EMC Bayswater Pty Ltd
18/88 Merrindale Drive Croydon South, Victoria, 3136, Australia
Telephone: +61 3 9761 5888
Facsimile: +61 3 8761 6547
Email: sales@emcbayswater.com.au
ABN: 49 112 221 333

RADIO COMPLIANCE REPORT
Certification Test Report
In accordance with:
CFR47 FCC Part 15, Subpart C, 15.247

CR Mining

SEN_GET_P1_5.5_920

GET Sensor Tag

FCC ID: 2A9FA-07-0023-915-A

REPORT: E2211-1609A-2
DATE: April, 2023

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

Certificate of Compliance
Certification Compliance Report
EMC Bayswater Test Report: E2211-1609A-2
Issue Date: April, 2023

Test Sample(s):	GET Sensor Tag
Model No:	SEN_GET_P1_5.5_920
Serial No:	57893
FCC ID:	2A9FA-07-0023-915-A

Customer Details:

Mr Julien Lopez
CR Mining
3/271 Treasure Road North
Welshpool
WA 6106
Australia
Phone No: +61 (08) 6253 3913
e-mail: Julien.Lopez@crmining.com

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***
15.109 - Radiated Emissions (Receive Mode)	***Complied***

Test Date(s): 15th of December, 2022 to 3rd of February, 2023

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

Phone No: +61 3 9761 5888 e-mail: sales@emcbayswater.com.au
Fax No: +61 3 8761 6547 Web: www.emcbayswater.com.au/

This is to certify that the necessary measurements were made by EMC Bayswater Pty Ltd, and that the CR Mining, SEN_GET_P1_5.5_920, GET Sensor Tag, 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)

21/04/2023 10:04

Date

Radio Compliance Report
for
CR Mining

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1. Introduction

Electromagnetic Compatibility (EMC) tests were performed on a CR Mining, SEN_GET_P1_5.5_920, GET Sensor Tag 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 15 sections	Test	Result
15.203	Antenna Requirement	Complied[#1]
15.247 (a)(2)	6dB Bandwidth	Complied by 1kHz
15.247 (b)(3)	Maximum Peak Output Power	Complied by 27.5dB
15.247 (d)	Out-of-Band Emissions – 100kHz, -20dBc	Complied by at least > 6dB
15.247 (d)	Emissions on the Band edge	Complied by 12.6dB
15.247 (d), 15.209	Radiated emissions in Restricted bands	Complied by 18.2dB
15.247 (e)	Power Spectral Density	Complied by 8.8dB
15.109	Radiated Emissions (Receive Mode)	Complied with quasi-peak limit by > 10dB
		Complied with peak limit by > 20dB
		Complied with average limit by > 20dB
	Occupied Bandwidth (99% Emission Bandwidth)	762kHz

[#1] *The Antenna is permanently attached, 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:	GET Sensor Tag	
Model No:	SEN_GET_P1_5.5_920	
Serial No:	57893	
Firmware:	4.6.2.9-R	
Power Specifications:	Battery powered 1x 3V lithium coin cell	
Dimensions:	40 x 40 x 40 (mm) (Length x Width x Height)	
Weight:	50g	
EUT Type:	Tested as table top.	
Transmitter Details:	Description:	GET Sensor Tag
	Type:	Sensor
	Modulation:	GSFK
	Channels:	903 to 927MHz
	Max power:	10mW
	Antenna:	Copper antenna rev 4.2
	FCC ID:	2A9FA-07-0023-915-A

(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:

"The GET Sensor is an IoT sensor used in Ground Engaging Tools. Battery-operated and equipped with an accelerometer and temperature sensor, the device is using GSFK modulation for bidirectional wireless communication in the 915MHz ISM band."

(Customer supplied product description information)

The highest fundamental frequency generated or used within the EUT, or the highest frequency at which it operates as specified by the customer is 927MHz.

5.3. Support Equipment

None

5.4. Product operating modes

The customer described the product normal operation modes as the following:

The sensors can have 2 operating modes:

- Sleep mode: used during storage in warehouse or transport to customer site.
- Active mode: used when sensor is installed on mining equipment.

(Customer supplied product operating mode information)

5.5. Product operating mode for testing

Active mode

5.6. Configuration

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

The EUT was battery powered. The EUT was transmitting continuously 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
None

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 permanent, internally attached antenna which is etched into the PCB. 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 a distance of 3m from the EUT, using the spectrum analyser. The worst-case transmitter orientation, measurement antenna height and polarization were used for each measurement. 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)
902 – 928	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
903 (Bottom)	501.0	500	+1.0	Complied
916 (Middle)	504.8	500	+4.8	Complied
927 (Top)	504.8	500	+4.8	Complied

Table 3: Results for 6dB Bandwidth – Awake Mode

Transmit operating frequency (MHz)	Measured 6dB Bandwidth (kHz)	Minimum 6dB Bandwidth (kHz)	Margin (kHz)	Comment
920	501.0	500	+1.0	Complied

Table 4: Results for 6dB Bandwidth – Sleep Mode

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:	18.3 to 20.3°C
Humidity:	45 to 46%
Atmospheric pressure:	1015.9 to 1019.2hPa

Table 5: Climatic conditions

Notes: The minimum required 500kHz 6dB Bandwidth requirements were satisfied by at least 1kHz.

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.

The EUT was placed on a polystyrene support at a height of 0.8m above the ground reference plane. The measuring antenna was located at a distance of 3m from the EUT, using the spectrum analyser. The transmitter was operated at its maximum carrier power. The worst-case transmitter orientation, measurement antenna polarization were used for each measurement. 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.6)

Transmit Operating Frequency (MHz)	99%BW Lower Frequency (MHz)	99%BW Upper Frequency (MHz)	Occupied Channel Bandwidth (kHz)
903 (Bottom Channel)	902.639	903.312	673
916 (Middle Channel)	915.639	916.274	635
927 (Top Channel)	926.639	927.278	639

Table 6: Occupied Bandwidth – Awake Mode

Transmit Operating Frequency (MHz)	99%BW Lower Frequency (MHz)	99%BW Upper Frequency (MHz)	Occupied Channel Bandwidth (kHz)
920	919.574	920.336	762

Table 7: Occupied Bandwidth – Sleep Mode

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:	18.3 to 20.3°C
Humidity:	45 to 46%
Atmospheric pressure:	1015.9 to 1019.2hPa

Table 8: Climatic conditions

Notes: The transmitter was tested with modulation applied.

Assessment: The measured Occupied bandwidth (99% Emission Bandwidth) is 762 kHz (informative only).

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

12.1. Test Procedure

The Maximum Peak Output Power measurements were performed in accordance with ANSI C63.10 - 2013.

Radiated Emissions were measured 3 metres 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 above the ground plane.

For both horizontal and vertical antenna polarizations, the peak detector was set to MAX-HOLD and the range selected continuously scanned with 1MHz RBW and 3MHz VBW. The antenna height was varied from 1 to 4 metres using the antenna bore-sighting technique and the turntable slowly rotated. The EUT was orientated in each of the X, Y and Z-axis, in-turn, to find the worst case emissions. The maximum emissions were recorded.

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)

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)
902 – 928	1	30	4	36

Table 9: 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)	Measured E-Field Peak (dBµV/m)	e.i.r.p (dBm)	Limit (dBm)	Margin (dB)	Result
Bottom	903.115	100.5	+5.3	36.0	-30.7	Complied
Middle	916.115	102.3	+7.1	36.0	-28.9	Complied
Top	926.782	103.7	+8.5	36.0	**-27.5***	Complied

**Worst-case emissions*

Table 10: Results for Maximum Peak Output Power – Awake Mode

Frequency (MHz)	Measured E-Field Peak (dBµV/m)	e.i.r.p (dBm)	Limit (dBm)	Margin (dB)	Result
920.109	67.3	-27.9	36.0	-63.9	Complied

Table 11: Results for Maximum Peak Output Power – Sleep Mode

The measurement uncertainty was calculated at ±4.83dB. 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:	18.3 to 20.3°C
Humidity:	45 to 46%
Atmospheric pressure:	1015.9 to 1019.2hPa

Table 12: 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 section15.209(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 section15.209 (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 13: 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 3.6m 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 (dBµV/m)**	**Limit Quasi-peak/ Average (dBµV/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 14: Transmitter Spurious Emissions – 9kHz to 30MHz – Awake Mode

Operating Channel: Bottom and Middle				
Measurement Antenna Polarisation	**Frequency (MHz)**	**Result Quasi-peak (dBµV/m)**	**Limit Quasi-peak (dBµV/m)**	**Delta limit (dB)**
Horizontal	Peak preview emissions >10dB below limit or no significant emissions above the noise floor observed			
Vertical	Peak preview emissions >10dB below limit or no significant emissions above the noise floor observed			

Table 15: Transmitter Spurious Emissions – 30MHz to 1GHz – Awake Mode

Operating Channel: Top				
Measurement Antenna Polarisation	**Frequency (MHz)**	**Result Quasi-peak (dBµV/m)**	**Limit Quasi-peak (dBµV/m)**	**Delta limit (dB)**
Horizontal	37.566	19.9	40.0	-20.1
	609.721	27.3	46.0	**-18.7***
	960.570	31.9	54.0	-22.1
Vertical	37.663	19.8	40.0	-20.2
	612.000	27.3	46.0	**-18.7***
	979.436	31.8	54.0	-22.1

**Worst-case emissions*

Table 16: Transmitter Spurious Emissions – 30MHz to 1GHz – Awake Mode

Operating Channel: Bottom, (903MHz)								
Measurement Antenna Polarisation	**Peak Measurements**				**Average Measurements**			
	Frequency (MHz)	**Result (dBµV/m)**	**Limit (dBµV/m)**	**Delta Limit (dB)**	**Frequency (MHz)**	**Result (dBµV/m)**	**Limit (dBµV/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 10dB below the limit			
Vertical	Peak emissions were not above the measurements system noise floor or at least 20dB below the limit				5418.480	32.3	54.0	**-21.7***
					5418.960	32.2	54.0	-21.8
					All other Average emissions were not above the measurements system noise floor or at least 10dB below the limit			

**Worst-case emission*

Table 17: Transmitter Spurious Emissions – 1GHz to 9.5GHz – Awake Mode

Operating Channel: Middle, (916MHz) and Top, (927MHz)								
Measurement Antenna Polarisation	**Peak Measurements**				**Average Measurements**			
	Frequency (MHz)	**Result (dBµV/m)**	**Limit (dBµV/m)**	**Delta Limit (dB)**	**Frequency (MHz)**	**Result (dBµV/m)**	**Limit (dBµV/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 10dB 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 10dB below the limit			

Table 18: Transmitter Spurious Emissions – 1GHz to 9.5GHz – Awake Mode

Operating Channel: 920MHz				
Measurement Antenna Polarisation	**Frequency (MHz)**	**Result peak (dBμV/m)**	**Limit Quasi-peak/ Average (dBμV/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 19: Transmitter Spurious Emissions – 9kHz to 30MHz – Sleep Mode

Operating Channel: 920MHz				
Measurement Antenna Polarisation	**Frequency (MHz)**	**Result Quasi-peak (dBμV/m)**	**Limit Quasi-peak (dBμV/m)**	**Delta limit (dB)**
Horizontal	37.566	20.3	40.0	-19.7
	613.407	27.8	46.0	**-18.2***
	992.192	32.2	54.0	-21.8
Vertical	37.518	20.3	40.0	-19.7
	608.557	27.7	46.0	-18.3
	975.217	32.2	54.0	-21.8

**Worst-case emissions*

Table 20: Transmitter Spurious Emissions – 30MHz to 1GHz – Sleep Mode

Operating Channel: 920MHz								
Measurement Antenna Polarisation	**Peak Measurements**				**Average Measurements**			
	Frequency (MHz)	**Result (dBμV/m)**	**Limit (dBμV/m)**	**Delta Limit (dB)**	**Frequency (MHz)**	**Result (dBμV/m)**	**Limit (dBμV/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 10dB 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 10dB below the limit			

Table 21: Transmitter Spurious Emissions – 1GHz to 9.5GHz – Sleep Mode

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:	17.3 to 23.6°C
Humidity:	42 to 48%
Atmospheric pressure:	993.6 to 1019.2hPa

Table 22: Climatic conditions

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

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

Where:

E = E-field in dBµV/m
$V_{QP/PK/AV}$ = Measured Voltage (Quasi Peak, Peak or Average) in dBµV
AF = Antenna Factor in dB(/m)
L_C = Cable and attenuator Loss in dB
G_{Amp} = Pre Amplifier Voltage Gain in dB

Example calculation:

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

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.

Radiated Emissions were measured 3 metres (from 30MHz 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 (30MHz to 1GHz) and 1.5m (1GHz to 25GHz) above the ground plane.

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

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 100 kHz and a video bandwidth of 300 kHz. Peak emissions that exceeded the limit or were close to the applicable limit were investigated further. The frequency of each emissions 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. Peak measurements were then performed using a measuring time of no less than 15 seconds.

In the frequency range 1.0GHz to 9.5GHz a Horn antenna was used and an area of 3m x 3.6m 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 preview measurements were performed with a resolution bandwidth of 100 Hz and a video bandwidth of 300 kHz. Peak 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 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.

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)

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 section15.209(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 +8.5dBm in Awake Mode

Frequency Range (MHz)	Limits (dBm)
30MHz and 9.5GHz	-11.5

Table 23: Limits for Unwanted Emissions - -20dBc (Non-restricted bands) – Awake Mode

The measured highest fundamental channel PSD in 100kHz was -27.9dBm in Sleep Mode

Frequency Range (MHz)	Limits (dBm)
30MHz and 9.5GHz	-47.9

Table 24: Limits for Unwanted Emissions - -20dBc (Non-restricted bands) – Sleep Mode

14.3.Test Results

Unwanted emissions measurements are detailed as follows:

(Refer to graphs in Appendix C.4)

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 25: Transmitter Out of Band emissions - -20dBc/100kHz – Awake Mode

Channel	Frequency (MHz)	Measured Level (dBm)	Limit (dBm)	Delta limit (dB)
920MHz	Peak preview emissions >6dB below limit or no significant emissions above the noise floor observed			

Table 26: Transmitter Out of Band emissions - -20dBc/100kHz – Sleep Mode

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

The reported uncertainty is an expanded uncertainty calculated using a coverage factor of *k=2* which gives a level of confidence of approximately 95%. The referenced uncertainty standard specifies that determination of compliance shall be based on measurements without taking into account measurement uncertainty. However, the measurement uncertainty shall appear in the test report.

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

Radiated 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) was performed in accordance with the section 11.11, 11.12 and 11.13 of ANSI C63.10 – 2013.

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

99% Occupied Band Width of the fundamental channel emission was within 2 MHz of the authorised band edge therefore Marker-delta method was used. Unwanted emission at the 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.

(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 +8.5dBm

Band edge Frequencies	Limits (dBm)
Lower Edge (902MHz)	-11.5
Higher Edge (928MHz)	

Table 27: Limits for Band edge - -20dBc (Non-restricted bands)

15.3.Test Results

Band edge measurements are detailed as follows:

(Refer to graphs in Appendix C.3)

Operating Channel: Bottom (903MHz)				
Measurement Antenna Polarisation	**Frequency (MHz)**	**Result Radiated Peak Power Spectral Density (dBm/100kHz)**	**Limit Radiated Peak Power Spectral Density (dBm/100kHz)**	**Delta limit (dB)**
Horizontal	901.988	-25.6	-11.5	-14.1
	901.942	-24.9	-11.5	**-13.4***
Vertical	901.952	-31.1	-11.5	-19.6
	901.908	-29.9	-11.5	-18.4

**Worst-case emissions*

Table 28: Transmitter Emissions on the Band edge – Awake Mode – Low end

Operating Channel: Top (927MHz)				
Measurement Antenna Polarisation	**Frequency (MHz)**	**Result Radiated Peak Power Spectral Density (dBm/100kHz)**	**Limit Radiated Peak Power Spectral Density (dBm/100kHz)**	**Delta limit (dB)**
Horizontal	928.156	-24.3	-11.5	-12.8
	928.009	-24.1	-11.5	**-12.6***
Vertical	928.053	-27.0	-11.5	-15.5
	928.090	-27.6	-11.5	-16.1

**Worst-case emissions*

Table 29: Transmitter Emissions on the Band edge – Awake Mode – High end

The measurement uncertainty was calculated as follows:

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

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:	18.3 to 18.5°C
Humidity:	45%
Atmospheric pressure:	1018.8 to 1019.2hPa

Table 30: Climatic conditions

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

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

Where:

E	=	E-field in dBμV/m
$V_{QP/PK/AV}$	=	Measured Voltage (Quasi Peak, Peak or Average) in dBμV
AF	=	Antenna Factor in dB(/m)
L_C	=	Cable and attenuator Loss in dB
G_{Amp}	=	Pre Amplifier Voltage Gain in dB

Example calculation:

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

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 radiated peak power spectral density was measured 3 metres 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 polystyrene support at a height of 0.8m above the ground plane. For both horizontal and vertical antenna polarizations, peak detector was set to MAX-HOLD and the range selected continuously scanned. The antenna height was varied from 1 to 4 metres using the antenna bore-sighting technique and the turntable slowly rotated with X, Y and Z EUT orientations, in order to find the worst-case emission arrangement.

The EUT was tested on the lowest, middle and highest channels measured using a spectrum analyser with 3kHz RBW and 30kHz VBW using the peak detector and a suitable span to allow accurate measurement whilst capturing the full intentional transmission. The maximum emissions were recorded.

Plots of the accumulated measurement data including all transducer 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)

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
902 – 928	8dBm/3kHz

Table 31: Power Spectral Density limits

16.3.Test Results

Power Spectral Density measurements are tabulated below:

(Refer to graphs in Appendix C.5)

Channel	Frequency (MHz)	Measured Power (dBm)	Limit (dBm/3kHz)	Margin (dB)	Result
Bottom	903.085	-4.3	8.0	-12.3	Complied
Middle	916.081	-2.2	8.0	-10.2	Complied
Top	927.078	-0.8	8.0	**-8.8***	Complied

**Worst-case emissions*

Table 32: Results for Power Spectral Density – Awake Mode

Frequency (MHz)	Measured Power (dBm)	Limit (dBm/3kHz)	Margin (dB)	Result
920.076	-38.5	8.0	-46.5	Complied

Table 33: Results for Power Spectral Density – Sleep Mode

The measurement uncertainty was calculated at ±4.83dB. 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%. The referenced uncertainty standard specifies that determination of compliance shall be based on measurements without taking into account measurement uncertainty. However, the measurement uncertainty shall appear in the test report.

Climatic Conditions	
Temperature:	18.3 to 20.3°C
Humidity:	45 to 46%
Atmospheric pressure:	1015.9 to 1019.2hPa

Table 34: 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. Radiated Emissions (Receive Mode)

17.1. Test Procedure

Radiated Emissions were measured 3 metres 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 table, at a height of 0.8m above the ground plane.

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 120 kHz and a video bandwidth of 300 kHz. Peak emissions that exceeded the limit or were close to the applicable limit were investigated further. The frequency of each emissions 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 120 kHz.

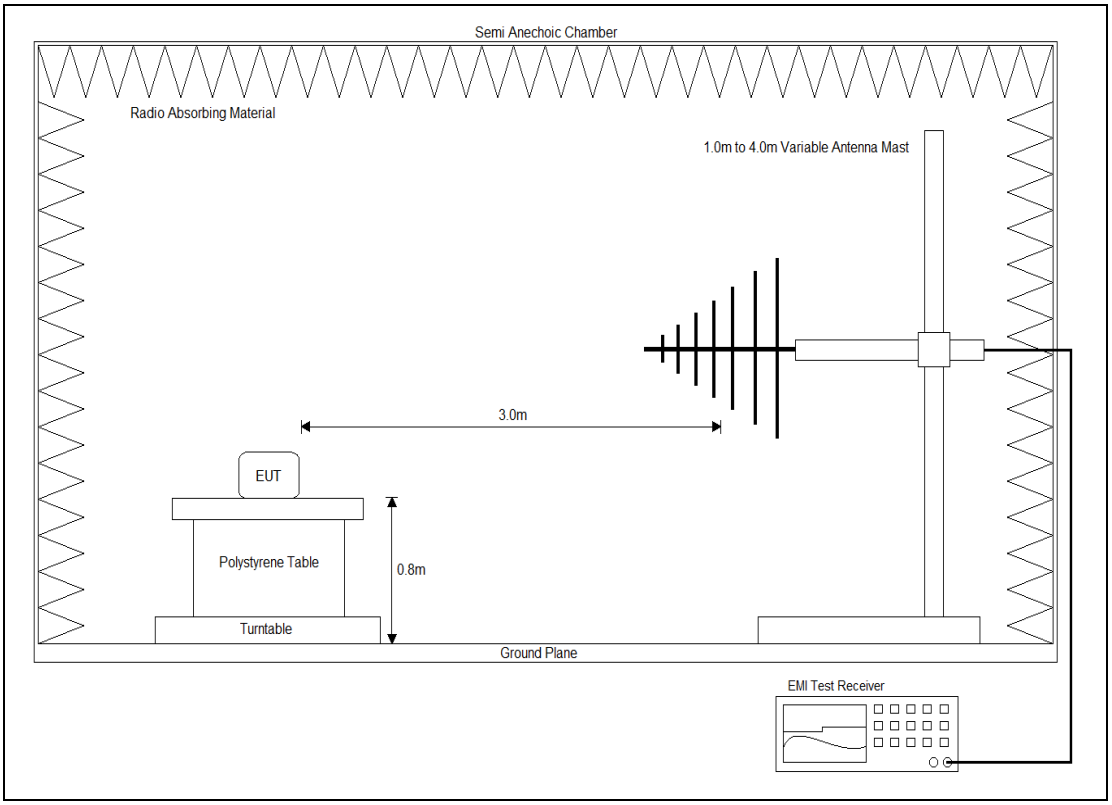


Figure 2: Test setup – 30MHz to 1GHz

In the frequency range 1GHz to 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 3 MHz. 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.

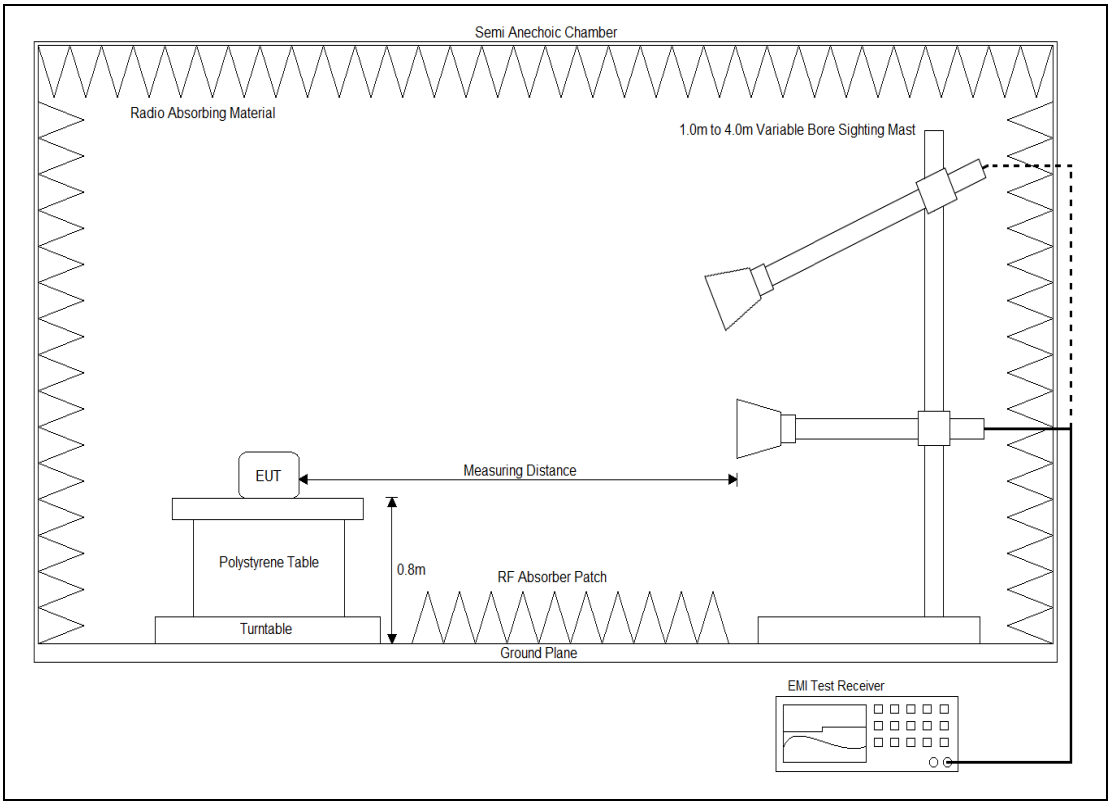


Figure 3: Test setup – above 1GHz

Horn	Frequency (GHz)	Degrees	Measuring Distance (m)	Illumination (m)	Measuring Distance (m)	Illumination (m)
EMCO 3115	1 to 2	55.00	3	3.12	1	1.04
	2 to 4	50.00	3	2.80	1	0.93
	4 to 6	34.00	3	1.83	1	0.61
AH SAS-584	5.8 to 8.2	30.00	3	1.61	1	0.54
AH SAS-585	8.2 to 12.4	30.00	3	1.61	1	0.54
AH SAS-586	12.4 to 18	30.00	3	1.61	1	0.54
AH SAS 587	18 to 26.5	30.00	3	1.61	1	0.54
AH SAS 588	26.5 to 40	31.00	3	1.66	1	0.55

Table 35: Worst case Maximum size of measuring envelope for Horn antennas

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)

17.2. Limits

17.2.1. CFR 47 FCC Part 15 Class A Limit

The EUT shall meet the limits in the following table:

Frequency Range (MHz)	Measuring distance	Limits (dBµV/m)	
		Quasi-Peak	
30 to 88	3m	49.5	
88 to 216	3m	54.0	
216 to 960	3m	56.9	
960 to 1000	3m	60.0	
Frequency Range (GHz)	**Measuring distance**	**Limits (dBµV/m)**	
		Average	**Peak**
1.0 to 26.5	3m	60.0	80.0
26.5 to 40.0	1m	69.5	89.5
NOTE The lower limit shall apply at the transition frequency.			

Table 36: Limits for Radiated Emissions of Class A equipment

17.3. Test Results

Radiated Emissions measurements are tabulated below. For below 1GHz measurements, Quasi-peak measurements were performed at spot frequencies where the peak emission was close to, or exceeded the applicable limit line. For above 1GHz measurements, Peak or CISPR Average measurements were performed at spot frequencies where the peak or average emission was close to, or exceeded the applicable limit line.

(Refer to graphs in Appendix C.7)

Operating Channel: Bottom, Middle and Top				
Measurement Antenna Polarisation	**Frequency (MHz)**	**Result peak (dBµV/m)**	**Limit Quasi-peak (dBµV/m)**	**Delta limit (dB)**
Horizontal	Peak preview emissions >10dB below limit or no significant emissions above the noise floor observed			
Vertical	Peak preview emissions >10dB below limit or no significant emissions above the noise floor observed			

Table 37: Radiated Emissions – (30MHz to 1GHz)

Operating Channel: Bottom, Middle and Top								
Measurement Antenna Polarisation	**Peak Measurements**				**Average Measurements**			
	Frequency (MHz)	**Result (dBµV/m)**	**Limit (dBµV/m)**	**Delta Limit (dB)**	**Frequency (MHz)**	**Result (dBµV/m)**	**Limit (dBµV/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 38: Radiated Emissions – (1GHz to 5GHz)

The measurement uncertainty was calculated as follows:

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

The reported uncertainty is an expanded uncertainty calculated using a coverage factor of *k=2* which gives a level of confidence of approximately 95%. The referenced uncertainty standard specifies that determination of compliance shall be based on measurements without taking into account measurement uncertainty. However, the measurement uncertainty shall appear in the test report.

Climatic Conditions	
Temperature:	17.3 to 23.6°C
Humidity:	42 to 48%
Atmospheric pressure:	993.6 to 1019.2hPa

Table 39: Climatic conditions

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

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

Where:

E = E-field in dBµV/m

$V_{QP/PK/AV}$ = Measured Voltage (Quasi Peak, Peak or Average) in dBμV
AF = Antenna Factor in dB(/m)
L_C = Cable and attenuator Loss in dB
G_{Amp} = Pre Amplifier Voltage Gain in dB

Example calculation:

$E = V_{QP} + AF - G_{Amp} + L_C$
$E = 30dB\mu V + 12dB/m - 0dB + 2.3dB$
$E = 44.3\ dB\mu V/m$

Notes: All Radiated Emissions measured were below the FCC Class A limits.

If the highest frequency generated or used within the device or on which the device operates or tunes is between 500MHz and 1000MHz, the upper frequency of measurement range should be 5000MHz.

The highest frequency of the EUT as specified by the customer is 927MHz as such measurements up to 5GHz were taken.

Assessment: The EUT complied with the Radiated Emissions (Receive Mode) requirements of CFR47 FCC Part 15, Subpart B section 15.109.

18. Conclusion

The CR Mining, SEN_GET_P1_5.5_920, GET Sensor Tag 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							
1217	ANALYSER, EMI Receiver	Rohde & Schwarz	ESU40	100182	1 year	Jun-23	E
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
0935	ANTENNA, Biconilog	Sunol Sciences	JB5	A071106	2 years	Feb-23*	E
0718	ATTENUATOR, 6dB	JFW	50FPE-006	-	1 year	Jan-24	I
0710	ATTENUATOR, 10dB	JFW	50HF-010N		3 years	Dec-24	I
0989	CABLE, Coax, Sucoflex 104A	Huber+Suhner	44454/4A	C357	1 year	Jan-24	I
1145	CABLE, Coax, Sucoflex 104PA	Huber + Suhner	84279564	SN MY056/4PA	1 year	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	3 years	Aug-25	I
SW007	EMC Measurement Software	Rohde & Schwarz	EMC 32	Version 8.53.0	N/A	N/A	N/A
Transmitter Spurious Emissions and Radiated Emissions (Receive Mode)							
1217	ANALYSER, EMI Receiver	Rohde & Schwarz	ESU40	100182	1 year	Jun-23	E
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
0935	ANTENNA, Biconilog	Sunol Sciences	JB5	A071106	2 years	Feb-23*	E
0718	ATTENUATOR, 6dB	JFW	50FPE-006	-	1 year	Jan-24	I
1145	CABLE, Coax, Sucoflex 104PA	Huber + Suhner	84279564	SN MY056/4PA	1 year	Jan-24	I
0989	CABLE, Coax, Sucoflex 104A	Huber+Suhner	44454/4A	C357	1 year	Jan-24	I
1238	CABLE, Coax, Sucoflex 126 E	Huber + Suhner	10422876	SN 8000495/126E	1 year	Jan-24	I
0633	ANTENNA, Double Ridge Horn	EMCO	3115	9712-5369	3 years	Aug-24	I
0559	PRE-AMP, Microwave, 18GHz	Miteq	AFS8	605305	1 year	Apr-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
0024	ANTENNA, Active Loop	EMCO	6502	2620	2 years	Aug-23	I
1155	Hygrometer, Temp, Humidity	DigiTech	QM7312	-	2 years	Jul-23	I
0666	Enclosure, Semi-Anechoic, No 1	RFI Industries	S800 iOATS	1229	3 years	Aug-25	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
** Equipment calibration valid at the time of testing*

Appendix B – Photographs

Annex	Number	Photograph Description
A	1	EUT – External views
A	2	
A	3	
A	4	
A	5	
A	6	
B	1	EUT – Internal views
B	2	
C	1	EUT X orientation
C	2	EUT Y orientation
C	3	EUT Z orientation
C	4	Field strength of fundamental, Duty cycle and Emission Bandwidth, Field strength of spurious emissions 30MHz to 1GHz – Test configuration
C	5	
C	6	Field strength of spurious emissions – Test configuration – 9kHz to 30MHz
C	7	
C	8	
C	9	Field strength of spurious emissions – Test configuration – 1GHz to 9.5GHz
C	10	
C	11	Receiver Mode – Test configuration
C	12	
C	13	
C	14	
C	15	

EUT External Photographs	EMC Bayswater Test Report E2211-1609A-2 Annex A
EUT Internal Photographs	EMC Bayswater Test Report E2211-1609A-2 Annex B
EUT Orientations & Test Configurations Photographs	EMC Bayswater Test Report E2211-1609A-2 Annex C

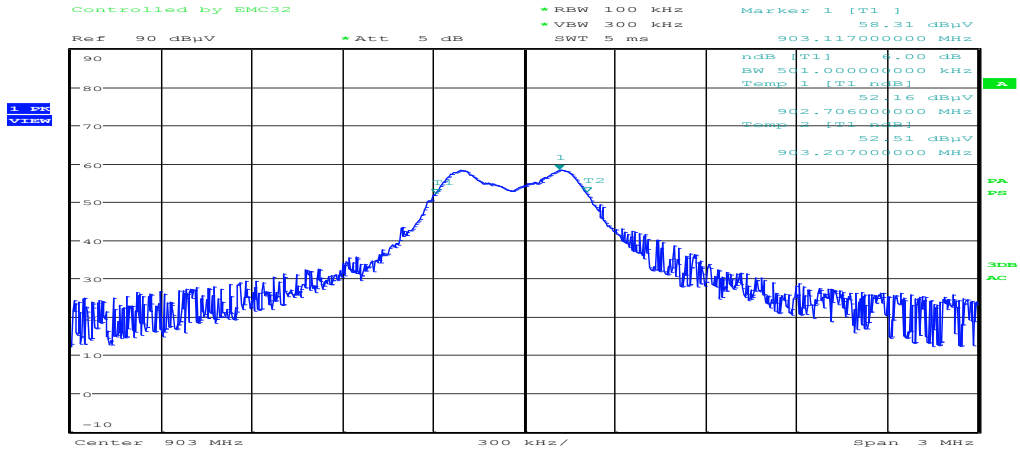
Appendix C.1 – Measurement Graphs – 6dB Bandwidth - 15.247 (a)(2)

No.	Test	Graph Description
1	6dB Bandwidth – Awake Mode	903MHz Channel
2		916MHz Channel
3		927MHz Channel
4	6dB Bandwidth – Sleep Mode	920MHz Channel

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - 6dB Bandwidth
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 903MHz Channel

Job Number: E2211-1609A-2
Test Engineer: NL



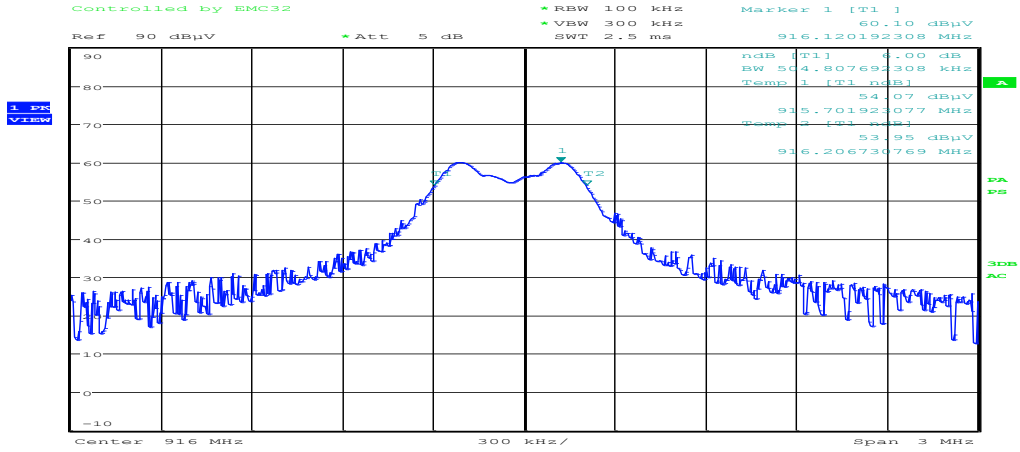
Date: 16.DEC.2022 14:35:16

Graph 1

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - 6dB Bandwidth
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 916MHz Channel

Job Number: E2211-1609A-2
Test Engineer: AZ



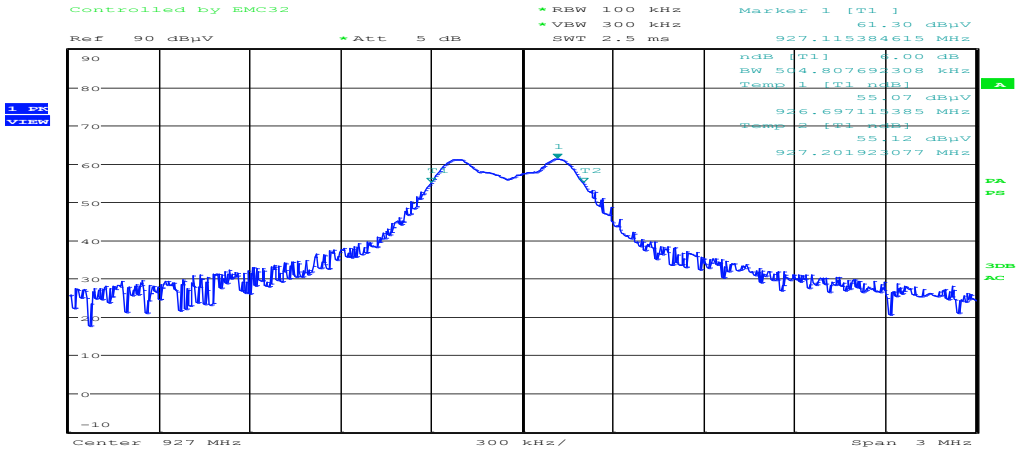
Date: 16.DEC.2022 15:30:59

Graph 2

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - 6dB Bandwidth
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 927MHz Channel

Job Number: E2211-1609A-2
Test Engineer: AZ

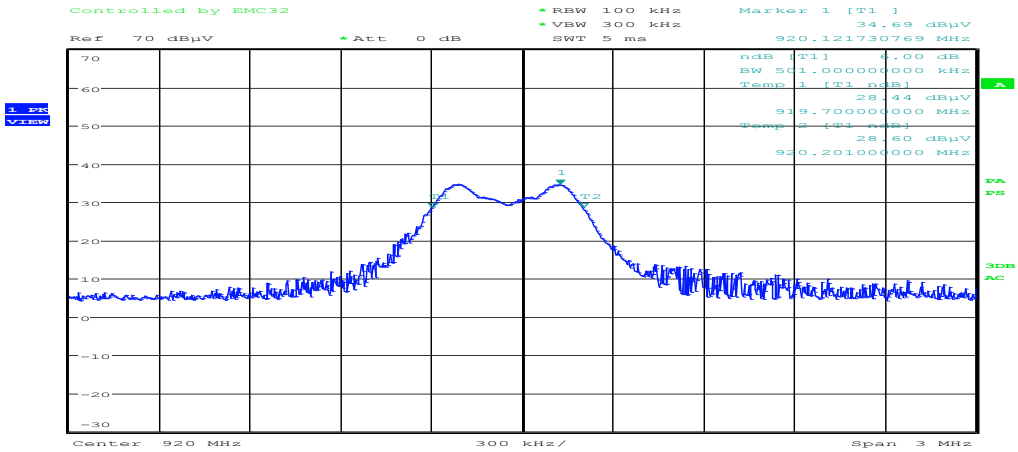


Graph 3

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - 6dB Bandwidth
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Sleep Mode - 920MHz Channel

Job Number: E2211-1609A-2
Test Engineer: AZ



Graph 4

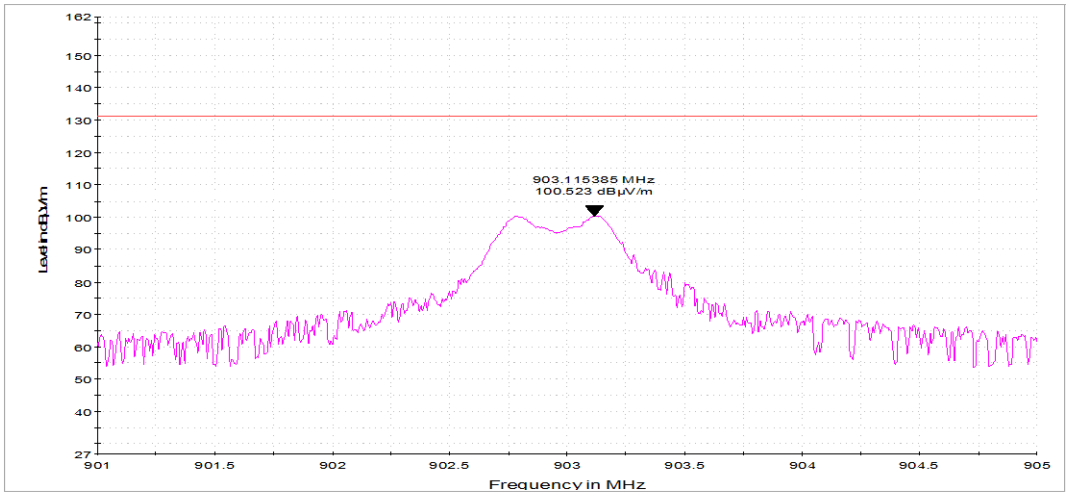
Appendix C.2 – Measurement Graphs – Maximum Peak Output Power - 15.247 (b)(3)

No.	Test	Graph Description
5	Maximum Peak Output Power – Awake Mode	903MHz Channel
6		916MHz Channel
7		927MHz Channel
8	Maximum Peak Output Power – Sleep Mode	920MHz Channel

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Maximum Peak Output Power
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 903MHz Channel

Job Number:	E2211-1609A-2
Test Engineer:	AZ

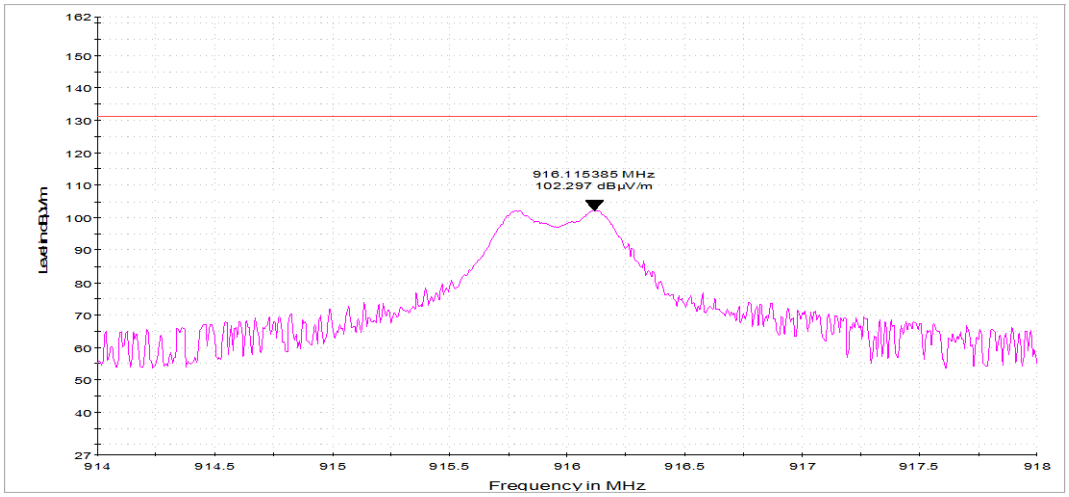


Graph 5

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Maximum Peak Output Power
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 916MHz Channel

Job Number:	E2211-1609A-2
Test Engineer:	AZ

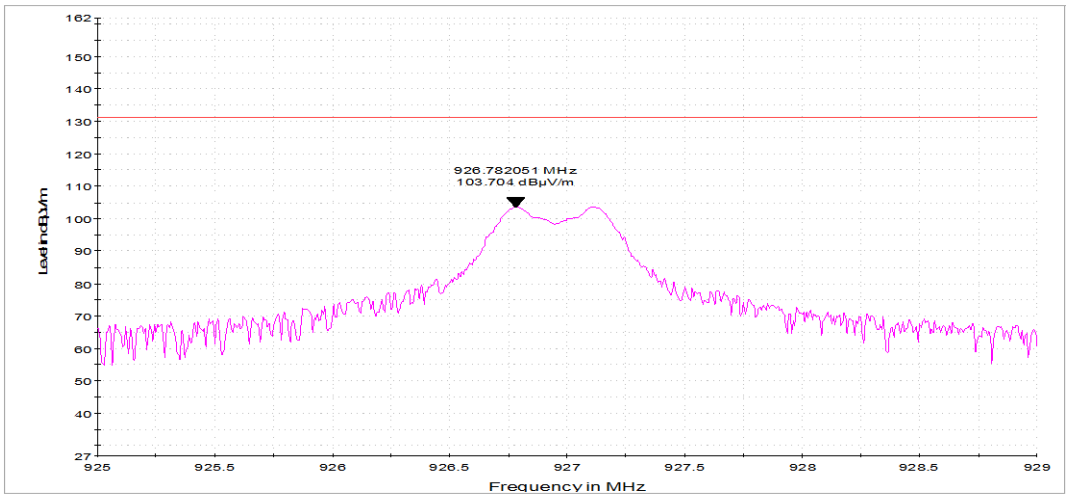


Graph 6

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Maximum Peak Output Power
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 927MHz Channel

Job Number: E2211-1609A-2
Test Engineer: AZ

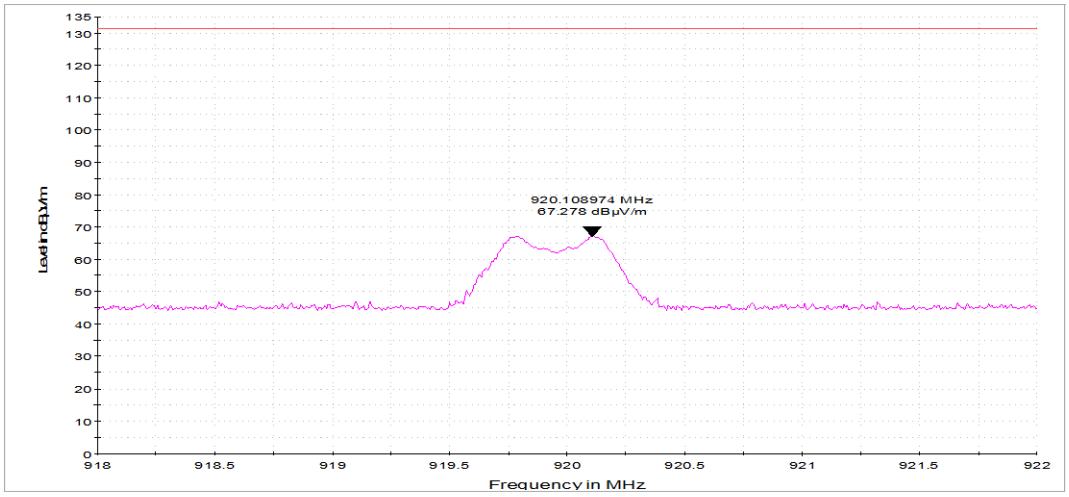


Graph 7

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Maximum Peak Output Power
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Sleep Mode - 920MHz Channel

Job Number: E2211-1609A-2
Test Engineer: AZ



Graph 8

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

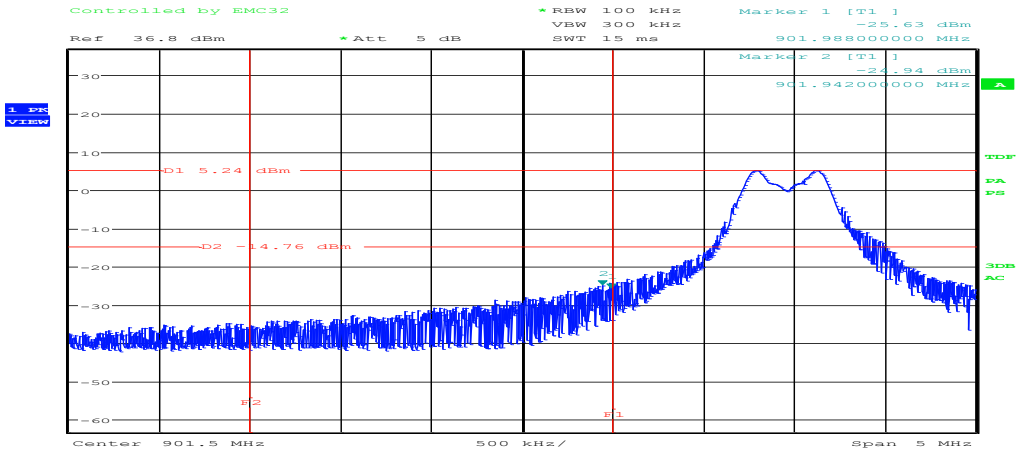
No.	Test	Graph Description
9	Band edge Measurement - Awake Mode	903MHz Channel (Non-restricted Band – Bandedge) – Horizontal measurement Antenna
10		903MHz Channel (Non-restricted Band – Bandedge) – Vertical measurement Antenna
11		927MHz Channel (Non-restricted Band – Bandedge) – Horizontal measurement Antenna
12		927MHz Channel (Non-restricted Band – Bandedge) – Vertical measurement Antenna

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Band edge Measurement (100kHz, -20dB from fc)
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag Awake Mode - 903MHz Channel (Non-restricted Band – Bandedge) – Horizontal measurement Antenna

Job Number: E2211-1609A-2

Test Engineer: AZ



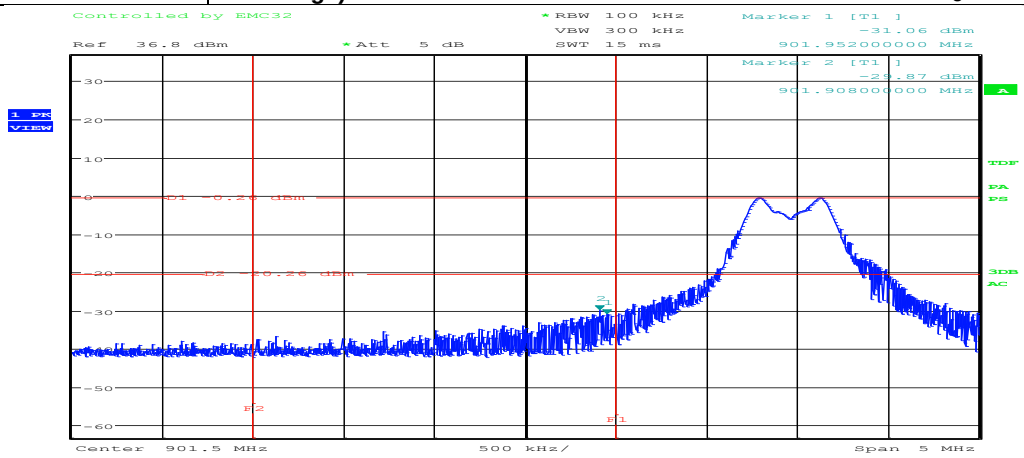
Graph 9

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Band edge Measurement (100kHz, -20dB from fc)
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag Awake Mode - 903MHz Channel (Non-restricted Band – Bandedge) – Vertical measurement Antenna

Job Number: E2211-1609A-2

Test Engineer: AZ

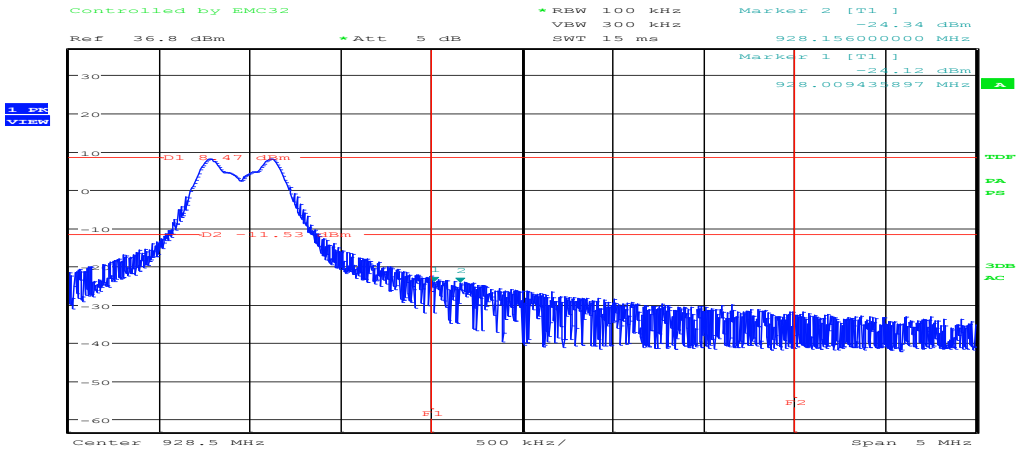


Graph 10

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Band edge Measurement (100kHz, -20dB from fc)
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag Awake Mode - 927MHz Channel (Non-restricted Band – Bandedge) – Horizontal measurement Antenna

Job Number: E2211-1609A-2
Test Engineer: AZ

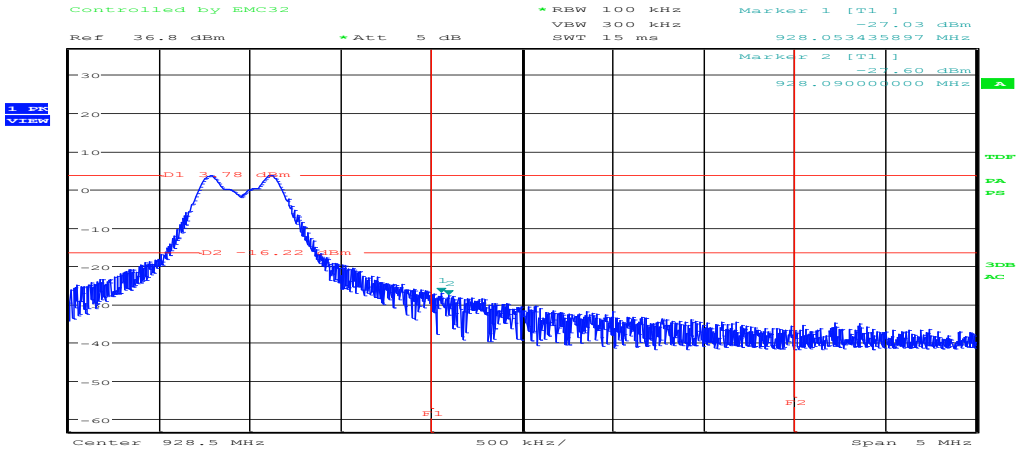


Graph 11

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Band edge Measurement (100kHz, -20dB from fc)
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag Awake Mode - 927MHz Channel (Non-restricted Band – Bandedge) – Vertical measurement Antenna

Job Number: E2211-1609A-2
Test Engineer: AZ



Graph 12

Appendix C.4 – Measurement Graphs – Transmitter Spurious – FCC 15.247 (d), 15.209

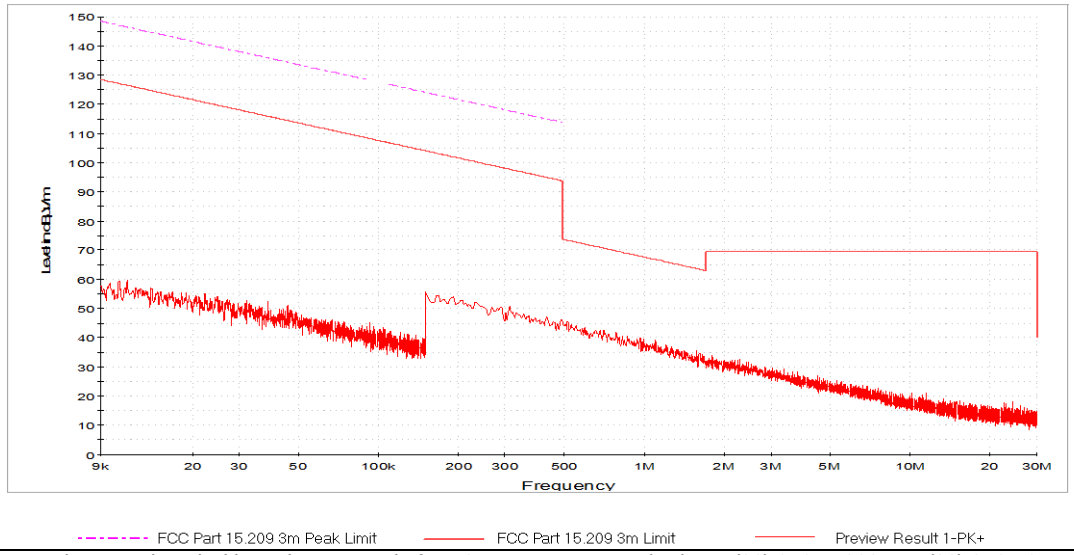
No.	Test	Graph Description
13	9kHz to 30MHz Restricted Bands - Awake Mode	903MHz Channel, Antenna X
14		903MHz Channel, Antenna Y
15		903MHz Channel, Antenna Z
16		916MHz Channel, Antenna X
17		916MHz Channel, Antenna Y
18		916MHz Channel, Antenna Z
19		927MHz Channel, Antenna X
20		927MHz Channel, Antenna Y
21		927MHz Channel, Antenna Z
22	30MHz to 1GHz Restricted and Non-Restricted Bands - Awake Mode	903MHz Channel, Antenna Horizontal
23		903MHz Channel, Antenna Vertical
24		916MHz Channel, Antenna Horizontal
25		916MHz Channel, Antenna Vertical
26		927MHz Channel, Antenna Horizontal
27		927MHz Channel, Antenna Vertical
28	1GHz to 6GHz Restricted Bands - Awake Mode	903MHz Channel, Antenna Horizontal
29		903MHz Channel, Antenna Vertical
30		916MHz Channel, Antenna Horizontal
31		916MHz Channel, Antenna Vertical
32		927MHz Channel, Antenna Horizontal
33		927MHz Channel, Antenna Vertical
34	1GHz to 6GHz Non-Restricted Bands - Awake Mode	903MHz Channel, Antenna Horizontal
35		903MHz Channel, Antenna Vertical
36		916MHz Channel, Antenna Horizontal
37		916MHz Channel, Antenna Vertical
38		927MHz Channel, Antenna Horizontal
39		927MHz Channel, Antenna Vertical
40	5.8GHz to 8.2GHz Restricted Bands - Awake Mode	903MHz Channel, Antenna Horizontal
41		903MHz Channel, Antenna Vertical
42		916MHz Channel, Antenna Horizontal
43		916MHz Channel, Antenna Vertical
44		927MHz Channel, Antenna Horizontal
45		927MHz Channel, Antenna Vertical
46	5.8GHz to 8.2GHz Non-Restricted Bands - Awake Mode	903MHz Channel, Antenna Horizontal
47		903MHz Channel, Antenna Vertical
48		916MHz Channel, Antenna Horizontal
49		916MHz Channel, Antenna Vertical
50		927MHz Channel, Antenna Horizontal
51		927MHz Channel, Antenna Vertical
52	8.2GHz to 9.5GHz Restricted Bands - Awake Mode	903MHz Channel, Antenna Horizontal
53		903MHz Channel, Antenna Vertical
54		916MHz Channel, Antenna Horizontal
55		916MHz Channel, Antenna Vertical
56		927MHz Channel, Antenna Horizontal
57		927MHz Channel, Antenna Vertical

No.	Test	Graph Description
58	8.2GHz to 9.5GHz Non-Restricted Bands - Awake Mode	903MHz Channel, Antenna Horizontal
59		903MHz Channel, Antenna Vertical
60		916MHz Channel, Antenna Horizontal
61		916MHz Channel, Antenna Vertical
62		927MHz Channel, Antenna Horizontal
63		927MHz Channel, Antenna Vertical
64	9kHz to 30MHz Restricted Bands - Sleep Mode	920MHz Channel, Antenna X
65		920MHz Channel, Antenna Y
66		920MHz Channel, Antenna Z
67	30MHz to 1GHz Restricted and Non-Restricted Bands - Sleep Mode	920MHz Channel, Antenna Horizontal
68		920MHz Channel, Antenna Vertical
69	1GHz to 6GHz Restricted Bands - Sleep Mode	920MHz Channel, Antenna Horizontal
70		920MHz Channel, Antenna Vertical
71	1GHz to 6GHz Non-Restricted Bands - Sleep Mode	920MHz Channel, Antenna Horizontal
72		920MHz Channel, Antenna Vertical
73	5.8GHz to 8.2GHz Restricted Bands - Sleep Mode	920MHz Channel, Antenna Horizontal
74		920MHz Channel, Antenna Vertical
75	5.8GHz to 8.2GHz Non-Restricted Bands - Sleep Mode	920MHz Channel, Antenna Horizontal
76		920MHz Channel, Antenna Vertical
77	8.2GHz to 9.5GHz Restricted Bands - Sleep Mode	920MHz Channel, Antenna Horizontal
78		920MHz Channel, Antenna Vertical
79	8.2GHz to 9.5GHz Non-Restricted Bands - Sleep Mode	920MHz Channel, Antenna Horizontal
80		920MHz Channel, Antenna Vertical

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 903MHz Channel - 9KHz to 30MHz - X Antenna Orientation

Job Number: E2211-1609A-2
Test Engineer: AZ

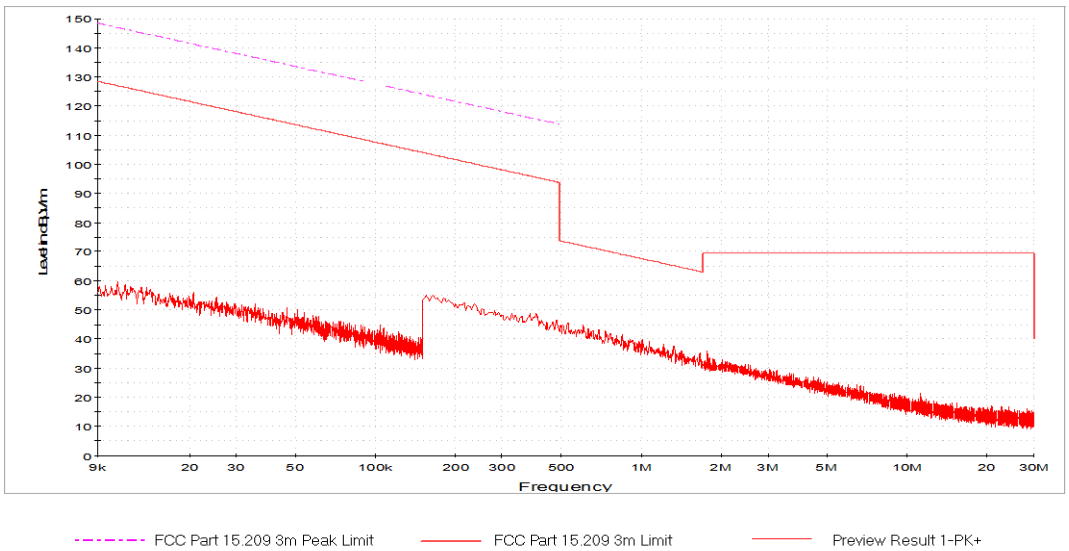


Graph 13

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 903MHz Channel - 9KHz to 30MHz - Y Antenna Orientation

Job Number: E2211-1609A-2
Test Engineer: AZ

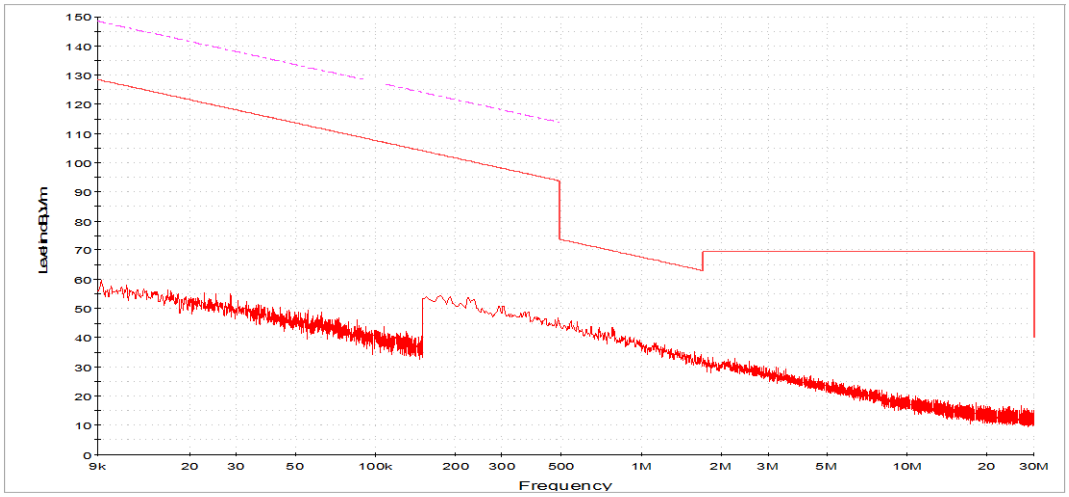


Graph 14

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 903MHz Channel - 9KHz to 30MHz - Z Antenna Orientation

Job Number: E2211-1609A-2
Test Engineer: AZ

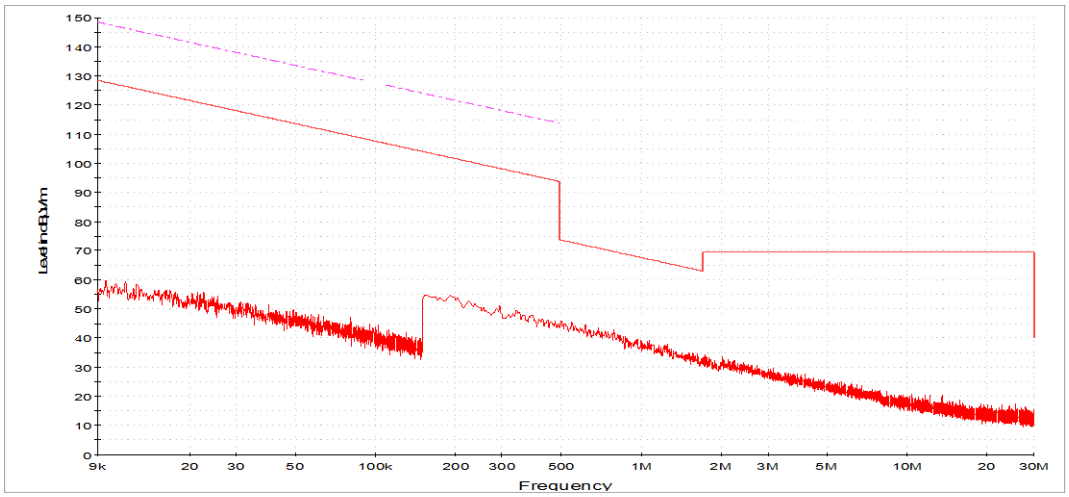


Graph 15

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 916MHz Channel - 9KHz to 30MHz - X Antenna Orientation

Job Number: E2211-1609A-2
Test Engineer: AZ

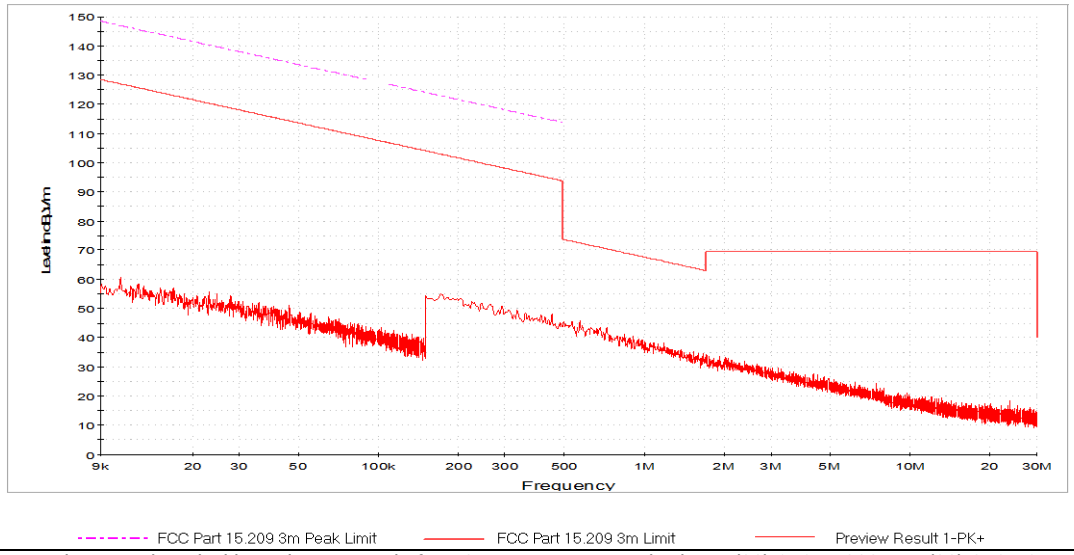


Graph 16

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 916MHz Channel - 9KHz to 30MHz - Y Antenna Orientation

Job Number: E2211-1609A-2
Test Engineer: AZ

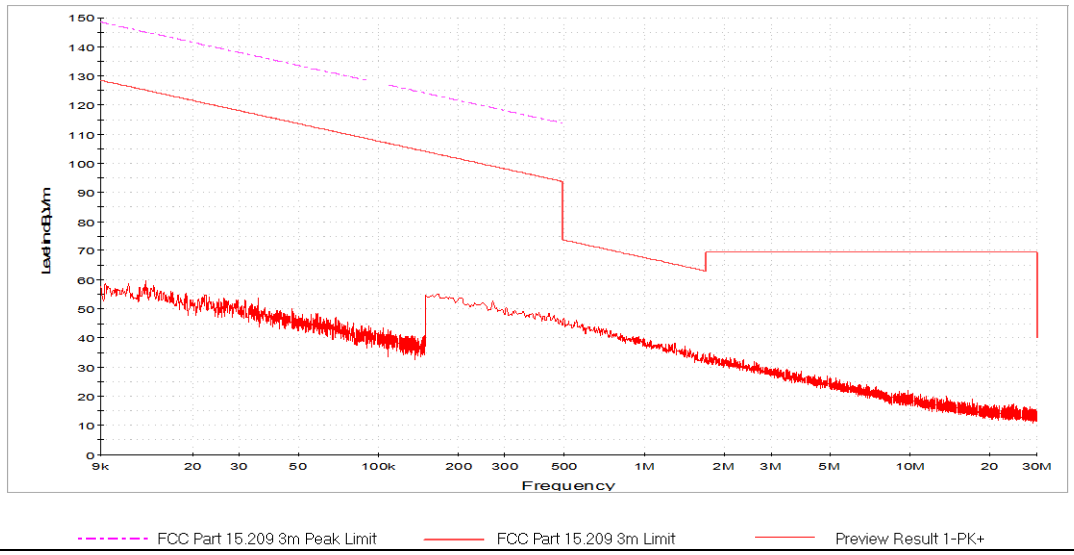


Graph 17

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 916MHz Channel - 9KHz to 30MHz - Z Antenna Orientation

Job Number: E2211-1609A-2
Test Engineer: AZ

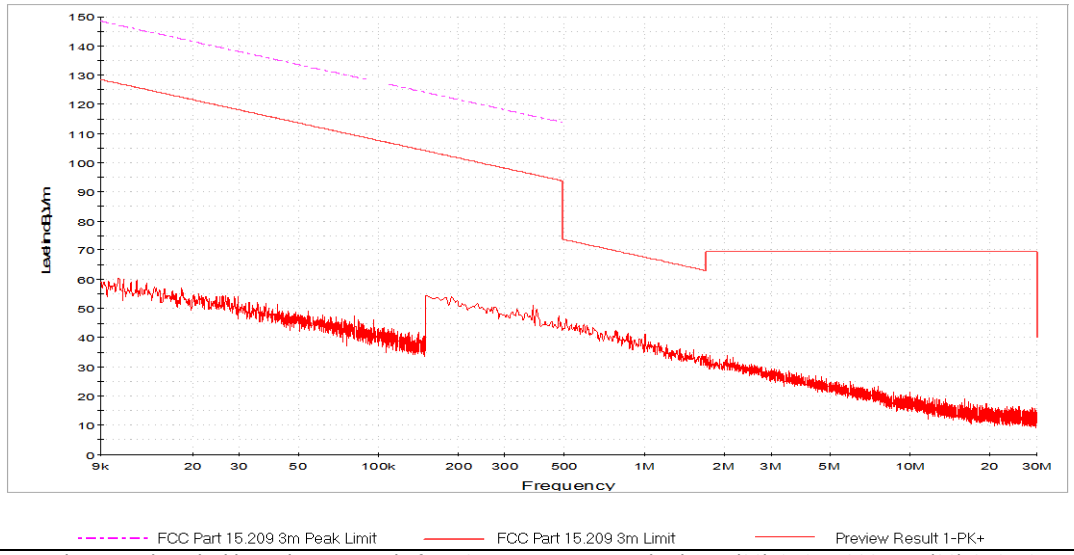


Graph 18

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 927MHz Channel - 9KHz to 30MHz - X Antenna Orientation

Job Number: E2211-1609A-2
Test Engineer: AZ

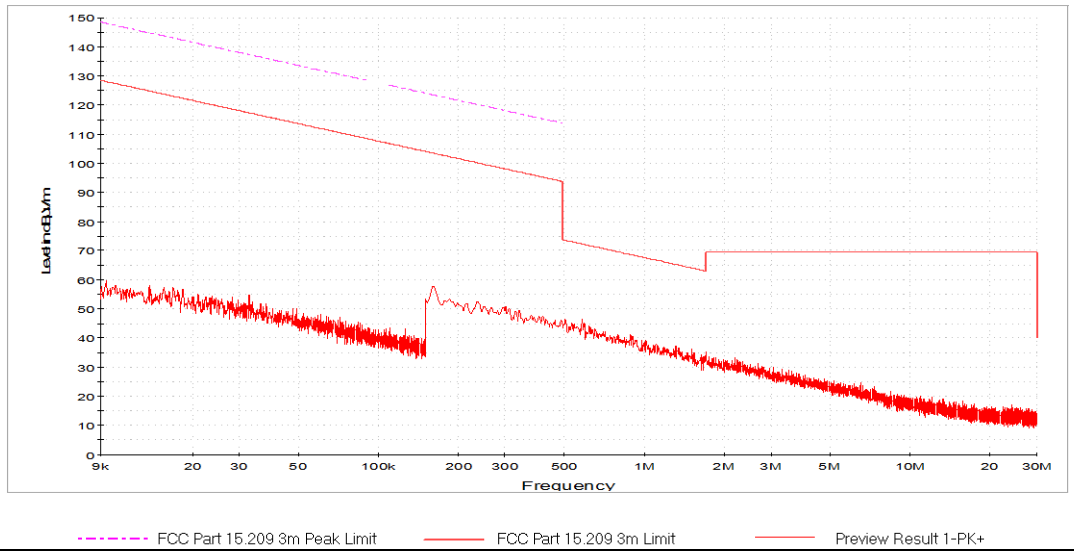


Graph 19

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 927MHz Channel - 9KHz to 30MHz - Y Antenna Orientation

Job Number: E2211-1609A-2
Test Engineer: AZ

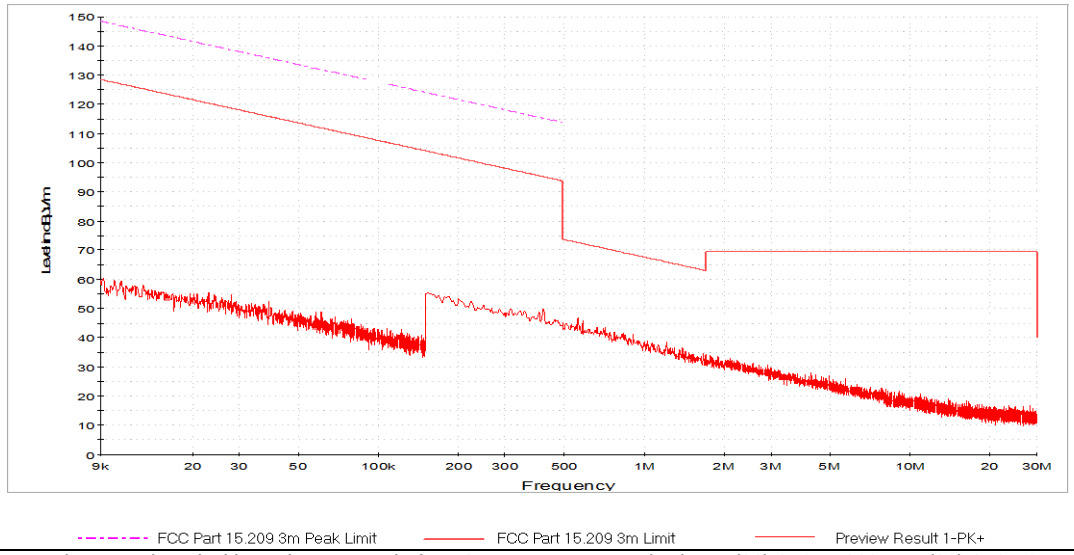


Graph 20

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 927MHz Channel - 9KHz to 30MHz - Z Antenna Orientation

Job Number: E2211-1609A-2
Test Engineer: AZ

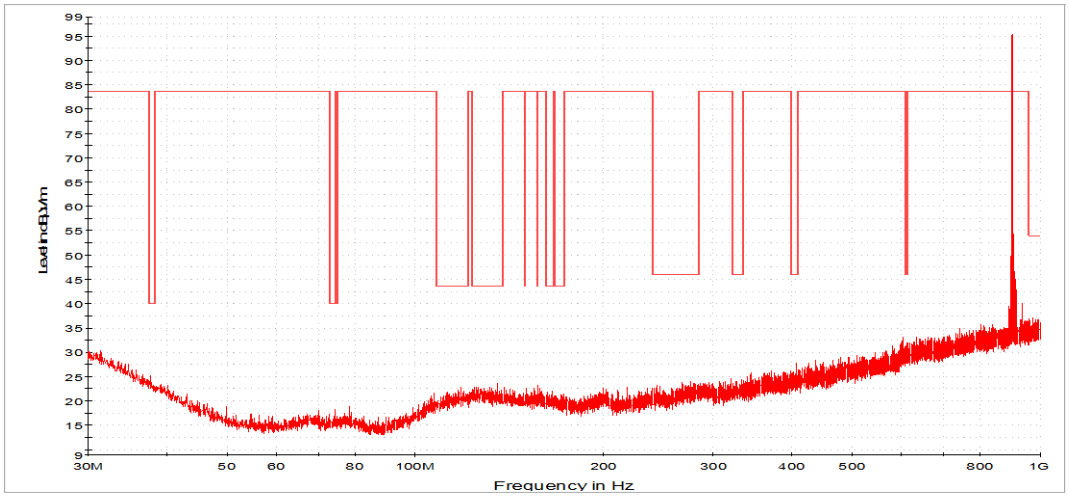


Graph 21

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted and Non-Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 903MHz Channel – 30MHz to 1GHz
Horizontal Antenna Orientation

Job Number: E2211-1609A-2
Test Engineer: AZ

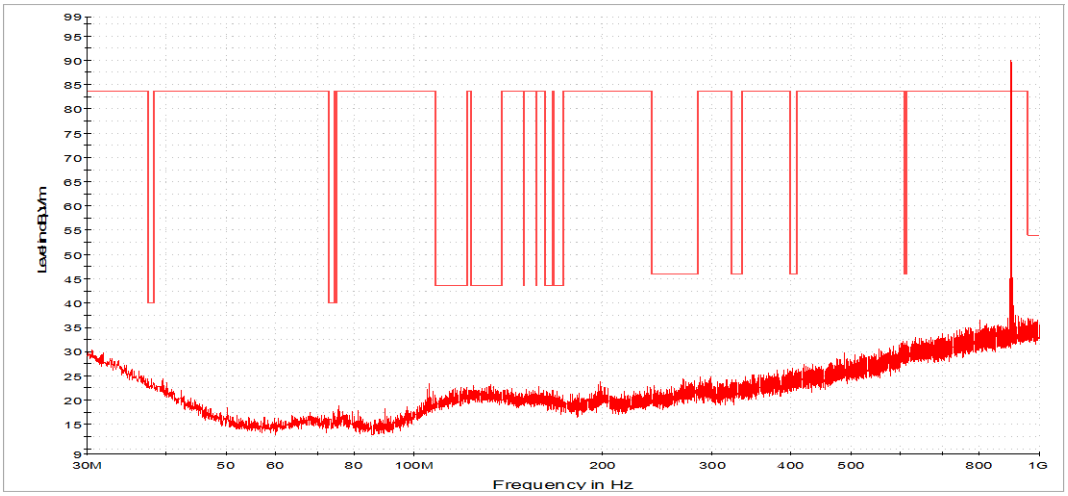


Graph 22

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted and Non-Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 903MHz Channel – 30MHz to 1GHz
Vertical Antenna Orientation

Job Number: E2211-1609A-2
Test Engineer: AZ



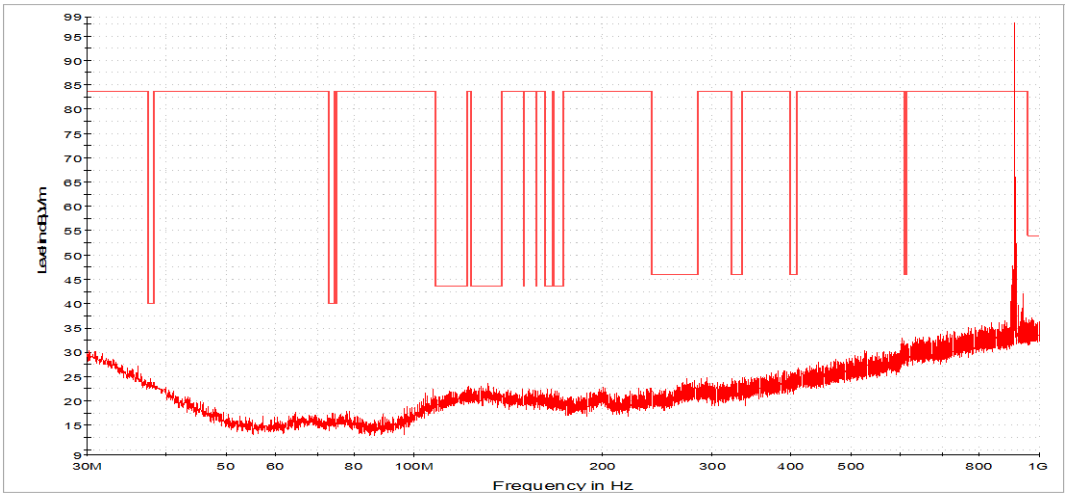
FCC Part 15.247 - 2400MHz TX - -20dBc & 15.209 3m Limit — Peak Preview ◆ Quasi Peak

Graph 23

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted and Non-Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 916MHz Channel – 30MHz to 1GHz
Horizontal Antenna Orientation

Job Number: E2211-1609A-2
Test Engineer: AZ



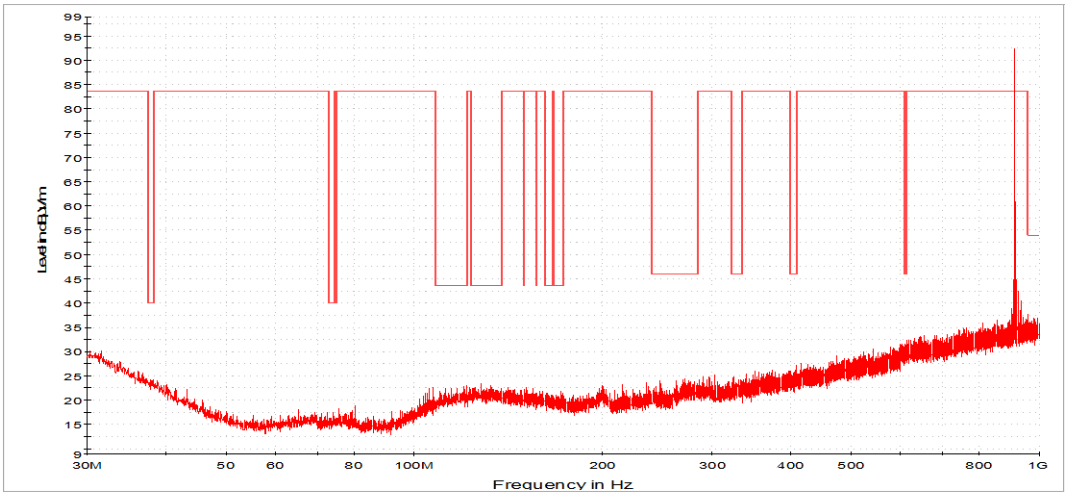
FCC Part 15.247 - 2400MHz TX - -20dBc & 15.209 3m Limit — Peak Preview ◆ Quasi Peak

Graph 24

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted and Non-Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 916MHz Channel – 30MHz to 1GHz
Vertical Antenna Orientation

Job Number: E2211-1609A-2
Test Engineer: AZ

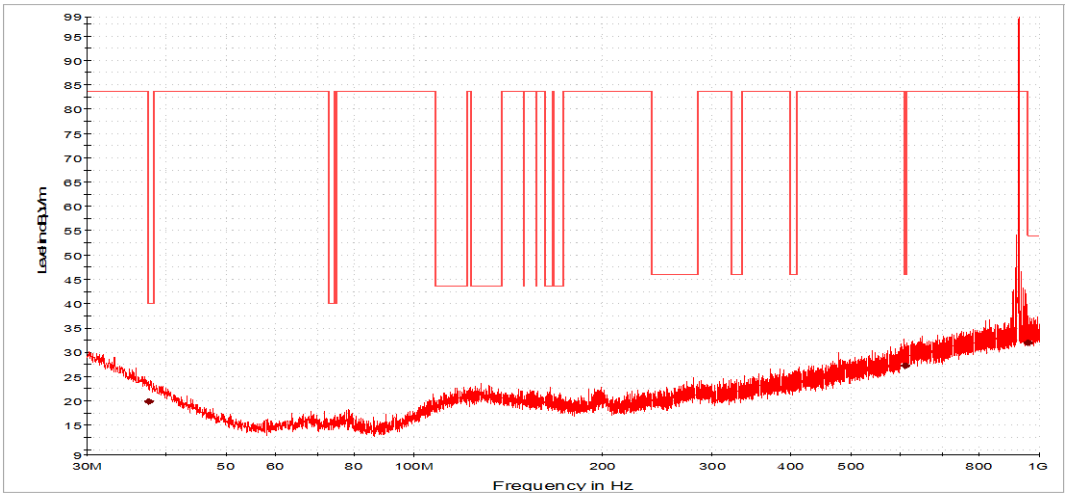


Graph 25

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted and Non-Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 927MHz Channel – 30MHz to 1GHz
Horizontal Antenna Orientation

Job Number: E2211-1609A-2
Test Engineer AZ

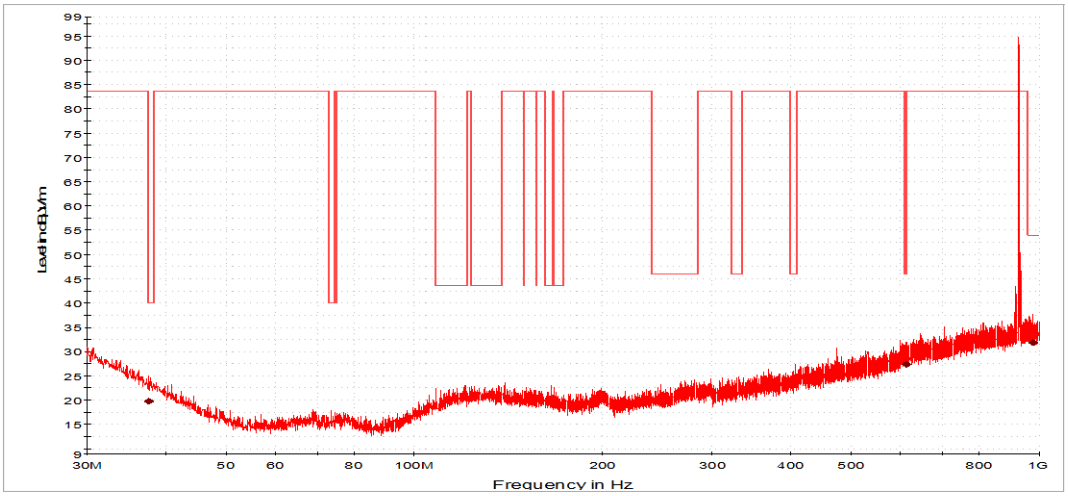


Graph 26

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted and Non-Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 927MHz Channel – 30MHz to 1GHz
Vertical Antenna Orientation

Job Number: E2211-1609A-2
Test Engineer: AZ

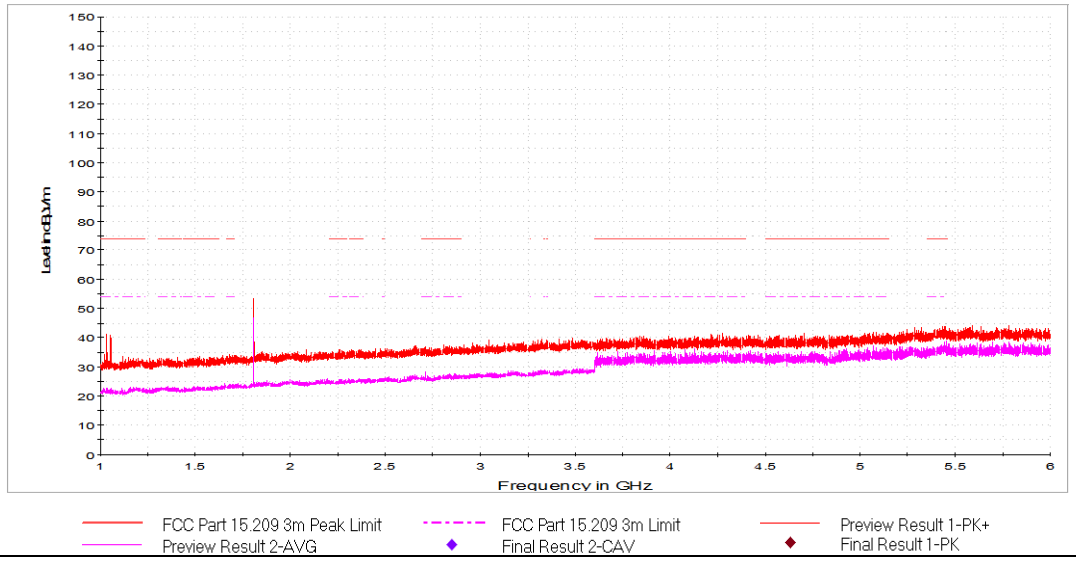


Graph 27

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 903MHz Channel – 1GHz to 6GHz
Horizontal Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

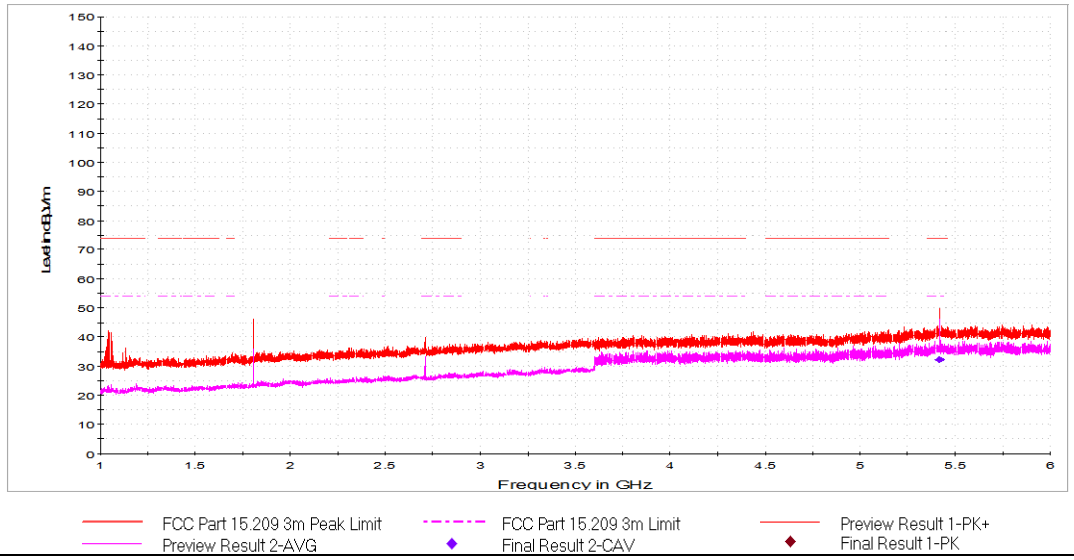


Graph 28

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 903MHz Channel – 1GHz to 6GHz
Vertical Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

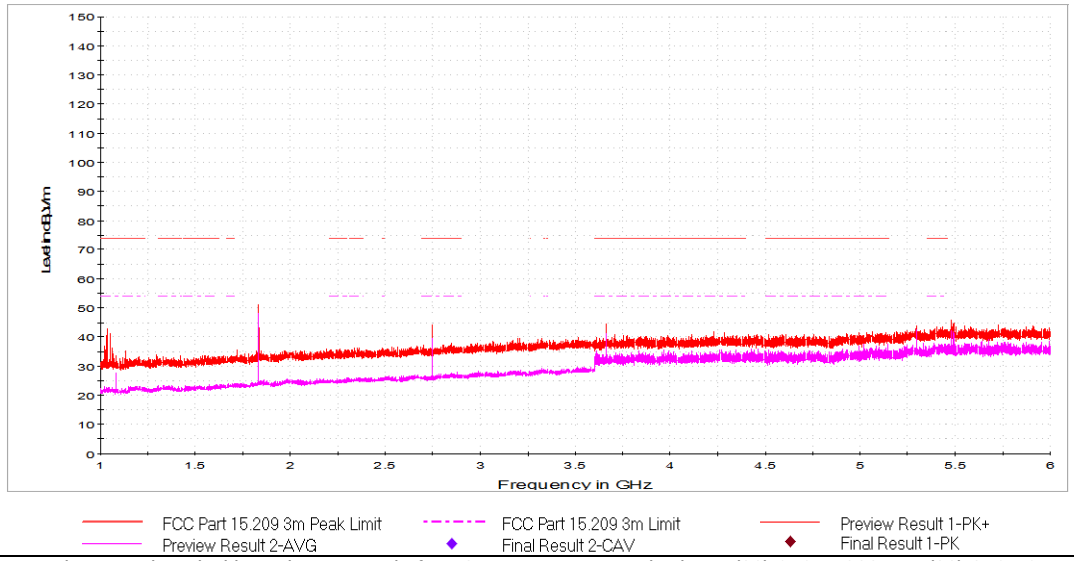


Graph 29

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 916MHz Channel – 1GHz to 6GHz
Horizontal Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

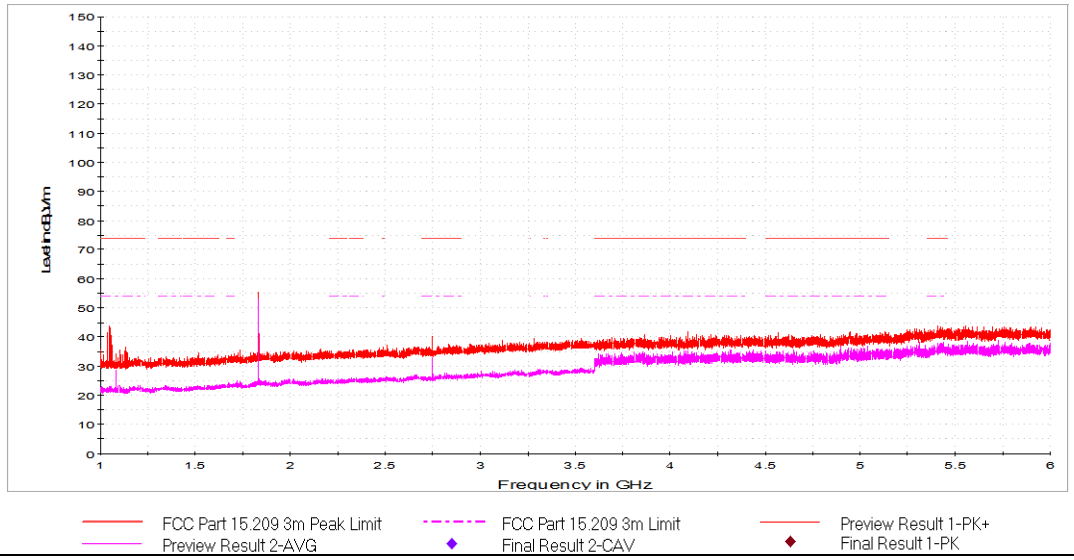


Graph 30

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 916MHz Channel – 1GHz to 6GHz
Vertical Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

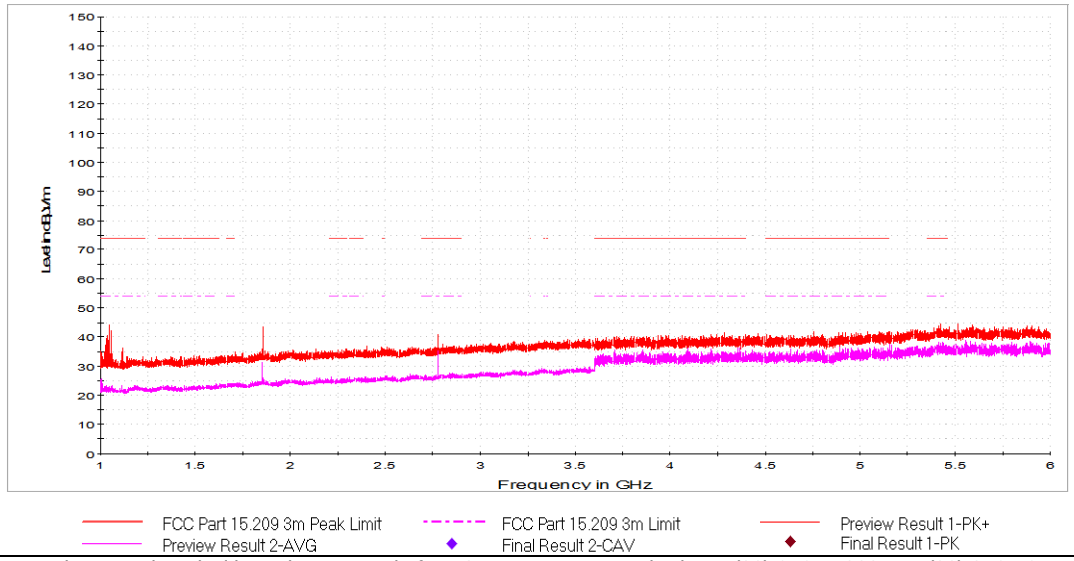


Graph 31

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 927MHz Channel – 1GHz to 6GHz
Horizontal Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

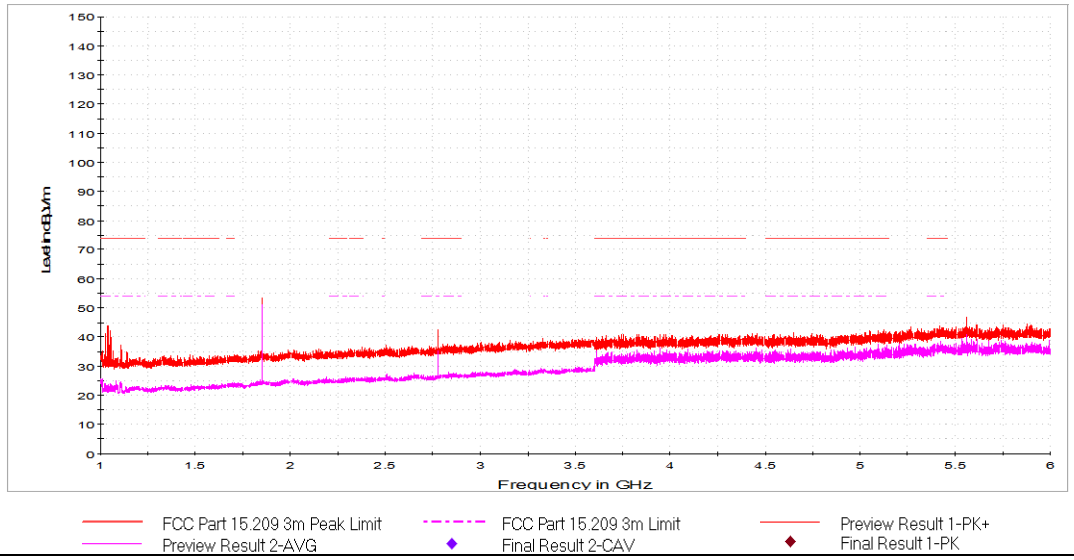


Graph 32

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 927MHz Channel – 1GHz to 6GHz
Vertical Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

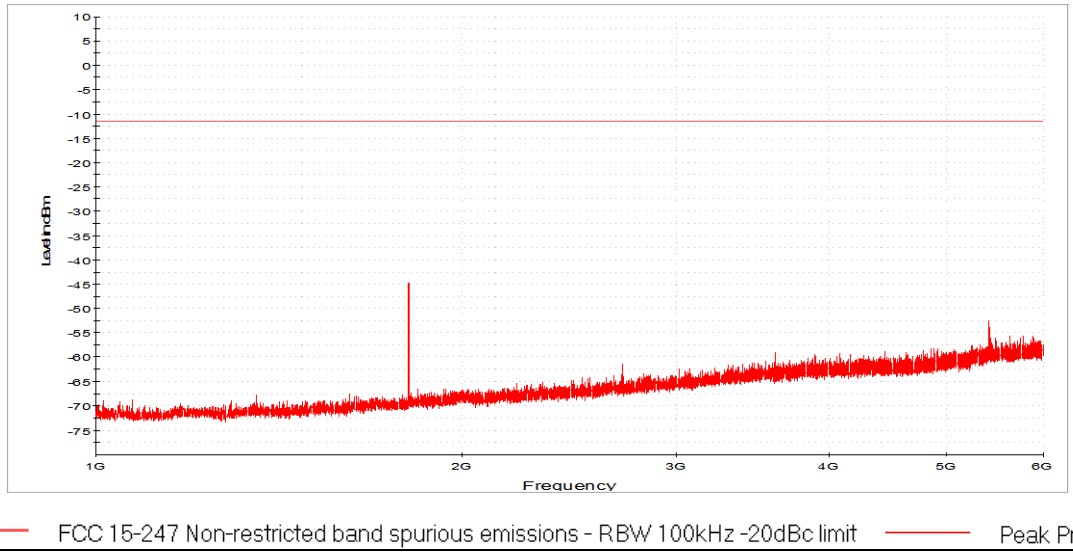


Graph 33

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Non-Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 903MHz Channel – 1GHz to 6GHz
Horizontal Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

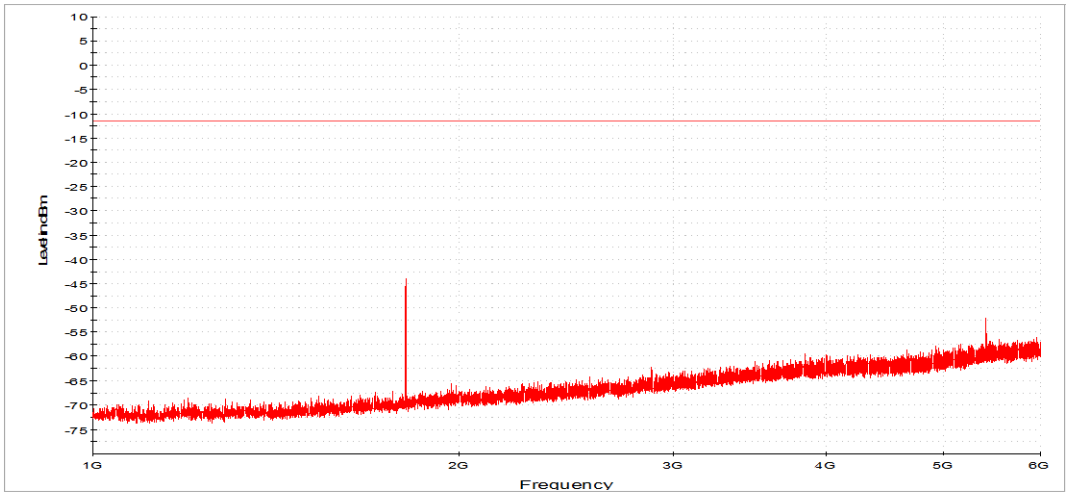


Graph 34

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Non-Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 903MHz Channel – 1GHz to 6GHz
Vertical Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

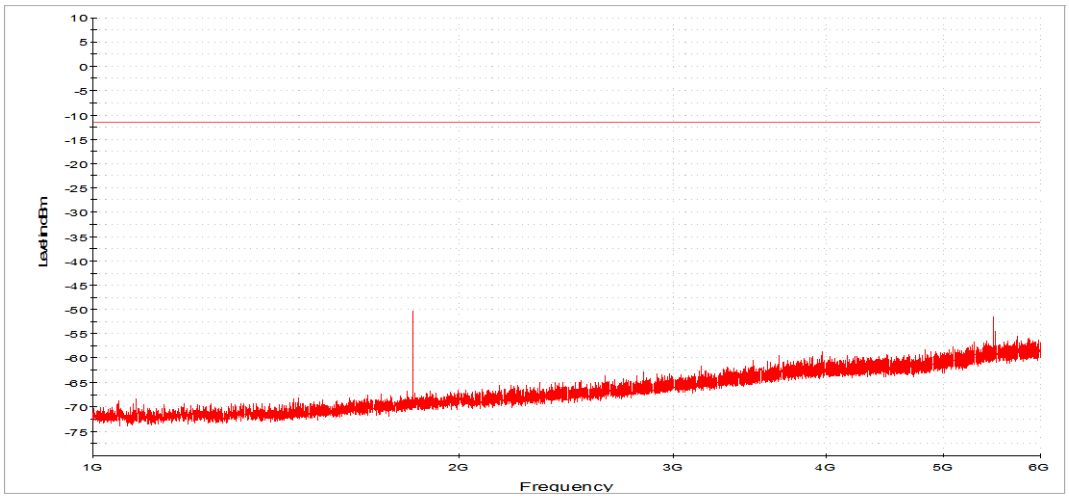


Graph 35

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Non-Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 916MHz Channel – 1GHz to 6GHz
Horizontal Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

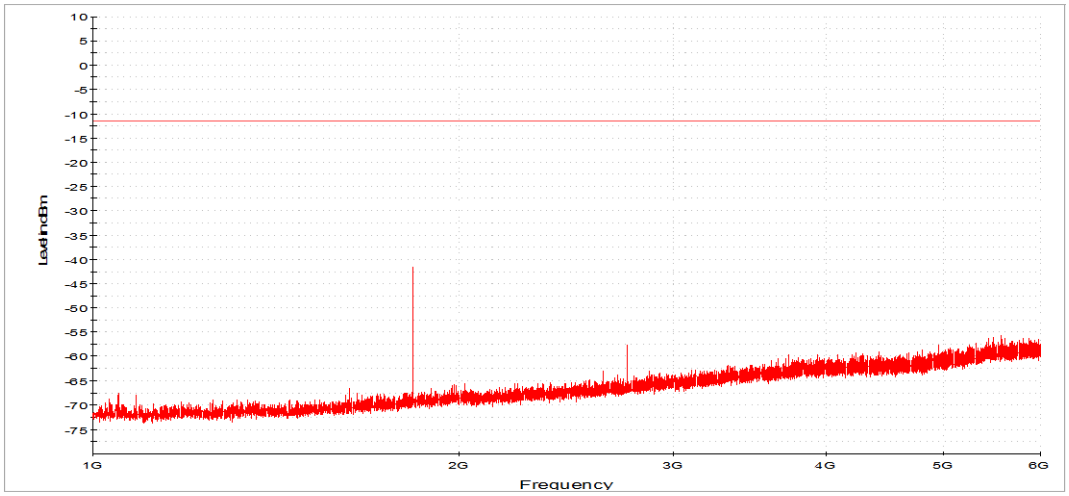


Graph 36

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Non-Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 916MHz Channel – 1GHz to 6GHz
Vertical Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

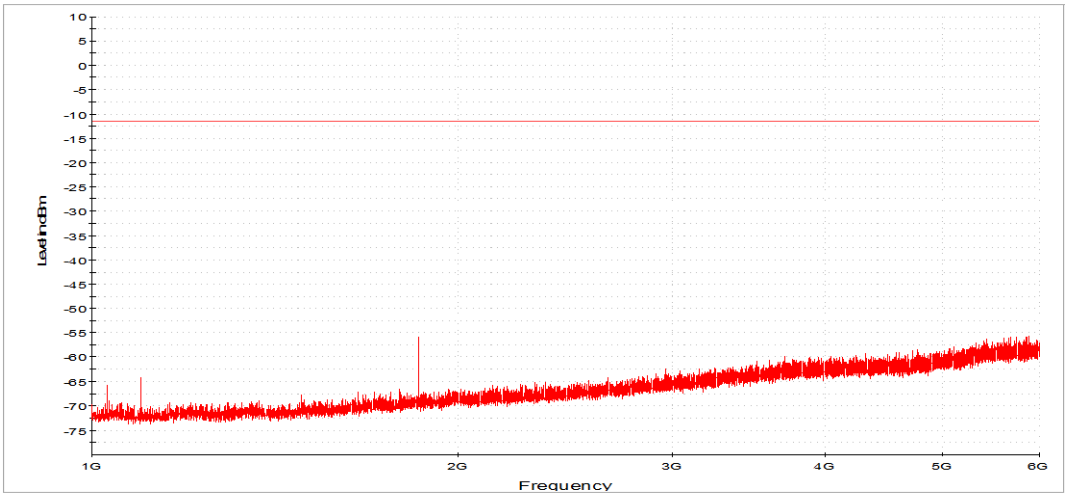


Graph 37

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Non-Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 927MHz Channel – 1GHz to 6GHz
Horizontal Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

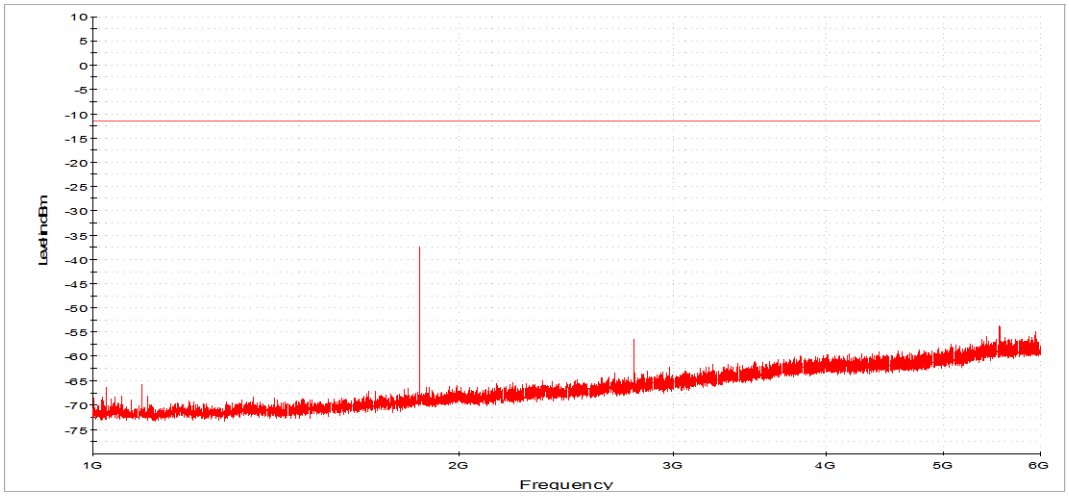


Graph 38

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Non-Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 927MHz Channel – 1GHz to 6GHz
Vertical Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

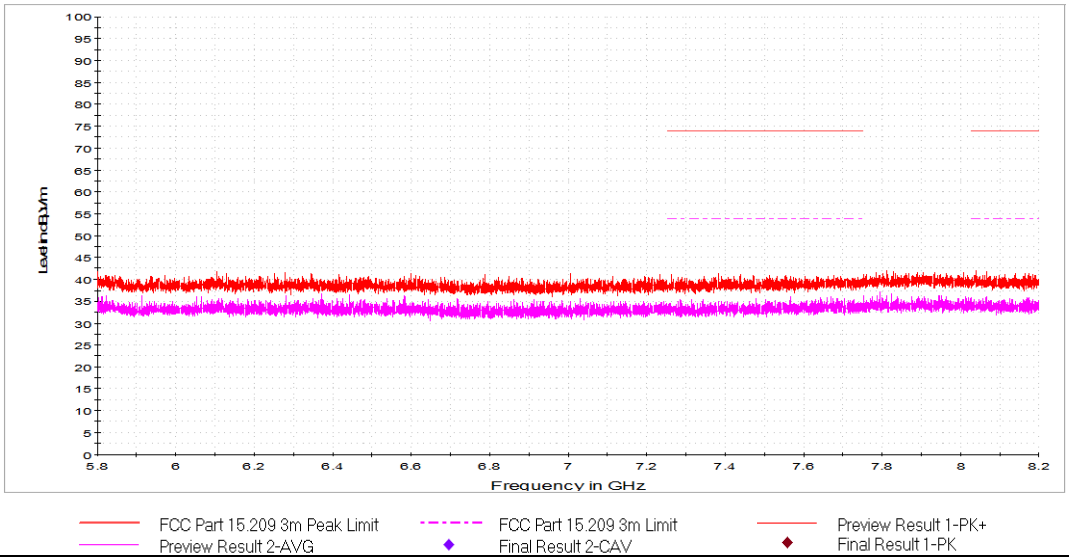


Graph 39

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 903MHz Channel – 5.8GHz to 8.2GHz
Horizontal Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

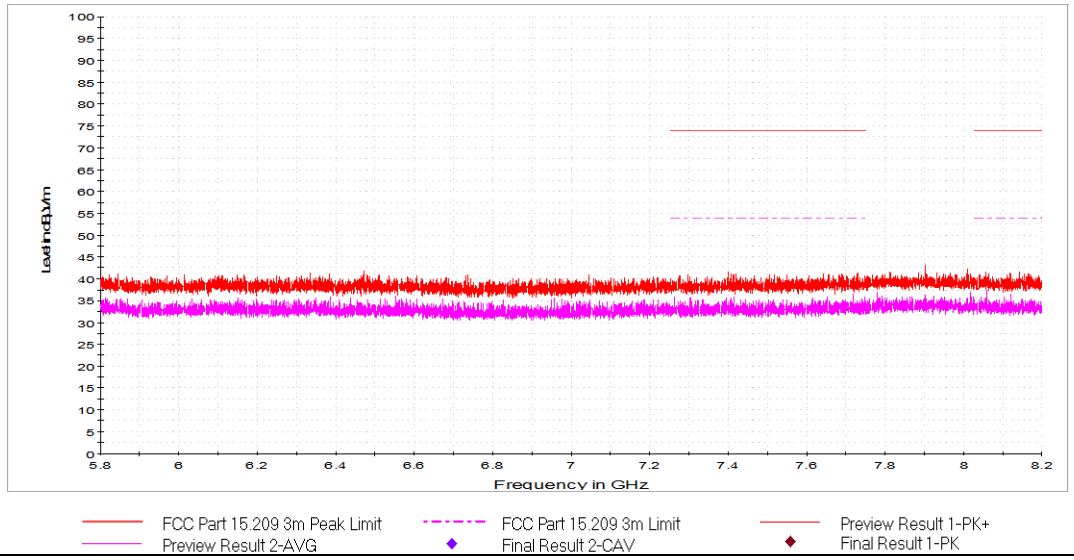


Graph 40

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 903MHz Channel – 5.8GHz to 8.2GHz
Vertical Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

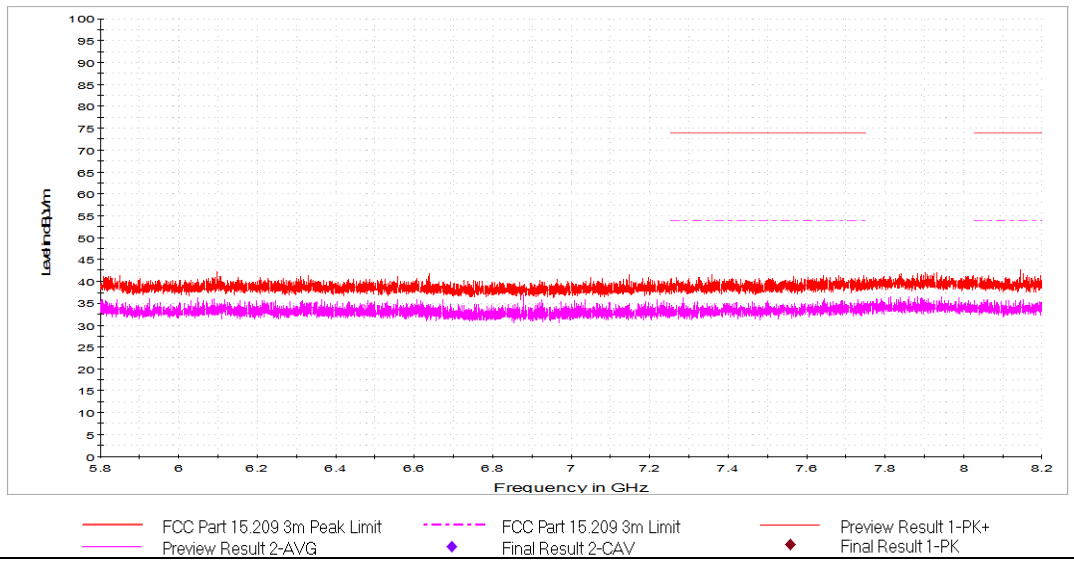


Graph 41

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 916MHz Channel – 5.8GHz to 8.2GHz
Horizontal Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

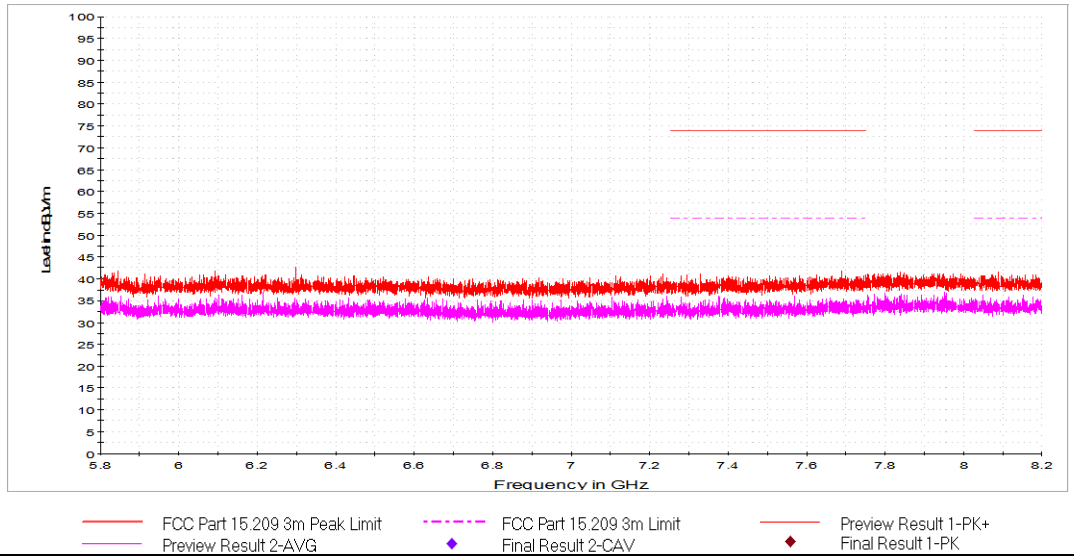


Graph 42

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 916MHz Channel – 5.8GHz to 8.2GHz
Vertical Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

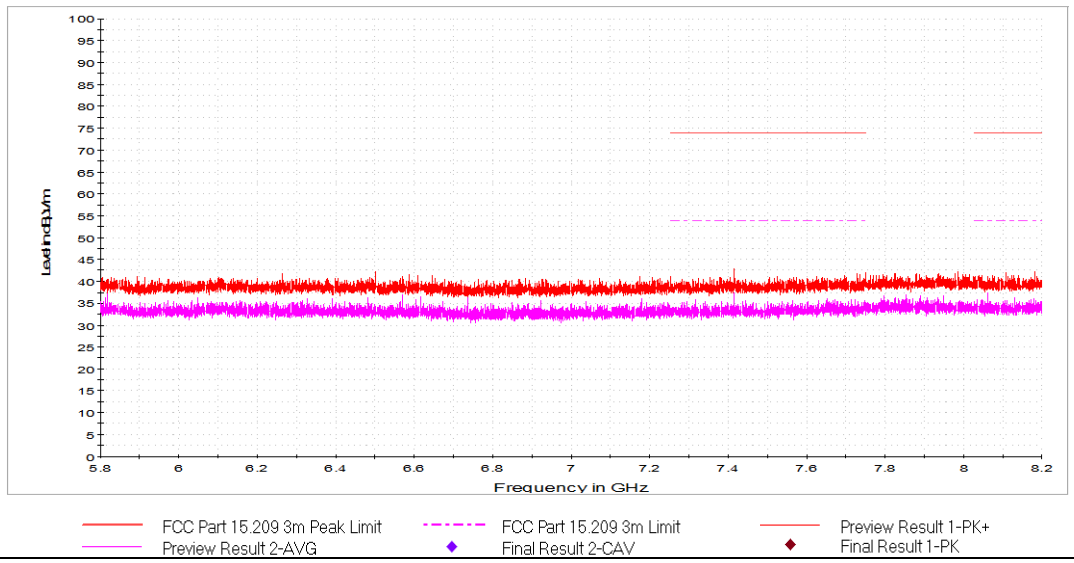


Graph 43

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 927MHz Channel – 5.8GHz to 8.2GHz
Horizontal Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

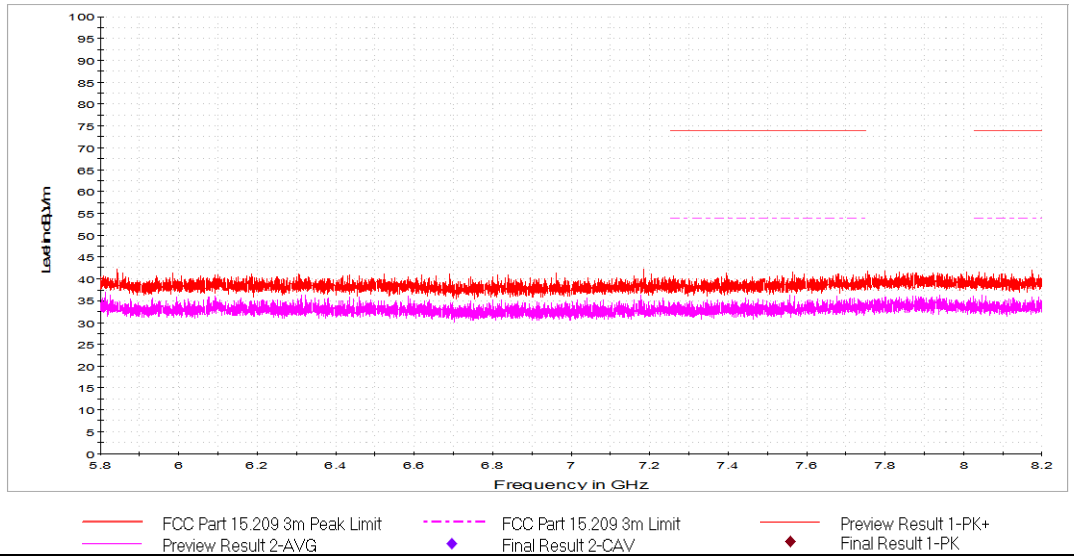


Graph 44

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 927MHz Channel – 5.8GHz to 8.2GHz
Vertical Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

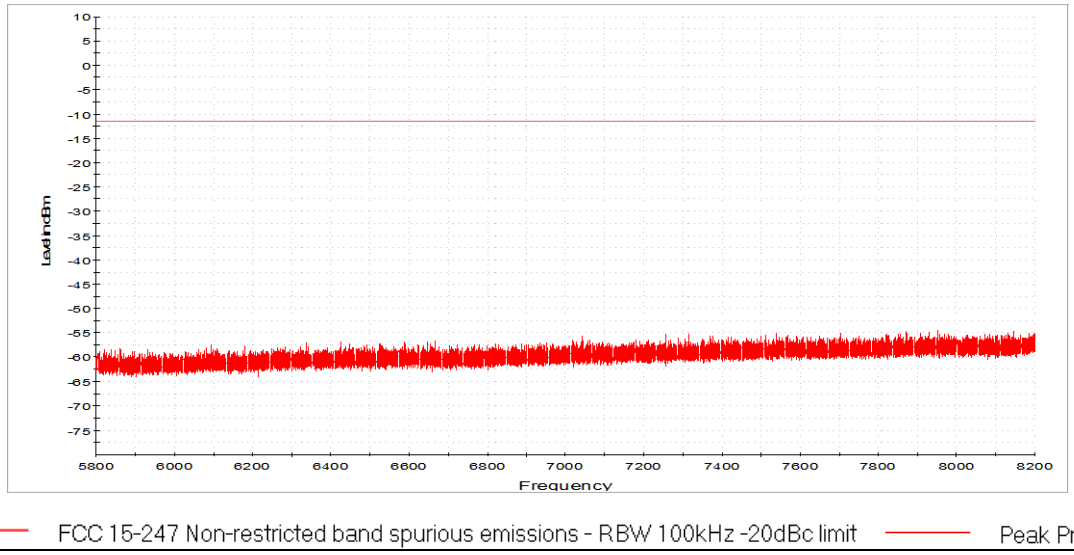


Graph 45

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Non-Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 903MHz Channel – 5.8GHz to 8.2GHz
Horizontal Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

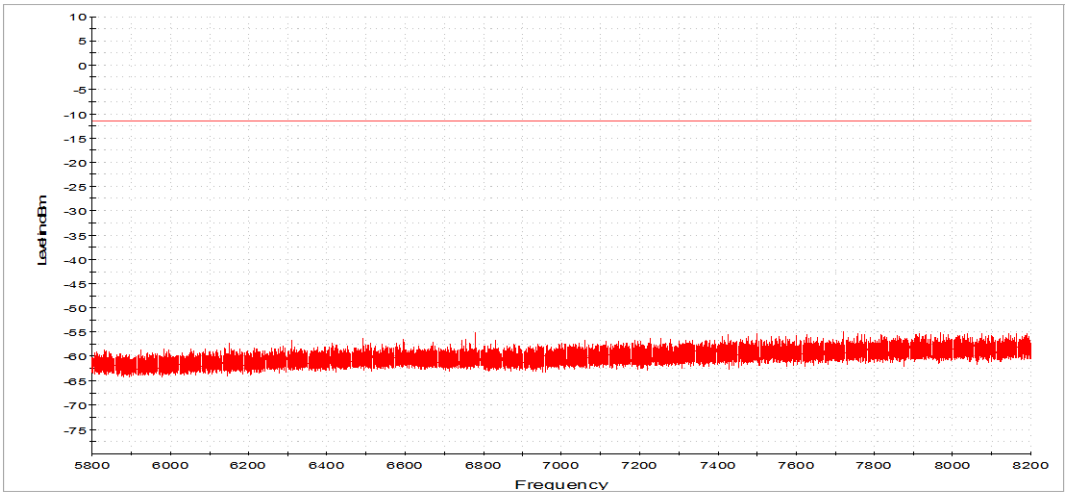


Graph 46

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Non-Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 903MHz Channel – 5.8GHz to 8.2GHz
Vertical Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ



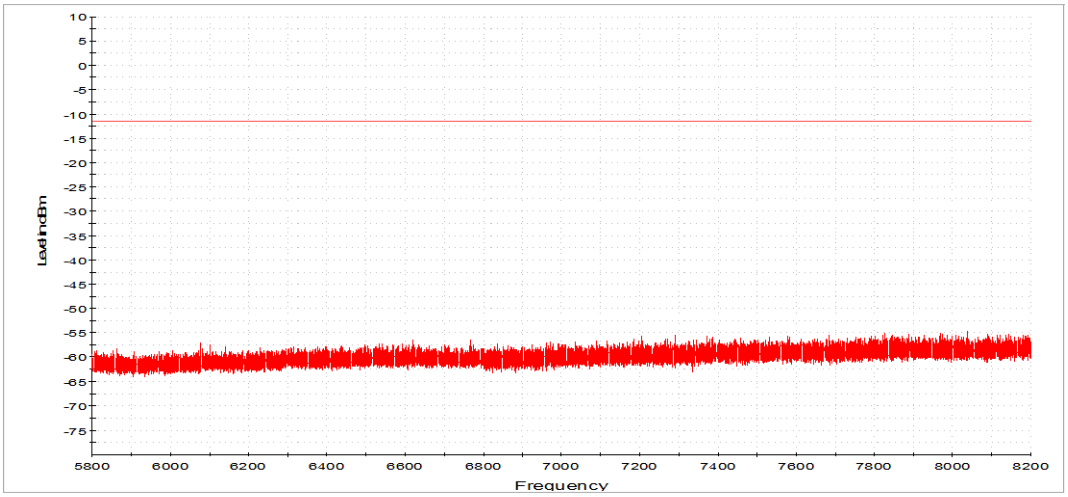
FCC 15-247 Non-restricted band spurious emissions - RBW 100kHz -20dBc limit — Peak Preview

Graph 47

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Non-Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 916MHz Channel – 5.8GHz to 8.2GHz
Horizontal Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ



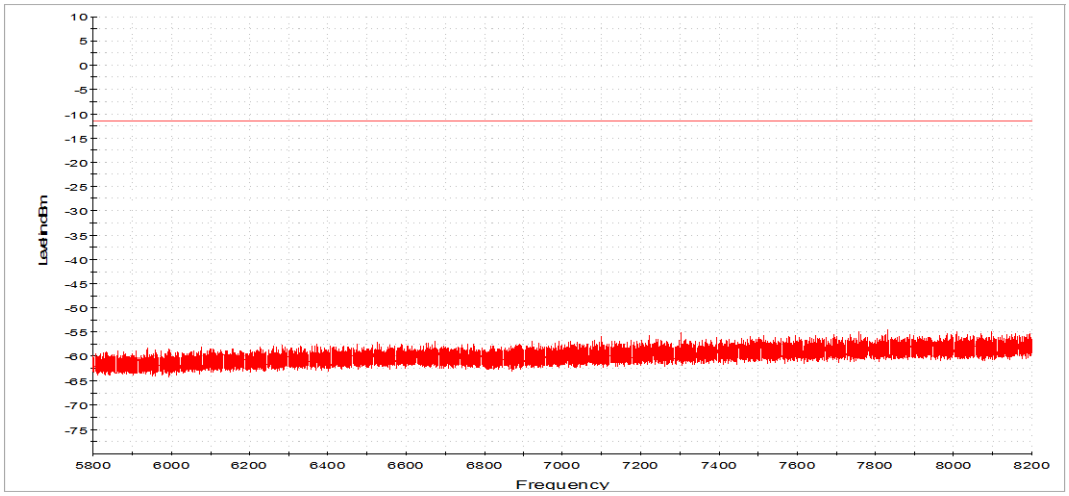
FCC 15-247 Non-restricted band spurious emissions - RBW 100kHz -20dBc limit — Peak Preview

Graph 48

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Non-Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 916MHz Channel – 5.8GHz to 8.2GHz
Vertical Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

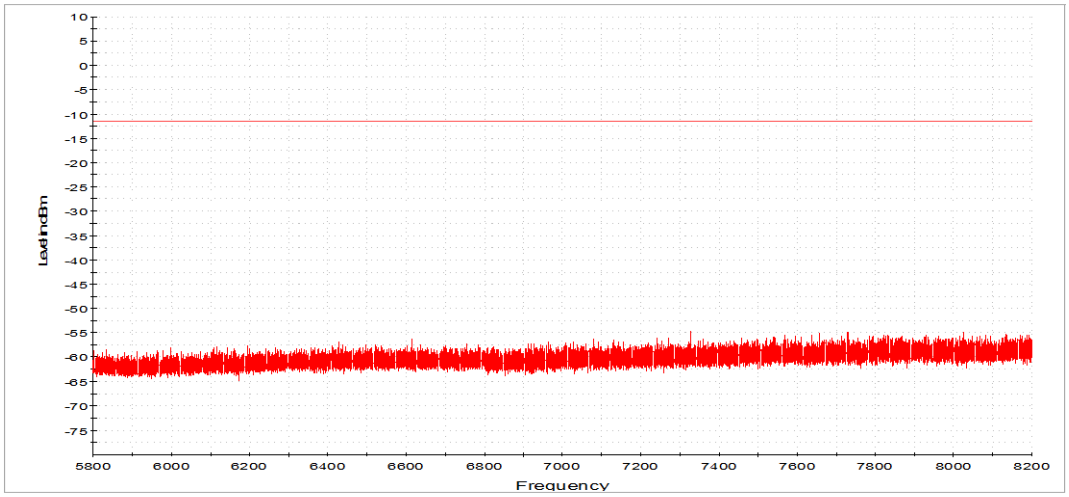


Graph 49

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Non-Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 927MHz Channel – 5.8GHz to 8.2GHz
Horizontal Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

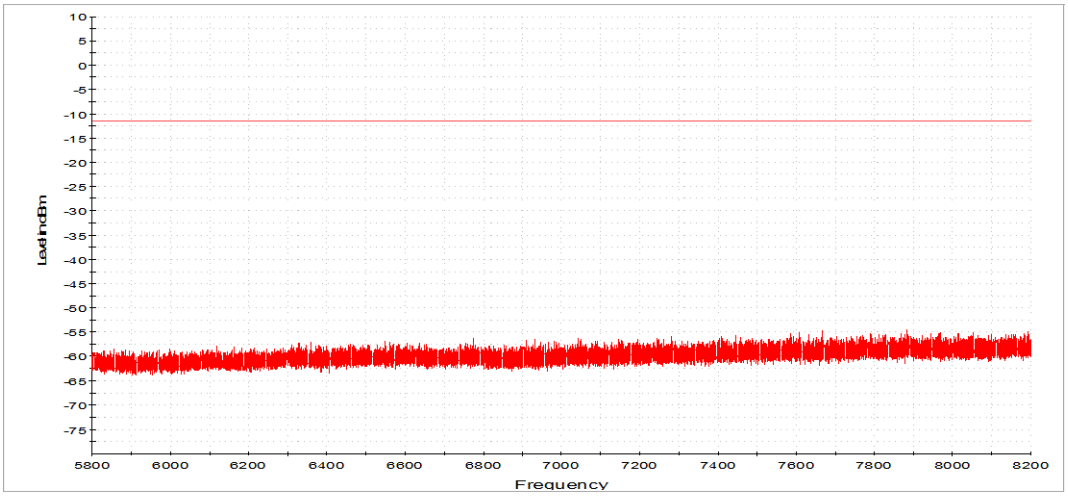


Graph 50

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Non-Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 927MHz Channel – 5.8GHz to 8.2GHz
Vertical Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

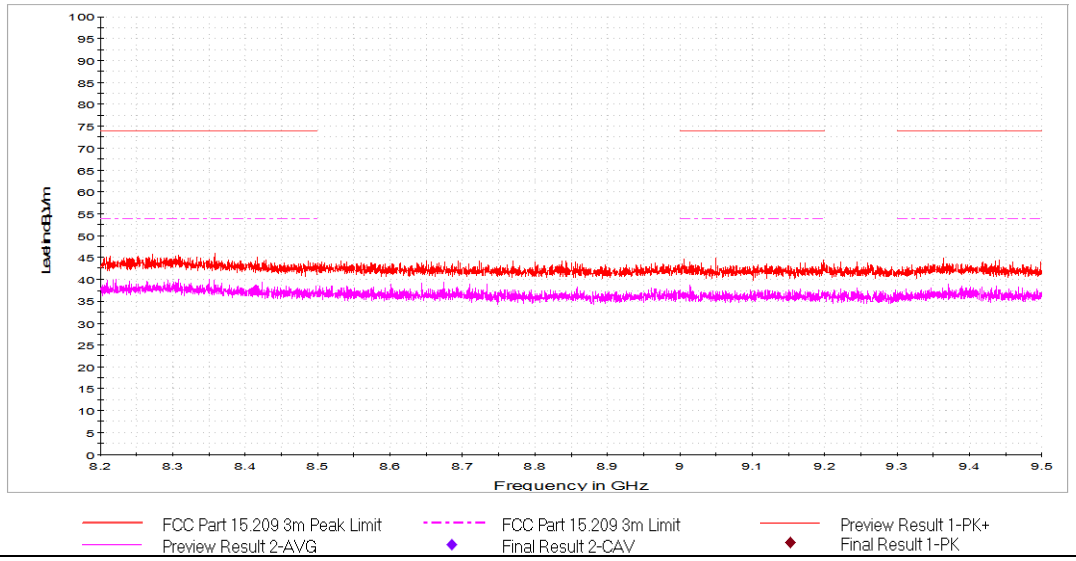


Graph 51

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 903MHz Channel – 8.2GHz to 9.5GHz
Horizontal Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

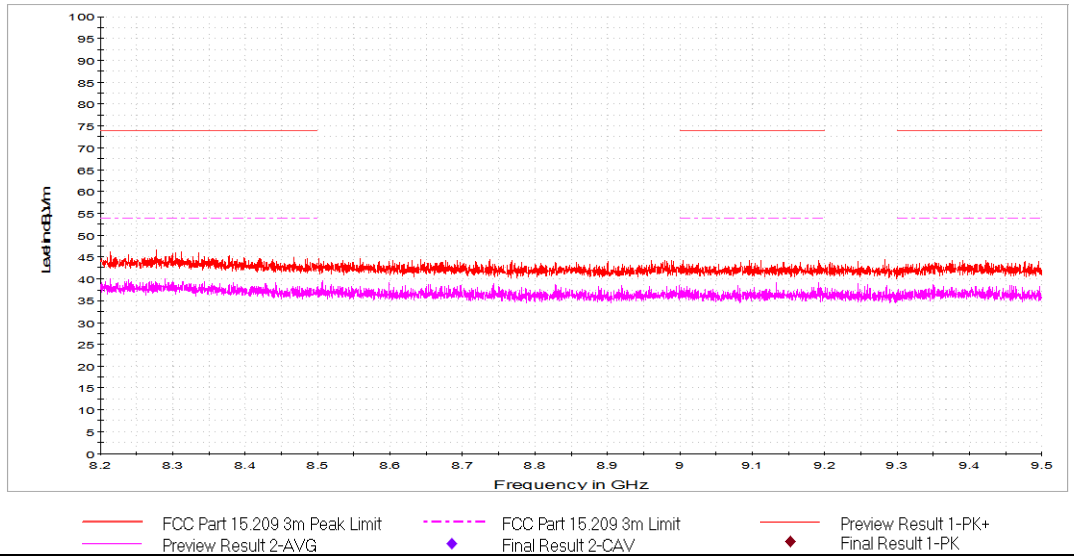


Graph 52

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 903MHz Channel – 8.2GHz to 9.5GHz
Vertical Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

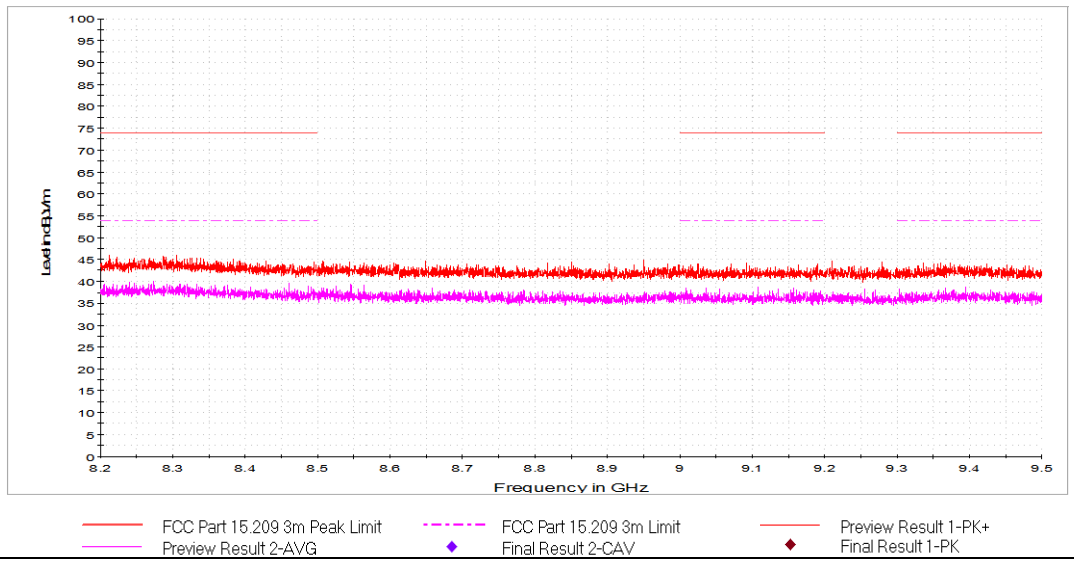


Graph 53

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 916MHz Channel – 8.2GHz to 9.5GHz
Horizontal Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

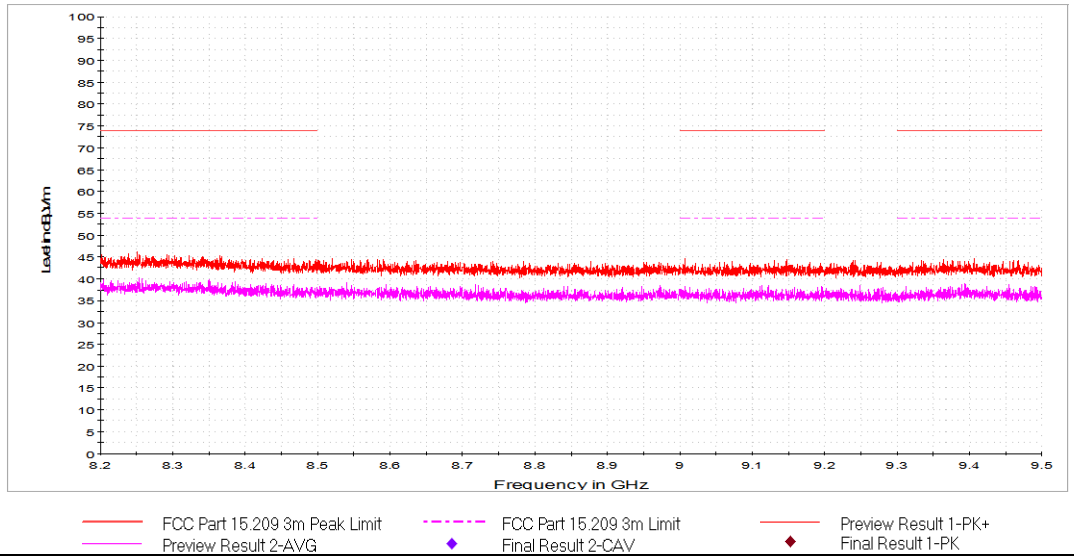


Graph 54

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 916MHz Channel – 8.2GHz to 9.5GHz
Vertical Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

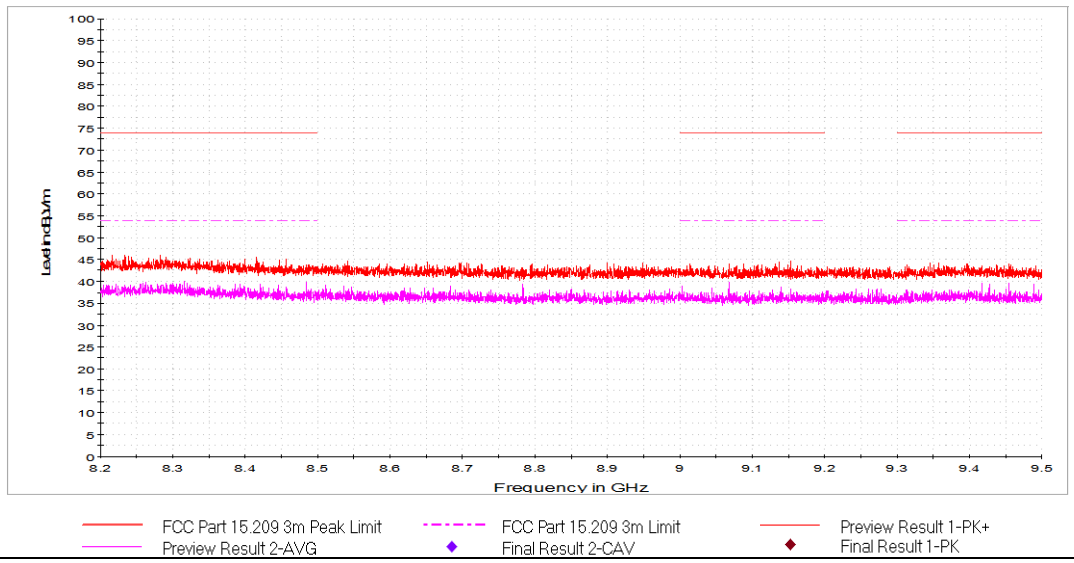


Graph 55

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 927MHz Channel – 8.2GHz to 9.5GHz
Horizontal Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

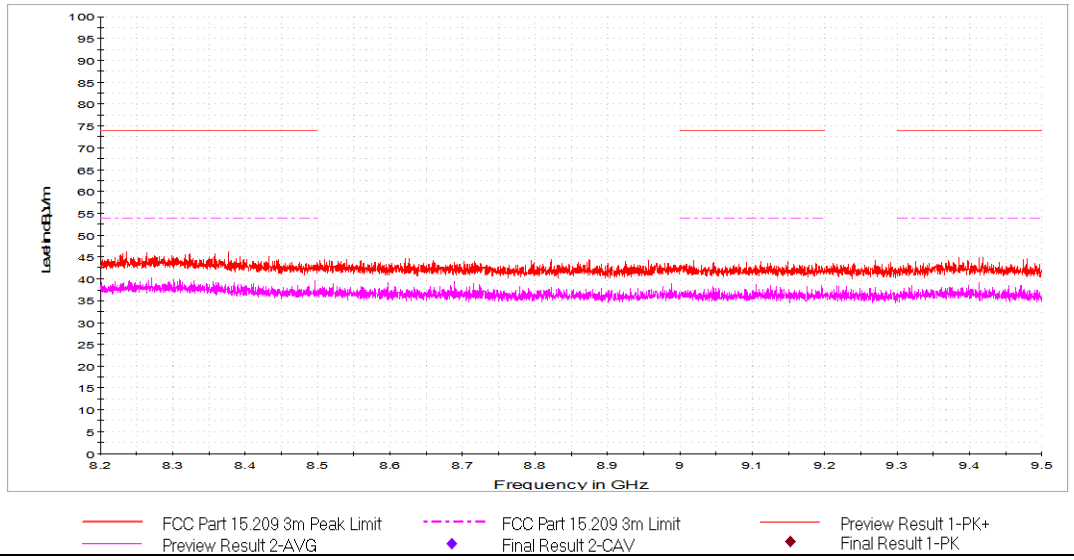


Graph 56

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 927MHz Channel – 8.2GHz to 9.5GHz
Vertical Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

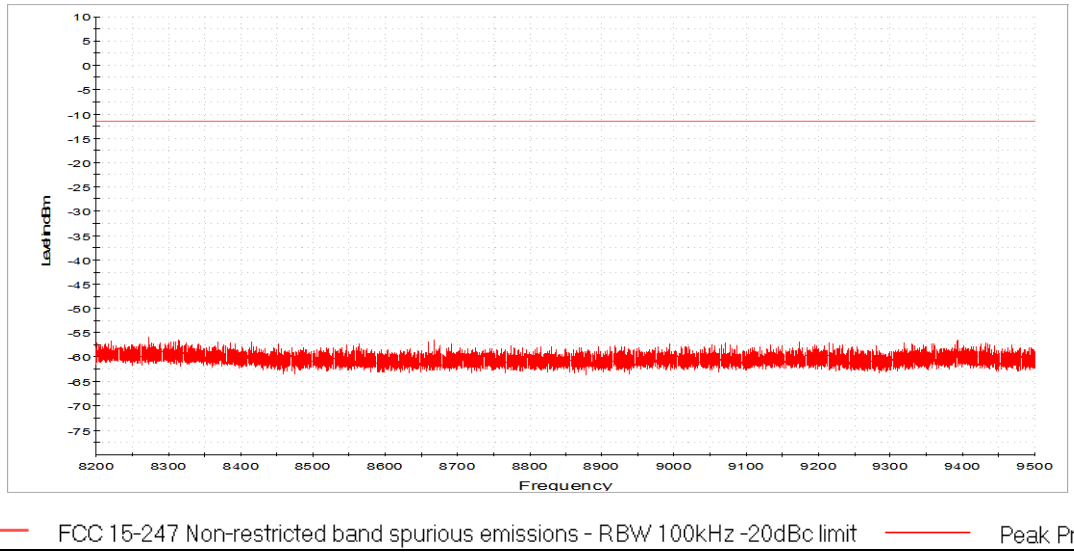


Graph 57

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Non-Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 903MHz Channel – 8.2GHz to 9.5GHz
Horizontal Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

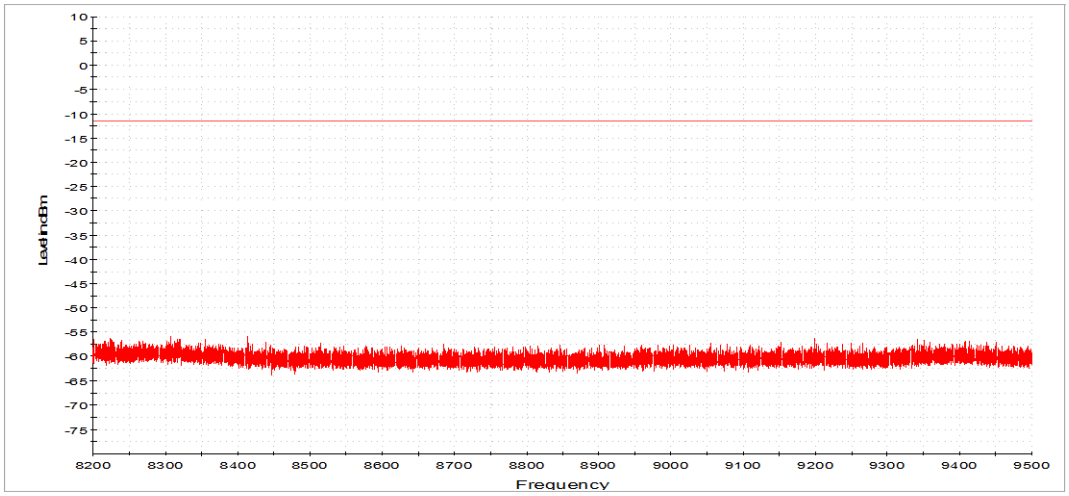


Graph 58

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Non-Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 903MHz Channel – 8.2GHz to 9.5GHz
Vertical Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

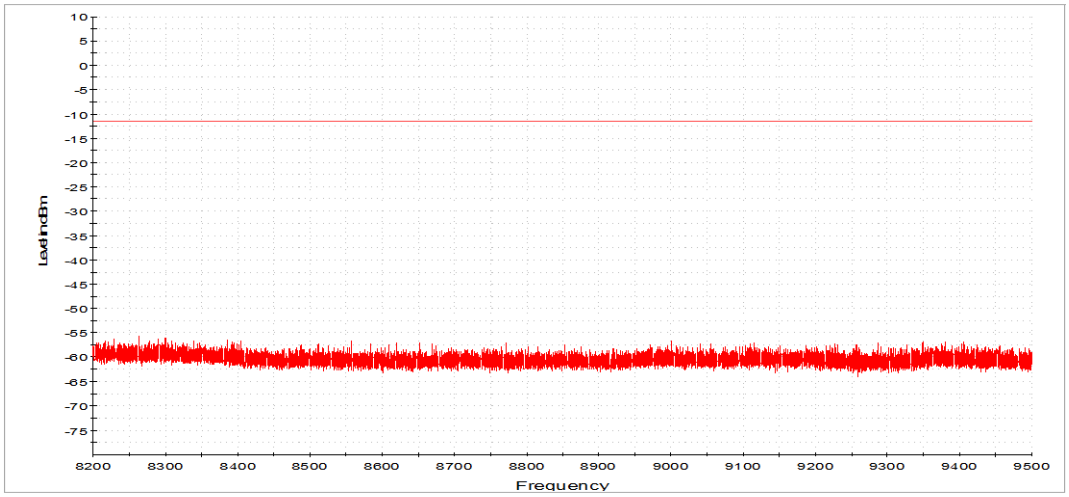


Graph 59

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Non-Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 916MHz Channel – 8.2GHz to 9.5GHz
Horizontal Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

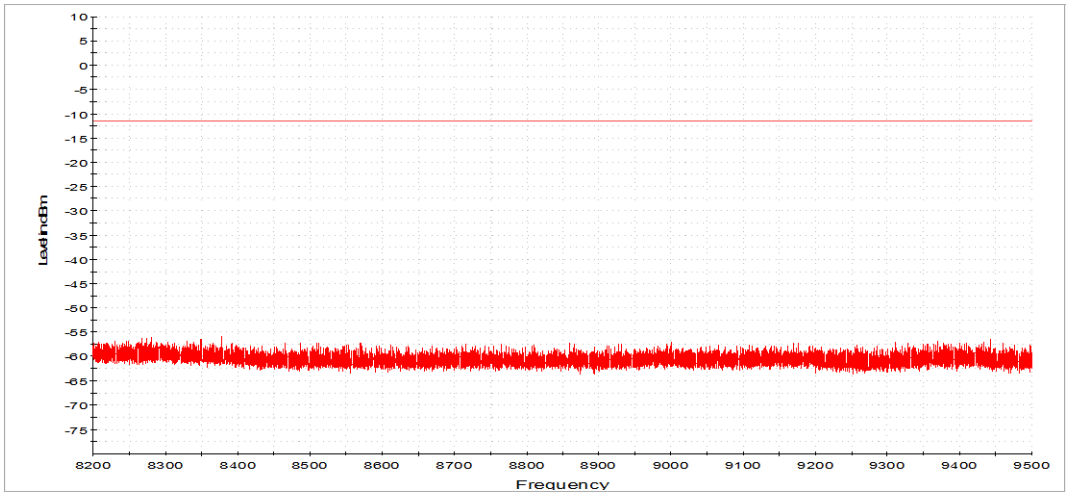


Graph 60

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Non-Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 916MHz Channel – 8.2GHz to 9.5GHz
Vertical Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

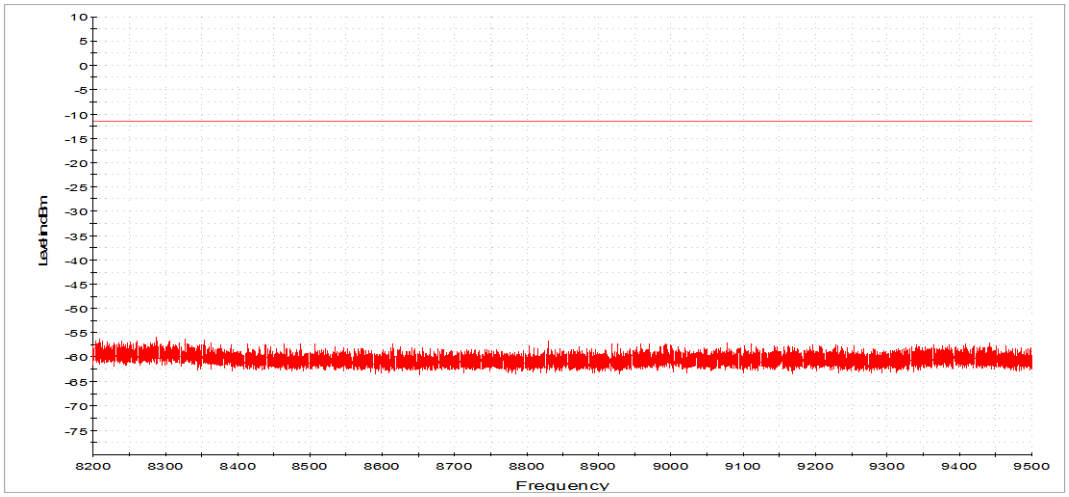


Graph 61

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Non-Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 927MHz Channel – 8.2GHz to 9.5GHz
Horizontal Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

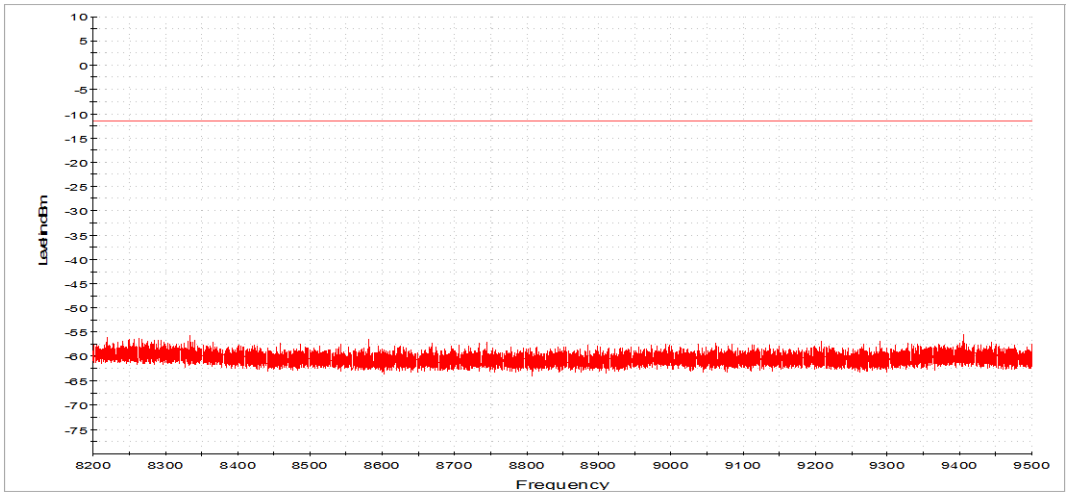


Graph 62

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Non-Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Awake Mode - 927MHz Channel – 8.2GHz to 9.5GHz
Vertical Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

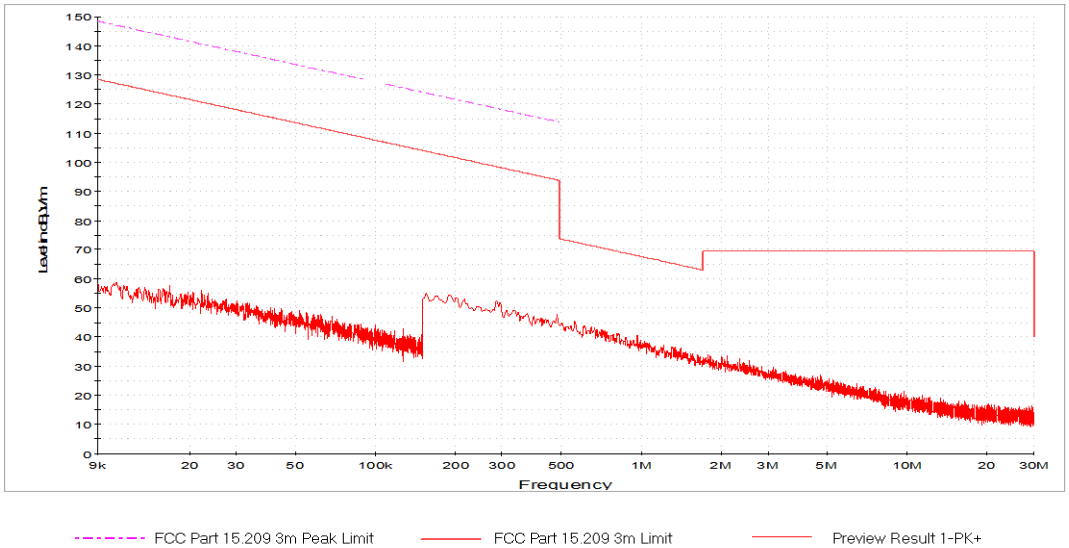


Graph 63

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Sleep Mode - 920MHz Channel - 9KHz to 30MHz - X Antenna Orientation

Job Number: E2211-1609A-2
Test Engineer: AZ

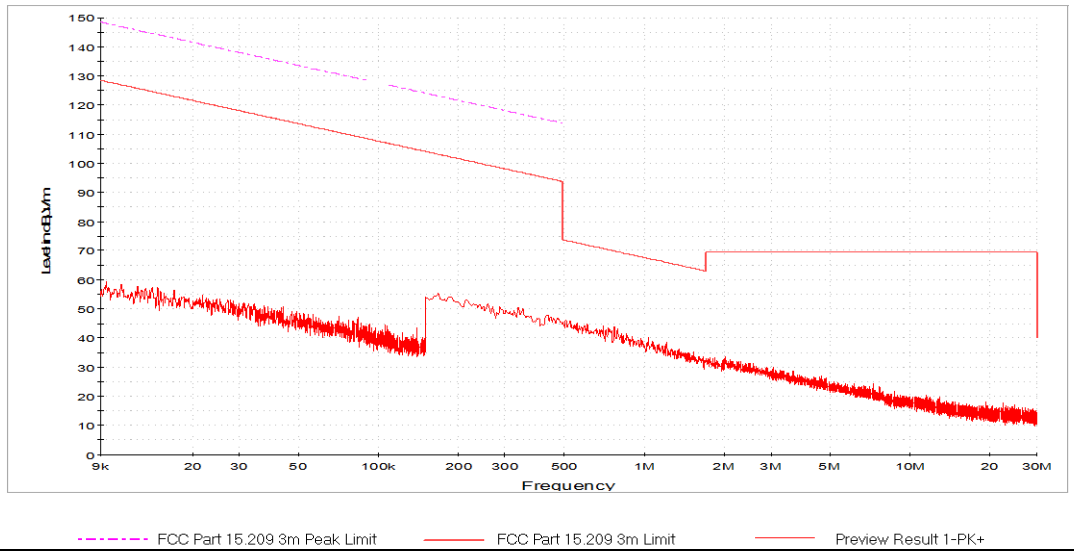


Graph 64

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Sleep Mode - 920MHz Channel - 9KHz to 30MHz - Y Antenna Orientation

Job Number: E2211-1609A-2
Test Engineer: AZ

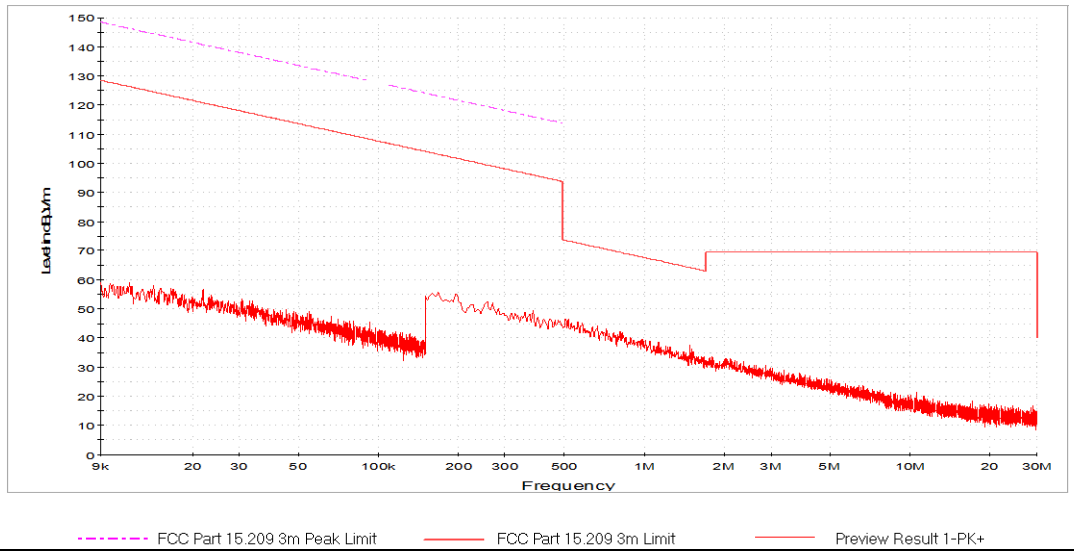


Graph 65

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Sleep Mode - 920MHz Channel - 9KHz to 30MHz - Z Antenna Orientation

Job Number: E2211-1609A-2
Test Engineer: AZ

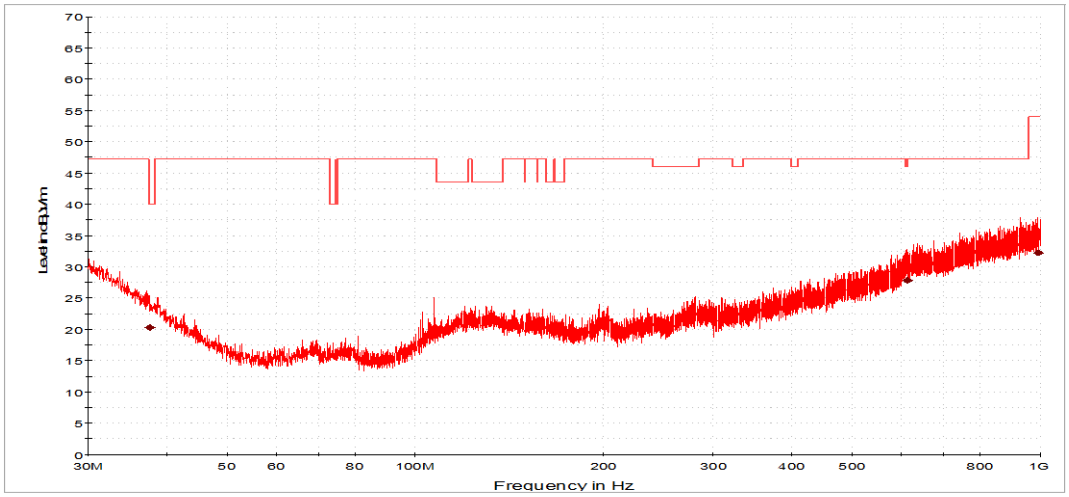


Graph 66

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted and Non-Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Sleep Mode - 920MHz Channel – 30MHz to 1GHz
Horizontal Antenna Orientation

Job Number: E2211-1609A-2
Test Engineer: AZ

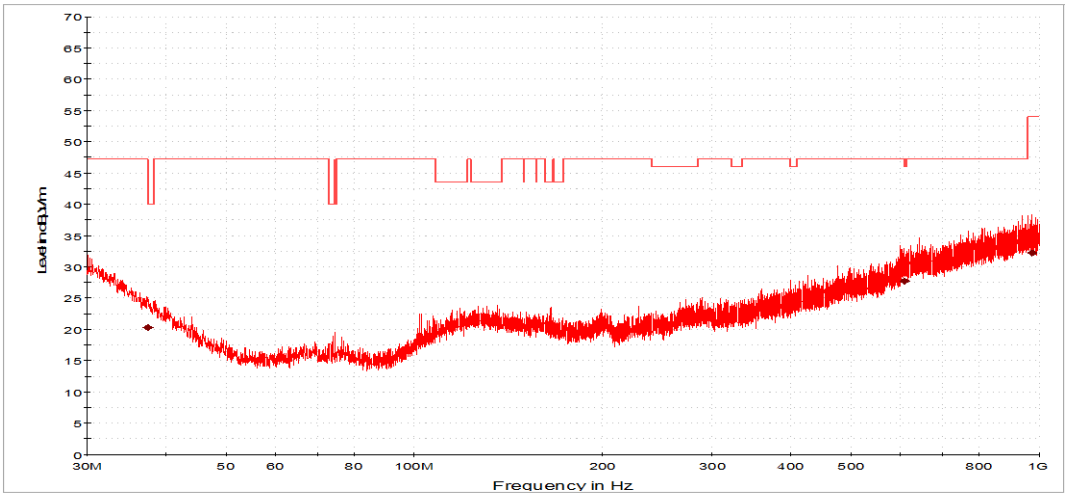


Graph 67

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted and Non-Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Sleep Mode - 920MHz Channel – 30MHz to 1GHz
Vertical Antenna Orientation

Job Number: E2211-1609A-2
Test Engineer: AZ

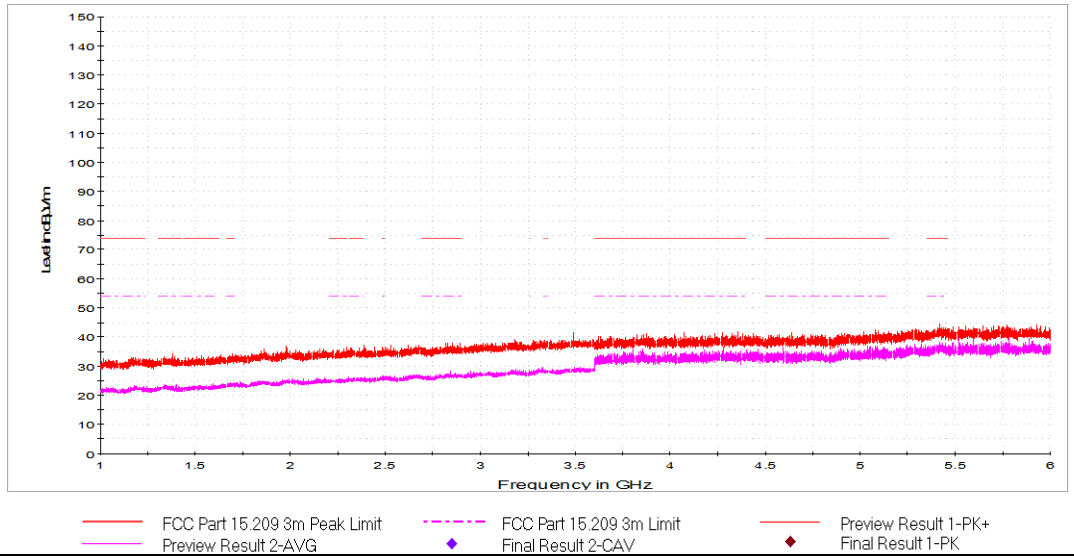


Graph 68

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Sleep Mode - 920MHz Channel – 1GHz to 6GHz
Horizontal Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

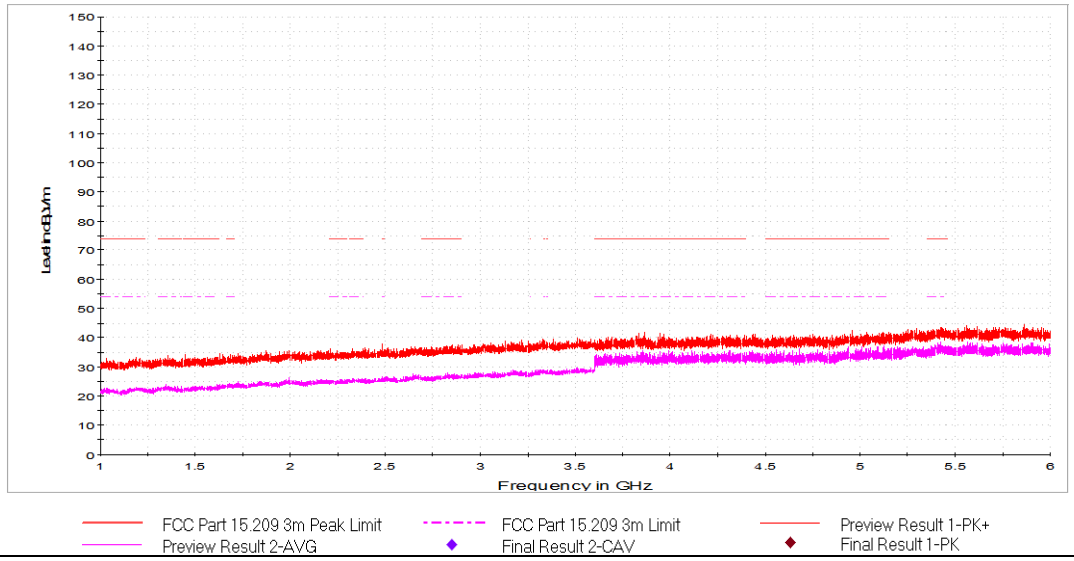


Graph 69

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Sleep Mode - 920MHz Channel – 1GHz to 6GHz
Vertical Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

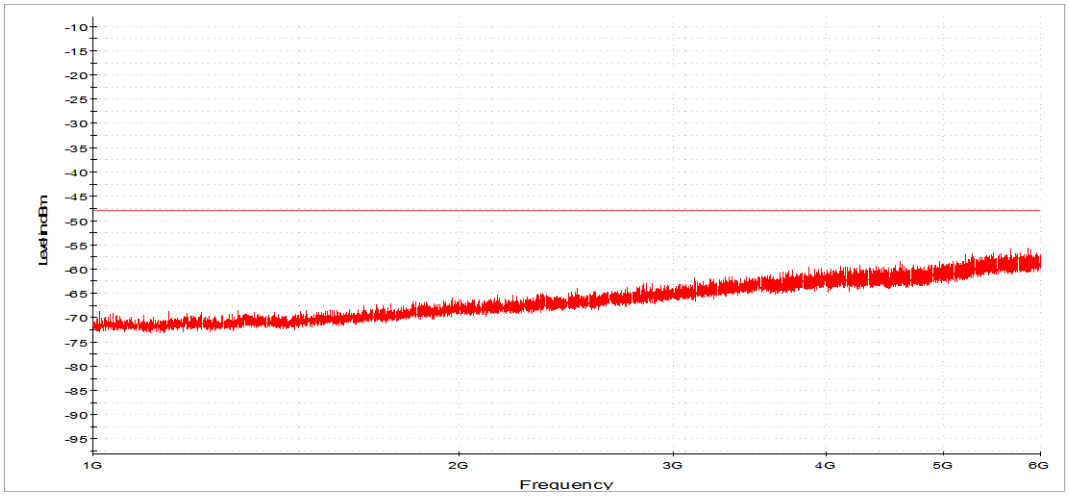


Graph 70

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Non-Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Sleep Mode - 920MHz Channel – 1GHz to 6GHz
Horizontal Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

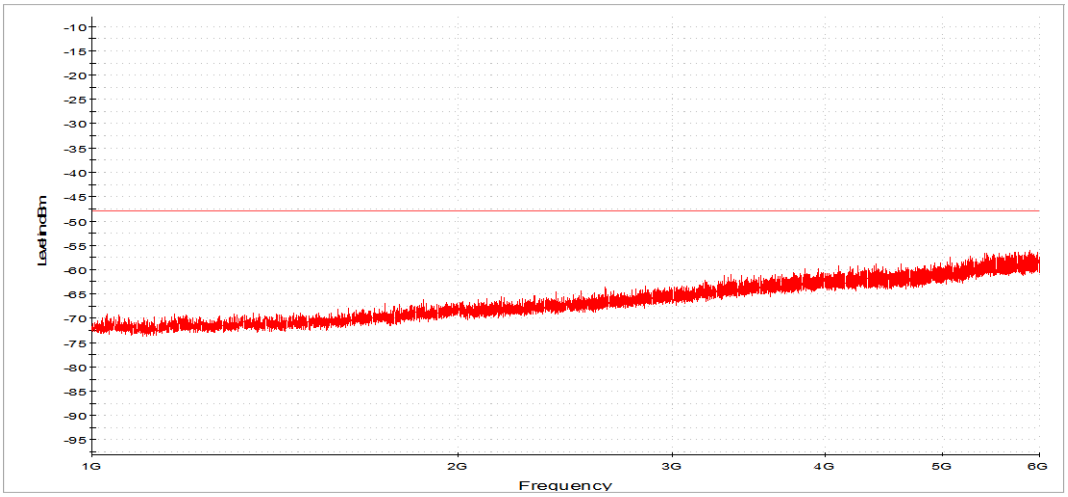


Graph 71

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Non-Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Sleep Mode - 920MHz Channel – 1GHz to 6GHz
Vertical Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

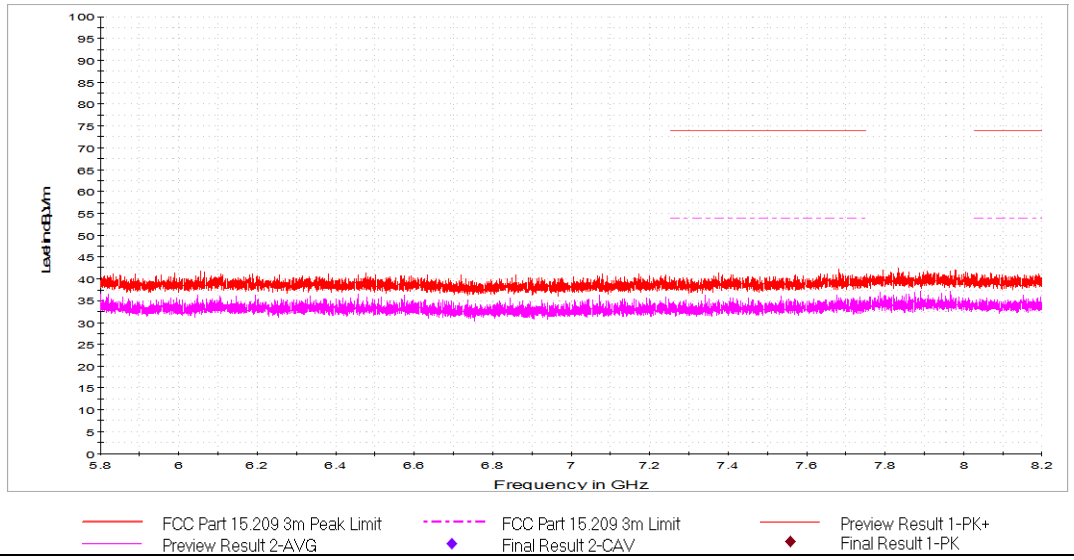


Graph 72

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Sleep Mode - 920MHz Channel – 5.8GHz to 8.2GHz
Horizontal Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

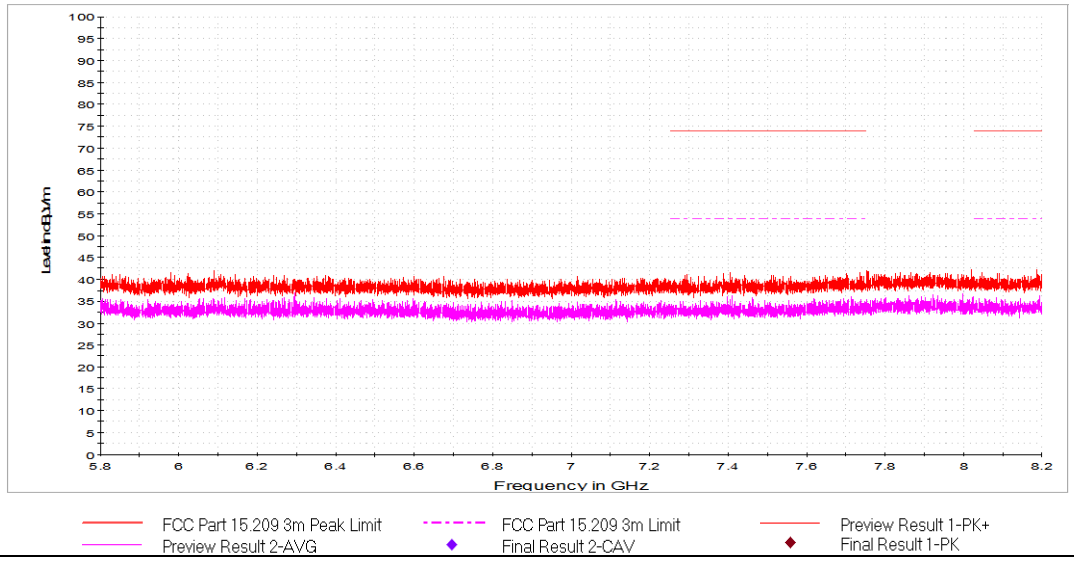


Graph 73

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Sleep Mode - 920MHz Channel – 5.8GHz to 8.2GHz
Vertical Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

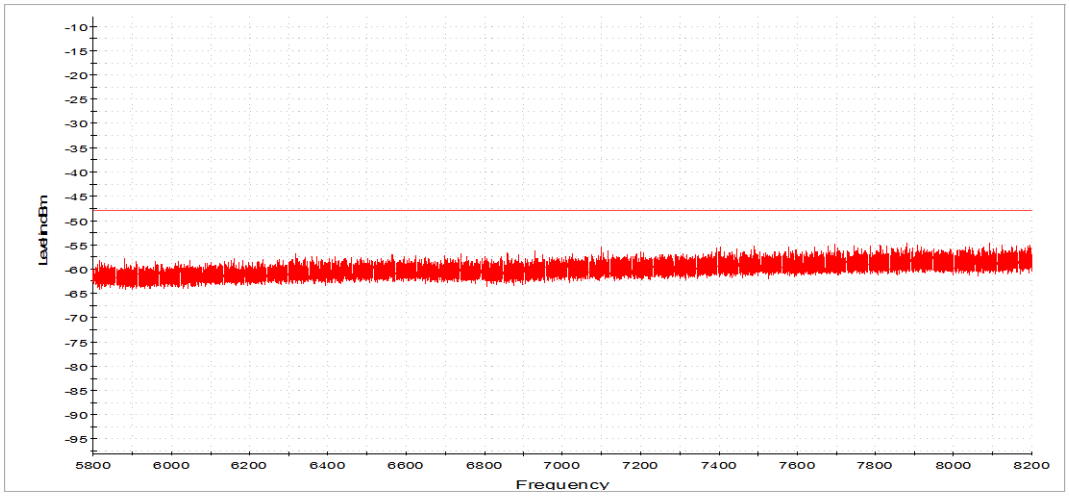


Graph 74

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Non-Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Sleep Mode - 920MHz Channel – 5.8GHz to 8.2GHz
Horizontal Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

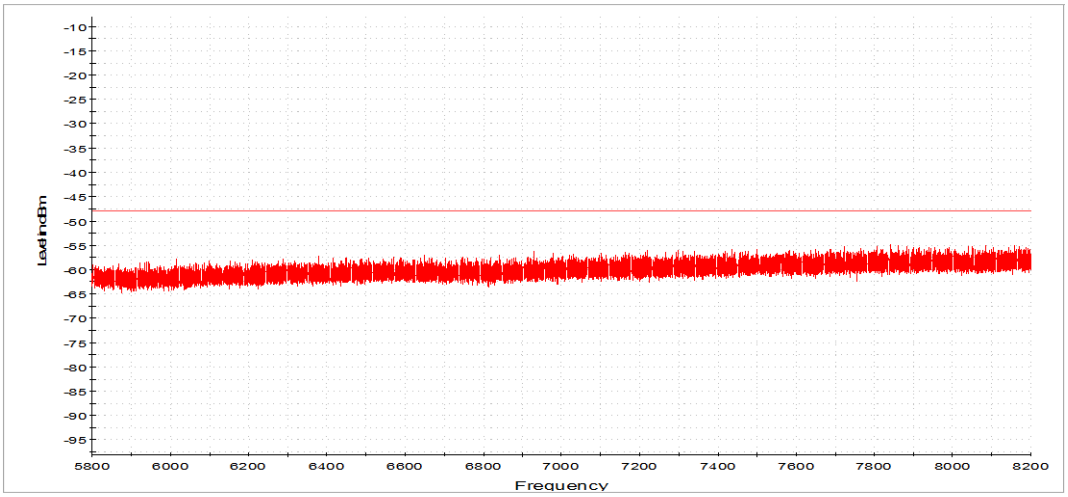


Graph 75

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Non-Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Sleep Mode - 920MHz Channel – 5.8GHz to 8.2GHz
Vertical Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

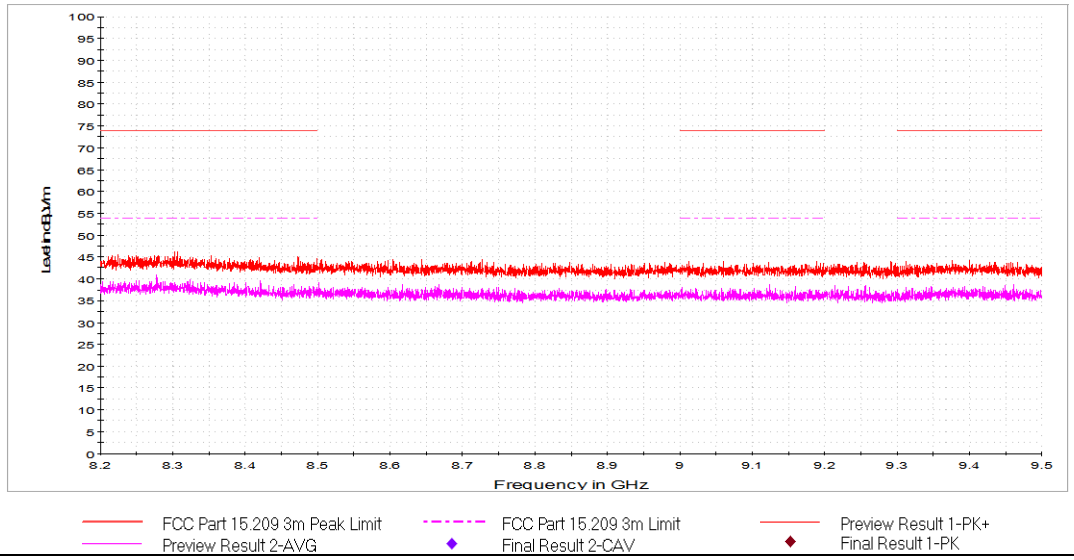


Graph 76

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Sleep Mode - 920MHz Channel – 8.2GHz to 9.5GHz
Horizontal Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

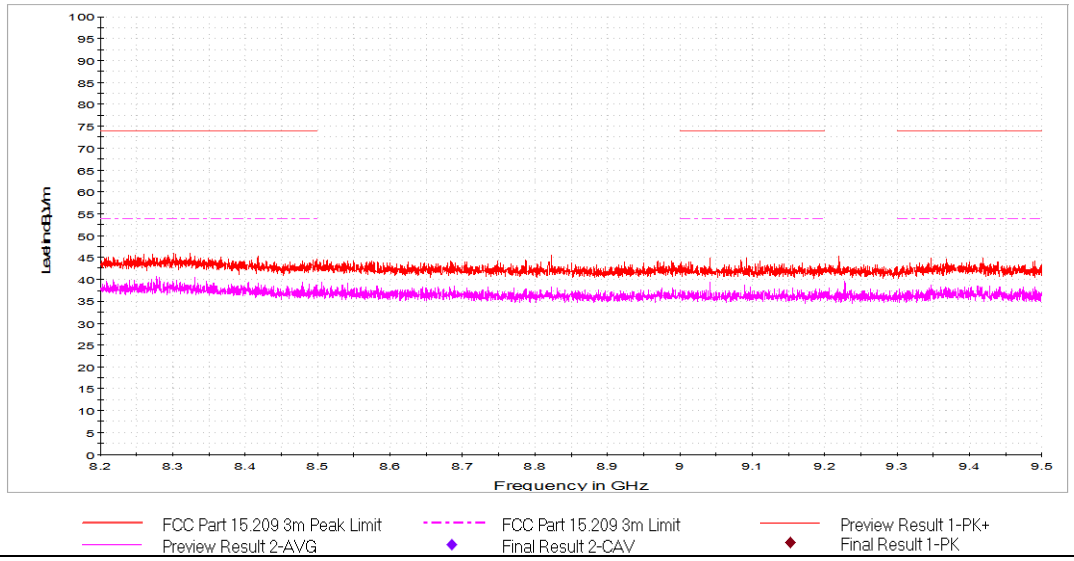


Graph 77

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Sleep Mode - 920MHz Channel – 8.2GHz to 9.5GHz
Vertical Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

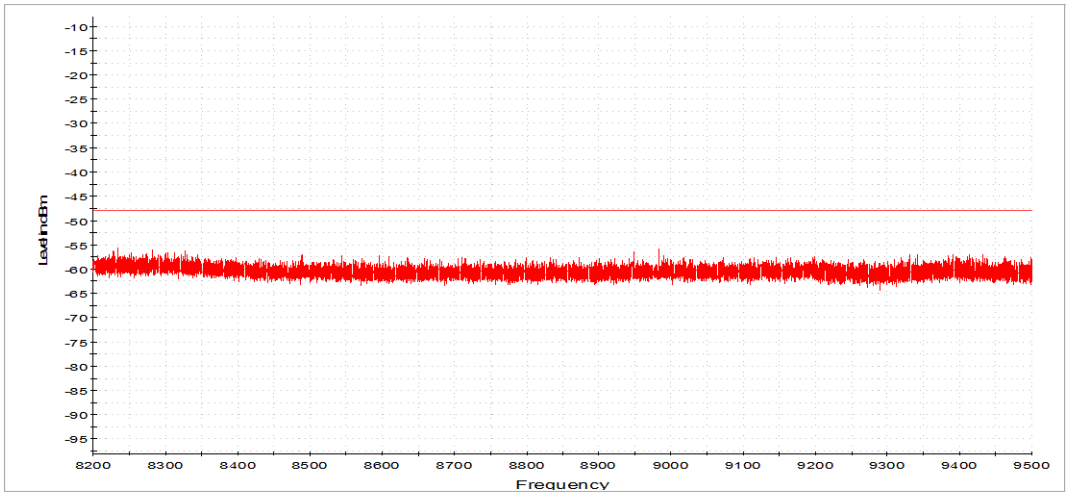


Graph 78

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Non-Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Sleep Mode - 920MHz Channel – 8.2GHz to 9.5GHz
Horizontal Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ

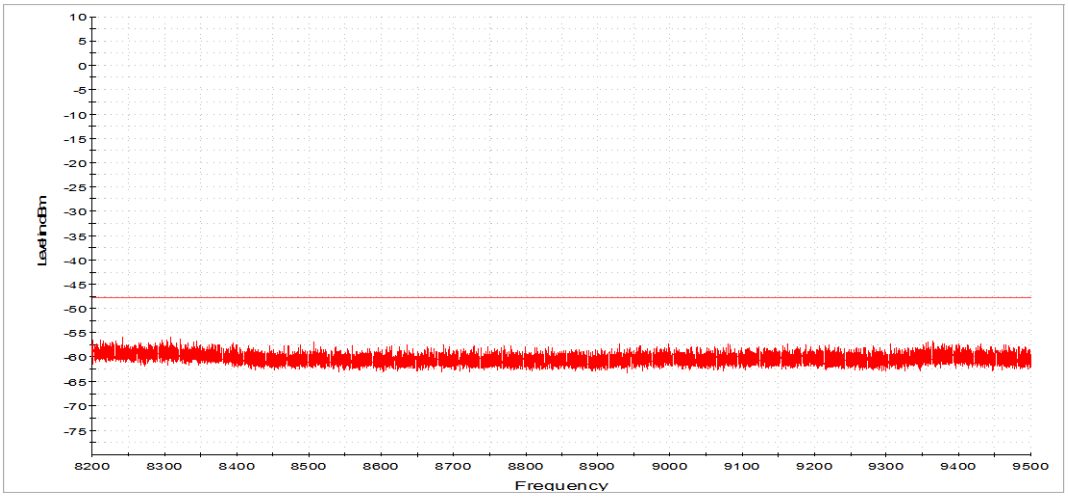


Graph 79

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Radiated emissions in Non-Restricted bands
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag
Sleep Mode - 920MHz Channel – 8.2GHz to 9.5GHz
Vertical Antenna Polarisation

Job Number: E2211-1609A-2
Test Engineer: AZ



Graph 80

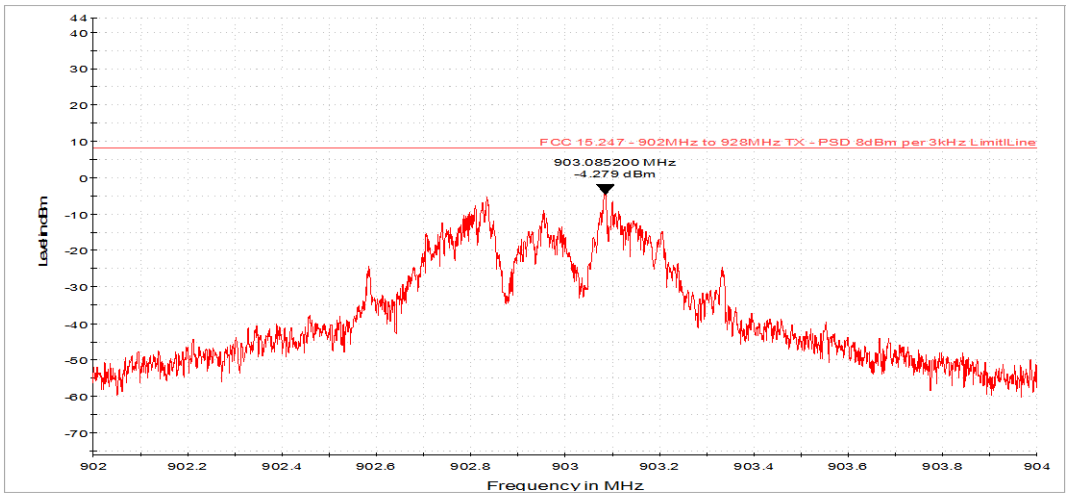
Appendix C.5 – Measurement Graphs – Power Spectral Density – FCC 15.247 (e)

No.	Test	Graph Description
81	Power Spectral Density – Awake Mode	903MHz Channel
82		916MHz Channel
83		927MHz Channel
84	Power Spectral Density – Sleep Mode	920MHz Channel

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Peak Power Spectral Density
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag Awake Mode - 903MHz Channel

Job Number: E2211-1609A-2
Test Engineer: AZ

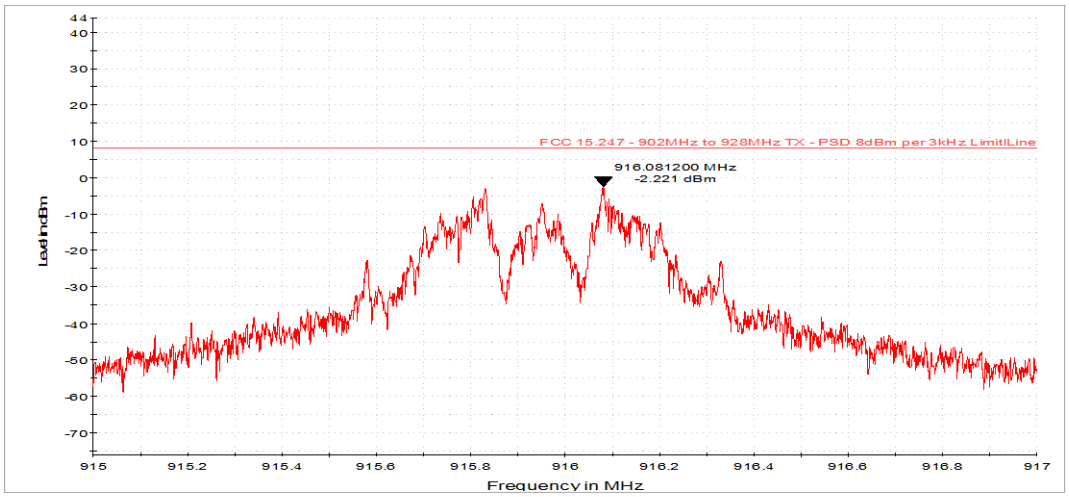


Graph 81

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Peak Power Spectral Density
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag Awake Mode - 916MHz Channel

Job Number: E2211-1609A-2
Test Engineer: AZ

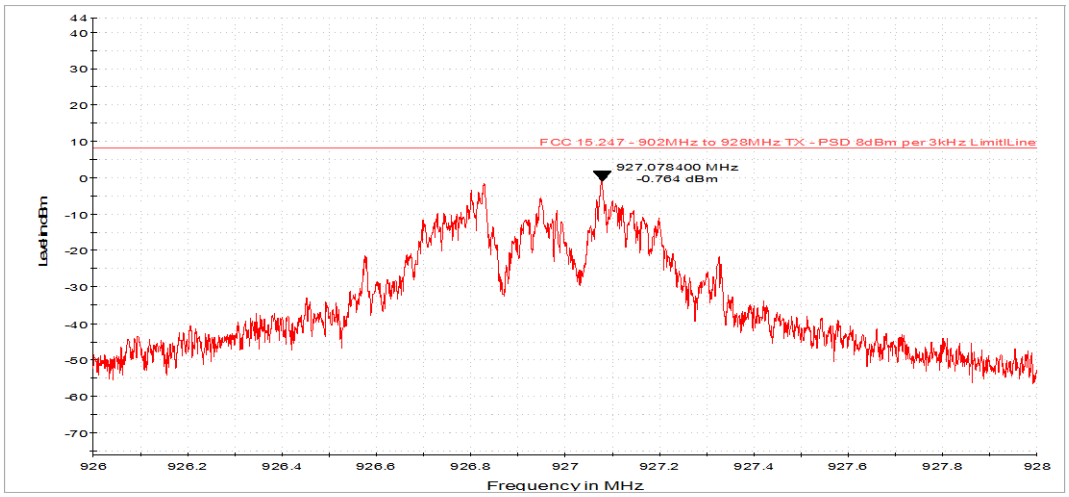


Graph 82

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Peak Power Spectral Density
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag Awake Mode - 927MHz Channel

Job Number: E2211-1609A-2
Test Engineer: AZ

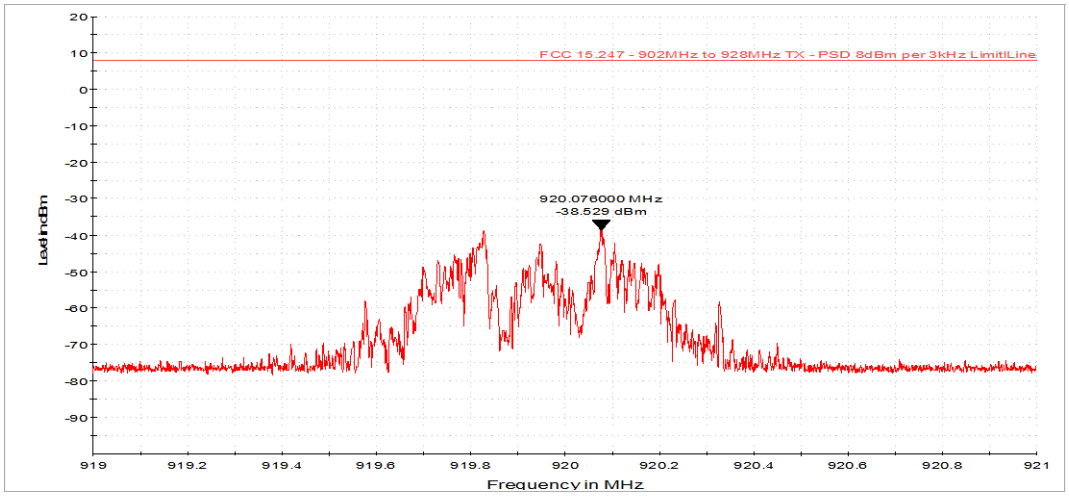


Graph 83

EMC Bayswater Pty. Ltd.

CFR47 FCC Part 15, Subpart C, 15.247 - Peak Power Spectral Density
CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag Sleep Mode - 920MHz Channel

Job Number: E2211-1609A-2
Test Engineer: AZ



Graph 84

Appendix C.6 – Occupied Bandwidth (99% Emission Bandwidth)

No.	Test	Graph Description
85	Occupied Bandwidth (99% Emission Bandwidth) – Awake Mode	903MHz Channel
86		916MHz Channel
87		927MHz Channel
88	Occupied Bandwidth (99% Emission Bandwidth) – Sleep Mode	920MHz Channel

EMC Bayswater Pty. Ltd.

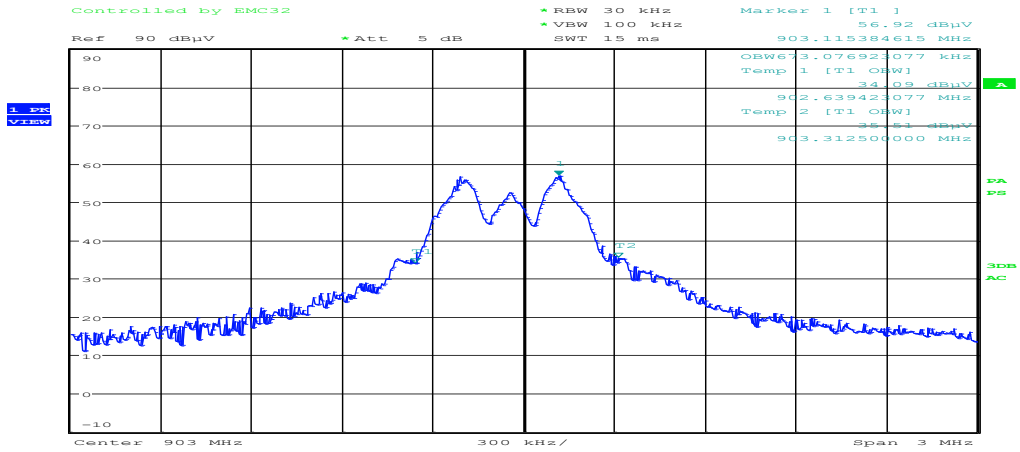
CFR47 FCC Part 15, Subpart C, 15.247 - Occupied Bandwidth (99% Emission Bandwidth)

CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag

Awake Mode - 903MHz Channel

Job Number: E2211-1609A-2

Test Engineer: NL



Graph 85

EMC Bayswater Pty. Ltd.

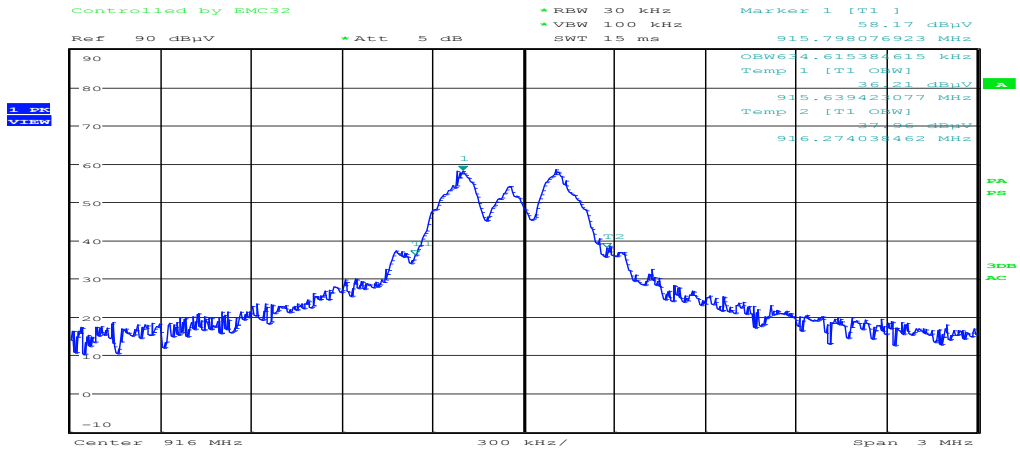
CFR47 FCC Part 15, Subpart C, 15.247 - Occupied Bandwidth (99% Emission Bandwidth)

CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag

Awake Mode - 916MHz Channel

Job Number: E2211-1609A-2

Test Engineer: AZ



Graph 86

EMC Bayswater Pty. Ltd.

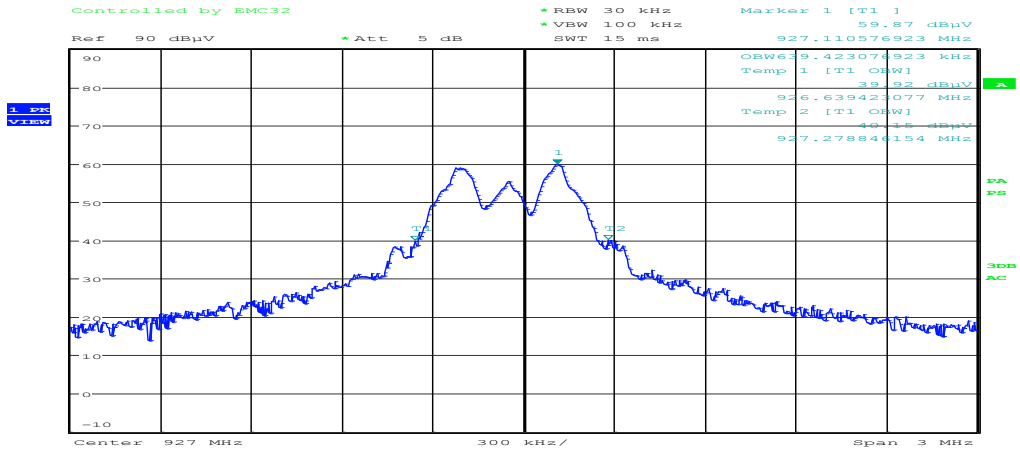
CFR47 FCC Part 15, Subpart C, 15.247 - Occupied Bandwidth (99% Emission Bandwidth)

CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag

Awake Mode - 927MHz Channel

Job Number: E2211-1609A-2

Test Engineer: AZ



Graph 87

EMC Bayswater Pty. Ltd.

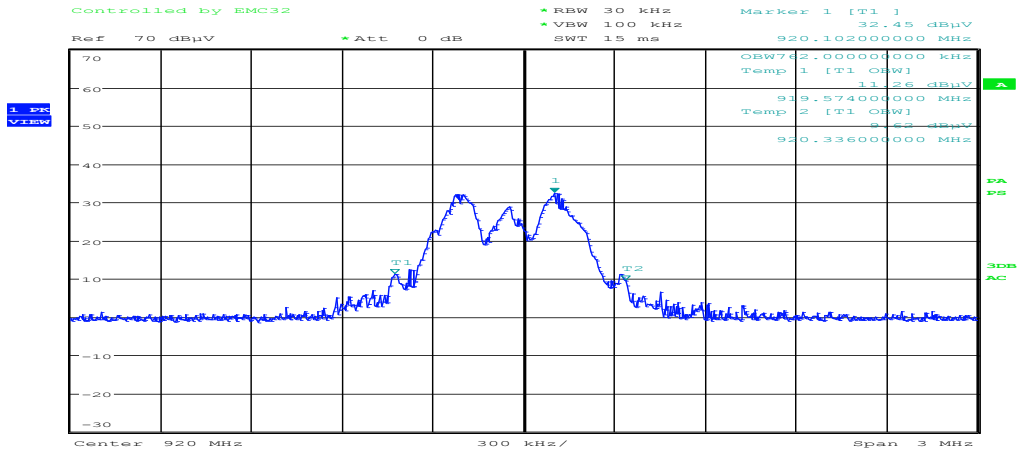
CFR47 FCC Part 15, Subpart C, 15.247 - Occupied Bandwidth (99% Emission Bandwidth)

CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag

Sleep Mode - 920MHz Channel

Job Number: E2211-1609A-2

Test Engineer: AZ



Graph 88

Appendix C.7 – Radiated Emissions (Receive Mode)

No.	Test	Graph Description
89	Radiated Emissions – Receive Mode 30MHz to 1000MHz	903MHz Channel, Horizontal Antenna Polarisation
90		903MHz Channel, Vertical Antenna Polarisation
91		916MHz Channel, Horizontal Antenna Polarisation
92		916MHz Channel, Vertical Antenna Polarisation
93		927MHz Channel, Horizontal Antenna Polarisation
94		927MHz Channel, Vertical Antenna Polarisation
95	Radiated Emissions – Receive Mode 1GHz to 5GHz	903MHz Channel, Horizontal Antenna Polarisation
96		903MHz Channel, Vertical Antenna Polarisation
97		916MHz Channel, Horizontal Antenna Polarisation
98		916MHz Channel, Vertical Antenna Polarisation
99		927MHz Channel, Horizontal Antenna Polarisation
100		927MHz Channel, Vertical Antenna Polarisation

EMC Bayswater Pty. Ltd.

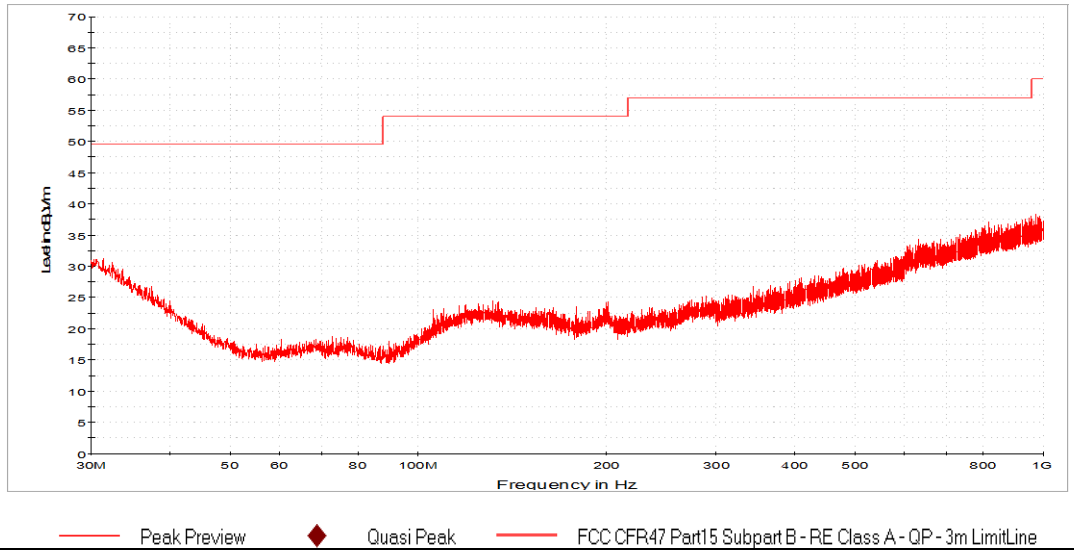
CFR47 FCC Part 15, Subpart C, 15.247 - Radiated Emissions (Receive Mode)

Job Number: E2211-1609A-2

CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag

Test Engineer: AZ

903MHz Channel - Horizontal Antenna Polarisation – 30MHz to 1000MHz



Graph 89

EMC Bayswater Pty. Ltd.

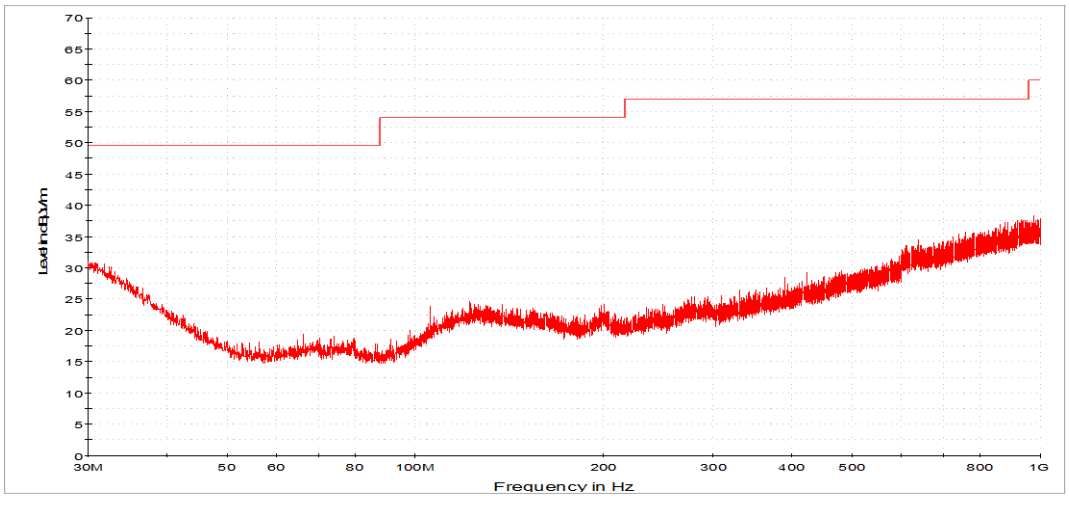
CFR47 FCC Part 15, Subpart C, 15.247 - Radiated Emissions (Receive Mode)

Job Number: E2211-1609A-2

CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag

Test Engineer: AZ

903MHz Channel - Vertical Antenna Polarisation – 30MHz to 1000MHz



Graph 90

EMC Bayswater Pty. Ltd.

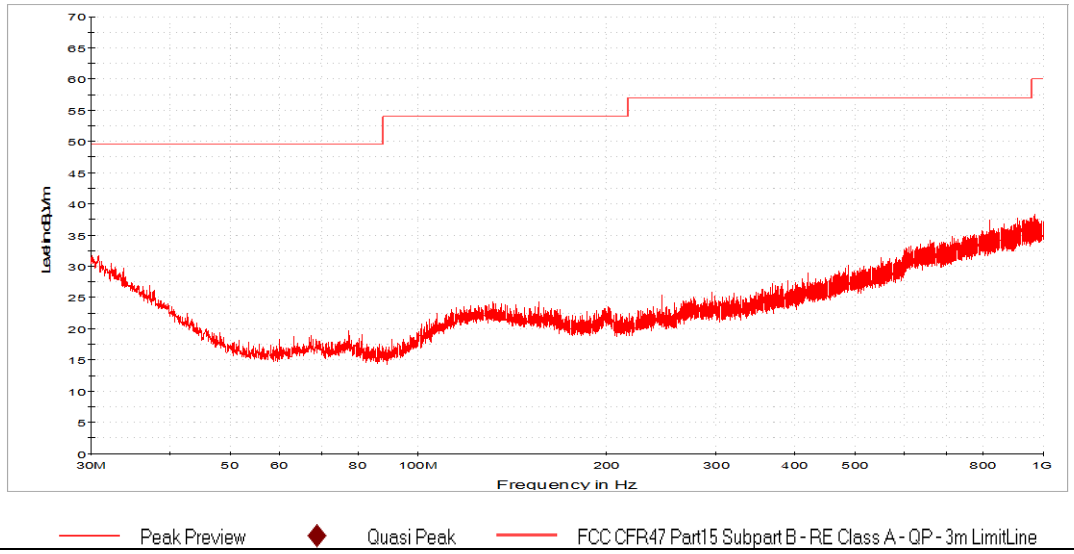
CFR47 FCC Part 15, Subpart C, 15.247 - Radiated Emissions (Receive Mode)

Job Number: E2211-1609A-2

CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag

Test Engineer: AZ

916MHz Channel - Horizontal Antenna Polarisation – 30MHz to 1000MHz



Graph 91

EMC Bayswater Pty. Ltd.

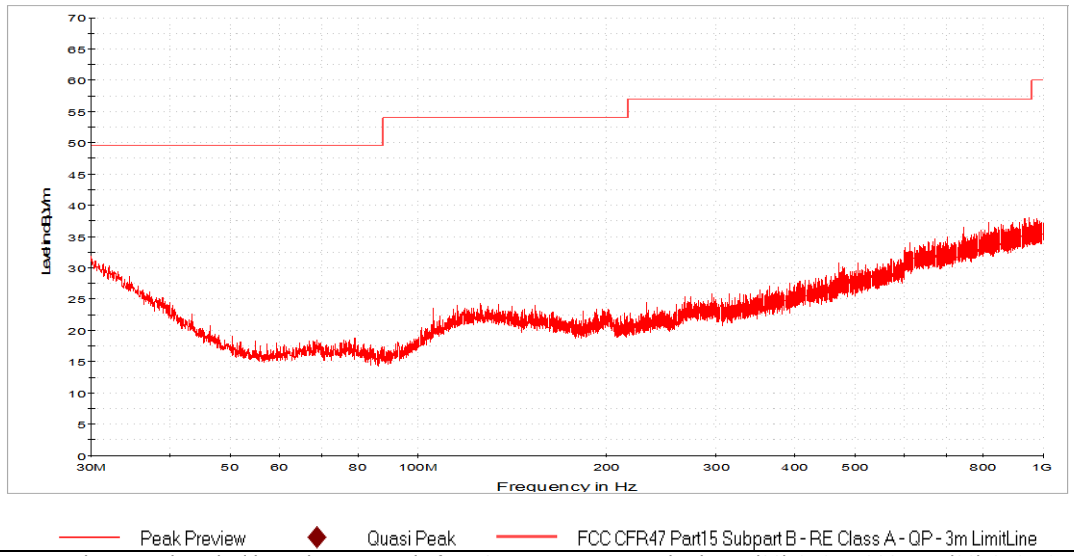
CFR47 FCC Part 15, Subpart C, 15.247 - Radiated Emissions (Receive Mode)

Job Number: E2211-1609A-2

CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag

Test Engineer: AZ

916MHz Channel - Vertical Antenna Polarisation – 30MHz to 1000MHz



Graph 92

EMC Bayswater Pty. Ltd.

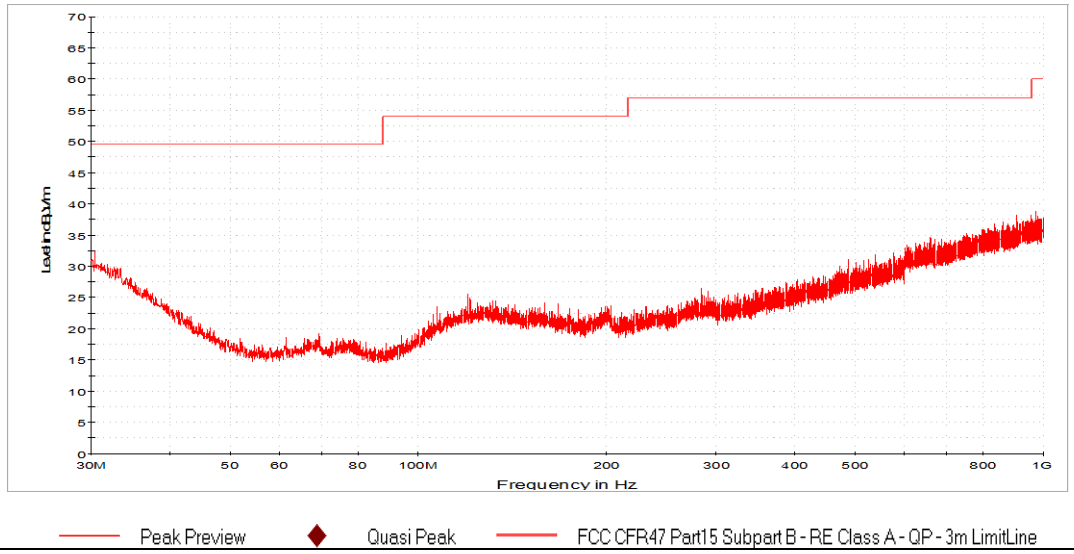
CFR47 FCC Part 15, Subpart C, 15.247 - Radiated Emissions (Receive Mode)

Job Number: E2211-1609A-2

CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag

Test Engineer: AZ

927MHz Channel - Horizontal Antenna Polarisation – 30MHz to 1000MHz



Graph 93

EMC Bayswater Pty. Ltd.

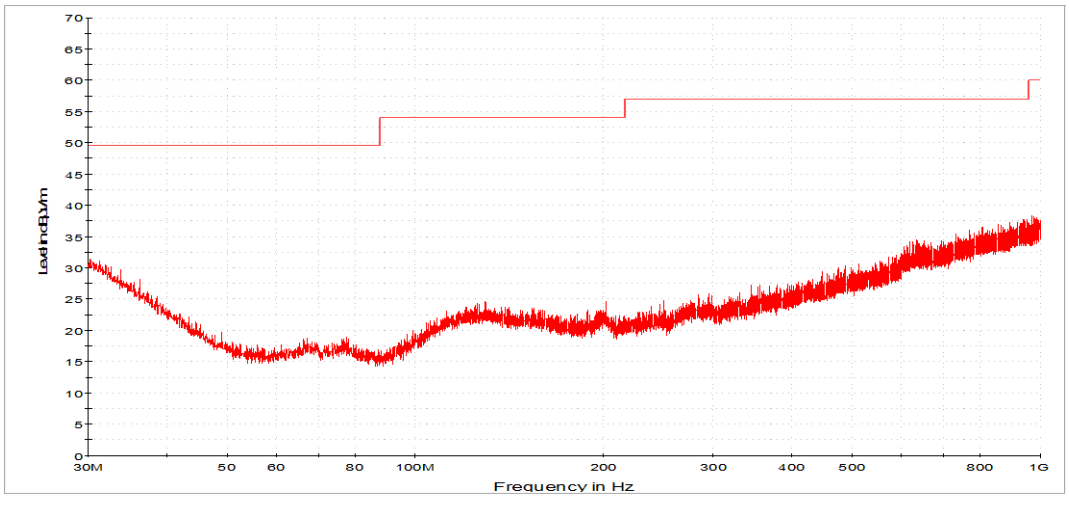
CFR47 FCC Part 15, Subpart C, 15.247 - Radiated Emissions (Receive Mode)

Job Number: E2211-1609A-2

CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag

Test Engineer: AZ

927MHz Channel - Vertical Antenna Polarisation – 30MHz to 1000MHz



Graph 94

EMC Bayswater Pty. Ltd.

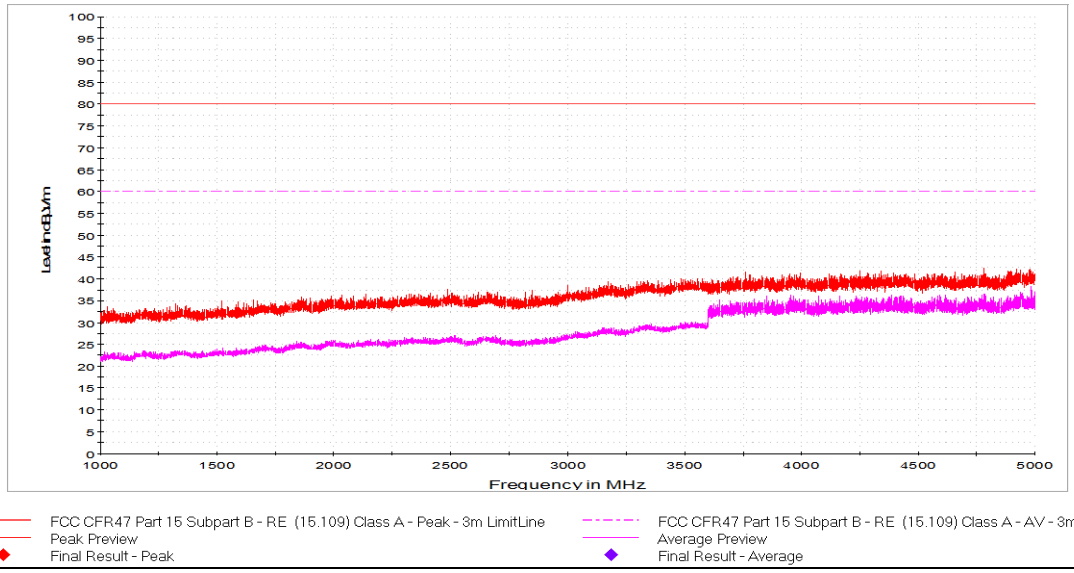
CFR47 FCC Part 15, Subpart C, 15.247 - Radiated Emissions (Receive Mode)

Job Number: E2211-1609A-2

CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag

Test Engineer: AZ

903MHz Channel - Horizontal Antenna Polarisation – 1GHz to 5GHz



Graph 95

EMC Bayswater Pty. Ltd.

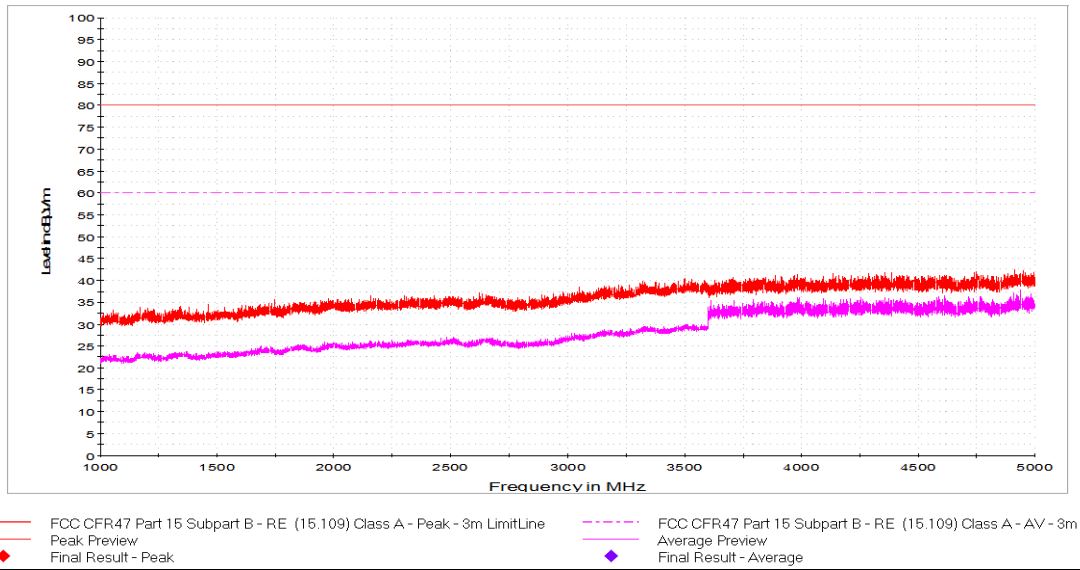
CFR47 FCC Part 15, Subpart C, 15.247 - Radiated Emissions (Receive Mode)

Job Number: E2211-1609A-2

CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag

Test Engineer: AZ

903MHz Channel - Vertical Antenna Polarisation – 1GHz to 5GHz



Graph 96

EMC Bayswater Pty. Ltd.

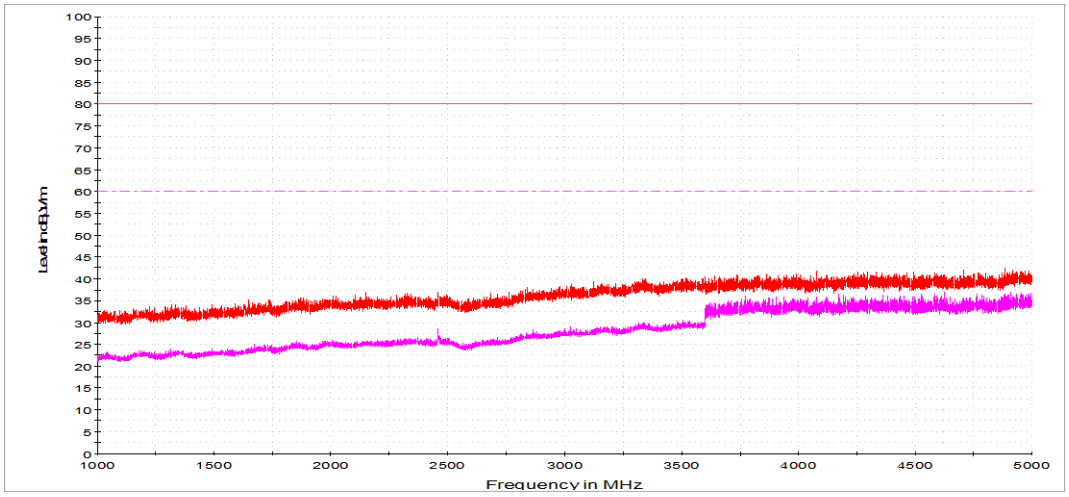
CFR47 FCC Part 15, Subpart C, 15.247 - Radiated Emissions (Receive Mode)

Job Number: E2211-1609A-2

CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag

Test Engineer: AZ

916MHz Channel - Horizontal Antenna Polarisation – 1GHz to 5GHz



Graph 97

EMC Bayswater Pty. Ltd.

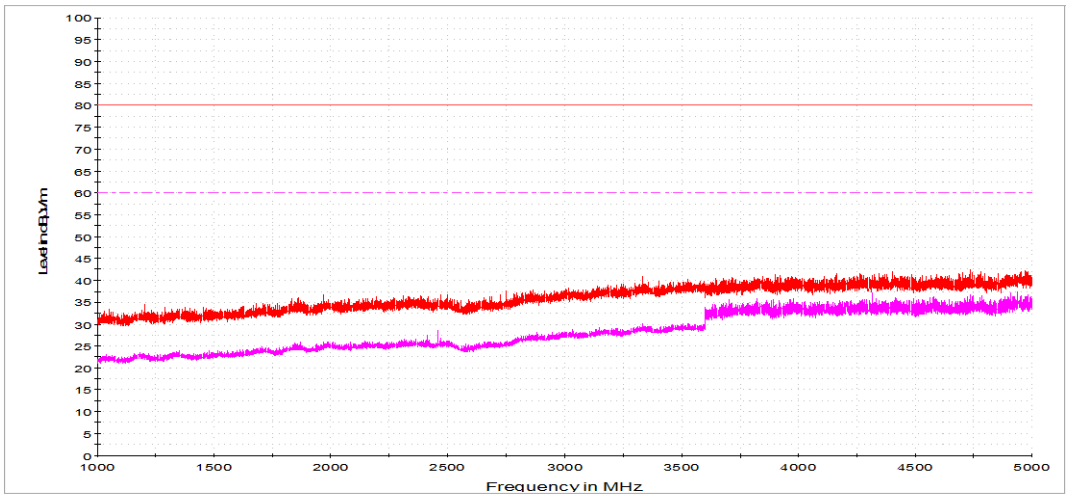
CFR47 FCC Part 15, Subpart C, 15.247 - Radiated Emissions (Receive Mode)

Job Number: E2211-1609A-2

CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag

Test Engineer: AZ

916MHz Channel - Vertical Antenna Polarisation – 1GHz to 5GHz



Graph 98

EMC Bayswater Pty. Ltd.

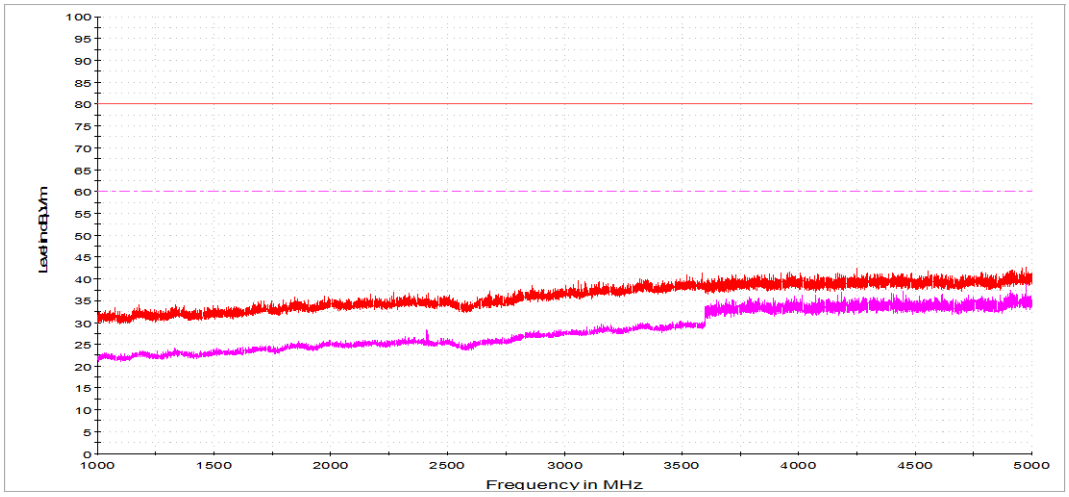
CFR47 FCC Part 15, Subpart C, 15.247 - Radiated Emissions (Receive Mode)

Job Number: E2211-1609A-2

CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag

Test Engineer: AZ

927MHz Channel - Horizontal Antenna Polarisation – 1GHz to 5GHz



Graph 99

EMC Bayswater Pty. Ltd.

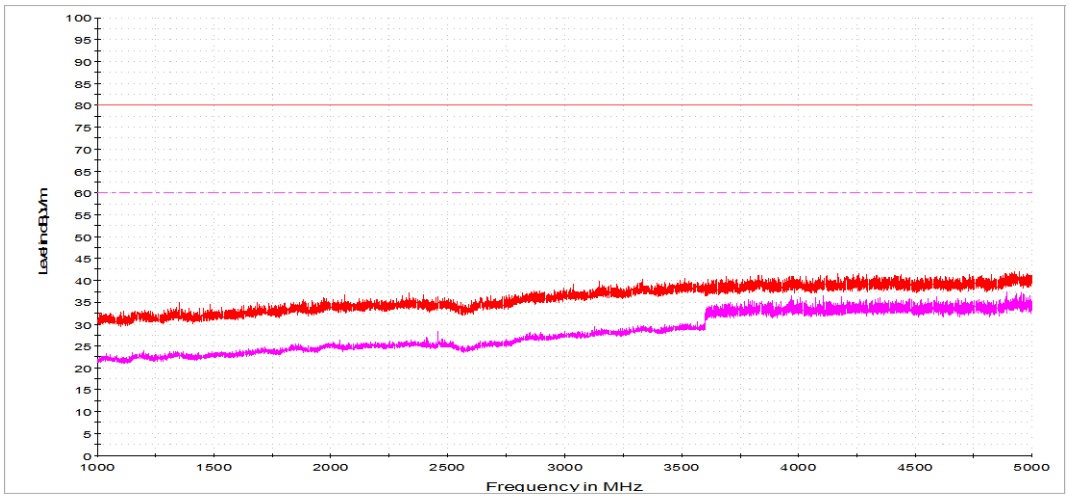
CFR47 FCC Part 15, Subpart C, 15.247 - Radiated Emissions (Receive Mode)

Job Number: E2211-1609A-2

CR Mining - SEN_GET_P1_5.5_920 - GET Sensor Tag

Test Engineer: AZ

927MHz Channel - Vertical Antenna Polarisation – 1GHz to 5GHz



Graph 100