

TEST REPORT

Report Number: 16148856-E1V2

Applicant : ENERGOUS CORPORATION
3590 NORTH FIRST STREET,
SUITE 330,
SAN JOSE, CA 95134, U.S.A.

Model : YND-PBP+

FCC ID : 2ADNG-YND-GW

EUT Description : WIRELESS CHARGER

Test Standard(s) : FCC 47 CFR PART 18 SUBPART C

Date Of Issue:
2026-07-21

Prepared by:
UL Verification Services Inc.
47173 Benicia Street
Fremont, CA 94538, U.S.A.
TEL: (510) 319-4000
FAX: (510) 661-0888



REPORT REVISION HISTORY

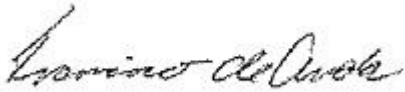
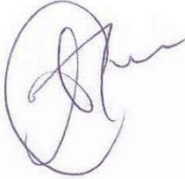
Rev.	Issue Date	Revisions	Revised By
V1	2026-01-28	Initial Issue	---
V2	2026-07-21	Updated Section 1, 3, added Section 8.1	Tina Chu

TABLE OF CONTENTS

REPORT REVISION HISTORY	2
TABLE OF CONTENTS	3
1. ATTESTATION OF TEST RESULTS	5
2. TEST RESULTS SUMMARY	6
3. TEST METHODOLOGY	6
4. FACILITIES AND ACCREDITATION	6
5. DECISION RULES AND MEASUREMENT UNCERTAINTY	7
5.1. METROLOGICAL TRACEABILITY	7
5.2. DECISION RULES.....	7
5.3. MEASUREMENT UNCERTAINTY.....	7
5.4. SAMPLE CALCULATION	7
6. EQUIPMENT UNDER TEST	8
6.1. EUT DESCRIPTION	8
6.2. OPERATING FREQUENCY AND POWER.....	8
6.3. DESCRIPTION OF AVAILABLE ANTENNAS	8
6.4. SOFTWARE AND FIRMWARE.....	8
6.5. WORST-CASE CONFIGURATION AND MODE.....	9
6.6. DESCRIPTION OF TEST SETUP.....	10
7. TEST AND MEASUREMENT EQUIPMENT	12
8. RADIATED EMISSIONS.....	13
8.1. OPERATING FREQUENCY	15
CONFIGURATION 1	15
8.1.1. Low Channel.....	15
8.1.2. High Channel	17
8.2. SPURIOUS EMISSIONS 9 kHz TO 30 MHz (Worst-Case)	19
CONFIGURATION 1	19
8.3. SPURIOUS EMISSIONS 30 MHz TO 1000 MHz	20
8.3.1. CONFIGURATION 1 (Low Channel).....	20
8.3.2. CONFIGURATION 1 (Mid Channel).....	22
8.3.3. CONFIGURATION 1 (High Channel).....	24
8.4. SPURIOUS EMISSIONS 1 GHz TO 10 GHz.....	26
8.4.1. CONFIGURATION 1 (Low Channel).....	26
8.4.2. CONFIGURATION 1 (Mid Channel).....	30
8.4.3. CONFIGURATION 1 (High Channel).....	34

8.5.	<i>SPURIOUS EMISSIONS (Worst Case Tx Simultaneous)</i>	38
	CONFIGURATION 3	38
9.	AC POWER LINE CONDUCTED EMISSIONS	42
9.1.	<i>CONFIGURATION 1 (EUT is powered by AC/DC adapter via USB-C cable)</i>	43
9.2.	<i>CONFIGURATION 2 (EUT is powered via PoE using a PoE Ethernet switch)</i>	45
10.	SETUP PHOTOS	47

1. ATTESTATION OF TEST RESULTS

Applicant Name and Address	Energous Corporation 3590 North First Street, Suite 330, San Jose, CA 95134, U.S.A.	
Model	YND-PBP+	
Brand	Energous	
FCC ID	2ADNG-YND-GW	
EUT Description	Wireless Charger	
Serial Number	4F4FE2DC042B	
Sample Receipt Date	2025-12-23	
Date Tested	2026-01-07 to 2026-01-09 & 2026-01-14 & 2026-07-21	
Applicable Standards	FCC 47 CFR Part 18 Subpart C	
Test Results	COMPLIES	
UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report. The results documented in this report apply only to the sample tested, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to ensure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise. 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.		
Approved & Released By:	Reviewed By:	Prepared By:
		
Francisco de Anda Staff Engineer UL Verification Services Inc.	Tina Chu Senior Project Engineer UL Verification Services Inc.	Jasdeep Madar Laboratory Engineer UL Verification Services Inc.

2. TEST RESULTS SUMMARY

This report contains data provided by the customer, which can impact the validity of the results. UL Verification Services Inc. is only responsible for correctly integrating customer-provided data with measurements performed by UL Verification Services Inc.

1. Antenna gain and type (see section 6.3)
2. Cable loss (see section 6.3)

FCC Clause	Requirement	Result	Comment
18.301	Operating Frequency	complies	The EUT operates within the 915 MHz ISM band.
18.303	Prohibited frequency bands	complies	The EUT does not operate within the frequencies listed in 18.303.
18.305 (b)	Field Strength Limits	Complies	None.
18.307 (b)	AC Mains Conducted Emissions	Complies	None
18.309	Frequency Range of Measurements	Complies	The EUT was measured to the 10 th harmonic or 10 GHz.
18.311	Methods of Measurements	-	FCC MP-5:1986 was used.

3. TEST METHODOLOGY

The tests documented in this report were performed in accordance with:

- KDB 680106 D01 Wireless Power Transfer
- FCC Part 18 Subpart C
- FCC / OST MP-5:1986, "FCC Method of Measurements of Radio Noise Emission from Industrial, Scientific, and Medical Equipment".

4. FACILITIES AND ACCREDITATION

UL Verification Services Inc. is accredited by A2LA, Certificate Number 0751.05, for all testing performed within the scope of this report. Testing was performed at the locations noted below.

	Address	ISED CABID	ISED Company Number	FCC Registration
☐	Building 1: 47173 Benicia Street, Fremont, CA 94538, USA	US0104	2324A	550739
☐	Building 2: 47266 Benicia Street, Fremont, CA 94538, USA			
☐	Building 3: 843 Auburn Court, Fremont, CA 94538, USA			
☒	Building 4: 47658 Kato Rd, Fremont, CA 94538, USA			
☐	Building 5: 47670 Kato Rd, Fremont, CA 94538, USA			

5. DECISION RULES AND MEASUREMENT UNCERTAINTY

5.1. METROLOGICAL TRACEABILITY

All test and measuring equipment utilized to perform the tests documented in this report are calibrated regularly, with a maximum time between calibrations of one year or the manufacturer's recommendation, whichever is less, and where applicable is traceable to recognized national standards.

5.2. DECISION RULES

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4:2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

5.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	U _{LAB}
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.40 dB
Worst Case Radiated Disturbance, 9kHz to 30 MHz	2.87 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	6.01 dB
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.73 dB
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.51 dB

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

5.4. SAMPLE CALCULATION

RADIATED EMISSIONS

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)

$36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} = 28.9 \text{ dBuV/m}$

MAINS CONDUCTED EMISSIONS

Where relevant, the following sample calculation is provided:

Final Voltage (dBuV) = Measured Voltage (dBuV) + Cable Loss (dB) + Limiter Factor (dB) + LISN
Insertion Loss.

$36.5 \text{ dBuV} + 0 \text{ dB} + 10.1 \text{ dB} + 0 \text{ dB} = 46.6 \text{ dBuV}$

6. EQUIPMENT UNDER TEST

6.1. EUT DESCRIPTION

The EUT is an over-the-air, distance-charging transmitter with WPT, BLE, and 802.11bgn HT20/H40 SISO capabilities. The wireless charger transmits power via a 52-tone frequency hopping signal in the 907MHz-920MHz range and charges multiple receivers simultaneously. The EUT uses BLE to communicate with a client device and 2.4 GHz Wi-Fi for data transmission. The EUT can be powered via 12W USB-C or PoE.

The WPT portion of the EUT is a frequency hopping transmitter in the ISM band, the following low/mid/high channels are selected for testing:

- 907MHz
- 913.5MHz
- 920MHz

6.2. OPERATING FREQUENCY AND POWER

EUT's operating frequency range is 907MHz to 920MHz. The maximum RF energy generated is 2 Watts (33dBm) as declared by the applicant.

The client device, as tested, has a maximum RF Energy of 3mW, 4.77dBm.

6.3. DESCRIPTION OF AVAILABLE ANTENNAS

The antenna(s) gain and type, as provided by the manufacturer, are as follows:

The radio utilizes a dual-polarized patch antenna with a maximum gain of 6.5dBi.

6.4. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing was brg_energous_v5_4.4.23.

6.5. WORST-CASE CONFIGURATION AND MODE

EUT is a wall or ceiling-mounted device; the fundamental of the EUT was investigated in three orthogonal orientations, X, Y, Z. It was determined that Z orientation was the worst-case orientation; therefore, all final radiated testing was performed with the EUT in Z orientation.

EUT supports 2 input power methods: Power over Ethernet (PoE) or USB. These modes were investigated to determine the worst case. It was determined that USB mode was the worst case. Therefore, all final radiated testing was performed with the EUT powered via a USB connection.

AC Line emissions were performed on Power over Ethernet (PoE) and USB, all 2 input power methods with the worst-case channel.

The worst-case orientation and position of the client devices (Rx load/Tag) was investigated and declared by the applicant. Without/with client devices and the position of the client devices at 30cm/40cm/50cm away from the EUT were investigated, and the worst configuration was reported.

Configuration	Mode	Description
1	With clients (at 50cm away from EUT) and charging	EUT is powered by a 12W AC/DC adapter via USB-C cable. Internal ethernet port is terminated by a PoE Ethernet switch via an RJ45 cable; the switch is placed underneath the turntable during the radiated test. The switch is not powered on, and two client devices receive maximum RF energy from EUT. BLE is in normal operating mode as the worst case.
2		EUT is powered by PoE using a PoE Ethernet switch. The switch is placed underneath the turntable during radiated test. The USB-C port is terminated by a flash drive. Two client devices receive maximum RF energy from EUT. BLE is in normal operating mode as the worst case.
3		EUT is powered by a 12W AC/DC adapter via USB-C cable. Internal ethernet port is terminated by a PoE Ethernet switch via an RJ45 cable; the switch is placed underneath the turntable during the radiated test. The switch is not powered on, and two client devices receive maximum RF energy from EUT. BLE and Wi-Fi are in normal operating mode as the worst case.

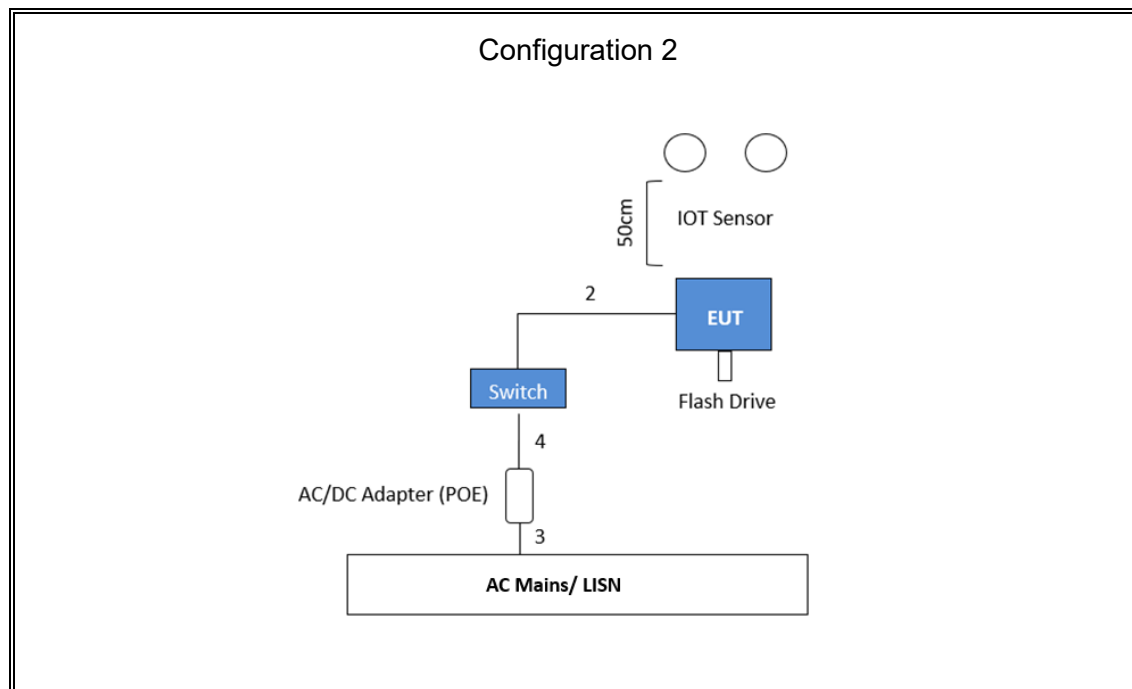
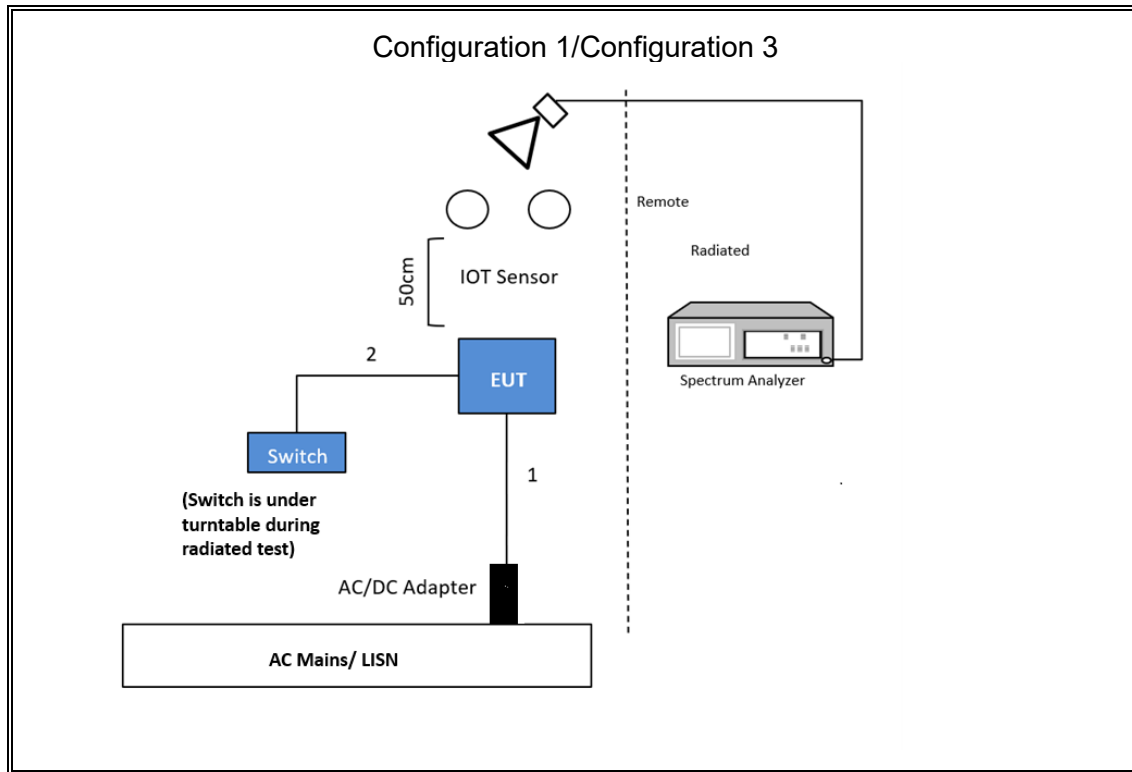
6.6. DESCRIPTION OF TEST SETUP

SUPPORT TEST EQUIPMENT						
Description		Manufacturer	Model		Serial Number	FCC ID/ DoC
EUT AC/DC Adapter		HDP	HDP12-MD05024U		N/A	DoC
PoE Ethernet Switch		Netgear	GS305PP		N/A	DoC
PoE Ethernet Switch AC/DC Adapter		Netgear	2ABP090S		N/A	DoC
Laptop		Dell	Precision 5520		FK7QHM2	DoC
Laptop power supply		Dell	HA130PM130		CN-0V363H- CH200-84A- 03QN-A01	DoC
C and A Dual Flash Drive		MOSDART	MOSTDART_FLASH_DRIVE_64GB		N/A	DoC
IOT Sensor		Energous	N/A		IOT-21DE	DoC
IOT Sensor		Energous	N/A		IOT-21DF	DoC
I/O CABLES (RF RADIATED/AC POWER LINE TEST)						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	USB-C	1	USB-C	Shielded	<3m	EUT to AC/DC adapter
2	Ethernet	1	RJ45	Un-shielded	>3m	EUT to switch
3	AC	1	3-Prong	Un-shielded	<3m	
4	DC	1	barrel	Shielded	>3m	

TEST SETUP - RADIATED TEST/AC POWER LINE TEST

The EUT is either powered by an AC/DC adapter via cable or a PoE Ethernet Switch and centered on the tabletop. The EUT was set to transmit at the max charging rate for the entire tests. Two client devices are lifted up 3cm by using two Styrofoam blocks. The two blocks are situated 50cm away and positioned in such a way that both client devices face the EUT. Test software exercised the EUT. The laptop was removed from the chamber during radiated tests.

SETUP DIAGRAM



7. TEST AND MEASUREMENT EQUIPMENT

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

Testing period: 2026-01-07 to 2026-01-14

TEST EQUIPMENT LIST				
Description	Manufacturer	Model	ID Num	Cal Due
Antenna, Passive Loop 30Hz - 1MHz	ELECTRO METRICS	EM-6871	219908	2026-08-31
Antenna, Passive Loop 100KHz - 30MHz	ELECTRO METRICS	EM-6872	219910	2026-08-31
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	206808	2027-04-30
RF Filter Box, 8 port, 1-18GHz	UL-FR1 (CTECH)	SAC 8 port rf box 1	197920	2026-03-23
Antenna, Broadband Hybrid, 30MHz to 2GHz	Sunol Sciences Corp.	JB1	203089	2027-04-30
Amplifier, 9KHz to 1GHz, 32dB	SONOMA INSTRUMENT	310	211062	2026-03-31
Antenna, Horn 18 to 26.5GHz	A.R.A.	MWH-1826/B	81140	2027-05-31
Link File, RF Amplifier Assembly, 18-26.5GHz, 60dB Gain	UL-FR1	AMP18G26.5-60	215705	2026-10-31
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	225688	2026-02-28
Filter, BRF 800 to 1000MHz	MICRO-TRONICS	BRM50706-02	155048	2026-09-30
Filter, HPF 1.5 to 18GHz	MICRO-TRONICS	HPM50114	204786	2027-01-30
AC Line Conducted				
Description	Manufacturer	Model	ID Num	Cal Due
LISN	Fischer Custom Communications, Inc	FCC-LISN-50/250-25-2-01-480V	79882	2026-01-31
EMI TEST RECEIVER	Rohde & Schwarz	ESR	171646	2026-02-28
Transient Limiter	TE	TBFL1	207996	2026-12-30
UL AUTOMATION SOFTWARE				
Radiated Software	UL	UL EMC	Rev 9.5, 25 Aug, 2025	

Testing period: 2026-07-21

TEST EQUIPMENT LIST				
Description	Manufacturer	Model	ID Num	Cal Due
Antenna, Broadband Hybrid, 30MHz to 3GHz	Sunol Sciences Corp.	JB3	232076	2027-03-30
Link File, 9KHz-1GHz Port 0 Factors	UL-FR1	Port 0 Factors	211062	2027-03-31
EMI Test Receiver	Rohde & Schwarz	ESW44	225688	2027-02-28
UL AUTOMATION SOFTWARE				
Radiated Software	UL	UL EMC	Rev 9.5, 25 Aug, 2025	

8. RADIATED EMISSIONS

LIMIT

§18.301 Operating frequencies

The EUT operates from 907MHz to 920MHz, within the tolerance of the ISM Frequency of 915 +/- 13MHz.

§18.305 Field Strength Limits

(b) The field strength levels of emissions which lie outside the bands specified in §18.301, unless otherwise indicated, shall not exceed the following:

Equipment	Operating frequency	RF Power generated by equipment (watts)	Field strength limit (µV/m)	Distance (meters)
Any type unless otherwise specified (miscellaneous)	Any ISM frequency	Below 500 500 or more	25 $25 \times \text{SQRT}(\text{power}/500)$	300 1300

¹Field strength may not exceed 10µV/m at 1600 meters. Consumer equipment operating below 1000 MHz does not permit the increase in field strength otherwise permitted here for power over 500 watts.

The formula for converting the field strength from uV/m to dBuV/m is:

Limit (dBuV/m) = 20 log limit (uV/m)

The RF Power generated by the equipment is below 500 W; therefore, the field strength limit is 25uV/m at 300 m, equivalent to 28 dBuV/m at 300 m.

TEST PROCEDURE

Tested in accordance with FCC / OST MP-5

The frequency range was investigated from 9 kHz to 26 GHz. An EUT that is normally operated on a table shall be placed on a non-conducting table having a height of 1 meter above the test site ground level for all frequency ranges.

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 in the 30-1000MHz range.

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. The detector function selector shall be set to average, unless otherwise specified for a given device.

For below 30MHz testing, an 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. Blue color trace on plots: Parallel orientation. Green color trace on plots: Perpendicular orientation. For a loop antenna, the antenna height shall be set at around 2 meters.

For operating frequency, investigation has been performed per with FCC / OST MP-5, Section 3.2.

KDB 414788 Open Field Site (OFS) and Chamber Correlation Justification

For below 30MHz testing, based on KDB 414788, Clause 2, for Part 18 equipment, Section 2.1 of FCC Measurement Procedure MP-5 also permits the use of test sites other than an open-field test site only if it can be shown that the results obtained at such a location are correlated with those made at an open-field test site.

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

Distance Correction Factor

Based on FCC 18.305, note 2. Testing for compliance with these limits may be made at closer distances, provided a sufficient number of measurements are taken to plot the radiation pattern, to determine the major lobes of radiation, and to determine the expected field strength level at 30, 300, or 1600 meters. Alternatively, if measurements are made at only one closer fixed distance, then the permissible field strength limits shall be adjusted using $1/d$ as an attenuation factor.

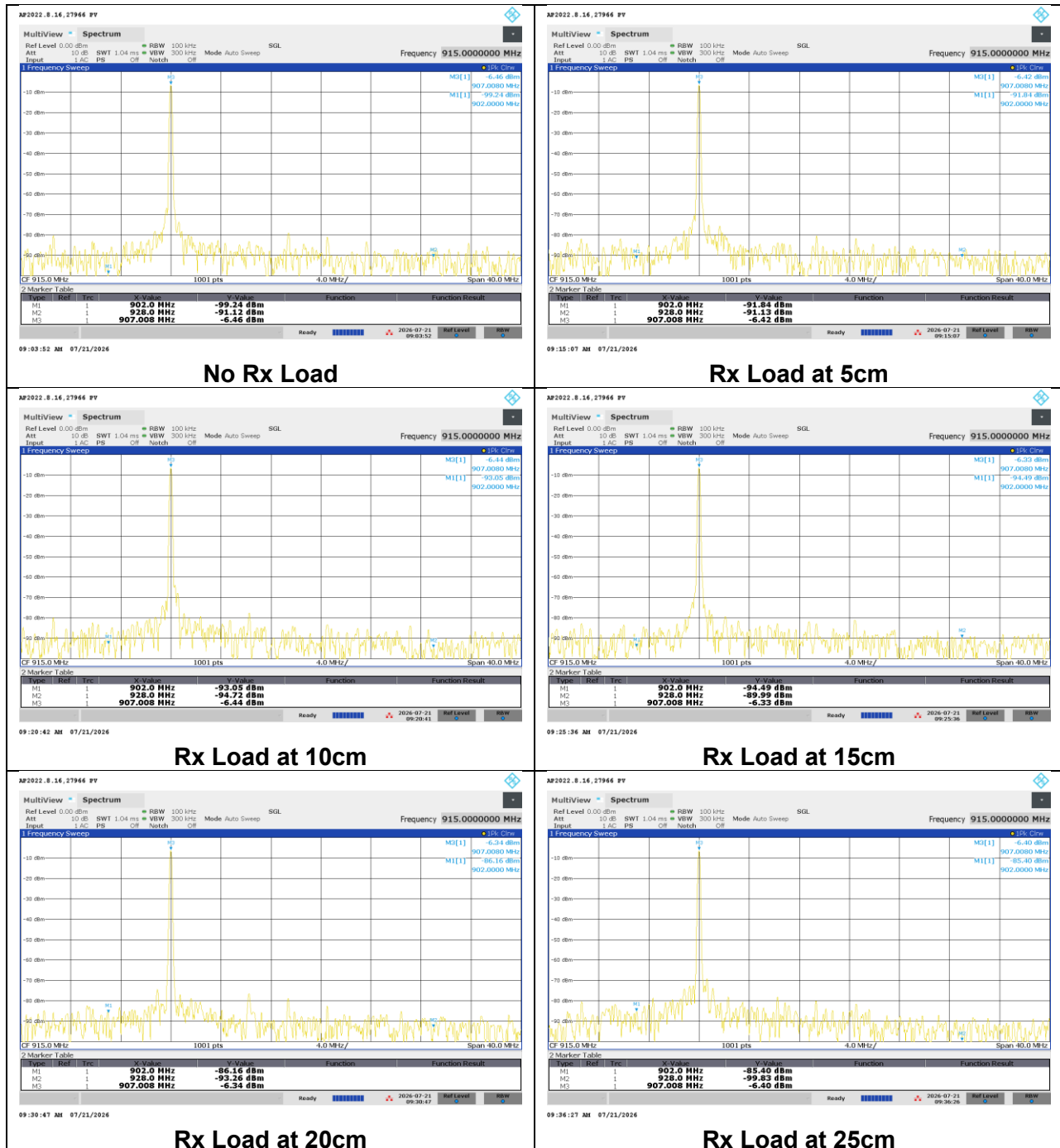
- Distance factor from 3m to 300m = $20\log(3/300) = -40\text{dB}$

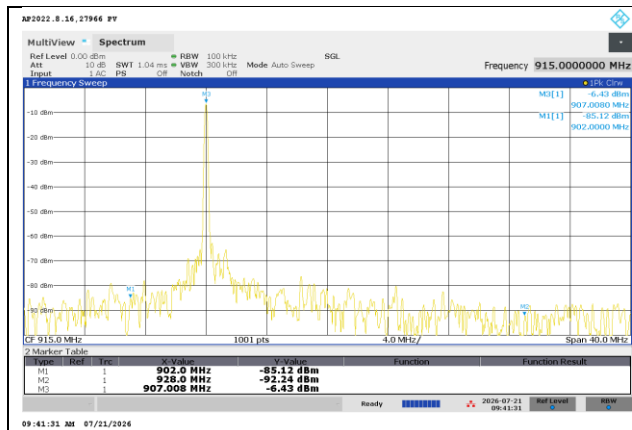
RESULTS

8.1. OPERATING FREQUENCY

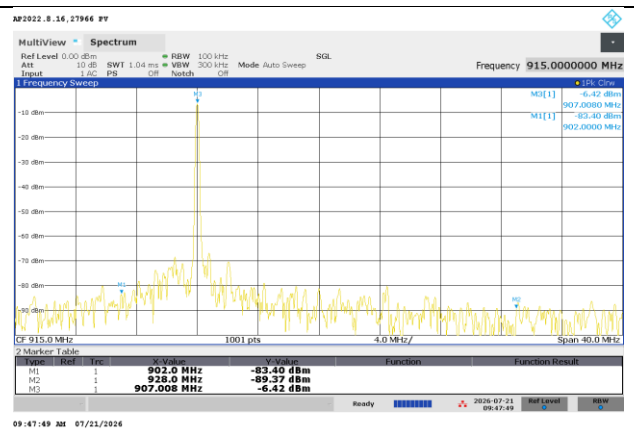
CONFIGURATION 1

8.1.1. Low Channel

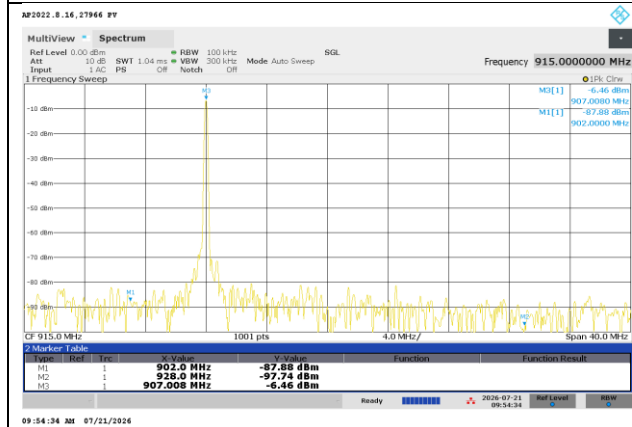




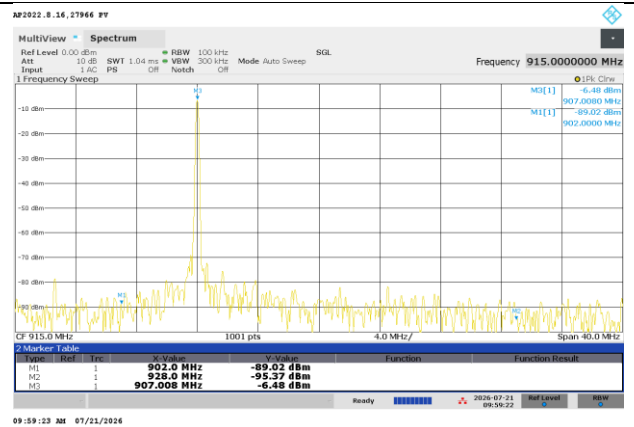
Rx Load at 30cm



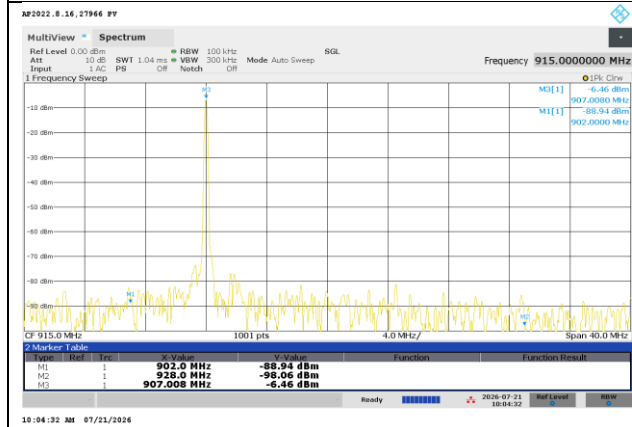
Rx Load at 35cm



Rx Load at 40cm



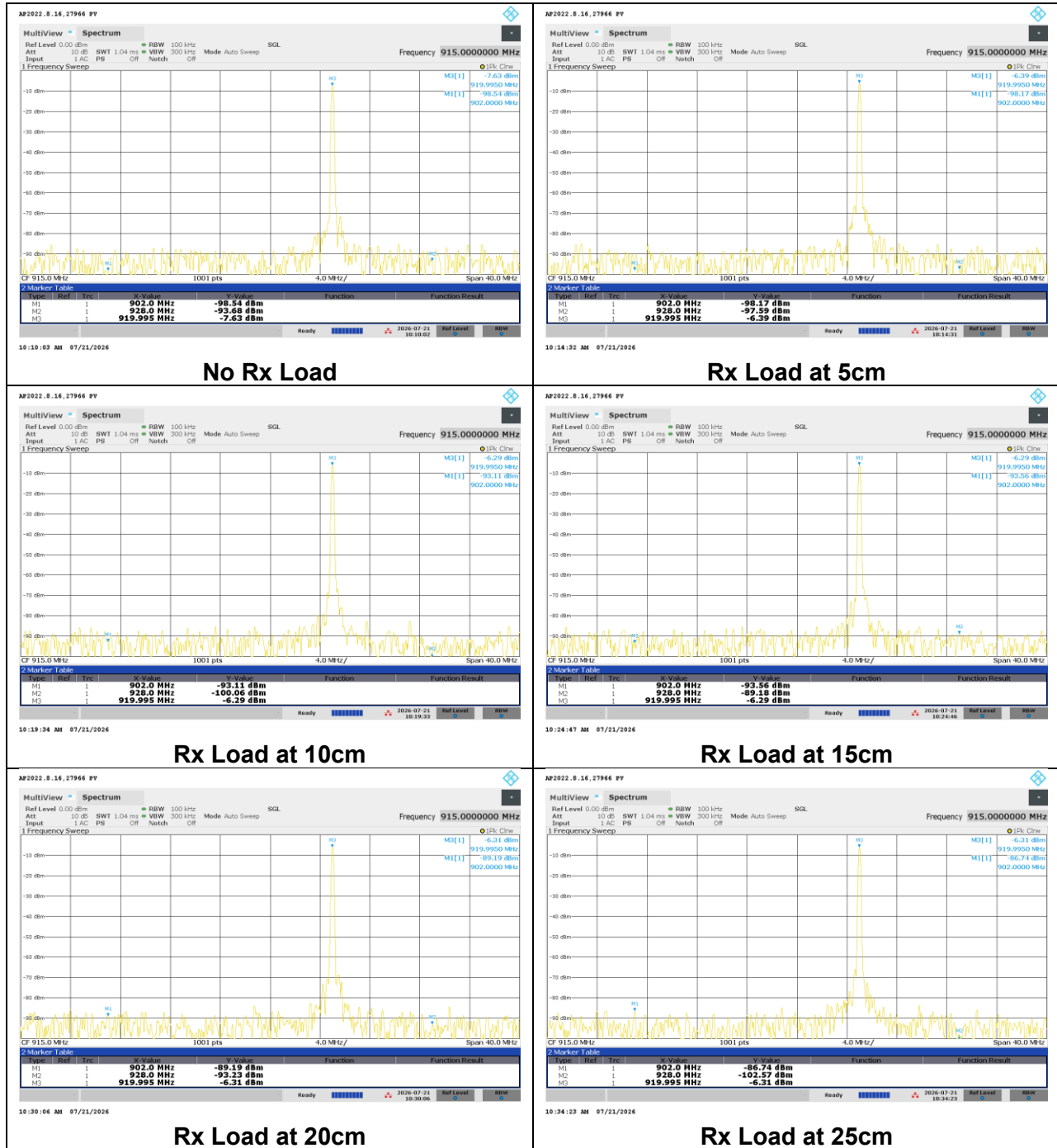
Rx Load at 45cm

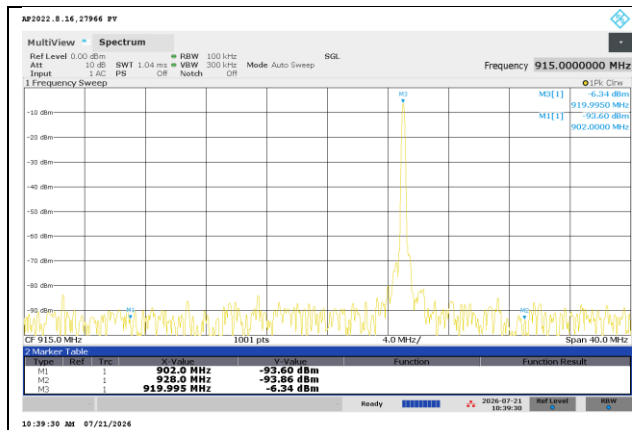


Rx Load at 50cm

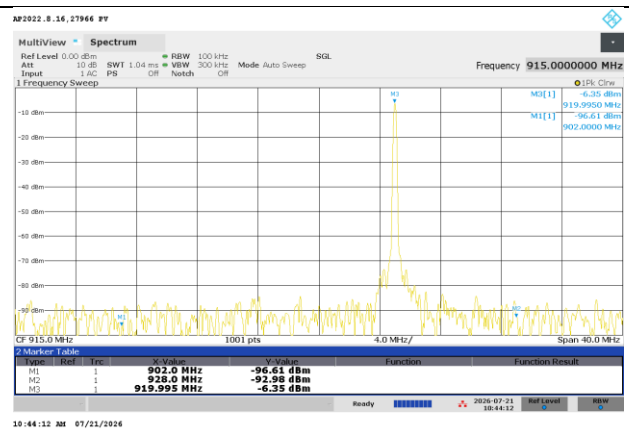
Intentionally left blank

8.1.2. High Channel

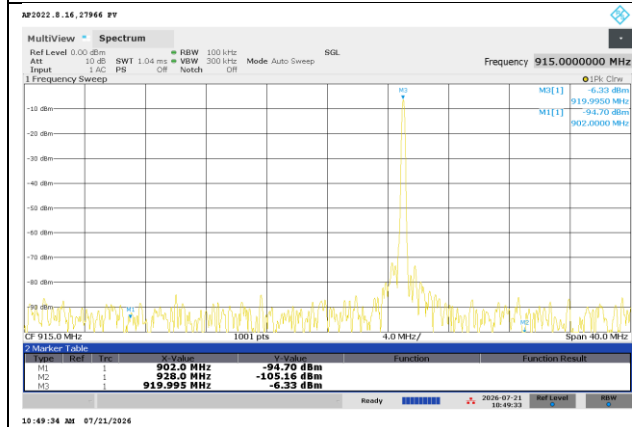




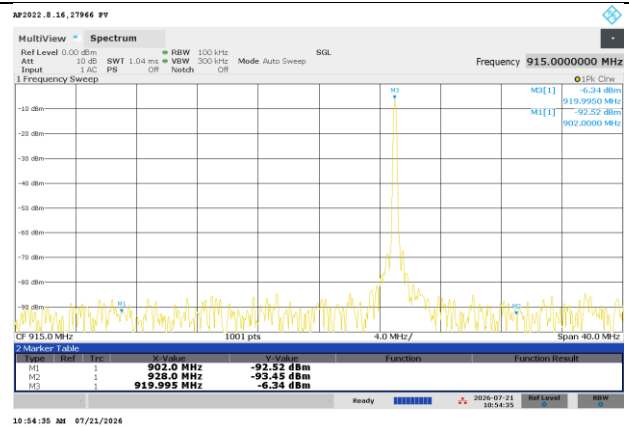
Rx Load at 30cm



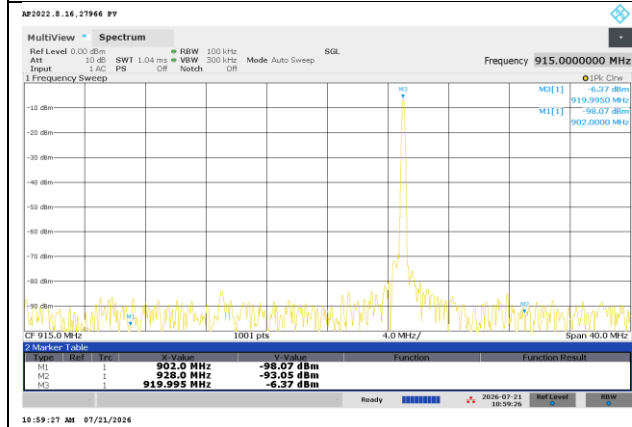
Rx Load at 35cm



Rx Load at 40cm



Rx Load at 45cm

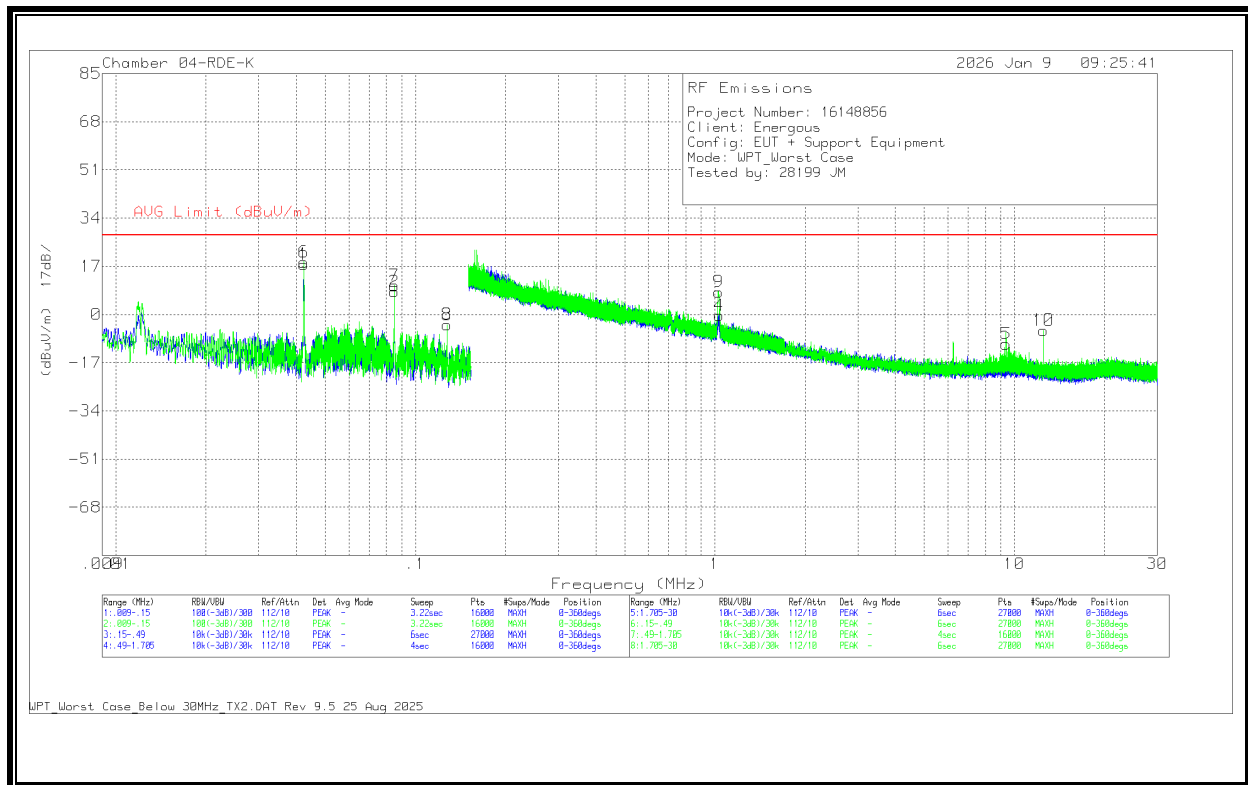


Rx Load at 50cm

Intentionally left blank

8.2. SPURIOUS EMISSIONS 9 kHz TO 30 MHz (Worst-Case)

CONFIGURATION 1



DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna E (dB/m)	Amp/Cbl (dB)	Dist Corr 300m (dB)	Corrected Reading (dBuV/m)	AVG Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	.0424	32.84	Pk	57.2	-32.4	-40	17.64	28	-10.36	0-360
2	.085	24.62	Pk	55.8	-32.4	-40	8.02	28	-19.98	0-360
3	.1275	12.89	Pk	55.8	-32.3	-40	-3.61	28	-31.61	0-360
4	1.0324	24.91	Pk	46.6	-31.9	-40	-3.9	28	-28.39	0-360
5	9.3774	26.58	Pk	34.5	-31.5	-40	-10.42	28	-38.42	0-360
6	.0424	33.61	Pk	57.2	-32.4	-40	18.41	28	-9.59	0-360
7	.085	26.81	Pk	55.8	-32.4	-40	10.21	28	-17.79	0-360
8	.1275	13.04	Pk	55.8	-32.4	-40	-3.56	28	-31.56	0-360
9	1.029	33.27	Pk	46.6	-31.9	-40	7.97	28	-20.03	0-360
10	12.4973	31.76	Pk	34.2	-31.6	-40	-5.64	28	-33.64	0-360

Pk - Peak detector

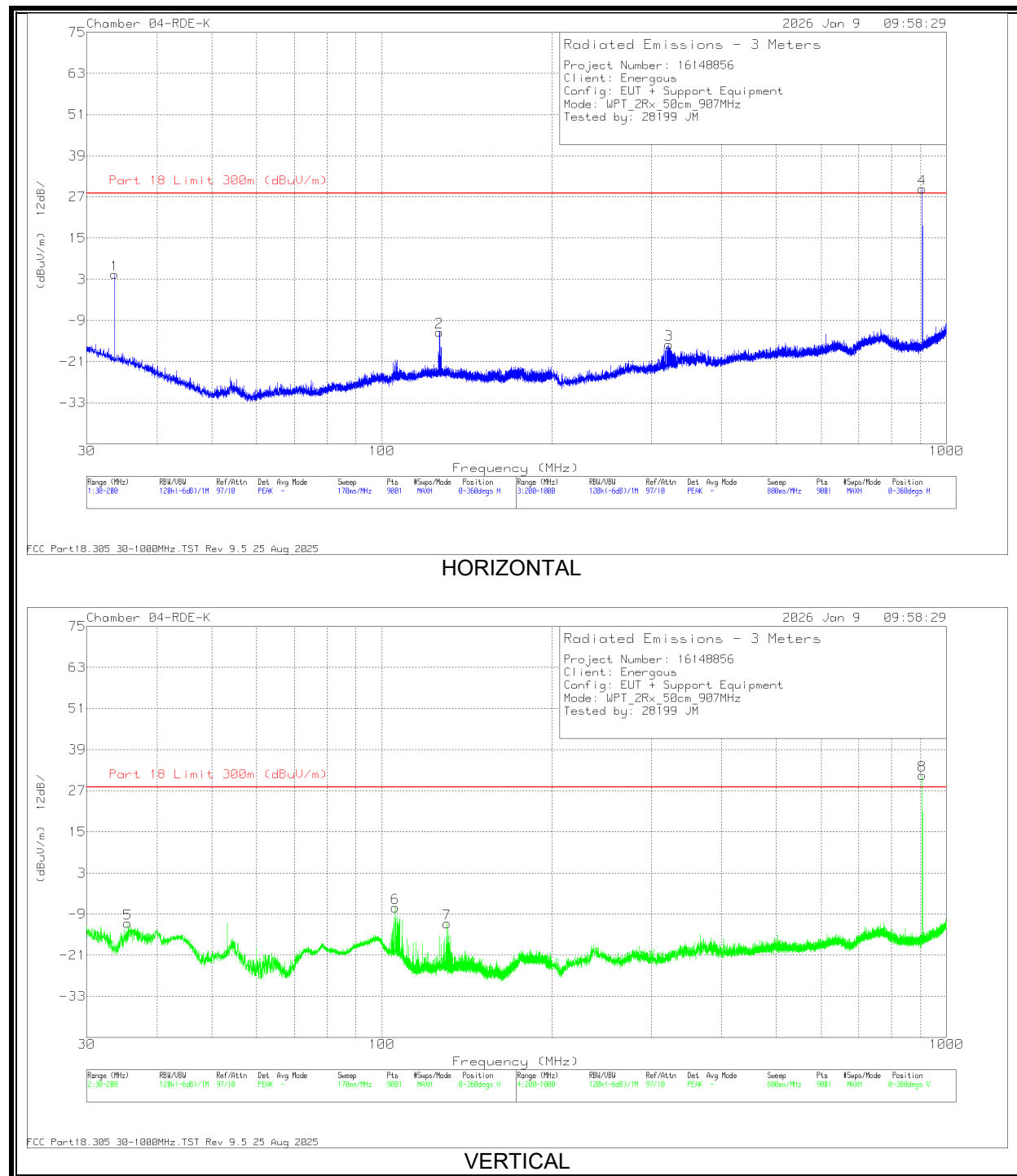
Note:

- Test was performed @ 3-meter distance.
- Distance factor from 3m to 300m = $20\log(3/300) = -40\text{dB}$

8.3. SPURIOUS EMISSIONS 30 MHz TO 1000 MHz

8.3.1. CONFIGURATION 1 (Low Channel)

Spurious Emissions 30 – 1000 MHz with a Band Reject Filter



DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	203089 ACF (dB/m)	Amp/CbIs (dB)	Dist Corr (dB)	Filter Loss (dB)	Corrected Reading (dBuV/m)	Part 18 Limit 300m (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	33.6267	50.65	Pk	24.6	-31.3	-40	.5	4.45	28	-23.55	0-360	101	H
	38.4851	15.13	Av	21.2	-31.3	-40	.5	-34.47	28	-62.47	132	358	H
2	126.372	37.5	Pk	20	-30.4	-40	.5	-12.4	28	-40.4	0-360	101	H
3	322.578	32.93	Pk	20	-29.4	-40	.5	-15.97	28	-43.97	0-360	199	H
4	907.023	67.21	Pk	28.1	-26.4	-40	.5	29.41	-	-	0-360	101	H
5	35.4778	35.7	Pk	23.4	-31.3	-40	.5	-11.7	28	-39.7	0-360	101	V
6	105.726	45.1	Pk	17.9	-30.6	-40	.5	-7.1	28	-35.1	0-360	101	V
7	130.527	38.36	Pk	19.8	-30.4	-40	.5	-11.74	28	-39.74	0-360	101	V
8	907.023	69.35	Pk	28.1	-26.4	-40	.5	31.55	-	-	0-360	100	V

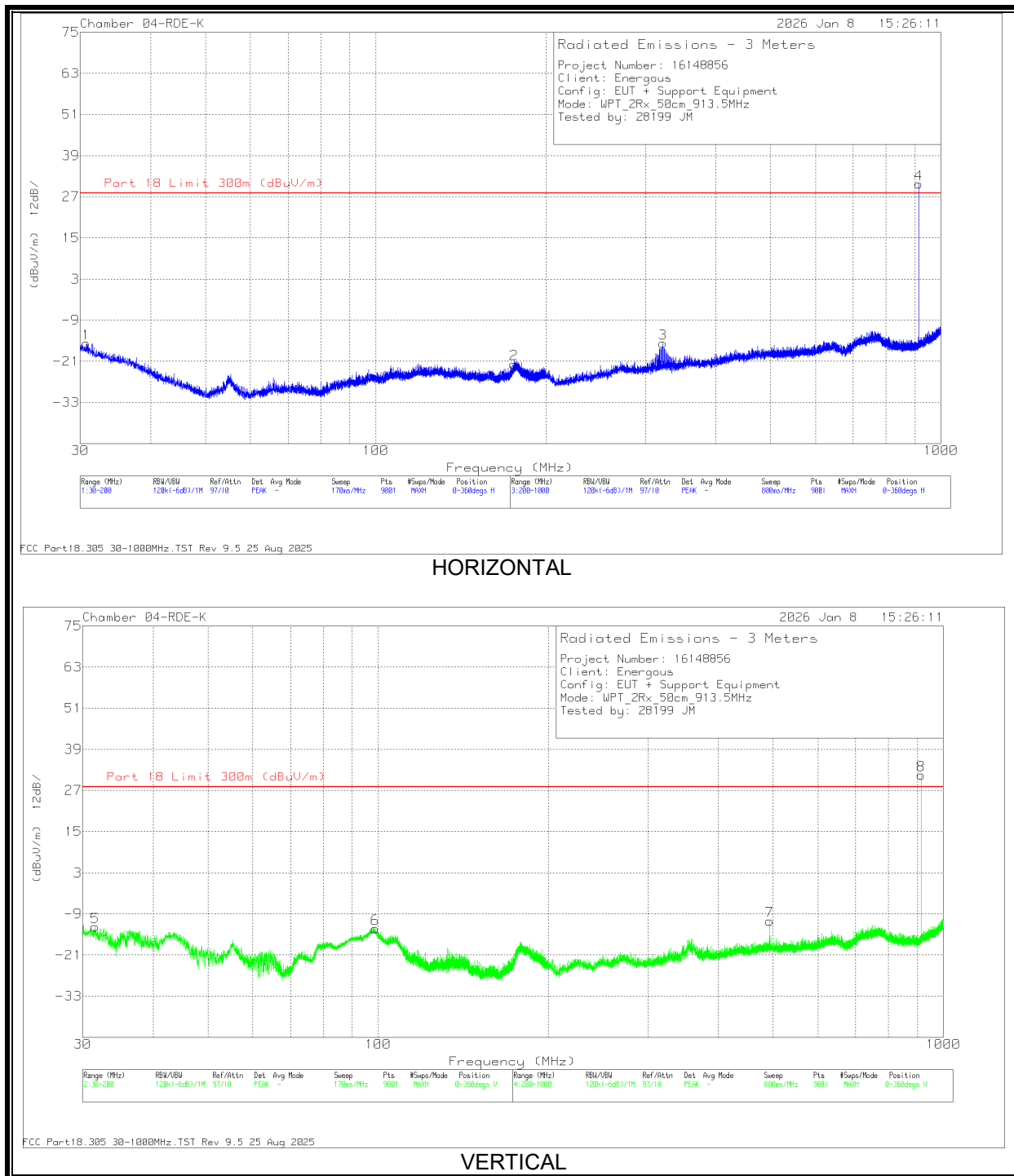
Pk - Peak detector
Av - Average detection

Note:

- Test was performed @ 3-meter distance.
- Distance factor from 3m to 300m = $20\log(3/300) = -40\text{dB}$
- A Band Reject Filter was used to prevent system overloading
- Markers 4 & 8 indicate the fundamental

8.3.2. CONFIGURATION 1 (Mid Channel)

Spurious Emissions 30 – 1000 MHz with a Band Reject Filter



DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	203089 ACF (dB/m)	Amp/CbIs (dB)	Dist Corr (dB)	Filter Loss (dB)	Corrected Reading (dBuV/m)	Part 18 Limit 300m (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	30.7745	28.41	Pk	26.6	-31.3	-40	.5	-15.79	28	-43.79	0-360	199	H
2	175.748	30.72	Pk	17.1	-30.1	-40	.5	-21.78	28	-49.78	0-360	101	H
3	322.489	33.25	Pk	19.9	-29.4	-40	.5	-15.75	28	-43.75	0-360	101	H
4	913.512	68.55	Pk	28.1	-26.4	-40	.5	30.75	-	-	0-360	101	H
5	31.5678	31.96	Pk	26.1	-31.3	-40	.5	-12.74	28	-40.74	0-360	101	V
6	98.8126	40.58	Pk	16.3	-30.7	-40	.5	-13.32	28	-41.32	0-360	101	V
7	492.978	33.57	Pk	23.6	-28.7	-40	.5	-11.03	28	-39.03	0-360	299	V
	495.21	13.89	Av	23.7	-28.7	-40	.5	-30.61	28	-58.61	303	139	V
8	913.512	69.31	Pk	28.1	-26.4	-40	.5	31.51	-	-	0-360	101	V

Pk - Peak detector

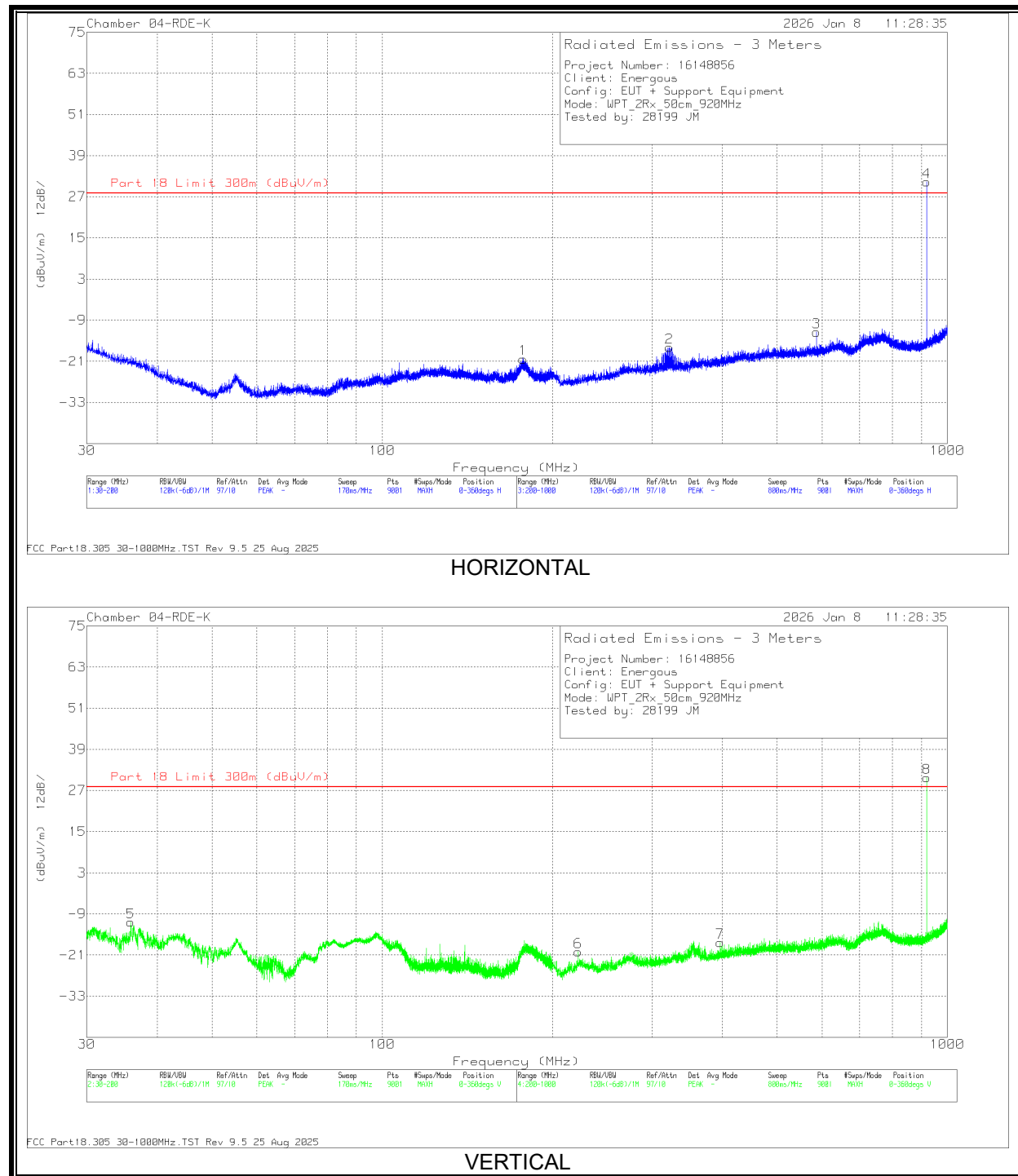
Av - Average detection

Note:

- Test was performed @ 3-meter distance.
- Distance factor from 3m to 300m = $20\log(3/300) = -40\text{dB}$
- A Band Reject Filter was used to prevent system overloading
- Markers 4 & 8 indicate the fundamental

8.3.3. CONFIGURATION 1 (High Channel)

Spurious Emissions 30 – 1000 MHz with a Band Reject Filter



DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	203089 ACF (dB/m)	Amp/CbIs (dB)	Dist Corr (dB)	Filter Loss (dB)	Corrected Reading (dBuV/m)	Part 18 Limit 300m (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	177.561	32.32	Pk	17	-30.1	-40	.5	-20.28	28	-48.28	0-360	100	H
2	322.4	32.08	Pk	19.9	-29.4	-40	.5	-16.92	28	-44.92	0-360	101	H
3	586.934	31.22	Pk	24.2	-28.4	-40	.5	-12.48	28	-40.48	0-360	199	H
4	920.09	69.15	Pk	28.1	-26.4	-40	.5	31.35	-	-	0-360	101	H
5	35.9123	36.28	Pk	23.1	-31.3	-40	.5	-11.42	28	-39.42	0-360	101	V
	39.565	20.44	Av	20.4	-31.2	-40	.5	-29.86	28	-57.86	32	136	V
6	222.222	32.81	Pk	16.5	-29.9	-40	.5	-20.09	28	-48.09	0-360	101	V
7	396.622	29.95	Pk	21.3	-29.1	-40	.5	-17.35	28	-45.35	0-360	199	V
8	920.09	68.55	Pk	28.1	-26.4	-40	.5	30.75	-	-	0-360	199	V

Pk - Peak detector

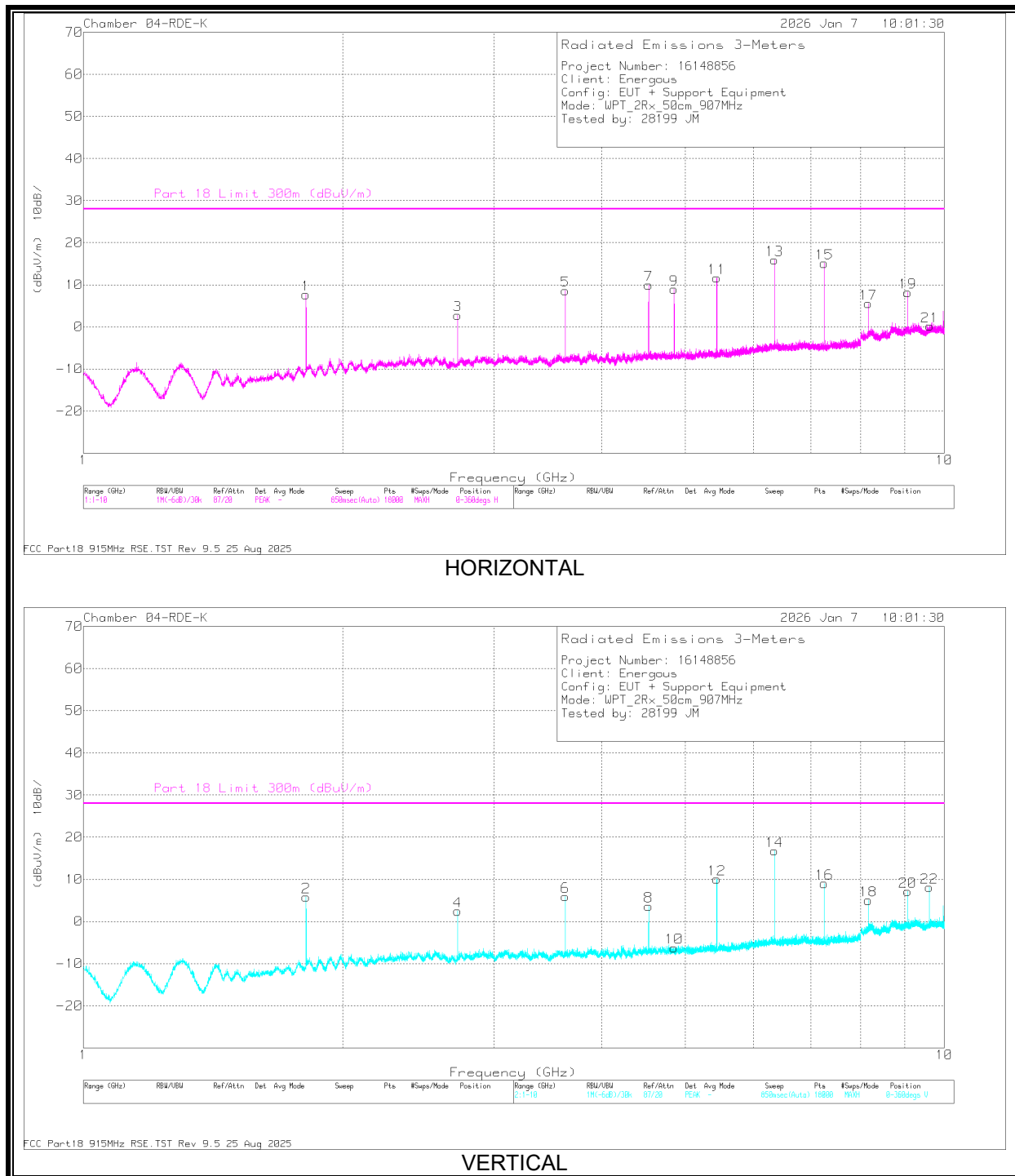
Av - Average detection

Note:

- Test was performed @ 3-meter distance.
- Distance factor from 3m to 300m = $20\log(3/300) = -40\text{dB}$
- A Band Reject Filter was used to prevent system overloading
- Markers 4 & 8 indicate the fundamental

8.4. SPURIOUS EMISSIONS 1 GHz TO 10 GHz

8.4.1. CONFIGURATION 1 (Low Channel)



DATA

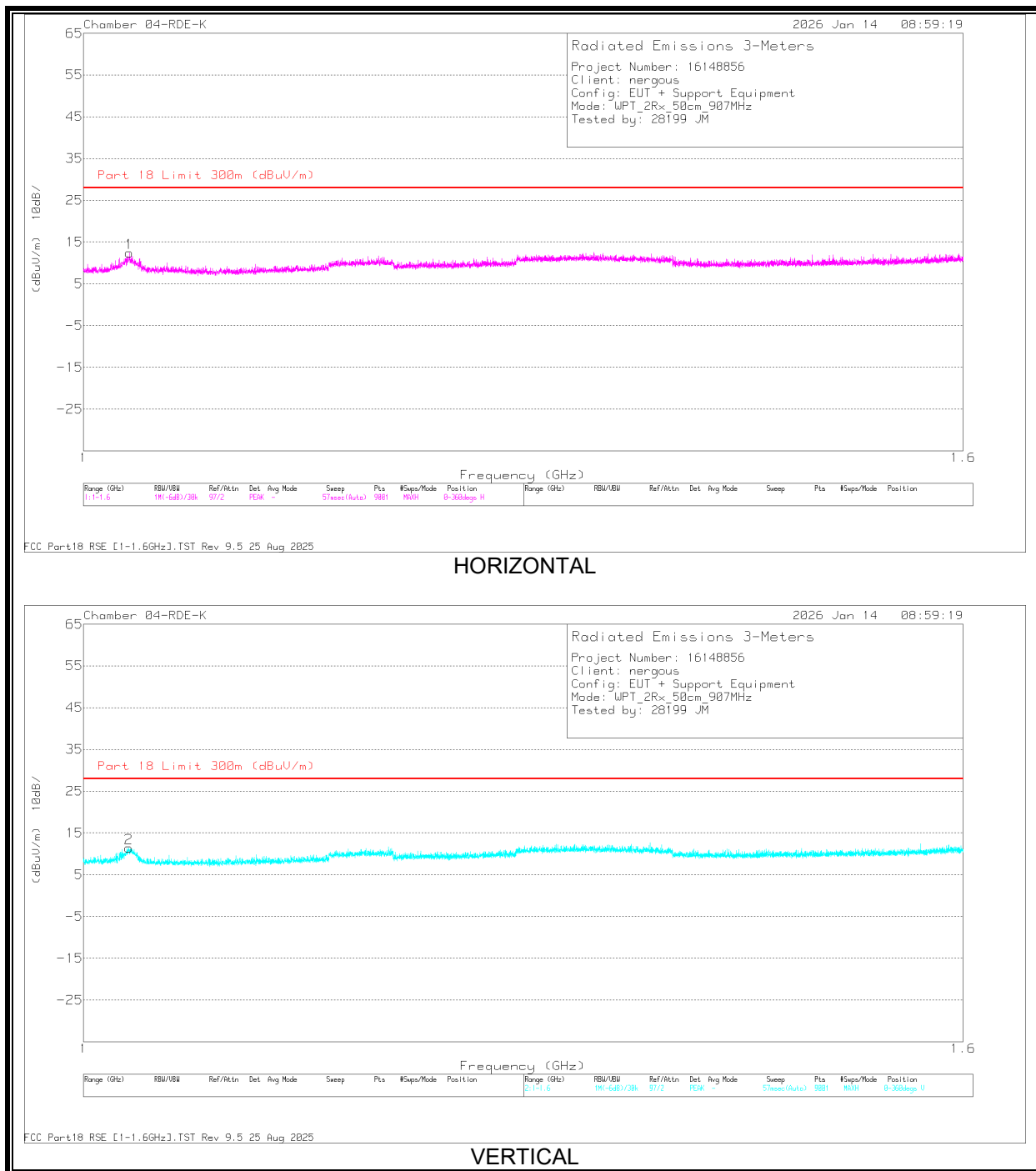
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206808 ACF (dB/m)	Amp/Cbl (dB)	Fitr (dB)	Dist Corr (dB)	Corrected Reading (dBuV/m)	Part 18 Limit 300m (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.813546	62.9	Pk	30.2	-45.9	.5	-40	7.7	28	-20.3	0-360	101	H
2	1.814046	61.01	Pk	30.2	-45.9	.5	-40	5.81	28	-22.19	0-360	199	V
3	2.720596	53.9	Pk	32.1	-43.7	.5	-40	2.8	28	-25.2	0-360	199	H
4	2.720596	53.57	Pk	32.1	-43.7	.5	-40	2.47	28	-25.53	0-360	101	V
5	3.628147	56.96	Pk	33.4	-42.2	.5	-40	8.66	28	-19.34	0-360	199	H
6	3.628147	54.22	Pk	33.4	-42.2	.5	-40	5.92	28	-22.08	0-360	199	V
7	4.535129	60.38	Pk	34.1	-41.7	.5	-40	13.28	28	-14.72	308	102	H
	4.535129	57.64	Av	34.1	-41.7	.5	-40	10.54	28	-17.46	308	102	H
8	4.534698	50.83	Pk	34.1	-41.8	.5	-40	3.63	28	-24.37	0-360	101	V
9	4.855216	55.35	Pk	34.1	-41	.5	-40	8.95	28	-19.05	0-360	101	H
10	4.855716	40.19	Pk	34.1	-41	.5	-40	-6.21	28	-34.21	0-360	199	V
11	5.442168	60.6	Pk	34.6	-40.4	.5	-40	15.3	28	-12.7	292	128	H
	5.442168	58.47	Av	34.6	-40.4	.5	-40	13.17	28	-14.83	292	128	H
12	5.442103	58.85	Pk	34.6	-40.4	.5	-40	13.55	28	-14.45	299	348	V
	5.442103	56.29	Av	34.6	-40.4	.5	-40	10.99	28	-17.01	299	348	V
13	6.349056	63	Pk	35.6	-39.1	.5	-40	20	28	-8	260	244	H
	6.349056	61.77	Av	35.6	-39.1	.5	-40	18.77	28	-9.23	260	244	H
14	6.349044	62.08	Pk	35.6	-39.1	.5	-40	19.08	28	-8.92	292	196	V
	6.349044	60.73	Av	35.6	-39.1	.5	-40	17.73	28	-10.27	292	196	V
15	7.256207	59	Pk	35.6	-38.5	.5	-40	16.6	28	-11.4	347	103	H
	7.256207	56.57	Av	35.6	-38.5	.5	-40	14.17	28	-13.83	347	103	H
16	7.25585	51.43	Pk	35.6	-38.5	.5	-40	9.03	28	-18.97	0-360	199	V
17	8.163401	47.15	Pk	35.9	-38	.5	-40	5.55	28	-22.45	0-360	101	H
18	8.162901	46.63	Pk	35.9	-38	.5	-40	5.03	28	-22.97	0-360	101	V
19	9.070452	48.78	Pk	36.2	-37.3	.5	-40	8.18	28	-19.82	0-360	199	H
20	9.069952	47.73	Pk	36.2	-37.3	.5	-40	7.13	28	-20.87	0-360	101	V
21	9.620983	40.06	Pk	36.7	-37.1	.5	-40	.16	28	-27.84	0-360	199	H
22	9.609982	47.99	Pk	36.7	-37.1	.5	-40	8.09	28	-19.91	0-360	199	V

Note:

- Test was performed @ 3-meter distance.
- Distance factor from 3m to 300m = $20\log(3/300) = -40\text{dB}$.

The Spurious Emissions 1GHz – 1.6GHz were investigated without a Band Reject Filter, a 1.5 GHz HPF, and an amplifier.

Low Channel



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206808 ACF (dB/m)	Cables (dB)	Dist Corr (dB)	Corrected Reading (dBuV/m)	Part 18 Limit 300m (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.023465	27.62	Pk	27.4	4.7	-40	19.72	28	-8.28	319	328	H
	1.023465	10.8	Av	27.4	4.7	-40	2.9	28	-25.1	319	328	H
2	1.025531	29.53	Pk	27.4	4.7	-40	21.63	28	-6.37	306	184	V
	1.025531	12.26	Av	27.4	4.7	-40	4.36	28	-23.64	306	184	V

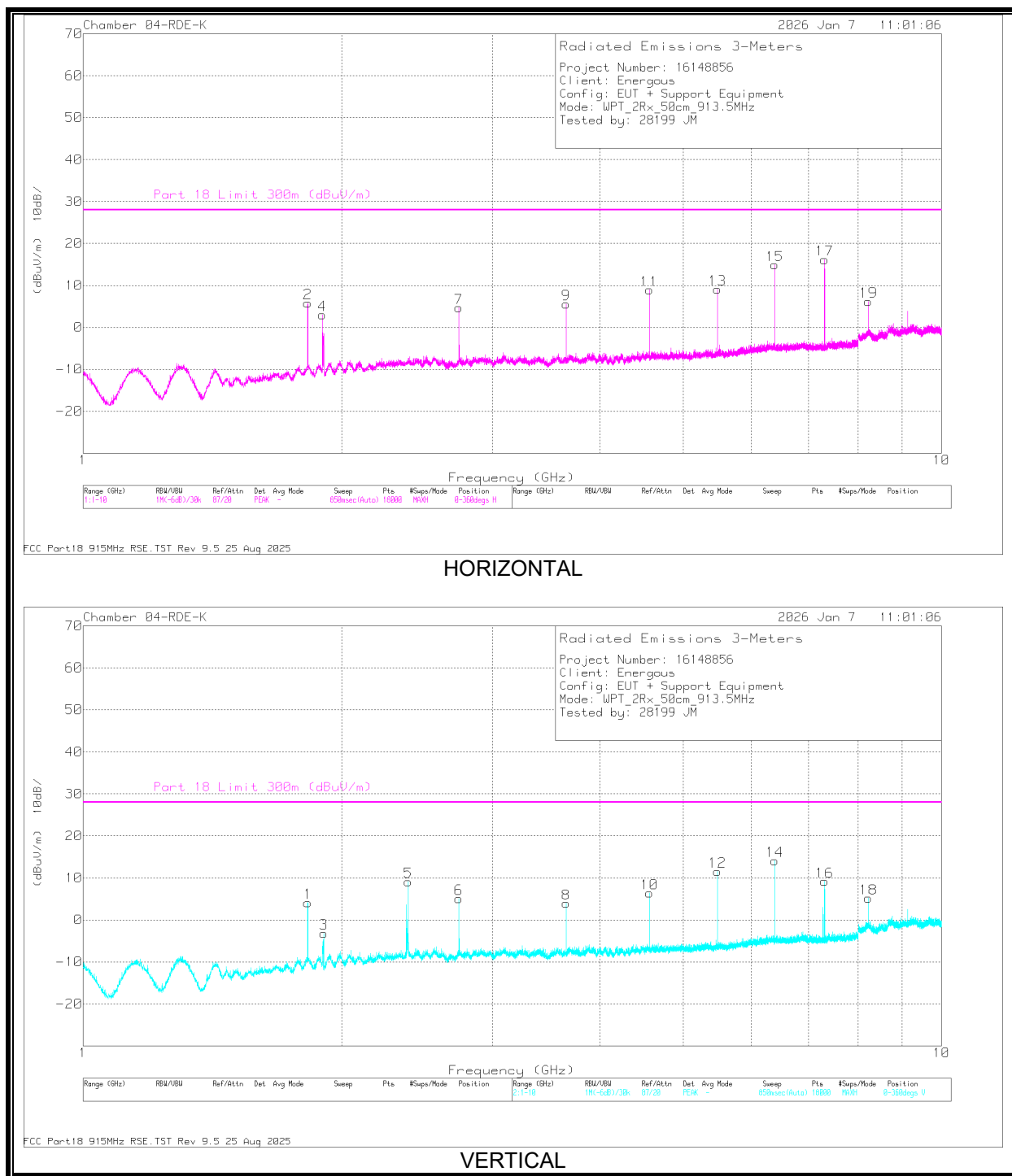
Pk - Peak detector

Av - Average detection

Note:

- Test was performed @ 3-meter distance.
- Distance factor from 3m to 300m = $20\log(3/300) = -40\text{dB}$

8.4.2. CONFIGURATION 1 (Mid Channel)



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206808 ACF (dB/m)	Amp/Cbl (dB)	Fitr (dB)	Dist Corr (dB)	Corrected Reading (dBuV/m)	Part 18 Limit 300m (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.827046	59.12	Pk	30.4	-45.9	.5	-40	4.12	28	-23.88	0-360	101	V
2	1.827046	60.84	Pk	30.4	-45.9	.5	-40	5.84	28	-22.16	0-360	101	H
3	1.907051	51.32	Pk	30.8	-45.8	.5	-40	-3.18	28	-31.18	0-360	101	V
4	1.90005	57.5	Pk	30.8	-45.8	.5	-40	3	28	-25	0-360	101	H
5	2.392078	60.83	Pk	32.3	-44.5	.5	-40	9.13	28	-18.87	0-360	101	V
6	2.740097	56.18	Pk	32.2	-43.8	.5	-40	5.08	28	-22.92	0-360	101	V
7	2.740597	55.79	Pk	32.2	-43.8	.5	-40	4.69	28	-23.31	0-360	199	H
8	3.653649	51.95	Pk	33.5	-42	.5	-40	3.95	28	-24.05	0-360	101	V
9	3.654149	53.6	Pk	33.5	-42	.5	-40	5.6	28	-22.4	0-360	101	H
10	4.5677	53.3	Pk	34.2	-41.6	.5	-40	6.4	28	-21.6	0-360	101	V
11	4.5672	55.83	Pk	34.2	-41.6	.5	-40	8.93	28	-19.07	0-360	101	H
12	5.481045	59.26	Pk	34.6	-40.4	.5	-40	13.96	28	-14.04	301	182	V
	5.481045	57	Av	34.6	-40.4	.5	-40	11.7	28	-16.3	301	182	V
13	5.481174	58.57	Pk	34.6	-40.4	.5	-40	13.27	28	-14.73	291	125	H
	5.481174	55.62	Av	34.6	-40.4	.5	-40	10.32	28	-17.68	291	125	H
14	6.394608	61.82	Pk	35.6	-39.2	.5	-40	18.72	28	-9.28	291	218	V
	6.394608	60.1	Av	35.6	-39.2	.5	-40	17	28	-11	291	218	V
15	6.39456	62.13	Pk	35.6	-39.2	.5	-40	19.03	28	-8.97	259	256	H
	6.39456	60.87	Av	35.6	-39.2	.5	-40	17.77	28	-10.23	259	256	H
16	7.308103	55.64	Pk	35.6	-38.5	.5	-40	13.24	28	-14.76	7	145	V
	7.308103	52.51	Av	35.6	-38.5	.5	-40	10.11	28	-17.89	7	145	V
17	7.308105	60.12	Pk	35.6	-38.5	.5	-40	17.72	28	-10.28	347	101	H
	7.308105	58.23	Av	35.6	-38.5	.5	-40	15.83	28	-12.17	347	101	H
18	8.221404	46.66	Pk	35.9	-37.9	.5	-40	5.16	28	-22.84	0-360	101	V
19	8.221904	47.69	Pk	35.9	-37.9	.5	-40	6.19	28	-21.81	0-360	101	H

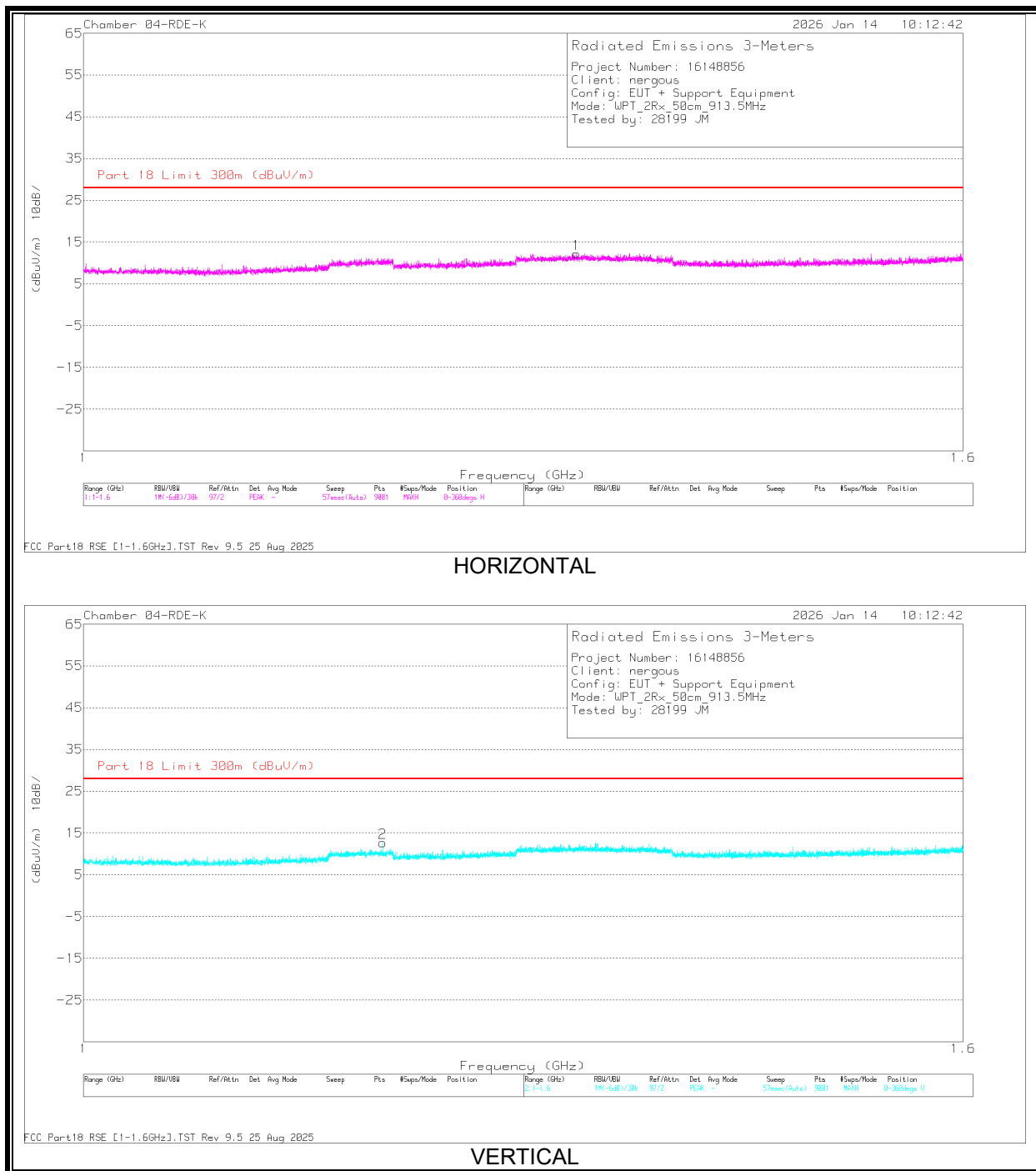
Pk - Peak detector
Av - Average detector

Note:

- Test was performed @ 3-meter distance.
- Distance factor from 3m to 300m = $20\log(3/300) = -40\text{dB}$

The Spurious Emissions 1GHz – 1.6GHz were investigated without a Band Reject Filter, a 1.5 GHz HPF, and an amplifier.

Mid Channel



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206808 ACF (dB/m)	Cables (dB)	Dist Corr (dB)	Corrected Reading (dBuV/m)	Part 18 Limit 300m (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.304497	26.21	Pk	28.8	5.3	-40	20.31	28	-7.69	29	386	H
	1.304497	6.9	Av	28.8	5.3	-40	1	28	-27	29	386	H
2	1.172821	26.13	Pk	28.2	5	-40	19.33	28	-8.67	356	103	V
	1.172821	6.61	Av	28.2	5	-40	-19	28	-28.19	356	103	V

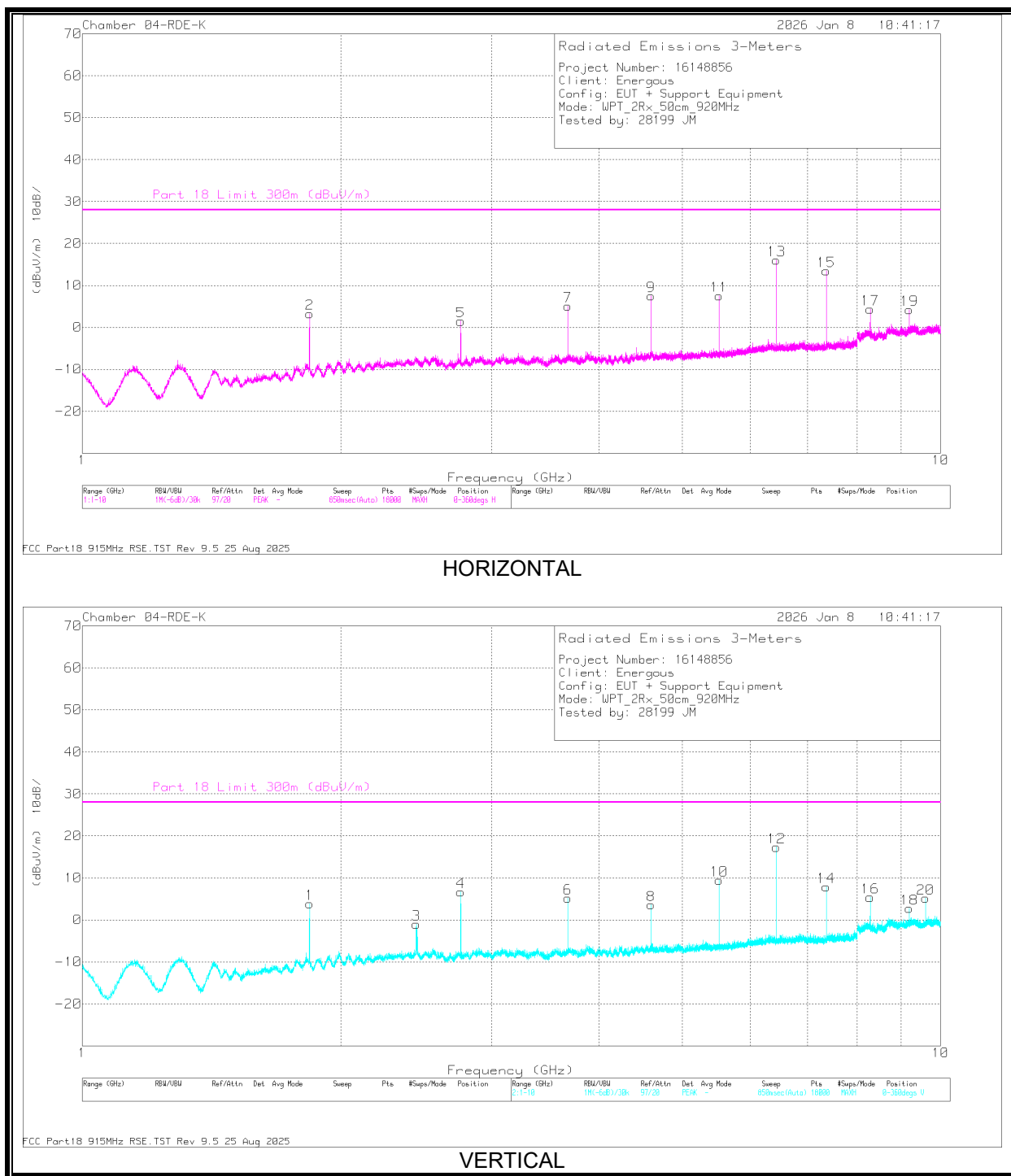
Pk - Peak detector

Av - Average detection

Note:

- Test was performed @ 3-meter distance.
- Distance factor from 3m to 300m = $20\log(3/300) = -40\text{dB}$

8.4.3. CONFIGURATION 1 (High Channel)



DATA

FOR REPORT

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206808 ACF (dB/m)	Amp/Cbl (dB)	Fitr (dB)	Dist Corr (dB)	Corrected Reading (dBuV/m)	Part 18 Limit 300m (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.840047	58.76	Pk	30.5	-45.9	.5	-40	3.86	28	-24.14	0-360	101	V
2	1.840047	58.2	Pk	30.5	-45.9	.5	-40	3.3	28	-24.7	0-360	101	H
3	2.450081	50.28	Pk	32.5	-44.3	.5	-40	-1.02	28	-29.02	0-360	101	V
4	2.760099	57.69	Pk	32.2	-43.7	.5	-40	6.69	28	-21.31	0-360	101	V
5	2.760099	52.48	Pk	32.2	-43.7	.5	-40	1.48	28	-26.52	0-360	200	H
6	3.67965	53.29	Pk	33.6	-42.2	.5	-40	5.19	28	-22.81	0-360	101	V
7	3.67965	53.18	Pk	33.6	-42.2	.5	-40	5.08	28	-22.92	0-360	200	H
8	4.600202	50.37	Pk	34.3	-41.6	.5	-40	3.57	28	-24.43	0-360	200	V
9	4.600202	54.32	Pk	34.3	-41.6	.5	-40	7.52	28	-20.48	0-360	101	H
10	5.519965	57.9	Pk	34.6	-40.3	.5	-40	12.7	28	-15.3	305	193	V
	5.519965	55.09	Av	34.6	-40.3	.5	-40	9.89	28	-18.11	305	193	V
11	5.520165	56.4	Pk	34.6	-40.3	.5	-40	11.2	28	-16.8	348	271	H
	5.520165	52.92	Av	34.6	-40.3	.5	-40	7.72	28	-20.28	348	271	H
12	6.440145	62.51	Pk	35.6	-39.2	.5	-40	19.41	28	-8.59	273	193	V
	6.440145	61.21	Av	35.6	-39.2	.5	-40	18.11	28	-9.89	273	193	V
13	6.44004	62.52	Pk	35.6	-39.2	.5	-40	19.42	28	-8.58	264	253	H
	6.44004	61.18	Av	35.6	-39.2	.5	-40	18.08	28	-9.92	264	253	H
14	7.360038	53.61	Pk	35.6	-38.2	.5	-40	11.51	28	-16.49	5	101	V
	7.360038	49.83	Av	35.6	-38.2	.5	-40	7.73	28	-20.27	5	101	V
15	7.36004	58.09	Pk	35.6	-38.2	.5	-40	15.99	28	-12.01	347	103	H
	7.36004	55.7	Av	35.6	-38.2	.5	-40	13.6	28	-14.4	347	103	H
16	8.280408	46.79	Pk	35.8	-37.7	.5	-40	5.39	28	-22.61	0-360	101	V
17	8.280408	45.78	Pk	35.8	-37.7	.5	-40	4.38	28	-23.62	0-360	101	H
18	9.200459	43.03	Pk	36.3	-37.1	.5	-40	2.73	28	-25.27	0-360	101	V
19	9.199959	44.56	Pk	36.3	-37.1	.5	-40	4.26	28	-23.74	0-360	200	H
20	9.607482	45.07	Pk	36.7	-37.1	.5	-40	5.17	28	-22.83	0-360	200	V

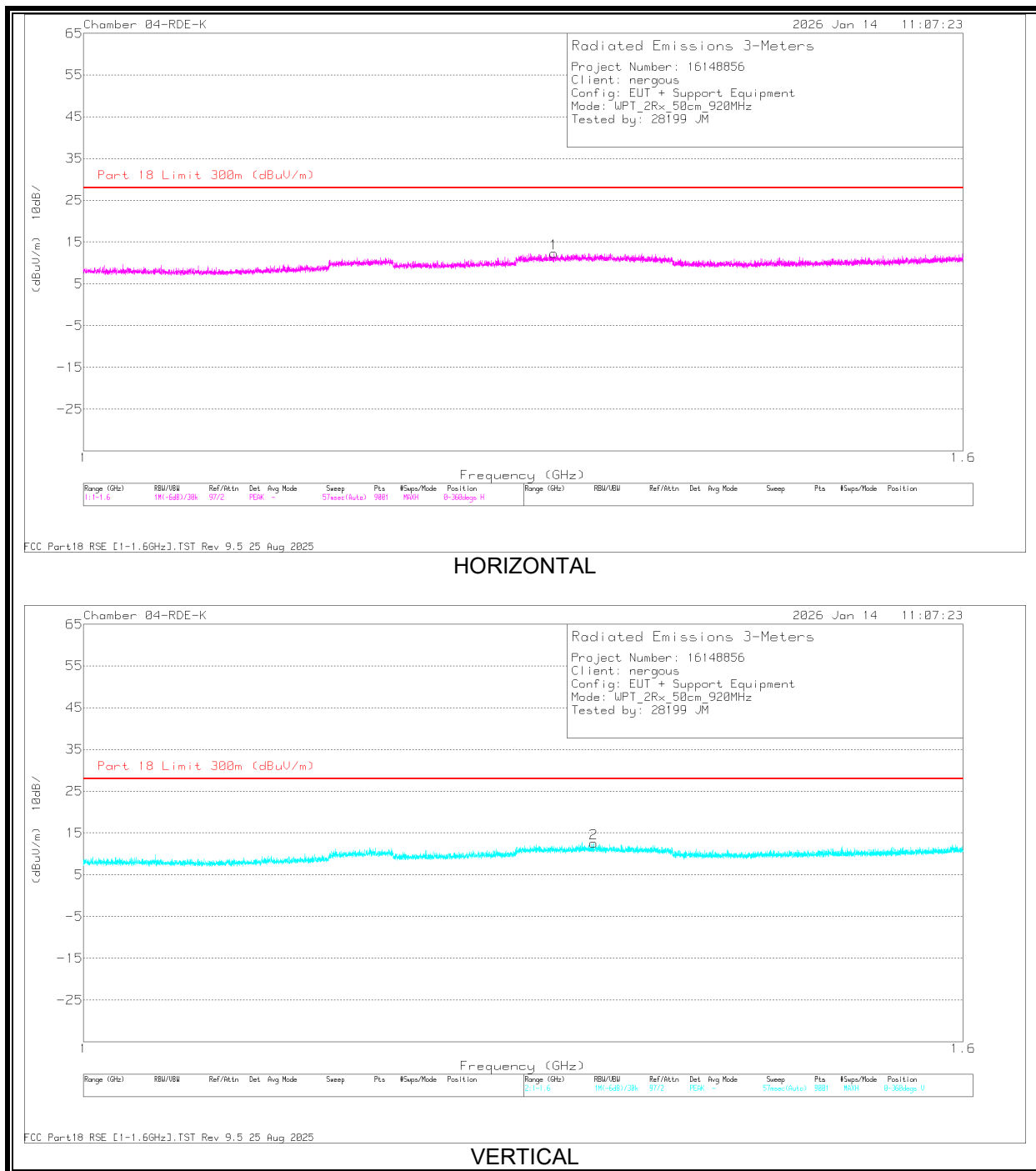
Pk - Peak detector
Av - Average detector

Note:

- Test was performed @ 3-meter distance.
- Distance factor from 3m to 300m = $20\log(3/300) = -40\text{dB}$

The Spurious Emissions 1GHz – 1.6GHz were investigated without a Band Reject Filter, a 1.5 GHz HPF, and an amplifier.

High Channel



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206808 ACF (dB/m)	Cables (dB)	Dist Corr (dB)	Corrected Reading (dBuV/m)	Part 18 Limit 300m (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.282902	25.78	Pk	28.8	5.2	-40	19.78	28	-8.22	343	321	H
	1.282902	5.59	Av	28.8	5.2	-40	-41	28	-28.41	343	321	H
2	1.306489	26.07	Pk	28.8	5.3	-40	20.17	28	-7.83	64	237	V
	1.306489	6.92	Av	28.8	5.3	-40	1.02	28	-26.98	64	237	V

Pk - Peak detector

Av - Average detection

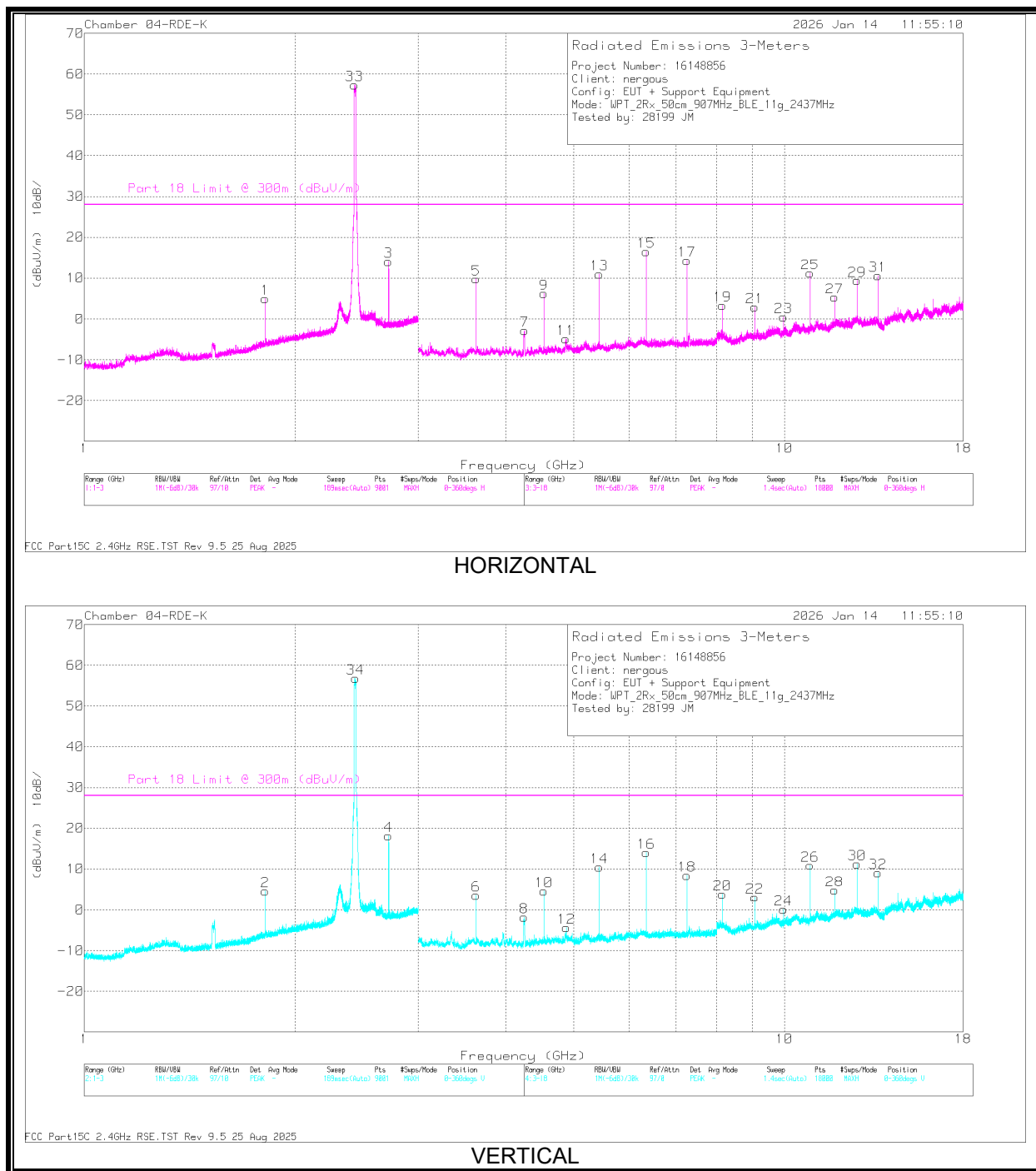
Note:

- Test was performed @ 3-meter distance.
- Distance factor from 3m to 300m = $20\log(3/300) = -40\text{dB}$

8.5. SPURIOUS EMISSIONS (Worst Case Tx Simultaneous)

CONFIGURATION 3

1 GHz to 18 GHz



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206808 ACF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Filter (dB)	Corrected Reading (dBuV/m)	Part 18 Limit @ 300m (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.813999	36.75	Pk	30.2	-22.5	-40	.5	4.95	28	-23.05	0-360	200	H
2	1.813999	36.41	Pk	30.2	-22.5	-40	.5	4.61	28	-23.39	0-360	100	V
3	2.720933	43.57	Pk	32.1	-20.8	-40	.5	15.37	28	-12.63	304	203	H
	2.720933	38.93	Av	32.1	-20.8	-40	.5	10.73	28	-17.27	304	203	H
4	2.721008	47.39	Pk	32.1	-20.8	-40	.5	19.19	28	-8.81	305	137	V
	2.721008	45.14	Av	32.1	-20.8	-40	.5	16.94	28	-11.06	305	137	V
33	2.432665	85.79	Pk	32.4	-21.3	-40	.5	57.39	-	-	0-360	100	H
34	2.43911	85.12	Pk	32.4	-21.2	-40	.5	56.82	-	-	0-360	200	V

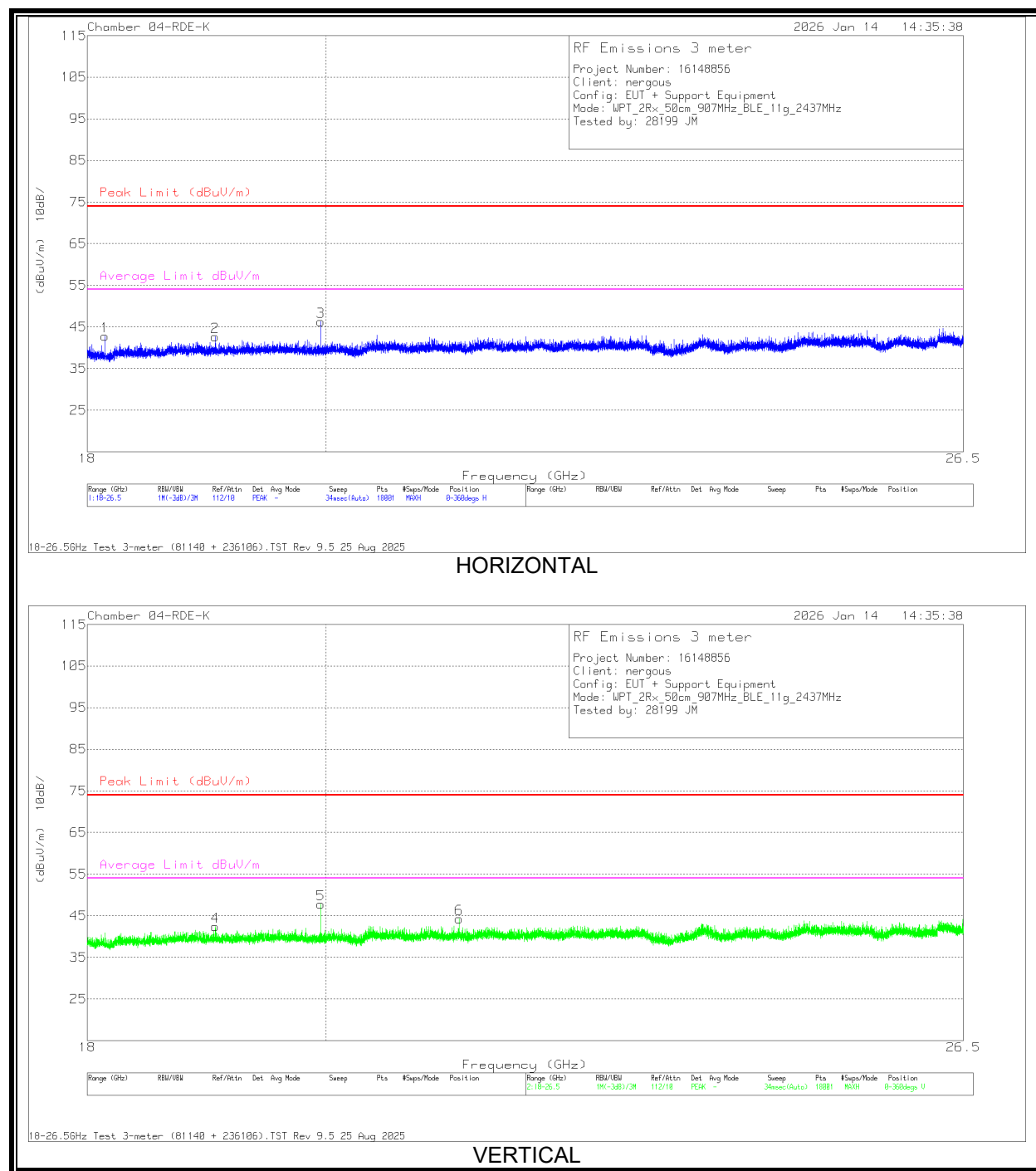
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206808 ACF (dB/m)	Amp/Cbl/Fitr (dB)	Dist Corr (dB)	Corrected Reading (dBuV/m)	Part 18 Limit @ 300m (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	3.627535	57.59	Pk	33.4	-41.2	-40	9.79	28	-18.21	0-360	200	H
6	3.627535	51.4	Pk	33.4	-41.2	-40	3.6	28	-24.4	0-360	200	V
7	4.254237	44.89	Pk	33.6	-41.3	-40	-2.81	28	-30.81	0-360	200	H
8	4.251737	45.96	Pk	33.6	-41.3	-40	-1.74	28	-29.74	0-360	200	V
9	4.535086	53.32	Pk	34.1	-41.2	-40	6.22	28	-21.78	0-360	100	H
10	4.535086	51.74	Pk	34.1	-41.2	-40	4.64	28	-23.36	0-360	100	V
11	4.875105	41.24	Pk	34.1	-40.2	-40	-4.86	28	-32.86	0-360	100	H
12	4.880105	41.74	Pk	34.1	-40.2	-40	-4.36	28	-32.36	0-360	200	V
13	5.441803	56.23	Pk	34.6	-39.8	-40	11.03	28	-16.97	0-360	100	H
14	5.441803	55.72	Pk	34.6	-39.8	-40	10.52	28	-17.48	0-360	200	V
15	6.349064	60.28	Pk	35.6	-38.9	-40	16.98	28	-11.02	266	109	H
	6.349064	59	Av	35.6	-38.9	-40	15.7	28	-12.3	266	109	H
16	6.349101	60.77	Pk	35.6	-38.9	-40	17.47	28	-10.53	273	202	V
	6.349101	59.51	Av	35.6	-38.9	-40	16.21	28	-11.79	273	202	V
17	7.256047	57.46	Pk	35.6	-38.1	-40	14.96	28	-13.04	350	116	H
	7.256047	55.4	Av	35.6	-38.1	-40	12.9	28	-15.1	350	116	H
18	7.256072	50.99	Pk	35.6	-38.1	-40	8.49	28	-19.51	0-360	100	V
19	8.162789	44.85	Pk	35.9	-37.4	-40	3.35	28	-24.65	0-360	100	H
20	8.162789	45.33	Pk	35.9	-37.4	-40	3.83	28	-24.17	0-360	200	V
21	9.07034	42.95	Pk	36.2	-36.2	-40	2.95	28	-25.05	0-360	200	H
22	9.069507	43.13	Pk	36.2	-36.2	-40	3.13	28	-24.87	0-360	200	V
23	9.977057	39.95	Pk	37.2	-36.6	-40	.55	28	-27.45	0-360	200	H
24	9.977057	39.51	Pk	37.2	-36.6	-40	.11	28	-27.89	0-360	100	V
25	10.883775	49.41	Pk	37.8	-36	-40	11.21	28	-16.79	0-360	100	H
26	10.884608	49.14	Pk	37.8	-36	-40	10.94	28	-17.06	0-360	200	V
27	11.791326	41.62	Pk	38.5	-34.8	-40	5.32	28	-22.68	0-360	200	H
28	11.791326	41.11	Pk	38.5	-34.8	-40	4.81	28	-23.19	0-360	200	V
29	12.698043	44.51	Pk	39.1	-34.2	-40	9.41	28	-18.59	0-360	100	H
30	12.698162	49.95	Pk	39.1	-34.2	-40	14.85	28	-13.15	311	109	V
	12.698162	45.49	Av	39.1	-34.2	-40	10.39	28	-17.61	311	109	V
31	13.605594	46.22	Pk	38.9	-34.5	-40	10.62	28	-17.38	0-360	100	H
32	13.605594	44.74	Pk	38.9	-34.5	-40	9.14	28	-18.86	0-360	100	V

Pk - Peak detector
Av - Average detector

Note:

- Test was performed @ 3-meter distance.
- Distance factor from 3m to 300m = $20\log(3/300) = -40\text{dB}$
- Markers 33 & 34 indicate the fundamental

18 GHz TO 26 GHz



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	81140 ACF (dB/m)	CBL/AMP (dB)	CBL (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Average Limit dBuV/m	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	18.14025	55.26	Pk	32.2	-64	19.3	42.76	74	-31.24	-	-	0-360	200	H
2	19.046916	53.51	Pk	32.3	-62.9	19.7	42.61	74	-31.39	-	-	0-360	100	H
3	19.954055	55.7	Pk	32.5	-62	20.1	46.3	74	-27.7	-	-	0-360	100	H
4	19.047388	53.34	Pk	32.3	-62.9	19.7	42.44	74	-31.56	-	-	0-360	199	V
5	19.954072	58.44	Pk	32.5	-62	20.1	49.04	74	-24.96	-	-	293	198	V
	19.954072	55.41	Av	32.5	-62	20.1	46.01	-	-	54	-7.99	293	198	V
6	21.210165	52.87	Pk	32.7	-61.9	20.6	44.27	74	-29.73	-	-	0-360	199	V

Pk - Peak detector

Av - Average detector

9. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

§ 18.307 For the following equipment, when designed to be connected to the public utility (AC) power line the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies shall not exceed the limits in the following table. Compliance with the provisions of this paragraph shall be based on the measurements of the radio frequency voltage between each power line and ground at the power terminal using a 50 μ H/50 ohms line impedance stabilization network (LISN).

§ 18.307 (b) All other Part 18 consumer devices:

Frequency of Emission (MHz)	Conducted Limit (dB μ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56 *	56 to 46 *
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

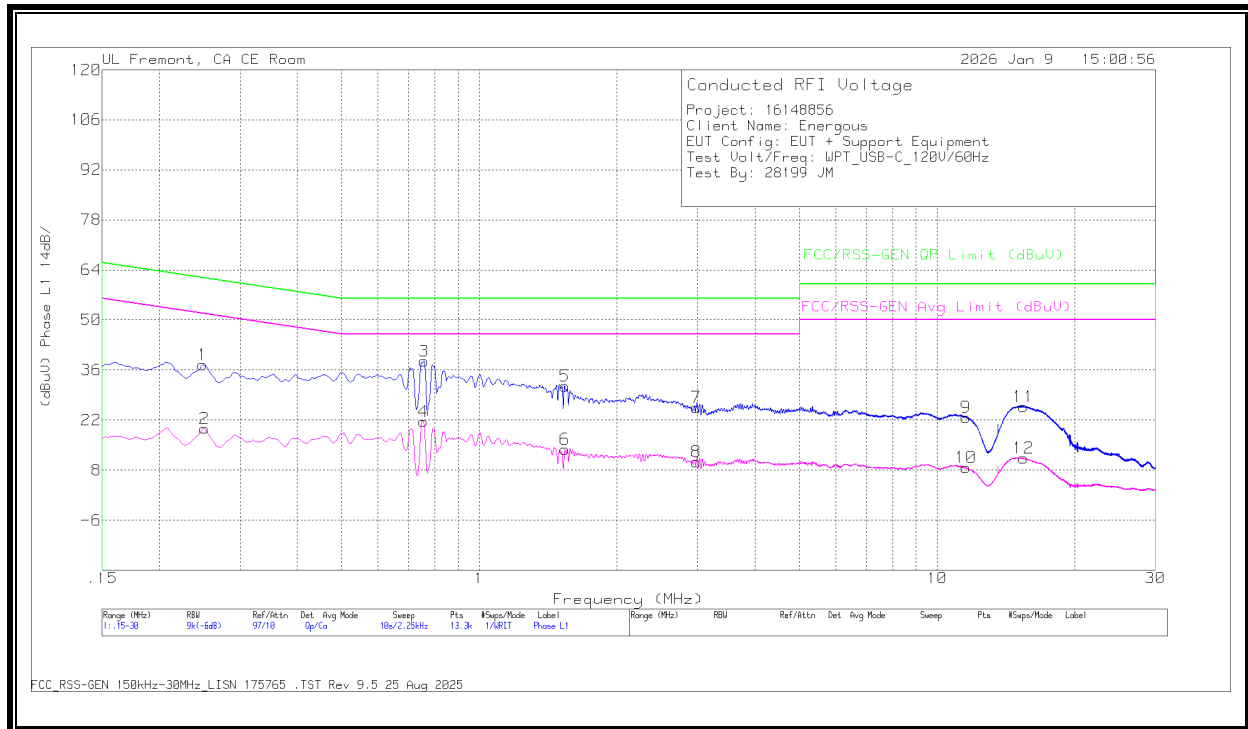
TEST PROCEDURE

Tested in accordance with FCC / OST MP-5

RESULTS

9.1. CONFIGURATION 1 (EUT is powered by AC/DC adapter via USB-C cable)

LINE 1 RESULTS



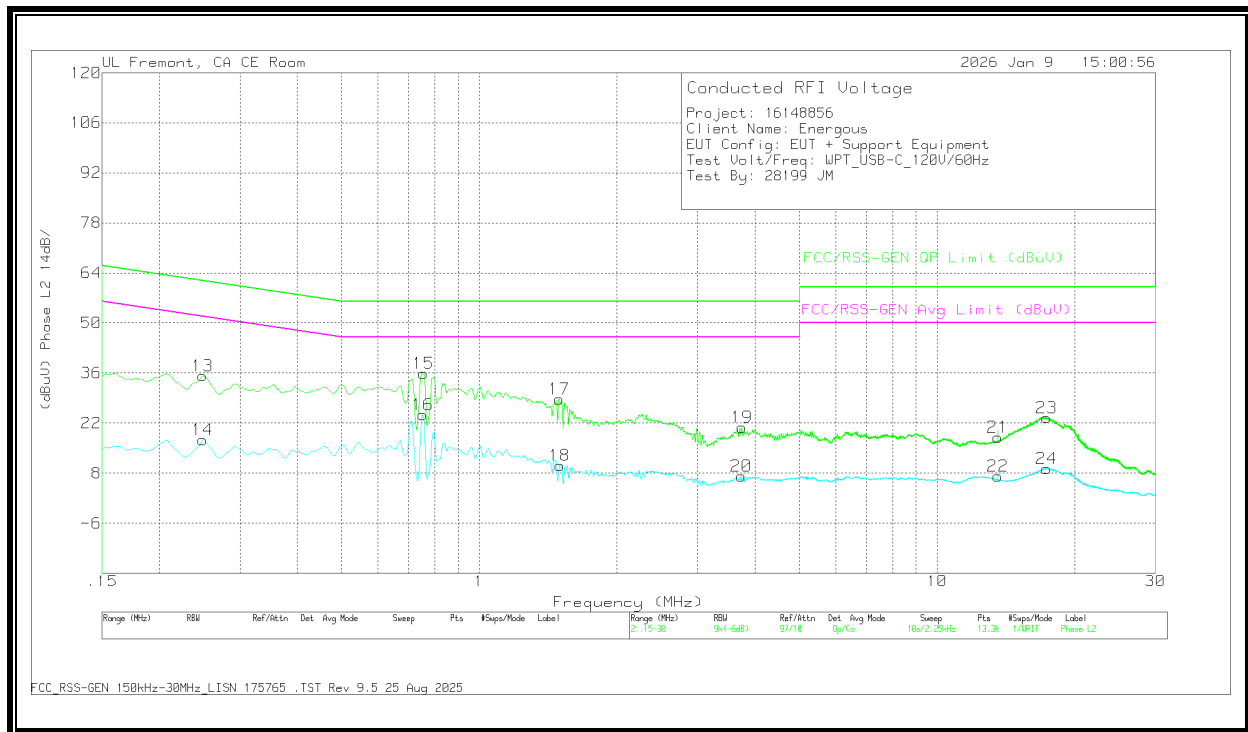
WORST EMISSIONS

Range 1: Phase L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Cbl (dB)	LISN (dB)	10dB Atten (dB)	Corrected Reading (dBuV)	FCC/RSS-GEN Avg Limit (dBuV)	Av(CISPR) Margin (dB)	FCC/RSS-GEN QP Limit (dBuV)	QP Margin (dB)
2	.2513	9.67	Ca	0	0	10	19.67	51.72	-32.05	-	-
4	.7553	11.5	Ca	.1	0	10	21.6	46	-24.4	-	-
6	1.5383	3.72	Ca	.1	0	10	13.82	46	-32.18	-	-
8	2.9783	.14	Ca	.1	0	10	10.24	46	-35.76	-	-
10	11.5598	-1.64	Ca	.2	.1	10	8.66	50	-41.34	-	-
12	15.4523	.93	Ca	.3	.1	10	11.33	50	-38.67	-	-
1	.249	27.53	Qp	0	0	10	37.53	-	-	61.79	-24.26
3	.7575	28.35	Qp	.1	0	10	38.45	-	-	56	-17.55
5	1.536	21.43	Qp	.1	0	10	31.53	-	-	56	-24.47
7	2.9783	15.51	Qp	.1	0	10	25.61	-	-	56	-30.39
9	11.5643	12.52	Qp	.2	.1	10	22.82	-	-	60	-37.18
11	15.4455	15.36	Qp	.3	.1	10	25.76	-	-	60	-34.24

Qp - Quasi-Peak detector

Ca - CISPR average detection

LINE 2 RESULTS



WORST EMISSIONS

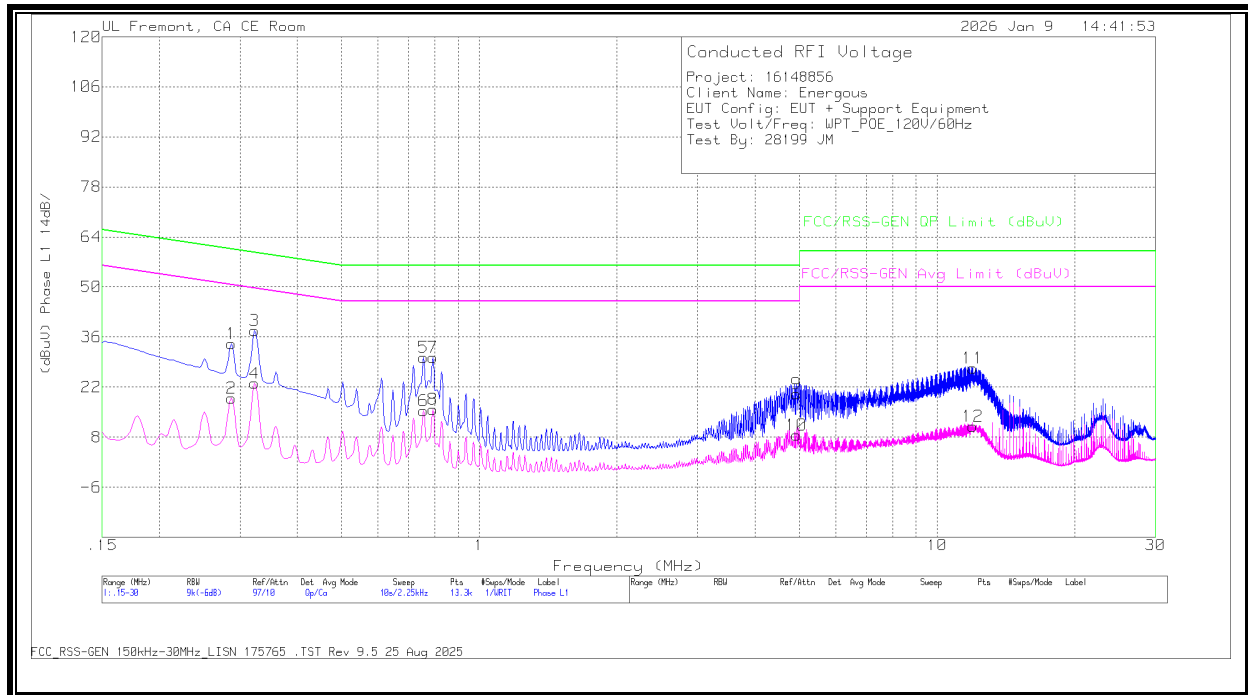
Range 2: Phase L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Cbl (dB)	LISN (dB)	10dB Atten (dB)	Corrected Reading (dBuV)	FCC/RSS-GEN Avg Limit (dBuV)	Av (CISPR) Margin (dB)	FCC/RSS-GEN QP Limit (dBuV)	QP Margin (dB)
14	.249	7.25	Ca	0	0	10	17.25	51.79	-34.54	-	-
16	.753	14.21	Ca	.1	0	10	24.31	46	-21.69	-	-
18	1.4978	.02	Ca	.1	0	10	10.12	46	-35.88	-	-
20	3.7388	-2.96	Ca	.1	0	10	7.14	46	-38.86	-	-
22	13.5645	-3.21	Ca	.2	.1	10	7.09	50	-42.91	-	-
24	17.3513	-1.15	Ca	.3	.1	10	9.25	50	-40.75	-	-
13	.249	25.27	Qp	0	0	10	35.27	-	-	61.79	-26.52
15	.7553	25.76	Qp	.1	0	10	35.86	-	-	56	-20.14
17	1.4933	18.67	Qp	.1	0	10	28.77	-	-	56	-27.23
19	3.7455	10.66	Qp	.1	0	10	20.76	-	-	56	-35.24
21	13.5645	7.74	Qp	.2	.1	10	18.04	-	-	60	-41.96
23	17.349	13.13	Qp	.3	.1	10	23.53	-	-	60	-36.47

Qp - Quasi-Peak detector

Ca - CISPR average detection

9.2. CONFIGURATION 2 (EUT is powered via PoE using a PoE Ethernet switch)

LINE 1 RESULTS

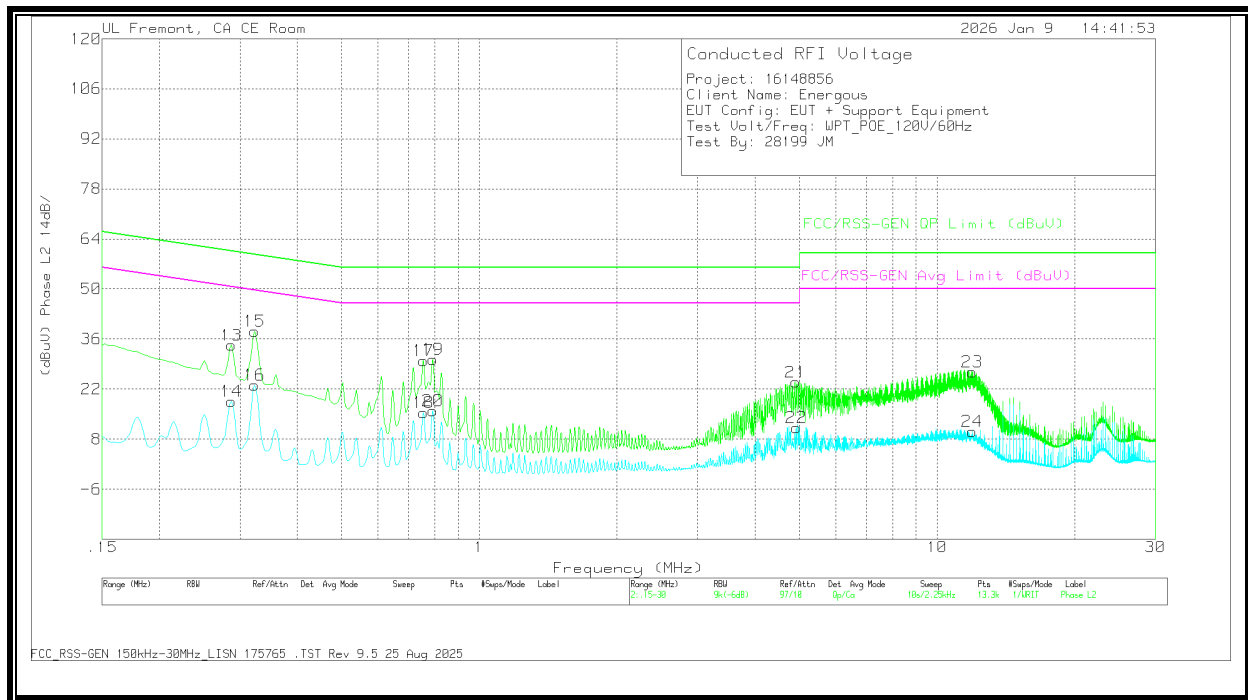


WORST EMISSIONS

Range 1: Phase L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Cbl (dB)	LISN (dB)	10dB Atten (dB)	Corrected Reading (dBuV)	FCC/RSS-GEN Avg Limit (dBuV)	Av (CISPR) Margin (dB)	FCC/RSS-GEN QP Limit (dBuV)	QP Margin (dB)
2	.2873	8.85	Ca	0	0	10	18.85	50.6	-31.75	-	-
4	.3233	13.02	Ca	0	0	10	23.02	49.62	-26.6	-	-
6	.7553	5.33	Ca	.1	0	10	15.43	46	-30.57	-	-
8	.7913	5.66	Ca	.1	0	10	15.76	46	-30.24	-	-
10	4.9335	-1.48	Ca	.1	0	10	8.62	46	-37.38	-	-
12	11.9659	.78	Ca	.2	.1	10	11.08	50	-38.92	-	-
1	.2873	24.12	Qp	0	0	10	34.12	-	-	60.6	-26.48
3	.3233	27.89	Qp	0	0	10	37.89	-	-	59.62	-21.73
5	.7553	20.13	Qp	.1	0	10	30.23	-	-	56	-25.77
7	.7913	20.19	Qp	.1	0	10	30.29	-	-	56	-25.71
9	4.9335	9.97	Qp	.1	0	10	20.07	-	-	56	-35.93
11	11.976	17	Qp	.2	.1	10	27.3	-	-	60	-32.7

Qp - Quasi-Peak detector
Ca - CISPR average detection

LINE 2 RESULTS



WORST EMISSIONS

Range 2: Phase L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Cbl (dB)	LISN (dB)	10dB Atten (dB)	Corrected Reading (dBuV)	FCC/RSS-GEN Avg Limit (dBuV)	Av (CISPR) Margin (dB)	FCC/RSS-GEN QP Limit (dBuV)	QP Margin(dB)
14	.2873	8.61	Ca	0	0	10	18.61	50.6	-31.99	-	-
16	.3233	13.11	Ca	0	0	10	23.11	49.62	-26.51	-	-
18	.7553	5.29	Ca	.1	0	10	15.39	46	-30.61	-	-
20	.7913	5.77	Ca	.1	0	10	15.87	46	-30.13	-	-
22	4.9223	1.13	Ca	.1	0	10	11.23	46	-34.77	-	-
24	11.9355	-.23	Ca	.2	.1	10	10.07	50	-39.93	-	-
13	.2873	24.24	Qp	0	0	10	34.24	-	-	60.6	-26.36
15	.3233	28.21	Qp	0	0	10	38.21	-	-	59.62	-21.41
17	.7553	19.86	Qp	.1	0	10	29.96	-	-	56	-26.04
19	.7913	20.13	Qp	.1	0	10	30.23	-	-	56	-25.77
21	4.9155	13.8	Qp	.1	0	10	23.9	-	-	56	-32.1
23	11.9265	16.45	Qp	.2	.1	10	26.75	-	-	60	-33.25

Qp - Quasi-Peak detector

Ca - CISPR average detection

10. SETUP PHOTOS

Please refer to 16148856-EP1 for setup photos.

END OF REPORT