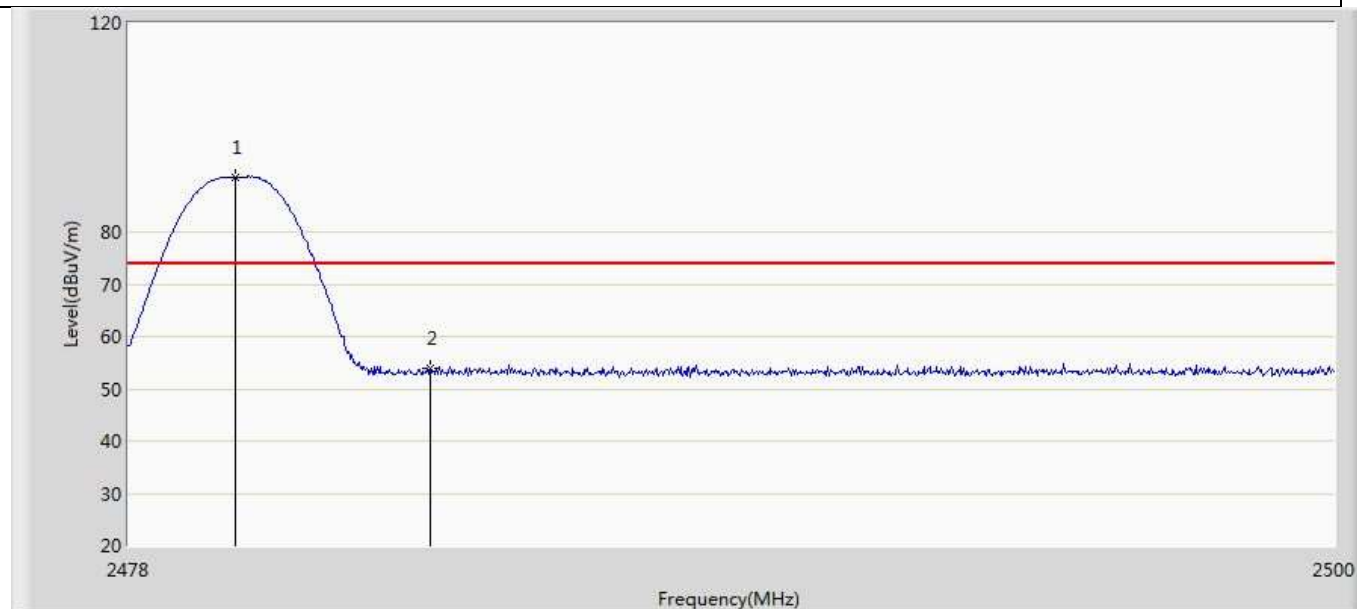
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	53.663	18.348	-20.337	74.000	35.315	PK
2	*	2402.245	87.817	52.505	13.817	74.000	35.312	PK

Profile: 2090075R	Page No.: 28
Engineer: YULIU	
Site: AC5	Time: 2020/04/28 - 21:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 8960i	Power: Battery
Note: Mode 4:Transmit at 2402MHz by BLE	



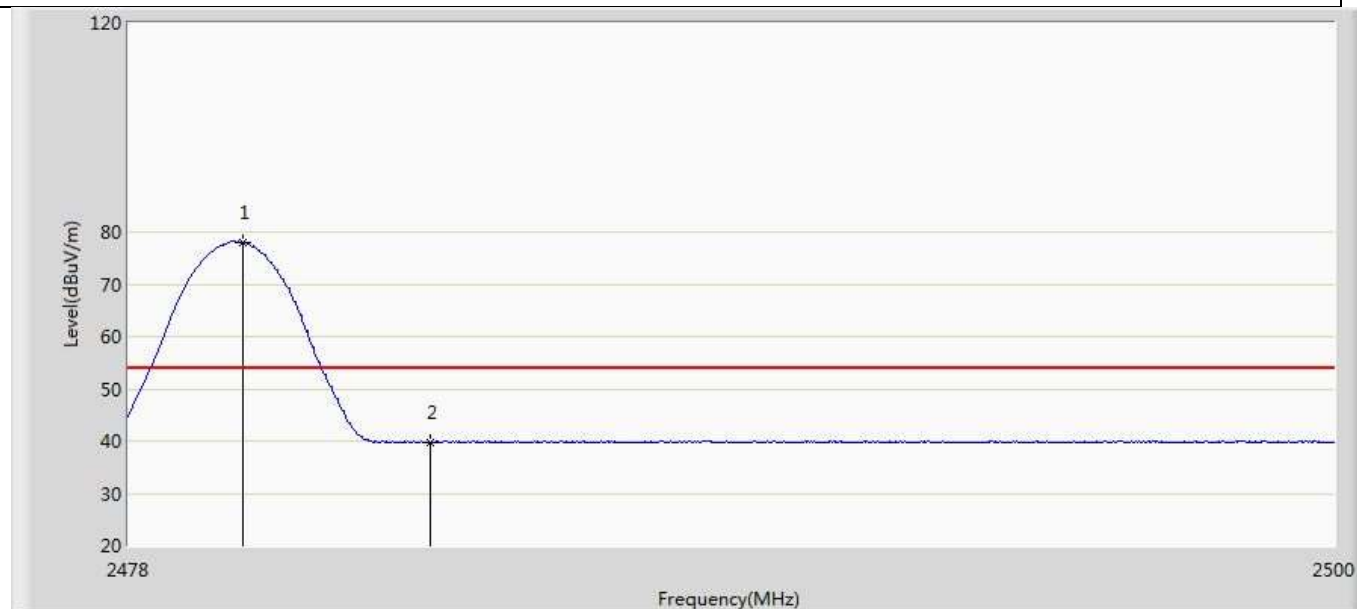
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	40.101	4.786	-13.899	54.000	35.315	AV
2	*	2401.960	77.360	42.048	23.360	54.000	35.312	AV

Profile: 2090075R	Page No.: 29
Engineer: YULIU	
Site: AC5	Time: 2020/04/28 - 21:46
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 8960i	Power: Battery
Note: Mode 4:Transmit at 2480MHz by BLE	



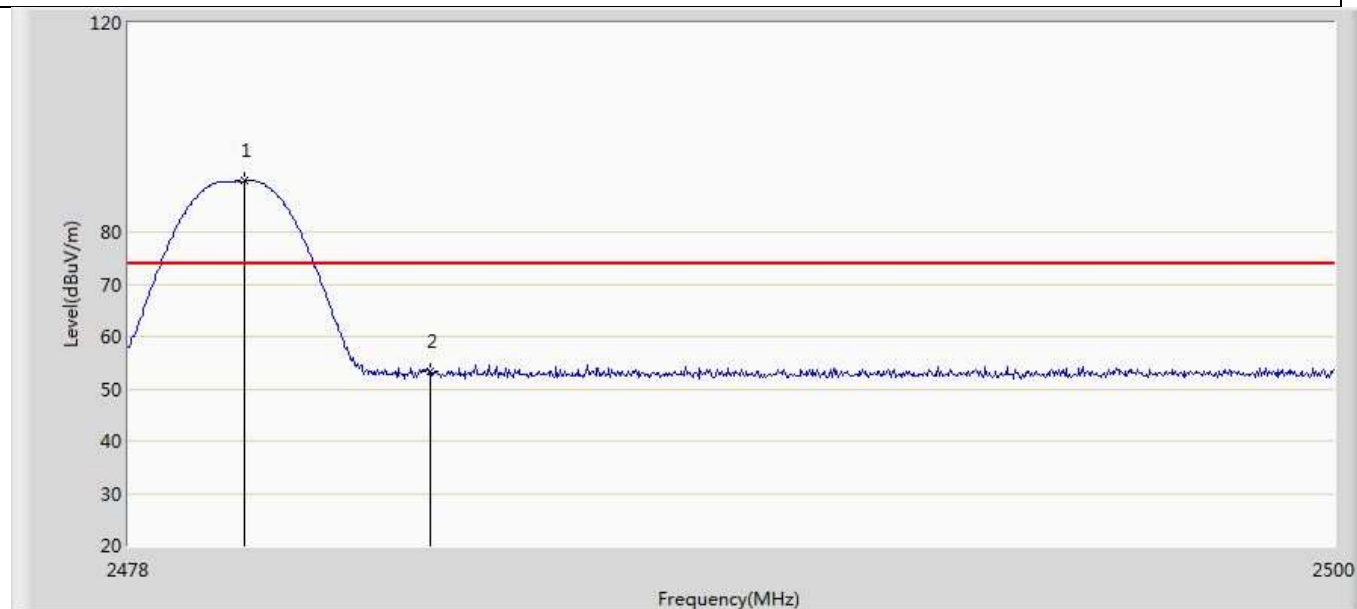
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.958	90.502	55.203	16.502	74.000	35.299	PK
2		2483.500	53.862	18.564	-20.138	74.000	35.297	PK

Profile: 2090075R	Page No.: 30
Engineer: YULIU	
Site: AC5	Time: 2020/04/28 - 21:51
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 8960i	Power: Battery
Note: Mode 4:Transmit at 2480MHz by BLE	



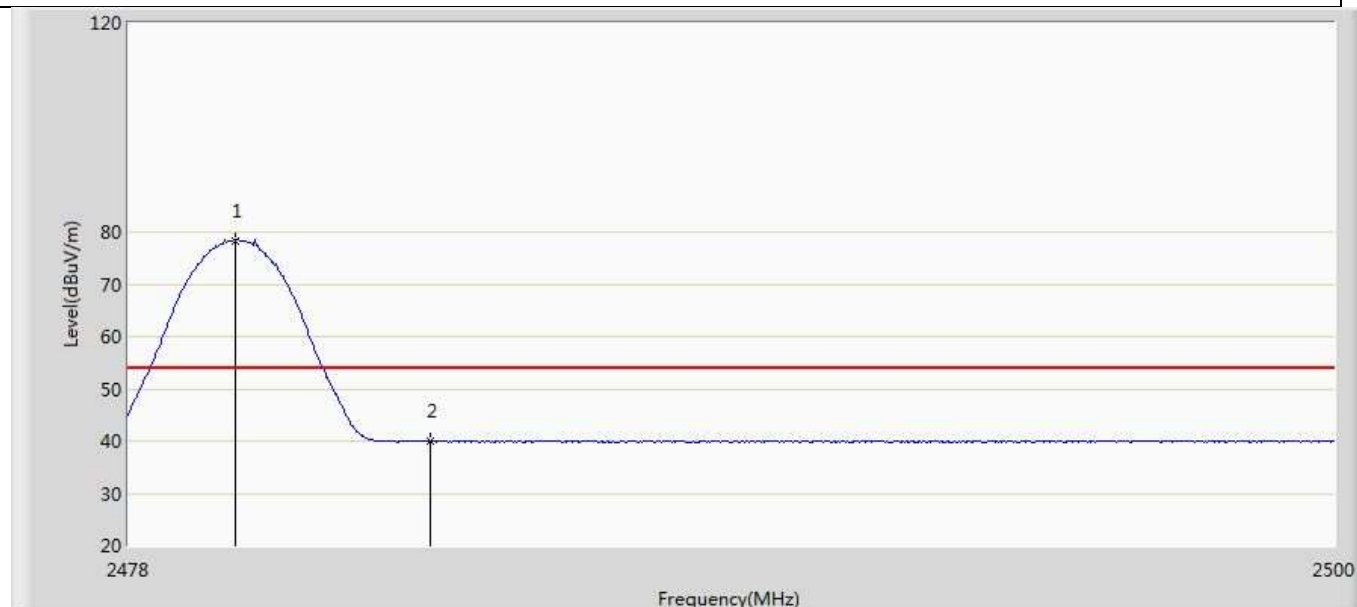
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.090	77.961	42.662	23.961	54.000	35.299	AV
2		2483.500	39.820	4.522	-14.180	54.000	35.297	AV

Profile: 2090075R	Page No.: 31
Engineer: YULIU	
Site: AC5	Time: 2020/04/28 - 21:54
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 8960i	Power: Battery
Note: Mode 4:Transmit at 2480MHz by BLE	



N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.112	89.713	54.414	15.713	74.000	35.299	PK
2		2483.500	53.345	18.047	-20.655	74.000	35.297	PK

Profile: 2090075R	Page No.: 32
Engineer: YULIU	
Site: AC5	Time: 2020/04/28 - 21:56
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 8960i	Power: Battery
Note: Mode 4:Transmit at 2480MHz by BLE	



N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.958	78.274	42.975	24.274	54.000	35.299	AV
2		2483.500	39.878	4.580	-14.122	54.000	35.297	AV

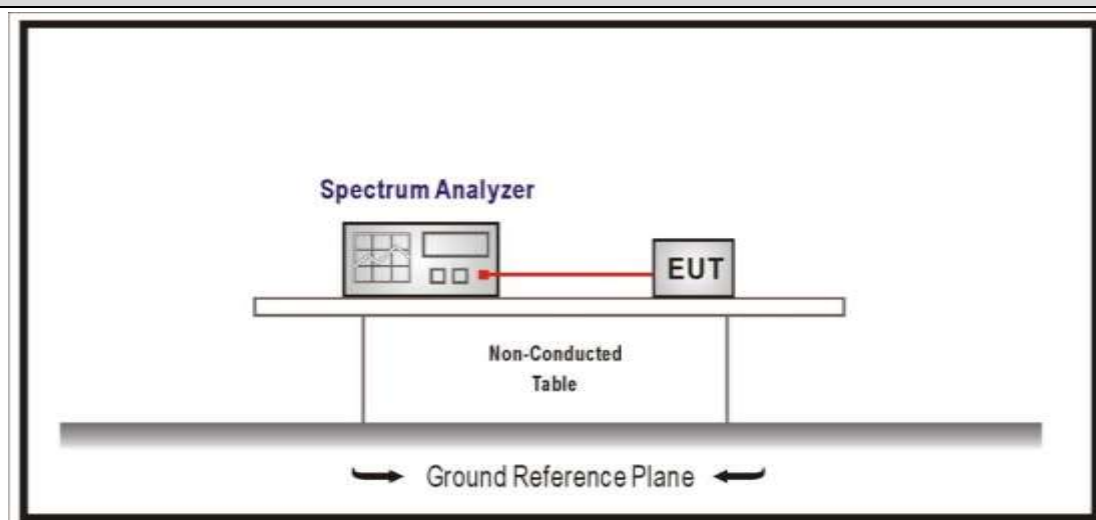
Note:

1. Measured Level = Reading Level + Factor.
2. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.
3. As the radiated emission was performed, so conducted emission was not tested.

4.6 DTS Bandwidth**VERDICT: PASS****4.6.1 Limit**

Standard	FCC Part 15 Subpart C Paragraph 15.247 (a)(2)
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Systems using digital modulation techniques operate in the 2400-2483.5 MHz. The minimum 6 dB bandwidth shall be at least 500 kHz

4.6.2 Test Setup**4.6.3 Test Procedure**

	Reference Rule	Chapter	Description
☒	ANSI C63.10	11.8	DTS bandwidth
☐	ANSI C63.10	11.8.1	Option 1
☒	ANSI C63.10	11.8.2	Option 2

4.6.4 Test Data

Mode	CH.	Test Freq. (MHz)	99% Occupied Bandwidth (kHz)	6dB Occupied Bandwidth (kHz)	Limit (kHz)	Result
1	00	2402	1060.8	688.9	>500	Pass
	19	2440	1063.6	676.9	>500	Pass
	39	2480	1067.0	681.0	>500	Pass

Note : The worst case of Occupied Bandwidth as below:

99% Occupied Bandwidth

Mode 1 / CH00 (2402MHz)



6dB Occupied Bandwidth

Mode 1 / CH19 (2440MHz)



4.7 Fundamental emission output power

VERDICT: PASS

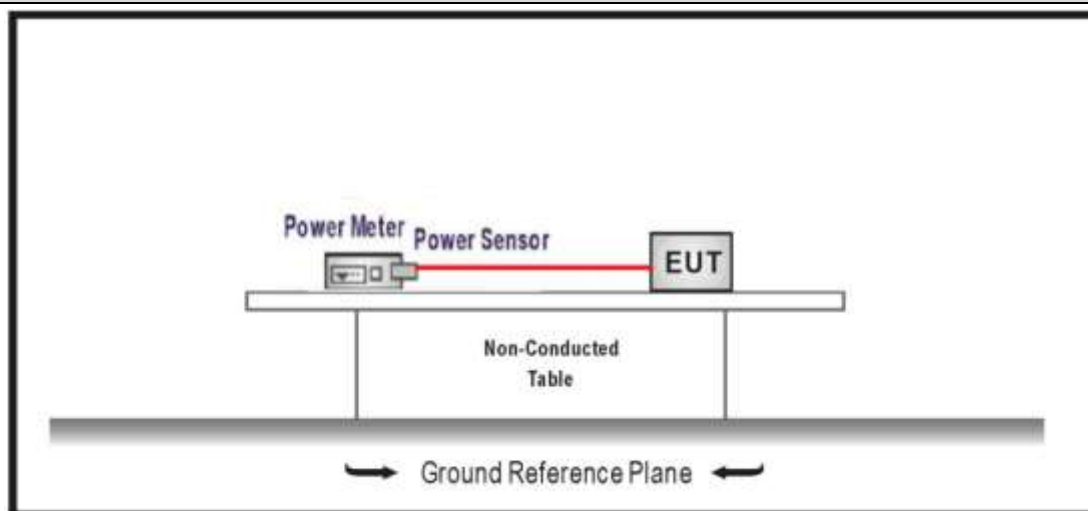
4.7.1 Limit

Standard		FCC Part 15 Subpart C Paragraph 15.247 (b)(3)
☒	GTX < 6dBi	$P_{out} \leq 30 \text{ dBm}$
☐	GTX > 6dBi	
☐	Non-Fix point-point	$P_{out} \leq 30 - (GTX - 6)$
☐	Fix point-point	$P_{out} \leq 30 - [(GTX - 6)]/3$
☐	Point-to-multipoint	$P_{out} \leq 30 - (GTX - 6)$
☐	Overlap Beams	$P_{out} \leq 30 - [(GTX - 6)]/3$
☐	Aggregate power transmitted simultaneously on all beams	$P_{out} \leq 30 - [(GTX - 6)]/3$
☐	single directional beam	$P_{out} \leq 30 - [(GTX - 6)]/3 + 8 \text{ dB}$

Note 1 : GTX directional gain of transmitting antennas.

Note 2 : Pout is maximum peak conducted output power .

4.7.2 Test Setup



4.7.3 Test Procedure

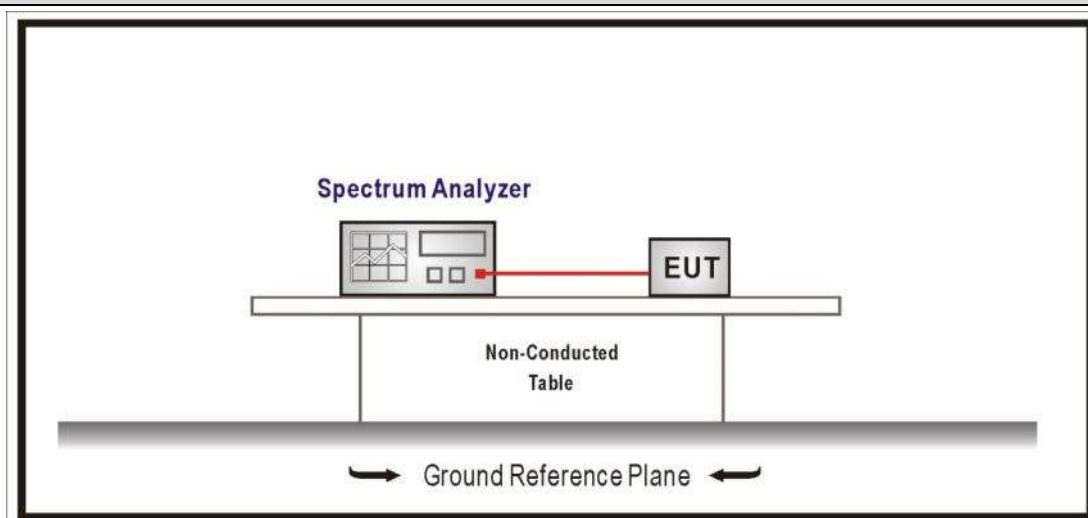
	References Rule			Chapter	Description		
☒	ANSI C63.10			11.9	Fundamental emission output power		
	☒	ANSI C63.10			11.9.1	Maximum peak conducted output power	
		☐	ANSI C63.10	11.9.1.1	RBW ≥ DTS bandwidth		
		☐	ANSI C63.10	11.9.1.2	Integrated band power method		
		☐	ANSI C63.10	11.9.1.3	PKPM1 Peak power meter method		
	☐	ANSI C63.10			11.9.2	Maximum conducted (average) output power	
		☐	ANSI C63.10			11.9.2.2	Measurement using a spectrum analyzer (SA)
			☐	ANSI C63.10	11.9.2.2.2	Method AVGSA-1(Duty cycle≥98%)	
			☐	ANSI C63.10	11.9.2.2.3	Method AVGSA-1A(Duty cycle≥98%)	
			☐	ANSI C63.10	11.9.2.2.4	Method AVGSA-2(Duty cycle≤98%)	
			☐	ANSI C63.10	11.9.2.2.5	Method AVGSA-2A(Duty cycle≤98%)	
			☐	ANSI C63.10	11.9.2.2.4	Method AVGSA-3	
			☐	ANSI C63.10	11.9.2.2.5	Method AVGSA-3A	
		☒	ANSI C63.10			11.9.2.3	Measurement using a power meter (PM)
		☒	ANSI C63.10	11.9.2.3.1	Method AVGPM		
		☐	ANSI C63.10	11.9.2.3.2	Method AVGPM-G		

4.7.4 Test Data

Mode	Channel	Test Frequency (MHz)	Power Output (dBm)	Limit (dBm)	Result
Mode 1	00	2402	-1.27	≤30	Pass
	19	2440	-2.11	≤30	Pass
	39	2480	0.59	≤30	Pass

4.8 Power Density**VERDICT: PASS****4.8.1 Limit:**

Standard	FCC Part 15 Subpart C Paragraph 15.247 (b)(3)
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Power Spectral Density $\leq 8 \text{ dBm/3kHz}$ **4.8.2 Test Setup****4.8.3 Test Procedure**

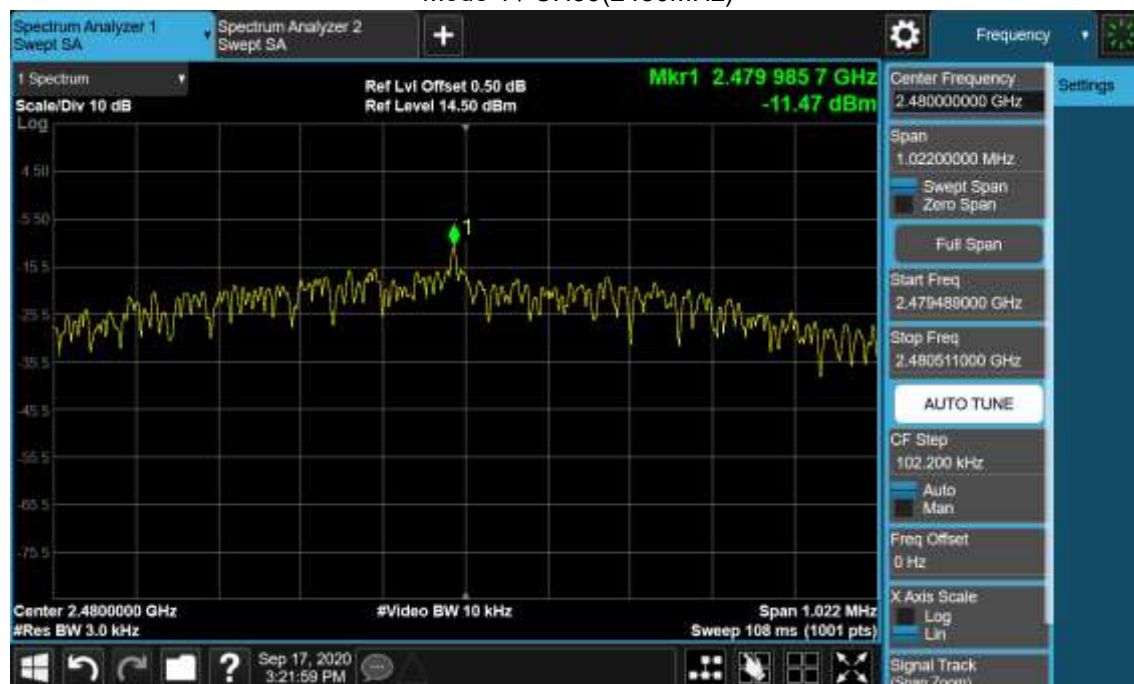
	References Rule		Chapter	Description
☒	ANSI C63.10		11.10	Maximum power spectral density level in the fundamental emission
	☒	ANSI C63.10	11.10.2	Method PKPSD (peak PSD)
	☐	ANSI C63.10	11.10.3	Method AVGPSD-1(Duty cycle $\geq 98\%$)
	☐	ANSI C63.10	11.10.4	Method AVGPSD-1A(Duty cycle $\geq 98\%$)
	☐	ANSI C63.10	11.10.5	Method AVGPSD-2(Duty cycle $< 98\%$)
	☐	ANSI C63.10	11.10.6	Method AVGPSD-2A(Duty cycle $< 98\%$)
	☐	ANSI C63.10	11.10.7	Method AVGPSD-3
	☐	ANSI C63.10	11.10.8	Method AVGPSD-3A

4.8.4 Test Data

Mode	Channel	Test Frequency (MHz)	Measurement PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
Mode 1	00	2402	-15.08	≤8	Pass
	19	2440	-15.05	≤8	Pass
	39	2480	-11.47	≤8	Pass

Note : The worst case of PSD as below:

Mode 1 / CH39(2480MHz)



4.9 Antenna Requirement**VERDICT: PASS****4.9.1 Limit:**

Standard	FCC Part 15 Subpart C Paragraph 15.203
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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 shall be considered sufficient to comply with the provisions of this section. 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. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

4.9.2 Antenna Connector Construction:

- | | |
|-------------------------------------|--|
| ☒ | The use of a permanently attached antenna |
| ☐ | The antenna use of a unique coupling to the intentional radiator |
| ☐ | The use of a nonstandard antenna jack or electrical connector |

Please refer to the attached document "Internal Photograph" to show the antenna connector.

5 TEST SETUP PHOTO AND EUT PHOTO

Remark: The test setup photo and EUT Photo please see appendix.

_____ The End _____