



Test Report - FCC Part 15.247

Applicant: Universal City Development Partners, Ltd.

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(352) 472-5500 / testing@timcoengr.com

1. Applicant Information

Applicant: Universal City Development Partners, Ltd.
Address: 300 New Jersey Avenue NW, Suite 700
Washington, District of Columbia, 20001
United States

1.1 Test Result Summary

The following test procedure and guidance were used; FCC KDB 558074 and ANSI C63.10-2013. Full test results are available in this report.

No additions to the test methods were needed. There were no deviations, or exclusions from the test methods. No test results are from external providers or from the customer. The test results relate only to the items tested. Timco does not offer opinions and interpretations, only a pass/fail statement.



Applicable Clauses from Part 2 or KDB		
FCC Clauses	Description of the requirements	Result: (Pass, Fail, N/A)
KDB 558074 D01	Duty Cycle	Reported
KDB 558074 D01	99 % Bandwidth	Reported
KDB 558074 D01	Band-edge measurements	Pass

Applicable Clauses from Part 15.247		
FCC Clauses	Description of the requirements	Result: (Pass, Fail, N/A)
15.247 (a) (1) – (1) (iii)	FHSS hopping requirements (1, i,ii,iii)	Pass
15.247 (a) (1)	FHSS 20dB Bandwidth	Pass
15.247 (a) (2)	DTS 6dB Bandwidth	n/a
15.247 (b) (1) – (4)	Conducted output power	Pass
15.247 (c) (1) – (2)	Operation with directional antenna gains > 6 dBi	n/a
15.247 (d), 15.215 (b)	Conducted Emissions in Non-restricted bands	Pass
15.247 (d), 15.215 (b)	Conducted Emissions at the Band-edge	Pass
15.247 (e)	Power Spectral Density (PSD)	n/a
15.247 (f)	Hybrid system hopping requirements	n/a
15.247 (f)	Hybrid system Power Spectral Density	n/a
15.247 (g)	FHSS System requirements	Pass
15.247 (h)	FHSS spectrum sensing	n/a

Applicable Clauses from Part 2 and Part 15 Subpart C		
FCC Clauses	Description of the requirements	Result: (Pass, Fail, N/A)
15.203	Antenna requirements	Pass
15.205	Restricted bands of operation	Pass
15.207	AC Power Conducted Emissions	n/a
15.209	Radiated Emissions in Restricted bands	Pass
15.211	Tunnel Radio Systems	n/a
15.212 (a)	Single Modular Transmitter	n/a
15.212 (b)	Limited Modular Transmitter	n/a
15.213	Cable Locating Equipment	n/a



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2. Location of Testing

2.1 Test Laboratory

Timco Engineering Inc. is a subsidiary of Industrial Inspection & Analysis, Inc. ("IIA").

Testing was performed at Timco's permanent laboratory located at 849 NW State Road 45, Newberry, Florida 32669

FCC test firm # 578780

FCC Designation # US1070

FCC site registration is under A2LA certificate # 0955.01

ISED Canada test site registration # 2056A

EU Notified Body # 1177

For all designations see A2LA scope # 0955.01

2.2 Testing was performed, reviewed by

Dates of Testing: 08/15/2023 – 08/21/2023

The device was prototyped and tested over a year ago, but there was not a need for production until the project was greenlit, which was delayed further than expected. The data taken two years ago is still representative of the device today

Signature:

Sr. EMC Engineer
EMC-003838-NE



Name & Title:

Tim Royer, EMC Engineer

Date of Signature

9/11/2025

Signature:

Name & Title:

Terri Allen, Project Specialist

Date of Signature

9/11/2025



3. Test Sample(s) (EUT/DUT)

The test sample was received: 08/14/2023

3.1 Description of the EUT

A description as well as unambiguous identification of the EUT(s) tested. Where more than one sample is required for technical reasons (such as the use of connected units for the purpose of conducted output power testing where the product units will have integral antennas), each specific test shall identify which unit was tested.

Identification	
FCC ID:	2BCG5-ITP-15
Brief Description	Themed entertainment Edge Computing and Interface Device
Model(s) #	ITP 1.5
Firmware version	N/A
Software version	The ITP 1.5s / Software Version: D3-0.1.0
Serial Number	40544

Technical Characteristics	
Frequency Range	902.75-927.75 MHz
RF O/P Power (Max.)	29.26 dBm / 0.84 W
Modulation	GFSK
Bandwidth & Emission Class	71.1 MHz / (FID)
Number of Channels	50
Duty Cycle	100%
Antenna Connector	SMA
Voltage Rating (AC or Batt.)	Unit is supplied with DC Voltage via IEEE 802.3bt, Power Over Ethernet ++ (which varies between 44VDC to 57VDC)

Antenna Characteristics			
Antenna	Frequency Range	Mode / BW	Antenna Gain
1 – Internal 2.3 linear	n/a	n/a	1.45 dBi
2 – External	n/a	n/a	9dBc



3.2 Configuration of EUT

Test Modes						
Band (MHz)	Mode (#)	Mode (Type)	Test Frequencies (MHz)	BW (nominal)(kHz)	Modulation	Number of Antennas
902.75 – 927.25 MHz	1	GFSK	903 MHz 919 MHz 927 MHz	kHz	GFSK (F1D)	1

Operating conditions during Testing:

No modifications of the device under test (including firmware, specific software settings, and input/output signal levels to the EUT).

Peripherals used during Testing:

A USB Flash drive connected as a peripheral to the ITP 1.5 during testing:
Integral USB 3.0 Flash Drive, 16GB - INFD16GBFUS3.0.

An IFM produced Accelerometer unit (IFM1017-ACC15) that was connected and tested as a peripheral during the test.

3.3 Test Setup of EUT

Equipment, antenna, and cable arrangement. The setup of the equipment and cable or wire placement on the test site that produces the highest radiated and the highest ac power line conducted emissions shall be shown clearly and described. Information on the orientation of portable equipment during testing shall be included. Drawings or photographs may be used for this purpose.

Test Setups are included in the test report.



4. Test methods & Applicable Regulatory Limits

4.1 Test methods/Standards/Guidance:

Test procedures and guidance are provided in the FCC KDB 558074 Guidance and in Clause 11 of ANSI C63.10-2013.

- 1) ANSI C63.10-2013
- 2) FCC KDB 558074 D01

4.2 Applied Limits and Regulatory Limits:

- 3) FCC CFR 47 Part 15.247

5. Measurement Uncertainty

Parameter	Uncertainty (dB)
Conducted Emissions	± 3.14 dB
Radiated Emissions (9kHz – 30 MHz)	± 3.08 dB
Radiated Emissions (30 – 200 MHz)	± 2.16 dB
Radiated Emissions (200 – 1000 MHz)	± 2.15 dB
Radiated Emissions (1 GHz – 18 GHz)	± 2.14 dB
Radiated Emissions (18 GHz – 40 GHz)	± 2.31 dB
Note: The uncertainties provided in this table represent an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of K=2.	

6. Environmental Conditions

6.1 Temperature & Humidity

Measurements performed at the test site did not exceed the following:

Temperature	23 C +/- 5%
Humidity	55% +/- 5%
Barometric pressure	30.05 inHg
Note: Specific environmental conditions that are applicable to a specific test are available in the test result section.	



7. List of Test Equipment and Test Facility

The test equipment used identified by type, manufacturer, serial number, or other identification and the date on which the next calibration or service check is due.

Description of the firmware or software used to operate EUT for testing purposes.

A complete list of all test equipment used shall be included with the test report. The manufacturer's model and serial numbers, and date of last calibration, and calibration interval shall be included. Measurement cable loss, measuring instrument bandwidth and detector function, video bandwidth, if appropriate, and antenna factors shall also be included where applicable.

7.1 List of Test Equipment

Test Equipment						
Type	Device	Manufacturer	Model	SN#	Current Cal	Cal Due
Signal Generator	Signal Generator HP 8648C	HP	8648C	3847A04696	03/31/21	3/30/2024
Antenna	Biconical 1057	Eaton	94455-1	1057	10/16/20	10/16/2023
Antenna, NSA	Log-Periodic 1243	Eaton	96005	1243	05/04/21	5/3/2024
Antenna	Double-Ridged Horn/ETS Horn 1	ETS-Lindgren	3117	00035923	05/31/23	5/30/2026
Receiver	EMI Test Receiver R&S ESW44	Rohde & Schwarz	ESW44	103049	10/13/21	10/12/2024

Software			
Software	Author	Version	Validation on
ESU Firmware	Rohde & Schwarz	4.43 SP3; BIOS v5.1-24-3	2018
RSCCommander	Rohde & Schwarz	1.6.4	2014
ScopeExplorer	LeCroy	v2.25.0.0	2009
Field Strength	Timco	v4.10.7.0	2016



8. Test Results

The results of the test are usually indicated in the form of tables, spectrum analyzer plots, charts, sample calculations, as appropriate for each test procedure.

A description and/or a block diagram of the test setup is usually provided.

The measurement results, along with the appropriate limits for comparison, may be presented in tabular or graphical form. In addition, any variation in the measurement environment may be reported if applicable (e.g., a significant change of temperature that could affect the cable loss and amplifier response).

Unless noted otherwise in the referenced standard, the measurements of **ac power-line conducted emissions and conducted power output** will be reported in units of dB μ V. Unless noted otherwise in the referenced standard, the measurements of **radiated emissions** will be reported in units of decibels, referenced to one microvolt per meter (dB μ V/m) for electric fields, or to one ampere per meter (dBA/m) for magnetic fields, at the distance specified in the appropriate standards or requirements. The measurements of antenna-conducted power for receivers may be reported in units of dB μ V if the impedance of the measuring instrument is also reported. Otherwise, antenna-conducted power will be reported in units of decibels referenced to one milliwatt (dBm). All formulas for data conversions and conversion factors, if used, will be included in this measurement report.

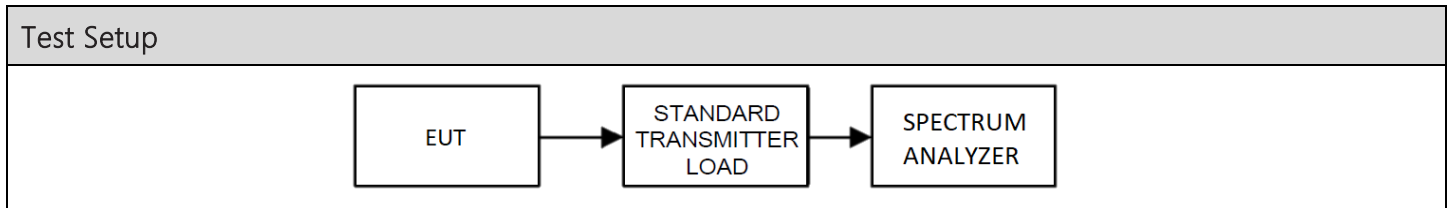
Example:

Freq (MHz)	Meter Reading	+ ACF	+CL	= FS
33	20 dB μ V	+ 10.36 dB/m	+0.40 dB	=30.36 dB μ V/m @ 3m

$$\text{EIRP} = \text{Pcond (dBm)} + \text{dBi}$$

8.1 Conducted Output Power

Limits from FCC Part 15.247 (b) (1) – (4) as applicable, and test procedure from ANSI C63.10-2013 section 7.8 or 11.9 as applicable.



Output Power Test Results

Test Results, Mode 1	
Tuned Frequency (MHz)	Power Output (dBm)
903	29.14
919	29.26
927	29.12

- MAXIMUM Conducted Output Power = 29.26 dBm

Point-to-Point - N/A. The EUT is not a PtP device.

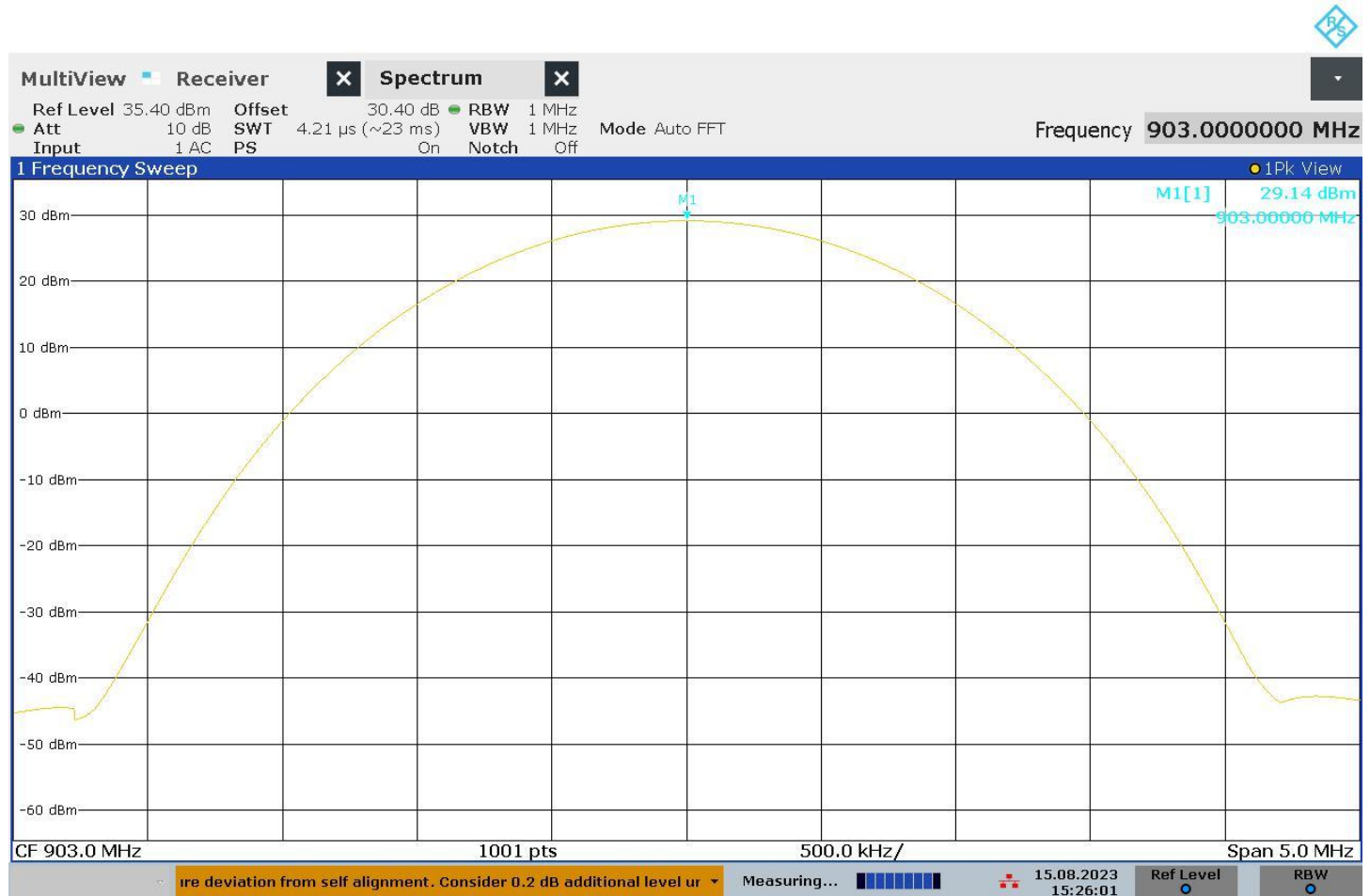
MIMO - N/A. The EUT is not a MIMO device.



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Conducted Output Power, Spectrum Plots

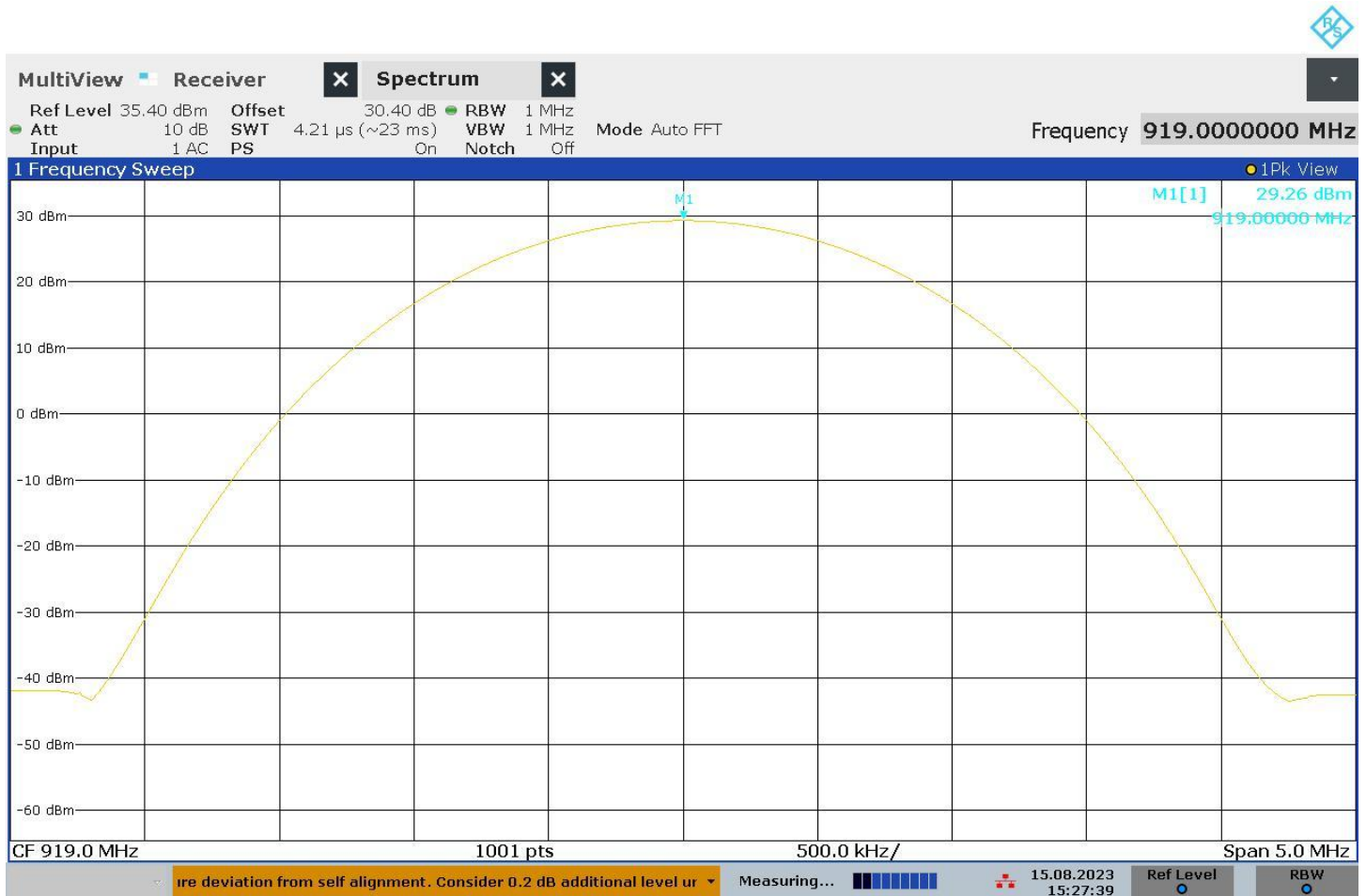
8.1.1 Conducted Output Power, 903 MHz



15:26:02 15.08.2023



8.1.2 Conducted Output Power, 919 MHz

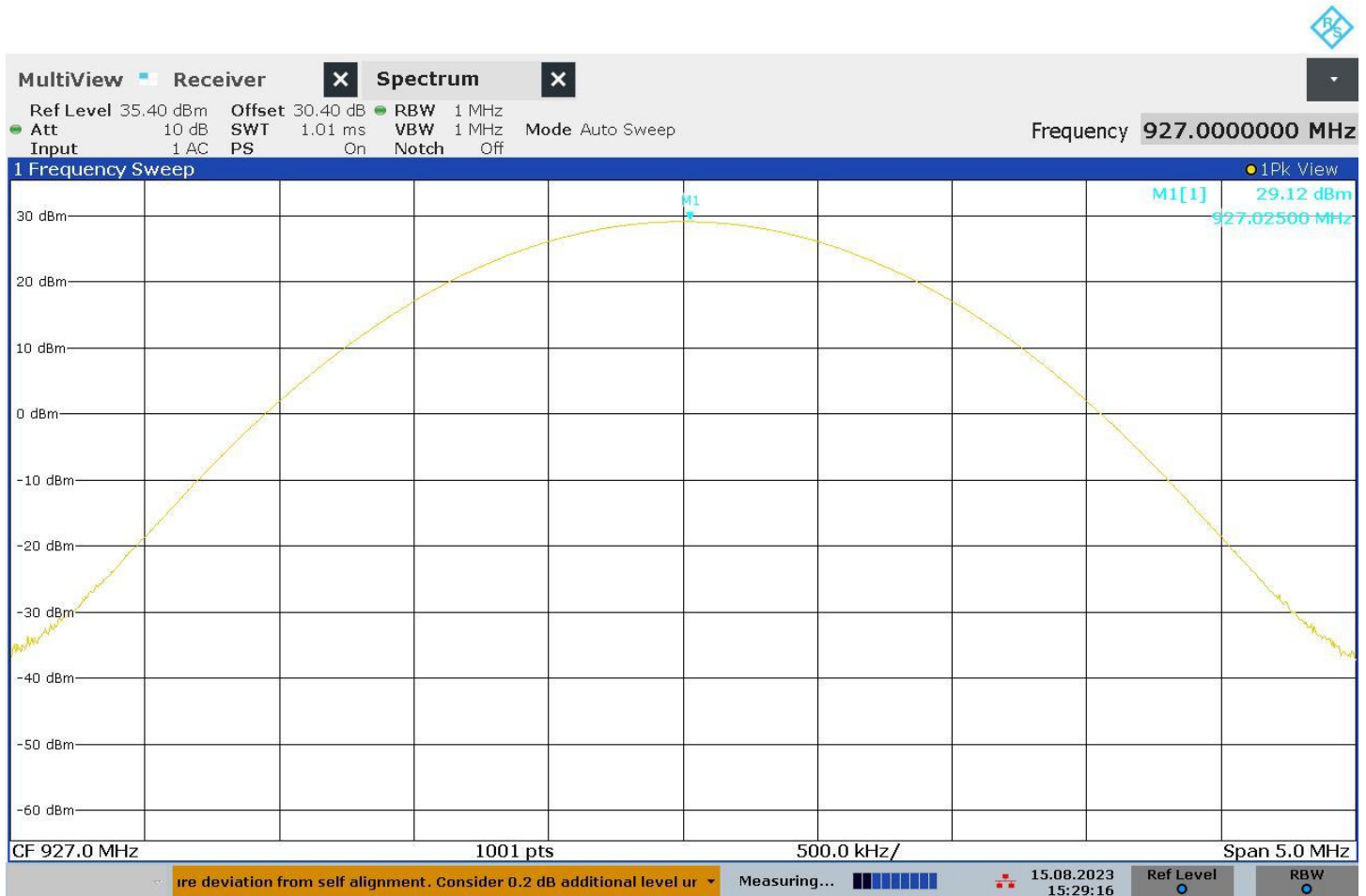


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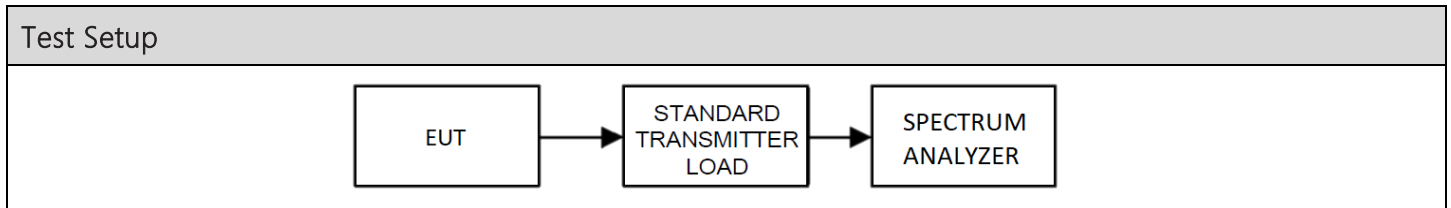
8.1.3 Conducted Output Power, 927 MHz





8.2 Occupied Bandwidth

Requirement from FCC KDB 558074 D01 and test procedure from ANSI C63.10-2013 section 6.9.3



99% BW Test Results

Tuned Frequency (MHz)	99% BW (MHz)
903	70.84
919	71.1
927	70.95



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99% Occupied Bandwidth, Spectrum Plots

8.2.1 99% Occupied Bandwidth, 903 MHz



15:38:24 15.08.2023



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8.2.2 99% Occupied Bandwidth, 919 MHz



15:33:57 15.08.2023



8.2.3 99% Occupied Bandwidth, 927 MHz

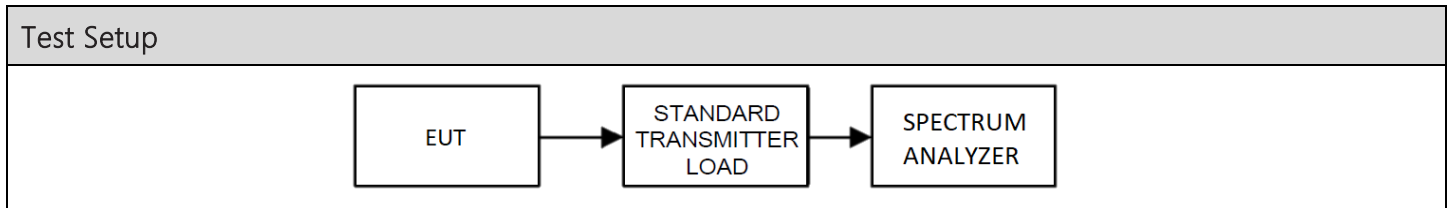


15:30:51 15.08.2023



8.3 20dB Bandwidth

Limits from FCC Part 15.247 (a)(1) – (2) as applicable, and test procedure from ANSI C63.10-2013 section 7.8 or 11.8 as applicable.



20dB Bandwidth Test Results

Test Results, Mode 1	
Tuned Frequency (MHz)	20dB Bandwidth (kHz)
903	71.21
919	71.21
927	71.21



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20dB Bandwidth, Spectrum Plots

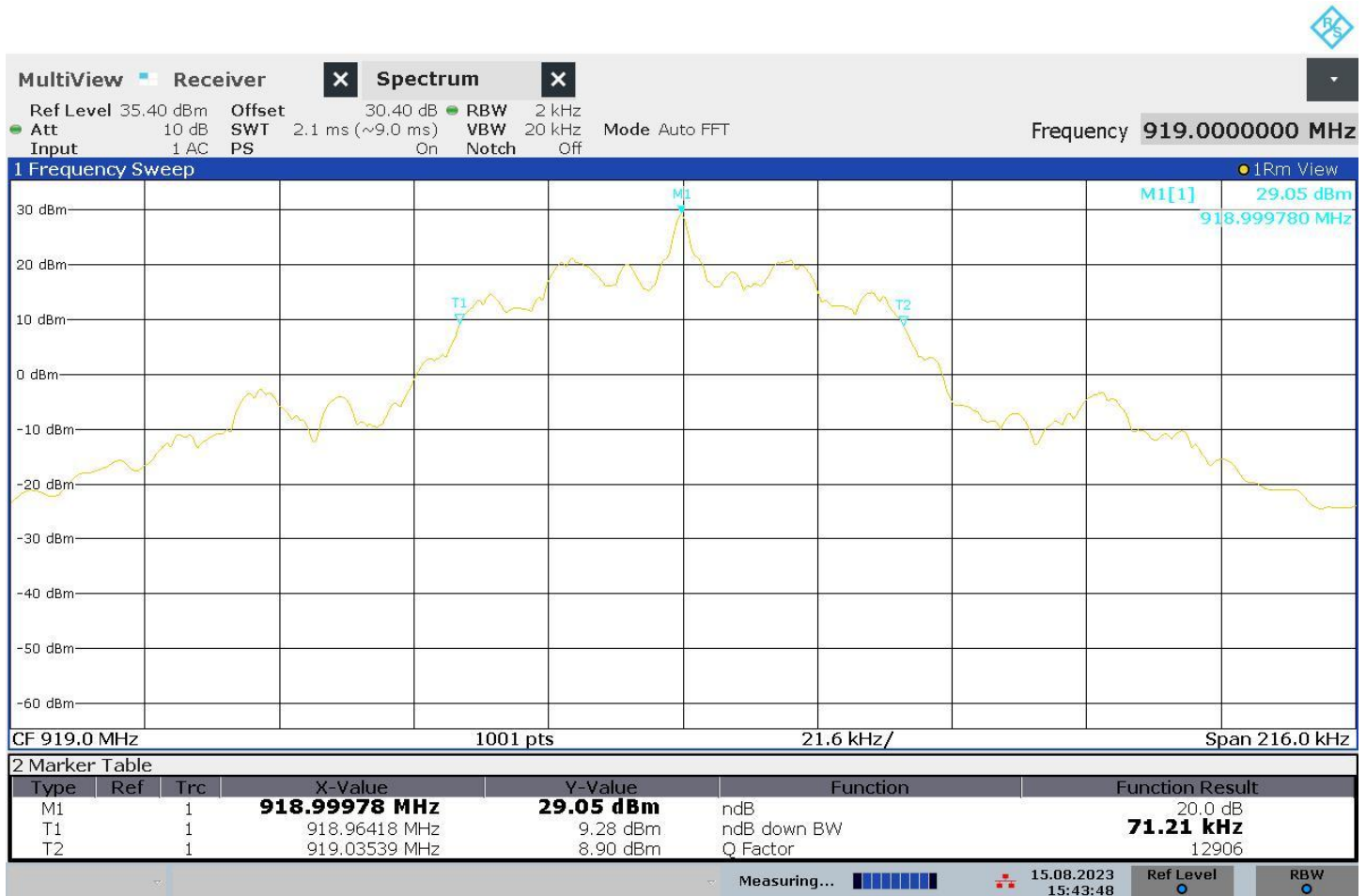
8.3.1 20 dB Bandwidth, 903 MHz



15:40:10 15.08.2023



8.3.2 20 dB Bandwidth, 919 MHz



15:43:49 15.08.2023



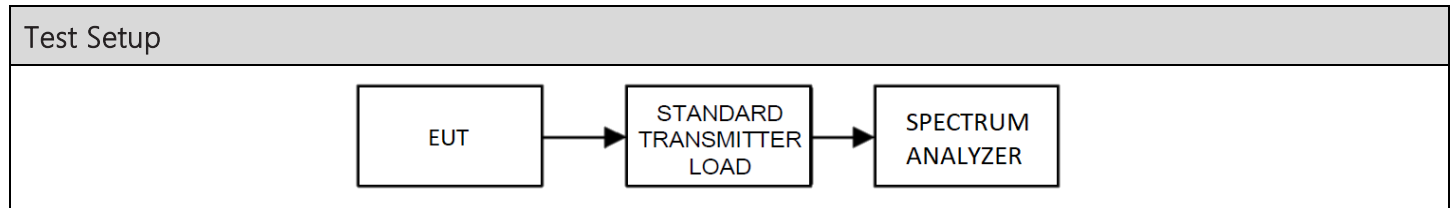
8.3.3 20 dB Bandwidth, 927 MHz



15:45:00 15.08.2023

8.4 Hopping Characteristics

Limits from FCC 15.247(a)(1)(i) or 15.247 (f) as applicable, and test procedure from ANSI C63.10-2013 section 11.10



Test Results	
Carrier Frequency Separation	499.5 kHz
Number of Hopping Frequencies	50
Time of Occupancy	205 ms
Dwell Time in 10 s	205 ms

8.4.1 Hopping Channel Occupancy Time

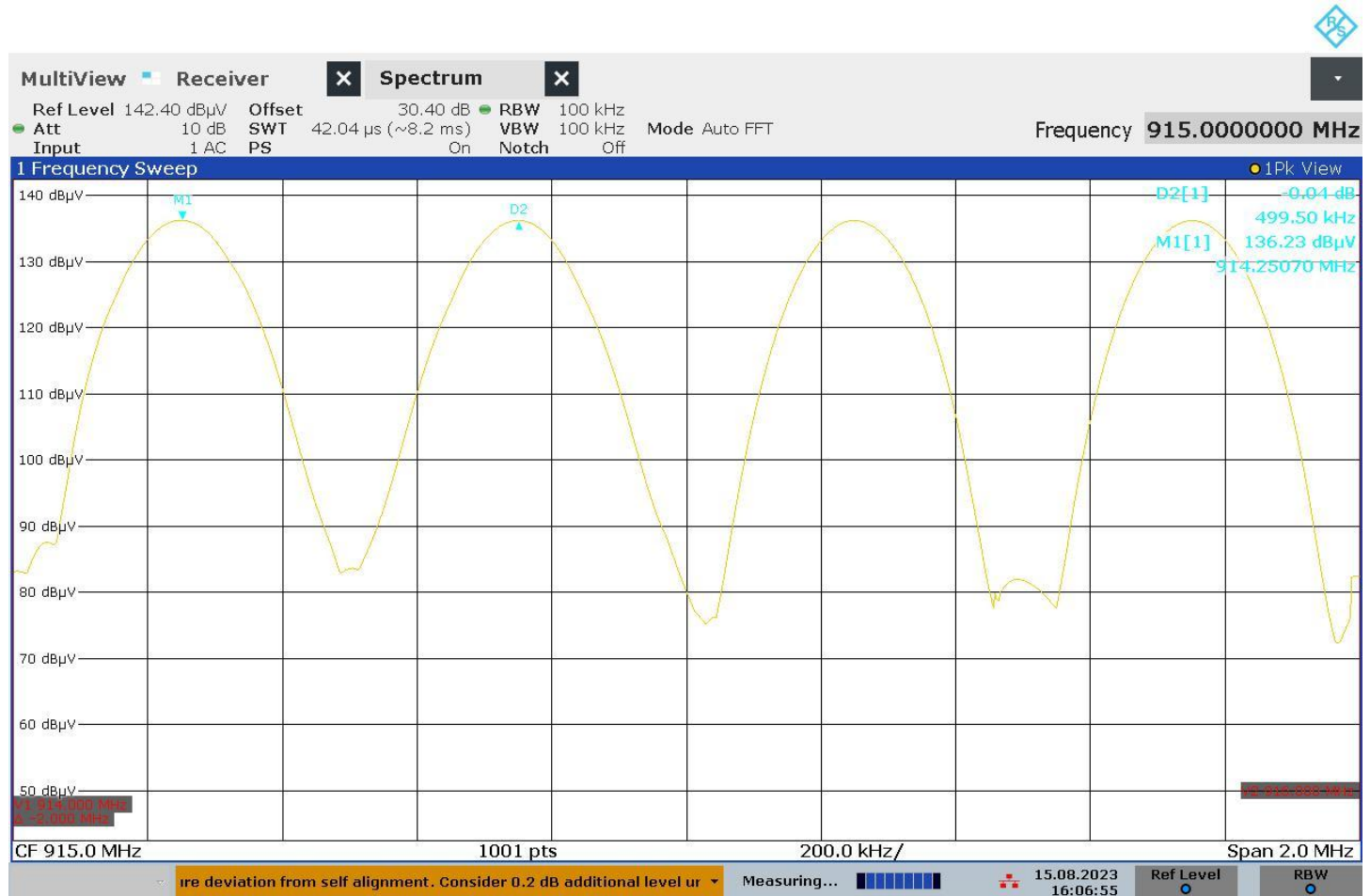
Number of hops	Dwell Time (ms)	Total Occupancy Time (ms)	Limit (sec)	Pass / Fail
1	205	205	≤ 0.4	Pass



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Hopping Characteristics, Spectrum Plots

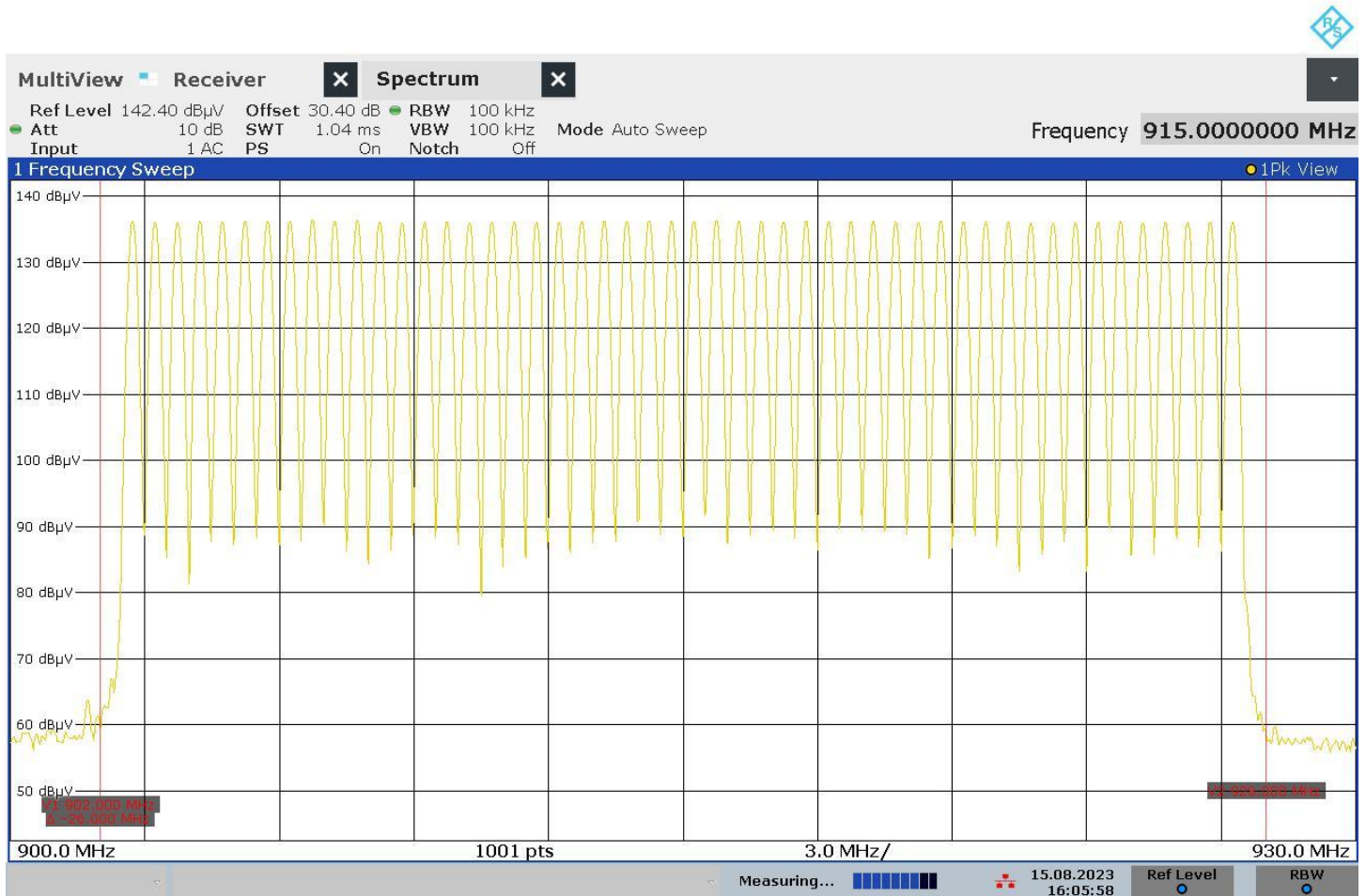
8.4.2 Carrier Frequency Separation Plot



16:06:56 15.08.2023



8.4.3 Number of Hopping Frequencies Plot



16:05:58 15.08.2023



8.4.4 Time of Occupancy Plot



16:25:55 15.08.2023



8.4.5 Hops in 10 s Plot



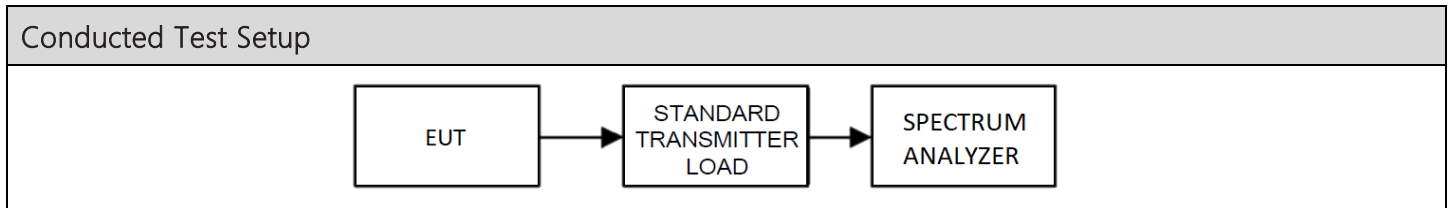
16:27:00 15.08.2023



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8.5 Emissions in Nonrestricted Frequency Bands (Out of Band)

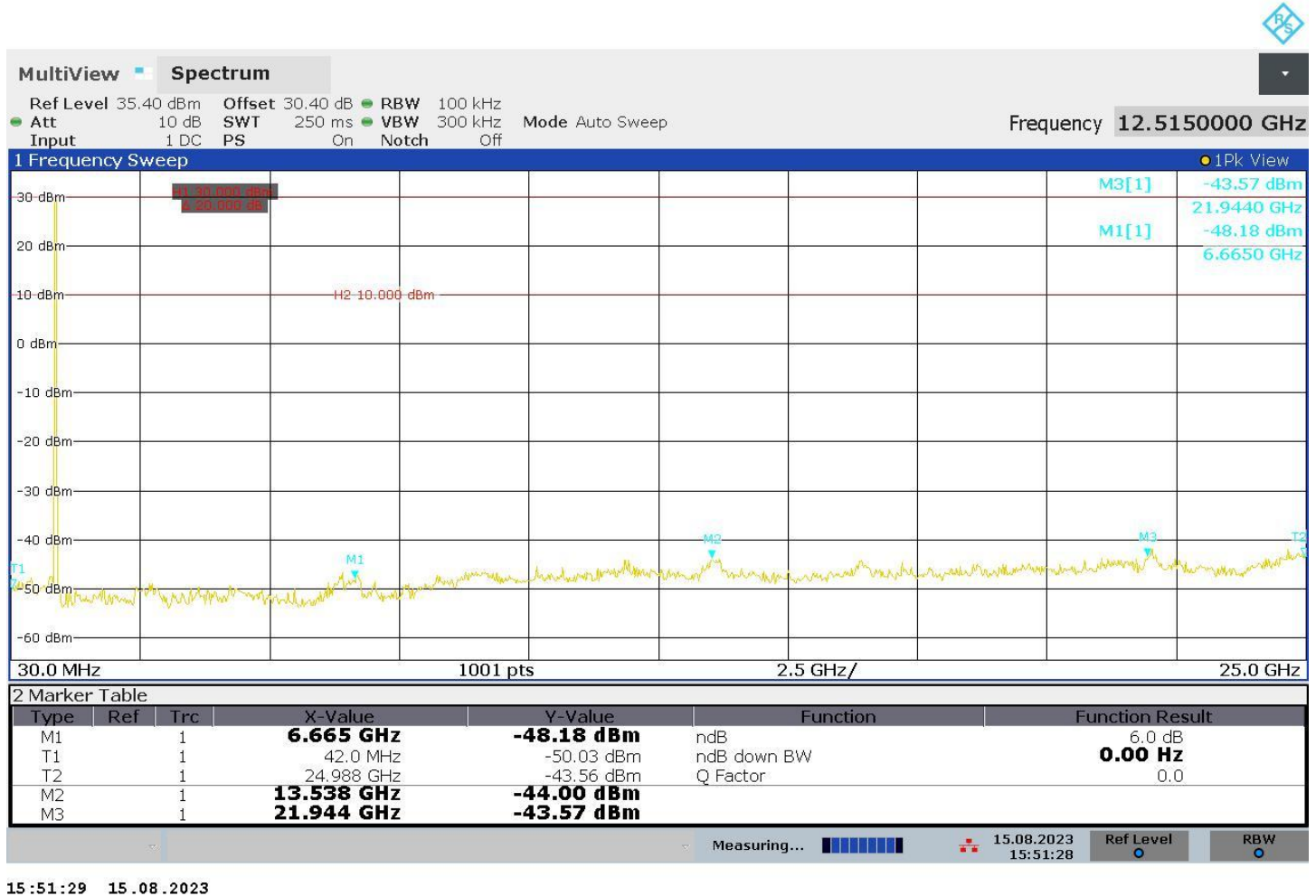
Limits from FCC Part 15.247 (d) and 15.215 (b) and test procedure from ANSI C63.10-2013 section 7.8 or 11.11 as applicable.





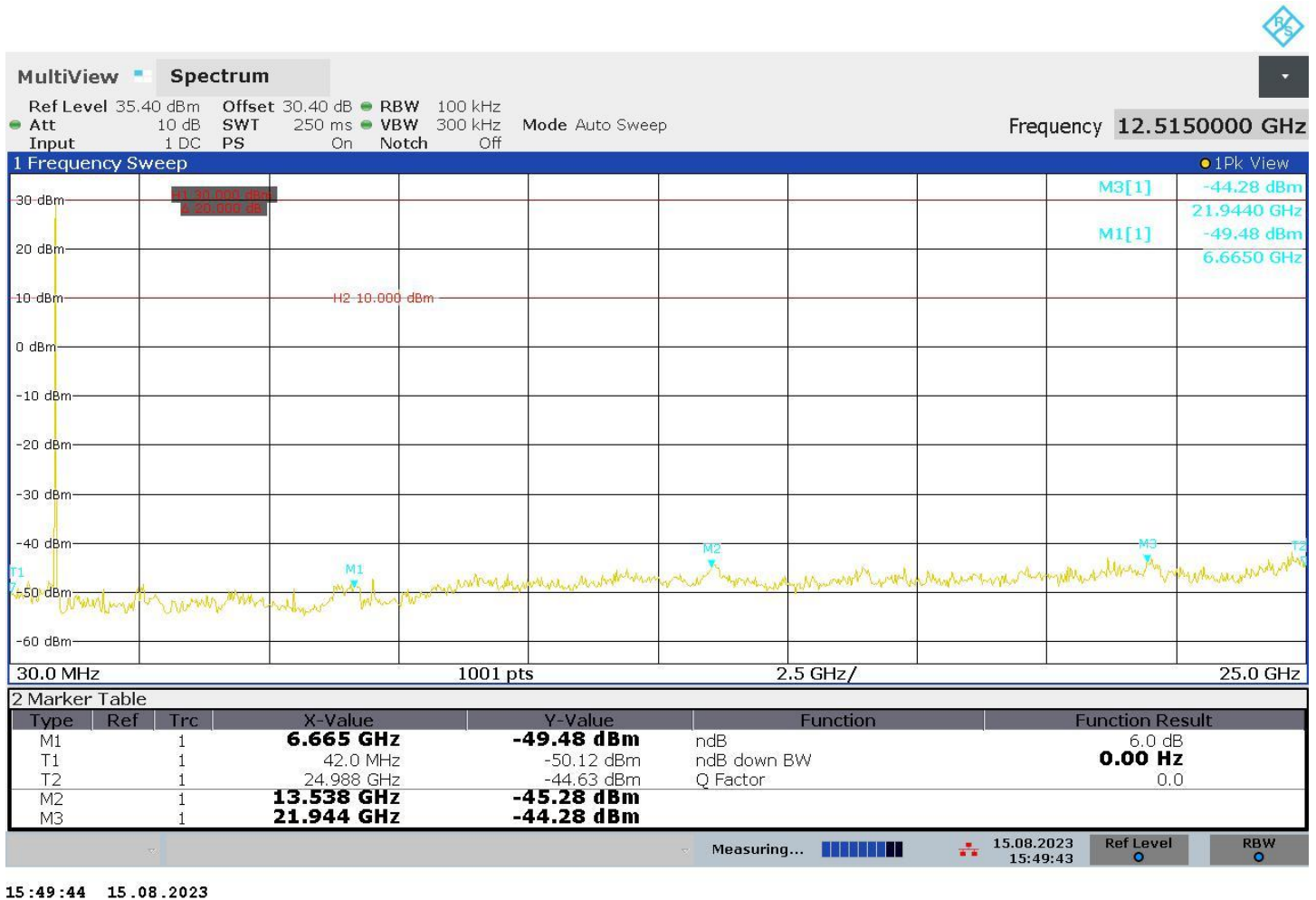
Conducted Emissions in Non-Restricted Bands, Spectrum Plots

8.5.1 Conducted Emissions Test Data, 903 MHz



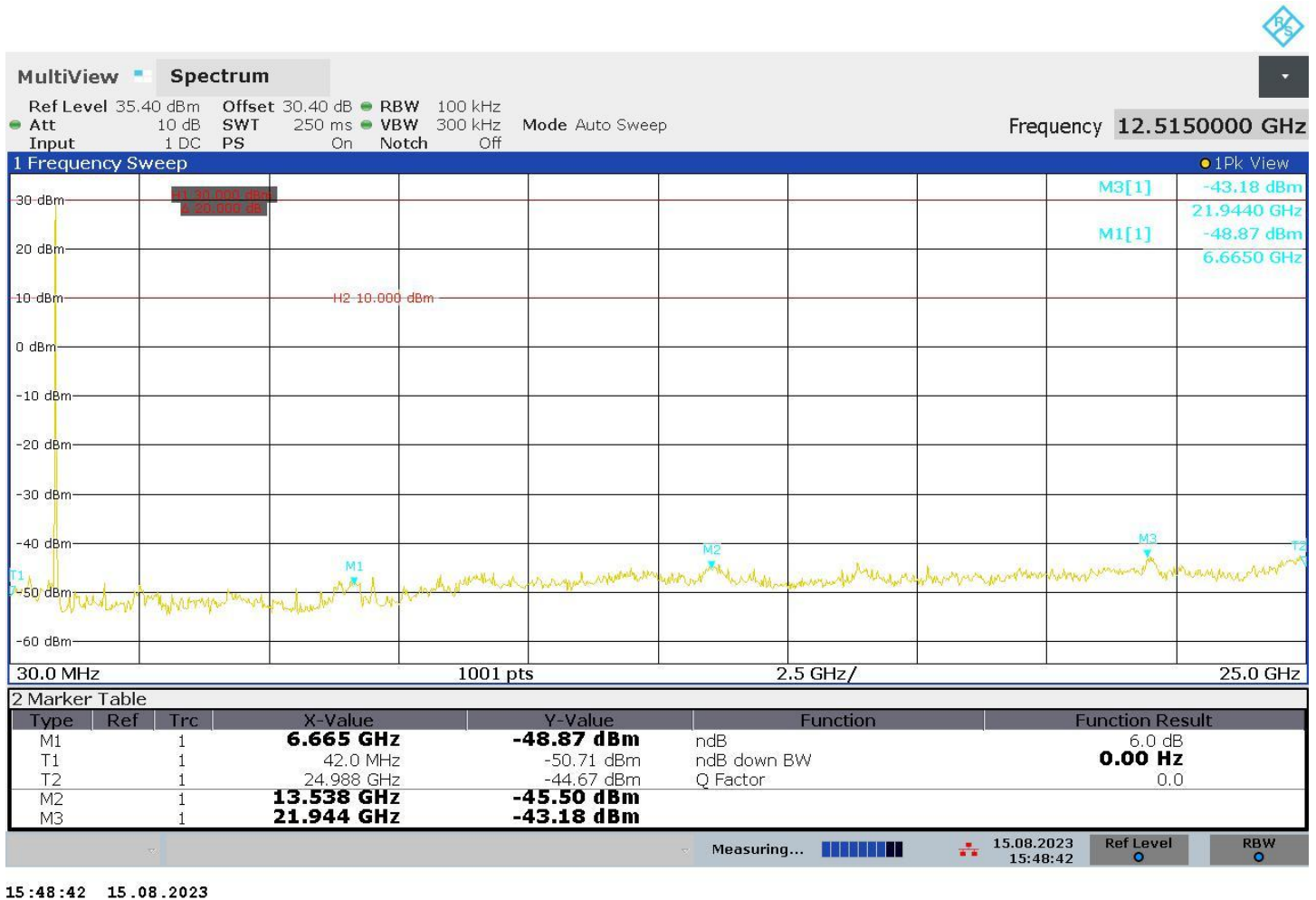


8.5.2 Conducted Emissions Test Data, 919 MHz





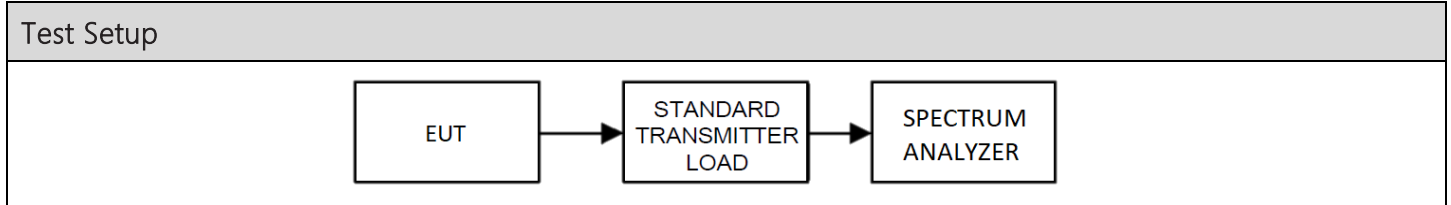
8.5.3 Conducted Emissions Test Data, 927 MHz





8.6 Power Spectral Density

Limits from 15.247 (e) as applicable, and test procedure from ANSI C63.10-2013 section 11.10.

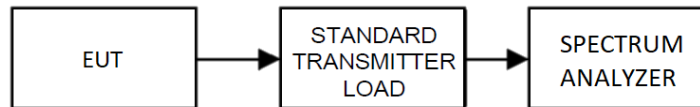


N/A. The EUT is not a DTS or Hybrid device.

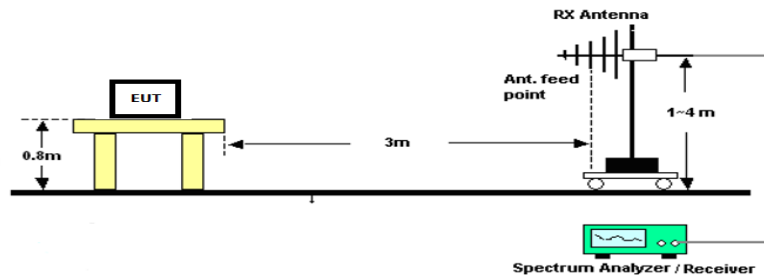
8.7 Band-edge measurements

Requirement from FCC KDB 558074 D01 and test procedure from ANSI C63.10-2013 section 7.8 or 11.13 as applicable.

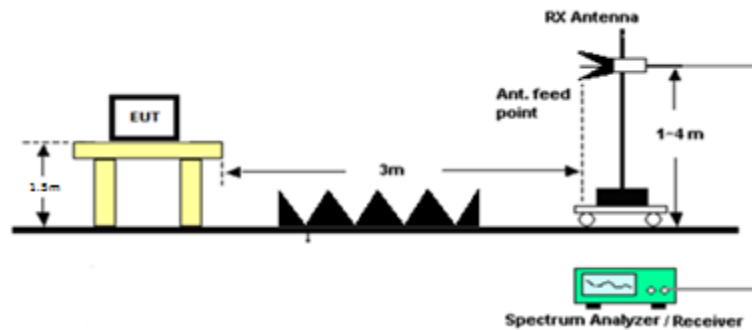
Conducted Test Setup



Radiated Test Setup, 30 – 1000 MHz



Radiated Test Setup, Above 1000 MHz

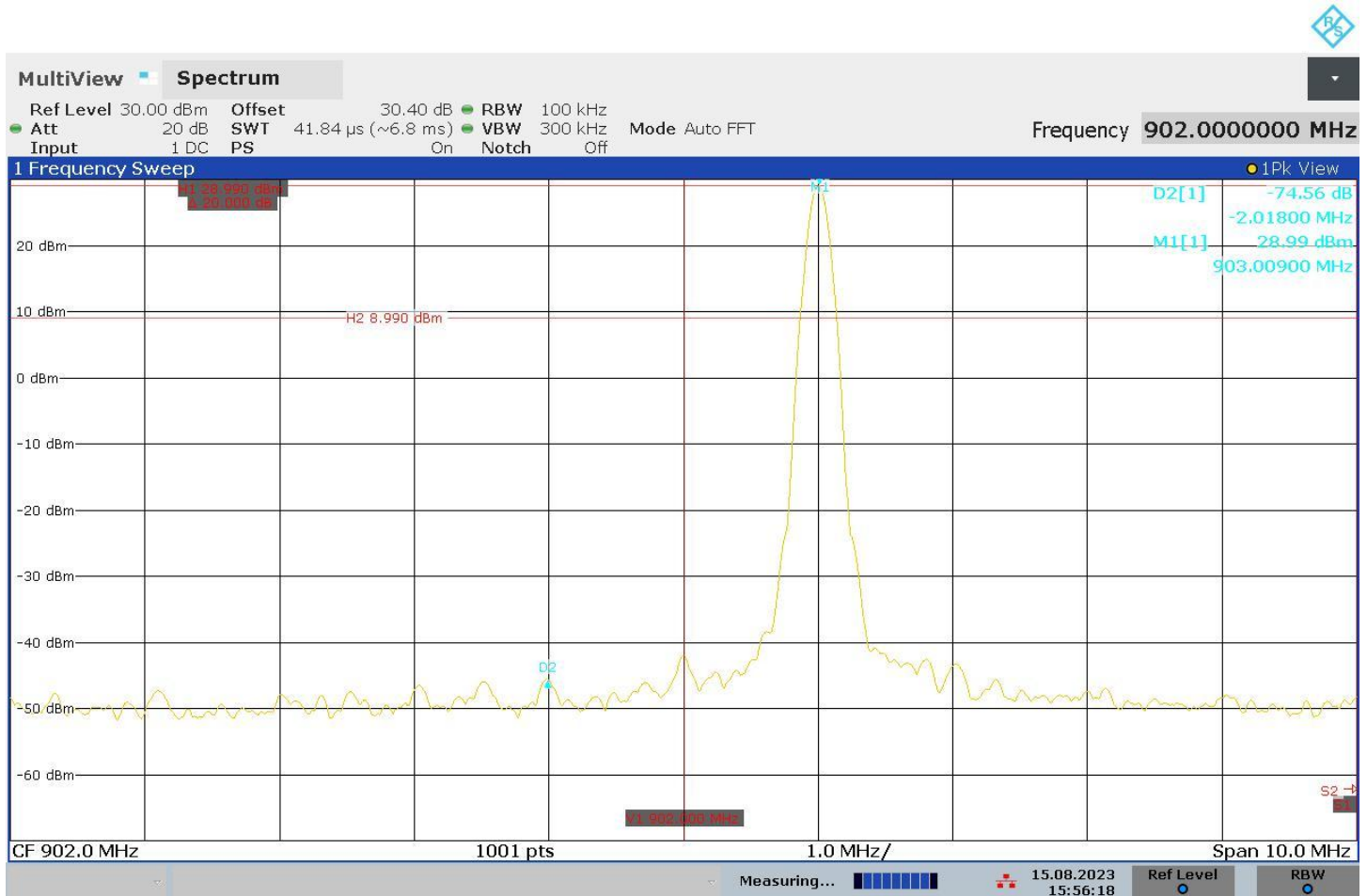




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Band-edge Spectrum Plots

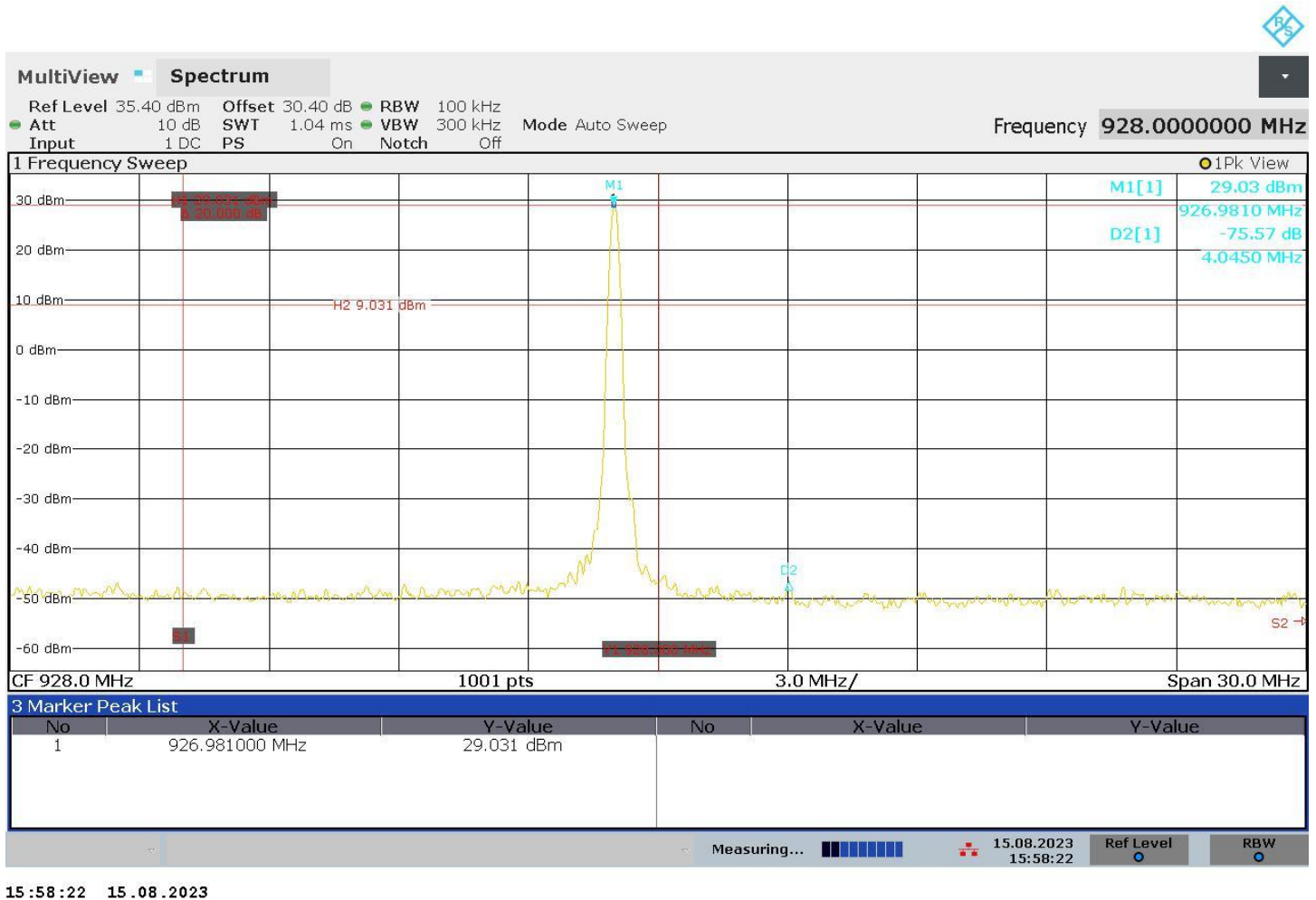
8.7.1 Lower Band Edge Plot, Stopped, 902 MHz



15:56:18 15.08.2023



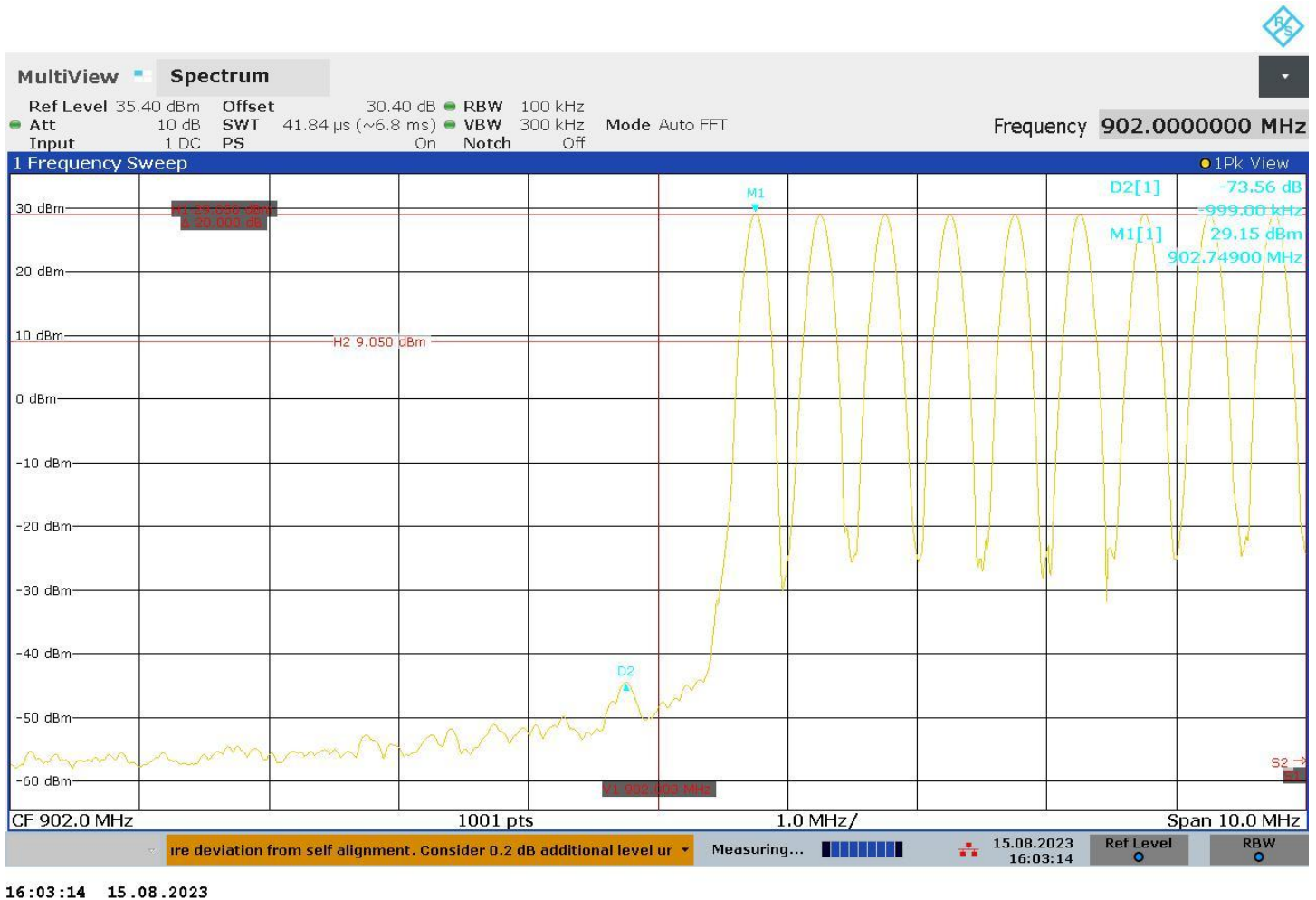
8.7.2 Upper Band Edge Plot, Stopped, 928 MHz



15:58:22 15.08.2023

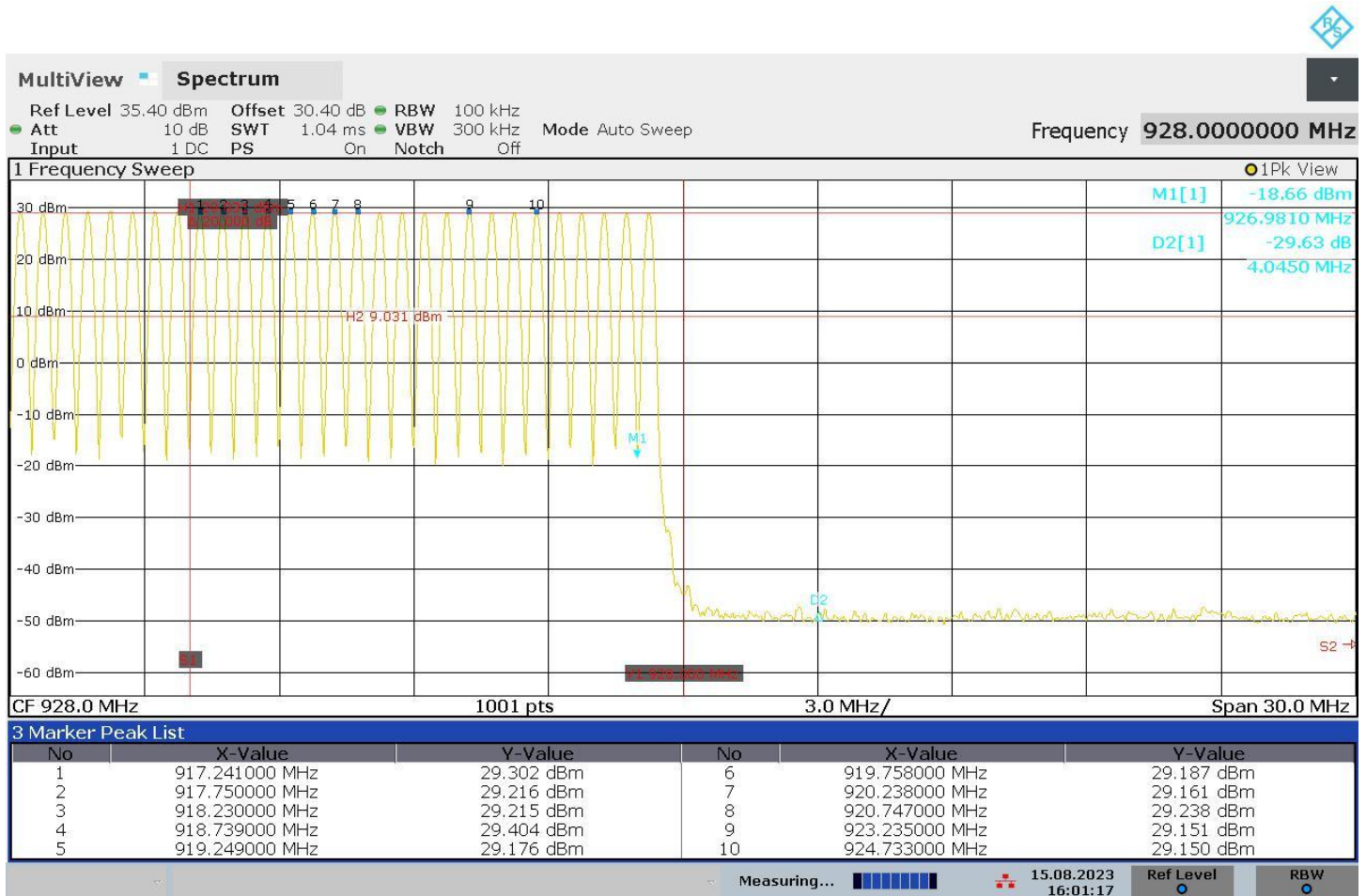


8.7.3 Lower Band Edge Plot, Hopping, 902 MHz





8.7.4 Upper Band Edge Plot, Hopping, 928 MHz

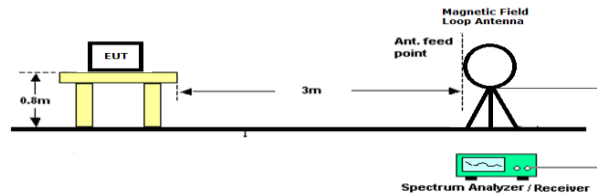


16:01:17 15.08.2023

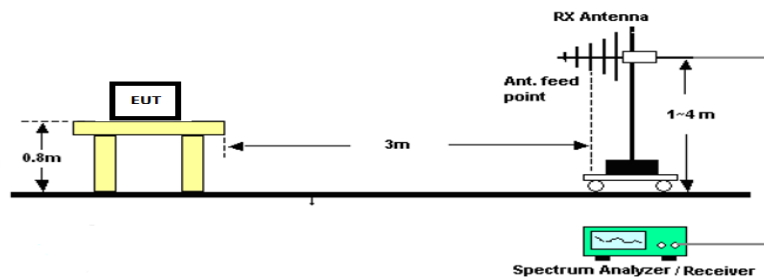
8.8 Radiated Emissions

Restricted Bands from FCC Part 15.205; Limits from FCC Part 15.209

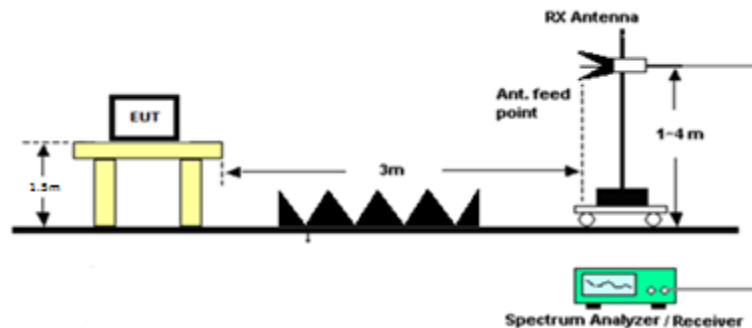
Radiated Test Setup, Below 30 MHz



Radiated Test Setup, 30 – 1000 MHz



Radiated Test Setup, Above 1000 MHz





Radiated Emissions in Restricted Bands, Tabular Data

8.8.1 Radiated Emissions, Internal Antenna, 903 MHz

Tuned Frequency (MHz)	Emission Frequency (MHz)	15.205 Restricted Band	15.205, 15.35, 15.247(d) Detector	Meter Reading (dBµV)	Antenna Polarity	Coax Loss (dB)	Duty Cycle Correction (dB)	Antenna Correction Factor (dB/m)	Distance (m)	Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)
903.00	1806.00		PK	17.10	H	4.90	0.00	27.77	3.00	49.77	53.98	4.21
903.00	1806.00		PK	16.80	V	4.90	0.00	27.77	3.00	49.47	53.98	4.51
903.00	2709.00	X	PK	18.40	H	6.00	0.00	28.87	3.00	53.27	73.98	20.71
903.00	2709.00	X	PK	15.30	V	6.00	0.00	28.87	3.00	50.17	73.98	23.81
903.00	2709.00	X	AVG	10.50	H	6.00	0.00	28.87	3.00	45.37	53.98	8.61
903.00	2709.00	X	AVG	4.20	V	6.00	0.00	28.87	3.00	39.07	53.98	14.91
903.00	3612.00	X	PK	19.80	H	6.64	0.00	27.69	3.00	54.13	73.98	19.85
903.00	3612.00	X	PK	19.80	V	6.64	0.00	27.69	3.00	54.13	73.98	19.85
903.00	3612.00	X	AVG	8.00	H	6.64	0.00	27.69	3.00	42.33	53.98	11.65
903.00	3612.00	X	AVG	8.00	V	6.64	0.00	27.69	3.00	42.33	53.98	11.65
903.00	4515.00	X	PK	19.50	H	7.37	0.00	29.37	3.00	56.24	73.98	17.74
903.00	4515.00	X	PK	18.70	V	7.37	0.00	29.37	3.00	55.44	73.98	18.54
903.00	4515.00	X	AVG	7.10	H	7.37	0.00	29.37	3.00	43.84	53.98	10.14
903.00	4515.00	X	AVG	7.10	V	7.37	0.00	29.37	3.00	43.84	53.98	10.14
903.00	5418.00	X	PK	19.30	H	8.15	0.00	31.39	3.00	58.84	73.98	15.14
903.00	5418.00	X	PK	19.10	V	8.15	0.00	31.39	3.00	58.64	73.98	15.34
903.00	5418.00	X	AVG	6.90	H	8.15	0.00	31.39	3.00	46.44	53.98	7.54
903.00	5418.00	X	AVG	6.90	V	8.15	0.00	31.39	3.00	46.44	53.98	7.54
903.00	6321.00		AVG	7.00	H	8.64	0.00	31.50	3.00	47.14	53.98	6.84
903.00	6321.00		AVG	7.00	V	8.64	0.00	31.50	3.00	47.14	53.98	6.84
903.00	7224.00		AVG	7.20	H	9.52	0.00	31.83	3.00	48.56	53.98	5.42
903.00	7224.00		AVG	7.20	V	9.52	0.00	31.83	3.00	48.56	53.98	5.42
903.00	8127.00	X	PK	18.20	H	9.96	0.00	32.28	3.00	60.43	73.98	13.55
903.00	8127.00	X	PK	18.50	V	9.96	0.00	32.28	3.00	60.73	73.98	13.25
903.00	8127.00	X	AVG	6.60	H	9.96	0.00	32.28	3.00	48.83	53.98	5.15
903.00	8127.00	X	AVG	6.60	V	9.96	0.00	32.28	3.00	48.83	53.98	5.15
903.00	9030.00	X	PK	19.40	H	10.70	0.00	32.58	3.00	62.68	73.98	11.30
903.00	9030.00	X	PK	18.80	V	10.70	0.00	32.58	3.00	62.08	73.98	11.90
903.00	9030.00	X	AVG	7.30	H	10.70	0.00	32.58	3.00	50.58	53.98	3.40
903.00	9030.00	X	AVG	7.30	V	10.70	0.00	32.58	3.00	50.58	53.98	3.40



8.8.2 Radiated Emissions, Internal Antenna, 919 MHz

Tuned Frequency (MHz)	Emission Frequency (MHz)	15.205 Restricted Band	15.205, 15.35, 15.247(d) Detector	Meter Reading (dBμV)	Antenna Polarity	Coax Loss (dB)	Duty Cycle Correction (dB)	Antenna Correction Factor (dB/m)	Distance (m)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
919.00	1838.00		PK	18.50	H	4.95	0.00	27.78	3.00	51.23	53.98	2.75
919.00	1838.00		PK	18.40	V	4.95	0.00	27.78	3.00	51.13	53.98	2.85
919.00	2757.00	X	PK	17.30	H	6.11	0.00	28.74	3.00	52.15	73.98	21.83
919.00	2757.00	X	PK	19.80	V	6.11	0.00	28.74	3.00	54.65	73.98	19.33
919.00	2757.00	X	AVG	7.60	H	6.11	0.00	28.74	3.00	42.45	53.98	11.53
919.00	2757.00	X	AVG	12.70	V	6.11	0.00	28.74	3.00	47.55	53.98	6.43
919.00	3676.00	X	PK	19.60	H	6.62	0.00	27.68	3.00	53.90	73.98	20.08
919.00	3676.00	X	PK	19.60	V	6.62	0.00	27.68	3.00	53.90	73.98	20.08
919.00	3676.00	X	AVG	7.40	H	6.62	0.00	27.68	3.00	41.70	53.98	12.28
919.00	3676.00	X	AVG	7.40	V	6.62	0.00	27.68	3.00	41.70	53.98	12.28
919.00	4595.00	X	PK	19.60	H	7.54	0.00	29.49	3.00	56.64	73.98	17.34
919.00	4595.00	X	PK	19.80	V	7.54	0.00	29.49	3.00	56.84	73.98	17.14
919.00	4595.00	X	AVG	7.70	H	7.54	0.00	29.49	3.00	44.74	53.98	9.24
919.00	4595.00	X	AVG	7.60	V	7.54	0.00	29.49	3.00	44.64	53.98	9.34
919.00	5514.00		AVG	7.50	H	8.06	0.00	31.47	3.00	47.03	53.98	6.95
919.00	5514.00		AVG	6.90	V	8.06	0.00	31.47	3.00	46.43	53.98	7.55
919.00	6433.00		AVG	7.50	H	8.95	0.00	31.47	3.00	47.92	53.98	6.06
919.00	6433.00		AVG	6.90	V	8.95	0.00	31.47	3.00	47.32	53.98	6.66
919.00	7352.00	X	PK	18.40	H	9.51	0.00	31.92	3.00	59.83	73.98	14.15
919.00	7352.00	X	PK	18.00	V	9.51	0.00	31.92	3.00	59.43	73.98	14.55
919.00	7352.00	X	AVG	7.50	H	9.51	0.00	31.92	3.00	48.93	53.98	5.05
919.00	7352.00	X	AVG	7.40	V	9.51	0.00	31.92	3.00	48.83	53.98	5.15
919.00	8271.00	X	PK	18.40	H	10.07	0.00	32.32	3.00	60.79	73.98	13.19
919.00	8271.00	X	PK	18.00	V	10.07	0.00	32.32	3.00	60.39	73.98	13.59
919.00	8271.00	X	AVG	6.50	H	10.07	0.00	32.32	3.00	48.89	53.98	5.09
919.00	8271.00	X	AVG	6.60	V	10.07	0.00	32.32	3.00	48.99	53.98	4.99
919.00	9190.00	X	PK	18.60	H	10.95	0.00	32.55	3.00	62.10	73.98	11.88
919.00	9190.00	X	PK	19.60	V	10.95	0.00	32.55	3.00	63.10	73.98	10.88
919.00	9190.00	X	AVG	7.00	H	10.95	0.00	32.55	3.00	50.50	53.98	3.48
919.00	9190.00	X	AVG	6.90	V	10.95	0.00	32.55	3.00	50.40	53.98	3.58



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8.8.3 Radiated Emissions, Internal Antenna, 927 MHz

Tuned Frequency (MHz)	Emission Frequency (MHz)	15.205 Restricted Band	15.205, 15.35, 15.247(d) Detector	Meter Reading (dBμV)	Antenna Polarity	Coax Loss (dB)	Duty Cycle Correction (dB)	Antenna Correction Factor (dB/m)	Distance (m)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
927.00	1854.00		PK	20.60	H	4.98	0.00	27.79	3.00	53.37	53.98	0.61
927.00	1854.00		PK	20.50	V	4.98	0.00	27.79	3.00	53.27	53.98	0.71
927.00	2781.00	X	PK	20.30	H	6.15	0.00	28.67	3.00	55.12	73.98	18.86
927.00	2781.00	X	PK	19.80	V	6.15	0.00	28.67	3.00	54.62	73.98	19.36
927.00	2781.00	X	AVG	13.70	H	6.15	0.00	28.67	3.00	48.52	53.98	5.46
927.00	2781.00	X	AVG	13.00	V	6.15	0.00	28.67	3.00	47.82	53.98	6.16
927.00	3708.00	X	PK	19.30	H	6.57	0.00	27.69	3.00	53.56	73.98	20.42
927.00	3708.00	X	PK	18.80	V	6.57	0.00	27.69	3.00	53.06	73.98	20.92
927.00	3708.00	X	AVG	7.40	H	6.57	0.00	27.69	3.00	41.66	53.98	12.32
927.00	3708.00	X	AVG	7.40	V	6.57	0.00	27.69	3.00	41.66	53.98	12.32
927.00	4635.00	X	PK	19.40	H	7.52	0.00	29.52	3.00	56.44	73.98	17.54
927.00	4635.00	X	PK	19.80	V	7.52	0.00	29.52	3.00	56.84	73.98	17.14
927.00	4635.00	X	AVG	7.40	H	7.52	0.00	29.52	3.00	44.44	53.98	9.54
927.00	4635.00	X	AVG	7.40	V	7.52	0.00	29.52	3.00	44.44	53.98	9.54
927.00	5562.00		PK	6.50	H	8.06	0.00	31.41	3.00	45.97	53.98	8.01
927.00	5562.00		PK	6.60	V	8.06	0.00	31.41	3.00	46.07	53.98	7.91
927.00	6489.00		PK	7.00	H	9.06	0.00	31.46	3.00	47.52	53.98	6.46
927.00	6489.00		PK	7.10	V	9.06	0.00	31.46	3.00	47.62	53.98	6.36
927.00	7416.00	X	PK	19.20	H	9.52	0.00	31.92	3.00	60.64	73.98	13.34
927.00	7416.00	X	PK	19.20	V	9.52	0.00	31.92	3.00	60.64	73.98	13.34
927.00	7416.00	X	AVG	7.40	H	9.52	0.00	31.92	3.00	48.84	53.98	5.14
927.00	7416.00	X	AVG	7.40	V	9.52	0.00	31.92	3.00	48.84	53.98	5.14
927.00	8343.00	X	PK	18.30	H	10.15	0.00	32.35	3.00	60.79	73.98	13.19
927.00	8343.00	X	PK	19.10	V	10.15	0.00	32.35	3.00	61.59	73.98	12.39
927.00	8343.00	X	AVG	6.40	H	10.15	0.00	32.35	3.00	48.89	53.98	5.09
927.00	8343.00	X	AVG	6.30	V	10.15	0.00	32.35	3.00	48.79	53.98	5.19
927.00	9270.00		AVG	7.40	H	10.86	0.00	32.51	3.00	50.77	53.98	3.21
927.00	9270.00		AVG	7.40	V	10.86	0.00	32.51	3.00	50.77	53.98	3.21



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8.8.4 Radiated Emissions, External Antenna, 903 MHz

Tuned Frequency (MHz)	Emission Frequency (MHz)	15.205 Restricted Band	15.205, 15.35, 15.247(d) Detector	Meter Reading (dBμV)	Antenna Polarity	Coax Loss (dB)	Duty Cycle Correction (dB)	Antenna Correction Factor (dB/m)	Distance (m)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
903.00	1806.00		AVG	18.60	H	4.90	0.00	27.77	3.00	51.27	53.98	2.71
903.00	1806.00		AVG	18.30	V	4.90	0.00	27.77	3.00	50.97	53.98	3.01
903.00	2709.00	X	PK	16.10	H	6.00	0.00	28.87	3.00	50.97	73.98	23.01
903.00	2709.00	X	PK	21.01	V	6.00	0.00	28.87	3.00	55.88	73.98	18.10
903.00	2709.00	X	AVG	3.10	H	6.00	0.00	28.87	3.00	37.97	53.98	16.01
903.00	2709.00	X	AVG	13.20	V	6.00	0.00	28.87	3.00	48.07	53.98	5.91
903.00	3612.00	X	PK	20.60	H	6.64	0.00	27.69	3.00	54.93	73.98	19.05
903.00	3612.00	X	PK	20.70	V	6.64	0.00	27.69	3.00	55.03	73.98	18.95
903.00	3612.00	X	AVG	8.10	H	6.64	0.00	27.69	3.00	42.43	53.98	11.55
903.00	3612.00	X	AVG	8.00	V	6.64	0.00	27.69	3.00	42.33	53.98	11.65
903.00	4515.00	X	PK	19.30	H	7.37	0.00	29.37	3.00	56.04	73.98	17.94
903.00	4515.00	X	PK	19.50	V	7.37	0.00	29.37	3.00	56.24	73.98	17.74
903.00	4515.00	X	AVG	7.00	H	7.37	0.00	29.37	3.00	43.74	53.98	10.24
903.00	4515.00	X	AVG	7.00	V	7.37	0.00	29.37	3.00	43.74	53.98	10.24
903.00	5418.00	X	PK	19.10	H	8.15	0.00	31.39	3.00	58.64	73.98	15.34
903.00	5418.00	X	PK	19.20	V	8.15	0.00	31.39	3.00	58.74	73.98	15.24
903.00	5418.00	X	AVG	6.90	H	8.15	0.00	31.39	3.00	46.44	53.98	7.54
903.00	5418.00	X	AVG	6.80	V	8.15	0.00	31.39	3.00	46.34	53.98	7.64
903.00	6321.00		AVG	7.00	H	8.64	0.00	31.50	3.00	47.14	53.98	6.84
903.00	6321.00		PK	11.43	V	8.64	0.00	31.50	3.00	51.57	53.98	2.41
903.00	7224.00		PK	11.60	H	9.52	0.00	31.83	3.00	52.96	53.98	1.02
903.00	7224.00		PK	12.60	V	9.52	0.00	31.83	3.00	53.96	53.98	0.02
903.00	8127.00	X	PK	18.40	H	9.96	0.00	32.28	3.00	60.63	73.98	13.35
903.00	8127.00	X	PK	18.70	V	9.96	0.00	32.28	3.00	60.93	73.98	13.05
903.00	8127.00	X	AVG	6.60	H	9.96	0.00	32.28	3.00	48.83	53.98	5.15
903.00	8127.00	X	AVG	6.60	V	9.96	0.00	32.28	3.00	48.83	53.98	5.15
903.00	9030.00	X	PK	19.80	H	10.70	0.00	32.58	3.00	63.08	73.98	10.90
903.00	9030.00	X	PK	19.60	V	10.70	0.00	32.58	3.00	62.88	73.98	11.10
903.00	9030.00	X	AVG	7.20	H	10.70	0.00	32.58	3.00	50.48	53.98	3.50
903.00	9030.00	X	AVG	7.23	V	10.70	0.00	32.58	3.00	50.51	53.98	3.47



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8.8.5 Radiated Emissions, External Antenna, 919 MHz

Tuned Frequency (MHz)	Emission Frequency (MHz)	15.205 Restricted Band	15.205, 15.35, 15.247(d) Detector	Meter Reading (dBμV)	Antenna Polarity	Coax Loss (dB)	Duty Cycle Correction (dB)	Antenna Correction Factor (dB/m)	Distance (m)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
919.00	1838.00		PK	20.80	H	4.95	0.00	27.78	3.00	53.53	53.98	0.45
919.00	1838.00		PK	16.20	V	4.95	0.00	27.78	3.00	48.93	53.98	5.05
919.00	2757.00	X	PK	15.40	H	6.11	0.00	28.74	3.00	50.25	73.98	23.73
919.00	2757.00	X	PK	15.60	V	6.11	0.00	28.74	3.00	50.45	73.98	23.53
919.00	2757.00	X	AVG	3.40	H	6.11	0.00	28.74	3.00	38.25	53.98	15.73
919.00	2757.00	X	AVG	3.70	V	6.11	0.00	28.74	3.00	38.55	53.98	15.43
919.00	3676.00	X	PK	21.00	H	6.62	0.00	27.68	3.00	55.30	73.98	18.68
919.00	3676.00	X	PK	19.40	V	6.62	0.00	27.68	3.00	53.70	73.98	20.28
919.00	3676.00	X	AVG	10.60	H	6.62	0.00	27.68	3.00	44.90	53.98	9.08
919.00	3676.00	X	AVG	7.40	V	6.62	0.00	27.68	3.00	41.70	53.98	12.28
919.00	4595.00	X	PK	19.70	H	7.54	0.00	29.49	3.00	56.74	73.98	17.24
919.00	4595.00	X	PK	18.80	V	7.54	0.00	29.49	3.00	55.84	73.98	18.14
919.00	4595.00	X	AVG	7.50	H	7.54	0.00	29.49	3.00	44.54	53.98	9.44
919.00	4595.00	X	AVG	7.40	V	7.54	0.00	29.49	3.00	44.44	53.98	9.54
919.00	5514.00		PK	14.40	H	8.06	0.00	31.47	3.00	53.93	53.98	0.05
919.00	5514.00		PK	13.40	V	8.06	0.00	31.47	3.00	52.93	53.98	1.05
919.00	6433.00		PK	11.10	H	8.95	0.00	31.47	3.00	51.52	53.98	2.46
919.00	6433.00		PK	11.70	V	8.95	0.00	31.47	3.00	52.12	53.98	1.86
919.00	7352.00	X	PK	19.20	H	9.51	0.00	31.92	3.00	60.63	73.98	13.35
919.00	7352.00	X	PK	19.70	V	9.51	0.00	31.92	3.00	61.13	73.98	12.85
919.00	7352.00	X	AVG	7.30	H	9.51	0.00	31.92	3.00	48.73	53.98	5.25
919.00	7352.00	X	AVG	7.40	V	9.51	0.00	31.92	3.00	48.83	53.98	5.15
919.00	8271.00	X	PK	18.80	H	10.07	0.00	32.32	3.00	61.19	73.98	12.79
919.00	8271.00	X	PK	18.50	V	10.07	0.00	32.32	3.00	60.89	73.98	13.09
919.00	8271.00	X	AVG	6.30	H	10.07	0.00	32.32	3.00	48.69	53.98	5.29
919.00	8271.00	X	AVG	6.30	V	10.07	0.00	32.32	3.00	48.69	53.98	5.29
919.00	9190.00	X	PK	19.20	H	10.95	0.00	32.55	3.00	62.70	73.98	11.28
919.00	9190.00	X	PK	18.60	V	10.95	0.00	32.55	3.00	62.10	73.98	11.88
919.00	9190.00	X	AVG	7.00	H	10.95	0.00	32.55	3.00	50.50	53.98	3.48
919.00	9190.00	X	AVG	7.10	V	10.95	0.00	32.55	3.00	50.60	53.98	3.38



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8.8.6 Radiated Emissions, External Antenna, 927 MHz

Tuned Frequency (MHz)	Emission Frequency (MHz)	15.205 Restricted Band	15.205, 15.35, 15.247(d) Detector	Meter Reading (dBμV)	Antenna Polarity	Coax Loss (dB)	Duty Cycle Correction (dB)	Antenna Correction Factor (dB/m)	Distance (m)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
927.00	1854.00		PK	20.30	H	4.98	0.00	27.79	3.00	53.07	53.98	0.91
927.00	1854.00		PK	16.10	V	4.98	0.00	27.79	3.00	48.87	53.98	5.11
927.00	2781.00	X	PK	16.40	H	6.15	0.00	28.67	3.00	51.22	73.98	22.76
927.00	2781.00	X	PK	15.10	V	6.15	0.00	28.67	3.00	49.92	73.98	24.06
927.00	2781.00	X	AVG	3.70	H	6.15	0.00	28.67	3.00	38.52	53.98	15.46
927.00	2781.00	X	AVG	3.50	V	6.15	0.00	28.67	3.00	38.32	53.98	15.66
927.00	3708.00	X	PK	22.20	H	6.57	0.00	27.69	3.00	56.46	73.98	17.52
927.00	3708.00	X	PK	19.10	V	6.57	0.00	27.69	3.00	53.36	73.98	20.62
927.00	3708.00	X	AVG	13.30	H	6.57	0.00	27.69	3.00	47.56	53.98	6.42
927.00	3708.00	X	AVG	7.30	V	6.57	0.00	27.69	3.00	41.56	53.98	12.42
927.00	4635.00	X	PK	20.50	H	7.52	0.00	29.52	3.00	57.54	73.98	16.44
927.00	4635.00	X	PK	19.70	V	7.52	0.00	29.52	3.00	56.74	73.98	17.24
927.00	4635.00	X	AVG	7.90	H	7.52	0.00	29.52	3.00	44.94	53.98	9.04
927.00	4635.00	X	AVG	7.60	V	7.52	0.00	29.52	3.00	44.64	53.98	9.34
927.00	5562.00		PK	14.40	H	8.06	0.00	31.41	3.00	53.87	53.98	0.11
927.00	5562.00		PK	13.10	V	8.06	0.00	31.41	3.00	52.57	53.98	1.41
927.00	6489.00		PK	11.60	H	9.06	0.00	31.46	3.00	52.12	53.98	1.86
927.00	6489.00		PK	11.10	V	9.06	0.00	31.46	3.00	51.62	53.98	2.36
927.00	7416.00	X	PK	20.60	H	9.52	0.00	31.92	3.00	62.04	73.98	11.94
927.00	7416.00	X	PK	20.00	V	9.52	0.00	31.92	3.00	61.44	73.98	12.54
927.00	7416.00	X	AVG	7.50	H	9.52	0.00	31.92	3.00	48.94	53.98	5.04
927.00	7416.00	X	AVG	7.50	V	9.52	0.00	31.92	3.00	48.94	53.98	5.04
927.00	8343.00	X	PK	18.70	H	10.15	0.00	32.35	3.00	61.19	73.98	12.79
927.00	8343.00	X	PK	18.00	V	10.15	0.00	32.35	3.00	60.49	73.98	13.49
927.00	8343.00	X	AVG	6.50	H	10.15	0.00	32.35	3.00	48.99	53.98	4.99
927.00	8343.00	X	AVG	6.50	V	10.15	0.00	32.35	3.00	48.99	53.98	4.99
927.00	9270.00		AVG	6.90	H	10.86	0.00	32.51	3.00	50.27	53.98	3.71
927.00	9270.00		AVG	9.90	V	10.86	0.00	32.51	3.00	53.27	53.98	0.71



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9. ANNEX-A - Photographs of the EUT

Photographs of the EUT and any manufacturer supplied accessories to be used with the EUT are in separate supplementary documents labelled EXTERNAL PHOTOS and INTERNAL PHOTOS.

10. ANNEX-B – Test Setup Photographs

Test setup photographs are located in a separate supplementary ANNEX-B document.

11. History of Test Report Changes

Test Report #	Revision #	Description	Date of Issue
TR_9607-23_FCC 15.247_DRAFT	1	Initial release	08/25/2023
	2	Revised pg 8 to add peripheral info.	08/29/2023
	3	Updated Page 6	9/11/2025



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END OF TEST REPORT