

TEST REPORT

Report Number: R15487718-E1

Applicant : Observation Without Limits LLC
1002 Explorer Boulevard
Huntsville, AL 35806

Model : GA7360

FCC ID : QFS001-10128706

EUT Description : Ground Radar

Test Standard(s) : FCC CFR47 PART 90.103

Date of Issue:
2025-05-08

Prepared by:
UL LLC
12 Laboratory Dr.
Research Triangle Park, NC 27709 USA
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REVISION HISTORY

Ver.	Issue Date	Revisions	Revised By
V1	2025-05-08	Initial Release	Mike Antola

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Observation Without Limits LLC
1002 Explorer Boulevard
Huntsville, AL 35806-2806

EUT DESCRIPTION: Ground Radar

MODEL: GA7360

SERIAL NUMBER: 9129

SAMPLE RECEIVE DATE: 2025-03-05, 2025-03-28

DATE TESTED: 2025-03-17 to 2025-04-23

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
47 CFR Part 90.103	Compliant

UL LLC tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL LLC based on interpretations and/or observations of test results. Measurement Uncertainties were not considered and are published for informational purposes only. The test results show that the equipment tested can demonstrate compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the sample tested, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL LLC and all revisions are noted in the revisions section. Any alteration of this document not carried out by UL LLC will constitute fraud and shall nullify the document.

Approved & Released
For UL LLC by:



Dan Coronio
Operations Leader
UL – Consumer Technology Division

Prepared By:



Mike Antola
Sr. Staff Engineer
UL – Consumer Technology Division

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, 47 CFR Part 90 and ANSI C63.26-2015.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 12 Laboratory Dr., Research Triangle Park, NC 27709, USA and 2800 Perimeter Park Drive, Suite B, Morrisville, NC 27560.

UL LLC is accredited A2LA, certification # 0751.06, for all testing performed within the scope of this report. Testing was performed at the locations noted below.

	Address	ISED CABID	ISED Company Number	FCC Registration
☐	Building: 12 Laboratory Dr RTP, NC 27709, U.S.A	US0067	2180C	825374
☒	Building: 2800 Perimeter Park Dr. Suite B Morrisville, NC 27560, U.S.A		27265	

4. DECISION RULES AND MEASUREMENT UNCERTAINTY

4.1. 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.

4.2. 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.)

4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Radio Frequency (Spectrum Analyzer)	141.2 Hz
Antenna Port Emissions, conducted	1.9 dB
All emissions, radiated	6.0 dB
Temperature	0.57°C
Humidity	3.39%
DC Supply voltages	0.57%

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

4.4. SAMPLE CALCULATION

RADIATED EMISSIONS

Where relevant, the following sample calculation is provided:

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a wide-band ground radar used to monitor a specific area.

5.2. MAXIMUM OUTPUT POWER

The transmitter has maximum peak conducted output powers as follows:

Channel	Peak Output Power (dBm)								
	Mode 1	Mode 2	Mode 3	Mode 4	Mode 5	Mode 6	Mode 7	Mode 8	Mode 9
Low	51.66	51.59	51.80	51.58	51.62	51.94	51.55	51.85	51.69
Mid	52.81	52.82	52.92	52.92	52.90	53.01	52.80	52.89	52.96
High	53.43	53.42	53.54	53.52	53.53	53.53	53.42	53.45	53.57

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The antenna type is a SMA-fed patch array antenna and the EUT utilizes four (4) total identical antennas. The maximum antenna gain of each antenna is 9 dBi. The antenna connector type is SMA.

5.4. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing was revision 90336003.

The EUT software installed during testing was revision 7360-20241017.

5.5. WORST-CASE CONFIGURATION AND MODE

The EUT is a ground radar device that operates in nine specific modes / waveforms as follows:

Mode	Waveform Description
1	3650H-15-1-16
2	3650-27-1-16
3	3650-49-1-32
4	10km
5	16km
6	5km
7	7300-14-1-16
8	4900
9	8km

All modes and three channels (low, middle, high) were tested during antenna-port measurements.

All modes were tested during radiated spurious emissions testing. The low, middle, and high channels were evaluated in the 1-18GHz range, while the highest-power channel was evaluated in the other ranges of interest.

The EUT utilizes four (4) antennas. There is one chain that feeds a single amplifier that then goes into a splitter and then to two switches which feed the four antennas. Thus, all four antenna ports are identical. Output power was fully measured on all four antenna outputs, then the remaining conducted testing was performed only on the chain that yielded the highest power. This was found to be chain TX4.

The device is intended to operate in only one orientation and was thus tested in the device's intended orientation.

The EUT can operate on 11 different channels in the 3.0-3.1 GHz range. The operating frequencies of the EUT that were tested as part of this investigation are as follows:

Center Frequencies (MHz)	Mode	Channel
3023	All	Low
3047	All	Mid
3070	All	High

Due to the high total output power the device generates and measurement equipment limitations, the antenna ports were terminated for all radiated emissions testing.

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Laptop	Dell	Latitude E6430	4JF28W1	N/A
Attenuator	Weinschel Associates	WA81-40-30	A157	N/A
Load	Weinchel Corp	1431-4	Bf8239	N/A

I/O CABLES

I/O Cable List						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	SMA	4	SMA	RF	>3m	Terminated for radiated testing
2	Mil Spec Weatherproof	1	Circular Milspec	I/O	>3m	Power and Communication

SETUP DIAGRAM

Please see R15487718-EP1 For Setup Photos and Setup Diagrams

6. TEST AND MEASUREMENT EQUIPMENT

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

Test Equipment Used - Wireless Conducted Measurement Equipment

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
90416	Spectrum Analyzer	Keysight Technologies	N9030A	2024-09-23	2025-09-23
90411	Spectrum Analyzer	Keysight Technologies	N9030A	2024-08-01	2025-08-01
241205	Environmental Meter	Fisher Scientific	15-077-963	2023-09-05	2025-09-05
239539	Environmental Meter	Fisher Scientific	15-077-963	2023-07-19	2025-07-19
207726	Thermal Chamber	Thermotron	SM-32-8200	2025-01-15	2026-01-15
SOFTEMI	Antenna Port Software	UL	Version 2022.8.16	NA	NA
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		

Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Chamber 1)

Equip. ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	1-18 GHz				
135143	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2024-02-07	2026-02-07
	Gain-Loss Chains				
91979	Gain-loss string: 1-18GHz	Various	Various	2024-05-08	2025-05-08
	Receiver & Software				
214284	Spectrum Analyzer	Rohde & Schwarz	FSW44	2025-03-14	2026-03-14
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
	Additional Equipment used				
241205	Environmental Meter	Fisher Scientific	15-077-963	2023-09-05	2025-09-05

Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Chamber 2)

Equip. ID	Description	Manufacturer/Brand	Model Number	Last Cal.	Next Cal.
0.009-30MHz					
65682	Active Loop Antenna	ETS-Lindgren	6502	2023-10-03	2025-10-03
	30-1000 MHz				
159203	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2024-03-05	2026-03-05
	1-18 GHz				
86408	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2023-06-19	2025-06-19
	18-40 GHz				
204704	Horn Antenna, 18-26.5GHz	Com-Power	AH-826	2023-07-20	2025-07-20
204705	Horn Antenna, 26-40GHz	Com-Power	AH-640	2023-07-20	2025-07-20
	Gain-Loss Chains				
91975	Gain-loss string: 0.009-30MHz	Various	Various	2024-05-10	2025-05-10
91978	Gain-loss string: 25-1000MHz	Various	Various	2024-05-10	2025-05-10
91977	Gain-loss string: 1-18GHz	Various	Various	2024-07-17	2025-07-17
136042	Gain-loss string: 18-40GHz	Various	Various	2024-05-10	2025-05-10
	Receiver & Software				
214284	Spectrum Analyzer	Rohde & Schwarz	FSW44	2025-03-14	2026-03-14
81018	Spectrum Analyzer	Agilent	E4446A	2024-07-31	2025-07-31
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
	Additional Equipment used				
200540	Environmental Meter	Fisher Scientific	15-077-963	2023-07-19	2025-07-19

7. TEST RESULTS

7.1. RF POWER OUTPUT

REQUIREMENT

§2.1046 Measurements required: RF power output.

(a) For transmitters other than single sideband, independent sideband and controlled carrier radiotelephone, power output shall be measured at the RF output terminals when the transmitter is adjusted in accordance with the tune-up procedure to give the values of current and voltage on the circuit elements specified in §2.1033(c)(8). The electrical characteristics of the radio frequency load attached to the output terminals when this test is made shall be stated.

§90.205 Output Power.

(r) All other frequency bands. Requested transmitter power will be considered and authorized on a case-by-case basis.

TEST PROCEDURE

The transmitter output was connected to the input of the Spectrum Analyzer via a calibrated coaxial cable and an attenuator.

The output power was measured with the spectrum analyzer at the low, middle, and high channels for each mode.

- Set the spectrum analyzer span wide enough or greater than the modulated signal bandwidth.
- Set a spectrum analyzer at peak detection mode with VBW $\geq$ RBW. The RBW was set to largest available (8MHz). It is less than overall bandwidth of individual channel but is larger than bandwidth of individual pulse within a channel.
- Set a marker to point the corresponding peak value.

Note: 8MHz RBW is adequate for a pulse width of 2048ns ($1/T=488.3\text{kHz}$)

To reduce the report size, only plots for a single chain per mode are included.

TABULAR RESULTS

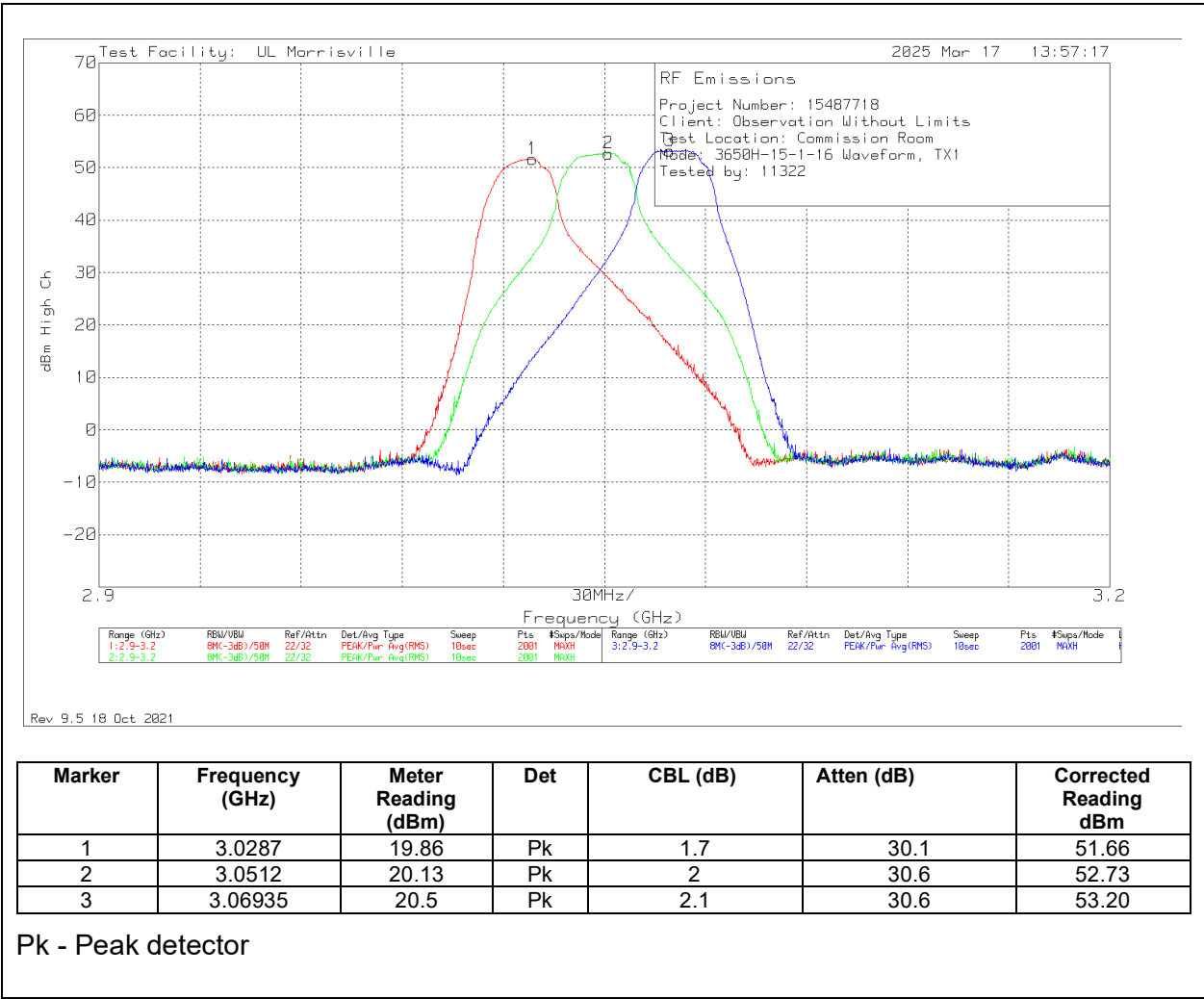
Waveform (Mode)	Antenna Port	Channel	Output Power (dBm)
3650H-15-1-16 (Mode 1)	TX1	Low	51.66
		Mid	52.73
		High	53.20
	TX2	Low	51.62
		Mid	52.71
		High	53.17
	TX3	Low	51.52
		Mid	52.59
		High	53.03
	TX4	Low	51.52
		Mid	52.81
		High	53.43
3650-27-1-16 (Mode 2)	TX1	Low	51.59
		Mid	52.50
		High	53.29
	TX2	Low	51.55
		Mid	52.74
		High	53.28
	TX3	Low	51.43
		Mid	52.56
		High	53.09
	TX4	Low	51.70
		Mid	52.82
		High	53.42
3650-49-1-32 (Mode 3)	TX1	Low	51.68
		Mid	52.80
		High	53.40
	TX2	Low	51.74
		Mid	52.78
		High	53.36
	TX3	Low	51.43
		Mid	52.66
		High	53.20
	TX4	Low	51.80
		Mid	52.92
		High	53.54

Waveform (Mode)	Antenna Port	Channel	Output Power (dBm)
10km (Mode 4)	TX1	Low	51.58
		Mid	52.72
		High	53.36
	TX2	Low	51.57
		Mid	52.76
		High	53.25
	TX3	Low	51.40
		Mid	52.59
		High	53.19
	TX4	Low	51.71
		Mid	52.92
		High	53.52
16km (Mode 5)	TX1	Low	51.37
		Mid	52.68
		High	53.30
	TX2	Low	51.41
		Mid	52.66
		High	53.25
	TX3	Low	51.32
		Mid	52.51
		High	53.13
	TX4	Low	51.62
		Mid	52.90
		High	53.53
5km (Mode 6)	TX1	Low	51.65
		Mid	52.81
		High	53.28
	TX2	Low	51.68
		Mid	52.84
		High	53.26
	TX3	Low	51.61
		Mid	52.68
		High	53.10
	TX4	Low	51.94
		Mid	53.01
		High	53.53

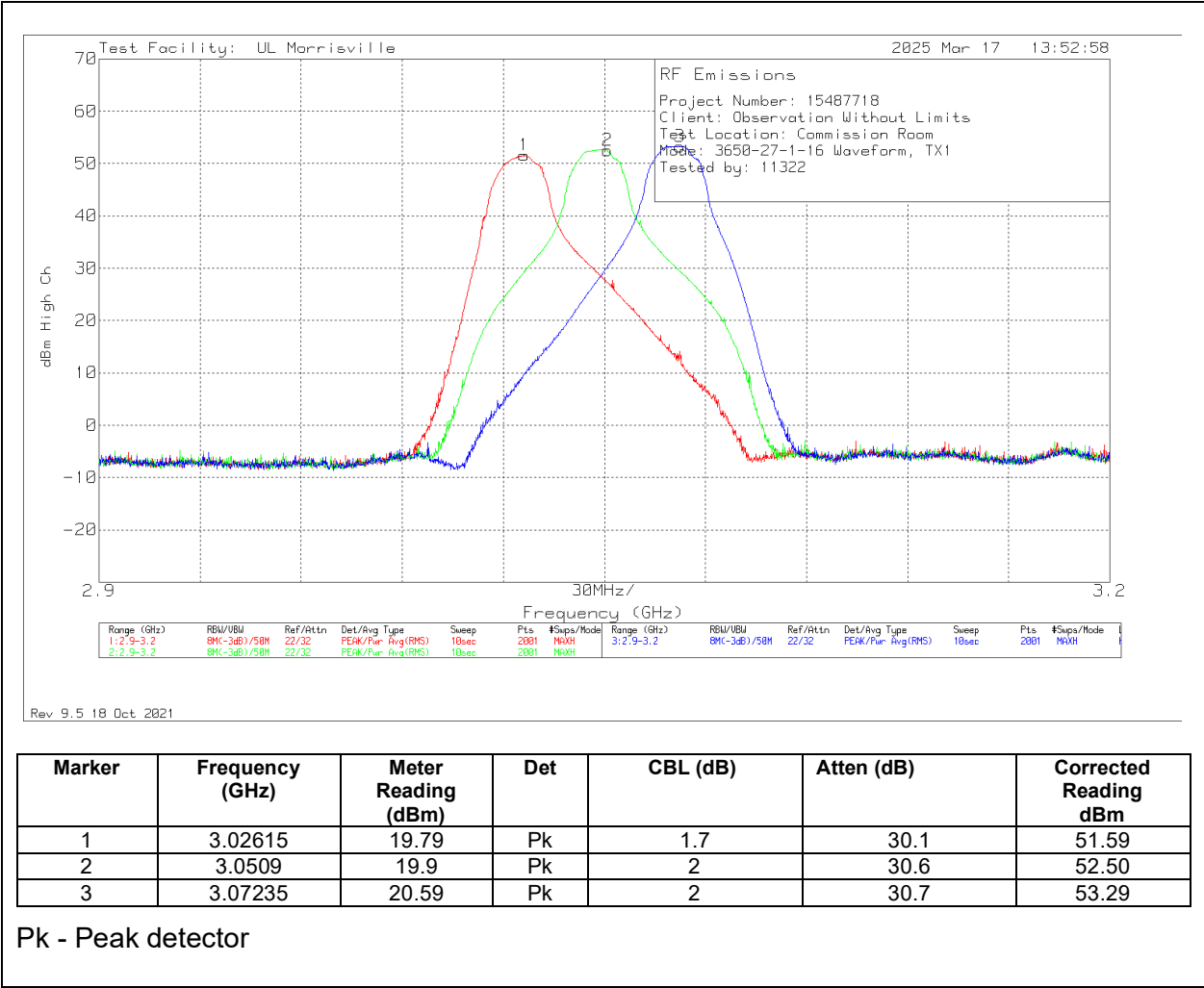
Waveform (Mode)	Antenna Port	Channel	Output Power (dBm)
7300-14-1-16 (Mode 7)	TX1	Low	51.41
		Mid	52.68
		High	53.28
	TX2	Low	51.31
		Mid	52.54
		High	53.18
	TX3	Low	51.36
		Mid	52.58
		High	53.17
	TX4	Low	51.55
		Mid	52.80
		High	53.42
4900 (Mode 8)	TX1	Low	51.61
		Mid	52.72
		High	53.25
	TX2	Low	51.60
		Mid	52.70
		High	53.15
	TX3	Low	51.52
		Mid	52.60
		High	53.05
	TX4	Low	51.85
		Mid	52.89
		High	53.45
8km (Mode 9)	TX1	Low	51.42
		Mid	52.71
		High	53.36
	TX2	Low	51.35
		Mid	52.63
		High	53.22
	TX3	Low	51.23
		Mid	52.43
		High	53.06
	TX4	Low	51.69
		Mid	52.96
		High	53.57

GRAPHICAL RESULTS

Mode 1 – Low/Mid/High Channel

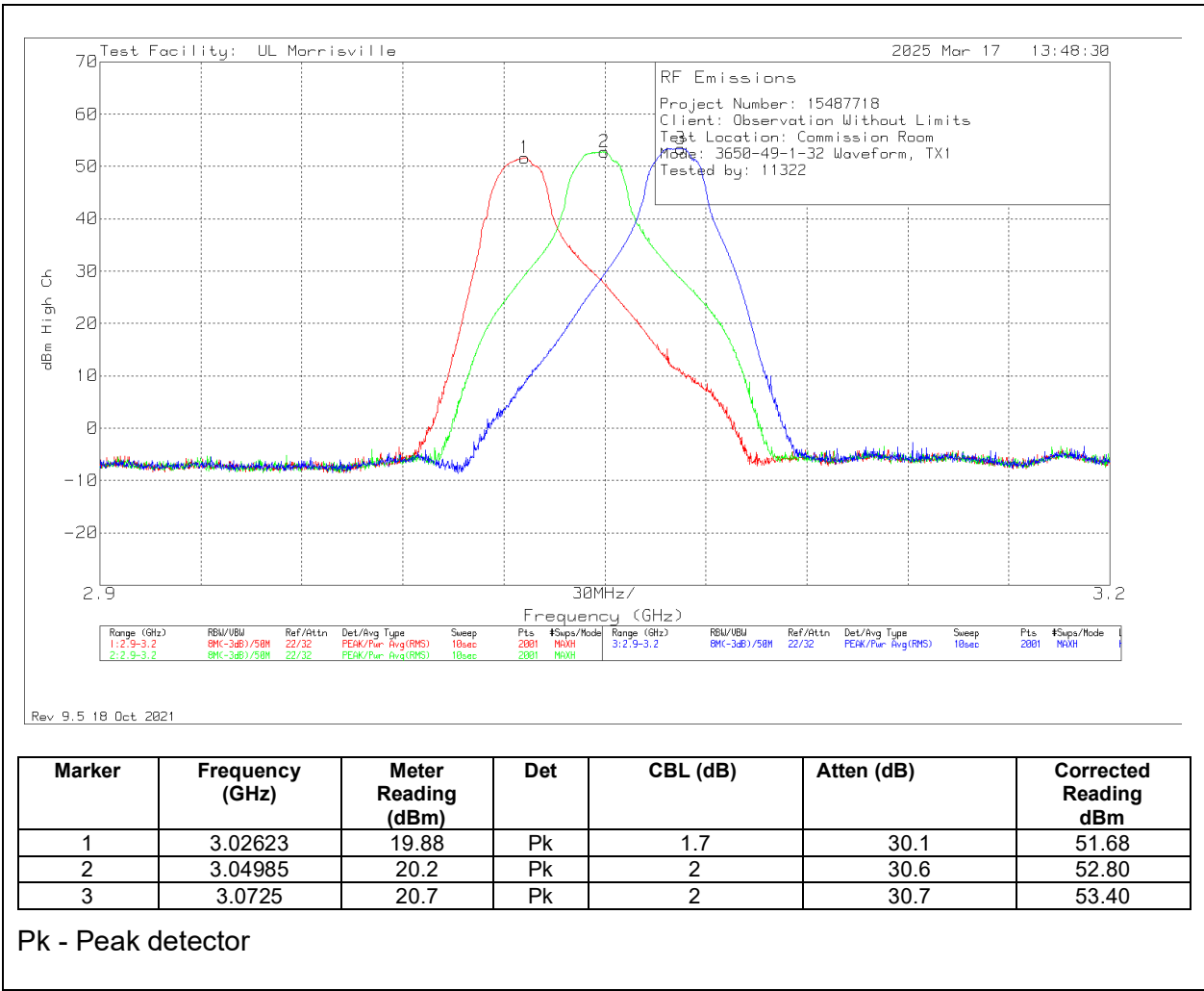


Mode 2 – Low/Mid/High Channel

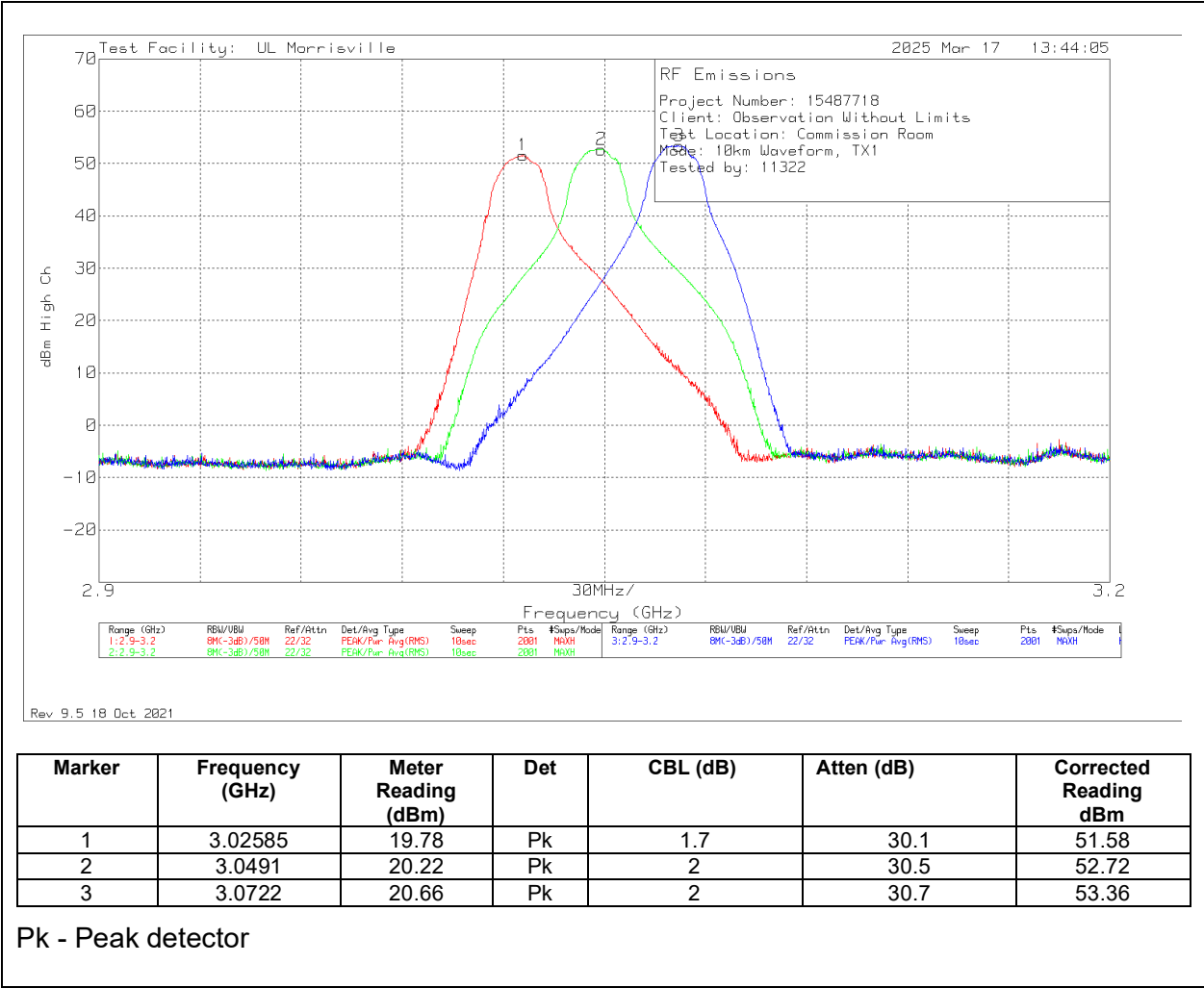


Rev 9.5 18 Oct 2021

Mode 3 – Low/Mid/High Channel



Mode 4 – Low/Mid/High Channel



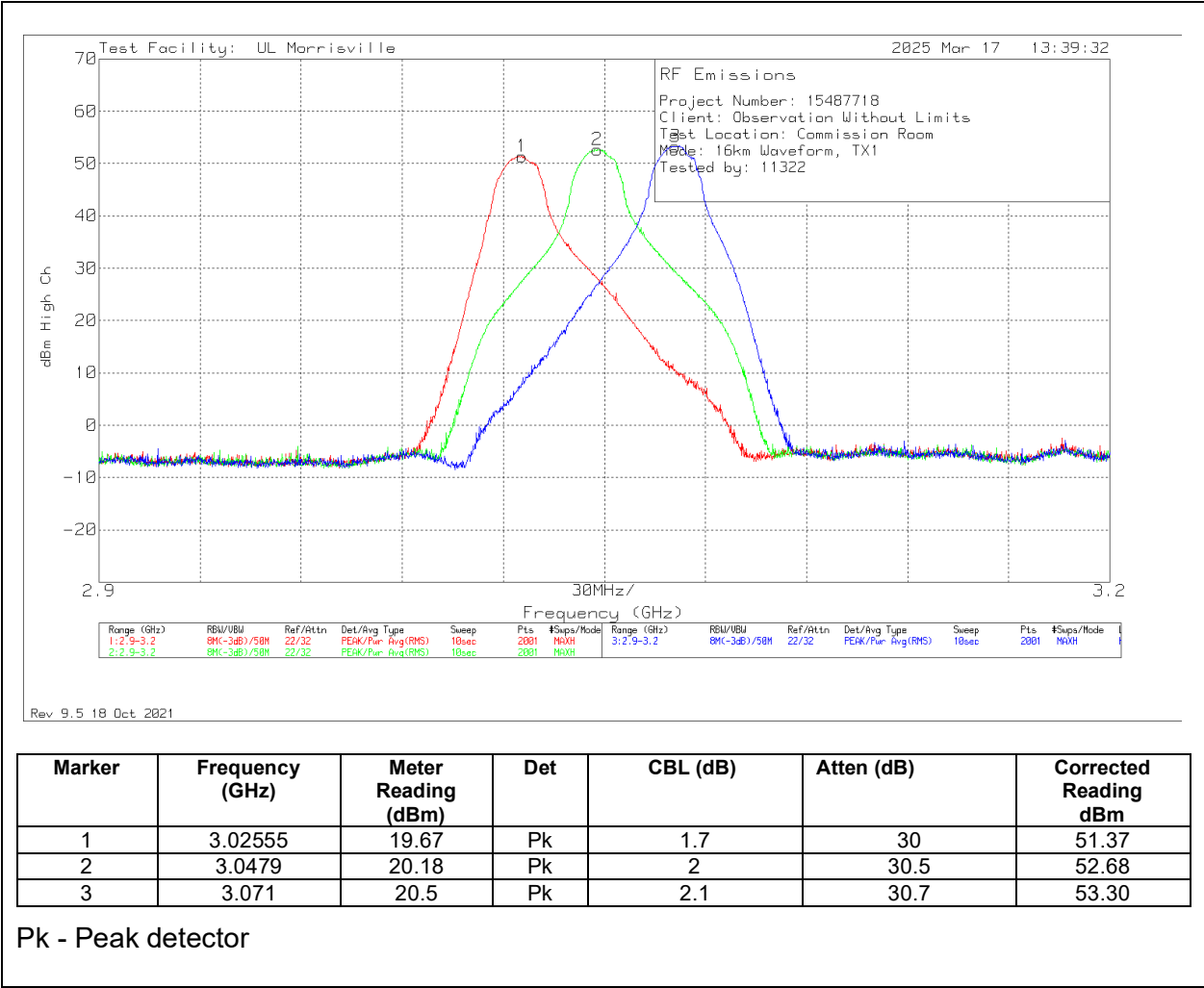
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12 Laboratory Dr., RTP, NC 27709

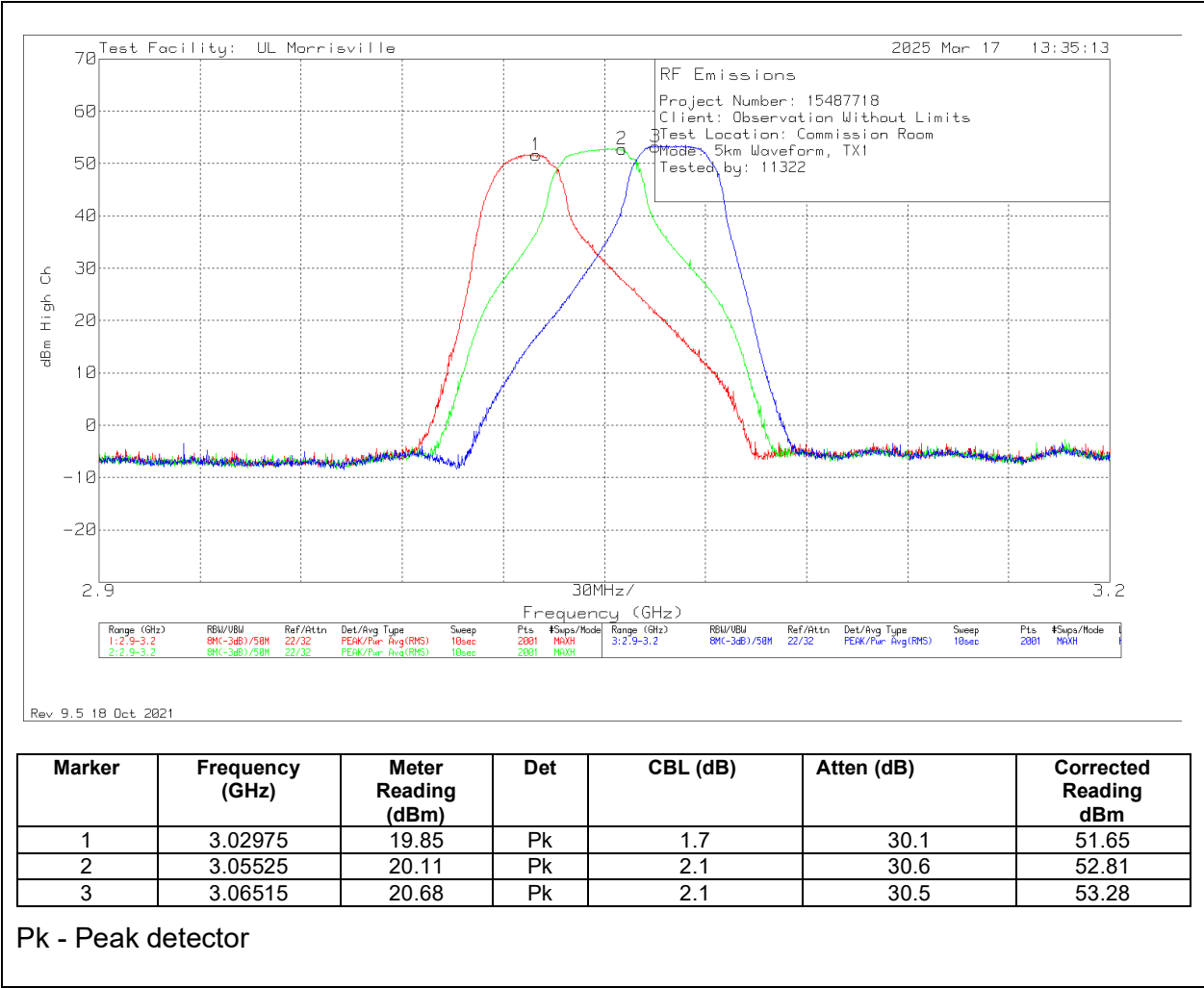
TEL: (919) 549-1400

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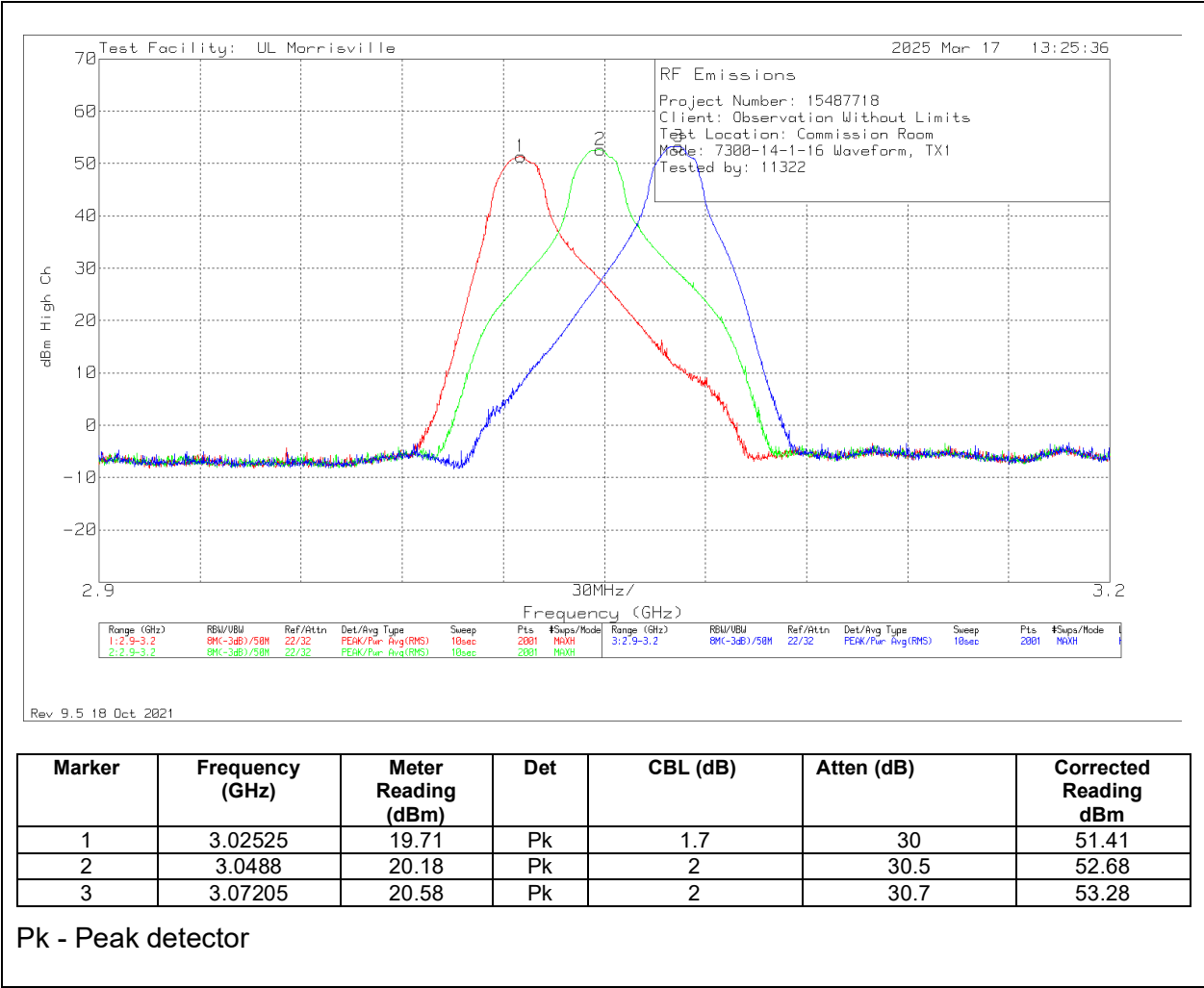
Mode 5 – Low/Mid/High Channel



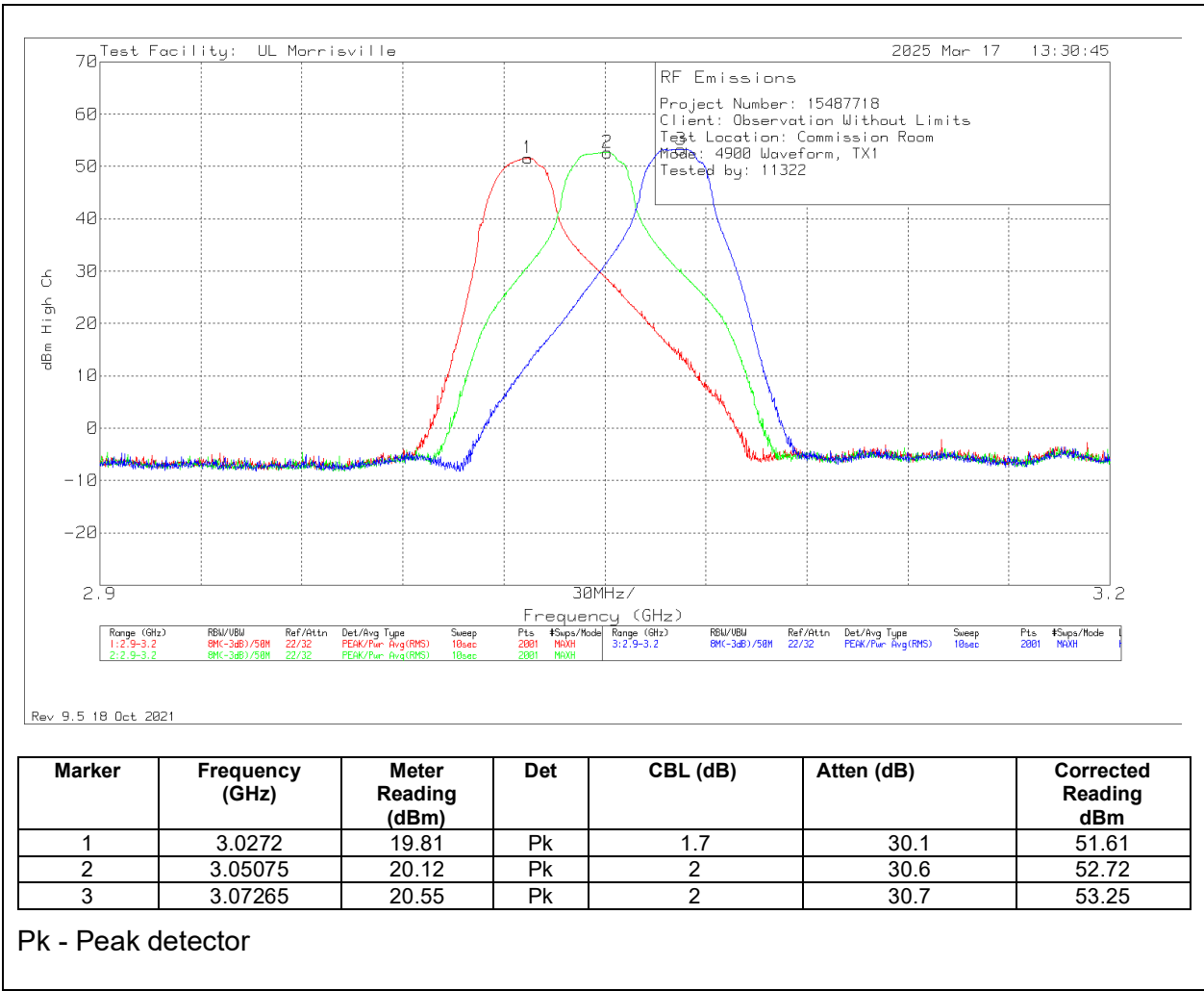
Mode 6 – Low/Mid/High Channel



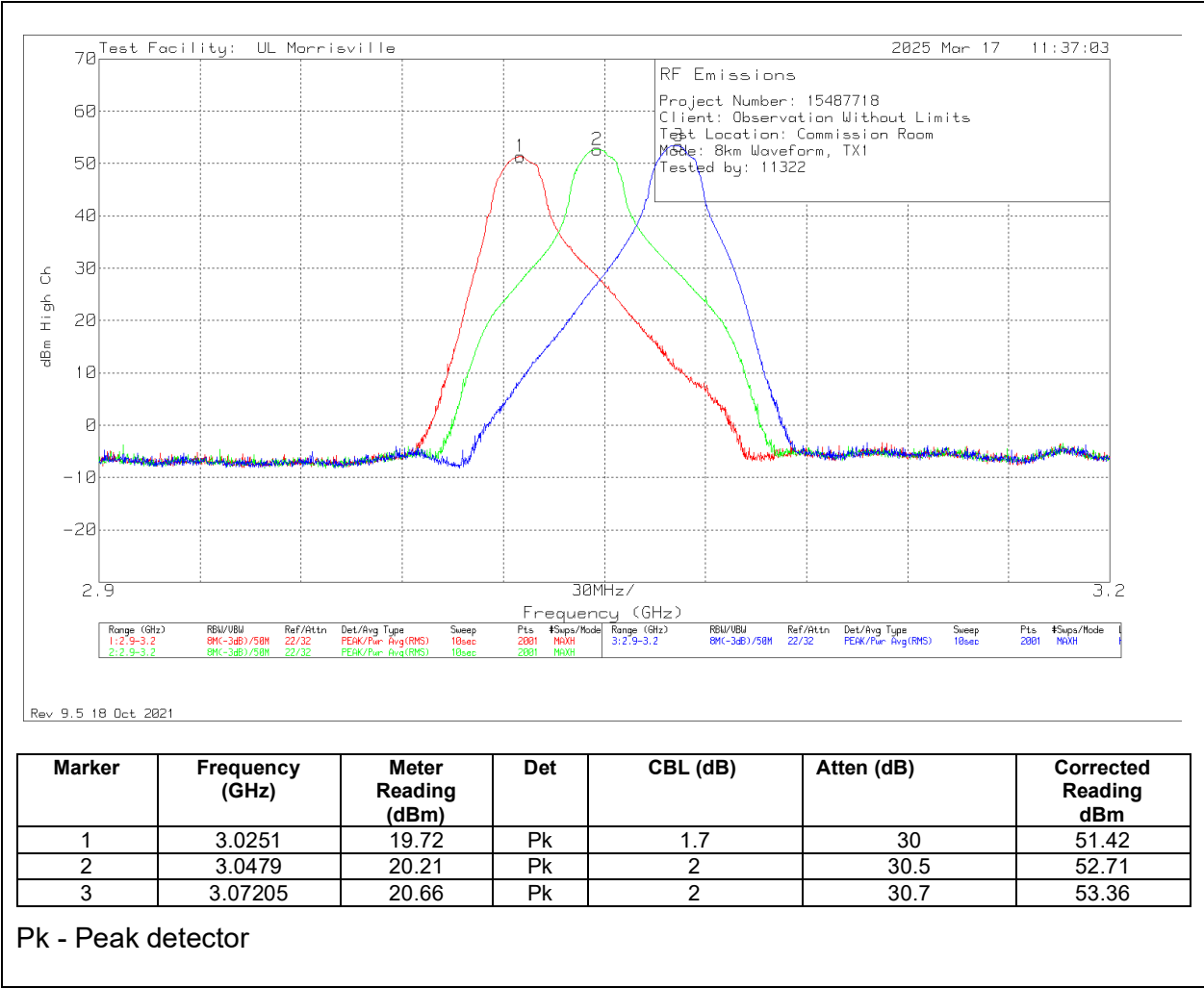
Mode 7 – Low/Mid/High Channel



Mode 8 – Low/Mid/High Channel



Mode 9 – Low/Mid/High Channel



7.1. OCCUPIED BANDWIDTH

REQUIREMENT

§2.1049 Measurements required: Occupied bandwidth.

§90.207 Types of emissions.

(k) For radiolocation operations as may be authorized in accordance with subpart F, unless otherwise provided for any type of emission may be authorized upon a satisfactory showing of need.

§90.209 Bandwidth Limitation.

Above 2500 MHz:

²Bandwidths for radiolocation stations in the 420-450 MHz band and for stations operating in bands subject to this footnote will be reviewed and authorized on a case-by-case basis.

LIMITS

For reporting purposes only.

TEST PROCEDURE

The transmitter output was connected to a calibrated coaxial cable and coupler, the other end of which was connected to a spectrum analyzer. The occupied bandwidth was measured with the spectrum analyzer at the low, middle and high channel in each band.

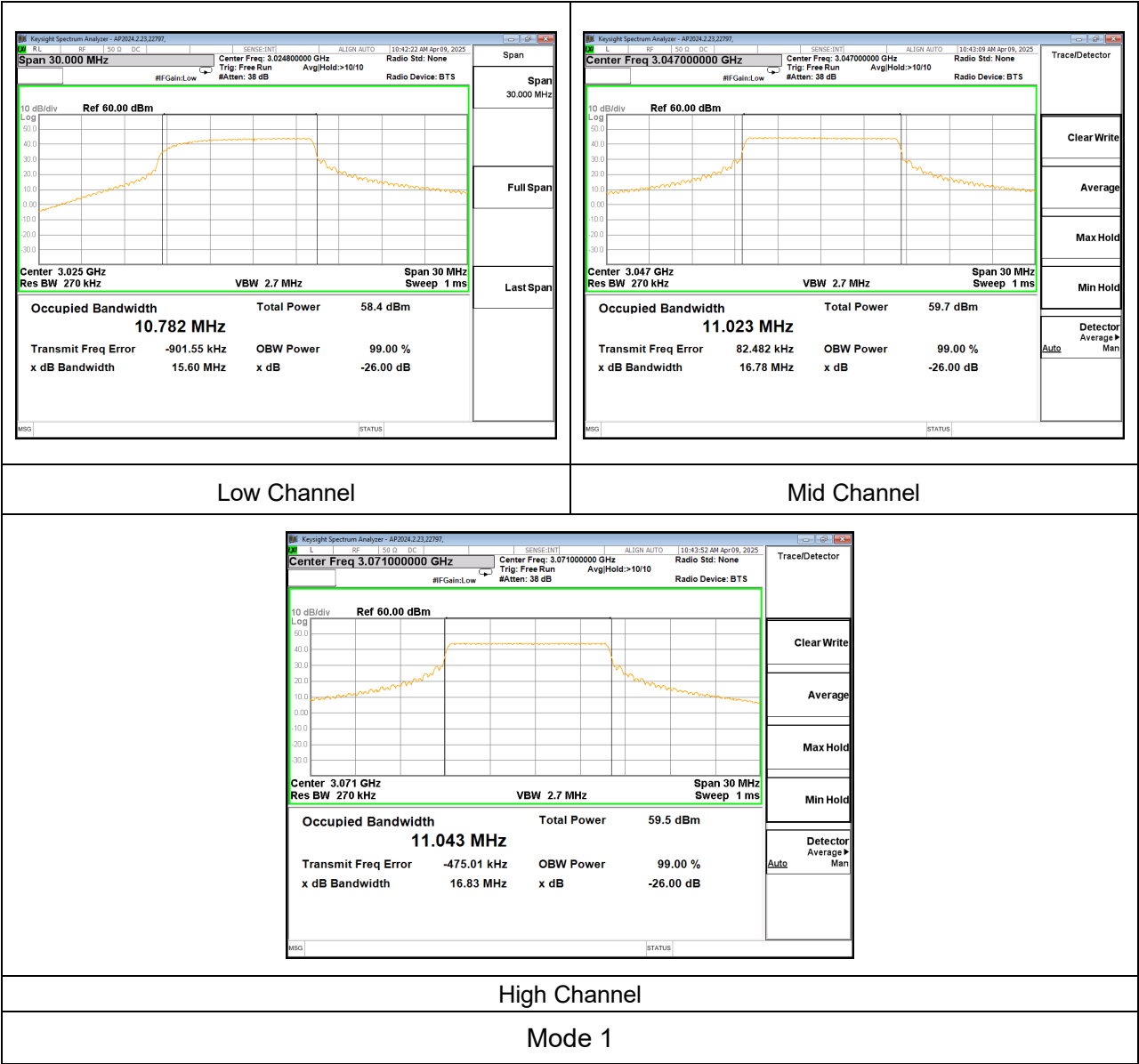
The occupied bandwidth was measured with the spectrum analyzer at the low, middle and high channel for each mode on the worst-case chain only (TX4).

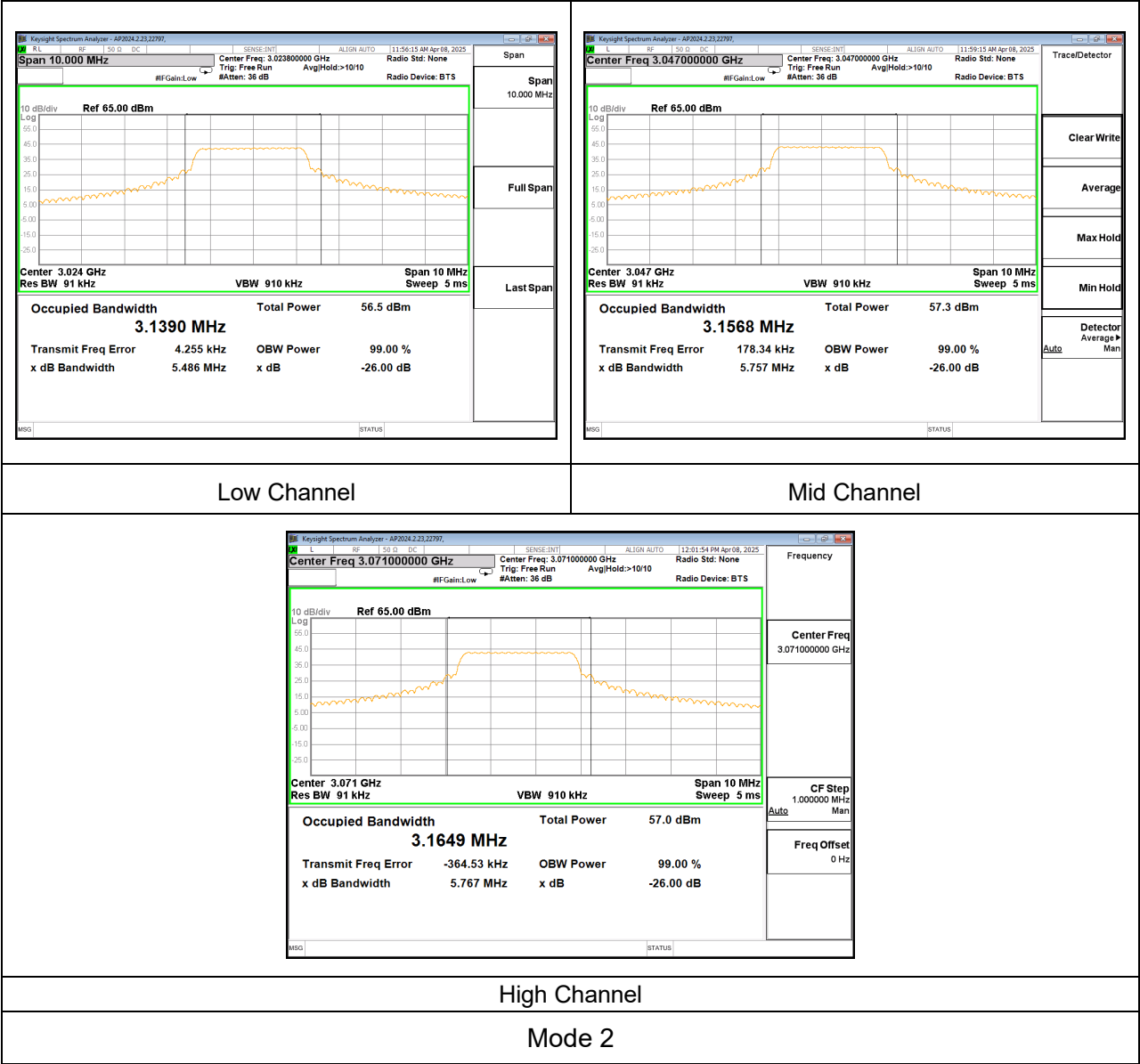
Date: 2025-03-28, 2025-04-08, 2025-04-09
Location: Commissioning Room
Tested by: 11322

TABULAR RESULTS

Waveform (Mode)	Channel	OBW (MHz)
3650H-15-1-16 (Mode 1)	Low	10.782
	Mid	11.023
	High	11.043
3650-27-1-16 (Mode 2)	Low	3.1390
	Mid	3.1568
	High	3.1649
3650-49-1-32 (Mode 3)	Low	11.853
	Mid	12.026
	High	12.030
10km (Mode 4)	Low	5.0432
	Mid	5.1337
	High	5.1588
16km (Mode 5)	Low	3.1323
	Mid	3.1561
	High	3.1608
5km (Mode 6)	Low	3.1371
	Mid	3.1555
	High	3.1628
7300-14-1-16 (Mode 7)	Low	3.3953
	Mid	3.4115
	High	3.4209
4900 (Mode 8)	Low	8.2466
	Mid	8.2775
	High	8.2883
8km (Mode 9)	Low	3.1408
	Mid	3.1565
	High	3.1594

GRAPHICAL RESULTS





Keyight Spectrum Analyzer - AP2024.2.23.22797

RF 50 dB DC

SENSE INT

ALIGN AUTO

11:59:15 AM Apr 08, 2025

Center Freq 3.047000000 GHz

Trig: Free Run

Avg/Hold: >10/10

Radio Std: None

#F Gain: Low

#Atten: 36 dB

Radio Device: BTS

Span 10.000 MHz

Full Span

Last Span

10 dB/div Ref 65.00 dBm

Log

50.0

45.0

35.0

25.0

15.0

5.00

0.00

Center 3.047 GHz

Res BW 91 kHz

VBW 910 kHz

Span 10 MHz

Sweep 5 ms

Occupied Bandwidth 3.1568 MHz

Total Power 57.3 dBm

Transmit Freq Error 178.34 kHz

OBW Power 99.00 %

x dB Bandwidth 5.757 MHz

x dB -26.00 dB

MSG

STATUS

Trace/Detector

Clear Write

Average

Max Hold

Min Hold

Detector Average

Auto

Man

Mid Channel

Keyight Spectrum Analyzer - AP2024.2.23.22797

RF 50 dB DC

SENSE INT

ALIGN AUTO

12:01:54 PM Apr 08, 2025

Center Freq 3.071000000 GHz

Trig: Free Run

Avg/Hold: >10/10

Radio Std: None

#F Gain: Low

#Atten: 36 dB

Radio Device: BTS

Span 10.000 MHz

Full Span

Last Span

10 dB/div Ref 65.00 dBm

Log

50.0

45.0

35.0

25.0

15.0

5.00

0.00

Center 3.071 GHz

Res BW 91 kHz

VBW 910 kHz

Span 10 MHz

Sweep 5 ms

Occupied Bandwidth 3.1649 MHz

Total Power 57.0 dBm

Transmit Freq Error -364.53 kHz

OBW Power 99.00 %

x dB Bandwidth 5.767 MHz

x dB -26.00 dB

MSG

STATUS

Frequency

Center Freq 3.071000000 GHz

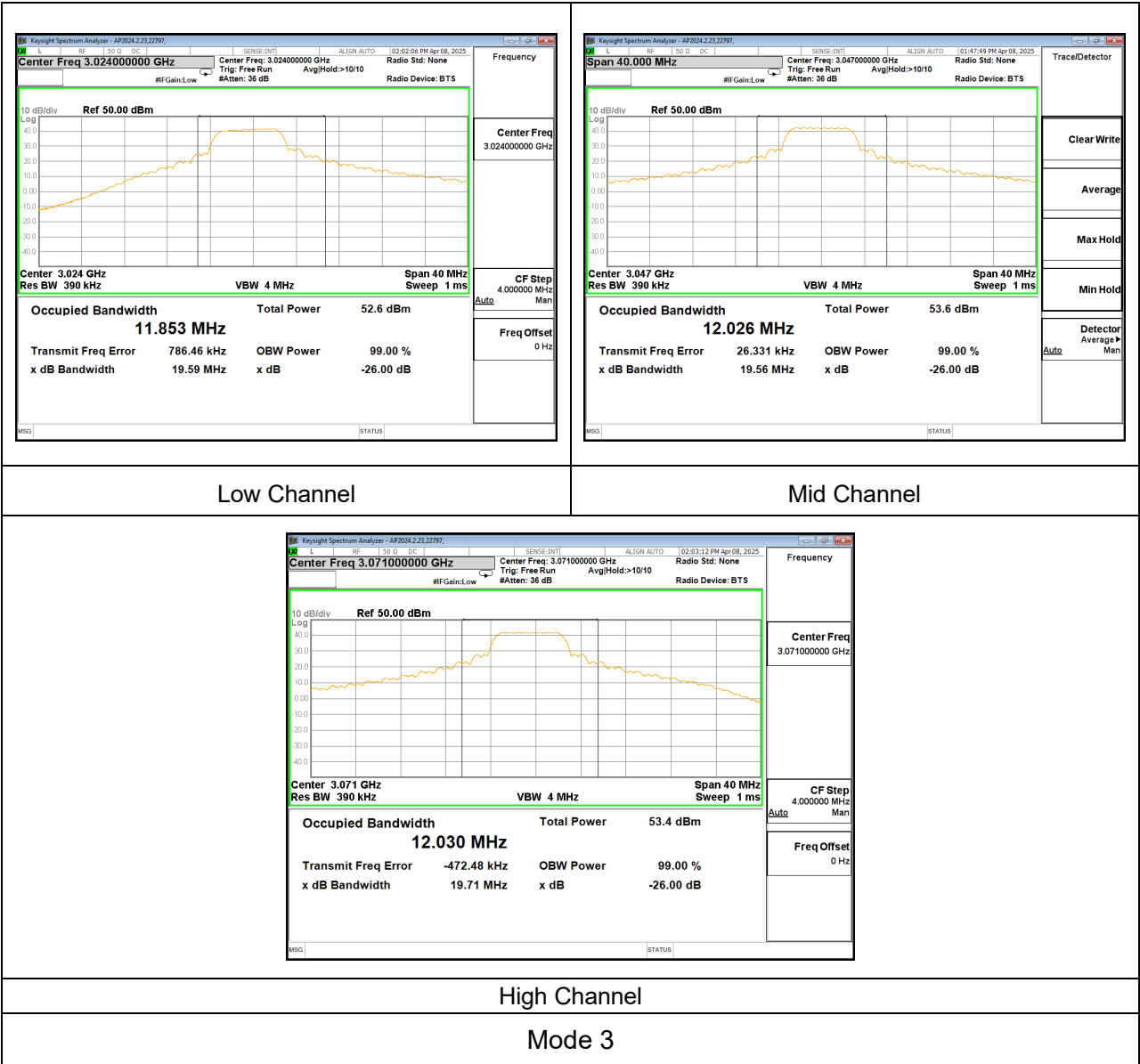
CF Step 1.000000 MHz

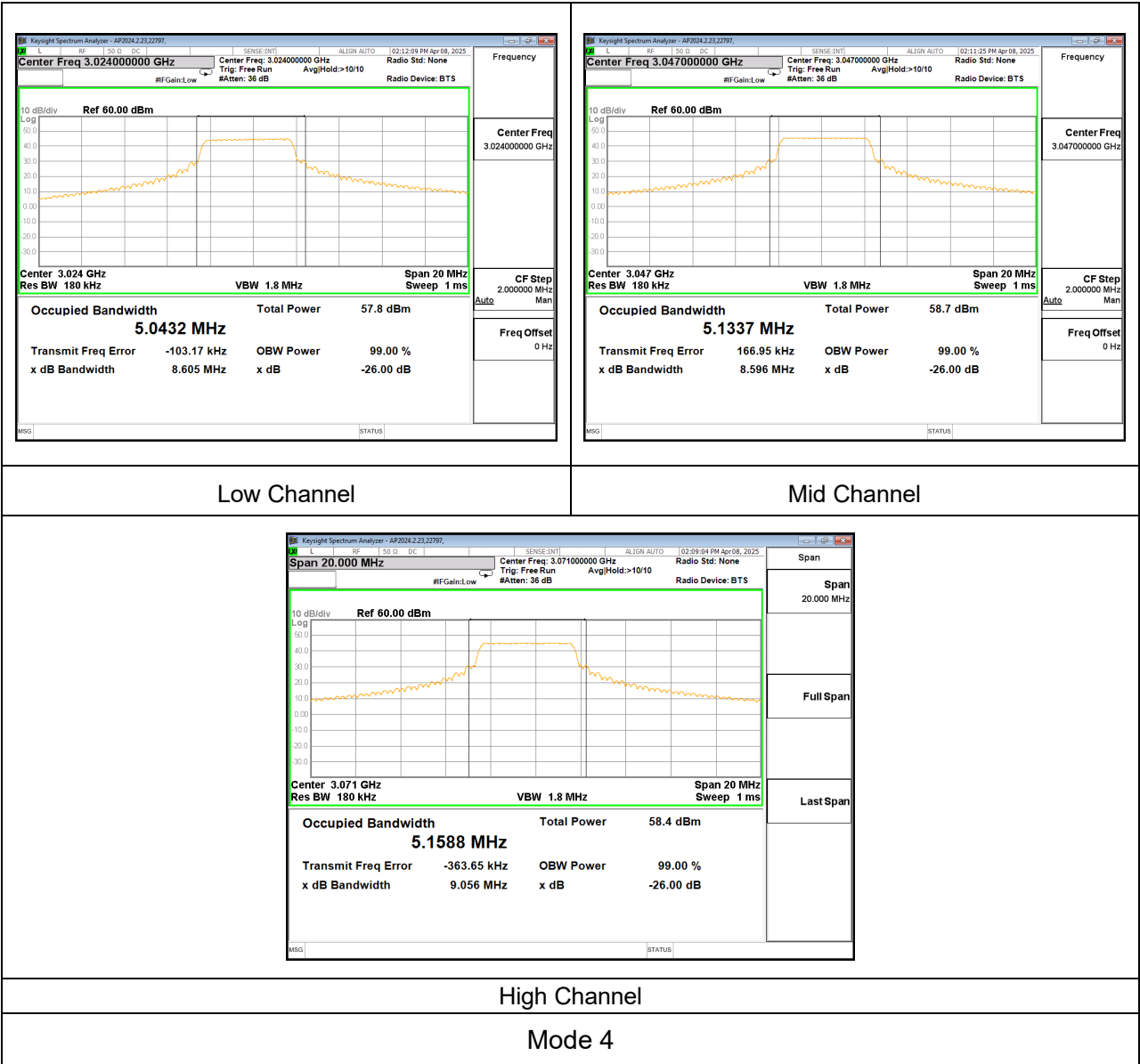
Man

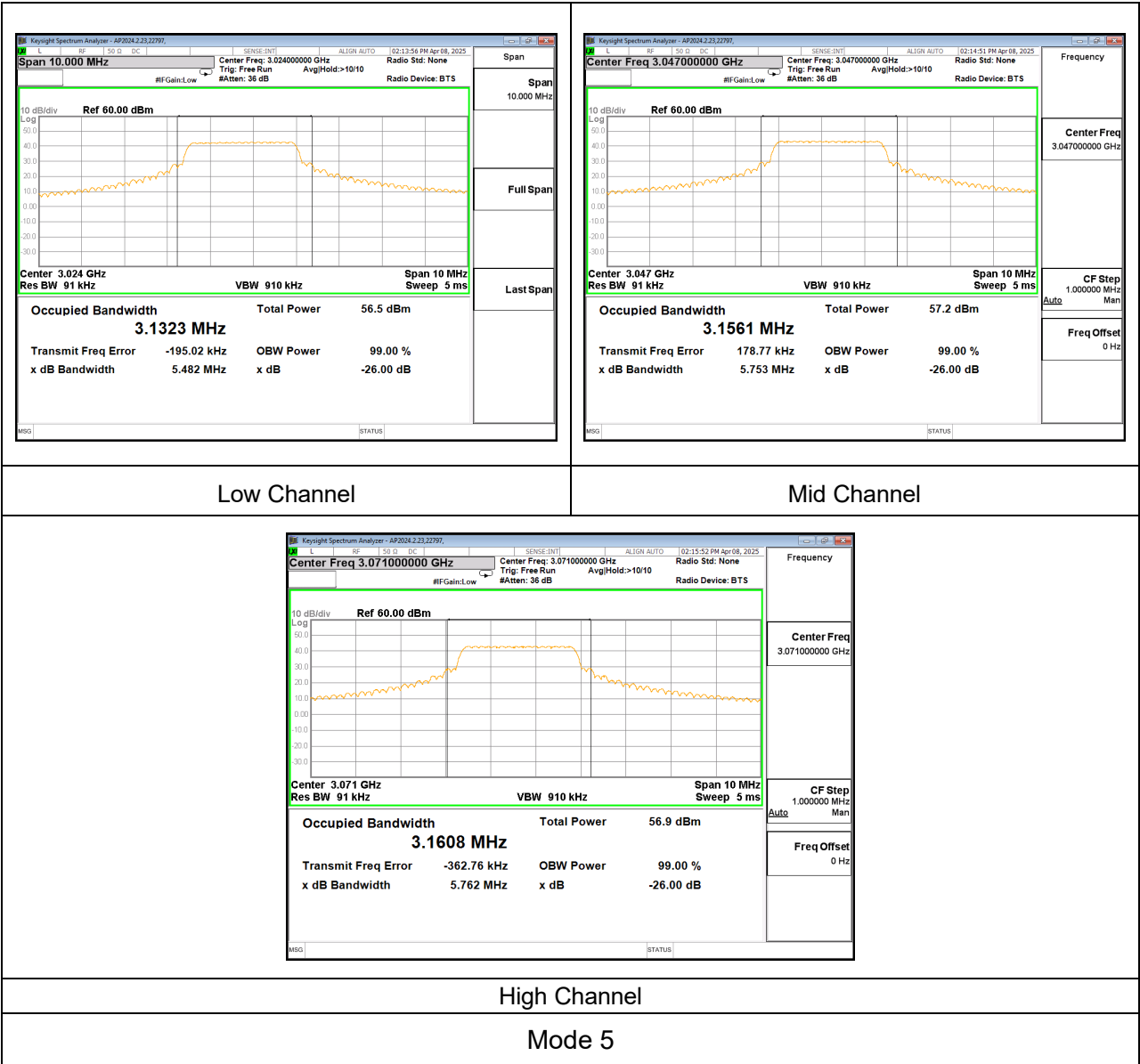
Freq Offset 0 Hz

High Channel

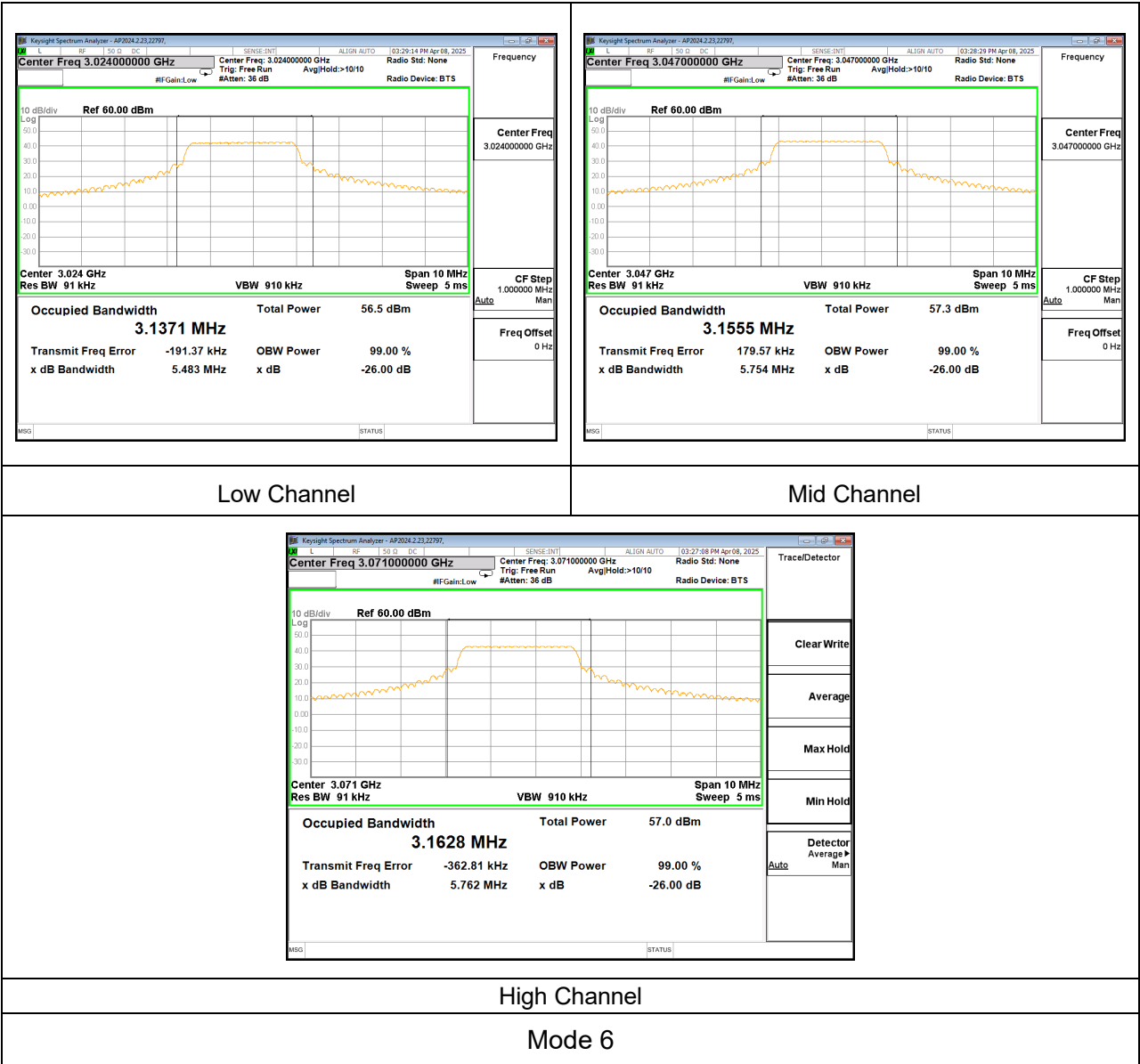
Mode 2

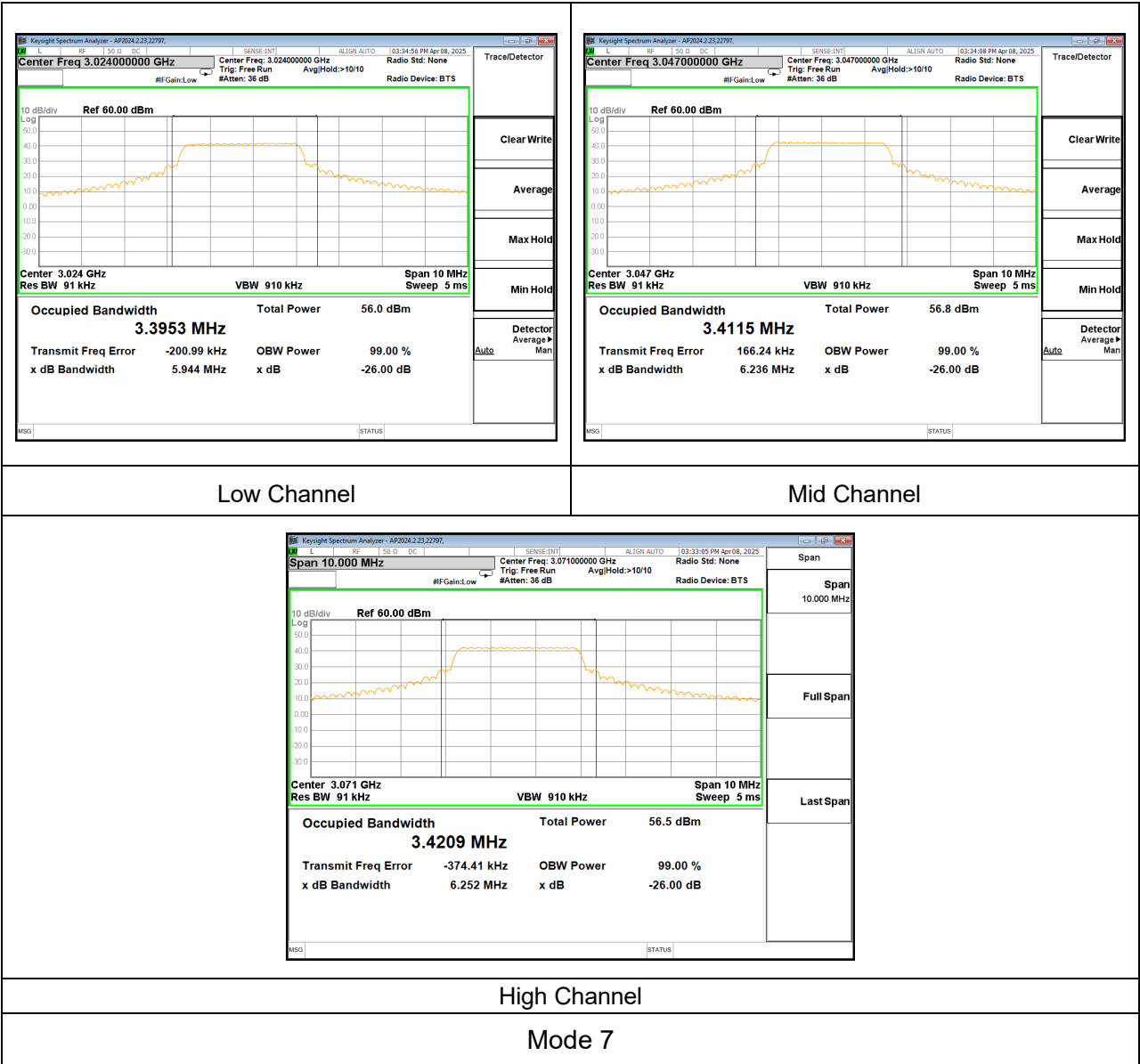






Mode 5





Keyight Spectrum Analyzer - AP2024.2.23.22797

Span 10.000 MHz

Center Freq: 3.071000000 GHz

Trig: Free Run

Avg/Hold: >10/10

Radio Std: None

Radio Device: BTS

Span

Span 10.000 MHz

Trace/Detector

10 dB/div

Ref 60.00 dBm

Log

50.0

40.0

30.0

20.0

10.0

0.00

-10.0

-20.0

-30.0

Center 3.071 GHz

Res BW 91 kHz

VBW 910 kHz

Span 10 MHz

Sweep 5 ms

Occupied Bandwidth

3.4209 MHz

Total Power

56.5 dBm

Transmit Freq Error

-374.41 kHz

OBW Power

99.00 %

x dB Bandwidth

6.252 MHz

x dB

-26.00 dB

MSG

STATUS

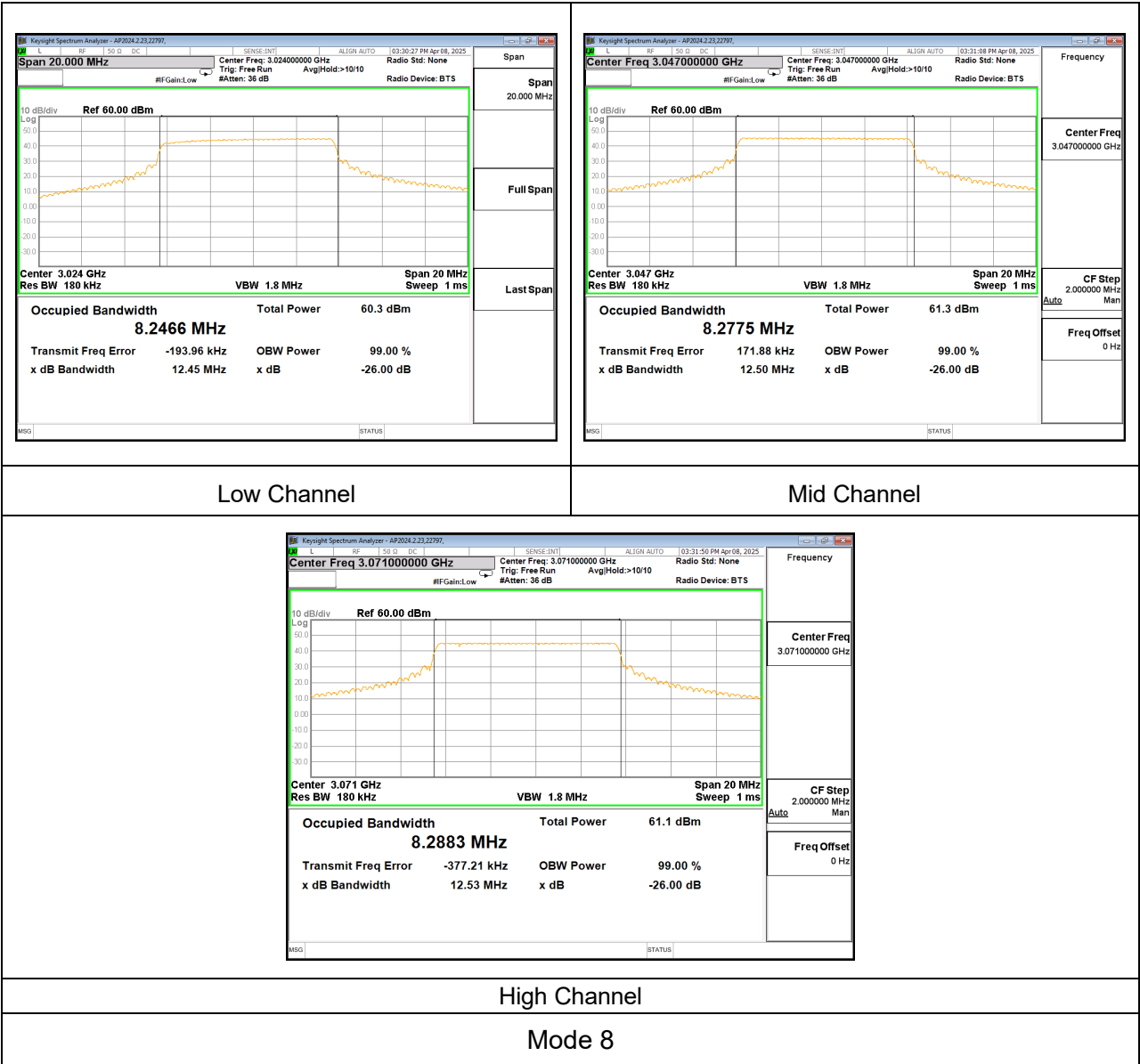
Span

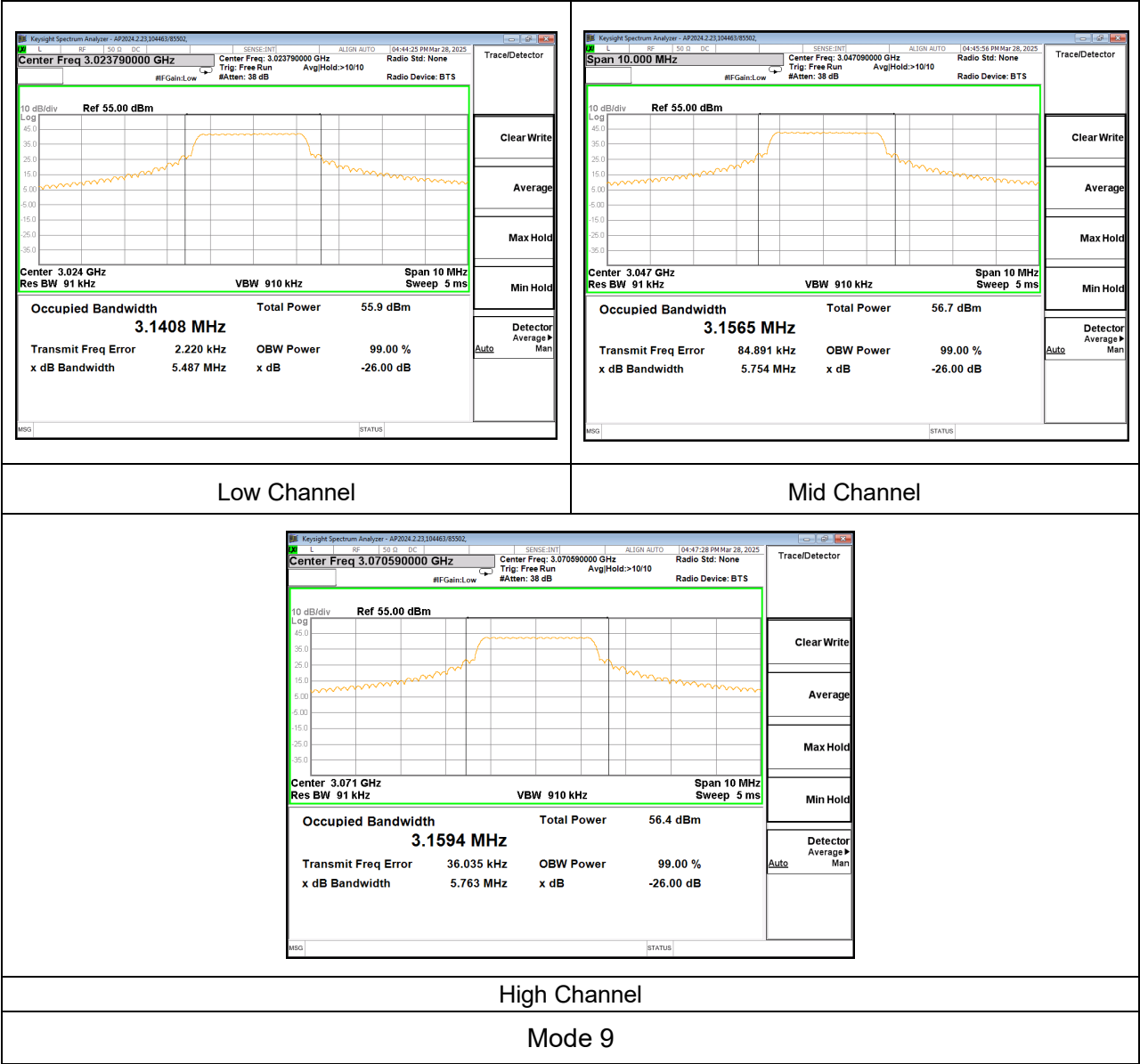
Full Span

Last Span

High Channel

Mode 7





7.2. BAND EDGE

REQUIREMENT

§2.1051 Measurements required: Spurious emissions at antenna terminals. (At the band edges [3000 to 3100 MHz])

§90.210 Emission Mask

Mask of 90.210(b)(3) is met as all emissions are below -13dBc as worst-case limit.

The radio frequency voltage or powers generated within the equipment and appearing on a spurious frequency shall be checked at the equipment output terminals when properly loaded with a suitable artificial antenna. Curves or equivalent data shall show the magnitude of each harmonic and other spurious emission that can be detected when the equipment is operated under the conditions specified in §2.1049 as appropriate. The magnitude of spurious emissions which are attenuated more than 20 dB below the permissible value need not be specified.

LIMITS

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB. (-13dBm)

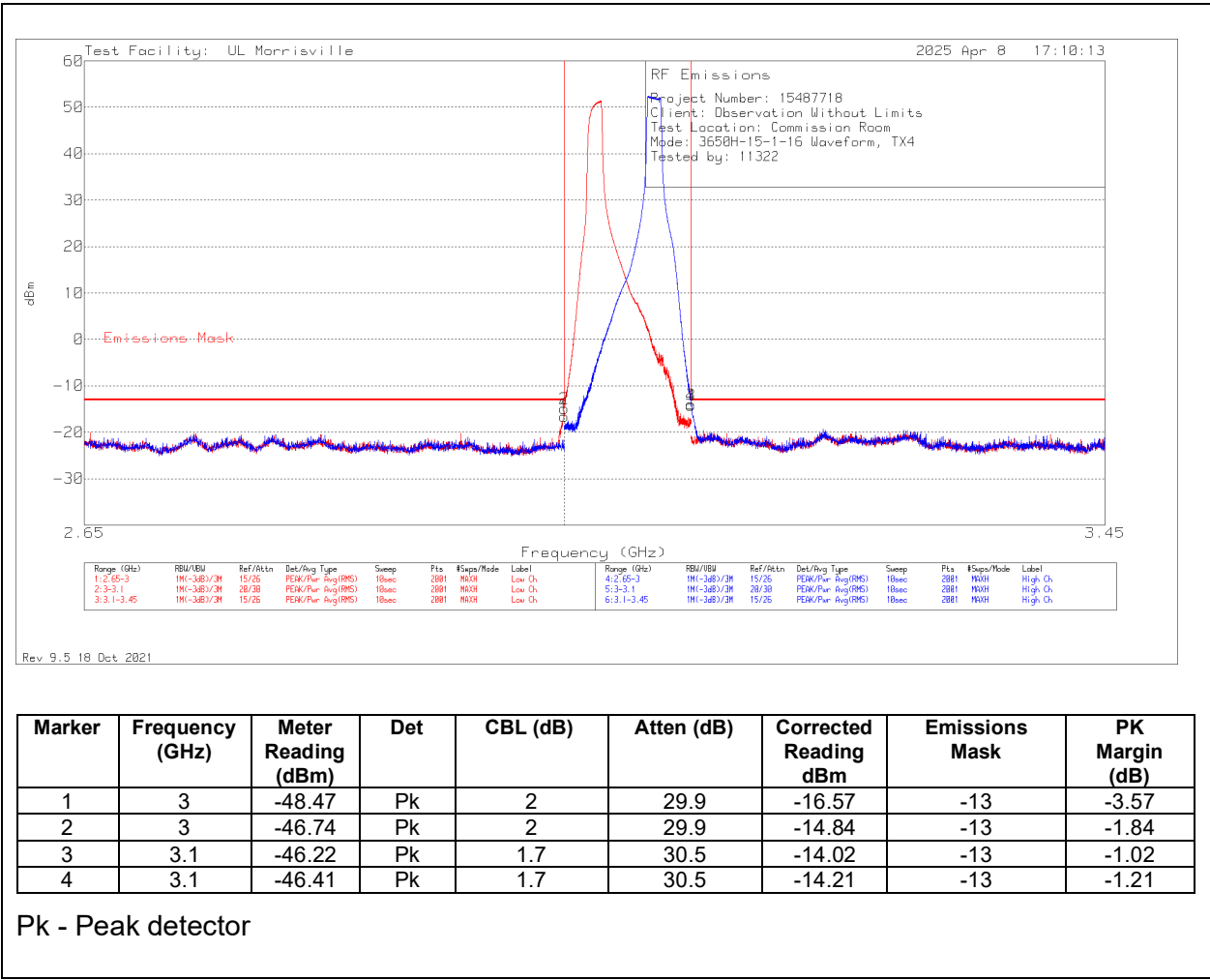
TEST PROCEDURE

The transmitter output was connected to the input of Spectrum Analyzer via calibrated coaxial cable and attenuator.

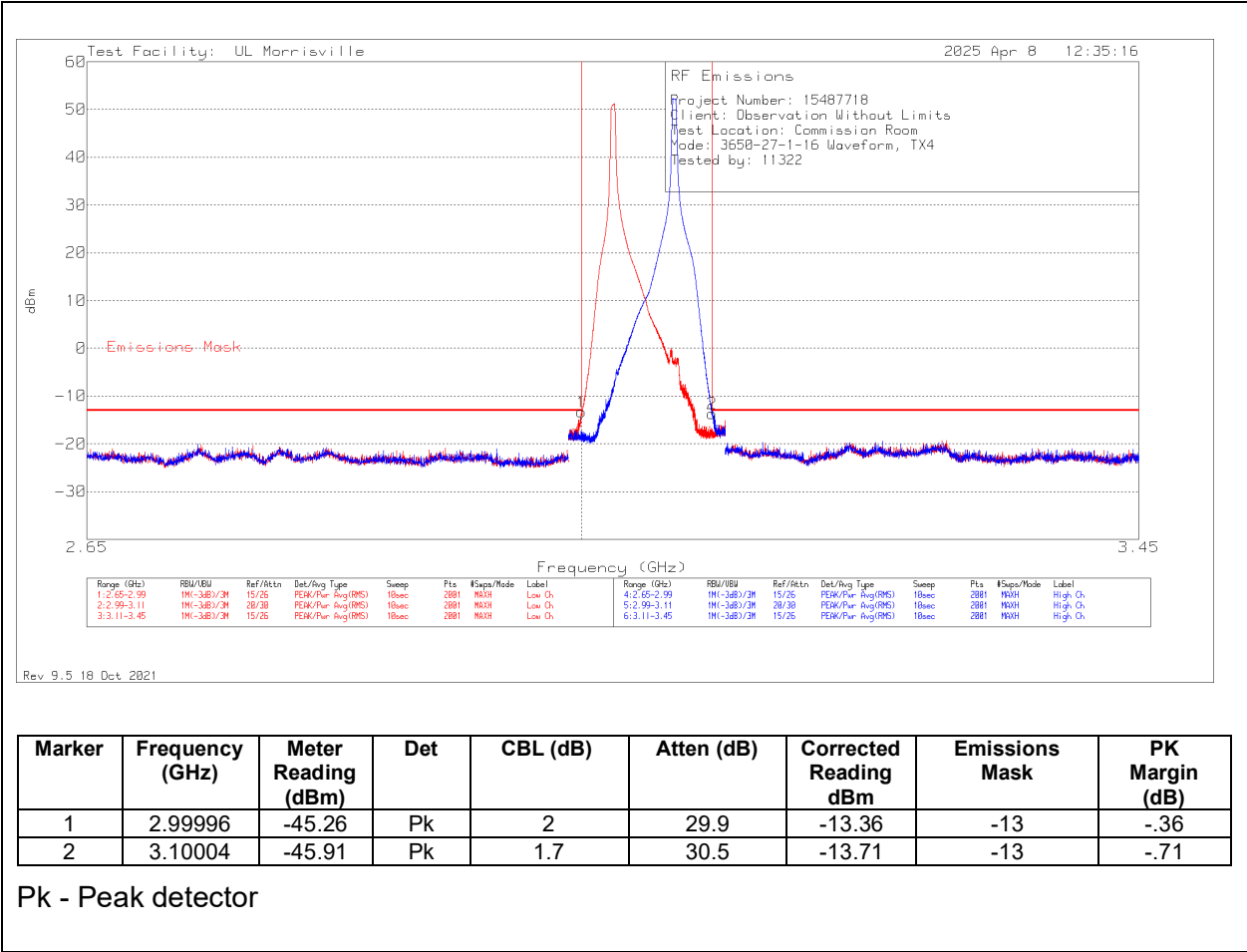
The output power was measured with the spectrum analyzer at the low and high channel for each mode on the worst-case chain only (TX4).

RESULTS

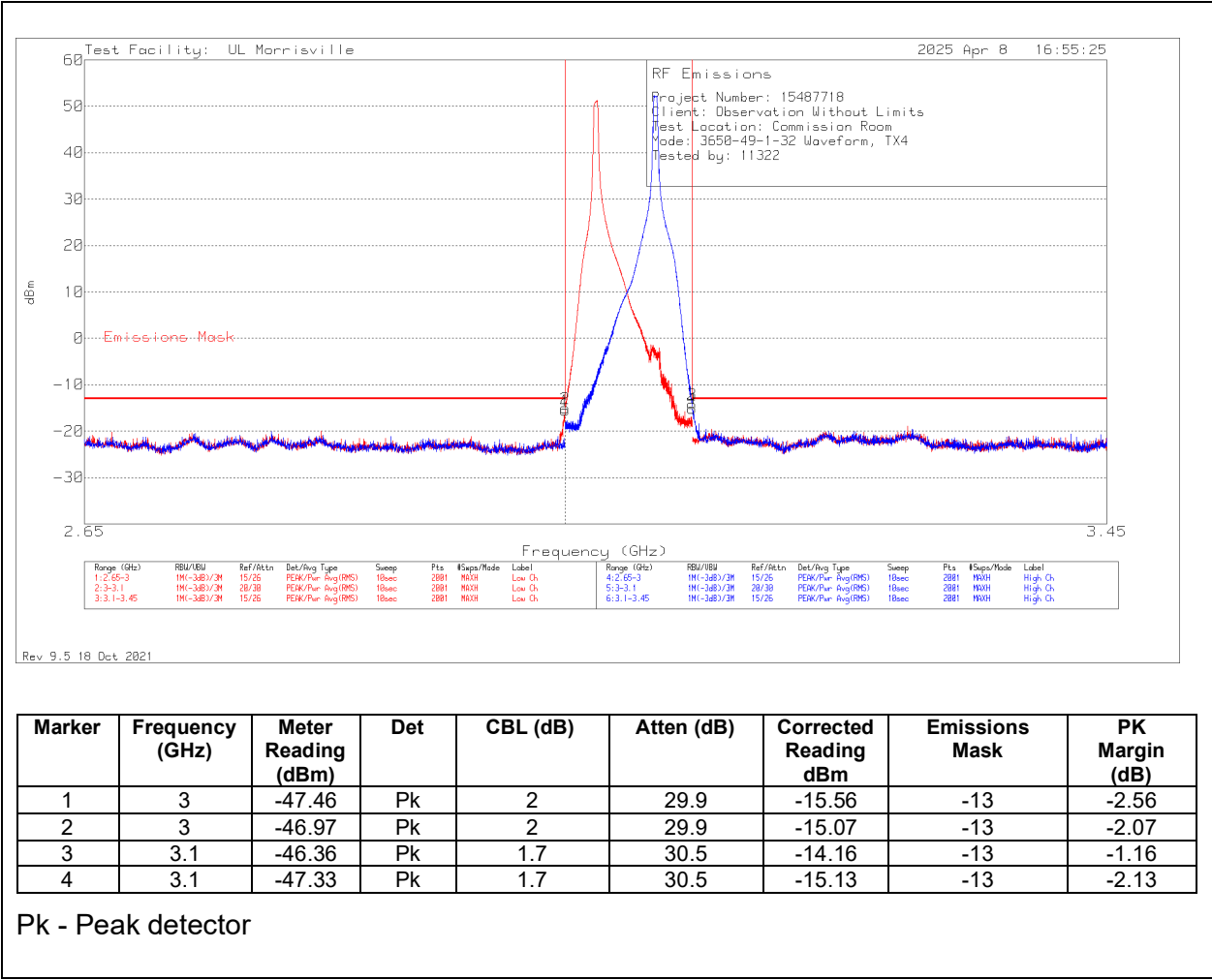
Mode 1 – Low/High Channel



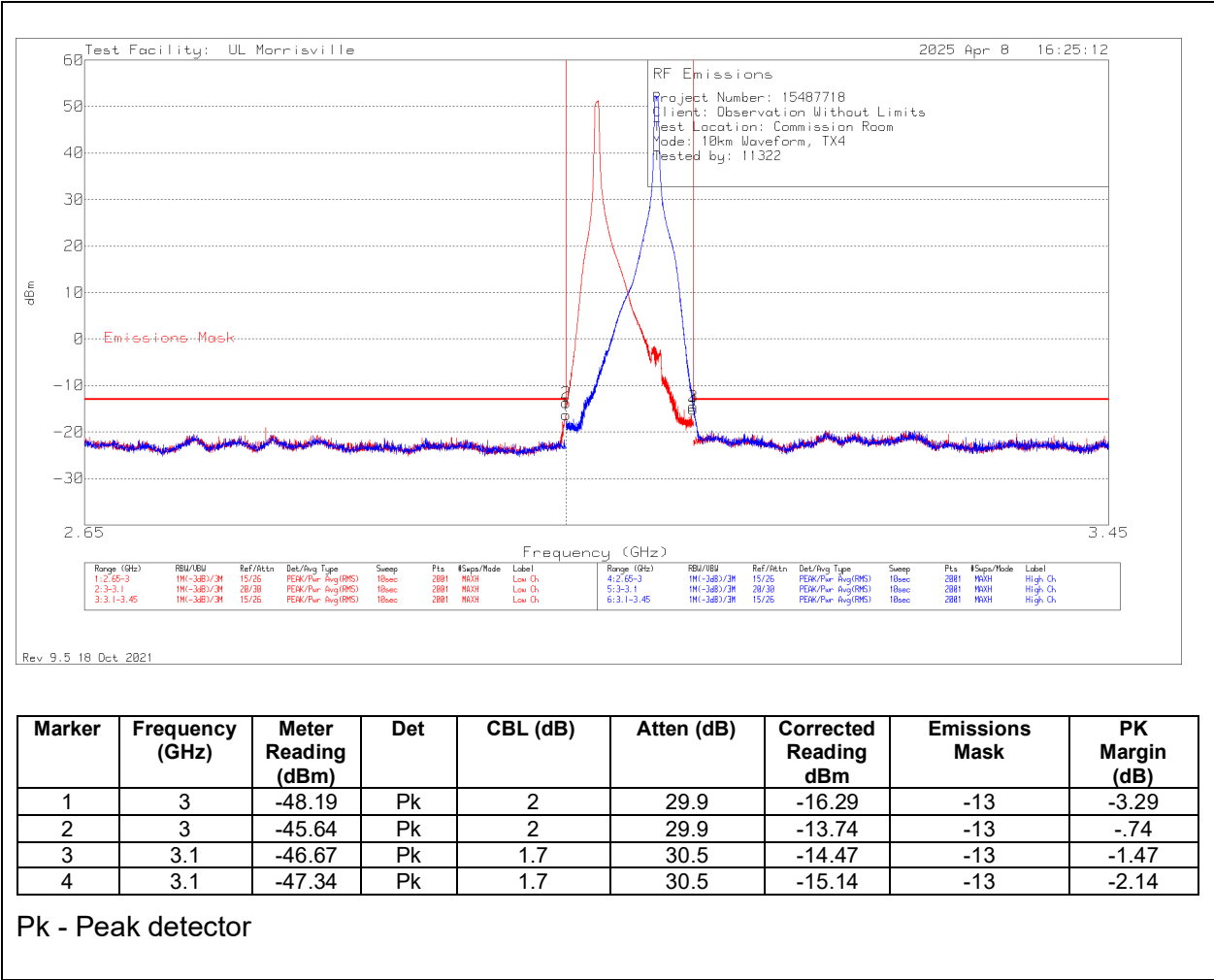
Mode 2 – Low/High Channel



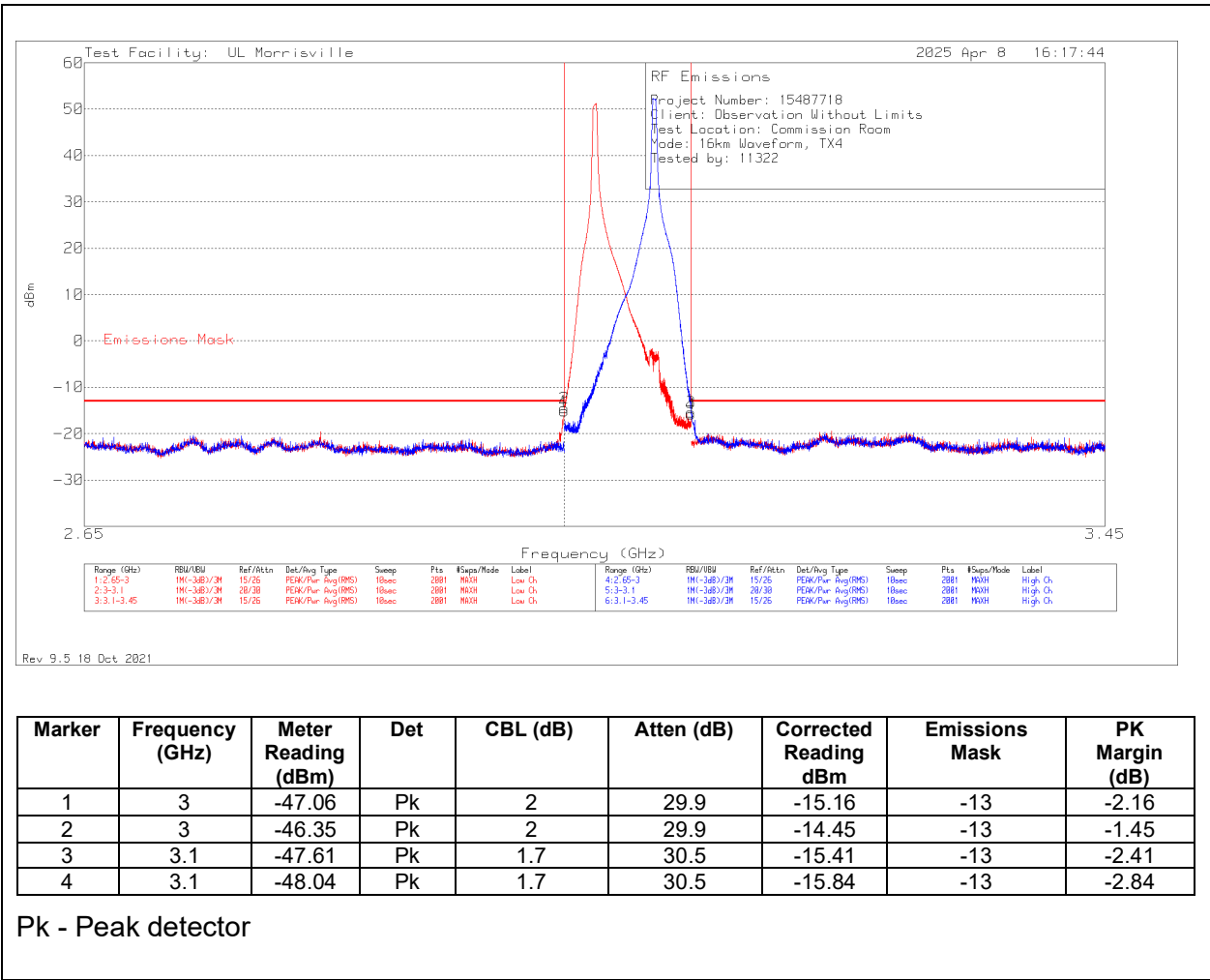
Mode 3 – Low/High Channel



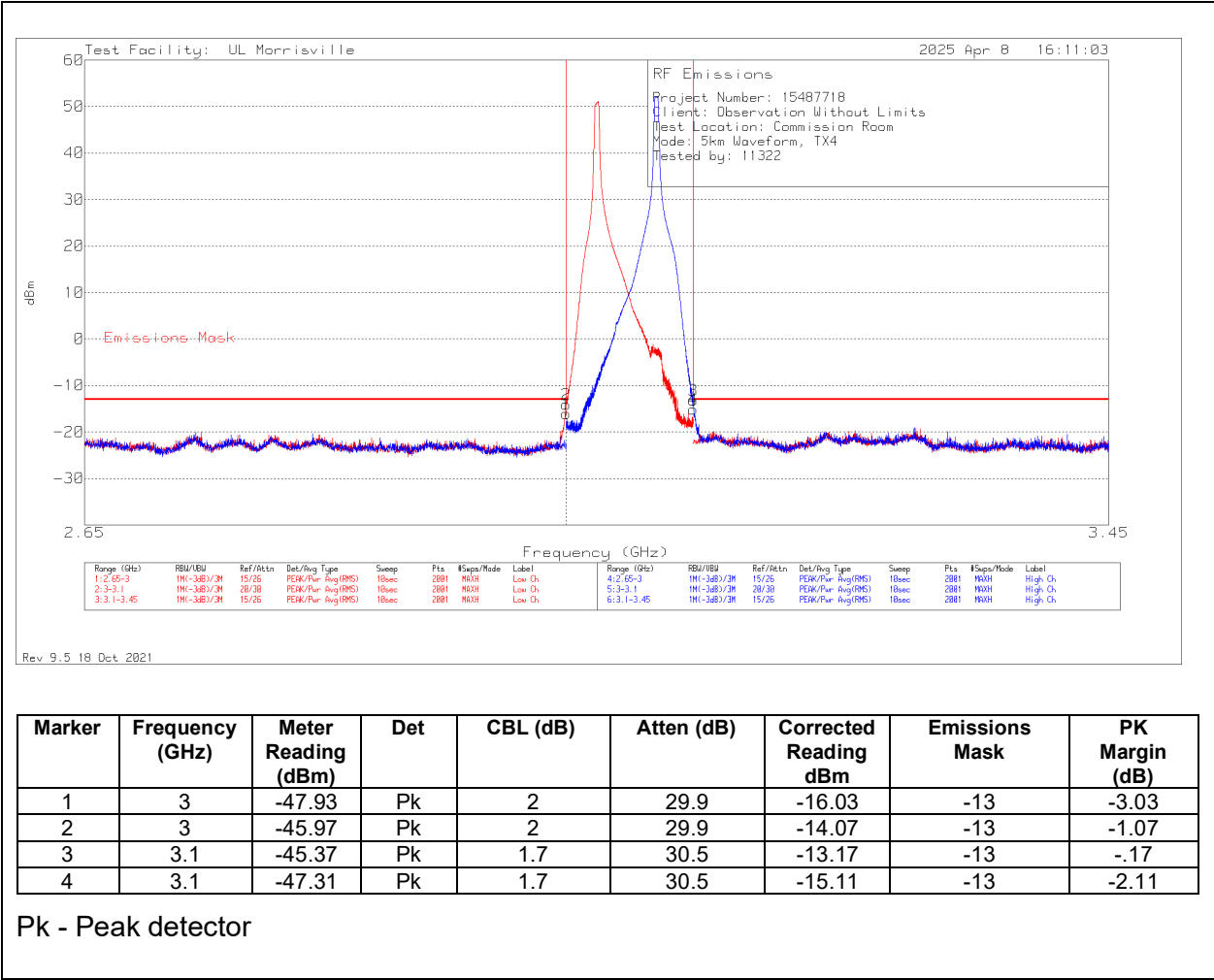
Mode 4 – Low/High Channel



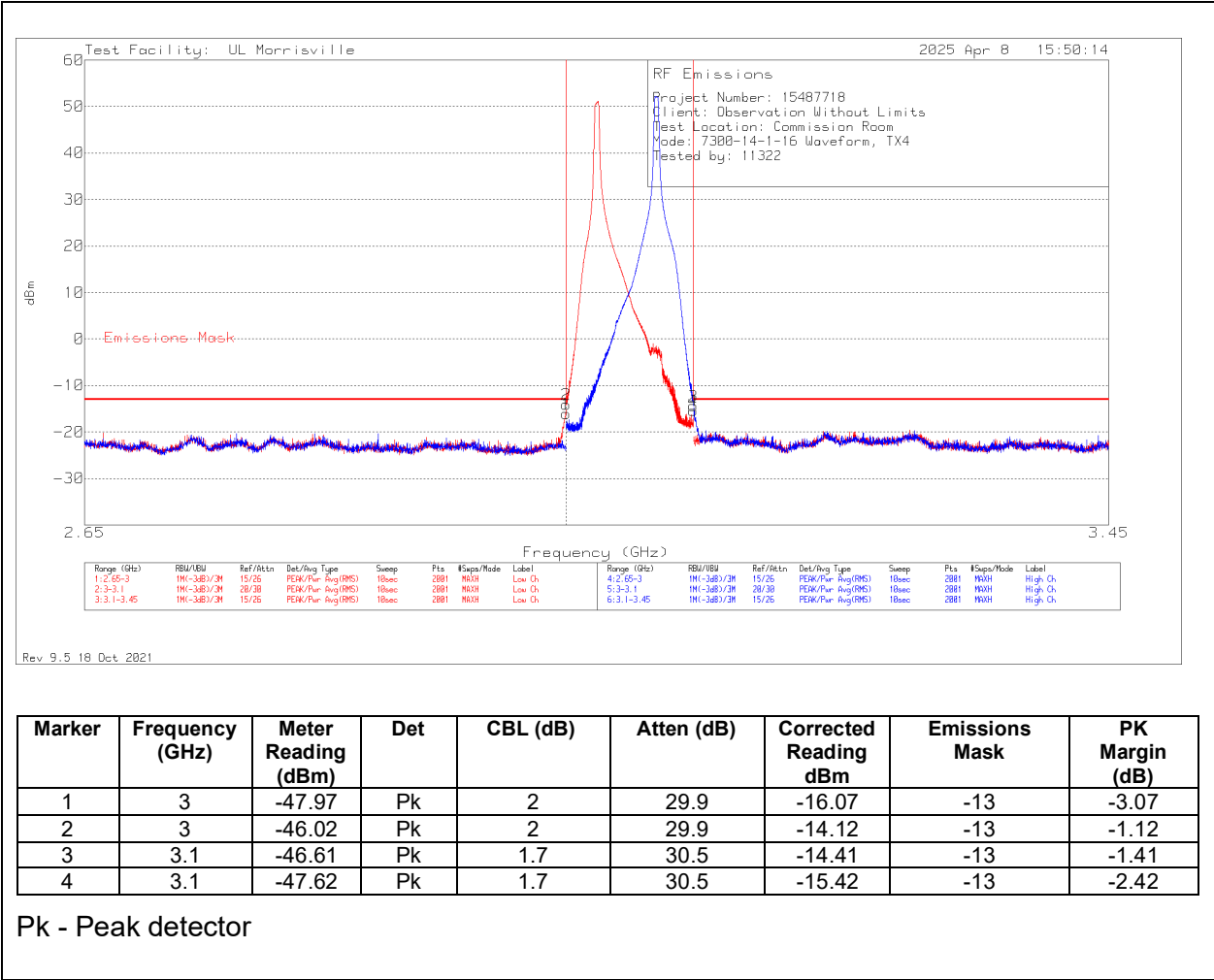
Mode 5 – Low/High Channel



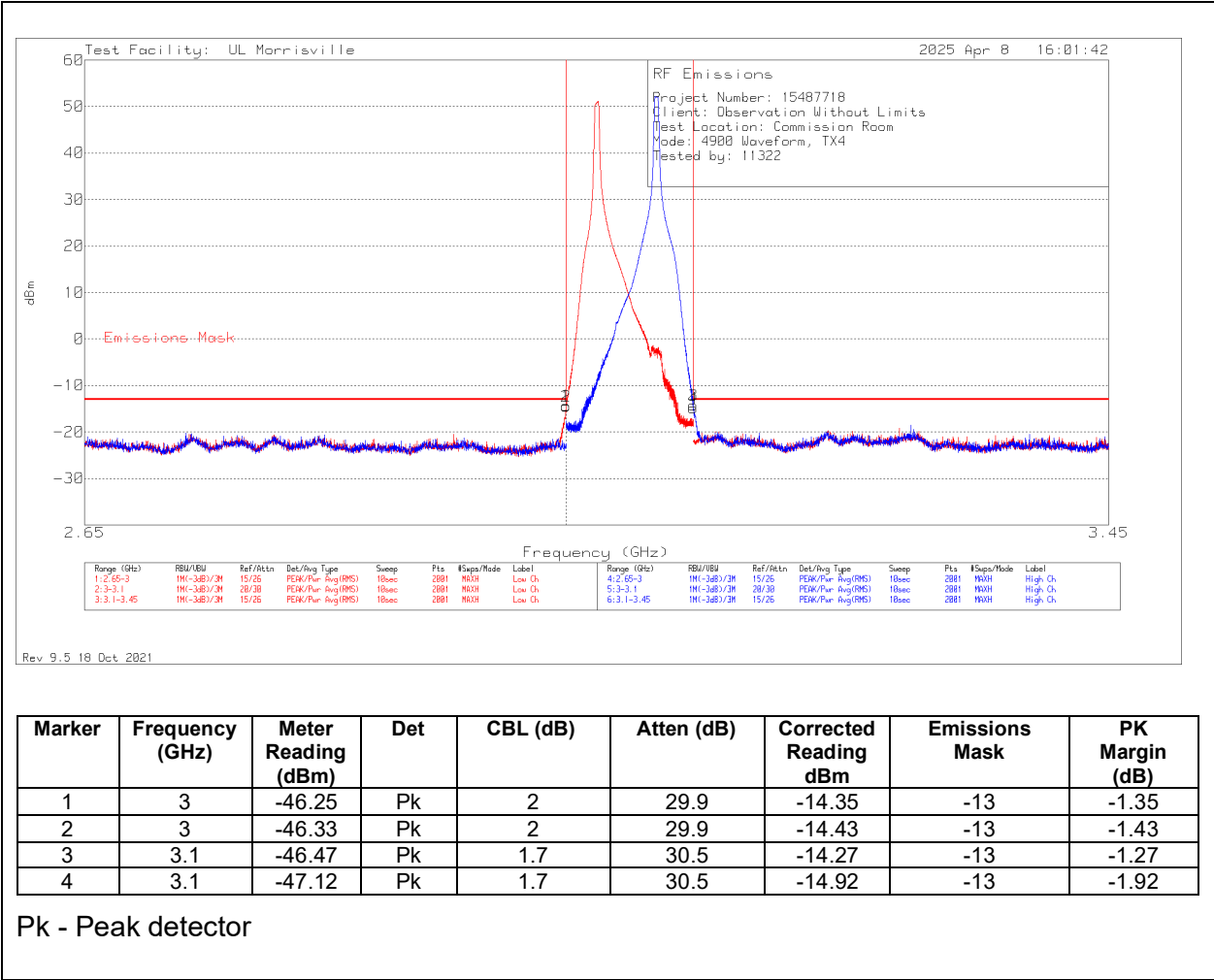
Mode 6 – Low/High Channel



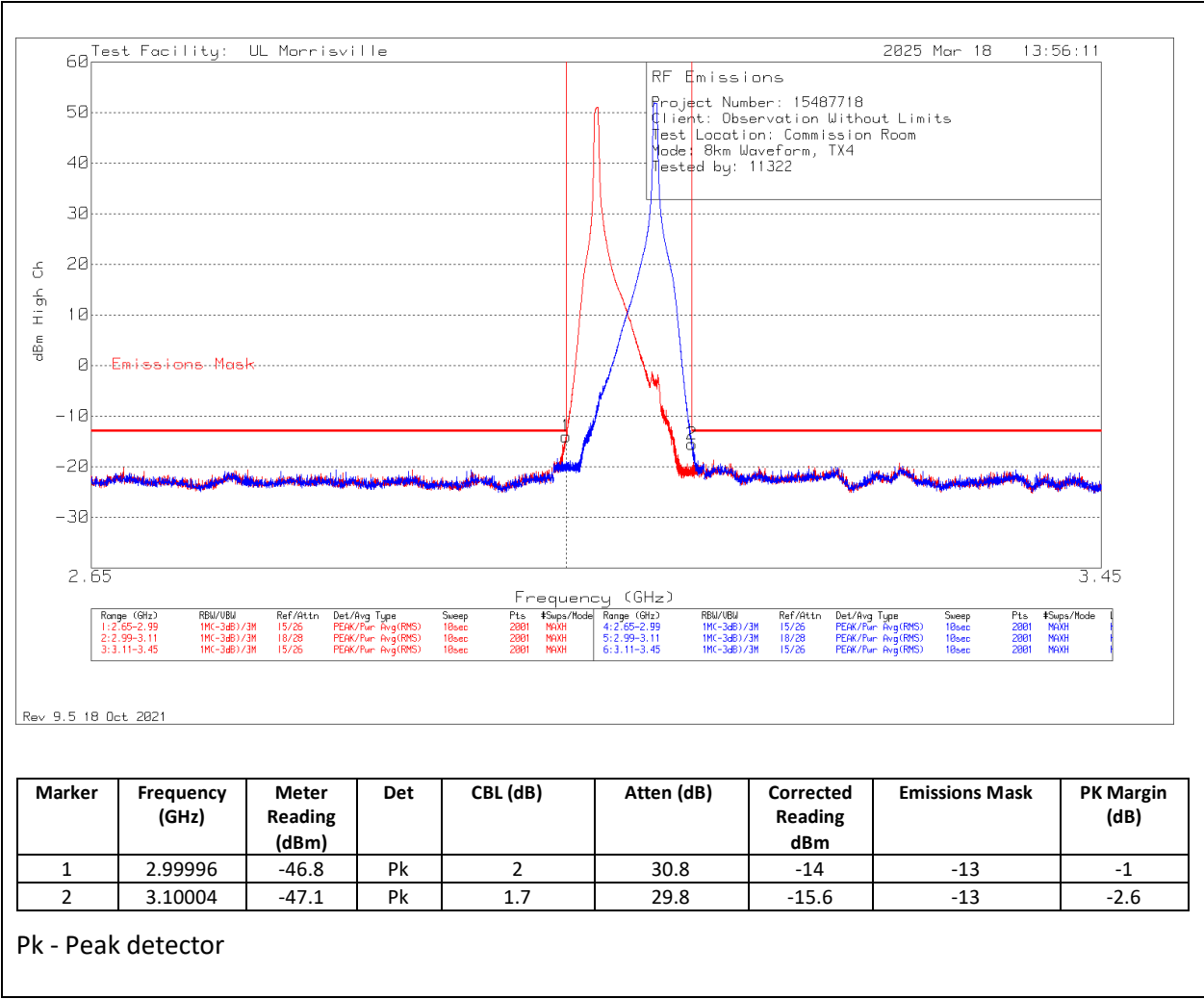
Mode 7 – Low/High Channel



Mode 8 – Low/High Channel



Mode 9 – Low/High Channel



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7.3. OUT OF BAND EMISSIONS

RULE PART(S)

§2.1051 Measurements required: Spurious emissions at antenna terminals.

§2.1053 Measurements required: Field strength of spurious radiation.

§90.210 Emission Masks

Mask of 90.210(b)(3) is met as all emissions are below -13dBc as worst-case limit.

LIMITS

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

TEST PROCEDURE

For antenna port the RF output of the transmitter was connected to a spectrum analyzer through a calibrated coaxial cable. Sufficient scans were taken to show the out-of-band Emissions, if any, up to 10th harmonic. Multiple sweeps were recorded in maximum hold mode using a peak detector to ensure that the worst-case emissions were caught. No emissions were detected above the system noise floor above 18 GHz.

For radiated emissions the radio output was terminated with artificial antenna (50Ohm Load). The measured electric field was converted to an EIRP value using the theoretical relationships given in section 5.2.7 of ANSI C63.26-2015 and is outlined below.

Know

$$(1) \text{ EIRP} = E - 95.2 \text{ (At a measurement distance of 3m.)}$$

Where

EIRP = equivalent isotropically radiated power in dBm

E = electric field in dBuV/m

$$(2) E = AF + V + G/L$$

Where

AF = antenna factor of receive antenna in dB/m.

V = receiver measured voltage in dBuV

G/L = gain-loss string between receive antenna and receiver

$$(3) V \text{ (dBuV)} = W \text{ (dBm)} + 107\text{dB}$$

Combine all the above and get the following:

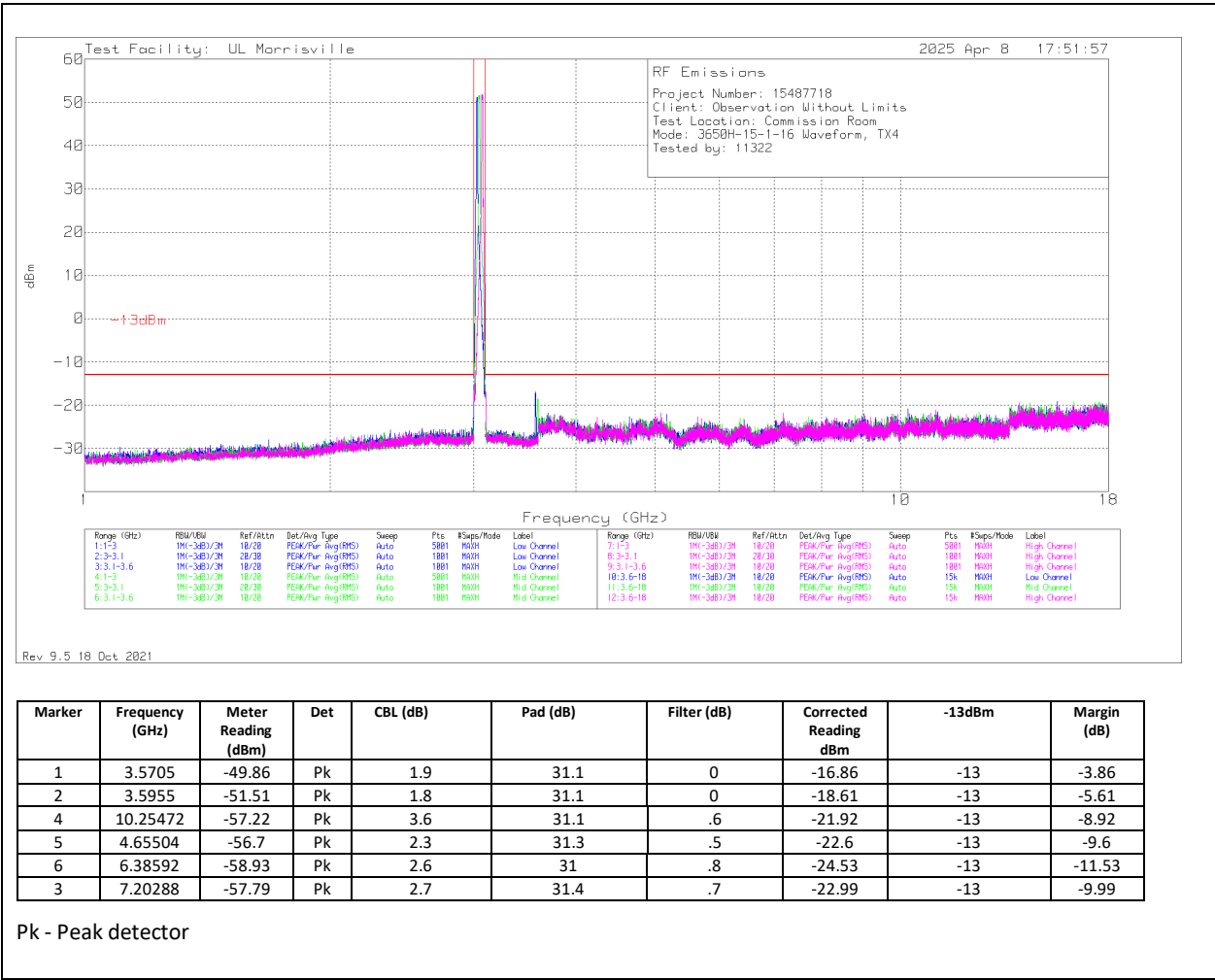
$$\text{EIRP} = (AF + V + G/L) - 95.2 = (AF + (W + 107) + G/L) - 95.2$$

$$\text{EIRP} = AF + V + G/L + 11.8$$

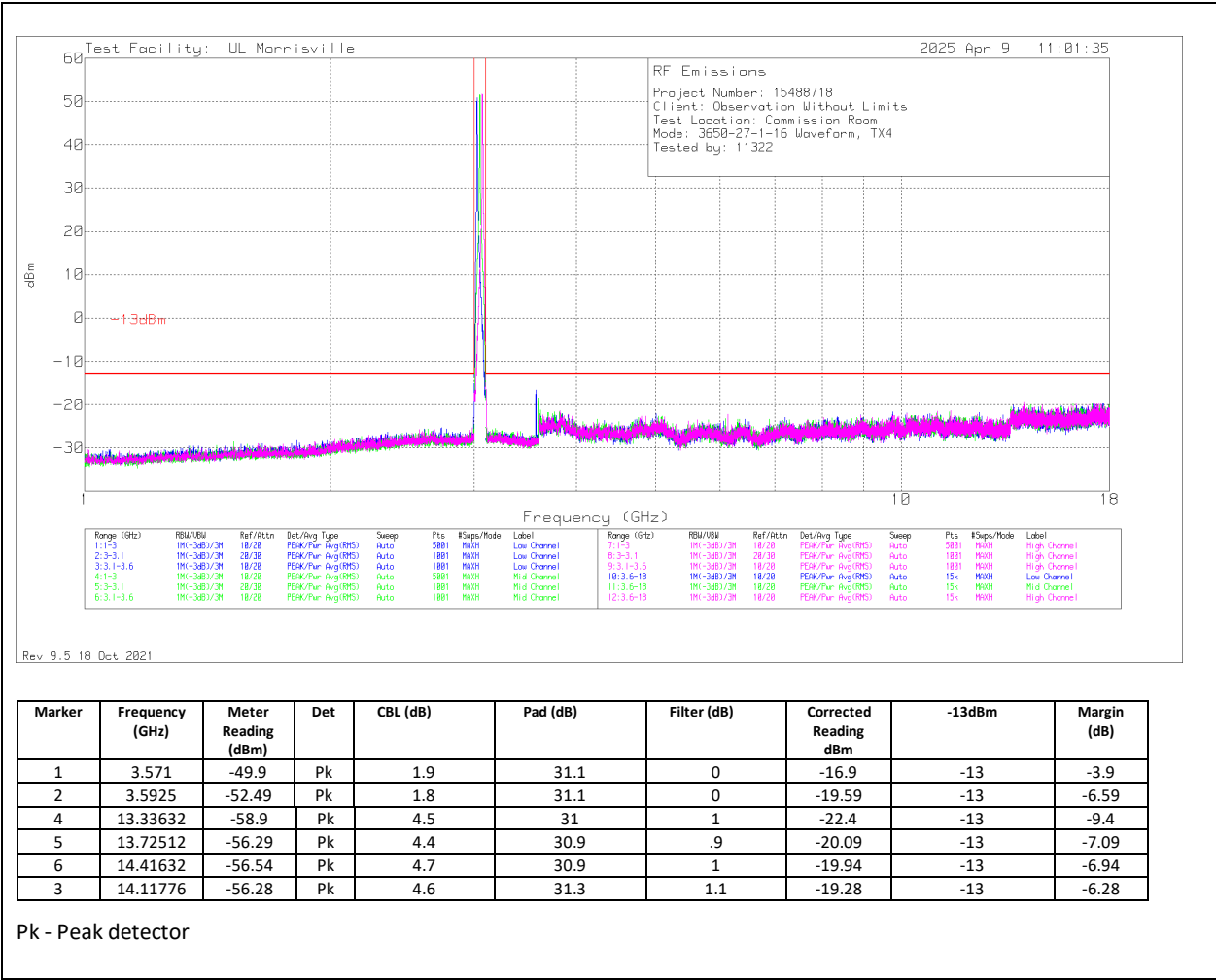
This EIRP value was then compared to the emissions limit of -13dBm.

7.3.1. ANTENNA PORT OUT OF BAND EMISSIONS

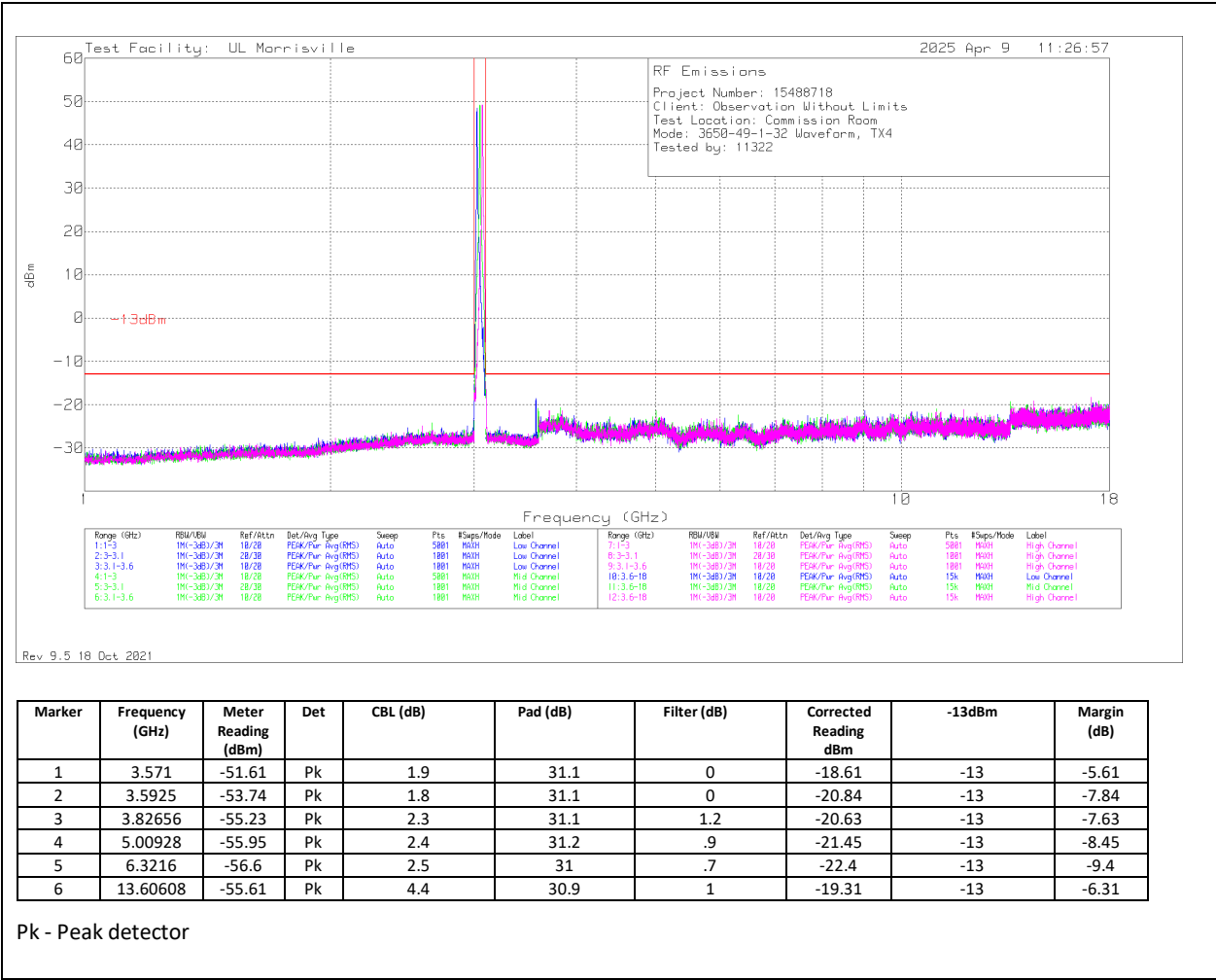
MODE 1 LOW/MID/HIGH CHANNEL 1GHz - 18GHz



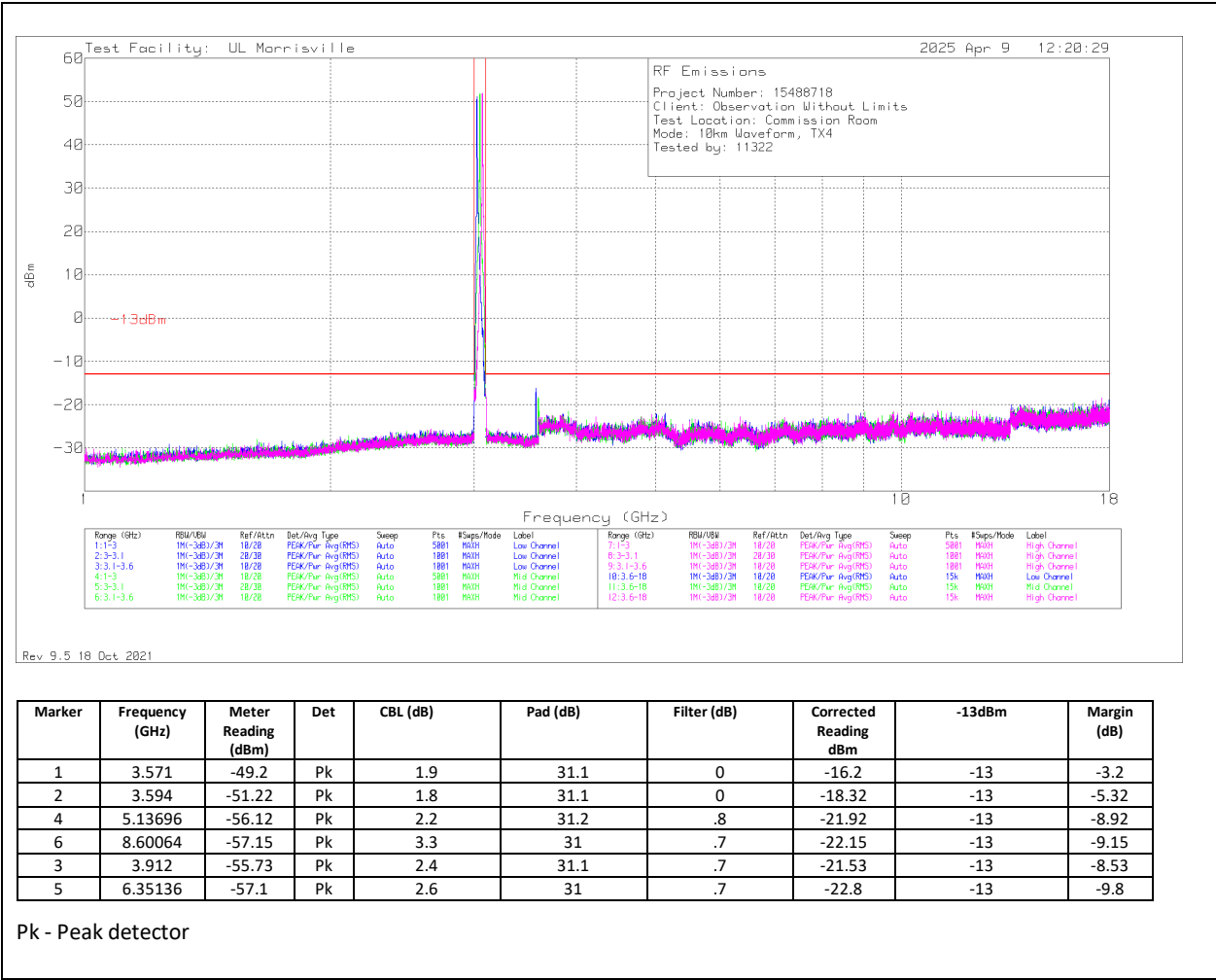
MODE 2 LOW/MID/HIGH CHANNEL 1GHz - 18GHz



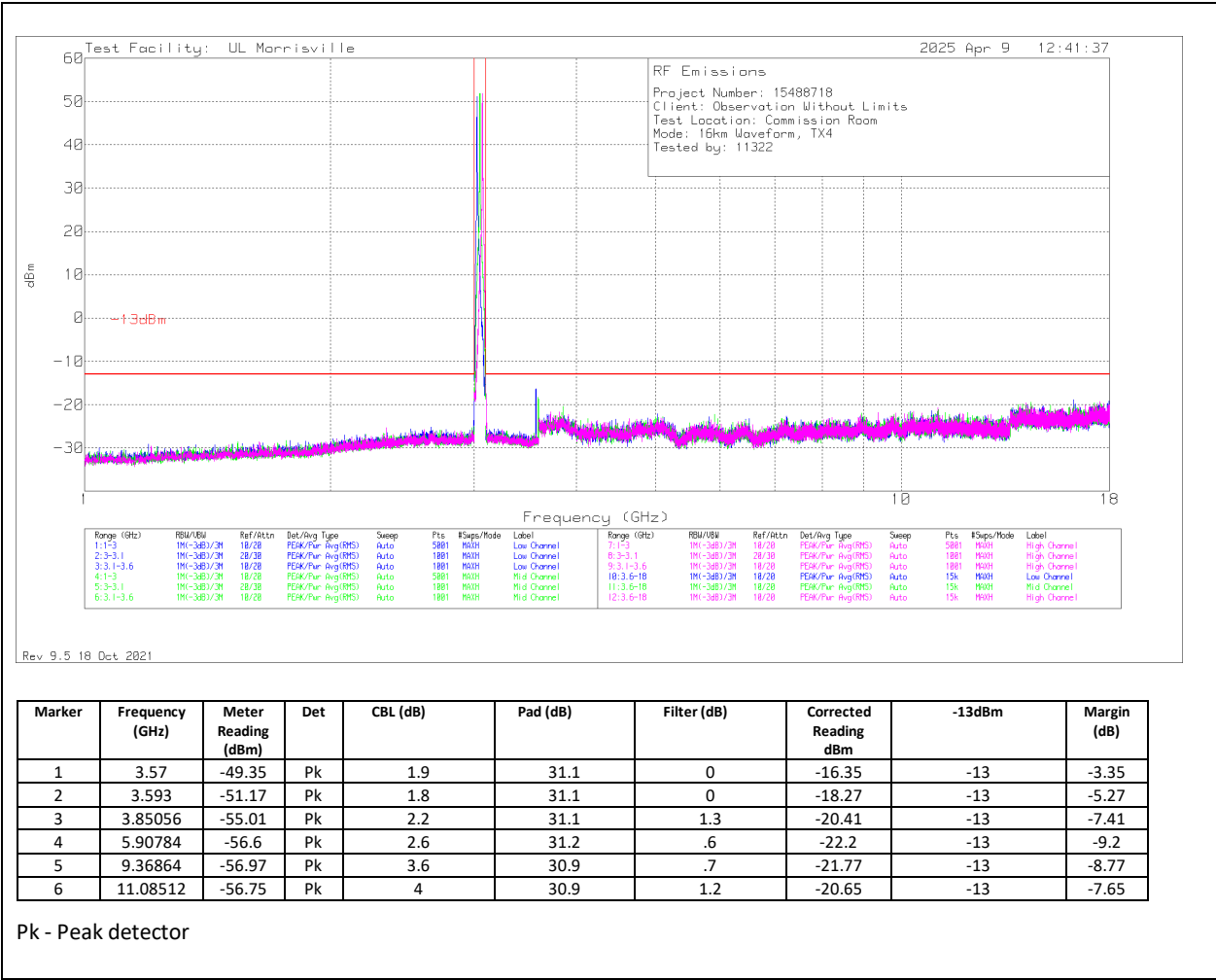
MODE 3 LOW/MID/HIGH CHANNEL 1GHz - 18GHz



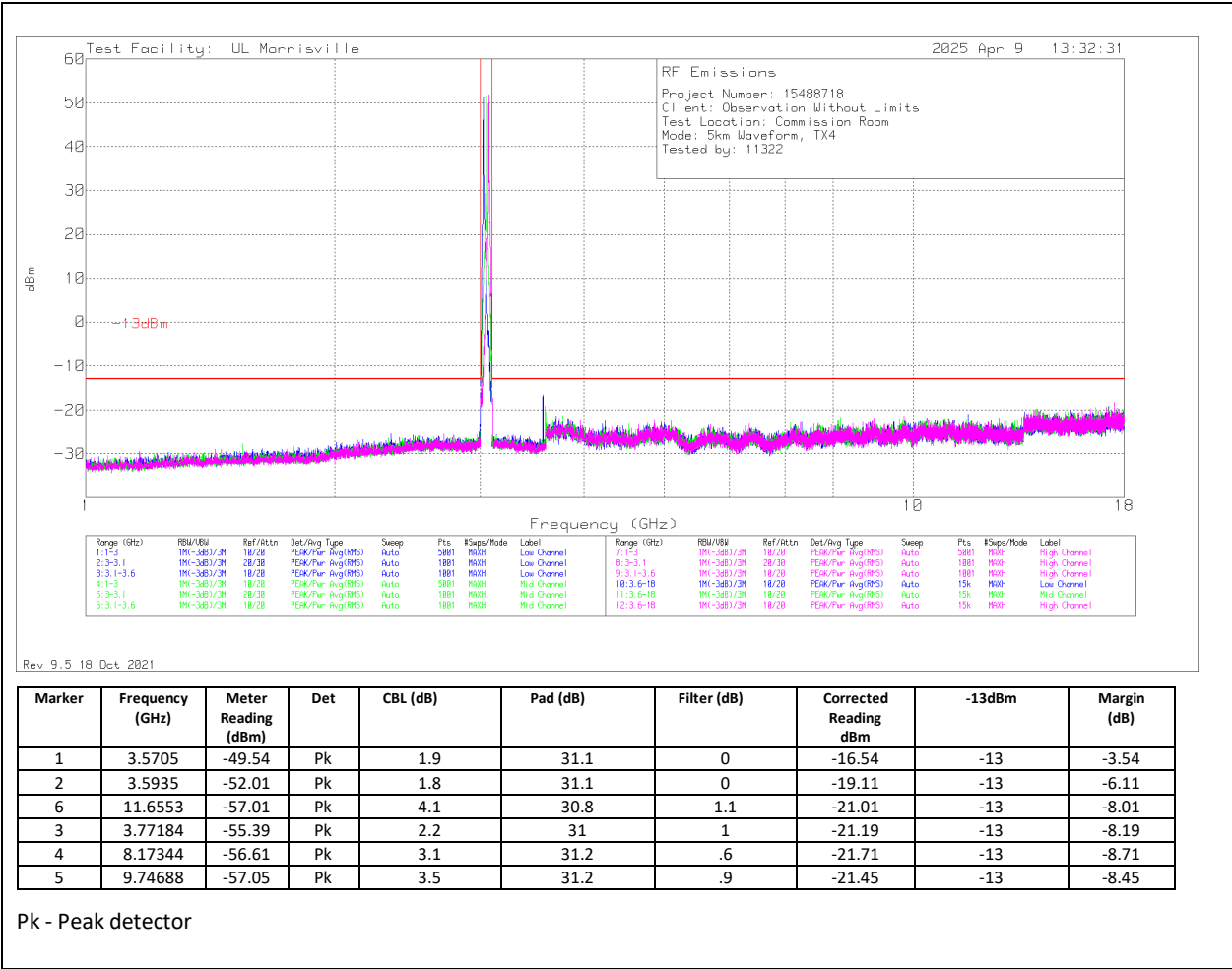
MODE 4 LOW/MID/HIGH CHANNEL 1GHz - 18GHz



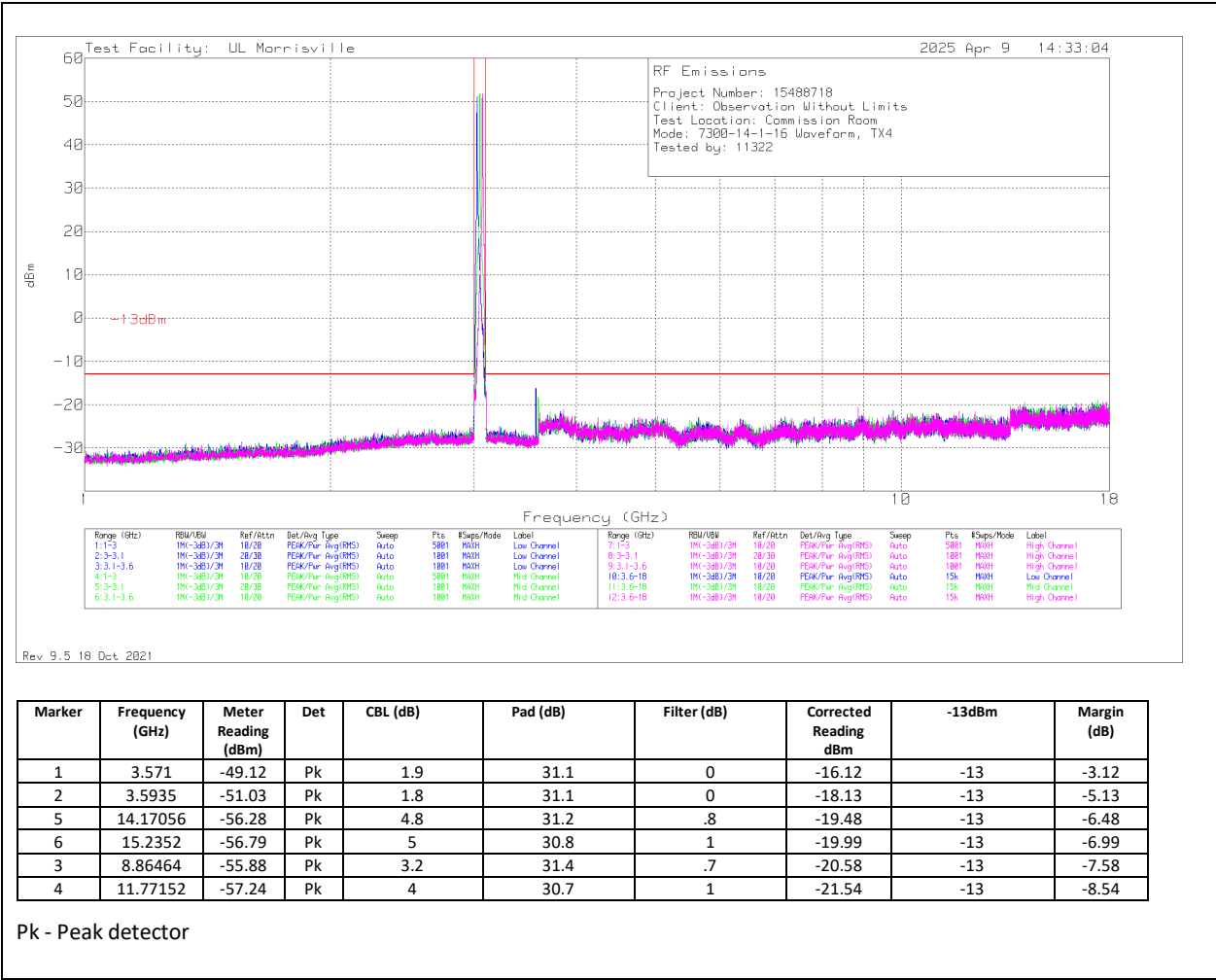
MODE 5 LOW/MID/HIGH CHANNEL 1GHz - 18GHz



MODE 6 LOW/MID/HIGH CHANNEL 1GHz - 18GHz



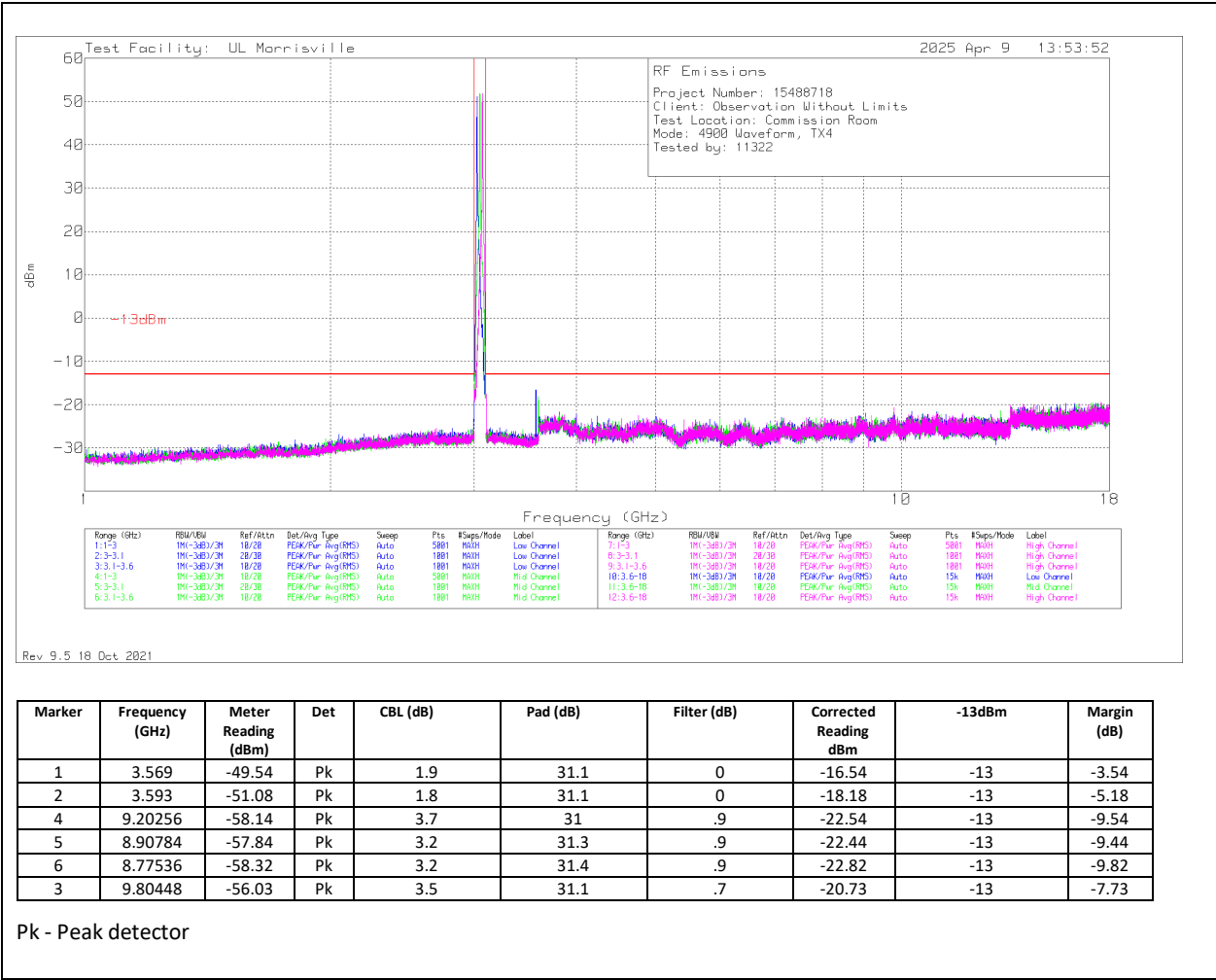
MODE 7 LOW/MID/HIGH CHANNEL 1GHz - 18GHz



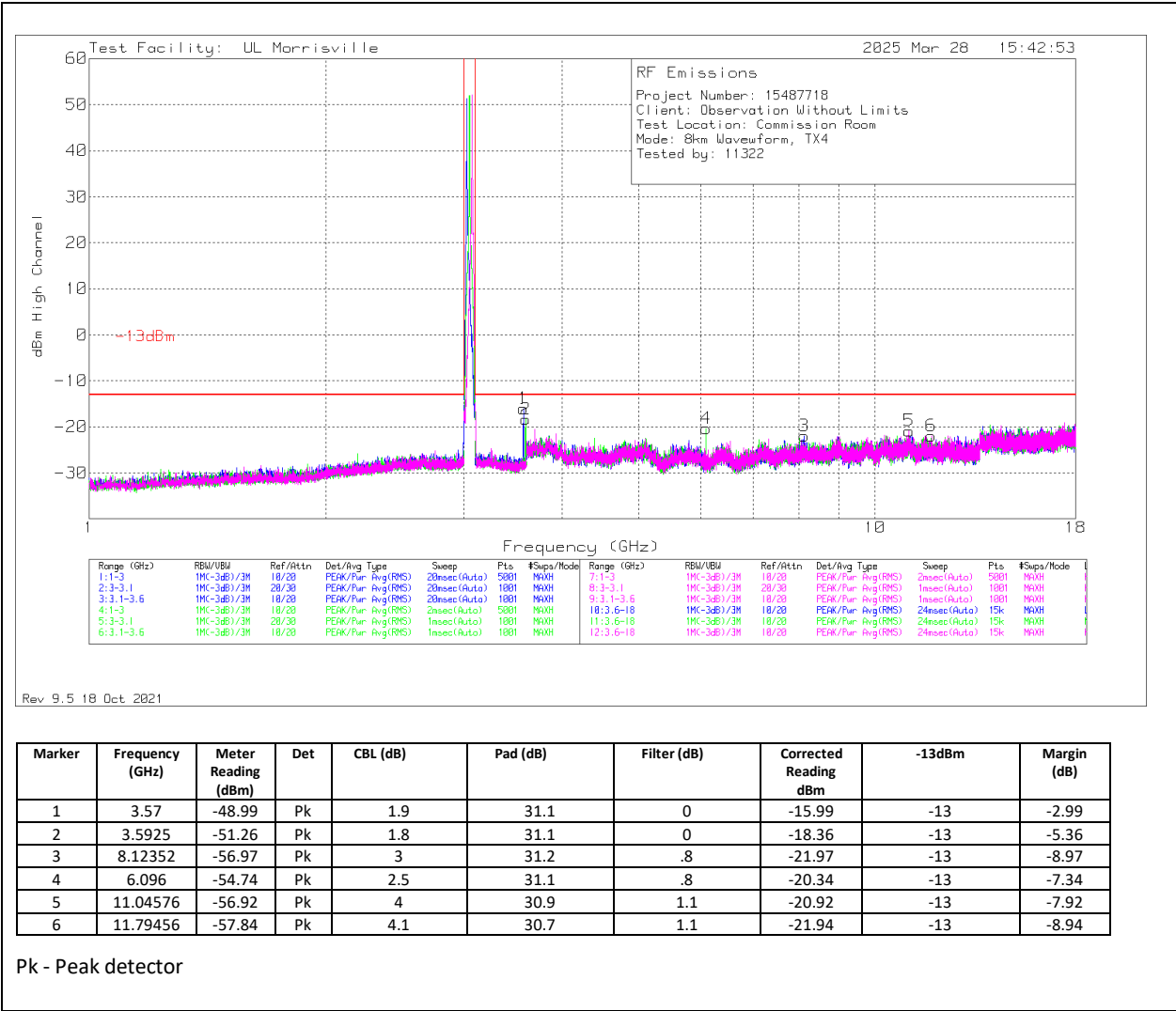
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MODE 8 LOW/MID/HIGH CHANNEL 1GHz - 18GHz

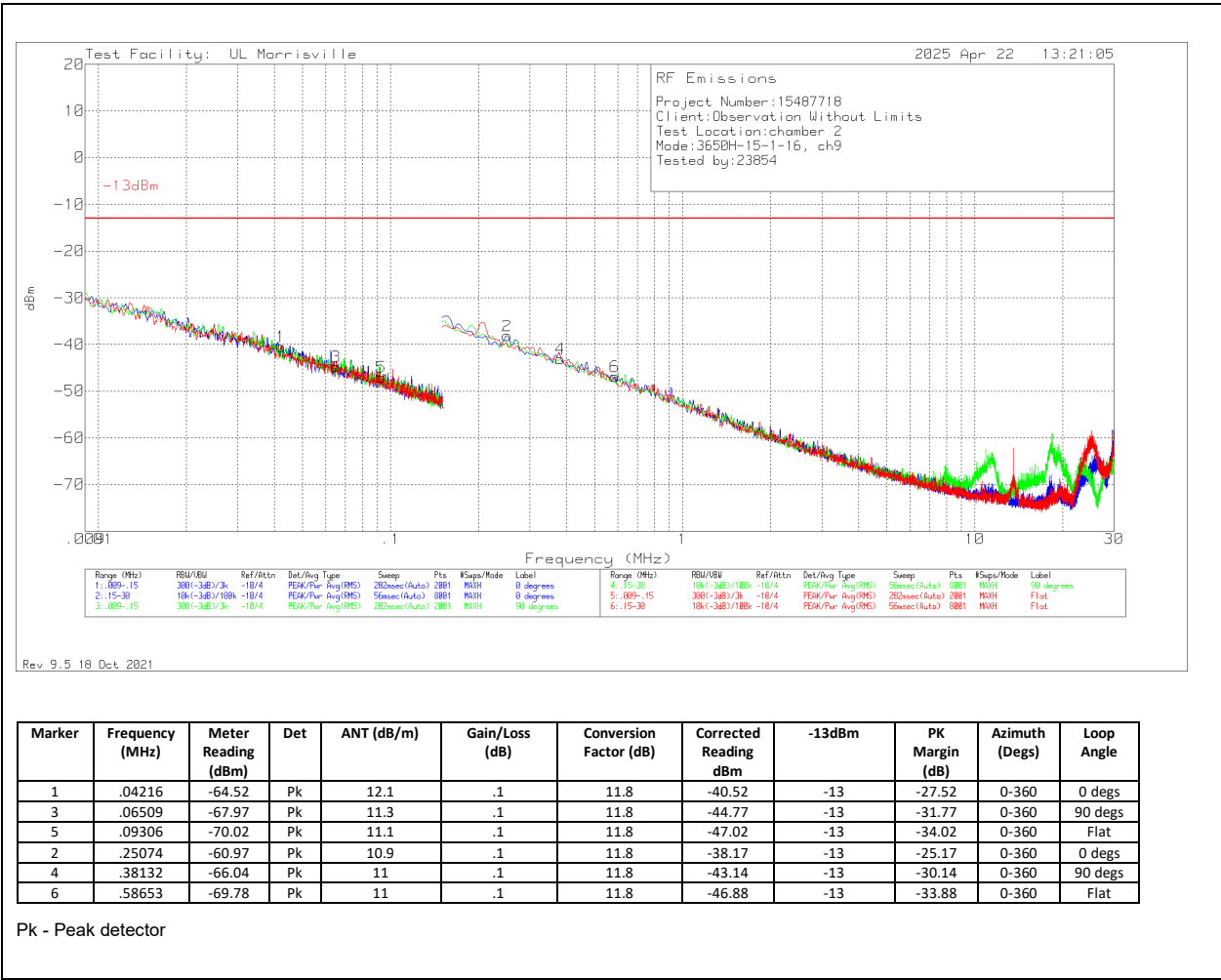


MODE 9 LOW/MID/HIGH CHANNEL 1GHz - 18GHz

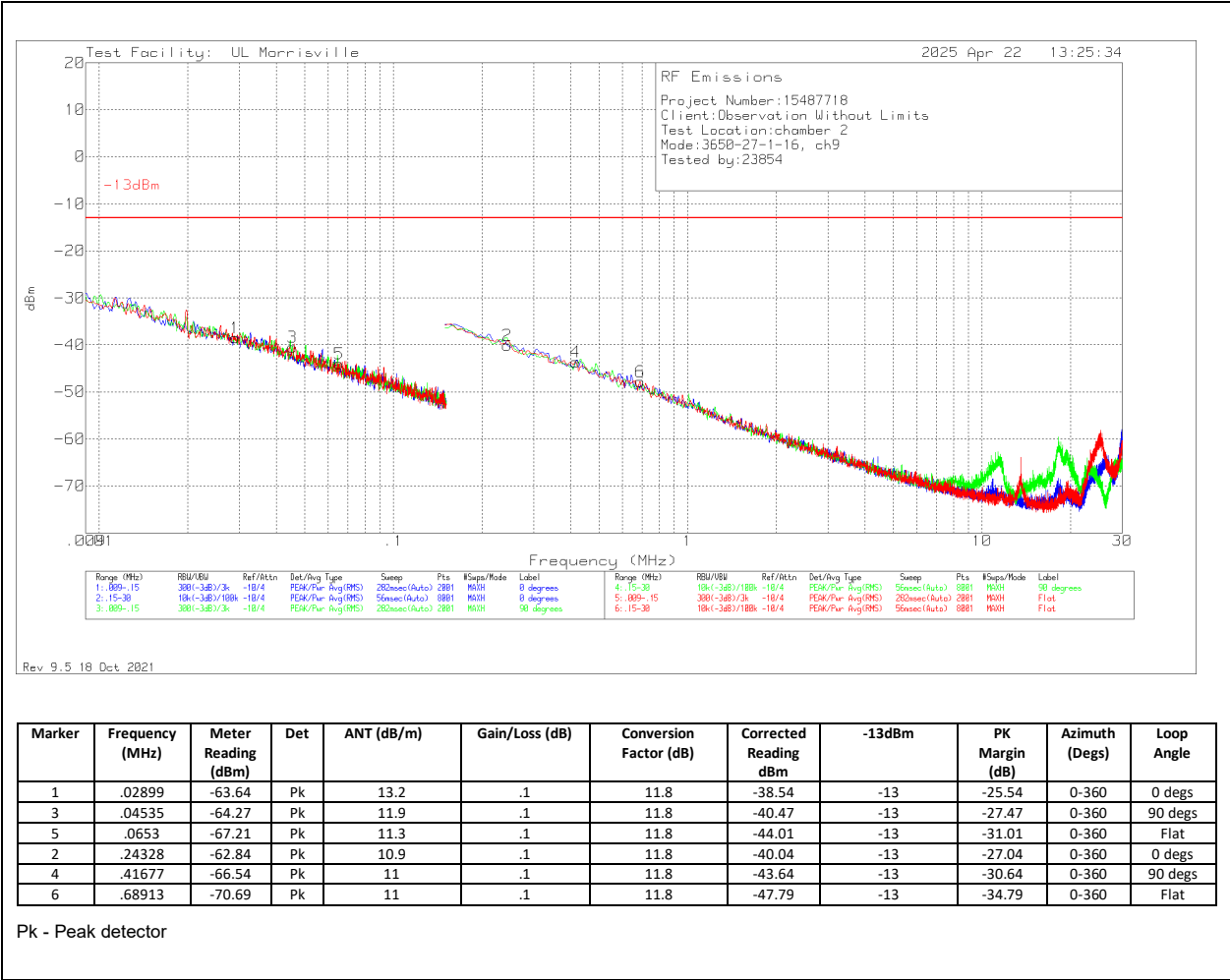


7.3.2. RADIATED ENCLOSURE PORT OUT OF BAND EMISSIONS

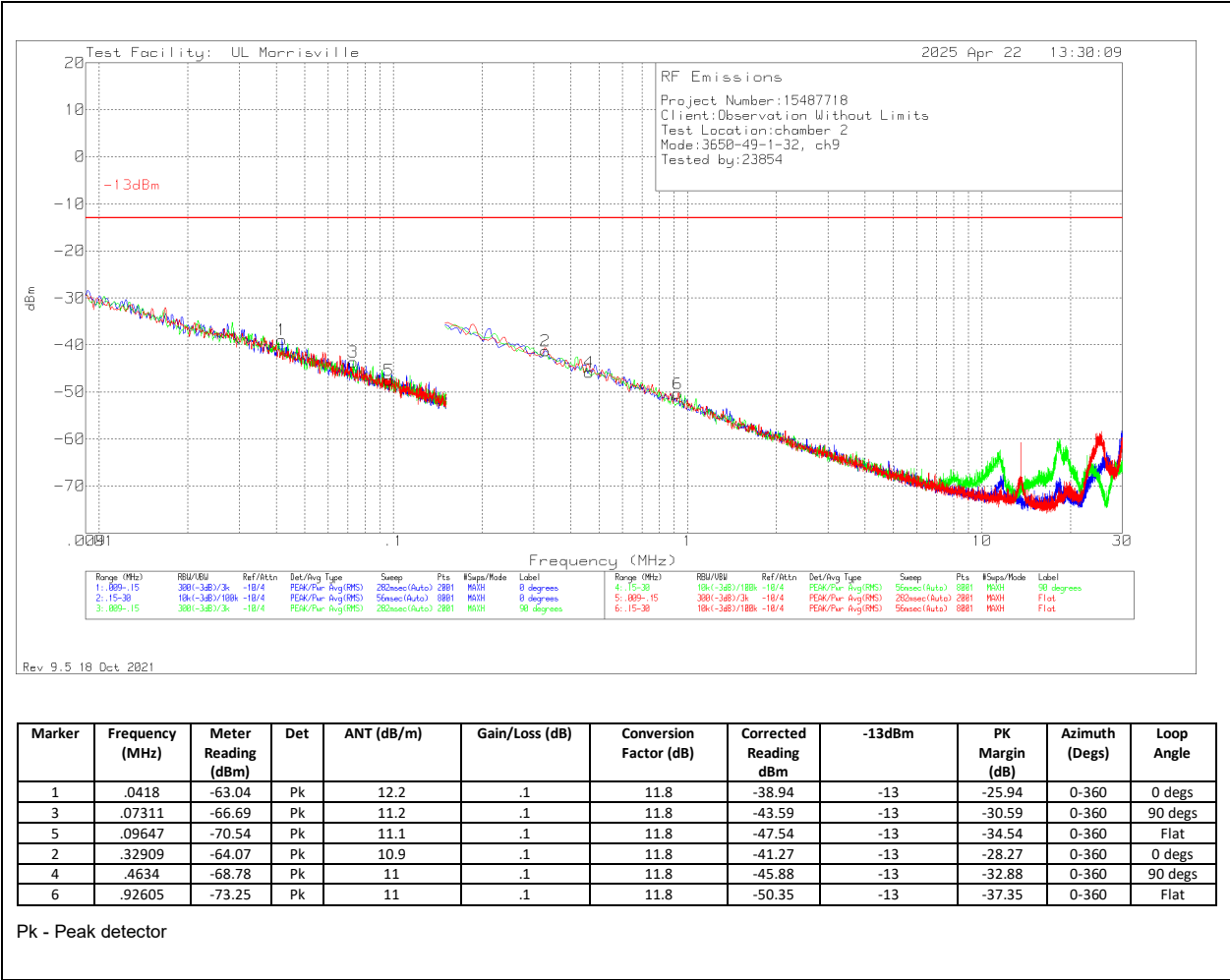
MODE 1 WORST-CASE <30MHz



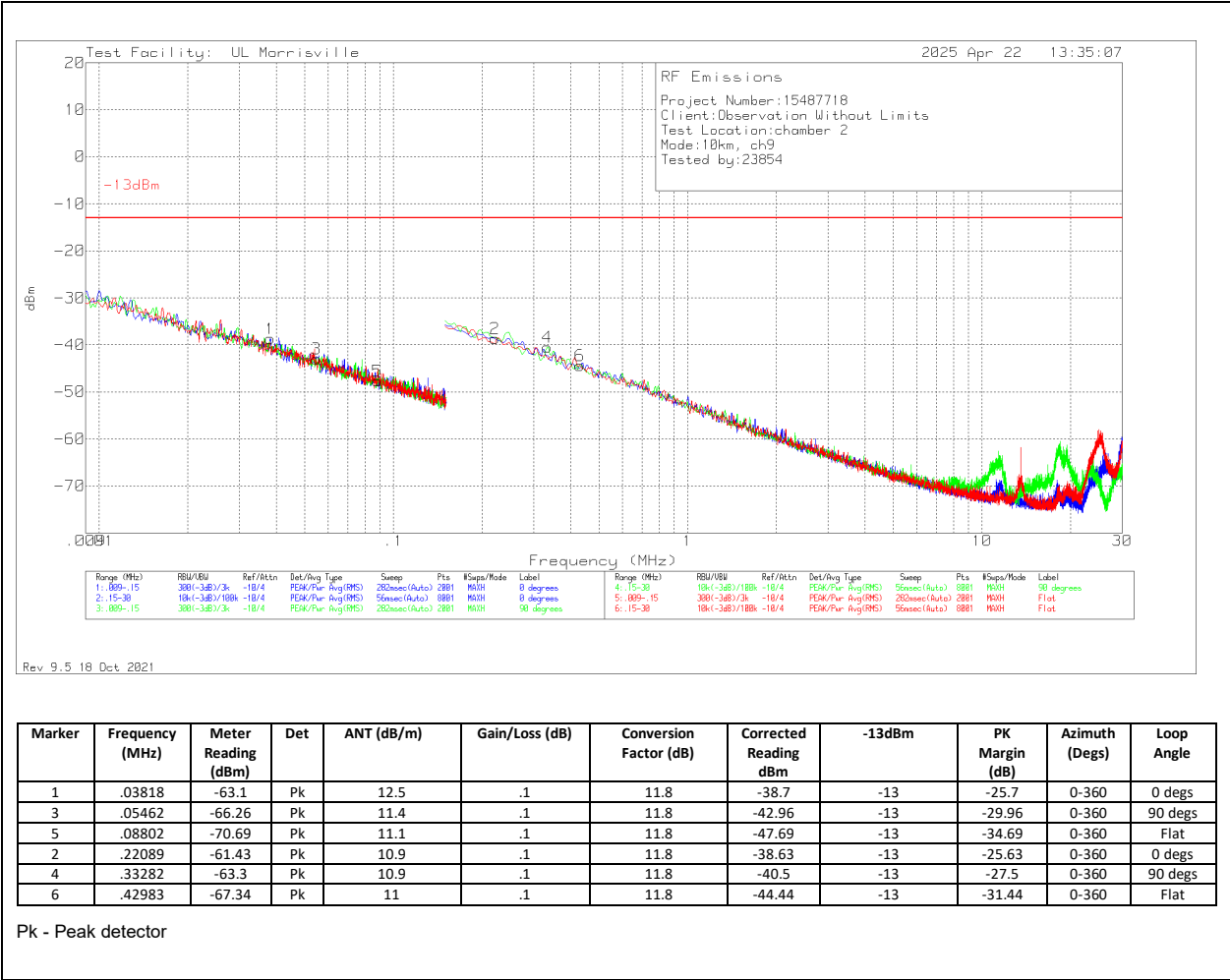
MODE 2 WORST-CASE <30MHz



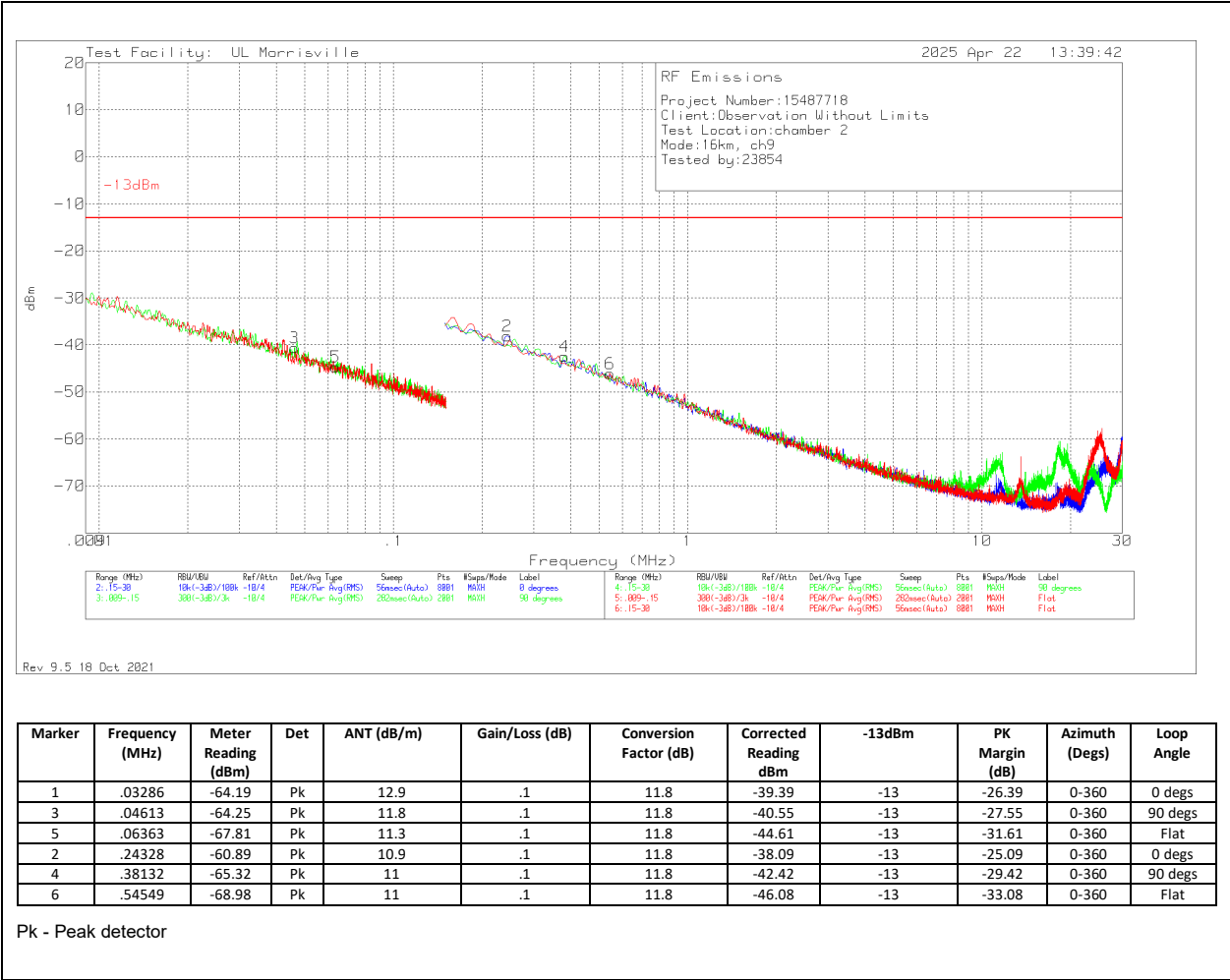
MODE 3 WORST-CASE <30MHz



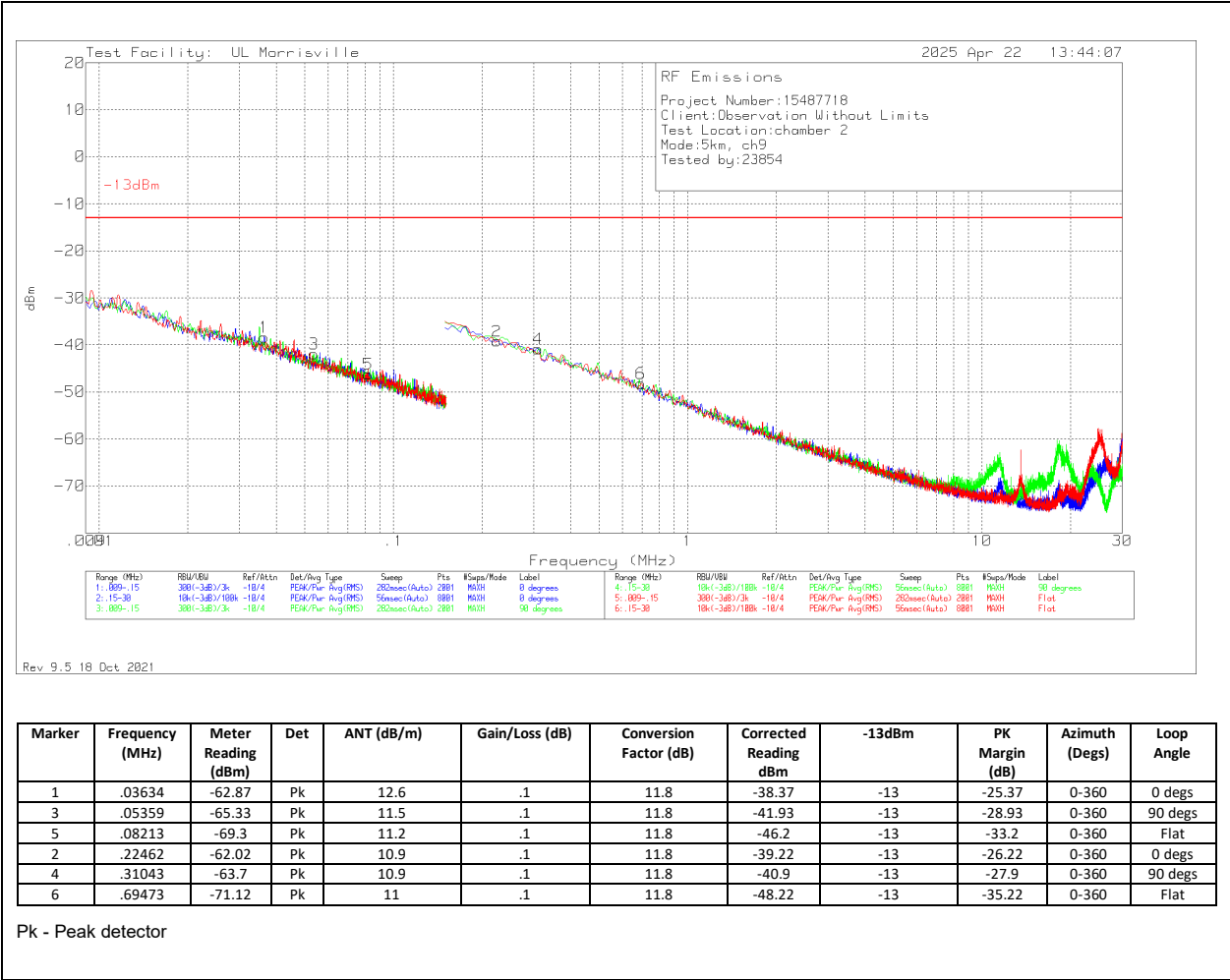
MODE 4 WORST-CASE <30MHz



MODE 5 WORST-CASE <30MHz



MODE 6 WORST-CASE <30MHz



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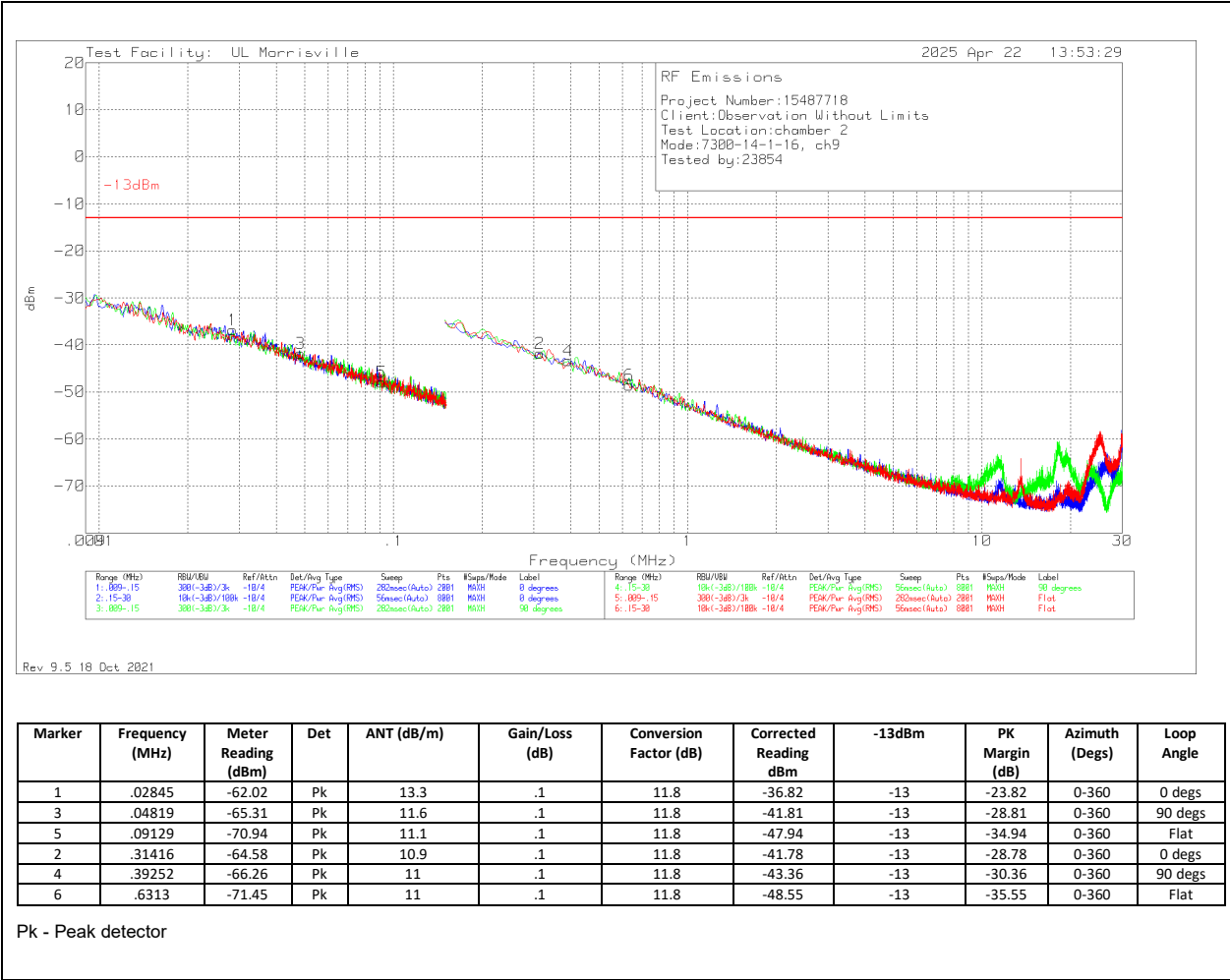
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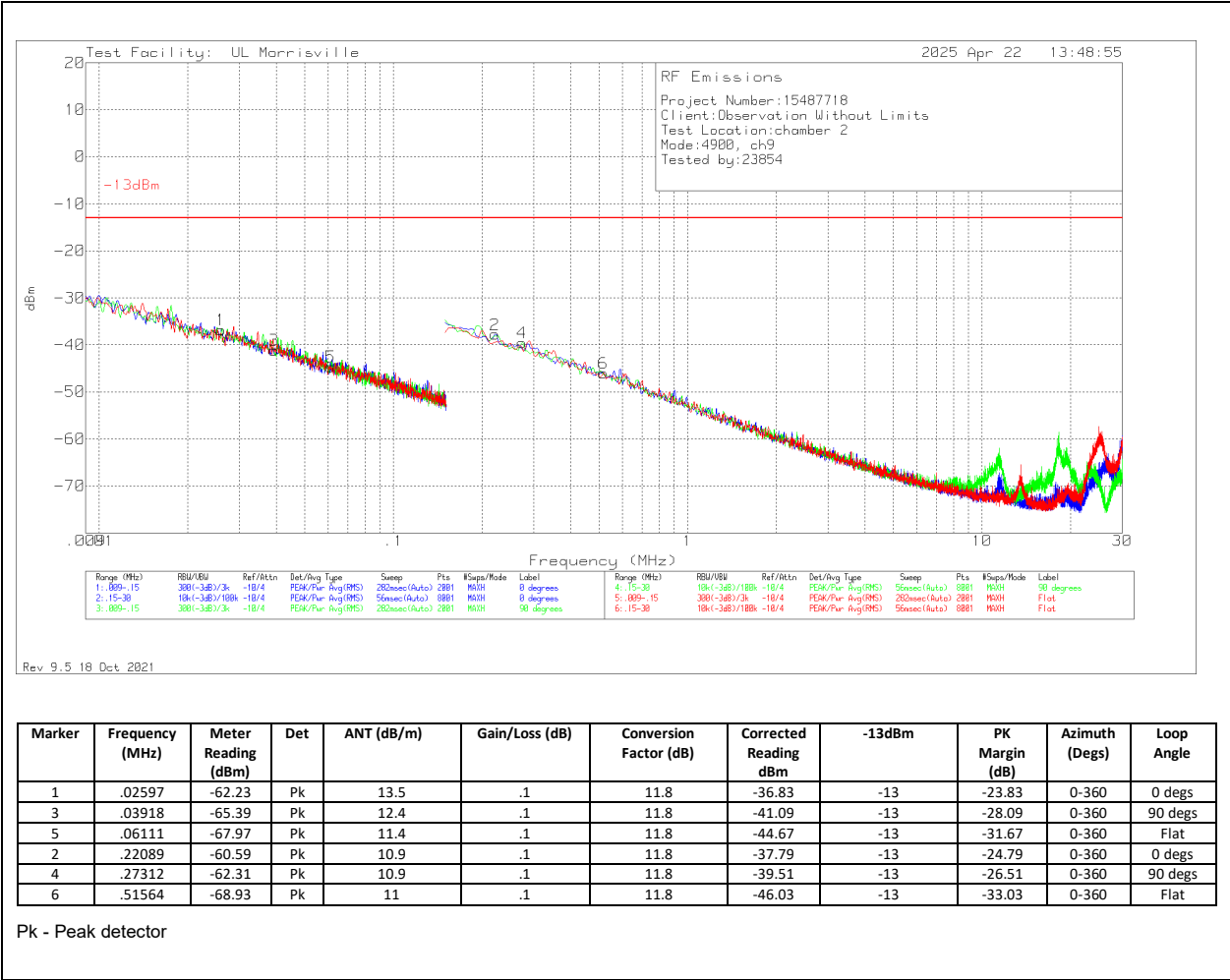
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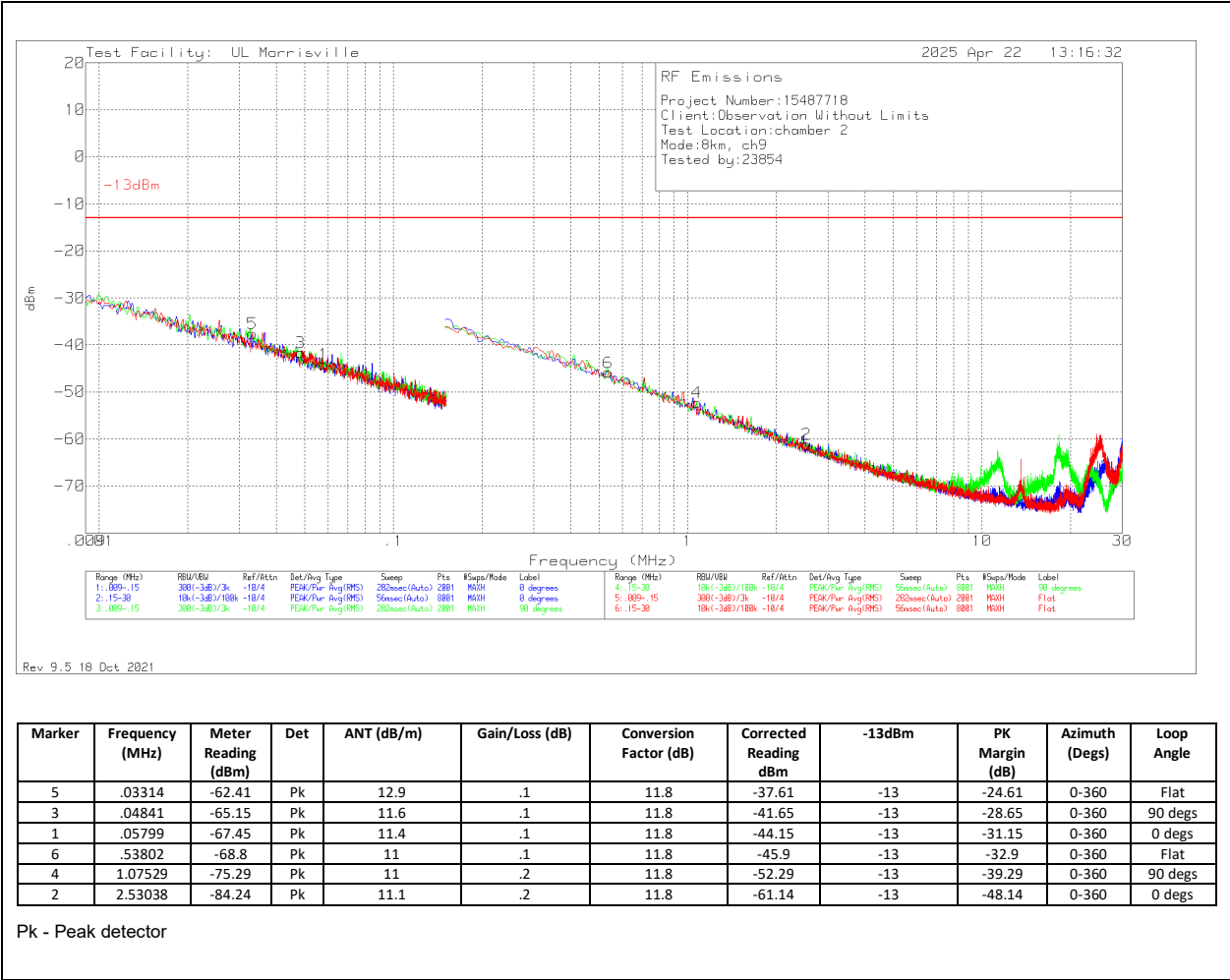
MODE 7 WORST-CASE <30MHz



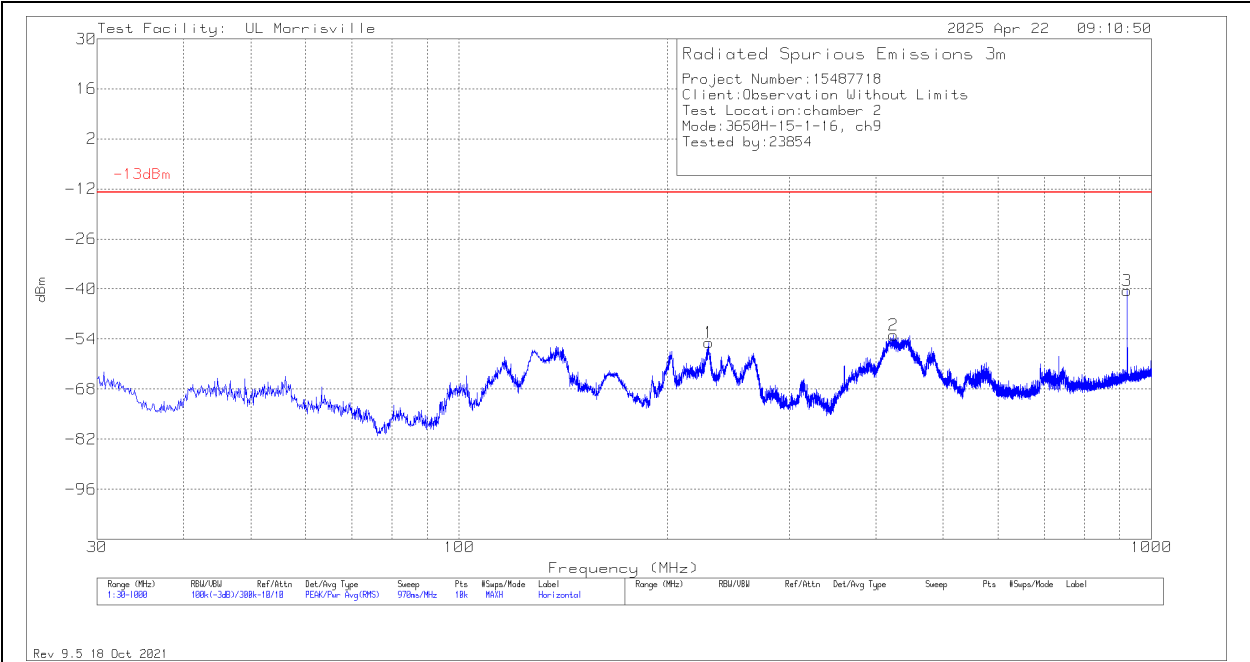
MODE 8 WORST-CASE <30MHz



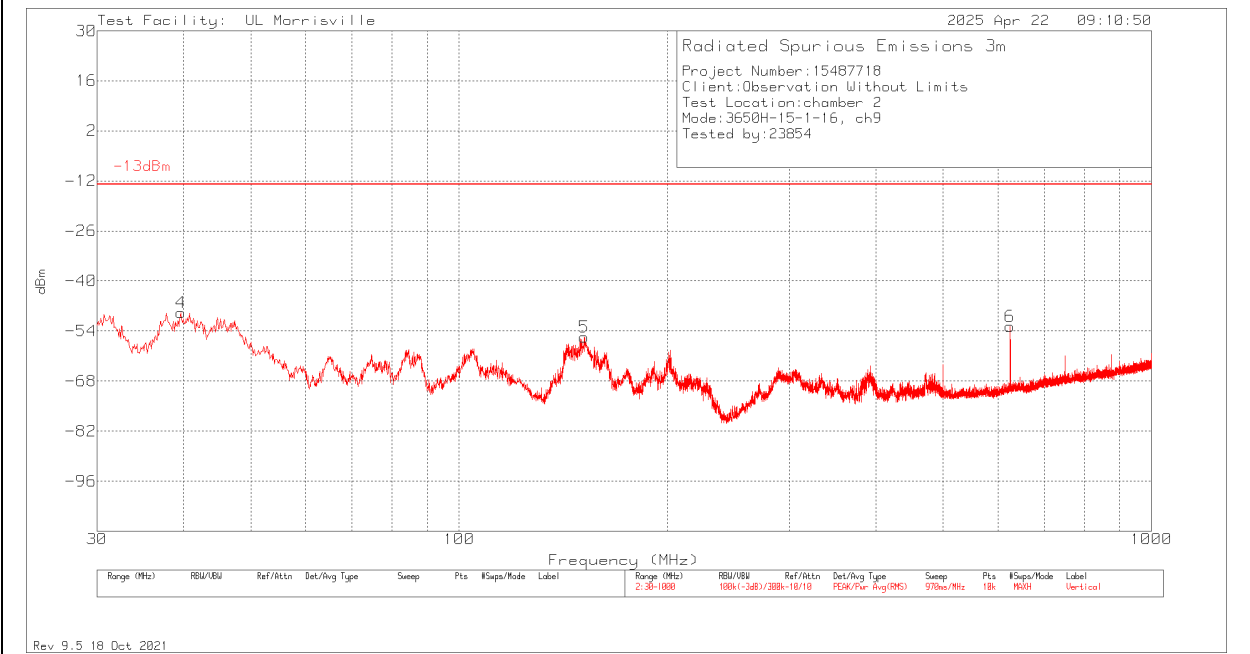
MODE 9 WORST-CASE <30MHz



MODE 1 WORST-CASE 30-1000 MHz



Horizontal

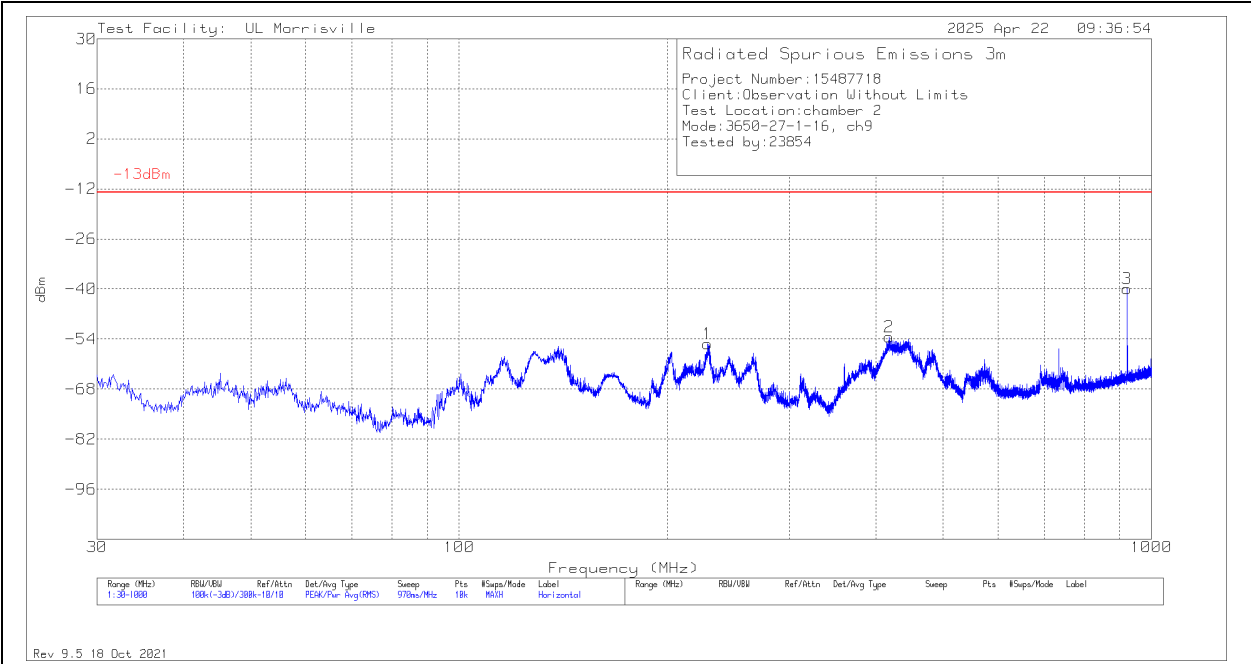


Vertical

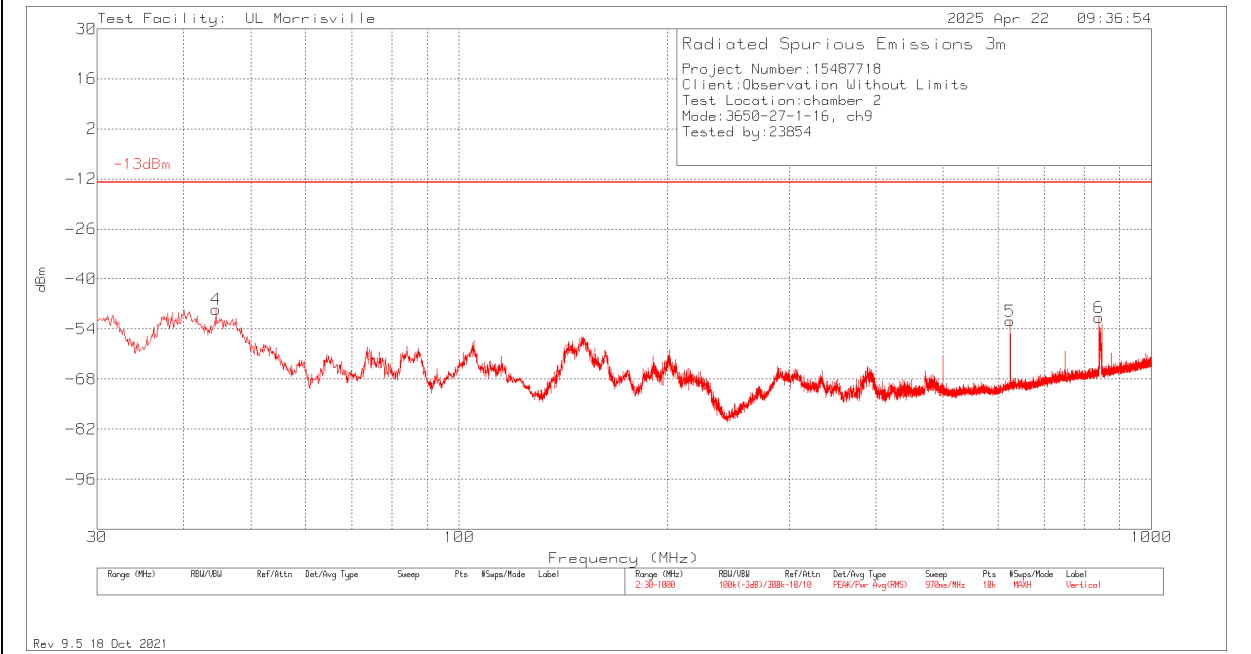
Marker	Frequency (MHz)	Meter Reading (dBm)	Det	159203 (dB/m)	Gain/Loss (dB)	Filter (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	39.603	-49.84	Pk	20.6	-31.5	.1	11.8	-48.84	-13	-35.84	0-360	100	V
5	151.638	-56.32	Pk	19	-30.4	.3	11.8	-55.62	-13	-42.62	0-360	100	V
1	229.141	-54.92	Pk	17.6	-29.8	.3	11.8	-55.02	-13	-42.02	0-360	199	H
2	423.626	-59.16	Pk	22.9	-28.7	.3	11.8	-52.86	-13	-39.86	0-360	101	H
6	625.095	-62.97	Pk	26	-27.9	.4	11.8	-52.67	-13	-39.67	0-360	100	V
3	922.594	-55.78	Pk	29.1	-26	.5	11.8	-40.38	-13	-27.38	0-360	101	H

Pk - Peak detector

MODE 2 WORST-CASE 30-1000 MHz



Horizontal

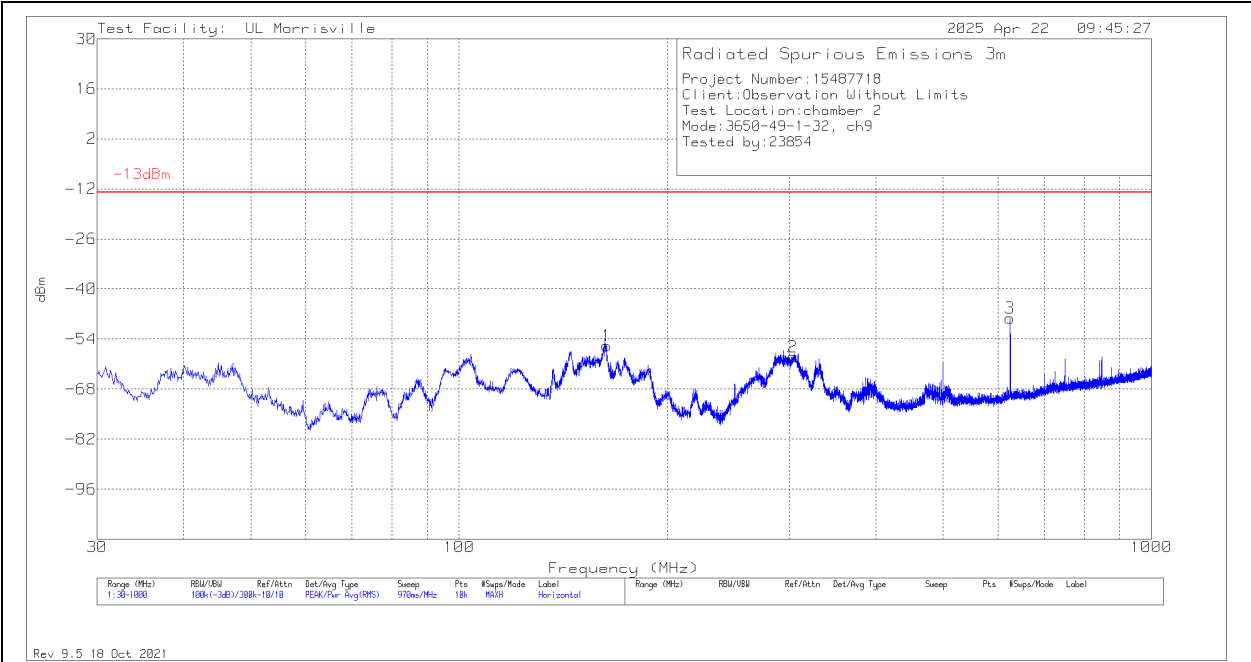


Vertical

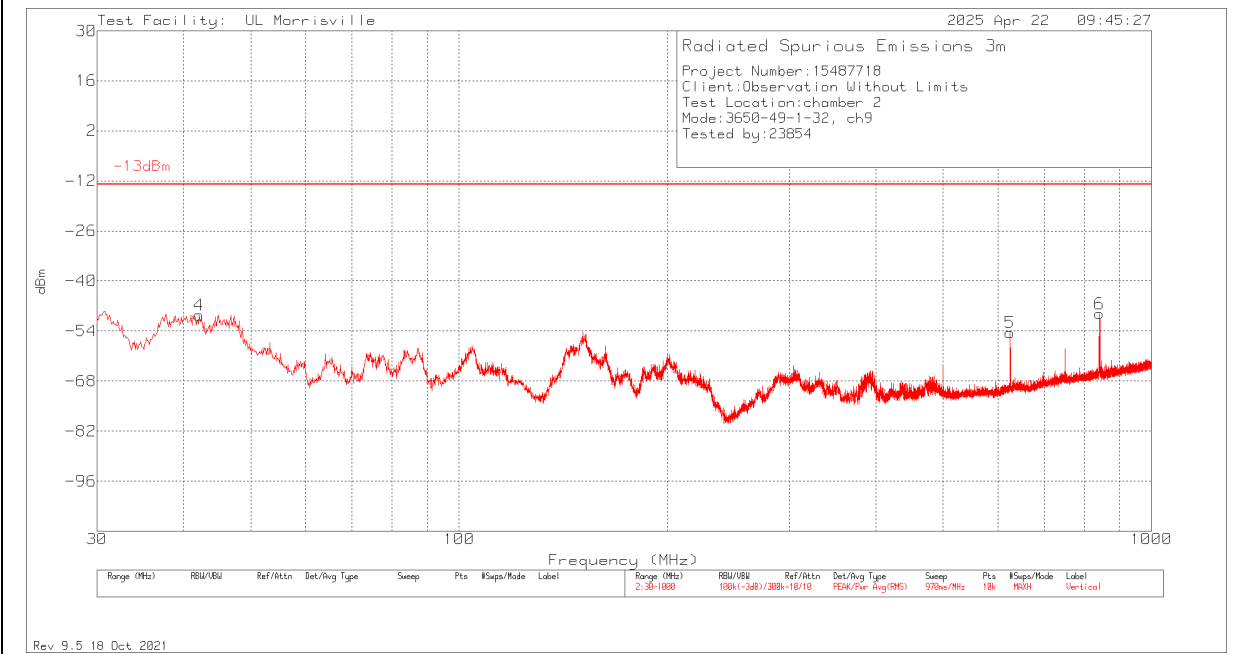
Marker	Frequency (MHz)	Meter Reading (dBm)	Det	159203 (dB/m)	Gain/Loss (dB)	Filter (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	44.55	-45.91	Pk	17	-31.5	1	11.8	-48.51	-13	-35.51	0-360	100	V
1	228.462	-55.17	Pk	17.5	-29.7	3	11.8	-55.27	-13	-42.27	0-360	199	H
2	417.903	-59.68	Pk	22.8	-28.6	3	11.8	-53.38	-13	-40.38	0-360	101	H
5	625.095	-62.05	Pk	26	-27.9	4	11.8	-51.75	-13	-38.75	0-360	100	V
6	839.853	-64.75	Pk	28.5	-26.7	4	11.8	-50.75	-13	-37.75	0-360	100	V
3	922.594	-55.26	Pk	29.1	-26	5	11.8	-39.86	-13	-26.86	0-360	101	H

Pk - Peak detector

MODE 3 WORST-CASE 30-1000 MHz



Horizontal

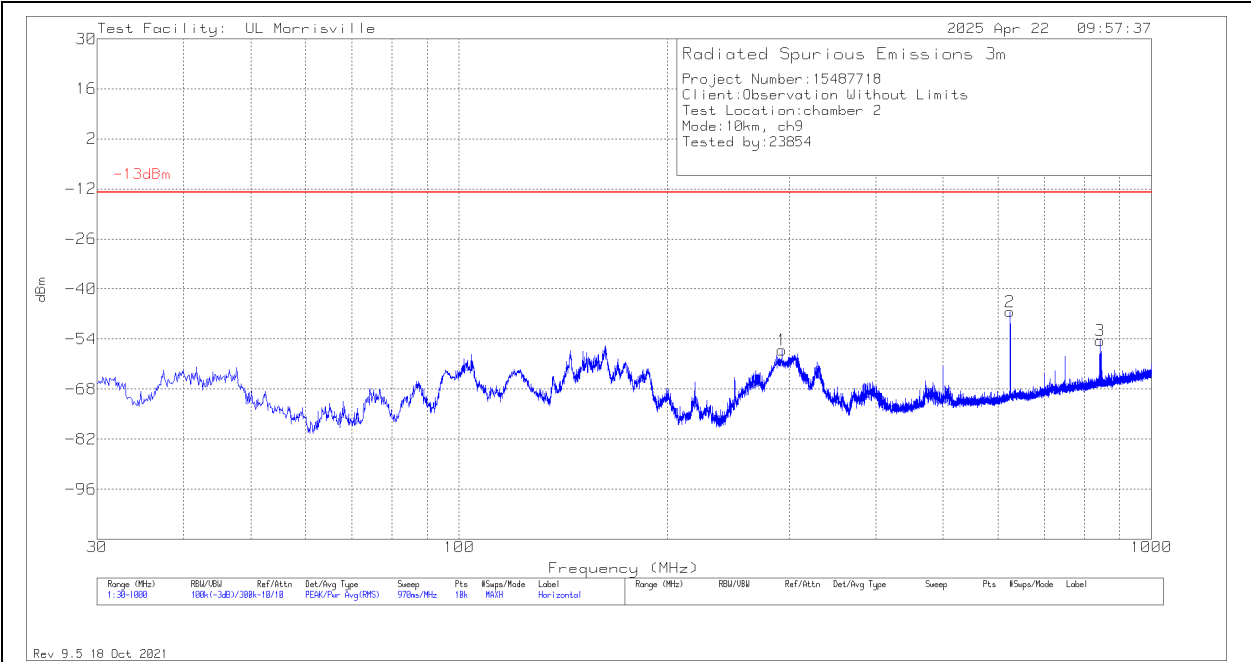


Vertical

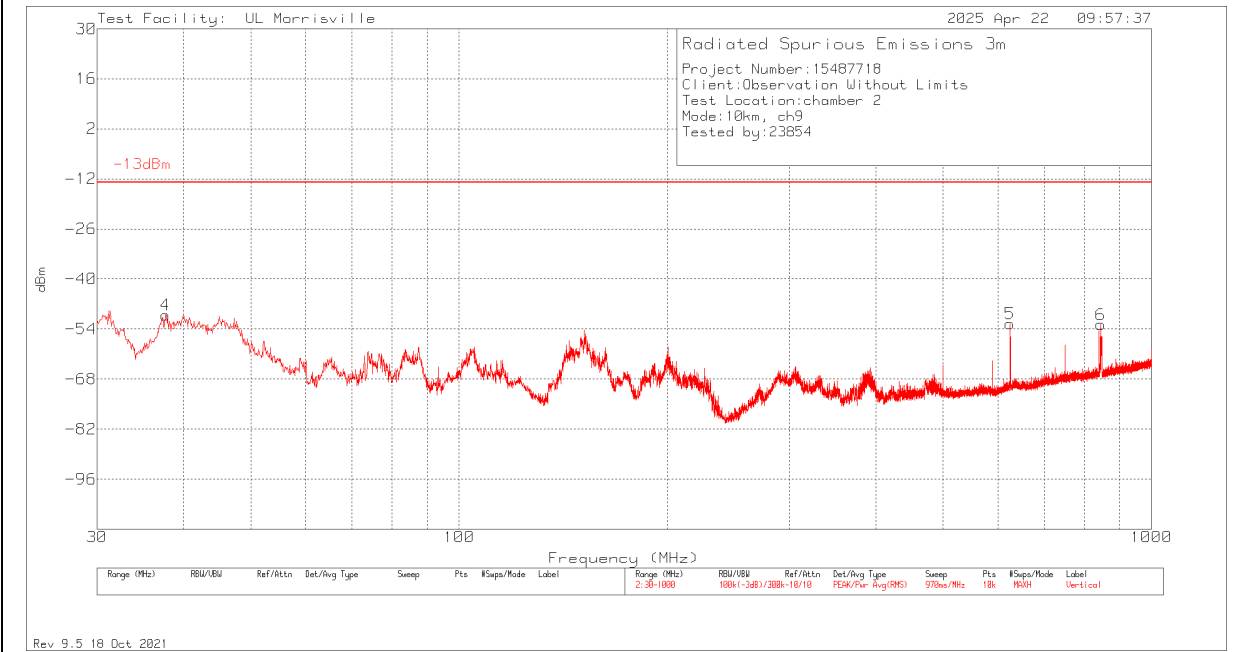
Marker	Frequency (MHz)	Meter Reading (dBm)	Det	159203 (dB/m)	Gain/Loss (dB)	Filter (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	42.125	-48.71	Pk	18.7	-31.4	1	11.8	-49.51	-13	-36.51	0-360	100	V
1	163.278	-56.53	Pk	18.6	-30.2	4	11.8	-55.93	-13	-42.93	0-360	199	H
2	303.346	-61.72	Pk	20	-29.3	2	11.8	-59.02	-13	-46.02	0-360	100	H
3	624.998	-58.46	Pk	26	-27.9	4	11.8	-48.16	-13	-35.16	0-360	100	H
5	625.095	-64.76	Pk	26	-27.9	4	11.8	-54.46	-13	-41.46	0-360	100	V
6	841.793	-63.22	Pk	28.5	-26.7	5	11.8	-49.12	-13	-36.12	0-360	100	V

Pk - Peak detector

MODE 4 WORST-CASE 30-1000 MHz



Horizontal

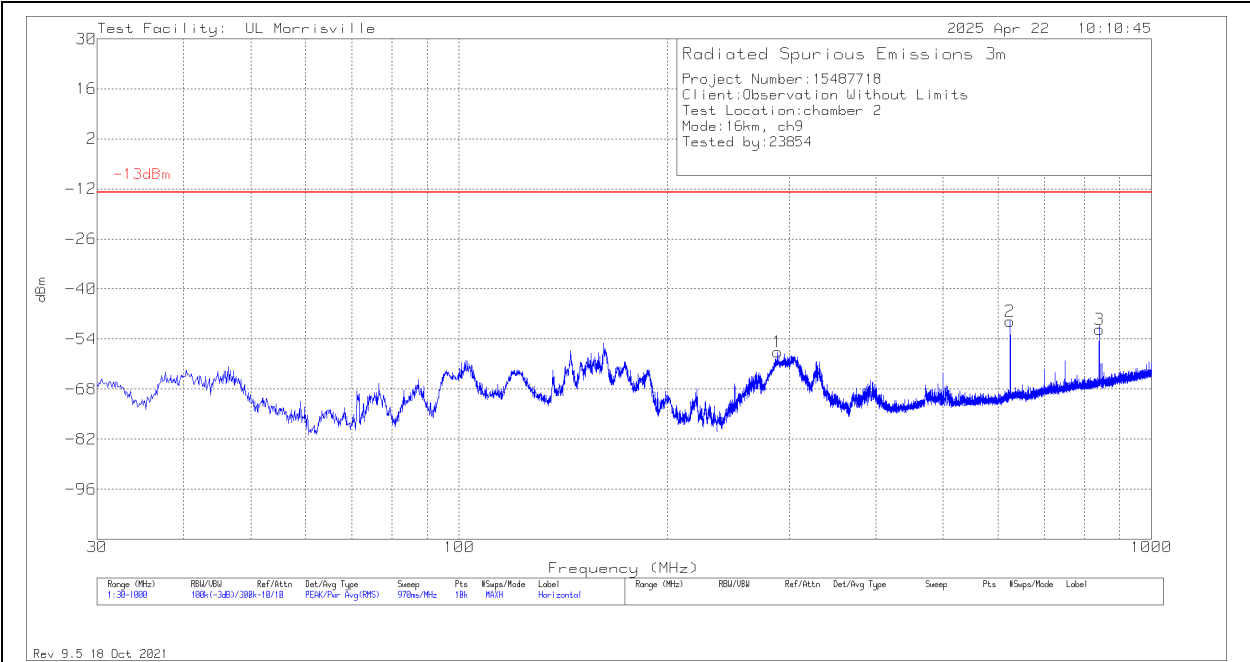


Vertical

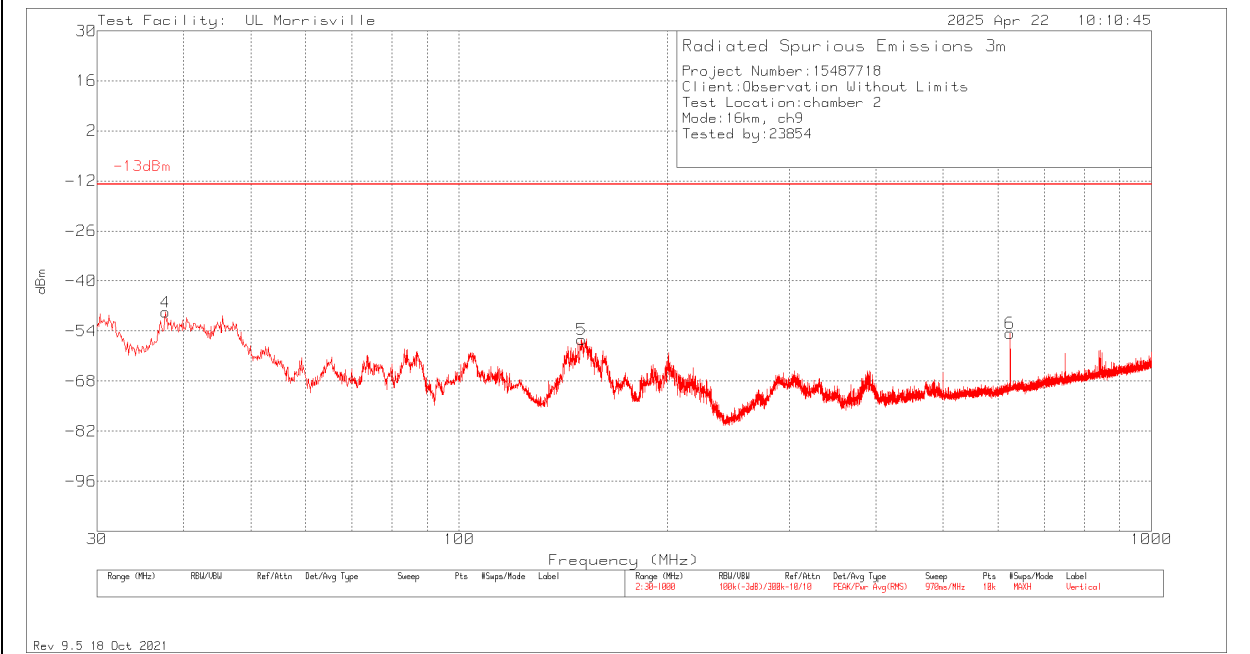
Marker	Frequency (MHz)	Meter Reading (dBm)	Det	159203 (dB/m)	Gain/Loss (dB)	Filter (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	37.663	-52.32	Pk	22	-31.6	1	11.8	-50.02	-13	-37.02	0-360	100	V
1	292.579	-59.52	Pk	19.8	-29.4	2	11.8	-57.12	-13	-44.12	0-360	101	H
2	625.095	-56.62	Pk	26	-27.9	4	11.8	-46.32	-13	-33.32	0-360	101	H
5	625.095	-62.85	Pk	26	-27.9	4	11.8	-52.55	-13	-39.55	0-360	100	V
3	842.957	-68.6	Pk	28.5	-26.7	.5	11.8	-54.5	-13	-41.5	0-360	399	H
6	845.188	-66.69	Pk	28.4	-26.8	.5	11.8	-52.79	-13	-39.79	0-360	100	V

Pk - Peak detector

MODE 5 WORST-CASE 30-1000 MHz



Horizontal

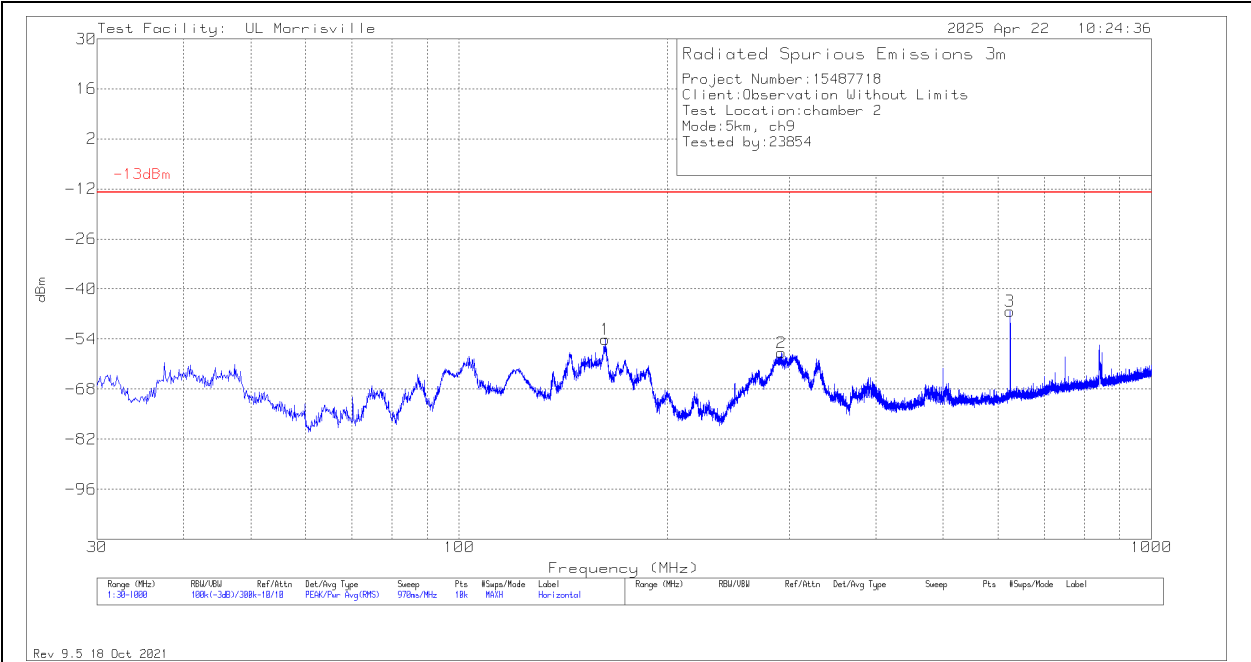


Vertical

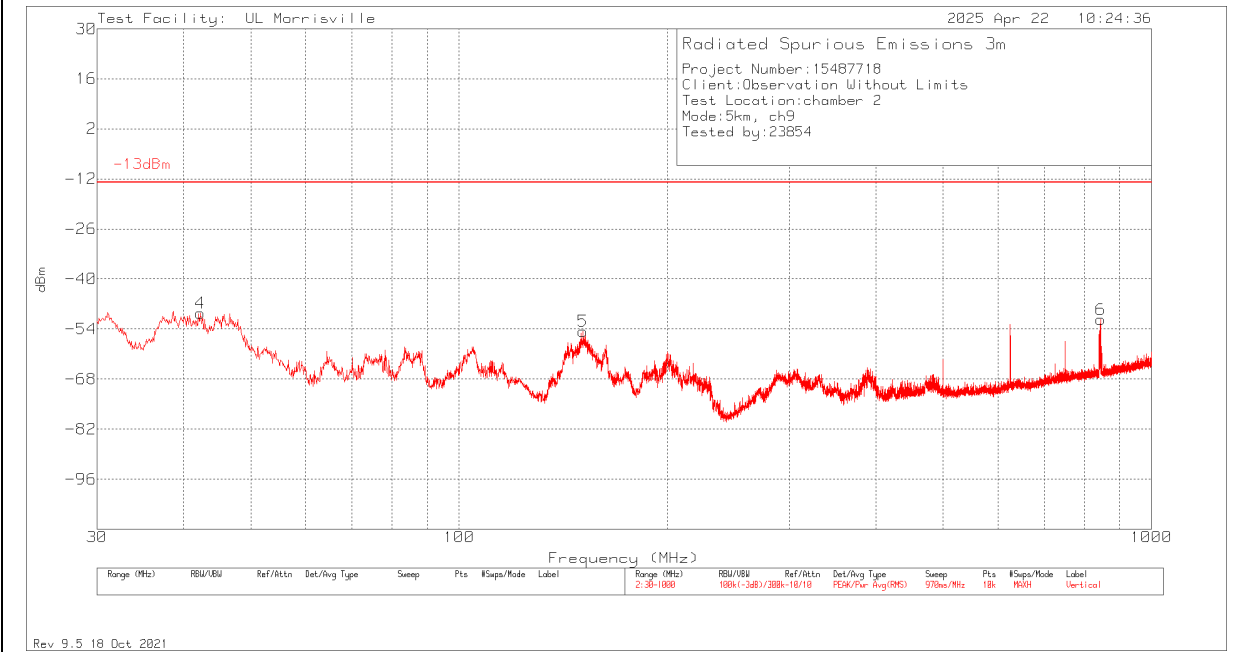
Marker	Frequency (MHz)	Meter Reading (dBm)	Det	159203 (dB/m)	Gain/Loss (dB)	Filter (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	37.663	-51.06	Pk	22	-31.6	1	11.8	-48.76	-13	-35.76	0-360	100	V
5	150.377	-57.03	Pk	19	-30.5	3	11.8	-56.43	-13	-43.43	0-360	100	V
1	288.311	-59.94	Pk	19.8	-29.4	2	11.8	-57.54	-13	-44.54	0-360	100	H
6	624.998	-64.91	Pk	26	-27.9	4	11.8	-54.61	-13	-41.61	0-360	100	V
2	625.095	-59.34	Pk	26	-27.9	4	11.8	-49.04	-13	-36.04	0-360	100	H
3	841.017	-65.37	Pk	28.5	-26.7	5	11.8	-51.27	-13	-38.27	0-360	299	H

Pk - Peak detector

MODE 6 WORST-CASE 30-1000 MHz



Horizontal

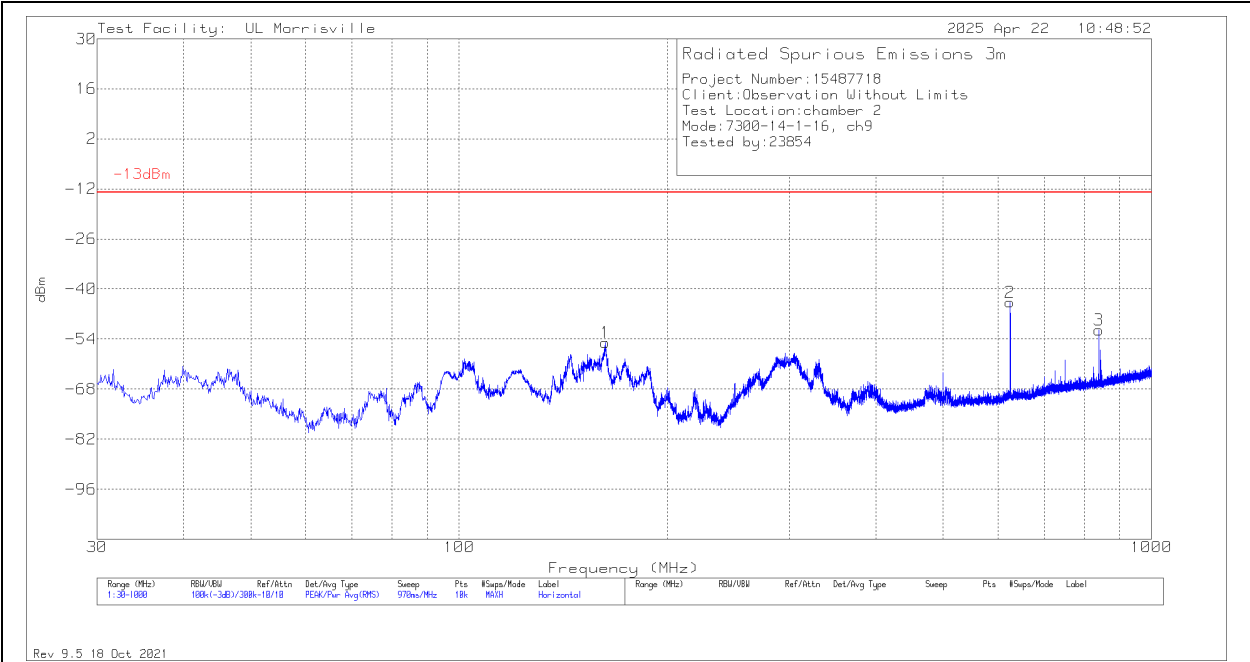


Vertical

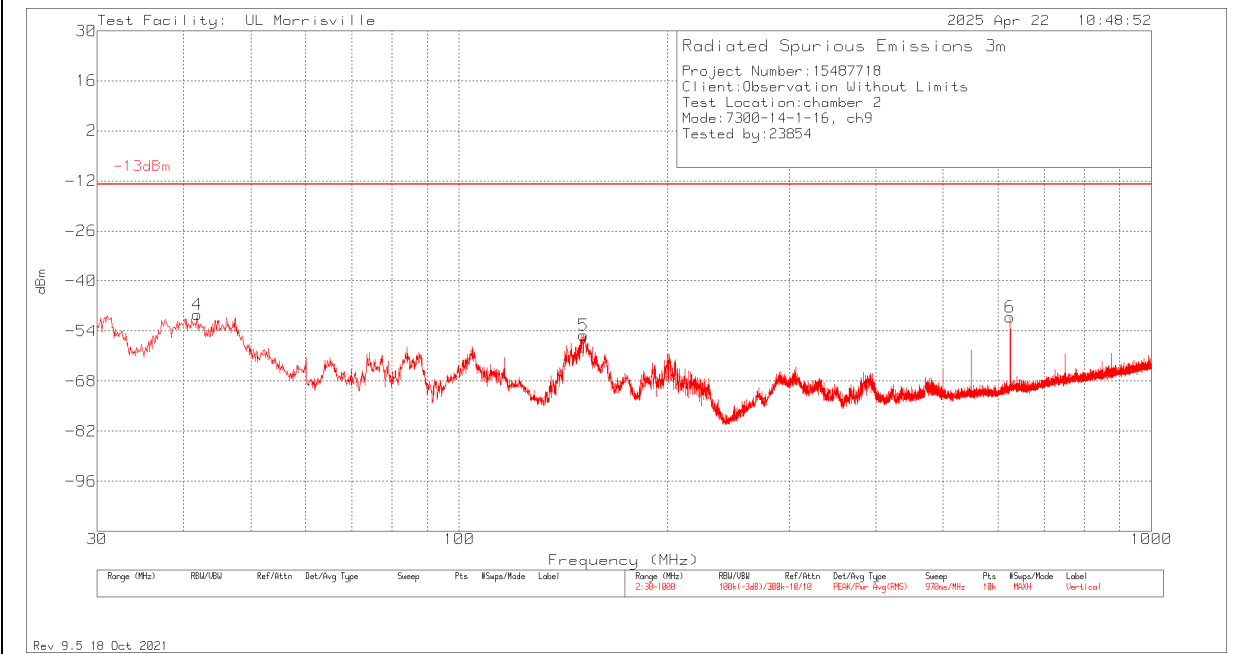
Marker	Frequency (MHz)	Meter Reading (dBm)	Det	159203 (dB/m)	Gain/Loss (dB)	Filter (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	42.319	-48.65	Pk	18.6	-31.4	1	11.8	-49.55	-13	-36.55	0-360	100	V
5	151.056	-55.15	Pk	18.9	-30.5	3	11.8	-54.65	-13	-41.65	0-360	100	V
1	162.502	-54.77	Pk	18.6	-30.2	4	11.8	-54.17	-13	-41.17	0-360	199	H
2	292.094	-60.16	Pk	19.8	-29.5	2	11.8	-57.86	-13	-44.86	0-360	99	H
3	625.095	-56.58	Pk	26	-27.9	4	11.8	-46.28	-13	-33.28	0-360	99	H
6	844.315	-65.38	Pk	28.5	-26.8	5	11.8	-51.38	-13	-38.38	0-360	100	V

Pk - Peak detector

MODE 7 WORST-CASE 30-1000 MHz



Horizontal

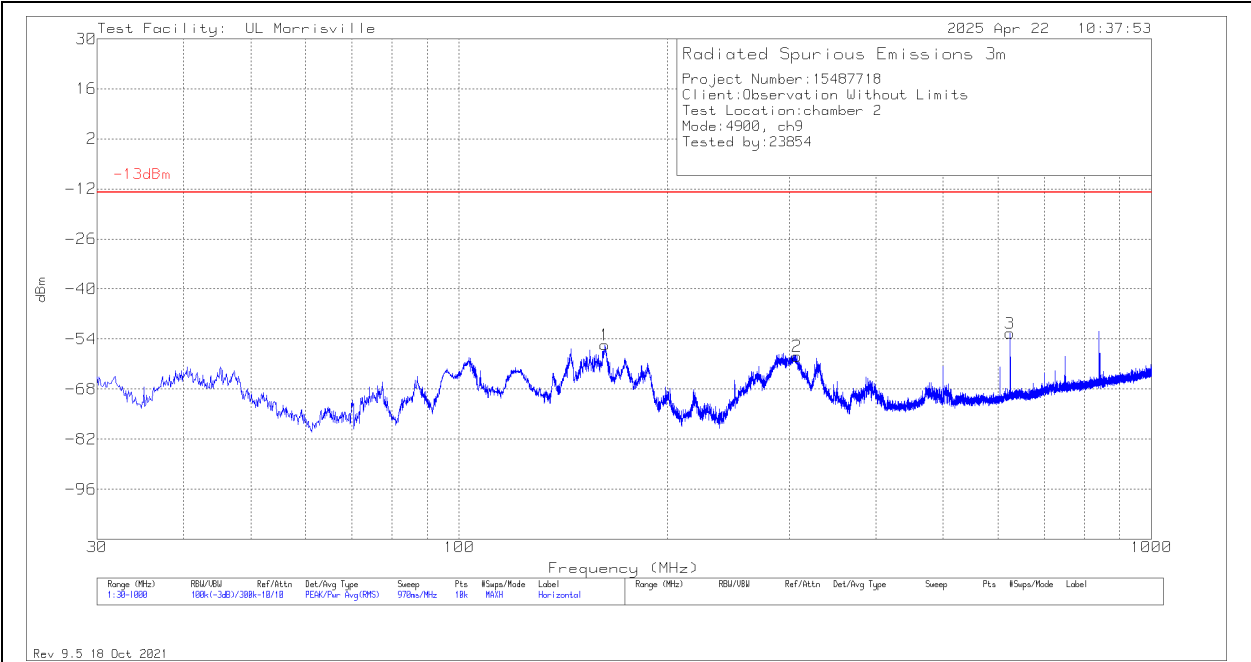


Vertical

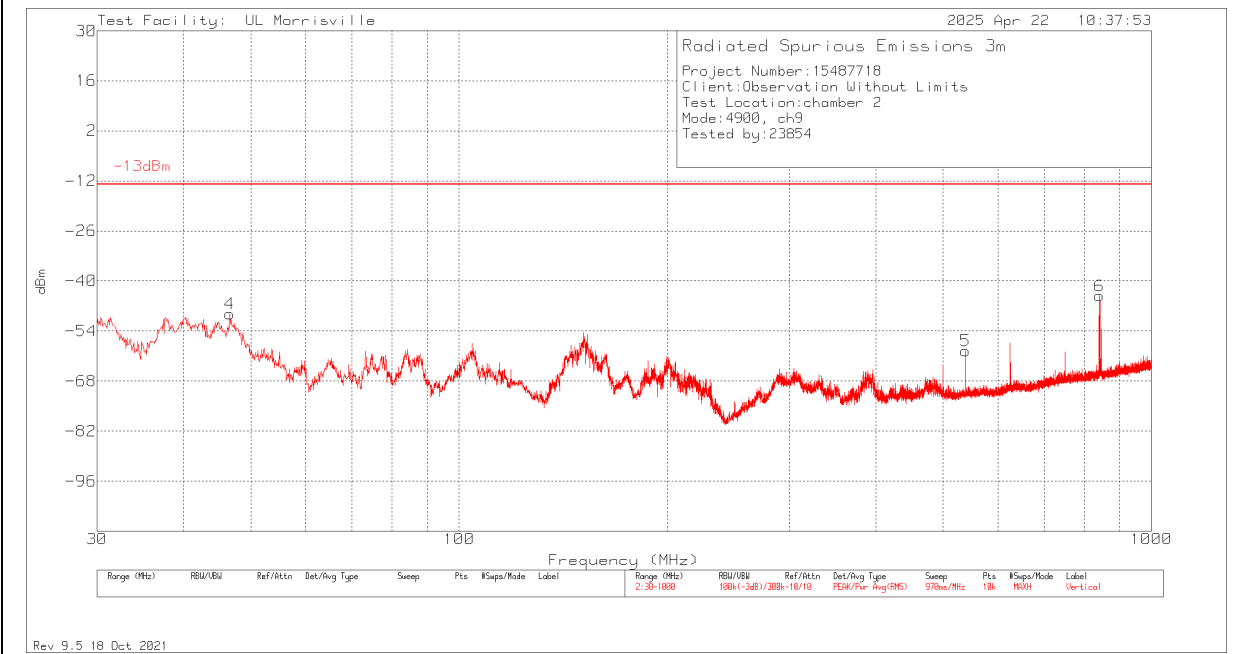
Marker	Frequency (MHz)	Meter Reading (dBm)	Det	159203 (dB/m)	Gain/Loss (dB)	Filter (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	41.834	-48.73	Pk	18.9	-31.4	1	11.8	-49.33	-13	-36.33	0-360	100	V
5	151.25	-55.79	Pk	18.9	-30.4	3	11.8	-55.19	-13	-42.19	0-360	100	V
1	162.502	-55.65	Pk	18.6	-30.2	4	11.8	-55.05	-13	-42.05	0-360	199	H
2	625.095	-53.99	Pk	26	-27.9	4	11.8	-43.69	-13	-30.69	0-360	100	H
6	625.095	-60.39	Pk	26	-27.9	4	11.8	-50.09	-13	-37.09	0-360	100	V
3	839.756	-65.41	Pk	28.5	-26.7	4	11.8	-51.41	-13	-38.41	0-360	299	H

Pk - Peak detector

MODE 8 WORST-CASE 30-1000 MHz



Horizontal

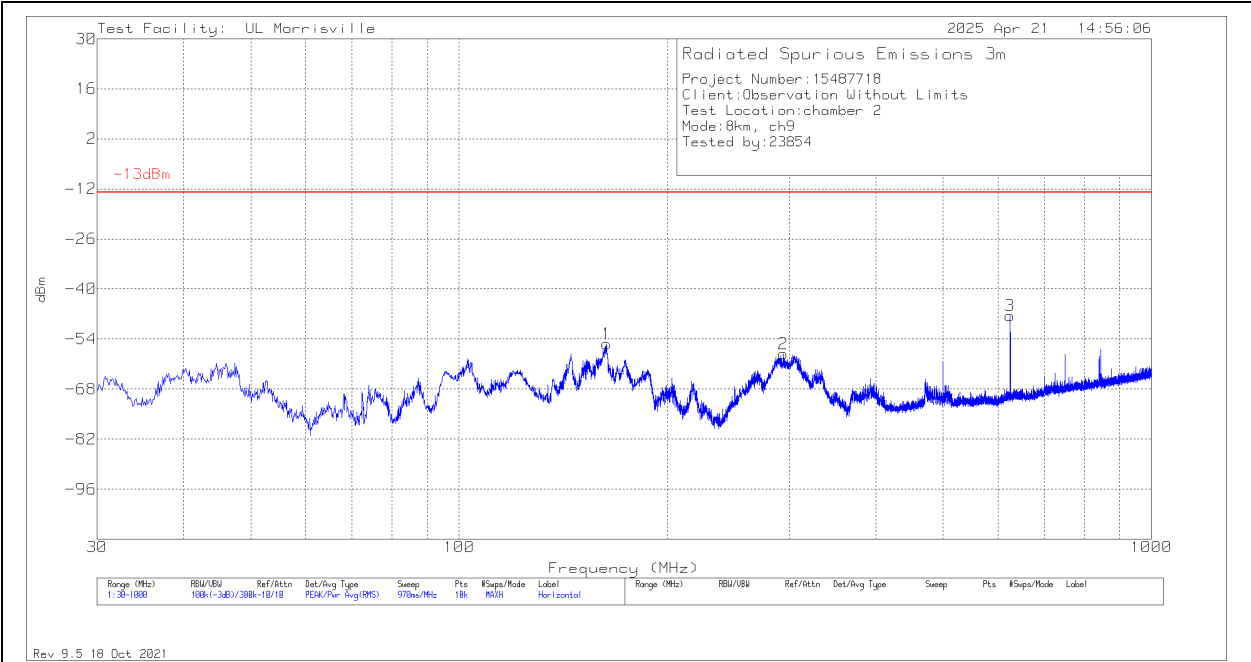


Vertical

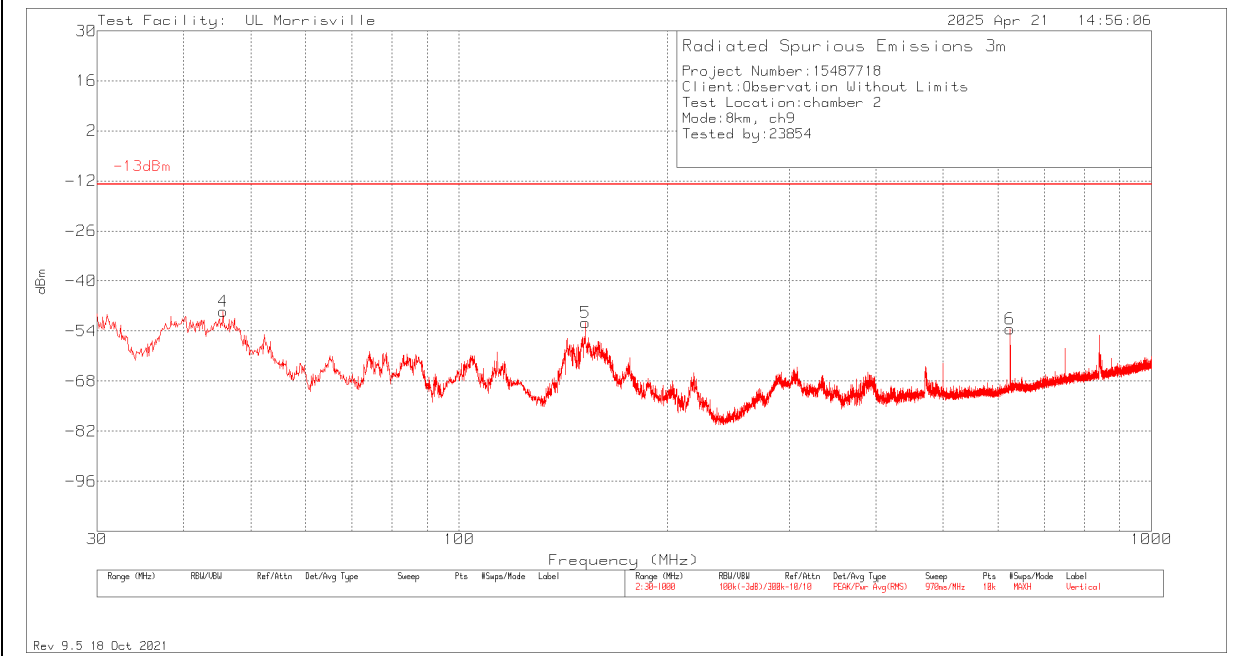
Marker	Frequency (MHz)	Meter Reading (dBm)	Det	159203 (dB/m)	Gain/Loss (dB)	Filter (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	46.587	-45.35	Pk	15.8	-31.5	1	11.8	-49.15	-13	-36.15	0-360	101	V
1	162.308	-56.21	Pk	18.6	-30.2	4	11.8	-55.61	-13	-42.61	0-360	199	H
2	307.808	-61.63	Pk	20.2	-29.4	2	11.8	-58.83	-13	-45.83	0-360	101	H
5	538.765	-68.28	Pk	24.6	-28.3	5	11.8	-59.48	-13	-46.48	0-360	101	V
3	624.998	-62.73	Pk	26	-27.9	4	11.8	-52.43	-13	-39.43	0-360	101	H
6	840.823	-58.3	Pk	28.5	-26.7	5	11.8	-44.2	-13	-31.2	0-360	101	V

Pk - Peak detector

MODE 9 WORST-CASE 30-1000 MHz



Horizontal

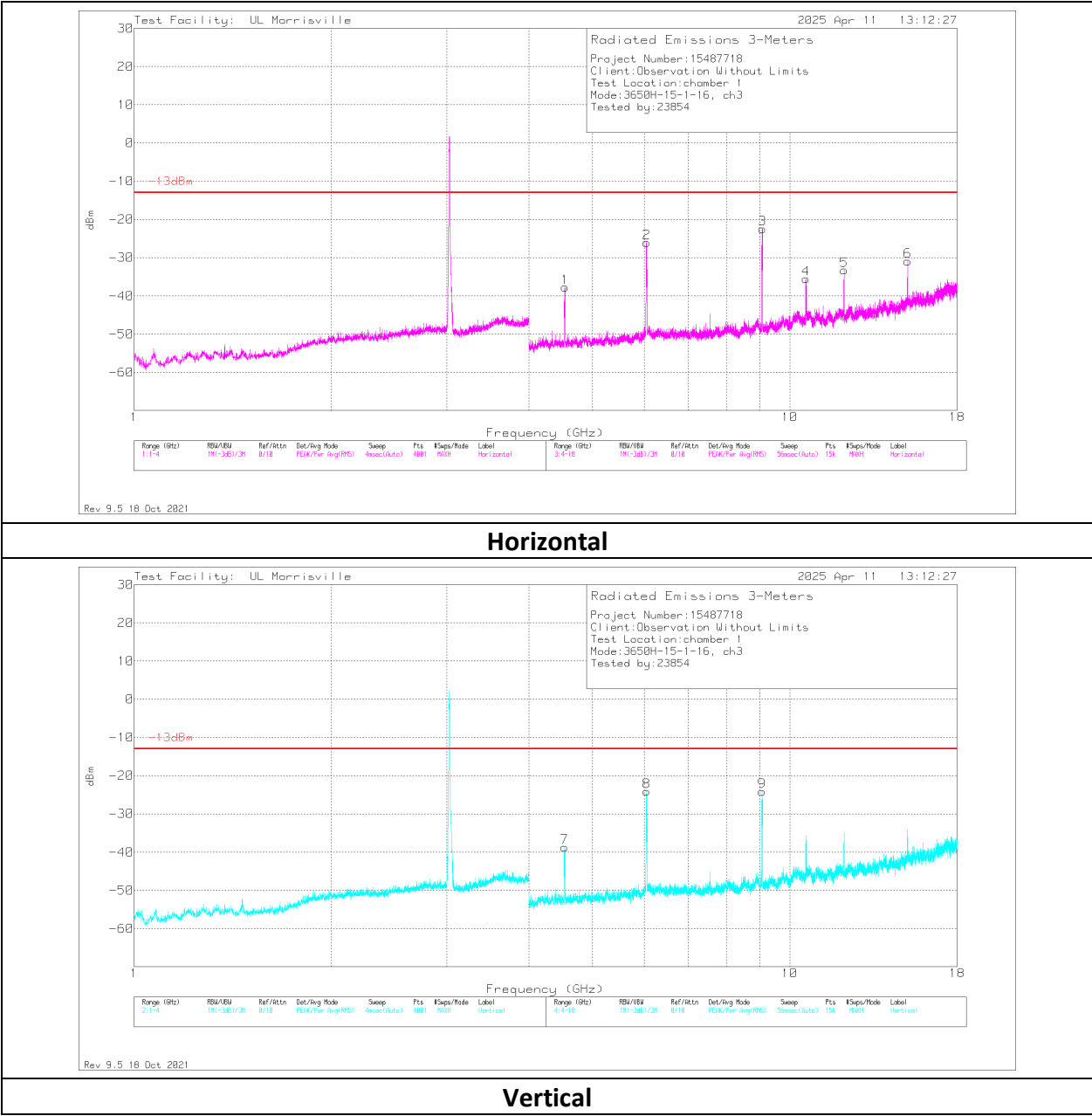


Vertical

Marker	Frequency (MHz)	Meter Reading (dBm)	Det	159203 (dB/m)	Gain/Loss (dB)	Filter (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	45.617	-45.29	Pk	16.4	-31.5	1	11.8	-48.49	-13	-35.49	0-360	100	V
5	152.123	-52.29	Pk	19	-30.4	3	11.8	-51.59	-13	-38.59	0-360	100	V
1	163.181	-56	Pk	18.6	-30.2	4	11.8	-55.4	-13	-42.4	0-360	100	H
2	293.937	-60.58	Pk	19.8	-29.4	2	11.8	-58.18	-13	-45.18	0-360	100	H
3	624.998	-57.73	Pk	26	-27.9	4	11.8	-47.43	-13	-34.43	0-360	100	H
6	625.095	-63.73	Pk	26	-27.9	4	11.8	-53.43	-13	-40.43	0-360	100	V

Pk - Peak detector

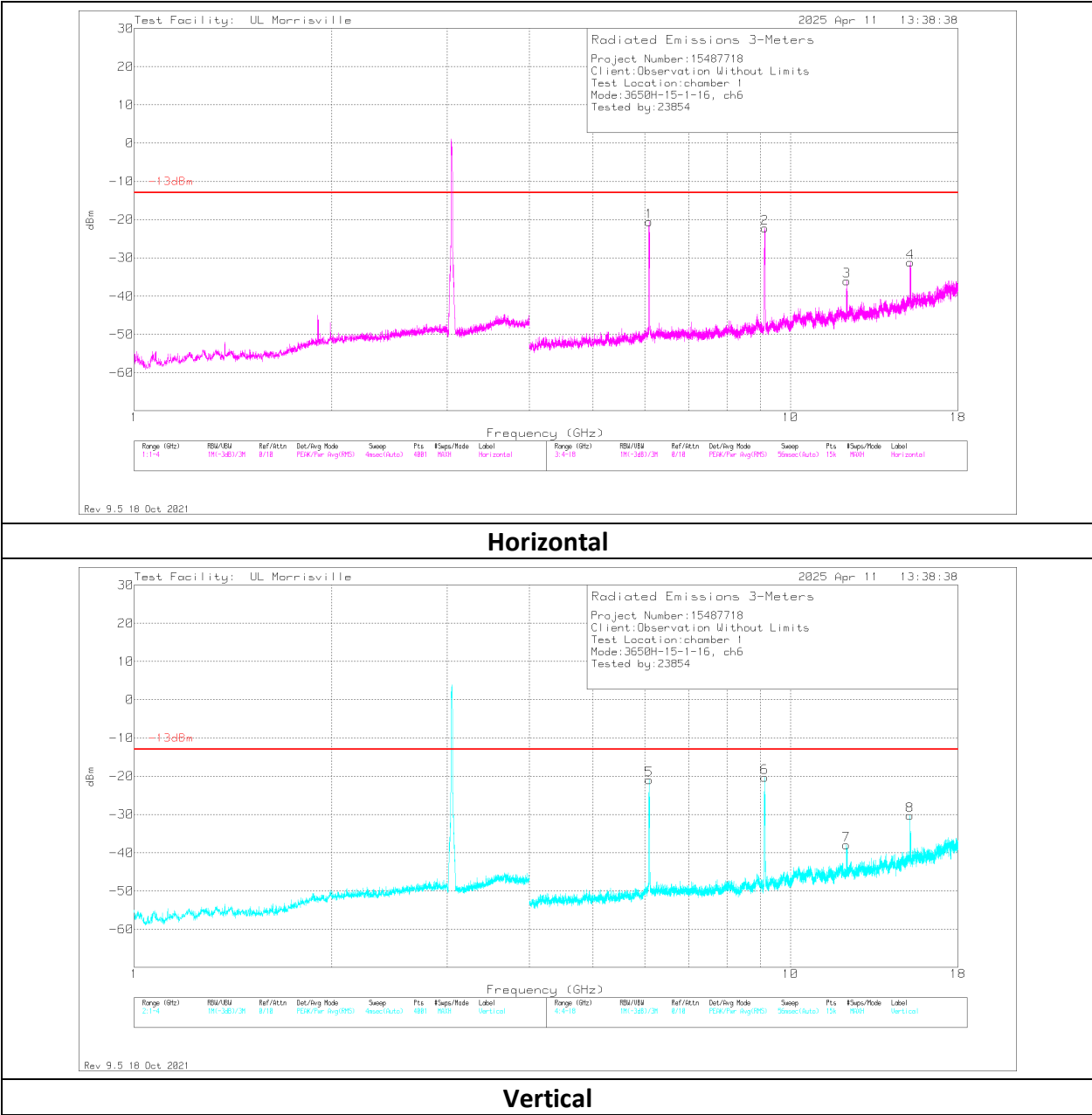
MODE 1 LOW CHANNEL 1-18GHz



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	135143 (dBm)	Gain/Loss (dB)	CF (dB)	Filter (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
7	4.53853	-39.46	Pk	33.9	-45.5	11.8	.5	-38.76	-13	-25.76	0-360	300	V
1	4.54227	-38.56	Pk	33.9	-45.4	11.8	.5	-37.76	-13	-24.76	0-360	300	H
8	6.0468	-29.67	Pk	35.2	-42	11.8	.6	-24.07	-13	-11.07	0-360	300	V
2	6.04867	-31.71	Pk	35.2	-41.9	11.8	.6	-26.01	-13	-13.01	0-360	300	H
9	9.07826	-31.59	Pk	35.8	-40.8	11.8	.7	-24.09	-13	-11.09	0-360	101	V
3	9.082	-30.02	Pk	35.8	-40.7	11.8	.7	-22.42	-13	-9.42	0-360	300	H
4	10.59026	-46.47	Pk	38	-39.4	11.8	.5	-35.57	-13	-22.57	0-360	199	H
5	12.09946	-46.38	Pk	38.8	-38.4	11.8	.9	-33.28	-13	-20.28	0-360	300	H
6	15.13186	-46.06	Pk	40.1	-37.4	11.8	.7	-30.86	-13	-17.86	0-360	300	H

Pk - Peak detector

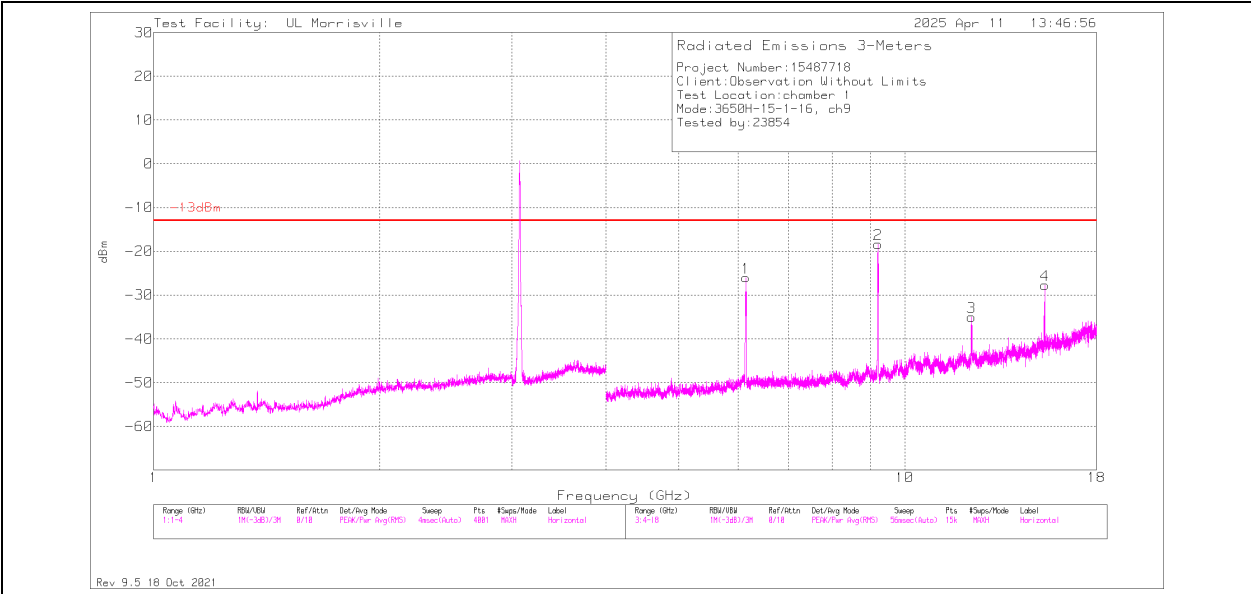
MODE 1 MID CHANNEL 1-18GHz



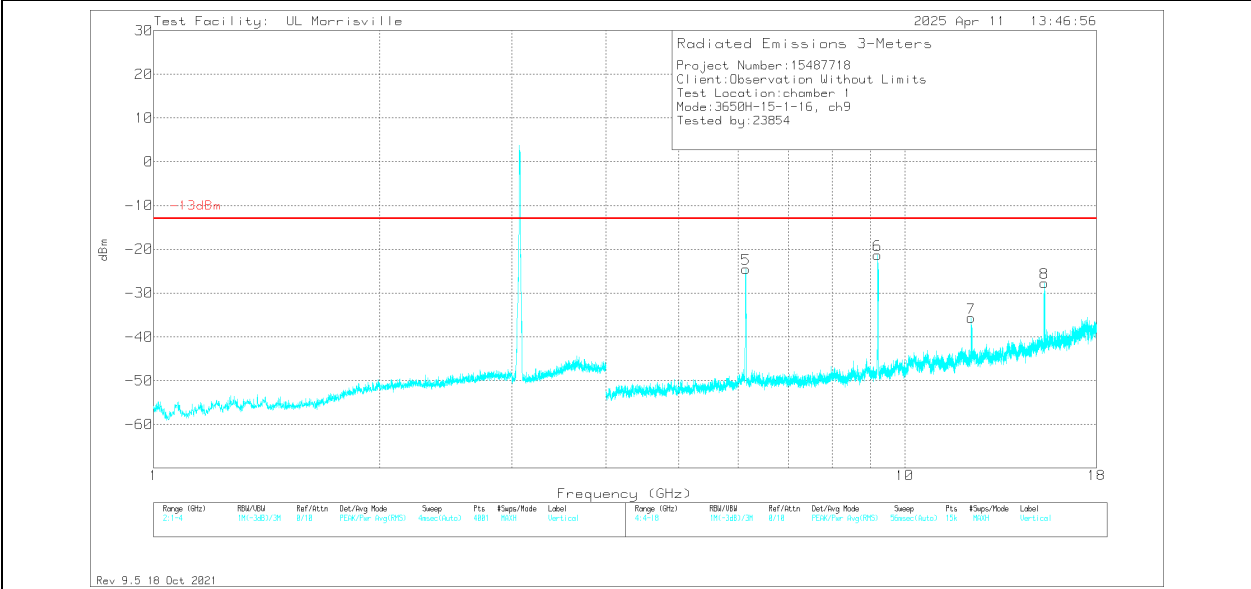
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	135143 (dB/m)	Gain/Loss (dB)	CF (dB)	Filter (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	6.08787	-26.63	Pk	35.2	-41.6	11.8	.7	-20.53	-13	-7.53	0-360	101	H
5	6.0972	-26.99	Pk	35.2	-41.6	11.8	.7	-20.89	-13	-7.89	0-360	200	V
6	9.14173	-27.97	Pk	35.9	-40.6	11.8	.6	-20.27	-13	-7.27	0-360	200	V
2	9.1436	-29.99	Pk	35.9	-40.5	11.8	.6	-22.19	-13	-9.19	0-360	300	H
7	12.16946	-50.68	Pk	38.8	-38.7	11.8	.8	-37.98	-13	-24.98	0-360	200	V
3	12.18066	-49.2	Pk	38.8	-38.2	11.8	.8	-36	-13	-23	0-360	199	H
8	15.22053	-46.28	Pk	40.2	-36.7	11.8	.7	-30.28	-13	-17.28	0-360	300	V
4	15.2364	-46.42	Pk	40.2	-37.4	11.8	.7	-31.12	-13	-18.12	0-360	199	H

Pk - Peak detector

MODE 1 HIGH CHANNEL 1-18GHz



Horizontal

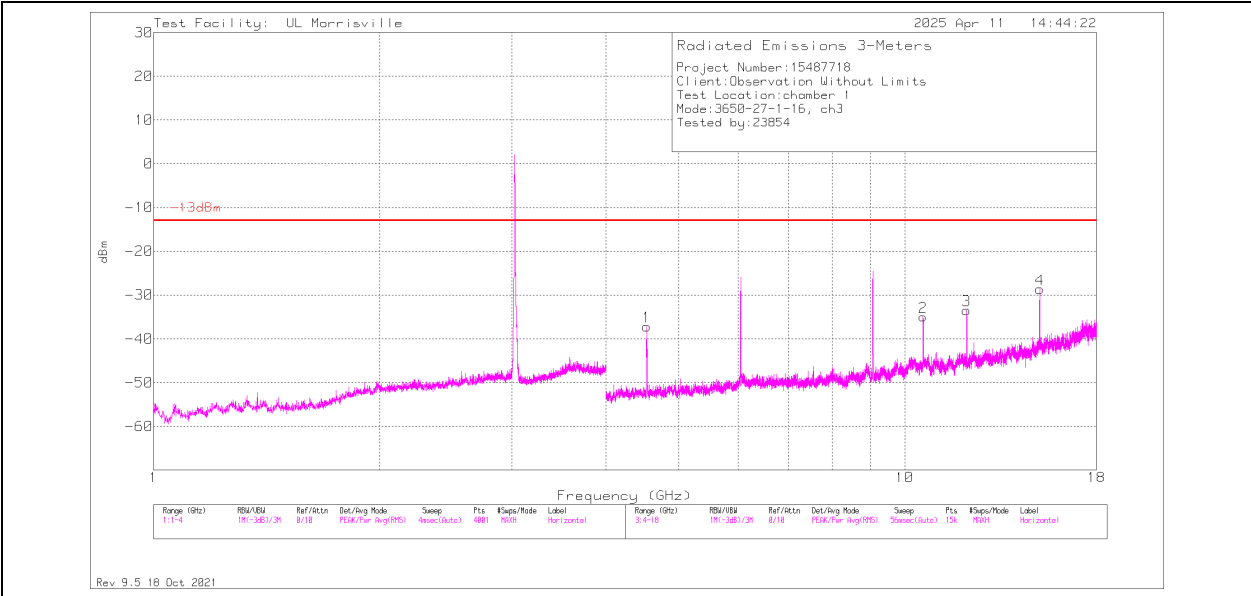


Vertical

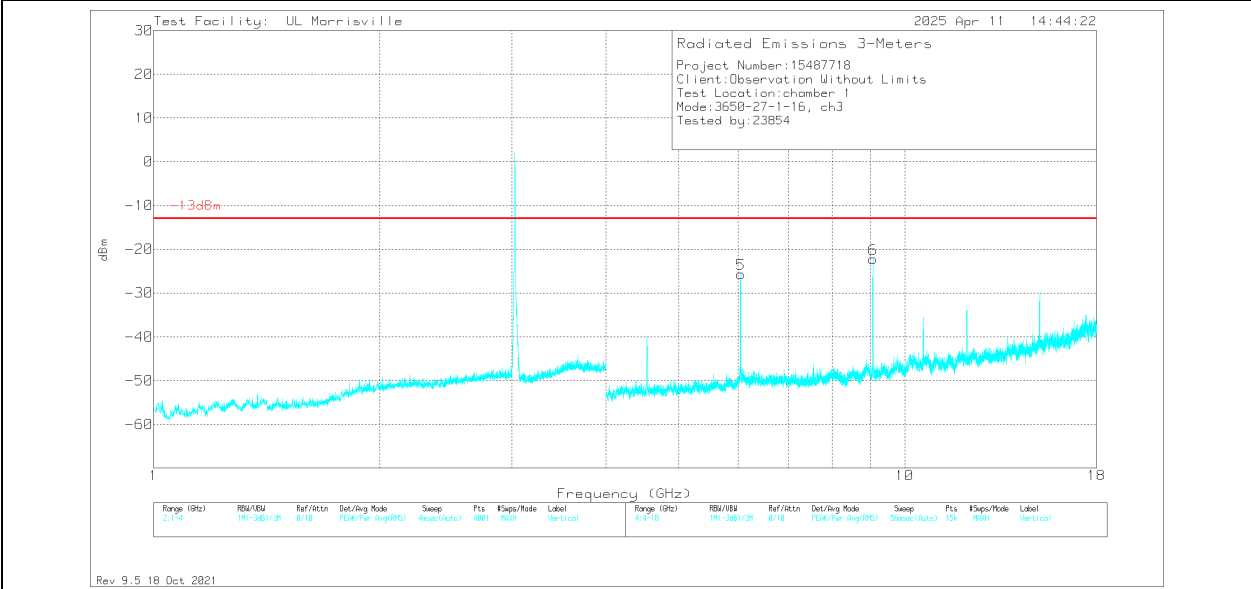
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	135143 (dB/m)	Gain/Loss (dB)	CF (dB)	Filter (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	6.14573	-29.55	Pk	35.3	-42.8	11.8	.7	-24.55	-13	-11.55	0-360	300	V
1	6.14853	-30.99	Pk	35.3	-42.8	11.8	.7	-25.99	-13	-12.99	0-360	200	H
6	9.1996	-30.13	Pk	36	-39.7	11.8	.7	-21.33	-13	-8.33	0-360	201	V
2	9.21096	-53.57	RMS	36	-40.3	11.8	.7	-45.37	-13	-32.37	344	112	H
7	12.2628	-47.7	Pk	38.7	-39.3	11.8	.8	-35.7	-13	-22.7	0-360	300	V
3	12.27026	-47.26	Pk	38.7	-39	11.8	.8	-34.96	-13	-21.96	0-360	300	H
8	15.33813	-45.17	Pk	40.4	-35.4	11.8	.7	-27.67	-13	-14.67	0-360	101	V
4	15.37266	-44.07	Pk	40.4	-36.6	11.8	.8	-27.67	-13	-14.67	0-360	101	H

Pk - Peak detector
RMS - RMS detection

MODE 2 LOW CHANNEL 1-18GHz



Horizontal

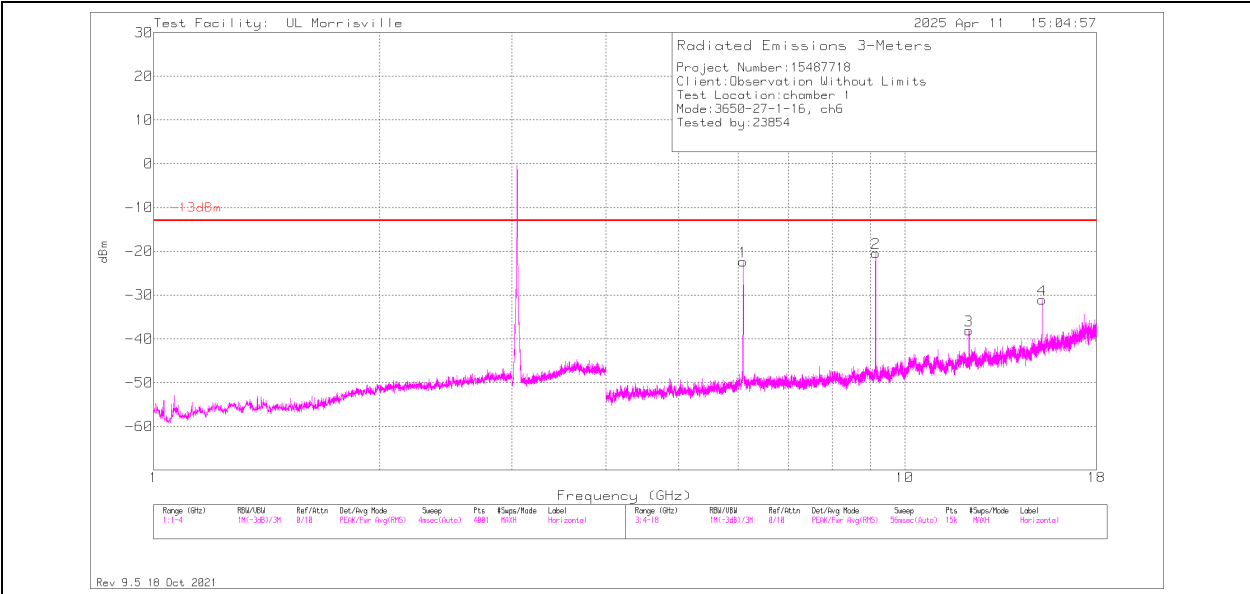


Vertical

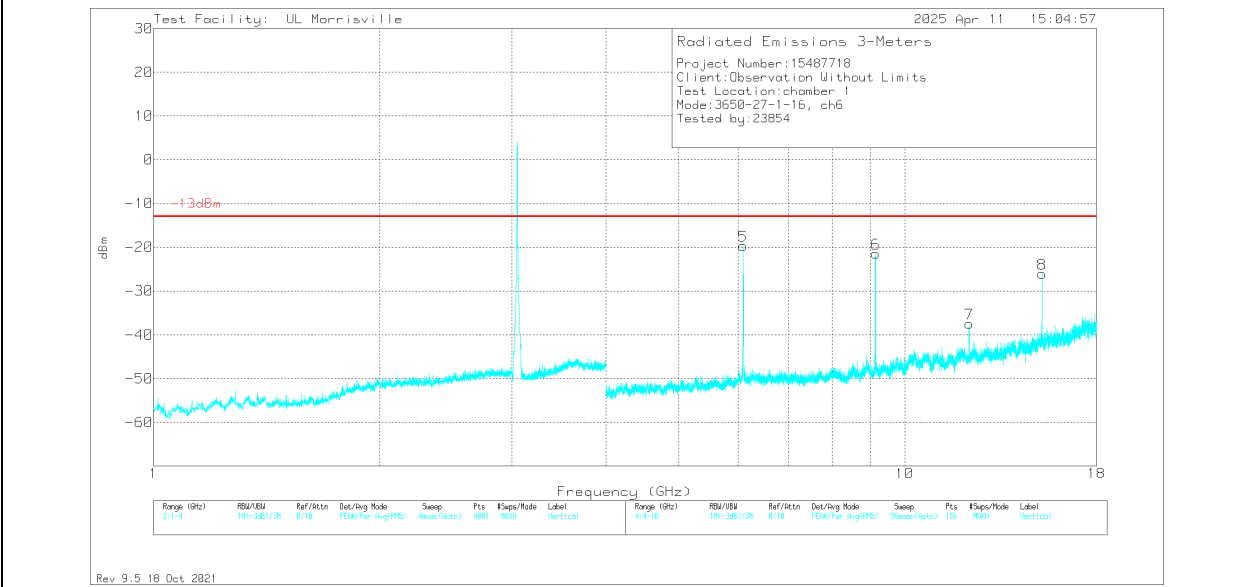
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	135143 (dB/m)	Gain/Loss (dB)	CF (dB)	Filter (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	4.53573	-37.72	Pk	33.9	-45.7	11.8	.5	-37.22	-13	-24.22	0-360	101	H
5	6.0496	-31.48	Pk	35.2	-41.8	11.8	.6	-25.68	-13	-12.68	0-360	201	V
6	9.06893	-29.9	Pk	35.8	-40.6	11.8	.7	-22.2	-13	-9.2	0-360	101	V
2	10.58	-45.05	Pk	38	-40.2	11.8	.5	-34.95	-13	-21.95	0-360	300	H
3	12.08546	-46.49	Pk	38.8	-38.5	11.8	.9	-33.49	-13	-20.49	0-360	300	H
4	15.1244	-43.76	Pk	40.1	-37.5	11.8	.7	-28.66	-13	-15.66	0-360	300	H

Pk - Peak detector

MODE 2 MID CHANNEL 1-18GHz



Horizontal

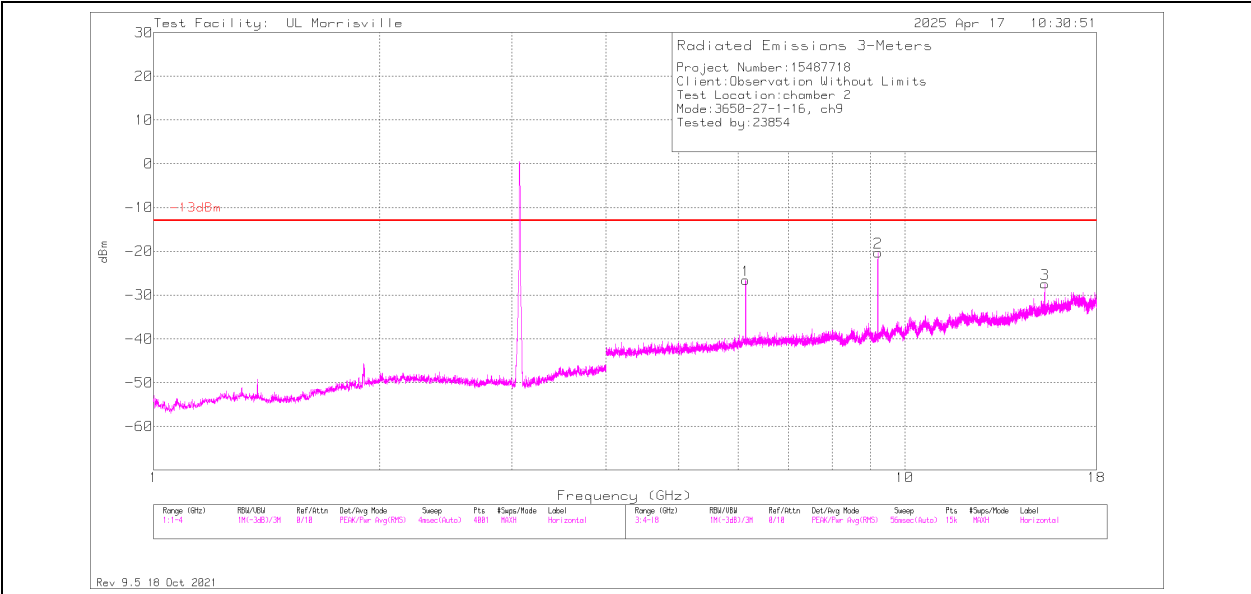


Vertical

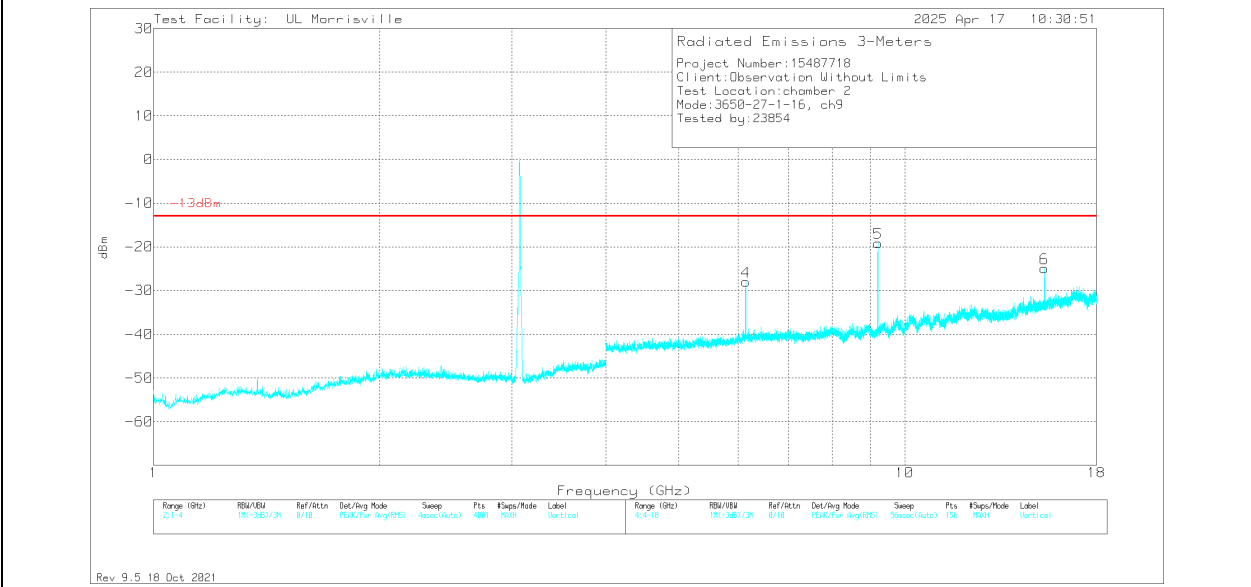
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	135143 (dB/m)	Gain/Loss (dB)	CF (dB)	Filter (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	6.09067	-28.41	Pk	35.2	-41.6	11.8	.7	-22.31	-13	-9.31	0-360	200	H
5	6.09627	-25.77	Pk	35.2	-41.6	11.8	.7	-19.67	-13	-6.67	0-360	300	V
2	9.14546	-28.34	Pk	35.9	-40.4	11.8	.6	-20.44	-13	-7.44	0-360	101	H
6	9.14546	-29.35	Pk	35.9	-40.4	11.8	.6	-21.45	-13	-8.45	0-360	200	V
3	12.1788	-51.15	Pk	38.8	-38.3	11.8	.8	-38.05	-13	-25.05	0-360	200	H
7	12.18253	-50.88	Pk	38.8	-38	11.8	.8	-37.48	-13	-24.48	0-360	101	V
4	15.24293	-47.29	Pk	40.2	-36.5	11.8	.7	-31.09	-13	-18.09	0-360	200	H
8	15.2448	-42.19	Pk	40.2	-36.6	11.8	.7	-26.09	-13	-13.09	0-360	200	V

Pk - Peak detector

MODE 2 HIGH CHANNEL 1-18GHz



Horizontal

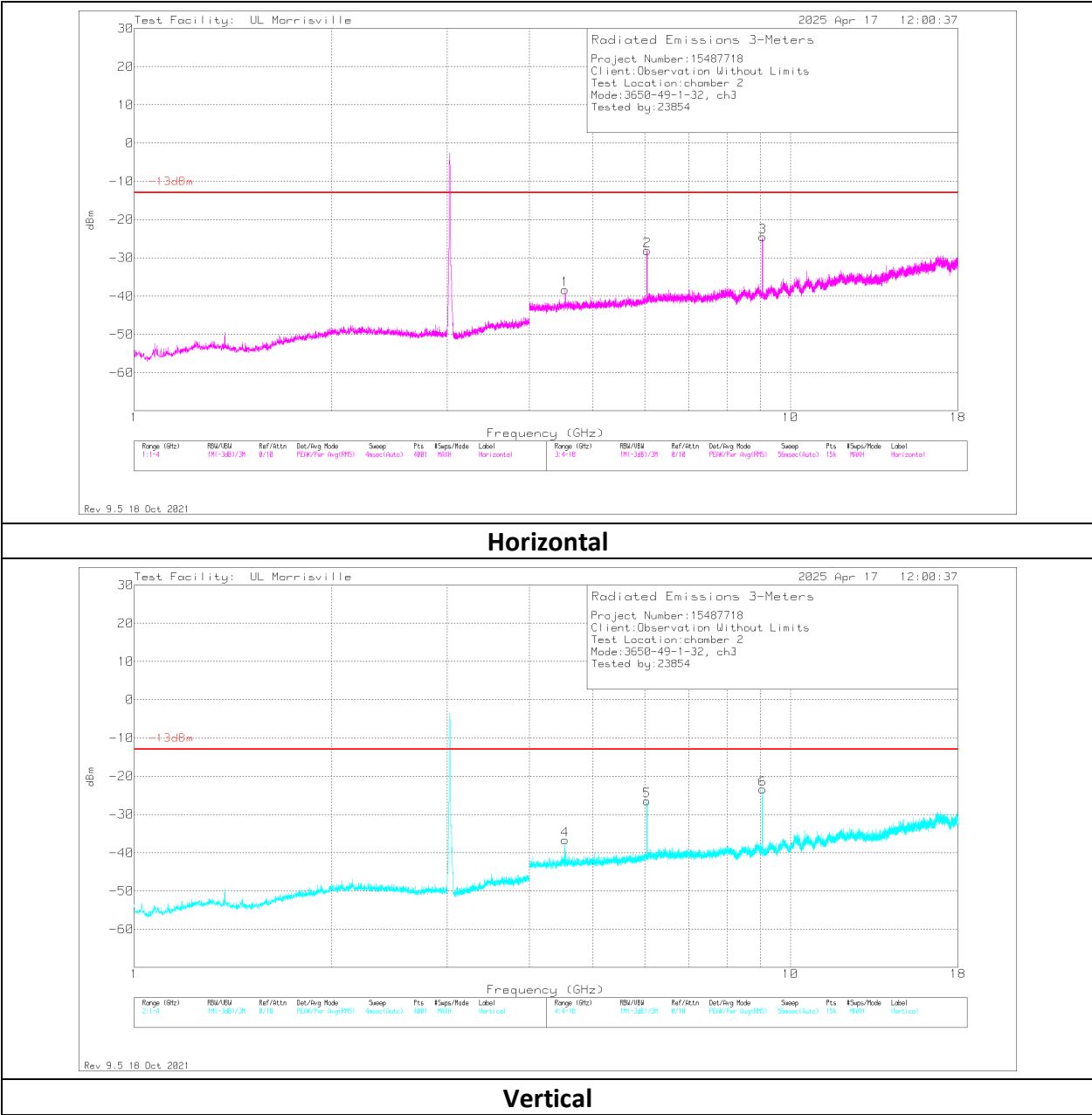


Vertical

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	86408 (dB/m)	Gain/Loss (dB)	CF (dB)	Filter (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	6.14013	-41.62	Pk	35.5	-33	11.8	.7	-26.62	-13	-13.62	0-360	200	H
4	6.14293	-43.05	Pk	35.5	-32.9	11.8	.7	-27.95	-13	-14.95	0-360	300	V
2	9.2108	-38.26	Pk	36	-30.5	11.8	.7	-20.26	-13	-7.26	0-360	300	H
5	9.21173	-37.15	Pk	36	-30.5	11.8	.7	-19.15	-13	-6.15	0-360	200	V
6	15.35213	-51.31	Pk	40.3	-26.4	11.8	.7	-24.91	-13	-11.91	0-360	200	V
3	15.3568	-53.6	Pk	40.3	-26.7	11.8	.8	-27.4	-13	-14.4	0-360	300	H

Pk - Peak detector

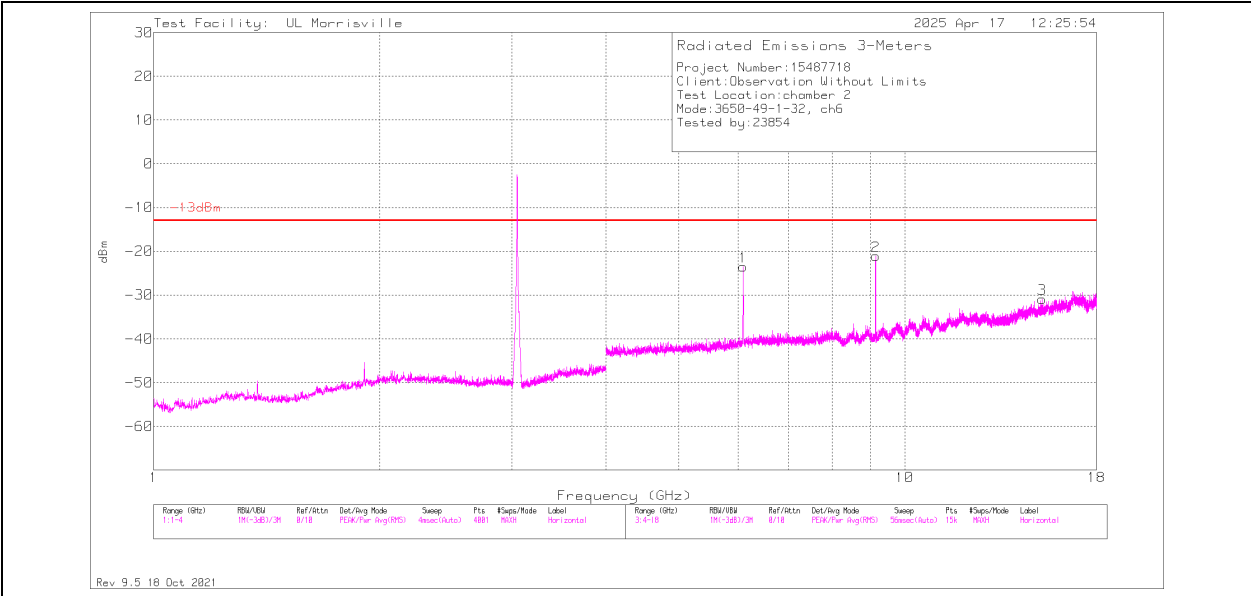
MODE 3 LOW CHANNEL 1-18GHz



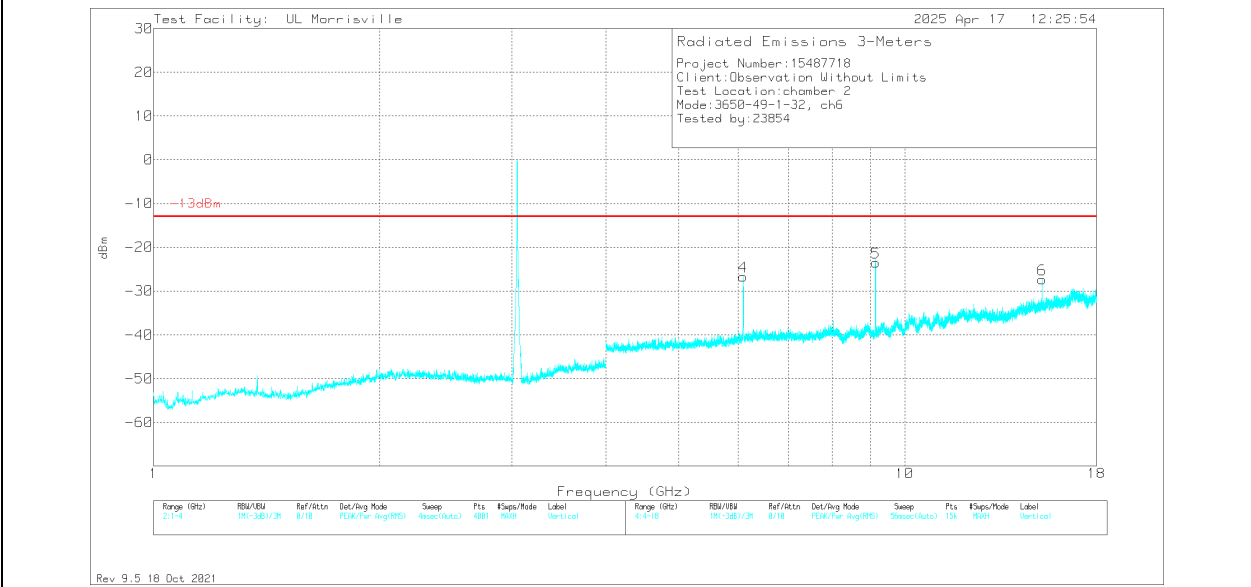
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	86408 (dB/m)	Gain/Loss (dB)	CF (dB)	Filter (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	4.53387	-50.17	Pk	34	-34.5	11.8	.5	-38.37	-13	-25.37	0-360	199	H
4	4.53387	-48.49	Pk	34	-34.5	11.8	.5	-36.69	-13	-23.69	0-360	200	V
5	6.04587	-41.11	Pk	35.4	-33.1	11.8	.6	-26.41	-13	-13.41	0-360	200	V
2	6.0496	-42.68	Pk	35.4	-33.2	11.8	.6	-28.08	-13	-15.08	0-360	300	H
6	9.07546	-41.32	Pk	35.9	-30.5	11.8	.7	-23.42	-13	-10.42	0-360	101	V
3	9.07733	-42.45	Pk	35.9	-30.5	11.8	.7	-24.55	-13	-11.55	0-360	199	H

Pk - Peak detector

MODE 3 MID CHANNEL 1-18GHz



Horizontal

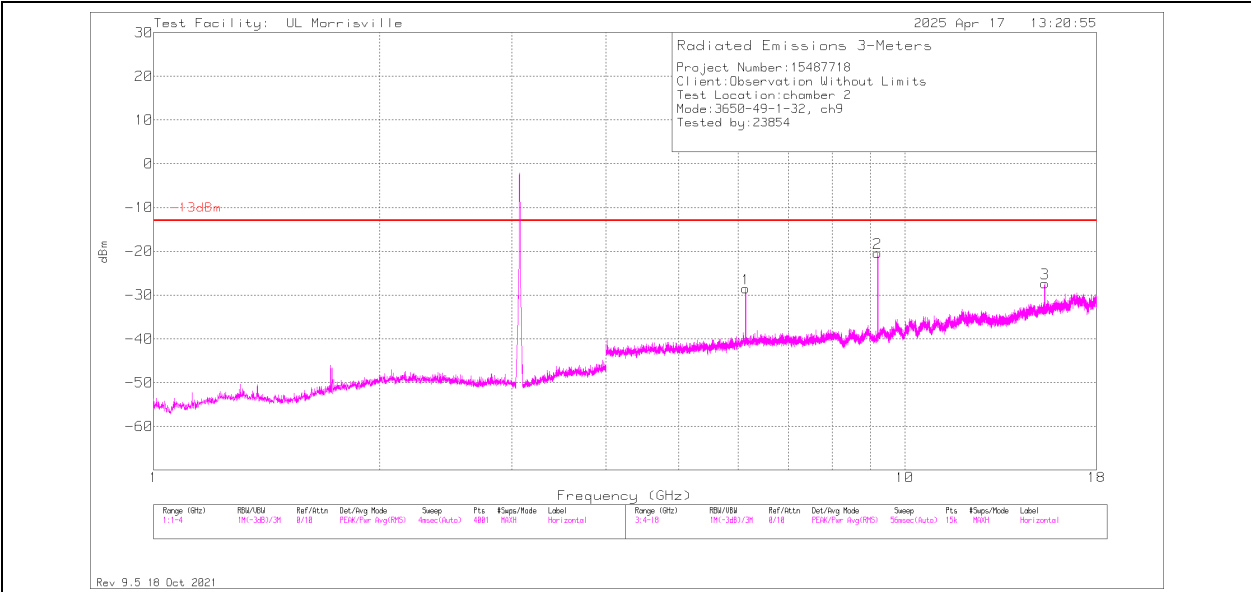


Vertical

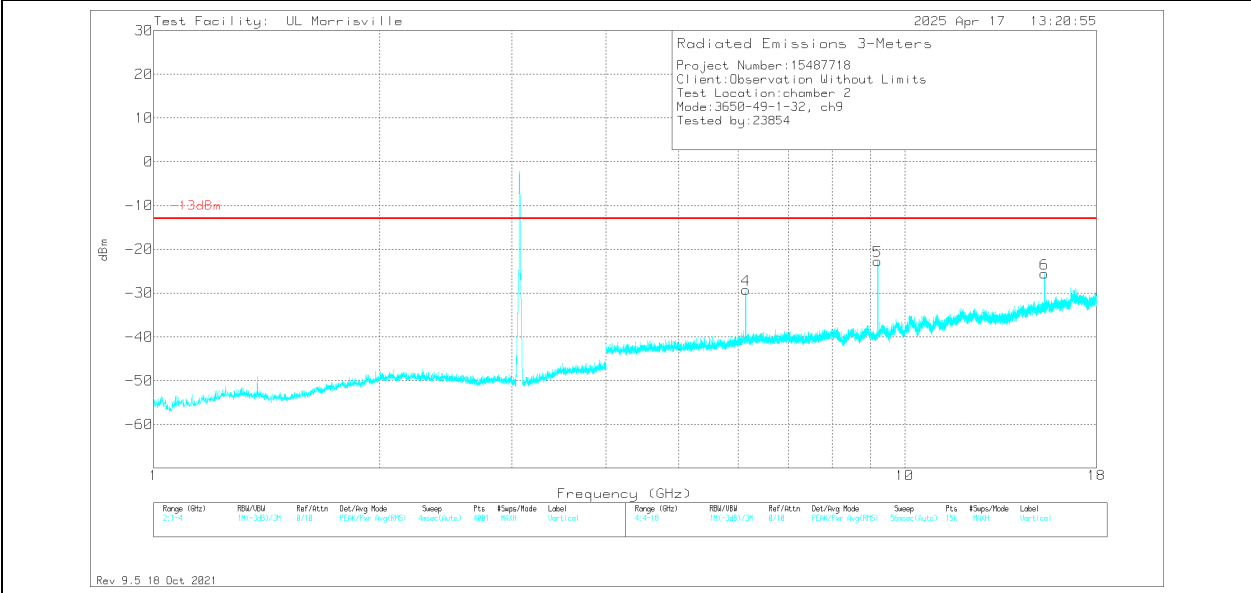
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	86408 (dB/m)	Gain/Loss (dB)	CF (dB)	Filter (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	6.0888	-38.84	Pk	35.5	-32.7	11.8	.7	-23.54	-13	-10.54	0-360	101	H
4	6.08973	-42.03	Pk	35.5	-32.7	11.8	.7	-26.73	-13	-13.73	0-360	200	V
2	9.14546	-39.31	Pk	35.9	-30.1	11.8	.6	-21.11	-13	-8.11	0-360	300	H
5	9.14546	-41.65	Pk	35.9	-30.1	11.8	.6	-23.45	-13	-10.45	0-360	200	V
6	15.22706	-52.15	Pk	40.1	-27.8	11.8	.7	-27.35	-13	-14.35	0-360	200	V
3	15.24573	-56.23	Pk	40.1	-27.3	11.8	.7	-30.93	-13	-17.93	0-360	101	H

Pk - Peak detector

MODE 3 HIGH CHANNEL 1-18GHz



Horizontal

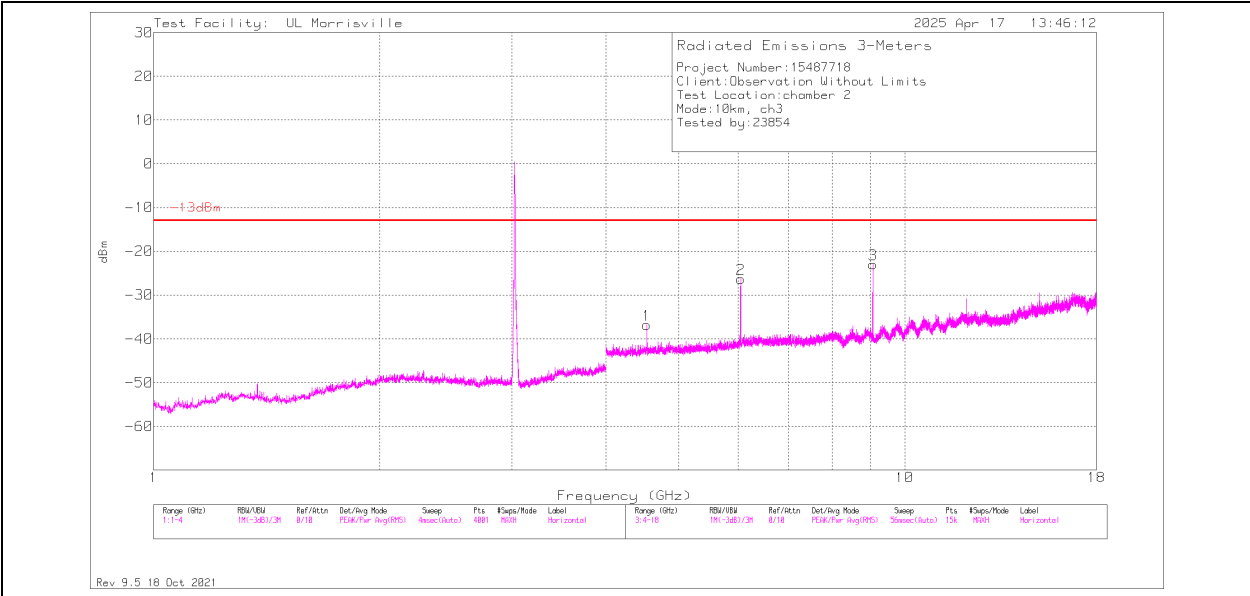


Vertical

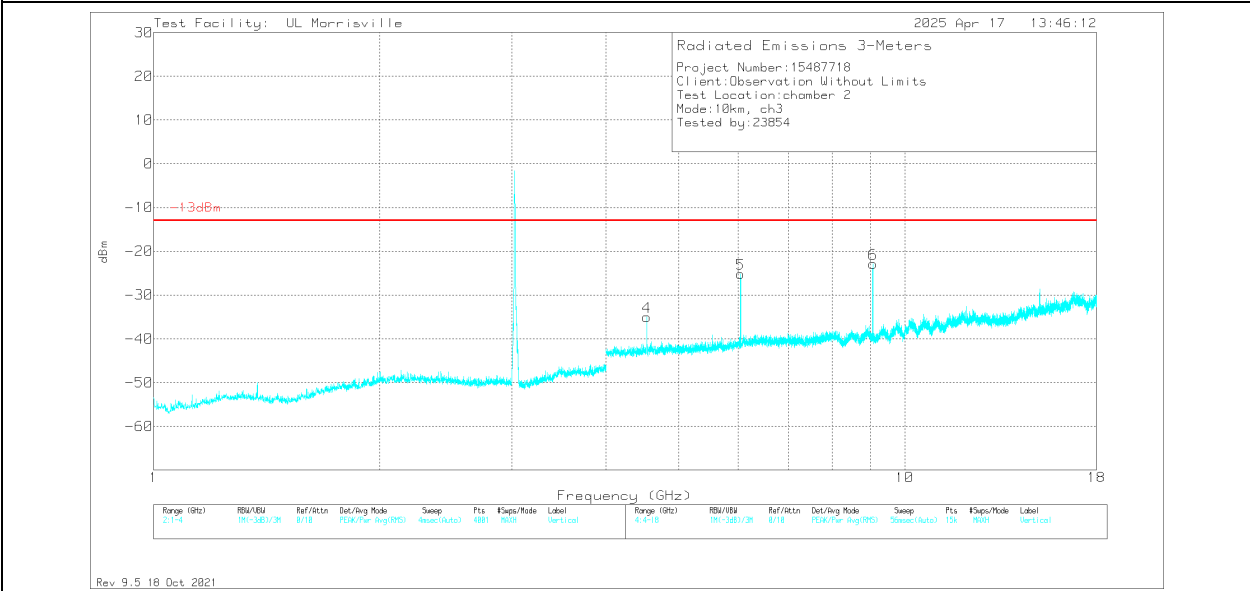
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	86408 (dB/m)	Gain/Loss (dB)	CF (dB)	Filter (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	6.14013	-43.54	Pk	35.5	-33	11.8	.7	-28.54	-13	-15.54	0-360	199	H
4	6.14387	-44.3	Pk	35.5	-32.9	11.8	.7	-29.2	-13	-16.2	0-360	299	V
2	9.20426	-38.2	Pk	36	-30.7	11.8	.7	-20.4	-13	-7.4	0-360	199	H
5	9.20426	-40.57	Pk	36	-30.7	11.8	.7	-22.77	-13	-9.77	0-360	200	V
6	15.354	-51.89	Pk	40.3	-26.5	11.8	.7	-25.59	-13	-12.59	0-360	200	V
3	15.36053	-53.37	Pk	40.3	-26.9	11.8	.8	-27.37	-13	-14.37	0-360	199	H

Pk - Peak detector

MODE 4 LOW CHANNEL 1-18GHz



Horizontal

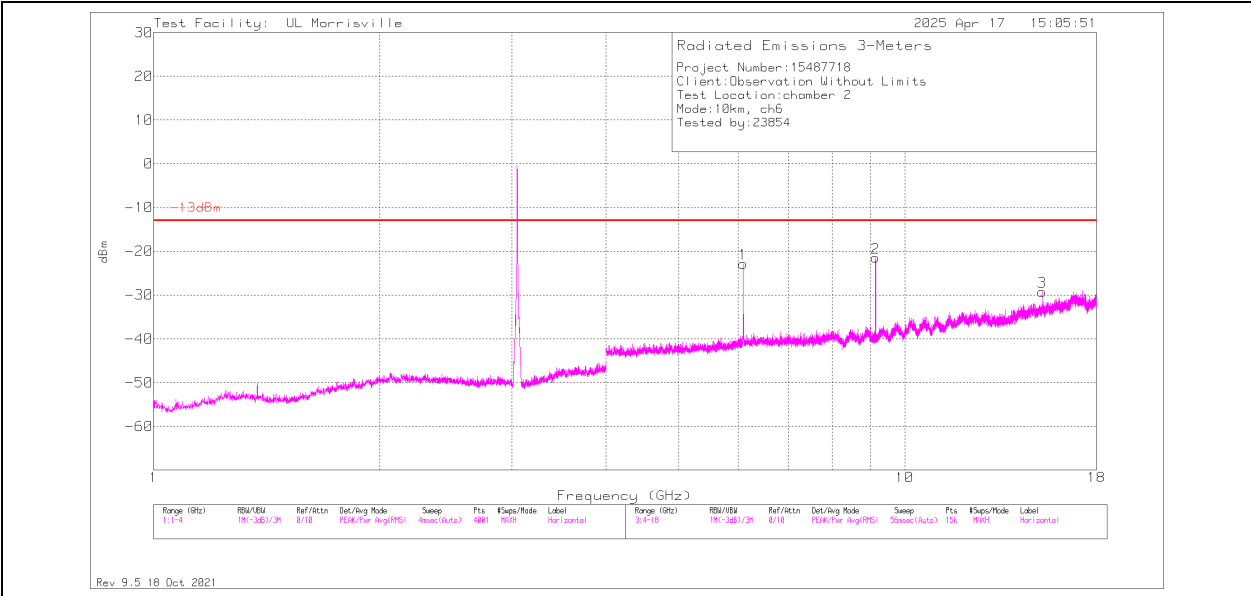


Vertical

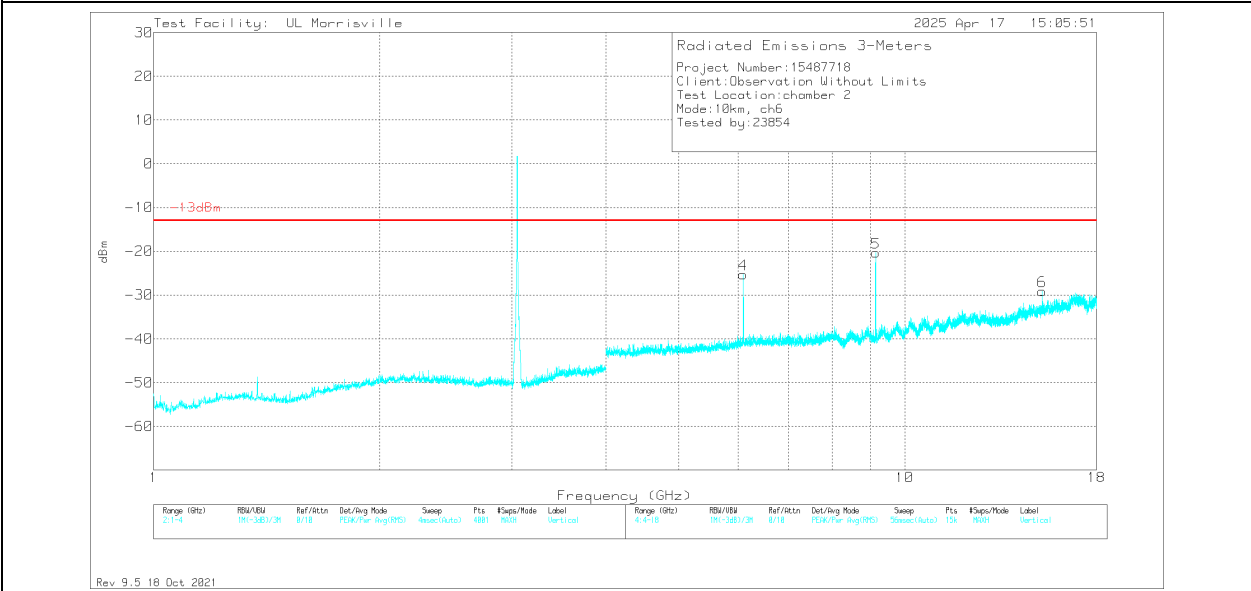
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	86408 (dB/m)	Gain/Loss (dB)	CF (dB)	Filter (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	4.5348	-48.55	Pk	34	-34.5	11.8	.5	-36.75	-13	-23.75	0-360	101	H
4	4.53573	-46.78	Pk	34	-34.5	11.8	.5	-34.98	-13	-21.98	0-360	200	V
5	6.04587	-39.87	Pk	35.4	-33.1	11.8	.6	-25.17	-13	-12.17	0-360	200	V
2	6.04773	-40.89	Pk	35.4	-33.2	11.8	.6	-26.29	-13	-13.29	0-360	101	H
6	9.07453	-40.74	Pk	35.9	-30.5	11.8	.7	-22.84	-13	-9.84	0-360	300	V
3	9.07546	-40.87	Pk	35.9	-30.5	11.8	.7	-22.97	-13	-9.97	0-360	300	H

Pk - Peak detector

MODE 4 MID CHANNEL 1-18GHz



Horizontal

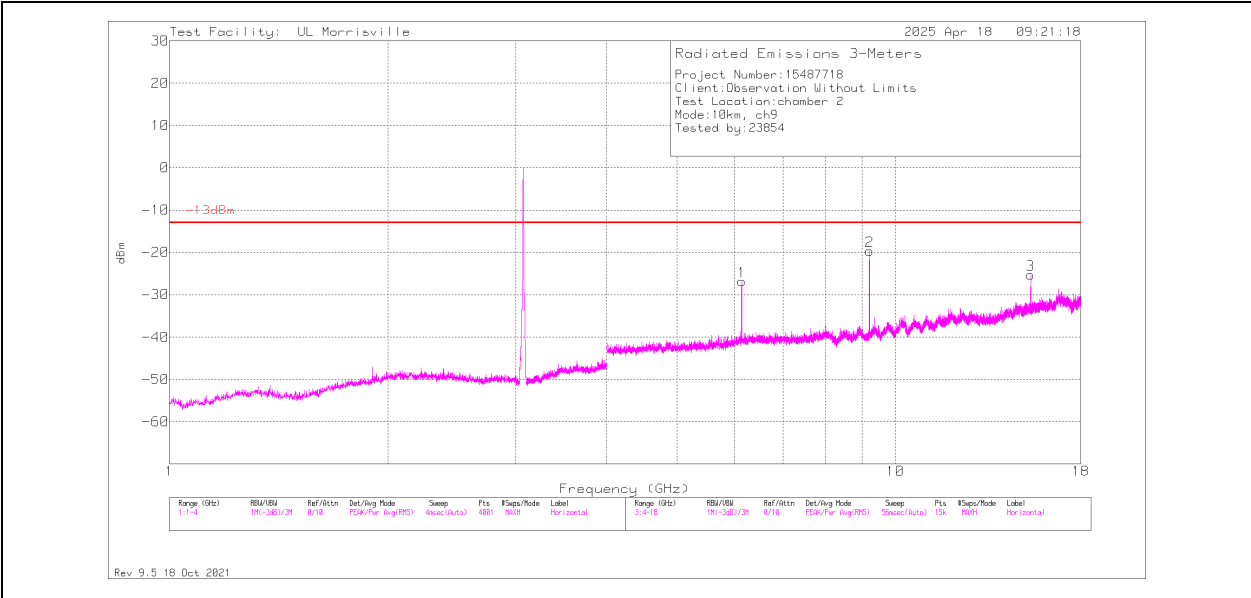


Vertical

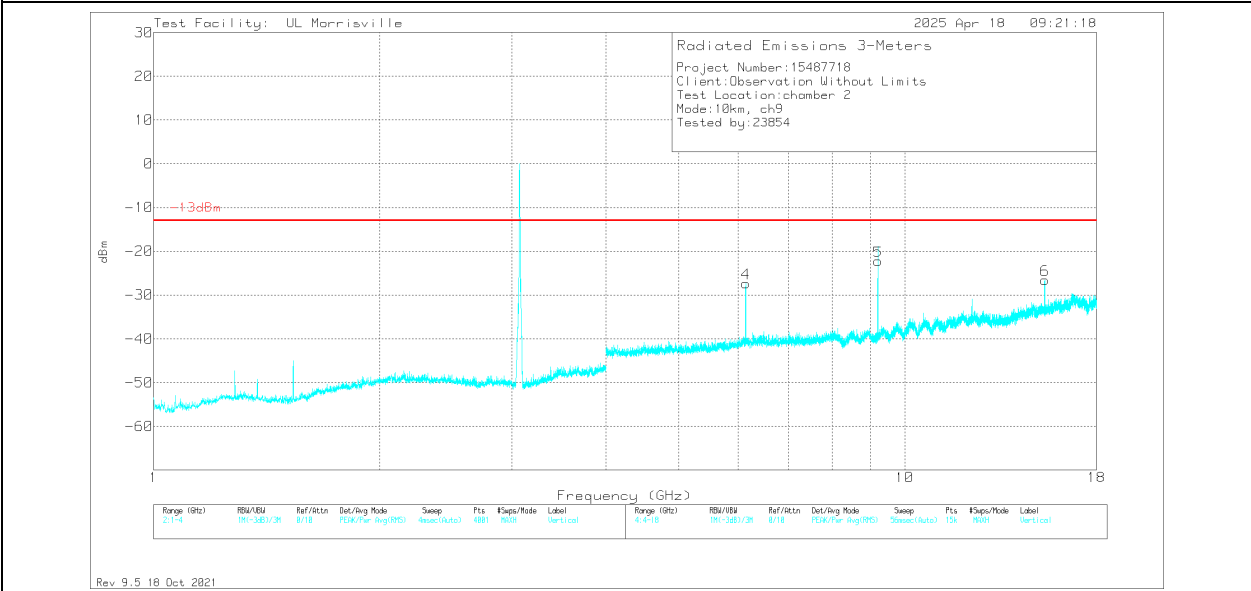
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	86408 (dB/m)	Gain/Loss (dB)	CF (dB)	Filter (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	6.0944	-40.65	Pk	35.5	-32.6	11.8	.7	-25.25	-13	-12.25	0-360	300	V
1	6.09533	-38.21	Pk	35.5	-32.6	11.8	.7	-22.51	-13	-9.81	0-360	101	H
2	9.1436	-39.7	Pk	35.9	-30.1	11.8	.6	-21.5	-13	-8.5	0-360	300	H
5	9.14453	-38.55	Pk	35.9	-30.1	11.8	.6	-20.35	-13	-7.35	0-360	101	V
3	15.22893	-54.06	Pk	40.1	-27.8	11.8	.7	-29.26	-13	-16.26	0-360	199	H
6	15.24106	-54.47	Pk	40.1	-27.2	11.8	.7	-29.07	-13	-16.07	0-360	200	V

Pk - Peak detector

MODE 4 HIGH CHANNEL 1-18GHz



Horizontal

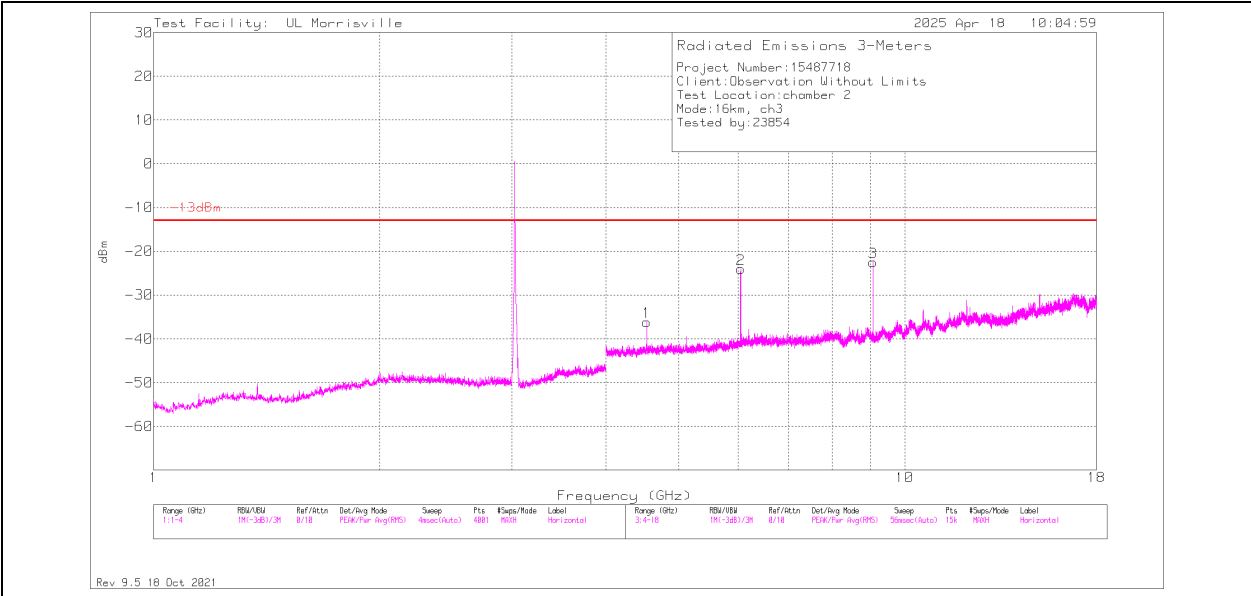


Vertical

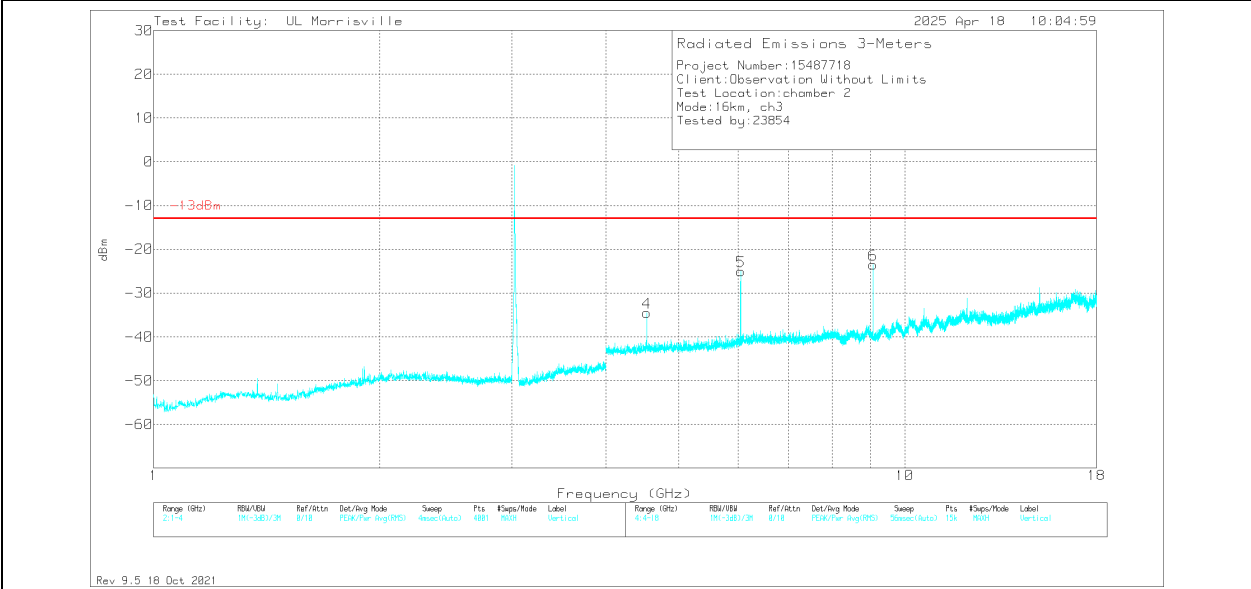
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	86408 (dB/m)	Gain/Loss (dB)	CF (dB)	Filter (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	6.142	-42.41	Pk	35.5	-32.9	11.8	.7	-27.31	-13	-14.31	0-360	200	V
1	6.14293	-41.87	Pk	35.5	-32.9	11.8	.7	-26.77	-13	-13.77	0-360	300	H
2	9.2164	-37.6	Pk	36	-30.5	11.8	.7	-19.6	-13	-6.6	0-360	101	H
5	9.2164	-40.26	Pk	36	-30.5	11.8	.7	-22.26	-13	-9.26	0-360	200	V
3	15.35586	-51.45	Pk	40.3	-26.6	11.8	.7	-25.25	-13	-12.25	0-360	300	H
6	15.3568	-52.8	Pk	40.3	-26.7	11.8	.8	-26.6	-13	-13.6	0-360	200	V

Pk - Peak detector

MODE 5 LOW CHANNEL 1-18GHz



Horizontal

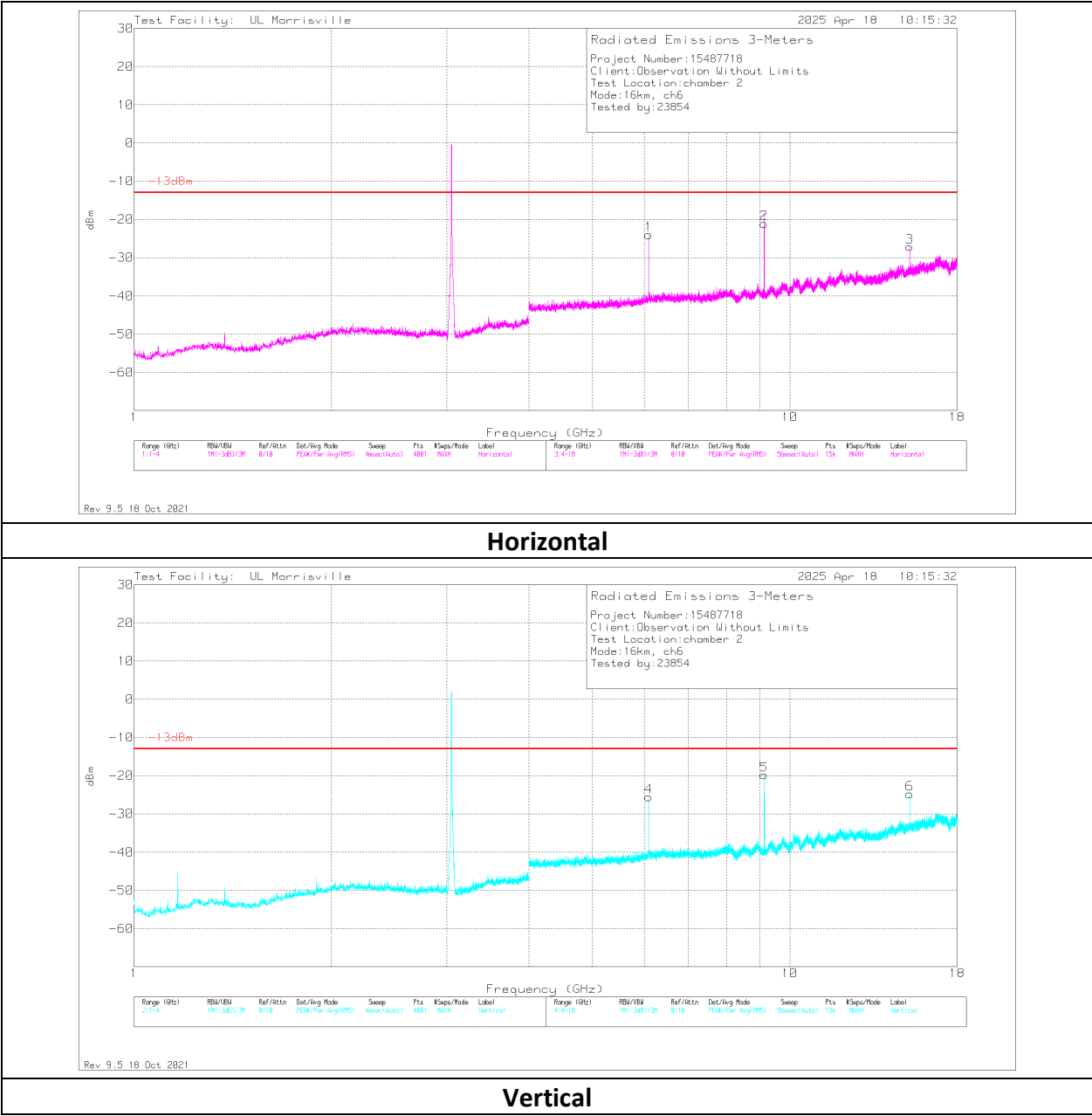


Vertical

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	86408 (dB/m)	Gain/Loss (dB)	CF (dB)	Filter (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	4.53387	-46.34	Pk	34	-34.5	11.8	.5	-34.54	-13	-21.54	0-360	201	V
1	4.53667	-47.98	Pk	34	-34.5	11.8	.5	-36.18	-13	-23.18	0-360	300	H
2	6.04867	-38.66	Pk	35.4	-33.2	11.8	.6	-24.06	-13	-11.06	0-360	300	H
5	6.04867	-39.63	Pk	35.4	-33.2	11.8	.6	-25.03	-13	-12.03	0-360	201	V
3	9.06893	-40.42	Pk	35.9	-30.5	11.8	.7	-22.52	-13	-9.52	0-360	300	H
6	9.07266	-41.4	Pk	35.9	-30.5	11.8	.7	-23.5	-13	-10.5	0-360	101	V

Pk - Peak detector

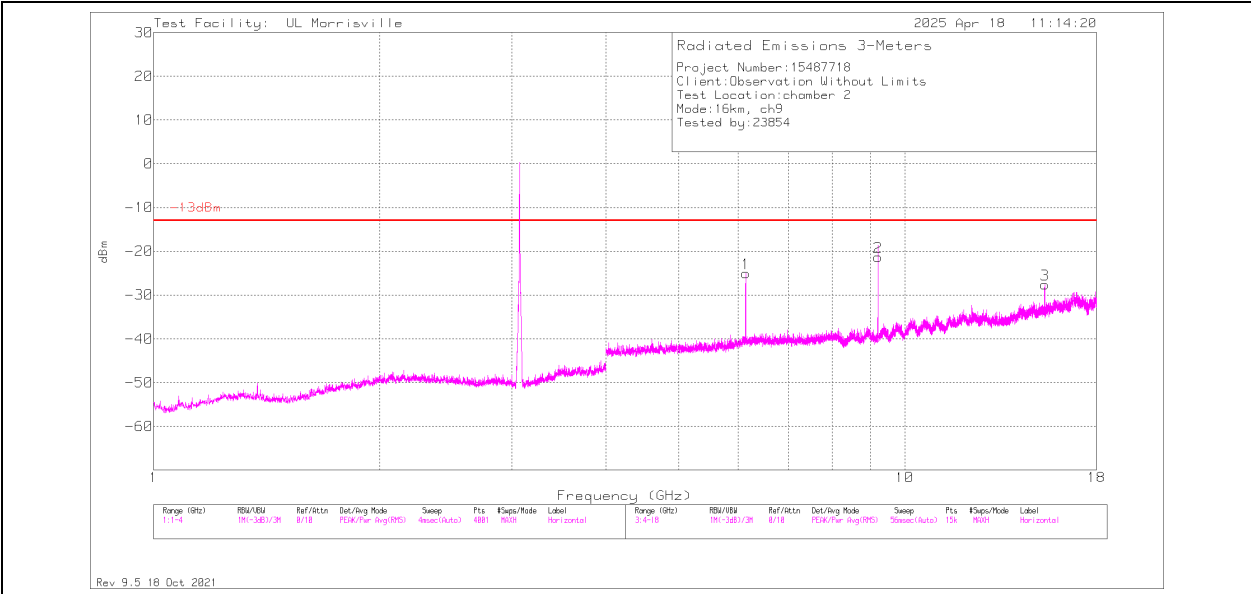
MODE 5 MID CHANNEL 1-18GHz



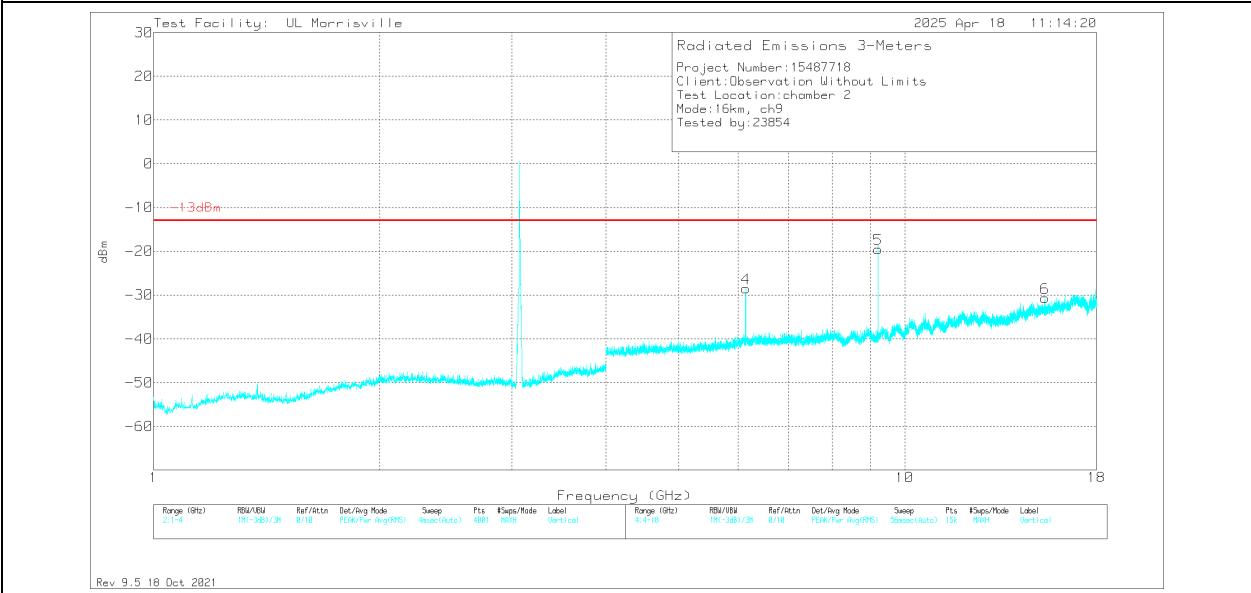
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	86408 (dB/m)	Gain/Loss (dB)	CF (dB)	Filter (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	6.0916	-40.83	Pk	35.5	-32.7	11.8	.7	-25.53	-13	-12.53	0-360	101	V
1	6.09627	-39.38	Pk	35.5	-32.6	11.8	.7	-23.98	-13	-10.98	0-360	101	H
2	9.138	-39.1	Pk	35.9	-30.2	11.8	.5	-21.1	-13	-8.1	0-360	300	H
5	9.14266	-38.03	Pk	35.9	-30.1	11.8	.6	-19.83	-13	-6.83	0-360	200	V
3	15.23173	-51.94	Pk	40.1	-27.8	11.8	.7	-27.14	-13	-14.14	0-360	300	H
6	15.23826	-49.93	Pk	40.1	-27.4	11.8	.7	-24.73	-13	-11.73	0-360	200	V

Pk - Peak detector

MODE 5 HIGH CHANNEL 1-18GHz



Horizontal

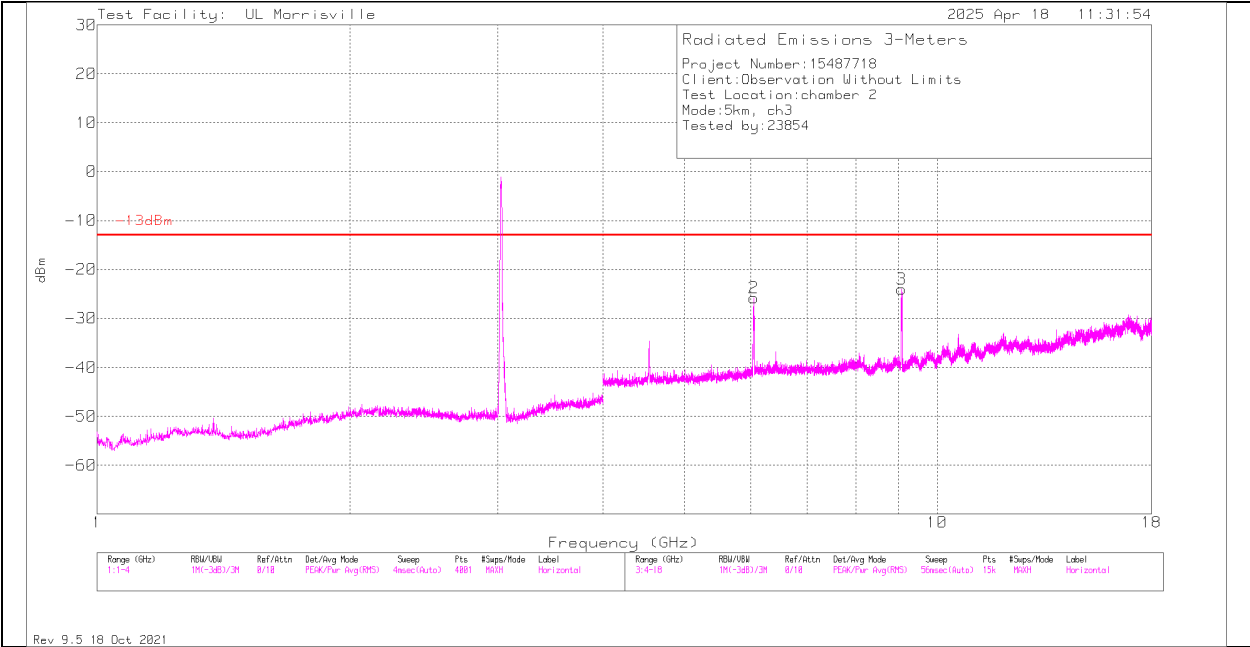


Vertical

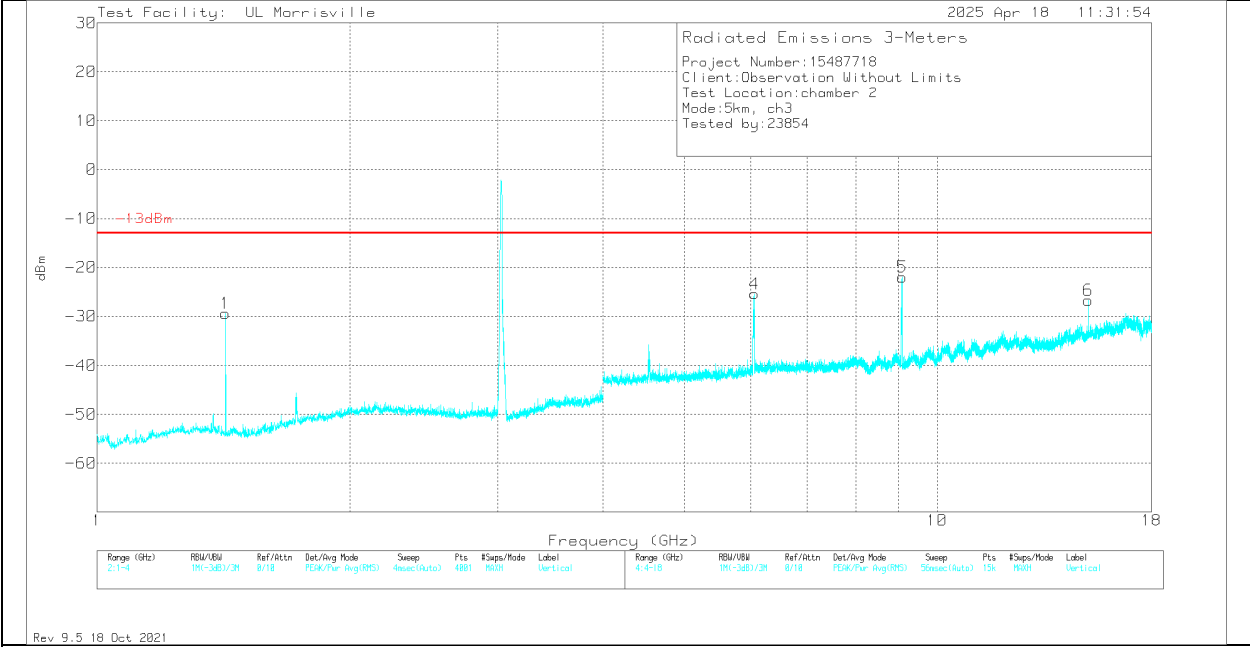
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	86408 (dB/m)	Gain/Loss (dB)	CF (dB)	Filter (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	6.142	-40.12	Pk	35.5	-32.9	11.8	.7	-25.02	-13	-12.02	0-360	101	H
4	6.14387	-43.59	Pk	35.5	-32.9	11.8	.7	-28.49	-13	-15.49	0-360	101	V
2	9.208	-39.16	Pk	36	-30.6	11.8	.7	-21.26	-13	-8.26	0-360	300	H
5	9.21266	-37.54	Pk	36	-30.5	11.8	.7	-19.54	-13	-6.54	0-360	200	V
6	15.3568	-56.89	Pk	40.3	-26.7	11.8	.8	-30.69	-13	-17.69	0-360	200	V
3	15.35773	-53.81	Pk	40.3	-26.7	11.8	.8	-27.61	-13	-14.61	0-360	199	H

Pk - Peak detector

MODE 6 LOW CHANNEL 1-18GHz



Horizontal

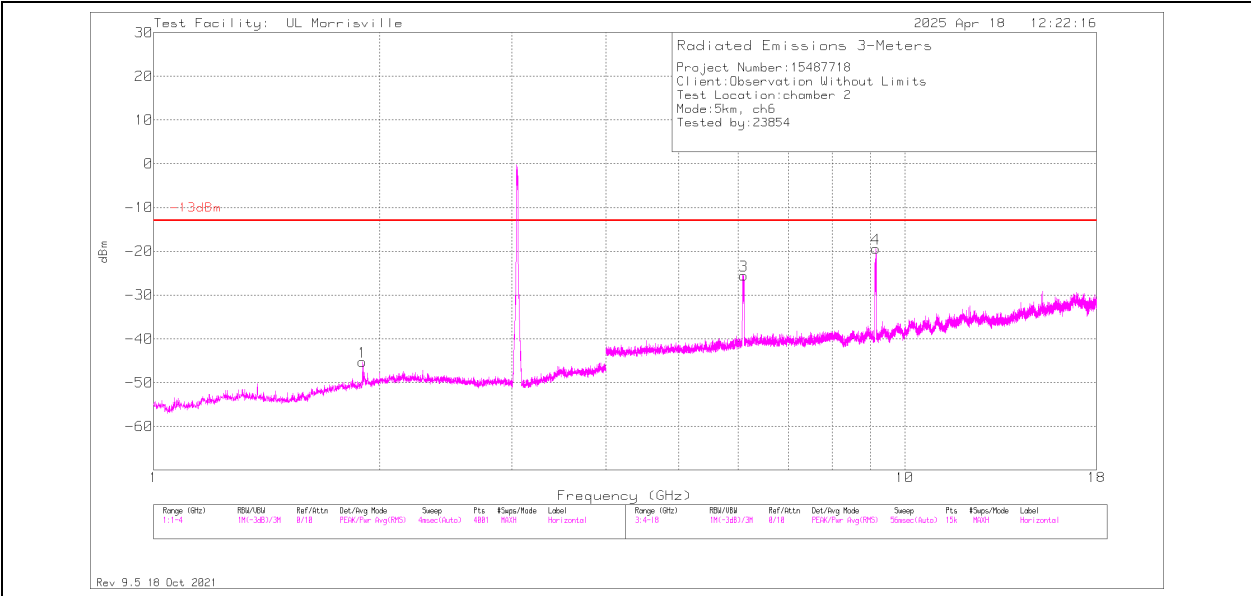


Vertical

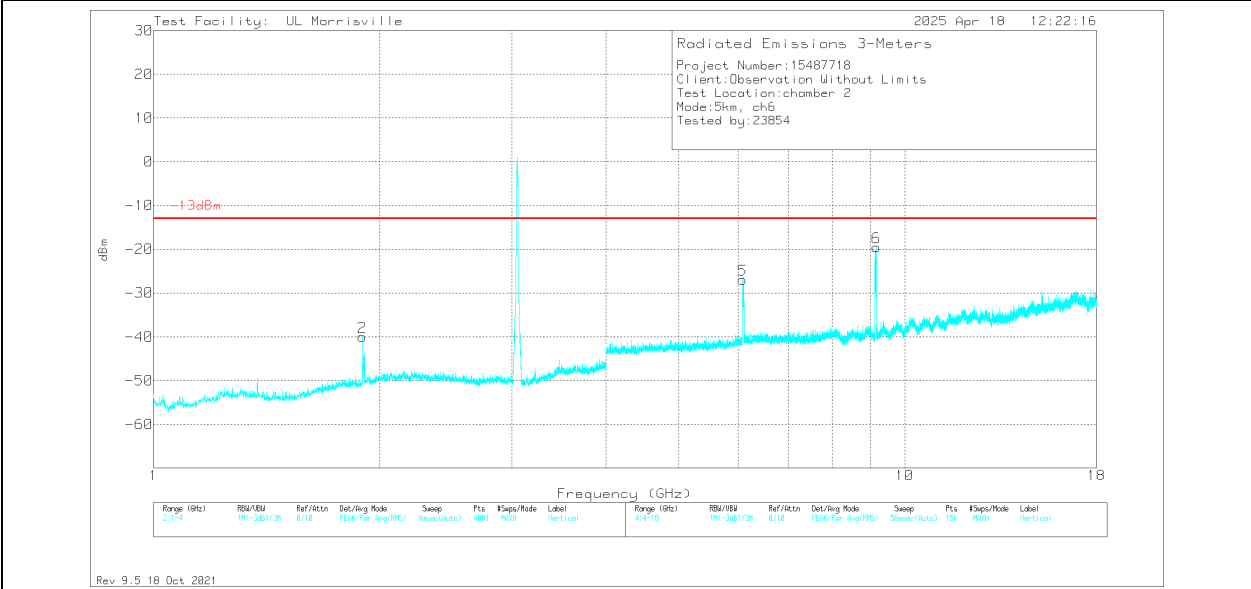
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	86408 (dB/m)	Gain/Loss (dB)	CF (dB)	Filter (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.4215	-46.88	Pk	28.4	-22.7	11.8	0	-29.38	-13	-16.38	0-360	200	V
2	6.05053	-40.35	Pk	35.4	-33.2	11.8	.6	-25.75	-13	-12.75	0-360	299	H
4	6.058	-40.05	Pk	35.4	-33.1	11.8	.6	-25.35	-13	-12.35	0-360	299	V
3	9.08013	-41.93	Pk	35.9	-30.5	11.8	.7	-24.03	-13	-11.03	0-360	199	H
5	9.082	-39.92	Pk	35.9	-30.5	11.8	.7	-21.92	-13	-8.92	0-360	200	V
6	15.1412	-51.07	Pk	40	-28.1	11.8	.7	-26.67	-13	-13.67	0-360	200	V

Pk - Peak detector

MODE 6 MID CHANNEL 1-18GHz



Horizontal

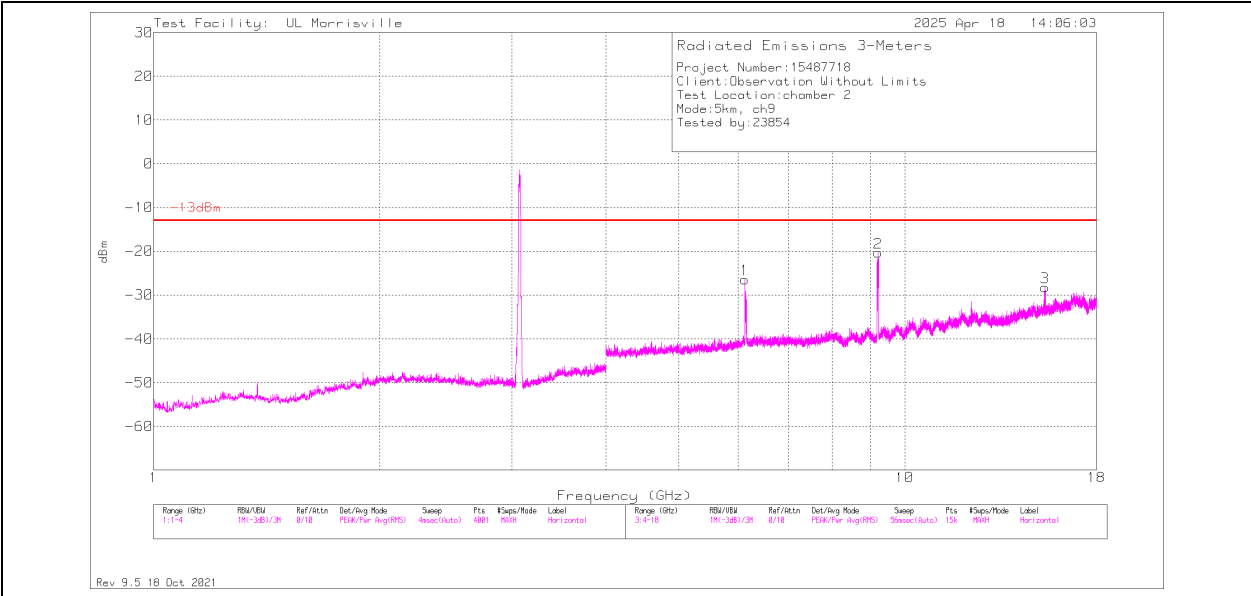


Vertical

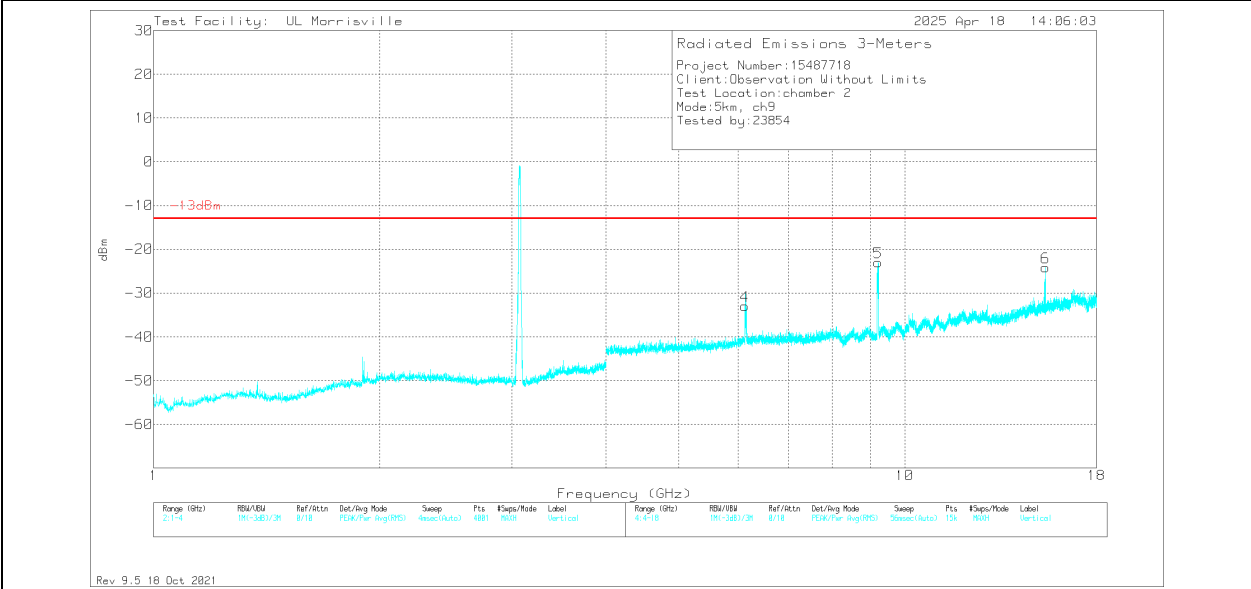
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	86408 (dB/m)	Gain/Loss (dB)	CF (dB)	Filter (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.89625	-65.89	Pk	31	-22.1	11.8	0	-45.19	-13	-32.19	0-360	300	H
2	1.89625	-60.71	Pk	31	-22.1	11.8	0	-40.01	-13	-27.01	0-360	200	V
5	6.08227	-42.12	Pk	35.5	-32.8	11.8	.7	-26.92	-13	-13.92	0-360	200	V
3	6.10093	-41.07	Pk	35.5	-32.5	11.8	.7	-25.57	-13	-12.57	0-360	101	H
4	9.1576	-37.48	Pk	35.9	-30.2	11.8	.6	-19.38	-13	-6.38	0-360	200	H
6	9.16133	-37.67	Pk	35.9	-30.2	11.8	.6	-19.57	-13	-6.57	0-360	200	V

Pk - Peak detector

MODE 6 HIGH CHANNEL 1-18GHz



Horizontal

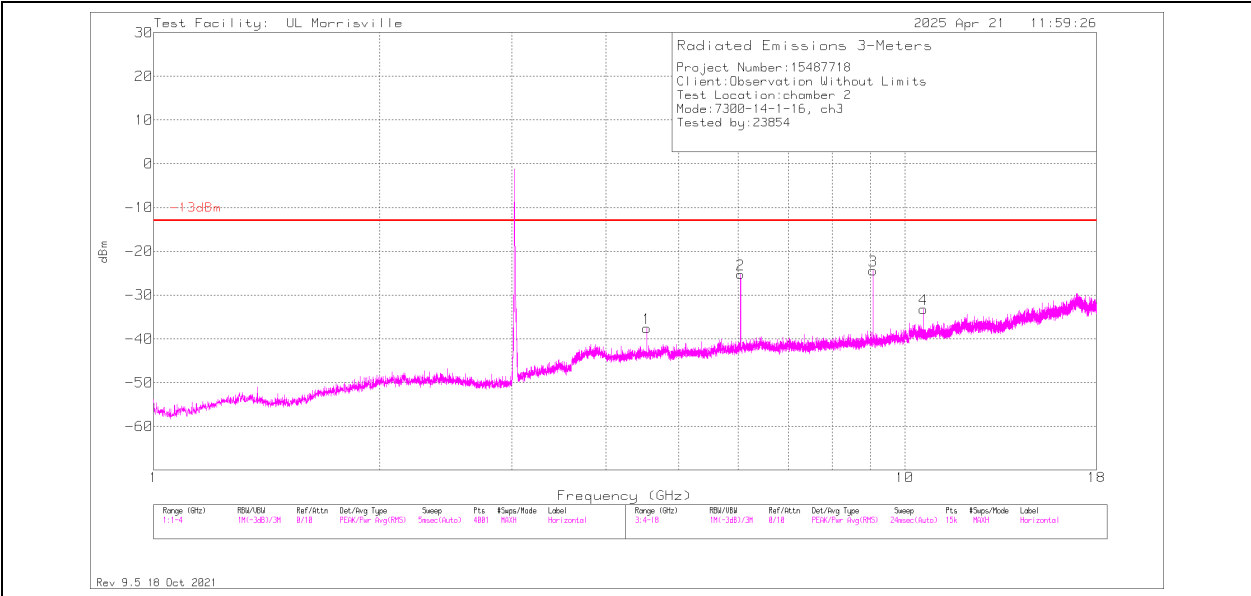


Vertical

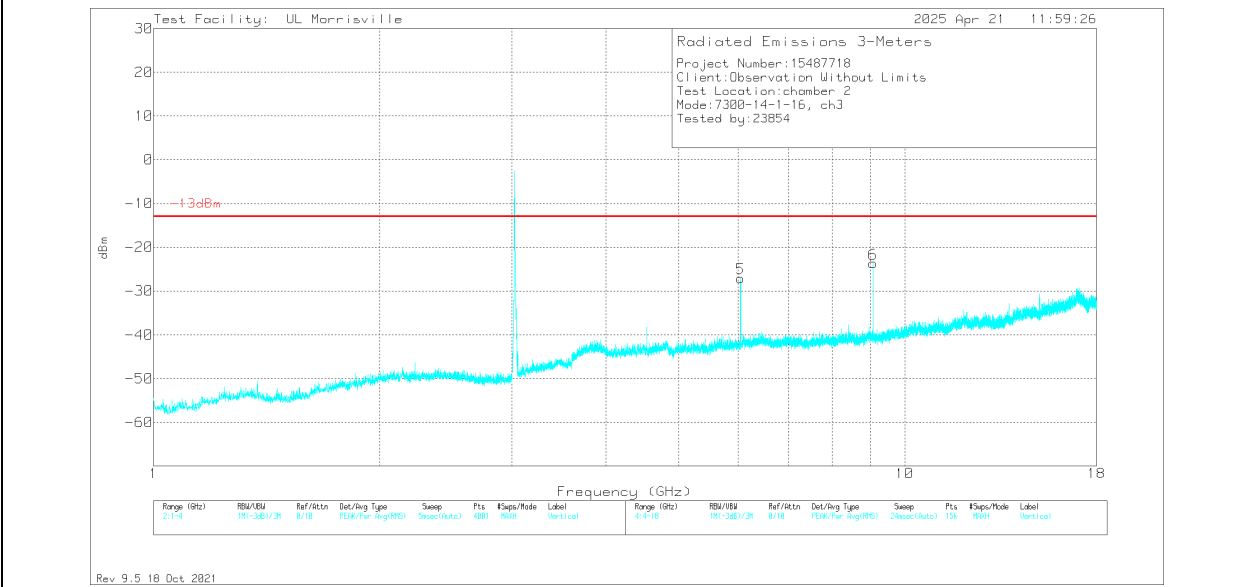
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	86408 (dB/m)	Gain/Loss (dB)	CF (dB)	Filter (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	6.12613	-41.46	Pk	35.5	-33	11.8	.7	-26.46	-13	-13.46	0-360	101	H
4	6.12893	-47.94	Pk	35.5	-33	11.8	.7	-32.94	-13	-19.94	0-360	101	V
5	9.208	-40.83	Pk	36	-30.6	11.8	.7	-22.93	-13	-9.93	0-360	101	V
2	9.21266	-38.35	Pk	36	-30.5	11.8	.7	-20.35	-13	-7.35	0-360	300	H
3	15.36333	-53.97	Pk	40.3	-27.1	11.8	.8	-28.17	-13	-15.17	0-360	101	H
6	15.38853	-50.03	Pk	40.3	-27	11.8	.8	-24.13	-13	-11.13	0-360	200	V

Pk - Peak detector

MODE 7 LOW CHANNEL 1-18GHz



Horizontal

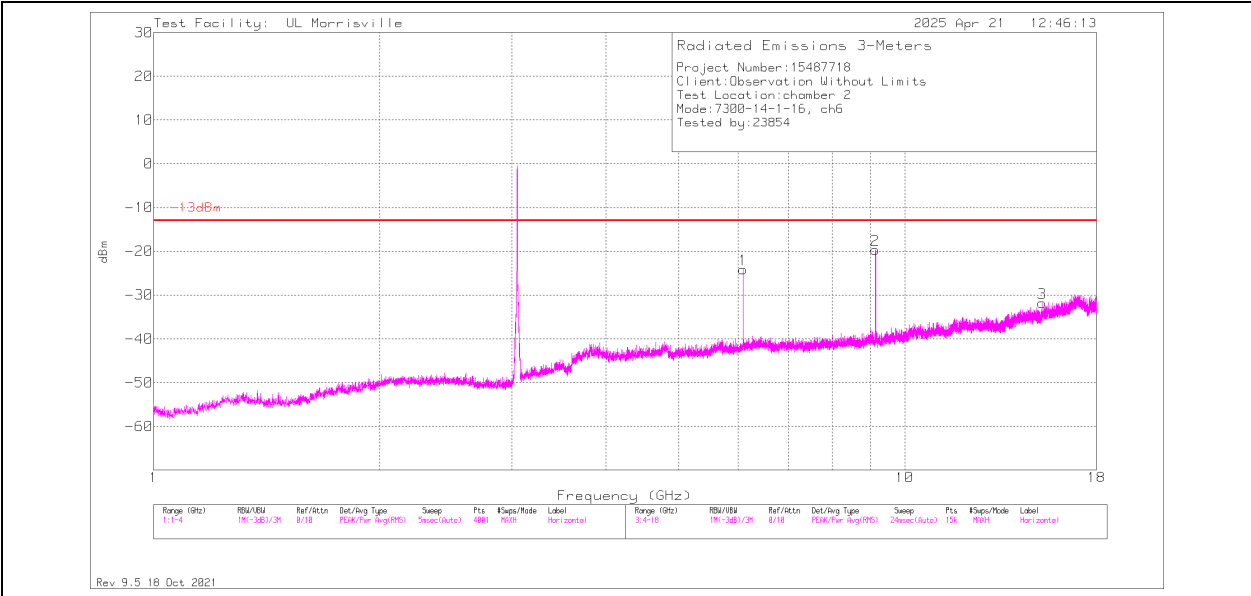


Vertical

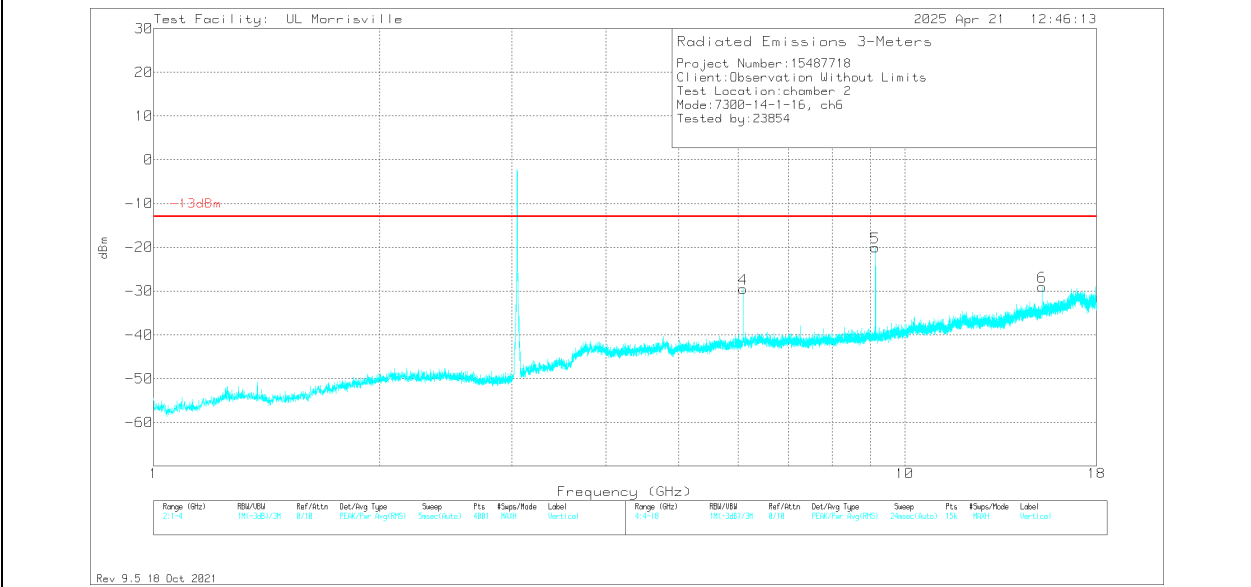
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	86408 (dBm)	Gain/Loss (dB)	CF (dB)	Filter (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	4.53667	-49.38	Pk	34	-34.5	11.8	.5	-37.58	-13	-24.58	0-360	101	H
2	6.04587	-39.92	Pk	35.4	-33.1	11.8	.6	-25.22	-13	-12.22	0-360	101	H
5	6.04587	-41.81	Pk	35.4	-33.1	11.8	.6	-27.11	-13	-14.11	0-360	200	V
6	9.068	-41.48	Pk	35.9	-30.6	11.8	.7	-23.68	-13	-10.68	0-360	101	V
3	9.06893	-42.31	Pk	35.9	-30.5	11.8	.7	-24.41	-13	-11.41	0-360	101	H
4	10.58653	-52.74	Pk	37.6	-30.4	11.8	.5	-33.24	-13	-20.24	0-360	300	H

Pk - Peak detector

MODE 7 MID CHANNEL 1-18GHz



Horizontal

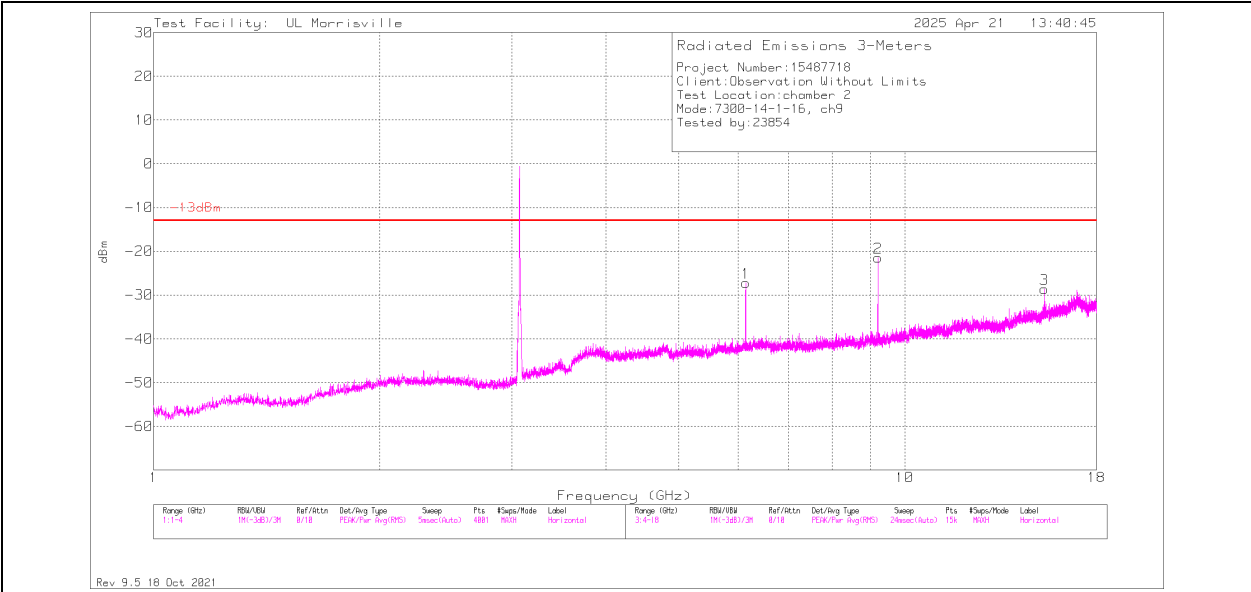


Vertical

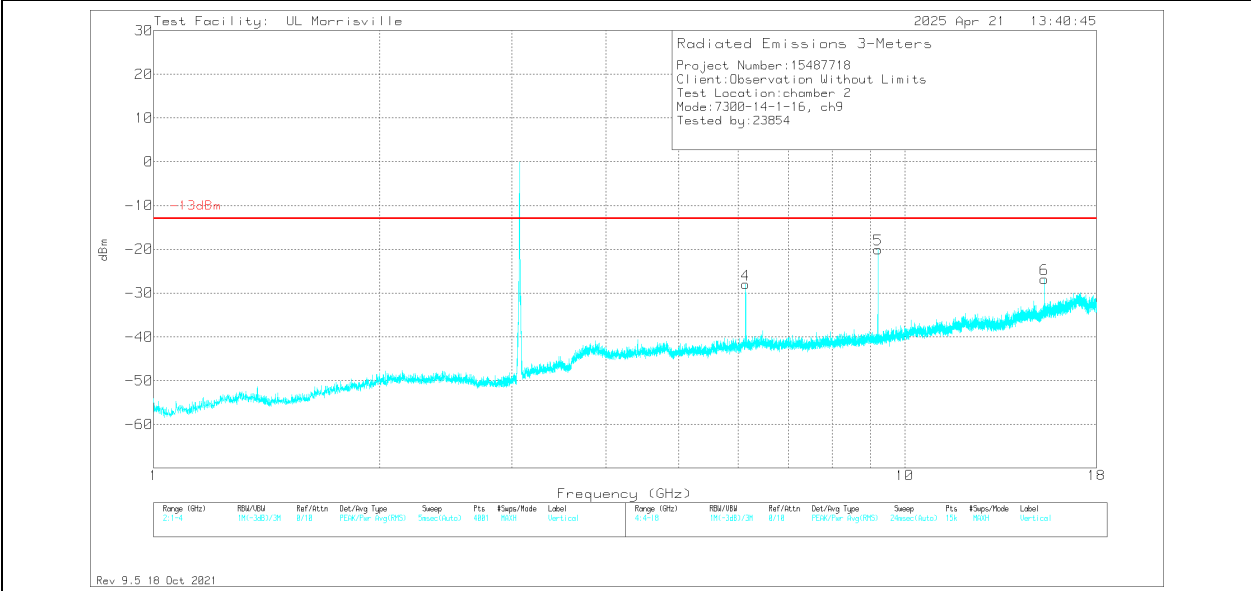
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	86408 (dBm)	Gain/Loss (dB)	CF (dB)	Filter (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	6.09253	-44.8	Pk	35.5	-32.7	11.8	.7	-29.5	-13	-16.5	0-360	200	V
1	6.09347	-39.46	Pk	35.5	-32.7	11.8	.7	-24.16	-13	-11.16	0-360	300	H
2	9.13986	-37.65	Pk	35.9	-30.2	11.8	.5	-19.65	-13	-6.65	0-360	300	H
5	9.14266	-38.19	Pk	35.9	-30.1	11.8	.6	-19.99	-13	-6.99	0-360	200	V
6	15.23733	-54.1	Pk	40.1	-27.5	11.8	.7	-29	-13	-16	0-360	200	V
3	15.242	-57.21	Pk	40.1	-27.2	11.8	.7	-31.81	-13	-18.81	0-360	200	H

Pk - Peak detector

MODE 7 HIGH CHANNEL 1-18GHz



Horizontal

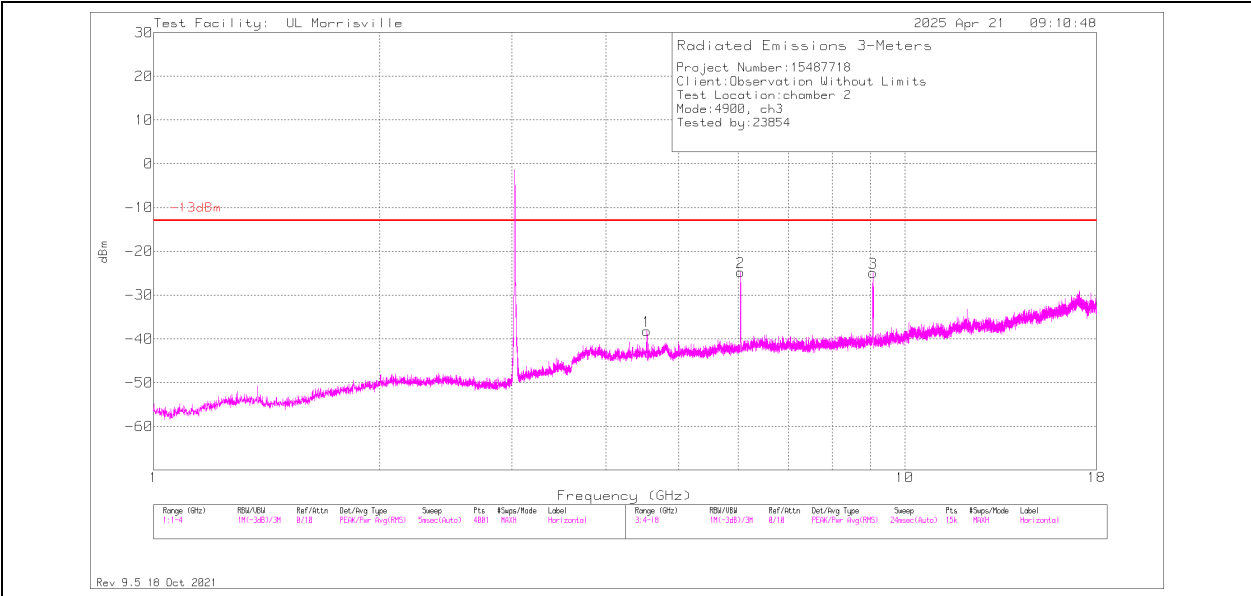


Vertical

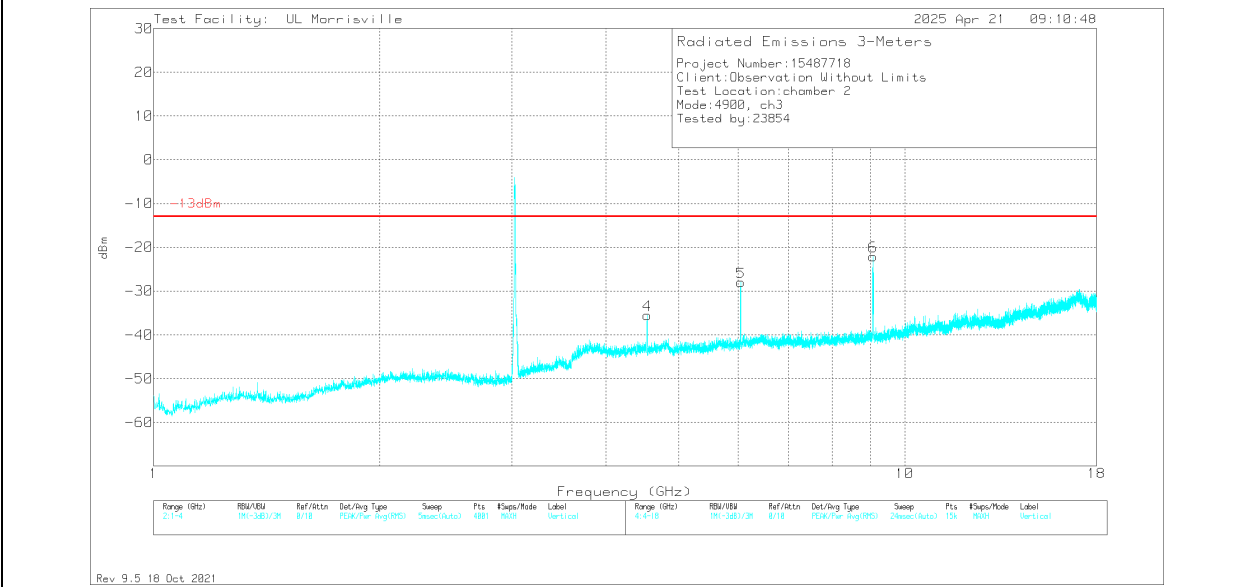
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	86408 (dB/m)	Gain/Loss (dB)	CF (dB)	Filter (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	6.14013	-43.03	Pk	35.5	-33	11.8	.7	-28.03	-13	-15.03	0-360	200	V
1	6.14107	-42.32	Pk	35.5	-32.9	11.8	.7	-27.22	-13	-14.22	0-360	200	H
2	9.21453	-39.43	Pk	36	-30.5	11.8	.7	-21.43	-13	-8.43	0-360	200	H
5	9.21453	-37.99	Pk	36	-30.5	11.8	.7	-19.99	-13	-6.99	0-360	200	V
6	15.35026	-53.29	Pk	40.3	-26.3	11.8	.7	-26.79	-13	-13.79	0-360	299	V
3	15.3512	-55.04	Pk	40.3	-26.4	11.8	.7	-28.64	-13	-15.64	0-360	299	H

Pk - Peak detector

MODE 8 LOW CHANNEL 1-18GHz



Horizontal

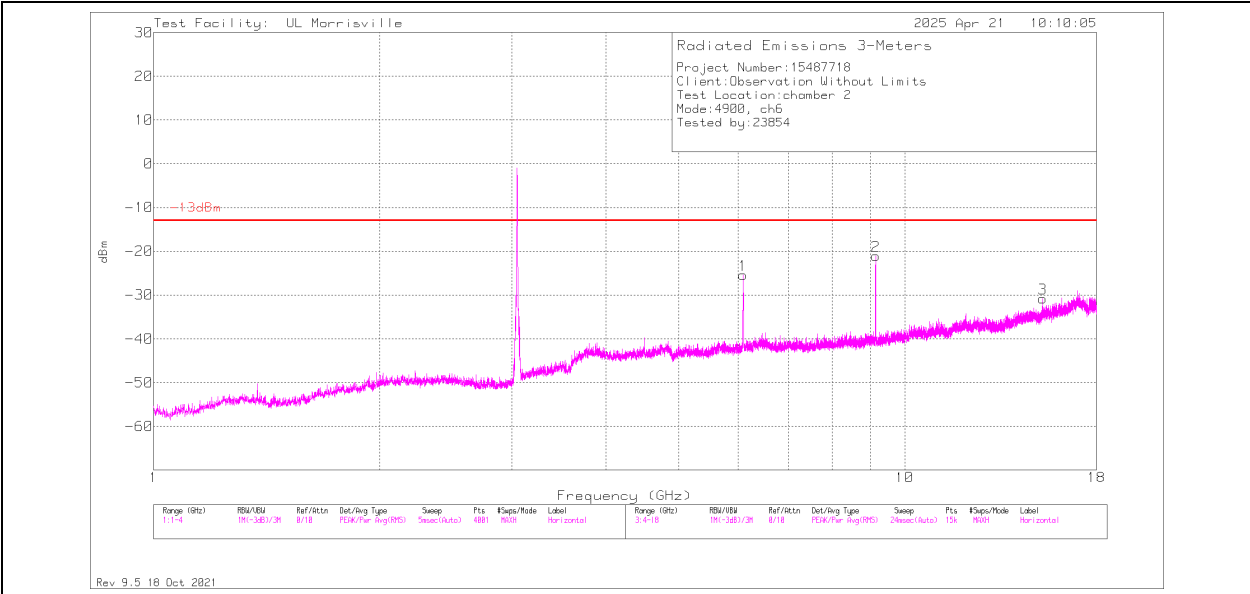


Vertical

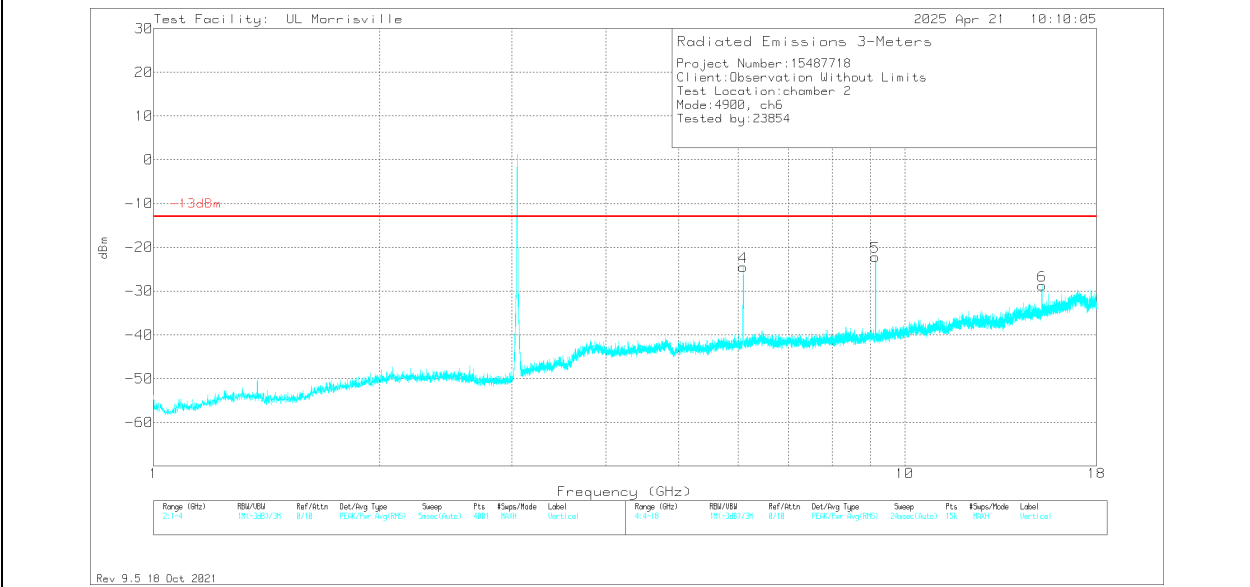
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	86408 (dB/m)	Gain/Loss (dB)	CF (dB)	Filter (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	4.53293	-49.97	Pk	34	-34.5	11.8	.5	-38.17	-13	-25.17	0-360	199	H
4	4.54133	-47.08	Pk	34	-34.7	11.8	.5	-35.48	-13	-22.48	0-360	200	V
2	6.04587	-39.51	Pk	35.4	-33.1	11.8	.6	-24.81	-13	-11.81	0-360	101	H
5	6.05333	-42.62	Pk	35.4	-33.2	11.8	.6	-28.02	-13	-15.02	0-360	300	V
6	9.06613	-39.91	Pk	35.9	-30.6	11.8	.7	-22.11	-13	-9.11	0-360	101	V
3	9.06986	-42.81	Pk	35.9	-30.5	11.8	.7	-24.91	-13	-11.91	0-360	199	H

Pk - Peak detector

MODE 8 MID CHANNEL 1-18GHz



Horizontal

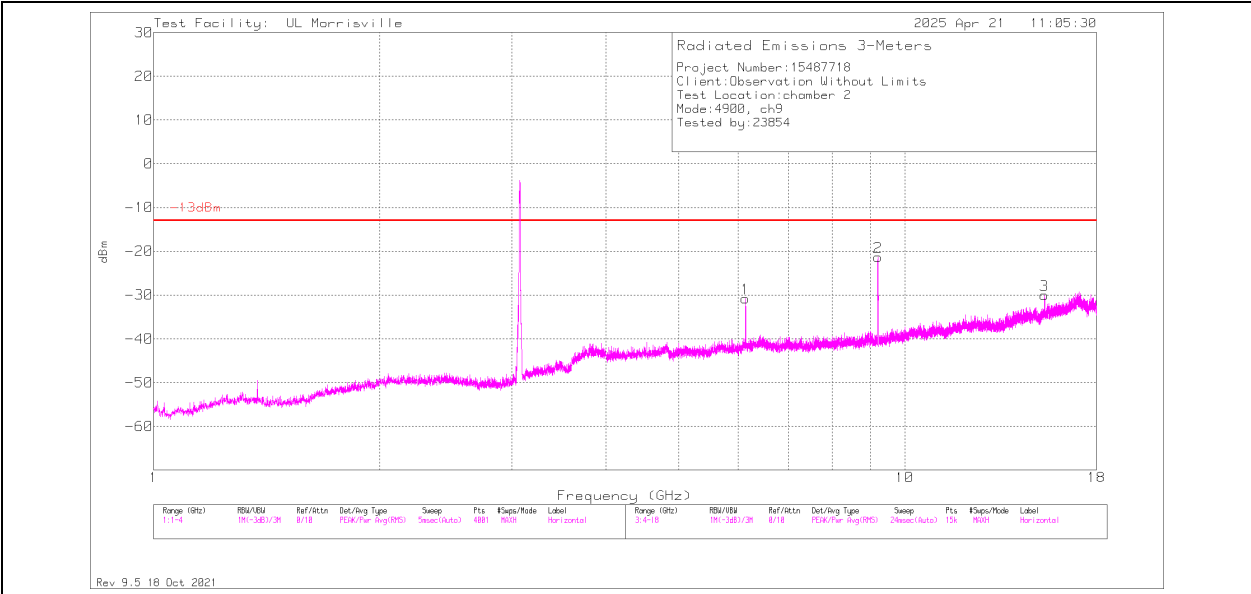


Vertical

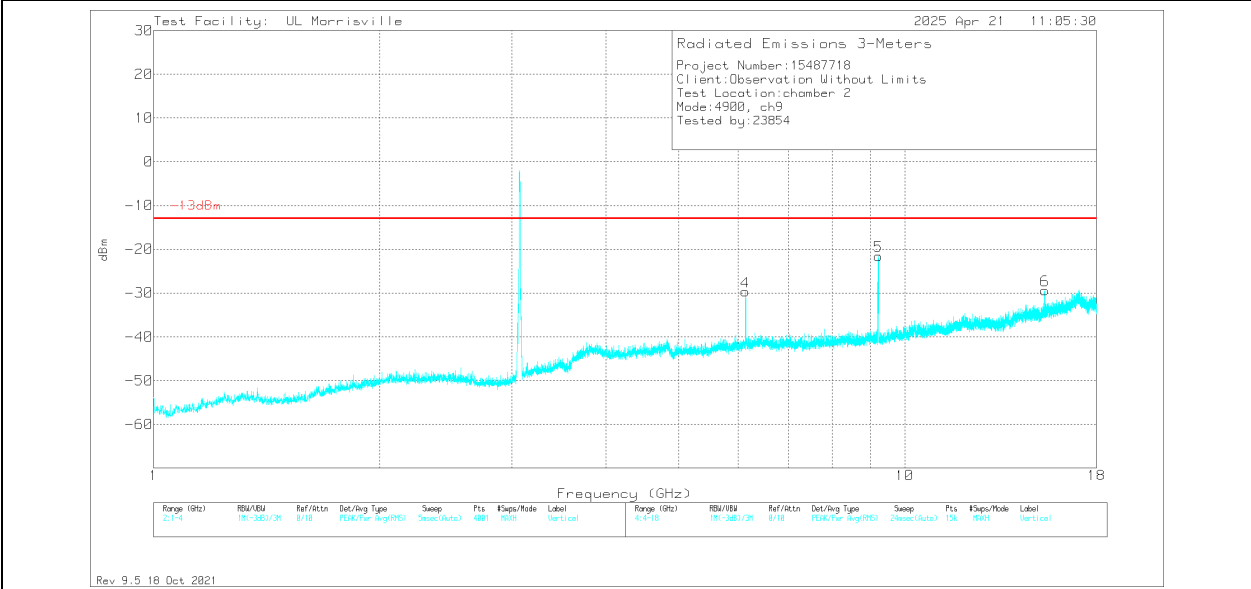
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	86408 (dBm)	Gain/Loss (dB)	CF (dB)	Filter (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	6.0888	-39.79	Pk	35.5	-32.7	11.8	.7	-24.49	-13	-11.49	0-360	200	V
1	6.08973	-40.73	Pk	35.5	-32.7	11.8	.7	-25.43	-13	-12.43	0-360	300	H
5	9.1408	-40.3	Pk	35.9	-30.2	11.8	.6	-22.2	-13	-9.2	0-360	200	V
2	9.14733	-39.4	Pk	35.9	-30	11.8	.6	-21.1	-13	-8.1	0-360	199	H
6	15.24666	-54.09	Pk	40.1	-27.3	11.8	.7	-28.79	-13	-15.79	0-360	200	V
3	15.2532	-56.13	Pk	40.2	-27.4	11.8	.7	-30.83	-13	-17.83	0-360	199	H

Pk - Peak detector

MODE 8 HIGH CHANNEL 1-18GHz



Horizontal

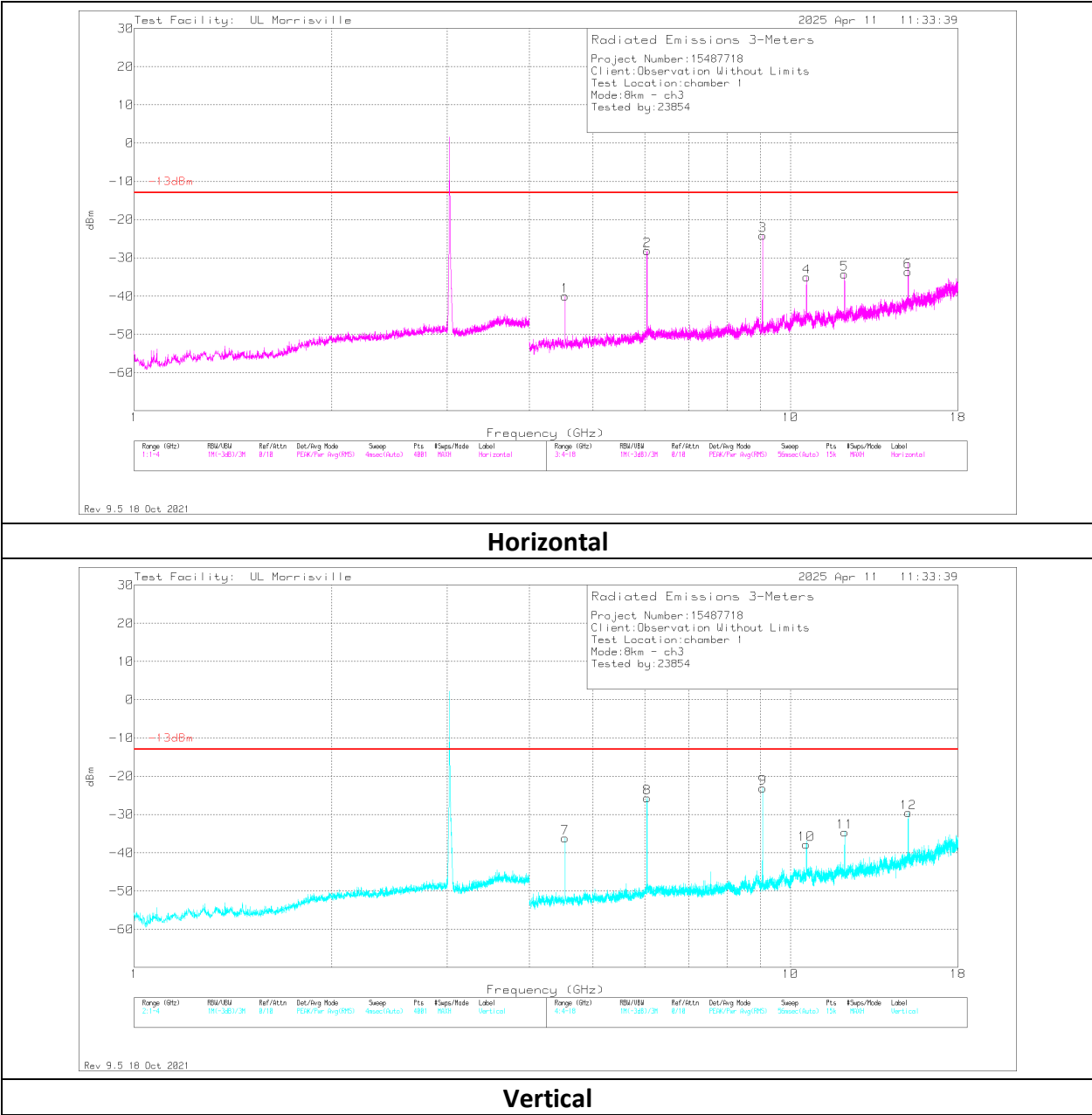


Vertical

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	86408 (dB/m)	Gain/Loss (dB)	CF (dB)	Filter (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	6.13547	-44.59	Pk	35.5	-33.1	11.8	.7	-29.69	-13	-16.69	0-360	300	V
1	6.1392	-45.74	Pk	35.5	-33	11.8	.7	-30.74	-13	-17.74	0-360	300	H
2	9.22106	-39.32	Pk	36	-30.5	11.8	.7	-21.32	-13	-8.32	0-360	100	H
5	9.22293	-39.56	Pk	36	-30.5	11.8	.7	-21.56	-13	-8.56	0-360	300	V
3	15.33533	-55.67	Pk	40.2	-27	11.8	.7	-29.97	-13	-16.97	0-360	300	H
6	15.37266	-55.08	Pk	40.3	-27.2	11.8	.8	-29.38	-13	-16.38	0-360	200	V

Pk - Peak detector

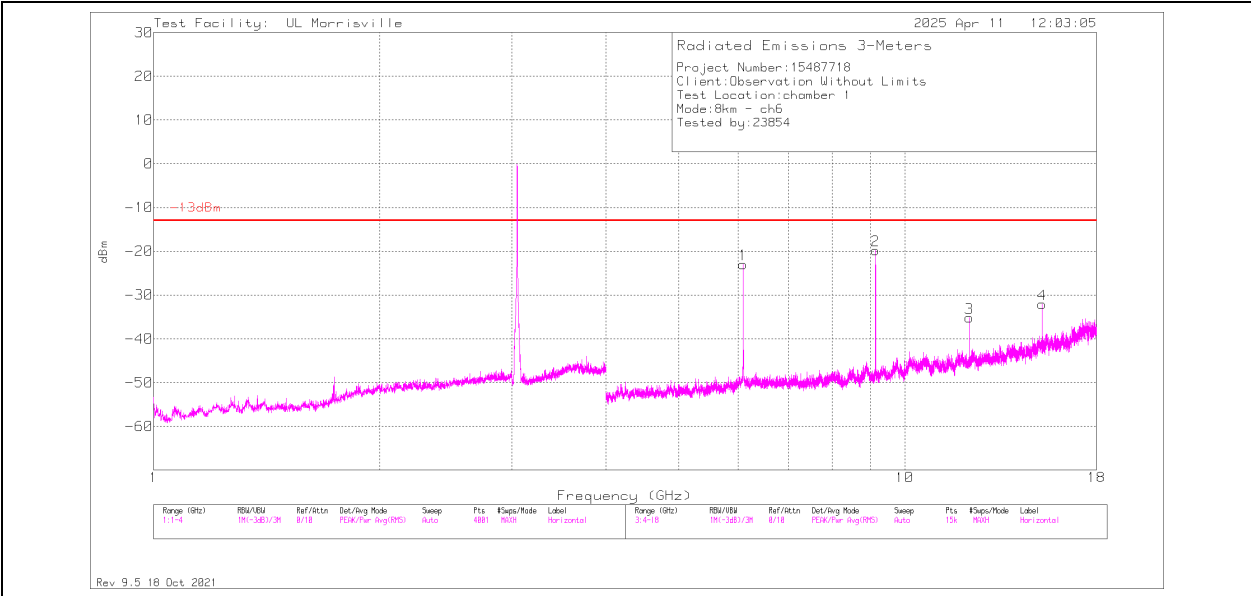
MODE 9 LOW CHANNEL 1-18GHz



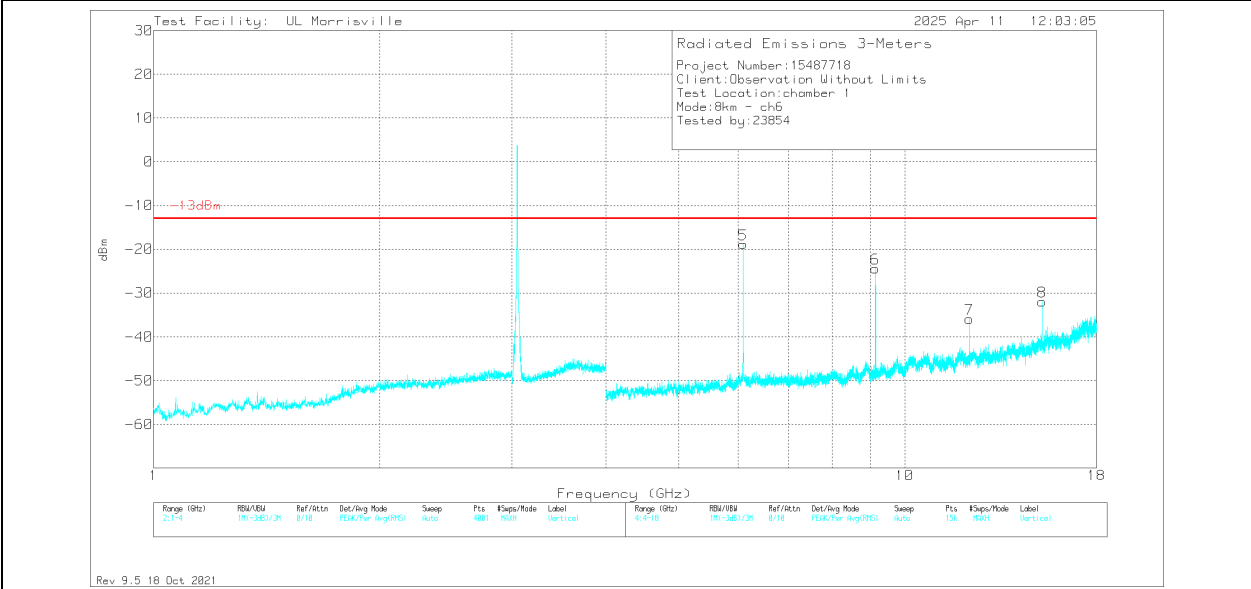
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	135143 (dB/m)	Gain/Loss (dB)	CF (dB)	Filter (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	4.5348	-40.48	Pk	33.9	-45.7	11.8	.5	-39.98	-13	-26.98	0-360	299	H
7	4.53667	-36.75	Pk	33.9	-45.6	11.8	.5	-36.15	-13	-23.15	0-360	200	V
2	6.04773	-33.7	Pk	35.2	-42	11.8	.6	-28.1	-13	-15.1	0-360	101	H
8	6.04867	-31.38	Pk	35.2	-41.9	11.8	.6	-25.68	-13	-12.68	0-360	200	V
9	9.06986	-30.77	Pk	35.8	-40.6	11.8	.7	-23.07	-13	-10.07	0-360	299	V
3	9.07266	-31.74	Pk	35.8	-40.7	11.8	.7	-24.14	-13	-11.14	0-360	101	H
10	10.57906	-47.84	Pk	38	-40.3	11.8	.5	-37.84	-13	-24.84	0-360	299	V
4	10.58186	-45.46	Pk	38	-39.9	11.8	.5	-35.06	-13	-22.06	0-360	200	H
5	12.09106	-47.1	Pk	38.8	-38.6	11.8	.9	-34.2	-13	-21.2	0-360	299	H
11	12.0976	-47.57	Pk	38.8	-38.5	11.8	.9	-34.57	-13	-21.57	0-360	200	V
6	15.11506	-49.17	Pk	40.1	-37	11.8	.7	-33.57	-13	-20.57	0-360	299	H
12	15.12066	-44.86	Pk	40.1	-37.3	11.8	.7	-29.56	-13	-16.56	0-360	200	V

Pk - Peak detector

MODE 9 MID CHANNEL 1-18GHz



Horizontal

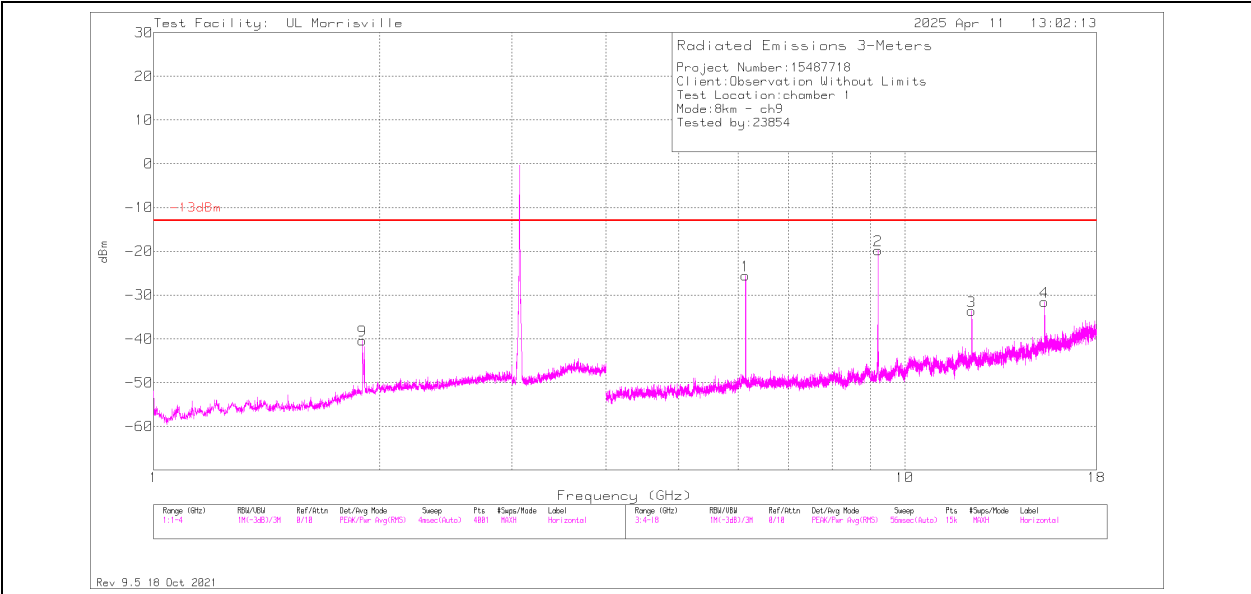


Vertical

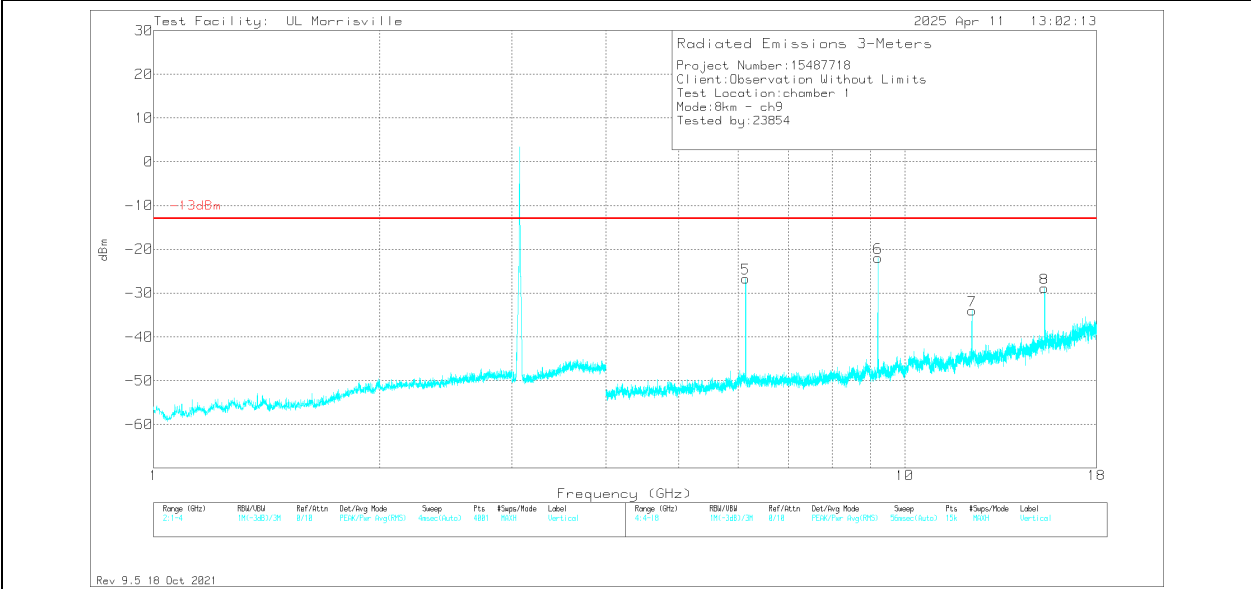
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	135143 (dB/m)	Gain/Loss (dB)	CF (dB)	Filter (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	6.09253	-29.1	Pk	35.2	-41.6	11.8	.7	-23	-13	-10	0-360	200	H
5	6.09462	-49.91	RMS	35.2	-41.6	11.8	.7	-43.61	-13	-30.81	316	296	V
6	9.1408	-32.05	Pk	35.9	-40.6	11.8	.6	-24.35	-13	-11.35	0-360	300	V
2	9.1436	-27.59	Pk	35.9	-40.5	11.8	.6	-19.79	-13	-6.79	0-360	300	H
7	12.18533	-49.53	Pk	38.8	-37.8	11.8	.8	-35.93	-13	-22.93	0-360	200	V
3	12.18813	-48.3	Pk	38.8	-38.3	11.8	.8	-35.2	-13	-22.2	0-360	101	H
8	15.24013	-47.98	Pk	40.2	-36.7	11.8	.7	-31.98	-13	-18.98	0-360	300	V
4	15.24106	-48.32	Pk	40.2	-36.5	11.8	.7	-32.12	-13	-19.12	0-360	200	H

Pk - Peak detector
RMS - RMS detection

MODE 9 HIGH CHANNEL 1-18GHz



Horizontal



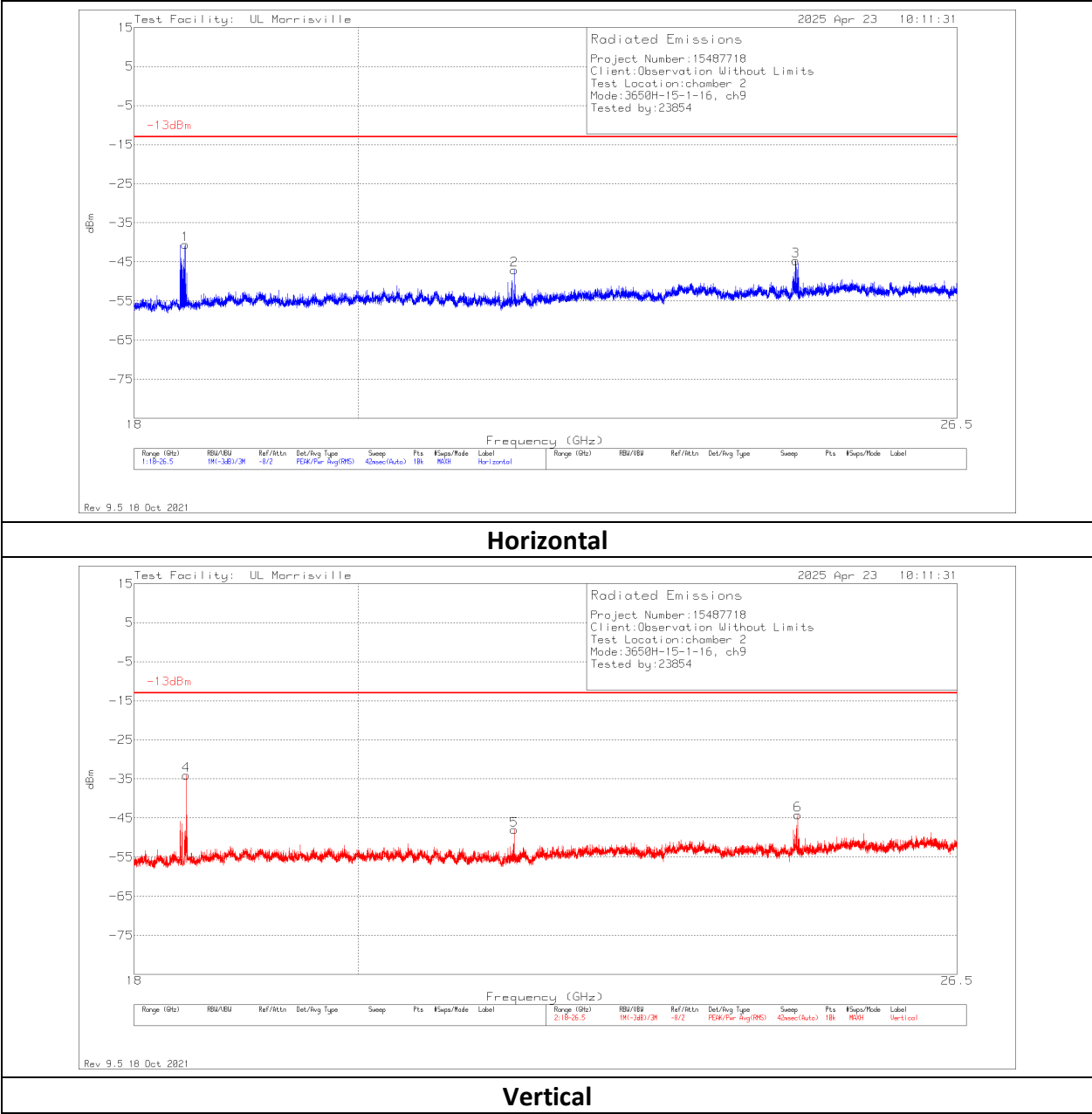
Vertical

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	135143 (dBm)	Gain/Loss (dB)	CF (dB)	Filter (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
9	1.89625	-59.31	Pk	31.3	-24.2	11.8	0	-40.41	-13	-27.41	0-360	300	H
1	6.1392	-30.91	Pk	35.3	-42.4	11.8	.7	-25.51	-13	-12.51	0-360	200	H
5	6.14013	-31.99	Pk	35.3	-42.5	11.8	.7	-26.69	-13	-13.69	0-360	200	V
2	9.21173	-27.83	Pk	36	-40.4	11.8	.7	-19.73	-13	-6.73	0-360	200	H
6	9.21453	-29.98	Pk	36	-40.5	11.8	.7	-21.98	-13	-8.98	0-360	101	V
3	12.27866	-46.86	Pk	38.7	-38	11.8	.7	-33.66	-13	-20.66	0-360	200	H
7	12.28706	-47.24	Pk	38.7	-38	11.8	.7	-34.04	-13	-21.04	0-360	200	V
8	15.34933	-44.62	Pk	40.4	-37.2	11.8	.7	-28.92	-13	-15.92	0-360	200	V
4	15.35026	-47.12	Pk	40.4	-37.3	11.8	.7	-31.52	-13	-18.52	0-360	200	H

Pk - Peak detector

MODE 1 WORST-CASE >18GHz

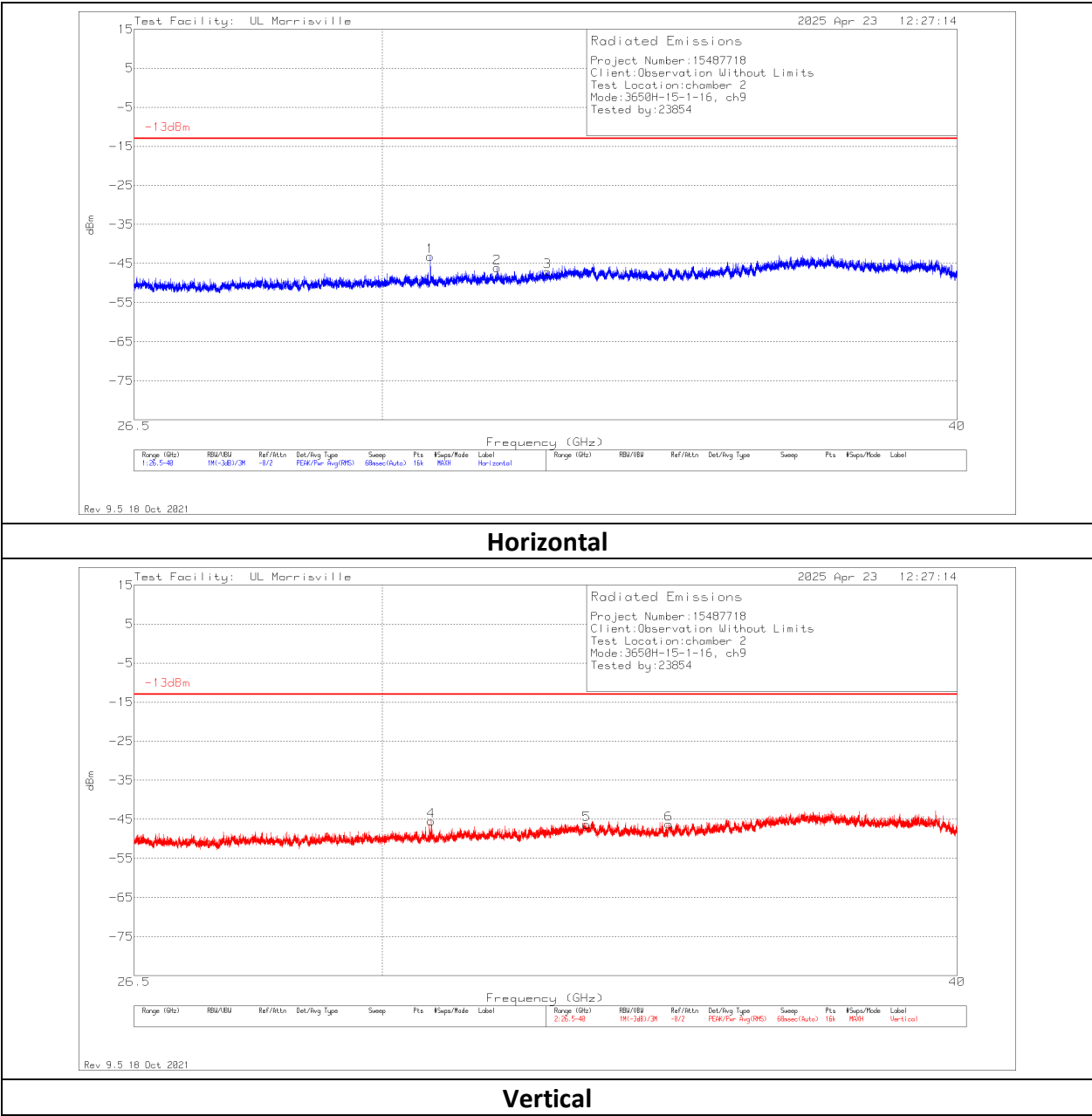
18 to 26 GHz



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	204704 (dB/m)	Gain/Loss (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	18.43686	-46.64	Pk	32.9	-38.6	11.8	-40.54	-13	-27.54	0-360	200	H
4	18.44706	-40.19	Pk	32.9	-38.6	11.8	-34.09	-13	-21.09	0-360	199	V
5	21.51865	-55.22	Pk	33.6	-38.2	11.8	-48.02	-13	-35.02	0-360	199	V
2	21.52205	-54.31	Pk	33.6	-38.2	11.8	-47.11	-13	-34.11	0-360	200	H
3	24.56304	-54.45	Pk	34.7	-36.7	11.8	-44.65	-13	-31.65	0-360	200	H
6	24.58854	-54.08	Pk	34.8	-36.7	11.8	-44.18	-13	-31.18	0-360	199	V

Pk - Peak detector

26 to 40 GHz

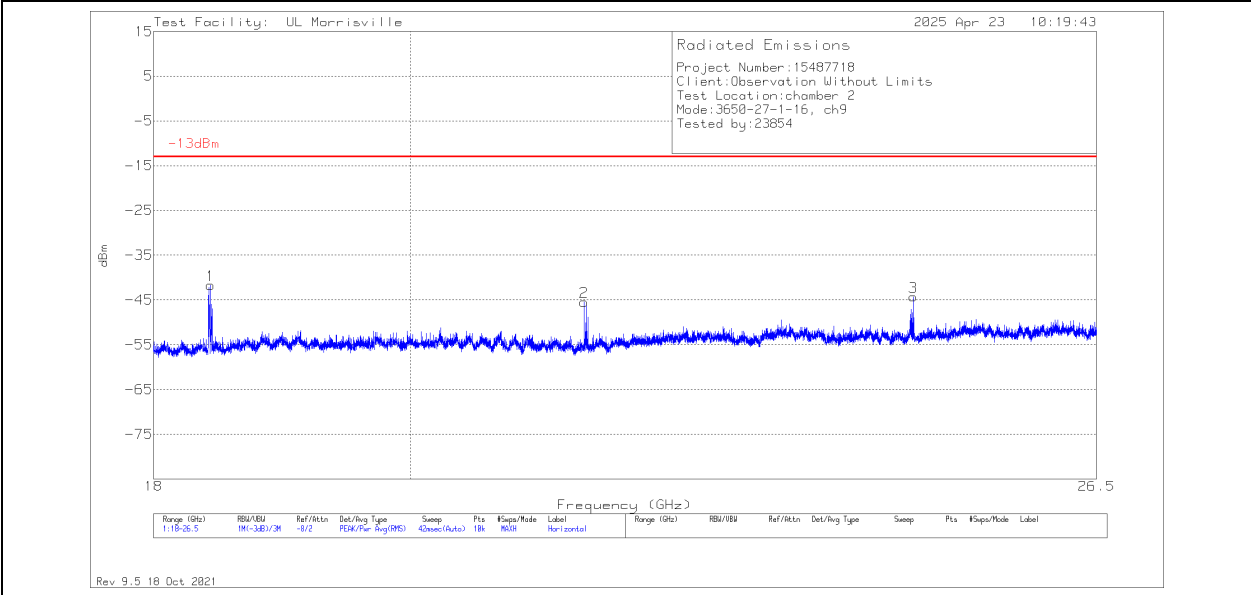


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	204705 (dB/m)	Gain/Loss (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	30.73114	-57.94	Pk	36.9	-34	11.8	-43.24	-13	-30.24	0-360	200	H
4	30.74801	-60.47	Pk	36.9	-33.7	11.8	-45.47	-13	-32.47	0-360	200	V
2	31.77564	-60.91	Pk	37.1	-34.1	11.8	-46.11	-13	-33.11	0-360	200	H
3	32.58812	-61.89	Pk	37.3	-34.3	11.8	-47.09	-13	-34.09	0-360	101	H
5	33.23439	-60.81	Pk	37	-34.3	11.8	-46.31	-13	-33.31	0-360	200	V
6	34.62733	-60.96	Pk	37.7	-34.8	11.8	-46.26	-13	-33.26	0-360	101	V

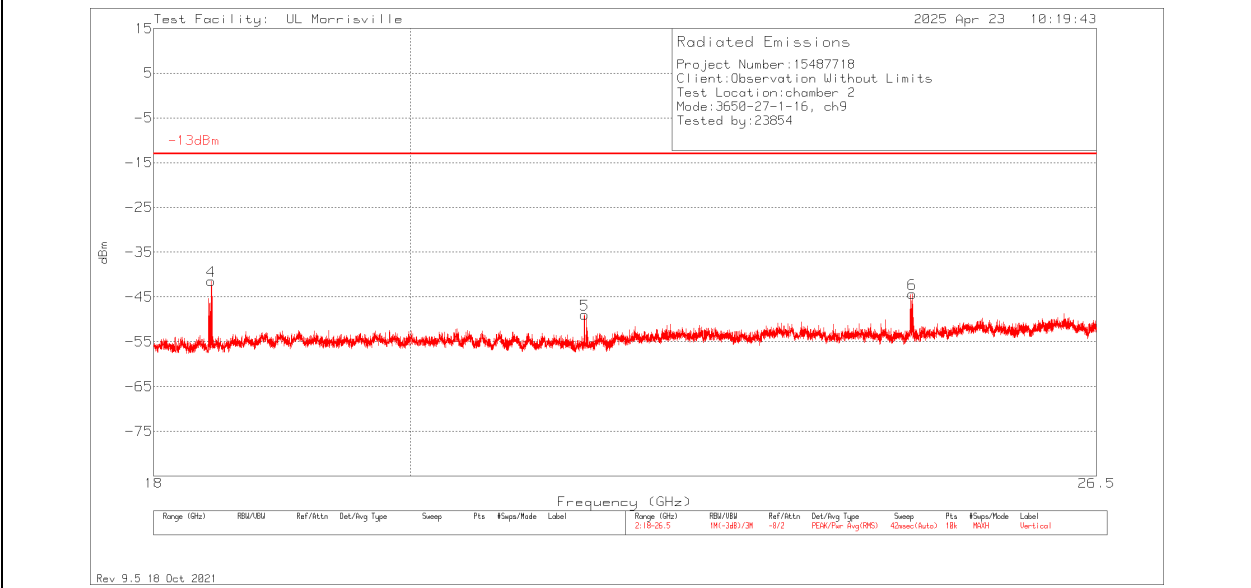
Pk - Peak detector

MODE 2 WORST-CASE >18GHz

18 to 26 GHz



Horizontal

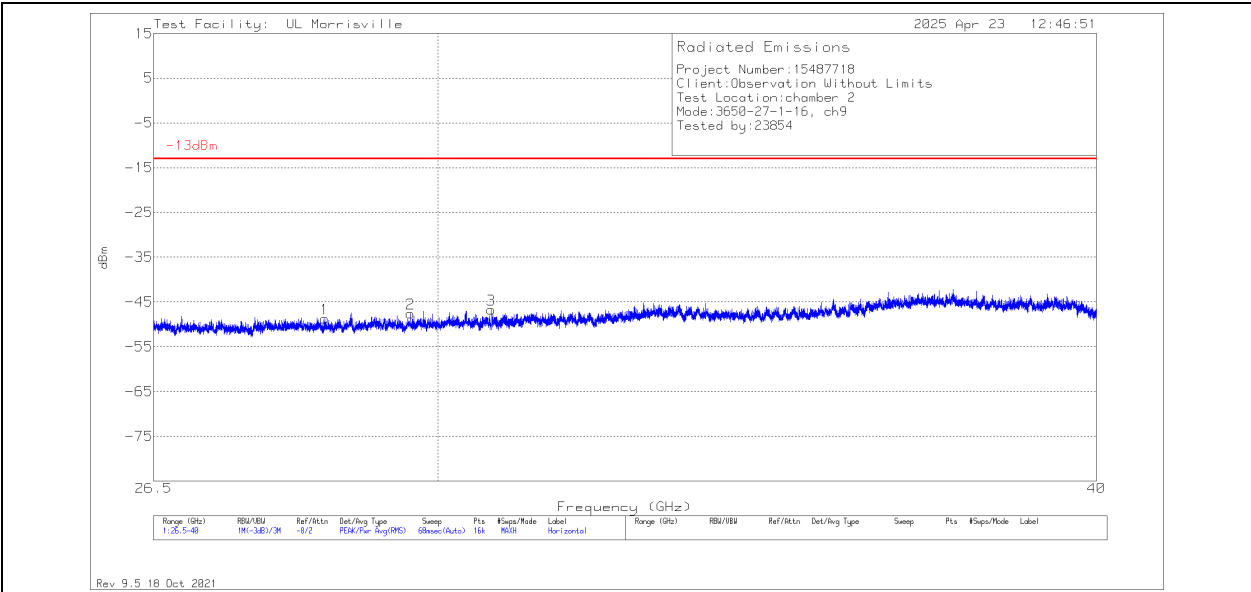


Vertical

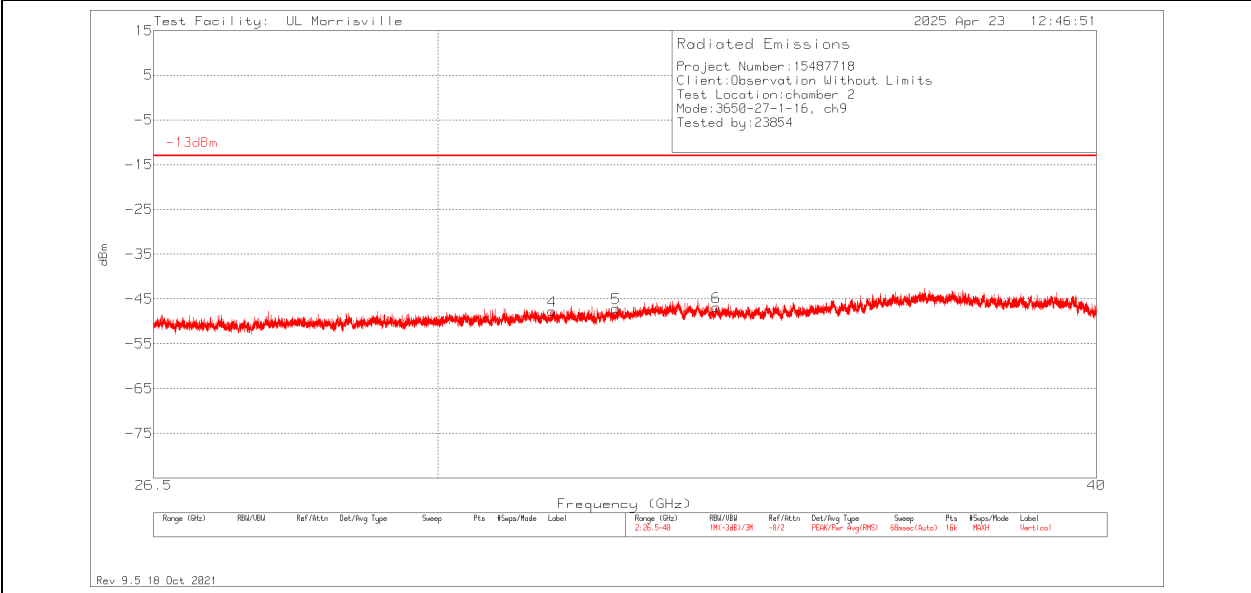
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	204704 (dB/m)	Gain/Loss (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	18.42666	-47.75	Pk	32.9	-38.6	11.8	-41.65	-13	-28.65	0-360	199	H
4	18.42836	-47.55	Pk	32.9	-38.6	11.8	-41.45	-13	-28.45	0-360	101	V
2	21.47615	-52.41	Pk	33.6	-38.4	11.8	-45.41	-13	-32.41	0-360	199	H
5	21.48295	-55.95	Pk	33.6	-38.4	11.8	-48.95	-13	-35.95	0-360	101	V
6	24.57154	-54.18	Pk	34.7	-36.6	11.8	-44.28	-13	-31.28	0-360	200	V
3	24.58429	-54.17	Pk	34.8	-36.7	11.8	-44.27	-13	-31.27	0-360	199	H

Pk - Peak detector

26 to 40 GHz



Horizontal



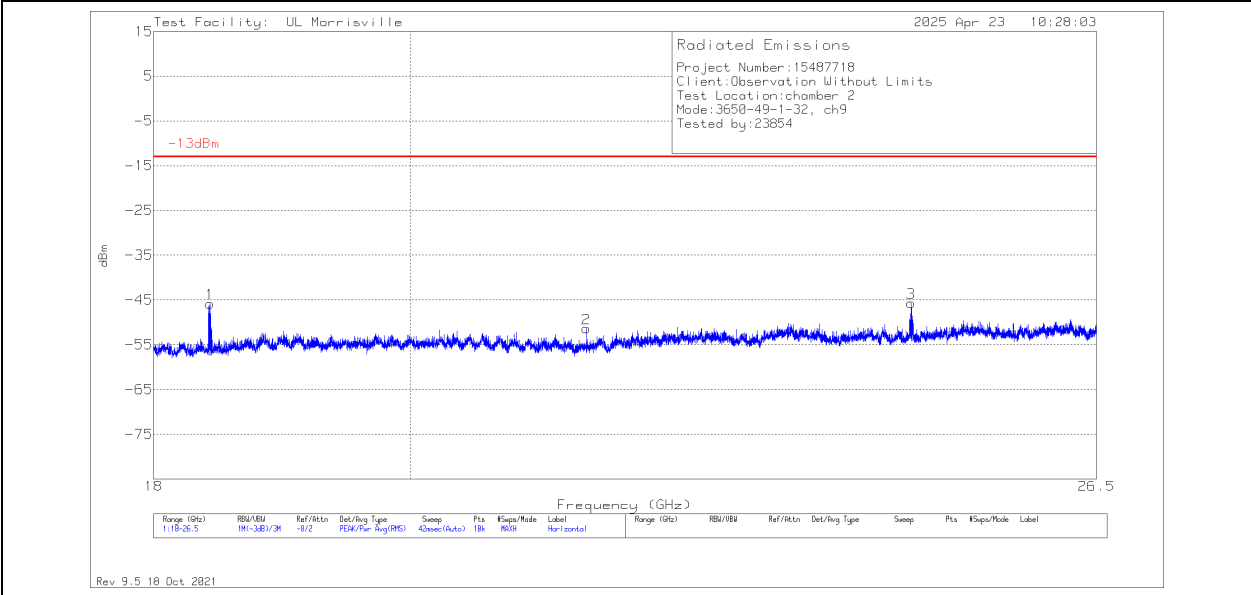
Vertical

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	204705 (dB/m)	Gain/Loss (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	28.55862	-62.52	Pk	36.3	-34.3	11.8	-48.72	-13	-35.72	0-360	101	H
2	29.64446	-61.43	Pk	36.5	-34.5	11.8	-47.63	-13	-34.63	0-360	101	H
3	30.70667	-60.96	Pk	36.9	-34.4	11.8	-46.66	-13	-33.66	0-360	101	H
4	31.53518	-62.31	Pk	36.7	-33.9	11.8	-47.71	-13	-34.71	0-360	101	V
5	32.43119	-61.46	Pk	37.3	-34.7	11.8	-47.06	-13	-34.06	0-360	101	V
6	33.87729	-61.7	Pk	37.4	-34.3	11.8	-46.8	-13	-33.8	0-360	101	V

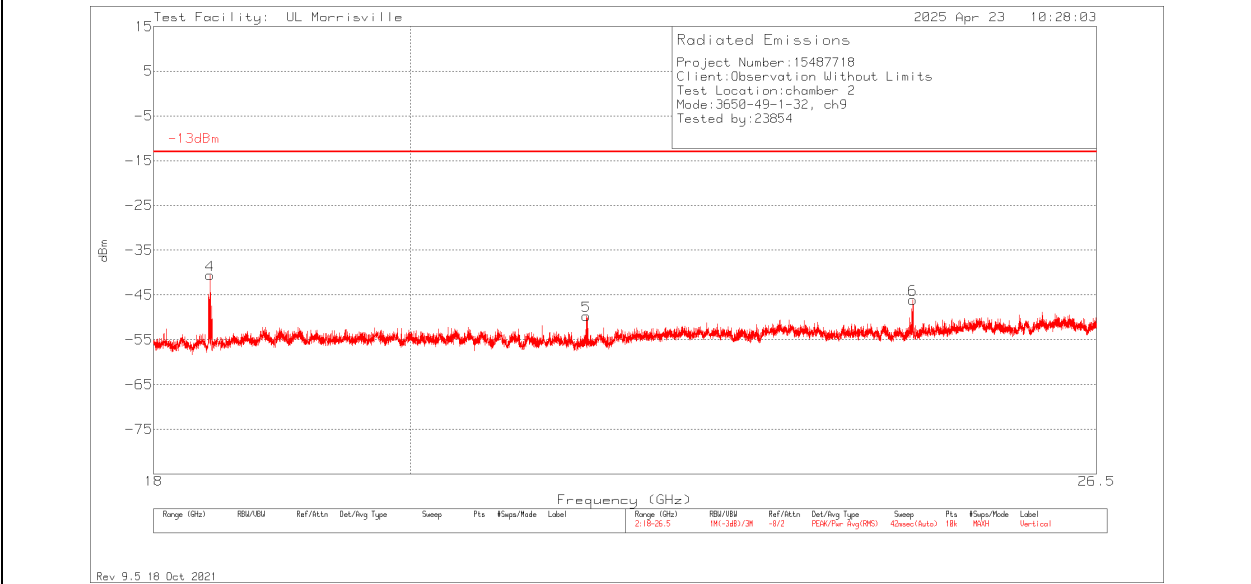
Pk - Peak detector

MODE 3 WORST-CASE >18GHz

18 to 26 GHz



Horizontal

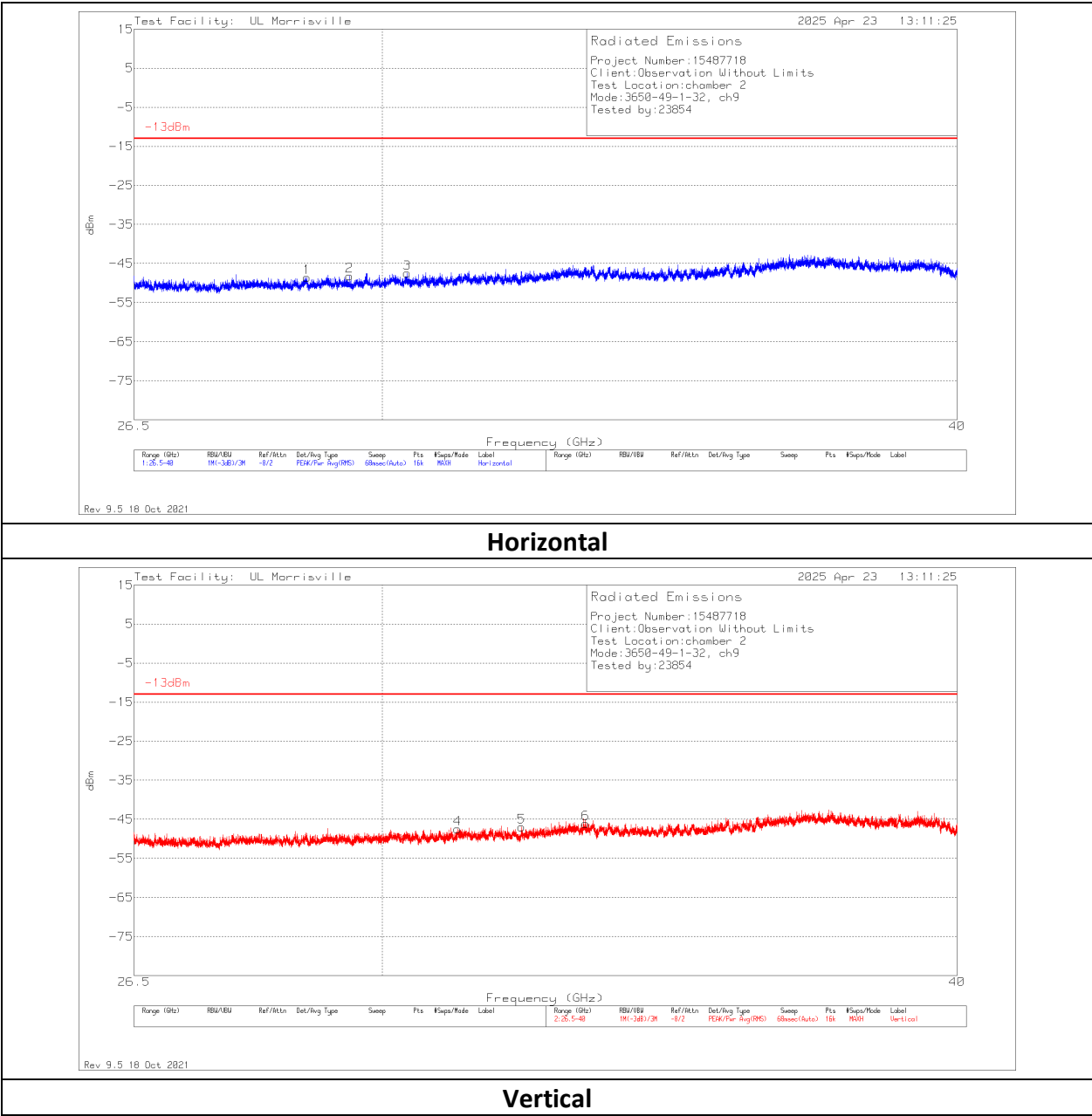


Vertical

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	204704 (dB/m)	Gain/Loss (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	18.41986	-51.97	Pk	32.9	-38.6	11.8	-45.87	-13	-32.87	0-360	200	H
4	18.41986	-46.73	Pk	32.9	-38.6	11.8	-40.63	-13	-27.63	0-360	199	V
2	21.49485	-58.49	Pk	33.6	-38.3	11.8	-51.39	-13	-38.39	0-360	200	H
5	21.49485	-56.86	Pk	33.6	-38.3	11.8	-49.76	-13	-36.76	0-360	199	V
3	24.56134	-55.46	Pk	34.7	-36.7	11.8	-45.66	-13	-32.66	0-360	200	H
6	24.57664	-56.08	Pk	34.8	-36.6	11.8	-46.08	-13	-33.08	0-360	199	V

Pk - Peak detector

26 to 40 GHz

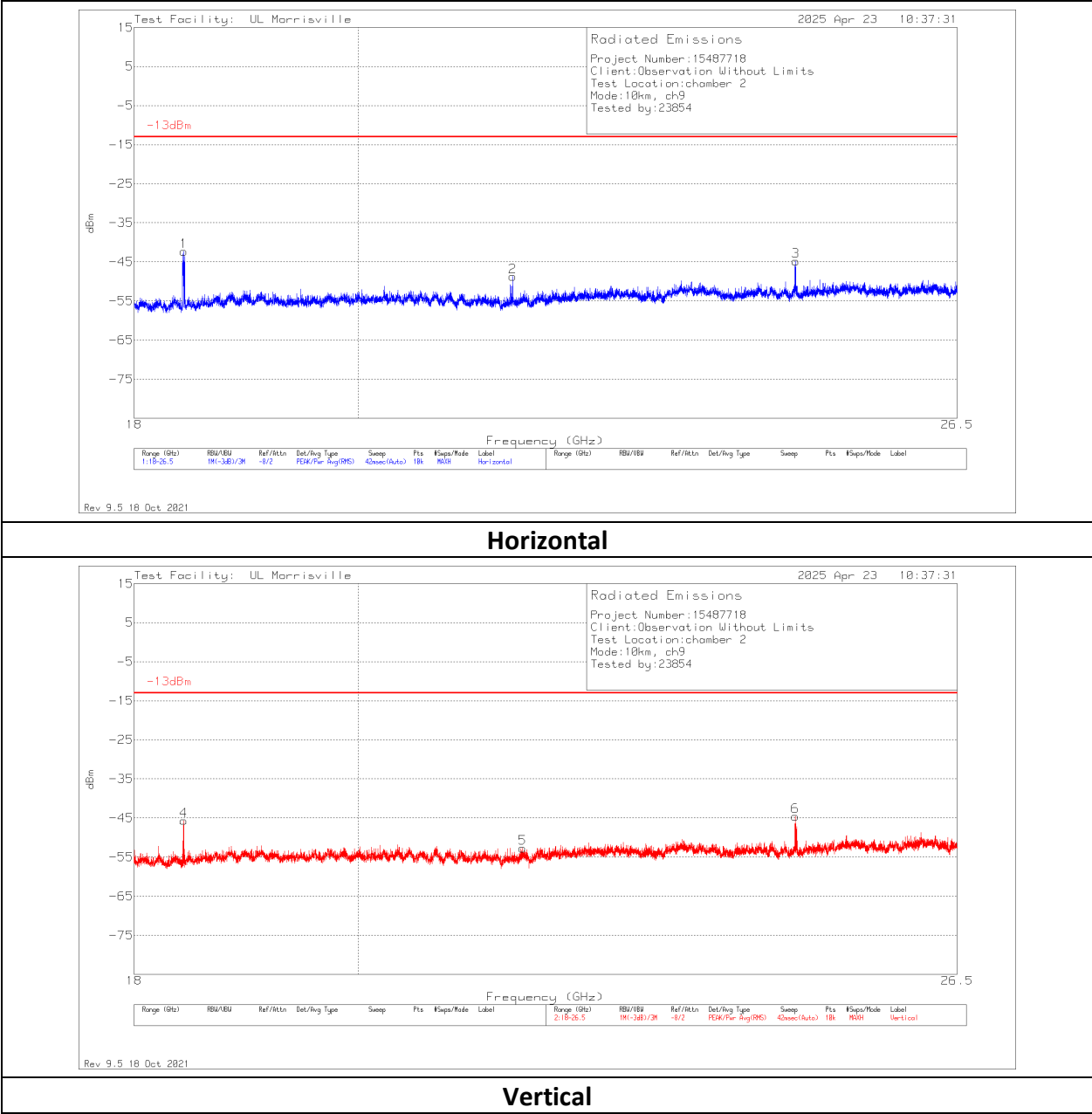


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	204705 (dB/m)	Gain/Loss (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	28.89272	-62.59	Pk	36.2	-34	11.8	-48.59	-13	-35.59	0-360	101	H
2	29.51369	-61.97	Pk	36.2	-34.2	11.8	-48.17	-13	-35.17	0-360	101	H
3	30.37679	-62.01	Pk	36.7	-34	11.8	-47.51	-13	-34.51	0-360	101	H
4	31.15299	-62.19	Pk	36.9	-34	11.8	-47.49	-13	-34.49	0-360	101	V
5	32.16711	-62.1	Pk	37.1	-33.8	11.8	-47	-13	-34	0-360	101	V
6	33.21836	-60.76	Pk	37	-34.1	11.8	-46.06	-13	-33.06	0-360	101	V

Pk - Peak detector

MODE 4 WORST-CASE >18GHz

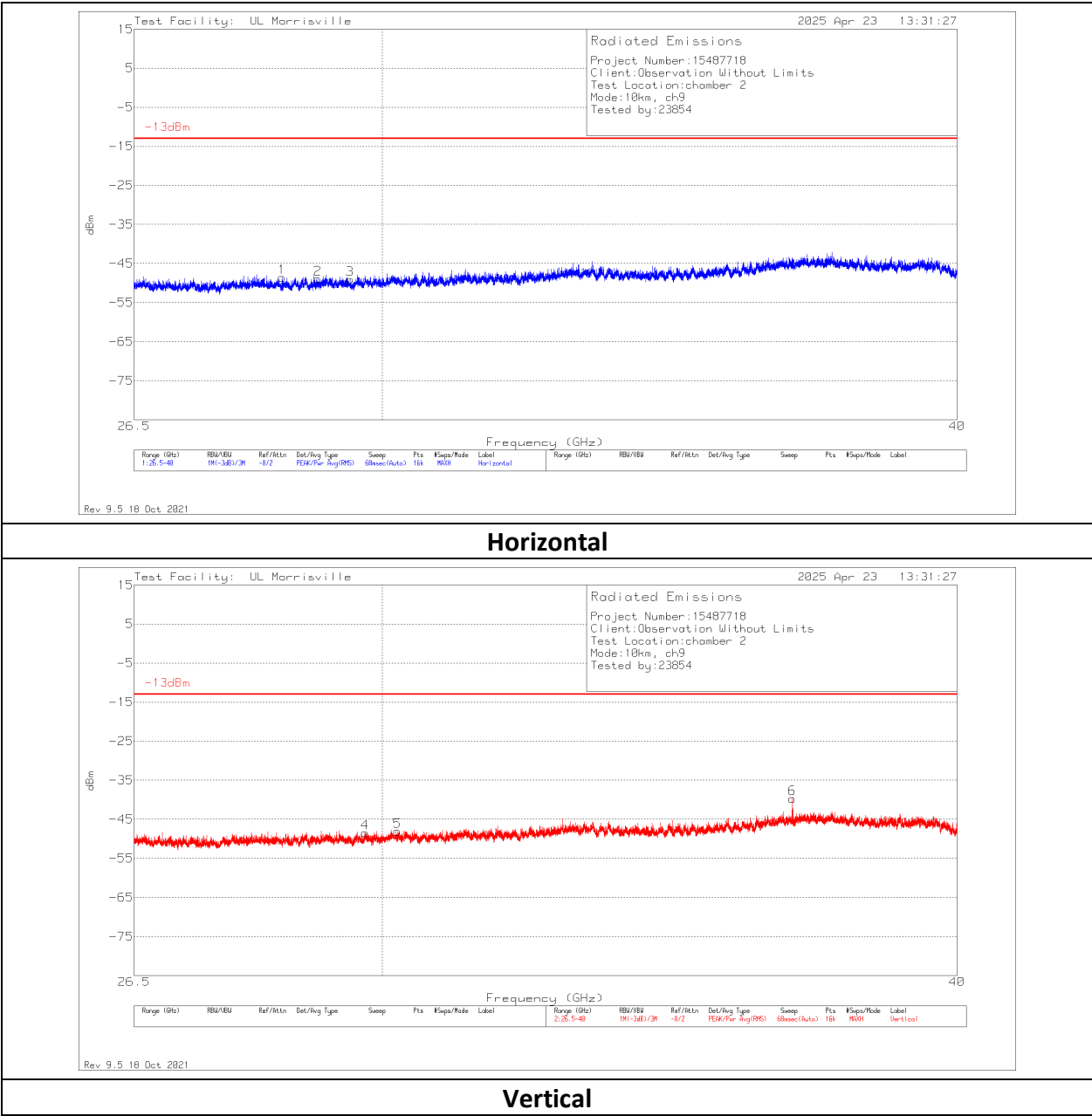
18 to 26 GHz



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	204704 (dB/m)	Gain/Loss (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	PK Margin (dB)	Azimuth (Degrs)	Height (cm)	Polarity
1	18.42581	-48.4	Pk	32.9	-38.6	11.8	-42.3	-13	-29.3	0-360	200	H
4	18.42581	-51.75	Pk	32.9	-38.6	11.8	-45.65	-13	-32.65	0-360	101	V
2	21.50675	-55.87	Pk	33.6	-38.3	11.8	-48.77	-13	-35.77	0-360	200	H
5	21.60704	-60.77	Pk	33.8	-37.5	11.8	-52.67	-13	-39.67	0-360	200	V
6	24.55794	-54.4	Pk	34.7	-36.7	11.8	-44.6	-13	-31.6	0-360	101	V
3	24.56559	-54.68	Pk	34.7	-36.6	11.8	-44.78	-13	-31.78	0-360	200	H

Pk - Peak detector

26 to 40 GHz

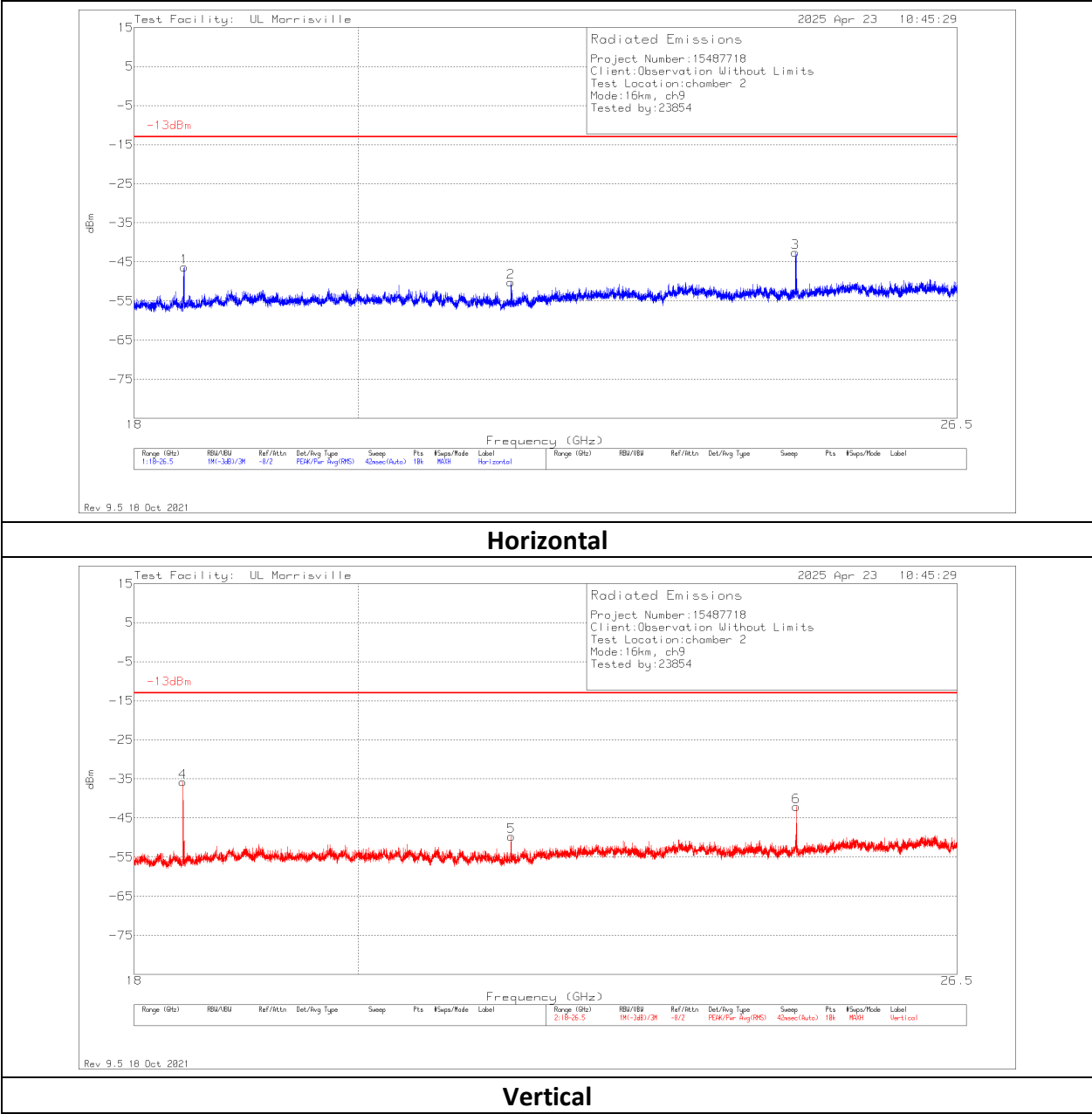


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	204705 (dB/m)	Gain/Loss (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	28.53331	-61.6	Pk	36.2	-35	11.8	-48.6	-13	-35.6	0-360	101	H
2	29.05218	-63	Pk	36.3	-34	11.8	-48.9	-13	-35.9	0-360	101	H
3	29.52128	-62.79	Pk	36.2	-34.3	11.8	-49.09	-13	-36.09	0-360	101	H
4	29.7457	-62.8	Pk	36.6	-34.1	11.8	-48.5	-13	-35.5	0-360	200	V
5	30.23167	-63.27	Pk	37	-33.6	11.8	-48.07	-13	-35.07	0-360	200	V
6	36.83107	-52.22	Pk	37.9	-37.2	11.8	-39.72	-13	-26.72	0-360	200	V

Pk - Peak detector

MODE 5 WORST-CASE >18GHz

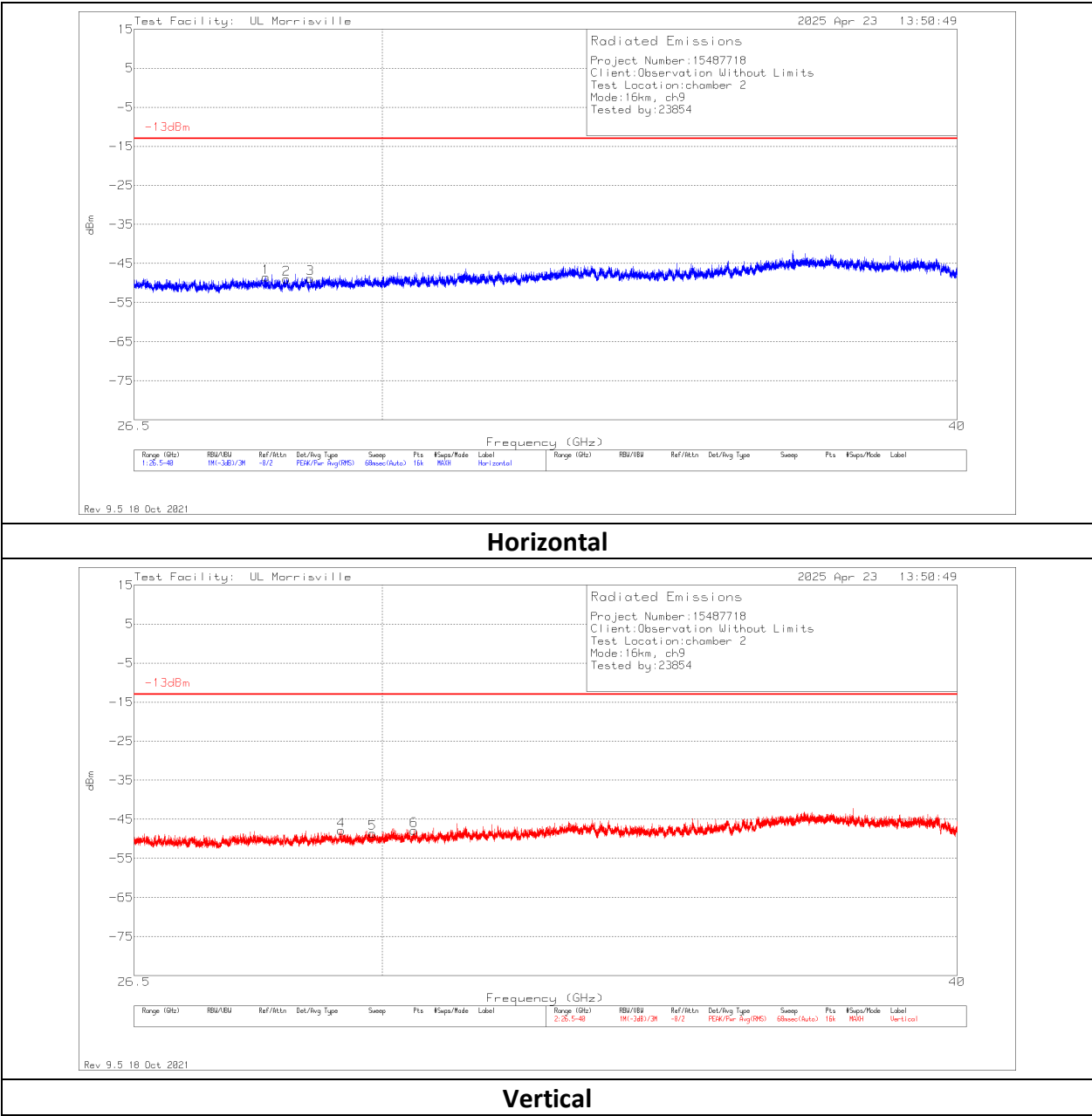
18 to 26 GHz



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	204704 (dB/m)	Gain/Loss (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	18.41901	-41.86	Pk	32.9	-38.6	11.8	-35.76	-13	-22.76	0-360	200	V
1	18.42836	-52.42	Pk	32.9	-38.6	11.8	-46.32	-13	-33.32	0-360	101	H
2	21.4855	-57.23	Pk	33.6	-38.4	11.8	-50.23	-13	-37.23	0-360	200	H
5	21.4889	-56.69	Pk	33.6	-38.4	11.8	-49.69	-13	-36.69	0-360	200	V
3	24.55964	-52.38	Pk	34.7	-36.7	11.8	-42.58	-13	-29.58	0-360	200	H
6	24.57324	-51.97	Pk	34.7	-36.6	11.8	-42.07	-13	-29.07	0-360	200	V

Pk - Peak detector

26 to 40 GHz

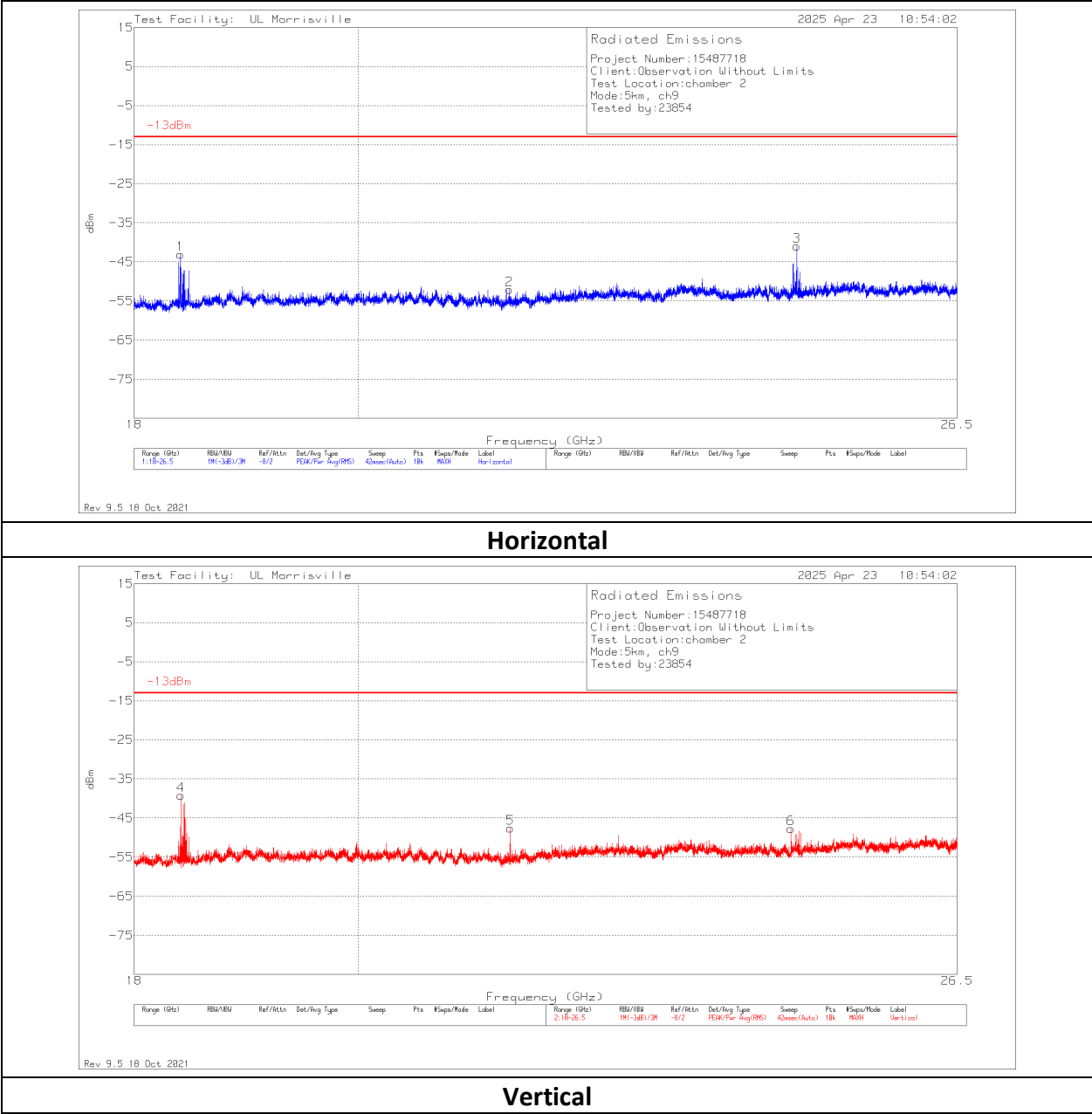


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	204705 (dB/m)	Gain/Loss (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	28.30973	-62.02	Pk	36.4	-34.7	11.8	-48.52	-13	-35.52	0-360	101	H
2	28.59912	-62.62	Pk	36.3	-34.4	11.8	-48.92	-13	-35.92	0-360	101	H
3	28.94672	-62.37	Pk	36.2	-34.5	11.8	-48.87	-13	-35.87	0-360	199	H
4	29.39135	-61.69	Pk	36.3	-34.3	11.8	-47.89	-13	-34.89	0-360	101	V
5	29.85454	-62.25	Pk	36.6	-34.7	11.8	-48.55	-13	-35.55	0-360	199	V
6	30.48478	-62.59	Pk	36.7	-33.7	11.8	-47.79	-13	-34.79	0-360	199	V

Pk - Peak detector

MODE 6 WORST-CASE >18GHz

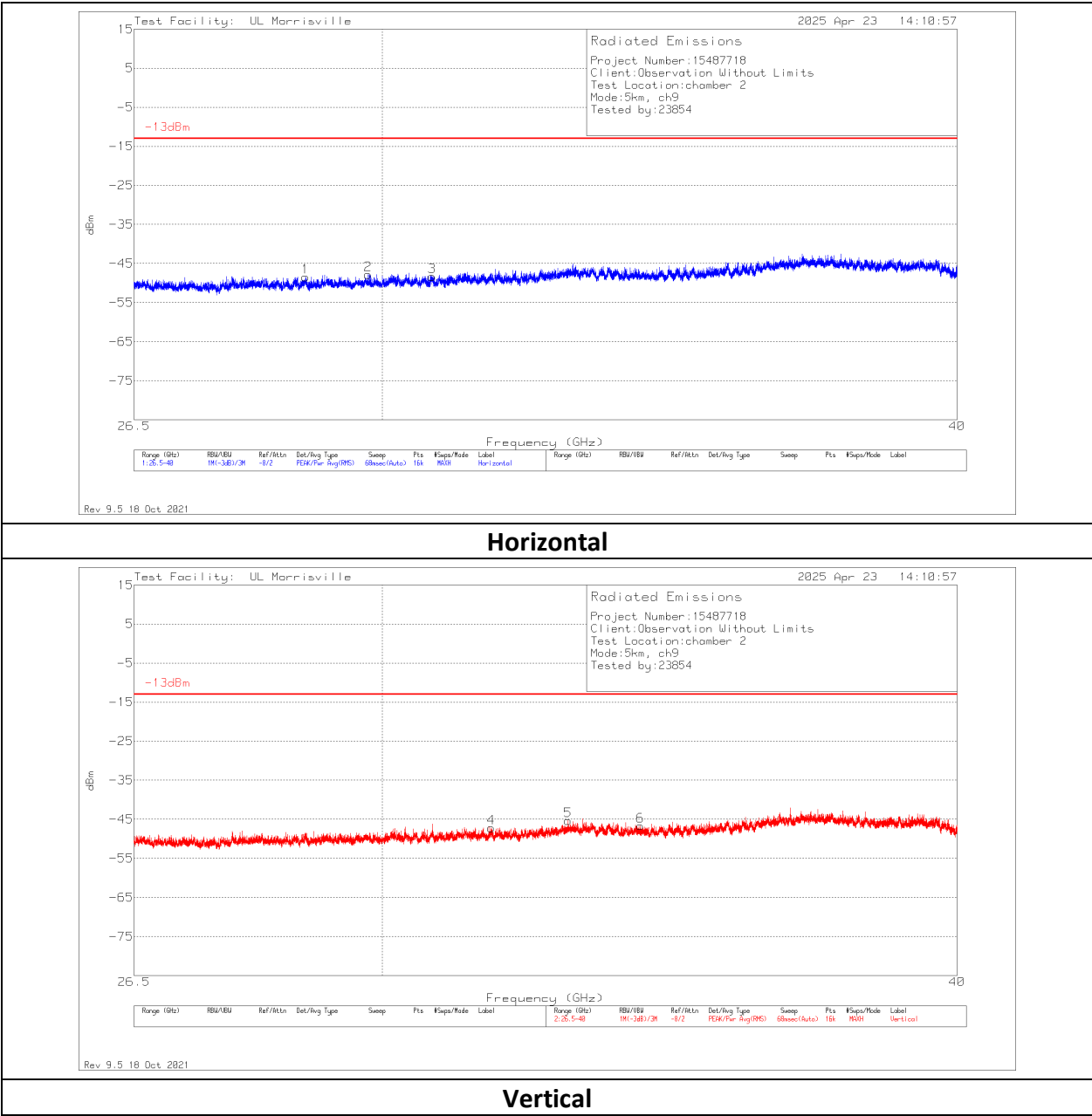
18 to 26 GHz



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	204704 (dB/m)	Gain/Loss (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	18.39776	-49.61	Pk	32.9	-38.2	11.8	-43.11	-13	-30.11	0-360	200	H
4	18.40116	-45.61	Pk	32.9	-38.3	11.8	-39.21	-13	-26.21	0-360	200	V
2	21.4736	-59.08	Pk	33.6	-38.4	11.8	-52.08	-13	-39.08	0-360	101	H
5	21.4804	-54.6	Pk	33.6	-38.4	11.8	-47.6	-13	-34.6	0-360	200	V
6	24.5112	-57	Pk	34.6	-37.1	11.8	-47.7	-13	-34.7	0-360	200	V
3	24.57409	-50.82	Pk	34.7	-36.6	11.8	-40.92	-13	-27.92	0-360	200	H

Pk - Peak detector

26 to 40 GHz

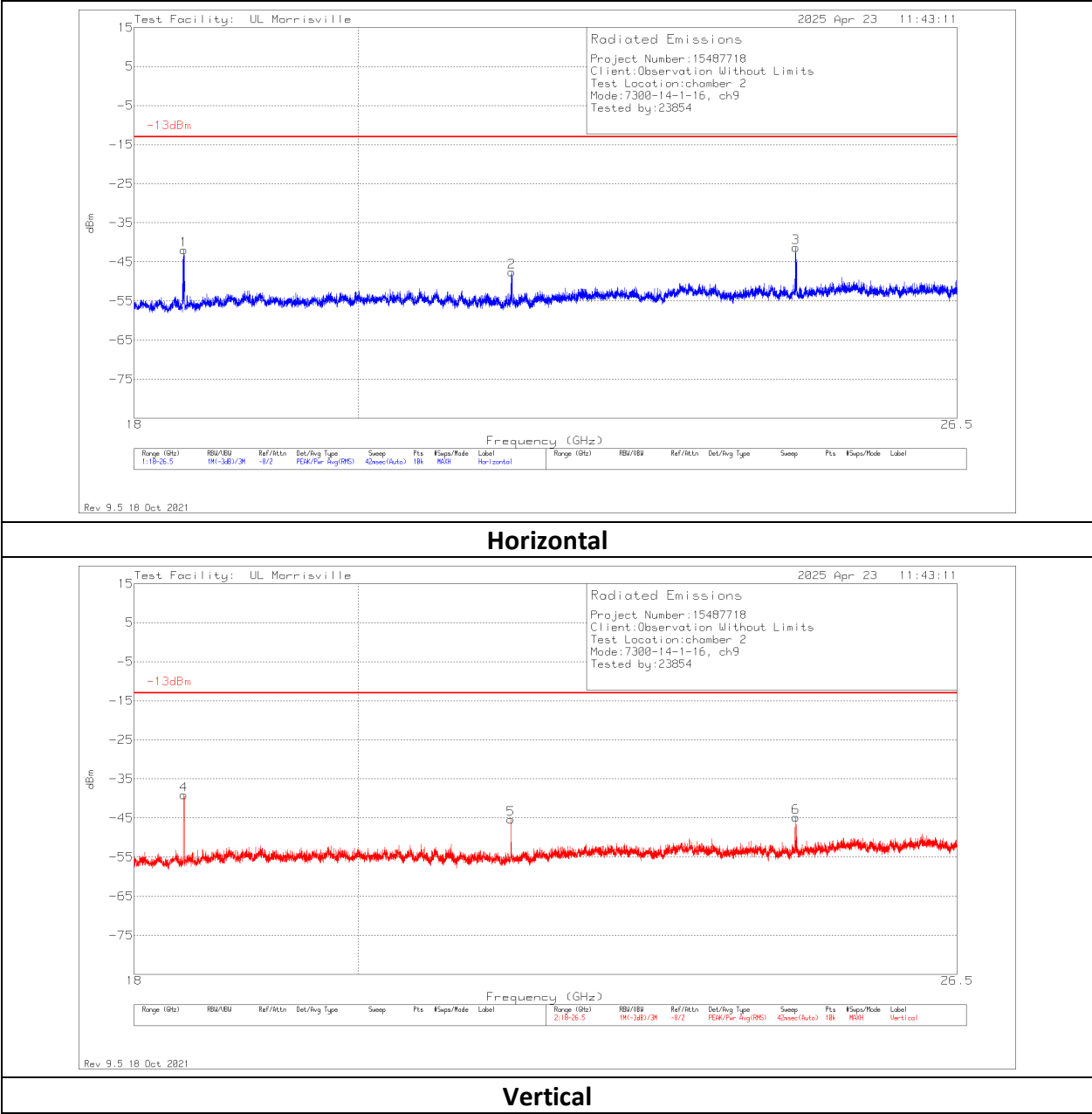


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	204705 (dB/m)	Gain/Loss (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	28.87501	-62.68	Pk	36.2	-33.8	11.8	-48.48	-13	-35.48	0-360	200	H
2	29.79126	-61.85	Pk	36.5	-34.3	11.8	-47.85	-13	-34.85	0-360	101	H
3	30.75898	-63.38	Pk	37	-33.7	11.8	-48.28	-13	-35.28	0-360	101	H
4	31.68452	-62.08	Pk	37	-33.9	11.8	-47.18	-13	-34.18	0-360	101	V
5	32.92813	-60.21	Pk	37.3	-34.2	11.8	-45.31	-13	-32.31	0-360	200	V
6	34.13461	-60.55	Pk	37.4	-35.3	11.8	-46.65	-13	-33.65	0-360	200	V

Pk - Peak detector

MODE 7 WORST-CASE >18GHz

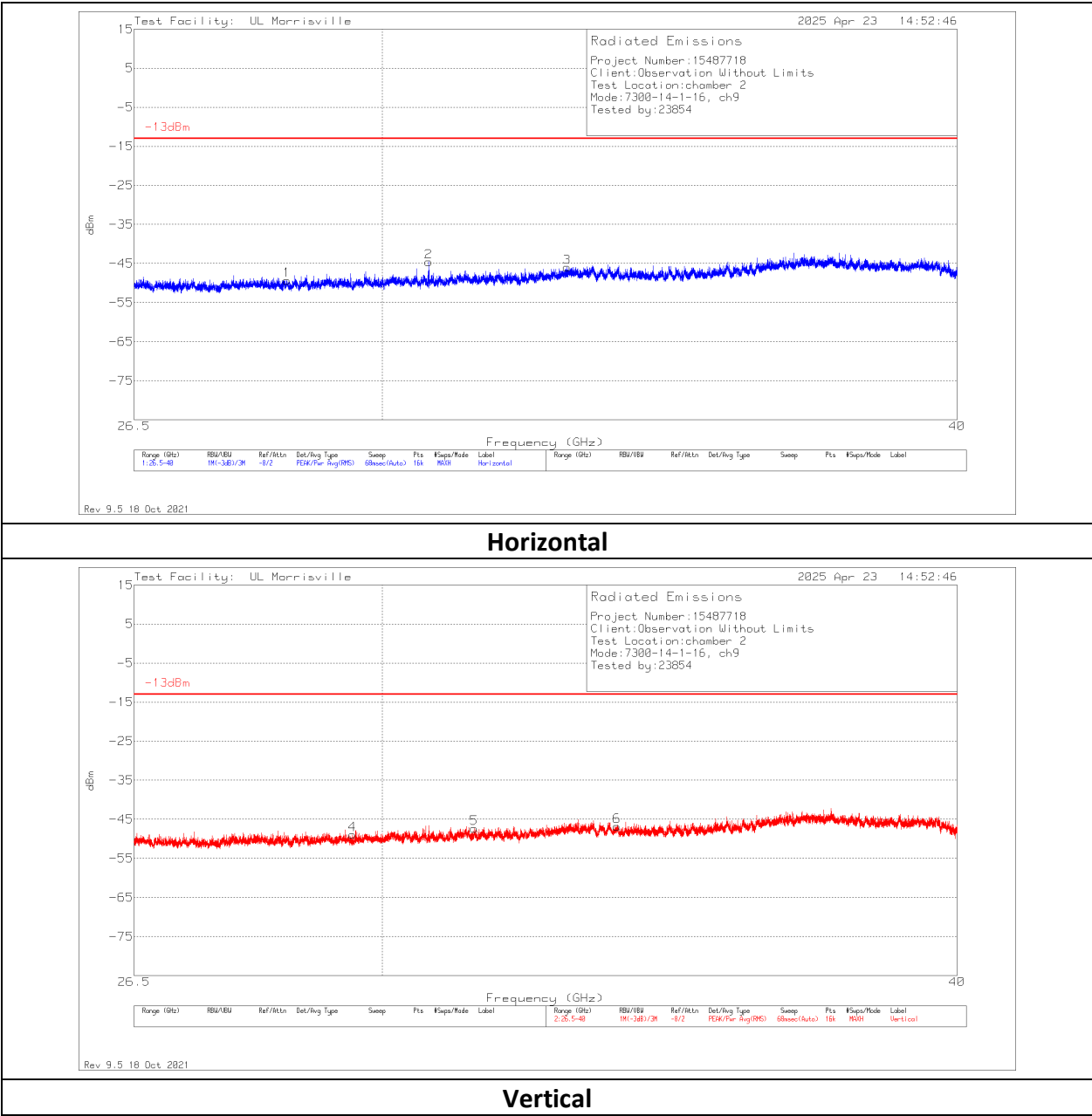
18 to 26 GHz



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	204704 (dB/m)	Gain/Loss (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	PK Margin (dB)	Azimuth (Degr)	Height (cm)	Polarity
4	18.42496	-45.22	Pk	32.9	-38.6	11.8	-39.12	-13	-26.12	0-360	200	V
1	18.42751	-48.07	Pk	32.9	-38.6	11.8	-41.97	-13	-28.97	0-360	101	H
5	21.4855	-52.35	Pk	33.6	-38.4	11.8	-45.35	-13	-32.35	0-360	200	V
2	21.49825	-54.64	Pk	33.6	-38.3	11.8	-47.54	-13	-34.54	0-360	199	H
3	24.56304	-51.1	Pk	34.7	-36.7	11.8	-41.3	-13	-28.3	0-360	199	H
6	24.56389	-54.75	Pk	34.7	-36.6	11.8	-44.85	-13	-31.85	0-360	101	V

Pk - Peak detector

26 to 40 GHz

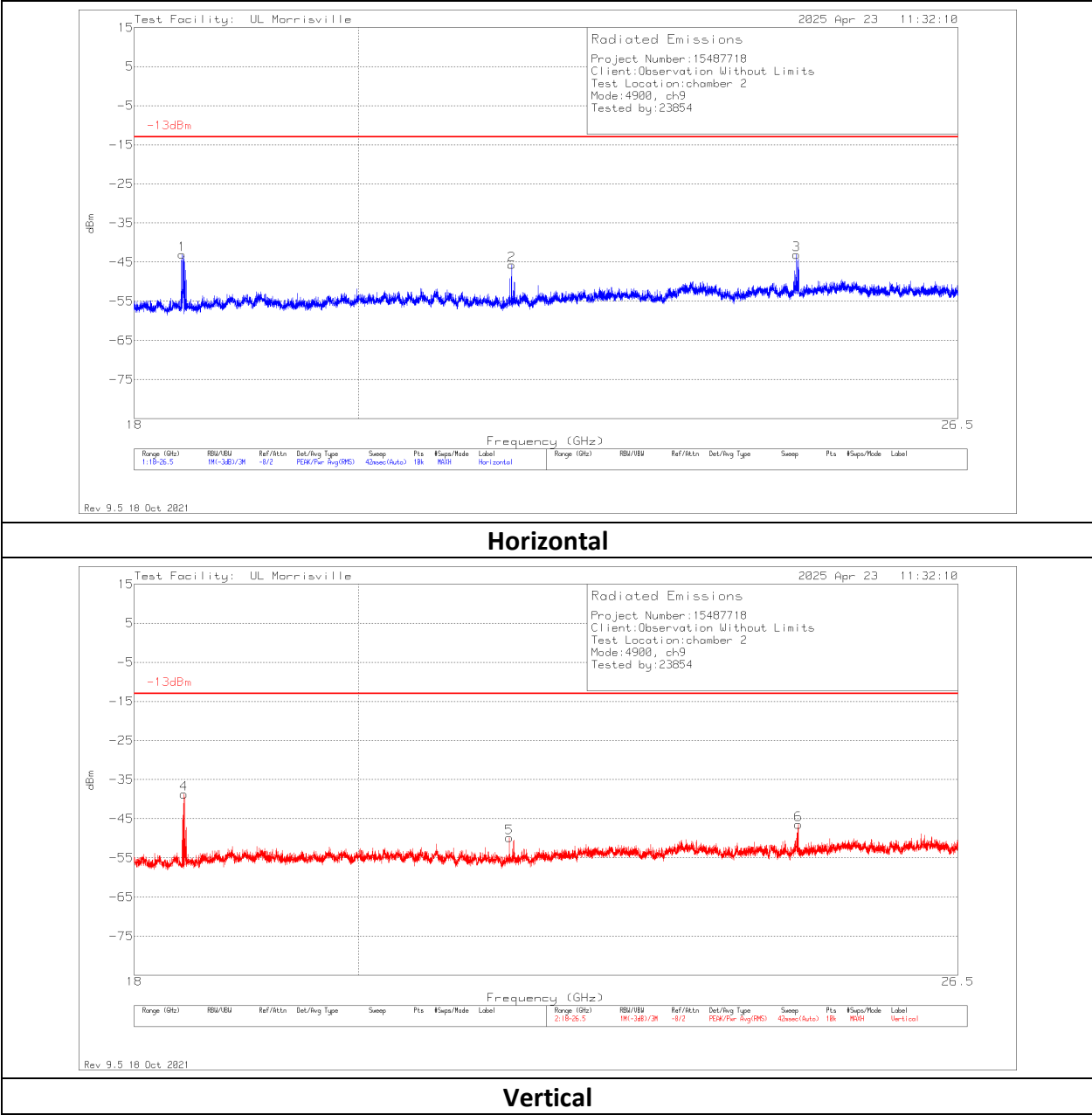


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	204705 (dB/m)	Gain/Loss (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	28.60334	-63.09	Pk	36.3	-34.3	11.8	-49.29	-13	-36.29	0-360	101	H
4	29.5584	-62.3	Pk	36.3	-34.7	11.8	-48.9	-13	-35.9	0-360	200	V
2	30.70499	-58.93	Pk	36.9	-34.4	11.8	-44.63	-13	-31.63	0-360	200	H
5	31.41285	-61.98	Pk	36.8	-33.9	11.8	-47.28	-13	-34.28	0-360	200	V
3	32.90788	-60.71	Pk	37.3	-34.4	11.8	-46.01	-13	-33.01	0-360	200	H
6	33.73976	-61.78	Pk	37.3	-34.1	11.8	-46.78	-13	-33.78	0-360	101	V

Pk - Peak detector

MODE 8 WORST-CASE >18GHz

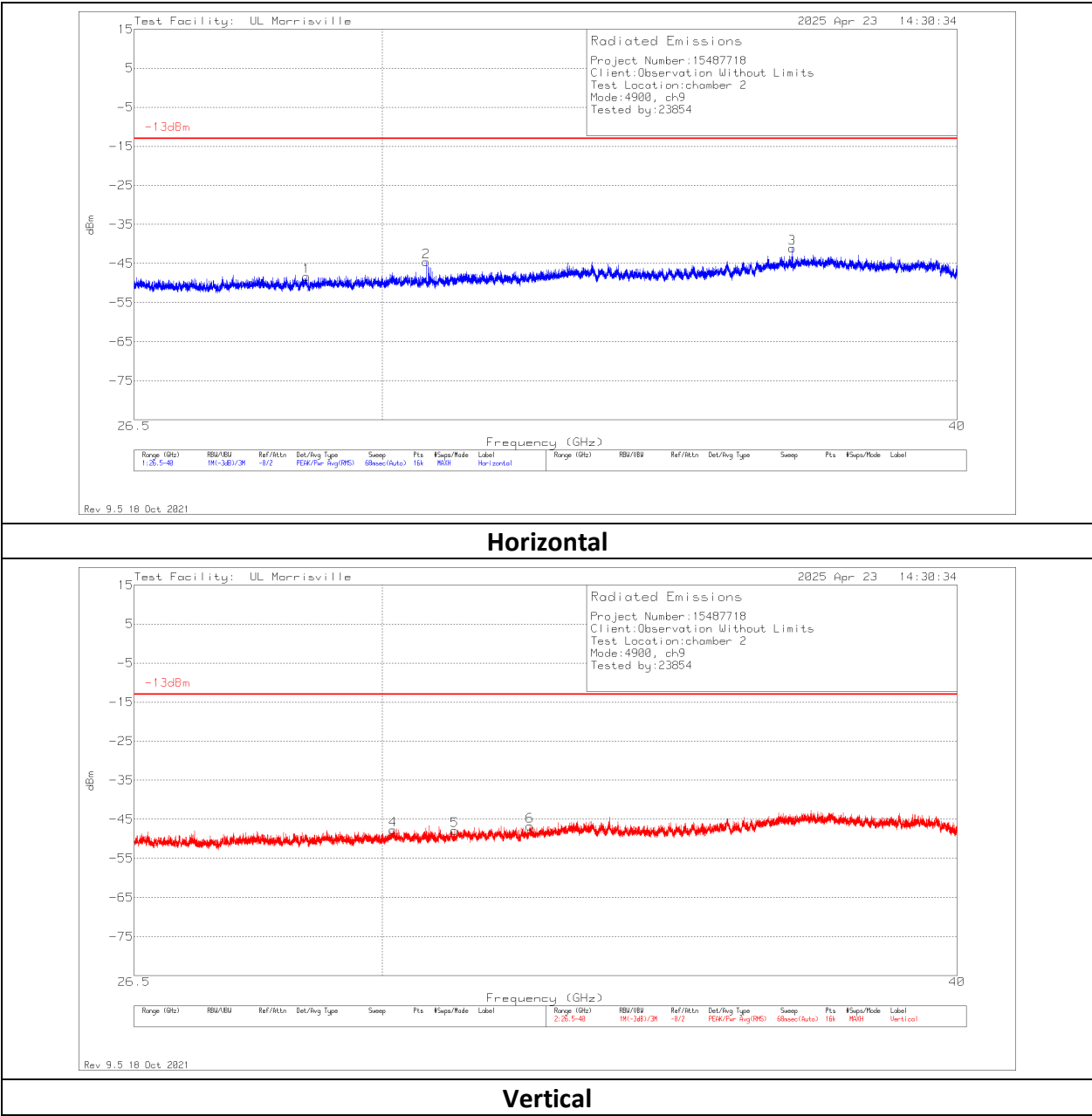
18 to 26 GHz



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	204704 (dB/m)	Gain/Loss (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	18.40796	-49.32	Pk	32.9	-38.4	11.8	-43.02	-13	-30.02	0-360	101	H
4	18.42581	-44.8	Pk	32.9	-38.6	11.8	-38.7	-13	-25.7	0-360	199	V
5	21.46765	-56.81	Pk	33.6	-38.4	11.8	-49.81	-13	-36.81	0-360	199	V
2	21.4906	-52.65	Pk	33.6	-38.4	11.8	-45.65	-13	-32.65	0-360	200	H
3	24.56559	-53.01	Pk	34.7	-36.6	11.8	-43.11	-13	-30.11	0-360	200	H
6	24.58939	-56.37	Pk	34.8	-36.7	11.8	-46.47	-13	-33.47	0-360	199	V

Pk - Peak detector

26 to 40 GHz

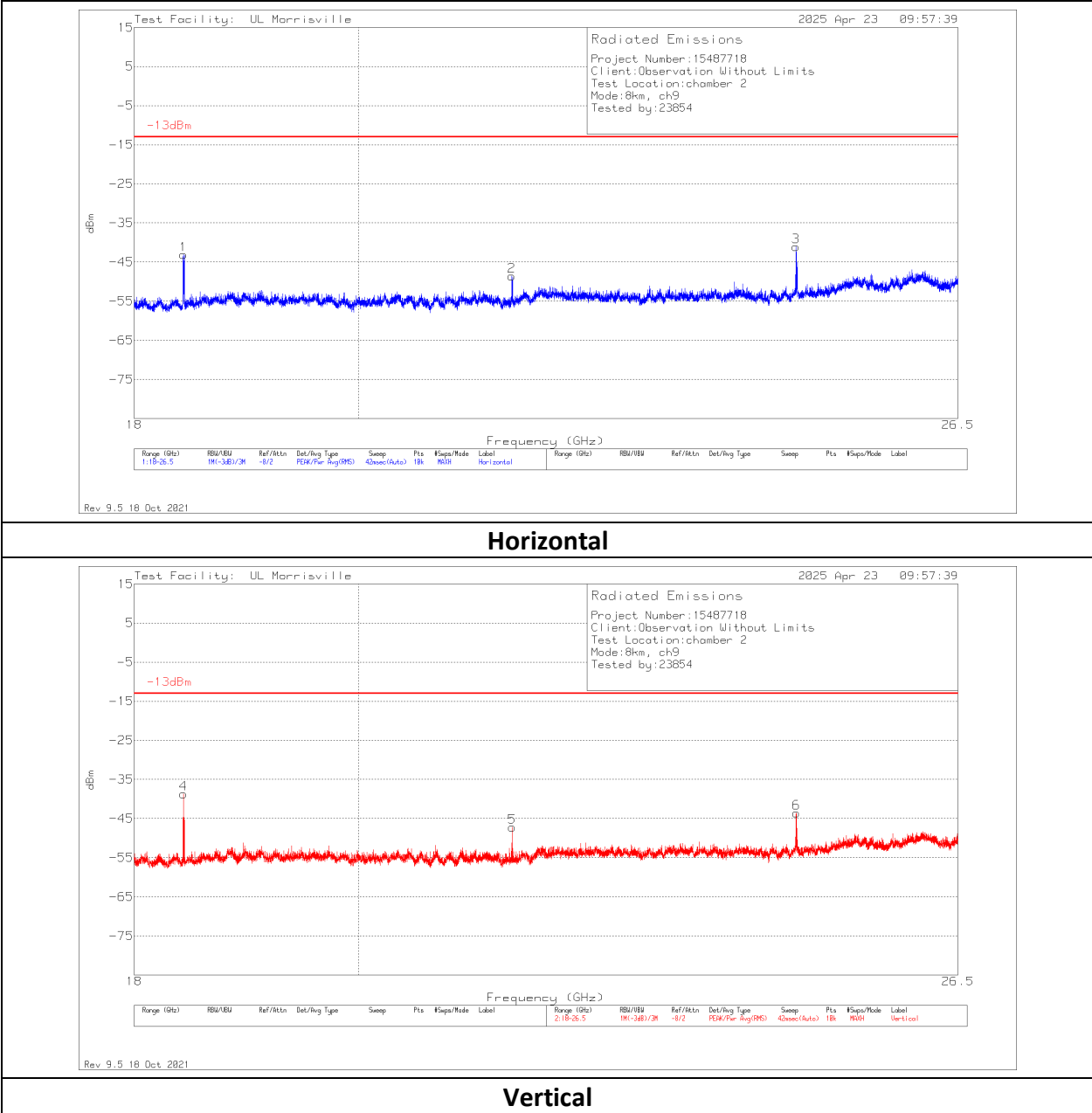


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	204705 (dB/m)	Gain/Loss (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	28.88513	-62.58	Pk	36.2	-33.8	11.8	-48.38	-13	-35.38	0-360	199	H
4	30.16333	-62.49	Pk	36.9	-33.9	11.8	-47.69	-13	-34.69	0-360	101	V
2	30.67039	-58.93	Pk	36.8	-34.2	11.8	-44.53	-13	-31.53	0-360	199	H
5	31.10574	-62.55	Pk	36.9	-34	11.8	-47.85	-13	-34.85	0-360	199	V
6	32.30548	-61.72	Pk	37.1	-33.9	11.8	-46.72	-13	-33.72	0-360	101	V
3	36.83107	-53.54	Pk	37.9	-37.2	11.8	-41.04	-13	-28.04	0-360	199	H

Pk - Peak detector

MODE 9 WORST-CASE >18GHz

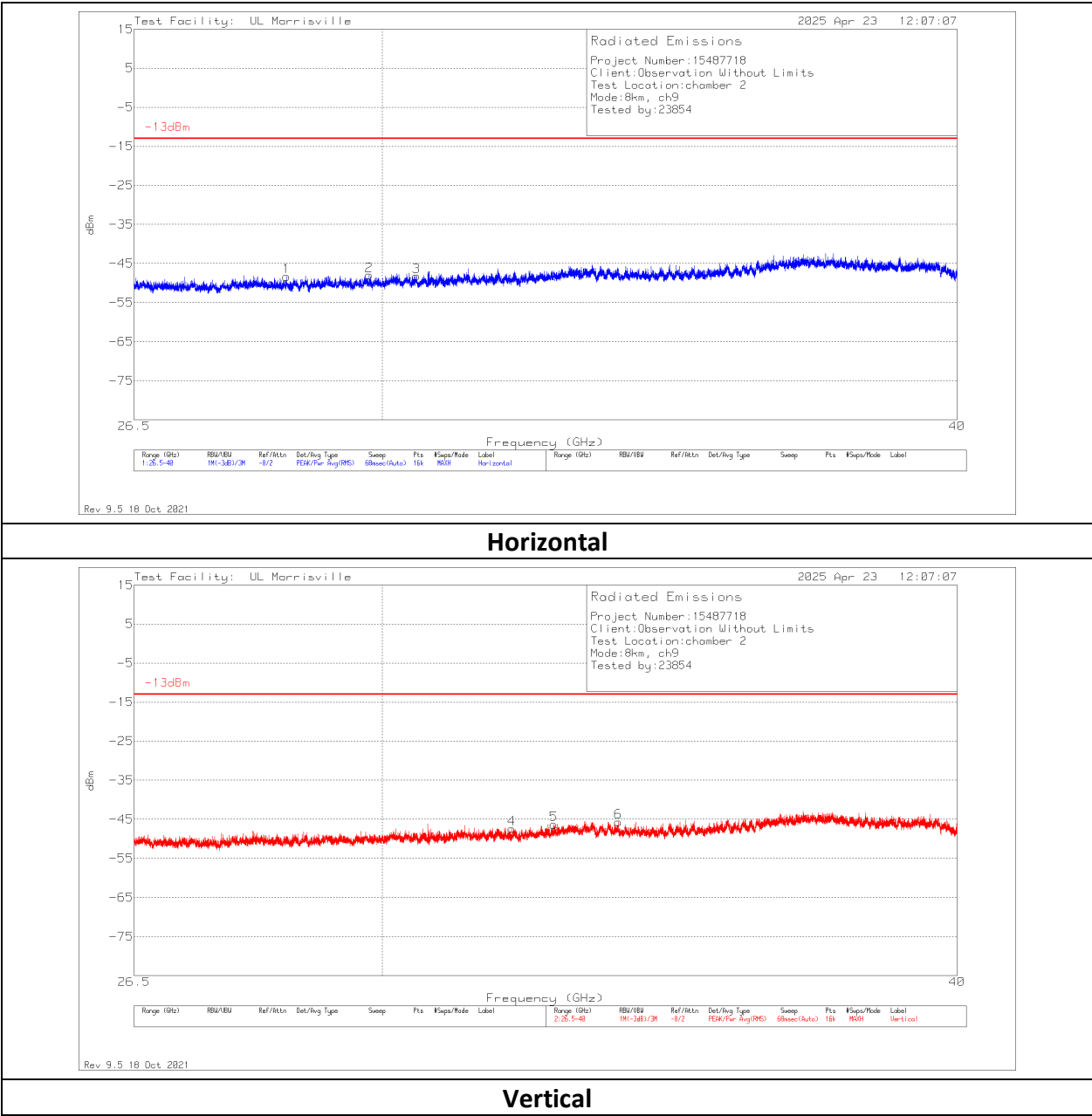
18 to 26 GHz



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	204704 (dB/m)	Gain/Loss (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	18.42071	-49.23	Pk	32.9	-38.6	11.8	-43.13	-13	-30.13	0-360	199	H
4	18.42241	-44.82	Pk	32.9	-38.6	11.8	-38.72	-13	-25.72	0-360	101	V
2	21.4923	-55.63	Pk	33.6	-38.3	11.8	-48.53	-13	-35.53	0-360	199	H
5	21.4957	-54.31	Pk	33.6	-38.3	11.8	-47.21	-13	-34.21	0-360	200	V
3	24.55964	-50.89	Pk	34.7	-36.7	11.8	-41.09	-13	-28.09	0-360	199	H
6	24.56559	-53.51	Pk	34.7	-36.6	11.8	-43.61	-13	-30.61	0-360	200	V

Pk - Peak detector

26 to 40 GHz



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	204705 (dB/m)	Gain/Loss (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	28.59743	-61.92	Pk	36.3	-34.5	11.8	-48.32	-13	-35.32	0-360	199	H
2	29.80898	-62.22	Pk	36.5	-34.1	11.8	-48.02	-13	-35.02	0-360	101	H
3	30.52106	-63.17	Pk	36.7	-33.6	11.8	-48.27	-13	-35.27	0-360	101	H
4	32.01187	-61.8	Pk	37.1	-34.5	11.8	-47.4	-13	-34.4	0-360	199	V
5	32.69358	-61.35	Pk	37.3	-34.1	11.8	-46.35	-13	-33.35	0-360	101	V
6	33.76086	-60.45	Pk	37.4	-34.4	11.8	-45.65	-13	-32.65	0-360	199	V

Pk - Peak detector

8. FREQUENCY STABILITY

REQUIREMENT

§2.1055 Measurements required: Frequency stability.

§90.213 Frequency stability

Above 2450 MHz ¹⁰

¹⁰Except for DSRCS equipment in the 5850-5925 MHz band, frequency stability is to be specified in the station authorization. Frequency stability for DSRCS equipment in the 5850-5925 MHz band is specified in subpart M of this part.

LIMITS

Device must remain operating in between 3000MHz to 3100MHz.

TEST PROCEDURE

Use spectrum analyzer to measure -6dBc points

- Temp. = -30° to +50°C
- Voltage = Nominal & Nominal +/-15%

Frequency Stability vs Temperature:

Frequency stability is tested at 10 °C intervals of temperatures between -30 °C and +50 °C at the manufacturer's rated supply voltage per **section 5.6.4 of ANSI C63.26-2015**.

Frequency Stability vs Voltage:

Frequency stability is tested at +20 °C temperature and ±15% supply voltage variations per **section 5.6.5 of ANSI C63.26-2015**.

The peak frequency error is recorded (worst-case).

RESULTS

Based on the band edge measurements and the frequency error data the device will operate in between the frequency range of 3000MHz - 3100MHz under the temperature and voltage variations described in the preceding test-procedure section.

Date: 2025-04-10 to 2025-04-14
Location: COND1
Tested by: 85502/104463, 85502/105900

Tabular Data - Mode 1

Limit		3000	3100	3042.0026	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm	F high @ -13dBm	Freq Center		
Temperature	Voltage	(MHz)	(MHz)	(MHz)		
Normal (20C)	Normal	3018.9150	3065.0903	3042.0026		
Extreme (50C)		3018.3285	3065.0400	3041.6843	0.3184	0.0002
Extreme (40C)		3018.3775	3065.0875	3041.7325	0.2701	0.0002
Extreme (30C)		3018.6938	3065.0925	3041.8931	0.1095	0.0001
Extreme (10C)		3019.7950	3065.0878	3042.4414	-0.4388	-0.0003
Extreme (0C)		3020.1323	3065.0020	3042.5672	-0.5645	-0.0004
Extreme (-10C)		3020.7765	3064.9640	3042.8703	-0.8676	-0.0006
Extreme (-20C)		3021.0425	3064.8740	3042.9583	-0.9556	-0.0006
Extreme (-30C)		3021.1083	3064.7985	3042.9534	-0.9508	-0.0006
20C	-15%	3018.9175	3065.1163	3042.0169	-0.0143	0.0000
	15%	3018.9000	3065.1025	3042.0013	0.0014	0.0000

Tabular Data - Mode 2

Limit		3000	3100	3044.2673	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm	F high @ -13dBm	Freq Center		
Temperature	Voltage	(MHz)	(MHz)	(MHz)		
Normal (20C)	Normal	3020.8480	3067.6865	3044.2673		
Extreme (50C)		3020.8085	3067.6400	3044.2243	0.0430	0.0000
Extreme (40C)		3020.8270	3067.6815	3044.2543	0.0130	0.0000
Extreme (30C)		3020.8555	3067.6825	3044.2690	-0.0018	0.0000
Extreme (10C)		3020.8510	3067.6765	3044.2638	0.0035	0.0000
Extreme (0C)		3020.3953	3067.6160	3044.0057	0.2616	0.0002
Extreme (-10C)		3020.8130	3067.5695	3044.1913	0.0760	0.0000
Extreme (-20C)		3020.9630	3067.4775	3044.2203	0.0470	0.0000
Extreme (-30C)		3021.1073	3067.4050	3044.2562	0.0111	0.0000
20C	-15%	3021.8455	3067.6875	3044.7665	-0.4992	-0.0003
	15%	3020.8475	3067.6890	3044.2683	-0.0010	0.0000

Tabular Data - Mode 3

Limit		3000	3100	3043.7685	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm	F high @ -13dBm	Freq Center		
Temperature	Voltage	(MHz)	(MHz)	(MHz)		
Normal (20C)	Normal	3020.3790	3067.1580	3043.7685		
Extreme (50C)		3020.3083	3067.1020	3043.7052	0.0634	0.0000
Extreme (40C)		3020.2845	3067.0805	3043.6825	0.0860	0.0001
Extreme (30C)		3020.3225	3067.1510	3043.7368	0.0318	0.0000
Extreme (10C)		3020.3985	3067.1450	3043.7718	-0.0032	0.0000
Extreme (0C)		3020.3908	3067.0875	3043.7392	0.0293	0.0000
Extreme (-10C)		3020.4070	3067.0265	3043.7168	0.0518	0.0000
Extreme (-20C)		3020.4645	3066.9430	3043.7038	0.0648	0.0000
Extreme (-30C)		3020.8073	3066.8705	3043.8389	-0.0704	0.0000
20C	-15%	3020.3840	3067.1515	3043.7678	0.0008	0.0000
	15%	3020.3805	3067.1515	3043.7660	0.0025	0.0000

Tabular Data - Mode 4

Condition		F low @ -13dBm	F high @ -13dBm	Freq Center	Delta (Hz)	Frequency Stability (ppm)
Temperature	Voltage	(MHz)	(MHz)	(MHz)		
Normal (20C)	Normal	3021.5745	3068.4245	3044.9995		
Extreme (50C)		3021.5960	3068.4495	3045.0228	-0.0233	0.0000
Extreme (40C)		3021.5935	3068.4535	3045.0235	-0.0240	0.0000
Extreme (30C)		3021.5900	3068.4465	3045.0183	-0.0188	0.0000
Extreme (10C)		3021.5570	3068.4130	3044.9850	0.0145	0.0000
Extreme (0C)		3021.4945	3068.3140	3044.9043	0.0953	0.0001
Extreme (-10C)		3021.4395	3068.2550	3044.8473	0.1523	0.0001
Extreme (-20C)		3021.4205	3068.1845	3044.8025	0.1970	0.0001
Extreme (-30C)		3021.4045	3068.1860	3044.7953	0.2042	0.0001
20C	-15%	3021.5745	3068.4360	3045.0053	-0.0058	0.0000
	15%	3021.5780	3068.4380	3045.0080	-0.0085	0.0000

Tabular Data - Mode 5

Limit		3000	3100	3047.1856	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm	F high @ -13dBm	Freq Center		
Temperature	Voltage	(MHz)	(MHz)	(MHz)		
Normal (20C)	Normal	3025.0513	3069.3200	3047.1856		
Extreme (50C)		3022.3948	3069.2520	3045.8234	1.3623	0.0009
Extreme (40C)		3022.4378	3069.3158	3045.8768	1.3089	0.0009
Extreme (30C)		3022.4355	3069.3198	3045.8776	1.3080	0.0009
Extreme (10C)		3022.4155	3069.3093	3045.8624	1.3233	0.0009
Extreme (0C)		3022.3583	3069.2435	3045.8009	1.3848	0.0009
Extreme (-10C)		3022.2960	3069.2748	3045.7854	1.4003	0.0009
Extreme (-20C)		3022.2773	3069.0938	3045.6855	1.5001	0.0010
Extreme (-30C)		3022.3153	3069.0708	3045.6930	1.4926	0.0010
20C	-15%	3025.0545	3069.3148	3047.1846	0.0010	0.0000
	15%	3025.0510	3069.3148	3047.1829	0.0028	0.0000

Tabular Data - Mode 6

Limit		3000	3100	3040.3050	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm	F high @ -13dBm	Freq Center		
Temperature	Voltage	(MHz)	(MHz)	(MHz)		
Normal (20C)	Normal	3018.5063	3062.1038	3040.3050		
Extreme (50C)		3017.6663	3062.2950	3039.9806	0.3244	0.0002
Extreme (40C)		3017.6263	3062.1675	3039.8969	0.4081	0.0003
Extreme (30C)		3018.7013	3062.2478	3040.4745	-0.1695	-0.0001
Extreme (10C)		3018.8125	3062.2200	3040.5163	-0.2112	-0.0001
Extreme (0C)		3019.6188	3062.1875	3040.9031	-0.5981	-0.0004
Extreme (-10C)		3019.9800	3062.1250	3041.0525	-0.7475	-0.0005
Extreme (-20C)		3020.0750	3062.1100	3041.0925	-0.7875	-0.0005
Extreme (-30C)		3020.3475	3062.0938	3041.2206	-0.9156	-0.0006
20C	-15%	3018.5963	3062.1075	3040.3519	-0.0469	0.0000
	15%	3018.6175	3062.1175	3040.3675	-0.0625	0.0000

Tabular Data - Mode 7

Limit		3000	3100	3045.7603	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm	F high @ -13dBm	Freq Center		
Temperature	Voltage	(MHz)	(MHz)	(MHz)		
Normal (20C)	Normal	3022.3235	3069.1970	3045.7603		
Extreme (50C)		3022.2873	3069.1728	3045.7300	0.0303	0.0000
Extreme (40C)		3022.3155	3069.1370	3045.7263	0.0340	0.0000
Extreme (30C)		3022.3263	3069.1970	3045.7616	-0.0014	0.0000
Extreme (10C)		3022.3230	3069.1915	3045.7573	0.0030	0.0000
Extreme (0C)		3022.2793	3069.1398	3045.7095	0.0508	0.0000
Extreme (-10C)		3022.2188	3069.0853	3045.6520	0.1083	0.0001
Extreme (-20C)		3022.1675	3069.0455	3045.6065	0.1538	0.0001
Extreme (-30C)		3020.8073	3068.9350	3044.8712	0.8891	0.0006
20C	-15%	3022.3228	3069.1953	3045.7590	0.0013	0.0000
	15%	3022.3295	3069.1953	3045.7624	-0.0021	0.0000

Tabular Data - Mode 8

Limit		3000	3100	3043.0768	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm	F high @ -13dBm	Freq Center		
Temperature	Voltage	(MHz)	(MHz)	(MHz)		
Normal (20C)	Normal	3019.6585	3066.4950	3043.0768		
Extreme (50C)		3019.6060	3066.4410	3043.0235	0.0532	0.0000
Extreme (40C)		3019.6700	3066.4933	3043.0817	-0.0049	0.0000
Extreme (30C)		3019.6788	3066.5103	3043.0946	-0.0178	0.0000
Extreme (10C)		3019.9995	3066.4898	3043.2447	-0.1679	-0.0001
Extreme (0C)		3020.1143	3066.4155	3043.2649	-0.1881	-0.0001
Extreme (-10C)		3020.8845	3066.3850	3043.6348	-0.5580	-0.0004
Extreme (-20C)		3021.0845	3066.2755	3043.6800	-0.6033	-0.0004
Extreme (-30C)		3021.0858	3066.2135	3043.6497	-0.5729	-0.0004
20C	-15%	3019.6560	3066.4600	3043.0580	0.0188	0.0000
	15%	3019.6625	3066.4930	3043.0778	-0.0010	0.0000

Tabular Data - Mode 9

Limit		3000	3100	3045.8611	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm	F high @ -13dBm	Freq Center		
Temperature	Voltage	(MHz)	(MHz)	(MHz)		
Normal (20C)	Normal	3022.4300	3069.2923	3045.8611		
Extreme (50C)		3022.4443	3069.3213	3045.8828	-0.0216	0.0000
Extreme (40C)		3022.4068	3069.2798	3045.8433	0.0179	0.0000
Extreme (30C)		3022.4313	3069.3058	3045.8685	-0.0074	0.0000
Extreme (10C)		3022.4310	3069.3048	3045.8679	-0.0068	0.0000
Extreme (0C)		3022.4265	3069.3073	3045.8669	-0.0058	0.0000
Extreme (-10C)		3022.3885	3069.2665	3045.8275	0.0336	0.0000
Extreme (-20C)		3022.3620	3069.2213	3045.7916	0.0695	0.0000
Extreme (-30C)		3022.2095	3069.0760	3045.6428	0.2184	0.0001
20C	-15%	3022.4340	3069.2958	3045.8649	-0.0038	0.0000
	15%	3022.4335	3069.2990	3045.8663	-0.0051	0.0000

9. TEST SETUP PHOTOS

See R15487718-EP1 for Setup Photos and Setup Diagrams

END OF REPORT