

TEST REPORT

Report Number : 14523740-E16V3

Applicant : APPLE INC.
1 APPLE PARK WAY
CUPERTINO, CA 95014, U.S.A

Model : A2848

Brand : APPLE

FCC ID : BCG-E8435A

IC : 579C-E8435A

EUT Description : SMARTPHONE

Test Standard(s) : FCC CFR 47 PART 15 SUBPART F §15.519
ISED RSS-220 ISSUE 1 AMENDMENT 1

Date Of Issue:
AUGUST 02, 2023

Prepared by:
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Revision History

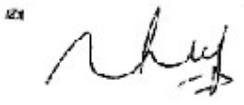
<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
V1	7/18/2023	Initial Issue	---
V2	7/20/2023	Address TCB Question section 8	Ben Dobbins
V3	8/2/2023	Address TCB Question section 3, 8	Ben Dobbins

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1. ATTESTATION OF TEST RESULTS

Applicant Name and Address	APPLE INC. 1 APPLE PARK WAY CUPERTINO, CA 95014, U.S.A	
Model	A2848	
Brand	APPLE	
FCC ID	BCG-E8435A	
IC	579C-E8435A	
EUT Description	SMARTPHONE	
SERIAL NUMBER	Y4VK4NVYF0; TK2HP0GGQ5; NMX6L579NC; QC177DXC4D	
SAMPLE RECEIPT DATE	JANUARY 18, 2023; APRIL 4, 2023; JUNE 5, 2023; JULY 5, 2023	
DATE TESTED	JANUARY 18, 2023 TO JULY 05, 2023	
Applicable Standards	FCC CFR 47 PART 15 SUBPART F §15.519 ISED RSS-220 ISSUE 1 AMENDMENT 1	
Test Results	COMPLIES	
<p>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.</p> <p>The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure 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.</p> <p>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.</p>		
Approved & Released By:	Prepared & Reviewed By:	
		
Thu Chan Staff Engineer UL Verification Services, Inc.	Benjamin Dobbins Senior Test Engineer UL Verification Services, Inc.	

2. TEST RESULTS SUMMARY

This report contains data provided by the customer which can impact the validity of results. UL Verification Services Inc. is only responsible for the validity of results after the integration of the data provided by the customer.

FCC Clause	ISED Clause	Requirement	Result	Comment
See Comment		Duty Cycle	Reporting purposes only	ANSI C63.10 Section 11.6
-	RSS-GEN 6.7	99% OBW	Reporting purposes only	ANSI C63.10 Section 6.9.4
15.503 & 15.519 (b)	RSS-220 Sect. 2	-10 dB BW	Complies	ANSI C63.10 Section 10.1
15.519 (c) & (e)	RSS-220 Sect. 4 (c) & 5.3.1 (d)	Pk Power & Max Avg Emissions	Complies	ANSI C63.10 Section 10.3
15.519 (a)(1)	RSS-220 Sect. 5.3.1 (b)	Cessation Time	Complies	None
15.519 (c) & 15.209 (a)	RSS-220 Sect. 3.4	Emissions Below 960 MHz	Complies	ANSI C63.10 Section 10.2
15.519 (c) & (d)	RSS-220 Sect. 5.3.1 (d) & (e)	Emissions Above 960 MHz	Complies	ANSI C63.10 Section 10.3
15.207 (a)	RSS-Gen 8.8	AC Power Line Conducted Emissions	Complies	ANSI C63.10 Section 6.2

3. TEST METHODOLOGY

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

- CFR Title 47 Part 15 Subpart F
- KDB 393764 D01 UWB FAQ v02r01
- ANSI C63.10:2013
- ISED RSS-220 Issue 1 Amendment 1
- ISED RSS GEN Issue 5 Amendment 2

4. FACILITIES AND ACCREDITATION

UL Verification Services Inc. is accredited by A2LA, certification #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
<input type="checkbox"/>	Building 1: 47173 Benicia Street, Fremont, CA 94538, USA	US0104	2324A	550739
<input checked="" type="checkbox"/>	Building 2: 47266 Benicia Street, Fremont, CA 94538, USA			
<input type="checkbox"/>	Building 3: 843 Auburn Ct, Fremont, CA 94538, USA			
<input checked="" type="checkbox"/>	Building 4: 47658 Kato Rd, Fremont, CA 94538, USA			
<input checked="" type="checkbox"/>	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 on a regular basis, with a maximum time between calibrations of one year or the manufacturers' 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}
Conducted Antenna Port Emission Measurement	1.940 dB
Power Spectral Density	2.466 dB
Time Domain Measurements Using SA	3.39 %
Radio Frequency (Spectrum Analyzer)	141.16 Hz
Occupied Bandwidth	1.22%
Worst Case Conducted Disturbance, 9KHz to 0.15 MHz	3.78 dB
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
Worst Case Radiated Disturbance, 26000 to 40000 MHz	5.29 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:

$$\begin{aligned}
 \text{EIRP (dBm)} &= \text{Meter Reading (dBm)} + \text{Antenna Factor (dB/m)} + \text{Pre-Amp Gain/Cbl Loss (dB)} \\
 &\quad + \text{dBm-to-dBm Unit Conversion Factor @ 3m} \\
 &= -60 \text{ dBm} + 28 \text{ dB/m} + (-27) \text{ dB} + 11.8 \\
 &= -47.2 \text{ dBm}
 \end{aligned}$$

MAINS CONDUCTED EMISSIONS

Where relevant, the following sample calculation is provided:

$$\begin{aligned}\text{Final Voltage (dBuV)} &= \text{Measured Voltage (dBuV)} + \text{LISN Insertion Loss (dB)} + \text{Cable Loss (dB)} \\ &\quad + \text{Limiter Factor (dB)} \\ &= 42.19 \text{ dBuV} + 0.1 \text{ dB} + 0 \text{ dB} + 9.4 \text{ (dB)} \\ &= 51.69 \text{ dBuV}\end{aligned}$$

6. EQUIPMENT UNDER TEST

6.1. DESCRIPTION OF EUT

The Apple iPhone is a smartphone with cellular GSM, GPRS, EGPRS, UMTS, LTE, 5G NR1, 5G NR2, IEEE 802.11a/b/g/n/ac/ax, Bluetooth (BT), Ultra-Wideband (UWB), GPS, NFC, NB UNII, 802.15.4, 802.15.4ab-NB and MSS technologies. The rechargeable battery is not user accessible.

The EUT has a UWB transceiver with two integral antennas (ANT1 = UWB1, ANT2 = ANT6/UWB0). ANT1 only operates on 8 GHz (Channel 9). ANT2 operates on 6.5 GHz (Channel 5) and 8 GHz (Channel 9). The antennas are not user accessible.

6.2. MAXIMUM OUTPUT POWER

Highest Average Powers based on ANT/CH are listed as follows:

ANT	CH	CONFIG	Average Power (dBm EIRP)
1	9	202	-42.31
2	5	701	-42.30
2	9	10	-42.32

6.3. MODULATION

The UWB signal is BPSK pulsed modulated signal.

6.4. SOFTWARE AND FIRMWARE

The Software and Firmware version used at test is FT: 1859.0.0.101.1~2.347.2503.

7. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

SUPPORT EQUIPMENT LIST			
Description	Manufacturer	Model	Serial Number
Laptop + Adapter	Apple	MacBook Pro	FVF1CBUHV29
Brisket – USB Adapter	Apple	Brisket UART Cable Pigtail	F2010M00004786
USB-C Power Adapter	Apple	A2305	C4H9516000APF4F4P
USB-C Ethernet Adapter	Ugreen	CM475	60600
USB-A to USB-C adapter	Anker	A8731	X002NCP6GR
USB-A Cable with Repeater	Ugreen	10321	X000TT2OLL

I/O CABLES

I/O CABLES					
Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
AC	1	AC	Un-shielded	2	N/A
USB	1	USB	Un-shielded	1	N/A

TEST SETUP

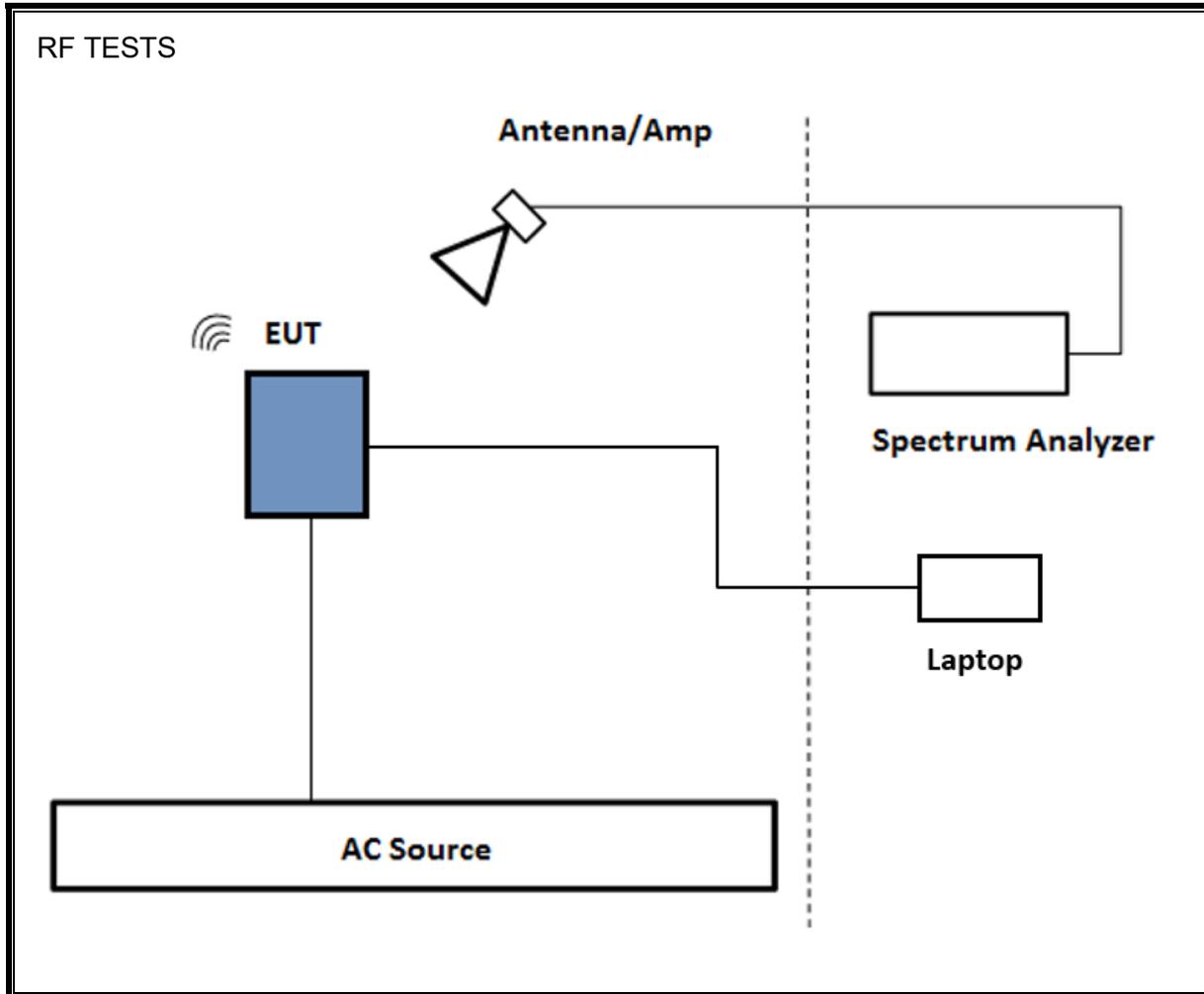
The EUT was examined at pre-scan test using a fundamental frequency in the portrait (z), landscape (y), and flatbed (x) position and the worst-case orientation of individual ANT/CH/CONFIG setting was determined for final spurious emission measurement. All selected configs are used for the Ant/Ch settings that were tested at default power (0 dBm), and Config 9 Payload 125 was chose for unwanted emission test with CH9 on Ant 1 and both CH5 and CH9 on Ant 2 by setting at maximum output power higher than 0 dBm.

Measurements of spurious average emissions were made with the device operating at a higher power than production power to ensure compliance. Measurements of the in-band signal (peak and average emissions, 10 dBc bandwidth, 99% bandwidth) were all made at the production power settings.

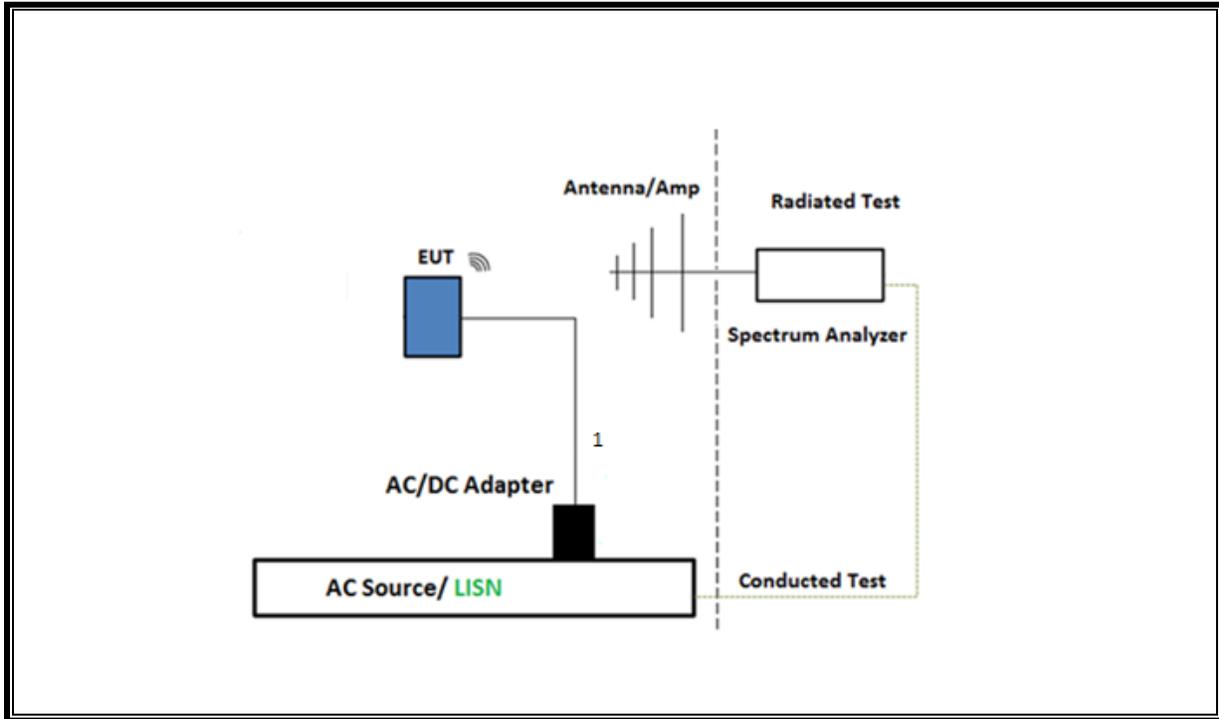
EUT was connected to AC power adapter in all test cases except 0.96 – 6 GHz, 1164 – 1240 MHz, and 1559 – 1610 MHz due to noise unrelated to the UWB signal from the device.

For simultaneous transmission on the same antenna of multiple channels in the UWB and WiFi, no noticeable new emission was found.

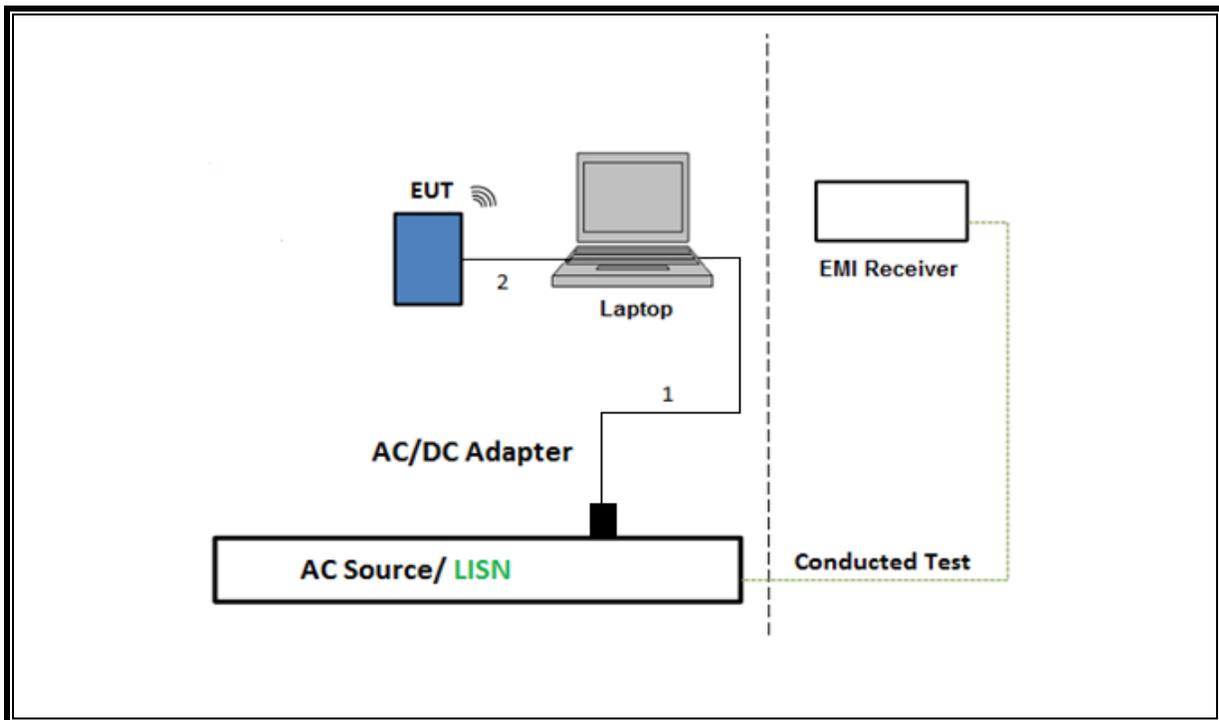
SETUP DIAGRAM FOR Above 1GHz TESTS



SETUP DIAGRAM FOR Below 1GHz and AC LINE CONDUCTED TEST



TEST SETUP- AC LINE CONDUCTED: LAPTOP CONFIGURATION



8. TEST AND MEASUREMENT EQUIPMENT

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

Test Equipment					
Description	Manufacturer	Model	Local ID	Cal Date	Cal Due
EMI Test Receiver	Rohde & Schwarz	ESW44	223460	2/18/2023	2/29/2024
Horn Antenna, 1-18GHz	ETS-Lindgren	3117	206805	7/5/2022	7/5/2023*
RF Filter Box, 1-18GHz	UL-FR1 (CTECH)	N/A	224478	10/26/2022	10/26/2023
EMI Test Receiver	Rohde & Schwarz	ESW44	226078	2/22/2023	2/29/2024
Antenna, Horn 26.5-40GHz	ARA	MWH-2640/B	172366	1/27/2023	1/31/2023
RF Amplifier 26.5-40GHz	Ampical	AMP26G40-60	172345	5/19/2023	5/31/2024
RF Filter Box, 1-18GHz	UL-FR1 (CTECH)	N/A	226779	3/5/2023	3/5/2024
EMI Test Receiver	Rohde & Schwarz	ESW44	235266	2/20/2022	2/20/2023*
Horn Antenna, 1-18GHz	ETS-Lindgren	3117	206808	2/18/2022	2/18/2023*
RF Filter Box, 1-18GHz	UL-FR1 (CTECH)	N/A	173233	3/28/2022	3/28/2023*
Antenna, Broadband Hybrid, 30 MHz to 3GHz	Sunol Sciences Corp	JB3	230634	1/15/2022	1/31/2023*
EMI Test Receiver	Rohde & Schwarz	ESW44	235266	3/30/2023	3/31/2024
Horn Antenna, 1-18GHz	ETS-Lindgren	3117	206808	3/7/2023	3/31/2024
Amplifier, 9kHz to 1 GHz, 32dB	Sonoma Instrumnet	310N	79584	12/12/2022	12/12/2023
Antenna, Passive Loop 100kHz - 30MHz	Electro-Metrics	EM-6872	170015	7/28/2022	7/28/2023
Antenna, Passive Loop 30Hz - 1MHz	Electro-Metrics	EM-6871	170013	7/28/2022	7/28/2023
Antenna, Horn 18-26.5GHz	ARA	MWH-1826/B	81139	7/11/2022	7/11/2023
RF Amplifier 18-26.5GHz	Ampical	AMP18G26.5-60	220194	7/13/2022	7/13/2023
Antenna, Horn 26.5-40GHz	ARA	MWH-2640/B	81105	7/11/2022	7/11/2023
RF Amplifier 26.5-40GHz	Ampical	AMP26G40-60	220193	7/15/2022	7/15/2023
Filter, LPF 0-5400MHz Ch5/9 5.4G LPF	Wainwright Instruments Gmbh	WLKX12-5400-5913-18000-60ST	204843	11/10/2022	11/10/2023
Filter, HPF, 9-18GHz	RF-Lambda	RHPF23G09G18	206078	11/10/2022	11/10/2023
Filter, HPF 11.2GHz, Ch9 11.5G HPF	Wainwright Instruments Gmbh	WHW2-8165-11500-21000-40CD	176234	12/28/2022	12/28/2023
EMI TEST RECEIVER	Rohde & Schwarz	ESR	171646	2/20/2023	2/20/2024
Cable, RG223 Coax, double shield, BNC	Pasternack Enterprises	RG233/U	202322	7/15/2022	7/31/2023
Cable, RG223 Coax, double shield, BNC	Pasternack Enterprises	RG233/U	202326	7/15/2022	7/31/2023
Transient Limiter	TE	TBFL1	207996	7/15/2022	7/15/2023
LISN for Conducted Emissions CISPR-16	Fischer Custom Communications, Ince	FCC-LISN-50/250/-25-2-01-480V	175765	1/27/2023	1/27/2024
Radiated Software	UL	UL EMC	Version 9.5 May 1, 2023		

*Tests were performed prior to the calibration date to ensure accurate measurements were recorded.

9. APPLICABLE LIMITS AND TEST RESULTS

9.1. 99% BANDWIDTH

LIMIT

None; for reporting purposes only.

TEST PROCEDURE

ANSI C63.10 Section 6.9.3

The transmitter output is connected to a spectrum analyzer. The RBW is in the range of 1% to 5% of the OBW bandwidth. The VBW is set to $\geq 3 \cdot \text{RBW}$. The sweep time is coupled.

Tabulated data provides the test results of all available test configurations. The plots for ANT1, CONFIG 9, Payload 125 on CH9 and ANT2, CONFIG 9, Payload 125 on CH5 and CH9 bandwidth measurement on are presented and same measurement settings apply to the rest of the test configurations.

RESULTS

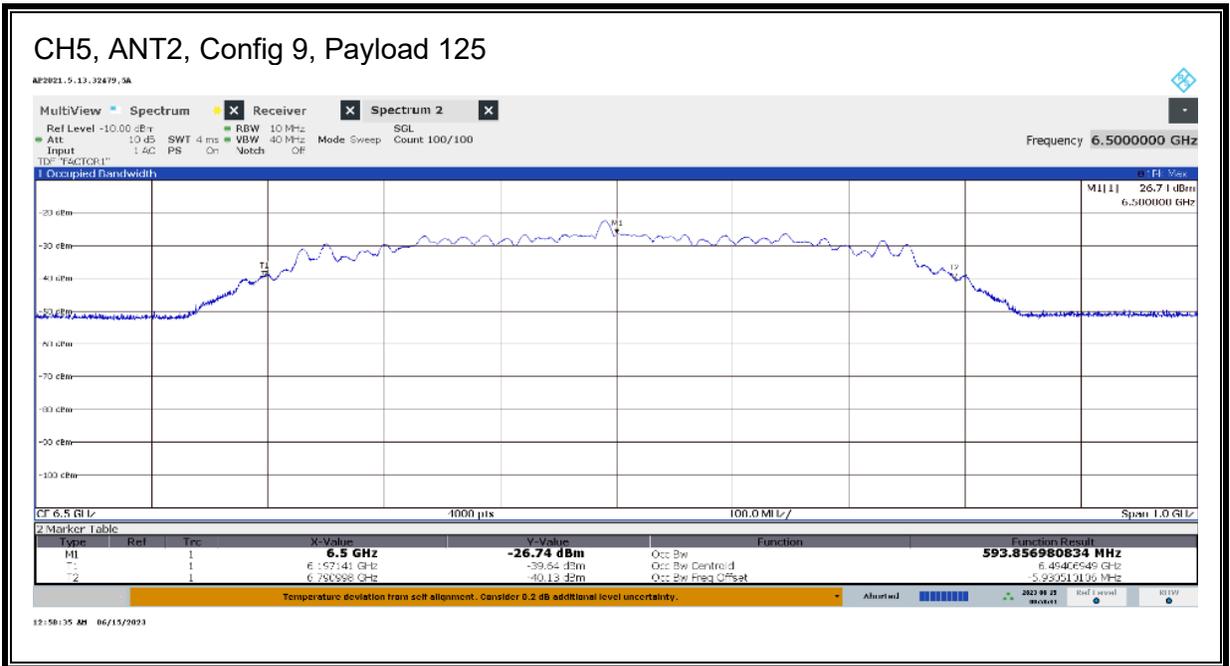
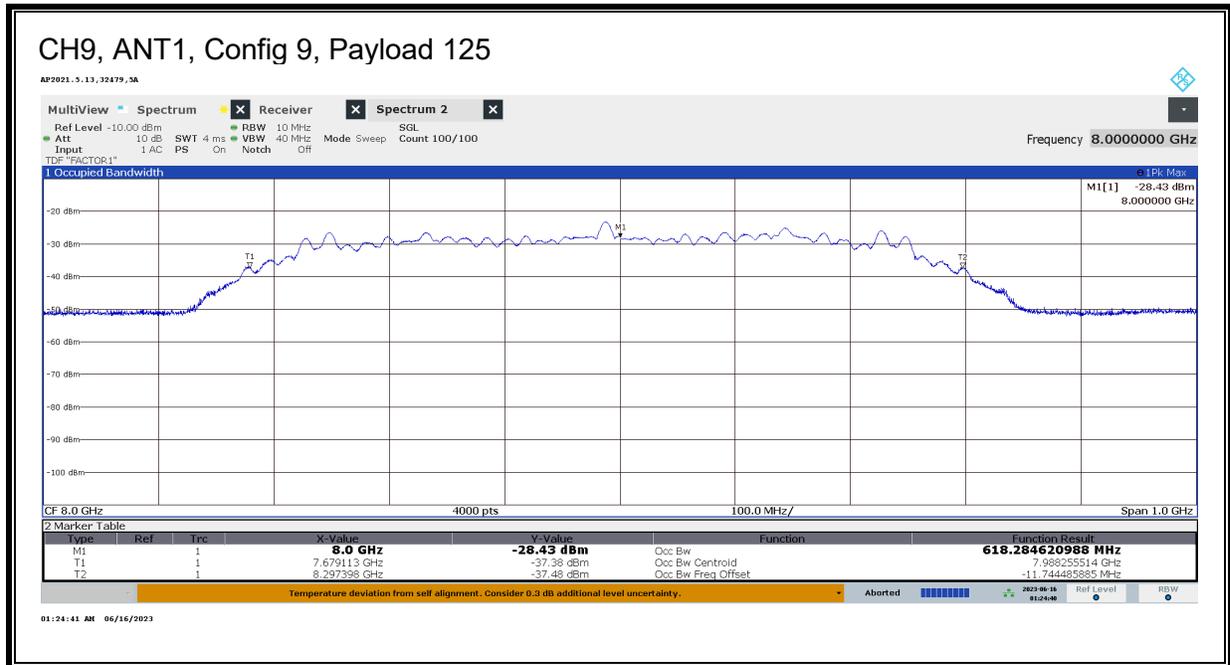
Employee IDs: 32188, 32305, 32479
Location: Chamber 5A
Test Date: 6/12/23 – 6/18/23

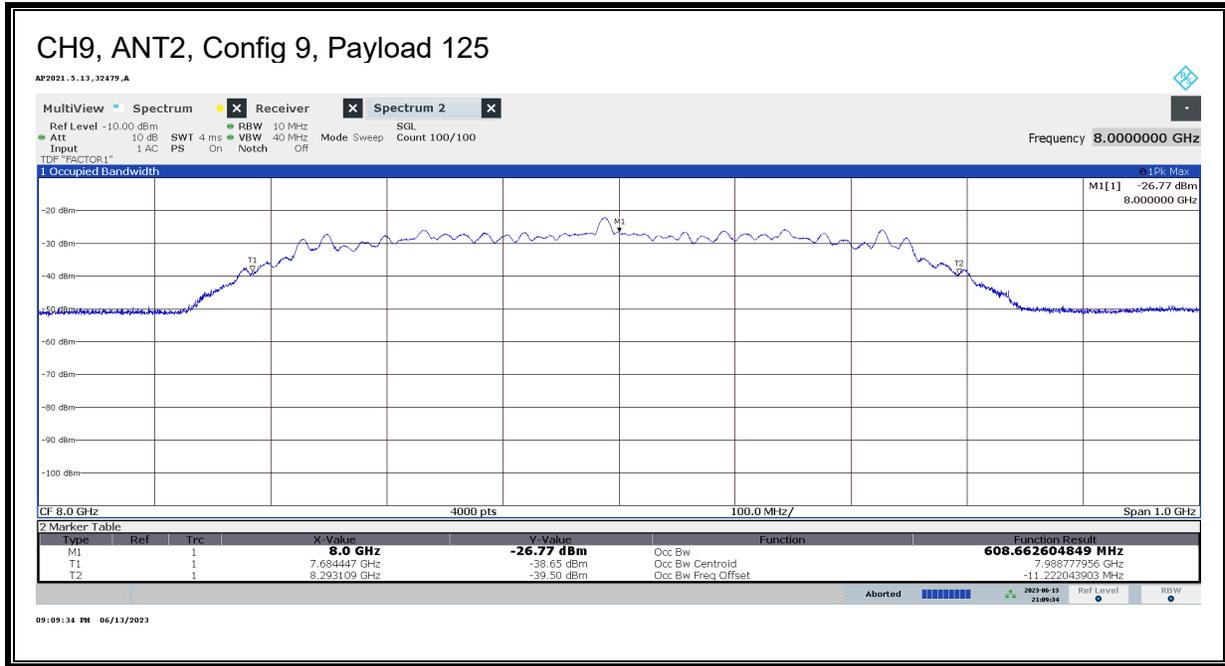
ANT	CH	CF	PL	EUT Orientation	Ant. Polarity	99% BW (MHz)
1	9	0	25	Portrait	H	599.16
1	9	1	45	Portrait	H	598.51
1	9	9	125	Portrait	H	618.28
1	9	10	25	Portrait	H	599.82
1	9	11	25	Portrait	H	597.72
1	9	11	65	Portrait	H	600.23
1	9	101	25	Portrait	H	598.47
1	9	101	65	Portrait	H	609.53
1	9	102	25	Portrait	H	610.09
1	9	102	65	Portrait	H	609.51
1	9	103	25	Portrait	H	609.43
1	9	103	125	Portrait	H	609.18
1	9	202	625	Portrait	H	772.82
1	9	402	445	Portrait	H	712.24
1	9	501	0	Portrait	H	600.20
1	9	503	0	Portrait	H	598.82
1	9	601	0	Portrait	H	611.74
1	9	605	0	Portrait	H	611.44
1	9	607	0	Portrait	H	611.38
1	9	701	0	Portrait	H	619.72
1	9	702	0	Portrait	H	616.44
1	9	703	0	Portrait	H	619.79
1	9	704	0	Portrait	H	626.93
1	9	705	0	Portrait	H	617.32
1	9	706	0	Portrait	H	619.60
1	9	405	4093	Portrait	H	749.56
1	9	407	4093	Portrait	H	756.57
1	9	801	0	Portrait	H	608.78
1	9	802	0	Portrait	H	610.06
1	9	803	0	Portrait	H	607.98
1	9	804	0	Portrait	H	621.50
1	9	805	0	Portrait	H	622.05
1	9	806	0	Portrait	H	616.08
1	9	807	0	Portrait	H	609.93
1	9	808	0	Portrait	H	608.16
1	9	809	0	Portrait	H	609.2968
1	9	80A	0	Portrait	H	621.1369
1	9	80B	0	Portrait	H	615.9695
1	9	80C	0	Portrait	H	617.483

ANT	CH	CF	PL	EUT Orientation	Ant. Polarity	99% BW (MHz)
2	5	0	25	Portrait	H	576.57
2	5	1	45	Portrait	H	575.78
2	5	9	125	Portrait	H	593.86
2	5	10	25	Portrait	H	573.21
2	5	11	25	Portrait	H	572.80
2	5	11	65	Portrait	H	574.49
2	5	101	25	Portrait	H	572.40
2	5	101	65	Portrait	H	567.66
2	5	102	25	Portrait	H	565.68
2	5	102	65	Portrait	H	568.39
2	5	103	25	Portrait	H	569.45
2	5	103	125	Portrait	H	576.40
2	5	202	625	Portrait	H	842.60
2	5	402	445	Portrait	H	765.99
2	5	501	0	Portrait	H	571.43
2	5	503	0	Portrait	H	571.30
2	5	601	0	Portrait	H	585.45
2	5	605	0	Portrait	H	568.44
2	5	607	0	Portrait	H	568.49
2	5	701	0	Portrait	H	607.24
2	5	702	0	Portrait	H	590.67
2	5	703	0	Portrait	H	599.75
2	5	704	0	Portrait	H	601.16
2	5	705	0	Portrait	H	580.15
2	5	706	0	Portrait	H	586.34
2	5	405	4093	Portrait	H	779.95
2	5	407	4093	Portrait	H	767.27
2	5	801	0	Portrait	H	577.49
2	5	802	0	Portrait	H	578.84
2	5	803	0	Portrait	H	574.28
2	5	804	0	Portrait	H	593.36
2	5	805	0	Portrait	H	594.34
2	5	806	0	Portrait	H	585.04
2	5	807	0	Portrait	H	576.30
2	5	808	0	Portrait	H	575.06
2	5	809	0	Portrait	H	576.09
2	5	80A	0	Portrait	H	590.03
2	5	80B	0	Portrait	H	582.4852
2	5	80C	0	Portrait	H	583.4535

ANT	CH	CF	PL	EUT Orientation	Ant. Polarity	99% BW (MHz)
2	9	0	25	Flatbed	H	587.94
2	9	1	45	Flatbed	H	586.89
2	9	9	125	Flatbed	H	608.66
2	9	10	25	Flatbed	H	589.49
2	9	11	25	Flatbed	H	589.89
2	9	11	65	Flatbed	H	590.60
2	9	101	25	Flatbed	H	589.21
2	9	101	65	Flatbed	H	593.24
2	9	102	25	Flatbed	H	589.12
2	9	102	65	Flatbed	H	589.22
2	9	103	25	Flatbed	H	588.79
2	9	103	125	Flatbed	H	595.45
2	9	202	625	Flatbed	H	816.70
2	9	402	445	Flatbed	H	736.41
2	9	501	0	Flatbed	H	583.57
2	9	503	0	Flatbed	H	585.12
2	9	601	0	Flatbed	H	597.68
2	9	605	0	Flatbed	H	592.71
2	9	607	0	Flatbed	H	593.71
2	9	701	0	Flatbed	H	614.65
2	9	702	0	Flatbed	H	604.34
2	9	703	0	Flatbed	H	609.64
2	9	704	0	Flatbed	H	614.85
2	9	705	0	Flatbed	H	604.15
2	9	706	0	Flatbed	H	607.17
2	9	405	4093	Flatbed	H	754.56
2	9	407	4093	Flatbed	H	734.65
2	9	801	0	Flatbed	H	599.41
2	9	802	0	Flatbed	H	600.45
2	9	803	0	Flatbed	H	597.85
2	9	804	0	Flatbed	H	614.02
2	9	805	0	Flatbed	H	615.89
2	9	806	0	Flatbed	H	605.75
2	9	807	0	Flatbed	H	599.69
2	9	808	0	Flatbed	H	596.45
2	9	809	0	Flatbed	H	597.21
2	9	80A	0	Flatbed	H	619.46
2	9	80B	0	Flatbed	H	605.8754
2	9	80C	0	Flatbed	H	608.2306

99% BW





9.2. OPERATING BANDWIDTH

LIMITS

FCC

§15.503 (a) *UWB bandwidth*. For the purpose of this subpart, the UWB bandwidth is the frequency band bounded by the points that are 10 dB below the highest radiated emission, as based on the complete transmission system including the antenna. The upper boundary is designated f_H and the lower boundary is designated f_L . The frequency at which the highest radiated emission occurs is designated f_M .

§15.503 (b) *Center frequency*. The center frequency, f_C , equals $(f_H + f_L)/2$.

§15.503 (c) *Fractional bandwidth*. The fractional bandwidth equals $2(f_H - f_L)/(f_H + f_L)$.

§15.503 (d) *Ultra-wideband (UWB) transmitter*. An intentional radiator that, at any point in time, has a fractional bandwidth equal to or greater than 0.20 or has a UWB bandwidth equal to or greater than 500 MHz, regardless of the fractional bandwidth.

§15.519 (b) The UWB bandwidth of a device operating under the provisions of this section must be contained between 3100 MHz and 10,600 MHz.

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Section 2 A *UWB device* is an intentional radiator that has either a *-10 dB bandwidth* of at least 500 MHz or a *-10 dB fractional bandwidth* greater than 0.2.

Section 5.1 (a) The *-10 dB bandwidth* of the device shall be totally contained in the band 3.1-10.6 GHz.

“-10 dB bandwidth B_{-10} ” and “-10 dB fractional bandwidth μ_{-10} ” are defined as follows:

$$B_{-10} = f_H - f_L$$
$$\mu_{-10} = B_{-10}/f_C$$

where:

f_M is the frequency of maximum UWB transmission;

f_H is the highest frequency at which the power spectral density of the UWB transmission is -10 dB relative to f_M ;

f_L is the lowest frequency at which the power spectral density of the UWB transmission is -10 dB relative to f_M ; and

$f_C = (f_H + f_L)/2$ is the centre frequency of the -10 dB bandwidth.

TEST PROCEDURE

ANSI C63.10 Clause 10.1

RSS-220 Section 2 of the Annex

Tabulated data provides the test results of all available test configurations. The plots for ANT1, CONFIG 9, Payload 125 on CH9 and ANT2, CONFIG 9, Payload 125 on CH5 and CH9 bandwidth measurement on are presented and same measurement settings apply to the rest of the test configurations.

RESULTS

Employee IDs: 32188, 32305, 32479

Location: Chamber 5A

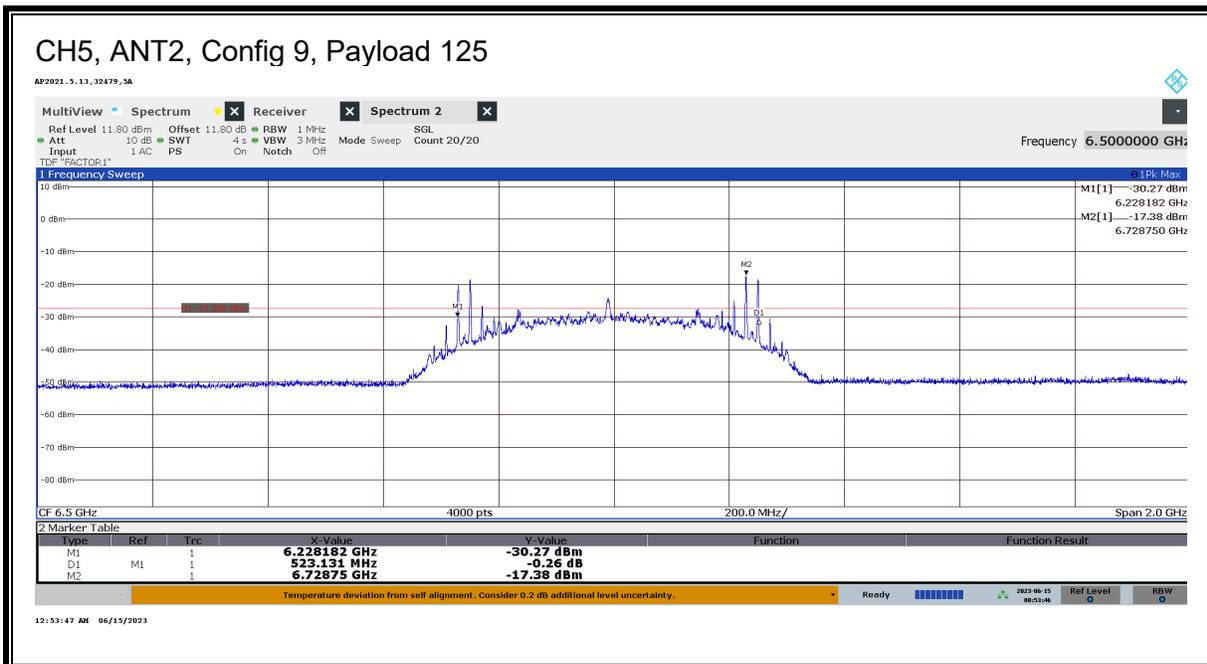
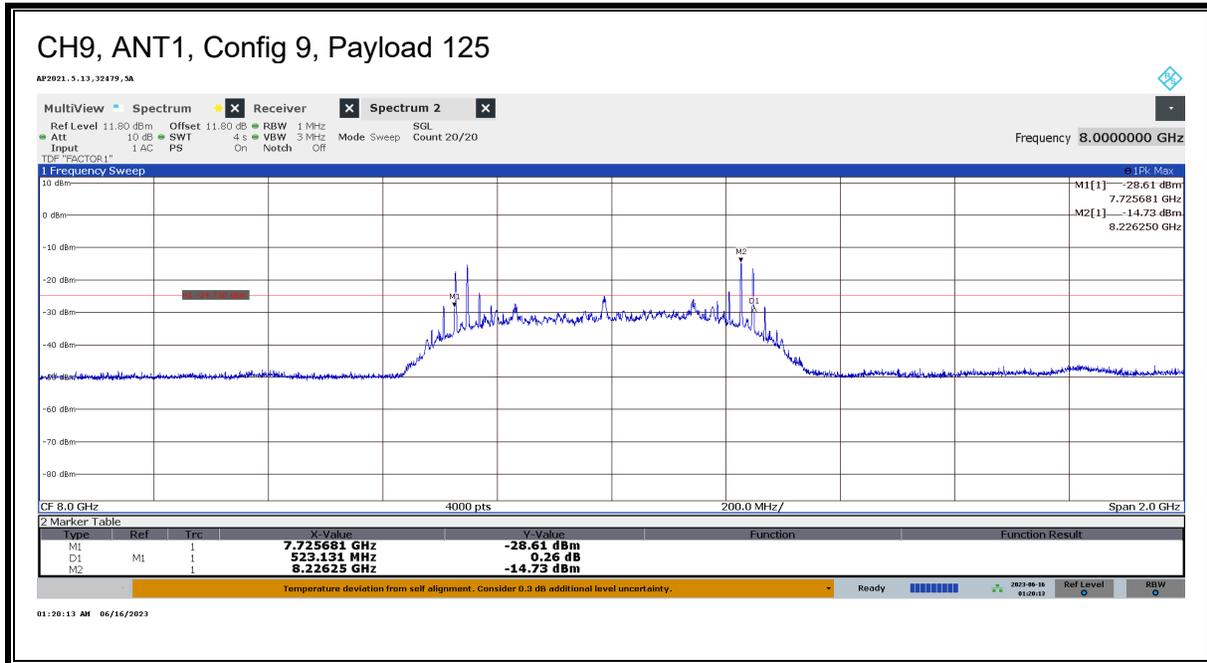
Test Date: 6/12/23 – 6/18/23

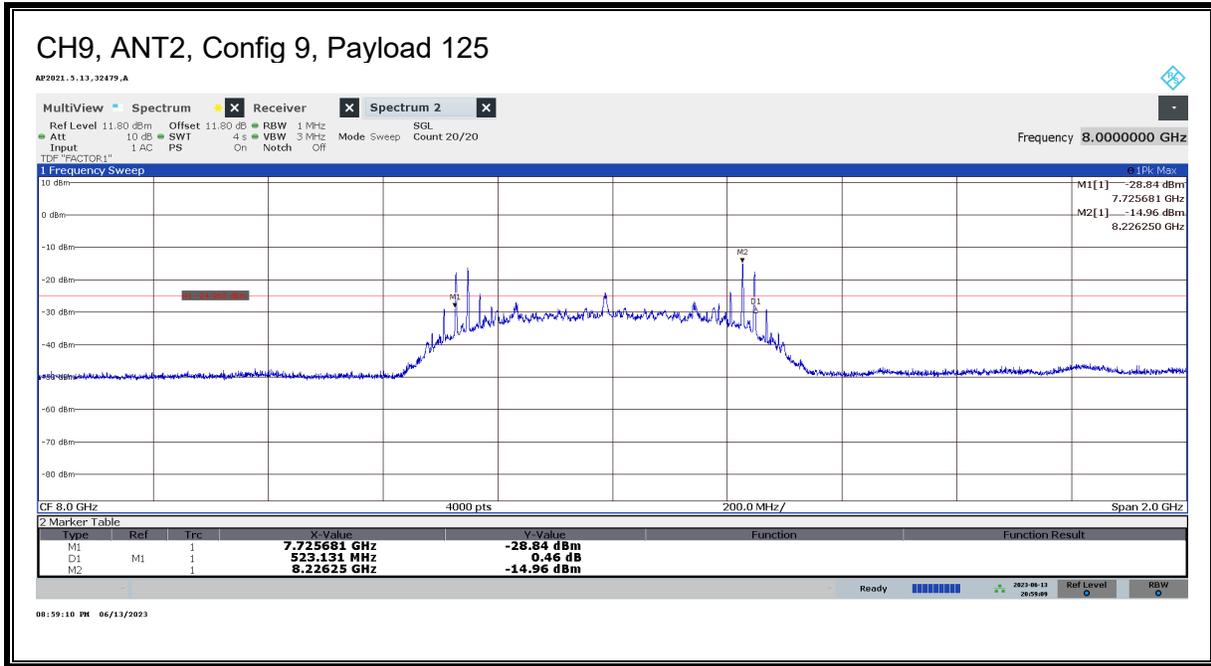
ANT	CH	CF	PL	EUT Orientation	Ant. Polarity	FM (GHz)	FL (GHz)	FH (GHz)	FC (GHz)	OBW (MHz)	Min. OBW (MHz)	OBW Margin (MHz)	OBW Pass/Fail
1	9	0	25	Portrait	H	8.22675	7.724181	8.250313	7.987247	526.13	500	26.132	P
1	9	1	45	Portrait	H	8.22675	7.724181	8.250313	7.987247	526.13	500	26.132	P
1	9	9	125	Portrait	H	8.2263	7.7257	8.248812	7.9872465	523.13	500	23.131	P
1	9	10	25	Portrait	H	8.2263	7.7242	8.250313	7.987247	526.13	500	26.132	P
1	9	11	25	Portrait	H	8.2263	7.7242	8.250313	7.987247	526.13	500	26.132	P
1	9	11	65	Portrait	H	8.2263	7.7242	8.250313	7.987247	526.13	500	26.132	P
1	9	101	25	Portrait	H	8.2268	7.7242	8.25031	7.987245	526.13	500	26.13	P
1	9	101	65	Portrait	H	8.2263	7.7232	8.24931	7.986245	526.13	500	26.13	P
1	9	102	25	Portrait	H	8.2263	7.7242	8.25031	7.987245	526.13	500	26.13	P
1	9	102	65	Portrait	H	8.2263	7.7242	8.25031	7.987245	526.13	500	26.13	P
1	9	103	25	Portrait	H	8.2268	7.7242	8.25031	7.987245	526.13	500	26.13	P
1	9	103	125	Portrait	H	8.2268	7.7247	8.25031	7.987495	525.63	500	25.63	P
1	9	202	625	Portrait	H	8.2263	7.7243	8.25032	7.987285	526.07	500	26.07	P
1	9	402	445	Portrait	H	8.2263	7.7242	8.25031	7.987245	526.13	500	26.13	P
1	9	501	0	Portrait	H	8.2263	7.7242	8.25031	7.987245	526.13	500	26.13	P
1	9	503	0	Portrait	H	8.2263	7.7242	8.25031	7.987245	526.13	500	26.13	P
1	9	601	0	Portrait	H	8.2268	7.7242	8.25031	7.987245	526.13	500	26.13	P
1	9	605	0	Portrait	H	8.2263	7.7242	8.25031	7.987245	526.13	500	26.13	P
1	9	607	0	Portrait	H	8.2263	7.7242	8.25031	7.987245	526.13	500	26.13	P
1	9	701	0	Portrait	H	8.2263	7.7232	8.25131	7.987245	528.13	500	28.13	P
1	9	702	0	Portrait	H	8.2263	7.7232	8.25131	7.987245	528.13	500	28.13	P
1	9	703	0	Portrait	H	8.2263	7.7232	8.25631	7.989745	533.13	500	33.13	P
1	9	704	0	Portrait	H	8.2263	7.7232	8.26582	7.9945	542.64	500	42.64	P
1	9	705	0	Portrait	H	8.2258	7.7232	8.25481	7.988995	531.63	500	31.63	P
1	9	706	0	Portrait	H	8.2263	7.7232	8.27182	7.9975	548.64	500	48.64	P
1	9	405	4093	Portrait	H	8.2263	7.7177	8.26432	7.991	546.64	500	46.64	P
1	9	407	4093	Portrait	H	8.2268	7.7242	8.26282	7.9935	538.64	500	38.64	P
1	9	801	0	Portrait	H	8.2258	7.7232	8.282821	8.003001	559.64	500	59.64	P
1	9	802	0	Portrait	H	8.2263	7.7157	8.270818	7.9932485	555.14	500	55.139	P
1	9	803	0	Portrait	H	8.2258	7.7157	8.271318	7.9934985	555.64	500	55.639	P
1	9	804	0	Portrait	H	8.2263	7.7157	8.266817	7.991248	551.14	500	51.138	P
1	9	805	0	Portrait	H	8.2263	7.7157	8.270818	7.9932485	555.14	500	55.139	P
1	9	806	0	Portrait	H	8.2263	7.7157	8.274319	7.994999	558.64	500	58.64	P
1	9	807	0	Portrait	H	8.2263	7.7097	8.282824	7.996252	573.14	500	73.144	P
1	9	808	0	Portrait	H	8.2258	7.7087	8.270818	7.9897475	562.14	500	62.141	P
1	9	809	0	Portrait	H	8.2263	7.7077	8.282821	7.995249	575.14	500	75.144	P
1	9	80A	0	Portrait	H	8.2263	7.7157	8.266817	7.991248	551.14	500	51.138	P
1	9	80B	0	Portrait	H	8.2263	7.7077	8.282824	7.995252	575.14	500	75.144	P
1	9	80C	0	Portrait	H	8.22625	7.715679	8.282821	7.99925	567.142	500	67.142	P

ANT	CH	CF	PL	EUT Orientation	Ant. Polarity	FM (GHz)	FL (GHz)	FH (GHz)	FC (GHz)	OBW (MHz)	Min. OBW (MHz)	OBW Margin (MHz)	OBW Pass/Fail
2	5	0	25	Portrait	H	6.7288	6.2267	6.752814	6.489748	526.13	500	26.132	P
2	5	1	45	Portrait	H	6.7288	6.2267	6.752814	6.489748	526.13	500	26.132	P
2	5	9	125	Portrait	H	6.7288	6.2282	6.751313	6.4897475	523.13	500	23.131	P
2	5	10	25	Portrait	H	6.7288	6.2267	6.752814	6.489748	526.13	500	26.132	P
2	5	11	25	Portrait	H	6.7288	6.2267	6.752814	6.489748	526.13	500	26.132	P
2	5	11	65	Portrait	H	6.7288	6.2267	6.752814	6.489748	526.13	500	26.132	P
2	5	101	25	Portrait	H	6.7288	6.2267	6.752814	6.489748	526.13	500	26.132	P
2	5	101	65	Portrait	H	6.2503	6.2264	6.75231	6.48935	525.92	500	25.92	P
2	5	102	25	Portrait	H	6.2503	6.2256	6.75246	6.489045	526.83	500	26.83	P
2	5	102	65	Portrait	H	6.2503	6.2262	6.75231	6.489245	526.13	500	26.13	P
2	5	103	25	Portrait	H	6.2503	6.2256	6.75231	6.48897	526.68	500	26.68	P
2	5	103	125	Portrait	H	6.2508	6.2256	6.75231	6.48897	526.68	500	26.68	P
2	5	202	625	Portrait	H	6.2508	6.2262	6.75231	6.489245	526.13	500	26.13	P
2	5	402	445	Portrait	H	6.2503	6.2262	6.75231	6.489246	526.13	500	26.128	P
2	5	501	0	Portrait	H	6.2508	6.2262	6.75231	6.489245	526.13	500	26.13	P
2	5	503	0	Portrait	H	6.2503	6.2263	6.75231	6.489285	526.05	500	26.05	P
2	5	601	0	Portrait	H	6.2503	6.2262	6.75231	6.489246	526.13	500	26.128	P
2	5	605	0	Portrait	H	6.2503	6.2262	6.75231	6.489245	526.13	500	26.13	P
2	5	607	0	Portrait	H	6.2508	6.2262	6.75231	6.489245	526.13	500	26.13	P
2	5	701	0	Portrait	H	6.2508	6.2247	6.75331	6.488995	528.63	500	28.63	P
2	5	702	0	Portrait	H	6.2508	6.2222	6.75331	6.487745	531.13	500	31.13	P
2	5	703	0	Portrait	H	6.4388	6.2122	6.75331	6.482745	541.13	500	41.13	P
2	5	704	0	Portrait	H	6.4343	6.2222	6.75331	6.487745	531.13	500	31.13	P
2	5	705	0	Portrait	H	6.4433	6.2152	6.75331	6.484245	538.13	500	38.13	P
2	5	706	0	Portrait	H	6.4348	6.2118	6.75193	6.481865	540.13	500	40.13	P
2	5	405	4093	Portrait	H	6.4273	6.2187	6.75231	6.485495	533.63	500	33.63	P
2	5	407	4093	Portrait	H	6.4578	6.2267	6.75181	6.489246	525.13	500	25.128	P
2	5	801	0	Portrait	H	6.4273	6.2252	6.75281	6.488995	527.63	500	27.63	P
2	5	802	0	Portrait	H	6.4273	6.2257	6.762915	6.494298	537.23	500	37.234	P
2	5	803	0	Portrait	H	6.4273	6.2257	6.761315	6.493498	535.63	500	35.634	P
2	5	804	0	Portrait	H	6.4273	6.2262	6.759815	6.4929985	533.63	500	33.633	P
2	5	805	0	Portrait	H	6.4273	6.2262	6.761316	6.493749	535.13	500	35.134	P
2	5	806	0	Portrait	H	6.2257	6.4273	6.962884	6.695067	535.63	500	35.634	P
2	5	807	0	Portrait	H	6.4273	6.2262	6.753314	6.489748	527.13	500	27.132	P
2	5	808	0	Portrait	H	6.4103	6.2262	6.761316	6.493749	535.13	500	35.134	P
2	5	809	0	Portrait	H	6.4273	6.2262	6.757315	6.4917485	531.13	500	31.133	P
2	5	80A	0	Portrait	H	6.4273	6.2262	6.759815	6.4929985	533.63	500	33.633	P
2	5	80B	0	Portrait	H	6.5518	6.2262	6.767817	6.4969995	541.64	500	41.635	P
2	5	80C	0	Portrait	H	6.53475	6.226182	6.758315	6.4922485	532.133	500	32.133	P

ANT	CH	CF	PL	EUT Orientation	Ant. Polarity	FM (GHz)	FL (GHz)	FH (GHz)	FC (GHz)	OBW (MHz)	Min. OBW (MHz)	OBW Margin (MHz)	OBW Pass/Fail
2	9	0	25	Flatbed	H	8.2268	7.7242	8.250309	7.9872445	526.13	500	26.129	P
2	9	1	45	Flatbed	H	8.2508	7.7724	8.2985471	8.0354826	526.13	500	26.129	P
2	9	9	125	Flatbed	H	8.2263	7.7257	8.248812	7.9872465	523.13	500	23.131	P
2	9	10	25	Flatbed	H	8.2268	7.7242	8.25031	7.987245	526.13	500	26.13	P
2	9	11	25	Flatbed	H	8.2268	7.7241	8.25045	7.98729	526.32	500	26.32	P
2	9	11	65	Flatbed	H	8.2263	7.7242	8.25031	7.987245	526.13	500	26.13	P
2	9	101	25	Flatbed	H	8.2268	7.7242	8.25031	7.987245	526.13	500	26.13	P
2	9	101	65	Flatbed	H	8.2263	7.7247	8.25031	7.987495	525.63	500	25.63	P
2	9	102	25	Flatbed	H	8.2263	7.7242	8.250313	7.987247	526.13	500	26.132	P
2	9	102	65	Flatbed	H	8.2263	7.7242	8.250313	7.987247	526.13	500	26.132	P
2	9	103	25	Flatbed	H	8.2263	7.7242	8.250313	7.987247	526.13	500	26.132	P
2	9	103	125	Flatbed	H	8.2263	7.7242	8.250313	7.987247	526.13	500	26.132	P
2	9	202	625	Flatbed	H	8.2268	7.7242	8.250313	7.987247	526.13	500	26.132	P
2	9	402	445	Flatbed	H	8.2268	7.7242	8.250313	7.987247	526.13	500	26.132	P
2	9	501	0	Flatbed	H	8.2263	7.7243	8.25032	7.987285	526.07	500	26.07	P
2	9	503	0	Flatbed	H	8.2268	7.7242	8.25031	7.987245	526.13	500	26.13	P
2	9	601	0	Flatbed	H	8.2268	7.7242	8.25031	7.987245	526.13	500	26.13	P
2	9	605	0	Flatbed	H	8.2263	7.7247	8.25031	7.987495	525.63	500	25.63	P
2	9	607	0	Flatbed	H	8.2268	7.7242	8.25031	7.987245	526.13	500	26.13	P
2	9	701	0	Flatbed	H	8.2263	7.7223	8.251313	7.9867815	529.06	500	29.063	P
2	9	702	0	Flatbed	H	8.2263	7.7218	8.25331	7.98753	531.56	500	31.56	P
2	9	703	0	Flatbed	H	8.2263	7.7212	8.25831	7.989745	537.13	500	37.13	P
2	9	704	0	Flatbed	H	8.2258	7.7232	8.26632	7.99475	543.14	500	43.14	P
2	9	705	0	Flatbed	H	8.2263	7.7132	8.25431	7.983745	541.13	500	41.13	P
2	9	706	0	Flatbed	H	8.2263	7.7077	8.26182	7.98475	554.14	500	54.14	P
2	9	405	4093	Flatbed	H	8.2263	7.7176	8.26432	7.99097	546.70	500	46.7	P
2	9	407	4093	Flatbed	H	8.2263	7.7202	8.25381	7.986995	533.63	500	33.63	P
2	9	801	0	Flatbed	H	8.2263	7.7117	8.26032	7.986	548.64	500	48.64	P
2	9	802	0	Flatbed	H	8.2263	7.7227	8.25632	7.9895	533.64	500	33.64	P
2	9	803	0	Flatbed	H	8.2263	7.7232	8.26032	7.99175	537.14	500	37.14	P
2	9	804	0	Flatbed	H	8.2263	7.7072	8.26632	7.98675	559.14	500	59.14	P
2	9	805	0	Flatbed	H	8.2263	7.7007	8.273818	7.9872465	573.14	500	73.143	P
2	9	806	0	Flatbed	H	7.7488	7.7032	8.271318	7.987247	568.14	500	68.142	P
2	9	807	0	Flatbed	H	8.0498	7.7047	8.265816	7.985246	561.14	500	61.14	P
2	9	808	0	Flatbed	H	7.9078	7.7047	8.266316	7.985496	561.64	500	61.64	P
2	9	809	0	Flatbed	H	7.9078	7.7047	8.258314	7.981495	553.64	500	53.638	P
2	9	80A	0	Flatbed	H	7.9873	7.7057	8.259314	7.982495	553.64	500	53.638	P
2	9	80B	0	Flatbed	H	7.9873	7.7077	8.259315	7.983496	551.64	500	51.638	P
2	9	80C	0	Flatbed	H	7.98675	7.704676	8.258314	7.981495	553.638	500	53.638	P

OPERATING BANDWIDTH





9.3. PEAK POWER AND MAXIMUM AVERAGE EMISSIONS

LIMITS

FCC

15.519 (e) There is a limit on the peak level of the emissions contained within a 50 MHz bandwidth centered on the frequency at which the highest radiated emission occurs, f_M . That limit is 0 dBm EIRP.

15.519 (c) The radiated emissions above 960 MHz from a device operating under the provisions of this section shall not exceed the following average limits when measured using a resolution bandwidth of 1 MHz:

Frequency in MHz	EIRP in dBm
3100 - 10600	-41.3

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Annex, Section 4 (c) Peak measurements shall be made in addition to average measurements. Transmissions shall not exceed 0 dBm e.i.r.p. in any 50 MHz bandwidth when the average limit is -41.3 dBm/MHz.

Section 5.3.1 (d) Radiated emissions above 960 MHz from a device shall not exceed the following average limits when measured using a resolution bandwidth of 1 MHz.

Frequency	E.I.R.P. in a Resolution Bandwidth of 1 MHz
4.75 – 10.6 GHz	-41.3

TEST PROCEDURE

ANSI C63.10 Clause 10.3

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Peak EIPR power is measured using RBW of 50 MHz.

The radiated emissions of 6 - 9 GHz frequency band are performed at 3-meter test distance.

Tabulated data provides the test results of all available test configurations. Plots for ANT1, CONFIG 9, Payload 125 on CH9 and ANT2, CONFIG 9, Payload 125 on CH5 and CH9 peak and maximum average power measurements are presented and same measurement settings apply to the rest of test configurations.

RESULTS

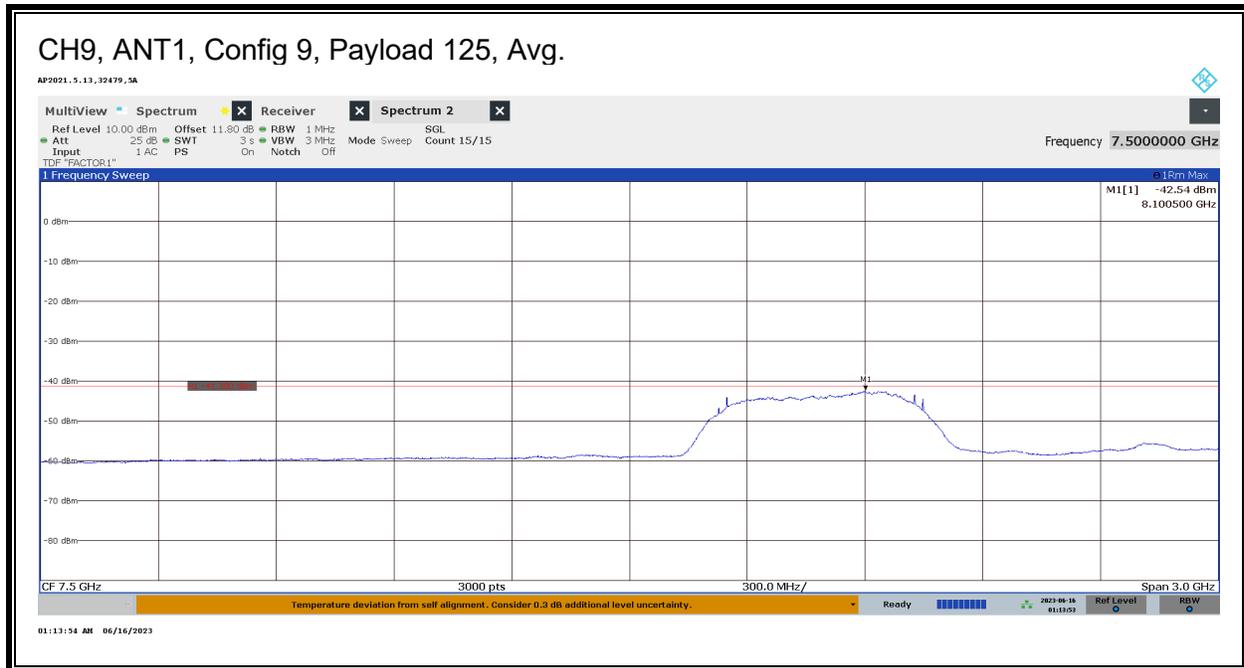
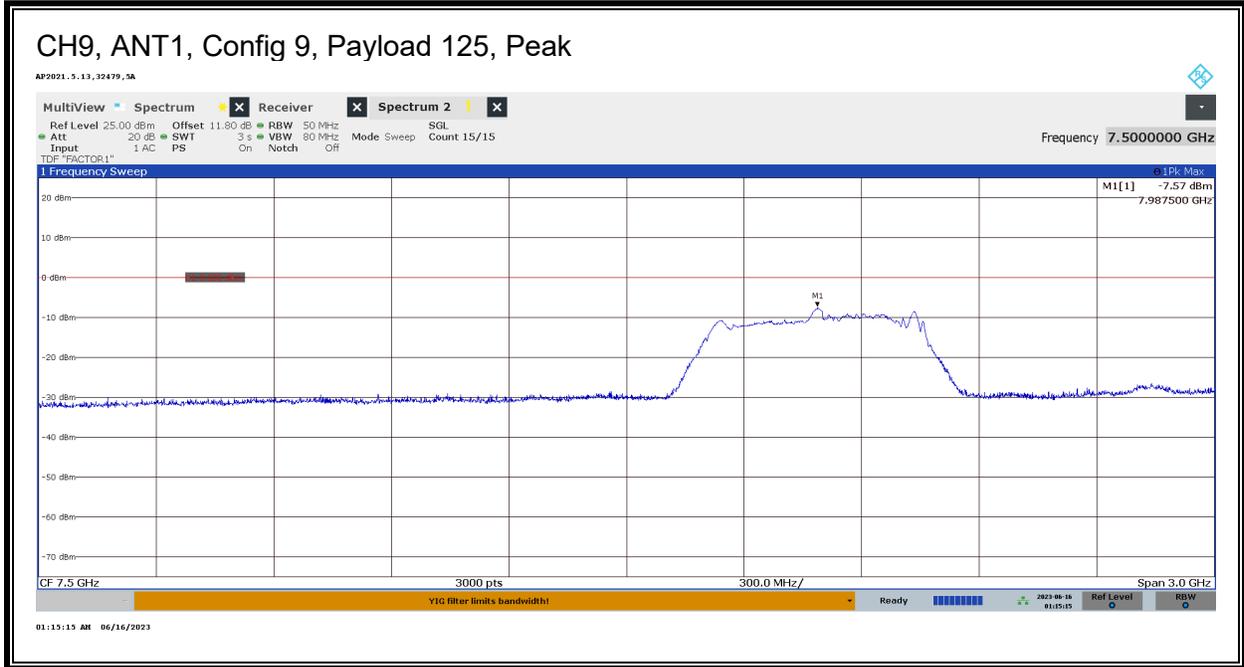
Employee IDs: 32188, 32305, 32479
Location: Chamber 5A
Test Date: 6/12/23 – 6/18/23

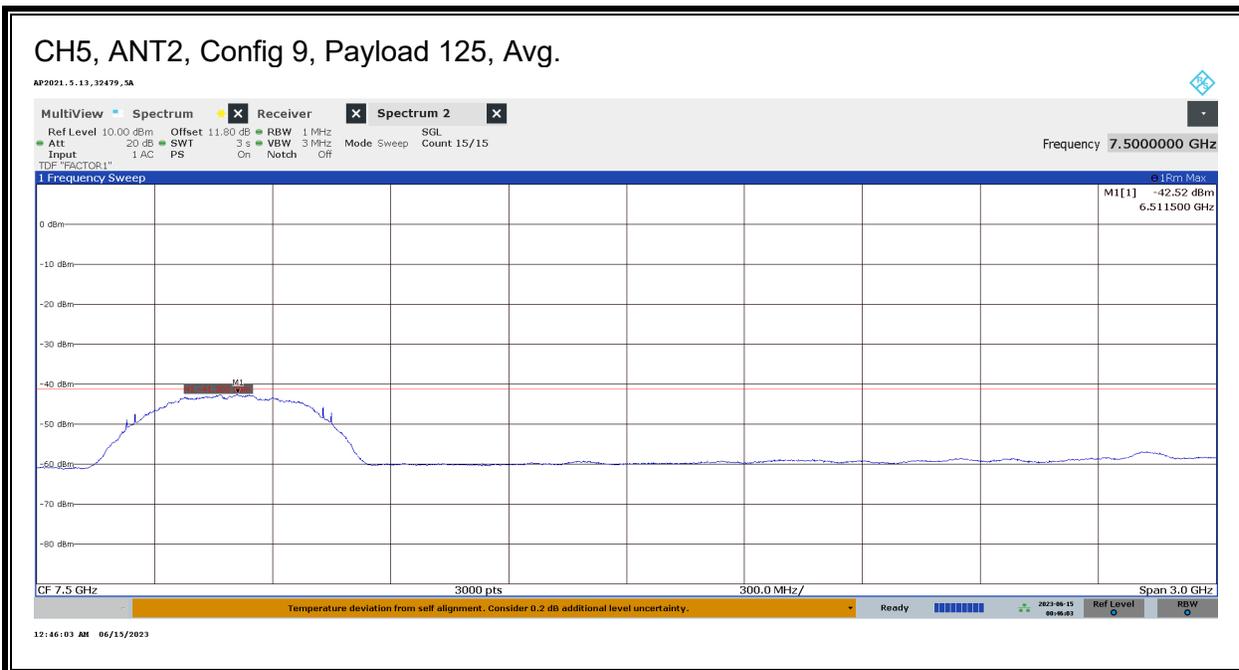
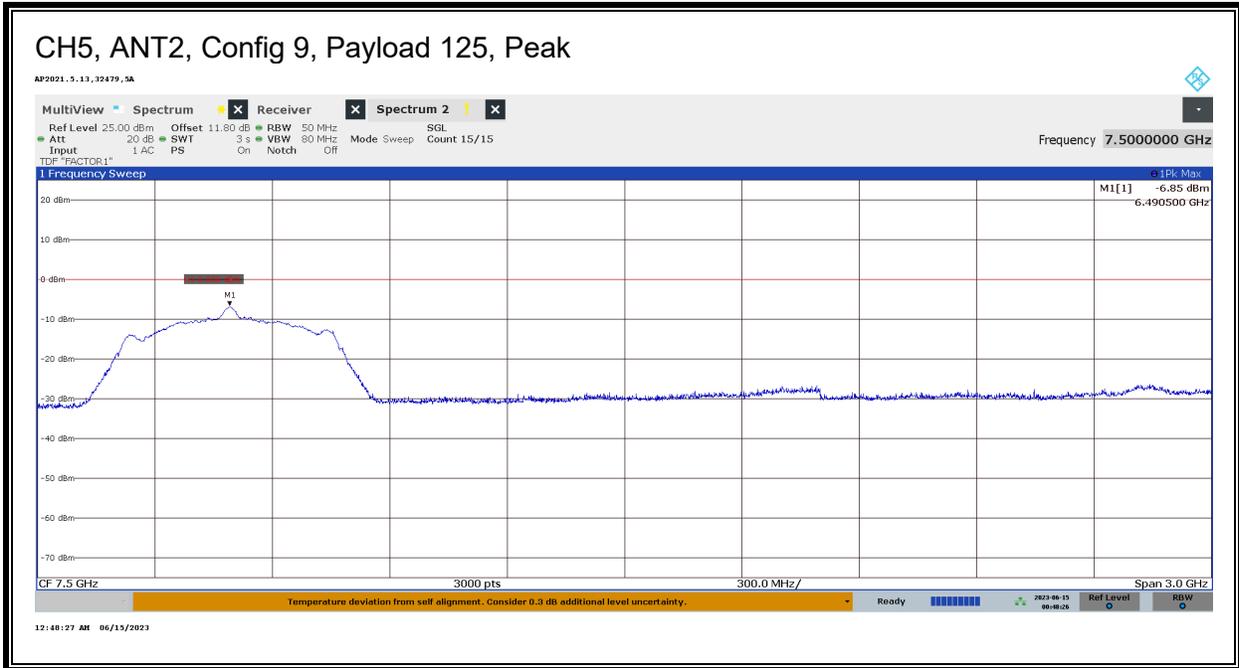
ANT	CH	CF	PL	EUT Orientation	Ant. Polarity	Peak EIRP Power				Average EIRP Power			
						FM (GHz)	Adj Pk	Pk Limit	Margin (dB)	FM (GHz)	Adj Av	Avg Limit	Margin (dB)
1	9	0	25	Portrait	H	8.2345	-1.88	0	-1.88	8.0965	-42.551	-41.3	-1.25
1	9	1	45	Portrait	H	8.2335	-1.36	0	-1.36	8.1275	-42.57	-41.3	-1.27
1	9	9	125	Portrait	H	7.9875	-7.57	0	-7.57	8.1005	-42.54	-41.3	-1.24
1	9	10	25	Portrait	H	8.2355	-2.36	0	-2.36	8.0965	-42.44	-41.3	-1.14
1	9	11	25	Portrait	H	8.2335	-1.20	0	-1.20	8.0975	-42.91	-41.3	-1.61
1	9	11	65	Portrait	H	7.9875	-2.44	0	-2.44	8.0965	-42.51	-41.3	-1.21
1	9	101	25	Portrait	H	8.2345	-1.16	0	-1.16	8.0975	-42.96	-41.3	-1.66
1	9	101	65	Portrait	H	8.2375	-1.23	0	-1.23	8.0805	-42.54	-41.3	-1.24
1	9	102	25	Portrait	H	8.2365	-1.45	0	-1.45	8.0885	-44.40	-41.3	-3.10
1	9	102	65	Portrait	H	8.2355	-1.42	0	-1.42	8.0805	-42.57	-41.3	-1.27
1	9	103	25	Portrait	H	8.2365	-1.08	0	-1.08	8.0965	-42.52	-41.3	-1.22
1	9	103	125	Portrait	H	8.2265	-4.26	0	-4.26	8.0805	-42.47	-41.3	-1.17
1	9	202	625	Portrait	H	8.2365	-9.89	0	-9.89	8.1015	-42.31	-41.3	-1.01
1	9	402	445	Portrait	H	8.2335	-8.64	0	-8.64	8.1545	-42.63	-41.3	-1.33
1	9	501	0	Portrait	H	8.2345	-1.25	0	-1.25	8.1165	-45.61	-41.3	-4.31
1	9	503	0	Portrait	H	8.2355	-1.32	0	-1.32	8.2265	-45.64	-41.3	-4.34
1	9	601	0	Portrait	H	8.2345	-1.16	0	-1.16	8.2265	-45.22	-41.3	-3.92
1	9	605	0	Portrait	H	8.2345	-1.27	0	-1.27	8.2275	-45.33	-41.3	-4.03
1	9	607	0	Portrait	H	8.2355	-1.25	0	-1.25	8.2275	-45.19	-41.3	-3.89
1	9	701	0	Portrait	H	8.2335	-3.33	0	-3.33	8.1055	-42.64	-41.3	-1.34
1	9	702	0	Portrait	H	8.2345	-3.30	0	-3.30	8.1535	-42.37	-41.3	-1.07
1	9	703	0	Portrait	H	8.2355	-3.39	0	-3.39	8.1625	-42.56	-41.3	-1.26
1	9	704	0	Portrait	H	8.2355	-5.30	0	-5.30	8.1115	-42.35	-41.3	-1.05
1	9	705	0	Portrait	H	8.1075	-2.49	0	-2.49	8.1505	-42.31	-41.3	-1.01
1	9	706	0	Portrait	H	8.2355	-3.94	0	-3.94	8.1505	-42.51	-41.3	-1.21
1	9	405	4093	Portrait	H	8.2335	-11.97	0	-11.97	8.1485	-42.54	-41.3	-1.24
1	9	407	4093	Portrait	H	8.2335	-12.13	0	-12.13	8.1495	-42.65	-41.3	-1.35
1	9	801	0	Portrait	H	8.2315	-2.03	0	-2.03	8.1125	-42.58	-41.3	-1.28
1	9	802	0	Portrait	H	8.2325	-2.30	0	-2.30	8.1495	-42.75	-41.3	-1.45
1	9	803	0	Portrait	H	8.2325	-1.40	0	-1.40	8.1495	-42.71	-41.3	-1.41
1	9	804	0	Portrait	H	8.2325	-5.01	0	-5.01	8.1535	-42.55	-41.3	-1.25
1	9	805	0	Portrait	H	8.2355	-4.96	0	-4.96	8.1435	-42.76	-41.3	-1.46
1	9	806	0	Portrait	H	8.2345	-4.00	0	-4.00	8.1435	-42.52	-41.3	-1.22
1	9	807	0	Portrait	H	8.2335	-2.12	0	-2.12	8.1455	-42.53	-41.3	-1.23
1	9	808	0	Portrait	H	8.2355	-1.64	0	-1.64	8.1015	-42.50	-41.3	-1.20
1	9	809	0	Portrait	H	8.2355	-1.82	0	-1.82	8.0825	-42.63	-41.3	-1.33
1	9	80A	0	Portrait	H	8.2335	-5.04	0	-5.04	8.1455	-42.75	-41.3	-1.45
1	9	80B	0	Portrait	H	8.2345	-4.08	0	-4.08	8.1485	-42.64	-41.3	-1.34
1	9	80C	0	Portrait	H	8.2355	-4.33	0	-4.33	8.1495	-42.58	-41.3	-1.28

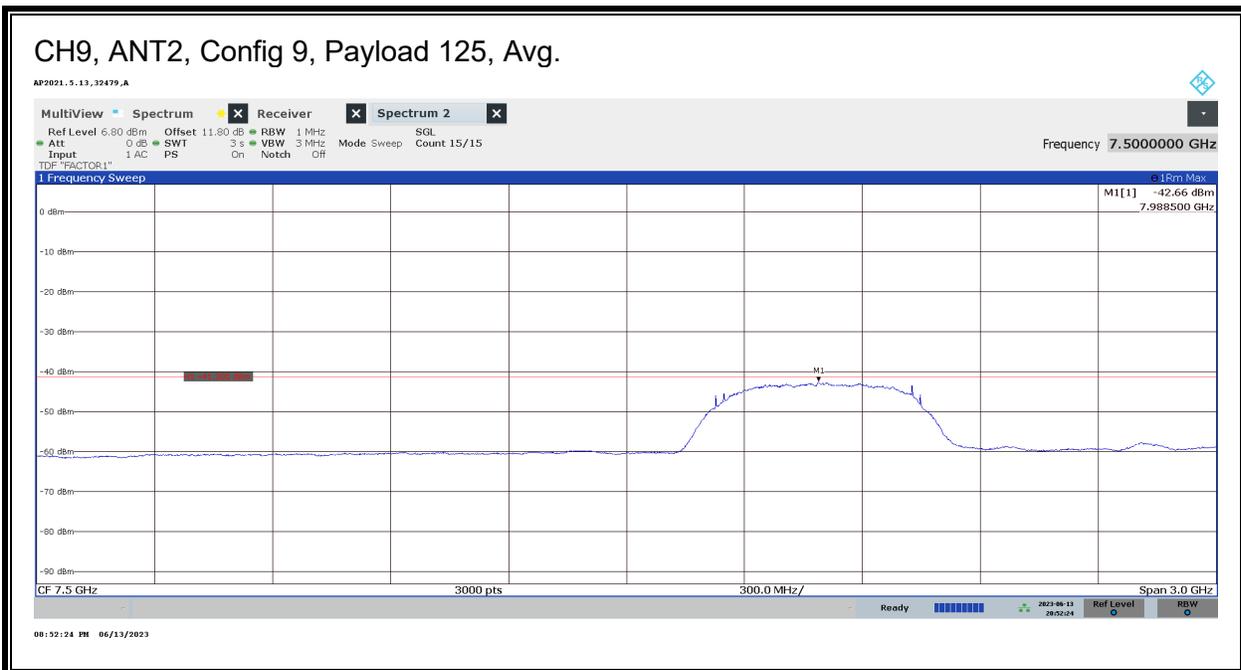
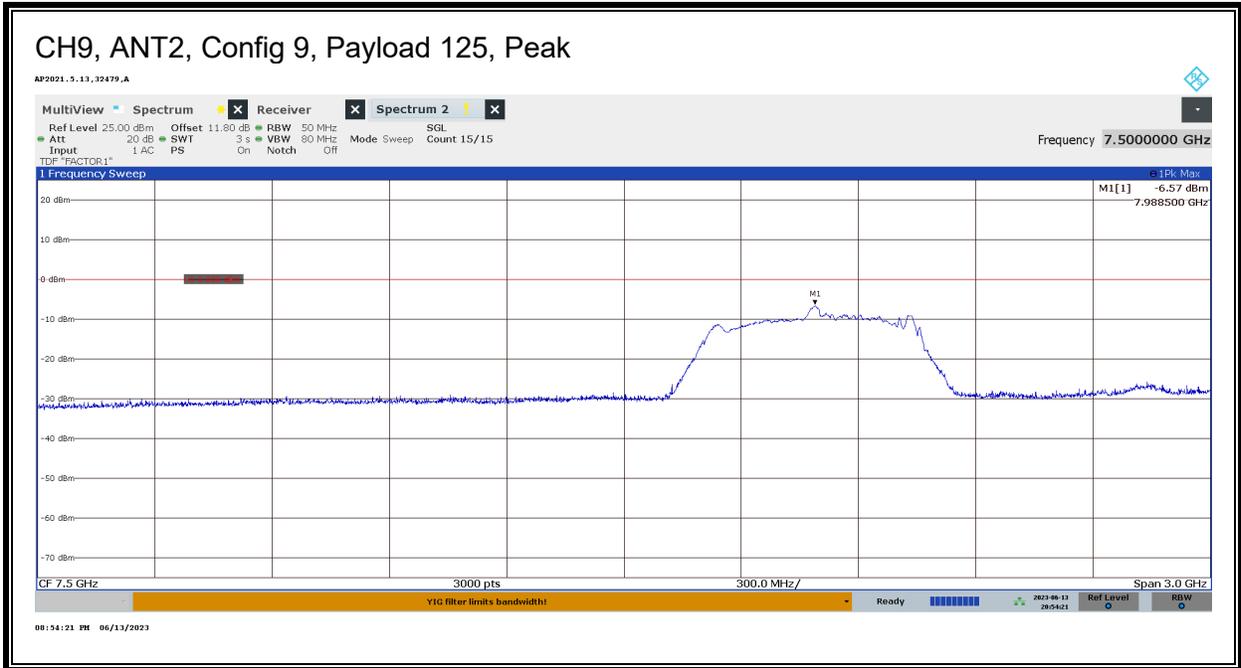
ANT	CH	CF	PL	EUT Orientation	Ant. Polarity	Peak EIRP Power				Average EIRP Power			
						FM (GHz)	Adj Pk	Pk Limit	Margin (dB)	FM (GHz)	Adj Av	Avg Limit	Margin (dB)
2	5	0	25	Portrait	H	6.5015	-1.61	0	-1.61	6.5105	-42.61	-41.3	-1.31
2	5	1	45	Portrait	H	6.5025	-1.10	0	-1.10	6.4585	-42.68	-41.3	-1.38
2	5	9	125	Portrait	H	6.4905	-6.85	0	-6.85	6.5115	-42.52	-41.3	-1.22
2	5	10	25	Portrait	H	6.5025	-1.60	0	-1.60	6.5055	-42.52	-41.3	-1.22
2	5	11	25	Portrait	H	6.5015	-1.12	0	-1.12	6.5395	-43.64	-41.3	-2.34
2	5	11	65	Portrait	H	6.5025	-2.04	0	-2.04	6.4585	-42.67	-41.3	-1.37
2	5	101	25	Portrait	H	6.5015	-1.32	0	-1.32	6.4585	-44.03	-41.3	-2.73
2	5	101	65	Portrait	H	6.4885	-2.15	0	-2.15	6.4385	-42.36	-41.3	-1.06
2	5	102	25	Portrait	H	6.4775	-1.31	0	-1.31	6.4345	-42.72	-41.3	-1.42
2	5	102	65	Portrait	H	6.4895	-2.42	0	-2.42	6.4585	-42.53	-41.3	-1.23
2	5	103	25	Portrait	H	6.4885	-2.85	0	-2.85	6.4345	-42.56	-41.3	-1.26
2	5	103	125	Portrait	H	6.5025	-4.86	0	-4.86	6.4585	-42.46	-41.3	-1.16
2	5	202	625	Portrait	H	6.4905	-15.10	0	-15.10	6.4365	-42.71	-41.3	-1.41
2	5	402	445	Portrait	H	6.3655	-13.56	0	-13.56	6.4295	-42.60	-41.3	-1.30
2	5	501	0	Portrait	H	6.2395	-4.07	0	-4.07	6.4355	-42.70	-41.3	-1.40
2	5	503	0	Portrait	H	6.2375	-4.10	0	-4.10	6.4315	-42.57	-41.3	-1.27
2	5	601	0	Portrait	H	6.2335	-6.84	0	-6.84	6.4335	-42.75	-41.3	-1.45
2	5	605	0	Portrait	H	6.2365	-3.85	0	-3.85	6.4495	-42.66	-41.3	-1.36
2	5	607	0	Portrait	H	6.2375	-4.03	0	-4.03	6.4495	-42.72	-41.3	-1.42
2	5	701	0	Portrait	H	6.4275	-8.63	0	-8.63	6.4275	-42.30	-41.3	-1.00
2	5	702	0	Portrait	H	6.4265	-7.61	0	-7.61	6.4355	-42.54	-41.3	-1.24
2	5	703	0	Portrait	H	6.4275	-7.39	0	-7.39	6.4325	-42.78	-41.3	-1.48
2	5	704	0	Portrait	H	6.4265	-8.20	0	-8.20	6.4285	-42.64	-41.3	-1.34
2	5	705	0	Portrait	H	6.4315	-4.14	0	-4.14	6.4335	-42.68	-41.3	-1.38
2	5	706	0	Portrait	H	6.4335	-5.33	0	-5.33	6.4345	-42.71	-41.3	-1.41
2	5	405	4093	Portrait	H	6.4265	-15.83	0	-15.83	6.4335	-42.46	-41.3	-1.16
2	5	407	4093	Portrait	H	6.4265	-15.43	0	-15.43	6.4355	-42.68	-41.3	-1.38
2	5	801	0	Portrait	H	6.2385	-7.09	0	-7.09	6.4475	-42.35	-41.3	-1.05
2	5	802	0	Portrait	H	6.7365	-7.01	0	-7.01	6.5105	-42.47	-41.3	-1.17
2	5	803	0	Portrait	H	6.7375	-5.71	0	-5.71	6.5105	-42.35	-41.3	-1.05
2	5	804	0	Portrait	H	6.7365	-9.73	0	-9.73	6.4895	-42.48	-41.3	-1.18
2	5	805	0	Portrait	H	6.7365	-9.85	0	-9.85	6.5105	-42.55	-41.3	-1.25
2	5	806	0	Portrait	H	6.7385	-8.52	0	-8.52	6.5105	-42.58	-41.3	-1.28
2	5	807	0	Portrait	H	6.7345	-6.92	0	-6.92	6.4895	-42.78	-41.3	-1.48
2	5	808	0	Portrait	H	6.7395	-6.53	0	-6.53	6.5195	-42.60	-41.3	-1.30
2	5	809	0	Portrait	H	6.7355	-6.34	0	-6.34	6.5195	-42.63	-41.3	-1.33
2	5	80A	0	Portrait	H	6.7385	-9.63	0	-9.63	6.5315	-42.44	-41.3	-1.14
2	5	80B	0	Portrait	H	6.7345	-7.77	0	-7.77	6.5185	-42.50	-41.3	-1.20
2	5	80C	0	Portrait	H	6.7375	-8.03	0	-8.03	6.5265	-42.692	-41.3	-1.392

ANT	CH	CF	PL	EUT Orientation	Ant. Polarity	Peak EIRP Power				Average EIRP Power			
						FM (GHz)	Adj Pk	Pk Limit	Margin (dB)	FM (GHz)	Adj Av	Avg Limit	Margin (dB)
2	9	0	25	Flatbed	H	7.9965	-0.68	0	-0.68	7.9555	-42.52	-41.3	-1.22
2	9	1	45	Flatbed	H	7.9985	-0.70	0	-0.70	7.9550	-42.44	-41.3	-1.14
2	9	9	125	Flatbed	H	7.9885	-6.57	0	-6.57	7.9885	-42.66	-41.3	-1.36
2	9	10	25	Flatbed	H	-7.9875	-1.25	0	-1.25	7.9715	-42.32	-41.3	-1.02
2	9	11	25	Flatbed	H	7.9875	-1.24	0	-1.24	8.0885	-43.86	-41.3	-2.56
2	9	11	65	Flatbed	H	7.9855	-1.86	0	-1.86	8.0805	-42.66	-41.3	-1.36
2	9	101	25	Flatbed	H	7.9865	-1.20	0	-1.20	8.0805	-43.83	-41.3	-2.53
2	9	101	65	Flatbed	H	7.9875	-1.84	0	-1.84	8.0805	-42.51	-41.3	-1.21
2	9	102	25	Flatbed	H	7.9865	-1.35	0	-1.35	8.0885	-44.13	-41.3	-2.83
2	9	102	65	Flatbed	H	7.9865	-1.54	0	-1.54	8.0185	-42.59	-41.3	-1.29
2	9	103	25	Flatbed	H	7.9875	-1.36	0	-1.36	8.0025	-42.50	-41.3	-1.20
2	9	103	125	Flatbed	H	7.9885	-4.06	0	-4.06	8.0185	-42.63	-41.3	-1.33
2	9	202	625	Flatbed	H	8.2315	-12.15	0	-12.15	7.9875	-42.53	-41.3	-1.23
2	9	402	445	Flatbed	H	8.2325	-10.40	0	-10.40	7.9995	-42.67	-41.3	-1.37
2	9	501	0	Flatbed	H	8.2325	-1.38	0	-1.38	7.9625	-44.19	-41.3	-2.89
2	9	503	0	Flatbed	H	8.2275	-1.42	0	-1.42	7.9665	-44.73	-41.3	-3.43
2	9	601	0	Flatbed	H	8.2345	-2.25	0	-2.25	7.9705	-42.44	-41.3	-1.14
2	9	605	0	Flatbed	H	8.2265	-1.24	0	-1.24	7.9705	-43.98	-41.3	-2.68
2	9	607	0	Flatbed	H	8.2275	-1.28	0	-1.28	7.9705	-44.00	-41.3	-2.70
2	9	701	0	Flatbed	H	8.2325	-4.73	0	-4.73	7.9625	-42.72	-41.3	-1.42
2	9	702	0	Flatbed	H	8.2345	-5.21	0	-5.21	7.9605	-42.59	-41.3	-1.29
2	9	703	0	Flatbed	H	8.2335	-5.14	0	-5.14	7.9995	-42.64	-41.3	-1.34
2	9	704	0	Flatbed	H	8.1055	-7.09	0	-7.09	7.9875	-42.60	-41.3	-1.30
2	9	705	0	Flatbed	H	8.1085	-2.82	0	-2.82	7.9635	-42.56	-41.3	-1.26
2	9	706	0	Flatbed	H	8.1045	-3.67	0	-3.67	7.9625	-42.56	-41.3	-1.26
2	9	405	4093	Flatbed	H	8.2285	-13.32	0	-13.32	7.9625	-42.42	-41.3	-1.12
2	9	407	4093	Flatbed	H	8.2265	-12.65	0	-12.65	7.9625	-42.64	-41.3	-1.34
2	9	801	0	Flatbed	H	8.2335	-3.10	0	-3.10	7.9875	-42.39	-41.3	-1.09
2	9	802	0	Flatbed	H	8.2345	-3.19	0	-3.19	7.9655	-42.62	-41.3	-1.32
2	9	803	0	Flatbed	H	8.2325	-2.40	0	-2.40	7.9655	-42.79	-41.3	-1.49
2	9	804	0	Flatbed	H	8.2335	-6.12	0	-6.12	7.9875	-42.69	-41.3	-1.39
2	9	805	0	Flatbed	H	8.2335	-6.38	0	-6.38	8.0085	-42.63	-41.3	-1.33
2	9	806	0	Flatbed	H	8.2325	-5.21	0	-5.21	8.0085	-42.67	-41.3	-1.37
2	9	807	0	Flatbed	H	8.2335	-4.02	0	-4.02	7.9875	-42.61	-41.3	-1.31
2	9	808	0	Flatbed	H	8.2265	-3.53	0	-3.53	7.9975	-42.62	-41.3	-1.32
2	9	809	0	Flatbed	H	8.2325	-3.65	0	-3.65	7.9975	-42.58	-41.3	-1.28
2	9	80A	0	Flatbed	H	8.2365	-7.05	0	-7.05	7.9875	-42.65	-41.3	-1.35
2	9	80B	0	Flatbed	H	8.2345	-5.33	0	-5.33	7.9505	-42.56	-41.3	-1.26
2	9	80C	0	Flatbed	H	8.2325	-5.54	0	-5.54	7.9875	-42.62	-41.3	-1.32

PEAK POWER AND MAXIMUM AVERAGE EMISSIONS







9.4. CESSATION TIME

LIMITS

FCC

§15.519(a)(1) A UWB device operating under the provisions of this section shall transmit only when it is sending information to an associated receiver. The UWB intentional radiator shall cease transmission within 10 seconds unless it receives an acknowledgement from the associated receiver that its transmission is being received. An acknowledgment of reception must continue to be received by the UWB intentional radiator at least every 10 seconds or the UWB device must cease transmitting.

RSS-220

Section 5.3.1 (b) The device is to transmit only when it is sending information to an associated receiver. The device shall cease transmission of information within 10 seconds unless it receives an acknowledgement from the associated receiver that its transmission is being received. An acknowledgment of reception must continue to be received by the UWB device at least every 10 seconds or the UWB device shall cease transmitting any information other than periodic signals used for the establishment or re-establishment of a communication link with an associated receiver.

TEST PROCEDURES

* Initiator = EUT

* Responder = associated receiver

Transmissions are monitored for two cases:

1. The Initiator ends the UWB link.
2. The Responder ends the UWB link.

RESULTS

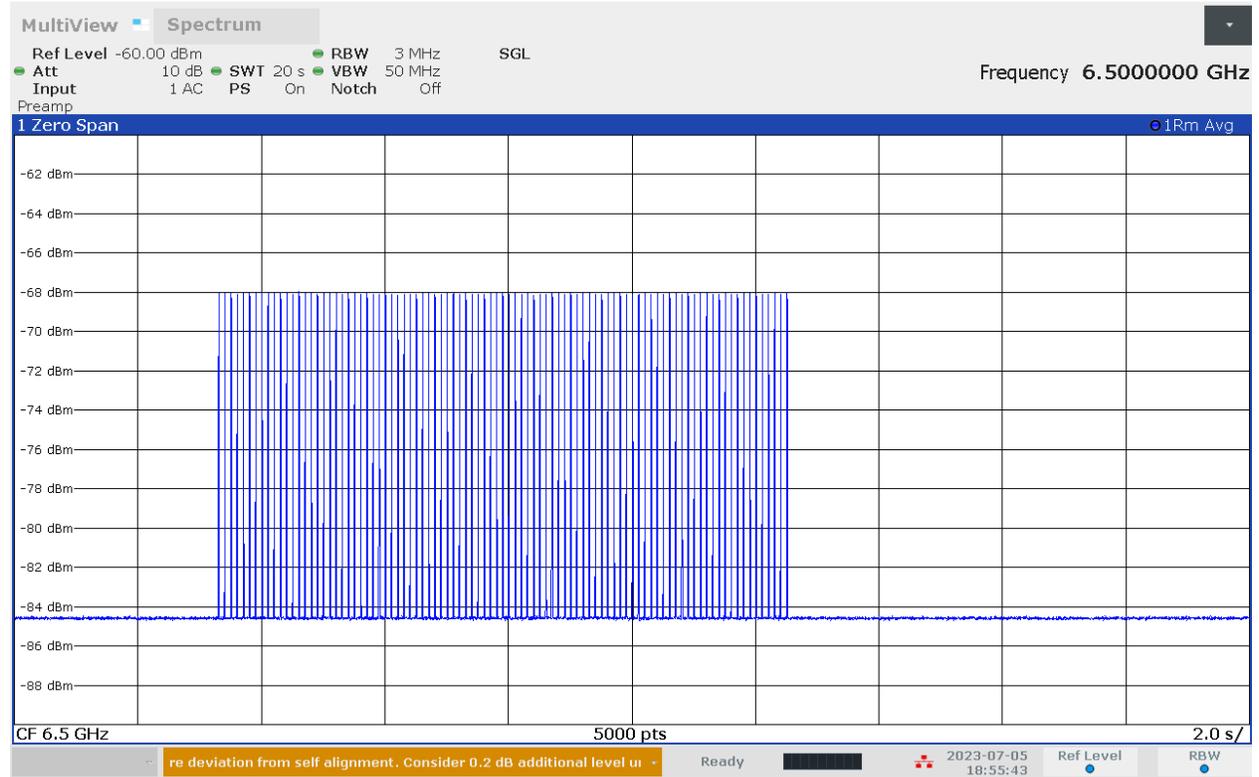
Employee ID: 24943
Location: Chamber F
Test Date: 7/5/23

Signal Levels on all Plots

- Initiator is Low Amplitude
- Responder is High Amplitude

Case 1: Initiator ends the UWB link

RP2021.2.16, 24943, 2F



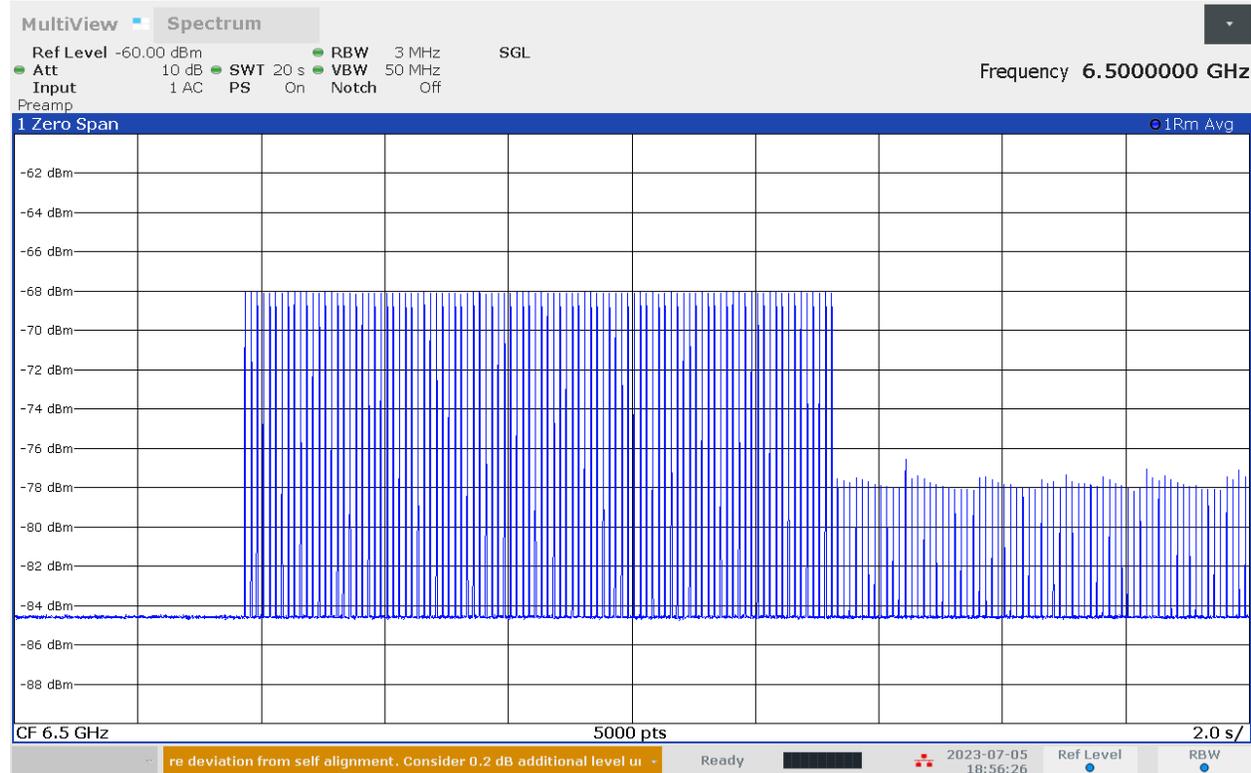
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RESULT

- All devices, including the Responder, cease transmissions

Case 2: Responder ends the UWB link

AP2021.2.16, 24943, 2F



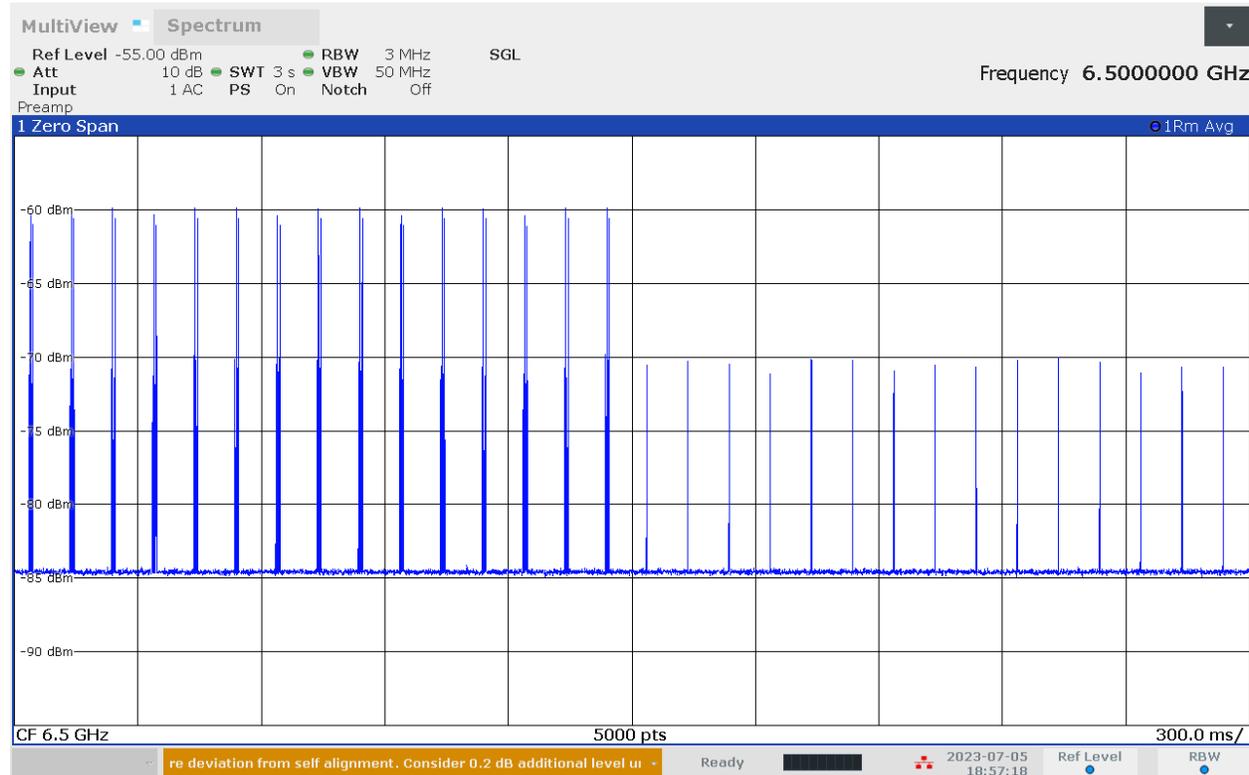
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RESULT

- Responder ends the link, Initiator stops Acknowledgements but continues Polling.
 - Responder ceases transmissions, does not respond to Polling Signals.

Zoom-in Plot during On-Off Transition

RP2021.2.16, 24943, 2F



06:57:19 PM 07/05/2023

RESULT

- Shows Link Traffic, Acknowledgements and Polling Signals while Link is established
- Shows Polling Signals after Link has ended

9.5. EMISSIONS BELOW 960 MHz

LIMITS

FCC

§15.519 (c) The radiated emissions at or below 960 MHz from a device operating under the provisions of this section shall not exceed the emission levels in §15.209. The radiated emissions above 960 MHz from a device operating under the provisions of this section shall not exceed the following average limits when measured using a resolution bandwidth of 1 MHz:

15.209 (a)

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

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Section 3.4 Radiated emissions at or below 960 MHz for all subclasses of UWB device shall not exceed the following limits. Measurements of radiated emissions at and below 960 MHz are to be made using a CISPR quasi-peak detector. CISPR measurement bandwidth specifications are to be used.

Frequency (MHz)	Field Strength (Microvolts/m)	Measurement Distance (Metres)	E.i.r.p. (dBmW)
0.009-0.490	2,400/F (F in kHz)	300	10 log (17.28 / F ²) (F in kHz)
0.490-1.705	24,000/F (F in kHz)	30	10 log (17.28 / F ²) (F in kHz)
1.705-30	30	30	-45.7
30-88	100	3	-55.2
88-216	150	3	-51.7
216-960	200	3	-49.2

Note: The emission limits for the bands 9-90 kHz and 110-490 kHz are based on measurements employing an average emissions detector.

TEST PROCEDURE

ANSI C63.10 Clause 10.2

RSS-220 Annex

Measurements are made with the antenna feeding a spectrum analyzer via a preamplifier and cables, at a maximum distance of 3m from the EUT.

For below 30 MHz testing, investigation was done on three antenna orientations: RX antenna Face-on, Face-off and horizontal (parallel to ground). The worst-case configurations were determined on RX antenna Face-on and Face-off; therefore, all final tests were performed using these two orientations.

Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30 meter 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.

A final test is made at any frequencies at which emissions are found. During this final scan, the antenna is kept no further from the EUT than the maximum distance calculated for each band that yields a minimum system noise floor.

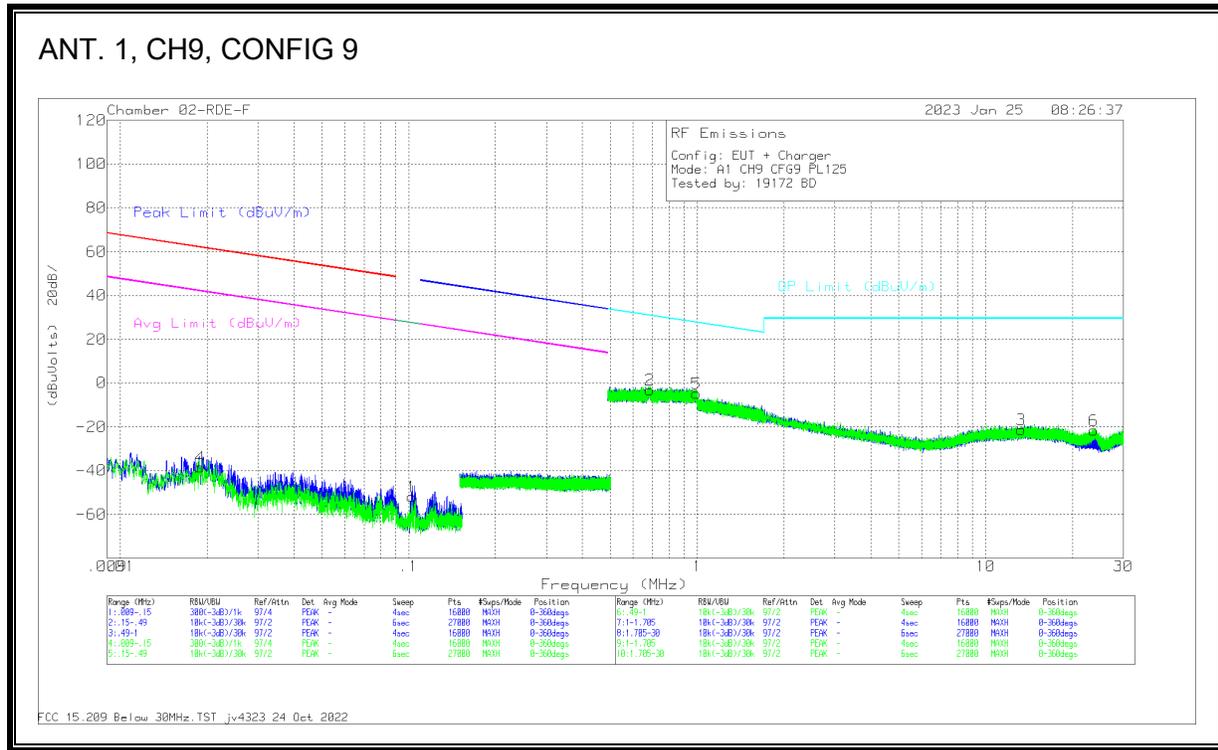
RESULTS

Emissions Summary

Employee IDs: 26051, 19172, 31300, 20737
Location: Chamber F
Test Date: 1/20/23 – 1/25/23

Ant	CH	Config	Payload	Power Setting	Frequency Range	
					9 kHz - 30 MHz	30 - 960 MHz
1	9	9	125	Max	PASS	PASS
2	5	9	125	Max	PASS	PASS
2	9	9	125	Max	PASS	PASS

9.5.1. EMISSIONS, 9 kHz – 30 MHz



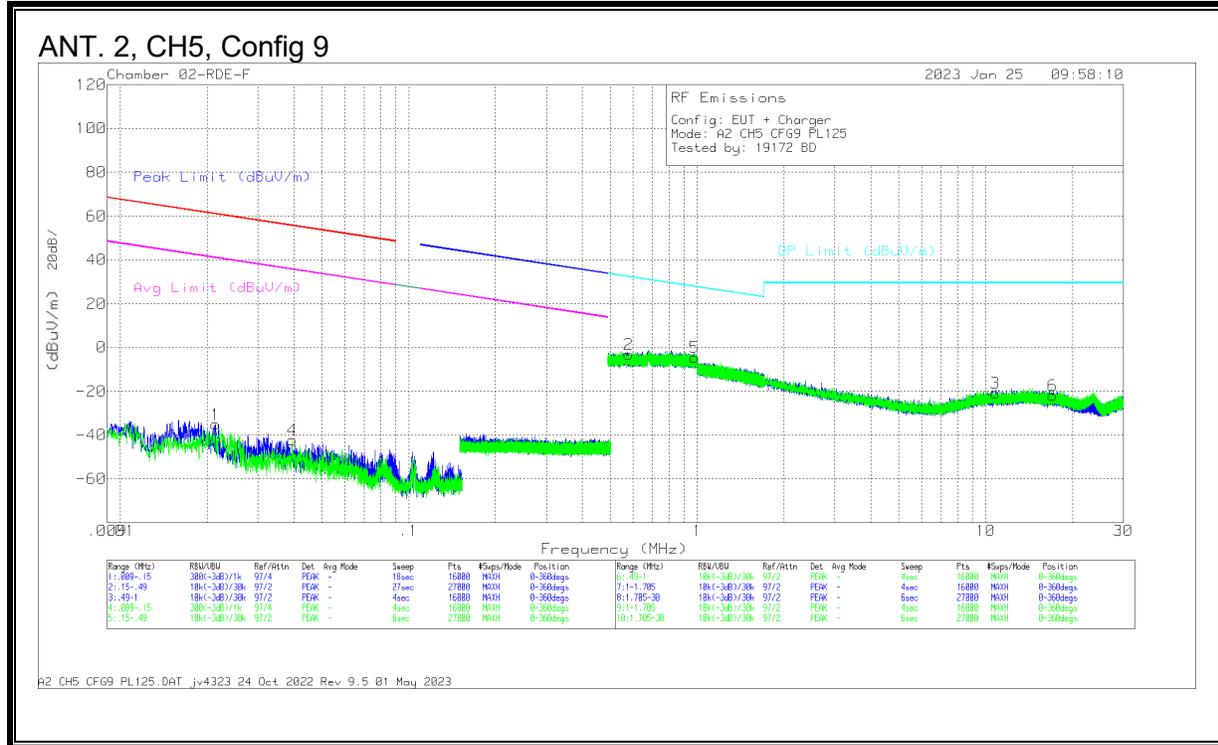
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna E(ACF)	Chamber F port 0 loss	Dist Corr 300m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Antenna Face
1	.1027	4.87	Pk	55.7	-32.5	-80	-51.93	-	-	-	-	27.38	-79.31	0-360	On
4	.019	14.06	Pk	59.3	-31.7	-80	-38.34	62.01	-100.35	42.01	-80.35	-	-	0-360	Off

Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna E(ACF)	Chamber F port 0 loss	Dist Corr (dB) 40Log	Corrected Reading (dBuVolts)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Antenna Face
2	.6856	13.16	Pk	56.3	-32.5	-40	-3.04	30.89	-33.93	0-360	On
3	13.3022	16.94	Pk	33.9	-32.2	-40	-21.36	29.5	-50.86	0-360	On
5	.9929	11.26	Pk	56.4	-32.5	-40	-4.84	27.68	-32.52	0-360	Off
6	23.6962	16.96	Pk	33.4	-32	-40	-21.64	29.5	-51.14	0-360	Off

Pk - Peak detector



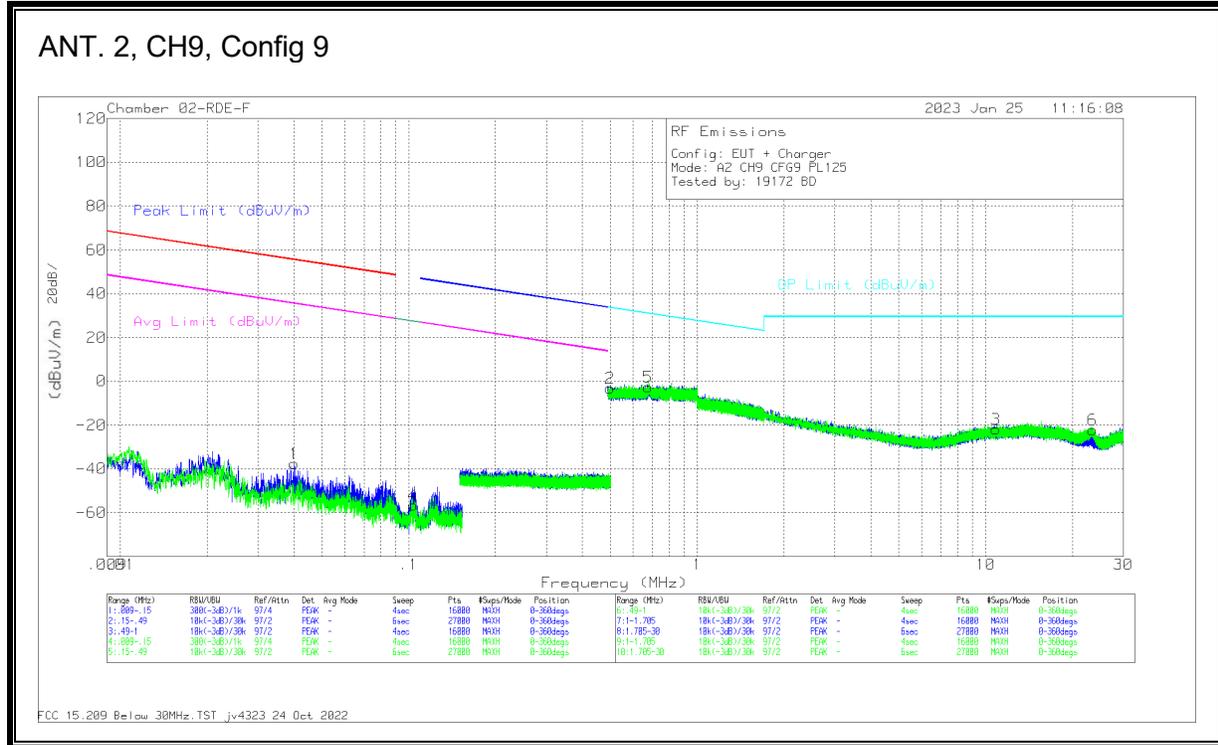
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna E(ACF)	Chamber F port 0 loss	Dist Corr 300m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Antenna Face
1	.0214	17.68	Pk	59	-31.8	-80	-35.12	60.96	-96.08	40.96	-76.08	0-360	On
4	.0395	12.75	Pk	57.4	-32.4	-80	-42.25	55.66	-97.91	35.66	-77.91	0-360	Off

Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna E(ACF)	Chamber F port 0 loss	Dist Corr (dB) 40Log	Corrected Reading (dBuVolts)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Antenna Face
2	.5791	13.12	Pk	56.3	-32.5	-40	-3.08	32.35	-35.43	0-360	On
3	10.7828	17.14	Pk	34.3	-32.2	-40	-20.76	29.5	-50.26	0-360	On
5	.9788	11.6	Pk	56.4	-32.4	-40	-4.4	27.81	-32.21	0-360	Off
6	17.0781	16.4	Pk	33.8	-32.1	-40	-21.9	29.5	-51.4	0-360	Off

Pk - Peak detector



Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna E(ACF)	Chamber F port 0 loss	Dist Corr 300m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Antenna Face
1	.0401	17.47	Pk	57.3	-32.4	-80	-37.63	55.51	-93.14	35.51	-73.14	-	-	0-360	On
4	.1037	.29	Pk	55.7	-32.5	-80	-56.51	-	-	-	-	27.3	-83.81	0-360	Off

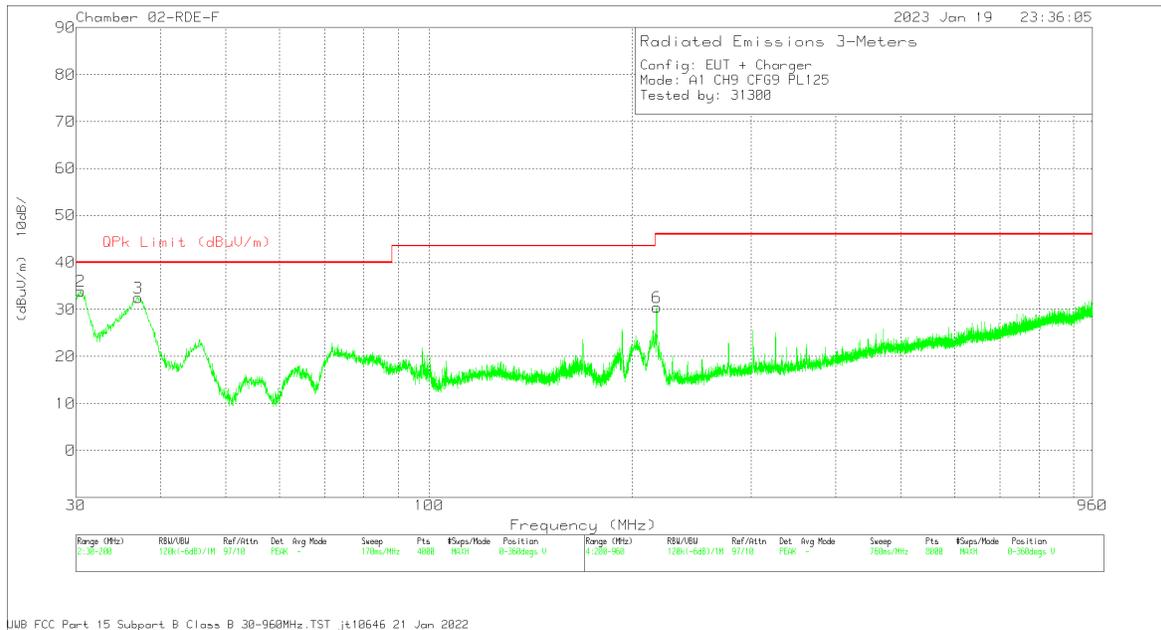
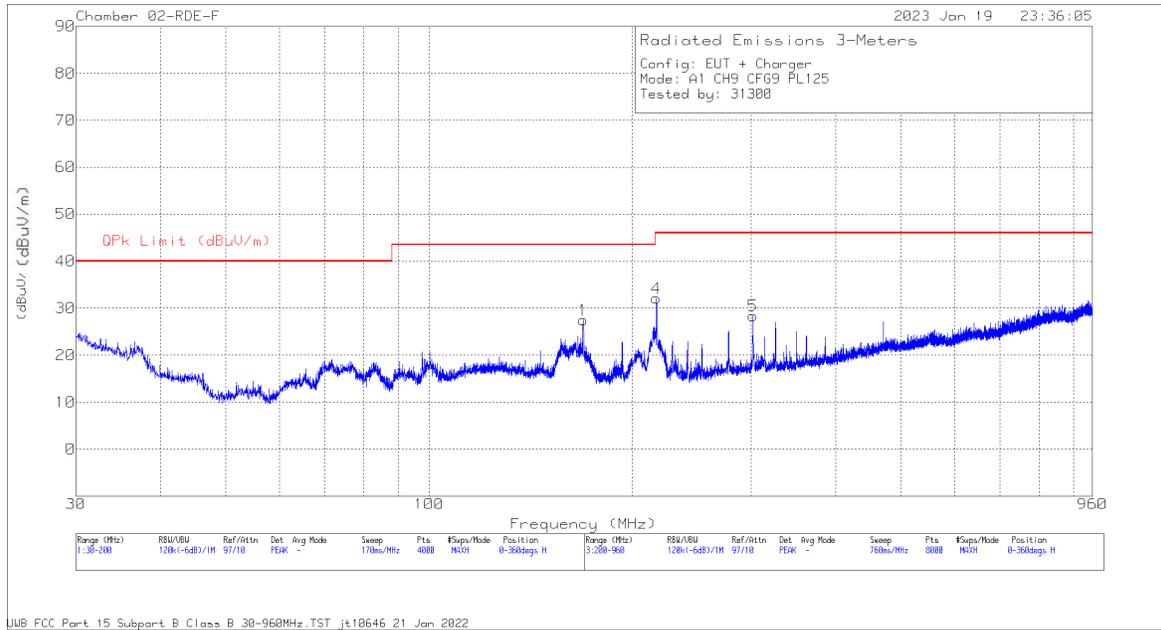
Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna E(ACF)	Chamber F port 0 loss	Dist Corr (dB) 40Log	Corrected Reading (dBuVolts)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Antenna Face
2	.4989	13	Pk	56.3	-32.5	-40	-3.2	33.64	-36.84	0-360	On
3	10.8362	16.15	Pk	34.3	-32.2	-40	-21.75	29.5	-51.25	0-360	On
5	6757	13.63	Pk	56.3	-32.5	-40	-2.57	31.02	-33.59	0-360	Off
6	23.4437	16.47	Pk	33.4	-32	-40	-22.13	29.5	-51.63	0-360	Off

Pk - Peak detector

9.5.2. EMISSIONS, 30 - 960 MHz

ANT. 1, CH9, CONFIG 9

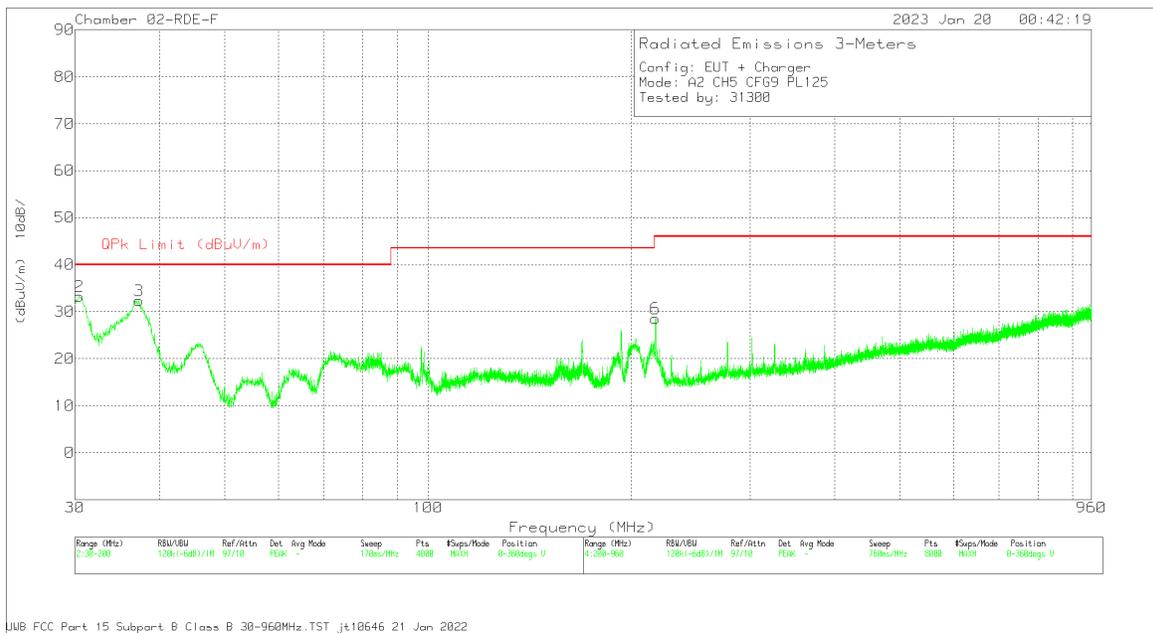
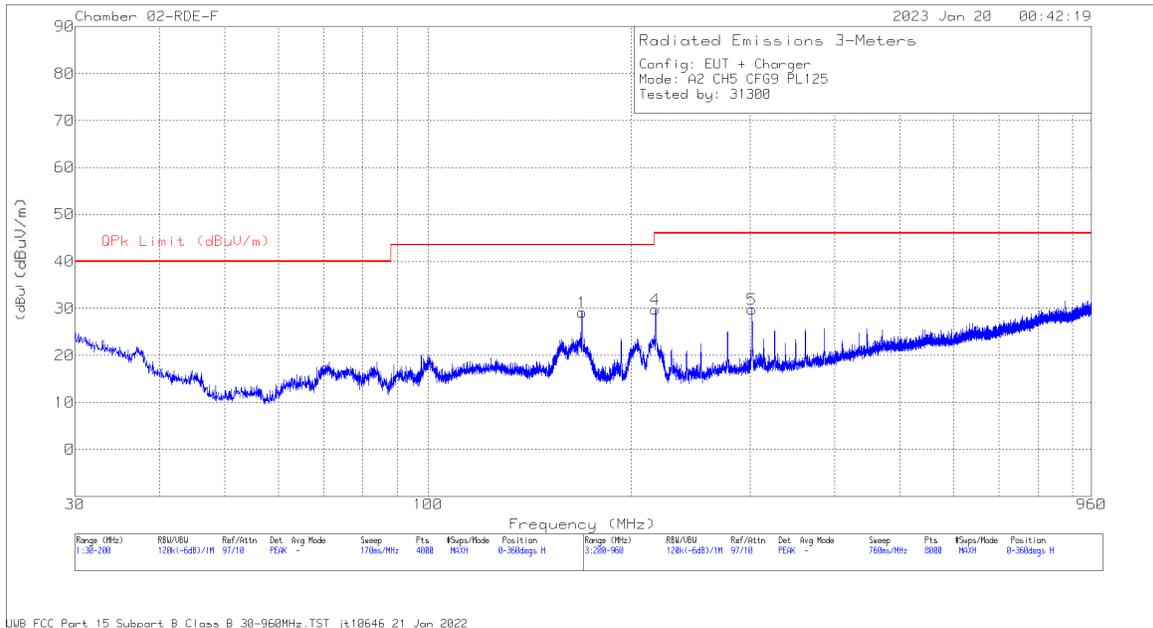


Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF 204044 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	169.053	40.42	Pk	17.6	-30.5	27.52	43.52	-16	0-360	199	H
2	30.4676	38.84	Pk	26.4	-31.3	33.94	40	-6.06	0-360	102	V
3	37.0568	42.4	Pk	21.4	-31.3	32.5	40	-7.5	0-360	102	V
4	217.102	46.07	Pk	16.4	-30.4	32.07	46.02	-13.95	0-360	102	H
5	301.758	39.04	Pk	19.5	-30.1	28.44	46.02	-17.58	0-360	102	H
6	217.292	44.39	Pk	16.4	-30.4	30.39	46.02	-15.63	0-360	102	V

Pk - Peak detector

ANT. 2, CH5, Config 9

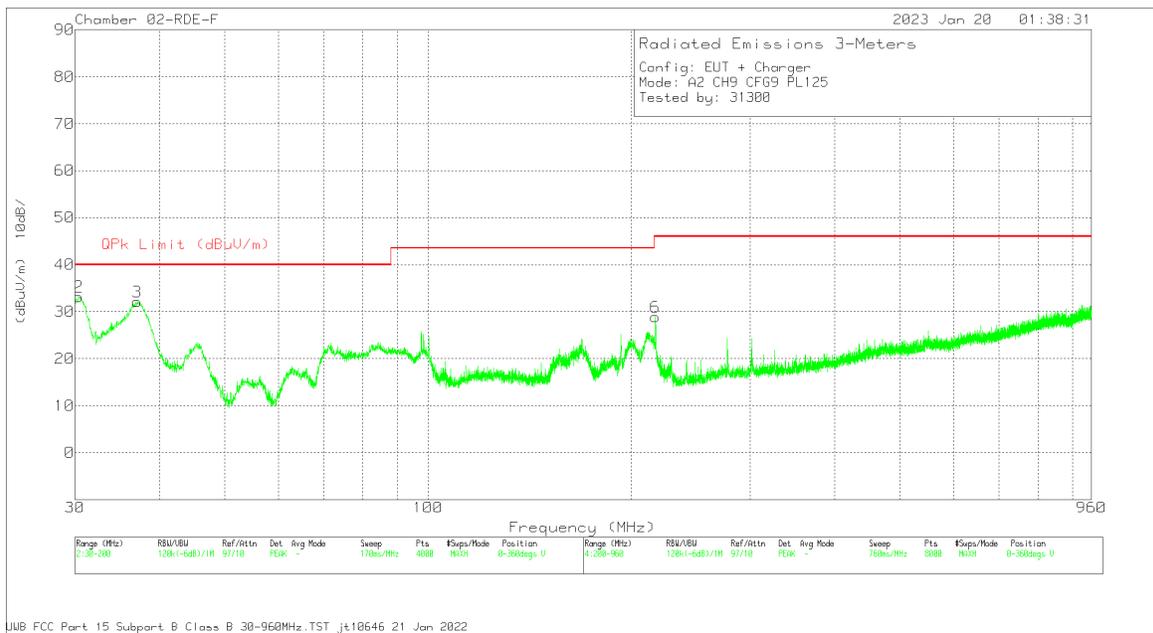
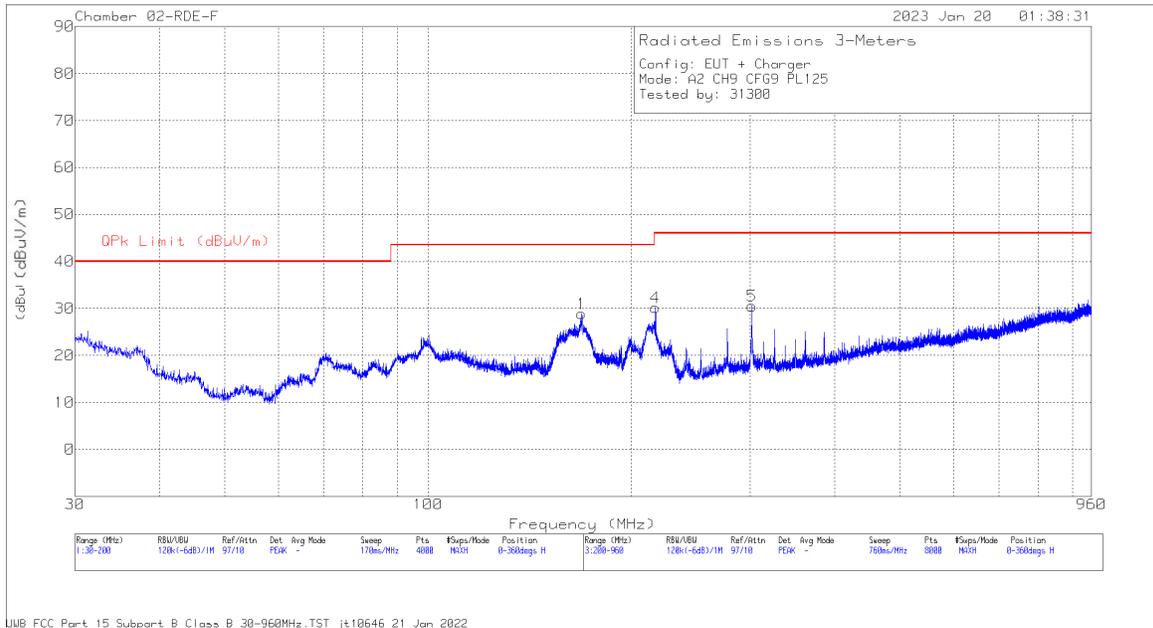


Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF 204044 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	169.011	42.06	Pk	17.6	-30.5	29.16	43.52	-14.36	0-360	102	H
2	30.4251	38.16	Pk	26.4	-31.3	33.26	40	-6.74	0-360	102	V
3	37.3119	42.46	Pk	21.2	-31.3	32.36	40	-7.64	0-360	102	V
4	217.197	43.81	Pk	16.4	-30.4	29.81	46.02	-16.21	0-360	102	H
5	301.948	40.42	Pk	19.5	-30.1	29.82	46.02	-16.2	0-360	102	H
6	217.197	42.58	Pk	16.4	-30.4	28.58	46.02	-17.44	0-360	102	V

Pk - Peak detector

ANT. 2, CH9, Config 9



Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF 204044 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	168.926	41.78	Pk	17.6	-30.5	28.88	43.52	-14.64	0-360	199	H
2	30.3826	38.1	Pk	26.4	-31.3	33.2	40	-6.8	0-360	102	V
3	37.0568	42.02	Pk	21.4	-31.3	32.12	40	-7.88	0-360	102	V
4	217.102	44.24	Pk	16.4	-30.4	30.24	46.02	-15.78	0-360	102	H
5	301.663	41.21	Pk	19.4	-30.1	30.51	46.02	-15.51	0-360	102	H
6	217.197	42.94	Pk	16.4	-30.4	28.94	46.02	-17.08	0-360	102	V

Pk - Peak detector

9.6. AVERAGE EMISSIONS ABOVE 960 MHz

LIMITS

FCC

15.519 (c)

Frequency in MHz	EIRP in dBm
960-1610	-75.3
1610-1990	-63.3
1990-3100	-61.3
3100-10600	-41.3
Above 10600	-61.3

§15.519 (d) In addition to the radiated emission limits specified in the table in paragraph (c) of this section, UWB transmitters operating under the provisions of this section shall not exceed the following average limits when measured using a resolution bandwidth of no less than 1 kHz:

Frequency in MHz	EIRP in dBm
1164-1240	-85.3
1559-1610	-85.3

RSS-220

Section 5.3.1 (d) Radiated emissions above 960 MHz from a device shall not exceed the following average limits when measured using a resolution bandwidth of 1 MHz.

Hand-held (Outdoor) Communication, Measurement, Location Sensing, and Tracking Devices	
Frequency	E.i.r.p. in a Resolution Bandwidth of 1 MHz
960-1 610 MHz	-75.3 dBm
1.61-4.75 GHz	-70.0 dBm
4.75-10.6 GHz	-41.3 dBm
Above 10.6 GHz	-61.3 dBm

Section 5.3.1 (e) In addition to the limits specified in paragraph (d) of this section, radiated emissions shall not exceed the following average limits when measured using a resolution bandwidth greater than or equal to 1 kHz. The measurements shall demonstrate compliance with the stated limits at whatever resolution bandwidth is used.

Frequency	E.i.r.p. in a Resolution Bandwidth of no less than 1 kHz
1 164-1 240 MHz	-85.3 dBm
1 559-1 610 MHz	-85.3 dBm

TEST PROCEDURE

ANSI C63.10 Clause 10.3.

RSS-220 Annex

Exploratory measurements for all frequency ranges are performed with the measurement antenna at close distances to the EUT as described in ANSI C63.10 6.6.4.2. Where emissions are observed the measurement antenna is then positioned at a height of 1.5m and a distance of 1m for 18-40GHz and 0.5m for 0.96-6GHz, 1.164-1.240GHz, and 1.559-1.610GHz from the EUT and final measurements are made at the frequencies observed in the exploratory scans using the alternative measurement procedures detailed in ANSI C63.10 section 6.6.5. If no emissions are observed, a plot is made at a test distance of 1m for 18-40GHz and 0.5m for 0.96-6GHz, 1.164-1.240GHz, and 1.559-1.610GHz from the EUT to show the measurement system noise floor.

PROCEDURE FOR 0.96 TO 6 GHz

Measurements are made with the antenna feeding a spectrum analyzer via a preamplifier and cables, at a maximum distance of 0.5m from the EUT.

A low pass filter with a cut off frequency of 5.4 GHz is used to suppress the fundamental and perform measurement for 0.96 - 6 GHz.

Distance Correction Factor from 3m to 0.5m = $20 \cdot \log(0.5\text{m}/3\text{m}) = -15.56 \text{ dB}$

RESULTS FOR 6 GHz TO 9 GHz

The 6 - 9 GHz frequency band is covered in Section 9.3.

PROCEDURE FOR 9 GHz TO 18 GHz

Measurements are made with the antenna feeding a spectrum analyzer via a preamplifier and cables, at a maximum distance of 0.5m from the EUT.

A high pass filter with pass band frequency beyond 9 GHz is used to suppress the fundamental and perform measurement for 9 - 18 GHz.

Distance Correction Factor from 3m to 0.5m = $20 \cdot \log(0.5\text{m}/3\text{m}) = -15.56 \text{ dB}$

PROCEDURE FOR 1.164 TO 1.240 GHz

Measurements are made with the antenna feeding a spectrum analyzer via a preamplifier and cables, at a maximum distance of 0.5m from the EUT.

RBW = 120 kHz & VBW = 500 kHz were used at pre-scan.

A low pass filter with a cut off frequency of 6 GHz is used to suppress the fundamental and perform measurement for 1.164 – 1.240 GHz.

Distance Correction Factor from 3m to 0.5m = $20 \cdot \log(0.5\text{m}/3\text{m}) = -15.56 \text{ dB}$

PROCEDURE FOR 1.559 TO 1.610 GHz

Measurements are made with the antenna feeding a spectrum analyzer via a preamplifier and cables, at a maximum distance of 0.5m from the EUT.

RBW = 120 kHz & VBW = 360 kHz were used at pre-scan.

A low pass filter with a cut off frequency of 6 GHz is used to suppress the fundamental and perform measurement for 1.559 – 1.610 GHz.

Distance Correction Factor from 3m to 0.5m = $20 \cdot \log(0.5\text{m}/3\text{m}) = -15.56 \text{ dB}$

PROCEDURE FOR 18 GHz TO 40 GHz

Measurements are made with the antenna feeding a spectrum analyzer via a preamplifier and cables, at a maximum distance of 1m from the EUT.

A final test is made at any frequencies at which emissions are found. During this final scan, the antenna is kept no further from the EUT than the maximum distance calculated for each band that yields a minimum system noise floor.

Distance Correction Factor from 3m to 1m = $20 \cdot \log(1\text{m}/3\text{m}) = -9.54 \text{ dB}$

RESULTS

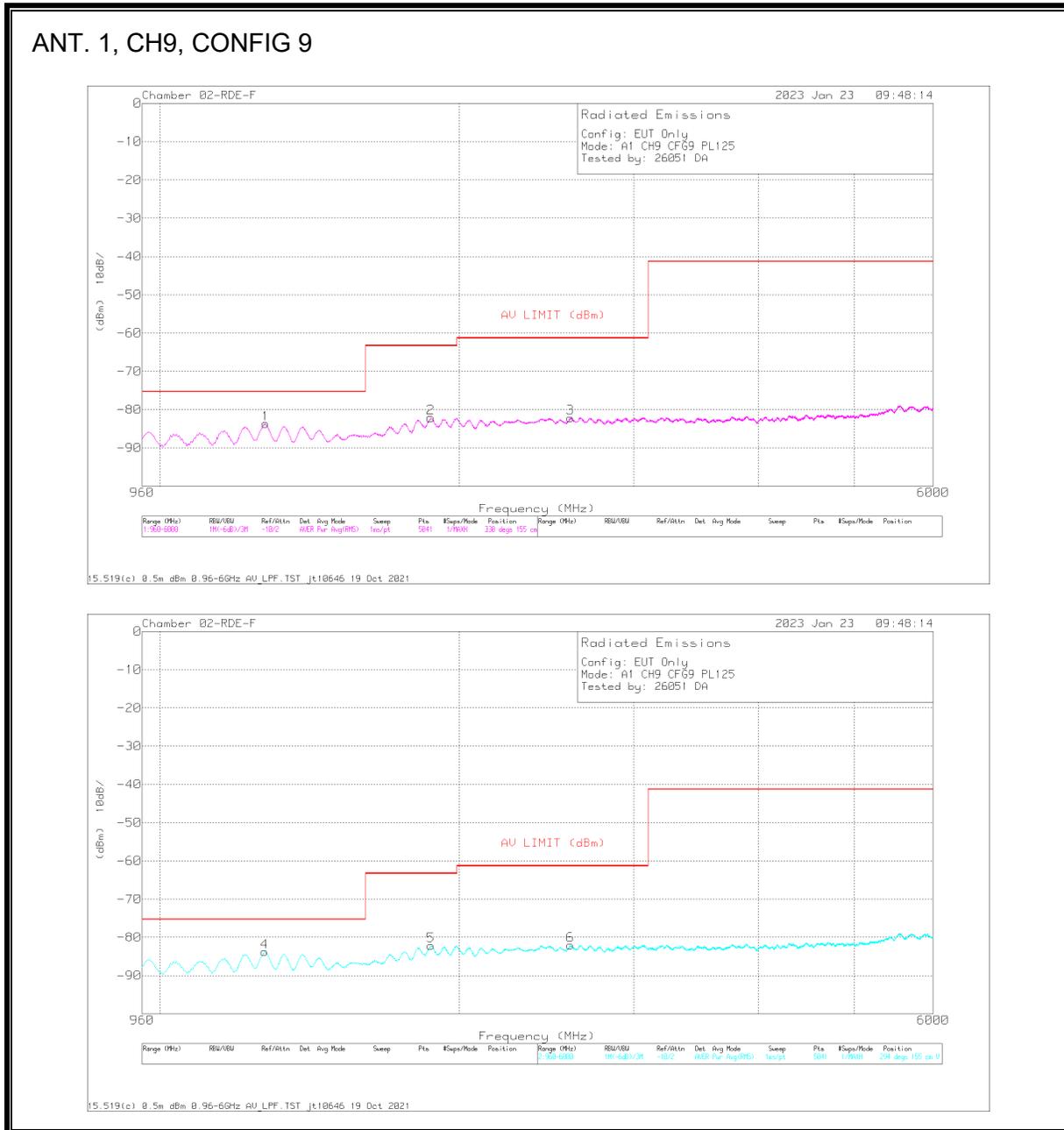
Average Emissions Summary

Employee IDs: 26051, 19172, 31300, 20737, 32440, 32312
Location: Chamber 2F, 5B, 5E
Test Date: 1/20/23 – 1/25/23, 6/16/23, 6/20/23

Ant	CH	Config	Payload	Power Setting	Frequency Ranges				
					1164 - 1240 MHz	1559 - 1610 MHz	0.96 - 18 GHz	18 - 26.5 GHz	26.5 - 40 GHz
1	9	9	125	Max	PASS	PASS	PASS	PASS	PASS
2	5	9	125	Max	PASS	PASS	PASS	PASS	PASS
2	9	9	125	Max	PASS	PASS	PASS	PASS	PASS

9.6.1. AVERAGE EMISSIONS, 0.96 – 6 GHz

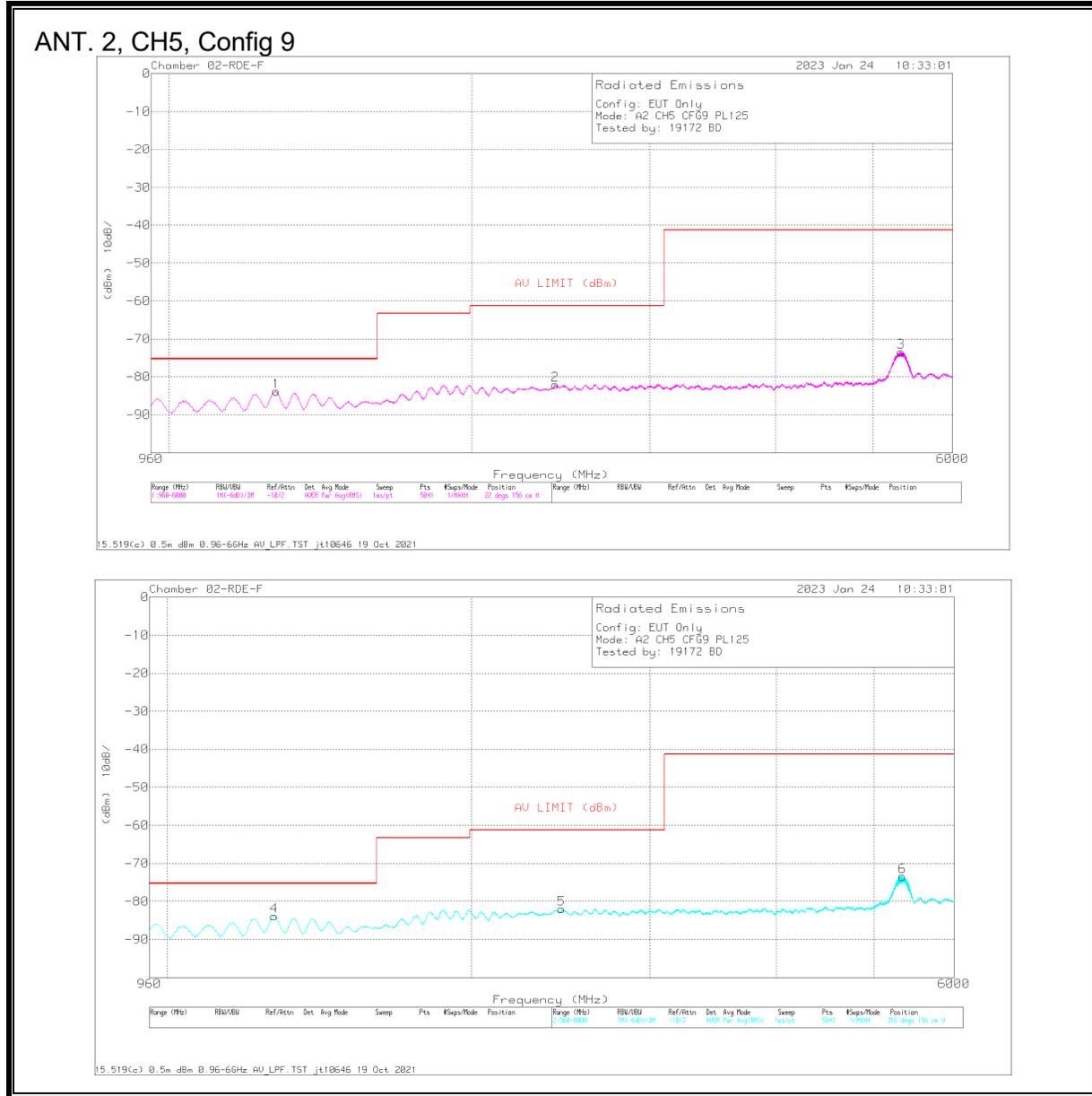
FCC15.519 (C)



Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBm)	Det	81887 ACF (dB)	Amp/Cbl (dB)	Dist. Corr. (dB)	Conv. Fact. (dB)	204843 LPF (dB)	Corrected Reading (dBm)	AV LIMIT (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1278	-60.86	RMS	29.6	-48.8	-15.6	11.8	.2	-83.66	-75.3	-8.36	1	155	H
2	1873	-61.4	RMS	31.9	-49	-15.6	11.8	.2	-82.1	-63.3	-18.8	242	155	H
3	2589	-62.93	RMS	32.9	-48.6	-15.6	11.8	.3	-82.13	-61.3	-20.83	66	155	H
4	1275	-60.88	RMS	29.6	-48.9	-15.6	11.8	.2	-83.78	-75.3	-8.48	360	155	V
5	1874	-61.37	RMS	31.9	-49.1	-15.6	11.8	.2	-82.17	-63.3	-18.87	360	155	V
6	2589	-62.84	RMS	32.9	-48.6	-15.6	11.8	.3	-82.04	-61.3	-20.74	294	155	V

RMS - RMS detection



Trace Markers

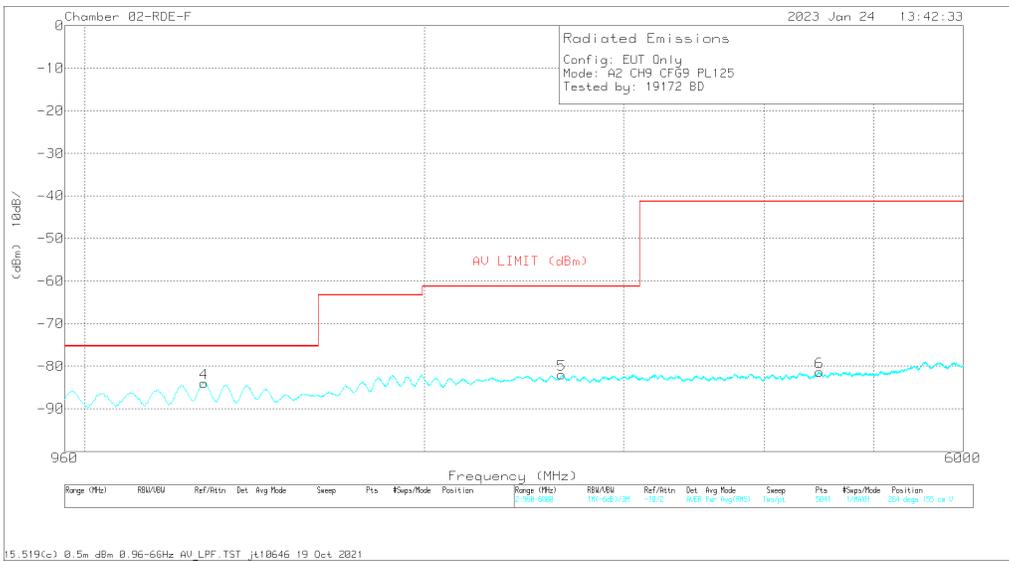
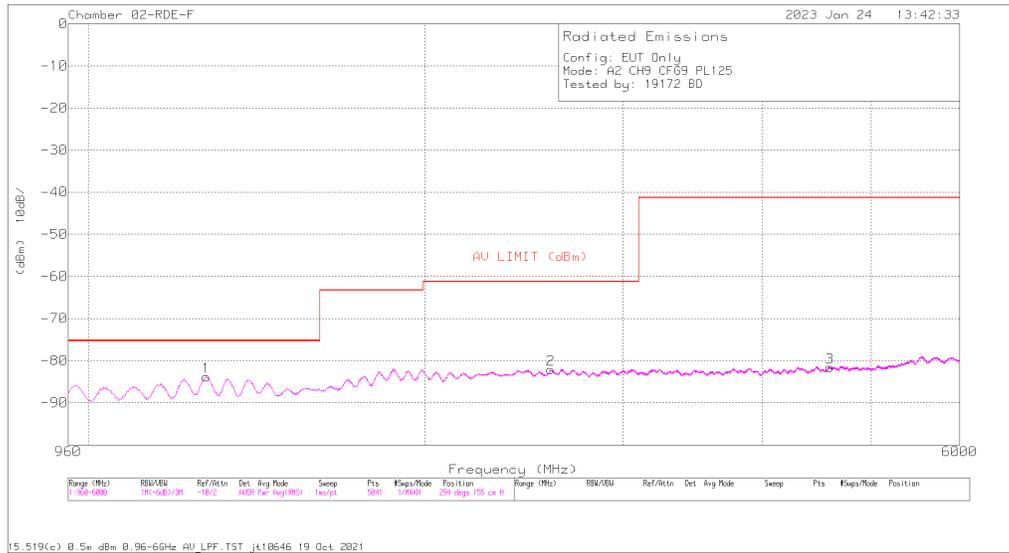
Marker	Frequency (MHz)	Meter Reading (dBm)	Det	81887 ACF (dB)	Amp/Cbl (dB)	Dist. Corr. (dB)	Conv. Fact. (dB)	204843 LPF (dB)	Corrected Reading (dBm)	AV LIMIT (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1278	-61.07	RMS	29.6	-48.8	-15.6	11.8	.2	-83.87	-75.3	-8.57	330	156	H
2	2420	-61.6	RMS	32.6	-49.5	-15.6	11.8	.2	-82.1	-61.3	-20.8	22	156	H
3	5335	-58.31	RMS	34.9	-47.4	-15.6	11.8	1.2	-73.41	-41.3	-32.11	220	156	H
4	1276	-60.97	RMS	29.6	-48.9	-15.6	11.8	.2	-83.87	-75.3	-8.57	97	156	V
5	2455	-62.24	RMS	32.7	-48.9	-15.6	11.8	.3	-81.94	-61.3	-20.64	30	156	V
6	5334	-58.29	RMS	34.9	-47.5	-15.6	11.8	1.3	-73.39	-41.3	-32.09	206	156	V

Radiated Emissions

Frequency (MHz)	Meter Reading (dBm)	Det	81887 ACF (dB)	Amp/Cbl (dB)	Dist. Corr. (dB)	Conv. Fact. (dB)	204843 LPF (dB)	Corrected Reading (dBm)	AV LIMIT (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5251.892	-44.58	RMS	34.8	-47.8	-15.6	11.8	1	-60.38	-41.3	-19.08	180	162	H
5251.933	-44.47	RMS	34.8	-47.8	-15.6	11.8	1	-60.27	-41.3	-18.97	200	172	V

RMS - RMS detection

ANT. 2, CH9, Config 9

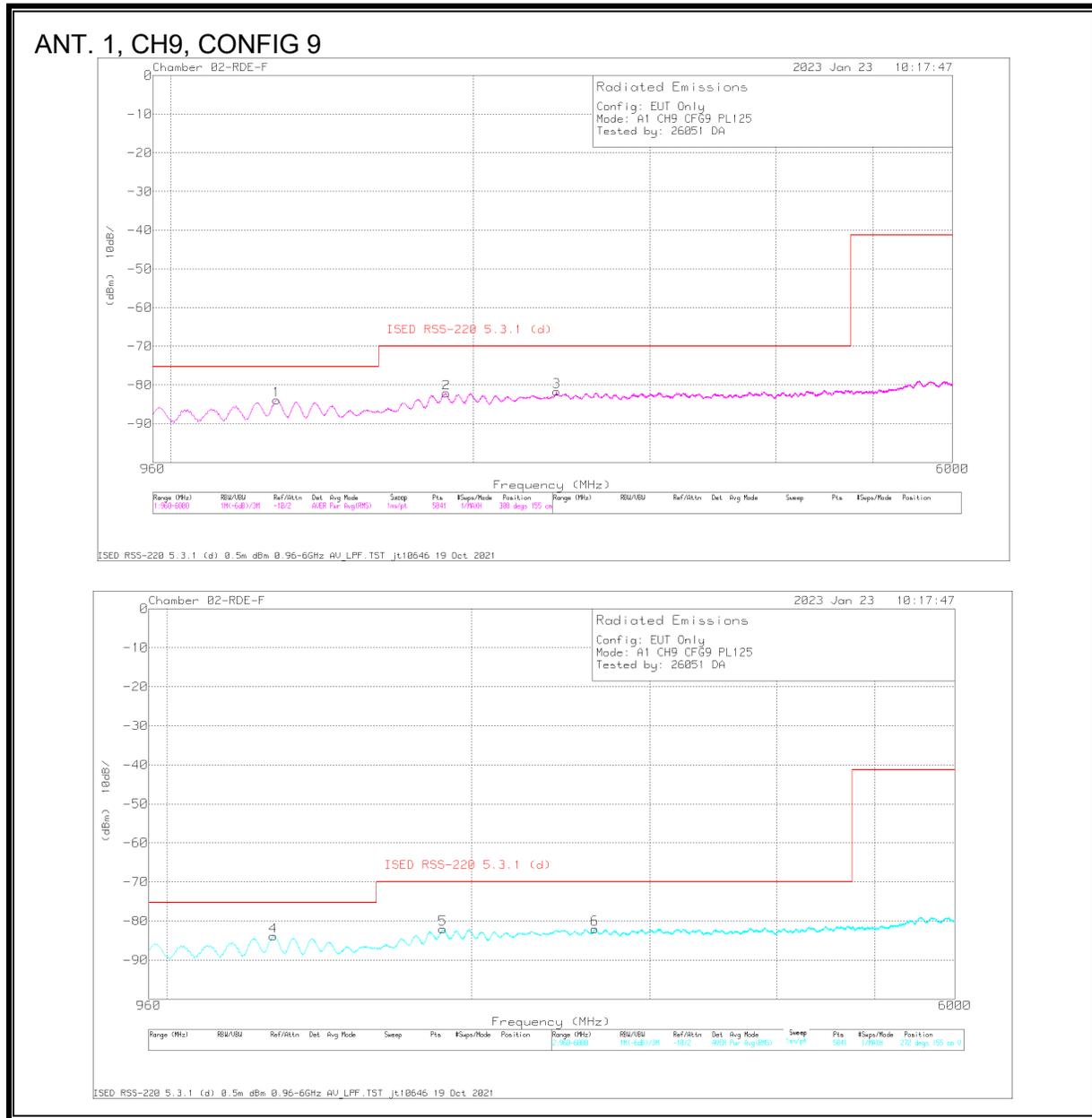


Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBm)	Det	81887 ACF (dB)	Amp/Cbl (dB)	Dist. Corr. (dB)	Conv. Fact. (dB)	204843 LPF (dB)	Corrected Reading (dBm)	AV LIMIT (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1275	-60.92	RMS	29.6	-48.9	-15.6	11.8	.2	-83.82	-75.3	-8.52	294	155	H
2	2588	-62.9	RMS	32.9	-48.6	-15.6	11.8	.3	-82.1	-81.3	-20.8	97	155	H
3	4596	-64.67	RMS	34.6	-48.2	-15.6	11.8	.5	-81.67	-41.3	-40.27	360	155	H
4	1276	-61.03	RMS	29.6	-48.9	-15.6	11.8	.2	-83.93	-75.3	-8.63	286	155	V
5	2646	-62.98	RMS	33.1	-48.6	-15.6	11.8	.3	-81.98	-61.3	-20.68	44	155	V
6	4475	-64.57	RMS	34.3	-47.9	-15.6	11.8	.6	-81.37	-41.3	-40.07	44	155	V

RMS - RMS detection

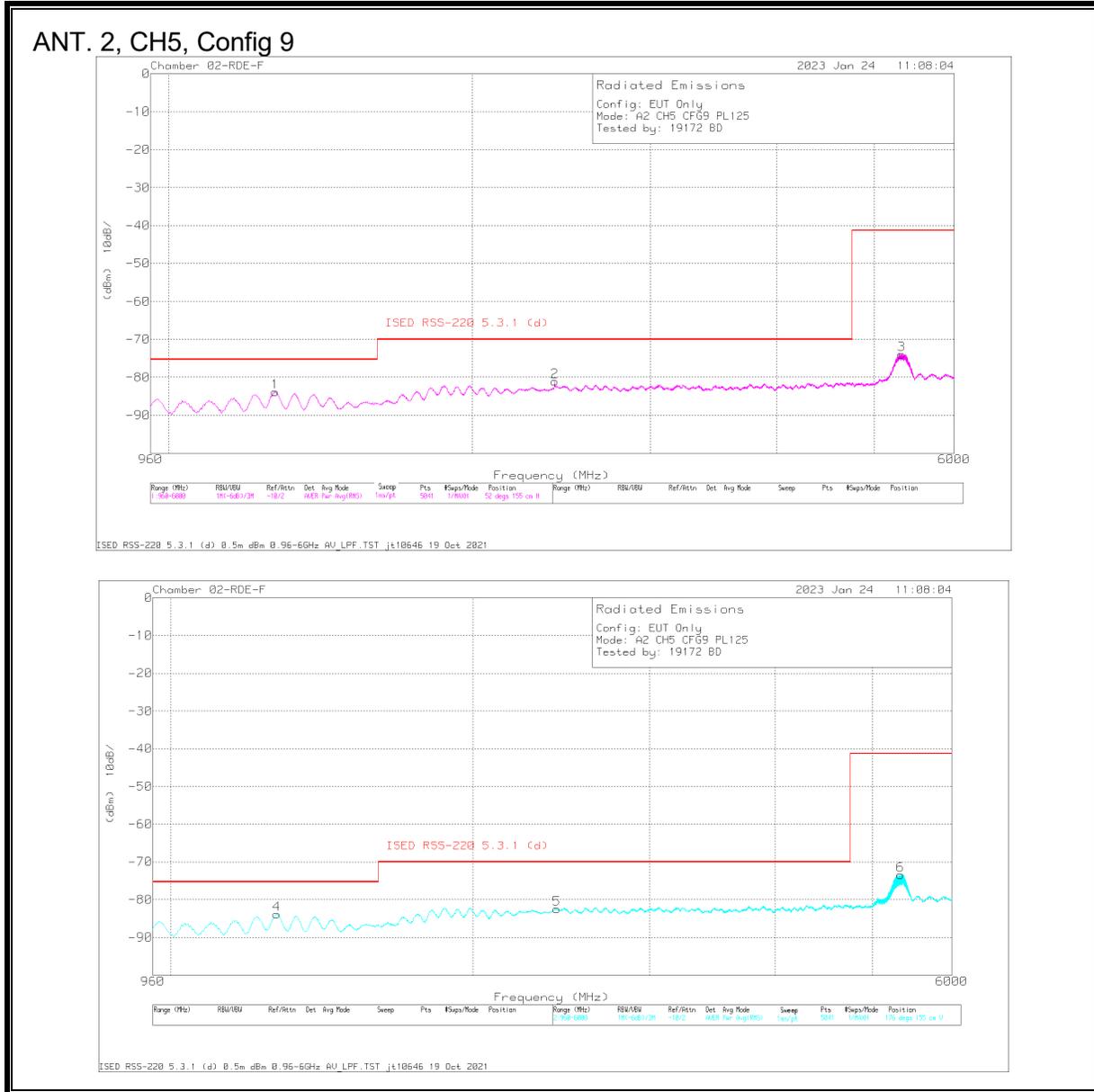
RSS-220 5.3.1 (d)



Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBm)	Det	81887 ACF (dB)	Amp/Cbl (dB)	Dist. Corr. (dB)	Conv. Fact. (dB)	204843 LPF (dB)	Corrected Reading (dBm)	ISED RSS-220 5.3.1 (d)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1275	-60.98	RMS	29.6	-48.9	-15.6	11.8	.2	-83.88	-75.3	-8.58	110	155	H
2	1881	-61.41	RMS	31.9	-49	-15.6	11.8	.2	-82.11	-70	-12.11	44	155	H
3	2422	-61.38	RMS	32.6	-49.3	-15.6	11.8	.2	-81.68	-70	-11.68	264	155	H
4	1274	-61.03	RMS	29.6	-48.9	-15.6	11.8	.2	-83.93	-75.3	-8.63	360	155	V
5	1873	-61.33	RMS	31.9	-49	-15.6	11.8	.2	-82.03	-70	-12.03	228	155	V
6	2646	-63.01	RMS	33.1	-48.6	-15.6	11.8	.3	-82.01	-70	-12.01	228	155	V

RMS - RMS detection



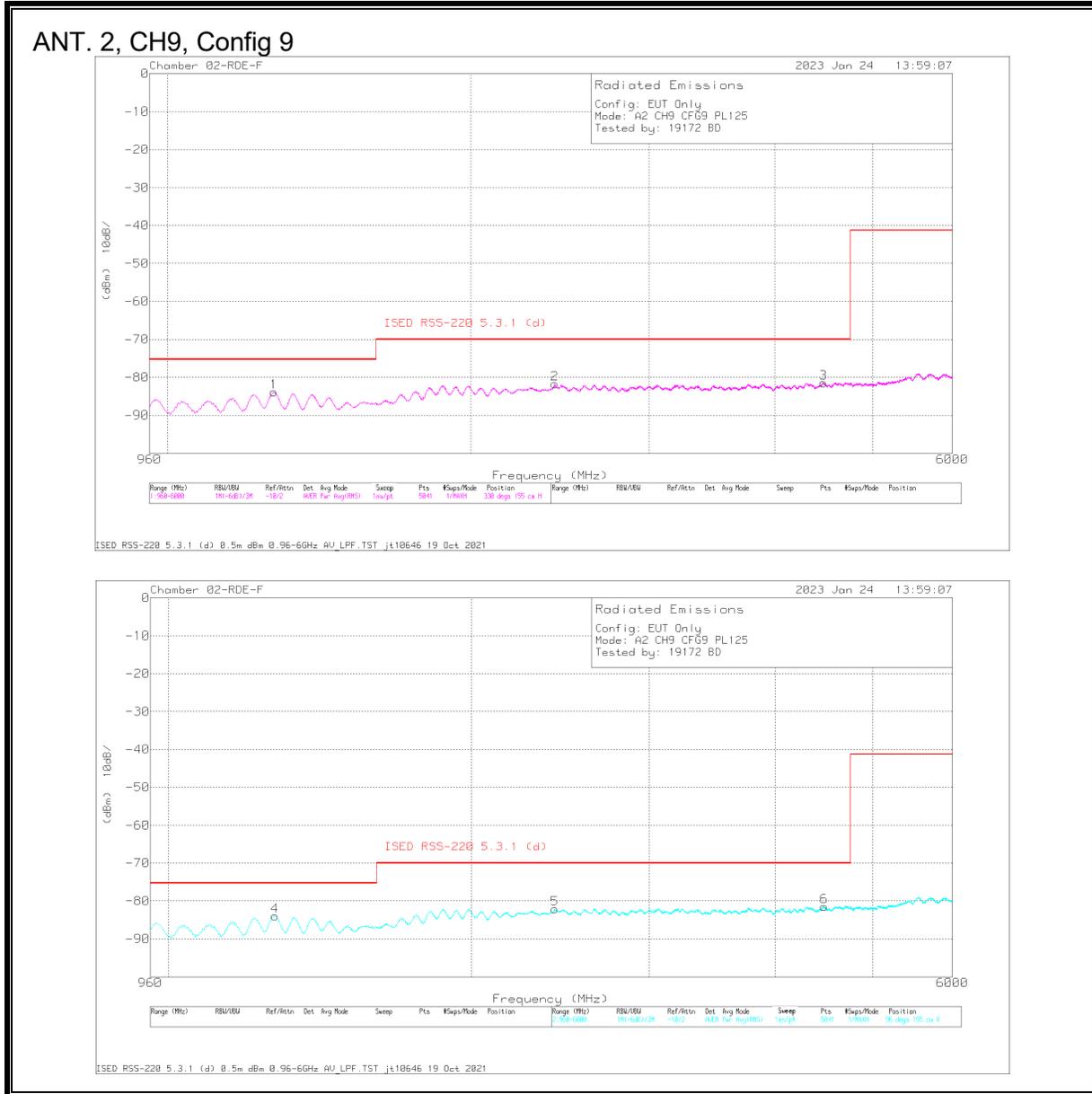
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBm)	Det	81887 ACF (dB)	Amp/Cbl (dB)	Dist. Corr. (dB)	Conv. Fact. (dB)	204843 LPF (dB)	Corrected Reading (dBm)	ISED RSS-220 5.3.1 (d)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1275	-60.99	RMS	29.6	-48.9	-15.6	11.8	.2	-83.89	-75.3	-8.59	184	155	H
2	2413	-60.62	RMS	32.6	-49.5	-15.6	11.8	.2	-81.12	-70	-11.12	360	155	H
3	5320	-58.81	RMS	34.9	-47.4	-15.6	11.8	1.2	-73.91	-41.3	-32.61	184	155	H
4	1275	-60.96	RMS	29.6	-48.9	-15.6	11.8	.2	-83.86	-75.3	-8.56	308	155	V
5	2425	-62.33	RMS	32.6	-49.1	-15.6	11.8	.2	-82.43	-70	-12.43	220	155	V
6	5335	-58.31	RMS	34.9	-47.4	-15.6	11.8	1.2	-73.41	-41.3	-32.11	176	155	V

Radiated Emissions

Frequency (MHz)	Meter Reading (dBm)	Det	81887 ACF (dB)	Amp/Cbl (dB)	Dist. Corr. (dB)	Conv. Fact. (dB)	204843 LPF (dB)	Corrected Reading (dBm)	ISED RSS-220 5.3.1 (d)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5251.888	-45.31	RMS	34.8	-47.8	-15.6	11.8	1	-61.11	-41.3	-19.81	205	159	H
5251.96	-44.32	RMS	34.8	-47.8	-15.6	11.8	1	-60.12	-41.3	-18.82	201	158	V

RMS - RMS detection

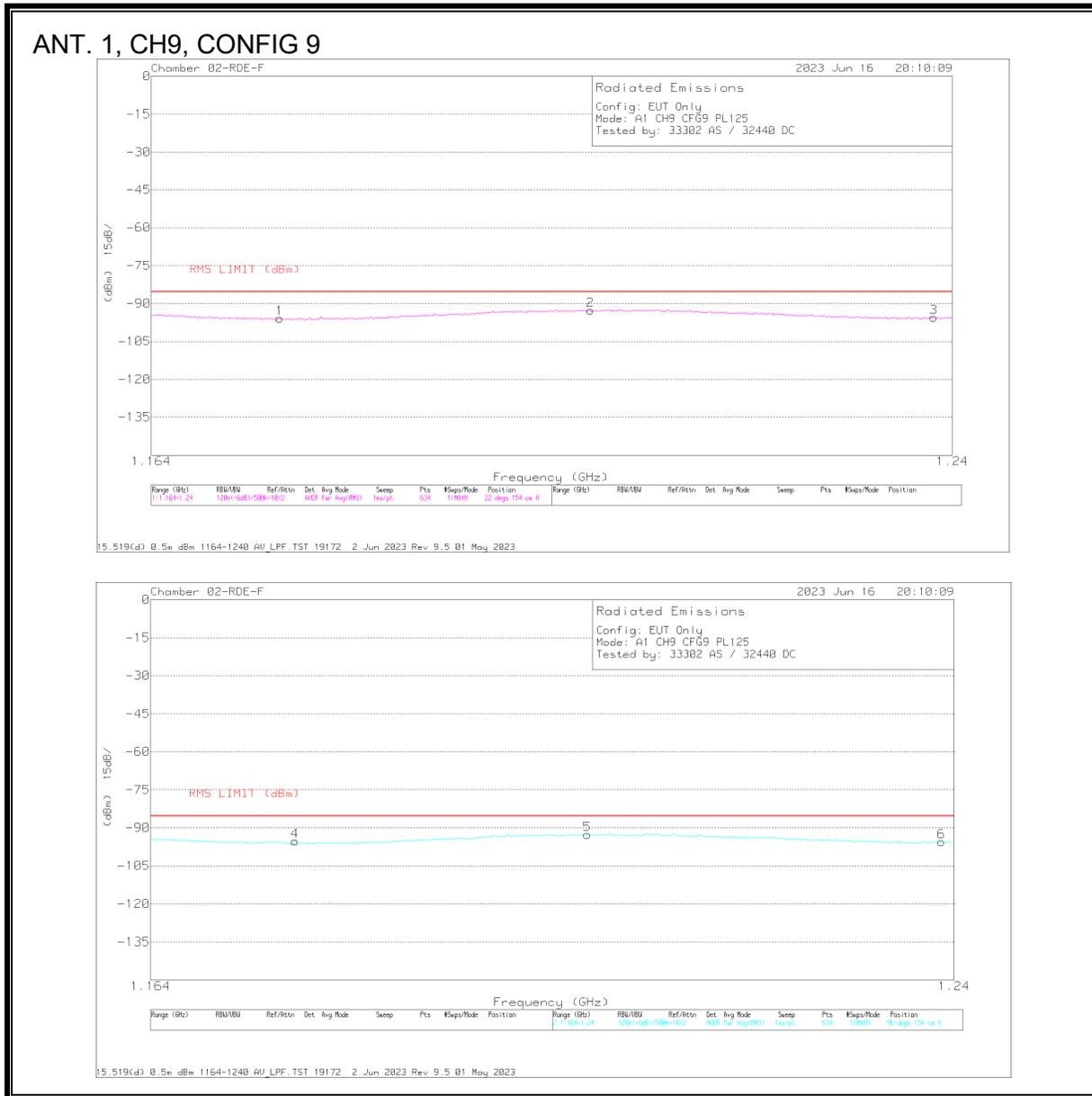


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	206808 ACF (dB) 3mH	Amp/Cbl (dB)	Dist. Corr. (dB)	Conv. Fact. (dB)	204843 LPF (dB)	Corrected Reading (dBm)	RMS LIMIT (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.175886	-73.41	RMS	28.2	-47	-15.6	11.8	2	-95.81	-85.3	-10.51	0	154	H
2	1.205062	-70.38	RMS	28.4	-47	-15.6	11.8	2	-92.58	-85.3	-7.28	220	154	H
3	1.238199	-73.64	RMS	28.6	-46.8	-15.6	11.8	2	-95.44	-85.3	-10.14	330	154	H
4	1.177327	-72.76	RMS	28.2	-47.1	-15.6	11.8	2	-95.26	-85.3	-9.96	228	154	V
5	1.204701	-70.41	RMS	28.4	-47	-15.6	11.8	2	-92.61	-85.3	-7.31	141	154	V
6	1.238799	-73.72	RMS	28.7	-46.8	-15.6	11.8	2	-95.42	-85.3	-10.12	272	154	V

RMS - RMS detection

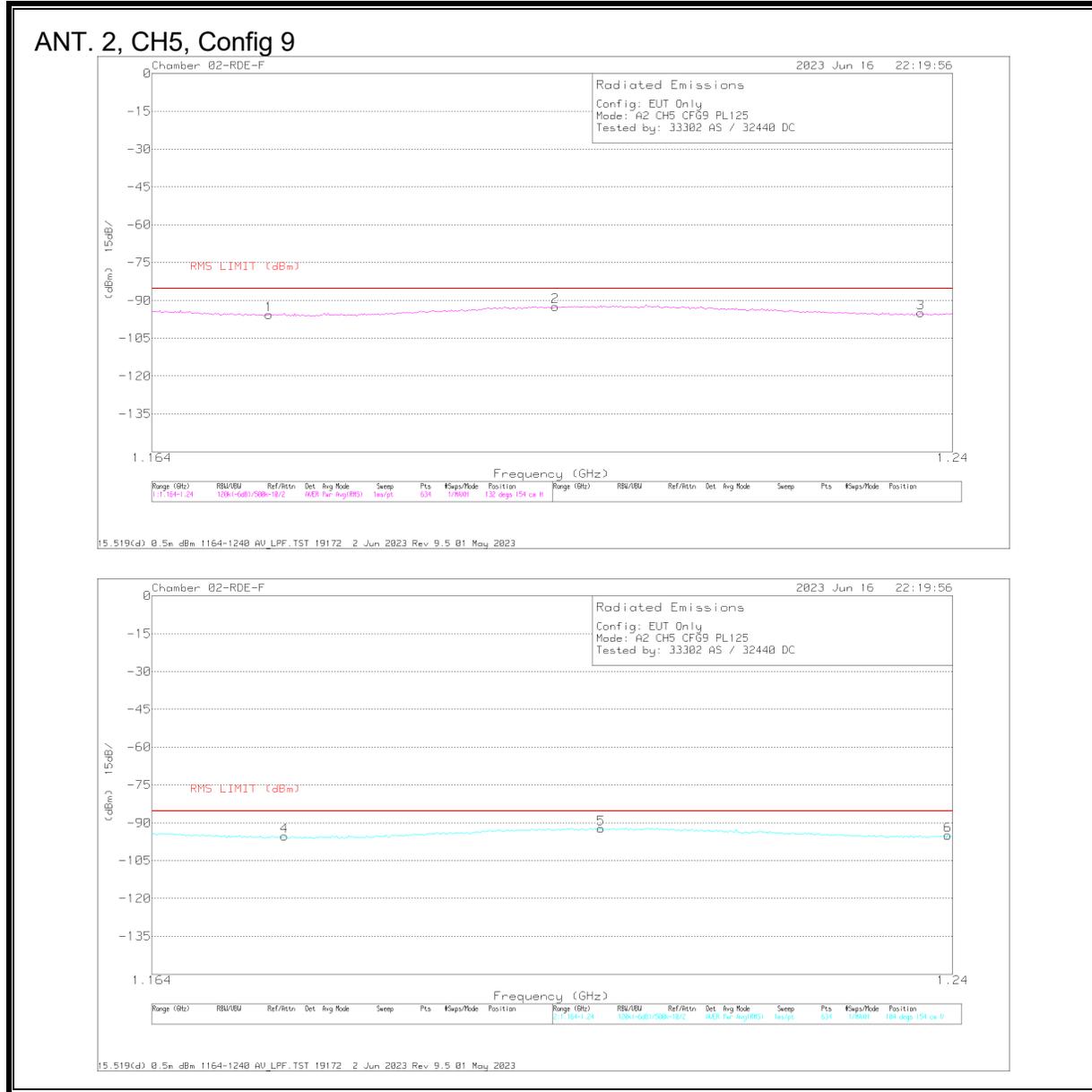
9.6.2. AVERAGE EMISSIONS, 1.164 – 1.240 GHz



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	81887 ACF (dB)	Amp/Cbl (dB)	Dist. Corr. (dB)	Conv. Fact. (dB)	204843 LPF (dB)	Corrected Reading (dBm)	RMS LIMIT (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.172	-70.9	RMS	28.3	-49.3	-15.6	11.8	.2	-95.5	-85.3	-10.2	132	154	H
2	1.202	-71.93	RMS	28.2	-49.1	-15.6	11.8	.2	-96.43	-85.3	-11.13	242	154	H
3	1.227	-70.18	RMS	28.4	-49	-15.6	11.8	.2	-94.38	-85.3	-9.08	242	154	H
4	1.167	-70.51	RMS	28.3	-49	-15.6	11.8	.2	-94.81	-85.3	-9.51	52	154	V
5	1.202	-71.63	RMS	28.2	-49.1	-15.6	11.8	.2	-96.13	-85.3	-10.83	250	154	V
6	1.23	-70.99	RMS	28.5	-49.1	-15.6	11.8	.2	-95.19	-85.3	-9.89	295	154	V

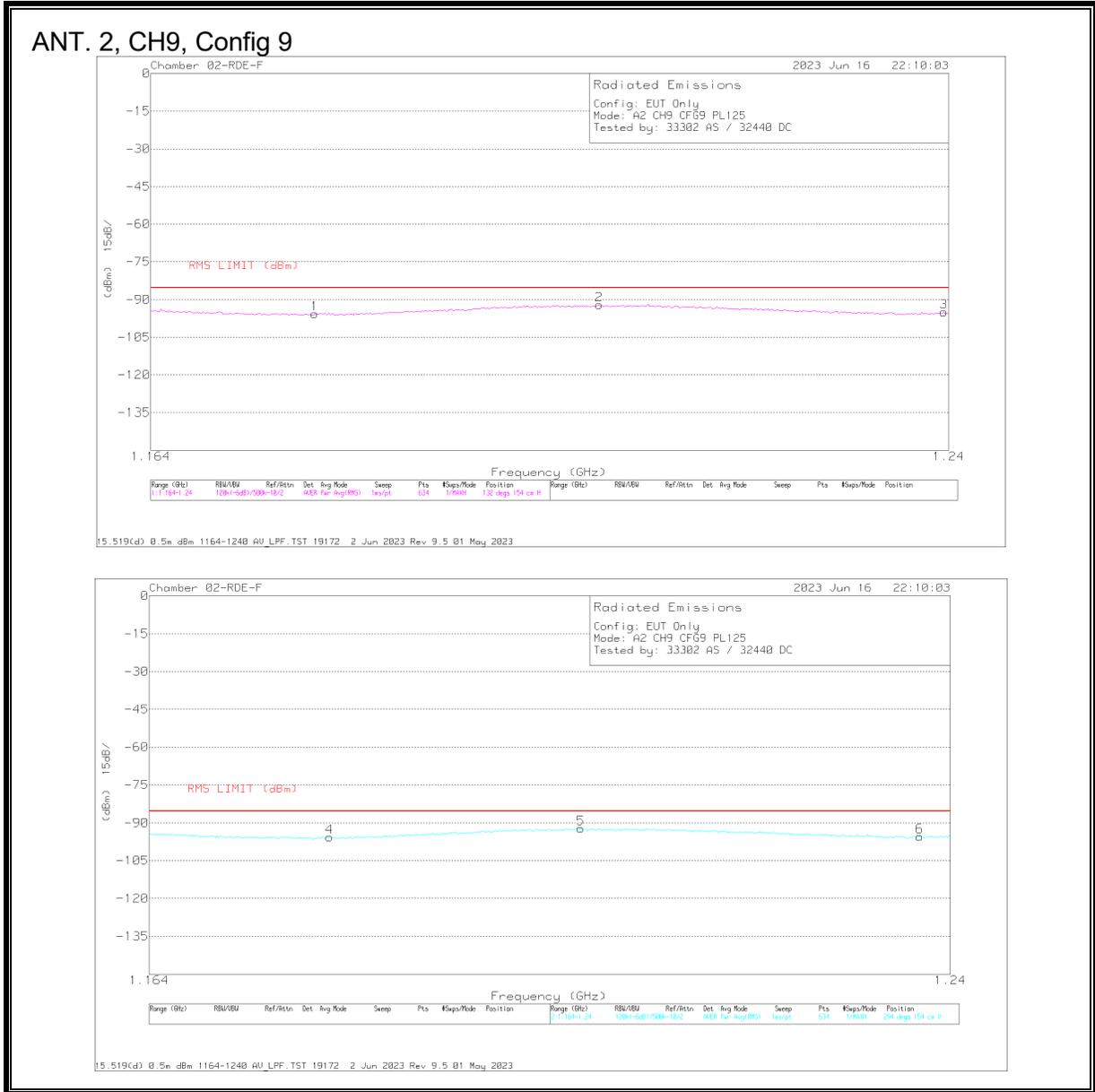
RMS - RMS detection



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	206808 ACF (dB) 3mH	Amp/Cbl (dB)	Dist. Corr. (dB)	Conv. Fact. (dB)	204843 LPF (dB)	Corrected Reading (dBm)	RMS LIMIT (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.174806	-73.16	RMS	28.1	-46.9	-15.6	11.8	.2	-95.56	-85.3	-10.26	88	154	H
2	1.2017	-70.15	RMS	28.4	-47	-15.6	11.8	.2	-92.35	-85.3	-7.05	110	154	H
3	1.236878	-73.16	RMS	28.6	-46.8	-15.6	11.8	.2	-94.96	-85.3	-9.66	198	154	H
4	1.176246	-72.79	RMS	28.2	-47	-15.6	11.8	.2	-95.19	-85.3	-9.89	162	154	V
5	1.206022	-70.02	RMS	28.4	-47	-15.6	11.8	.2	-92.22	-85.3	-6.92	162	154	V
6	1.23952	-73.28	RMS	28.7	-46.8	-15.6	11.8	.2	-94.98	-85.3	-9.68	360	154	V

RMS - RMS detection

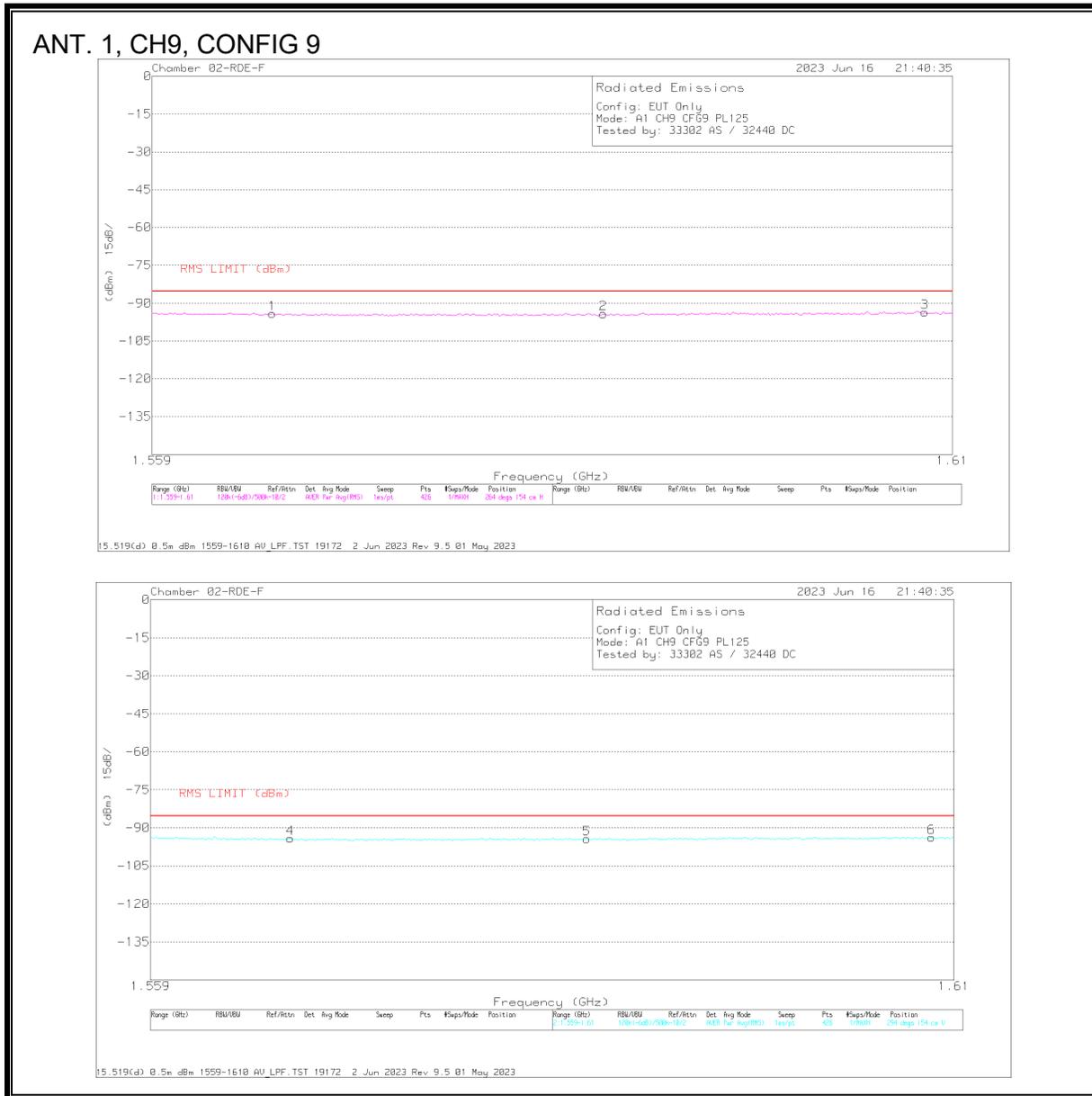


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	206808 ACF (dB) 3mH	Amp/Cbl (dB)	Dist. Corr. (dB)	Conv. Fact. (dB)	204843 LPF (dB)	Corrected Reading (dBm)	RMS LIMIT (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.179248	-73.33	RMS	28.2	-47	-15.6	11.8	-2	-95.73	-85.3	-10.43	220	154	H
2	1.206142	-69.91	RMS	28.4	-47	-15.6	11.8	-2	-92.11	-85.3	-6.81	264	154	H
3	1.23952	-73.28	RMS	28.7	-46.8	-15.6	11.8	-2	-94.98	-85.3	-9.68	154	154	H
4	1.180689	-73.33	RMS	28.2	-46.9	-15.6	11.8	-2	-95.63	-85.3	-10.33	250	154	V
5	1.204341	-70.07	RMS	28.4	-47	-15.6	11.8	-2	-92.27	-85.3	-6.97	140	154	V
6	1.236998	-73.57	RMS	28.6	-46.8	-15.6	11.8	-2	-95.37	-85.3	-10.07	30	154	V

RMS - RMS detection

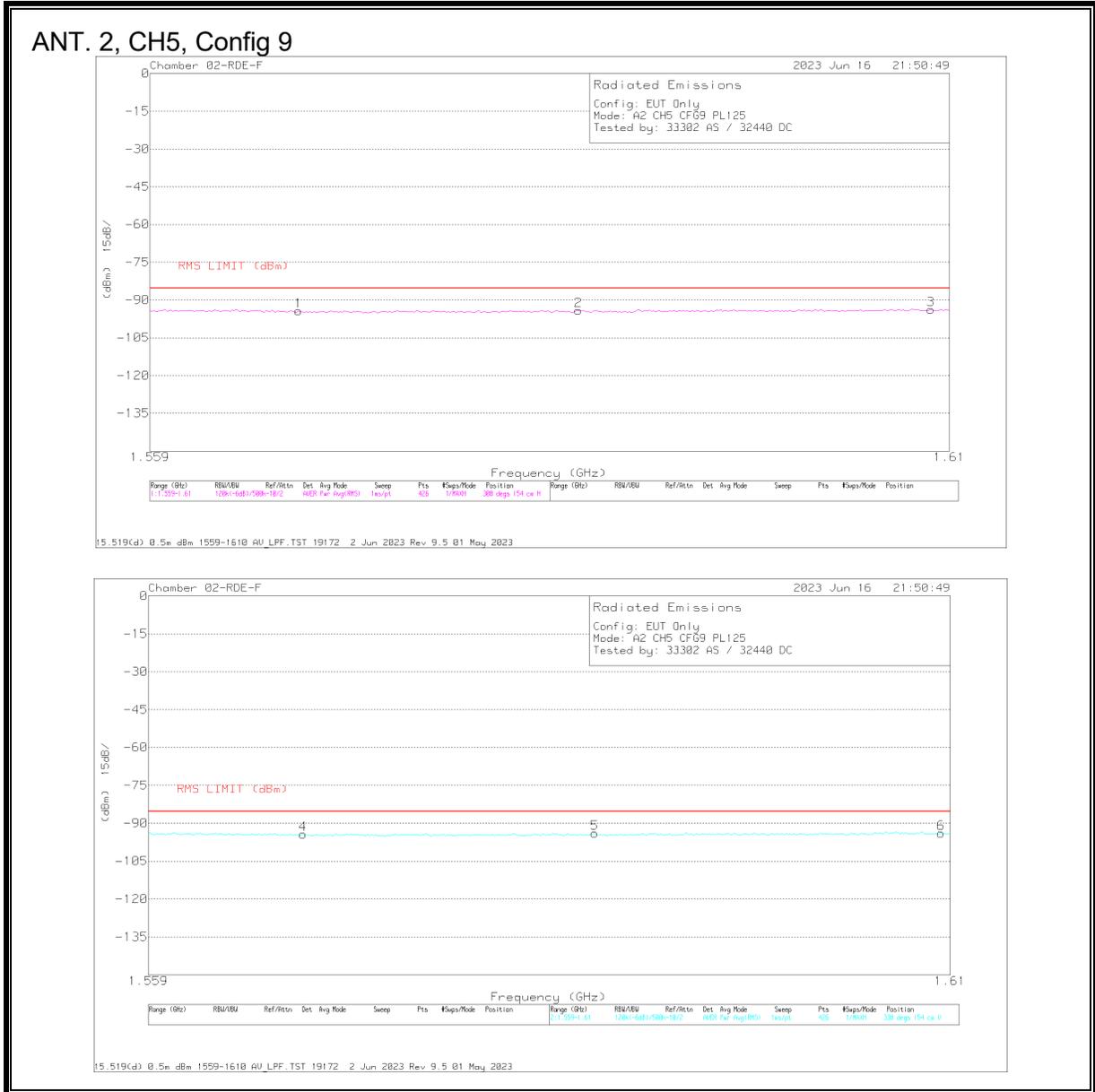
9.6.3. AVERAGE EMISSIONS, 1.559 – 1.610 GHz



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	206808 ACF (dB) 3mH	Amp/Cbl (dB)	Dist. Corr. (dB)	Conv. Fact. (dB)	204843 LPF (dB)	Corrected Reading (dBm)	RMS LIMIT (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.56656	-71.42	RMS	27.8	-46.9	-15.6	11.8	.2	-94.12	-85.3	-8.82	88	154	H
2	1.58756	-71.93	RMS	28	-46.7	-15.6	11.8	.2	-94.23	-85.3	-8.93	264	154	H
3	1.6082	-71.35	RMS	28.2	-46.8	-15.6	11.8	.2	-93.55	-85.3	-8.25	44	154	H
4	1.56776	-71.45	RMS	27.8	-46.9	-15.6	11.8	.2	-94.15	-85.3	-8.85	52	154	V
5	1.58648	-72.04	RMS	28	-46.7	-15.6	11.8	.2	-94.34	-85.3	-9.04	162	154	V
6	1.60856	-71.61	RMS	28.2	-46.8	-15.6	11.8	.2	-93.81	-85.3	-8.51	338	154	V

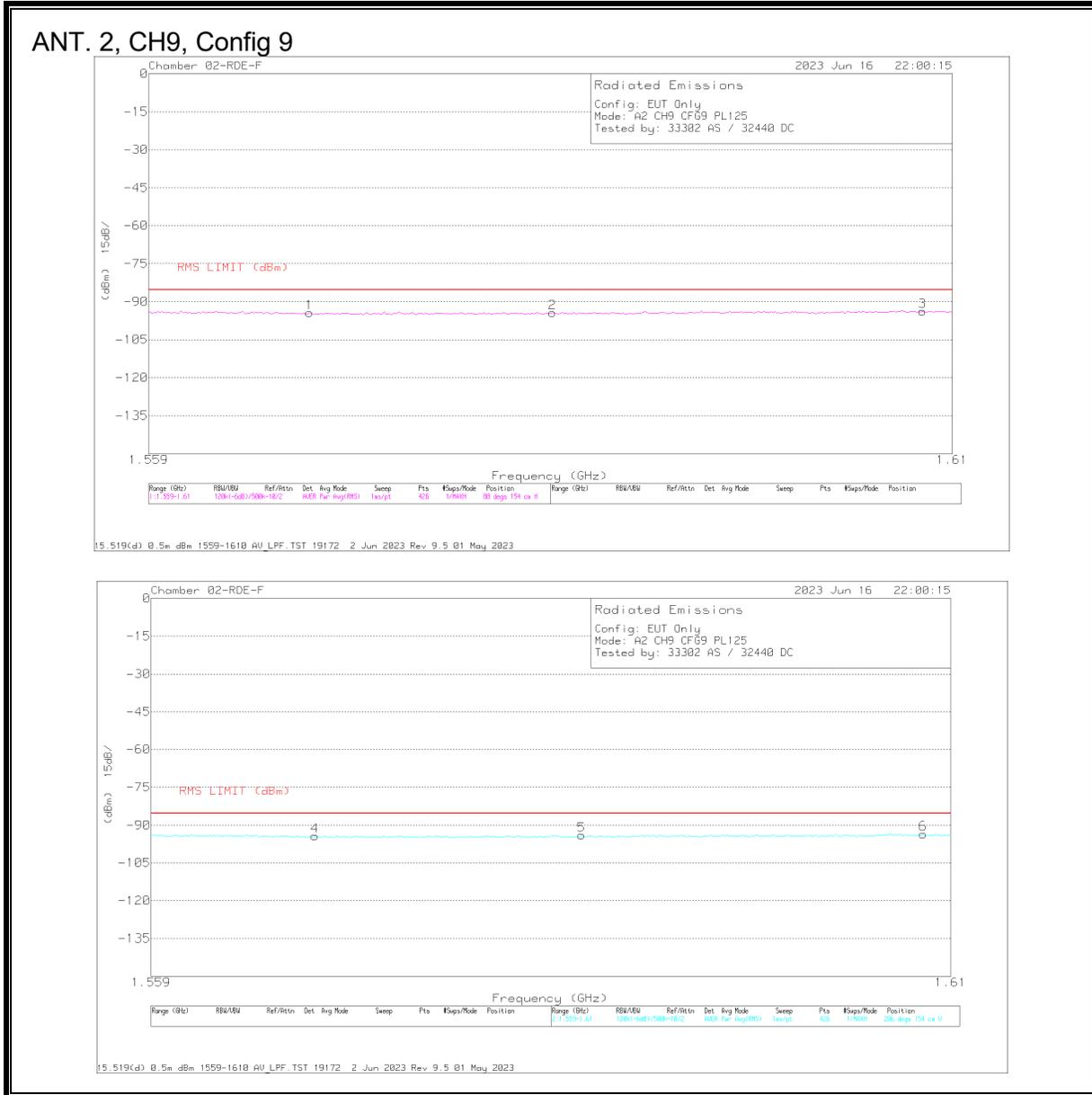
RMS - RMS detection



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	206808 ACF (dB) 3mH	Amp/Cbl (dB)	Dist. Corr. (dB)	Conv. Fact. (dB)	204843 LPF (dB)	Corrected Reading (dBm)	RMS LIMIT (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.56836	-71.64	RMS	27.8	-46.9	-15.6	11.8	.2	-94.34	-85.3	-9.04	198	154	H
2	1.56612	-71.78	RMS	28	-46.7	-15.6	11.8	.2	-94.08	-85.3	-8.78	198	154	H
3	1.6088	-71.6	RMS	28.2	-46.8	-15.6	11.8	.2	-93.8	-85.3	-8.5	198	154	H
4	1.56872	-71.6	RMS	27.8	-46.9	-15.6	11.8	.2	-94.3	-85.3	-9	360	154	V
5	1.5872	-71.7	RMS	28	-46.7	-15.6	11.8	.2	-94	-85.3	-8.7	294	154	V
6	1.6094	-71.69	RMS	28.2	-46.8	-15.6	11.8	.1	-93.99	-85.3	-8.69	30	154	V

RMS - RMS detection

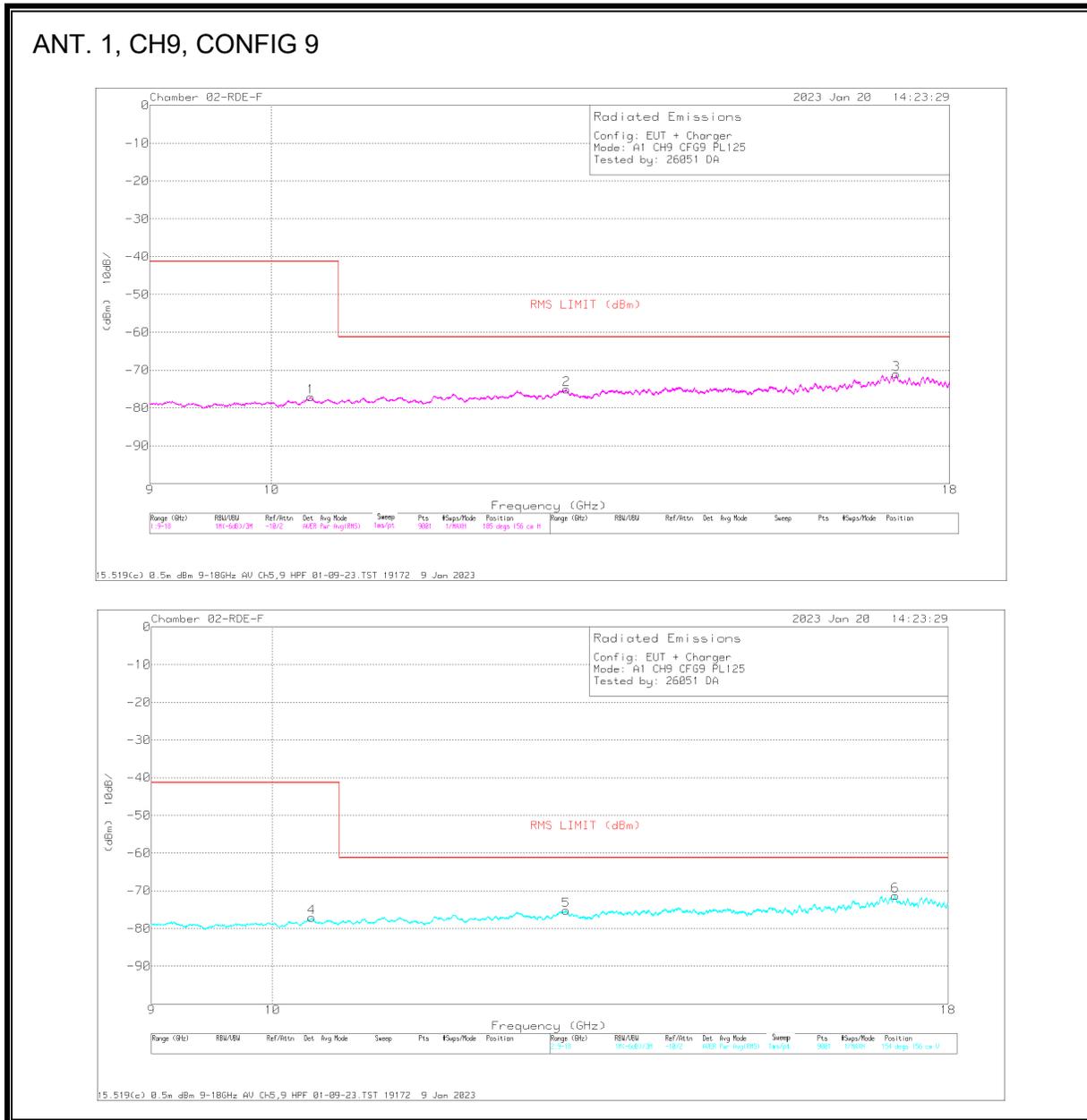


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	206808 ACF (dB) 3mH	Amp/Cbl (dB)	Dist. Corr. (dB)	Conv. Fact. (dB)	204843 LPF (dB)	Corrected Reading (dBm)	RMS LIMIT (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.56908	-71.64	RMS	27.8	-46.9	-15.6	11.8	.2	-94.34	-85.3	-9.04	110	154	H
2	1.58444	-72.1	RMS	28	-46.7	-15.6	11.8	.2	-94.4	-85.3	-9.1	0	154	H
3	1.60808	-71.55	RMS	28.2	-46.8	-15.6	11.8	.2	-93.75	-85.3	-8.45	264	154	H
4	1.56932	-71.68	RMS	27.8	-46.9	-15.6	11.8	.2	-94.38	-85.3	-9.08	118	154	V
5	1.58624	-71.59	RMS	28	-46.7	-15.6	11.8	.2	-93.89	-85.3	-8.59	118	154	V
6	1.6082	-71.28	RMS	28.2	-46.8	-15.6	11.8	.2	-93.48	-85.3	-8.18	295	154	V

RMS - RMS detection

9.6.4. AVERAGE EMISSIONS, 9 – 18 GHz

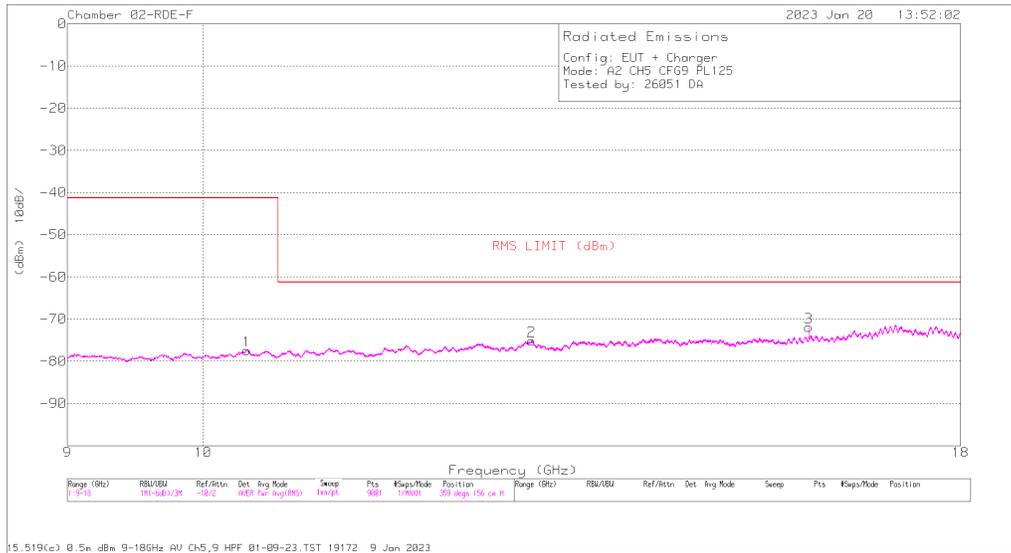


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	81887 ACF (dB)	Amp/Cbl (dB)	Dist. Corr. (dB)	Conv. Fact. (dB)	High Pass Filter (dB)	Corrected Reading (dBm)	RMS LIMIT (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	10.347	-64.96	RMS	37.4	-46	-15.6	11.8	.3	-77.06	-41.3	-35.76	295	156	H
2	12.914	-65.43	RMS	38.7	-44.8	-15.6	11.8	.3	-75.03	-61.3	-13.73	141	156	H
3	17.188	-64.99	RMS	42.2	-44.8	-15.6	11.8	.3	-71.09	-61.3	-9.79	316	156	H
4	10.347	-64.94	RMS	37.4	-46	-15.6	11.8	.3	-77.04	-41.3	-35.74	286	156	V
5	12.911	-65.63	RMS	38.7	-44.8	-15.6	11.8	.3	-75.23	-61.3	-13.93	0	156	V
6	17.192	-65.14	RMS	42.2	-44.8	-15.6	11.8	.3	-71.24	-61.3	-9.94	242	156	V

RMS - RMS detection

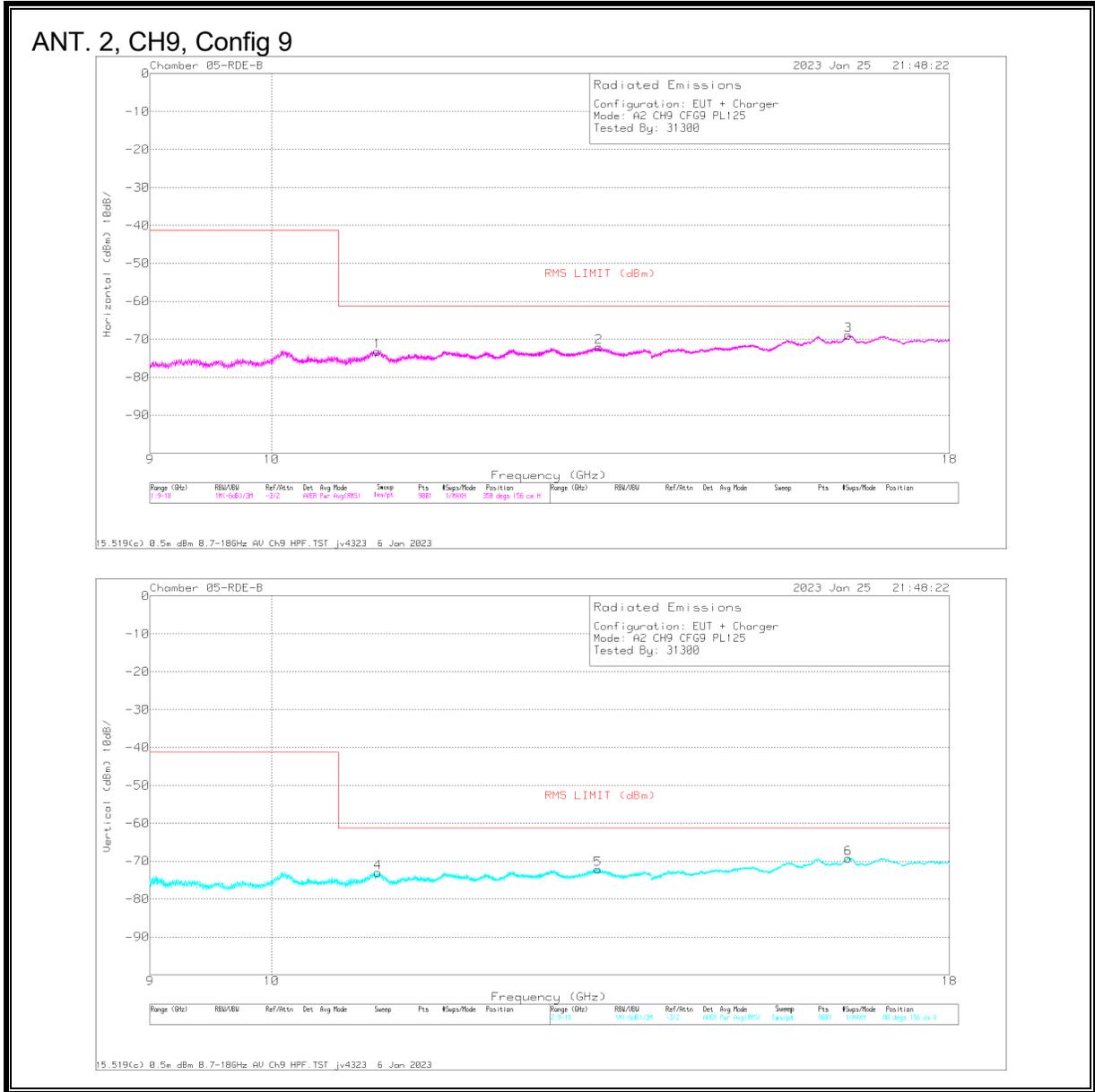
ANT. 2, CH5, Config 9



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	81887 ACF (dB)	Amp/Cbl (dB)	Dist. Corr. (dB)	Conv. Fact. (dB)	High Pass Filter (dB)	Corrected Reading (dBm)	RMS LIMIT (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	10.344	-65.1	RMS	37.4	-46.2	-15.6	11.8	.3	-77.4	-41.3	-36.1	339	156	H
2	12.904	-65.23	RMS	38.7	-45	-15.6	11.8	.2	-75.13	-61.3	-13.83	228	156	H
3	16	-62.56	RMS	40	-45.9	-15.6	11.8	.3	-71.96	-61.3	-10.66	339	156	H
4	10.35	-65.09	RMS	37.4	-46.1	-15.6	11.8	.3	-77.29	-41.3	-35.99	88	156	V
5	12.903	-65.2	RMS	38.7	-45	-15.6	11.8	.2	-75.1	-61.3	-13.8	264	156	V
6	16	-62.32	RMS	40	-45.9	-15.6	11.8	.3	-71.72	-61.3	-10.42	308	156	V

RMS - RMS detection

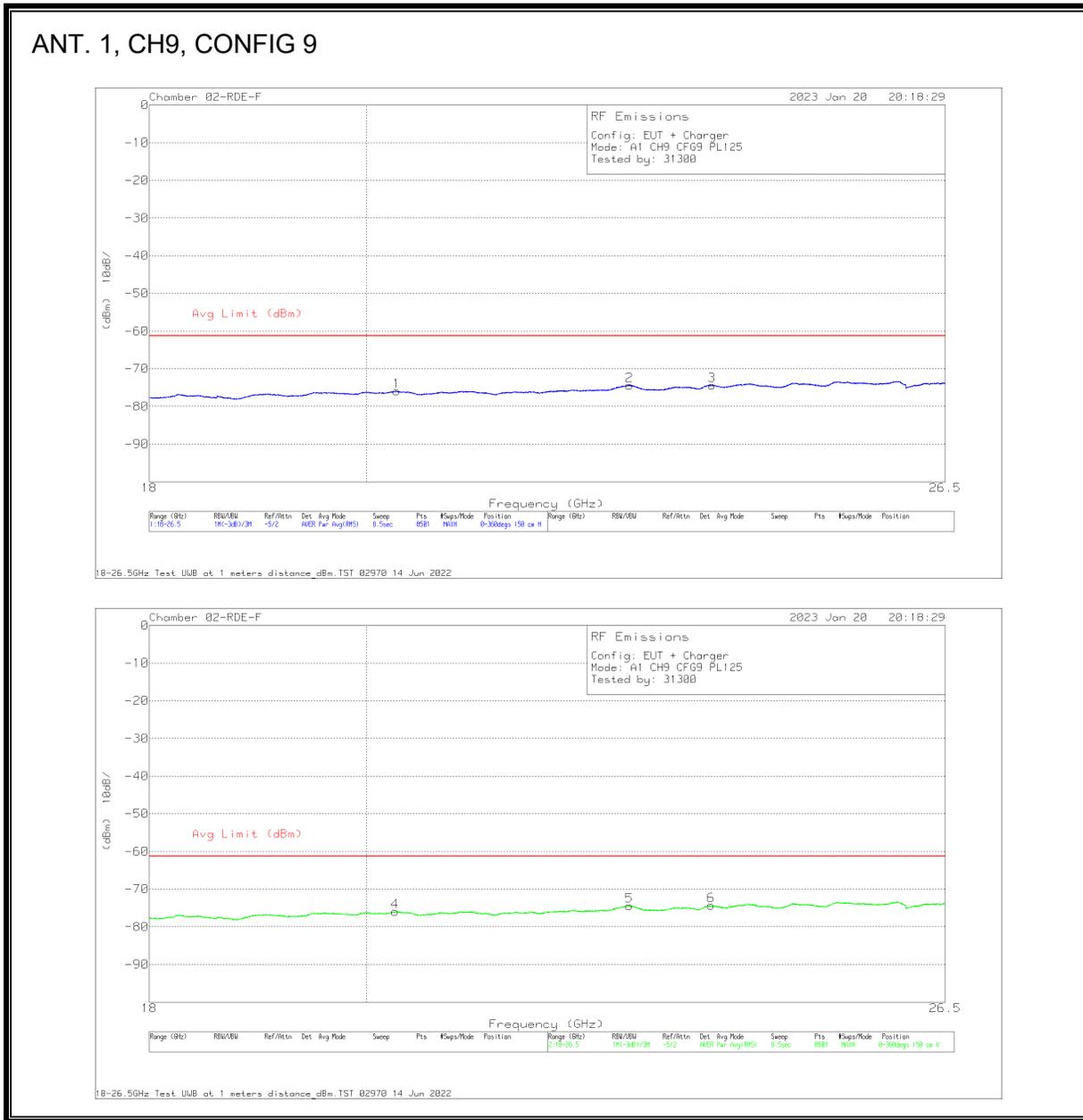


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	Horn Antenna ACF(dB)	Dist. Corr. (dB)	Conversion Factor (dB)	Gain/Loss (dB)	Corrected Reading (dBm)	RMS LIMIT (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	10.963	-65.21	RMS	38.2	-15.6	11.8	-42.29	-73.1	-61.3	-11.8	338	156	H
4	10.966	-65.36	RMS	38.3	-15.6	11.8	-42.2	-73.06	-61.3	-11.76	1	156	V
5	13.271	-63.21	RMS	39.6	-15.6	11.8	-44.7	-72.11	-61.3	-10.81	1	156	V
2	13.284	-63.33	RMS	39.6	-15.6	11.8	-44.55	-72.08	-61.3	-10.78	338	156	H
6	16.485	-64.91	RMS	41.9	-15.6	11.8	-42.41	-69.22	-61.3	-7.92	242	156	V
3	16.49	-64.58	RMS	41.9	-15.6	11.8	-42.45	-68.93	-61.3	-7.63	358	156	H

RMS - RMS detection

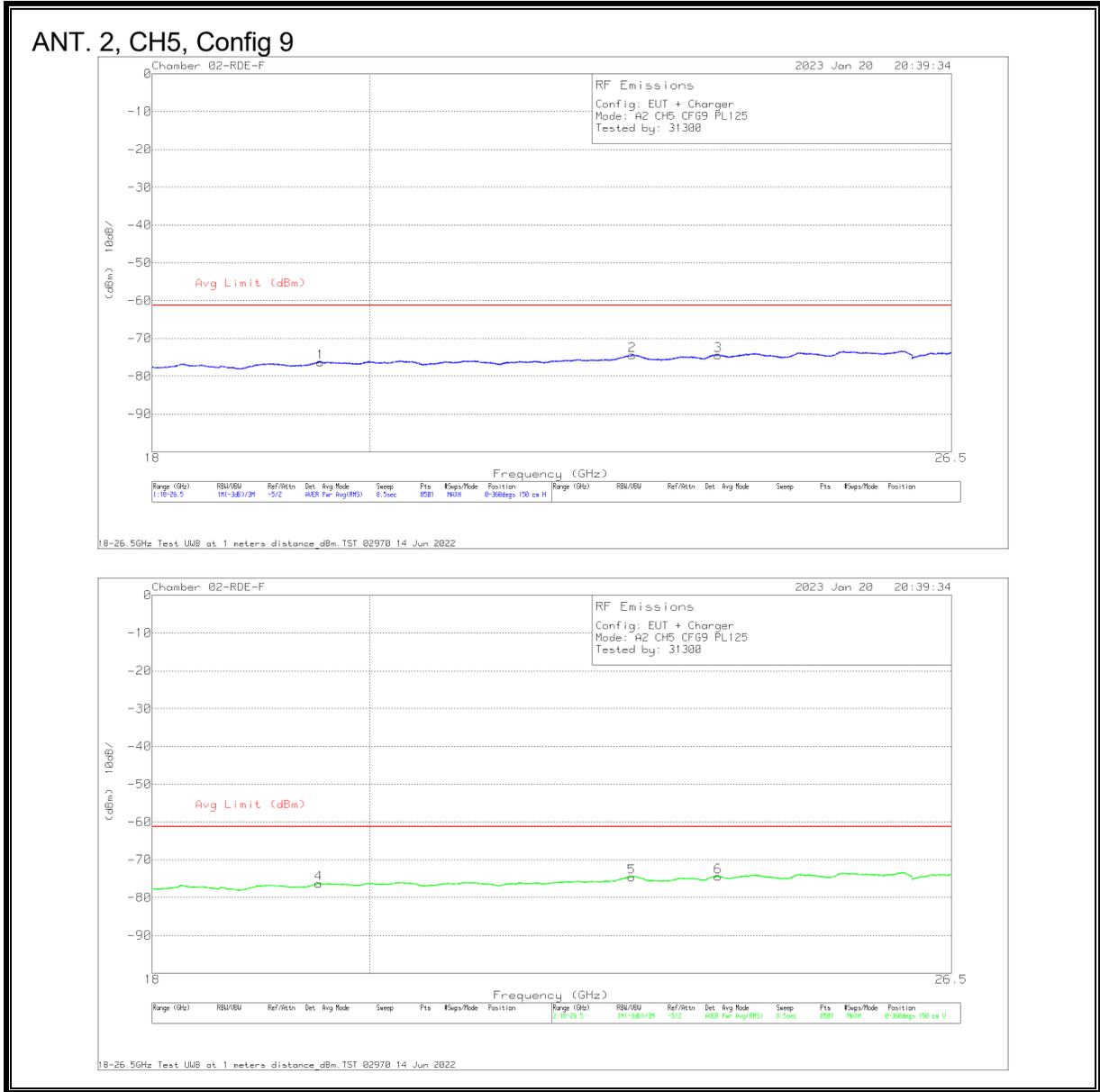
9.6.5. AVERAGE EMISSIONS, 18 – 26.5 GHz



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	172362 1m AF (dB/m)	171580 Amp (dB)	Cables (dB)	Distance CF (dB)	Conv. Fact. (dB)	Corrected Reading (dBm)	Avg Limit (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 20.298	-68.12	RMS	33.4	-61.9	18.4	-9.5	11.8	-75.92	-61.3	-14.62	0-360	150	H
2	* 22.731	-67.82	RMS	34.7	-63.1	19.5	-9.5	11.8	-74.42	-61.3	-13.12	0-360	150	H
3	* 23.659	-68.99	RMS	35.1	-62.8	19.9	-9.5	11.8	-74.49	-61.3	-13.19	0-360	150	H
4	* 20.283	-68.2	RMS	33.4	-61.9	18.4	-9.5	11.8	-76	-61.3	-14.7	0-360	150	V
5	* 22.728	-67.86	RMS	34.7	-63.1	19.5	-9.5	11.8	-74.46	-61.3	-13.16	0-360	150	V
6	* 23.652	-68.82	RMS	35.1	-62.8	19.9	-9.5	11.8	-74.32	-61.3	-13.02	0-360	150	V

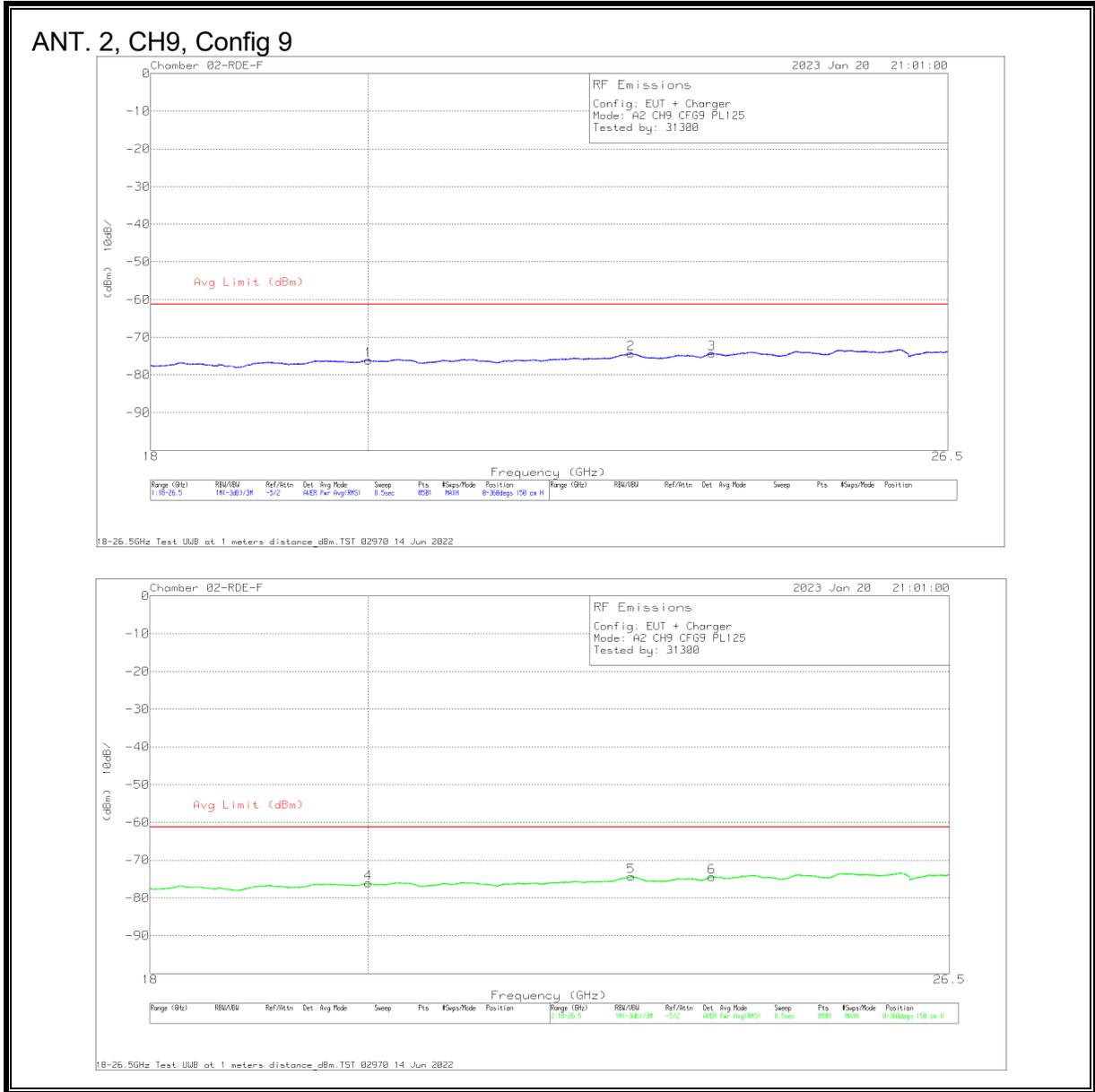
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 RMS - RMS detection



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	172362 1m AF (dB/m)	171580 Amp (dB)	Cables (dB)	Distance CF (dB)	Conv. Fact. (dB)	Corrected Reading (dBm)	Avg Limit (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 19.53	-66.91	RMS	33	-62.8	18.1	-9.5	11.8	-76.31	-61.3	-15.01	0-360	150	H
2	* 22.708	-67.96	RMS	34.8	-63.1	19.5	-9.5	11.8	-74.46	-61.3	-13.16	0-360	150	H
3	* 23.674	-68.91	RMS	35.1	-62.8	19.9	-9.5	11.8	-74.41	-61.3	-13.11	0-360	150	H
4	* 19.51	-66.9	RMS	33	-62.8	18.1	-9.5	11.8	-76.3	-61.3	-15	0-360	150	V
5	* 22.702	-68.02	RMS	34.8	-63.1	19.5	-9.5	11.8	-74.52	-61.3	-13.22	0-360	150	V
6	* 23.674	-68.89	RMS	35.1	-62.8	19.9	-9.5	11.8	-74.39	-61.3	-13.09	0-360	150	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 RMS - RMS detection

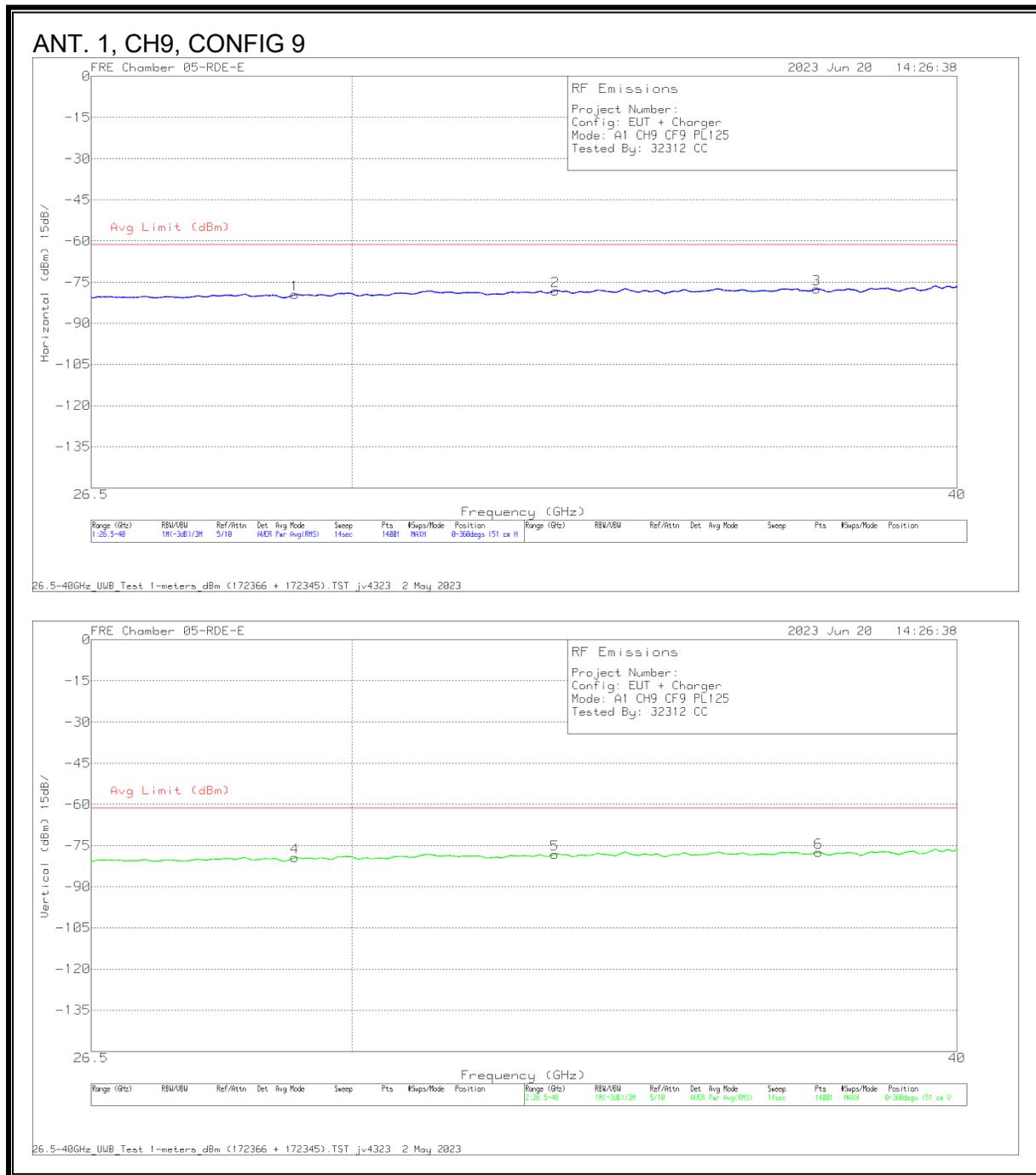


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	172362 1m AF (dB/m)	171580 Amp (dB)	Cables (dB)	Distance CF (dB)	Conv. Fact. (dB)	Corrected Reading (dBm)	Avg Limit (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 20.007	-68.3	RMS	33.6	-62	18.3	-9.5	11.8	-76.1	-61.3	-14.8	0-360	150	H
2	* 22.723	-67.72	RMS	34.7	-63.1	19.5	-9.5	11.8	-74.32	-61.3	-13.02	0-360	150	H
3	* 23.634	-68.93	RMS	35.1	-62.7	19.9	-9.5	11.8	-74.33	-61.3	-13.03	0-360	150	H
4	* 20.006	-68.29	RMS	33.6	-62	18.3	-9.5	11.8	-76.09	-61.3	-14.79	0-360	150	V
5	* 22.719	-67.87	RMS	34.8	-63.1	19.5	-9.5	11.8	-74.37	-61.3	-13.07	0-360	150	V
6	* 23.624	-69.02	RMS	35.1	-62.7	19.9	-9.5	11.8	-74.42	-61.3	-13.12	0-360	150	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 RMS - RMS detection

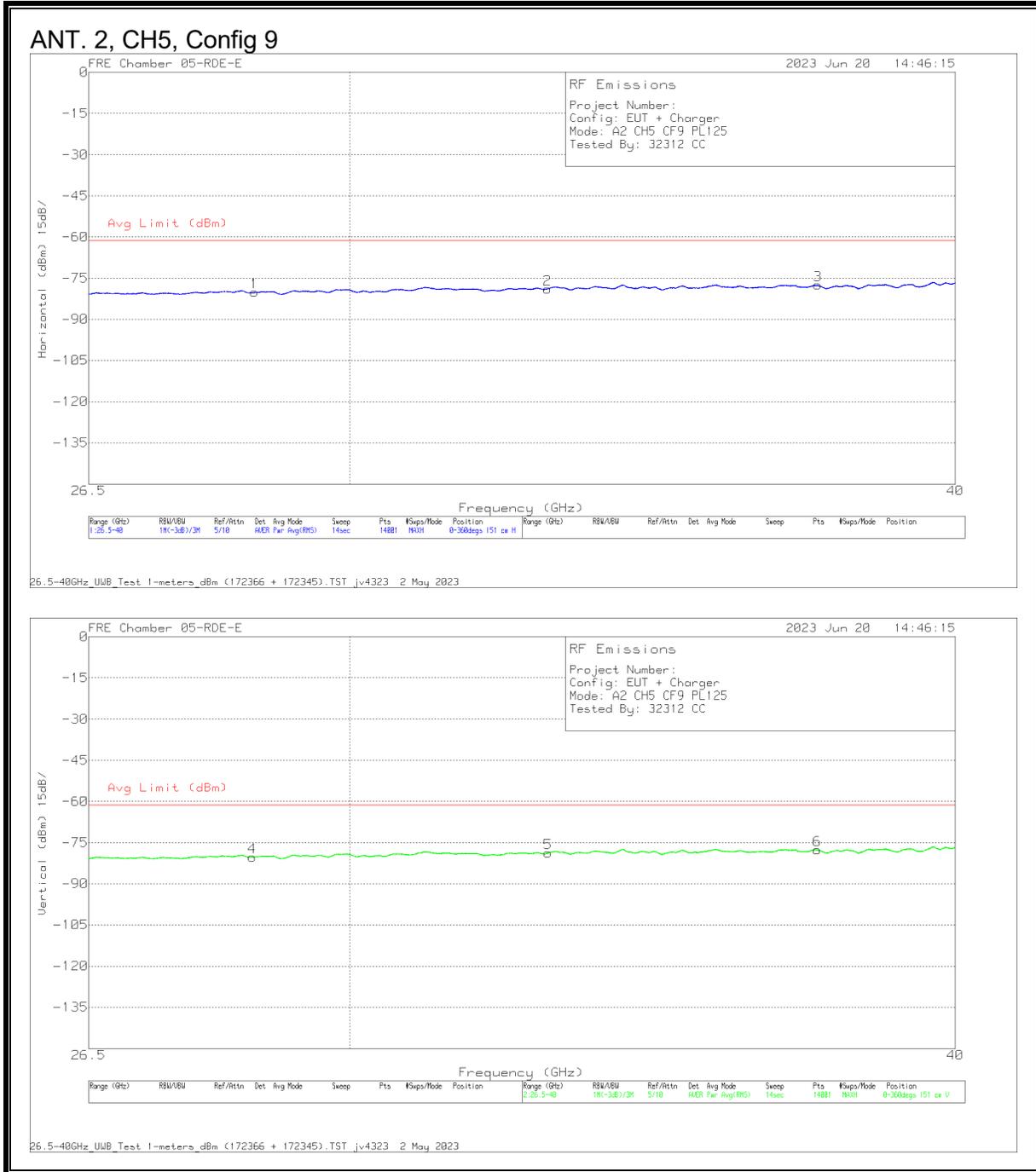
9.6.6. AVERAGE EMISSIONS, 26.5 – 40 GHz



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	172366 ACF (dB) 1mit	172345 Amp (dB)	Dist Corr (dB)	Conversion Factor (dB)	CBL/SWITCH	Corrected Reading (dBm)	Avg Limit (dBm)	Margin (dB)	Acimuth (Degs)	Height (cm)	Polarity
1	29.198072	-57.39	RMS	36.5	-71.7	-15.6	11.8	16.9	-79.49	-61.3	-18.19	0-360	151	H
4	29.198072	-57.31	RMS	36.5	-71.7	-15.6	11.8	16.9	-79.41	-61.3	-18.11	0-360	151	V
5	33.035931	-58.25	RMS	37.5	-71.3	-15.6	11.8	17.7	-78.15	-61.3	-16.85	0-360	151	V
2	33.040752	-58.24	RMS	37.5	-71.3	-15.6	11.8	17.7	-78.14	-61.3	-16.84	0-360	151	H
3	37.414753	-60.75	RMS	38.6	-70.8	-15.6	11.8	19.3	-77.45	-61.3	-16.15	0-360	151	H
6	37.449468	-60.57	RMS	38.6	-70.9	-15.6	11.8	19.2	-77.47	-61.3	-16.17	0-360	151	V

RMS - RMS detection

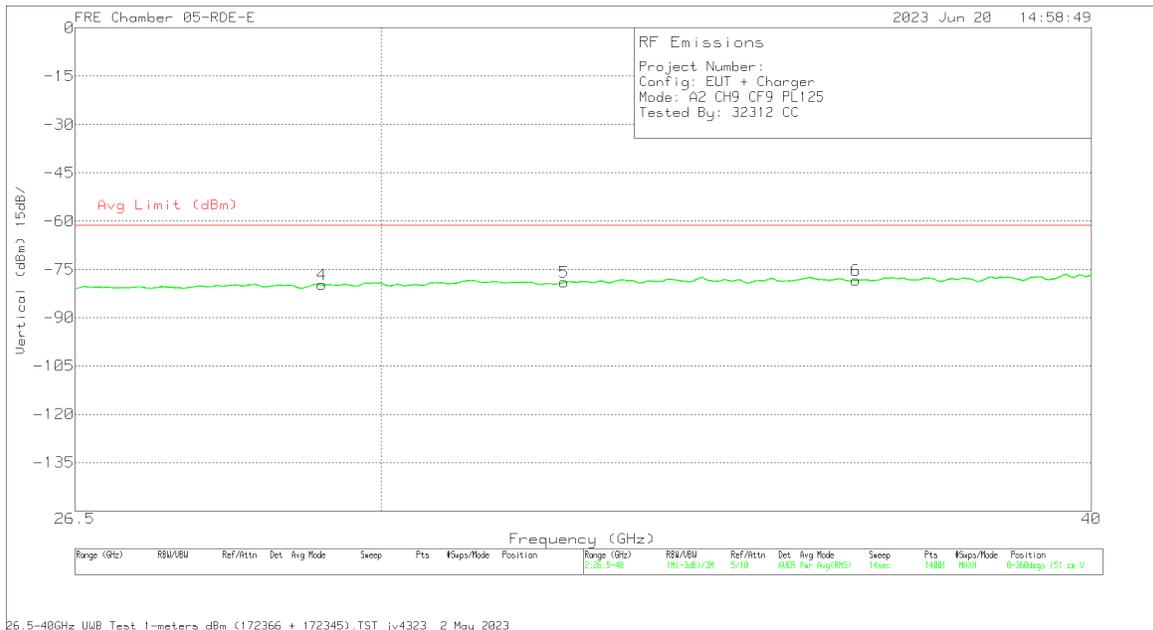
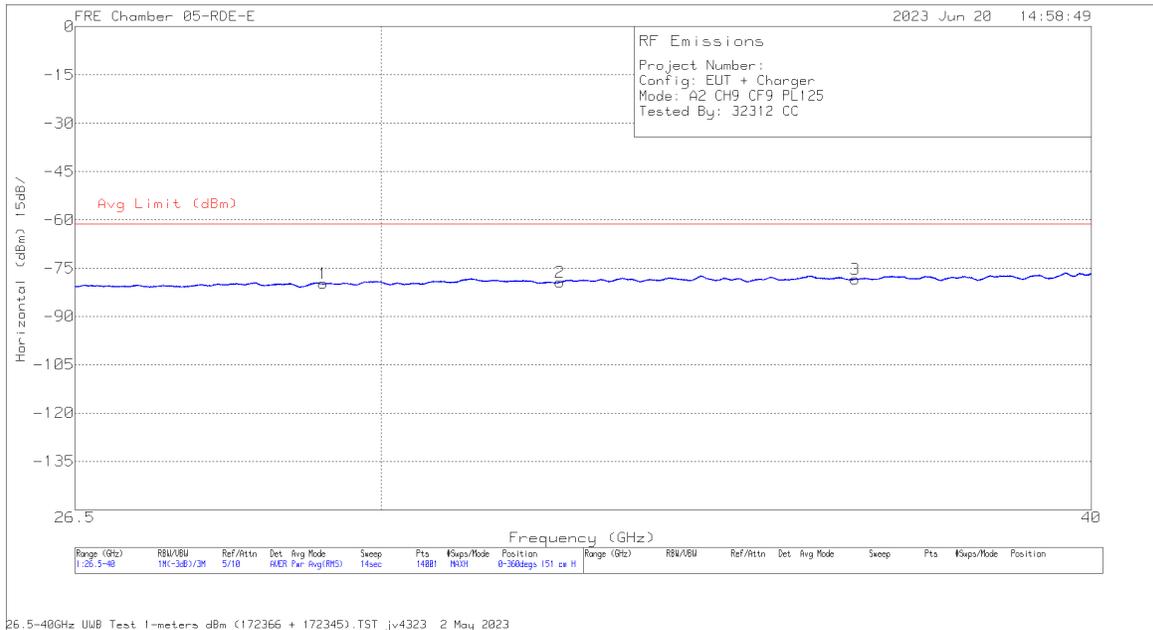


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	172366 ACF (dB) 1mH	172345 Amp (dB)	Dist Corr (dB)	Conversion Factor (dB)	CBL/SWITCH	Corrected Reading (dBm)	Avg Limit (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	28.642643	-56.75	RMS	36.3	-72.5	-15.6	11.8	16.5	-80.25	-61.3	-18.95	0-360	151	V
1	28.670608	-56.63	RMS	36.3	-72.5	-15.6	11.8	16.5	-80.13	-61.3	-18.83	0-360	151	H
2	32.952038	-58.87	RMS	37.4	-71.3	-15.6	11.8	17.7	-78.87	-61.3	-17.57	0-360	151	H
5	32.959752	-58.7	RMS	37.4	-71.3	-15.6	11.8	17.7	-78.7	-61.3	-17.4	0-360	151	V
6	37.46345	-60.78	RMS	38.6	-70.9	-15.6	11.8	19.2	-77.68	-61.3	-16.38	0-360	151	V
3	37.468753	-60.5	RMS	38.6	-70.9	-15.6	11.8	19.1	-77.5	-61.3	-16.2	0-360	151	H

RMS - RMS detection

ANT. 2, CH9, Config 9



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	172366 ACF (dB) 1mH	172345 Amp (dB)	Dist Corr (dB)	Conversion Factor (dB)	CBL/SWITCH	Corrected Reading (dBm)	Avg Limit (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	29.289679	-57.33	RMS	36.6	-71.8	-15.6	11.8	16.6	-79.73	-61.3	-18.43	0-360	151	V
1	29.301251	-57.34	RMS	36.6	-71.8	-15.6	11.8	16.6	-79.74	-61.3	-18.44	0-360	151	H
2	32.250037	-59.26	RMS	37.2	-70.9	-15.6	11.8	17.5	-79.26	-61.3	-17.96	0-360	151	H
5	32.308859	-58.96	RMS	37.2	-70.9	-15.6	11.8	17.5	-78.96	-61.3	-17.66	0-360	151	V
3	36.348253	-58.5	RMS	38	-73.1	-15.6	11.8	19	-78.4	-61.3	-17.1	0-360	151	H
6	36.360789	-58.45	RMS	38	-73.1	-15.6	11.8	19	-78.35	-61.3	-17.05	0-360	151	V

RMS - RMS detection

9.7. AC POWER-LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a) & RSS-Gen 8.8

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	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

ANSI C63.10 Section 6.2

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.

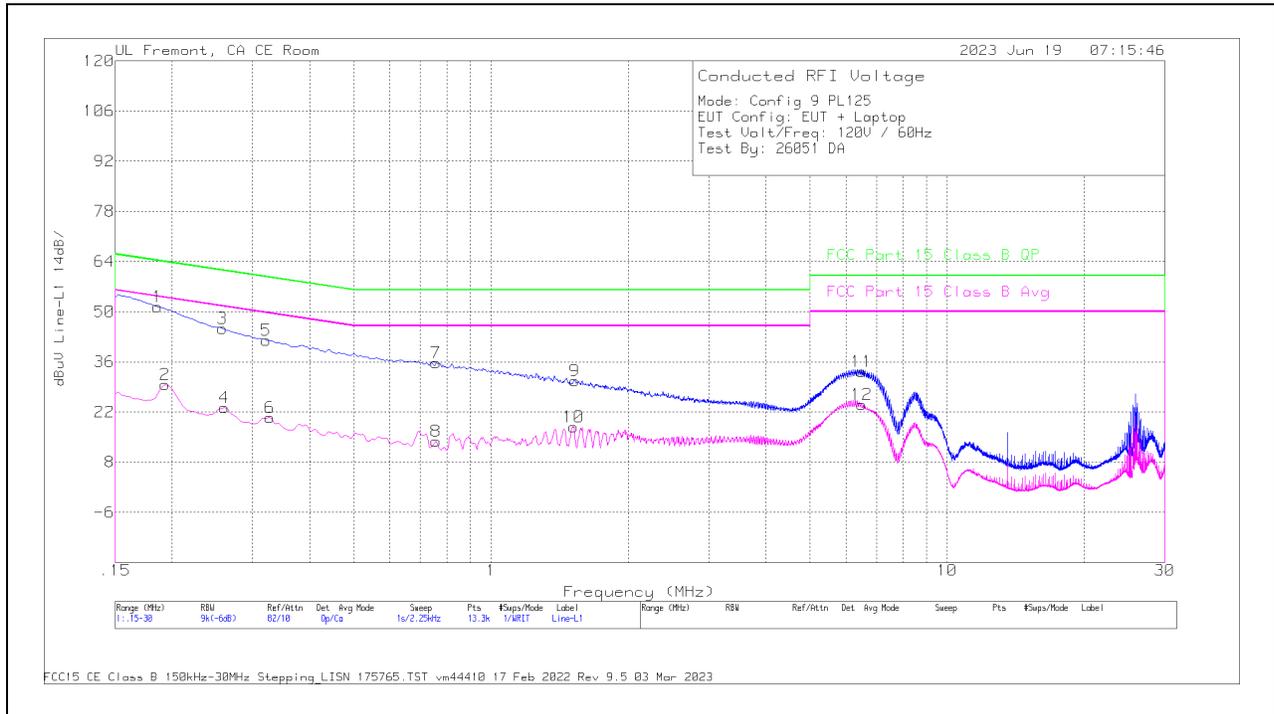
Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

Employee IDs: 26051
Location: Immunity Lab
Test Date: 6/19/2023

9.7.1. AC Power Line With Laptop

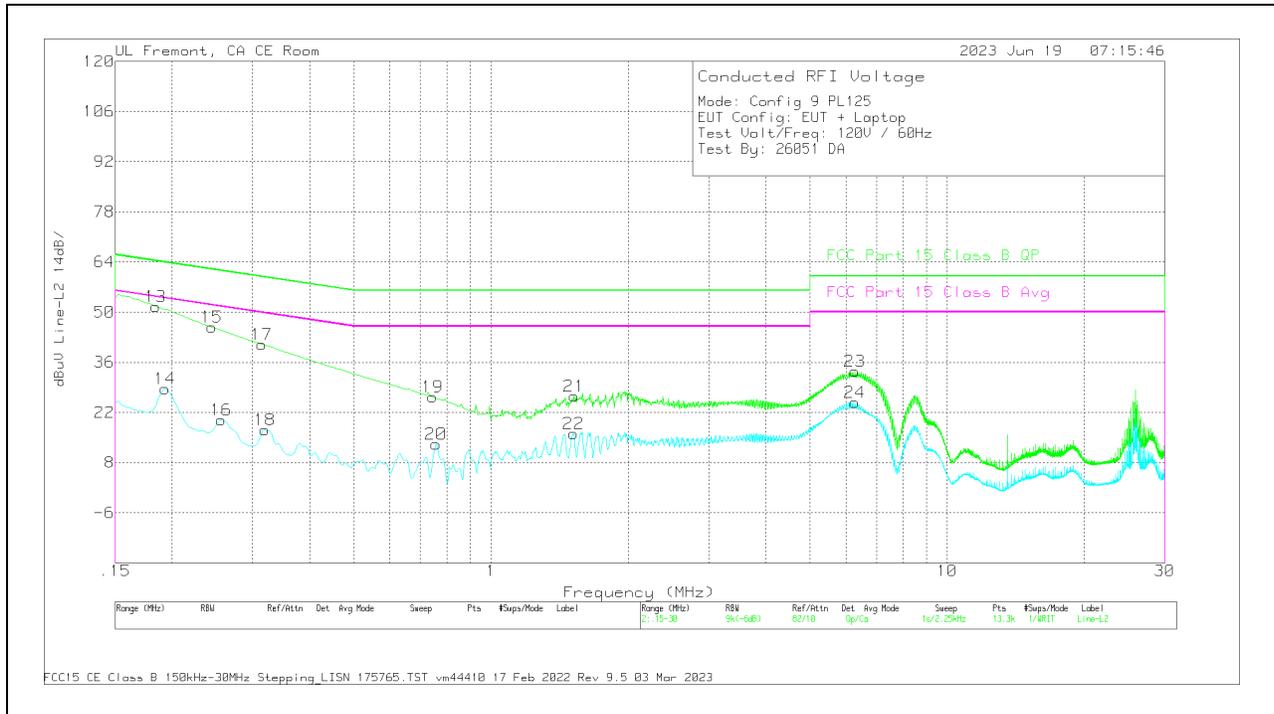
LINE 1 RESULTS



Range 1: Line-L1 .15 - 30MHz												
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	L1_LISN.csv (dB)	C1&C3 cable path loss (dB)	207996 Limiter with short cabl (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av(CISPR)M argin (dB)	
2	.1928	20.2	Ca	0	0	9.4	29.6	-	-	53.92	-24.32	
4	.2603	13.86	Ca	0	0	9.3	23.16	-	-	51.42	-28.26	
6	.3278	11.19	Ca	0	0	9.3	20.49	-	-	49.51	-29.02	
8	.7575	4.45	Ca	0	.1	9.3	13.85	-	-	46	-32.15	
10	1.518	8.46	Ca	0	.1	9.3	17.86	-	-	46	-28.14	
12	6.486	14.67	Ca	0	.1	9.3	24.07	-	-	50	-25.93	
1	.186	41.97	Qp	0	0	9.4	51.37	64.21	-12.84	-	-	
3	.258	36.05	Qp	0	0	9.3	45.35	61.5	-16.15	-	-	
5	.321	32.77	Qp	0	0	9.3	42.07	59.68	-17.61	-	-	
7	.7575	26.35	Qp	0	.1	9.3	35.75	56	-20.25	-	-	
9	1.527	21.38	Qp	0	.1	9.3	30.78	56	-25.22	-	-	
11	6.4871	23.89	Qp	0	.1	9.3	33.29	60	-26.71	-	-	

Qp - Quasi-Peak detector
 Ca - CISPR average detection

LINE 2 RESULTS

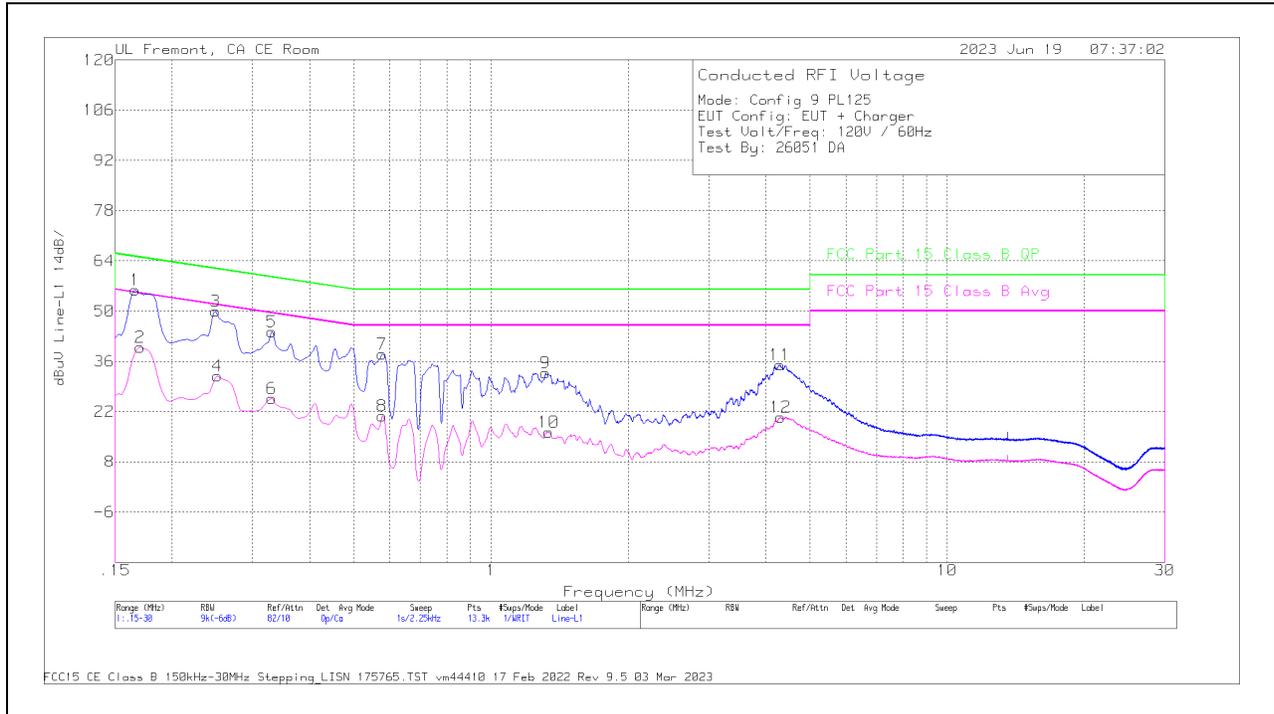


Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	L2_LISN (dB)	C2&C3 cable path loss (dB)	207996 Limiter with short cabl (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av(CISPR)M argin (dB)
14	.1928	19.19	Ca	0	0	9.4	28.59	-	-	53.92	-25.33
16	.2558	10.55	Ca	0	0	9.3	19.85	-	-	51.57	-31.72
18	.3188	7.79	Ca	0	0	9.3	17.09	-	-	49.74	-32.65
20	.7575	3.81	Ca	0	.1	9.3	13.21	-	-	46	-32.79
22	1.518	6.7	Ca	0	.1	9.3	16.1	-	-	46	-29.9
24	6.2745	15.36	Ca	0	.1	9.3	24.76	-	-	50	-25.24
13	.1838	42.23	Qp	0	0	9.4	51.63	64.31	-12.68	-	-
15	.2445	36.53	Qp	0	0	9.3	45.83	61.94	-16.11	-	-
17	.3143	31.73	Qp	0	0	9.3	41.03	59.86	-18.83	-	-
19	.744	16.9	Qp	0	.1	9.3	26.3	56	-29.7	-	-
21	1.5203	17.19	Qp	0	.1	9.3	26.59	56	-29.41	-	-
23	6.27	24.01	Qp	0	.1	9.3	33.41	60	-26.59	-	-

Qp - Quasi-Peak detector
 Ca - CISPR average detection

9.7.2. AC Power Line With AC/DC Adapter

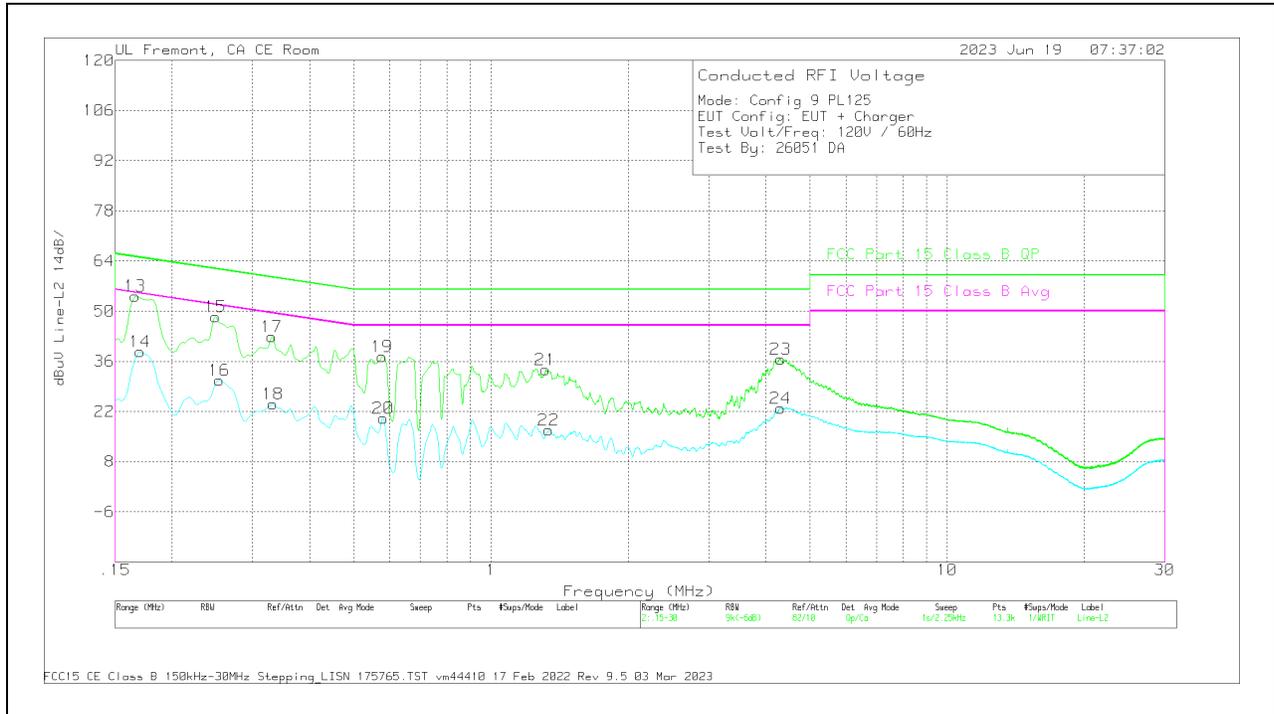
LINE 1 RESULTS



Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	L1_LISN.csv (dB)	C1&C3 cable path loss (dB)	207996 Limiter with short cabl (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av(CISPR)M argin (dB)
2	.1703	30.51	Ca	0	0	9.4	39.91	-	-	54.95	-15.04
4	.2513	22.58	Ca	0	0	9.3	31.88	-	-	51.72	-19.84
6	.33	16.39	Ca	0	0	9.3	25.69	-	-	49.45	-23.76
8	.5775	11.33	Ca	0	.1	9.3	20.73	-	-	46	-25.27
10	1.3358	6.95	Ca	0	.1	9.3	16.35	-	-	46	-29.65
12	4.308	11.01	Ca	0	.1	9.3	20.41	-	-	46	-25.59
1	.1658	46.49	Qp	0	0	9.4	55.89	65.17	-9.28	-	-
3	.249	40.68	Qp	0	0	9.3	49.98	61.79	-11.81	-	-
5	.33	34.9	Qp	0	0	9.3	44.2	59.45	-15.25	-	-
7	.5775	28.67	Qp	0	.1	9.3	38.07	56	-17.93	-	-
9	1.3178	23.43	Qp	0	.1	9.3	32.83	56	-23.17	-	-
11	4.3001	25.62	Qp	0	.1	9.3	35.02	56	-20.98	-	-

Qp - Quasi-Peak detector
 Ca - CISPR average detection

LINE 2 RESULTS



Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	L2 LISN (dB)	C2&C3 cable path loss (dB)	207996 Limiter with short cabl (dB)	Corrected Reading (dBuV)	FCC Part 15 Class B QP (dBuV)	QP Margin (dB)	FCC Part 15 Class B Avg (dBuV)	Av(CISPR)M argin (dB)
14	.1703	29.26	Ca	0	0	9.4	38.66	-	-	54.95	-16.29
16	.2535	21.42	Ca	0	0	9.3	30.72	-	-	51.64	-20.92
18	.3323	14.76	Ca	0	0	9.3	24.06	-	-	49.39	-25.33
20	.5798	10.69	Ca	0	.1	9.3	20.09	-	-	46	-25.91
22	1.338	7.34	Ca	0	.1	9.3	16.74	-	-	46	-29.26
24	4.317	13.51	Ca	0	.1	9.3	22.91	-	-	46	-23.09
13	.1658	44.85	Qp	0	0	9.4	54.25	65.17	-10.92	-	-
15	.249	39.21	Qp	0	0	9.3	48.51	61.79	-13.28	-	-
17	.33	33.63	Qp	0	0	9.3	42.93	59.45	-16.52	-	-
19	.5775	27.92	Qp	0	.1	9.3	37.32	56	-18.68	-	-
21	1.3178	24.3	Qp	0	.1	9.3	33.7	56	-22.3	-	-
23	4.3148	27.29	Qp	0	.1	9.3	36.69	56	-19.31	-	-

Qp - Quasi-Peak detector
 Ca - CISPR average detection

10. SETUP PHOTOS

Please refer to 14523740-EP1V1 for setup photos.

END OF REPORT