



Test report issued under the responsibility of:
EMITECH MONTPELLIER laboratory
MRA US-EU Designation Number: FR0006
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RADIO TEST REPORT

FCC part 15.519
RSS-220

Company : **ETS GEORGES RENAULT**
Address..... : 38 RUE BOBBY SANDS
44800 SAINT HERBLAIN
FRANCE

Test item description. : **Tools tracker**
Trade Mark. : DESOUTTER
Manufacturer..... : ETS GEORGES RENAULT
Model/Product/Type reference. : 615919149005 / TRACKER-EABS / 6158134150
FCC ID...... : 2APE2-TRACKER2
IC. : 24012-TRACKER2
Ratings..... : Not communicated

Testing Laboratory : **EMITECH MONTPELLIER laboratory**
Address..... : 145 rue de Massacan
34740 VENDARGUES
FRANCE

Report Reference No...... : **RR410-21-100495-1A**
Test procedure. : FCC IC Certification
Diffusion..... : MR BUTON MANUEL
Applicant's name. : ETS GEORGES RENAULT
Date of issue..... : August 5, 2021
Total number of pages..... : 92
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Compiled by..... : Morgan PATEY
Approved by (+ signature). : David MONTAULON (RADIO Laboratory Manager)

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This document is the result of testing a specimen or a sample of the product submitted. It does not imply an assessment of the conformity of
the whole manufactured products of the tested sample.*

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REVISION HISTORY:

Revision	Date	Modified pages	Modifications
0	August 5, 2021	/	Creation

1. GENERAL INFORMATION

This document submits the results of Radio tests performed on the equipment **TRACKER-EABS 6158134150** (denominated hereafter E.U.T.: equipment under test) according to document(s) listed in §2 of this test report.

TESTING PROCEDURE AND TESTING LOCATION:					
Testing Location : EMITECH MONTPELLIER laboratory Address. : 145 rue de Massacan 34740 VENDARGUES FRANCE Test procedure. : FCC IC Certification Tested by : Morgan PATEY Test supervisor : None Date of receipt of test item : N/A Date (s) of performance of tests : From April the 1 st to 6 th of 2021					
APPLICANT'S GENERAL INFORMATIONS:					
Company name : ETS GEORGES RENAULT Company address. : 38 RUE BOBBY SANDS 44800 SAINT HERBLAIN FRANCE Person(s) present during the tests. : No representative for company attended the tests. Responsible. : MR BUTON MANUEL					
GENERAL REMARKS:					
The information in <i>italics</i> is declared by the manufacturer and is under his responsibility The test results presented in this report relate only to the object tested. The results contained in this report reflect the results for this particular model and serial number. It is the responsibility of the manufacturer to ensure that all production models meet the intent of the requirements detailed within this report. "(see Enclosure #)" refers to additional information appended to the report. "(see appended table)" refers to a table appended to the report. Throughout this report the decimal separator is point.					
POSSIBLE TEST CASE VERDICTS:					
Test case does not apply to the test object.: N/A Test case not performed.....: N/P Test object does meet the requirement.....: P (Pass) Test object does not meet the requirement.: F (Fail)					
DEFINITIONS AND ABBREVIATIONS:					
E.U.T.	Equipment under test	AE	Ancillary equipment	Pk	Peak detector
RBW	Resolution bandwidth	VBW	Video bandwidth	QP	Quasi-peak detector
OATS	Open area test site	FAR	Full anechoic room	Av	Average detector
VP	Vertical Polarization	HP	Horizontal Polarization	RMS	Root Mean Square
RF	Radio frequency	NTR	Nothing to report	N/C	Not communicated

2. REFERENCE DOCUMENT(S)

NORMATIVE REFERENCES:

The following referenced documents are necessary for the application of the present test report.

FCC 47 CFR PART 15: April 2020

Code of federal regulations – Title 47 telecommunication
Part 15- Radio frequency devices

FCC part 15.519

Technical requirements for hand held UWB systems.

FCC part 15.521

Technical requirements applicable to all UWB devices.

RSS-GEN: March 2019

General Requirements for Compliance of Radio Apparatus

RSS-220: July 2018

Devices Using Ultra-Wideband (UWB) Technology

ANSI C 63.10: 2013

American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices

Although the product standard uses obsolete technical standards, the latest versions of standards achievable by the laboratory will be used for testing.

INFORMATIVE REFERENCES:

The following referenced documents are not necessary for the application of the present test report but they assist the user with regard to a particular subject area.

3. EQUIPMENT TECHNICAL DESCRIPTION

3.1. Test Conditions

Test item description. :	Tools tracker
Model/Product/Type reference. :	615919149005 / TRACKER-EABS / 6158134150
Trade Mark. :	DESOUTTER
FCC ID..... :	2APE2-TRACKER2
IC. :	24012-TRACKER2
Serial number (S/N)..... :	Not communicated
Part number (P/N). :	Not communicated
Software version..... :	N/A
Firmware version. :	2.3.30
Type of sample. :	Prototype
Function(s)..... :	Tracker EABS is an equipment use to accessorize a battery screwdriver. The power is supply by the tool itself with a 5V DC connector. When Tracker EABS is on, it communicates with a Tracking Base (FCC ID : 2APE2-TRACKBASE). Signal exchange between Tracker and Tracking base allow to measure distance between them.
Manufacturer name. :	ETS GEORGES RENAULT
Address. :	38 RUE BOBBY SANDS 44800 SAINT HERBLAIN
General product information:	
N/A	

3.2. EUT Marking plate

Not communicated

3.3.EUT General view



The red holder is not part of the EUT.

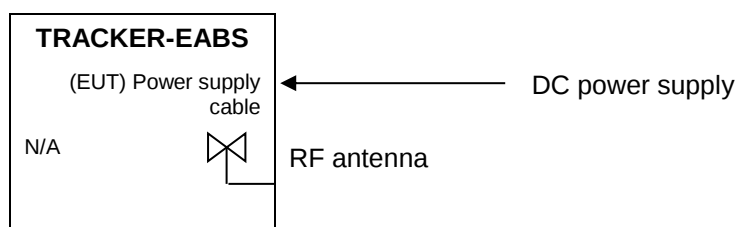
3.4. EUT Mechanical and Electrical Design

Power supply. : 5 VDC
Power supply range..... : Not communicated
Power type..... : Battery powered
Power (W)..... : 2.5
Nominal current (A). : 0.5
Dimensions (L x W x H) (m). : 0.07 x 0.03 x 0.015
Weight (kg). : 0.02
Temperature range (°C). : 0 to +45
Ground bounding strap..... : No

Comments:

N/A

3.5. EUT Input/Output ports



PORT	NAME	TYPE	LENGHT	CABLE TYPE	COMMENTS
0	Main frame	N/E	N/A	Plastic	N/A
1	DC power supply	DC	N/C	Not shielded	5 VDC from EA
2	RF antenna	RF	N/A	N/A	3100 MHz to 10600 MHz

AC/DC: AC/DC Converter port AC: Alternative current port DC: Discontinuous current port
I/O: Input or Output port TP: Telecommunication port RF: Radio frequency port
N/E: Non Electrical port

3.6. Supporting Equipment Used During Test

Sample subject to the tests was tested with following equipment.

PRODUCT TYPE	MANUFACTURER	MODEL	N°EMITECH / COMMENTS
External power bank	RS	Not communicated	5 VDC

EXTERNAL POWER BANK (EA)



3.7. EUT Radio Specifications

a) GENERAL INFORMATIONS	
According to manufacturer's declarations :	
EUT type.....	Transceiver
Technology	UWB
Environmental profile.....	Data transmissions
Temperature range.....	Category III (Indoor) (0°C to +45°C)
Antenna type	Integrated
Antenna Gain.....	Not communicated
Comments:	
N/A	
b) TRANSMITTER PARAMETERS (Tx)	
Frequency bands.....	3.5GHz to 6.5GHz
RF Power.....	<0dBm EIRP
Number of channels / Separation.....	6 (channel 1, 2, 3, 4, 5, 7)
Modulation type	BPM-BPSK
Duty cycle	0.5% (calculation method : 128 slots of 0.5ms = 64ms. On each slot, emission is around 0.3ms. $0.3/64 \times 100 = \sim 0.5\%$)
Tested frequency.....	3494.4 MHz (channel 1) 4492.8 MHz (channel 3) 6489.6 MHz (channel 5)
c) RECEIVER PARAMETERS (Rx)	
Frequency bands.....	3.5GHz to 6.5GHz
Category/Class	Not communicated
Bandwidth.....	according IEEE802.15.4-2011 UWB compliant

4. OPINION(S) AND INTERPRETATION(S)

TEST(S) PERFORMED	DEVIATION(S) TO TEST METHOD(S)
ANSI C63.10	N/A

Comments: N/A

5. RESULT SUMMARY

TEST DESIGNATION	SEVERITY	VERDICT	BASIC STANDARDS / COMMENTS
Conducted emissions		N/A	Powered by internals batteries
UWB 10dB bandwidth			ANSI C63.10 : 2013
- 10dB Bandwidth / Low channel	3.1GHz-10.6GHz	PASS	
- 10dB Bandwidth / Mid channel	3.1GHz-10.6GHz	PASS	
- 10dB Bandwidth / High channel	3.1GHz-10.6GHz	PASS	
Transmission time			ANSI C63.10 : 2013
- Transmission time	<10sec	PASS	
Radiated spurious emissions			ANSI C63.10 : 2013
- 9kHz to 30MHz / Low channel / All positions / 0°	15.209	PASS	
- 9kHz to 30MHz / Low channel / All positions / 45°	15.209	PASS	
- 9kHz to 30MHz / Low channel / All positions / 90°	15.209	PASS	
- 9kHz to 30MHz / Mid channel / All positions / 0°	15.209	PASS	
- 9kHz to 30MHz / Mid channel / All positions / 45°	15.209	PASS	
- 9kHz to 30MHz / Mid channel / All positions / 90°	15.209	PASS	
- 9kHz to 30MHz / High channel / All positions / 0°	15.209	PASS	
- 9kHz to 30MHz / High channel / All positions / 45°	15.209	PASS	
- 9kHz to 30MHz / High channel / All positions / 90°	15.209	PASS	
- 30MHz to 960MHz / Low channel / All positions	15.209	PASS	
- 30MHz to 960MHz / Mid channel / All positions	15.209	PASS	
- 30MHz to 960MHz / High channel / All positions	15.209	PASS	
- 960MHz to 18GHz / Low channel / Position 1	15.519	PASS	
- 15.519 (d) / Low channel / Position 1	15.519	PASS	
- 960MHz to 18GHz / Low channel / Position 2	15.519	PASS	
- 15.519 (d) / Low channel / Position 2	15.519	PASS	
- 960MHz to 18GHz / Low channel / Position 3	15.519	PASS	
- 15.519 (d) / Low channel / Position 3	15.519	PASS	
- 960MHz to 18GHz / Mid channel / Position 1	15.519	PASS	
- 15.519 (d) / Mid channel / Position 1	15.519	PASS	
- 960MHz to 18GHz / Mid channel / Position 2	15.519	PASS	
- 15.519 (d) / Mid channel / Position 2	15.519	PASS	
- 960MHz to 18GHz / Mid channel / Position 3	15.519	PASS	
- 15.519 (d) / Mid channel / Position 3	15.519	PASS	
- 960MHz to 18GHz / High channel / Position 1	15.519	PASS	
- 15.519 (d) / High channel / Position 1	15.519	PASS	
- 960MHz to 18GHz / High channel / Position 2	15.519	PASS	
- 15.519 (d) / High channel / Position 2	15.519	PASS	
- 960MHz to 18GHz / High channel / Position 3	15.519	PASS	
- 15.519 (d) / High channel / Position 3	15.519	PASS	
- 18GHz to 40GHz / Low channel / Position 1	15.519	PASS	
- 18GHz to 40GHz / Low channel / Position 2	15.519	PASS	
- 18GHz to 40GHz / Low channel / Position 3	15.519	PASS	
- 18GHz to 40GHz / Mid channel / Position 1	15.519	PASS	
- 18GHz to 40GHz / Mid channel / Position 2	15.519	PASS	
- 18GHz to 40GHz / Mid channel / Position 3	15.519	PASS	
- 18GHz to 40GHz / High channel / Position 1	15.519	PASS	
- 18GHz to 40GHz / High channel / Position 2	15.519	PASS	
- 18GHz to 40GHz / High channel / Position 3	15.519	PASS	
- Integrated / All positions	15.209	PASS	
- Integrated / Position 1	15.209	PASS	
- Integrated / Position 2	15.209	PASS	
- Integrated / Position 3	15.209	PASS	
Maximum peak output power of UWB device			ANSI C63.10 : 2013
- Low channel / Position 1	0dBm	PASS	
- Low channel / Position 2	0dBm	PASS	

TEST DESIGNATION	SEVERITY	VERDICT	BASIC STANDARDS / COMMENTS
- Low channel / Position 3	0dBm	PASS	
- Mid channel / Position 1	0dBm	PASS	
- Mid channel / Position 2	0dBm	PASS	
- Mid channel / Position 3	0dBm	PASS	
- High channel / Position 1	0dBm	PASS	
- High channel / Position 2	0dBm	PASS	
- High channel / Position 3	0dBm	PASS	
- Channel 2 / Position 1	0dBm	PASS	
- Channel 2 / Position 2	0dBm	PASS	
- Channel 2 / Position 3	0dBm	PASS	
- Channel 4 / Position 1	0dBm	PASS	
- Channel 4 / Position 2	0dBm	PASS	
- Channel 4 / Position 3	0dBm	PASS	
- Channel 7 / Position 1	0dBm	PASS	
- Channel 7 / Position 2	0dBm	PASS	
- Channel 7 / Position 3	0dBm	PASS	

Sample subject to the test complies for tests done with the requirements of the reference document(s) listed in §2 of this test report and, where applicable, with deviation(s) specified in this document.

To declare, or not, the compliance with the specifications, it was not explicitly taken into account of uncertainty associated with the results.

TEST(S) PERFORMED	MODIFICATION(S)
ANSI C63.10	N/A

6. MEASUREMENT UNCERTAINTY

PARAMETER	MAXIMAL EMITECH UNCERTAINTY	MINIMAL STANDARD UNCERTAINTY
Radio frequency	$\pm 1 \times 10^{-7}$	$\pm 1 \times 10^{-7}$
Occupied bandwidth		
RF power	$\pm 3.8 \%$	$\pm 5 \%$
Radiated emission (PAR / PIRE / RNE)		
1 GHz - 18 GHz	$\pm 5.2 \text{ dB}$	$\pm 6 \text{ dB}$
Supply voltages	$\pm 3 \%$	$\pm 3 \%$
Temperature	$\pm 1 \text{ }^{\circ}\text{C}$	$\pm 1^{\circ}\text{C}$
Humidity	$\pm 5 \%$	$\pm 5 \%$
Time / Duty cycle	$\pm 4.4 \%$	$\pm 5 \%$
Radiated emission (electric field for FCC standard)		
9kHz – 30MHz	$\pm 2.7 \text{ dB}$	/
30MHz – 1GHz	$\pm 5.0 \text{ dB}$	/
1GHz – 18GHz	$\pm 5.6 \text{ dB}$	/
18GHz – 26GHz	$\pm 5.7 \text{ dB}$	/
26GHz – 40GHz	$\pm 5.7 \text{ dB}$	/

For the calculation of expanded uncertainty, the confidence interval is 95 % (k=2).

7. TEST CONDITIONS AND RESULTS

7.1. UWB 10dB bandwidth

Reference standard:	FCC part 15 Radio part 15.519
Test method:	ANSI C63.10 §10
Test description: b): The UWB bandwidth of a UWB system operating under the provisions of this section must be contained between 3100 MHz and 10600 MHz. f_M is the frequency at which the highest emission occurs. Tests are done in max-hold mode in order to capture all channels.	

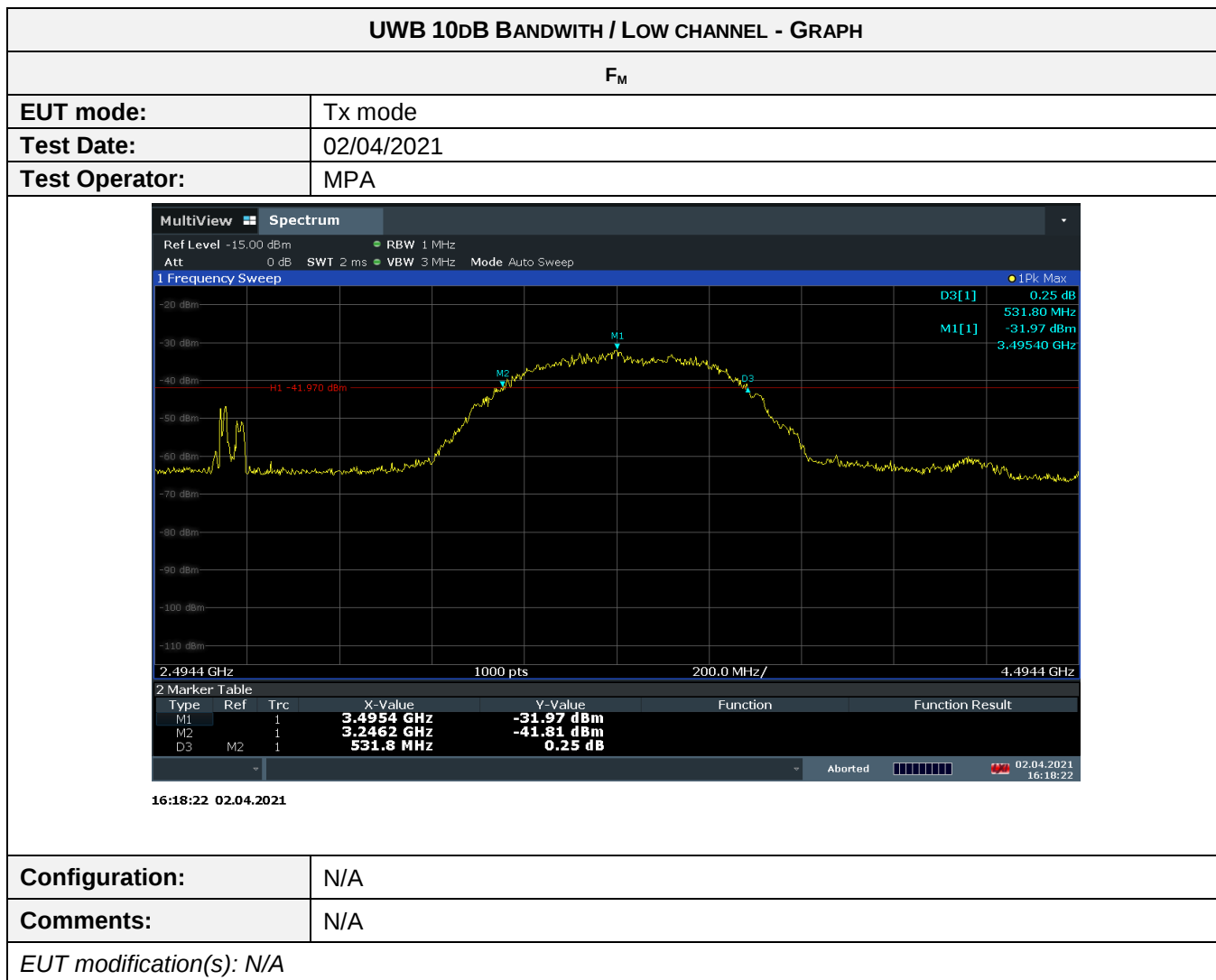
TESTED PARAMETER	SEVERITY	VERDICT
10dB Bandwidth / Low channel	3100MHz-10600MHz	PASS
10dB Bandwidth / Mid channel	3100MHz-10600MHz	PASS
10dB Bandwidth / High channel	3100MHz-10600MHz	PASS

LABORATORY PARAMETERS:	REQUIRED PRIOR TO THE TEST	DURING THE TEST
Ambient Temperature	15 to 35 °C	15.7 °C
Relative Humidity	20 to 75 %	44.5 %
Atmospheric pressure	N/A	1016 hPa
Test method deviation: N/A		
Supplementary information: N/A		

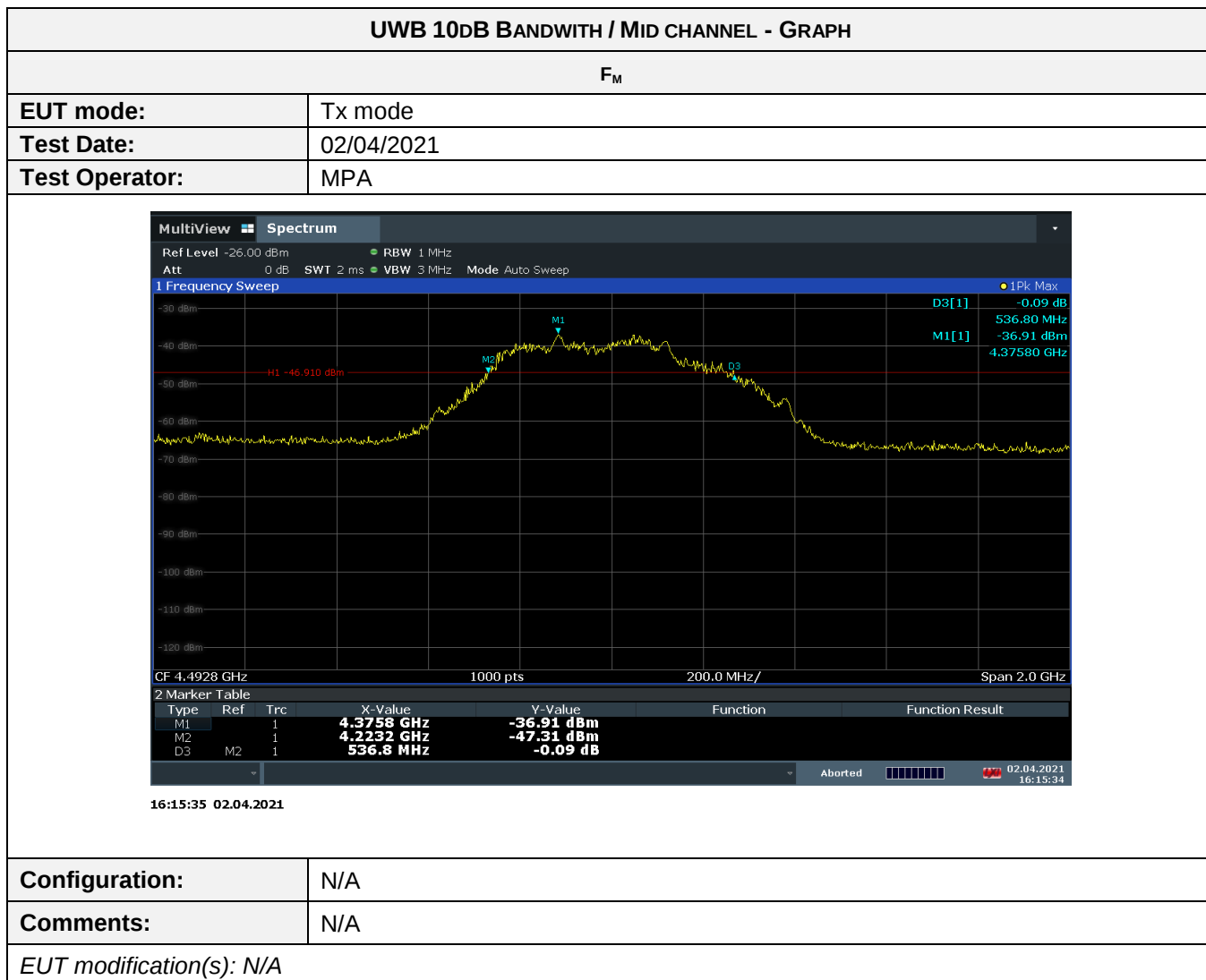
TEST EQUIPMENT USED					
CATEGORY	BRAND	TYPE	IDENTIFIER	CAL. DATE	CAL. DUE
Antenna	AARONIA	Powerlog 70180	15306	24/07/2019	24/09/2022
Cable	SUCOFLEX	N-3m	14378	25/06/2019	25/08/2021
Cable	SUCOFLEX	N-6,5m	14380	25/07/2019	25/09/2021
Cable	Huber + Suhner	SF102K	16041	28/02/2019	28/04/2021
Cable	MegaPhase	TM18-N1N1-118	12841	14/08/2020	14/10/2022
Cable	MegaPhase	TM18-N1N1-118	12842	02/12/2020	02/02/2023
Preamplifier	IMPULSE	CA118-546ACN	9169	13/01/2021	13/03/2022
Receiver	Rohde & Schwarz	FSW43	14830	29/07/2020	29/09/2021
Shielded enclosure	COMTEST	SAC 3m	14494	02/10/2019	02/12/2022
Software	Nexio		0000		
Thermohygrometer	Testo	608-H2	12268	07/05/2020	07/07/2022
Thermohygrometer	Testo	608-H2	12269	07/05/2020	07/07/2022

BAT-EMC software version: V3.18.0.26

Blank cells = Permanent validity



UWB 10dB BANDWIDTH / LOW CHANNEL - TABULATED RESULTS			
F_M			
Frequency	RBW	10 dB BW	Limit
3494.4 MHz	1MHz	531.8 MHz $f_L=3246.2$ MHz $f_H=3778$ MHz	$f_L > 3100$ MHz $f_H < 10600$ MHz



UWB 10dB BANDWIDTH / MID CHANNEL - TABULATED RESULTS			
F_M			
Frequency	RBW	10 dB BW	Limit
4492.8 MHz	1MHz	536.8 MHz $f_L=4223.2$ MHz $f_H=4760$ MHz	$f_L > 3100$ MHz $f_H < 10600$ MHz

UWB 10dB BANDWIDTH / HIGH CHANNEL - GRAPH	
F _M	
EUT mode:	Tx mode
Test Date:	02/04/2021
Test Operator:	MPA
 15:46:34 02.04.2021	
Configuration:	N/A
Comments:	N/A
EUT modification(s): N/A	

UWB 10dB BANDWIDTH / HIGH CHANNEL - TABULATED RESULTS			
F _M			
Frequency	RBW	10 dB BW	Limit
6489.6 MHz	1MHz	663.8 MHz f _L =6124.2 MHz f _H =6788 MHz	f _L > 3100 MHz f _H < 10600 MHz

7.2. Transmission time

Reference standard:	FCC part 15 Radio part 15.519
Test method:	ANSI C63.10 §10
Test description: 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.	

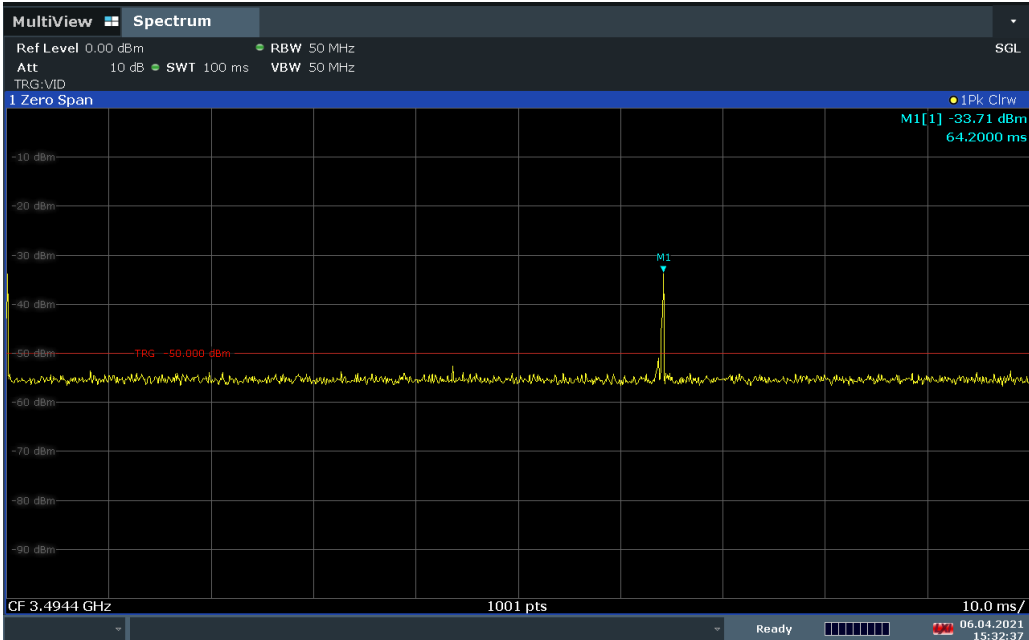
TESTED PARAMETER	SEVERITY	VERDICT
Transmission time	<10sec	PASS

LABORATORY PARAMETERS:	REQUIRED PRIOR TO THE TEST	DURING THE TEST
Ambient Temperature	15 to 35 °C	15.7 °C
Relative Humidity	20 to 75 %	44.5 %
Atmospheric pressure	N/A	1016 hPa
Test method deviation: N/A		
Supplementary information: N/A		

TEST EQUIPMENT USED					
CATEGORY	BRAND	TYPE	IDENTIFIER	CAL. DATE	CAL. DUE
Antenna	AARONIA	Powerlog 70180	15306	24/07/2019	24/09/2022
Cable	SUCOFLEX	N-3m	14378	25/06/2019	25/08/2021
Cable	SUCOFLEX	N-6,5m	14380	25/07/2019	25/09/2021
Cable	Huber + Suhner	SF102K	16041	28/02/2019	28/04/2021
Cable	MegaPhase	TM18-N1N1-118	12841	14/08/2020	14/10/2022
Cable	MegaPhase	TM18-N1N1-118	12842	02/12/2020	02/02/2023
Preamplifier	IMPULSE	CA118-546ACN	9169	13/01/2021	13/03/2022
Receiver	Rohde & Schwarz	FSW43	14830	29/07/2020	29/09/2021
Shielded enclosure	COMTEST	SAC 3m	14494	02/10/2019	02/12/2022
Software	Nexio		0000		
Thermohygrometer	Testo	608-H2	12268	07/05/2020	07/07/2022
Thermohygrometer	Testo	608-H2	12269	07/05/2020	07/07/2022

BAT-EMC software version: V3.18.0.26

Blank cells = Permanent validity

TRANSMISSION TIME - GRAPH	
F_M	
EUT mode:	Tx mode
Test Date:	02/04/2021
Test Operator:	MPA
 15:32:37 06.04.2021	
Configuration:	N/A
Comments:	N/A
EUT modification(s): N/A	

TRANSMISSION TIME - TABULATED RESULTS			
F_M			
Configuration	Sweep time	Result	Limit
Zero span	100ms	64.2ms	<10sec

7.3. Radiated spurious emissions

Reference standard:	FCC part 15 Radio part 15.519 and part 15.209: 2020
Test method:	ANSI C63.10 : 2013
Test description: : c) and d) For f <30MHz, EUT is set on an insulating support at 80cm above the ground reference plane. Preliminary (peak) measurements were performed at an antenna to EUT separation distance of 3-meter in a semi-anechoic chamber. The EUT was rotated 360° in order to maximize radiated levels. Test antenna was oriented in 3 axes (0°, 45° and 90°). Final measurements (quasi-peak) were then performed in a 10-meter Open Area Test Site that complies to CISPR 16 in the same measurement conditions. For f > 30MHz, EUT is set on an insulating support at 80cm above the ground reference plane (150cm for f >1GHz). Preliminary (peak) measurements were performed at an antenna to EUT separation distance of 3-meter. The EUT was rotated 360° about its azimuth with the receive antenna located at various heights in horizontal and vertical polarities. Final measurements (quasi-peak or average) were then performed in a semi-anechoic chamber or Open Area Test Site that complies to CISPR 16. The EUT was rotated 360° about its azimuth and adjusting the receive antenna height from 1 to 4 m. Above 960MHz, radiated measurements were done at 1m test distance in order to optimise measurement dynamic. All frequencies were investigated, where applicable. For portable equipments a research of maximum level is done on the 3 axes. Only the highest levels are recorded.	

TESTED CONFIGURATION	PARAMETER	SEVERITY	RESULT TAB.	VERDICT
9kHz to 30MHz / Low channel / All positions / 0°	9kHz-30MHz	15.209	EMI4598	PASS
9kHz to 30MHz / Low channel / All positions / 45°	9kHz-30MHz	15.209	EMI4599	PASS
9kHz to 30MHz / Low channel / All positions / 90°	9kHz-30MHz	15.209	EMI4600	PASS
9kHz to 30MHz / Mid channel / All positions / 0°	9kHz-30MHz	15.209	EMI4601	PASS
9kHz to 30MHz / Mid channel / All positions / 45°	9kHz-30MHz	15.209	EMI4602	PASS
9kHz to 30MHz / Mid channel / All positions / 90°	9kHz-30MHz	15.209	EMI4603	PASS
9kHz to 30MHz / High channel / All positions / 0°	9kHz-30MHz	15.209	EMI4604	PASS
9kHz to 30MHz / High channel / All positions / 45°	9kHz-30MHz	15.209	EMI4605	PASS
9kHz to 30MHz / High channel / All positions / 90°	9kHz-30MHz	15.209	EMI4606	PASS
30MHz to 960MHz / Low channel / All positions	30MHz-960MHz	15.209	EMI4558	PASS
30MHz to 960MHz / Mid channel / All positions	30MHz-960MHz	15.209	EMI4578	PASS
30MHz to 960MHz / High channel / All positions	30MHz-960MHz	15.209	EMI4579	PASS
960MHz to 18GHz / Low channel / Position 1	960MHz-18GHz	15.519	EMI4537	PASS
15.519 (d) / Low channel / Position 1	1.164GHz-1.61GHz	15.519	EMI4538	PASS
960MHz to 18GHz / Low channel / Position 2	960MHz-18GHz	15.519	EMI4539	PASS
15.519 (d) / Low channel / Position 2	1.164GHz-1.61GHz	15.519	EMI4540	PASS
960MHz to 18GHz / Low channel / Position 3	960MHz-18GHz	15.519	EMI4541	PASS
15.519 (d) / Low channel / Position 3	1.164GHz-1.61GHz	15.519	EMI4542	PASS
960MHz to 18GHz / Mid channel / Position 1	960MHz-18GHz	15.519	EMI4545	PASS
15.519 (d) / Mid channel / Position 1	1.164GHz-1.61GHz	15.519	EMI4546	PASS
960MHz to 18GHz / Mid channel / Position 2	960MHz-18GHz	15.519	EMI4547	PASS
15.519 (d) / Mid channel / Position 2	1.164GHz-1.61GHz	15.519	EMI4548	PASS
960MHz to 18GHz / Mid channel / Position 3	960MHz-18GHz	15.519	EMI4549	PASS

TESTED CONFIGURATION	PARAMETER	SEVERITY	RESULT TAB.	VERDICT
15.519 (d) / Mid channel / Position 3	1.164GHz-1.61GHz	15.519	EMI4550	PASS
960MHz to 18GHz / High channel / Position 1	960MHz-18GHz	15.519	EMI4551	PASS
15.519 (d) / High channel / Position 1	1.164GHz-1.61GHz	15.519	EMI4552	PASS
960MHz to 18GHz / High channel / Position 2	960MHz-18GHz	15.519	EMI4553	PASS
15.519 (d) / High channel / Position 2	1.164GHz-1.61GHz	15.519	EMI4554	PASS
960MHz to 18GHz / High channel / Position 3	960MHz-18GHz	15.519	EMI4555	PASS
15.519 (d) / High channel / Position 3	1.164GHz-1.61GHz	15.519	EMI4556	PASS
18GHz to 40GHz / Low channel / Position 1	18GHz-40GHz	15.519	EMI4608	PASS
18GHz to 40GHz / Low channel / Position 2	18GHz-40GHz	15.519	EMI4609	PASS
18GHz to 40GHz / Low channel / Position 3	18GHz-40GHz	15.519	EMI4610	PASS
18GHz to 40GHz / Mid channel / Position 1	18GHz-40GHz	15.519	EMI4613	PASS
18GHz to 40GHz / Mid channel / Position 2	18GHz-40GHz	15.519	EMI4612	PASS
18GHz to 40GHz / Mid channel / Position 3	18GHz-40GHz	15.519	EMI4611	PASS
18GHz to 40GHz / High channel / Position 1	18GHz-40GHz	15.519	EMI4614	PASS
18GHz to 40GHz / High channel / Position 2	18GHz-40GHz	15.519	EMI4615	PASS
18GHz to 40GHz / High channel / Position 3	18GHz-40GHz	15.519	EMI4616	PASS
Integrated / All positions	30MHz-960MHz	15.209	EMI4638	PASS
Integrated / Position 1	1GHz-18GHz	15.209	EMI4625	PASS
Integrated / Position 2	1GHz-18GHz	15.209	EMI4626	PASS
Integrated / Position 3	1GHz-18GHz	15.209	EMI4627	PASS

LABORATORY PARAMETERS:	REQUIRED PRIOR TO THE TEST	DURING THE TEST
Ambient Temperature	15 to 35 °C	See Graph(es)
Relative Humidity	20 to 75 %	See Graph(es)
Atmospheric pressure	N/A	See Graph(es)
Test method deviation: N/A		
Supplementary information: From 9 kHz to 30MHz: limit indicated on the curves is calculated with 40 dB/decade extrapolation factor and 51.5 dB conversion factor. From 30MHz to 960MHz Quasi peak limit provided is the limit given in §15.209. Above 960MHz average limit of §15.519 c) and d).		

TEST EQUIPMENT USED					
CATEGORY	BRAND	TYPE	IDENTIFIER	CAL. DATE	CAL. DUE
Antenna	ETS lindgren	3160-09	14690	26/09/2017	26/05/2021 ⁽¹⁾
Antenna	ETS lindgren	3160-10	14692	26/09/2017	26/05/2021 ⁽¹⁾
Antenna	Rohde & Schwarz	HFH2-Z2	5825	24/04/2020	24/06/2022
Antenna	Electro Metrics	BIA-30HF	0824	13/06/2018	13/08/2021
Antenna	Rohde & Schwarz	HL223	3126	13/06/2018	13/08/2021
Antenna	AARONIA	Powerlog 70180	15306	24/07/2019	24/09/2022
Cable	MegaPhase	F135N1N28	16664	25/10/2019	25/12/2021
Cable	MegaPhase	F135N1N28	16666	25/10/2019	25/12/2021
Cable	Huber + Suhner	K-1m	14522	25/06/2019	25/08/2021
Cable	JYE BAO	K30K30-5003-40G1	14887	25/06/2019	25/08/2021
Cable	Huber + Suhner	K-5m	14460	25/06/2019	25/08/2021
Cable	C&C	N-1.5m	10554	20/12/2019	20/02/2022
Cable	cables and connectors	N-1.5m	4203	27/01/2021	27/03/2023

CATEGORY	BRAND	TYPE	IDENTIFIER	CAL. DATE	CAL. DUE
Cable	SUCOFLEX	N-3m	14378	25/06/2019	25/08/2021
Cable	SUCOFLEX	N-6,5m	14380	25/07/2019	25/09/2021
Cable	MegaPhase	N-8m	15813	14/01/2021	14/03/2023
Cable	Huber + Suhner	SF102K	16041	28/02/2019	28/04/2021
Cable	Huber + Suhner	SF102K	16042	28/02/2019	28/04/2021
Cable	MegaPhase	TM18-N1N1-118	12841	14/08/2020	14/10/2022
Cable	MegaPhase	TM18-N1N1-197	12840	14/08/2020	14/10/2022
Preamplifier	Wright Technologie	ASL40-B3015	14851	12/08/2020	12/10/2021
Preamplifier	IMPULSE	CA118-546ACN	9169	13/01/2021	13/03/2022
Receiver	Agilent Technologies	E4440A	5824	22/10/2020	22/12/2022
Receiver	Rohde & Schwarz	ESI	9704	03/03/2020	03/05/2021
Receiver	Rohde & Schwarz	FSW43	14830	29/07/2020	29/09/2021
Shielded enclosure	RAY PROOF	C.V1	1123	16/06/2018	16/08/2021
Shielded enclosure	COMTEST	SAC 3m	14494	02/10/2019	02/12/2022
Software	Nexio		0000		
Thermohygrometer	Testo	608-H1	7561	26/01/2019	26/09/2021
Thermohygrometer	Testo	608-H2	12269	07/05/2020	07/07/2022
Thermohygrometer	Bioblock Scientific	Météostar	0963	26/01/2019	26/09/2021

BAT-EMC software version: V3.18.0.26

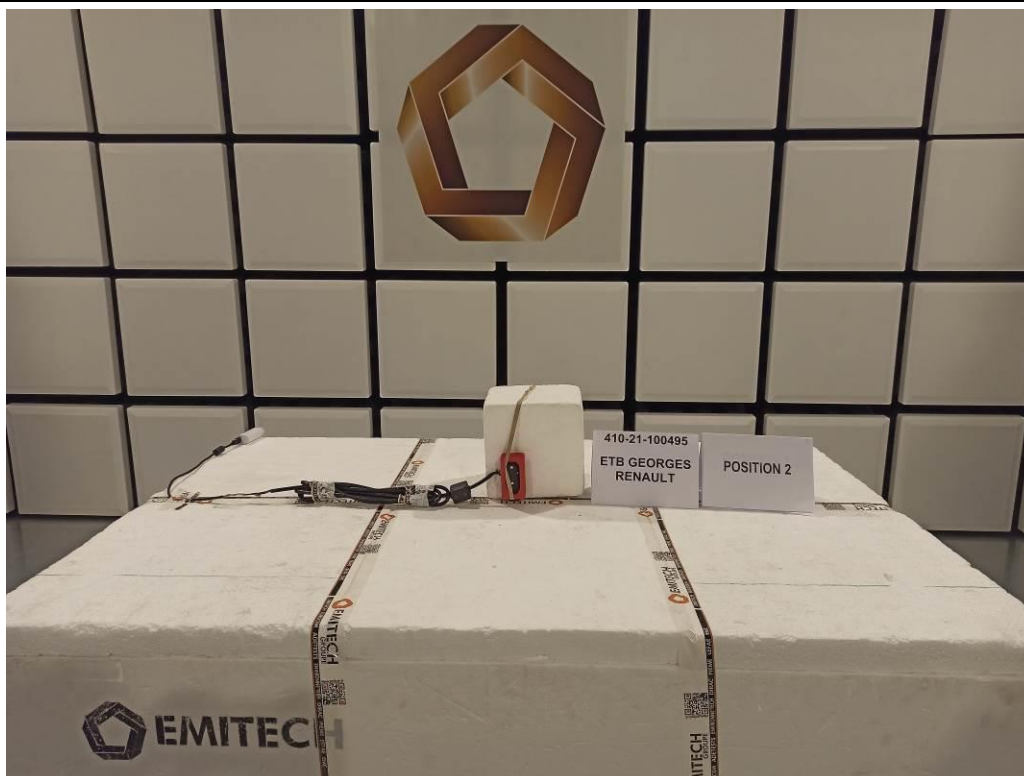
Blank cells = Permanent validity

⁽¹⁾ Under derogation EQSDER000S4100077

TEST SETUP PHOTO(S) - RADIATED MEASUREMENT <960MHZ / POSITION 1



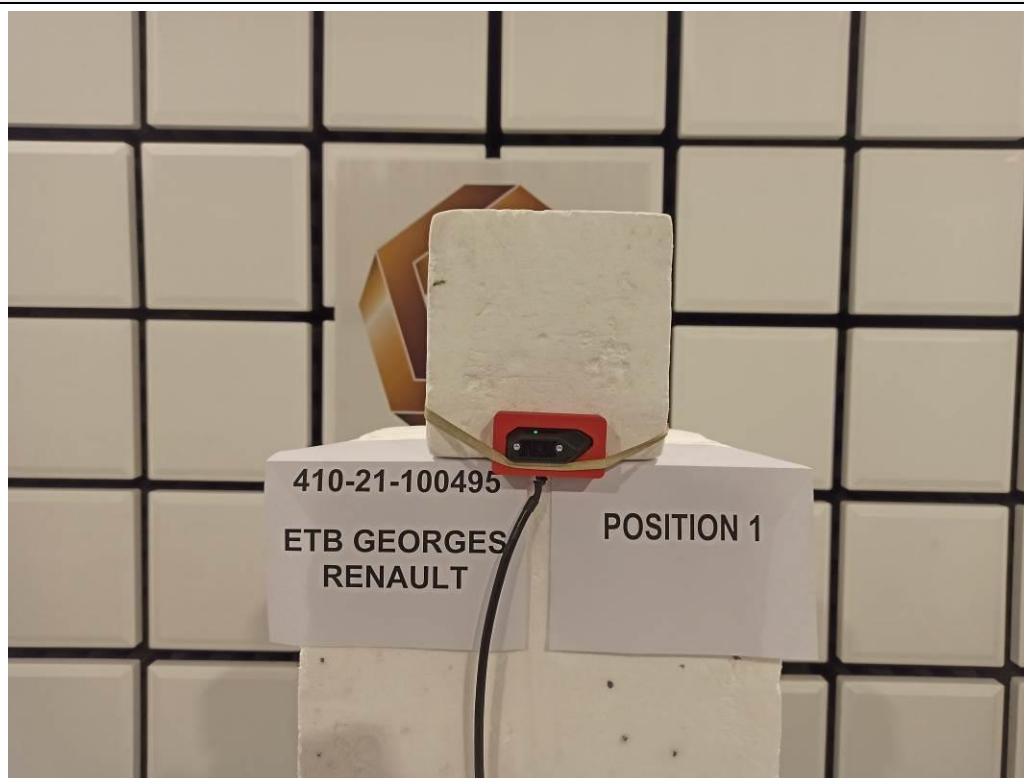
TEST SETUP PHOTO(S) - RADIATED MEASUREMENT <960MHz / POSITION 2



TEST SETUP PHOTO(S) - RADIATED MEASUREMENT <960MHz / POSITION 3



TEST SETUP PHOTO(S) - RADIATED MEASUREMENT >960MHz / POSITION 1



TEST SETUP PHOTO(S) - RADIATED MEASUREMENT >960MHz / POSITION 2



TEST SETUP PHOTO(S) - RADIATED MEASUREMENT >960MHZ / POSITION 3



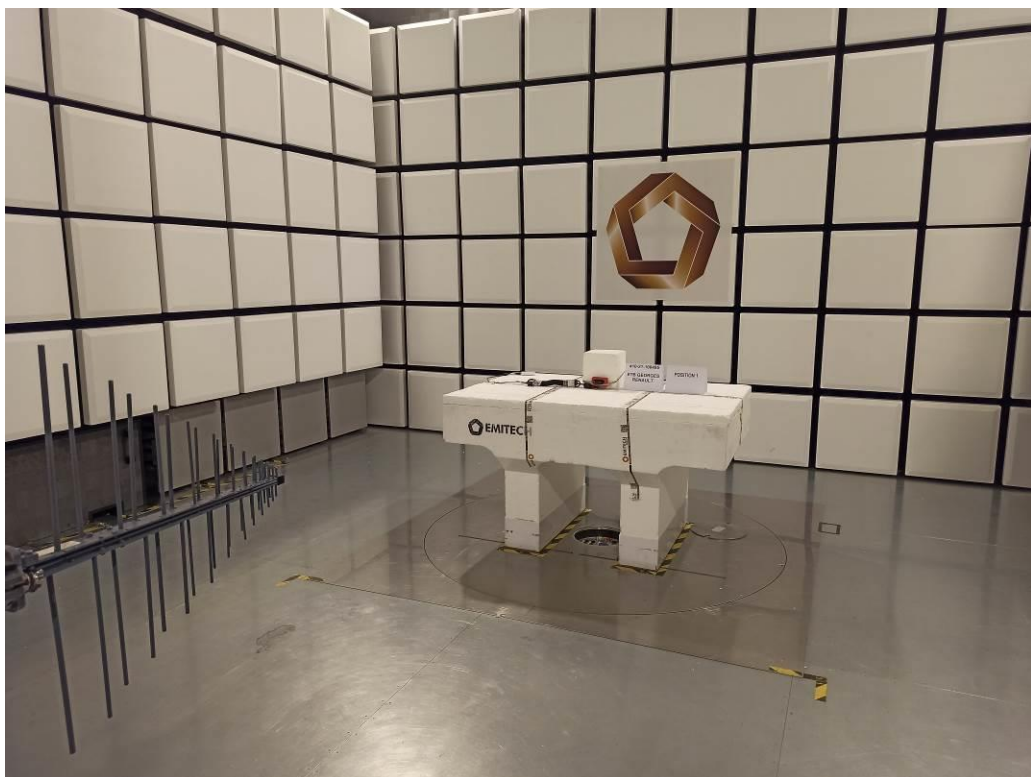
TEST SETUP PHOTO(S) - 9KHZ TO 30MHZ



TEST SETUP PHOTO(S) - 30MHZ TO 200MHZ



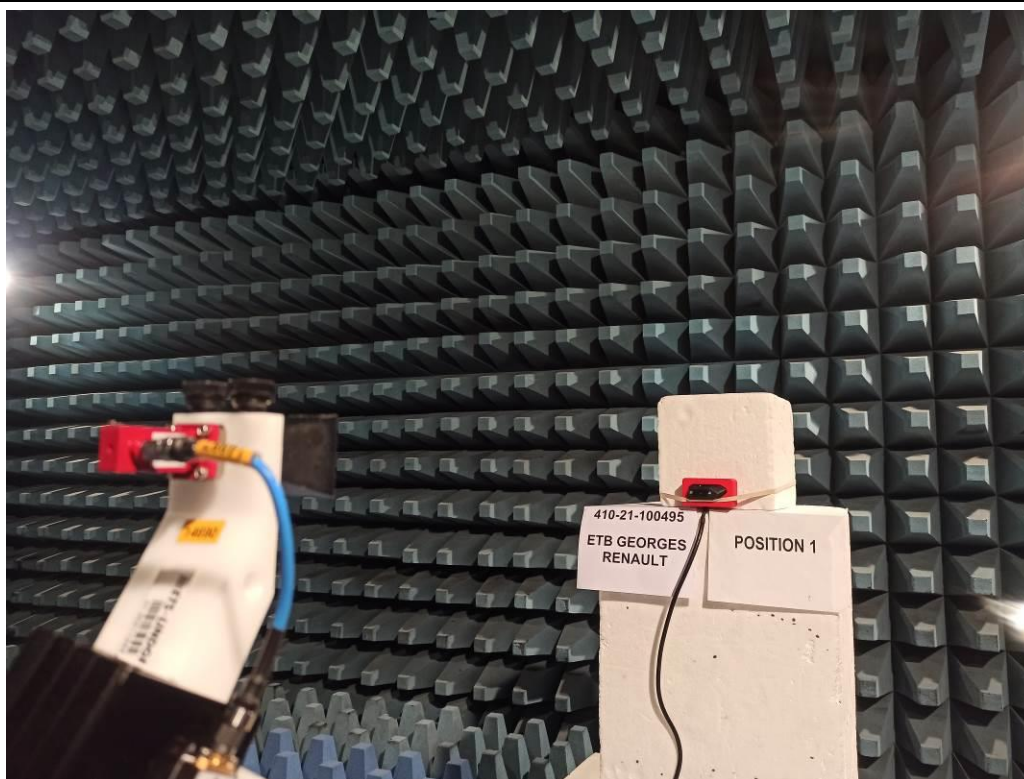
TEST SETUP PHOTO(S) - 200MHZ TO 960MHZ



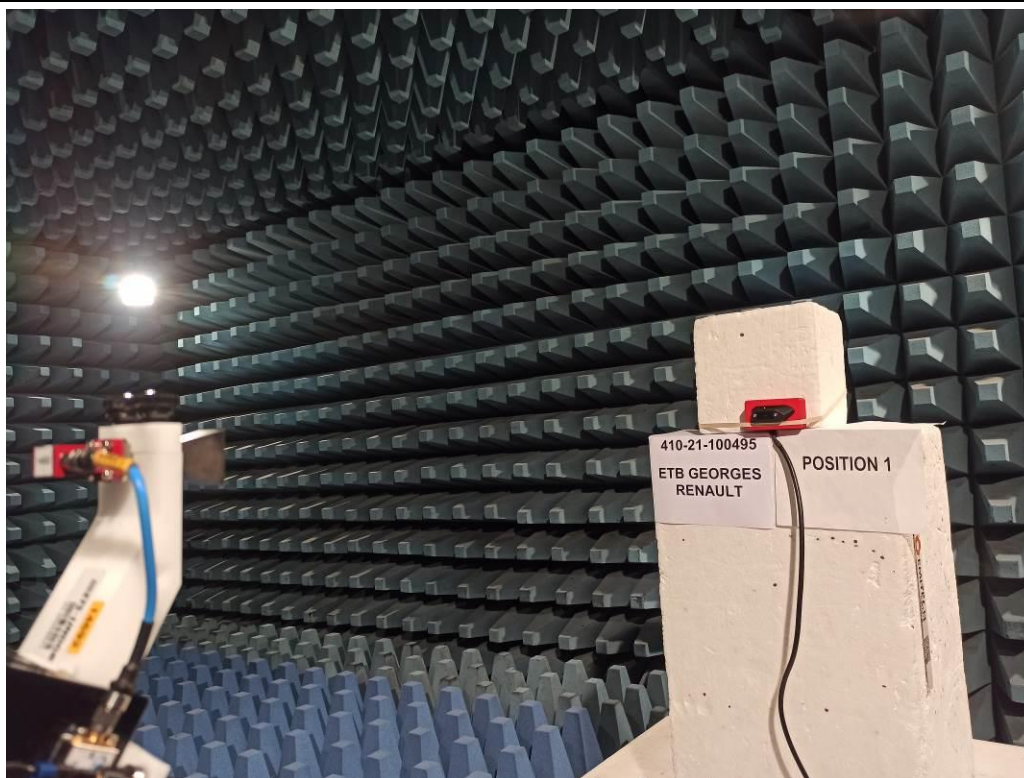
TEST SETUP PHOTO(S) - 960MHZ TO 18GHZ

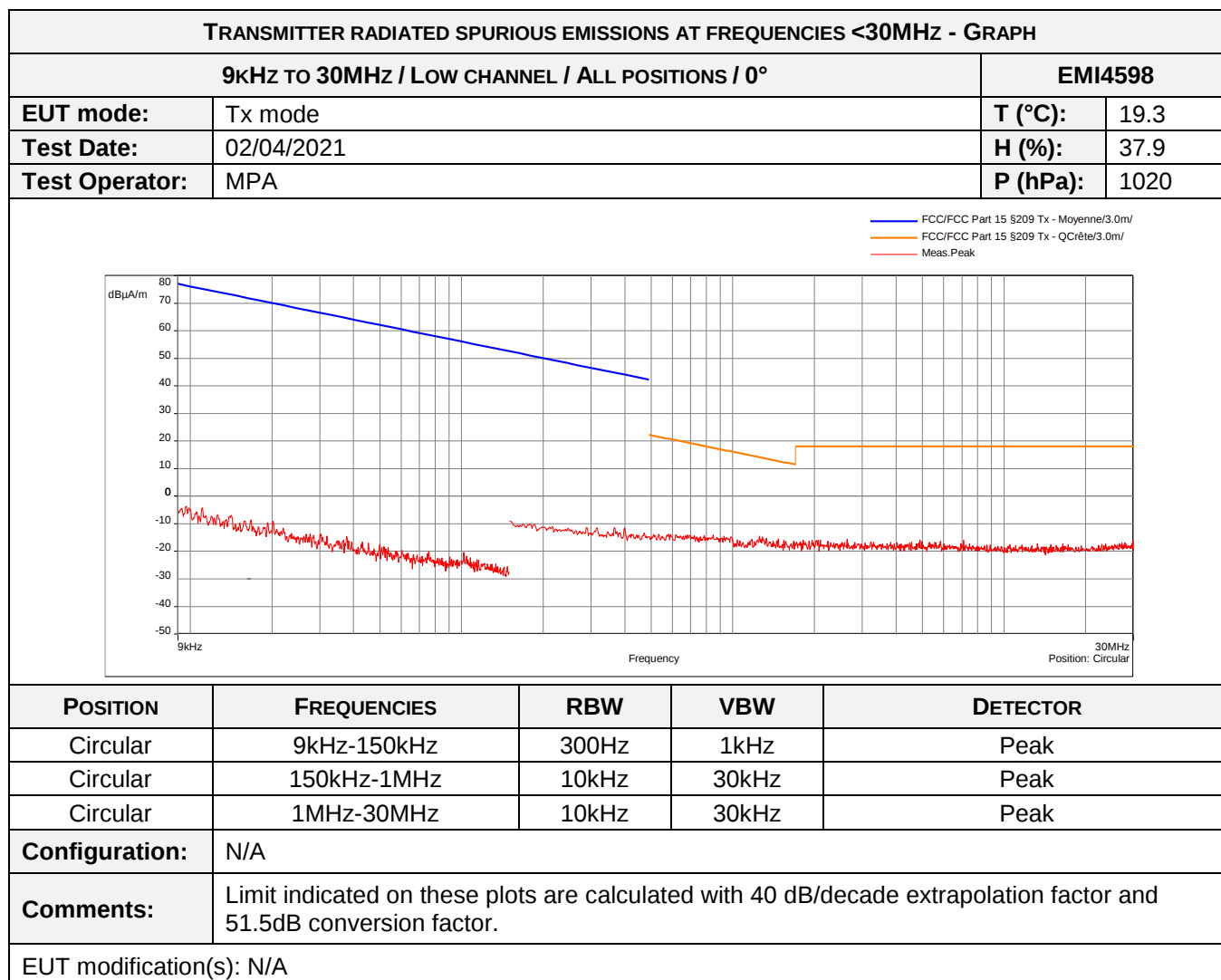


TEST SETUP PHOTO(S) - 18GHZ TO 26.5GHZ



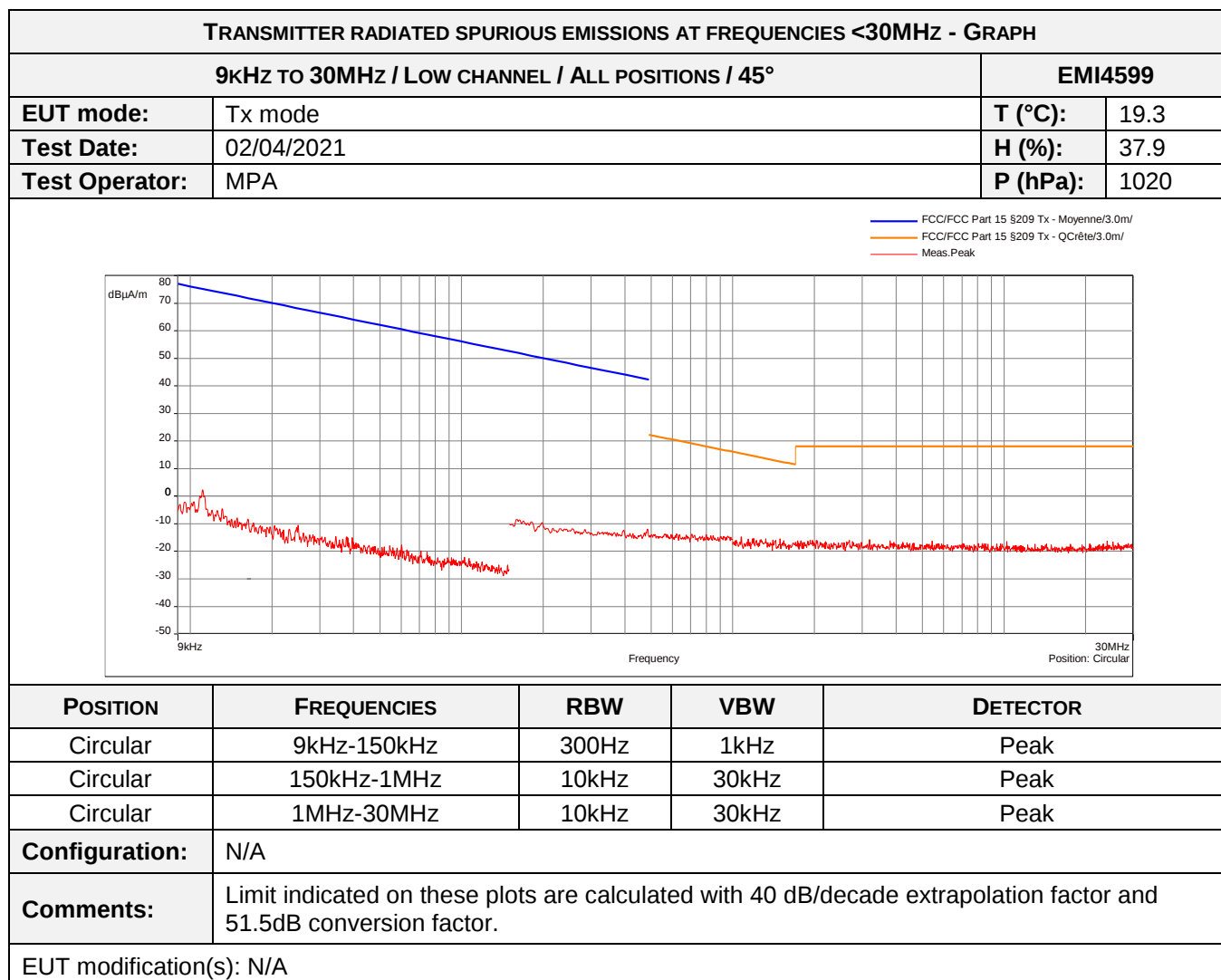
TEST SETUP PHOTO(S) - 26.5GHZ TO 40GHZ





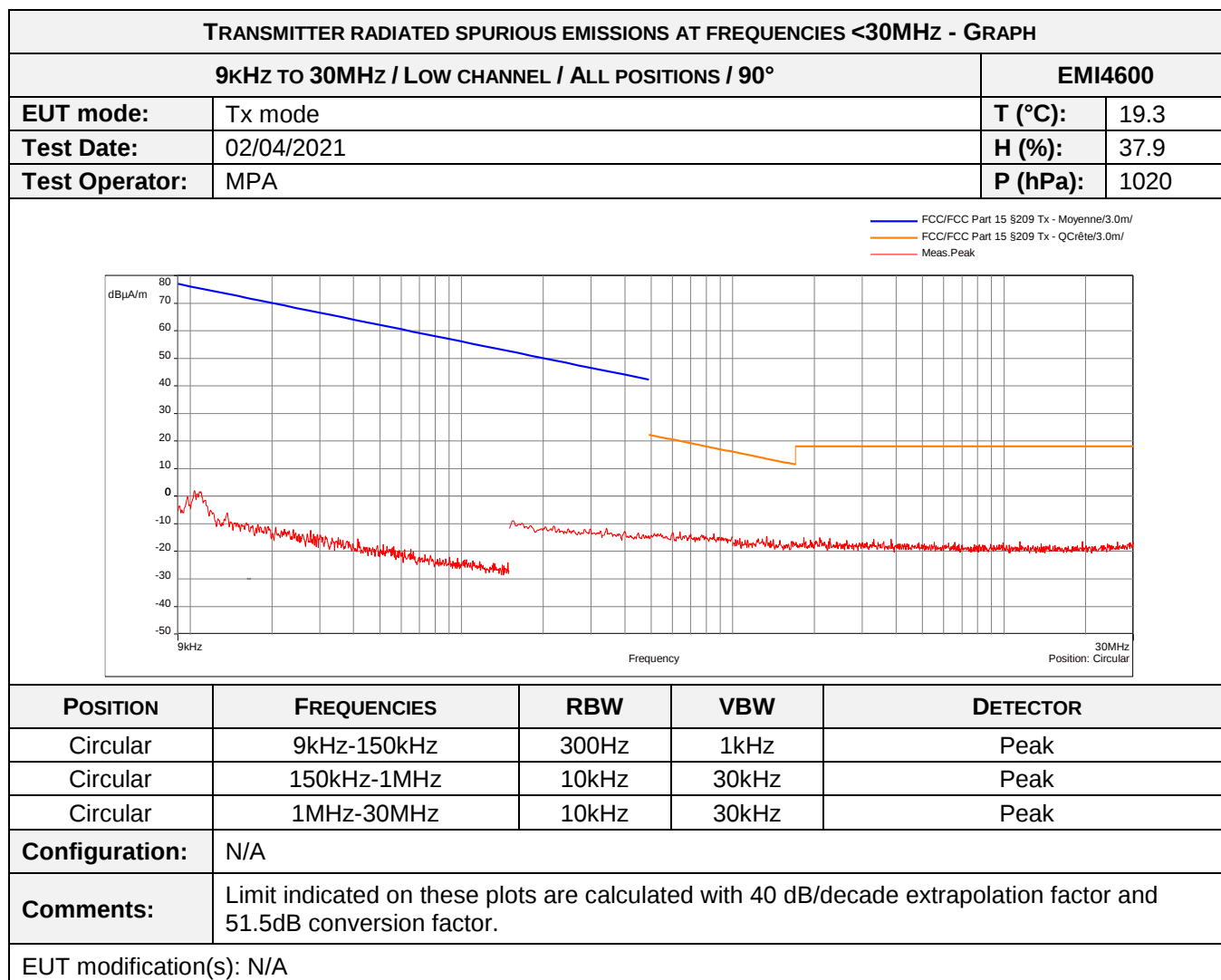
No spurious emissions were detected.

Spurious which has more than 20 dB of margin compared to the applicable limit is not necessarily reported



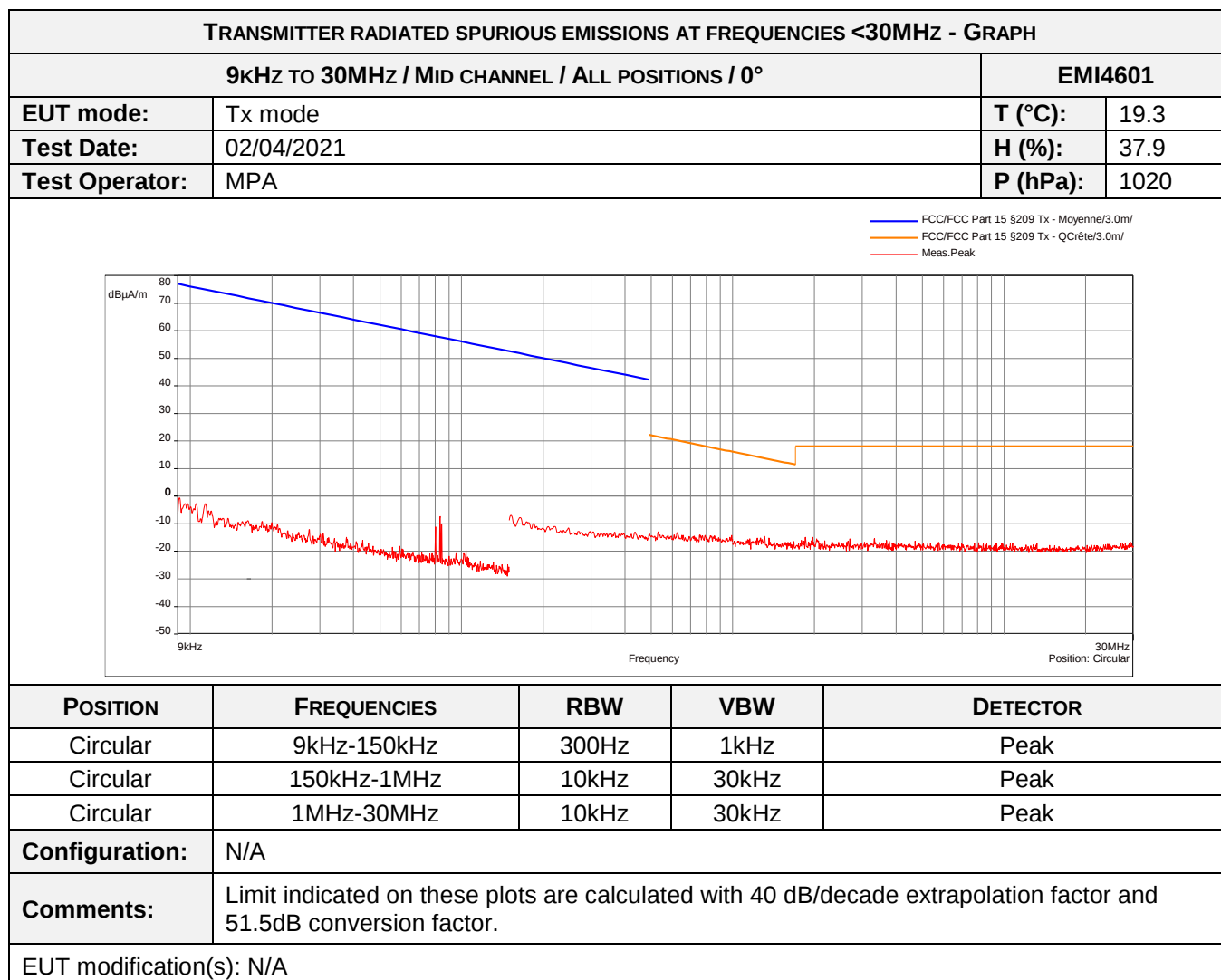
No spurious emissions were detected.

Spurious which has more than 20 dB of margin compared to the applicable limit is not necessarily reported



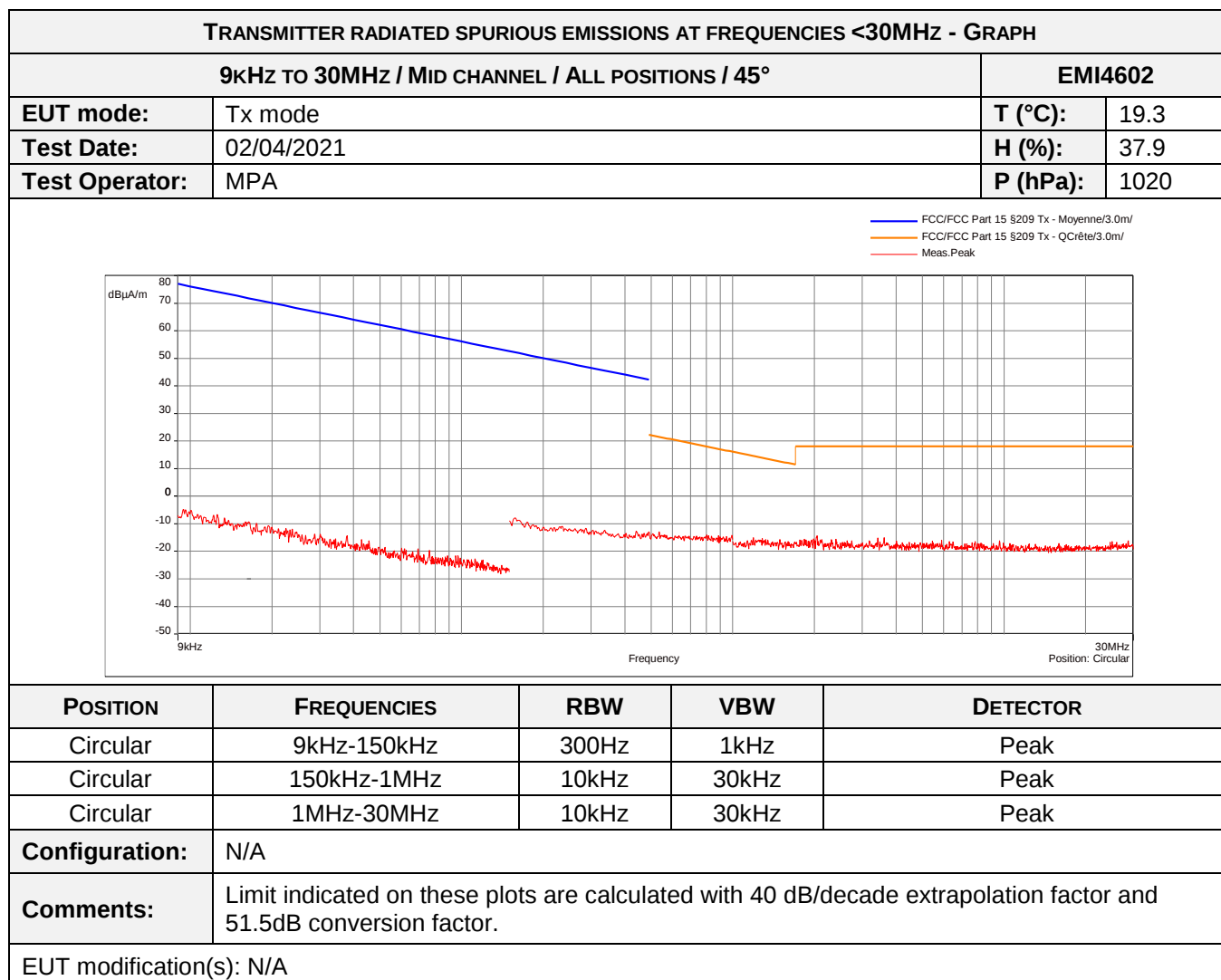
No spurious emissions were detected.

Spurious which has more than 20 dB of margin compared to the applicable limit is not necessarily reported



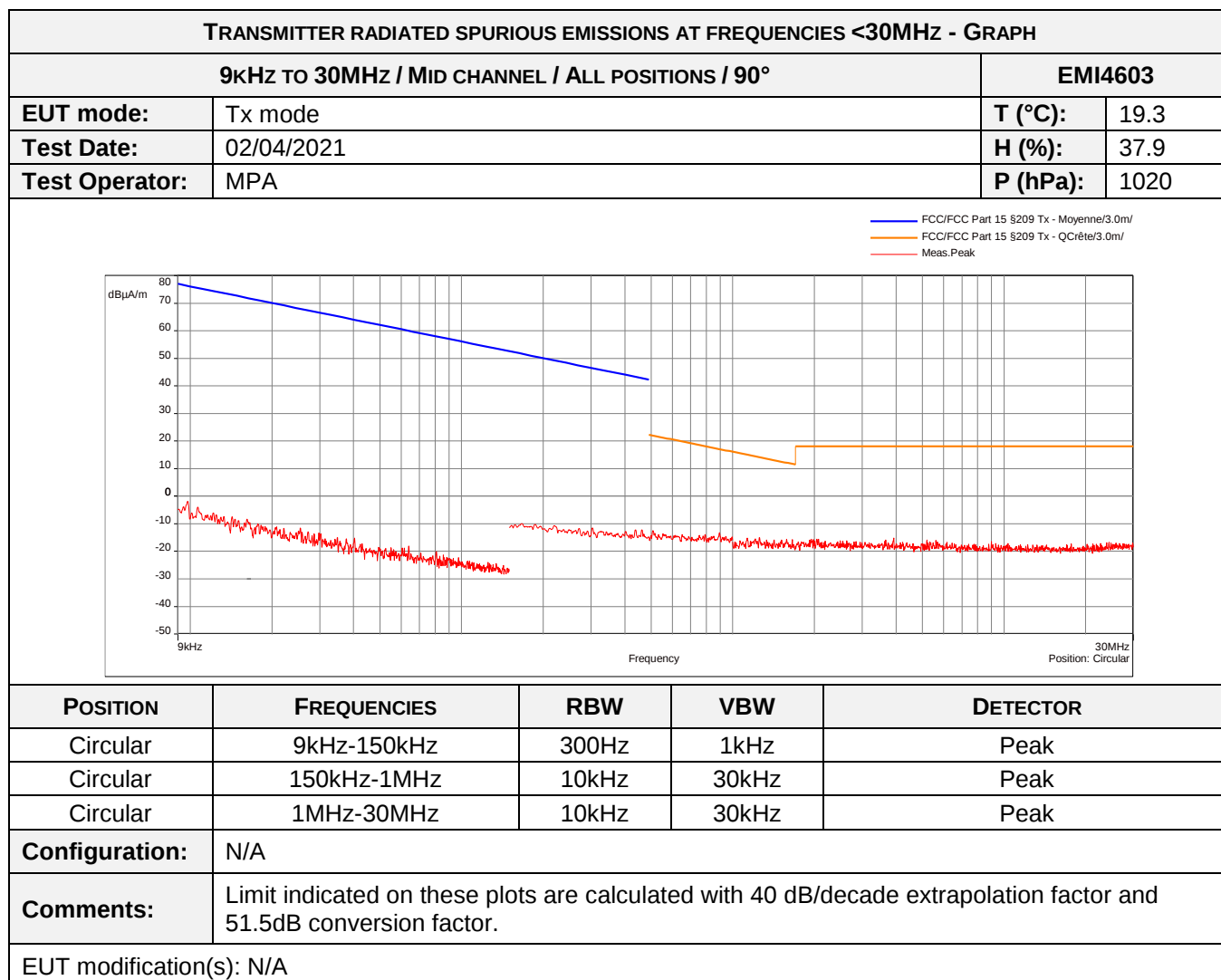
No spurious emissions were detected.

Spurious which has more than 20 dB of margin compared to the applicable limit is not necessarily reported



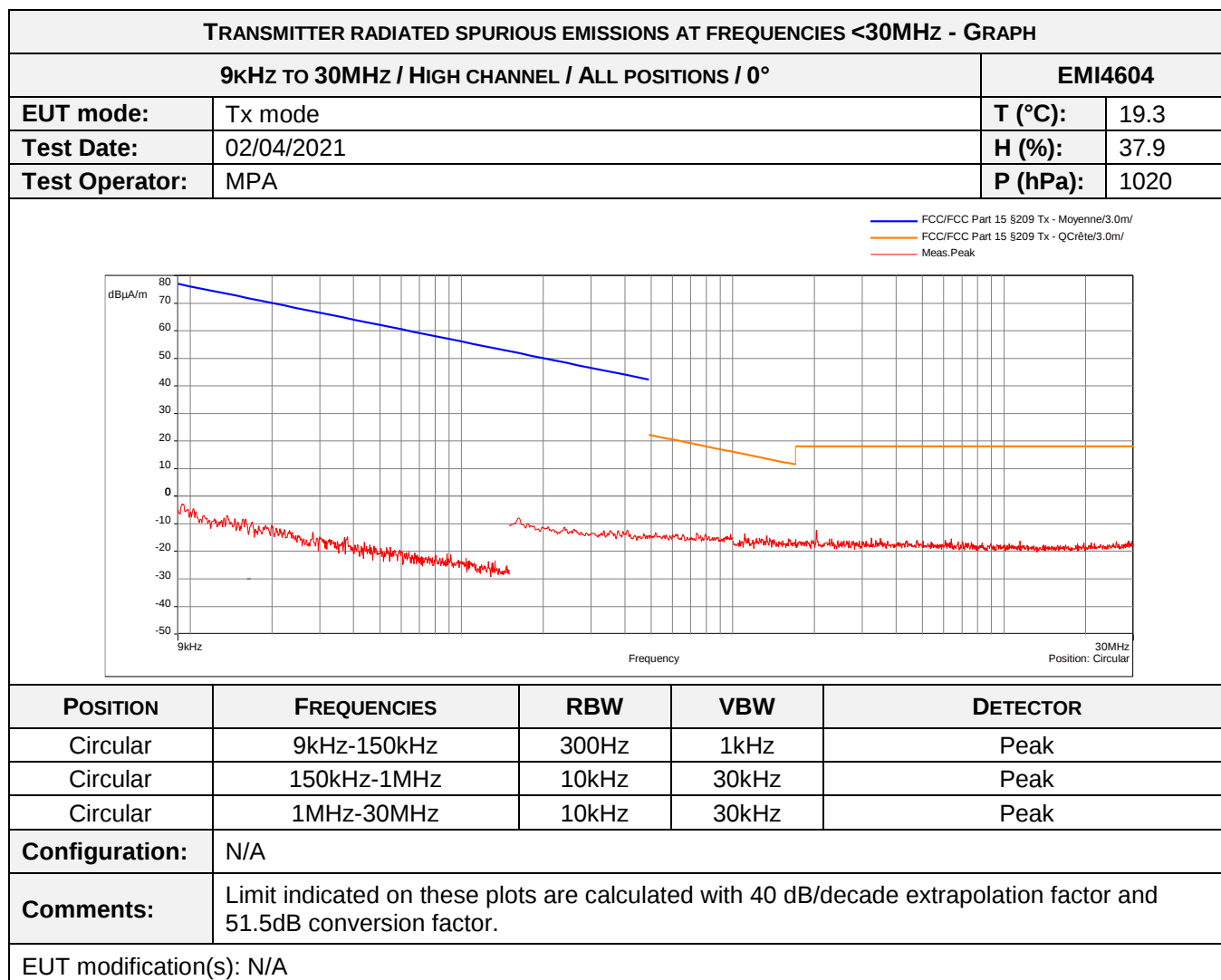
No spurious emissions were detected.

Spurious which has more than 20 dB of margin compared to the applicable limit is not necessarily reported



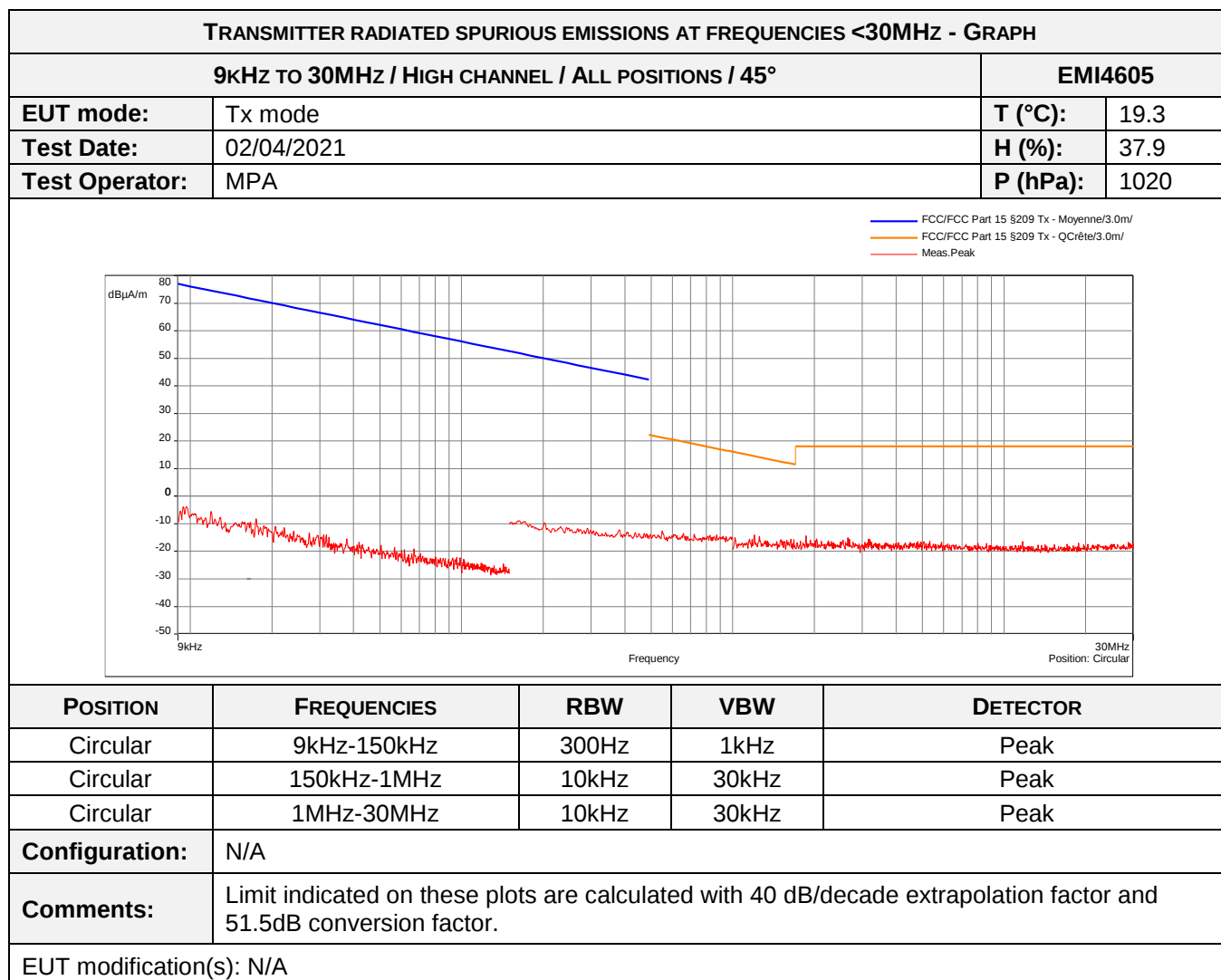
No spurious emissions were detected.

Spurious which has more than 20 dB of margin compared to the applicable limit is not necessarily reported



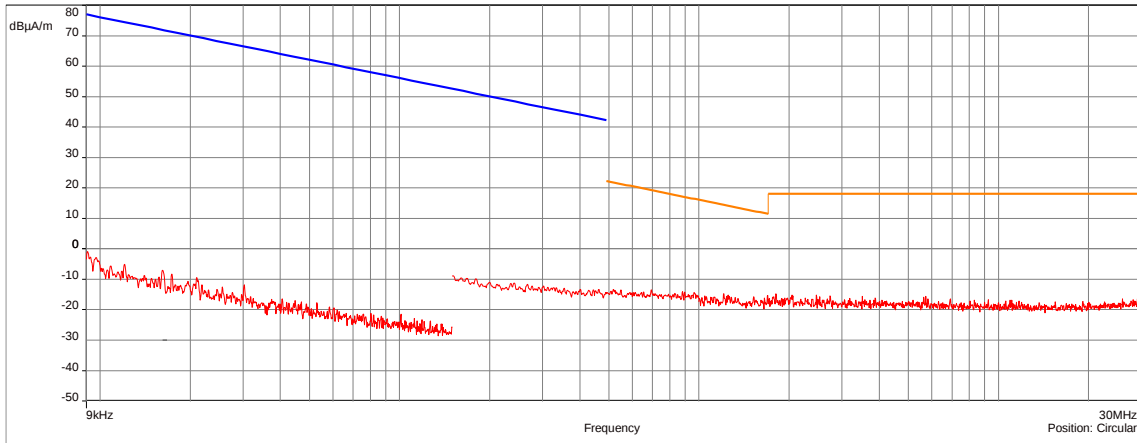
No spurious emissions were detected.

Spurious which has more than 20 dB of margin compared to the applicable limit is not necessarily reported



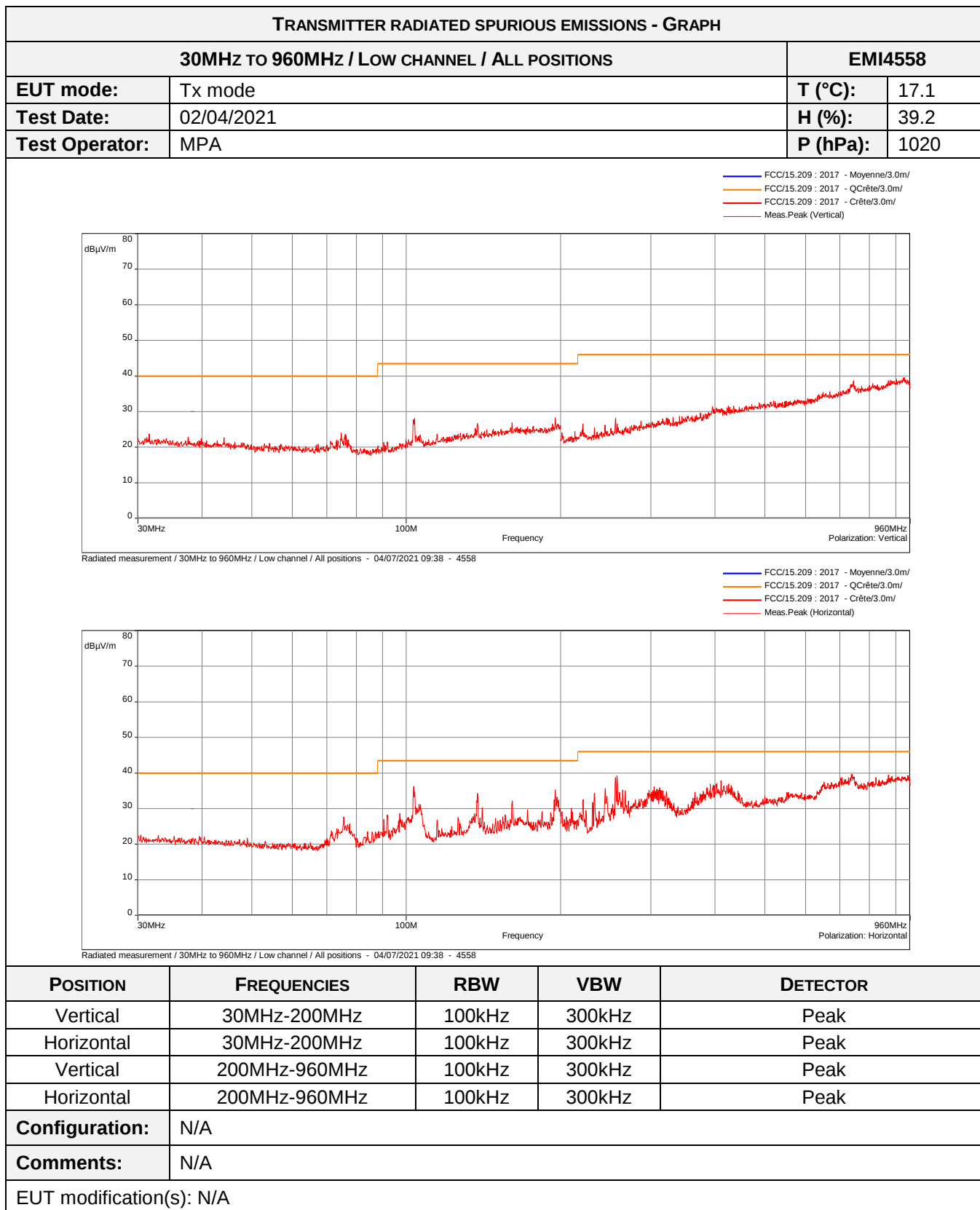
No spurious emissions were detected.

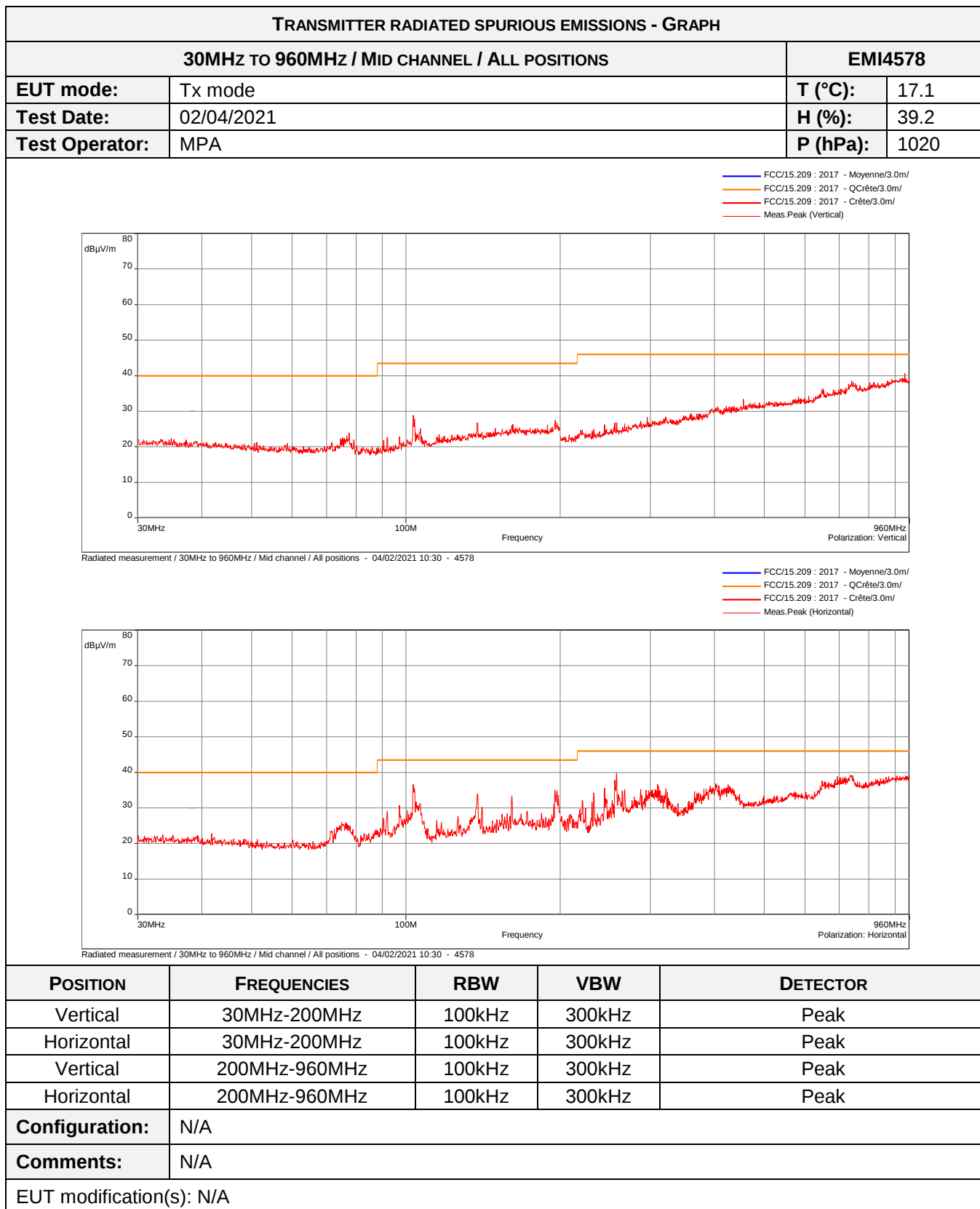
Spurious which has more than 20 dB of margin compared to the applicable limit is not necessarily reported

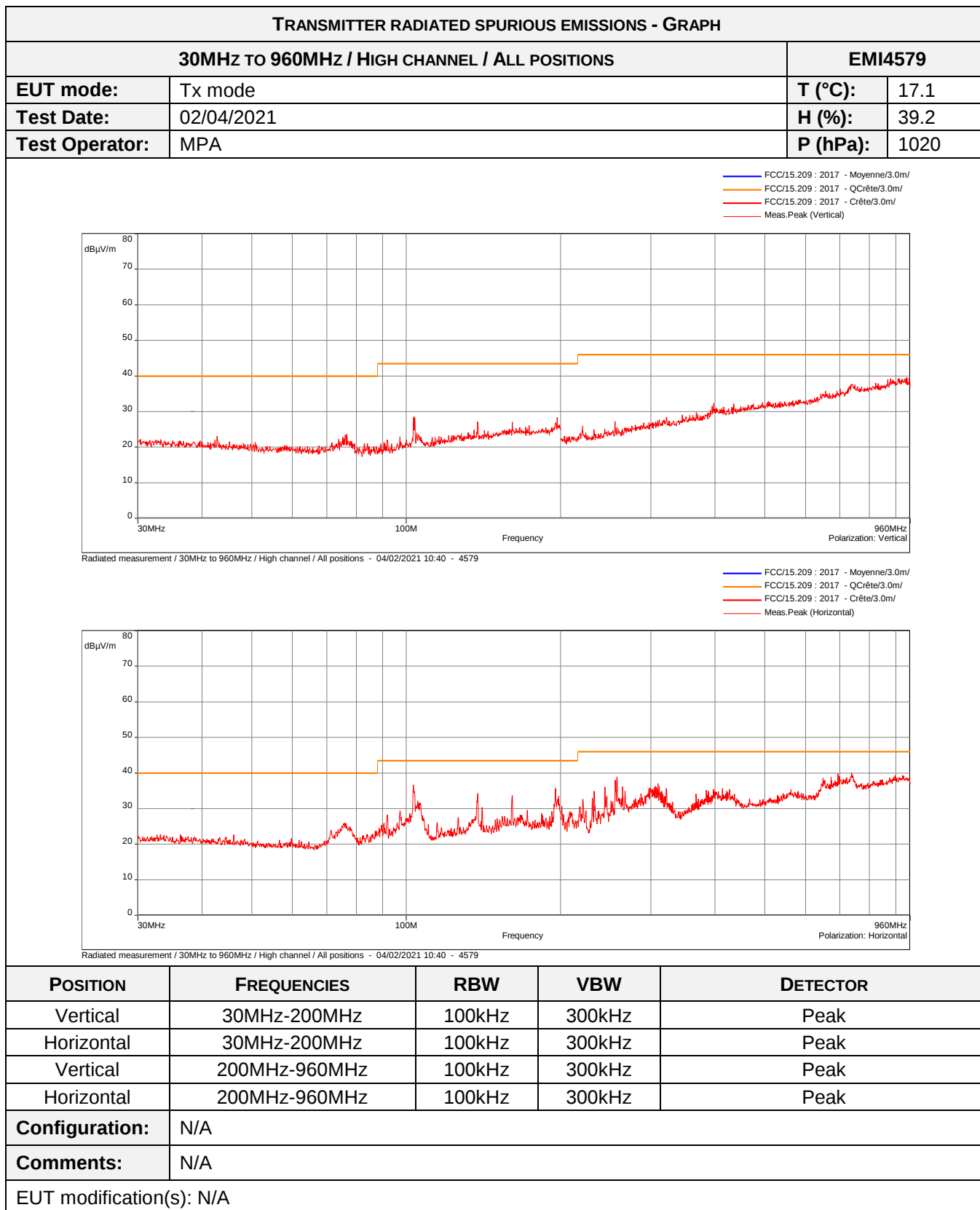
TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES <30MHz - GRAPH				
9kHz TO 30MHz / HIGH CHANNEL / ALL POSITIONS / 90°			EMI4606	
EUT mode:	Tx mode		T (°C):	19.3
Test Date:	02/04/2021		H (%):	37.9
Test Operator:	MPA		P (hPa):	1020
FCC/FCC Part 15 §209 Tx - Moyenne/3.0m/ FCC/FCC Part 15 §209 Tx - QCrête/3.0m/ Meas. Peak 				
POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Circular	9kHz-150kHz	300Hz	1kHz	Peak
Circular	150kHz-1MHz	10kHz	30kHz	Peak
Circular	1MHz-30MHz	10kHz	30kHz	Peak
Configuration:	N/A			
Comments:	Limit indicated on these plots are calculated with 40 dB/decade extrapolation factor and 51.5dB conversion factor.			
EUT modification(s): N/A				

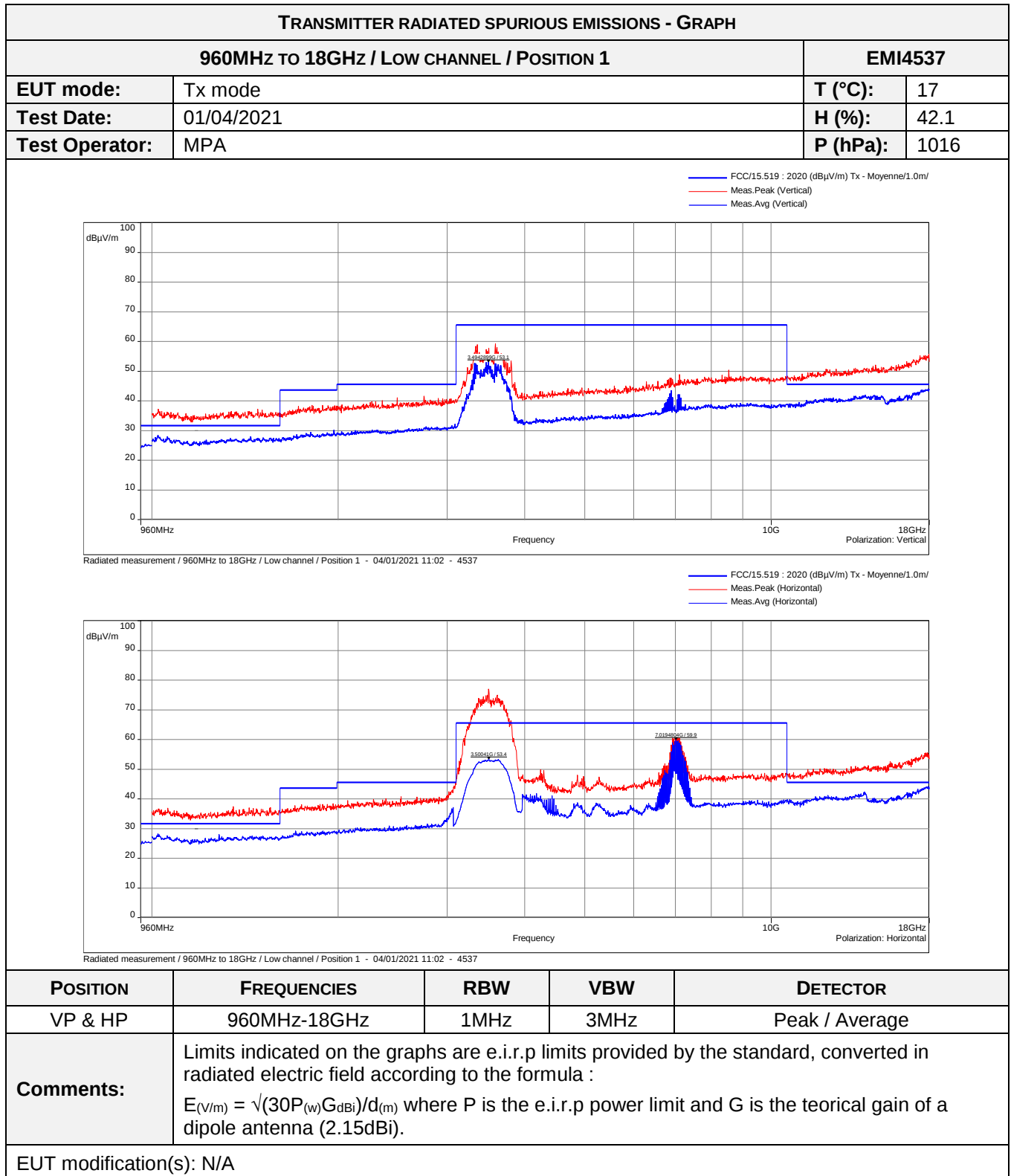
No spurious emissions were detected.

Spurious which has more than 20 dB of margin compared to the applicable limit is not necessarily reported

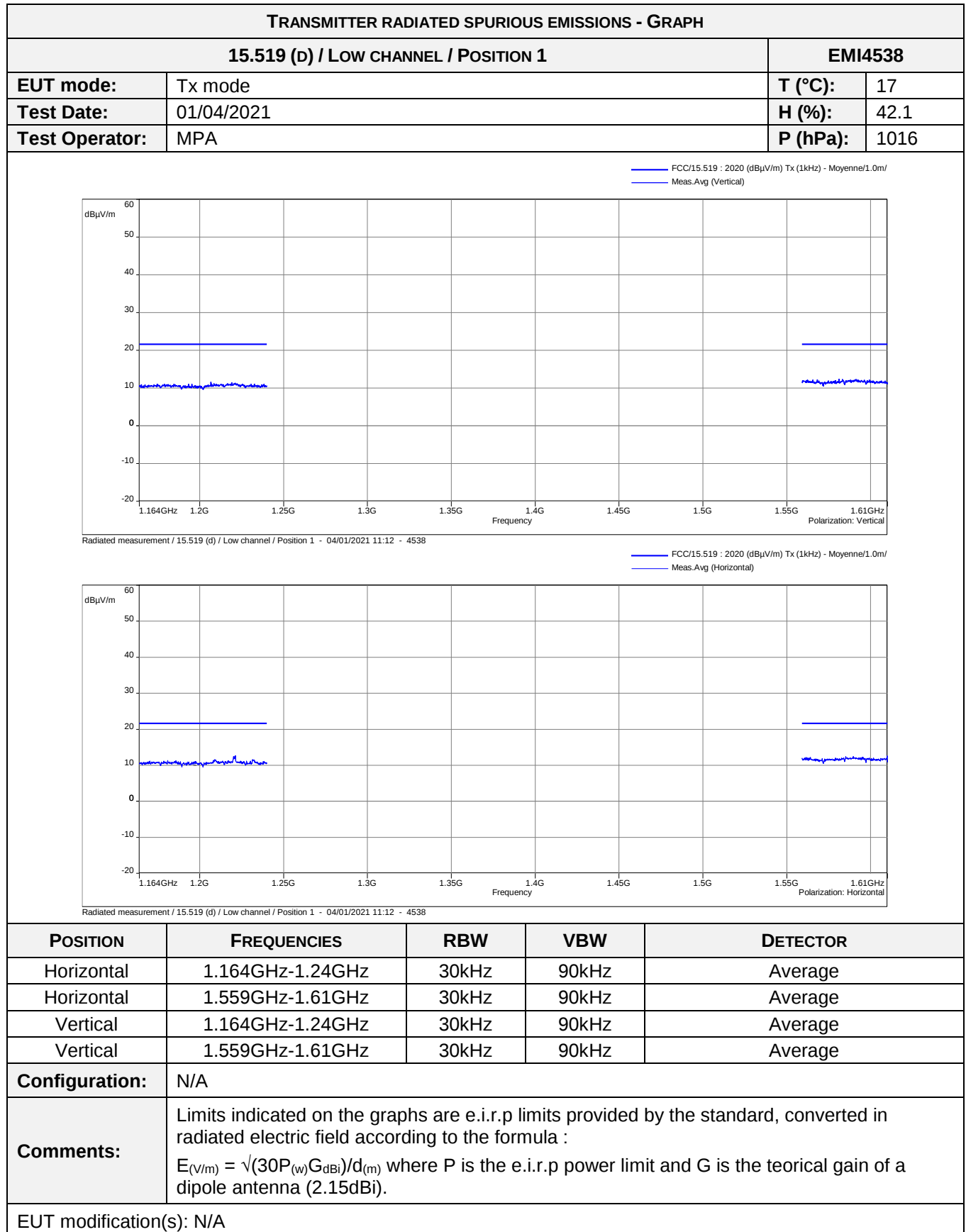




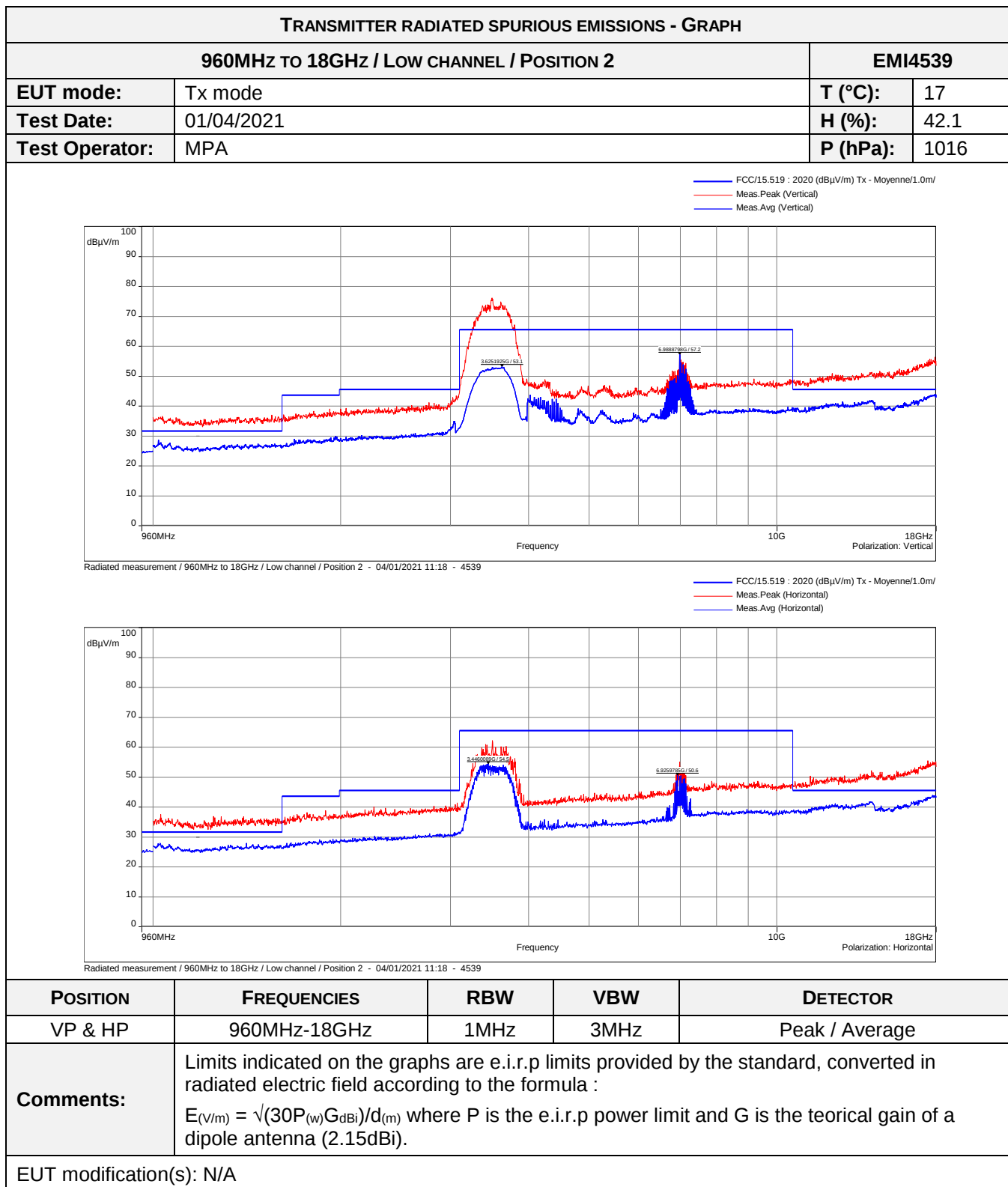




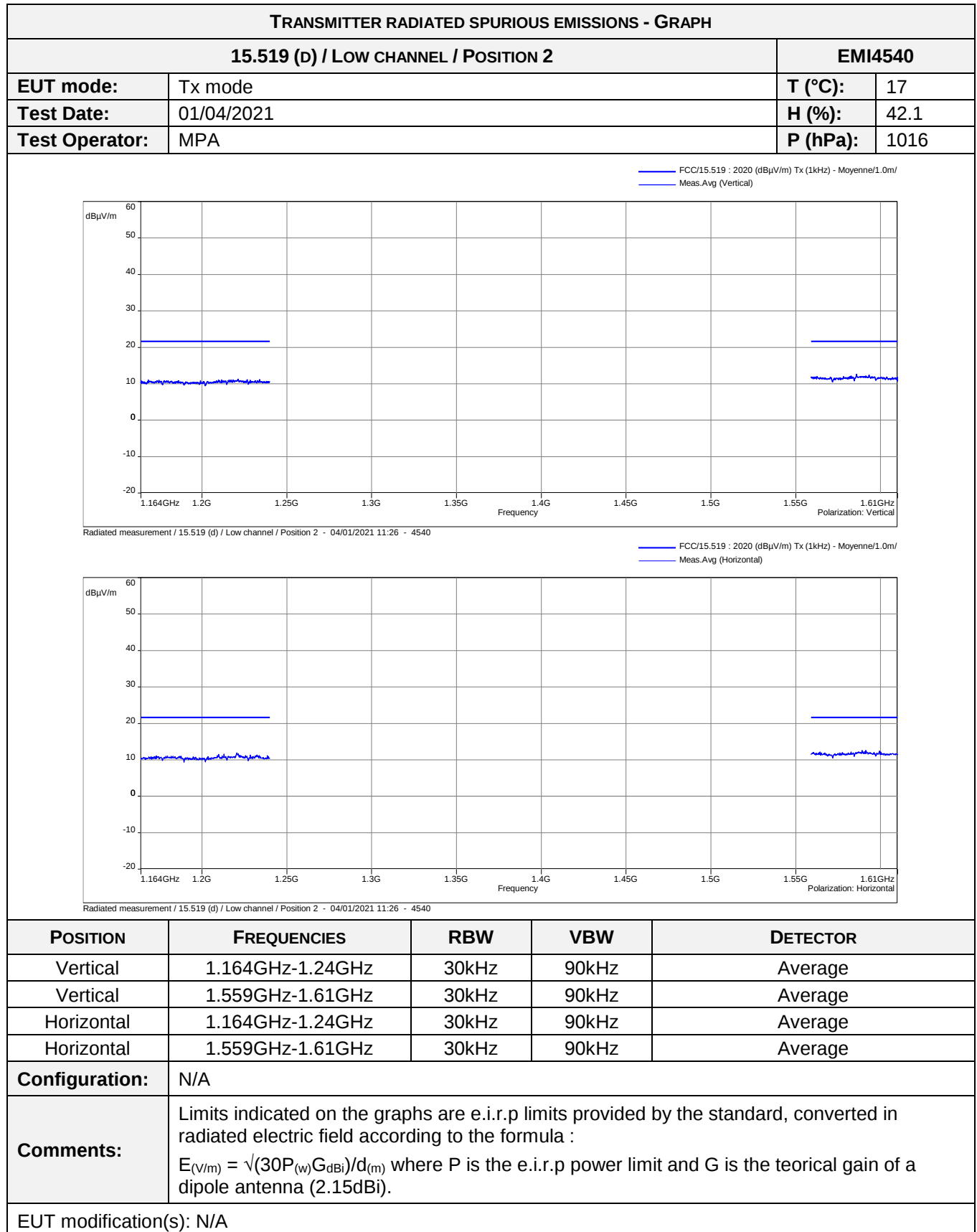
960MHz TO 18GHz / Low CHANNEL / POSITION 1 - TABULATED RESULTS				
Frequency (MHz)	Polarization	Peak level (dBμV/m)	Average level (dBμV/m)	Limit (dBμV/m)
3494.289886	Vertical	56.66	53.1	65.62
3500.410008	Horizontal	70.90	53.4	65.62
7019.48039	Horizontal	61.47	59.9	65.62



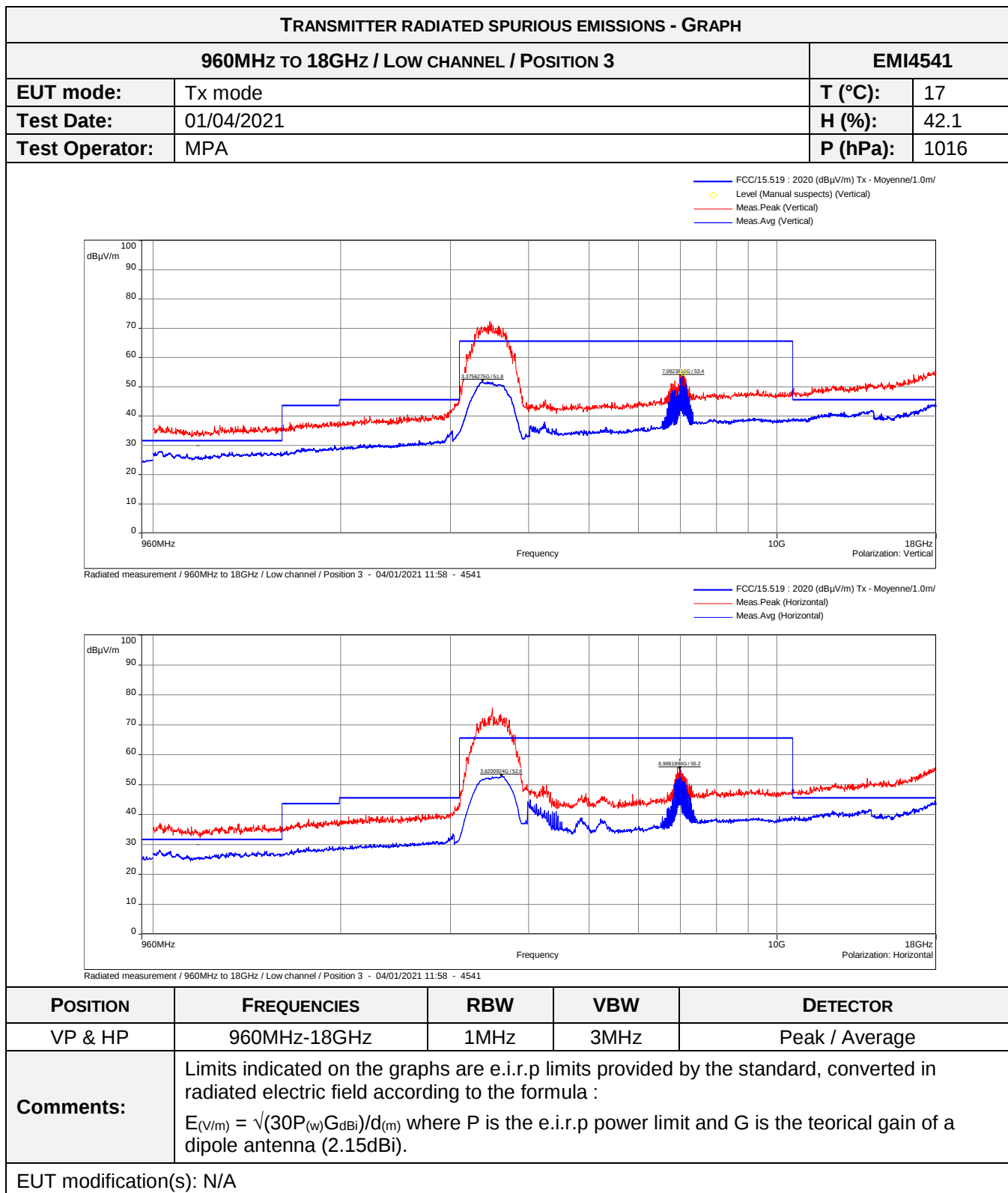
No spurious emissions were detected.



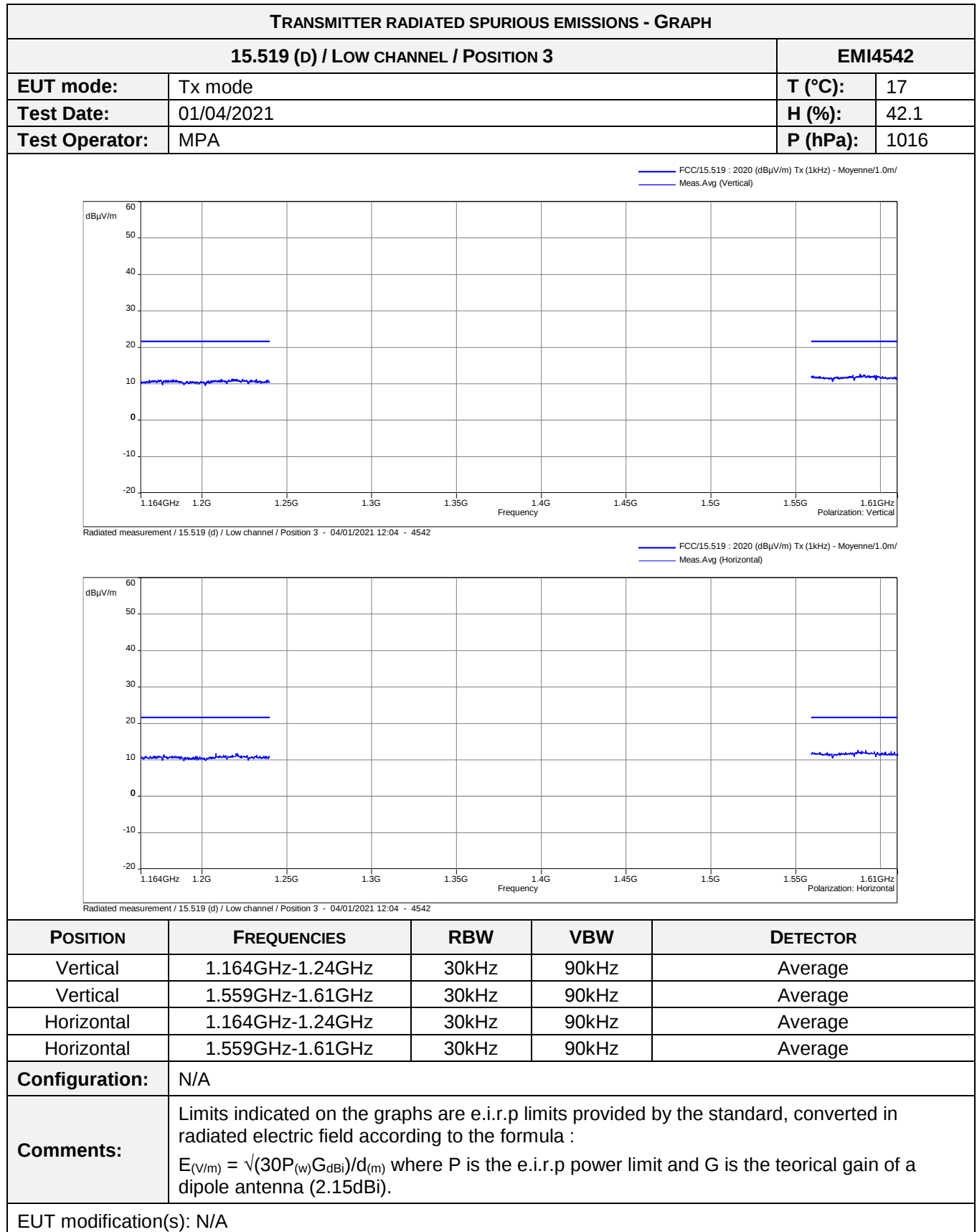
960MHz TO 18GHz / Low CHANNEL / POSITION 2 - TABULATED RESULTS				
Frequency (MHz)	Polarization	Peak level (dBμV/m)	Average level (dBμV/m)	Limit (dBμV/m)
3625.192504	Vertical	71.35	53.1	65.62
6988.879778	Vertical	59.39	57.2	65.62
3446.00892	Horizontal	55.87	54.5	65.62
6925.97852	Horizontal	52.95	50.6	65.62



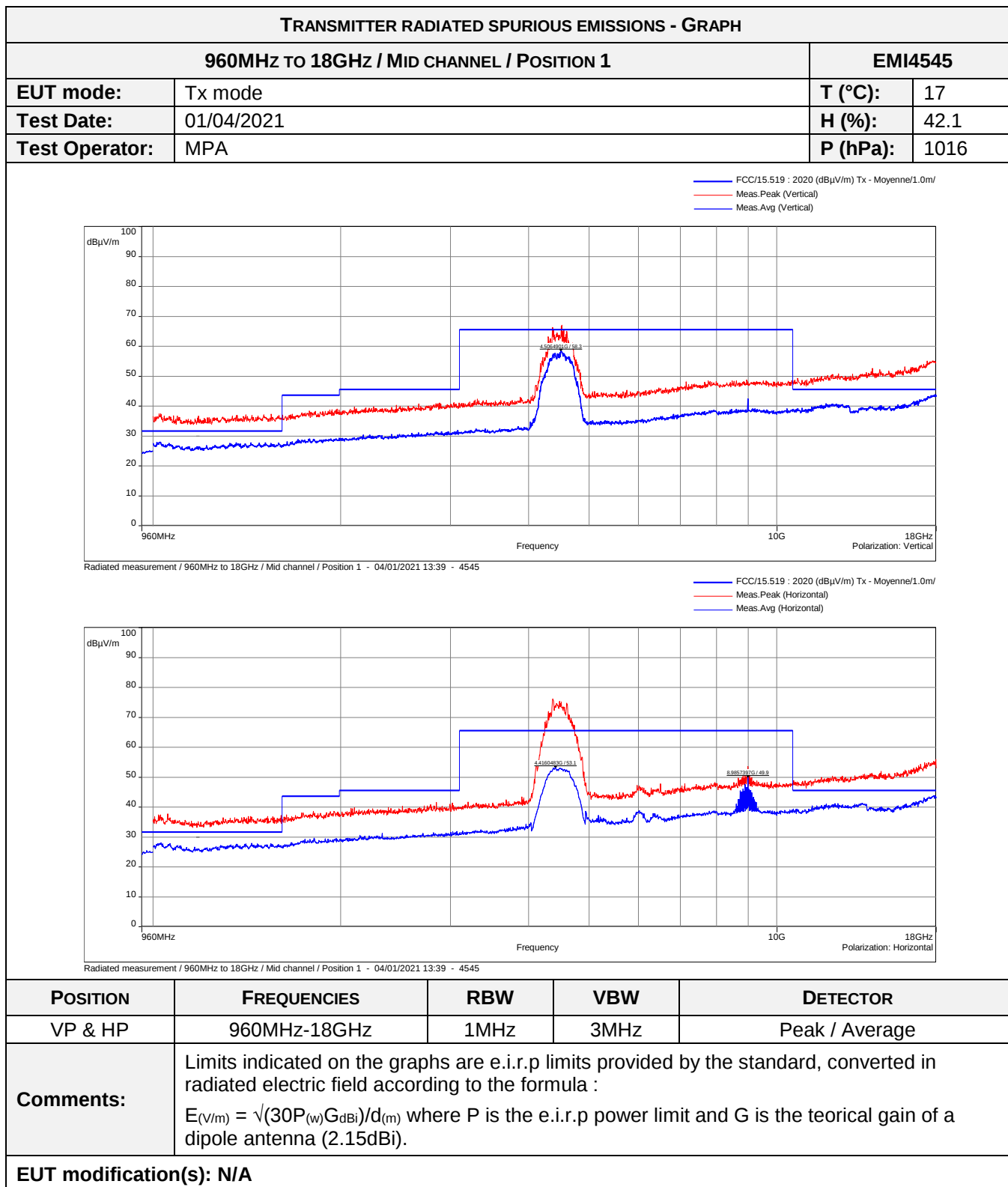
No spurious emissions were detected.



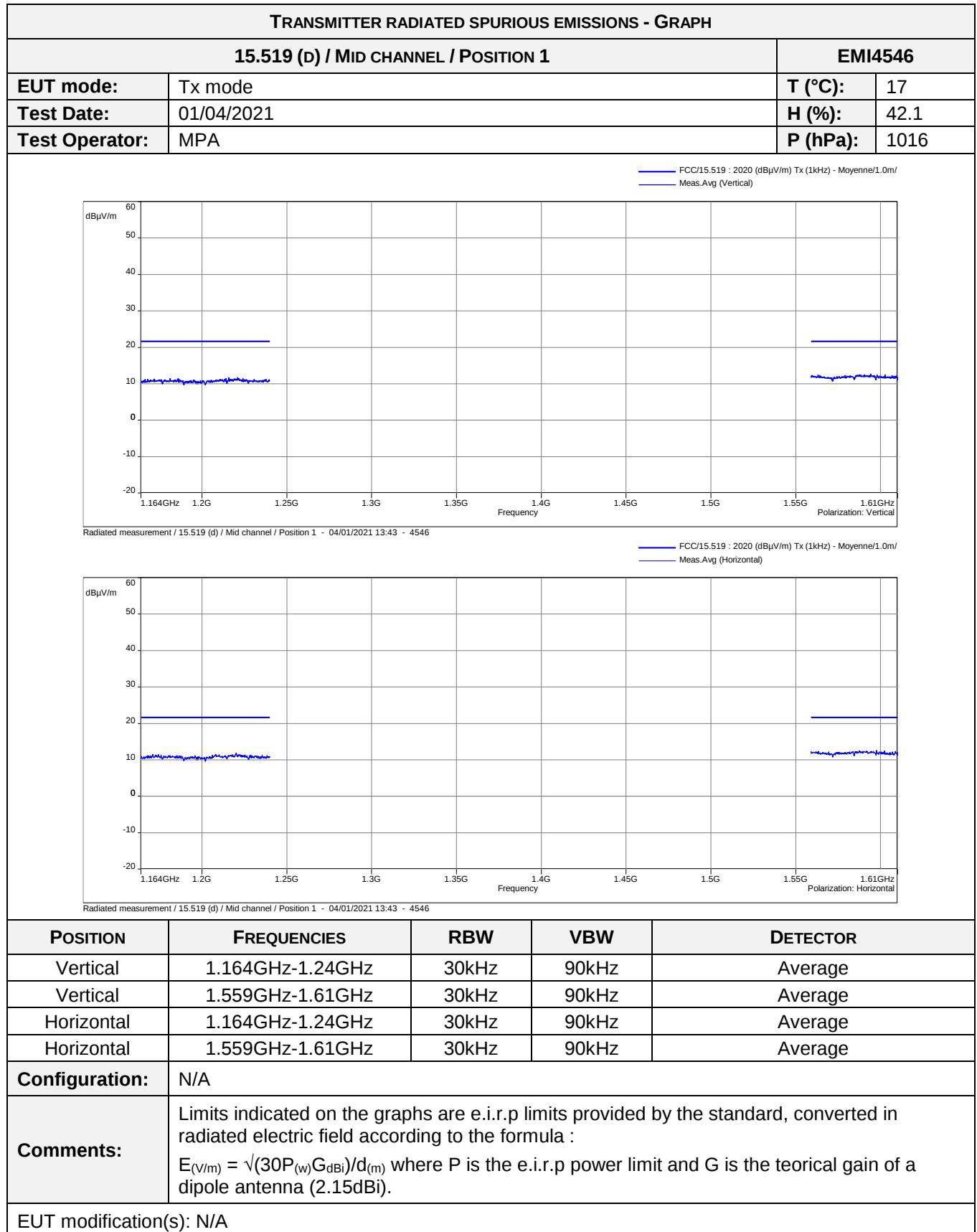
960MHz TO 18GHz / Low channel / POSITION 3 - TABULATED RESULTS				
Frequency (MHz)	Polarization	Peak level (dBμV/m)	Average level (dBμV/m)	Limit (dBμV/m)
3375.627513	Vertical	68.57	51.8	65.62
7082.381648	Vertical	54.83	53.4	65.62
3620.092402	Horizontal	69.43	52.8	65.62
6988.199764	Horizontal	58.23	55.2	65.62



No spurious emissions were detected.

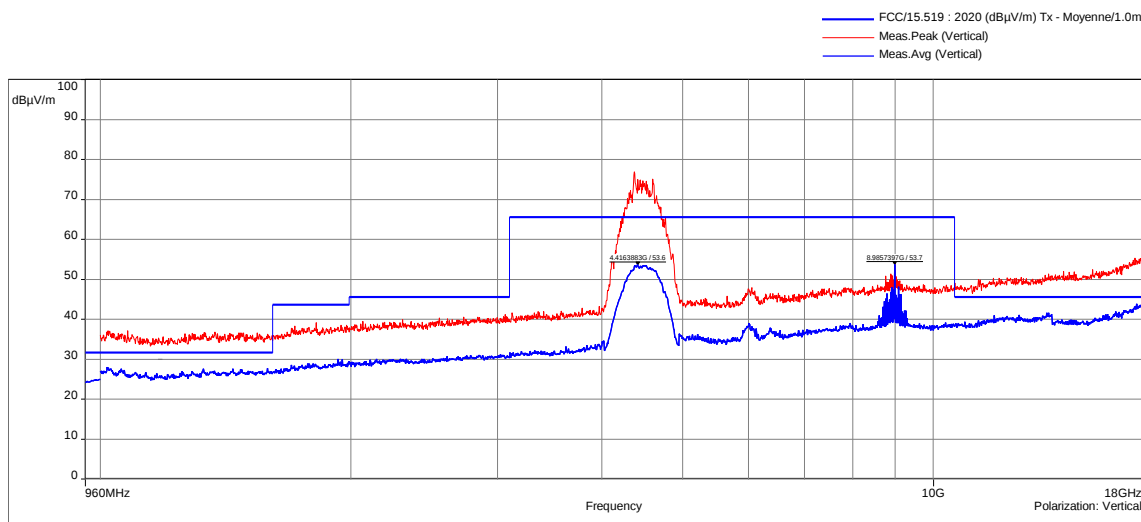


960MHz TO 18GHz / MID CHANNEL / POSITION 1 - TABULATED RESULTS				
Frequency (MHz)	Polarization	Peak level (dBμV/m)	Average level (dBμV/m)	Limit (dBμV/m)
4506.49013	Vertical	61.15	58.3	65.62
4416.048321	Horizontal	72.56	53.1	65.62
8985.739715	Horizontal	53.02	49.9	65.62

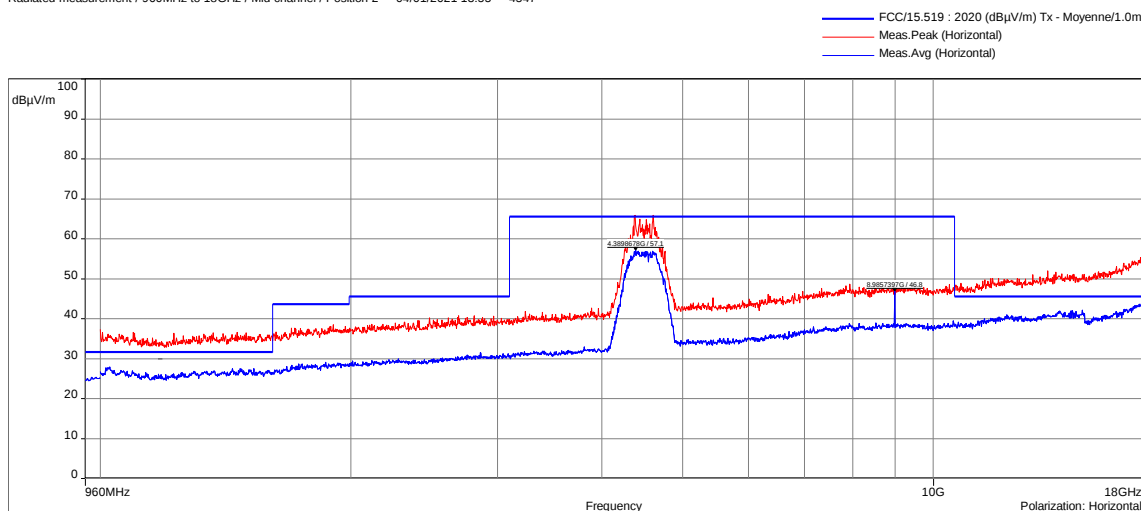


No spurious emissions were detected.

TRANSMITTER RADIATED SPURIOUS EMISSIONS - GRAPH				
960MHz TO 18GHz / MID CHANNEL / POSITION 2			EMI4547	
EUT mode:	Tx mode		T (°C):	17
Test Date:	01/04/2021		H (%):	42.1
Test Operator:	MPA		P (hPa):	1016



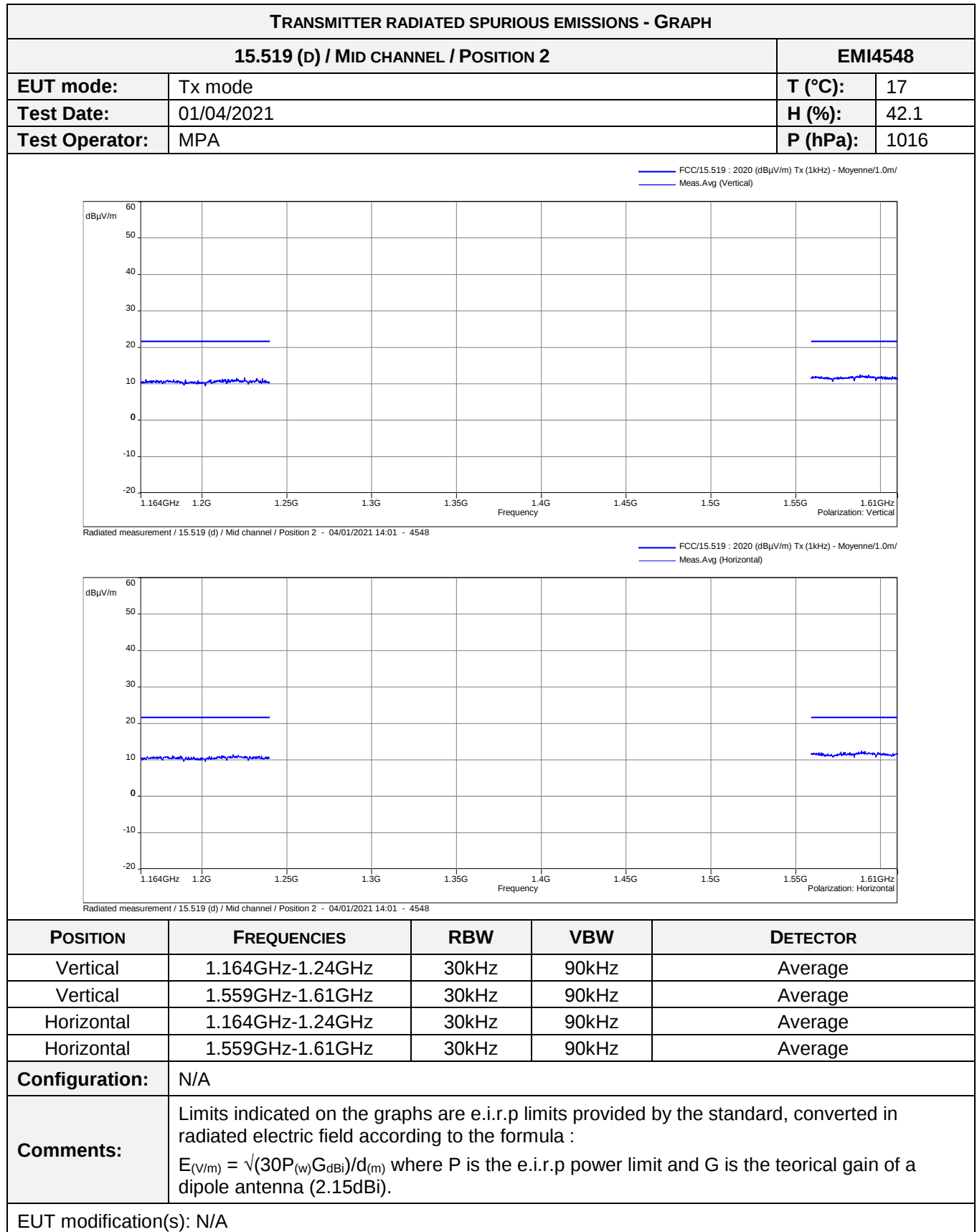
Radiated measurement / 960MHz to 18GHz / Mid channel / Position 2 - 04/01/2021 13:55 - 4547



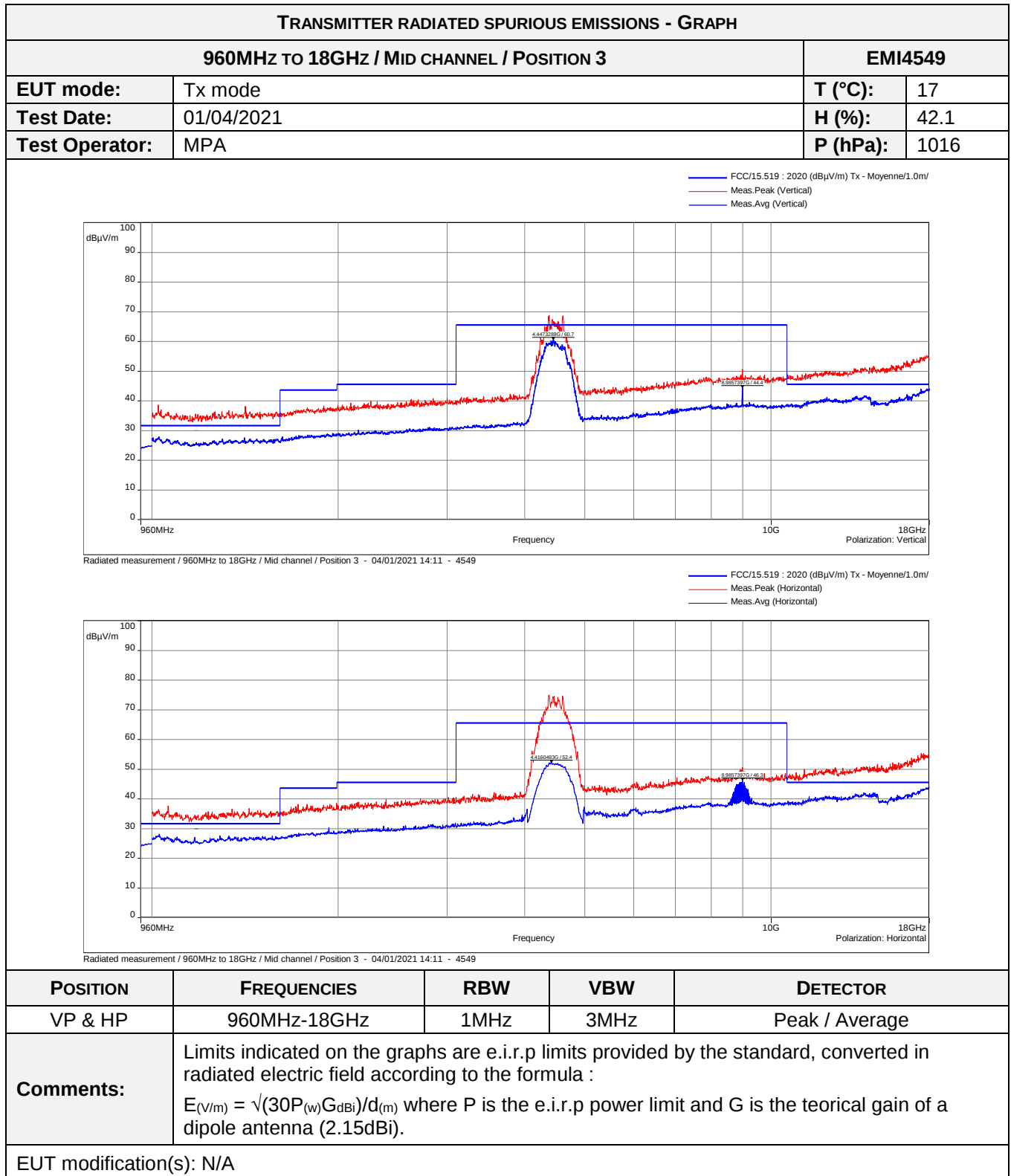
Radiated measurement / 960MHz to 18GHz / Mid channel / Position 2 - 04/01/2021 13:55 - 4547

POSITION	FREQUENCIES	RBW	VBW	DETECTOR
VP & HP	960MHz-18GHz	1MHz	3MHz	Peak / Average
Comments:	Limits indicated on the graphs are e.i.r.p limits provided by the standard, converted in radiated electric field according to the formula : $E_{(V/m)} = \sqrt{(30P_{(w)}G_{dBi})/d_{(m)}}$ where P is the e.i.r.p power limit and G is the teorical gain of a dipole antenna (2.15dBi).			
EUT modification(s): N/A				

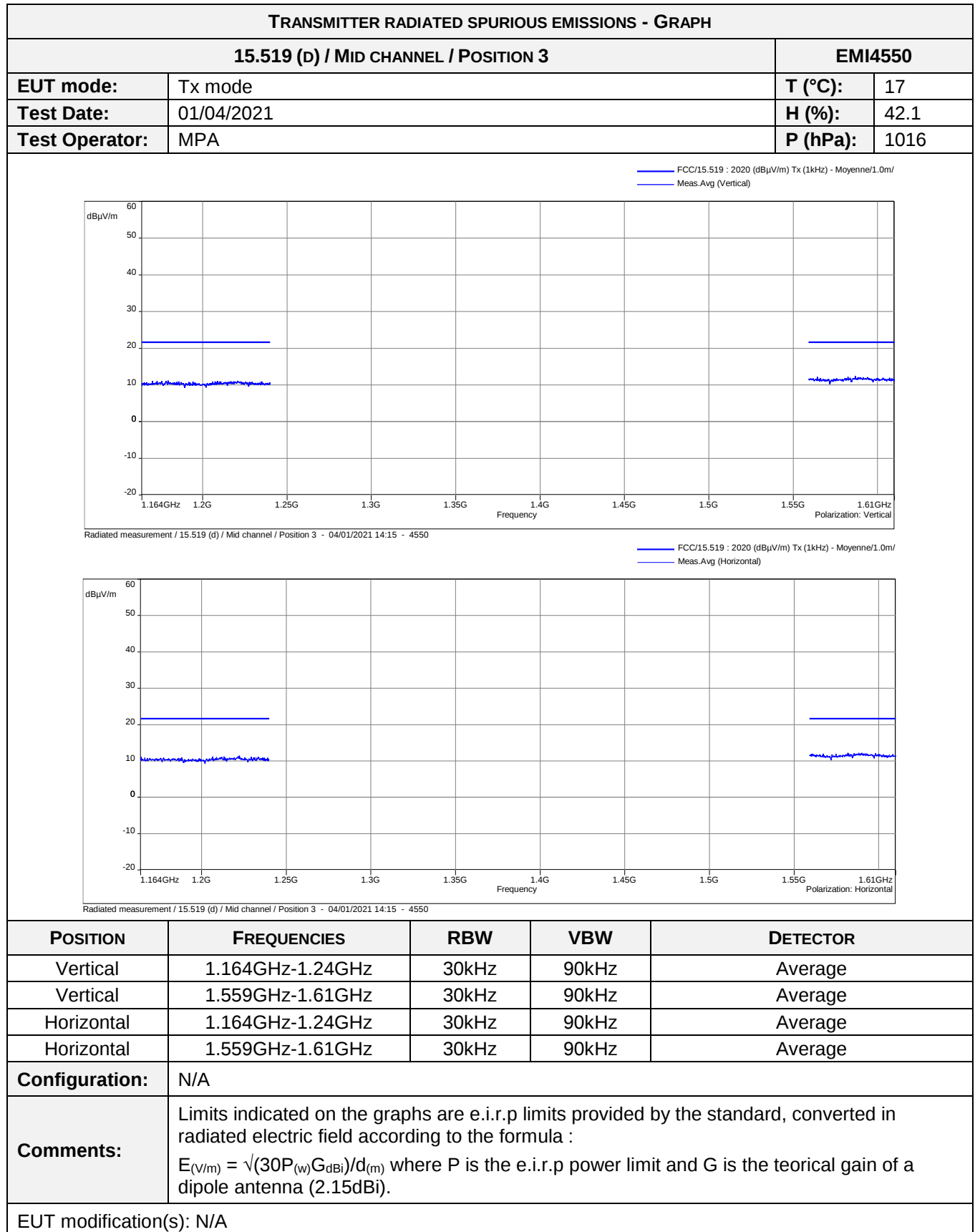
960MHz TO 18GHz / MID CHANNEL / POSITION 2 - TABULATED RESULTS				
Frequency (MHz)	Polarization	Peak level (dBμV/m)	Average level (dBμV/m)	Limit (dBμV/m)
4416.388328	Vertical	74.15	53.6	65.62
8985.739715	Vertical	54.26	53.7	65.62
4389.867797	Horizontal	60.14	57.1	65.62
8985.739715	Horizontal	48.74	46.8	65.62



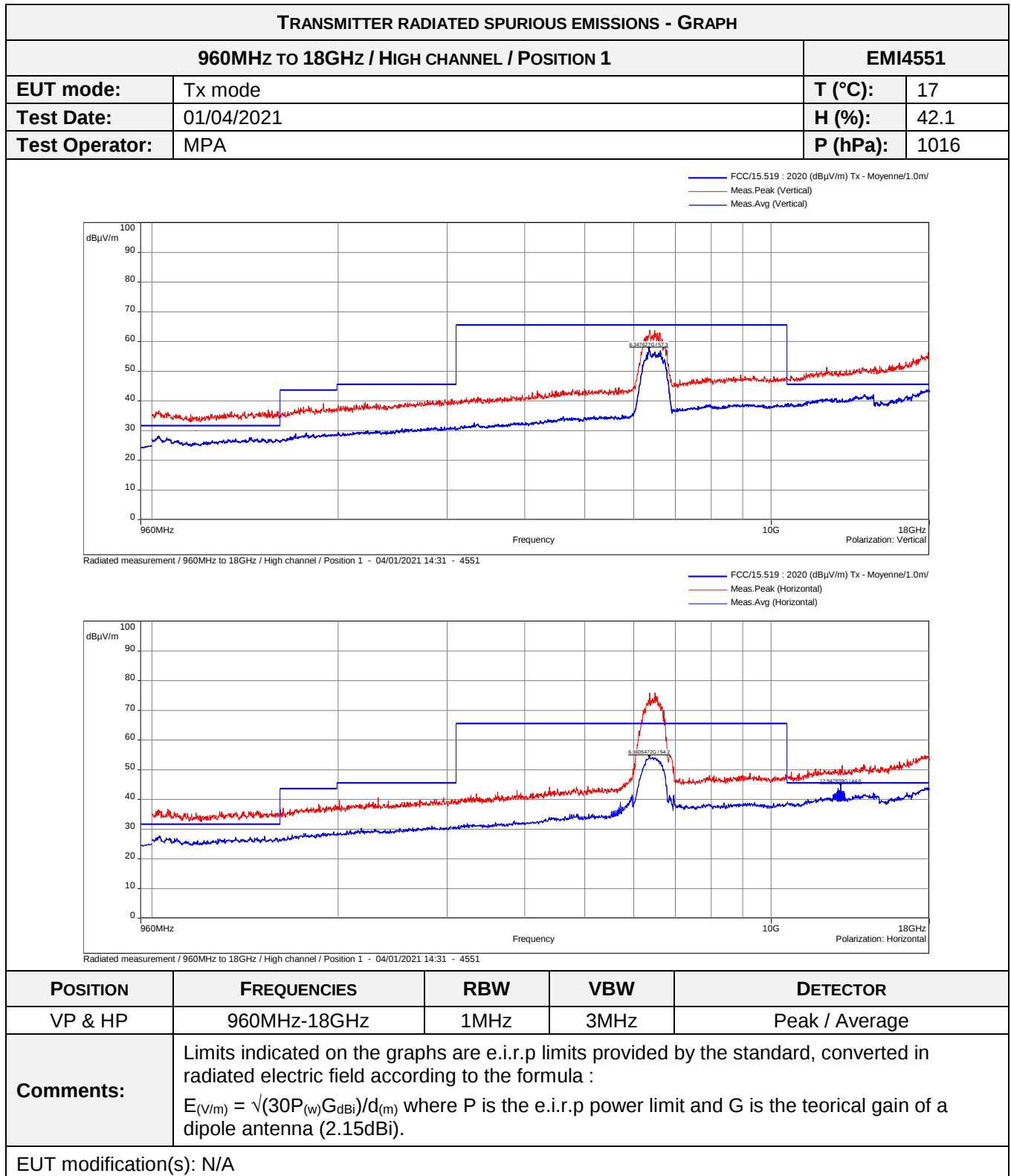
No spurious emissions were detected.



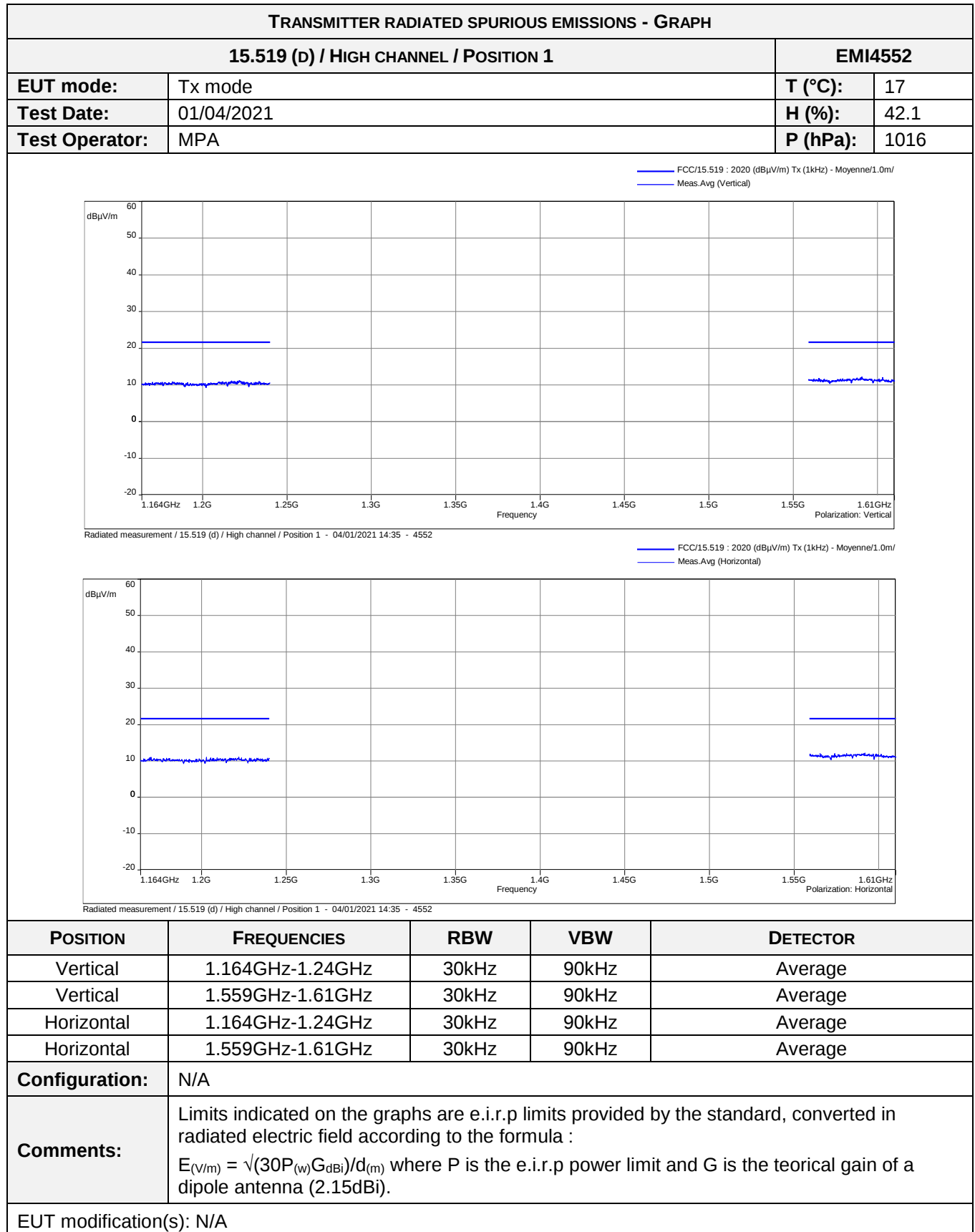
960MHz TO 18GHz / MID CHANNEL / POSITION 3 - TABULATED RESULTS				
Frequency (MHz)	Polarization	Peak level (dBµV/m)	Average level (dBµV/m)	Limit (dBµV/m)
4447.328947	Vertical	62.99	60.7	65.62
8985.739715	Vertical	50.03	44.4	65.62
4416.048321	Horizontal	69.17	52.4	65.62
8985.739715	Horizontal	48.94	46.3	65.62



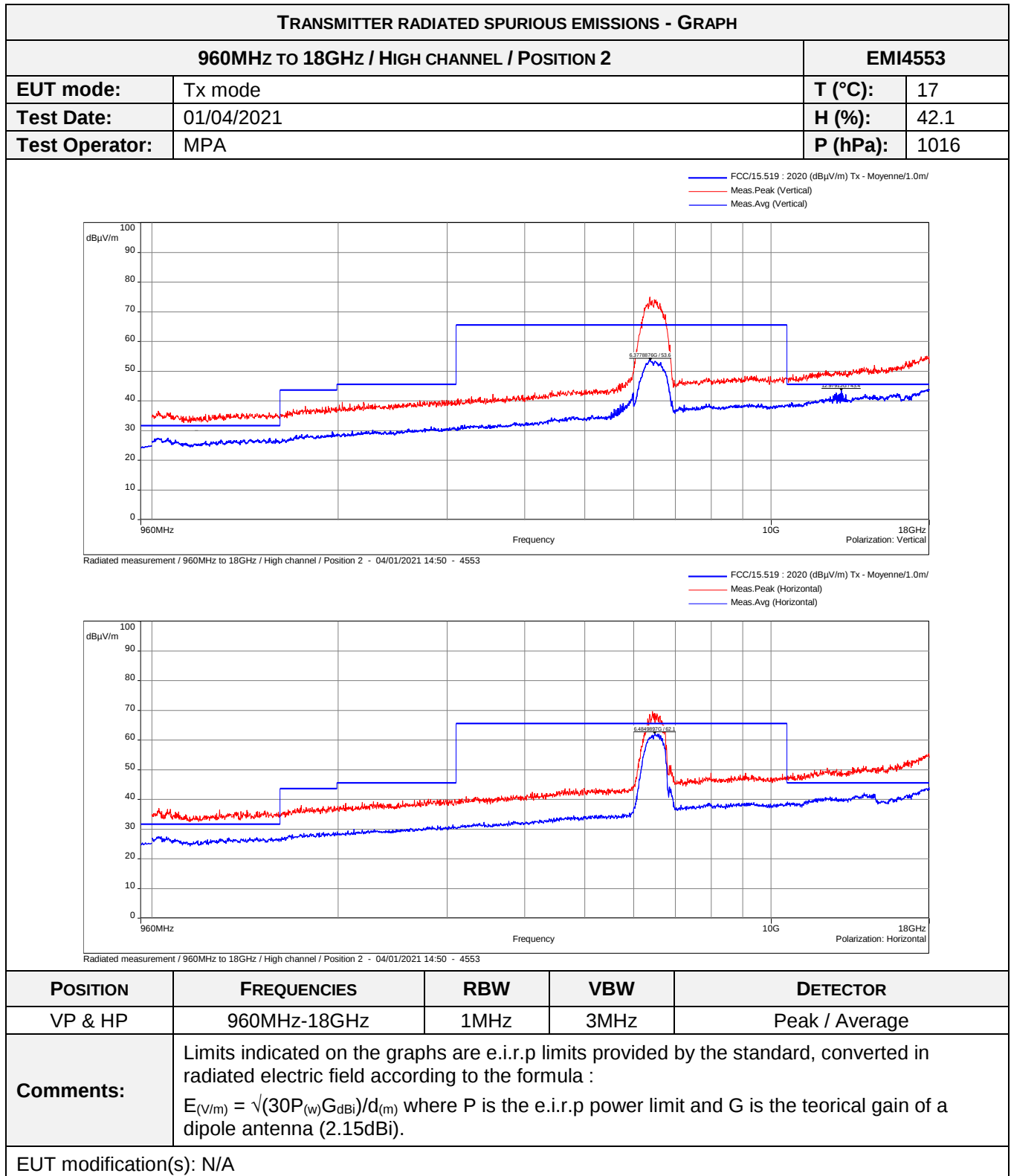
No spurious emissions were detected.



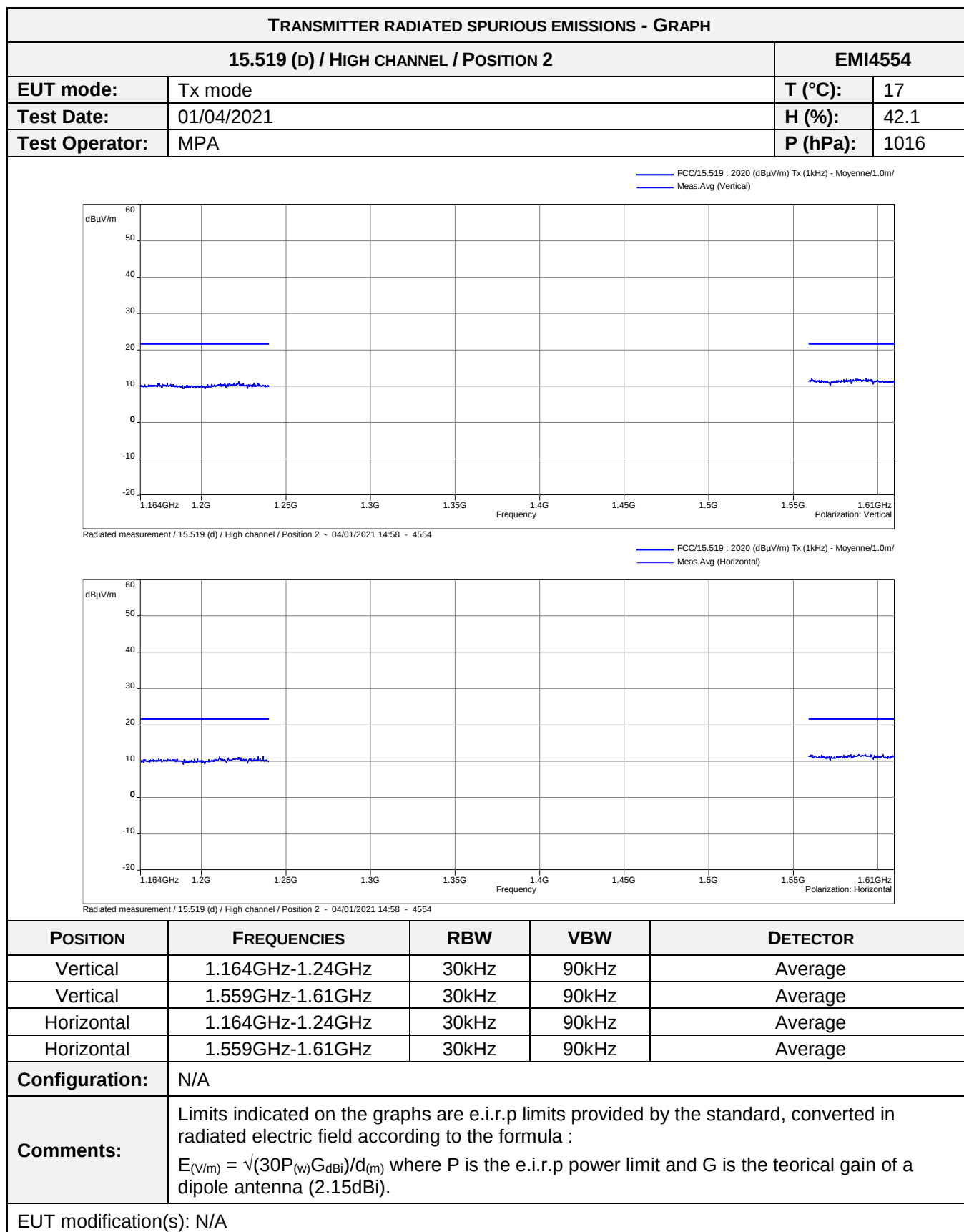
960MHz TO 18GHz / HIGH CHANNEL / POSITION 1 - TABULATED RESULTS				
Frequency (MHz)	Polarization	Peak level (dBμV/m)	Average level (dBμV/m)	Limit (dBμV/m)
6347.626953	Vertical	59.91	57.3	65.62
6360.547211	Horizontal	71.49	54.2	65.62
12947.83896	Horizontal	50.01	44.6	45.62



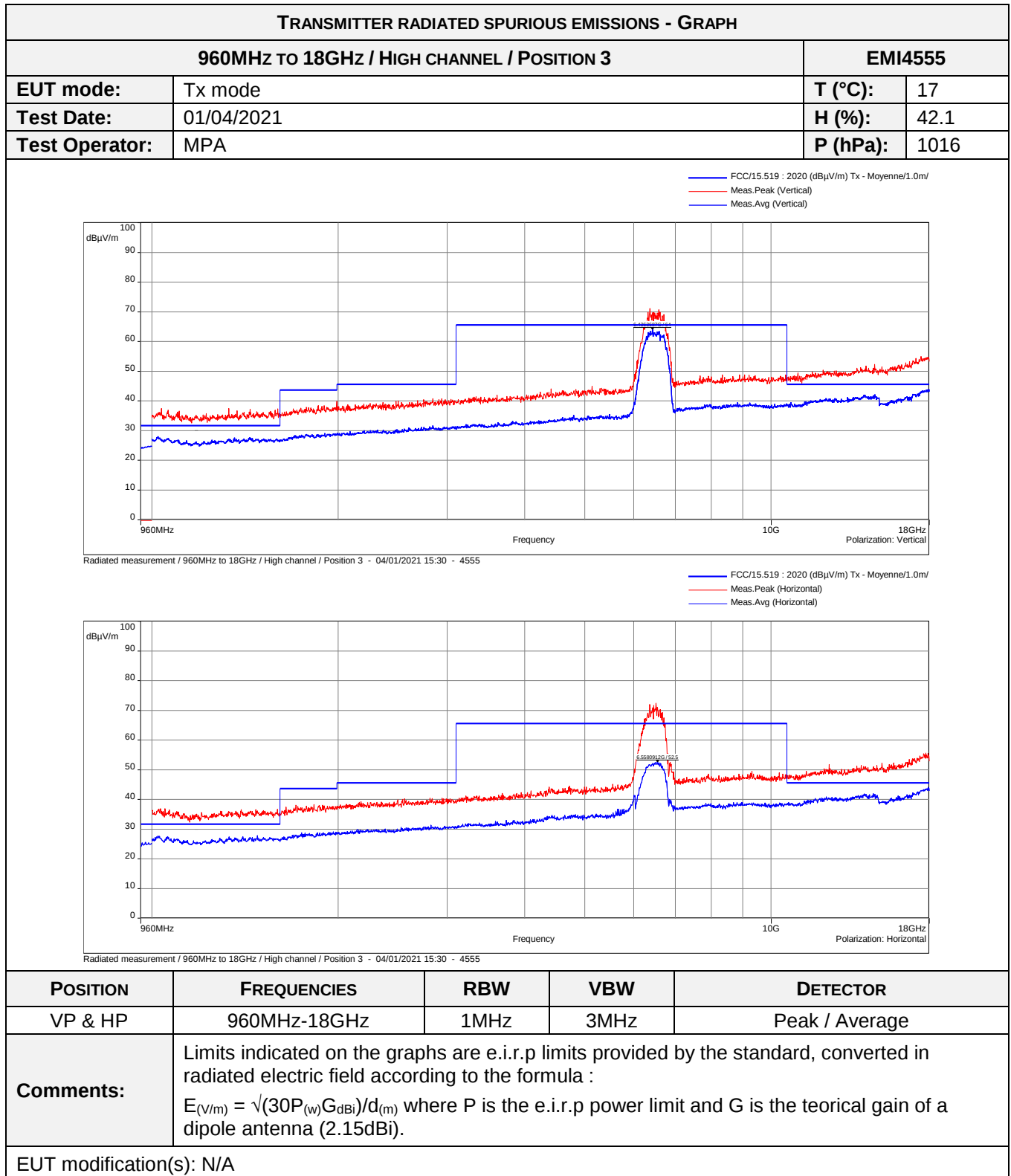
No spurious emissions were detected.



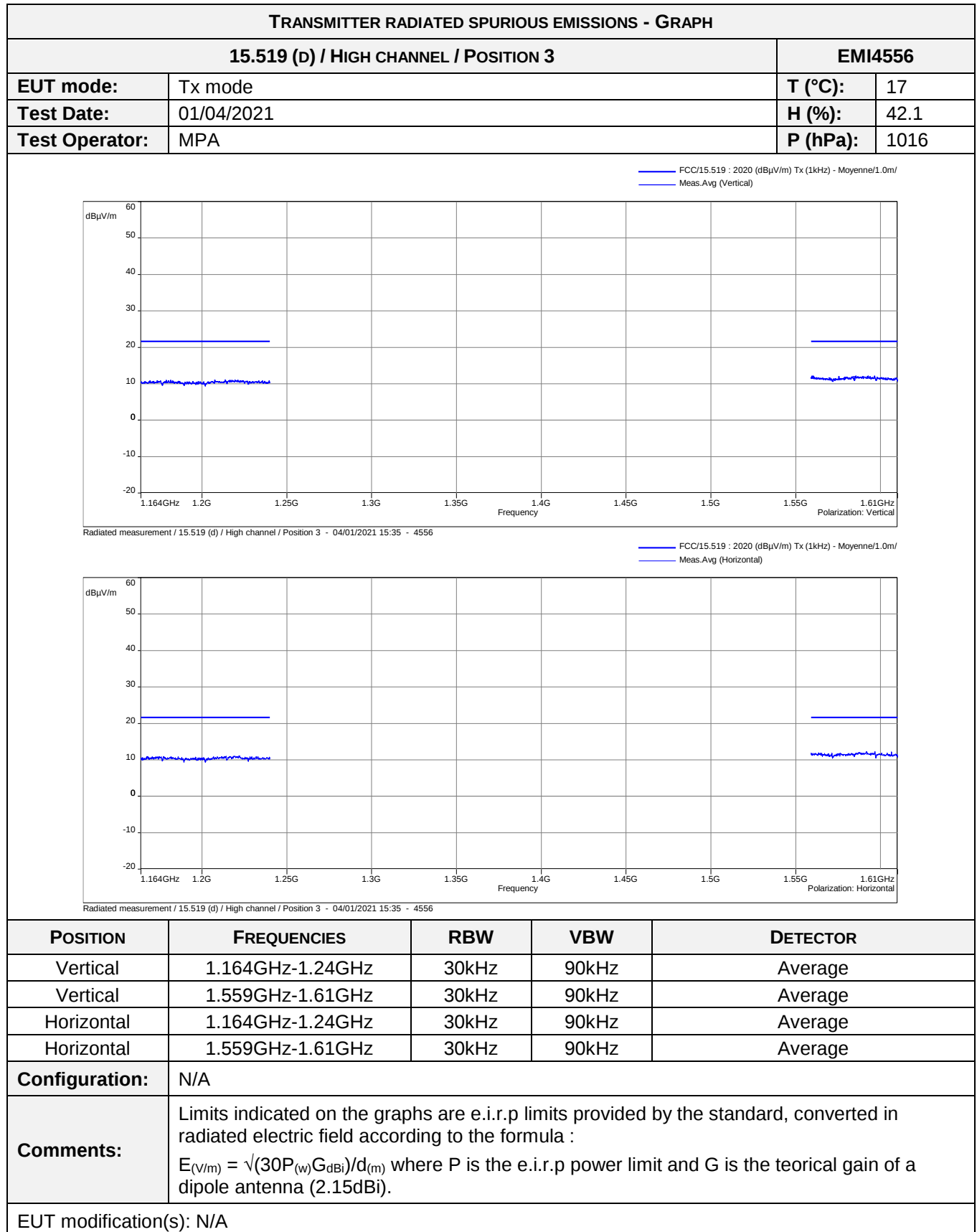
960MHz TO 18GHz / HIGH CHANNEL / POSITION 2 - TABULATED RESULTS				
Frequency (MHz)	Polarization	Peak level (dBμV/m)	Average level (dBμV/m)	Limit (dBμV/m)
6377.887558	Vertical	73.40	53.6	65.62
12979.11958	Vertical	49.57	43.4	45.62
6484.9897	Horizontal	63.73	62.1	65.62



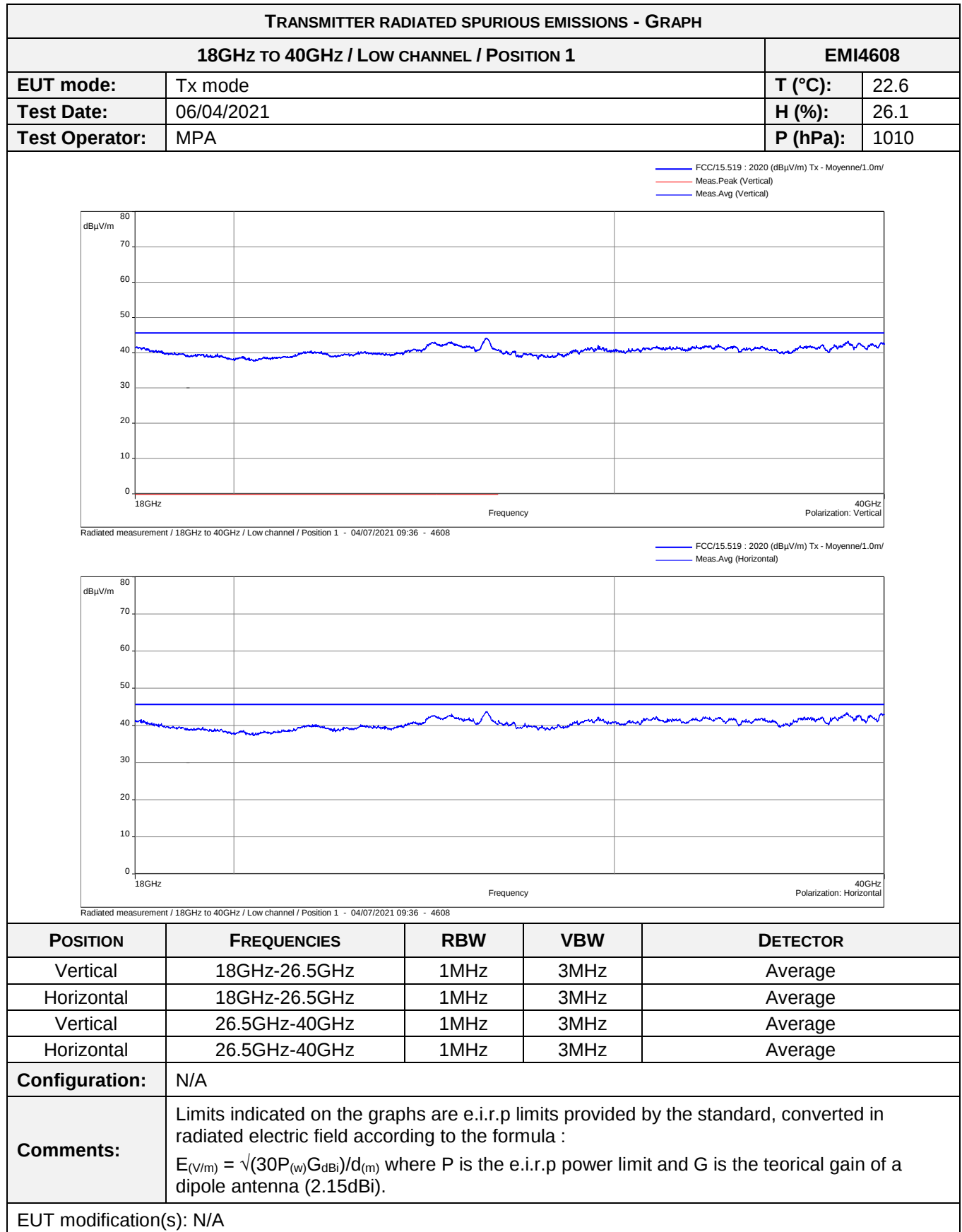
No spurious emissions were detected.



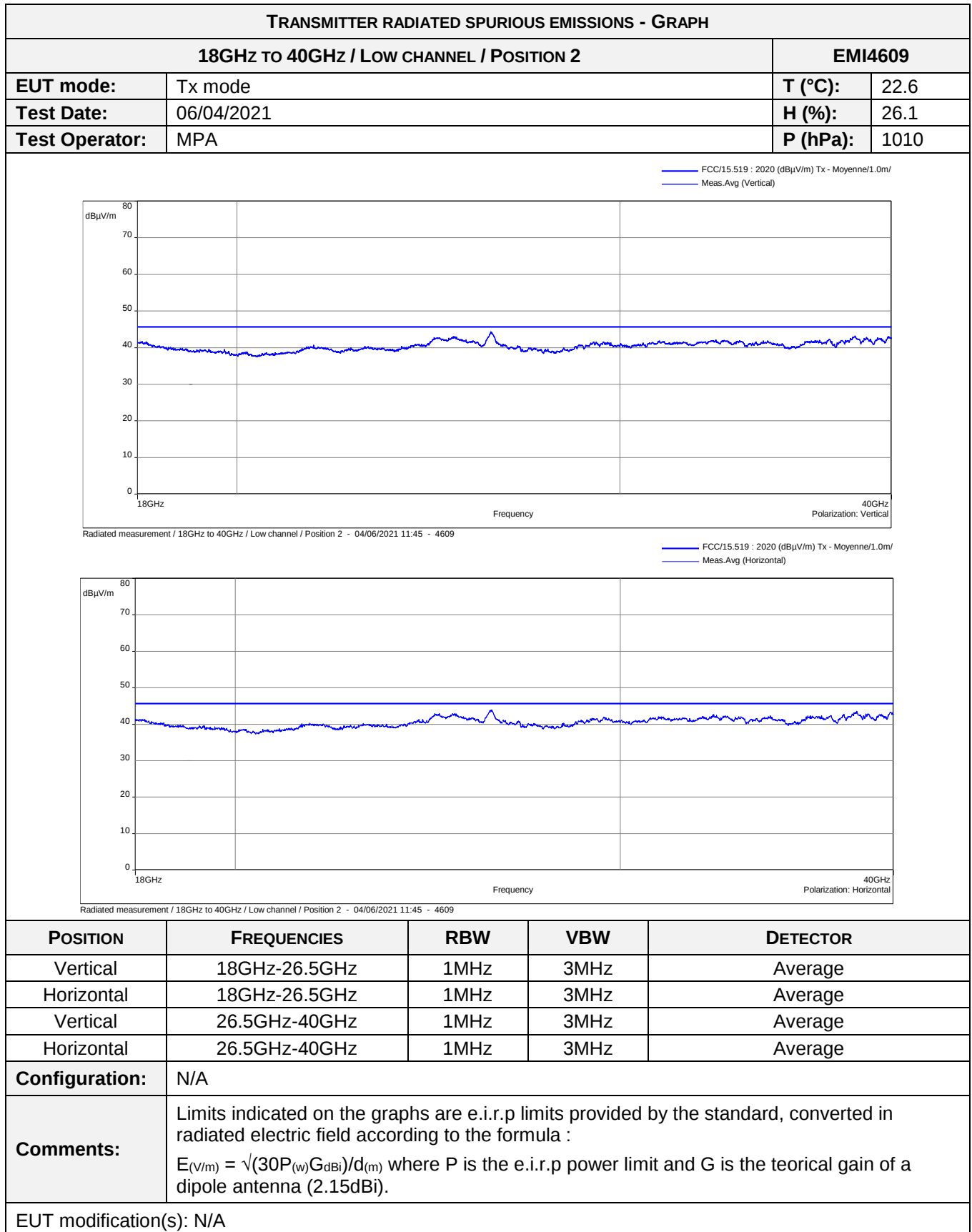
960MHz TO 18GHz / HIGH CHANNEL / POSITION 3 - TABULATED RESULTS				
Frequency (MHz)	Polarization	Peak level (dBμV/m)	Average level (dBμV/m)	Limit (dBμV/m)
6436.368727	Vertical	66.29	64	65.62
6558.091162	Horizontal	67.80	52.5	65.62



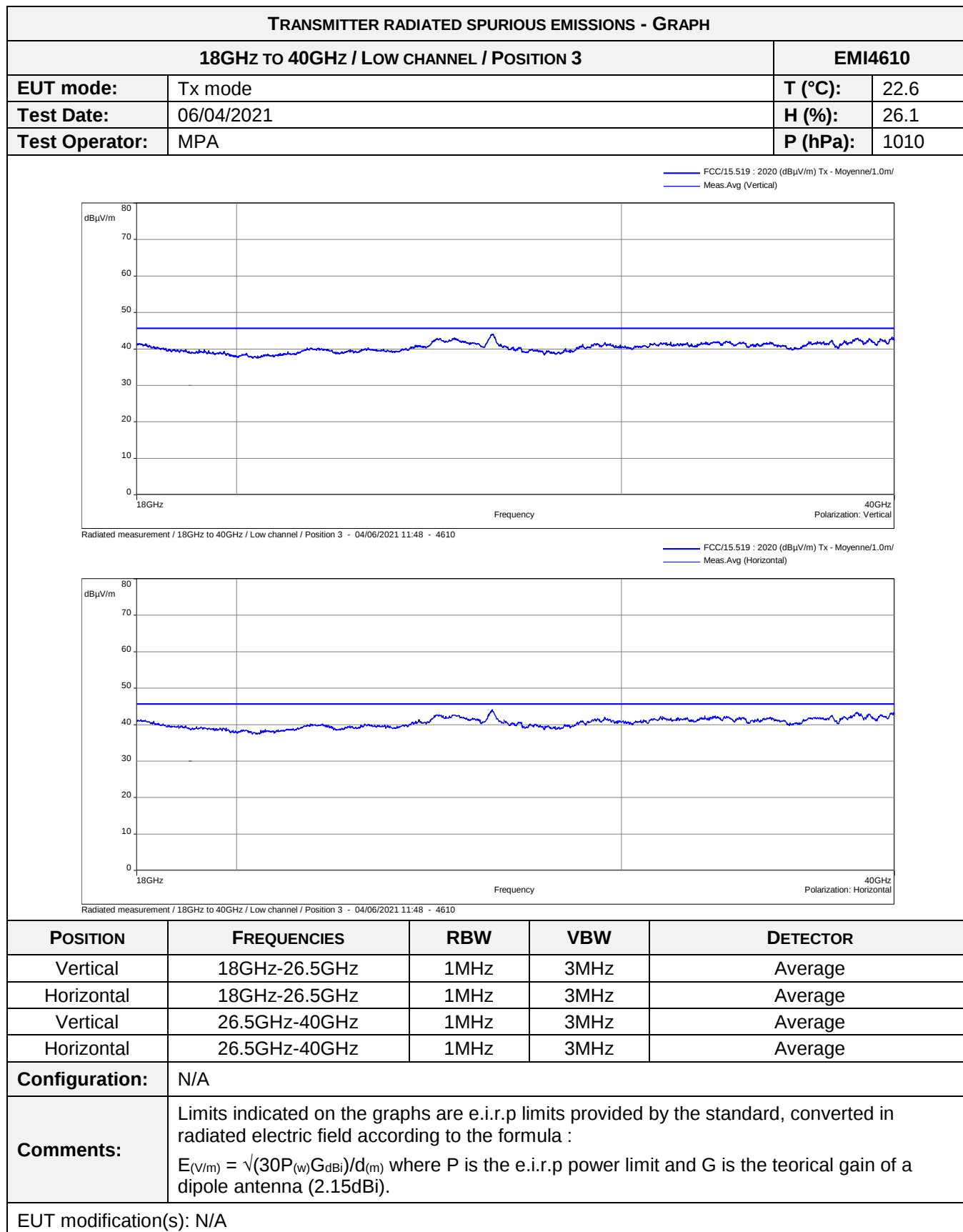
No spurious emissions were detected.



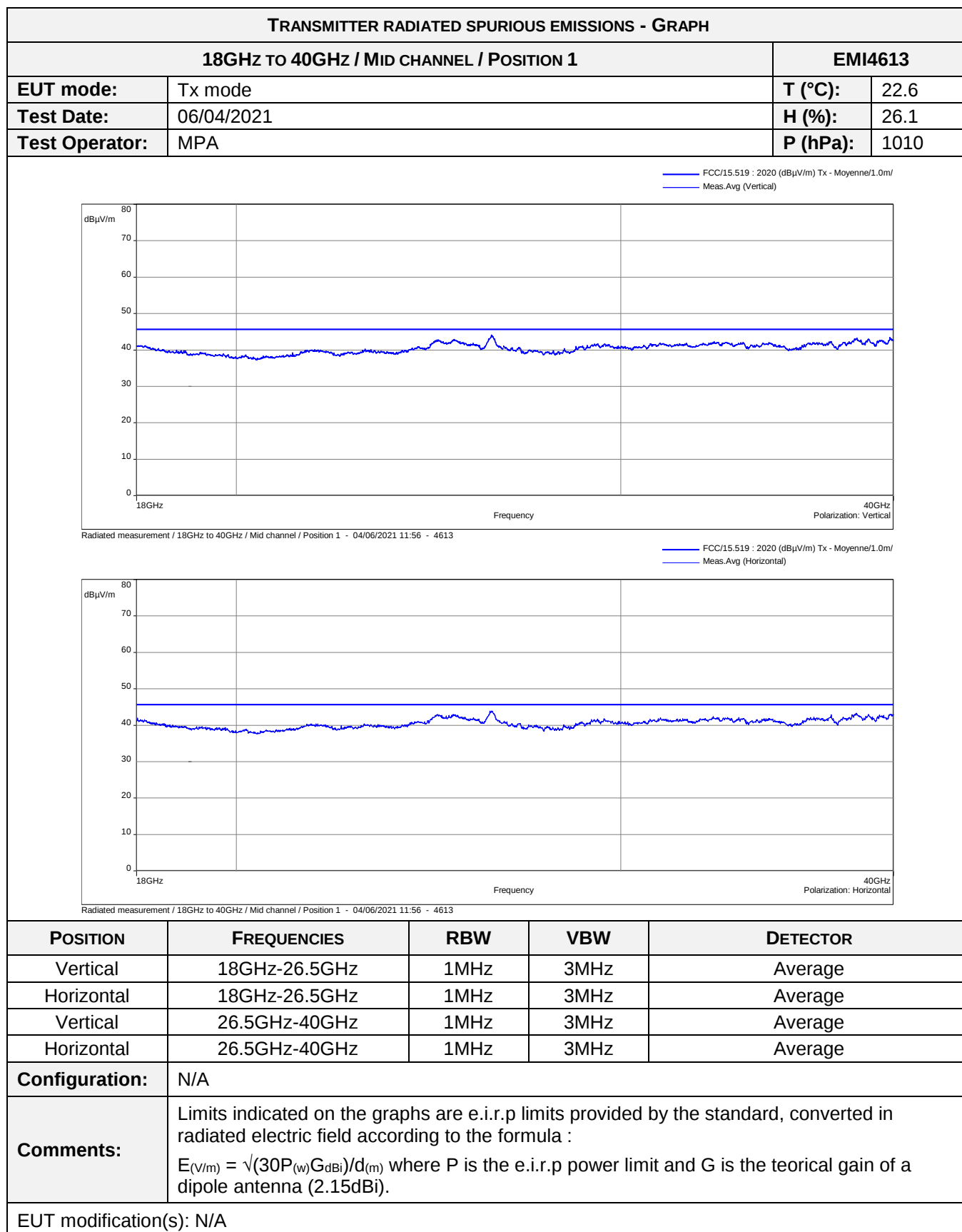
No spurious emissions were detected.



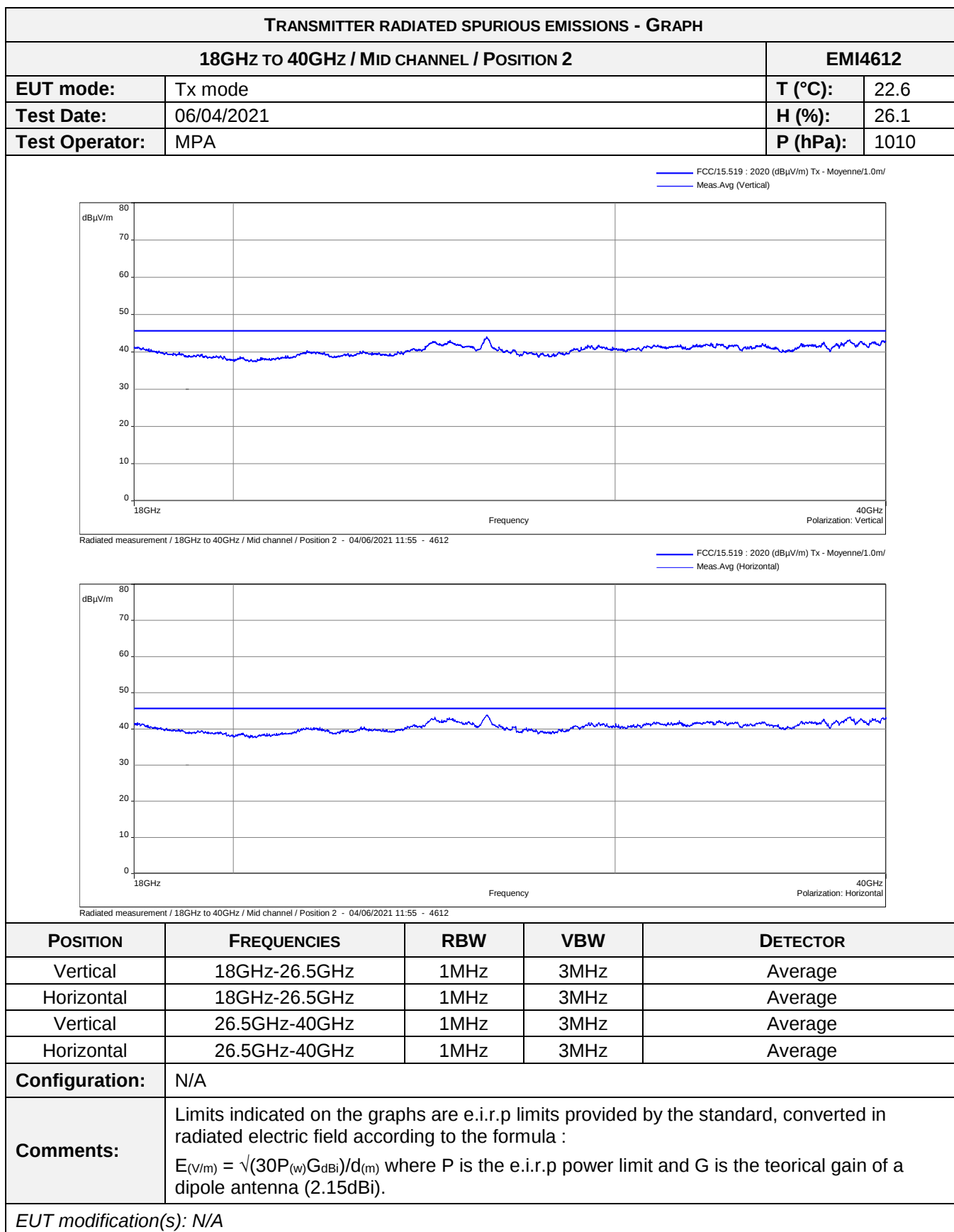
No spurious emissions were detected.



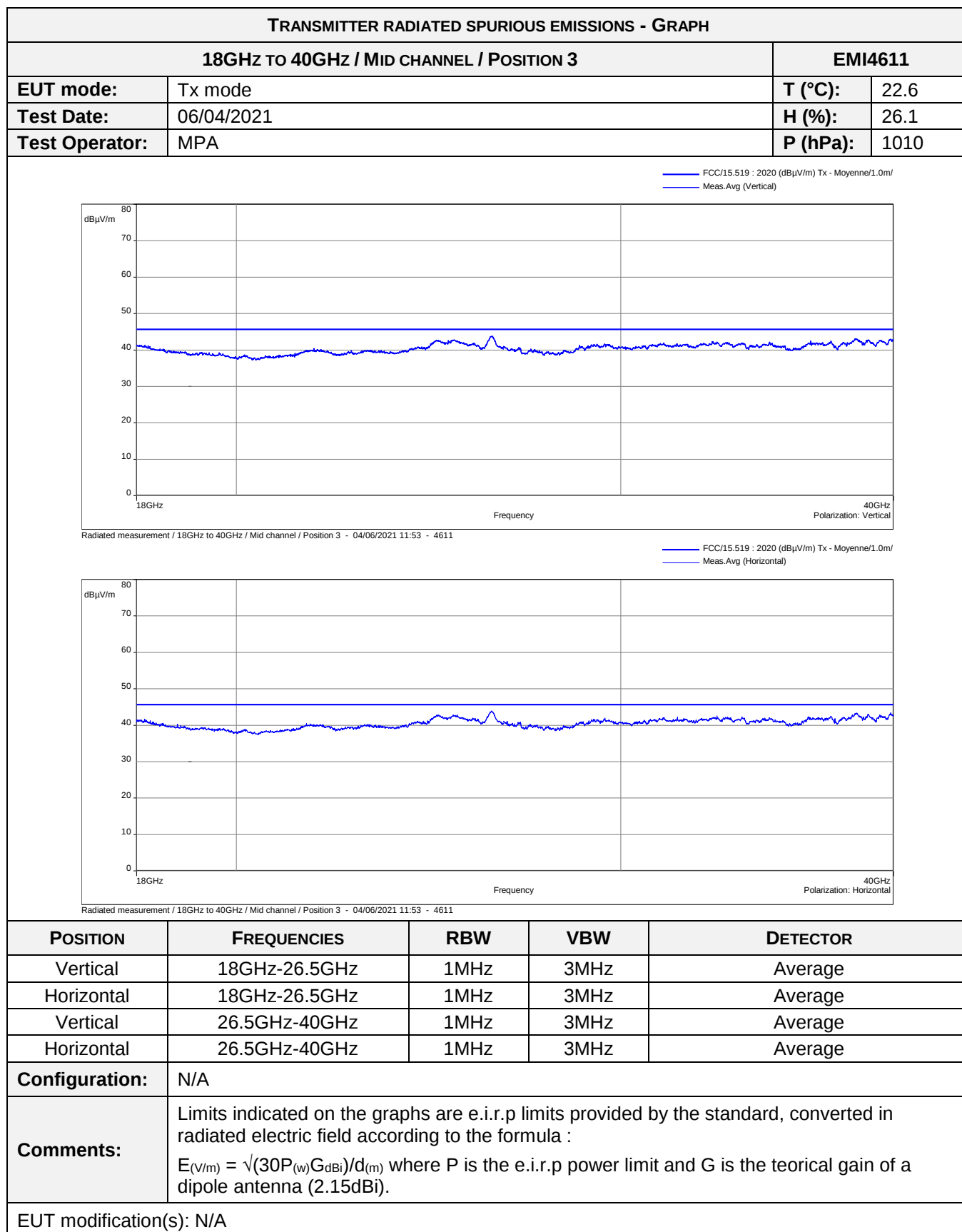
No spurious emissions were detected.



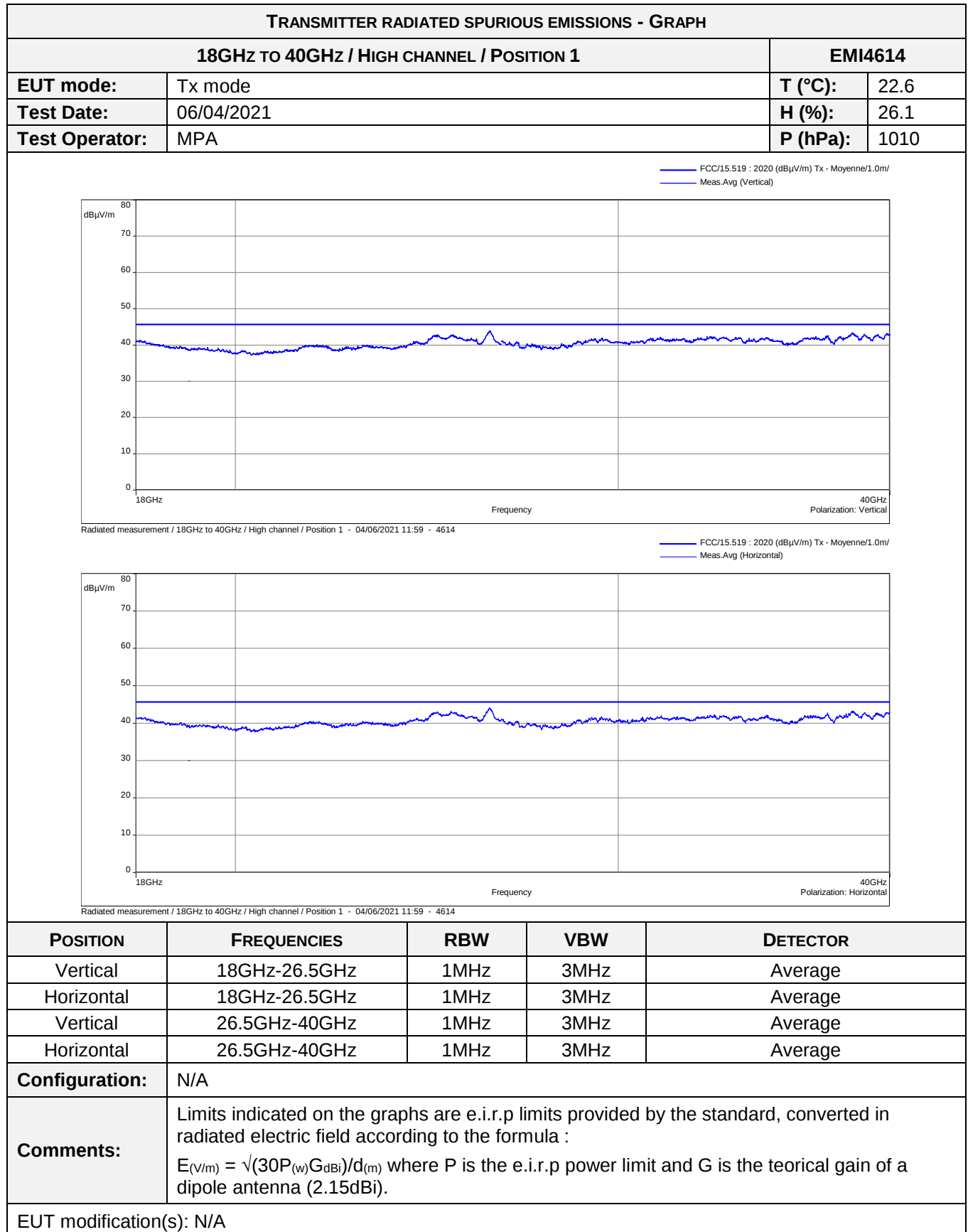
No spurious emissions were detected.



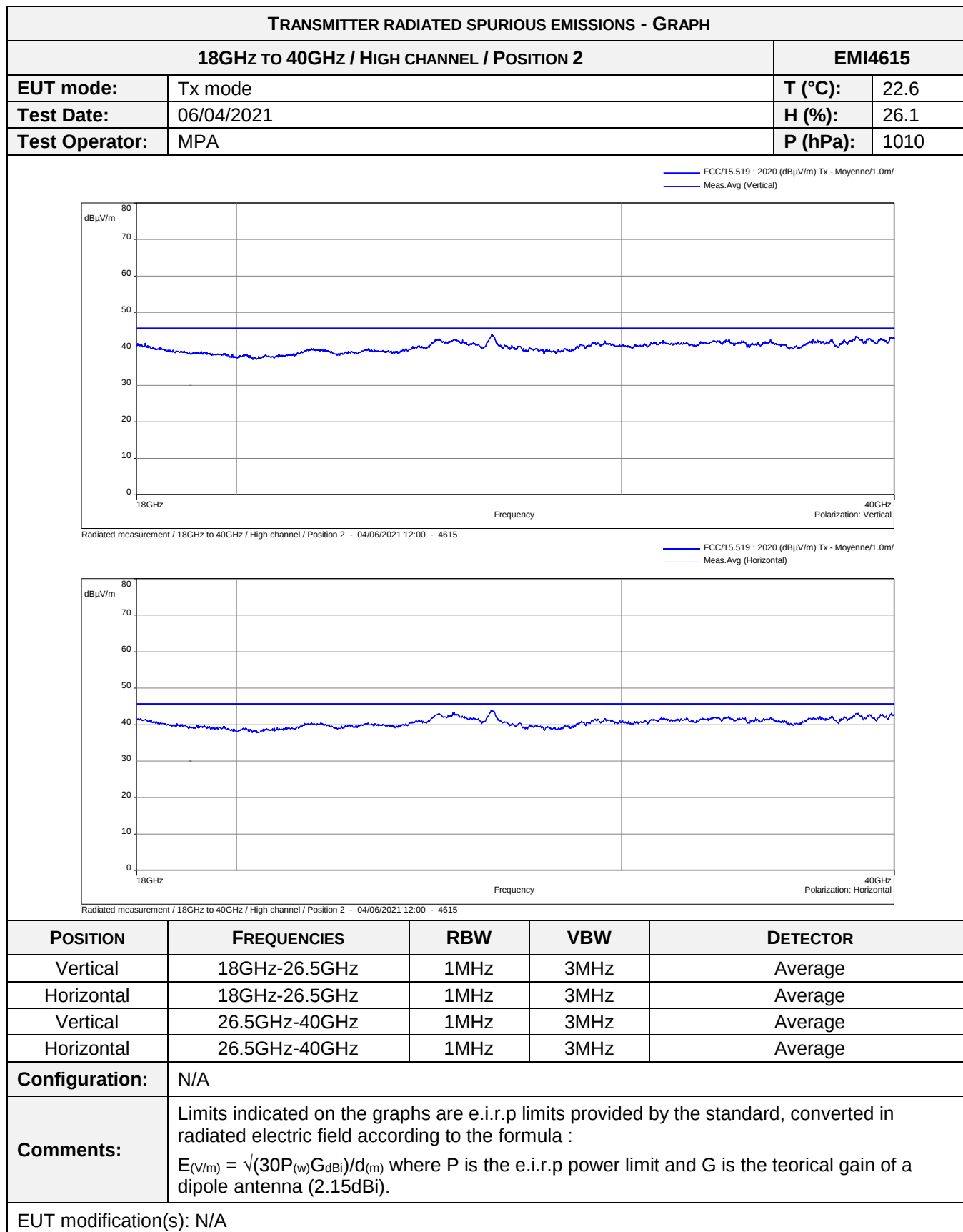
No spurious emissions were detected.



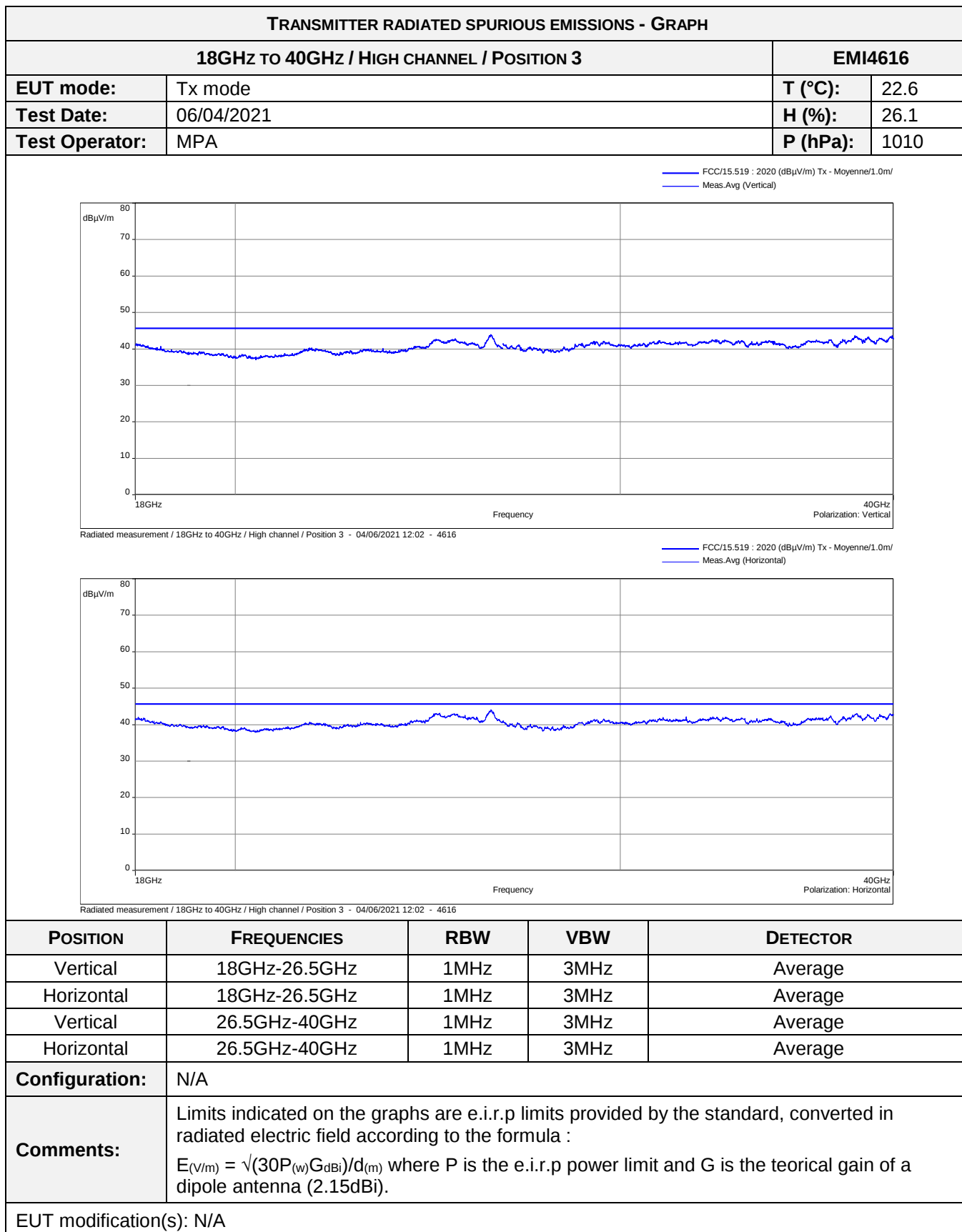
No spurious emissions were detected.



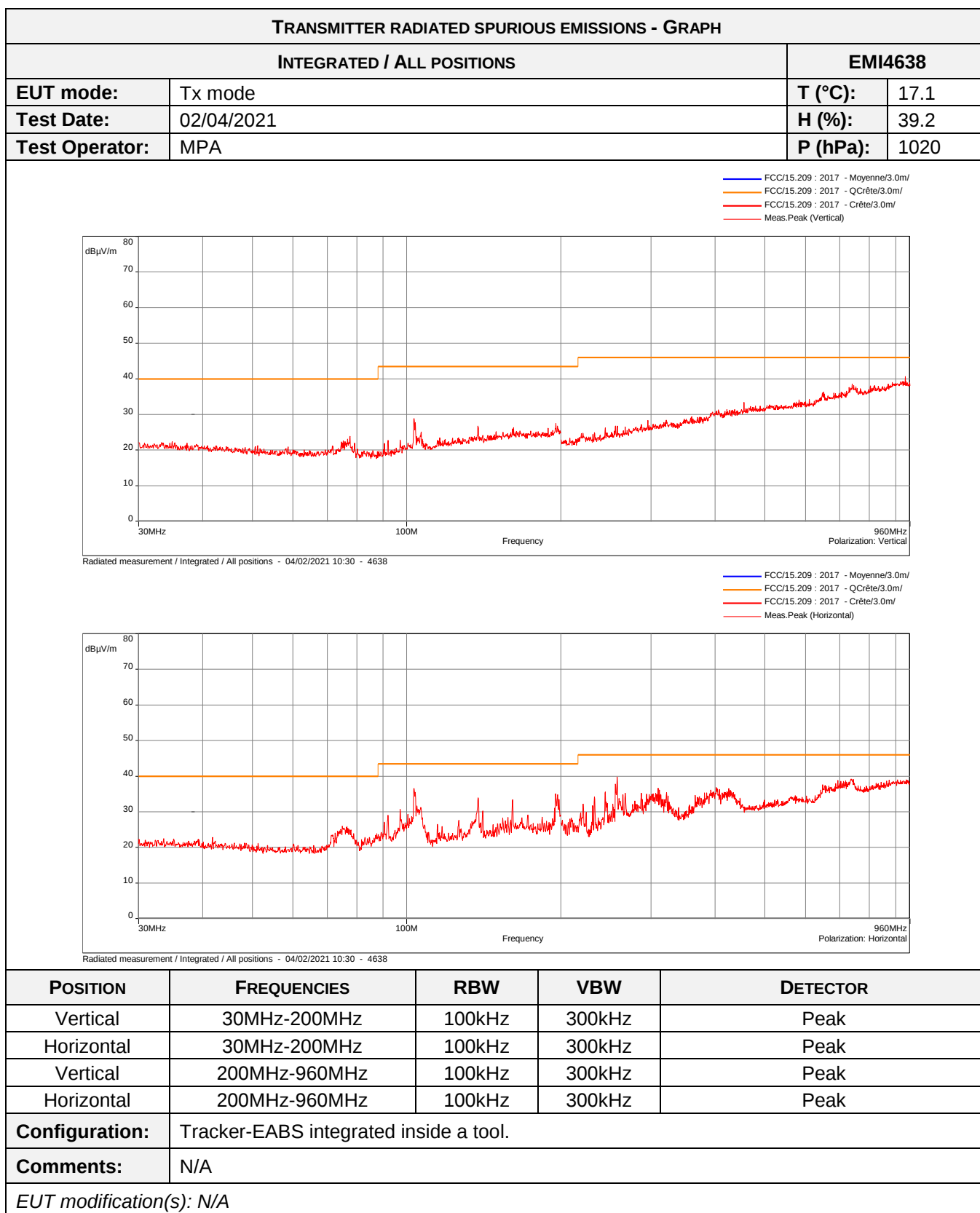
No spurious emissions were detected.

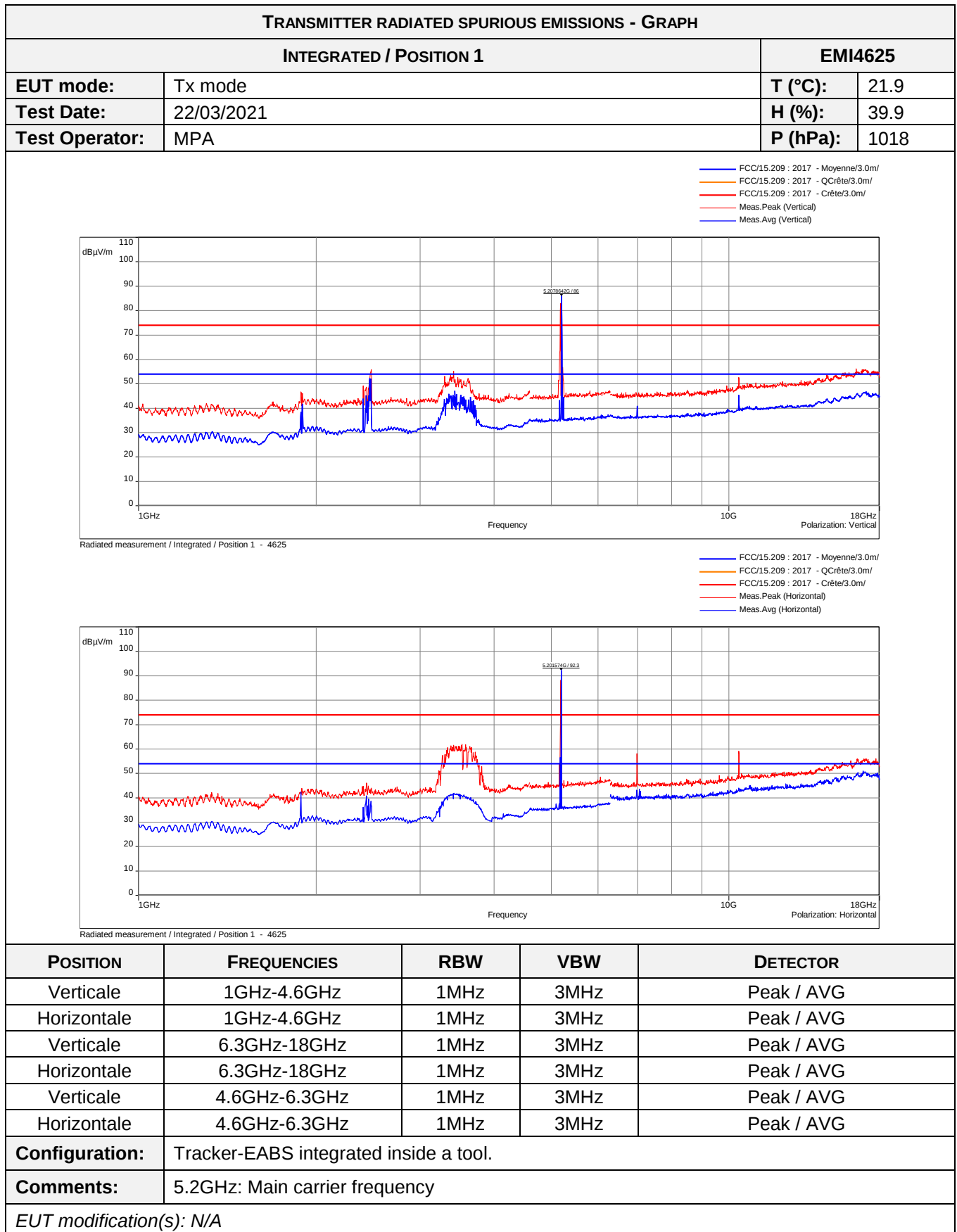


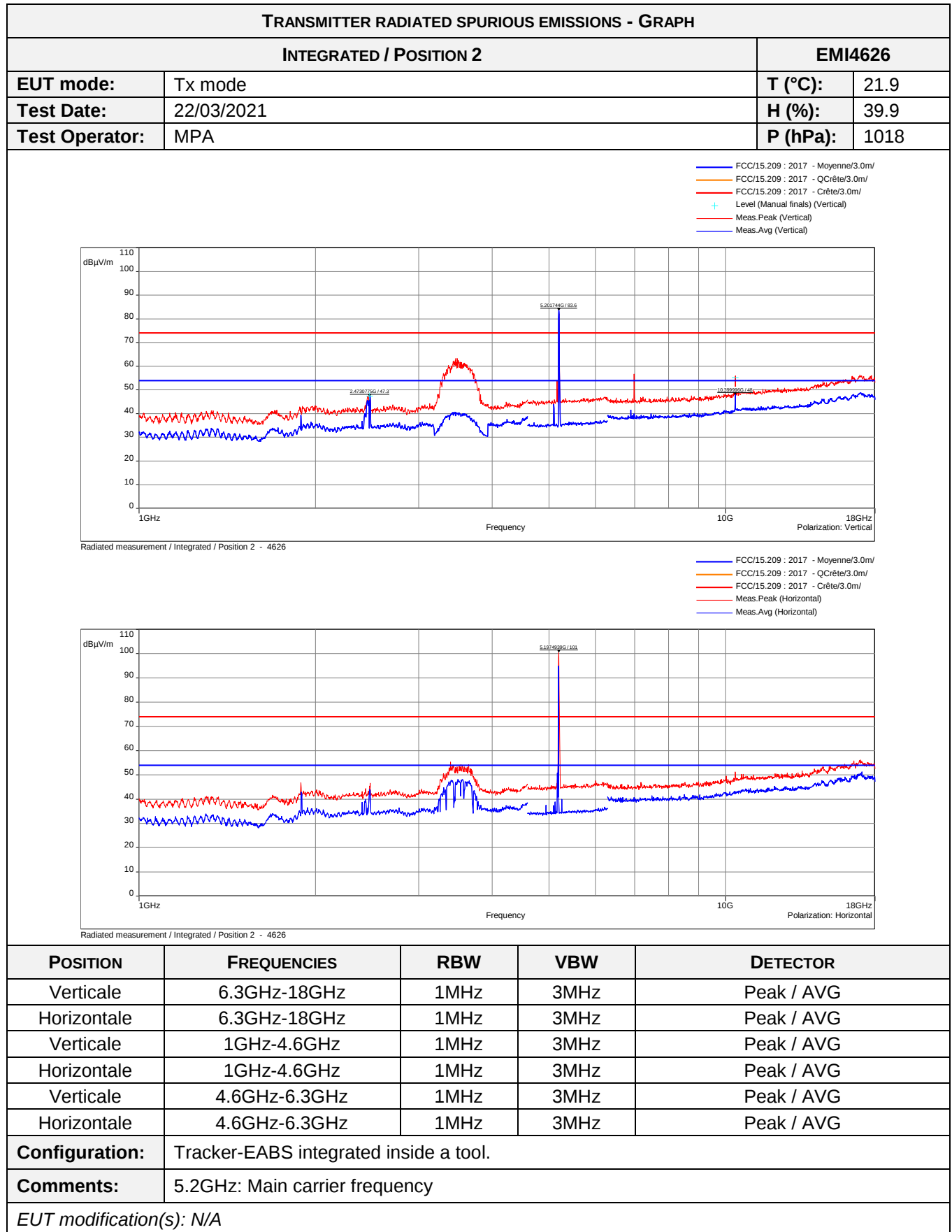
No spurious emissions were detected.



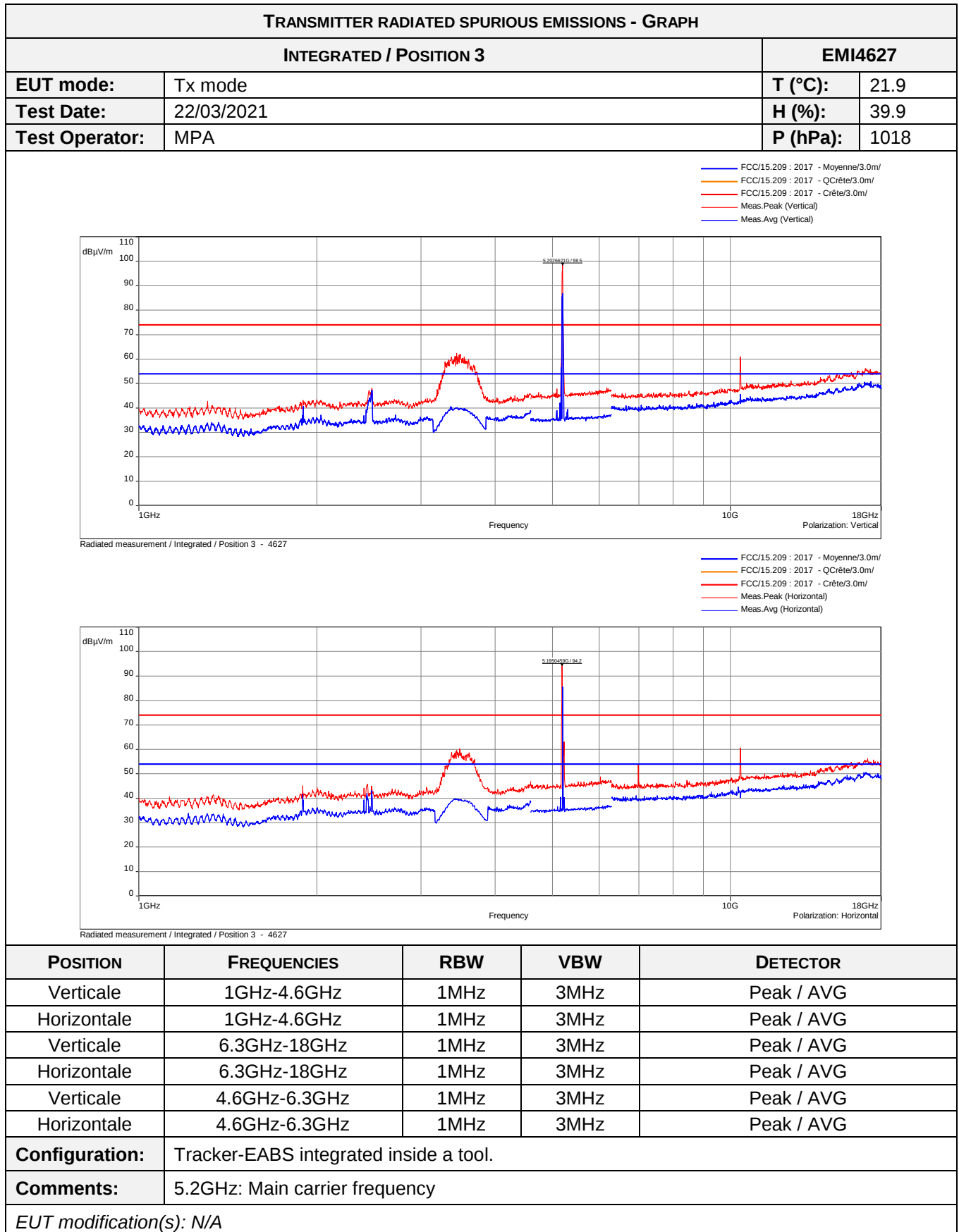
No spurious emissions were detected.







INTEGRATED / POSITION 2 - TABULATED RESULTS				
Frequency (MHz)	Polarization	Peak level (dB μ V/m)	Average level (dB μ V/m)	Limit (dB μ V/m)
10399.996	Vertical	55.21	47.3	54
2473.077462	Vertical	47.44	48	54



7.4. Maximum peak output power of UWB device

Reference standard:	FCC part 15.519 : 2020
Test method:	ANSI C63.10
General test setup: 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. It is acceptable to employ a different resolution bandwidth, and a correspondingly different peak emission limit, following the procedures described in §15.521. For $f > 1\text{GHz}$, EUT is set on an insulating support at 150cm above the ground reference plane. Measurements are performed in a semi-anechoic chamber at 1m test distance in order to optimise measurement dynamic. For portable equipments a research of maximum level is done on the 3 axes. Only the highest levels are recorded.	

TESTED CONFIGURATION	PARAMETER	SEVERITY	RESULT TAB.	VERDICT
Low channel / Position 1	3.2444GHz-3.7444GHz	0dBm	EMI4519	PASS
Low channel / Position 2	3.2444GHz-3.7444GHz	0dBm	EMI4529	PASS
Low channel / Position 3	3.2444GHz-3.7444GHz	0dBm	EMI4530	PASS
Mid channel / Position 1	4.2428GHz-4.7428GHz	0dBm	EMI4531	PASS
Mid channel / Position 2	4.2428GHz-4.7428GHz	0dBm	EMI4532	PASS
Mid channel / Position 3	4.2428GHz-4.7428GHz	0dBm	EMI4533	PASS
High channel / Position 1	6.2396GHz-6.7396GHz	0dBm	EMI4534	PASS
High channel / Position 2	6.2396GHz-6.7396GHz	0dBm	EMI4535	PASS
High channel / Position 3	6.2396GHz-6.7396GHz	0dBm	EMI4536	PASS
Channel 2 / Position 1	3.5GHz-4.5GHz	0dBm	EMI4629	PASS
Channel 2 / Position 2	3.5GHz-4.5GHz	0dBm	EMI4630	PASS
Channel 2 / Position 3	3.5GHz-4.5GHz	0dBm	EMI4631	PASS
Channel 4 / Position 1	3GHz-5GHz	0dBm	EMI4632	PASS
Channel 4 / Position 2	3GHz-5GHz	0dBm	EMI4633	PASS
Channel 4 / Position 3	3GHz-5GHz	0dBm	EMI4634	PASS
Channel 7 / Position 1	5.5GHz-7.5GHz	0dBm	EMI4637	PASS
Channel 7 / Position 2	5.5GHz-7.5GHz	0dBm	EMI4636	PASS
Channel 7 / Position 3	5.5GHz-7.5GHz	0dBm	EMI4635	PASS

LABORATORY PARAMETERS:	REQUIRED PRIOR TO THE TEST	DURING THE TEST
Ambient Temperature	15 to 35 °C	See Graph(es)
Relative Humidity	20 to 75 %	See Graph(es)
Atmospheric pressure	N/A	See Graph(es)
Test method deviation: N/A		
Supplementary information: N/A		

TEST EQUIPMENT USED					
CATEGORY	BRAND	TYPE	IDENTIFIER	CAL. DATE	CAL. DUE
Antenna	AARONIA	Powerlog 70180	15306	24/07/2019	24/09/2022
Attenuator	EMITECH	SUB.V3-H	14848	19/01/2021	19/03/2022
Attenuator	EMITECH	SUB.V3-V	14847	19/01/2021	19/03/2022
Cable	SUCOFLEX	N-3m	14378	25/06/2019	25/08/2021

CATEGORY	BRAND	TYPE	IDENTIFIER	CAL. DATE	CAL. DUE
Cable	SUCOFLEX	N-6,5m	14380	25/07/2019	25/09/2021
Cable	Huber + Suhner	SF102K	16041	28/02/2019	28/04/2021
Cable	MegaPhase	TM18-N1N1-118	12841	14/08/2020	14/10/2022
Cable	MegaPhase	TM18-N1N1-118	12842	02/12/2020	02/02/2023
Preamplifier	IMPULSE	CA118-546ACN	9169	13/01/2021	13/03/2022
Receiver	Rohde & Schwarz	FSW43	14830	29/07/2020	29/09/2021
Shielded enclosure	COMTEST	SAC 3m	14494	02/10/2019	02/12/2022
Software	Nexio		0000		
Thermohygrometer	Testo	608-H2	12268	07/05/2020	07/07/2022
Thermohygrometer	Testo	608-H2	12269	07/05/2020	07/07/2022

BAT-EMC software version: V3.18.0.26

Blank cells = Permanent validity

TEST SETUP PHOTO(S) - MAXIMUM PEAK OUTPUT POWER OF UWB DEVICE / POSITION 1


TEST SETUP PHOTO(S) - MAXIMUM PEAK OUTPUT POWER OF UWB DEVICE / POSITION 2

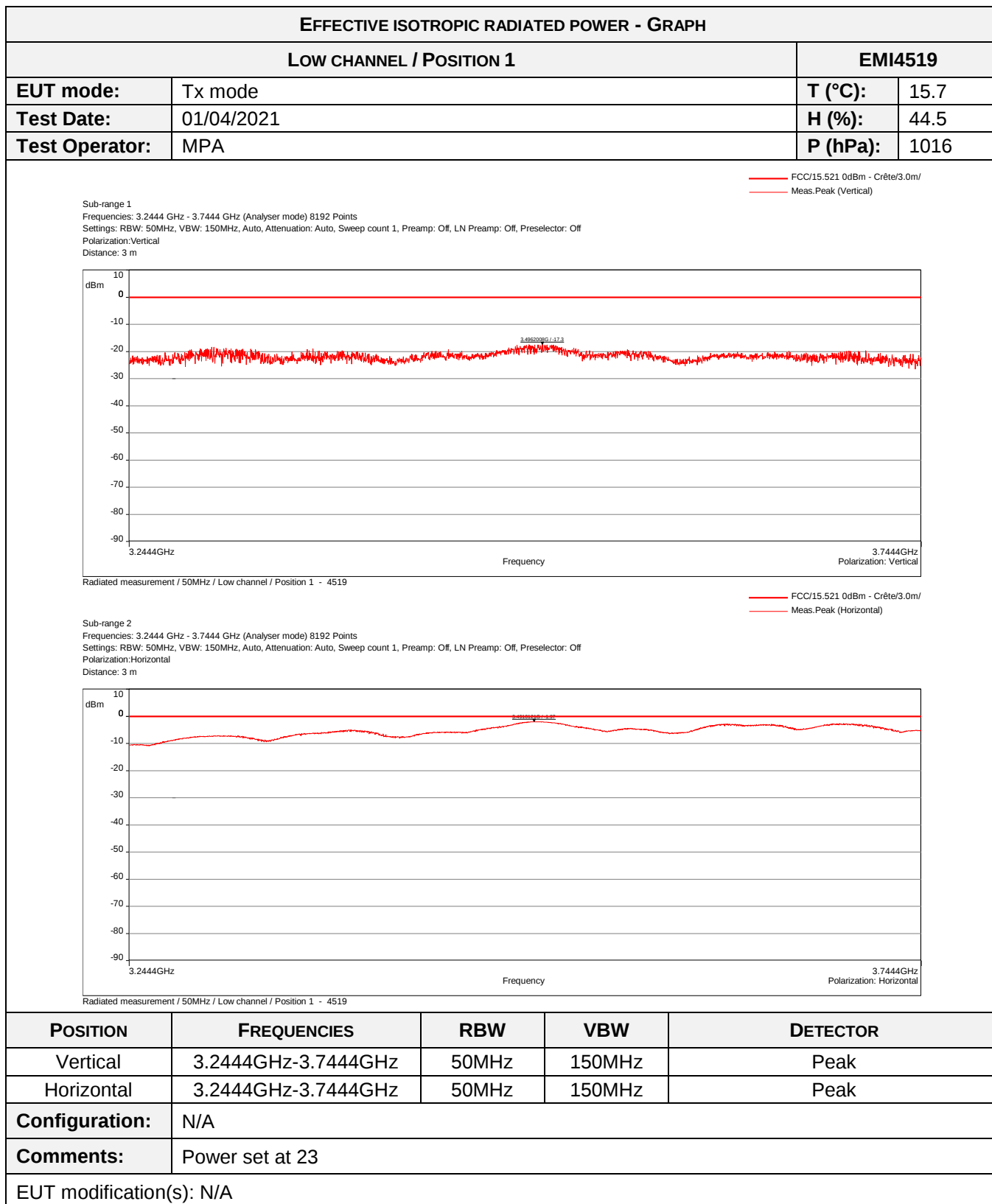


TEST SETUP PHOTO(S) - MAXIMUM PEAK OUTPUT POWER OF UWB DEVICE / POSITION 3

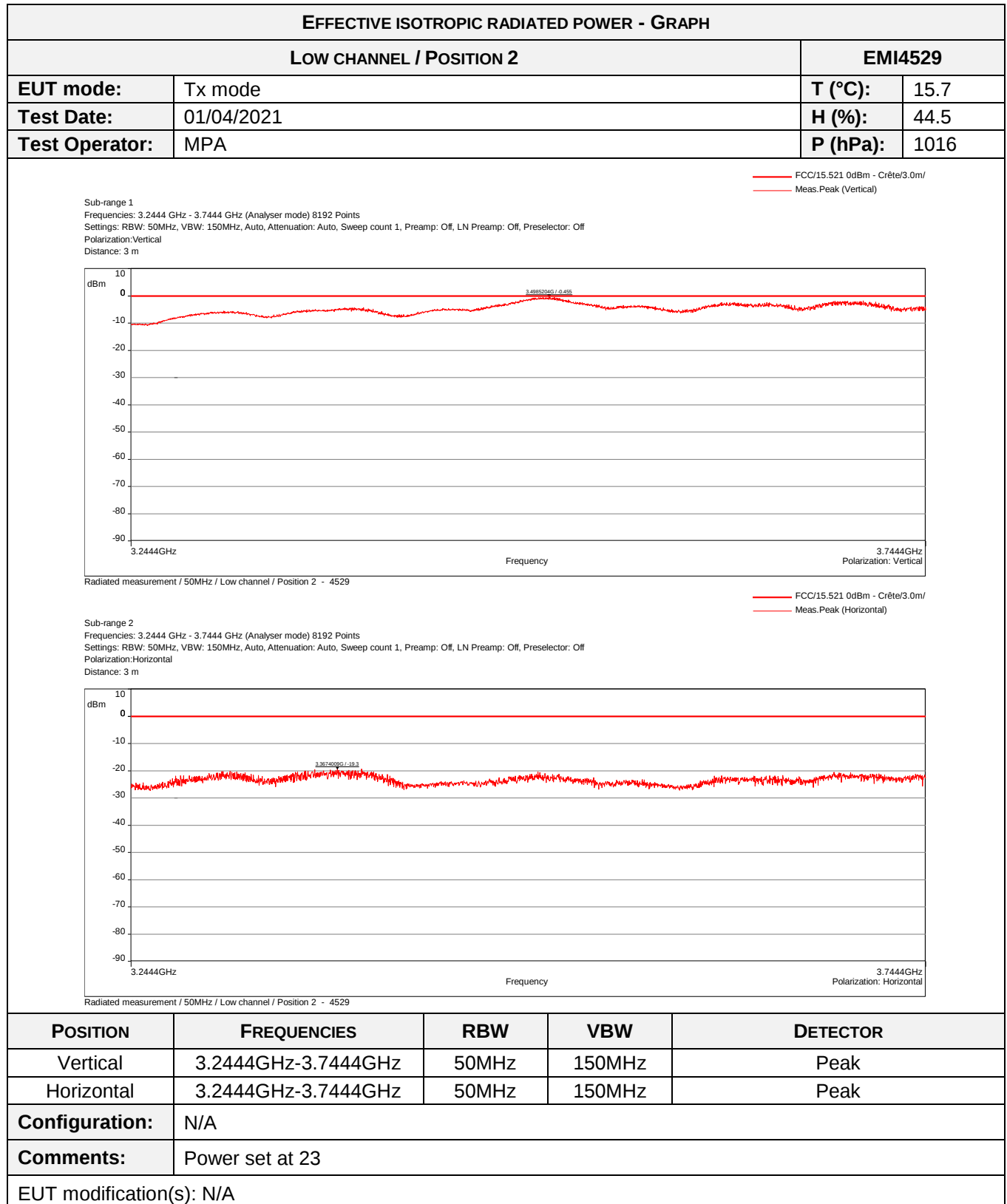


TEST SETUP PHOTO(S) - MAXIMUM PEAK OUTPUT POWER OF UWB DEVICE

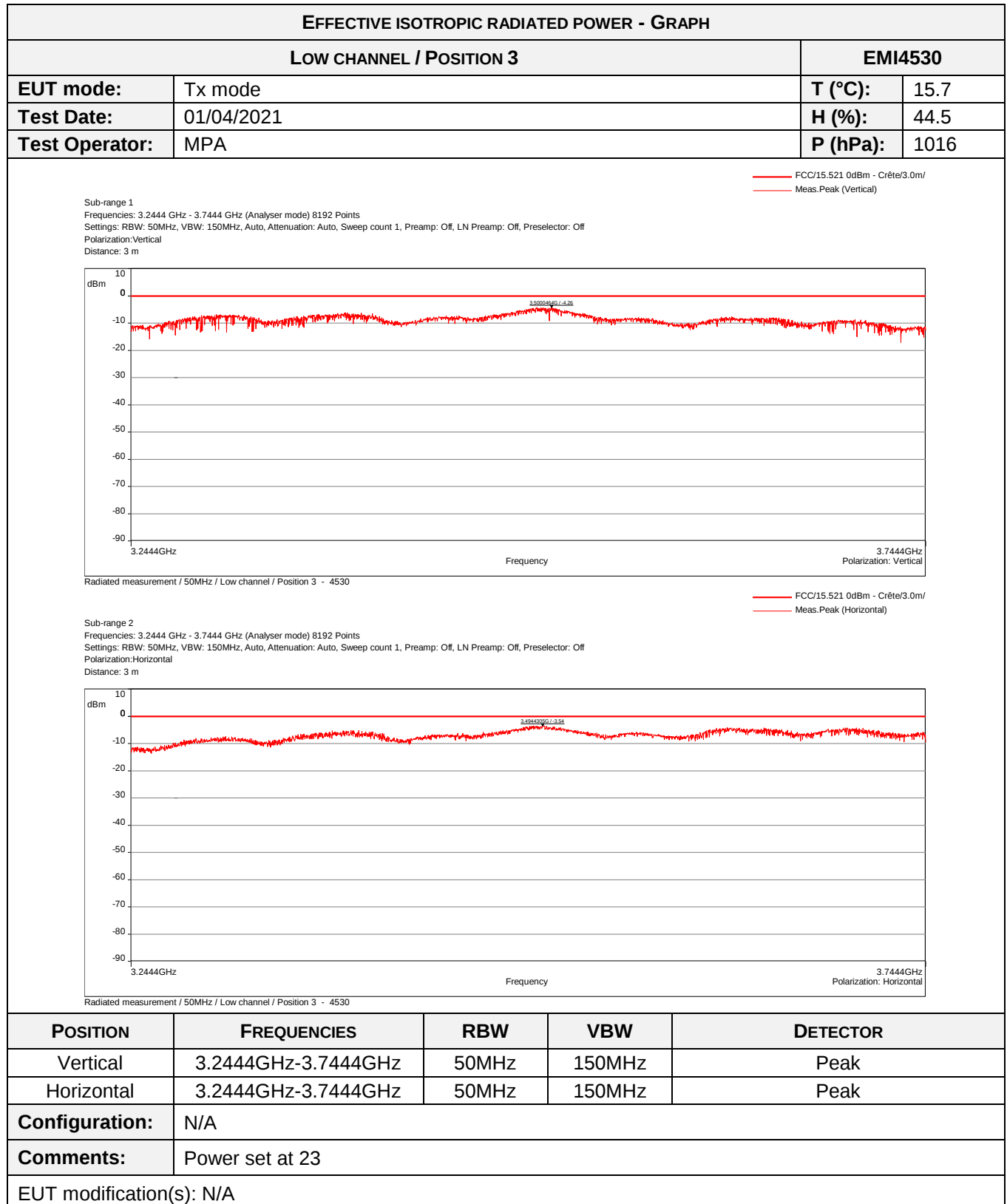




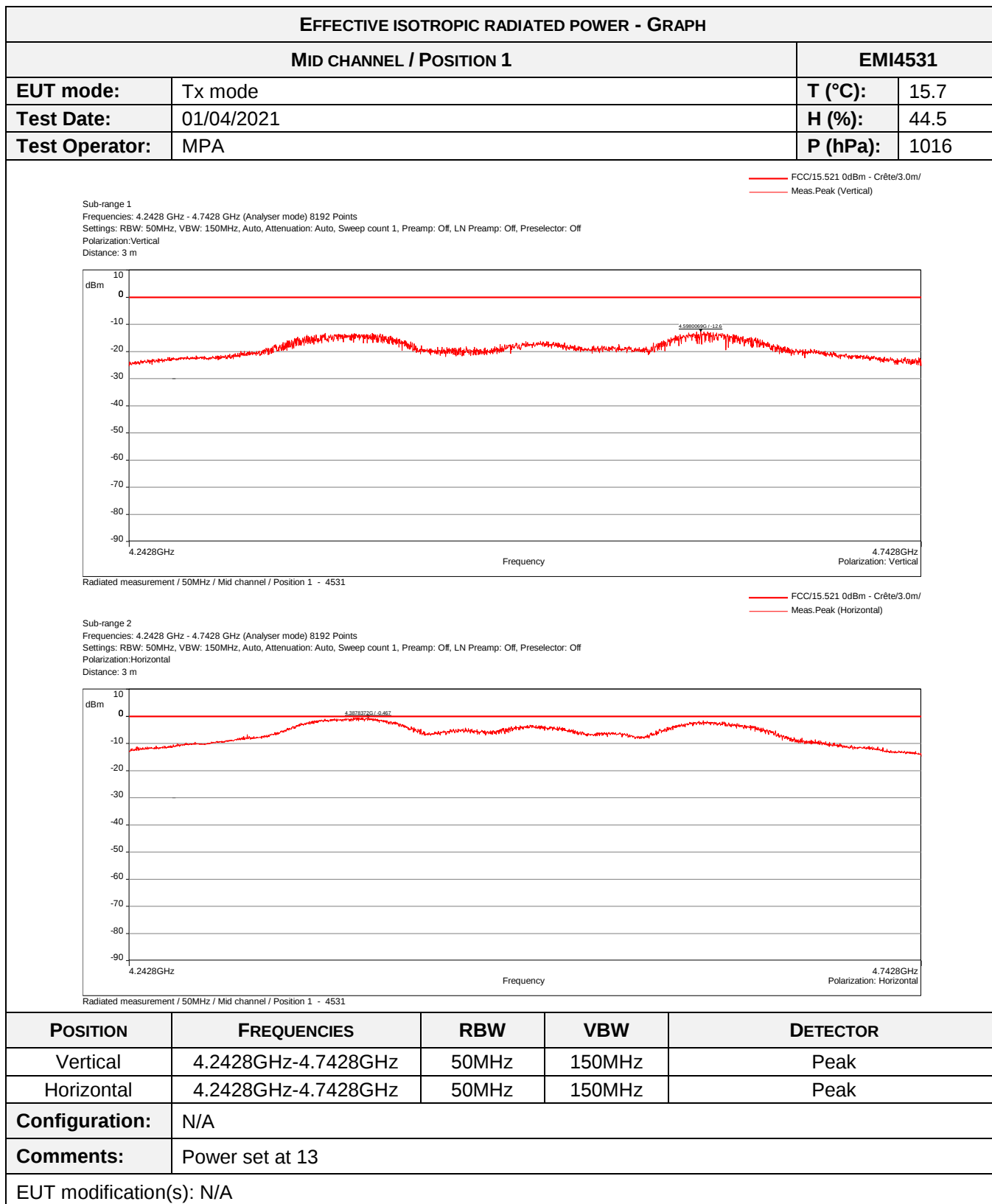
LOW CHANNEL / POSITION 1 - TABULATED RESULTS			
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)
3496.200757	Vertical	-17.32	0
3491.012135	Horizontal	-1.97	0



LOW CHANNEL / POSITION 2 - TABULATED RESULTS			
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)
3498.520376	Vertical	-0.45	0
3367.400855	Horizontal	-19.30	0



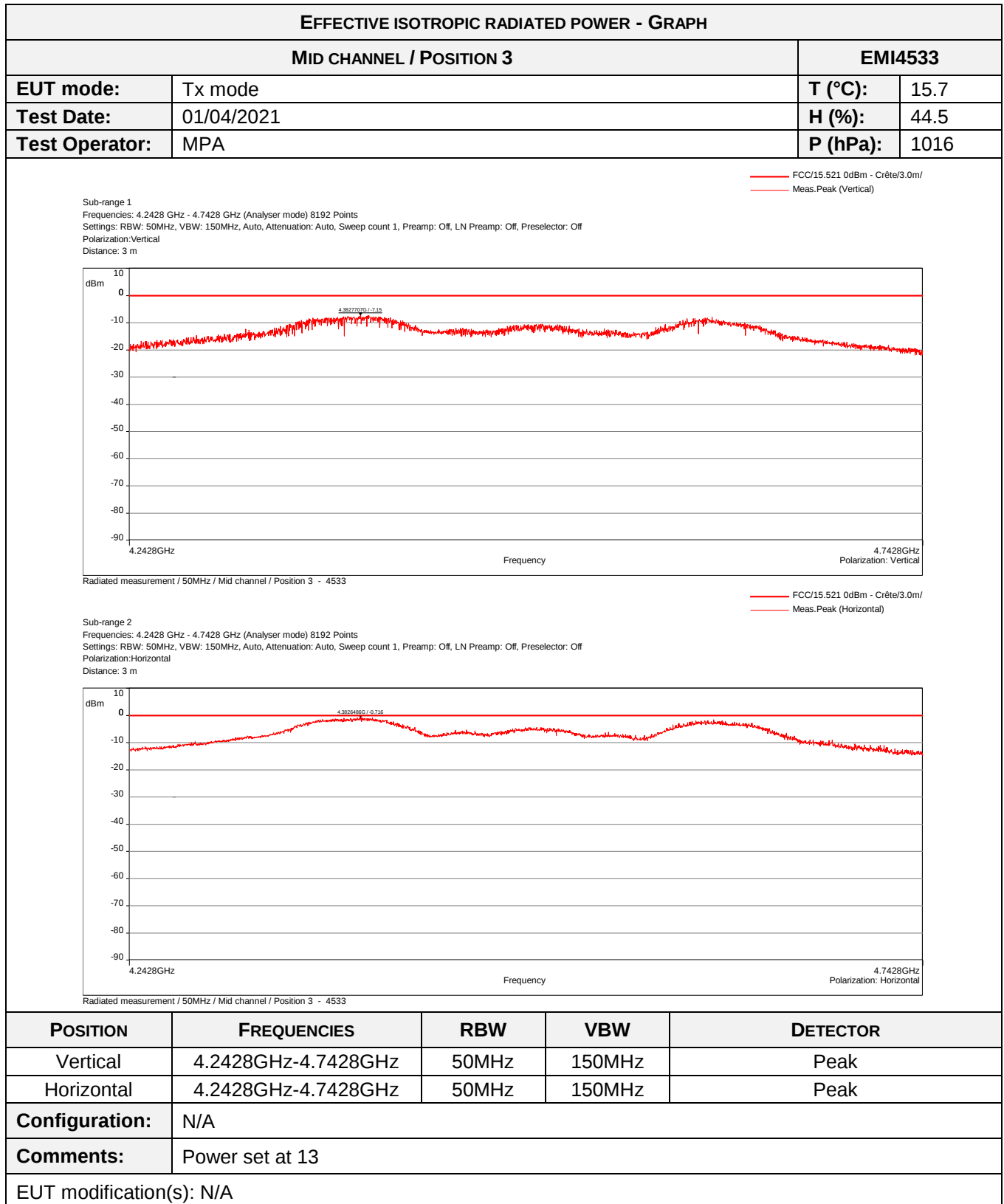
LOW CHANNEL / POSITION 3 - TABULATED RESULTS			
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)
3500.046441	Vertical	-4.26	0
3494.430521	Horizontal	-3.54	0



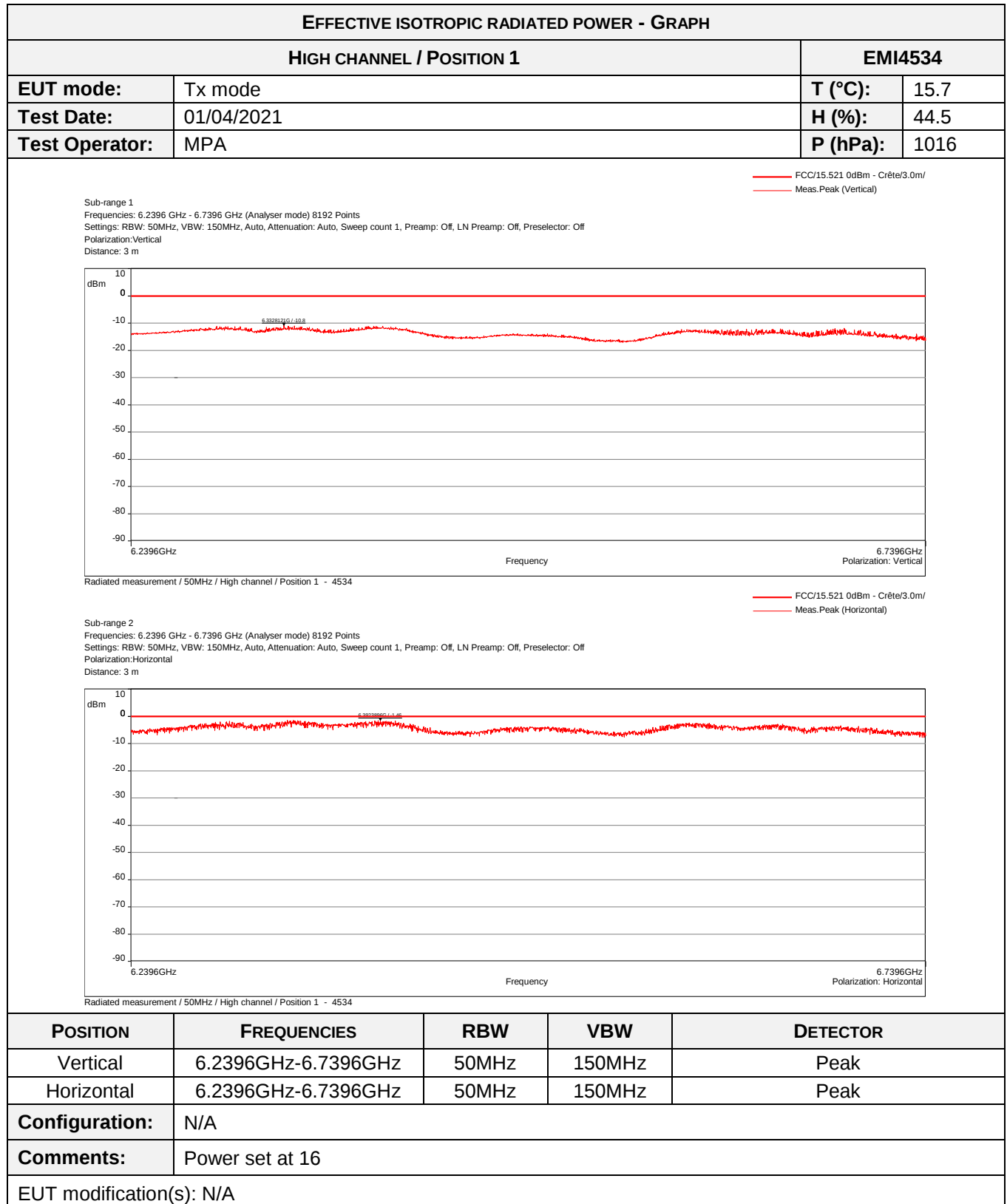
MID CHANNEL / POSITION 1 - TABULATED RESULTS			
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)
4598.006934	Vertical	-12.59	0
4387.837236	Horizontal	-0.47	0



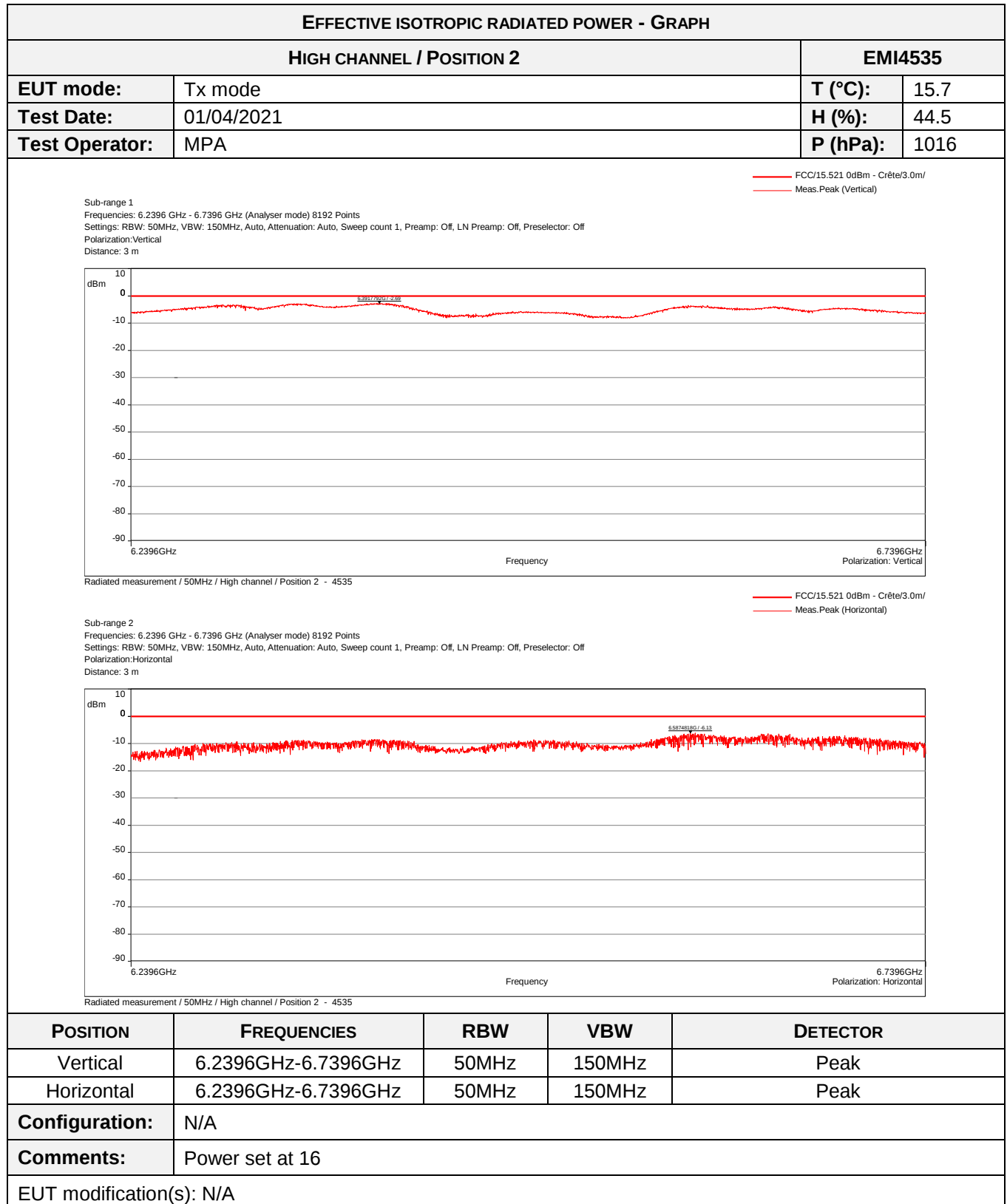
MID CHANNEL / POSITION 2 - TABULATED RESULTS			
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)
4386.616384	Vertical	-0.02	0
4599.77717	Horizontal	-10.28	0



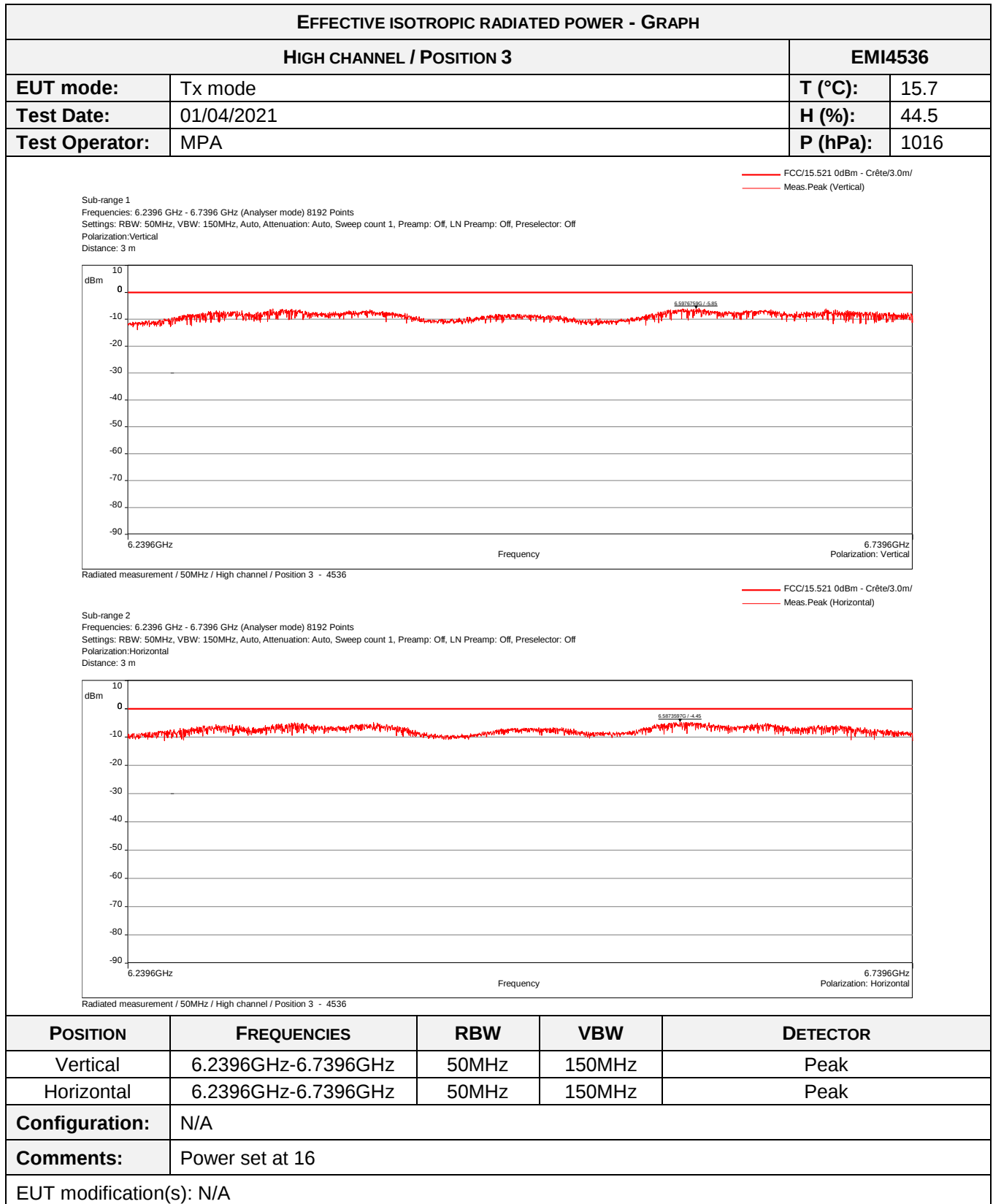
MID CHANNEL / POSITION 3 - TABULATED RESULTS			
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)
4382.7707	Vertical	-7.15	0
4382.648614	Horizontal	-0.72	0



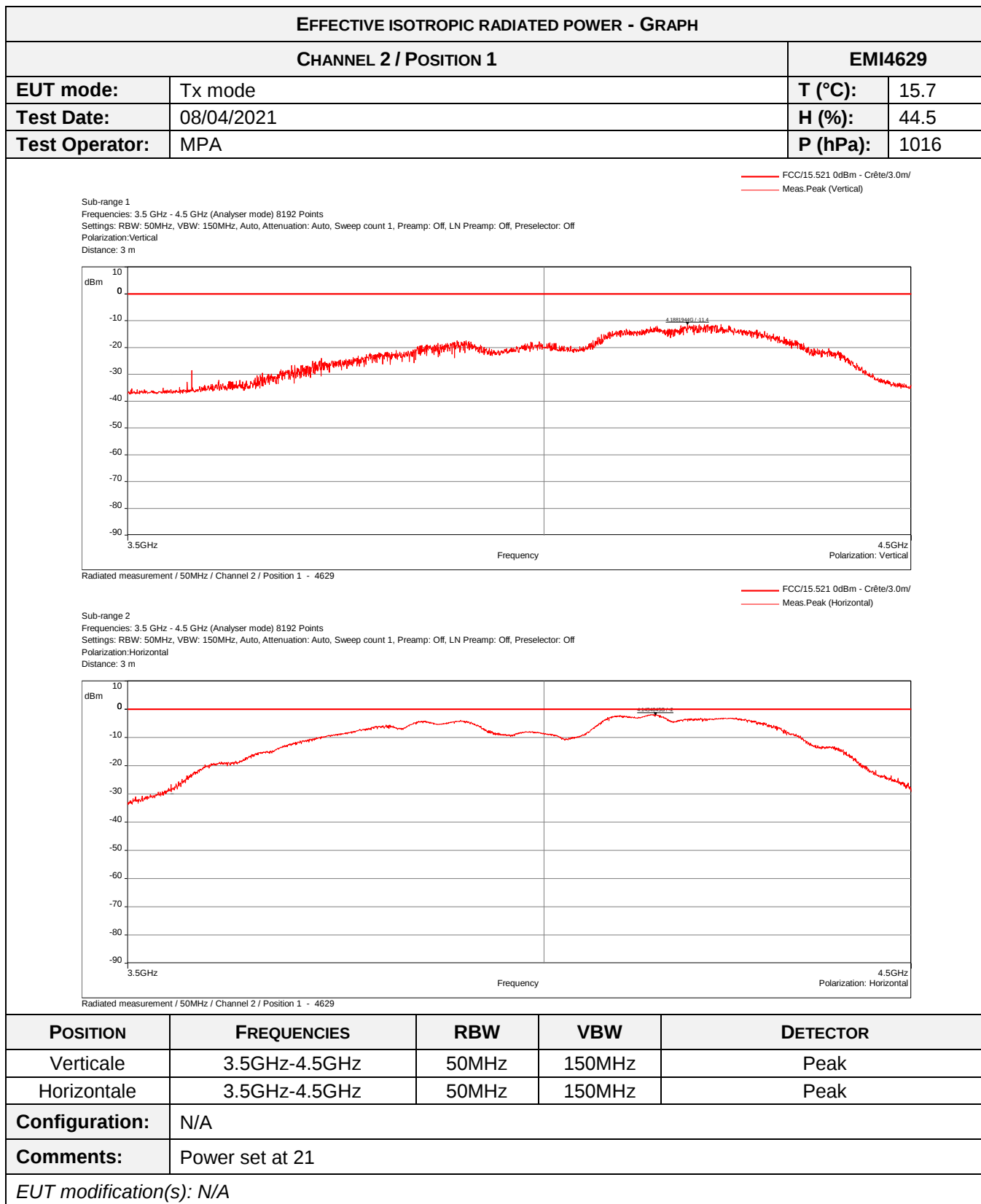
HIGH CHANNEL / POSITION 1 - TABULATED RESULTS			
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)
6332.812062	1	-10.79	0
6392.389647	2	-1.46	0



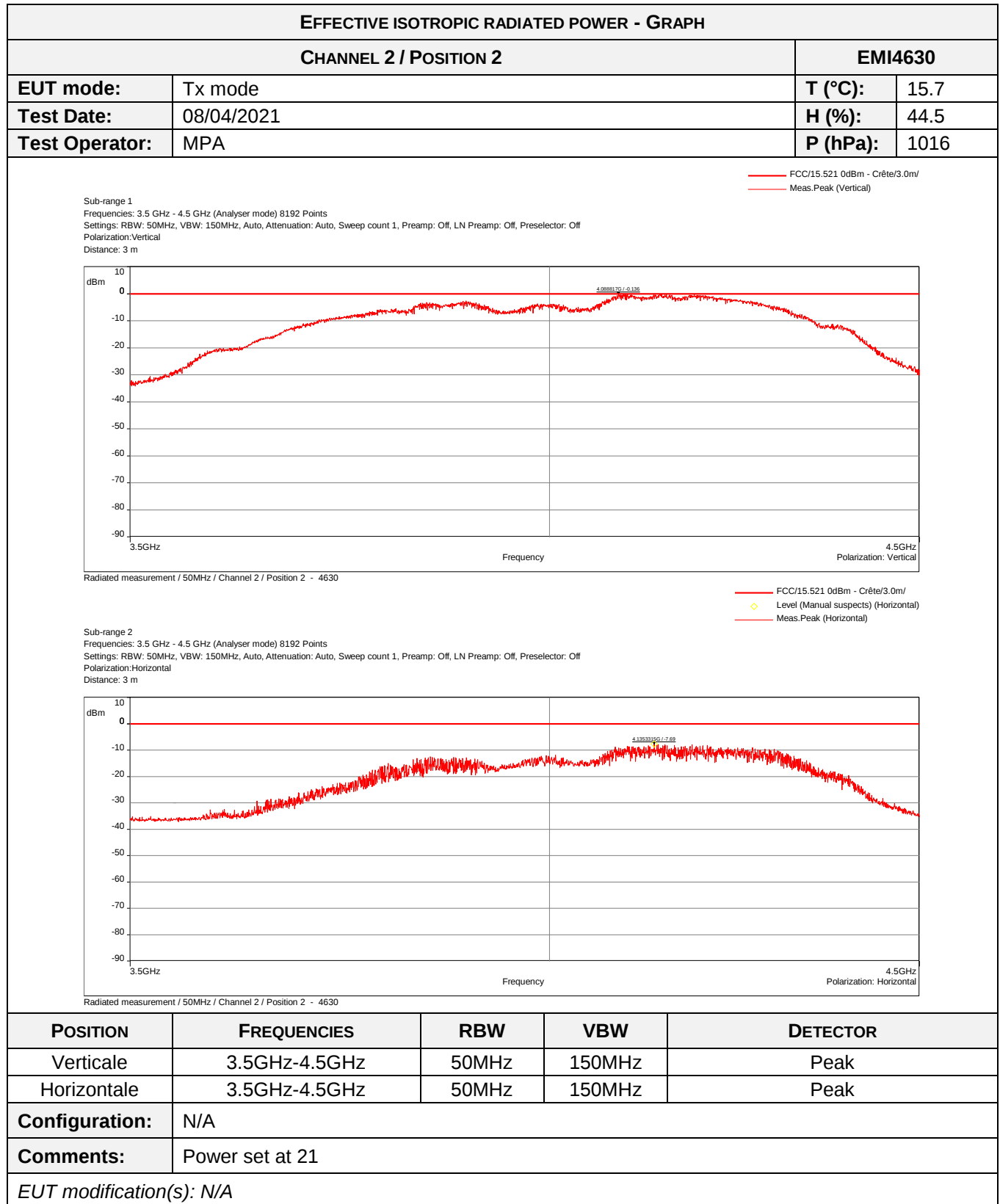
HIGH CHANNEL / POSITION 2 - TABULATED RESULTS			
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)
6391.779221	Vertical	-2.69	0
6587.481822	Horizontal	-6.13	0



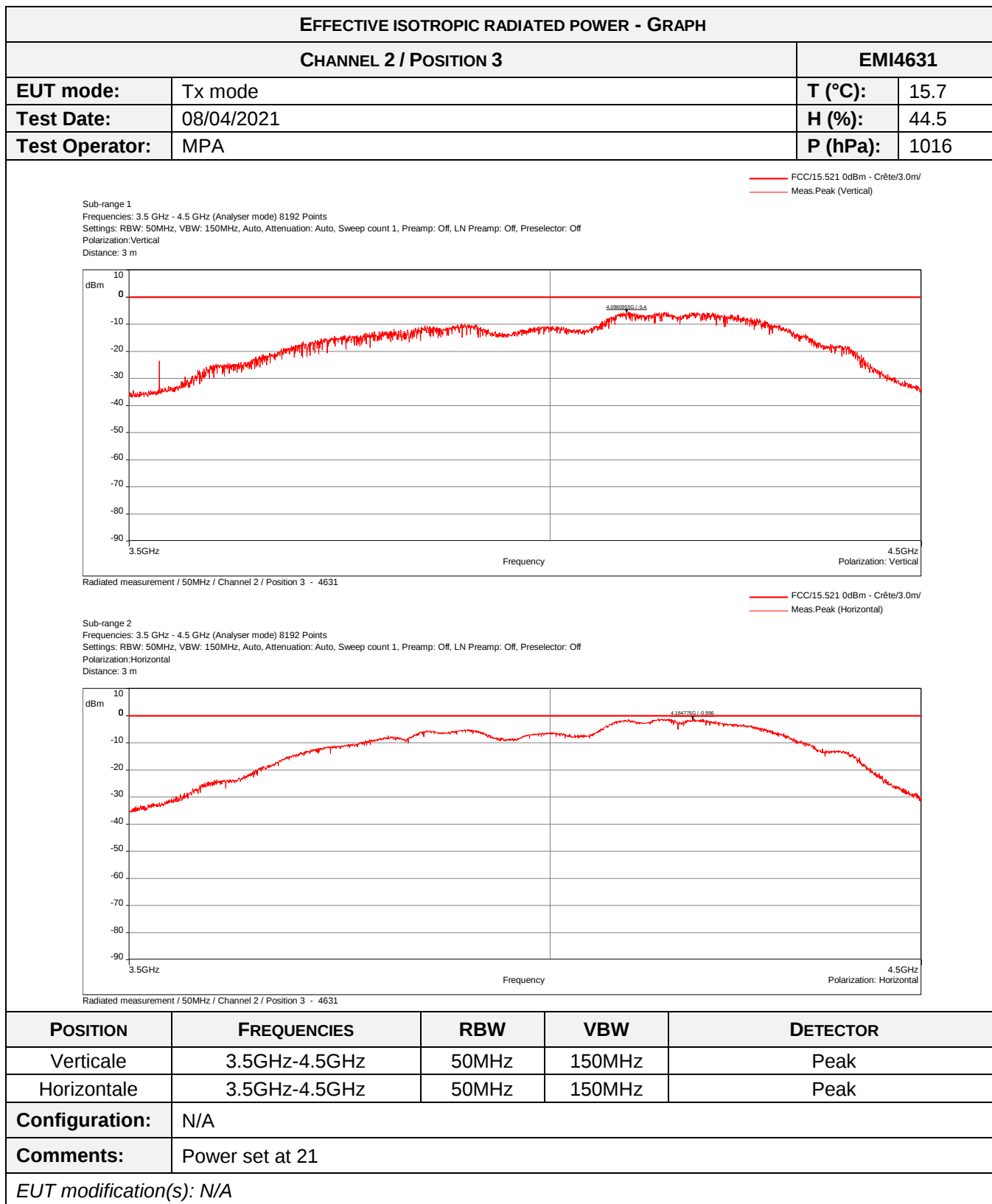
HIGH CHANNEL / POSITION 3 - TABULATED RESULTS			
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)
6597.675937	Vertical	-5.85	0
6587.359736	Horizontal	-4.45	0



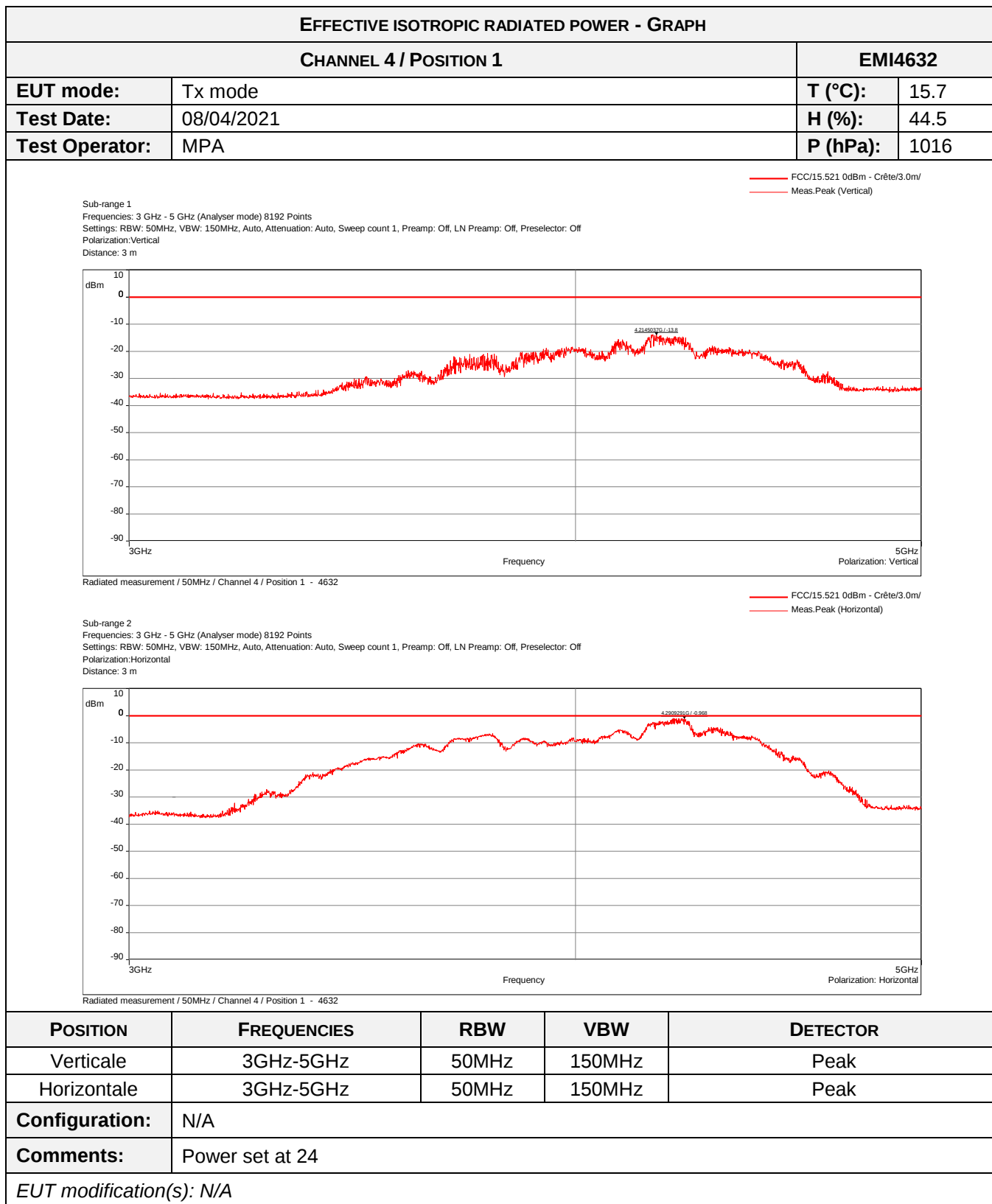
CHANNEL 2 / POSITION 1 - TABULATED RESULTS			
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)
4188.19436	Vertical	-11.39	0
4145.464534	Horizontal	-2.00	0



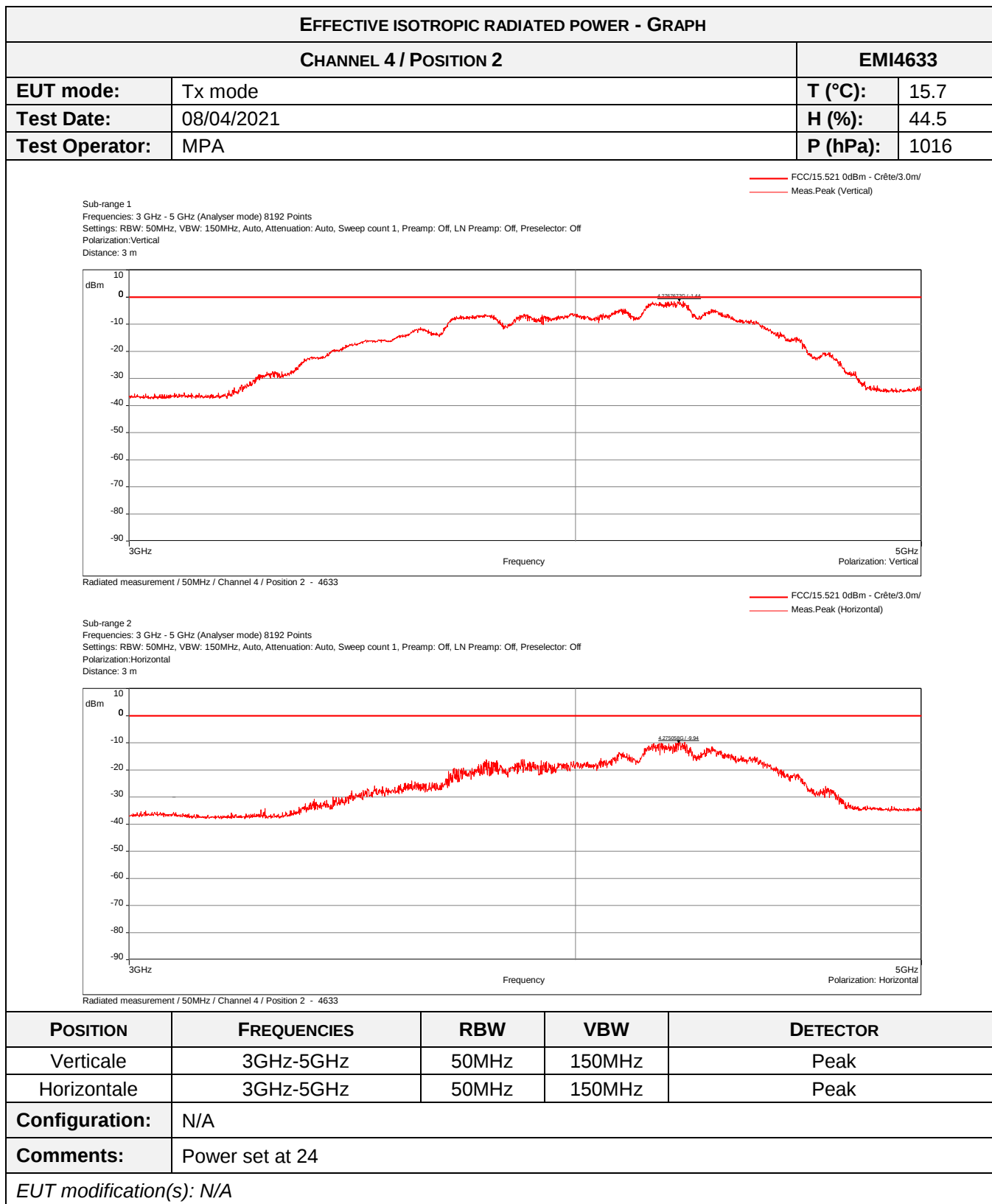
CHANNEL 2 / POSITION 2 - TABULATED RESULTS			
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)
4088.817	Vertical	-0.13	0
4135.331	Horizontal	-7.69	0



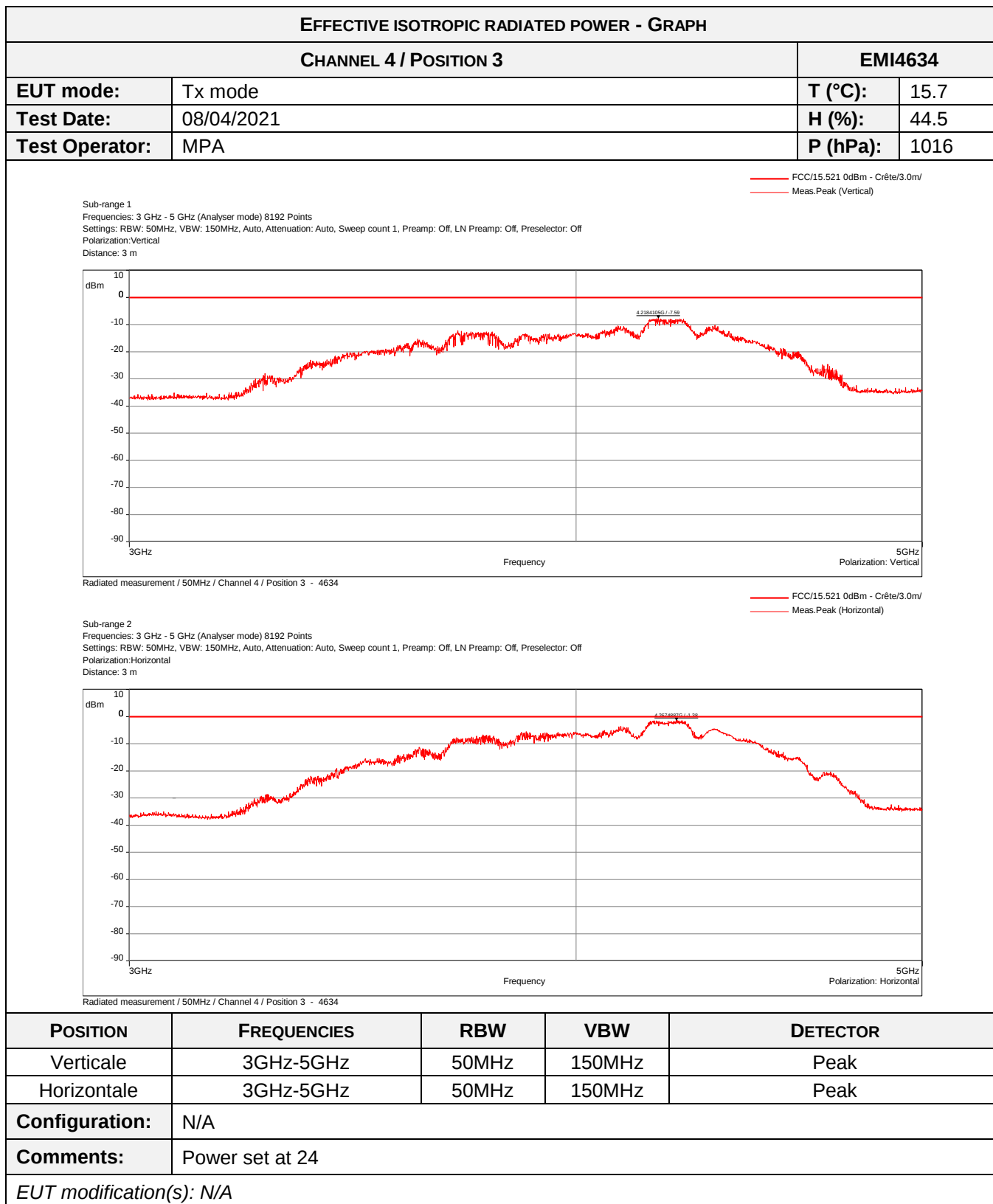
CHANNEL 2 / POSITION 3 - TABULATED RESULTS			
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)
4098.095471	Vertical	-5.40	0
4184.775974	Horizontal	-1.00	0



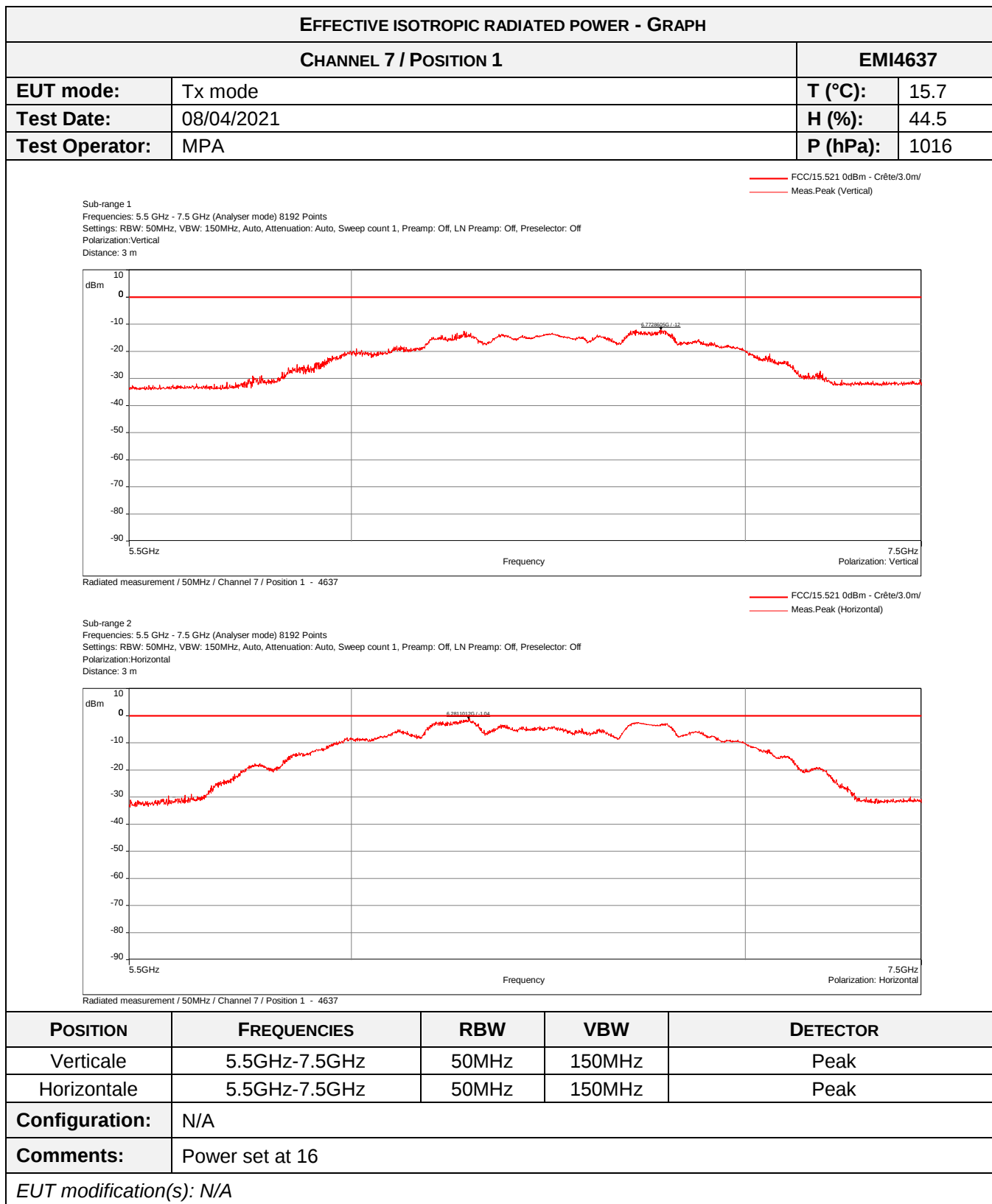
CHANNEL 4 / POSITION 1 - TABULATED RESULTS			
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)
4214.503724	Vertical	-13.83	0
4290.929068	Horizontal	-0.97	0



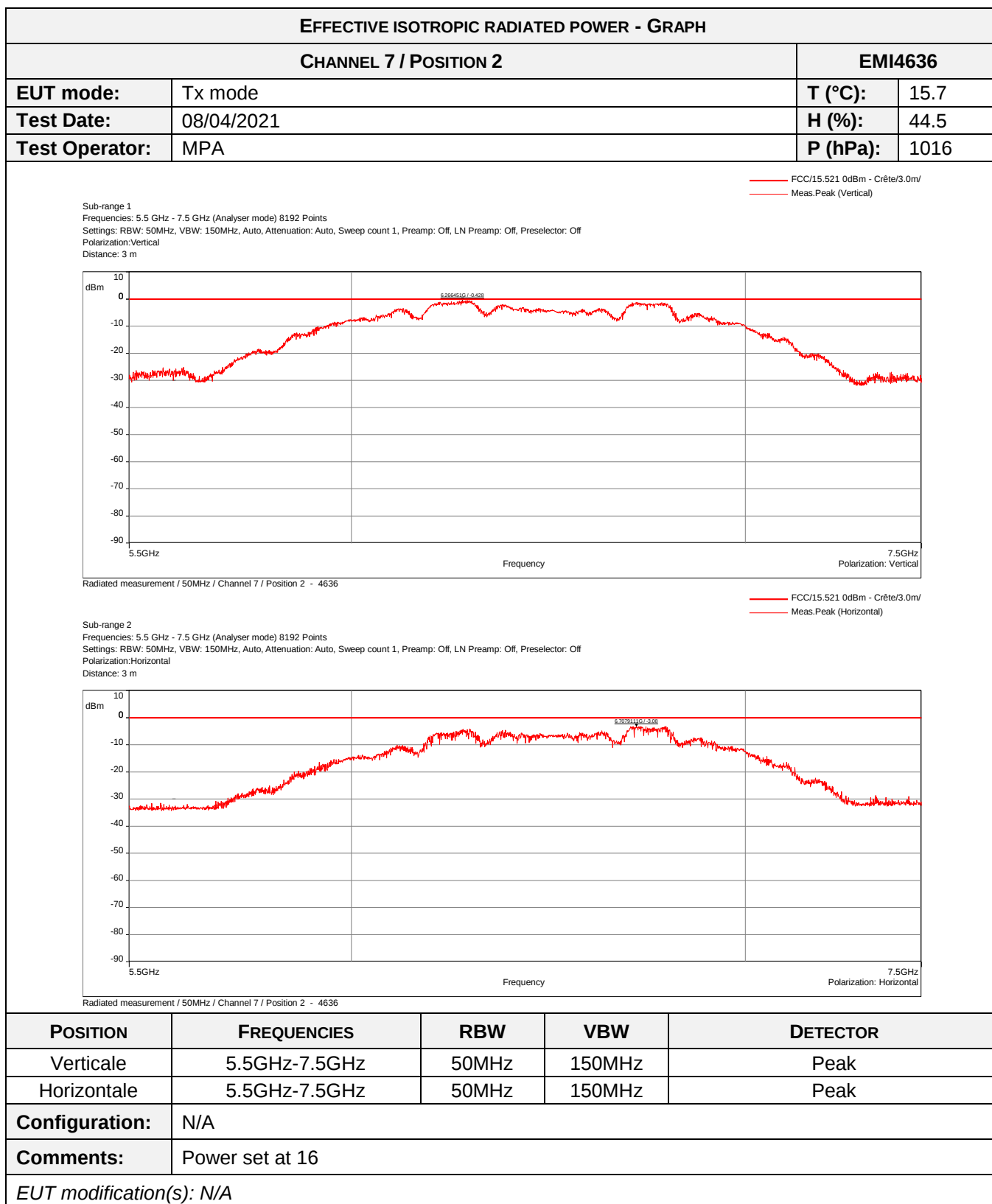
CHANNEL 4 / POSITION 2 - TABULATED RESULTS			
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)
4276.767183	Vertical	-1.44	0
4275.05799	Horizontal	-9.94	0



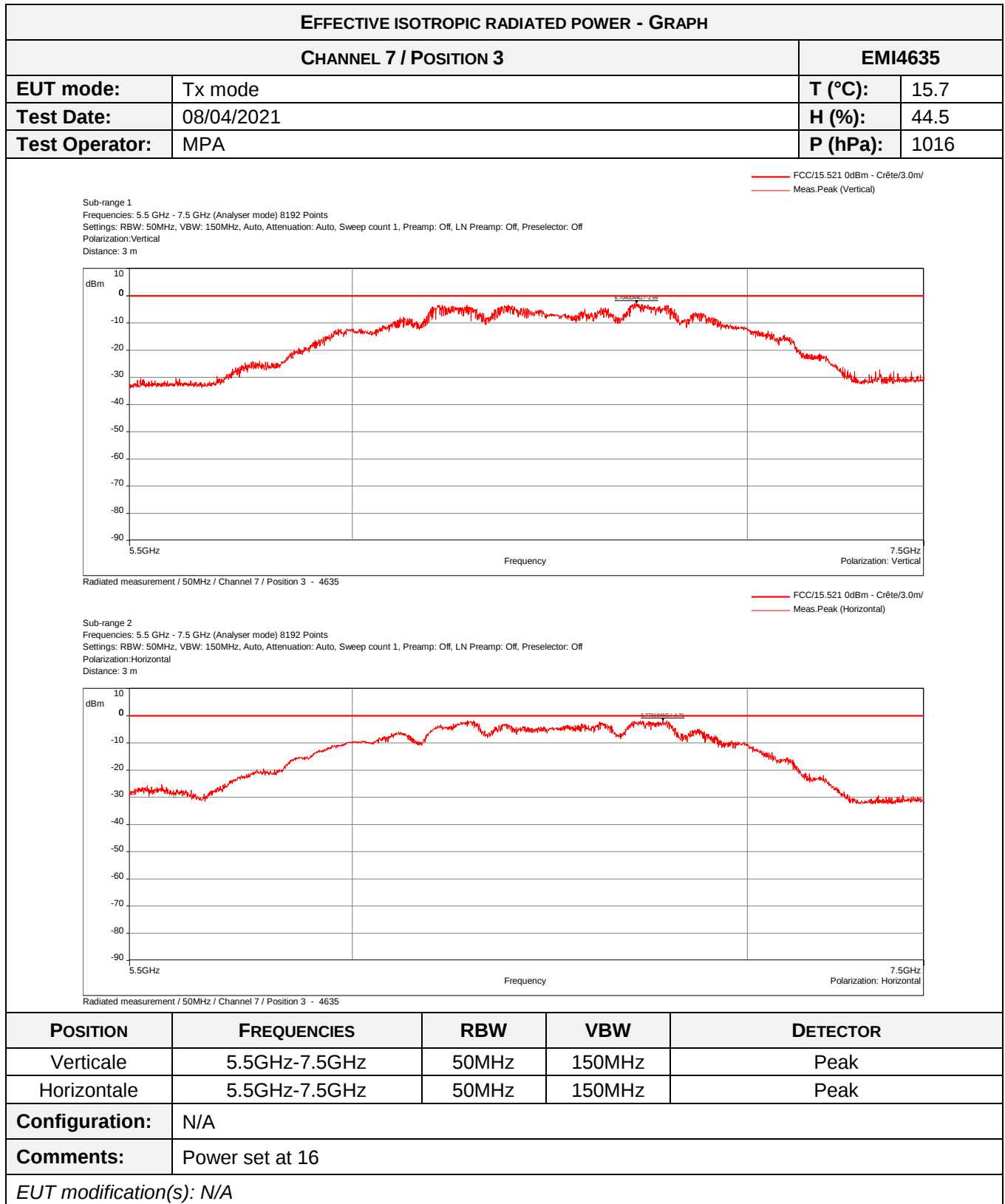
CHANNEL 4 / POSITION 3 - TABULATED RESULTS			
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)
4218.41045	Vertical	-7.59	0
4267.488707	Horizontal	-1.38	0



CHANNEL 7 / POSITION 1 - TABULATED RESULTS			
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)
6772.860457	Vertical	-11.96	0
6281.101209	Horizontal	-1.04	0



CHANNEL 7 / POSITION 2 - TABULATED RESULTS			
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)
6266.450983	Vertical	-0.43	0
6707.911122	Horizontal	-3.08	0



CHANNEL 7 / POSITION 3 - TABULATED RESULTS			
Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)
6704.004395	Vertical	-2.59	0
6773.104627	Horizontal	-1.71	0

End of test report