

# **CERTIFICATION TEST REPORT**

**Report Number.**: 12216317-E2V4

**Applicant:** ANELTO INC.

6270 MORNINGSTAR DRIVE

SUITE 100

THE COLONY, TX 75056, U.S.A.

Model: ANH0418

FCC ID: 2AGPI-ANH0418

**IC**: 20951-ANH0418

**EUT Description**: CELLULAR PERSONAL EMERGENCY RESPONSE SYSTEM

Test Standard(s): FCC 47 CFR PART 15 SUBPART C

INDUSTRY CANADA RSS - 210 ISSUE 9 INDUSTRY CANADA RSS - GEN ISSUE 5

Date Of Issue:

June 01, 2018

Prepared by:

UL Verification Services Inc. 47173 Benicia Street Fremont, CA 94538, U.S.A. TEL: (510) 771-1000

FAX: (510) 661-0888



# **Revision History**

Rev.	Issue Date	Revisions	Revised By
V1	5/7/2018	Initial Issue	
V2	5/23/2018	Updated report to address TCB's questions	Tina Chu
V3	5/31/2018	Updated report to address TCB's question	Tina Chu
V4	6/1/2018	Updated the sections 6 -Test And Measurement Equipment and note on 8.2.5	Jason Qian

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# 1. ATTESTATION OF TEST RESULTS

COMPANY NAME: ANELTO INC.

6270 MORNINGSTAR DRIVE

SUITE 100

THE COLONY, TX 75056, U.S.A.

EUT DESCRIPTION: CELLULAR PERSONAL EMERGENCY RESPONSE SYSTEM

MODEL: ANH0418

SERIAL NUMBER: 1528533

**DATE TESTED:** APRIL 16, 2018 AND MAY 23, 2018

#### **APPLICABLE STANDARDS**

STANDARD TEST RESULTS

Complies

CFR 47 Part 15 Subpart C

INDUSTRY CANADA RSS-210 Issue 9, Annex B.10 Complies

\*INDUSTRY CANADA RSS-GEN Issue 5 Complies

UL Verification Services Inc. 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 UL Verification Services Inc. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. 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 UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. 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 U.S. government.

<sup>\*</sup> This standard is not covered by the NVLAP accreditation.

REPORT NO: 12216317-E2V4 FCC ID: 2AGPI-ANH0418

Approved & Released For UL Verification Services Inc. By:

FRANCISCO DE ANDA

OPERATIONS LEAD UL Verification Services Inc.

Prepared By:

TOM CHEN TEST ENGINEER

UL Verification Services Inc.

DATE: JUNE 01, 2018

IC: 20951-ANH0418

Reviewed By:

TINA CHU

SENIOR PROJECT ENGINEER UL Verification Services Inc.

# 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10-2013, FCC CFR 47 Part 2, FCC CFR 47 Part 15, RSS-GEN Issue 5, and RSS-210 Issue 9.

# 3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, Fremont, California, USA. Line conducted emissions are measured only at the 47173 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

47173 Benicia Street	47266 Benicia Street
Chamber A (ISED:2324B-1)	☐ Chamber D (ISED:22541-1)
Chamber B (ISED:2324B-2)	☐ Chamber E (ISED:22541-2)
Chamber C (ISED:2324B-3)	Chamber F (ISED:22541-3)
	☐ Chamber G (ISED:22541-4)
	☐ Chamber H (ISED:22541-5)

The above test sites and facilities are covered under FCC Test Firm Registration # 208313.

Chambers A through C are covered under ISED company address code 2324B with site numbers 2324B -1 through 2324B-3, respectively. Chambers D through H are covered under ISED company address code 22541 with site numbers 22541 -1 through 22541-5, respectively.

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <a href="NVLAP Lab Search">NVLAP Lab Search</a>.

# 4. CALIBRATION AND UNCERTAINTY

# 4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

#### 4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB) 36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

# 4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Conducted Disturbance, 9KHz to 0.15 MHz	3.84 dB
Conducted Disturbance, 0.15 to 30 MHz	3.65 dB
Radiated Disturbance, 9KHz to 30 MHz	3.15 dB
Radiated Disturbance, 30 to 1000 MHz	5.36 dB
Radiated Disturbance,1000 to 18000 MHz	4.32 dB
Radiated Disturbance,18000 to 26000 MHz	4.45 dB
Radiated Disturbance,26000 to 40000 MHz	5.24 dB
Occupied Channel Bandwidth	± 0.39 dB

Uncertainty figures are valid to a confidence level of 95%.

# 5. EQUIPMENT UNDER TEST

# 5.1. DESCRIPTION OF EUT

The EUT is a desk (mobile application) in home personal emergency response system with BLE, WCDMA, LTE and 906 MHz single channel radio.

### 5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum output peak E-field as follows:

Frequency Band (MHz)	Output PK E-field Strength (dBuV/m)
906	87.81

#### 5.3. DESCRIPTION OF AVAILABLE ANTENNAS

Frequency Band (MHz)	Antenna Peak Gain (dBi)
906	0.6

#### 5.4. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was v4.10.

#### 5.5. WORST-CASE CONFIGURATION AND MODE

All tests were performed with the EUT was set to transmit at the 906MHz frequency with highest output power as worst-case scenario.

The EUT is a desktop device. Therefore, all final radiated testing was performed with the EUT in desktop orientation.

906 MHz and cellular transmit simultaneously.

# 5.6. DESCRIPTION OF TEST SETUP

# **SUPPORT EQUIPMENT & PERIPHERALS**

SUPPORT EQUIPMENT & PERIPHERALS LIST			
Description Manufacturer Model Serial Number/Part Number			
AC/DC Adapter	CUI Inc.	SW12-9-N	SW12-9-N-P5R

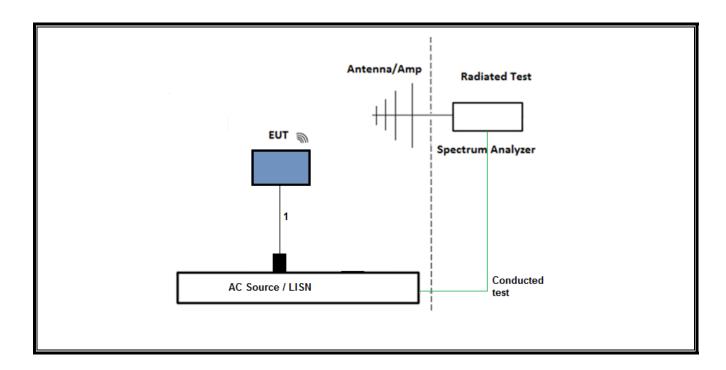
# I/O CABLES (RADIATED AND CONDUCTED EMISSIONS)

	I/O CABLE LIST					
Cable	Port	# of	Connector	Cable	Cable	Remarks
No.		Identical	Туре	Туре	Length	
		Ports			m	
1	AC	1	2-prong	Unshielded	1.2	N/A

### **TEST SETUP**

The EUT was installed in a typical configuration. Refer to the following diagram.

# **TEST SETUP DIAGRAM**



# 6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

	TEST EQUIPMENT	LIST				
Description	Manufacturer	Model	Asset	Cal Due		
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent	N9030A	T1466	04/16/2019		
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	T345	04/25/2019		
Amplifier, 1 to 18GHz	Miteq	AFS42-00101800- 25-S-42	T1165	04/03/2019		
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	T120	06/26/2018		
Amplifier, 1 to 18GHz	Miteq	AFS42-00101800- 25-S-42	T931	02/24/2019		
Antenna, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences Corp.	JB1	T243	11/02/2018		
Amplifier, 10KHz to 1GHz, 32dB	SONOMA INSTRUMENT	310N	T300	12/11/2018		
Wideband Communication Test Set, Call Box	R&S	CMW500	T954	02/21/2019		
Filter, HPF 1.5 to 18GHz	MICRO-TRONICS	HPM50114	T1852	07/16/2018		
Filter, BRF 902 to 928MHz	MICRO-TRONICS	BRC50722	T1847	07/15/2018		
Spectrum Analyzer, PXA 3Hz to 44GHz	Keysight N9030A		T1210	07/17/2018		
	AC Line Conduct	ted				
EMI Test Receiver	Rohde&Schwarz	ESR26	PRE0176493	02/21/2019		
L.I.S.N	FCC INC.	FCC LISN 50/250	1310	03/06/2019		
Power Cable, Line Conducted Emissions	UL	PG1	T861	08/31/2018		
	UL AUTOMATION SOFTWARE					
Radiated Software	UL	UL EMC	Ver 9.5, De	ec 01, 2016		
AC Line Conducted Software	UL	UL EMC	Ver 9.5, May 26, 2015			

# **NOTES:**

- 1. Equipment listed above that calibrated during the testing period was set for test after the calibration.
- 2. Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.

# 7. MEASUREMENT METHODS

Radiated emissions: ANSI C63.10-2013, Sections 6.5 and 6.6.

Occupied bandwidth (99% dB): ANSI C63.10-2013, Sections 6.9.3.

AC Power Line Conducted Emissions: ANSI C63.10-2013 Section 6.2.

# 8. TEST RESULTS

# 8.1. 20 dB AND 99% BANDWIDTH

# **LIMITS**

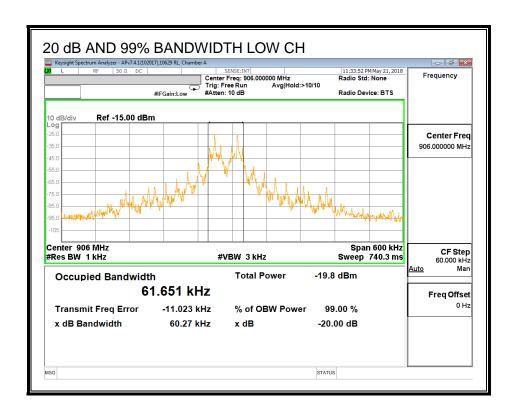
None; for reporting purposes only.

#### **TEST PROCEDURE**

The transmitter output is connected to a spectrum analyzer. The RBW is set to  $\geq$  1% of the 20 dB bandwidth. The VBW is set to  $\geq$  RBW. The sweep time is coupled.

#### **RESULTS**

Frequency (MHz)	20 dB Bandwidth (KHz)	99% Bandwidth (KHz)



# 8.2. RADIATED TEST RESULTS

#### **LIMITS**

FCC 15.249 (a)(d)(e) & 15.209 (a) IC RSS-210, B.10 IC RSS-GEN Clause 8.9 (Transmitter)

Operation within the bands 902–928 MHz, 2400–2483.5 MHz, 5725–5875 MHZ, and 24.0–24.25 GHz.

(a) Except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following @ 3 meter:

Fundamental	Field strength of fundamental at 3 m		Field strength of harmonics at 3 m		
frequency	mV/m	dBuV/m	uV/m	dBuV/m	
902-928 MHz	50	94	500	54	
2400-2483.5 MHz	50	94	500	54	
5725-5875 MHz	50	94	500	54	
24.0-24.25 GHz	250	107.95	2500	67.95	

(d) 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 Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
0.009-0.490	2400/F(kHz) @ 300m	-
0.490-1.705	24000/F(kHz) @ 30m	-
1.705-30.0	30 @ 30m	-
30 - 88	100**	40**
88 - 216	150**	43.5**
216 - 960	200**	46**
Above 960	500**	54**

<sup>\*\*</sup>Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§15.231 and 15.241.

#### **TEST PROCEDURE**

The EUT is placed on a non-conducting table 80 cm above the ground plane for measurement below 1GHz; 1.5 m above the ground plane for measurement above 1GHz. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For pre-scans above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 30 KHz for peak measurements.

For final measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and as applicable for average measurements.

NOTE: According to ANSI C63.10 Section 6.6 NOTE 1— Where limits are specified by regulations for both average and peak detection, if the maximized peak measured value complies with the average limit, then it is unnecessary to perform an average measurement.

The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

#### KDB 414788 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 result is the worst case test result.

#### RESULTS

# 8.2.1. FUNDAMENTAL FREQUENCY RADIATED EMISSION

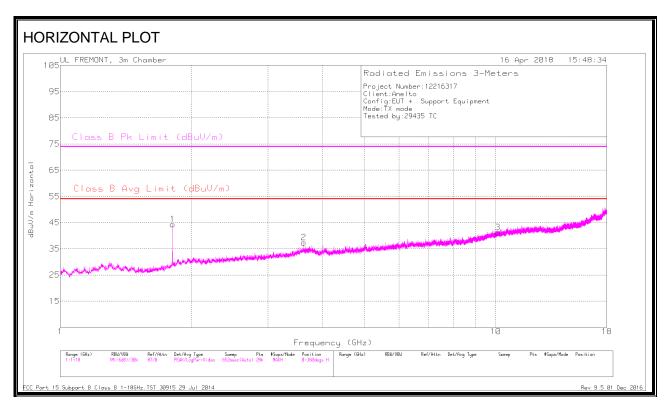
# **DATA**

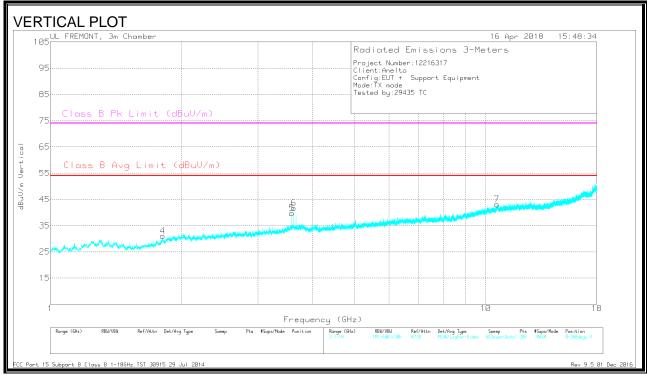
Frequency (MHz)	Meter Reading	Det	AF T243 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading	Class B QPk Limit	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
, ,	(dBuV)		, ,	, ,	(dBuV/m)	(dBuV/m)	, ,	, , ,	, ,	
905.9702	87.11	Pk	26.5	-25.8	87.81	94	-6.19	69	134	Н
905.9702	85.88	Qp	26.5	-25.8	86.58	94	-7.42	69	134	Н
905.9716	83.94	Pk	26.5	-25.8	84.64	94	-9.36	176	100	V
905.9716	82.73	Qp	26.5	-25.8	83.43	94	-10.57	176	100	V

Pk - Peak detector

Qp - Quasi-Peak detector

# 8.2.2. HARMONICS AND SPURIOUS EMISSIONS ABOVE 1GHz





#### **DATA**

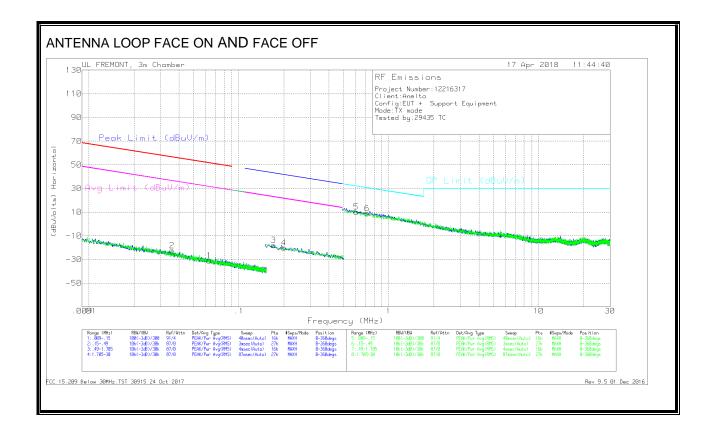
Marker	Frequency	Meter	Det	AF T120 (dB/m)	Amp/Cbl (dB)	Corrected	Class B Avg Limit (dBuV/m)	Margin	Class B Pk Limit	PK Margin	Azimuth	Height	Polarity
	(GHz)	Reading				Reading		(dB)	(dBuV/m)	(dB)	(Degs)	(cm)	
		(dBuV)				dBuV/m							
1	1.812	51.36	Pk	30.4	-31.3	50.46	-	-	74	-23.54	142	316	Н
4	1.812	39.56	Pk	30.4	-31.3	38.66	-	-	74	-35.34	279	391	V
5	3.589	41.36	Pk	34.7	-29.6	46.46	-	-	74	-27.54	272	100	V
6	3.624	42.02	Pk	34.6	-29.3	47.32	-	-	74	-26.68	273	103	V
2	3.625	38.7	Pk	34.6	-29.4	43.9	-	-	74	-30.1	83	109	Н
3	10.113	34.58	Pk	37.4	-21.3	50.68	-	-	74	-23.32	216	202	Н
7	10.612	34.25	Pk	37.8	-21.9	50.15	-	-	74	-23.85	334	315	V

Pk - Peak detector

**NOTE:** According to ANSI C63.10 Section 6.6 NOTE 1— Where limits are specified by regulations for both average and peak detection, if the maximized peak measured value complies with the average limit, then it is unnecessary to perform an average measurement.

# 8.2.3. WORST-CASE BELOW 30MHz

### SPURIOUS EMISSIONS BELOW 30 MHz (WORST-CASE CONFIGURATION)



# **DATA**

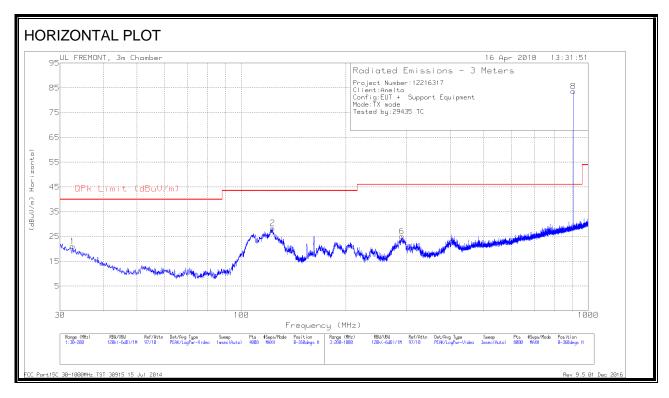
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
2	.03598	40.92	Pk	15.1	1.4	-80	-22.58	56.46	-79.04	36.46	-59.04	-	-	-	-	0-360
1	.06346	33.34	Pk	14.4	1.4	-80	-30.86	51.53	-82.39	31.53	-62.39		-	-	-	0-360
3	.17046	46.72	Pk	13.9	1.5	-80	-17.88	-	-	-	-	42.99	-60.87	22.99	-40.87	0-360
4	.20044	44.54	Pk	13.9	1.5	-80	-20.06	-	-	-	-	41.58	-61.64	21.58	-41.64	0-360

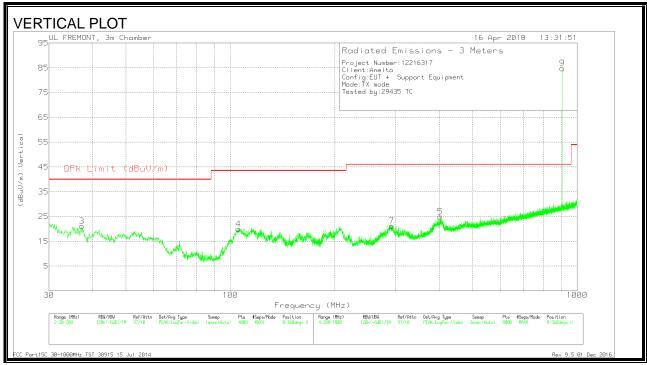
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbi (dB)	Dist Corr 30m	Corrected Reading (dBuVolts)	QP Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/ m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
5	.60712	34.62	Pk	14	1.5	-40	10.12	31.94	-21.82	-	-	-		0-360
6	.72013	33.46	Pk	14	1.5	-40	8.96	30.47	-21.51	-	-	-	-	0-360

Pk - Peak detector

#### 8.2.4. WORST-CASE 30MHz TO 1GHz

# SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION)





# <u>DATA</u>

Marker	Frequency (MHz)	Meter Reading	Det	AF T243 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
	(2)	(dBuV)				(dBuV/m)		(42)	(5085)	(6)	
1	32.6357	28.77	Pk	23.4	-31.1	21.07	40	-18.93	0-360	200	Н
3	37.3119	32.27	Pk	19.9	-31	21.17	40	-18.83	0-360	100	V
4	105.4145	34.47	Pk	15.8	-30.2	20.07	43.52	-23.45	0-360	100	V
2	123.0141	40.33	Pk	18.1	-30.1	28.33	43.52	-15.19	0-360	200	Н
6	290.3117	36.62	Pk	17.3	-28.8	25.12	46.02	-20.9	0-360	100	Н
7	291.8119	32.72	Pk	17.3	-28.8	21.22	46.02	-24.8	0-360	100	V
5	403.0264	33.27	Pk	19.9	-28.2	24.97	46.02	-21.05	0-360	100	V

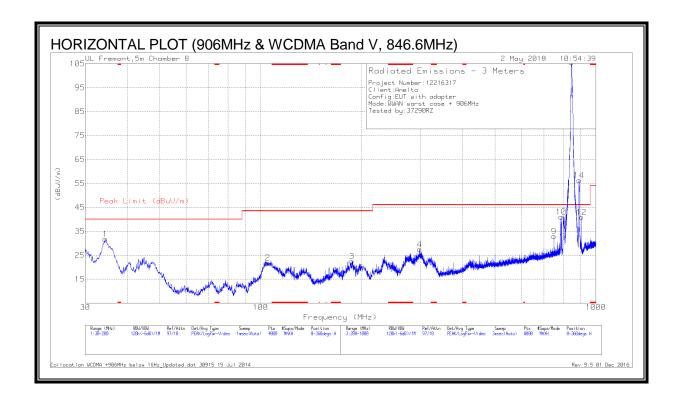
Pk - Peak detector

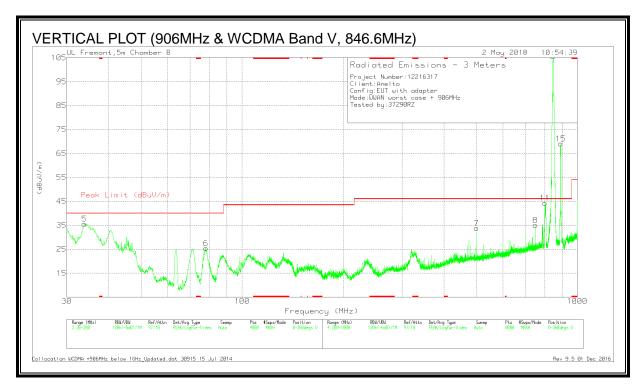
Qp - Quasi-Peak detector

NOTE: Marker 8 and 9 are fundamental signals

# 8.2.5. WORST-CASE CO-LOCATION

### **SPURIOUS EMISSIONS 30MHz TO 1GHz**





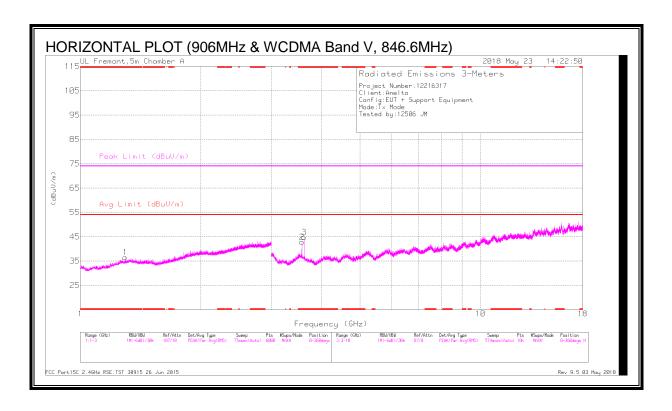
#### **DATA**

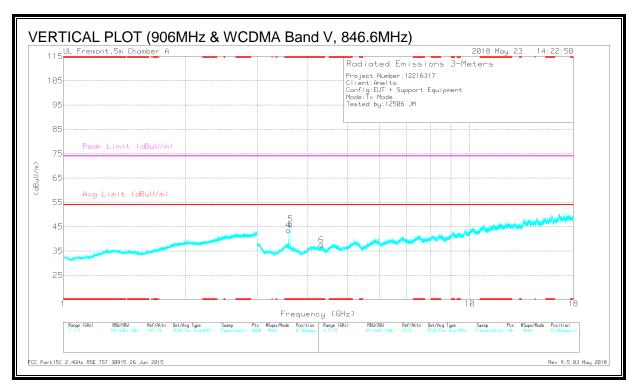
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB/m)	Filter	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	33.8685	44.52	Pk	22.2	-31.1	08	35.54	40	-4.46	0-360	100	V
1	34.4211	40.96	Pk	21.8	-31	097	31.663	40	-8.337	0-360	100	Н
6	77.9949	44.28	Pk	11.7	-30.5	35	25.13	40	-14.87	0-360	100	V
2	105.0744	36.33	Pk	15.7	-30.2	65	21.18	43.52	-22.34	0-360	200	Н
3	187.4182	36.9	Pk	15.1	-29.5	46	22.04	43.52	-21.48	0-360	100	Н
4	297.9127	38.91	Pk	17.4	-28.8	62	26.89	46.02	-19.13	0-360	100	Н
7	500.039	39.84	Pk	21.8	-27.8	56	33.28	46.02	-12.74	0-360	100	V
9	749.9715	34.98	Pk	24.8	-26.8	73	32.25	46.02	-13.77	0-360	300	Н
8	749.9715	37.08	Pk	24.8	-26.8	73	34.35	46.02	-11.67	0-360	200	V
10	788.4765	42.57	Pk	25.2	-26.7	69	40.38	46.02	-5.64	0-360	100	Н
11	799.978	45.62	Pk	25.3	-26.6	53	43.79	46.02	-2.23	0-360	300	V

Pk - Peak detector

NOTE: Markers 13 & 16 are WCDMA fundamental uplink signals; Markers 15 & 14 are WCDMA fundamental downlink signals from the call box. Marker 12 is 906MHz fundamental signal. Filter (model: BRC50722) was used in this testing to prevent systems overloading.

#### **SPURIOUS EMISSIONS 1 TO 18 GHz**





#### **DATA**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.296	35.82	PK2	29.4	-23.6	41.62	-	-	74	-32.38	251	342	Н
2	* 3.579	40.98	PK2	33	-26.8	47.18	-	-	74	-26.82	115	241	Н
3	* 3.624	41.6	PK2	33	-27.5	47.1	-	-	74	-26.9	26	229	Н
4	* 3.579	42.73	PK2	33	-26.8	48.93	-	-	74	-25.07	6	118	V
5	* 3.624	45.09	PK2	33	-27.5	50.59	-	-	74	-23.41	6	101	V
6	* 4.316	36.49	PK2	33.6	-26.7	43.39	-	-	74	-30.61	118	349	V

<sup>\* -</sup> indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band PK2 - Maximum Peak

**NOTE:** According to ANSI C63.10 Section 6.6 NOTE 1— Where limits are specified by regulations for both average and peak detection, if the maximized peak measured value complies with the average limit, then it is unnecessary to perform an average measurement.

# 8.3. AC POWER LINE CONDUCTED EMISSIONS

#### **LIMITS**

FCC §15.207 (a)

RSS-Gen 8.8

Frequency of Emission (MHz)	Conducted	l Limit (dΒμV)
Frequency of Emission (MHZ)	Quasi-peak	Average
0.15-0.5	66 to 56 *	56 to 46 *
0.5-5	56	46
5-30	60	50

<sup>\*</sup>Decreases with the logarithm of the frequency.

#### **TEST PROCEDURE**

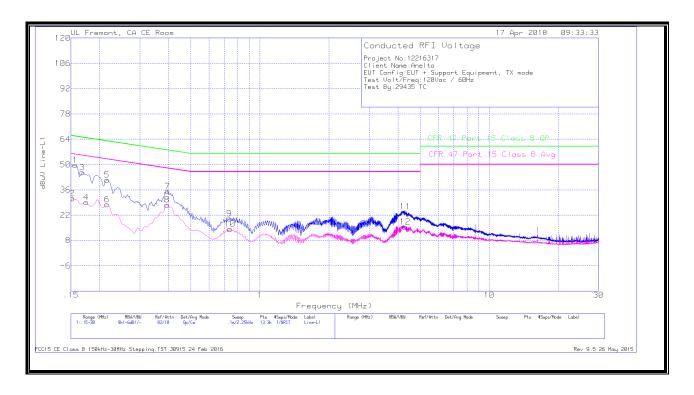
The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.10.

The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

#### **RESULTS**

#### **LINE 1 RESULTS**



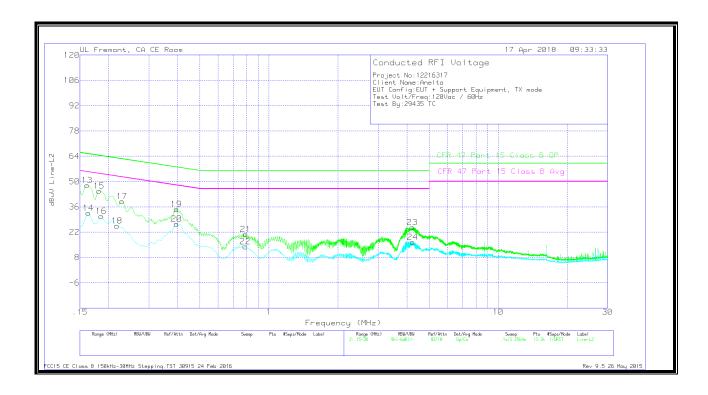
#### **WORST EMISSIONS**

Range	1: Line-L1 .	15 - 30MH	lz								
Marker	Frequency	Meter	Det	LISN L1	LC Cables	Limiter	Corrected	CFR 47	QP Margin	CFR 47	Av(CISPR)
	(MHz)	Reading			C1&C3	(dB)	Reading	Part 15	(dB)	Part 15	Margin
		(dBuV)					dBuV	Class B QP		Class B Avg	(dB)
1	.15675	39.53	Qp	.1	0	10.1	49.73	65.63	-15.9	-	-
2	.15225	21	Ca	.1	0	10.1	31.2	-	-	55.88	-24.68
3	.168	35.43	Qp	.1	0	10.1	45.63	65.06	-19.43	-	-
4	.17475	19.06	Ca	0	0	10.1	29.16	-	-	54.73	-25.57
5	.21525	31.43	Qp	0	0	10.1	41.53	63	-21.47	-	-
6	.21525	17.82	Ca	0	0	10.1	27.92	-	-	53	-25.08
7	.39525	25.12	Qp	0	0	10.1	35.22	57.95	-22.73	-	-
8	.393	17.67	Ca	0	0	10.1	27.77	-	-	48	-20.23
9	.73725	10.06	Qp	0	0	10.1	20.16	56	-35.84	-	-
10	.74175	4.23	Ca	0	0	10.1	14.33	-	-	46	-31.67
11	4.299	13.8	Qp	0	.1	10.1	24	56	-32	-	-
12	4.299	5.3	Ca	0	.1	10.1	15.5	-	-	46	-30.5

Qp - Quasi-Peak detector

Ca - CISPR average detection

#### **LINE 2 RESULTS**



# **WORST EMISSIONS**

Range	Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency	Meter	Det	LISN L2	LC Cables	Limiter	Corrected	CFR 47	QP Margin	CFR 47	Av(CISPR)	
	(MHz)	Reading			C2&C3	(dB)	Reading	Part 15	(dB)	Part 15	Margin	
		(dBuV)					dBuV	Class B QP		Class B Avg	(dB)	
13	.16125	37.87	Qp	0	0	10.1	47.97	65.4	-17.43	-	-	
14	.1635	22.54	Ca	0	0	10.1	32.64	-	-	55.28	-22.64	
15	.1815	34.65	Qp	0	0	10.1	44.75	64.42	-19.67	-	-	
16	.186	20.78	Ca	0	0	10.1	30.88	-	-	54.21	-23.33	
17	.22875	28.97	Qp	0	0	10.1	39.07	62.49	-23.42	-	-	
18	.2175	15.35	Ca	0	0	10.1	25.45	-	-	52.91	-27.46	
19	.39525	24.59	Qp	0	0	10.1	34.69	57.95	-23.26	-	-	
20	.39525	16.35	Ca	0	0	10.1	26.45	-	-	47.95	-21.5	
21	.79125	10.65	Qp	0	0	10.1	20.75	56	-35.25	-	-	
22	.789	3.95	Ca	0	0	10.1	14.05	-	-	46	-31.95	
23	4.227	14.5	Qp	0	.1	10.1	24.7	56	-31.3	-	-	
24	4.22925	6.26	Ca	0	.1	10.1	16.46	-	-	46	-29.54	

Qp - Quasi-Peak detector

Ca - CISPR average detection

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