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Certificate: 1152.01

Date: 8 March 2023

I.T.L. Product Testing Ltd.

Test Report

for

Synoia Technologies Ltd.

Equipment under test:

Aesthetic Device

WISHPro Plus+

(13.56 MHz Transceiver)

FCC ID: ZAI-SYNOIAWISHB01

Tested by: _____
M. Zohar

Approved by: _____
I. Mansky

This report concerns: Original Grant

Equipment type: Low Power Transmitter General Field Limits (9 kHz-30MHz)

Limits used: 47CFR15 Section 15.225,

Measurement procedure used is ANSI C.63.10 2013

Prepared by:

R. Ezrah

I.T.L. Product Testing Ltd.

1 Bat Sheva St., Lod 7116002, Israel

Email: rame@itlglobal.org

Applicant:

Ziv Geva

Synoia Technologies Ltd.

Jungfrugatan 48 SE-114 44, Stockholm, Sweden

Email: ziv@bdrgroup.com

Table of Contents

1. General Information

1.1 Administrative Information

Manufacturer:	Synoia Technologies Ltd.
Manufacturer's Address:	Jungfrugatan 48 SE-114 44, Stockholm, Sweden
Manufacturer's Representative:	Omri Cohen
	B.D.R. Technologies Ltd.
	6 Ha'charash St., Ness Ziona, Israel
Equipment Under Test (E.U.T):	Aesthetic Device
Equipment Model No.:	WISHPro Plus+
Other Models:	WISHPro Plus+ model B*
	WISHPro Plus+ model C*
	*See manufacturer's declaration on following page.
Equipment Part No.:	Not designated
Date of Receipt of E.U.T:	February 11, 2022
Start of Test:	February 11, 2022
End of Test:	March 28, 2022
Test Laboratory Location:	I.T.L Product Testing Ltd.
	1 Bat Sheva St., Lod 7120101, Israel
Test Specifications:	FCC Part 15, Subpart C, Section 15.225

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.

Engineering	BDRH002881- ML WishPro Model Difference Letter-V10	BDR GROUP
Version 1.0		
Valid from: 11/01/2022		

Date: 29/12/2022

Description of Model Difference/s

Dear Madam/Sir,

We, Synoia Technologies Ltd., Jungfrugatan 48 SE-114 44, Stockholm, Sweden hereby declare, that the EUT that was tested at the I.T.L.'s EMC laboratory between February 11, 2022, and March 28, 2022, which is as follows:

EUT: Aesthetic Device

Model Name: WISHPro Plus+

Serial No.: not designated

is identical in all components, RF modules, electronic design, and PCB layout to:

WISHPro Plus+ model B

WISHPro Plus+ model C

except for the following:

1. Battery capacity:
   a) Model B: 2400mAhr
   b) Model C: 800mAhr
2. Physical size:
   a) Model B: 68 mm (max) diameter 18.6mm (max)
   b) Model C: 53 ± 1mm diameter 15± 0.5 mm

Charging method:

   a) Model B: Wireless
   b) Model C: cable

which do not affect EMC/Radio performance.

Sincerely,

Signature: Ziv Geva

Printed Name: Ziv Geva

Title: President

Company Name: Synoia Technologies Ltd.

סינויה טכנולוגיות בע"מ
Synoia Technologies Ltd
514369103

BDRH002881-ML WishPro Model Difference Letter-V10 Page 1 of 1

1.3 Product Description

An aesthetic device for non-invasive body treatment mainly focused on face and upper body.

This is one product in three compositions:

1. 1 Handle, 1 Docking station, 4 Technology heads.
2. 1 Handle, 4 Technology heads.

1.4 Test Methodology

Radiated testing was performed according to the procedures in ANSI C63.10: 2013.

Radiated testing was performed at an antenna-to-EUT distance of three meters.

1.5 Test Facility

Emissions tests were performed at I.T.L.'s testing facility in Lod, Israel.

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 13.56 MHz transmitter (transmitting only in when in battery mode), powered by a rechargeable battery
2. The E.U.T has two model types (see manufacturer's declaration on page 4).
3. Exploratory radiated emission screening was performed in three orthogonal orientations to find the "worst case" type and orientation

model	Orientation	Field Strength (dBuV/m)	2nd Harmonic (dBuV/m)	3rd Harmonic (dBuV/m)
Wireless	X axis	56.9	44.7 (N.L.[1])	35.9 (N.L.)
	Y axis	61.4	44.6 (N.L.)	36.0 (N.L.)
	Z axis	56.5	44.2 (N.L.)	35.2 (N.L.)
Cradle	X axis	56.3	44.5 (N.L.)	36.1 (N.L.)
	Y axis	61.6	44.8 (N.L.)	35.8 (N.L.)
	Z axis	57.1	44.8 (N.L.)	35.9 (N.L.)

Figure 1. Screening Results

According to the above table, the "worst case" was the Cradle model in the Y axis.

2.2 EUT Exercise Software

No special exercise software was needed.

2.3 Special Accessories

No accessories were used.

2.4 Equipment Modifications

No modifications were needed in order to achieve compliance.

2.5 Configuration of Tested System

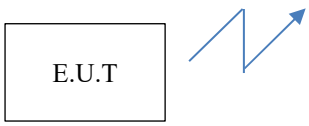

Figure 2. Configuration of Tested System

[1] Noise Level

3. Test Setup Photos

See a separate file.

4. Field Strength of Fundamental

4.1 Test Specification

Part 15, Subpart C, Section 15.225 (a-c)

4.2 Test Procedure

(Temperature (19°C)/ Humidity (58%RH))

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

The E.U.T. was placed in the chamber on a non-conductive table, 0.8 meters above the ground.
The EMI receiver was set to the E.U.T. Fundamental Frequency and Peak Detection.
The distance between the E.U.T. and test antenna was 3 meters.

The turntable and antenna were adjusted for maximum level reading on the EMI receiver.

4.3 Test Limit

The emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency band	Field strength	Measurement distance	Field strength @30m	Field strength @3m*
(MHz)	(microvolts/meter)	(meters)	(dBµV/m)	(dBµV/m)
13.553-13.567	15,848.0	30	84.0	124.0
13.410-13.553	334.0	30	50.4	90.4
13.567-13.710				
13.110-13.410	106.0	30	40.5	80.5
13.710-14.010				
Up to 13.110	According to 15.209/ RSS Gen			
From 14.010				

* Field strength @3m =40 log(30m/3m)=40

4.4 Test Results

Frequency	Polarity	Peak Reading	Lowest Mask Limit	Margin
(MHz)	(V/H)	(dBµV/m)	(dBµV/m)	(dB)
13.56	V	61.6	80.5	-18.9
13.56	H	57.5	80.5	-23.0

The EUT met the FCC Part 15, Subpart C, Section 15.209 requirements.

JUDGEMENT: Passed by -18.9 dB

The details of the highest emissions are given in *Figure 3* to *Figure 4.*

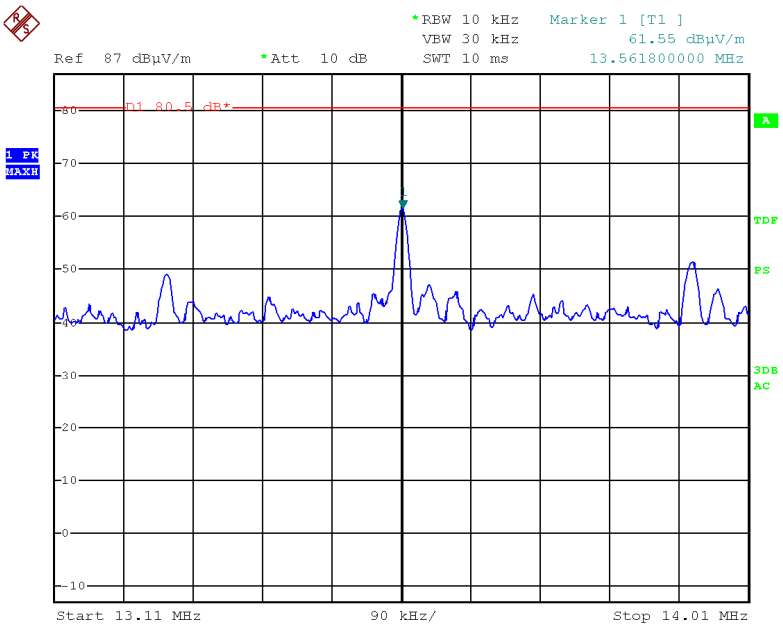

Figure 3. Field Strength of Fundamental, Horizontal

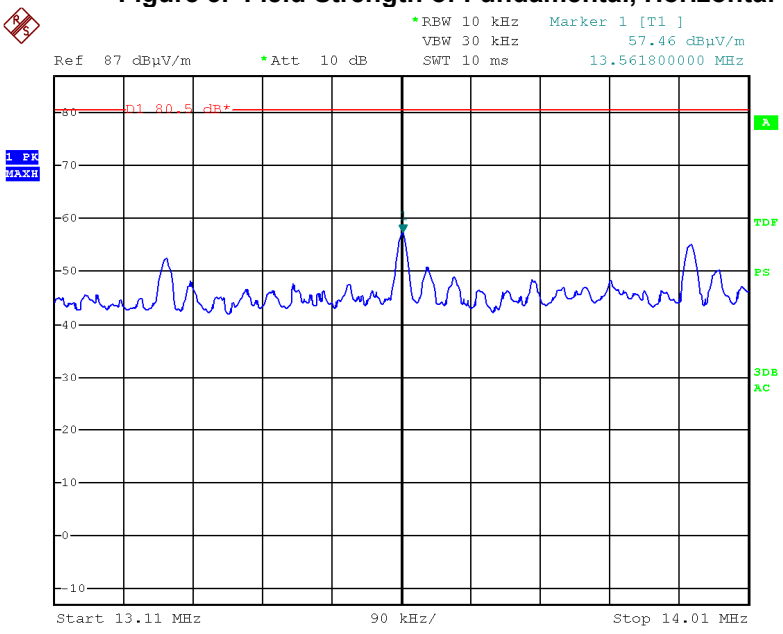

Figure 4. Field Strength of Fundamental, Vertical

4.5 Test Instrumentation Used; Field Strength of Fundamental

Instrument	Manufacturer	Model	Serial No.	Last Calibration Date	Next Calibration Due
EMI Receiver	R&S	ESCI7	100724	Feb 20, 2022	Feb 20, 2023
Loop Antenna	EMCO	6502	2950	July 5, 2022	July 5, 2023
Full Anechoic Chamber	ETS	S81	SL 11643	NCR	NCR
10 m RF cable	Commscope ORS (Serge)	0623 WBC-400	G020132	May 16, 2022	May 16, 2023

Figure 5. Test Equipment Used

5. Radiated Emission, 9 kHz – 200 MHz

5.1 Test Specification

Part 15, Subpart C, Sections 225(d), 209(a)

5.2 Test Procedure

(Temperature (19°C)/ Humidity (58%RH))

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

For measurements between 0.009MHz-30.0MHz:

The E.U.T was tested inside the shielded room at a distance of 3 meters and the E.U.T was placed on a non-metallic table, 0.8 meters above the ground. The frequency range 0.009MHz-30MHz was scanned. The readings were maximized by the turntable azimuth between 0-360°, and the antenna polarization.

The emissions were measured at a distance of three meters.

For measurements between 30.0MHz-200.0MHz:

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 readings were maximized by adjusting the antenna height between 1-4 meters, the turntable azimuth between 0-360°, and the antenna polarization.

The emissions were measured at a distance of three meters.

5.3 FCC Test Limit

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
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.

5.4 Test Results

JUDGEMENT: Passed by -2.2 dB

The EUT met the requirements of the F.C.C. Part 15, Subpart C, Section 209 specification.

See additional information in *Figure 6*.

Specification: FCC, Part 15, Subpart C;

Antenna Polarization: Horizontal/ Vertical

Frequency range: 9 kHz to 200.0 MHz

Test Distance: 3 meters

Detector: Peak, Quasi-peak

Operation Frequency: 13.56MHz

Frequency (MHz)	Polarity (V/H)	Peak (dBµV/m)	Q.P. (dBµV/m)	Specification (dBµV/m)	Margin (dB)
No emissions detected above the spectrum analyzer noise level, which have at least 10dB margin below the limit.					

Figure 6. Radiated Emission

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.

5.5 Test Instrumentation Used; Radiated Measurements

Instrument	Manufacturer	Model	Serial No.	Last Calibration Date	Next Calibration Due
EMI Receiver	R&S	ESCI7	100724	Feb 20, 2022	Feb 20, 2023
EMI Receiver	HP	8542E	3906A00276	Feb 22, 2022	Feb 22, 2023
RF Filter Section	HP	85420E	3705A00248	Feb 22, 2022	Feb 22, 2023
Active Loop Antenna	EMCO	6502	9506-2950	July 5, 2022	July 5, 2023
Biconical Antenna	EMCO	3110B	9912-3337	Jan 18, 2022	Jan 18, 2024
10 m RF cable	Commscope ORS (Serge)	0623 WBC-400	G020132	May 16, 2022	May 16, 2023

Figure 7. Test Equipment Used

5.6 Field Strength Calculation

The field strength is calculated directly by the EMI Receiver software, and a "Correction Factors" data disk, using the following equation:

FS = RA + AF + CF

FS: Field Strength [dBμv/m]

RA: Receiver Amplitude [dBμv]

AF: Receiving Antenna Correction Factor [dB/m]

CF: Cable Attenuation Factor [dB]

Example: FS = 30.7 dBμV (RA) + 14.0 dB (AF) + 0.9 dB (CF) = 45.6 dBμV

No external pre-amplifiers are used.

6. Occupied Bandwidth

6.1 Test Specification

Part 2, Section 2.1049

6.2 Test Procedure

(Temperature (19°C)/ Humidity (58%RH))

The E.U.T. operation mode and test set-up are as described in Section 2 of this report. The E.U.T. was placed in the chamber on a non-conductive table, 0.8 meters above the ground.

The distance between the E.U.T. and test antenna was 3 meters.

The transmitter unit was operated with normal modulation. The RBW set to the range of 1% to 5% of the OBW. The span was set to ~ 3 times the OBW.

99% occupied bandwidth function was set on.

6.3 Test Limit

N/A

6.4 Test Results

Frequency (MHz)	Reading (kHz)
13.56	21.9

Figure 8. Bandwidth Test Results

JUDGEMENT: Passed

See additional information in *Figure 9*.

Occupied Bandwidth

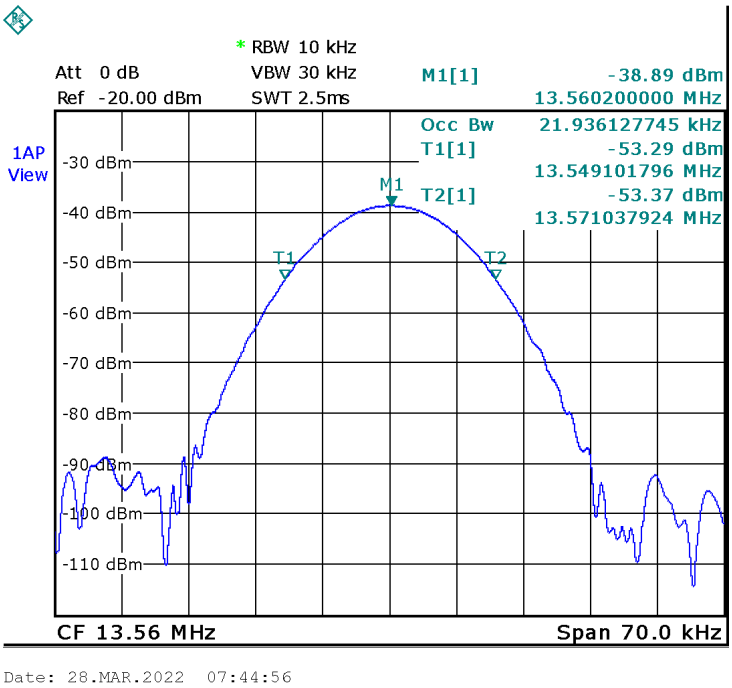

Figure 9 Occupied Bandwidth

6.5 Test Equipment Used; Occupied Bandwidth

Instrument	Manufacturer	Model	Serial No.	Last Calibration Date	Next Calibration Due
Spectrum Analyzer	R&S	FSL6	100194	Feb 20, 2022	Feb 20, 2023
Loop Antenna	EMCO	6502	2950	July 5, 2022	July 5, 2023
Full Anechoic Chamber	ETS	S81	SL 11643	NCR	NCR
10 m RF cable	Commscope ORS (Serge)	0623 WBC-400	G020132	February 21, 2022	February 21, 2023

Figure 10 Test Equipment Used

7. Frequency Stability

7.1 Test Specification

FCC Part 15, Subpart C, Sections 225(e)

7.2 Test Procedure

(Temperature (19°C)/ Humidity (59%RH))

The E.U.T operation mode and test setup are as described in Section 2.

The E.U.T. was placed inside a temperature chamber. The power to the E.U.T supplied by external DC power

The spectrum analyzer was set to 10.0 kHz span and 1.0 kHz RBW, and 1.0 kHz VBW, counter function was set on.

The carrier frequency was measured and recorded after at least 20 minutes of exposing the E.U.T. to the temperature.

7.3 FCC Test Limit

The frequency tolerance of the carrier signal shall be maintained within ±0.01% of the operating frequency: 0.01*(13.56M/100) = ±1356Hz

7.4 IC Test Limit

The carrier frequency stability shall not exceed ±100 ppm: 100*(13.56 M/1M)= ±1356 Hz

7.5 Test Results

The E.U.T met the requirements of Part 15, Subpart C, Sections 225(e) specifications.

The details of the results are given in *Figure 11*.

Frequency Stability

Temperature	Voltage	2 minutes		5 minutes		10 minutes	
		Frequency	Drift	Frequency	Drift	Frequency	Drift
(°C)	(VDC)	(Hz)	(Hz)	(Hz)	(Hz)	(Hz)	(Hz)
+20.0	4.07	13,560,125	-	-	-	-	-
	3.70	**13,560,125**	-	-	-	-	-
	3.33	13,560,125	-	-	-	-	-
-20.0	3.70	13,560,238	+113	13,560,230	+105	13,560,232	+107
-10.0	3.70	13,560,167	+42	13,560,170	+45	13,560,170	+45
0.0	3.70	13,560,144	+19	13,560,145	+20	13,560,145	+20
+10.0	3.70	13,560,112	-13	13,560,122	-3	13,560,107	-18
+30.0	3.70	13,560,058	-63	13,560,050	-75	13,560,058	-63
+40.0	3.70	13,560,022	-103	13,560,022	-103	13,560,025	-100
+50.0	3.70	13,560,024	-101	13,560,024	-101	13,560,024	-101

Figure 11 Frequency Stability Results

7.6 Test Instruments Used; Frequency Stability

Instrument	Manufacturer	Model	Serial Number	Calibration	
				Last Calibration Date	Next Calibration Due
Spectrum Analyzer	R&S	FSL6	100194	Feb 20, 2022	Feb 20, 2023
Environmental Chamber	Thermotron Corp	SM 32C Mini Max	25-1030	N/A	N/A
Variable Voltage Transformer	Variac Voltage Co.	-	-	N/A	N/A

Table 1 Test Instruments Used Frequency Stability

8. Appendix B - Correction Factors

8.1 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

8.2 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			

8.3 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
0.30	-40.30	11.20
0.50	-40.30	11.20
0.70	-40.30	11.20
1.00	-40.10	11.40
2.00	-40.00	11.50

8.00	-40.40	11.10
9.00	-40.50	11.00
10.00	-40.50	11.00
20.00	-41.50	10.00
30.00	-43.50	8.00

8.4 ITL #1356: Biconical Antenna

Frequency (MHz)	AF (dB/m)
30.00	13.00
35.00	10.89
40.00	10.59
45.00	10.63
50.00	10.12
60.00	9.26
70.00	7.74
80.00	6.63

Frequency (MHz)	AF (dB/m)
90.00	8.23
100.00	11.12
120.00	13.16
140.00	13.07
160.00	14.80
180.00	16.95
200.00	17.17

8.5 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

8.6 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

End of Test Report