



Test Report

FCC Part15 Subpart C & ISED RSS-247 Issue 2

Product Name : GEYE 900
Model No. : 8390837, 117826, 2245339
FCC ID : 2AH2PG90017BR

Applicant : DECATHLON USA LLC
Address : 2415 3rd Street, Suite 231
San Francisco
94107, California
United States of America

Date of Receipt : July. 13, 2017
Test Date : July. 14, 2017~ Dec. 13, 2017
Issued Date : Jul. 24, 2018
Report No. : 1772085R-RF-US-P06V02
Report Version : V 1.1

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by TAF, A2LA or any agency of the government.

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Test Report Certification

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Product Name : GEYE 900
 Applicant : DECATHLON USA LLC
 Address : 2415 3rd Street, Suite 231
 San Francisco
 94107, California
 United States of America

Manufacturer : DECATHLON SA
 Address : 4 Boulevard de Mons- 59650 Villeneuve D'Ascq-FRANCE
 Model No. : 8390837, 117826, 2245339
 FCC ID : 2AH2PG90017BR
 EUT Voltage : 3.8 V dc
 Test Voltage : AC 120V/60Hz
 Brand Name : Decathlon
 Applicable Standard : FCC CFR Title 47 Part 15 Subpart C
 ANSI C63.4:2014; ANSI C63.10:2013;
 KDB 558074 D01v04

Test Result : Complied
 Performed Location : DEKRA Testing & Certification (Suzhou) Co., Ltd.
 No.99 Hongye Rd., Suzhou Industrial Park, Suzhou, 215006,
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 FCC Designation Number: CN1155; IC Lab Code: 4075B

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TABLE OF CONTENTS

Description	Page
1. General Information	6
1.1. EUT Description.....	6
1.2. Working Frequency of Each Channel:	7
1.3. Antenna information	7
1.4. Mode of Operation	8
1.5. Tested System Details	8
1.6. Configuration of Tested System	9
1.7. EUT Exercise Software	10
2. Technical Test.....	11
2.1. Summary of Test Result	11
2.2. Test Frequency configuration:	12
2.3. Test Environment.....	13
2.4. Measurement Uncertainty	13
3. AC Power Line Conducted Emission	14
3.1. Test Equipment	14
3.2. Test Setup.....	14
3.3. Limit.....	15
3.4. Test Procedure	15
3.5. Test Result	16
4. Emissions in restricted frequency bands	16
4.1. Test Equipment	18
4.2. Test Setup.....	19
4.3. Limit.....	20
4.4. Test Procedure	23
4.5. EUT test Axis definition.....	24
4.6. Test Result	25
5. Emissions in non-restricted frequency bands	33
5.1. Test Equipment	33
5.2. Test Setup.....	33
5.3. Limit.....	34
5.4. Test Procedure	35
5.5. EUT test Axis definition.....	36
5.6. Test Result	37
6. Radiated Emission Band Edge	38
6.1. Test Equipment	38
6.2. Test Setup.....	39
6.3. Limit.....	39

- 6.4. Test Procedure40
- 6.5. EUT test definition41
- 6.6. Duty Cycle42
- 6.7. Test Result43
- 7. Occupied Bandwidth55
- 7.1. Test Equipment55
- 7.2. Test Setup55
- 7.3. Limit56
- 7.4. Test Procedure56
- 7.5. EUT test definition57
- 7.6. Test Result58
- 8. Fundamental emission output power59
- 8.1. Test Equipment59
- 8.2. Test Setup59
- 8.3. Limit60
- 8.4. Test Procedure61
- 8.5. EUT test definition62
- 8.6. Test Result63
- 9. Power Spectral Density64
- 9.1. Test Equipment64
- 9.2. Test Setup64
- 9.3. Limit64
- 9.4. Test Procedure65
- 9.5. EUT test definition66
- 9.6. Test Result67

History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
1772085R-RF-US-P06V02	V1.0	Initial Issued Report	May. 16, 2018
1772085R-RF-US-P06V02	V1.1	Change some descriptions	Jul. 24, 2018

1. General Information

1.1. EUT Description

Product Name	GEYE 900
Model No.	8390837, 117826, 2245339
EUT Voltage	3.8 V dc
Test Voltage	AC 120V/60Hz
Bluetooth Specification	V4.0
Frequency Range	2402- 2480 MHz
Channel Number	V4.0: 40
Channel Separation	V4.0: 2MHz
Type of Modulation	V4.0: GFSK
Data Rate	V4.0: 1Mbps(GFSK)
Antenna Type	Reference to Antenna List
Peak Antenna Gain	Reference to Antenna List

1.2. Working Frequency of Each Channel:

Bluetooth Working Frequency of Each Channel: (For V4.0)							
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

1.3. Antenna information

Model No.	N/A					
Antenna manufacturer	N/A					
Antenna Delivery	<input checked="" type="checkbox"/>	1*TX+1*RX	<input type="checkbox"/>	2*TX+2*RX	<input type="checkbox"/>	3*TX+3*RX
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"/>	Internal	<input checked="" type="checkbox"/>	PIFA		
			<input type="checkbox"/>	PCB		
			<input type="checkbox"/>	Ceramic Chip Antenna		
			<input type="checkbox"/>	Monopole Antenna		
Antenna Technology	Ant Gain (dBi)					
<input checked="" type="checkbox"/>	SISO	Ant1:2.5				

1.4. Mode of Operation

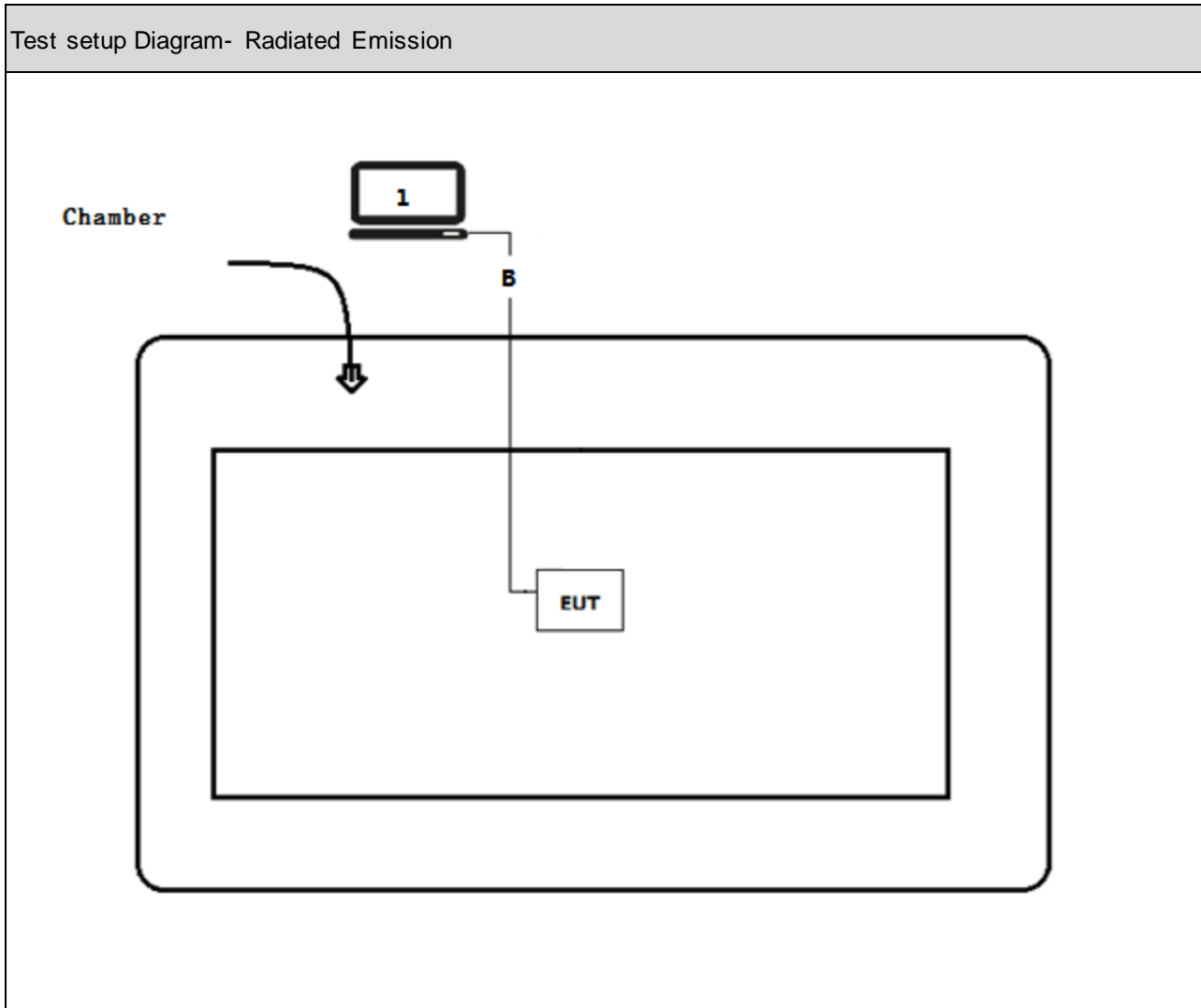
Test Mode
Mode 1: Transmit-1Mbps(GFSK_BLE)

1.5. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

No.	Product	Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook	Think Pad	2526	LV-A3285	Power by adapter
A	USB cable	N/A	N/A	N/A	Shielded,0.5m
B	USB cable	N/A	N/A	N/A	Shielded,10m

1.6. Configuration of Tested System



1.7. EUT Exercise Software

1	Setup the EUT and simulators as shown on above.
2	Turn on the power of all equipment.
3	Run the CDM, and Input command to control EUT transmit and receive signal.

2. Technical Test
2.1. Summary of Test Result

Performed Test Item	Normative References	Worst case mode	Limit	Result
AC Power Line Conducted Emission	FCC CFR Title 47 Part 15 Subpart C: Section 15.207	Mode 1	FCC 15.207	PASS
Emissions in restricted frequency bands	FCC CFR Title 47 Part 15 Subpart C: Section 15.209	Mode 1	FCC 15.209	PASS
Emissions in non-restricted frequency bands	FCC CFR Title 47 Part 15 Subpart C: Section 15.247(d)	Mode 1	$\geq 20\text{dBc}$	PASS
Radiated Emission Band Edge	FCC CFR Title 47 Part 15 Subpart C: 15.247(d)	Mode 1	FCC 15.209	PASS
Occupied Bandwidth	FCC CFR Title 47 Part 15 Subpart C: Section 15.247(a)(2)	Mode 1	$\geq 500\text{kHz}$	PASS
Fundamental emission output power	FCC CFR Title 47 Part 15 Subpart C: Section 15.247(b)(3)	Mode 1	$\leq 30\text{dBm}$	PASS
Power Spectral Density	FCC CFR Title 47 Part 15 Subpart C: Section 15.247(e)	Mode 1	$\leq 8\text{dBm}/3\text{kHz}$	PASS
Antenna Requirement	FCC CFR Title 47 Part 15 Subpart C: Section 15.203	N/A	FCC 15.203	PASS

2.2. Test Frequency configuration:

Modulation Mode	Channel	Frequency	Channel	Frequency	Channel	Frequency
BLE	00	2402 MHz	19	2440 MHz	39	2480MHz

2.3. Test Environment

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	21
Humidity (%RH)	25-75	50
Barometric pressure (mbar)	860-1060	950-1000

2.4. Measurement Uncertainty

Test Items	Uncertainty
AC Power Line Conducted Emission	$\pm 2.02\text{dB}$
Radiated Emission	Below 1GHz $\pm 3.8\text{ dB}$
	Above 1GHz $\pm 3.9\text{ dB}$
RF Antenna Port Conducted Emission	$\pm 1.27\text{dB}$
Radiated Emission Band Edge	$\pm 3.9\text{dB}$
Occupied Bandwidth	$\pm 1\text{kHz}$
Power Spectral Density	$\pm 1.27\text{dB}$

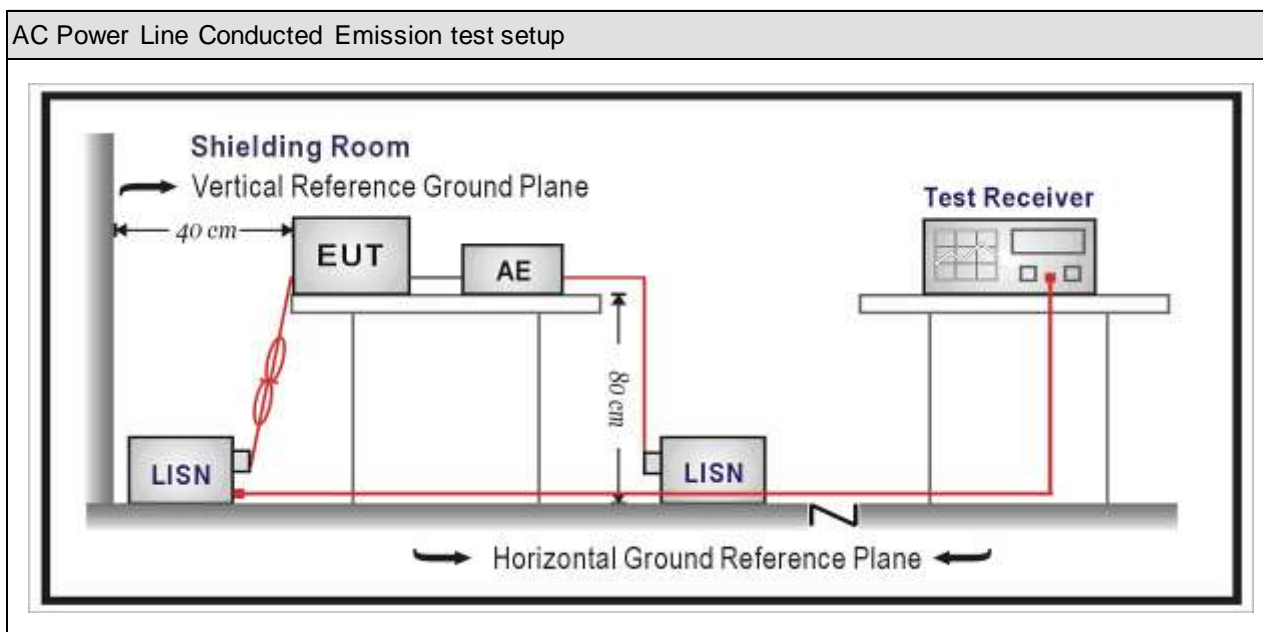
3. AC Power Line Conducted Emission

3.1. Test Equipment

AC Power Line Conducted Emission / TR-1					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
EMI Test Receiver	R&S	ESCI	100906	2017.03.05	2018.03.04
Two-Line V-Network	R&S	ENV 216	101189	2017.07.16	2018.07.15
Two-Line V-Network	R&S	ENV 216	101044	2017.09.16	2018.09.15
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	N/A	N/A
50ohm Termination	SHX	TF2	07081402	2017.09.16	2018.09.15
Temperature/Humidity Meter	Zhichen	ZC1-2	TR1-TH	2017.01.04	2018.01.03

Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

3.2. Test Setup



3.3. Limit

Frequency of Emission (MHz)	Conducted Limit	
	Quasi-peak (dBµV)	Average (dBµV)
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

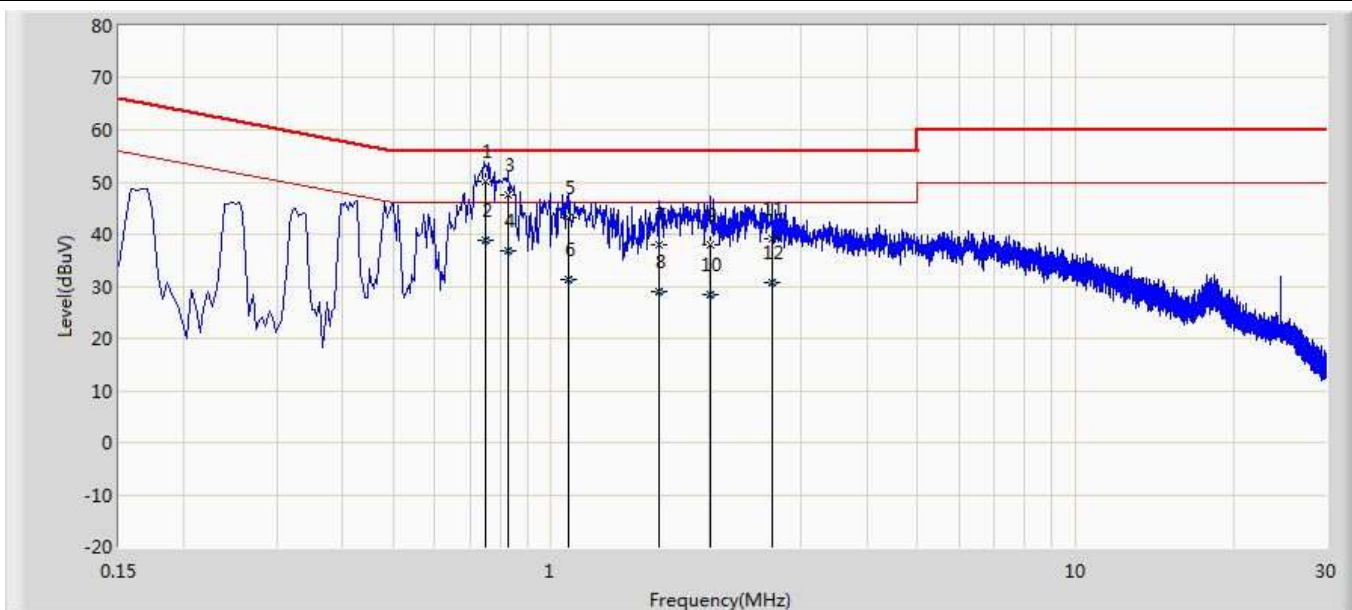
Note 1: The lower limit shall apply at the transition frequencies.
 Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

3.4. Test Procedure

Test Method			
	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
<input checked="" type="checkbox"/>	ANSI C63.4-2014	7	AC power-line conducted emission measurements

3.5. Test Result

Engineer: cptJack	
Site: TR1	Time: 2017/12/06
Limit: FCC_Part15.107_CE_AC Power_ClassC	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Line
EUT: GEYE 900	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by BLE	

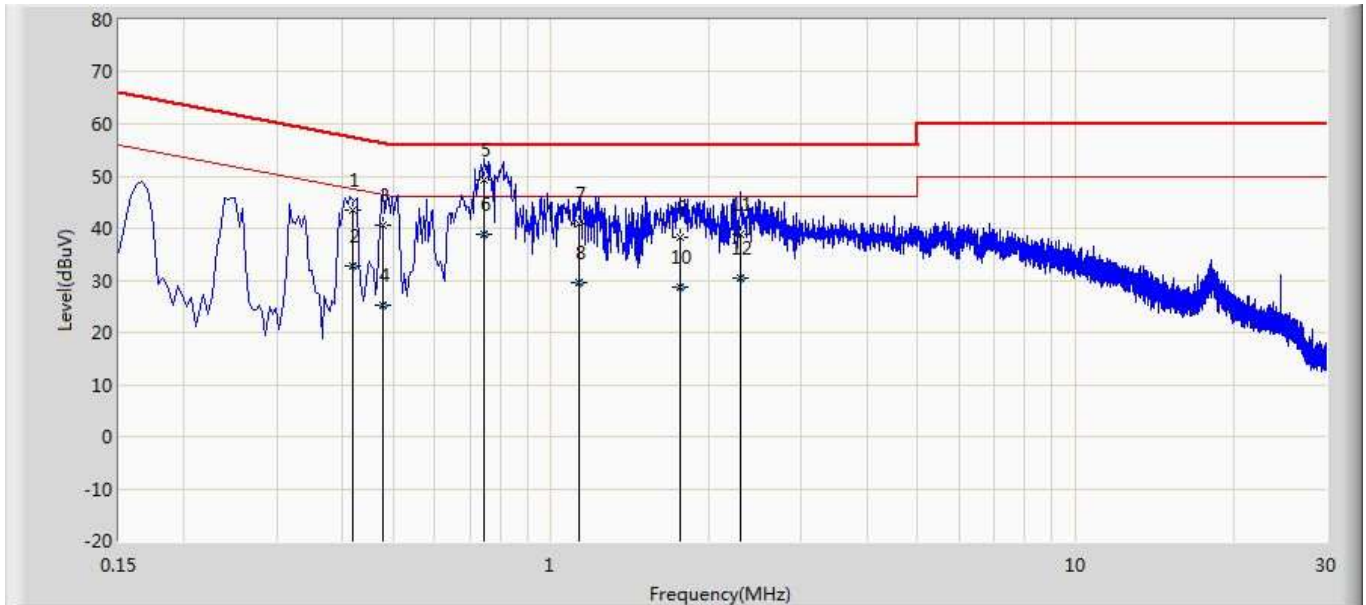


No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1	*	0.749	50.209	40.556	-5.791	56.000	9.602	0.051	0.000	QP
2		0.749	38.808	29.155	-7.192	46.000	9.602	0.051	0.000	AV
3		0.830	47.620	37.976	-8.380	56.000	9.590	0.054	0.000	QP
4		0.830	36.824	27.180	-9.176	46.000	9.590	0.054	0.000	AV
5		1.078	43.101	33.448	-12.899	56.000	9.592	0.062	0.000	QP
6		1.078	31.420	21.767	-14.580	46.000	9.592	0.062	0.000	AV
7		1.610	38.095	28.416	-17.905	56.000	9.602	0.076	0.000	QP
8		1.610	28.907	19.228	-17.093	46.000	9.602	0.076	0.000	AV
9		2.010	37.910	28.213	-18.090	56.000	9.610	0.087	0.000	QP
10		2.010	28.346	18.648	-17.654	46.000	9.610	0.087	0.000	AV
11		2.638	39.118	29.398	-16.882	56.000	9.619	0.101	0.000	QP
12		2.638	30.741	21.021	-15.259	46.000	9.619	0.101	0.000	AV

Note:

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

Engineer: cptJack	
Site: TR1	Time: 2017/12/06
Limit: FCC_Part15.107_CE_AC Power_ClassC	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Neutral
EUT: GEYE 900	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by BLE	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.419	43.616	33.985	-13.852	57.468	9.592	0.039	0.000	QP
2		0.419	32.787	23.156	-14.681	47.468	9.592	0.039	0.000	AV
3		0.478	40.518	30.887	-15.856	56.374	9.590	0.041	0.000	QP
4		0.478	25.179	15.547	-21.195	46.374	9.590	0.041	0.000	AV
5	*	0.744	49.155	39.514	-6.845	56.000	9.590	0.051	0.000	QP
6		0.744	38.892	29.251	-7.108	46.000	9.590	0.051	0.000	AV
7		1.134	40.964	31.309	-15.036	56.000	9.593	0.063	0.000	QP
8		1.134	29.560	19.905	-16.440	46.000	9.593	0.063	0.000	AV
9		1.766	38.246	28.560	-17.754	56.000	9.606	0.080	0.000	QP
10		1.766	28.796	19.110	-17.204	46.000	9.606	0.080	0.000	AV
11		2.302	38.955	29.246	-17.045	56.000	9.614	0.094	0.000	QP
12		2.302	30.320	20.612	-15.680	46.000	9.614	0.094	0.000	AV

Note:

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

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

4. Emissions in restricted frequency bands

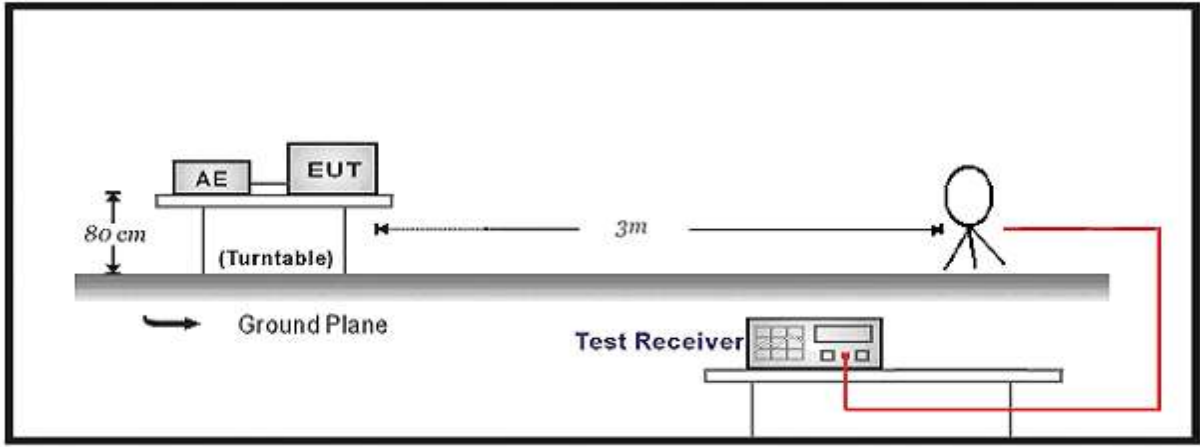
4.1. Test Equipment

Radiated Emission(Below 1GHz) / AC-2					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
EMI Test Receiver	R&S	ESCI	100573	2017.03.29	2018.03.28
Loop Antenna	R&S	HFH2-Z2	833799/003	2017.11.16	2018.11.15
Bilog Antenna	Teseq GmbH	CBL6112D	27611	2017.10.16	2018.10.15
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC2-C	2016.03.02	2018.03.01
Temperature/Humidity Meter	Zhichen	ZC1-2	AC2-TH	2017.01.03	2018.01.02
Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

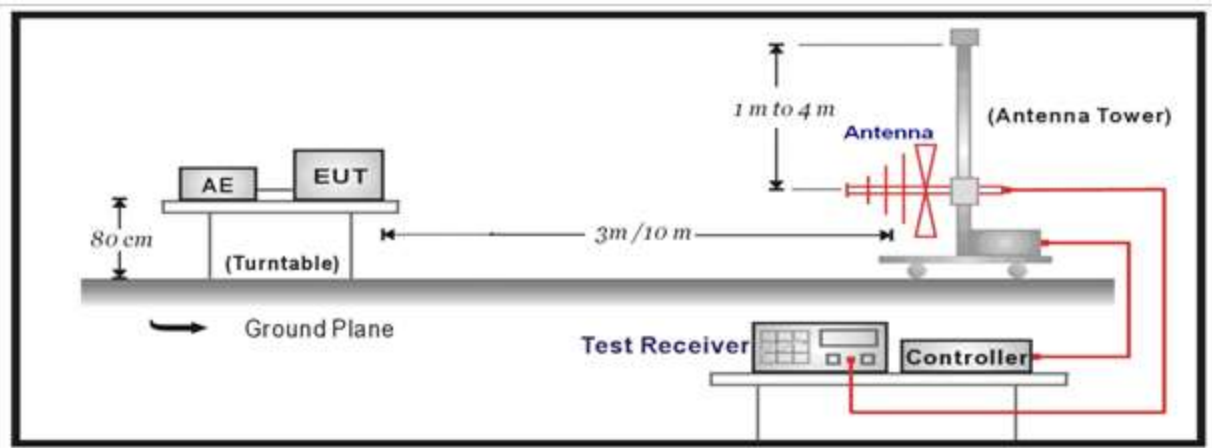
Radiated Emission(Above 1GHz) / AC-5					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2017.01.04	2018.01.03
Preamplifier	Miteq	NSP1800-25	1364185	2017.05.06	2018.05.05
Preamplifier	QuieTek	AP-040G	CHM-0906001	2017.05.06	2018.05.05
DRG Horn	ETS-Lindgren	3117	00123988	2017.01.22	2018.01.21
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2017.11.25	2018.11.24
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2016.03.02	2018.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2016.03.02	2018.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	AC5-C3	2016.03.02	2018.03.01
EMI Receiver	Agilent	N9038A	MY51210196	2017.06.10	2018.06.09
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2017.01.04	2018.01.03
Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

4.2. Test Setup

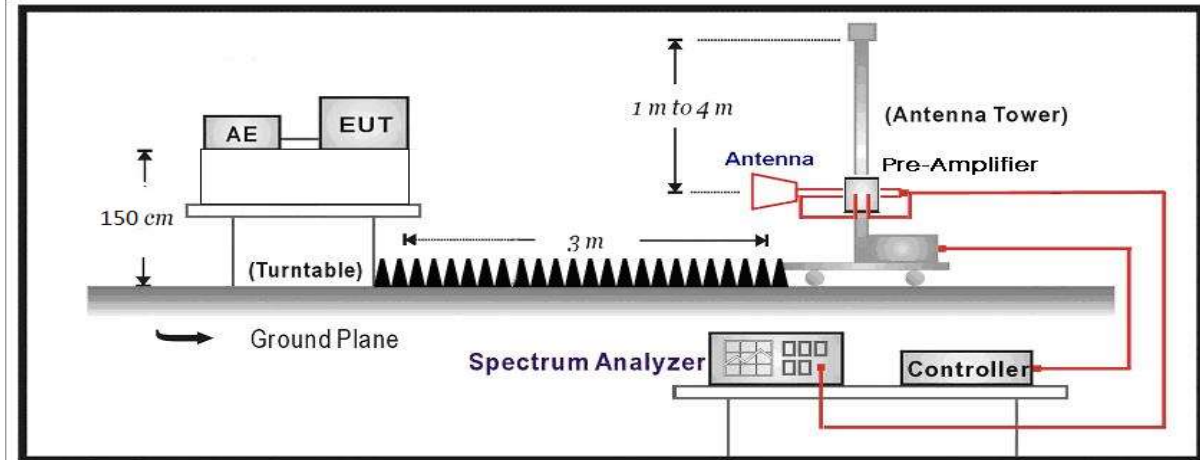
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



Above 1GHz Test Setup:



4.3. Limit

For FCC

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			

For IC:

Restricted Bands of operation			
Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090-0.110	13.36-13.41	1645.5-1646.5	9.0-9.2
2.1735-2.1905	16.42-16.423	1660-1710	9.3-9.5
3.020-3.026	16.69475-16.69525	1718.8-1722.2	10.6-12.7
4.125-4.128	16.80425-16.80475	2200-2300	13.25-13.4
4.17725-4.17775	25.5-25.67	2310-2390	14.47-14.5
4.20725-4.20775	37.5-38.25	2655-2900	15.35-16.2
5.677-5.683	73-74.6	3260-3267	17.7-21.4
6.215-6.218	74.8-75.2	3332-3339	22.01-23.12
6.26775-6.26825	108-138	3345.8-3358	23.6-24.0
6.31175-6.31225	156.52475-156.52525	3500-4400	31.2-31.8
8.291-8.294	156.7-156.9	4500-5150	36.43-36.5
8.362-8.366	240-285	5350-5460	Above 38.6
8.37625-8.38675	322-335.4	7250-7750	
8.41425-8.41475	399.9-410	8025-8500	
12.29-12.293	608-614		
12.51975-12.52025	960-1427		
12.57675-12.57725	1435-1626.5		

Restricted Band Emissions Limit			
Frequency (MHz)	Field strength (µV/m)	Field strength (dBµV/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)

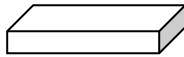
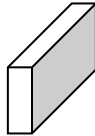
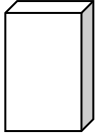
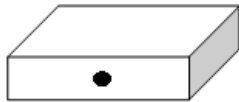
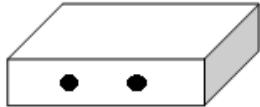

Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed 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).

4.4. Test Procedure

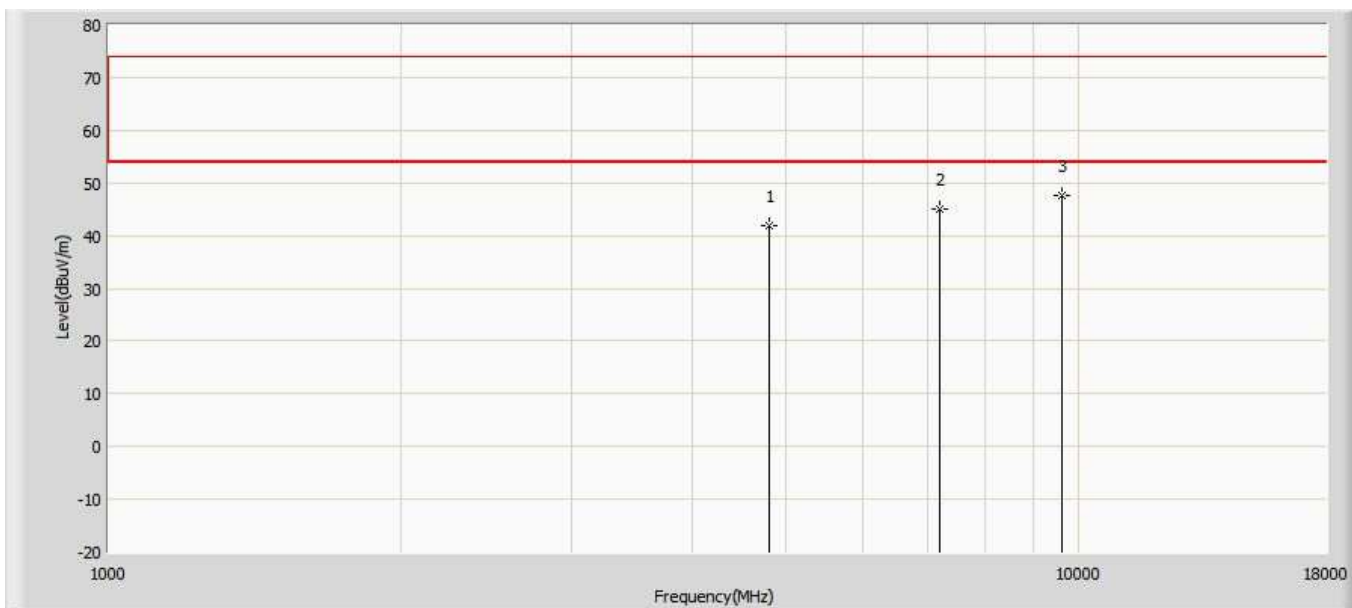
Test Method				
	References	Rule	Chapter	Description
<input type="checkbox"/>	ANSI C63.10		11.11	Emissions in non-restricted frequency bands
	<input type="checkbox"/>	ANSI C63.10	11.11.2	Reference level measurement
	<input type="checkbox"/>	ANSI C63.10	11.11.3	Emission level measurement
<input checked="" 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	11.12.2.7	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	11.12.2.3	Quasi-peak measurement procedure
	<input checked="" type="checkbox"/>	ANSI C63.10	11.12.2.4	Peak power measurement procedure
	<input checked="" 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 checked="" 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

4.5. EUT test Axis definition

Item	Emissions in restricted frequency bands			
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		
Test mode	Mode 1			
Test method	<input checked="" type="checkbox"/>	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis <input checked="" type="checkbox"/>	Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>
	<input type="checkbox"/>	Conducted		
	<input type="checkbox"/>	Chain 0		
				
	<input type="checkbox"/>	Chain 0	Chain 1	
				
	<input type="checkbox"/>	Chain 0	Chain 1	Chain 2
				

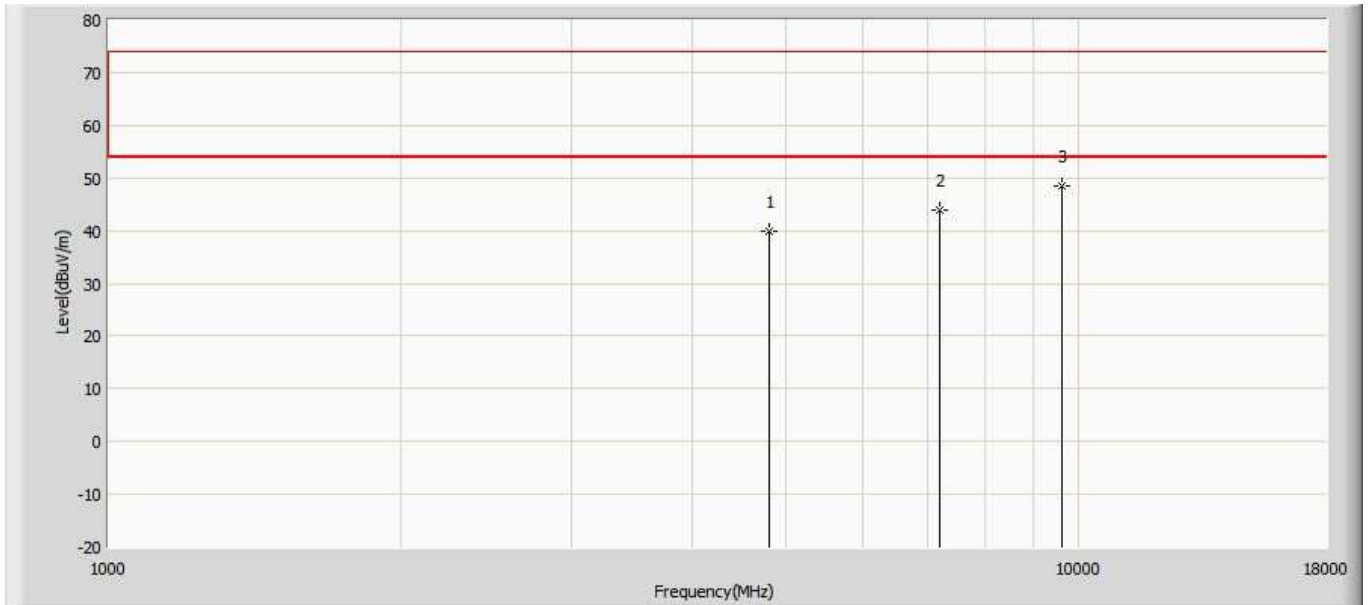
4.6. Test Result

Engineer:Slark	
Site:AC5	Time:2017/08/07 - 10:51
Limit:FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: GEYE 900	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by BLE	



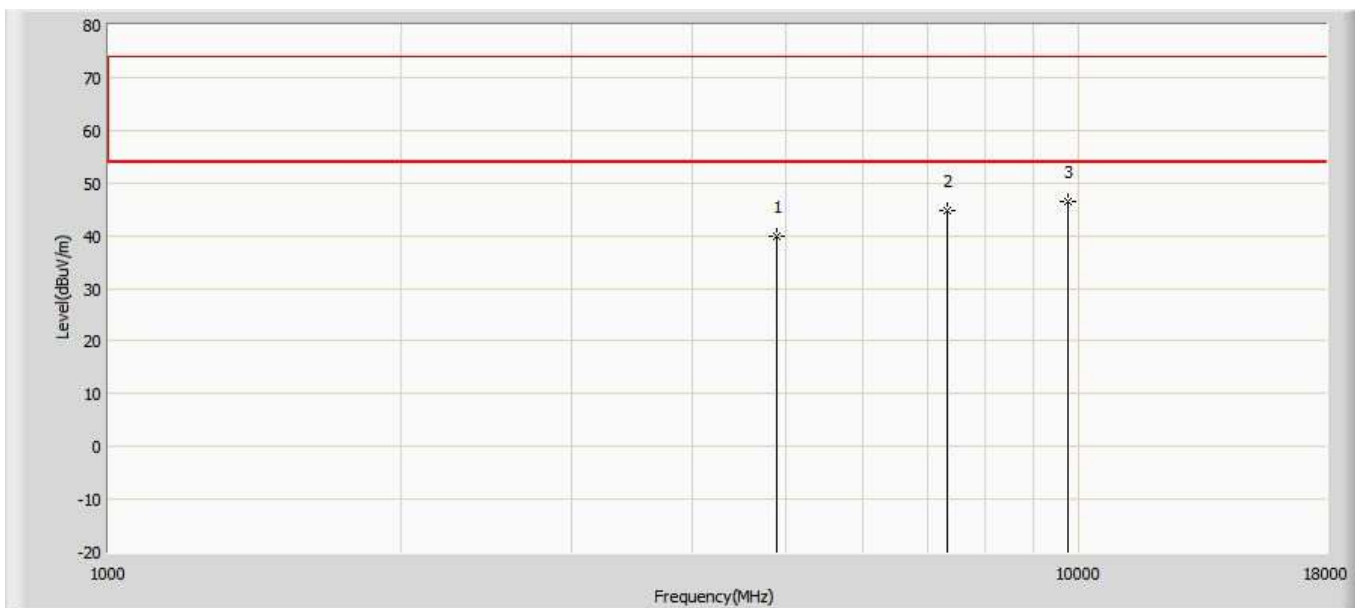
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	41.951	54.961	-12.049	54.000	-13.010	AV
2		7206.000	45.165	52.875	-8.835	54.000	-7.710	AV
3	*	9608.000	47.643	49.233	-6.357	54.000	-1.590	AV

Engineer:Slark	
Site:AC5	Time: 2017/08/07 - 10:51
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: GEYE 900	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by BLE	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	40.005	53.015	-13.995	54.000	-13.010	AV
2		7206.000	43.888	51.598	-10.112	54.000	-7.710	AV
3	*	9608.000	48.535	50.125	-5.465	54.000	-1.590	AV

Engineer:Slark	
Site:AC5	Time: 2017/08/07 - 10:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: GEYE 900	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2440MHz by BLE	



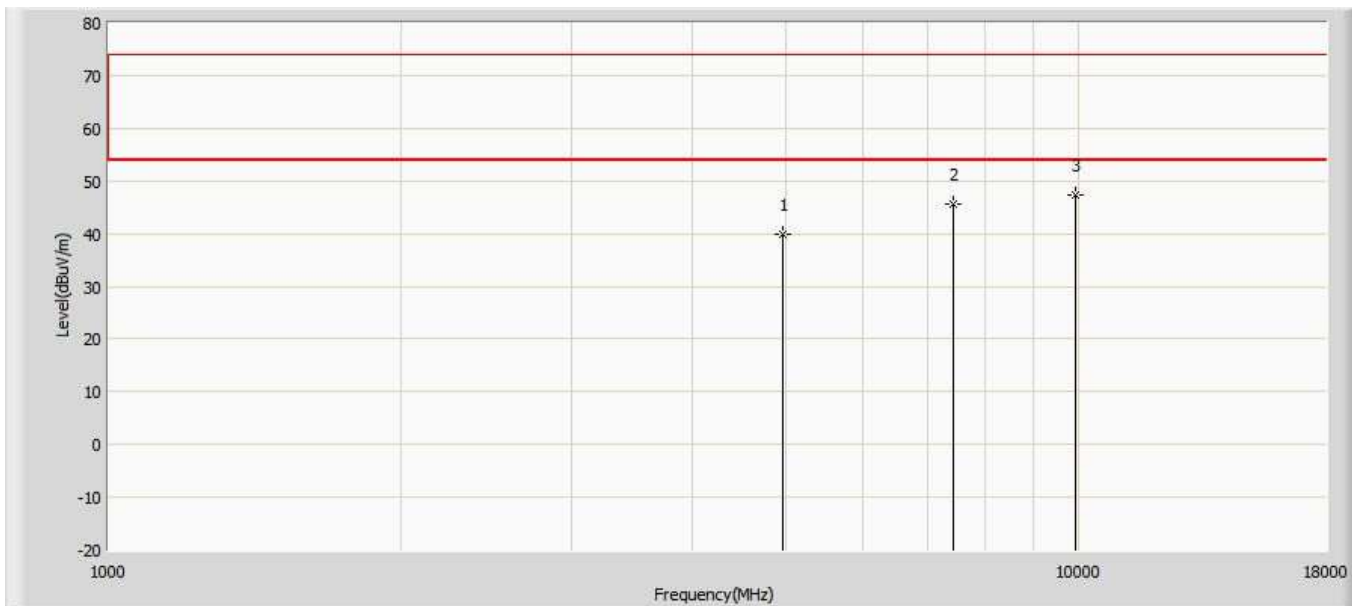
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	39.943	52.953	-14.057	54.000	-13.010	AV
2		7320.000	44.790	52.500	-9.210	54.000	-7.710	AV
3	*	9760.000	46.558	48.148	-7.442	54.000	-1.590	AV

Engineer:Slark	
Site:AC5	Time: 2017/08/07 - 10:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: GEYE 900	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2440MHz by BLE	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	39.825	52.835	-14.175	54.000	-13.010	AV
2		7320.000	43.711	51.421	-10.289	54.000	-7.710	AV
3	*	9760.000	46.337	47.927	-7.663	54.000	-1.590	AV

Engineer:Slark	
Site:AC5	Time: 2017/08/07 - 10:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: GEYE 900	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by BLE	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	40.000	52.230	-14.000	54.000	-12.230	AV
2		7440.000	45.604	52.264	-8.396	54.000	-6.660	AV
3	*	9920.000	47.301	49.261	-6.699	54.000	-1.960	AV

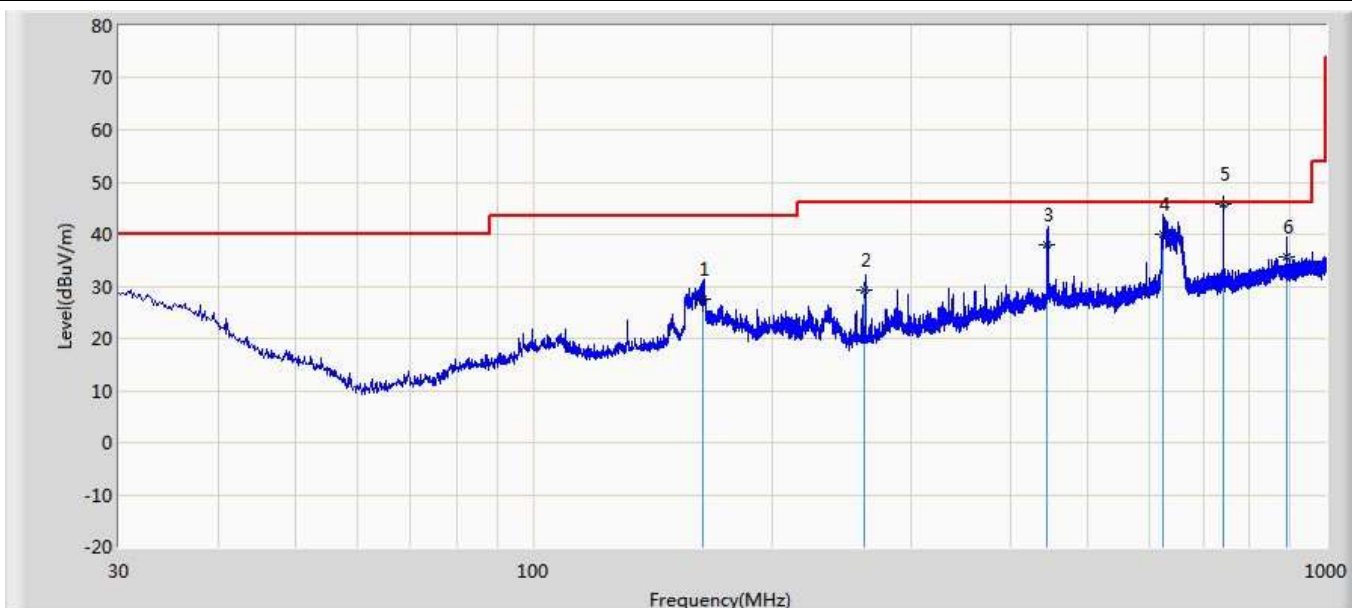
Engineer:Slark	
Site:AC5	Time: 2017/08/07 - 10:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: GEYE 900	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by BLE	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	38.929	51.159	-15.071	54.000	-12.230	AV
2		7440.000	44.987	51.647	-9.013	54.000	-6.660	AV
3	*	9920.000	47.034	48.994	-6.966	54.000	-1.960	AV

The worst case of Radiated Emission below 1GHz:

Engineer: Leon	
Site: AC3	Time: 2017/10/30
Limit: FCC_Part15.109_RE(3m)_ClassC	Margin: 0
Probe: AC3_3m (30-1000MHz)	Polarity: Horizontal
EUT: GEYE 900	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by BLE	

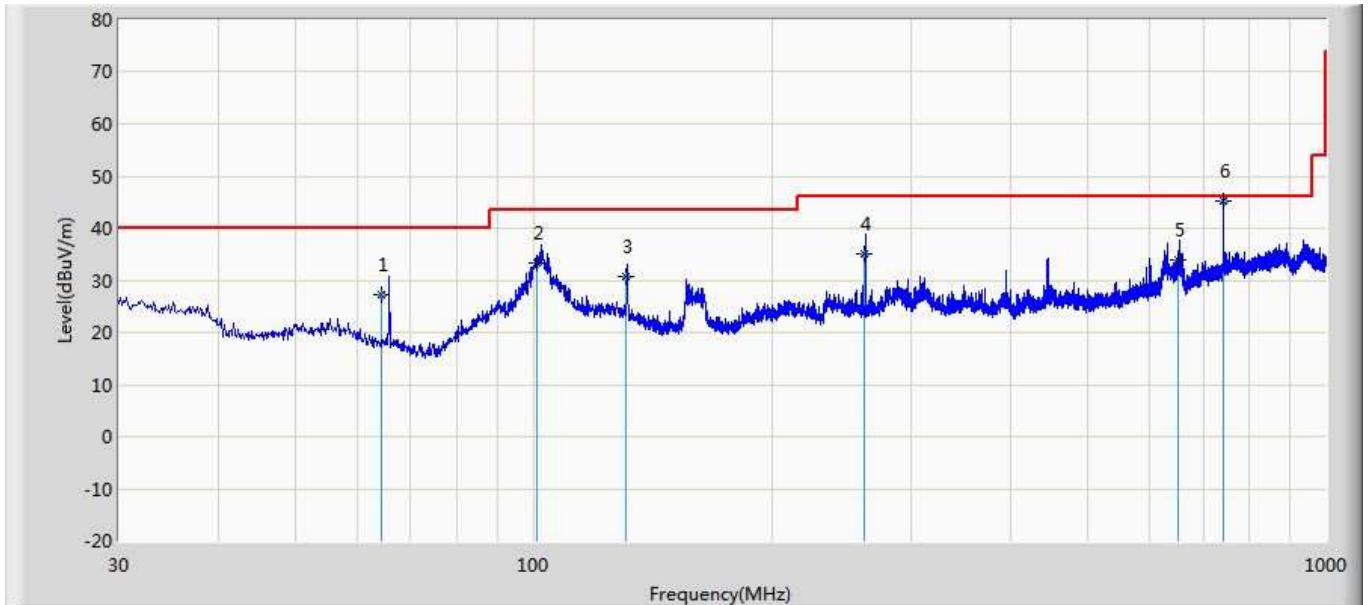


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		163.325	27.529	10.021	-15.971	43.500	10.369	7.139	0.000	100	125	QP
2		261.125	29.243	10.362	-16.757	46.000	11.388	7.493	0.000	200	59	QP
3		444.328	37.865	11.336	-8.135	46.000	18.507	8.022	0.000	200	126	QP
4		622.365	39.941	10.214	-6.059	46.000	21.243	8.484	0.000	100	360	QP
5	*	742.480	45.675	16.500	-0.325	46.000	20.421	8.754	0.000	100	40	QP
6		890.378	35.703	4.365	-10.297	46.000	22.260	9.078	0.000	200	229	QP

Note:

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

Engineer: Leon	
Site: AC3	Time: 2017/10/30
Limit: FCC_Part15.109_RE(3m)_ClassC	Margin: 0
Probe: AC3_3m (30-1000MHz)	Polarity: Vertical
EUT: GEYE 900	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by BLE	



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		64.325	27.194	11.325	-12.806	40.000	9.197	6.672	0.000	100	360	QP
2		101.225	33.448	11.336	-10.052	43.500	15.252	6.860	0.000	200	265	QP
3		130.558	30.755	9.789	-12.745	43.500	13.973	6.993	0.000	100	16	QP
4		261.366	34.999	12.336	-11.001	46.000	15.168	7.495	0.000	200	15	QP
5		651.336	33.960	6.369	-12.040	46.000	19.042	8.549	0.000	200	228	QP
6	*	742.515	45.154	14.600	-0.846	46.000	21.800	8.754	0.000	100	51	QP

Note:

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

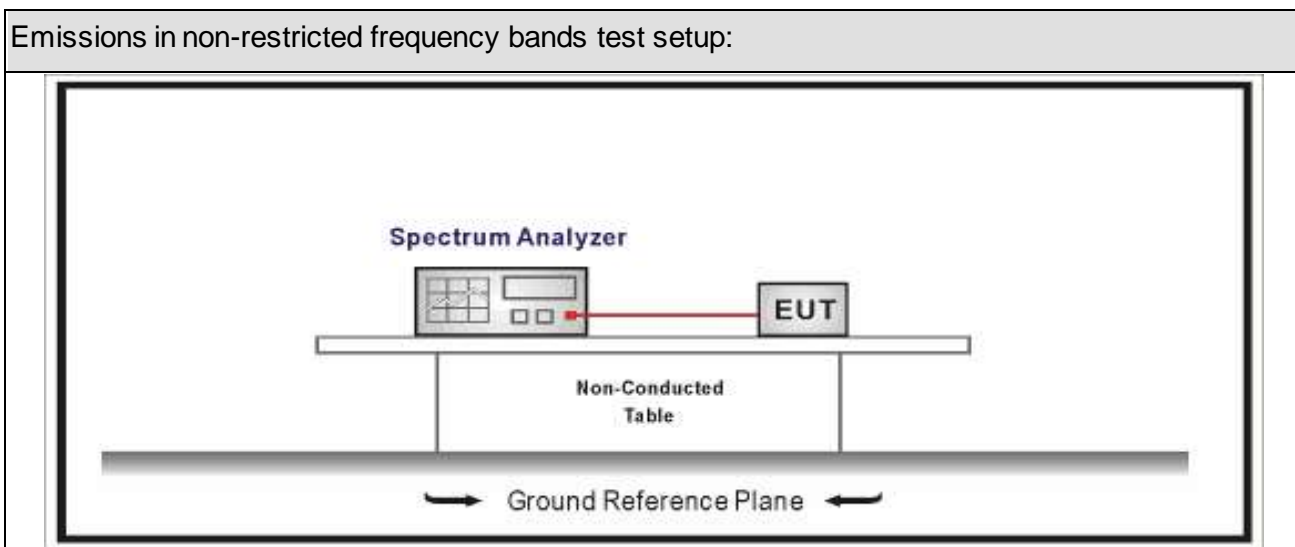
5. Emissions in non-restricted frequency bands

5.1. Test Equipment

Emissions in non-restricted frequency bands / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2017.02.04	2018.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2017.04.09	2018.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2017.04.09	2018.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2017.04.10	2018.04.09

Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

5.2. Test Setup



5.3. Limit

Un-Restricted Band Emissions Limit	
RF Output power (Detection methods)	Limit(dB)
RF Output power(Average detector)	30c(Note1)
RF Output power(PK detector)	20c(Note2)

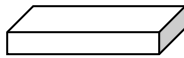
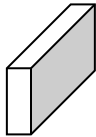
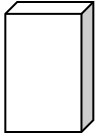

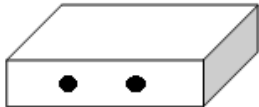
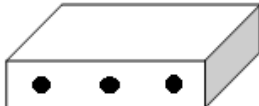
Note 1: If maximum conducted (average) output power was used to demonstrate compliance as described in 9.2, then the peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 30 dBc).

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).

5.4. Test Procedure

Test Method					
	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	11.11.2	Reference level measurement	
	<input checked="" type="checkbox"/>	ANSI C63.10	11.11.3	Emission level measurement	
<input type="checkbox"/>		ANSI C63.10	11.12	Emissions in restricted frequency bands	
	<input type="checkbox"/>	ANSI C63.10	11.12.1	Radiated emission measurements	
	<input type="checkbox"/>	ANSI C63.10	11.12.2.7	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 type="checkbox"/>		ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz	
	<input checked="" 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 checked="" 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

5.5. EUT test Axis definition

Item	Emissions in non-restricted frequency bands			
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		
Test mode	Mode 1			
Test method	<input type="checkbox"/>	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>
	<input checked="" type="checkbox"/>	Conducted		
	<input checked="" type="checkbox"/>	Chain 0		
				
	<input type="checkbox"/>	Chain 0	Chain 1	
				
	<input type="checkbox"/>	Chain 0	Chain 1	Chain 2
				

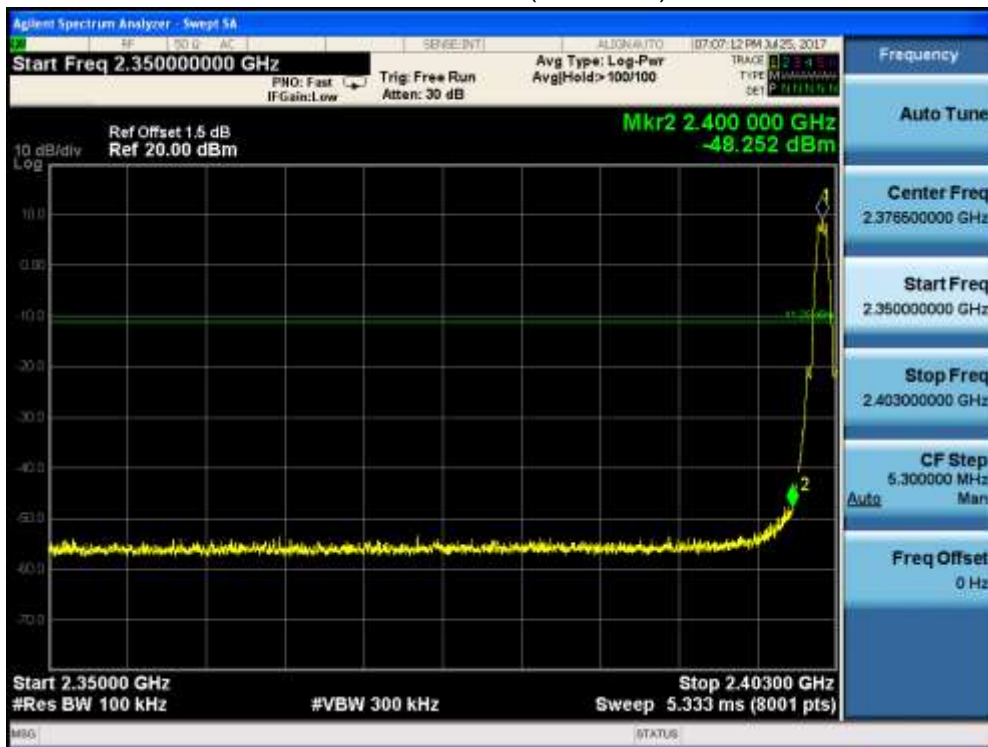
5.6. Test Result

Product Name	: GEYE 900	Power	: AC 120V/60Hz
Test Mode	: Mode 1	Test Site	: TR-8
Test Date	: 2017.09.25		

Mode	Channel	Test Frequency (MHz)	In-Band PSD[a] (dBm/100kHz)	Frequency (MHz)	Out-Band PSD[b] (dBm/100kHz)	[a]-[b] (dB)	Limit (dB)	Result
1	00	2402	8.75	2400.00	-48.252	57.002	>20	Pass
1	39	2480	7.95	2500.00	-55.651	63.601	>20	Pass

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

Mode 1 CH00 (2402MHz)

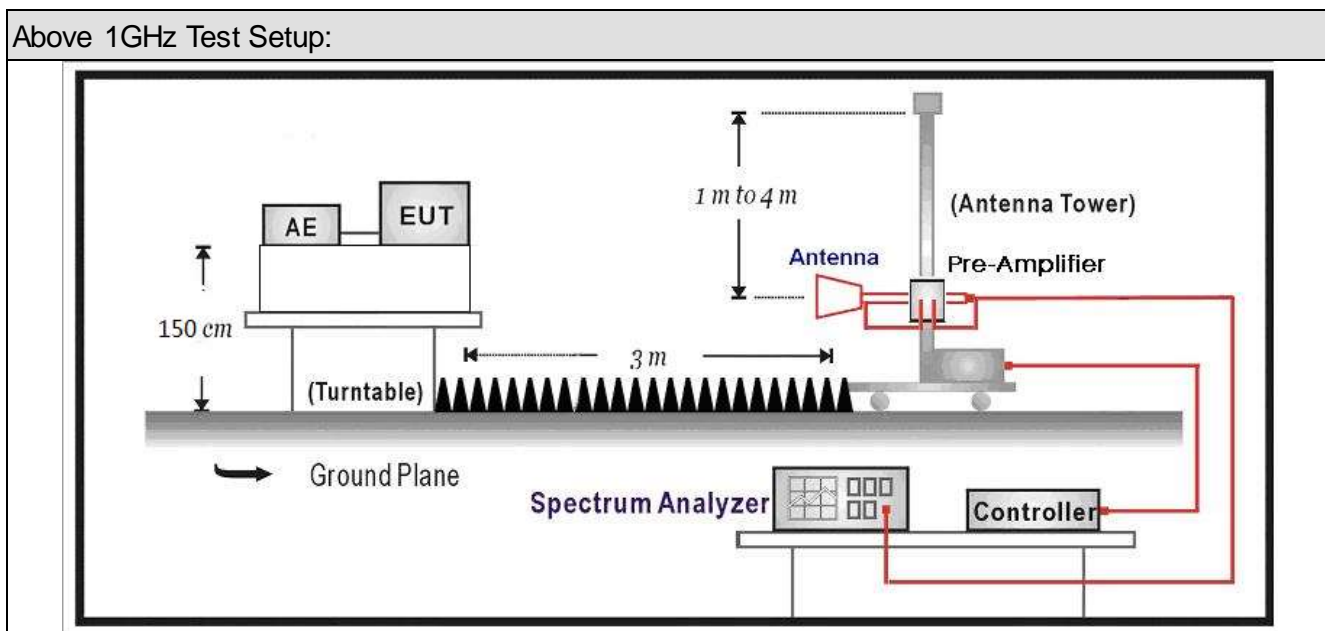


6. Radiated Emission Band Edge

6.1. Test Equipment

Radiated Emission(Above 1GHz) / AC-5					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
EMI Receiver	Agilent	N9038A	MY51210196	2017.07.16	2018.07.15
Pre-Amplifier	Miteq	NSP1800-25	1364185	2017.05.03	2018.05.02
DRG Horn Antenna	ETS-Lindgren	3117	00167055	2017.07.12	2018.07.11
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2017.09.18	2018.09.17
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2017.02.28	2018.02.27
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2017.02.28	2018.02.27
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2017.01.05	2018.01.04

6.2. Test Setup



6.3. Limit

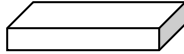
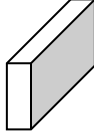
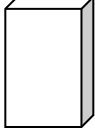



Band edge Limit				
Frequency bands (MHz)	Detector	Limit (dB μ V/m)	RBW (MHz)	Distance (m)
2310-2390	PK	74	1	3
2483.5-2500	AV	54	1	3

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

6.4. Test Procedure

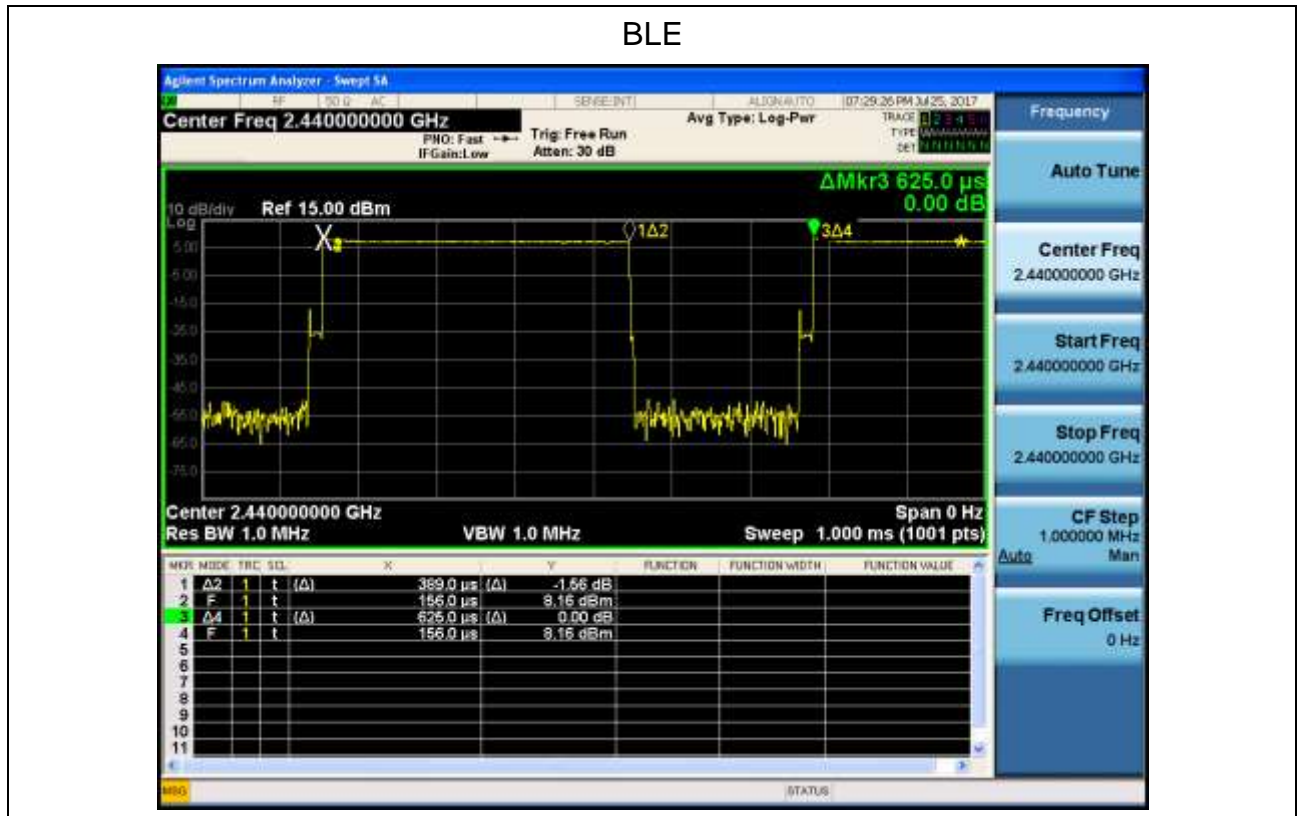
Test Method				
	References	Rule	Chapter	Description
<input checked="" type="checkbox"/>		ANSI C63.10	6.10	Band-edge testing
	<input checked="" type="checkbox"/>	ANSI C63.10	6.10.5	Restricted-band band-edge measurements
	<input type="checkbox"/>	ANSI C63.10	6.10.6	Marker-delta method
<input checked="" 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	11.12.2.7	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	11.12.2.3	Quasi-peak measurement procedure
	<input checked="" type="checkbox"/>	ANSI C63.10	11.12.2.4	Peak power measurement procedure
	<input checked="" 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 checked="" 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

6.5. EUT test definition

Item	Radiated Emission Band Edge			
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		
Test mode	Mode 1			
Test method	<input checked="" type="checkbox"/>	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis <input checked="" type="checkbox"/>	Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>
	<input type="checkbox"/>	Conducted		
	<input type="checkbox"/>	Chain 0		
				
	<input type="checkbox"/>	Chain 0	Chain 1	
				
	<input type="checkbox"/>	Chain 0	Chain 1	Chain 2
				

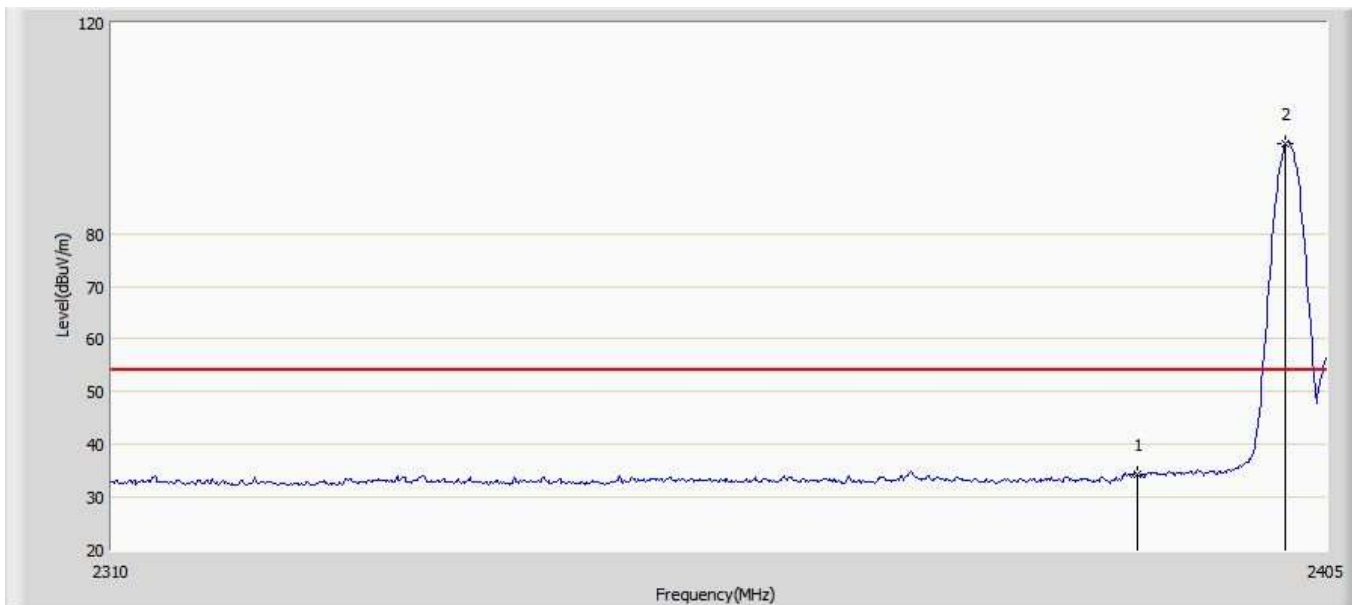
6.6. Duty Cycle

Test Mode	Tx On (ms)	Tx Off (ms)	Reduced VBW (kHz)	Tx On + Tx Off (ms)	Duty Cycle
BLE	0.389	0.236	2.7kHz	0.625	62.24%



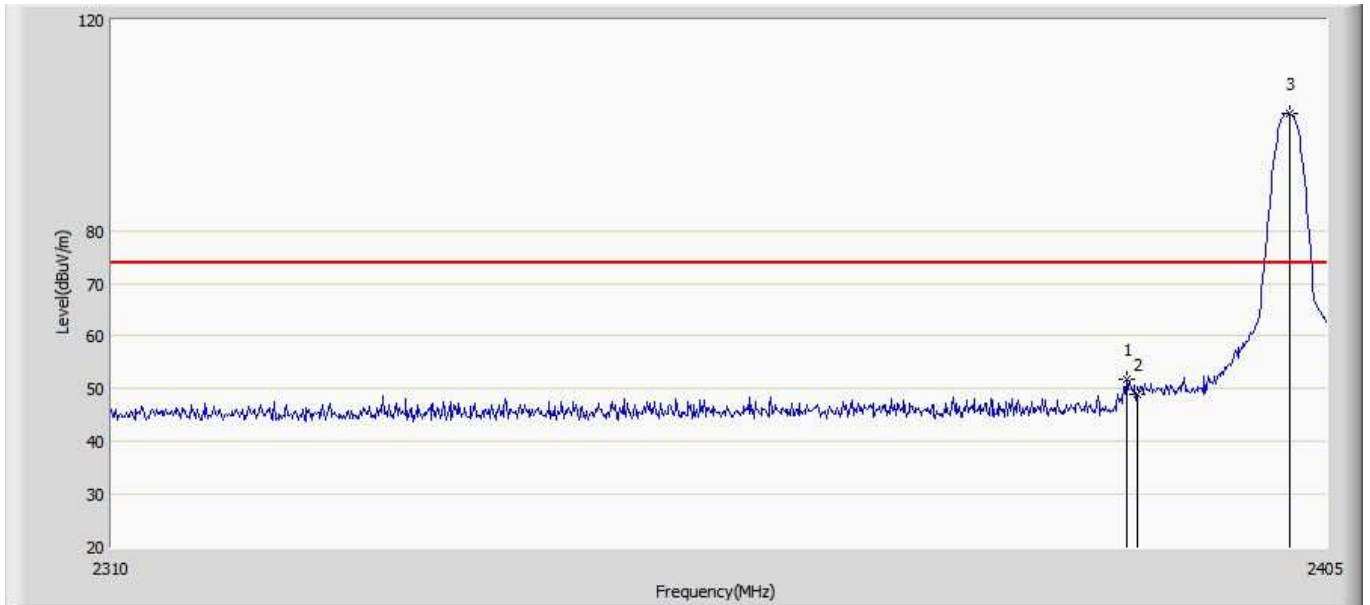
6.7 Test Result

Engineer:Slark	
Site: AC5	Time: 2017/07/31 - 09:41
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: GEYE 900	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by BLE	



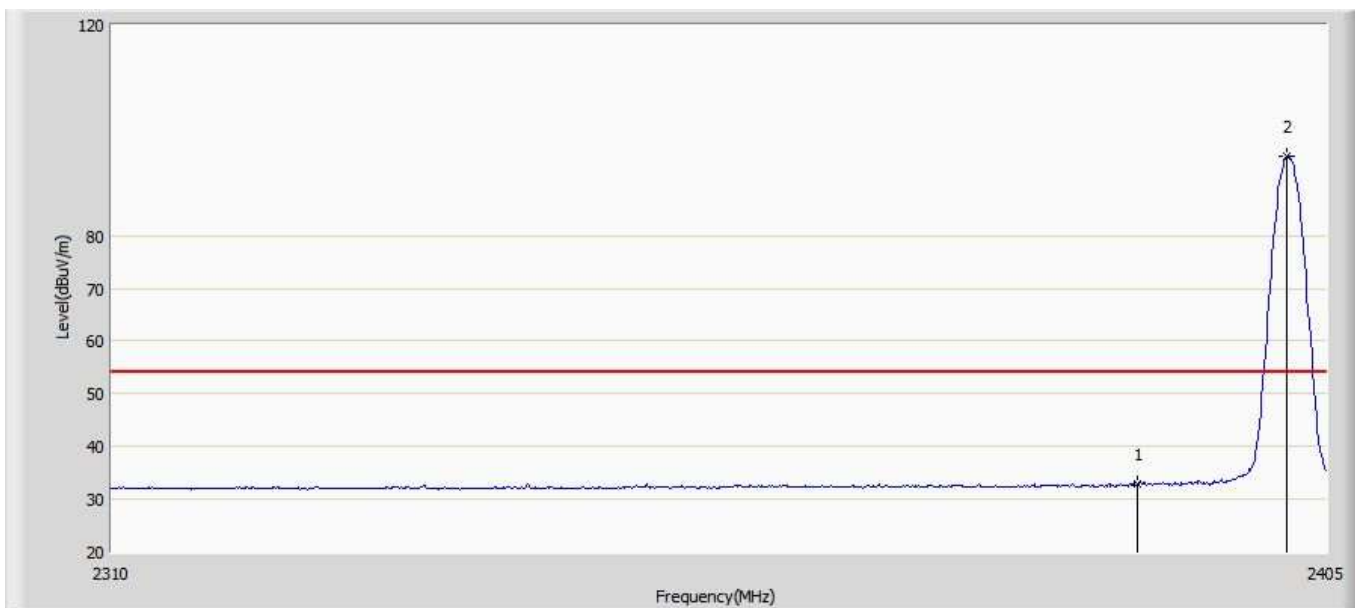
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	34.294	5.246	-19.706	54.000	29.048	AV
2	*	2401.770	96.945	67.982	N/A	N/A	28.963	AV

Engineer:Slark	
Site: AC5	Time: 2017/07/31 - 09:47
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: GEYE 900	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by BLE	



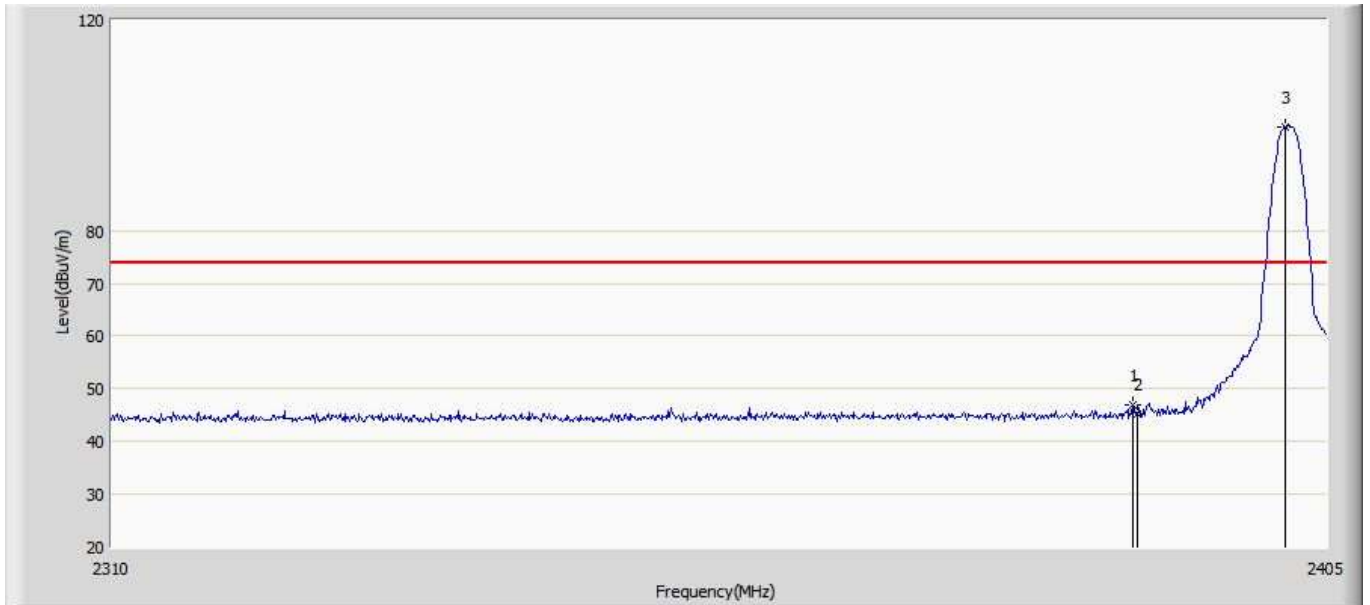
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2389.135	51.809	22.760	-22.191	74.000	29.049	PK
2		2390.000	48.823	19.775	-25.177	74.000	29.048	PK
3	*	2402.055	102.254	73.294	N/A	N/A	28.960	PK

Engineer:Slark	
Site: AC5	Time: 2017/07/31 - 09:51
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: GEYE 900	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by BLE	



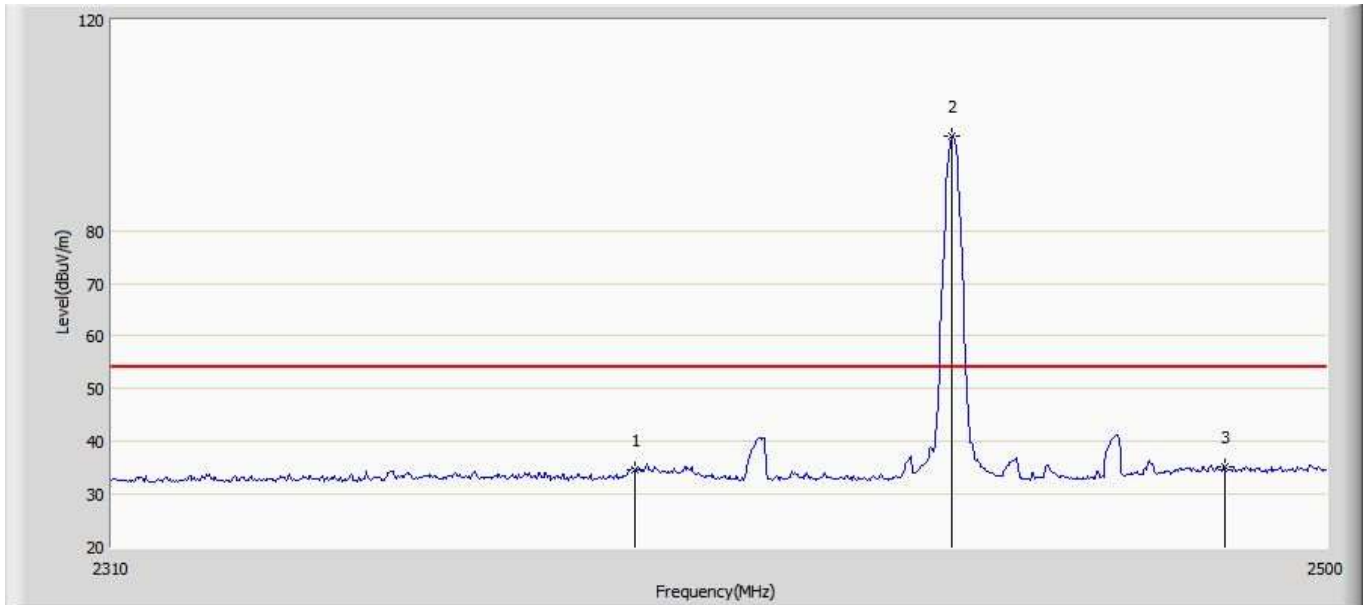
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	32.887	3.839	-21.113	54.000	29.048	AV
2	*	2401.865	94.940	65.978	N/A	N/A	28.962	AV

Engineer:Slark	
Site: AC5	Time: 2017/07/31 - 09:54
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: GEYE 900	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by BLE	



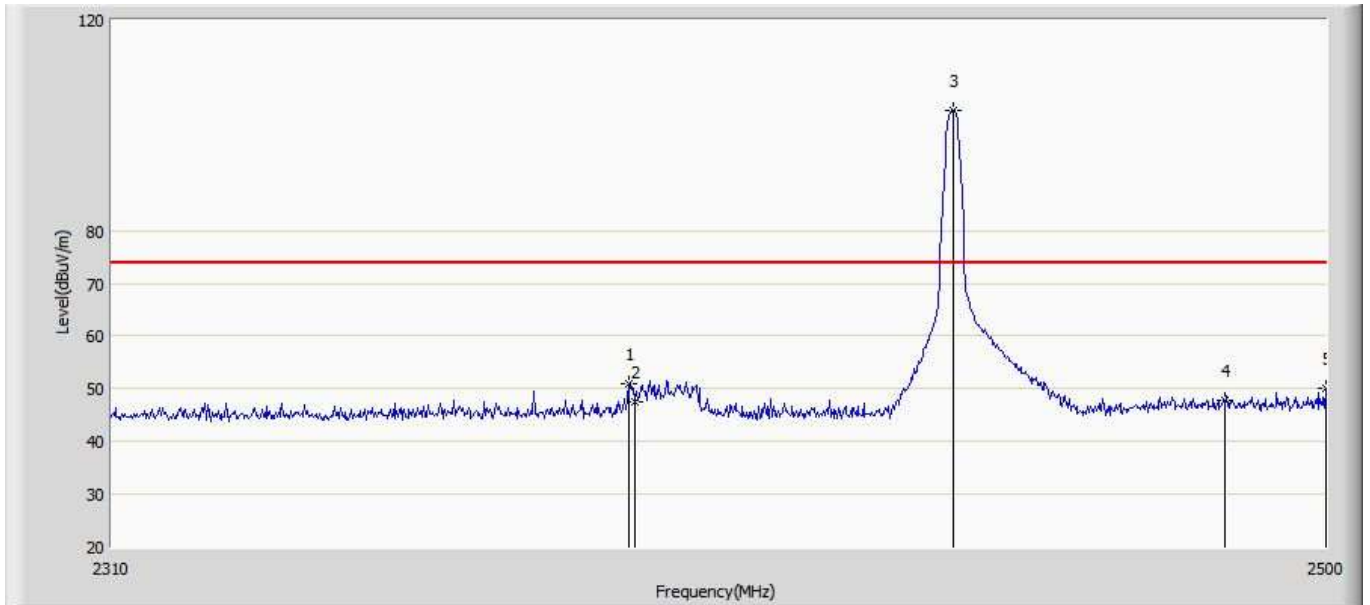
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2389.610	46.815	17.766	-27.185	74.000	29.049	PK
2		2390.000	45.174	16.126	-28.826	74.000	29.048	PK
3	*	2401.770	99.701	70.738	N/A	N/A	28.963	PK

Engineer:Slark	
Site: AC5	Time: 2017/07/31 - 09:59
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: GEYE 900	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2440MHz by BLE	



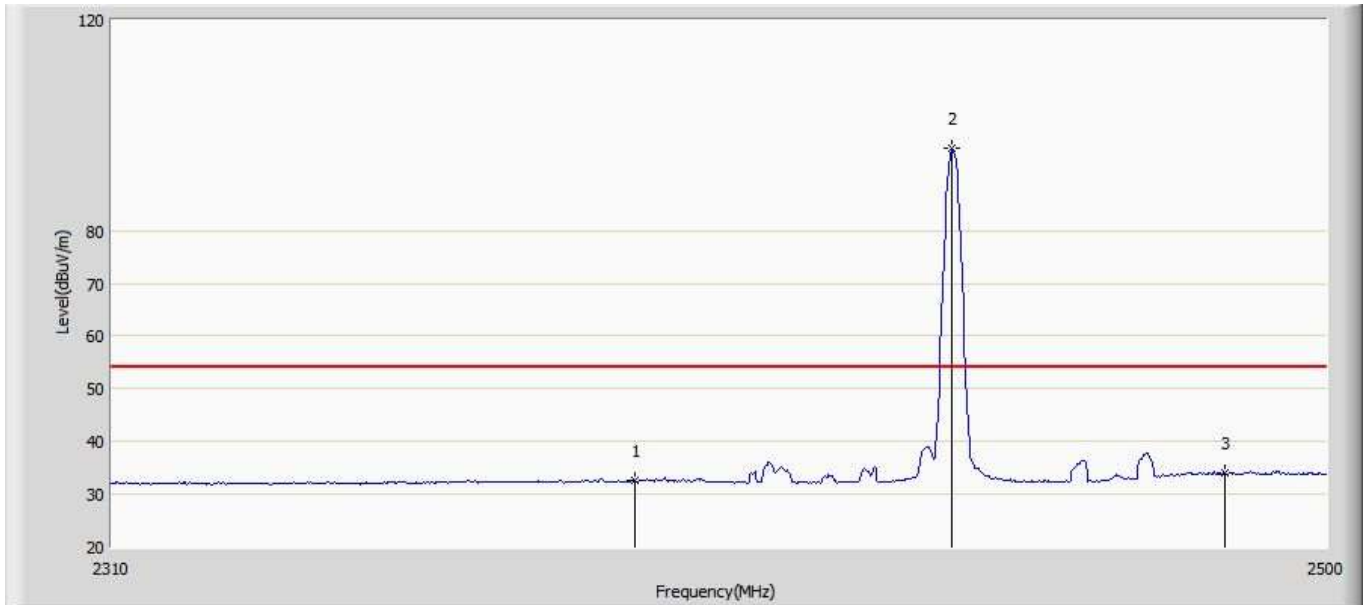
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	34.708	5.660	-19.292	54.000	29.048	AV
2	*	2439.960	97.846	68.912	N/A	N/A	28.934	AV
3		2483.500	35.291	4.807	-18.709	54.000	30.484	AV

Engineer:Slark	
Site: AC5	Time: 2017/07/31 - 10:05
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: GEYE 900	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2440MHz by BLE	



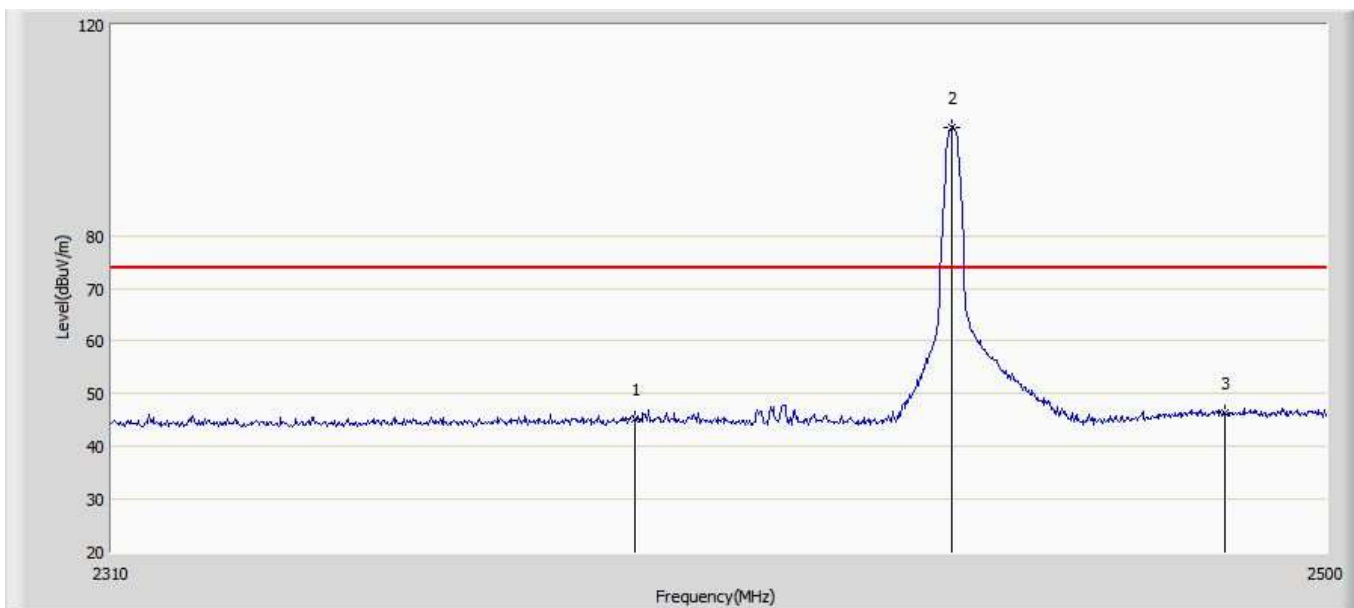
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2389.040	50.829	21.780	-23.171	74.000	29.049	PK
2		2390.000	47.577	18.529	-26.423	74.000	29.048	PK
3	*	2440.150	102.859	73.925	N/A	N/A	28.934	PK
4		2483.500	47.783	17.299	-26.217	74.000	30.484	PK
5		2500.000	50.030	19.607	-23.970	74.000	30.423	PK

Engineer:Slark	
Site: AC5	Time: 2017/07/31 - 10:09
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: GEYE 900	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2440MHz by BLE	



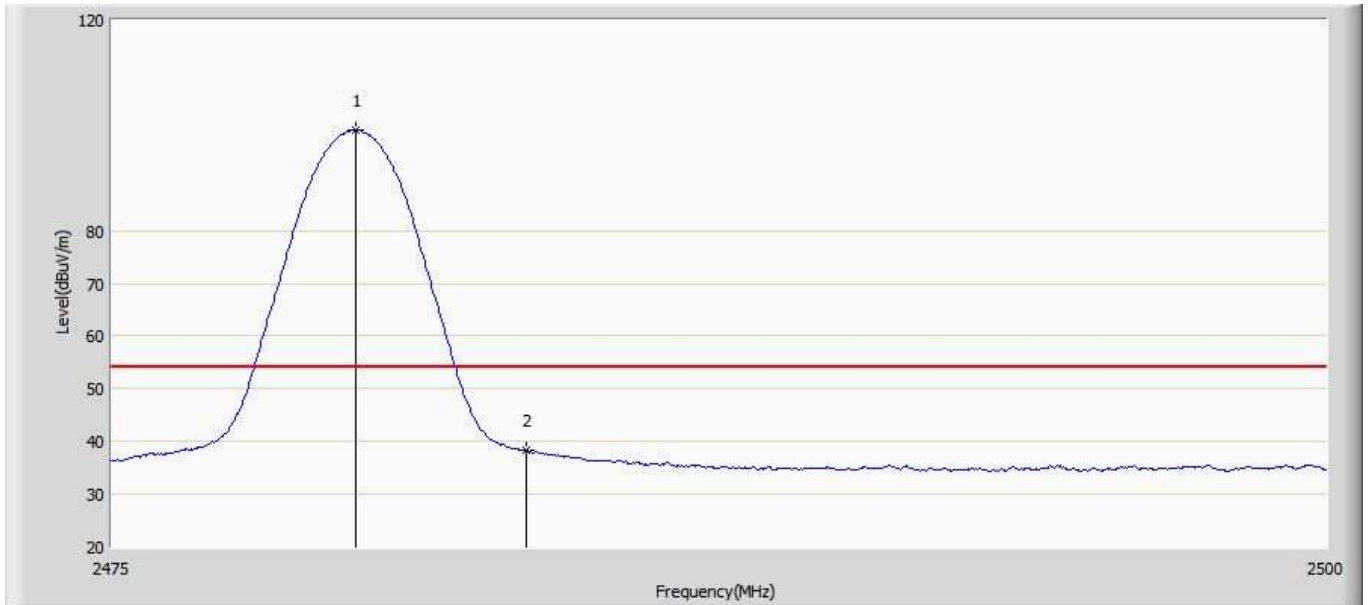
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	32.700	3.652	-21.300	54.000	29.048	AV
2	*	2439.960	95.770	66.836	N/A	N/A	28.934	AV
3		2483.500	34.085	3.601	-19.915	54.000	30.484	AV

Engineer:Slark	
Site: AC5	Time: 2017/07/31 - 10:13
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: GEYE 900	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2440MHz by BLE	



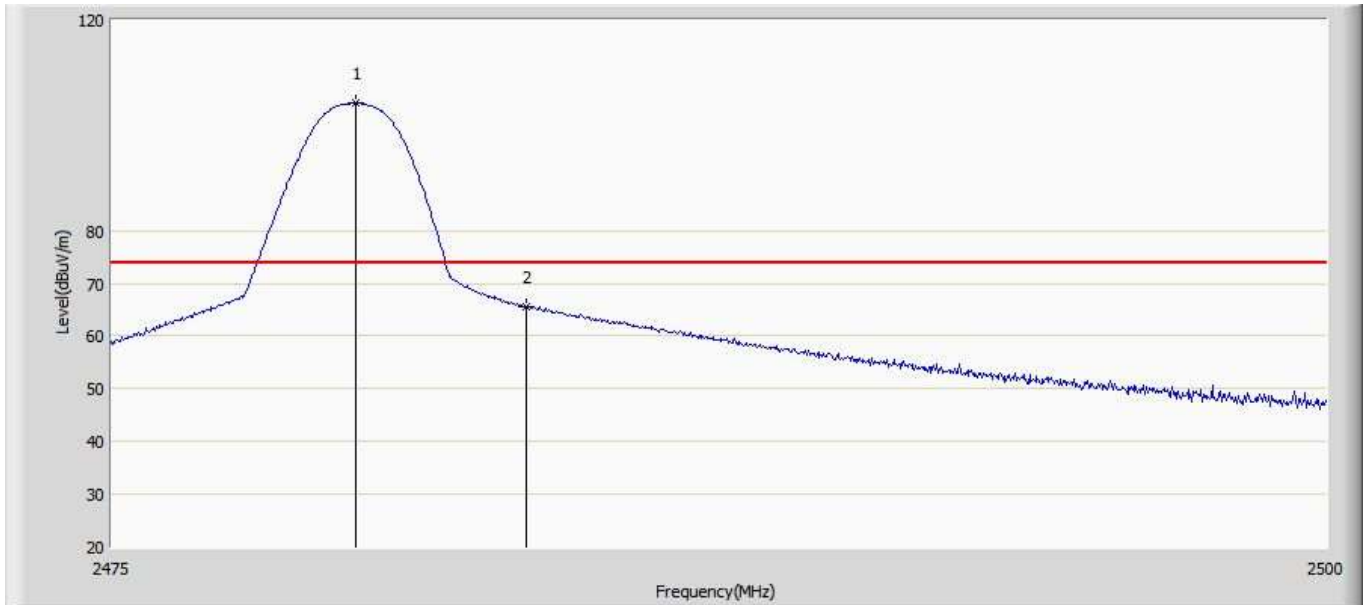
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	45.118	16.070	-28.882	74.000	29.048	PK
2	*	2439.770	100.607	71.673	N/A	N/A	28.934	PK
3		2483.500	46.246	15.762	-27.754	74.000	30.484	PK

Engineer:Slark	
Site: AC5	Time: 2017/07/31 - 10:17
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: GEYE 900	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by BLE	



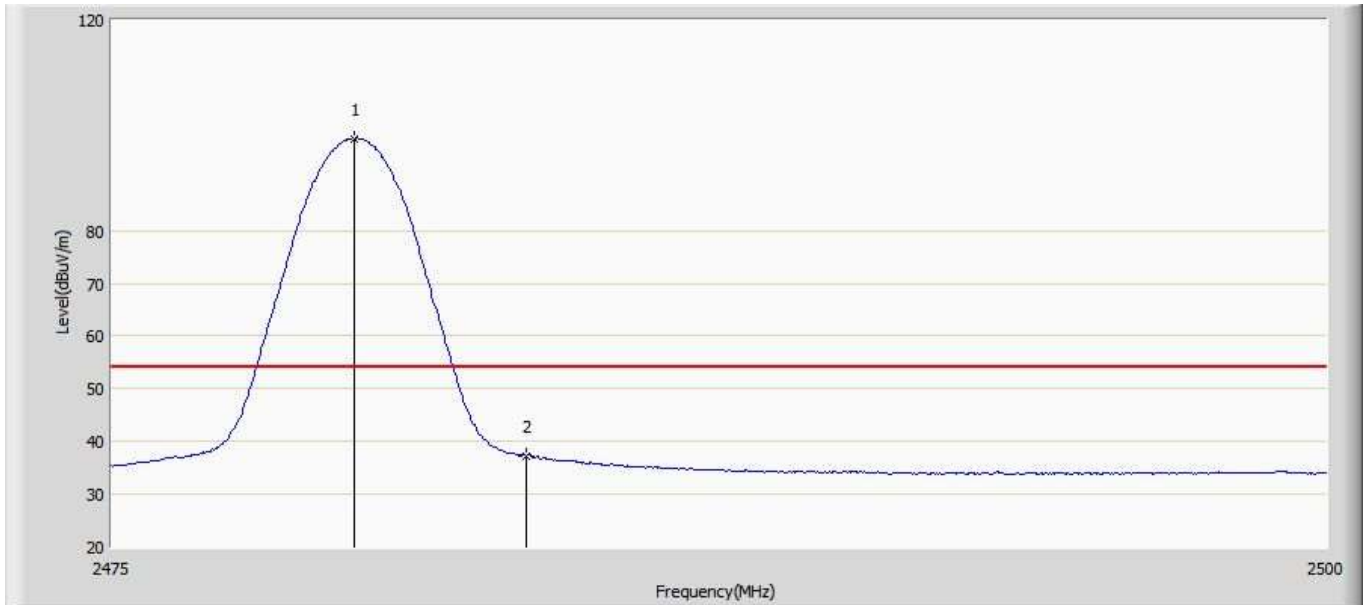
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.000	99.058	68.542	N/A	N/A	30.516	AV
2		2483.500	38.343	7.859	-15.657	54.000	30.484	AV

Engineer:Slark	
Site: AC5	Time: 2017/07/31 - 10:21
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: GEYE 900	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by BLE	



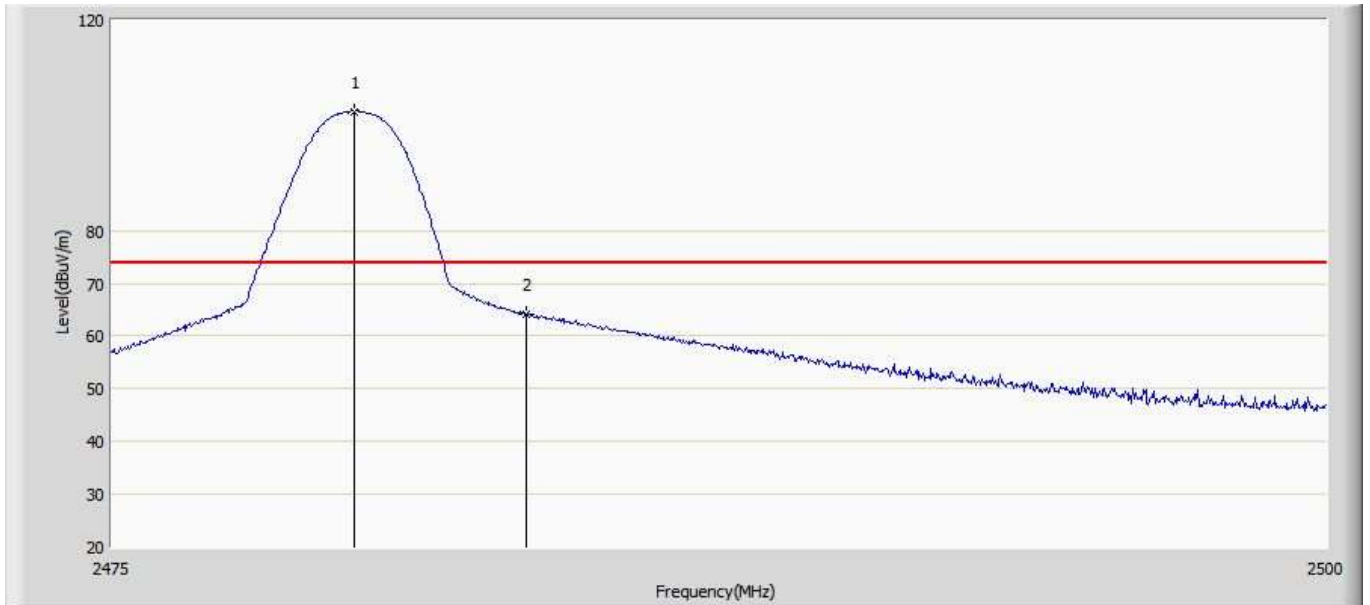
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.025	104.169	73.653	N/A	N/A	30.516	PK
2		2483.500	65.428	34.944	-8.572	74.000	30.484	PK

Engineer:Slark	
Site: AC5	Time: 2017/07/31 - 10:23
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: GEYE 900	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by BLE	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.975	97.498	66.982	N/A	N/A	30.516	AV
2		2483.500	37.221	6.737	-16.779	54.000	30.484	AV

Engineer:Slark	
Site: AC5	Time: 2017/07/31 - 10:26
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: GEYE 900	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by BLE	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.975	102.524	72.008	N/A	N/A	30.516	PK
2		2483.500	64.171	33.686	-9.829	74.000	30.484	PK

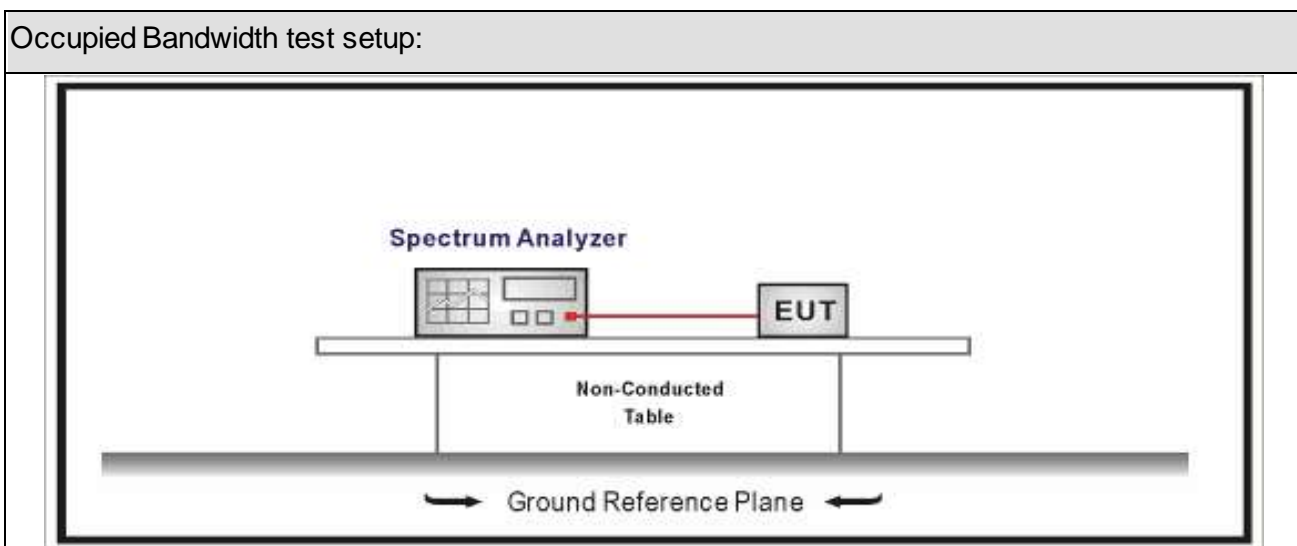
7. Occupied Bandwidth

7.1. Test Equipment

Occupied Bandwidth / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2017.02.04	2018.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2017.04.09	2018.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2017.04.09	2018.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2017.04.10	2018.04.09

Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

7.2. Test Setup



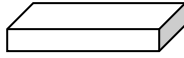
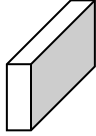
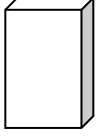

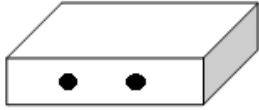

7.3. Limit

Occupied Bandwidth
Systems using digital modulation techniques operate in the 2400-2483.5 MHz. The minimum 6 dB bandwidth shall be at least 500 kHz

7.4. Test Procedure

Test Method				
	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

7.5. EUT test definition

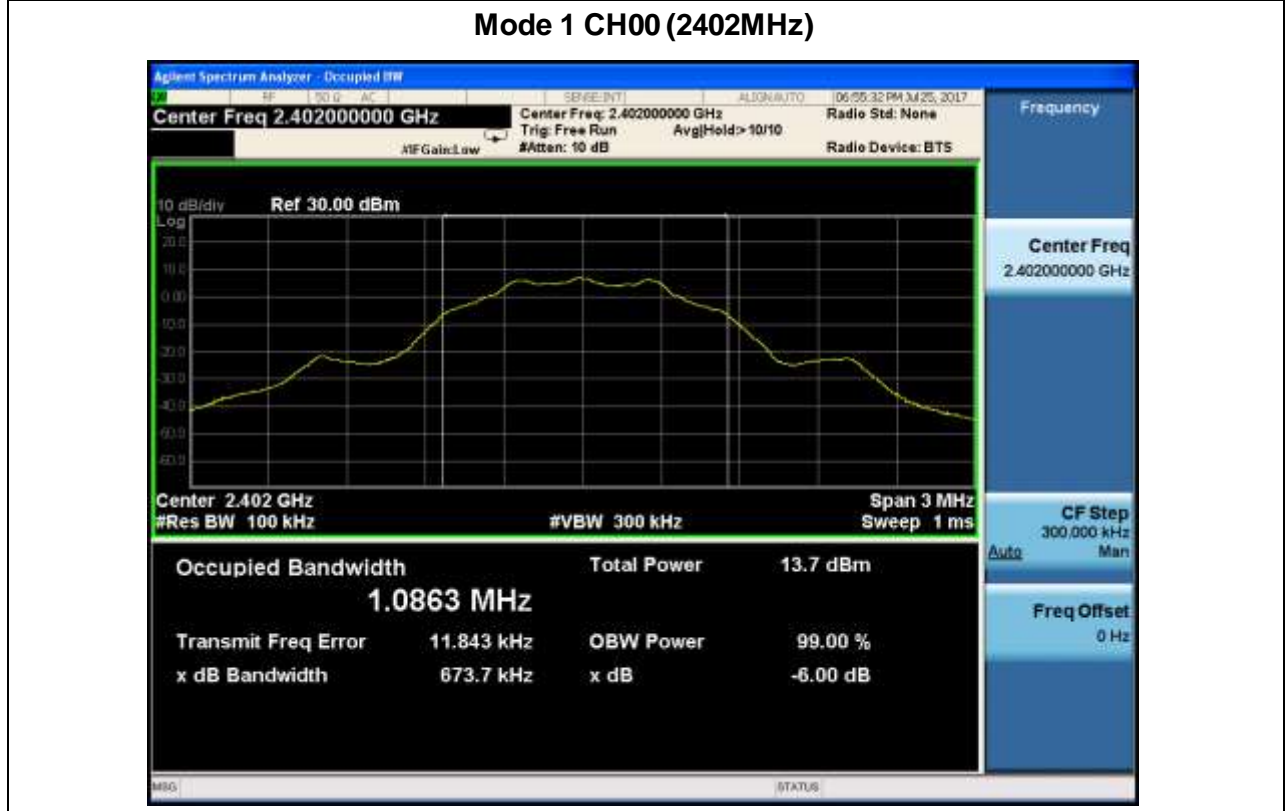
Item	Occupied Bandwidth			
Device Category	<input type="checkbox"/>	Fixed point-to-point		
	<input type="checkbox"/>	Emit multiple directional beams, simultaneously or sequentially		
	<input checked="" type="checkbox"/>	Other cases		
Test mode	Mode 1			
Test method	<input type="checkbox"/>	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>
	<input checked="" type="checkbox"/>	Conducted		
	<input checked="" type="checkbox"/>	Chain 0		
				
	<input type="checkbox"/>	Chain 0	Chain 1	
				
	<input type="checkbox"/>	Chain 0	Chain 1	Chain 2
				

7.6. Test Result

Product Name	: GEYE 900	Power	: AC 120V/60Hz
Test Mode	: Mode 1	Test Site	: TR-8
Test Date	: 2017.09.15		

Mode	CH.	Test Freq. (MHz)	99% Occupied Bandwidth (kHz)	6dB Occupied Bandwidth (kHz)	Limit (kHz)	Result
1	00	2402	1086.3	673.7	>500	Pass
1	19	2440	1085.4	678.1	>500	Pass
1	39	2480	1087.1	677.3	>500	Pass

Note : The worst case of Occupied Bandwidth as below:



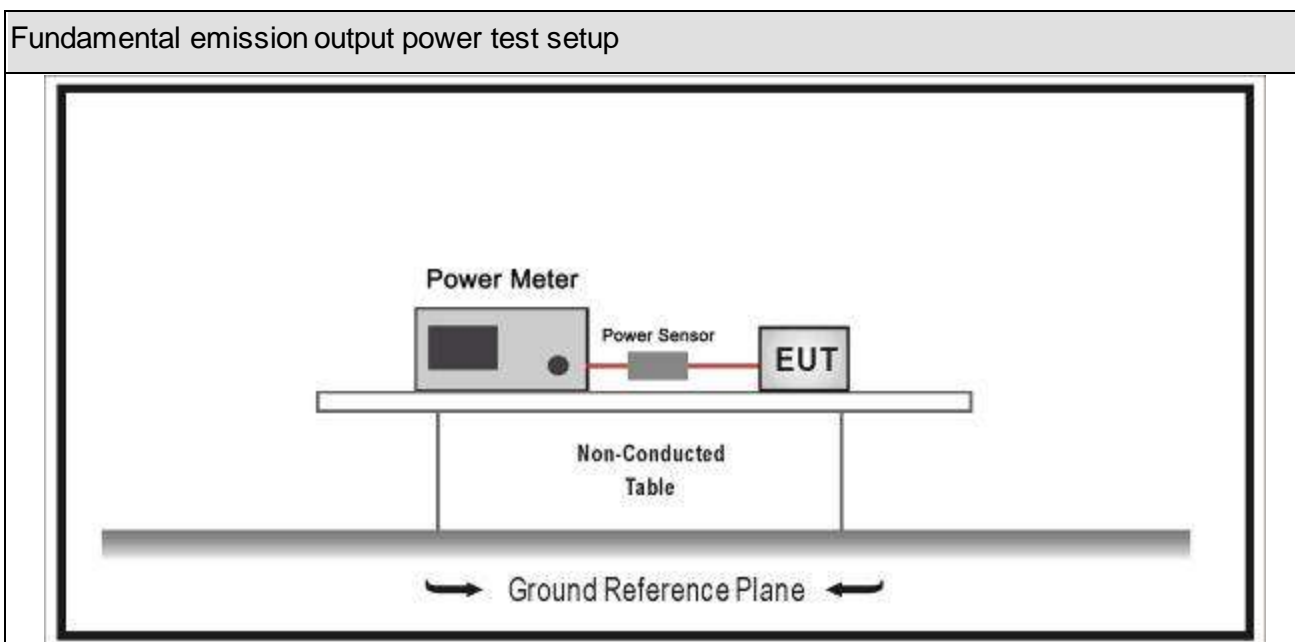
8. Fundamental emission output power

8.1. Test Equipment

Fundamental emission output power/ TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2017.01.04	2018.01.03
Spectrum Analyzer	Agilent	N9010A	MY48030494	2017.01.04	2018.01.03
Wideband Peak Power Meter	Anritsu	ML2495A	0905006	2017.10.14	2018.10.13
Power Sensor	Anritsu	MA2411B	0846014	2017.10.14	2018.10.13
Temperature/Humidity Meter	zhicheng	ZC1-2	TR8-TH	2017.04.10	2018.04.09

Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

8.2. Test Setup



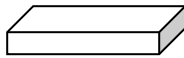
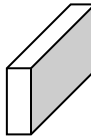
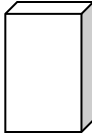

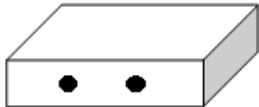
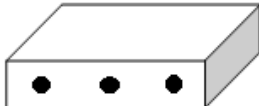
8.3. Limit

Fundamental emission output power Limit		
<input checked="" type="checkbox"/>	$G_{TX} < 6\text{dBi}$	$P_{out} \leq 30\text{dBm}$
<input type="checkbox"/>	$G_{TX} > 6\text{dBi}$	
<input type="checkbox"/>	Non-Fix point-point	$P_{out} \leq 30 - (G_{TX} - 6)$
<input type="checkbox"/>	Fix point-point	$P_{out} \leq 30 - [(G_{TX} - 6)]/3$
<input type="checkbox"/>	Point-to-multipoint	$P_{out} \leq 30 - (G_{TX} - 6)$
<input type="checkbox"/>	Overlap Beams	$P_{out} \leq 30 - [(G_{TX} - 6)]/3$
<input type="checkbox"/>	Aggregate power transmitted simultaneously on all beams	$P_{out} \leq 30 - [(G_{TX} - 6)]/3$
<input type="checkbox"/>	single directional beam	$P_{out} \leq 30 - [(G_{TX} - 6)]/3 + 8\text{dB}$
<p>Note 1 : G_{TX} directional gain of transmitting antennas.</p> <p>Note 2 : P_{out} is maximum peak conducted output power .</p>		

8.4. Test Procedure

Fundamental emission output power Test Method				
	References Rule		Chapter	Description
<input checked="" type="checkbox"/>	ANSI C63.10		11.9	Fundamental emission output power
	<input checked="" type="checkbox"/>	ANSI C63.10	11.9.1	Maximum peak conducted output power
	<input type="checkbox"/>	ANSI C63.10	11.9.1.1	RBW ≥ DTS bandwidth
	<input type="checkbox"/>	ANSI C63.10	11.9.1.2	Integrated band power method
	<input checked="" type="checkbox"/>	ANSI C63.10	11.9.1.3	PKPM1 Peak power meter method
	<input type="checkbox"/>	ANSI C63.10	11.9.2	Maximum conducted (average) output power
	<input type="checkbox"/>	ANSI C63.10	11.9.2.2	Measurement using a spectrum analyzer (SA)
	<input type="checkbox"/>	ANSI C63.10	11.9.2.2.2	Method AVGSA-1(Duty cycle ≥ 98%)
	<input type="checkbox"/>	ANSI C63.10	11.9.2.2.3	Method AVGSA-1A(Duty cycle ≥ 98%)
	<input type="checkbox"/>	ANSI C63.10	11.9.2.2.4	Method AVGSA-2(Duty cycle ≤ 98%)
	<input type="checkbox"/>	ANSI C63.10	11.9.2.2.5	Method AVGSA-2A(Duty cycle ≤ 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 type="checkbox"/>	ANSI C63.10	11.9.2.3	Measurement using a power meter (PM)
	<input 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	

8.5. EUT test definition

Item	Fundamental emission output power			
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		
Test mode	Mode 1			
Test method	<input type="checkbox"/>	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>
	<input checked="" type="checkbox"/>	Conducted		
	<input checked="" type="checkbox"/>	Chain 0		
				
	<input type="checkbox"/>	Chain 0	Chain 1	
				
	<input type="checkbox"/>	Chain 0	Chain 1	Chain 2
				

8.6. Test Result

Product Name	: GEYE 900	Power	: AC 120V/60Hz
Test Mode	: Mode 1	Test Site	: TR-8
Test Date	: 2017.09.15		

Mode	Channel	Test Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
1	00	2402	8.86	30	Pass
1	19	2440	9.71	30	Pass
1	39	2480	8.35	30	Pass

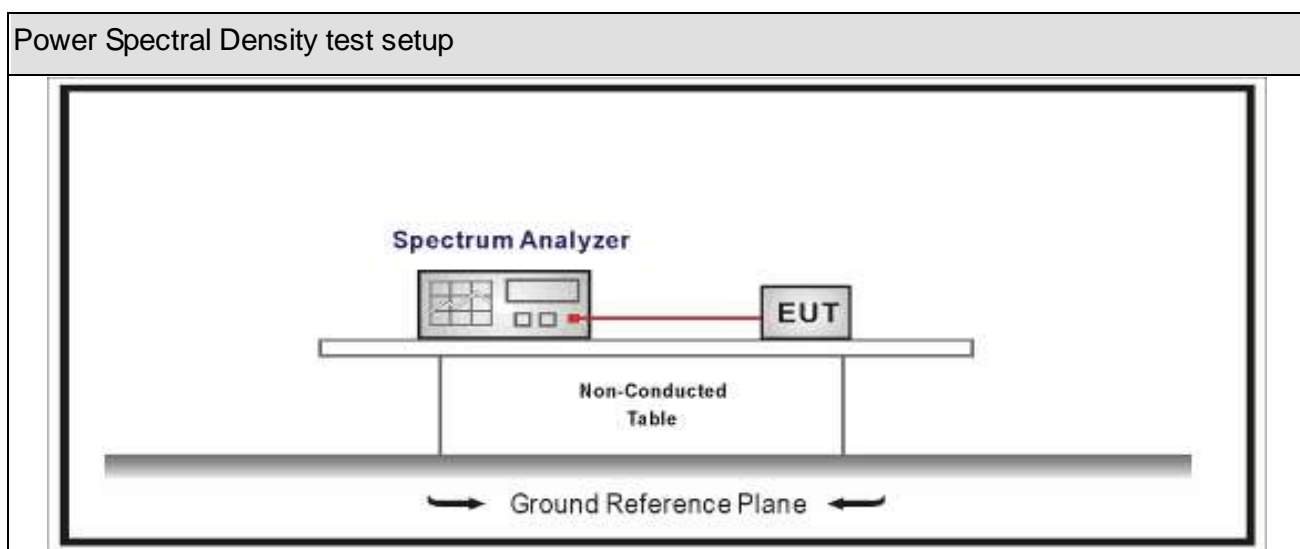
9. Power Spectral Density

9.1. Test Equipment

Power Spectral Density / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2017.02.04	2018.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2017.04.09	2018.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2017.04.09	2018.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2017.04.10	2018.04.09

Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

9.2. Test Setup



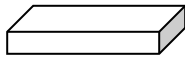
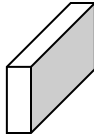
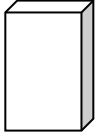
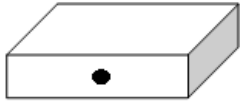
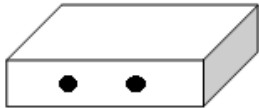

9.3. Limit

Power Spectral Density Limit
Power Spectral Density $\leq 8\text{dBm}/3\text{kHz}$

9.4. Test Procedure

Power Spectral Density Test Method				
	References	Rule	Chapter	Description
<input checked="" type="checkbox"/>	ANSI C63.10		11.10	Maximum power spectral density level in the fundamental emission
<input checked="" type="checkbox"/>	ANSI C63.10		11.10.2	Method PKPSD (peak PSD)
<input 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 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

9.5. EUT test definition

Item	Power Spectral Density Test Method			
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		
Test mode	Mode 1			
Test method	<input type="checkbox"/>	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>
	<input checked="" type="checkbox"/>	Conducted		
	<input checked="" type="checkbox"/>	Chain 0		
				
	<input type="checkbox"/>	Chain 0	Chain 1	
				
	<input type="checkbox"/>	Chain 0	Chain 1	Chain 2
				

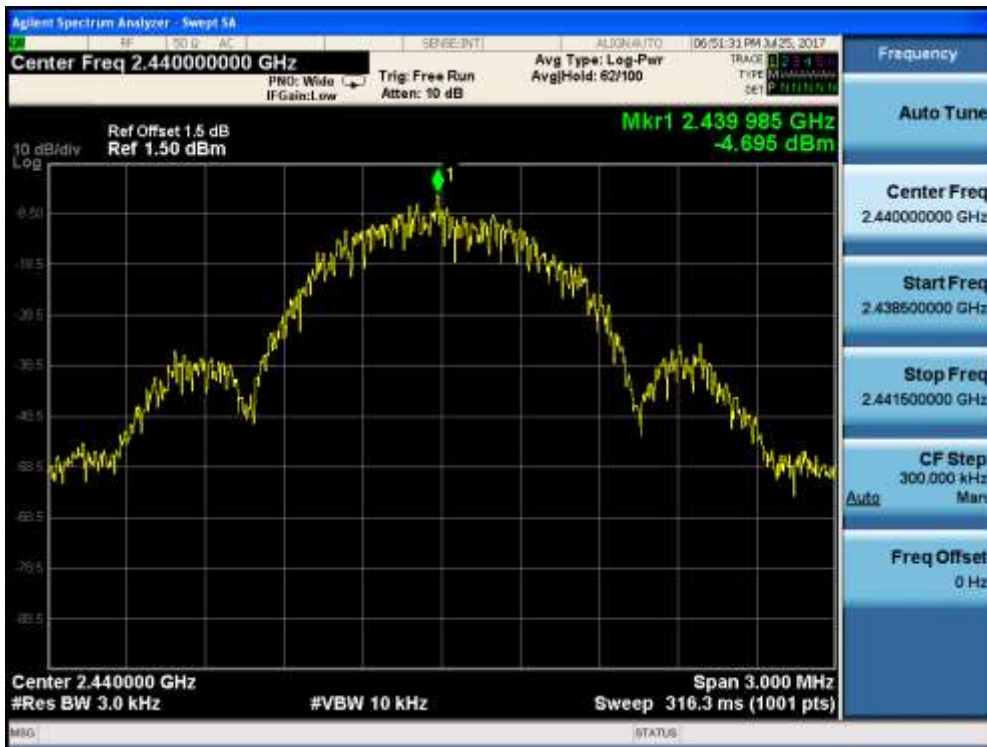
9.6. Test Result

Product Name	: GEYE 900	Power	: AC 120V/60Hz
Test Mode	: Mode 1	Test Site	: TR-8
Test Date	: 2017.09.27		

Mode	Channel	Test Frequency (MHz)	Measurement PSD (dBm/3kHz)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
1	00	2402	-5.026	-5.026	8	Pass
1	19	2440	-4.695	-4.695	8	Pass
1	39	2480	-5.847	-5.847	8	Pass

Note : The worst case of Power Spectral Density as below:

Mode 1 CH19(2440MHz)



10. Antenna Requirement

10.1. Limit

Antenna Requirement Limit
<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. 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>

10.2. Antenna Connector Construction

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.	

_____ The End _____