

RADIO TEST REPORT

Product	: Arlo Wire-Free Outdoor Siren
Model Name	: SLB1001
FCC ID	: 2APLE18300420
Test Regulation	: FCC 47 CFR Part 15 Subpart C (Section 15.247)
Received Date	: 2023/1/19
Test Date	: 2023/1/31 ~ 2023/2/1
Issued Date	: 2023/2/15
Applicant	: Arlo Technologies Inc 2200 Faraday Avenue, Suite 150, Carlsbad, CA 92008, USA
Issued By	: Underwriters Laboratories Taiwan Co., Ltd. Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan



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REVISION HISTORY

Original Test Report No.: 4790706984-US-R0-V0

Rev.	Test report No.	Date	Page revised	Contents
Original	4790706984-US-R0-V0	2023/2/15	-	Initial issue



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1. Attestation of Test Results **APPLICANT:** Arlo Technologies Inc 2200 Faraday Avenue, Suite 150, Carlsbad, CA 92008, USA **MANUFACTURER:** Fuyu Precision Component Company Limited Lot M1 and Lot F, Quang Chau Industrial Park, Van Trung Commune, Viet Nam District, Bac Giang Province, 26171 VietNam Arlo Wire-Free Outdoor Siren **EUT DESCRIPTION: BRAND:** Arlo **MODEL:** SLB1001 Engineering Verification Test sample **SAMPLE STAGE: DATE of TESTED:** 2023/1/31 ~ 2023/2/1 **APPLICABLE STANDARDS STANDARD Test Results**

FCC 47 CFR PART 15 Subpart C (Section 15.247)

Underwriters Laboratories Taiwan Co., Ltd. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by Underwriters Laboratories Taiwan Co., Ltd. based on interpretations and/or observations of test results. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by Underwriters Laboratories Taiwan Co., Ltd. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Underwriters Laboratories Taiwan Co., Ltd. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Prepared By:

ind

Cindy Hsin Project Handler Date : 2023/2/15

Approved and Authorized By:

Eric Lee Date : 2023/2/15 Senior Laboratory Engineer

PASS

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2. Summary of Test Results

Summary of Test Results					
FCC Clause	Result				
15.247(a)(2)	6dB Bandwidth	PASS			
15.247(b)	Conducted Output Power	PASS			
15.247(e)	Power Spectral Density	PASS			
15.247(d)	Antenna Port Emission	PASS			
15.205 / 15.209 / 15.247(d)	Radiated Emissions and Band Edge Measurement	PASS			
15.207	AC Power Conducted Emission NA				
15.203	Antenna Requirement	PASS			



3. Test Methodology and Reference Procedures

The tests documented in this report were performed in accordance with 47 CFR FCC Part 2, KDB558074 D01 Meas Guidance v05r02, KDB414788 D01 Radiated Test Site v01r01, ANSI C63.10-2013.

4. Facilities and Accreditation

Test Location	Underwriters Laboratories Taiwan Co., Ltd.		
Address	Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan		
Accreditation Certificate	Underwriters Laboratories Taiwan Co., Ltd. is accredited by TAF, Laboratory Code 3398.		



5. Measurement Uncertainty

For statement of conformity, accuracy method (Section 8.2.4 and 8.2.5 of ISO Guide 98-4) was applied as decision rule for measurement in this test report.

The following uncertainties have been calculated to provide a confidence level of 95 % using a coverage factor k=2.

Measurement	Frequency	Uncertainty
Conducted disturbance at mains terminals ports	150kHz ~ 30MHz	±2.9 dB
RF Conducted	9 kHz - 40GHz	±2.4 dB
Radiated disturbance below 30MHz	9 kHz - 30 MHz	±1.9 dB
Radiated disturbance below 1 GHz	30MHz ~ 1GHz	±5.8 dB
Radiated disturbance above 1 GHz	1GHz ~ 40GHz	±4.8 dB



6. Equipment under Test

6.1. Description of EUT

Product	Arlo Wire-Free Outdoor Siren	
Brand Name	Arlo	
Model Name	SLB1001	
Operating Frequency	904 MHz ~ 926MHz	
Modulation	O-QPSK	
Transfer Rate	250Kbps	
Number of Channel	12	
Maximum Output Power	15.30 dBm	
Normal Voltage	6Vdc from Battery	
Sample ID	Conducted Test: 5721656	
Sample ID	Radiated Test: 5721657	

Note:

1. The EUT incorporates a SISO function. Physically, the EUT provides one completed transmitters and one receivers.

Modulation Mode	Tx,Rx Function	
Sub-G	1TX,1RX	

2. The EUT contains following accessory devices:

Product	Brand	Model	Description
Battery	Panasonic	CR123A	3Vdc x 2

3. The above EUT information is declared by manufacturer and for more detailed features description, please refer the manufacturer's or user's manual.



6.2. Channel List

11 channels are provided for Sub-G:

Channel	nnel Frequency (MHz) Channel		Frequency (MHz)		
1	904	7	916		
2	906	8	918		
3	908	9	920		
4	910	10	922		
5	912	11	924		
6	914	12	926		



6.3. Test Condition

Test Item	Test Site No.	Environmental Condition	Input Power	Test Date	Tested by
Antenna Port Conducted Measurement	SR4	20~22°C/ 59~61%RH	6Vdc	2023/01/31~ 2023/01/31	Jubo Shen
Radiated Spurious Emission	966-2	20~22°C/ 59~61%RH	6Vdc	2023/02/01~ 2023/02/01	Jubo Shen

FCC Test Firm Registration Number: 498077

Sample Calculation:

Antenna Port Conducted Measurement:

 Where relevant, the follow sample calculation is provided: Result Value (dBm) = Reading Value (dBm) +Attenuator Factor (dB) + Cable Loss (dB).
Example: Result Value (10dBm) = Reading Value (-2dBm) +Attenuator Factor (10dB) + Cable Loss(2dB).

*Test plot only shown the "Result Value".

Radiated Spurious Emission:

 Where relevant, the follow sample calculation is provided: Result Value (dBuV/m) = Reading Value (dBuV) + Correction Factor (dB/m). Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) - Preamp Factor (dB). Example: Result Value (34.5dBuV/m) = Reading Value (40.1dBV) + Antenna Factor (18.7dB/m) + Cable Loss (4.2dB) - Preamp Factor (28.5dB).



6.4. Description of Available Antennas

Ant. No.	Transmitter Circuit	Brand Name	Model Name	Ant. Type	Maximum Gain (dBi)
1	Chain (0)	MASTER WAVE TECHNOLOGY CO., LTD.	907X01069X0 907X01070X0	PIFA	-1.4

Note: The above antenna information was provided from customer and for more detailed features description, please refer the manufacturer's specification or user's manual.



6.5. Test Mode Applicability and Tested Channel Detail

- The fundamental of the EUT was investigated in three orthogonal axes X-Y/Y-Z/X-Z, it was determined that X-Y plane was worst-case. Therefore, all final radiated testing was performed with the EUT in X-Y plane.
- For Antenna Port Conducted Measurement, this item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- For below 30MHz testing, investigation was done on three antenna orientations (parallel, perpendicular, and ground-parallel), parallel and perpendicular are the worst orientations, therefore testing was performed on these two orientations only.
- For below 1 GHz radiated emission has performed all modes of operation were investigated and the worst-case emissions are reported.
- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates.

Test Item	Modulation Type	Available Channel	Test Channel	
Radiated Emissions	SubG	1 to 12	1,6,12	
Antenna Port Conducted Measurement	SubG	1 to 12	1,6,12	



6.6. Duty cycle

Mode	On Time (ms)	On+Off Time (ms)	Duty Cycle	Duty Factor (dB)	VBW Set (above 1GHz)
SubG	10000.000	10000.000	1.0000	N/A	10Hz

			Sub	G				
Spectrum								Ē
Reflevel 20.00	l dBm	= R	RW 1 MHz	-	-	-		(*.
Att	30 dB 🖷 SW	[10 ms 🖷 V	BW 1 MHz					
Sub-G •1Pk View								
				M	1[1]			2.55 dBm
							0.0	J0000000 s
10 dBm				M	2[1]	MQ		2.59 dBm
÷								1.53000 ms
0 dBm								-
					1			
-10 dBm						-		-
					1			/
-20 dBm-								
				ļ	1			'
-30 dBm								
40.40-				ļ	1			
-40 dBm-								
FO dDm				ļ				
-50 dBm								
60 dBm								
-00 0bm								
-70 dBm								
-/o ubiii-								
					I			
CF 904.0 MHz			2001 p	ts				1.0 ms/
Marker								
Type Ref Trc	X-va	lue	Y-value	Funct	dion	Fund	tion Result	
M1 1		0.U S	2.55 dBm					
M2 4		7.53 ms	2.59 ubm 2.59 dBm	-				
1110		7.55 115	2.39 0011					



7. Test Equipment

Test Equipment List							
Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Expired date		
Radiated Spurious Emission							
Spectrum Analyzer	Keysight	N9010A	MY56070834	2022/10/24	2023/10/23		
EMI Test Receiver	Rohde & Schwarz	ESR7	101754	2022/12/13	2023/12/12		
Loop Antenna	ETS lindgren	6502	00213440	2023/1/4	2024/1/3		
Trilog- Broadband Antenna with 5dB Attenuator	Schwarzbeck & EMCI	VULB 9168 & N-6-05	774 & AT- N0538	2022/2/8	2023/2/7		
Horn Antenna (1-18 GHz)	Schwarzbeck	BBHA 9120 D	01690	2022/12/21	2023/12/20		
Horn Antenna (18-40 GHz)	Schwarzbeck	BBHA 9170	781	2022/12/30	2023/12/29		
Preamplifier (30-1000 MHz)	EMCI	EMC330E	980405	2022/6/7	2023/6/6		
Preamplifier (1-18 GHz)	EMCI	EMC051835BE	980406	2022/2/16	2023/2/15		
Preamplifier (18-40GHz)	EMCI	EMC184040SEE	980426	2022/5/17	2023/5/16		
Cables	Hanyitek	K1K50-UP0264- K1K50-2500	170214-4 & 170425-2	2022/12/1	2023/11/30		
Cables	Hanyitek	K1K50-UP0264- K1K50-2500	170214-1 & 170214-2	2022/12/1	2023/11/30		
Antenna Port Conducted Measurement							
Spectrum Analyzer	Keysight	N9010A	MY56070834	2022/9/12	2023/9/11		
Attenuator	EMCI	EMC- 40ATK2W10	17002	2022/12/9	2023/12/8		
Pulse Power Sensor	Anritsu	MA2411B	1531202	2023/1/4	2024/1/3		
Power Meter	Anritsu	ML2495A	1645002	2023/1/4	2024/1/3		

UL Software					
Description	Name	Version			
Radiated measurement	e3	6.191211 (V6)			
Conducted measurement	RF-Conducted-FCC 15247	ver 1.0			

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8. Description of Test Setup

Support Equipment

ID	Equipment	Brand Name	Model Name	S/N	Remark
А	Test Tool	N/A	N/A	N/A	Provided by Client
В	Laptop	Lenovo	T430	PB-8XTB2	Provided by Lab
С	Battery	Panasonic	CR123A	N/A	Provided by Client

I/O Cables

ID	Equipment	Brand Name	Model Name	Length (m)	Remark
1	Test Tool Cable	N/A	N/A	0.2	Provided by Client
2	Micro USB Cable	WONDER	WA-W07UA	0.8	Provided by Lab



Test Setup

Controlled using a bespoke application (Typing RF command by terminal tool(Putty version 0.62)) on a test Notebook. The application was used to enable a continuous transmission mode and to select the test channels, data rates, modulation schemes and power setting as required.

Setup Diagram for Test





9. Test Results

9.1.6dB Bandwidth

Requirements

The minimum 6 dB bandwidth shall be at least 500 kHz.

Test procedure

- a. Set resolution bandwidth (RBW) = 100 kHz.
- b. Set the video bandwidth (VBW) \geq 3 x RBW, Detector = Peak.
- c. Trace mode = max hold.
- d. Sweep = auto couple.
- e. 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 6 dB relative to the maximum level measured in the fundamental emission.

Test Setup



The loss between RF output port of the EUT and the input port of the Spectrum Analyzer has been taken into consideration.



Test Data

Mode	СН	Freq (MHz)	6dB BW (MHz)	Limit (MHz)	Result
SubG	1	904	1.598	0.5	PASS
SubG	6	914	1.603	0.5	PASS
SubG	12	926	1.588	0.5	PASS





9.2. Conducted Output Power

Requirements

For systems using digital modulation in the 902-928 MHz bands: 1 Watt.

Note:

1. Directional Gain = $G_{ant} + 10 \log (Nant) dBi$.

Nant: Number of Transmit Antennas G1, G2,..., Gn: Gain of Individual Antennas (Same for Each Antenna)

Test Procedure

A peak power sensor was used on the output port of the EUT. A power meter was used to read the response of the peak power sensor. Record the power level.

Test Setup



The loss between RF output port of the EUT and the input port of the Power Meter has been taken into consideration.



<u>Test Data</u>

Peak Power

Sub-G

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
1	904	31.915	15.04	30	PASS
6	914	32.885	15.17	30	PASS
12	926	33.884	15.30	30	PASS

Average Power (Reference Only)

Sub-G					
Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)		
1	904	31.405	14.97		
6	914	32.434	15.11		
12	926	33.42	15.24		



9.3. Power Spectral Density

Requirements

The Maximum of Power Spectral Density Measurement is 8dBm in any 3 kHz (If $G_{TX} > 6$ dBi, then PSD = 8 - ($G_{TX} - 6$)).

Note:

- 1. PSD = power spectral density that he same method as used to determine the conducted output power shall be used to determine the power spectral density. And power spectral density in dBm/MHz.
- 2. G_{TX} = the maximum transmitting antenna directional gain in dBi.

Test procedure

- a. Set analyzer center frequency to DTS channel center frequency.
- b. Set the span to 1.5 times the DTS bandwidth.
- c. Set the RBW to: 3 kHz \leq RBW \leq 100 kHz.
- d. Set the VBW \geq 3 × RBW.
- e. Detector = peak.
- f. Sweep time = auto couple.
- g. Trace mode = max hold.
- h. Allow trace to fully stabilize.
- i. Use the peak marker function to determine the maximum amplitude level within the RBW.

Test Setup



The loss between RF output port of the EUT and the input port of the Spectrum Analyzer has been taken into consideration.



Test Data

Mode	СН	Freq (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
SubG	1	904	-2.56	8	PASS
SubG	6	914	-3.61	8	PASS
SubG	12	926	-4.67	8	PASS





9.4. Conducted Out of Band Emission

Requirements

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b) (3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209 (a) is not required.

Test procedure

Measurement Procedure REF

- 1. Set the RBW = 100 kHz.
- 2. Set the VBW \geq 300 kHz.
- 3. Set the span to 1.5 times the DTS bandwidth.
- 4. Detector = peak.
- 5. Sweep time = auto couple.
- 6. Trace mode = max hold.
- 7. Allow trace to fully stabilize.
- 8. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

Measurement Procedure OOBE

- 1. Set RBW = 100 kHz.
- 2. Set VBW \geq 300 kHz.
- 3. Detector = peak.
- 4. Sweep = auto couple.
- 5. Trace Mode = max hold.
- 6. Allow trace to fully stabilize.
- 7. Use the peak marker function to determine the maximum amplitude level.

Test Setup



The loss between RF output port of the EUT and the input port of the Spectrum Analyzer has been taken into consideration.

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<u>Test Data</u>



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9.5. Radiated Spurious Emission

Requirements

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

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

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.



Test Procedures

[For $9 \text{ kHz} \sim 30 \text{ MHz}$]

- 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. For measurement below 30MHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

NOTE:

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

[For above 30 MHz]

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



Note:

- a. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
- b. 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.
- c. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle < 98%) or 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.

Configuration	Average					
Comiguration	RBW	VBW				
Sub-G	1MHz	Refer to section 6.6 for duty cycle.				

- d. All modes of operation were investigated (includes all external accessories) and the worst-case emissions are reported, the other emission levels were low against the limit.
- e. Test data of Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- f. Test data of Margin(dB) = Result value (dBuV/m) Limit value (dBuV/m).
- g. Test data of Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) Preamp Factor (dB).
- h. Test data of Notation "@" = Fundamental Frequency
- i. Test data of Notation " * " = The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.



Test Setup

<Frequency Range 9 kHz ~ 30 MHz>



<Frequency Range 30 MHz ~ 1 GHz >





<Frequency Range above 1 GHz>



For the actual test configuration, please refer to the Setup Configurations.



<u>Test Data</u>

Above 1 GHz

Mode	SRD	Channel	1

Delorization	arization Notation		Reading	Correct	Result	Limit	Margin	Domort
Folalization	Notation	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Kelliark
Homizontal	*	1808	47.09	-7.24	39.85	74	-34.15	PK
Horizontai	*	2712	53.98	-3.29	50.69	74	-23.31	PK
Vartical	*	1808	47.47	-7.24	40.23	74	-33.77	PK
vertical	*	2712	52.25	-3.29	48.96	74	-25.04	PK

TX, SRD (Ch 1)	TX, SRD (Ch 1)					
Radiated Spurious Emission, Horizontal	Radiated Spurious Emission, Vertical					
Dec 17 The 13 fee Dec Projection Climate (Later Case of the Climate Case of the Climat	Bell III Bell III Bell Berner Anderson (Uniter Onterline Uniter Onterline					
n						
•						
	- 15% 244 286 486 561 886 764 855 986 988					



Vertical

*

*

*

2742

1828

2742

53.36

44.96

53.55

74

74

74

-23.83

-36.16

-23.64

PK

PK

PK

Mode	SRD			Char	nnel 6			
Delemization	Notation	Frequency	Reading	Correct	Result	Limit	Margin	Domont
Polarization Notation	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Remark	
Harimantal	*	1828	45.56	-7.12	38.44	74	-35.56	PK
Horizontal	J.	0740	52.26	2.10	50.17	74	00.00	DIZ

-3.19

-7.12

-3.19

50.17

37.84

50.36

ΓX, SRI	D (Ch 6)			TX, SRD (Ch 6)					
Radiate	d Spurious Emi	ission, Horizon	tal	Radiated Spurious Emission, Vertical					
na: 23 100 ^{Level} (dBaVim)	Tiles (2013) Tiles (2014) Projection/04/201200001_0.000014/20020004_0.0010	206 (26	Quie: 42.41.3823	Data: 24 100 Cenel (dBaV/m)	Fèle D	ED Teet Data Project/anor/20200804_SLD1081-62	60795964_SLB1011.E365 (24)		Datic 62.0
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Mode	SRD		Chan	inel 12	2	

Delorization	Polarization Notation		Reading	Correct	Result	Limit	Margın	Domork
Folalization	Notation	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Kelliark
Homizontal	*	1852	41.91	-6.99	34.92	74	-39.08	РК
Horizontal	*	2778	55.22	-3.06	52.16	74	-21.84	PK
Vartical	*	1852	44.35	-6.99	37.36	74	-36.64	PK
vertical	*	2778	53.01	-3.06	49.95	74	-24.05	РК

TX, SRD	K, SRD (Ch 12)					TX, SRD (Ch 12)							
Radiated	Spurious	Emission	n, Horizo	ntal		Radiated Spurious Emission, Vertical							
No. 2 Maria Maria No. 2 No.					Den: 52 45 3223	Image: 10 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100		2	LEDWING ALEXANDER			8	News 12 44-3223
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Below 1 GHz

Mode	SRD			Char	nnel 1			
Delarization	Notation	Frequency	Reading	Correct	Result	Limit	Margin	Domork
Folalization	Notation	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Remark
		65.89	35.99	-3.49	32.5	40	-7.5	РК
		156.1	37.21	-1.52	35.69	43.5	-7.81	РК
		252.13	41.26	-2.3	38.96	46	-7.04	РК
Horizontal		380.17	36.39	1.58	37.97	46	-8.03	РК
		614	30.2	7.52	37.72	46	-8.28	РК
	@	904	86.93	12.27	99.2	N/A	N/A	Carrier
		960	29.59	13.32	42.91	54	-11.09	РК
		49.4	35.74	-1.91	33.83	40	-6.17	РК
		160.95	31.88	-1.49	30.39	43.5	-13.11	РК
		379.2	33.44	1.55	34.99	46	-11.01	РК
Vertical		569.32	31.11	6.26	37.37	46	-8.63	РК
		614	29.37	7.52	36.89	46	-9.11	PK
	@	904	92.35	12.27	104.62	N/A	N/A	Carrier
		960	29.78	13.32	43.1	54	-10.9	PK





Mode	SRD			Char	nnel 6			
Delarization	Notation	Frequency	Reading	Correct	Result	Limit	Margin	Domort
Polarization	Notation	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Remark
		64.92	35.83	-3.04	32.79	40	-7.21	РК
		156.1	36.38	-1.52	34.86	43.5	-8.64	РК
		252.13	40.99	-2.3	38.69	46	-7.31	РК
Horizontal		382.11	34.66	1.63	36.29	46	-9.71	РК
		614	29.39	7.52	36.91	46	-9.09	РК
	@	914	86.18	12.61	98.79	N/A	N/A	Carrier
		960	29.32	13.32	42.64	54	-11.36	РК
		56.19	36.75	-1.94	34.81	40	-5.19	РК
		168.71	32.73	-1.73	31	43.5	-12.5	РК
		378.23	33.55	1.51	35.06	46	-10.94	РК
Vertical		594.54	32.19	7.13	39.32	46	-6.68	РК
		614	29.74	7.52	37.26	46	-8.74	РК
	@	914	90.27	12.61	102.88	N/A	N/A	Carrier
		960	29.19	13.32	42.51	54	-11.49	РК

TX, SRD (Ch 6) Radiated Spurious Emission, Horizontal	TX, SRD (Ch 6) Radiated Spurious Emission Vertical					
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FCC ID	: 2APLE18300420

Mode	SRD	SRD Channel 12						
Polarization	Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
		(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
Horizontal		65.89	36.7	-3.49	33.21	40	-6.79	РК
		156.1	34.86	-1.52	33.34	43.5	-10.16	РК
		263.77	39.49	-1.79	37.7	46	-8.3	PK
		614	29.76	7.52	37.28	46	-8.72	PK
	@	926	84.26	12.8	97.06	N/A	N/A	Carrier
		960	30.2	13.32	43.52	54	-10.48	PK
		980.6	31.01	13.34	44.35	54	-9.65	PK
Vertical		30.97	37.81	-2.86	34.95	40	-5.05	PK
		57.16	37.17	-1.98	35.19	40	-4.81	PK
		574.17	32.13	6.41	38.54	46	-7.46	PK
		614	29.56	7.52	37.08	46	-8.92	PK
	@	926	88.17	12.8	100.97	N/A	N/A	Carrier
		960	29.99	13.32	43.31	54	-10.69	PK
		976.72	31	13.38	44.38	54	-9.62	PK

TX, SRD (Ch 12)	TX, SRD (Ch 12)
Radiated Spurious Emission, Horizontal	Radiated Spurious Emission, Vertical
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9 kHz ~ 30 MHz Data:

For 9 kHz to 30 MHz radiated emission have performed all modes of operation were investigated. The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

No non-compliance noted:

KDB 414788 D01 OATS and Chamber Correlation Justification

- Base on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.

- OATs and chamber correlation testing had been performed and chamber measured test results is the worst case test result.

Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30m open area test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.

END OF REPORT