



REPORT

For

Guard RFID Solutions Inc

#140 – 766 Cliveden Place
Delta, British Columbia
V3M 6C7, Canada

Date: 2 Feb 2022
Report No.: 20.01.20665-2
Revision No.: 0
Project No.: 20665
Equipment: WiFi Asset Tag
Model No.: AT-6
FCC ID: VZKAT6
IC ID: 9937A-AT6




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ISO 17025 ACCREDITED ISO 17065 ACCREDITED ISO ISO 17020 ACCREDITED

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TABLE OF CONTENTS

TEST REPORT_FCC Part 15C/ISED RSS-247	3
Revision History	4
Device Under Test Description	4
Program details	5
Summary of Testing	6
Radiated Emissions	6
Description of Equipment Under Test and Variant Models	7
EUT Internal Operating Frequencies	7
Client Equipment Used During Test	7
Software and Firmware	8
Input/Output Ports	8
Power Interface	8
EUT Operation Modes	8
EUT Configuration Modes	8
Measurement Uncertainty	8
Result Summary	10
1- Antenna Requirement	10
Results	10
2- Occupied Bandwidth	11
Test Method	11
Test setup	12
Results	12
3- Power Spectral Density	13
Test Method	13
Test setup	14
Results	14
4- RF Peak Power Output	15
Test Method	16
Test Result Calculation	16
Test setup	16
Results	16
5- Frequency Stability (Temperature & Voltage Variation)	18
Test Method	18
Test setup	18
Results	19
6- Conducted Spurious Emissions	20
Test Method	20
Measurements	21
7- Spurious Radiated Emissions	22
Test setup	23
Test Method	28
Test Result	28
Results	29
Graphical Representation for Emission - Radiated 10kHz to 30MHz	29
Graphical Representation for Emission - Radiated 30MHz to 250GHz	30
Table Representation for Emission - Radiated 250 MHz to 1000 MHz	31
Graphical Representation for Emission - Radiated 1 to 18GHz	32

TEST REPORT_FCC Part 15C/ ISED RSS-247	
Intentional Radiator - WiFi 802.11b	
Report Reference No:	20.01.20665-2
Report Revision History	✓ Rev. 0: 2 Feb 2022
Compiled by (+ signature)	Bruce Balston 
Approved by (+ signature).....	David Johanson 
Date of issue	2 Feb 2022
Total number of pages	30
FCC Site Registration No.: 721268	
IC Site Registration No.: 5970A	
Testing Laboratory: LabTest Certification Inc.	
Address	
Unit 205 – 8291 92 St Delta, BC V4G 0A4 Canada	
Applicant's name:	
Guard RFID Solutions Inc	
Address	
#140 – 766 Cliveden Place Delta BC V3M 6C7 Canada	
Manufacture's Name	
Same as Applicant	
Address	
Same as Applicant	
Test specification:	
Standards	<ul style="list-style-type: none"> ➢ FCC Part 15C ➢ ISED RSS-247 Issue 2
Test procedure	<ul style="list-style-type: none"> ➢ ANSI C63.10:2013, ANSI C63.4:2014 ➢ ISED RSS-Gen, Issue 5, ICES-003 Issue 7
Non-standard test method.....:	N/A
Test Report Form(s) Originator	Jeremy Lee
Master TRF	1036_Rev2 – RF Report Template
Test item description :	
Trade Mark	
Model/Type reference	AT-6
Serial Number	08-ED-02-C6-00-A3
FCC ID	VZKAT6

IC ID	9937A-AT6
Possible test case verdicts:	
- test case does not apply to the test object	N/A
- test object does meet the requirement	P (Pass) or Complies
- test object does not meet the requirement	F (Fail)
Testing:	
Date of receipt of test item	10 September 2021
Date (s) of performance of tests.....	December 2021- Jan 2022

Revision History

Revision	Date	Reason For Change	Author(s)
0	2 Feb 2022	Initial release	Bruce Balston

Device Under Test Description

Application for	AT-6-WiFi
Operating Transmit Frequency	2.4 GHz (802.11b compliant)
Operating Receive Frequency	2.4 GHz (802.11b compliant)
Number of Channels	11
Rated RF Output (peak power).....	4.6 dBm Conducted peak power measurement
Modulation Type	DSSS
Data Rate	1, 2, 5.5, 11 mbps
Hop Timing	N/A
Antenna Type/Gain	Pulse Larsen 5320LL24R2455A Chip Antenna Peak Gain: 2.17 dBi
Equipment mobility	Mobile
Operating condition	0 to 50 °C
Mass of equipment (g)	30 g
Dimension(W X D X H)	50 mm X 34 mm X 19 mm
Supply Voltage:	_____ AC _____ Amps ___3.6 V___ DC _____ Amps
If DC Power:	___ Internal Power Supply ___ External Power Supply or AC/DC adapter ___x_ Battery : High energy Lithium 3.6 Vdc – nonrechargeable

Program details

Testing Facility by procedure:		
<input checked="" type="checkbox"/>	All Testing:	LabTest Certification Inc.
Testing location/ address.....:		Unit 3128 - 20800 Westminster Hwy, Richmond, BC V6V 2W3 Canada

Summary of Testing

The tests indicated in Test Summary were performed on the product constructed as described below. The test sections are the verbatim text from the actual data sheets used during the investigation. These test sections include the test name, the specified test Method, a list of the actual Test Equipment Used, documentation Photos, Results and raw Data. No additions, deviations, or exclusions have been made from the standard(s) unless specifically noted.

Based on the results of our investigation, we have concluded the product tested **complies** with the requirements of the standard(s) indicated. The results obtained in this test report pertain only to the item(s) tested. LabTest does not make any claims of compliance for samples or variants which were not tested.

FCC Part 15.247 and RSS-247		
Test Type	Applicable Standard	Result
Antenna Requirement	FCC 15.203 RSS-Gen Issue 5 7.1.2	Complies
Occupied Bandwidth	FCC 15.247(a)(1)(i) RSS-247 (5.1)(c)	Complies
RF Output Power	FCC 15.247(a)(1) RSS-247 (5.1) (b)	Complies
Power Spectral Density	FCC 15.247(e) RSS-247 5.2(b)	Complies
Conducted Spurious Emission	FCC 47 CFR Part 15.247(d)	Complies
Spurious Radiated Emissions	FCC 15.205(a), 15.209(a), 15.247(d) RSS-Gen	Complies
Out-of-Band Emissions (Bandedge)	FCC 15.247(d), 15.209, 15.205 RSS-247	Complies

FCC Part 15/B, ICES-003		
Test Type	Standard	Result
Radiated Emissions	FCC 15.109, Class B ICES-003 Issue 6	Complies

Description of Equipment Under Test and Variant Models

The AT-6-WIFI is a tag that is designed for locating and monitoring important assets. These tags can leverage existing wireless networks to work with GuardRFID® excitors and AllGuard® software to complete the real-time location system.



Variant Models:

The following variant models were not tested as part of this evaluation, but have been identified by the manufacturer as being electrically identical models, depopulated models, or with reasonable similarity to the model(s) tested. Intertek does not make any claims of compliance for samples or variants which were not tested.

None

EUT Internal Operating Frequencies

Frequency	Description
2412- 2462 MHz	802.11b Single modulation mode
32.768 kHz	Min clock frequency
40 MHz	Max clock frequency

Client Equipment Used During Test

Use*	Product Type	Manufacturer	Model	Comments
EUT	WiFi Asset Tag	Guard RFID Solutions Inc	AT-6	
AE	-	-	-	

Abbreviations:
 EUT - Equipment Under Test,
 AE - Auxiliary/Associated Equipment, or
 SIM - Simulator (Not Subjected to Test)

Software and Firmware

Description	Version
Firmware	v1.3.0.0.

Abbreviations:
 EUT - Equipment Under Test,
 AE - Auxiliary/Associated Equipment, or
 SIM - Simulator (Not Subjected to Test)

Input/Output Ports

Port #	Name	Type*	Cable Max. >3m	Cable Shielded	Comments

*Note: AC = AC Power Port DC = DC Power Port N/E = Non-Electrical
 I/O = Signal Input or Output Port (Not Involved in Process Control)
 TP = Telecommunication Ports

Power Interface

Mode #	Voltage (V)	Current (A)	Power (W)	Frequency (DC/AC-Hz)	Phases (#)	Comments

EUT Operation Modes

Mode #	Description
1	AT-6 transmits periodic unassociated Wi-Fi packets for the purpose of locating the tag based on RSSI. Tag location is determined on server side based on signals received from multiple Wi-Fi Access Points.

EUT Configuration Modes

Mode #	Description
1	Tag configuration is also done on server side and communicated to the tag over Wi-Fi.

Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests:

Parameter	Uncertainty
Radio Frequency	± 0.2 ppm
Total RF Power: Conducted	± 1 dB
RF Power Density: Conducted	± 2.75 dB
Spurious Emissions: Conducted	± 3.0 dB
Temperature	± 1.0 °C
Humidity	± 5.0 %
DC and Low Frequency Voltages	± 3.0 %
Radiated Emission, 30 to 250MHz	± 4.37 dB
Radiated Emission, 250 to 1000MHz	± 4.29 dB
Radiated Emission, 1 to 6GHz	± 5.02 dB
Conducted Measurements, 0.15 to 30MHz	± 3.52 dB

Uncertainty figures are valid to a confidence level of 95%.

Result Summary

The compliance status is based on direct measurement and calculated highest emissions to appropriate standard limits. Measurement uncertainty values, provided were not be used in the status of compliance.

1- Antenna Requirement

Applicable Standard	FCC 47 CFR Part 15.203 RSS-Gen Issue 5 7.1.2	Room Temperature (°C)	22.5
Test Method	Inspection	Relative Humidity (%)	48.3
Test Location	Richmond	Barometric Pressure (kPa)	101.2
Test Engineer	Bruce Balston	Date	2021 Dec 11
EUT Voltage	<input checked="" type="checkbox"/> Battery <input type="checkbox"/> 120VAC @ 60Hz		
Compliant <input checked="" type="checkbox"/> Non-Compliant <input type="checkbox"/> Not Applicable <input type="checkbox"/>			

Results

According to §15.203, 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.

The EUT has an internal antenna and is not accessible to the end user.

2- Occupied Bandwidth

Applicable Standard	FCC 15.247(a)(1)(i) RSS-247 5.1(c)	Room Temperature (°C)	22.5		
Test Method	ANSI C63.10	Relative Humidity (%)	48.3		
Test Location	Richmond	Barometric Pressure (kPa)	101.2		
Test Engineer	Bruce Balston	Date	2021 Dec 11		
EUT Voltage	<input checked="" type="checkbox"/> Battery <input type="checkbox"/> 120VAC @ 60Hz				
Test Equipment Used	Manufacturer	Model	Identifier	Calibration	Calibration due
EMC Analyzer	Keysight	N9038A	702	04-June 2021	04-June-2022
RF Cable	MRO	n/a	n/a	IHC ¹	IHC ¹
AC Power Source	California Instrument	5001i	059	IHC ²	IHC ²
Note1) In House Calibration Ref. # 6					
Note2) In House Calibration Ref. # 7					
Compliant <input checked="" type="checkbox"/> Non-Compliant <input type="checkbox"/> Not Applicable <input type="checkbox"/>					

Test Method

This test ensures the occupied bandwidth of the Equipment Under Test (EUT) does not exceed the limits as specified in 15.247(a)(1), and RSS-247 5.1 (1), RSS-Gen 6.6 for systems employing digital modulation techniques operating in the bands 902-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz.

The purpose of this test is to make certain that the occupied bandwidth of the Equipment-Under-Test (EUT) is within the limits as per the standards, FCC Part 15.247, RSS 247 Issue 2, RSS-Gen Issue 5 Section 6.6.

The test was conducted as defined by the standards above with the antenna port of the EUT directly connected to a spectrum analyzer. The minimum DTS bandwidth (RBW=100kHz) of the EUT, as per the standards, shall be at least 500kHz.

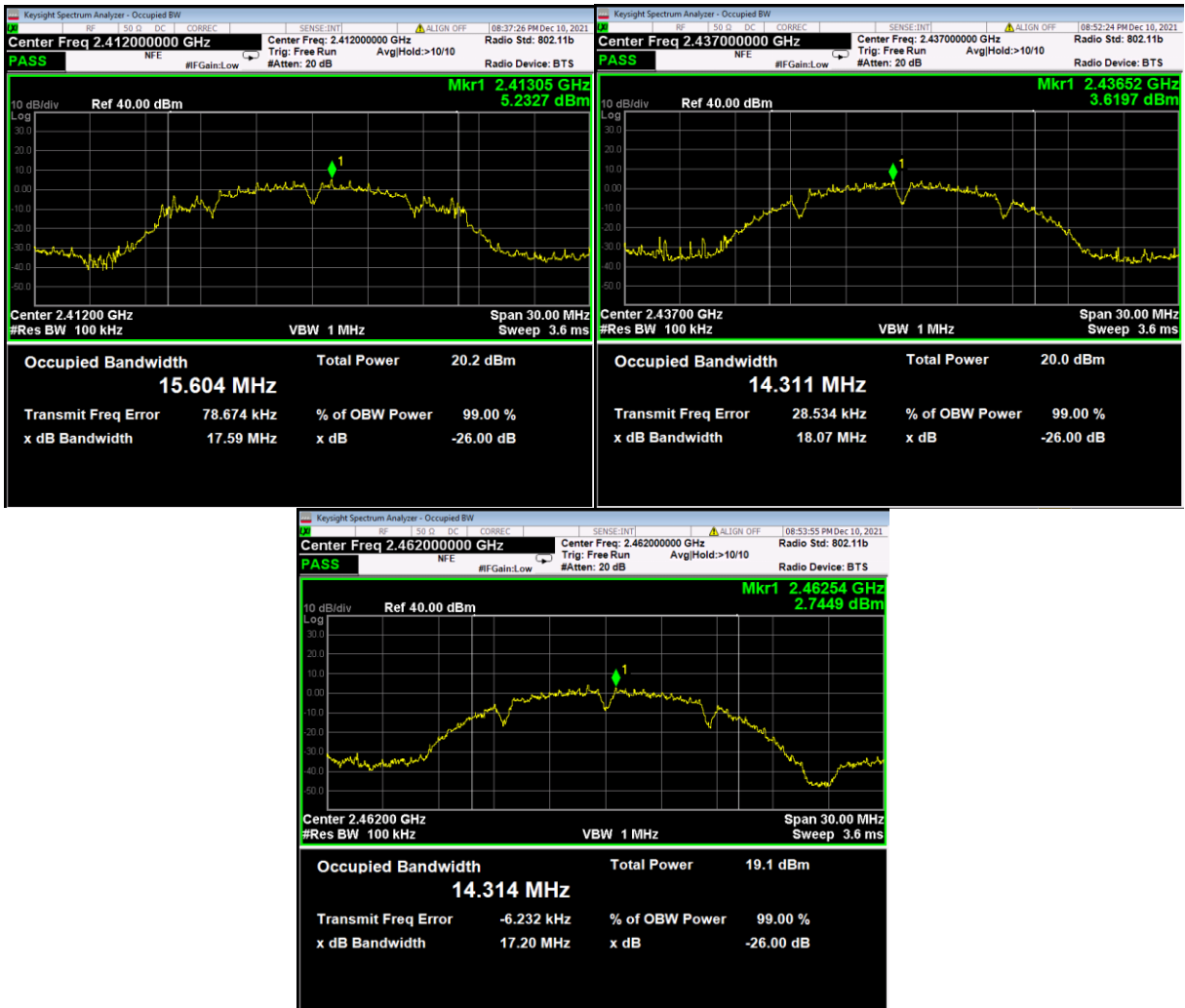
The transmitter shall be operated at its maximum carrier power measured under normal test conditions. The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts. The resolution bandwidth (RBW) shall be in the range of 1% to 5% of the occupied bandwidth (OBW) and video bandwidth (VBW) shall be approximately 3x RBW.

Test setup



The EUT was connected directly to the spectrum analyzer/receiver with appropriate attenuation to reduce the signal level to less than -10dBm.

Results



3- Power Spectral Density

Applicable Standard	FCC 15.247(e) RSS-247 5.2(b)	Room Temperature (°C)	22.5		
Test Method	ANSI C63.10	Relative Humidity (%)	48.3		
Test Location	Richmond	Barometric Pressure (kPa)	101.2		
Test Engineer	Bruce Balston	Date	2021 Dec 11		
EUT Voltage	<input checked="" type="checkbox"/> Battery <input type="checkbox"/> 120VAC @ 60 Hz				
Test Equipment Used	Manufacturer	Model	Identifier	Calibration	Calibration due
EMC Analyzer	Keysight	N9038A	702	04-June 2021	04-June-2022
RF Cable	MRO	n/a	n/a	IHC ¹	IHC ¹
AC Power Source	California Instrument	5001i	059	IHC ²	IHC ²
Note1) In House Calibration Ref. # 6					
Note2) In House Calibration Ref. # 7					
Compliant <input checked="" type="checkbox"/> Non-Compliant <input type="checkbox"/> Not Applicable <input type="checkbox"/>					

Test Method

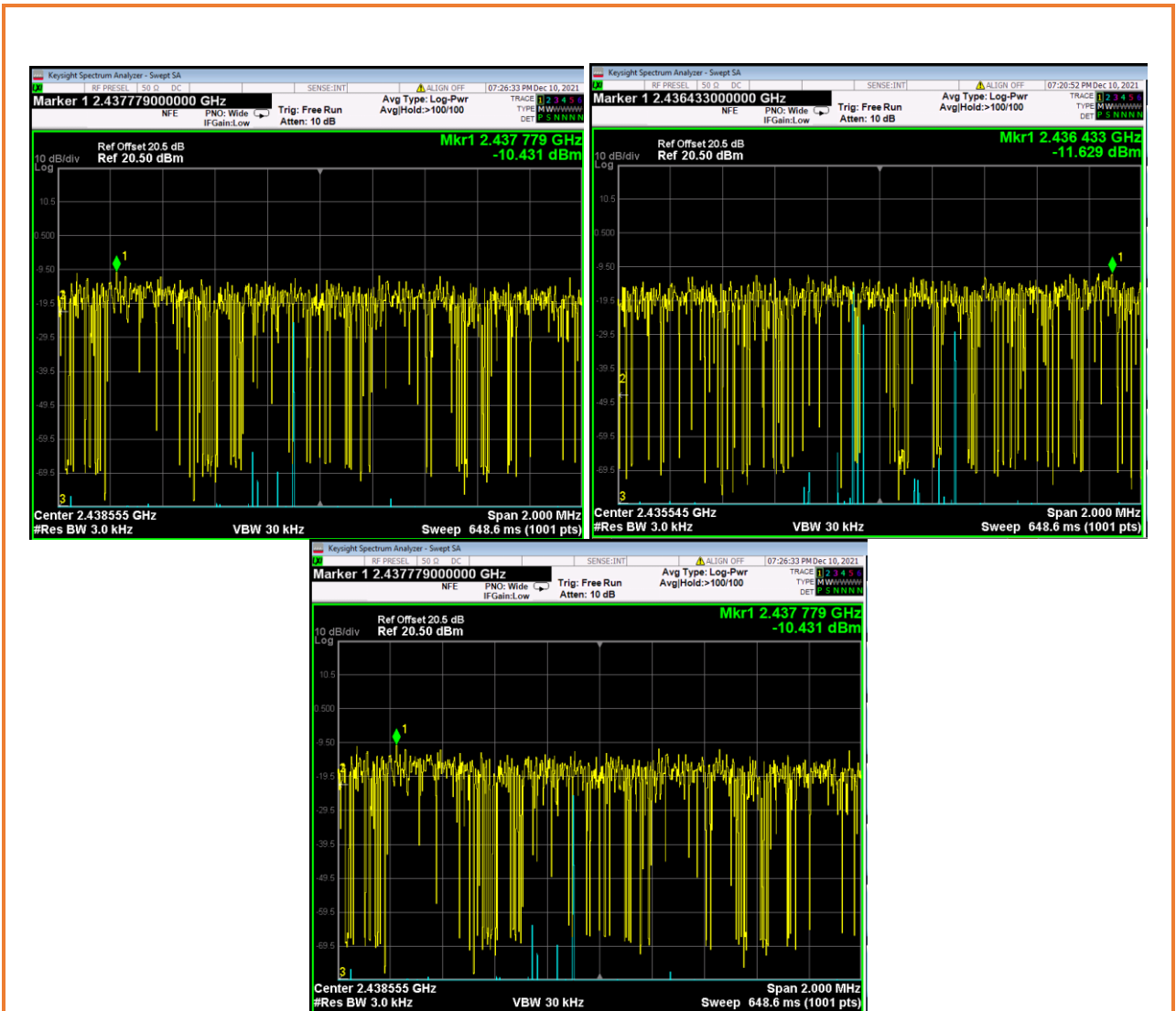
For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

Test setup



The EUT was connected directly to the spectrum analyzer/receiver with appropriate attenuation to reduce the signal level to less than -10dBm.

Results



4- RF Peak Power Output

Applicable Standard	15.247(b)(1),(b)(3) RSS-247 5.4(2)	Room Temperature (°C)	22.5		
Test Method	ANSI C63.10	Relative Humidity (%)	48.3		
Test Location	Richmond	Barometric Pressure (kPa)	101.2		
Test Engineer	Bruce Balston	Date	2021 Dec 10		
EUT Voltage	<input checked="" type="checkbox"/> Battery <input type="checkbox"/> 120VAC @ 60Hz				
Test Equipment Used	Manufacturer	Model	Identifier	Calibration	Calibration due
EMC Analyzer	Keysight	N9038A	702	04-June 2021	04-June-2022
RF Cable	MRO	n/a	n/a	IHC ¹	IHC ¹
Attenuator(s)	As needed	n/a	n/a	IHC ¹	IHC ¹
AC Power Source	California Instrument	5001i	059	IHC ²	IHC ²
Note1) In House Calibration Ref. # 6					
Note2) In House Calibration Ref. # 7					
Compliant <input checked="" type="checkbox"/> Non-Compliant <input type="checkbox"/> Not Applicable <input type="checkbox"/>					

Test Method

This test ensures the RF peak power output of the Equipment Under Test (EUT) does not exceed the limits as specified in 15.247(b)(1),(b)(3), RSS-247 5.4 (2) for systems employing frequency hopping, digital modulation and/or other modulation techniques operating in the bands 902-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz.

The EUT was operated in 'continuous transmit mode'. The test was performed as defined by the standards above with the antenna port of the EUT directly connected to a spectrum analyzer or power meter. The conducted RF peak output power is also corrected for duty cycle to report the maximum transmit power.

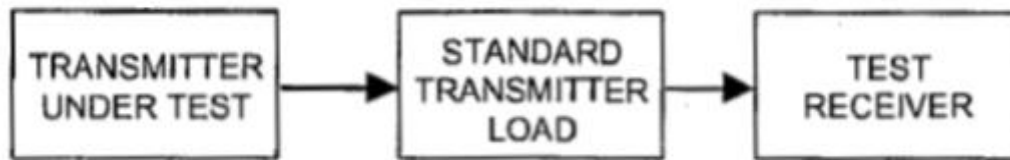
The maximum peak conducted power for systems employing digital modulation techniques operating in the bands 902-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz shall not exceed 1W. The Equivalent Isotropically Radiated Power (EIRP) shall not exceed 4 W unless otherwise specified in the standard.

Test Result Calculation

$$\text{RF Power (W)} = (10^{(\text{RF Power (dBm)}/10)})/1000$$

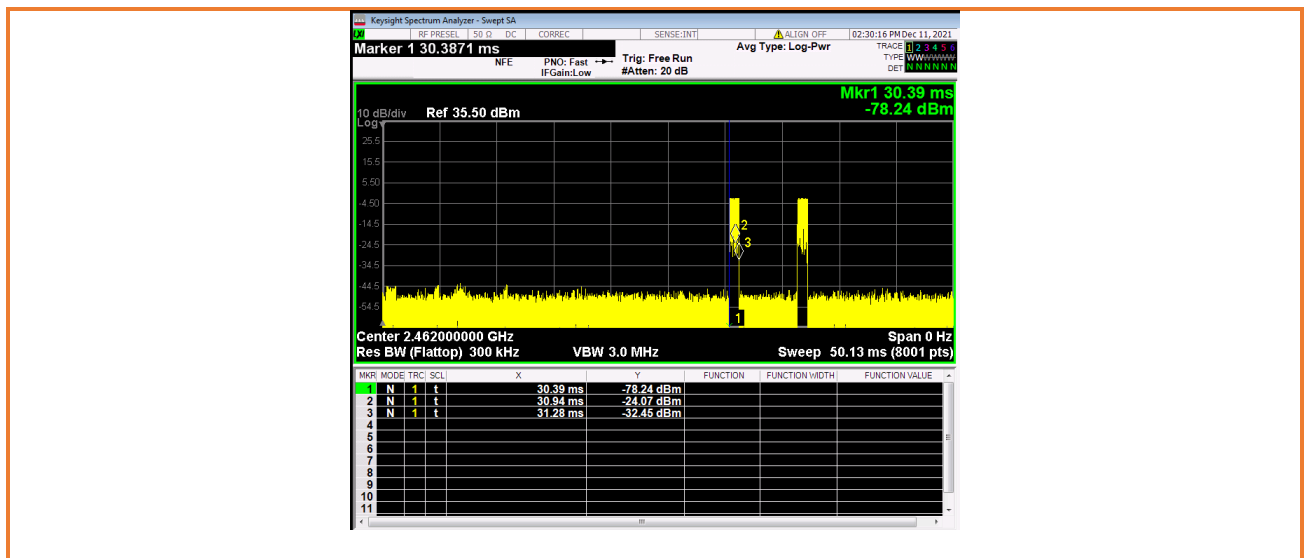
$$\text{RF Power (dBm)} = \text{Power Meter reading (dBm)} + \text{Attenuator and Cable Loss (dB)}$$

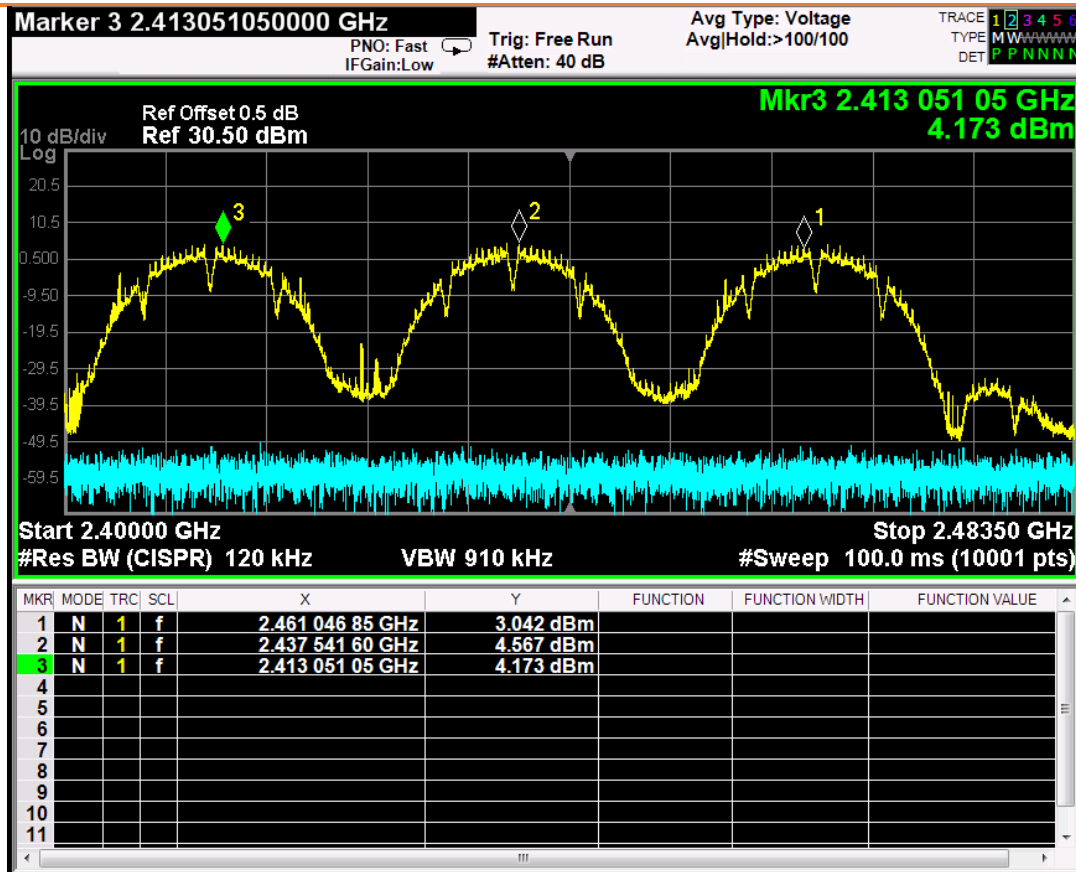
Test setup



The EUT was connected directly to the spectrum analyzer/receiver with appropriate attenuation to reduce the signal level to less than -10dBm.

Results





The transmit duty cycle of the EUT is approximately 1ms ON and 5ms OFF for special test mode. Device transmits in normal operation on demand when the button is pressed. No duty cycle correction has been applied to measurements.

5- Frequency Stability (Temperature & Voltage Variation)

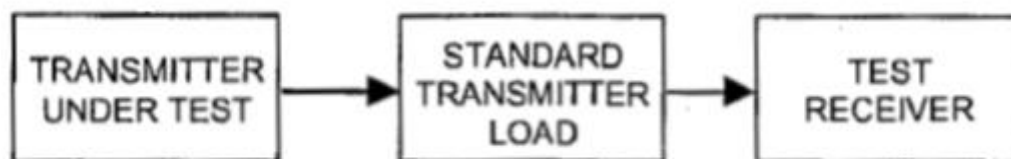
Applicable Standard	FCC 2.1055(a)(1), 2.1055(d)(1)	Room Temperature (°C)	22.5		
Test Method	ANSI 63.10	Relative Humidity (%)	49.3		
Test Location	Richmond	Barometric Pressure (kPa)	101.2		
Test Engineer	Bruce Balston	Date	2021 Dec 10		
EUT Voltage	<input checked="" type="checkbox"/> Battery <input type="checkbox"/> 120VAC @ 60Hz				
Test Equipment Used	Manufacturer	Model	Identifier	Calibration	Calibration due
EMC Analyzer	Keysight	N9038A	702	04 June 2021	04 June 2022
Temperature Chamber	Haida international equipment Co., LTD	HD-E702- 100-7	1068	calibration not required	calibration not required
RF Cable	MRO	n/a	n/a	IHC ¹	IHC ¹
AC Power Source	California Instrument	5001i	059	IHC ²	IHC ²
Note1) In House Calibration Ref. # 6 Note2) In House Calibration Ref. # 7					
Compliant <input checked="" type="checkbox"/> Non-Compliant <input type="checkbox"/> Not Applicable <input type="checkbox"/>					

Test Method

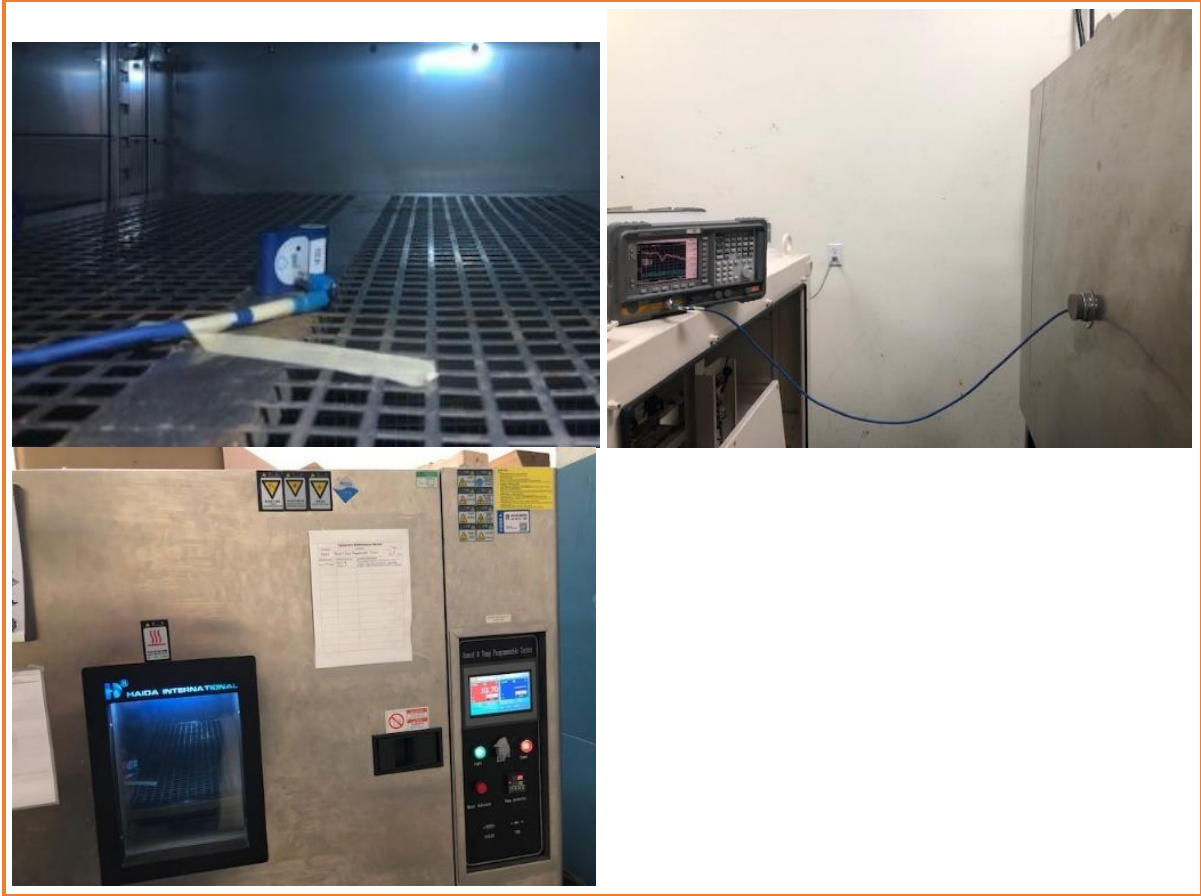
A modified EUT with external SMA connector was setup inside the temperature chamber and test equipment configured to provide continuous measurement. The temperature was varied over the manufacturer's temperature range specified and continuous measurement of the transmitter frequency made.

The battery voltage was adjusted using a battery at full capacity and a depleted battery while the EUT frequency was monitored.

Test setup



The EUT was connected directly to the spectrum analyzer/receiver with appropriate attenuation to reduce the signal level to less than -10dBm.



Results

The manufacturer's declared temperature range is 0 - 50C.

The temperature chamber was adjusted from 10-50C while continuously monitoring the frequency of the EUT. The maximum temperature dependent frequency variation of the EUT was less than 1ppm.

The voltage supplied to the EUT was varied using a battery at full capacity and a 'used' battery at rated minimum voltage while continuously monitoring the frequency of the EUT. The maximum voltage dependent frequency variation of the EUT was less than 1ppm.

6- Conducted Spurious Emissions

Applicable Standard	15.247(d), 15.205, 15.209(a), RSS-247 5.5	Room Temperature (°C)	22.5		
Test Method	ANSI C63.10	Relative Humidity (%)	49.3		
Test Location	Richmond	Barometric Pressure (kPa)	101.2		
Test Engineer	Bruce Balston	Date	2021 Dec 11		
EUT Voltage	<input checked="" type="checkbox"/> Battery <input type="checkbox"/> 120VAC @ 60Hz				
Test Equipment Used	Manufacturer	Model	Identifier	Calibration	Calibration due
EMC Analyzer	Keysight	N9038A	702	04 June 2021	04 June 2022
RF Cable	MRO	n/a	n/a	IHC ¹	IHC ¹
EMC Shielded Enclosure	USC	USC-26	374	IHC ²	IHC ²
AC Power Source	California Instrument	5001i	059	IHC ³	IHC ³
Used Template of Tile 7!					
Note1) In House Calibration Ref. # 6 Note2) In House Calibration Ref. # 4 Note3) In House Calibration Ref. # 7					
Compliant <input checked="" type="checkbox"/> Non-Compliant <input type="checkbox"/> Not Applicable <input type="checkbox"/>					

Test Method

This test ensures the RF peak power output of the Equipment Under Test (EUT) does not exceed the limits as specified in 15.247(d), 15.205, 15.209(a), and RSS-247 5.5 for systems employing, frequency hopping, digital modulation, and/or other modulation techniques operating in the bands 902-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz.

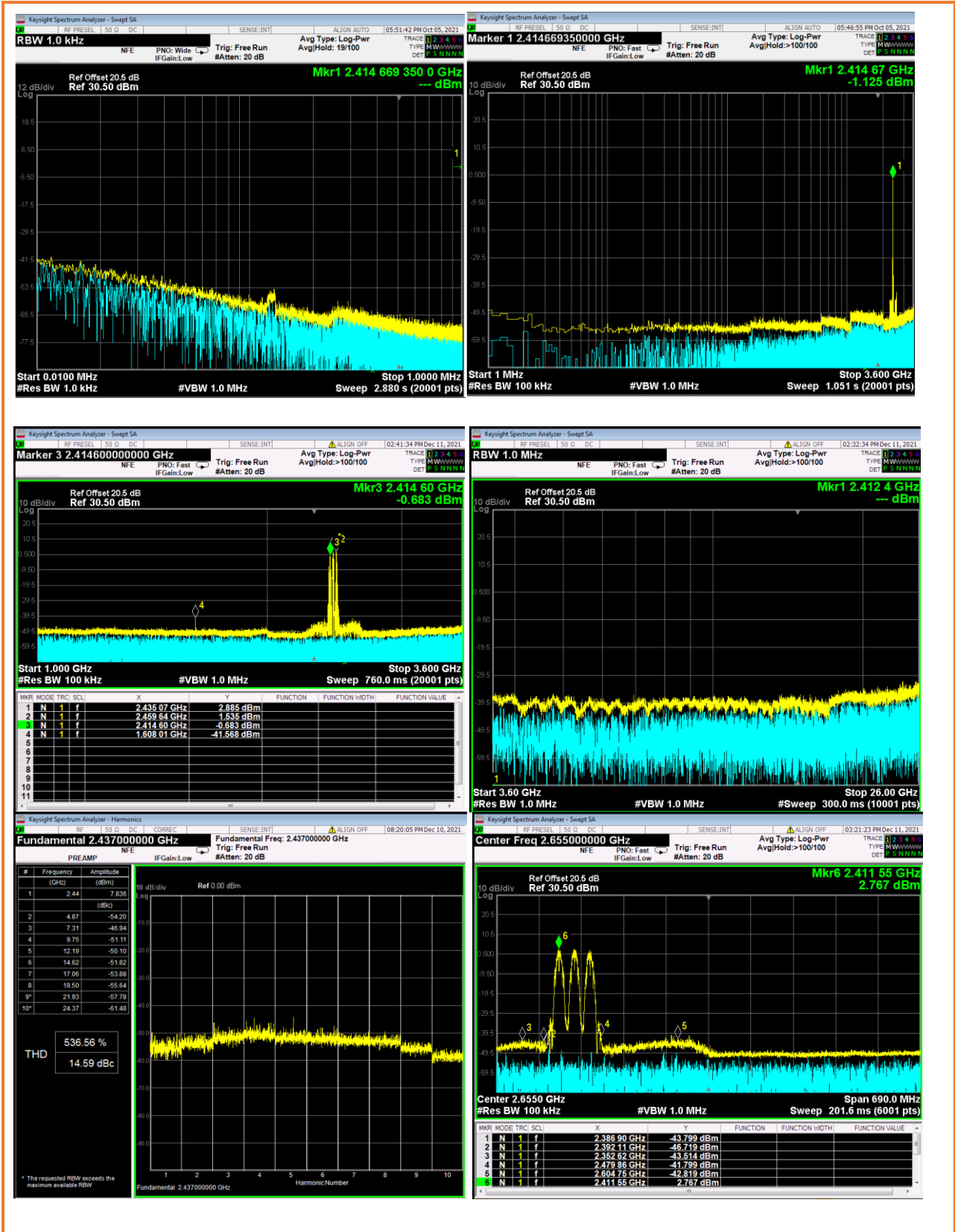
The EUT was operated in continuous transmit mode with a duty cycle exceeding normal operation or 98% as applicable. The test was performed as defined by the standards above with the antenna port of the EUT directly connected to a spectrum analyzer.

For systems operating in the bands 902-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz, spurious emissions in any 100 kHz bandwidth shall be reduced at least 20 dBc, based on either a peak conducted or radiated measurement. If the transmitter complies with the conducted power limits based on the use of RMS averaging, the attenuation required shall be 30 dBc instead of 20 dBc. Attenuation below the general limits specified in § 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified in 15.205

If the device includes co-location of transmitters and transmit mode (TX) limits are applicable while all transmitters are operating unless RF transmission of each device is exclusive. Preliminary investigation of intermodulation of transmitters to determine worst-case has been performed and final measurements for transmit mode have been performed independently and during simultaneous worst-case transmission of all devices.

Worse case data is shown.

Measurements



7- Spurious Radiated Emissions

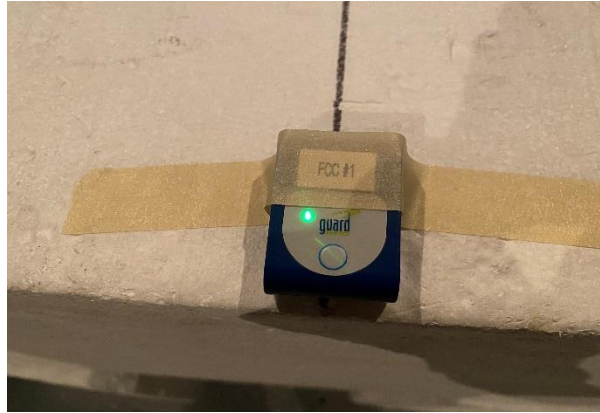
Applicable Standard	FCC 15.109 Class B ICES-003 FCC 15.209 RSS-Gen Issue 5	Room Temperature (°C)	22.5		
Test Method	ANSI C63.4	Relative Humidity (%)	49.3		
Test Location	Richmond	Barometric Pressure (kPa)	101.2		
Test Engineer	Ajaypal Khakh	Date	4 OCTOBER 2021		
EUT Voltage	<input checked="" type="checkbox"/> Battery <input type="checkbox"/> 120VAC @ 60Hz				
Test Equipment Used	Manufacturer	Model	Identifier	Calibration	Calibration due
Spectrum Analyzer	KeySight	N9038A	702	04-Jun-2021	04-Jun-2022
BiCon Antenna	A.H Systems	SAS-540	1115	06-May-2021	06-May-2023
LPDA Antenna	Schwarzbeck Mess	VUSLP9111	996	05-Apr-2021	05-Apr-2023
Double-ridged Guide Horn Antenna	A.H.Systems	SAS-571	227C	12-Aug-2020	12-Aug-2022
Loop Antenna	ComPower	AL-130	241	12 January 2022	12 January 2024
Horn Antenna	A.H.Systems	SAS-572	227D	NA	NA
RF Cable	MRO	n/a	n/a	IHC ¹	IHC ¹
EMC Shielded Enclosure	USC	USC-26	374	IHC ²	IHC ²
AC Power Source	California Instrument	5001i	059	IHC ³	IHC ³
Used Template of Tile 7!					
Note1) In House Calibration Ref. # 6 Note2) In House Calibration Ref. # 4 Note3) In House Calibration Ref. # 7					
Frequency Range:	<input checked="" type="checkbox"/> 9kHz-30MHz	<input checked="" type="checkbox"/> 30-1000MHz	<input checked="" type="checkbox"/> 1-26GHz		
Detector:	<input type="checkbox"/> Peak (for Prescan)	<input checked="" type="checkbox"/> Quasi-Peak(for Formal)			
RBW/VBW:	<input type="checkbox"/> 9/30kHz	<input checked="" type="checkbox"/> 120/300kHz	<input checked="" type="checkbox"/> 1/3MHz		
Type of Facility:	<input checked="" type="checkbox"/> SAC	<input type="checkbox"/> FSOATS	<input type="checkbox"/> <i>in-situ</i>		
Distance:	<input checked="" type="checkbox"/> 3meter	<input type="checkbox"/> 10meter	<input type="checkbox"/> 1meter		
Arrangement of EUT:	<input checked="" type="checkbox"/> Table-top only	<input type="checkbox"/> Floor-standing only	<input type="checkbox"/> Rack Mounted		
Classification:	<input checked="" type="checkbox"/> Class B	<input type="checkbox"/> Class A			
Compliant <input checked="" type="checkbox"/> Non-Compliant <input type="checkbox"/> Not Applicable <input type="checkbox"/>					

Test setup

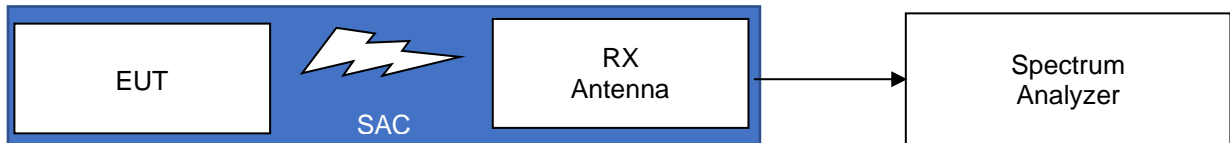
Description of test set-up:

The EUT was placed on a 0.8 m non-conducting table above a Turn table in SAC (below 1 GHz)

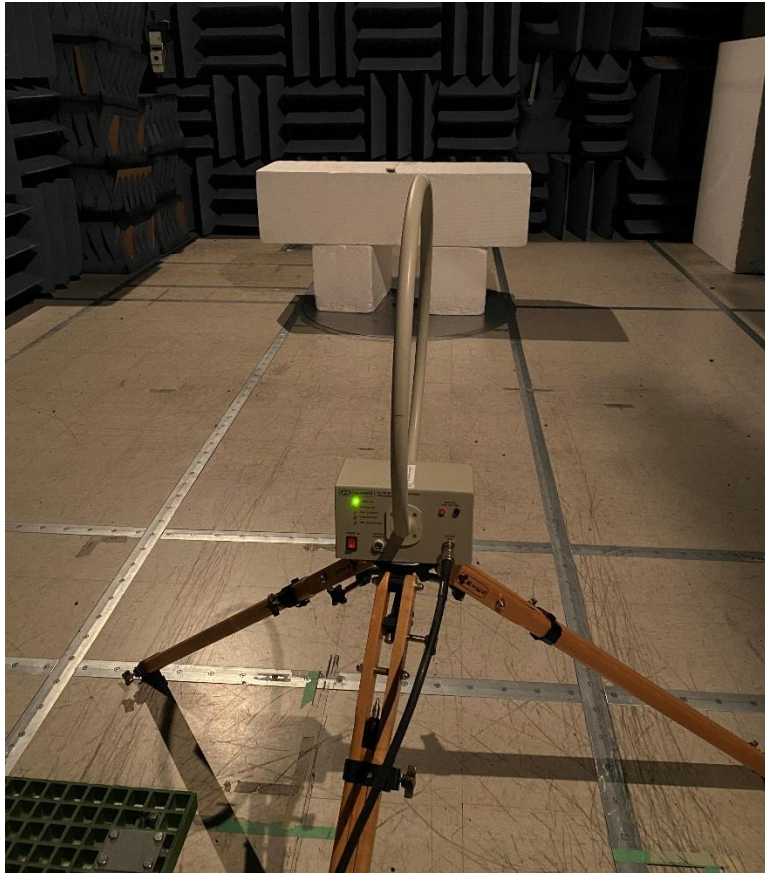
The EUT was placed on a 1.5m non-conducting table above a ground reference plane (GRP). (above 1 GHz)



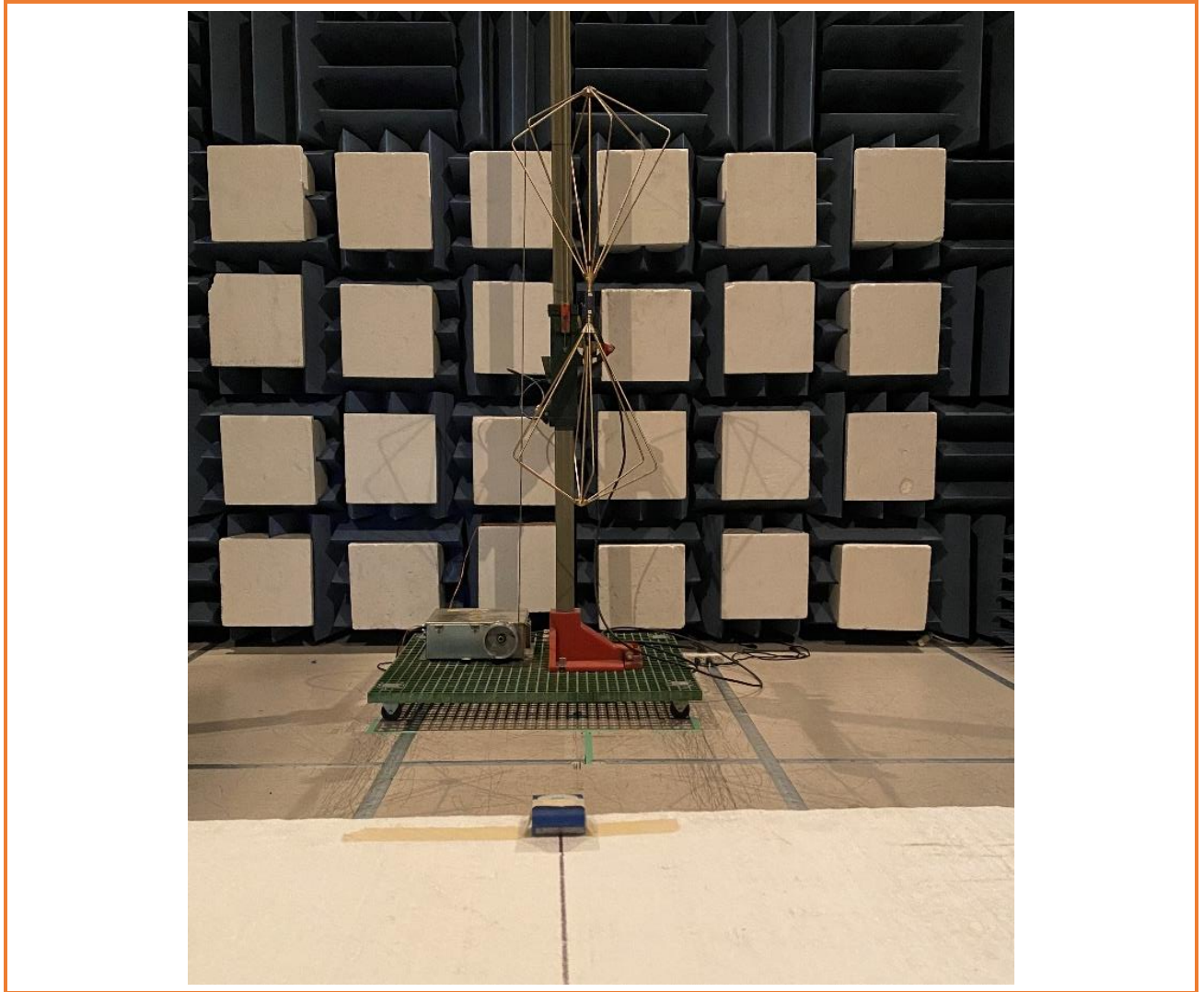
The EUT was set to **Operation Mode #1 with configuration Mode #1.**



Radiated Emission below 10kHz - 30MHz, with AL-130

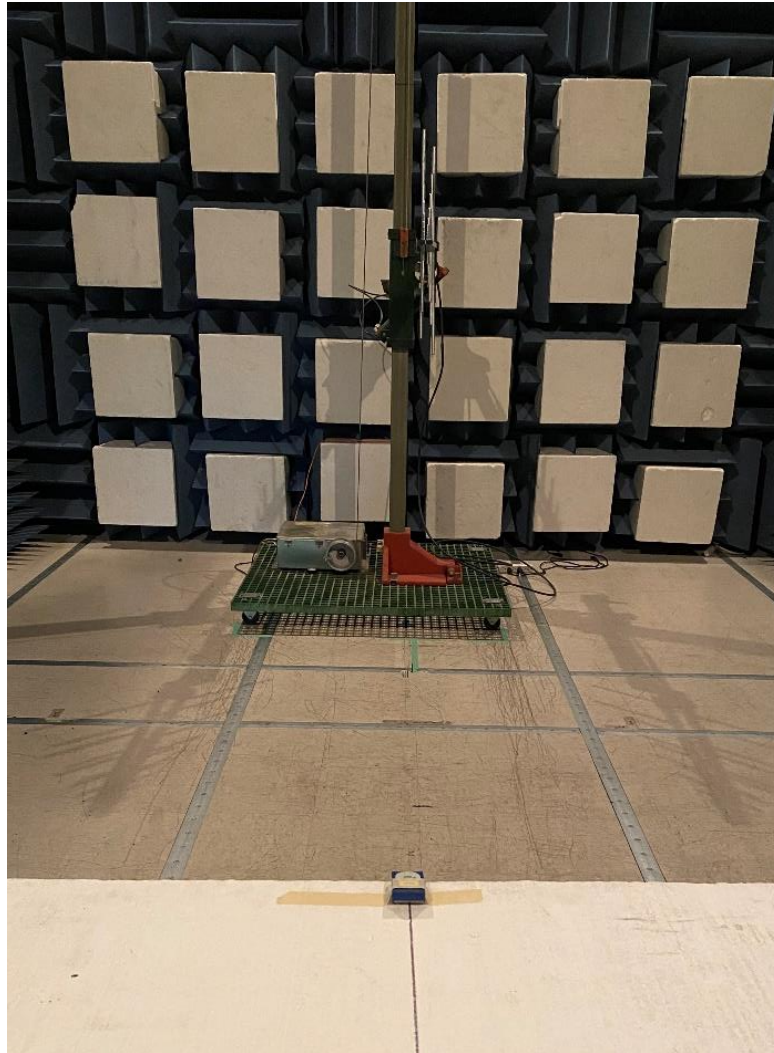


30 - 250MHz, Final Measurement with SAS-540



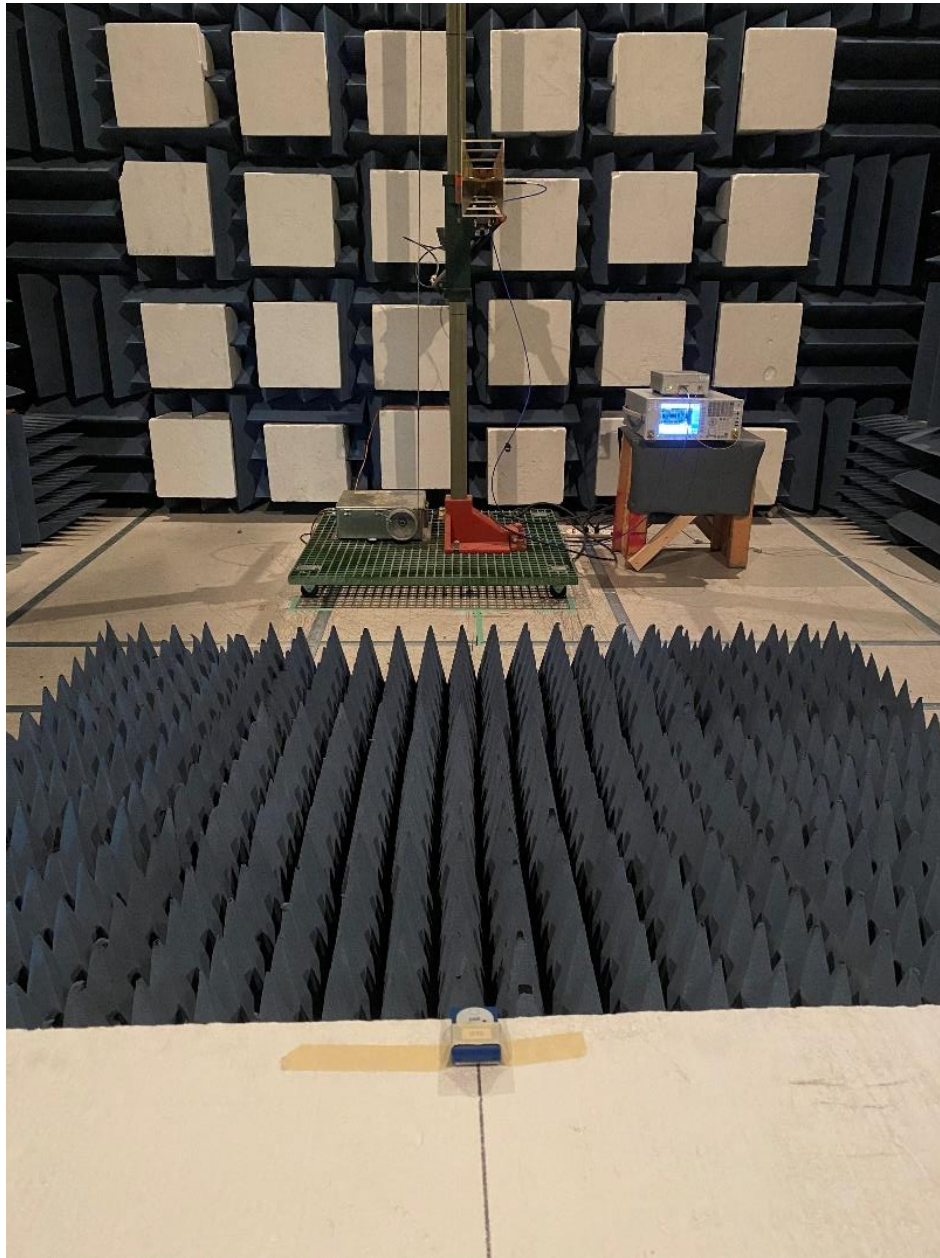
....

250 - 1000MHz, Final Measurement with VUSLP9111B



....

1-18GHz with SAS-571 Antenna:



18- 26.5 GHz with SAS-572 Antenna:



Test Method

This test measures the radiating levels from the EUT, thus evaluating the potential for the EUT to cause radio frequency interference to other electronic devices. Testing was performed in accordance with the test standard(s) referenced in the test summary section of this report. The Equipment Under Test (EUT) was configured based upon the requirements of the applicable test standard. Initially, the primary emission frequencies are identified by positioning a broadband receive antenna three meter from the EUT.

A test was made with an Spectrum Analyzer, controlled by Test Software, Tile7!, at 433.92MHz with the Analyzer in the peak mode. The IF bandwidth was 120 kHz. To ensure that the maximum emission at each discrete frequency of interest is observed, the receive antenna is varied in height from one to four meters and rotated to produce horizontal and vertical polarities while the turntable is rotated to determine the worst emitting configuration. Measurements were then made using CISPR quasi peak (and Averaging for RSS-210) at each orthogonal. It was repeated again for three different Orthogonals as described in configuration mode. The numerical results are included herein to demonstrate compliance.

Worse case data is shown.

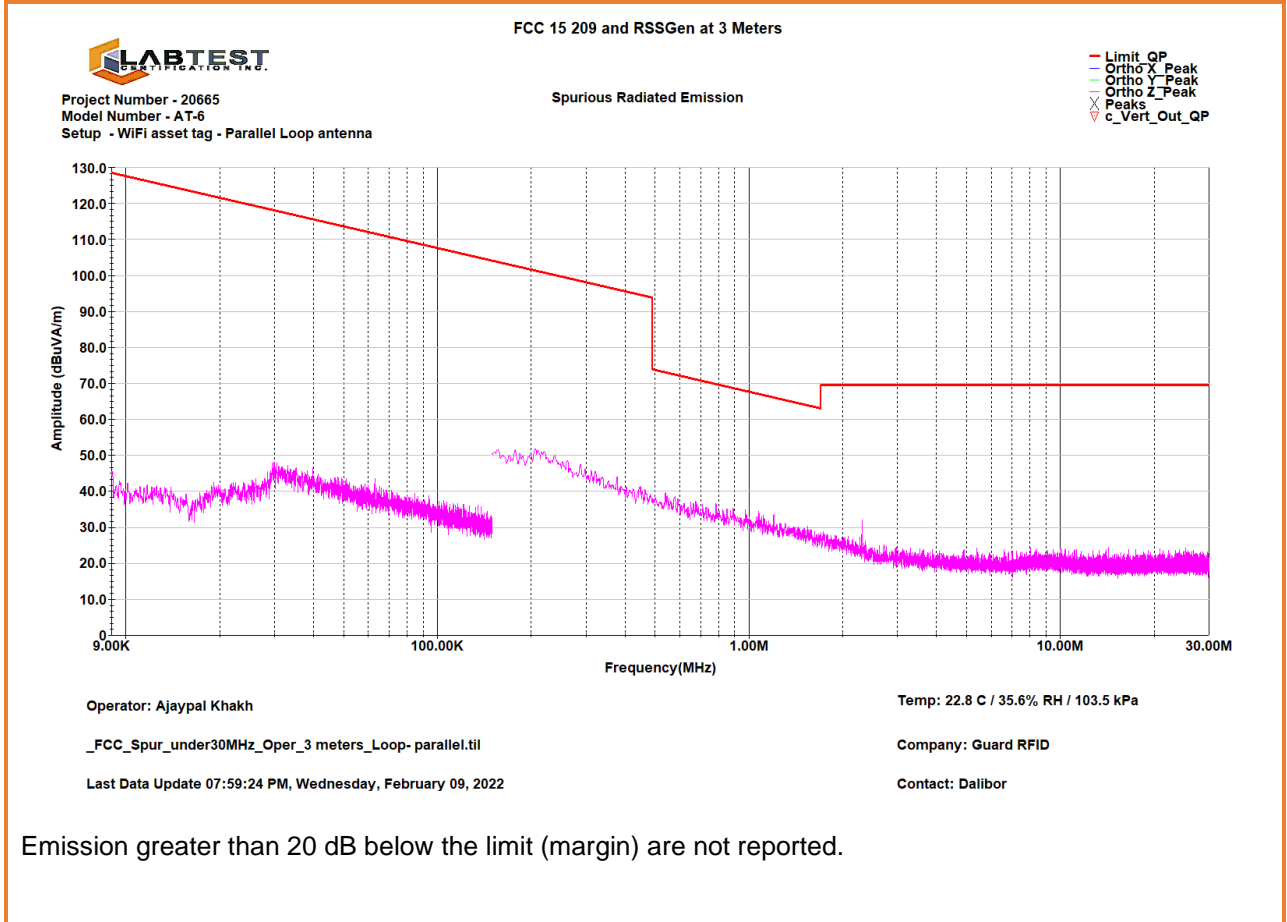
Harmonic and spurious emissions falling within restricted bands (15.205, RSS-GEN 8.10) were examined to ensure compliance with general emission limits (15.209/RSS-GEN 8.9). For transmitters in the band 2400-2483.5 MHz, adjacent restricted bands 2310-2390 MHz and 2483.5-2500 MHz were examined to ensure the transmission skirt as well as any other spurious emissions within the restricted bands comply with the general emission limits.

Test Result

Emission Level (dBuV/m) = Detected Level (dBuV) + Cable Loss (dB) + Antenna Factor (dB/m)

Results

Graphical Representation for Emission - Radiated 10kHz to 30MHz



Graphical Representation for Emission - Radiated 30MHz to 250GHz

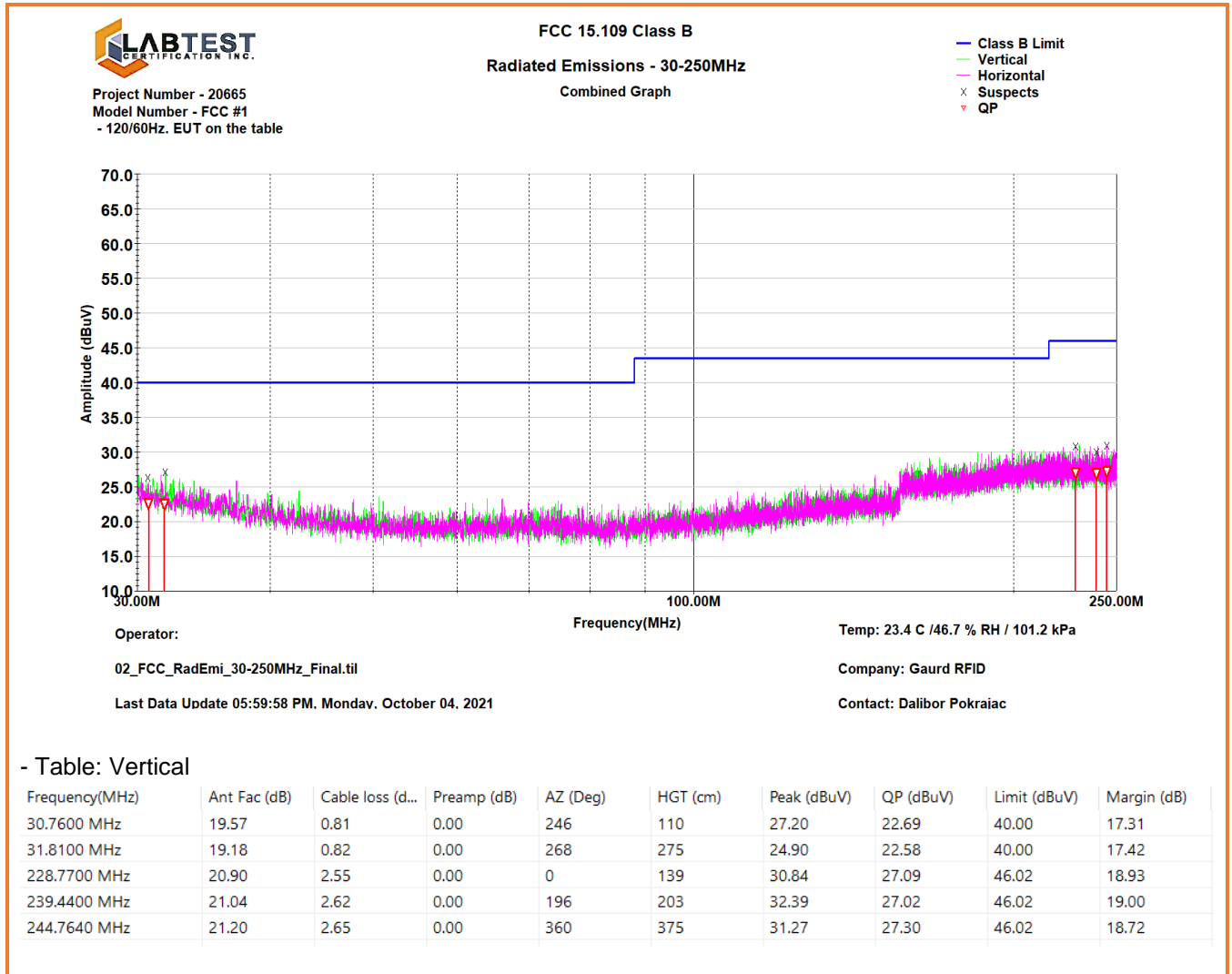
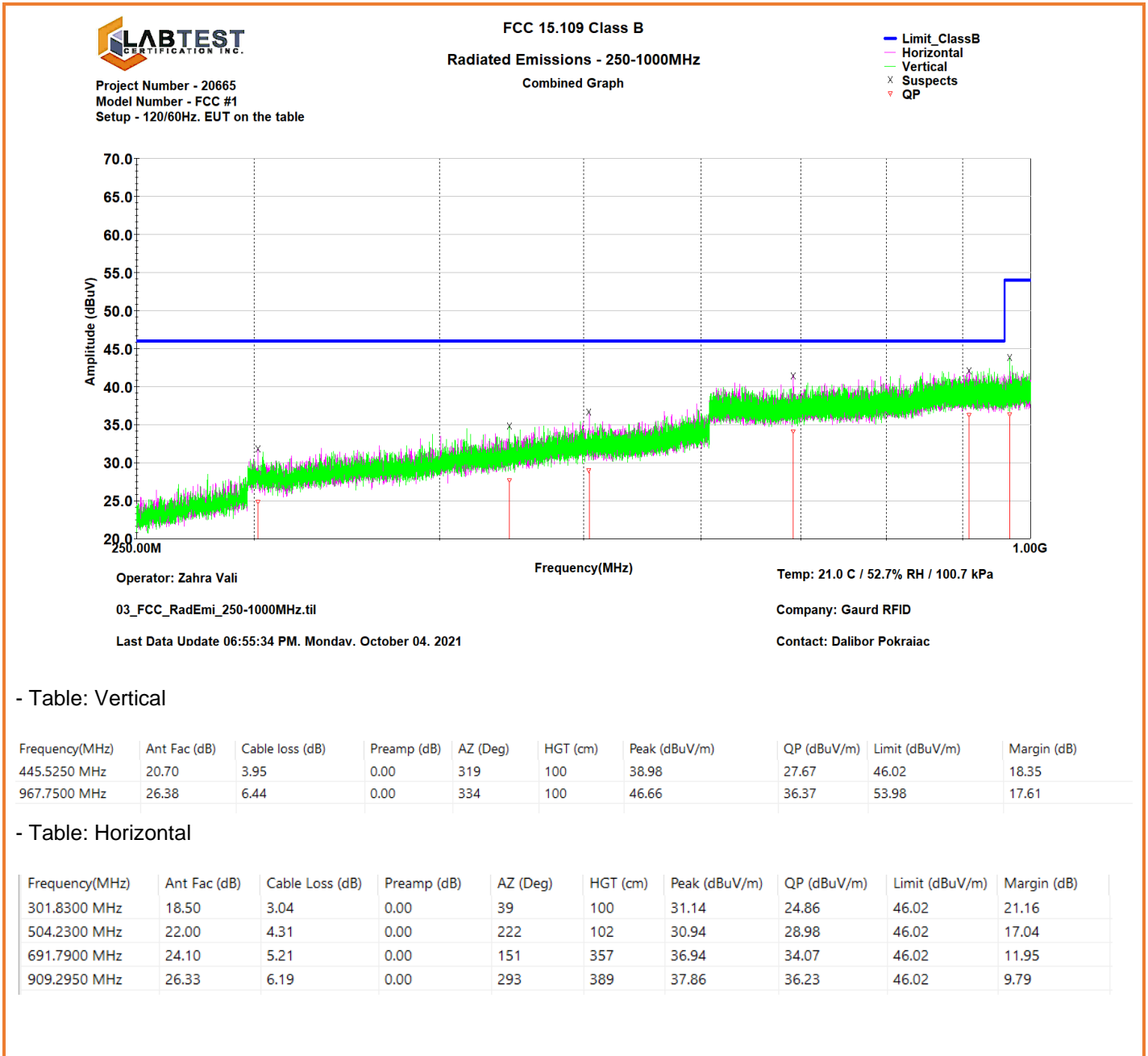


Table Representation for Emission - Radiated 250 MHz to 1000 MHz



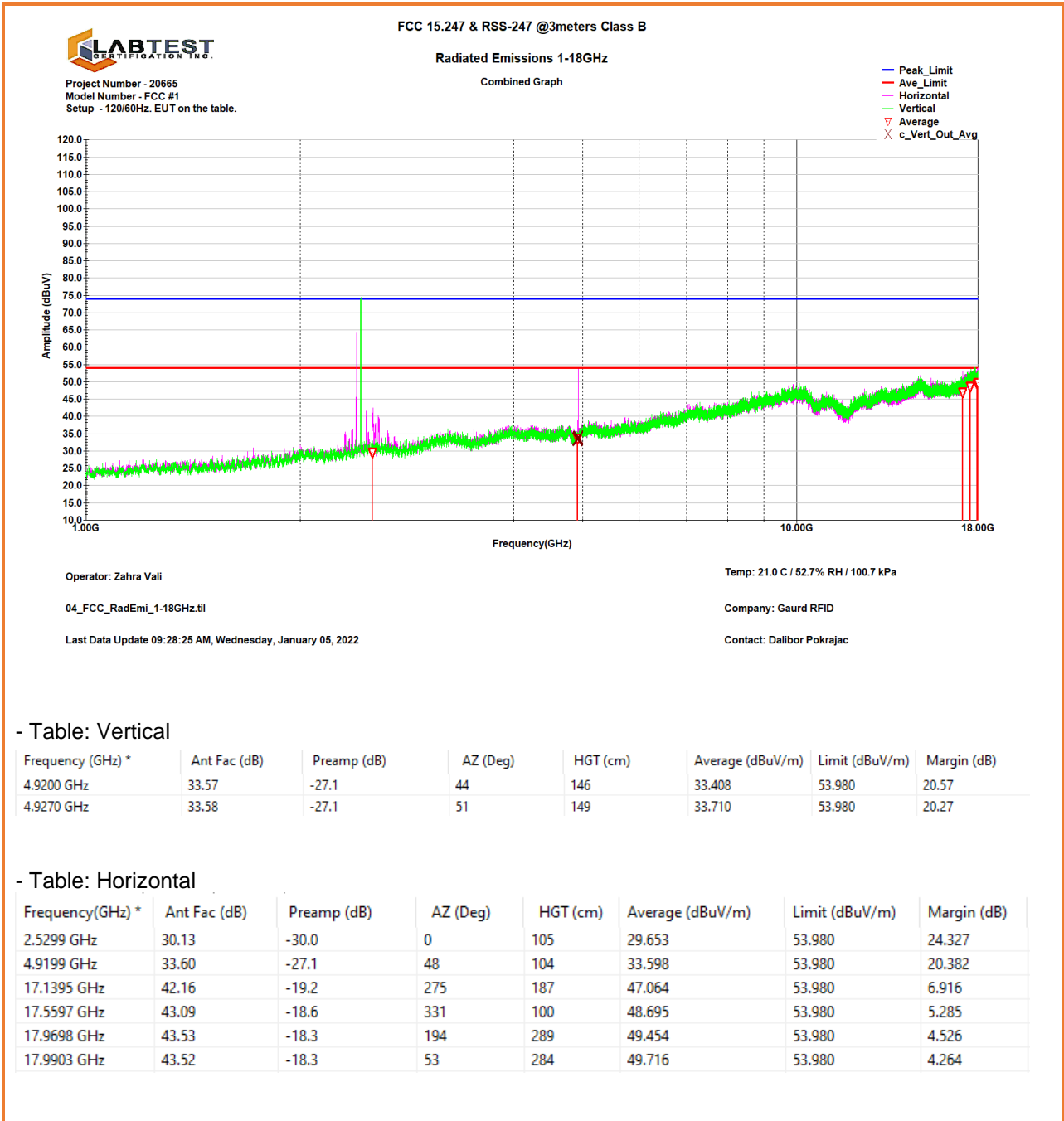
- Table: Vertical

Frequency(MHz)	Ant Fac (dB)	Cable loss (dB)	Preamp (dB)	AZ (Deg)	HGT (cm)	Peak (dBuV/m)	QP (dBuV/m)	Limit (dBuV/m)	Margin (dB)
445.5250 MHz	20.70	3.95	0.00	319	100	38.98	27.67	46.02	18.35
967.7500 MHz	26.38	6.44	0.00	334	100	46.66	36.37	53.98	17.61

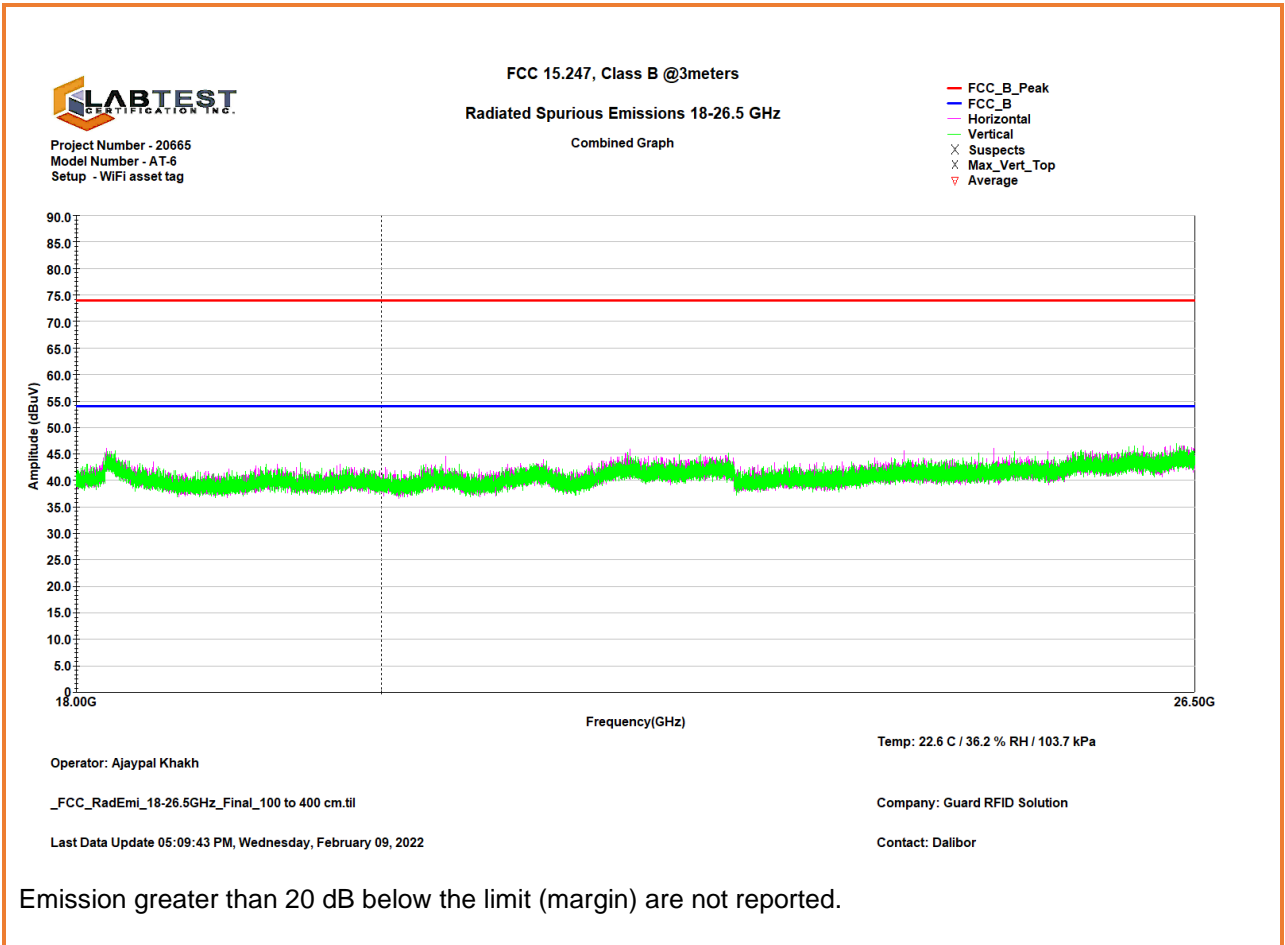
- Table: Horizontal

Frequency(MHz)	Ant Fac (dB)	Cable Loss (dB)	Preamp (dB)	AZ (Deg)	HGT (cm)	Peak (dBuV/m)	QP (dBuV/m)	Limit (dBuV/m)	Margin (dB)
301.8300 MHz	18.50	3.04	0.00	39	100	31.14	24.86	46.02	21.16
504.2300 MHz	22.00	4.31	0.00	222	102	30.94	28.98	46.02	17.04
691.7900 MHz	24.10	5.21	0.00	151	357	36.94	34.07	46.02	11.95
909.2950 MHz	26.33	6.19	0.00	293	389	37.86	36.23	46.02	9.79

Graphical Representation for Emission - Radiated 1 to 18GHz



Graphical Representation for Emission - Radiated 18-26.5 GHz



END OF REPORT