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EMC COMPLIANCE REPORT

Certification Test Report

In accordance with:
CFR47 FCC Part 15, Subpart C, 15.247

SBN Technology Pty Ltd

V2.0

AxIT Stomp-IT

FCC ID: 2A733-STOMP-2

REPORT: E2204-1437A-4
DATE: December, 2022



**WORLD RECOGNISED
ACCREDITATION**

Accreditation Number: 18553
Accredited for compliance with ISO/IEC 17025 - Testing

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Certificate of Compliance

Certification Compliance Report

EMC Bayswater Test Report: E2204-1437A-4
Issue Date: December, 2022

Test Sample(s): AxIT Stomp-IT
Model No: V2.0
Serial No: D8:80:39:F5:CA:EC
FCC ID: 2A733-STOMP-2

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Test Specification: CFR47 FCC Part 15, Subpart C, 15.247

Results Summary:	15.203 - Antenna requirement	Complied
	15.247 (a)(2) - 6dB Bandwidth	Complied
	15.247 (b)(3) - Maximum Output Power	Complied
	15.247 (d) - Out-of-Band Emissions - - 100kHz, -20dBc	Complied
	15.247 (d) - Emissions on the Band edge	Complied
	15.247 (d), 15.209 - Radiated emissions in Restricted bands	Complied
	15.247 (e) - Power Spectral Density	Complied
	15.247 (i) - Radio frequency hazard	Complied

Test Date(s): 19th of 25th of May, 2022

**Test House
(Issued By):** EMC Bayswater Pty Ltd
18/88 Merrindale Drive
Croydon South
Victoria 3136
Australia

FCC Accredited Test Firm Registration number: 527798
FCC Accredited Test Firm Designation number: AU0004

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This is to certify that the necessary measurements were made by EMC Bayswater Pty Ltd, and that the SBN Technology Pty Ltd, V2.0, AxIT Stomp-IT, has been tested in accordance with requirements contained in the appropriate commission regulations..

Prepared & tested by:



Adnan Zaman
(EMC Test Engineer)

Approved by:



Neville Liyanapatabendige
(Manager)

13/12/2022 09:26

Date

EMC Compliance Report for SBN Technology Pty Ltd

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1. Introduction

Electromagnetic Compatibility (EMC) tests were performed on a SBN Technology Pty Ltd, V2.0, AxIT Stomp-IT in accordance with the requirements of Title 47 of the standard CFR47 FCC Part 15, Subpart C, 15.247.

2. Test Report Revision History

None

3. Report Information

EMC Bayswater Pty Ltd reports apply only to the specific samples tested under the stated test conditions. All samples tested were in good operating condition throughout the entire test program unless otherwise stated. EMC Bayswater Pty Ltd does not in any way guarantee the later performance of the product/equipment. It is the manufacturer's responsibility to ensure that additional production units of the tested model are manufactured with identical electrical and mechanical components. EMC Bayswater Pty Ltd shall have no liability for any deductions, inference or generalisations drawn by the clients or others from EMC Bayswater Pty Ltd issued reports. This report shall not be used to claim, constitute or imply product endorsement by EMC Bayswater Pty Ltd. This report shall not be reproduced except in full (with the exception of the certificate on page 2) without the written approval of EMC Bayswater Pty Ltd. This document may be altered or revised by EMC Bayswater Pty Ltd personnel only, and shall be noted in the revision section of the document. Any alteration of this document not carried out by EMC Bayswater Pty Ltd will nullify the document.

4. Summary of Results

The EUT complied with applicable requirements of CFR47 FCC Part 15, Subpart C, 15.247. Worst-case results are tabled as follows:

FCC Part 15C sections	Test	Result
15.203	Antenna Requirement	Complied ^{#1}
15.247 (a)(2)	6dB Bandwidth	Complied by 182.2kHz
15.247 (b)(3)	Maximum Peak Output Power	Complied by 28.1dB
15.247 (d)	Out-of-Band Emissions – 100kHz, -20dBc	Complied by at least >20dB
15.247 (d)	Emissions on the Band edge	Complied by 4.4dB ⁺
15.247 (d), 15.209	Radiated emissions in Restricted bands	Complied by 7.2dB
15.247 (e)	Power Spectral Density	Complied by 20.3dB
	Occupied Bandwidth (99% Emission Bandwidth)	1078kHz

⁺Refer to relevant section for statement of measurement uncertainty.

^{#1}The Antenna is attached to a dedicated connector, internal to the device

Table 1: Summary of test results

5. Product Sample Details

5.1. EUT Description

The EUT (Equipment Under Test), as supplied by the client, is described as follows:

Product:	AxIT Stomp-IT	
Model No:	V2.0	
Serial No:	D8:80:39:F5:CA:EC	
Firmware:	v272	
Software:	AxIT App v2.8.11	
Power Specifications:	Battery powered, Lithium Ion 3.7V, 2000mAh (LiPol Battery Co; Battery Model LP604260)	
Dimensions:	400mm x 400mm x 30mm (Length x Width x Height)	
Weight:	6950 g	
EUT Type:	Portable, tested as table-top	
Transmitter details:	Description:	RN4871-U
	Type:	BLE 4.2
	Modulation:	GFSK
	Channels:	Channels 0-39 (ISM Band 2.402 to 2.480 GHz)
	Max power:	0dBm
	Antenna:	2.4GHz Mini Flexible WiFi Antenna with uFL Connector [100mm], Antenna Gain: 4dBi. Part No: AF-2308

(Customer supplied product information)

(Refer to photographs in Annex A & B for views of the EUT)

5.2. Product description

The EUT (Equipment Under Test) has been described by the customer as follows:

“Stomp-IT devices are used in a pair of Stomp-ITs. They are used in allied health and fitness settings for measuring forces generated through them from activities such as squats, lunges, jumps etc. Stomp-ITs are used in close proximity to users (often stood on with bare feet). Whilst the device transmits live data to the tablet computer for analysis and visualisation.

The typical environment would be indoors (although outdoor use is possible) in a clinic/practice/gym setting. Tests may run from approximately 1 min each, though can be many minutes long.”

(Customer supplied product description information)

The highest frequency generated or used in the device or on which the device operates or tunes as specified by the customer is 2.480GHz (Bluetooth Module).

5.3. Support Equipment

None

5.4. Product operating modes

“Transmitting only”

(Customer supplied product operating mode information)

5.5. Product operating mode for testing

“Transmitting”

(Customer supplied product operating mode for testing information)

5.6. Configuration

The EUT was either configured by the customer or configured using the customer's instructions.

The EUT was battery powered and transmitting constantly with modulation.

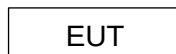


Figure 1: Block diagram of EUT test configuration

5.7. Modifications

EMC Bayswater Pty Ltd did not modify the EUT.

6. Test Facility & Equipment

6.1. Test Facility

Tests were performed at the indoor Open Area Test Site (iOATS) at EMC Bayswater Pty Ltd, located at 18/88 Merrindale Drive, Croydon South, Victoria, 3136, Australia.

EMC Bayswater Pty Ltd FCC Test Firm registration number is 527798.

EMC Bayswater Pty Ltd FCC Test Firm Designation number is AU0004.

6.2. Test Equipment

Refer to Appendix A for the measurement instrument list.

7. Referenced Standards

CFR47 FCC Part 15, Subpart C, 15.247

CFR47 FCC Part 15, Subpart B

ANSI C63.10 - 2013

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

ANSI C63.4 - 2014

American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.

FCC KDB - 558074 D01 15.247 Meas Guidance v05r02

8. Referenced Documents

Test Plan

Not supplied

9. Antenna Requirement – FCC Part 15.203

9.1. Requirements

As per section 15.203 of CFR47 FCC Part 15, Subpart C, 15.247:

- An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

9.2. Result

The EUT uses internal antenna with dedicated connector. Therefore, the EUT complied with the antenna requirements of CFR47 FCC Part 15, Subpart C, 15.247 Section 15.203.

10.6dB Bandwidth – FCC 15.247 (a)(2)

10.1.Test Procedure

The 6dB Bandwidth was performed in accordance with the section 11.8 of ANSI C63.10 - 2013.

6dB Bandwidth measurements were performed at the antenna port (Conducted method). The transmitter output was connected to a spectrum analyzer through a suitable attenuator. The spectrum analyser was tuned to the fundamental (transmit frequency) of the transmitter bottom, centre and top channels with 100kHz RBW and 300kHz VBW using the peak detector and a suitable span to allow accurate measurements whilst capturing the full intentional transmission including side lobes. The resultant bandwidth measurement was recorded.

(Refer to photographs in Annex C for views of the test configuration)

10.2.Limits

Applicable only to systems using digital modulation techniques:

Transmit operating frequency (MHz)	Minimum 6dB Bandwidth (kHz)
2400 – 2483.5	500

Table 2: 6dB Bandwidth

10.3.Test Results

6dB Bandwidth measurements are tabulated below:

(Refer to graphs in Appendix C.1)

Transmit operating frequency (MHz)	Measured 6dB Bandwidth (kHz)	Minimum 6dB Bandwidth (kHz)	Margin (kHz)	Comment
2402 (Bottom)	683.0	500	+183.0	Complied
2440 (Middle)	682.2	500	+182.2	Complied
2480 (Top)	685.8	500	+185.8	Complied

Table 3: Results for 6dB Bandwidth

The measurement uncertainty was calculated as follows:

Measurement Parameter	Calculated measurement uncertainty
Operating Frequency	±10.5kHz
Bandwidth	±14.96kHz

The reported uncertainty is an expanded uncertainty calculated using a coverage factor of $k=2$ which gives a level of confidence of approximately 95%.

Climatic Conditions	
Temperature:	17.3°C
Humidity:	48%
Atmospheric pressure:	1022.7hPa

Table 4: Climatic conditions

Notes: The minimum required 500kHz 6dB Bandwidth requirements were satisfied by at least 182.2kHz.

The transmitter was continuously transmitting in modulated transmit mode.

Assessment: The EUT complied with the 6dB Bandwidth requirements of CFR47 FCC Part 15, Subpart C, 15.247 (a)(2).

11. Occupied Channel Bandwidth (99% Emission Bandwidth)

11.1. Test Procedure

The 99% emission Bandwidth was performed in accordance with the section 6.9.3 of ANSI C63.10 - 2013.

99% Emission Bandwidth measurements were performed at the antenna port (Conducted method). The transmitter output was connected to a spectrum analyzer through a suitable attenuator. The spectrum analyzer centre frequency was tuned to the fundamental (transmit frequency) of the transmitter with the span of the analyzer was set to capture all products of the modulation process, including the emission skirts. The resolution bandwidth (RBW) was set to 1% to 5% of the occupied bandwidth and video bandwidth (VBW) was set to three times the RBW.

A peak detector, maxhold function (worst case) was used to measure the occupied bandwidth, using the built-in 99% occupied bandwidth measurement function of the receiver. The resultant bandwidth measurement was recorded.

(Refer to photographs in Annex C for views of the test configuration)

11.2. Requirements

No limits are defined in CFR47 FCC Part 15, Subpart C, 15.247.

11.3. Test Results

Occupied Bandwidth measurements are tabulated below:

(Refer to graph in Appendix C.7)

Transmit Operating Frequency (MHz)	99%BW Lower Frequency (MHz)	99%BW Upper Frequency (MHz)	Occupied Channel Bandwidth (kHz)
2402 (Lowest Channel)	2401.468	2402.546	1078
2440 (Middle Channel)	2439.469	2440.545	1076
2480 (Highest Channel)	2479.468	2480.541	1073

Table 5: Occupied Bandwidth

The measurement uncertainty was calculated as follows:

Measurement Parameter	Calculated measurement uncertainty
Operating Frequency	$\pm 10.5\text{kHz}$
Bandwidth	$\pm 14.96\text{kHz}$

The reported uncertainty is an expanded uncertainty calculated using a coverage factor of $k=2$ which gives a level of confidence of approximately 95%.

Climatic Conditions	
Temperature:	17.3°C
Humidity:	48%
Atmospheric pressure:	1022.7hPa

Table 6: Climatic conditions

Notes: The transmitter was tested with modulation applied.

Assessment: The measured Occupied bandwidth (99% Emission Bandwidth) is 1078 kHz (informative only).

12. Maximum Peak Output Power – FCC 15.247 (b)(3)

12.1. Test Procedure

Conducted Method:

The conducted output power measurements were performed in accordance with the section 11.9.1 of ANSI C63.10 - 2013.

The transmitter output was connected to a spectrum analyzer through a suitable attenuator. The Maximum Peak Conducted Output Power of the fundamental transmit frequency was measured using a spectrum analyzer with 1MHz RBW and 3MHz VBW using the peak detector and a suitable span to allow accurate measurement whilst capturing the full intentional transmission including side lobes. An offset for the measurement path insertion loss (attenuators and cables) was used to get a true measurement.

The EUT was tested on the top, middle and bottom channels.

(Refer to photographs in Annex C for views of the test configuration)

12.2. Limits

For systems using digital modulation techniques:

Transmit operating frequency (MHz)	Peak Power (W)	Peak Power (dBm)	e.i.r.p (W)	e.i.r.p (dBm)
2400 – 2483.5	1	30	4	36

Table 7: Limits – Transmitter maximum peak output power

12.3. Test Results

The worst-case maximum output power measurements are tabulated below:

(Refer to graphs in Appendix C.2)

Channel	Frequency (MHz)	Peak Power (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	2402	+1.9	30.0	-28.1*	Complied
Middle	2440	+1.6	30.0	-28.4	Complied
Top	2480	+1.2	30.0	-28.8	Complied

**Worst-case emissions*

Table 8: Results for Maximum Peak Conducted Output Power – Conducted Method

The measurement uncertainty was calculated at ± 1.4 dB. The reported uncertainty is an expanded uncertainty calculated using a coverage factor of approximately $k=2$ which gives a level of confidence of approximately 95%.

Climatic Conditions	
Temperature:	17.3°C
Humidity:	48%
Atmospheric pressure:	1022.7hPa

Table 9: Climatic Conditions

Notes: The transmitter maximum output power was below the specified limit for the specified operating frequency.

The transmitter was continuously transmitting in modulated transmit mode.

Assessment: The EUT complied with the Transmitter Maximum Peak output power requirements of CFR47 FCC Part 15, Subpart C, 15.247 (b)(3).

13. Radiated emissions in Restricted bands – 15.247 (d), 15.209

13.1. Requirements

As per section 15.247(d) of 47 CFR Part 15 Subpart C:

- Radiated emissions which fall in the restricted bands, as defined in section 15.205(a) of 47 CFR Part 15 Subpart C, must also comply with the radiated emission limits specified in section 15.209(a) of 47 CFR Part 15 Subpart C (see §15.205(c) of 47 CFR Part 15 Subpart C).

As per section 47 CFR Part 15 Subpart C section 15.209 (Radiated emissions, general requirements) the EUT is required to meet the limits that permit the highest field strength of the following table for the radiated emissions which fall in the restricted bands, as defined in section 15.205(a) of 47 CFR Part 15 Subpart C:

Frequency Range (MHz)	Limits at 3m (dBµV/m)
0.009 to 0.490	128.5 to 93.8
0.490 to 1.705	73.8 to 62.9
1.705 to 30.0	69.5
30.0 to 88	40.0
88.0 to 216.0	43.5
216.0 to 960.0	46.0
Above 960	54.0
NOTE: The lower limit shall apply at the transition frequency.	

Note 1: as per CFR FCC Part 15 section 15.209 (d) The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector

Note 2: as per CFR FCC Part 15.35 (b) Unless otherwise specified, on any frequency or frequencies above 1000 MHz, the radiated emission limits are based on the use of measurement instrumentation employing an average detector function. Unless otherwise specified, measurements above 1000 MHz shall be performed using a minimum resolution bandwidth of 1 MHz. When average radiated emission measurements are specified in this part, including average emission measurements below 1000 MHz, there also is a limit on the peak level of the radio frequency emissions. Unless otherwise specified, e.g., see §§15.250, 15.252, 15.253(d), 15.255, 15.256, and 15.509 through 15.519 of this part, the limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device, e.g., the total peak power level. Note that the use of a pulse desensitization correction factor may be needed to determine the total peak emission level. The instruction manual or application note for the measurement instrument should be consulted for determining pulse desensitization factors, as necessary.

Table 10: Limits for Radiated Spurious Emissions at distance of 3m – Restricted Bands

13.2. Test Procedure

The Radiated Emissions were performed in accordance with the section 11.12 of ANSI C63.10 - 2013.

Radiated Emissions were measured 3 metres (from 9kHz to 25GHz) away from the EUT in the iOATS (indoor Open Area Test Site) facility, which is an ANSI C63.4 compliant semi-anechoic chamber with ground plane. The EUT was placed on a non-conductive support at a height of 0.8m (9kHz to 1GHz) and 1.5m (1GHz to 25GHz) above the ground plane.

In the frequency range of 9kHz to 30MHz, an Active loop antenna was used. For X (Parallel), Y (Perpendicular) and Z (Ground-Parallel) antenna polarizations, the peak detector was set to MAX-HOLD and the range selected continuously scanned. The measuring antenna was positioned at 1m fixed height, and the turntable slowly rotated. The peak preview measurements were performed with a resolution bandwidth of 200Hz (9kHz to 150kHz), 9kHz (150kHz to 30MHz) and a video bandwidth of 30kHz. Peak emissions that exceeded the limit or were close to the applicable limit were investigated further. The frequency of each emission was then accurately determined. Each emission of interest was then in-turn maximised by using the turntable to rotate the EUT through 360 degrees to find the worst-case emission arrangement. Quasi peak measurements were then performed using a measuring time of no less than 15 seconds. The final quasi-peak measurements were performed using a receiver bandwidth of 6dB and a resolution bandwidth of 200Hz (9kHz to 150kHz) and 9kHz (150kHz to 30MHz).

In the frequency range of 30MHz to 1GHz, a Biconilog antenna was used. For both horizontal and vertical antenna polarizations, the peak detector was set to MAX-HOLD and the range selected continuously scanned. The measuring antenna was positioned at 4 different fixed height positions and the turntable slowly rotated. The peak preview measurements were performed with a resolution bandwidth of 120kHz and a video bandwidth of 300kHz. Peak emissions that exceeded the limit or were close to the applicable limit were investigated further. The frequency of each emission was then accurately determined. Each emission of interest was then in-turn maximised by using the turntable to rotate the EUT through 360 degrees and varying the height of the antenna between 1 and 4 metres to find the worst-case emission arrangement. Quasi peak measurements were then performed using a measuring time of no less than 15 seconds. The final quasi-peak measurements were performed using a receiver bandwidth of 6dB and a resolution bandwidth of 120kHz.

In the frequency range 1.0GHz to 26.5GHz a Horn antenna was used and an area of 3m x 3m was covered between the antenna and the EUT using RF absorbing material with a rated attenuation more than 20dB over the frequency range. The height of the horn antenna was varied using the antenna bore-sighting technique and the turntable slowly rotated to maximise the emissions. For both horizontal and vertical antenna polarizations, the Peak and Average preview measurements were performed with a resolution bandwidth of 1 MHz and a video bandwidth of 3MHz. Peak and average emissions that exceeded the applicable limit or were close to the applicable limit were investigated further. Each emission of interest was then in-turn maximised by using the turntable to rotate the EUT through 360 degrees and the antenna height varied (if applicable, using the antenna bore-sighting technique) to find the worst-case emission arrangement. Peak and CISPR Average measurements were then performed using a

measuring time of no less than 15 seconds, the maximum emission level in the observed duration was recorded as the final result. The final peak and CISPR Average measurements were performed using a receiver bandwidth of 6dB and a resolution bandwidth of 1 MHz. Peak and Average measurements were performed at spot frequencies where the peak or average emission was close to, or exceeded the applicable limit line with the EUT rotation and antenna height varied (if applicable, using the antenna bore-sighting technique) to produce the highest emission.

Plots of the accumulated measurement data for both horizontal and vertical antenna polarizations, including all transducer and other measuring system correction factors were produced using commercially available compliant software (as listed in the test equipment list of this report).

(Refer to photographs in Annex C for views of the test configuration)

13.3. Test Results

Transmitter Spurious Emissions measurements are detailed as follows:

(Refer to graphs in Appendix C.4)

Operating Channel: Bottom, Middle and Top				
Measurement Antenna Polarisation	Frequency (MHz)	Result peak (dB μ V/m)	Limit Quasi-peak/ Average (dB μ V/m)	Delta limit (dB)
X	Peak preview emissions >20dB below limit or no significant emissions above the noise floor observed			
Y	Peak preview emissions >20dB below limit or no significant emissions above the noise floor observed			
Z	Peak preview emissions >20dB below limit or no significant emissions above the noise floor observed			

Table 11: Transmitter Spurious Emissions – 9kHz to 30MHz

Operating Channel: Bottom, Middle and Top				
Measurement Antenna Polarisation	Frequency (MHz)	Result Quasi-peak (dB μ V/m)	Limit Quasi-peak (dB μ V/m)	Delta limit (dB)
Horizontal	Peak preview emissions >20dB below limit or no significant emissions above the noise floor observed			
Vertical				

Table 12: Transmitter Spurious Emissions – 30MHz to 1GHz

Operating Channel: Bottom, (2402MHz)								
Measurement Antenna Polarisation	Peak Measurements				Average Measurements			
	Frequency (MHz)	Result (dB μ V/m)	Limit (dB μ V/m)	Delta Limit (dB)	Frequency (MHz)	Result (dB μ V/m)	Limit (dB μ V/m)	Delta Limit (dB)
Horizontal	Peak emissions were not above the measurements system noise floor or at least 20dB below the limit				4804.560	42.3	54.0	-11.7
					All other Average emissions were not above the measurements system noise floor or at least 20dB below the limit			
Vertical	Peak emissions were not above the measurements system noise floor or at least 20dB below the limit				4803.360	46.8	54.0	-7.2*
					All other Average emissions were not above the measurements system noise floor or at least 10dB below the limit			

**Worst-case emissions*

Table 13: Transmitter Spurious Emissions – 1GHz to 25GHz

Operating Channel: Middle, (2440MHz)								
Measurement Antenna Polarisation	Peak Measurements				Average Measurements			
	Frequency (MHz)	Result (dB μ V/m)	Limit (dB μ V/m)	Delta Limit (dB)	Frequency (MHz)	Result (dB μ V/m)	Limit (dB μ V/m)	Delta Limit (dB)
Horizontal	Peak emissions were not above the measurements system noise floor or at least 20dB below the limit				4880.400	39.6	54.0	-14.4
					All other Average emissions were not above the measurements system noise floor or at least 20dB below the limit			
Vertical	Peak emissions were not above the measurements system noise floor or at least 20dB below the limit				4880.400	40.1	54.0	-13.8*
					All other Average emissions were not above the measurements system noise floor or at least 20dB below the limit			

**Worst-case emission*

Table 14: Transmitter Spurious Emissions – 1GHz to 25GHz

Operating Channel: Top, (2480MHz)								
Measurement Antenna Polarisation	Peak Measurements				Average Measurements			
	Frequency (MHz)	Result (dB μ V/m)	Limit (dB μ V/m)	Delta Limit (dB)	Frequency (MHz)	Result (dB μ V/m)	Limit (dB μ V/m)	Delta Limit (dB)
Horizontal	Peak emissions were not above the measurements system noise floor or at least 20dB below the limit				Average emissions were not above the measurements system noise floor or at least 20dB below the limit			
Vertical	Peak emissions were not above the measurements system noise floor or at least 20dB below the limit				Average emissions were not above the measurements system noise floor or at least 20dB below the limit			

Table 15: Transmitter Spurious Emissions – 1GHz to 25GHz

The measurement uncertainty was calculated as follows:

Measurement frequency range	Calculated measurement uncertainty
30MHz to 1GHz	±4.65dB
1GHz to 6GHz	±4.83dB
6GHz to 18GHz	±4.49dB
18GHz to 26.5GHz	±4.46dB

The reported uncertainty is an expanded uncertainty calculated using a coverage factor of $k=2$ which gives a level of confidence of approximately 95%.

Climatic Conditions	
Temperature:	16.0 to 17.7°C
Humidity:	50 to 51%
Atmospheric pressure:	1027.1 to 1033.0hPa

Table 16: Climatic conditions

Calculation: The above results are based upon the following calculation:

$$E = V_{QP/PK/AV} + AF - G_{Amp} + L_C$$

Where:

$$\begin{aligned}
 E &= \text{E-field in dB}\mu\text{V/m} \\
 V_{QP/PK/A} &= \text{Measured Voltage (Quasi Peak, Peak or Average) in dB}\mu\text{V} \\
 AF &= \text{Antenna Factor in dB(/m)} \\
 L_C &= \text{Cable and attenuator Loss in dB} \\
 G_{Amp} &= \text{Pre Amplifier Voltage Gain in dB}
 \end{aligned}$$

Example calculation:

$$\begin{aligned}
 E &= V_{PK} + AF - G_{Amp} + L_C \\
 E &= 30\text{dB}\mu\text{V} + 12\text{dB/m} - 0\text{dB} + 2.3\text{dB} \\
 E &= 44.3 \text{ dB}\mu\text{V/m}
 \end{aligned}$$

Notes: All Transmitter Radiated spurious emissions in restricted bands measurements were below the specified limits.

Radiated Emissions measurements were made up to the 10th harmonic.

The transmitter was continuously transmitting in modulated transmit mode.

Assessment: The EUT complied with the Radiated emissions in Restricted bands requirements of CFR47 FCC Part 15, Subpart C, 15.247 (d).

14. Out of Band emissions (100kHz, -20dBc) - FCC 15.247 (d)

14.1. Test Procedure

The Out of band emissions in non-restricted bands were performed in accordance with the section 11.11 of ANSI C63.10 – 2013.

Measurements were performed at the antenna port.

The EUT was placed inside a shielded chamber. The transmitter output was connected to a spectrum analyzer through a suitable attenuator (Conducted method). The out of band emissions were measured by spectrum analyzer with 100kHz RBW and 300kHz VBW using the peak detector. All measuring system correction factors (attenuators and cables) were used to get a true measurement.

Reference and emission level measurements were performed as per section 11.11.2 and 11.11.3 of ANSI C63.10 - 2013.

(Refer to photographs in Annex C for views of the test configuration)

14.2. Limits

As per section 15.247(d) of 47 CFR Part 15 Subpart C:

- 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, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of section 15.247 of 47 CFR Part 15 Subpart C, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in section 15.209(a) of 47 CFR Part 15 Subpart C is not required. In addition, radiated emissions which fall in the restricted bands, as defined in section 15.205(a) of 47 CFR Part 15 Subpart C, must also comply with the radiated emission limits specified in section 15.209(a) of 47 CFR Part 15 Subpart C (see §15.205(c) of 47 CFR Part 15 Subpart C).

The measured highest fundamental channel PSD in 100kHz was +1.5dBm

Frequency Range (MHz)	Limits (dBm)
30MHz and 26.5GHz	-18.5

Table 17: Limits for Unwanted Emissions - -20dBc (Non-restricted bands)

14.3. Test Results

Unwanted emissions measurements are detailed as follows:

(Refer to graphs in Appendix C.5)

Channel	Frequency (MHz)	Measured Level (dBm)	Limit (dBm)	Delta limit (dB)
Bottom	Peak preview emissions >20dB below limit or no significant emissions above the noise floor observed			
Middle	Peak preview emissions >20dB below limit or no significant emissions above the noise floor observed			
Top	Peak preview emissions >20dB below limit or no significant emissions above the noise floor observed			

Table 18: Transmitter Out of Band emissions - -20dBc/100kHz

The measurement uncertainty was calculated as follows:

Measurement frequency range	Calculated measurement uncertainty
30MHz to 25GHz	$\pm 1.4\text{dB}$

The reported uncertainty is an expanded uncertainty calculated using a coverage factor of $k=2$ which gives a level of confidence of approximately 95%.

Notes: All Transmitter Out of Band emissions measurements were below the specified limits (-20dBc).

Conducted measurements were made up to the 10th harmonic.

The transmitter was continuously transmitting in modulated transmit mode.

Assessment: The EUT complied with the Out of Band emissions (100kHz, -20dBc) requirements of CFR47 FCC Part 15, Subpart C, 15.247 (d).

15. Emissions on the Band edge – FCC 15.247 (d)

15.1. Test Procedure

The Band edge Measurement (100kHz, -20dB from fc & Restricted bands) was performed in accordance with the section 11.11, 11.12 and 11.13 of ANSI C63.10 – 2013.

Conducted measurements were performed within 2 MHz of the authorised lower band-edge.

At the lowest channel, 99% Occupied Band Width of the fundamental channel emission was within 2 MHz of the authorised Lower band edge therefore Marker-delta method was used. Unwanted emission at the lower band-edge were performed as per section 6.10.4 of ANSI C63.10 - 2013. At authorised-band band edge where the requiring band-edge emission attenuation is -20dB in a 100kHz bandwidth relative to the highest fundamental channel PSD in 100kHz. Radiated peak measurements were performed as per as section 6.10.4 of ANSI C63.10 - 2013.

The higher end of the band-edge was in restricted-band therefore measurements were performed as per section 6.10.5 of ANSI C63.10 - 2013. The FCC 15.209 limits are applicable to emission in restricted-band band-edge.

(Refer to photographs in Annex C for views of the test configuration)

15.2. Limits

Band edge in Non-restricted Bands

As per CFR47 FCC Part 15, Subpart C, 15.247 (d) the EUT shall meet the requirements that in any given 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.

The measured highest fundamental channel PSD in 100kHz was +1.5dBm

Band edge Frequencies	Limits (dBm)
Lower Edge (2402MHz)	-18.5

Table 19: Limits for Band edge - -20dBc (Non-restricted bands)

Band edge in Restricted Bands

As per CFR47 FCC Part 15, Subpart C, 15.247 (d) and 15.209 (Transmitter emission limits) the EUT is required to meet the limits that permit the highest field strength of the following table for the radiated emissions which fall in the restricted bands, as defined in section 15.205(a) of 47 CFR Part 15 Subpart C :

Band edge Frequencies	Limits at 3m (dB μ V/m)	
	Peak	Average
2483.5MHz to 2485.5	74.0	54.0

Table 20: Limits for Radiated Spurious Emissions at distance of 3m – Restricted Bands.

15.3. Test Results

Band edge measurements are detailed as follows:

(Refer to graphs in Appendix C.3)

Operating Channel: Bottom (2402MHz)			
Frequency (MHz)	Result Radiated Peak Power Spectral Density (dBm/100kHz)	Limit Radiated Peak Power Spectral Density (dBm/100kHz)	Delta limit (dB)
2399.846	-39.5	-18.5	-21.0*
2399.969	-39.9	-18.5	-21.4

*Worst-case emissions

Table 21: Transmitter Emissions on the Band edge - Low end

Operating Channel: Top (2480MHz)								
Measurement Antenna Polarisation	Peak Measurements				Average Measurements			
	Frequency (MHz)	Result (dB μ V/m)	Limit (dB μ V/m)	Delta Limit (dB)	Frequency (MHz)	Result (dB μ V/m)	Limit (dB μ V/m)	Delta Limit (dB)
Horizontal	2483.512	53.1	74.0	-20.9	2483.512	46.8	54.0	-7.2
	2485.424	48.1	74.0	-25.9	2485.424	44.6	54.0	-9.4
Vertical	2483.536	54.7	74.0	-19.3*	2483.536	49.6	54.0	-4.4**
	2485.168	52.8	74.0	-21.2	2485.168	47.6	54.0	-6.4

*Worst-case emissions, **Refer to measurement uncertainty statement

Table 22: Transmitter Emissions on the Band edge - High end

The measurement uncertainty was calculated as follows:

Measurement frequency range	Calculated measurement uncertainty
Radiated (1GHz to 6GHz)	± 4.83 dB
Conducted (1GHz to 6GHz)	± 1.4 dB

The reported uncertainty is an expanded uncertainty calculated using a coverage factor of $k=2$ which gives a level of confidence of approximately 95%.

Climatic Conditions	
Temperature:	17.3°C
Humidity:	48%
Atmospheric pressure:	1022.7hPa

Table 23: Climatic conditions

Calculation: The above results are based upon the following calculation:

$$E = V_{QP/PK/AV} + AF - G_{Amp} + L_C$$

Where:

$$E = \text{E-field in dB}\mu\text{V/m}$$

$$V_{QP/PK/AV} = \text{Measured Voltage (Quasi Peak, Peak or Average) in dB}\mu\text{V}$$

$$AF = \text{Antenna Factor in dB/(m)}$$

$$L_C = \text{Cable and attenuator Loss in dB}$$

$$G_{Amp} = \text{Pre Amplifier Voltage Gain in dB}$$

Example calculation:

$$E = V_{PK} + AF - G_{Amp} + L_C$$

$$E = 30\text{dB}\mu\text{V} + 12\text{dB/m} - 0\text{dB} + 2.3\text{dB}$$

$$E = 44.3 \text{ dB}\mu\text{V/m}$$

Notes: All Band edge measurements were below the specified limits.

The transmitter was continuously transmitting in modulated transmit mode.

Assessment: The EUT complied with the Transmitter Emissions on the Band edge requirements of CFR47 FCC Part 15, Subpart C, 15.247 (d).

16. Power Spectral Density – FCC 15.247 (e)

16.1. Test Procedure

The Power Spectral Density was performed in accordance with the section 11.10 of ANSI C63.10 - 2013.

The transmitter output was connected to a spectrum analyzer through a suitable attenuator (Conducted method). The Power Spectral density was measured in a 3kHz bandwidth of the fundamental frequency by spectrum analyzer with 3kHz RBW and 30kHz VBW using the peak detector and a suitable span to allow accurate measurements whilst capturing the full intentional transmission including side lobes.

(Refer to photographs in Annex C for views of the test configuration)

16.2. Limits

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. This power spectral density shall be determined in accordance with the provisions of CFR47 FCC Part 15, Subpart C, 15.247 (e). The same method of determining the conducted output power shall be used to determine the power spectral density.

Applicable only to systems using digital modulation techniques:

Transmit operating frequency (MHz)	Limit
2400 – 2483.5	8dBm/3kHz

Table 24: Power Spectral Density limits

16.3. Test Results

Power Spectral Density measurements are tabulated below:

(Refer to graphs in Appendix C.6)

Channel	Frequency (MHz)	Measured Power (dBm)	Limit (dBm/3kHz)	Margin (dB)	Result
Bottom	2402.003	-12.3	8.00	-20.3	Complied
Middle	2440.002	-12.4	8.00	-20.4	Complied
Top	2480.002	-12.7	8.00	-20.7	Complied

Table 25: Results for Power Spectral Density

The measurement uncertainty was calculated at ± 1.4 dB. The reported uncertainty is an expanded uncertainty calculated using a coverage factor of approximately $k=2$ which gives a level of confidence of approximately 95%.

Climatic Conditions	
Temperature:	17.3°C
Humidity:	48%
Atmospheric pressure:	1022.7hPa

Table 26: Climatic conditions

Notes: All Power Spectral Density measurements were below the specified limits.

The transmitter was supplied by the customer to be continuously transmitting in modulated transmit mode.

Assessment: The EUT complied with the Power Spectral Density requirements of CFR47 FCC Part 15, Subpart C, 15.247 (e).

17. Conclusion

The SBN Technology Pty Ltd, V2.0, AxIT Stomp-IT complied with the applicable requirements of CFR47 FCC Part 15, Subpart C, 15.247.

Appendix A – Test Equipment

Inv.	Equipment	Make	Model No.	Serial No.	Calibration		
					Interval	Due	Type
Transmitter Maximum EIRP, Power Spectral Density, 6dB Bandwidth and Band-edge – Conducted Method							
1217	ANALYSER, EMI Receiver	Rohde & Schwarz	ESU40	100182	1 year	June-23	E
1092	ATTENUATOR, 6dB, 2W	Fairview Microwave	SA26B-06	1092	2 years	Jan-24	I
1155	Hygrometer, Temp, Humidity	DigiTech	QM7312	-	2 years	Jul-23	I
0666	Enclosure, Semi-Anechoic, No 1	RFI Industries	S800 iOATS	1229	2.5 years	Jul-22	I
Transmitter Spurious Emissions							
1217	ANALYSER, EMI Receiver	Rohde & Schwarz	ESU40	100182	1 year	Jun-23	E
0935	ANTENNA, Biconilog	Sunol Sciences	JB5	A071106	2 years	Feb-23	E
0718	ATTENUATOR, 6dB	JFW	50FPE-006	-	1 year	Jan-23	I
0024	ANTENNA, Active Loop	EMCO	6502	2620	2 years	Aug-23	I
0932	CONTROLLER, Position	Sunol Sciences	SC104V-3	081006-1	N/A	N/A	V
0933	TURNTABLE	Sunol Sciences	SM46C	081006-2	N/A	N/A	V
0934	MAST, Antenna	Sunol Sciences	TLT2	081006-5	N/A	N/A	V
0559	PRE-AMP, Microwave, 18GHz	Miteq	AFS8	605305	1 year	Apr-23	I
0633	ANTENNA, Double Ridge Horn	EMCO	3115	9712-5369	3 years	Aug-24	I
1238	CABLE, Coax, Sucoflex 126 E	Huber + Suhner	10422876	SN 8000495/126E	1 year	Jan-23	I
1143	CABLE, Coax, Sucoflex 104PA	Huber + Suhner	84287041	SN MY058/4PA	1 year	Jan-23	I
1145	CABLE, Coax, Sucoflex 104PA	Huber + Suhner	84279564	SN MY056/4PA	1 year	Jan-23	I
0989	CABLE, Coax, Sucoflex 104A	Huber+Suhner	44454/4A	C357	1 year	Jan-23	I
1193	Standard Gain Horn Antenna - 5.85GHz to 8.2GHz	A.H. Systems, inc	SAS-584	186	1 year	May-23	E
1194	Standard Gain Horn Antenna - 8.2GHz to 12.4GHz	A.H. Systems, inc	SAS-585	224	1 year	May-23	E
1195	Standard Gain Horn Antenna - 12.4GHz to 18.0GHz	A.H. Systems, inc	SAS-586	195	1 year	May-23	E
1196	Standard Gain Horn Antenna - 18.0GHz to 26.5GHz	A.H. Systems, inc	SAS-587	181	1 year	Apr-23	E
1010	CABLE, Coax, Sucoflex 104B	Huber+Suhner	00078/4B	C406	2 years	Jul-22	E
1009	CABLE, Coax, Sucoflex 104B	Huber+Suhner	00065/4B	C405	2 years	Jul-22	E
1064	PRE-AMP, Microwave, 26GHz	Miteq	AFS33	1696371	1 year	Aug-22	V
1155	Hygrometer, Temp, Humidity	DigiTech	QM7312	-	2 years	Jul-23	I
0666	Enclosure, Semi-Anechoic, No 1	RFI Industries	S800 iOATS	1229	2.5 years	Jul-22	I
SW007	EMC Measurement Software	Rohde & Schwarz	EMC 32	Version 8.53.0	N/A	N/A	N/A

V: Verification of operation against an internal reference

I: Internal calibration against a traceable standard

E: External calibration by a NATA or MRA equivalent endorsed facility

N/A: Not Applicable

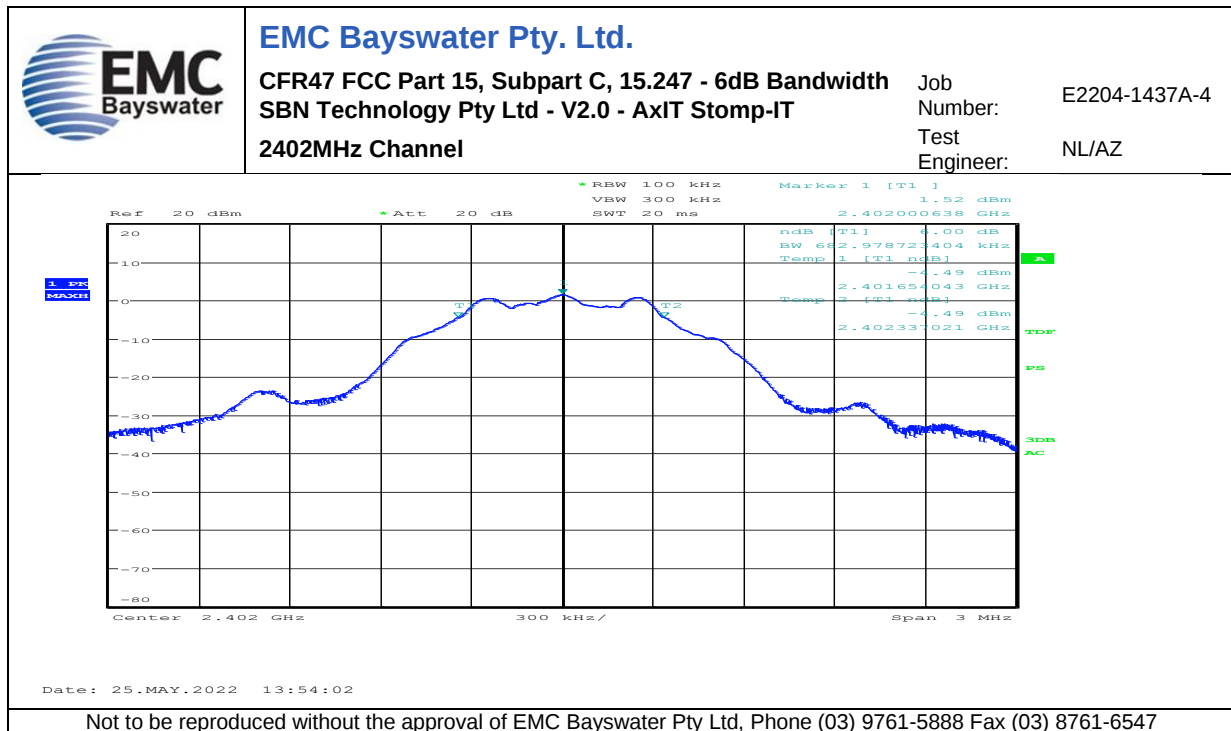
Appendix B – Photographs

Annex	Number	Photograph Description
A	1	EUT – External views
A	2	
A	3	
A	4	
A	5	
A	6	
A	7	
B	1	EUT – Internal views
B	2	
B	3	
B	4	
B	5	
B	6	
B	7	
B	8	
B	9	
B	10	
B	11	
B	12	
B	13	EUT - Battery
B	14	EUT – View of the antenna
B	15	
B	16	
B	17	
B	18	
B	19	
B	20	
C	1	Radiated measurements – Test configuration
C	2	Radiated measurements – 9kHz to 30MHz – X Antenna orientation
C	3	Radiated measurements – 9kHz to 30MHz – Y Antenna orientation
C	4	Radiated measurements – 9kHz to 30MHz – Z Antenna orientation
C	5	Radiated measurements – below 1GHz
C	6	Radiated measurements – above 1GHz
C	7	Conducted measurements

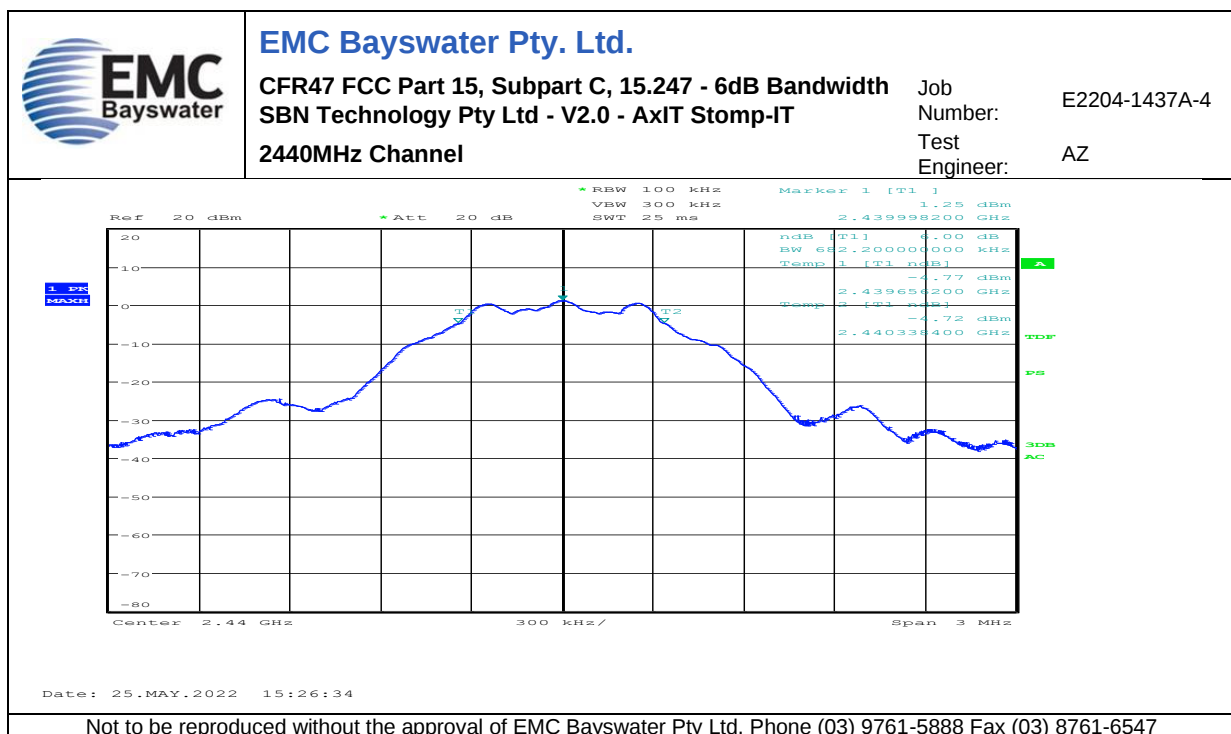
EUT External Photographs	EMC Bayswater Test Report E2204-1437A-4 Annex A
EUT Internal Photographs	EMC Bayswater Test Report E2204-1437A-4 Annex B
EUT Orientations & Test Configurations Photographs	EMC Bayswater Test Report E2204-1437A-4 Annex C

Appendix C.1 – Measurement Graphs – 6dB Bandwidth – 15.247 (a)(2)

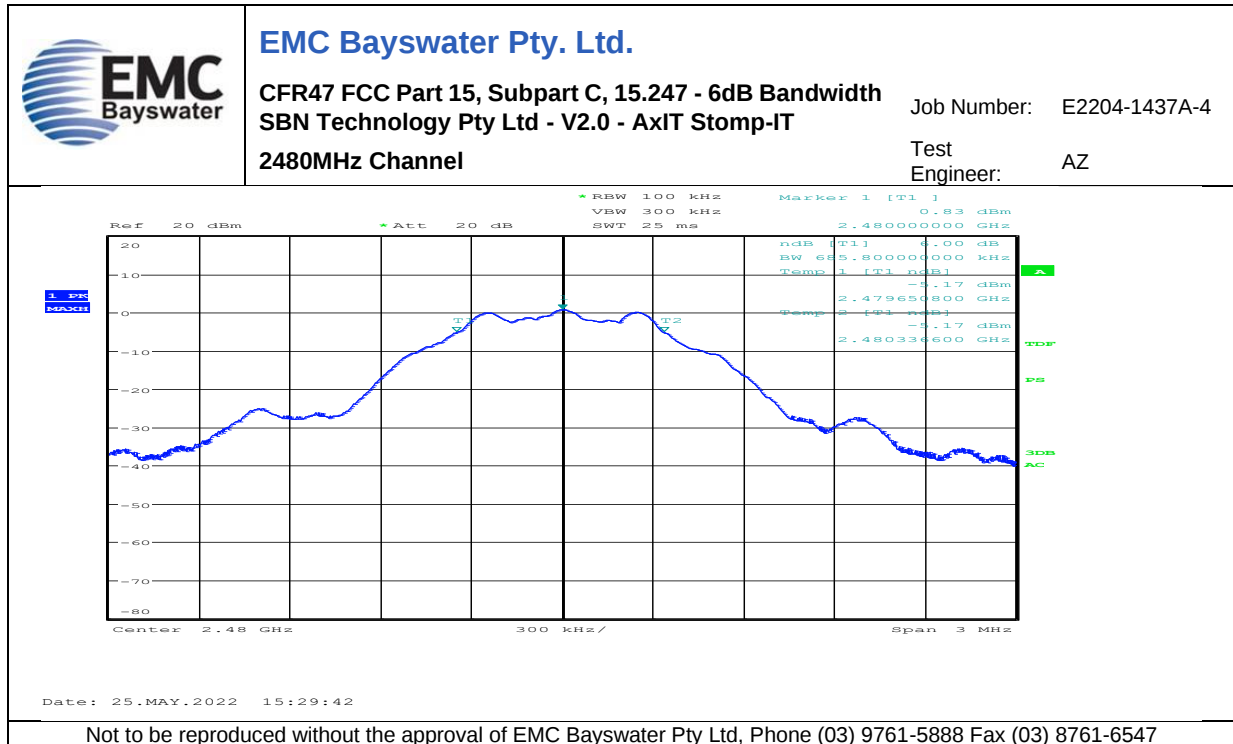
No.	Test	Graph Description
1	6dB Bandwidth	2402MHz Channel
2		2440MHz Channel
3		2480MHz Channel



Graph 1



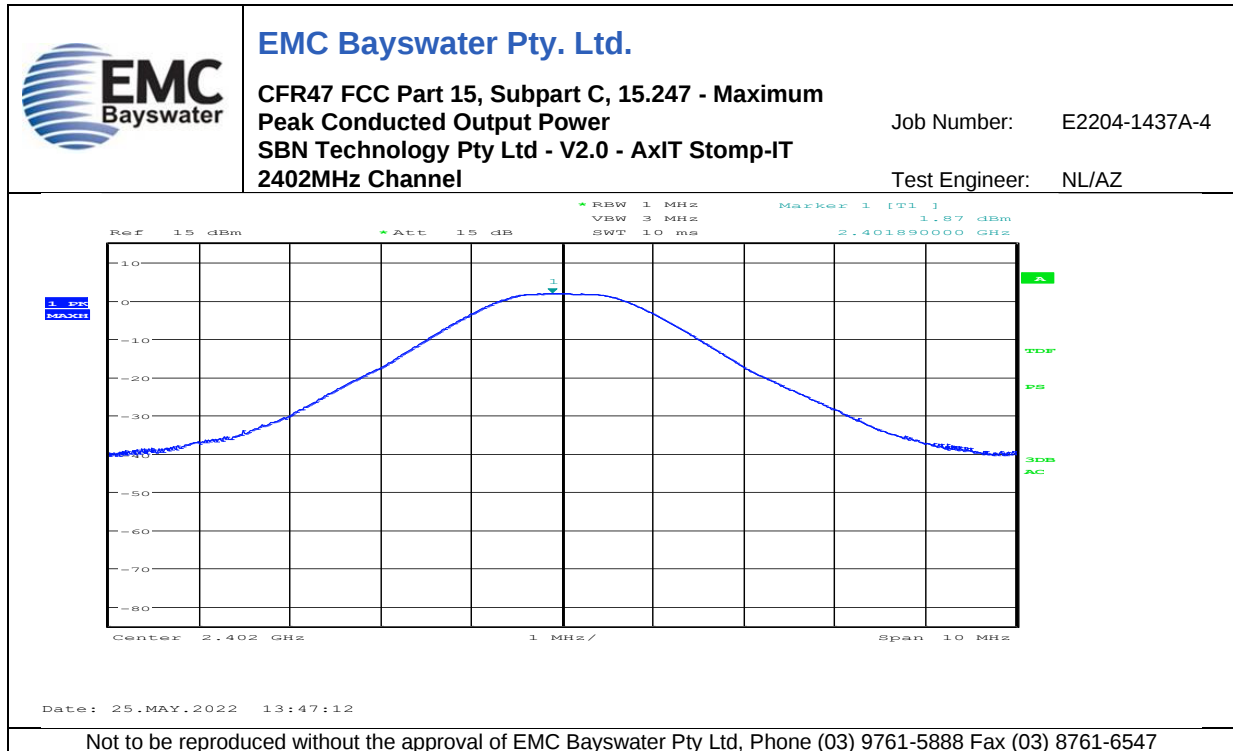
Graph 2



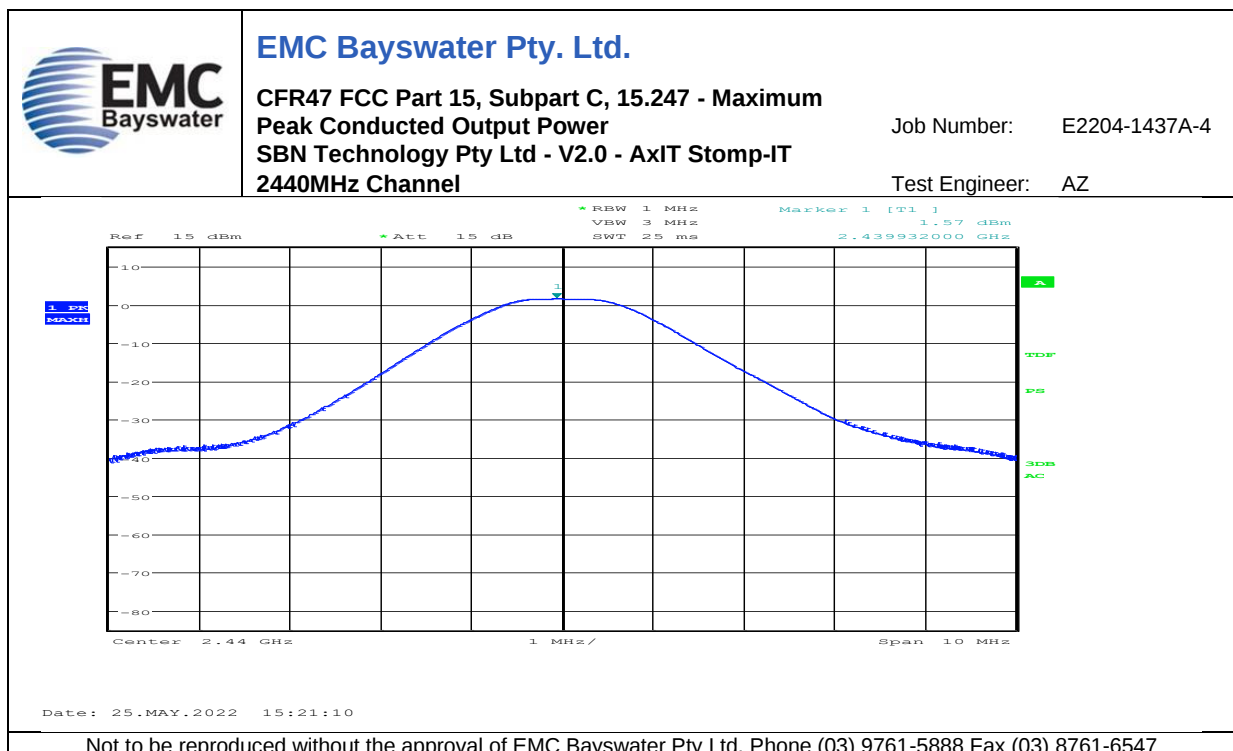
Graph 3

Appendix C.2 – Measurement Graphs – Maximum Peak Conducted Output Power – 15.247 (b)(3)

No.	Test	Graph Description
4	Maximum Peak Conducted Output Power	2402MHz Channel
5		2440MHz Channel
6		2480MHz Channel



Graph 4



Graph 5

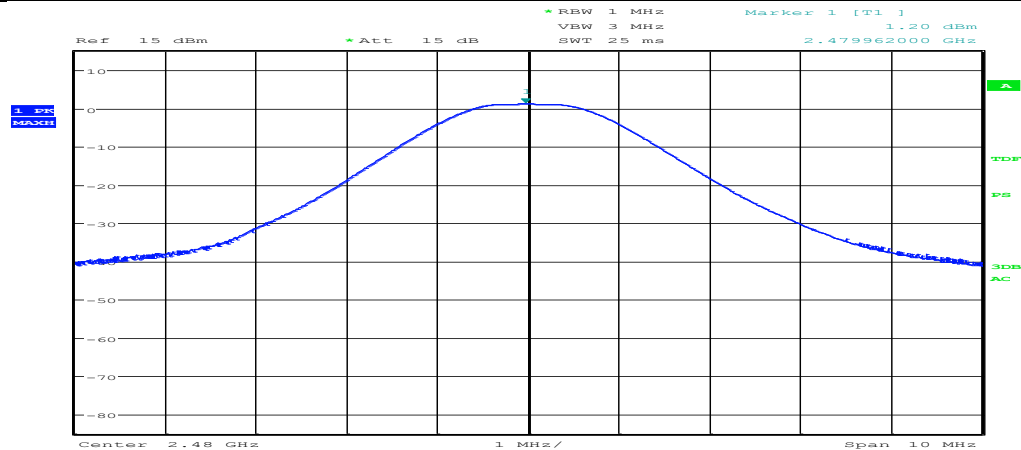


EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Maximum
Peak Conducted Output Power
SBN Technology Pty Ltd - V2.0 - AxIT Stomp-IT
2480MHz Channel

Job Number: E2204-1437A-4

Test Engineer: AZ



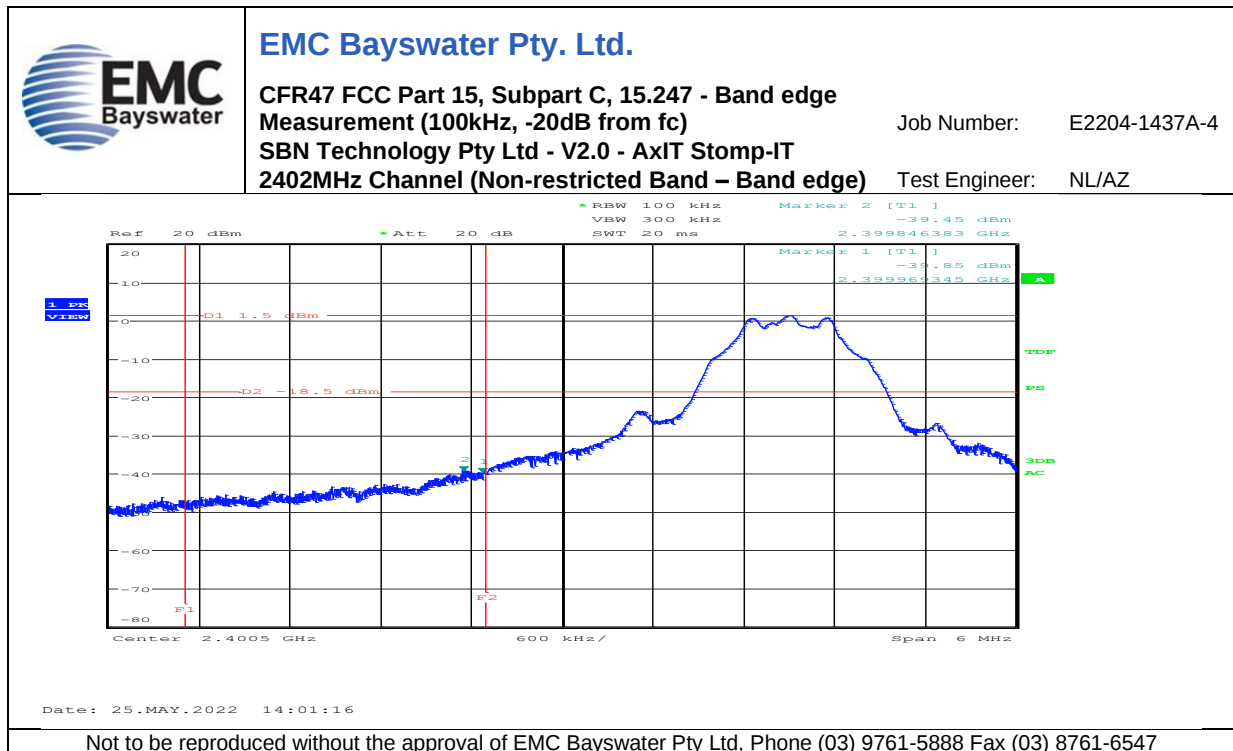
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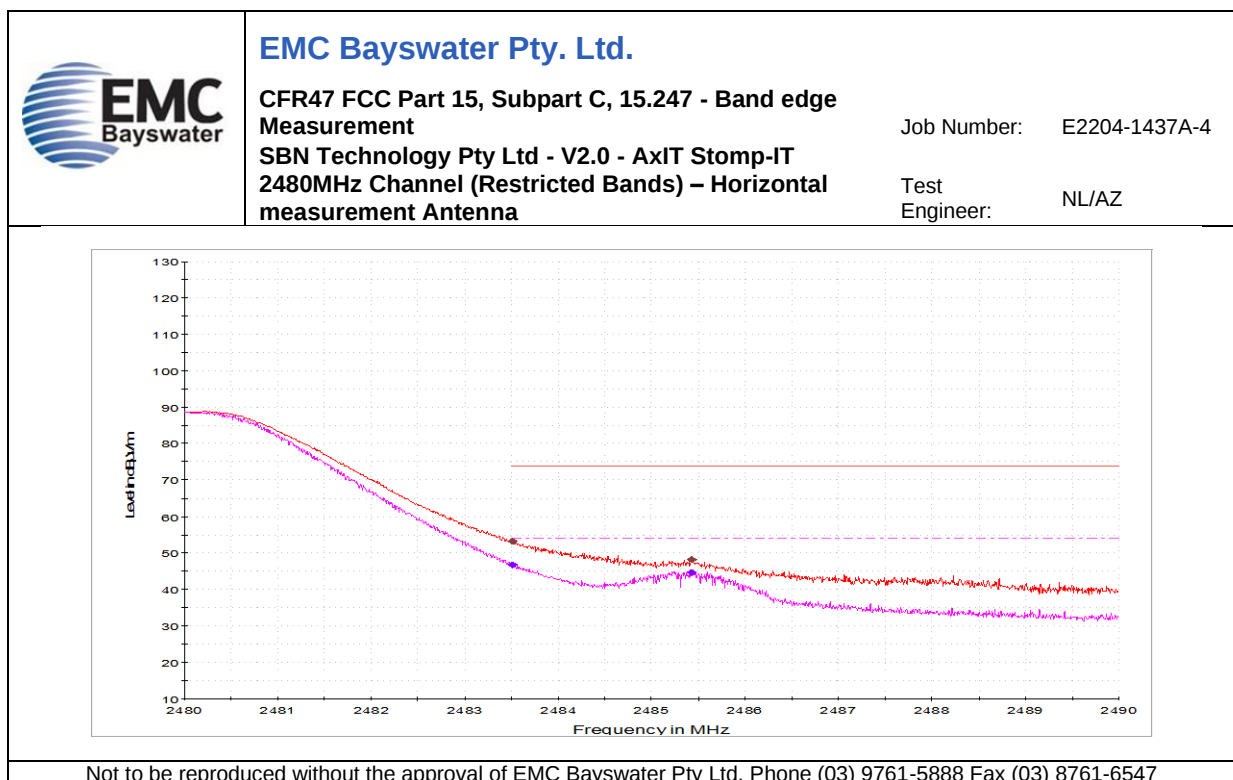
Graph 6

Appendix C.3 – Measurement Graphs – Band Edge – 15.247 (d)

No.	Test	Graph Description
7	Band edge Measurement	2402MHz Channel (Non-restricted Band – Band edge)
8	Band edge Measurement	2480MHz Channel (Restricted Bands) – Horizontal measurement Antenna
9		2480MHz Channel (Restricted Bands) – Vertical measurement Antenna



Graph 7



Graph 8

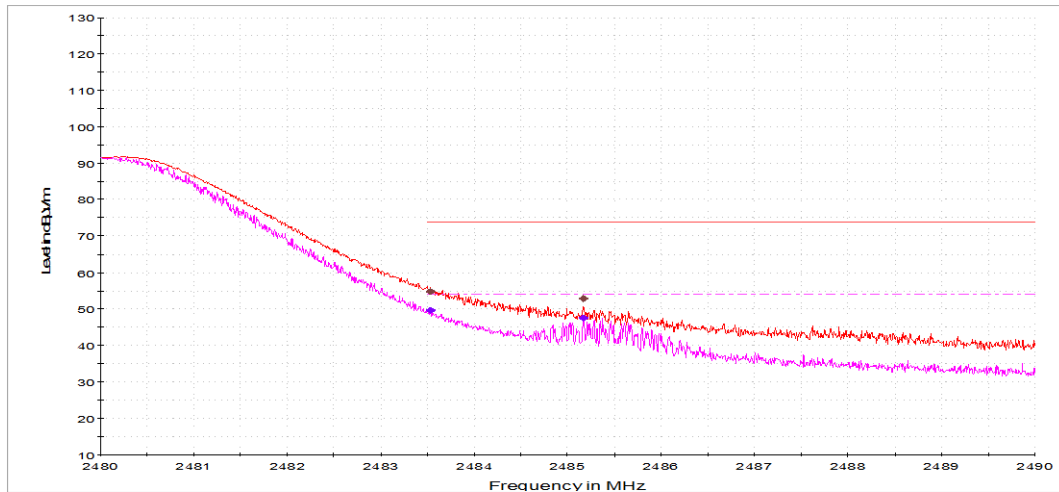


EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Band edge
Measurement
SBN Technology Pty Ltd - V2.0 - AxIT Stomp-IT
2480MHz Channel (Restricted Bands) – Vertical
measurement Antenna

Job Number: E2204-1437A-4

Test Engineer: NL/AZ

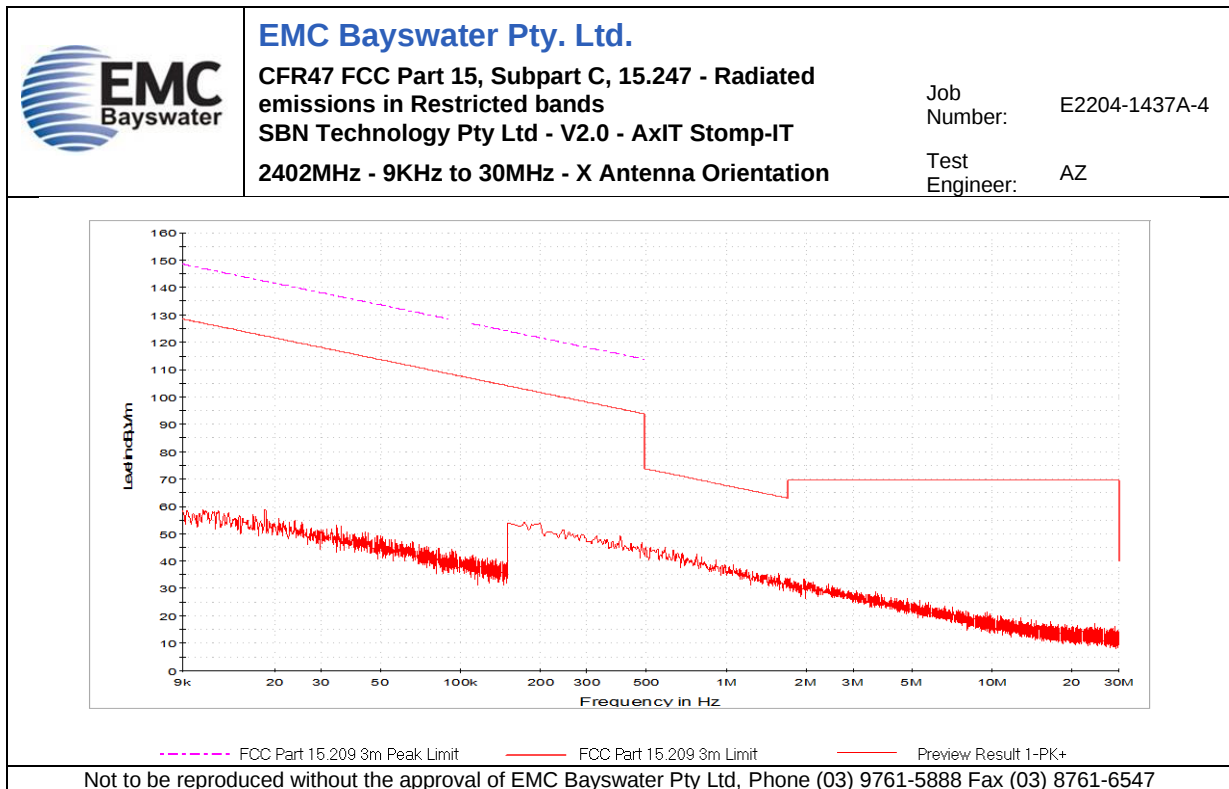


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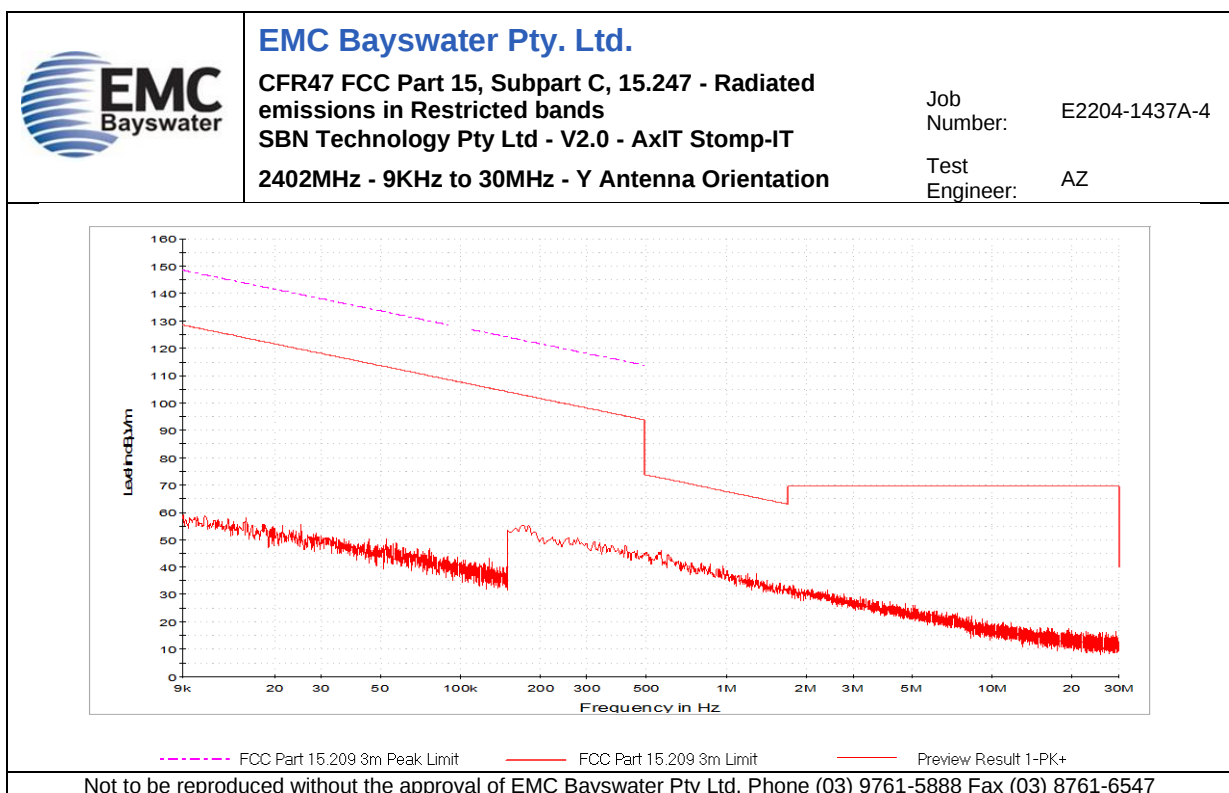
Graph 9

Appendix C.4 – Measurement Graphs – Radiated emissions in Restricted bands – FCC 15.247 (d), 15.209

No.	Test	Graph Description
10	Radiated emissions in Restricted bands 2402MHz Channel	9kHz to 30MHz – Antenna X
11		9kHz to 30MHz – Antenna Y
12		9kHz to 30MHz – Antenna Z
13		30MHz to 1GHz – Horizontal Antenna
14		30MHz to 1GHz – Vertical Antenna
15		1GHz to 6GHz – Horizontal Antenna
16		1GHz to 6GHz – Vertical Antenna
17		5.8GHz to 8.2GHz – Horizontal Antenna
18		5.8GHz to 8.2GHz – Vertical Antenna
19		8.2GHz to 12.4GHz – Horizontal Antenna
20		8.2GHz to 12.4GHz – Vertical Antenna
21		12.4GHz to 18GHz – Horizontal Antenna
22		12.4GHz to 18GHz – Vertical Antenna
23		18GHz to 25GHz – Horizontal Antenna
24		18GHz to 25GHz – Vertical Antenna
25	Radiated emissions in Restricted bands 2440MHz Channel	9kHz to 30MHz – Antenna X
26		9kHz to 30MHz – Antenna Y
27		9kHz to 30MHz – Antenna Z
28		30MHz to 1GHz – Horizontal Antenna
29		30MHz to 1GHz – Vertical Antenna
30		1GHz to 6GHz – Horizontal Antenna
31		1GHz to 6GHz – Vertical Antenna
32		5.8GHz to 8.2GHz – Horizontal Antenna
33		5.8GHz to 8.2GHz – Vertical Antenna
34		8.2GHz to 12.4GHz – Horizontal Antenna
35		8.2GHz to 12.4GHz – Vertical Antenna
36		12.4GHz to 18GHz – Horizontal Antenna
37		12.4GHz to 18GHz – Vertical Antenna
38		18GHz to 25GHz – Horizontal Antenna
39		18GHz to 25GHz – Vertical Antenna
40	Radiated emissions in Restricted bands 2480MHz Channel	9kHz to 30MHz – Antenna X
41		9kHz to 30MHz – Antenna Y
42		9kHz to 30MHz – Antenna Z
43		30MHz to 1GHz – Horizontal Antenna
44		30MHz to 1GHz – Vertical Antenna
45		1GHz to 6GHz – Horizontal Antenna
46		1GHz to 6GHz – Vertical Antenna
47		5.8GHz to 8.2GHz – Horizontal Antenna
48		5.8GHz to 8.2GHz – Vertical Antenna
49		8.2GHz to 12.4GHz – Horizontal Antenna
50		8.2GHz to 12.4GHz – Vertical Antenna
51		12.4GHz to 18GHz – Horizontal Antenna
52		12.4GHz to 18GHz – Vertical Antenna
53		18GHz to 25GHz – Horizontal Antenna
54		18GHz to 25GHz – Vertical Antenna



Graph 10



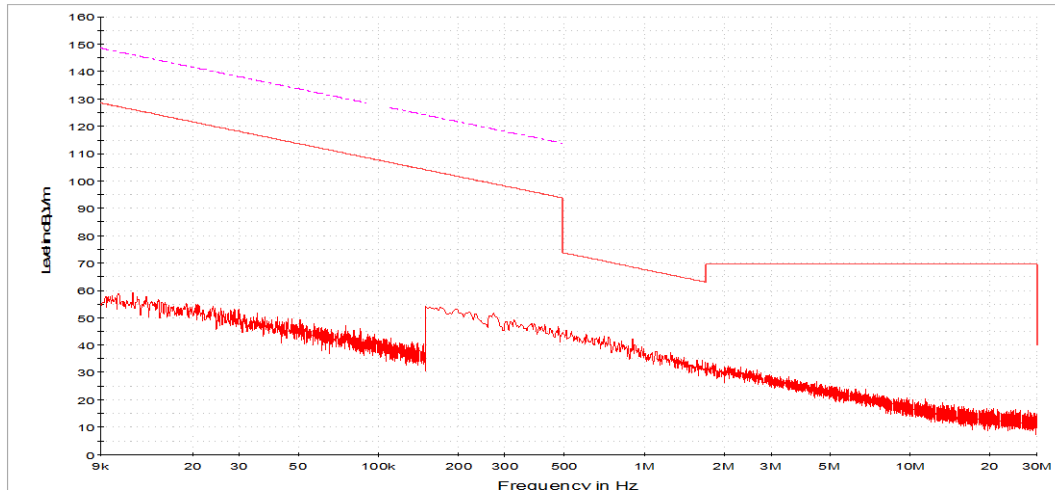
Graph 11



EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
SBN Technology Pty Ltd - V2.0 - AxIT Stomp-IT
2402MHz - 9KHz to 30MHz - Z Antenna Orientation

Job Number: E2204-1437A-4
Test Engineer: AZ



----- FCC Part 15.209 3m Peak Limit ——— FCC Part 15.209 3m Limit ——— Preview Result 1-PK+

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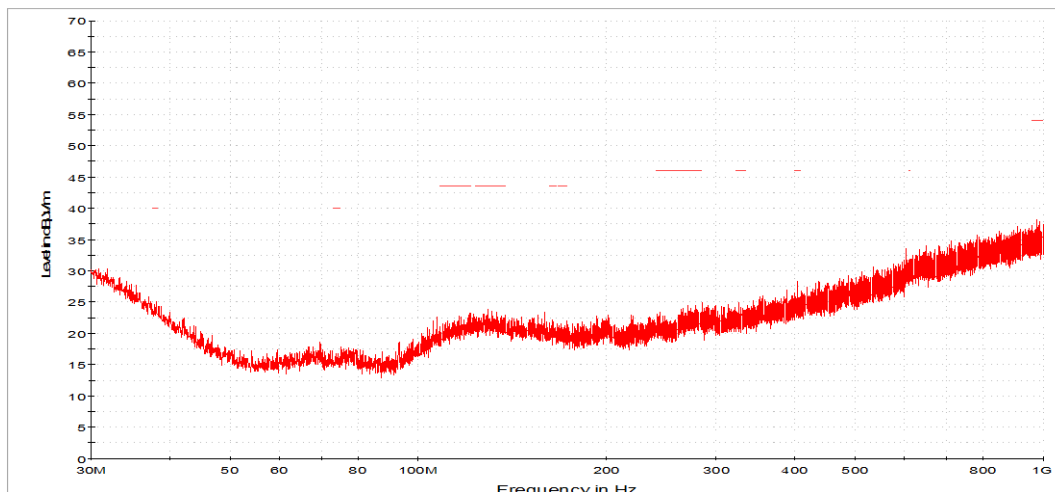
Graph 12



EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
SBN Technology Pty Ltd - V2.0 - AxIT Stomp-IT
2402MHz - 30MHz to 1GHz - Horizontal Antenna Orientation

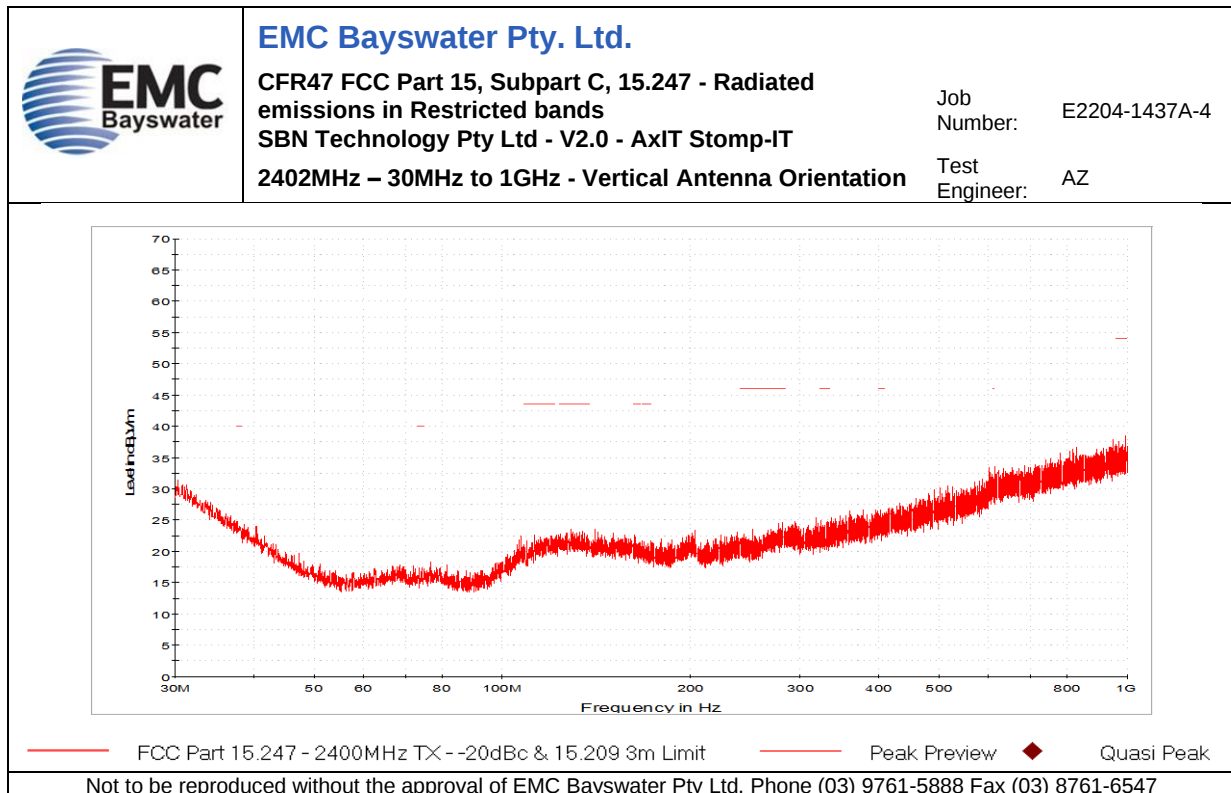
Job Number: E2204-1437A-4
Test Engineer: AZ



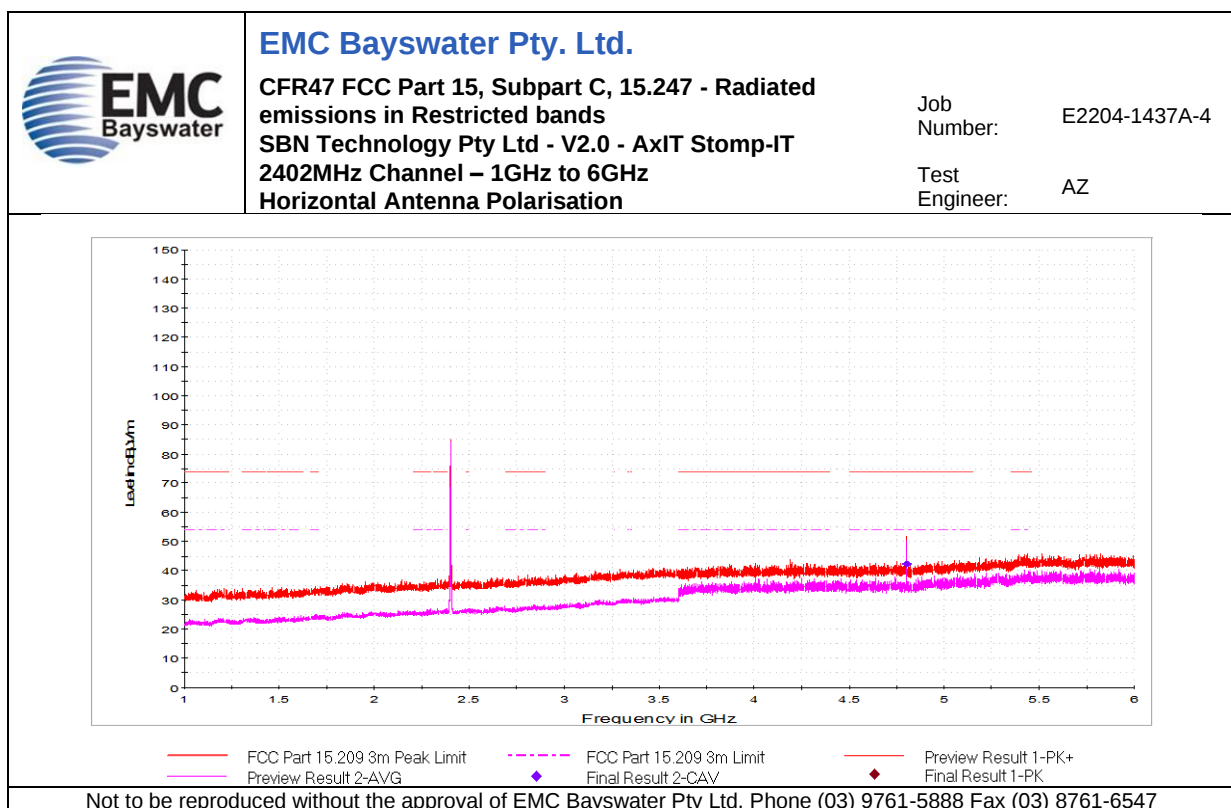
——— FCC Part 15.247 - 2400MHz TX - -20dBc & 15.209 3m Limit ——— Peak Preview ◆ Quasi Peak

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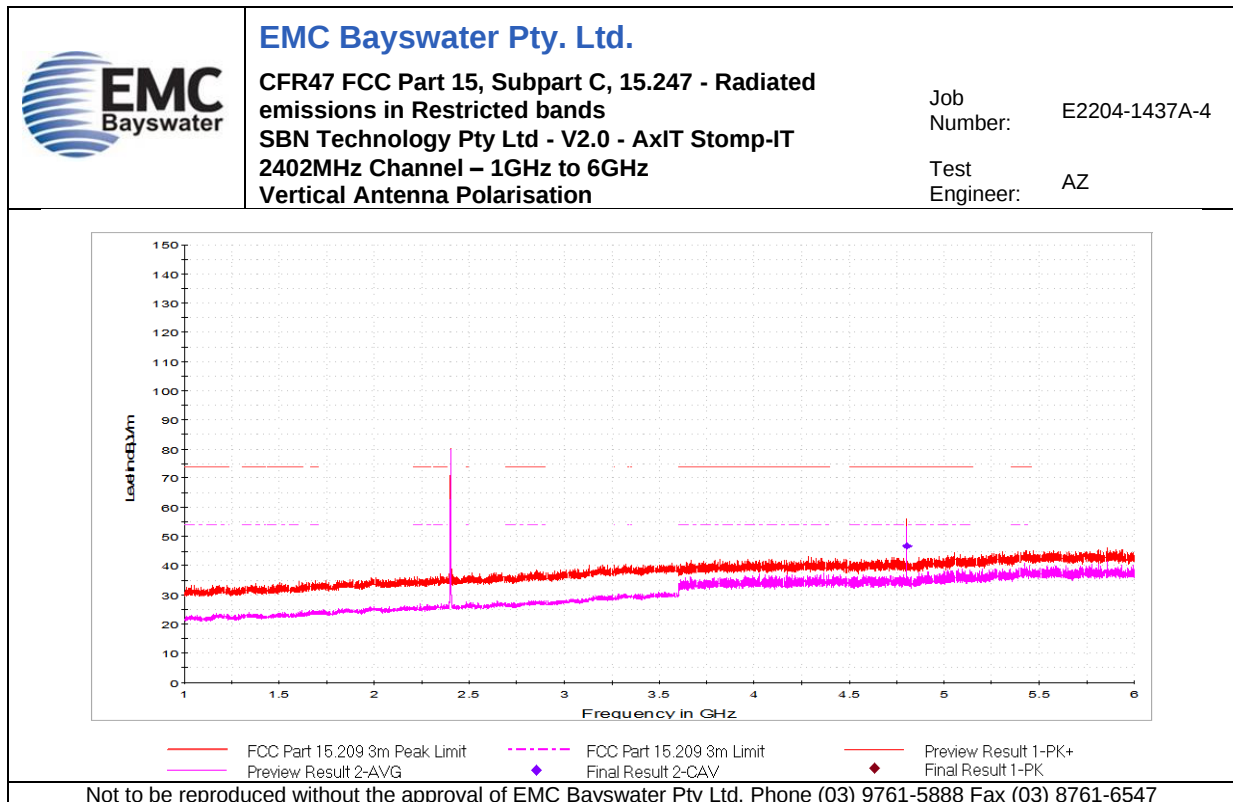
Graph 13



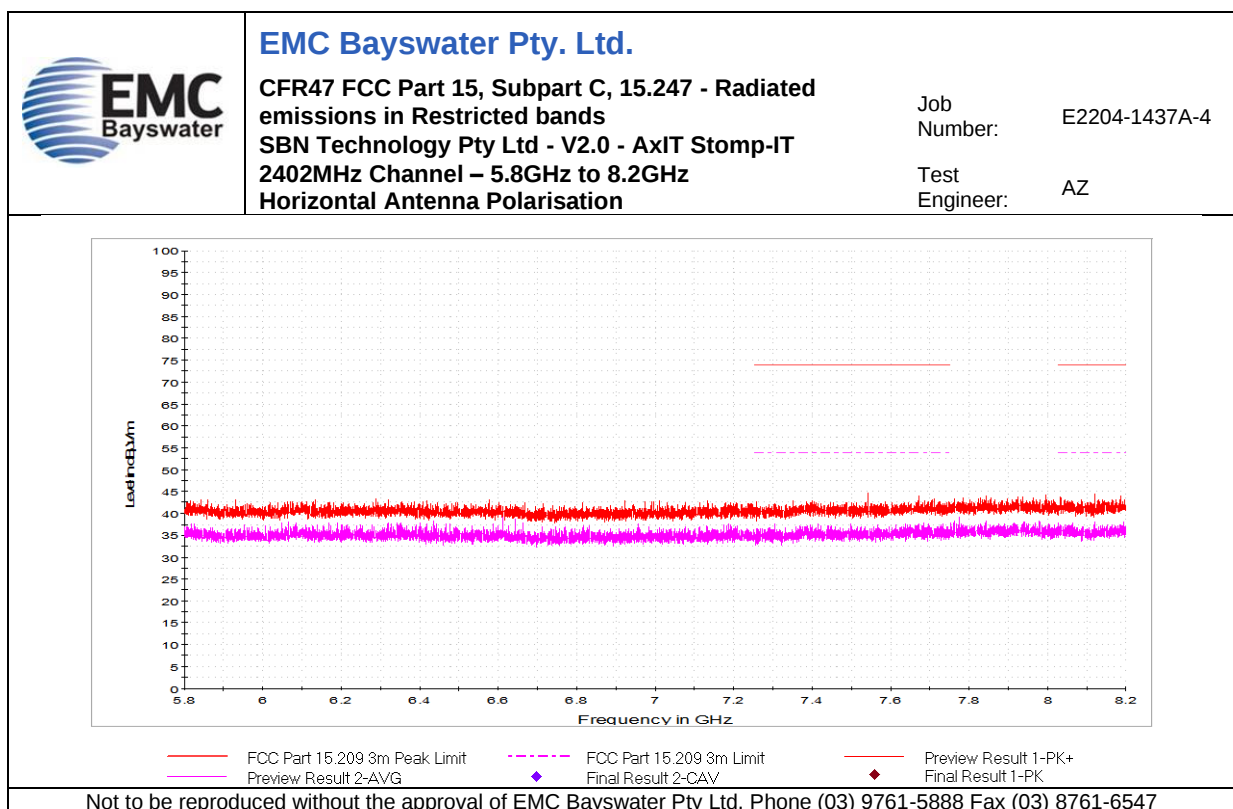
Graph 14



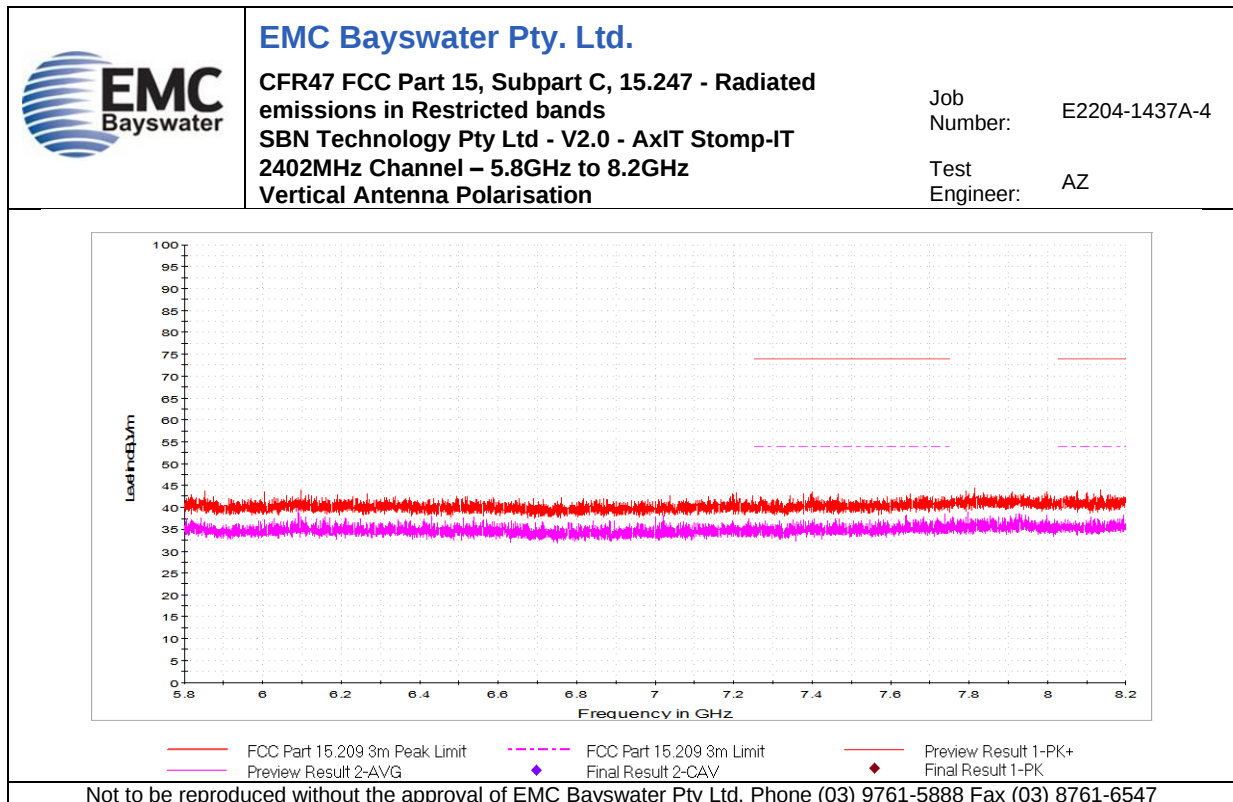
Graph 15



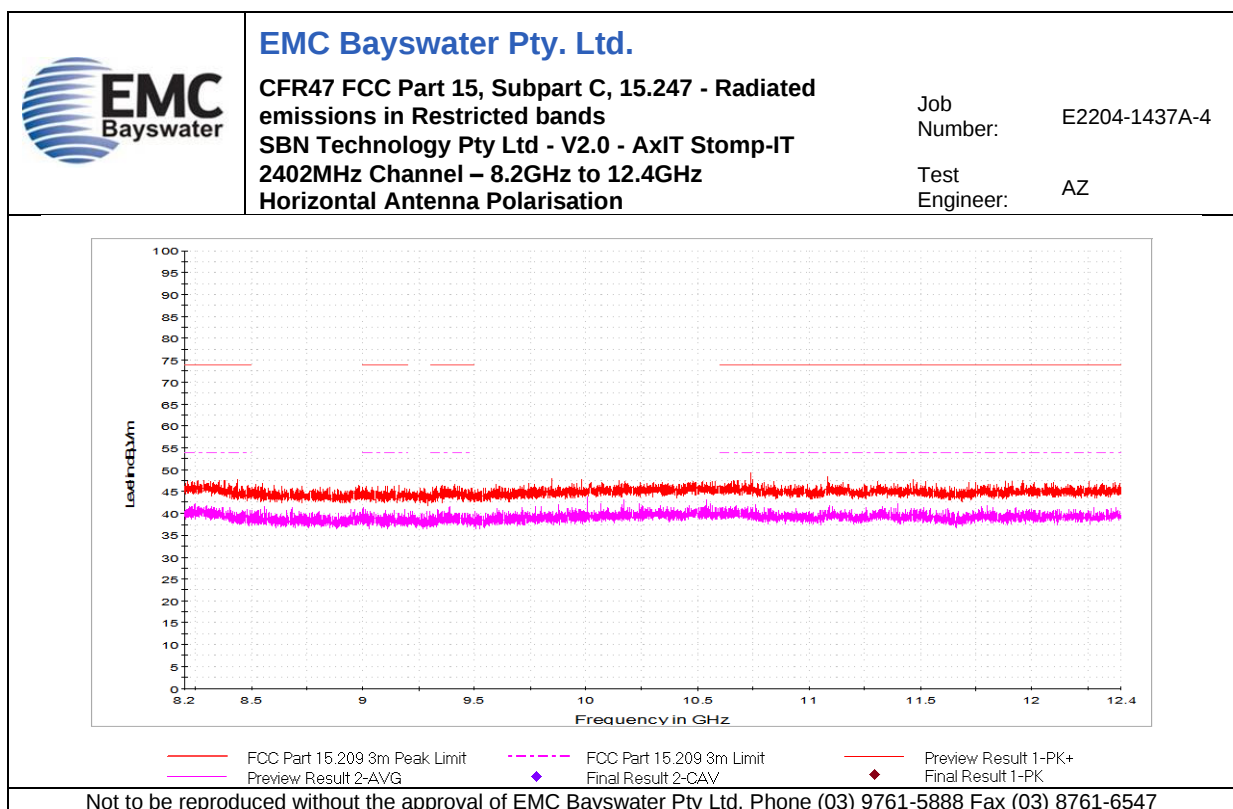
Graph 16



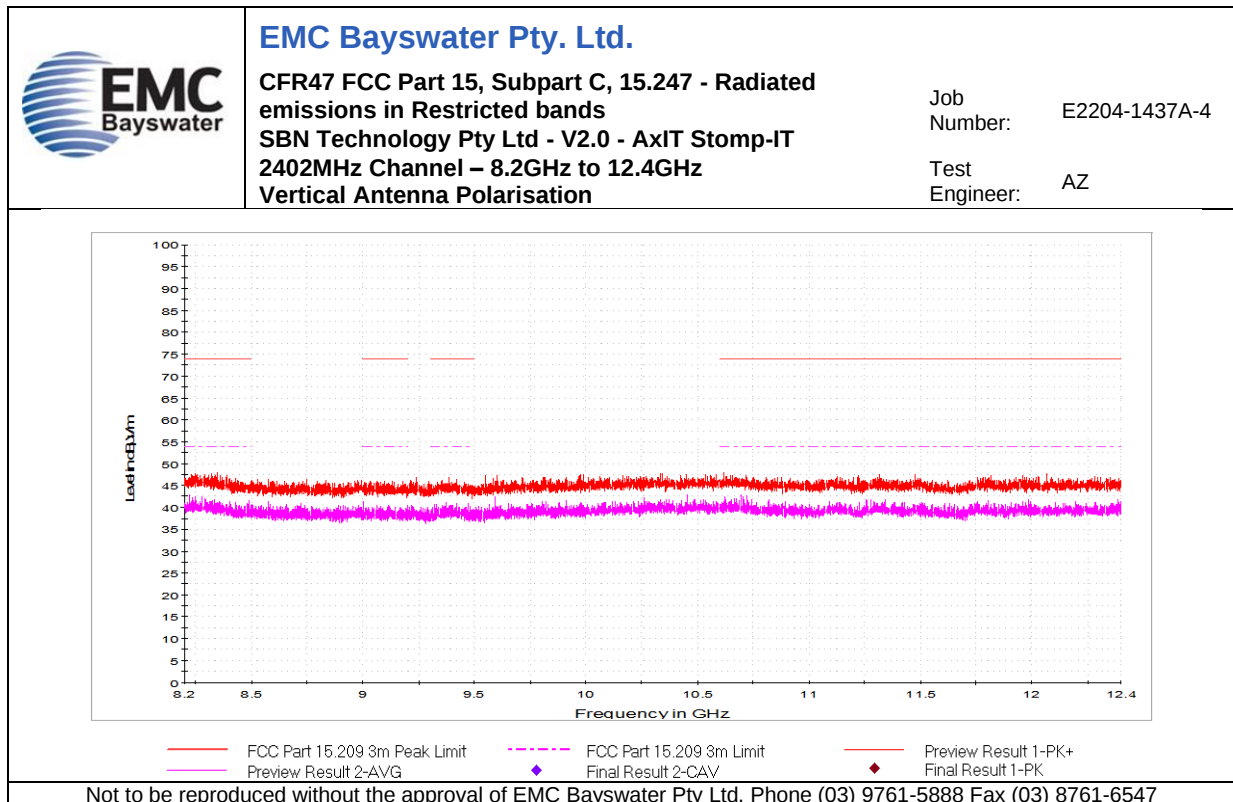
Graph 17



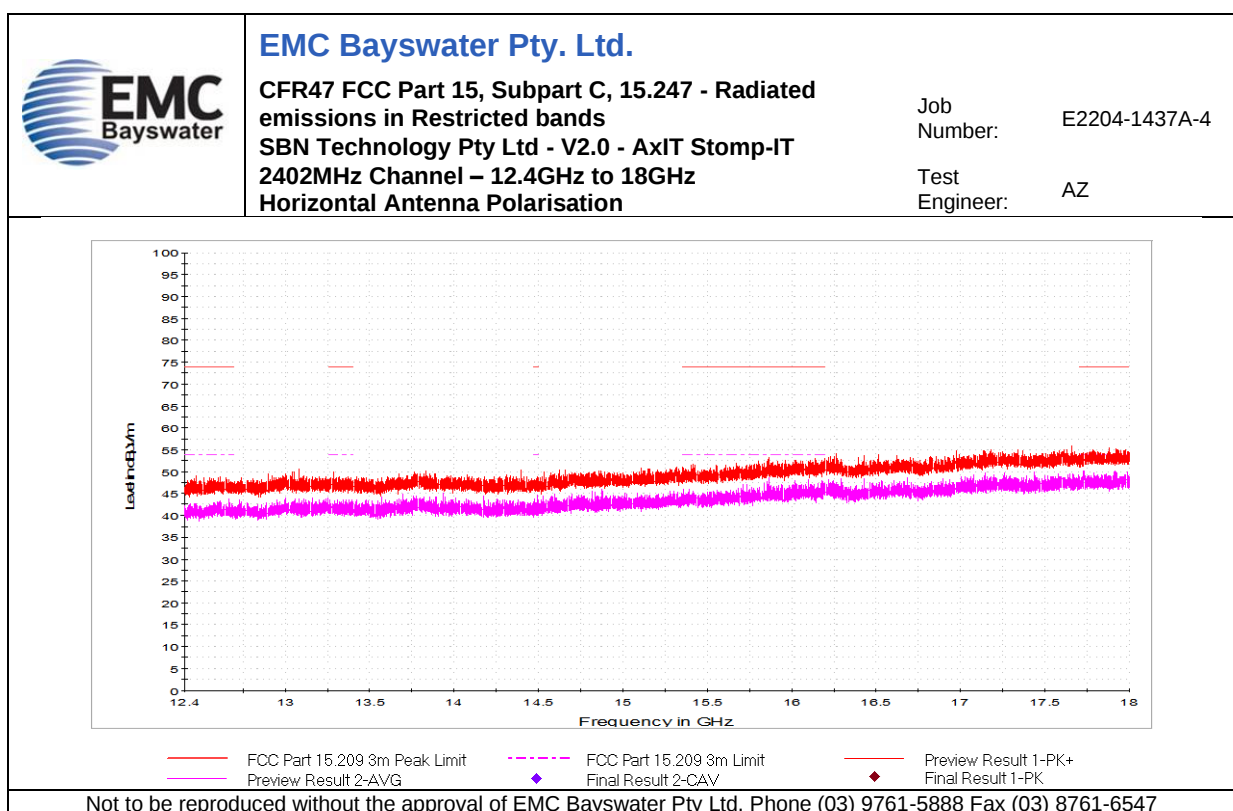
Graph 18



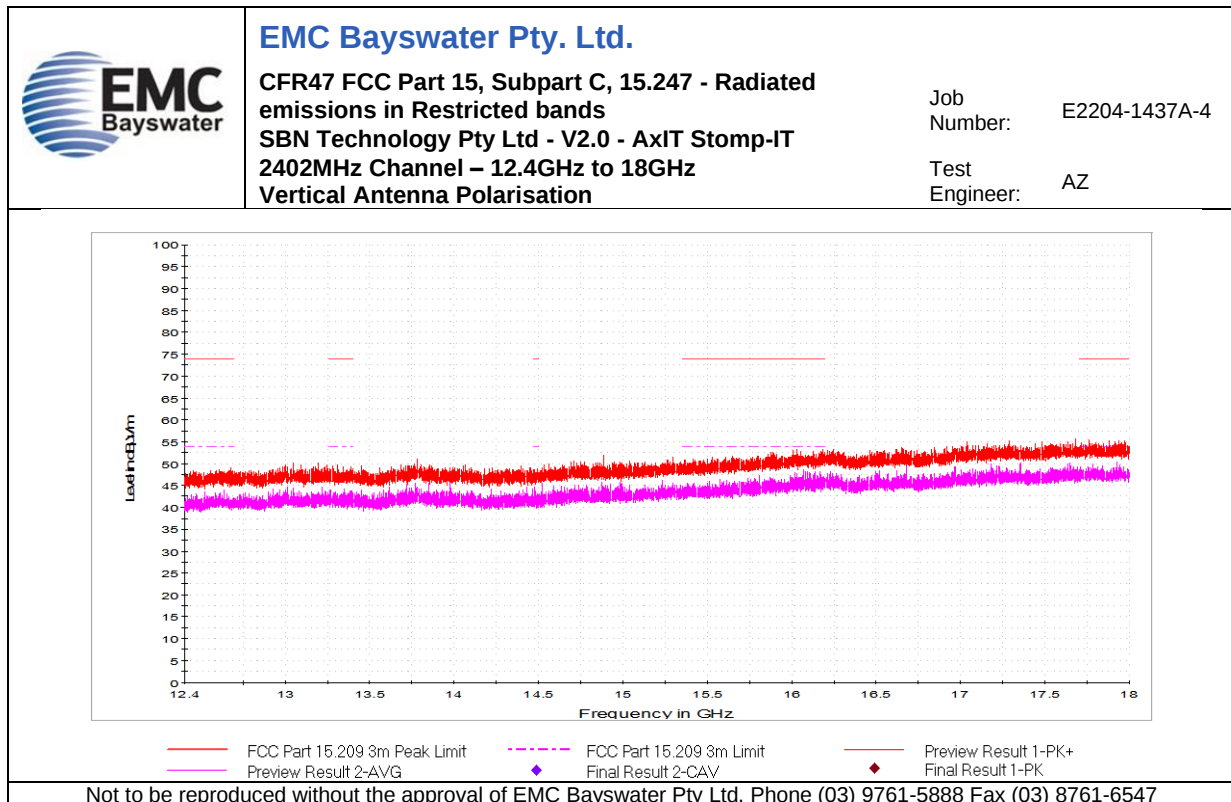
Graph 19



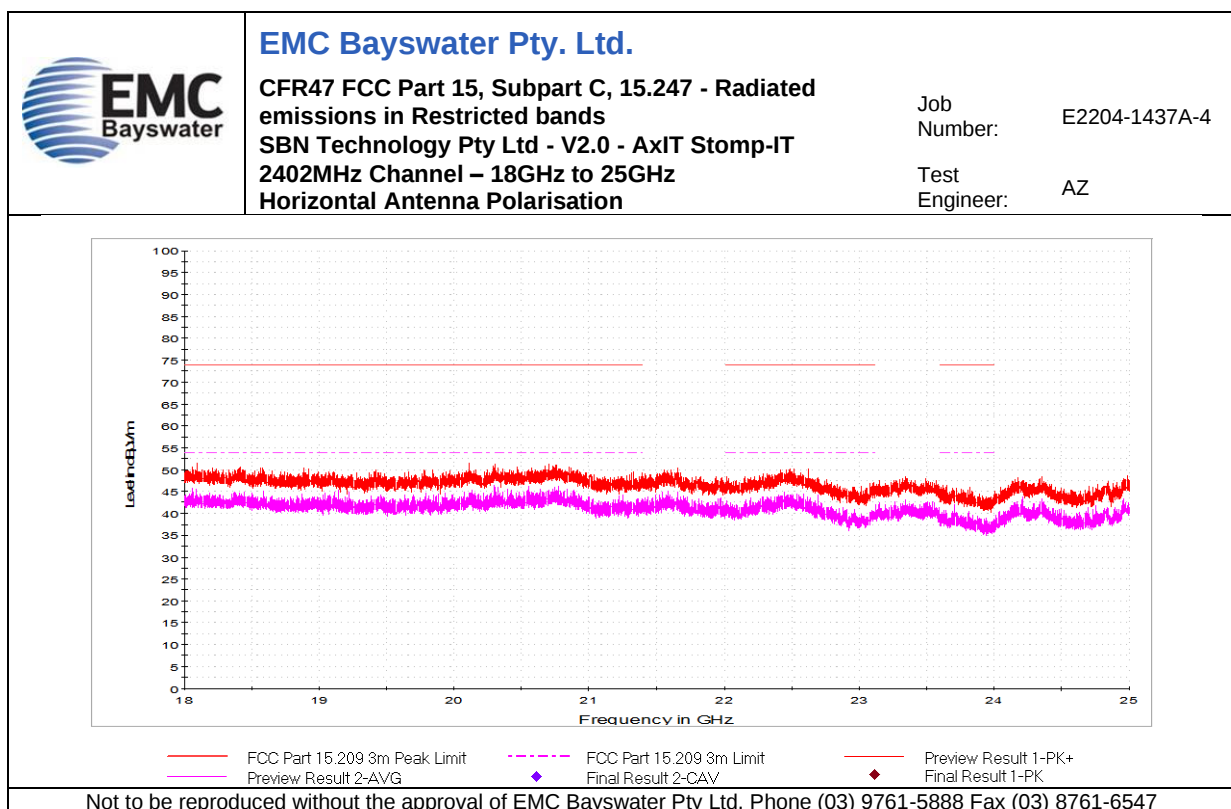
Graph 20



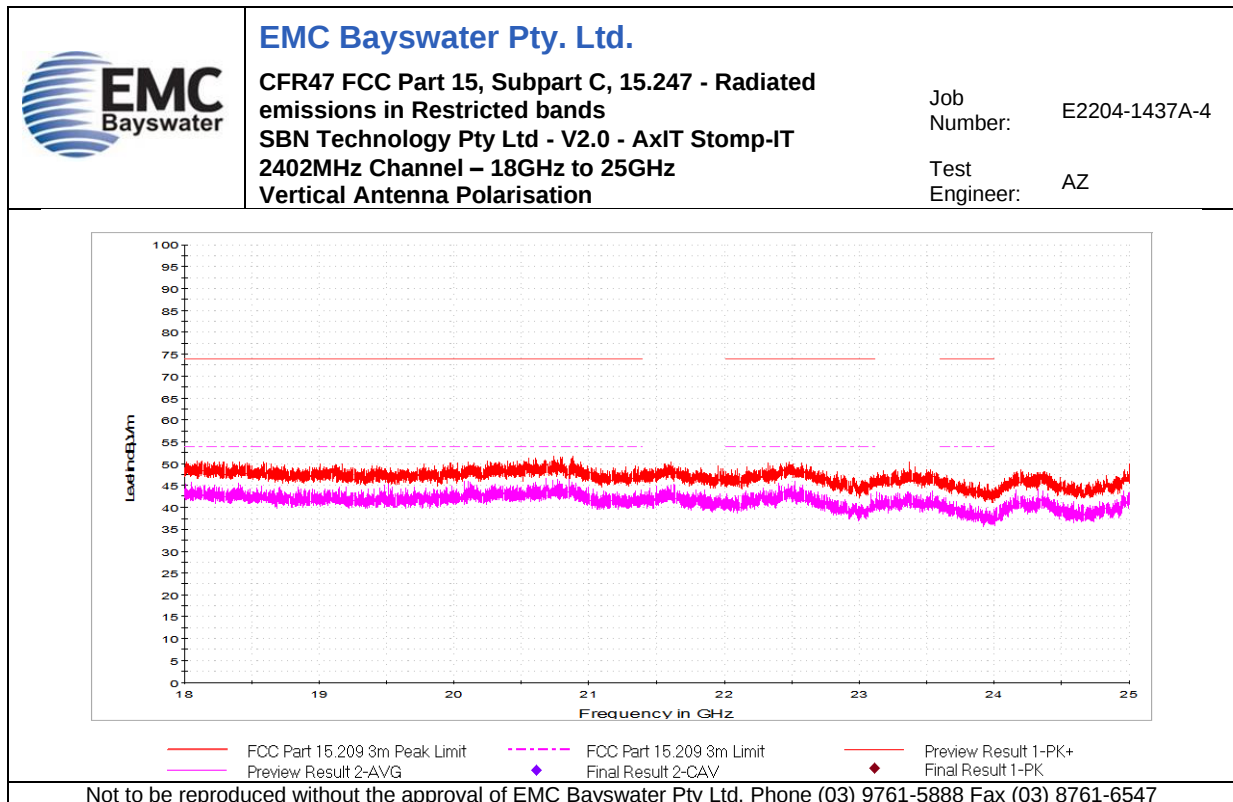
Graph 21



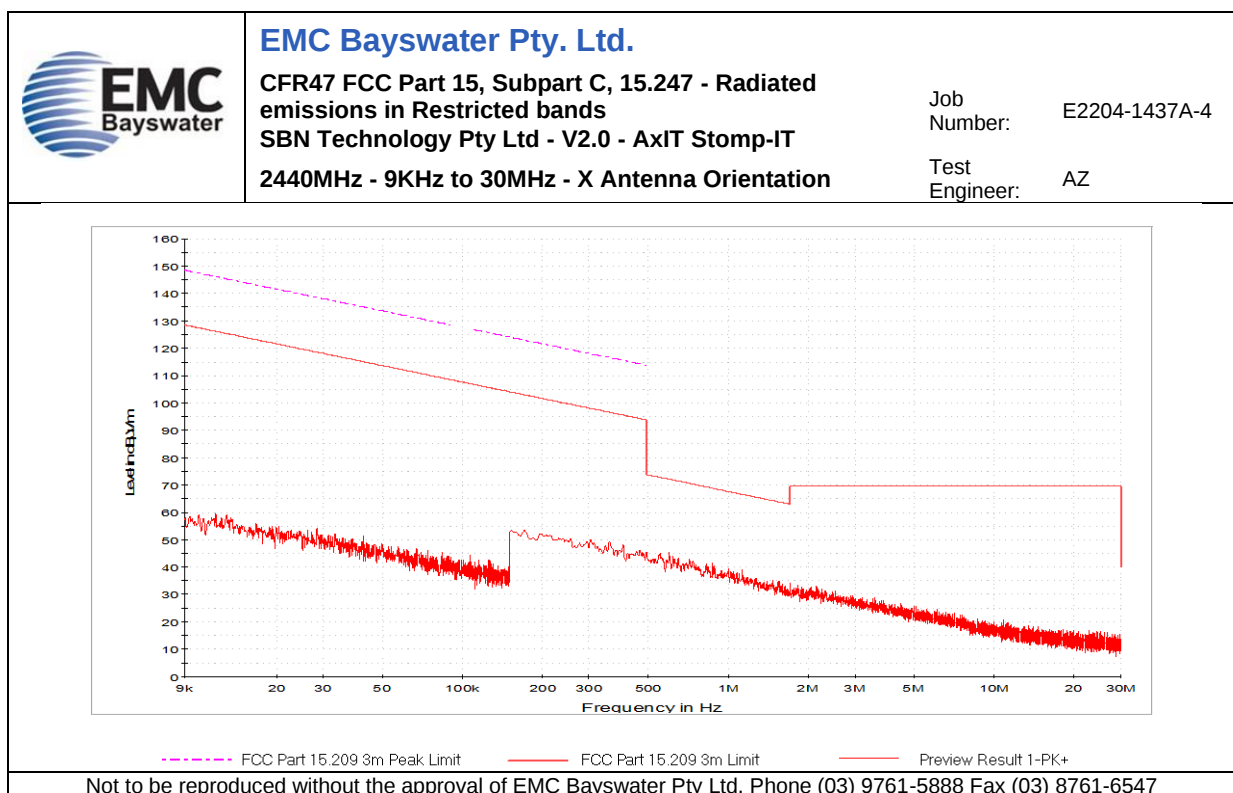
Graph 22



Graph 23



Graph 24



Graph 25

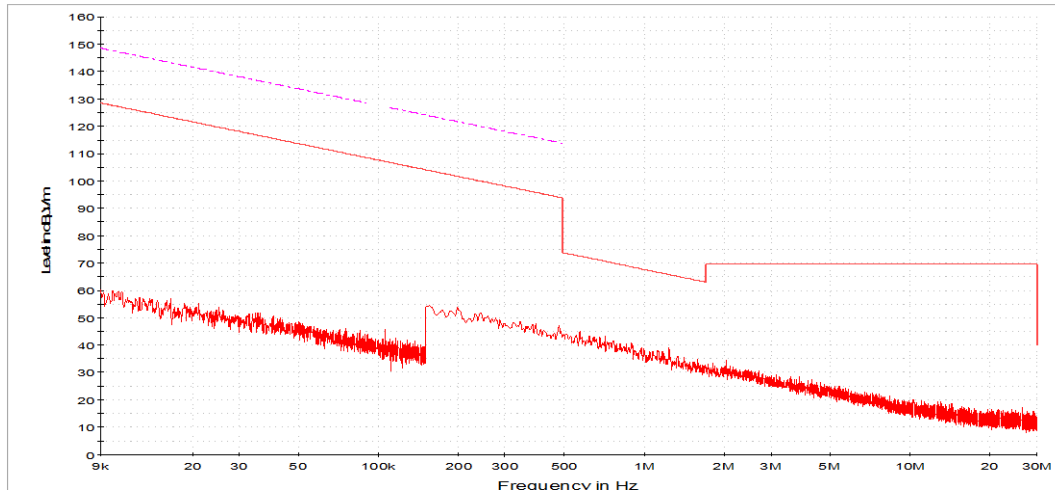


EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated
emissions in Restricted bands
SBN Technology Pty Ltd - V2.0 - AxIT Stomp-IT
2440MHz - 9KHz to 30MHz - Y Antenna Orientation

Job
Number: E2204-1437A-4

Test
Engineer: AZ



----- FCC Part 15.209 3m Peak Limit — FCC Part 15.209 3m Limit — Preview Result 1-PK+

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Graph 26

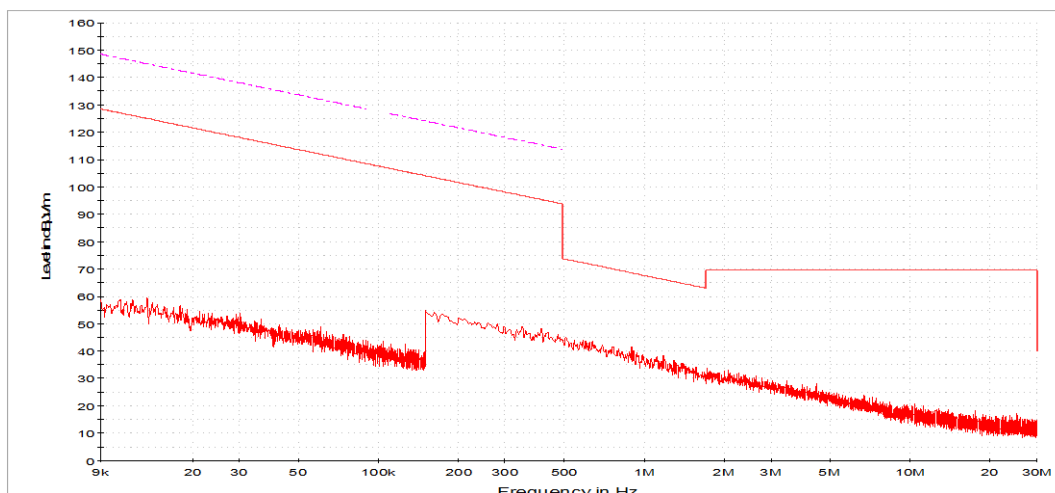


EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated
emissions in Restricted bands
SBN Technology Pty Ltd - V2.0 - AxIT Stomp-IT
2440MHz - 9KHz to 30MHz - Z Antenna Orientation

Job
Number: E2204-1437A-4

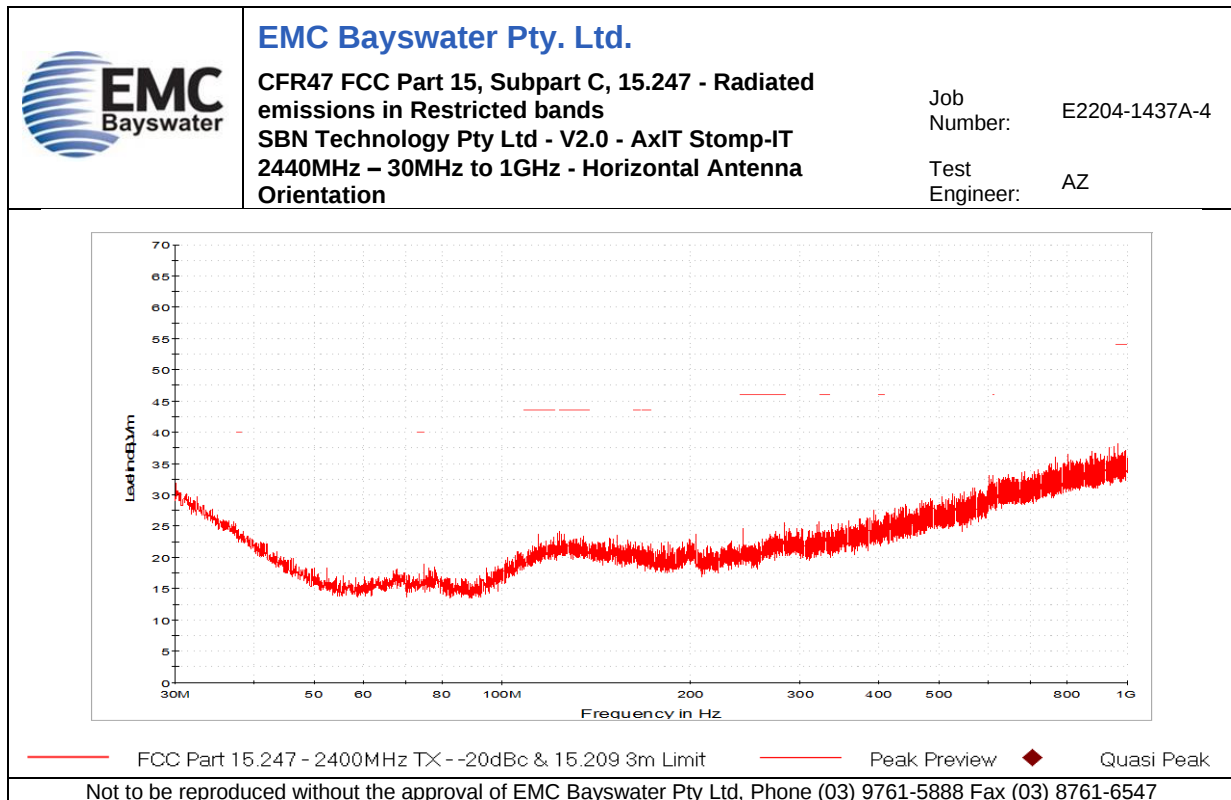
Test
Engineer: AZ



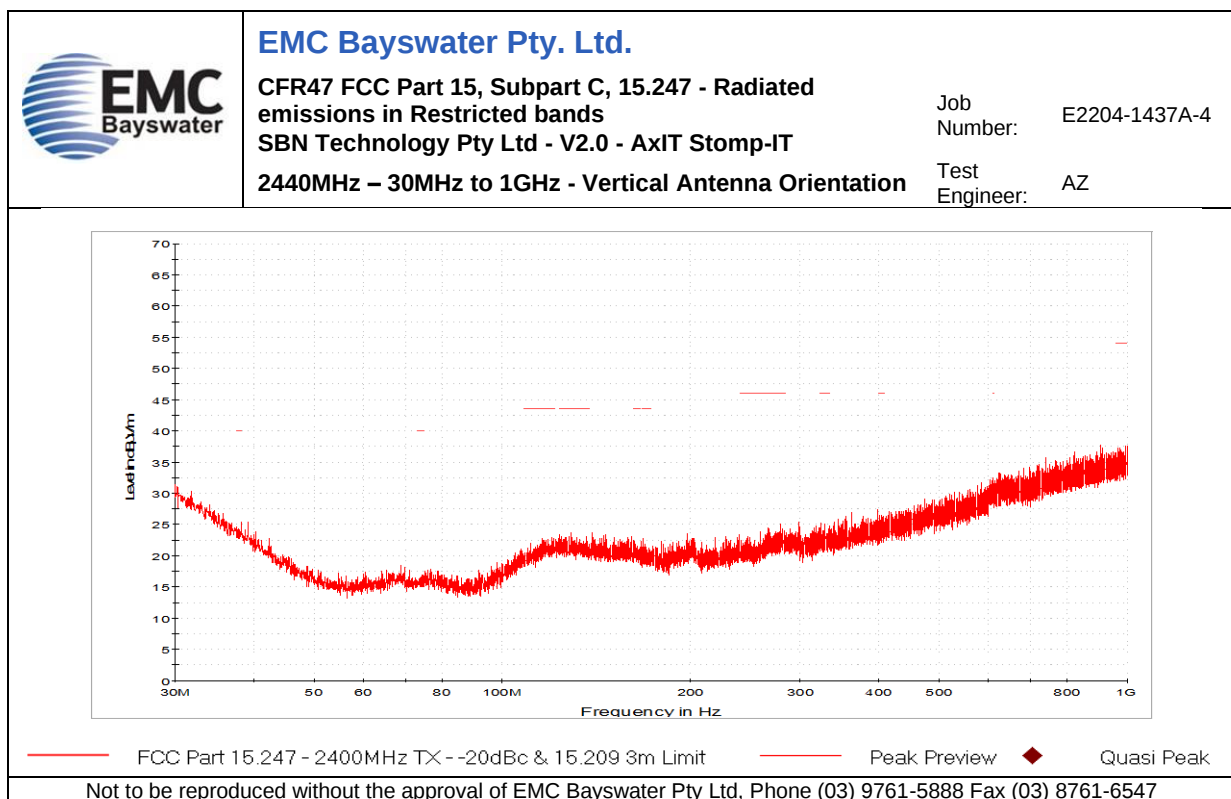
----- FCC Part 15.209 3m Peak Limit — FCC Part 15.209 3m Limit — Preview Result 1-PK+

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Graph 27



Graph 28



Graph 29

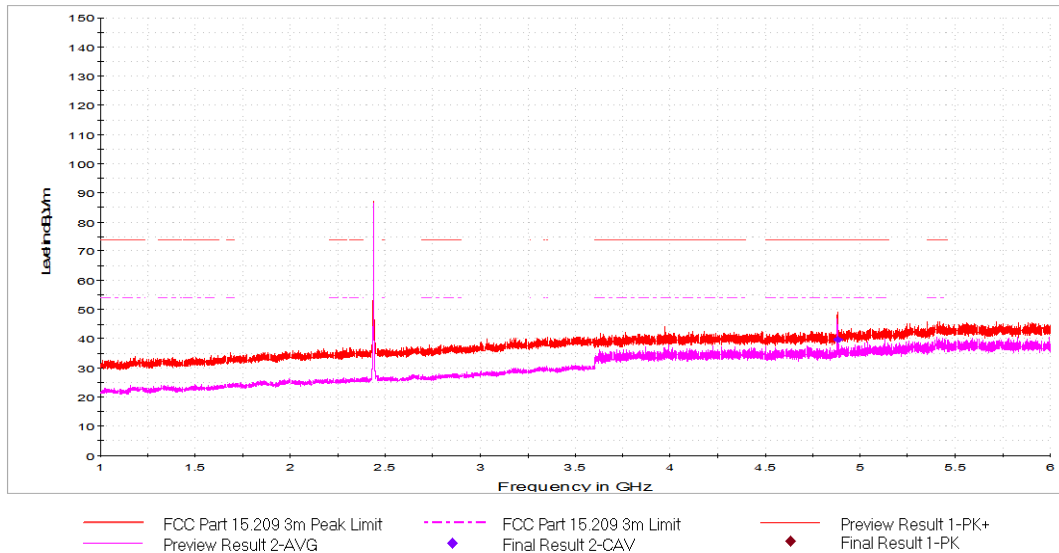


EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated
emissions in Restricted bands
SBN Technology Pty Ltd - V2.0 - AxIT Stomp-IT
2440MHz Channel – 1GHz to 6GHz
Horizontal Antenna Polarisation

Job
Number: E2204-1437A-4

Test
Engineer: AZ



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Graph 30

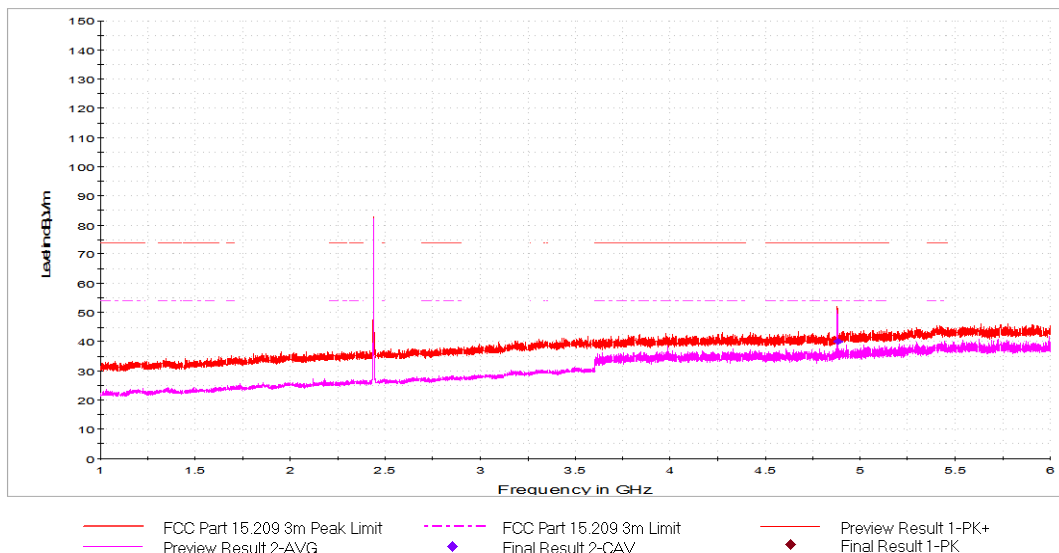


EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated
emissions in Restricted bands
SBN Technology Pty Ltd - V2.0 - AxIT Stomp-IT
2440MHz Channel – 1GHz to 6GHz
Vertical Antenna Polarisation

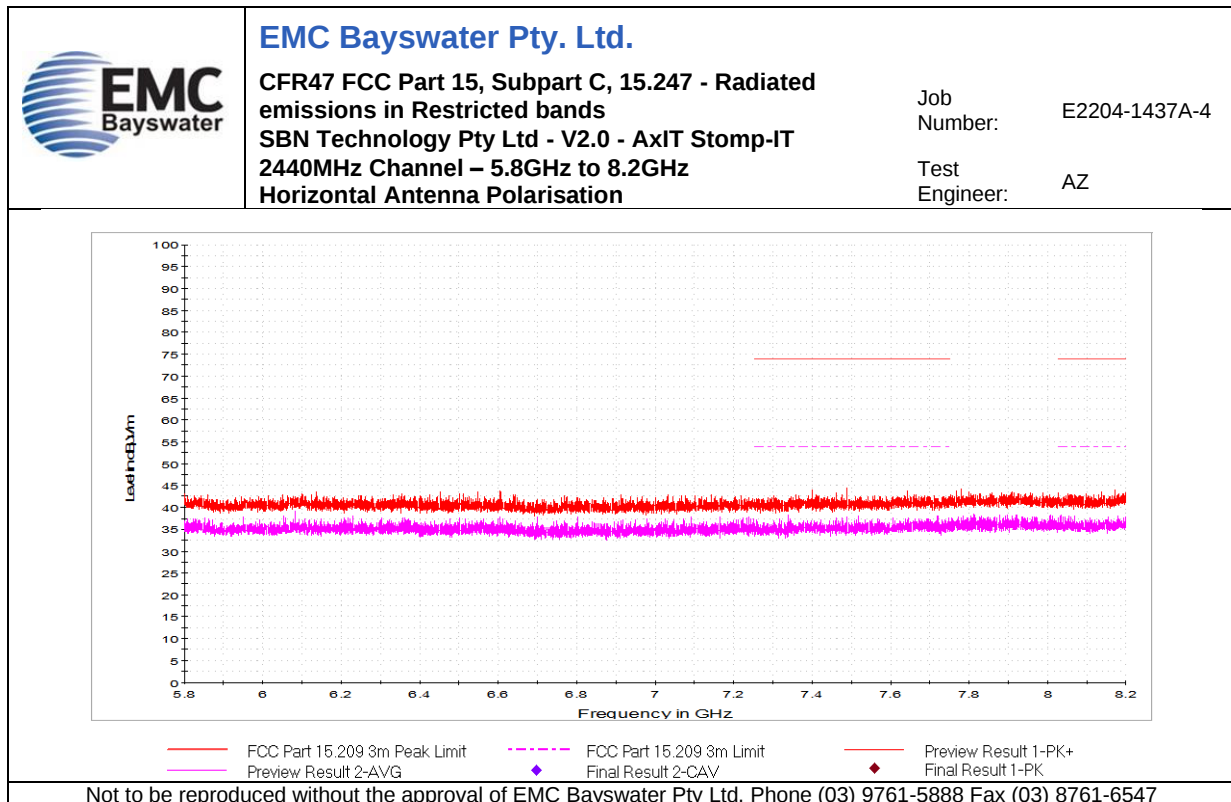
Job
Number: E2204-1437A-4

Test
Engineer: AZ

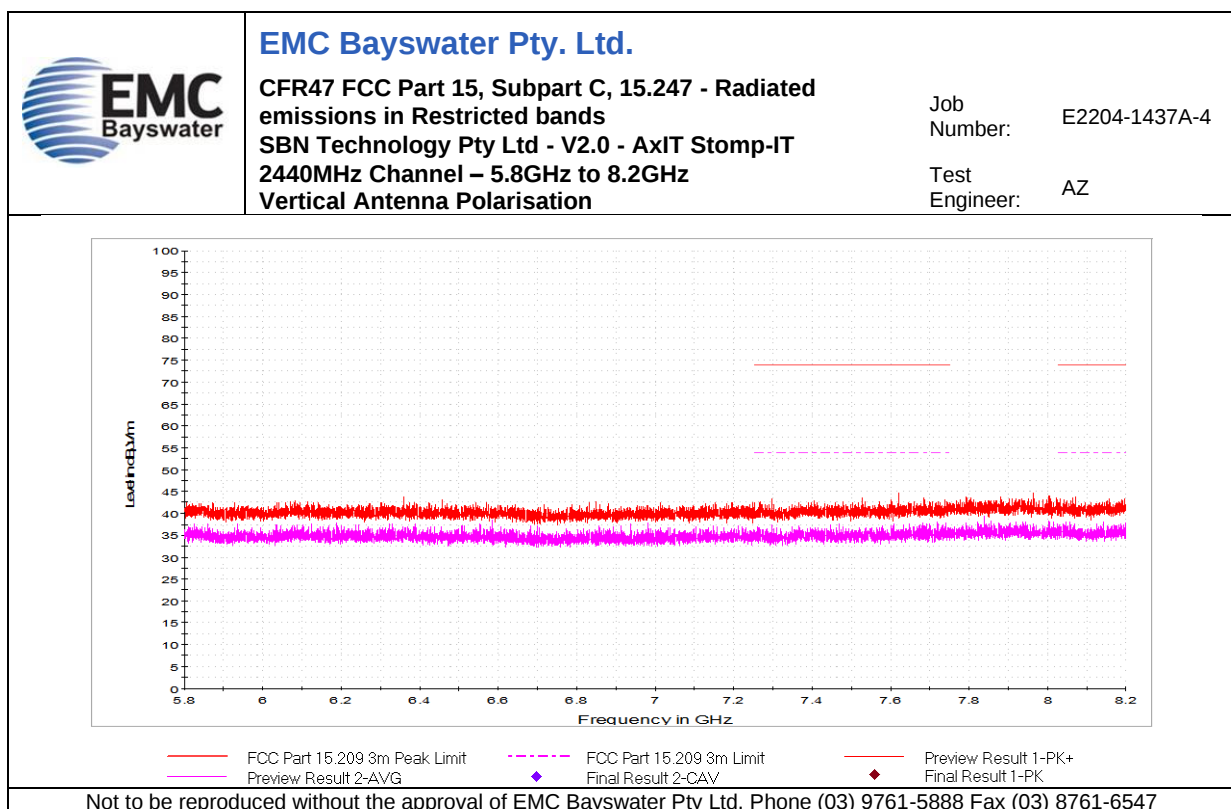


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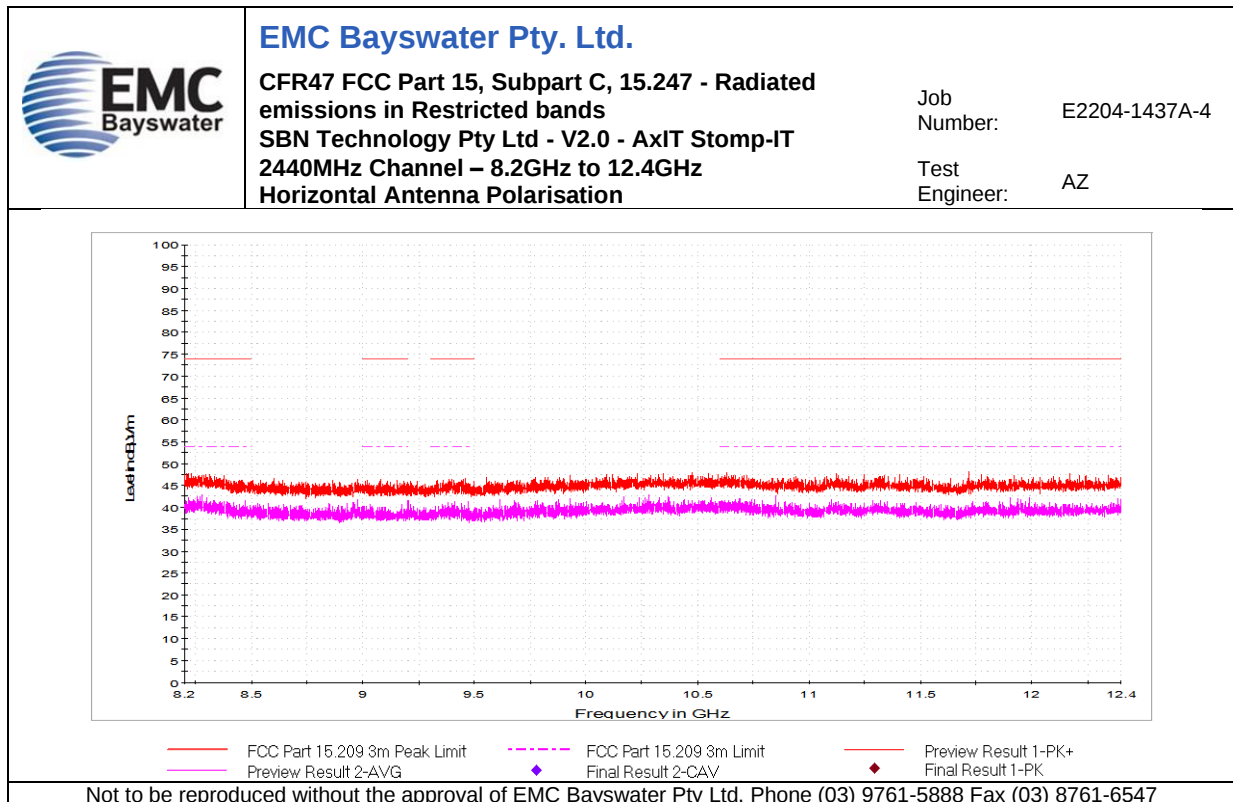
Graph 31



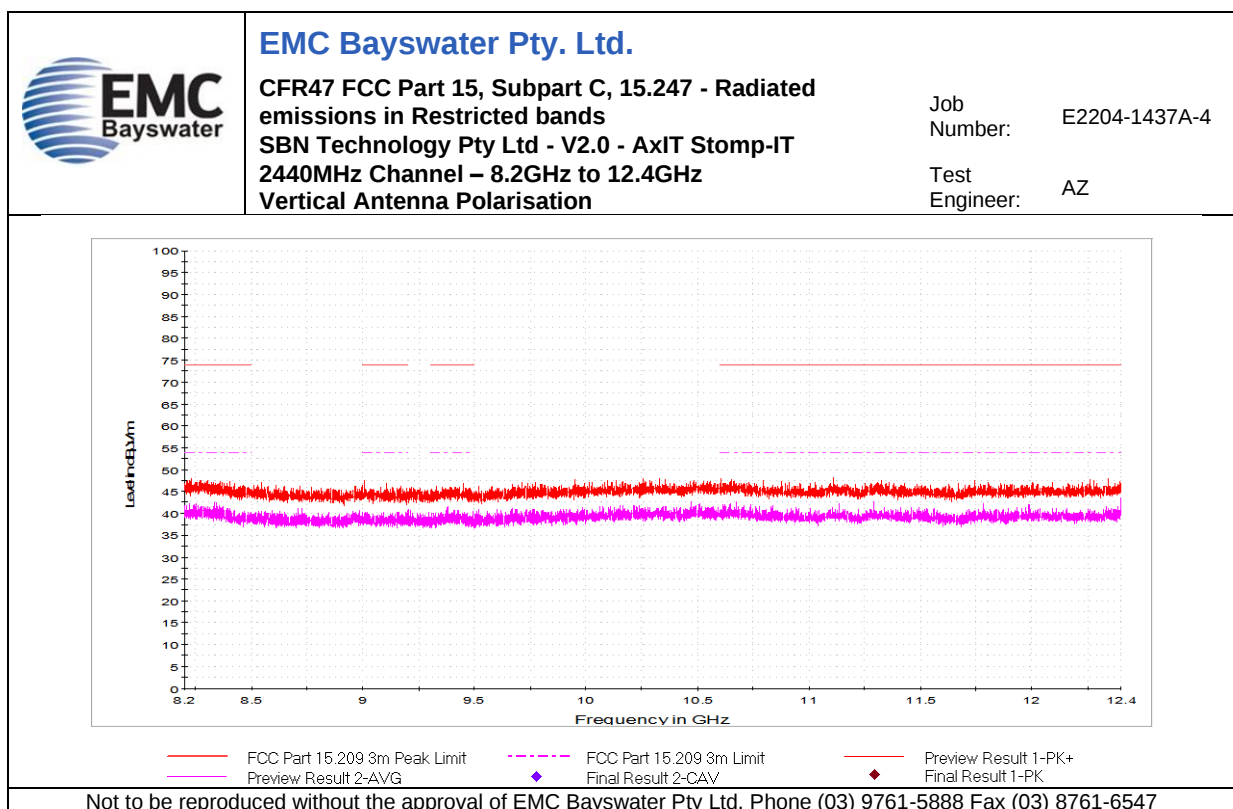
Graph 32



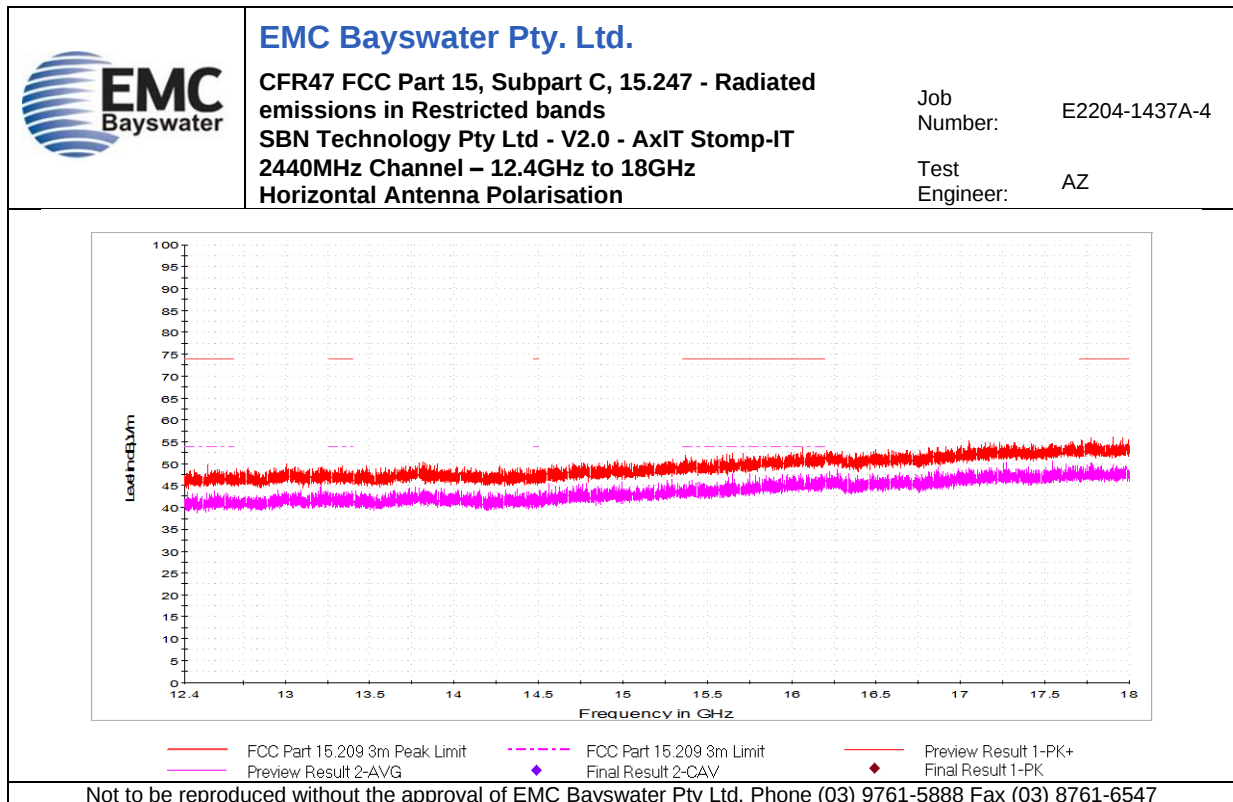
Graph 33



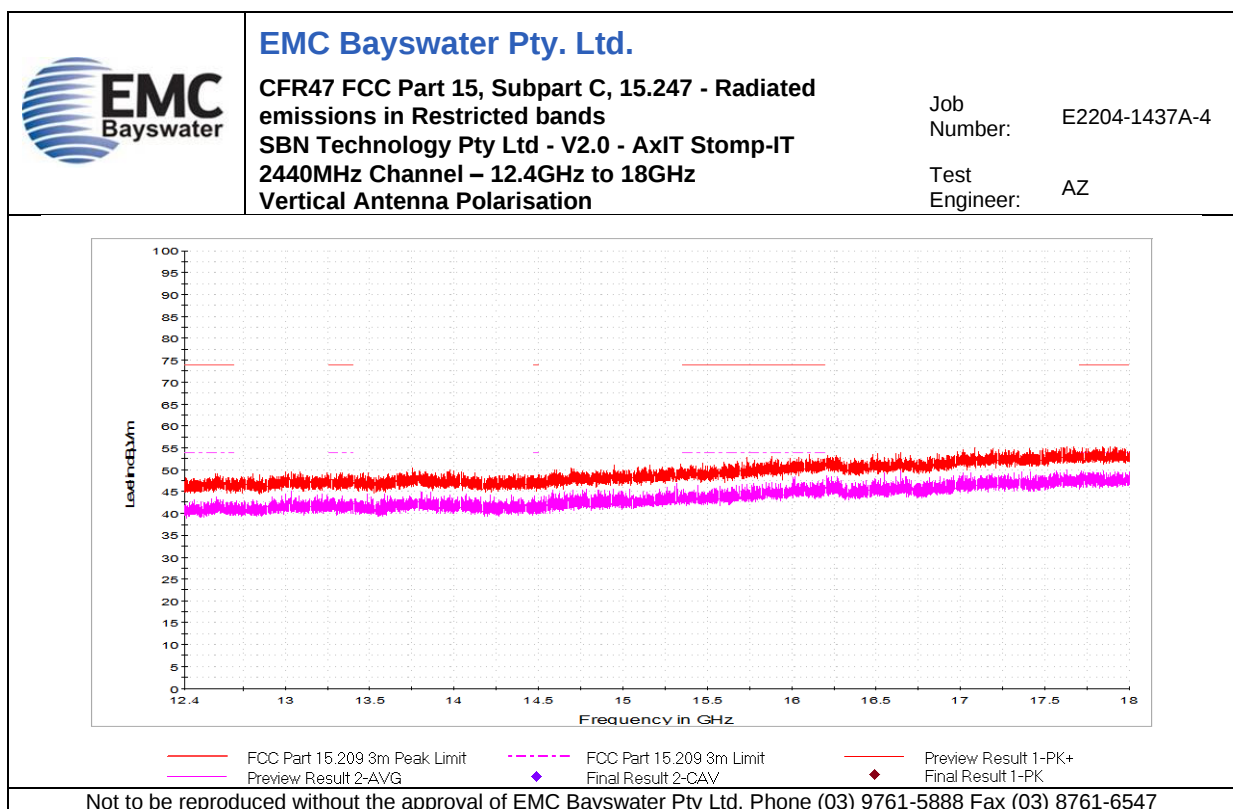
Graph 34



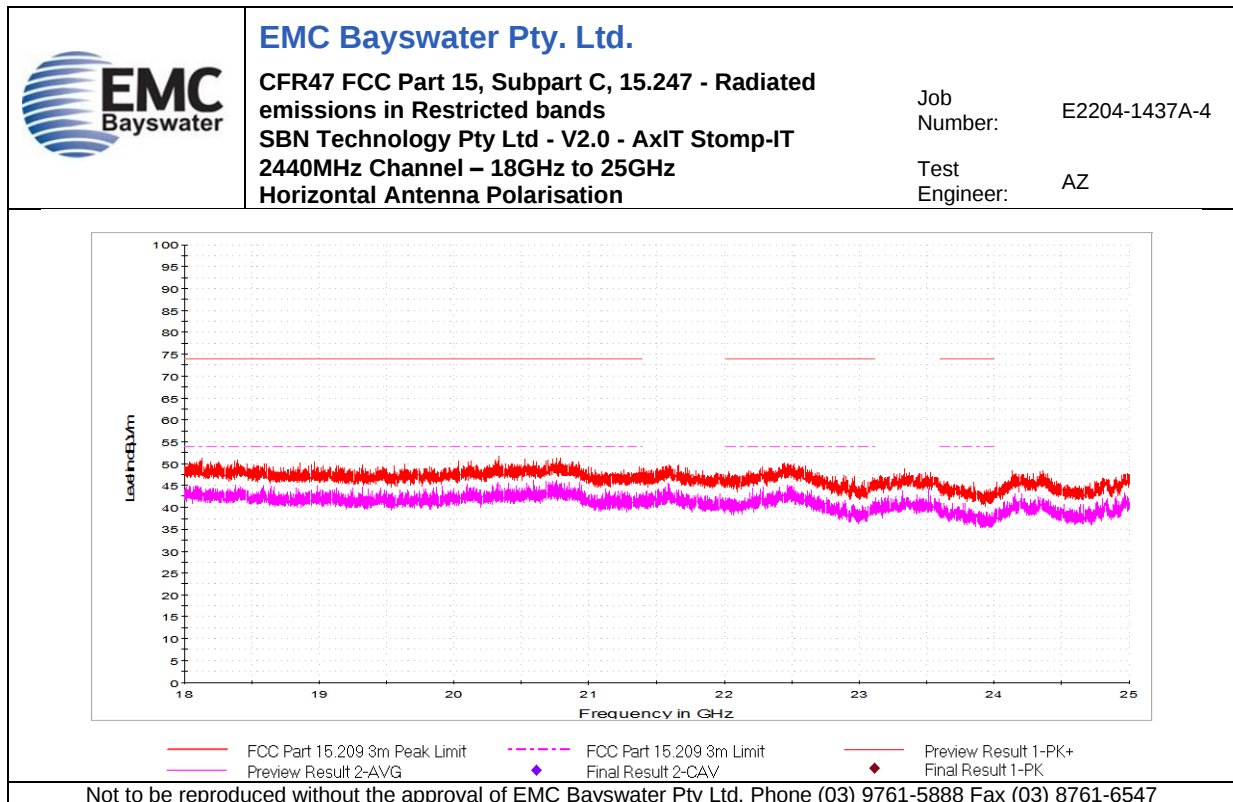
Graph 35



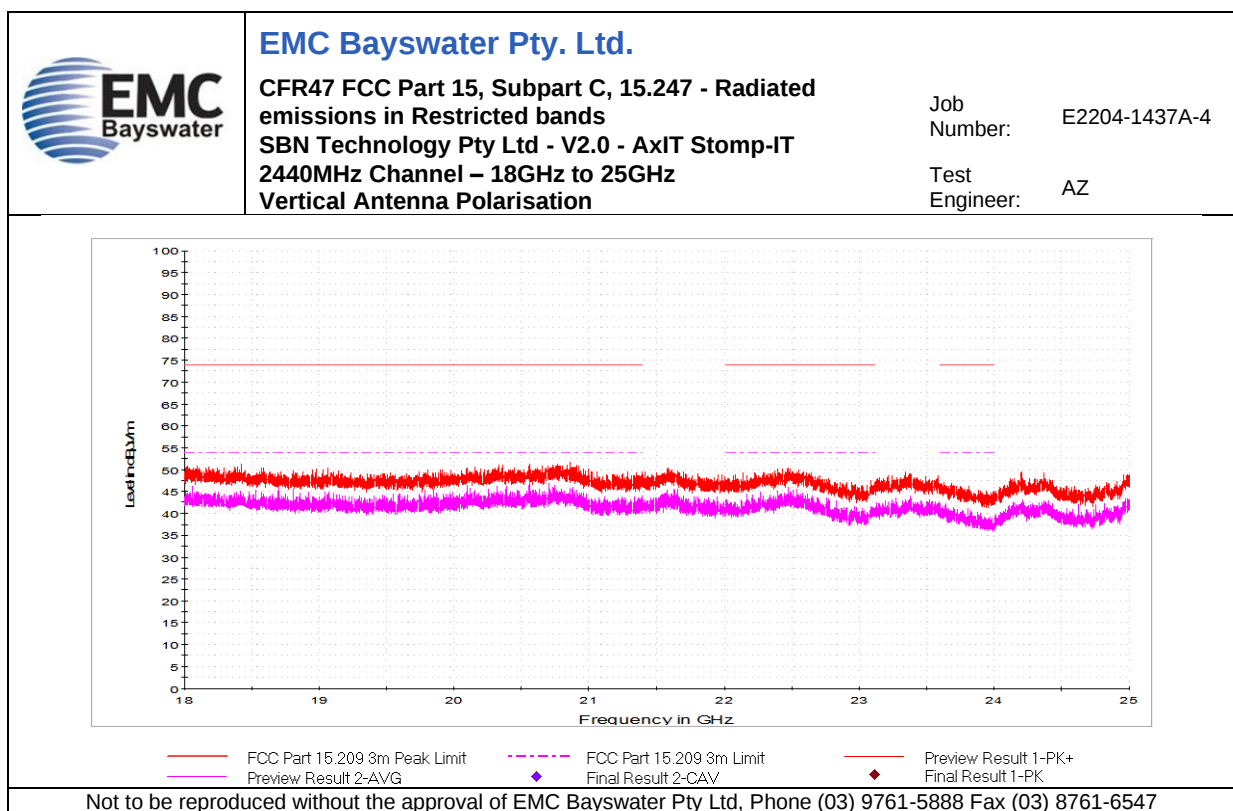
Graph 36



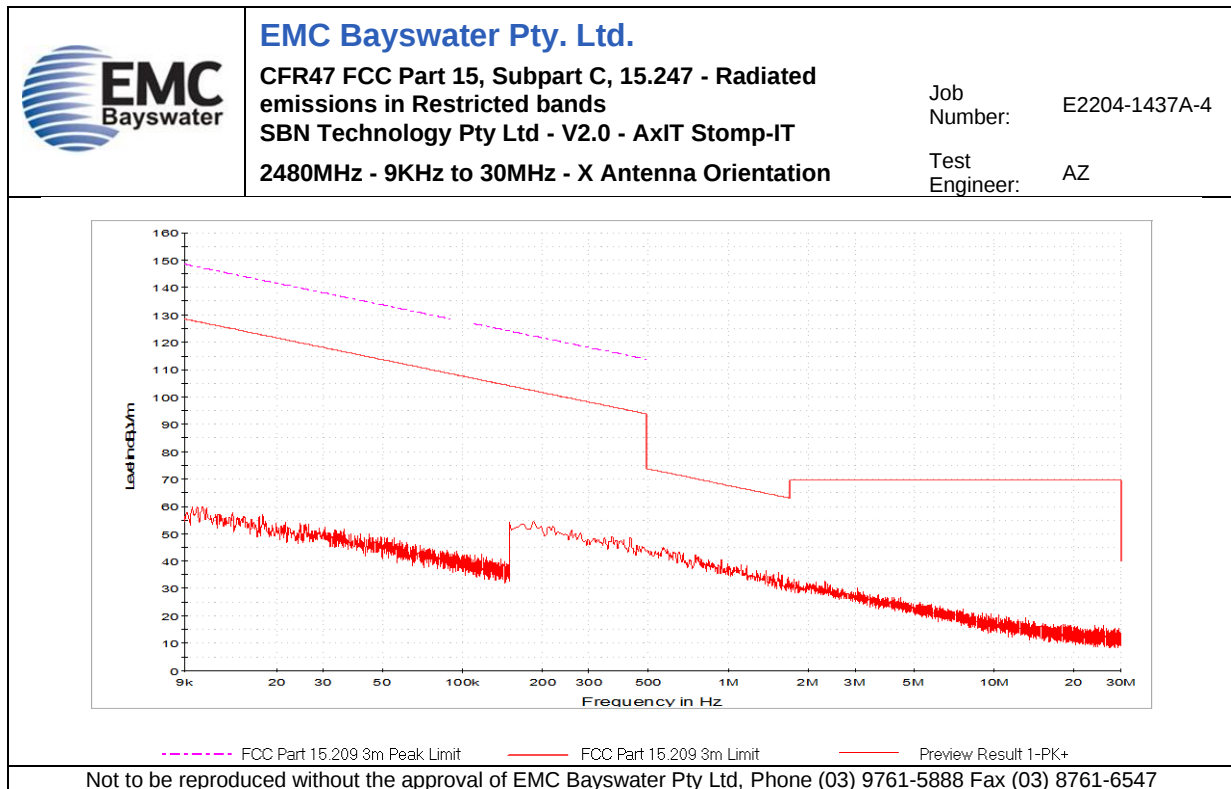
Graph 37



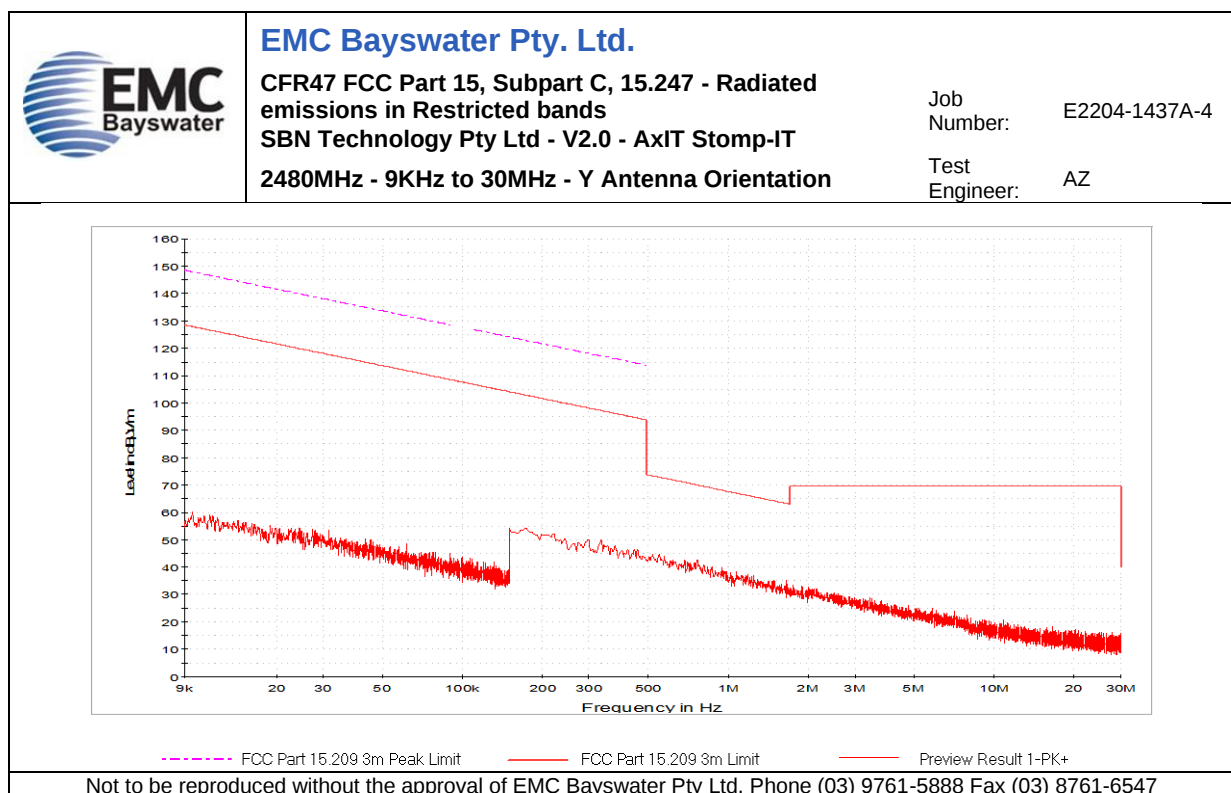
Graph 38



Graph 39



Graph 40



Graph 41

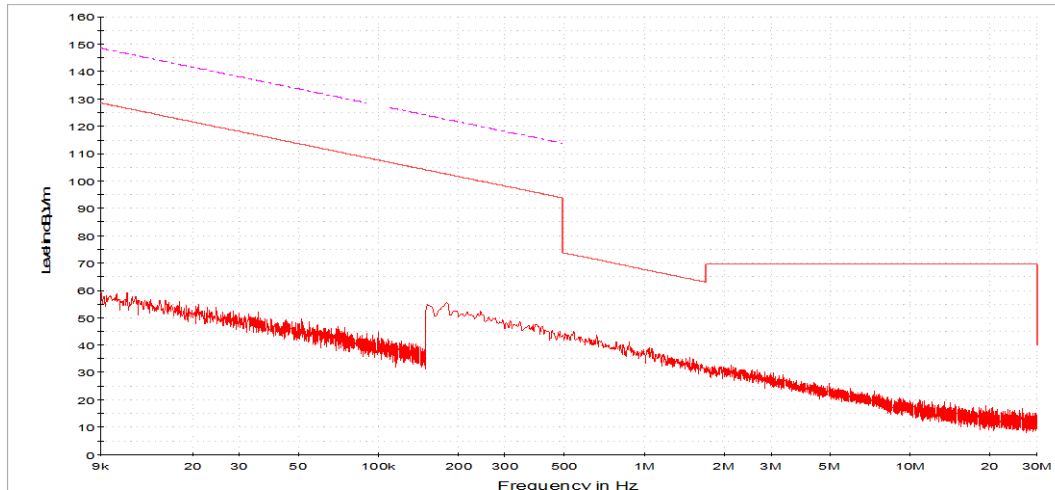


EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated
emissions in Restricted bands
SBN Technology Pty Ltd - V2.0 - AxIT Stomp-IT
2480MHz - 9KHz to 30MHz - Z Antenna Orientation

Job
Number: E2204-1437A-4

Test
Engineer: AZ



----- FCC Part 15.209 3m Peak Limit — FCC Part 15.209 3m Limit — Preview Result 1-PK+

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Graph 42

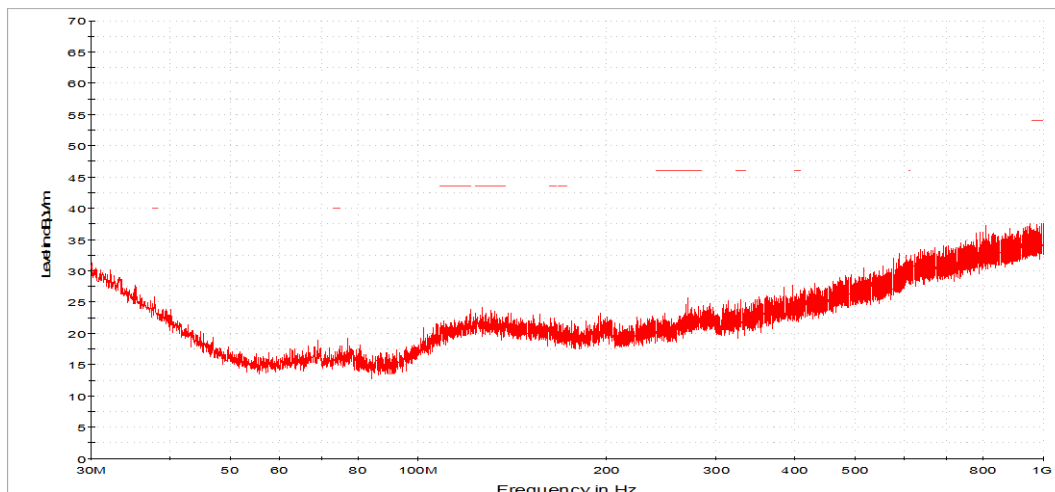


EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated
emissions in Restricted bands
SBN Technology Pty Ltd - V2.0 - AxIT Stomp-IT
2480MHz - 30MHz to 1GHz - Horizontal Antenna
Orientation

Job
Number: E2204-1437A-4

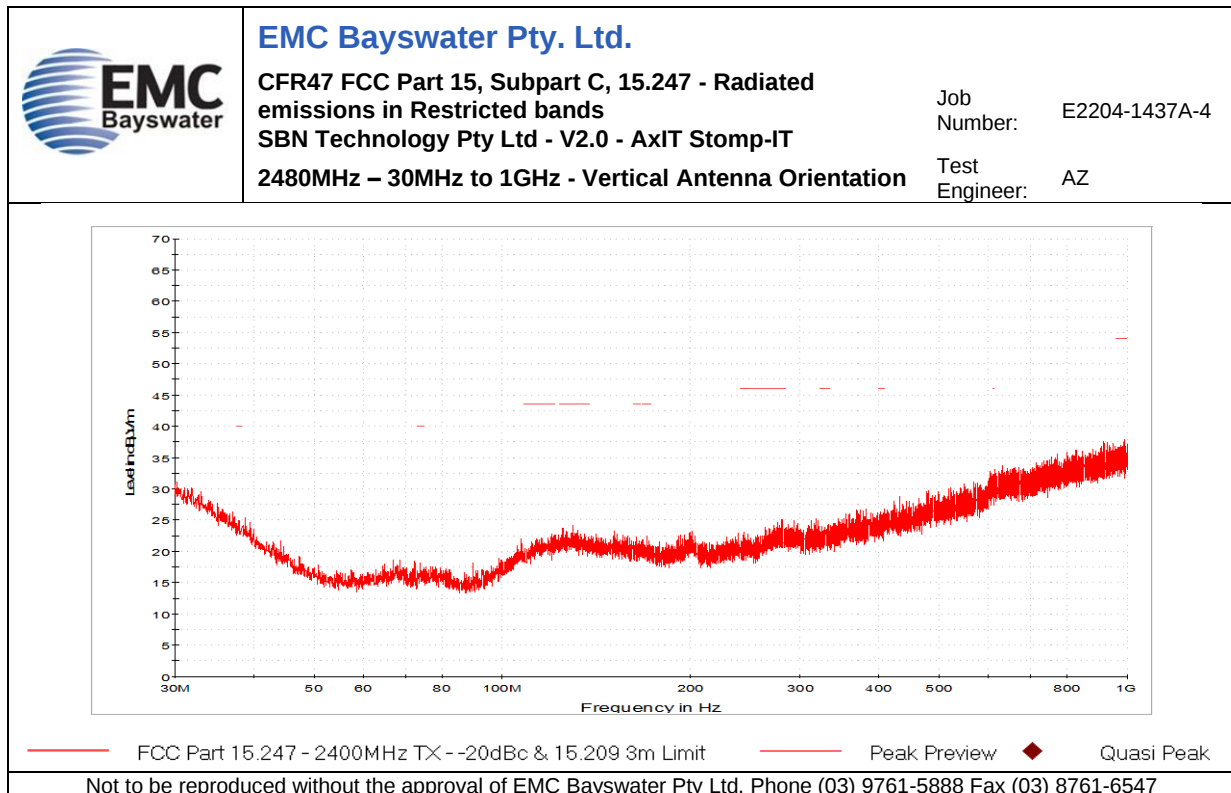
Test
Engineer: AZ



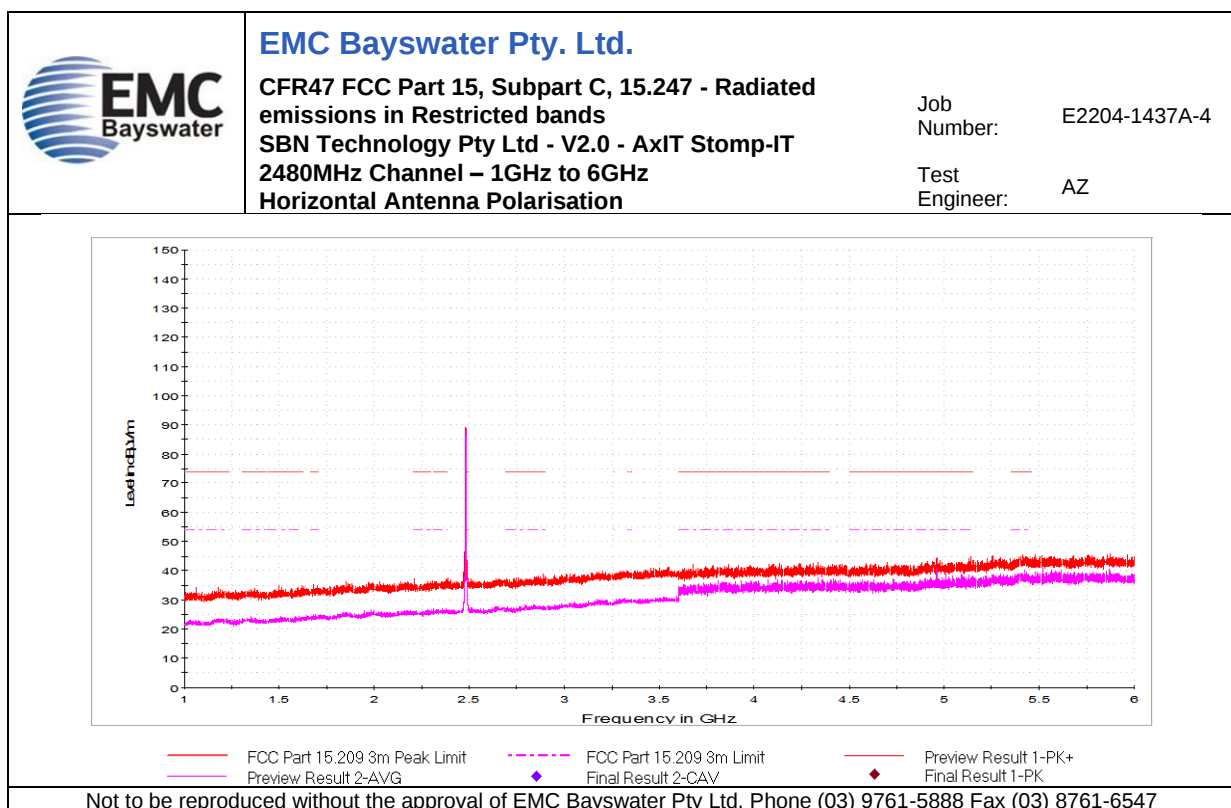
— FCC Part 15.247 - 2400MHz TX - -20dBc & 15.209 3m Limit — Peak Preview ◆ Quasi Peak

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Graph 43



Graph 44



Graph 45

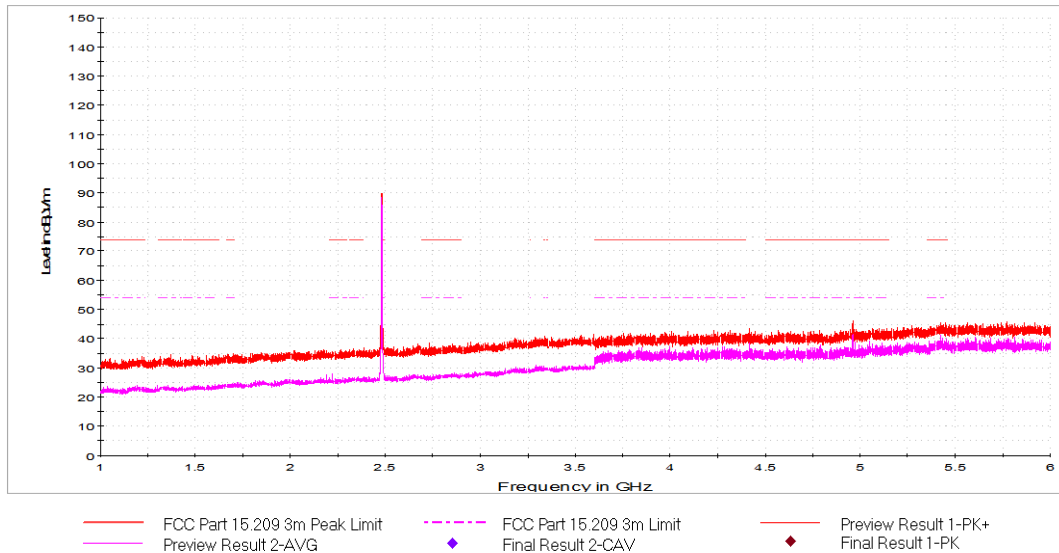


EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
SBN Technology Pty Ltd - V2.0 - AxIT Stomp-IT
2480MHz Channel – 1GHz to 6GHz
Vertical Antenna Polarisation

Job Number: E2204-1437A-4

Test Engineer: AZ



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Graph 46

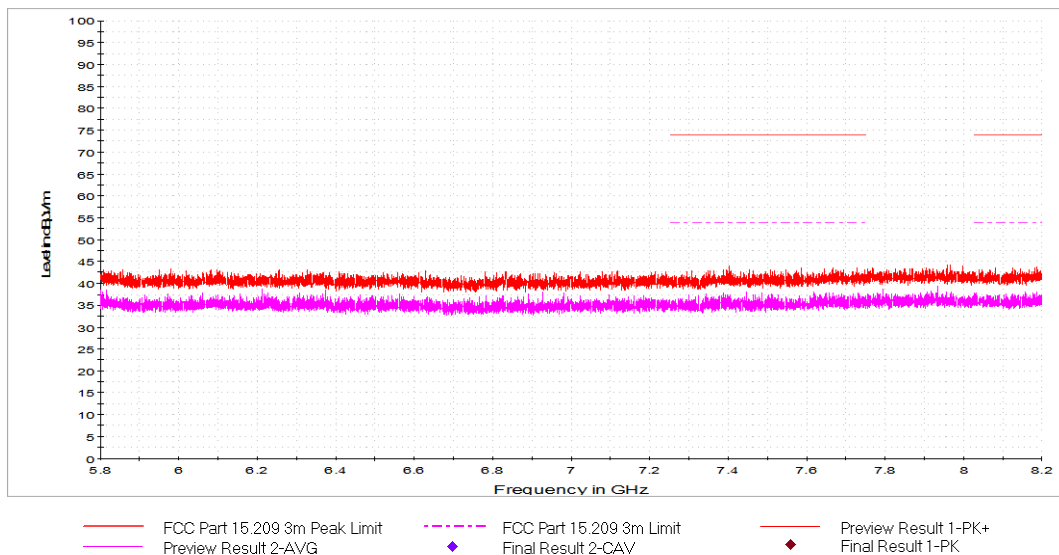


EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
SBN Technology Pty Ltd - V2.0 - AxIT Stomp-IT
2480MHz Channel – 5.8GHz to 8.2GHz
Horizontal Antenna Polarisation

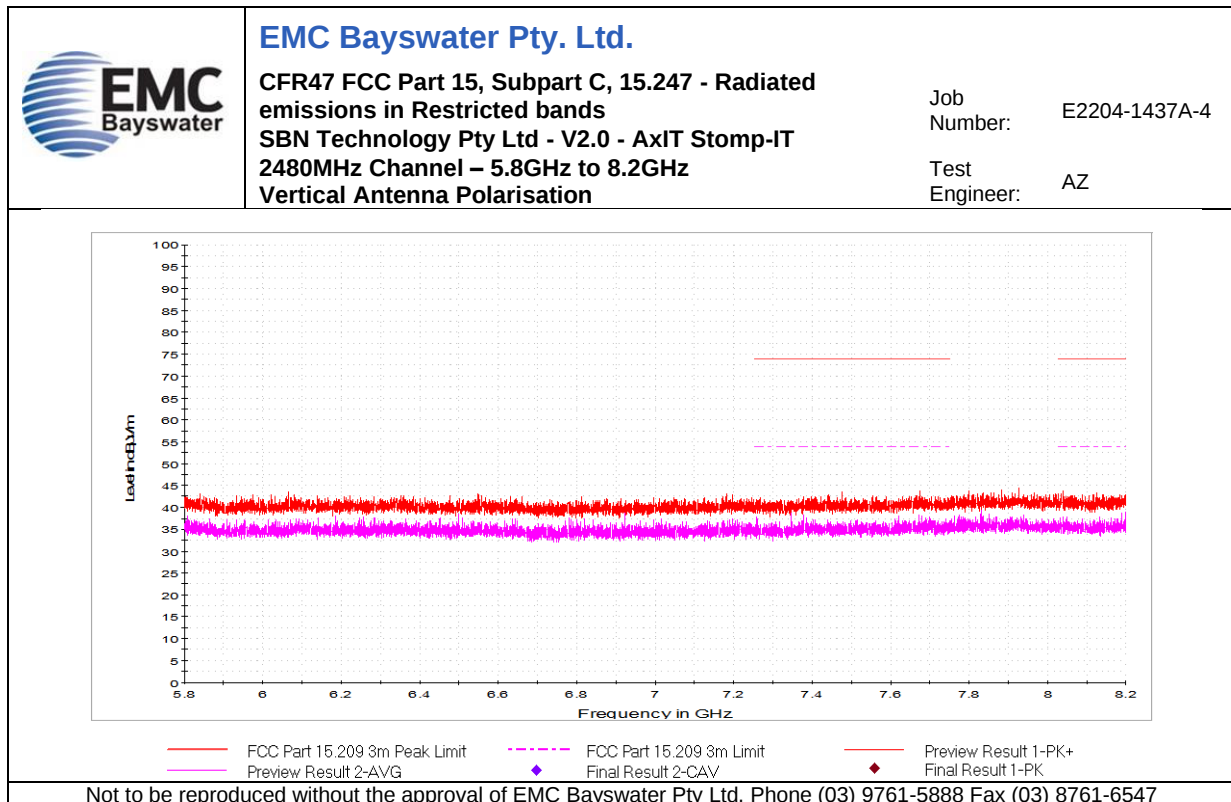
Job Number: E2204-1437A-4

Test Engineer: AZ

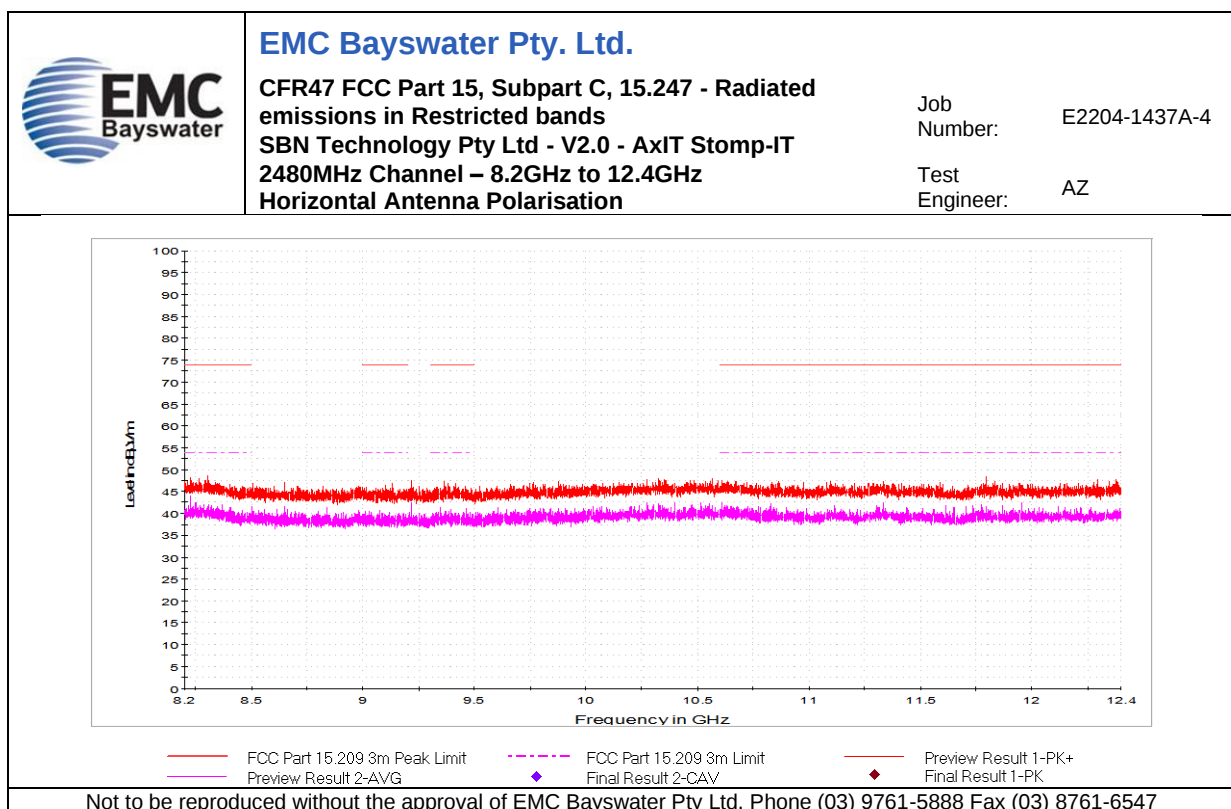


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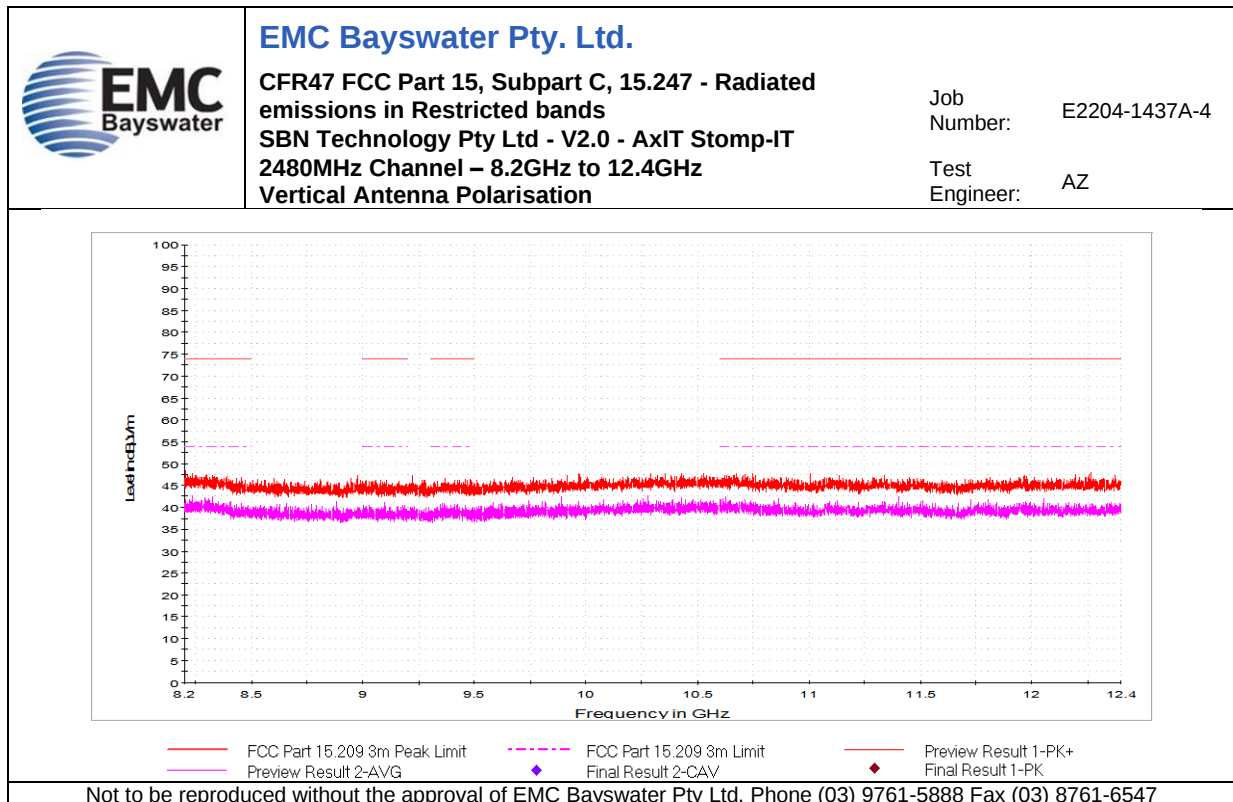
Graph 47



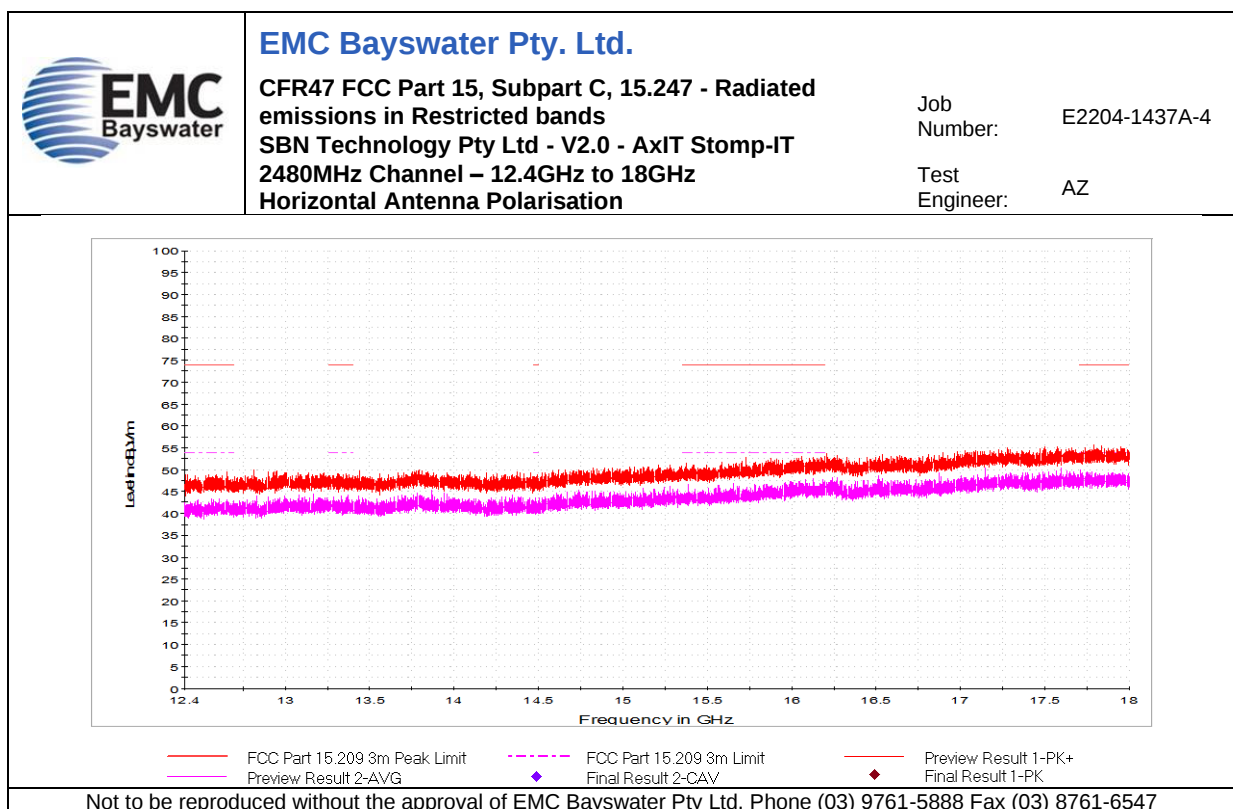
Graph 48



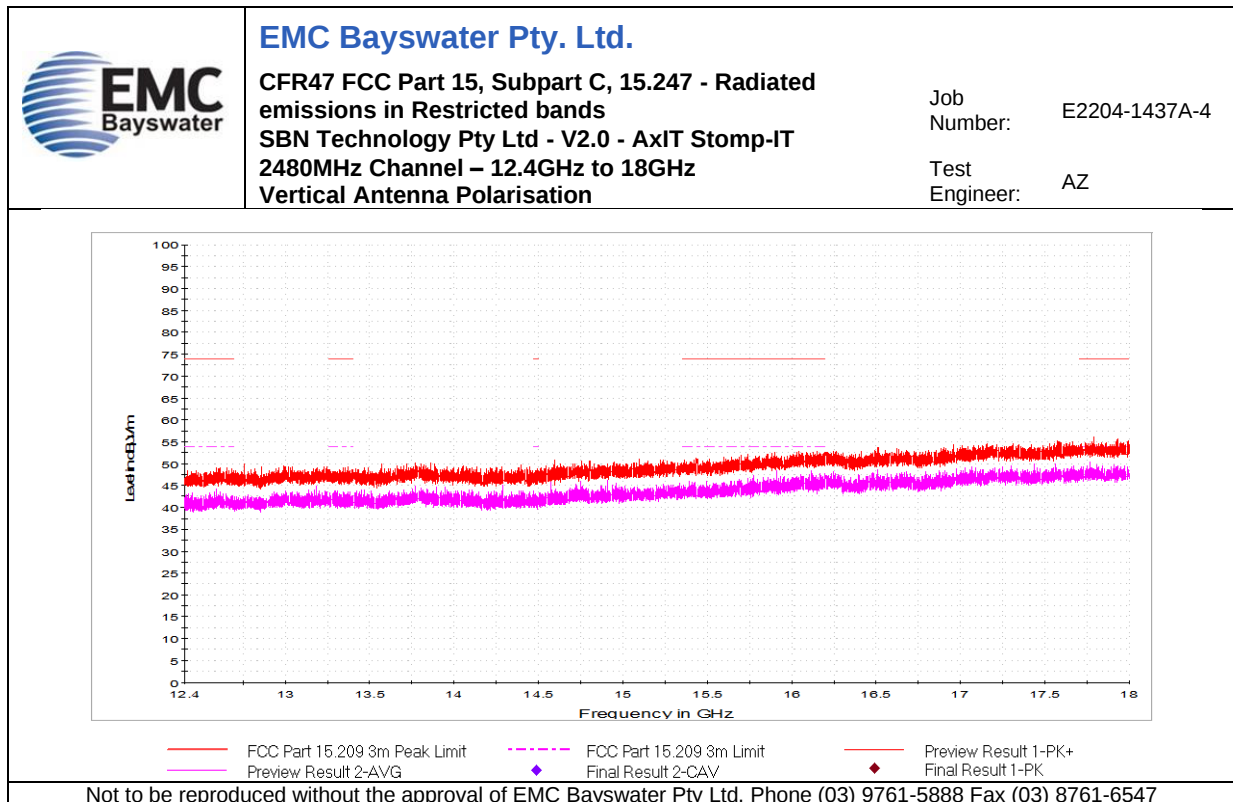
Graph 49



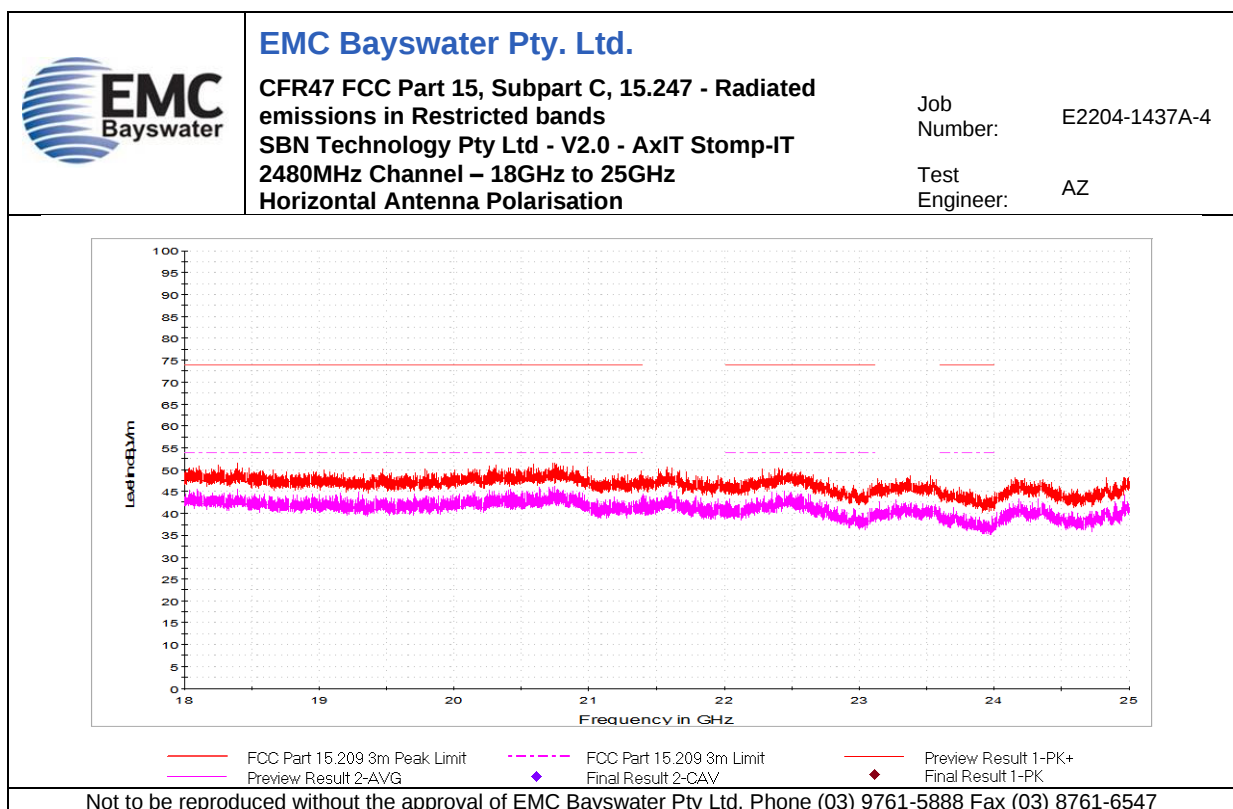
Graph 50



Graph 51



Graph 52



Graph 53

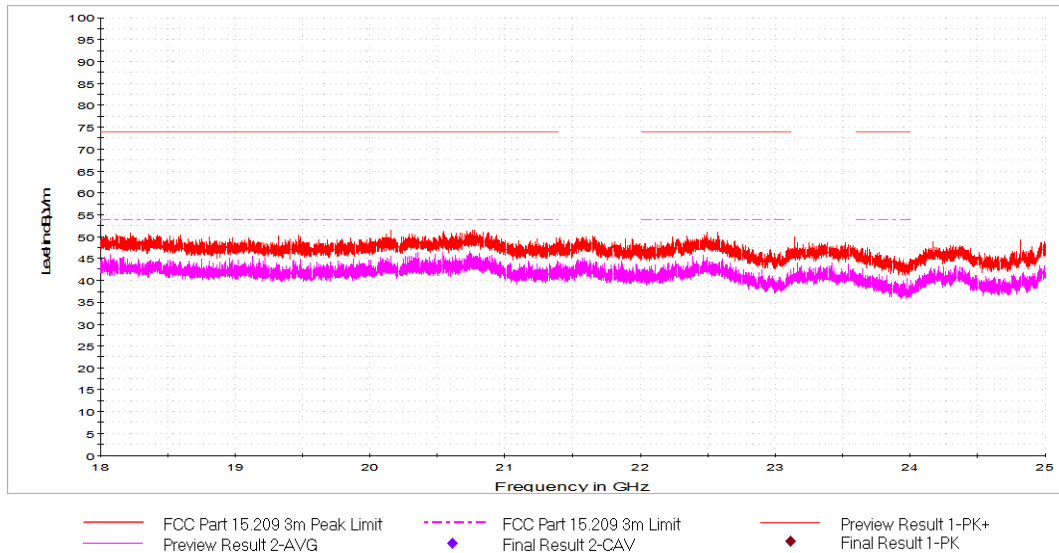


EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated
emissions in Restricted bands
SBN Technology Pty Ltd - V2.0 - AxIT Stomp-IT
2480MHz Channel – 18GHz to 25GHz
Vertical Antenna Polarisation

Job
Number: E2204-1437A-4

Test
Engineer: AZ

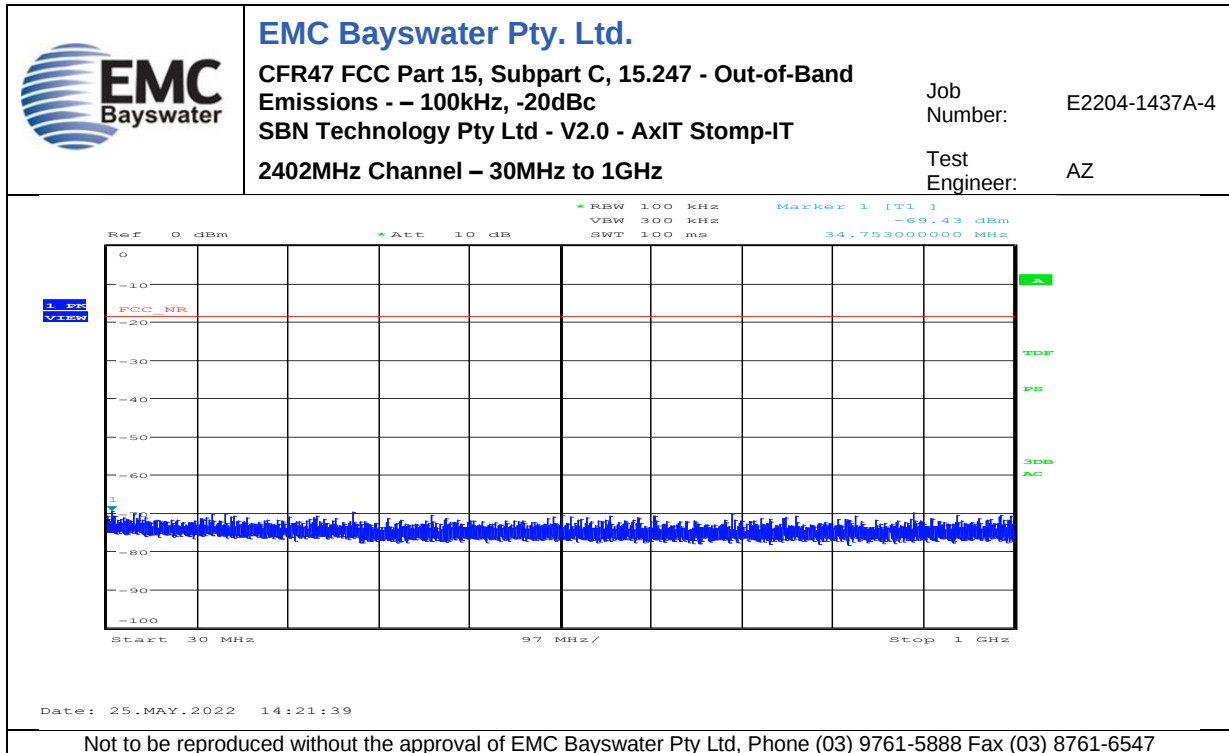


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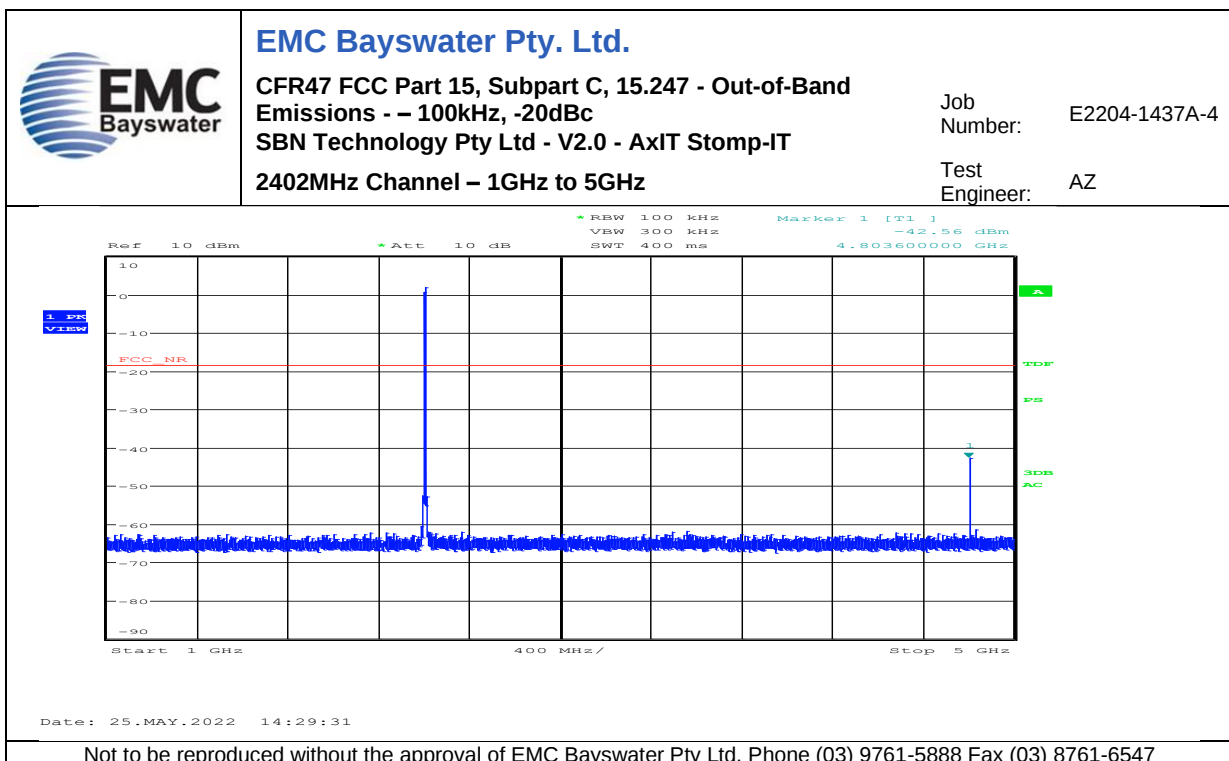
Graph 54

Appendix C.5 – Out-of-Band Emissions – 100kHz, -20dBc – FCC 15.247(d)

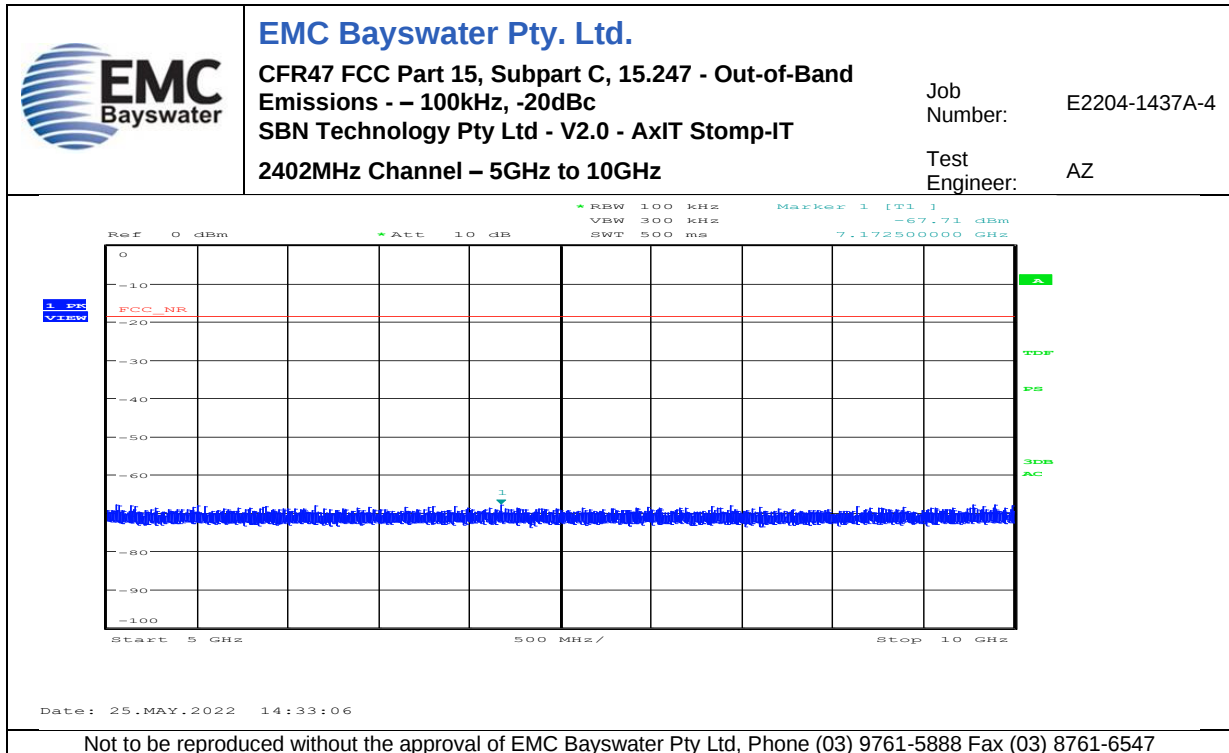
No.	Test	Graph Description
55	Out-of-Band Emissions 100kHz, -20dBc 2402MHz Channel	30MHz to 1GHz
56		1GHz to 5GHz
57		5GHz to 10GHz
58		10GHz to 15GHz
59		15GHz to 25GHz
60	Out-of-Band Emissions 100kHz, -20dBc 2440MHz Channel	30MHz to 1GHz
61		1GHz to 5GHz
62		5GHz to 10GHz
63		10GHz to 15GHz
64		15GHz to 25GHz
65	Out-of-Band Emissions 100kHz, -20dBc 2480MHz Channel	30MHz to 1GHz
66		1GHz to 5GHz
67		5GHz to 10GHz
68		10GHz to 15GHz
69		15GHz to 25GHz



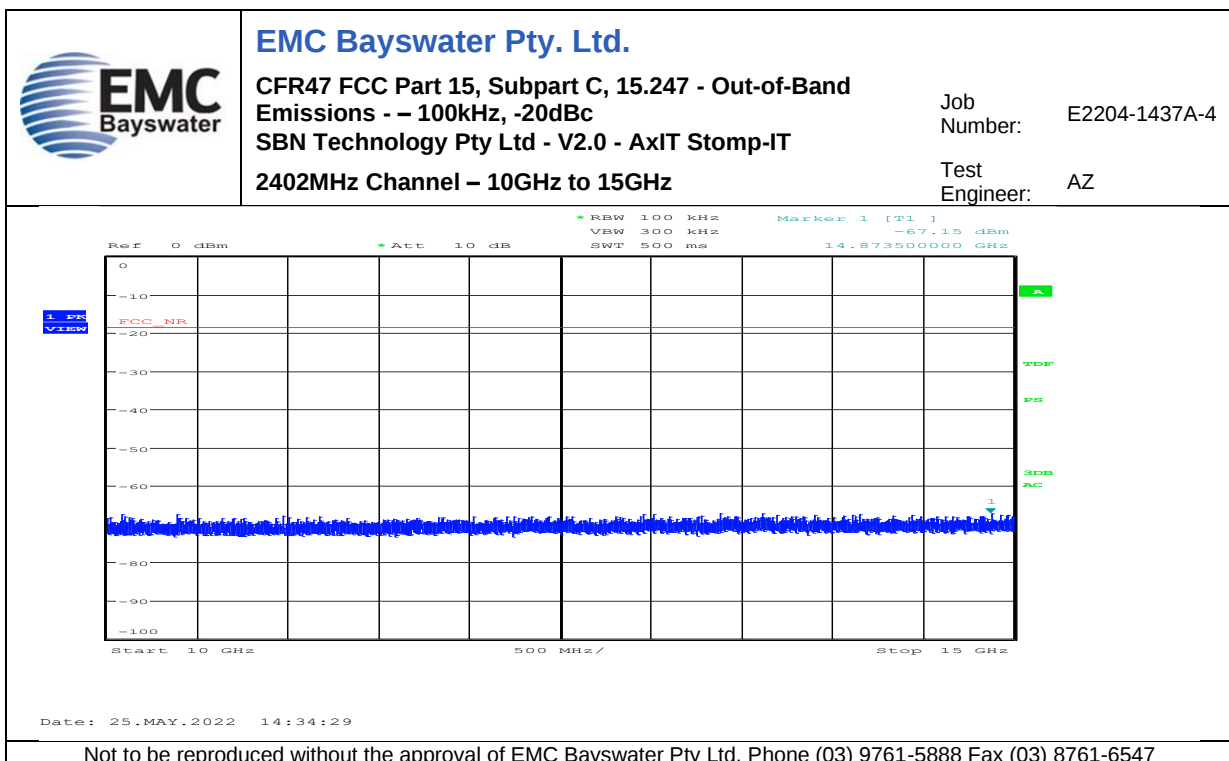
Graph 55



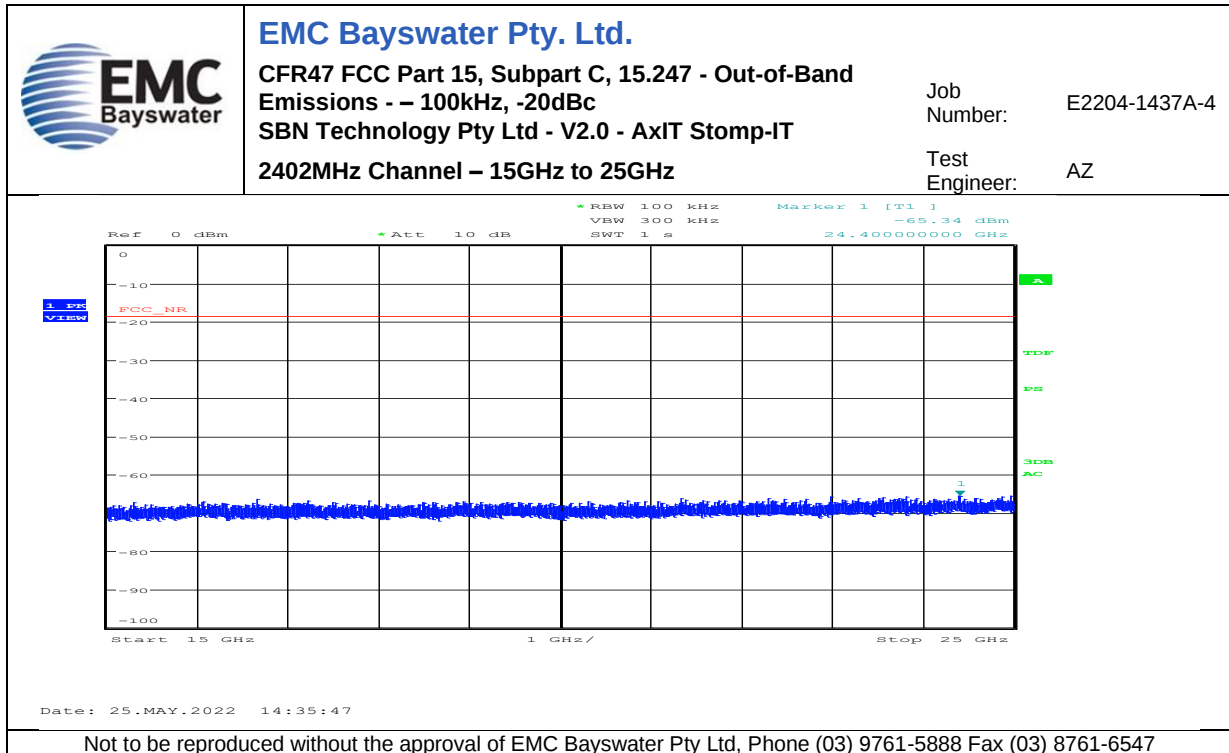
Graph 56



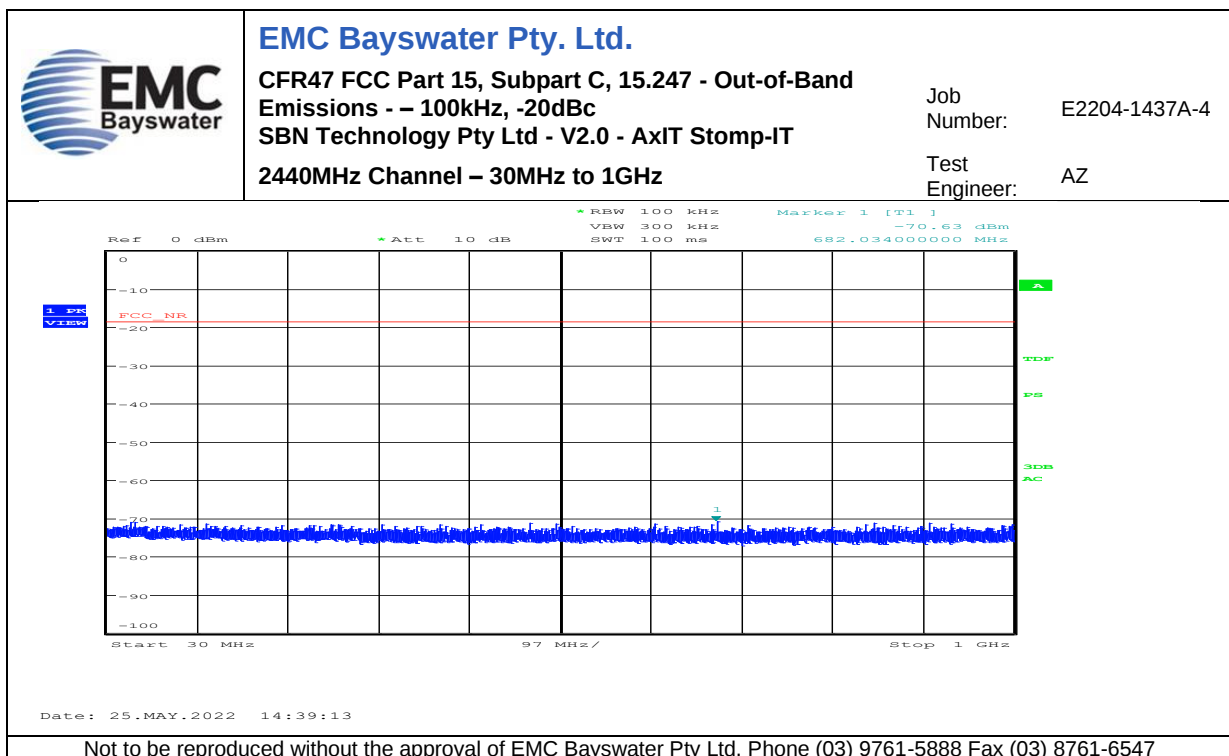
Graph 57



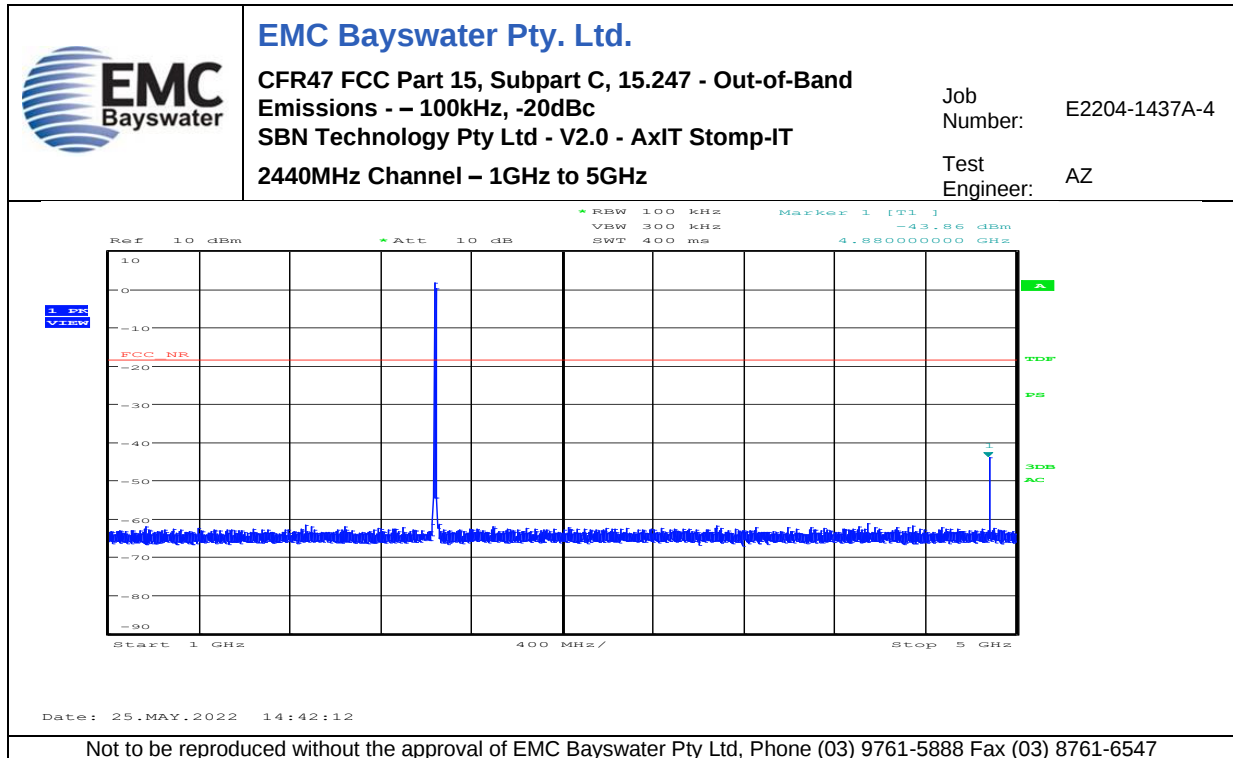
Graph 58



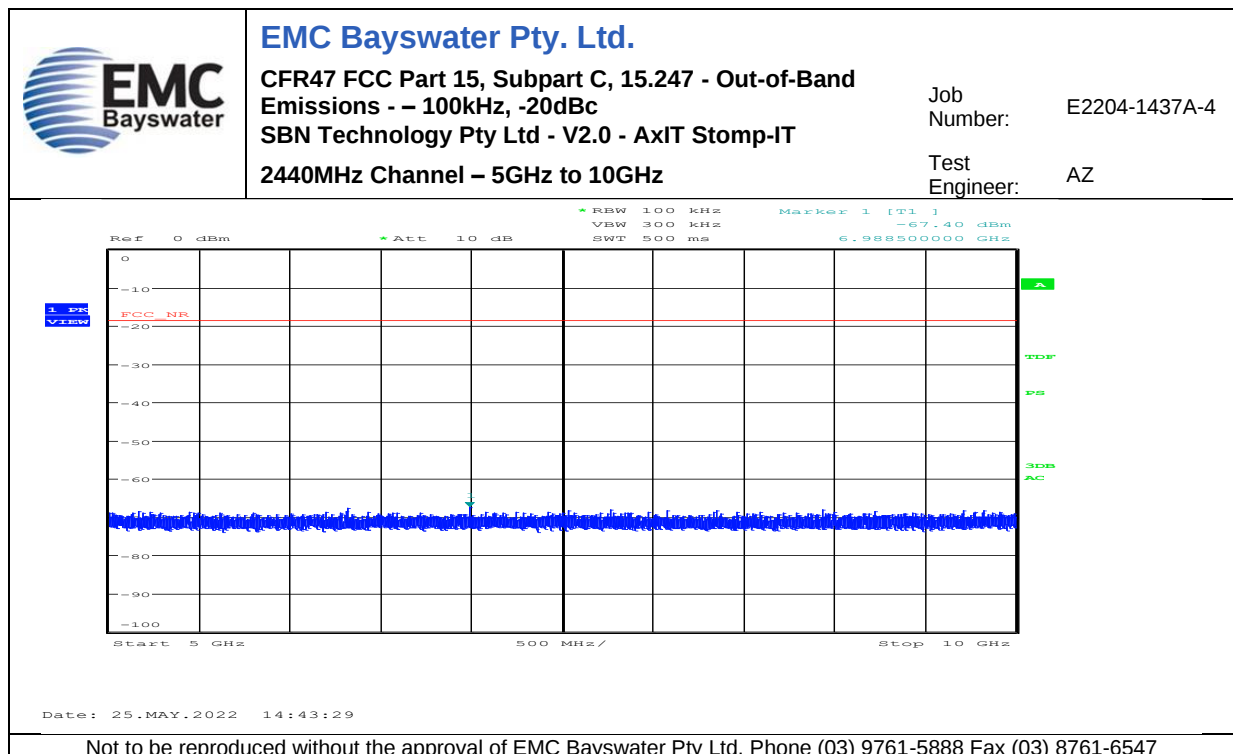
Graph 59



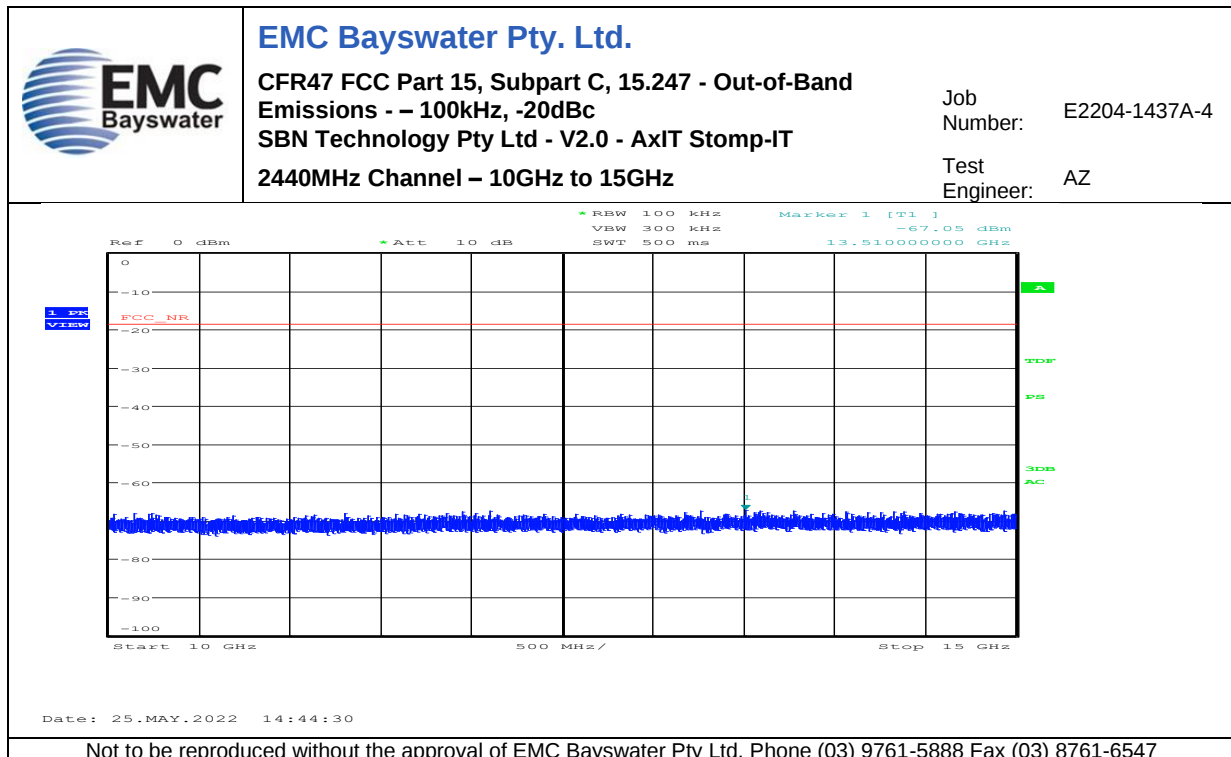
Graph 60



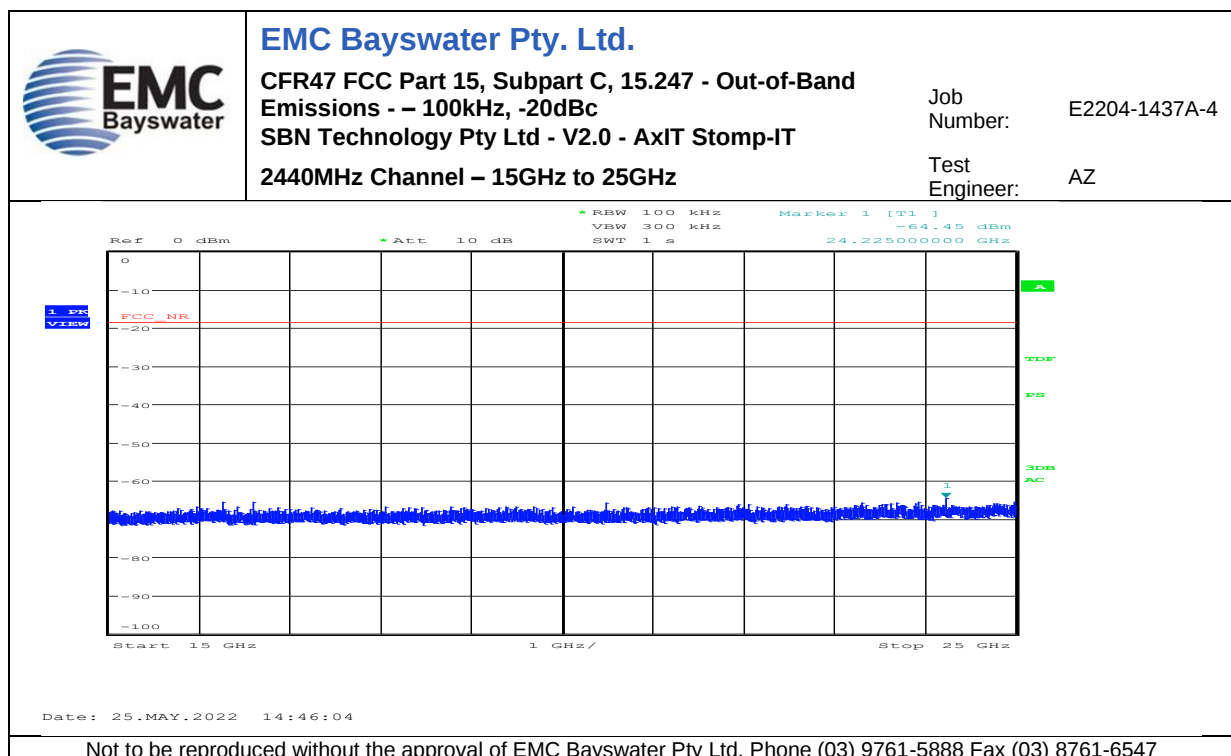
Graph 61



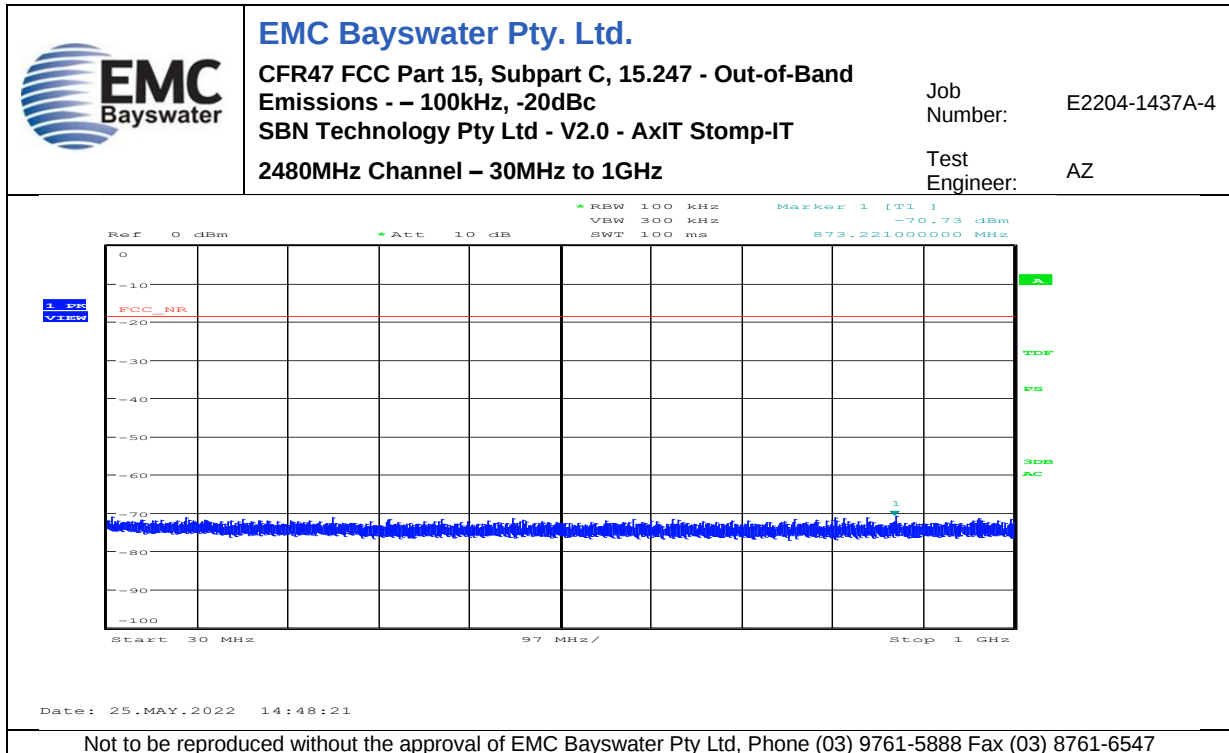
Graph 62



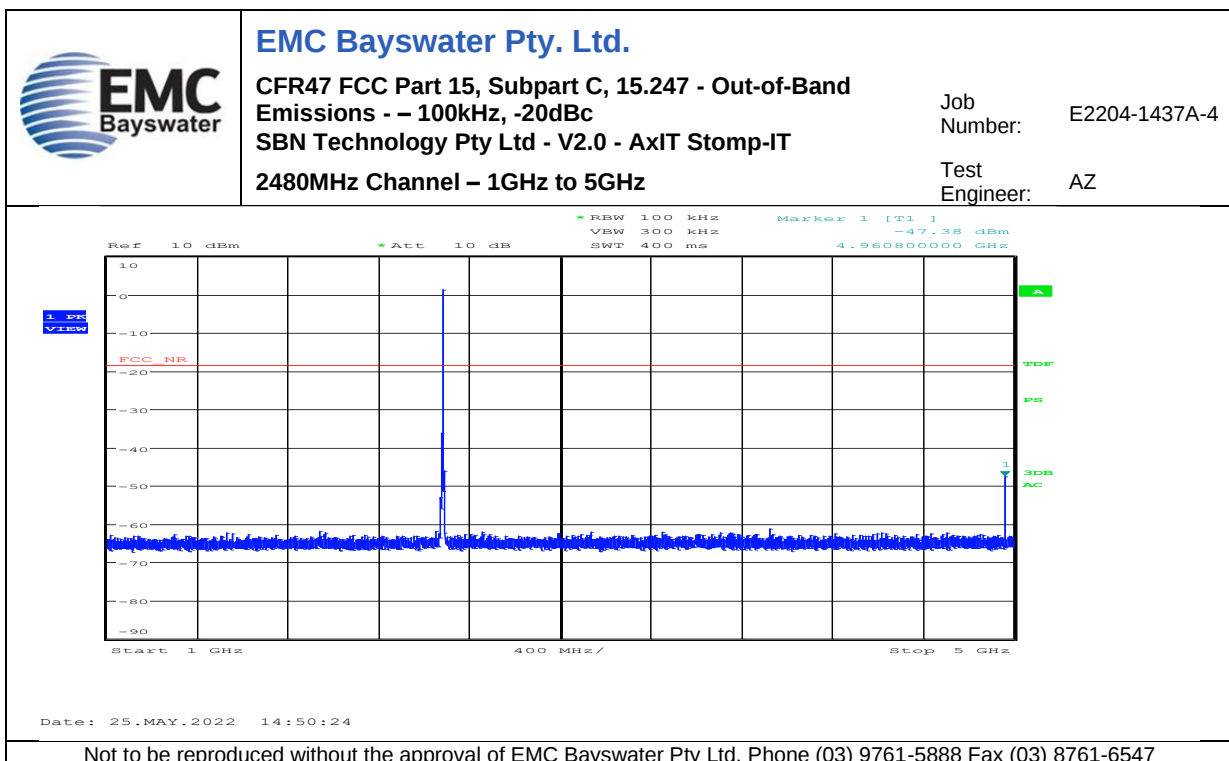
Graph 63



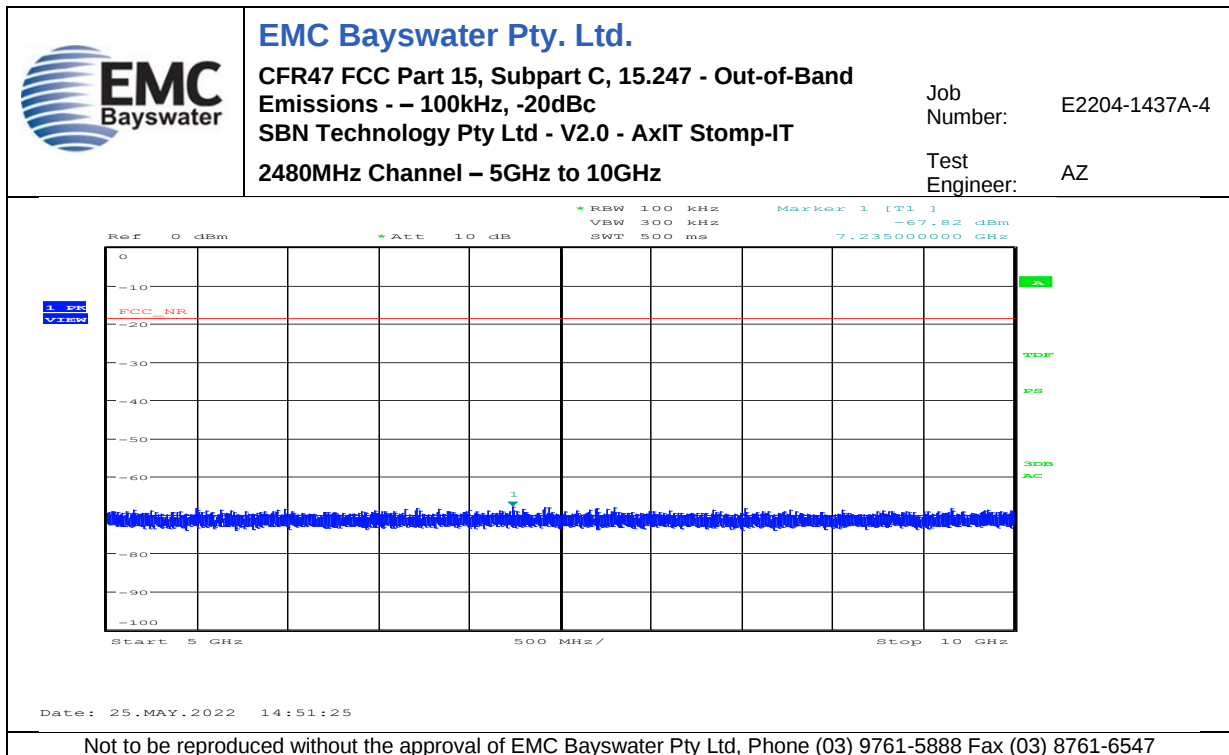
Graph 64



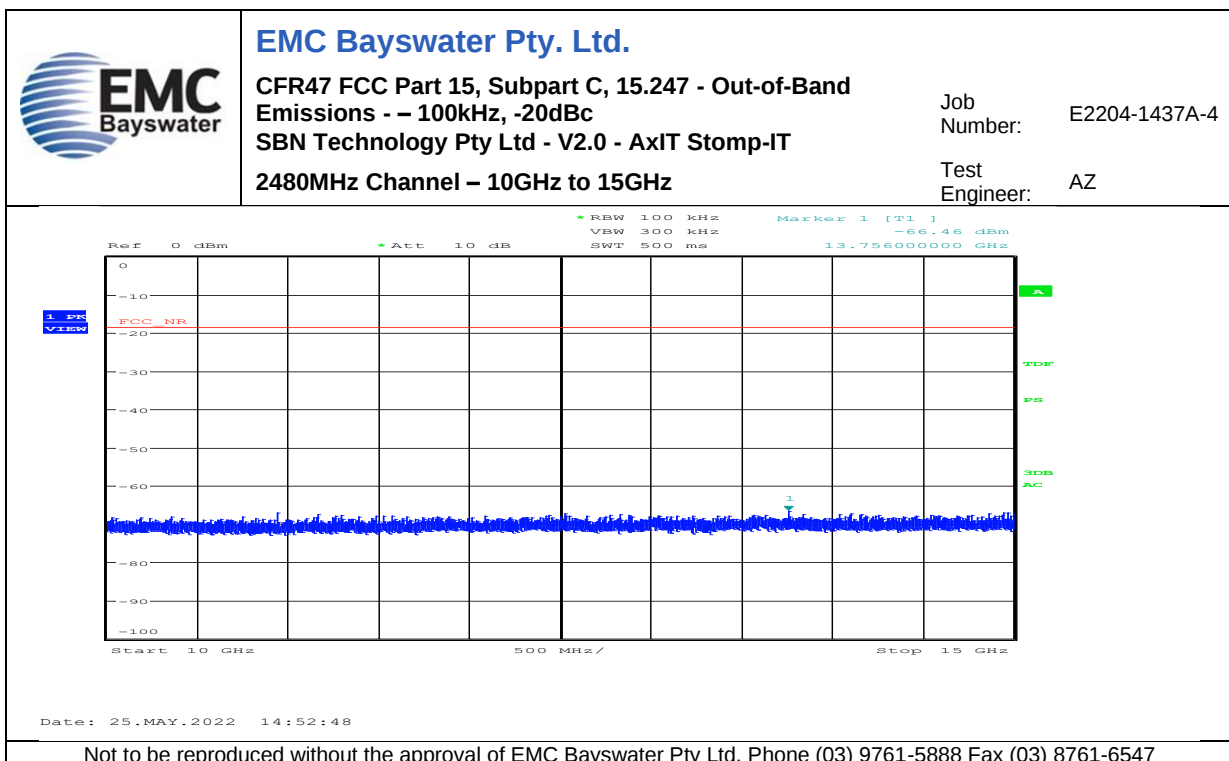
Graph 65



Graph 66



Graph 67



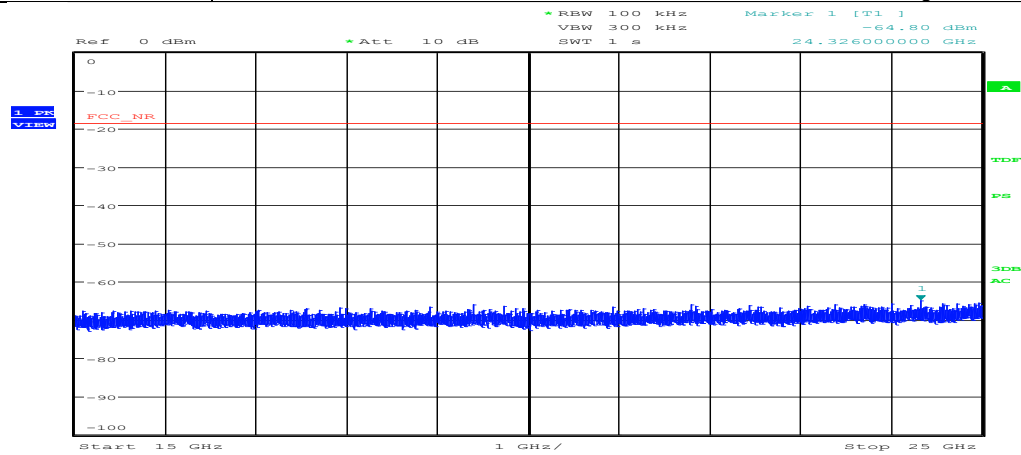
Graph 68



EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Out-of-Band
Emissions - - 100kHz, -20dBc
SBN Technology Pty Ltd - V2.0 - AxIT Stomp-IT
2480MHz Channel - 15GHz to 25GHz

Job Number: E2204-1437A-4
Test Engineer: AZ



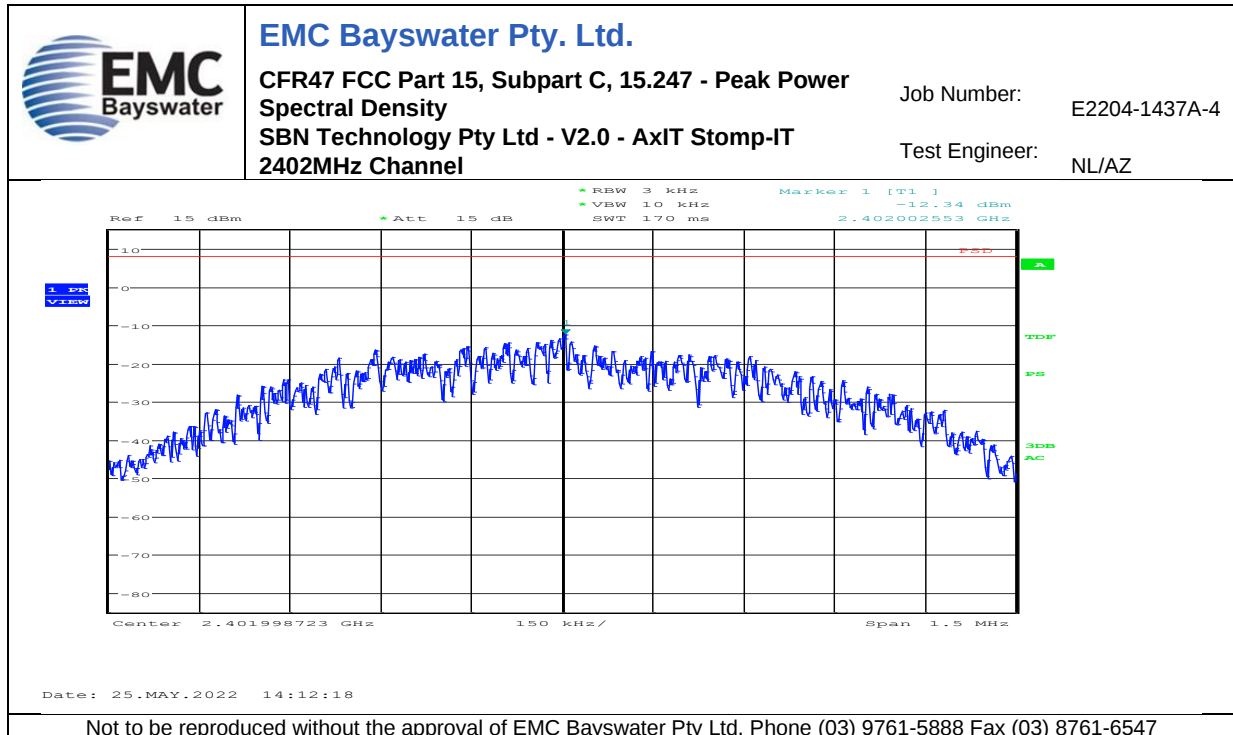
Date: 25.MAY.2022 14:53:45

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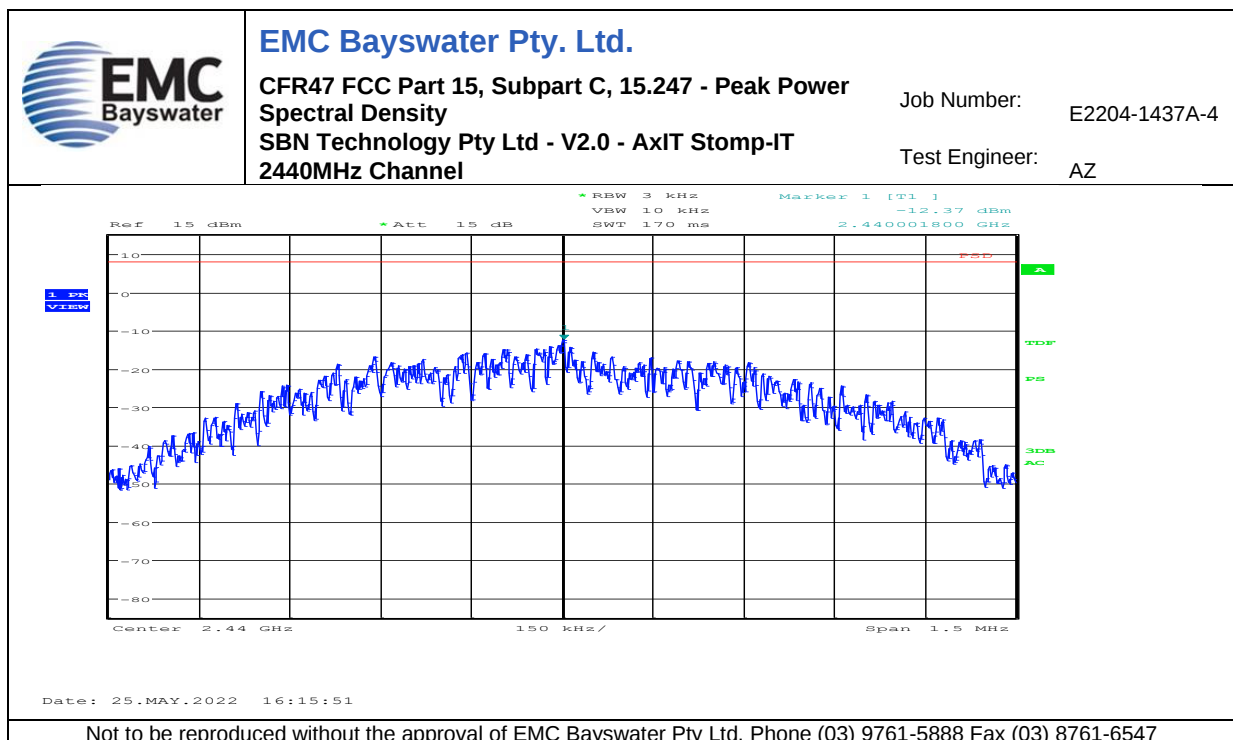
Graph 69

Appendix C.6 – Measurement Graphs – Power Spectral Density – FCC 15.247 (e)

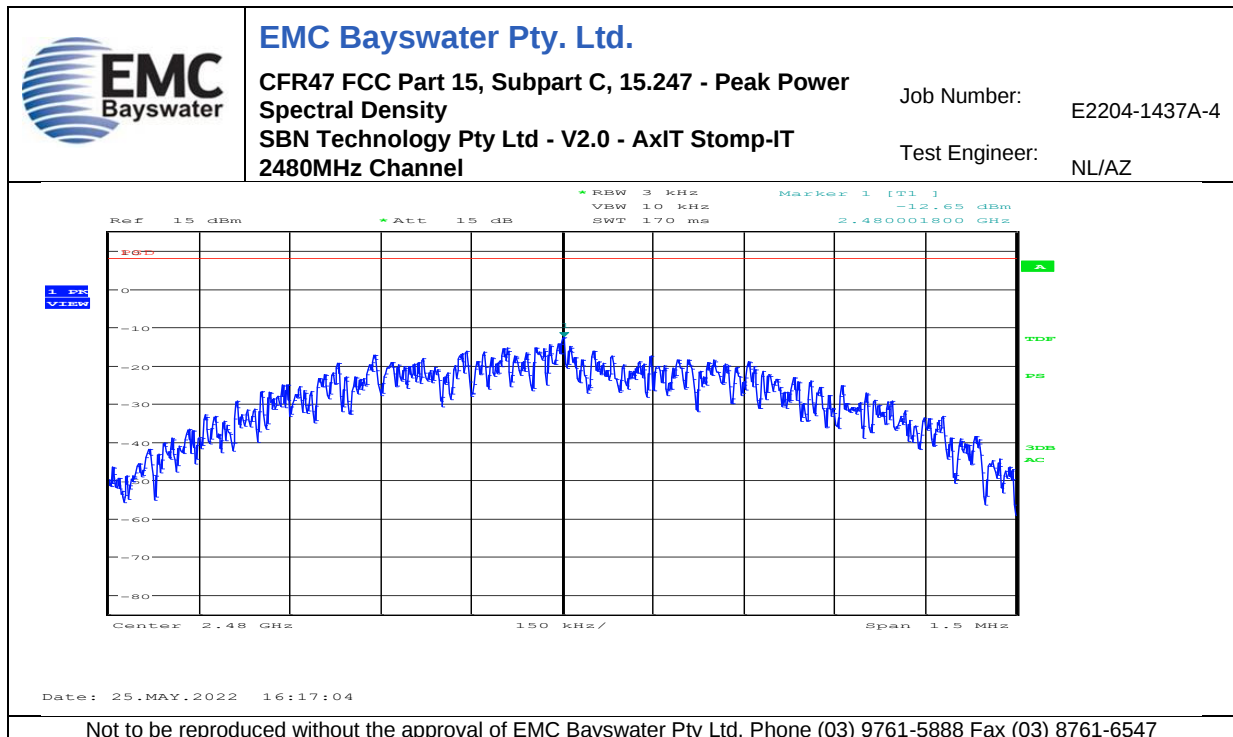
No.	Test	Graph Description
70	Power Spectral Density	2402MHz Channel
71		2440MHz Channel
72		2480MHz Channel



Graph 70



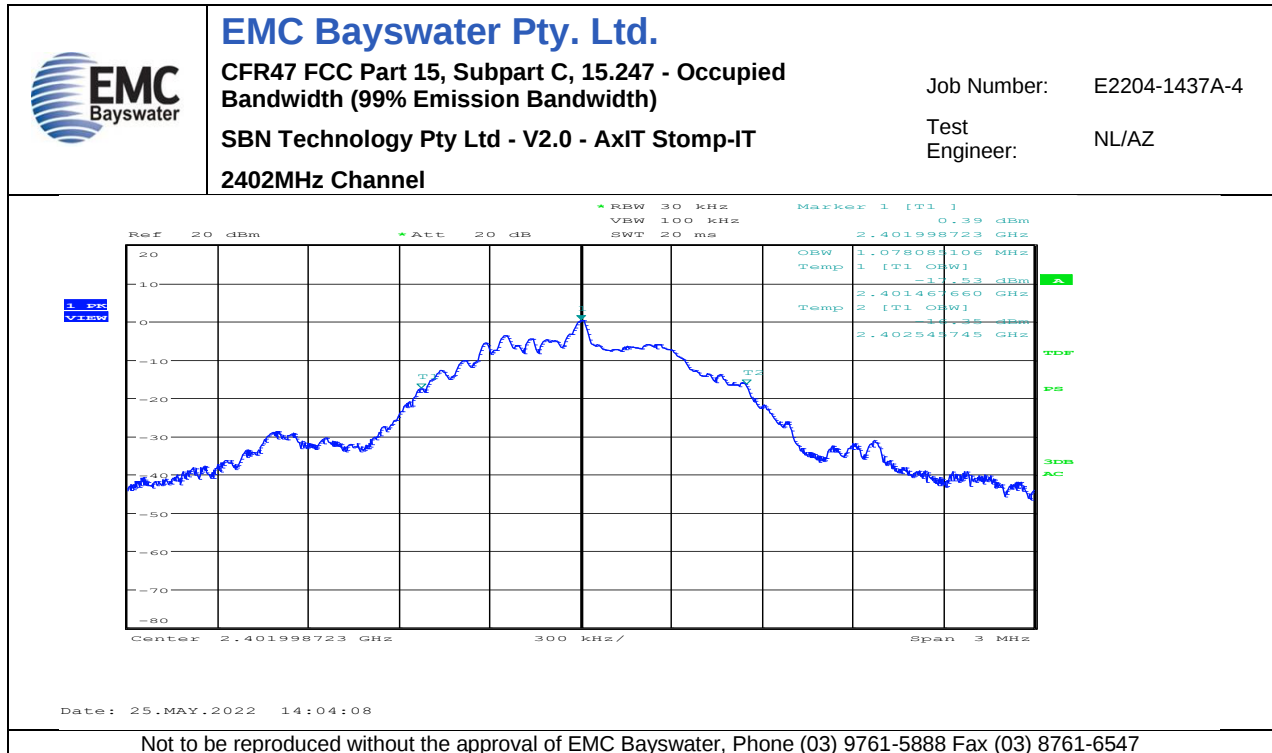
Graph 71



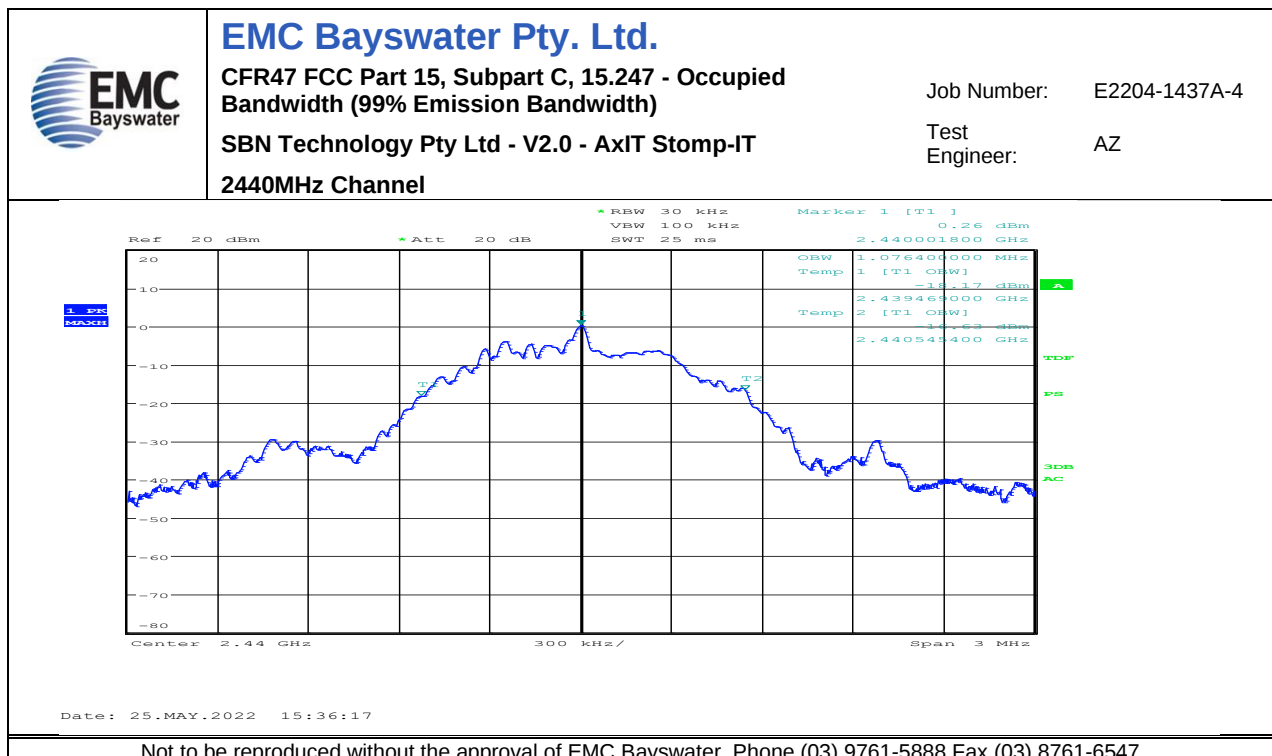
Graph 72

Appendix C.7 – Occupied Bandwidth (99% Emission Bandwidth)

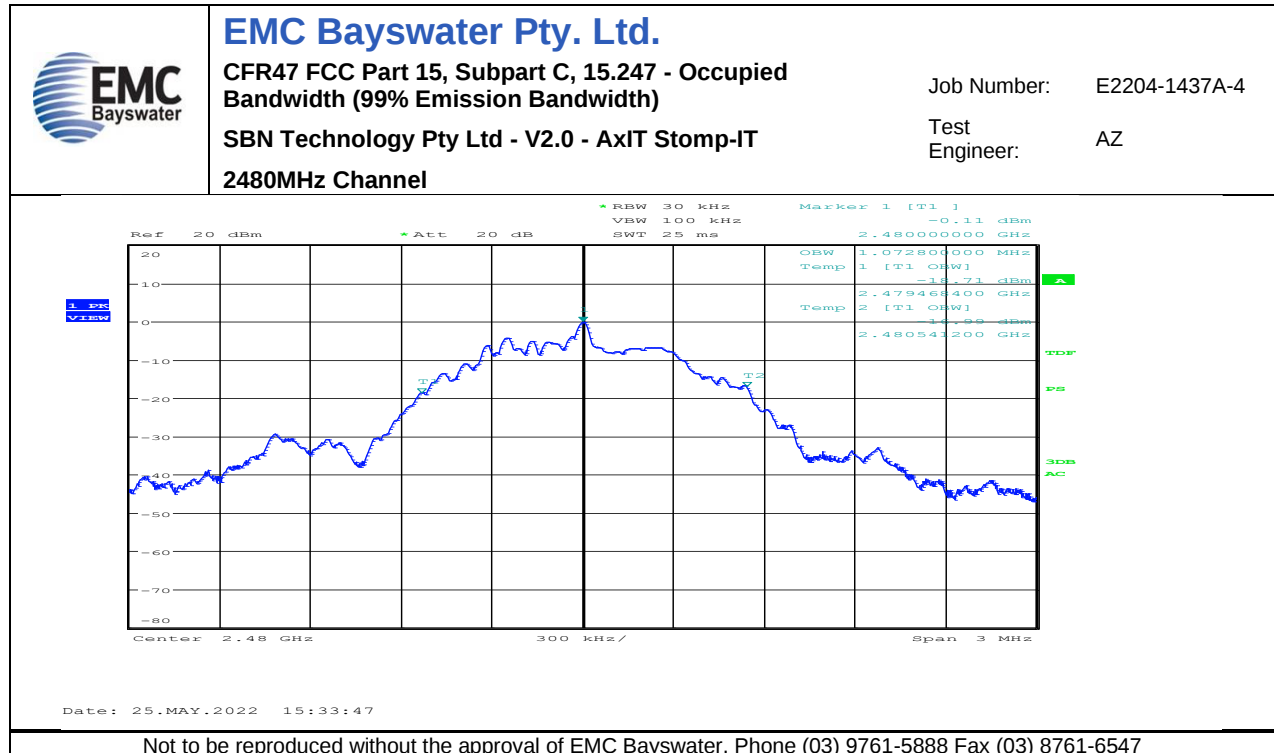
No.	Test	Graph Description
73	Occupied Bandwidth (99% Emission Bandwidth)	2402MHz Channel
74		2440MHz Channel
75		2480MHz Channel



Graph 73



Graph 74



Graph 75