

TEST REPORT

CERTIFICATE OF CONFORMITY

Standard: 47 CFR FCC Part 15, Subpart C (Section 15.249)

Report No.: RFBAOZ-WTW-P26010501-2

FCC ID: RRK-MSSS2571

Product: Z-Wave 800 module

Brand: ALPHA

Model No.: MSSS-2571

Received Date: 2026/1/23

Test Date: 2026/2/13 ~ 2026/4/15

Issued Date: 2026/5/29

Applicant: Alpha Networks Inc.

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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FCC Registration / 723255 / TW2022

Designation Number:

Approved by: _____, **Date:** 2026/5/29
May Chen / Manager

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Prepared by : Claire Kuan / Specialist

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Release Control Record

Issue No.	Description	Date Issued
RFBAOZ-WTW-P26010501-2	Original release.	2026/5/29

1 Certificate

Product: Z-Wave 800 module

Brand: ALPHA

Test Model: MSSS-2571

Sample Status: production module

Applicant: Alpha Networks Inc.

Test Date: 2026/2/13 ~ 2026/4/15

Standard: 47 CFR FCC Part 15, Subpart C (Section 15.249)

Measurement procedure: ANSI C63.10-2020

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.

2 Summary of Test Results

47 CFR FCC Part 15, Subpart C (Section 15.249)			
Standard / Clause	Test Item	Result	Remark
15.207	AC Power Conducted Emissions	Pass	Minimum passing margin is -21.59 dB at 1.57422 MHz
15.209 / 15.249(a) / 15.249(d)	Radiated Emissions below 1 GHz	Pass	Minimum passing margin is -4.9 dB at 35.26 MHz
15.209 / 15.249(a) / 15.249(d) / 15.249(e)	Radiated Emissions above 1 GHz	Pass	Minimum passing margin is -28.3 dB at 4580.00 MHz
15.215 (c)	20 dB Bandwidth	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector is I-pex not a standard connector.

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) (±)
AC Power Conducted Emissions	150 kHz ~ 30 MHz	1.9 dB
Radiated Emissions below 1 GHz	9 kHz ~ 30 MHz	3.1 dB
	30 MHz ~ 1 GHz	5.5 dB
Radiated Emissions above 1 GHz	1 GHz ~ 18 GHz	5.1 dB
20 dB Bandwidth	-	1050.00 Hz

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

2.2 Supplementary Information

There is not any deviation from the test standards for the test method, and no modifications required for compliance.

3 General Information

3.1 General Description

Product	Z-Wave 800 module
Brand	ALPHA
Test Model	MSSS-2571
Status of EUT	production module
Power Supply Rating	3.3 Vdc from host equipment
Modulation Type	FSK, GFSK
Transfer Rate	40 kbps for 908.4 MHz 9.6 kbps for 908.42 MHz 100 kbps for 916 MHz
Operating Frequency	908.4 MHz, 908.42 MHz, 916 MHz
Number of Channel	3
Field Strength Of Fundamental	93.8 dBuV/m at 3 meters

Note:

1. There are Bluetooth and Z-Wave technology used for the EUT.
2. Bluetooth and Z-Wave technology can not transmit at same time.
3. 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.

Antenna NO.	Model	Antenna Net Gain(dBi)	Frequency range	Antenna Type	Connector Type
1	module_Z-Wave	2.9	862.5 MHz ~ 926.3 MHz	PIFA	I-pex
2	module -BT	3.5	2400 MHz ~ 2500 MHz	PIFA	I-pex

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

3.3 Channel List

3 channels are provided to this EUT:

Channel	Freq. (MHz)
1	908.4
2	908.42
0	916

3.4 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	1. EUT can be used in the following ways: Antenna X-axis/ Y-axis/ Z-axis. Pre-scan these ways and find the worst case as a representative test condition. 2. 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).
Worst Case:	1. Antenna X-axis/ Y-axis/ Z-axis Worst Condition: Antenna Z-axis

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

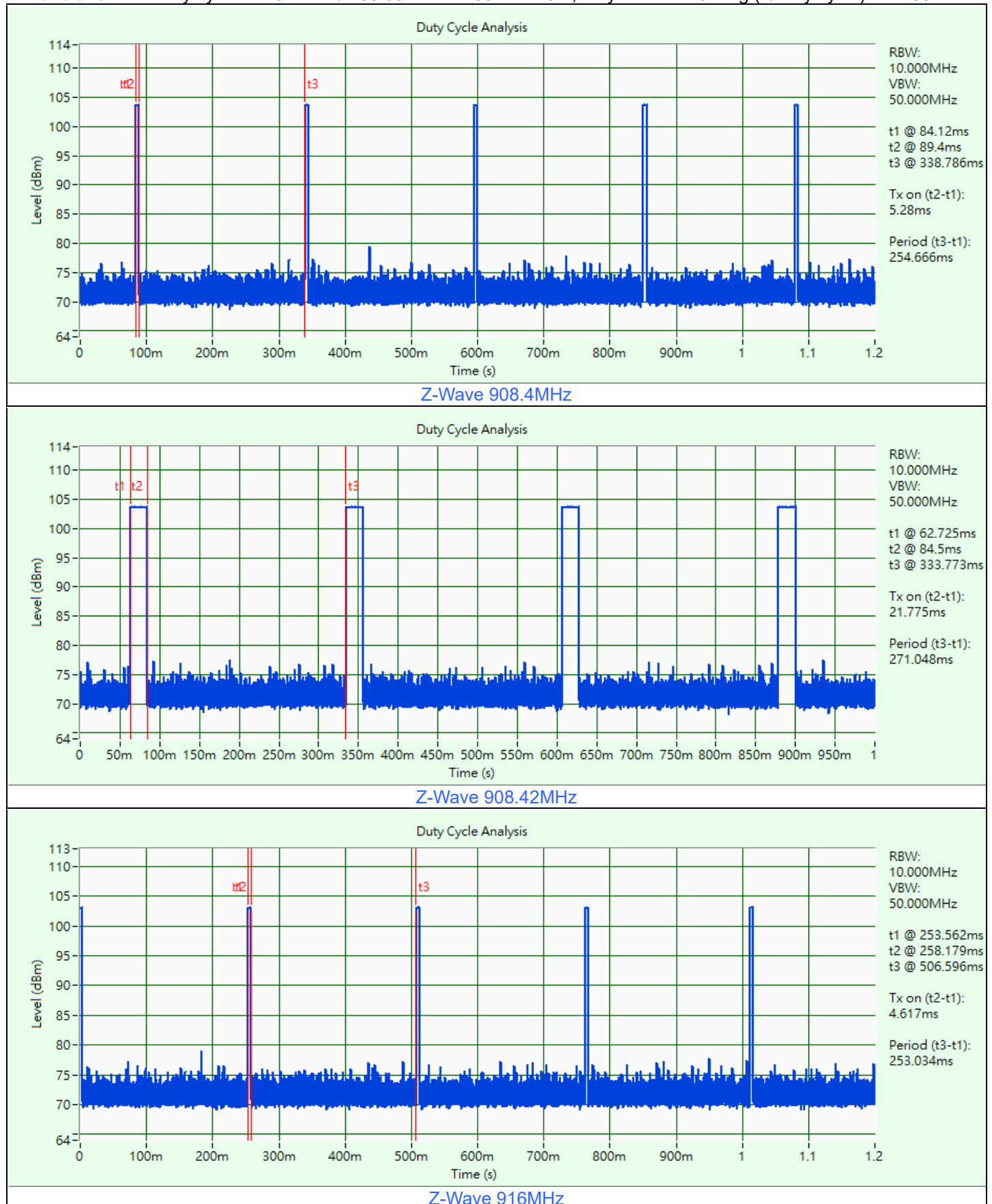
Test Item	Tested Channel	Operating Frequency (MHz)	Modulation Type	Data Rate Parameter
AC Power Conducted Emissions	2	908.42	FSK	9.6 kbps
20 dB Bandwidth	1	908.4	FSK	40 kbps
	2	908.42	FSK	9.6 kbps
	0	916	GFSK	100 kbps
Radiated Emissions below 1 GHz	1	908.4	FSK	40 kbps
	2	908.42	FSK	9.6 kbps
	0	916	GFSK	100 kbps
Radiated Emissions above 1 GHz	1	908.4	FSK	40 kbps
	2	908.42	FSK	9.6 kbps
	0	916	GFSK	100 kbps

3.5 Duty Cycle of Test Signal

Z-Wave 908.4MHz: Duty cycle = 5.28 ms / 254.666 ms x 100% = 2.1%, duty factor = $10 \cdot \log(1/\text{Duty cycle}) = 16.83$ dB

Z-Wave 908.42MHz: Duty cycle = 21.775 ms / 271.048 ms x 100% = 8.0%, duty factor = $10 \cdot \log(1/\text{Duty cycle}) = 10.95$ dB

Z-Wave 916MHz: Duty cycle = 4.617 ms / 253.034 ms x 100% = 1.8%, duty factor = $10 \cdot \log(1/\text{Duty cycle}) = 17.39$ dB

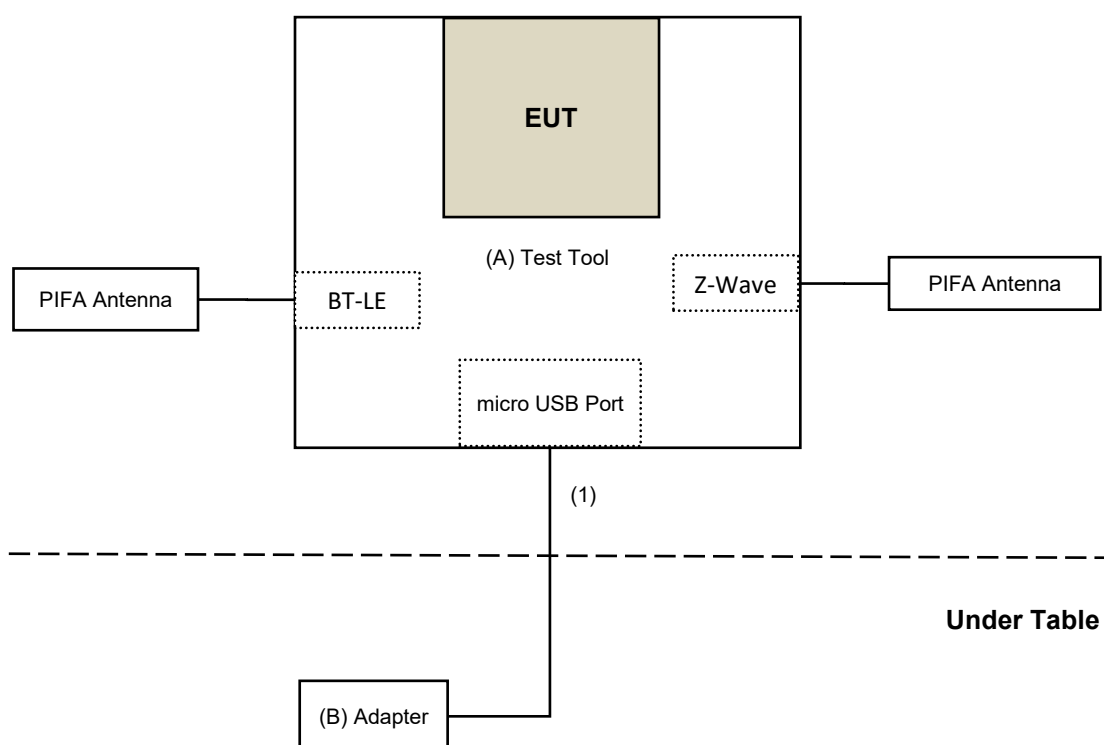


3.6 Test Program Used and Operation Descriptions

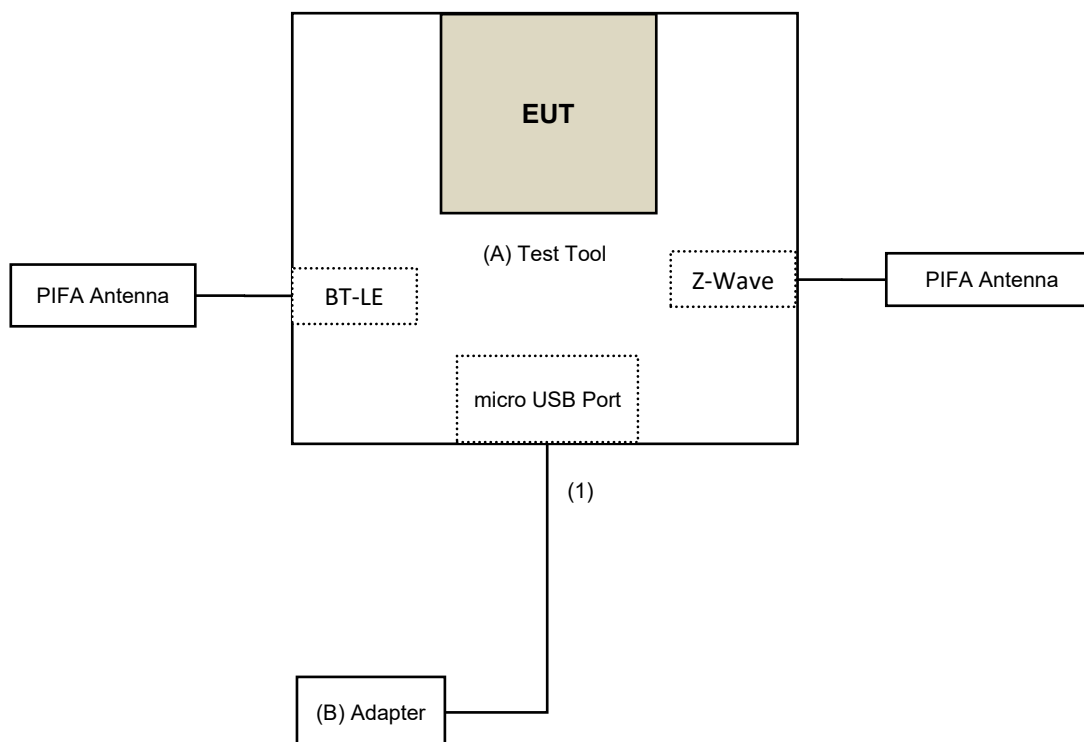
Controlling software (HyperTerminal paste MSSS-2571 RF Command 0115.xls command) has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.7 Connection Diagram of EUT and Peripheral Devices

For Unwanted Emission test:



For AC Power Conducted Emission test:



3.8 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Test Tool	ALPHA	N/A	N/A	N/A	Supplied by applicant
B	Adapter	APD	WB-10N05R	N/A	N/A	Supplied by applicant

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	DC Cable	1	3	No	0	Supplied by applicant

4 Test Instruments

The calibration interval of the all test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.1 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
50 ohm terminal resistance Telegartner	50 ohm	3	2025/10/29	2026/10/28
EMI Test Receiver R&S	ESCS 30	100375	2025/5/21	2026/5/20
Fixed Attenuator STI	STI02-2200-10	005	2026/2/9	2027/2/8
LISN R&S	ESH3-Z5	835239/001	2025/3/27	2026/3/26
		848773/004	2025/10/3	2026/10/2
RF Coaxial Cable JYEBAO	5D-FB	COCCAB-001	2026/2/9	2027/2/8
Software BVADT	BVADT_Cond_V7.3.7.4	N/A	N/A	N/A

Notes:

1. The test was performed in HC - Conduction 1(Hsinchu).
2. Tested Date: 2026/2/13

4.2 Radiated Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-406	2025/9/17	2026/9/16
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	N/A	N/A
Fixed Attenuator Mini-Circuits	UNAT-5+	PAD-ATT5-03	2026/2/7	2027/2/6
Loop Antenna TESEQ	HLA 6121	63620	2025/10/20	2026/10/19
MXE EMI Receiver Agilent	N9038A	MY51210202	2025/7/30	2026/7/29
Preamplifier EMCI	EMC330N	980701	2026/2/7	2027/2/6
RF Coaxial Cable mTJ	100100-CFD400LW-200	CFD400-200	2026/2/7	2027/2/6
	100100-CFD400LW-400	CFD400-400	2026/2/7	2027/2/6
	100100-CFD400LW-800	CFD400-800	2026/2/7	2027/2/6
Software	ADT_Radiated_V8.7.08	N/A	N/A	N/A

Notes:

1. The test was performed in HC - 966 Chamber No. 4(Hsinchu).
2. Tested Date: 2026/2/14 ~ 2026/2/25

4.3 Radiated Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	N/A	N/A
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-783	2025/11/9	2026/11/8
MXA Signal Analyzer Keysight	N9020B	MY60112410	2025/3/17	2026/3/16
Preamplifier EMCI	EMC12630SE	980688	2025/8/7	2026/8/6
RF Coaxial Cable EMCI	EMC104-SM-SM-1200	160922	2026/1/10	2027/1/9
	EMC104-SM-SM-2000	180502	2026/1/10	2027/1/9
	EMC104-SM-SM-6000	210704	2025/10/22	2026/10/21
Software	ADT_Radiated_V8.7.08	N/A	N/A	N/A

Notes:

1. The test was performed in HC - 966 Chamber No. 4(Hsinchu).
2. Tested Date: 2026/3/2 ~ 2026/3/4

4.4 20 dB Bandwidth

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Fixed Attenuator Woken	00800A1K01A-10	00800A1K01A-10-01	2025/5/23	2026/5/22
PXA Signal Analyzer Keysight	N9030B	MY57141948	2025/5/20	2026/5/19
Software	ADT_RF Test Software v8.5.6.4	N/A	N/A	N/A

Notes:

1. The test was performed in HC - Oven room 2(Hsinchu).
2. Tested Date: 2026/4/15

5 Limits of Test Items

5.1 AC Power Conducted Emissions

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

Notes:

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 0.50 MHz.

5.2 Radiated Emissions below 1 GHz

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).

5.3 Radiated Emissions above 1 GHz

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.

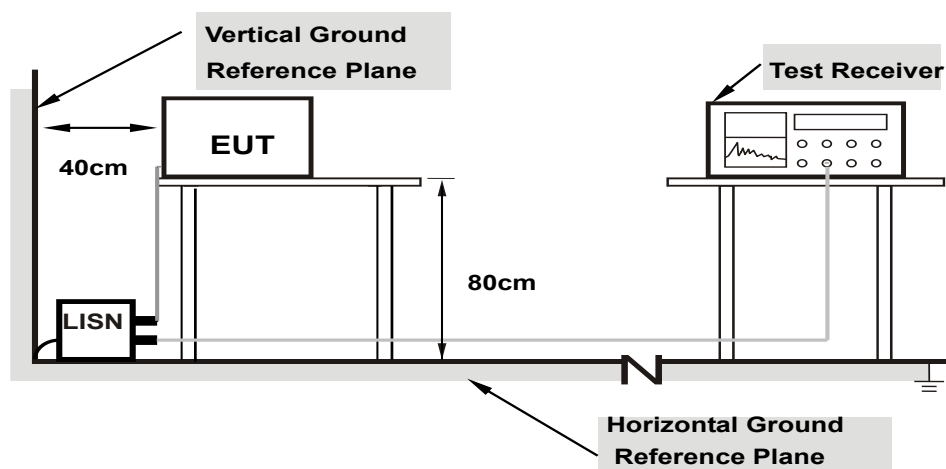
5.4 20 dB Bandwidth

The 20dB bandwidth shall be specified in operating frequency band.

6 Test Arrangements

6.1 AC Power Conducted Emissions

6.1.1 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).

6.1.2 Test Procedure

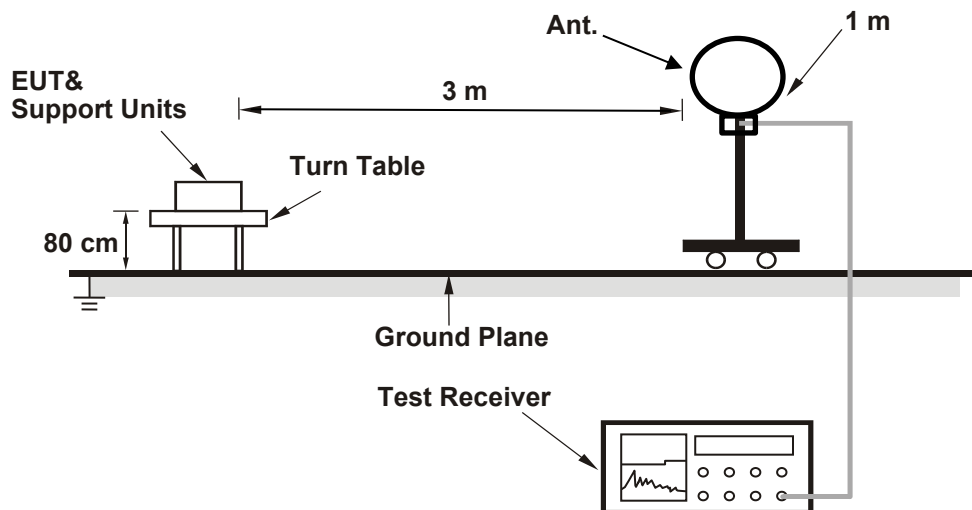
- Exploratory ac power-line conducted emission measurements: The EUT shall be operated on the mid channel and in the mode with highest output power unless the fundamental operates in the AC power-line emission test range then the EUT shall be operated in the range of typical modes of operation.
- The EUT was placed on a 0.8 meter to the top of table and 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/ 50 uH 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 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

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

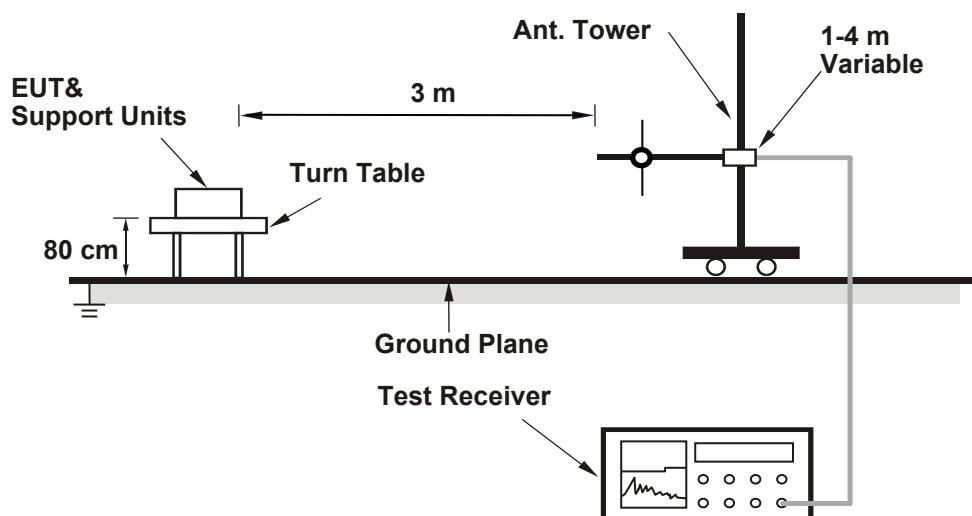
6.2 Radiated Emissions below 1 GHz

6.2.1 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).

6.2.2 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 (however, peak detector measurements may be used to determine compliance with QP requirements), 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

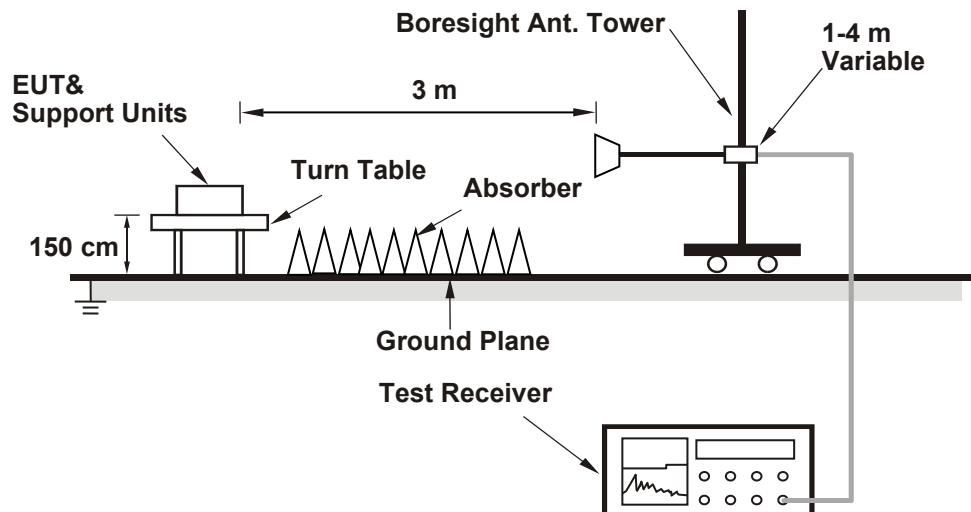
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the 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(QP) detect function, Average(AV) detect function, Peak(PK) detect function and specified bandwidth with maximum hold mode when the test frequencies less than or equal to 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 (however, peak detector measurements may be used to determine compliance with QP requirements).
2. All modes of operation were investigated and the worst-case emissions are reported.

6.3 Radiated Emissions above 1 GHz

6.3.1 Test Setup



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

6.3.2 Test Procedure

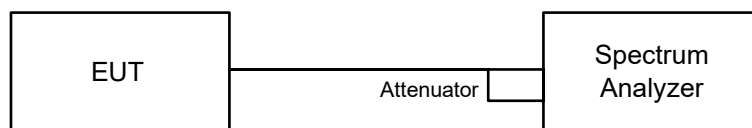
- The EUT was placed on the top of a rotating table 1.5 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- 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.
- 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.
- 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:

- 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.
- For fundamental and harmonic signal measurement, 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 Average detection (AV) at frequency above 1 GHz.
- All modes of operation were investigated and the worst-case emissions are reported.

6.4 20 dB Bandwidth

6.4.1 Test Setup



6.4.2 Test Procedure

Conducted Measurement:

- Set resolution bandwidth (RBW) = 1% to 5% of the OBW.
- Set the video bandwidth (VBW) $\geq 3 \times$ RBW, Detector = Peak.
- Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than $[10 \log (OBW/RBW)]$ below the reference level.
- Trace mode = max hold.
- Sweep = auto couple.
- Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 20 dB relative to the maximum level measured in the fundamental emission.

7 Test Results of Test Item

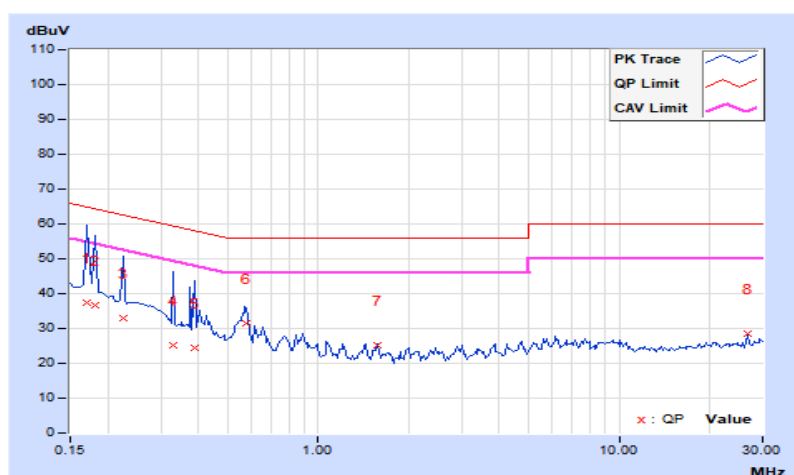
7.1 AC Power Conducted Emissions

RF Mode	Z-Wave	Channel	CH 1 : 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, 59% RH
Tested By	Wayne Chen		

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	0.16953	9.97	27.45	7.75	37.42	17.72	64.98	54.98	-27.56	-37.26
2	0.18125	9.97	26.81	11.05	36.78	21.02	64.43	54.43	-27.65	-33.41
3	0.22422	9.97	23.07	6.79	33.04	16.76	62.66	52.66	-29.62	-35.90
4	0.32969	9.99	15.03	1.53	25.02	11.52	59.46	49.46	-34.44	-37.94
5	0.38828	10.00	14.52	1.13	24.52	11.13	58.10	48.10	-33.58	-36.97
6	0.57969	10.02	21.28	10.44	31.30	20.46	56.00	46.00	-24.70	-25.54
7	1.57422	10.08	15.27	14.33	25.35	24.41	56.00	46.00	-30.65	-21.59
8	26.75391	11.46	17.00	12.59	28.46	24.05	60.00	50.00	-31.54	-25.95

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

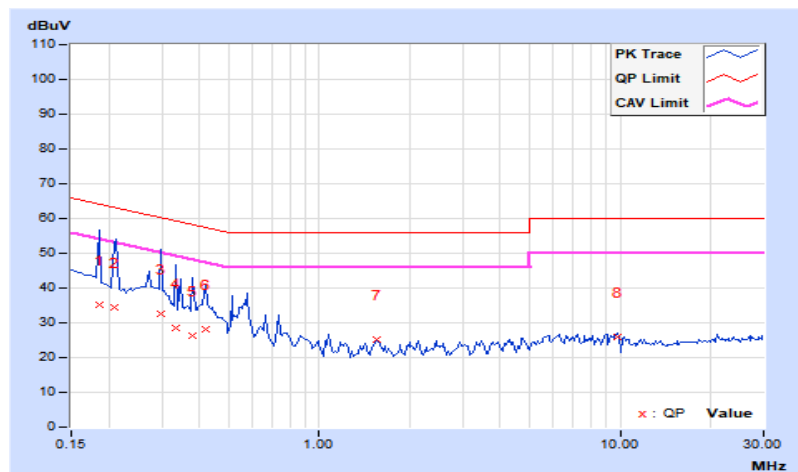


RF Mode	Z-Wave	Channel	CH 1 : 908.4 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	24 °C, 59% RH
Tested By	Wayne Chen		

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	0.18516	9.99	25.23	5.25	35.22	15.24	64.25	54.25	-29.03	-39.01
2	0.20859	9.99	24.57	1.97	34.56	11.96	63.26	53.26	-28.70	-41.30
3	0.29844	9.97	22.54	3.70	32.51	13.67	60.29	50.29	-27.78	-36.62
4	0.33359	9.96	18.53	2.50	28.49	12.46	59.36	49.36	-30.87	-36.90
5	0.38047	9.95	16.36	1.54	26.31	11.49	58.27	48.27	-31.96	-36.78
6	0.41953	9.95	18.29	5.23	28.24	15.18	57.46	47.46	-29.22	-32.28
7	1.55469	10.05	15.01	14.29	25.06	24.34	56.00	46.00	-30.94	-21.66
8	9.85156	10.60	15.32	12.93	25.92	23.53	60.00	50.00	-34.08	-26.47

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



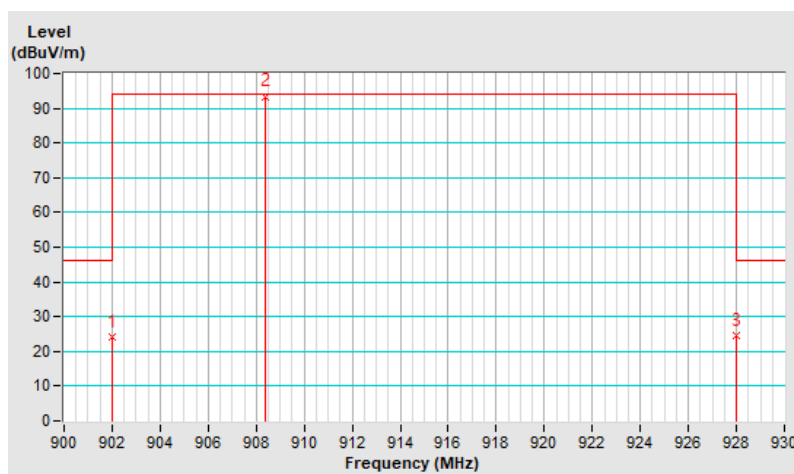
7.2 Radiated Emissions below 1 GHz

RF Mode	Z-Wave	Channel	CH 1 : 908.4 MHz
Frequency Range	900 MHz ~ 930 MHz	Detector Function & Bandwidth	QP: RB=120 kHz, DET=Quasi-Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Wayne Chen		

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	902.00	24.0 QP	46.0	-22.0	1.84 H	64	24.4	-0.4
2	*908.40	93.3 QP	94.0	-0.7	1.84 H	64	93.6	-0.3
3	928.00	24.4 QP	46.0	-21.6	1.84 H	64	24.3	0.1

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. " * ": Fundamental frequency.

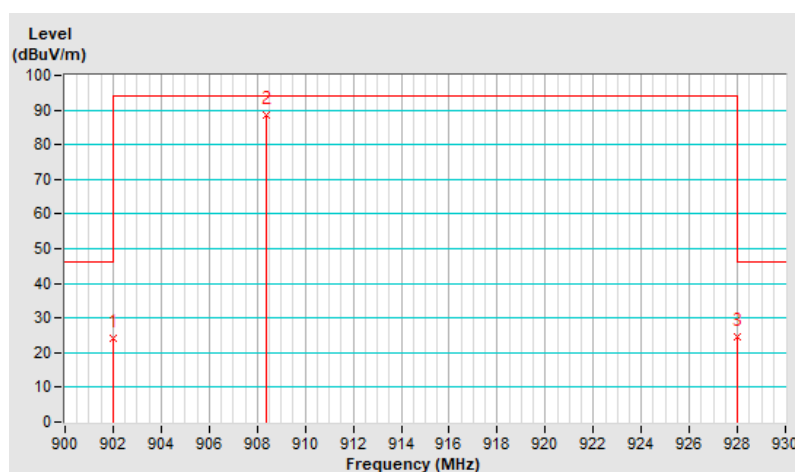


RF Mode	Z-Wave	Channel	CH 1 : 908.4 MHz
Frequency Range	900 MHz ~ 930 MHz	Detector Function & Bandwidth	QP: RB=120 kHz, DET=Quasi-Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Wayne Chen		

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	902.00	24.2 QP	46.0	-21.8	1.36 V	218	24.6	-0.4
2	*908.40	88.5 QP	94.0	-5.5	1.36 V	218	88.8	-0.3
3	928.00	24.5 QP	46.0	-21.5	1.36 V	218	24.4	0.1

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. " * " : Fundamental frequency.

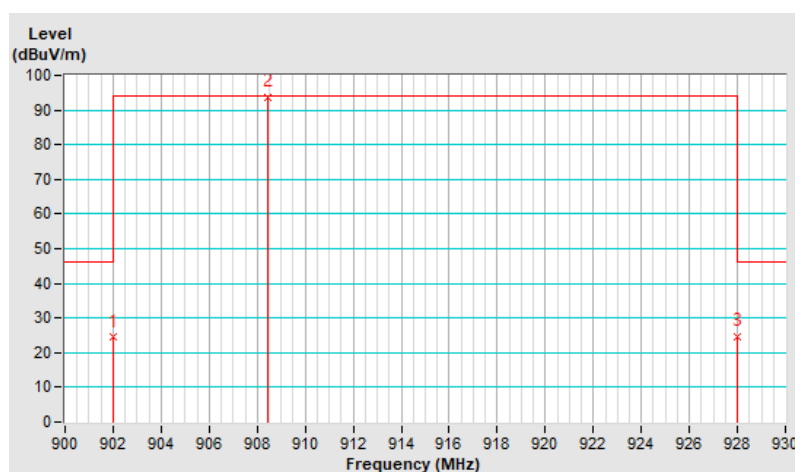


RF Mode	Z-Wave	Channel	CH 2 : 908.42 MHz
Frequency Range	900 MHz ~ 930 MHz	Detector Function & Bandwidth	QP: RB=120 kHz, DET=Quasi-Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Wayne Chen		

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	902.00	24.4 QP	46.0	-21.6	1.82 H	65	24.8	-0.4
2	*908.42	93.8 QP	94.0	-0.2	1.82 H	65	94.1	-0.3
3	928.00	24.5 QP	46.0	-21.5	1.82 H	65	24.4	0.1

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. " * ": Fundamental frequency.

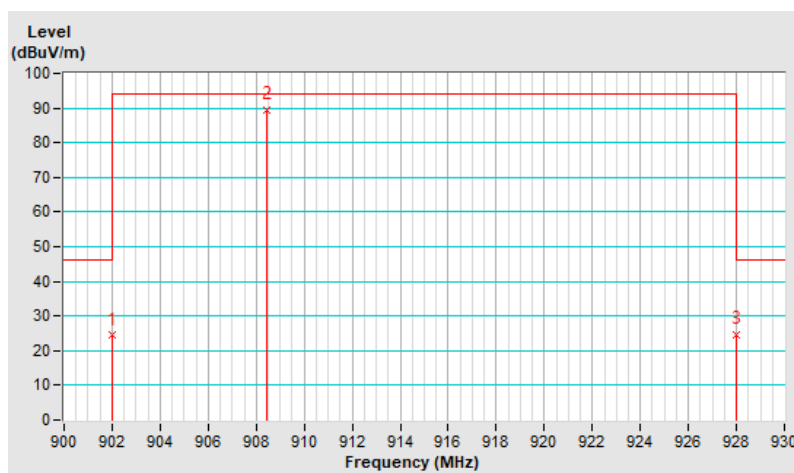


RF Mode	Z-Wave	Channel	CH 2 : 908.42 MHz
Frequency Range	900 MHz ~ 930 MHz	Detector Function & Bandwidth	QP: RB=120 kHz, DET=Quasi-Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Wayne Chen		

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	902.00	24.4 QP	46.0	-21.6	1.38 V	218	24.8	-0.4
2	*908.42	89.5 QP	94.0	-4.5	1.38 V	218	89.8	-0.3
3	928.00	24.6 QP	46.0	-21.4	1.38 V	218	24.5	0.1

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. " * " : Fundamental frequency.

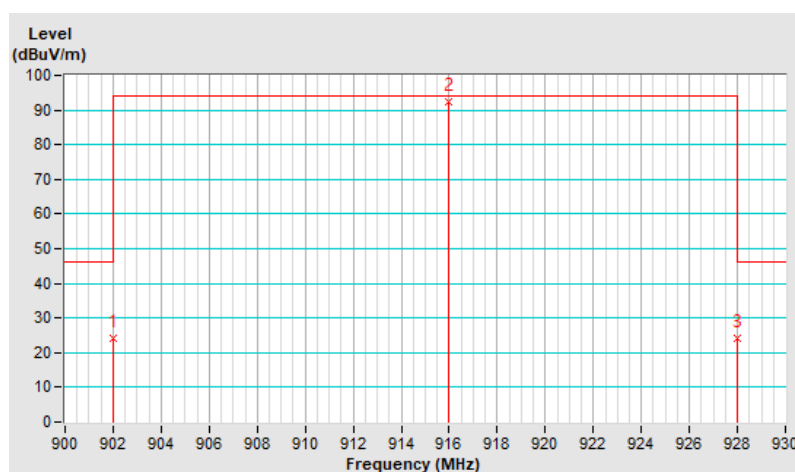


RF Mode	Z-Wave	Channel	CH 0 : 916 MHz
Frequency Range	900 MHz ~ 930 MHz	Detector Function & Bandwidth	QP: RB=120 kHz, DET=Quasi-Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Wayne Chen		

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	902.00	24.1 QP	46.0	-21.9	1.84 H	64	24.5	-0.4
2	*916.00	92.3 QP	94.0	-1.7	1.84 H	64	92.2	0.1
3	928.00	24.3 QP	46.0	-21.7	1.84 H	64	24.2	0.1

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. " * " : Fundamental frequency.

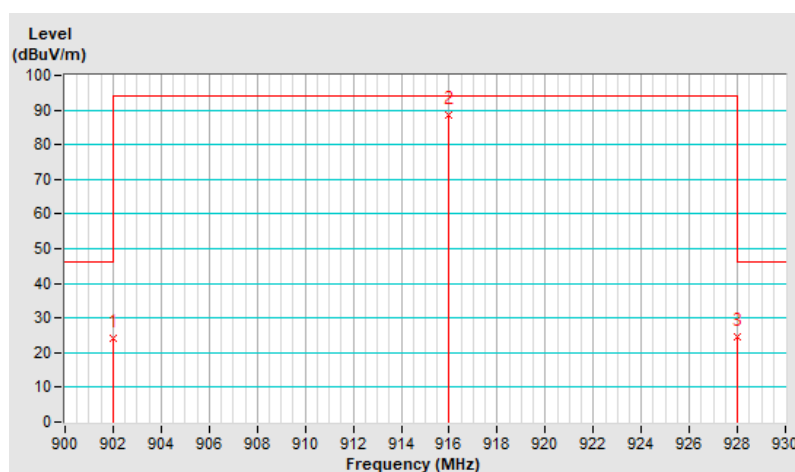


RF Mode	Z-Wave	Channel	CH 0 : 916 MHz
Frequency Range	900 MHz ~ 930 MHz	Detector Function & Bandwidth	QP: RB=120 kHz, DET=Quasi-Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Wayne Chen		

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	902.00	24.2 QP	46.0	-21.8	1.36 V	215	24.6	-0.4
2	*916.00	88.5 QP	94.0	-5.5	1.36 V	215	88.4	0.1
3	928.00	24.5 QP	46.0	-21.5	1.36 V	215	24.4	0.1

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. " * " : Fundamental frequency.

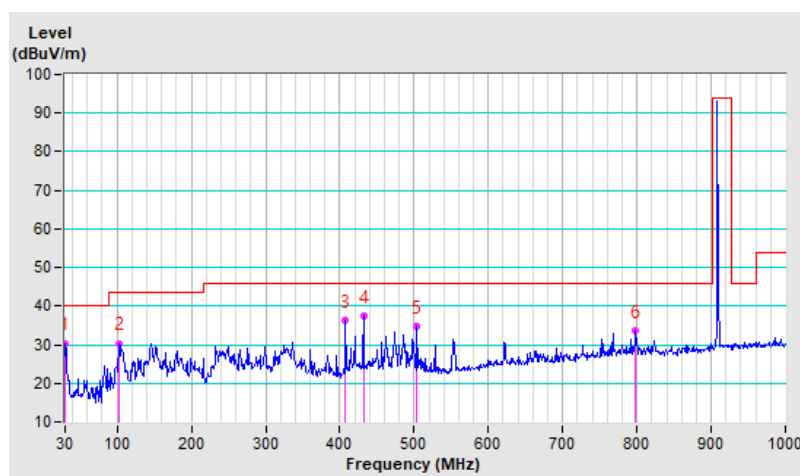


RF Mode	Z-Wave	Channel	CH 1 : 908.4 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	PK: RB=120 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Wayne Chen		

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	30.51	30.4 PK	40.0	-9.6	3.00 H	304	44.3	-13.9
2	103.33	30.4 PK	43.5	-13.1	3.00 H	13	47.1	-16.7
3	407.96	36.2 PK	46.0	-9.8	1.00 H	18	45.6	-9.4
4	431.94	37.4 PK	46.0	-8.6	1.00 H	360	46.0	-8.6
5	503.94	34.9 PK	46.0	-11.1	1.00 H	1	42.0	-7.1
6	798.24	33.5 PK	46.0	-12.5	1.00 H	122	35.2	-1.7

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.

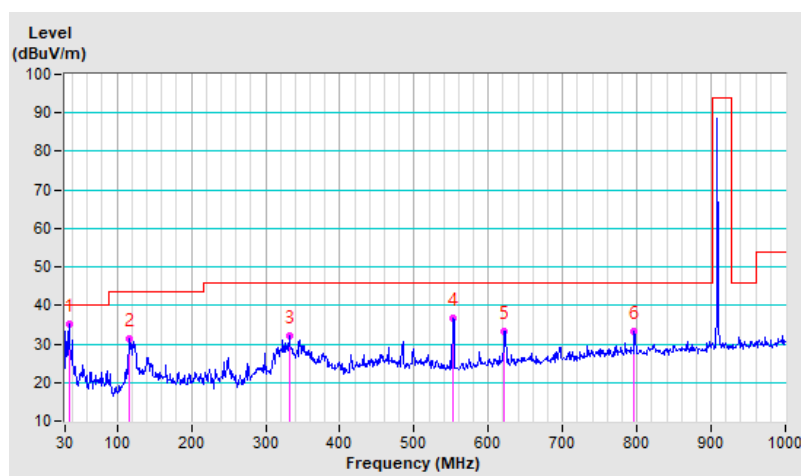


RF Mode	Z-Wave	Channel	CH 1 : 908.4 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	PK: RB=120 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Wayne Chen		

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	35.26	35.1 PK	40.0	-4.9	2.00 V	1	48.7	-13.6
2	116.98	31.2 PK	43.5	-12.3	1.00 V	135	46.3	-15.1
3	332.01	32.1 PK	46.0	-13.9	2.00 V	204	43.4	-11.3
4	551.88	36.6 PK	46.0	-9.4	1.00 V	192	43.0	-6.4
5	621.99	33.4 PK	46.0	-12.6	1.00 V	232	38.0	-4.6
6	796.69	33.1 PK	46.0	-12.9	3.00 V	226	34.8	-1.7

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.

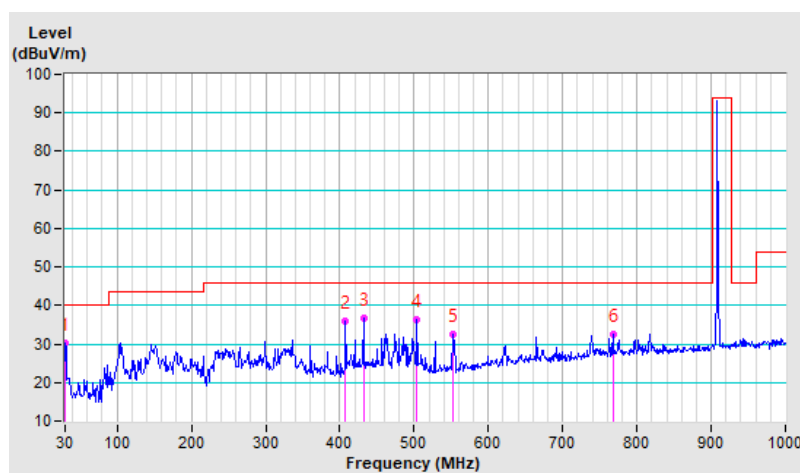


RF Mode	Z-Wave	Channel	CH 2 : 908.42 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	PK: RB=120 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Wayne Chen		

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	30.2 PK	40.0	-9.8	3.00 H	360	44.1	-13.9
2	407.96	36.0 PK	46.0	-10.0	1.00 H	360	45.4	-9.4
3	431.94	36.8 PK	46.0	-9.2	1.00 H	20	45.4	-8.6
4	503.97	36.2 PK	46.0	-9.8	2.00 H	8	43.3	-7.1
5	551.88	32.4 PK	46.0	-13.6	2.00 H	1	38.8	-6.4
6	767.93	32.6 PK	46.0	-13.4	1.00 H	196	34.8	-2.2

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.

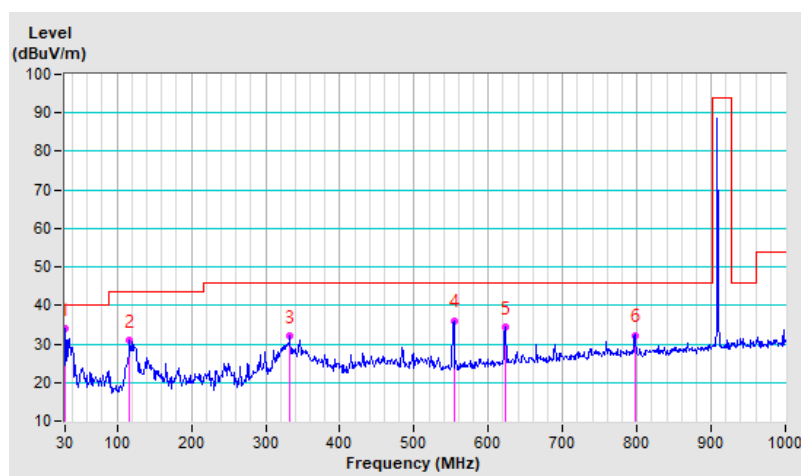


RF Mode	Z-Wave	Channel	CH 2 : 908.42 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120 kHz, DET=Quasi-Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Wayne Chen		

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	30.56	33.9 QP	40.0	-6.1	1.00 V	81	47.8	-13.9
2	116.79	31.1 QP	43.5	-12.4	1.00 V	111	46.2	-15.1
3	332.57	32.1 QP	46.0	-13.9	1.00 V	1	43.4	-11.3
4	554.04	36.1 QP	46.0	-9.9	1.50 V	188	42.4	-6.3
5	623.40	34.3 QP	46.0	-11.7	2.00 V	230	38.8	-4.5
6	798.22	32.3 QP	46.0	-13.7	1.50 V	105	34.0	-1.7

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.

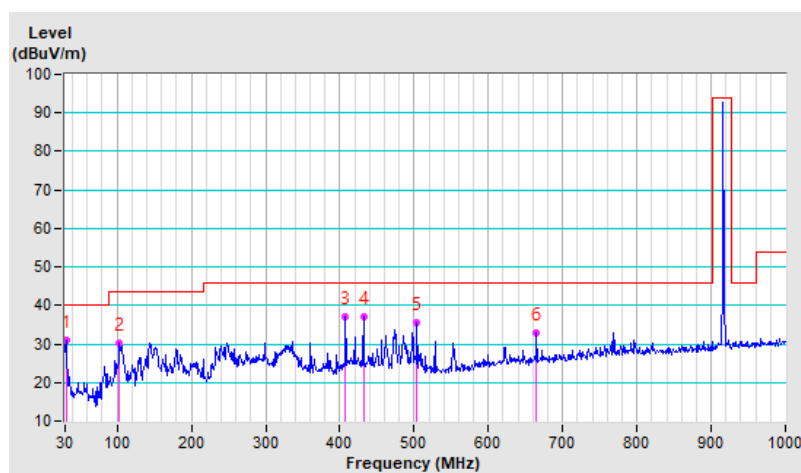


RF Mode	Z-Wave	Channel	CH 0 : 916 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	PK: RB=120 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Wayne Chen		

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	31.02	31.0 PK	40.0	-9.0	3.00 H	360	45.1	-14.1
2	103.50	30.3 PK	43.5	-13.2	3.00 H	346	46.9	-16.6
3	407.94	37.0 PK	46.0	-9.0	1.00 H	360	46.4	-9.4
4	431.94	37.1 PK	46.0	-8.9	1.00 H	360	45.7	-8.6
5	503.94	35.4 PK	46.0	-10.6	2.00 H	7	42.5	-7.1
6	664.99	32.9 PK	46.0	-13.1	1.00 H	116	37.0	-4.1

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 of frequency range 30 MHz ~ 1 GHz.

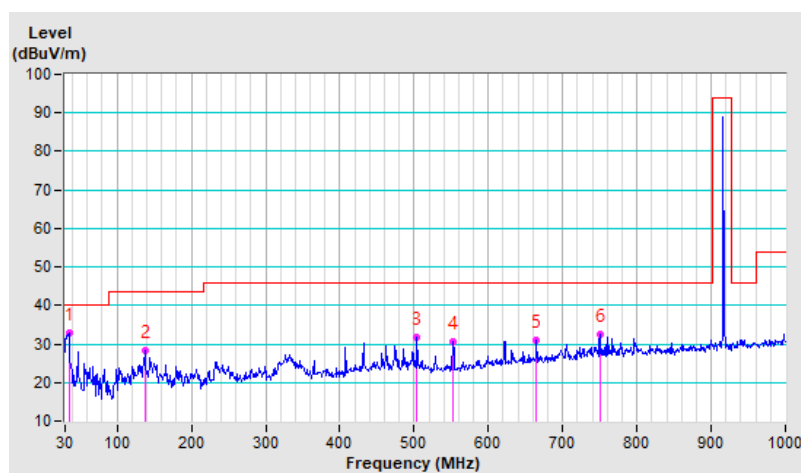


RF Mode	Z-Wave	Channel	CH 0 : 916 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	PK: RB=120 kHz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Wayne Chen		

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	35.36	32.8 PK	40.0	-7.2	1.00 V	350	46.4	-13.6
2	137.57	28.4 PK	43.5	-15.1	1.00 V	188	41.8	-13.4
3	503.89	31.6 PK	46.0	-14.4	1.00 V	318	38.7	-7.1
4	551.86	30.6 PK	46.0	-15.4	2.00 V	220	37.0	-6.4
5	665.01	31.1 PK	46.0	-14.9	1.00 V	87	35.2	-4.1
6	749.81	32.5 PK	46.0	-13.5	1.00 V	333	34.9	-2.4

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.



7.3 Radiated Emissions above 1 GHz

RF Mode	Z-Wave	Channel	CH 1 : 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=200 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Wayne Chen		

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	35.2 PK	74.0	-38.8	1.50 H	157	34.9	0.3
2	2725.20	22.6 AV	54.0	-31.4	1.50 H	157	22.3	0.3
3	3633.60	38.2 PK	74.0	-35.8	1.50 H	257	36.2	2.0
4	3633.60	24.7 AV	54.0	-29.3	1.50 H	257	22.7	2.0
5	4542.00	38.7 PK	74.0	-35.3	1.50 H	199	34.8	3.9
6	4542.00	25.5 AV	54.0	-28.5	1.50 H	199	21.6	3.9
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	2725.20	35.0 PK	74.0	-39.0	1.50 V	219	34.7	0.3
2	2725.20	22.6 AV	54.0	-31.4	1.50 V	219	22.3	0.3
3	3633.60	38.1 PK	74.0	-35.9	1.50 V	73	36.1	2.0
4	3633.60	24.8 AV	54.0	-29.2	1.50 V	73	22.8	2.0
5	4542.00	38.8 PK	74.0	-35.2	1.50 V	175	34.9	3.9
6	4542.00	25.6 AV	54.0	-28.4	1.50 V	175	21.7	3.9

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.

RF Mode	Z-Wave	Channel	CH 2 : 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=51 Hz, DET=Peak
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Wayne Chen		

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	34.8 PK	74.0	-39.2	1.50 H	142	34.5	0.3
2	2725.26	22.3 AV	54.0	-31.7	1.50 H	142	22.0	0.3
3	3633.68	38.1 PK	74.0	-35.9	1.50 H	263	36.1	2.0
4	3633.68	24.5 AV	54.0	-29.5	1.50 H	263	22.5	2.0
5	4542.10	38.8 PK	74.0	-35.2	1.50 H	185	34.9	3.9
6	4542.10	25.3 AV	54.0	-28.7	1.50 H	185	21.4	3.9
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	2725.26	34.7 PK	74.0	-39.3	1.50 V	211	34.4	0.3
2	2725.26	22.4 AV	54.0	-31.6	1.50 V	211	22.1	0.3
3	3633.68	38.0 PK	74.0	-36.0	1.50 V	77	36.0	2.0
4	3633.68	24.4 AV	54.0	-29.6	1.50 V	77	22.4	2.0
5	4542.10	38.7 PK	74.0	-35.3	1.50 V	165	34.8	3.9
6	4542.10	25.4 AV	54.0	-28.6	1.50 V	165	21.5	3.9

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.

RF Mode	Z-Wave	Channel	CH 0 : 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
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75% RH
Tested By	Wayne Chen		

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	35.0 PK	74.0	-39.0	1.50 H	156	34.6	0.4
2	2748.00	22.5 AV	54.0	-31.5	1.50 H	156	22.1	0.4
3	3664.00	38.1 PK	74.0	-35.9	1.50 H	257	36.1	2.0
4	3664.00	24.8 AV	54.0	-29.2	1.50 H	257	22.8	2.0
5	4580.00	38.9 PK	74.0	-35.1	1.50 H	190	35.1	3.8
6	4580.00	25.6 AV	54.0	-28.4	1.50 H	190	21.8	3.8
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	34.9 PK	74.0	-39.1	1.50 V	211	34.5	0.4
2	2748.00	22.5 AV	54.0	-31.5	1.50 V	211	22.1	0.4
3	3664.00	38.0 PK	74.0	-36.0	1.50 V	70	36.0	2.0
4	3664.00	24.7 AV	54.0	-29.3	1.50 V	70	22.7	2.0
5	4580.00	38.8 PK	74.0	-35.2	1.50 V	186	35.0	3.8
6	4580.00	25.7 AV	54.0	-28.3	1.50 V	186	21.9	3.8

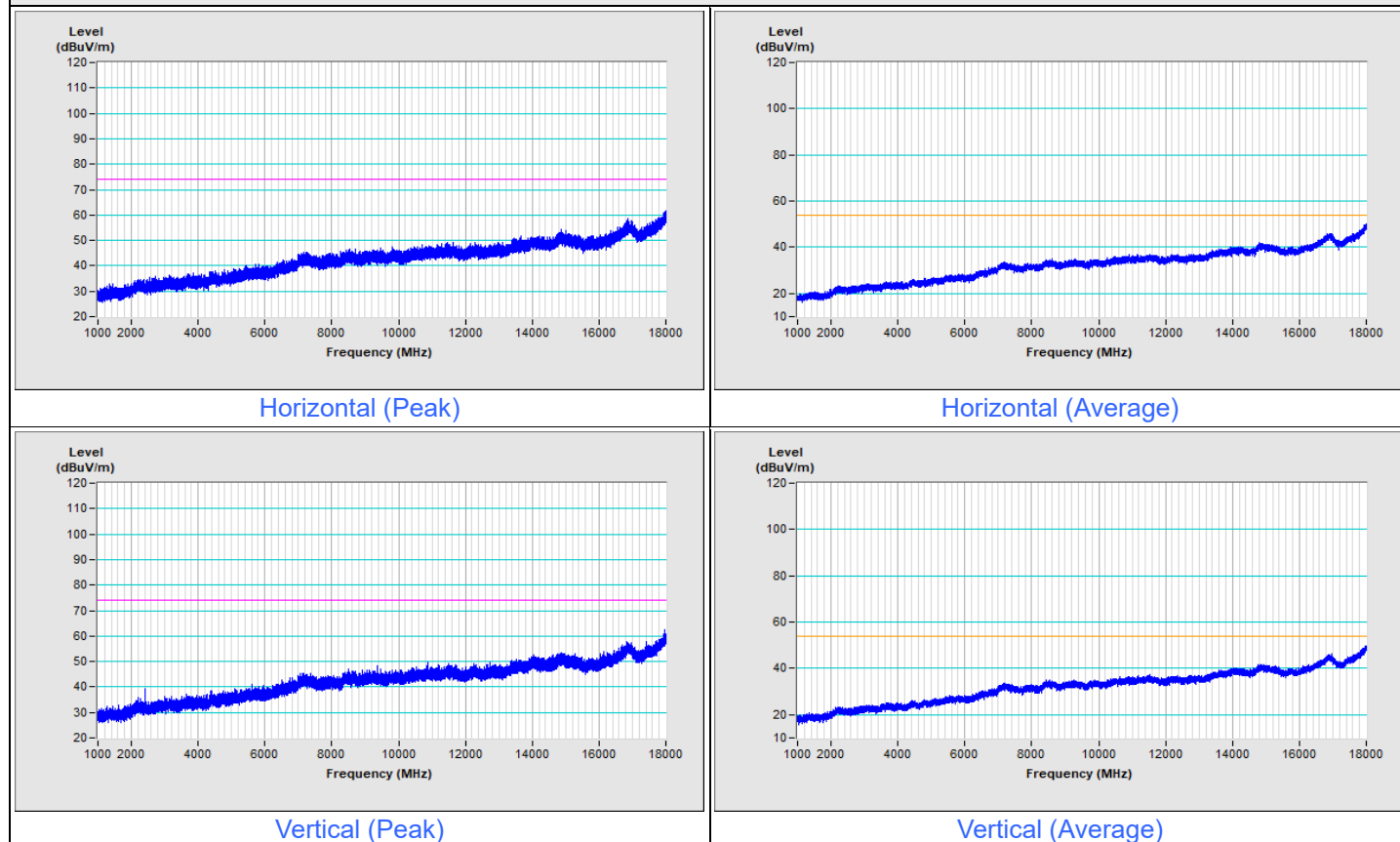
Remarks:

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.

Plot of Other Emission

Frequency Range	1 GHz ~ 10GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
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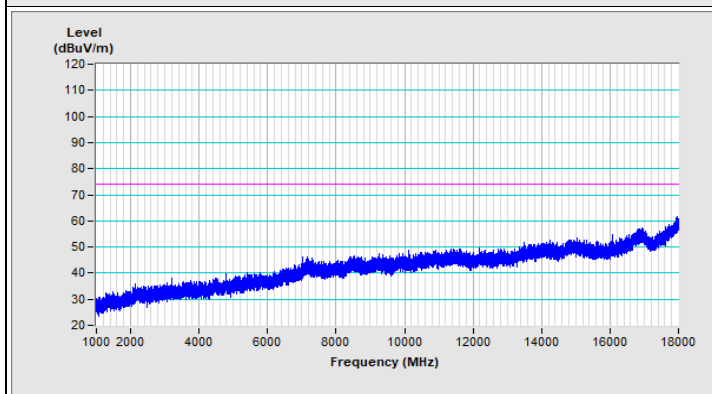
FSK Channel 1



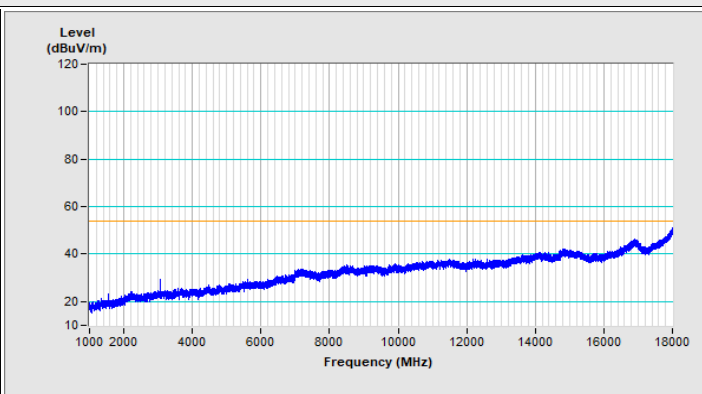
Notes:

- For radiated emission test data, complete spectral plots shall be presented in the report only for the worst-case scenarios of each mode within each operating frequency band.

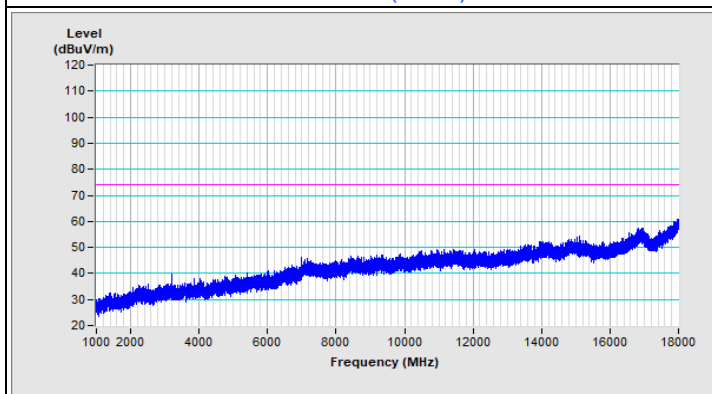
GFSK Channel 0



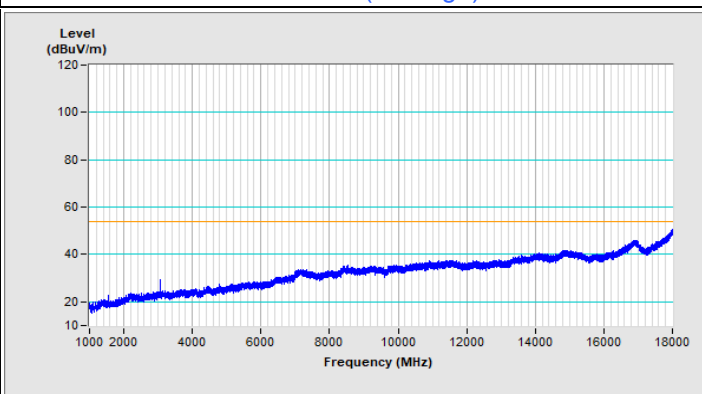
Horizontal (Peak)



Horizontal (Average)



Vertical (Peak)



Vertical (Average)

Notes:

1. For radiated emission test data, complete spectral plots shall be presented in the report only for the worst-case scenarios of each mode within each operating frequency band.

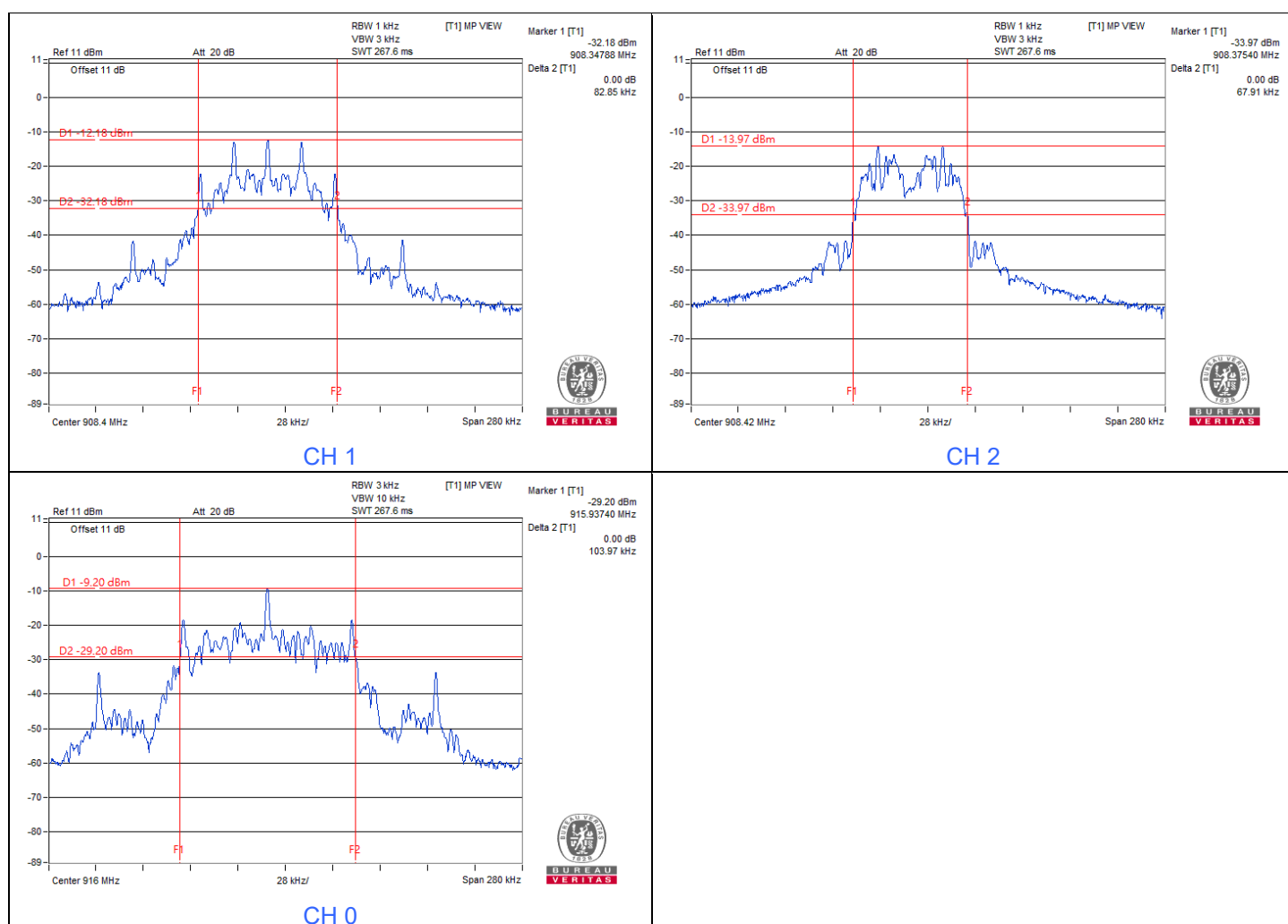
7.4 20 dB Bandwidth

Input Power:	3.3 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Wayne Chen
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Channel	Channel Frequency (MHz)	20 dB Bandwidth (MHz)	Measured Frequencies		Operating Frequency Band (MHz)	Test Result
			FL (MHz)	FH (MHz)		
1	908.4	0.08285	908.34788	908.4307	902 ~ 928	Pass
2	908.42	0.06791	908.3754	908.4433		Pass
0	916	0.10397	915.9374	916.0414		Pass

Notes:

1. FL is the lowest frequency of the 20 dB bandwidth of power envelope.
2. FH is the highest frequency of the 20 dB bandwidth of power envelope.



8 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo)

9 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.

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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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