

FCC Test Report

Report No.: RFBCKS-WTW-P25020718-2

FCC ID: 2AAAS-CP09

Test Model: CP09

Received Date: 2025/2/27

Test Date: 2025/3/28 ~ 2025/4/1

Issued Date: 2025/4/10

Applicant: Vivint, Inc.

Address: 3401 N. Ashton Blvd., Lehi, UT 84043 USA

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Hsin Chu Laboratory

Lab Address: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,
Taiwan

Test Location: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,
Taiwan

FCC Registration / 723255 / TW2022
Designation Number:



This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at <http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/> and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. Statements of conformity are based on simple acceptance criteria without taking measurement uncertainty into account, unless otherwise requested in writing. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

Table of Contents

Release Control Record	3
1 Certificate of Conformity	4
2 Summary of Test Results	5
2.1 Measurement Uncertainty.....	5
2.2 Modification Record	5
3 General Information	6
3.1 General Description of EUT	6
3.2 Description of Test Modes.....	7
3.2.1 Test Mode Applicability and Tested Channel Detail.....	8
3.3 Duty Cycle of Test Signal	10
3.4 Description of Support Units	11
3.4.1 Configuration of System under Test	11
3.5 General Description of Applied Standards	12
4 Test Types and Results	13
4.1 Radiated Emission and Bandedge Measurement.....	13
4.1.1 Limits of Radiated Emission and Bandedge Measurement	13
4.1.2 Test Instruments	14
4.1.3 Test Procedures.....	16
4.1.4 Deviation from Test Standard	16
4.1.5 Test Set Up	17
4.1.6 EUT Operating Conditions.....	18
4.1.7 Test Results	19
4.2 Conducted Emission Measurement	34
4.2.1 Limits of Conducted Emission Measurement.....	34
4.2.2 Test Instruments	34
4.2.3 Test Procedures.....	35
4.2.4 Deviation from Test Standard	35
4.2.5 Test Setup.....	35
4.2.6 EUT Operating Conditions.....	35
4.2.7 Test Results	36
4.3 Channel Bandwidth	38
4.3.1 Limits of Channel Bandwidth Measurement.....	38
4.3.2 Test Setup.....	38
4.3.3 Test Instruments	38
4.3.4 Test Procedure	38
4.3.5 Deviation from Test Standard	38
4.3.6 EUT Operating Condition	38
4.3.7 Test Results	39
5 Pictures of Test Arrangements	40
Appendix – Information on the Testing Laboratories	41

Release Control Record

Issue No.	Description	Date Issued
RFBCKS-WTW-P25020718-2	Original release	2025/4/10

1 Certificate of Conformity

Product: Security Hub

Brand: Vivint

Test Model: CP09

Sample Status: Engineering sample

Applicant: Vivint, Inc.

Test Date: 2025/3/28 ~ 2025/4/1

Standards: 47 CFR FCC Part 15, Subpart C (Section 15.249)
ANSI C63.10: 2013

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 :  , **Date:** 2025/4/10
Claire Kuan / Specialist

Approved by :  , **Date:** 2025/4/10
Wen Yu / Assistant Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart C (Section 15.249)			
FCC Clause	Test Item	Result	Remarks
15.207	AC Power Conducted Emission	Pass	Meet the requirement of limit. Minimum passing margin is -10.12 dB at 0.38438 MHz.
15.215	Channel Bandwidth	Pass	Meet the requirement of limit.
15.209 15.249 15.249 (d)	Radiated Emission Test Band Edge Measurement Limit: 50dB less than the peak value of fundamental frequency or meet radiated emission limit in section 15.209	Pass	Meet the requirement of limit. Minimum passing margin is -1.0 dB at 908.40 MHz.

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	Frequency	Expanded Uncertainty (k=2) (±)
20 dB Bandwidth	-	1050.00 Hz
Conducted Emissions at mains ports	150 kHz ~ 30 MHz	1.9 dB
Radiated Emissions up to 1 GHz	9 kHz ~ 30 MHz	3.1 dB
	30 MHz ~ 1 GHz	5.4 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	1.76 dB
	1 GHz ~ 18 GHz	5.1 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Security Hub
Brand	Vivint
Test Model	CP09
Sample Status	Engineering sample
Power Supply Rating	12Vdc from adapter or 3.8Vdc from battery
Modulation Type	FSK
Operating Frequency	908.40 MHz, 908.42 MHz, 916.00 MHz
Transfer Rate	40 kbps for 908.40 MHz 9.6 kbps for 908.42 MHz 100 kbps for 916.00 MHz
Number of Channel	3
Fundamental Field Strength	93.0 dBuV/m (3m)
Antenna Type	Refer to note
Antenna Connector	Refer to note
Accessory Device	Refer to note
Cable Supplied	Refer to note

Note:

1. The EUT uses following accessories.

Item	Brand	Model	Specification	P/N
AC Adapter 1	ZB-Power	ZB-A120020A-09	AC Input : 100-240V, 50/60Hz, 0.6A DC Output : 12V, 2A DC Output Cable : 1.52m, unshielded, w/o core	-
Battery	Shanghai BYD Co., Ltd.	BAT-600004-001	Power Rating : Nominal Voltage: 3.80V Min Capacity: 1630mAh 6.2Wh Typ Capacity: 1662mAh 6.3Wh Maximum Charge Voltage: 4.35V	17470852-00
RJ 45 Cable	-	-	Signal Line : 1m, unshielded, w/o core	-

2. The EUT contains certified LTE module (FCC ID: XMR2020BG95M1).

3. Simultaneously transmission condition.

Condition	Technology
1	WWAN + Z-wave

Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.

4. The antenna information is listed as below.

Antenna Net Gain(dBi)	Frequency range	Antenna Type	Connector Type
2.1	908 MHz	PIFA	NA
2.05	916 MHz	PIFA	NA

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

3.2 Description of Test Modes

3 channels are provided to this EUT:

Channel	Freq. (MHz)
0	908.40
1	908.42
2	916.00

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable To				Description
	RE $\geq$ 1G	RE<1G	PLC	BW	
-	√	√	√	√	-

Where **RE $\geq$ 1G**: Radiated Emission above 1GHz & Bandedge Measurement **RE<1G**: Radiated Emission below 1GHz
PLC: Power Line Conducted Emission **BW**: Channel Bandwidth

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	Available Channel	Operating Frequency	Modulation Type
-	0	908.40 MHz	FSK
-	1	908.42 MHz	FSK
-	2	916.00 MHz	FSK

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	Available Channel	Operating Frequency	Modulation Type
-	0	908.40 MHz	FSK
-	1	908.42 MHz	FSK
-	2	916.00 MHz	FSK

Power Line Conducted Emission Test:

- ☒ 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	Available Channel	Operating Frequency	Modulation Type
-	0	908.40 MHz	FSK

Channel Bandwidth Test:

- ☒ 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.

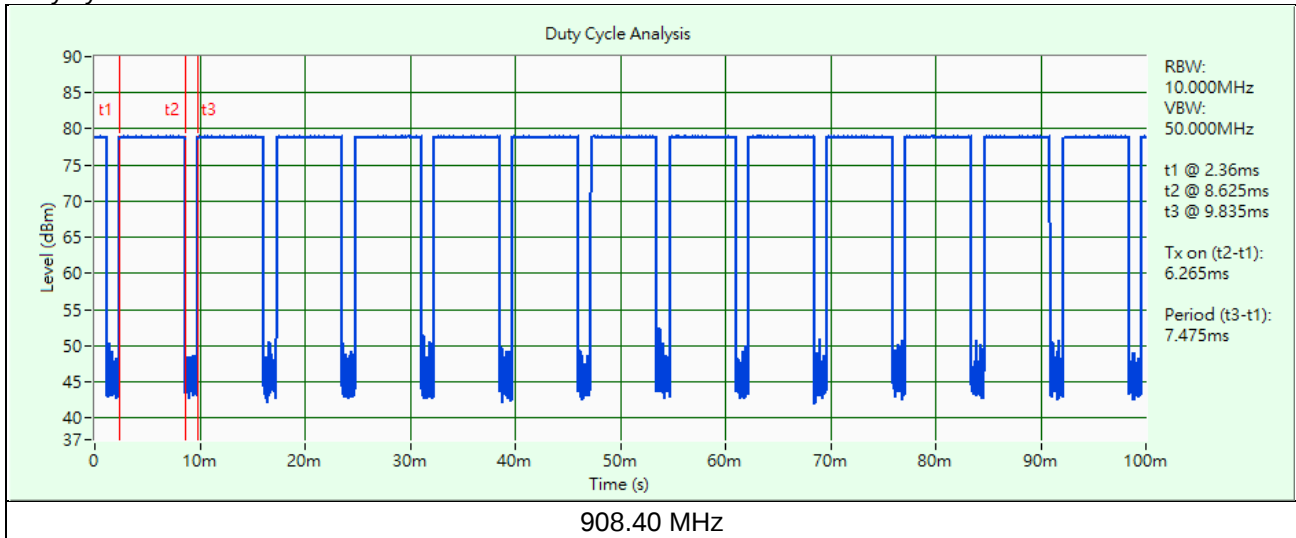
EUT Configure Mode	Available Channel	Operating Frequency	Modulation Type
-	0	908.40 MHz	FSK
-	1	908.42 MHz	FSK
-	2	916.00 MHz	FSK

Test Condition:

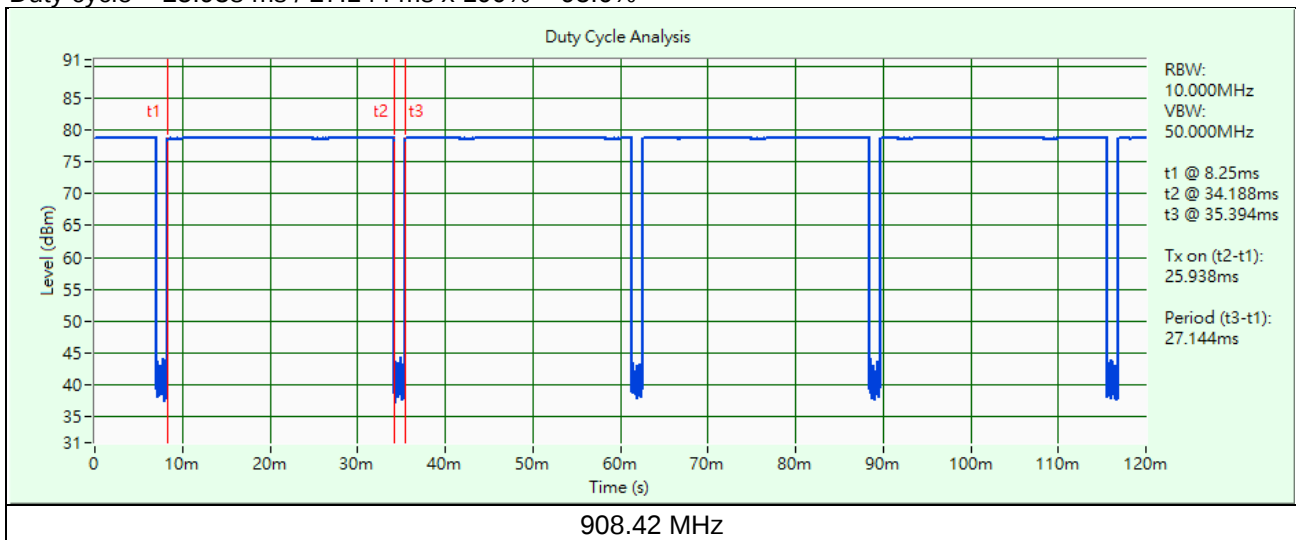
Applicable To	Environmental Conditions	Input Power	Tested By
RE $\geq$ 1G	23 deg. C, 67% RH	120Vac, 60Hz	Louis Yang
RE<1G	23 deg. C, 72% RH 19 deg. C, 60% RH 19 deg. C, 61% RH	120Vac, 60Hz	Louis Yang
PLC	24 deg. C, 73% RH	120Vac, 60Hz	Louis Yang
BW	25 deg. C, 60% RH	120Vac, 60Hz	Dolly Chung

3.3 Duty Cycle of Test Signal

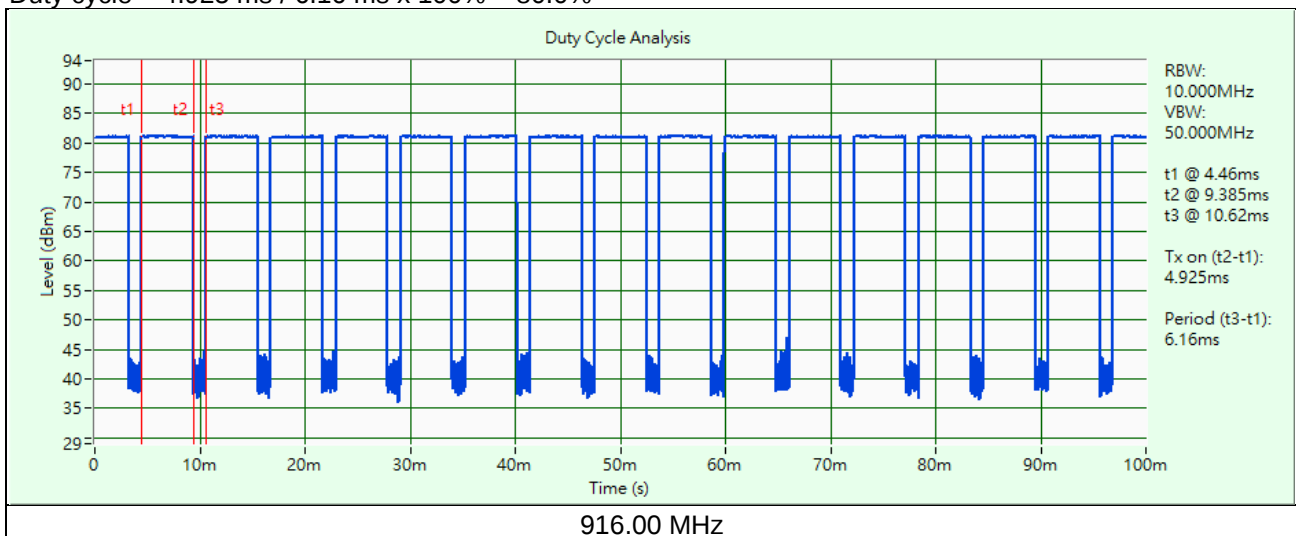
Duty cycle = 6.265 ms / 7.475 ms x 100% = 83.8%



Duty cycle = 25.938 ms / 27.144 ms x 100% = 95.6%



Duty cycle = 4.925 ms / 6.16 ms x 100% = 80.0%



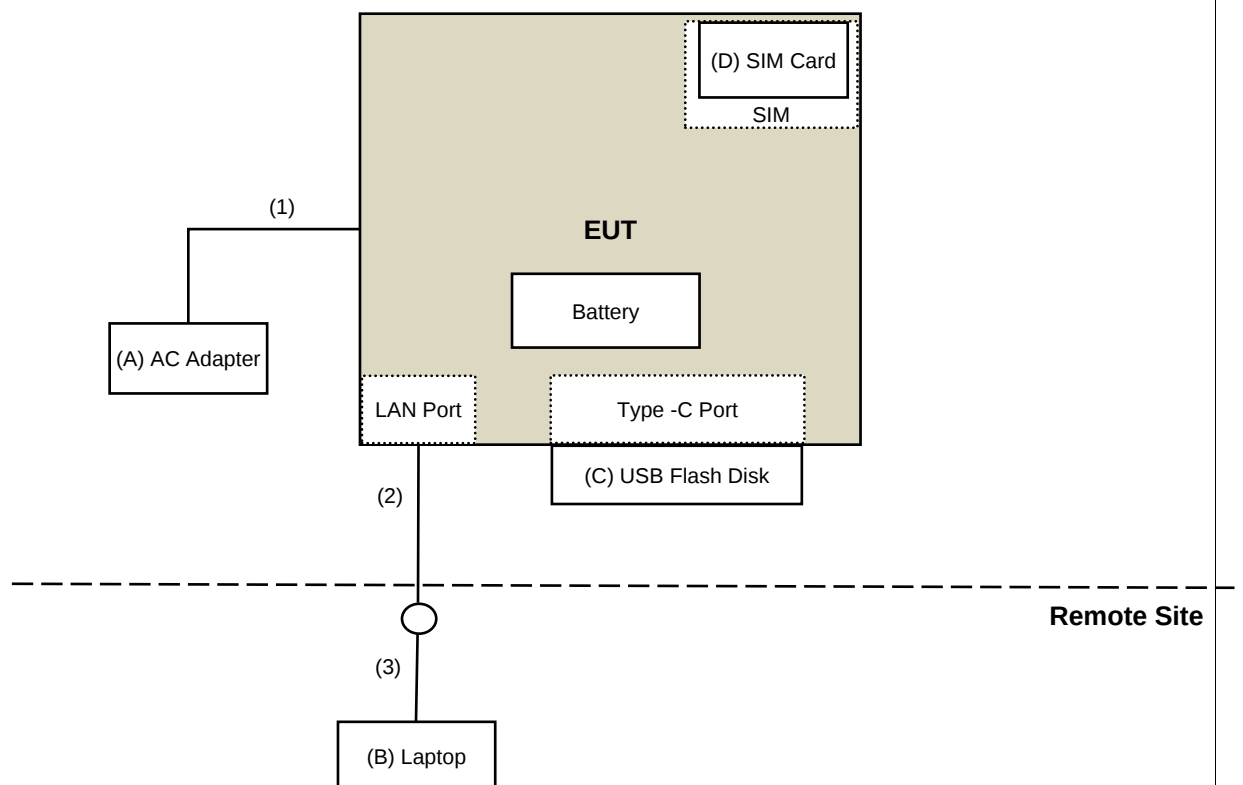
3.4 Description of Support Units

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	AC Adapter	ZB-Power	ZB-A120020A-09	N/A	N/A	Supplied by applicant
B	Laptop	Dell	P92G	BM6Q4P2	N/A	Provided by Lab
C	USB Flash Disk	Sandisk	Ultra Go	N/A	N/A	Provided by Lab
D	SIM Card	R&S	CRT-Z3	N/A	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	DC Cable	1	1.52	No	0	Supplied by applicant
2	RJ-45 Cable	1	1	No	0	Supplied by applicant
3	RJ-45 Cable	1	10	No	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:

FCC Part 15, Subpart C (15.249)

ANSI C63.10-2013

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

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

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
2400 ~ 2483.5 MHz	50	500
5725 ~ 5875 MHz	50	500
24 ~ 24.25 GHz	250	2500

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)
0.009 ~ 0.490	$2400/F(\text{kHz})$	300
0.490 ~ 1.705	$24000/F(\text{kHz})$	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

Note:

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 1000MHz, 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 20dB under any condition of modulation.

4.1.2 Test Instruments

Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208406	N/A	N/A
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-361	2024/10/8	2025/10/7
Fix tool for Boresight antenna tower BV	FBA-01	FBA_SIP01	N/A	N/A
Fixed Attenuator Mini-Circuits	UNAT-5+	PAD-3m-3-01	2025/2/8	2026/2/7
Loop Antenna TESEQ	HLA 6121	63620	2024/10/17	2025/10/16
MXE EMI Receiver Agilent	N9038A	MY50010156	2024/6/5	2025/6/4
Preamplifier EMCI	EMC330N	980852	2025/2/8	2026/2/7
	EMC001340	980142	2025/2/17	2026/2/16
RF Coaxial Cable PEWC	8D	001	2025/2/8	2026/2/7
		966-3-2	2025/2/8	2026/2/7
		966-3-3	2025/2/8	2026/2/7
Software	ADT_Radiated_V8.7.08	N/A	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 966 Chamber No. 3.
3. Tested Date: 2025/3/28 ~ 2025/3/31

Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208406	N/A	N/A
Fix tool for Boresight antenna tower BV	FBA-01	FBA_SIP01	N/A	N/A
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-406	2024/11/10	2025/11/9
MXE EMI Receiver Agilent	N9038A	MY50010156	2024/6/5	2025/6/4
Preamplifier EMCI	EMC12630SE	980384	2025/1/14	2026/1/13
RF Coaxial Cable EMCI	EMC104-SM-SM-1500	180504	2025/1/18	2026/1/17
	EMC104-SM-SM-2000	180601	2025/1/18	2026/1/17
	EMC104-SM-SM-6000	210201	2025/1/18	2026/1/17
Software	ADT_Radiated_V8.7.08	N/A	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 966 Chamber No. 3.
3. Tested Date: 2025/4/1

4.1.3 Test Procedures

For Radiated emission below 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. 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.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

For Radiated emission above 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) 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.
- f. The test-receiver system was set to peak and average detect 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.

Note:

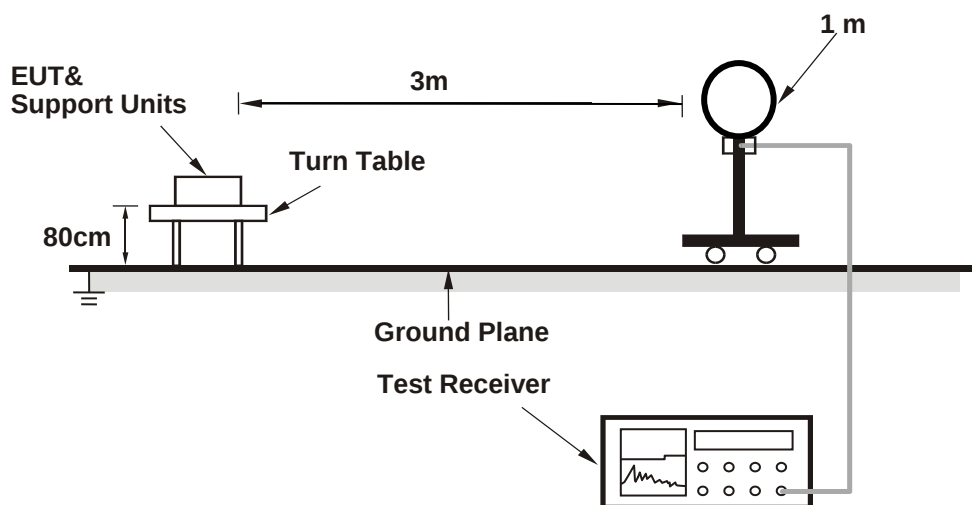
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is $\geq 1/T$ (Duty cycle < 98%) or 10 Hz (Duty cycle $\geq 98\%$) for Peak detection at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

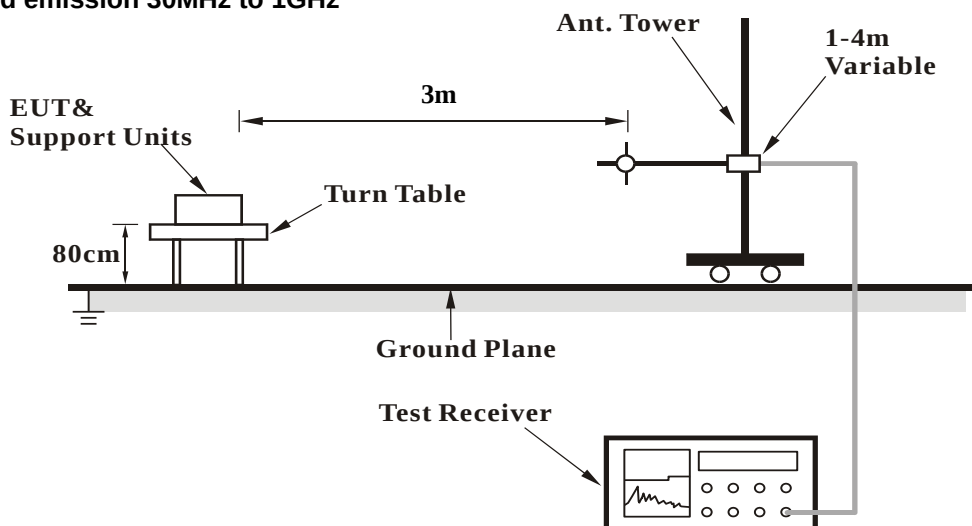
No deviation.

4.1.5 Test Set Up

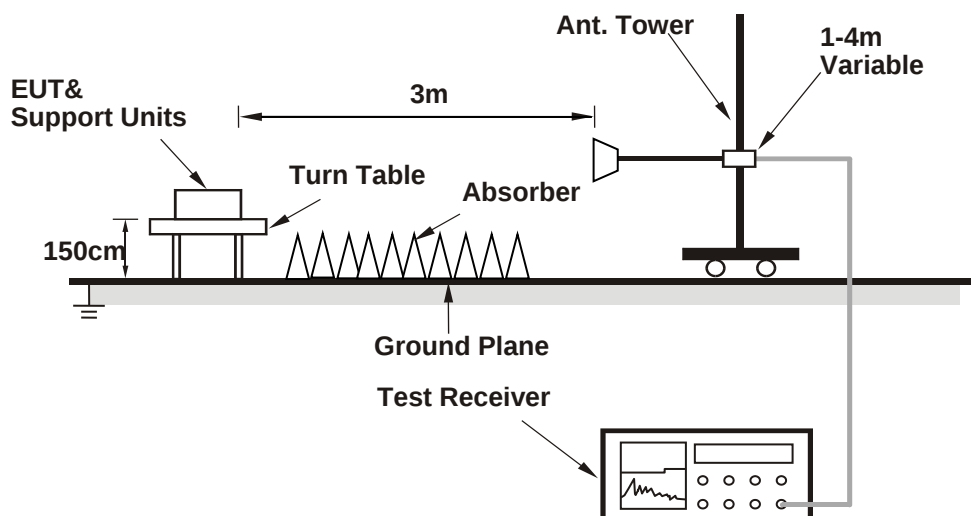
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



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

4.1.6 EUT Operating Conditions

- Set the EUT under transmission condition continuously at specific channel frequency.

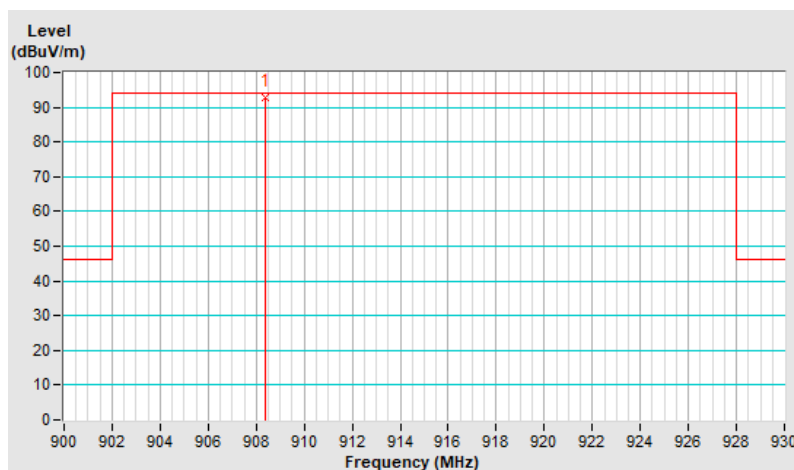
4.1.7 Test Results

RF Mode	Zwave	Channel	CH 0 : 908.4 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Environmental Conditions	23 °C, 72 % RH	Tested By	Louis Yang

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	*908.40	93.0 QP	94.0	-1.0	1.60 H	156	61.4	31.6

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. " * ": Fundamental frequency.

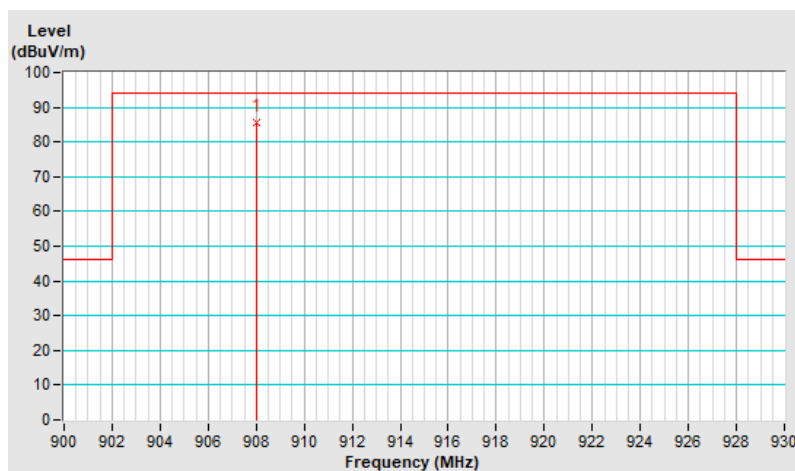


RF Mode	Zwave	Channel	CH 0 : 908.4 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Environmental Conditions	23 °C, 72 % RH	Tested By	Louis Yang

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	908.00	85.7 QP	94.0	-8.3	1.01 V	360	54.1	31.6

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.

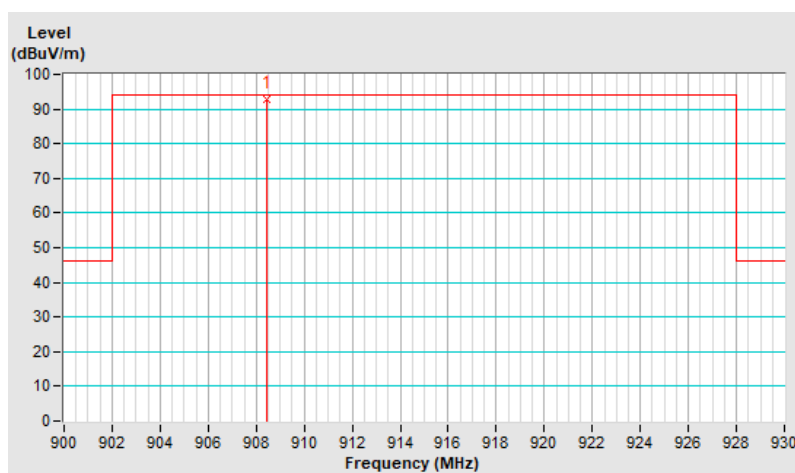


RF Mode	Zwave	Channel	CH 1 : 908.42 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Environmental Conditions	23 °C, 72 % RH	Tested By	Louis Yang

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	*908.42	92.7 QP	94.0	-1.3	1.60 H	157	61.1	31.6

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. " * ": Fundamental frequency.

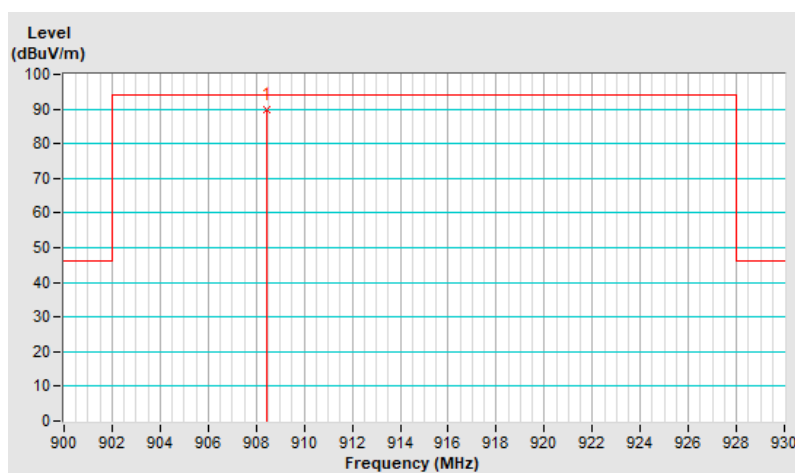


RF Mode	Zwave	Channel	CH 1 : 908.42 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Environmental Conditions	23 °C, 72 % RH	Tested By	Louis Yang

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	*908.42	89.7 QP	94.0	-4.3	1.53 V	195	58.1	31.6

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. " * ": Fundamental frequency.

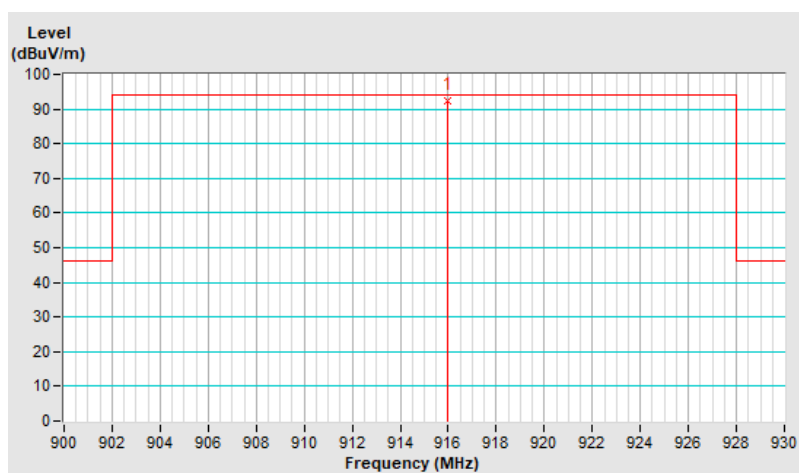


RF Mode	Zwave	Channel	CH 2 : 916 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Environmental Conditions	23 °C, 72 % RH	Tested By	Louis Yang

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	*916.00	92.3 QP	94.0	-1.7	1.56 H	154	60.3	32.0

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. " * ": Fundamental frequency.

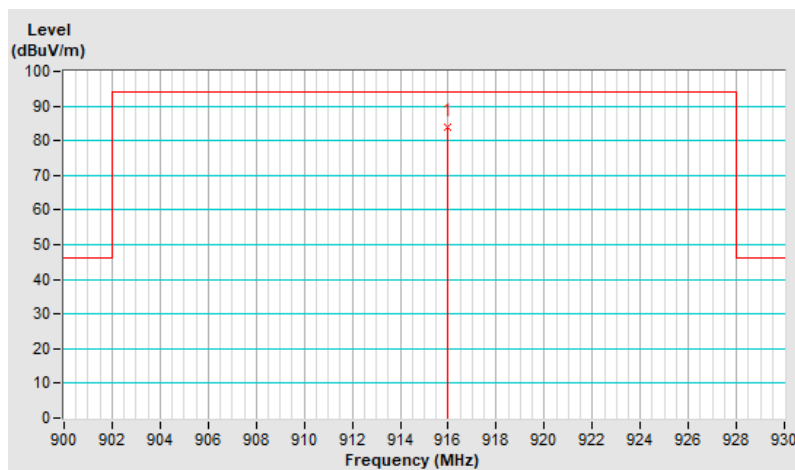


RF Mode	Zwave	Channel	CH 2 : 916 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Environmental Conditions	23 °C, 72 % RH	Tested By	Louis Yang

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	*916.00	84.0 QP	94.0	-10.0	1.00 V	360	52.0	32.0

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. " * ": Fundamental frequency.



Above 1GHz Data

RF Mode	Zwave	Channel	CH 0 : 908.4 MHz
Frequency Range	1 GHz ~ 10 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=300 Hz, DET=Peak
Environmental Conditions	23 °C, 67 % RH	Tested By	Louis Yang

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	2725.20	36.8 PK	74.0	-37.2	1.42 H	153	38.3	-1.5
2	2725.20	24.6 AV	54.0	-29.4	1.42 H	153	26.1	-1.5
3	3633.60	38.5 PK	74.0	-35.5	1.05 H	22	39.3	-0.8
4	3633.60	24.3 AV	54.0	-29.7	1.05 H	22	25.1	-0.8
5	4542.00	38.5 PK	74.0	-35.5	3.98 H	46	37.3	1.2
6	4542.00	26.6 AV	54.0	-27.4	3.98 H	46	25.4	1.2
7	5450.40	39.5 PK	74.0	-34.5	1.00 H	360	37.2	2.3
8	5450.40	27.2 AV	54.0	-26.8	1.00 H	360	24.9	2.3
9	7267.20	44.5 PK	74.0	-29.5	1.55 H	260	37.6	6.9
10	7267.20	31.3 AV	54.0	-22.7	1.55 H	260	24.4	6.9
11	8175.60	54.8 PK	74.0	-19.2	2.94 H	200	46.9	7.9
12	8175.60	42.0 AV	54.0	-12.0	2.94 H	200	34.1	7.9
13	9084.00	48.4 PK	74.0	-25.6	1.01 H	191	40.3	8.1
14	9084.00	39.9 AV	54.0	-14.1	1.01 H	191	31.8	8.1
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	2725.20	37.7 PK	74.0	-36.3	1.46 V	275	39.2	-1.5
2	2725.20	24.2 AV	54.0	-29.8	1.46 V	275	25.7	-1.5
3	3633.60	37.6 PK	74.0	-36.4	1.47 V	14	38.4	-0.8
4	3633.60	24.6 AV	54.0	-29.4	1.47 V	14	25.4	-0.8
5	4542.00	38.4 PK	74.0	-35.6	3.97 V	21	37.2	1.2
6	4542.00	25.9 AV	54.0	-28.1	3.97 V	21	24.7	1.2
7	5450.40	39.7 PK	74.0	-34.3	1.00 V	360	37.4	2.3
8	5450.40	27.3 AV	54.0	-26.7	1.00 V	360	25.0	2.3
9	7267.20	44.9 PK	74.0	-29.1	1.57 V	270	38.0	6.9
10	7267.20	30.9 AV	54.0	-23.1	1.57 V	270	24.0	6.9
11	8175.60	53.9 PK	74.0	-20.1	2.95 V	181	46.0	7.9
12	8175.60	42.0 AV	54.0	-12.0	2.95 V	181	34.1	7.9
13	9084.00	47.9 PK	74.0	-26.1	1.00 V	186	39.8	8.1
14	9084.00	38.9 AV	54.0	-15.1	1.00 V	186	30.8	8.1

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.

RF Mode	Zwave	Channel	CH 1 : 908.42 MHz
Frequency Range	1 GHz ~ 10 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=300 Hz, DET=Peak
Environmental Conditions	23 °C, 67 % RH	Tested By	Louis Yang

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	2725.26	36.5 PK	74.0	-37.5	1.53 H	145	38.0	-1.5
2	2725.26	24.3 AV	54.0	-29.7	1.53 H	145	25.8	-1.5
3	3633.68	39.3 PK	74.0	-34.7	1.02 H	27	40.1	-0.8
4	3633.68	24.5 AV	54.0	-29.5	1.02 H	27	25.3	-0.8
5	4542.10	38.0 PK	74.0	-36.0	3.92 H	0	36.8	1.2
6	4542.10	26.8 AV	54.0	-27.2	3.92 H	0	25.6	1.2
7	5450.52	39.6 PK	74.0	-34.4	1.01 H	360	37.3	2.3
8	5450.52	27.3 AV	54.0	-26.7	1.01 H	360	25.0	2.3
9	7267.36	44.0 PK	74.0	-30.0	1.55 H	285	37.1	6.9
10	7267.36	30.6 AV	54.0	-23.4	1.55 H	285	23.7	6.9
11	8175.78	55.3 PK	74.0	-18.7	2.87 H	204	47.4	7.9
12	8175.78	41.4 AV	54.0	-12.6	2.87 H	204	33.5	7.9
13	9084.20	47.5 PK	74.0	-26.5	1.06 H	160	39.4	8.1
14	9084.20	39.2 AV	54.0	-14.8	1.06 H	160	31.1	8.1

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	2725.26	37.4 PK	74.0	-36.6	1.57 V	264	38.9	-1.5
2	2725.26	24.0 AV	54.0	-30.0	1.57 V	264	25.5	-1.5
3	3633.68	37.5 PK	74.0	-36.5	1.55 V	39	38.3	-0.8
4	3633.68	24.5 AV	54.0	-29.5	1.55 V	39	25.3	-0.8
5	4542.10	38.8 PK	74.0	-35.2	3.98 V	33	37.6	1.2
6	4542.10	26.3 AV	54.0	-27.7	3.98 V	33	25.1	1.2
7	5450.52	39.0 PK	74.0	-35.0	1.08 V	341	36.7	2.3
8	5450.52	27.0 AV	54.0	-27.0	1.08 V	341	24.7	2.3
9	7267.36	44.4 PK	74.0	-29.6	1.55 V	264	37.5	6.9
10	7267.36	30.7 AV	54.0	-23.3	1.55 V	264	23.8	6.9
11	8175.78	54.2 PK	74.0	-19.8	2.97 V	163	46.3	7.9
12	8175.78	42.3 AV	54.0	-11.7	2.97 V	163	34.4	7.9
13	9084.20	48.3 PK	74.0	-25.7	1.00 V	139	40.2	8.1
14	9084.20	39.0 AV	54.0	-15.0	1.00 V	139	30.9	8.1

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.

RF Mode	Zwave	Channel	CH 2 : 916 MHz
Frequency Range	1 GHz ~ 10 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=300 Hz, DET=Peak
Environmental Conditions	23 °C, 67 % RH	Tested By	Louis Yang

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	2748.00	37.0 PK	74.0	-37.0	1.46 H	167	38.4	-1.4
2	2748.00	24.2 AV	54.0	-29.8	1.46 H	167	25.6	-1.4
3	3664.00	39.2 PK	74.0	-34.8	1.01 H	1	40.0	-0.8
4	3664.00	24.6 AV	54.0	-29.4	1.01 H	1	25.4	-0.8
5	4580.00	38.8 PK	74.0	-35.2	4.00 H	1	37.5	1.3
6	4580.00	26.4 AV	54.0	-27.6	4.00 H	1	25.1	1.3
7	7328.00	44.5 PK	74.0	-29.5	1.54 H	270	37.7	6.8
8	7328.00	31.0 AV	54.0	-23.0	1.54 H	270	24.2	6.8
9	8244.00	54.5 PK	74.0	-19.5	2.97 H	186	47.1	7.4
10	8244.00	41.8 AV	54.0	-12.2	2.97 H	186	34.4	7.4
11	9160.00	48.3 PK	74.0	-25.7	1.02 H	175	40.0	8.3
12	9160.00	39.6 AV	54.0	-14.4	1.02 H	175	31.3	8.3
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	2748.00	37.5 PK	74.0	-36.5	1.50 V	284	38.9	-1.4
2	2748.00	24.2 AV	54.0	-29.8	1.50 V	284	25.6	-1.4
3	3664.00	37.5 PK	74.0	-36.5	1.51 V	1	38.3	-0.8
4	3664.00	24.3 AV	54.0	-29.7	1.51 V	1	25.1	-0.8
5	4580.00	38.6 PK	74.0	-35.4	3.98 V	15	37.3	1.3
6	4580.00	26.3 AV	54.0	-27.7	3.98 V	15	25.0	1.3
7	7328.00	44.4 PK	74.0	-29.6	1.57 V	279	37.6	6.8
8	7328.00	31.1 AV	54.0	-22.9	1.57 V	279	24.3	6.8
9	8244.00	54.6 PK	74.0	-19.4	2.98 V	171	47.2	7.4
10	8244.00	42.1 AV	54.0	-11.9	2.98 V	171	34.7	7.4
11	9160.00	48.2 PK	74.0	-25.8	1.00 V	159	39.9	8.3
12	9160.00	39.4 AV	54.0	-14.6	1.00 V	159	31.1	8.3

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.

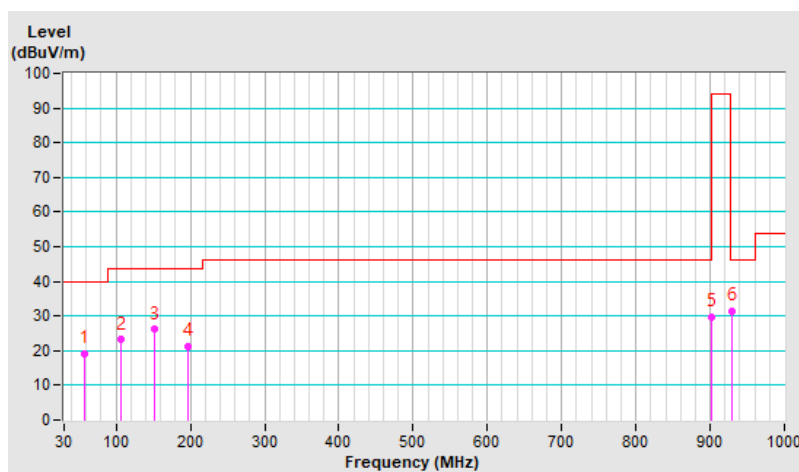
Below 1GHz data

RF Mode	Zwave	Channel	CH 0 : 908.4 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Environmental Conditions	19 °C, 60 % RH	Tested By	Louis Yang

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	57.18	19.0 QP	40.0	-21.0	3.00 H	141	32.0	-13.0
2	107.21	23.1 QP	43.5	-20.4	3.00 H	211	38.7	-15.6
3	151.03	26.1 QP	43.5	-17.4	2.00 H	282	38.4	-12.3
4	196.96	21.4 QP	43.5	-22.1	2.00 H	68	37.2	-15.8
5	901.50	29.6 QP	46.0	-16.4	3.00 H	148	29.5	0.1
6	928.58	31.5 QP	46.0	-14.5	1.00 H	360	30.7	0.8

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.

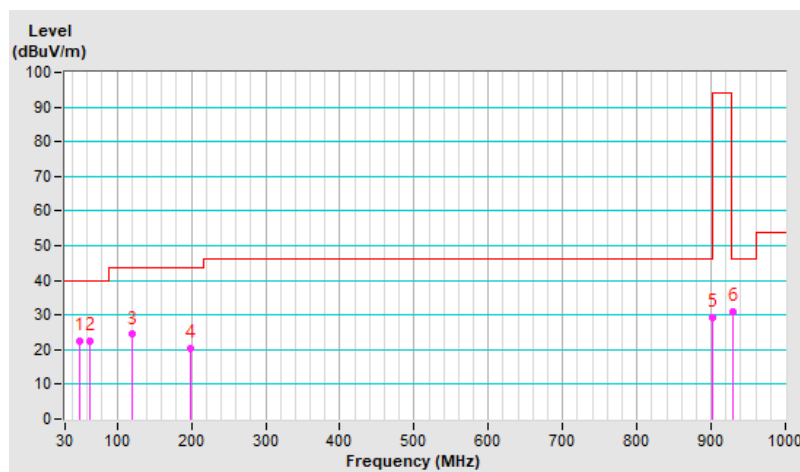


RF Mode	Zwave	Channel	CH 0 : 908.4 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Environmental Conditions	19 °C, 61 % RH	Tested By	Louis Yang

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	48.89	22.5 QP	40.0	-17.5	1.00 V	114	35.0	-12.5
2	64.07	22.6 QP	40.0	-17.4	1.00 V	150	36.4	-13.8
3	120.43	24.4 QP	43.5	-19.1	1.00 V	163	38.7	-14.3
4	198.17	20.5 QP	43.5	-23.0	1.00 V	81	36.2	-15.7
5	901.42	29.4 QP	46.0	-16.6	1.00 V	229	29.3	0.1
6	928.41	30.9 QP	46.0	-15.1	2.00 V	64	30.2	0.7

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.

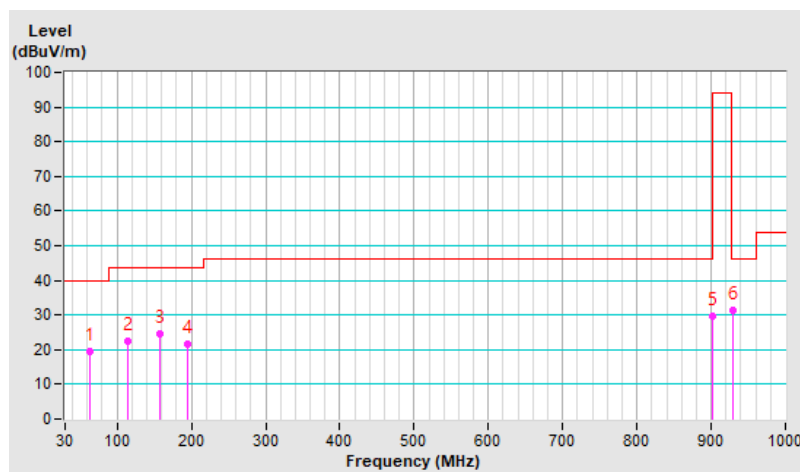


RF Mode	Zwave	Channel	CH 1 : 908.42 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Environmental Conditions	19 °C, 60 % RH	Tested By	Louis Yang

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	64.07	19.4 QP	40.0	-20.6	3.00 H	93	33.2	-13.8
2	113.88	22.4 QP	43.5	-21.1	3.00 H	254	37.2	-14.8
3	157.53	24.6 QP	43.5	-18.9	2.00 H	260	37.0	-12.4
4	195.82	21.6 QP	43.5	-21.9	2.00 H	12	37.1	-15.5
5	902.00	29.8 QP	46.0	-16.2	2.00 H	360	29.7	0.1
6	928.54	31.3 QP	46.0	-14.7	1.00 H	158	30.6	0.7

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.

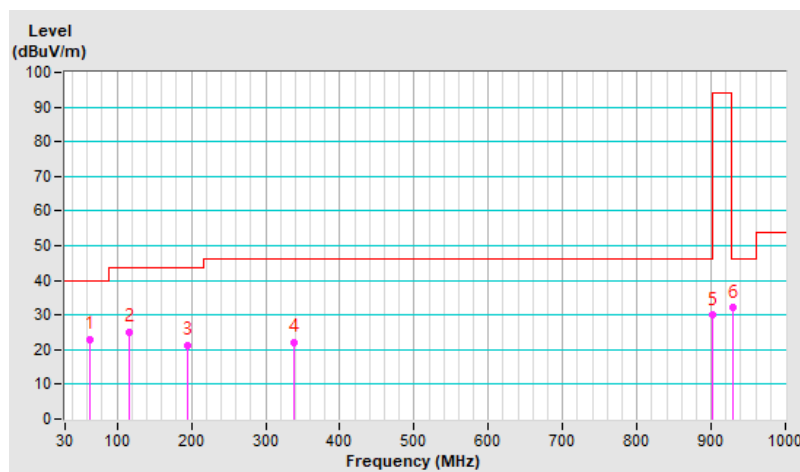


RF Mode	Zwave	Channel	CH 1 : 908.42 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Environmental Conditions	19 °C, 61 % RH	Tested By	Louis Yang

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	64.10	23.1 QP	40.0	-16.9	1.00 V	97	36.9	-13.8
2	116.77	24.9 QP	43.5	-18.6	1.00 V	49	39.4	-14.5
3	195.82	21.2 QP	43.5	-22.3	1.00 V	41	36.7	-15.5
4	337.56	22.2 QP	46.0	-23.8	1.00 V	105	33.0	-10.8
5	901.57	29.9 QP	46.0	-16.1	3.00 V	360	29.8	0.1
6	928.51	32.0 QP	46.0	-14.0	3.00 V	47	31.3	0.7

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.

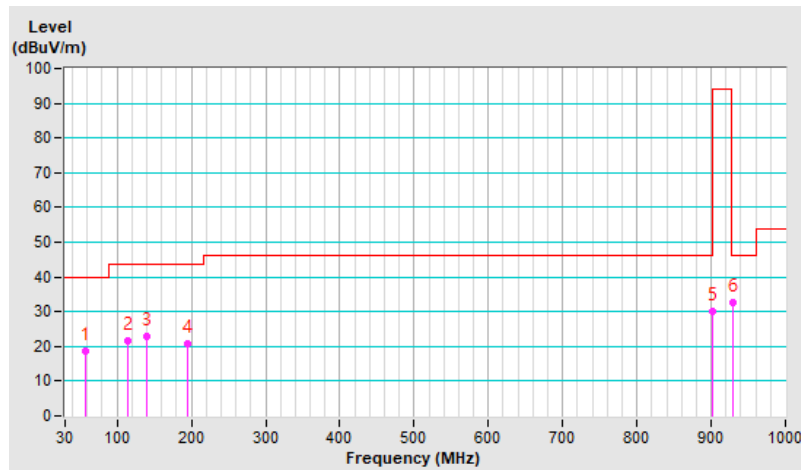


RF Mode	Zwave	Channel	CH 2 : 916 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Environmental Conditions	19 °C, 60 % RH	Tested By	Louis Yang

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	58.35	18.7 QP	40.0	-21.3	2.00 H	360	31.7	-13.0
2	114.29	21.6 QP	43.5	-21.9	2.00 H	255	36.4	-14.8
3	140.05	22.8 QP	43.5	-20.7	1.00 H	116	35.4	-12.6
4	195.80	20.9 QP	43.5	-22.6	1.00 H	46	36.4	-15.5
5	901.45	30.0 QP	46.0	-16.0	2.00 H	60	29.9	0.1
6	928.69	32.6 QP	46.0	-13.4	3.00 H	3	31.8	0.8

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.

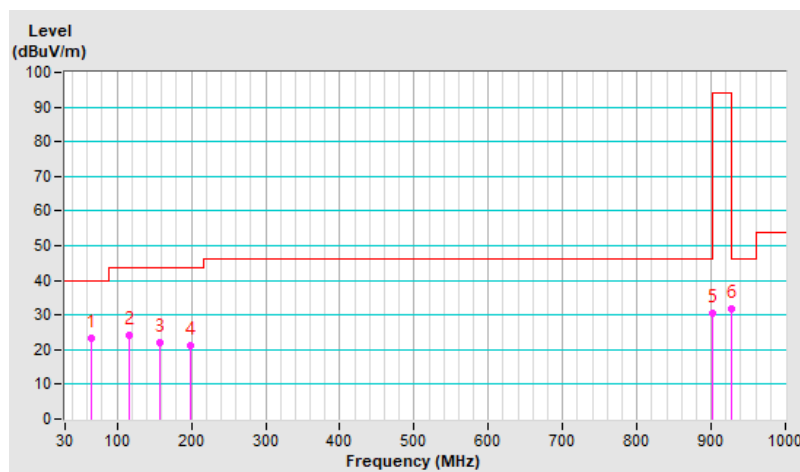


RF Mode	Zwave	Channel	CH 2 : 916 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Environmental Conditions	19 °C, 61 % RH	Tested By	Louis Yang

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	65.43	23.3 QP	40.0	-16.7	1.00 V	360	37.6	-14.3
2	117.32	24.1 QP	43.5	-19.4	1.00 V	147	38.6	-14.5
3	157.53	22.2 QP	43.5	-21.3	1.00 V	338	34.6	-12.4
4	198.20	21.1 QP	43.5	-22.4	1.00 V	226	36.8	-15.7
5	901.64	30.7 QP	46.0	-15.3	2.00 V	141	30.6	0.1
6	928.12	31.7 QP	46.0	-14.3	3.00 V	231	30.9	0.8

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 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

Note: 1. The lower limit shall apply at the transition frequencies.

2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.2.2 Test Instruments

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
50 ohm terminal resistance Telegartner	50 ohm	3	2024/11/1	2025/10/31
EMI Test Receiver R&S	ESCS 30	100375	2024/5/20	2025/5/19
Fixed Attenuator STI	STI02-2200-10	005	2025/2/17	2026/2/16
LISN R&S	ESH3-Z5	835239/001	2025/3/27	2026/3/26
		848773/004	2024/10/7	2025/10/6
RF Coaxial Cable JYEBAO	5D-FB	COCCAB-001	2025/2/17	2026/2/16
Software BVADT	BVADT_Cond_V7.3.7.4	N/A	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 Conduction 1
3. Tested Date: 2025/4/1

4.2.3 Test Procedures

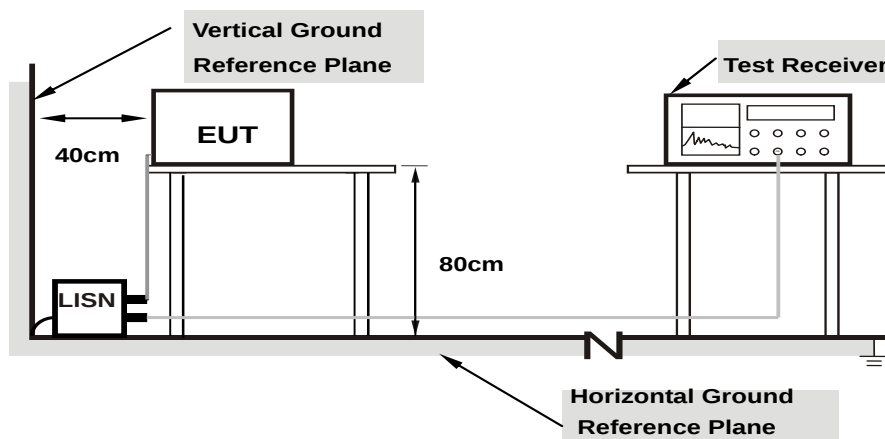
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

Note: The resolution bandwidth and video bandwidth of test receiver is 9kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15MHz-30MHz.

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



Note: 1.Support units were connected to second LISN.

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

4.2.6 EUT Operating Conditions

Same as 4.1.6.

4.2.7 Test Results

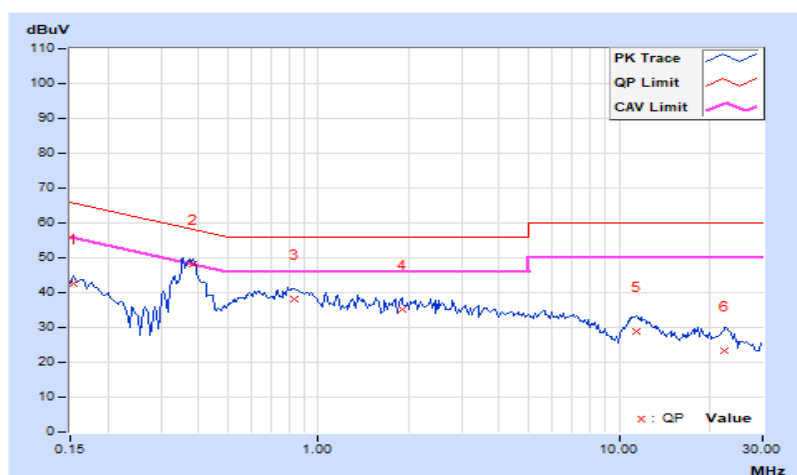
Worst-case data:

RF Mode	Zwave	Channel	CH 0 : 908.4 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	24 °C, 73 % RH
Tested By	Louis Yang		

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	9.96	32.66	19.66	42.62	29.62	65.79	55.79	-23.17	-26.17
2	0.38438	9.99	38.07	27.31	48.06	37.30	58.18	48.18	-10.12	-10.88
3	0.83750	10.02	28.20	18.36	38.22	28.38	56.00	46.00	-17.78	-17.62
4	1.89453	10.08	24.93	14.12	35.01	24.20	56.00	46.00	-20.99	-21.80
5	11.46875	10.70	18.16	12.20	28.86	22.90	60.00	50.00	-31.14	-27.10
6	22.53516	11.13	12.08	5.37	23.21	16.50	60.00	50.00	-36.79	-33.50

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value

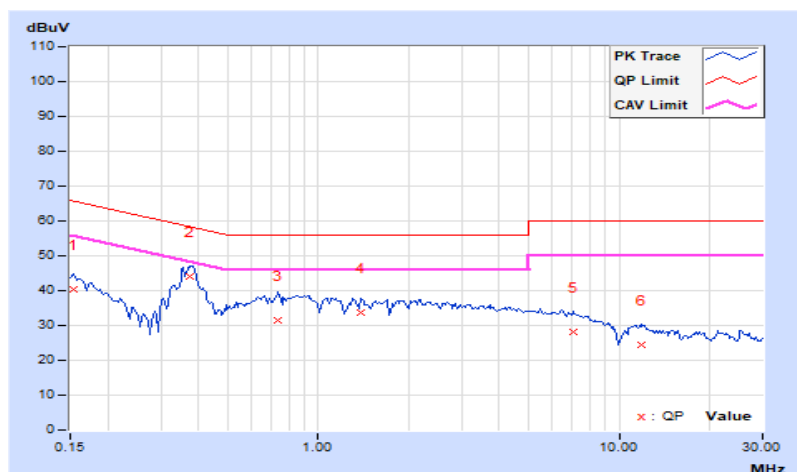


RF Mode	Zwave	Channel	CH 0 : 908.4 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	24 °C, 73 % RH
Tested By	Louis Yang		

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	10.02	30.34	13.96	40.36	23.98	65.79	55.79	-25.43	-31.81
2	0.37266	10.01	34.06	21.05	44.07	31.06	58.44	48.44	-14.37	-17.38
3	0.73594	10.03	21.27	9.29	31.30	19.32	56.00	46.00	-24.70	-26.68
4	1.38672	10.07	23.70	10.34	33.77	20.41	56.00	46.00	-22.23	-25.59
5	7.03516	10.39	17.74	11.08	28.13	21.47	60.00	50.00	-31.87	-28.53
6	11.81250	10.65	13.63	7.95	24.28	18.60	60.00	50.00	-35.72	-31.40

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value

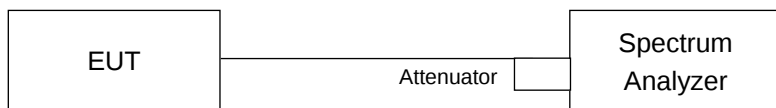


4.3 Channel Bandwidth

4.3.1 Limits of Channel Bandwidth Measurement

The channel bandwidth within the frequency band designated in the rule section under which the equipment is operated.

4.3.2 Test Setup



4.3.3 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
PXA Signal Analyzer Keysight	N9030A	MY55410176	2024/6/12	2025/6/11
Software	ADT_RF Test Software V7.6.5.4	NA	NA	NA

Note: 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 Oven room 2.
 3. Tested Date: 2025/3/31

4.3.4 Test Procedure

- Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
- Measure the frequency difference of two frequencies that were attenuated 20dB from the reference level. Record the frequency difference as the emission bandwidth.
- Repeat above procedures until all frequencies measured were complete.

4.3.5 Deviation from Test Standard

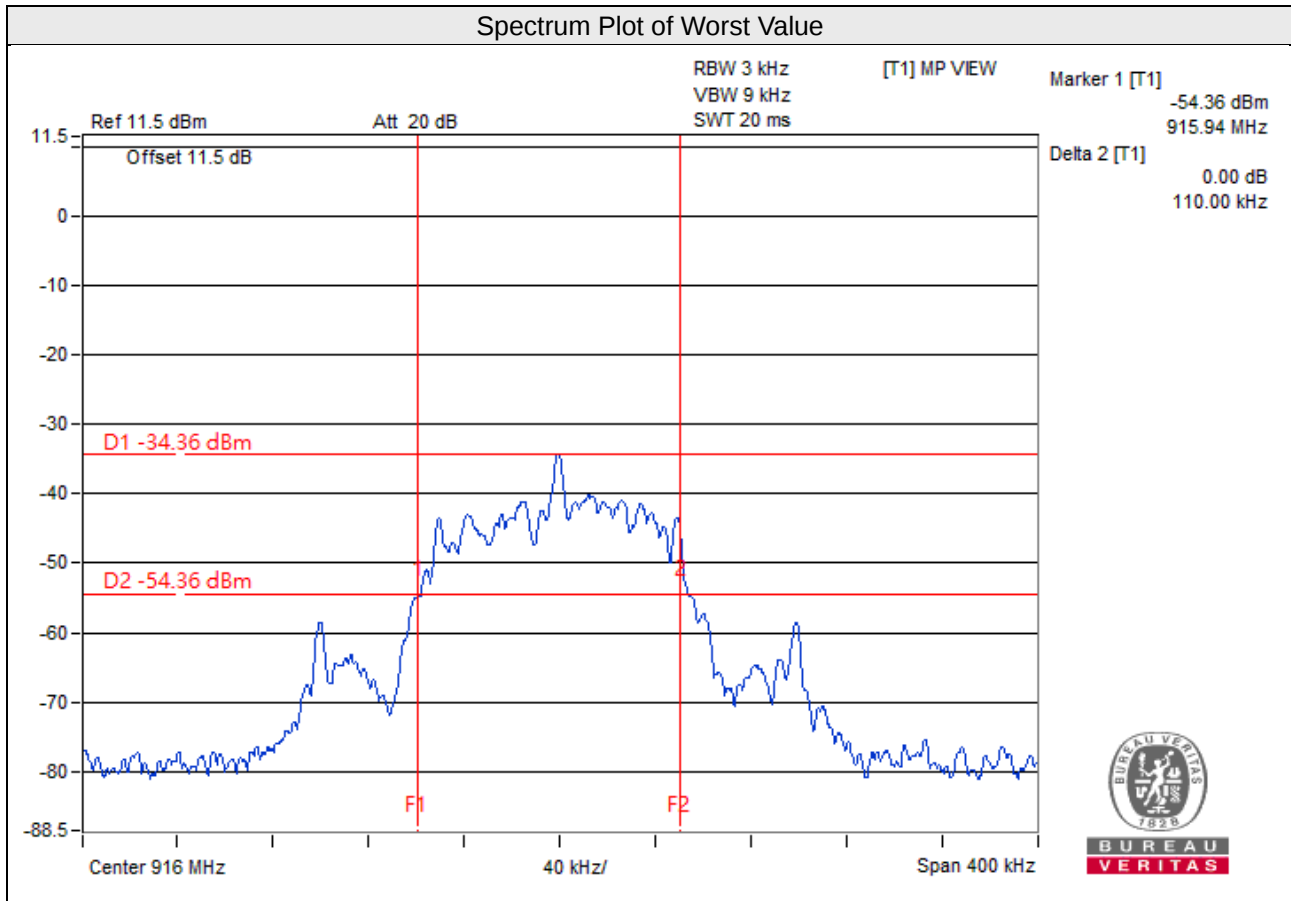
No deviation.

4.3.6 EUT Operating Condition

The software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel frequencies individually.

4.3.7 Test Results

Channel	Frequency (MHz)	20dB Bandwidth (MHz)
0	908.40	0.080
1	908.42	0.070
2	916.00	0.110



5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

Appendix – Information on 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 and approved according to ISO/IEC 17025.

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

Lin Kou EMC/RF Lab

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab

Tel: 886-3-6668565

Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab

Tel: 886-3-3183232

Fax: 886-3-3270892

Email: service.adt@bureauveritas.com

Web Site: <http://ee.bureauveritas.com.tw>

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

--- END ---