

TEST REPORT

Report Number : 14523778-E16V2

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

Model : A2849

FCC ID : BCG-E8439A

IC : 579C- E8439A

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	7/31/2023	Initial Review	--
V2	8/2/2023	Address TCB Questions for sections: 1, 3, 6.2, 7, 9.1, 9.2, 9.3 &9.4	Alfonso Sanchez

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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	A2849	
Brand	APPLE	
FCC ID	BCG-E8439A	
IC	579C-E8439A	
EUT Description	SMARTPHONE	
Serial Number	TJ0462QWN1, T9NPRXX6RY	
Sample Receipt Date	Jun 16, 2023, July 17, 2024	
Date Tested	Feb 14, 2023 to July 17, 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.	Alfonso Sanchez 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 Court, Fremont, CA 94538, USA			
<input 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:

$$\begin{aligned}\text{Final Voltage (dBuV)} &= \text{Measured Voltage (dBuV)} + \text{LISN Insertion Loss (dB)} + \text{Cable Loss (dB)} \\ &\quad + \text{Limiter Factor (dB)} \\ &= 38.32 \text{ dBuV} + 0.1 \text{ dB} + 0 \text{ dB} + 9.4 \text{ (dB)} \\ &= 47.82 \text{ dBuV}\end{aligned}$$

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 follow:

ANT	CH	CONFIG	Average Power (dBm EIRP)
1	9	103	-42.35
2	5	103	-42.33
2	9	810	-42.31

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: 210.1868000000100002.9

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

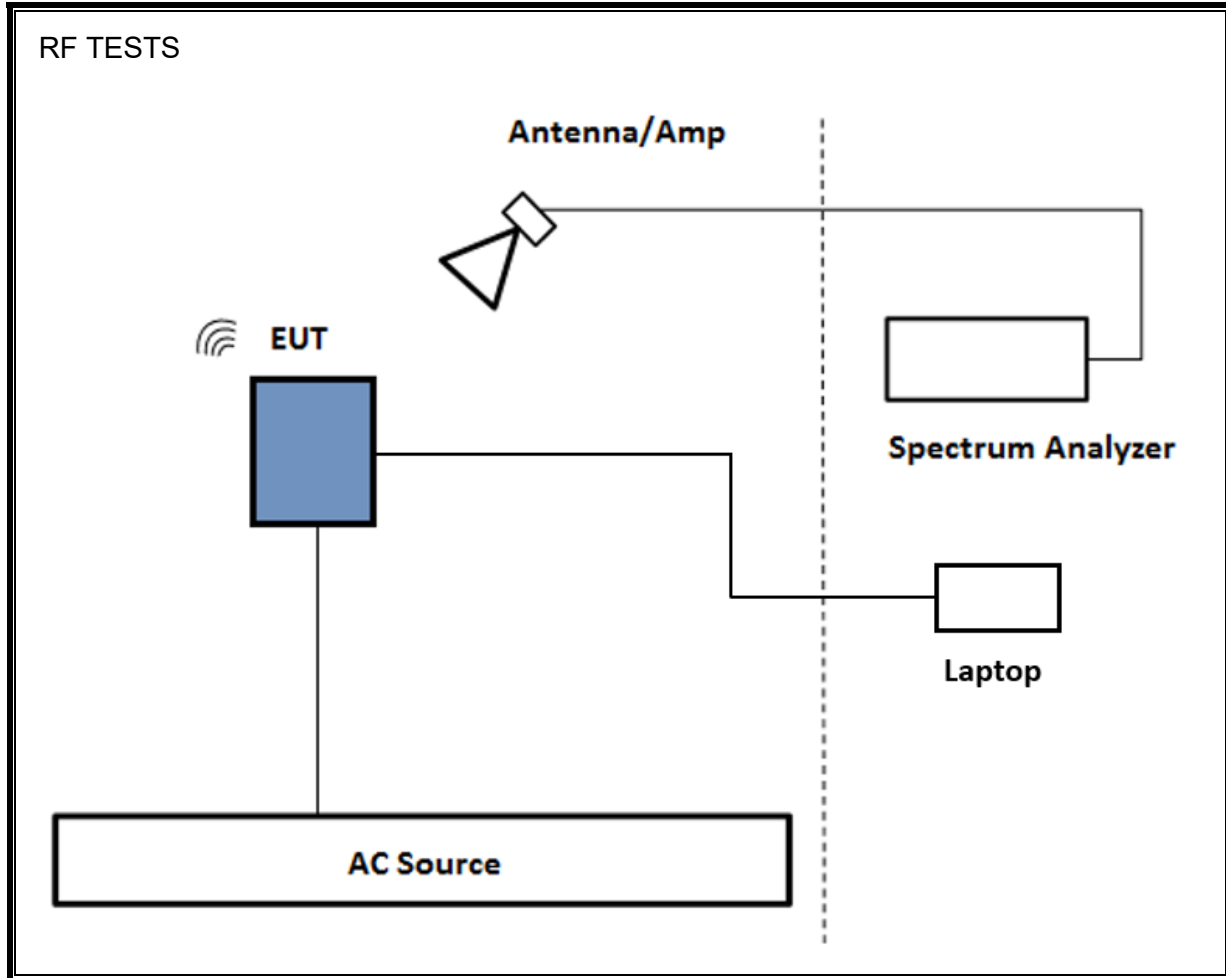
The EUT was examined at pre-scan test using a fundamental frequency in the portrait (z), landscape (y), and flatbed (x) position and the worst-case orientation of individual ANT/CH/CONFIG setting was determined for final spurious emission measurement. All selected configs are used for the Ant/Ch settings 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.

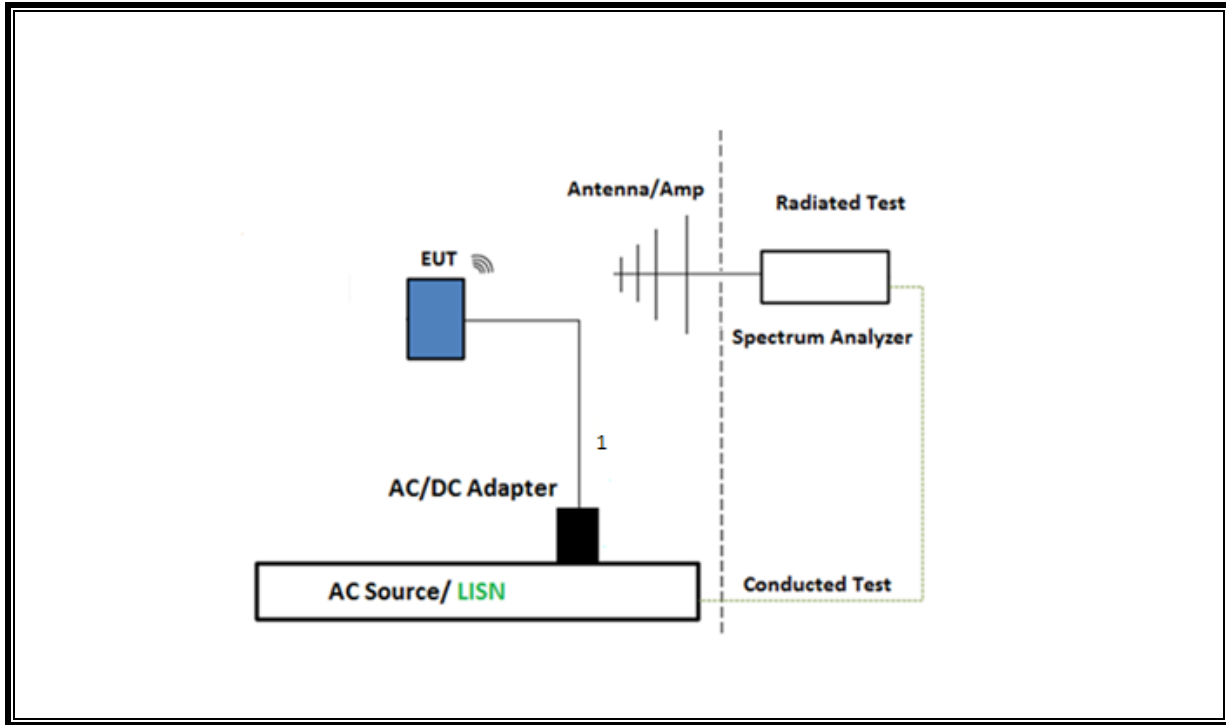
EUT was connected to AC power adapter in all test cases except 0.96-6GHz, 1164-1240MHz, and 1559-1610MHz due to noise unrelated to the UWB signal from the device.

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

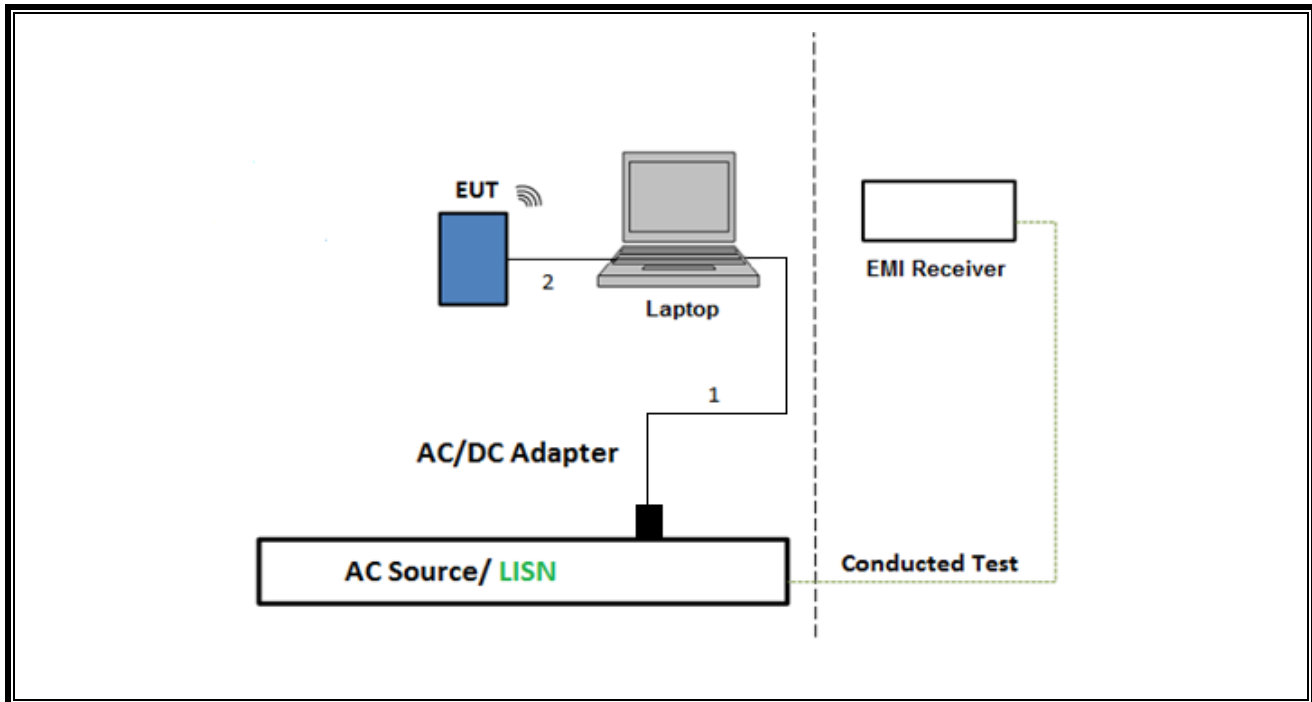
SETUP DIAGRAM FOR Above 1GHz TESTS



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 List					
Description	Manufacturer	Model	Local ID	Cal Due	Cal Date
EMI Test Receiver	Rohde & Schwarz	ESW44	223459	9/9/2023	9/9/2022
Horn Antenna, 1-18 GHz	ETS-Lindgren	3117	80707	5/31/2024	5/30/2023
RF Filter Box, 1-18GHz	UL-FR1 (CTECH)	N/A	231876	4/30/2024	4/4/2023
EMI Test Receiver	Rohde & Schwarz	ESW44	226078	2/29/2024	2/22/2023
Horn Antenna, 1-18 GHz	ETS-Lindgren	3117	226671	1/9/2024	1/9/2023
RF Filter Box, 1-18GHz	UL-FR1 (CTECH)	N/A	226779	3/5/2024	3/5/2023
EMI Test Receiver	Rohde & Schwarz	ESW44	235266	3/31/2024	3/30/2023
Horn Antenna, 1-18 GHz	ETS-Lindgren	3117	206808	3/31/2024	3/7/2023
RF Filter Box, 1-18GHz	UL-FR1 (CTECH)	N/A	173233	3/31/2024	3/13/2023
Antenna, Broadband Hybrid, 30MHz to 3GHz	Sunol Sciences Corp.	JB3	230634	1/31/2024	1/23/2023
Amplifier, 9KHz to 1GHz, 32dB	SONOMA INSTRUMENT	310	79584	8/15/2023	8/15/2022
Antenna, Horn 18 to 26.5GHz	A.R.A.	MWH-1826/B	172354	10/21/2023	10/21/2022
Rf amplifier 18-26.5GHz	AMPLICAL	AMP18G26.5-60	221832	2/13/2024	2/13/2023
Antenna, Horn 26.5 to 40GHz	A.R.A.	MWH-2640/B	172369	10/21/2023	10/21/2022
Rf Amplifier, 26-40GHz	AMPLICAL	AMP26G40-60	221834	2/13/2024	2/13/2023
Antenna, Passive Loop 100KHz - 30MHz	ELECTRO-METRICS	EM-6872	170015	7/28/2023	7/28/2022
Antenna, Passive Loop 30Hz - 1MHz	ELECTRO-METRICS	EM-6871	170013	7/28/2023	7/28/2022
Filter, HPF 11.2GHz, Ch9 11.5G HPF	Wainwright Instruments GmbH	WHW2-8165-11500-21000-40CD	176234	12/28/2023	12/28/2022
EMI TEST RECEIVER	Rohde & Schwarz	ESR	93091	2/29/2024	2/20/2023
Cable, RG223 Coax, double shield, BNC	Pasternack Enterprises	RG233/U	202326	7/31/2023	7/15/2022
Cable, RG223 Coax, double shield, BNC	Pasternack Enterprises	RG233/U	202322	7/31/2023	7/15/2022
*Transient Limiter	TE	TBFL1	207996	7/31/2023	7/15/2022
LISN for Conducted Emissions CISPR-16	Fischer Custom Communications, Inc	FCC-LISN-50/250-25-2-01-480V	175765	1/31/2024	1/27/2023
Radiated Software	UL	UL EMC	Ver 9.5, 21 Jan 2022		
AC Line Conducted Software	UL	UL EMC	Ver 9.5, 21 Jan 2022		

*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 Ant 1, CONFIG 9, Payload 125 on CH9 and Ant 2, 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, 28499, 32479

Location: Chamber 05-RDE-B

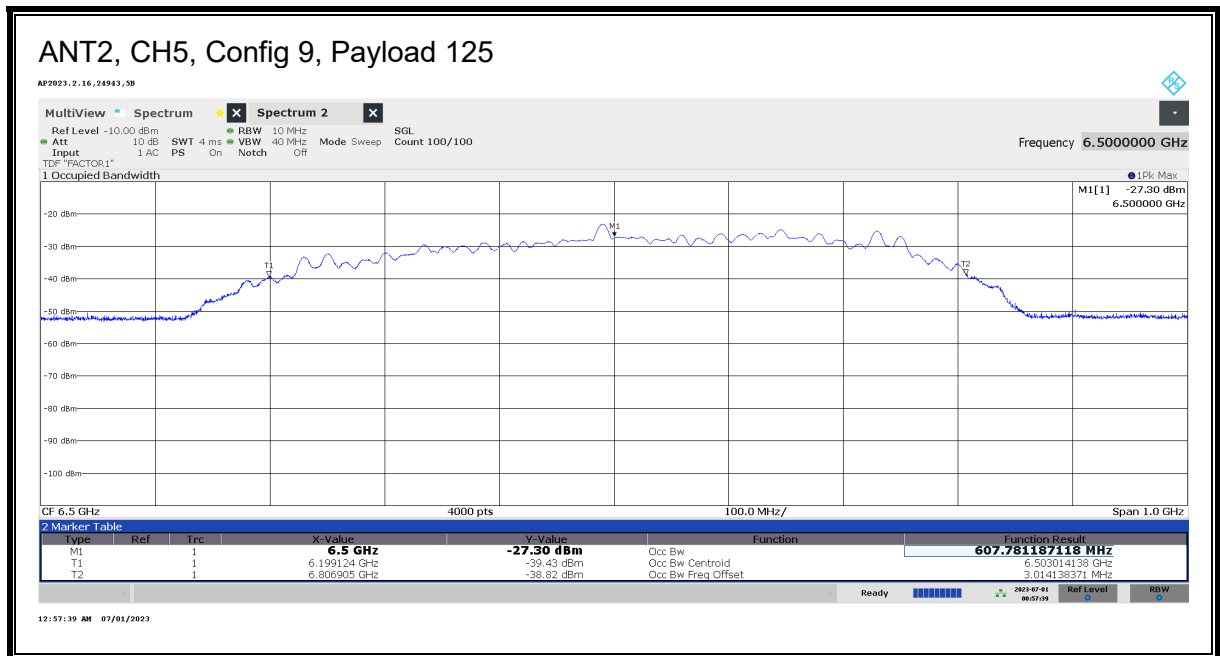
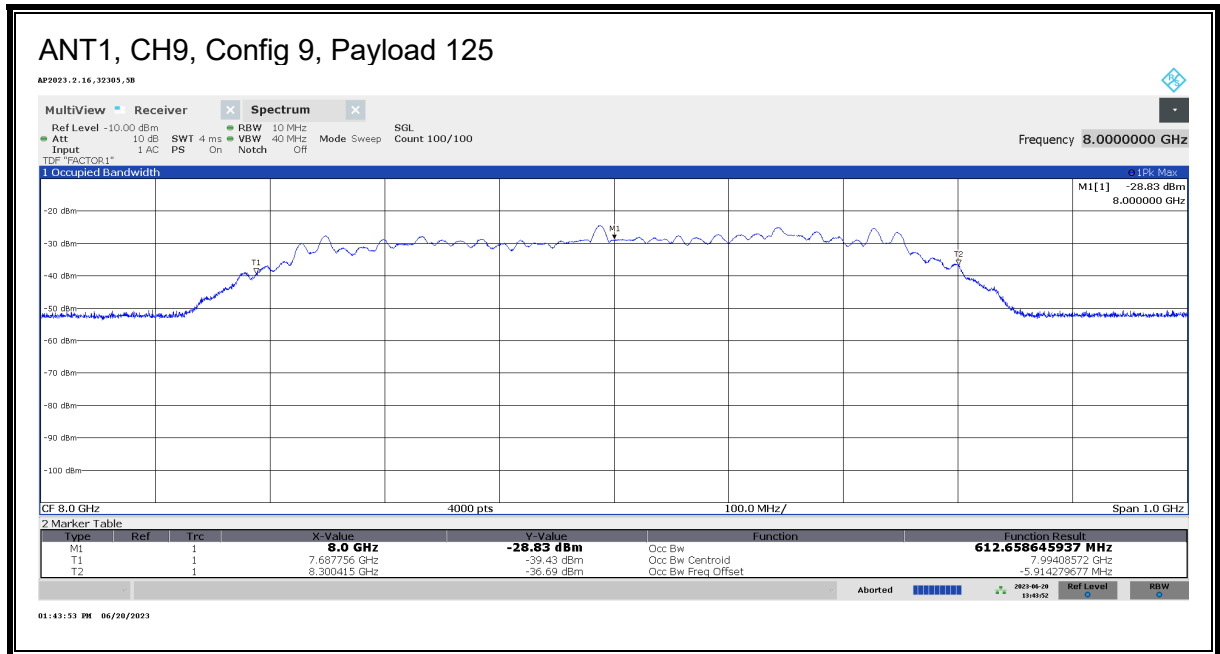
Test Date: 6/18/23 – 6/20/23

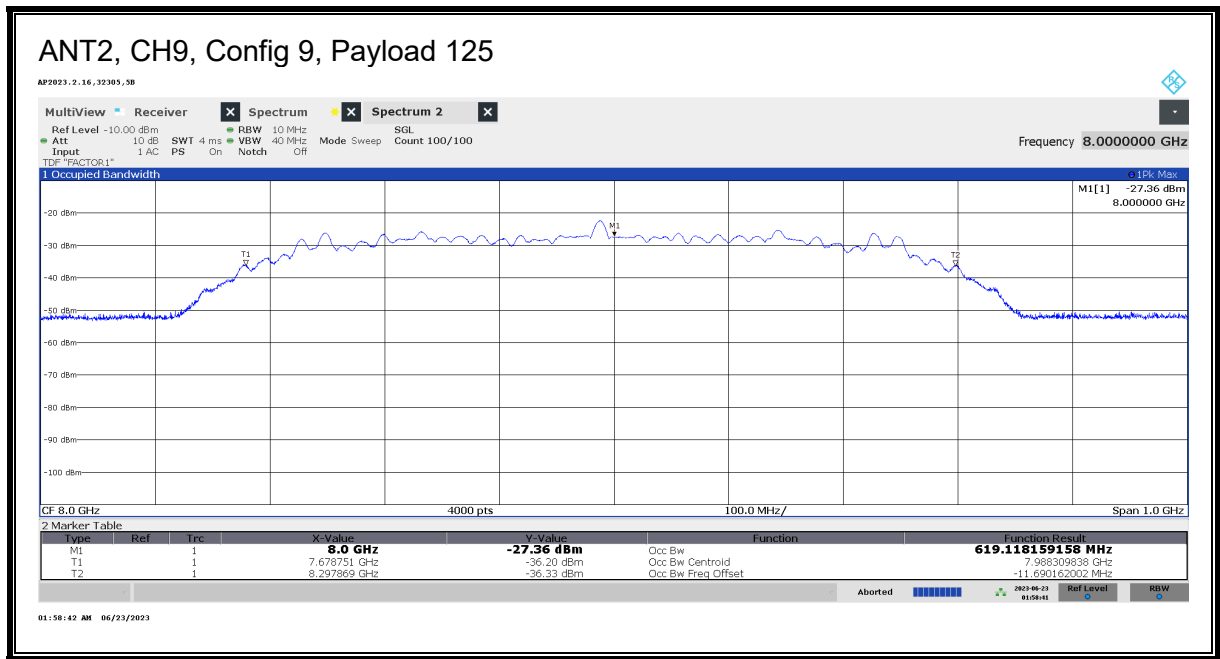
ANT	CH	CF	PL	EUT Orientation	Ant. Polarity	99% BW (MHz)
1	9	0	25	Portrait	H	597.15
1	9	1	45	Portrait	H	596.25
1	9	9	125	Portrait	H	612.66
1	9	10	25	Portrait	H	597.32
1	9	11	25	Portrait	H	596.56
1	9	11	65	Portrait	H	597.52
1	9	101	25	Portrait	H	600.17
1	9	101	65	Portrait	H	600.55
1	9	102	25	Portrait	H	599.93
1	9	102	65	Portrait	H	600.45
1	9	103	25	Portrait	H	601.88
1	9	103	125	Portrait	H	604.43
1	9	202	625	Portrait	H	733.10
1	9	402	445	Portrait	H	662.94
1	9	501	0	Portrait	H	589.06
1	9	503	0	Portrait	H	587.30
1	9	601	0	Portrait	H	599.01
1	9	605	0	Portrait	H	599.28
1	9	607	0	Portrait	H	600.08
1	9	701	0	Portrait	H	607.41
1	9	702	0	Portrait	H	608.95
1	9	703	0	Portrait	H	611.29
1	9	704	0	Portrait	H	616.06
1	9	705	0	Portrait	H	608.97
1	9	706	0	Portrait	H	611.48
1	9	405	4093	Portrait	H	687.50
1	9	407	4093	Portrait	H	669.07
1	9	801	0	Portrait	H	603.22
1	9	802	0	Portrait	H	604.36
1	9	803	0	Portrait	H	602.13
1	9	804	0	Portrait	H	610.86
1	9	805	0	Portrait	H	610.58
1	9	806	0	Portrait	H	608.44
1	9	807	0	Portrait	H	605.24
1	9	808	0	Portrait	H	604.30
1	9	809	0	Portrait	H	604.60
1	9	80A	0	Portrait	H	612.18
1	9	80B	0	Portrait	H	608.27
1	9	80C	0	Portrait	H	607.61

ANT	CH	CF	PL	EUT Orientation	Ant. Polarity	99% BW (MHz)
2	5	0	25	Landscape	H	586.24
2	5	1	45	Landscape	H	586.19
2	5	9	125	Landscape	H	607.78
2	5	10	25	Landscape	H	585.89
2	5	11	25	Landscape	H	583.44
2	5	11	65	Landscape	H	586.29
2	5	101	25	Landscape	H	583.94
2	5	101	65	Landscape	H	589.96
2	5	102	25	Landscape	H	588.57
2	5	102	65	Landscape	H	590.80
2	5	103	25	Landscape	H	591.11
2	5	103	125	Landscape	H	596.58
2	5	202	625	Landscape	H	746.66
2	5	402	445	Landscape	H	674.61
2	5	501	0	Landscape	H	590.74
2	5	503	0	Landscape	H	591.06
2	5	601	0	Landscape	H	595.28
2	5	605	0	Landscape	H	592.87
2	5	607	0	Landscape	H	592.91
2	5	701	0	Landscape	H	610.27
2	5	702	0	Landscape	H	607.94
2	5	703	0	Landscape	H	612.03
2	5	704	0	Landscape	H	616.93
2	5	705	0	Landscape	H	605.32
2	5	706	0	Landscape	H	608.94
2	5	405	4093	Landscape	H	680.81
2	5	407	4093	Landscape	H	667.89
2	5	801	0	Landscape	H	599.18
2	5	802	0	Landscape	H	597.21
2	5	803	0	Landscape	H	595.36
2	5	804	0	Landscape	H	605.20
2	5	805	0	Landscape	H	607.34
2	5	806	0	Landscape	H	604.15
2	5	807	0	Landscape	H	597.01
2	5	808	0	Landscape	H	596.36
2	5	809	0	Landscape	H	595.70
2	5	80A	0	Landscape	H	605.07
2	5	80B	0	Landscape	H	591.83
2	5	80C	0	Landscape	H	592.54

ANT	CH	CF	PL	EUT Orientation	Ant. Polarity	99% BW (MHz)
2	9	0	25	Landscape	V	603.65
2	9	1	45	Landscape	V	603.02
2	9	9	125	Landscape	V	619.12
2	9	10	25	Landscape	V	604.68
2	9	11	25	Landscape	V	606.71
2	9	11	65	Landscape	V	606.89
2	9	101	25	Landscape	V	605.64
2	9	101	65	Landscape	V	606.50
2	9	102	25	Landscape	V	605.66
2	9	102	65	Landscape	V	606.37
2	9	103	25	Landscape	V	606.19
2	9	103	125	Landscape	V	611.31
2	9	202	625	Landscape	V	728.49
2	9	402	445	Landscape	V	655.90
2	9	501	0	Landscape	V	593.23
2	9	503	0	Landscape	V	592.22
2	9	601	0	Landscape	V	609.61
2	9	605	0	Landscape	V	609.16
2	9	607	0	Landscape	V	608.26
2	9	701	0	Landscape	V	615.97
2	9	702	0	Landscape	V	615.43
2	9	703	0	Landscape	V	618.86
2	9	704	0	Landscape	V	627.94
2	9	705	0	Landscape	V	619.06
2	9	706	0	Landscape	V	620.87
2	9	405	4093	Landscape	V	678.36
2	9	407	4093	Landscape	V	664.35
2	9	801	0	Landscape	V	614.82
2	9	802	0	Landscape	V	614.26
2	9	803	0	Landscape	V	613.17
2	9	804	0	Landscape	V	621.09
2	9	805	0	Landscape	V	620.97
2	9	806	0	Landscape	V	618.39
2	9	807	0	Landscape	V	614.48
2	9	808	0	Landscape	V	614.18
2	9	809	0	Landscape	V	613.72
2	9	80A	0	Landscape	V	620.47
2	9	80B	0	Landscape	V	617.86
2	9	80C	0	Landscape	V	618.40

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.

RSS-220

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 Ant 1, CONFIG 9, Payload 125 on CH9 and Ant 2, 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, 28499, 32479

Location: Chamber 05-RDE-B

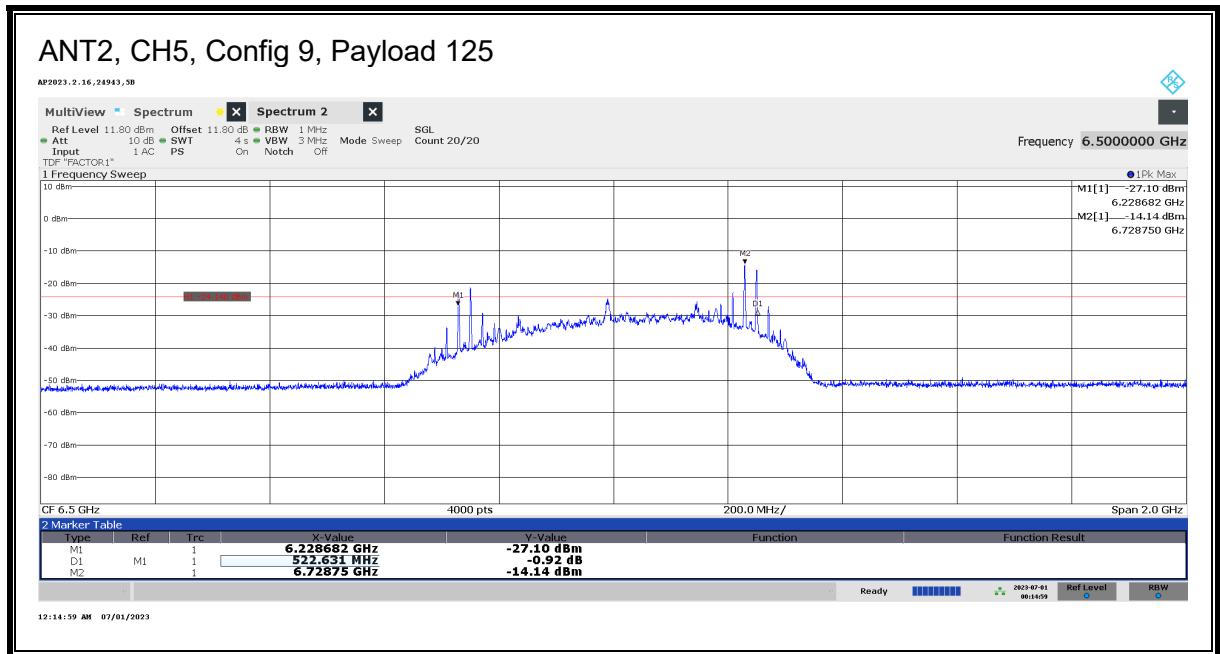
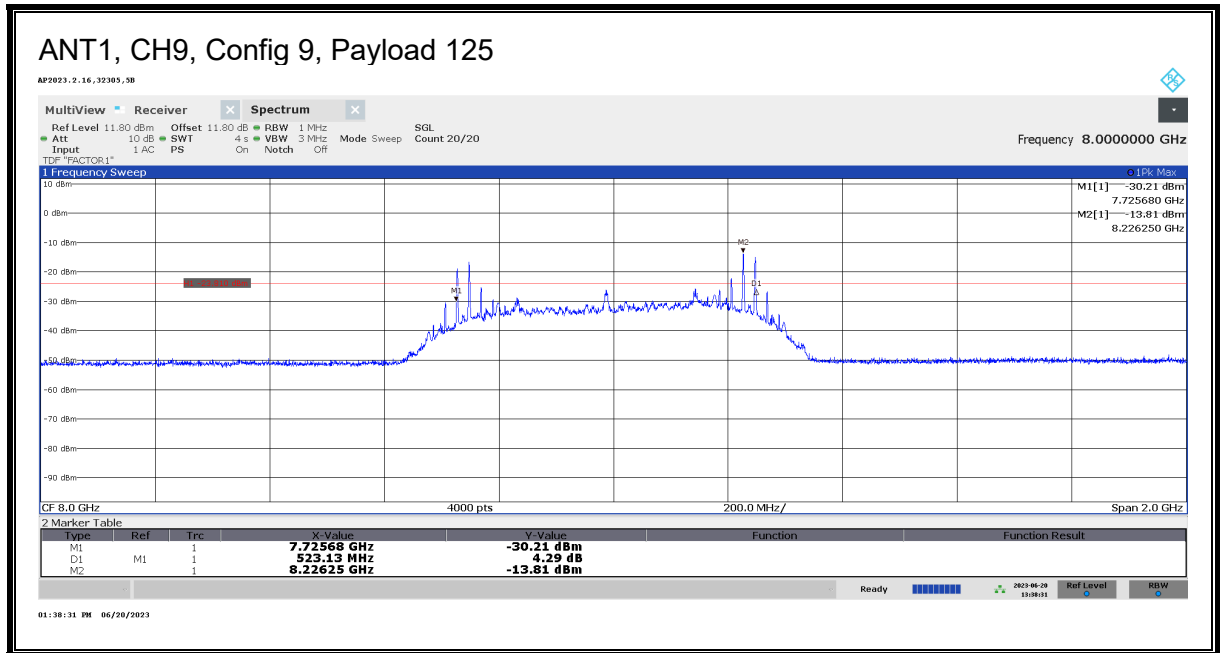
Test Date: 6/18/23 – 6/20/23

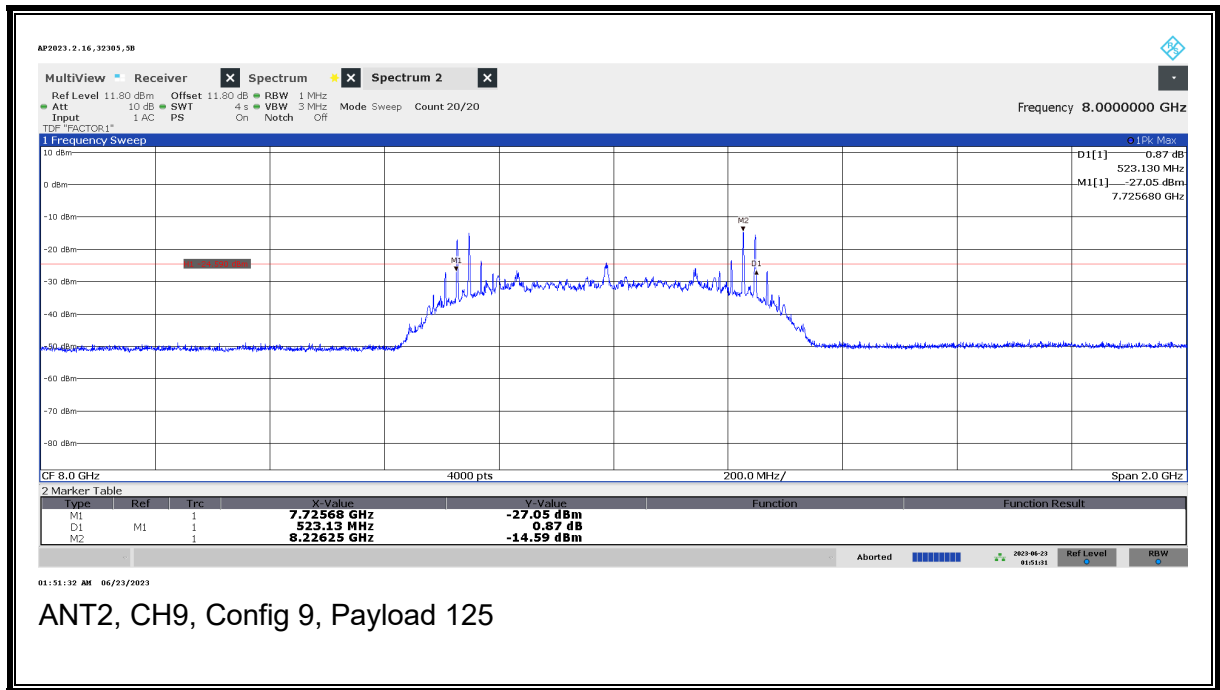
ANT	CH	CF	PL	EUT Orientation	Ant. Polarity	FM (GHz)	FL (GHz)	FH (GHz)	FC (GHz)	OBW (MHz)	Min. OBW (MHz)	OBW Margin (MHz)	OBW Pass/Fail
1	9	0	25	Portrait	H	8.22675	7.724681	8.250312	7.987497	525.63	500	25.631	P
1	9	1	45	Portrait	H	8.22675	7.72468	8.25031	7.987495	525.63	500	25.63	P
1	9	9	125	Portrait	H	8.2263	7.7257	8.24881	7.987245	523.13	500	23.13	P
1	9	10	25	Portrait	H	8.2263	7.7247	8.25031	7.987495	525.63	500	25.63	P
1	9	11	25	Portrait	H	8.2263	7.7247	8.25031	7.987495	525.63	500	25.63	P
1	9	11	65	Portrait	H	8.2263	7.7247	8.25031	7.987495	525.63	500	25.63	P
1	9	101	25	Portrait	H	8.2268	7.7247	8.25031	7.987495	525.63	500	25.63	P
1	9	101	65	Portrait	H	8.2263	7.7247	8.25031	7.987495	525.63	500	25.63	P
1	9	102	25	Portrait	H	8.2263	7.7247	8.25031	7.987495	525.63	500	25.63	P
1	9	102	65	Portrait	H	8.2268	7.7247	8.25081	7.987745	526.13	500	26.13	P
1	9	103	25	Portrait	H	8.2263	7.7247	8.25031	7.987495	525.63	500	25.63	P
1	9	103	125	Portrait	H	8.2263	7.7247	8.25031	7.987495	525.63	500	25.63	P
1	9	202	625	Portrait	H	8.2268	7.7247	8.25081	7.987745	526.13	500	26.13	P
1	9	402	445	Portrait	H	8.2263	7.7247	8.25031	7.987495	525.63	500	25.63	P
1	9	501	0	Portrait	H	8.2268	7.7247	8.25031	7.987495	525.63	500	25.63	P
1	9	503	0	Portrait	H	8.2268	7.7247	8.250311	7.987496	525.63	500	25.631	P
1	9	601	0	Portrait	H	8.2263	7.7247	8.25031	7.987495	525.63	500	25.63	P
1	9	605	0	Portrait	H	8.2263	7.7247	8.25031	7.987495	525.63	500	25.63	P
1	9	607	0	Portrait	H	8.2268	7.7247	8.25031	7.987495	525.63	500	25.63	P
1	9	701	0	Portrait	H	8.2263	7.7237	8.25131	7.987495	527.63	500	27.63	P
1	9	702	0	Portrait	H	8.2263	7.7232	8.25231	7.987745	529.13	500	29.13	P
1	9	703	0	Portrait	H	8.2263	7.7232	8.25931	7.991245	536.13	500	36.13	P
1	9	704	0	Portrait	H	8.2258	7.7237	8.26632	7.995	542.64	500	42.64	P
1	9	705	0	Portrait	H	8.2263	7.7233	8.25475	7.989	531.50	500	31.5	P
1	9	706	0	Portrait	H	8.2258	7.7237	8.27182	7.99775	548.14	500	48.14	P
1	9	405	0	Portrait	H	8.2268	7.7247	8.26432	7.9945	539.64	500	39.64	P
1	9	407	0	Portrait	H	8.2263	7.7247	8.27432	7.9995	549.64	500	49.64	P
1	9	801	0	Portrait	H	8.2263	7.7232	8.28282	8.003	559.64	500	59.64	P
1	9	802	0	Portrait	H	8.2263	7.7237	8.27432	7.999001	550.64	500	50.639	P
1	9	803	0	Portrait	H	8.2263	7.7237	8.27432	7.999	550.64	500	50.64	P
1	9	804	0	Portrait	H	8.2263	7.7237	8.28282	8.00325	559.14	500	59.14	P
1	9	805	0	Portrait	H	8.2263	7.7237	8.27432	7.999001	550.64	500	50.639	P
1	9	806	0	Portrait	H	8.2263	7.7237	8.27432	7.999	550.64	500	50.64	P
1	9	807	0	Portrait	H	8.2263	7.7237	8.282821	8.003251	559.14	500	59.14	P
1	9	808	0	Portrait	H	8.2263	7.7237	8.282821	8.003251	559.14	500	59.14	P
1	9	809	0	Portrait	H	8.2258	7.7237	8.282821	8.003251	559.14	500	59.14	P
1	9	80A	0	Portrait	H	8.2263	7.1968	7.759441	7.478121	562.64	500	62.641	P
1	9	80B	0	Portrait	H	8.2263	7.7237	8.282821	8.003251	559.14	500	59.14	P
1	9	80C	0	Portrait	H	8.2263	7.7237	8.282821	8.003251	559.14	500	59.14	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	Landscape	H	6.7288	6.2277	6.752813	6.490248	525.13	500	25.131	P
2	5	1	45	Landscape	H	6.7293	6.2277	6.752813	6.490248	525.13	500	25.131	P
2	5	9	125	Landscape	H	6.7288	6.2287	6.751313	6.489998	522.63	500	22.631	P
2	5	10	25	Landscape	H	6.7288	6.2277	6.752813	6.490248	525.13	500	25.131	P
2	5	11	25	Landscape	H	6.7288	6.2282	6.752813	6.490498	524.63	500	24.631	P
2	5	11	65	Landscape	H	6.7288	6.2282	6.752813	6.490498	524.63	500	24.631	P
2	5	101	25	Landscape	H	6.7288	6.2277	6.752813	6.490248	525.13	500	25.131	P
2	5	101	65	Landscape	H	6.7293	6.2282	6.75281	6.490495	524.63	500	24.63	P
2	5	102	25	Landscape	H	6.7288	6.2282	6.75281	6.490495	524.63	500	24.63	P
2	5	102	65	Landscape	H	6.7288	6.2282	6.75281	6.490495	524.63	500	24.63	P
2	5	103	25	Landscape	H	6.7288	6.2282	6.75231	6.490245	524.13	500	24.13	P
2	5	103	125	Landscape	H	6.7288	6.2282	6.75281	6.490495	524.63	500	24.63	P
2	5	202	625	Landscape	H	6.7288	6.2282	6.75281	6.490495	524.63	500	24.63	P
2	5	402	445	Landscape	H	6.7288	6.2282	6.75281	6.490495	524.63	500	24.63	P
2	5	501	0	Landscape	H	6.7288	6.2282	6.75281	6.490495	524.63	500	24.63	P
2	5	503	0	Landscape	H	6.7288	6.2277	6.75281	6.490245	525.13	500	25.13	P
2	5	601	0	Landscape	H	6.7288	6.2282	6.75281	6.490495	524.63	500	24.63	P
2	5	605	0	Landscape	H	6.7288	6.2282	6.75281	6.490495	524.63	500	24.63	P
2	5	607	0	Landscape	H	6.7293	6.2282	6.75281	6.490495	524.63	500	24.63	P
2	5	701	0	Landscape	H	6.7288	6.2267	6.753814	6.490248	527.13	500	27.132	P
2	5	702	0	Landscape	H	6.7288	6.2267	6.753814	6.490248	527.13	500	27.132	P
2	5	703	0	Landscape	H	6.7288	6.2267	6.761316	6.493999	534.63	500	34.634	P
2	5	704	0	Landscape	H	6.7288	6.2267	6.768317	6.4975	541.64	500	41.635	P
2	5	705	0	Landscape	H	6.7283	6.2267	6.763816	6.495249	537.13	500	37.134	P
2	5	706	0	Landscape	H	6.7283	6.2267	6.786322	6.506502	559.64	500	59.64	P
2	5	405	4093	Landscape	H	6.7293	6.2277	6.766317	6.497	538.64	500	38.635	P
2	5	407	4093	Landscape	H	6.7288	6.2277	6.790323	6.509003	562.64	500	62.641	P
2	5	801	0	Landscape	H	6.7288	6.2267	6.785322	6.506002	558.64	500	58.64	P
2	5	802	0	Landscape	H	6.7288	6.2267	6.77682	6.501751	550.14	500	50.138	P
2	5	803	0	Landscape	H	6.7288	6.2267	6.77682	6.501751	550.14	500	50.138	P
2	5	804	0	Landscape	H	6.7283	6.2267	6.785322	6.506002	558.64	500	58.64	P
2	5	805	0	Landscape	H	6.7283	6.2267	6.77682	6.501751	550.14	500	50.138	P
2	5	806	0	Landscape	H	6.7288	6.2267	6.784822	6.505752	558.14	500	58.14	P
2	5	807	0	Landscape	H	6.7288	6.2267	6.785322	6.506002	558.64	500	58.64	P
2	5	808	0	Landscape	H	6.7288	6.2267	6.785322	6.506002	558.64	500	58.64	P
2	5	809	0	Landscape	H	6.7283	6.2267	6.784822	6.505752	558.14	500	58.14	P
2	5	80A	0	Landscape	H	6.7283	6.2267	6.785322	6.506002	558.64	500	58.64	P
2	5	80B	0	Landscape	H	6.7283	6.2272	6.785322	6.506252	558.14	500	58.14	P
2	5	80C	0	Landscape	H	6.7288	6.2272	6.785322	6.506252	558.14	500	58.14	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	Landscape	V	8.2263	7.7242	8.250813	7.987497	526.63	500	26.632	P
2	9	1	45	Landscape	V	8.2263	7.7242	8.250813	7.987497	526.63	500	26.632	P
2	9	9	125	Landscape	V	8.2263	7.7257	8.24881	7.987245	523.13	500	23.13	P
2	9	10	25	Landscape	V	8.2268	7.7242	8.250813	7.987497	526.63	500	26.632	P
2	9	11	25	Landscape	V	7.7483	7.7242	8.250813	7.987497	526.63	500	26.632	P
2	9	11	65	Landscape	V	8.2268	7.7242	8.250313	7.987247	526.13	500	26.132	P
2	9	101	25	Landscape	V	8.2268	7.7242	8.25031	7.987245	526.13	500	26.13	P
2	9	101	65	Landscape	V	8.2263	7.7242	8.25031	7.987245	526.13	500	26.13	P
2	9	102	25	Landscape	V	8.2268	7.7242	8.25031	7.987245	526.13	500	26.13	P
2	9	102	65	Landscape	V	8.2263	7.7242	8.25081	7.987495	526.63	500	26.63	P
2	9	103	25	Landscape	V	8.2263	7.7242	8.25081	7.987495	526.63	500	26.63	P
2	9	103	125	Landscape	V	8.2263	7.7242	8.25031	7.987245	526.13	500	26.13	P
2	9	202	625	Landscape	V	8.2263	7.7242	8.25031	7.987245	526.13	500	26.13	P
2	9	402	445	Landscape	V	8.2263	7.7242	8.25031	7.987245	526.13	500	26.13	P
2	9	501	0	Landscape	V	8.2268	7.7247	8.25081	7.987745	526.13	500	26.13	P
2	9	503	0	Landscape	V	8.2268	7.7242	8.25081	7.987495	526.63	500	26.63	P
2	9	601	0	Landscape	V	7.7483	7.7247	8.25081	7.987745	526.13	500	26.13	P
2	9	605	0	Landscape	V	7.7483	7.7242	8.25031	7.987245	526.13	500	26.13	P
2	9	607	0	Landscape	V	7.7483	7.7242	8.25081	7.987495	526.63	500	26.63	P
2	9	701	0	Landscape	V	8.2263	7.7232	8.251813	7.987497	528.63	500	28.632	P
2	9	702	0	Landscape	V	8.2263	7.7232	8.263816	7.993499	540.64	500	40.635	P
2	9	703	0	Landscape	V	8.2263	7.7232	8.267817	7.995499	544.64	500	44.636	P
2	9	704	0	Landscape	V	8.2263	7.7232	8.276319	7.99975	553.14	500	53.138	P
2	9	705	0	Landscape	V	8.2263	7.7232	8.266817	7.994999	543.64	500	43.636	P
2	9	706	0	Landscape	V	8.2268	7.7232	8.284321	8.003751	561.14	500	61.14	P
2	9	405	4093	Landscape	V	8.2268	7.7177	8.273319	7.9955	555.64	500	55.639	P
2	9	407	4093	Landscape	V	8.2263	7.7207	8.288322	8.004501	567.64	500	67.642	P
2	9	801	0	Landscape	V	8.2263	7.7157	8.286822	8.001251	571.14	500	71.143	P
2	9	802	0	Landscape	V	8.2263	7.7157	8.282321	7.999	566.64	500	66.642	P
2	9	803	0	Landscape	V	8.2263	7.7157	8.282321	7.999	566.64	500	66.642	P
2	9	804	0	Landscape	V	8.2263	7.7157	8.282321	7.999	566.64	500	66.642	P
2	9	805	0	Landscape	V	8.2263	7.7057	8.28232	7.993998	576.64	500	76.644	P
2	9	806	0	Landscape	V	8.2263	7.7157	8.282321	7.999	566.64	500	66.642	P
2	9	807	0	Landscape	V	8.2263	7.7087	8.286822	7.99775	578.15	500	78.145	P
2	9	808	0	Landscape	V	8.2263	7.7086	8.282788	7.995716	574.14	500	74.144	P
2	9	809	0	Landscape	V	8.2263	7.6917	8.282821	7.987247	591.15	500	91.148	P
2	9	80A	0	Landscape	V	8.2258	7.7155	8.283121	7.9993	567.64	500	67.642	P
2	9	80B	0	Landscape	V	8.2263	7.7077	8.282821	7.995249	575.14	500	75.144	P
2	9	80C	0	Landscape	V	8.2263	7.7087	8.283321	7.995999	574.64	500	74.644	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 dBm

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 Ant 1, CONFIG 9, Payload 125 on CH9 and Ant 2, 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

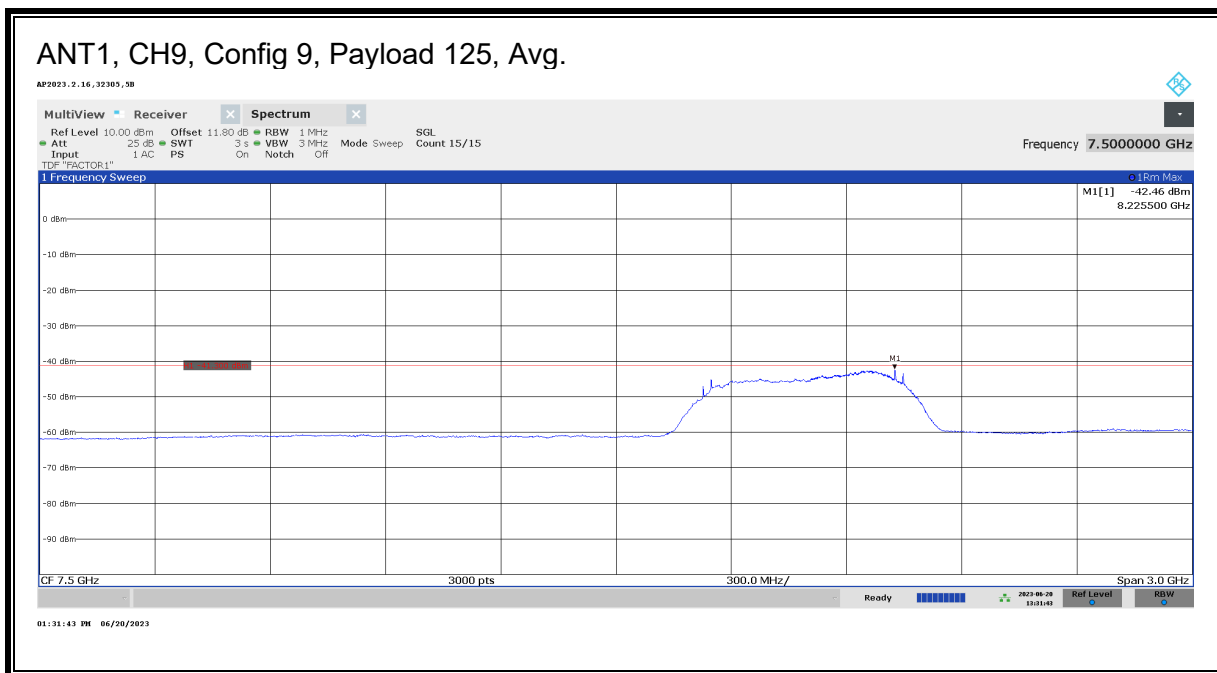
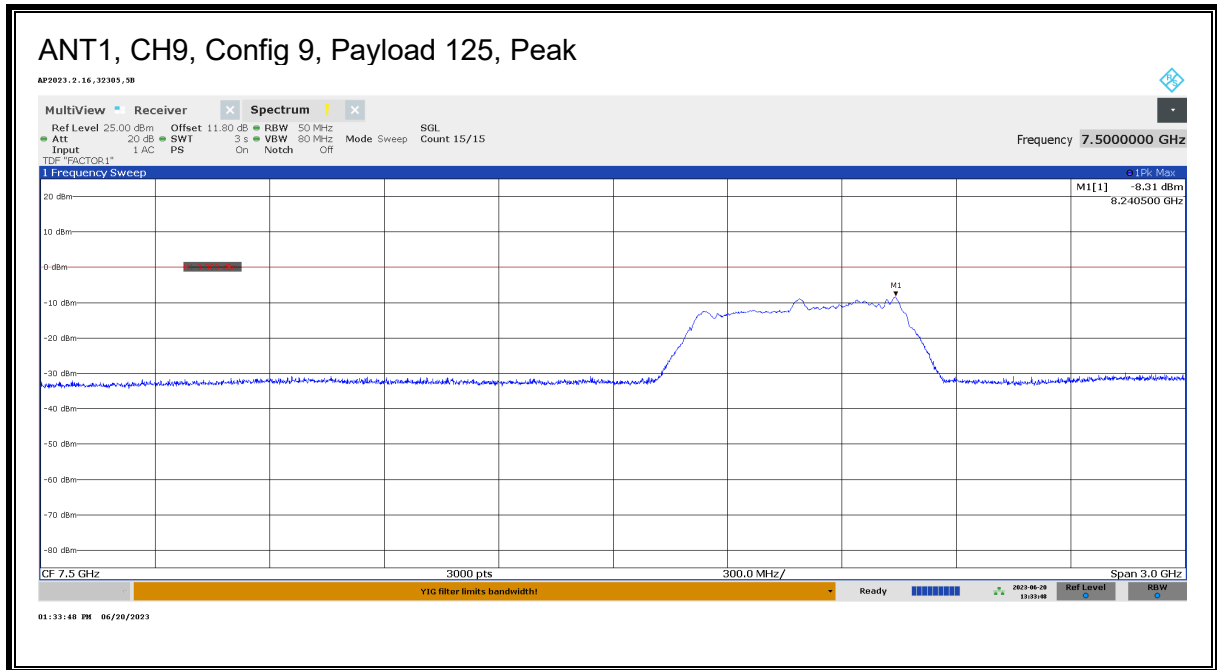
Employee IDs: 32188, 28499, 32479
Location: Chamber 05-RDE-B
Test Date: 6/18/23 – 6/20/23

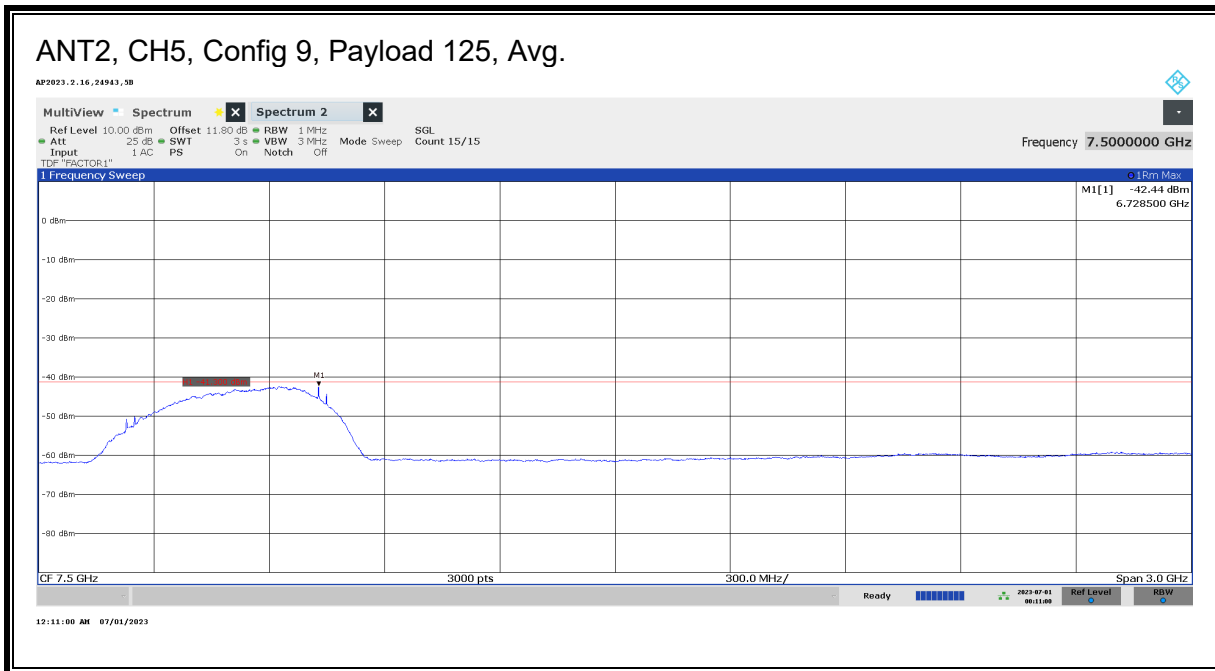
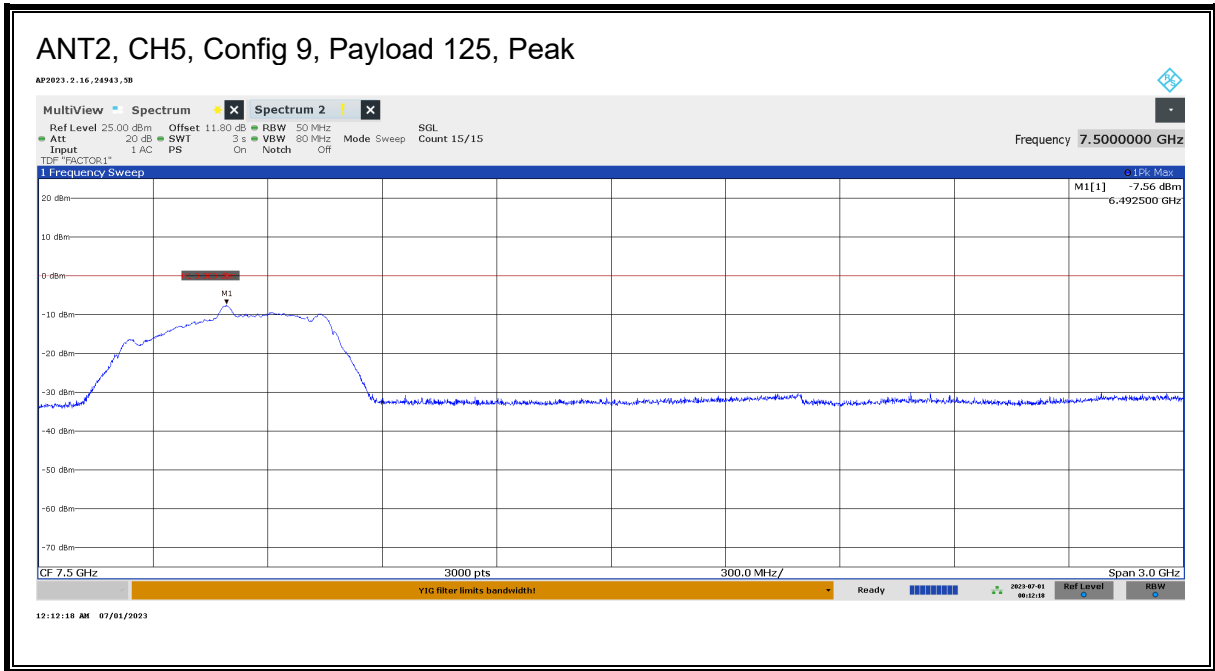
ANT	CH	CONFIG	Payload	EUT Orientation	Ant. Polarity	Peak EIRP Power				Average EIRP Power			
						FM (GHz)	Adj Pk	Peak Limit	Margin (dB)	FM (GHz)	Adj Avg	Avg Limit (dBm/MHz)	Margin (dB)
1	9	0	25	Portrait	H	8.2395	-1.58	0	-1.58	8.1545	-42.461	-41.3	-1.16
1	9	1	45	Portrait	H	8.2395	-1.06	0	-1.06	8.1435	-42.89	-41.3	-1.59
1	9	9	125	Portrait	H	8.2405	-8.31	0	-8.31	8.2255	-42.46	-41.3	-1.16
1	9	10	25	Portrait	H	8.2395	-2.15	0	-2.15	8.1585	-42.60	-41.3	-1.30
1	9	11	25	Portrait	H	8.2385	-1.40	0	-1.40	8.1585	-43.76	-41.3	-2.46
1	9	11	65	Portrait	H	8.2375	-1.91	0	-1.91	8.1435	-42.51	-41.3	-1.21
1	9	101	25	Portrait	H	8.2385	-1.04	0	-1.04	8.1435	-43.87	-41.3	-2.57
1	9	101	65	Portrait	H	8.2405	-1.57	0	-1.57	8.1435	-42.57	-41.3	-1.27
1	9	102	25	Portrait	H	8.2395	-1.11	0	-1.11	8.1435	-43.75	-41.3	-2.45
1	9	102	65	Portrait	H	8.2395	-1.49	0	-1.49	8.1435	-42.40	-41.3	-1.10
1	9	103	25	Portrait	H	8.2385	-1.67	0	-1.67	8.1585	-42.41	-41.3	-1.11
1	9	103	125	Portrait	H	8.2395	-4.05	0	-4.05	8.1585	-42.40	-41.3	-1.10
1	9	202	625	Portrait	H	8.2385	-10.47	0	-10.47	8.1695	-42.35	-41.3	-1.05
1	9	402	445	Portrait	H	8.2395	-8.55	0	-8.55	8.1545	-42.36	-41.3	-1.06
1	9	501	0	Portrait	H	8.2385	-1.17	0	-1.17	8.1535	-45.05	-41.3	-3.75
1	9	503	0	Portrait	H	8.2385	-1.07	0	-1.07	8.2265	-44.96	-41.3	-3.66
1	9	601	0	Portrait	H	8.2395	-1.09	0	-1.09	8.1295	-42.74	-41.3	-1.44
1	9	605	0	Portrait	H	8.2395	-1.18	0	-1.18	8.2275	-44.73	-41.3	-3.43
1	9	607	0	Portrait	H	8.2395	-1.21	0	-1.21	8.2275	-44.54	-41.3	-3.24
1	9	701	0	Portrait	H	8.2375	-3.77	0	-3.77	8.1745	-42.44	-41.3	-1.14
1	9	702	0	Portrait	H	8.2385	-4.00	0	-4.00	8.1385	-42.42	-41.3	-1.12
1	9	703	0	Portrait	H	8.2385	-4.10	0	-4.10	8.1625	-42.39	-41.3	-1.09
1	9	704	0	Portrait	H	8.2385	-5.84	0	-5.84	8.1405	-42.36	-41.3	-1.06
1	9	705	0	Portrait	H	8.1115	-2.87	0	-2.87	8.1415	-42.57	-41.3	-1.27
1	9	706	0	Portrait	H	8.2385	-4.43	0	-4.43	8.1405	-42.50	-41.3	-1.20
1	9	405	4093	Portrait	H	8.2375	-12.40	0	-12.40	8.1385	-42.37	-41.3	-1.07
1	9	407	4093	Portrait	H	8.2395	-11.91	0	-11.91	8.1395	-42.42	-41.3	-1.12
1	9	801	0	Portrait	H	8.2395	-1.90	0	-1.90	8.1535	-42.48	-41.3	-1.18
1	9	802	0	Portrait	H	8.2385	-1.84	0	-1.84	8.1435	-42.43	-41.3	-1.13
1	9	803	0	Portrait	H	8.2385	-1.13	0	-1.13	8.1435	-42.90	-41.3	-1.60
1	9	804	0	Portrait	H	8.2395	-4.81	0	-4.81	8.1535	-42.41	-41.3	-1.11
1	9	805	0	Portrait	H	8.2395	-4.78	0	-4.78	8.1435	-42.52	-41.3	-1.22
1	9	806	0	Portrait	H	8.2395	-3.72	0	-3.72	8.1435	-42.41	-41.3	-1.11
1	9	807	0	Portrait	H	8.2395	-1.93	0	-1.93	8.1535	-42.56	-41.3	-1.26
1	9	808	0	Portrait	H	8.2395	-1.28	0	-1.28	8.1225	-42.49	-41.3	-1.19
1	9	809	0	Portrait	H	8.2385	-1.20	0	-1.20	8.1215	-42.47	-41.3	-1.17
1	9	80A	0	Portrait	H	8.2395	-5.02	0	-5.02	8.1535	-42.42	-41.3	-1.12
1	9	80B	0	Portrait	H	8.2395	-3.35	0	-3.35	8.1215	-42.47	-41.3	-1.17
1	9	80C	0	Portrait	H	8.2385	-3.21	0	-3.21	8.1485	-42.45	-41.3	-1.15

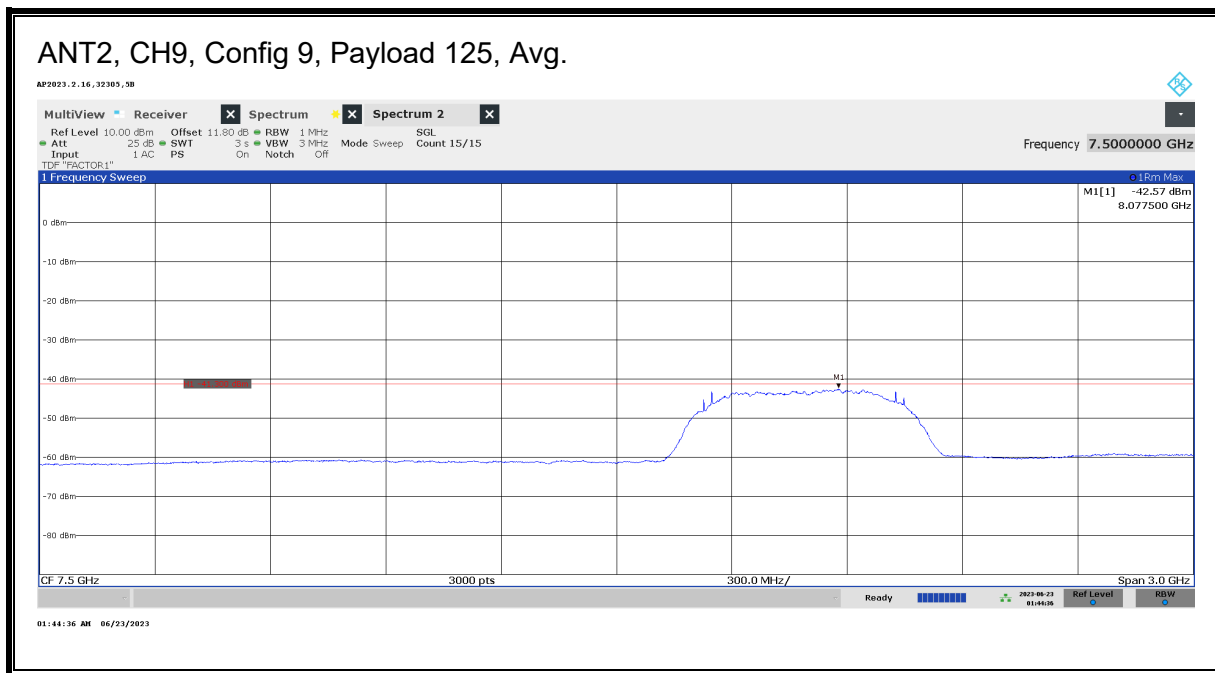
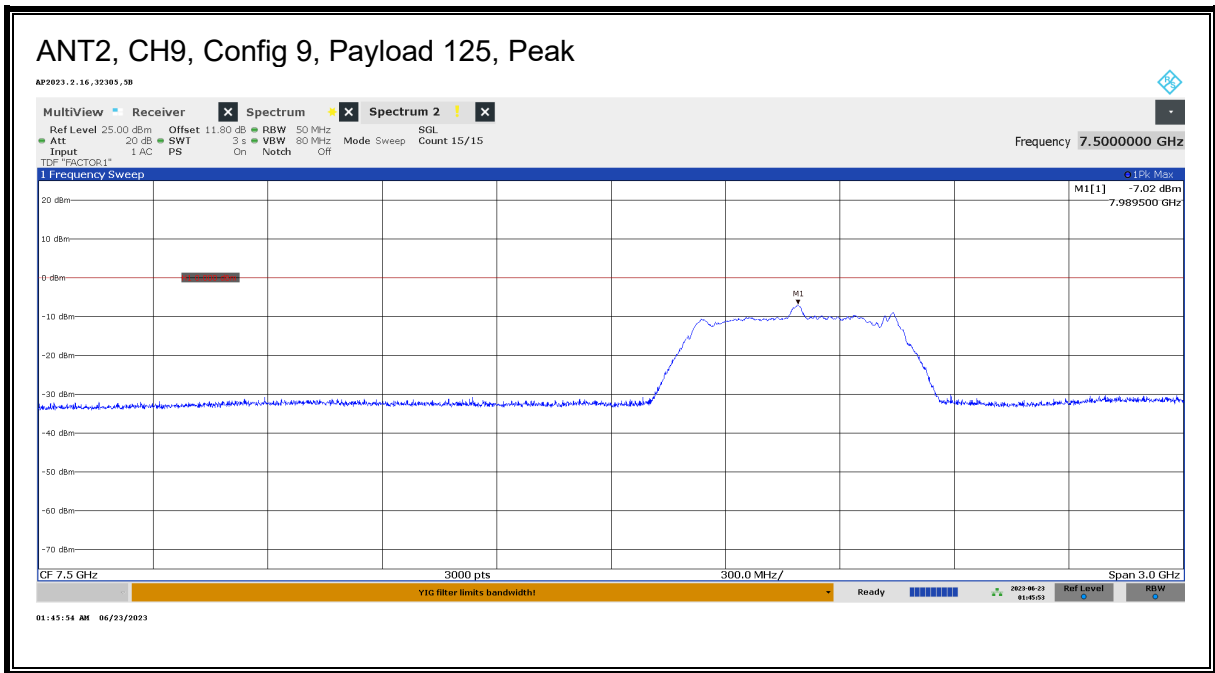
ANT	CH	CONFIG	Payload	EUT Orientation	Ant. Polarity	Peak EIRP Power				Average EIRP Power			
						FM (GHz)	Adj Pk	Peak Limit	Margin (dB)	FM (GHz)	Adj Avg	Avg Limit (dBm/MHz)	Margin (dB)
2	5	0	25	Landscape	H	6.5025	-3.00	0	-3.00	6.6305	-42.54	-41.3	-1.24
2	5	1	45	Landscape	H	6.5035	-2.78	0	-2.78	6.6305	-42.69	-41.3	-1.39
2	5	9	125	Landscape	H	6.4925	-7.56	0	-7.56	6.7285	-42.44	-41.3	-1.14
2	5	10	25	Landscape	H	6.5025	-3.08	0	-3.08	6.6305	-42.69	-41.3	-1.39
2	5	11	25	Landscape	H	6.5005	-1.53	0	-1.53	6.6295	-42.69	-41.3	-1.39
2	5	11	65	Landscape	H	6.5015	-3.06	0	-3.06	6.6305	-42.68	-41.3	-1.38
2	5	101	25	Landscape	H	6.5035	-1.20	0	-1.20	6.6295	-42.64	-41.3	-1.34
2	5	101	65	Landscape	H	6.5035	-2.50	0	-2.50	6.6295	-42.51	-41.3	-1.21
2	5	102	25	Landscape	H	6.5035	-1.14	0	-1.14	6.6295	-42.70	-41.3	-1.40
2	5	102	65	Landscape	H	6.5035	-2.46	0	-2.46	6.6295	-42.35	-41.3	-1.05
2	5	103	25	Landscape	H	6.5035	-2.68	0	-2.68	6.6295	-42.66	-41.3	-1.36
2	5	103	125	Landscape	H	6.4895	-5.03	0	-5.03	6.6295	-42.33	-41.3	-1.03
2	5	202	625	Landscape	H	6.7385	-11.87	0	-11.87	6.6255	-42.60	-41.3	-1.30
2	5	402	445	Landscape	H	6.7395	-10.22	0	-10.22	6.6285	-42.48	-41.3	-1.18
2	5	501	0	Landscape	H	6.7395	-1.01	0	-1.01	6.6295	-44.10	-41.3	-2.80
2	5	503	0	Landscape	H	6.7395	-1.24	0	-1.24	6.6729	-44.44	-41.3	-3.14
2	5	601	0	Landscape	H	6.7395	-2.10	0	-2.10	6.6315	-42.35	-41.3	-1.05
2	5	605	0	Landscape	H	6.7385	-1.08	0	-1.08	6.7295	-43.66	-41.3	-2.36
2	5	607	0	Landscape	H	6.7395	-1.10	0	-1.10	6.7295	-43.65	-41.3	-2.35
2	5	701	0	Landscape	H	6.7405	-4.97	0	-4.97	6.6215	-42.36	-41.3	-1.06
2	5	702	0	Landscape	H	6.7375	-4.99	0	-4.99	6.5885	-42.42	-41.3	-1.12
2	5	703	0	Landscape	H	6.7385	-5.22	0	-5.22	6.6265	-42.45	-41.3	-1.15
2	5	704	0	Landscape	H	6.7385	-6.94	0	-6.94	6.6425	-42.54	-41.3	-1.24
2	5	705	0	Landscape	H	6.6145	-3.27	0	-3.27	6.6275	-42.42	-41.3	-1.12
2	5	706	0	Landscape	H	6.6135	-4.75	0	-4.75	6.6285	-42.38	-41.3	-1.08
2	5	405	4093	Landscape	H	6.7355	-13.54	0	-13.54	6.6275	-42.34	-41.3	-1.04
2	5	407	4093	Landscape	H	6.7355	-13.01	0	-13.01	6.6285	-42.35	-41.3	-1.05
2	5	801	0	Landscape	H	6.7395	-2.92	0	-2.92	6.6565	-42.60	-41.3	-1.30
2	5	802	0	Landscape	H	6.7395	-2.97	0	-2.97	6.6355	-42.52	-41.3	-1.22
2	5	803	0	Landscape	H	6.7395	-1.97	0	-1.97	6.5935	-42.61	-41.3	-1.31
2	5	804	0	Landscape	H	6.7375	-5.87	0	-5.87	6.6145	-42.57	-41.3	-1.27
2	5	805	0	Landscape	H	6.7395	-5.89	0	-5.89	6.5935	-42.73	-41.3	-1.43
2	5	806	0	Landscape	H	6.7395	-4.92	0	-4.92	6.5935	-42.46	-41.3	-1.16
2	5	807	0	Landscape	H	6.7395	-3.00	0	-3.00	6.6145	-42.57	-41.3	-1.27
2	5	808	0	Landscape	H	6.7385	-2.52	0	-2.52	6.5855	-42.65	-41.3	-1.35
2	5	809	0	Landscape	H	6.7405	-2.47	0	-2.47	6.6045	-42.77	-41.3	-1.47
2	5	80A	0	Landscape	H	6.7405	-5.80	0	-5.80	6.6565	-42.65	-41.3	-1.35
2	5	80B	0	Landscape	H	6.7395	-5.42	0	-5.42	6.6045	-42.36	-41.3	-1.06
2	5	80C	0	Landscape	H	6.7385	-5.68	0	-5.68	6.5775	-42.64	-41.3	-1.34

ANT	CH	CONFIG	Payload	EUT Orientation	Ant. Polarity	Peak EIRP Power				Average EIRP Power			
						FM (GHz)	Adj Pk	Peak Limit	Margin (dB)	FM (GHz)	Adj Avg	Avg Limit (dBm/MHz)	Margin (dB)
2	9	0	25	Landscape	V	7.9895	-2.06	0	-2.06	8.0765	-42.50	-41.3	-1.20
2	9	1	45	Landscape	V	7.9895	-1.40	0	-1.40	8.0805	-42.45	-41.3	-1.15
2	9	9	125	Landscape	V	7.9895	-7.02	0	-7.02	8.0775	-42.57	-41.3	-1.27
2	9	10	25	Landscape	V	7.9875	-2.16	0	-2.16	8.0765	-42.64	-41.3	-1.34
2	9	11	25	Landscape	V	7.9885	-1.27	0	-1.27	8.0805	-43.35	-41.3	-2.05
2	9	11	65	Landscape	V	7.9885	-1.89	0	-1.89	8.8085	-42.49	-41.3	-1.19
2	9	101	25	Landscape	V	7.9895	-1.25	0	-1.25	8.0375	-43.74	-41.3	-2.44
2	9	101	65	Landscape	V	7.9885	-2.03	0	-2.03	8.0765	-42.73	-41.3	-1.43
2	9	102	25	Landscape	V	7.9895	-1.29	0	-1.29	8.0765	-43.45	-41.3	-2.15
2	9	102	65	Landscape	V	7.9895	-1.98	0	-1.98	8.0805	-42.45	-41.3	-1.15
2	9	103	25	Landscape	V	7.9885	-1.77	0	-1.77	8.0655	-42.40	-41.3	-1.10
2	9	103	125	Landscape	V	7.9905	-4.40	0	-4.40	8.0965	-42.48	-41.3	-1.18
2	9	202	625	Landscape	V	8.2365	-11.89	0	-11.89	8.0355	-42.78	-41.3	-1.48
2	9	402	445	Landscape	V	8.2385	-9.52	0	-9.52	8.0695	-42.32	-41.3	-1.02
2	9	501	0	Landscape	V	8.2385	-1.25	0	-1.25	8.0375	-44.54	-41.3	-3.24
2	9	503	0	Landscape	V	8.2375	-1.26	0	-1.26	8.0415	-44.76	-41.3	-3.46
2	9	601	0	Landscape	V	8.2385	-1.83	0	-1.83	8.0255	-42.53	-41.3	-1.23
2	9	605	0	Landscape	V	8.2385	-1.20	0	-1.20	8.0185	-44.31	-41.3	-3.01
2	9	607	0	Landscape	V	8.2385	-1.34	0	-1.34	8.0185	-44.35	-41.3	-3.05
2	9	701	0	Landscape	V	8.2395	-4.33	0	-4.33	8.0495	-42.37	-41.3	-1.07
2	9	702	0	Landscape	V	8.2405	-4.49	0	-4.49	8.0135	-42.43	-41.3	-1.13
2	9	703	0	Landscape	V	8.2415	-4.73	0	-4.73	8.0375	-42.50	-41.3	-1.20
2	9	704	0	Landscape	V	8.2385	-6.64	0	-6.64	8.0155	-42.50	-41.3	-1.20
2	9	705	0	Landscape	V	8.1115	-2.69	0	-2.69	8.0375	-42.74	-41.3	-1.44
2	9	706	0	Landscape	V	8.1135	-4.30	0	-4.30	8.0375	-42.54	-41.3	-1.24
2	9	405	4093	Landscape	V	8.2385	-13.07	0	-13.07	8.0275	-42.55	-41.3	-1.25
2	9	407	4093	Landscape	V	8.2415	-12.48	0	-12.48	8.0355	-42.48	-41.3	-1.18
2	9	801	0	Landscape	V	8.2395	-2.58	0	-2.58	8.0295	-42.44	-41.3	-1.14
2	9	802	0	Landscape	V	8.2395	-2.78	0	-2.78	8.0905	-42.60	-41.3	-1.30
2	9	803	0	Landscape	V	8.2385	-1.20	0	-1.20	8.0905	-42.35	-41.3	-1.05
2	9	804	0	Landscape	V	8.2385	-5.54	0	-5.54	8.1125	-42.49	-41.3	-1.19
2	9	805	0	Landscape	V	8.2385	-5.38	0	-5.38	8.0905	-42.43	-41.3	-1.13
2	9	806	0	Landscape	V	8.2375	-4.30	0	-4.30	8.0905	-42.63	-41.3	-1.33
2	9	807	0	Landscape	V	8.2395	-2.61	0	-2.61	8.0295	-42.36	-41.3	-1.06
2	9	808	0	Landscape	V	8.2395	-2.12	0	-2.12	8.0825	-42.45	-41.3	-1.15
2	9	809	0	Landscape	V	8.2375	-2.21	0	-2.21	8.0165	-42.35	-41.3	-1.05
2	9	80A	0	Landscape	V	8.2375	-5.36	0	-5.36	8.1125	-42.31	-41.3	-1.01
2	9	80B	0	Landscape	V	8.2385	-4.30	0	-4.30	8.0755	-42.43	-41.3	-1.13
2	9	80C	0	Landscape	V	8.2385	-4.32	0	-4.32	8.0245	-42.56	-41.3	-1.26

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.

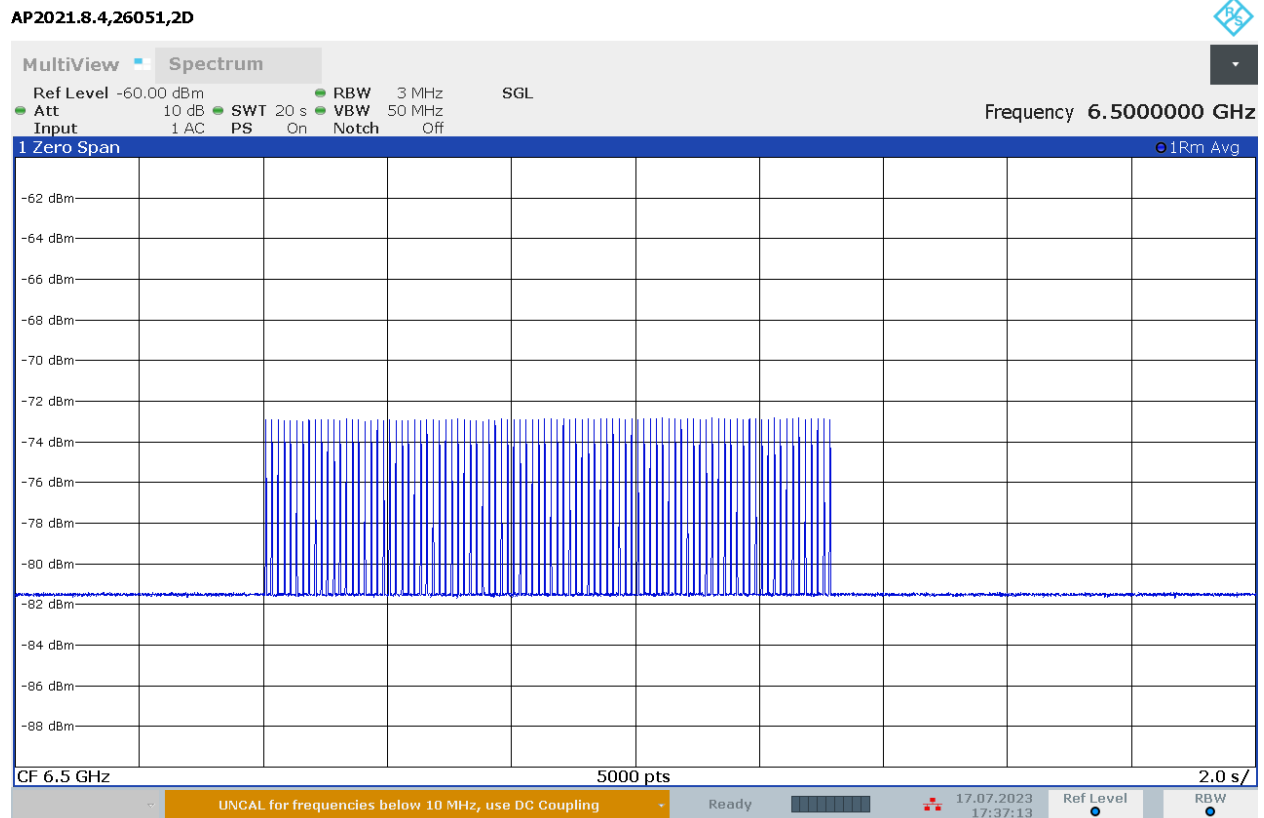
RESULTS

Employee ID: 26051
Location: Chamber D
Test Date: 07/17/23

Signal Levels on all Plots

- Initiator is Low Amplitude
- Responder is High Amplitude

Case 1: Initiator ends the UWB link



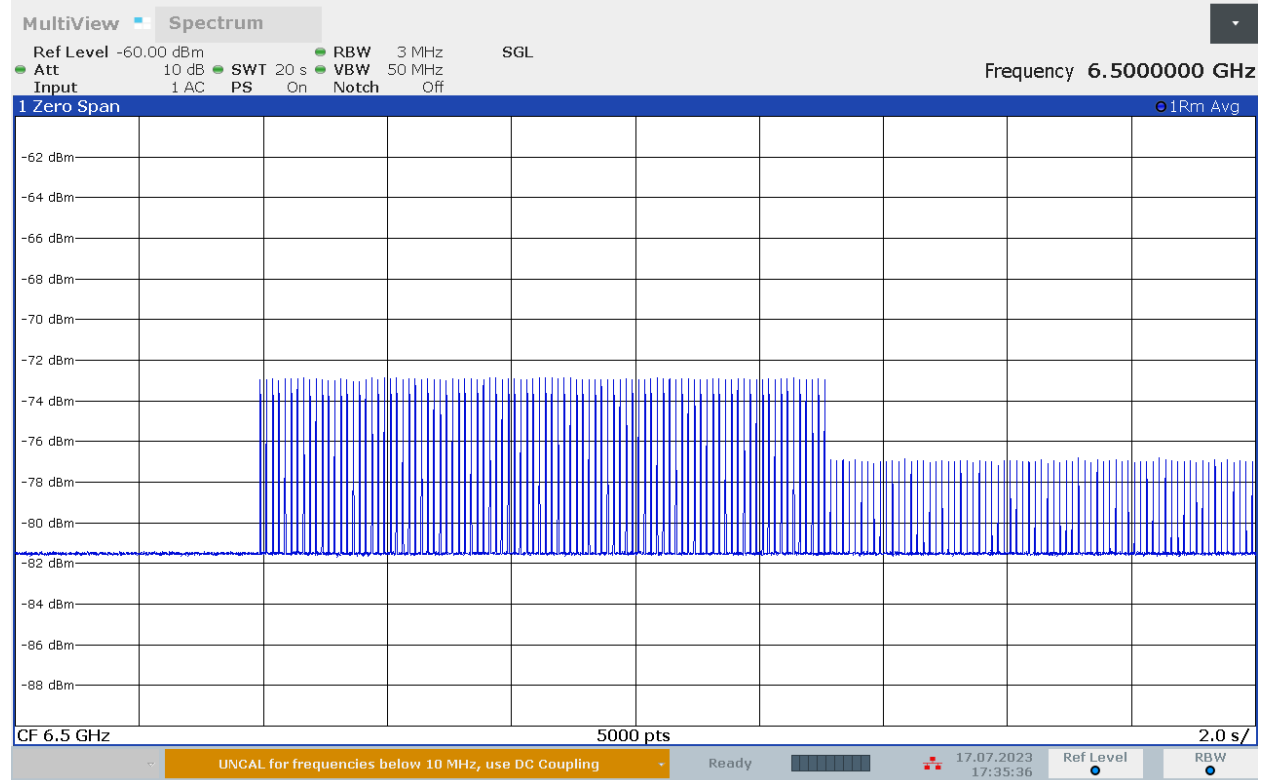
17:37:13 17.07.2023

RESULT

- All devices, including the Responder, cease transmissions

Case 2: Responder ends the UWB link

AP2021.8.4,26051,2D



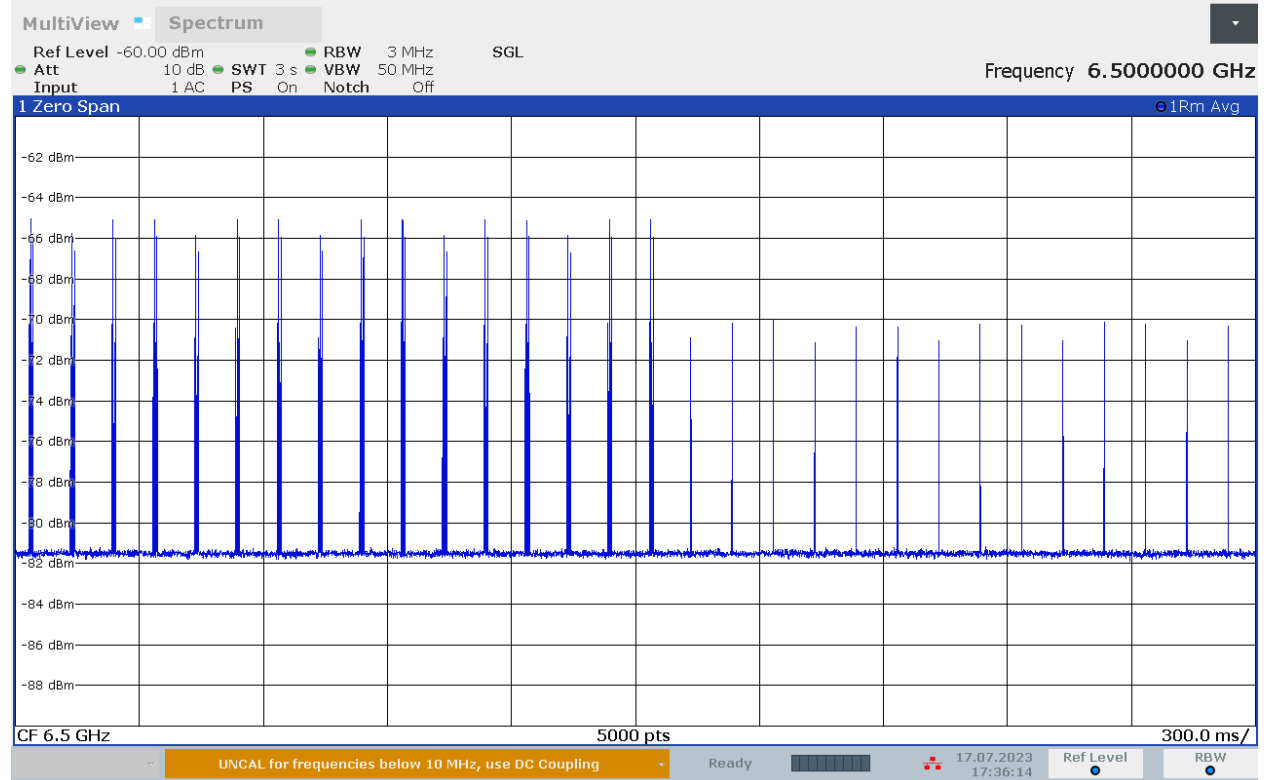
17:35:37 17.07.2023

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

AP2021.8.4,26051,2D



17:36:15 17.07.2023

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

RSS-220

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

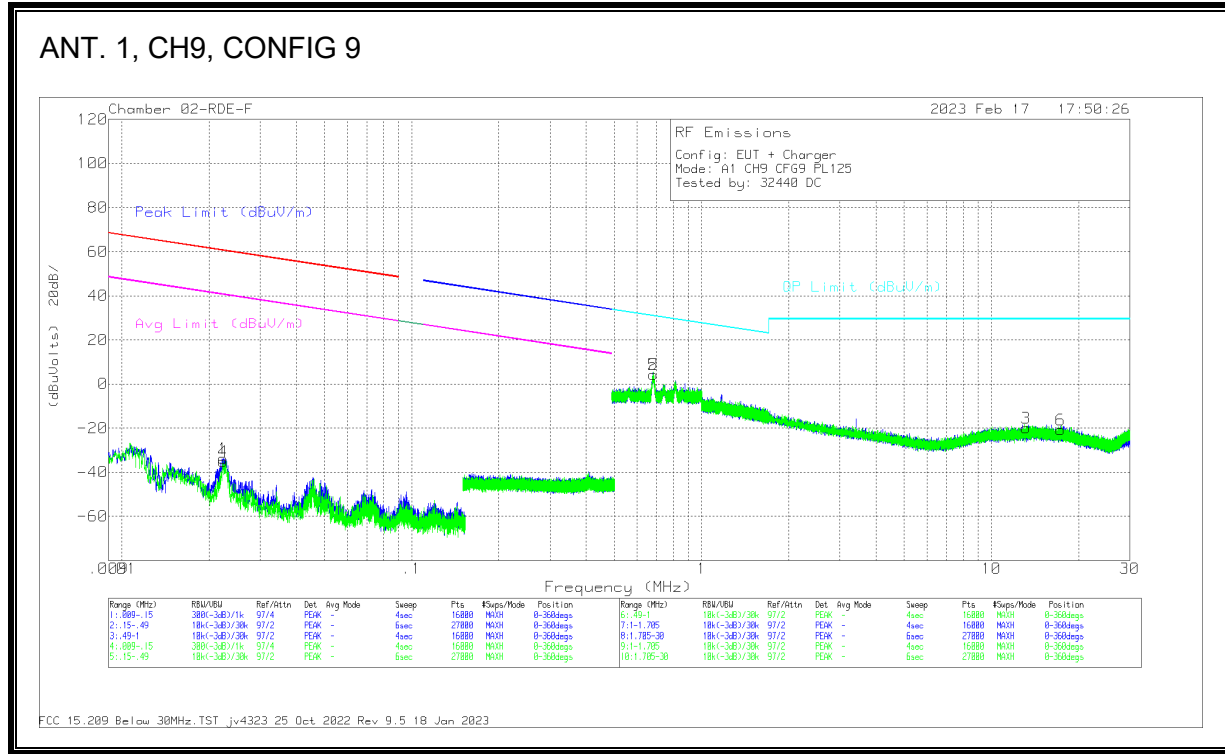
Employee IDs: 32440, 20737, 32067

Location: Chamber F

Test Date: 02/28/23 – 03/01/23

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

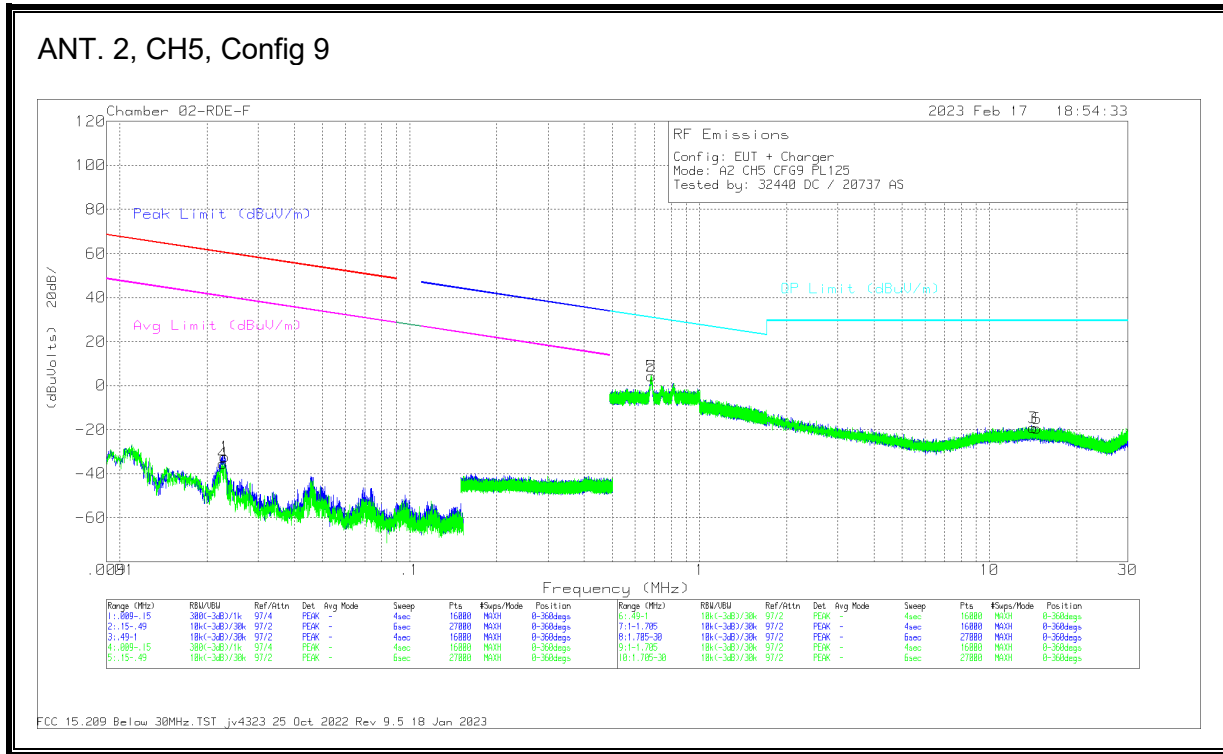
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna E(ACF)	Chamber F port 0 loss	Dist Corr 300m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Antenna Face
1	.0223	19.33	Pk	58.8	-31.9	-80	-33.77	60.61	-94.38	40.61	-74.38	0-360	On
4	.0224	18.14	Pk	58.8	-31.9	-80	-34.96	60.59	-95.55	40.59	-75.55	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	.681	20.55	Pk	56.4	-32.5	-40	4.45	30.95	-26.5	0-360	On
3	13.1575	18.01	Pk	34.3	-32.2	-40	-19.89	29.5	-49.39	0-360	On
5	.6832	20.37	Pk	56.4	-32.5	-40	4.27	30.92	-26.65	0-360	Off
6	17.3328	17.23	Pk	34.2	-32.1	-40	-20.67	29.5	-50.17	0-360	Off

Pk - Peak detector

ANT. 2, CH5, Config 9



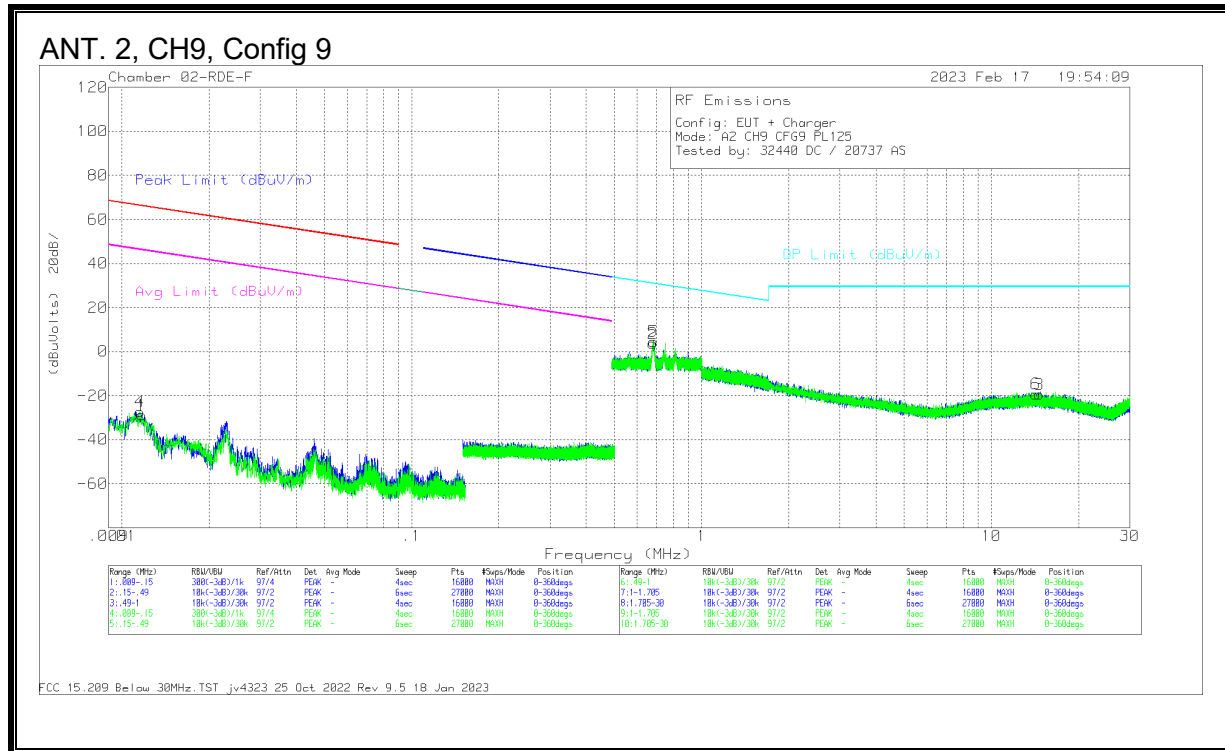
Trace Markers

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	.023	20.81	Pk	58.8	-32	-80	-32.39	60.34	-92.73	40.34	-72.73	0-360	On
4	.0227	17.88	Pk	58.8	-31.9	-80	-35.22	60.48	-95.7	40.48	-75.7	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	.6822	20.43	Pk	56.4	-32.5	-40	4.33	30.93	-26.6	0-360	On
3	14.1217	18.76	Pk	34.2	-32.1	-40	-19.14	29.5	-48.64	0-360	On
5	.6818	20.54	Pk	56.4	-32.5	-40	4.44	30.94	-26.5	0-360	Off
6	14.5399	18.8	Pk	34.1	-32.2	-40	-19.3	29.5	-48.8	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	.0117	21.86	Pk	60.2	-30.7	-80	-28.64	66.22	-94.86	46.22	-74.86	0-360	On
4	.0115	23.18	Pk	60.2	-30.6	-80	-27.22	66.34	-93.56	46.34	-73.56	0-360	Off

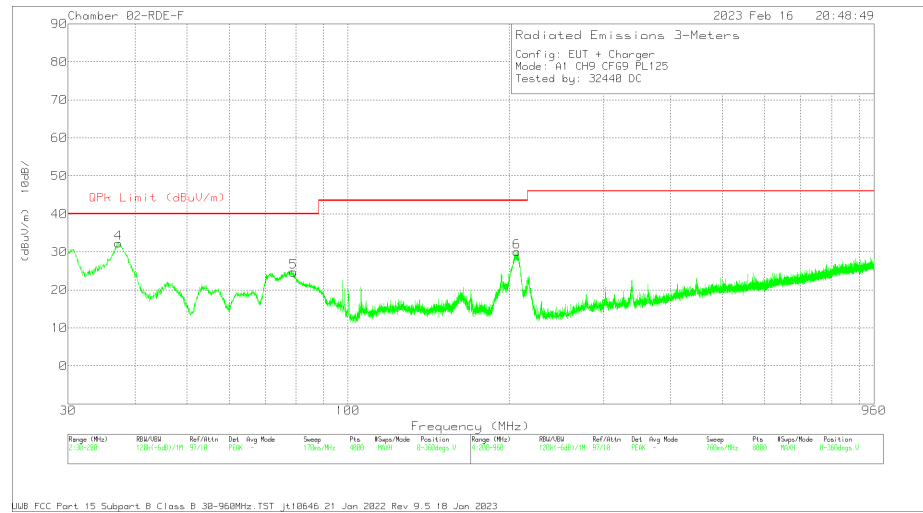
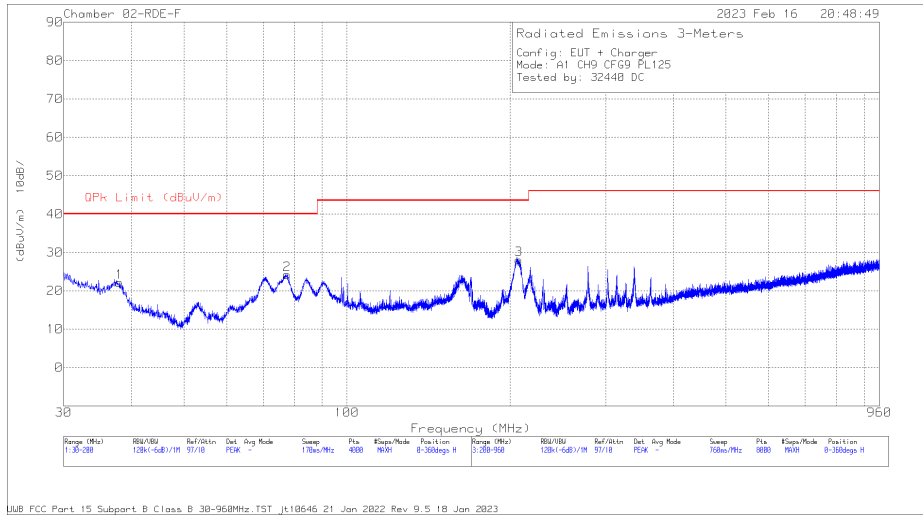
Pk - Peak detector

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	.6793	19.83	Pk	56.4	-32.5	-40	3.73	30.97	-27.24	0-360	On
3	14.6111	18.7	Pk	34.1	-32.2	-40	-19.4	29.5	-48.9	0-360	On
5	.6823	20.64	Pk	56.4	-32.5	-40	4.54	30.93	-26.39	0-360	Off
6	14.2108	18.67	Pk	34.2	-32.1	-40	-19.23	29.5	-48.73	0-360	Off

Pk - Peak detector

9.5.2. EMISSIONS, 30 - 960 MHz

ANT. 1, CH9, CONFIG 9

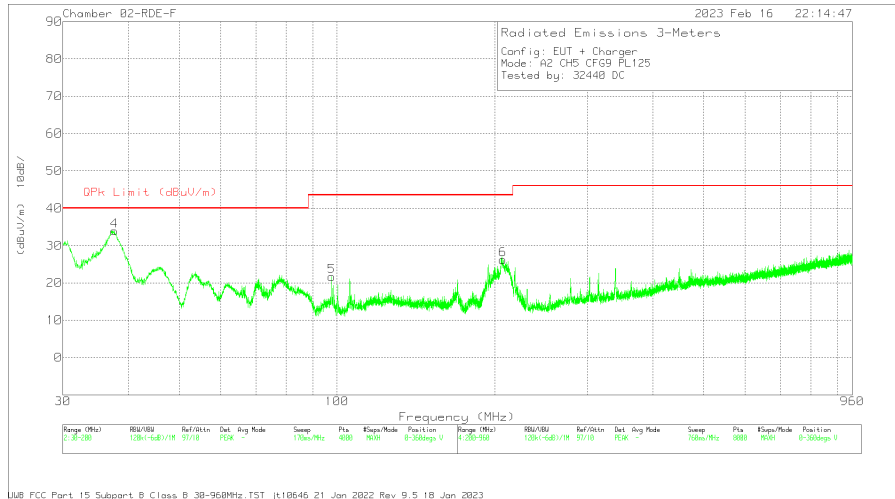
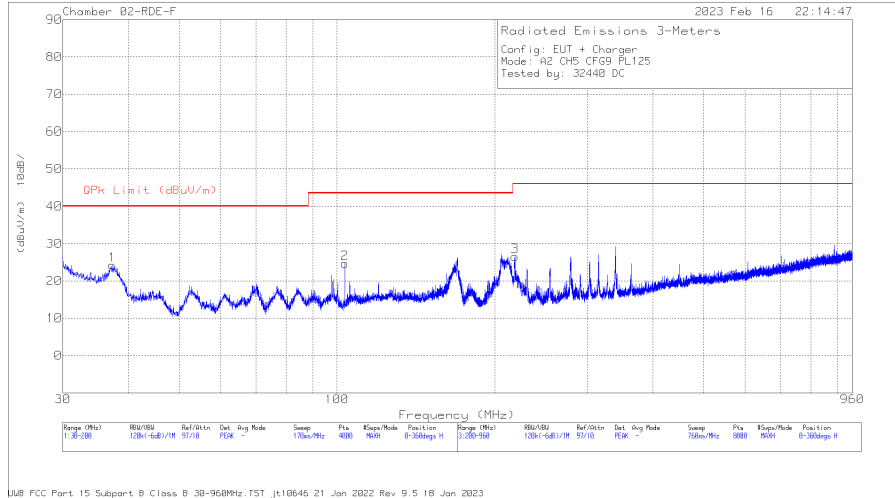


Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	230634 ACF (dB) 10m H	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	38.0346	32.66	Pk	20.8	-31.3	22.16	40	-17.84	0-360	399	H
2	77.4848	41.62	Pk	13.6	-31	24.22	40	-15.78	0-360	299	H
3	207.506	42.06	Pk	16.4	-30.4	28.06	43.52	-15.46	0-360	103	H
4	37.2694	42.18	Pk	21.4	-31.3	32.28	40	-7.72	0-360	103	V
5	79.1002	42.19	Pk	13.5	-31	24.69	40	-15.31	0-360	103	V
6	206.556	43.8	Pk	16.6	-30.4	30	43.52	-13.52	0-360	103	V

Pk - Peak detector

ANT. 2, CH5, CONFIG 9

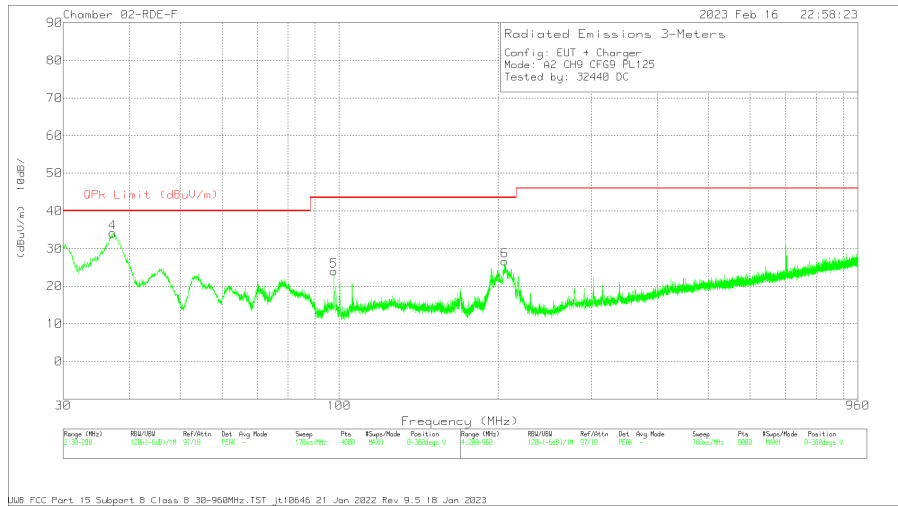
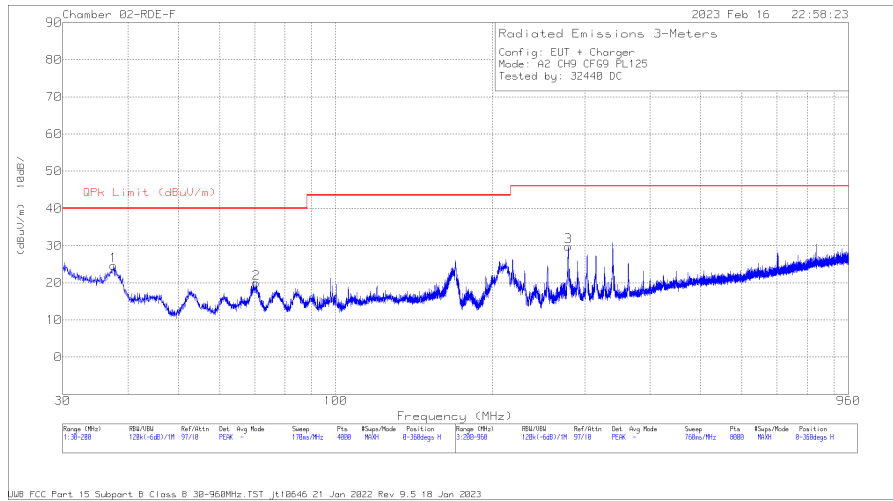


Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	230634 ACF (dB) 10m H	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPK Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	37.2269	34.04	Pk	21.5	-31.3	24.24	40	-15.76	0-360	399	H
2	103.417	38.6	Pk	17	-30.9	24.7	43.52	-18.82	0-360	199	H
3	218.242	40.53	Pk	16.3	-30.3	26.53	46.02	-19.49	0-360	103	H
4	37.6095	44.13	Pk	21.1	-31.3	33.93	40	-6.07	0-360	103	V
5	97.6775	37.07	Pk	15.5	-30.9	21.67	43.52	-21.85	0-360	103	V
6	207.126	40.1	Pk	16.5	-30.4	26.2	43.52	-17.32	0-360	101	V

Pk - Peak detector

ANT. 2, CH9, CONFIG 9



Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	230634 ACF (dB) 10m H	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	37.567	34.75	Pk	21.2	-31.3	24.65	40	-15.35	0-360	299	H
2	70.4705	37.11	Pk	13.9	-31.1	19.91	40	-20.09	0-360	199	H
3	278.955	40.98	Pk	19	-30.2	29.78	46.02	-16.24	0-360	103	H
4	37.2694	44.03	Pk	21.4	-31.3	34.13	40	-5.87	0-360	103	V
5	97.72	39.35	Pk	15.5	-30.9	23.95	43.52	-19.57	0-360	103	V
6	205.796	40.29	Pk	16.8	-30.4	26.69	43.52	-16.83	0-360	103	V

Pk - Peak detector

Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	230634 ACF (dB) 10m H	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
37.3223	40.45	Qp	21.4	-31.3	30.55	40	-9.45	287	103	V

Qp - Quasi-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 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 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 = 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 1.559 – 1.610 GHz.

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

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 = $20 \cdot \log(1m/3m) = -9.54 \text{ dB}$

RESULTS

Average Emissions Summary

Employee IDs: 32440, 20737, 32067 28499

Location: Chambers F & E

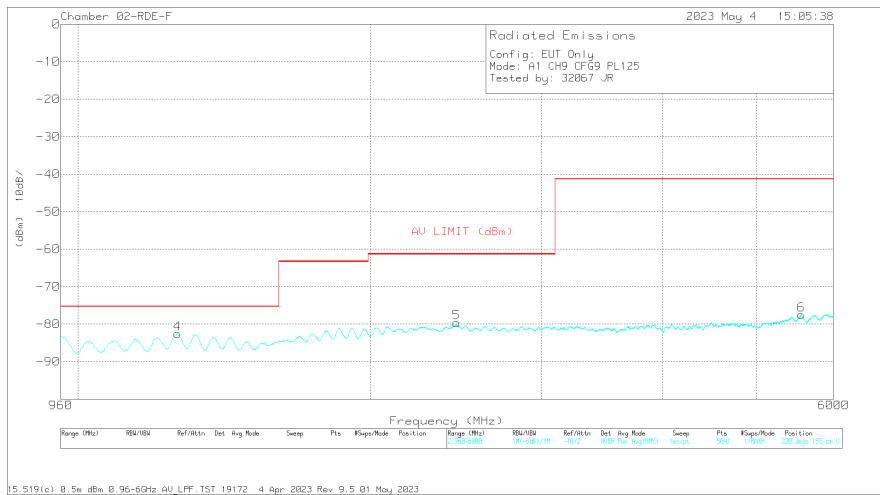
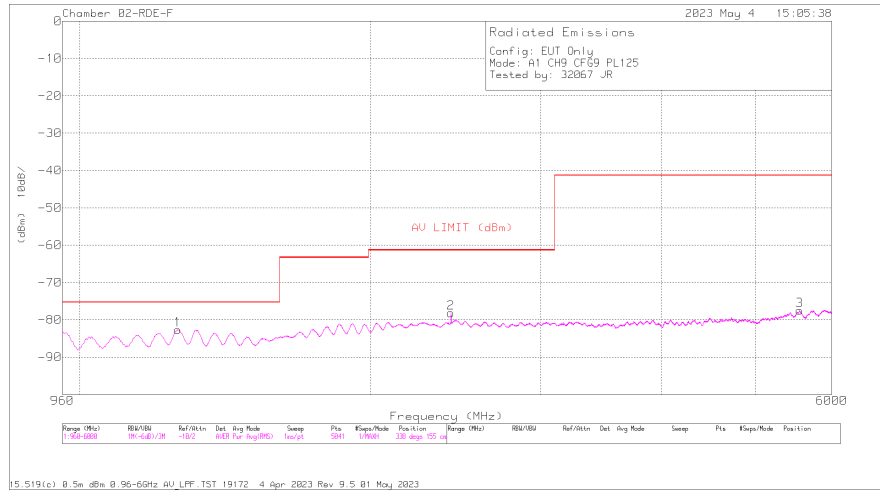
Test Date: 02/27/23 - 03/27/23

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)
Parent

ANT. 1, CH9, CONFIG 9

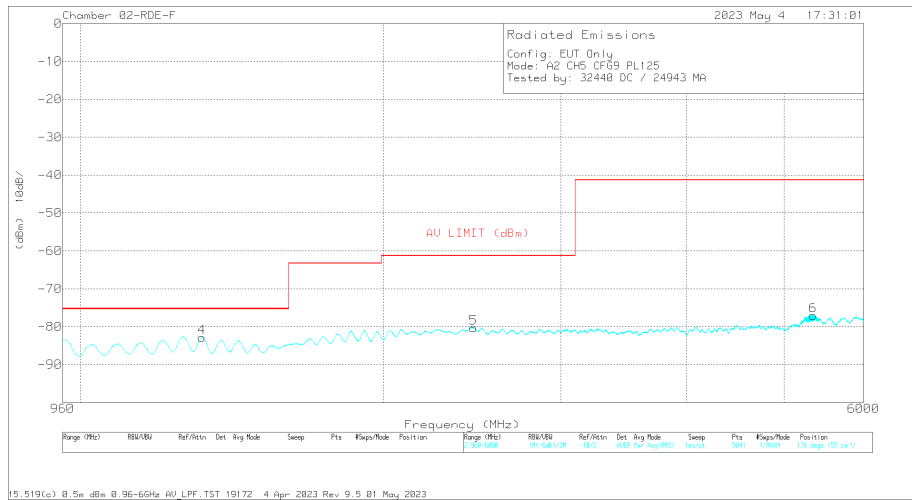
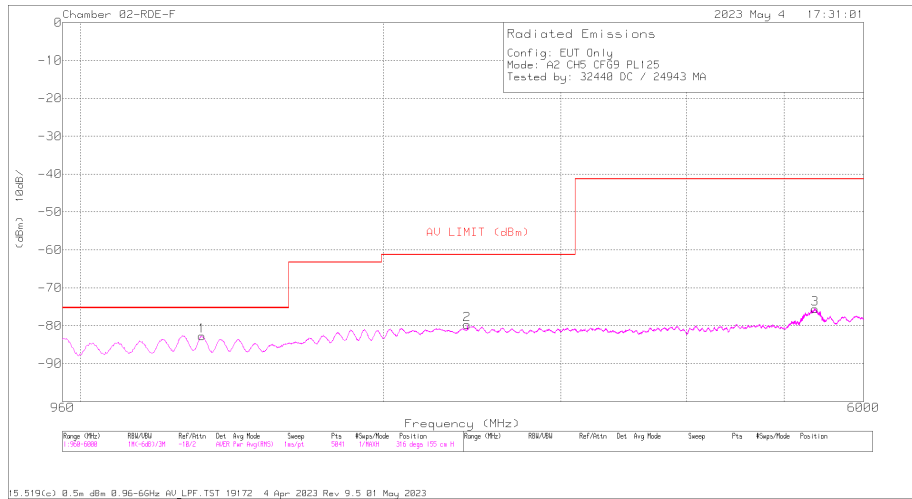


Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBm)	Det	200000 ACF (dB) 3mHz	Amp/Cbl (dB)	Dist. Corr. (dB)	Conv. Fact. (dB)	204443 LPF (dB)	Corrected Reading (dBm)	AV LIMIT (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1264	-61.13	RMS	28.8	-46.7	-15.6	11.8	.2	-82.63	-75.3	-7.33	272	155	H
2	2423	-59.85	RMS	32.3	-47	-15.6	11.8	.2	-78.15	-61.3	-16.85	338	155	H
3	5559	-64.69	RMS	34.4	-45.4	-15.6	11.8	2	-77.49	-41.3	-36.19	206	155	H
4	1266	-61.05	RMS	28.8	-46.7	-15.6	11.8	.2	-82.55	-75.3	-7.25	264	155	V
5	2455	-61.93	RMS	32.4	-46.7	-15.6	11.8	.3	-79.63	-61.3	-18.33	242	155	V
6	5559	-64.72	RMS	34.4	-45.4	-15.6	11.8	2	-77.52	-41.3	-36.22	242	155	V

RMS - RMS detection

ANT. 2, CH5, CONFIG 9

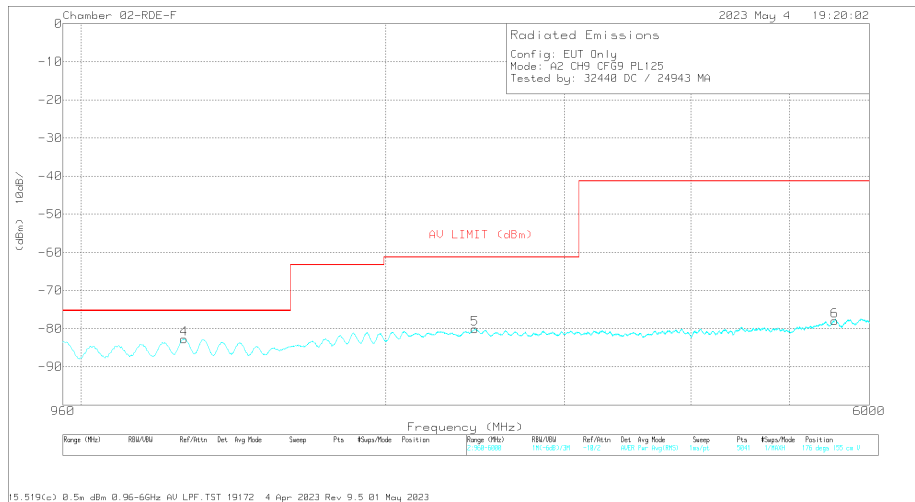
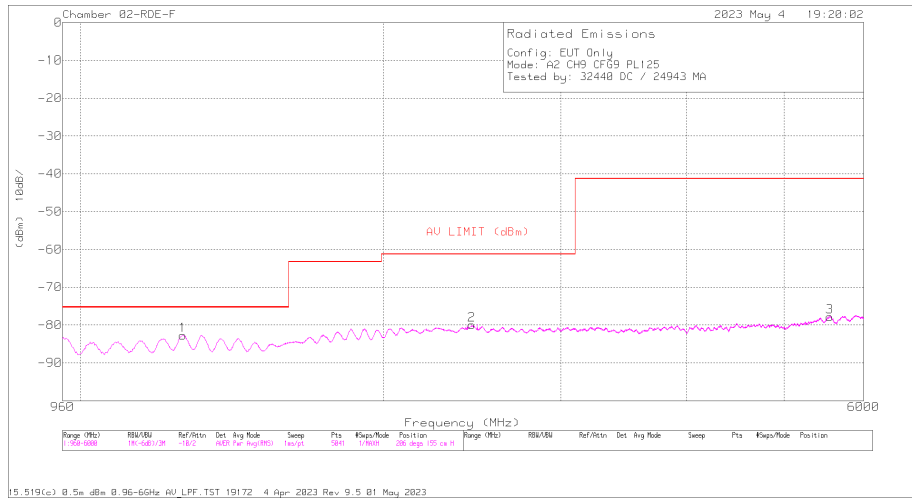


Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBm)	Det	20680 8 ACF (dB) 3mH	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	1320	-61.31	RMS	28.9	-46.7	-15.6	11.8	.2	-82.71	-75.3	-7.41	30	155	H
2	2423	-61.46	RMS	32.3	-47	-15.6	11.8	.2	-79.76	-61.3	-18.46	316	155	H
3	5370	-61.87	RMS	34.5	-45.9	-15.6	11.8	1.5	-75.57	-41.3	-34.27	294	155	H
4	1320	-61.43	RMS	28.9	-46.7	-15.6	11.8	.2	-82.83	-75.3	-7.53	198	155	V
5	2458	-62.62	RMS	32.4	-46.6	-15.6	11.8	.3	-80.32	-61.3	-19.02	132	155	V
6	5348	-63.24	RMS	34.5	-45.8	-15.6	11.8	1.3	-77.04	-41.3	-35.74	22	155	V

RMS - RMS detection

ANT. 2, CH9, CONFIG 9



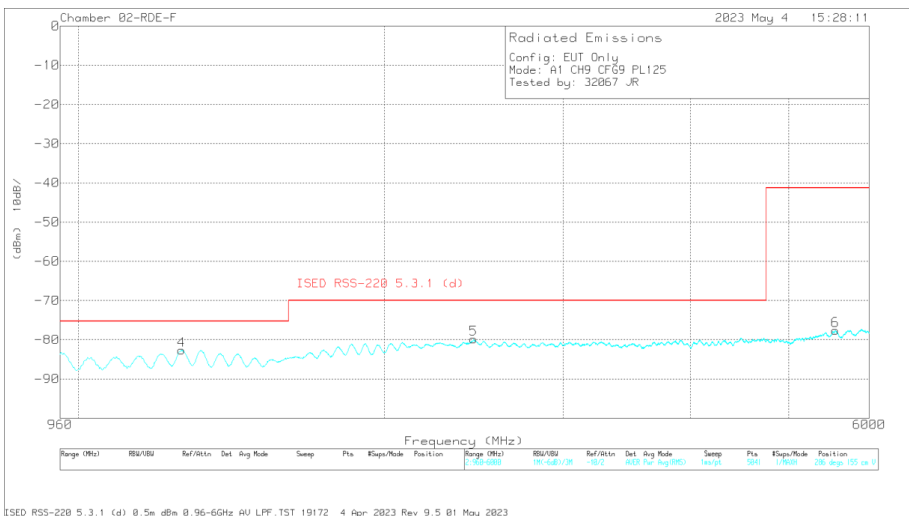
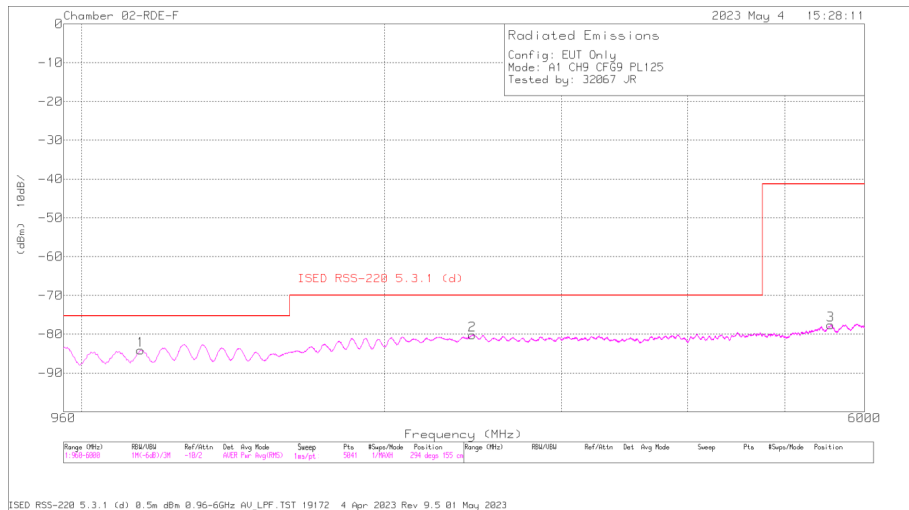
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBm)	Det	206808 ACF (dB) 3mH	Amp/Cbl (dB)	Dist. Corr. (dB)	Conv. Fact. (dB)	20484 3 LPF (dB)	Corrected Reading (dBm)	AV LIMIT (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1264	-61.2	RMS	28.8	-46.7	-15.6	11.8	.2	-82.7	-75.3	-7.4	162	155	H
2	2449	-62.06	RMS	32.4	-46.7	-15.6	11.8	.2	-79.96	-61.3	-18.66	162	155	H
3	5551	-64.9	RMS	34.4	-45.5	-15.6	11.8	2	-77.8	-41.3	-36.5	52	155	H
4	1264	-61.21	RMS	28.8	-46.7	-15.6	11.8	.2	-82.71	-75.3	-7.41	286	155	V
5	2449	-62.22	RMS	32.4	-46.7	-15.6	11.8	.2	-80.12	-61.3	-18.82	154	155	V
6	5546	-65.1	RMS	34.4	-45.5	-15.6	11.8	2	-78	-41.3	-36.7	198	155	V

RMS - RMS detection

RSS-220 5.3.1 (d)

ANT. 1, CH9, CONFIG 9

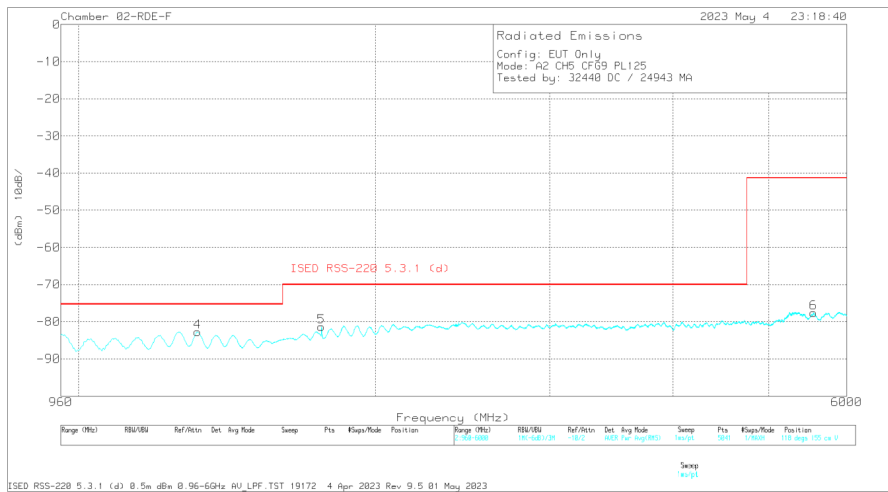
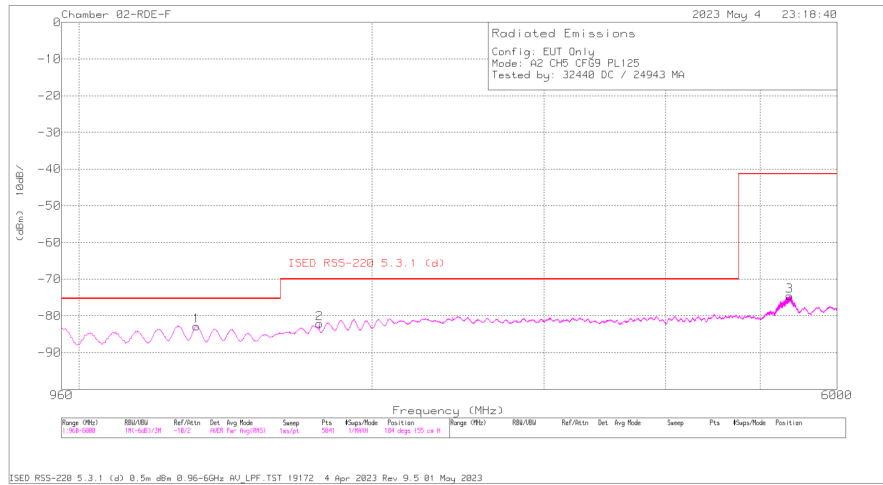


Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBm)	Det	206880 ACF (dB) 3mH	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	1145	-61.21	RMS	27.8	-47	-15.6	11.8	.1	-84.11	-75.3	-8.81	273	155	H
2	2445	-62.16	RMS	32.3	-46.7	-15.6	11.8	.2	-80.16	-70	-10.16	206	155	H
3	5554	-65	RMS	34.4	-45.2	-15.6	11.8	.2	-77.6	-41.3	-36.3	31	155	H
4	1264	-61.17	RMS	28.8	-46.7	-15.6	11.8	.2	-82.67	-75.3	-7.37	22	155	V
5	2449	-61.91	RMS	32.4	-46.7	-15.6	11.8	.2	-79.81	-70	-9.81	242	155	V
6	5557	-64.9	RMS	34.4	-45.3	-15.6	11.8	.2	-77.6	-41.3	-36.3	132	155	V

RMS - RMS detection

ANT. 2, CH5, CONFIG 9

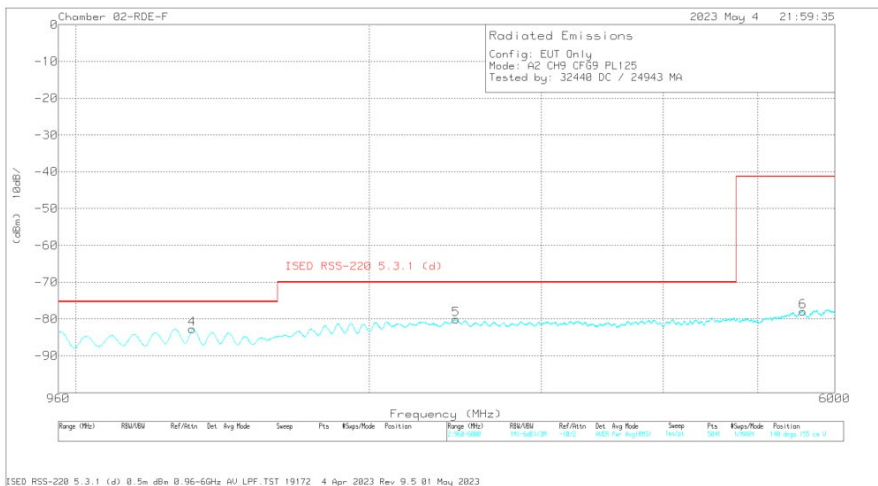
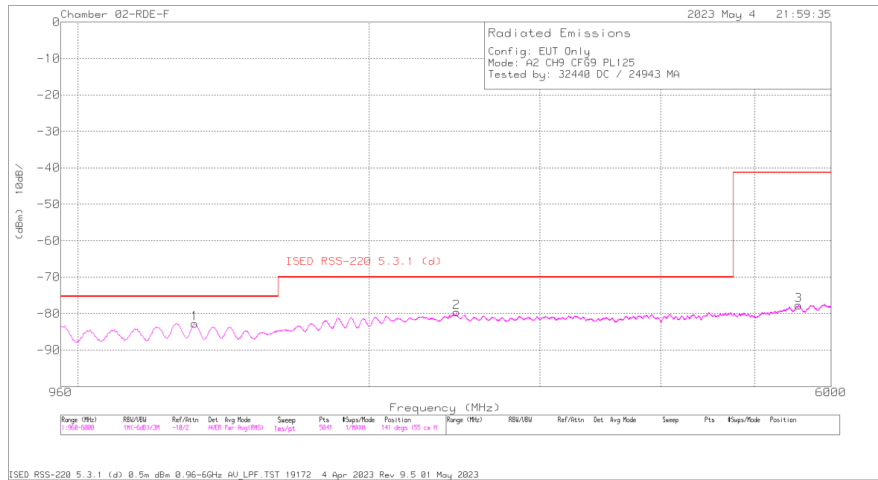


Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBm)	Det	206800 ACF (dB) 3mHz	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	1320	-61.39	RMS	28.9	-46.7	-15.6	11.8	.2	-82.79	-75.3	-7.49	74	155	H
2	1766	-61.74	RMS	30.1	-47	-15.6	11.8	.3	-82.14	-70	-12.14	316	155	H
3	5361	-60.83	RMS	34.5	-45.9	-15.6	11.8	1.5	-74.53	-41.3	-33.23	294	155	H
4	1320	-61.34	RMS	28.9	-46.7	-15.6	11.8	.2	-82.74	-75.3	-7.44	250	155	V
5	1763	-60.81	RMS	30	-47	-15.6	11.8	.3	-81.31	-70	-11.31	75	155	V
6	5555	-64.93	RMS	34.4	-45.2	-15.6	11.8	2	-77.53	-41.3	-36.23	140	155	V

RMS - RMS detection

ANT. 2, CH9, CONFIG 9

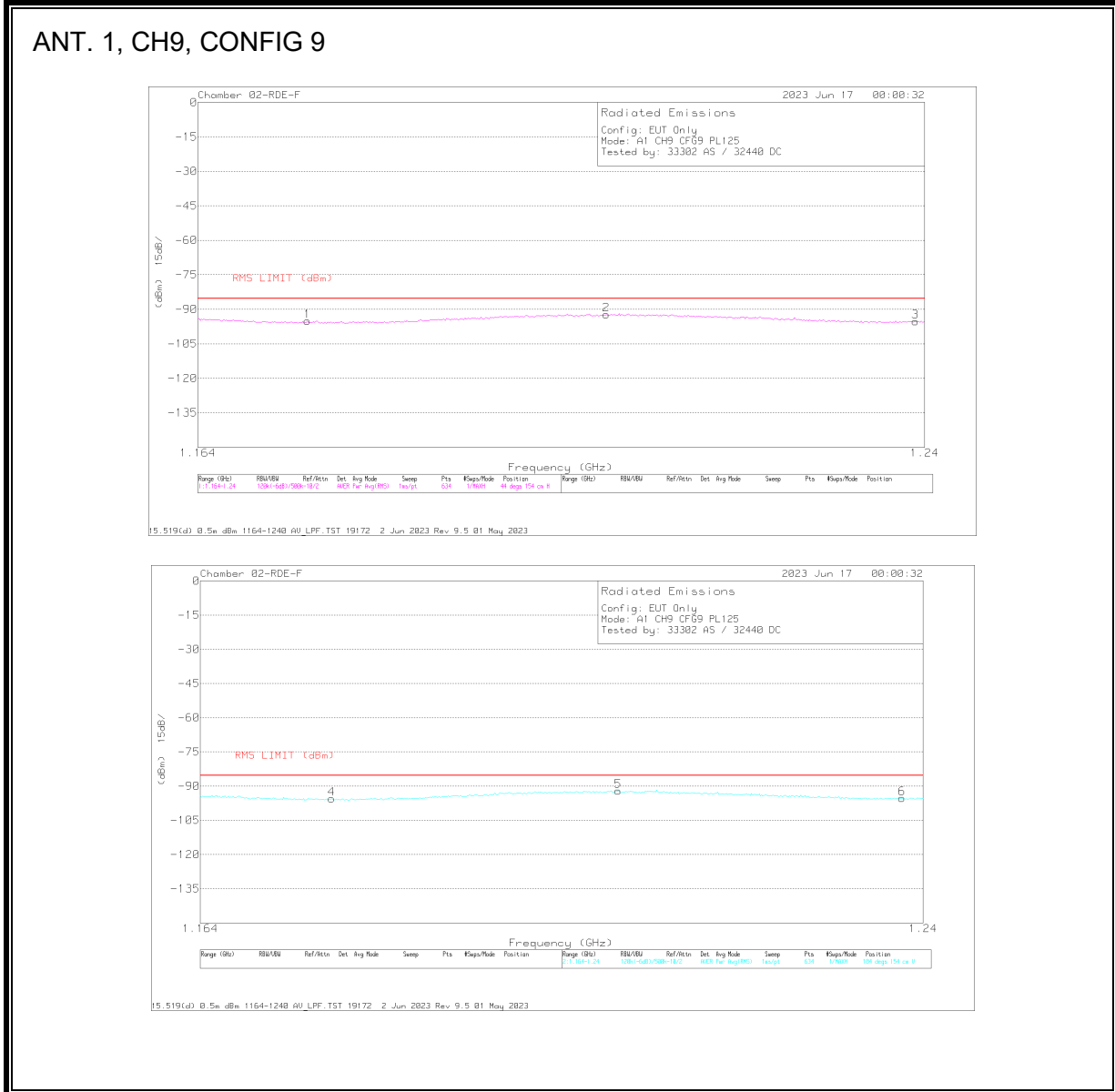


Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBm)	Det	200000 ACF (dB) 3mT	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	1320	-61.27	RMS	28.9	-46.7	-15.6	11.8	-2	-82.67	-75.3	-7.37	294	155	H
2	2462	-61.94	RMS	32.4	-46.6	-15.6	11.8	-3	-79.64	-70	-9.64	52	155	H
3	5555	-65.06	RMS	34.4	-45.2	-15.6	11.8	2	-77.66	-41.3	-36.36	52	155	H
4	1317	-61.47	RMS	28.9	-46.6	-15.6	11.8	2	-82.77	-75.3	-7.47	295	155	V
5	2453	-62.33	RMS	32.4	-46.7	-15.6	11.8	-3	-80.13	-70	-10.13	52	155	V
6	5567	-65.03	RMS	34.3	-45.4	-15.6	11.8	2	-77.93	-41.3	-36.63	316	155	V

RMS - RMS detection

9.6.2. AVERAGE EMISSIONS, 1.164 – 1.240 GHz

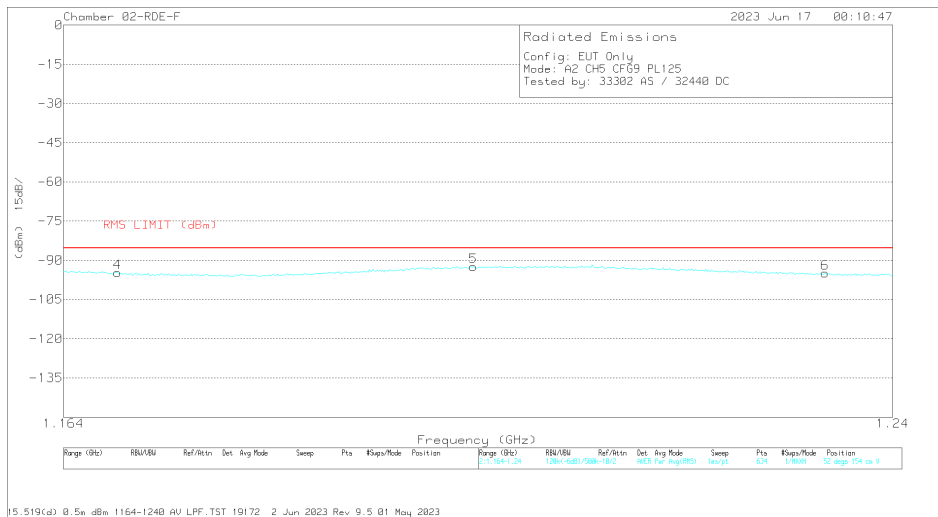
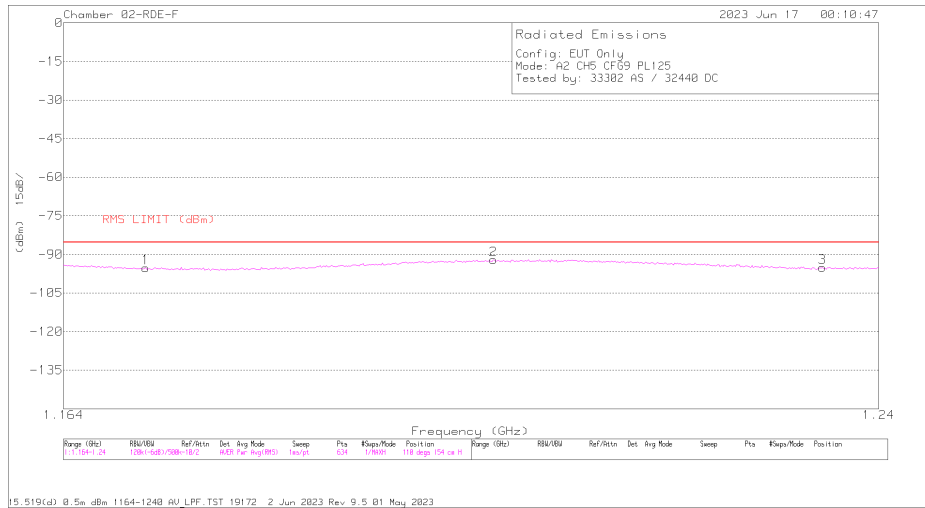


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	20dB/10 ACF (dB) 3mH	Amp/Chl (dB)	Dist. Corr. (dB)	Conv. Fact. (dB)	20dB/10 LFF (dB)	Corrected Reading (dBm)	RMS LIMIT (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.175166	-72.59	RMS	28.1	-47	-15.6	11.8	.2	-85.09	-85.3	-9.79	176	154	H
2	1.206142	-70.11	RMS	28.4	-47	-15.6	11.8	.2	-82.31	-85.3	-7.01	80	154	H
3	1.239039	-73.5	RMS	28.7	-46.8	-15.6	11.8	.2	-85.2	-85.3	-9.9	308	154	H
4	1.177447	-73.03	RMS	28.2	-47.1	-15.6	11.8	.2	-85.53	-85.3	-10.23	118	154	V
5	1.207343	-69.97	RMS	28.4	-47	-15.6	11.8	.2	-82.07	-85.3	-6.77	97	154	V
6	1.237719	-73.45	RMS	28.6	-46.8	-15.6	11.8	.2	-85.25	-85.3	-9.95	118	154	V

RMS - RMS detection

ANT. 2, CH5, CONFIG 9

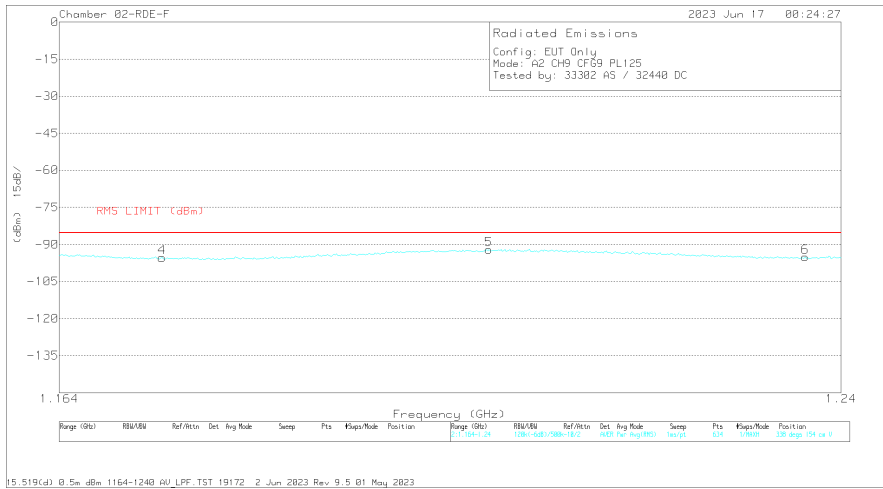
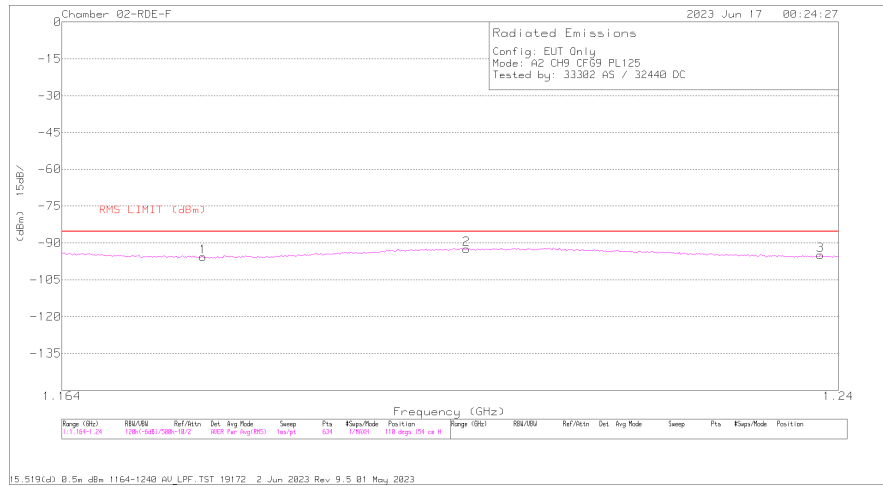


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	206800 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	1.171444	-72.58	RMS	28.1	-47.1	-15.6	11.8	2	-95.18	-85.3	-9.88	220	154	H
2	1.203501	-69.93	RMS	28.4	-46.9	-15.6	11.8	2	-92.03	-85.3	-6.73	330	154	H
3	1.234597	-73.34	RMS	28.6	-46.8	-15.6	11.8	2	-95.14	-85.3	-9.84	242	154	H
4	1.168803	-72.17	RMS	28.1	-47.1	-15.6	11.8	2	-94.77	-85.3	-9.47	294	154	V
5	1.200979	-70.23	RMS	28.4	-47	-15.6	11.8	2	-92.43	-85.3	-7.13	31	154	V
6	1.233637	-73.1	RMS	28.6	-46.8	-15.6	11.8	2	-94.9	-85.3	-9.6	140	154	V

RMS - RMS detection

ANT. 2, CH9, CONFIG 9

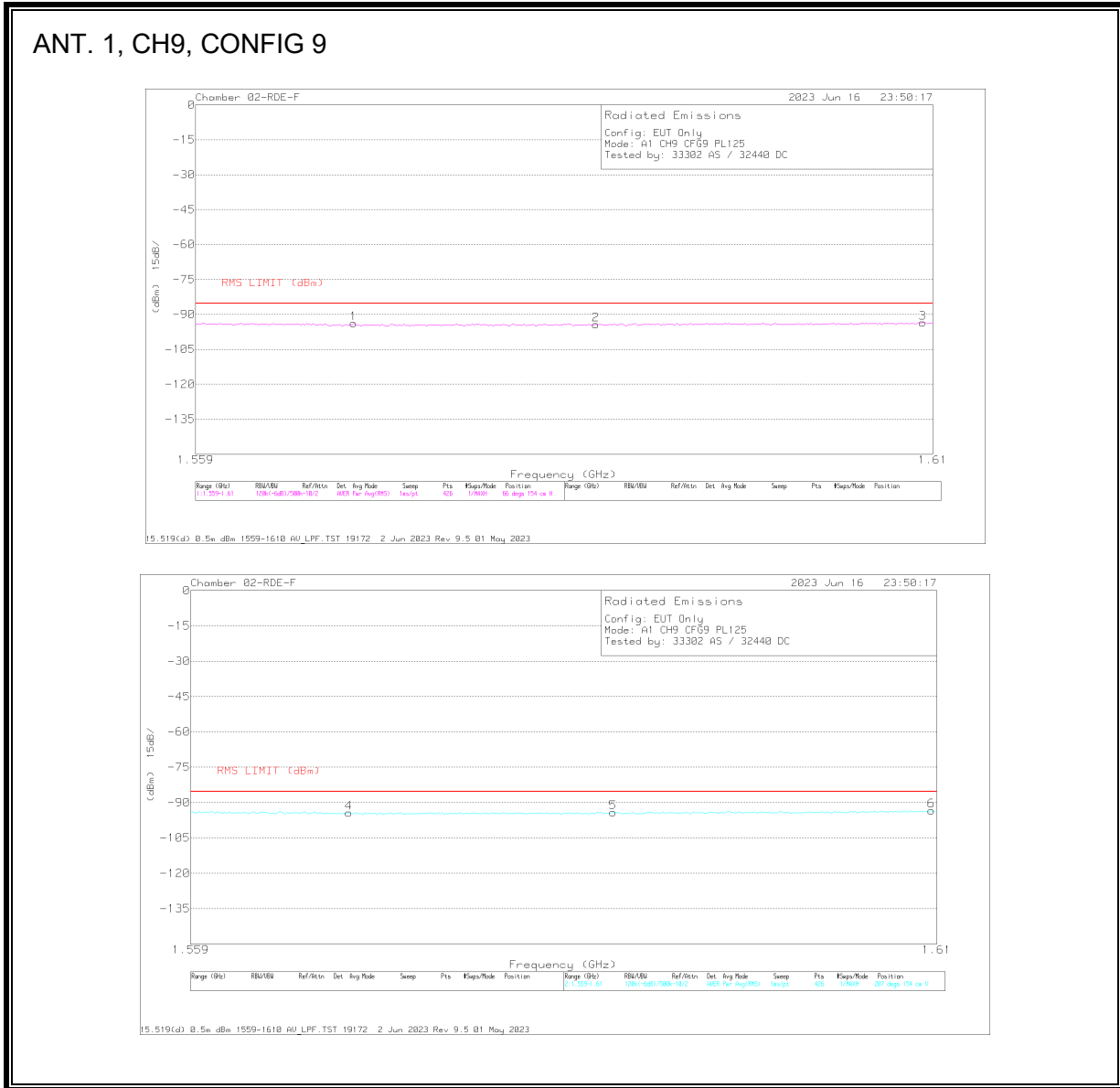


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	20dB/3dB ACF (dB) 3MHz	Amp/Cbl (dB)	Dist. Corr. (dB)	Conv. Fact. (dB)	20dB/3dB LFP (dB)	Corrected Reading (dBm)	RMS LIMIT (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.177447	-73.11	RMS	28.2	-47.1	-15.6	11.8	-2	-95.61	-85.3	-10.31	132	154	H
2	1.20302	-70.3	RMS	28.4	-46.9	-15.6	11.8	-2	-92.4	-85.3	-7.1	330	154	H
3	1.238199	-73.11	RMS	28.6	-46.8	-15.6	11.8	-2	-94.91	-85.3	-9.61	154	154	H
4	1.173725	-72.96	RMS	28.1	-46.9	-15.6	11.8	-2	-95.36	-85.3	-10.06	316	154	V
5	1.205162	-69.92	RMS	28.4	-47	-15.6	11.8	-2	-92.12	-85.3	-6.82	316	154	V
6	1.236398	-73.31	RMS	28.6	-46.8	-15.6	11.8	-2	-95.11	-85.3	-9.81	206	154	V

RMS - RMS detection

9.6.3. AVERAGE EMISSIONS, 1.559 – 1.610 GHz

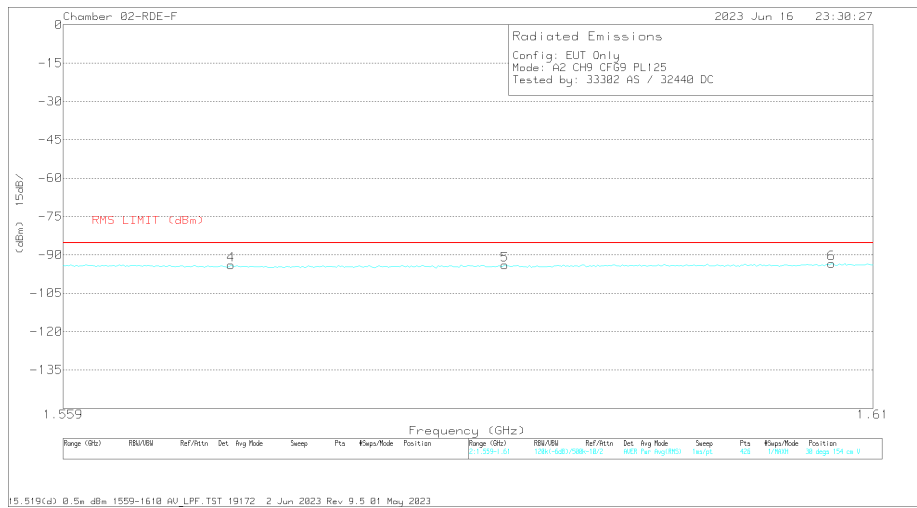


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	20dB/100 ACF (dB) Slew	Amp/Ctrl (dB)	Dist. Corr. (dB)	Conv. Fact. (dB)	20dB/43 LPF (dB)	Corrected Reading (dBm)	RMS LIMIT (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.5698	-71.04	RMS	27.8	-46.9	-15.6	11.8	-2	-93.74	-85.3	-8.44	308	154	H
2	1.5848	-71.98	RMS	28	-46.7	-15.6	11.8	-2	-94.28	-85.3	-8.98	176	154	H
3	1.60928	-71.19	RMS	28.2	-46.8	-15.6	11.8	-1	-93.49	-85.3	-8.19	264	154	H
4	1.56968	-71.58	RMS	27.8	-46.9	-15.6	11.8	-2	-94.28	-85.3	-8.98	207	154	V
5	1.58768	-71.78	RMS	28	-46.7	-15.6	11.8	-2	-94.08	-85.3	-8.78	118	154	V
6	1.60964	-71.15	RMS	28.2	-46.8	-15.6	11.8	-1	-93.45	-85.3	-8.15	184	154	V

RMS - RMS detection

ANT. 2, CH9, CONFIG 9

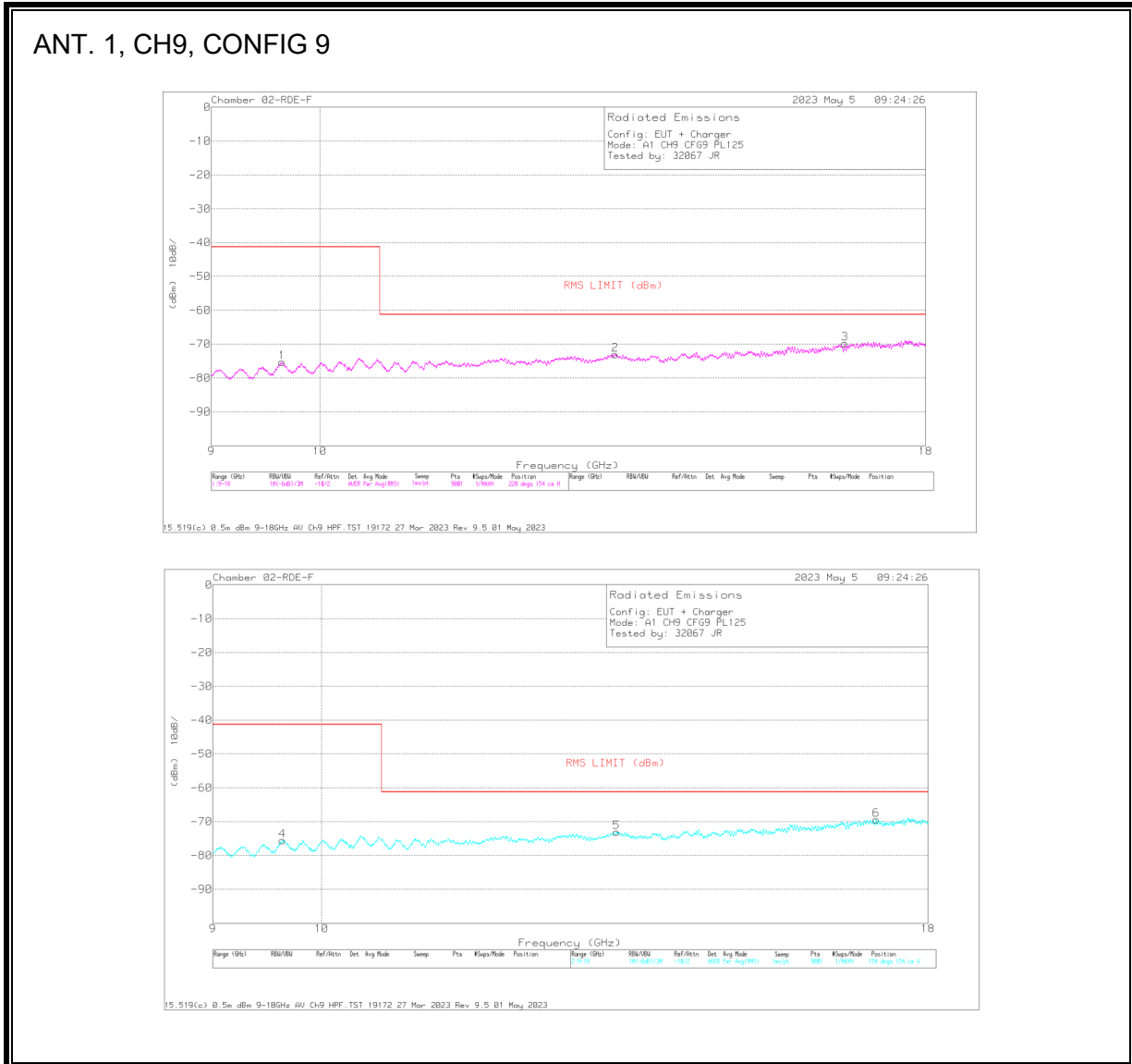


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	200000 ACF (dB) Smtk	Amp/Cbt (dB)	Dist. Corr. (dB)	Conv. Fact. (dB)	204843 LFF (dB)	Corrected Reading (dBm)	RMS LIMIT (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.56836	-71.74	RMS	27.8	-46.9	-15.6	11.8	-2	-94.44	-85.3	-9.14	88	154	H
2	1.58576	-72.02	RMS	28	-46.7	-15.6	11.8	-2	-94.32	-85.3	-9.02	330	154	H
3	1.60856	-71.43	RMS	28.2	-46.8	-15.6	11.8	-2	-93.63	-85.3	-8.33	110	154	H
4	1.56944	-71.32	RMS	27.8	-46.9	-15.6	11.8	-2	-94.02	-85.3	-8.72	206	154	V
5	1.5866	-71.72	RMS	28	-46.7	-15.6	11.8	-2	-94.02	-85.3	-8.72	294	154	V
6	1.60736	-71.26	RMS	28.2	-46.8	-15.6	11.8	-2	-93.46	-85.3	-8.16	316	154	V

RMS - RMS detection

9.6.4. AVERAGE EMISSIONS, 9 – 18 GHz

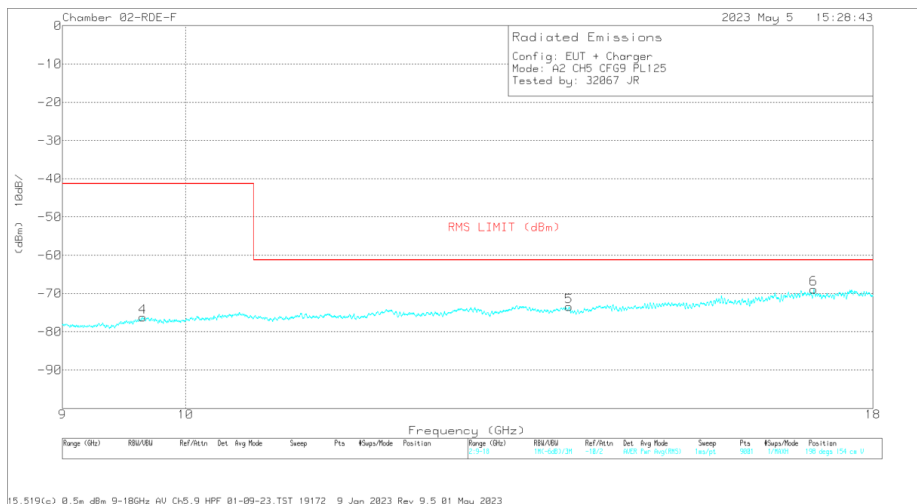
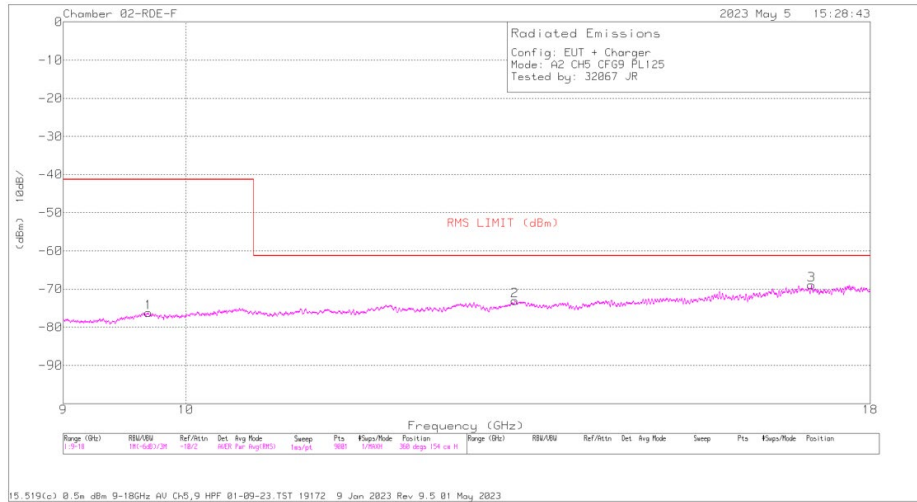


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	200kHz ACF (dB) Scaled	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	9.641	-64.76	RMS	36.6	-43.4	-15.6	11.8	0	-75.36	-61.3	-34.06	294	154	H
2	13.321	-65.27	RMS	39.1	-42.4	-15.6	11.8	-3	-73.07	-61.3	-11.77	206	154	H
3	16.842	-66.73	RMS	41.1	-40.6	-15.6	11.8	-2	-69.83	-61.3	-8.53	294	154	H
4	9.628	-64.53	RMS	36.6	-43.8	-15.6	11.8	0	-75.53	-61.3	-34.23	286	154	V
5	13.309	-66.28	RMS	39.1	-42.4	-15.6	11.8	-3	-73.08	-61.3	-11.78	22	154	V
6	17.116	-66.81	RMS	41.3	-40.2	-15.6	11.8	-1	-69.41	-61.3	-8.11	330	154	V

RMS - RMS detection

ANT. 2, CH5, CONFIG 9

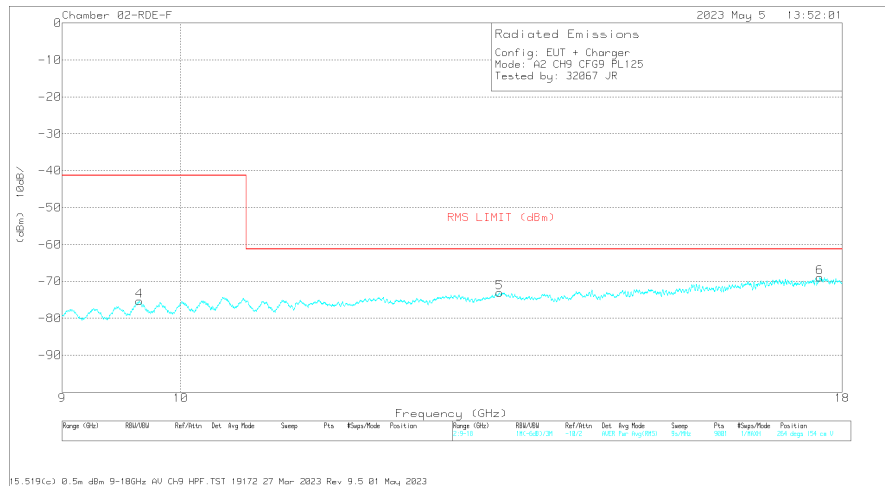
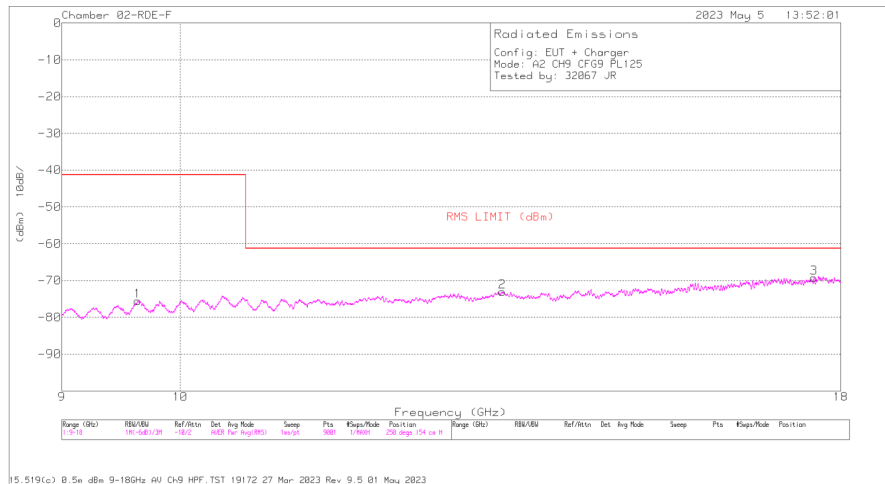


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	20dB/0dB ACF (dB) 3mH	Amp/Chl (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	9.683	-66.34	RMS	36.7	-43.2	-15.6	11.8	.4	-76.24	-41.3	-34.94	140	154	H
2	13.265	-66.49	RMS	39.1	-42.3	-15.6	11.8	.4	-73.09	-61.3	-11.79	140	154	H
3	17.114	-66.69	RMS	41.3	-40	-15.6	11.8	.3	-68.89	-61.3	-7.59	338	154	H
4	9.64	-66.22	RMS	36.6	-43.2	-15.6	11.8	.4	-76.22	-41.3	-34.92	154	154	V
5	13.882	-66.96	RMS	38.7	-41.7	-15.6	11.8	.3	-73.46	-61.3	-12.16	198	154	V
6	17.113	-66.65	RMS	41.3	-40	-15.6	11.8	.3	-68.85	-61.3	-7.55	330	154	V

RMS - RMS detection

ANT. 2, CH9, CONFIG 9

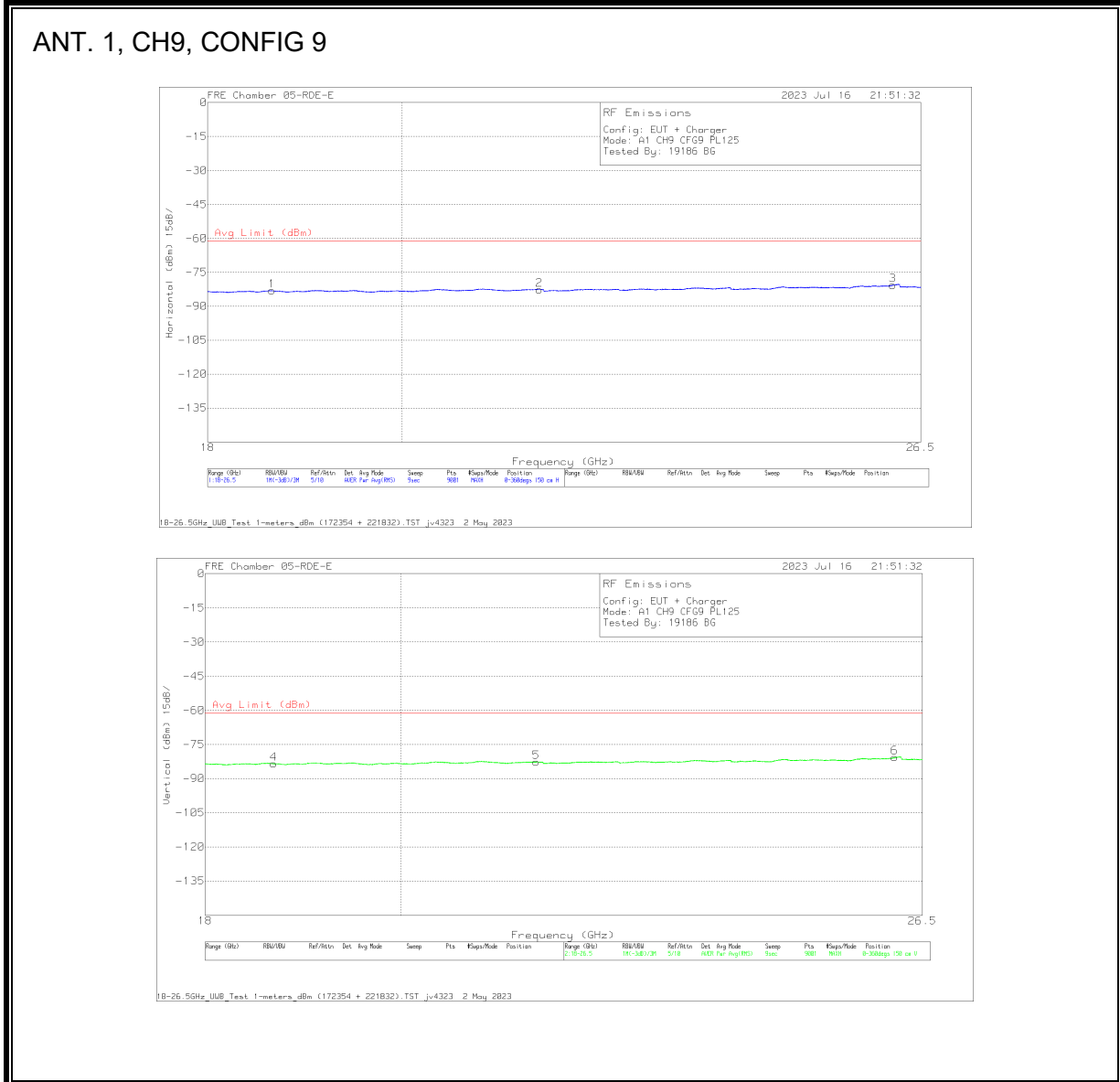


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	20dB/10dB ACF (dB) 3mHz	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	9.627	-64.82	RMS	36.6	-43.6	-15.6	11.8	0	-75.62	-41.3	-34.32	96	154	H
2	13.32	-66.36	RMS	39.1	-42.3	-15.6	11.8	-3	-73.06	-61.3	-11.76	184	154	H
3	17.576	-67.21	RMS	41.6	-40.3	-15.6	11.8	-4	-69.31	-61.3	-8.01	250	154	H
4	9.639	-65.16	RMS	38.6	-43	-15.6	11.8	0	-75.36	-41.3	-34.06	96	154	V
5	13.278	-68.07	RMS	39.1	-42.5	-15.6	11.8	-2	-73.07	-61.3	-11.77	22	154	V
6	17.647	-67.3	RMS	41.5	-39.6	-15.6	11.8	-3	-68.9	-61.3	-7.6	154	154	V

RMS - RMS detection

9.6.5. AVERAGE EMISSIONS, 18 – 26.5 GHz

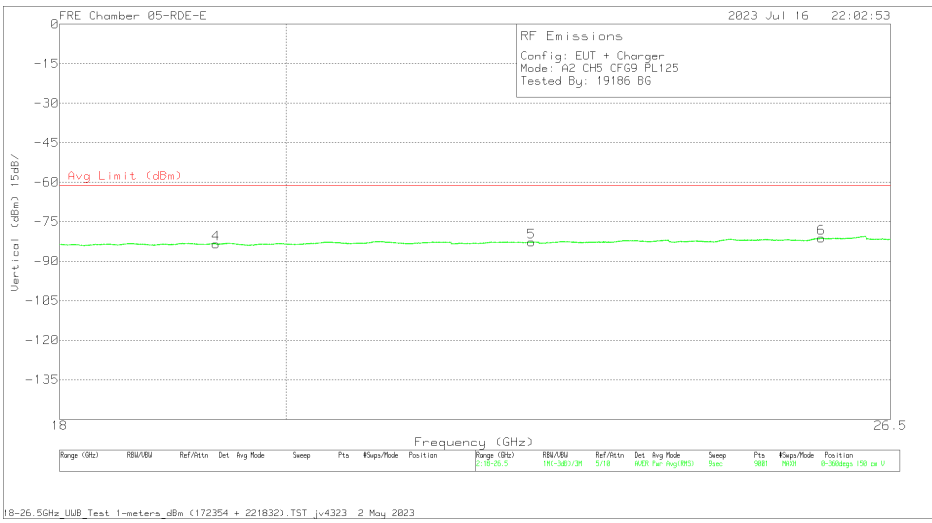
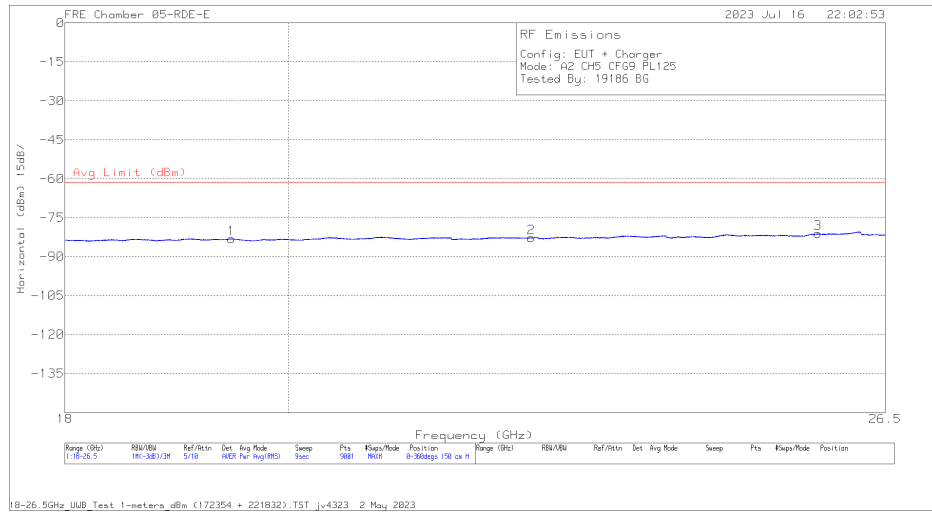


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	172354 1m AF (dBm)	18-26GHz Amp	CBL/SWITCH	Dist Corr (dB)	Conv. Fact. (dB)	Corrected Reading (dBm)	Avg Limit (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	18.638444	-61.9	RMS	32.6	-63.1	13.1	-15.6	11.8	-83.1	-61.3	-21.8	0-360	150	H
4	18.676222	-62.28	RMS	32.6	-63.1	13.1	-15.6	11.8	-83.48	-61.3	-22.18	0-360	150	V
5	21.520887	-64.56	RMS	33.4	-61.7	14	-15.6	11.8	-82.66	-61.3	-21.36	0-360	150	V
2	21.547332	-64.53	RMS	33.4	-61.7	14	-15.6	11.8	-82.63	-61.3	-21.33	0-360	150	H
3	26.098607	-66.33	RMS	34.9	-61	15.5	-15.6	11.8	-80.73	-61.3	-19.43	0-360	150	H
6	26.108996	-66.29	RMS	34.9	-61	15.5	-15.6	11.8	-80.69	-61.3	-19.39	0-360	150	V

RMS - RMS detection

ANT. 2, CH5, CONFIG 9

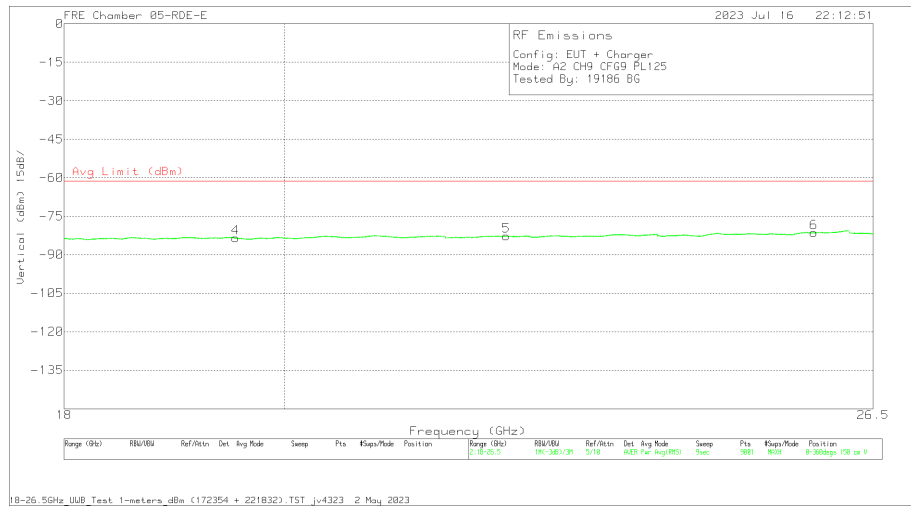
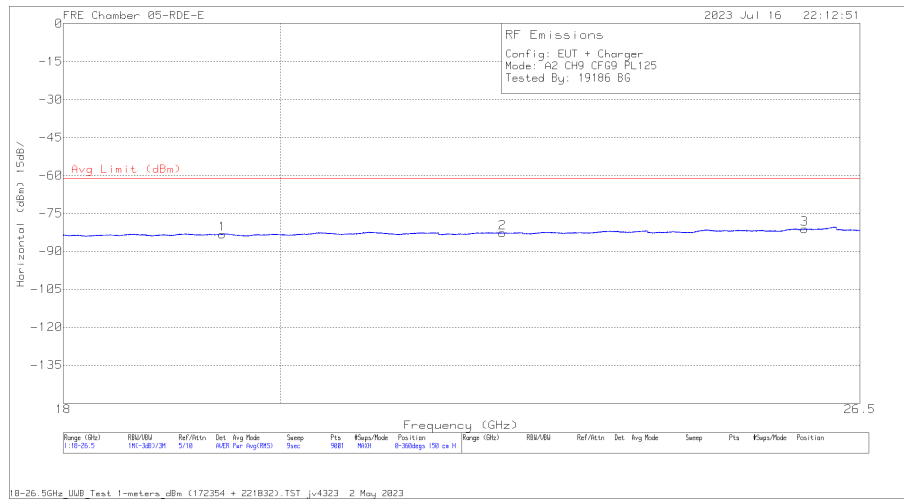


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	172354 1m AF (dBm)	18-26GHz Amp	CBL/SWITCH	Dist Corr (dB)	Conv. Fact. (dB)	Corrected Reading (dBm)	Avg Limit (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	19.361888	-62.69	RMS	32.8	-62.9	13.2	-15.6	11.8	-83.39	-61.3	-22.09	0-360	150	V
1	19.469555	-62.73	RMS	32.8	-62.8	13.4	-15.6	11.8	-83.13	-61.3	-21.83	0-360	150	H
5	22.424272	-64.59	RMS	33.7	-62.3	14.3	-15.6	11.8	-82.69	-61.3	-21.39	0-360	150	V
2	22.427553	-64.54	RMS	33.7	-62.3	14.3	-15.6	11.8	-82.64	-61.3	-21.34	0-360	150	H
6	25.659441	-66.06	RMS	34.6	-61.4	15.4	-15.6	11.8	-81.26	-61.3	-19.96	0-360	150	V
3	25.673608	-65.88	RMS	34.6	-61.3	15.4	-15.6	11.8	-80.98	-61.3	-19.68	0-360	150	H

RMS - RMS detection

ANT. 2, CH9, CONFIG 9

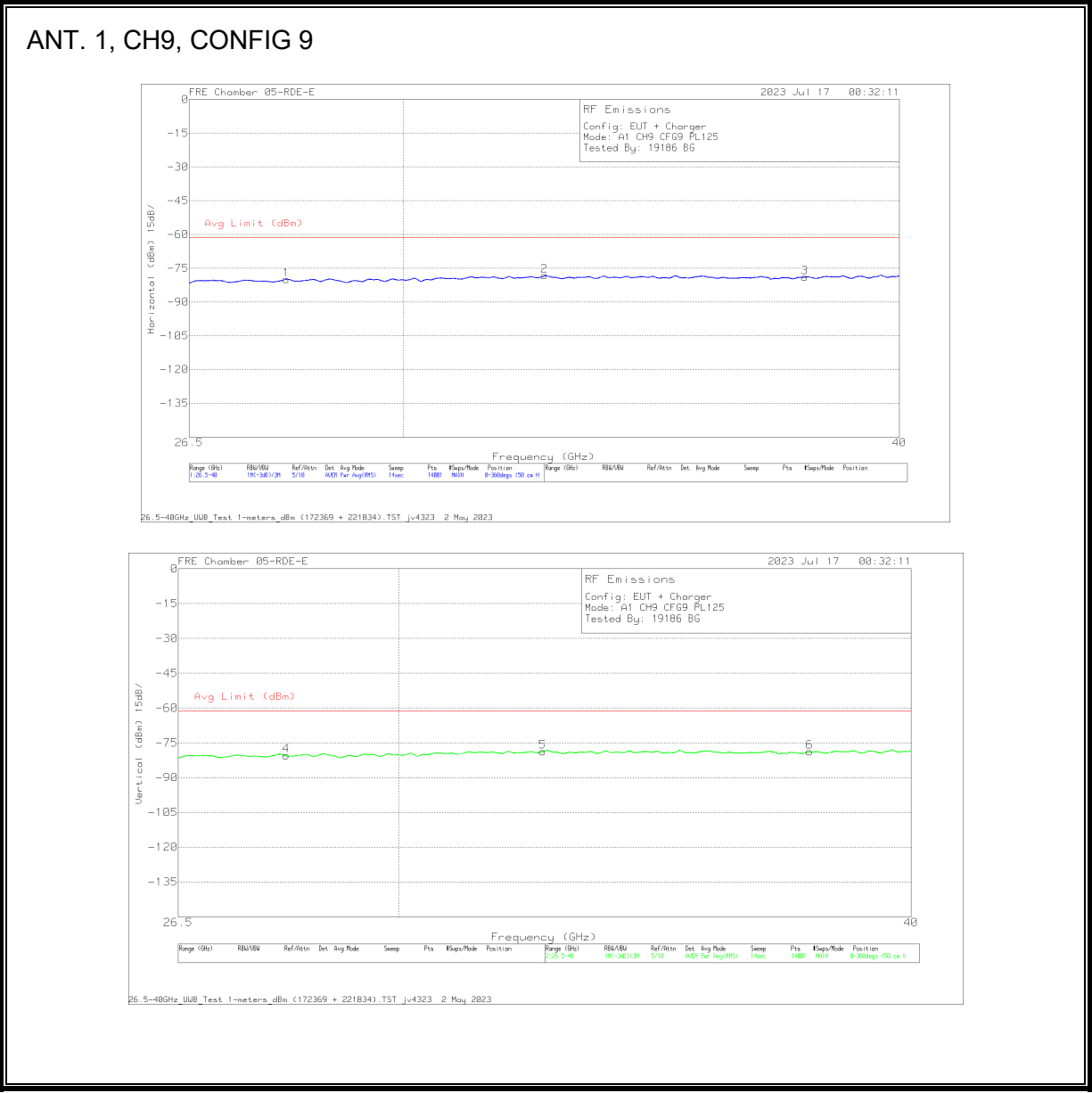


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	172354 1m AF (dBm)	18-26GHz Amp	CBL/SWITCH	Dist Corr (dB)	Conv. Fact. (dB)	Corrected Reading (dBm)	Avg Limit (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	19.444055	-62.75	RMS	32.8	-62.8	13.3	-15.6	11.8	-83.25	-61.3	-21.95	0-360	150	H
4	19.537555	-63.18	RMS	32.8	-62.6	13.4	-15.6	11.8	-83.38	-61.3	-22.08	0-360	150	V
5	22.236776	-64.73	RMS	33.7	-62.1	14.2	-15.6	11.8	-82.73	-61.3	-21.43	0-360	150	V
2	22.277387	-64.85	RMS	33.8	-62.1	14.2	-15.6	11.8	-82.75	-61.3	-21.45	0-360	150	H
6	25.759552	-66.38	RMS	34.6	-61.2	15.4	-15.6	11.8	-81.38	-61.3	-20.08	0-360	150	V
3	25.795441	-66.38	RMS	34.7	-61.2	15.4	-15.6	11.8	-81.28	-61.3	-19.98	0-360	150	H

RMS - RMS detection

9.6.6. AVERAGE EMISSIONS, 26.5 – 40 GHz

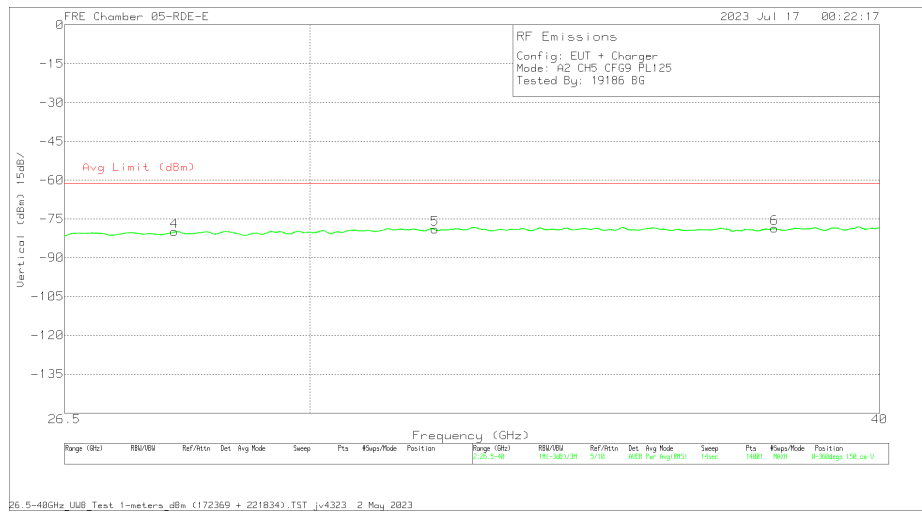
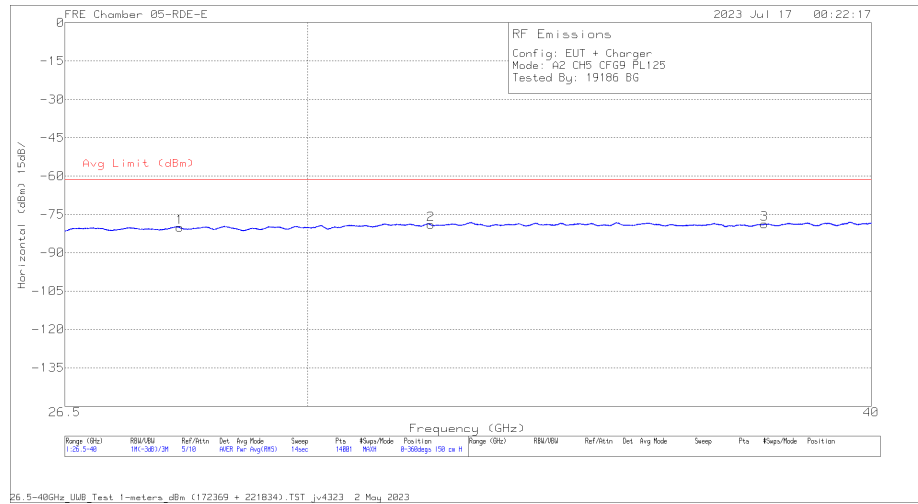


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	172369 1m AF (dBm)	221834 amp(cbl) (dB)	Dist Corr (dB)	Conversion Factor (dB)	CBL/SWITCH	Corrected Reading (dBm)	Avg Limit (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	28.031286	-66.04	RMS	36.2	-62.4	-15.6	11.8	16.2	-79.84	-61.3	-18.54	0-360	150	H
4	28.158572	-66.96	RMS	36.3	-62.3	-15.6	11.8	16.3	-80.46	-61.3	-19.16	0-360	150	V
5	32.521966	-68.11	RMS	37.3	-61.8	-15.6	11.8	17.7	-78.71	-61.3	-17.41	0-360	150	V
2	32.561502	-67.74	RMS	37.3	-61.7	-15.6	11.8	17.7	-78.24	-61.3	-16.94	0-360	150	H
6	37.784075	-66.65	RMS	38.6	-66.5	-15.6	11.8	19.5	-78.85	-61.3	-17.55	0-360	150	V
3	37.866039	-66.86	RMS	38.7	-66.4	-15.6	11.8	19.4	-78.96	-61.3	-17.66	0-360	150	H

RMS - RMS detection

ANT. 2, CH5, CONFIG 9

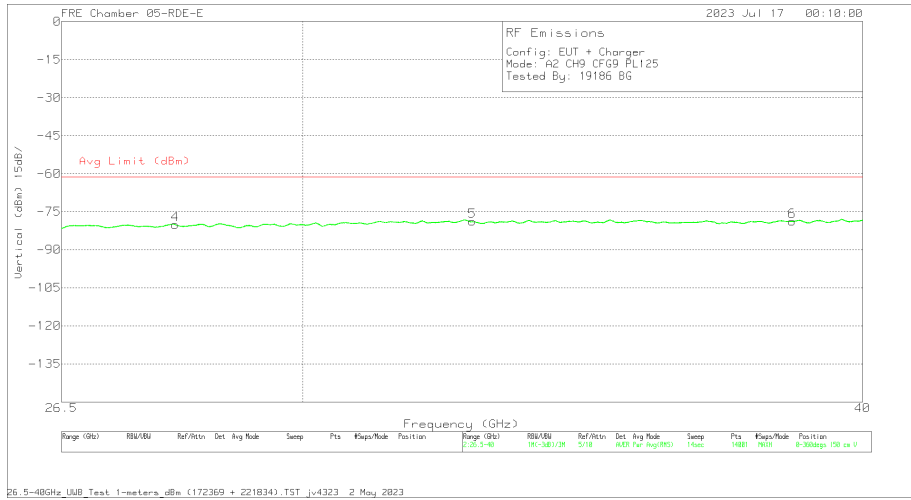
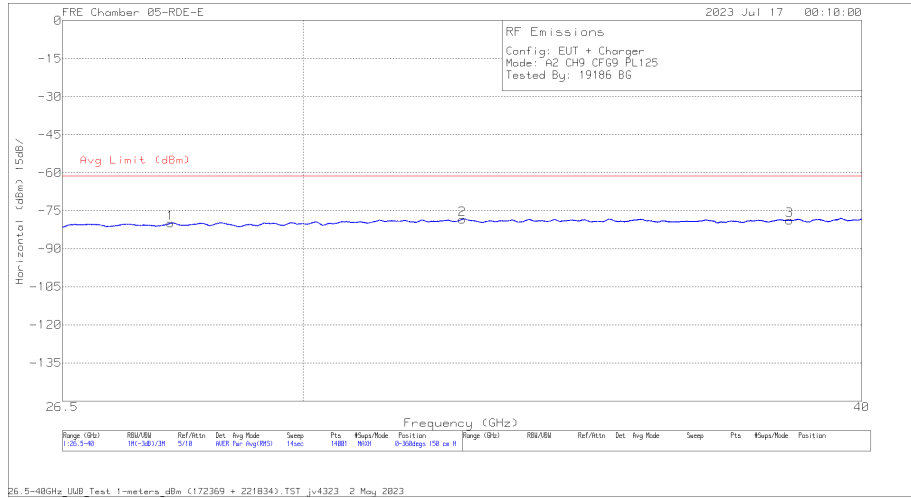


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	172369 1m AF (dBm)	221834 amp/cbl (dB)	Dist Corr (dB)	Conversion Factor (dB)	CBL/SWITCH	Corrected Reading (dBm)	Avg Limit (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	28.015858	-66.09	RMS	36.2	-62.4	-15.6	11.8	16.2	-79.89	-61.3	-18.59	0-360	150	V
1	28.100715	-66.6	RMS	36.3	-62.3	-15.6	11.8	16.3	-80.1	-61.3	-18.8	0-360	150	H
2	31.945323	-69.78	RMS	36.8	-59.6	-15.6	11.8	17.4	-78.98	-61.3	-17.68	0-360	150	H
5	31.954002	-69.68	RMS	36.8	-59.7	-15.6	11.8	17.4	-78.98	-61.3	-17.68	0-360	150	V
3	37.872789	-66.71	RMS	38.7	-66.4	-15.6	11.8	19.4	-78.81	-61.3	-17.51	0-360	150	H
6	37.932575	-66.34	RMS	38.7	-66.6	-15.6	11.8	19.4	-78.64	-61.3	-17.34	0-360	150	V

RMS - RMS detection

ANT. 2, CH9, CONFIG 9



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	172369 1m AF (dB/m)	221834 amp/cbi (dB)	Dist Corr (dB)	Conversion Factor (dB)	CBL/SWITCH	Corrected Reading (dBm)	Avg Limit (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	28.017786	-66.08	RMS	36.2	-62.4	-15.6	11.8	16.2	-79.88	-61.3	-18.58	0-360	150	H
4	28.093	-66.52	RMS	36.3	-62.3	-15.6	11.8	16.3	-80.02	-61.3	-18.72	0-360	150	V
2	32.562466	-67.85	RMS	37.3	-61.7	-15.6	11.8	17.7	-78.35	-61.3	-17.05	0-360	150	H
5	32.729288	-67.54	RMS	37.3	-62.3	-15.6	11.8	17.6	-78.74	-61.3	-17.44	0-360	150	V
3	38.539111	-66.54	RMS	39	-67	-15.6	11.8	19.6	-78.74	-61.3	-17.44	0-360	150	H
6	38.579611	-66.4	RMS	39	-67.1	-15.6	11.8	19.6	-78.7	-61.3	-17.4	0-360	150	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.

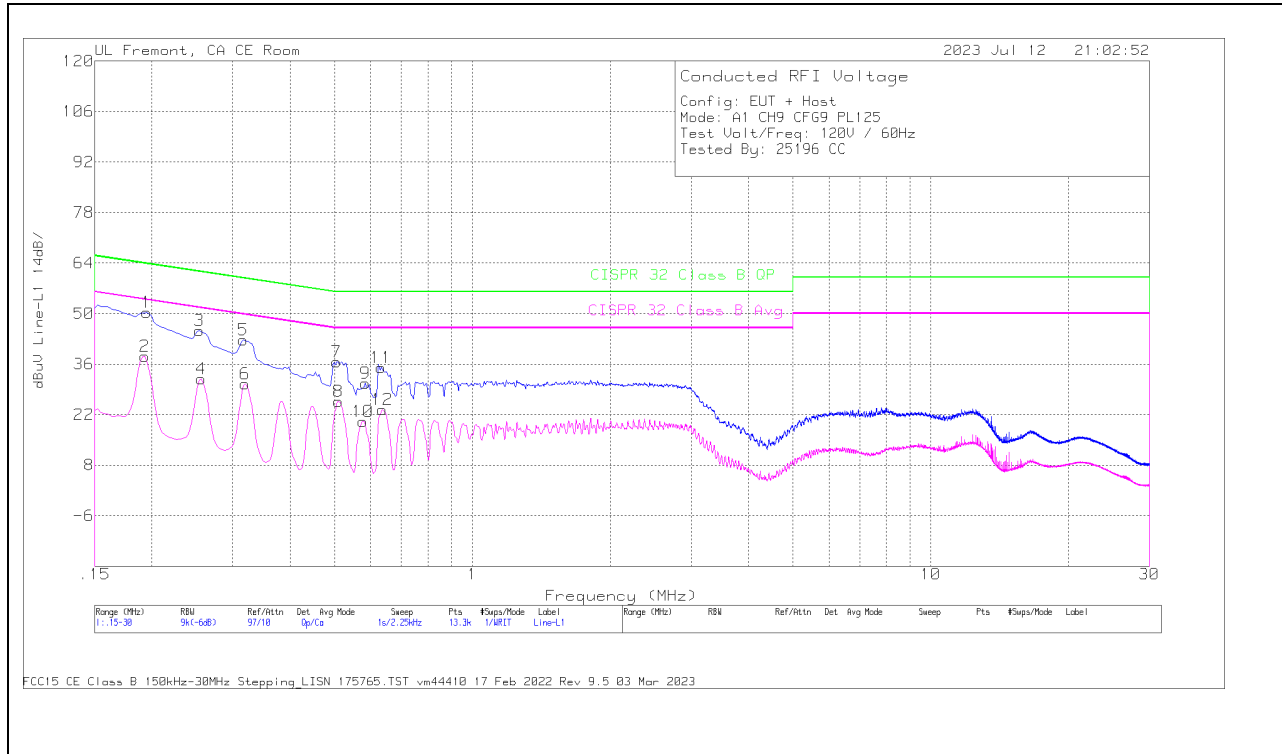
RESULTS

Employee IDs: 26051
 Location: Immunity Test Lab
 Test Date: 07/13/23

9.7.1. AC Power Line with Laptop

Parent

LINE 1 RESULTS

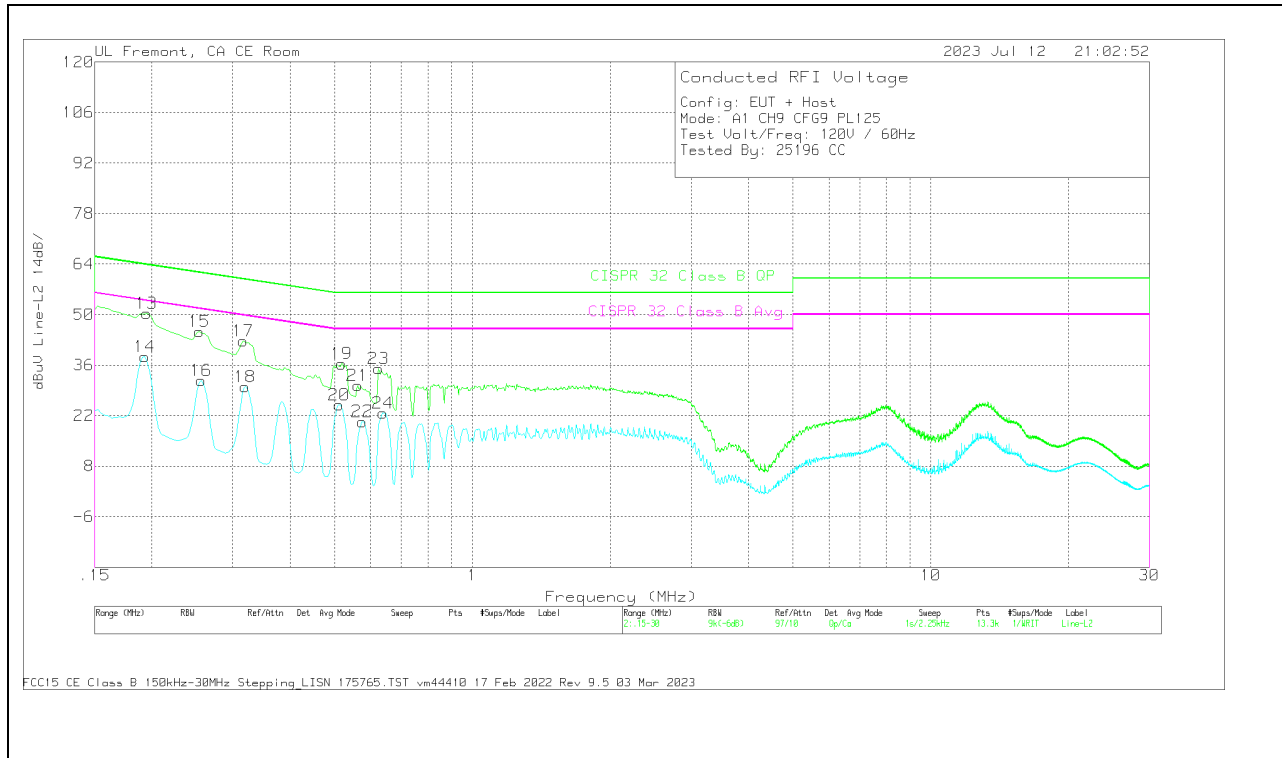


Trace Markers

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	CISPR 32 Class B QP dBuV	Margin (dB)	CISPR 32 Class B Avg dBuV	Margin (dB)
2	.1928	28.73	Ca	0	0	9.4	38.13	-	-	53.92	-15.79
4	.2558	22.65	Ca	0	0	9.3	31.95	-	-	51.57	-19.62
6	.3188	21.28	Ca	0	0	9.3	30.58	-	-	49.74	-19.16
8	.51	16.25	Ca	0	.1	9.3	25.65	-	-	46	-20.35
10	.5775	10.72	Ca	0	.1	9.3	20.12	-	-	46	-25.88
12	.636	13.95	Ca	0	.1	9.3	23.35	-	-	46	-22.65
1	.195	40.97	Qp	0	0	9.4	50.37	63.82	-13.45	-	-
3	.2535	35.98	Qp	0	0	9.3	45.28	61.64	-16.36	-	-
5	.3165	33.43	Qp	0	0	9.3	42.73	59.8	-17.07	-	-
7	.5055	27.29	Qp	0	.1	9.3	36.69	56	-19.31	-	-
9	.5843	21.32	Qp	0	.1	9.3	30.72	56	-25.28	-	-
11	.6315	25.7	Qp	0	.1	9.3	35.1	56	-20.9	-	-

Qp - Quasi-Peak detector
 Ca - CISPR average detection

LINE 2 RESULTS



Trace Markers

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	CISPR 32 Class B QP dBuV	Margin (dB)	CISPR 32 Class B Avg dBuV	Margin (dB)	
14	.1928	29.03	Ca	0	0	9.4	38.43	-	-	53.92	-15.49	
16	.2558	22.5	Ca	0	0	9.3	31.8	-	-	51.57	-19.77	
18	.3188	20.76	Ca	0	0	9.3	30.06	-	-	49.74	-19.68	
20	.5123	15.55	Ca	0	.1	9.3	24.95	-	-	46	-21.05	
22	.5753	10.96	Ca	0	.1	9.3	20.36	-	-	46	-25.64	
24	.6383	13.34	Ca	0	.1	9.3	22.74	-	-	46	-23.26	
13	.195	40.94	Qp	0	0	9.4	50.34	63.82	-13.48	-	-	
15	.2535	36.03	Qp	0	0	9.3	45.33	61.64	-16.31	-	-	
17	.3165	33.37	Qp	0	0	9.3	42.67	59.8	-17.13	-	-	
19	.519	26.96	Qp	0	.1	9.3	36.36	56	-19.64	-	-	
21	.5618	20.9	Qp	0	.1	9.3	30.3	56	-25.7	-	-	
23	.6248	25.69	Qp	0	.1	9.3	35.09	56	-20.91	-	-	

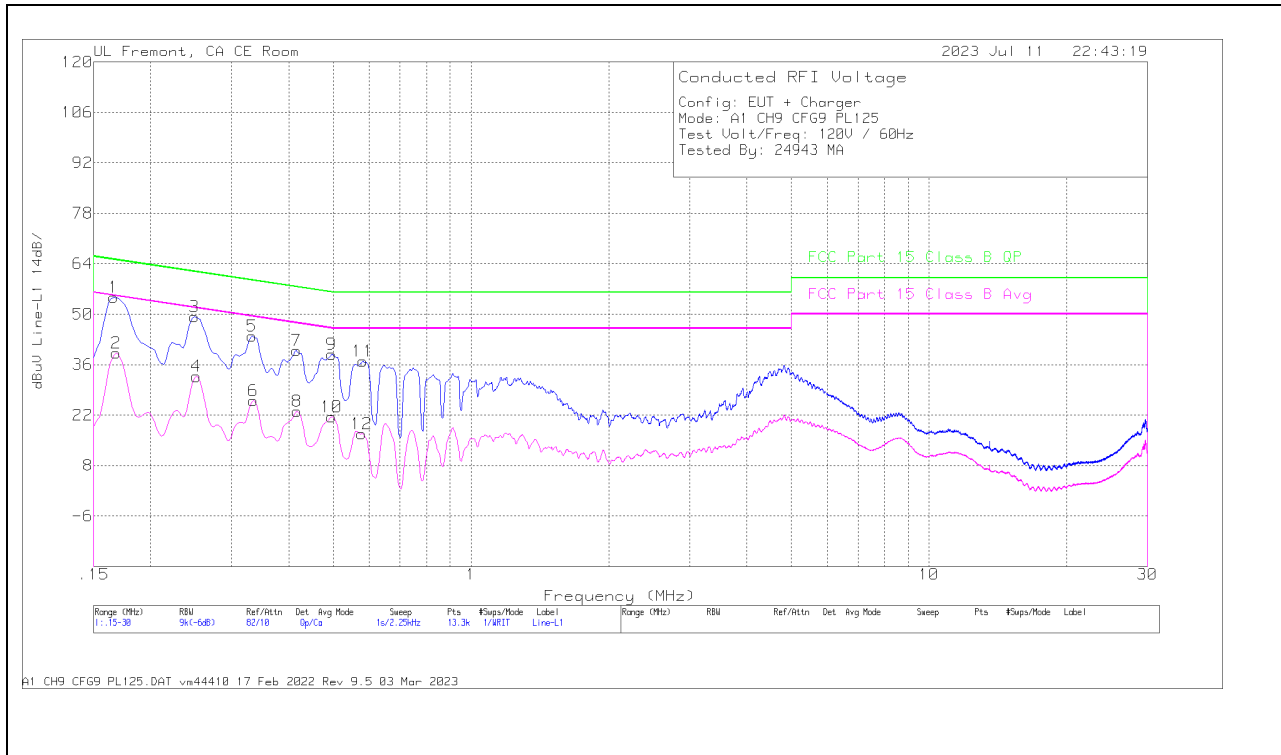
Qp - Quasi-Peak detector

Ca - CISPR average detection

9.7.2. AC Power Line with AC/DC Adapter

Parent

LINE 1 RESULTS

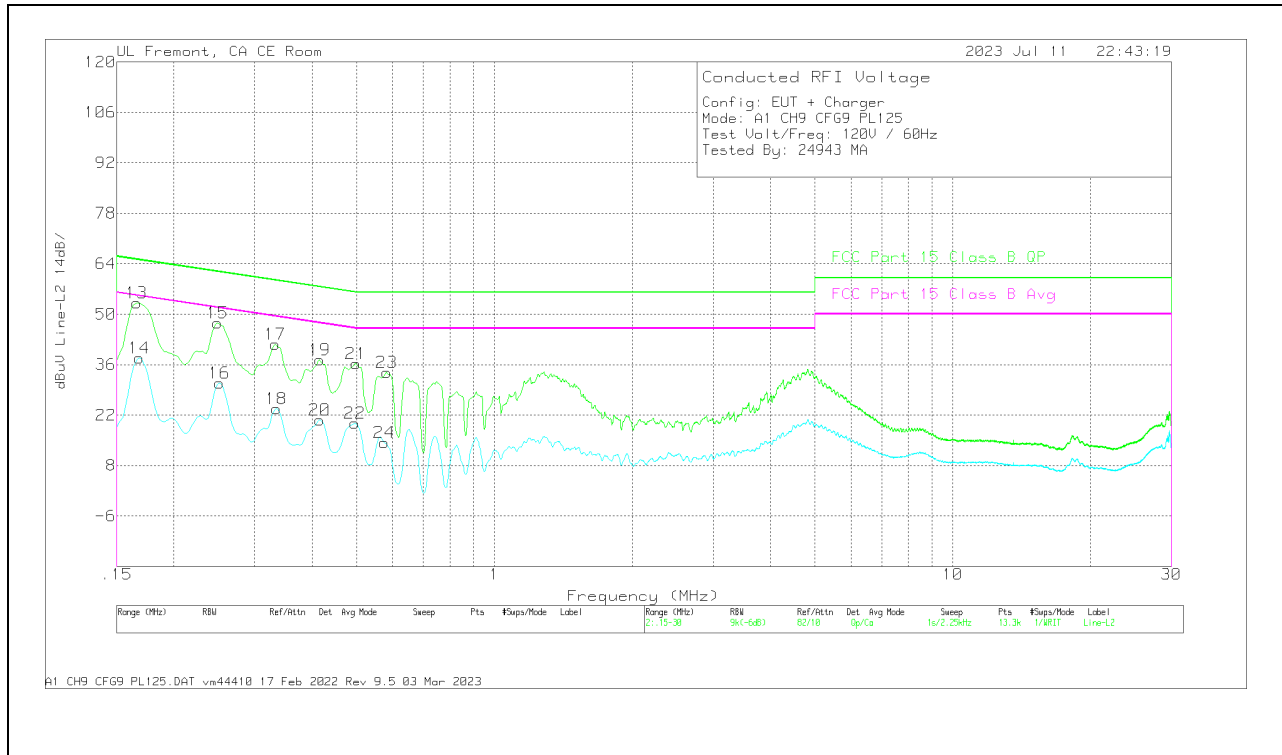


Trace Markers

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	.168	29.84	Ca	0	0	9.4	39.24	-	-	55.06	-15.82
4	.2513	23.41	Ca	0	0	9.3	32.71	-	-	51.72	-19.01
6	.3345	16.69	Ca	0	0	9.3	25.99	-	-	49.34	-23.35
8	.4178	13.62	Ca	0	.1	9.3	23.02	-	-	47.49	-24.47
10	.4965	12.05	Ca	0	.1	9.3	21.45	-	-	46.06	-24.61
12	.5775	7.43	Ca	0	.1	9.3	16.83	-	-	46	-29.17
1	.1658	45.23	Qp	0	0	9.4	54.63	65.17	-10.54	-	-
3	.249	40.02	Qp	0	0	9.3	49.32	61.79	-12.47	-	-
5	.3323	34.61	Qp	0	0	9.3	43.91	59.39	-15.48	-	-
7	.4155	30.51	Qp	0	.1	9.3	39.91	57.54	-17.63	-	-
9	.4965	29.42	Qp	0	.1	9.3	38.82	56.06	-17.24	-	-
11	.5798	27.56	Qp	0	.1	9.3	36.96	56	-19.04	-	-

Qp - Quasi-Peak detector
 Ca - CISPR average detection

LINE 2 RESULTS



Trace Markers

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	.168	28.51	Ca	0	0	9.4	37.91	-	-	55.06	-17.15
16	.2513	21.56	Ca	0	0	9.3	30.86	-	-	51.72	-20.86
18	.3345	14.53	Ca	0	0	9.3	23.83	-	-	49.34	-25.51
20	.4155	11.28	Ca	0	.1	9.3	20.68	-	-	47.54	-26.86
22	.4965	10.28	Ca	0	.1	9.3	19.68	-	-	46.06	-26.38
24	.5753	4.95	Ca	0	.1	9.3	14.35	-	-	46	-31.65
13	.1658	43.75	Qp	0	0	9.4	53.15	65.17	-12.02	-	-
15	.249	38.26	Qp	0	0	9.3	47.56	61.79	-14.23	-	-
17	.3323	32.33	Qp	0	0	9.3	41.63	59.39	-17.76	-	-
19	.4155	27.89	Qp	0	.1	9.3	37.29	57.54	-20.25	-	-
21	.4988	26.9	Qp	0	.1	9.3	36.3	56.02	-19.72	-	-
23	.582	24.41	Qp	0	.1	9.3	33.81	56	-22.19	-	-

Qp - Quasi-Peak detector
 Ca - CISPR average detection

10. SETUP PHOTOS

Please refer to 14523771-EP1V1 for setup photos.

END OF REPORT