



Test report No:
2040170R-RF-US-P06V02

FCC&ISED TEST REPORT

Product Name	Ring Bridge
Trademark	Ring
Model and /or type reference	5C28S8
FCC ID	2AEUPRBBR003
IC	20271- RBBR003
Applicant's name / address	Ring, LLC. 1523 26th St, Santa Monica, CA 90404
Factor's name / address	AZ e-lite Pte Ltd 31 Ubi Road 1 Aztech Building 408694 Singapore
Test method requested, standard	FCC CFR Title 47 Part 15 Subpart C Section 15.247 ANSI C63.10: 2013 RSS-Gen Issue 5 / RSS-247 Issue 2
Verdict Summary	IN COMPLIANCE
Documented By	Kitty Li/Project Assistant 
Reviewed by (name / position & signature)	Frank He/ Technical Supervisor 
Approved by (name / position & signature)	Jack Zhang/ Supervisor 
Date of issue	2020-08-03
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.

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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)	Apr. 08, 2020
Date (start test)	Jul. 09, 2020
Date (finish test)	Jul. 16, 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
2040170R-RF-US-P06V02	V1.0	Initial issue of report.	2020-08-03

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 FCC 15.247.
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, unless the specification, standard or customer have special requirements.
4. The test results presented in this report relate only to the object tested.
5. The test results relate only to the samples tested.
6. The test report shall not be reproduced without the written approval of DEKRA Testing and Certification (Suzhou) Co., Ltd.
7. This report will not be used for social proof function in China market.
8. 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 Data Rate;
 - Chapter 1.4 Channel List;

USED EQUIPMENT

AC Power Line Conducted Emission / TR1(Chamber details)

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
EMI Test Receiver	R&S	ESCI	100906	2020.04.18	2021.04.17
Two-Line V-Network	R&S	ENV216	101044	2020.04.18	2021.04.17
Current Probe	R&S	EZ-17	100678	2020.03.26	2021.03.25
50ohm Termination	SHX	TF2	07081403	2019.09.02	2020.09.01
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	N/A	N/A
Temperature/Humidity Meter	RTS	RTS-8S	TR1-TH	2019.08.21	2020.08.20
Coaxial Cable	Suhner	RG 223	TR1-C1	2019.09.27	2020.09.26
DEKRA test software	N/A	N/A	N/A	N/A	N/A

RF conducted test / TR8(Chamber details)

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2019.09.28	2020.09.27
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2020.04.17	2021.04.16
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2019.08.30	2020.08.29
DEKRA test software	N/A	N/A	N/A	N/A	N/A

Radiated Emission(30MHz-1GHz) / AC3(Chamber details)

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
EMI Test Receiver	R&S	ESCI	100573	2019.12.28	2020.12.27
Bilog Antenna	Teseq GmbH	CBL6112D	27611	2019.09.23	2020.09.22
Temperature/Humidity Meter	RTS	RTS-8S	AC2-TH	2019.09.02	2020.09.01
Coaxial Cable	Huber+Suhner	RG 214	AC2-C	2020.04.05	2021.04.04
DEKRA test software	N/A	N/A	N/A	N/A	N/A

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

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
EMI Receiver	Agilent	N9038A	MY51210196	2020.04.18	2021.04.17
DRG Horn	ETS-Lindgren	3117	00123988	2019.09.25	2020.09.24
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170D	750	2019.01.05	2021.01.04
Pre-Amplifier	Schwarzbeck	BBV 9721	9721-024	2019.07.17	2021.07.16
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2019.09.02	2020.09.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2020.04.05	2021.04.04
DEKRA test software	N/A	N/A	N/A	N/A	N/A

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%. Uncertainties is comply with standard required as below.

Test item	Uncertainty
AC Power Line Conducted Emission	± 2.92 dB
Peak Power Output	± 1.13 dB
Radiated Emission(30MHz~1GHz)	Horizontal: 30MHz~200MHz: 4.60 dB 200MHz~1GHz: 4.10 dB Vertical: 30MHz~200MHz: 4.80 dB 200MHz~1GHz: 4.10 dB
Radiated Emission(1GHz~26.5GHz)	Horizontal: 1GHz~18GHz: 5.00 dB Vertical: 1GHz~18GHz: 4.80 dB Horizontal: 18GHz~40GHz: 4.70 dB Vertical: 18GHz~40GHz: 4.60 dB
RF antenna conducted test	± 1.13 dB
Radiated Emission Band Edge	± 5.00 dB
DTS Bandwidth	± 279 Hz
Occupied Bandwidth	± 279 Hz
Power Density	± 1.13 dB

1 GENERAL INFORMATION

1.1 General Description of the Item(s)

All information are form clinet.

Model / Type number	5C28S8
Trademark	Ring
Manufacturer.....	Ring, LLC.
Manufacturer Address	1523 26th St, Santa Monica, CA 90404

Wireless specification.....	LoRa
Operating frequency range(s) :	LoRa(DTS) : 902.5MHz~926.5MHz :500KHz LoRa(FHSS) : 902.2MHz~927.8MHz :125KHz FSK #1: 902.2MHz~927.8MHz FSK #2: 902.4MHz~927.6MHz FSK #3: 902.5MHz~927.5MHz
Modulation	LoRa/FSK
Date Rate.....	LoRa: DR0/1/2/3/4/5/6/7 FSK #1:50Kbps FSK #2:150Kbps FSK #3:250Kbps
Number of channel.....	LoRa(DTS): 31 LoRa(DTS): 129 FSK #1:129 FSK #2:64 FSK #3:51
Device category	<input type="checkbox"/> Fixed point-to-point <input type="checkbox"/> Emit multiple directional beams, simultaneously or sequentially <input checked="" type="checkbox"/> Other cases

Rated power supply.....	Voltage and Frequency	
	<input type="checkbox"/>	AC: 220 - 240 V, 50/60 Hz
	<input type="checkbox"/>	AC: 100 - 240 V, 50/60 Hz
	<input type="checkbox"/>	DC: 12 - 24 Vdc
	<input type="checkbox"/>	Battery:
	<input checked="" type="checkbox"/>	USB
Mounting position	<input type="checkbox"/>	Table top equipment
	<input checked="" type="checkbox"/>	Wall/Ceiling mounted equipment
	<input type="checkbox"/>	Floor standing equipment
	<input type="checkbox"/>	Hand-held equipment
	<input type="checkbox"/>	Other:

1.2 Antenna Information

Antenna model / type number.....:	N/A		
Antenna serial number	N/A		
Antenna Delivery	<input checked="" type="checkbox"/>	1TX + 1RX	
	<input type="checkbox"/>	2TX + 2RX	
	<input type="checkbox"/>	Others:.....	
Antenna technology.....:	<input checked="" type="checkbox"/>	SISO	
	<input type="checkbox"/>	MIMO	<input type="checkbox"/> Basic
			<input type="checkbox"/> CDD
			<input type="checkbox"/> Sectorized
			<input type="checkbox"/> Beam-forming
Antenna Type.....:	<input type="checkbox"/>	External	<input type="checkbox"/> Dipole
			<input type="checkbox"/> Sectorized
			<input checked="" type="checkbox"/>
	<input type="checkbox"/>	PCB	
	<input type="checkbox"/>	Metal Antenna	
	Antenna Gain.....:	-1.0 dBi	

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	Mode 1: Transmit by Lora with 500K bandwidth(902.5-926.5)
	Mode 2: Transmit by Lora with 125K bandwidth(902.2-927.8)
	Mode 3: Transmit by FSK with 50Kbps data rate(902.2-927.8)
	Mode 4: Transmit by FSK with 150Kbps data rate(902.4-927.6)
	Mode 5: Transmit by FSK with 250Kbps data rate(902.5-927.5)

2.2 Support / Auxiliary equipment / unit / Test software for the EUT

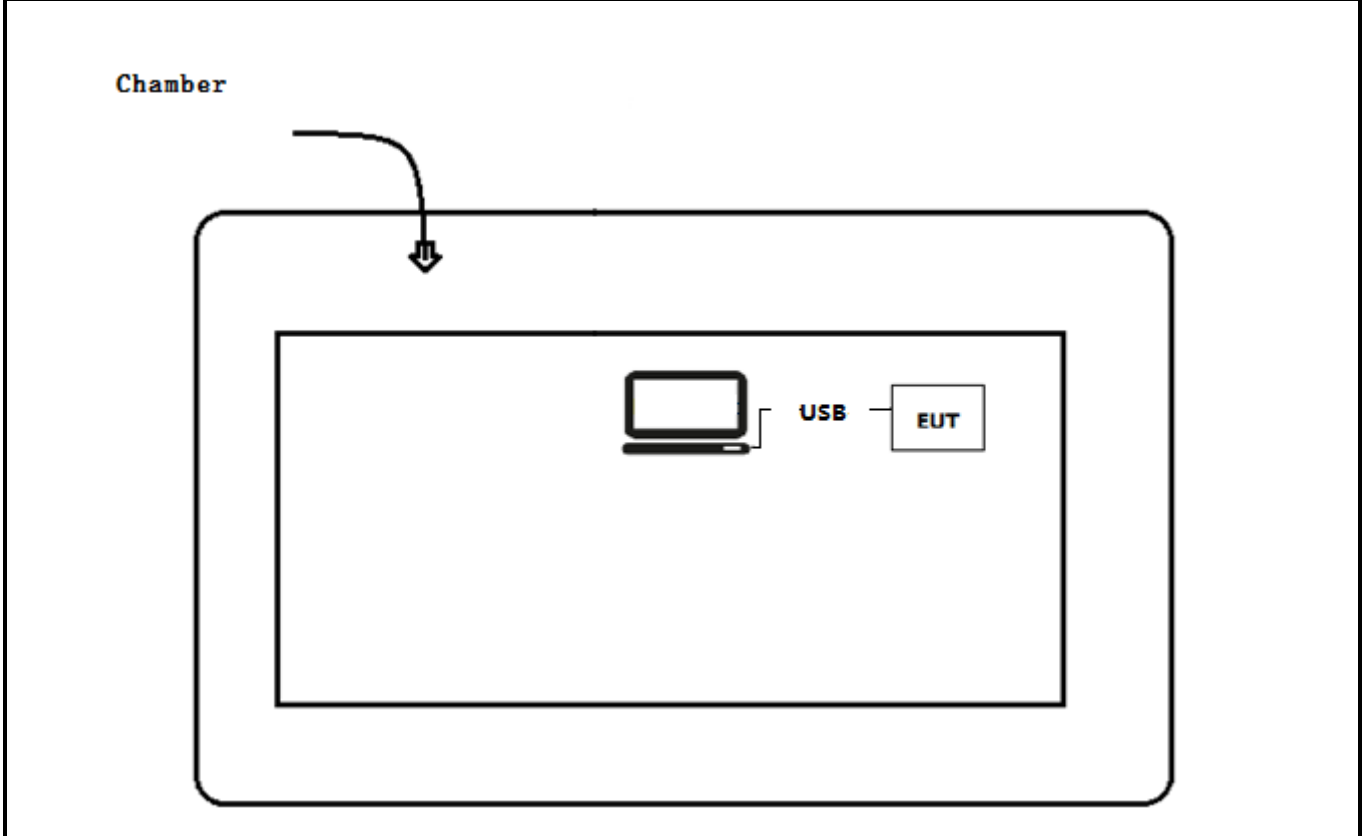
The EUT has been tested with the following auxiliary equipment / unit / software:

Auxiliary equipment	Type / Version	Manufacturer	Supplied by
Notebook	Think pad x220	Lenovo	Adapter
USB Control Cable	Serial to USB	N/A	N/A
software	Type / Version	Manufacturer	Supplied by
IPOP	V4.1	N/A	N/A

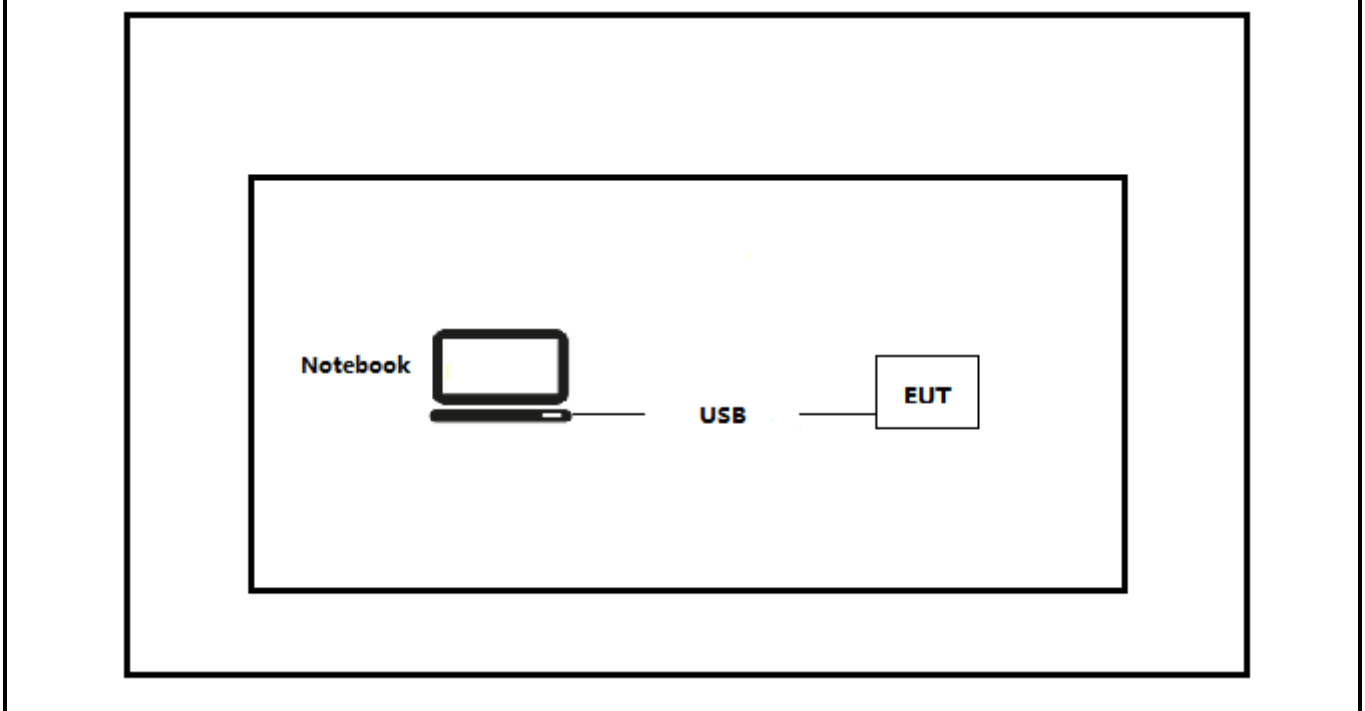
2.3 Test Configuration / Block diagram used for tests

The following test setup / configuration / block diagram has been used during the tests:

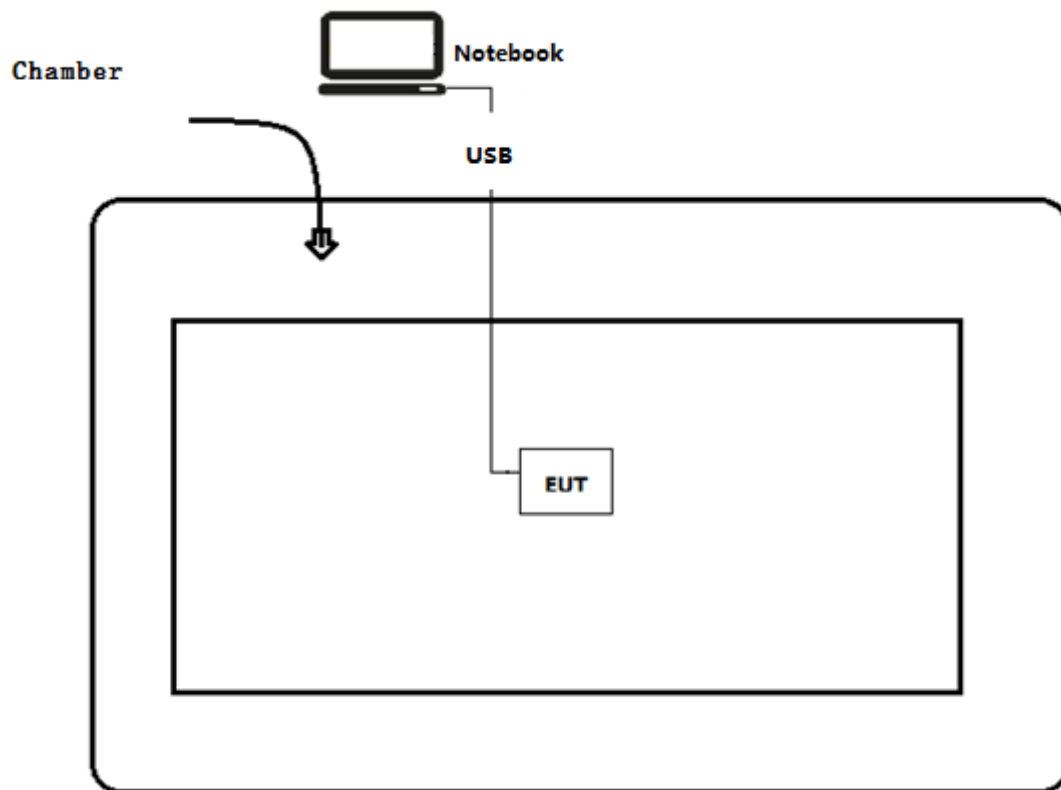
Test setup Diagram- AC Line Conducted Emission Test



Test setup Diagram- Conducted test



Test setup Diagram- Conducted test



2.4 Testing process

1	Setup the EUT as shown in Section 2.4.
2	Input the commands.
3	Configure the test mode, the test channel, and the data rate.
4	Start the continuous Transmitter.
5	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	2020	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
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 Overview of results

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(d), 15.209	PASS	---
Emissions in non-restricted frequency bands	FCC 15.247(d)	PASS	---
Radiated Emission Band Edge	FCC 15.247(d), 15.209	PASS	---
Fundamental emission output power	FCC 15.247(b)(3)	PASS	---
DTS Bandwidth	FCC 15.247(a)(2)	PASS	---
20dB Bandwidth	FCC 15.247(a)(1)	PASS	
Carrier Frequency Separation	FCC 15.247(a)(1)	PASS	
Number of Hopping Frequencies	FCC 15.247(a)(1)(iii)	PASS	
Time of Occupancy (Dwell Time)	FCC 15.247(a)(1)(iii)	PASS	
Power Spectral Density	FCC 15.247(e)	PASS	---
Antenna Requirement	FCC 15.203	PASS	---

3.3 Test Facility

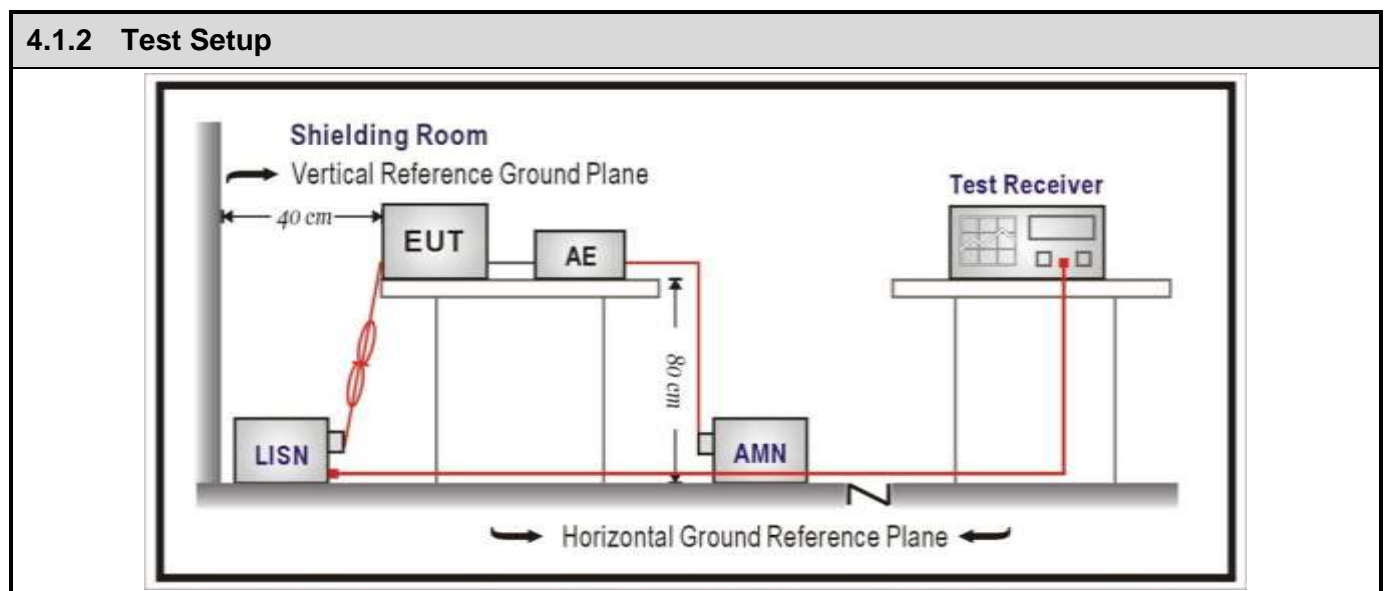
USA	:	FCC Designation Number: CN1199
Canada	:	CAB identifier Number: CN0040

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(μ V) ¹]	Limit: AV [dB(μ V) ¹]
0,15 - 0,50	66 - 56 ²⁾	56 - 46 ²⁾
0,50 - 5,0	56	46
5,0 - 30	60	50

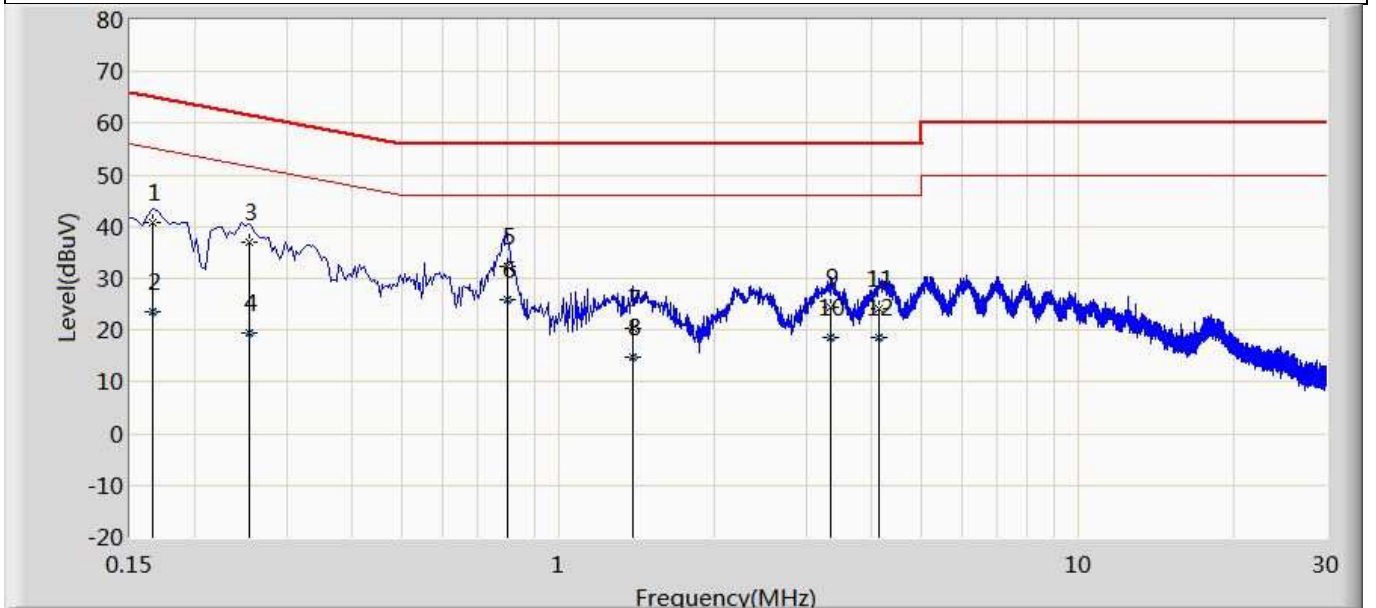
¹⁾ At the transition frequency, the lower limit applies.
²⁾ The limit decreases linearly with the logarithm of the frequency.



4.1.3 Test Procedure			
	References Rule	Chapter	Item
<input checked="" type="checkbox"/>	ANSI C63.10-2013	6.2	Standard test method for ac power-line conducted emissions from unlicensed wireless devices

4.1.4 Test Data

Engineer: Pawn	
Site: TR1	Time: 2020/04/13
Limit: FCC_Part15.207_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Line
EUT: Ring Bridge	Power: AC 120V/60Hz
Note: Mode1	



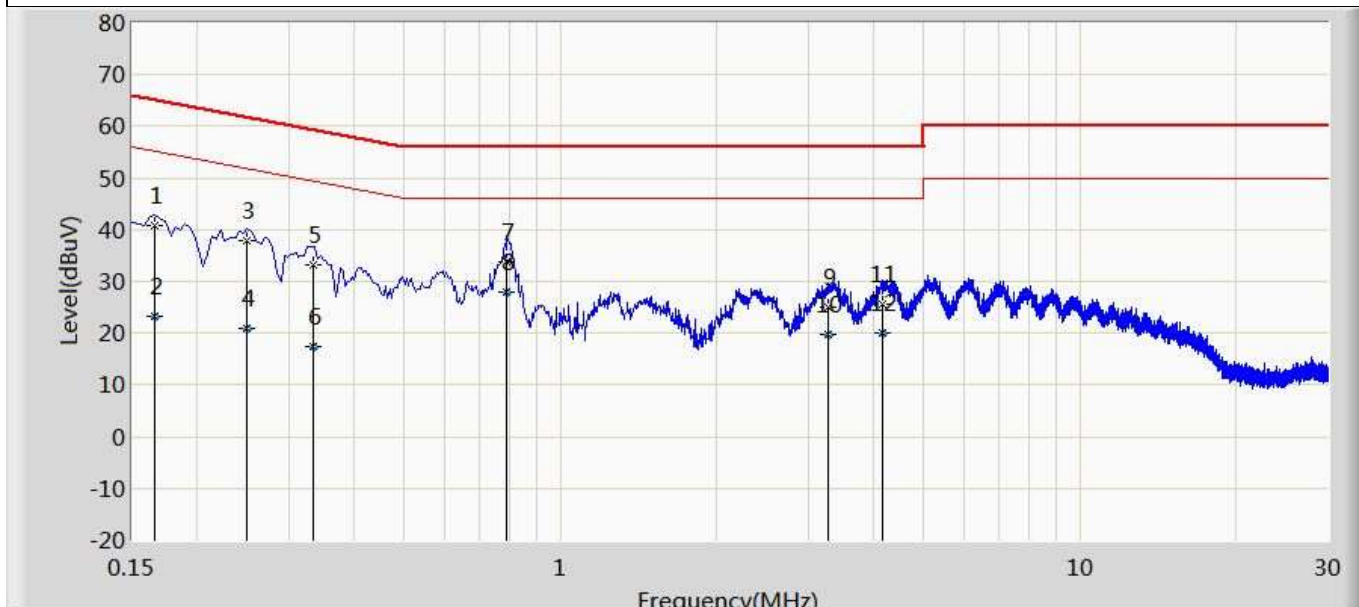
No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.153	41.204	31.584	-24.474	65.158	9.593	0.027	0.000	QP
2		0.153	23.649	14.029	-31.649	55.158	9.593	0.027	0.000	AV
3		0.256	37.582	27.952	-24.884	61.625	9.598	0.031	0.000	QP
4		0.256	19.577	9.948	-32.368	51.625	9.598	0.031	0.000	AV
5		0.798	32.608	22.965	-23.872	56.000	9.590	0.053	0.000	QP
6	*	0.798	25.983	16.34	-20.297	46.000	9.590	0.053	0.000	AV
7		1.378	20.464	10.796	-35.656	56.000	9.598	0.070	0.000	QP
8		1.378	14.887	5.219	-31.153	46.000	9.598	0.070	0.000	AV
9		3.341	24.416	14.673	-31.784	56.000	9.628	0.115	0.000	QP
10		3.341	18.596	8.853	-27.524	46.000	9.628	0.115	0.000	AV
11		4.127	24.496	14.728	-32.084	56.000	9.639	0.130	0.000	QP
12		4.127	18.829	9.061	-27.791	46.000	9.639	0.130	0.000	AV

Note:

1. " * ", means this data is the worst emission level.

2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Engineer: Pawn	
Site: TR1	Time: 2020/04/13
Limit: FCC_Part15.207_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Neutral
EUT: Ring Bridge	Power: AC 120V/60Hz
Note: Mode1	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.169	41.308	31.688	-24.71	65.158	9.593	0.027	0.000	QP
2		0.169	23.433	13.813	-31.765	55.158	9.593	0.027	0.000	AV
3		0.252	38.134	28.505	-24.043	61.757	9.598	0.031	0.000	QP
4		0.252	21.387	11.758	-31.271	51.757	9.598	0.031	0.000	AV
5		0.331	33.345	23.715	-26.066	59.351	9.595	0.035	0.000	QP
6		0.331	17.726	8.095	-32.266	49.351	9.595	0.035	0.000	AV
7		0.790	33.849	24.206	-22.211	56.000	9.590	0.052	0.000	QP
8	*	0.790	27.987	18.344	-18.353	46.000	9.590	0.052	0.000	AV
9		3.269	25.093	15.352	-31.247	56.000	9.627	0.114	0.000	QP
10		3.269	19.995	10.254	-26.665	46.000	9.627	0.114	0.000	AV
11		4.152	25.764	15.996	-30.816	56.000	9.639	0.129	0.000	QP
12		4.152	20.368	10.599	-26.392	46.000	9.639	0.129	0.000	AV

Remark	<p>1. " * ", means this data is the worst emission level.</p> <p>2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).</p>
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4.2 Emissions in restricted frequency bands	VERDICT: PASS
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4.2.1 Limit			
Standard		FCC Part 15 Subpart C Paragraph 15.205; 15.209	
Restricted Bands of operation for FCC			
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	Above 38.6
13.36 - 13.41	--	--	--
Restricted Bands of operation for ISSED			
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	--	--

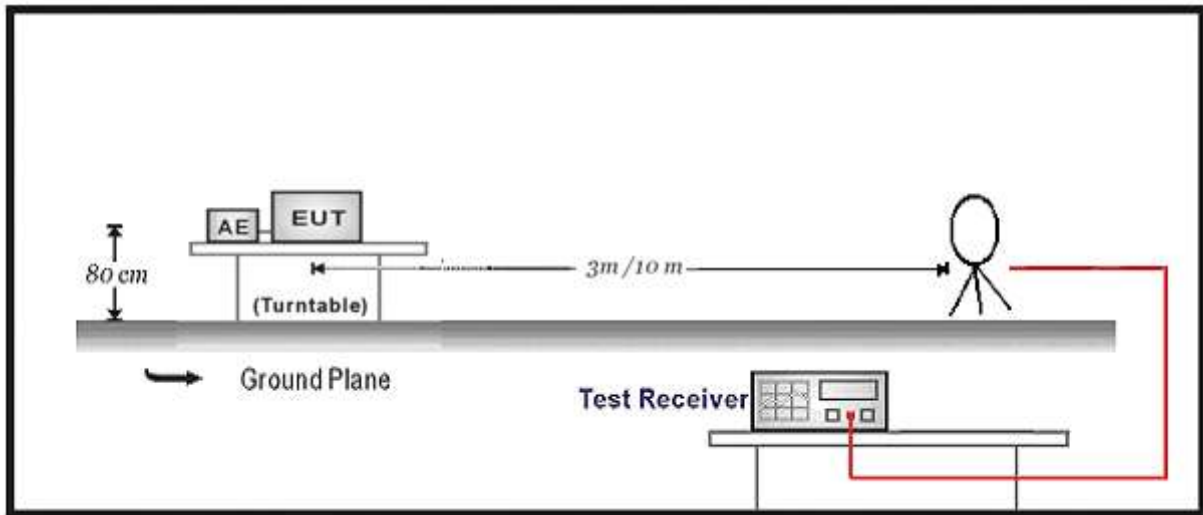
Restricted Band Emissions Limit			
Frequency (MHz)	Field strength ($\mu\text{V/m}$)	Field strength ($\text{dB}\mu\text{V/m}$)	Measurement distance (m)
0.009 - 0.49	2400/F(kHz)	48.5 - 13.8	300 ^(Note 1)
0.49 - 1.705	24000/F(kHz)	33.8 - 23	30 ^(Note 1)
1.705 - 30	30	29.5	30 ^(Note 1)
30 - 88	100	40	3 ^(Note 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).

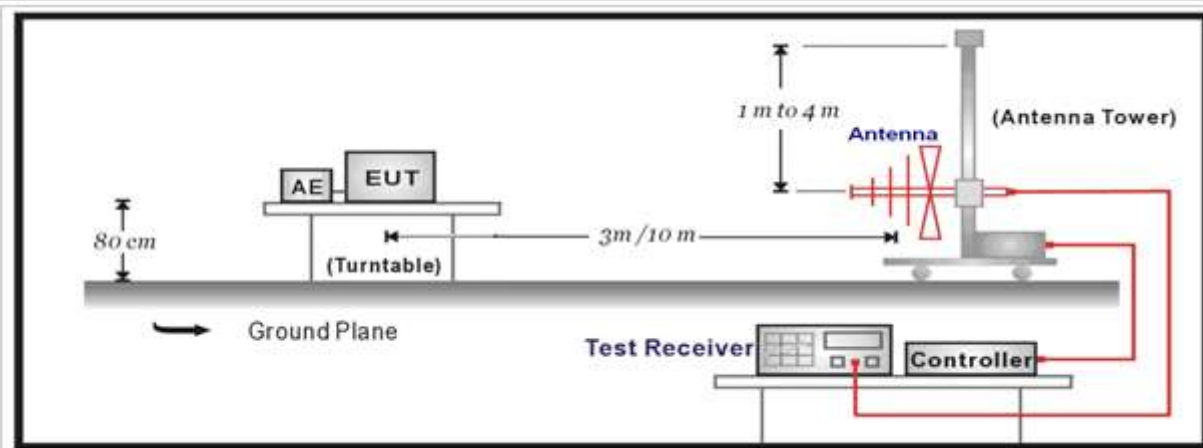
Note 2: At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated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

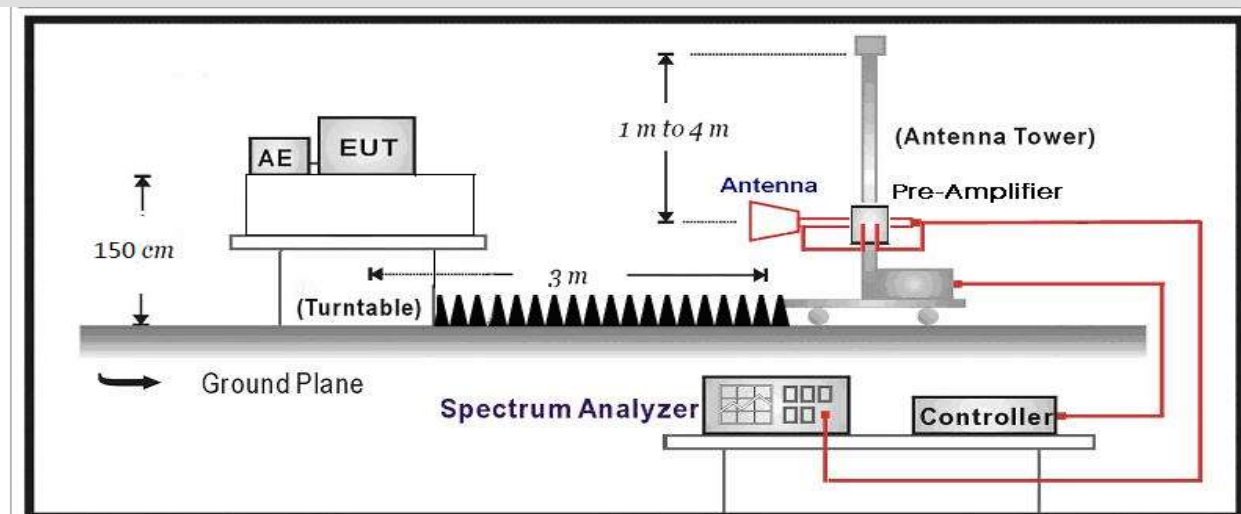
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



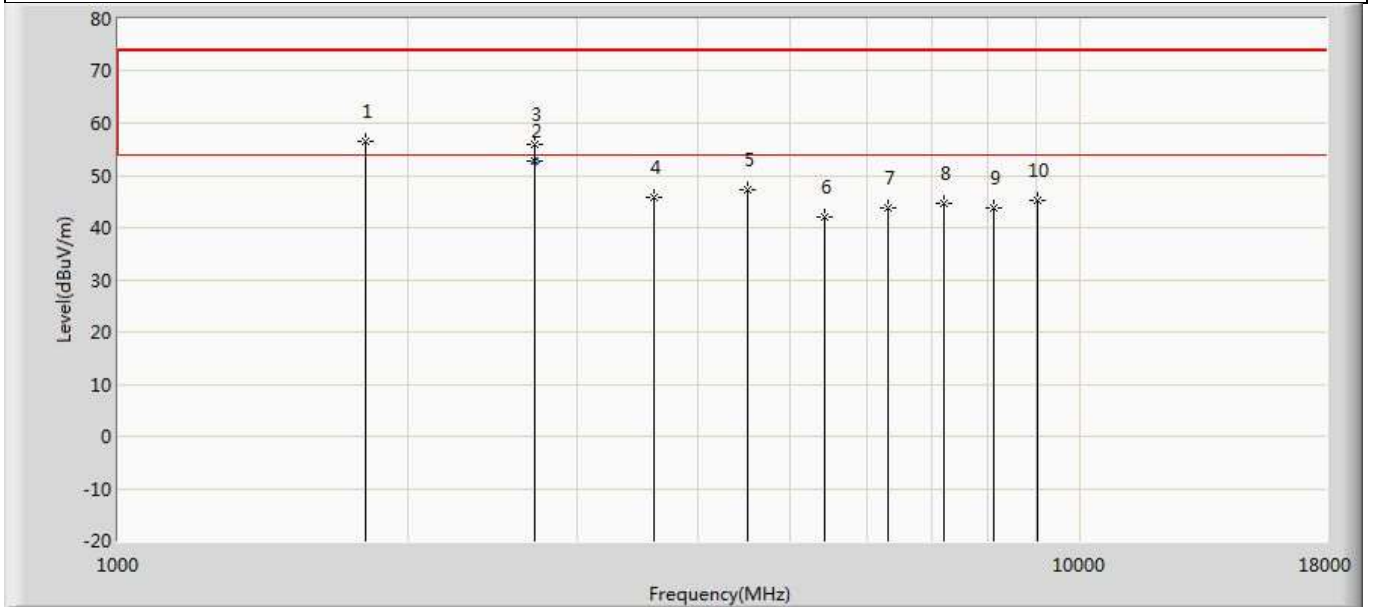
Above 1GHz Test Setup:



4.2.3 Test Procedure			
	References Rule	Chapter	Description
<input checked="" type="checkbox"/>	ANSI C63.10	11.12	Emissions in restricted frequency bands
	<input checked="" type="checkbox"/> ANSI C63.10	11.12.1	Radiated emission measurements
	<input checked="" type="checkbox"/> ANSI C63.10	6.3	Radiated spurious emission test
	<input checked="" type="checkbox"/> ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
	<input checked="" type="checkbox"/> ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
	<input checked="" type="checkbox"/> ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz
	<input type="checkbox"/> ANSI C63.10	11.12.2	Antenna-port conducted measurements
	<input type="checkbox"/> ANSI C63.10	11.12.2.3	Quasi-peak measurement procedure
	<input type="checkbox"/> ANSI C63.10	11.12.2.4	Peak power measurement procedure
	<input type="checkbox"/> ANSI C63.10	11.12.2.5	Average power measurement procedures
	<input type="checkbox"/> ANSI C63.10	11.12.2.5.1	Trace averaging with continuous EUT transmission at full power
	<input type="checkbox"/> ANSI C63.10	11.12.2.5.2	Trace averaging across ON and OFF times of the EUT transmissions followed by duty cycle correction
	<input type="checkbox"/> ANSI C63.10	11.12.2.5.3	Reduced VBW averaging across ON and OFF times of the EUT transmissions with max hold

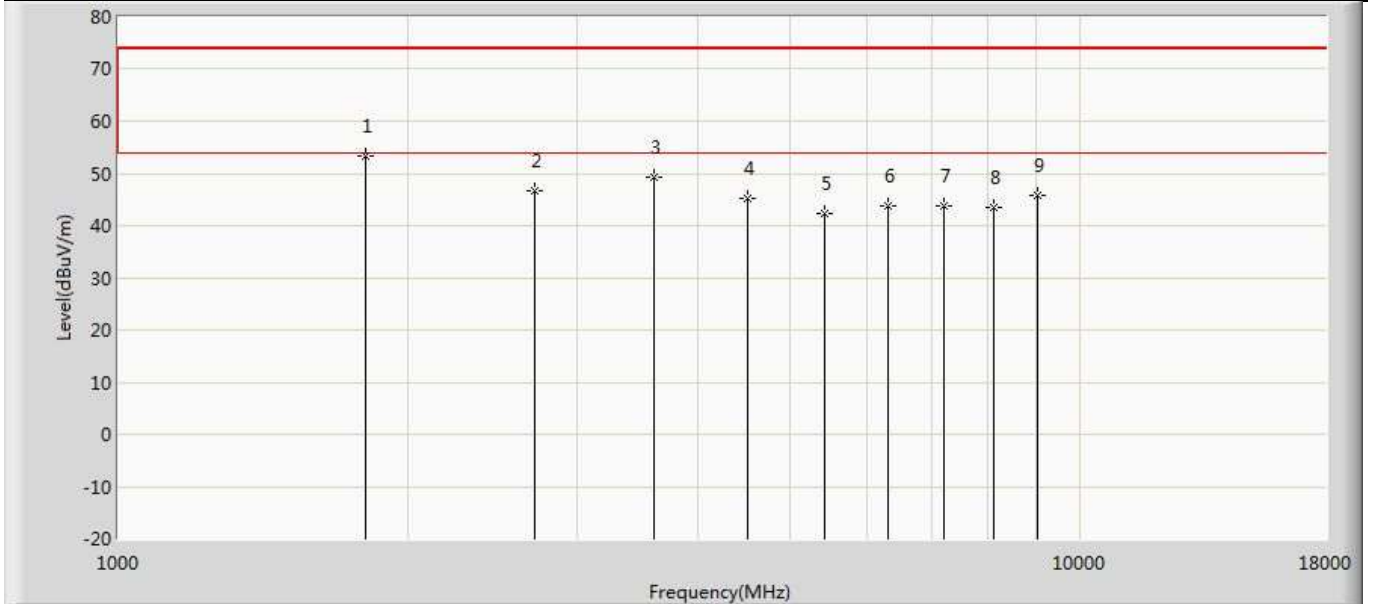
4.2.4 Test Data

Profile: 2040170R	Page No.: 52
Engineer: Tongben	
Site: AC5	Time: 2020/07/02 - 19:23
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Ring Bridge	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 902.5MHz	



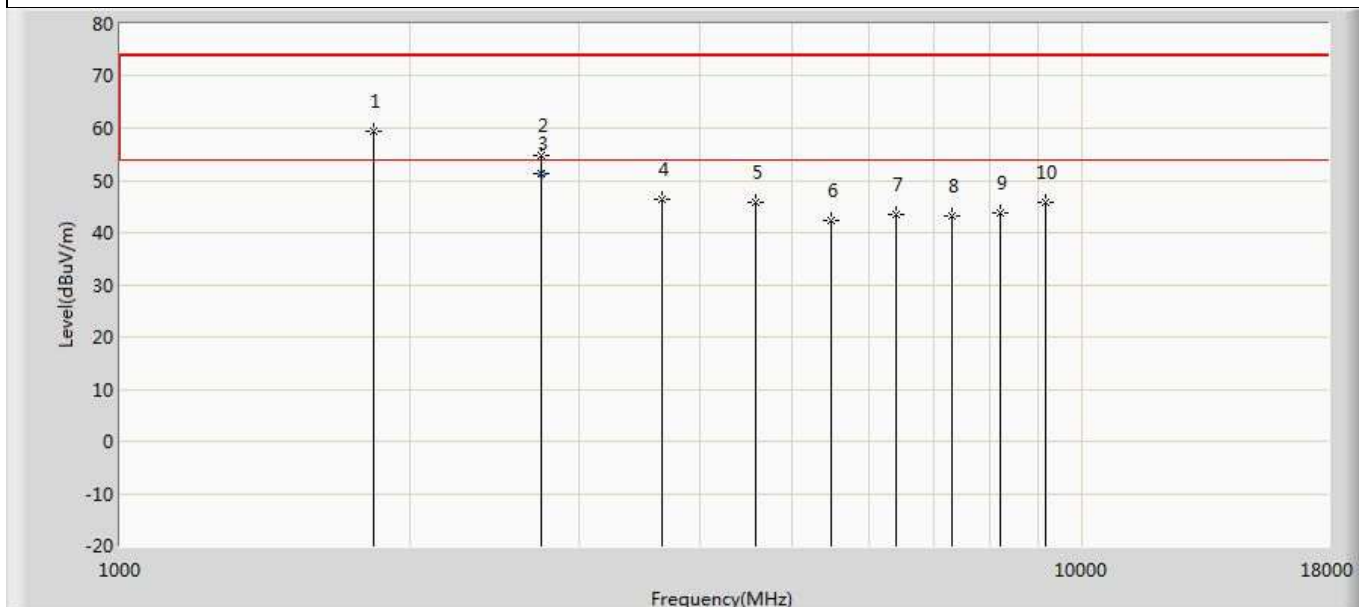
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		1807.500	56.495	56.625	-17.505	74.000	-0.131	PK
2	*	2707.500	52.633	51.149	-1.367	54.000	1.484	AV
3		2708.500	55.813	54.330	-18.187	74.000	1.483	PK
4		3609.500	45.918	42.833	-28.082	74.000	3.085	PK
5		4510.500	47.139	43.088	-26.861	74.000	4.051	PK
6		5415.000	41.906	37.076	-32.094	74.000	4.830	PK
7		6317.500	43.636	37.922	-30.364	74.000	5.714	PK
8		7220.000	44.576	37.890	-29.424	74.000	6.686	PK
9		8122.500	43.639	36.529	-30.361	74.000	7.109	PK
10		9025.000	45.319	37.248	-28.681	74.000	8.071	PK

Profile: 2040170R	Page No.: 46
Engineer: Tongben	
Site: AC5	Time: 2020/07/02 - 19:22
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Ring Bridge	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 902.5MHz	



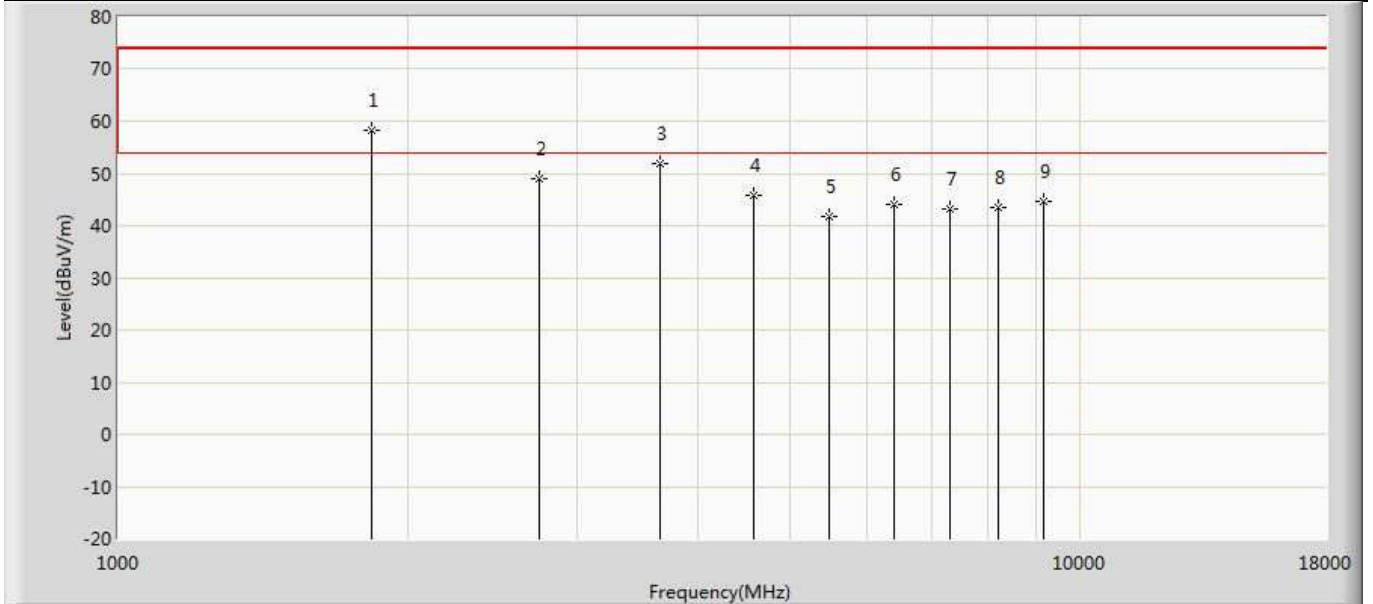
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	1807.500	53.206	53.336	-20.794	74.000	-0.131	PK
2		2708.500	46.551	45.068	-27.449	74.000	1.483	PK
3		3609.500	49.306	46.221	-24.694	74.000	3.085	PK
4		4510.500	45.334	41.283	-28.666	74.000	4.051	PK
5		5415.000	42.195	37.365	-31.805	74.000	4.830	PK
6		6317.500	43.645	37.931	-30.355	74.000	5.714	PK
7		7220.000	43.716	37.030	-30.284	74.000	6.686	PK
8		8122.500	43.607	36.497	-30.393	74.000	7.109	PK
9		9025.000	45.828	37.757	-28.172	74.000	8.071	PK

Profile: 2040170R	Page No.: 48
Engineer: Tongben	
Site: AC5	Time: 2020/07/02 - 19:23
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Ring Bridge	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 914.5MHz	



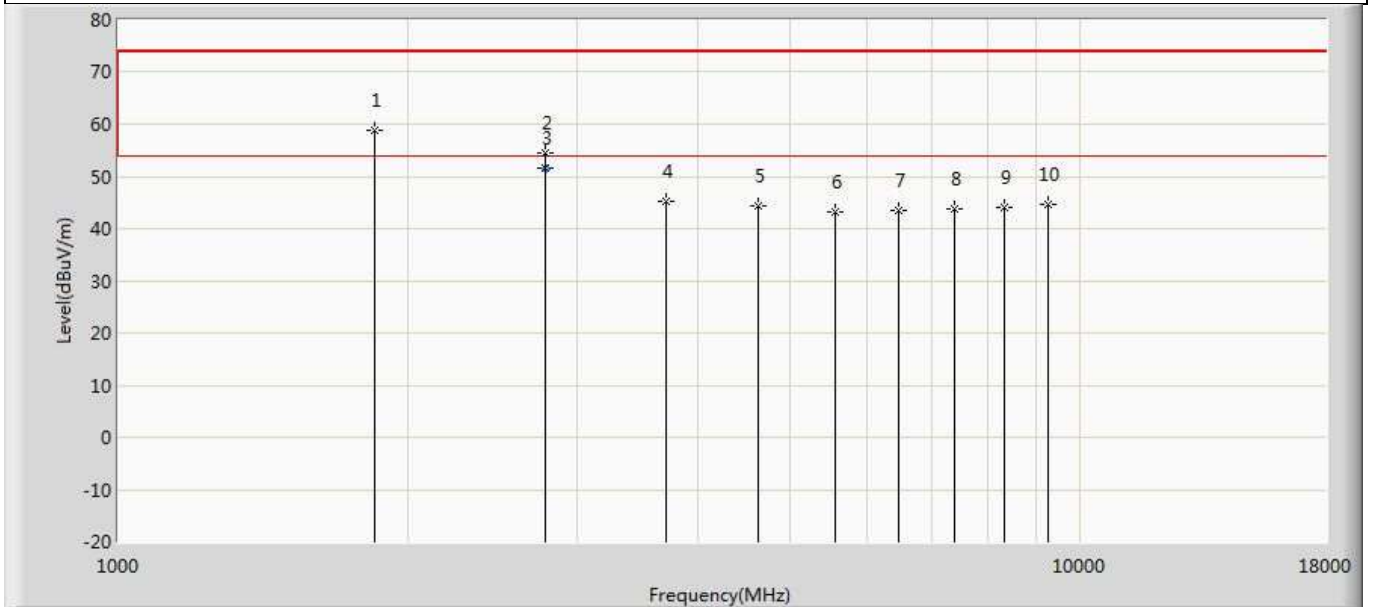
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		1833.000	59.514	59.248	-14.486	74.000	0.267	PK
2		2742.500	54.921	53.331	-19.079	74.000	1.590	PK
3	*	2743.510	51.279	49.687	-2.721	54.000	1.591	AV
4		3660.500	46.515	43.382	-27.485	74.000	3.134	PK
5		4570.000	45.940	41.713	-28.060	74.000	4.227	PK
6		5487.000	42.337	37.422	-31.663	74.000	4.914	PK
7		6401.500	43.569	37.816	-30.431	74.000	5.754	PK
8		7316.000	43.296	36.636	-30.704	74.000	6.660	PK
9		8230.500	43.821	36.470	-30.179	74.000	7.351	PK
10		9145.000	45.827	37.917	-28.173	74.000	7.910	PK

Profile: 2040170R	Page No.: 49
Engineer: Tongben	
Site: AC5	Time: 2020/07/02 - 19:23
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Ring Bridge	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 914.5MHz	



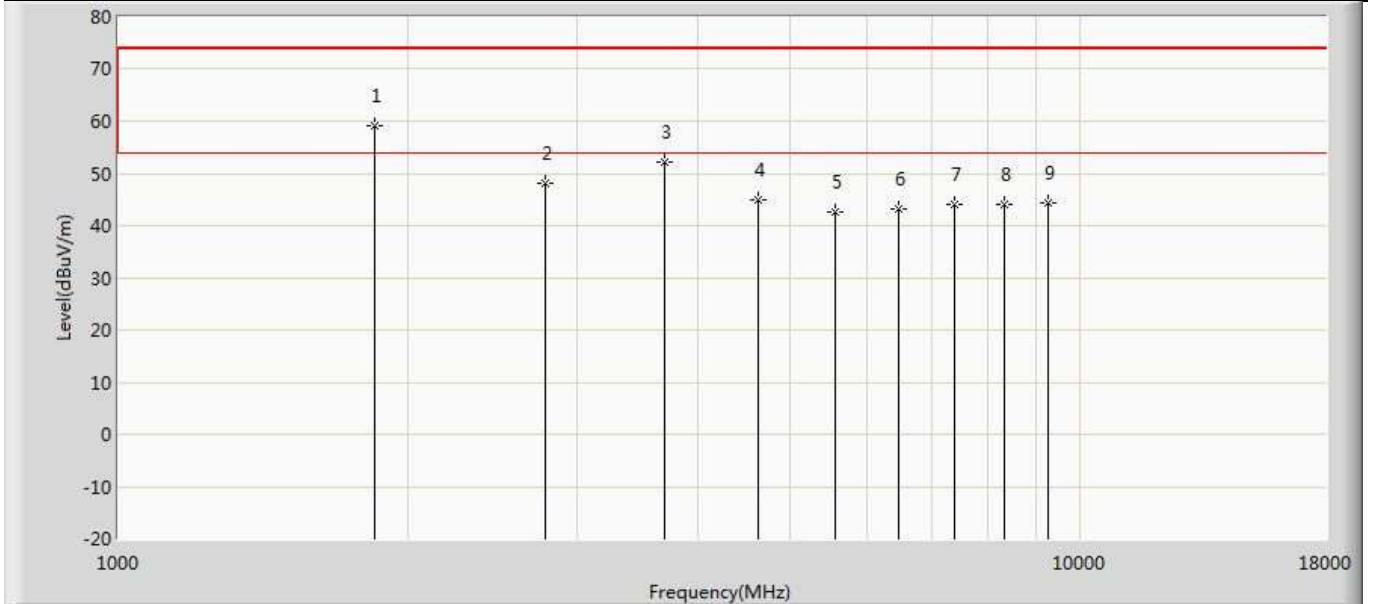
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	1833.000	58.348	58.082	-15.652	74.000	0.267	PK
2		2742.500	48.878	47.288	-25.122	74.000	1.590	PK
3		3660.500	51.895	48.762	-22.105	74.000	3.134	PK
4		4570.000	45.917	41.690	-28.083	74.000	4.227	PK
5		5487.000	41.837	36.922	-32.163	74.000	4.914	PK
6		6401.500	43.944	38.191	-30.056	74.000	5.754	PK
7		7316.000	43.177	36.517	-30.823	74.000	6.660	PK
8		8230.500	43.376	36.025	-30.624	74.000	7.351	PK
9		9145.000	44.670	36.760	-29.330	74.000	7.910	PK

Profile: 2040170R	Page No.: 50
Engineer: Tongben	
Site: AC5	Time: 2020/07/02 - 19:23
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Ring Bridge	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 926.5MHz	



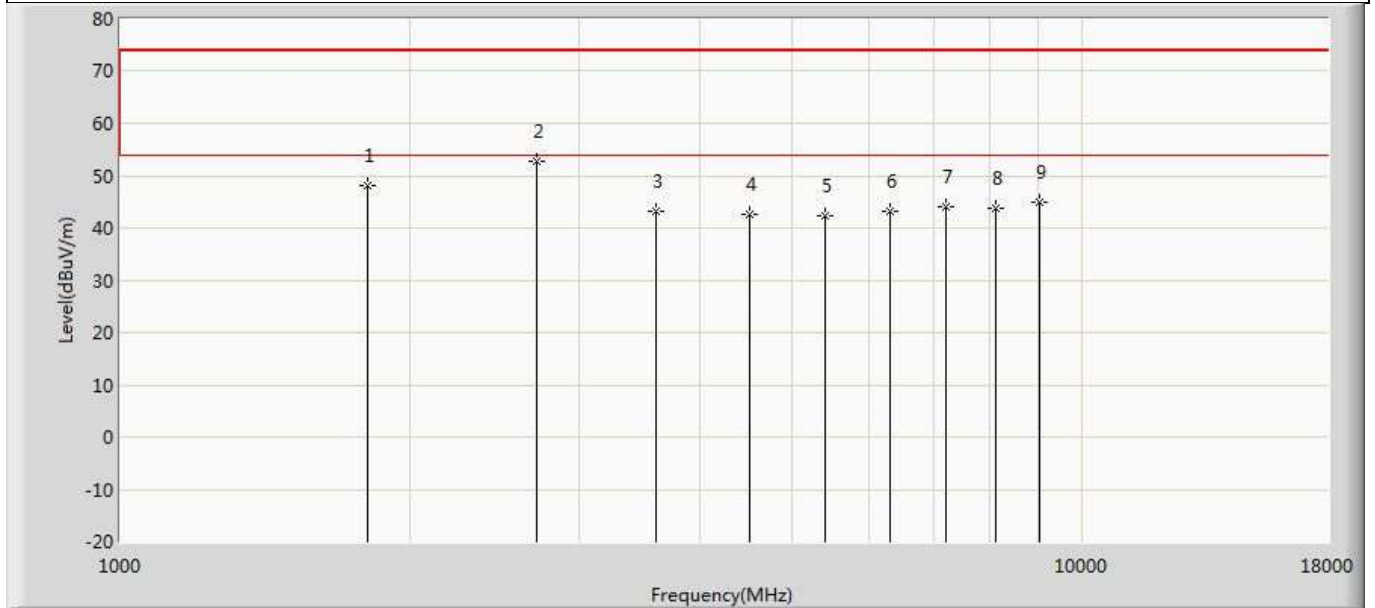
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		1850.000	58.823	58.425	-15.177	74.000	0.398	PK
2		2776.500	54.553	53.037	-19.447	74.000	1.516	PK
3	*	2779.510	51.517	49.970	-2.483	54.000	1.548	AV
4		3706.000	45.306	41.907	-28.694	74.000	3.398	PK
5		4632.500	44.438	40.643	-29.562	74.000	3.796	PK
6		5559.000	43.079	37.827	-30.921	74.000	5.251	PK
7		6485.500	43.355	37.381	-30.645	74.000	5.974	PK
8		7412.000	43.883	37.259	-30.117	74.000	6.624	PK
9		8338.500	44.043	36.497	-29.957	74.000	7.546	PK
10		9265.000	44.496	36.697	-29.504	74.000	7.799	PK

Profile: 2040170R	Page No.: 51
Engineer: Tongben	
Site: AC5	Time: 2020/07/02 - 19:23
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Ring Bridge	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 926.5MHz	



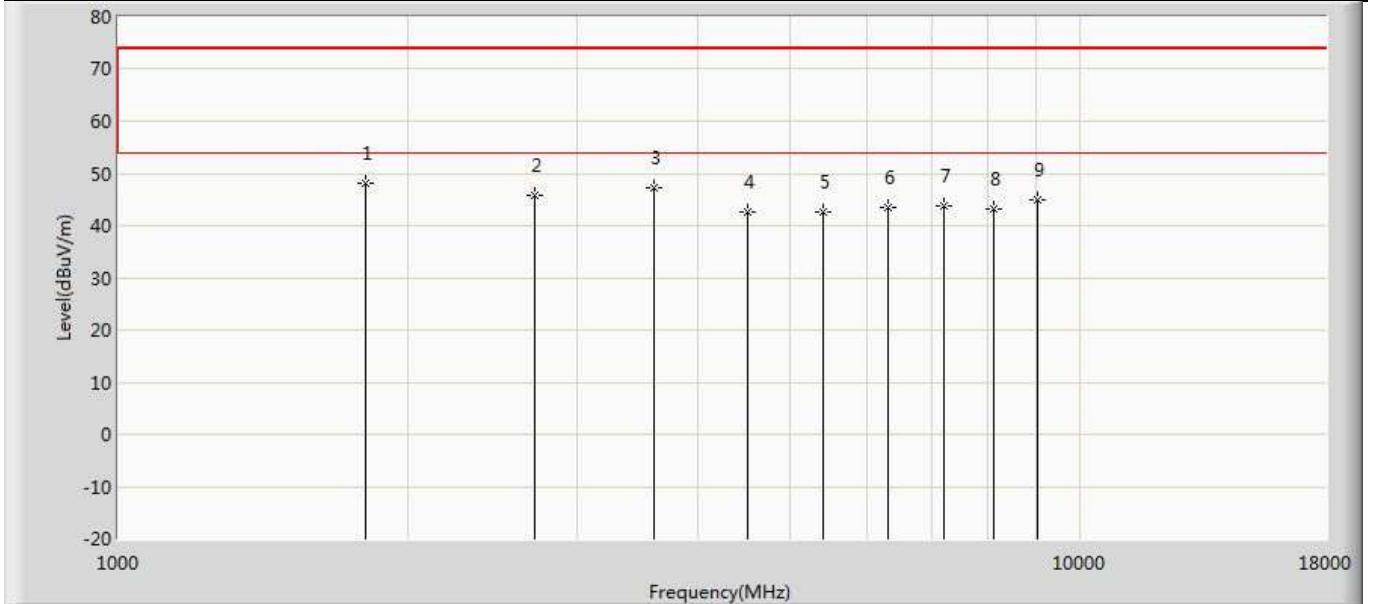
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	1850.000	59.075	58.677	-14.925	74.000	0.398	PK
2		2776.500	48.253	46.737	-25.747	74.000	1.516	PK
3		3703.000	52.200	48.798	-21.800	74.000	3.402	PK
4		4629.500	44.971	41.158	-29.029	74.000	3.813	PK
5		5559.000	42.593	37.341	-31.407	74.000	5.251	PK
6		6485.500	43.178	37.204	-30.822	74.000	5.974	PK
7		7412.000	44.025	37.401	-29.975	74.000	6.624	PK
8		8338.500	44.140	36.594	-29.860	74.000	7.546	PK
9		9265.000	44.439	36.640	-29.561	74.000	7.799	PK

Profile: 2040170R	Page No.: 53
Engineer: Tongben	
Site: AC5	Time: 2020/07/02 - 19:27
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Ring Bridge	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 902.2MHz	



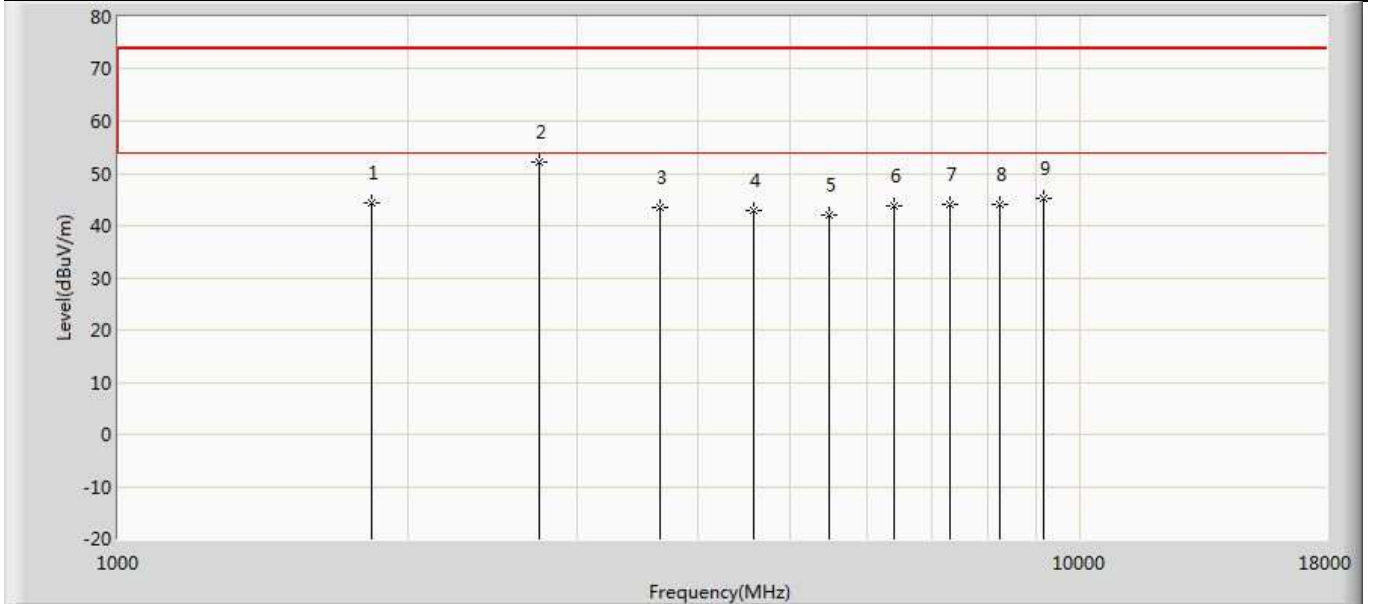
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		1807.500	48.067	48.197	-25.933	74.000	-0.131	PK
2	*	2708.500	52.674	51.191	-21.326	74.000	1.483	PK
3		3608.800	43.301	40.210	-30.699	74.000	3.091	PK
4		4511.000	42.665	38.611	-31.335	74.000	4.053	PK
5		5413.200	42.408	37.585	-31.592	74.000	4.824	PK
6		6315.400	43.044	37.332	-30.956	74.000	5.711	PK
7		7217.600	44.023	37.341	-29.977	74.000	6.682	PK
8		8119.800	43.805	36.696	-30.195	74.000	7.109	PK
9		9022.000	44.934	36.941	-29.066	74.000	7.993	PK

Profile: 2040170R	Page No.: 54
Engineer: Tongben	
Site: AC5	Time: 2020/07/02 - 19:27
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Ring Bridge	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 902.2MHz	



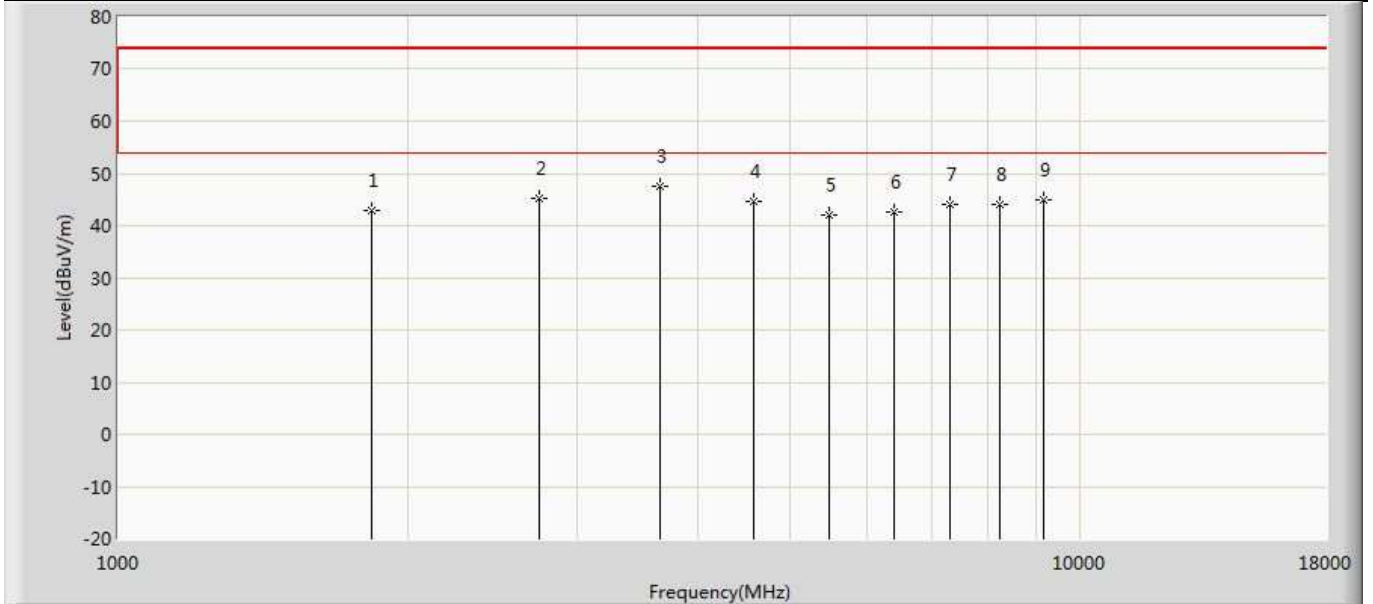
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	1807.500	47.986	48.116	-26.014	74.000	-0.131	PK
2		2708.500	45.696	44.213	-28.304	74.000	1.483	PK
3		3609.500	47.250	44.165	-26.750	74.000	3.085	PK
4		4511.000	42.510	38.456	-31.490	74.000	4.053	PK
5		5413.200	42.570	37.747	-31.430	74.000	4.824	PK
6		6315.400	43.469	37.757	-30.531	74.000	5.711	PK
7		7217.600	43.624	36.942	-30.376	74.000	6.682	PK
8		8119.800	43.116	36.007	-30.884	74.000	7.109	PK
9		9022.000	44.837	36.844	-29.163	74.000	7.993	PK

Profile: 2040170R	Page No.: 55
Engineer: Tongben	
Site: AC5	Time: 2020/07/02 - 19:27
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Ring Bridge	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 915MHz	



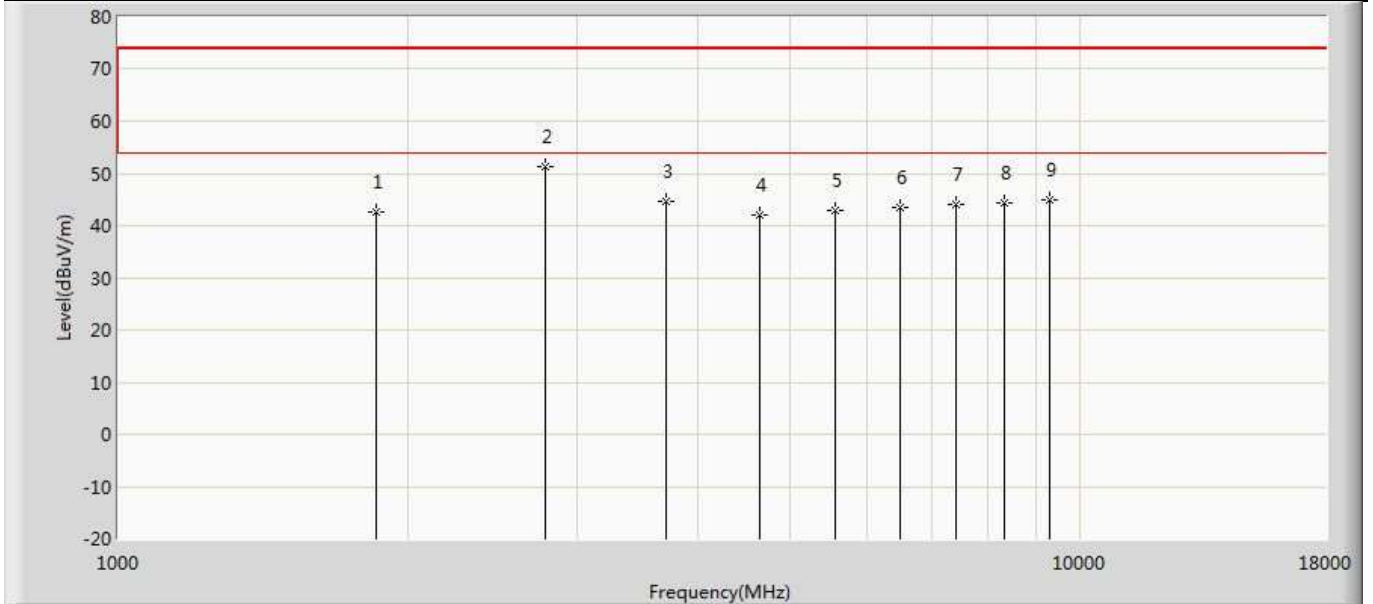
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		1833.000	44.371	44.105	-29.629	74.000	0.267	PK
2	*	2742.500	52.232	50.642	-21.768	74.000	1.590	PK
3		3660.000	43.526	40.388	-30.474	74.000	3.138	PK
4		4575.000	42.802	38.648	-31.198	74.000	4.155	PK
5		5490.000	42.173	37.265	-31.827	74.000	4.907	PK
6		6405.000	43.732	37.970	-30.268	74.000	5.762	PK
7		7320.000	44.000	37.315	-30.000	74.000	6.685	PK
8		8235.000	43.969	36.688	-30.031	74.000	7.281	PK
9		9150.000	45.336	37.470	-28.664	74.000	7.865	PK

Profile: 2040170R	Page No.: 56
Engineer: Tongben	
Site: AC5	Time: 2020/07/02 - 19:28
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Ring Bridge	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 915MHz	



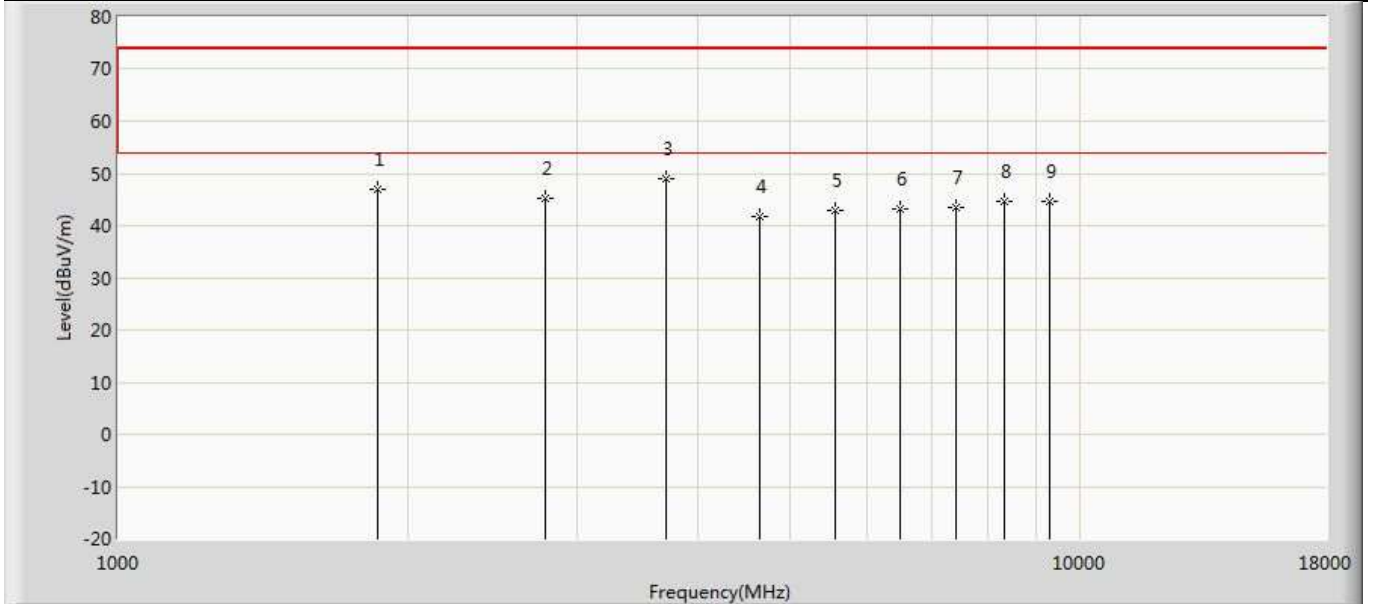
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		1833.000	42.946	42.680	-31.054	74.000	0.267	PK
2		2742.500	45.232	43.642	-28.768	74.000	1.590	PK
3	*	3660.500	47.541	44.408	-26.459	74.000	3.134	PK
4		4578.500	44.575	40.471	-29.425	74.000	4.104	PK
5		5490.000	42.044	37.136	-31.956	74.000	4.907	PK
6		6405.000	42.609	36.847	-31.391	74.000	5.762	PK
7		7320.000	44.017	37.332	-29.983	74.000	6.685	PK
8		8235.000	44.079	36.798	-29.921	74.000	7.281	PK
9		9150.000	44.847	36.981	-29.153	74.000	7.865	PK

Profile: 2040170R	Page No.: 57
Engineer: Tongben	
Site: AC5	Time: 2020/07/02 - 19:28
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Ring Bridge	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 927.8MHz	



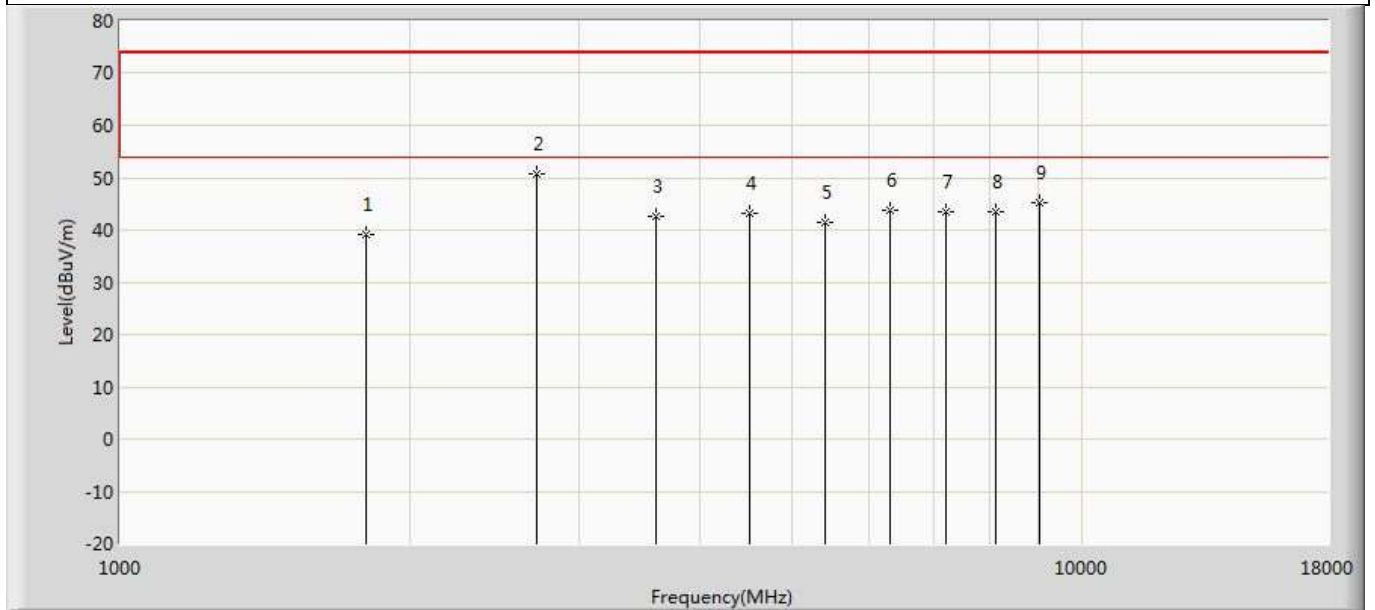
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		1855.600	42.544	42.182	-31.456	74.000	0.363	PK
2	*	2785.000	51.219	49.614	-22.781	74.000	1.605	PK
3		3711.200	44.548	41.154	-29.452	74.000	3.394	PK
4		4639.000	41.971	38.197	-32.029	74.000	3.775	PK
5		5566.800	42.893	37.740	-31.107	74.000	5.153	PK
6		6494.600	43.428	37.429	-30.572	74.000	5.999	PK
7		7422.400	43.926	37.388	-30.074	74.000	6.538	PK
8		8350.200	44.283	36.705	-29.717	74.000	7.578	PK
9		9278.000	44.989	37.290	-29.011	74.000	7.699	PK

Profile: 2040170R	Page No.: 58
Engineer: Tongben	
Site: AC5	Time: 2020/07/02 - 19:28
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Ring Bridge	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 927.8MHz	



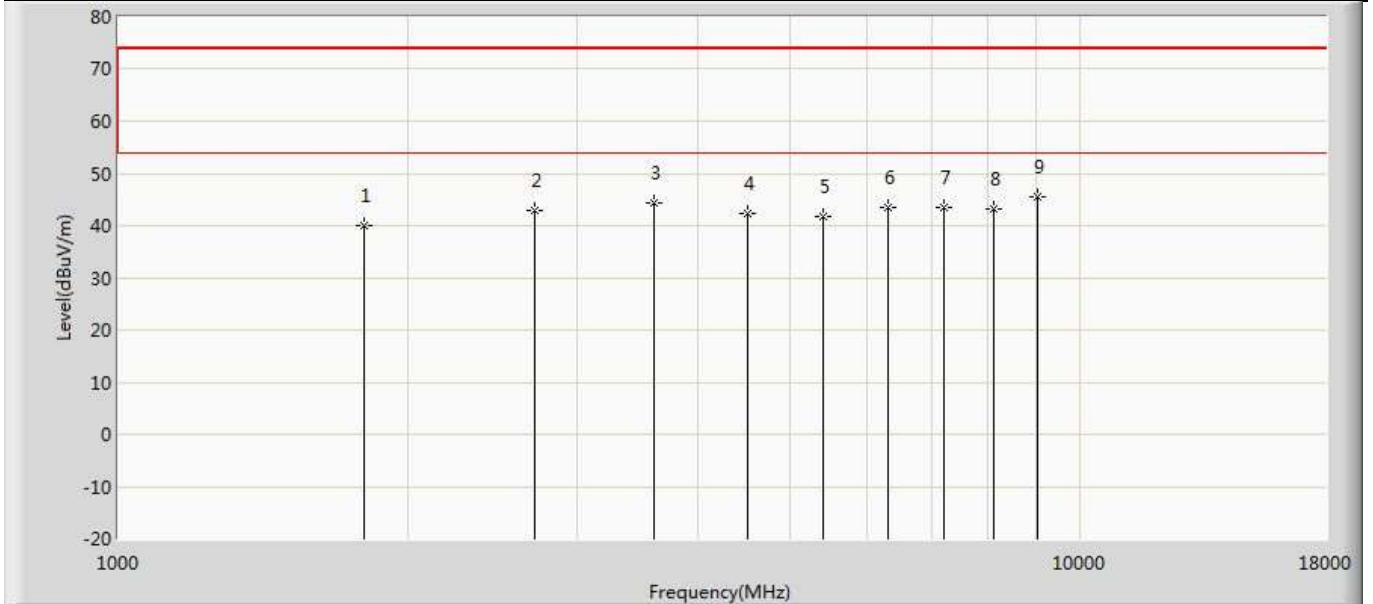
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		1858.500	46.985	46.641	-27.015	74.000	0.343	PK
2		2785.000	45.144	43.539	-28.856	74.000	1.605	PK
3	*	3711.500	48.918	45.524	-25.082	74.000	3.394	PK
4		4639.000	41.823	38.049	-32.177	74.000	3.775	PK
5		5566.800	42.899	37.746	-31.101	74.000	5.153	PK
6		6494.600	43.114	37.115	-30.886	74.000	5.999	PK
7		7422.400	43.431	36.893	-30.569	74.000	6.538	PK
8		8350.200	44.522	36.944	-29.478	74.000	7.578	PK
9		9278.000	44.588	36.889	-29.412	74.000	7.699	PK

Profile: 2040170R	Page No.: 59
Engineer: Tongben	
Site: AC5	Time: 2020/07/02 - 19:29
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Ring Bridge	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 902.2MHz	



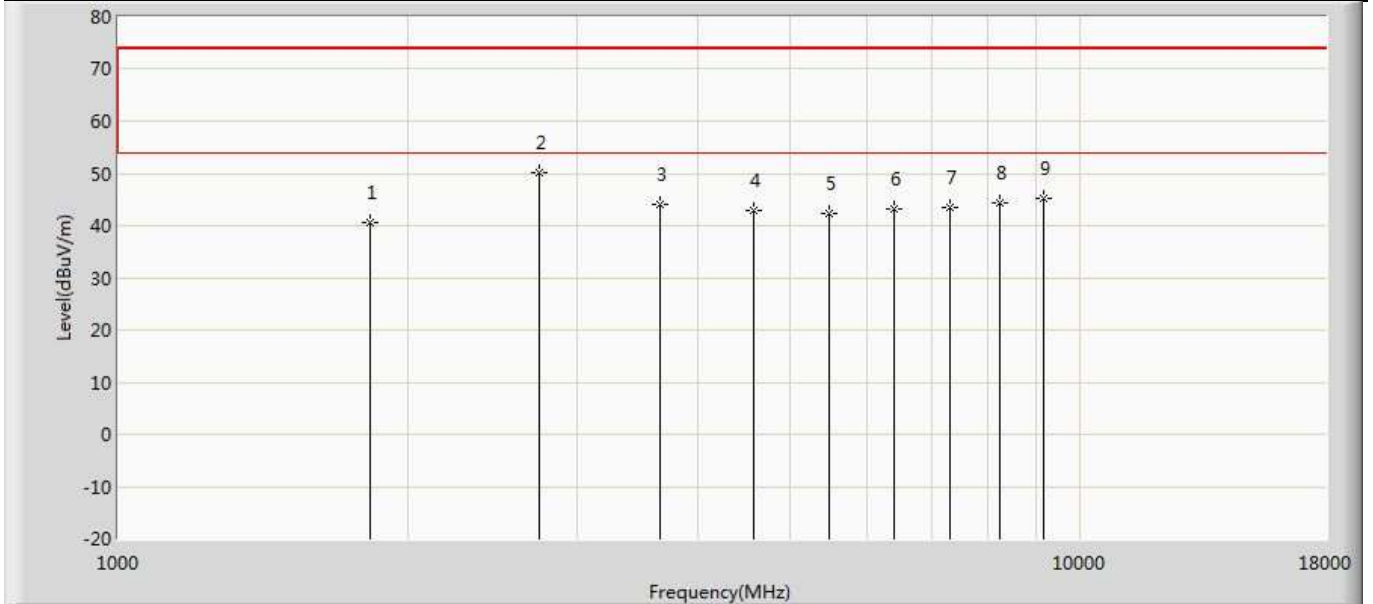
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		1804.400	39.167	39.323	-34.833	74.000	-0.156	PK
2	*	2708.500	50.837	49.354	-23.163	74.000	1.483	PK
3		3608.800	42.482	39.391	-31.518	74.000	3.091	PK
4		4511.000	43.080	39.026	-30.920	74.000	4.053	PK
5		5413.200	41.500	36.677	-32.500	74.000	4.824	PK
6		6315.400	43.759	38.047	-30.241	74.000	5.711	PK
7		7217.600	43.341	36.659	-30.659	74.000	6.682	PK
8		8119.800	43.524	36.415	-30.476	74.000	7.109	PK
9		9022.000	45.300	37.307	-28.700	74.000	7.993	PK

Profile: 2040170R	Page No.: 60
Engineer: Tongben	
Site: AC5	Time: 2020/07/02 - 19:29
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Ring Bridge	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 902.2MHz	



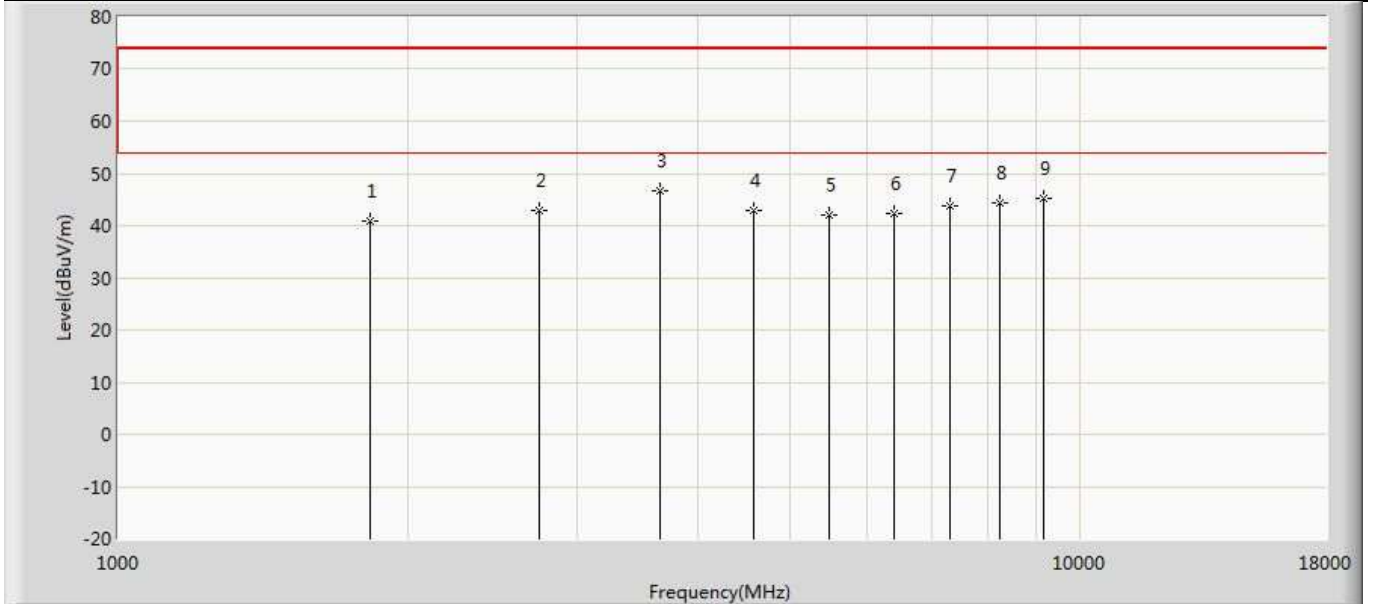
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		1804.400	40.083	40.239	-33.917	74.000	-0.156	PK
2		2706.600	42.941	41.457	-31.059	74.000	1.484	PK
3		3608.800	44.332	41.241	-29.668	74.000	3.091	PK
4		4511.000	42.348	38.294	-31.652	74.000	4.053	PK
5		5413.200	41.771	36.948	-32.229	74.000	4.824	PK
6		6315.400	43.402	37.690	-30.598	74.000	5.711	PK
7		7217.600	43.485	36.803	-30.515	74.000	6.682	PK
8		8119.800	43.317	36.208	-30.683	74.000	7.109	PK
9	*	9022.000	45.597	37.604	-28.403	74.000	7.993	PK

Profile: 2040170R	Page No.: 61
Engineer: Tongben	
Site: AC5	Time: 2020/07/02 - 19:29
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Ring Bridge	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 915MHz	



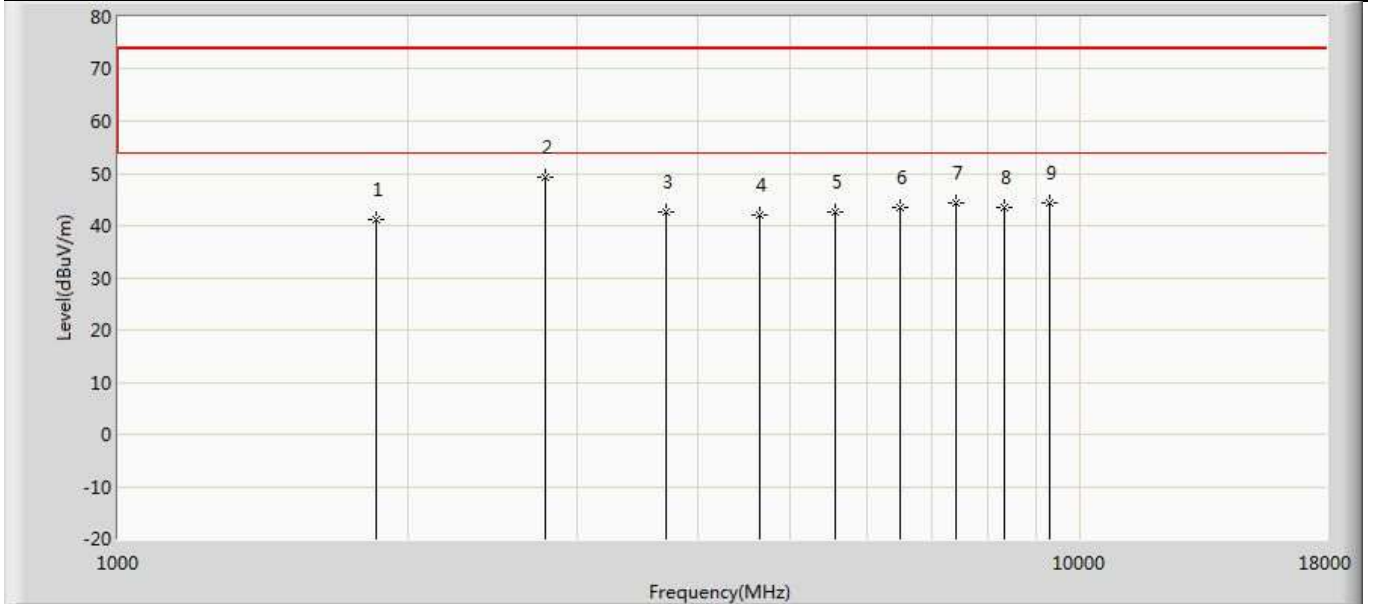
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		1830.000	40.439	40.230	-33.561	74.000	0.209	PK
2	*	2742.500	50.238	48.648	-23.762	74.000	1.590	PK
3		3660.000	43.939	40.801	-30.061	74.000	3.138	PK
4		4575.000	42.913	38.759	-31.087	74.000	4.155	PK
5		5490.000	42.285	37.377	-31.715	74.000	4.907	PK
6		6405.000	43.232	37.470	-30.768	74.000	5.762	PK
7		7320.000	43.615	36.930	-30.385	74.000	6.685	PK
8		8235.000	44.443	37.162	-29.557	74.000	7.281	PK
9		9150.000	45.216	37.350	-28.784	74.000	7.865	PK

Profile: 2040170R	Page No.: 62
Engineer: Tongben	
Site: AC5	Time: 2020/07/02 - 19:29
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Ring Bridge	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 915MHz	



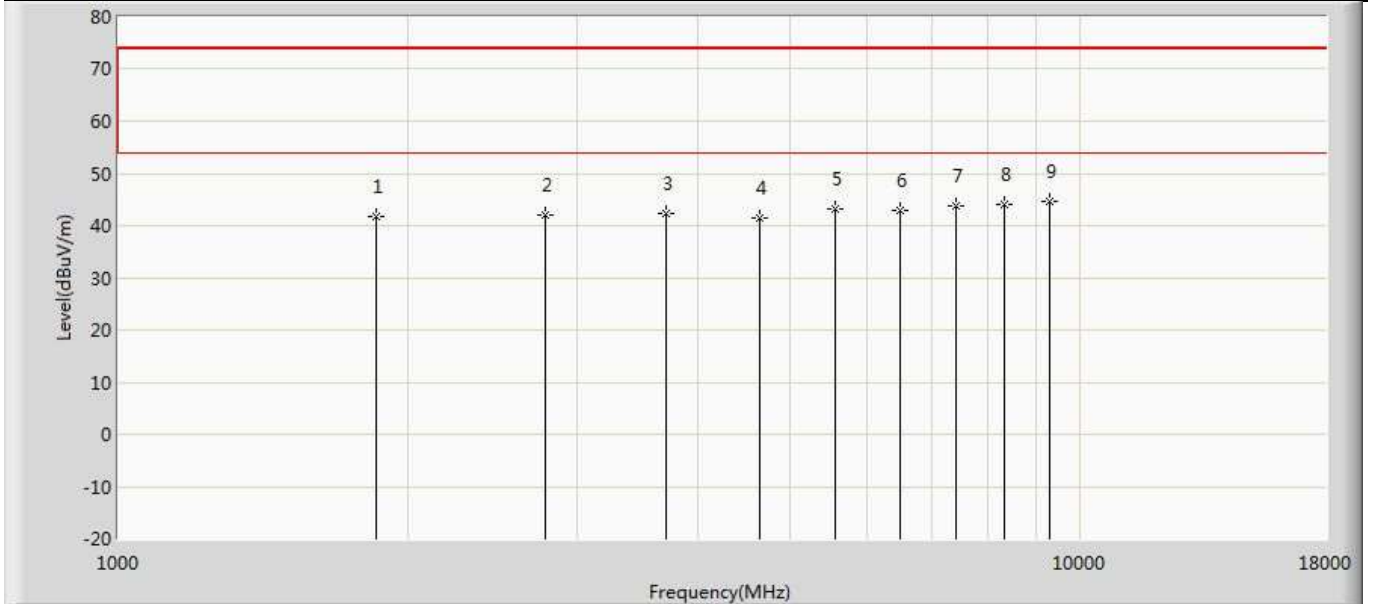
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		1830.000	40.752	40.543	-33.248	74.000	0.209	PK
2		2745.000	42.930	41.334	-31.070	74.000	1.596	PK
3	*	3660.500	46.536	43.403	-27.464	74.000	3.134	PK
4		4575.000	42.963	38.809	-31.037	74.000	4.155	PK
5		5490.000	42.008	37.100	-31.992	74.000	4.907	PK
6		6405.000	42.387	36.625	-31.613	74.000	5.762	PK
7		7320.000	43.838	37.153	-30.162	74.000	6.685	PK
8		8235.000	44.431	37.150	-29.569	74.000	7.281	PK
9		9150.000	45.294	37.428	-28.706	74.000	7.865	PK

Profile: 2040170R	Page No.: 63
Engineer: Tongben	
Site: AC5	Time: 2020/07/02 - 19:29
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Ring Bridge	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 927.8MHz	



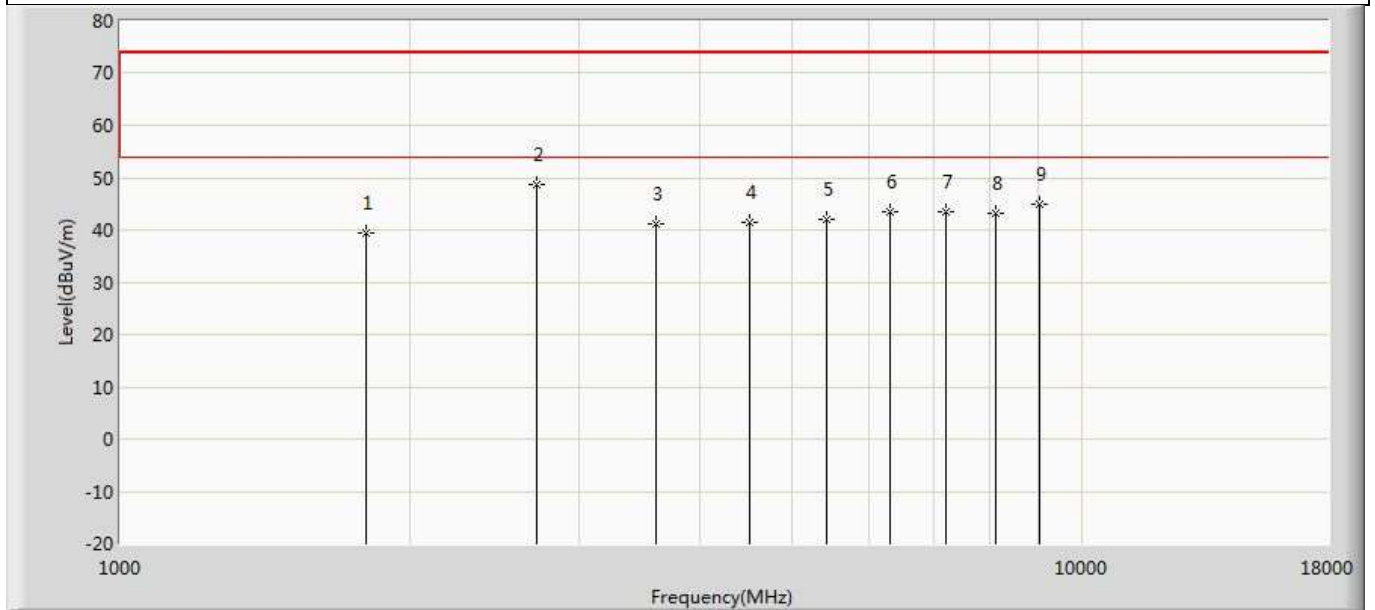
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		1855.600	41.281	40.919	-32.719	74.000	0.363	PK
2	*	2785.000	49.153	47.548	-24.847	74.000	1.605	PK
3		3711.200	42.614	39.220	-31.386	74.000	3.394	PK
4		4639.000	42.144	38.370	-31.856	74.000	3.775	PK
5		5566.800	42.667	37.514	-31.333	74.000	5.153	PK
6		6494.600	43.609	37.610	-30.391	74.000	5.999	PK
7		7422.400	44.415	37.877	-29.585	74.000	6.538	PK
8		8350.200	43.617	36.039	-30.383	74.000	7.578	PK
9		9278.000	44.338	36.639	-29.662	74.000	7.699	PK

Profile: 2040170R	Page No.: 64
Engineer: Tongben	
Site: AC5	Time: 2020/07/02 - 19:30
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Ring Bridge	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 927.8MHz	



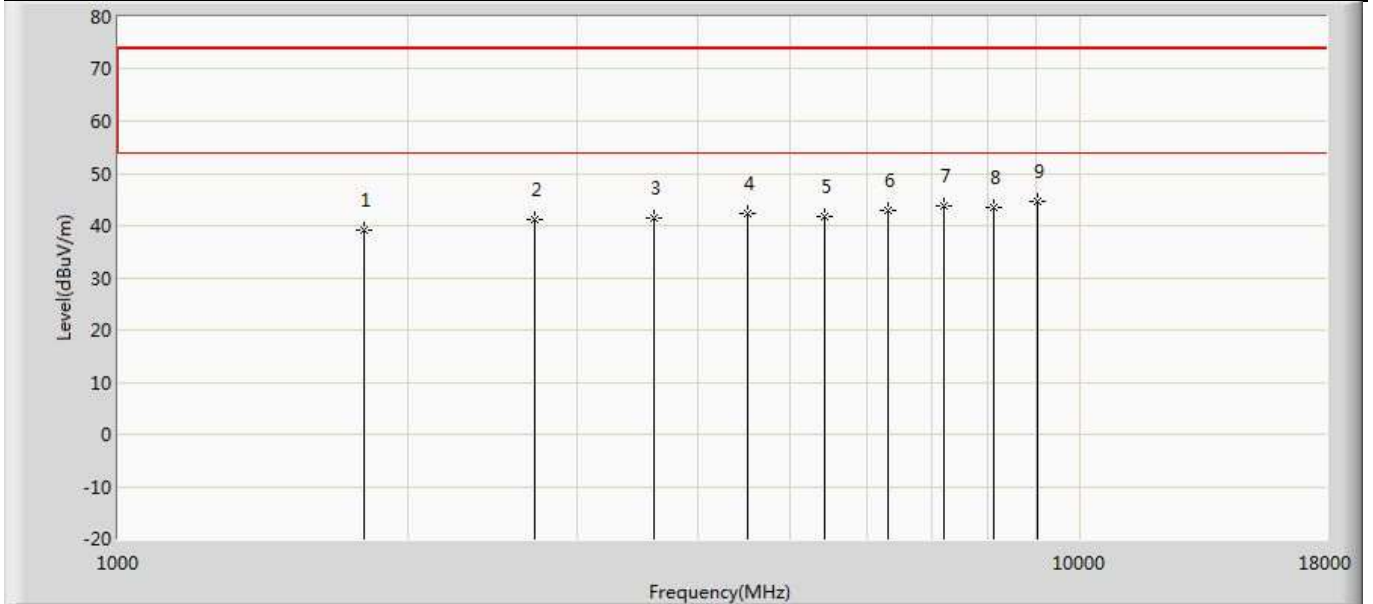
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		1855.600	41.628	41.266	-32.372	74.000	0.363	PK
2		2783.400	42.113	40.525	-31.887	74.000	1.588	PK
3		3711.200	42.324	38.930	-31.676	74.000	3.394	PK
4		4639.000	41.593	37.819	-32.407	74.000	3.775	PK
5		5566.800	43.048	37.895	-30.952	74.000	5.153	PK
6		6494.600	42.951	36.952	-31.049	74.000	5.999	PK
7		7422.400	43.798	37.260	-30.202	74.000	6.538	PK
8		8350.200	44.099	36.521	-29.901	74.000	7.578	PK
9	*	9278.000	44.625	36.926	-29.375	74.000	7.699	PK

Profile: 2040170R	Page No.: 65
Engineer: Tongben	
Site: AC5	Time: 2020/07/02 - 19:31
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Ring Bridge	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 902.4MHz	



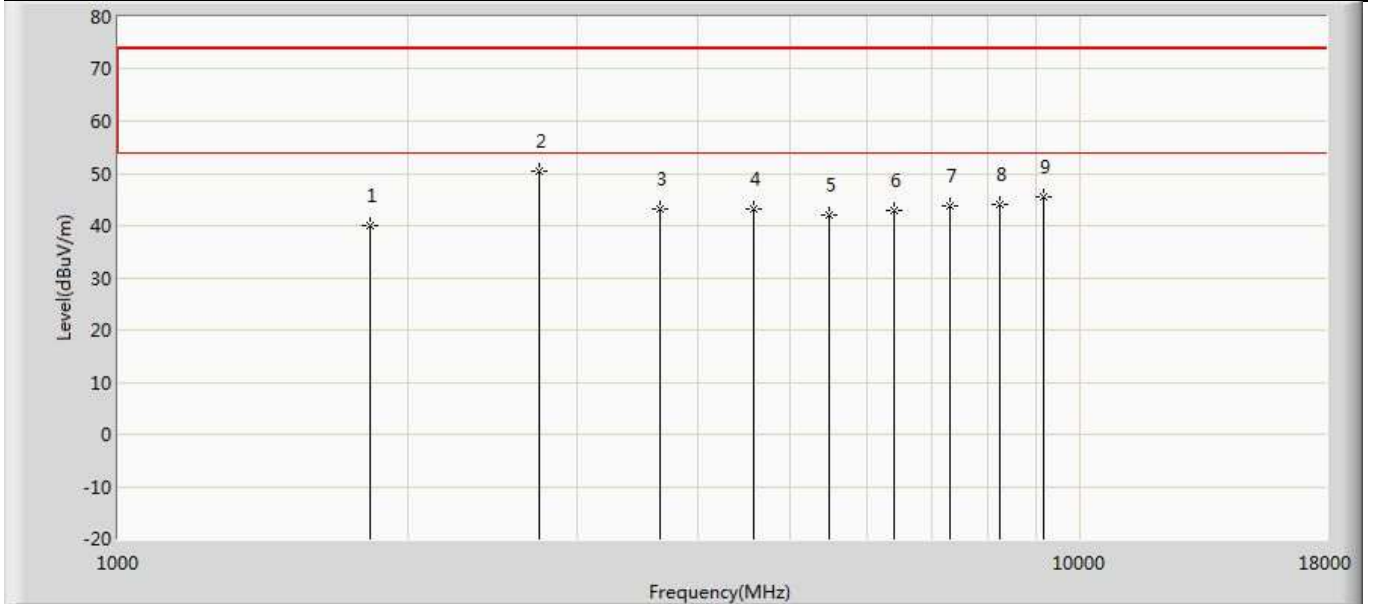
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		1804.800	39.353	39.506	-34.647	74.000	-0.152	PK
2	*	2707.200	48.562	47.078	-25.438	74.000	1.483	PK
3		3609.600	41.180	38.096	-32.820	74.000	3.085	PK
4		4512.000	41.383	37.324	-32.617	74.000	4.059	PK
5		5414.400	42.000	37.172	-32.000	74.000	4.828	PK
6		6316.800	43.402	37.689	-30.598	74.000	5.714	PK
7		7219.200	43.567	36.883	-30.433	74.000	6.685	PK
8		8121.600	43.207	36.097	-30.793	74.000	7.110	PK
9		9024.000	44.844	36.767	-29.156	74.000	8.076	PK

Profile: 2040170R	Page No.: 66
Engineer: Tongben	
Site: AC5	Time: 2020/07/02 - 19:31
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Ring Bridge	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 902.4MHz	



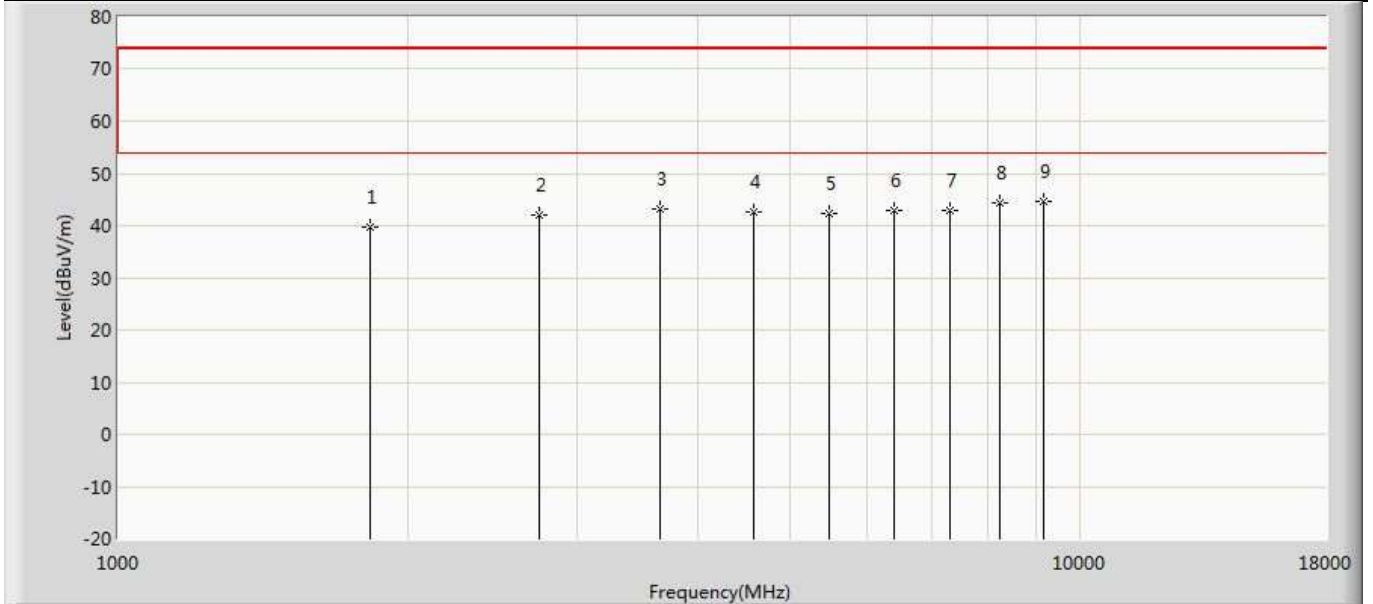
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		1804.800	39.207	39.360	-34.793	74.000	-0.152	PK
2		2707.200	41.283	39.799	-32.717	74.000	1.483	PK
3		3609.600	41.426	38.342	-32.574	74.000	3.085	PK
4		4512.000	42.318	38.259	-31.682	74.000	4.059	PK
5		5414.400	41.817	36.989	-32.183	74.000	4.828	PK
6		6316.800	42.868	37.155	-31.132	74.000	5.714	PK
7		7219.200	43.679	36.995	-30.321	74.000	6.685	PK
8		8121.600	43.538	36.428	-30.462	74.000	7.110	PK
9	*	9024.000	44.697	36.620	-29.303	74.000	8.076	PK

Profile: 2040170R	Page No.: 67
Engineer: Tongben	
Site: AC5	Time: 2020/07/02 - 19:31
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Ring Bridge	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 914.8MHz	



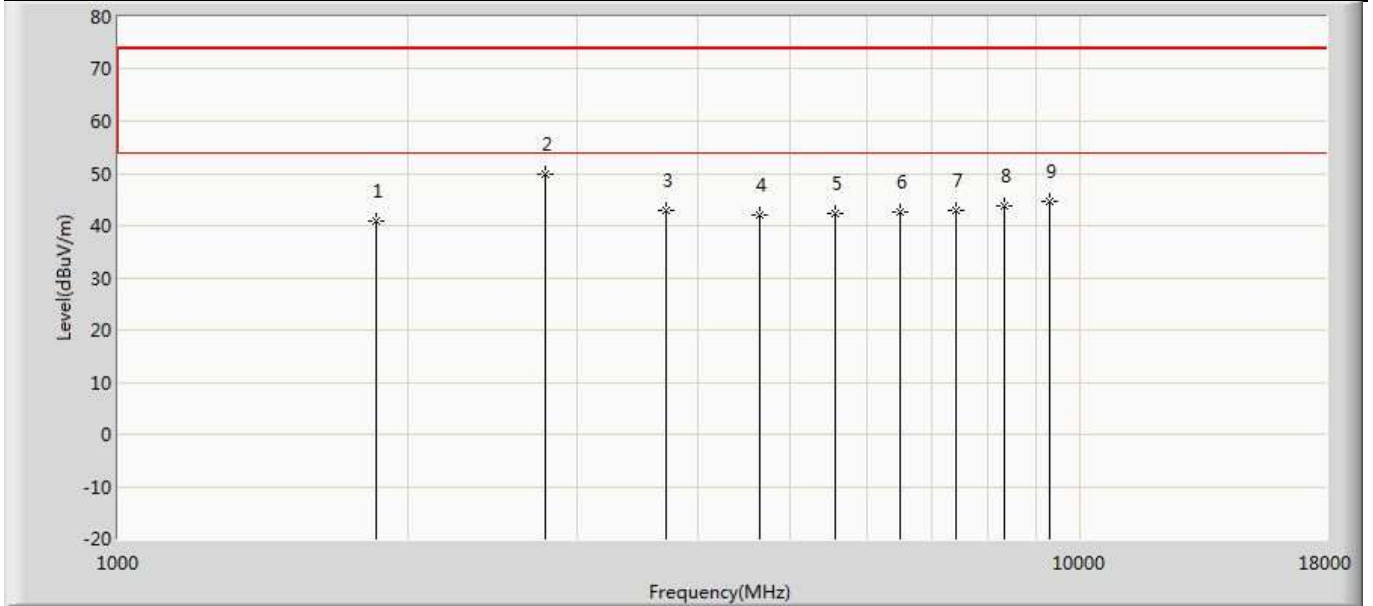
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		1829.600	40.110	39.909	-33.890	74.000	0.201	PK
2	*	2742.500	50.548	48.958	-23.452	74.000	1.590	PK
3		3659.200	43.209	40.063	-30.791	74.000	3.146	PK
4		4574.000	43.219	39.050	-30.781	74.000	4.168	PK
5		5488.800	41.936	37.026	-32.064	74.000	4.910	PK
6		6403.600	42.960	37.201	-31.040	74.000	5.759	PK
7		7318.400	43.702	37.027	-30.298	74.000	6.675	PK
8		8233.200	44.171	36.862	-29.829	74.000	7.309	PK
9		9148.000	45.540	37.656	-28.460	74.000	7.884	PK

Profile: 2040170R	Page No.: 68
Engineer: Tongben	
Site: AC5	Time: 2020/07/02 - 19:31
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Ring Bridge	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 914.8MHz	



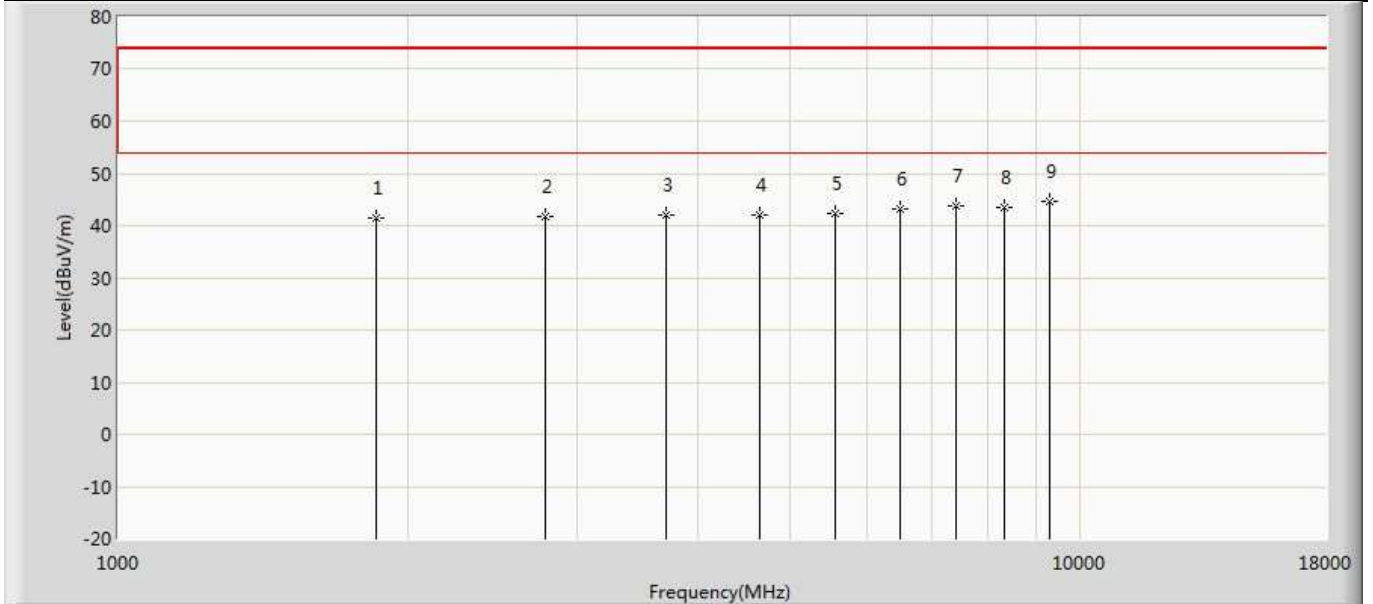
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		1829.600	39.795	39.594	-34.205	74.000	0.201	PK
2		2744.400	42.053	40.459	-31.947	74.000	1.594	PK
3		3659.200	43.226	40.080	-30.774	74.000	3.146	PK
4		4574.000	42.731	38.562	-31.269	74.000	4.168	PK
5		5488.800	42.423	37.513	-31.577	74.000	4.910	PK
6		6403.600	42.925	37.166	-31.075	74.000	5.759	PK
7		7318.400	42.879	36.204	-31.121	74.000	6.675	PK
8		8233.200	44.293	36.984	-29.707	74.000	7.309	PK
9	*	9148.000	44.690	36.806	-29.310	74.000	7.884	PK

Profile: 2040170R	Page No.: 69
Engineer: Tongben	
Site: AC5	Time: 2020/07/02 - 19:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Ring Bridge	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 927.6MHz	



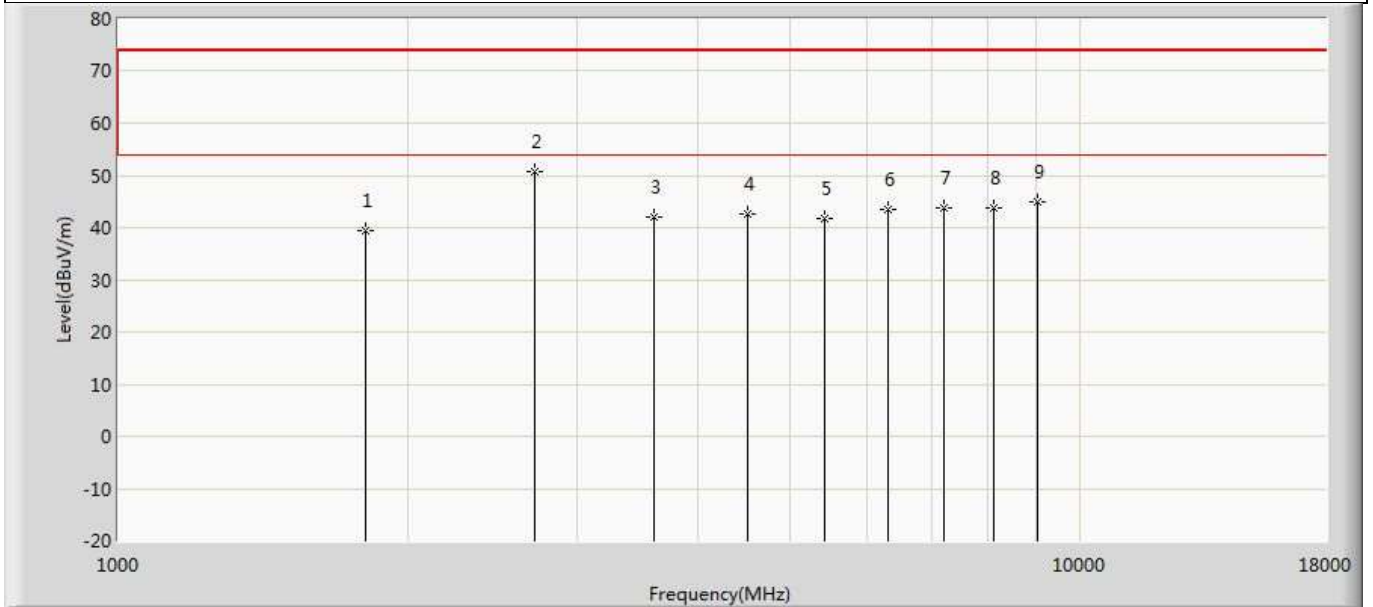
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		1855.200	40.783	40.418	-33.217	74.000	0.365	PK
2	*	2785.000	49.790	48.185	-24.210	74.000	1.605	PK
3		3710.400	43.027	39.632	-30.973	74.000	3.395	PK
4		4638.000	42.060	38.297	-31.940	74.000	3.762	PK
5		5565.600	42.318	37.150	-31.682	74.000	5.169	PK
6		6493.200	42.659	36.669	-31.341	74.000	5.990	PK
7		7420.800	42.951	36.400	-31.049	74.000	6.551	PK
8		8348.400	43.740	36.148	-30.260	74.000	7.591	PK
9		9276.000	44.778	37.064	-29.222	74.000	7.714	PK

Profile: 2040170R	Page No.: 70
Engineer: Tongben	
Site: AC5	Time: 2020/07/02 - 19:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Ring Bridge	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 927.6MHz	



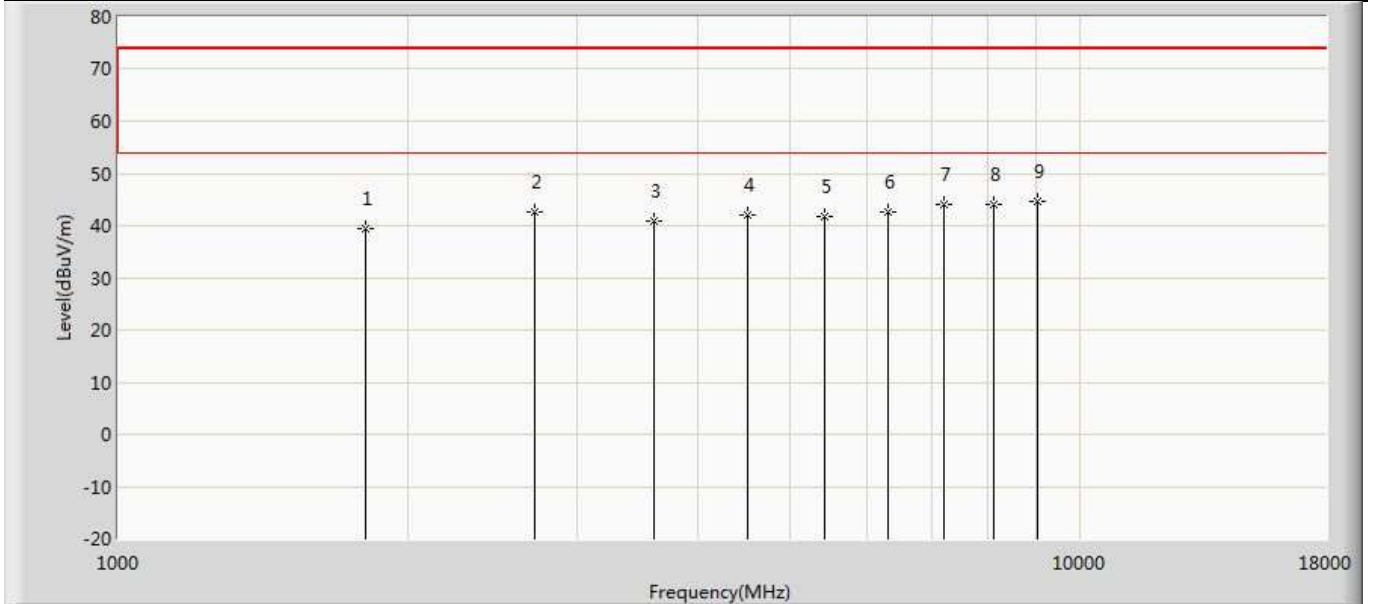
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		1855.200	41.523	41.158	-32.477	74.000	0.365	PK
2		2782.800	41.732	40.150	-32.268	74.000	1.582	PK
3		3710.400	41.996	38.601	-32.004	74.000	3.395	PK
4		4638.000	42.057	38.294	-31.943	74.000	3.762	PK
5		5565.600	42.390	37.222	-31.610	74.000	5.169	PK
6		6493.200	43.151	37.161	-30.849	74.000	5.990	PK
7		7420.800	43.675	37.124	-30.325	74.000	6.551	PK
8		8348.400	43.567	35.975	-30.433	74.000	7.591	PK
9	*	9276.000	44.525	36.811	-29.475	74.000	7.714	PK

Profile: 2040170R	Page No.: 71
Engineer: Tongben	
Site: AC5	Time: 2020/07/08 - 19:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Ring Bridge	Power: AC 120V/60Hz
Note: Mode 5:Transmit at 902.5MHz	



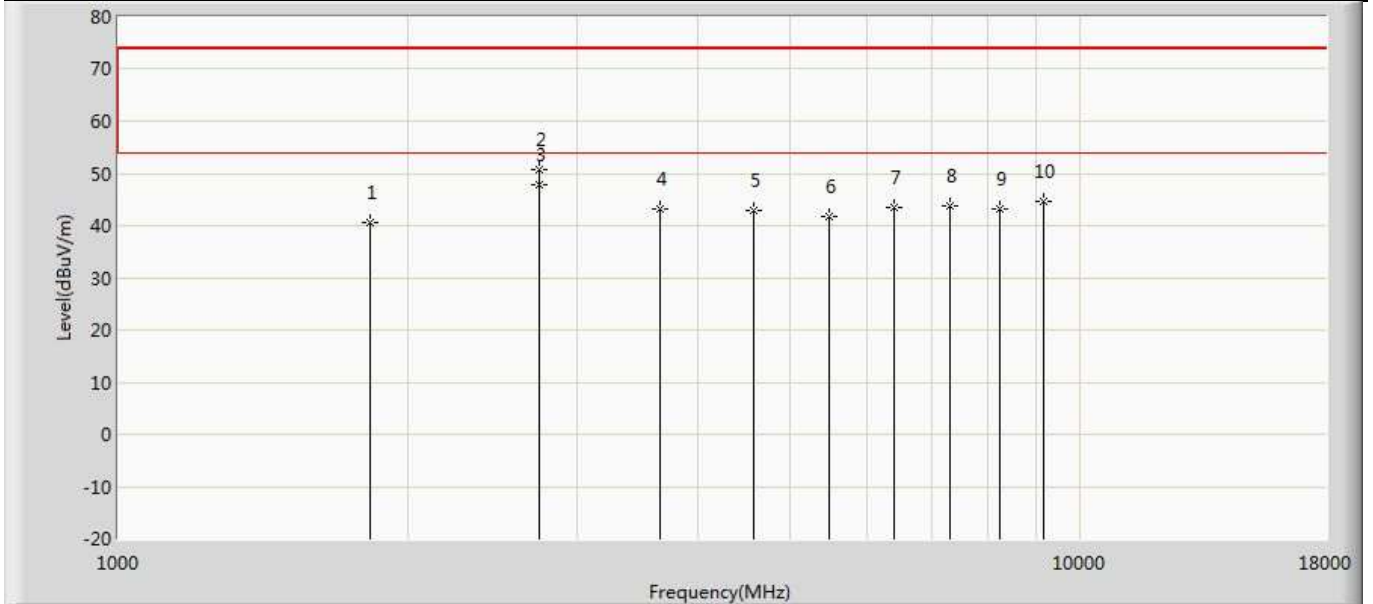
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		1806.000	39.350	39.493	-34.650	74.000	-0.144	PK
2	*	2708.500	50.710	49.227	-23.290	74.000	1.483	PK
3		3612.000	41.938	38.874	-32.062	74.000	3.065	PK
4		4515.000	42.467	38.391	-31.533	74.000	4.076	PK
5		5418.000	41.746	36.905	-32.254	74.000	4.841	PK
6		6321.000	43.403	37.684	-30.597	74.000	5.719	PK
7		7224.000	43.844	37.132	-30.156	74.000	6.711	PK
8		8127.000	43.694	36.551	-30.306	74.000	7.143	PK
9		9030.000	44.942	36.899	-29.058	74.000	8.042	PK

Profile: 2040170R	Page No.: 72
Engineer: Tongben	
Site: AC5	Time: 2020/07/08- 19:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Ring Bridge	Power: AC 120V/60Hz
Note: Mode 5:Transmit at 902.5MHz	



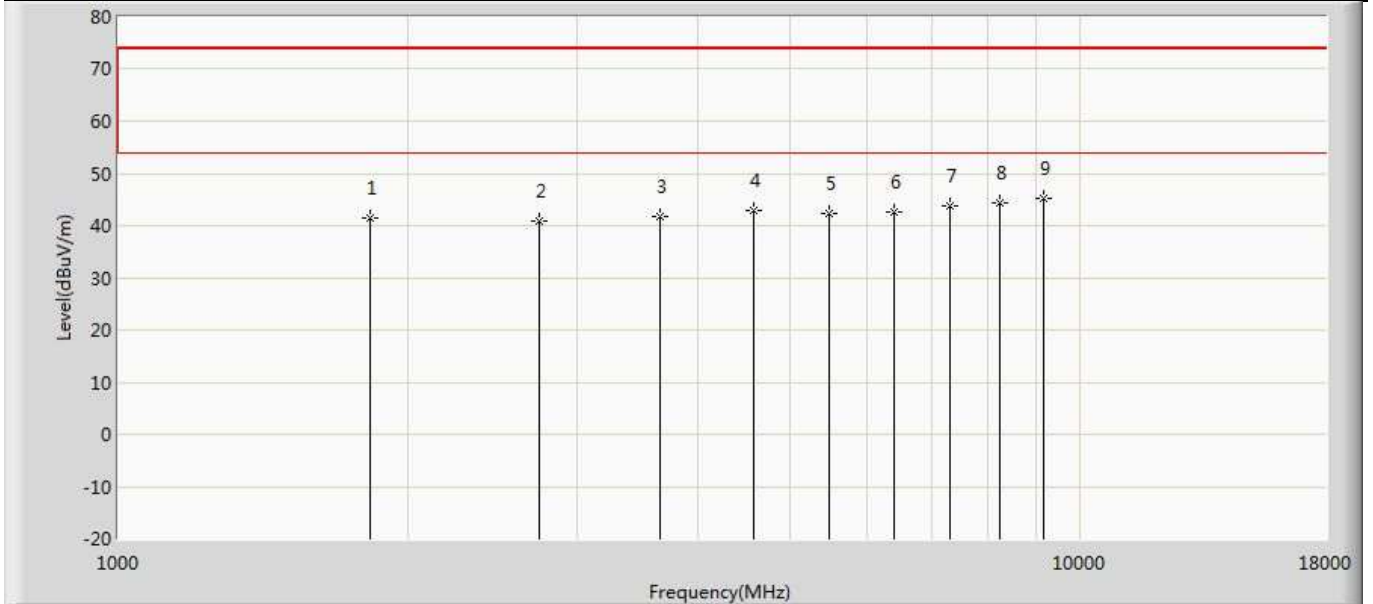
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		1806.000	39.520	39.663	-34.480	74.000	-0.144	PK
2		2709.000	42.536	41.053	-31.464	74.000	1.484	PK
3		3612.000	40.838	37.774	-33.162	74.000	3.065	PK
4		4515.000	41.971	37.895	-32.029	74.000	4.076	PK
5		5418.000	41.760	36.919	-32.240	74.000	4.841	PK
6		6321.000	42.749	37.030	-31.251	74.000	5.719	PK
7		7224.000	44.103	37.391	-29.897	74.000	6.711	PK
8		8127.000	43.988	36.845	-30.012	74.000	7.143	PK
9	*	9030.000	44.764	36.721	-29.236	74.000	8.042	PK

Profile: 2040170R	Page No.: 73
Engineer: Tongben	
Site: AC5	Time: 2020/07/08 - 19:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Ring Bridge	Power: AC 120V/60Hz
Note: Mode 5:Transmit at 915MHz	



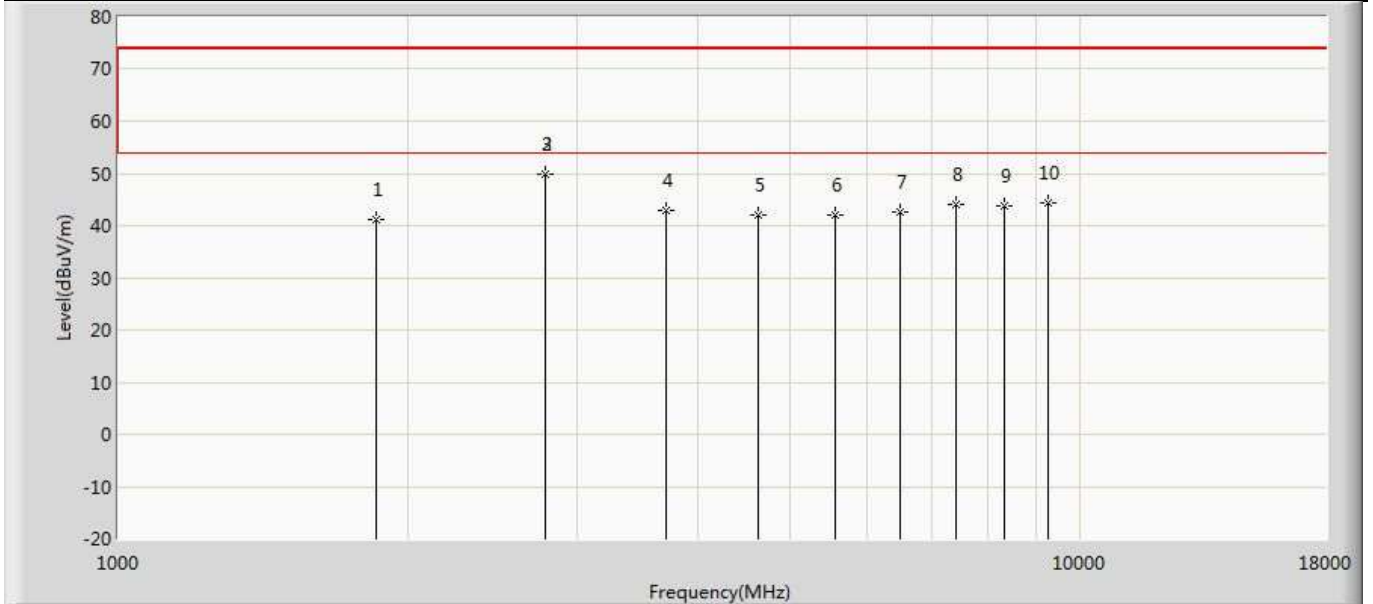
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		1830.000	40.582	40.373	-33.418	74.000	0.209	PK
2	*	2742.500	50.588	48.998	-23.412	74.000	1.590	PK
3		2745.000	47.966	46.370	-26.034	74.000	1.596	PK
4		3660.000	43.254	40.116	-30.746	74.000	3.138	PK
5		4575.000	42.790	38.636	-31.210	74.000	4.155	PK
6		5490.000	41.682	36.774	-32.318	74.000	4.907	PK
7		6405.000	43.383	37.621	-30.617	74.000	5.762	PK
8		7320.000	43.708	37.023	-30.292	74.000	6.685	PK
9		8235.000	43.069	35.788	-30.931	74.000	7.281	PK
10		9150.000	44.732	36.866	-29.268	74.000	7.865	PK

Profile: 2040170R	Page No.: 74
Engineer: Tongben	
Site: AC5	Time: 2020/07/08 - 19:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Ring Bridge	Power: AC 120V/60Hz
Note: Mode 5:Transmit at 915MHz	



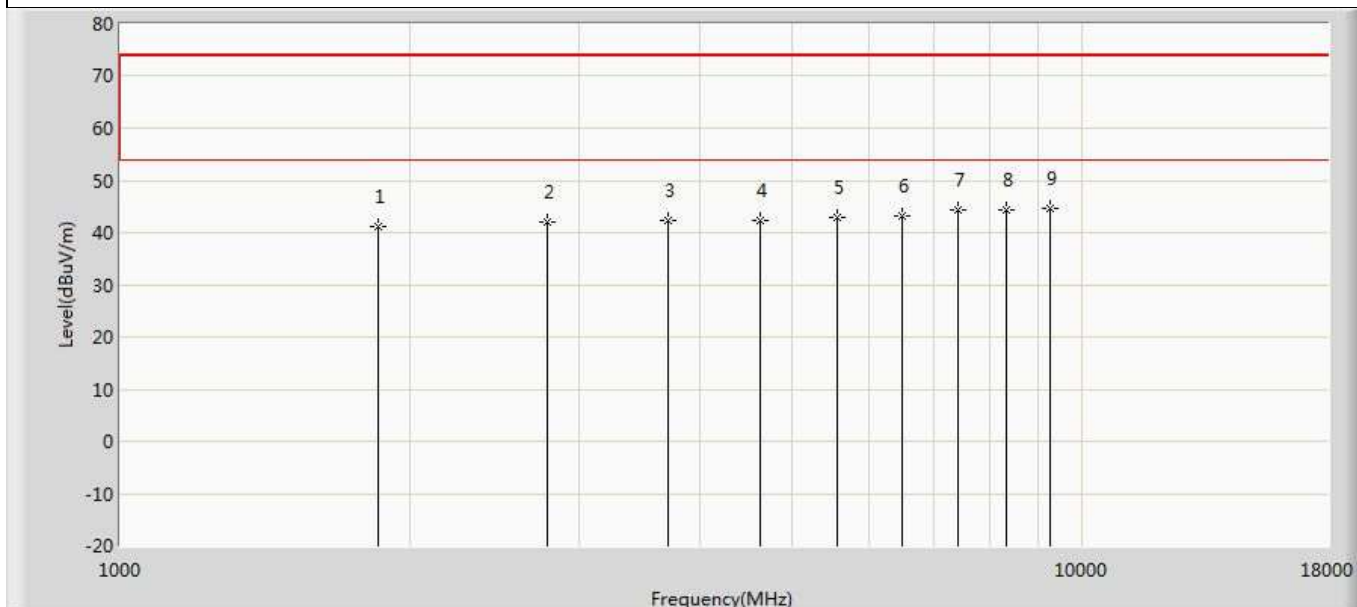
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		1830.000	41.355	41.146	-32.645	74.000	0.209	PK
2		2745.000	40.998	39.402	-33.002	74.000	1.596	PK
3		3660.000	41.722	38.584	-32.278	74.000	3.138	PK
4		4575.000	42.955	38.801	-31.045	74.000	4.155	PK
5		5490.000	42.428	37.520	-31.572	74.000	4.907	PK
6		6405.000	42.565	36.803	-31.435	74.000	5.762	PK
7		7320.000	43.740	37.055	-30.260	74.000	6.685	PK
8		8235.000	44.466	37.185	-29.534	74.000	7.281	PK
9	*	9150.000	45.226	37.360	-28.774	74.000	7.865	PK

Profile: 2040170R	Page No.: 75
Engineer: Tongben	
Site: AC5	Time: 2020/07/08 - 19:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Ring Bridge	Power: AC 120V/60Hz
Note: Mode 5:Transmit at 927.5MHz	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		1854.000	41.206	40.834	-32.794	74.000	0.373	PK
2		2776.500	49.727	48.211	-24.273	74.000	1.516	PK
3	*	2781.000	49.814	48.251	-24.186	74.000	1.562	PK
4		3708.000	42.945	39.548	-31.055	74.000	3.397	PK
5		4635.000	41.975	38.195	-32.025	74.000	3.780	PK
6		5562.000	41.977	36.763	-32.023	74.000	5.214	PK
7		6489.000	42.563	36.588	-31.437	74.000	5.975	PK
8		7416.000	44.008	37.417	-29.992	74.000	6.591	PK
9		8343.000	43.787	36.175	-30.213	74.000	7.612	PK
10		9270.000	44.310	36.550	-29.690	74.000	7.761	PK

Profile: 2040170R	Page No.: 76
Engineer: Tongben	
Site: AC5	Time: 2020/07/08 - 19:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Ring Bridge	Power: AC 120V/60Hz
Note: Mode 5:Transmit at 927.5MHz	

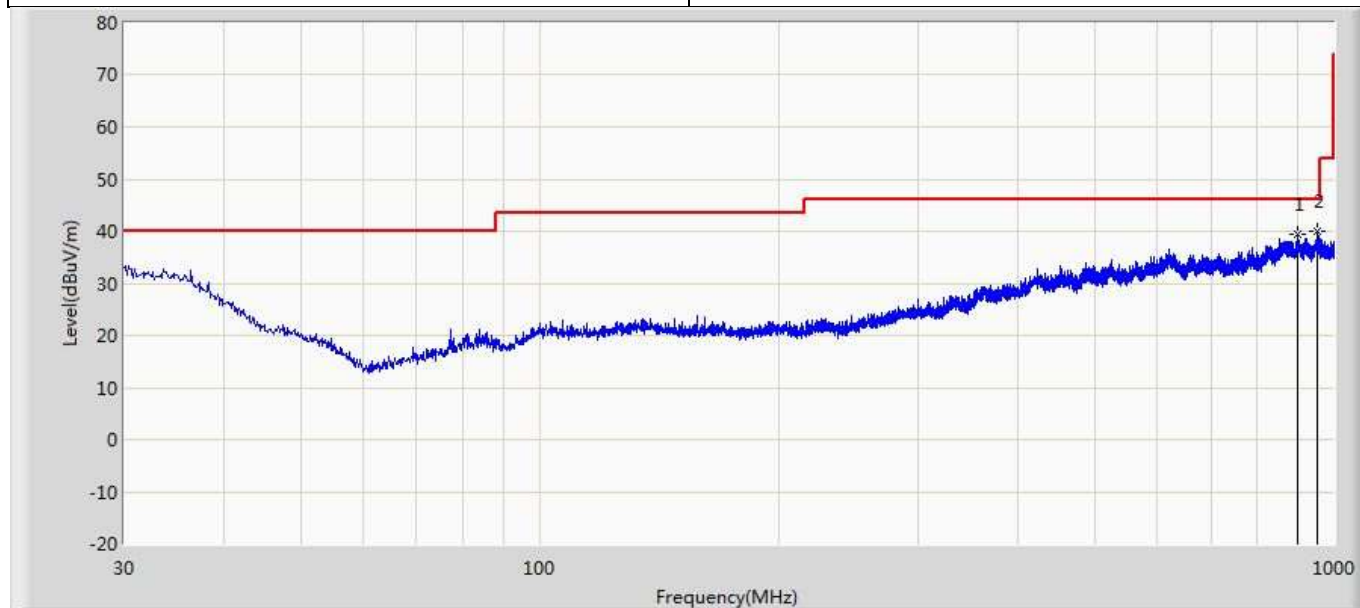


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		1854.000	41.085	40.713	-32.915	74.000	0.373	PK
2		2781.000	41.944	40.381	-32.056	74.000	1.562	PK
3		3708.000	42.308	38.911	-31.692	74.000	3.397	PK
4		4635.000	42.177	38.397	-31.823	74.000	3.780	PK
5		5562.000	42.924	37.710	-31.076	74.000	5.214	PK
6		6489.000	43.287	37.312	-30.713	74.000	5.975	PK
7		7416.000	44.249	37.658	-29.751	74.000	6.591	PK
8		8343.000	44.295	36.683	-29.705	74.000	7.612	PK
9	*	9270.000	44.493	36.733	-29.507	74.000	7.761	PK

Remark	<p>1. " * ", means this data is the worst emission level.</p> <p>2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).</p> <p>3. The test frequency range, 9kHz~30MHz and Above 18GHz worst case are at least 6dB below the limits, therefore no data appear in the report.</p> <p>4. 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.</p> <p>5. The No. 1 is non-restricted bands, so the limit is Fundamental emission down 20dB, and then we evaluated each channel, it is comply with the RSE requirements.</p>
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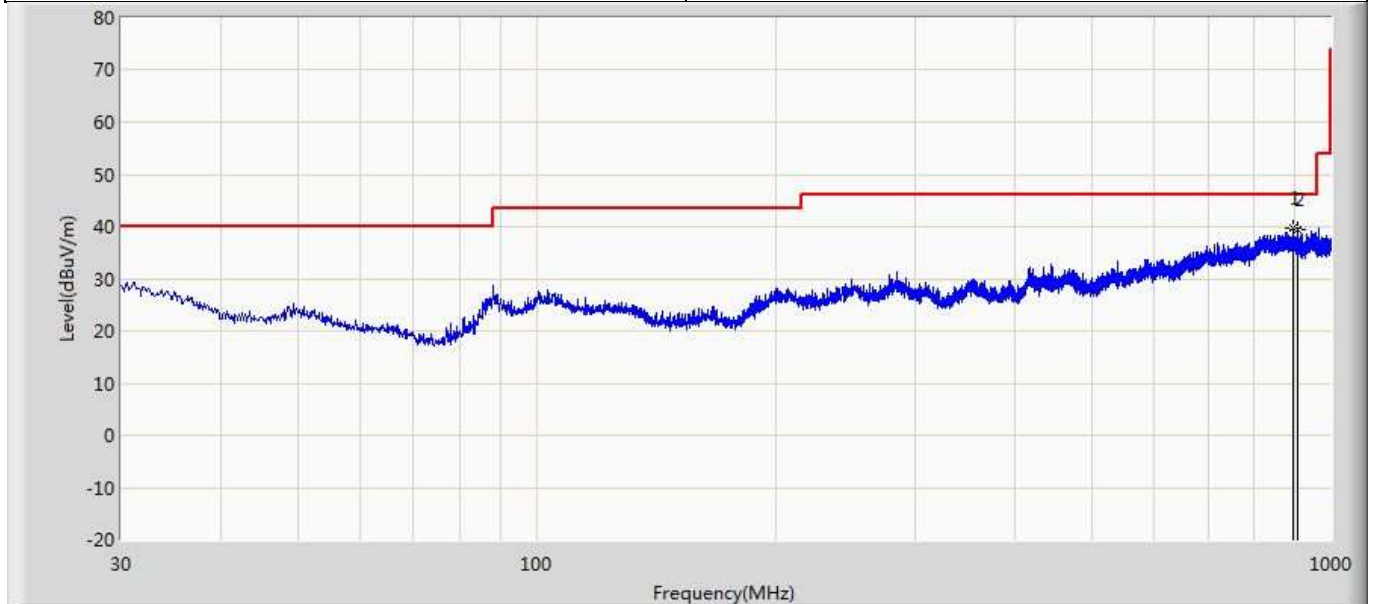
The worst case of Radiated Emission below 1GHz:

Profile: 2040170R	Page No.: 1
Engineer: Pawn	
Site: AC2	Time: 2020/04/13 - 14:16
Limit: FCC_Part15.209_RE(3m)_ClassB	Margin: 0
Probe: AC2_3M(30-1000M)	Polarity: Horizontal
EUT: Ring Bridge	Power: AC 120V/50Hz



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		900.333	39.490	6.262	-6.510	46.000	23.977	9.251	0.000	0	0	PK
2	*	954.653	39.908	6.659	-6.092	46.000	23.890	9.360	0.000	0	0	PK

Profile: 2040170R	Page No.: 2
Engineer: Pawn	
Site: AC2	Time: 2020/04/13 - 14:22
Limit: FCC_Part15.209_RE(3m)_ClassB	Margin: 0
Probe: AC2_3M(30-1000M)	Polarity: Vertical
EUT: Ring Bridge	Power: AC 120V/50Hz



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1	*	895.725	39.636	5.983	-6.364	46.000	24.413	9.239	0.000	0	0	PK
2		909.790	39.548	6.757	-6.452	46.000	23.522	9.269	0.000	0	0	PK

Remark	<p>1. " * ", means this data is the worst emission level.</p> <p>2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).</p> <p>3. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.</p>
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4.3 Emissions in non-restricted frequency band	VERDICT: PASS
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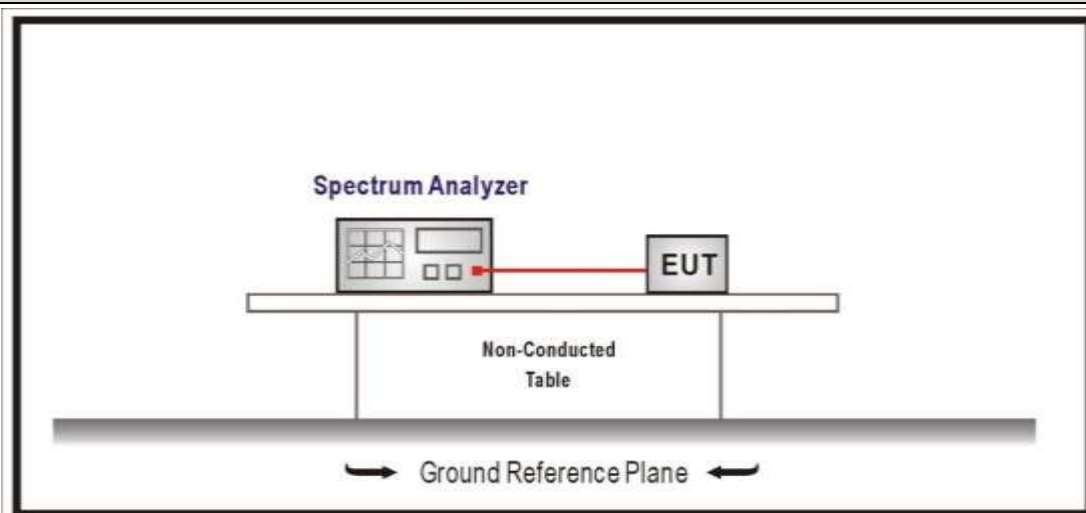
4.3.1 Limit

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

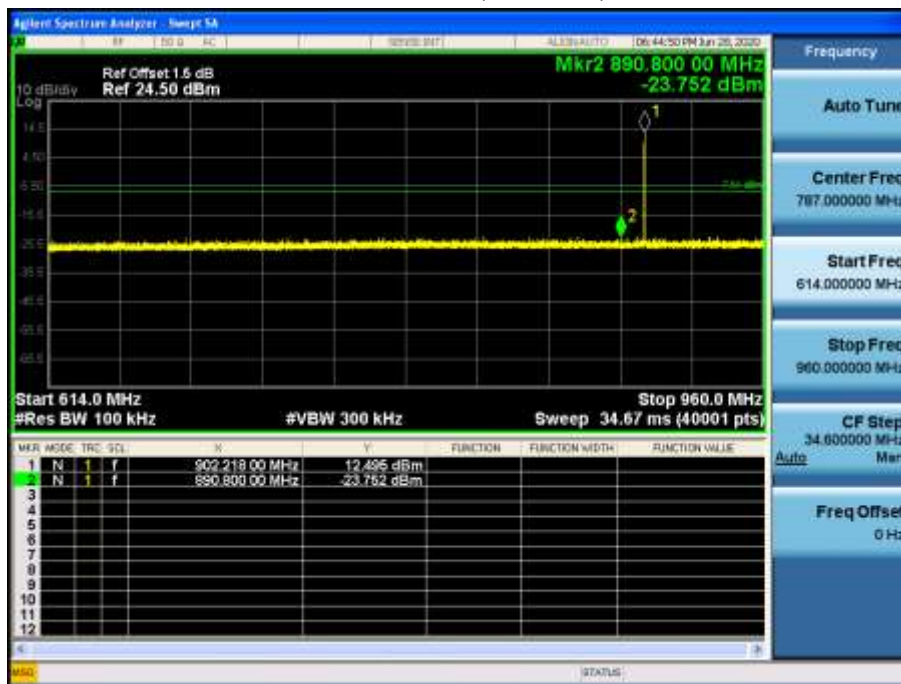
References Rule	Chapter	Description
<input checked="" type="checkbox"/> ANSI C63.10	11.11	Emissions in non-restricted frequency bands
<input checked="" type="checkbox"/> ANSI C63.10	11.11.1	General
<input checked="" type="checkbox"/> ANSI C63.10	11.11.2	Reference level measurement
<input checked="" type="checkbox"/> 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)	Out-Band PSD[b] (dBm/100kHz)	[a]-[b] (dB)	Limit (dB)	Result
1	1	902.5	19.981	-26.567	46.548	≥20	Pass
	31	926.5	20.147	-25.294	45.441	≥20	Pass
2	1	902.2	12.495	-23.752	36.247	≥20	Pass
	129	927.6	12.733	-25.549	38.282	≥20	Pass
	#1~#129			19.835	-43.316	63.151	≥20
3	1	902.2	9.759	-43.808	53.567	≥20	Pass
	129	927.8	9.373	-46.394	55.767	≥20	Pass
	#1~#129			9.517	-43.153	52.67	≥20
4	1	902.4	8.618	-54.195	62.813	≥20	Pass
	64	927.6	8.855	-54.521	63.376	≥20	Pass
	#1~#64			20.063	-43.839	63.902	≥20
5	1	902.5	7.757	-54.918	62.675	≥20	Pass
	51	927.5	7.888	-55.328	63.216	≥20	Pass
	#1~#51			19.873	-44.404	64.277	≥20

Note: The worst case of emissions in non-restricted frequency bands as below:

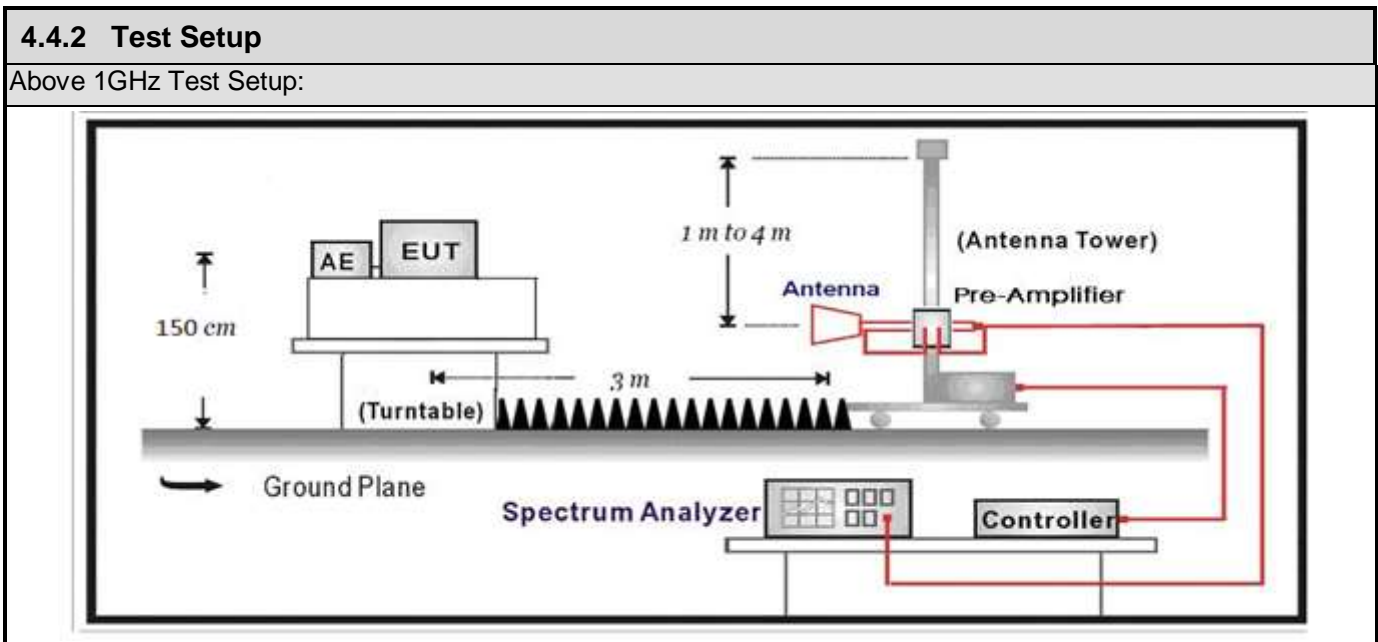
Mode 2 CH01(2412MHz)



4.4 Radiated Emission Band Edge	VERDICT: PASS
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4.4.1 Limit				
Standard	FCC Part 15 Subpart C Paragraph 15.247(d) , 15.205, 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.



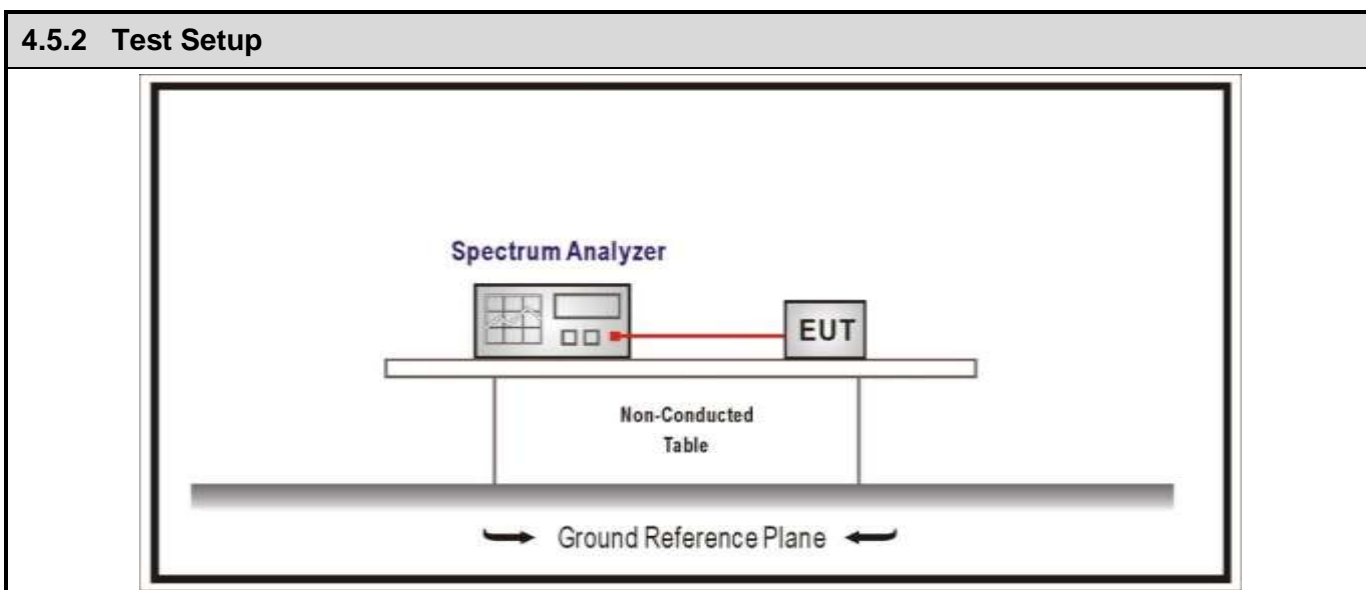
4.4.3 Test Procedure			
	References Rule	Chapter	Description
<input checked="" type="checkbox"/>	ANSI C63.10	6.10	Band-edge testing
	<input checked="" type="checkbox"/> ANSI C63.10	6.10.5	Restricted-band band-edge measurements
	<input type="checkbox"/> ANSI C63.10	6.10.6	Marker-delta method
<input checked="" type="checkbox"/>	ANSI C63.10	11.12	Emissions in restricted frequency bands
	<input checked="" type="checkbox"/> ANSI C63.10	11.12.1	Radiated emission measurements
	<input checked="" type="checkbox"/> ANSI C63.10	6.3	Radiated spurious emission test
<input type="checkbox"/>	ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
<input type="checkbox"/>	ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
<input checked="" type="checkbox"/>	ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz
	<input type="checkbox"/> ANSI C63.10	11.12.2	Antenna-port conducted measurements
	<input type="checkbox"/> ANSI C63.10	11.12.2.3	Quasi-peak measurement procedure
	<input type="checkbox"/> ANSI C63.10	11.12.2.4	Peak power measurement procedure
	<input type="checkbox"/> ANSI C63.10	11.12.2.5	Average power measurement procedures
	<input type="checkbox"/> ANSI C63.10	11.12.2.5.1	Trace averaging with continuous EUT transmission at full power
	<input type="checkbox"/> ANSI C63.10	11.12.2.5.2	Trace averaging across ON and OFF times of the EUT transmissions followed by duty cycle correction
	<input type="checkbox"/> ANSI C63.10	11.12.2.5.3	Reduced VBW averaging across ON and OFF times of the EUT transmissions with max hold

4.4.4 Test Data

Remark	No restricted band in the range ± 2 channel bandwidths of the Band-edges of the specified emission band! (608 MHz – 614 MHz and 960 MHz – 1240 MHz).
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4.5 6dB and 20dB Bandwidth	VERDICT: PASS
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4.5.1 Limit	
Standard	FCC Part 15 Subpart C Paragraph 15.247 (a)(1)(2)
(1) Systems using digital modulation techniques operate in the 2400-2483.5 MHz. The minimum 6 dB bandwidth shall be at least 500 kHz (2) For frequency hopping systems operating in 902-928 MHz band, the maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.	
Standard	ANSI C63.10 Paragraph 6.7
The occupied bandwidth or the “99% emission bandwidth” is defined as the frequency range between two points, one above and the other below the carrier frequency, within which 99% of the total transmitted power of the fundamental transmitted emission is contained. The occupied bandwidth shall be reported for all equipment in addition to the specified bandwidth required in the applicable RSSs. The occupied bandwidth should be within the required frequency range.	



4.5.3 Test Procedure			
	Reference Rule	Chapter	Description
<input checked="" type="checkbox"/>	ANSI C63.10	11.8	DTS bandwidth
<input type="checkbox"/>	ANSI C63.10	11.8.1	Option 1
<input checked="" type="checkbox"/>	ANSI C63.10	11.8.2	Option 2
<input checked="" type="checkbox"/>	ANSI C63.10	6.9	Occupied bandwidth
<input type="checkbox"/>	ANSI C63.10	6.9.2	relative measurement procedure
<input checked="" type="checkbox"/>	ANSI C63.10	6.9.3	power bandwidth (99%) measurement procedure

4.5.4 Test Data

Mode	CH.	Test Freq. (MHz)	6dB Occupied Bandwidth (KHz)	Limit (kHz)	Result
1	1	902.5	620.1	≥500	Pass
	16	914.5	630.3	≥500	Pass
	31	926.5	625.5	≥500	Pass

Note : The worst case of Occupied Bandwidth as below in next page:

6dB Occupied Bandwidth

Mode 1 CH1 (902.5MHz)

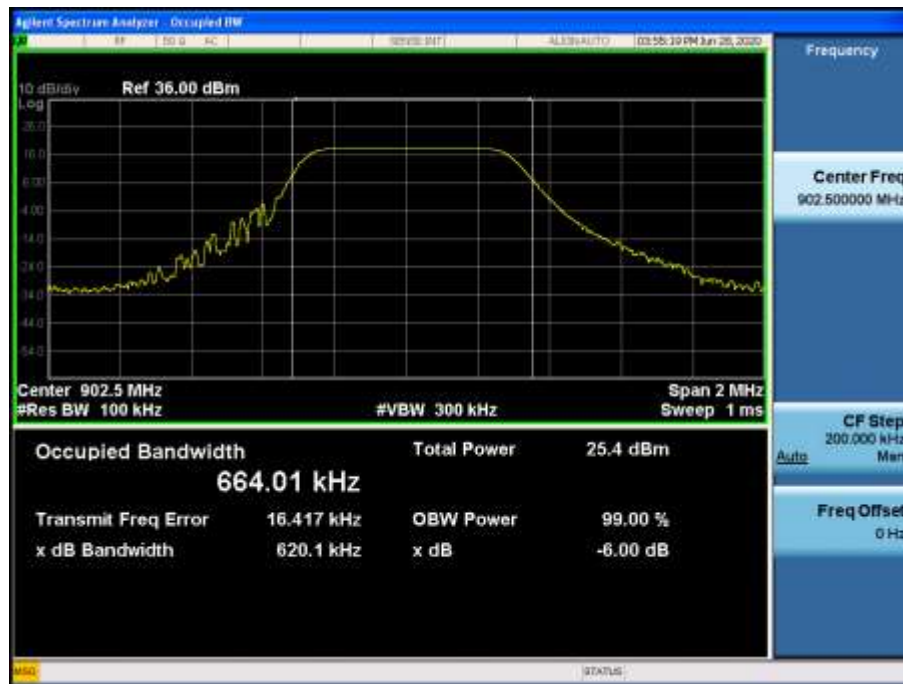


Mode	CH.	Test Freq. (MHz)	99% Occupied Bandwidth (kHz)	Limit	Result
1	1	902.5	664.01	Within frequency range	Pass
	16	914.5	685.30	Within frequency range	Pass
	31	926.5	673.95	Within frequency range	Pass

Note : The worst case of Occupied Bandwidth as below in next page:

99% Occupied Bandwidth

Mode 1 CH1 (902.5MHz)

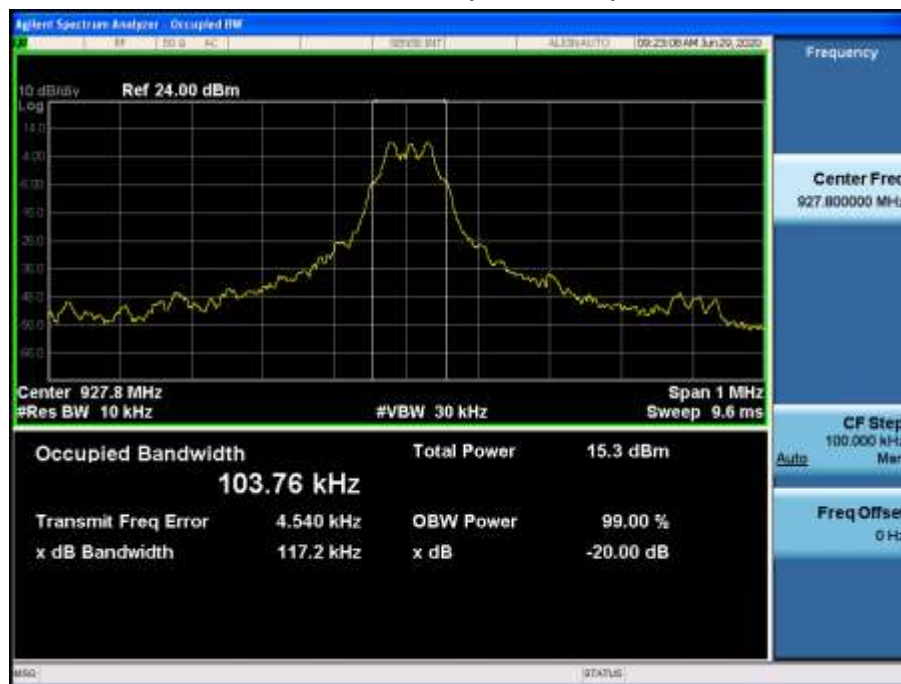


Mode	CH.	Test Freq. (MHz)	20dB Occupied Bandwidth (KHz)	99% Occupied Bandwidth (KHz)	Result
2	1	902.2	137.7	159.4	Pass
	65	915	136.9	159.1	Pass
	129	927.8	137.3	162.5	Pass
3	1	902.2	104.41	117.1	Pass
	65	915	107.02	118.6	Pass
	129	927.8	103.76	117.2	Pass
4	1	902.4	169.29	187.1	Pass
	32	914.8	164.49	185.1	Pass
	64	927.6	167.30	183.6	Pass
5	1	902.5	266.67	295.2	Pass
	26	915	262.41	288.5	Pass
	51	927.5	264.96	282.9	Pass

Note : The worst case of Occupied Bandwidth as below in next page:

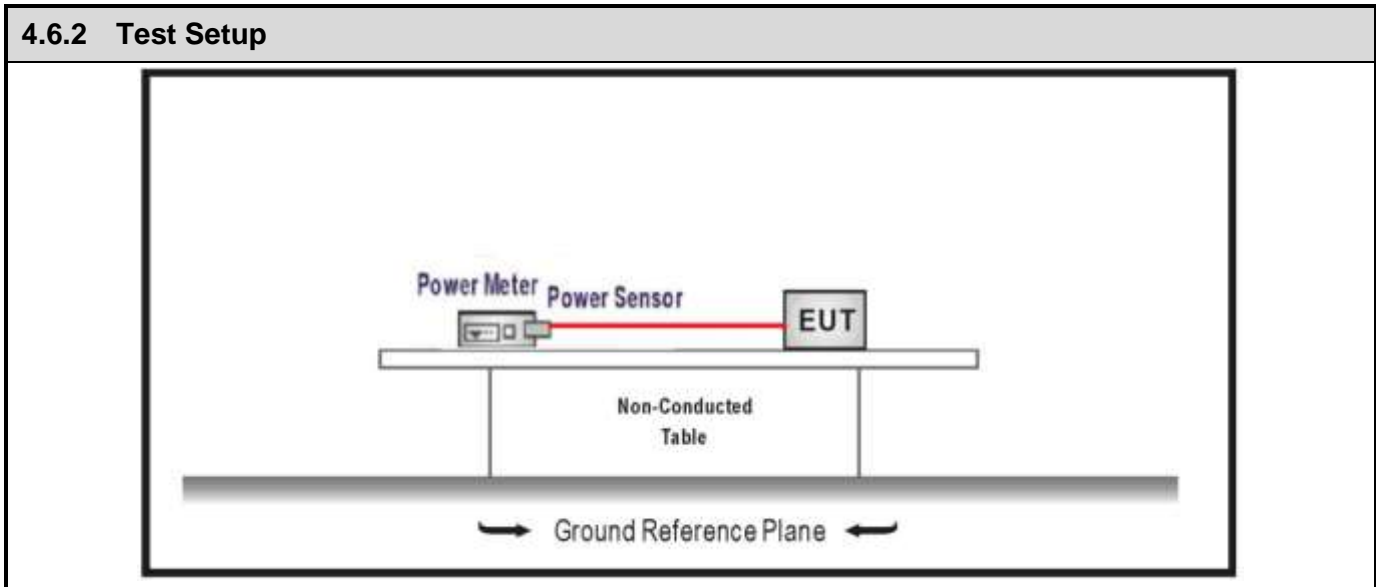
20dB Occupied Bandwidth

Mode 3 CH1 (103.76MHz)



4.6 Fundamental emission output power	VERDICT: PASS
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4.6.1 Limit		
Standard	FCC Part 15 Subpart C Paragraph 15.247 (b)(3)	
<input checked="" type="checkbox"/>	GTX <6dBi	$P_{out} \leq 30\text{dBm}$
<input type="checkbox"/>	GTX >6dBi	
<input type="checkbox"/>	Non-Fix point-point	$P_{out} \leq 30 - (GTX - 6)$
<input type="checkbox"/>	Fix point-point	$P_{out} \leq 30 - [(GTX - 6)]/3$
<input type="checkbox"/>	Point-to-multipoint	$P_{out} \leq 30 - (GTX - 6)$
<input type="checkbox"/>	Overlap Beams	$P_{out} \leq 30 - [(GTX - 6)]/3$
<input type="checkbox"/>	Aggregate power transmitted simultaneously on all beams	$P_{out} \leq 30 - [(GTX - 6)]/3$
<input type="checkbox"/>	single directional beam	$P_{out} \leq 30 - [(GTX - 6)]/3 + 8\text{dB}$
<input checked="" type="checkbox"/>	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	
Note 1 : GTX directional gain of transmitting antennas.		
Note 2 : Pout is maximum peak conducted output power .		

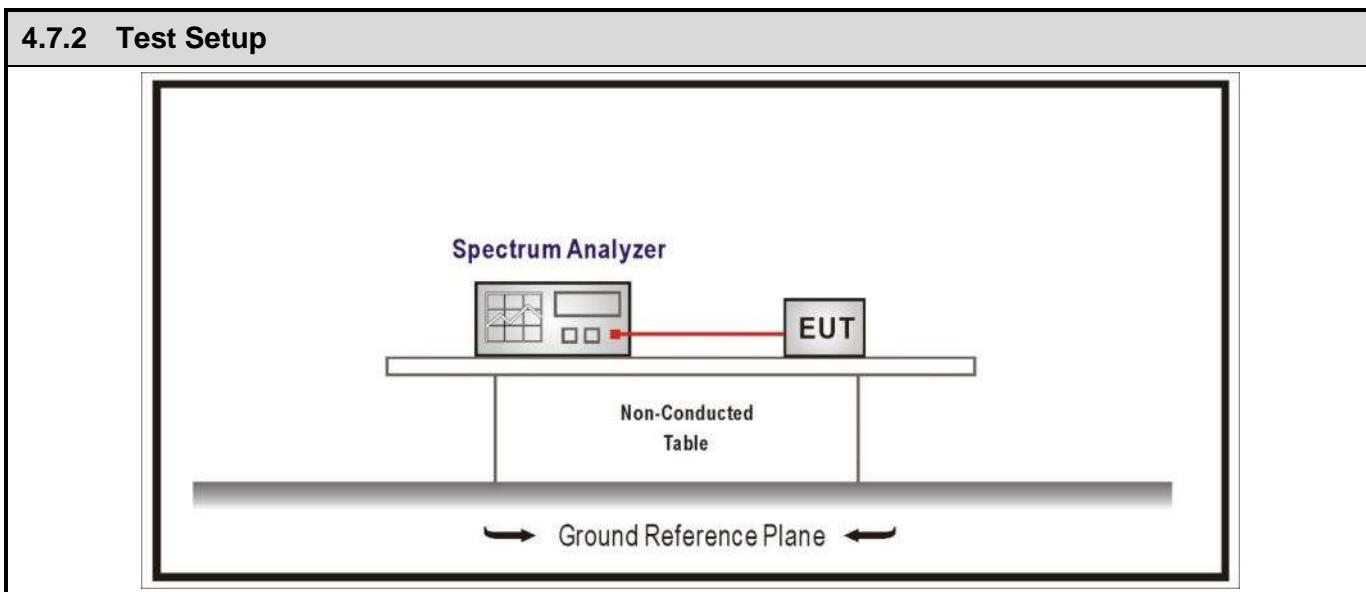


4.6.3 Test Procedure				
	References Rule		Chapter	Description
<input checked="" type="checkbox"/>	ANSI C63.10		11.9	Fundamental emission output power
	<input type="checkbox"/>	ANSI C63.10	11.9.1	Maximum peak conducted output power
		<input type="checkbox"/> ANSI C63.10	11.9.1.1	RBW \geq DTS bandwidth
		<input type="checkbox"/> ANSI C63.10	11.9.1.2	Integrated band power method
		<input type="checkbox"/> ANSI C63.10	11.9.1.3	PKPM1 Peak power meter method
	<input checked="" type="checkbox"/>	ANSI C63.10	11.9.2	Maximum conducted (average) output power
		<input checked="" type="checkbox"/> ANSI C63.10	11.9.2.2	Measurement using a spectrum analyzer (SA)
		<input checked="" type="checkbox"/> ANSI C63.10	11.9.2.2.2	Method AVGSA-1(Duty cycle \geq 98%)
		<input type="checkbox"/> ANSI C63.10	11.9.2.2.3	Method AVGSA-1A(Duty cycle \geq 98%)
		<input checked="" type="checkbox"/> ANSI C63.10	11.9.2.2.4	Method AVGSA-2(Duty cycle \leq 98%)
		<input type="checkbox"/> ANSI C63.10	11.9.2.2.5	Method AVGSA-2A(Duty cycle \leq 98%)
		<input type="checkbox"/> ANSI C63.10	11.9.2.2.4	Method AVGSA-3
		<input type="checkbox"/> ANSI C63.10	11.9.2.2.5	Method AVGSA-3A
		<input checked="" type="checkbox"/> ANSI C63.10	11.9.2.3	Measurement using a power meter (PM)
		<input checked="" type="checkbox"/> ANSI C63.10	11.9.2.3.1	Method AVGPM
		<input type="checkbox"/> ANSI C63.10	11.9.2.3.2	Method AVGPM-G
<input checked="" type="checkbox"/>	ANSI C63.10		7.8.5	Output power test procedure for frequency-hopping spread-spectrum (FHSS) devices

4.6.4 Test Data							
Mode	Channel	Test Frequency (MHz)	Power Output (dBm)	E.I.R.P (dBm)	Conducted Limit (dBm)	E.I.R.P Limit (dBm)	Result
1	1	902.5	17.72	16.72	30.00	36.00	Pass
	16	914.5	20.15	19.15	30.00	36.00	Pass
	31	926.5	20.14	19.14	30.00	36.00	Pass
2	1	902.2	21.22	20.22	30.00	36.00	Pass
	65	915	20.98	19.98	30.00	36.00	Pass
	129	927.8	20.91	19.91	30.00	36.00	Pass
3	1	902.2	21.19	20.19	30.00	36.00	Pass
	65	915	20.98	19.98	30.00	36.00	Pass
	129	927.8	20.97	19.97	30.00	36.00	Pass
4	1	902.4	21.21	20.21	30.00	36.00	Pass
	32	914.8	21.05	20.05	30.00	36.00	Pass
	64	927.6	20.96	19.96	30.00	36.00	Pass
5	1	902.5	21.14	20.14	30.00	36.00	Pass
	26	915	21.00	20.00	30.00	36.00	Pass
	51	927.5	21.22	20.22	30.00	36.00	Pass

4.7 Power Density	VERDICT: PASS
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4.7.1 Limit:	
Standard	FCC Part 15 Subpart C Paragraph 15.247 (e)
Power Spectral Density $\leq 8\text{dBm}/3\text{kHz}$	



4.7.3 Test Procedure

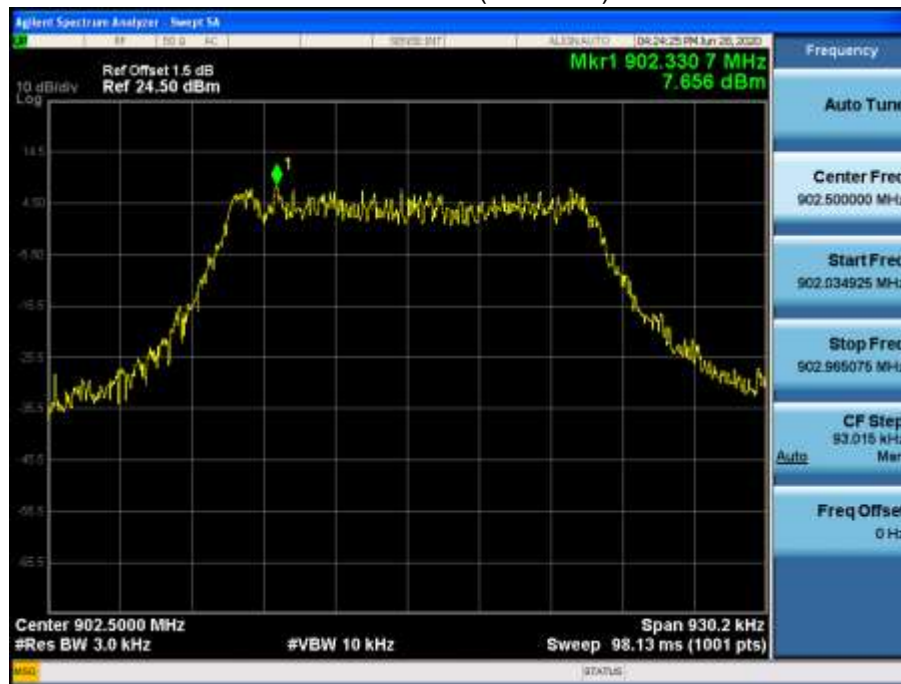
	References Rule	Chapter	Description
<input checked="" type="checkbox"/>	ANSI C63.10	11.10	Maximum power spectral density level in the fundamental emission
<input type="checkbox"/>	ANSI C63.10	11.10.2	Method PKPSD (peak PSD)
<input checked="" type="checkbox"/>	ANSI C63.10	11.10.3	Method AVGPSD-1(Duty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

4.7.4 Test Data

Mode	Channel	Test Frequency (MHz)	Measurement PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
1	1	902.5	7.656	≤8	Pass
	16	914.5	7.279	≤8	Pass
	31	926.5	7.265	≤8	Pass

Note 1: The worst data as below:

Mode 1 CH06(2437MHz)



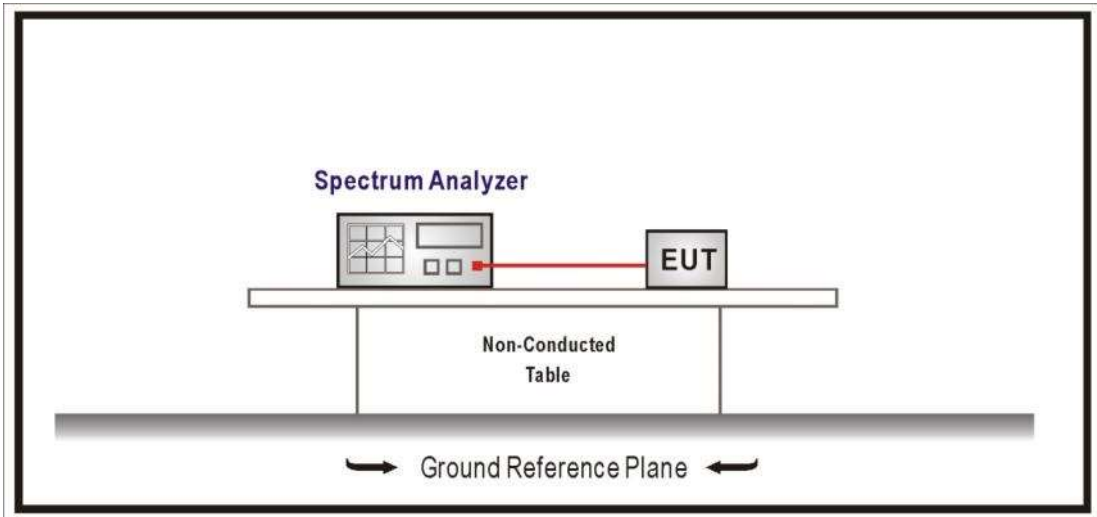
4.8 Carrier Frequency Separation	VERDICT: PASS
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4.8.1 Limit:

Standard	FCC Part 15 Subpart C Paragraph 15.247(a)(1)
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Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

4.8.2 Test Setup



4.8.3 Test Procedure

	References Rule	Chapter	Description
<input checked="" type="checkbox"/>	ANSI C63.10	7.8.2	Carrier frequency separation

4.8.4 Test Data					
Mode	Channel	Test Frequency (MHz)	Carrier Frequency Separation (kHz)	Limit (kHz)	Result
2	1	902.2	200	137.7	Pass
	65	915	200	136.9	Pass
	129	927.8	200	137.3	Pass
3	1	902.2	200	104.41	Pass
	65	915	200	107.02	Pass
	129	927.8	200	103.76	Pass
4	1	902.4	400	169.29	Pass
	32	914.8	400	164.49	Pass
	64	927.6	400	167.30	Pass
5	1	902.5	500	266.67	Pass
	26	915	500	262.41	Pass
	51	927.5	500	264.96	Pass

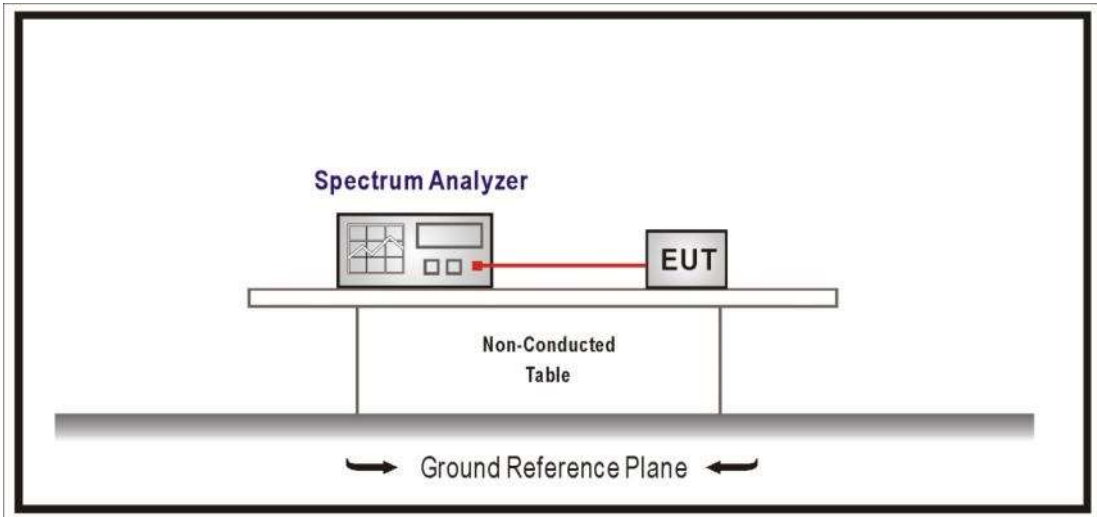
4.9 Number of Hopping Frequencies	VERDICT: PASS
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4.9.1 Limit:

Standard	FCC Part 15 Subpart C Paragraph 15.247 15.247(a)(1) (iii)
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For frequency hopping systems operating in 902-928 MHz band, if the 20 dB bandwidth of the hopping channel is less than 250 kHz, shall use at least 50 hopping frequencies.

4.9.2 Test Setup



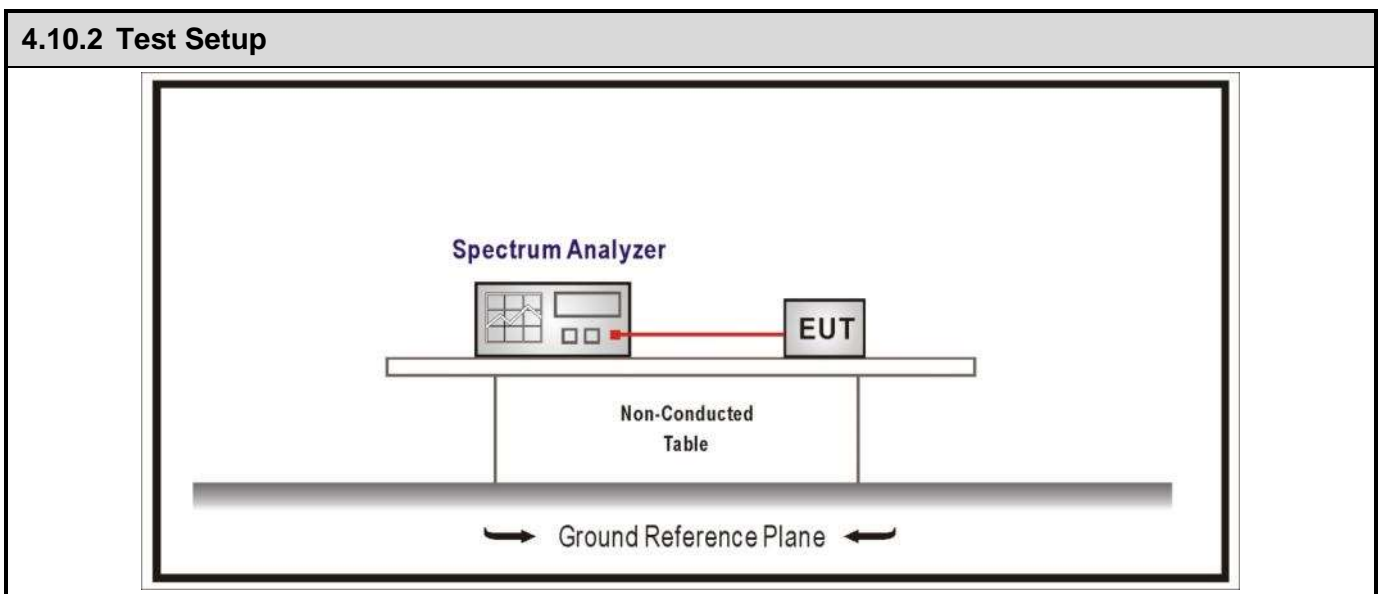
4.9.3 Test Procedure

	References Rule	Chapter	Description
<input checked="" type="checkbox"/>	ANSI C63.10	7.8.3	Number of Hopping Frequencies

4.9.4 Test Data				
Mode	Frequency Band	Number of Hopping Frequencies	Limit	Result
2	902.2~927.8MHz	129	50	Pass
3	902.2~927.8MHz	129	50	Pass
4	902.4~927.6MHz	64	50	Pass
5	902.5~927.5MHz	51	50	Pass

4.10 Time of Occupancy (Dwell Time)	VERDICT: PASS
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4.10.1 Limit:	
Standard	FCC Part 15 Subpart C Paragraph 15.247(a)(1)(iii)
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	



4.10.3 Test Procedure			
	References Rule	Chapter	Description
<input checked="" type="checkbox"/>	ANSI C63.10	7.8.4	Time of Occupancy (Dwell Time)

4.10.4 Test Data					
Mode	Channel No.	Frequency (MHz)	Time of Occupancy (ms)	Limit (ms)	Result
2	65	915	6.28	≤400	Pass
3	65	914.8	7.14	≤400	Pass
4	32	915	4.8	≤400	Pass
5	26	915	1.44	≤400	Pass

4.11 Antenna Requirement	VERDICT: PASS
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4.11.1 Limit:	
Standard	FCC Part 15 Subpart C Paragraph 15.203
<p>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.</p> <p>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.</p>	

4.11.2 Antenna Connector Construction:	
<input checked="" type="checkbox"/>	The use of a permanently attached antenna
<input type="checkbox"/>	The antenna use of a unique coupling to the intentional radiator
<input type="checkbox"/>	The use of a nonstandard antenna jack or electrical connector
Please refer to the attached document "Internal Photograph" to show the antenna connector.	

4.12 Test setup photo and EUT Photo
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VERDICT: PASS

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

_____ The End _____