EMC Technologies Pty. Ltd.
ABN 82 057 105 549

Melbourne
176 Harrick Road
Keilor Park, Vic 3042
Tel: +61 3 9365 1000

Sydney
Unit 3/87 Station Road
Seven Hills, NSW 2147
Tel: +61 2 9624 2777

Email: sales@emctech.com.au
Web: www.emctech.com.au

RADIO REPORT FOR CERTIFICATION

47 CFR PART 15 SUBPART C (SECTION 15.247)

Client: Minelab Electronics Pty. Ltd.
Device Under Test / PMN: Platypus Metal Detector
Model Number / HVIN: EQX 800
FCC ID: Z4C-0022

Report Number: M170635-1R1
(This report supersedes M170635-1)
Date of Issue: 16 November 2017

EMC Technologies Pty Ltd reports apply only to the specific samples tested under stated test conditions. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. EMC Technologies Pty Ltd shall have no liability for any deductions, inferences or generalisations drawn by the client or others from EMC Technologies Pty Ltd issued reports. This report shall not be used to claim, constitute or imply product endorsement by EMC Technologies Pty Ltd.

TABLE OF CONTENTS

RADIO REPORT
CERTIFICATE OF COMPLIANCE

Device / PMN:	Platypus Metal Detector
Model Number / HVIN:	EQX 800
Manufacturer:	Minelab Electronics Pty. Ltd.
Tested for:	Minelab Electronics Pty. Ltd.
Address:	2 Second Avenue, Mawson Lakes, South Australia 5095, AUSTRALIA
Phone:	+61 (0)8 8238 0851
Contact:	Shan Wang
Email:	shan.wang@minelab.com.au
Standards:	**47 CFR Part 15 –** Radio Frequency Devices **Subpart C –** Intentional Radiators **Section 15.247 –** Operation within the bands 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz
Result:	The EQX 800 complied with the applicable requirements of 47 CFR Part 15 Subpart C for a Frequency Hopping Spread Spectrum transceiver.
Test Dates:	10 August to 28 September, 2017
Issue Date:	16 November 2017
Issued by:	**EMC TECHNOLOGIES PTY. LTD.,** 176 Harrick Road, Keilor Park, VIC 3042, Australia. Phone: +61 3 9365 1000, Web: www.emctech.com.au
Test Officer:	William Alam Test Engineer
Authorised Signatory:	Rob Weir Wireless Certification Manager
Attestation:	I hereby certify that the device(s) described herein were tested as described in this report and that the data included is that which was obtained during such testing.

RADIO REPORT FOR CERTIFICATION
to
47 CFR Part 15 Subpart C (section 15.247)

1.0 INTRODUCTION

Radio tests were performed on the EQX 800 Platypus Metal Detector in accordance with the applicable requirements of 47 CFR, Part 15 Subpart C – Section 15.247 for a Frequency Hopping Spread Spectrum Transceiver (FHSS) operating within the band: 2400 to 2483.5 MHz.

1.1 Test Procedure

Radio measurements were performed in accordance with the appropriate procedures of ANSI C63.10: 2013.

The measurement instrumentation conformed to the requirements of ANSI C63.2: 2009.

1.2 Summary of 47 CFR Part 15 Subpart C Results

FCC	Test Performed	Results
15.203	Antenna requirement	**Complied**
15.205	Restricted bands of operation	**Complied**
15.207	Conducted limits	**Complied**
15.209	Radiated emissions limits; general requirements	**Complied**
15.247 (a)	Channel Separation	**Complied**
	Number of channels and time of occupancy	**Complied**
15.247 (b)	Peak Output Power	**Complied**
15.247 (c)	Antenna Gain > 6 dBi	**Not Applicable**
15.247 (d)	Out of Band Emissions	**Complied**
15.247 (e)	Peak Power Spectral Density	**Not Applicable**
15.247 (f)	Hybrid Systems	**Not Applicable**
15.247 (g)	FHS with continuous data streams and short bursts	**Complied (Bluetooth Industry Standard)**
15.247 (h)	Adaptivity	
15.247 (i)	Radio Frequency Hazard	**Complied**
2.1049	Occupied Bandwidth	**Complied**

2.0 GENERAL INFORMATION

(Information supplied by the Client)

2.1 EUT (Transmitter) Details

Radio:	Digital Transmission System (DTS)
Frequency Band:	2400-2483.5 MHz
Frequency Range:	2402 to 2480 MHz Ch. Low: 2402 MHz Ch. Mid: 2441 MHz Ch. High: 2480 MHz
Modulation:	PSK
Emission Designator:	974KGXW
Antenna type and gain:	Inverted S, PCB track with 3 dBi gain

2.2 EUT (Host) Details

Device under Test / PMN:	Platypus Metal Detector
Model Number / HVIN:	EQX 800
Manufacturer:	Minelab Electronics Pty. Ltd.
Power Supply:	Internal Battery Charger tested: Redot Technology Co., Ltd. Model 4UTR2069

The EQX 800 Metal Detector was intended for operating in an open field, detecting metal targets of various sizes at different depths.

2.3 Test Configuration

Engineering software was provided to enable configuration of the radio such as selection of transmit channel.

2.4 Modifications by EMC Technologies

No modifications were performed.

2.5 Test Facility

2.5.1 General

EMC Technologies Pty Ltd has also been accredited as a Conformity Assessment Body (CAB) by Australian Communications and Media Authority (ACMA) under the APECTEL MRA and is designated to perform compliance testing on equipment subject to Declaration of Conformity (DoC) and Certification under Parts 15 and 18 of the FCC Commission’s rules – **Registration Number 494713 & Designation number AU0001.**

EMC Technologies indoor open are test site (iOATS) have been accepted by Industry Canada for the performance of radiated measurements in accordance with RSS-Gen, Issue 8 - **Industry Canada iOATS number - IC 3569B**

Measurements in this report were performed at EMC Technologies' laboratory in Keilor Park, Victoria Australia.

2.5.2 NATA Accreditation

EMC Technologies is accredited in Australia by the National Association of Testing Authorities (NATA). All testing in this report has been conducted in accordance with EMC Technologies' scope of NATA accreditation.

NATA is the Australian National laboratory accreditation body and has accredited EMC Technologies to IEC/ISO17025. A major requirement for accreditation is the assessment of the company and its personnel as being technically competent in testing to the standards. This requires documented test procedures, continued calibration of measurement equipment, traceable to the National Standard at the National Measurements Institute (NMI) and an internal quality system to ISO 9002. NATA has mutual recognition agreements with the National Voluntary Laboratory Accreditation Program (NVLAP) and the American Association for Laboratory Accreditation (A^2LA).

The current full scope of accreditation can be found on the NATA website: www.nata.com.au

2.6 Test Equipment Calibration

Measurement instrumentation and transducers were calibrated in accordance with the applicable standards by an independent NATA registered laboratory such as Agilent Technologies (Australia) Pty Ltd or the National Measurement Institute (NMI) or in-house. All equipment calibration is traceable to Australian national standards at the National Measurements Institute.

Equipment Type	Make/Model/Serial Number	Last Cal. dd/mm/yyyy	Due Date dd/mm/yyyy	Cal. Interval
Chamber	Frankonia SAC-10-2 (R-139)	22/03/2017	22/03/2018	1 Year, *1
EMI Receiver	R&S ESW26, 2 Hz – 26.5 GHz Sn: 101306 (R-143)	31/03/2017	31/03/2018	1 Year, *2
Antennas	EMCO 6502 Active Loop 9 kHz – 30 MHz Sn. 9311-2801 (A-231)	20/07/2015	20/07/2018	3 Year, *2
	SUNOL JB6 Biconilog 30 – 6000 MHz Sn. A012312 (A-363)	26/05/2016	26/05/2018	2 Year, *2
	EMCO 3115 Double Ridge Horn 1 – 18 GHz Sn: 8908-3282 (A-004)	15/07/2016	15/07/2019	3 Year, *1
	ETS-Lindgren 3160-09 Horn 18 – 26.5 GHz Sn: 66032 (A-307)	31/05/2016	31/05/2019	3 Year, *1
Cables	Room 12 inbuilt cable Panel 1 to 10 m (C-422)	31/05/2017	31/05/2018	1 Year, *1
	Room 12 inbuilt cable Panel 1 to 3 m (C-421)	31/05/2017	31/05/2018	1 Year, *1
	Room 12 Antenna cable (C-437)	31/05/2017	31/05/2018	1 Year, *1
	Sucoflex 104 Huber & Suhner 18 GHz, 5 m cable (C-337)	03/01/2017	03/01/2018	1 Year, *1
	Sucoflex 102 Huber & Suhner 40 GHz, 3 m cable (C-273)	04/01/2017	04/01/2018	1 Year, *1

Note *1. Internal NATA calibration.
Note *2. External NATA / A2LA calibration

3.0 TEST RESULTS

3.1 §15.203 Antenna Requirement

The antenna was internal to the device ensuring that it could not be replaced.

3.2 §15.207 Conducted Limits

3.2.1 Test Procedure

The arrangement specified in ANSI C63.10: 2013 was adhered to for the conducted EMI measurements. The EUT was placed in the RF screened enclosure and a CISPR EMI Receiver as defined in ANSI C63.2: 2009 was used to perform the measurements.

The EMI Receiver was operated under program control using the Max-Hold function and automatic frequency scanning, measurement and data logging techniques. The specified 0.15 MHz to 30 MHz frequency range was sub-divided into sub-ranges to ensure that all short duration peaks were captured.

3.2.2 Peak Maximising Procedure

The various operating modes of the system were investigated. For each of the sub-ranges, the EMI receiver was set to continuous scan with the Peak detector set to Max-Hold mode. The Quasi-Peak detector and the Average detector were then invoked to measure the actual Quasi-Peak and Average level of the most significant peaks, which were detected.

3.2.3 Calculation of Voltage Levels

The voltage levels were automatically measured in software and compared to the test limit. The method of calculation was as follows:

$$\mathbf{V_{EMI} = V_{Rx} + L}$$

Where:
V_{EMI} = The Measured EMI voltage in dBµV to be compared to the limit.
V_{Rx} = The Voltage in dBµV read directly at the EMI receiver.
L = The insertion loss in dB of the LISN, cables and transient Limiter.

3.2.4 Plotting of Conducted Emission Measurement Data

The measurement data pertaining to each frequency sub-range were concatenated to form a single graph of (peak) amplitude versus frequency. This was performed for both Active and Neutral lines and the composite graph was subsequently plotted. A list of the highest relevant peaks and the respective Quasi-Peak and Average values were also plotted on the graph.

3.2.5 Test Climatic Conditions

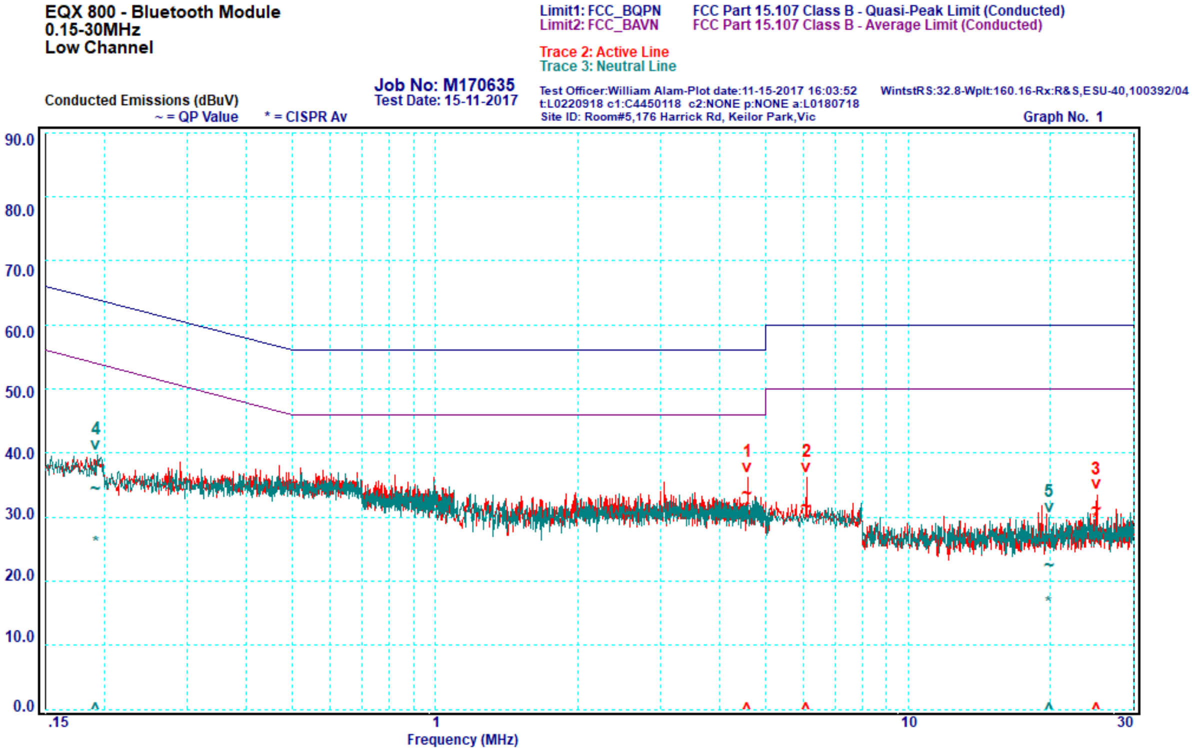
Shielded Room Temperature: 25°C
Relative Humidity: 46%

3.2.6 Conclusion

The sample complied with the applicable spurious emissions of §15.207. Refer to the following graphs for the results.

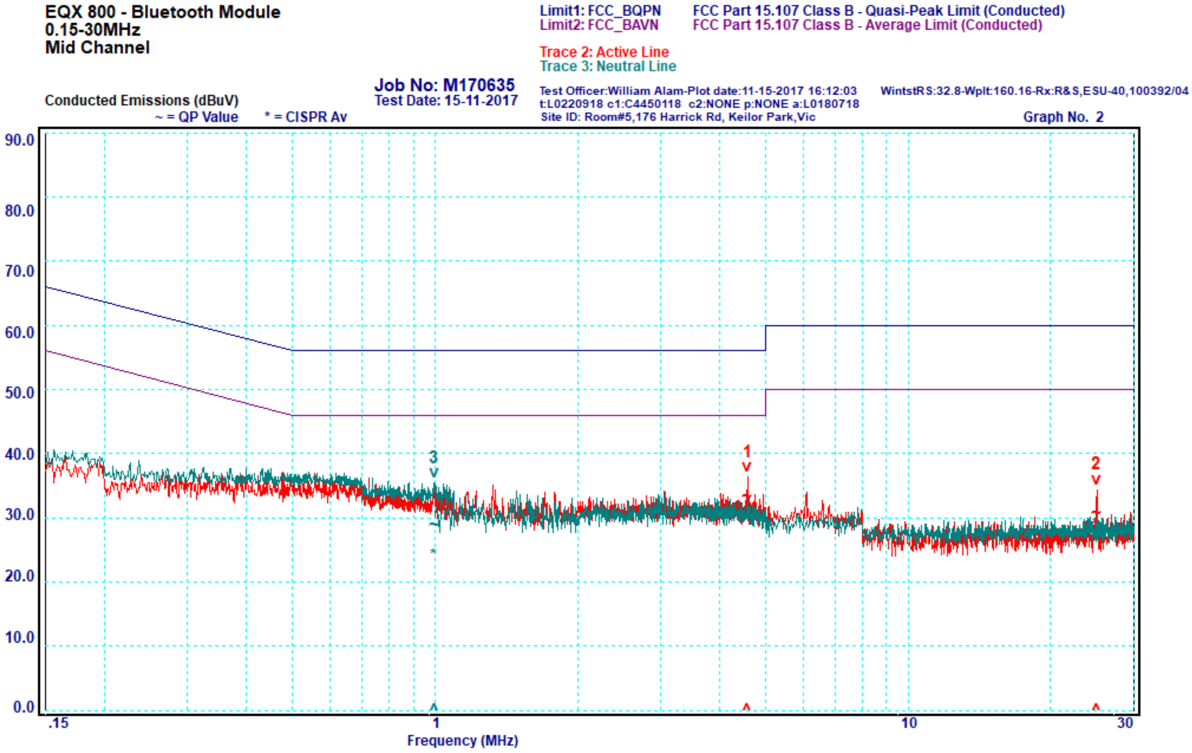
3.2.7 Results of Conducted Emission Measurements

Active and Neutral Line, Channel 2402MHz, 0.15-30MHz



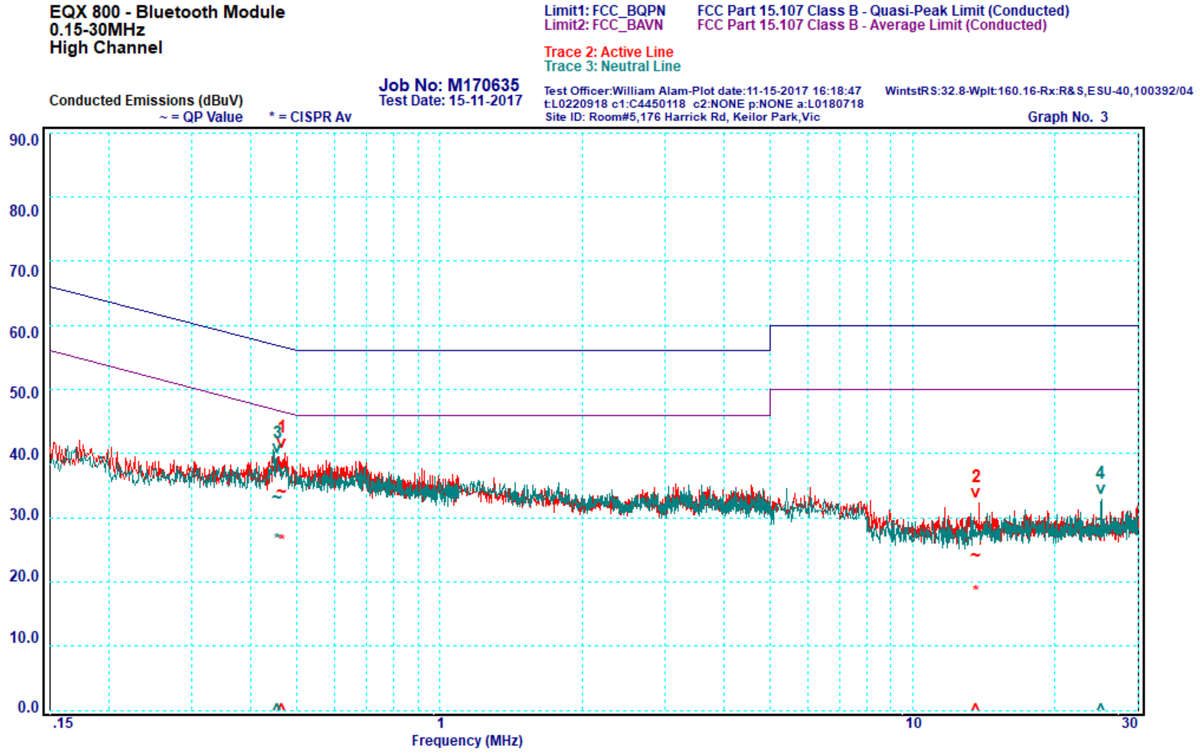
Peak	Frequency [MHz]	Line	Quasi-Peak			Average		
			Level [dBµV]	Limit [dBµV]	Margin [±dB]	Level [dBµV]	Limit [dBµV]	Margin [±dB]
1	4.576	Active	33.6	56	-22.4	31.2	46	-14.8
2	6.101	Active	31.5	60	-28.5	29.3	50	-20.7
3	25	Active	31.3	60	-28.7	29.5	50	-20.5
4	0.192	Neutral	34.3	63.9	-29.6	25.9	53.9	-28.0
5	19.87	Neutral	22.4	60	-37.6	16.5	50	-33.5

Active and Neutral Line, Channel 2441MHz, 0.15-30MHz



Peak	Frequency [MHz]	Line	Quasi-Peak			Average		
			Level [dBµV]	Limit [dBµV]	Margin [±dB]	Level [dBµV]	Limit [dBµV]	Margin [±dB]
1	4.572	Active	33.2	56	-22.8	30.3	46	-15.7
2	25.00	Active	30.7	60	-29.3	28.8	50	-21.2
3	0.996	Neutral	28.8	56	-27.2	24	46	-22

Active and Neutral Line, Channel 2480MHz, 0.15-30MHz



Peak	Frequency [MHz]	Line	Quasi-Peak			Average		
			Level [dBμV]	Limit [dBμV]	Margin [±dB]	Level [dBμV]	Limit [dBμV]	Margin [±dB]
1	0.465	Active	34	56.6	-22.6	26.2	46.6	-20.4
2	13.65	Active	24	60	-36	18.3	50	-31.7
3	0.456	Neutral	33	56.8	-23.8	26.5	46.8	-20.3
4	25.00	Neutral	29.6	60	-30.4	26.8	50	-23.2

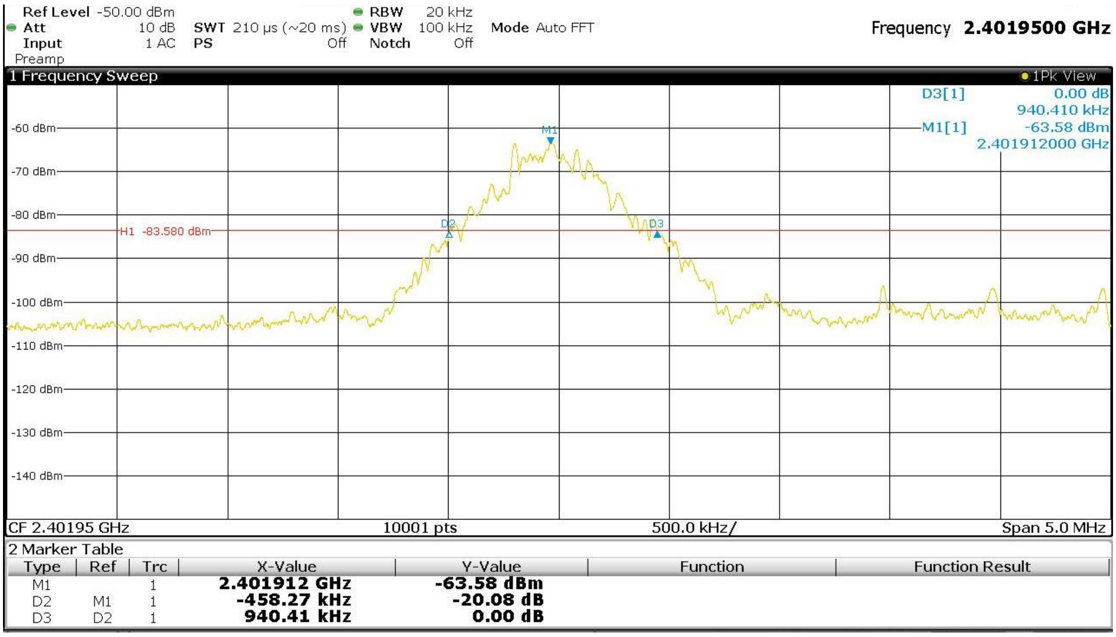
3.3 §15.247(a1) Channel Separation

In the band 2400.0 – 2483.5 MHz, the channel separation must be more than 25 kHz or 2/3 of the 20 dB bandwidth, whichever is greater.

20 dB Emission Bandwidth

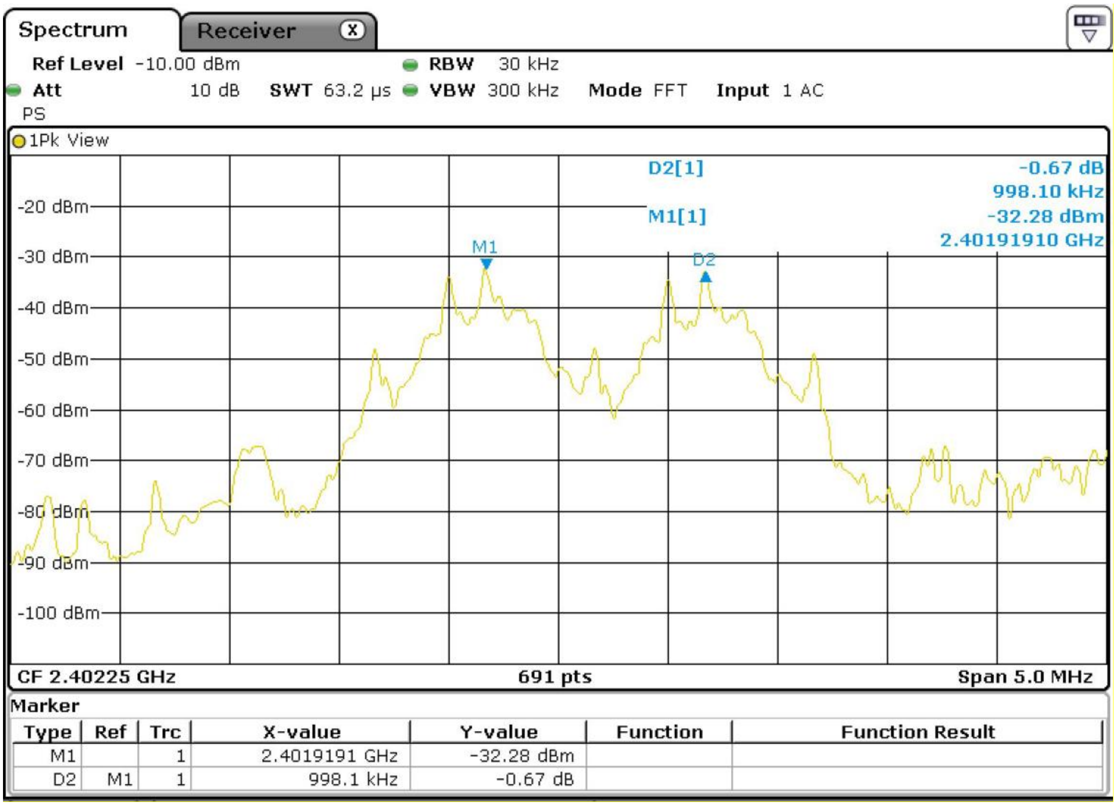
Centre Frequency [MHz]	20 dB Bandwidth [kHz]
2402	940
2480	932

The largest 20 dB bandwidth was measured on lowest channel:



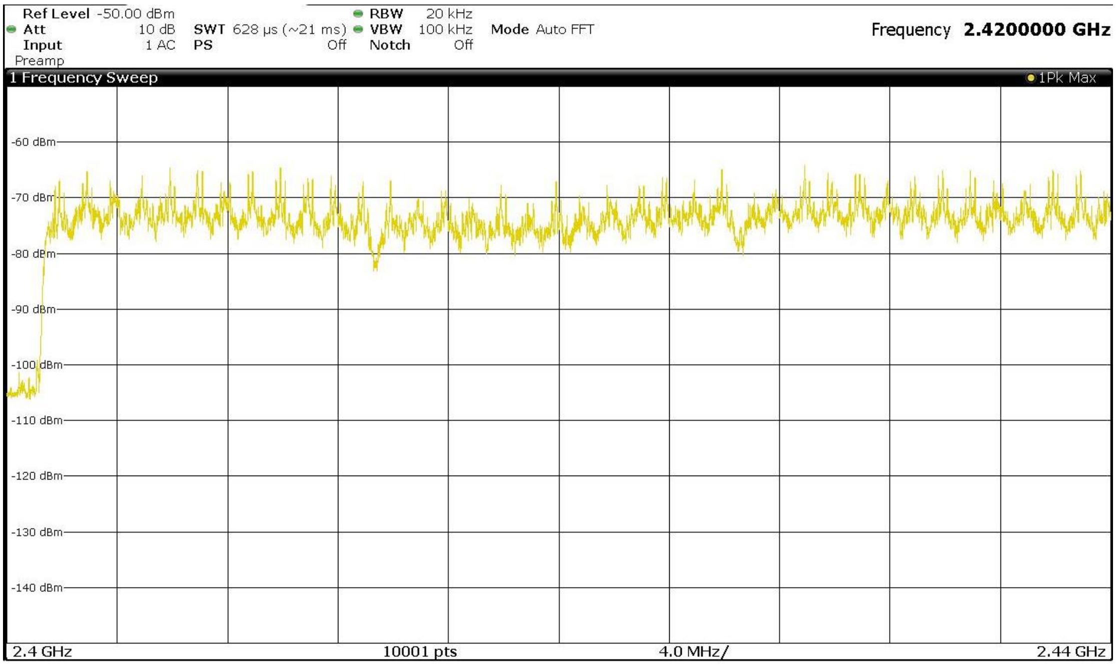
Channel Separation

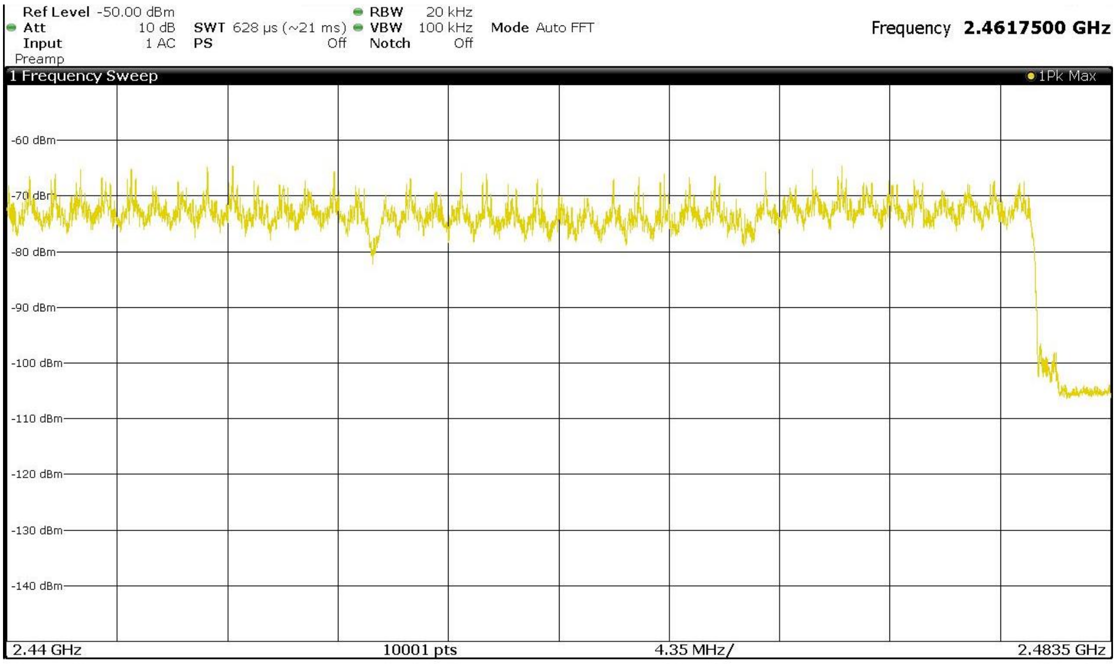
Channel Separation [kHz]	Limit [kHz]	Result
998	627	Complied



3.4 §15.247(a1) Number of channels and time of occupancy

There must be at least 15 hopping channels employed by devices operating in the band 2400-2483.5 MHz. The EQX 800 utilised 79 channels:





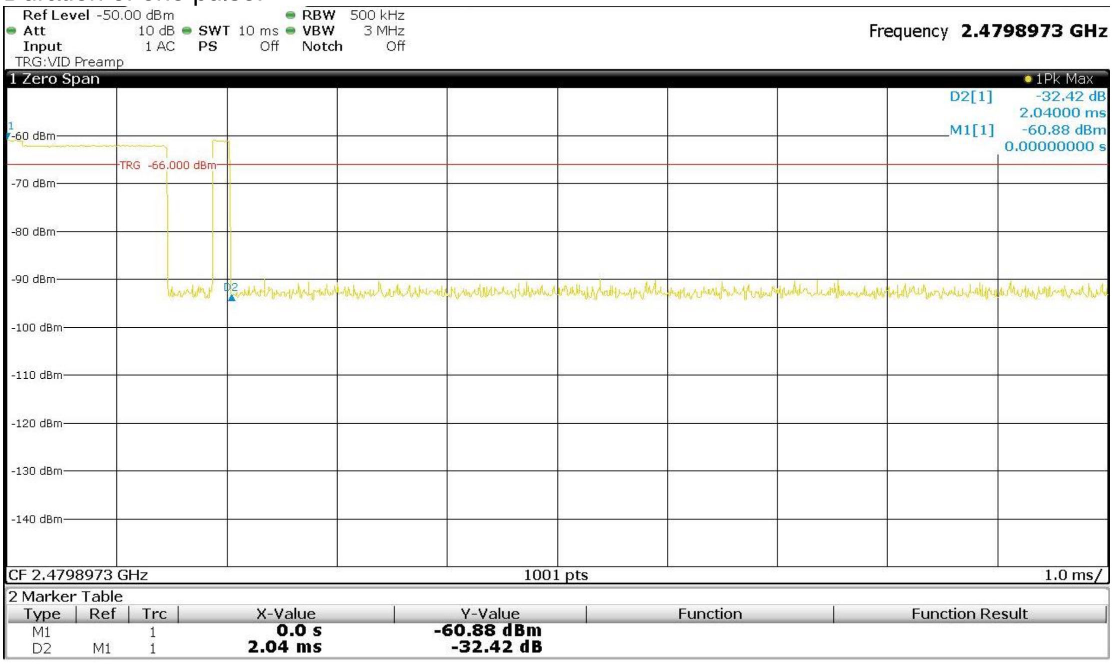
Time of Occupancy

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds, multiplied by the number of hopping channels employed.

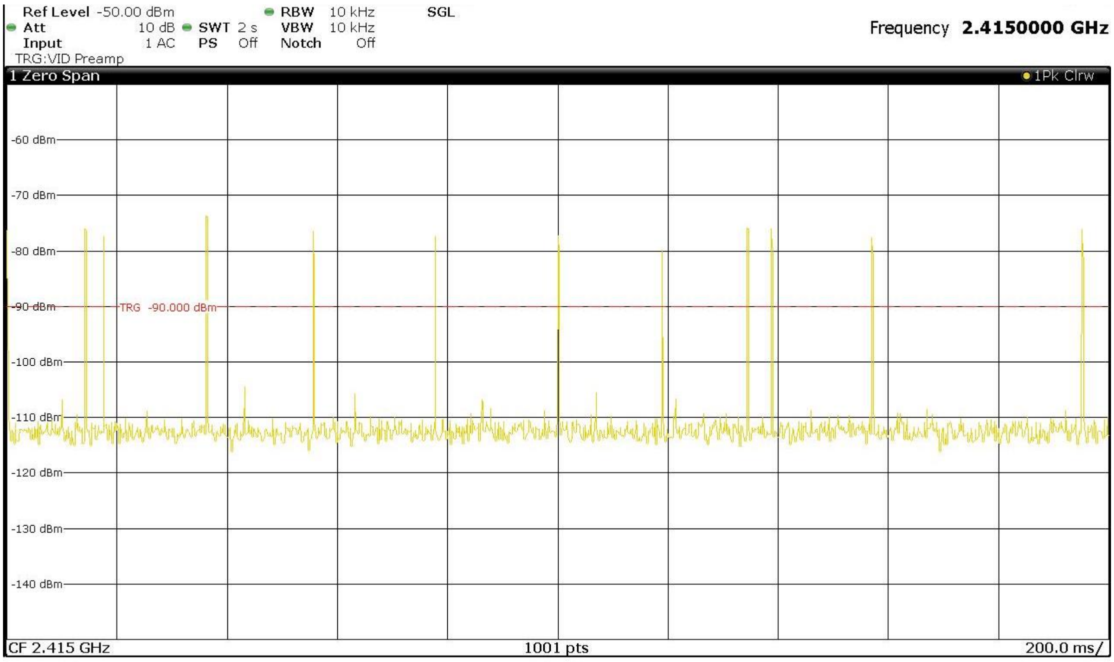
Time of occupancy in 0.4 × 79 = 31.6 seconds ≤ 0.4 seconds.

On time of one pulse	= 2.04 ms
Number of pulses in 2 seconds	= 12
Number of pulses in 31.6 seconds	= 190
Total on time in 31.6 seconds	= 190 × 2.04 ms = **388 ms** (limit = 400 ms)

Duration of one pulse:



Pulses in 2 seconds:



3.5 §15.247(b3) Peak Output power

Testing was performed in a semi-anechoic chamber at a distance of 3 metres. Different configurations of EUT and antenna polarization were investigated to produce highest emission EIRP and the EUT was set to transmit in continuous transmission mode without modulation.

Results:

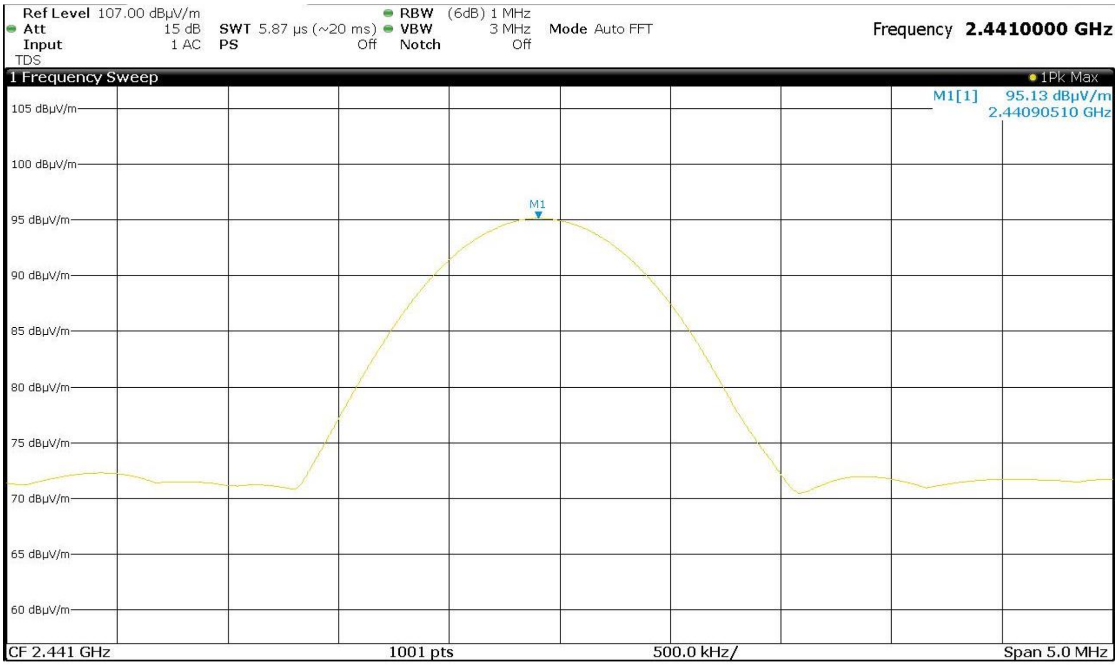
Freq. (MHz)	3 m Field (dBµV/m)	EIRP		Limit	Ant. Gain (dBi)	Conducted power		Limit	Margin
		(dBm)	(W)	(W)		(dBm)	(W)	(W)	(W)
2402	90.9	-4.33	0.000	4	3.0	-7.33	0.000	1	0.999
2441	95.1	-0.13	0.001	4	3.0	-3.13	0.000	1	0.999
2480	94.6	-0.63	0.001	4	3.0	-3.63	0.000	1	0.999

dBµV/m to dBm conversion:

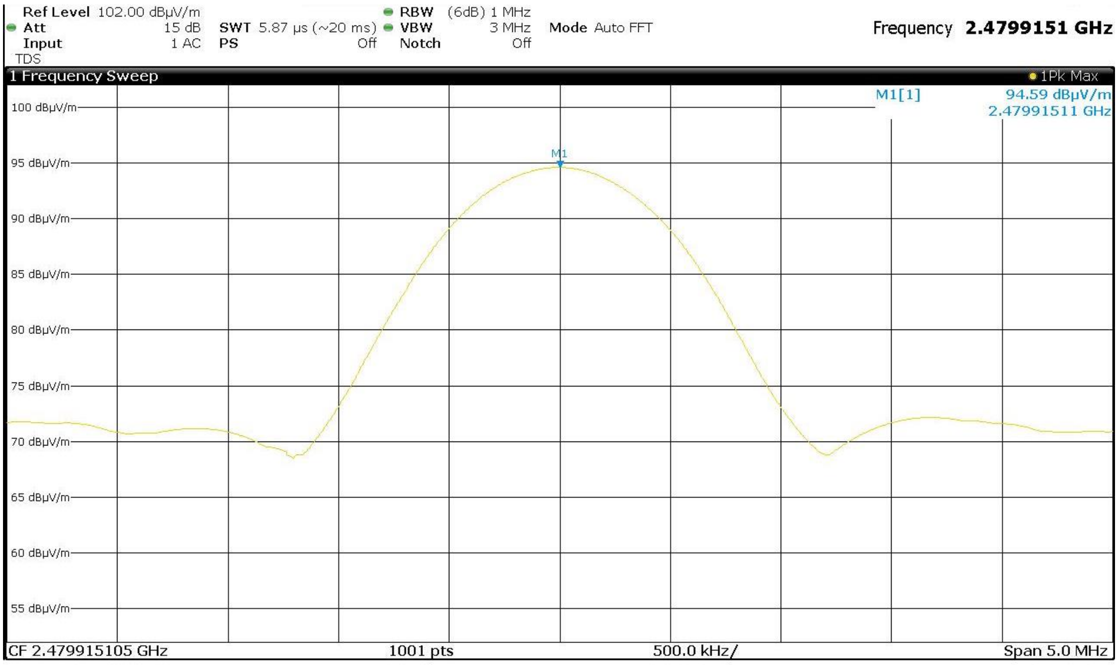
$$E = 20.log\left(\frac{\sqrt{30.P}}{d}\right) + 120$$

Where: E = electric field strength (dBµV/m)
P = EIRP in Watts
d = measurement distance in metres

Channel 2402 MHz



Channel 2441 MHz



Channel 2480 MHz

3.6 §15.205 Restricted Bands of Operation

The restricted band limits were applied.

3.7 §15.209 Radiated emission limits; general requirements

The limits given in §15.247 applied, however attenuation below the general levels was not required.

3.8 §15.247(d) Out of Band Emissions

3.8.1 Radiated Spurious Measurements

Radiated spurious emission measurements were performed in a semi-anechoic chamber compliant with ANSI C63.4: 2014.

The test frequency range was sub-divided into smaller bands with sufficient frequency resolution to permit reliable display and identification of emissions.

Frequency range [MHz]	Measurement Bandwidth [kHz]	Measurement Distance [m]	Antenna
0.009 to 0.150	0.2	10	0.6 metre loop antenna
0.150 to 30	9	10	
30 to 1000	120	10	Biconilog hybrid
1000 to 18 000	1000	3	Standard gain or broad band horns
18 000 to 40 000	1000	1	

The sample was slowly rotated with the spectrum analyser set to Max-Hold. This was performed for at least two antenna heights. When an emission was located, it was positively identified and its maximum level found by rotating the automated turntable and by varying the antenna height. Devices design for a fixed position were tested in that position, portable devices were tested in three orthogonal orientations.

The measurement data for each frequency range was corrected for cable losses, antenna factors and preamplifier gain. This process was performed for both horizontal and vertical antenna polarisations.

Calculation of field strength

The field strength was calculated automatically by the software using the pre-stored calibration data. The method of calculation is shown below:

$$\boldsymbol{E = V + AF - G + L}$$

Where: E = Radiated Field Strength in dBµV/m.
V = EMI Receiver Voltage in dBµV/m.
AF = Antenna Factor in dB. (stored as a data array)
G = Preamplifier Gain in dB. (stored as a data array)
L = Cable loss in dB. (stored as a data array of Insertion Loss versus frequency)

Field strength conversion over distance

To convert a limit given at a certain distance to a limit at the measurement distance or vice-versa the following equation was applied:

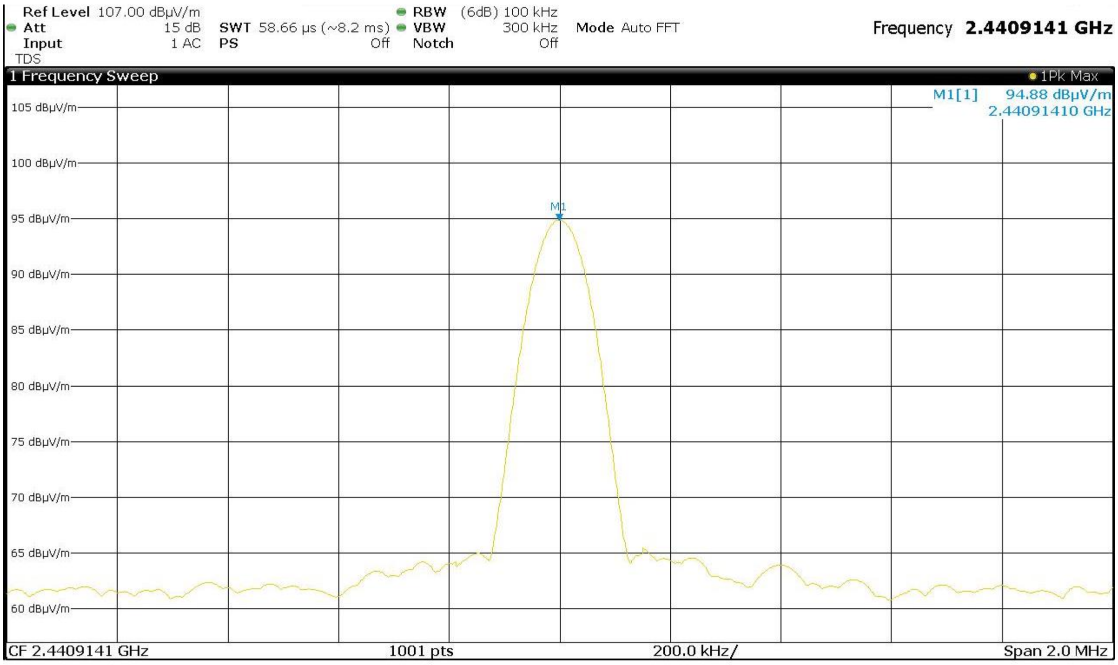
$$E_x = 20 \times \log\left(\frac{d_y \times 10^{E_y/20}}{d_x}\right)$$

Where: E_x = Electric field at x metres (dBµV/m)
E_y = Electric field at y metres (dBµV/m)
d_x = Measurement distance of x metres
d_y = Measurement distance of y metres

3.8.2 Spurious Emission Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

Channel [MHz]	100 kHz BW Power at 3 m [dBµV/m]	Limit		
		10 m [dBµV/m]	3 m [dBµV/m]	1 m [dBµV/m]
2441	94.9	64.4	74.9	84.4



Channel 2441 MHz

3.8.3 Radiated Spurious Emission Tabulated Results

Frequency Band: 9 kHz - 30 MHz

No emissions detected above the measurement system noise floor. Limit 15.209 was applied over the full range, 9 kHz to 30 MHz.

Frequency Band: 30 - 1000 MHz

Limit 15.209 was applied over the full range, 30 MHz to 1000 MHz.

Channel [MHz]	Polarity	Frequency [MHz]	Quasi-Peak [dBµV/m]		Limit [dBµV/m]	Margin [dB]
			10 m (Meas.)	3 m (Calc.)		
2402	Vertical	31.41	19.6	30.1	40.0	-9.9
2441	Vertical	30.06	20.3	30.8	40.0	-9.2
	Horizontal	264.06	11.4	21.9	46.0	-24.1

Frequency Band: 1 000 – 18 000 MHz

Average Detector Results:

Channel [MHz]	Polarity	Frequency [GHz]	3 m Average [dBµV/m]	Limit [dBµV/m]	Margin [dB]
2402	Vertical	2.293	23.6	54.0	-30.4
		4.804	38.9	54.0	-15.1
	Horizontal	4.804	50.3	54.0	-3.7
2441	Vertical	4.881	42.8	54.0	-11.2
		13.411	37.0	54.0	-17.0
	Horizontal	2.285	27.4	54.0	-26.6
		4.881	**53.1**	**54.0**	**-0.9**
		13.353	37.7	54.0	-16.3
2480	Vertical	4.960	44.0	54.0	-10.0
	Horizontal	4.959	52.1	54.0	-1.9

Peak Detector Results:

Channel [MHz]	Polarity	Frequency [GHz]	3 m Peak [dBµV/m]	Limit [dBµV/m]	Margin [dB]
2402	Vertical	2.293	54.4	74.0	-19.6
		4.804	53.3	74.0	-20.7
	Horizontal	4.804	63.2	74.0	-10.8
2441	Vertical	4.881	55.5	74.0	-18.5
		13.411	50.9	74.0	-23.1
	Horizontal	2.285	57.9	74.0	-16.1
		4.881	64.8	74.0	-9.2
		13.353	51.5	74.0	-22.5
2480	Vertical	4.960	57.0	74.0	-17.0
	Horizontal	4.959	63.8	74.0	-10.2

Frequency Band: 18 000 – 25 000 MHz

Average Detector Results:

Channel [MHz]	Frequency [GHz]	Average [dBμV/m]		Limit [dBμV/m]	Margin [dB]
		1 m (Meas.)	3 m (Calc.)		
2402	22.843	51.5	42.0	63.5	-21.5
2441	19.256	48.0	38.5	63.5	-25.0
2480	19.836	48.7	39.2	63.5	-24.3

Peak Detector Results:

Channel [MHz]	Frequency [GHz]	Peak [dBμV/m]		Limit [dBμV/m]	Margin [dB]
		1 m (Meas.)	3 m (Calc.)		
2402	22.843	65.9	56.4	83.5	-27.1
2441	19.256	62.5	53.0	83.5	-30.5
2480	19.836	62.5	53.0	83.5	-30.5

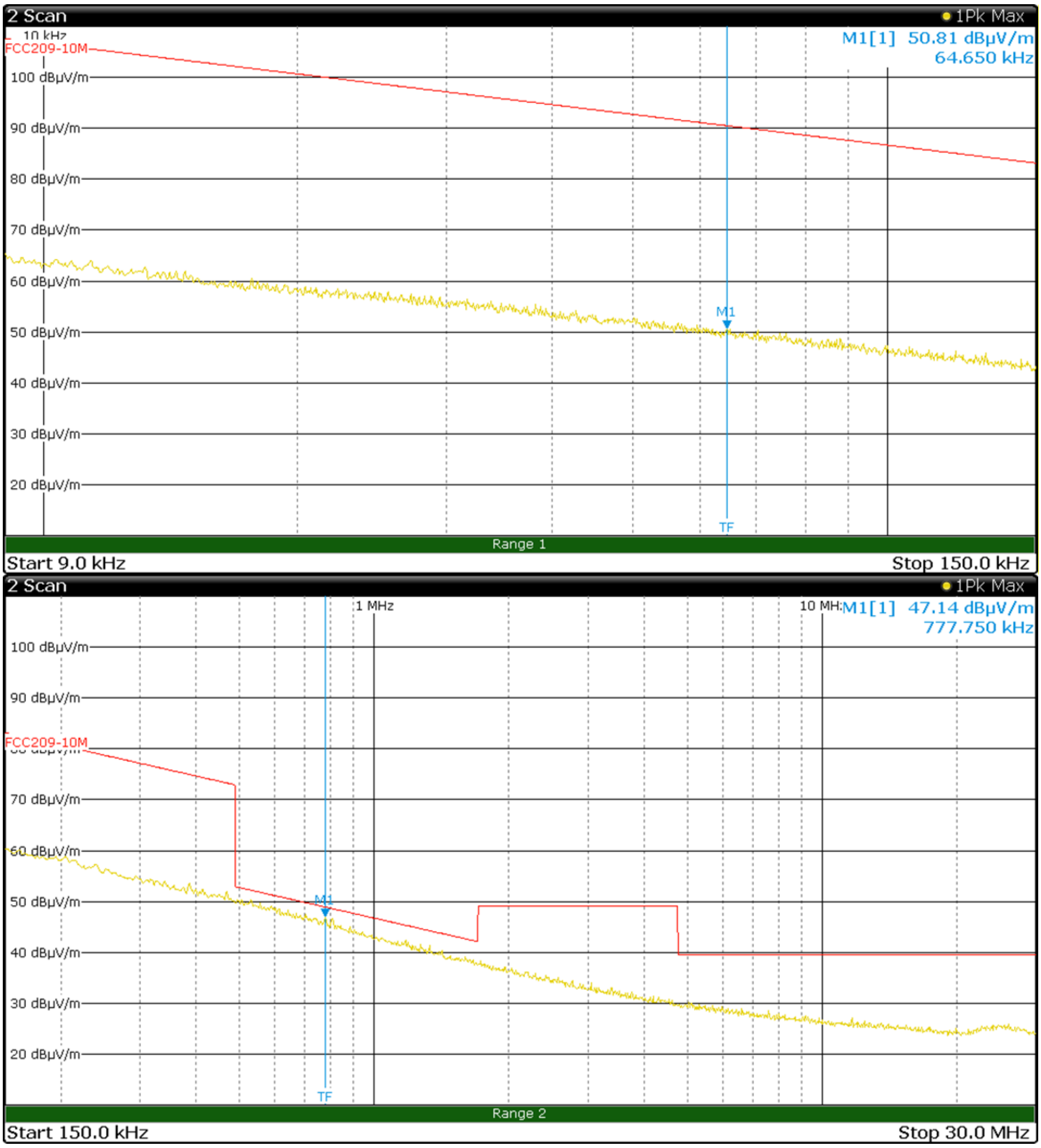
Band-edge measurement results:

Channel [MHz]	Frequency [GHz]	3 m Average [dBμV/m]	Limit [dBμV/m]	Margin [dB]
2402	2.400	46.1	74.9	-28.8
2480	2.4835	41.2	54.0	-12.8
Hopping On	2.400	40.5	74.9	-34.4
	2.4835	41.4	54.0	-12.6

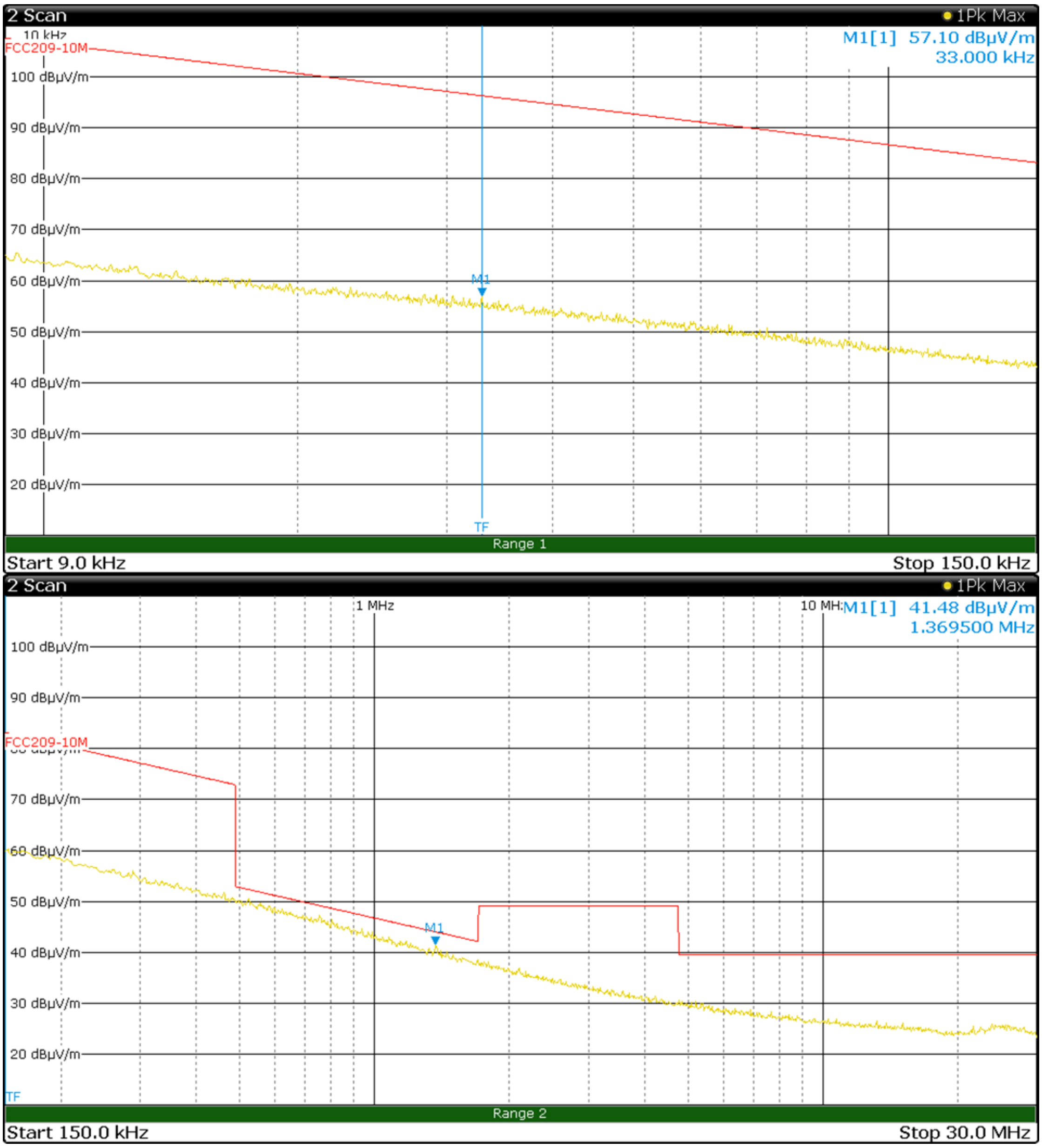
Channel [MHz]	Frequency [GHz]	3 m Peak [dBμV/m]	Limit [dBμV/m]	Margin [dB]
2402	2.400	49.9	94.9	-45.0
2480	2.4835	44.0	74.0	-30.0
Hopping On	2.400	42.7	94.9	-52.2
	2.4835	43.0	74.0	-31.0

3.8.4 Frequency Band: 9 kHz - 30 MHz

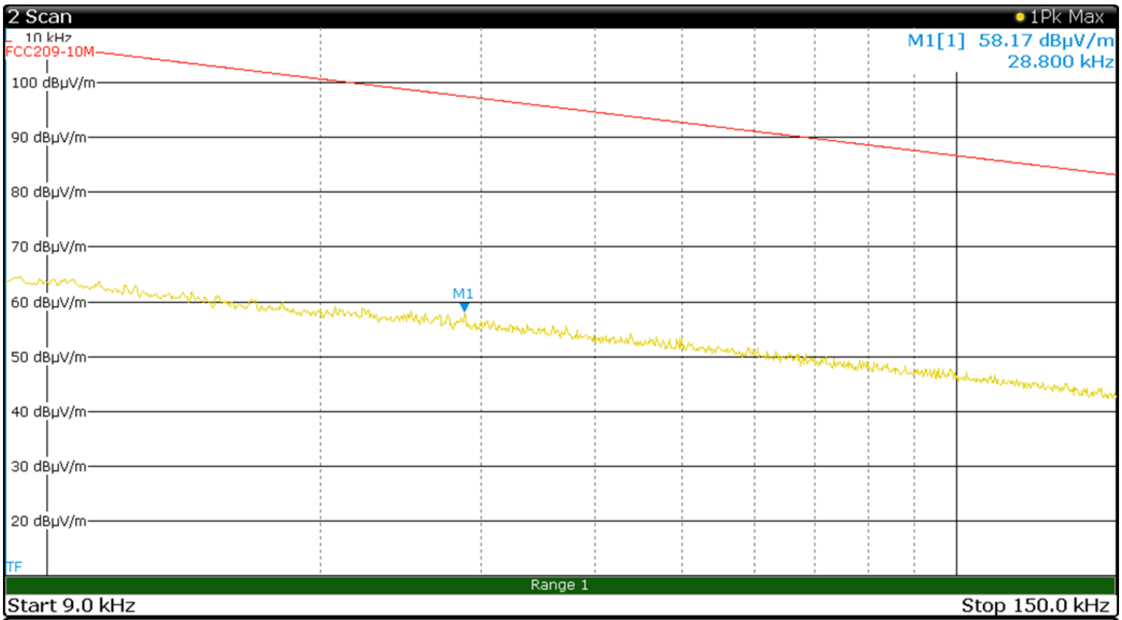
Measurements were made at a distance of 10 metres. The measurement of emissions between 9 kHz – 150 kHz were made with a resolution bandwidth (RBW) of 200 Hz and the video bandwidth (VBW) of 3 kHz, 150 kHz – 30 MHz were measured with the resolution bandwidth (RBW) of 9 kHz and the video bandwidth (VBW) of 30 kHz. Measurements were made with the loop antenna oriented perpendicular, parallel and ground-parallel with respect to the sample. Only the maximum graphs have been reported.

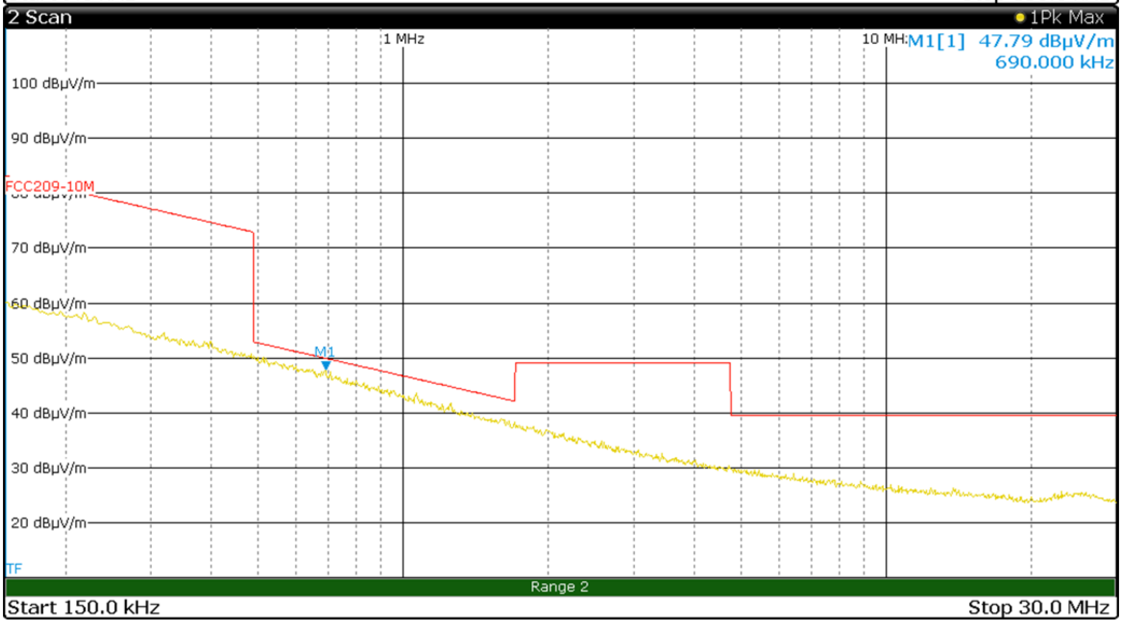


Channel 2402 MHz



Channel 2441 MHz

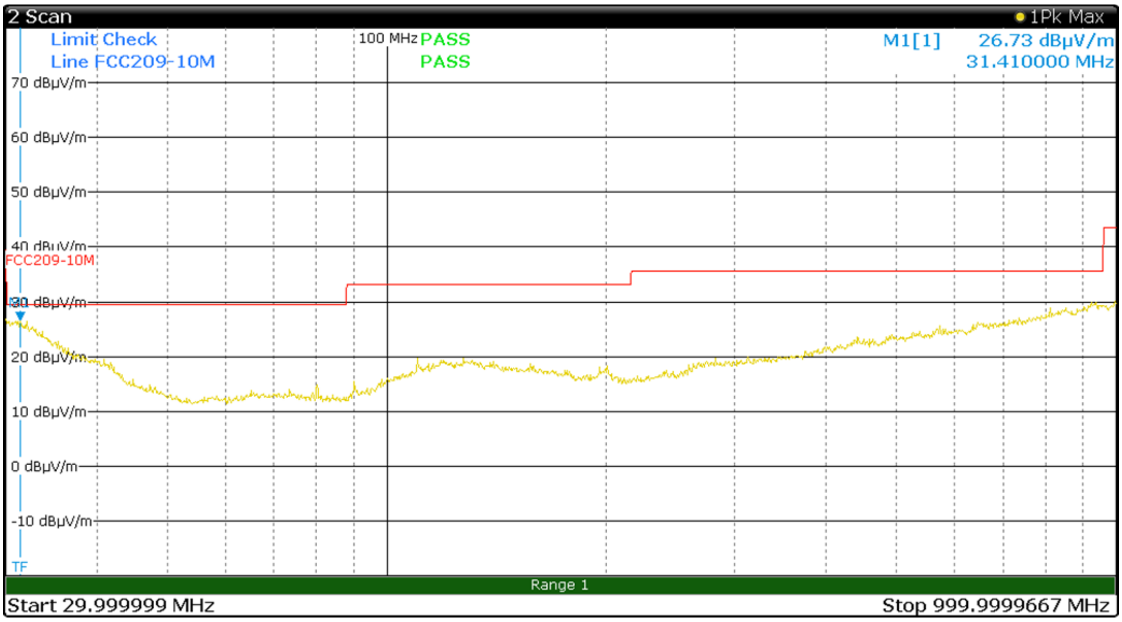




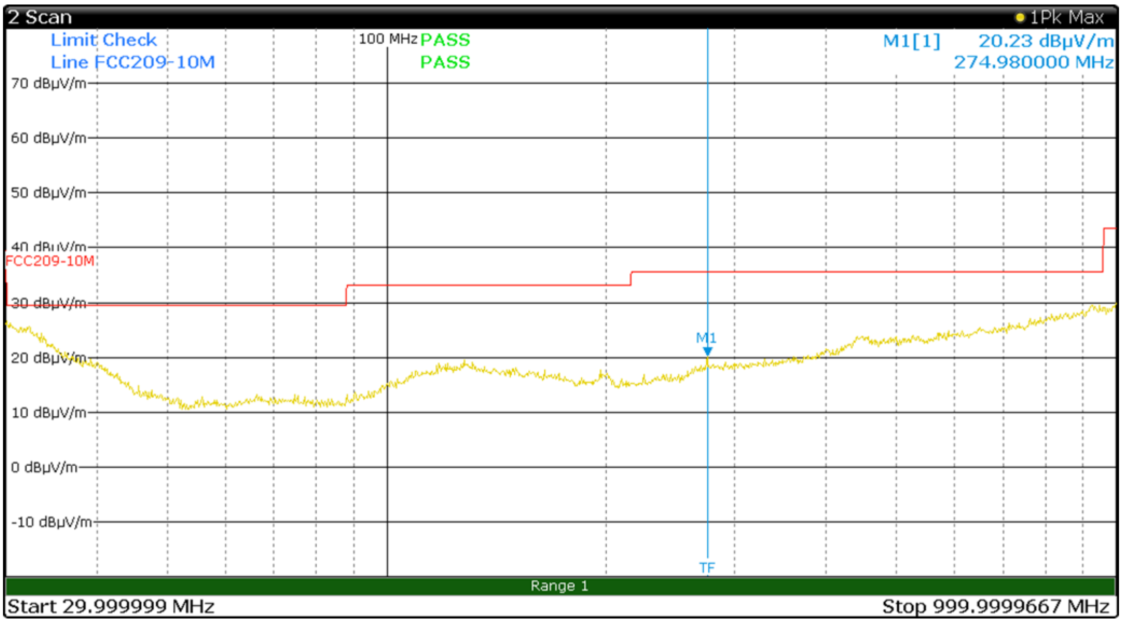
Channel 2480 MHz

3.8.5 Frequency Band: 30 - 1000 MHz

Measurements were made at a distance of 10 metres. The measurement of emissions between 30 - 1000 MHz were made with a resolution bandwidth (RBW) of 120 kHz and the video bandwidth (VBW) of 300 kHz.

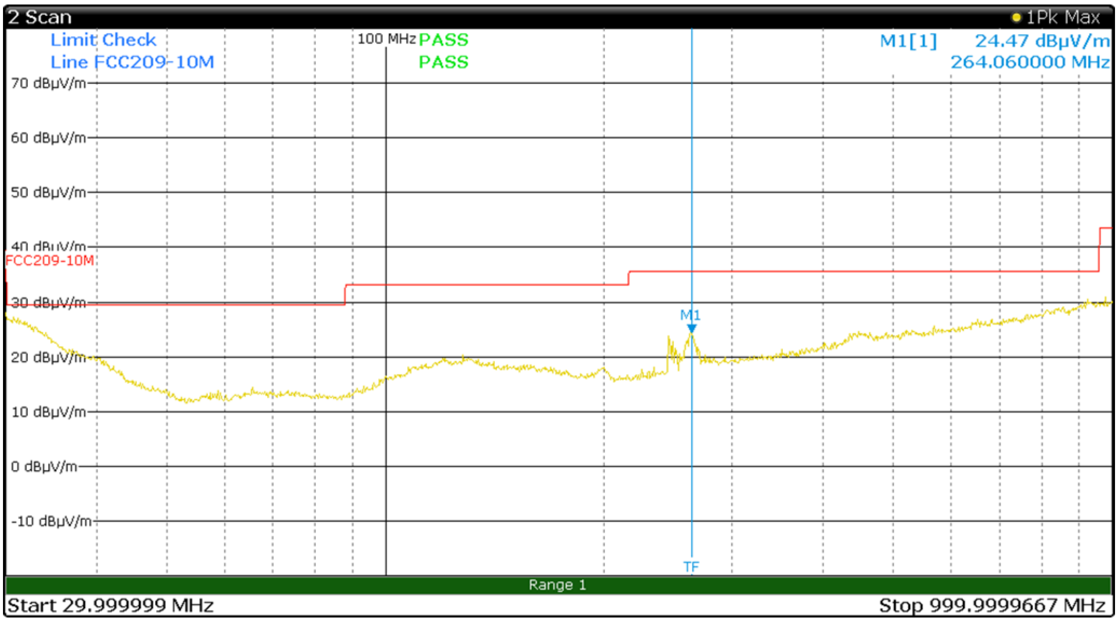


Channel 2402 MHz - Vertical

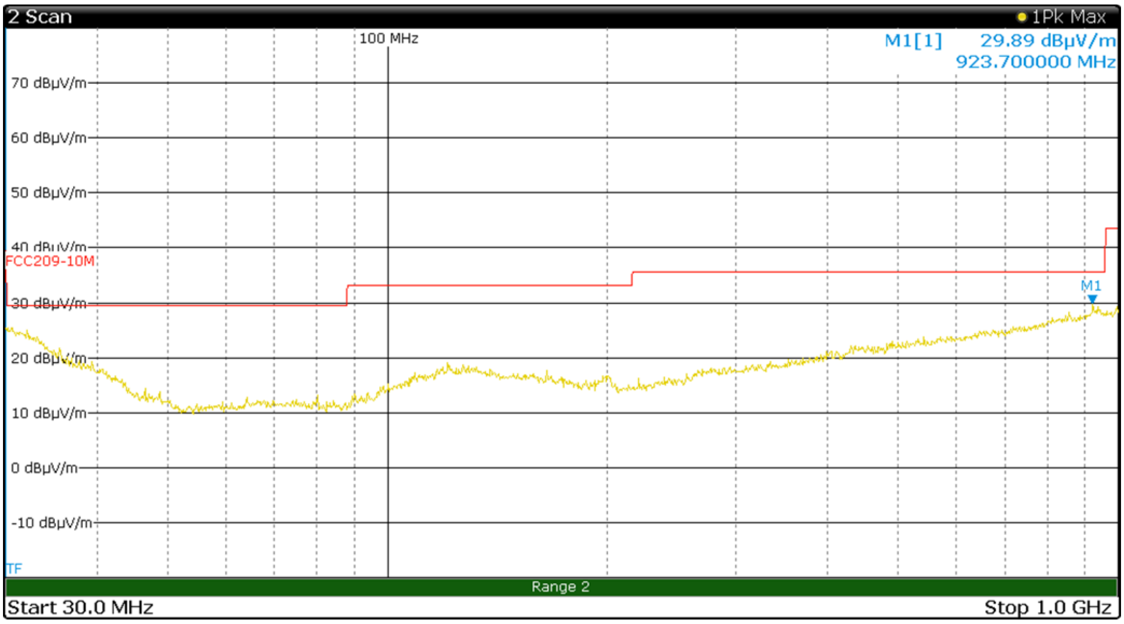


Channel 2402 MHz - Horizontal

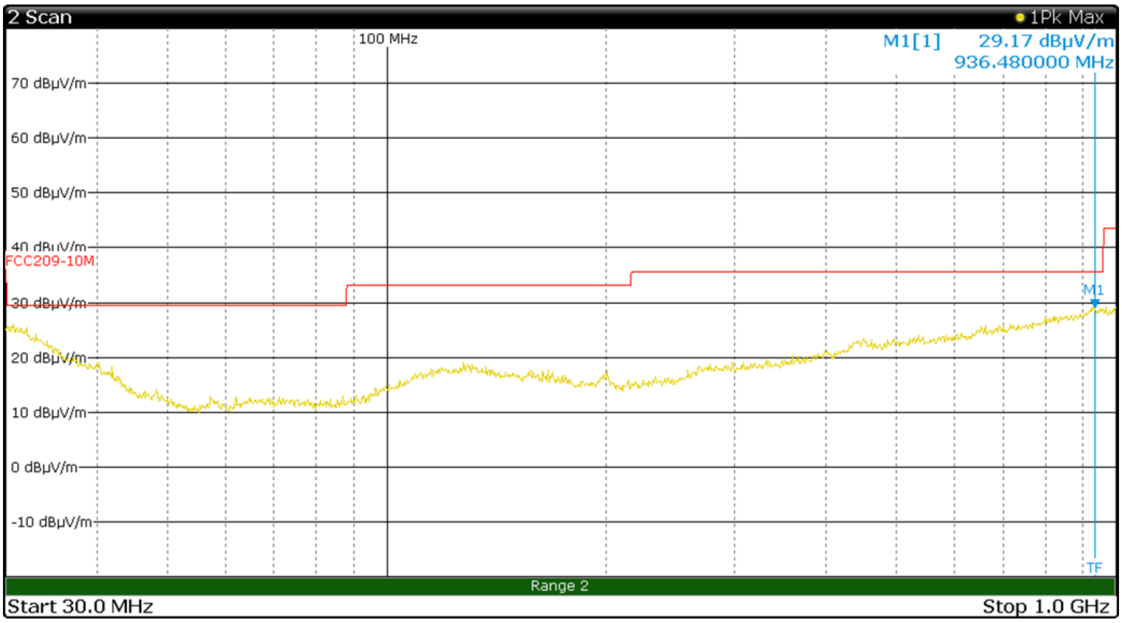
Channel 2441 MHz - Vertical



Channel 2441 MHz - Horizontal



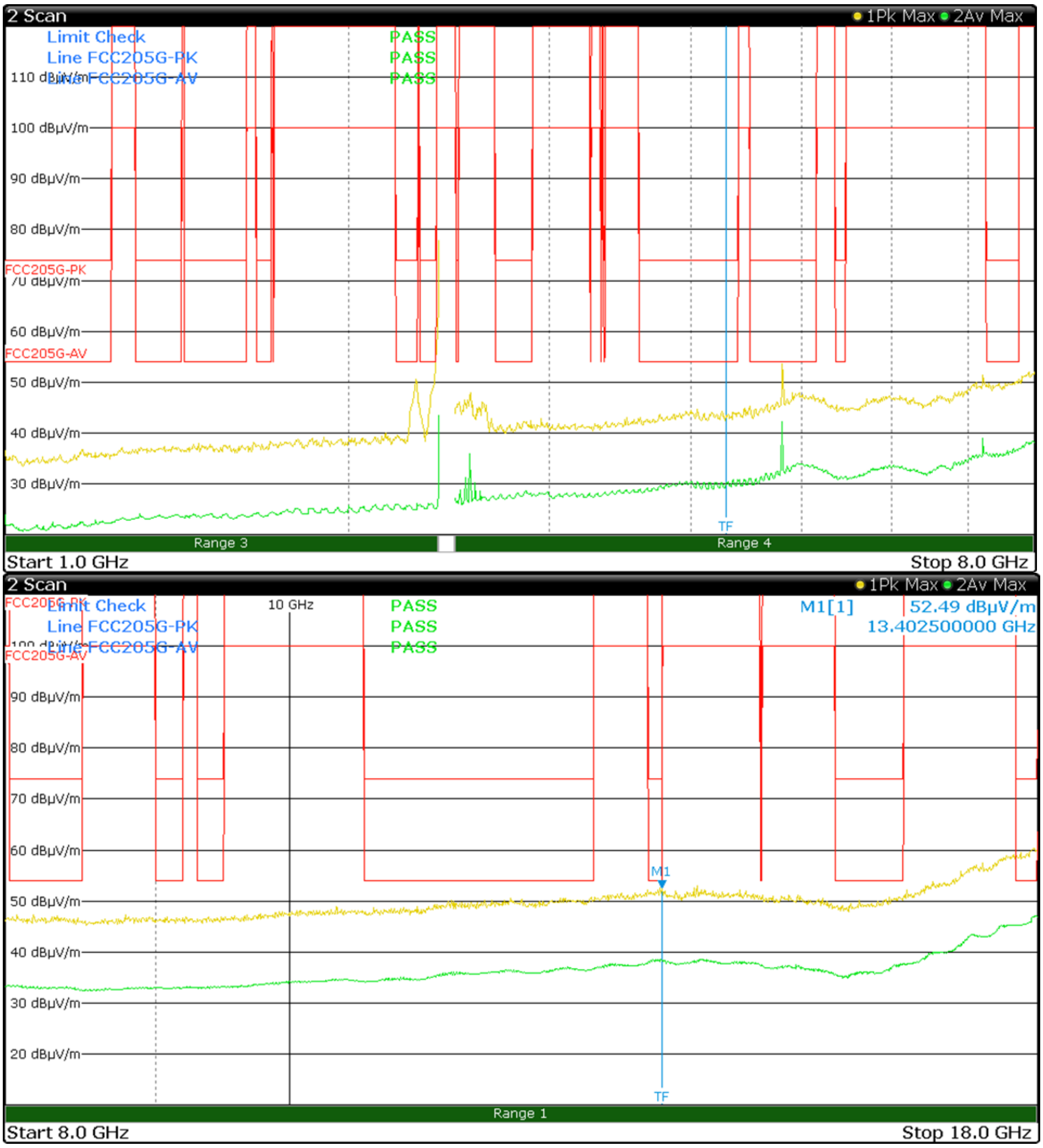
Channel 2480 MHz - Vertical



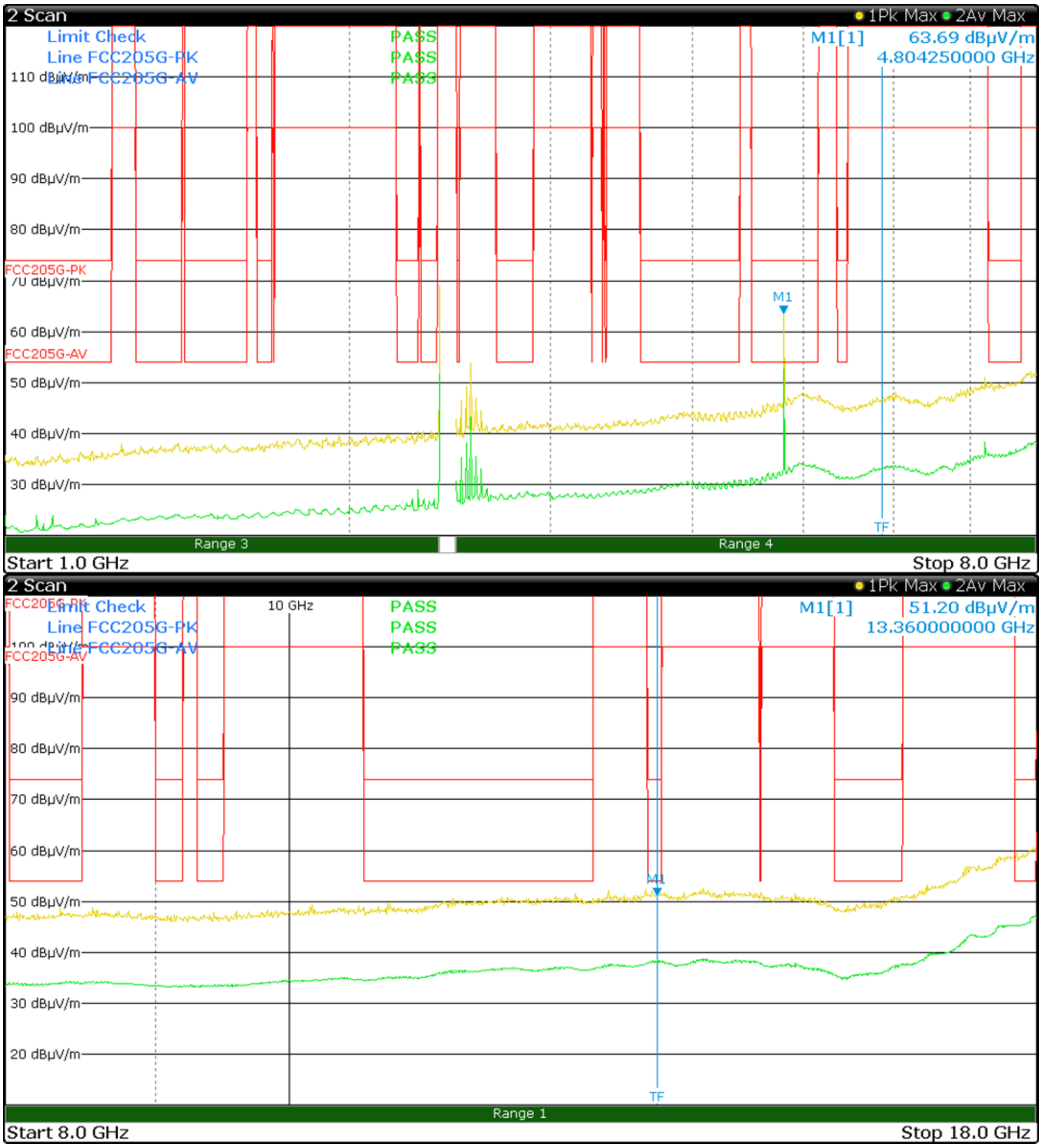
Channel 2480 MHz - Horizontal

3.8.6 Frequency Band: 1 000 – 18 000 MHz

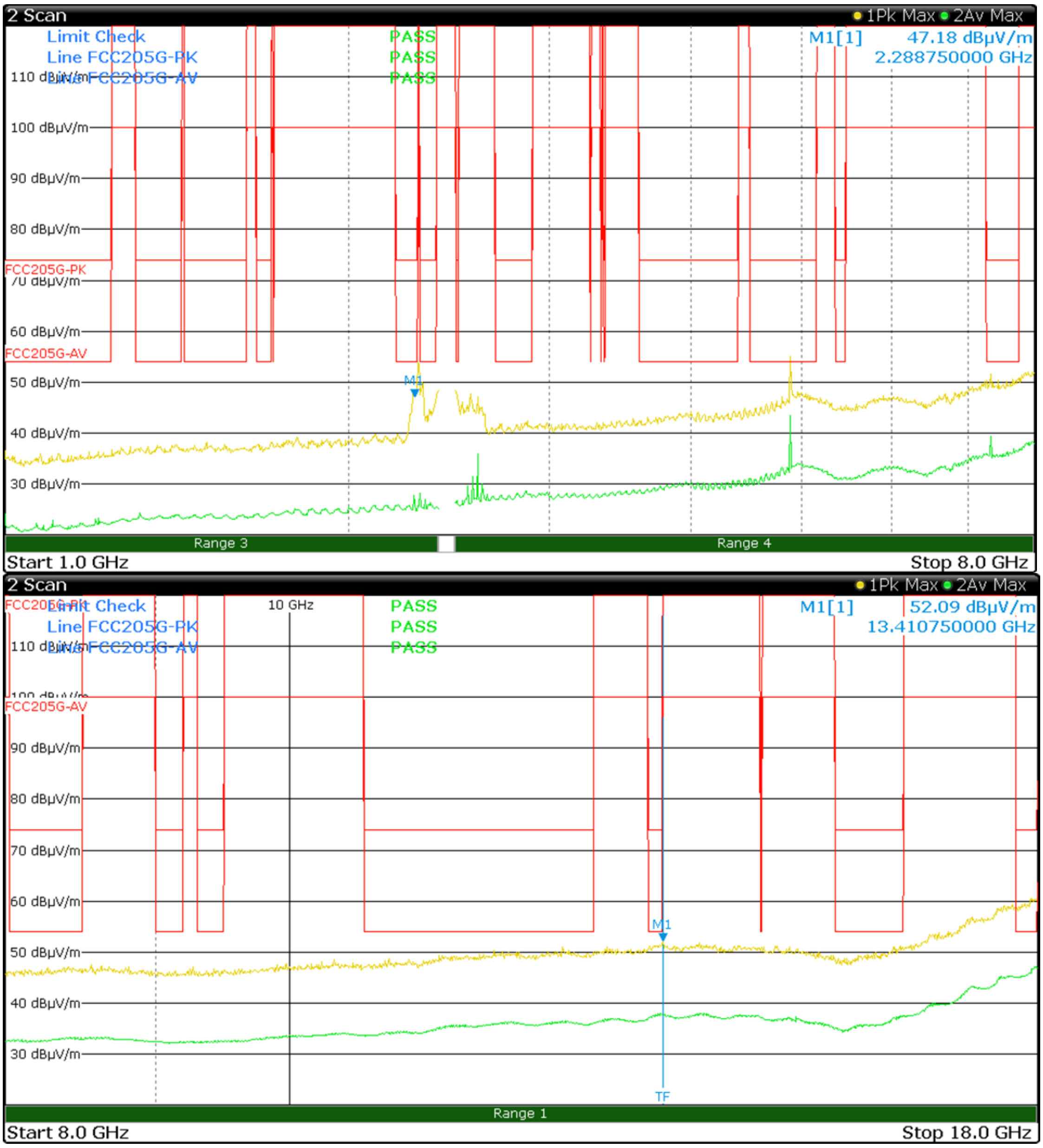
Measurements to 18 GHz were made at a distance of 3 metres. The measurements were made with a resolution bandwidth (RBW) of 1000 kHz and the video bandwidth (VBW) of 1000 kHz.



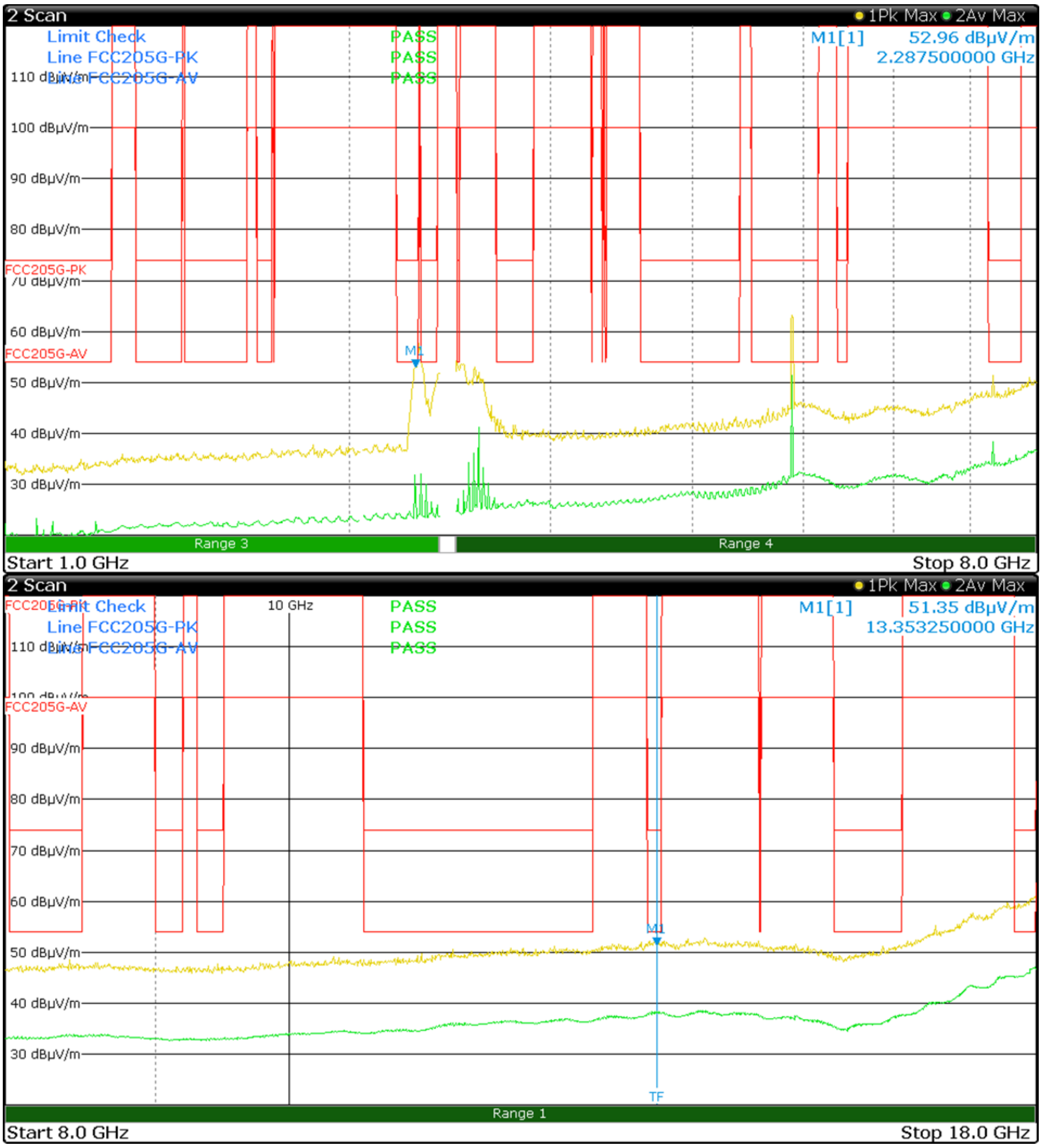
Channel 2402 MHz - Vertical



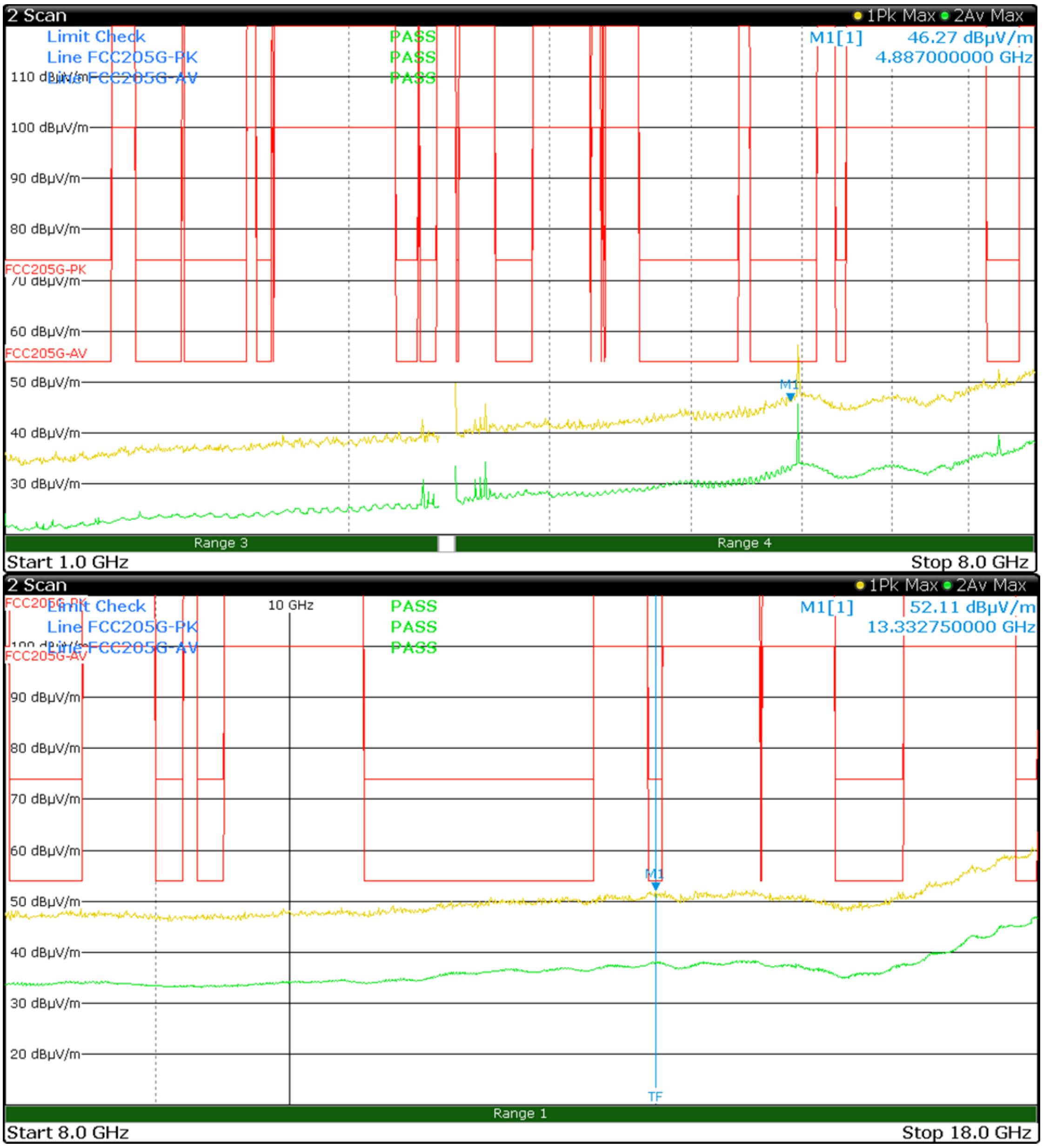
Channel 2402 MHz - Horizontal



Channel 2441 MHz - Vertical



Channel 2441 MHz - Horizontal



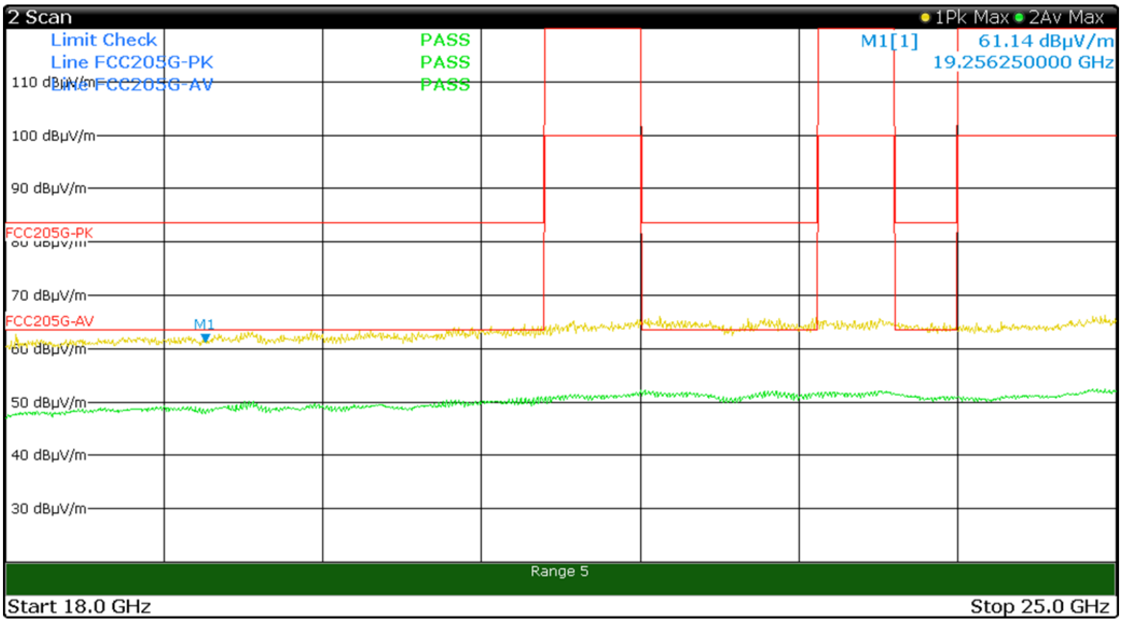
Channel 2480 MHz - Vertical

Channel 2480 MHz - Horizontal

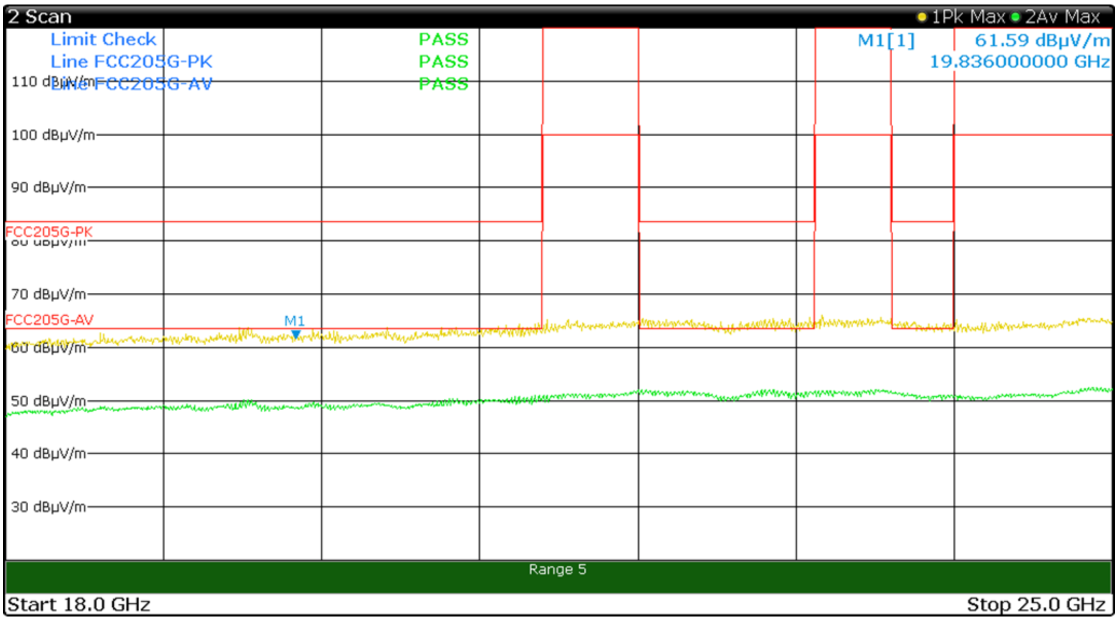
3.8.7 Frequency Band: 18 000 – 25 000 MHz

Measurements above 18 GHz were made at a distance of 1 metre. The measurements were made with a resolution bandwidth (RBW) of 1000 kHz and the video bandwidth (VBW) of 1000 kHz. Both receive antenna polarities combined.

Channel 2402 MHz



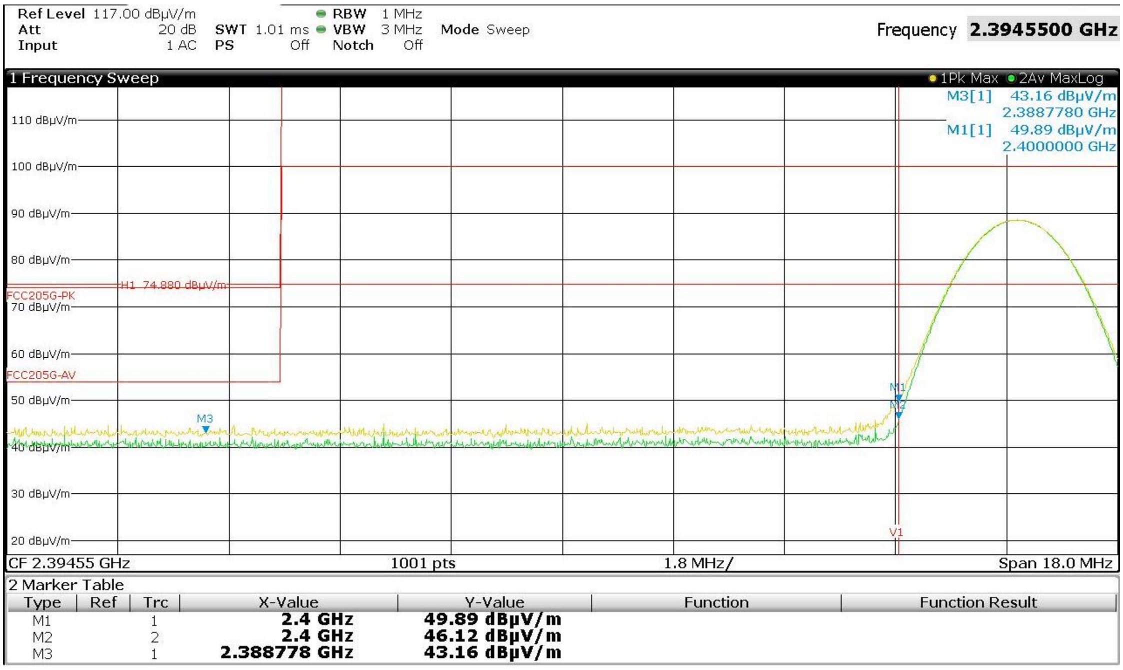
Channel 2441 MHz



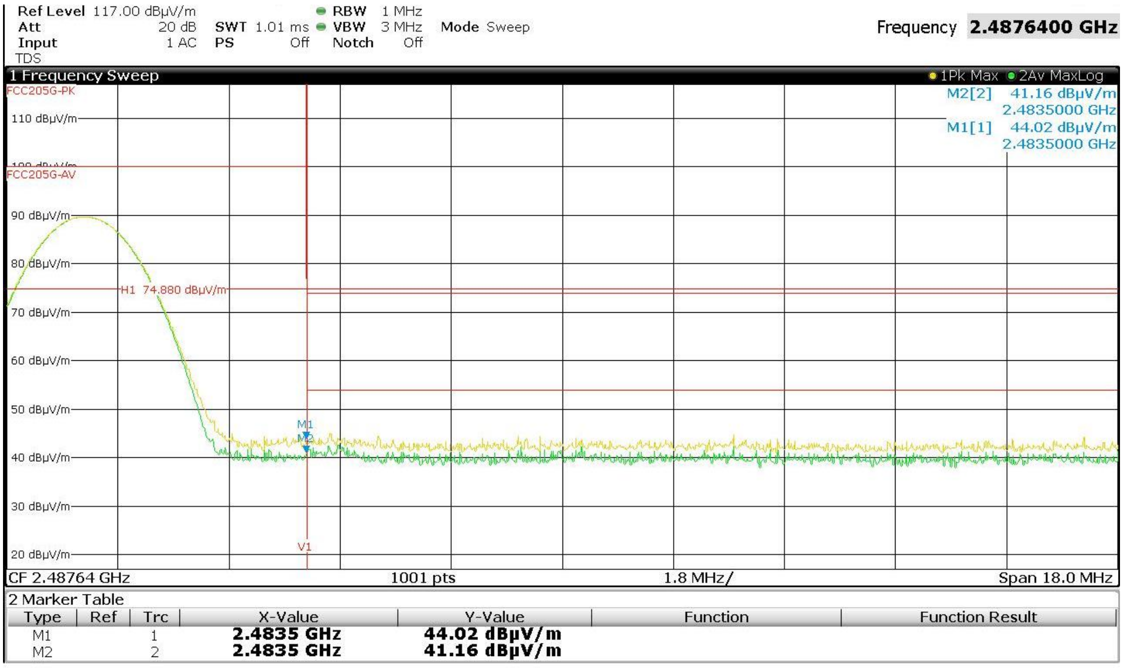
Channel 2480 MHz

3.8.8 Band-Edge Emission Measurements

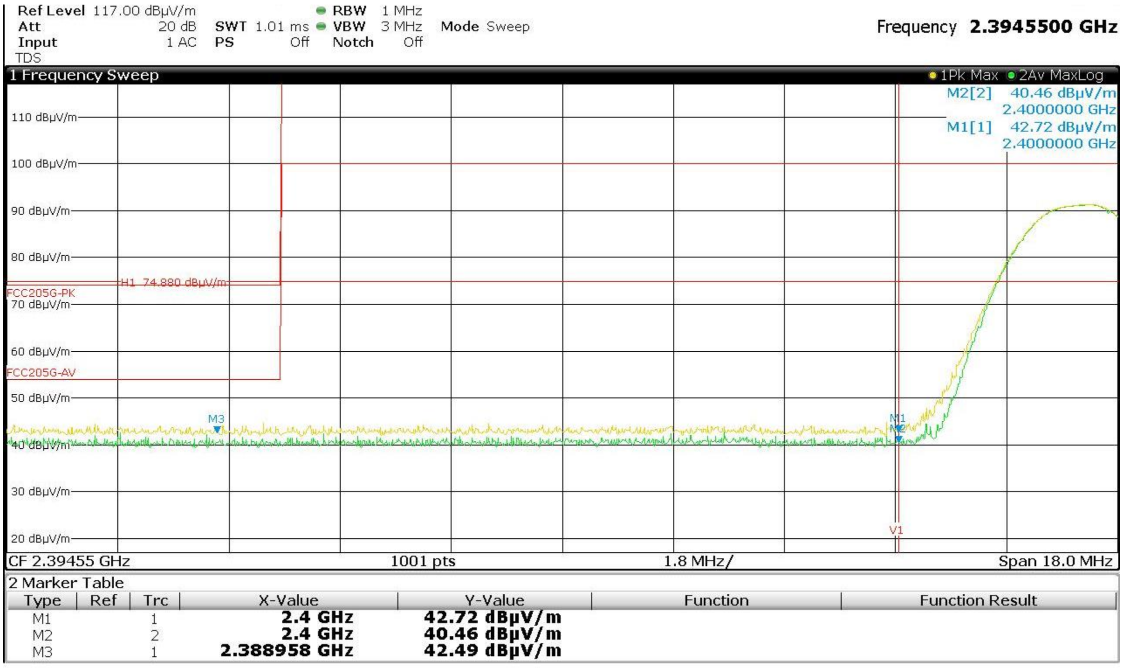
Emissions within 5 MHz of an authorised band edge were measured. The measurements were made with the sample and antenna orientated for maximum power level.



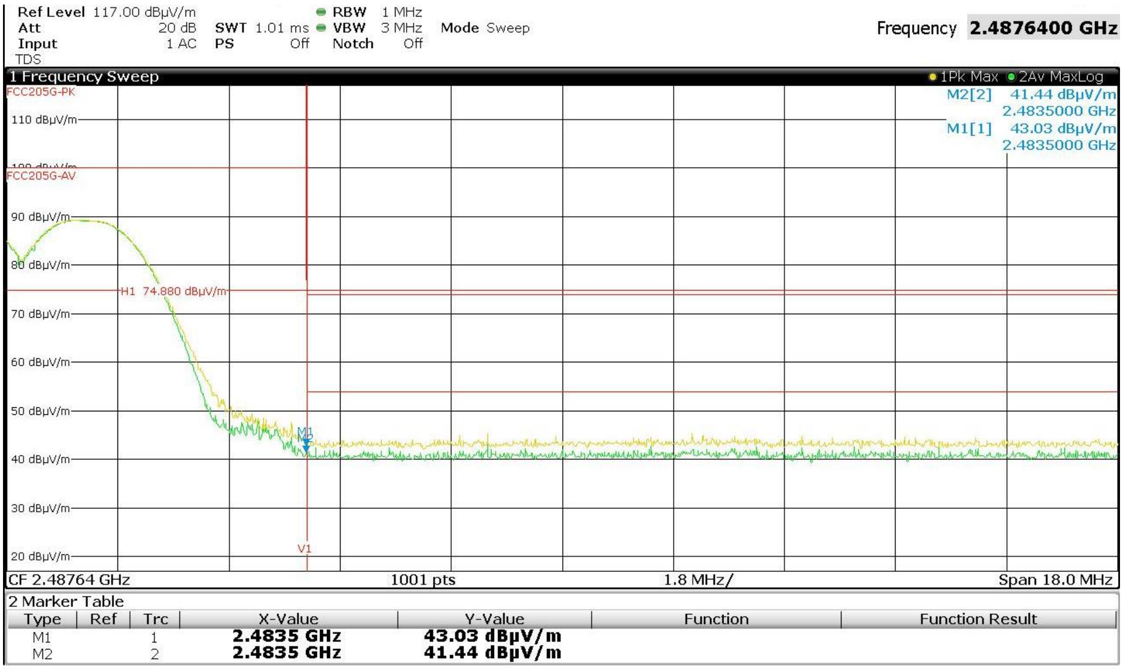
Channel 2402 MHz, Hopping Off



Channel 2480 MHz, Hopping Off



2400 MHz Band-Edge, Hopping On



2483.5 MHz Band-Edge, Hopping On

3.9 §15.247(i) Maximum Permissible Exposure

The EQX 800 was considered a portable device without containing other radios transmitting simultaneously and could be operated within 50 mm of the extremity of a user or nearby person. SAR measurement exclusion requirements of KDB 447498 D01 General RF Exposure Guidance v06 were applied. The following equation was applicable:

10-g Extremity SAR:

$$\left(\frac{max.channel\ power, mW}{min.separation\ distance, mm}\right) \times \sqrt{f(GHz)} \leq 7.5$$

Maximum measured power, E.I.R.P. = 1 mW
Minimum separation distance = 5 mm
Highest frequency = 2.480 GHz

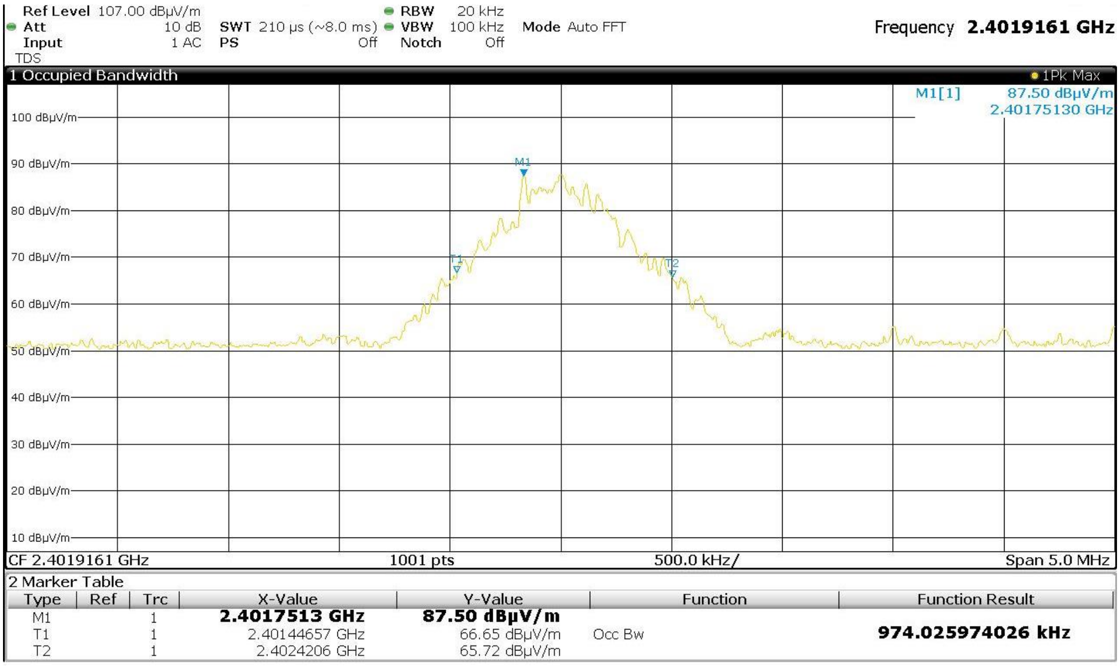
$$\left({}^{1\ mW}/_{5\ mm}\right) \times \sqrt{2.480\ GHz} = 0.3$$

The EQX800 FHSS transceiver complied with the RF exposure requirements of FCC 1.1307.

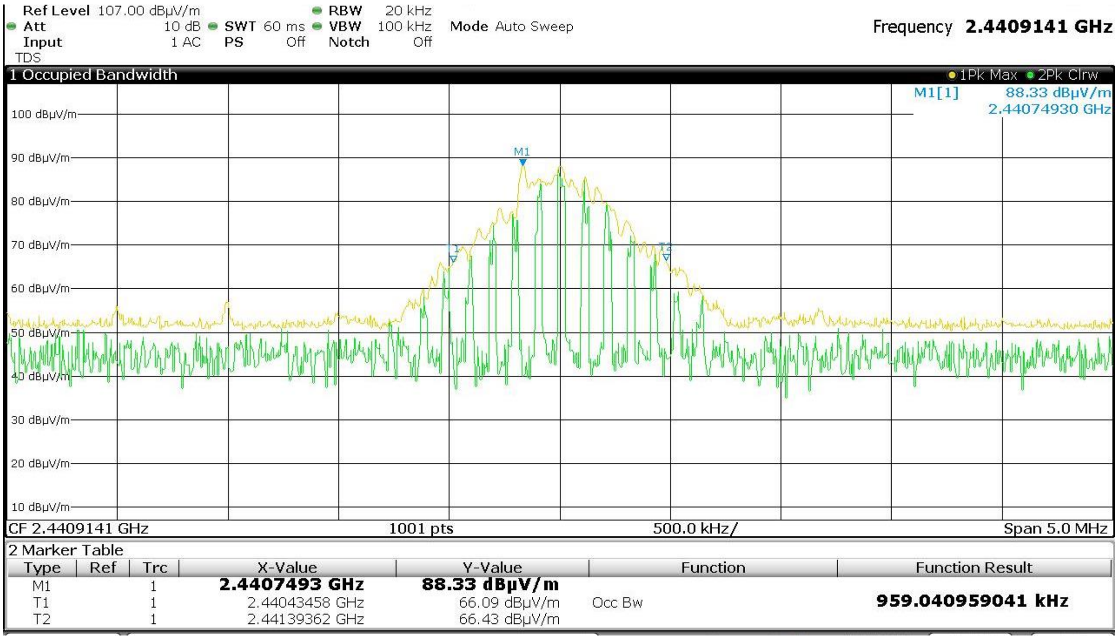
3.10 §2.1049 Occupied bandwidth – 99% power

The bandwidth containing 99% power of the transmitted signal was measured using the procedure from ANSI C63.10 section 6.9.

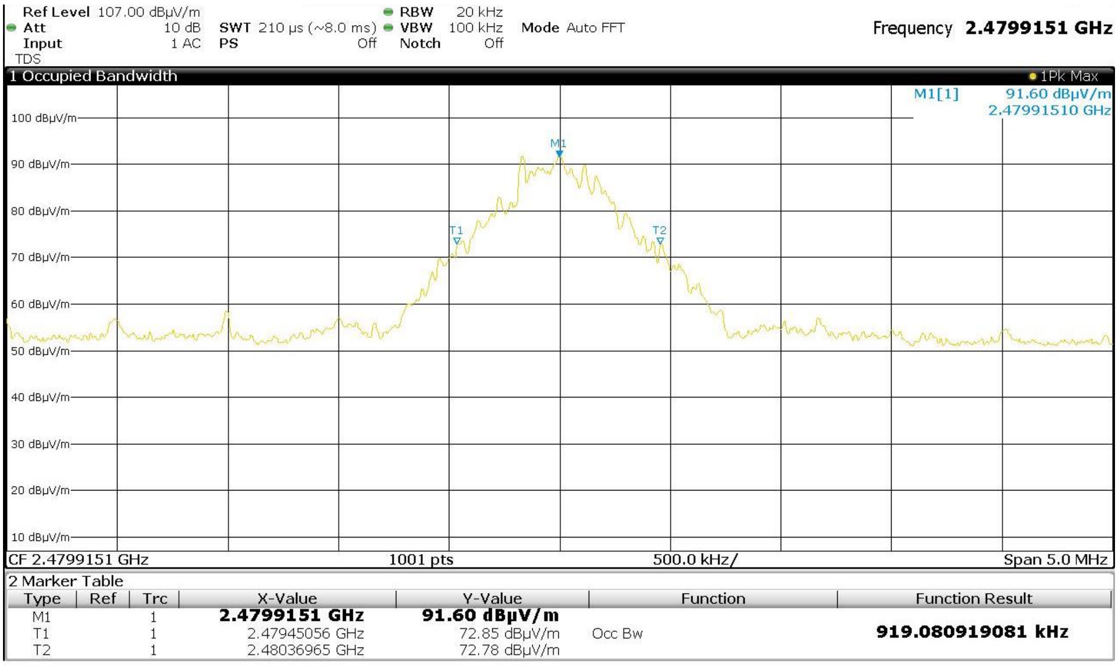
Channel [MHz]	99% Bandwidth [MHz]	Low Frequency [MHz]	High Frequency [MHz]
2402	0.974	2401.4	2402.4
2441	0.959	2440.4	2441.4
2480	0.919	2479.5	2480.4



Channel 2402 MHz



Channel 2438 MHz



Channel 2480 MHz

4.0 COMPLIANCE STATEMENT

The EQX 800 Platypus Metal Detector tested on behalf of Minelab Electronics Pty. Ltd. **complied** with the requirements of 47 CFR, Part 15 Subpart C - Rules for Radio Frequency Devices (intentional radiators) for a Frequency Hopping Spread Spectrum Transceiver (FHSS) operating within the band: 2400 MHz to 2483.5 MHz.

5.0 MEASUREMENT UNCERTAINTY

EMC Technologies has evaluated the equipment and the methods used to perform the emissions testing. The estimated measurement uncertainties for emissions tests shown within this report are as follows:

Conducted Emissions:	9 kHz to 30 MHz	±3.2 dB
Radiated Emissions:	9 kHz to 30 MHz	±4.1 dB
	30 MHz to 300 MHz	±5.1 dB
	300 MHz to 1000 MHz	±4.7 dB
	1 GHz to 18 GHz	±4.6 dB
Peak Output Power:		±1.5 dB
Peak Power Spectral Density:		±1.5 dB

The above expanded uncertainties are based on standard uncertainties multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.