



Date: 15 May 2023

**I.T.L. Product Testing Ltd.
FCC Radio Test Report**


for


Attenti US, Inc.

Equipment under test:

**Electronic Monitoring Tracking Device
Bracelet 100**

FCC ID: NC3BRACELET-100

Tested by: 
M. Zohar

Approved by: 
I. Mansky

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This report concerns: Original Grant:
Equipment type: FCC: DSS Part 15 Spread Spectrum Transmitter
Limits used: 47CFR15 Section 15.247
Measurement procedures: KDB 558074 D01 v05r02, ANSI C63.10:2013

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1. General Information

1.1 Administrative Information

Manufacturer:	Attenti US, Inc.
Manufacturer's Address:	1838 Gunn Highway, Odessa, Florida 33556, United States
Equipment Under Test (E.U.T):	Electronic Monitoring Tracking Device
Equipment Model:	Bracelet 100
Equipment Serial No.:	BCL-100-0-9-00
Date of Receipt of E.U.T:	January 01, 2023
Start of Test:	January 01, 2023
End of Test:	January 01, 2023
Test Laboratory Location:	I.T.L. (Product Testing) Ltd. 1 Bat Sheva St., Lod 7120101, Israel
Test Specifications:	FCC Part 15, Subpart C

1.2 List of Accreditations

The EMC laboratory of I.T.L. is accredited by the following bodies:

1. The American Association for Laboratory Accreditation (A2LA) (U.S.A.), Certificate No. 1152.01.
2. The Federal Communications Commission (FCC) (U.S.A.), FCC Designation No. IL1005.
3. Department of Innovation, Science and Economic Development (ISED) Canada, CAB identifier: IL1002

I.T.L. Product Testing Ltd. is accredited by the American Association for Laboratory Accreditation (A2LA) and the results shown in this test report have been determined in accordance with I.T.L.'s terms of accreditation unless stated otherwise in the report.



1.3 Product Description

The Bracelet 100 device is a body worn unit, powered by an internal 3V primary battery. The device is part of Attenti Curfew’s monitoring system. It contains an SRD transceiver. Its operating frequency band is: 901-928 Mhz.

Type of Equipment			
<input checked="" type="checkbox"/>	Stand Alone (Equipment with/without its own control provisions)		
<input type="checkbox"/>	Combined (Equipment where radio part is fully integrated with another type of equipment)		
<input type="checkbox"/>	Plug in card (Equipment intended for a variety of host systems)		
Intended Use		Condition of use	
<input type="checkbox"/>	Fixed	Always of distance >2m from the people	
<input type="checkbox"/>	Mobile	Always of distance >20cm from the people	
<input checked="" type="checkbox"/>	Portable	Always of distance <20cm to human body	
Assigned frequency band		902-928MHz	
Operational frequencies		915MHz	
Maximum rated output power		At transmitter 50Ω RF output connector [dBm]	18dBm
		Effective Radiated Power (for equipment without RF connector)	
Antenna Connection			
<input type="checkbox"/>	Unique Coupling	<input type="checkbox"/>	Standard Connection
<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	Integral
		<input checked="" type="checkbox"/>	With temporary RF connector
		<input type="checkbox"/>	Without temporary RF connector
Antenna Gain(peak)		-9dBi (Peak)	
Operating channel bandwidth		500kHz	
Type of modulation		GFSK	
Bit rate		50Kbps	
Maximum transmitter duty cycle		0.05% at operative mode , 100% at “test mode”	
Transmitter power source			
<input type="checkbox"/>	AC	Nominal rated voltage	
<input type="checkbox"/>	DC	Nominal rated voltage	
<input checked="" type="checkbox"/>	Battery	Nominal rated voltage	3.7V

1.4 Test Methodology

Both conducted and radiated testing was performed according to the procedures in KDB 558074 D01 v03r05 and ANSI C63.10: 2013. Radiated testing was performed at an antenna to EUT distance of 3 meters.



1.5 Test Facility

Emissions tests were performed at I.T.L.'s testing facility in Lod, Israel. I.T.L.'s EMC Laboratory is accredited by A2LA, certificate No. 1152.01 and its FCC Designation Number is IL1005.

1.6 Measurement Uncertainty

Conducted Emission

Conducted Emission (CISPR 11, EN 55011, CISPR 22, EN 55022, ANSI C63.4)

0.15-30 MHz:

Expanded Uncertainty (95% Confidence, K=2):

± 3.44 dB

Radiated Emission

Radiated Emission (CISPR 11, EN 55011, CISPR 22, EN 55022, ANSI C63.4) for open site:

30-1000MHz:

Expanded Uncertainty (95% Confidence, K=2):

± 4.96 dB

1 GHz to 6 GHz

Expanded Uncertainty (95% Confidence, K=2):

±5.19 dB

>6 GHz

Expanded Uncertainty (95% Confidence, K=2):

±5.51 dB

2. System Test Configuration

2.1 Justification

1. The E.U.T contains a transceiver that uses DTS protocol in sub-Giga band.
2. The unit was evaluated while transmitting in the operation frequency: 915.0MHz.
3. Conducted emission tests were performed with the E.U.T. antenna terminal connected by an RF cable to the Spectrum Analyzer, through a 30dB external attenuator.
4. Final radiated emission tests were performed after exploratory emission testing that was performed in 3 orthogonal polarities to determine the “worst case” radiation.
5. According to screening results below, the “worst case” was the X axis

Orientation	Frequency	2 nd Harmonic	3 rd Harmonic
	(MHz)	(dBuV/m)	(dBuV/m)
Y axis	915.0	57.4	60.1
X axis	915.0	58.4	61.3
Z axis	915.0	57.8	60.6

6. Figure 1. Screening Results

2.2 EUT Exercise Software

No special exercise software was used.

2.3 Special Accessories

No special accessory was used.

2.4 Equipment Modifications

Initially, the E.U.T failed in the restricted bands radiated spurious emissions testing, with exceeding value of 8dB. The applicant assembled a metallic cover (shielding) on the transmitter’s chip and PCB, and reduced the power level to 18dBm (code level).

2.5 Configuration of Tested System

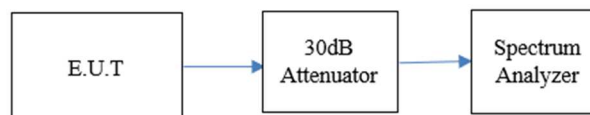


Figure 2. Configuration of Tested System Conducted



Figure 3. Configuration of Tested System Radiated



3. Setup Photos

See a separate document.

4. 6 dB Minimum Bandwidth

4.1 Test Specification

FCC Part 15, Subpart C, Section 247(a)(2)

4.2 Test Procedure

(Temperature (20°C)/ Humidity (62%RH))

The E.U.T operation mode and test set-up are as described in Section 2 of this report. The E.U.T. antenna terminal was connected to the Spectrum Analyzer through an external attenuator and an appropriate coaxial cable (total loss=31dB). Special attention was taken to prevent Spectrum Analyzer RF input overload.

The spectrum bandwidth of the E.U.T. at the point of 6 dB below maximum peak power was measured and recorded.

The RBW was set to 100 kHz.

4.3 Test Limit

Systems using digital modulation techniques may operate in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

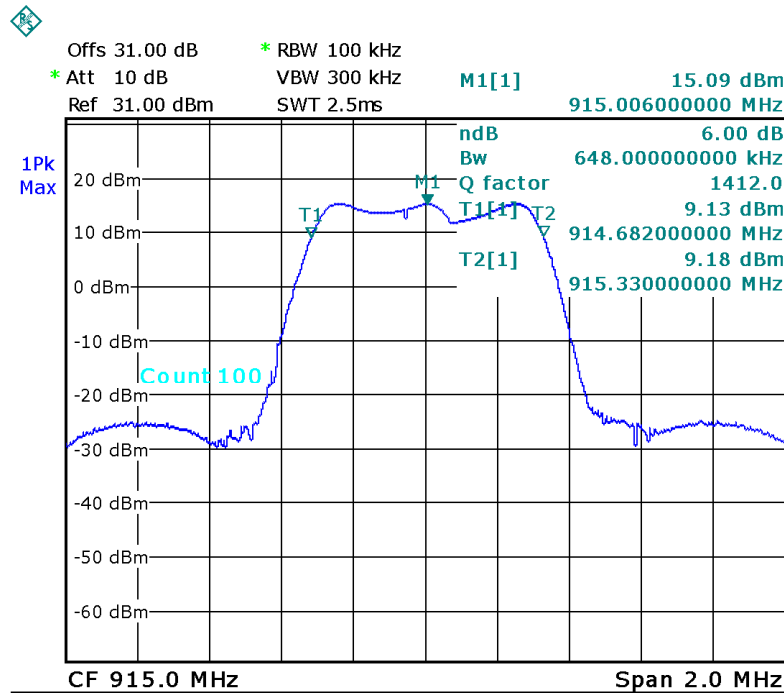
4.4 Test Results

Operation Frequency	Reading	Limit
(MHz)	(kHz)	(kHz)
915.0	648.0	>500.0

Figure 4 6 dB Minimum Bandwidth

JUDGEMENT: Passed

For additional information see *Figure 5*.



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Figure 5. 6dB BW

4.5 Test Equipment Used; 6dB Bandwidth

ITL #	Instrument	Manufacturer	Model	Serial No.	Last Calibration Date	Next Calibration Due
1499	Spectrum Analyzer	Rohde & Schwarz	FSL6	100194	February 20, 2022	February 20, 2023
1776	30 dB attenuator	MCL	BW-S30W5	533	May 16, 2022	May 16, 2023
1697	Low Loss cable	Huber Suhner	Sucofelex	27504/4PEA	May 16, 2022	May 16, 2023

Figure 6 Test Equipment Used



5. Occupied Bandwidth

5.1 Test Specification

FCC, Part 15, Subpart C, Section 2.1049

5.2 Test Procedure

(Temperature (20°C)/ Humidity (62%RH))

The E.U.T. antenna terminal was connected to the Spectrum Analyzer through an external attenuator and an appropriate coaxial cable. The transmitter unit operated with normal modulation.

The spectrum analyzer was set to the following parameters:

- Span between 1.5 times and 5.0 times the OBW.
- RBW in the range of 1% to 5% of the OBW.
- Detector Function: Peak, Trace: Maximum Hold.
- 99% occupied bandwidth function set on.

5.3 Test Limit

N/A

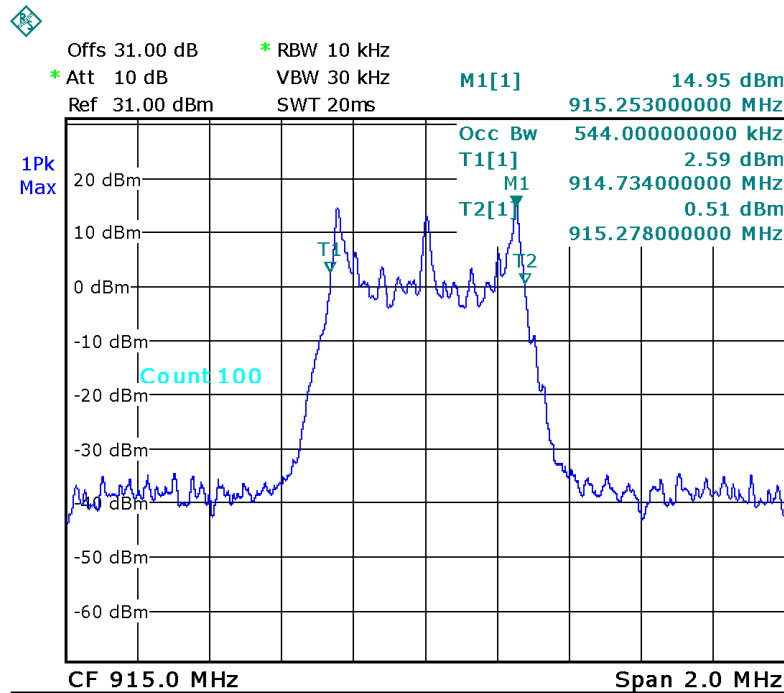
5.4 Test Results

Operation Frequency (MHz)	Bandwidth Reading (kHz)
915.0	544.0

Figure 7 Test Results

JUDGEMENT: Passed

For additional information see *Figure 8*.



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Figure 8. Occupied Bandwidth

5.5 Test Equipment Used, Occupied Bandwidth

ITL #	Instrument	Manufacturer	Model	Serial No.	Last Calibration Date	Next Calibration Due
1499	Spectrum Analyzer	Rohde & Schwarz	FSL6	100194	February 20, 2022	February 20, 2023
1776	30 dB attenuator	MCL	BW-S30W5	533	May 16, 2022	May 16, 2023
1697	Low Loss cable	Huber Suhner	Sucofelex	27504/4PEA	May 16, 2022	May 16, 2023

Figure 9 Test Equipment Used



6. Maximum (Average) Conducted Output Power

6.1 Test Specification

FCC, Part 15, Subpart C, Section 247(b)(3)

6.2 Test Procedure

(Temperature (20°C)/ Humidity (62%RH))

The E.U.T operation mode and test set-up are as described in Section 2 of this report. The E.U.T. antenna terminal was connected to the Spectrum Analyzer through an external attenuator and an appropriate coaxial cable (total loss=31dB). Special attention was taken to prevent Spectrum Analyzer RF input overload.

Evaluation method performed according to ANSI C63.10, Section 11.9.2.2.2: AVGSA-1

Radiated output power levels were measured at selected operation frequencies and the results were converted to power level according to the formula as shown below:

6.3 Test Limit

The maximum peak conducted output power of the intentional radiator for systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt.

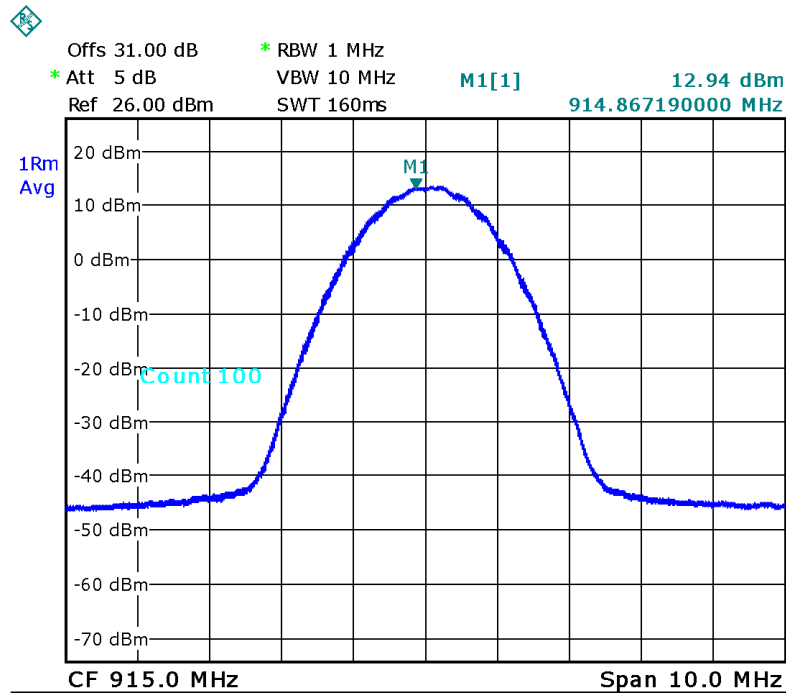
6.4 Test Results

Protocol Type	Operation Frequency	Average Reading	Power	Limit	Margin
	(MHz)	(dBm)	(mW)	(mW)	(mW)
DTS	915.0	12.9	20.0	1000.0	-980.0

Figure 10 Maximum Conducted (Average) Output Power

JUDGEMENT: Passed by 980.0 mW

For additional information see Figure 11.



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Figure 11. 915.0MHz

6.5 Test Equipment Used; Maximum Conducted(Average) Output Power

ITL #	Instrument	Manufacturer	Model	Serial No.	Last Calibration Date	Next Calibration Due
1499	Spectrum Analyzer	Rohde & Schwarz	FSL6	100194	February 20, 2022	February 20, 2023
1776	30 dB attenuator	MCL	BW-S30W5	533	May 16, 2022	May 16, 2023
1697	Low Loss cable	Huber Suhner	Sucofelex	27504/4PEA	May 16, 2022	May 16, 2023

Figure 12 Test Equipment Used



7. Band Edge Spectrum

7.1 Test Specification

FCC, Part 15, Subpart C, Section 247(d)

7.2 Test Procedure

(Temperature (20°C)/ Humidity (62%RH))

The E.U.T operation mode and test set-up are as described in Section 2 of this report. The E.U.T. antenna terminal was connected to the Spectrum Analyzer through an external attenuator and an appropriate coaxial cable (loss=31.0 dB). Special attention was taken to prevent Spectrum Analyzer RF input overload.

The RBW was set to 100 kHz.

7.3 Test Limit

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

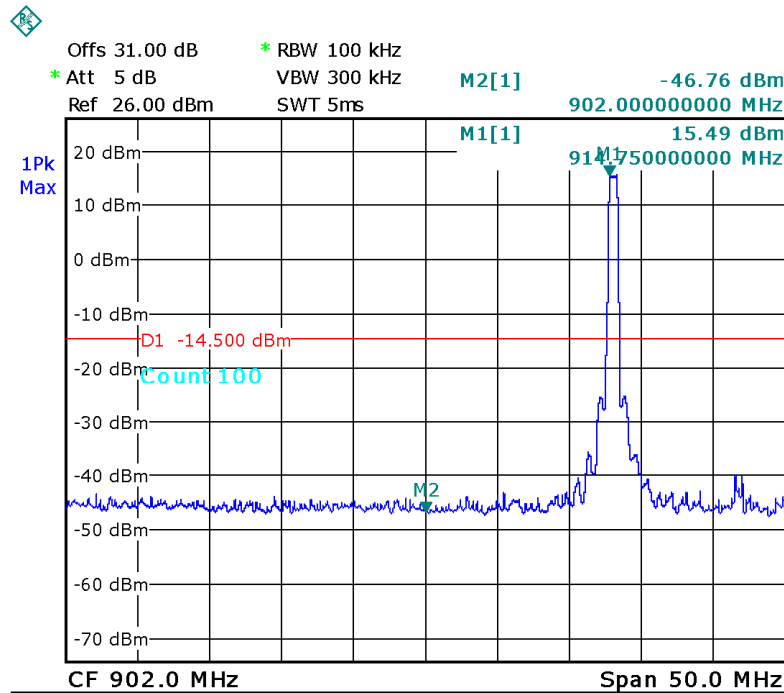
7.4 Test Results

Operation Frequency (MHz)	Band Edge Frequency (MHz)	Spectrum Level (dBm)	Limit (dBm)	Margin (dB)
915.0	902.0	-46.8	-14.5	-32.3
915.0	928.0	-45.6	-14.5	-31.1

Figure 13 Band Edge Spectrum

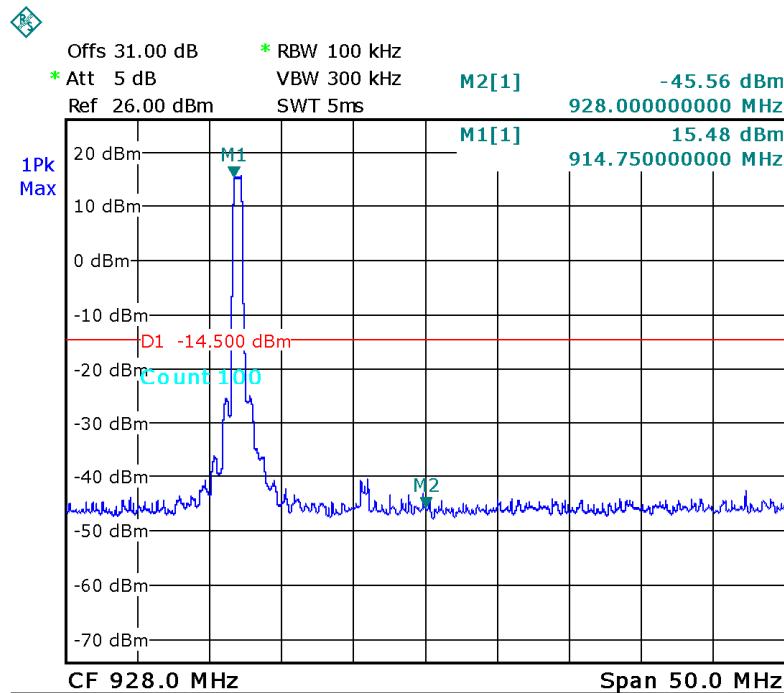
JUDGEMENT: Passed by 31.1dB

For additional information see *Figure 14* and *Figure 15*.



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Figure 14 Band Edge - Low



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Figure 15 Band Edge - High



7.5 Test Equipment Used; Band Edge

ITL #	Instrument	Manufacturer	Model	Serial No.	Last Calibration Date	Next Calibration Due
1499	Spectrum Analyzer	Rohde & Schwarz	FSL6	100194	February 20, 2022	February 20, 2023
1776	30 dB attenuator	MCL	BW-S30W5	533	May 16, 2022	May 16, 2023
1697	Low Loss cable	Huber Suhner	Sucofelex	27504/4PEA	May 16, 2022	May 16, 2023

Figure 16 Test Equipment Used



8. Emissions in non-Restricted Frequency Bands

8.1 Test Specification

FCC, Part 15, Subpart C, Section 247(d)

8.2 Test Procedure

(Temperature (20°C)/ Humidity (62%RH))

The E.U.T. operation mode and test set-up are as described in Section 2 of this report.

The E.U.T. antenna terminal was connected to the Spectrum Analyzer through an external attenuator and an appropriate coaxial cable (max total loss=32.0 dB). Special attention was taken to prevent Spectrum Analyzer RF input overload. RBW was set to 100 kHz, detector set to max peak and trace to “max hold”.

8.3 Test Limit

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

8.4 Test Results

JUDGEMENT: Passed

The EUT met the requirements of the FCC Part 15, Subpart C, Section 247(d) specification.

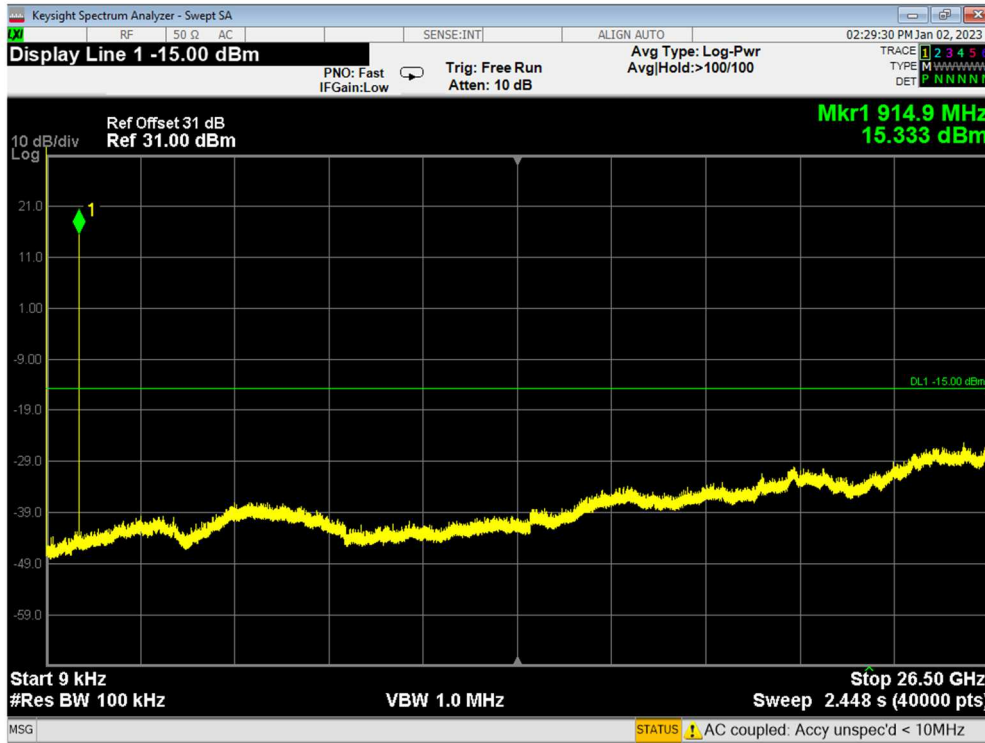


Figure 17 915.0MHz

Note: All exceeds peaks in plot are the fundamental transmission frequency.

8.5 Test Instrumentation Used, Emission in Non-Restricted Frequency Bands

ITL #	Instrument	Manufacturer	Model	Serial No.	Last Calibration Date	Next Calibration Due
2163	Signal analyzer	Keysight	EXA signal analyzer N9010A	my51170071	February 13, 2022	February 13, 2023
1776	30 dB attenuator	MCL	BW-S30W5	533	May 16, 2022	May 16, 2023
1697	Low Loss cable	Huber Suhner	Sucofelex	27504/4PEA	May 16, 2022	May 16, 2023

Figure 18 Test Equipment Used



9. Emissions in Restricted Frequency Bands

9.1 Test Specification

FCC Part 15, Subpart C, Sections 15.209, 15.205, 15.247(d)

9.2 Test Procedure

(Temperature (23°C)/ Humidity (55%RH))

The E.U.T. operation mode and test set-up are as described in Section 2 of this report.

For measurements between 0.009-30MHz:

The E.U.T was tested inside the shielded room and placed on a non-metallic table, 0.8 meters above the ground. The emissions were measured at a distance of 3 meters. The readings were maximized by the turntable azimuth between 0-360°, and the antenna polarization.

The frequency range 0.009MHz-30MHz was scanned.

For measurements between 30-1000MHz:

A preliminary measurement to characterize the E.U.T was performed inside the shielded room at a distance of 3 meters, using peak detection mode and broadband antennas. The preliminary measurements produced a list of the highest emissions. The E.U.T was then transferred to the open site, and placed on a remote-controlled turntable. The E.U.T was placed on a non-metallic table, 0.8 meters above the ground. The emissions were measured at a distance of 3 meters. The readings were maximized by adjusting the antenna height between 1-4 meters, the turntable azimuth between 0-360°, and the antenna polarization. The frequency range 30MHz -1000MHz was scanned and the list of the highest emissions was verified and updated accordingly.

For measurements between 1GHz-10GHz:

The E.U.T was tested inside the shielded room and placed on a non-metallic table, 1.5 meters above the ground. The emissions were measured at a distance of 3 meters. The readings were maximized by the turntable azimuth between 0-360°, and the antenna polarization.

The frequency range 1GHz -10GHz was scanned.

The highest radiation is described in the tables below.

9.3 Test Limit

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)).

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)	Field strength* (dBµV/m)	Field strength* (dBµV/m)@3m
0.009-0.490	2400/F(kHz)	300	48.5-13.8	128.5-73.8
0.490-1.705	24000/F(kHz)	30	33.8-23.0	73.8-63.0
1.705-30.0	30	30	29.5	69.5
30-88	100	3	40.0	40.0



Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)	Field strength* (dB μ V/m)	Field strength* (dB μ V/m)@3m
88-216	150	3	43.5	43.5
216-960	200	3	46.0	46.0
Above 960	500	3	54.0	54.0

*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. For average radiated emission measurements above 1000 MHz, there is also a limit corresponding to 20 dB above the indicated values in the table is specified when measuring with peak detector function.

Figure 19 Table of Limits

9.4 Test Results

JUDGEMENT: Passed

For the operation frequency of 922.5 MHz, the margin between the emission level and the specification limit is in the worst case 2.3 dB at the frequency of 2709.0 MHz, vertical polarization.

The EUT met the requirements of the FCC Part 15, Subpart C Sections 15.209, 15.205, 15.247(d) specifications.

The details of the highest emissions are given in *Figure 20*.



Radiated Emission

E.U.T Description Electronic Monitoring Tracking Device
Type Bracelet 100
Serial Number: BCL-100-0-9-00

Specifications: FCC, Part 15, Subpart C, Sections 15.209, 15.205, 15.247(d)

Antenna Polarization: Horizontal/ Vertical Frequency Range: 9 kHz to 10.0 GHz
Operation Frequency: 915.0MHz Detector: Peak, Average

Operation Frequency	Freq.	Pol	Peak Reading	Peak Limit	Peak Margin	Average Reading	Average Limit	Average Margin
(MHz)	(MHz)	(H/V)	(dBµV/m)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
915.0	1830.0	V	49.9	74.0	-24.1	38.2	54.0	-15.8
	1830.0	H	58.4	74.0	-15.6	50.0	54.0	-4.0
	2745.0	V	51.4	74.0	-22.6	43.5	54.0	-10.5
	2745.0	H	61.3	74.0	-12.7	53.8	54.0	-0.2
	3660.0	V	61.0	74.0	-13.0	53.9	54.0	-0.1
	3660.0	H	57.4	74.0	-16.6	51.5	54.0	-2.5

Figure 20. Radiated Emission Results

Margin refers to the test results obtained minus specified requirement; thus, a positive number indicates failure, and a negative result indicates that the product passes the test.

“Peak Amp” includes correction factor.

* “Correction Factor” = Antenna Factor + Cable Loss- Low Noise Amplifier Gain



9.5 Test Instrumentation Used; Emissions in Restricted Frequency Bands

Instrument	Manufacturer	Model	Serial No.	Last Calibration Date	Next Calibration Due
Active Loop Antenna	EMCO	6502	2950	July 5, 2022	July 5, 2023
EMI Receiver	HP(Agilent)	8542E	3906A00276	February 22, 2022	February 22, 2023
RF Filter	HP(Agilent)	85420E	3705A00248	February 22, 2022	February 22, 2023
Spectrum Analyzer	HP	8593EM	3536A00120ADI	February 26, 2019	February 26, 2020
MicroWave System Amplifier (LNA)	HP	83006A	3104A00589	August 23, 2020	August 23, 2021
Log-periodic Antenna	EMCO	3146	9505-4081	April 27, 2021	April 27, 2024
Horn Antenna	ETS	3115	29845	May 25, 2021	May 25, 2024
Biconical Antenna	EMCO	3110B	9912-3337	January 18, 2022	January 18, 2024
Multi device Controller	EMCO	2090	9908-1456	NCR	NCR
Full anechoic Civil Chamber	ETS	S81	SL 11643	NCR	NCR
Pass Band Filter	Meuro	MFL040120H50	902252	May 16, 2022	May 16, 2023
Spectrum Analyzer	Rohde & Schwarz	FSL6	100194	February 20, 2022	February 20, 2023
EMI Test Receiver	Rohde & Schwarz	ESCI7	100724	February 20, 2022	February 20, 2023
10 m RF cable	Commscope ORS (Serge)	0623 WBC-400	G020132	May 25, 2021	May 25, 2022
35m coaxial cable for oats	EIM (Huber Suhner)	RG214-11N(X2) RG214/U	(blank)	June 22, 2022	June 22, 2023
Antenna Mast	ETS	2070-2	9608-1497	NCR	NCR
Turntable	ETS	2087	-	NCR	NCR
Mast & Table Controller	ETS/EMCO	2090	9608-1456	NCR	NCR

Figure 21 Test Equipment Used



10. Transmitted Power Density

10.1 Test Specification

FCC, Part 15, Subpart C, Section 247(e)

10.2 Test Procedure

(Temperature (20°C)/ Humidity (62%RH))

The E.U.T operation mode and test set-up are as described in Section 2 of this report. The E.U.T. antenna terminal was connected to the Spectrum Analyzer through an external attenuator and an appropriate coaxial cable (total loss=31dB). Special attention was taken to prevent Spectrum Analyzer RF input overload.

Evaluation method performed according ANSI C63.10, Section 11.10.1: AVGPSD-1

10.3 Test Limit

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.

10.4 Test Results

Protocol Type	Operation Frequency	Average Reading	Limit	Margin
	(MHz)	(dBm)	(dBm)	(dBm)
DTS	915.0	6.2	8.0	-1.8

Figure 22 Test Results

JUDGEMENT: Passed by-1 dB

For additional information see Figure 23.

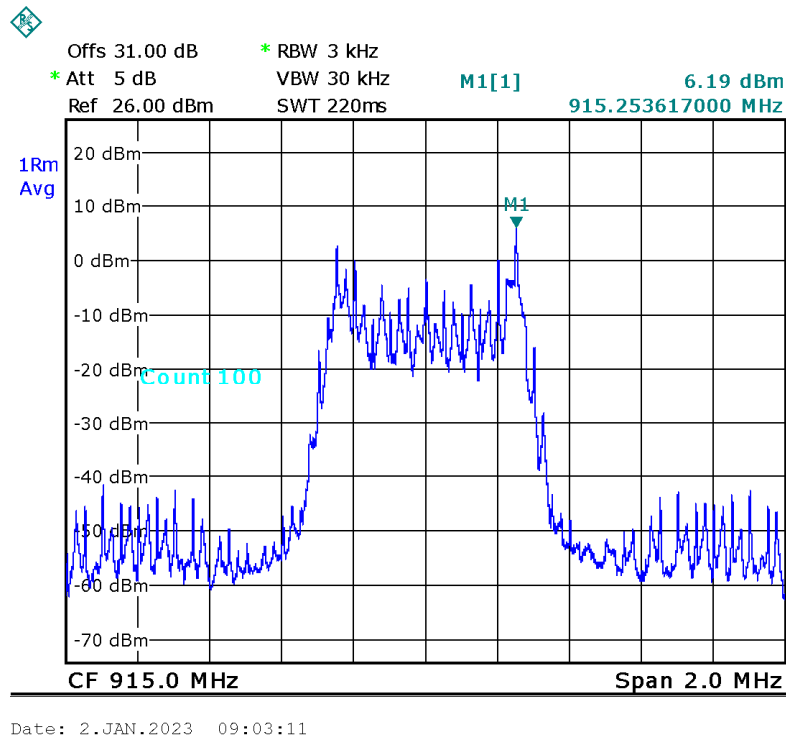


Figure 23. 915.0MHz

10.5 Test Equipment Used; Transmitted Power Density

ITL #	Instrument	Manufacturer	Model	Serial No.	Last Calibration Date	Next Calibration Due
1499	Spectrum Analyzer	Rohde & Schwarz	FSL6	100194	February 20, 2022	February 20, 2023
1776	30 dB attenuator	MCL	BW-S30W5	533	May 16, 2022	May 16, 2023
1697	Low Loss cable	Huber Suhner	Sucofelex	27504/4PEA	May 16, 2022	May 16, 2023

Figure 24 Test Equipment Used



11. Antenna Gain/Information

The antenna gain is -9dBi (Peak).



12. Appendix A - Correction Factors

12.1 ITL #1911: OATS RF Cable

Frequency (MHz)	Cable Loss (dB)	Frequency (MHz)	Cable Loss (dB)
1.00	0.50	450.00	5.83
10.00	1.00	500.00	6.33
20.00	1.34	550.00	6.67
30.00	1.50	600.00	6.83
50.00	1.83	650.00	7.17
100.00	2.67	700.00	7.66
150.00	3.17	750.00	7.83
200.00	3.83	800.00	8.16
250.00	4.17	850.00	8.50
300.00	4.50	900.00	8.83
350.00	5.17	950.00	8.84
400.00	5.50	1000.00	9.00

12.2 ITL #1840: Semi-Anechoic Chamber RF Cable

Frequency (MHz)	Cable Loss (dB)	Frequency (MHz)	Cable Loss (dB)
1,000.0	-1.40	10,000.0	-6.00
1,500.0	-1.70	10,500.0	-6.20
2,000.0	-2.00	11,000.0	-6.20
2,500.0	-2.30	11,500.0	-6.00
3,000.0	-2.60	12,000.0	-6.00
3,500.0	-2.80	12,500.0	-6.10
4,000.0	-3.10	13,000.0	-6.30
4,500.0	-3.30	13,500.0	-6.50
5,000.0	-3.60	14,000.0	-6.70
5,500.0	-3.70	14,500.0	-7.00
6,000.0	-4.00	15,000.0	-7.30
6,500.0	-4.40	15,500.0	-7.50
7,000.0	-4.7	16,000.0	-7.60
7,500.0	-4.80	16,500.0	-8.00
8,000.0	-5.00	17,000.0	-8.00
8,500.0	-5.10	17,500.0	-8.10
9,000.0	-5.60	18,000.0	-8.20
9,500.0	-5.80		



12.3 ITL # 1075: Active Loop Antenna

Frequency (MHz)	MAF (dBs/m)	AF (dB/m)	Frequency (MHz)	MAF (dBs/m)	AF (dB/m)
0.01	-33.10	18.40	3.00	-40.00	11.50
0.02	-37.20	14.30	4.00	-40.10	11.40
0.03	-38.20	13.30	5.00	-40.20	11.30
0.05	-39.80	11.70	6.00	-40.40	11.10
0.10	-40.10	11.40	7.00	-40.40	11.10
0.20	-40.30	11.20	8.00	-40.40	11.10
0.30	-40.30	11.20	9.00	-40.50	11.00
0.50	-40.30	11.20	10.00	-40.50	11.00
0.70	-40.30	11.20	20.00	-41.50	10.00
1.00	-40.10	11.40	30.00	-43.50	8.00
2.00	-40.00	11.50			

12.4 ITL #1356: Biconical Antenna

Frequency (MHz)	AF (dB/m)	Frequency (MHz)	AF (dB/m)
30.00	13.00	90.00	8.23
35.00	10.89	100.00	11.12
40.00	10.59	120.00	13.16
45.00	10.63	140.00	13.07
50.00	10.12	160.00	14.80
60.00	9.26	180.00	16.95
70.00	7.74	200.00	17.17
80.00	6.63		

12.5 ITL # 1349: Log Periodic Antenna

Frequency (MHz)	AF (dB/m)
200.00	11.58
250.00	12.04
300.00	14.76
400.00	15.55
500.00	17.85
600.00	18.66
700.00	20.87
800.00	21.15
900.00	22.32
1000.00	24.22



12.6 ITL # 1352: 1-18 GHz Horn Antenna

Frequency (GHz)	AF (dB/m)	Frequency (GHz)	AF (dB/m)
0.75	25.00	9.50	38.00
1.00	23.50	10.00	38.50
1.50	26.00	10.50	38.50
2.00	29.00	11.00	38.50
2.50	27.50	11.50	38.50
3.00	30.00	12.00	38.00
3.50	31.50	12.50	38.50
4.00	32.50	13.00	40.00
4.50	32.50	13.50	41.00
5.00	33.00	14.00	40.00
5.50	35.00	14.50	39.00
6.00	36.50	15.00	38.00
6.50	36.50	15.50	37.50
7.00	37.50	16.00	37.50
7.50	37.50	16.50	39.00
8.00	37.50	17.00	40.00
8.50	38.00	17.50	42.00
9.00	37.50	18.00	42.50

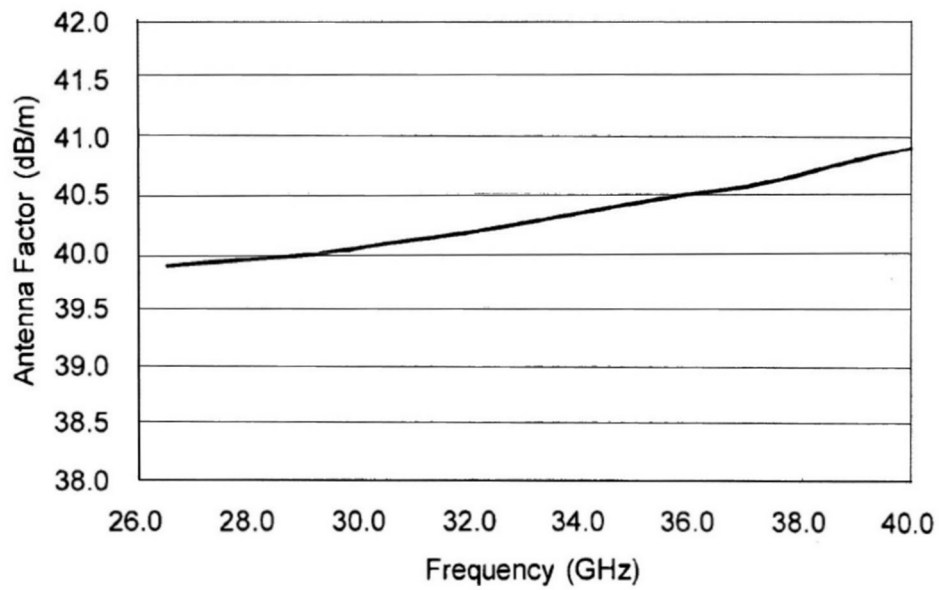
12.7 ITL # 1353: 18-26.5 GHz Horn Antenna

Frequency (MHz)	Measured antenna factor (dB/m) ¹	Frequency (MHz)	Measured antenna factor (dB/m) ¹
18,000.00	32.40	22,500.00	33.00
18,500.00	32.00	23,000.00	33.10
19,000.00	32.30	23,500.00	33.80
19,500.00	32.40	24,000.00	33.50
20,000.00	32.30	24,500.00	33.50
20,500.00	32.80	25,000.00	33.80
21,000.00	32.80	25,500.00	33.90
21,500.00	32.70	26,000.00	34.20
22,000.00	33.10	26,500.00	34.70

¹ The antenna factor shall be added to the receiver's reading in dBμV, to obtain field strength in dBμ V/m



12.8 ITL # 1777: 26.5-40 GHz Horn Antenna



End of Test Report