



FCC RADIO TEST REPORT

FCC ID : MG3-FLZWLR
Equipment : UEI/Ecolink Z-Wave Long Range Flood Freeze Sensor
Brand Name : Ecolink
Model Name : FLZWLR-ECO
Marketing Name : Ecolink
Applicant : Universal Electronics
15147 N Scottsdale Rd Ste H300, Scottsdale, AZ 85254
Manufacturer : Universal Electronics
15147 N Scottsdale Rd Ste H300, Scottsdale, AZ 85254
Standard : FCC Part 15 Subpart C §15.249

The product was received on Feb. 24, 2026 and testing was performed from Mar. 25, 2026 to Apr. 12, 2026. We, Sporton International (USA) Inc, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written from Sporton International (USA) Inc, the test report shall not be reproduced except in full.

Approved by: Neil Kao

Sporton International (USA) Inc.

1175 Montague Expressway, Milpitas, CA 95035



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History of this test report

Report No.	Version	Description	Issue Date
FR251118001B	01	Initial issue of report	May 22, 2026

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	§15.215(c)	Emission Bandwidth	Pass	-
3.2	15.249(a) 15.249(d)	Field Strength of Fundamental and Radiated Spurious Emission	Pass	-
-	15.207	AC Conducted Emission	Not Required	See Note
-	15.249(b)	Frequency Stability	Not Required	See Note
3.3	15.203	Antenna Requirements	Pass	-

Note:

1. The power source method of the EUT is to use DC power source, and there is no other AC power port, after assessing, AC Conduction Emission test is not required.
2. Only applicable to fixed point to point systems.

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacture who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section "Measurement Uncertainty".

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature		
General Specs Zigbee-Z-wave		
Antenna Type PCB Trace Antenna		
Antenna information		
902MHz ~ 928MHz	Peak Gain (dBi)	-8.05

Remark: The EUT's information above is declared by manufacturer. Please refer to Disclaimer in report summary.

1.2 Modification of EUT

No modifications are made to the EUT during all test items.

1.3 Testing Location

Test Site	Sporton International (USA) Inc.
Test Site Location	1175 Montague Expressway, Milpitas, CA 95035 TEL : 408 9043300
Test Site No.	Sporton Site No.
	TH01-CA, 03CH02-CA

Note: The test site complies with ANSI C63.4 2014 requirement.

FCC Designation No.: US1250

1.4 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ FCC Part 15 Subpart C §15.249
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01.
- ♦ ANSI C63.10-2020 + Cor.1-2023

Remark:

1. All the test items were validated and recorded in accordance with the standards without any modification during the testing.

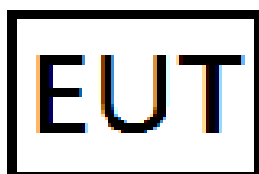
2 Test Configuration of Equipment Under Test

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, the measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in three orthogonal axis (X: flat, Y: portrait, Z: landscape), and adjusting the measurement antenna orientation, following C63.10 exploratory test procedures and only the worst case emissions were reported in this report..

2.1 Carrier Frequency and Test Mode

Frequency Band	Frequency
902MHz ~ 928MHz	908.42 MHz
	908.40 MHz
	916.00 MHz

2.2 Connection Diagram of Test System



2.3 EUT Operation Test Setup

The RF test items, make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

3 Test Result

3.1 Emission Bandwidth

3.1.1 Description of Emission Bandwidth Measurement

99% Occupied Bandwidth are for reporting only.

Limit for 20 dB Bandwidth: Per Part15.215(C), the device shall operate in the 902-928MHz band.

The emission bandwidth (EBW) is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least the specified amount below the maximum level of the modulated carrier.

3.1.2 Measuring Instruments

See list of measuring equipment of this test report.

3.1.3 Test Procedures

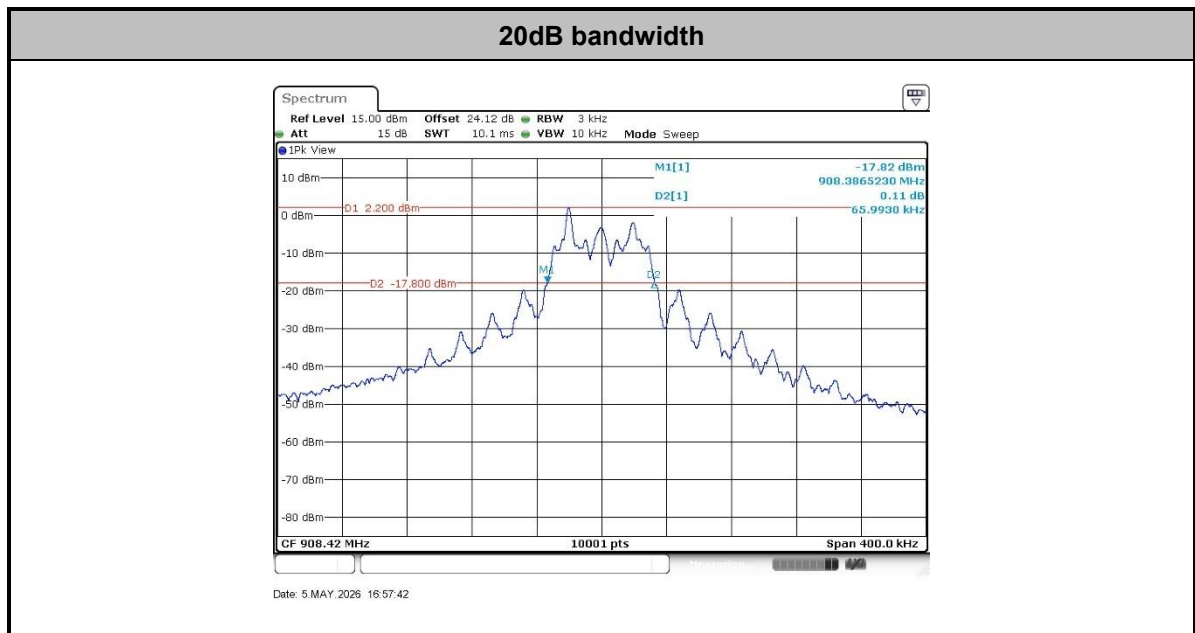
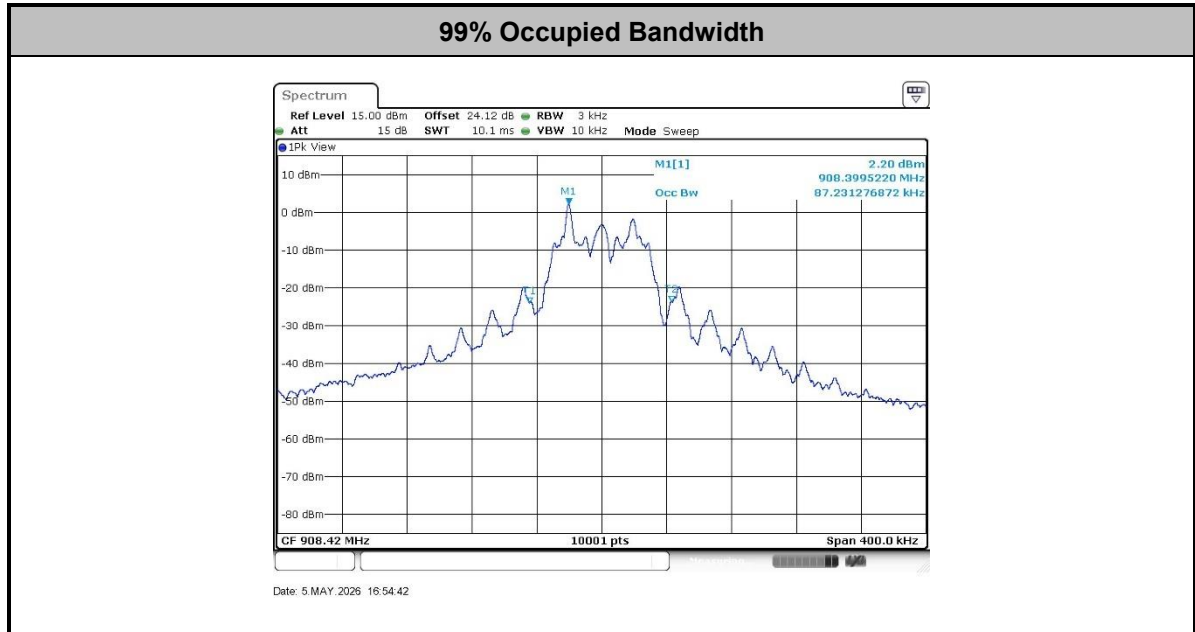
1. The testing follows the ANSI C63.10 Section 6.9.3.
2. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1-5% of the emission bandwidth and set the Video bandwidth (VBW) $\geq 3 * RBW$.
3. Measure and record the results in the test report.

3.1.4 Test Result of Emission Bandwidth

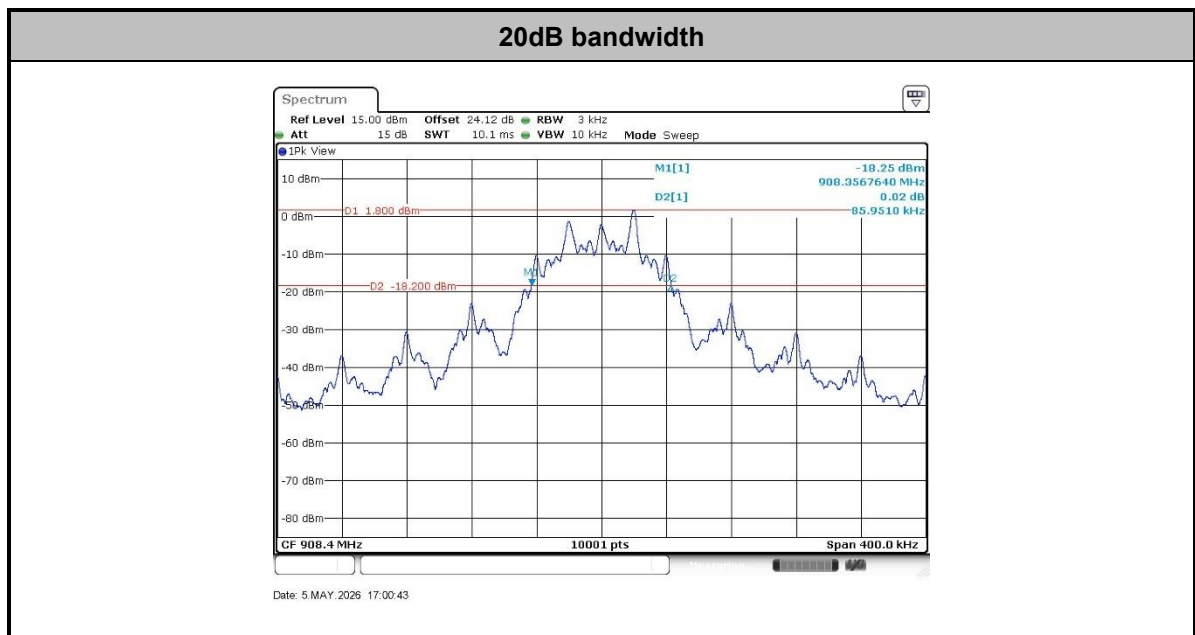
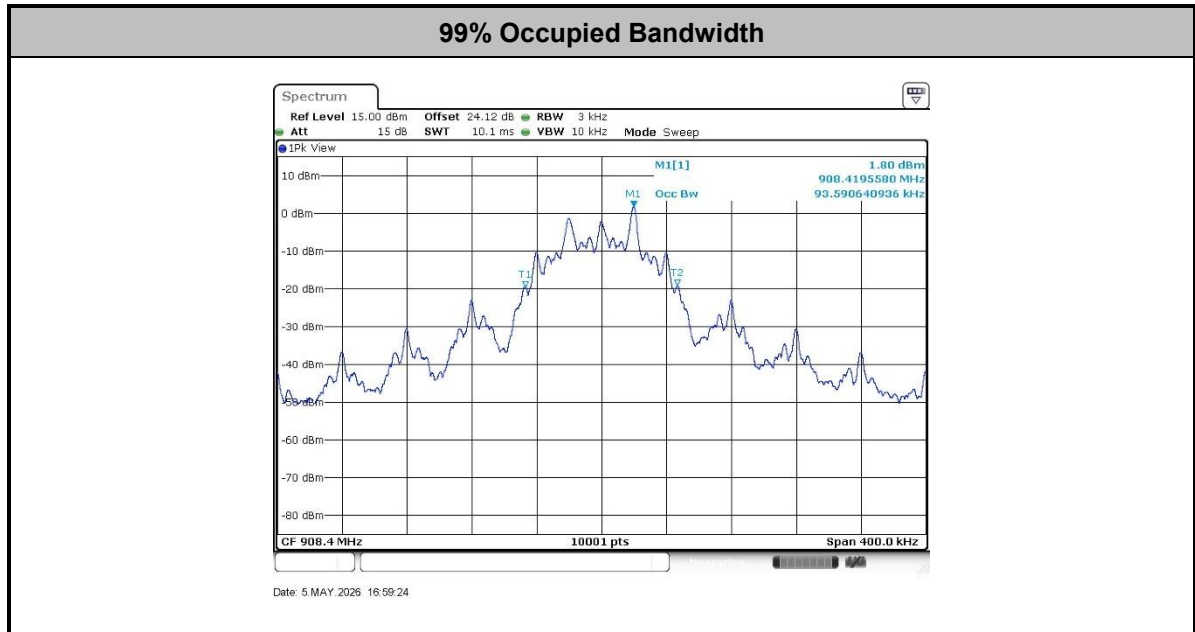
Frequency (MHz)			99% Occupied Bandwidth (MHz)	Limit (MHz)
908.42			0.087	Report Only
908.40			0.094	
916.00			0.113	
20dB Bandwidth Measurement				
Frequency (MHz)	Low Frequency(MHz)	High Frequency(MHz)	20dB Bandwidth (MHz)	Limit (MHz)
908.42	908.387	908.453	0.066	Within in 902-928
908.40	908.357	908.443	0.086	
916.00	915.938	916.056	0.118	

3.1.5 Test Plots

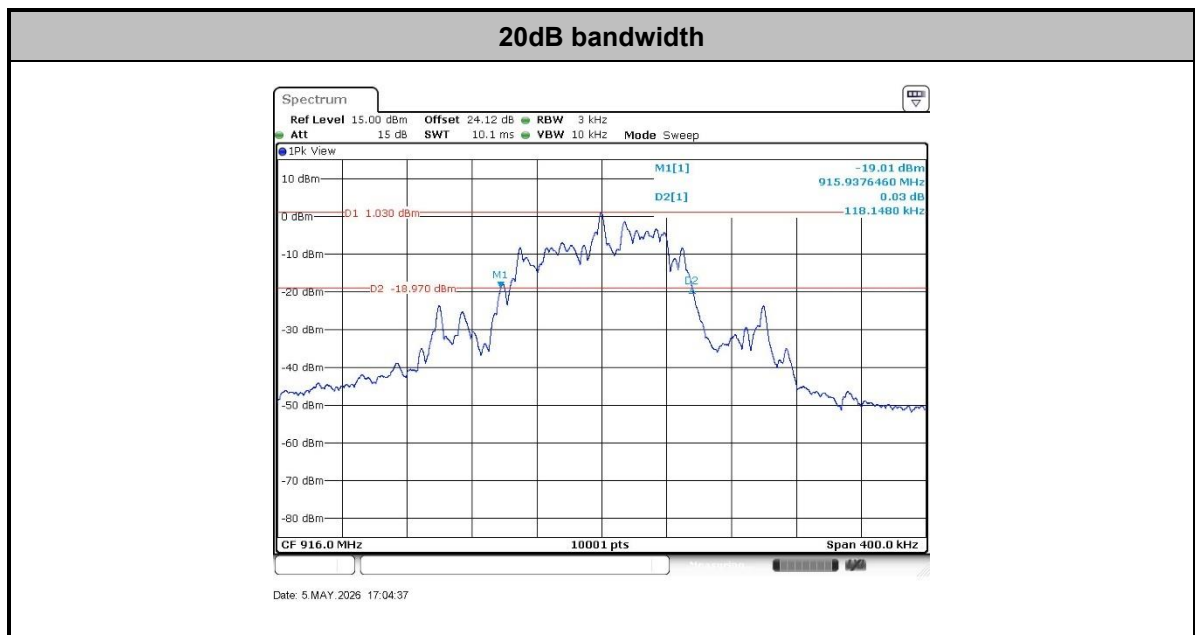
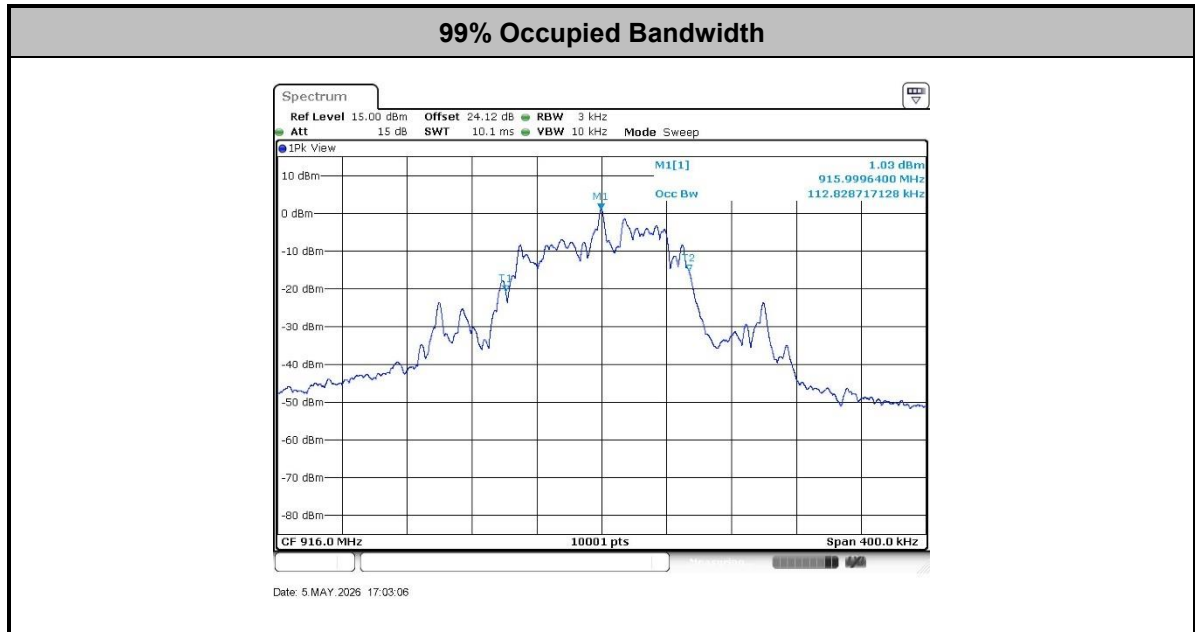
<908.42 MHz>



<908.40 MHz>



<916.00 MHz>



3.2 Field Strength of Fundamental/Harmonics and Radiated Spurious Emission Measurement

3.2.1 Limit

The field strength measured at 3 meters shall not exceed the limits in the following table:

Rules and specifications	FCC CFR 47 Part 15 section 15.249	
Description	Field strength of fundamental	
902~928 (MHz)	Fundamental emissions (millivolts/meter) at 3m	Fundamental emissions (dBμV/m) at 3m
Average limits	50	93.98
Peak limits	-	113.98
Description	Field strength of harmonics	
902~928 (MHz)	Fundamental emissions (microvolts/meter) at 3m	Harmonic emissions (dBμV/m) at 3m
Average limits	500	53.98
Peak limits	-	73.98

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 in §15.209, whichever is the lesser attenuation

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

3.2.2 Measuring Instruments

See list of measuring equipment of this test report.

3.2.3 Test Procedures

1. The testing follows the ANSI C63.10 Section 11.12.1 Radiated emission measurements.
2. The EUT is arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT is placed on a turntable with 0.8 meter for frequency below 1 GHz and 1.5 meter for frequency above 1 GHz respectively above ground.
4. The EUT is set 3 meters away from the receiving antenna, which is mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. Radiated testing below 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading. When there is no suspected emission found and the emission level is with at least 6 dB margin against QP limit line, the position is marked as “-”.
7. Radiated testing above 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading for scanning all frequencies. When there is no suspected emission found and the harmonic emission level is with at least 6 dB margin against average limit line, the position is marked as “-”.
8. Use the following spectrum analyzer settings:
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) Set RBW = 100 kHz for $f < 1$ GHz; VBW $\geq$ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
 - (3) Set RBW = 1 MHz, VBW = 3 MHz for $f \geq 1$ GHz for peak measurement.For average measurement:
Applied protocol-limited duty cycle measurement method as per ANSI C63.10 Clause 4.1.5.2.5, subtracted the Peak reading to derive the RMS average value.

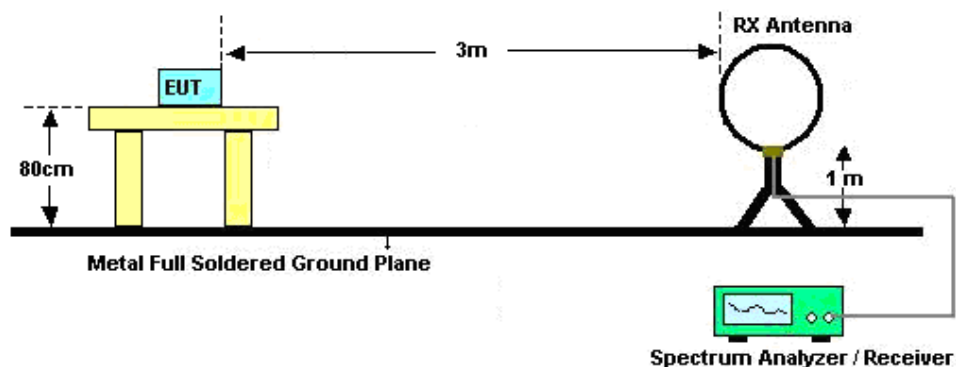
Calculation example,

Duty Cycle percentage is limited to maximum 20.9%, duty factor = $20\log(0.2009) = -13.6(\text{dB})$. Average value = Peak value (59.06dBuV/m) – 13.6 (dB) = 45.46 dBuV/m.

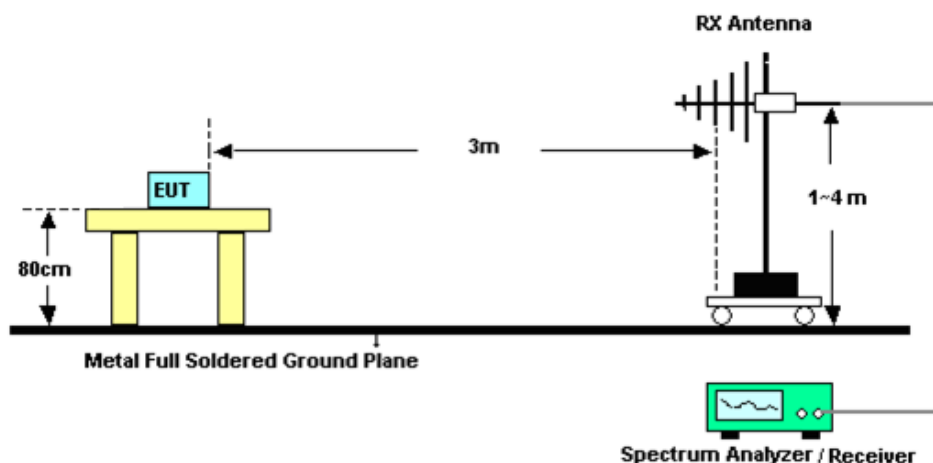
Detailed method to limit duty cycle will be addressed at the operation description from manufacturer.

3.2.4 Test Setup

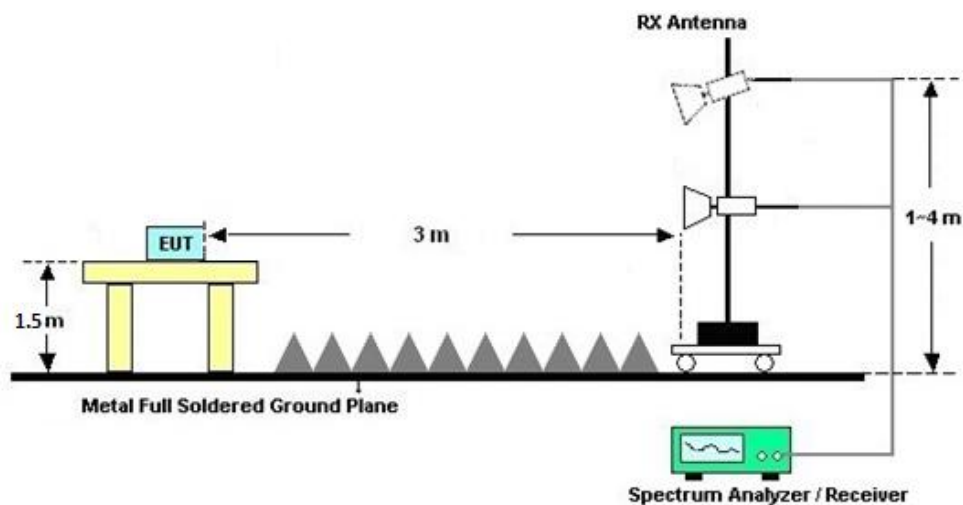
<For radiated emissions below 30MHz>



<For radiated emissions from 30MHz ~ 1GHz>



<For radiated emissions from 1 ~ 18GHz>





3.2.5 Test Results of Radiated Spurious Emissions (9 kHz ~ 30 MHz)

The low frequency, which starts from 9 kHz to 30 MHz, is pre-scanned and the result which is 20 dB lower than the limit line is not reported.

There is adequate comparison measurement of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result comes out very similar.

3.2.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix A.

3.2.7 Duty Cycle

Please refer to Appendix B.

3.2.8 Test Result of Radiated Spurious Emission (30 MHz ~ 10th Harmonic)

Please refer to Appendix A.

3.3 Antenna Requirements

3.3.1 Standard Applicable

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of § 15.211, 15.213, 15.217, 15.219, 15.221, or § 15.236. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

3.3.2 Antenna Anti-Replacement Construction

Antenna permanently attached.



4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Hygrometer	Testo	608-H1	45141354	N/A	Aug. 08, 2025	Apr. 08, 2026	Aug. 07, 2026	Conducted (TH01-CA)
Power Sensor	Dare Instruments	RPR3006W	RPR6W-1901027	10MHz~6GHz	Apr. 17, 2025	Apr. 08, 2026	Apr. 16, 2026	Conducted (TH01-CA)
Switch Box	EM Electronics	EMSW18	SW1070902	N/A	Jun. 04, 2025	Apr. 08, 2026	Jun. 03, 2026	Conducted (TH01-CA)
Spectrum Analyzer	Rohde & Schwarz	FSV40	101545	10Hz~40GHz	Apr. 17, 2025	Apr. 08, 2026	Apr. 16, 2026	Conducted (TH01-CA)
Bilog Antenna	TESEQ	6111D	50392	30MHz~1GHz	Aug. 25, 2026	Mar. 25, 2026~ Apr. 12, 2026	Aug. 24, 2026	Radiation (03CH02-CA)
Loop Antenna	R&S	HFH2-Z2E	100840	9kHz~30MHz	Apr. 28, 2025	Mar. 25, 2026~ Apr. 12, 2026	Apr. 27, 2026	Radiation (03CH02-CA)
Horn Antenna	SCHWARZBECK	BBHA 9120D	02140	1GHz~18GHz	Feb. 23, 2026	Mar. 25, 2026~ Apr. 12, 2026	Feb. 22, 2027	Radiation (03CH02-CA)
Spectrum Analyzer	Keysight	N9010A	MY57420221	10Hz~44GHz	Aug. 18, 2025	Mar. 25, 2026~ Apr. 12, 2026	Aug. 17, 2026	Radiation (03CH02-CA)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA9170	00841	18GHz~40GHz	Aug. 08, 2025	Mar. 25, 2026~ Apr. 12, 2026	Aug. 07, 2026	Radiation (03CH02-CA)
Amplifier	SONOMA	310N	372240	9kHz~1GHz	Apr. 14, 2025	Mar. 25, 2026~ Apr. 12, 2026	Apr. 13, 2026	Radiation (03CH02-CA)
Preamplifier	Keysight	83017A	MY53270321	1GHz~26.5GHz	Apr. 14, 2025	Mar. 25, 2026~ Apr. 12, 2026	Apr. 13, 2026	Radiation (03CH02-CA)
Preamplifier	E-instrument	ERA-100M-18G-56-01-A70	EC1900251	1GHz~18GHz	Apr. 14, 2025	Mar. 25, 2026~ Apr. 12, 2026	Apr. 13, 2026	Radiation (03CH02-CA)
Preamplifier	EMEC	EMC18G40G	060726	18G~40G	Apr. 15, 2025	Mar. 25, 2026~ Apr. 12, 2026	Apr. 14, 2026	Radiation (03CH02-CA)
RF Cable	HUBER+SUHNER · EMC	SUCOFLEX 102 · EMC101Y-KM-KM	805581/2 · 802860/2 · 250709	N/A	Dec. 02, 2025	Mar. 25, 2026~ Apr. 12, 2026	Dec. 01, 2026	Radiation (03CH02-CA)
Hygrometer	TESEO	608-H1	45142602	N/A	Aug. 08, 2025	Mar. 25, 2026~ Apr. 12, 2026	Aug. 07, 2026	Radiation (03CH02-CA)
Controller	Chaintek	EM-1000	060876	Control Turn Table & Antenna Mast	N/A	Mar. 25, 2026~ Apr. 12, 2026	N/A	Radiation (03CH02-CA)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Mar. 25, 2026~ Apr. 12, 2026	N/A	Radiation (03CH02-CA)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Mar. 25, 2026~ Apr. 12, 2026	N/A	Radiation (03CH02-CA)
Test Software	Audix E3	E3	N/A	N/A	N/A	Mar. 25, 2026~ Apr. 12, 2026	N/A	Radiation (03CH02-CA)



5 Measurement Uncertainty

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.10 dB
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Uncertainty of Radiated Emission Measurement (1GHz ~ 18GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.30 dB
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Appendix A. Radiated Spurious Emission Test Data

Test Engineer :	Kevin Hsu	Relative Humidity :	41.7~56.2%
		Temperature :	17.8~23.6°C

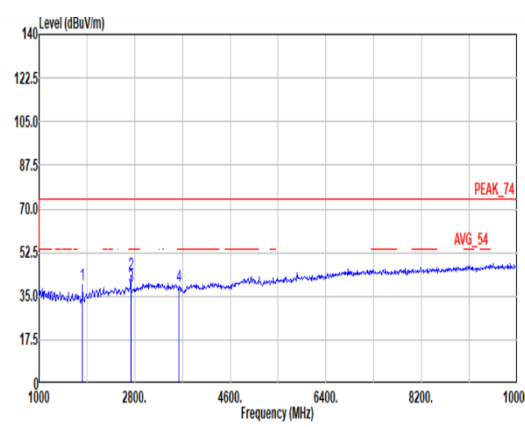
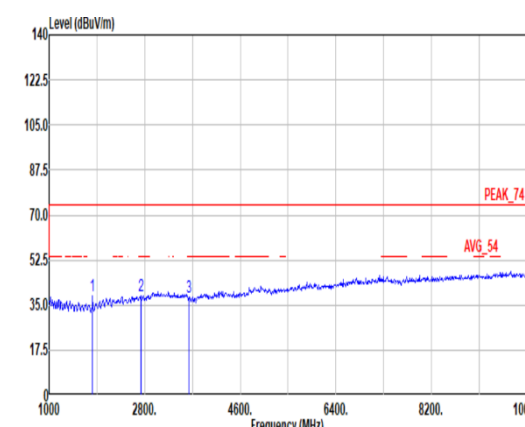
A1. Radiated Spurious Emission Test Modes

Mode	Band (MHz)	Antenna	Modulation	Channel	Frequency (MHz)	Data Rate	RU	Power Setting
Mode 1	902-928	SISO	Classic Z-wave FSK	-	908.42	9.6kbps	-	-4
Mode 2	902-928	SISO	Classic Z-wave FSK	-	908.40	40kbps	-	0
Mode 3	902-928	SISO	Classic Z-wave GFSK	-	912	100kbps	-	-4

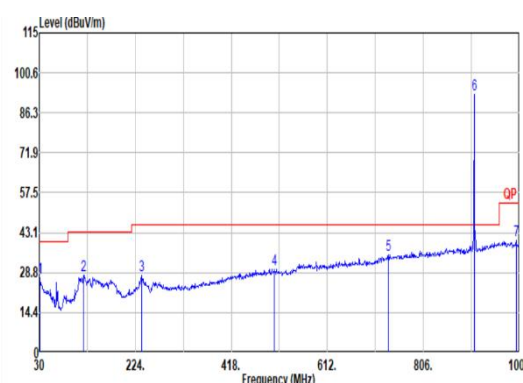
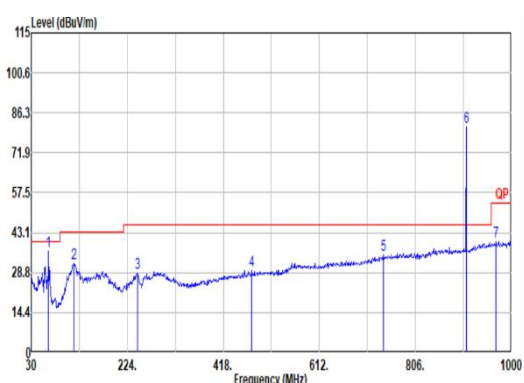
A2. Summary of each worse mode

Mode	Modulation	Ch.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol.	Peak Avg.	Result	RU	Remark
1	Classic Z-wave FSK	-	908.42	92.99	94.00	-1.01	H	Peak	Pass	-	LF
	Classic Z-wave FSK	-	2725.26	39.07	54.00	-14.93	H	Avg.	Pass	-	Harmonic
2	Classic Z-wave FSK	-	908.4	93.89	94.00	-0.11	H	Peak	Pass	-	LF
	Classic Z-wave FSK	-	2725.20	41.44	74.00	-32.56	H	Peak	Pass	-	Harmonic
3	Classic Z-wave GFSK	-	916.00	93.09	94.00	-0.91	H	Peak	Pass	-	LF
	Classic Z-wave GFSK	-	2748.00	30.76	54.00	-23.24	H	Avg.	Pass	-	Harmonic



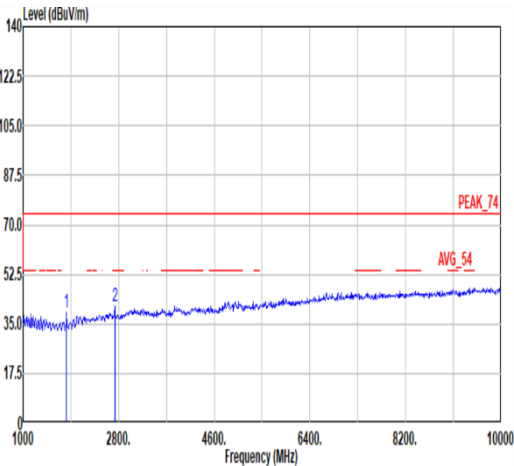
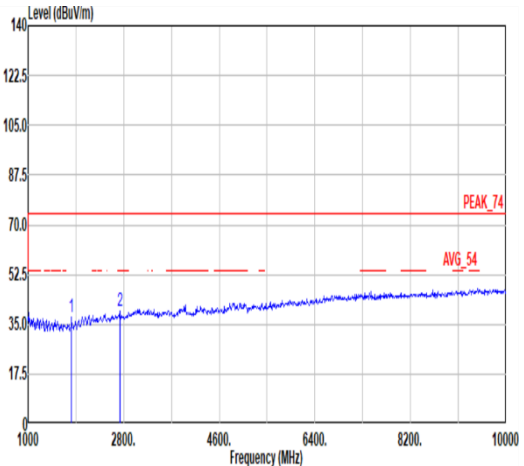
Mode	1																																																																																																																																																											
	Harmonic																																																																																																																																																											
	Z-Wave 908.42MHz																																																																																																																																																											
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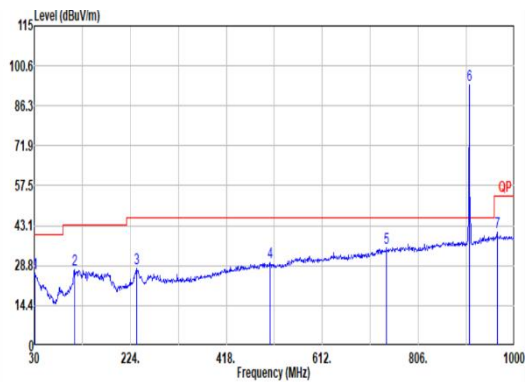
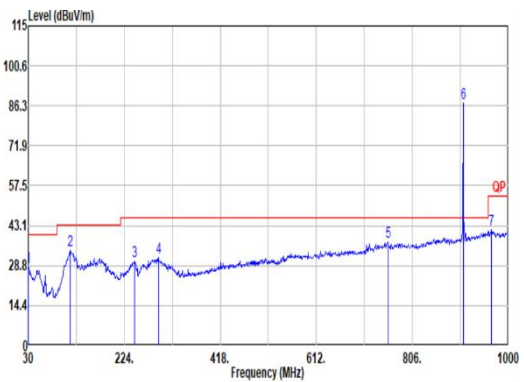
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Remark: The unwanted signals can be ignored since they fall within the non-restricted band and meet the requirements of 15.249.



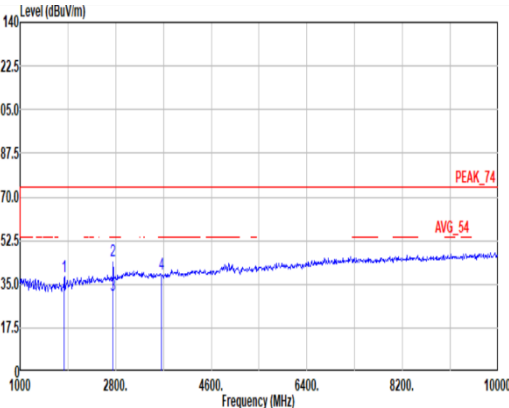
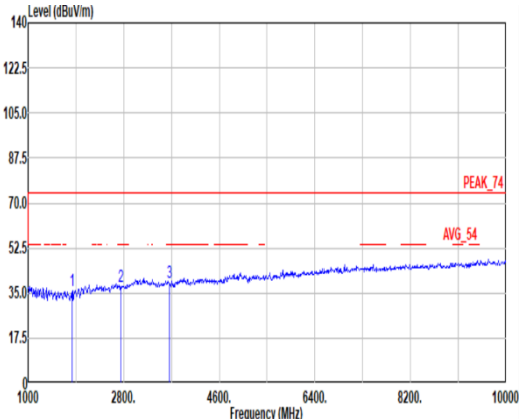
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2	2725.20	41.44	74.00	-32.56	71.86	28.32	8.04	67.17	0.39	--	PEAK																																																																																																					
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	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg																																																																																																						
1	1816.80	37.51	74.00	-36.49	72.88	25.35	6.52	67.65	0.41	--	PEAK																																																																																																					
2	2725.20	39.42	74.00	-34.58	69.86	28.30	8.04	67.17	0.39	--	PEAK																																																																																																					



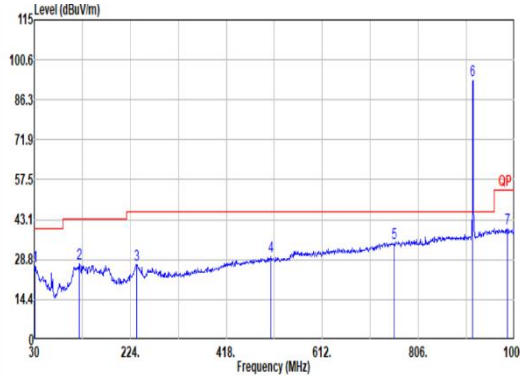
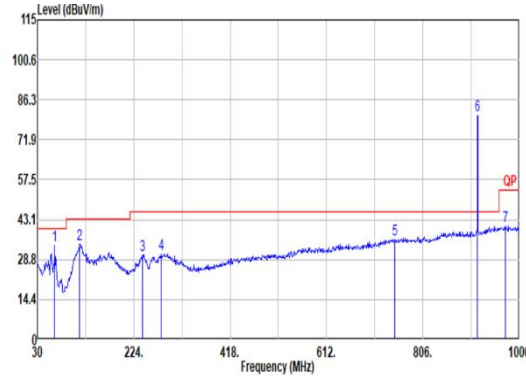
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QP/ Peak	 Site : 03CH02-CA Condition: QP 3m BILOG_50392_250825 HORIZONTAL <table><thead><tr><th></th><th>Freq</th><th>Level</th><th>Limit</th><th>Line Margin</th><th>Read</th><th>Ant</th><th>Cable</th><th>Preamp</th><th>Aux</th><th>APos</th><th>TPos</th><th>Remark</th></tr><tr><th></th><th>MHz</th><th>dBuV/m</th><th>dBuV/m</th><th>dB</th><th>dBuV</th><th>dB/m</th><th>dB</th><th>dB</th><th>dB</th><th>cm</th><th>deg</th><th></th></tr></thead><tbody><tr><td>1</td><td>30.97</td><td>25.97</td><td>40.00</td><td>-14.03</td><td>33.33</td><td>24.15</td><td>0.88</td><td>32.46</td><td>0.07</td><td>--</td><td>--</td><td>Peak</td></tr><tr><td>2</td><td>111.48</td><td>27.39</td><td>43.50</td><td>-16.11</td><td>41.02</td><td>17.00</td><td>1.61</td><td>32.45</td><td>0.13</td><td>--</td><td>--</td><td>Peak</td></tr><tr><td>3</td><td>236.61</td><td>27.92</td><td>46.00</td><td>-18.08</td><td>41.01</td><td>16.90</td><td>2.33</td><td>32.49</td><td>0.17</td><td>--</td><td>--</td><td>Peak</td></tr><tr><td>4</td><td>506.27</td><td>29.93</td><td>46.00</td><td>-16.07</td><td>35.08</td><td>23.96</td><td>3.35</td><td>32.68</td><td>0.22</td><td>--</td><td>--</td><td>Peak</td></tr><tr><td>5</td><td>741.98</td><td>35.02</td><td>46.00</td><td>-10.98</td><td>35.06</td><td>28.03</td><td>4.08</td><td>32.53</td><td>0.38</td><td>--</td><td>--</td><td>Peak</td></tr><tr><td>6</td><td>908.40</td><td>93.89</td><td>94.00</td><td>-0.11</td><td>91.72</td><td>28.92</td><td>4.53</td><td>31.67</td><td>0.39</td><td>--</td><td>--</td><td>Peak</td></tr><tr><td>7</td><td>965.08</td><td>40.58</td><td>54.00</td><td>-13.42</td><td>35.87</td><td>30.79</td><td>4.69</td><td>31.22</td><td>0.45</td><td>--</td><td>--</td><td>Peak</td></tr></tbody></table>		Freq	Level	Limit	Line Margin	Read	Ant	Cable	Preamp	Aux	APos	TPos	Remark		MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg		1	30.97	25.97	40.00	-14.03	33.33	24.15	0.88	32.46	0.07	--	--	Peak	2	111.48	27.39	43.50	-16.11	41.02	17.00	1.61	32.45	0.13	--	--	Peak	3	236.61	27.92	46.00	-18.08	41.01	16.90	2.33	32.49	0.17	--	--	Peak	4	506.27	29.93	46.00	-16.07	35.08	23.96	3.35	32.68	0.22	--	--	Peak	5	741.98	35.02	46.00	-10.98	35.06	28.03	4.08	32.53	0.38	--	--	Peak	6	908.40	93.89	94.00	-0.11	91.72	28.92	4.53	31.67	0.39	--	--	Peak	7	965.08	40.58	54.00	-13.42	35.87	30.79	4.69	31.22	0.45	--	--	Peak	 Site : 03CH02-CA Condition: QP 3m BILOG_50392_250825 VERTICAL <table><thead><tr><th></th><th>Freq</th><th>Level</th><th>Limit</th><th>Line Margin</th><th>Read</th><th>Ant</th><th>Cable</th><th>Preamp</th><th>Aux</th><th>APos</th><th>TPos</th><th>Remark</th></tr><tr><th></th><th>MHz</th><th>dBuV/m</th><th>dBuV/m</th><th>dB</th><th>dBuV</th><th>dB/m</th><th>dB</th><th>dB</th><th>dB</th><th>cm</th><th>deg</th><th></th></tr></thead><tbody><tr><td>1</td><td>30.00</td><td>28.15</td><td>40.00</td><td>-11.85</td><td>34.91</td><td>24.77</td><td>0.86</td><td>32.46</td><td>0.07</td><td>--</td><td>--</td><td>Peak</td></tr><tr><td>2</td><td>115.36</td><td>34.50</td><td>43.50</td><td>-9.00</td><td>47.87</td><td>17.33</td><td>1.63</td><td>32.45</td><td>0.12</td><td>--</td><td>--</td><td>Peak</td></tr><tr><td>3</td><td>245.34</td><td>30.17</td><td>46.00</td><td>-15.83</td><td>42.23</td><td>17.87</td><td>2.38</td><td>32.49</td><td>0.18</td><td>--</td><td>--</td><td>Peak</td></tr><tr><td>4</td><td>292.87</td><td>31.50</td><td>46.00</td><td>-14.50</td><td>42.05</td><td>19.21</td><td>2.59</td><td>32.52</td><td>0.17</td><td>--</td><td>--</td><td>Peak</td></tr><tr><td>5</td><td>756.53</td><td>37.25</td><td>46.00</td><td>-8.75</td><td>37.14</td><td>28.09</td><td>4.12</td><td>32.48</td><td>0.38</td><td>--</td><td>--</td><td>Peak</td></tr><tr><td>6</td><td>908.40</td><td>87.12</td><td>94.00</td><td>-6.88</td><td>84.95</td><td>28.92</td><td>4.53</td><td>31.67</td><td>0.39</td><td>--</td><td>--</td><td>Peak</td></tr><tr><td>7</td><td>965.08</td><td>41.46</td><td>54.00</td><td>-12.54</td><td>36.75</td><td>30.79</td><td>4.69</td><td>31.22</td><td>0.45</td><td>--</td><td>--</td><td>Peak</td></tr></tbody></table>		Freq	Level	Limit	Line Margin	Read	Ant	Cable	Preamp	Aux	APos	TPos	Remark		MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg		1	30.00	28.15	40.00	-11.85	34.91	24.77	0.86	32.46	0.07	--	--	Peak	2	115.36	34.50	43.50	-9.00	47.87	17.33	1.63	32.45	0.12	--	--	Peak	3	245.34	30.17	46.00	-15.83	42.23	17.87	2.38	32.49	0.18	--	--	Peak	4	292.87	31.50	46.00	-14.50	42.05	19.21	2.59	32.52	0.17	--	--	Peak	5	756.53	37.25	46.00	-8.75	37.14	28.09	4.12	32.48	0.38	--	--	Peak	6	908.40	87.12	94.00	-6.88	84.95	28.92	4.53	31.67	0.39	--	--	Peak	7	965.08	41.46	54.00	-12.54	36.75	30.79	4.69	31.22	0.45	--	--	Peak
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Remark: The unwanted signals can be ignored since they fall within the non-restricted band and meet the requirements of 15.249.



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Peak Avg	 Site : 03CH02-CA Condition: PEAK_74 3m HORN_02140_260223 HORIZONTAL <table><thead><tr><th></th><th>Limit</th><th>Read</th><th>Ant</th><th>Cable</th><th>Preamp</th><th>Aux</th><th>APos</th><th>TPos</th><th></th></tr><tr><th>Freq</th><th>Level</th><th>Line Margin</th><th>Level</th><th>Factor</th><th>Loss</th><th>Factor</th><th></th><th></th><th>Remark</th></tr><tr><th></th><th>MHz</th><th>dBuV/m</th><th>dBuV/m</th><th>dB</th><th>dBuV</th><th>dB/m</th><th>dB</th><th>dB</th><th>cm</th><th>deg</th></tr></thead><tbody><tr><td>1</td><td>1832.00</td><td>38.11</td><td>74.00</td><td>-35.89</td><td>73.26</td><td>25.47</td><td>6.55</td><td>67.58</td><td>0.41</td><td>--</td><td>PEAK</td></tr><tr><td>2</td><td>2748.00</td><td>44.44</td><td>74.00</td><td>-29.56</td><td>74.76</td><td>28.29</td><td>8.07</td><td>67.08</td><td>0.40</td><td>100</td><td>248 PEAK</td></tr><tr><td>3</td><td>2748.00</td><td>30.76</td><td>54.00</td><td>-23.24</td><td>--</td><td>--</td><td>--</td><td>--</td><td>--</td><td>--</td><td>AVERAGE</td></tr><tr><td>4</td><td>3664.00</td><td>39.02</td><td>74.00</td><td>-34.98</td><td>67.02</td><td>29.76</td><td>9.06</td><td>67.12</td><td>0.30</td><td>--</td><td>PEAK</td></tr></tbody></table>							Limit	Read	Ant	Cable	Preamp	Aux	APos	TPos		Freq	Level	Line Margin	Level	Factor	Loss	Factor			Remark		MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	1	1832.00	38.11	74.00	-35.89	73.26	25.47	6.55	67.58	0.41	--	PEAK	2	2748.00	44.44	74.00	-29.56	74.76	28.29	8.07	67.08	0.40	100	248 PEAK	3	2748.00	30.76	54.00	-23.24	--	--	--	--	--	--	AVERAGE	4	3664.00	39.02	74.00	-34.98	67.02	29.76	9.06	67.12	0.30	--	PEAK	 Site : 03CH02-CA Condition: PEAK_74 3m HORN_02140_260223 VERTICAL <table><thead><tr><th></th><th>Limit</th><th>Read</th><th>Ant</th><th>Cable</th><th>Preamp</th><th>Aux</th><th>APos</th><th>TPos</th><th></th></tr><tr><th>Freq</th><th>Level</th><th>Line Margin</th><th>Level</th><th>Factor</th><th>Loss</th><th>Factor</th><th></th><th></th><th>Remark</th></tr><tr><th></th><th>MHz</th><th>dBuV/m</th><th>dBuV/m</th><th>dB</th><th>dBuV</th><th>dB/m</th><th>dB</th><th>dB</th><th>dB</th><th>cm</th><th>deg</th></tr></thead><tbody><tr><td>1</td><td>1832.00</td><td>36.16</td><td>74.00</td><td>-37.84</td><td>71.34</td><td>25.44</td><td>6.55</td><td>67.58</td><td>0.41</td><td>--</td><td>PEAK</td></tr><tr><td>2</td><td>2748.00</td><td>37.71</td><td>74.00</td><td>-36.29</td><td>68.00</td><td>26.32</td><td>8.07</td><td>67.08</td><td>0.40</td><td>--</td><td>PEAK</td></tr><tr><td>3</td><td>3664.00</td><td>39.29</td><td>74.00</td><td>-34.71</td><td>67.26</td><td>29.79</td><td>9.06</td><td>67.12</td><td>0.30</td><td>--</td><td>PEAK</td></tr></tbody></table>						Limit	Read	Ant	Cable	Preamp	Aux	APos	TPos		Freq	Level	Line Margin	Level	Factor	Loss	Factor			Remark		MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	1	1832.00	36.16	74.00	-37.84	71.34	25.44	6.55	67.58	0.41	--	PEAK	2	2748.00	37.71	74.00	-36.29	68.00	26.32	8.07	67.08	0.40	--	PEAK	3	3664.00	39.29	74.00	-34.71	67.26	29.79	9.06	67.12	0.30	--	PEAK
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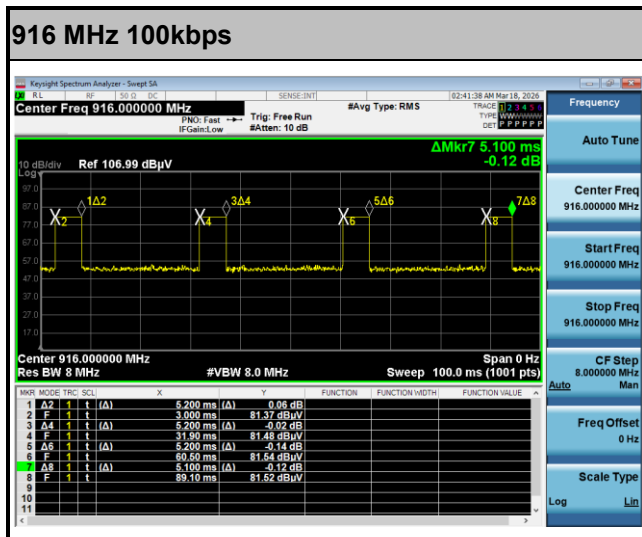
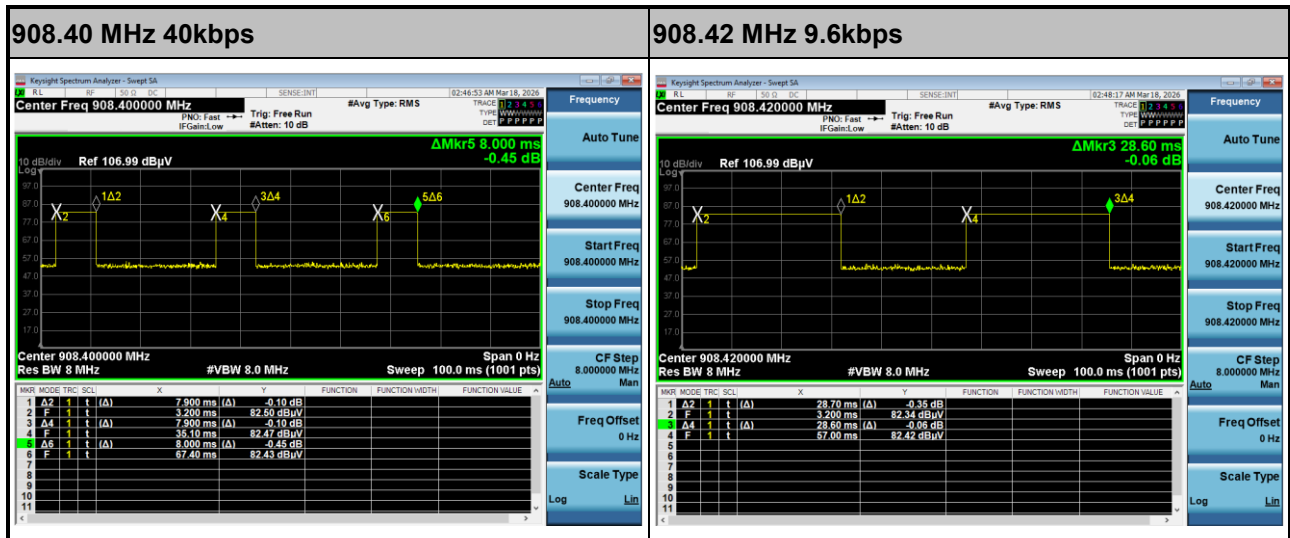
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QP/ Peak	 Site : 03CH02-CA Condition: QP 3m BILOG_50392_250825 HORIZONTAL <table><thead><tr><th></th><th>Freq</th><th>Level</th><th>Limit</th><th>Line Margin</th><th>Read</th><th>Ant</th><th>Cable</th><th>Preamp</th><th>Aux</th><th>APos</th><th>TPos</th><th>Remark</th></tr><tr><th></th><th>MHz</th><th>dBuV/m</th><th>dBuV/m</th><th>dB</th><th>dBuV</th><th>dB/m</th><th>dB</th><th>dB</th><th>dB</th><th>cm</th><th>deg</th><th></th></tr></thead><tbody><tr><td>1</td><td>30.97</td><td>26.29</td><td>40.00</td><td>-13.71</td><td>33.65</td><td>24.15</td><td>0.88</td><td>32.46</td><td>0.07</td><td>--</td><td>--</td><td>Peak</td></tr><tr><td>2</td><td>120.21</td><td>27.25</td><td>43.50</td><td>-16.25</td><td>40.39</td><td>17.54</td><td>1.66</td><td>32.45</td><td>0.11</td><td>--</td><td>--</td><td>Peak</td></tr><tr><td>3</td><td>236.61</td><td>26.99</td><td>46.00</td><td>-19.01</td><td>40.08</td><td>16.90</td><td>2.33</td><td>32.49</td><td>0.17</td><td>--</td><td>--</td><td>Peak</td></tr><tr><td>4</td><td>508.21</td><td>30.13</td><td>46.00</td><td>-15.87</td><td>35.25</td><td>23.98</td><td>3.36</td><td>32.68</td><td>0.22</td><td>--</td><td>--</td><td>Peak</td></tr><tr><td>5</td><td>756.53</td><td>34.78</td><td>46.00</td><td>-11.22</td><td>34.67</td><td>28.09</td><td>4.12</td><td>32.48</td><td>0.38</td><td>--</td><td>--</td><td>Peak</td></tr><tr><td>6</td><td>916.00</td><td>93.09</td><td>94.00</td><td>-0.91</td><td>90.69</td><td>29.07</td><td>4.55</td><td>31.62</td><td>0.40</td><td>--</td><td>--</td><td>Peak</td></tr><tr><td>7</td><td>986.42</td><td>40.02</td><td>54.00</td><td>-13.98</td><td>35.42</td><td>30.43</td><td>4.71</td><td>31.01</td><td>0.47</td><td>--</td><td>--</td><td>Peak</td></tr></tbody></table>		Freq	Level	Limit	Line Margin	Read	Ant	Cable	Preamp	Aux	APos	TPos	Remark		MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg		1	30.97	26.29	40.00	-13.71	33.65	24.15	0.88	32.46	0.07	--	--	Peak	2	120.21	27.25	43.50	-16.25	40.39	17.54	1.66	32.45	0.11	--	--	Peak	3	236.61	26.99	46.00	-19.01	40.08	16.90	2.33	32.49	0.17	--	--	Peak	4	508.21	30.13	46.00	-15.87	35.25	23.98	3.36	32.68	0.22	--	--	Peak	5	756.53	34.78	46.00	-11.22	34.67	28.09	4.12	32.48	0.38	--	--	Peak	6	916.00	93.09	94.00	-0.91	90.69	29.07	4.55	31.62	0.40	--	--	Peak	7	986.42	40.02	54.00	-13.98	35.42	30.43	4.71	31.01	0.47	--	--	Peak	 Site : 03CH02-CA Condition: QP 3m BILOG_50392_250825 VERTICAL <table><thead><tr><th></th><th>Freq</th><th>Level</th><th>Limit</th><th>Line Margin</th><th>Read</th><th>Ant</th><th>Cable</th><th>Preamp</th><th>Aux</th><th>APos</th><th>TPos</th><th>Remark</th></tr><tr><th></th><th>MHz</th><th>dBuV/m</th><th>dBuV/m</th><th>dB</th><th>dBuV</th><th>dB/m</th><th>dB</th><th>dB</th><th>dB</th><th>cm</th><th>deg</th><th></th></tr></thead><tbody><tr><td>1</td><td>64.92</td><td>33.83</td><td>40.00</td><td>-6.17</td><td>52.83</td><td>12.13</td><td>1.24</td><td>32.47</td><td>0.10</td><td>--</td><td>--</td><td>Peak</td></tr><tr><td>2</td><td>115.36</td><td>34.32</td><td>43.50</td><td>-9.18</td><td>47.69</td><td>17.33</td><td>1.63</td><td>32.45</td><td>0.12</td><td>--</td><td>--</td><td>Peak</td></tr><tr><td>3</td><td>241.46</td><td>30.33</td><td>46.00</td><td>-15.67</td><td>42.86</td><td>17.43</td><td>2.36</td><td>32.49</td><td>0.17</td><td>--</td><td>--</td><td>Peak</td></tr><tr><td>4</td><td>279.29</td><td>30.79</td><td>46.00</td><td>-15.21</td><td>41.00</td><td>18.81</td><td>2.53</td><td>32.52</td><td>0.17</td><td>--</td><td>--</td><td>Peak</td></tr><tr><td>5</td><td>749.74</td><td>36.16</td><td>46.00</td><td>-9.84</td><td>36.07</td><td>28.11</td><td>4.10</td><td>32.51</td><td>0.39</td><td>--</td><td>--</td><td>Peak</td></tr><tr><td>6</td><td>916.00</td><td>80.85</td><td>46.00</td><td>34.85</td><td>78.45</td><td>29.07</td><td>4.55</td><td>31.62</td><td>0.40</td><td>--</td><td>--</td><td>Peak</td></tr><tr><td>7</td><td>971.87</td><td>40.76</td><td>54.00</td><td>-13.24</td><td>36.07</td><td>30.68</td><td>4.70</td><td>31.15</td><td>0.46</td><td>--</td><td>--</td><td>Peak</td></tr></tbody></table>		Freq	Level	Limit	Line Margin	Read	Ant	Cable	Preamp	Aux	APos	TPos	Remark		MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg		1	64.92	33.83	40.00	-6.17	52.83	12.13	1.24	32.47	0.10	--	--	Peak	2	115.36	34.32	43.50	-9.18	47.69	17.33	1.63	32.45	0.12	--	--	Peak	3	241.46	30.33	46.00	-15.67	42.86	17.43	2.36	32.49	0.17	--	--	Peak	4	279.29	30.79	46.00	-15.21	41.00	18.81	2.53	32.52	0.17	--	--	Peak	5	749.74	36.16	46.00	-9.84	36.07	28.11	4.10	32.51	0.39	--	--	Peak	6	916.00	80.85	46.00	34.85	78.45	29.07	4.55	31.62	0.40	--	--	Peak	7	971.87	40.76	54.00	-13.24	36.07	30.68	4.70	31.15	0.46	--	--	Peak
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Remark: The unwanted signals can be ignored since they fall within the non-restricted band and meet the requirements of 15.249.



Appendix B. Duty Cycle Plots

Band	Duty Cycle (%)	T(us)	1/T(kHz)	VBW Setting
Classic Z-wave 40kbps	23.8	-	-	-
Classic Z-wave 9.6kbps	57.3	-	-	-
Classic Z-wave 100kbps	20.7	-	-	-



23.8, 57.3, 20.7% is used to determine the duty cycle correction factor (DCCF) in this report.