



Global Product Certification  
EMC-EMF Safety Approvals

## RADIO TEST REPORT

**REPORT NUMBER: M2011022-7**

**TEST STANDARD: FCC PART 15 SUBPART C  
SECTION 15.247  
ISED RSS-247 SECTION 5.0**

**CLIENT: THERMO FISHER SCIENTIFIC  
AUSTRALIA PTY LTD**

**DEVICE: GAS LOGGER**

**MODEL: G20 RTX**

**FCC ID: 2A3MT-G20RTX**

**IC: 27920-G20RTX**

**DATE OF ISSUE: 10 DECEMBER 2021**

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Accreditation No.5292

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**Equipment Under Test (EUT): Gas Logger**

## REVISION TABLE

Version	Sec/Para Changed	Change Made	Date
1		Initial issue of document	10/12/2021



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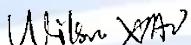
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## TEST CERTIFICATE

Device:	Gas Logger
Model Number:	G20 RTX
Variant Model:	G20
Manufacturer:	Thermo Fisher Scientific Australia Pty Ltd
Radio:	Bluetooth Low Energy (STMicroelectronics BT Chip STM32WB55RGV6)
FCC ID:	2A3MT-G20RTX
IC:	27920-G20RTX
Tested for:	Thermo Fisher Scientific Australia Pty Ltd
Address:	5 Caribbean Drive Scoresby, VIC 3179, Australia
Phone Number:	+61 03 9757 4449
Contact:	Alex Liu
Email:	Alex.liu@thermofisher.com
Standard:	FCC Part 15, Subpart C, Section 15.247 Operation within the bands 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz
	ISED RSS-247, Issue 2, Section 5 Standard specifications for frequency hopping systems and digital transmission systems operating in the bands 902-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz
Result:	The Gas Logger complied with the applicable requirements of the above standards. Refer to Report M2011022-7 for full details.
Test Date:	12 – 15 October 2021
Issue Date:	10 December 2021
Test Engineer:	 _____ Ian Paul Ng
Attestation:	<i>I hereby certify that the device(s) described herein were tested as described in this report and that the data included is that which was obtained during such testing.</i>
Authorised Signatory:	 _____ Wilson Xiao Lead Engineer - Radio
<b>Issued by:</b> EMC Technologies Pty. Ltd., 176 Harrick Road, Keilor Park, VIC, 3042, Australia. <b>Phone:</b> +61 3 9365 1000 <b>E-mail:</b> <a href="mailto:emc-general@emctech.com.au">emc-general@emctech.com.au</a> <b>Web:</b> <a href="http://www.emctech.com.au">www.emctech.com.au</a>	

## RADIO TEST REPORT

### 1 TEST SUMMARY

Sec.	Description	FCC	ISED	Result(s)
6.1	Antenna Requirement	§15.203	RSS-Gen 6.8	Complied
6.2	Restricted Bands of Operation	§15.205	RSS-Gen 8.10	Complied
6.3	Conducted Limits	§15.207	RSS-Gen 8.8	Not Applicable
6.4	Radiated emission limits; general requirements	§15.209	RSS-Gen 8.9	Complied
6.5	6 dB Bandwidth	§15.247(a)(2)	RSS-247 5.2(a)	Complied
6.6	Peak Output Power	§15.247(b)(3)	RSS-247 5.4(d)	Complied
6.7	Out-of-Band/Spurious Emissions	§15.247(d)	RSS-247 5.5	Complied
6.8	Band-Edge Emission Measurements	§15.247(d)	RSS-247 5.5	Complied
6.9	Power spectral density	§15.247(e)	RSS-247 5.2(b)	Complied
6.10	Maximum Permissible Exposure	§15.247(i)	RSS-102	Complied
6.11	Occupied Bandwidth – 99% power	§15.215	RSS-Gen 6.7	Complied

### 2 TEST FACILITY

#### 2.1 General

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

EMC Technologies Pty Ltd is also an ISED Canada recognized testing laboratory – **ISED company number: 3569B** and **CAB identifier number: AU0001**.

#### 2.2 Test Laboratory/Accreditations

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

All testing in this report has been conducted in accordance with EMC Technologies' scope of NATA accreditation to ISO 17025 for both testing and calibration and ISO 17020 for Inspection – **Accreditation Number 5292**.

The current full scope of accreditation can be found on the NATA website: [www.nata.com.au](http://www.nata.com.au)



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### 3 TEST EQUIPMENT CALIBRATION

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

Equipment Type	Make/Model/Serial Number	Last Cal. dd/mm/yyyy	Due Date dd/mm/yyyy	Cal. Interval
Chamber	Frankonia SAC-3-2 (R-144)	10/08/2020	10/08/2023	3 Year <sup>*1</sup>
EMI Receiver	R&S ESW26 Sn: 101306 (R-143)	21/06/2021	21/06/2022	1 Year <sup>*2</sup>
Antennas	EMCO 6502 Active Loop Antenna Sn: 2021 (A-310)	31/08/2020	31/08/2022	2 Year <sup>*2</sup>
	SUNOL JB1 Sn. A052518 (A-434)	13/11/2020	13/11/2022	2 Year <sup>*2</sup>
	Com-Power AH-118 Horn Antenna Sn: 71168 (A-333)	16/01/2019	16/01/2022	3 Year <sup>*1</sup>
	ETS-Lindgren 3160-09 Horn Antenna Sn:66032 (A307)	30/04/2021	30/04/2024	3 Year <sup>*1</sup>
Cables <sup>*3</sup>	Huber & Suhner Sucoflex 104A Sn: 503055 (C-457)	05/01/2021	05/01/2022	1 Year <sup>*1</sup>
	Huber & Suhner Sucoflex 104A Sn: 800448 (C-520)	05/01/2021	05/01/2022	1 Year <sup>*1</sup>
	Huber & Suhner Sucoflex 104A Sn: 27319 (C-273)	06/01/2021	06/01/2022	1 Year <sup>*1</sup>

Note \*1. Internal NATA calibration.

Note \*2. External NATA / A2LA calibration.

Note \*3. Cables are verified before measurements are taken.

### 4 MEASUREMENT UNCERTAINTY

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

Radiated Emissions:	9 kHz to 30 MHz	±4.1 dB
	30 MHz to 300 MHz	±5.1 dB
	300 MHz to 1000 MHz	±4.7 dB
	1 GHz to 18 GHz	±4.6 dB
	18 GHz to 40 GHz	±4.6 dB

Peak Output Power:	±1.5 dB
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The above expanded uncertainties are based on standard uncertainties multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.

#### Application of measurement uncertainty for this report:

The referenced uncertainty standard specifies that determination of compliance shall be based on measurements without taking into account measurement instrumentation uncertainty. However, the measurement uncertainty shall appear in the test report.

## 5 Device Details

(Information supplied by the Client)

The OdaLog is a compact portable gas data-logger, designed for harsh environments, such as the wastewater industry. With superior sealing and use of heavy-duty materials, this instrument is corrosion-resistant, durable and reliable.

### 5.1 EUT (Transmitter) Details

<b>Radio:</b>	Bluetooth Low Energy (STMicroelectronics BT Chip STM32WB55RGV6)
<b>Frequency band:</b>	2400 – 2483.5 MHz
<b>Number of Channels:</b>	40
<b>Operating Frequency:</b>	Low Channel: 2402 MHz Mid Channel: 2440 MHz High Channel: 2480 MHz
<b>Nominal Bandwidth:</b>	2 MHz
<b>Modulation:</b>	GFSK
<b>Data Rate:</b>	2 Mbps
<b>Antenna:</b>	PCB Trace Antenna
<b>Antenna gain:</b>	2 dBi

### 5.2 EUT (Host) Details

<b>Test Sample:</b>	Gas Logger
<b>Model Number:</b>	G20 RTX
<b>Variant Model:</b>	G20
<b>Supply Rating:</b>	3.6V DC Internal Battery

### 5.3 Test Configuration

Testing was performed with the EUT's Transceiver set to transmit continuously at Low Channel (2402 MHz), Mid Channel (2440 MHz) and High Channel (2480 MHz).

### 5.4 Modifications

No modifications were required to achieve compliance.

### 5.5 Deviations from the Standard

No deviation from the standard.

## 6 RESULTS

### 6.1 §15.203/ RSS-Gen 6.8 Antenna Requirement

Test sample Radio Module incorporates a PCB trace antenna and cannot be replaced by another type.

**Antenna Type:** PCB trace

**Antenna gain:** 2.0 dBi

**Connector:** Not Applicable

The above installation will prevent any unauthorised switching of antennas.

### 6.2 §15.205/ RSS-Gen 8.10/ RSS-247 3.3 Restricted Bands of Operation

The provisions of the §15.205/ RSS-Gen 8.10/ RSS-247 3.3 restricted bands of operation and §15.209 radiated emissions limits have been met, refer to section 6.7

### 6.3 §15.207/ RSS-Gen 8.8 Conducted Limits

The device is battery DC powered and does not connect directly or indirectly to the AC mains network. Test was not applicable.

### 6.4 §15.209/ RSS-Gen 8.9 Radiated Emission Limits; General Requirements

The provisions of the §15.205/ RSS-Gen 8.10/ RSS-247 3.3 restricted bands of operation and §15.209/ RSS-Gen 8.9 radiated emissions limits have been met, refer to section 6.7

### 6.5 §15.247(a)(2)/ RSS-247 5.2(a) 6 dB bandwidth

#### 6.5.1 Test Procedure

The tests were performed in accordance with ANSI C63.10: 2013 Clause 11.8 DTS bandwidth.

The 6 dB bandwidth was measured while the device was transmitting with typical modulation applied. The resolution bandwidth of 100 kHz and the video bandwidth of 300 kHz were utilised when measuring the bandwidth.

#### 6.5.2 Limits

In the band 2400-2483.5MHz, the minimum 6 dB bandwidth shall be at least 500 kHz.

#### 6.5.3 Results

Table 6-1: 6 dB Bandwidth

Frequency (MHz)	6 dB Bandwidth (kHz)	Limit (kHz)
2402	1138.8	≥ 500
2440	1153.8	≥ 500
2480	1143.8	≥ 500



Graph 6-1: 6 dB bandwidth, 2402 MHz



Graph 6-2: 6 dB bandwidth, 2440 MHz



Graph 6-3: 6 dB bandwidth, 2480 MHz

## 6.6 §15.247(b)(3)/ RSS-247 5.4(d) Peak Output Power

### 6.6.1 Test Procedure

The field strength of the fundamental transmitted frequency was measured inside a semi-anechoic chamber compliant with ANSI C63.4: 2014 in accordance to ANSI C63.10: 2013 clause 11.9.1.1.

The EUT was positioned on a test turn-table and rotated through 360° to determine the highest emissions. The measurement antenna was also varied between 1 and 4 metres height. Different orientations of the EUT (x, y and z-axis) and measurement antenna polarisations (vertical and horizontal) were investigated to produce the maximum EIRP.

All measurements were made at a distance of 3 metres.

### 6.6.2 Limits

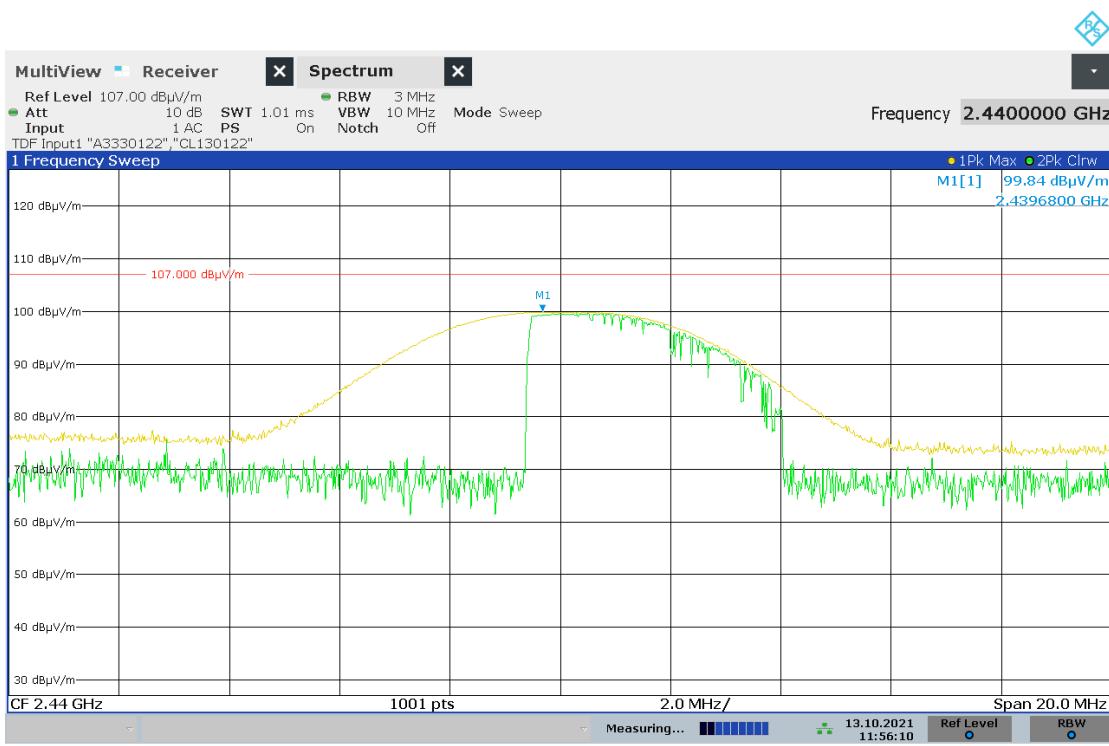
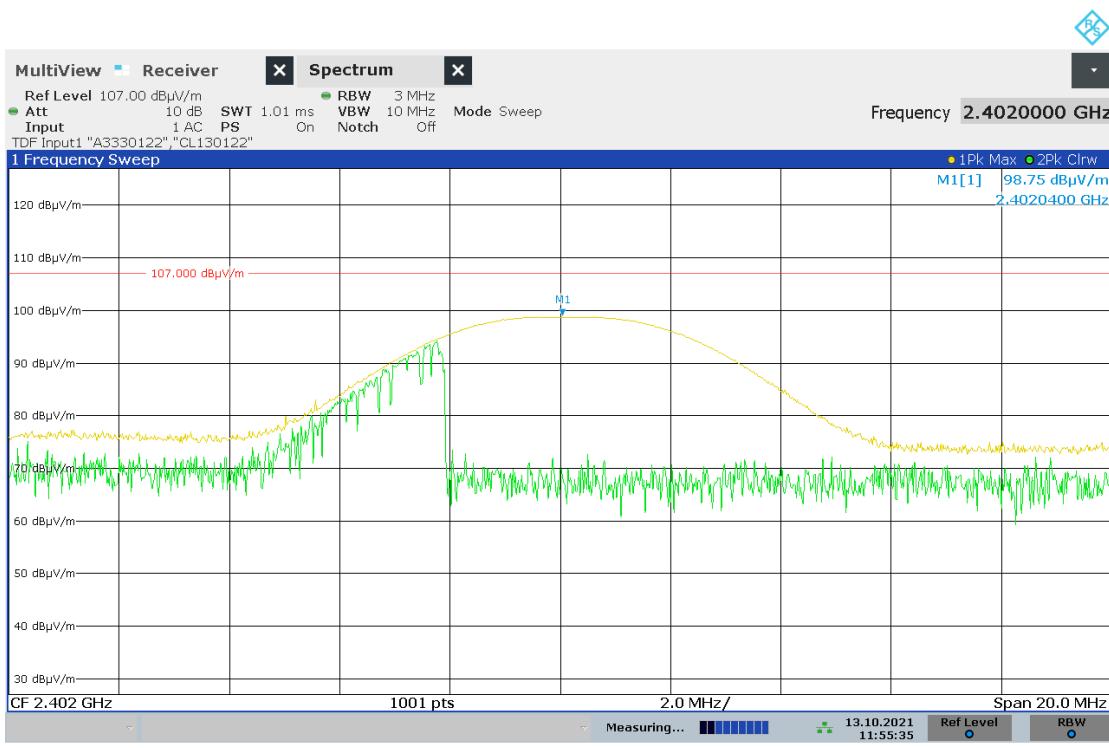
The maximum peak conducted output power at 2400-2483.5 MHz is 1 Watt or 30 dBm.

### 6.6.3 Results

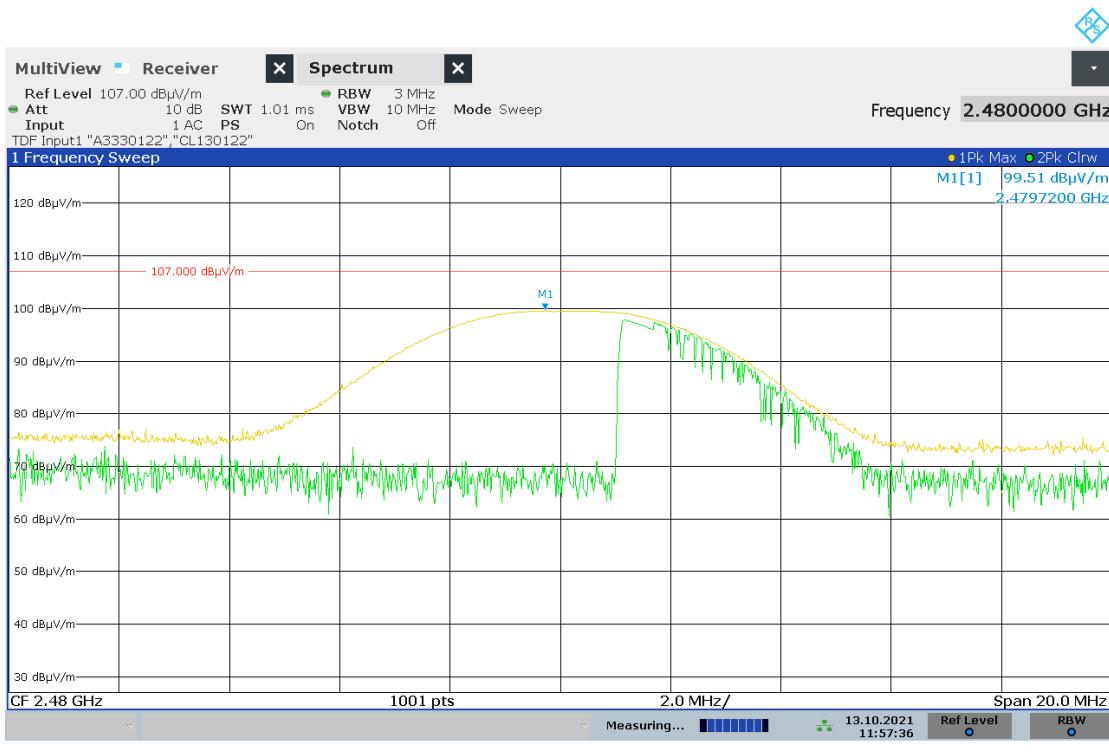
Table 6-2: Maximum peak power

Freq. (MHz)	E-Field @ 3 m (dB $\mu$ V/m)	EIRP (dBm)	Antenna Gain (dBi)	Equivalent Conducted Output Power (dBm)	Limit (dBm)	Results
2402	98.75	3.52	2	1.52	30	Complied
2440	99.84	4.61	2	2.61	30	Complied
2480	99.51	4.28	2	2.28	30	Complied

The measured radiated field strength is converted to equivalent conducted output power for checking compliance (KDB 558074 D01 Section 3).



Graph 6-5: Max EIRP, 2440 MHz



Graph 6-6: Max EIRP, 2480MHz

## 6.7 §15.247(d)/ RSS-247 5.5 Out-of-Band/Spurious Emissions

### 6.7.1 Test procedure

Radiated out-of-band/spurious emissions measurements were performed in a semi-anechoic chamber compliant with ANSI C63.4: 2014.

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

Frequency range (MHz)	Measurement Bandwidth (kHz)	Measurement Distance (m)	Antenna
0.009 to 0.150	0.2	3	
0.150 to 30	9	3	0.6 metre loop antenna
30 to 1000	120	3	Biconilog hybrid
1000 to 18 000	1000	3	Standard gain or broadband horn
18 000 to 40 000	1000	1	

EUT was set at a height of 0.8 m for measurements below 1000 MHz and set at a height of 1.5 m for measurements above 1000 MHz.

The sample was slowly rotated with the spectrum analyser set to Max-Hold. This was performed for at least two antenna heights. When an emission was located, it was positively identified and its maximum level was found by rotating the automated turntable and by varying the antenna height. For below 1000 MHz the emissions were measured with a Quasi-Peak detector, and for above 1000 MHz the emissions were measured with Peak and Average detectors.

EUT was investigated on all three axes (x, y, and z) with the loop antenna. Measurements on the worst axis are presented below.

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

### 6.7.2 Evaluation of field strength

Field strengths were calculated automatically by the software using pre-stored calibration data. The method of calculation is shown below:

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

Where:  $E$  = Radiated Field Strength in  $\text{dB}\mu\text{V}/\text{m}$ .

$V$  = EMI Receiver Voltage in  $\text{dB}\mu\text{V}$ .

$AF$  = Antenna Factor in  $\text{dB}/\text{m}$  (stored as a data array).

$G$  = Preamplifier Gain in  $\text{dB}$  (stored as a data array).

$L$  = Cable loss in  $\text{dB}$  (stored as a data array of Insertion Loss versus frequency).

### 6.7.3 Limits

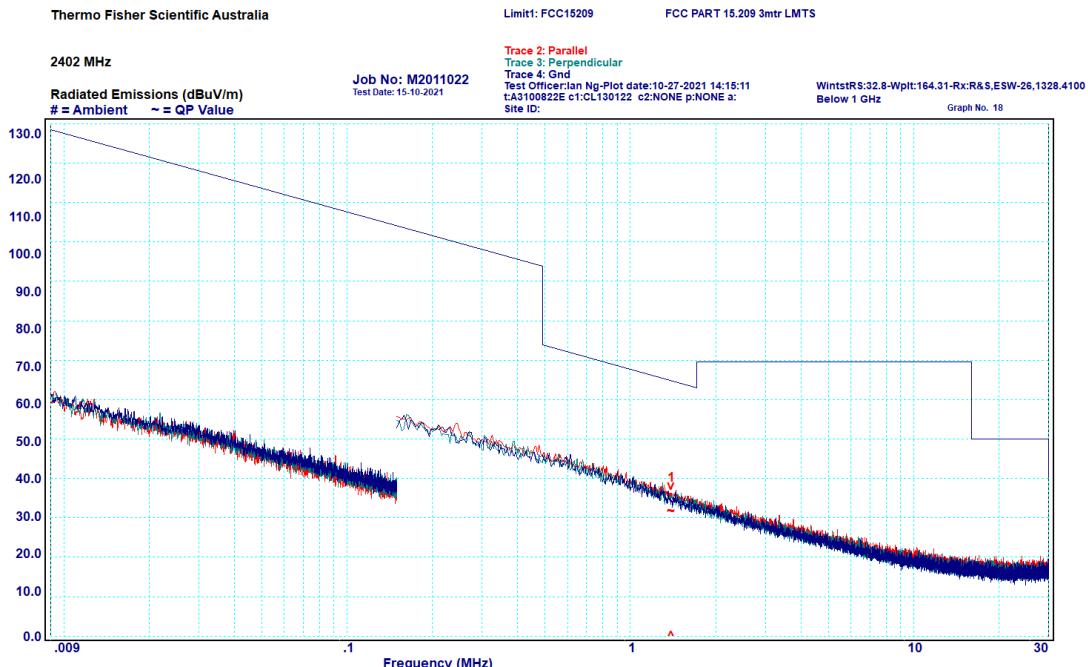
The limit applied is in accordance with the out-of-band/spurious emissions limit defined in §15.247(d).

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.

The in-band peak PSD in 100 kHz bandwidth were measured on all three channels. The maximum PSD level was used to establish the limit. However, the general limits of §15.209 apply for the restricted bands of operation defined in §15.205.

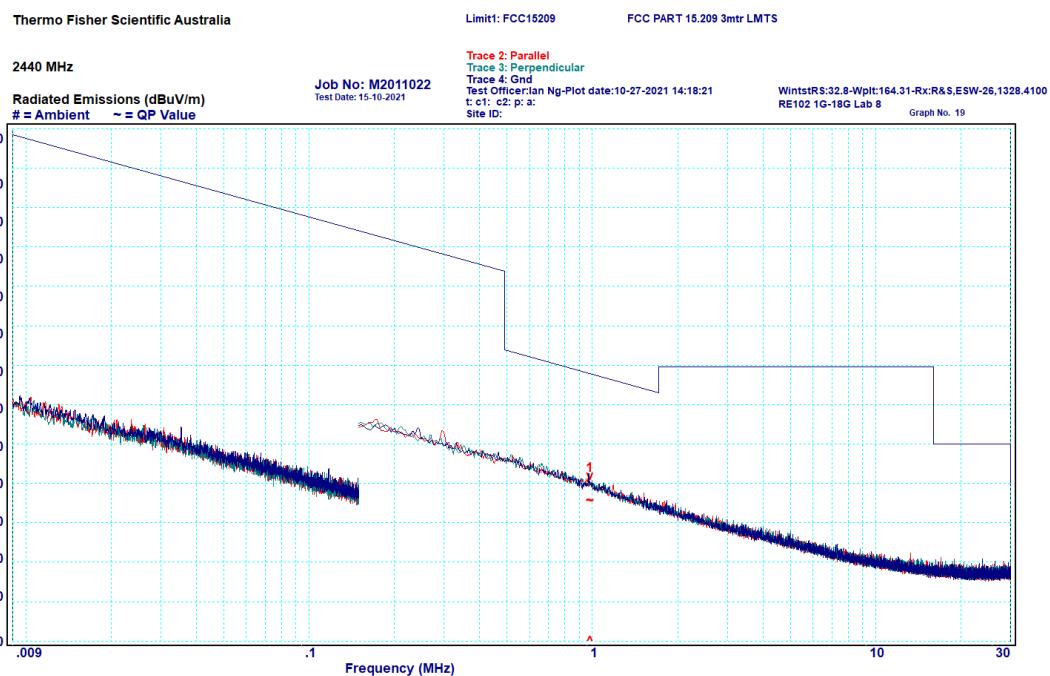
### 6.7.4 Transmitter Spurious Emissions: 9 kHz to 30 MHz

All emissions measured in the frequency band 9kHz - 30MHz complied with the requirements of the standard.



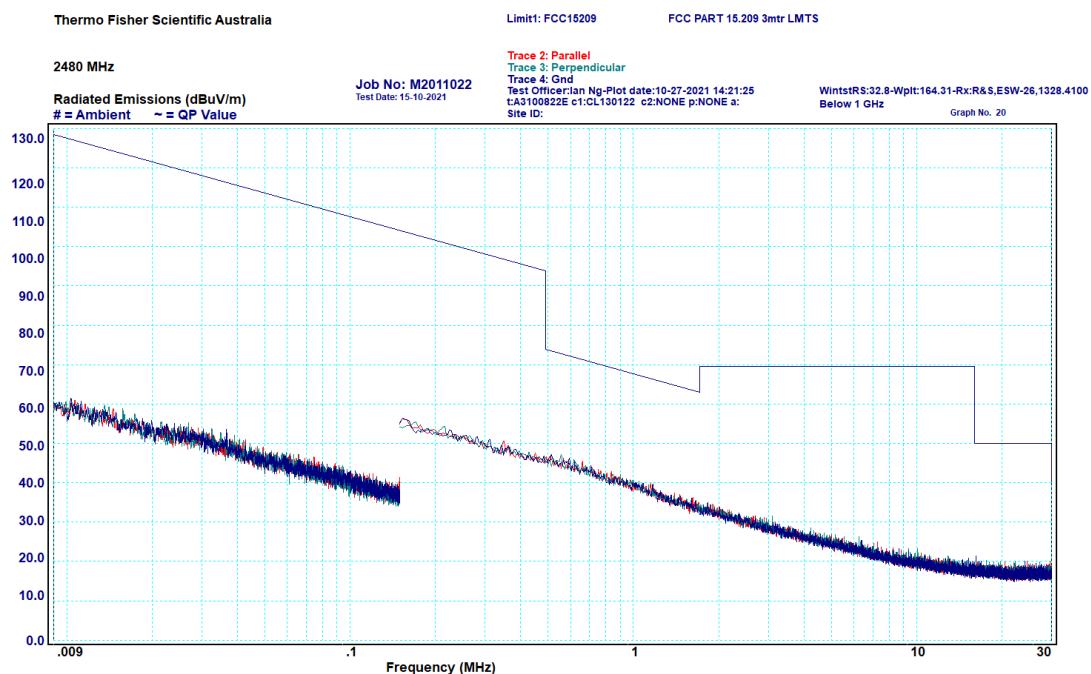
Graph 6-7: Transmitter Spurious Emissions, 9 kHz – 30 MHz, 2402 MHz

No peaks were measured within 10 dB of the limit.



Graph 6-8: Transmitter Spurious Emissions, 9 kHz – 30 MHz, 2440 MHz

No peaks were measured within 10 dB of the limit.

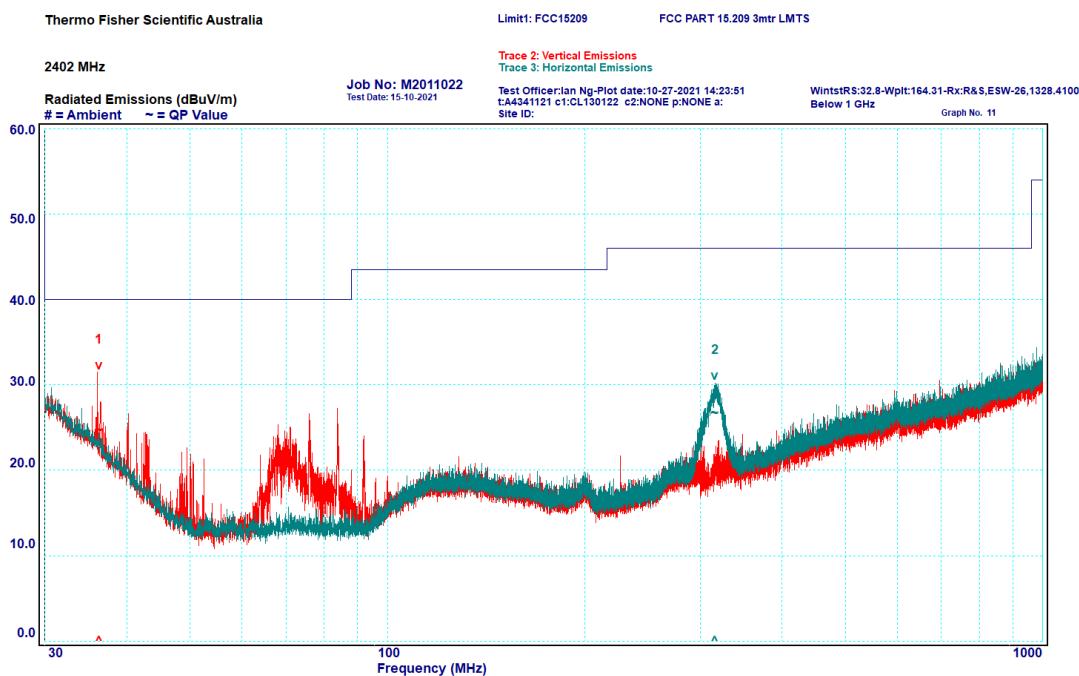


Graph 6-9: Transmitter Spurious Emissions, 9 kHz – 30 MHz, 2480 MHz

No peaks were measured within 10 dB of the limit.

### 6.7.5 Transmitter Spurious Emissions: 30 - 1000 MHz

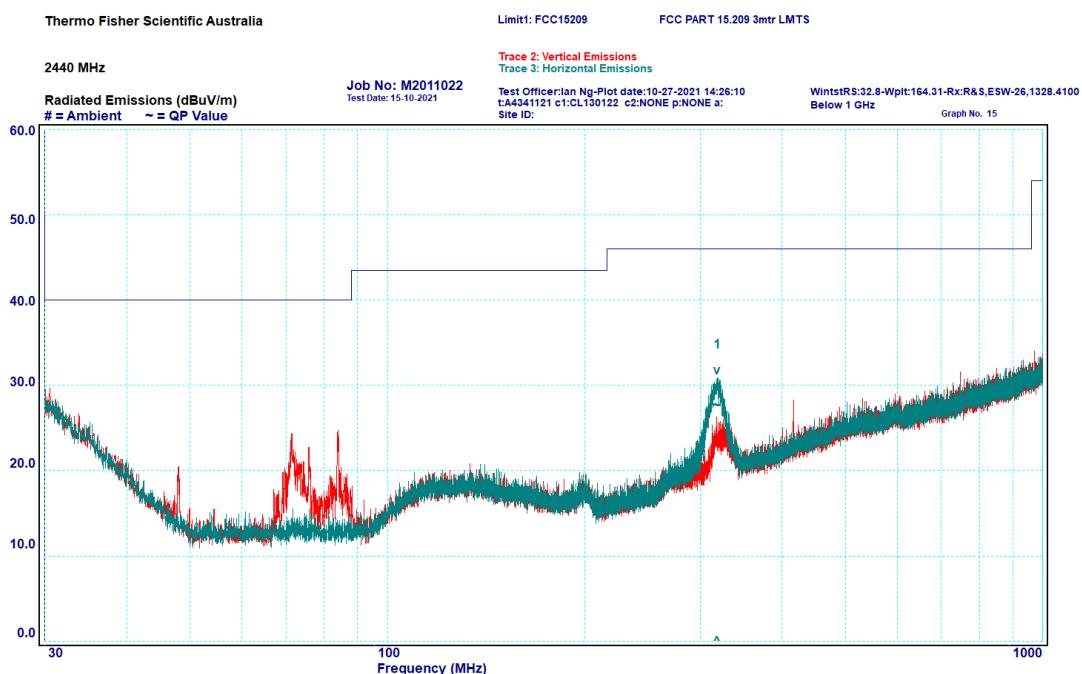
All emissions measured in the frequency band 30 – 1000 MHz complied with the requirements of the standard.



Graph 6-10: Transmitter Spurious Emissions, 30– 1000 MHz, 2402 MHz

Table 6-3: Transmitter Spurious Emissions, 30– 1000 MHz, 2402 MHz

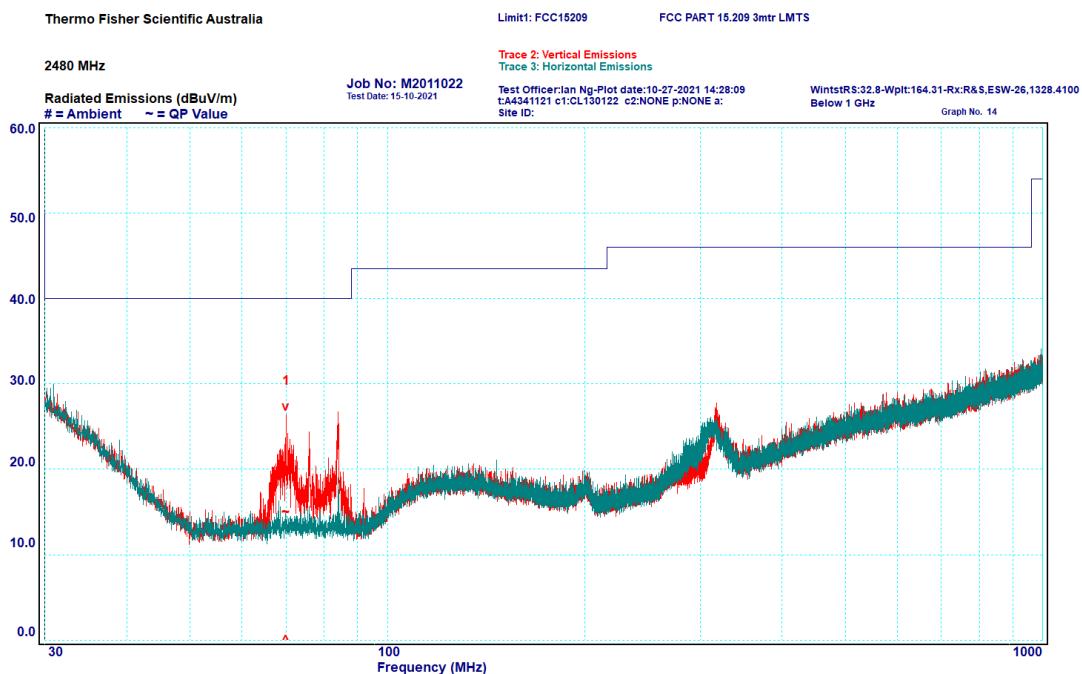
Peak	Frequency (MHz)	Polarisation	Quasi Peak		
			Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)
1	36.28	Vertical	24.7	40	-15.3
2	316.23	Horizontal	26.7	46	-19.3



Graph 6-11: Transmitter Spurious Emissions, 30 – 1000 MHz, 2440 MHz

Table 6-4: Transmitter Spurious Emissions, 30 – 1000 MHz, 2440 MHz

Peak	Frequency (MHz)	Polarisation	Quasi Peak		
			Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)
1	318.39	Horizontal	27.6	46	-18.4



Graph 6-12: Transmitter Spurious Emissions, 30 – 1000 MHz, 2480 MHz

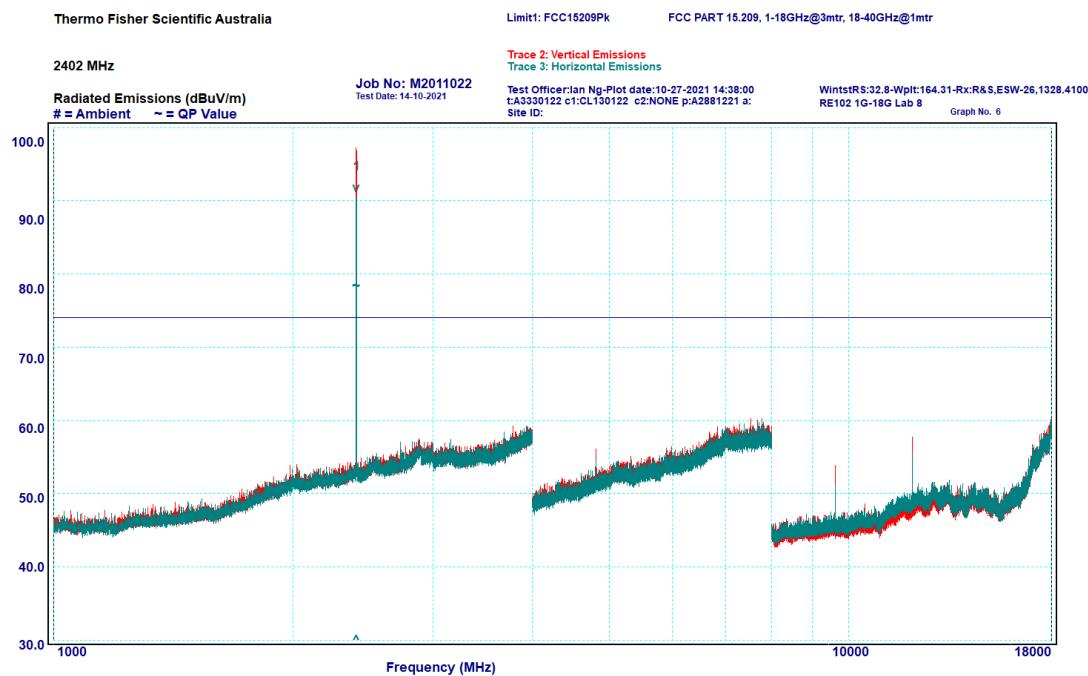
Table 6-5: Transmitter Spurious Emissions, 30 – 1000 MHz, 2480 MHz

Peak	Frequency (MHz)	Polarisation	Quasi Peak		
			Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)
1	70	Vertical	15	40	-25

### 6.7.6 Transmitter Spurious Emissions: 1 - 18 GHz

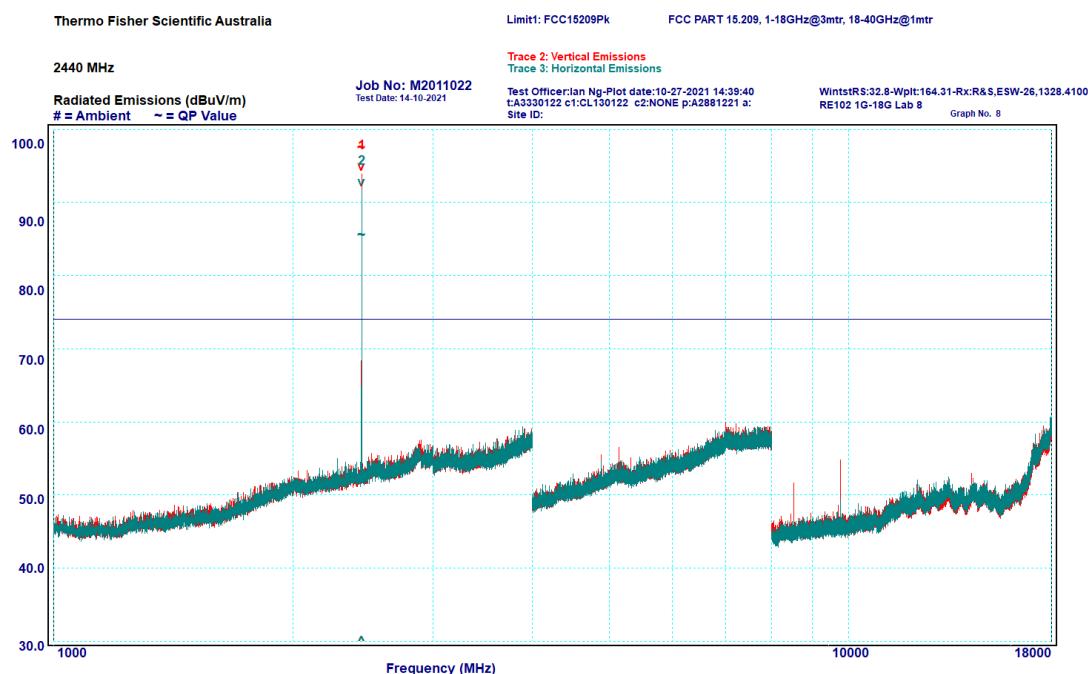
All emissions measured in the frequency band 1 – 18 GHz complied with the requirements of the standard.

#### Peak Measurement:



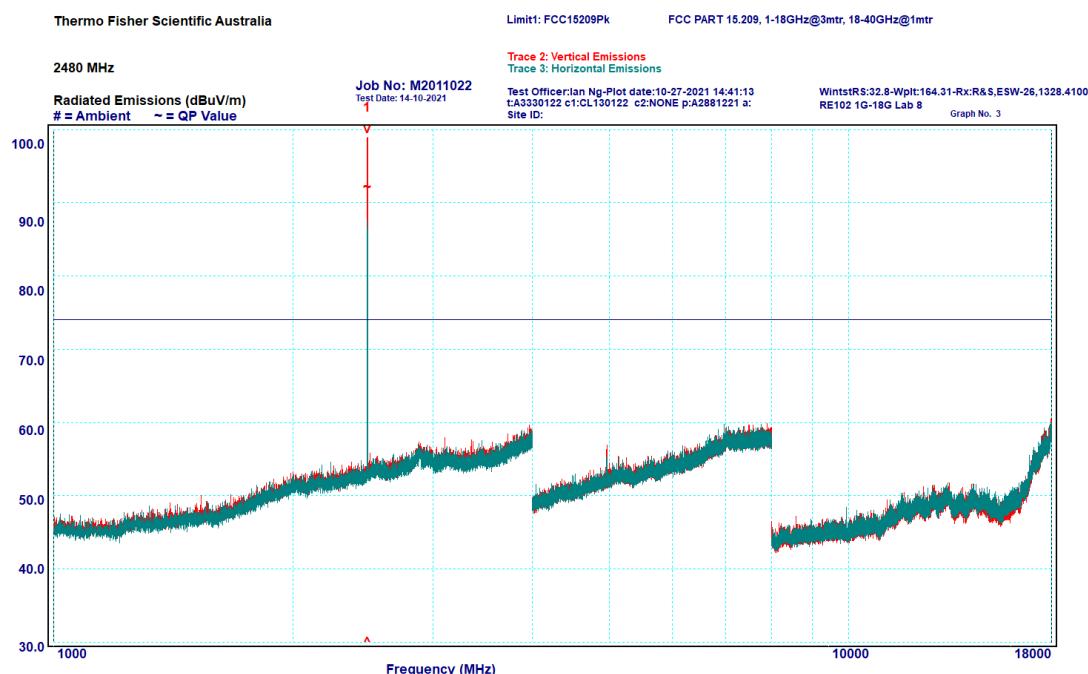
Graph 6-13: Transmitter Spurious Emissions, 1 – 18 GHz, 2402 MHz, Peak

\*Note: Peaks above the limit are the fundamental transmission and not subject to the spurious limits of the standard



Graph 6-14: Transmitter Spurious Emissions, 1 – 18 GHz, 2440 MHz, Peak

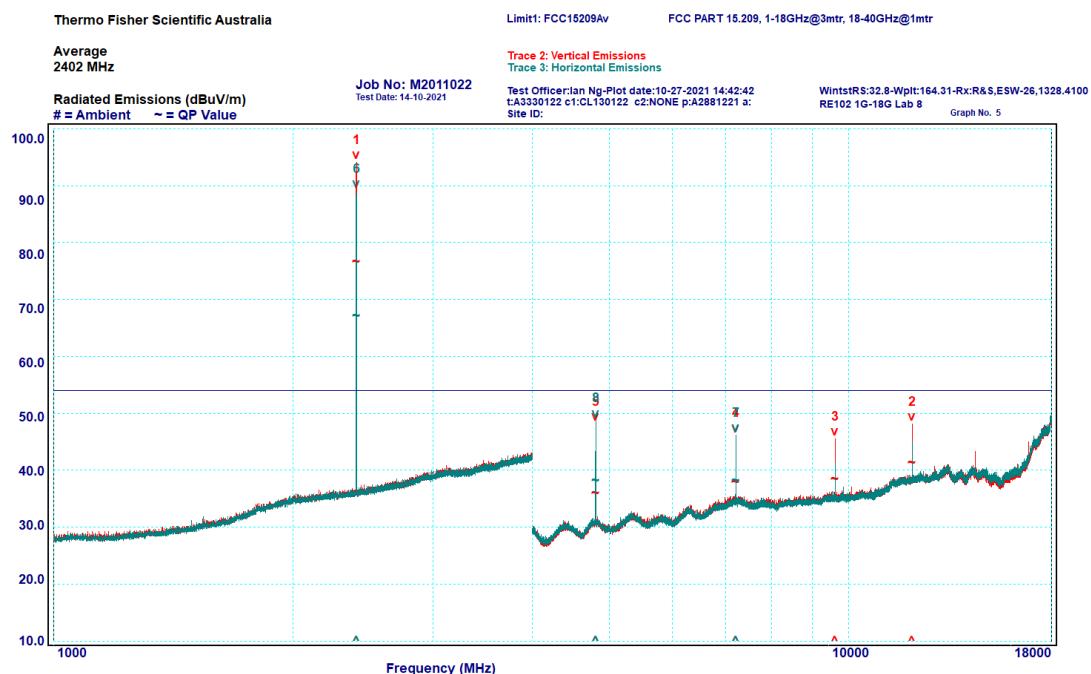
\*Note: Peaks above the limit are the fundamental transmission and not subject to the spurious limits of the standard



Graph 6-15: Transmitter Spurious Emissions, 1 – 18 GHz, 2480 MHz, Peak

\*Note: Peaks above the limit are the fundamental transmission and not subject to the spurious limits of the standard

### Average Measurement:

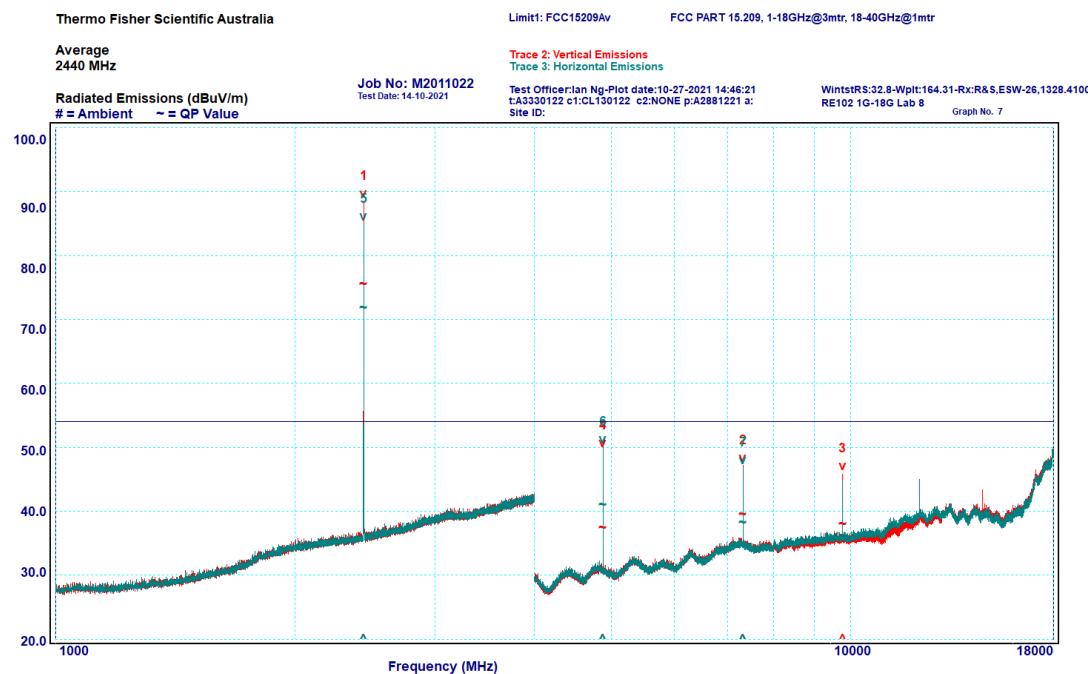


Graph 6-16: Transmitter Spurious Emissions, 1 – 18 GHz, 2402 MHz, Average

Table 6-6: Transmitter Spurious Emissions, 1 – 18 GHz, 2402 MHz, Average

Peak	Frequency (MHz)	Polarisation	Peak		
			Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)
1*	2402.06	Vertical	N/A	N/A	N/A
2	12010.48	Vertical	41.3	54	-12.7
3	9608.47	Vertical	38.4	54	-15.6
4	7206.33	Vertical	37.9	54	-16.1
5	4804.22	Vertical	36	54	-18
6*	2402.08	Horizontal	N/A	N/A	N/A
7	7206.42	Horizontal	38.2	54	-15.8
8	4804.17	Horizontal	38.1	54	-15.9

\*Note: Peak 1 and 6 are the fundamental transmission and not subject to the spurious limits of the standard

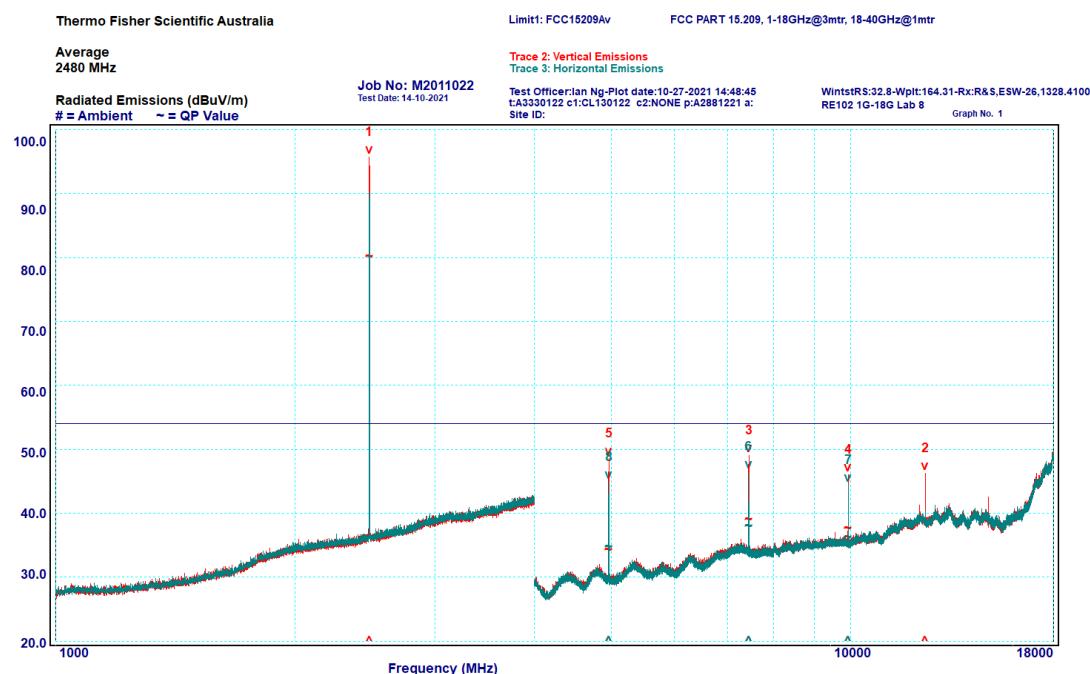


Graph 6-17: Transmitter Spurious Emissions, 1 – 18 GHz, 2440 MHz, Average

Table 6-7: Transmitter Spurious Emissions, 1 – 18 GHz, 2440 MHz, Average

Peak	Frequency (MHz)	Polarisation	Peak		
			Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)
1*	2439.52	Vertical	N/A	N/A	N/A
2	7320.34	Vertical	39.4	54	-14.6
3	9760.34	Vertical	38	54	-16
4	4880.2	Vertical	37.4	54	-16.6
5*	2440.15	Horizontal	N/A	N/A	N/A
6	4880.18	Horizontal	41	54	-13
7	7320.26	Horizontal	38.2	54	-15.8

\*Note: Peak 1 and 5 are the fundamental transmission and not subject to the spurious limits of the standard



Graph 6-18: Transmitter Spurious Emissions, 1 – 18 GHz, 2480 MHz, Average

Table 6-8: Transmitter Spurious Emissions, 1 – 18 GHz, 2480 MHz, Average

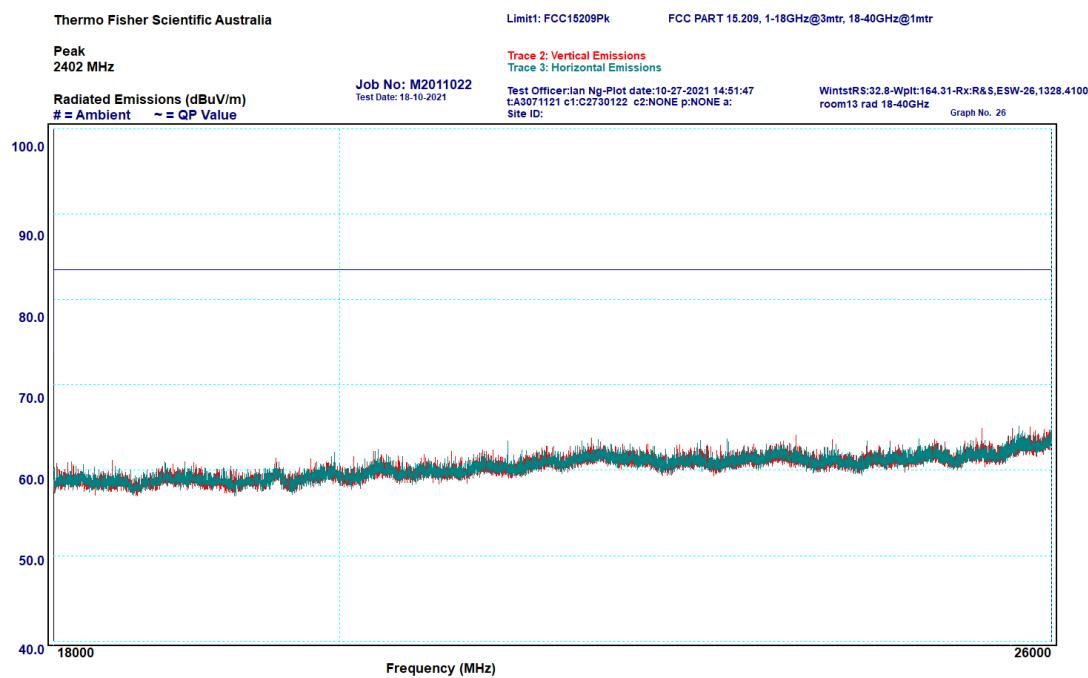
Peak	Frequency (MHz)	Polarisation	Peak		
			Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)
1*	2480.02	Vertical	N/A	N/A	N/A
2	12400.38	Vertical	39.2	54	-14.8
3	7440.28	Vertical	39	54	-15
4	9920.4	Vertical	37.6	54	-16.4
5	4960.2	Vertical	34.2	54	-19.8
6	7439.56	Horizontal	38	54	-16
7	9920.24	Horizontal	36.2	54	-17.8
8	4960.1	Horizontal	34.8	54	-19.2

\*Note: Peak 1 is the fundamental transmission and not subject to the spurious limits of the standard

### 6.7.7 Transmitter Spurious Emissions: 18 – 26 GHz

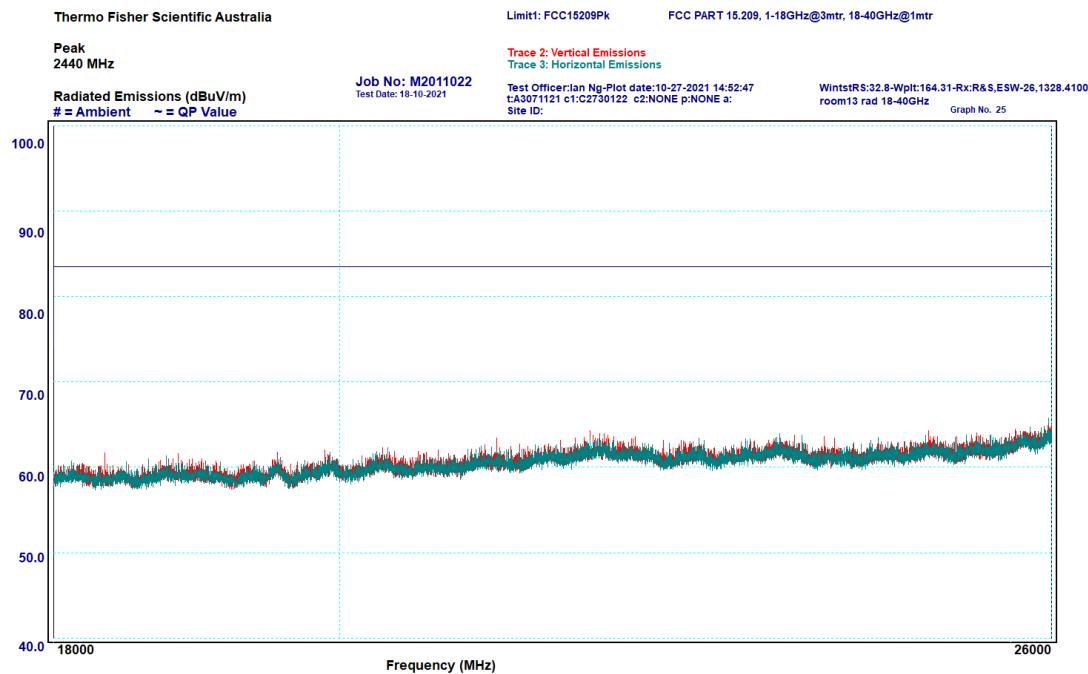
All emissions measured in the frequency band 18 – 26 GHz complied with the requirements of the standard.

#### Peak Measurement:



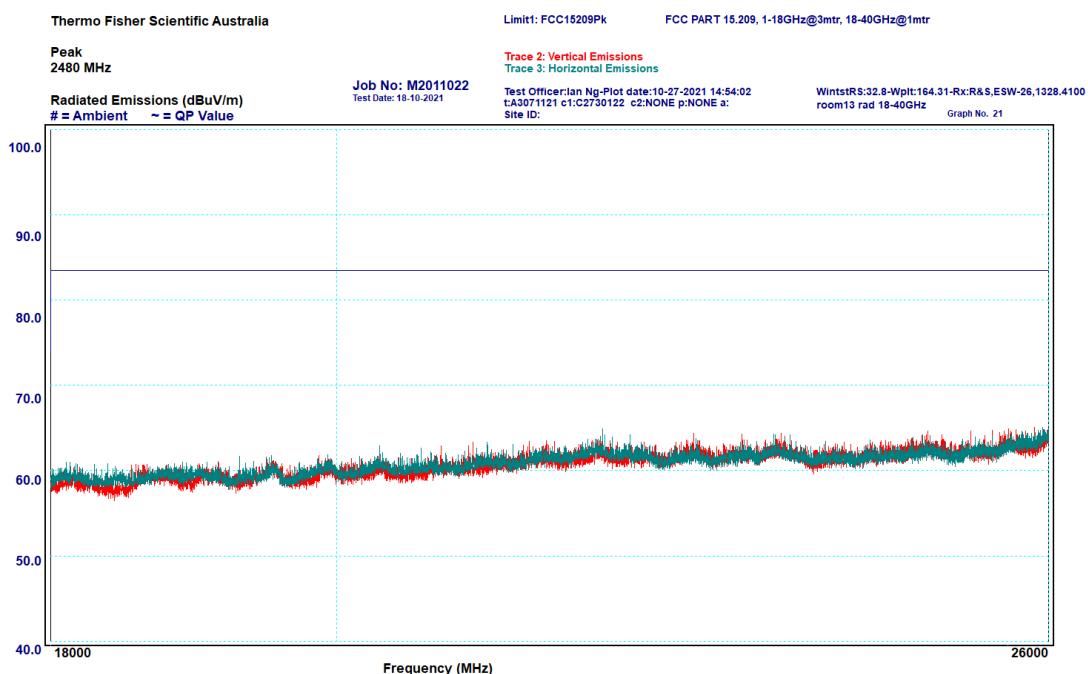
Graph 6-19: Transmitter Spurious Emissions, 18– 26 GHz, 2402 MHz, Peak

No peaks were measured within 10 dB of the limit.



Graph 6-20: Transmitter Spurious Emissions, 18– 26 GHz, 2440 MHz, Peak

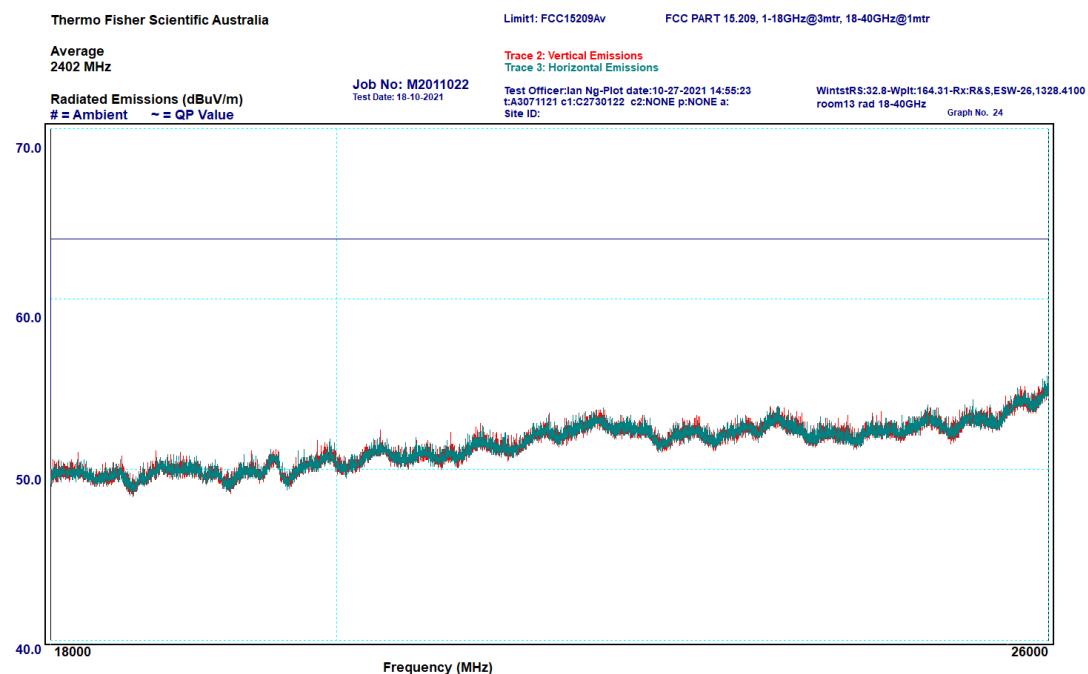
No peaks were measured within 10 dB of the limit.



Graph 6-21: Transmitter Spurious Emissions, 18– 26 GHz, 2480 MHz, Peak

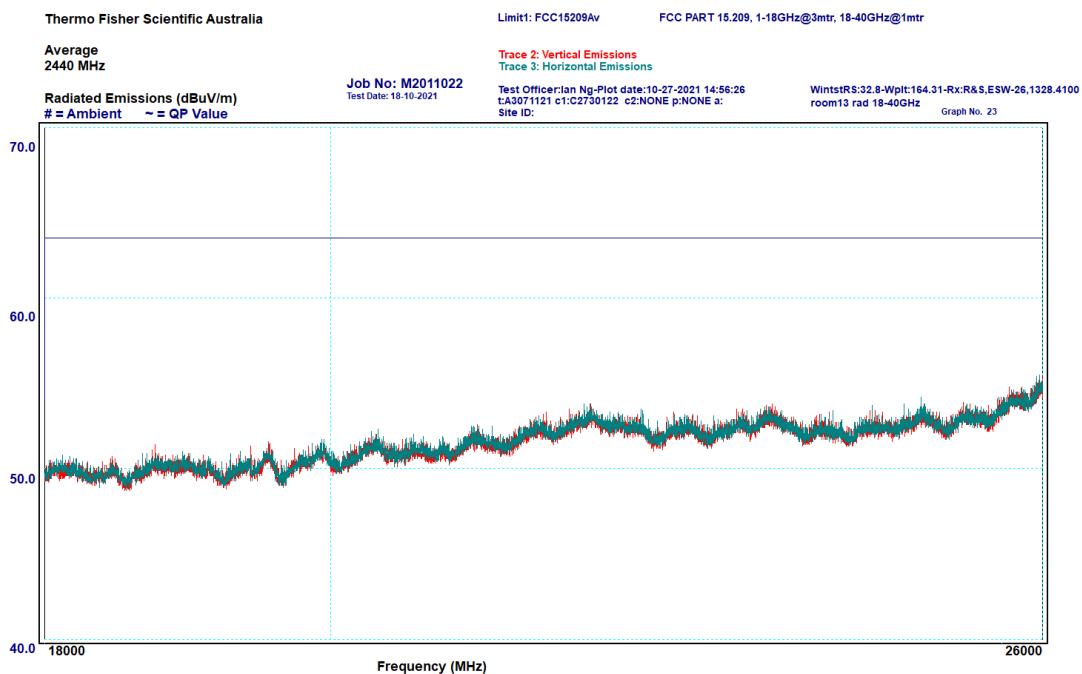
No peaks were measured within 10 dB of the limit.

#### Average Measurement:



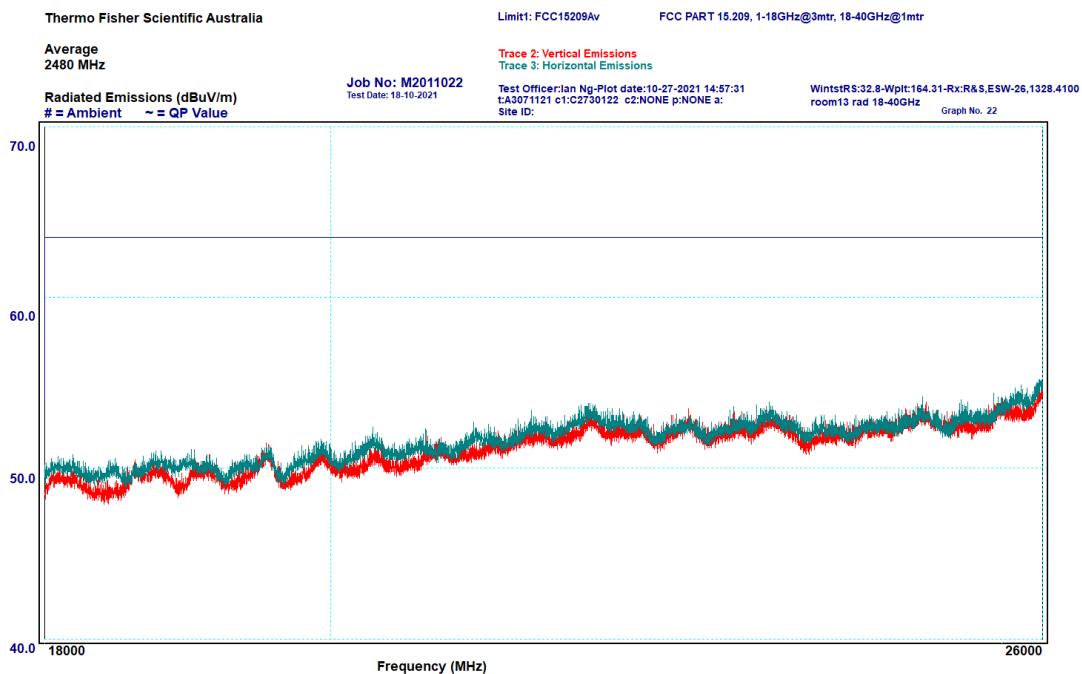
Graph 6-22: Transmitter Spurious Emissions, 18– 26 GHz, 2402 MHz, Average

No peaks were measured within 10 dB of the limit.



Graph 6-23: Transmitter Spurious Emissions, 18 – 26 GHz, 2440 MHz, Average

No peaks were measured within 10 dB of the limit.



Graph 6-24: Transmitter Spurious Emissions, 18 – 26 GHz, 2480 MHz, Average

No peaks were measured within 10 dB of the limit.

## 6.8 §15.247(d)/ §RSS-247 5.5 Band Edge Emission Measurements

Band-edge measurements were done using radiated in accordance to ANSI C63.10 clause 6.10. All emissions measured near the lower and higher band edge complied with the requirements of §15.247/ RSS-247 5.0.



Graph 6-25: Band Edge Emission, Lower Band-edge

Table 6-9: Band Edge Emission, Lower Band-edge

Measurement Type	Freq (MHz)	Measurement (dBμV/m)	Limit (dBμV/m)	Result
Peak	2400	62.22	76.45	Complied



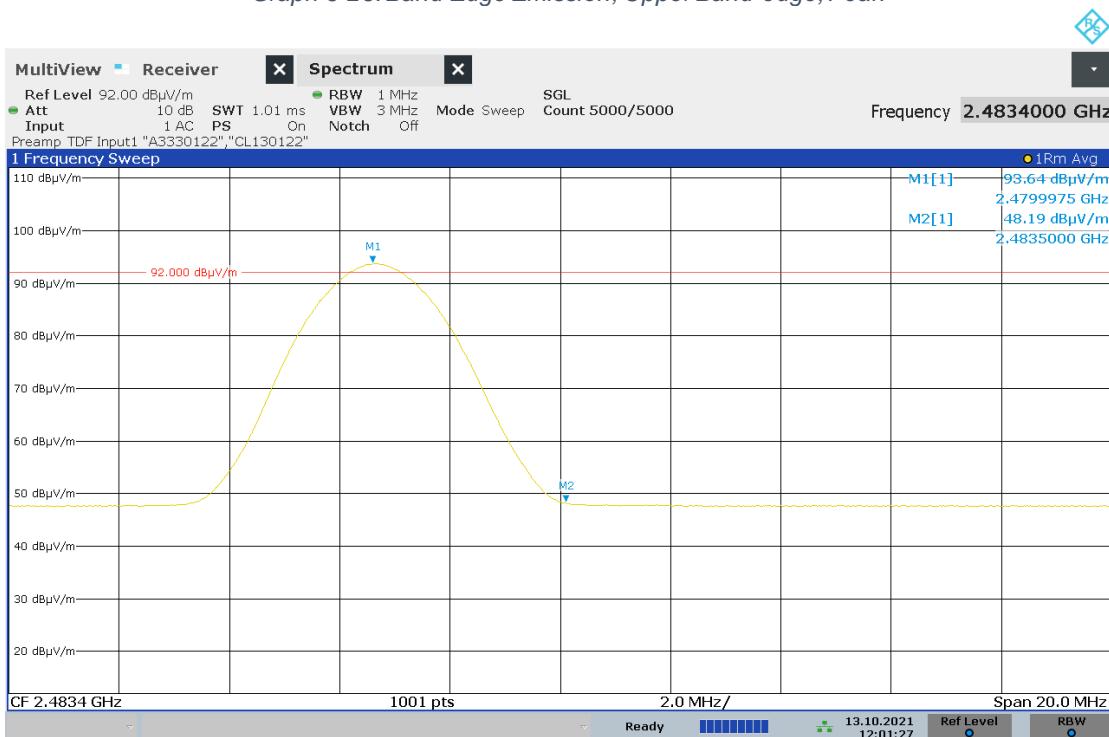
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16:51:32 12.10.2021

Graph 6-26: Band Edge Emission, Upper Band-edge, Peak



12:01:27 13.10.2021

Graph 6-27: Band Edge Emission, Upper Band-edge, Average

Table 6-10: Band Edge Emission, Upper Band-edge

Measurement Type	Freq (MHz)	Measurement (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Result
Peak	2483.5	64.51	74	Complied
Average	2483.5	48.19	54	Complied



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## 6.9 §15.247(e)/ RSS-247 5.2(b) Power Spectral Density

### 6.9.1 Test procedure

The tests were performed in accordance with ANSI C63.10: 2013 Clause 11.10 Maximum power spectral density level in the fundamental emissions.

Power spectral density measurements were done using radiated method at 3 metres. The measurement resolution bandwidth was 3 kHz. The orientation of the EUT and the measurement antenna height and polarisation that produced the highest EIRP was used.

### 6.9.2 Limits

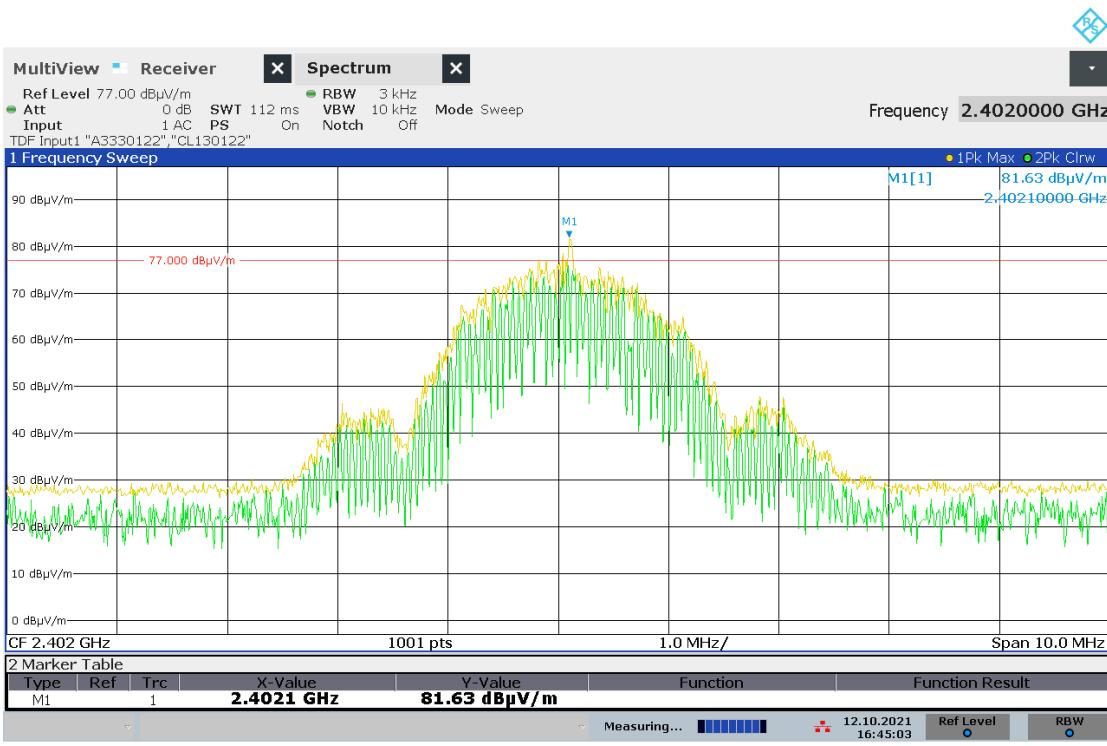
The maximum peak conducted power spectral density (PSD) is 8 dBm per 3 kHz.

### 6.9.3 Results

The measured radiated field strength is converted to equivalent conducted output power spectral density for checking compliance (KDB 558074 D01 Section 3).

Table 6-11: Power spectral density

Freq (MHz)	E-Field@ 3 m (dB $\mu$ V/m)	EIRP (dBm)	Antenna Gain (dBi)	Equivalent Conducted Output PSD (dBm)	Limit (dBm)	Results
2402	81.63	-13.60	2	-15.60	8	Complied
2440	83.00	-12.23	2	-14.23	8	Complied
2480	83.43	-11.80	2	-13.80	8	Complied



Graph 6-28: Radiated – Power Spectral Density, 2402 MHz



Graph 6-29: Radiated – Power Spectral Density, 2440 MHz



Graph 6-30: Radiated – Power Spectral Density, 2480 MHz

## 6.10 §15.247(i)/ RSS-Gen 3.4/RSS-102 Maximum Permissible Exposure

The EUT complied with the applicable maximum permissible exposure levels. Refer to EMC Technologies report M2011022-11V2 and M2011022-12V2.

## 6.11 §15.215/ RSS-Gen 6.7 Occupied Bandwidth – 99% power

### 6.11.1 Test procedure

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

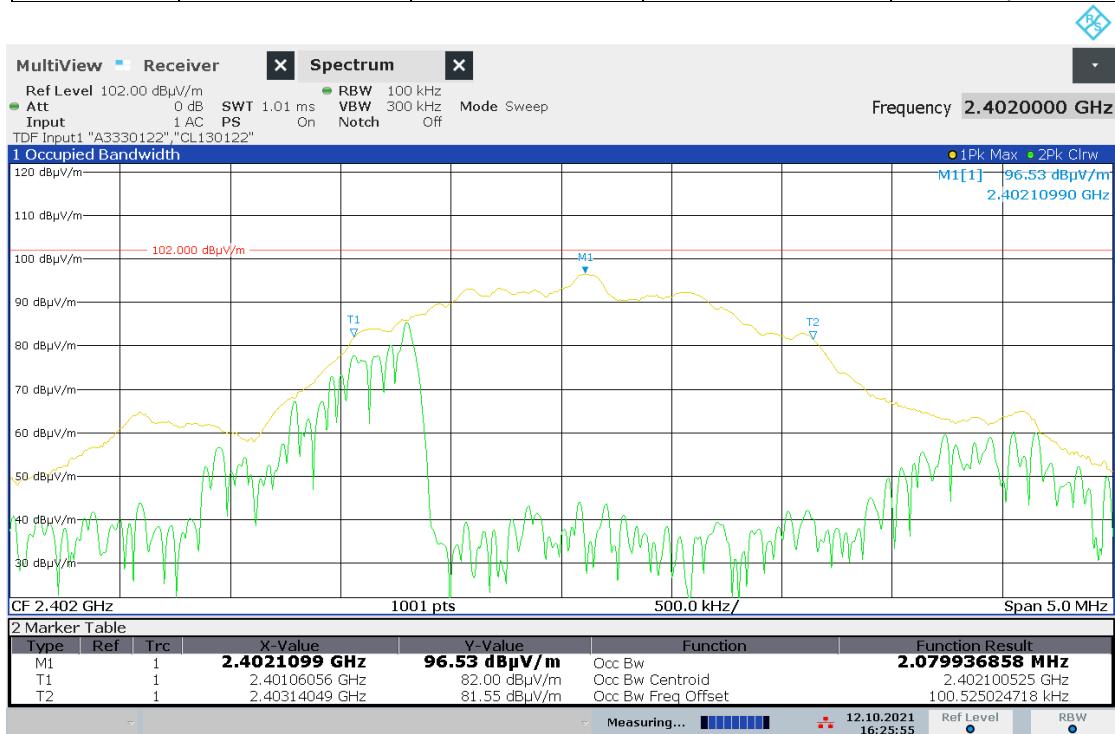
### 6.11.2 Limits

The 99% power should be contained within the frequency band 2400 – 2483.5 MHz.

### 6.11.3 Results

Table 6-12: Occupied Bandwidth

Freq. (MHz)	99% Bandwidth (MHz)	Lower Frequency (MHz)	Upper Frequency (MHz)	Result
2402	2.079	2401.06	2403.14	Complied
2440	2.085	2439.05	2441.14	Complied
2480	2.079	2479.05	2481.13	Complied



Graph 6-31: Occupied bandwidth, 2402 MHz



Graph 6-32: Occupied bandwidth, 2440 MHz



Graph 6-33: Occupied bandwidth, 2480 MHz

**END OF REPORT**