FCC Test Report

(Co-Located)

Report No.:	RFBDKX-WTW-P23090081-8
FCC ID:	2ATIO5
Product:	Home IOT Gateway
Brand:	Level
Model No.:	H5
Series Model:	H2
Received Date:	2023/9/25
Test Date:	2023/11/24 ~ 2023/12/1
Issued Date:	2023/12/8
Applicant:	Level Home Inc.
Address:	935 Main Street, Redwood City, California 94063, United States of America
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Test Location:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
FCC Registration / Designation Number:	198487 / TW2021

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Release Control Record

Issue No.	Description	Date Issued
RFBDKX-WTW-P23090081-8	Original release	2023/12/8

1 Certificate of Conformity

Product:	Home IOT Gateway
Brand:	Level
Test Model:	H5
Series Model:	H2
Sample Status:	Engineering sample
Applicant:	Level Home Inc.
Test Date:	2023/11/24 ~ 2023/12/1
Standard:	47 CFR FCC Part 15, Subpart C (Section 15.247) 47 CFR FCC Part 15, Subpart C (Section 15.249)
Measurement procedure:	ANSI C63.10-2013 KDB 558074 D01 15.247 Meas Guidance v05r02

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

Prepared by : Annie Chang , **Date:** 2023/12/8

Annie Chang / Senior Specialist

Approved by : Jeremy Lin , **Date:** 2023/12/8

Jeremy Lin / Project Engineer

2 Summary of Test Results

Applied Standard	47 CFR FCC Part 15, Subpart C (Section 15.247) 47 CFR FCC Part 15, Subpart C (Section 15.249)		
Clause	Test Item	Result	Remarks
15.205 15.209 15.247(d)	Radiated Spurious Emissions below 1 GHz	Pass	Meet the requirement of limit. Minimum passing margin is -1.5dB at 308.00MHz.
15.209 15.249(a) 15.249(d)			
15.205 15.209 15.247(d)	Radiated Spurious Emissions above 1 GHz	Pass	Meet the requirement of limit. Minimum passing margin is -0.1dB at 2718.00MHz.
15.209 15.249(a) 15.249(d) 15.249(e)			

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Specification	Expanded Uncertainty (k=2) (±)
Radiated Spurious Emissions below 1 GHz	9 kHz ~ 30 MHz	2.38 dB
	30 MHz ~ 1 GHz	5.7 dB
Radiated Spurious Emissions above 1 GHz	1 GHz ~ 6 GHz	4.83 dB
	6 GHz ~ 18 GHz	5.37 dB
	18 GHz ~ 40 GHz	5.24 dB

The other instruments specified are routine verified to remain within the calibrated levels, no measurement uncertainty is required to be calculated.

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Home IOT Gateway		
Brand	Level		
Test Model	H5		
Series Model	H2		
Model Difference	Refer to Note as below		
Status of EUT	Engineering sample		
Power Supply Rating	3.6Vdc from battery or 5Vdc from Adapter		
Modulation Type	Radio 2	Z-Wave	2FSK (908.4 MHz) 2FSK (908.42 MHz) 2GFSK (916 MHz)
		Thread 900M	O-QPSK
	Radio 3	Thread	O-QPSK
		Zigbee	O-QPSK
		BTLE	GFSK
	Radio 4	WLAN	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
		BTLE	GFSK
Transfer Rate	Radio 2	Z-Wave	40kb/s (908.4 MHz) 9.6kb/s (908.42 MHz) 100kb/s (916 MHz)
		Thread 900M	100kb/s
	Radio 3	Thread	250kb/s
		Zigbee	250kb/s
		BTLE	125k, 500k, 1M, 2M
	Radio 4	WLAN	Up to 72.2 Mbps
		BTLE	Up to 1 Mbps
Operating Frequency	Radio 1	WWAN	WCDMA Band 4: 1712.4 MHz ~ 1752.6 MHz
	Radio 2	Z-Wave	908.4 MHz ~ 916 MHz
		Thread 900M	906 MHz ~ 924 MHz
	Radio 3	Thread	2.405 GHz ~ 2.475 GHz
		Zigbee	2.405 GHz ~ 2.475 GHz
		BTLE	2.402 GHz ~ 2.48 GHz
	Radio 4	WLAN	2.412 GHz ~ 2.462 GHz
		BTLE	2.402 GHz ~ 2.48 GHz
Number of Channel	Radio 2	Z-Wave	3
		Thread 900M	19
	Radio 3	Thread	15
		Zigbee	15
		BTLE	40
	Radio 4	WLAN	802.11b, 802.11g, 802.11n (HT20):11
		BTLE	40

Max. EIRP Power	Radio 1	WWAN	WCDMA Band 4: 459.198mW (26.62dBm)
Output Power	Radio 2	Thread 900M	21.677 mW (13.36 dBm)
	Radio 3	Thread	66.069 mW (18.2 dBm)
		Zigbee	65.917 mW (18.19 dBm)
		BTLE	14.06 mW (11.48 dBm)
	Radio 4	WLAN	312.608 mW (24.95 dBm)
		BTLE	7.621 mW (8.82 dBm)
Field Strength Of Fundamental	Radio 2	Z-Wave	92.3 dBuV/m at 3 meters

Note:

1. All models are listed as below.

RF Radio List	Radio ID	Technology List	H5	H2
1	LTE	WWAN (LTE + WCDMA)	V	V
2	Z-Wave	Z-Wave	V	X
	Thread 900M	Thread 900M	V(Optional)	V
3	Thread	Thread	V(Optional)	V
	Zigbee	Zigbee	V	X
	BLE	BTLE	V	V
4	WiFi	WLAN(2.4G)	V	X
	BLE-SOM	BLE	V	V

2. There are WWAN, WLAN (2.4 GHz), Bluetooth LE, Zigbee, Thread, Z-Wave technology used for the EUT.
3. Simultaneously transmission condition.

Condition	Technology			
	Radio 1	Radio 2	Radio 3	Radio 4
1	WWAN	Z-Wave	Zigbee	BTLE
2	WWAN	Z-Wave	Thread	BTLE
3	WWAN	Z-Wave	BTLE	BTLE
4	WWAN	Thread 900M	Zigbee	BTLE
5	WWAN	Thread 900M	Thread	BTLE
6	WWAN	Thread 900M	BTLE	BTLE
7	-	Z-Wave	Zigbee	WLAN
8	-	Z-Wave	Thread	WLAN
9	-	Z-Wave	BTLE	WLAN
10	-	Thread 900M	Zigbee	WLAN
11	-	Thread 900M	Thread	WLAN
12	-	Thread 900M	BTLE	WLAN

4. The EUT uses following accessories.

Item	Brand	Model	Specification
AC Adapter	CUI INC	SWH15-5B-N	AC Input : 100-240Vac 50/60Hz 0.5A Max DC Output : 5.0Vdc 3.0A DC Output Cable : Non-shielded without core, 1.8m
LAN Cable	-	-	Non-shielded without core, 1.0m

5. More information of WWAN module (Radio 1) refer to report no.: RFBDKX-WTW-P23090081.
6. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Radio 1: WWAN

Antenna Type				PIFA										
Antenna Connector				NA										
Frequency (MHz)	700	750	800	850	900	1700	1750	1800	1850	1900	1950	2000	2100	2150
Main Ant. Gain (dBi)	**-3.21**	-1.48	**-0.66**	**-3.22**	-3.95	**3.87**	3.77	4.08	**3.38**	2.76	1.67	0.72	0.51	-0.43
Aux. Ant. Gain (dBi)	0.12	0.93	0.05	-0.42	-3.05	0.13	0.44	-0.47	-0.72	1.88	2.45	2.49	-0.99	-2.50
* Main Antenna was for the final tests.														

Radio 2: Z-Wave & Thread 900M

Antenna Type	Gain (dBi)	Connector Type
PIFA	-0.4	None

Radio 3: Thread, Zigbee & BTLE

Antenna Type	Gain (dBi)	Connector Type
PIFA	4.06	None

Radio 4: WLAN & BTLE

Antenna Type	Gain (dBi)	Connector Type
PIFA	2.27	I-PEX

* Detail antenna specification please refer to antenna datasheet and/or antenna measurement report.

2. The EUT incorporates a SISO function:

Radio 4: WLAN

Modulation Mode	TX & RX Configuration	
802.11b	1TX	1RX
802.11g	1TX	1RX
802.11n (HT20)	1TX	1RX

3.3 Description of Test Modes

For Radio 2:

3 channels are provided for Z-Wave:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	908.4	2	916
1	908.42		

19 channels are provided for Thread 900M:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	906	10	916
1	907	11	917
2	908	12	918
3	909	13	919
4	910	14	920
5	911	15	921
6	912	16	922
7	913	17	923
8	914	18	924
9	915		

For Radio 3:

15 channels are provided for Thread & Zigbee:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
11	2405	19	2445
12	2410	20	2450
13	2415	21	2455
14	2420	22	2460
15	2425	23	2465
16	2430	24	2470
17	2435	25	2475
18	2440		

40 channels are provided for BTLE:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2402	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466
3	2408	13	2428	23	2448	33	2468
4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	19	2440	29	2460	39	2480

For Radio 4:

11 channels are provided for WLAN:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412	7	2442
2	2417	8	2447
3	2422	9	2452
4	2427	10	2457
5	2432	11	2462
6	2437		

40 channels are provided for BTLE:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2402	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466
3	2408	13	2428	23	2448	33	2468
4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	19	2440	29	2460	39	2480

3.3.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable To		Description			
	RE≥1G	RE<1G	Radio 1	Radio 2	Radio 3	Radio 4
A	√	√	WCDMA Band 4	Z-Wave	Zigbee	BT LE-1M
B	√	√	WCDMA Band 4	Z-Wave	Thread	BT LE-1M
C	√	√	WCDMA Band 4	Z-Wave	BTLE-1M	BTLE-1M
D	√	√	WCDMA Band 4	Thread 900M	Zigbee	BTLE-1M
E	√	√	WCDMA Band 4	Thread 900M	Thread	BTLE-1M
F	√	√	WCDMA Band 4	Thread 900M	BTLE-1M	BTLE-1M
G	√	√	-	Z-Wave	Zigbee	802.11g
H	√	√	-	Z-Wave	Thread	802.11g
I	√	√	-	Z-Wave	BTLE-1M	802.11g
J	√	√	-	Thread 900M	Zigbee	802.11g
K	√	√	-	Thread 900M	Thread	802.11g
L	√	√	-	Thread 900M	BTLE-1M	802.11g

Where **RE≥1G:** Radiated Emission above 1GHz
RE<1G: Radiated Emission below 1GHz

Radiated Emission Test (Above 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Radio	Mode	Tested Channel	Modulation	Data Rate
A	1	WCDMA Band 4	1413 (1732.6MHz)	-	-
	2	Z-Wave	0	2FSK	40kb/s
	3	Zigbee	25	O-QPSK	250kb/s
	4	BTLE-1M	0	GFSK	1Mb/s
B	1	WCDMA Band 4	1413 (1732.6MHz)	-	-
	2	Z-Wave	0	2FSK	40kb/s
	3	Thread	25	O-QPSK	250kb/s
	4	BTLE-1M	0	GFSK	1Mb/s
C	1	WCDMA Band 4	1413 (1732.6MHz)	-	-
	2	Z-Wave	0	2FSK	40kb/s
	3	BTLE-1M	39	GFSK	1Mb/s
	4	BTLE-1M	0	GFSK	1Mb/s
D	1	WCDMA Band 4	1413 (1732.6MHz)	-	-
	2	Thread 900M	0	O-QPSK	100kb/s
	3	Zigbee	25	O-QPSK	250kb/s
	4	BTLE-1M	0	GFSK	1Mb/s
E	1	WCDMA Band 4	1413 (1732.6MHz)	-	-
	2	Thread 900M	0	O-QPSK	100kb/s
	3	Thread	25	O-QPSK	250kb/s
	4	BTLE-1M	0	GFSK	1Mb/s
F	1	WCDMA Band 4	1413 (1732.6MHz)	-	-
	2	Thread 900M	0	O-QPSK	100kb/s
	3	BTLE-1M	39	GFSK	1Mb/s
	4	BTLE-1M	0	GFSK	1Mb/s

G	2	Z-Wave	0	2FSK	40kb/s
	3	Zigbee	25	O-QPSK	250kb/s
	4	802.11g	1	BPSK	6Mb/s
H	2	Z-Wave	0	2FSK	40kb/s
	3	Thread	25	O-QPSK	250kb/s
	4	802.11g	1	BPSK	6Mb/s
I	2	Z-Wave	0	2FSK	40kb/s
	3	BTLE-1M	39	GFSK	1Mb/s
	4	802.11g	1	BPSK	6Mb/s
J	2	Thread 900M	0	O-QPSK	100kb/s
	3	Zigbee	25	O-QPSK	250kb/s
	4	802.11g	1	BPSK	6Mb/s
K	2	Thread 900M	0	O-QPSK	100kb/s
	3	Thread	25	O-QPSK	250kb/s
	4	802.11g	1	BPSK	6Mb/s
L	2	Thread 900M	0	O-QPSK	100kb/s
	3	BTLE-1M	39	GFSK	1Mb/s
	4	802.11g	1	BPSK	6Mb/s

Radiated Emission Test (Below 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Radio	Mode	Tested Channel	Modulation	Data Rate
A	1	WCDMA Band 4	1413 (1732.6MHz)	-	-
	2	Z-Wave	0	2FSK	40kb/s
	3	Zigbee	25	O-QPSK	250kb/s
	4	BTLE-1M	0	GFSK	1Mb/s
B	1	WCDMA Band 4	1413 (1732.6MHz)	-	-
	2	Z-Wave	0	2FSK	40kb/s
	3	Thread	25	O-QPSK	250kb/s
	4	BTLE-1M	0	GFSK	1Mb/s
C	1	WCDMA Band 4	1413 (1732.6MHz)	-	-
	2	Z-Wave	0	2FSK	40kb/s
	3	BTLE-1M	39	GFSK	1Mb/s
	4	BTLE-1M	0	GFSK	1Mb/s
D	1	WCDMA Band 4	1413 (1732.6MHz)	-	-
	2	Thread 900M	0	O-QPSK	100kb/s
	3	Zigbee	25	O-QPSK	250kb/s
	4	BTLE-1M	0	GFSK	1Mb/s
E	1	WCDMA Band 4	1413 (1732.6MHz)	-	-
	2	Thread 900M	0	O-QPSK	100kb/s
	3	Thread	25	O-QPSK	250kb/s
	4	BTLE-1M	0	GFSK	1Mb/s
F	1	WCDMA Band 4	1413 (1732.6MHz)	-	-
	2	Thread 900M	0	O-QPSK	100kb/s
	3	BTLE-1M	39	GFSK	1Mb/s
	4	BTLE-1M	0	GFSK	1Mb/s

G	2	Z-Wave	0	2FSK	40kb/s
	3	Zigbee	25	O-QPSK	250kb/s
	4	802.11g	1	BPSK	6Mb/s
H	2	Z-Wave	0	2FSK	40kb/s
	3	Thread	25	O-QPSK	250kb/s
	4	802.11g	1	BPSK	6Mb/s
I	2	Z-Wave	0	2FSK	40kb/s
	3	BTLE-1M	39	GFSK	1Mb/s
	4	802.11g	1	BPSK	6Mb/s
J	2	Thread 900M	0	O-QPSK	100kb/s
	3	Zigbee	25	O-QPSK	250kb/s
	4	802.11g	1	BPSK	6Mb/s
K	2	Thread 900M	0	O-QPSK	100kb/s
	3	Thread	25	O-QPSK	250kb/s
	4	802.11g	1	BPSK	6Mb/s
L	2	Thread 900M	0	O-QPSK	100kb/s
	3	BTLE-1M	39	GFSK	1Mb/s
	4	802.11g	1	BPSK	6Mb/s

Test Condition:

Applicable To	Environmental Conditions	Input Power	Tested By
RE>1G	25deg. C, 62%RH	120Vac, 60Hz	Jed Wu
RE<1G	25deg. C, 62%RH	120Vac, 60Hz	Jed Wu

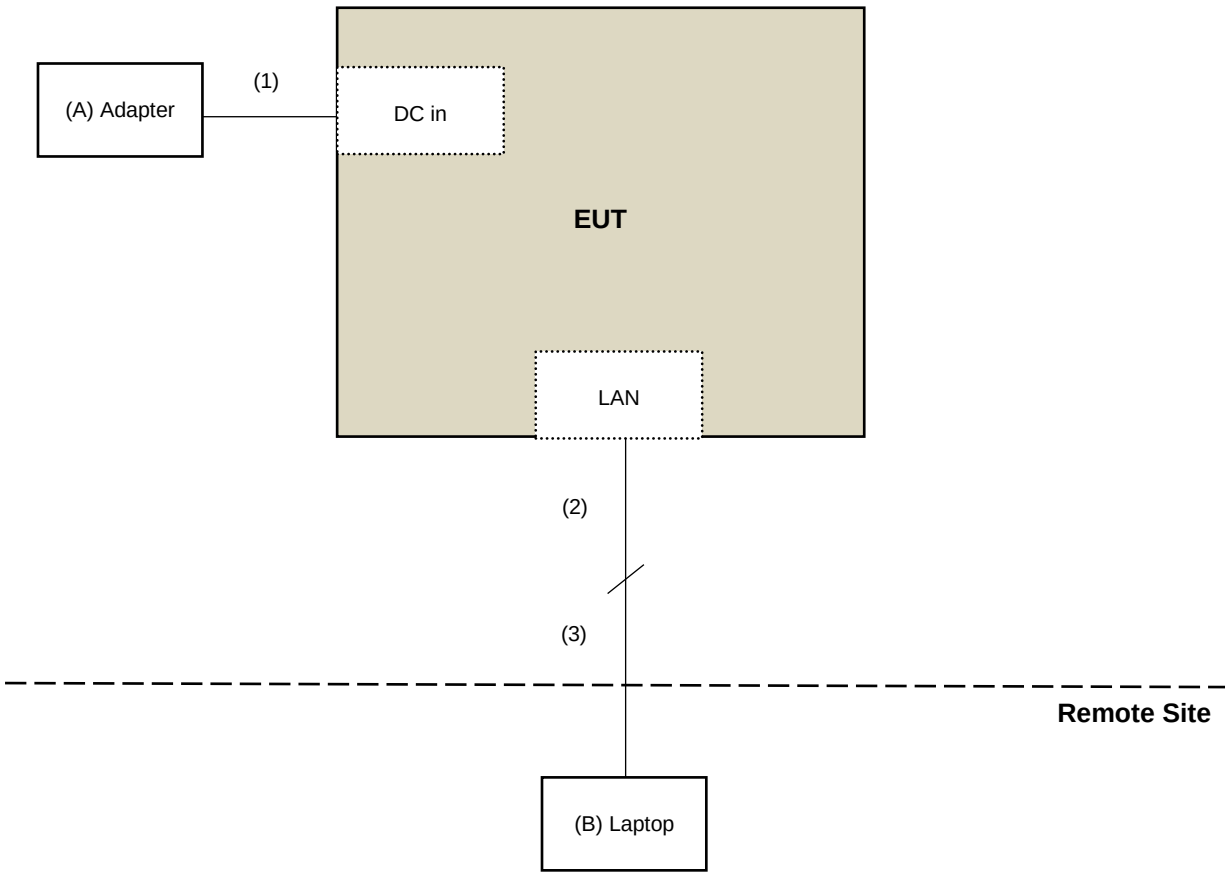
3.4 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Adapter	CUI INC	SWH15-5B-N	N/A	N/A	Supplied by applicant
B	Laptop	Lenovo	81A4	YD02TWDP	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	DC cable	1	1.8	N	0	Supplied by applicant
2	LAN cable	1	1	N	0	Supplied by applicant
3	LAN cable	1	10	N	0	Provided by Lab

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standards

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards and references:

Test Standard:
FCC Part 15, Subpart C (15.247)
FCC Part 15, Subpart C (15.249)
ANSI C63.10-2013

All test items have been performed and recorded as per the above standards.

References Test Guidance:
KDB 558074 D01 15.247 Meas Guidance v05r02

All test items have been performed as a reference to the above KDB test guidance.

4 Test Types and Results

4.1 Radiated Emissions below 1 GHz

4.1.1 Limits

Radio 2: For Z-Wave

The field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following

Fundamental Frequency	Field Strength of Fundamental (millivolts/meter)	Field Strength of Harmonics (microvolts/meter)
902 ~ 928 MHz	50	500

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits as below table, whichever is the lesser attenuation

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table.

Frequencies (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
Above 960	500	3

Notes:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).

Radio 2: For Thread 900M ; Radio 3: For Thread, Zigbee, BTLE ; Radio 4: WLAN, BTLE

Radiated emissions up to 1 GHz which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20 dB below the highest level of the desired power:

Frequencies (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
Above 960	500	3

Notes:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).

4.1.2 Test Instruments

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Bi_Log Antenna Schwarzbeck	VULB 9168	137	2023/10/13	2024/10/12
Coupling / Decoupling Network Schwarzbeck	CDNE-M2	00097	2023/5/25	2024/5/24
	CDNE-M3	00091	2023/5/25	2024/5/24
Loop Antenna EMCI	LPA600	270	2023/9/4	2024/9/3
MXE EMI Receiver Agilent	N9038A	MY51210129	2023/3/24	2024/3/23
		MY51210137	2023/6/5	2024/6/4
Preamplifier EMCI	EMC001340	980269	2023/6/27	2024/6/26
Preamplifier HP	8447D	2432A03504	2023/2/16	2024/2/15
RF Coaxial Cable Pacific	8D-FB	Cable-CH6-02	2023/6/27	2024/6/26
Signal Analyzer R&S	FSV40	101544	2023/5/9	2024/5/8
Software BVADT	Radiated_V8.7.08	N/A	N/A	N/A
Tower ADT	AT100	0306	N/A	N/A
Turn Table ADT	TT100	0306	N/A	N/A

Notes:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA
2. The test was performed in Linkou 966 Chamber 6 (CH 6).
3. Tested Date: 2023/11/30

4.1.3 Test Procedure

For Radiated emission below 30 MHz

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode, except for the frequency band (9 kHz to 90 kHz and 110 kHz to 490 kHz) set to average detect function and peak detect function.

Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 200 Hz at frequency below 150 kHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9 kHz or 10 kHz at frequency (150 kHz to 30 MHz).
3. All modes of operation were investigated and the worst-case emissions are reported.

For Radiated emission above 30 MHz

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

Notes:

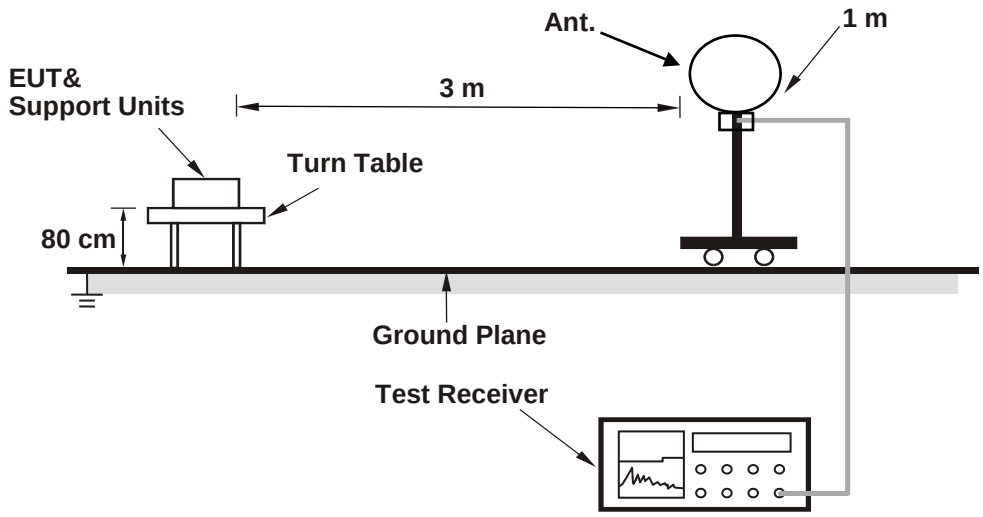
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
2. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

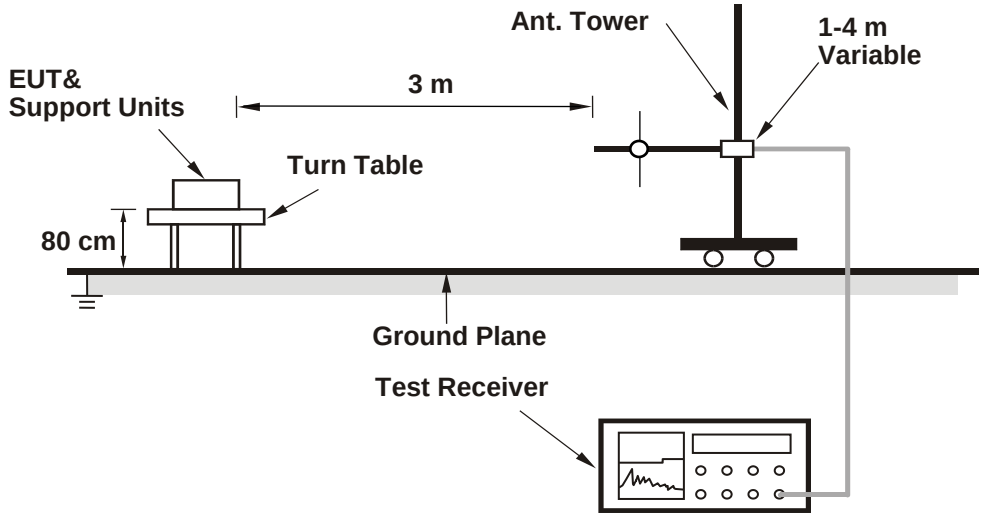
No deviation.

4.1.5 Test Setup

For Radiated emission below 30 MHz



For Radiated emission above 30 MHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.1.6 EUT Operating Condition

Controlling software (teraterm v4.8) has been activated to set the EUT under transmission condition continuously at specific channel frequency.

4.1.7 Test Results

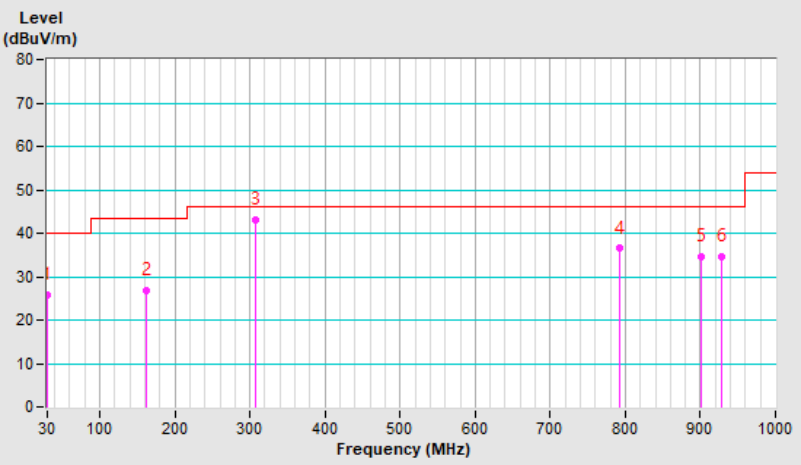
Mode A

RF Mode	WCDMA Band 4	**Channel**	CH 1413：1732.6MHz
	Z-Wave		CH 0：908.4MHz
	Zigbee		CH 25：2475MHz
	BTLE-1M		CH 0：2402MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	QP: RB=120kHz, DET=Quasi-Peak

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	30.58	25.9 QP	40.0	-14.1	1.23 H	282	36.8	-10.9
2	161.34	26.8 QP	43.5	-16.7	1.58 H	280	35.2	-8.4
3	308.00	43.1 QP	46.0	-2.9	1.67 H	155	49.1	-6.0
4	792.03	36.5 QP	46.0	-9.5	1.49 H	213	32.1	4.4
5	902.00	34.5 QP	46.0	-11.5	1.88 H	198	28.2	6.3
6	928.00	34.6 QP	46.0	-11.4	1.74 H	360	27.7	6.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

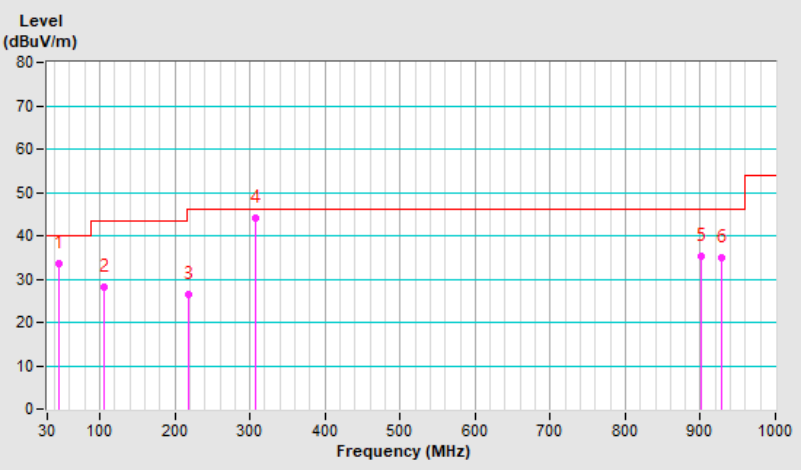


RF Mode	WCDMA Band 4	**Channel**	CH 1413：1732.6MHz
	Z-Wave		CH 0：908.4MHz
	Zigbee		CH 25：2475MHz
	BTLE-1M		CH 0：2402MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	QP: RB=120kHz, DET=Quasi-Peak

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	45.28	33.5 QP	40.0	-6.5	1.58 V	211	42.6	-9.1
2	105.56	28.1 QP	43.5	-15.4	1.73 V	301	40.6	-12.5
3	217.50	26.4 QP	46.0	-19.6	1.98 V	324	36.9	-10.5
4	308.00	44.1 QP	46.0	-1.9	1.24 V	258	50.1	-6.0
5	902.00	35.4 QP	46.0	-10.6	1.46 V	79	29.1	6.3
6	928.00	35.0 QP	46.0	-11.0	1.52 V	317	28.1	6.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



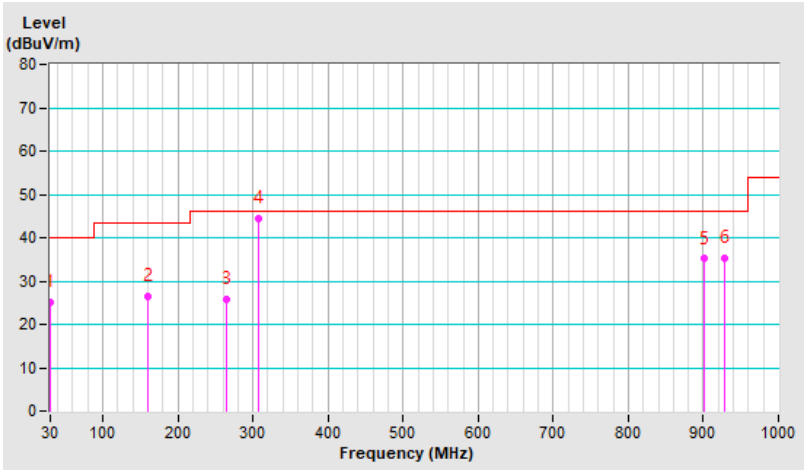
Mode B

RF Mode	WCDMA Band 4	Channel	CH 1413：1732.6MHz
	Z-Wave		CH 0：908.4MHz
	Thread		CH 25：2475MHz
	BTLE-1M		CH 0：2402MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	QP: RB=120kHz, DET=Quasi-Peak

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	30.58	25.1 QP	40.0	-14.9	1.58 H	183	36.0	-10.9
2	159.98	26.6 QP	43.5	-16.9	1.69 H	269	34.9	-8.3
3	264.01	25.9 QP	46.0	-20.1	1.47 H	140	33.7	-7.8
4	308.00	44.4 QP	46.0	-1.6	1.72 H	243	50.4	-6.0
5	902.00	35.1 QP	46.0	-10.9	1.83 H	2	28.8	6.3
6	928.00	35.2 QP	46.0	-10.8	1.91 H	266	28.3	6.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

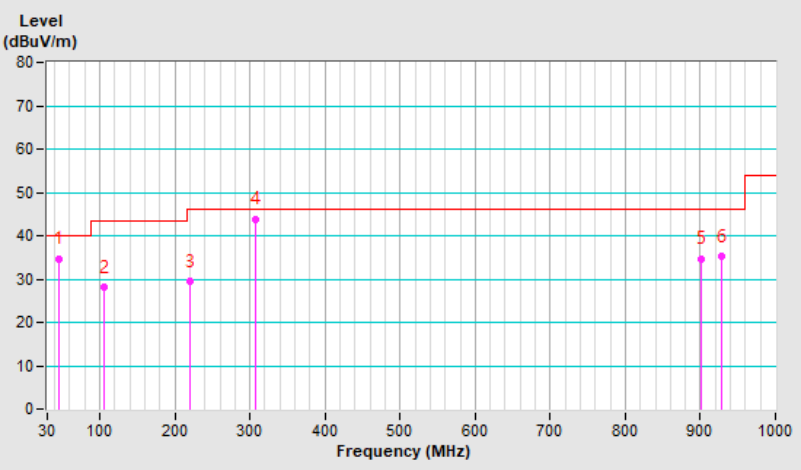


RF Mode	WCDMA Band 4	**Channel**	CH 1413：1732.6MHz
	Z-Wave		CH 0：908.4MHz
	Thread		CH 25：2475MHz
	BTLE-1M		CH 0：2402MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	QP: RB=120kHz, DET=Quasi-Peak

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	44.74	34.6 QP	40.0	-5.4	1.27 V	49	43.8	-9.2
2	104.93	28.0 QP	43.5	-15.5	1.36 V	306	40.5	-12.5
3	220.02	29.4 QP	46.0	-16.6	1.49 V	303	40.0	-10.6
4	308.00	43.8 QP	46.0	-2.2	1.87 V	260	49.8	-6.0
5	902.00	34.5 QP	46.0	-11.5	1.54 V	56	28.2	6.3
6	928.00	35.1 QP	46.0	-10.9	1.02 V	351	28.2	6.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



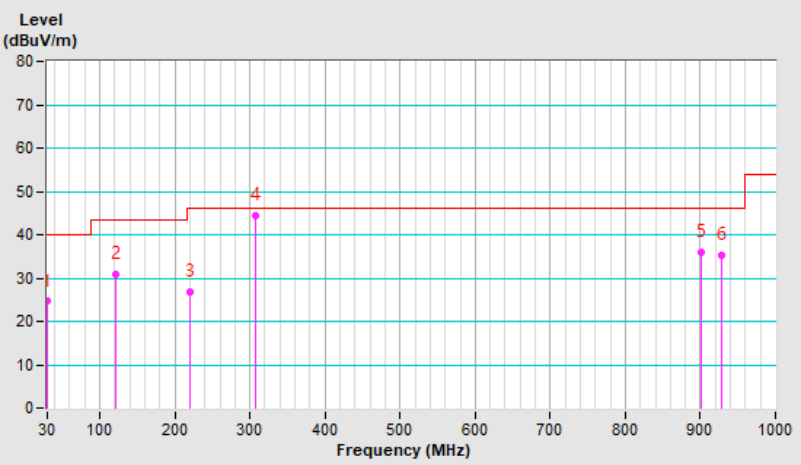
Mode C

RF Mode	WCDMA Band 4	**Channel**	CH 1413：1732.6MHz
	Z-Wave		CH 0：908.4MHz
	BTLE-1M		CH 39：2480MHz
	BTLE-1M		CH 0：2402MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	QP: RB=120kHz, DET=Quasi-Peak

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	30.58	24.6 QP	40.0	-15.4	1.38 H	112	35.5	-10.9
2	121.13	31.0 QP	43.5	-12.5	1.24 H	326	41.9	-10.9
3	219.97	26.7 QP	46.0	-19.3	1.75 H	264	37.3	-10.6
4	**308.00**	**44.5 QP**	**46.0**	**-1.5**	**1.68 H**	**153**	**50.5**	**-6.0**
5	902.00	36.0 QP	46.0	-10.0	1.94 H	141	29.7	6.3
6	928.00	35.4 QP	46.0	-10.6	1.28 H	161	28.5	6.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

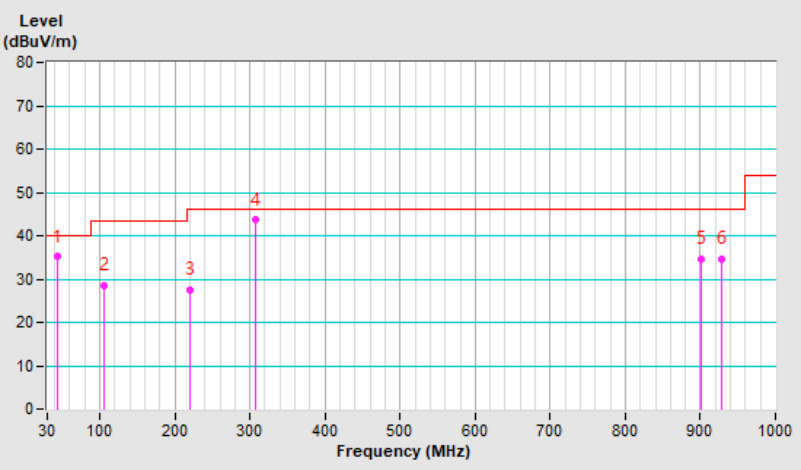


RF Mode	WCDMA Band 4	**Channel**	CH 1413：1732.6MHz
	Z-Wave		CH 0：908.4MHz
	BTLE-1M		CH 39：2480MHz
	BTLE-1M		CH 0：2402MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	QP: RB=120kHz, DET=Quasi-Peak

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	44.50	35.1 QP	40.0	-4.9	1.22 V	195	44.3	-9.2
2	106.48	28.5 QP	43.5	-15.0	1.35 V	288	40.8	-12.3
3	220.02	27.6 QP	46.0	-18.4	1.02 V	351	38.2	-10.6
4	308.00	43.6 QP	46.0	-2.4	1.69 V	254	49.6	-6.0
5	902.00	34.5 QP	46.0	-11.5	1.86 V	326	28.2	6.3
6	928.00	34.6 QP	46.0	-11.4	1.75 V	322	27.7	6.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



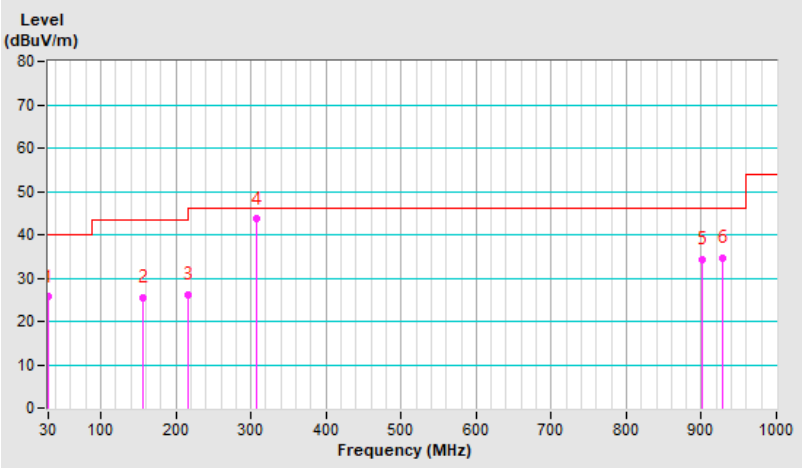
Mode D

RF Mode	WCDMA Band 4	**Channel**	CH 1413：1732.6MHz
	Thread 900M		CH 0：906MHz
	Zigbee		CH 25：2475MHz
	BTLE-1M		CH 0：2402MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	QP: RB=120kHz, DET=Quasi-Peak

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	30.58	25.6 QP	40.0	-14.4	1.89 H	130	36.5	-10.9
2	156.44	25.4 QP	43.5	-18.1	1.26 H	285	33.7	-8.3
3	215.37	26.2 QP	43.5	-17.3	1.34 H	278	36.9	-10.7
4	308.00	43.6 QP	46.0	-2.4	1.57 H	140	49.6	-6.0
5	902.00	34.4 QP	46.0	-11.6	1.24 H	316	28.1	6.3
6	928.00	34.7 QP	46.0	-11.3	1.11 H	142	27.8	6.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

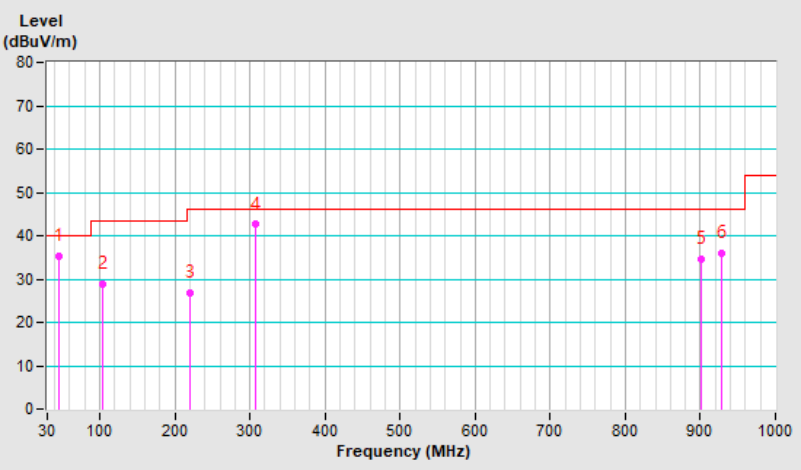


RF Mode	WCDMA Band 4	**Channel**	CH 1413：1732.6MHz
	Thread 900M		CH 0：906MHz
	Zigbee		CH 25：2475MHz
	BTLE-1M		CH 0：2402MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	QP: RB=120kHz, DET=Quasi-Peak

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	45.08	35.4 QP	40.0	-4.6	1.86 V	328	44.5	-9.1
2	103.62	28.8 QP	43.5	-14.7	1.73 V	313	41.5	-12.7
3	219.97	26.9 QP	46.0	-19.1	1.87 V	0	37.5	-10.6
4	308.00	42.6 QP	46.0	-3.4	1.46 V	256	48.6	-6.0
5	902.00	34.5 QP	46.0	-11.5	1.95 V	134	28.2	6.3
6	928.00	36.0 QP	46.0	-10.0	1.23 V	192	29.1	6.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



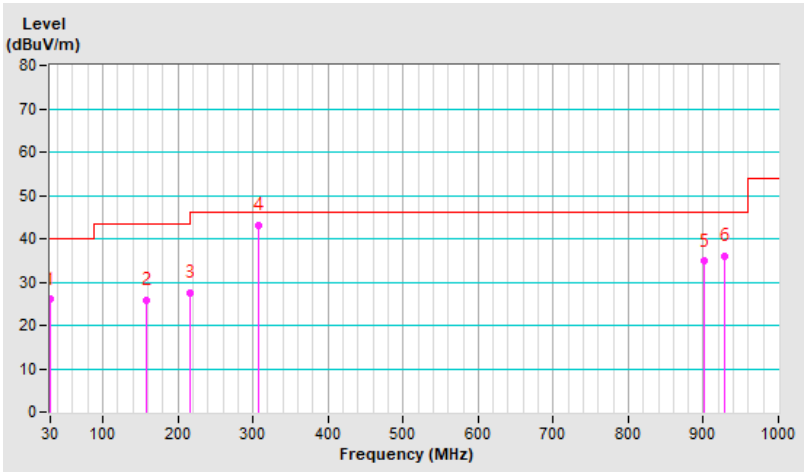
Mode E

RF Mode	WCDMA Band 4	**Channel**	CH 1413：1732.6MHz
	Thread 900M		CH 0：906MHz
	Thread		CH 25：2475MHz
	BTLE-1M		CH 0：2402MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	QP: RB=120kHz, DET=Quasi-Peak

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	30.58	26.0 QP	40.0	-14.0	1.56 H	226	36.9	-10.9
2	158.48	25.8 QP	43.5	-17.7	1.23 H	240	34.1	-8.3
3	216.63	27.6 QP	46.0	-18.4	1.89 H	267	38.3	-10.7
4	308.00	43.2 QP	46.0	-2.8	1.42 H	243	49.2	-6.0
5	902.00	34.8 QP	46.0	-11.2	1.72 H	6	28.5	6.3
6	928.00	36.1 QP	46.0	-9.9	1.35 H	262	29.2	6.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

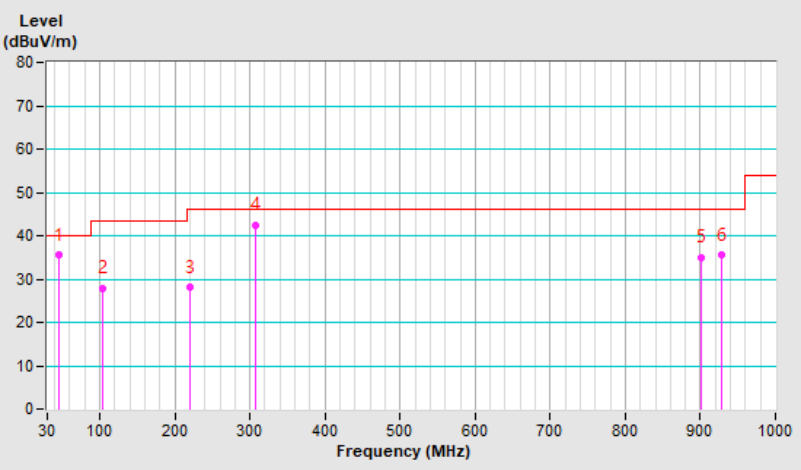


RF Mode	WCDMA Band 4	**Channel**	CH 1413：1732.6MHz
	Thread 900M		CH 0：906MHz
	Thread		CH 25：2475MHz
	BTLE-1M		CH 0：2402MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	QP: RB=120kHz, DET=Quasi-Peak

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	45.08	35.5 QP	40.0	-4.5	1.28 V	235	44.6	-9.1
2	103.14	27.8 QP	43.5	-15.7	1.38 V	276	40.6	-12.8
3	220.02	28.0 QP	46.0	-18.0	1.97 V	156	38.6	-10.6
4	308.00	42.5 QP	46.0	-3.5	1.83 V	138	48.5	-6.0
5	902.00	34.9 QP	46.0	-11.1	1.67 V	358	28.6	6.3
6	928.00	35.5 QP	46.0	-10.5	1.28 V	279	28.6	6.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



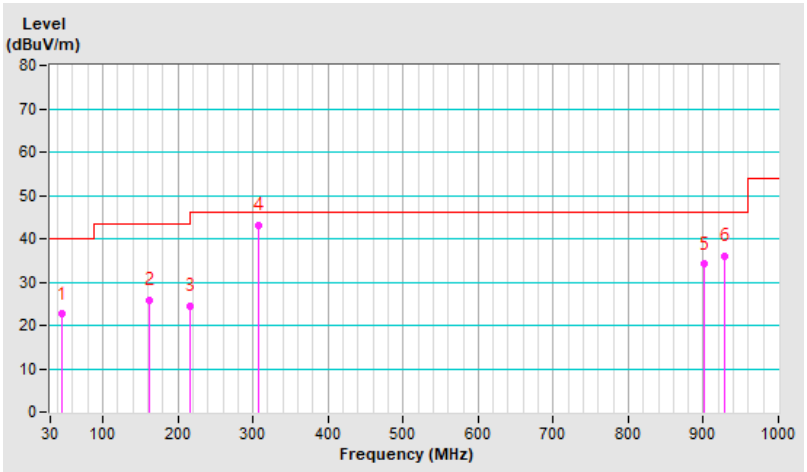
Mode F

RF Mode	WCDMA Band 4	**Channel**	CH 1413：1732.6MHz
	Thread 900M		CH 0：906MHz
	BTLE-1M		CH 39：2480MHz
	BTLE-1M		CH 0：2402MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	QP: RB=120kHz, DET=Quasi-Peak

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	45.22	22.6 QP	40.0	-17.4	1.21 H	65	31.7	-9.1
2	161.02	25.7 QP	43.5	-17.8	1.23 H	208	34.1	-8.4
3	216.55	24.5 QP	46.0	-21.5	1.57 H	259	35.2	-10.7
4	308.00	43.2 QP	46.0	-2.8	1.42 H	243	49.2	-6.0
5	902.00	34.1 QP	46.0	-11.9	1.00 H	301	27.8	6.3
6	928.00	35.9 QP	46.0	-10.1	1.00 H	262	29.0	6.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

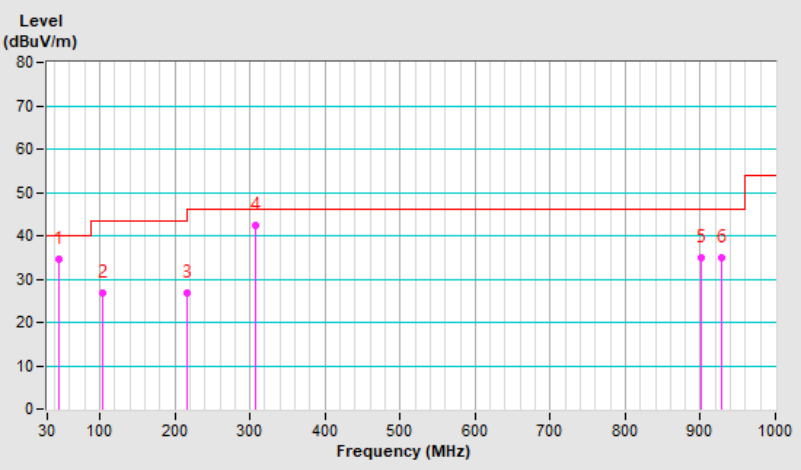


RF Mode	WCDMA Band 4	**Channel**	CH 1413：1732.6MHz
	Thread 900M		CH 0：906MHz
	BTLE-1M		CH 39：2480MHz
	BTLE-1M		CH 0：2402MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	QP: RB=120kHz, DET=Quasi-Peak

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	45.00	34.7 QP	40.0	-5.3	1.35 V	224	43.8	-9.1
2	103.25	26.8 QP	43.5	-16.7	1.45 V	271	39.6	-12.8
3	215.66	26.9 QP	43.5	-16.6	1.57 V	226	37.6	-10.7
4	308.00	42.5 QP	46.0	-3.5	1.83 V	138	48.5	-6.0
5	902.00	35.0 QP	46.0	-11.0	1.67 V	358	28.7	6.3
6	928.00	35.0 QP	46.0	-11.0	1.02 V	279	28.1	6.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



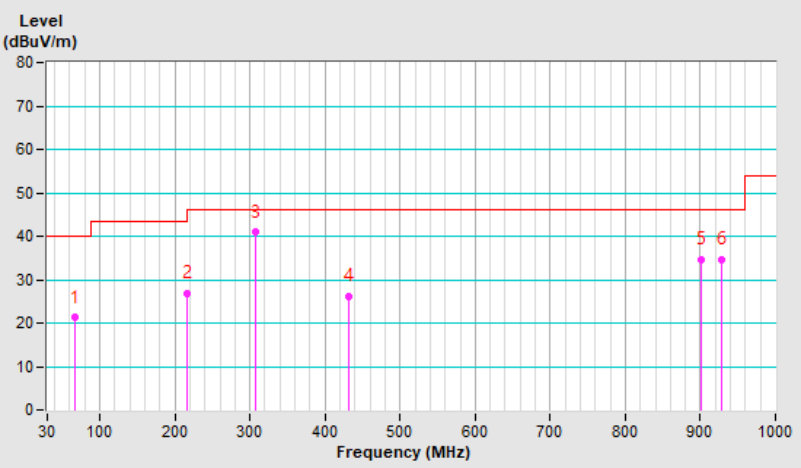
Mode G

RF Mode	Z-Wave	**Channel**	CH 0：908.4MHz
	Zigbee		CH 25：2475MHz
	802.11g		CH 1：2412MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	QP: RB=120kHz, DET=Quasi-Peak

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	66.42	21.2 QP	40.0	-18.8	1.28 H	152	31.4	-10.2
2	216.29	26.9 QP	46.0	-19.1	1.18 H	290	37.6	-10.7
3	308.00	40.9 QP	46.0	-5.1	1.52 H	144	46.9	-6.0
4	432.02	26.1 QP	46.0	-19.9	1.27 H	158	29.4	-3.3
5	902.00	34.5 QP	46.0	-11.5	1.57 H	221	28.2	6.3
6	928.00	34.6 QP	46.0	-11.4	1.74 H	360	27.7	6.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

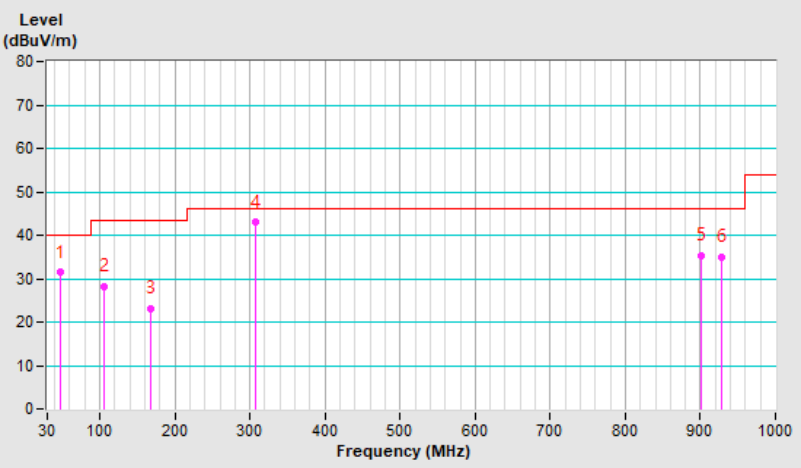


RF Mode	Z-Wave	**Channel**	CH 0：908.4MHz
	Zigbee		CH 25：2475MHz
	802.11g		CH 1：2412MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	QP: RB=120kHz, DET=Quasi-Peak

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	48.28	31.4 QP	40.0	-8.6	1.35 V	53	40.4	-9.0
2	105.56	28.1 QP	43.5	-15.4	1.18 V	301	40.6	-12.5
3	168.03	23.2 QP	43.5	-20.3	1.64 V	134	31.8	-8.6
4	308.00	42.9 QP	46.0	-3.1	1.36 V	251	48.9	-6.0
5	902.00	35.4 QP	46.0	-10.6	1.05 V	79	29.1	6.3
6	928.00	35.0 QP	46.0	-11.0	1.10 V	218	28.1	6.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



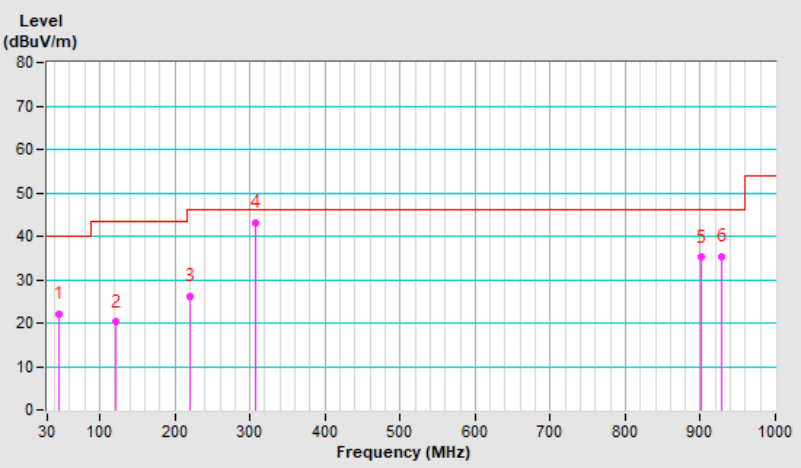
Mode H

RF Mode	Z-Wave	**Channel**	CH 0：908.4MHz
	Thread		CH 25：2475MHz
	802.11g		CH 1：2412MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	QP: RB=120kHz, DET=Quasi-Peak

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	45.08	22.1 QP	40.0	-17.9	1.28 H	99	31.2	-9.1
2	120.99	20.2 QP	43.5	-23.3	1.68 H	100	31.1	-10.9
3	220.02	26.2 QP	46.0	-19.8	1.51 H	273	36.8	-10.6
4	308.00	43.2 QP	46.0	-2.8	1.15 H	254	49.2	-6.0
5	902.00	35.1 QP	46.0	-10.9	1.83 H	321	28.8	6.3
6	928.00	35.2 QP	46.0	-10.8	2.51 H	244	28.3	6.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

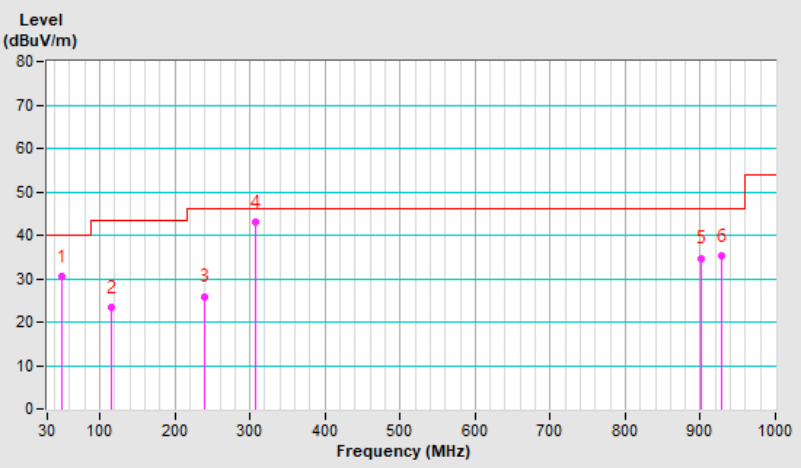


RF Mode	Z-Wave	**Channel**	CH 0：908.4MHz
	Thread		CH 25：2475MHz
	802.11g		CH 1：2412MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	QP: RB=120kHz, DET=Quasi-Peak

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	49.98	30.4 QP	40.0	-9.6	1.27 V	110	39.4	-9.0
2	115.17	23.3 QP	43.5	-20.2	1.36 V	332	34.8	-11.5
3	240.20	25.7 QP	46.0	-20.3	1.57 V	118	34.8	-9.1
4	308.00	42.9 QP	46.0	-3.1	1.87 V	251	48.9	-6.0
5	902.00	34.5 QP	46.0	-11.5	1.03 V	56	28.2	6.3
6	928.00	35.1 QP	46.0	-10.9	1.15 V	259	28.2	6.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



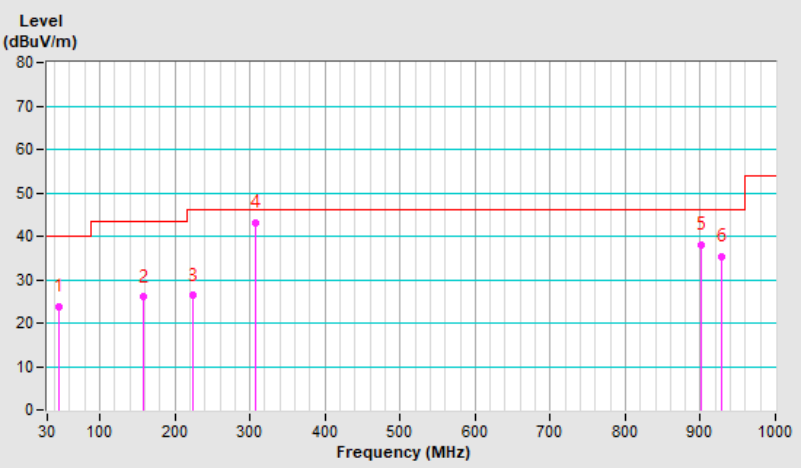
Mode I

RF Mode	Z-Wave	**Channel**	CH 0：908.4MHz
	BTLE-1M		CH 39：2480MHz
	802.11g		CH 1：2412MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	QP: RB=120kHz, DET=Quasi-Peak

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	45.42	23.7 QP	40.0	-16.3	1.35 H	180	32.8	-9.1
2	157.99	26.0 QP	43.5	-17.5	1.16 H	275	34.3	-8.3
3	223.32	26.3 QP	46.0	-19.7	1.09 H	278	37.0	-10.7
4	308.00	43.2 QP	46.0	-2.8	1.68 H	225	49.2	-6.0
5	902.00	37.9 QP	46.0	-8.1	1.94 H	152	31.6	6.3
6	928.00	35.4 QP	46.0	-10.6	1.05 H	161	28.5	6.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

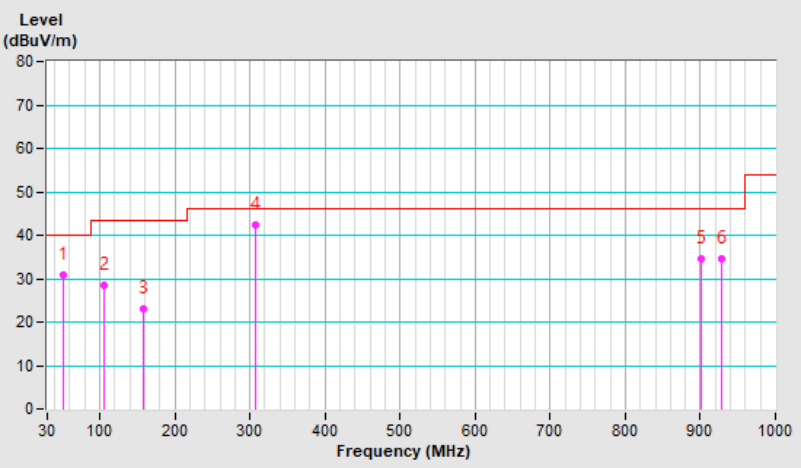


RF Mode	Z-Wave	**Channel**	CH 0：908.4MHz
	BTLE-1M		CH 39：2480MHz
	802.11g		CH 1：2412MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	QP: RB=120kHz, DET=Quasi-Peak

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	52.12	31.0 QP	40.0	-9.0	1.32 V	18	40.0	-9.0
2	106.48	28.5 QP	43.5	-15.0	1.15 V	288	40.8	-12.3
3	158.28	23.0 QP	43.5	-20.5	1.48 V	360	31.3	-8.3
4	308.00	42.5 QP	46.0	-3.5	1.21 V	254	48.5	-6.0
5	902.00	34.5 QP	46.0	-11.5	1.86 V	225	28.2	6.3
6	928.00	34.6 QP	46.0	-11.4	1.04 V	322	27.7	6.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



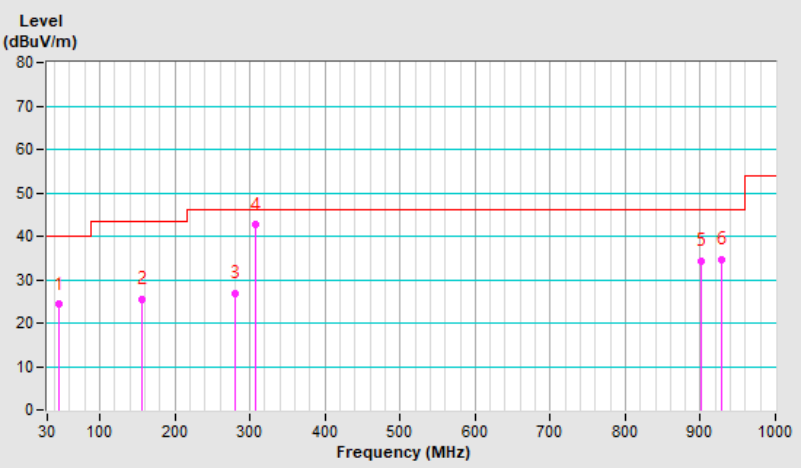
Mode J

RF Mode	Thread 900M	**Channel**	CH 0：906MHz
	Zigbee		CH 25：2475MHz
	802.11g		CH 1：2412MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	QP: RB=120kHz, DET=Quasi-Peak

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	45.08	24.3 QP	40.0	-15.7	1.15 H	360	33.4	-9.1
2	156.44	25.4 QP	43.5	-18.1	1.27 H	285	33.7	-8.3
3	280.41	26.8 QP	46.0	-19.2	1.31 H	149	33.7	-6.9
4	308.00	42.6 QP	46.0	-3.4	1.57 H	221	48.6	-6.0
5	902.00	34.4 QP	46.0	-11.6	2.05 H	316	28.1	6.3
6	928.00	34.7 QP	46.0	-11.3	1.11 H	111	27.8	6.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

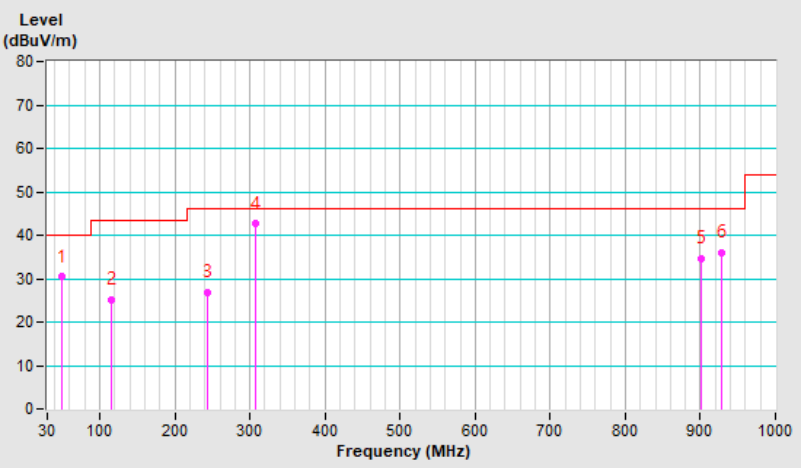


RF Mode	Thread 900M	**Channel**	CH 0：906MHz
	Zigbee		CH 25：2475MHz
	802.11g		CH 1：2412MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	QP: RB=120kHz, DET=Quasi-Peak

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	50.32	30.4 QP	40.0	-9.6	1.36 V	360	39.4	-9.0
2	115.46	25.1 QP	43.5	-18.4	1.42 V	201	36.6	-11.5
3	244.18	26.9 QP	46.0	-19.1	1.18 V	55	35.7	-8.8
4	308.00	42.6 QP	46.0	-3.4	1.51 V	224	48.6	-6.0
5	902.00	34.5 QP	46.0	-11.5	1.64 V	134	28.2	6.3
6	928.00	36.0 QP	46.0	-10.0	1.23 V	201	29.1	6.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



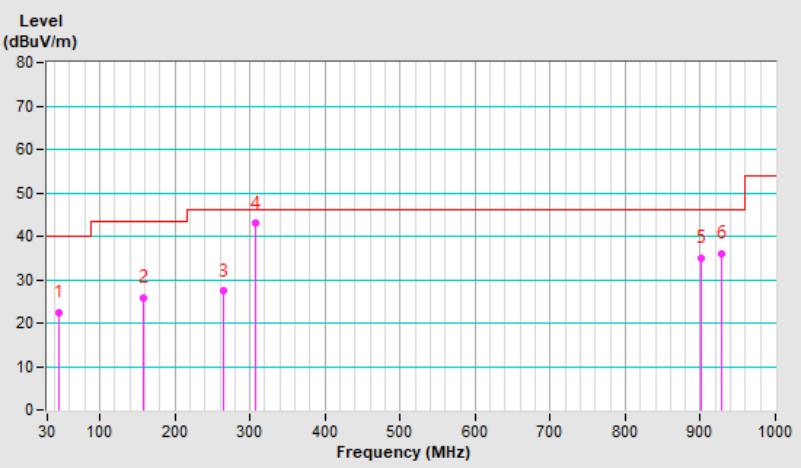
Mode K

RF Mode	Thread 900M	**Channel**	CH 0：906MHz
	Thread		CH 25：2475MHz
	802.11g		CH 1：2412MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	QP: RB=120kHz, DET=Quasi-Peak

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	44.84	22.5 QP	40.0	-17.5	1.16 H	65	31.7	-9.2
2	158.48	25.8 QP	43.5	-17.7	1.28 H	240	34.1	-8.3
3	263.96	27.3 QP	46.0	-18.7	1.35 H	152	35.1	-7.8
4	308.00	42.9 QP	46.0	-3.1	1.42 H	221	48.9	-6.0
5	902.00	34.9 QP	46.0	-11.1	1.72 H	6	28.6	6.3
6	928.00	35.9 QP	46.0	-10.1	1.35 H	262	29.0	6.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

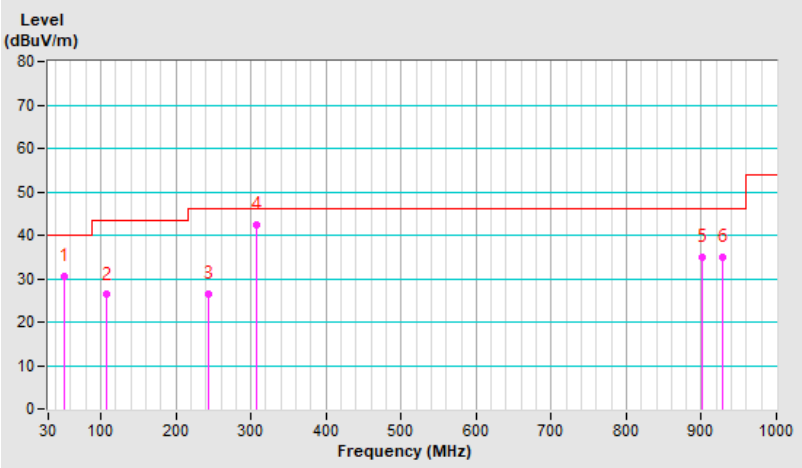


RF Mode	Thread 900M	**Channel**	CH 0：906MHz
	Thread		CH 25：2475MHz
	802.11g		CH 1：2412MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	QP: RB=120kHz, DET=Quasi-Peak

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	51.87	30.6 QP	40.0	-9.4	1.24 V	127	39.6	-9.0
2	108.52	26.3 QP	43.5	-17.2	1.16 V	251	38.3	-12.0
3	244.08	26.5 QP	46.0	-19.5	1.27 V	302	35.3	-8.8
4	308.00	42.5 QP	46.0	-3.5	2.21 V	138	48.5	-6.0
5	902.00	35.0 QP	46.0	-11.0	1.67 V	225	28.7	6.3
6	928.00	35.0 QP	46.0	-11.0	1.36 V	301	28.1	6.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



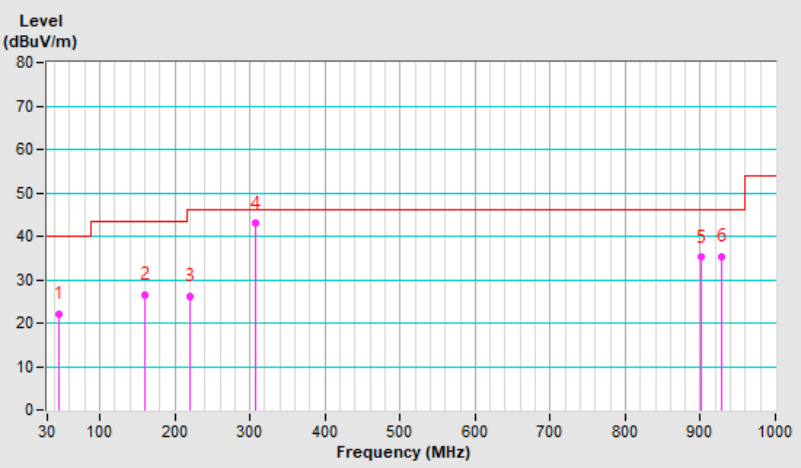
Mode L

RF Mode	Thread 900M	**Channel**	CH 0：906MHz
	BTLE-1M		CH 39：2480MHz
	802.11g		CH 1：2412MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	QP: RB=120kHz, DET=Quasi-Peak

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	45.08	22.1 QP	40.0	-17.9	1.11 H	79	31.2	-9.1
2	159.98	26.6 QP	43.5	-16.9	1.24 H	269	34.9	-8.3
3	220.02	26.2 QP	46.0	-19.8	1.32 H	273	36.8	-10.6
4	308.00	42.9 QP	46.0	-3.1	1.53 H	251	48.9	-6.0
5	902.00	35.1 QP	46.0	-10.9	1.83 H	55	28.8	6.3
6	928.00	35.2 QP	46.0	-10.8	1.91 H	211	28.3	6.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

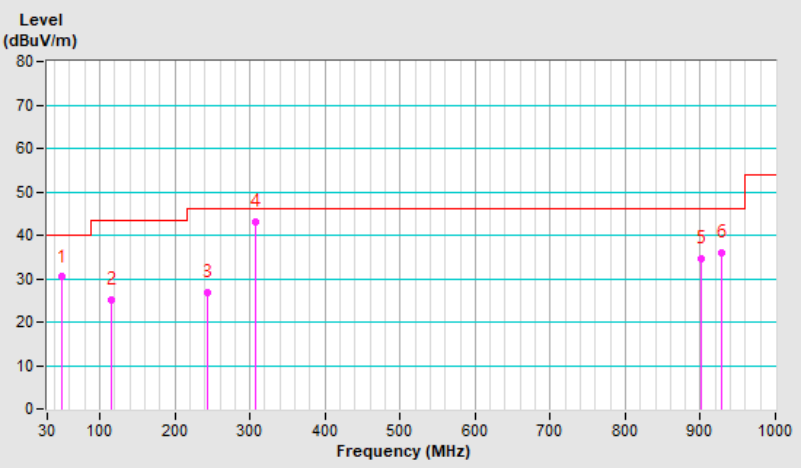


RF Mode	Thread 900M	**Channel**	CH 0：906MHz
	BTLE-1M		CH 39：2480MHz
	802.11g		CH 1：2412MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	QP: RB=120kHz, DET=Quasi-Peak

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	50.32	30.4 QP	40.0	-9.6	1.25 V	360	39.4	-9.0
2	115.46	25.1 QP	43.5	-18.4	1.24 V	201	36.6	-11.5
3	244.18	26.9 QP	46.0	-19.1	1.32 V	55	35.7	-8.8
4	308.00	43.1 QP	46.0	-2.9	1.46 V	251	49.1	-6.0
5	902.00	34.5 QP	46.0	-11.5	1.15 V	251	28.2	6.3
6	928.00	36.0 QP	46.0	-10.0	1.22 V	105	29.1	6.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



4.2 Radiated Emissions above 1 GHz

4.2.1 Limits

Radio 2: For Z-Wave

The field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following

Fundamental Frequency	Field Strength of Fundamental (millivolts/meter)	Field Strength of Harmonics (microvolts/meter)
902 ~ 928 MHz	50	500

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits as below table, whichever is the lesser attenuation

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
Above 960	500	3

Notes:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20 dB under any condition of modulation.

Radio 2: For Thread 900M ; Radio 3: For Thread, Zigbee, BTLE ; Radio 4: WLAN, BTLE

Radiated emissions above 1 GHz which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20 dB below the highest level of the desired power:

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
Above 960	500	3

Notes:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20 dB under any condition of modulation.

4.2.2 Test Instruments

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Band Pass Filter Micro-Tronics	BRM17690	005	2023/5/25	2024/5/24
Boresight antenna tower fixture BV	BAF-02	6	N/A	N/A
High Pass Filter Wainwright	WHK 3.1/18G-10SS	SN 8	2023/5/25	2024/5/24
Horn Antenna EMCO	3115	00028257	2023/11/12	2024/11/11
Horn Antenna ETS-Lindgren	3117-PA	00215857	2023/11/12	2024/11/11
Horn Antenna Schwarzbeck	BBHA 9170	212	2023/10/16	2024/10/15
		BBHA9170241	2023/10/16	2024/10/15
MXE EMI Receiver Agilent	N9038A	MY51210129	2023/3/24	2024/3/23
		MY51210137	2023/6/5	2024/6/4
Notch Filter Micro-Tronics	BRC50703-01	010	2023/5/25	2024/5/24
Preamplifier EMCI	EMC0126545	980076	2023/2/16	2024/2/15
	EMC184045B	980175	2023/9/2	2024/9/1
		980235	2023/2/16	2024/2/15
Preamplifier HP	8449B	3008A01201	2023/2/16	2024/2/15
RF Coaxial Cable EMCI	EMC102-KM-KM-1000	200310	2023/3/12	2024/3/11
	EMC104	190801	2023/9/13	2024/9/12
		190804	2023/9/13	2024/9/12
RF Coaxial Cable HUBER+SUHNER	SF-104	Cable-CH6-01	2023/9/13	2024/9/12
Signal Analyzer R&S	FSV40	101042	2023/9/5	2024/9/4
		101544	2023/5/9	2024/5/8
Software BVADT	Radiated_V7.7.1.1.1	N/A	N/A	N/A
Tower ADT	AT100	0306	N/A	N/A
Turn Table ADT	TT100	0306	N/A	N/A

Notes:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA
2. The test was performed in Linkou 966 Chamber 6 (CH 6).
3. Tested Date: 2023/11/24 ~ 2023/12/1

4.2.3 Test Procedures

a. The EUT was placed on the top of a rotating table 1.5 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

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

c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

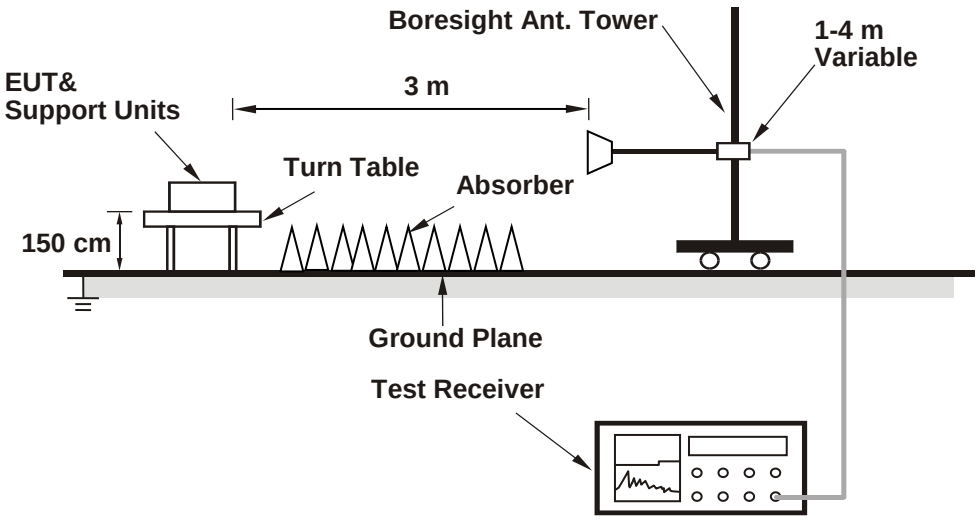
Notes:

1. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) and Average detection (AV) at frequency above 1 GHz.
2. According to ANSI C63.10 section 6.6.4 and 4.1.4.2.2. For fundamental and harmonic signal measurement, according to ANSI C63.10 section 7.5, the average value = peak value + duty cycle correction factor. For duty cycle correction factor values, see the Test Signal Duty Cycle section in this report.
3. All modes of operation were investigated and the worst-case emissions are reported.

4.2.4 Deviation From Test Standard

No deviation.

4.2.5 Test Setup



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.2.6 EUT Operating Condition

Same as item 4.1.6.

4.2.7 Test Results

Mode A

RF Mode	WCDMA Band 4	**Channel**	CH 1413：1732.6MHz
	Z-Wave		CH 0：908.4MHz
	Zigbee		CH 25：2475MHz
	BTLE-1M		CH 0：2402MHz
Frequency Range	1 GHz ~ 25 GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1155.10	46.1 PK	74.0	-27.9	1.36 H	285	54.2	-8.1
2	1155.10	35.0 AV	54.0	-19.0	1.36 H	285	43.1	-8.1
3	2390.00	55.6 PK	74.0	-18.4	1.45 H	322	56.8	-1.2
4	2390.00	46.9 AV	54.0	-7.1	1.45 H	322	48.1	-1.2
5	2483.50	65.6 PK	74.0	-8.4	1.45 H	322	66.6	-1.0
6	2483.50	50.2 AV	54.0	-3.8	1.45 H	322	51.2	-1.0
7	2725.20	44.0 PK	74.0	-30.0	1.38 H	291	44.0	0.0
8	2725.20	35.9 AV	54.0	-18.1	1.38 H	291	35.9	0.0
9	4804.00	47.9 PK	74.0	-26.1	1.76 H	295	39.9	8.0
10	4804.00	37.4 AV	54.0	-16.6	1.76 H	295	29.4	8.0
11	4950.00	54.3 PK	74.0	-19.7	2.97 H	346	46.4	7.9
12	4950.00	46.2 AV	54.0	-7.8	2.97 H	346	38.3	7.9
13	7425.00	56.8 PK	74.0	-17.2	1.00 H	49	44.3	12.5
14	7425.00	47.1 AV	54.0	-6.9	1.00 H	49	34.6	12.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1155.10	43.8 PK	74.0	-30.2	1.68 V	95	51.9	-8.1
2	1155.10	33.5 AV	54.0	-20.5	1.68 V	95	41.6	-8.1
3	2390.00	53.9 PK	74.0	-20.1	1.51 V	66	55.1	-1.2
4	2390.00	44.2 AV	54.0	-9.8	1.51 V	66	45.4	-1.2
5	2483.50	61.7 PK	74.0	-12.3	1.51 V	66	62.7	-1.0
6	2483.50	47.8 AV	54.0	-6.2	1.51 V	66	48.8	-1.0
7	2725.20	42.9 PK	74.0	-31.1	1.24 V	135	42.9	0.0
8	2725.20	34.8 AV	54.0	-19.2	1.24 V	135	34.8	0.0
9	4804.00	47.4 PK	74.0	-26.6	2.45 V	132	39.4	8.0
10	4804.00	37.5 AV	54.0	-16.5	2.45 V	132	29.5	8.0
11	4950.00	56.2 PK	74.0	-17.8	2.61 V	307	48.3	7.9
12	4950.00	49.2 AV	54.0	-4.8	2.61 V	307	41.3	7.9
13	7425.00	60.3 PK	74.0	-13.7	2.52 V	286	47.8	12.5
14	7425.00	53.3 AV	54.0	-0.7	2.52 V	286	40.8	12.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

Mode B

RF Mode		Channel	
	WCDMA Band 4		CH 1413：1732.6MHz
	Z-Wave		CH 0：908.4MHz
	Thread		CH 25：2475MHz
	BTLE-1M		CH 0：2402MHz
Frequency Range	1 GHz ~ 25 GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1155.10	46.4 PK	74.0	-27.6	1.32 H	189	54.5	-8.1
2	1155.10	35.3 AV	54.0	-18.7	1.32 H	189	43.4	-8.1
3	2390.00	53.6 PK	74.0	-20.4	1.48 H	346	54.8	-1.2
4	2390.00	43.4 AV	54.0	-10.6	1.48 H	346	44.6	-1.2
5	2483.50	69.4 PK	74.0	-4.6	2.21 H	235	70.4	-1.0
6	2483.50	51.3 AV	54.0	-2.7	2.21 H	235	52.3	-1.0
7	2725.20	43.9 PK	74.0	-30.1	1.41 H	128	43.9	0.0
8	2725.20	35.8 AV	54.0	-18.2	1.41 H	128	35.8	0.0
9	4804.00	48.4 PK	74.0	-25.6	1.77 H	323	40.4	8.0
10	4804.00	38.5 AV	54.0	-15.5	1.77 H	323	30.5	8.0
11	4950.00	56.0 PK	74.0	-18.0	1.42 H	152	48.1	7.9
12	4950.00	43.3 AV	54.0	-10.7	1.42 H	152	35.4	7.9
13	7425.00	57.4 PK	74.0	-16.6	1.73 H	288	44.9	12.5
14	7425.00	45.8 AV	54.0	-8.2	1.73 H	288	33.3	12.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1155.10	44.1 PK	74.0	-29.9	2.28 V	194	52.2	-8.1
2	1155.10	33.8 AV	54.0	-20.2	2.28 V	194	41.9	-8.1
3	2390.00	53.2 PK	74.0	-20.8	2.86 V	43	54.4	-1.2
4	2390.00	42.8 AV	54.0	-11.2	2.86 V	43	44.0	-1.2
5	2483.50	67.0 PK	74.0	-7.0	3.05 V	238	68.0	-1.0
6	2483.50	48.7 AV	54.0	-5.3	3.05 V	238	49.7	-1.0
7	2725.20	42.8 PK	74.0	-31.2	1.64 V	138	42.8	0.0
8	2725.20	34.7 AV	54.0	-19.3	1.64 V	138	34.7	0.0
9	4804.00	47.9 PK	74.0	-26.1	2.53 V	142	39.9	8.0
10	4804.00	38.0 AV	54.0	-16.0	2.53 V	142	30.0	8.0
11	4950.00	55.6 PK	74.0	-18.4	1.93 V	123	47.7	7.9
12	4950.00	44.2 AV	54.0	-9.8	1.93 V	123	36.3	7.9
13	7425.00	60.3 PK	74.0	-13.7	2.33 V	211	47.8	12.5
14	7425.00	49.3 AV	54.0	-4.7	2.33 V	211	36.8	12.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

Mode C

RF Mode	WCDMA Band 4	Channel	CH 1413：1732.6MHz
	Z-Wave		CH 0：908.4MHz
	BTLE-1M		CH 39：2480MHz
	BTLE-1M		CH 0：2402MHz
Frequency Range	1 GHz ~ 25 GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1155.10	46.6 PK	74.0	-27.4	1.28 H	178	54.7	-8.1
2	1155.10	35.5 AV	54.0	-18.5	1.28 H	178	43.6	-8.1
3	2390.00	52.8 PK	74.0	-21.2	3.05 H	32	54.0	-1.2
4	2390.00	42.4 AV	54.0	-11.6	3.05 H	32	43.6	-1.2
5	2483.50	62.0 PK	74.0	-12.0	1.08 H	210	63.0	-1.0
6	2483.50	48.5 AV	54.0	-5.5	1.08 H	210	49.5	-1.0
7	2725.20	44.1 PK	74.0	-29.9	1.26 H	114	44.1	0.0
8	2725.20	36.0 AV	54.0	-18.0	1.26 H	114	36.0	0.0
9	4804.00	48.0 PK	74.0	-26.0	1.52 H	313	40.0	8.0
10	4804.00	38.1 AV	54.0	-15.9	1.52 H	313	30.1	8.0
11	4960.00	56.8 PK	74.0	-17.2	2.56 H	111	48.9	7.9
12	4960.00	50.1 AV	54.0	-3.9	2.56 H	111	42.2	7.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1155.10	44.3 PK	74.0	-29.7	2.03 V	254	52.4	-8.1
2	1155.10	34.0 AV	54.0	-20.0	2.03 V	254	42.1	-8.1
3	2390.00	52.8 PK	74.0	-21.2	2.74 V	58	54.0	-1.2
4	2390.00	42.4 AV	54.0	-11.6	2.74 V	58	43.6	-1.2
5	2483.50	62.0 PK	74.0	-12.0	1.10 V	237	63.0	-1.0
6	2483.50	48.5 AV	54.0	-5.5	1.10 V	237	49.5	-1.0
7	2725.20	43.0 PK	74.0	-31.0	1.66 V	124	43.0	0.0
8	2725.20	34.9 AV	54.0	-19.1	1.66 V	124	34.9	0.0
9	4804.00	47.5 PK	74.0	-26.5	2.55 V	163	39.5	8.0
10	4804.00	37.6 AV	54.0	-16.4	2.55 V	163	29.6	8.0
11	4960.00	56.8 PK	74.0	-17.2	2.53 V	114	48.9	7.9
12	4960.00	50.1 AV	54.0	-3.9	2.53 V	114	42.2	7.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

Mode D

RF Mode	WCDMA Band 4	Channel	CH 1413：1732.6MHz
	Thread 900M		CH 0：906MHz
	Zigbee		CH 25：2475MHz
	BTLE-1M		CH 0：2402MHz
Frequency Range	1 GHz ~ 25 GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1155.10	46.8 PK	74.0	-27.2	1.86 H	125	54.9	-8.1
2	1155.10	35.7 AV	54.0	-18.3	1.86 H	125	43.8	-8.1
3	2390.00	53.5 PK	74.0	-20.5	1.40 H	325	54.7	-1.2
4	2390.00	43.3 AV	54.0	-10.7	1.40 H	325	44.5	-1.2
5	2483.50	69.2 PK	74.0	-4.8	2.17 H	325	70.2	-1.0
6	2483.50	51.4 AV	54.0	-2.6	2.17 H	325	52.4	-1.0
7	2718.00	57.6 PK	74.0	-16.4	2.86 H	254	57.6	0.0
8	2718.00	53.4 AV	54.0	-0.6	2.86 H	254	53.4	0.0
9	4804.00	48.3 PK	74.0	-25.7	1.44 H	279	40.3	8.0
10	4804.00	38.4 AV	54.0	-15.6	1.44 H	279	30.4	8.0
11	4950.00	56.1 PK	74.0	-17.9	1.61 H	179	48.2	7.9
12	4950.00	43.4 AV	54.0	-10.6	1.61 H	179	35.5	7.9
13	7425.00	57.7 PK	74.0	-16.3	1.77 H	263	45.2	12.5
14	7425.00	46.0 AV	54.0	-8.0	1.77 H	263	33.5	12.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1155.10	44.5 PK	74.0	-29.5	2.58 V	124	52.6	-8.1
2	1155.10	34.2 AV	54.0	-19.8	2.58 V	124	42.3	-8.1
3	2390.00	53.1 PK	74.0	-20.9	2.99 V	20	54.3	-1.2
4	2390.00	42.7 AV	54.0	-11.3	2.99 V	20	43.9	-1.2
5	2483.50	67.2 PK	74.0	-6.8	3.58 V	295	68.2	-1.0
6	2483.50	49.0 AV	54.0	-5.0	3.58 V	295	50.0	-1.0
7	2718.00	58.0 PK	74.0	-16.0	2.99 V	143	58.0	0.0
8	**2718.00**	**53.9 AV**	**54.0**	**-0.1**	**2.99 V**	**143**	**53.9**	**0.0**
9	4804.00	47.8 PK	74.0	-26.2	2.30 V	161	39.8	8.0
10	4804.00	37.9 AV	54.0	-16.1	2.30 V	161	29.9	8.0
11	4950.00	55.7 PK	74.0	-18.3	2.16 V	134	47.8	7.9
12	4950.00	44.3 AV	54.0	-9.7	2.16 V	134	36.4	7.9
13	7425.00	60.4 PK	74.0	-13.6	2.66 V	291	47.9	12.5
14	7425.00	49.5 AV	54.0	-4.5	2.66 V	291	37.0	12.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

Mode E

RF Mode	WCDMA Band 4	Channel	CH 1413：1732.6MHz
	Thread 900M		CH 0：906MHz
	Thread		CH 25：2475MHz
	BTLE-1M		CH 0：2402MHz
Frequency Range	1 GHz ~ 25 GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1155.10	47.0 PK	74.0	-27.0	1.35 H	147	55.1	-8.1
2	1155.10	35.9 AV	54.0	-18.1	1.35 H	147	44.0	-8.1
3	2390.00	53.4 PK	74.0	-20.6	1.50 H	343	54.6	-1.2
4	2390.00	43.2 AV	54.0	-10.8	1.50 H	343	44.4	-1.2
5	2483.50	68.9 PK	74.0	-5.1	2.38 H	257	69.9	-1.0
6	2483.50	51.1 AV	54.0	-2.9	2.38 H	257	52.1	-1.0
7	2718.00	57.6 PK	74.0	-16.4	2.81 H	255	57.6	0.0
8	2718.00	53.4 AV	54.0	-0.6	2.81 H	255	53.4	0.0
9	4804.00	48.2 PK	74.0	-25.8	1.69 H	295	40.2	8.0
10	4804.00	38.3 AV	54.0	-15.7	1.69 H	295	30.3	8.0
11	4950.00	55.8 PK	74.0	-18.2	1.68 H	200	47.9	7.9
12	4950.00	43.1 AV	54.0	-10.9	1.68 H	200	35.2	7.9
13	7425.00	57.2 PK	74.0	-16.8	1.81 H	239	44.7	12.5
14	7425.00	45.6 AV	54.0	-8.4	1.81 H	239	33.1	12.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1155.10	44.7 PK	74.0	-29.3	1.88 V	233	52.8	-8.1
2	1155.10	34.4 AV	54.0	-19.6	1.88 V	233	42.5	-8.1
3	2390.00	53.0 PK	74.0	-21.0	2.97 V	18	54.2	-1.2
4	2390.00	42.6 AV	54.0	-11.4	2.97 V	18	43.8	-1.2
5	2483.50	66.8 PK	74.0	-7.2	3.52 V	296	67.8	-1.0
6	2483.50	48.5 AV	54.0	-5.5	3.52 V	296	49.5	-1.0
7	2718.00	58.0 PK	74.0	-16.0	2.98 V	177	58.0	0.0
8	**2718.00**	**53.9 AV**	**54.0**	**-0.1**	**2.98 V**	**177**	**53.9**	**0.0**
9	4804.00	47.7 PK	74.0	-26.3	2.51 V	160	39.7	8.0
10	4804.00	37.8 AV	54.0	-16.2	2.51 V	160	29.8	8.0
11	4950.00	55.4 PK	74.0	-18.6	2.29 V	137	47.5	7.9
12	4950.00	44.0 AV	54.0	-10.0	2.29 V	137	36.1	7.9
13	7425.00	60.1 PK	74.0	-13.9	2.89 V	263	47.6	12.5
14	7425.00	49.1 AV	54.0	-4.9	2.89 V	263	36.6	12.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

Mode F

RF Mode	WCDMA Band 4	Channel	CH 1413：1732.6MHz
	Thread 900M		CH 0：906MHz
	BTLE-1M		CH 39：2480MHz
	BTLE-1M		CH 0：2402MHz
Frequency Range	1 GHz ~ 25 GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1155.10	46.5 PK	74.0	-27.5	1.22 H	158	54.6	-8.1
2	1155.10	35.4 AV	54.0	-18.6	1.22 H	158	43.5	-8.1
3	2390.00	53.1 PK	74.0	-20.9	1.57 H	323	54.3	-1.2
4	2390.00	42.9 AV	54.0	-11.1	1.57 H	323	44.1	-1.2
5	2483.50	61.9 PK	74.0	-12.1	1.09 H	235	62.9	-1.0
6	2483.50	48.4 AV	54.0	-5.6	1.09 H	235	49.4	-1.0
7	2718.00	57.5 PK	74.0	-16.5	3.10 H	299	57.5	0.0
8	2718.00	53.3 AV	54.0	-0.7	3.10 H	299	53.3	0.0
9	4804.00	47.9 PK	74.0	-26.1	1.72 H	291	39.9	8.0
10	4804.00	38.0 AV	54.0	-16.0	1.72 H	291	30.0	8.0
11	4960.00	56.7 PK	74.0	-17.3	2.72 H	110	48.8	7.9
12	4960.00	50.0 AV	54.0	-4.0	2.72 H	110	42.1	7.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1155.10	44.2 PK	74.0	-29.8	2.13 V	122	52.3	-8.1
2	1155.10	33.9 AV	54.0	-20.1	2.13 V	122	42.0	-8.1
3	2390.00	52.7 PK	74.0	-21.3	2.82 V	35	53.9	-1.2
4	2390.00	42.3 AV	54.0	-11.7	2.82 V	35	43.5	-1.2
5	2483.50	58.1 PK	74.0	-15.9	1.26 V	137	59.1	-1.0
6	2483.50	44.7 AV	54.0	-9.3	1.26 V	137	45.7	-1.0
7	2718.00	57.9 PK	74.0	-16.1	3.40 V	172	57.9	0.0
8	2718.00	53.8 AV	54.0	-0.2	3.40 V	172	53.8	0.0
9	4804.00	47.4 PK	74.0	-26.6	2.48 V	169	39.4	8.0
10	4804.00	37.5 AV	54.0	-16.5	2.48 V	169	29.5	8.0
11	4960.00	57.5 PK	74.0	-16.5	3.63 V	89	49.6	7.9
12	4960.00	52.1 AV	54.0	-1.9	3.63 V	89	44.2	7.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

Mode G

RF Mode	Z-Wave	Channel	CH 0：908.4MHz
	Zigbee		CH 25：2475MHz
	802.11g		CH 1：2412MHz
Frequency Range	1 GHz ~ 25 GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	73.5 PK	74.0	-0.5	1.85 H	306	74.7	-1.2
2	2390.00	47.8 AV	54.0	-6.2	1.85 H	306	49.0	-1.2
3	2483.50	70.3 PK	74.0	-3.7	1.92 H	283	71.3	-1.0
4	2483.50	52.1 AV	54.0	-1.9	1.92 H	283	53.1	-1.0
5	2725.20	44.7 PK	74.0	-29.3	1.35 H	258	44.7	0.0
6	2725.20	36.6 AV	54.0	-17.4	1.35 H	258	36.6	0.0
7	4824.00	51.5 PK	74.0	-22.5	2.33 H	154	43.5	8.0
8	4824.00	38.4 AV	54.0	-15.6	2.33 H	154	30.4	8.0
9	4950.00	57.0 PK	74.0	-17.0	1.47 H	192	49.1	7.9
10	4950.00	45.4 AV	54.0	-8.6	1.47 H	192	37.5	7.9
11	7425.00	58.8 PK	74.0	-15.2	1.78 H	266	46.3	12.5
12	7425.00	47.4 AV	54.0	-6.6	1.78 H	266	34.9	12.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	72.4 PK	74.0	-1.6	2.64 V	301	73.6	-1.2
2	2390.00	45.4 AV	54.0	-8.6	2.64 V	301	46.6	-1.2
3	2483.50	68.4 PK	74.0	-5.6	2.99 V	257	69.4	-1.0
4	2483.50	50.6 AV	54.0	-3.4	2.99 V	257	51.6	-1.0
5	2725.20	43.6 PK	74.0	-30.4	1.14 V	161	43.6	0.0
6	2725.20	35.5 AV	54.0	-18.5	1.14 V	161	35.5	0.0
7	4824.00	50.3 PK	74.0	-23.7	1.98 V	236	42.3	8.0
8	4824.00	37.4 AV	54.0	-16.6	1.98 V	236	29.4	8.0
9	4950.00	56.4 PK	74.0	-17.6	2.35 V	132	48.5	7.9
10	4950.00	44.7 AV	54.0	-9.3	2.35 V	132	36.8	7.9
11	7425.00	62.0 PK	74.0	-12.0	2.87 V	311	49.5	12.5
12	7425.00	51.3 AV	54.0	-2.7	2.87 V	311	38.8	12.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

Mode H

RF Mode	Z-Wave	Channel	CH 0：908.4MHz
	Thread		CH 25：2475MHz
	802.11g		CH 1：2412MHz
Frequency Range	1 GHz ~ 25 GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	73.6 PK	74.0	-0.4	1.44 H	300	74.8	-1.2
2	2390.00	47.9 AV	54.0	-6.1	1.44 H	300	49.1	-1.2
3	2483.50	69.2 PK	74.0	-4.8	1.95 H	249	70.2	-1.0
4	2483.50	51.3 AV	54.0	-2.7	1.95 H	249	52.3	-1.0
5	2725.20	44.5 PK	74.0	-29.5	1.11 H	259	44.5	0.0
6	2725.20	36.4 AV	54.0	-17.6	1.11 H	259	36.4	0.0
7	4824.00	50.8 PK	74.0	-23.2	2.73 H	186	42.8	8.0
8	4824.00	37.7 AV	54.0	-16.3	2.73 H	186	29.7	8.0
9	4950.00	56.5 PK	74.0	-17.5	1.68 H	171	48.6	7.9
10	4950.00	43.8 AV	54.0	-10.2	1.68 H	171	35.9	7.9
11	7425.00	57.8 PK	74.0	-16.2	1.82 H	238	45.3	12.5
12	7425.00	46.2 AV	54.0	-7.8	1.82 H	238	33.7	12.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	72.5 PK	74.0	-1.5	2.38 V	243	73.7	-1.2
2	2390.00	45.5 AV	54.0	-8.5	2.38 V	243	46.7	-1.2
3	2483.50	67.5 PK	74.0	-6.5	3.16 V	253	68.5	-1.0
4	2483.50	49.2 AV	54.0	-4.8	3.16 V	253	50.2	-1.0
5	2725.20	43.4 PK	74.0	-30.6	1.24 V	158	43.4	0.0
6	2725.20	35.3 AV	54.0	-18.7	1.24 V	158	35.3	0.0
7	4824.00	49.7 PK	74.0	-24.3	2.28 V	231	41.7	8.0
8	4824.00	36.8 AV	54.0	-17.2	2.28 V	231	28.8	8.0
9	4950.00	56.2 PK	74.0	-17.8	2.01 V	124	48.3	7.9
10	4950.00	44.8 AV	54.0	-9.2	2.01 V	124	36.9	7.9
11	7425.00	60.7 PK	74.0	-13.3	2.68 V	230	48.2	12.5
12	7425.00	49.7 AV	54.0	-4.3	2.68 V	230	37.2	12.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

Mode I

RF Mode	Z-Wave	Channel	CH 0：908.4MHz
	BTLE-1M		CH 39：2480MHz
	802.11g		CH 1：2412MHz
Frequency Range	1 GHz ~ 25 GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	73.5 PK	74.0	-0.5	1.49 H	352	74.7	-1.2
2	2390.00	47.8 AV	54.0	-6.2	1.49 H	352	49.0	-1.2
3	2483.50	63.7 PK	74.0	-10.3	1.13 H	235	64.7	-1.0
4	2483.50	50.2 AV	54.0	-3.8	1.13 H	235	51.2	-1.0
5	2725.20	44.4 PK	74.0	-29.6	1.42 H	236	44.4	0.0
6	2725.20	36.3 AV	54.0	-17.7	1.42 H	236	36.3	0.0
7	4824.00	51.6 PK	74.0	-22.4	2.88 H	158	43.6	8.0
8	4824.00	38.5 AV	54.0	-15.5	2.88 H	158	30.5	8.0
9	4960.00	58.5 PK	74.0	-15.5	2.54 H	123	50.6	7.9
10	4960.00	51.8 AV	54.0	-2.2	2.54 H	123	43.9	7.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	73.3 PK	74.0	-0.7	2.61 V	302	74.5	-1.2
2	2390.00	46.3 AV	54.0	-7.7	2.61 V	302	47.5	-1.2
3	2483.50	59.9 PK	74.0	-14.1	1.35 V	142	60.9	-1.0
4	2483.50	46.5 AV	54.0	-7.5	1.35 V	142	47.5	-1.0
5	2725.20	43.3 PK	74.0	-30.7	1.27 V	159	43.3	0.0
6	2725.20	35.2 AV	54.0	-18.8	1.27 V	159	35.2	0.0
7	4824.00	50.5 PK	74.0	-23.5	1.94 V	231	42.5	8.0
8	4824.00	37.6 AV	54.0	-16.4	1.94 V	231	29.6	8.0
9	4960.00	58.3 PK	74.0	-15.7	3.36 V	88	50.4	7.9
10	4960.00	52.9 AV	54.0	-1.1	3.36 V	88	45.0	7.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

Mode J

RF Mode	Thread 900M	Channel	CH 0：906MHz
	Zigbee		CH 25：2475MHz
	802.11g		CH 1：2412MHz
Frequency Range	1 GHz ~ 25 GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	73.6 PK	74.0	-0.4	1.71 H	318	74.8	-1.2
2	2390.00	47.9 AV	54.0	-6.1	1.71 H	318	49.1	-1.2
3	2483.50	69.3 PK	74.0	-4.7	1.95 H	316	70.3	-1.0
4	2483.50	51.5 AV	54.0	-2.5	1.95 H	316	52.5	-1.0
5	2718.00	57.7 PK	74.0	-16.3	2.86 H	271	57.7	0.0
6	2718.00	53.5 AV	54.0	-0.5	2.86 H	271	53.5	0.0
7	4824.00	50.8 PK	74.0	-23.2	2.54 H	163	42.8	8.0
8	4824.00	37.7 AV	54.0	-16.3	2.54 H	163	29.7	8.0
9	4950.00	56.3 PK	74.0	-17.7	1.63 H	190	48.4	7.9
10	4950.00	43.6 AV	54.0	-10.4	1.63 H	190	35.7	7.9
11	7425.00	57.7 PK	74.0	-16.3	1.48 H	239	45.2	12.5
12	7425.00	46.0 AV	54.0	-8.0	1.48 H	239	33.5	12.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	72.5 PK	74.0	-1.5	2.55 V	306	73.7	-1.2
2	2390.00	45.5 AV	54.0	-8.5	2.55 V	306	46.7	-1.2
3	2483.50	67.3 PK	74.0	-6.7	3.03 V	258	68.3	-1.0
4	2483.50	49.1 AV	54.0	-4.9	3.03 V	258	50.1	-1.0
5	2718.00	58.0 PK	74.0	-16.0	2.89 V	187	58.0	0.0
6	**2718.00**	**53.9 AV**	**54.0**	**-0.1**	**2.89 V**	**187**	**53.9**	**0.0**
7	4824.00	49.7 PK	74.0	-24.3	1.99 V	228	41.7	8.0
8	4824.00	36.8 AV	54.0	-17.2	1.99 V	228	28.8	8.0
9	4950.00	55.9 PK	74.0	-18.1	2.17 V	124	48.0	7.9
10	4950.00	43.5 AV	54.0	-10.5	2.17 V	124	35.6	7.9
11	7425.00	60.4 PK	74.0	-13.6	2.45 V	263	47.9	12.5
12	7425.00	49.5 AV	54.0	-4.5	2.45 V	263	37.0	12.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

Mode K

RF Mode	Thread 900M	Channel	CH 0：906MHz
	Thread		CH 25：2475MHz
	802.11g		CH 1：2412MHz
Frequency Range	1 GHz ~ 25 GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	73.5 PK	74.0	-0.5	1.10 H	45	74.7	-1.2
2	2390.00	47.8 AV	54.0	-6.2	1.10 H	45	49.0	-1.2
3	2483.50	68.5 PK	74.0	-5.5	1.90 H	28	69.5	-1.0
4	2483.50	50.7 AV	54.0	-3.3	1.90 H	28	51.7	-1.0
5	2718.00	57.6 PK	74.0	-16.4	2.86 H	279	57.6	0.0
6	2718.00	53.4 AV	54.0	-0.6	2.86 H	279	53.4	0.0
7	4824.00	49.7 PK	74.0	-24.3	2.82 H	194	41.7	8.0
8	4824.00	36.6 AV	54.0	-17.4	2.82 H	194	28.6	8.0
9	4950.00	55.5 PK	74.0	-18.5	1.94 H	217	47.6	7.9
10	4950.00	42.8 AV	54.0	-11.2	1.94 H	217	34.9	7.9
11	7425.00	56.7 PK	74.0	-17.3	1.03 H	39	44.2	12.5
12	7425.00	45.1 AV	54.0	-8.9	1.03 H	39	32.6	12.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	72.4 PK	74.0	-1.6	2.56 V	260	73.6	-1.2
2	2390.00	45.4 AV	54.0	-8.6	2.56 V	260	46.6	-1.2
3	2483.50	66.4 PK	74.0	-7.6	3.15 V	280	67.4	-1.0
4	2483.50	48.1 AV	54.0	-5.9	3.15 V	280	49.1	-1.0
5	2718.00	58.0 PK	74.0	-16.0	3.09 V	188	58.0	0.0
6	**2718.00**	**53.9 AV**	**54.0**	**-0.1**	**3.09 V**	**188**	**53.9**	**0.0**
7	4824.00	48.6 PK	74.0	-25.4	2.35 V	278	40.6	8.0
8	4824.00	35.7 AV	54.0	-18.3	2.35 V	278	27.7	8.0
9	4950.00	55.1 PK	74.0	-18.9	1.94 V	127	47.2	7.9
10	4950.00	43.8 AV	54.0	-10.2	1.94 V	127	35.9	7.9
11	7425.00	59.6 PK	74.0	-14.4	2.38 V	215	47.1	12.5
12	7425.00	48.6 AV	54.0	-5.4	2.38 V	215	36.1	12.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

Mode L

RF Mode	Thread 900M	Channel	CH 0：906MHz
	BTLE-1M		CH 39：2480MHz
	802.11g		CH 1：2412MHz
Frequency Range	1 GHz ~ 25 GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	73.6 PK	74.0	-0.4	1.60 H	323	74.8	-1.2
2	2390.00	47.9 AV	54.0	-6.1	1.60 H	323	49.1	-1.2
3	2483.50	61.9 PK	74.0	-12.1	2.55 H	21	62.9	-1.0
4	2483.50	48.4 AV	54.0	-5.6	2.55 H	21	49.4	-1.0
5	2718.00	57.6 PK	74.0	-16.4	3.45 H	199	57.6	0.0
6	2718.00	53.3 AV	54.0	-0.7	3.45 H	199	53.3	0.0
7	4824.00	49.8 PK	74.0	-24.2	2.55 H	166	41.8	8.0
8	4824.00	36.7 AV	54.0	-17.3	2.55 H	166	28.7	8.0
9	4960.00	56.7 PK	74.0	-17.3	3.60 H	318	48.8	7.9
10	4960.00	50.0 AV	54.0	-4.0	3.60 H	318	42.1	7.9
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	72.5 PK	74.0	-1.5	3.03 V	23	73.7	-1.2
2	2390.00	45.5 AV	54.0	-8.5	3.03 V	23	46.7	-1.2
3	2483.50	61.9 PK	74.0	-12.1	3.25 V	267	62.9	-1.0
4	2483.50	48.4 AV	54.0	-5.6	3.25 V	267	49.4	-1.0
5	2718.00	57.9 PK	74.0	-16.1	1.65 V	161	57.9	0.0
6	2718.00	53.8 AV	54.0	-0.2	1.65 V	161	53.8	0.0
7	4824.00	48.7 PK	74.0	-25.3	2.58 V	293	40.7	8.0
8	4824.00	35.8 AV	54.0	-18.2	2.58 V	293	27.8	8.0
9	4960.00	57.5 PK	74.0	-16.5	2.80 V	120	49.6	7.9
10	4960.00	52.1 AV	54.0	-1.9	2.80 V	120	44.2	7.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

5 Construction Photos of EUT.

Please refer to the attached file (Test Setup Photo)

Appendix – Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

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The address and road map of all our labs can be found in our web site also.

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