FCC / ISED Test Report

For:
Iridium Satellite LLC

Model Name:
Iridium Edge Pro

Product Description:
Standalone satellite device with Java application programming environment. Includes internal power supply, Iridium Short Burst Data Transceiver, GNSS, BLE, I/O, RS232, RS485, CAN.

FCC ID: Q639690
IC ID: 4629A-9690

Applied Rules and Standards:
47 CFR Part 15.247 (DTS)
RSS-247 Issue 2 (DTSs) & RSS-Gen Issue 5

REPORT #: EMC_METOC-003-19001_15.247_DTS

DATE: 2020-07-10

A2LA Accredited

IC recognized # 3462B-1

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TABLE OF CONTENTS

1 ASSESSMENT 3

2 ADMINISTRATIVE DATA 4

2.1 IDENTIFICATION OF THE TESTING LABORATORY ISSUING THE EMC TEST REPORT 4
2.2 IDENTIFICATION OF THE CLIENT 4
2.3 IDENTIFICATION OF THE MANUFACTURER 4

3 EQUIPMENT UNDER TEST (EUT) 5

3.1 EUT SPECIFICATIONS 5
3.2 EUT SAMPLE DETAILS 6
3.3 SUPPORT EQUIPMENT (SE) DETAILS 6
3.4 TEST SAMPLE CONFIGURATION 6
3.5 JUSTIFICATION FOR WORST CASE MODE OF OPERATION 6

4 SUBJECT OF INVESTIGATION 7

5 MEASUREMENT RESULTS SUMMARY 7

6 MEASUREMENT UNCERTAINTY 8

6.1 ENVIRONMENTAL CONDITIONS DURING TESTING: 8
6.2 DATES OF TESTING: 8

7 MEASUREMENT PROCEDURES 9

7.1 RADIATED MEASUREMENT 9
7.2 POWER LINE CONDUCTED MEASUREMENT PROCEDURE 11
7.3 RF CONDUCTED MEASUREMENT PROCEDURE 11

8 TEST RESULT DATA 12

8.1 RADIATED TRANSMITTER SPURIOUS EMISSIONS AND RESTRICTED BANDS 12

9 TEST SETUP PHOTOS 25

10 TEST EQUIPMENT AND ANCILLARIES USED FOR TESTING 25

11 HISTORY 26

1 Assessment

The following device was evaluated against the applicable criteria specified in FCC rules Parts 15.247 of Title 47 of the Code of Federal Regulations and the relevant ISED Canada standard RSS-247.

No deviations were ascertained.

Company	Description	Model #
Iridium Satellite LLC	Standalone satellite device with Java application programming environment. Includes internal power supply, Iridium Short Burst Data Transceiver, GNSS, BLE, I/O, RS232, RS485, CAN.	9690

Responsible for Testing Laboratory:

Date	Section	Name	Signature
2020-07-10	Compliance	Cindy Li (EMC Lab Manager)	Cindy Li Digitally signed by cindy.li@cetecom.com DN: CN=cindy.li@cetecom.com Reason: I am approving this document Location: Date: 2020-07-16 12:39:13

Responsible for the Report:

Date	Section	Name	Signature
2020-07-10	Compliance	Chin Ming Lui (Associate EMC Engineer)	Chin Ming Lui Digitally signed by: Chin Ming Lui DN: CN = Chin Ming Lui email = chinming.lui@cetecom.com C = US O = CETECOM Date: 2020.07.15 17:39:10 -07'00'

The test results of this test report relate exclusively to the test item specified in Section3.
CETECOM Inc. USA does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item. The test report may only be reproduced or published in full. Reproduction or publication of extracts from the report requires the prior written approval of CETECOM Inc. USA.

2 Administrative Data

2.1 Identification of the Testing Laboratory Issuing the EMC Test Report

Company Name:	CETECOM Inc.
Department:	Compliance
Street Address:	411 Dixon Landing Road
City/Zip Code	Milpitas, CA 95035
Country	USA
Telephone:	+1 (408) 586 6200
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EMC Lab Manager:	Cindy Li
Responsible Project Leader:	Rami Saman

2.2 Identification of the Client

Client's Name:	Iridium Satellite LLC
Street Address:	1750 Tysons Blvd. #1400
City/Zip Code	McLean, VA 22102
Country	USA
Contact Person:	Scott Mallonee
Phone No.	1-703-287-7400
e-mail:	scott.mallonee@iridium.com

2.3 Identification of the Manufacturer

Manufacturer's Name:	MetOcean Telematics
Manufacturers Address:	11 Thornhill Drive
City/Zip Code	Dartmouth, Nova Scotia B3B1R9
Country	Canada
Contact Person:	Scott Feener
Phone No.	902-468-2505
e-mail:	sfeener@metocean.com

3 Equipment Under Test (EUT)

3.1 EUT Specifications

Model No:	9690
HW Version :	SA-200050-00
SW Version :	0.1
FCC-ID :	Q639690
IC-ID:	4629A-9690
FWIN:	N/A
HVIN:	9690
PMN:	Iridium Edge Pro
Product Description:	Standalone satellite device with Java application programming environment. Includes internal power supply, Iridium Short Burst Data Transceiver, GNSS, BLE, I/O, RS232, RS485, CAN.
Frequency Range / number of channels:	Nominal band: 2400 MHz – 2483.5 MHz; Center to center: 2402 MHz (ch 0) – 2480 MHz (ch 39), 40 channels
Radio Information	Bluetooth Low Energy (BLE): • Module Name: u-blox NINA-B1 Series • Module Number: NINA-B112 • FCC / IC ID: XPYNINAB1 / 8595A-NINAB1 • Mode of Operation: Bluetooth version 5.0, Low Energy, using Dynamic Sequence Spread Spectrum with GFSK modulation.
Antenna Information as declared:	• Type: Integrated • Location: Internal • Max Gain: 2 dBi
Max. Peak Output Power:	Conducted Power: 0.0026 W Note
Power Supply / Rated Operating Voltage Range:	18 pin panel mount receptacle, Bayonet Lock: Vmin: 7 VDC / Vnom: 12 VDC / Vmax: 32 VDC
Operating Temperature Range	-40ºC to 85ºC
Other Radios included in the device:	• GNSS: u-blox NEO-M8N • Iridium 9603N
Sample Revision	☐Prototype Unit; ■Production Unit; ☐Pre-Production

Note: Leveraged from Bluetooth module NINAB1 certification grant (FCC ID: XPYNINAB1, IC ID: 8595A-NINAB1)

3.2 EUT Sample details

EUT #	Serial Number	HW Version	SW Version	Notes/Comments
1	EP142D0001	SA-200050-00	0.1	Radiated Emissions

3.3 Support Equipment (SE) details

SE #	Manufacturer	Equipment	Description
1	MetOcean	Test Box with CAN SNOOP, DUT, RS-485, and USB Ports	Input: 12 VDC, Output: 12 VDC

3.4 Test Sample Configuration

EUT Set-up #	Combination of SE used for test set up	Comments
1	EUT#1 + SE#1	The radio of the EUT was configured to a fixed channel transmission with highest possible duty cycle using software that is not available to the end user. The internal antenna was connected. The EUT was connected to the test box, which is powered by a 12 VDC power supply.

3.5 Justification for Worst Case Mode of Operation

During the testing process, the EUT was tested with transmitter sets on low, mid and high channels, and highest possible duty cycle. For radiated measurements, all data in this report shows the worst case between horizontal and vertical antenna polarizations and for all orientations of the EUT.

4 Subject of Investigation

The objective of the measurements done by CETECOM Inc. was to assess the performance of the EUT according to the relevant requirements specified in FCC rules Part 15.247 of Title 47 of the Code of Federal Regulations and Radio Standard Specification RSS-247 of ISED Canada.

This test report is to support a request for new equipment authorization under the FCC ID: Q639690 IC ID: 4629A-9690

Testing procedures are based on 558074 D01 15.247 Meas Guidance v05r02 – "GUIDANCE FOR COMPLIANCE MEASUREMENTS ON DIGITAL TRANSMISSION SYSTEM, FREQUENCY HOPPING SPREAD SPECTRUM SYSTEM, AND HYBRID SYSTEM DEVICES OPERATING UNDER SECTION 15.247 OF THE FCC RULES" - April 2, 2019, by the Federal Communications Commission, Office of Engineering and Technology, Laboratory Division.

5 Measurement Results Summary

Test Specification	Test Case	Temperature and Voltage Conditions	Mode	Pass	NA	NP	Result
§15.247(a)(1) RSS-247 5.2(a)	Emission Bandwidth	Nominal	BTLE	☐	☐	■	N/A
§15.247(e) RSS-247 5.2(b)	Power Spectral Density	Nominal	BTLE	☐	☐	■	N/A
§15.247(b)(1) RSS-247 5.4(d)	Maximum Conducted Output Power and EIRP	Nominal	BTLE	☐	☐	■	N/A
§15.247(d) RSS-247 5.5	Band edge compliance Unrestricted Band Edges	Nominal	BTLE	☐	☐	■	N/A
§15.247; 15.209; 15.205 RSS-Gen 8.9; 8.10	Band edge compliance Restricted Band Edges	Nominal	BTLE	☐	☐	■	N/A
§15.247(d); §15.209 RSS-Gen 6.13	TX Spurious emissions-Radiated	Nominal	BTLE	■	☐	☐	Complies
§15.207(a) RSS Gen 8.8	AC Conducted Emissions	Nominal	BTLE	☐	☐	■	N/A

Note: NA= Not Applicable; NP= Not Performed.

6 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus, with 95% confidence interval (in dB delta to result), based on a coverage factor k=1.

Radiated measurement

9 kHz to 30 MHz	±2.5 dB (Magnetic Loop Antenna)
30 MHz to 1000 MHz	±2.0 dB (Biconilog Antenna)
1 GHz to 40 GHz	±2.3 dB (Horn Antenna)

Conducted measurement

150 kHz to 30 MHz	±0.7 dB (LISN)

RF conducted measurement	±0.5 dB

According to TR 102 273 a multiplicative propagation of error is assumed for RF measurement systems. For this reason the RMS method is applied to dB values and not to linear values as appropriate for additive propagation of error.

6.1 Environmental Conditions During Testing:

The following environmental conditions were maintained during the course of testing:

- Ambient Temperature: 20-25° C
- Relative humidity: 40-60%

6.2 Dates of Testing:

02/14/2020 – 02/18/2020

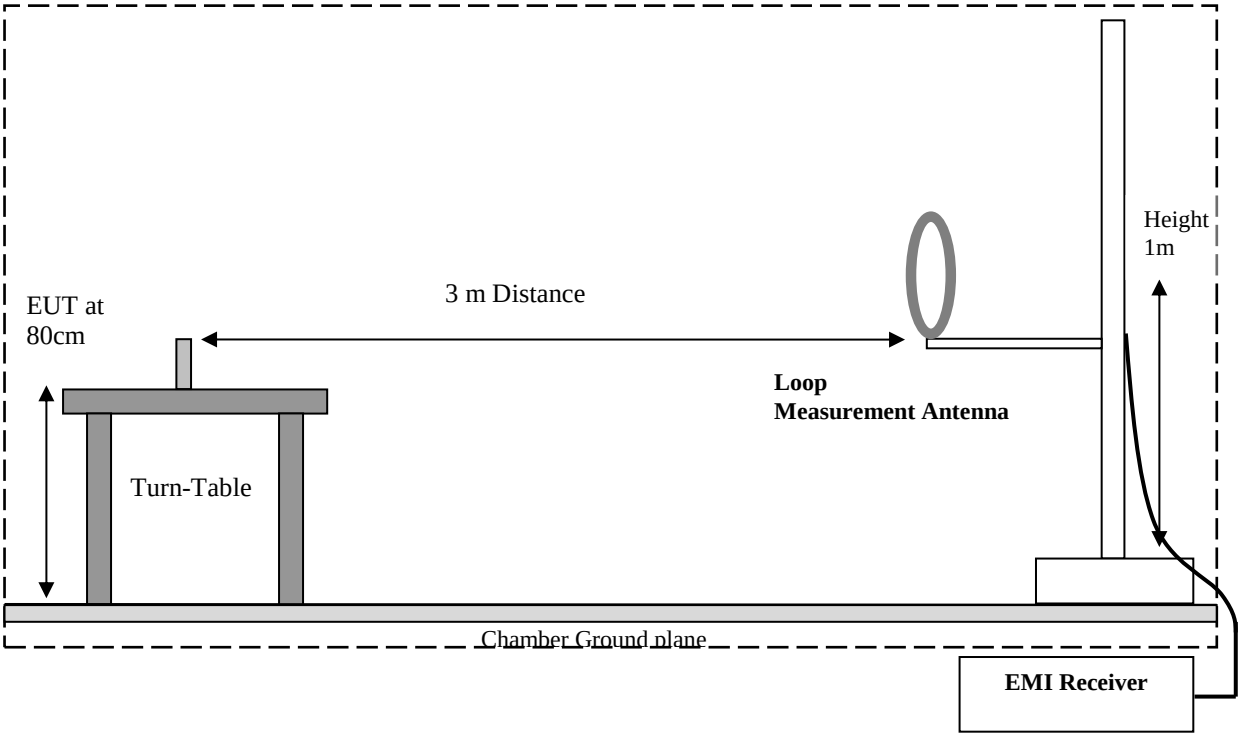
7 Measurement Procedures

7.1 Radiated Measurement

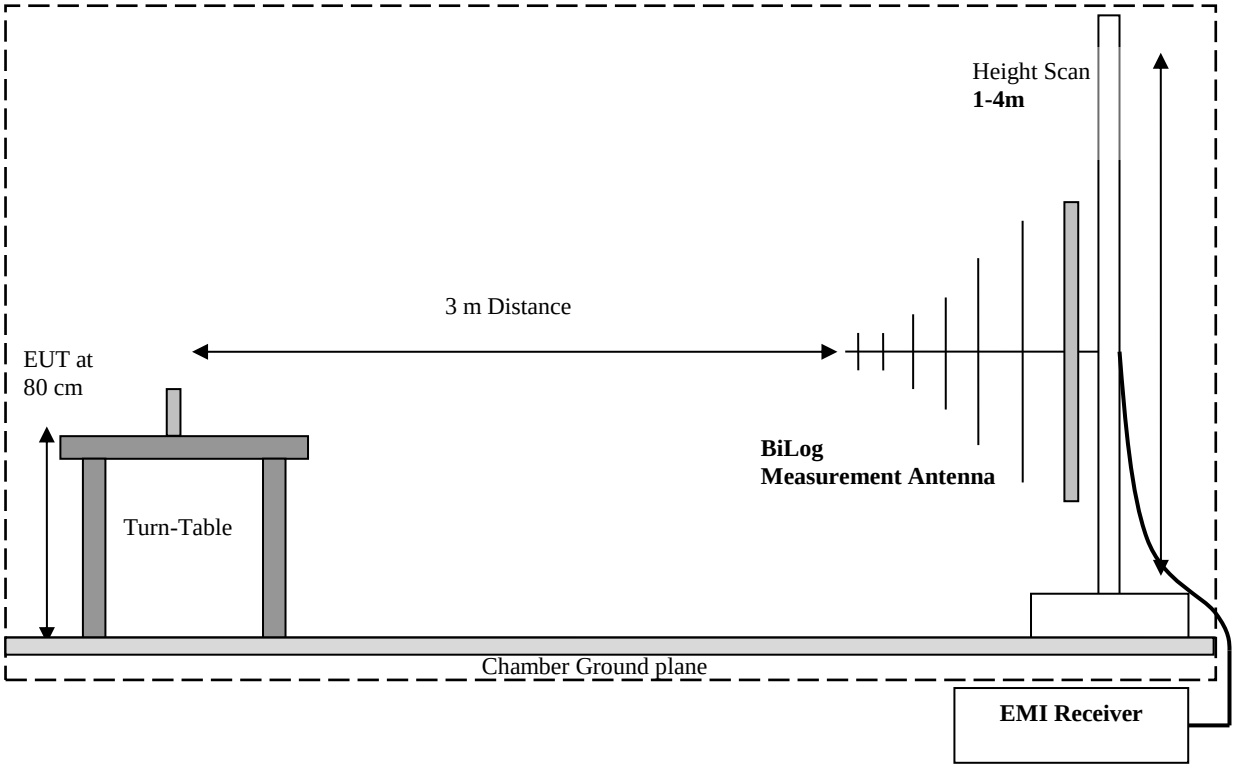
The radiated measurement is performed according to ANSI C63.10 (2013)

- The exploratory measurement is accomplished by running a matrix of 16 sweeps over the required frequency range with R&S Test-SW EMC32 for 4 positions of the turntable, two orthogonal positions of the EUT and both antenna polarizations. This procedure exceeds the requirement of the above standards to cover the 3 orthogonal axis of the EUT. A max peak detector is utilized during the exploratory measurement. The Test-SW creates an overall maximum trace for all 12 sweeps and saves the settings for each point of this trace. The maximum trace is part of the test report.
- The 10 highest emissions are selected with an automatic algorithm of EMC32 searching for peaks in the noise floor and ensuring that broadband signals are not selected multiple times.
- The maxima are then put through the final measurement and again maximized in a 90deg range of the turntable, fine search in frequency domain and height scan between 1m and 4m.
- The above procedure is repeated for all possible ways of power supply to EUT and for all supported modulations.
- In case there are no emissions above noise floor level only the maximum trace is reported as described above.
- The results are split up into up to 4 frequency ranges due to antenna bandwidth restrictions. A magnetic loop is used from 9 kHz to 30 MHz, a Biconilog antenna is used from 30 MHz to 1 GHz, and two different horn antennas are used to cover frequencies up to 40 GHz.

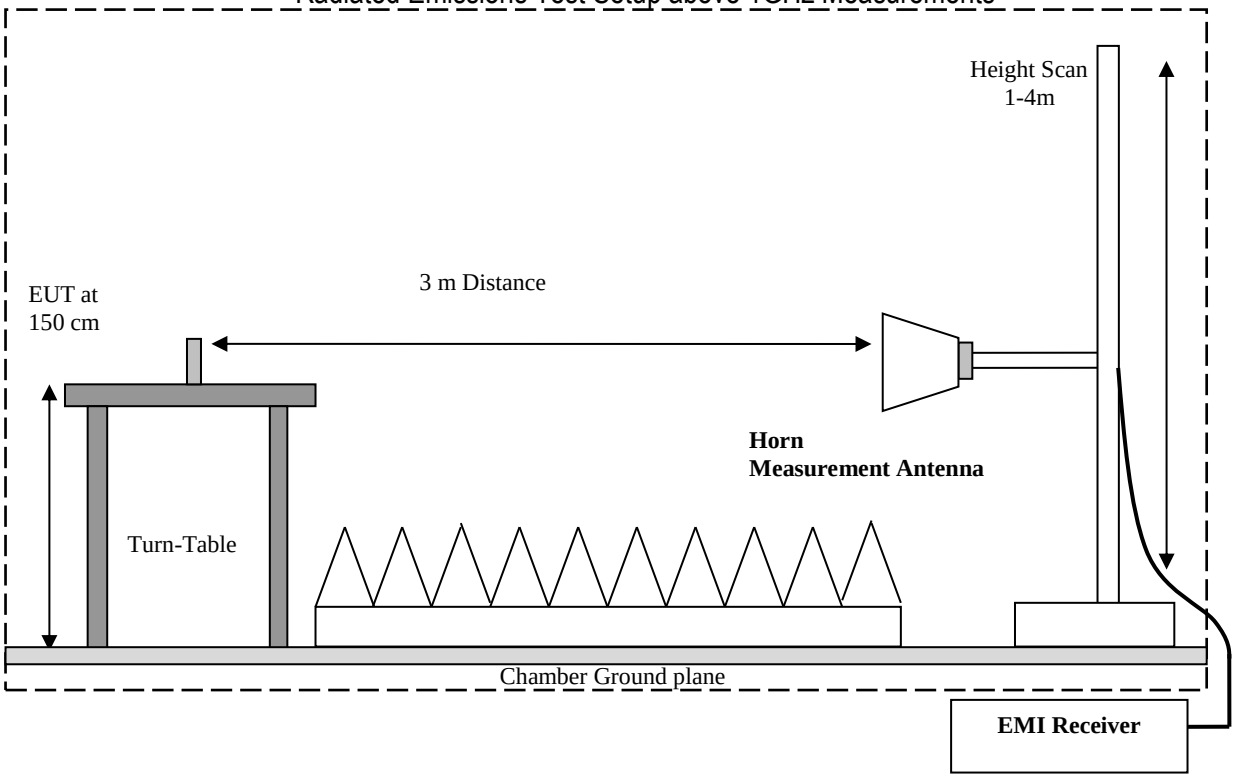
Radiated Emissions Test Setup below 30MHz Measurements



Radiated Emissions Test Setup 30MHz-1GHz Measurements



Radiated Emissions Test Setup above 1GHz Measurements



7.1.1 Sample Calculations for Field Strength Measurements

Field Strength is calculated from the Spectrum Analyzer/ Receiver readings, taking into account the following parameters:

1. Measured reading in dBµV
2. Cable Loss between the receiving antenna and SA in dB and
3. Antenna Factor in dB/m

All radiated measurement plots in this report are taken from a test SW that calculates the Field Strength based on the following equation:

FS (dBµV/m) = Measured Value on SA (dBµV)- Cable Loss (dB)+ Antenna Factor (dB/m)

Example:

Frequency (MHz)	Measured SA (dBµV)	Cable Loss (dB)	Antenna Factor Correction (dB)	Field Strength Result (dBµV/m)
1000	80.5	3.5	14	98.0

7.2 Power Line Conducted Measurement Procedure

AC Power Line conducted emissions measurements performed according to: ANSI C63.4 (2014)

7.3 RF Conducted Measurement Procedure

Testing procedures are based on 558074 D01 15.247 Meas Guidance v05r02 – "GUIDANCE FOR COMPLIANCE MEASUREMENTS ON DIGITAL TRANSMISSION SYSTEM, FREQUENCY HOPPING SPREAD SPECTRUM SYSTEM, AND HYBRID SYSTEM DEVICES OPERATING UNDER SECTION 15.247 OF THE FCC RULES" - April 2, 2019, by the Federal Communications Commission, Office of Engineering and Technology, Laboratory Division.

- Connect the equipment as shown in the above diagram.
- Adjust the settings of the SA (Rohde-Schwarz Spectrum Analyzer) to connect the EUT at the required mode of test.
- Measurements are to be performed with the EUT set to the low, middle and high channels and for worst case modulation schemes.

8 Test Result Data

8.1 Radiated Transmitter Spurious Emissions and Restricted Bands

8.1.1 Measurement according to ANSI C63.10 (2013)

Spectrum Analyzer Settings:

- Frequency = 9 KHz – 30 MHz
- RBW = 9 KHz
- Detector: Peak

- Frequency = 30 MHz – 1 GHz
- Detector = Peak / Quasi-Peak
- RBW= 120 KHz (<1GHz)

- Frequency > 1 GHz
- Detector = Peak / Average
- RBW = 1 MHz

- Radiated spurious emissions shall be measured for the transmit frequencies, transmit power, and data rate for the lowest, middle and highest channel in each frequency band of operation and for the highest gain antenna for each antenna type, and using the appropriate parameters and test requirements.
- The highest (or worst-case) data rate shall be recorded for each measurement.
- For testing at distance other than the specified in the standard, the limit conversion is calculated by using 40 dB/decade extrapolation factor as follow: Conversion factor (CF) = 40 log (D/d) = 40 log (300m / 3m) = 80dB

8.1.2 Limits:

FCC §15.247

- 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 this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

FCC §15.209 & RSS-Gen 8.9

- Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency of emission (MHz)	Field strength (µV/m)	Measurement Distance (m)	Field strength @ 3m (dBµV/m)
0.009–0.490	2400/F(kHz) / ---------	300	-
0.490–1.705	24000/F(kHz) / --------	30	-
1.705–30.0	30 / (29.5)	30	-
30–88	100	3	40 dBµV/m
88–216	150	3	43.5 dBµV/m
216–960	200	3	46 dBµV/m
Above 960	500	3	54 dBµV/m

FCC §15.205 & RSS-Gen 8.10

- Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
[1]0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	Above 38.6
13.36-13.41			

- Radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).
  *PEAK LIMIT= 74 dBµV/m
  *AVG. LIMIT= 54 dBµV/m

8.1.3 Test conditions and setup:

Ambient Temperature	EUT Set-Up #	EUT operating mode	Power Input
24.1°C	1	GFSK continuous fixed channel	12 VDC

8.1.4 Measurement result:

Plot #	Channel #	Scan Frequency	Limit	Result
1-3	Low	30 MHz – 18 GHz	See section 8.1.2	Pass
4-8	Mid	9 kHz – 26 GHz	See section 8.1.2	Pass
9-11	High	30 MHz – 18 GHz	See section 8.1.2	Pass

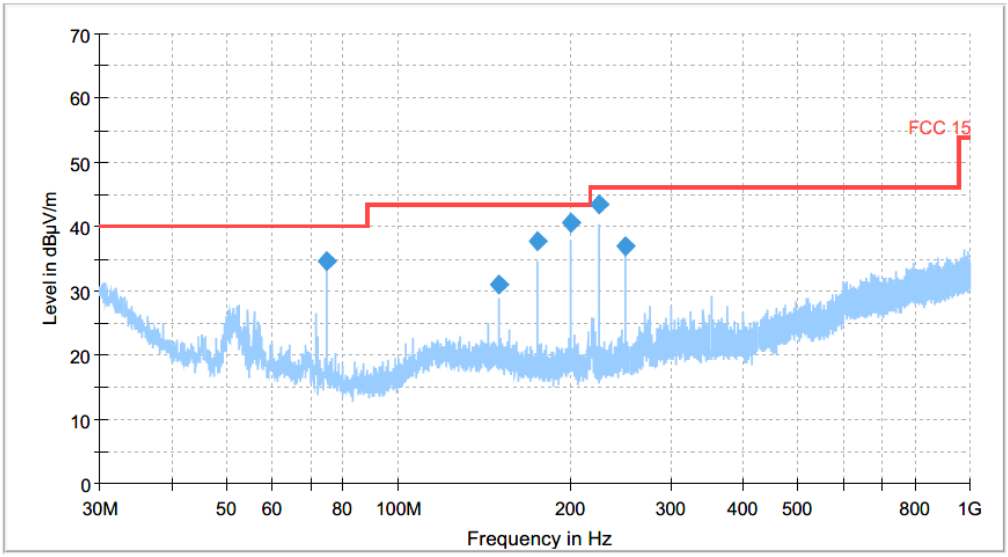
8.1.5 Measurement Plots:

Plot #1 Radiated Emissions: 30 MHz – 1GHz

Modulation: GFSK | **Channel: Low**

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
75.005	34.55	40.00	5.45	200.0	120.000	162.0	V	271.0	6.5
150.006	31.07	43.52	12.45	200.0	120.000	183.0	V	228.0	15.7
174.997	37.80	43.52	5.72	200.0	120.000	274.0	H	74.0	20.9
200.015	40.59	43.52	2.94	200.0	120.000	318.0	H	245.0	22.1
225.010	43.35	46.02	2.67	200.0	120.000	325.0	H	248.0	20.3
250.009	37.04	46.02	8.98	200.0	120.000	259.0	H	14.0	20.7



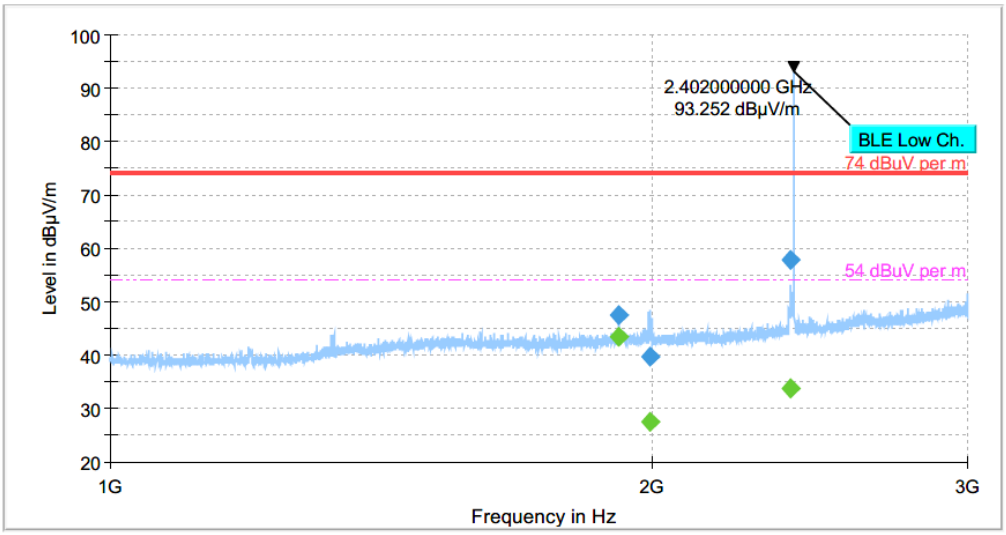
Preview Result 1-PK+ FCC 15 Final_Result QPK

Plot # 2 Radiated Emissions: 1-3 GHz

Modulation: GFSK	Channel: Low

Final_Result

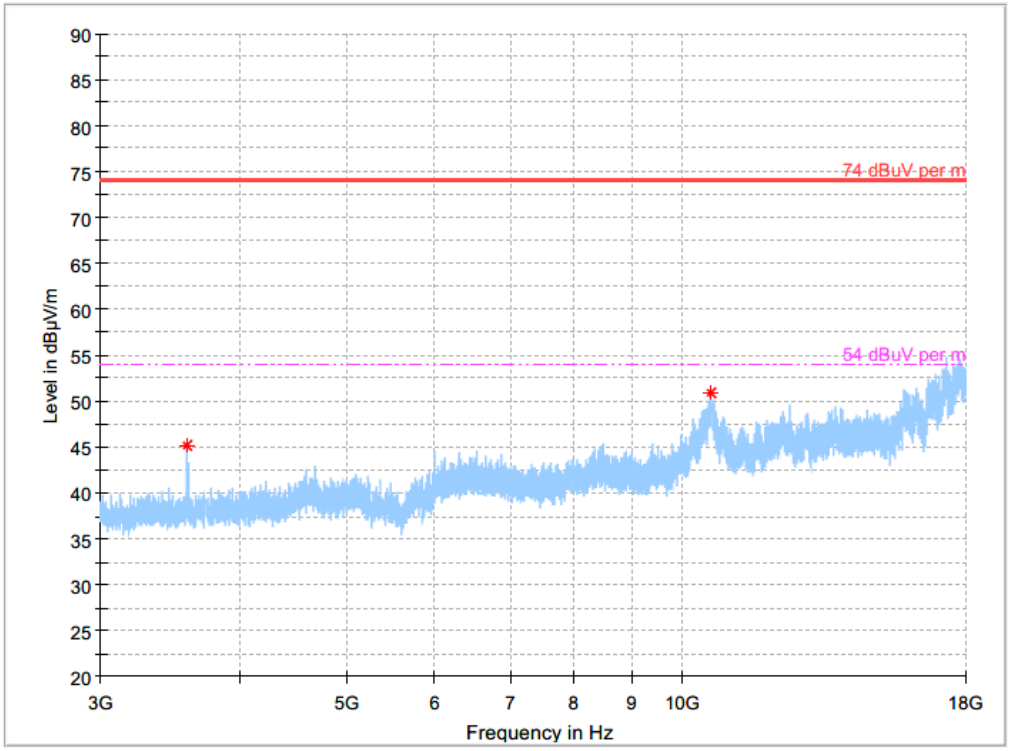
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol
1920.136	---	43.50	54.00	10.50	200.0	1000.000	162.0	V
1920.136	47.49	---	74.00	26.51	200.0	1000.000	162.0	V
1996.262	---	27.58	54.00	26.42	200.0	1000.000	166.0	V
1996.262	39.61	---	74.00	34.39	200.0	1000.000	166.0	V
2388.971	---	33.91	54.00	20.09	200.0	1000.000	151.0	V
2388.971	57.83	---	74.00	16.17	200.0	1000.000	151.0	V



Preview Result 1-PK+
Final_Result PK+
74 dBuV per m
Final_Result AVG
54 dBuV per m

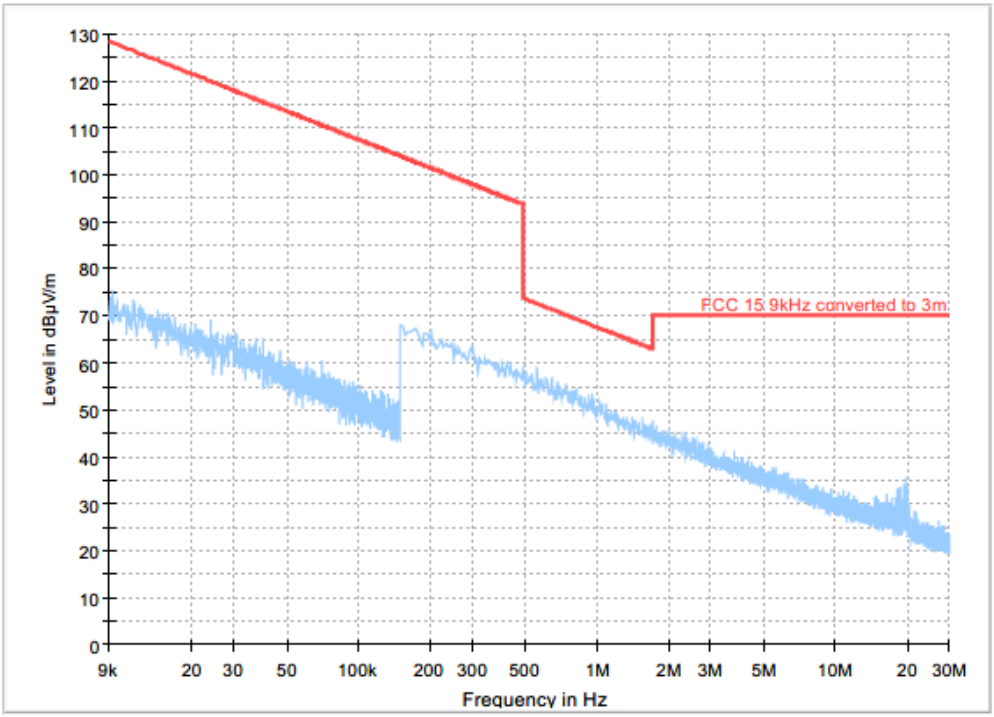
Plot # 3 Radiated Emissions: 3-18 GHz

Modulation: GFSK	Channel: Low



Preview Result 1-PK+ | Critical_Freqs PK+ | 74 dBuV per m
54 dBuV per m | Final_Result PK+ | Final_Result AVG

Plot # 4 Radiated Emissions: 9 KHz – 30 MHz	
Modulation: GFSK	**Channel: Mid**



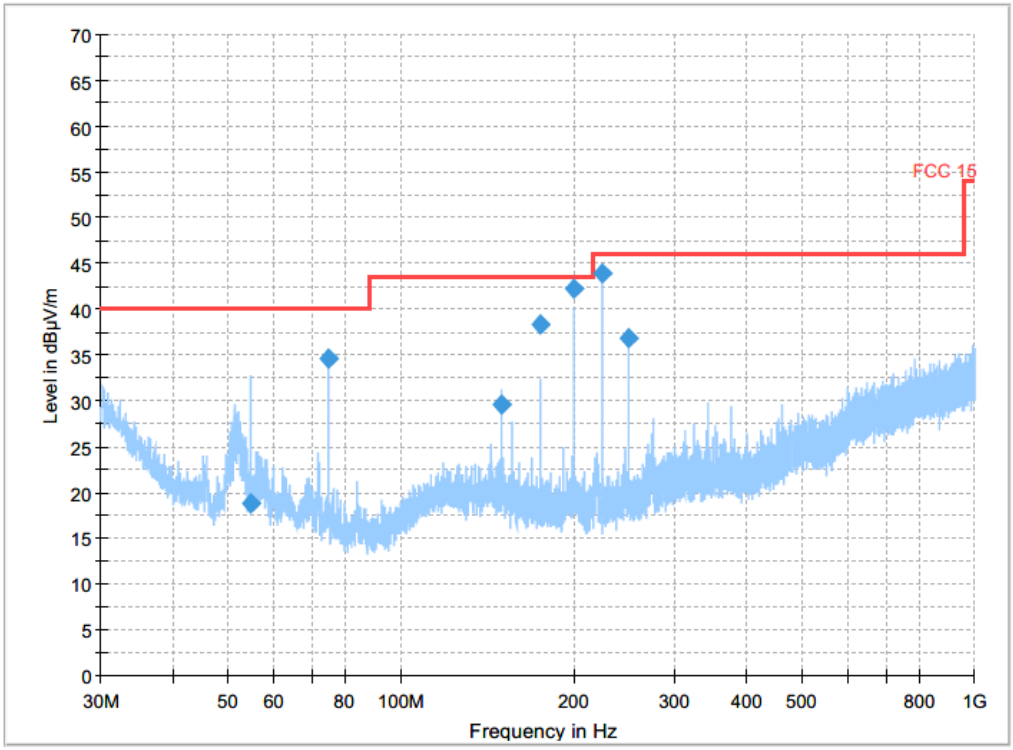
Preview Result 2-RMS
Critical_Freqs RMS
FCC 15 9kHz converted to 3m
Preview Result 1-PK+
Critical_Freqs PK+
Final_Result QPK

Plot #5 Radiated Emissions: 30 MHz – 1GHz

Modulation: GFSK	Channel: Mid

Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
54.734	18.80	40.00	21.20	200.0	120.000	238.0	V	159.0	3.1
75.000	34.58	40.00	5.42	200.0	120.000	170.0	V	-39.0	6.5
150.019	29.63	43.52	13.89	200.0	120.000	166.0	V	-23.0	15.7
175.009	38.30	43.52	5.22	200.0	120.000	257.0	H	60.0	20.9
200.009	42.34	43.52	1.18	200.0	120.000	316.0	H	253.0	22.1
225.002	43.90	46.02	2.12	200.0	120.000	325.0	H	247.0	20.3
250.006	36.87	46.02	9.15	200.0	120.000	183.0	H	142.0	20.7



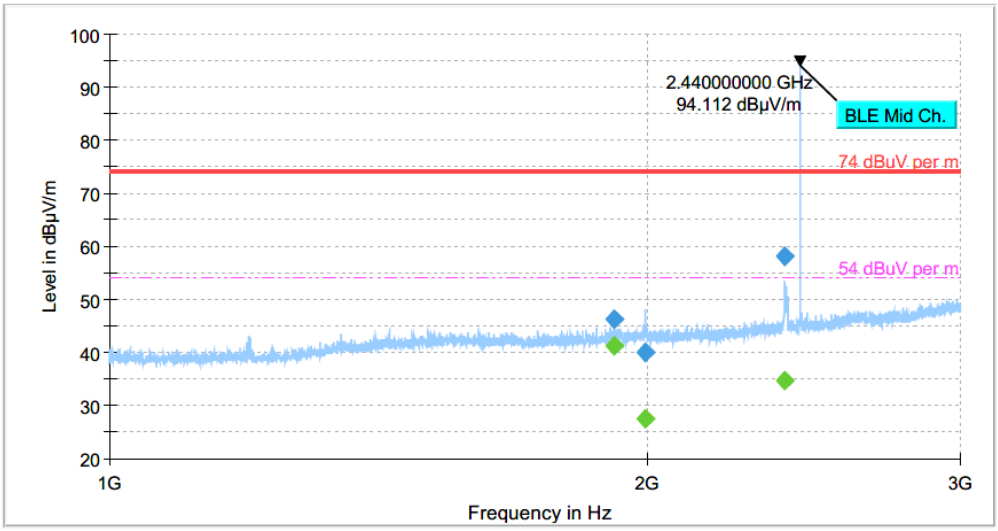
Preview Result 1-PK+ FCC 15 Final_Result QPK

Plot #6 Radiated Emissions: 1-3 GHz

Modulation: GFSK	Channel: Mid

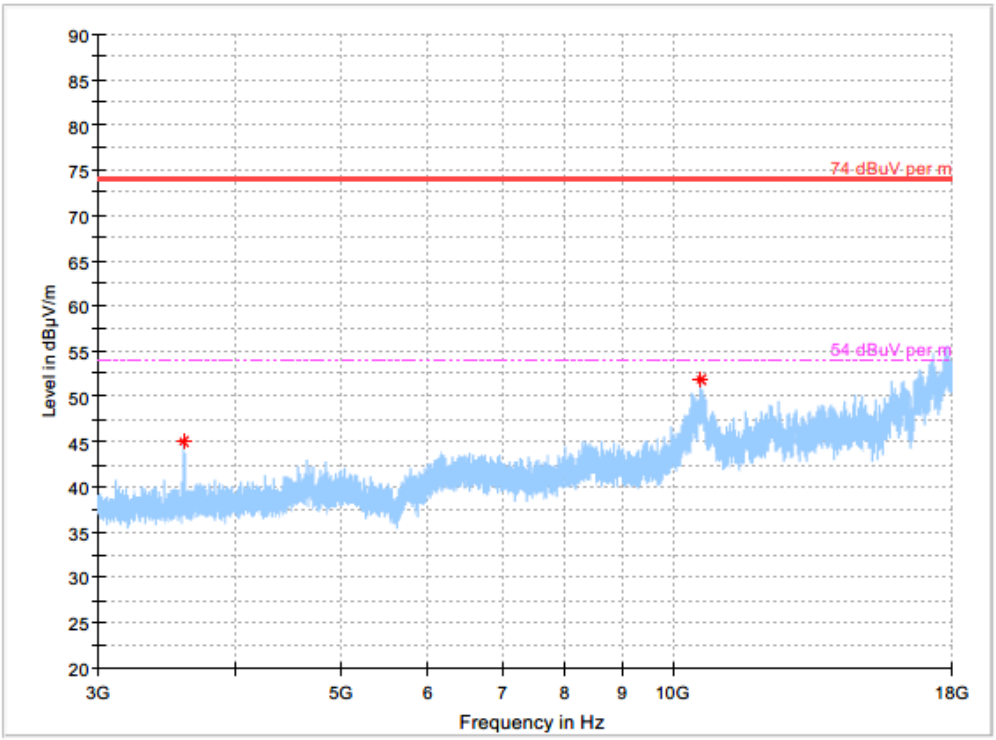
Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol
1920.055	---	41.31	54.00	12.69	200.0	1000.000	150.0	V
1920.055	46.20	---	74.00	27.80	200.0	1000.000	150.0	V
1996.388	---	27.61	54.00	26.39	200.0	1000.000	191.0	V
1996.388	40.01	---	74.00	33.99	200.0	1000.000	191.0	V
2389.223	---	34.75	54.00	19.25	200.0	1000.000	248.0	V
2389.223	58.19	---	74.00	15.81	200.0	1000.000	248.0	V



Preview Result 1-PK+
Final_Result PK+
74 dBuV per m
Final_Result AVG
54 dBuV per m

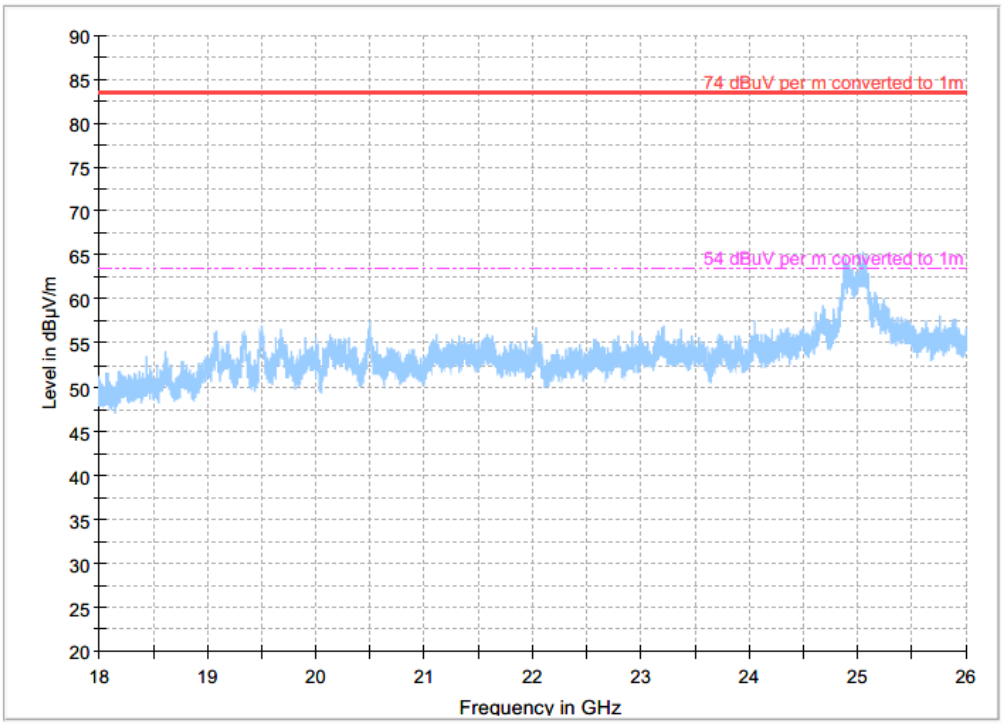
Plot #7 Radiated Emissions: 3-18 GHz	
Modulation: GFSK	**Channel: Mid**



Preview Result 1-PK+
54 dBuV per m
Critical_Freqs PK+
Final_Result PK+
74 dBuV per m
Final_Result AVG

Plot #8 Radiated Emissions: 18-26 GHz

Modulation: GFSK	Channel: Mid



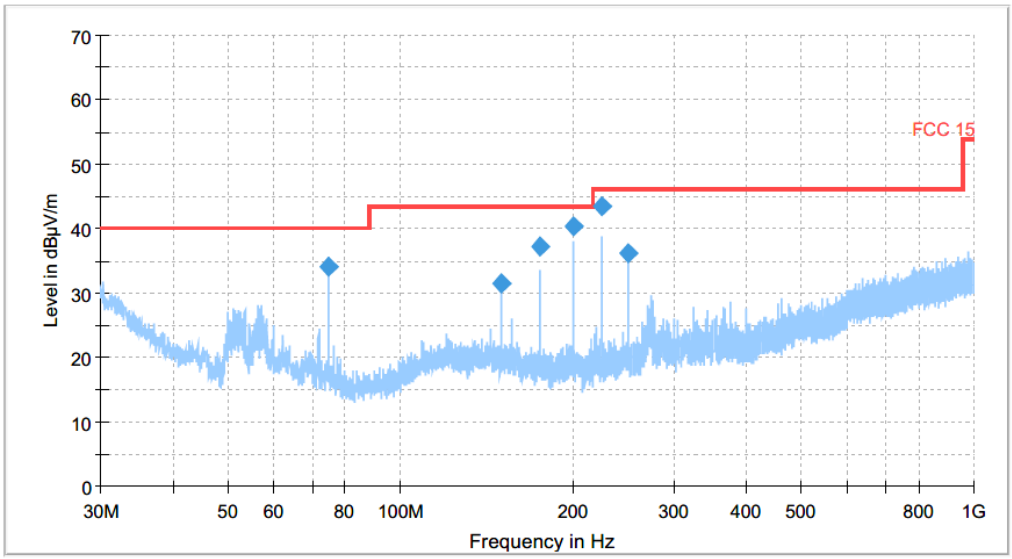
Preview Result 1-PK+
74 dBuV per m converted to 1m
Final_Result PK+
Critical_Freqs PK+
54 dBuV per m converted to 1m
Final_Result AVG

Plot # 9 Radiated Emissions: 30 MHz – 1GHz

Modulation: GFSK	Channel: High

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
75.003	34.21	40.00	5.79	200.0	120.000	176.0	V	354.0	6.5
150.003	31.38	43.52	12.14	200.0	120.000	158.0	V	-7.0	15.7
175.003	37.33	43.52	6.19	200.0	120.000	285.0	H	65.0	20.9
199.998	40.38	43.52	3.14	200.0	120.000	321.0	H	84.0	22.1
225.009	43.45	46.02	2.57	200.0	120.000	325.0	H	261.0	20.3
250.009	36.18	46.02	9.84	200.0	120.000	177.0	H	99.0	20.7



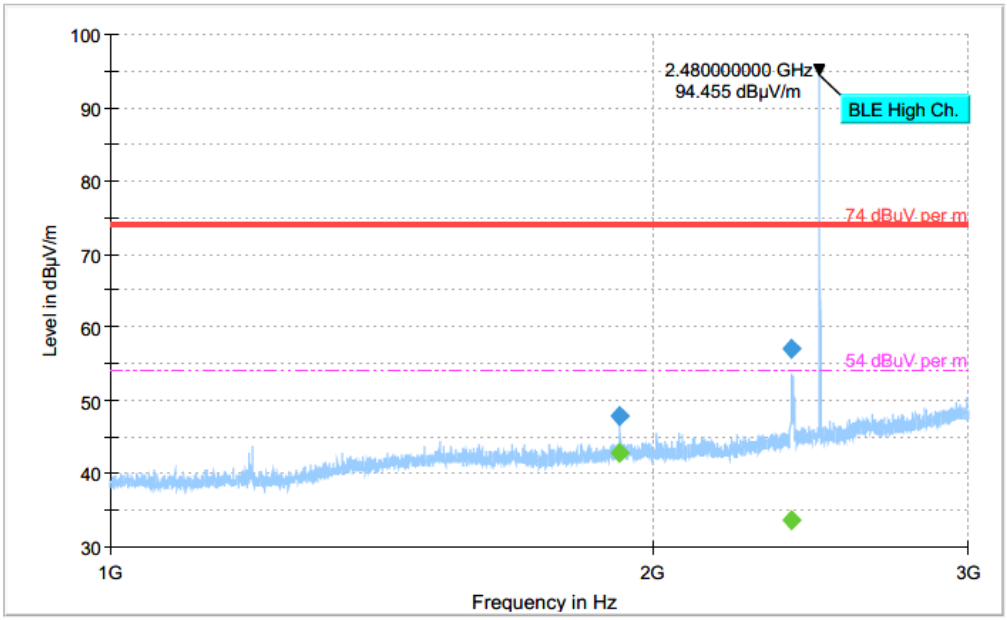
Preview Result 1-PK+ FCC 15 Final_Result QPK

Plot #10 Radiated Emissions: 1-3 GHz

Modulation: GFSK	Channel: High

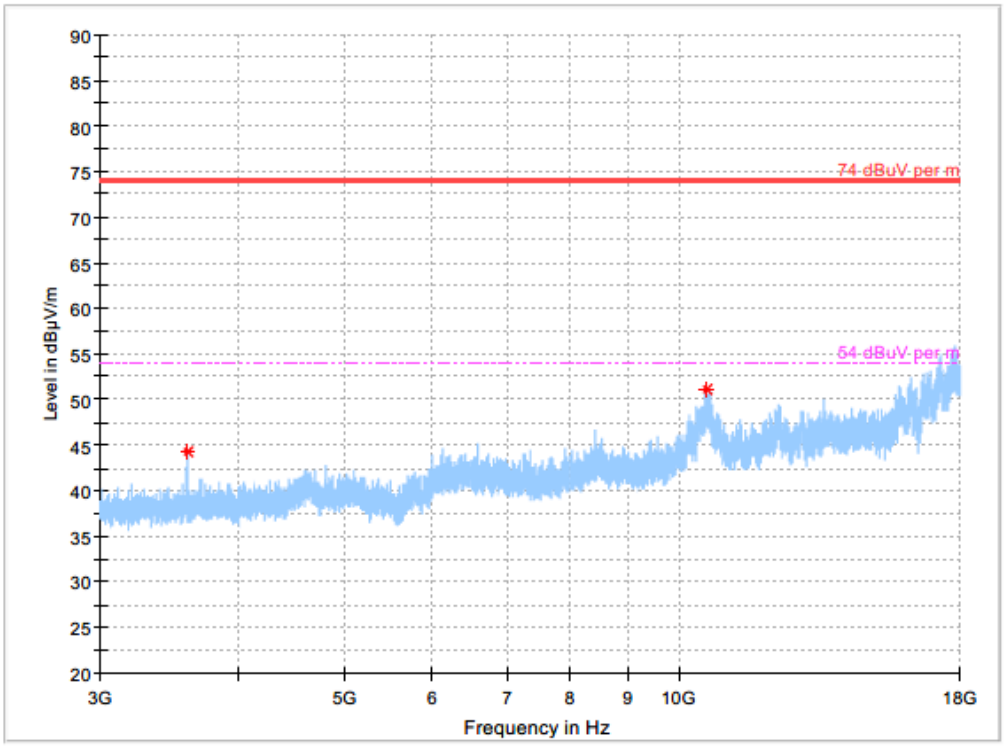
Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol
1920.053	---	42.85	54.00	11.15	200.0	1000.000	140.0	V
1920.053	47.84	---	74.00	26.16	200.0	1000.000	140.0	V
2389.279	---	33.57	54.00	20.43	200.0	1000.000	164.0	V
2389.279	57.07	---	74.00	16.93	200.0	1000.000	164.0	V



Preview Result 1-PK+
Final_Result PK+
74 dBuV per m
Final_Result AVG
54 dBuV per m

Plot #11 Radiated Emissions: 3-18 GHz	
Modulation: GFSK	**Channel: High**



Preview Result 1-PK+ | Critical_Freqs PK+ | 74 dBuV per m
54 dBuV per m | Final_Result PK+ | Final_Result AVG

9 Test setup photos

Setup photos are included in supporting file name: "EMC_METOC-003-19001_15.247_DTS_Setup_Photos.pdf"

10 Test Equipment And Ancillaries Used For Testing

Equipment Type	Manufacturer	Model	Serial #	Calibration Cycle	Last Calibration Date
Loop Antenna	ETS Lindgren	6507	161344	3 years	10/26/2017
Biconlog Antenna	ETS Lindgren	3142E	166067	3 years	06/27/2017
Horn Antenna	ETS Lindgren	3115	35114	3 years	07/31/2017
Horn Antenna	ETS Lindgren	3117-PA	215984	3 years	01/26/2018
Horn Antenna	ETS Lindgren	3116	70497	3 years	10/31/2017
EMI Receiver	R&S	ESU40	100251	3 years	07/16/2019
Thermometer Humidity Monitor	Control Company	36934-164	181230565	2 years	04/27/2018

Note: Equipment used meets the measurement uncertainty requirements as required per applicable standards for 95% confidence levels. Calibration due dates, unless defined specifically, falls on the last day of the month. Items indicated "N/A" for cal status either do not specifically require calibration or is internally characterized before use.

11 History

Date	Report Name	Changes to report	Report prepared by
2020-07-10	EMC_METOC-003-19001_15.247_DTS	Initial Version	Chin Ming Lui

<<< The End >>>