FCC 47 CFR PART 15 SUBPART C
ISED RSS-247 ISSUE 2

CERTIFICATION TEST REPORT

For

WLAN+Bluetooth Module

MODEL NUMBER: LBEE5PK2AE

PROJECT NUMBER: 4790016144.1

REPORT NUMBER: 4790016144.1-AE-1

FCC ID: VPYLB2AE

IC: 772C-LB2AE

ISSUE DATE: Jun. 28, 2022

Prepared for

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Prepared by

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Revision History

Rev.	Issue Date	Revisions	Revised By
V0	06/28/2022	Initial Issue	

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1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name:	Murata Manufacturing Co., Ltd.
Address:	10-1, Higashikotari 1-chome, Nagaokakyo-shi, Kyoto 617-8555, Japan

Manufacturer Information

Company Name:	Murata Manufacturing Co., Ltd.
Address:	10-1, Higashikotari 1-chome, Nagaokakyo-shi, Kyoto 617-8555, Japan

EUT Description

Product Name:	WLAN+Bluetooth Module
Model Name:	LBEE5PK2AE
Sample Number:	4059724
Data of Receipt Sample:	Jul. 12, 2021
Date Tested:	Jul. 23, 2021 ~ Jun. 27, 2022

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 15 Subpart C	PASS
ISED RSS-247 Issue 2	PASS
ISED RSS-GEN Issue 5	PASS

Summary of Test Results			
Clause	Test Items	FCC and ISED Rules	Test Results
1	6dB Bandwidth and 99% Occupied Bandwidth	FCC 15.247 (a) (2) RSS-247 Clause 5.2 (a) RSS-Gen Clause 6.7	PASS
2	Conducted Power	FCC 15.247 (b) (3) RSS-247 Clause 5.4 (d) RSS-Gen Clause 6.12	PASS
3	Power Spectral Density	FCC 15.247 (e) RSS-247 Clause 5.2 (b)	PASS
4	Conducted Band edge And Spurious emission	FCC 15.247 (d) RSS-247 Clause 5.5 RSS-GEN Clause 6.13	PASS
5	Radiated Band edges and Spurious emission	FCC 15.247 (d) FCC 15.209 FCC 15.205 RSS-247 Clause 5.5 RSS-GEN Clause 8.9 RSS-GEN Clause 6.13	PASS
6	Conducted Emission Test for AC Power Port	FCC 15.207 RSS-GEN Clause 8.8	PASS
7	Antenna Requirement	FCC 15.203 RSS-GEN Clause 6.8	PASS
Note: The measurement result for the sample received is <Pass> according to < ANSI C63.10-2013, FCC CFR 47 Part 2, FCC CFR 47 Part 15C> when <Accuracy Method> decision rule is applied.			

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Leon Wu

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Chris Zhong
Laboratory Leader

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with KDB 558074 D01 15.247 Meas Guidance v05r02, 414788 D01 Radiated Test Site v01r01, CFR 47 FCC Part 2, CFR 47 FCC Part 15, ANSI C63.10-2013, ISED RSS-247 Issue 2 and ISED RSS-GEN Issue 5.

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	**A2LA (Certificate No.: 4829.01)** **UL-CCIC COMPANY LIMITED has been assessed and proved to be in compliance with A2LA.** **FCC (FCC Designation No.: CN1247)** **UL-CCIC COMPANY LIMITED has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules.** **IC (IC Designation No.: 25056; CAB No.: CN0073)** **UL-CCIC COMPANY LIMITED has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules.**

Note 1: All tests measurement facilities use to collect the measurement data are located at No. 2, Chengwan Road, Suzhou Industrial Park, Suzhou 215122, People's Republic of China

Note 2: For below 30MHz, lab had performed measurements at test anechoic chamber and comparing to measurements obtained on an open field site. These measurements below 30MHz had been correlated to measurements performed on an OFS.

Note 3: The test anechoic chamber in UL-CCIC COMPANY LIMITED had been calibrated and compared to the open field sites and the test anechoic chamber is shown to be equivalent to or worst case from the open field site.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations and is traceable to recognized national standards.

4.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Test Item	Uncertainty
Conduction emission	3.1dB
Radiation Emission test (include Fundamental emission) (9kHz-30MHz)	3.4dB
Radiation Emission test (include Fundamental emission) (30MHz-1GHz)	3.4dB
Radiation Emission test (1GHz to 26GHz) (include Fundamental emission)	3.9dB (1GHz-18GHz)
	4.2dB (18GHz-26.5GHz)
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

Equipment	WLAN+Bluetooth Module		
Model Name	LBEE5PK2AE		
Product Description	Operation Frequency	2402 MHz ~ 2480 MHz	
	Modulation Type		Data Rate
	GFSK		1Mbps
Rated Input	DC 3.3V		
Bluetooth Version	LE		
Hardware Version	V1.0		
Test software of EUT:	Cybluetool (manufacturer declare)		
Antenna Type:	Type 1: PCB Antenna Type 2: External Dipole Antenna		
Antenna Gain:	Type 1: 3.0 dBi for 2.4G band; 3.3 dBi for 5G band Type 2: 3.4 dBi for 2.4G band; 4.75 dBi for 5G band		
	Note: 1. The product has only one transmission chain and two antenna types are provided. 2. This data is provided by customer and our lab isn't responsible for this data.		

5.2. MAXIMUM OUTPUT POWER

Bluetooth Mode	Frequency (MHz)	Channel Number	Max Output Power(dBm)
BLE	2402-2480	0-39[40]	5.63

5.3. CHANNEL LIST

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2402	11	2424	22	2446	33	2468
1	2404	12	2426	23	2448	34	2470
2	2406	13	2428	24	2450	35	2472
3	2408	14	2430	25	2452	36	2474
4	2410	15	2432	26	2454	37	2476
5	2412	16	2434	27	2456	38	2478
6	2414	17	2436	28	2458	39	2480
7	2416	18	2438	29	2460		
8	2418	19	2440	30	2462		
9	2420	20	2442	31	2464		
10	2422	21	2444	32	2468		

5.4. TEST CHANNEL CONFIGURATION

Test Mode	Test Channel		Frequency
GFSK	Low Channel	CH 0	2402MHz
	Middle Channel	CH 19	2440MHz
	High Channel	CH 39	2480MHz

5.5. THE WORSE CASE POWER SETTING PARAMETER

The Worse Case Power Setting Parameter under 2400 ~ 2483.5MHz Band				
Test Software		Cybluetool		
Modulation Type	Transmit Antenna Number	Test Channel		
		LCH	MCH	HCH
GFSK	1	default	default	default

5.6. DESCRIPTION OF AVAILABLE ANTENNAS

Ant.	Frequency (MHz)	Antenna Type	Antenna Gain (dBi)
1	2400-2483.5	PCB Antenna	3.0
		External Dipole Antenna	3.4

Note: This data is provided by customer and our lab isn't responsible for this data.

Test Mode	Transmit and Receive Mode	Description
BLE	☒1TX, 1RX	Antenna1 can be used as transmitting/receiving antenna independently.

5.7. TEST ENVIRONMENT

Environment Parameter	Selected Values During Tests	
Relative Humidity	55 ~ 65%	
Atmospheric Pressure:	101kPa	
Temperature	TN	23 ~ 28°C
Voltage:	VL	N/A
	VN	DC 3.3V
	VH	N/A

Note: VL= Lower Extreme Test Voltage
VN= Nominal Voltage
VH= Upper Extreme Test Voltage
TN= Normal Temperature

5.8. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Item	Equipment	Brand Name	Model Name	Description
1	Laptop	ThinkPad	E590	/
2	DC Power Supply	Tektronix	PWS2326	INPUT: AC 230V OUTPUT: 0-32V, 6A

I/O PORT

Cable No	Port	Connector Type	Cable Type	Cable Length(m)	Remarks
1	RJ45	RJ45	LAN	100cm Length	/

ACCESSORY

Item	Accessory	Brand Name	Model Name	Description
1	/	/	/	/

TEST SETUP

The EUT can work in an engineer mode with a software through a table PC.

SETUP DIAGRAM FOR TESTS

5.9. MEASURING INSTRUMENT AND SOFTWARE USED

Conducted Emissions (Instrument**)**							
Used	Equipment	Manufacturer	Model No.	Serial No.	Upper Last Cal.	Last Cal.	Next Cal.
☑	EMI Test Receiver	R&S	ESR3	126700	2020-12-05	2021-12-04	2022-12-03
☑	Two-Line V-Network	R&S	ENV216	126701	2020-12-05	2021-12-04	2022-12-03
☑	Artificial Mains Networks	R&S	ENY81	126711	2020-10-13	2021-10-12	2022-10-11
Software							
Used	Description		Manufacturer		Name	Version	
☑	Test Software for Conducted disturbance		R&S		EMC32	Ver. 9.25	
Radiated Emissions (Instrument**)**							
Used	Equipment	Manufacturer	Model No.	Serial No.	Upper Last Cal.	Last Cal.	Next Cal.
☑	Spectrum Analyzer	Keysight	N9010B	155727	2021-05-09	2022-04-09	2023-04-08
☑	EMI test receiver	R&S	ESR26	126703	2020-12-05	2021-12-04	2022-12-03
☑	Receiver Antenna (9kHz-30MHz)	Schwarzbeck	FMZB 1513	155456	2018-06-15	2021-06-03	2024-06-02
☑	Receiver Antenna (30MHz-1GHz)	SunAR RF Motion	JB1	177821	2019-01-19	2022-01-18	2025-01-17
☑	Receiver Antenna (1GHz-18GHz)	R&S	HF907	126705	2019-01-27	2022-02-28	2025-02-27
☑	Receiver Antenna (18GHz-26.5GHz)	Schwarzbeck	BBHA9170	126706	2019-02-29	2022-02-28	2025-02-27
☑	Pre-amplification (To 18GHz)	Compliance Direction System Inc.	PAP-1G18-50	178825	2021-03-26	2022-03-01	2023-02-28
☑	Pre-amplification (To 26.5GHz)	R&S	SCU-26D	135391	2020-12-05	2021-12-04	2022-12-03
☑	Band Reject Filter	Wainwright	WRCJV8-2350-2400-2483.5-2533.5-40SS	1	2021-05-09	2022-05-08	2023-05-07
☑	Highpass Filter	Wainwright	WHKX10-2700-3000-18000-40SS	2	2021-05-09	2022-05-08	2023-05-07
Software							
Used	Description		Manufacturer		Name	Version	
☑	Test Software for Radiated disturbance		Tonscend		TS+	Ver. 2.5	
Other instruments							
Used	Equipment	Manufacturer	Model No.	Serial No.	Upper Last Cal.	Last Cal.	Next Cal.
☑	Spectrum Analyzer	Keysight	N9010B	155368	2021-05-09	2022-05-08	2023-05-07
☑	Power Meter	Keysight	U2021XA	155370	2021-05-09	2022-05-08	2023-05-07

6. MEASUREMENT METHODS

No.	Test Item	KDB Name	Section
1	6dB Bandwidth	KDB 558074 D01 15.247 Meas Guidance v05r02	8.2
2	Output Power	KDB 558074 D01 15.247 Meas Guidance v05r02	8.3.1.3/8.3.2.3
3	Power Spectral Density	KDB 558074 D01 15.247 Meas Guidance v05r02	8.4
4	Out-of-band emissions in non-restricted bands	KDB 558074 D01 15.247 Meas Guidance v05r02	8.5
5	Out-of-band emissions in restricted bands	KDB 558074 D01 15.247 Meas Guidance v05r02	8.6
6	Band-edge	KDB 558074 D01 15.247 Meas Guidance v05r02	8.7
7	Conducted Emission Test for AC Power Port	ANSI C63.10-2013	6.2

7. ANTENNA PORT TEST RESULTS

7.1. ON TIME AND DUTY CYCLE

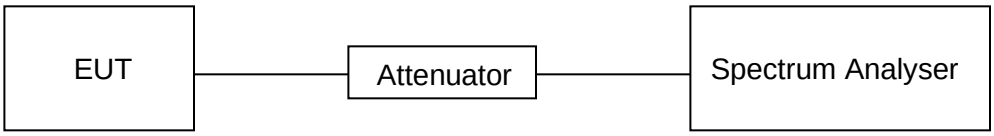
LIMITS

None; for reporting purposes only

PROCEDURE

FCC KDB 558074 Zero-Span Spectrum Analyzer Method

TEST SETUP



TEST ENVIRONMENT

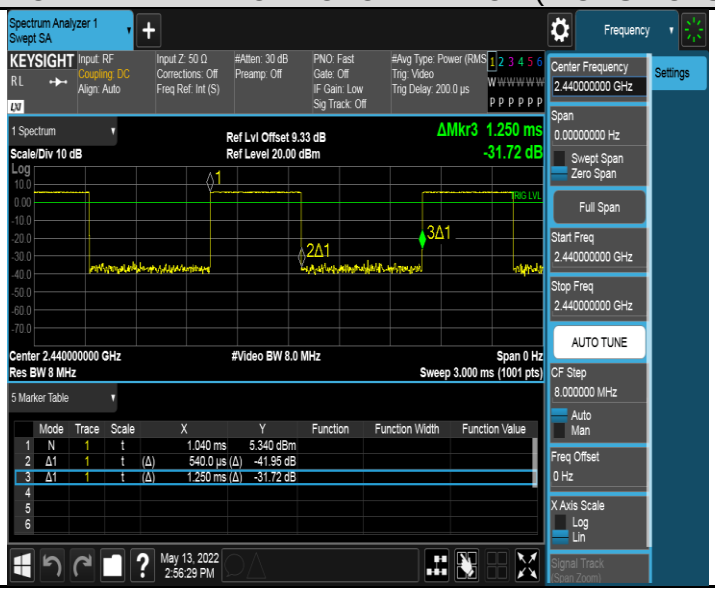
Temperature	22°C	Relative Humidity	56%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.3V

TEST RESULTS TABLE

Mode	On Time (msec)	Period (msec)	Duty Cycle x (Linear)	Duty Cycle (%)	Duty Cycle Correction Factor (db)	1/T Minimum VBW (kHz)	Final VBW (kHz)
BLE	0.54	1.25	0.4320	43.20%	3.65	1.9	2

Note: 1) Duty Cycle Correction Factor=10log(1/x).
2) Where: x is Duty Cycle (Linear)
3) Where: T is On Time (transmit duration)

TEST GRAPHS

BLE ON TIME AND DUTY CYCLE MID CH (WORSE CASE)


7.2. 6 dB BANDWIDTH AND 99% OCCUPIED BANDWIDTH

LIMITS

FCC Part15 (15.247), Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC 15.247(a)(2) ISED RSS-247 5.2 (a)	6dB Bandwidth	>= 500KHz	2400-2483.5
ISED RSS-Gen Clause 6.7	99 % Occupied Bandwidth	For reporting purposes only	2400-2483.5

TEST PROCEDURE

Refer to ANSI C63.10-2013 clause 11.8 for DTS bandwidth and clause 6.9 for Occupied Bandwidth.

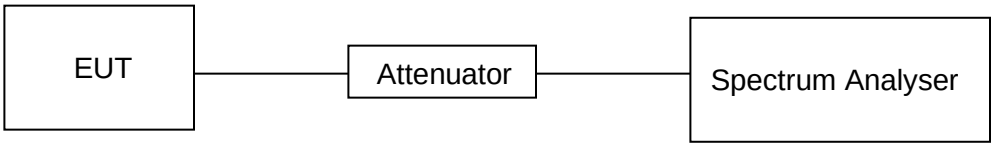
Connect the EUT to the spectrum analyser and use the following settings:

Center Frequency	The centre frequency of the channel under test
Frequency Span	For 6 dB Bandwidth: enough to capture all products of the modulation carrier emission For 99 % Occupied Bandwidth: Between 1.5 times and 5 times the OBW
Detector	Peak
RBW	For 6 dB Bandwidth: 100 kHz For 99 % Occupied Bandwidth: 1 % to 5 % of the occupied bandwidth
VBW	For 6 dB Bandwidth: ≥3 × RBW For 99 % Occupied Bandwidth: ≥3 × RBW
Trace	Max hold
Sweep	Auto couple

a) Use the 99 % power bandwidth function of the instrument, allow the trace to stabilize and report the measured bandwidth.

b) Allow the trace to stabilize and measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

TEST SETUP



TEST ENVIRONMENT

Temperature	22°C	Relative Humidity	56%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.3V

TEST RESULTS TABLE

Test Mode	Test Channel	6dB bandwidth (MHz)	99% bandwidth (MHz)	Result
BLE	LCH	0.720	1.0520	Pass
	MCH	0.720	1.0527	Pass
	HCH	0.720	1.0545	Pass

TEST GRAPHS

6dB Bandwdith

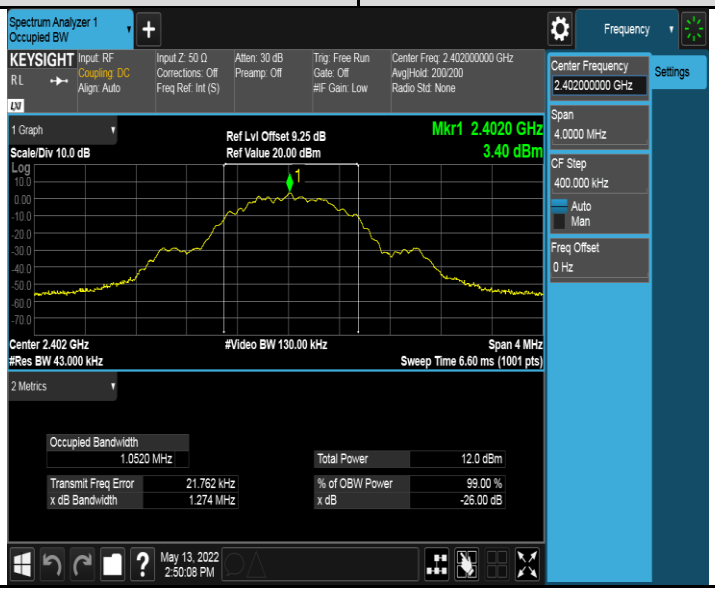
Test Mode	Test Channel	Verdict
BLE	LCH	PASS

Test Mode	Test Channel	Verdict
BLE	MCH	PASS

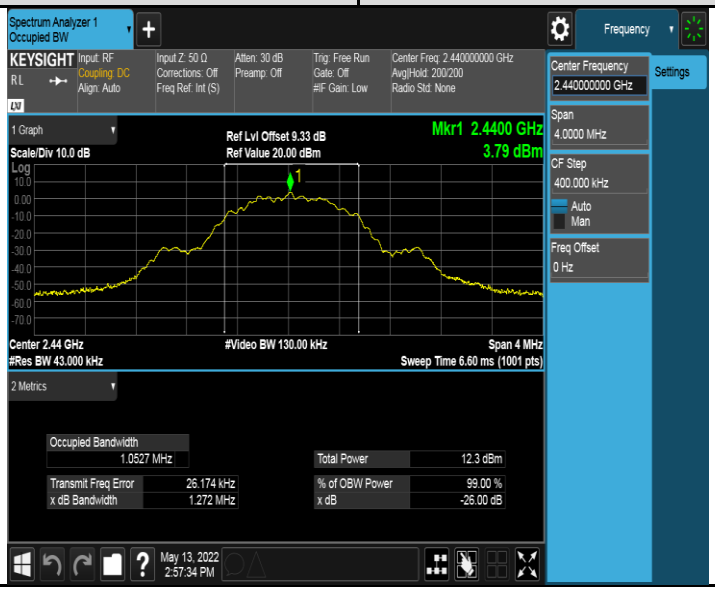
Test Mode	Test Channel	Verdict
BLE	HCH	PASS

99% Bandwidth

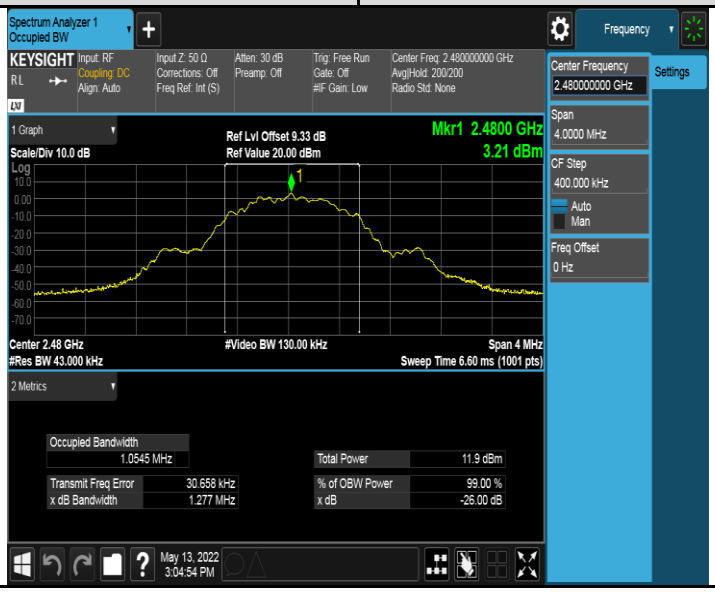
Test Mode	Test Channel
BLE	LCH



Test Mode	Test Channel
BLE	MCH



Test Mode	Test Channel
BLE	HCH



7.3. CONDUCTED OUTPUT POWER

LIMITS

FCC Part15 (15.247), Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
FCC 15.247(b)(3)	Output Power	1 watt or 30dBm	2400-2483.5

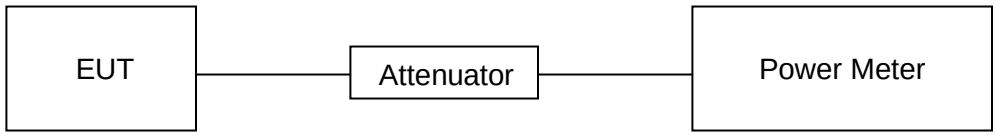
TEST PROCEDURE

Place the EUT on the table and set it in the transmitting mode.
Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the Power sensor.
Measure the power of each channel.
PK Detector used for PK result.

TEST ENVIRONMENT

Temperature	22°C	Relative Humidity	56%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.3V

TEST SETUP



TEST RESULTS TABLE

Test Mode	Test Channel	Maximum Conducted Output Power (PK)	LIMIT
		dBm	dBm
BLE	LCH	5.26	30
	MCH	5.63	30
	HCH	5.21	30

7.4. POWER SPECTRAL DENSITY

LIMITS

FCC Part15 (15.247), Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
FCC §15.247 (e)	Power Spectral Density	8 dBm/3 kHz	2400-2483.5

TEST PROCEDURE

Refer to FCC KDB 558074, connect the UUT to the spectrum analyser and use the following settings:

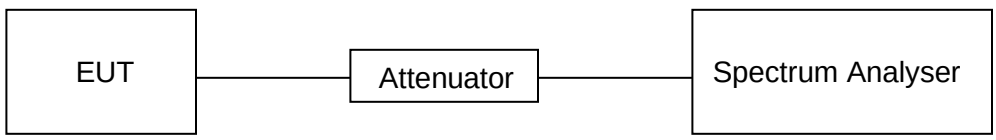
Center Frequency	The centre frequency of the channel under test
Detector	Peak
RBW	3 kHz ≤ RBW ≤100 kHz
VBW	≥3 × RBW
Span	1.5 x DTS bandwidth
Trace	Max hold
Sweep time	Auto couple.

Allow trace to fully stabilize and use the peak marker function to determine the maximum amplitude level within the RBW.
If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

TEST ENVIRONMENT

Temperature	22°C	Relative Humidity	56%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.3V

TEST SETUP

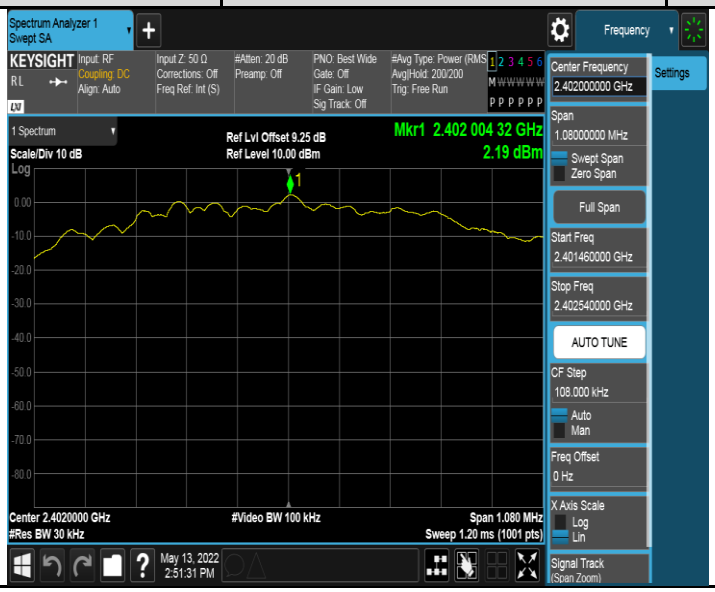


TEST RESULTS TABLE

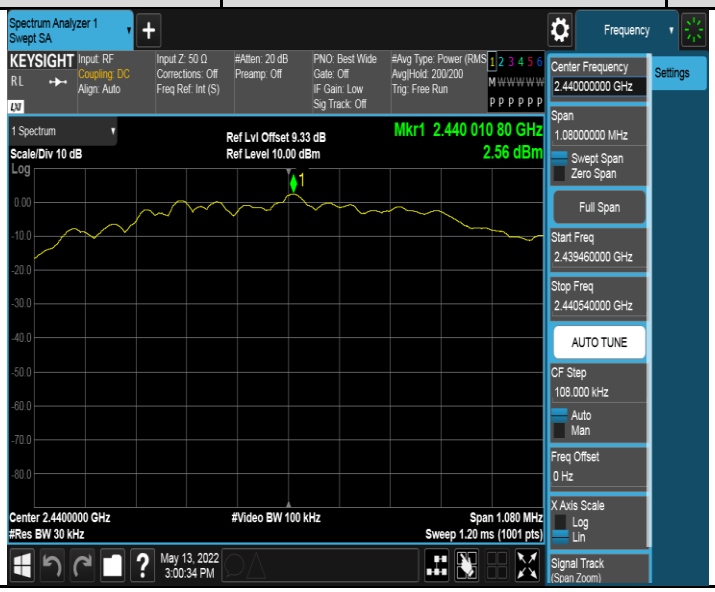
Test Mode	Test Channel	Maximum Peak power spectral density (dBm/30kHz)	Result
BLE	LCH	2.19	Pass
	MCH	2.56	Pass
	HCH	1.97	Pass

TEST GRAPHS

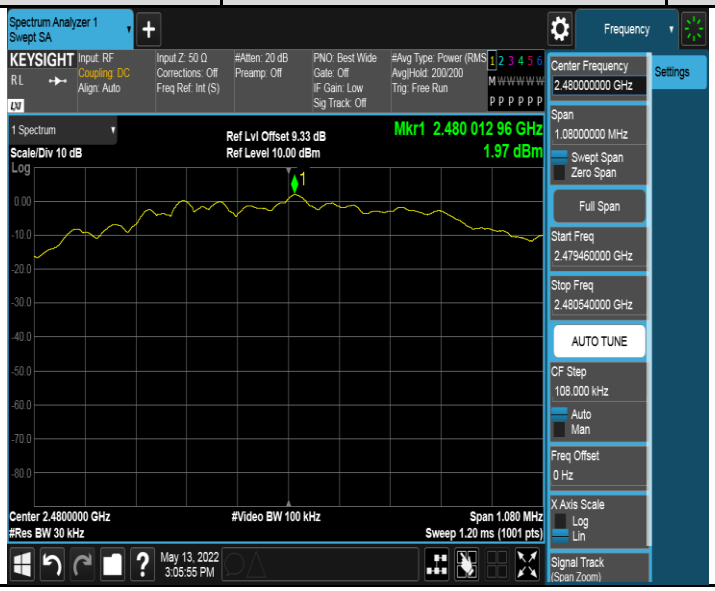
Test Mode	Test Channel	Verdict
BLE	LCH	PASS



Test Mode	Test Channel	Verdict
BLE	MCH	PASS



Test Mode	Test Channel	Verdict
BLE	HCH	PASS



7.5. CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS

LIMITS

FCC Part15 (15.247), Subpart C		
Section	Test Item	Limit
FCC §15.247 (d)	Conducted Bandedge and Spurious Emissions	20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power

TEST PROCEDURE

Refer to FCC KDB 558074, connect the UUT to the spectrum analyser and use the following settings:

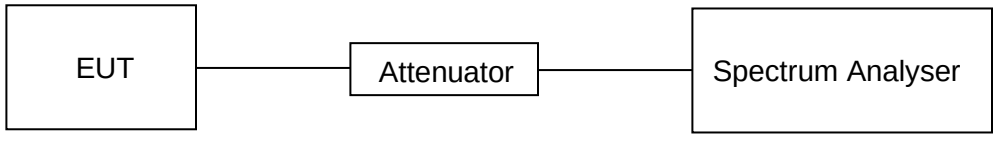
Center Frequency	The centre frequency of the channel under test
Detector	Peak
RBW	100 kHz
VBW	≥3 × RBW
Span	1.5 x DTS bandwidth
Trace	Max hold
Sweep time	Auto couple.

Use the peak marker function to determine the maximum PSD level.

Span	Set the center frequency and span to encompass frequency range to be measured
Detector	Peak
RBW	100 kHz
VBW	≥3 × RBW
measurement points	≥span/RBW
Trace	Max hold
Sweep time	Auto couple.

Use the peak marker function to determine the maximum amplitude level**.**

TEST SETUP



TEST ENVIRONMENT

Temperature	22°C	Relative Humidity	56%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.3V

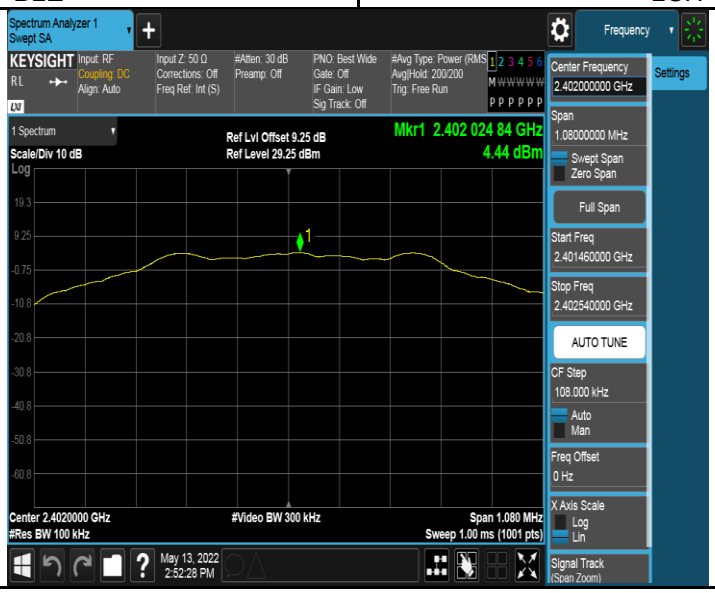
PART 1: REFERENCE LEVEL MEASUREMENT

TEST RESULTS TABLE

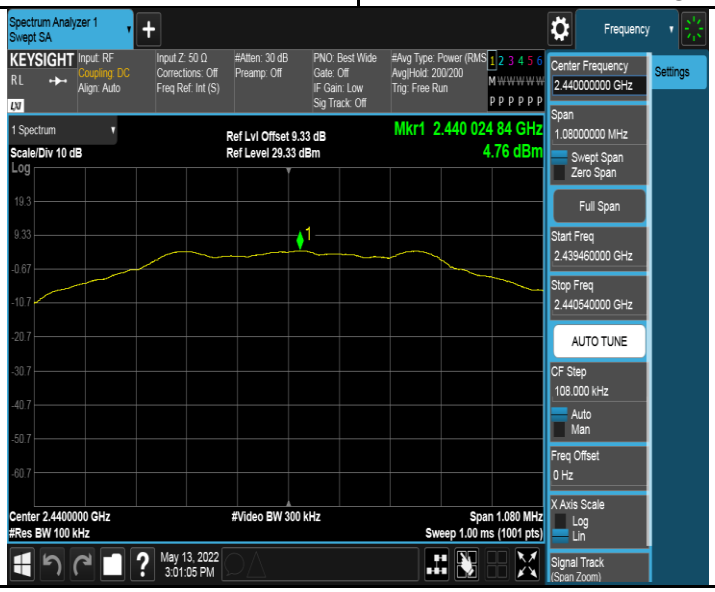
Test Mode	Test Channel	Result[dBm]
BLE	LCH	4.44
	MCH	4.76
	HCH	4.29

TEST GRAPHS

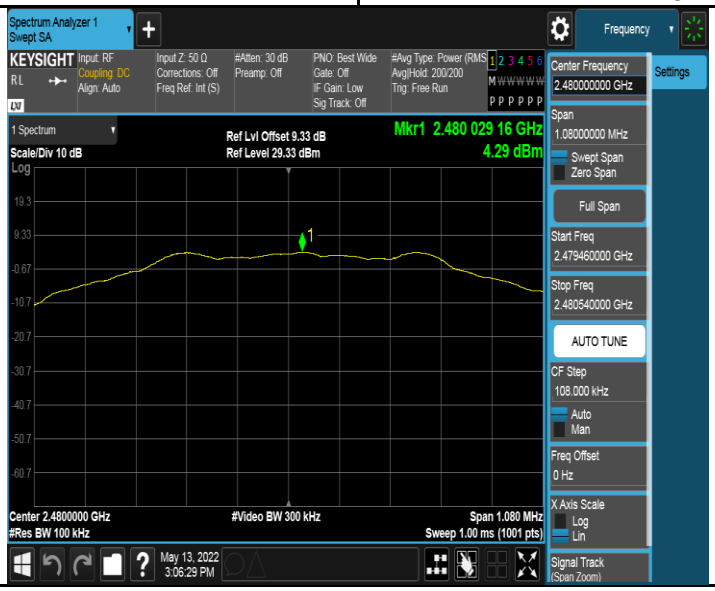
Test Mode	Channel
BLE	LCH



Test Mode	Channel
BLE	MCH



Test Mode	Channel
BLE	HCH



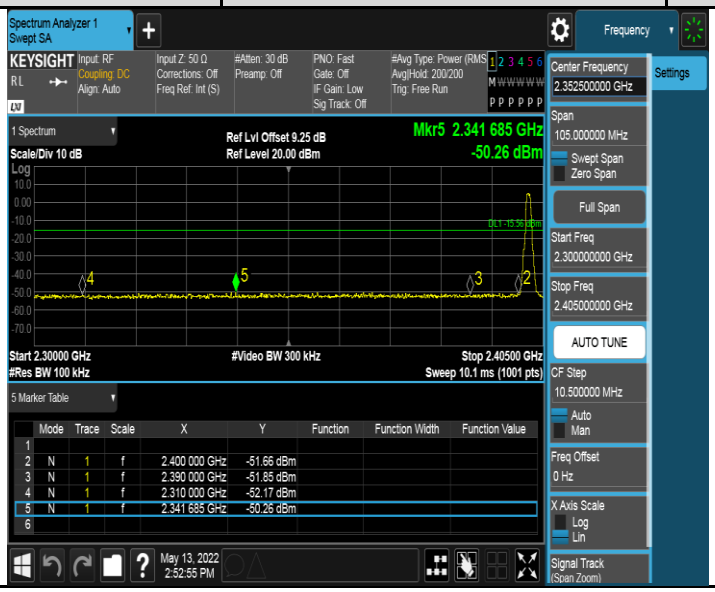
PART 2: CONDUCTED BANDEDGE

TEST RESULTS TABLE

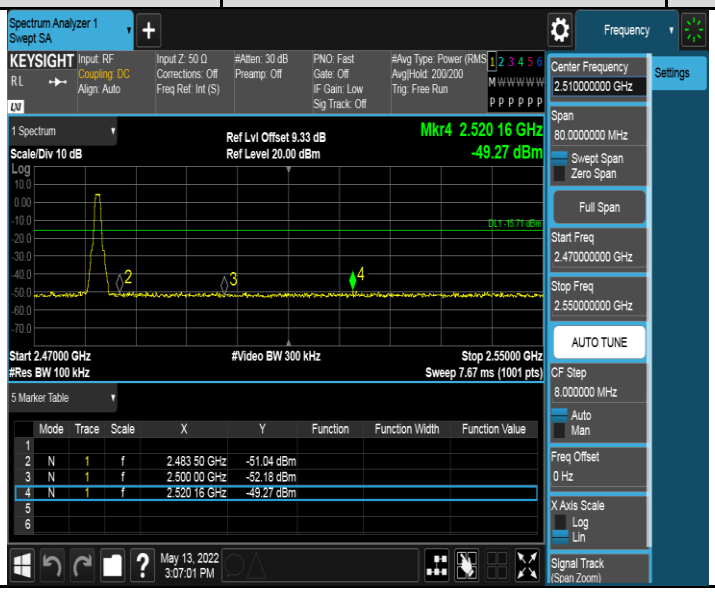
Test Mode	Test Channel	Result	Verdict
BLE	LCH	Refer to the Test Graph	PASS
	HCH	Refer to the Test Graph	PASS

TEST GRAPHS

Test Mode	Test Channel	Verdict
BLE	LCH	PASS



Test Mode	Test Channel	Verdict
BLE	HCH	PASS



PART 3: CONDUCTED SPURIOUS EMISSION

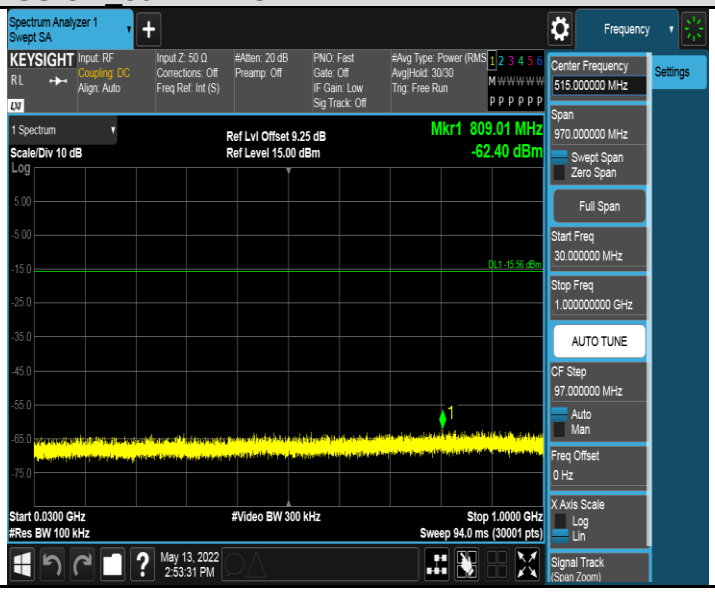
TEST RESULTS TABLE

Test Mode	Test Channel	Result	Verdict
BLE	LCH	Refer to the Test Graph	PASS
	MCH	Refer to the Test Graph	PASS
	HCH	Refer to the Test Graph	PASS

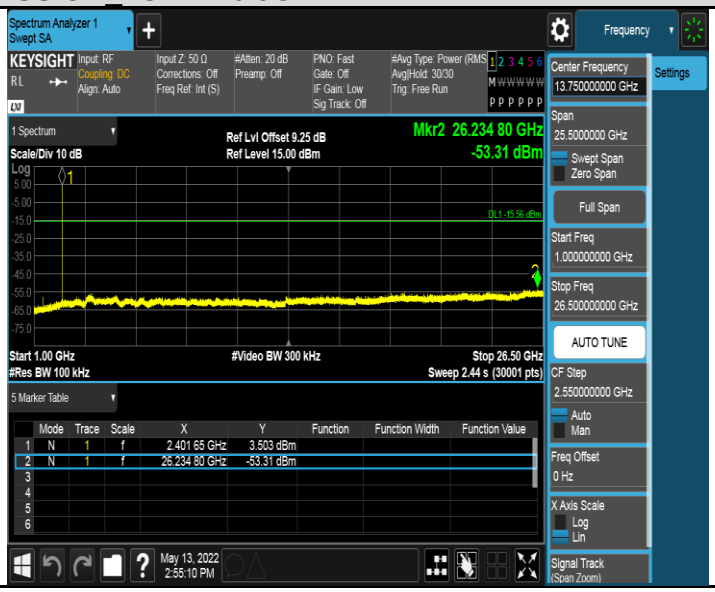
TEST GRAPHS

Test Mode	Channel	Verdict
BLE	LCH	PASS

LCH SPURIOUS EMISSION_30MHz~1GHz

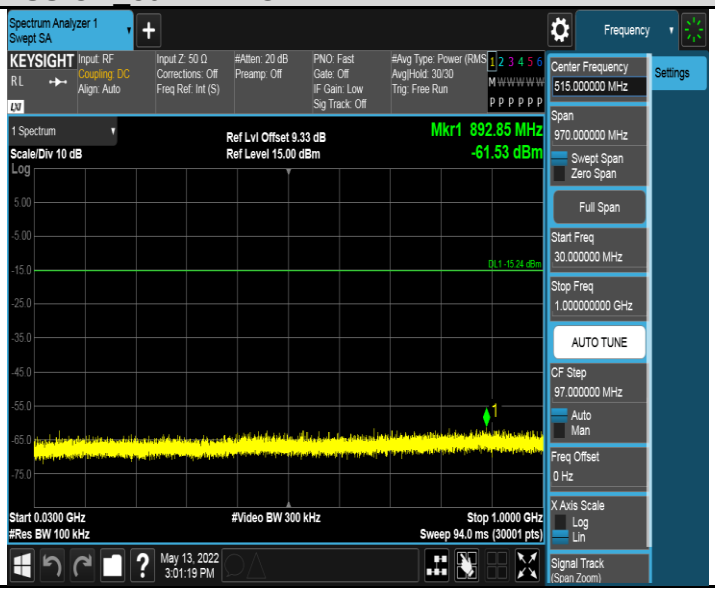


LCH SPURIOUS EMISSION_1GHz~26.5GHz

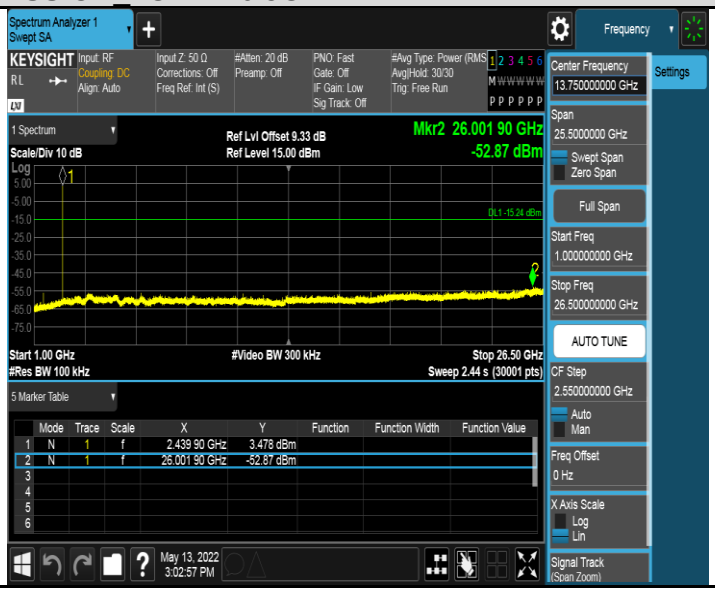


Test Mode	Channel	Verdict
BLE	MCH	PASS

MCH SPURIOUS EMISSION_30MHz~1GHz

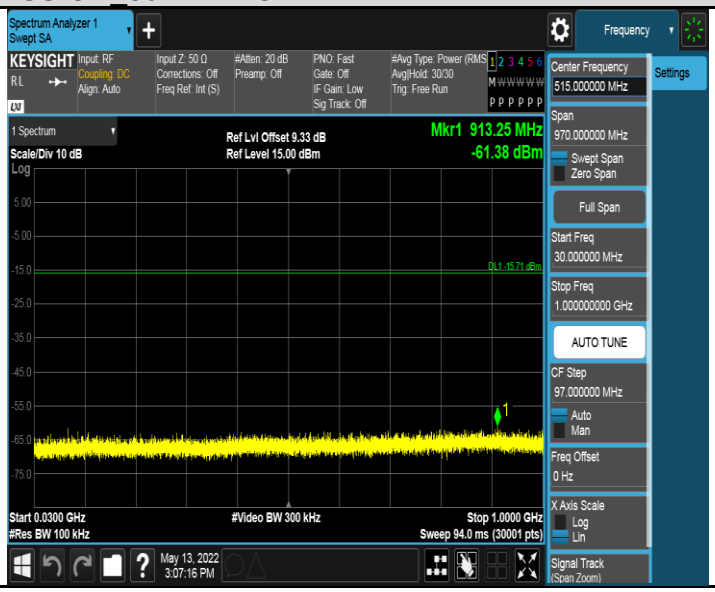


MCH SPURIOUS EMISSION_1GHz~26.5GHz

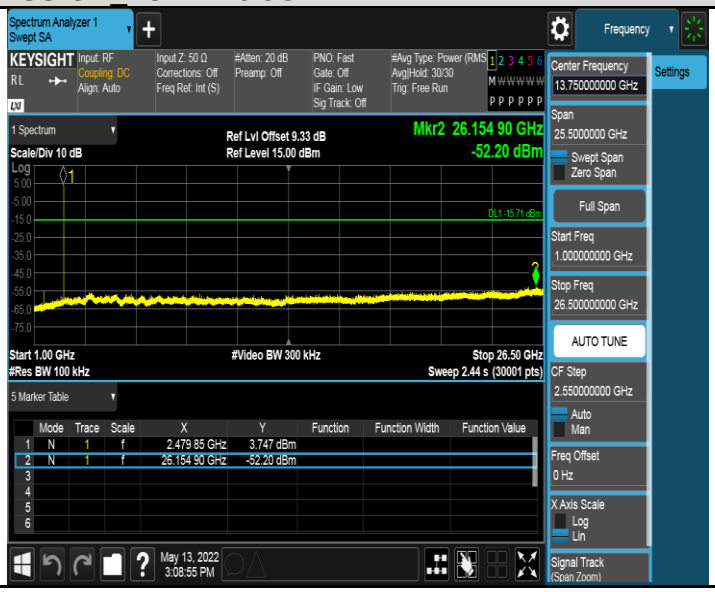


Test Mode	Channel	Verdict
BLE	HCH	PASS

HCH SPURIOUS EMISSION_30MHz~1GHz



HCH SPURIOUS EMISSION_1GHz~26.5GHz



7.6. RADIATED TEST RESULTS

7.6.1. LIMITS AND PROCEDURE

LIMITS

Please refer to FCC §15.205 and §15.209, ISED RSS-247 Clause 5.5, ISED RSS-GEN Clause 8.9&6.13 (Transmitter)
Radiation Disturbance Test Limit for ISED (9kHz-1GHz)

Except where otherwise indicated in the applicable RSS, radiated emissions shall comply with the field strength limits shown in table 5 and table 6. Additionally, the level of any transmitter unwanted emission shall not exceed the level of the transmitter's fundamental emission.

Table 5 – General field strength limits at frequencies above 30 MHz

Frequency (MHz)	Field strength (µV/m at 3 m)
30 – 88	100
88 – 216	150
216 – 960	200
Above 960	500

Table 6 – General field strength limits at frequencies below 30 MHz

Frequency	Magnetic field strength (H-Field) (µA/m)	Measurement distance (m)
9 - 490 kHz[Note 1]	6.37/F (F in kHz)	300
490 - 1705 kHz	63.7/F (F in kHz)	30
1.705 - 30 MHz	0.08	30

Note 1: The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.

Please refer to FCC KDB 558074

Radiation Disturbance Test Limit for FCC (Class B) (9KHz-1GHz)

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
960~1000	500	3

Note: 1) 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).

(2) 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). This paragraph (f) shall not apply to Access BPL devices operating below 30 MHz.

Radiation Disturbance Test Limit for FCC (Above 1G)

Frequency (MHz)	dB(uV/m) (at 3 meters)	
	Peak	Average
Above 1000	74	54

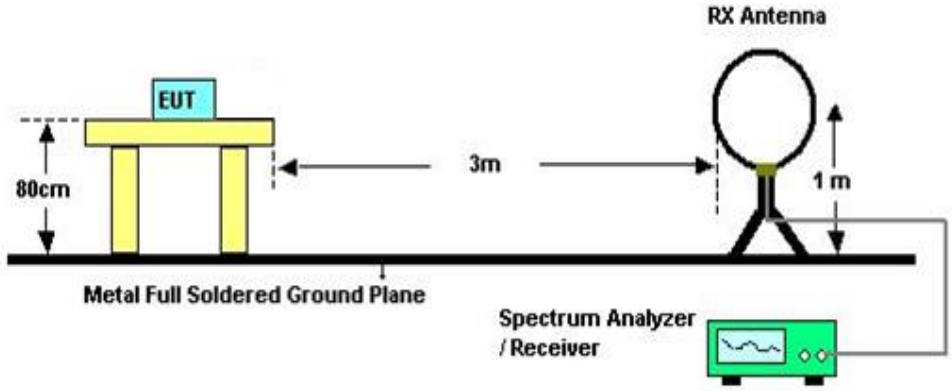
Restricted bands of operation

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
[1]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
8.41425-8.41475	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	([2])
13.36-13.41			

Note: [1]Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.
[2]Above 38.6c

TEST SETUP AND PROCEDURE

Below 30MHz



The setting of the spectrum analyser

RBW	200 Hz (From 9kHz to 0.15MHz)/ 9KHz (From 0.15MHz to 30MHz)
VBW	200 Hz (From 9kHz to 0.15MHz)/ 9KHz (From 0.15MHz to 30MHz)
Sweep	Auto
Detector	Peak/QP/Average
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2013

2. The EUT was arranged to its worst case and then turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both Horizontal, Face-on and Face-off polarizations of the antenna are set to make the measurement.

3. The EUT was placed on a turntable with 0.8 meter above ground.

4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a 1m height antenna tower.

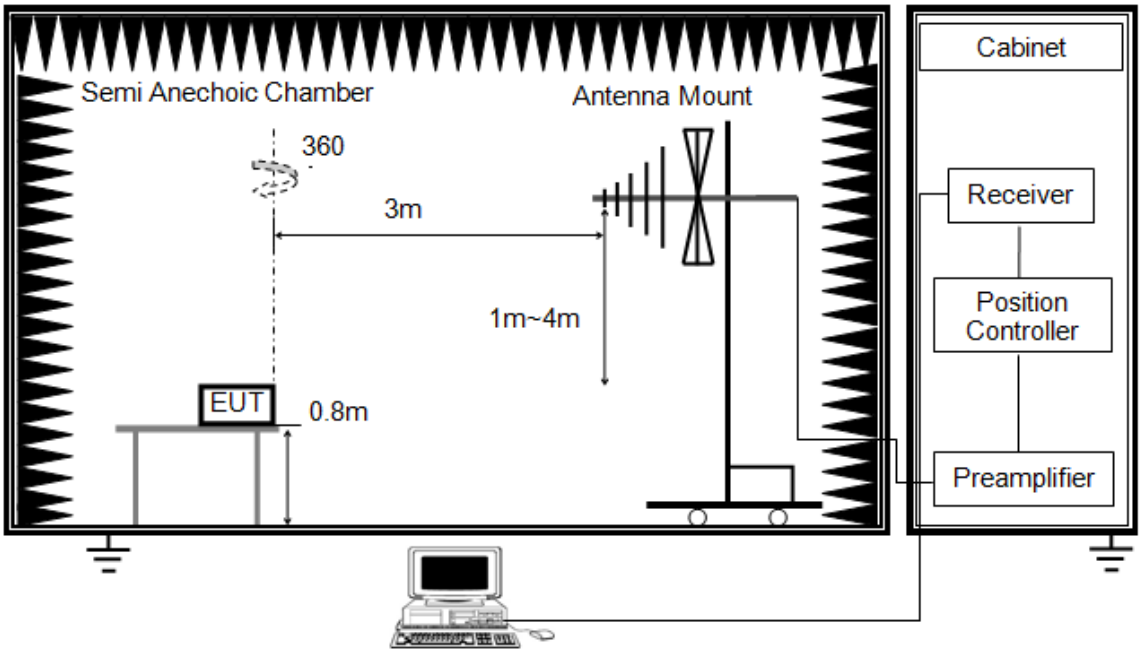
5. The radiated emission limits are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector

6. For measurement below 1GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

7. For the actual test configuration, please refer to the related item in this test report (Photographs of the Test Configuration)

8. The limits in CFR 47, Part 15, Subpart C, paragraph 15.209 (a), are identical to those in RSS-GEN Section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as reported in the table) using the free space impedance of 377 Ω. For example, the measurement frequency X kHz resulted in a level of Y dBuV/m, which is equivalent to Y-51.5 = Z dBuA/m, which has the same margin, W dB, to the corresponding RSS-GEN Table 6 limit as it has to be 15.209(a) limit.

Below 1G



The setting of the spectrum analyser

RBW	120 kHz
VBW	300 kHz
Sweep	Auto
Detector	Peak/QP
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2013.

2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

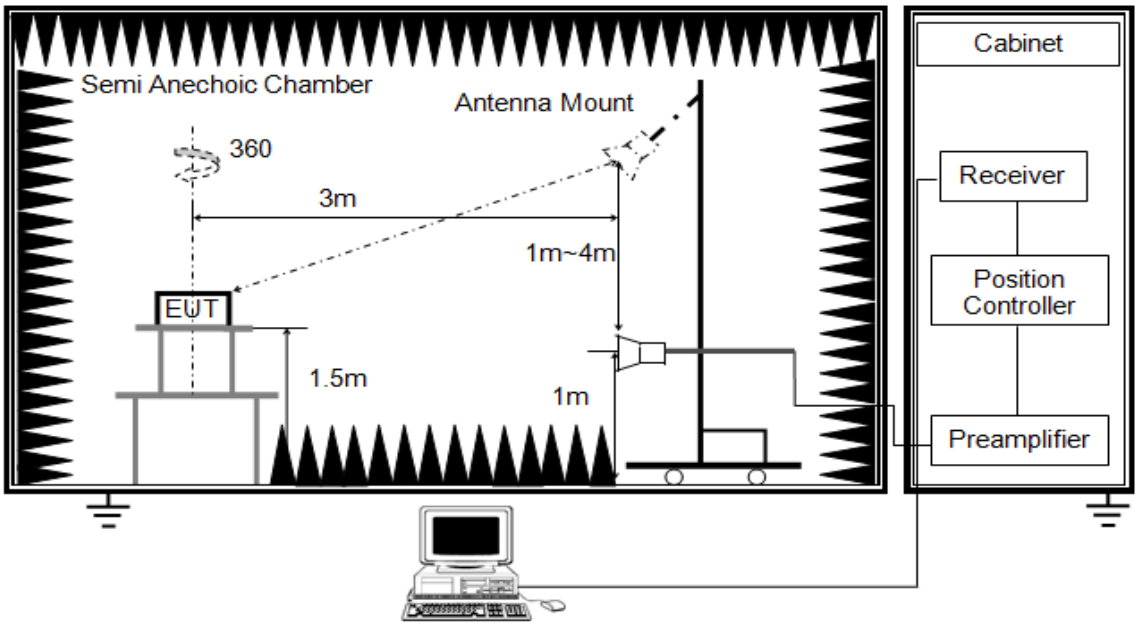
3. The EUT was placed on a turntable with 0.8 meter above ground.

4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

5. For measurement below 1GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

6. For the actual test configuration, please refer to the related item in this test report (Photographs of the Test Configuration)

Above 1G



The setting of the spectrum analyser

RBW	1 MHz
VBW	PEAK:3 MHz AVG: See note6
Sweep	Auto
Detector	Peak
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2013.

2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

3. The EUT was placed on a turntable with 1.5m above ground.

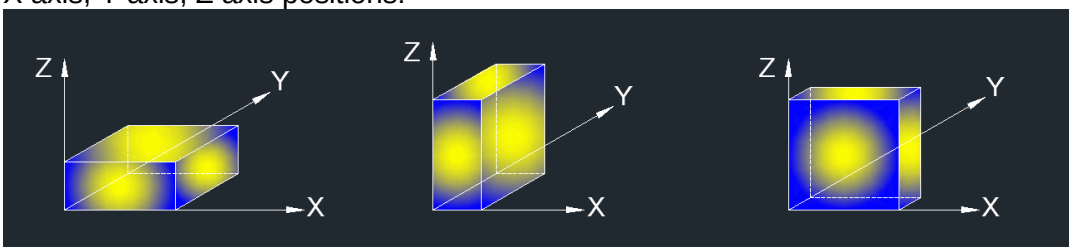
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

5. For measurement above 1GHz, the emission measurement will be measured by the peak detector. This peak level, once corrected, must comply with the limit specified in Section 15.209.

6. For measurements above 1 GHz, the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements; and 1 MHz resolution bandwidth with video bandwidth $\geqslant$1/T but not less than the setting list in section 7.1 when use peak detector, max hold to be run for at least [50*(1/Duty Cycle)] traces for average measurements. For the Duty Cycle need to refer the results in section 7.1.

7. For the actual test configuration, please refer to the related item in this test report (Photographs of the Test Configuration)

X axis, Y axis, Z axis positions:



Note: For all radiated test, EUT in each of three orthogonal axis emissions had been tested, but only the worse case (X axis) data recorded in the report.

7.6.2. TEST ENVIRONMENT

Temperature	22°C	Relative Humidity	56%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.3V

7.6.3. RESTRICTED BANDEDGE

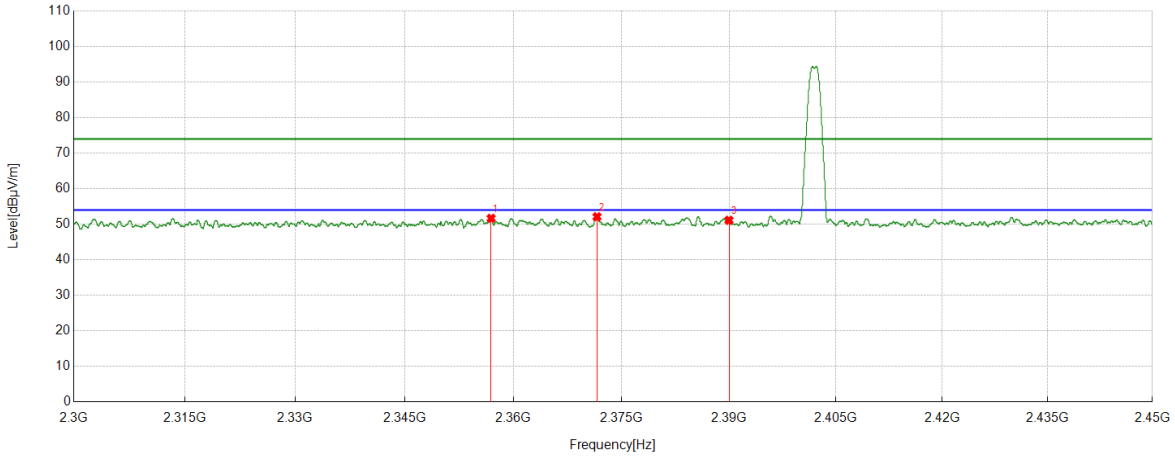
TEST RESULT TABLE

Test Mode	Antenna Type	Channel	Puw(dBm)	Verdict
BLE	External Dipole Antenna	LCH	<Limit	PASS
		HCH	<Limit	PASS
	PCB Antenna	LCH	<Limit	PASS
		HCH	<Limit	PASS

TEST GRAPHS

Antenna Type 2: External Dipole Antenna

Test Mode	Channel	Polarization	Verdict
BLE	LCH	Horizontal	PASS

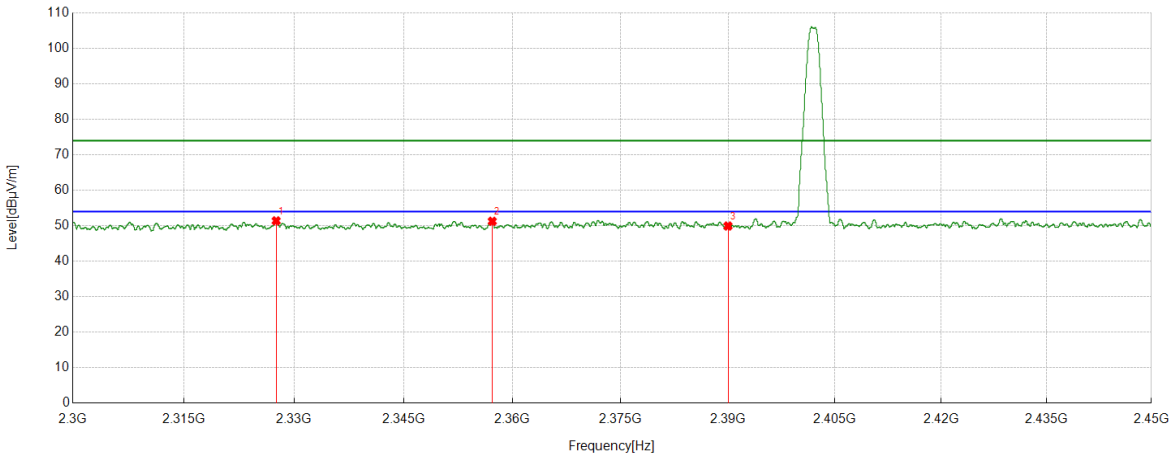


PK Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	2356.9321	40.51	11.15	51.66	74.00	-22.34	Horizontal
2	2371.5964	40.82	11.28	52.10	74.00	-21.90	Horizontal
3	2390	39.86	11.25	51.11	74.00	-22.89	Horizontal

Note: 1. Peak result: Peak detector, RBW: 1 MHz, VBW: 3 MHz.
2. Average result: Peak detector, RBW: 1 MHz, VBW: 1/T MHz (refer to clause 7.1.).
3. Measurement = Reading Level + Correct Factor.
4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Test Mode	Channel	Polarization	Verdict
BLE	LCH	Vertical	PASS

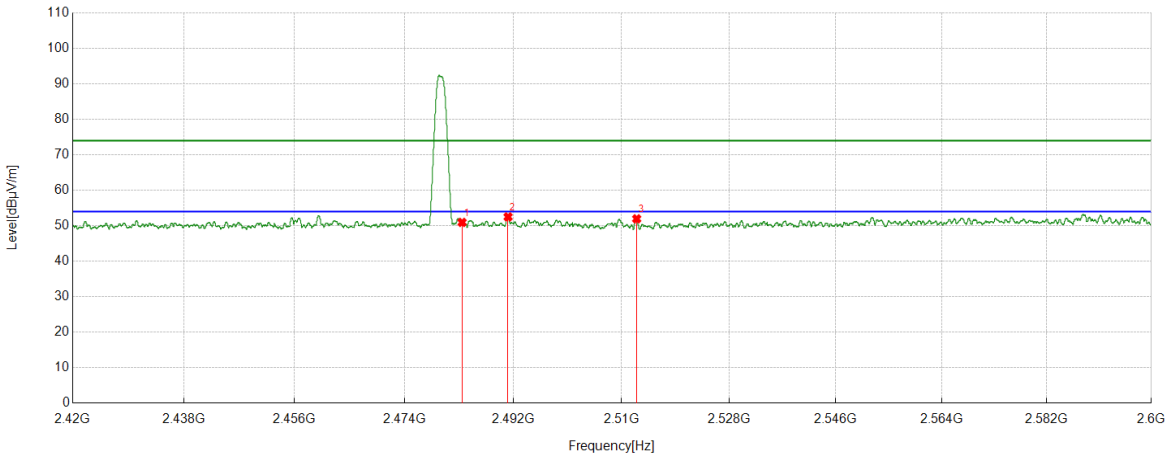


PK Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	2327.5847	40.45	10.94	51.39	74.00	-22.61	Vertical
2	2357.2322	40.12	11.15	51.27	74.00	-22.73	Vertical
3	2390	38.68	11.25	49.93	74.00	-24.07	Vertical

Note: 1. Peak result: Peak detector, RBW: 1 MHz, VBW: 3 MHz.
2. Average result: Peak detector, RBW: 1 MHz, VBW: 1/T MHz (refer to clause 7.1.).
3. Measurement = Reading Level + Correct Factor.
4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Test Mode	Channel	Polarization	Verdict
BLE	HCH	Horizontal	PASS

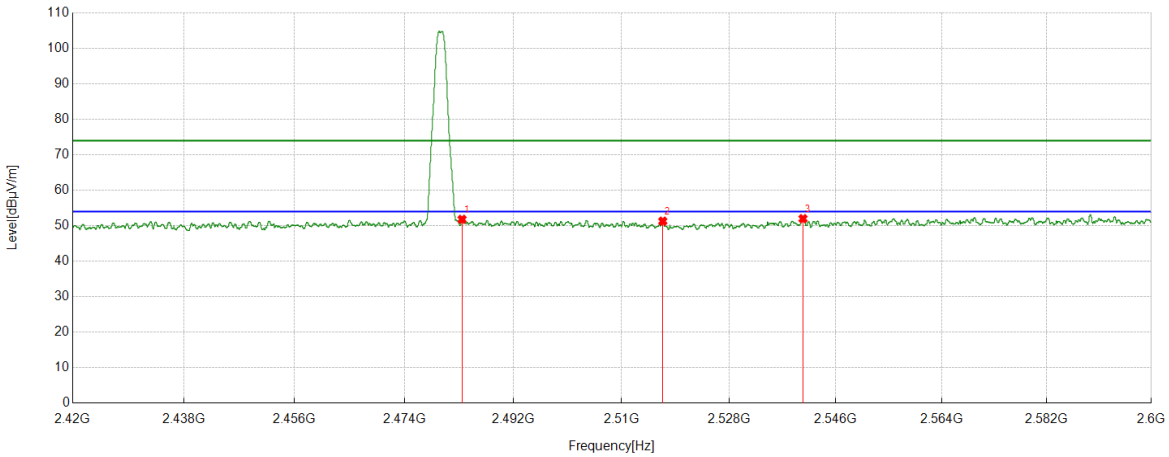


PK Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	2483.5	39.67	11.28	50.95	74.00	-23.05	Horizontal
2	2491.1089	41.10	11.40	52.50	74.00	-21.50	Horizontal
3	2512.5091	40.44	11.52	51.96	74.00	-22.04	Horizontal

Note: 1. Peak result: Peak detector, RBW: 1 MHz, VBW: 3 MHz.
2. Average result: Peak detector, RBW: 1 MHz, VBW: 1/T MHz (refer to clause 7.1.).
3. Measurement = Reading Level + Correct Factor.
4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Test Mode	Channel	Polarization	Verdict
BLE	HCH	Vertical	PASS



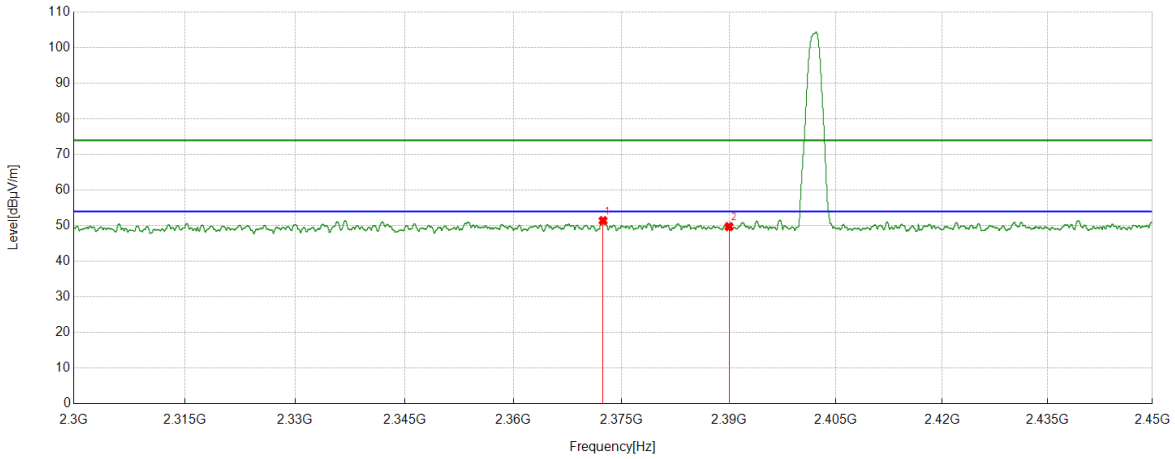
PK Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	2483.5	40.53	11.28	51.81	74.00	-22.19	Vertical
2	2516.8746	39.74	11.56	51.30	74.00	-22.70	Vertical
3	2540.4576	40.14	11.86	52.00	74.00	-22.00	Vertical

Note: 1. Peak result: Peak detector, RBW: 1 MHz, VBW: 3 MHz.
2. Average result: Peak detector, RBW: 1 MHz, VBW: 1/T MHz (refer to clause 7.1.).
3. Measurement = Reading Level + Correct Factor.
4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Antenna Type 1: PCB Antenna

Test Mode	Channel	Polarization	Verdict
BLE	LCH	Horizontal	PASS

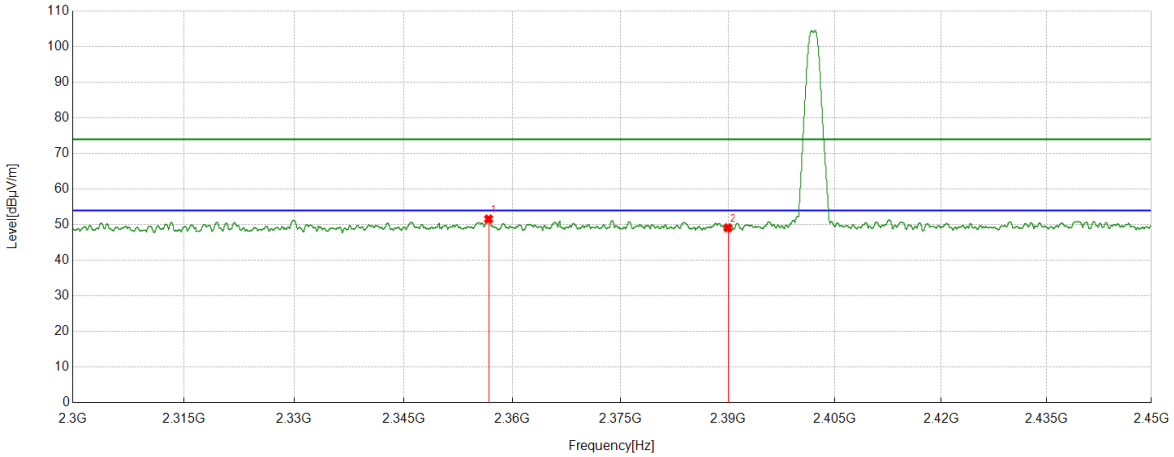


PK Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	2372.4403	40.14	11.28	51.42	74.00	-22.58	Horizontal
2	2390	38.50	11.25	49.75	74.00	-24.25	Horizontal

Note: 1. Peak result: Peak detector, RBW: 1 MHz, VBW: 3 MHz.
2. Average result: Peak detector, RBW: 1 MHz, VBW: 1/T MHz (refer to clause 7.1.).
3. Measurement = Reading Level + Correct Factor.
4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Test Mode	Channel	Polarization	Verdict
BLE	LCH	Vertical	PASS

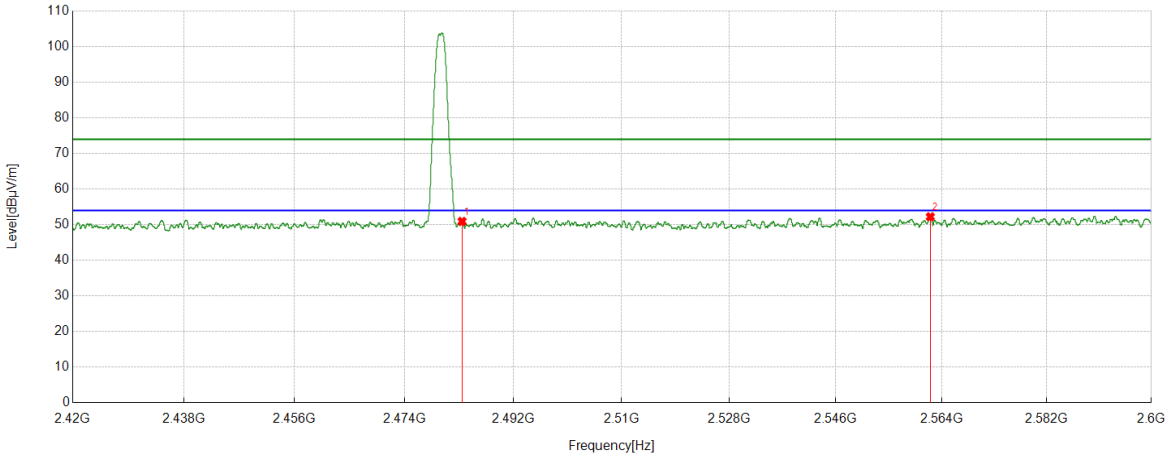


PK Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	2356.7258	40.43	11.15	51.58	74.00	-22.42	Vertical
2	2390	37.87	11.25	49.12	74.00	-24.88	Vertical

Note: 1. Peak result: Peak detector, RBW: 1 MHz, VBW: 3 MHz.
2. Average result: Peak detector, RBW: 1 MHz, VBW: 1/T MHz (refer to clause 7.1.).
3. Measurement = Reading Level + Correct Factor.
4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Test Mode	Channel	Polarization	Verdict
BLE	HCH	Horizontal	PASS

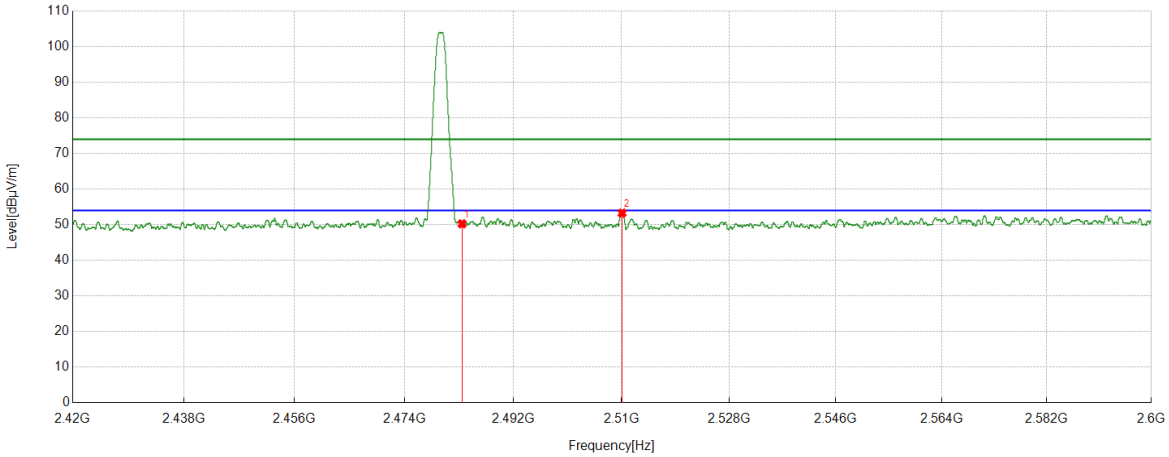


PK Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	2483.5	39.65	11.28	50.93	74.00	-23.07	Horizontal
2	2562.0603	40.29	11.93	52.22	74.00	-21.78	Horizontal

Note: 1. Peak result: Peak detector, RBW: 1 MHz, VBW: 3 MHz.
2. Average result: Peak detector, RBW: 1 MHz, VBW: 1/T MHz (refer to clause 7.1.).
3. Measurement = Reading Level + Correct Factor.
4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Test Mode	Channel	Polarization	Verdict
BLE	HCH	Vertical	PASS



PK Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	2483.5	38.98	11.28	50.26	74.00	-23.74	Vertical
2	2510.0788	41.77	11.49	53.26	74.00	-20.74	Vertical

Note: 1. Peak result: Peak detector, RBW: 1 MHz, VBW: 3 MHz.
2. Average result: Peak detector, RBW: 1 MHz, VBW: 1/T MHz (refer to clause 7.1.).
3. Measurement = Reading Level + Correct Factor.
4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

7.6.4. SPURIOUS EMISSIONS

TEST RESULTS TABLE

1) For 1GHz~18GHz

Test Mode	Antenna Type	Channel	Puw(dBm)	Verdict
BLE	External Dipole Antenna	LCH	<Limit	PASS
		MCH	<Limit	PASS
		HCH	<Limit	PASS
	PCB Antenna	LCH	<Limit	PASS
		MCH	<Limit	PASS
		HCH	<Limit	PASS

Note:
Through pre-testing all the test modes and test channels, but only the data of the worst case is included in this test report

2) For 9KHz~30MHz

Test Mode	Antenna Type	Channel	Puw(dBm)	Verdict
BLE	External Dipole Antenna	HCH	<Limit	PASS
	PCB Antenna	HCH	<Limit	PASS

Note:
Through pre-testing all the test modes and test channels, but only the data of the worst case is included in this test report

3) For 30MHz~1GHz

Test Mode	Antenna Type	Channel	Puw(dBm)	Verdict
BLE	External Dipole Antenna	HCH	<Limit	PASS
	PCB Antenna	HCH	<Limit	PASS

Note:
Through pre-testing all the test modes and test channels, but only the data of the worst case is included in this test report.

4) For 18GHz~26.5GHz

Test Mode	Antenna Type	Channel	Puw(dBm)	Verdict
BLE	External Dipole Antenna	HCH	<Limit	PASS
	PCB Antenna	HCH	<Limit	PASS

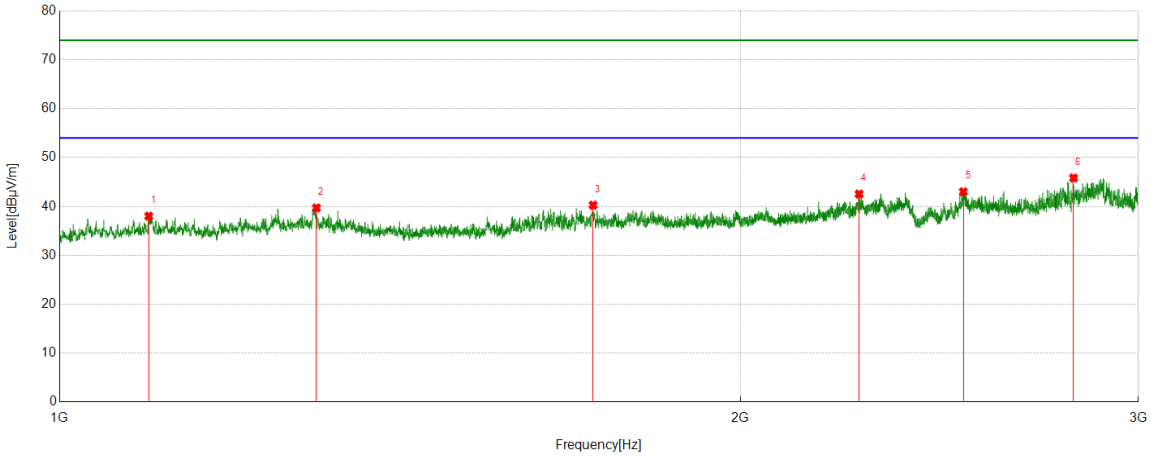
Note:
Through pre-testing all the test modes and test channels, but only the data of the worst case is included in this test report.

Part 1: 1GHz~3GHz

Antenna Type 2: External Dipole Antenna

HARMONICS AND SPURIOUS EMISSIONS

Test Mode	Channel	Polarization	Verdict
BLE	LCH	Horizontal	PASS

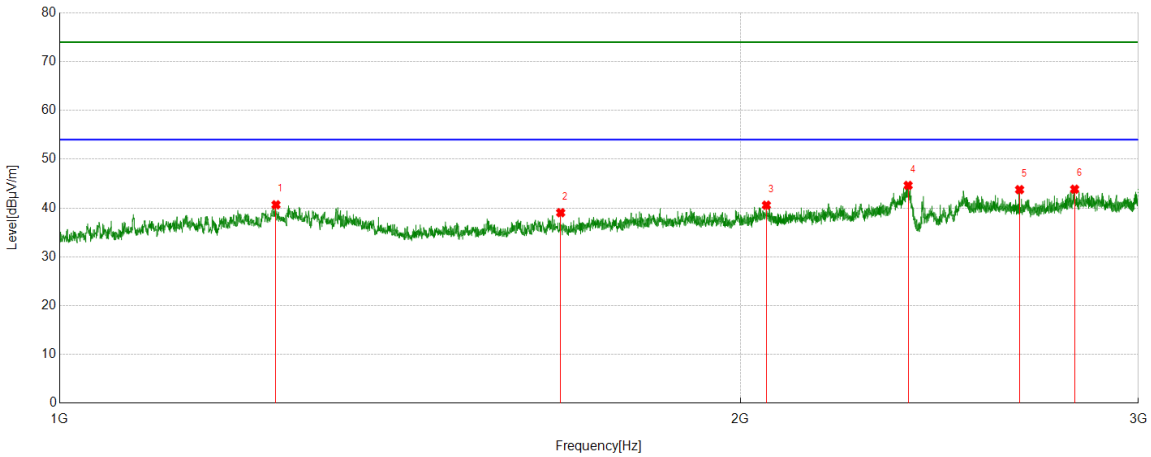


PK Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	1095.1299	43.61	-5.59	38.02	74.00	-35.98	Horizontal
2	1299.2455	45.53	-5.83	39.70	74.00	-34.30	Horizontal
3	1721.7503	44.59	-4.32	40.27	74.00	-33.73	Horizontal
4	2257.5311	44.65	-2.11	42.54	74.00	-31.46	Horizontal
5	2510.2599	43.37	-0.38	42.99	74.00	-31.01	Horizontal
6	2808.5531	46.06	-0.24	45.82	74.00	-28.18	Horizontal

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
4. Peak: Peak detector.
5. For below 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band Reject Filter losses.
6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Test Mode	Channel	Polarization	Verdict
BLE	LCH	Vertical	PASS

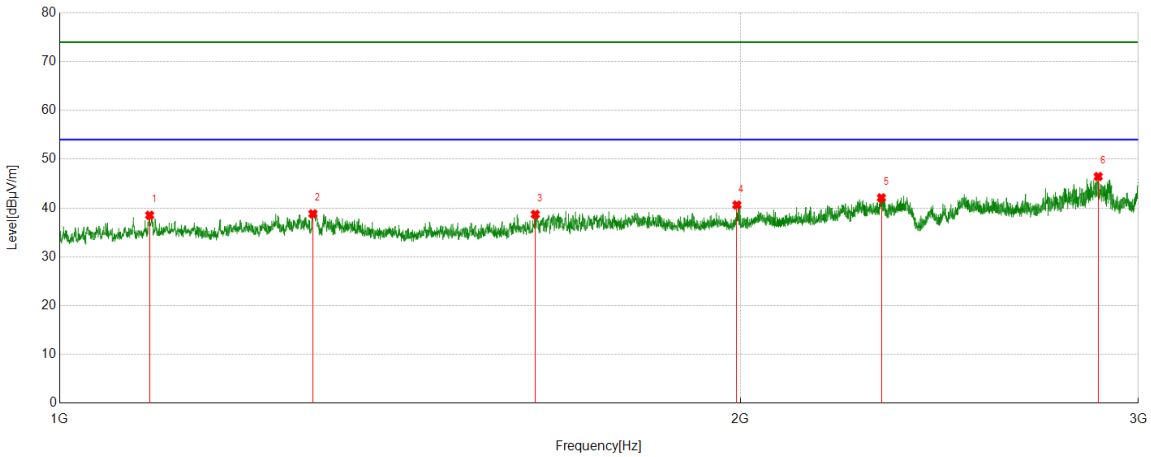


PK Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	1246.5481	46.29	-5.63	40.66	74.00	-33.34	Vertical
2	1665.7565	43.91	-4.87	39.04	74.00	-34.96	Vertical
3	2054.3328	43.06	-2.48	40.58	74.00	-33.42	Vertical
4	2373.3005	45.75	-1.12	44.63	74.00	-29.37	Vertical
5	2658.2514	44.45	-0.69	43.76	74.00	-30.24	Vertical
6	2811.5743	44.07	-0.22	43.85	74.00	-30.15	Vertical

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
4. Peak: Peak detector.
5. For below 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band Reject Filter losses.
6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Test Mode	Channel	Polarization	Verdict
BLE	MCH	Horizontal	PASS

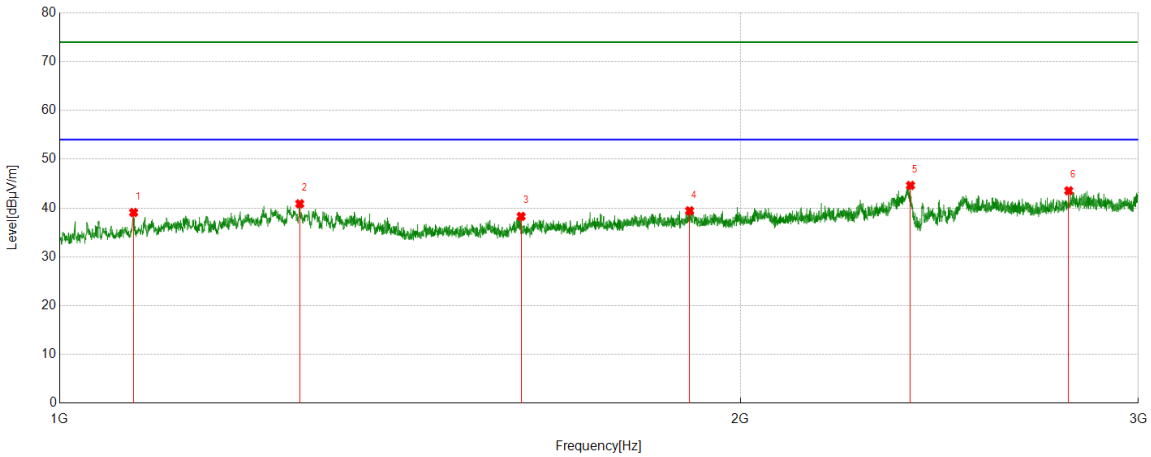


PK Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	1096.2208	44.11	-5.59	38.52	74.00	-35.48	Horizontal
2	1294.2307	44.59	-5.78	38.81	74.00	-35.19	Horizontal
3	1623.2776	43.73	-5.03	38.70	74.00	-35.30	Horizontal
4	1993.2412	43.68	-3.06	40.62	74.00	-33.38	Horizontal
5	2309.2096	43.76	-1.67	42.09	74.00	-31.91	Horizontal
6	2880.0250	46.16	0.29	46.45	74.00	-27.55	Horizontal

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
4. Peak: Peak detector.
5. For below 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band Reject Filter losses.
6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Test Mode	Channel	Polarization	Verdict
BLE	MCH	Vertical	PASS

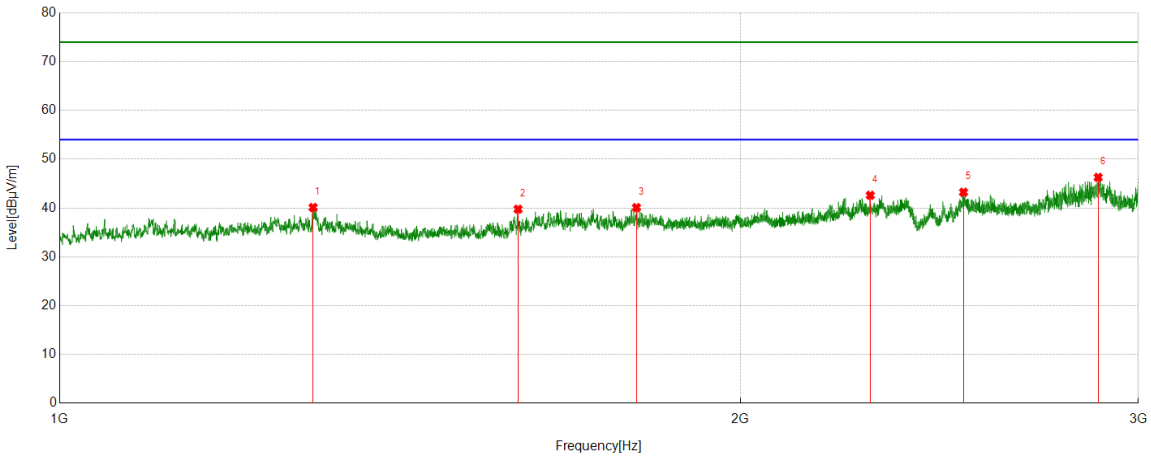


PK Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	1078.2571	44.49	-5.41	39.08	74.00	-34.92	Vertical
2	1277.0146	46.43	-5.56	40.87	74.00	-33.13	Vertical
3	1600.1896	43.46	-5.18	38.28	74.00	-35.72	Vertical
4	1899.5015	42.73	-3.29	39.44	74.00	-34.56	Vertical
5	2378.7516	45.72	-1.09	44.63	74.00	-29.37	Vertical
6	2794.7472	43.83	-0.29	43.54	74.00	-30.46	Vertical

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
4. Peak: Peak detector.
5. For below 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band Reject Filter losses.
6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Test Mode	Channel	Polarization	Verdict
BLE	HCH	Horizontal	PASS

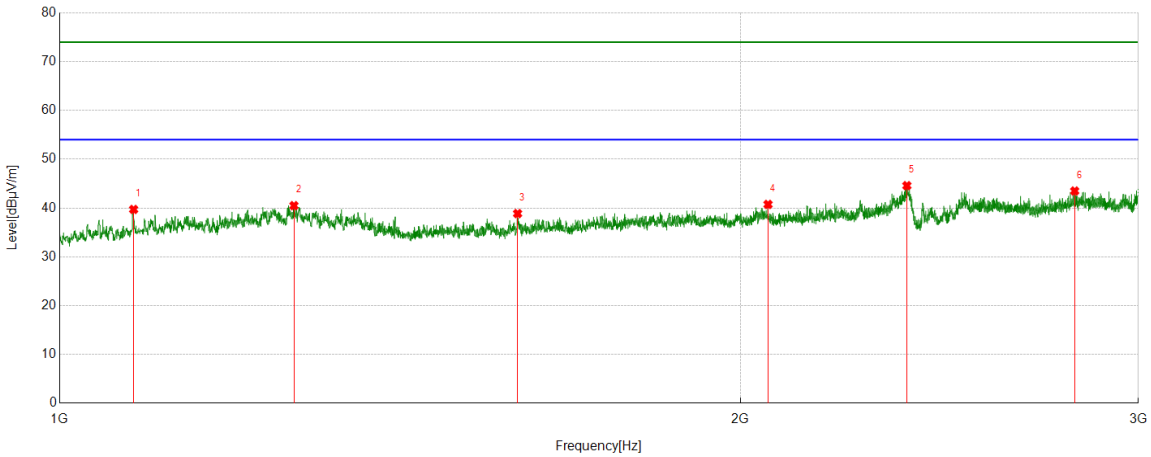


PK Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	1294.5025	45.90	-5.79	40.11	74.00	-33.89	Horizontal
2	1595.5416	44.82	-5.06	39.76	74.00	-34.24	Horizontal
3	1799.5772	43.93	-3.84	40.09	74.00	-33.91	Horizontal
4	2283.2517	44.55	-1.94	42.61	74.00	-31.39	Horizontal
5	2510.74912	43.61	-0.38	43.23	74.00	-30.77	Horizontal
6	2879.7507	45.99	0.29	46.28	74.00	-27.72	Horizontal

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
4. Peak: Peak detector.
5. For below 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band Reject Filter losses.
6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Test Mode	Channel	Polarization	Verdict
BLE	HCH	Vertical	PASS



PK Result:

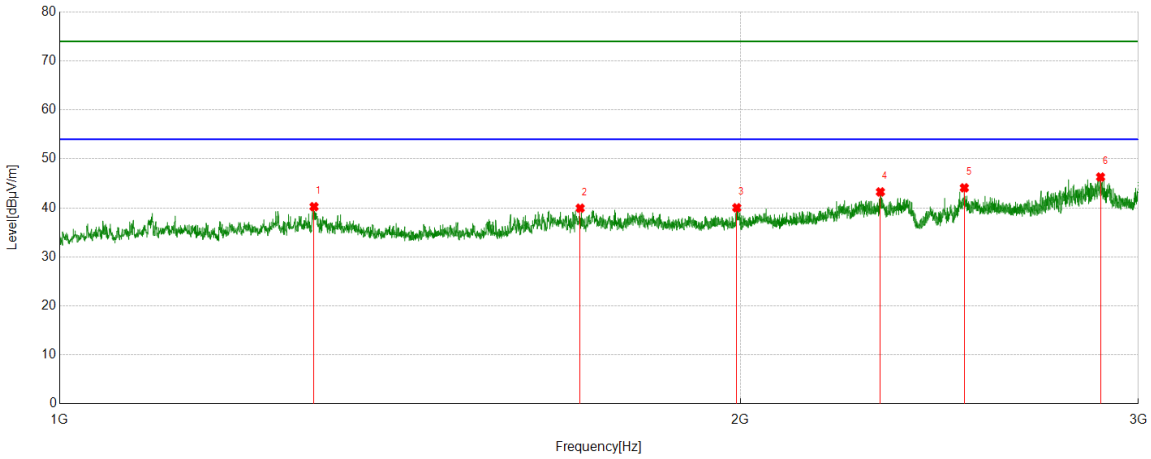
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	1078.2574	45.12	-5.41	39.71	74.00	-34.29	Vertical
2	1269.5127	45.93	-5.44	40.49	74.00	-33.51	Vertical
3	1594.2527	43.90	-5.04	38.86	74.00	-35.14	Vertical
4	2057.5904	43.31	-2.57	40.74	74.00	-33.26	Vertical
5	2370.0413	45.71	-1.13	44.58	74.00	-29.42	Vertical
6	2811.7536	43.71	-0.22	43.49	74.00	-30.51	Vertical

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
4. Peak: Peak detector.
5. For below 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band Reject Filter losses.
6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Antenna Type 1: PCB Antenna

HARMONICS AND SPURIOUS EMISSIONS

Test Mode	Channel	Polarization	Verdict
BLE	LCH	Horizontal	PASS

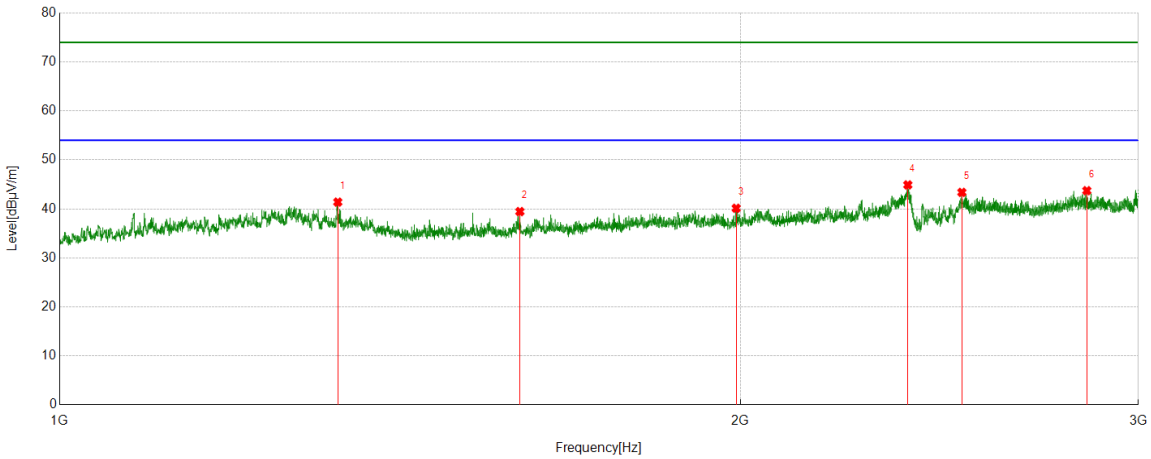


PK Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	1295.7589	46.04	-5.80	40.24	74.00	-33.76	Horizontal
2	1699.2534	44.74	-4.80	39.94	74.00	-34.06	Horizontal
3	1993.3775	43.09	-3.06	40.03	74.00	-33.97	Horizontal
4	2307.5216	44.97	-1.71	43.26	74.00	-30.74	Horizontal
5	2512.2723	44.46	-0.37	44.09	74.00	-29.91	Horizontal
6	2886.2130	45.83	0.47	46.30	74.00	-27.70	Horizontal

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
4. Peak: Peak detector.
5. For below 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band Reject Filter losses.
6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Test Mode	Channel	Polarization	Verdict
BLE	LCH	Vertical	PASS

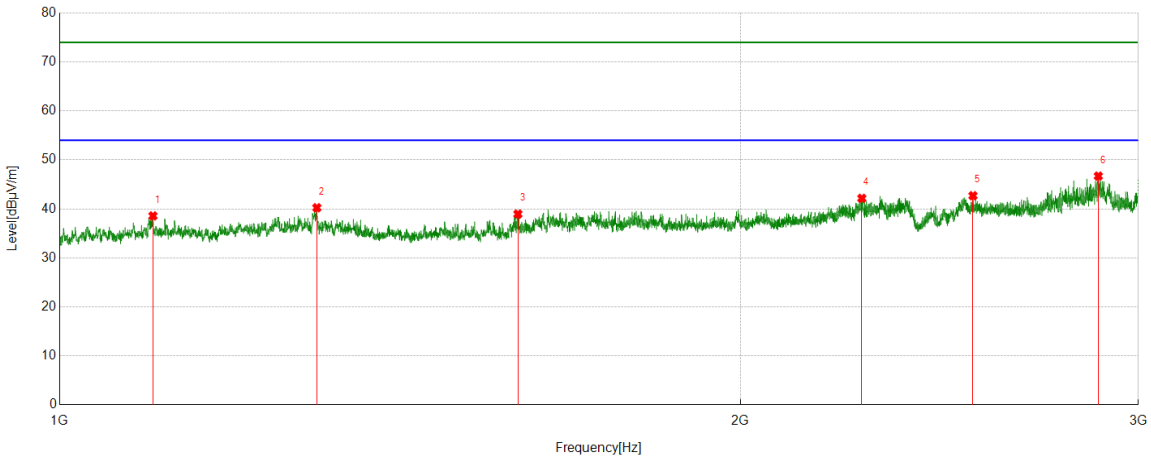


PK Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	1327.3751	47.05	-5.66	41.39	74.00	-32.61	Vertical
2	1598.1450	44.58	-5.13	39.45	74.00	-34.55	Vertical
3	1991.2753	43.20	-3.07	40.13	74.00	-33.87	Vertical
4	2372.1205	46.02	-1.12	44.90	74.00	-29.10	Vertical
5	2506.2671	43.78	-0.41	43.37	74.00	-30.63	Vertical
6	2846.3178	43.59	0.13	43.72	74.00	-30.28	Vertical

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
4. Peak: Peak detector.
5. For below 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band Reject Filter losses.
6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Test Mode	Channel	Polarization	Verdict
BLE	MCH	Horizontal	PASS

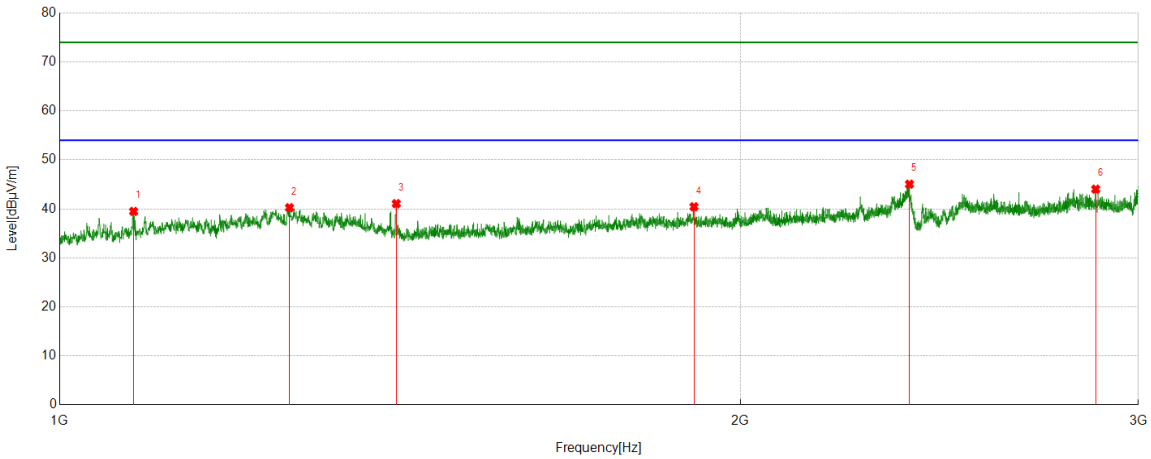


PK Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	1099.4234	44.15	-5.58	38.57	74.00	-35.43	Horizontal
2	1299.2671	46.06	-5.83	40.23	74.00	-33.77	Horizontal
3	1594.2512	44.01	-5.06	38.95	74.00	-35.05	Horizontal
4	2263.3790	44.27	-2.11	42.16	74.00	-31.84	Horizontal
5	2535.0829	43.53	-0.84	42.69	74.00	-31.31	Horizontal
6	2880.2791	46.40	0.30	46.70	74.00	-27.30	Horizontal

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
4. Peak: Peak detector.
5. For below 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band Reject Filter losses.
6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Test Mode	Channel	Polarization	Verdict
BLE	MCH	Vertical	PASS

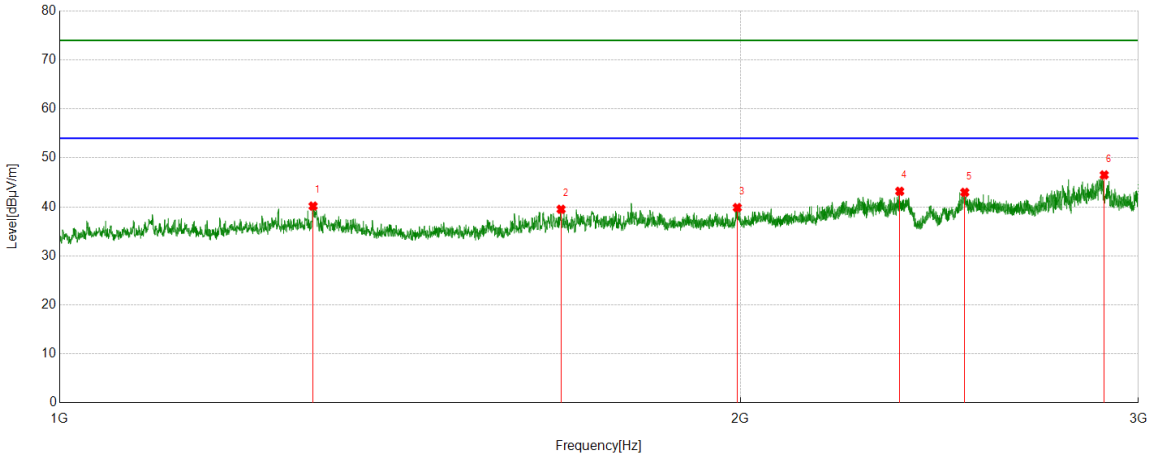


PK Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	1078.1078	44.89	-5.41	39.48	74.00	-34.52	Vertical
2	1263.3791	45.85	-5.60	40.25	74.00	-33.75	Vertical
3	1409.2210	46.46	-5.39	41.07	74.00	-32.93	Vertical
4	1908.5127	43.75	-3.31	40.44	74.00	-33.56	Vertical
5	2376.1434	46.14	-1.10	45.04	74.00	-28.96	Vertical
6	2872.3472	43.84	0.18	44.02	74.00	-29.98	Vertical

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
4. Peak: Peak detector.
5. For below 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band Reject Filter losses.
6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Test Mode	Channel	Polarization	Verdict
BLE	HCH	Horizontal	PASS

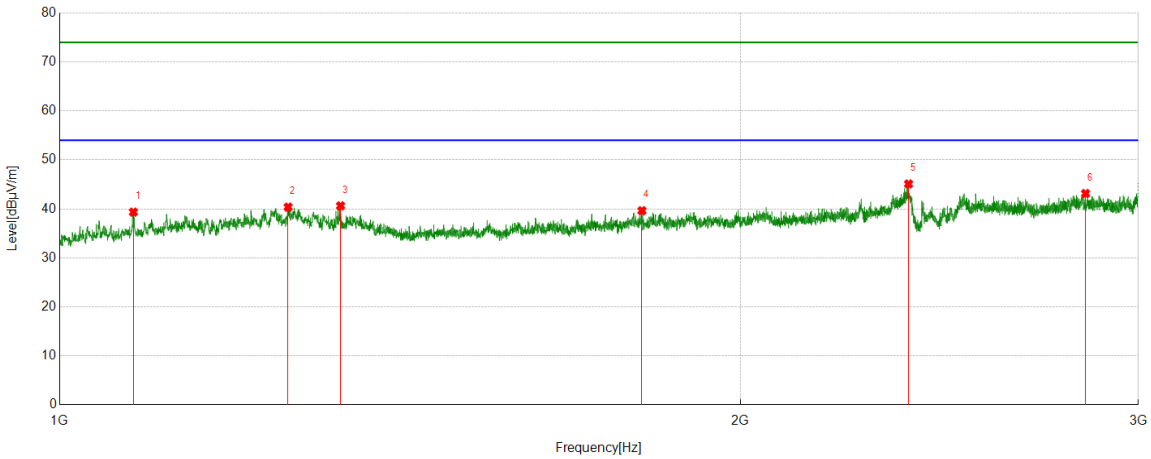


PK Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	1294.3165	45.95	-5.79	40.16	74.00	-33.84	Horizontal
2	1666.2520	44.37	-4.86	39.51	74.00	-34.49	Horizontal
3	1994.4260	42.90	-3.05	39.85	74.00	-34.15	Horizontal
4	2352.3730	44.72	-1.54	43.18	74.00	-30.82	Horizontal
5	2514.3612	43.33	-0.36	42.97	74.00	-31.03	Horizontal
6	2897.3479	46.13	0.39	46.52	74.00	-27.48	Horizontal

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
4. Peak: Peak detector.
5. For below 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band Reject Filter losses.
6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Test Mode	Channel	Polarization	Verdict
BLE	HCH	Vertical	PASS



PK Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	1078.4325	44.75	-5.41	39.34	74.00	-34.66	Vertical
2	1262.8602	46.01	-5.65	40.36	74.00	-33.64	Vertical
3	1331.2600	46.30	-5.68	40.62	74.00	-33.38	Vertical
4	1809.2647	43.70	-4.07	39.63	74.00	-34.37	Vertical
5	2374.5237	46.20	-1.11	45.09	74.00	-28.91	Vertical
6	2843.2852	43.01	0.13	43.14	74.00	-30.86	Vertical

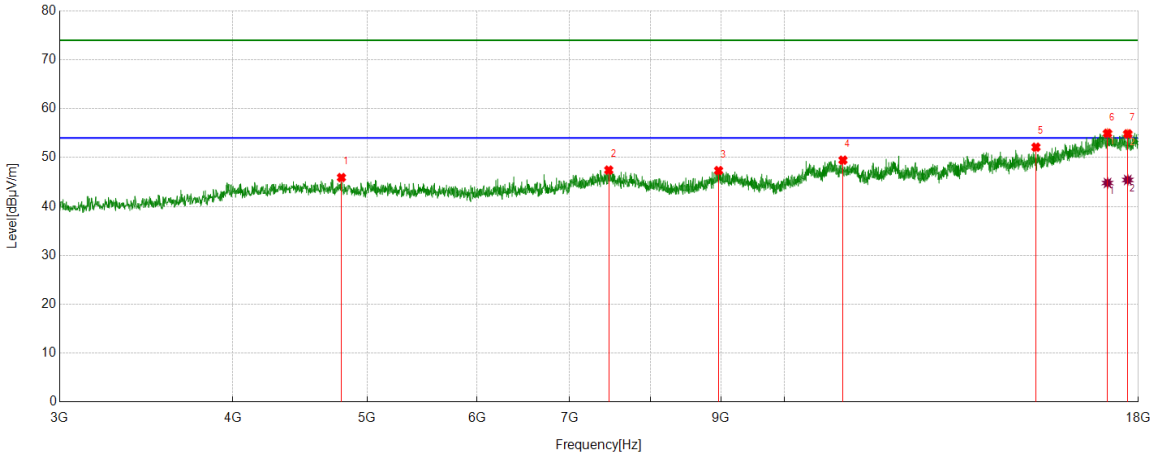
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
4. Peak: Peak detector.
5. For below 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band Reject Filter losses.
6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Part 2: 3GHz~18GHz

Antenna Type 2: External Dipole Antenna

HARMONICS AND SPURIOUS EMISSIONS

Test Mode	Channel	Polarization	Verdict
BLE	LCH	Horizontal	PASS



PK Result:

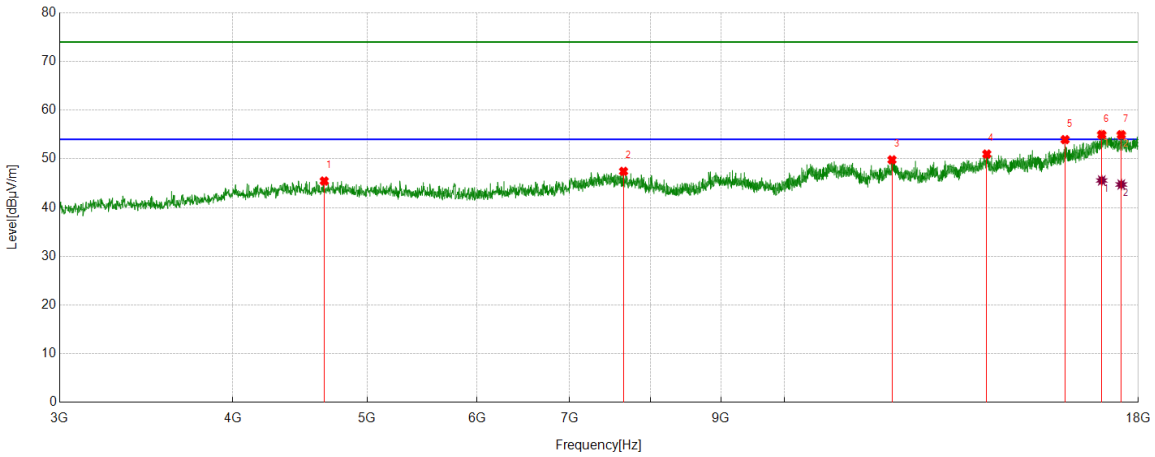
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	4790.8489	39.81	6.10	45.91	74.00	-28.09	Horizontal
2	7468.6836	38.70	8.73	47.43	74.00	-26.57	Horizontal
3	8963.2454	38.34	9.00	47.34	74.00	-26.66	Horizontal
4	11020.3775	36.92	12.55	49.47	74.00	-24.53	Horizontal
5	15185.2732	38.01	14.11	52.12	74.00	-21.88	Horizontal
6	17101.7627	36.65	18.28	54.93	74.00	-19.07	Horizontal
7	17686.8359	36.83	17.96	54.79	74.00	-19.21	Horizontal

AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	17101.7627	26.52	18.28	44.80	54.00	-9.20	Horizontal
2	17686.8359	27.46	17.96	45.42	54.00	-8.58	Horizontal

Note: 1. Measurement = Reading Level + Correct Factor.
2. If peak result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak result: Peak detector, RBW: 1 MHz, VBW: 3 MHz.
4. Average result: Peak detector, RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.).
5. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses.
6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Test Mode	Channel	Polarization	Verdict
BLE	LCH	Vertical	PASS



PK Result:

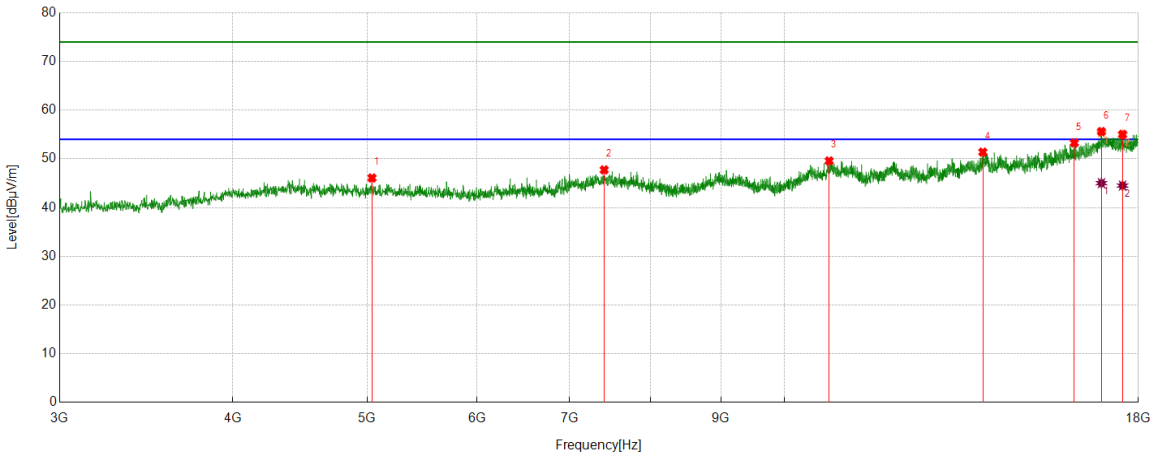
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	4655.832	39.91	5.54	45.45	74.00	-28.55	Vertical
2	7654.3318	39.22	8.22	47.44	74.00	-26.56	Vertical
3	11956.1195	37.21	12.59	49.80	74.00	-24.20	Vertical
4	13994.4993	36.81	14.17	50.98	74.00	-23.02	Vertical
5	15937.2422	38.01	15.94	53.95	74.00	-20.05	Vertical
6	16938.6173	36.47	18.45	54.92	74.00	-19.08	Vertical
7	17497.4372	36.98	17.87	54.85	74.00	-19.15	Vertical

AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	16938.6173	27.12	18.45	45.57	54.00	-8.43	Vertical
2	17497.4372	26.87	17.87	44.74	54.00	-9.26	Vertical

Note: 1. Measurement = Reading Level + Correct Factor.
2. If peak result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak result: Peak detector, RBW: 1 MHz, VBW: 3 MHz.
4. Average result: Peak detector, RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.).
5. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses.
6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Test Mode	Channel	Polarization	Verdict
BLE	MCH	Horizontal	PASS



PK Result:

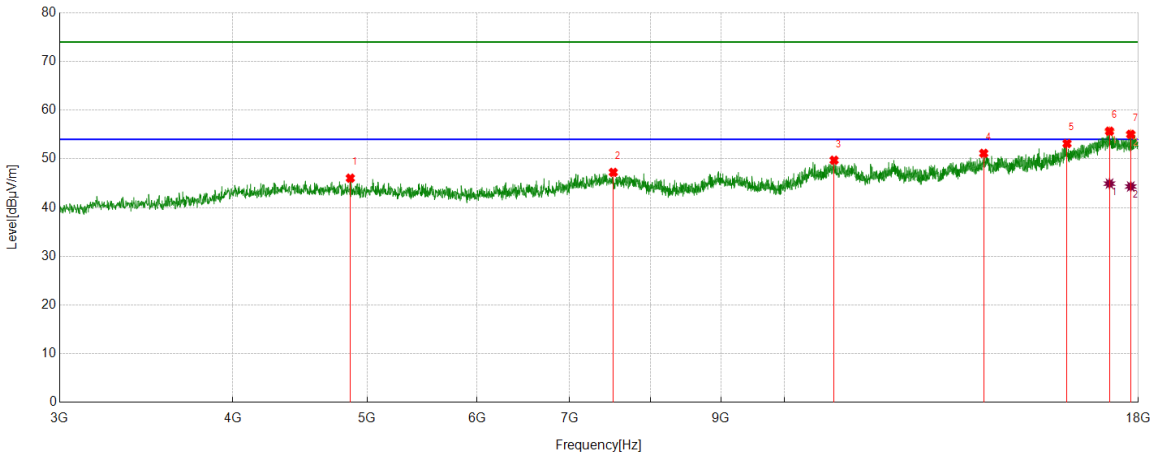
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	5040.255	40.47	5.61	46.08	74.00	-27.92	Horizontal
2	7412.4266	39.09	8.65	47.74	74.00	-26.26	Horizontal
3	10770.9714	37.30	12.28	49.58	74.00	-24.42	Horizontal
4	13902.6128	37.08	14.31	51.39	74.00	-22.61	Horizontal
5	16184.7731	36.78	16.51	53.29	74.00	-20.71	Horizontal
6	16931.1164	37.00	18.38	55.38	74.00	-18.62	Horizontal
7	17534.9419	37.33	17.65	54.98	74.00	-19.02	Horizontal

AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	16931.1164	26.63	18.38	45.01	54.00	-8.99	Horizontal
2	17534.9419	26.87	17.65	44.52	54.00	-9.48	Horizontal

Note: 1. Measurement = Reading Level + Correct Factor.
2. If peak result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak result: Peak detector, RBW: 1 MHz, VBW: 3 MHz.
4. Average result: Peak detector, RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.).
5. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses.
6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Test Mode	Channel	Polarization	Verdict
BLE	MCH	Vertical	PASS



PK Result:

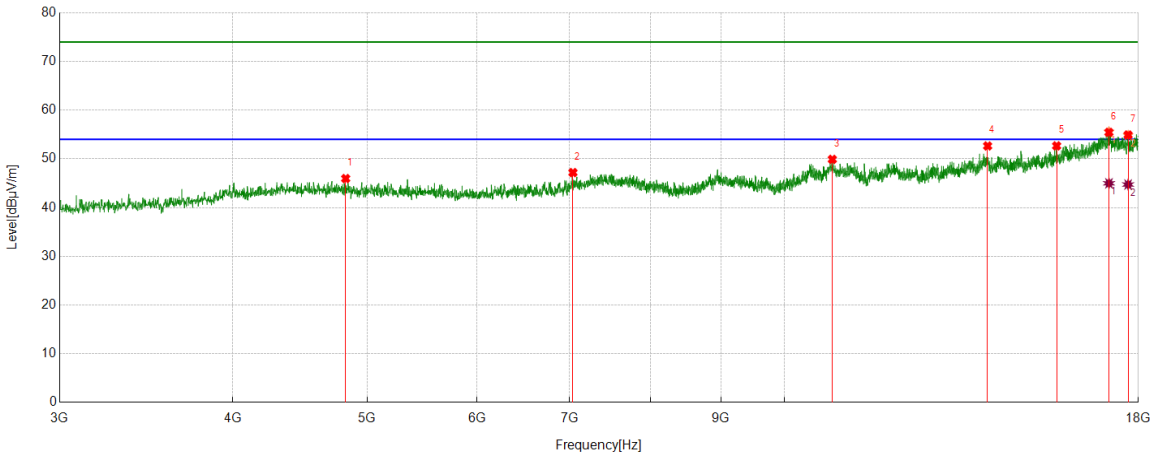
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	4862.1078	40.69	5.35	46.04	74.00	-27.96	Vertical
2	7524.9406	38.47	8.76	47.23	74.00	-26.77	Vertical
3	10859.1074	37.53	12.19	49.72	74.00	-24.28	Vertical
4	13923.2404	36.98	14.16	51.14	74.00	-22.86	Vertical
5	15989.7487	37.43	15.71	53.14	74.00	-20.86	Vertical
6	17158.0198	37.33	18.24	55.57	74.00	-18.43	Vertical
7	17774.9719	37.02	18.00	55.02	74.00	-18.98	Vertical

AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	17158.0198	26.68	18.24	44.92	54.00	-9.08	Vertical
2	17774.9719	26.33	18.00	44.33	54.00	-9.67	Vertical

Note: 1. Measurement = Reading Level + Correct Factor.
2. If peak result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak result: Peak detector, RBW: 1 MHz, VBW: 3 MHz.
4. Average result: Peak detector, RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.).
5. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses.
6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Test Mode	Channel	Polarization	Verdict
BLE	HCH	Horizontal	PASS



PK Result:

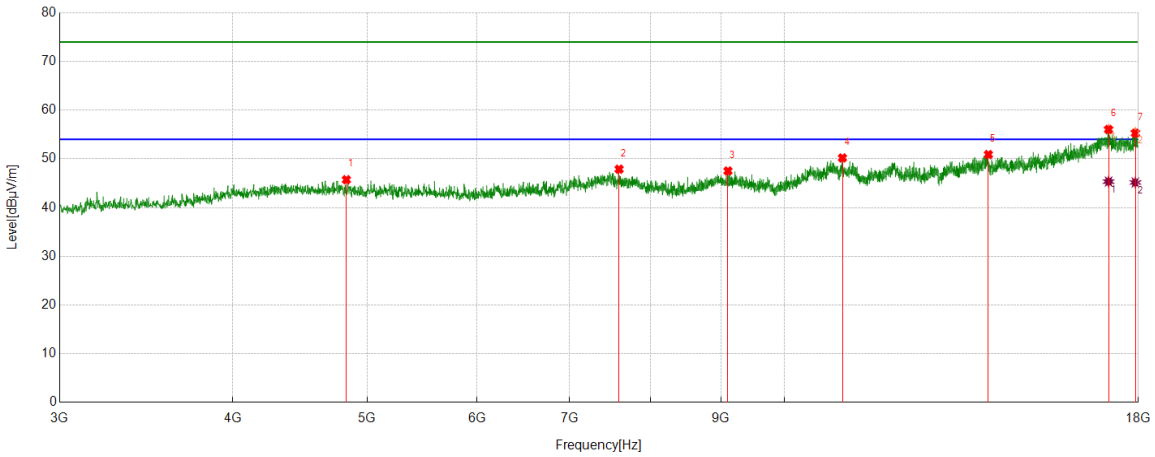
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	4824.6031	40.56	5.40	45.96	74.00	-28.04	Horizontal
2	7037.3797	39.13	8.06	47.19	74.00	-26.81	Horizontal
3	10827.2284	37.81	12.09	49.90	74.00	-24.10	Horizontal
4	14013.2517	38.36	14.29	52.65	74.00	-21.35	Horizontal
5	15715.9645	37.66	15.01	52.67	74.00	-21.33	Horizontal
6	17143.0179	37.28	18.28	55.56	74.00	-18.44	Horizontal
7	17696.2120	37	17.83	54.83	74.00	-19.17	Horizontal

AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	17143.0179	26.70	18.28	44.98	54.00	-9.02	Horizontal
2	17696.2120	26.90	17.83	44.73	54.00	-9.27	Horizontal

Note: 1. Measurement = Reading Level + Correct Factor.
2. If peak result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak result: Peak detector, RBW: 1 MHz, VBW: 3 MHz.
4. Average result: Peak detector, RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.).
5. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses.
6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Test Mode	Channel	Polarization	Verdict
BLE	HCH	Vertical	PASS



PK Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	4830.2288	40.19	5.53	45.72	74.00	-28.28	Vertical
2	7598.0748	39.24	8.64	47.88	74.00	-26.12	Vertical
3	9103.888	38.58	8.94	47.52	74.00	-26.48	Vertical
4	11011.0014	37.72	12.47	50.19	74.00	-23.81	Vertical
5	14032.004	36.26	14.63	50.89	74.00	-23.11	Vertical
6	17131.7665	38.08	18.03	56.11	74.00	-17.89	Vertical
7	17911.8640	37.24	18.19	55.43	74.00	-18.57	Vertical

AV Result:

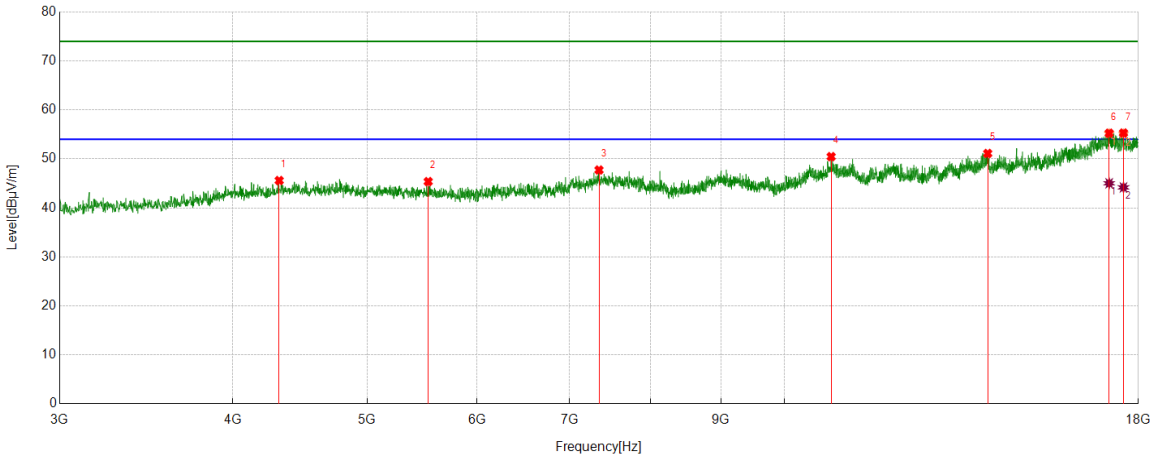
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	17131.7665	27.31	18.03	45.34	54.00	-8.66	Vertical
2	17911.8640	26.96	18.19	45.15	54.00	-8.85	Vertical

Note: 1. Measurement = Reading Level + Correct Factor.
2. If peak result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak result: Peak detector, RBW: 1 MHz, VBW: 3 MHz.
4. Average result: Peak detector, RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.).
5. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses.
6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Antenna Type 1: PCB Antenna

HARMONICS AND SPURIOUS EMISSIONS

Test Mode	Channel	Polarization	Verdict
BLE	LCH	Horizontal	PASS



PK Result:

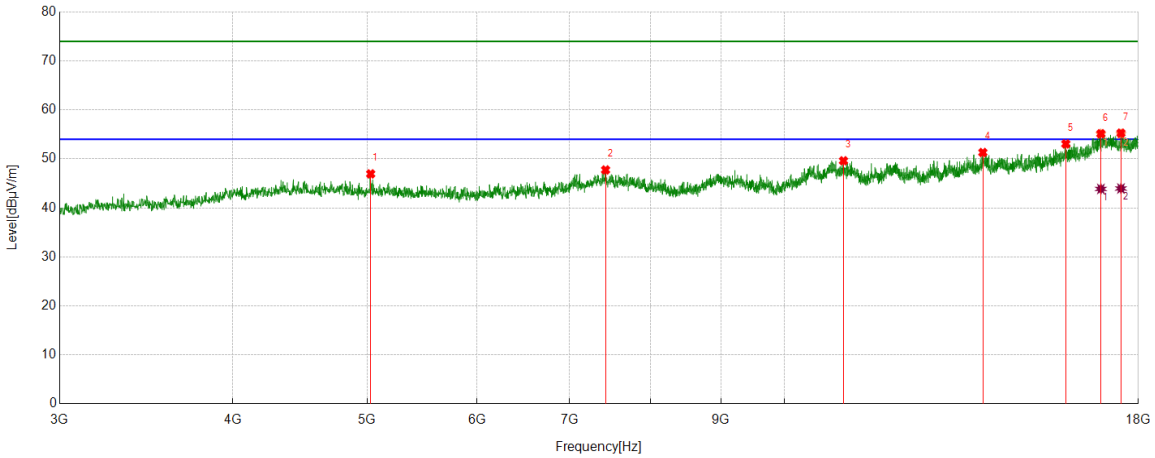
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	4320.165	40.41	5.18	45.59	74.00	-28.41	Horizontal
2	5533.4417	40.01	5.36	45.37	74.00	-28.63	Horizontal
3	7348.6686	39.26	8.47	47.73	74.00	-26.27	Horizontal
4	10806.6008	38.31	12.15	50.46	74.00	-23.54	Horizontal
5	14015.1269	36.84	14.27	51.11	74.00	-22.89	Horizontal
6	17148.6436	36.88	18.27	55.15	74.00	-18.85	Horizontal
7	17561.1951	37.15	17.92	55.07	74.00	-18.93	Horizontal

AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	17148.6436	26.75	18.27	45.02	54.00	-8.98	Horizontal
2	17561.1951	26.26	17.92	44.18	54.00	-9.82	Horizontal

Note: 1. Measurement = Reading Level + Correct Factor.
2. If peak result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak result: Peak detector, RBW: 1 MHz, VBW: 3 MHz.
4. Average result: Peak detector, RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.).
5. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses.
6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Test Mode	Channel	Polarization	Verdict
BLE	LCH	Vertical	PASS



PK Result:

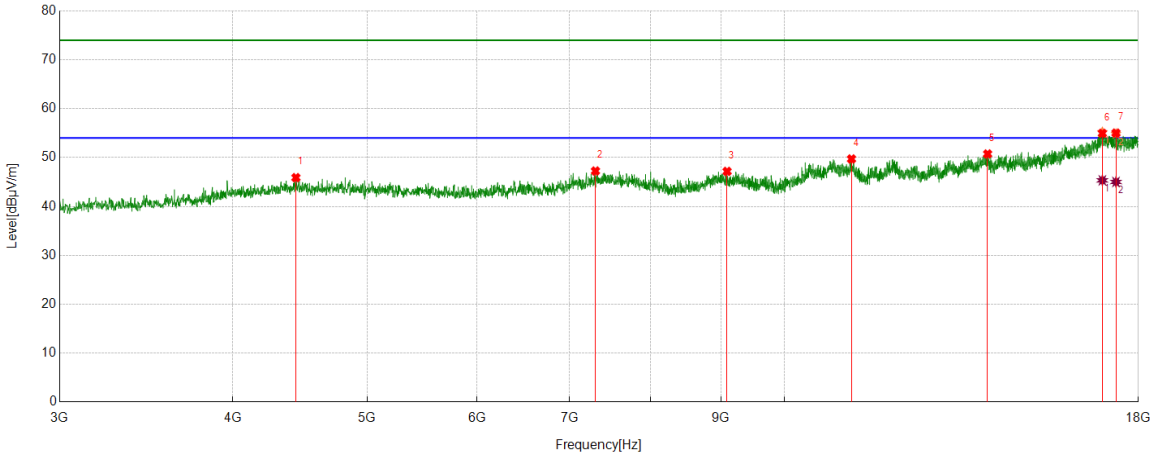
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	5029.0036	41.37	5.57	46.94	74.00	-27.06	Vertical
2	7429.3037	39.21	8.54	47.75	74.00	-26.25	Vertical
3	11029.7537	37.33	12.29	49.62	74.00	-24.38	Vertical
4	13902.6128	37.00	14.31	51.31	74.00	-22.69	Vertical
5	15957.8697	37.04	16.02	53.06	74.00	-20.94	Vertical
6	16914.2393	37.51	17.54	55.05	74.00	-18.95	Vertical
7	17488.0610	37.68	17.36	55.04	74.00	-18.96	Vertical

AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	16914.2393	26.33	17.54	43.87	54.00	-10.13	Vertical
2	17488.0610	26.60	17.36	43.96	54.00	-10.04	Vertical

Note: 1. Measurement = Reading Level + Correct Factor.
2. If peak result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak result: Peak detector, RBW: 1 MHz, VBW: 3 MHz.
4. Average result: Peak detector, RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.).
5. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses.
6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Test Mode	Channel	Polarization	Verdict
BLE	MCH	Horizontal	PASS



PK Result:

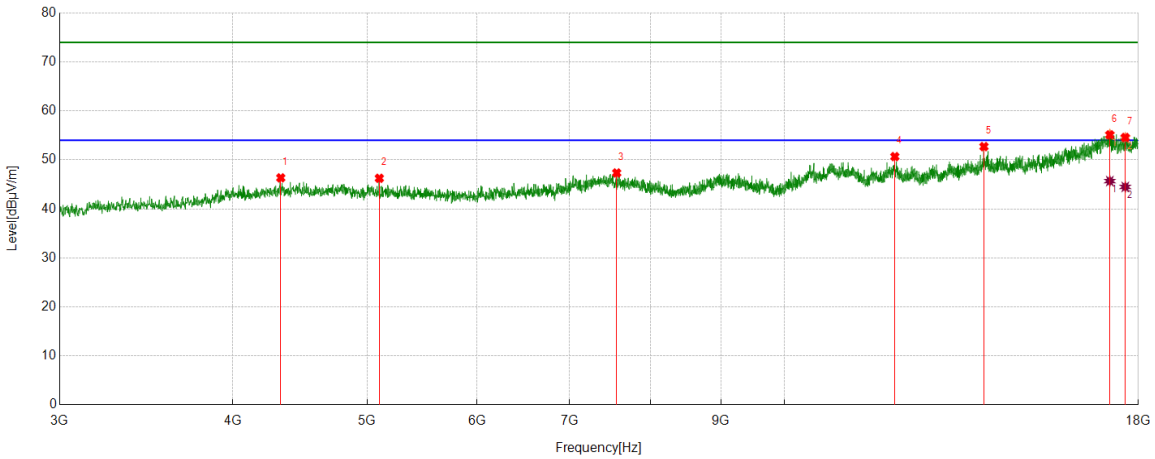
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	4442.0553	40.70	5.19	45.89	74.00	-28.11	Horizontal
2	7305.5382	38.77	8.48	47.25	74.00	-26.75	Horizontal
3	9090.7613	38.20	8.97	47.17	74.00	-26.83	Horizontal
4	11177.8972	37.77	11.94	49.71	74.00	-24.29	Horizontal
5	14013.2517	36.45	14.29	50.74	74.00	-23.26	Horizontal
6	16955.4944	36.68	18.52	55.20	74.00	-18.80	Horizontal
7	17343.6680	37.14	17.69	54.83	74.00	-19.17	Horizontal

AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	16955.4944	26.82	18.52	45.34	54.00	-8.66	Horizontal
2	17343.6680	27.32	17.69	45.01	54.00	-8.99	Horizontal

Note: 1. Measurement = Reading Level + Correct Factor.
2. If peak result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak result: Peak detector, RBW: 1 MHz, VBW: 3 MHz.
4. Average result: Peak detector, RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.).
5. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses.
6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Test Mode	Channel	Polarization	Verdict
BLE	MCH	Vertical	PASS



PK Result:

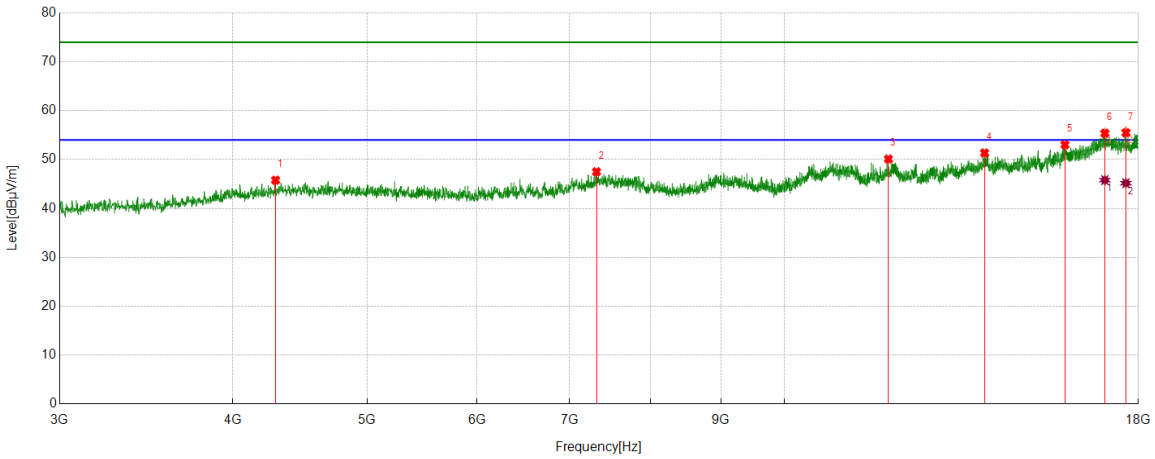
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	4331.4164	41.24	5.10	46.34	74.00	-27.66	Vertical
2	5102.1378	40.92	5.33	46.25	74.00	-27.75	Vertical
3	7568.071	38.79	8.55	47.34	74.00	-26.66	Vertical
4	12012.3765	37.97	12.70	50.67	74.00	-23.33	Vertical
5	13928.8661	38.30	14.41	52.71	74.00	-21.29	Vertical
6	17167.3959	36.9	18.33	55.23	74.00	-18.77	Vertical
7	17613.7017	36.77	17.78	54.55	74.00	-19.45	Vertical

AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	17167.3959	27.35	18.33	45.68	54.00	-8.32	Vertical
2	17613.7017	26.71	17.78	44.49	54.00	-9.51	Vertical

Note: 1. Measurement = Reading Level + Correct Factor.
2. If peak result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak result: Peak detector, RBW: 1 MHz, VBW: 3 MHz.
4. Average result: Peak detector, RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.).
5. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses.
6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Test Mode	Channel	Polarization	Verdict
BLE	HCH	Horizontal	PASS



PK Result:

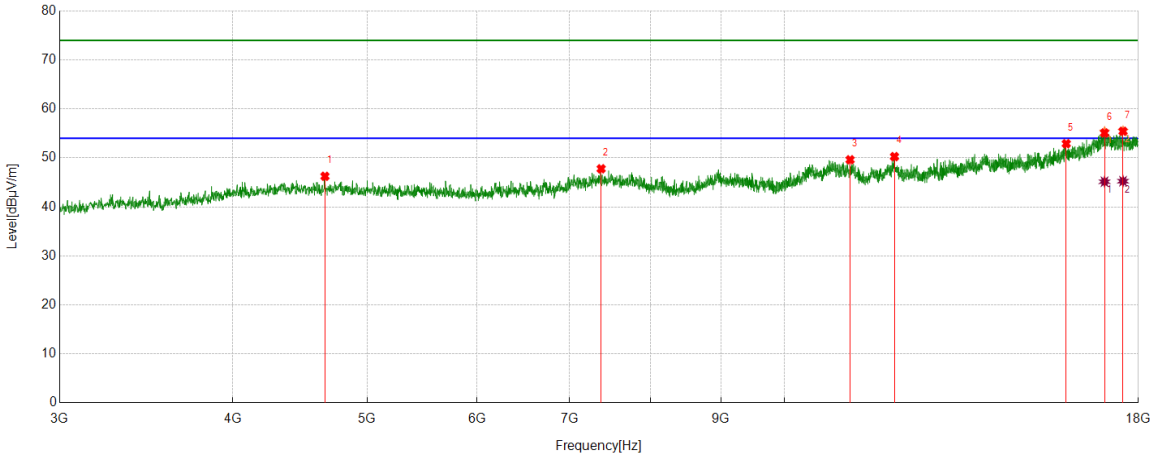
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	4293.9117	40.88	4.90	45.78	74.00	-28.22	Horizontal
2	7318.6648	38.94	8.56	47.50	74.00	-26.50	Horizontal
3	11884.8606	37.73	12.38	50.11	74.00	-23.89	Horizontal
4	13943.868	37.02	14.33	51.35	74.00	-22.65	Horizontal
5	15933.4917	37.12	15.90	53.02	74.00	-20.98	Horizontal
6	17026.7533	36.65	18.81	55.46	74.00	-18.54	Horizontal
7	17632.4541	38.4	17.34	55.74	74.00	-18.26	Horizontal

AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	17026.7533	26.99	18.81	45.80	54.00	-8.20	Horizontal
2	17632.4541	27.83	17.34	45.17	54.00	-8.83	Horizontal

Note: 1. Measurement = Reading Level + Correct Factor.
2. If peak result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak result: Peak detector, RBW: 1 MHz, VBW: 3 MHz.
4. Average result: Peak detector, RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.).
5. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses.
6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Test Mode	Channel	Polarization	Verdict
BLE	HCH	Vertical	PASS



PK Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	4661.4577	40.75	5.50	46.25	74.00	-27.75	Vertical
2	7374.9219	39.26	8.52	47.78	74.00	-26.22	Vertical
3	11151.644	37.72	11.90	49.62	74.00	-24.38	Vertical
4	12004.8756	37.42	12.84	50.26	74.00	-23.74	Vertical
5	15969.1211	37.03	15.87	52.90	74.00	-21.10	Vertical
6	17017.3772	36.97	18.39	55.36	74.00	-18.64	Vertical
7	17548.0685	37.56	17.95	55.51	74.00	-18.49	Vertical

AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	17017.3772	26.75	18.39	45.14	54.00	-8.86	Vertical
2	17548.0685	27.30	17.95	45.25	54.00	-8.75	Vertical

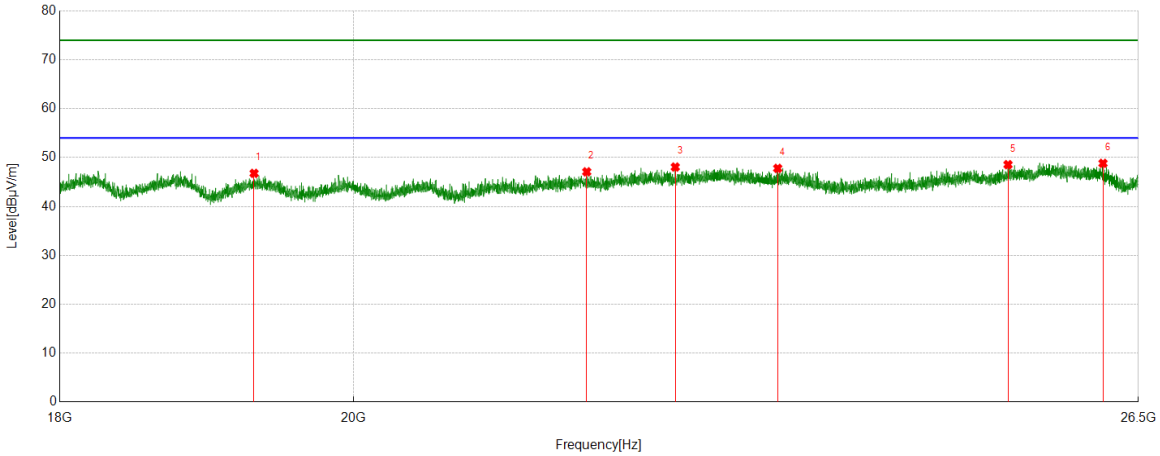
Note: 1. Measurement = Reading Level + Correct Factor.
2. If peak result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak result: Peak detector, RBW: 1 MHz, VBW: 3 MHz.
4. Average result: Peak detector, RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.).
5. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses.
6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Part 3: 18GHz~26.5GHz

Antenna Type 2: External Dipole Antenna

SPURIOUS EMISSIONS 18GHz TO 26.5GHz (WORST-CASE CONFIGURATION)

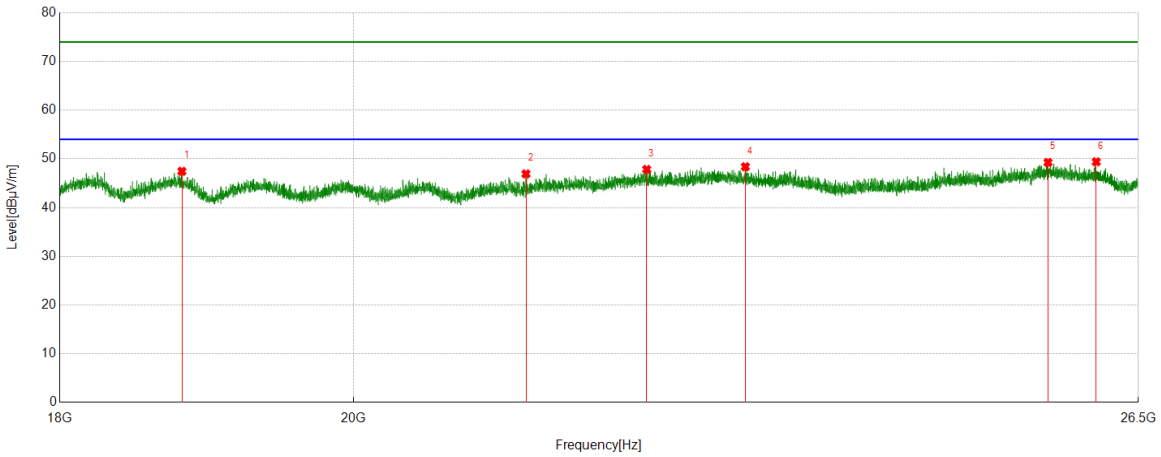
Test Mode	Channel	Polarization	Verdict
BLE	MCH	Horizontal	PASS



No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	19299.78	48.11	-1.34	46.77	74.00	-27.23	Peak
2	21744.6245	47.60	-0.52	47.08	74.00	-26.92	Peak
3	22445.9446	47.83	0.23	48.06	74.00	-25.94	Peak
4	23285.8286	47.59	0.20	47.79	74.00	-26.21	Peak
5	25290.329	48.55	0.00	48.55	74.00	-25.45	Peak
6	26166.7667	48.10	0.72	48.82	74.00	-25.18	Peak

Note: 1. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
2. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
3. Measurement = Reading Level + Correct Factor.
4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Test Mode	Channel	Polarization	Verdict
BLE	MCH	Vertical	PASS



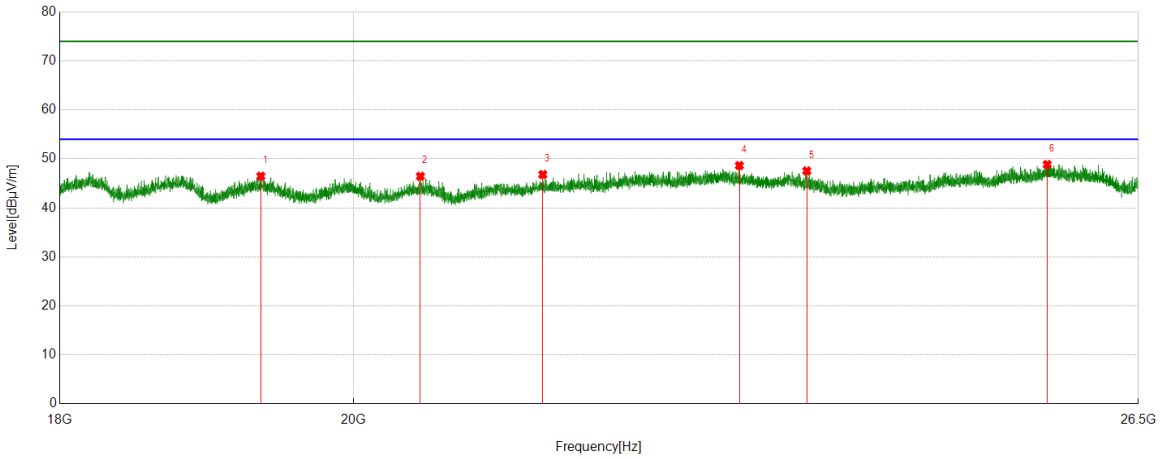
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	18806.7307	48.90	-1.45	47.45	74.00	-26.55	Peak
2	21276.2276	47.80	-0.88	46.92	74.00	-27.08	Peak
3	22217.2717	47.89	-0.06	47.83	74.00	-26.17	Peak
4	23017.2017	47.60	0.79	48.39	74.00	-25.61	Peak
5	25655.8656	48.69	0.58	49.27	74.00	-24.73	Peak
6	26103.0103	48.55	0.85	49.40	74.00	-24.60	Peak

Note: 1. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
2. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
3. Measurement = Reading Level + Correct Factor.
4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Antenna Type 1: PCB Antenna

SPURIOUS EMISSIONS 18GHz TO 26.5GHz (WORST-CASE CONFIGURATION)

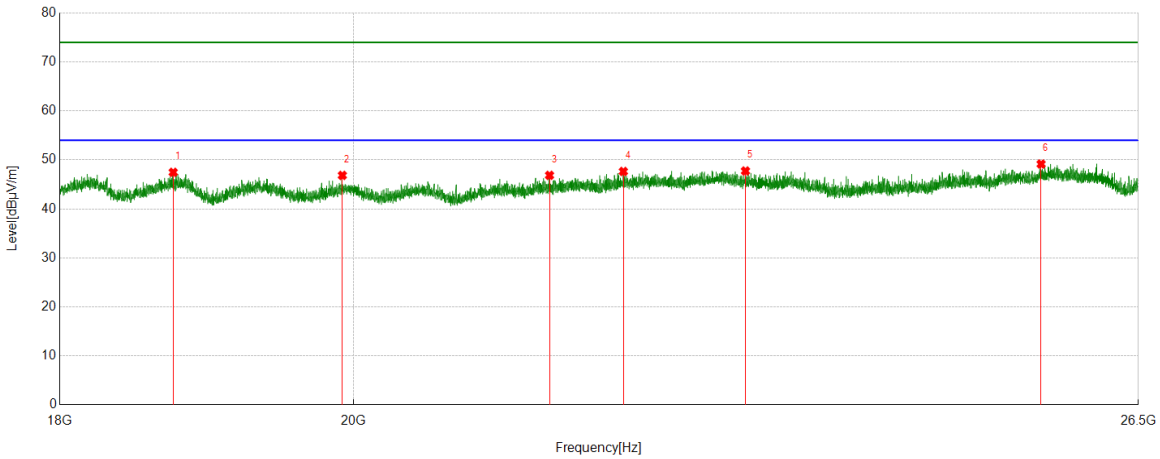
Test Mode	Channel	Polarization	Verdict
BLE	MCH	Horizontal	PASS



No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	19346.5347	47.78	-1.31	46.47	74.00	-27.53	Peak
2	20485.6486	47.43	-0.98	46.45	74.00	-27.55	Peak
3	21404.5905	47.61	-0.79	46.82	74.00	-27.18	Peak
4	22967.8968	47.84	0.80	48.64	74.00	-25.36	Peak
5	23529.803	47.96	-0.41	47.55	74.00	-26.45	Peak
6	25648.2148	48.28	0.57	48.85	74.00	-25.15	Peak

Note: 1. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
2. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
3. Measurement = Reading Level + Correct Factor.
4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Test Mode	Channel	Polarization	Verdict
BLE	MCH	Vertical	PASS



No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	18748.0748	48.89	-1.42	47.47	74.00	-26.53	Peak
2	19920.342	47.82	-0.98	46.84	74.00	-27.16	Peak
3	21456.4456	47.60	-0.75	46.85	74.00	-27.15	Peak
4	22031.9532	47.93	-0.29	47.64	74.00	-26.36	Peak
5	23018.0518	46.95	0.79	47.74	74.00	-26.26	Peak
6	25592.1092	48.67	0.48	49.15	74.00	-24.85	Peak

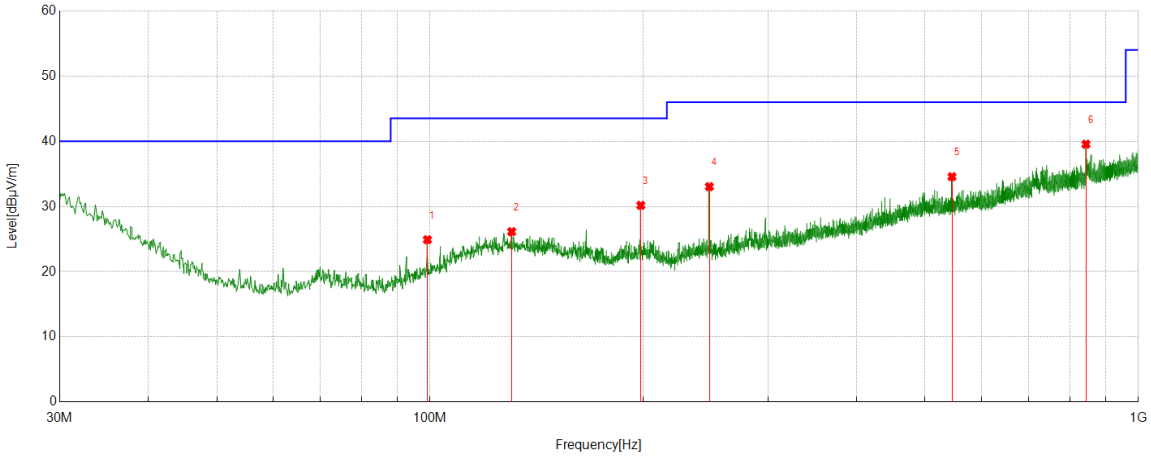
Note: 1. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
2. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
3. Measurement = Reading Level + Correct Factor.
4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Part 4: 30MHz~1GHz

Antenna Type 2: External Dipole Antenna

SPURIOUS EMISSIONS 30M TO 1GHz (WORST-CASE CONFIGURATION)

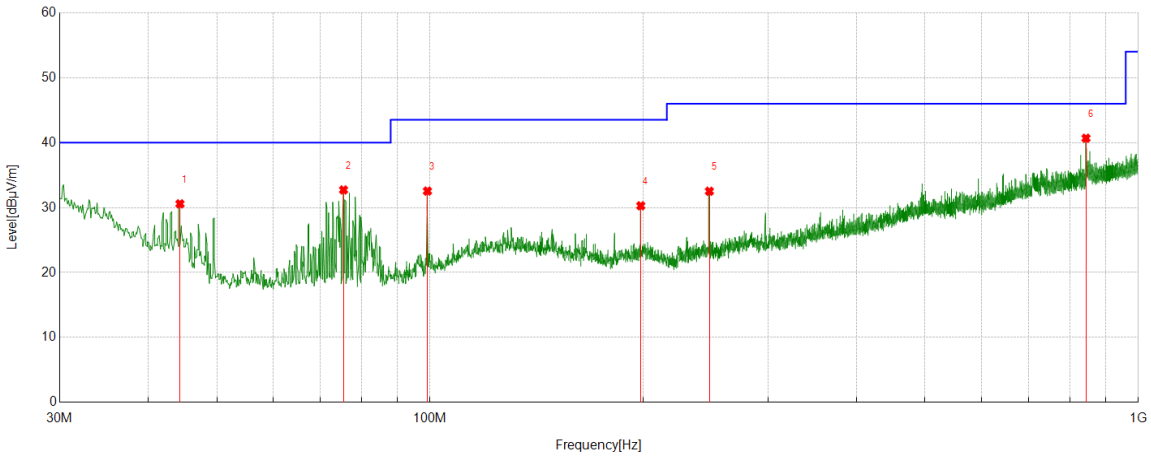
Test Mode	Channel	Polarization	Verdict
BLE	MCH	Horizontal	PASS



No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	99.1679	8.23	16.67	24.90	43.50	-18.60	Peak
2	130.405	5.93	20.20	26.13	43.50	-17.37	Peak
3	198.4088	11.10	19.07	30.17	43.50	-13.33	Peak
4	247.9808	14.08	18.96	33.04	46.00	-12.96	Peak
5	545.7036	8.48	26.09	34.57	46.00	-11.43	Peak
6	843.4263	9.19	30.36	39.55	46.00	-6.45	Peak

Note: 1. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
2. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.
3. Measurement = Reading Level + Correct Factor.

Test Mode	Channel	Polarization	Verdict
BLE	MCH	Vertical	PASS



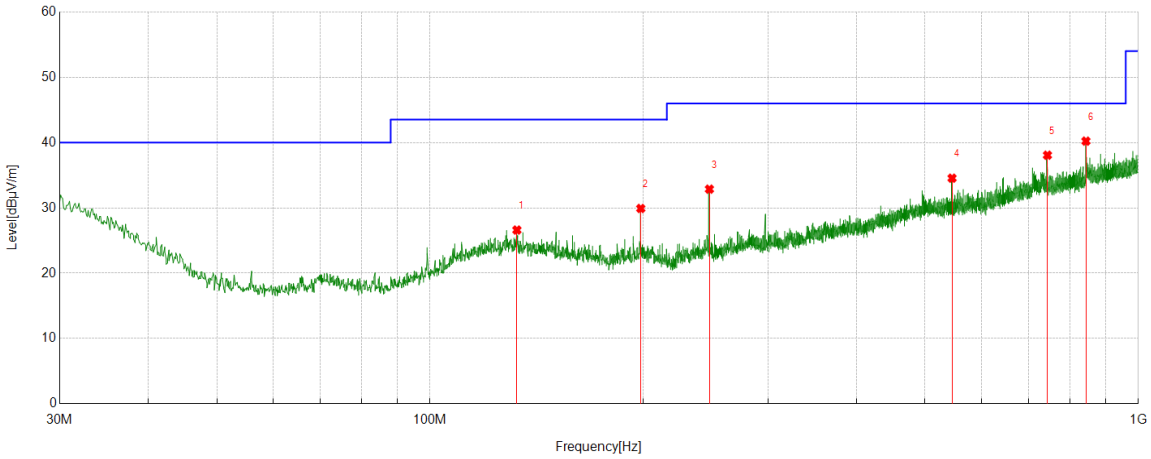
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	44.3574	12.58	18.00	30.58	40.00	-9.42	Peak
2	75.4976	18.16	14.56	32.72	40.00	-7.28	Peak
3	99.1679	15.87	16.67	32.54	43.50	-10.96	Peak
4	198.4088	11.21	19.07	30.28	43.50	-13.22	Peak
5	247.9808	13.56	18.96	32.52	46.00	-13.48	Peak
6	843.5234	10.32	30.36	40.68	46.00	-5.32	Peak

Note: 1. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
2. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.
3. Measurement = Reading Level + Correct Factor.

Antenna Type 1: PCB Antenna

SPURIOUS EMISSIONS 30M TO 1GHz (WORST-CASE CONFIGURATION)

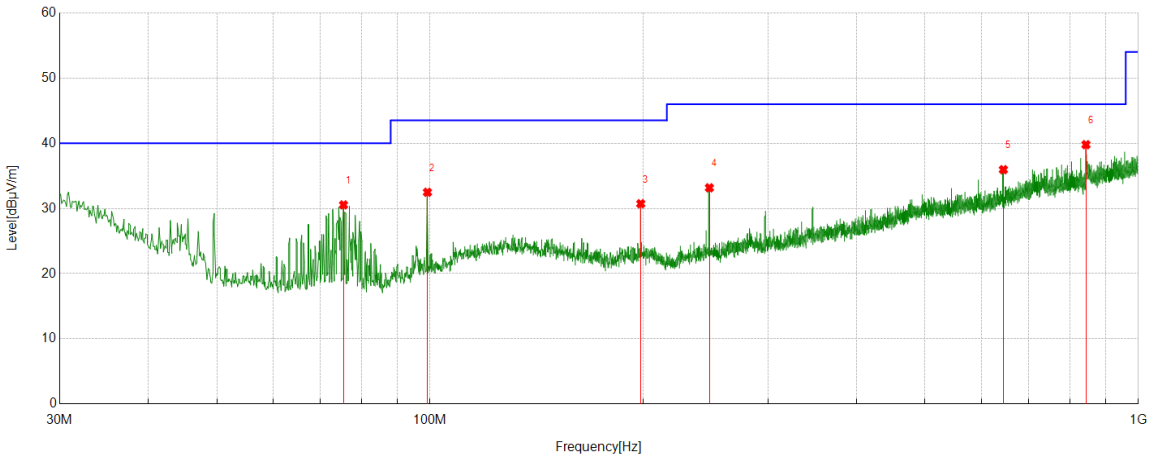
Test Mode	Channel	Polarization	Verdict
BLE	MCH	Horizontal	PASS



No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	132.6363	6.47	20.14	26.61	43.50	-16.89	Peak
2	198.4088	10.84	19.07	29.91	43.50	-13.59	Peak
3	247.9808	13.91	18.96	32.87	46.00	-13.13	Peak
4	545.8006	8.46	26.09	34.55	46.00	-11.45	Peak
5	744.1854	9.01	29.06	38.07	46.00	-7.93	Peak
6	843.4263	9.86	30.36	40.22	46.00	-5.78	Peak

Note: 1. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
2. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.
3. Measurement = Reading Level + Correct Factor.

Test Mode	Channel	Polarization	Verdict
BLE	MCH	Vertical	PASS



No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	75.4976	15.99	14.56	30.55	40.00	-9.45	Peak
2	99.1679	15.81	16.67	32.48	43.50	-11.02	Peak
3	198.4088	11.66	19.07	30.73	43.50	-12.77	Peak
4	247.9808	14.21	18.96	33.17	46.00	-12.83	Peak
5	644.8475	8.49	27.46	35.95	46.00	-10.05	Peak
6	843.4263	9.42	30.36	39.78	46.00	-6.22	Peak

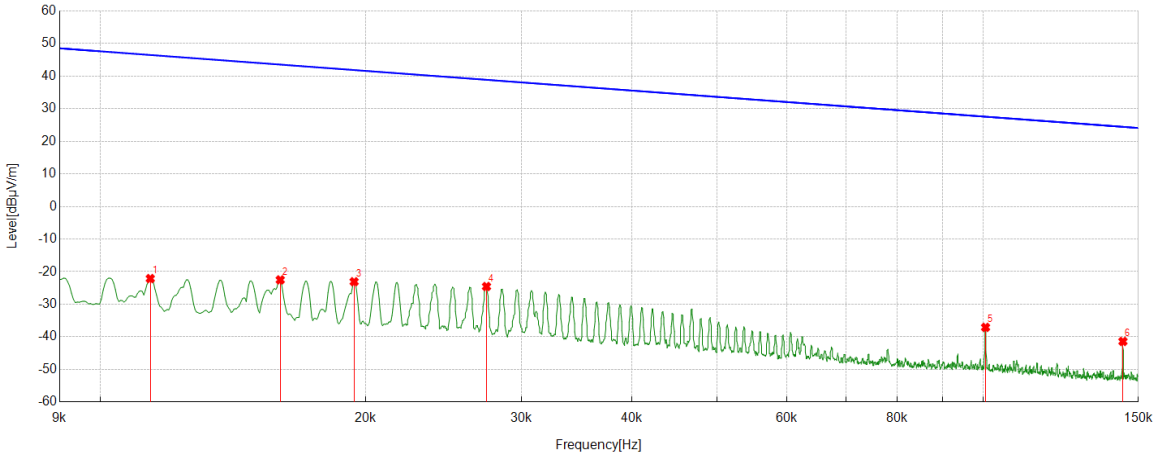
Note: 1. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
2. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.
3. Measurement = Reading Level + Correct Factor.

Part 5: 9KHz~30MHz

Antenna Type 2: External Dipole Antenna

SPURIOUS EMISSIONS Below 30MHz (WORST CASE CONFIGURATION-FACE ON)

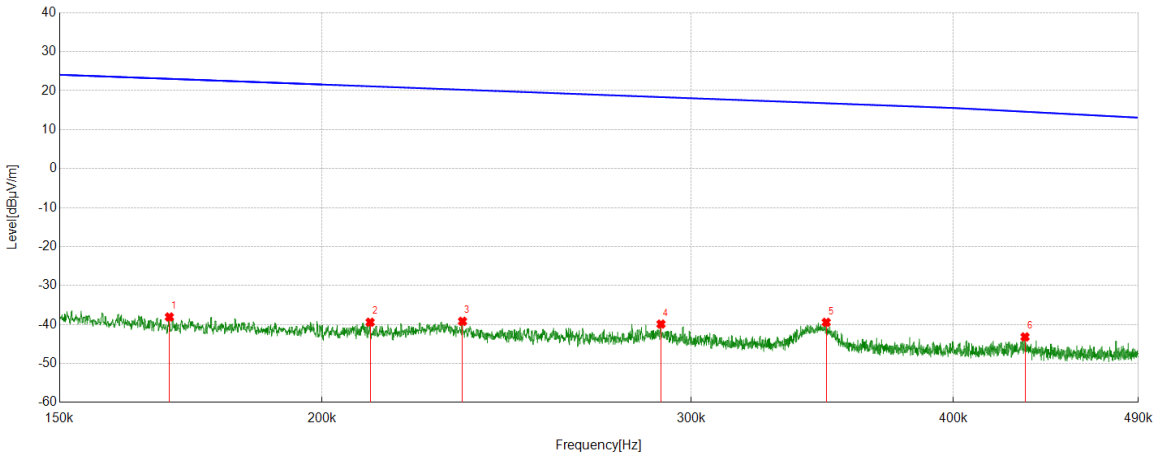
Test Mode	Channel	Frequency Range	Verdict
BLE	MCH	9kHz~150kHz	PASS



No.	Frequency	Reading Level	Correct Factor	FCC Result	FCC Limit	ISED Result	ISED Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dBuA/m]	[dBuA/m]	[dB]	
1	0.0114	38.99	-61.11	-22.12	46.46	-73.62	-5.04	-68.58	Peak
2	0.016	38.45	-60.97	-22.52	43.54	-74.02	-7.96	-66.06	Peak
3	0.0194	37.79	-60.87	-23.08	41.85	-74.58	-9.65	-64.93	Peak
4	0.0274	36.34	-60.89	-24.55	38.85	-76.05	-12.65	-63.40	Peak
5	0.1007	23.65	-60.73	-37.08	27.54	-88.58	-23.96	-64.62	Peak
6	0.1441	19.85	-61.25	-41.40	24.43	-92.90	-27.07	-65.83	Peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.
3. All 3 polarizations(Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.

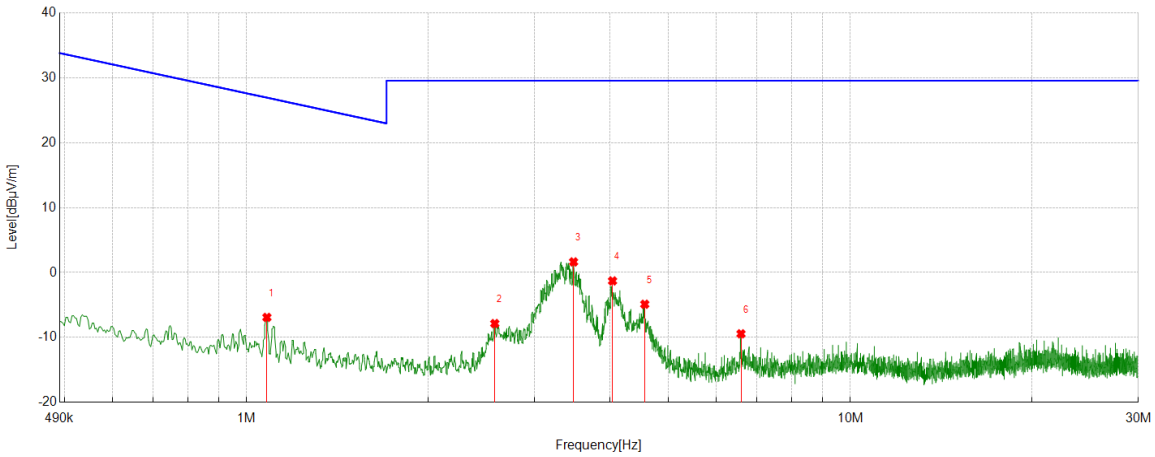
Test Mode	Channel	Frequency Range	Verdict
BLE	MCH	150kHz~490kHz	PASS



No.	Frequency	Reading Level	Correct Factor	FCC Result	FCC Limit	ISED Result	ISED Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dBuA/m]	[dBuA/m]	[dB]	
1	0.1692	23.15	-61.22	-38.07	23.04	-89.57	-28.46	-61.11	Peak
2	0.2109	21.59	-61.01	-39.42	21.12	-90.92	-30.38	-60.54	Peak
3	0.2334	21.71	-60.89	-39.18	20.24	-90.68	-31.26	-59.42	Peak
4	0.2902	20.88	-60.77	-39.89	18.35	-91.39	-33.15	-58.24	Peak
5	0.3479	21.28	-60.72	-39.44	16.77	-90.94	-34.73	-56.21	Peak
6	0.4327	17.47	-60.65	-43.18	14.60	-94.68	-36.90	-57.78	Peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.
3. All 3 polarizations(Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.

Test Mode	Channel	Frequency Range	Verdict
BLE	MCH	490kHz~30MHz	PASS



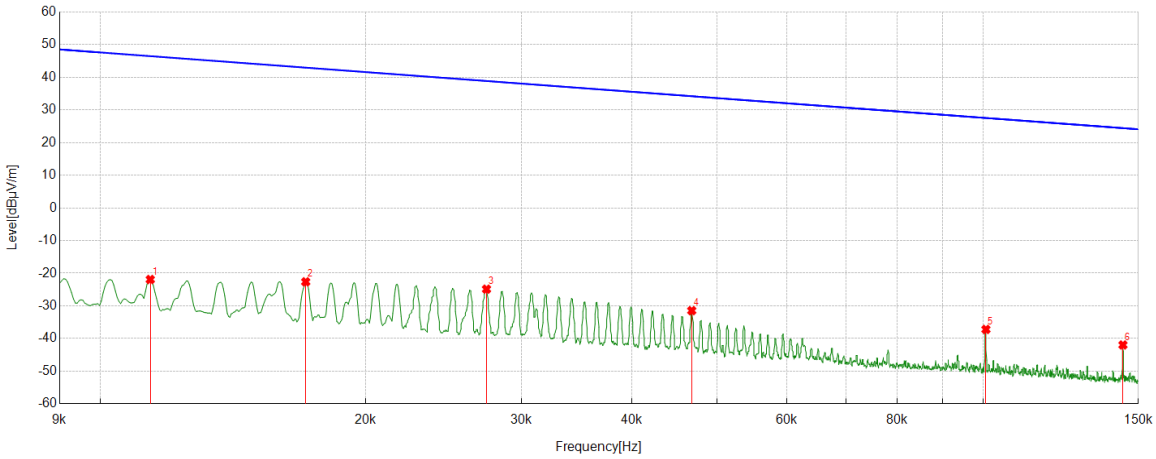
No.	Frequency	Reading Level	Correct Factor	FCC Result	FCC Limit	ISED Result	ISED Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dBuA/m]	[dBuA/m]	[dB]	
1	1.0803	13.44	-20.34	-6.90	26.94	-58.40	-24.56	-33.84	Peak
2	2.5766	12.51	-20.36	-7.85	29.54	-59.35	-21.96	-37.39	Peak
3	3.4797	21.90	-20.26	1.64	29.54	-49.86	-21.96	-27.90	Peak
4	4.0375	18.76	-20.05	-1.29	29.54	-52.79	-21.96	-30.83	Peak
5	4.5657	15.26	-20.14	-4.88	29.54	-56.38	-21.96	-34.42	Peak
6	6.5903	10.36	-19.79	-9.43	29.54	-60.93	-21.96	-38.97	Peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.
3. All 3 polarizations(Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.

Antenna Type 1: PCB Antenna

SPURIOUS EMISSIONS Below 30MHz (WORST CASE CONFIGURATION-FACE ON)

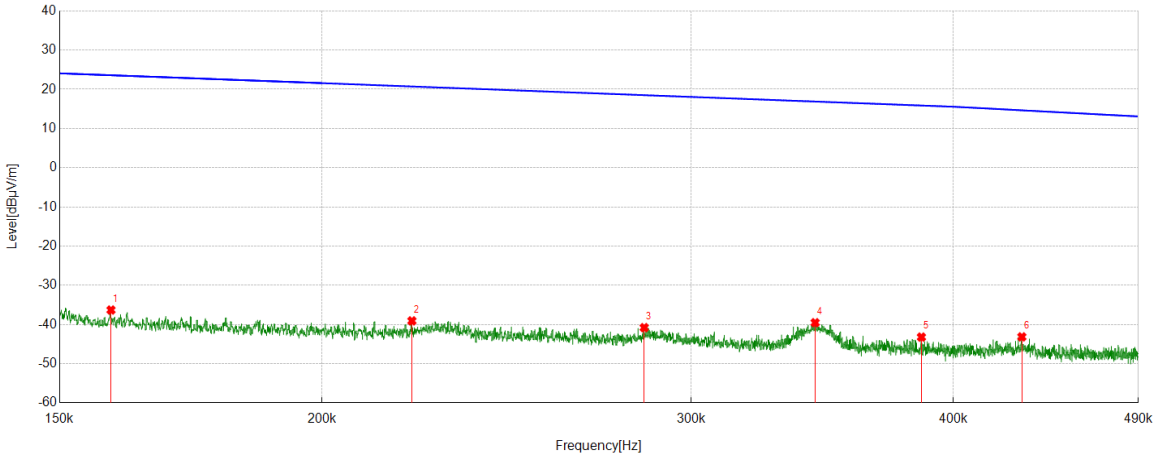
Test Mode	Channel	Frequency Range	Verdict
BLE	MCH	9kHz~150kHz	PASS



No.	Frequency	Reading Level	Correct Factor	FCC Result	FCC Limit	ISED Result	ISED Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dBuA/m]	[dBuA/m]	[dB]	
1	0.0114	39.19	-61.11	-21.92	46.46	-73.42	-5.04	-68.38	Peak
2	0.0171	38.30	-60.93	-22.63	42.92	-74.13	-8.58	-65.55	Peak
3	0.0274	36.01	-60.89	-24.88	38.85	-76.38	-12.65	-63.73	Peak
4	0.0468	29.57	-61.02	-31.45	34.19	-82.95	-17.31	-65.64	Peak
5	0.1008	23.53	-60.73	-37.20	27.53	-88.70	-23.97	-64.73	Peak
6	0.1441	19.29	-61.25	-41.96	24.43	-93.46	-27.07	-66.39	Peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.
3. All 3 polarizations(Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.

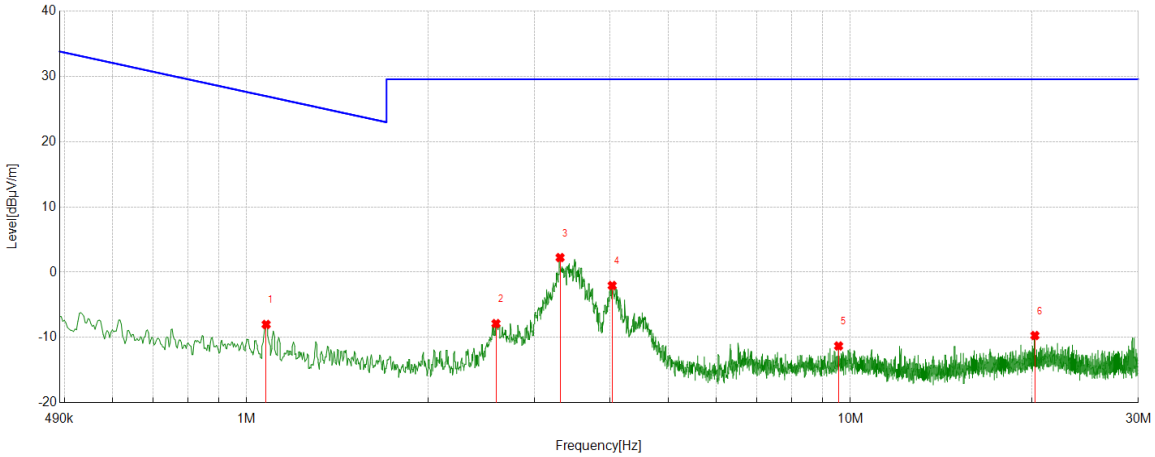
Test Mode	Channel	Frequency Range	Verdict
BLE	MCH	150kHz~490kHz	PASS



No.	Frequency	Reading Level	Correct Factor	FCC Result	FCC Limit	ISED Result	ISED Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dBuA/m]	[dBuA/m]	[dB]	
1	0.1587	24.96	-61.27	-36.31	23.59	-87.81	-27.91	-59.90	Peak
2	0.2208	21.88	-60.96	-39.08	20.72	-90.58	-30.78	-59.80	Peak
3	0.2849	19.96	-60.77	-40.81	18.51	-92.31	-32.99	-59.32	Peak
4	0.3437	21.19	-60.73	-39.54	16.88	-91.04	-34.62	-56.42	Peak
5	0.3862	17.47	-60.69	-43.22	15.87	-94.72	-35.63	-59.09	Peak
6	0.4312	17.49	-60.65	-43.16	14.64	-94.66	-36.86	-57.80	Peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.
3. All 3 polarizations(Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.

Test Mode	Channel	Frequency Range	Verdict
BLE	MCH	490kHz~30MHz	PASS



No.	Frequency	Reading Level	Correct Factor	FCC Result	FCC Limit	ISED Result	ISED Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dBuA/m]	[dBuA/m]	[dB]	
1	1.0773	12.35	-20.35	-8.00	26.96	-59.50	-24.54	-34.96	Peak
2	2.5884	12.51	-20.37	-7.86	29.54	-59.36	-21.96	-37.40	Peak
3	3.3055	22.59	-20.35	2.24	29.54	-49.26	-21.96	-27.30	Peak
4	4.0316	18.01	-20.05	-2.04	29.54	-53.54	-21.96	-31.58	Peak
5	9.5623	7.62	-18.91	-11.29	29.54	-62.79	-21.96	-40.83	Peak
6	20.2194	7.66	-17.35	-9.69	29.54	-61.19	-21.96	-39.23	Peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.
3. All 3 polarizations(Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.

8. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

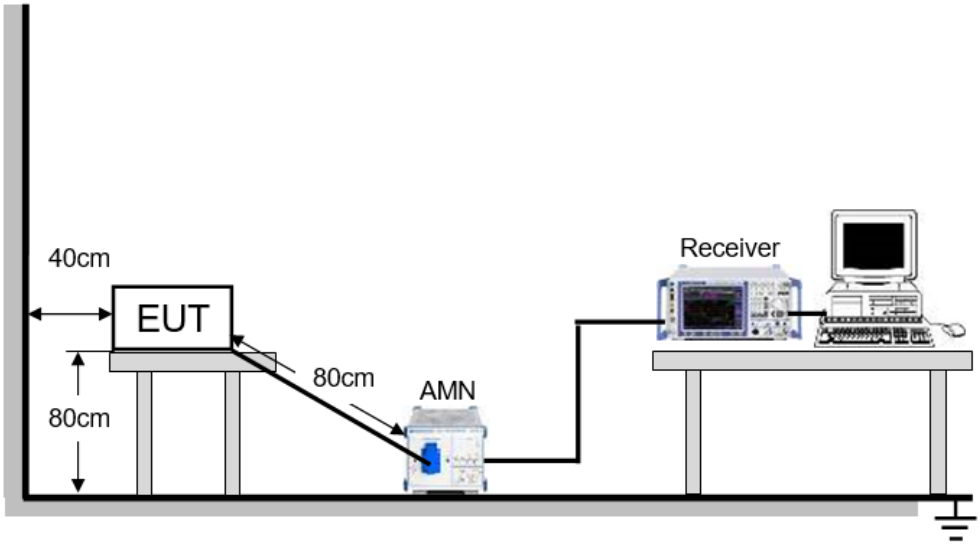
Please refer to FCC §15.207 (a)

FREQUENCY (MHz)	Limit (dBuV)	
	Quasi-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

TEST ENVIRONMENT

Temperature	22°C	Relative Humidity	56%
Atmosphere Pressure	101kPa	Test Voltage	AC 120V

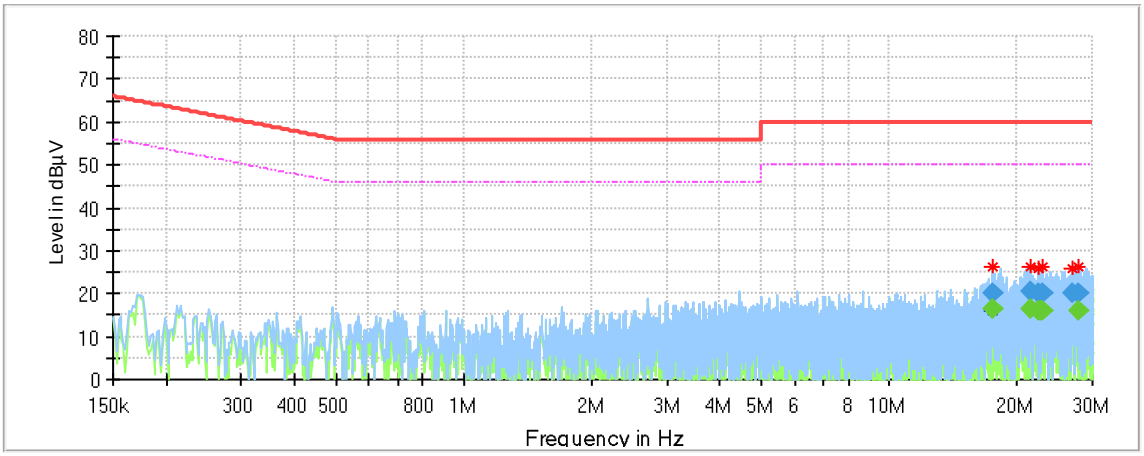
TEST SETUP AND PROCEDURE



The EUT is put on a table of non-conducting material that is 80cm high. The vertical conducting wall of shielding is located 40cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through an Artificial Mains Network (A.M.N.). A EMI Measurement Receiver (R&S Test Receiver ESR3) is used to test the emissions from both sides of AC line. According to the requirements in Section 6.2 of ANSI C63.10-2013.Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and average detector mode. The bandwidth of EMI test receiver is set at 9kHz.

The arrangement of the equipment is installed to meet the standards and operating in a manner, which tends to maximize its emission characteristics in a normal application.

LINE L RESULTS (WORST-CASE CONFIGURATION)

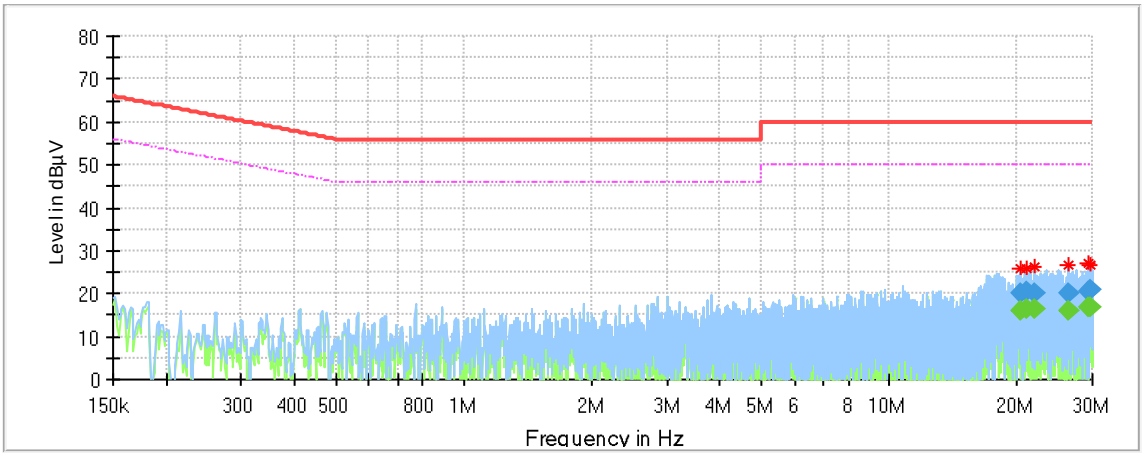


Final_Result

Frequency [MHz]	QuasiPeak [dBµV]	Average [dBµV]	Limit [dBµV]	Margin [dB]	Meas. Time [ms]	Bandwidth [kHz]	Line	Filter	Corr. [dB]
17.573445	---	16.40	50.00	33.60	1000.0	9.000	L1	OFF	9.7
17.573445	20.24	---	60.00	39.76	1000.0	9.000	L1	OFF	9.7
21.383798	---	16.29	50.00	33.71	1000.0	9.000	L1	OFF	9.8
21.383798	20.44	---	60.00	39.56	1000.0	9.000	L1	OFF	9.8
22.364370	20.23	---	60.00	39.77	1000.0	9.000	L1	OFF	9.8
22.364370	---	16.15	50.00	33.85	1000.0	9.000	L1	OFF	9.8
22.592723	---	15.96	50.00	34.04	1000.0	9.000	L1	OFF	9.8
22.861373	19.98	---	60.00	40.02	1000.0	9.000	L1	OFF	9.8
22.861373	---	15.93	50.00	34.07	1000.0	9.000	L1	OFF	9.8
26.795603	19.99	---	60.00	40.01	1000.0	9.000	L1	OFF	9.8
27.923933	---	16.07	50.00	33.93	1000.0	9.000	L1	OFF	9.8
27.923933	19.91	---	60.00	40.09	1000.0	9.000	L1	OFF	9.8

Note: 1. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
2. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
3. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.
4. The extension cord/outlet strip was calibrated with the LISN as required by ANSI C63.10:2013 Clause 6.2.2.
5. The EUT was test with two type antennas, the result of the EUT with type 2 antenna was worse case and recorded in this report.
6. Pre-testing all test modes and channels and find the MCH which is the worst case, so only the worst case is included in this test report.

LINE N RESULTS (WORST-CASE CONFIGURATION)



Final_Result

Frequency [MHz]	QuasiPeak [dBµV]	Average [dBµV]	Limit [dBµV]	Margin [dB]	Meas. Time [ms]	Bandwidth [kHz]	Line	Filter	Corr. [dB]
20.392778	---	16.00	50.00	34.00	1000.0	9.000	N	OFF	10.1
20.440538	19.98	---	60.00	40.02	1000.0	9.000	N	OFF	10.1
21.028583	---	16.47	50.00	33.53	1000.0	9.000	N	OFF	10.0
21.028583	20.63	---	60.00	39.37	1000.0	9.000	N	OFF	10.0
21.833040	---	16.24	50.00	33.76	1000.0	9.000	N	OFF	10.0
21.833040	20.15	---	60.00	39.85	1000.0	9.000	N	OFF	10.0
26.447850	20.14	---	60.00	39.86	1000.0	9.000	N	OFF	9.8
26.447850	---	16.14	50.00	33.86	1000.0	9.000	N	OFF	9.8
29.382105	20.67	---	60.00	39.33	1000.0	9.000	N	OFF	9.7
29.382105	---	16.64	50.00	33.36	1000.0	9.000	N	OFF	9.7
29.822393	---	16.80	50.00	33.20	1000.0	9.000	N	OFF	9.7
29.822393	20.82	---	60.00	39.18	1000.0	9.000	N	OFF	9.7

Note: 1. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
2. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
3. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.
4. The extension cord/outlet strip was calibrated with the LISN as required by ANSI C63.10:2013 Clause 6.2.2.
5. The EUT was test with two type antennas, the result of the EUT with type 2 antenna was worse case and recorded in this report.
6. Pre-testing all test modes and channels and find the MCH which is the worst case, so only the worst case is included in this test report.

9. ANTENNA REQUIREMENTS

APPLICABLE REQUIREMENTS

Please refer to FCC §15.203
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.

Please refer to FCC §15.247(b)(4)
The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

ANTENNA GAIN

The antenna gain of EUT is less than 6 dBi

END OF REPORT