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

FCC ID: 2AS35-GFR1

Report Number: S190310-1 DRAFT

Tested For: GOFAR PTY LTD

Device under Test : GOFAR V1.5 Adapter and Ray Set

Model Number : GOFAR V1.5

Serial Number: GFR190100001

Issue Date: 9th May 2019

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REVISION TABLE

Version	Sec/Para Changed	Change Made	Date
1		Initial issue of document	09/05/2019

RADIO REPORT FOR CERTIFICATION

47 CFR Part 15 Subpart C (Section 15.247)

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RADIO REPORT FOR CERTIFICATION

Product : GOFAR V1.5 Adapter and Ray Set
Model Number: GOFAR V1.5
Serial Number: GFR190100001

Manufacturer: GOFAR PTY LTD

Tested for: GOFAR PTY LTD
Address: Level 2, 11 York Street,
Sydney, NSW, 2000

Phone: 0455 111 020

Contact: Mr Danny Adams
Email: danny@gofar.co

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

Test Dates: 8th April 2019 to 10th April 2019

Issue Date: 9th May 2019

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.

Test Engineer:

Dong Feng

**Authorised
Signatory:**

**Robert Middleton
Sydney Branch Manager
EMC Technologies Pty Ltd.**

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

1.0 INTRODUCTION

Radio tests were performed on GOFAR V1.5 Adapter and Ray Set with Model Number: GOFAR V1.5, in accordance with the applicable requirements of 47 CFR, Part 15 Subpart C – Section 15.247 operating within the band: 2400 MHz to 2483.5 MHz.

1.1 Test Procedure

Radio measurements were performed in accordance with the appropriate procedures of ANSI C63.10: 2013 and KDB 558074 D01 v04 - Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247.

The measurement instrumentation conformed to the requirements of ANSI C63.2: 2016.

1.2 Summary of 47 CFR Part 15 Subpart C Results

FCC Part 15 Subpart C	Test Performed	Results
15.203	Antenna requirement	Not Applicable
15.204	Antenna information	Not Applicable
15.205	Restricted bands of operation	Complied
15.207	Disturbance voltage on AC Mains	Not Applicable EUT is DC powered
15.247(c)	Spurious radiated emission 15.209 limit applied	Complied
15.247 (a2)	6 dB Bandwidth	Complied
15.247 (e)	3 kHz Peak Power Density	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 (f)	Hybrid Systems	Not Applicable
15.247 (i)	99% Occupied bandwidth	Complied

1.3 Modifications by EMC Technologies

No modifications were performed on the EUT in order to achieve compliance.

2.0 GENERAL INFORMATION

2.1 EUT (Transmitter) Details

The Equipment Under Test (EUT) was identified as follows:

Product :	GOFAR V1.5 Adapter and Ray Set
Model Number:	GOFAR V1.5
Serial Number:	GFR190100001
Frequency Range:	2402MHz to 2480MHz
Crystal Frequency:	8MHz, 16MHz
Microprocessor:	PIC32MX550F256H
Highest Internal Frequency:	40MHz
Crystal Frequency:	8MHz and 16MHz
Operating Band::	Bluetooth 2.4GHz
Nominal Power:	0dB Max
Antenna type and gain:	Gain 0.5dBi (Peak)/-1dBi (Average)
Nominal Bandwidth:	2402MHz to 2480MHz
Radio Module:	Texas Instrument CC2541 2.4GHz Bluetooth SoC
Data Cable:	1-1.5m, 4 conductor, 2.5mm interconnects
FCC ID:	2AS35-GFR1

2.2 Test Sample Description

GOFAR V1.5 Adapter and Ray Set logs and transmits vehicle data to a connected mobile application via Bluetooth.



The GOFAR complete set includes GOFAR Adapter, Ray and Cable.



2.3 Test Configuration

The device under test is to be connected to the DC power interface with CAN bus load. The power supply required is 12VDC +/-10%.

The mobile Bluetooth device is to be paired with the device under test for the purpose of demonstrating that the device under test is operational. The mobile device is excluded from testing and can be reported as a generic Bluetooth device for the purposes of the test report.

Emissions: The device under test is to be connected to the remote LED display by the custom data cable. A Bluetooth device shall be paired and the test application started. The LED display shall show a defined pattern. The device is to be run in the predetermined worst-case normal operating configuration. The active OBD interface shall be set to CAN running at 500kHz. All internal buses shall be running at their normal operating speeds. The LED display shall be running at full power. The microprocessor shall be running at its maximum speed of 80Mhz.

EUT is to be tested as a tabletop unit.

2.4 Test Facility

2.4.1 General

EMC Technologies Pty Ltd has 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 507687 & Designation number AU0002.**

Measurements in this report were performed at EMC Technologies' laboratory in Seven Hills, New South Wales Australia.

2.4.2 NATA Accreditation

NATA is the Australian National laboratory accreditation body and has accredited EMC Technologies to operate to the IEC/ISO17025 requirements. 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 fully documented test procedures, continued calibration of all equipment 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 (A²LA).

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.

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

2.5 Test Equipment Calibration

Measurement instrumentation and transducers were calibrated in accordance with the applicable standards by an independent NATA registered laboratory such as Keysight Technologies, NPL 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/YY	Due Date DD/MM/YY
EMI Receivers	Model: ESCI (Asset No: R029) S/N: 100012 9Hz – 3GHz	10/05/18	10/05/19 *1
Antenna	Double Ridged Horn Antenna (Asset No: A324) 1-18GHz Model: EMCO 3115 S/N: 3823	9/01/18	29/01/21 *2
	Sunar RF Motion Model: JB1 S/N: A021318 (Asset No: A430)	08/03/18	08/03/21 *1
Cables	13m RG214 N-Type, 0.1- 6000MHz (Asset No: SC028)	17/07/18	17/07/19 *2
Preamplifier	HP 8449B Preamplifier Model: HP 8449B S/N: 3008A01113 (Asset No: A138)	07/08/18	07/08/19 *2

Note *1: NATA Calibration by Rohde & Schwarz.

Note *2 : In-house calibration. Traceable to Australian National Standards

Note *3: NATA Calibration by NPL.

Note *4: NATA Calibration by Keysight.

TEST SITES

Equipment Type	Make/Model Serial Number	Last Cal. DD/MM/YY	Due Date DD/MM/YY
Shielded Room/ Test Laboratory	7.23m × 4.83m × 2.45m	N/A	N/A
Indoor Open Area Test Site (iOATS)	RFI Industries S800 Serial Number: 876, 3 metre site iOATS situated at Seven Hills, NSW	20/04/17	20/04/19

3.0 TEST RESULTS

3.1 §15.203 Antenna Requirement

Not Applicable.

3.2 §15.204 Antenna Information

Not Applicable.

3.3 §15.207 Disturbance Voltage on AC Mains

Testing on AC mains not applicable as the EUT is DC battery powered.

3.4 §15.247(a2) 6 dB Bandwidth

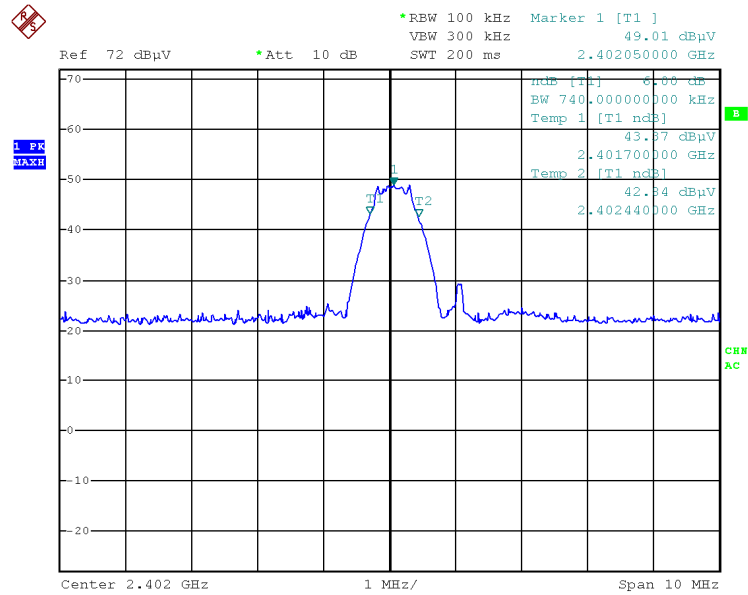
Requirement:

Systems using digital modulation techniques may operate in the 902-928MHz, 2400- 2483.5MHz, and 5725-5850MHz bands. The minimum 6dB bandwidth shall be at least 500kHz.

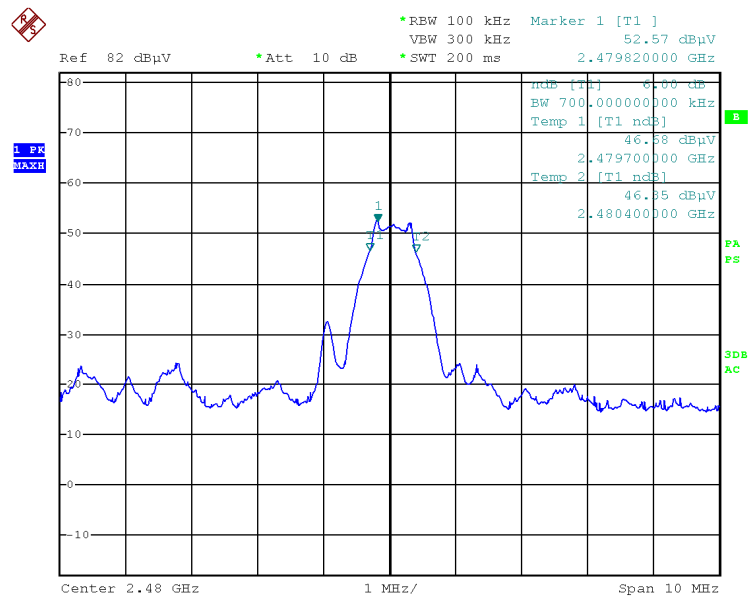
Results:

6 dB Emission Bandwidth:

Centre Frequency [MHz]	6 dB Bandwidth [kHz]
2402	740
2480	700

Low Channel 2402 MHz

Date: 10.APR.2019 11:09:59

High Channel 2480 MHz

Date: 10.APR.2019 15:37:08

Conclusion: Complied

3.5 §15.247(e) 3 kHz Peak Power Density

Requirement:

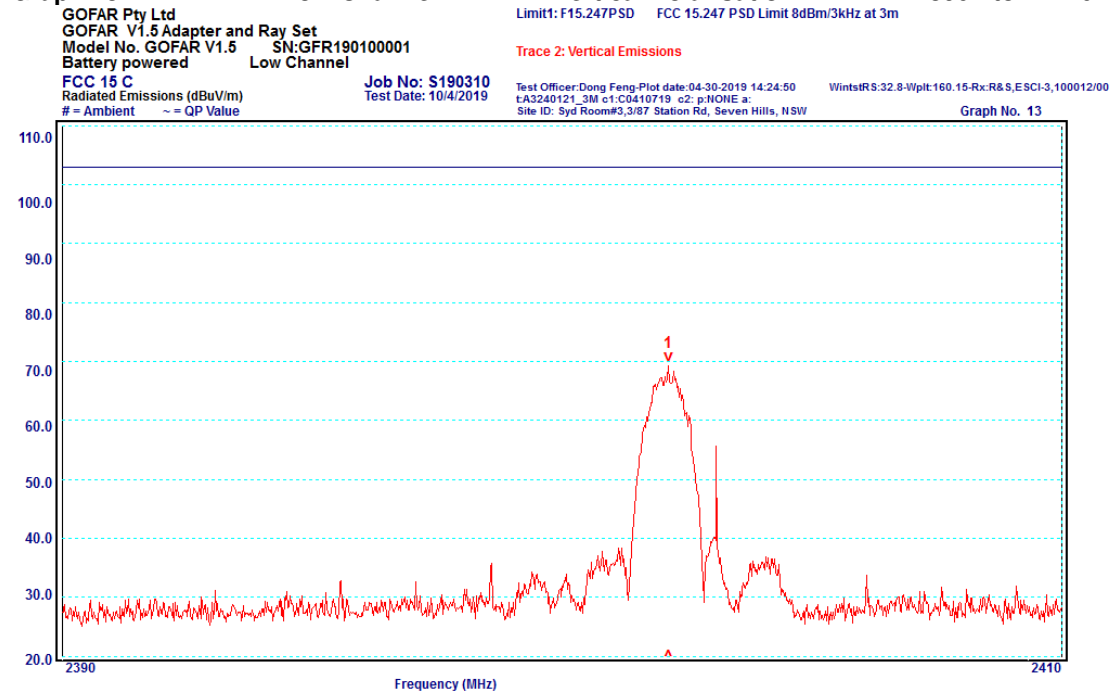
For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

Radiated Measurement were performed at a distance of 3 metres.

Limit of 8 dBm/3kHz has been converted to 103 dBuV/m per 3kHz at 3 metres distance.

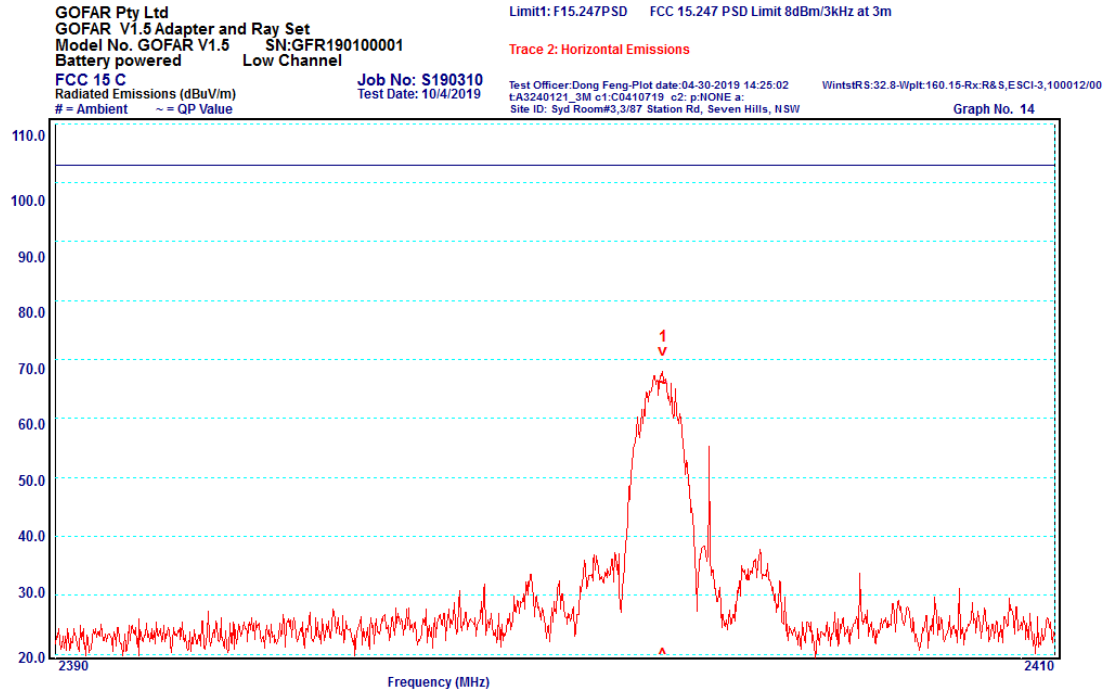
Results:

Graph 13 Low Channel Vertical Polarisation 2390 to 2410MHz



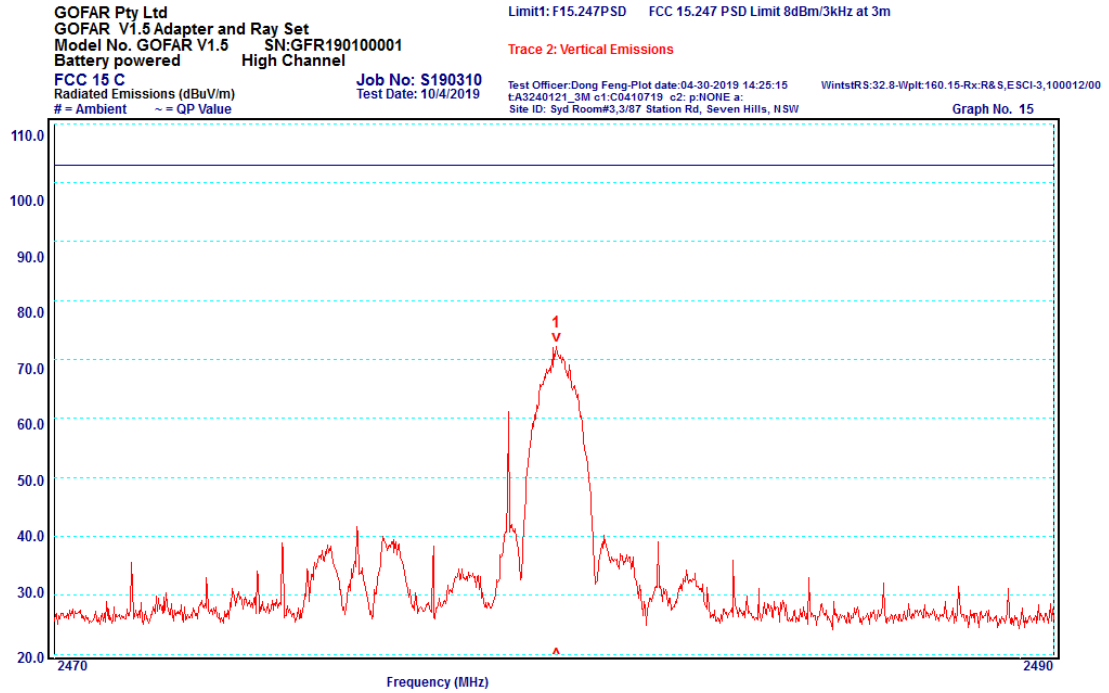
Peak	Frequency [MHz]	Polarisation	Maximum Radiated Peak Value Measured (dBuV/m)	Limit (dBuV/m)	Margin [± dB]
1	2402.11	Vertical	69.2	103	-33.8

All measured frequencies complied with the Limit by a margin of greater than 10dB.

Graph 18 Low Channel**Horizontal Polarisation****2390 to 2410MHz**

Peak	Frequency [MHz]	Polarisation	Maximum Radiated Peak Value Measured (dBuV/m)	Limit (dBuV/m)	Margin [± dB]
1	2402.15	Horizontal	69.9	103	-33.1

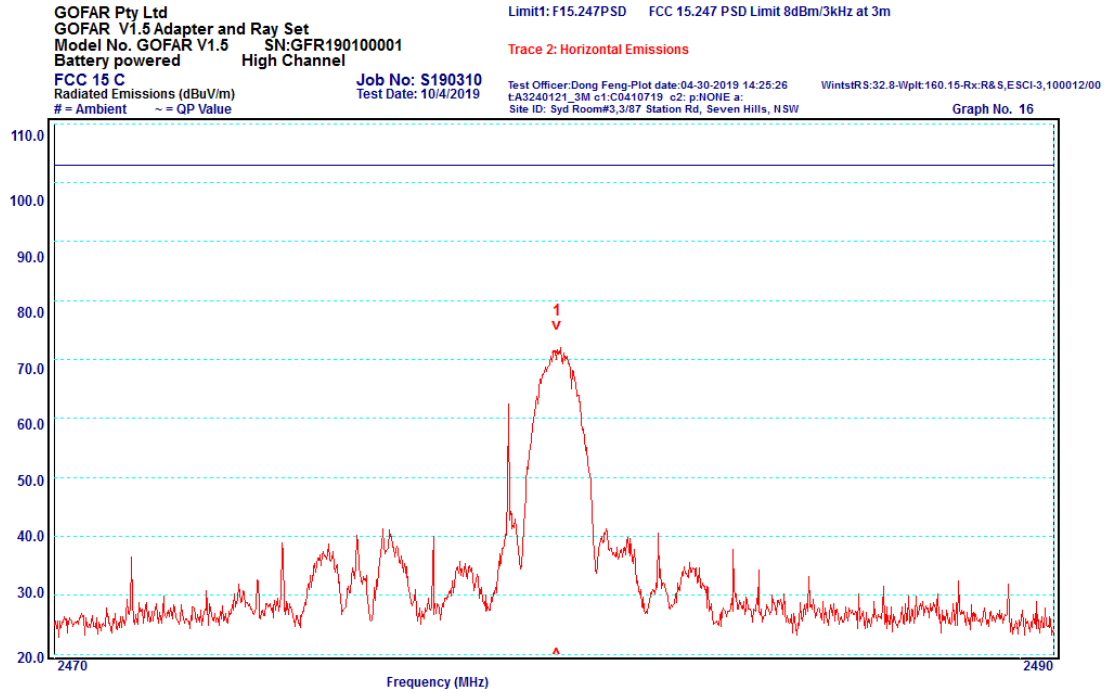
All measured frequencies complied with the Limit by a margin of greater than 10dB.

Graph 19 High Channel Vertical Polarisation 2470 to 2490MHz


Peak	Frequency [MHz]	Polarisation	Maximum Radiated Peak Value Measured (dBuV/m)	Radiated 125-93 Peak Value Limit (dBuV/m)	Margin [± dB]
1	2480.03	Vertical	72.2	103	-30.8

All measured frequencies complied with the Limit by a margin of greater than 10dB.

Graph 20 High Channel Horizontal Polarisation 2470 to 2490MHz



Peak	Frequency [MHz]	Polarisation	Maximum Radiated Peak Value Measured (dBuV/m)	Radiated 125-93 Peak Value Limit (dBuV/m)	Margin [± dB]
1	2480.04	Horizontal	74.2	103	-28.8

All measured frequencies complied with the Limit by a margin of greater than 10dB.

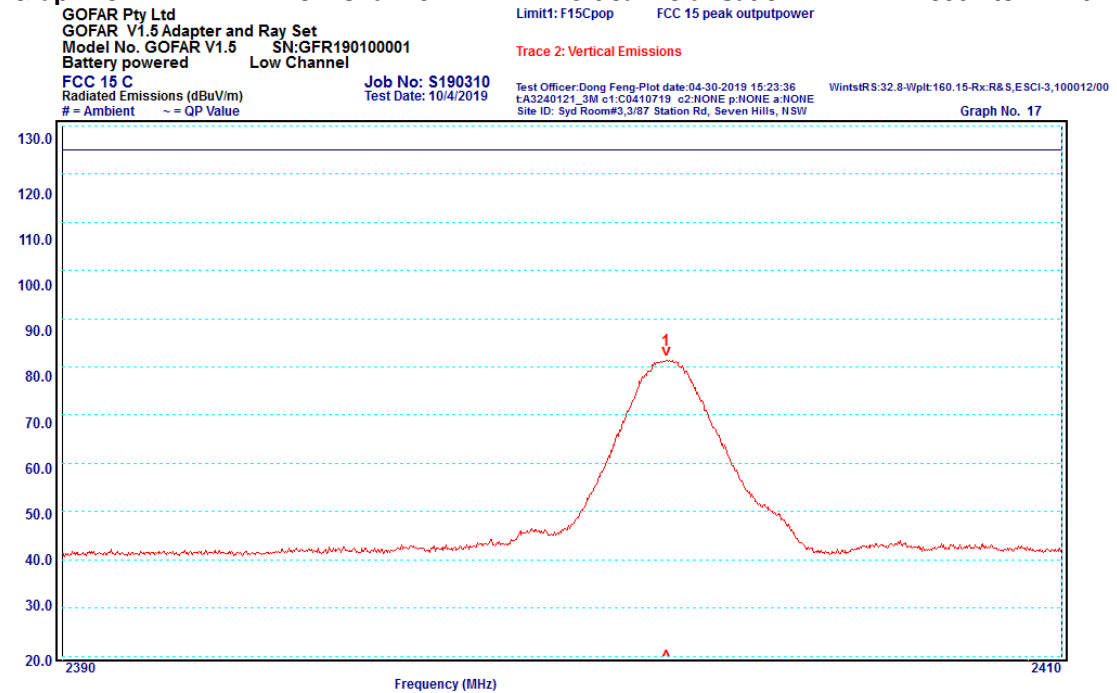
3.6 §15.247(b) Peak Output power

Requirement:

For system using digital modulation in the 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz Bands: 1 Watt.

Radiated Measurement were performed at a distance of 3 metres.

Limit of 1 Watt has been converted to 125 dBuV/m at 3 metres distance.

Results:
Graph 13 Low Channel Vertical Polarisation 2390 to 2410MHz


Peak	Frequency [MHz]	Polarisation	Maximum Radiated Peak Value Measured (dBuV/m)	Limit (dBuV/m)	Margin [± dB]
1	2402.07	Vertical	81.3	125	-43.7

All measured frequencies complied with the Limit by a margin of greater than 10dB.

Graph 18 Low Channel**Horizontal Polarisation****2390 to 2410MHz**

GOFAR Pty Ltd
 GOFAR V1.5 Adapter and Ray Set
 Model No. GOFAR V1.5 SN:GFR190100001
 Battery powered Low Channel
FCC 15 C
 Radiated Emissions (dBuV/m)
 # = Ambient ~ = QP Value

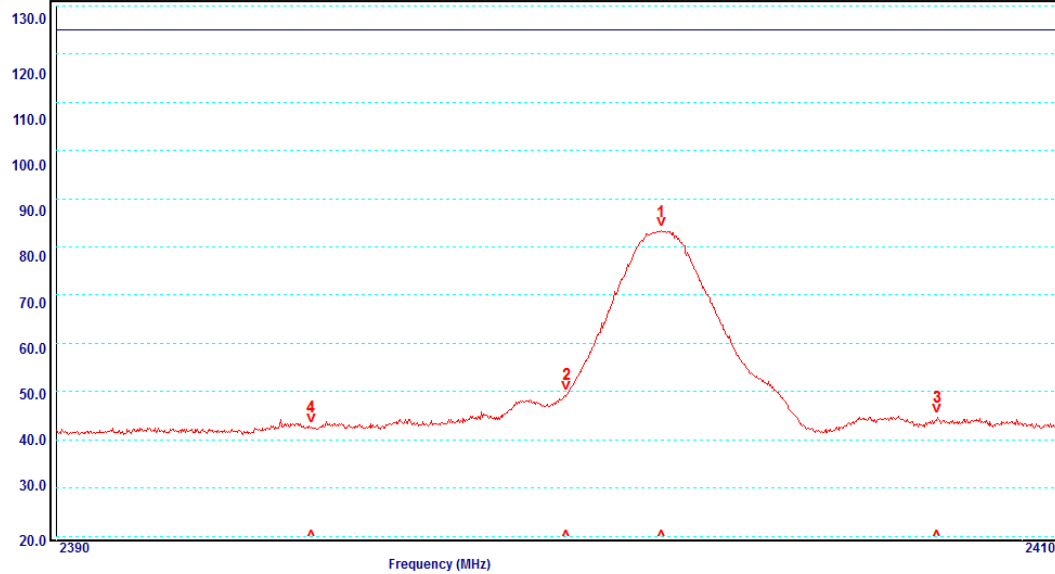
Job No: S190310
 Test Date: 10/4/2019

Limit1: F15Cpop FCC 15 peak outputpower

Trace 2: Horizontal Emissions

Test Officer: Dong Feng Plot date: 04-30-2019 15:23:56 WintstRS:32.8-Wpit:160.15-Rx:R&S,ESCI-3,100012/00
 tA3240121_3M c1:CD410719 c2:NONE p:NONE a:NONE
 Site ID: Syd Room#3,3/87 Station Rd, Seven Hills, NSW

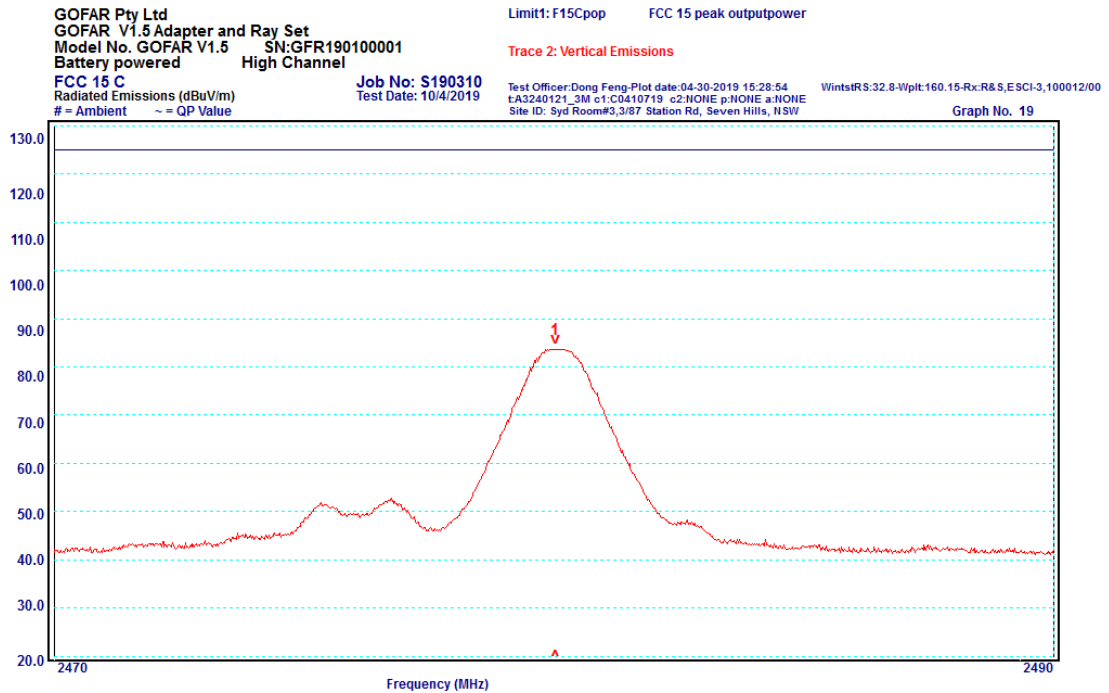
Graph No. 18



Peak	Frequency [MHz]	Polarisation	Maximum Radiated Peak Value Measured (dBuV/m)	Limit (dBuV/m)	Margin [± dB]
1	2402.09	Horizontal	83.3	125	-41.7

All measured frequencies complied with the Limit by a margin of greater than 10dB.

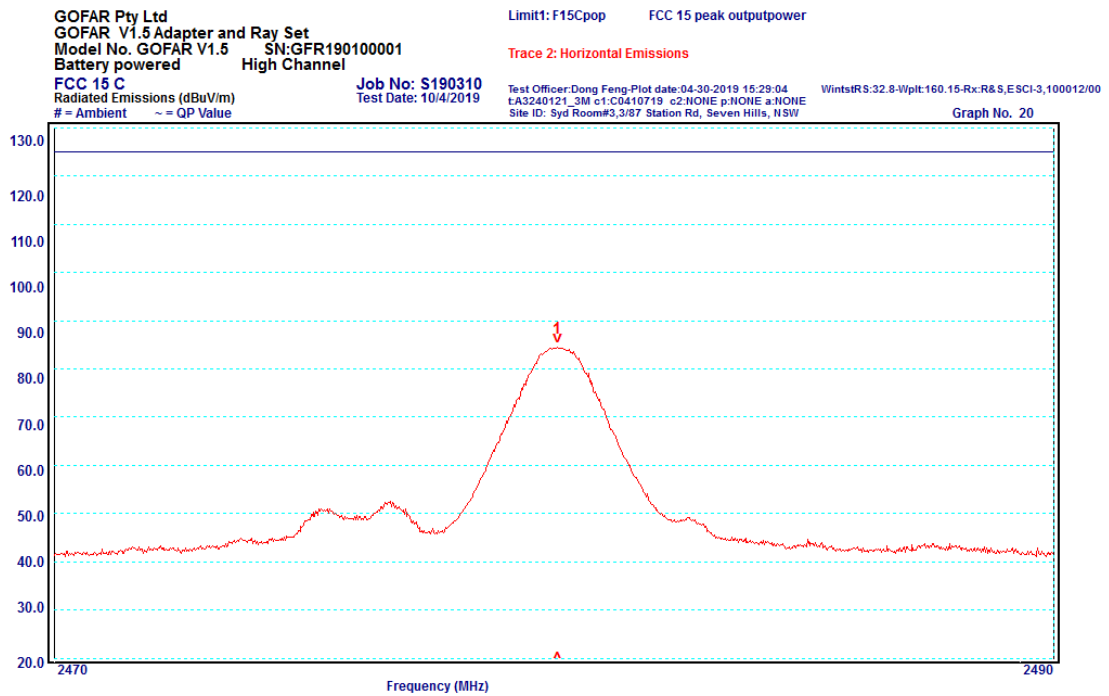
Graph 19 High Channel Vertical Polarisation 2470 to 2490MHz



Peak	Frequency [MHz]	Polarisation	Maximum Radiated Peak Value Measured (dBuV/m)	Radiated 125-93 Peak Value Limit (dBuV/m)	Margin [± dB]
1	2480.01	Vertical	83.7	125	-41.3

All measured frequencies complied with the Limit by a margin of greater than 10dB.

Graph 20 High Channel Horizontal Polarisation 2470 to 2490MHz



Peak	Frequency [MHz]	Polarisation	Maximum Radiated Peak Value Measured (dBuV/m)	Radiated 125-93 Peak Value Limit (dBuV/m)	Margin [± dB]
1	2480.05	Horizontal	84.4	125	-40.6

All measured frequencies complied with the Limit by a margin of greater than 10dB.

3.7 §15.247(d) Spurious Radiated Emission

Requirement:

In any 100KHz bandwidth outside the frequency band at least 20dB below the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands, as defined in section 15.205(a), must also comply with the radiated emission limits specified in section 15.209(a)

Limits of 15.209(a) was applied cross the applicable spectrum as that is the most stringent requirement.

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
30 to 1000	120	3	Biconilog antenna
1000 to 18 000	1000	3	Broad band horn

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 prescanned in three orthogonal orientations to decide maximum emission direction.

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 software using pre-stored calibration data. The method of calculation is shown below:

$$E = V + AF - G + L$$

Where:

- E** = Radiated Field Strength in dBμV/m.
- V** = EMI Receiver Voltage in dBμV. (measured value)
- 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)

3.7.2 Frequency Band: 30 - 1000 MHz

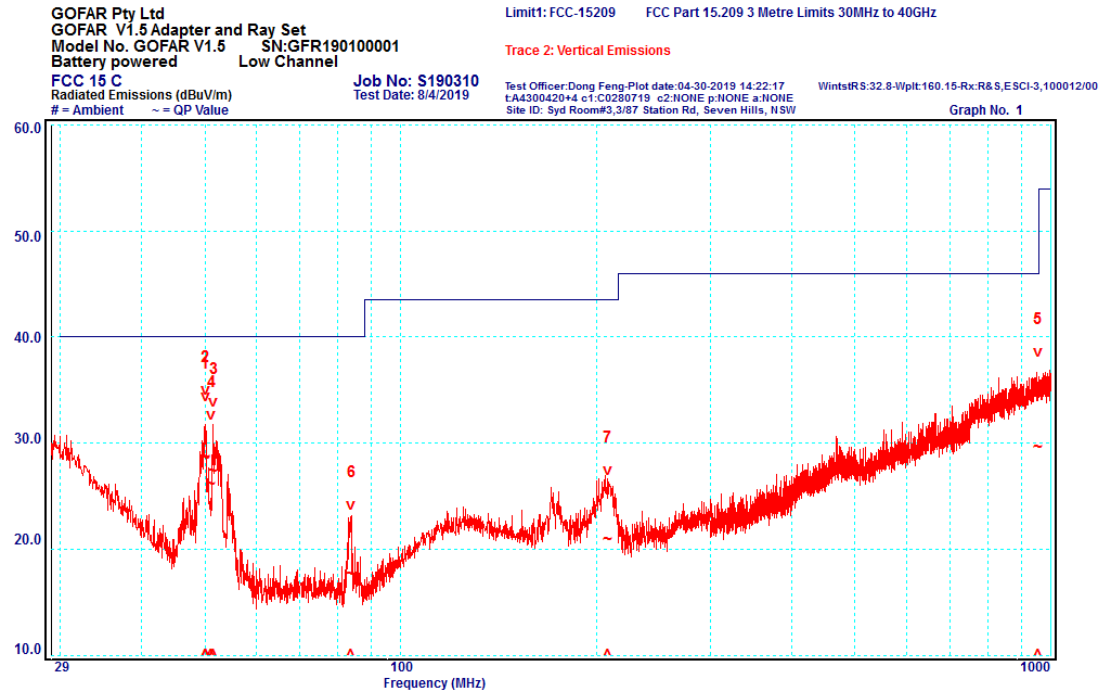
Measurements were made at a distance of 3 metres. The measurement of emissions between 30 - 1000 MHz were made with a resolution bandwidth (RBW) of 120 kHz and the video bandwidth (VBW) of 300 kHz.

The §15.209 limit applied

Test Result: All measured frequencies complied with the Limit by a margin of greater than 10dB.

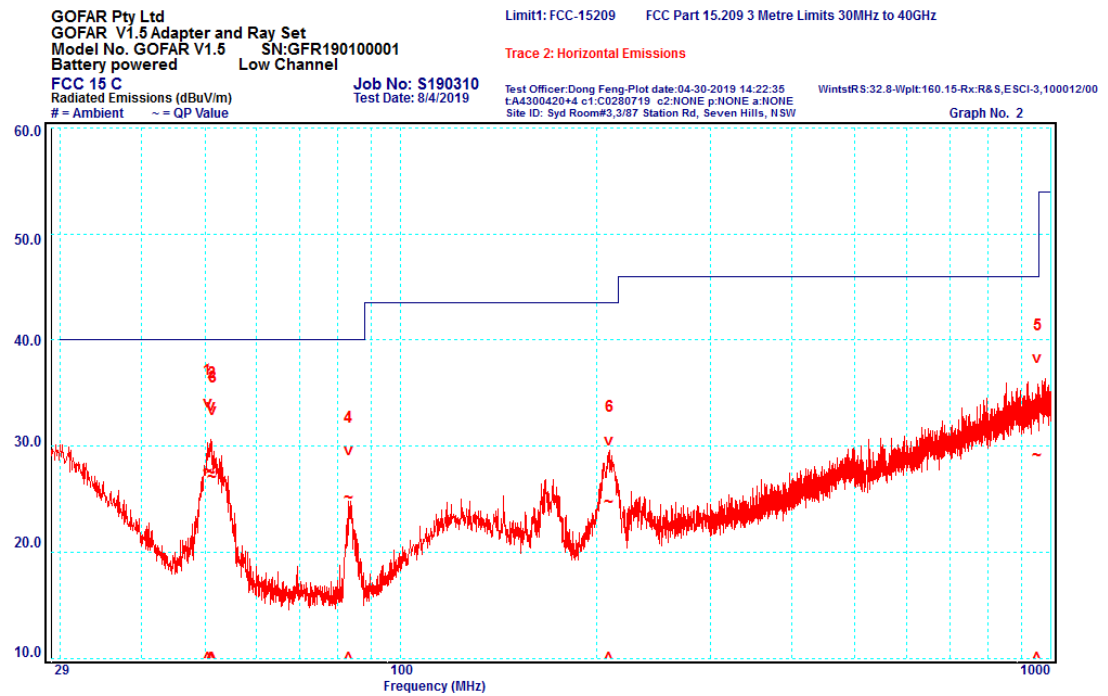
Low Channel

Graph 1: Vertical Polarisation 29 to 1000MHz



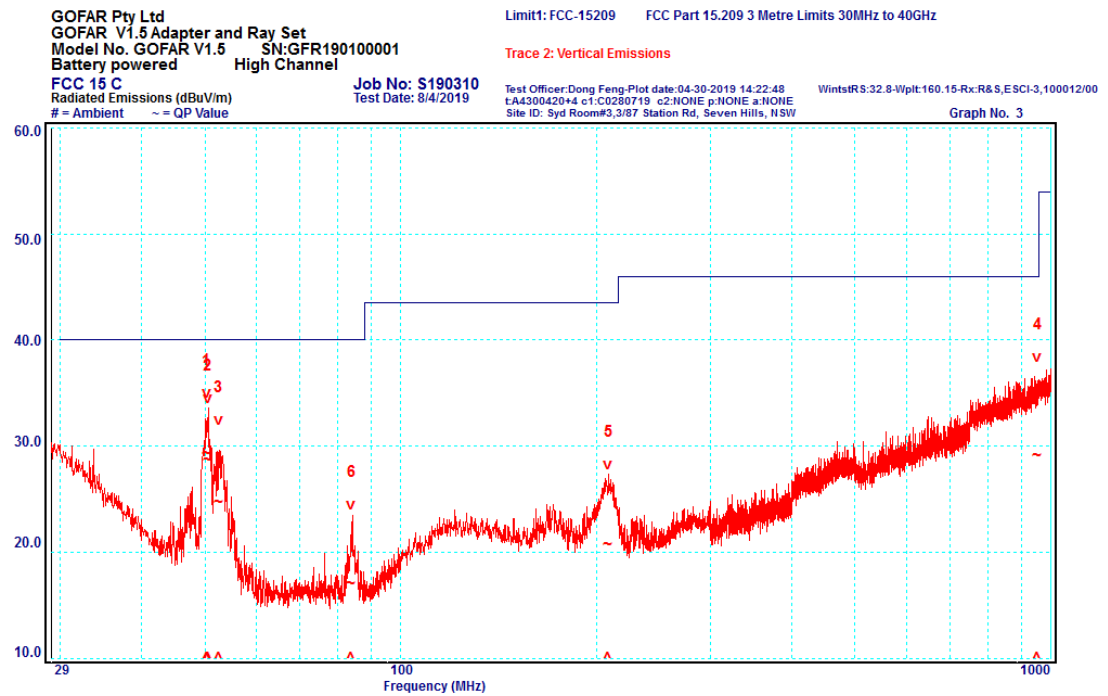
Peak	Frequency [MHz]	Polarisation	Quasi-Peak Value [dBμV/m]	Limit [dBμV/m]	Margin [± dB]
1	50.15	Vertical	28.7	40.0	-11.3
2	50.14	Vertical	28.5	40.0	-11.5
3	51.64	Vertical	27.4	40.0	-12.6
4	51.19	Vertical	26.1	40.0	-13.9
5	956.05	Vertical	29.6	46.0	-16.4
6	84.03	Vertical	17.7	40.0	-22.3
7	208.22	Vertical	20.9	43.5	-22.6

All measured frequencies complied with the Limit by a margin of greater than 10dB.

Graph 2: Horizontal Polarisation 29 to 1000MHz

Peak	Frequency [MHz]	Polarisation	Quasi-Peak [dBμV/m]	Limit [dBμV/m]	Margin [± dB]
1	50.56	Horizontal	27.7	40.0	-12.3
2	51.22	Horizontal	27.4	40.0	-12.6
3	51.41	Horizontal	27.0	40.0	-13.0
4	83.14	Horizontal	25.1	40.0	-14.9
5	953.46	Horizontal	29.4	46.0	-16.9
6	209.24	Horizontal	24.7	43.5	-18.8

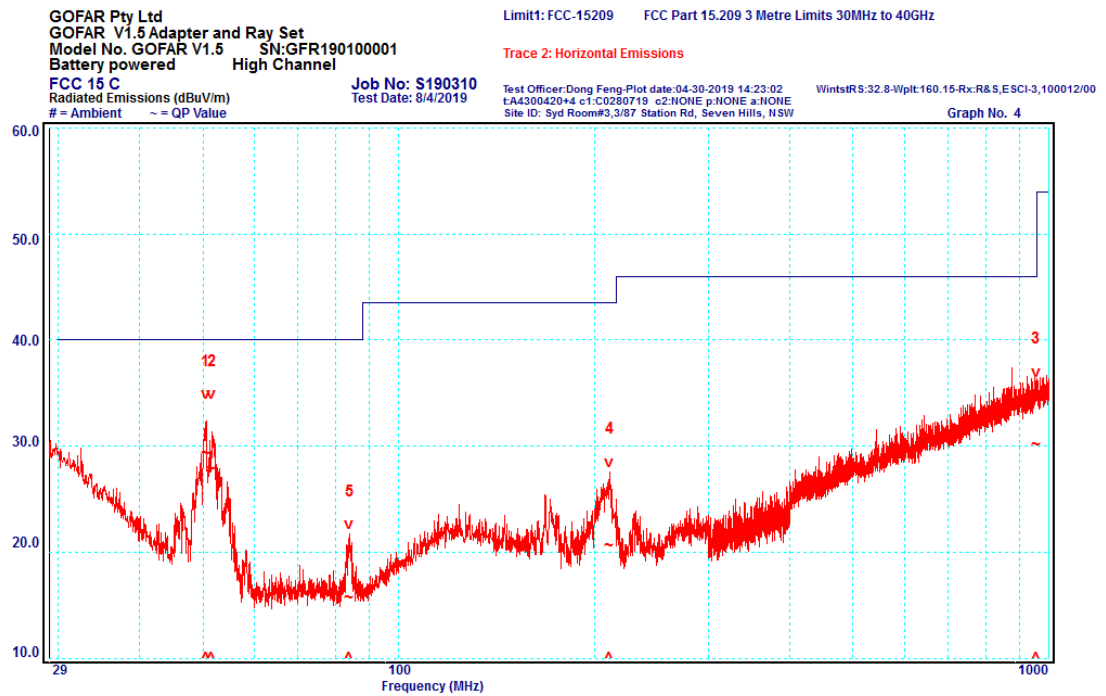
All measured frequencies complied with the Limit by a margin of greater than 10dB.

High Channel**Graph 3****Vertical Polarisation****29 to 1000MHz**

Peak	Frequency [MHz]	Polarisation	Quasi-Peak [dBuV/m]	Limit [dBuV/m]	Margin [± dB]
1	5035	Vertical	29.3	40.0	-10.7
2	50.57	Vertical	28.6	40.0	-11.4
3	52.47	Vertical	24.7	40.0	-15.3
4	953.74	Vertical	29.1	46.0	-16.9
5	208.64	Vertical	20.7	43.5	-22.8
6	84.07	Vertical	17.0	40.0	-23.0

All measured frequencies complied with the Limit by a margin of greater than 10dB.

Graph 4 Horizontal Polarisation 29 to 1000MHz



Peak	Frequency [MHz]	Polarisation	Quasi-Peak [dBμV/m]	Limit [dBμV/m]	Margin [± dB]
1	50.54	Horizontal	29.3	40.0	-10.7
2	51.62	Horizontal	27.9	40.0	-12.1
3	955.17	Horizontal	30.1	46.0	-15.9
4	211.15	Horizontal	20.6	43.5	-22.9
5	84.04	Horizontal	15.7	40.0	-24.3

All measured frequencies complied with the Limit by a margin of greater than 10dB.

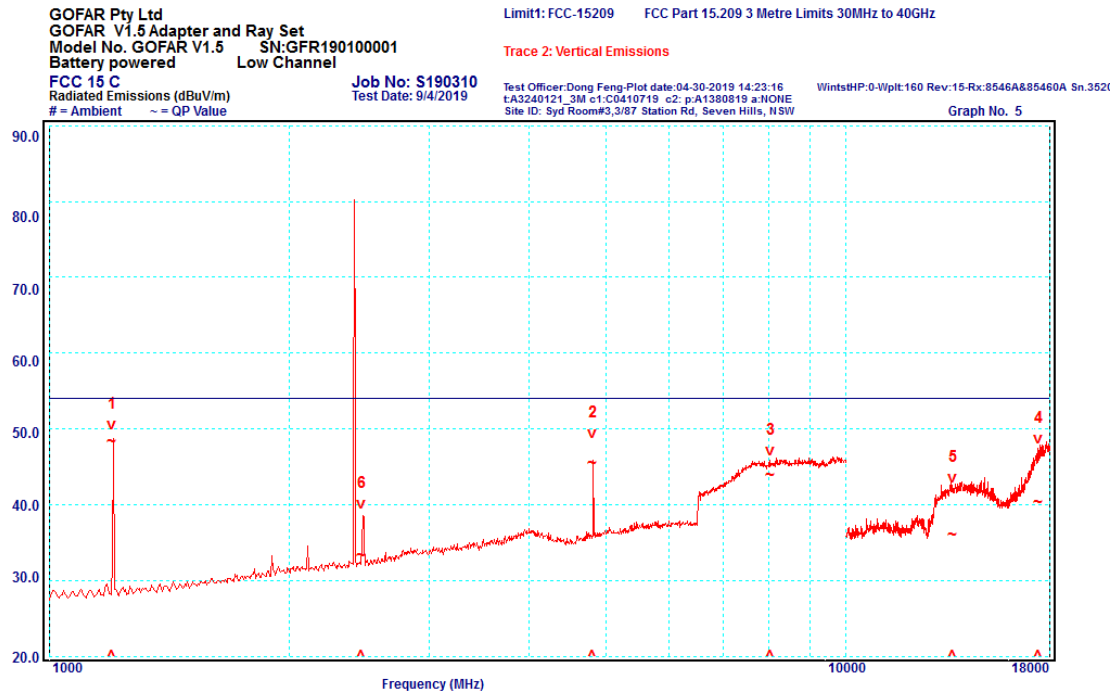
3.7.2 Frequency Band: 1000 – 18000 MHz

Measurements from 1 to 18 GHz were made at a distance of 3 metres. The average measurements were made with a resolution bandwidth (RBW) of 1000 kHz and the video bandwidth (VBW) of 10kHz.

The §15.209(a) limits applied.

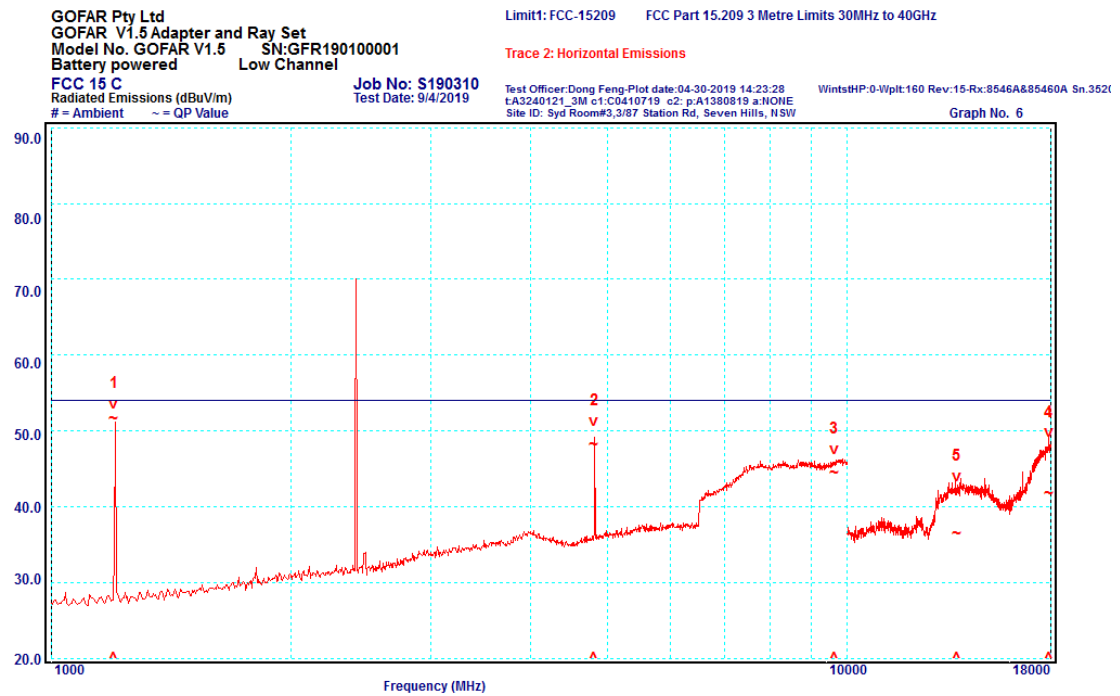
Low Channel

Graph 5: Vertical Polarisation 1000 to 18000 MHz



Peak	Frequency [MHz]	Polarisation	Average-Peak [dBuV/m]	Limit [dBuV/m]	Margin [± dB]
1	1200.01	Vertical	48.4	54.0	-5.6
2	4804.10	Vertical	45.5	54.0	-8.5
3	8038.67	Vertical	43.9	54.0	-10.1
4	17428.86	Vertical	40.3	54.0	-13.7
5	13601.08	Vertical	36.0	54.0	-18.0
6	2466.64	Vertical	33.2	54.0	-20.8

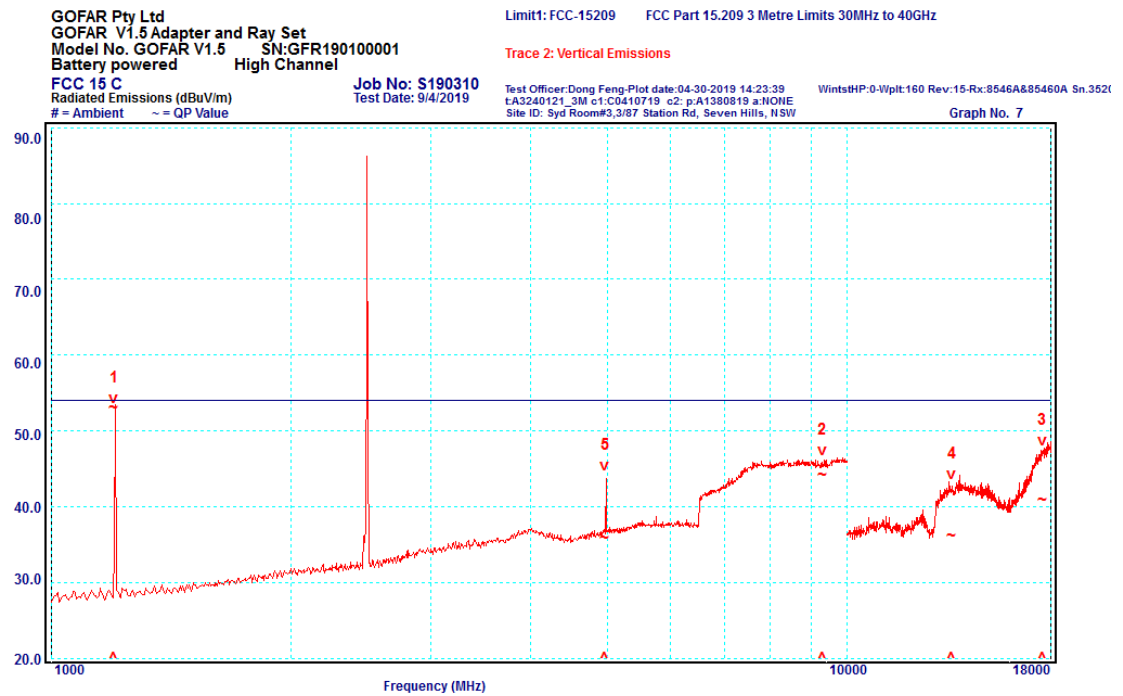
All measured frequencies complied with the Limit by a margin of at least 5.6dB.

Graph 6 Horizontal Polarisation 1000 to 18000 MHz

Peak	Frequency [MHz]	Polarisation	Average-Peak [dBμV/m]	Limit [dBμV/m]	Margin [± dB]
1	1200.07	Horizontal	51.5	54.0	-2.5*
2	4804.18	Horizontal	48.1	54.0	-5.9
3	9619.75	Horizontal	44.5	54.0	-9.5
4	17889.78	Horizontal	41.7	54.0	-12.3
5	13710.76	Horizontal	36.4	54.0	-17.6

* This measurement falls within the laboratory's measurement uncertainty.

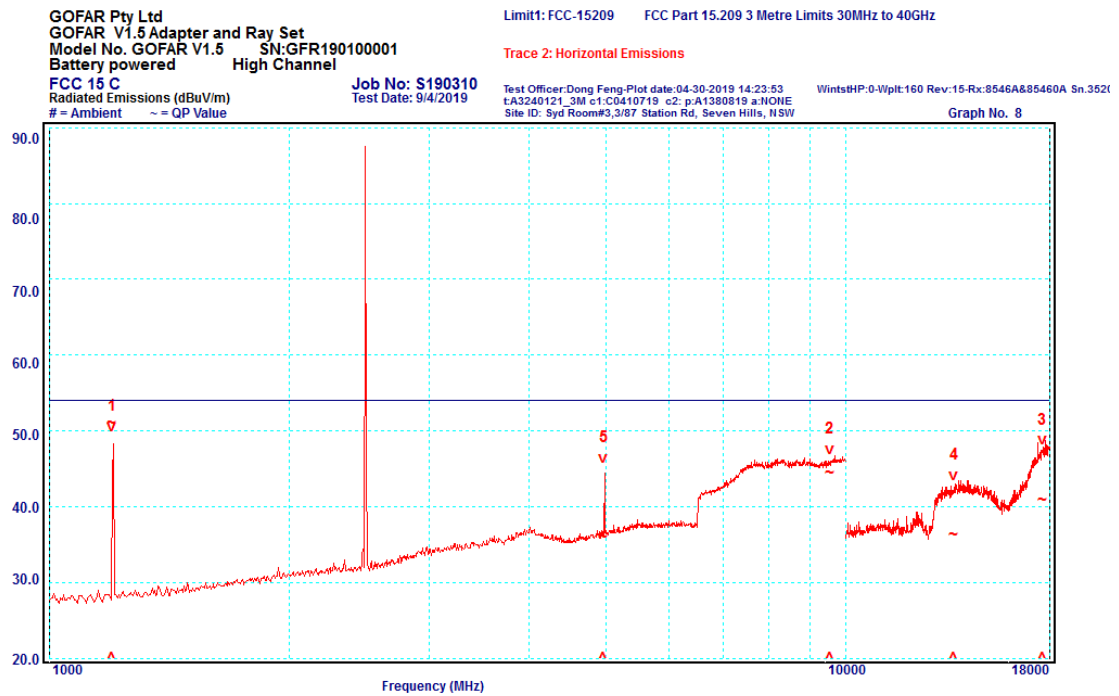
All measured frequencies complied with the Limit by a margin of at least 2.5dB*.

High Channel**Graph 7:****Vertical Polarisation****1000 to 18000 MHz**

Peak	Frequency [MHz]	Polarisation	Average-Peak [dBuV/m]	Limit [dBuV/m]	Margin [± dB]
1	1200.03	Vertical	53.1	54.0	-0.9*
2	9290.63	Vertical	44.2	54.0	-9.8
3	17571.29	Vertical	40.8	54.0	-13.2
4	13511.10	Vertical	36.2	54.0	-17.8
5	4961.55	Vertical	35.9	54.0	-18.1

* This measurement falls within the laboratory's measurement uncertainty.

All measured frequencies complied with the Limit by a margin of at least 0.9dB*.

Graph 8: Horizontal Polarisation 1000 to 18000 MHz

Peak	Frequency [MHz]	Polarisation	Average-Peak [dBμV/m]	Limit [dBμV/m]	Margin [± dB]
1	1199.99	Horizontal	51.1	54.0	-2.9*
2	9529.72	Horizontal	44.4	54.0	-9.6
3	17629.72	Horizontal	40.8	54.0	-13.2
4	13640.72	Horizontal	36.3	54.0	-17.7
5	4961.55	Horizontal	35.9	54.0	-18.1

* This Measurement falls within the laboratory's measurement uncertainty.

All measured frequencies complied with the Limit by a margin of at least 2.9dB*.

Conclusion:

The EUT complied with the limits of FCC Rule Part 15 Subpart C, 15.209.

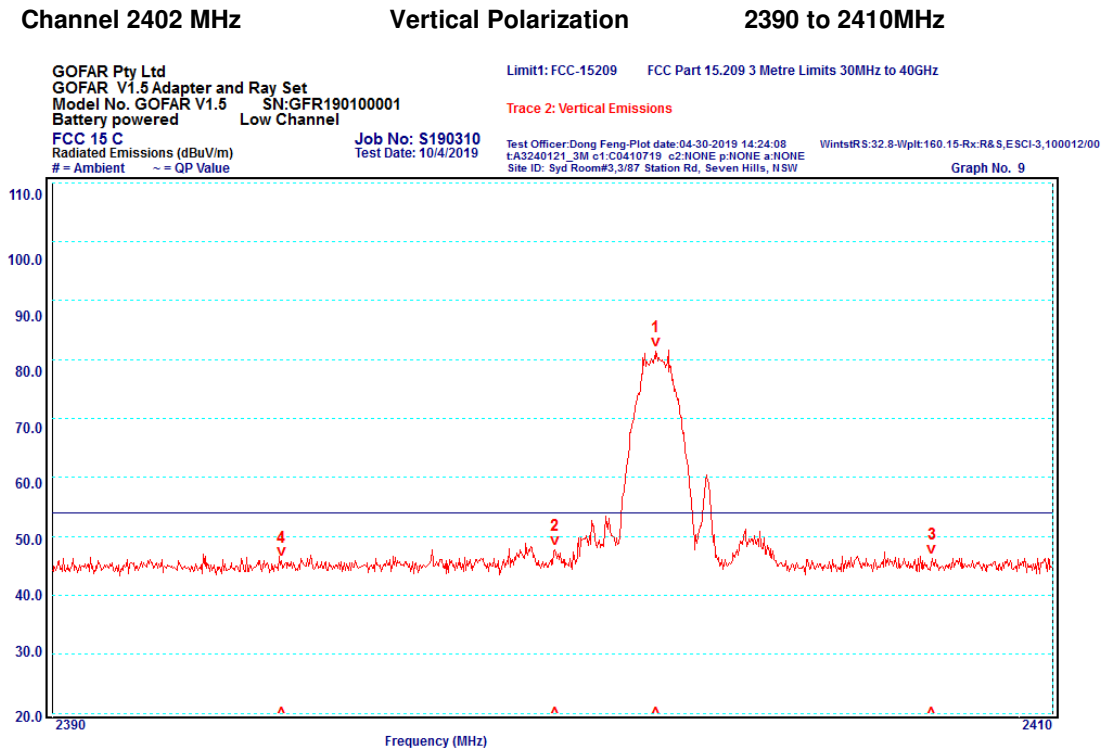
3.8 15.247(d) Out of Band Emissions

Requirement:

In any 100kHz 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 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

The §15.209(a) limits are for reference only.

3.8.1 Authorized-band band-edge



Peak	Frequency [MHz]	Polarisation	Peak Value [dBμV/m]	Limit [dBμV/m]	Margin [± dB]
1	2402.05	Vertical	81.4	54.0	+27.4
2	2400.03	Vertical	47.7	54.0	-6.3
3	2407.58	Vertical	46.2	54.0	-7.8
4	2394.57	Vertical	45.8	54.0	-8.2

Result: No Emission Bandwidth were found within 2390MHz to 2400MHz.

Channel 2402 MHz

Horizontal Polarization

2390 to 2410MHz

GOFAR Pty Ltd
 GOFAR V1.5 Adapter and Ray Set
 Model No. GOFAR V1.5 SN:GFR190100001
 Battery powered Low Channel
 FCC 15 C
 Radiated Emissions (dBuV/m)
 # = Ambient ~ = QP Value

Job No: S190310
 Test Date: 10/4/2019

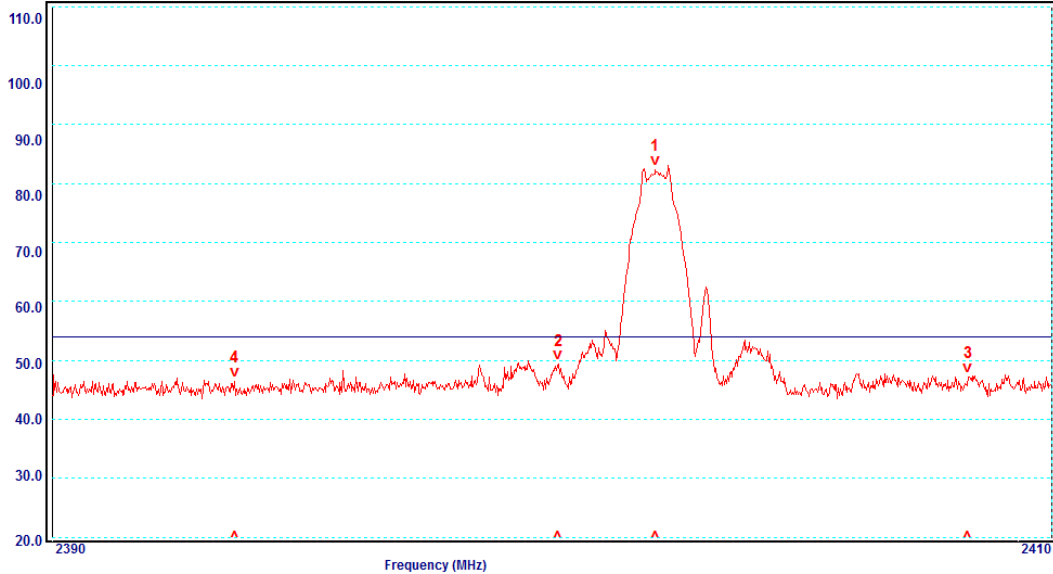
Limit1: FCC-15209

FCC Part 15.209 3 Metre Limits 30MHz to 40GHz

Trace 2: Horizontal Emissions

Test Officer: Dong Feng-Plot date: 04-30-2019 14:24:19
 tA3240121_3M c1: C0410719 c2: NONE p: NONE a: NONE
 Site ID: Syd Room3, 3/87 Station Rd, Seven Hills, NSW

Graph No. 10



Peak	Frequency [MHz]	Polarisation	Peak Value [dBμV/m]	Limit [dBμV/m]	Margin [± dB]
1	2402.05	Horizontal	82.4	54.0	+28.4
2	2400.11	Horizontal	49.3	54.0	-4.7
3	2408.32	Horizontal	47.2	54.0	-6.8
4	2393.64	Horizontal	46.5	54.0	-7.5

Result: No Emission Bandwidth were found within 2390MHz to 2400MHz.

Channel 2480 MHz

Vertical Polarization

2470 to 2490MHz

GOFAR Pty Ltd
 GOFAR V1.5 Adapter and Ray Set
 Model No. GOFAR V1.5 SN:GFR190100001
 Battery powered High Channel
 FCC 15 C
 Radiated Emissions (dBuV/m)
 # = Ambient ~ = QP Value

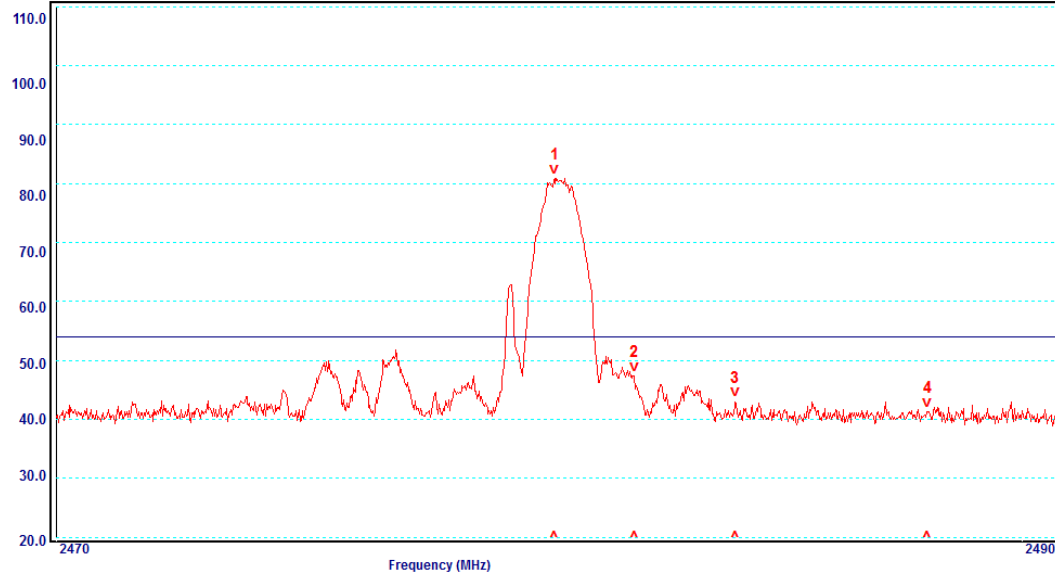
Job No: S190310
 Test Date: 10/4/2019

Limit1: FCC-15209 FCC Part 15.209 3 Metre Limits 30MHz to 40GHz

Trace 2: Vertical Emissions

Test Officer: Dong Feng-Plot date: 04-30-2019 14:24:31
 tA3240121_3M c1:CD410719 c2:NONE p:NONE a:NONE
 Site ID: Syd Room#3,3/87 Station Rd, Seven Hills, NSW

Graph No. 11



Peak	Frequency [MHz]	Polarisation	Peak Value [dB μ V/m]	Limit [dB μ V/m]	Margin [$\pm$ dB]
1	2479.95	Vertical	80.9	54.0	+26.9
2	2481.55	Vertical	47.4	54.0	-6.6
3	2483.57	Vertical	43.0	54.0	-11.0
4	2487.42	Vertical	41.4	54.0	-12.6

Result: No Emission Bandwidth were found within 2390MHz to 2400MHz.

Channel 2480 MHz

Horizontal Polarization

2470 to 2490MHz

GOFAR Pty Ltd
 GOFAR V1.5 Adapter and Ray Set
 Model No. GOFAR V1.5 SN:GFR190100001
 Battery powered High Channel
 FCC 15 C
 Radiated Emissions (dBuV/m)
 # = Ambient ~ = QP Value

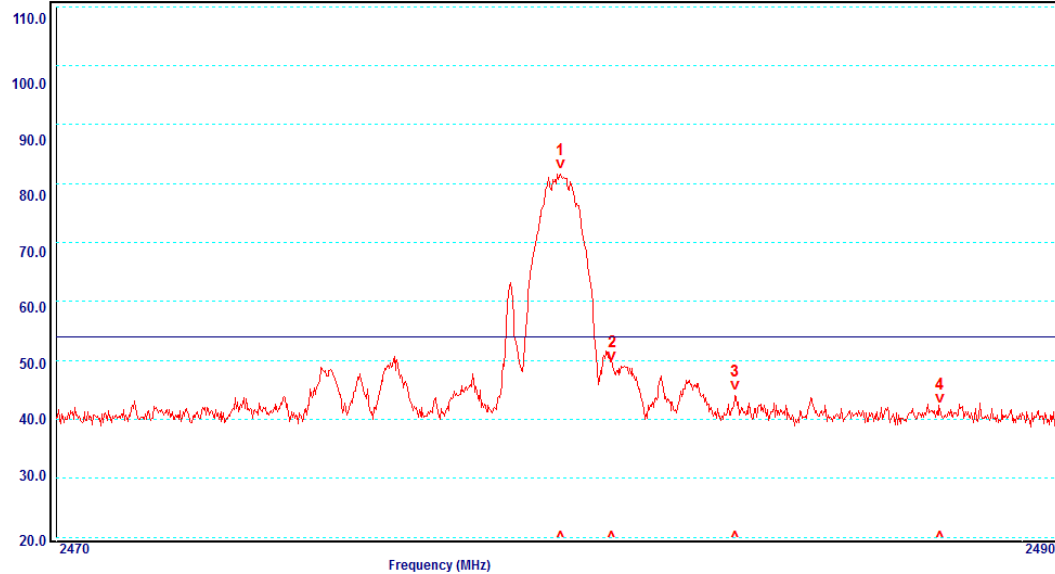
Job No: S190310
 Test Date: 10/4/2019

Limit1: FCC-15209 FCC Part 15.209 3 Metre Limits 30MHz to 40GHz

Trace 2: Horizontal Emissions

Test Officer: Dong Feng-Plot date: 04-30-2019 14:24:40
 tA3240121_3M c1:CD410719 c2:NONE p:NONE s:NONE
 Site ID: Syd Room3,3/87 Station Rd, Seven Hills, NSW

Graph No. 12



Peak	Frequency [MHz]	Polarisation	Peak Value [dB μ V/m]	Limit [dB μ V/m]	Margin [$\pm$ dB]
1	2480.07	Horizontal	81.7	54.0	+27.7
2	2481.11	Horizontal	49.1	54.0	-4.9
3	2483.57	Horizontal	44.1	54.0	-9.9
4	2487.68	Horizontal	42.0	54.0	-12.0

Result: No Emission Bandwidth were found within 2390MHz to 2400MHz.

Conclusion: Complied.

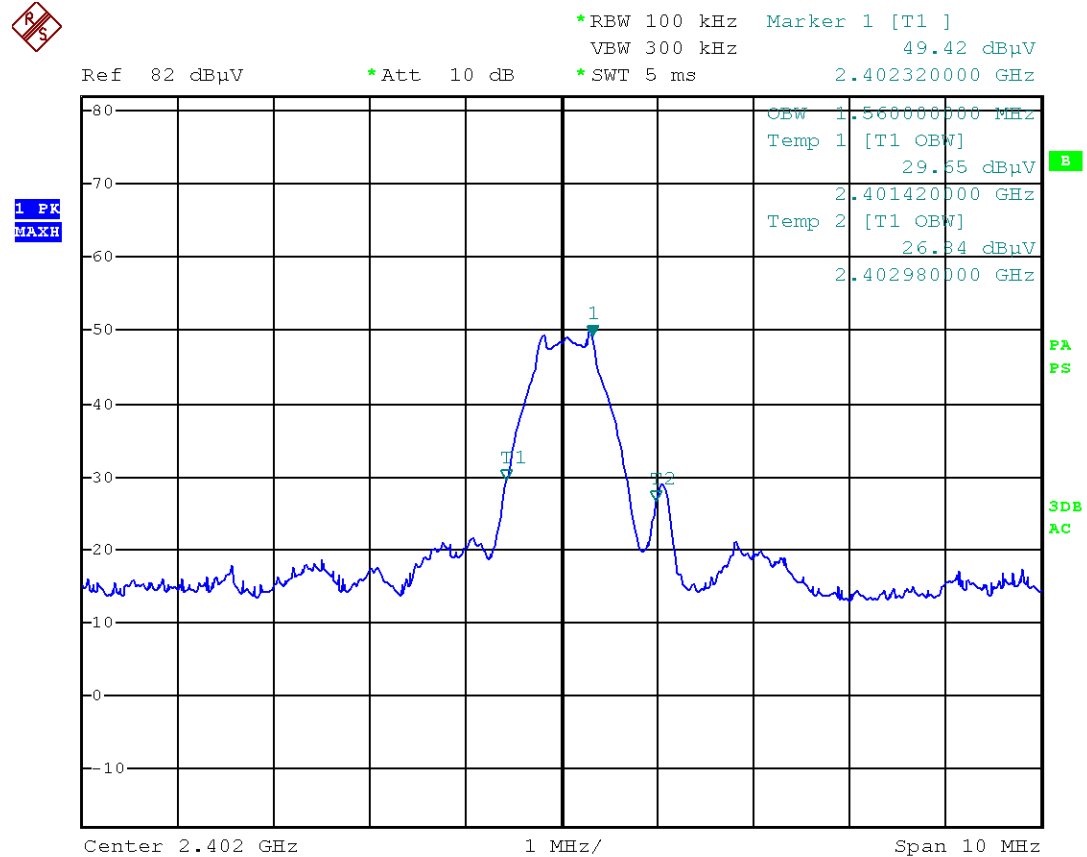
3.9 §2.1049 Occupied bandwidth – 99% power

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

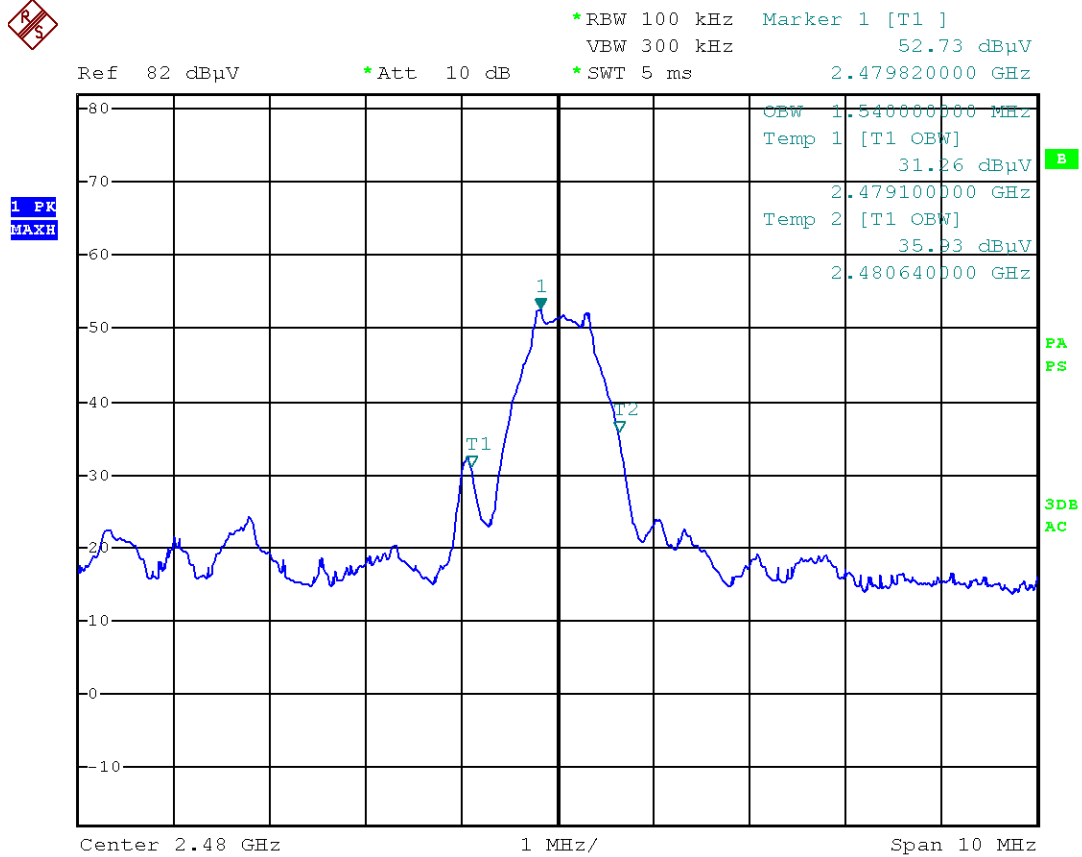
Channel [kHz]	99% Bandwidth [MHz]	Low Frequency [GHz]	High Frequency [GHz]
2402	1.560	2.401420	2.402980
2480	1.540	2.479100	2.480640

99% Occupied Bandwidth

Channel 2402



Date: 10.APR.2019 11:52:40

99% Occupied Bandwidth**Channel 2480**

Date: 10.APR.2019 15:34:30

4.0 COMPLIANCE STATEMENT

The GOFAR V1.5 Adapter and Ray Set with Model Number: GOFAR V1.5 tested on behalf of GOFAR PTY LTD. complied with the requirements of 47 CFR, Part 15 Subpart C - Rules for Radio Frequency Devices (intentional radiators) 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:

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

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%.