CFR 47 FCC PART 90
CFR 47 FCC PART 24D
ISED RSS-119 Issue 12
ISED RSS-134 Issue 2

CERTIFICATION TEST REPORT

For

Two Way Portable Radio R7

MODEL NUMBER: AAH06UCN9RB1AN (IC Model: PMUF2000ABB)

FCC ID: AZ489FT7169

IC ID: 109U-89FT7169

REPORT NUMBER: 4790494290-1-RF-5

ISSUE DATE: October 28, 2022

Prepared for

Motorola Solutions, Inc.
8000, West Sunrise Blvd., Ft Lauderdale, Florida 33322, United States

Prepared by

UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch

Building 10, Innovation Technology Park, No. 1, Li Bin Road, Song Shan Lake Hi-Tech Development Zone Dongguan, 523808, People's Republic of China

Tel: +86 769 22038881
Fax: +86 769 33244054
Website: www.ul.com

Revision History

Rev.	Issue Date	Revisions	Revised By
V0	10/28/2022	Initial Issue	

Summary of Test Results			
Clause	**Test Items**	**FCC Rules**	**Test Results**
1	RF Power Output	CFR 47 FCC Part 90.205 CFR 47 FCC Part 24.132 Part 2.1046(a) RSS-119 (4.1,5.4) ISED RSS-134 (3.1)	Pass
2	Modulation Limiting	CFR 47 FCC Part 90.207 Part 2.1047(b) RSS-119 (5.5)	Pass
3	Audio Frequency Response	CFR 47 FCC Part 90.207 Part 2.1047(a) RSS-119 (5.5)	Pass
4	Audio Low Pass Filter	CFR 47 FCC Part 90.207 Part 2.1047(a) RSS-119 (5.5)	Pass
5	Emission Bandwidth	CFR 47 FCC Part 90.209 Part 2.1049 RSS-119 (5.5) RSS-134 (4.1)	Pass
6	Emission Mask	CFR 47 FCC Part 90.210 CFR 47 FCC Part 24.131 CFR 47 FCC Part 24.133 CFR 47 FCC Part 90.691 Part 2.1053 RSS-119 (5.5)	Pass
7	Frequency Stability	CFR 47 FCC Part 90.213 CFR 47 FCC Part 24.135 Part 2.1055 RSS-119(5.3) RSS-119(4.5)	Pass
8	Transient Frequency Behavior	CFR 47 FCC Part 90.214 RSS-119(5.9)	Pass
9	Transmitter Radiated Spurious Emission	CFR 47 FCC Part 90.210 CFR 47 FCC Part 24.133 Part 2.1053 RSS-119 (4.2, 5.8) RSS-134 (3.2, 4.4)	Pass
10	Transmitter Conducted Spurious Emissions	CFR 47 FCC Part 24.133 Part 2.1051 RSS-119 (4.2, 5.8) RSS-134 (3.2, 4.4)	Pass
Note 1: This test report is only published to and used by the applicant, and it is not for evidence purpose in China. Note 2: The measurement result for the sample received is <Pass> according to < CFR 47 FCC PART 90, CFR 47 FCC PART 24D, ISED RSS-119 Issue 12, ISED RSS-134 Issue 6 and ISED RSS-GEN Issue 5 > when <Accuracy Method> decision rule is applied.			

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1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name:	Motorola Solutions, Inc.
Address:	8000, West Sunrise Blvd., Ft Lauderdale, Florida 33322, United States

Manufacturer Information

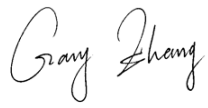
Company Name:	Motorola Solutions, Inc.
Address:	8000, West Sunrise Blvd., Ft Lauderdale, Florida 33322, United States

EUT Information

EUT Name:	Two Way Portable Radio R7
Model:	AAH06UCN9RB1AN (IC Model: PMUF2000ABB)
Brand:	Motorola
Sample Received Date:	June 27, 2022
Sample Status:	Normal
Sample ID:	5225541
Date of Tested:	August 08, 2022~ October 27, 2022

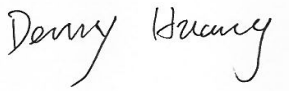
APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 FCC PART 90 SUBPART S	**PASS**
CFR 47 FCC PART 24D	**PASS**
ISED RSS-119 Issue 12	**PASS**
ISED RSS-134 Issue 2	**PASS**
ISED RSS-GEN Issue 5	**PASS**

Prepared By:



Gary Zhang
Project Engineer

Checked By:



Denny Huang
Senior Project Engineer

Approved By:

Stephen Guo
Laboratory Manager

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.26-2015, ANSI/TIA-603-E-2016, CFR 47 FCC Part 2, CFR 47 FCC Part 90, CFR 47 FCC Part 24D, ISED RSS-119 Issue 12, ISED RSS-134 Issue 2 and ISED RSS-GEN Issue 5.

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	**A2LA (Certificate No.: 4102.01)** UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with A2LA. **FCC (FCC Designation No.: CN1187)** UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. Has been recognized to perform compliance testing on equipment subject to the Commission's Delcaration of Conformity (DoC) and Certification rules **ISED (Company No.: 21320)** UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been registered and fully described in a report filed with ISED. The Company Number is 21320 and the test lab Conformity Assessment Body Identifier (CABID) is CN0046. **VCCI (Registration No.: G-20019, R-20004, C-20012 and T-20011)** UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with VCCI, the Membership No. is 3793. Facility Name: Chamber D, the VCCI registration No. is G-20019 and R-20004 Shielding Room B , the VCCI registration No. is C-20012 and T-20011

Note 1: All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China

Note 2: The test anechoic chamber in UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch had been calibrated and compared to the open field sites and the test anechoic chamber is shown to be equivalent to or worst case from the open field site.

Note 3: For below 30 MHz, lab had performed measurements at test anechoic chamber and comparing to measurements obtained on an open field site. And these measurements below 30 MHz had been correlated to measurements performed on an OFS.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations and is traceable to recognize national standards.

4.2. MEASUREMENT UNCERTAINTY

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

Test Item	Uncertainty
Conduction emission	3.62 dB
Radiated Emission (Included Fundamental Emission) (9 kHz ~ 30 MHz)	2.2 dB
Radiated Emission (Included Fundamental Emission) (30 MHz ~ 1 GHz)	4.00 dB
Radiated Emission (Included Fundamental Emission) (1 GHz to 26 GHz)	5.78 dB (1 GHz ~ 18 GHz)
	5.23 dB (18 GHz ~ 26 GHz)
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95 % confidence level using a coverage factor of k=2.	

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

EUT Name	Two Way Portable Radio R7	
Model	AAH06UCN9RB1AN (IC Model: PMUF2000ABB)	
EUT Description	The device is portable Land Mobile Radio (LMR)	
Product Description	Operation Frequency	806 - 824 MHz 851 - 869 MHz 896 - 901 MHz 935 - 940 MHz 901 - 902 MHz 940 - 941 MHz
	Modulation Type	Analog, 4FSK
	Channel Separation	12.5 kHz / 25kHz
	Communication Type	Voice / Tone only
	Rated Output Power	1W / 3W
Firmware Version:	D02.22.02.1009	
Ratings	Normal Voltage: 7.5V Battery: PMNN4809A: DC 7.7V / 21.9Wh PMNN4810A: DC 7.2V / 23.0Wh	

5.2. TEST CHANNEL CONFIGURATION

For Analog:

Test Channel	Frequency (MHz)	Channel Spacing (kHz)	Modulation Type
1	806.0125	25	FM
2	814.9875	25	FM
3	823.9875	25	FM
4	851.0125	25	FM
5	860.0125	25	FM
6	868.8875	25	FM
7	896.0125	12.5	FM
8	900.9875	12.5	FM
9	901.5000	12.5	FM
10	935.0125	12.5	FM
11	939.9875	12.5	FM
12	940.5000	12.5	FM

For Digital:

Test Channel	Frequency (MHz)	Channel Spacing (kHz)	Modulation Type
1	806.0125	12.5	4FSK
2	814.9875	12.5	4FSK
3	823.9875	12.5	4FSK
4	851.0125	12.5	4FSK
5	860.0125	12.5	4FSK
6	868.8875	12.5	4FSK
7	896.0125	12.5	4FSK
8	900.9875	12.5	4FSK
9	901.5000	12.5	4FSK
10	935.0125	12.5	4FSK
11	939.9875	12.5	4FSK
12	940.5000	12.5	4FSK

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

Ant.	Frequency (MHz)	Antenna Type	Gain(dBi)	Model Number
1	806 - 870	External Antenna - Whip Antenna	1.0	PMAF4009A
1	896 - 941	External Antenna - Whip Antenna	1.0	PMAF4010A
1	806 - 870	External Antenna - Whip Antenna	1.0	PMAF4011A
1	896 - 941	External Antenna - Whip Antenna	1.0	PMAF4012A

Mode	Transmit and Receive Mode	Description
FM	1TX, 1RX	Chain 1 can be used as transmitting/receiving antenna.

5.4. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Item	Accessory	Brand Name	Model Name	Description
1	50ohm load	TERMALINE	8080	25W 50ohm
2	attenuator	Weinschel	24-20-34	BP8634

I/O CABLES

Item	Type of cable	Shielded Type	Ferrite Core	Length
1	/	/	/	/

ACCESSORY

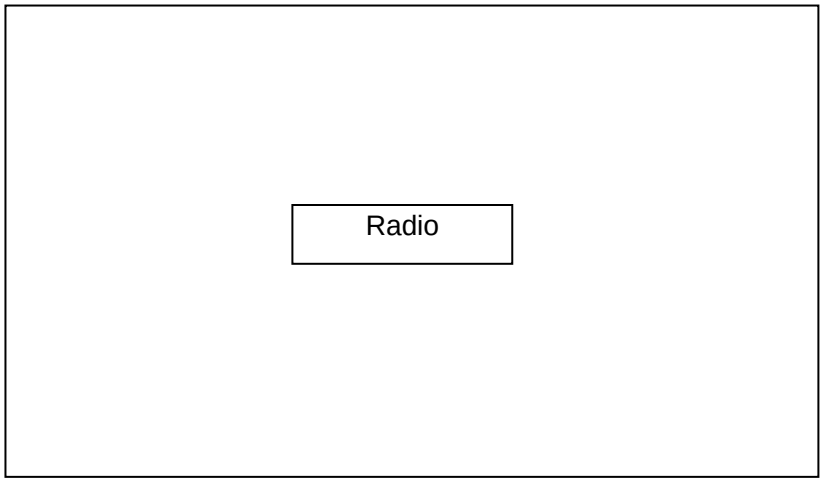
Item	Accessory	Brand Name	Model Name	Description
1	Lithium battery	Motorola	PMNN4809A	DC 7.7V / 21.9Wh
2	Lithium battery	Motorola	PMNN4810A	DC 7.2V / 23.0Wh

TEST SETUP

A fully charged battery was used for all tests.

The test sample can be set to a transmitter mode.

Radio Alone



5.5. MEASURING INSTRUMENT AND SOFTWARE USED

Radiated Emissions					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
MXE EMI Receiver	KESIGHT	N9038A	MY56400036	Oct. 30, 2021	Oct. 29, 2022
Hybrid Log Periodic Antenna	TDK	HLP-3003C	130959	Apr. 24, 2020	Apr. 23, 2023
Hybrid Log Periodic Antenna	TDK	HLP-3003C	130960	Aug. 02, 2021	Aug. 01, 2024
MXG Vector Signal Generator	Keysight	N5182B	MY56200284	Oct.30, 2021	Oct.29, 2022
Preamplifier	HP	8447D	2944A09099	Oct. 30, 2021	Oct. 29, 2022
EMI Measurement Receiver	R&S	ESR26	101377	Oct. 30, 2021	Oct. 29, 2022
Horn Antenna	TDK	HRN-0118	130940	Jul. 20, 2021	Jul. 19, 2024
Preamplifier	TDK	PA-02-0118	TRS-305-00067	Oct. 31, 2021	Oct. 30, 2022
Software					
Description			Manufacturer	Name	Version
Test Software for Radiated Emissions			Farad	EZ-EMC	Ver. UL-3A1

Other instruments					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
RF COMMUNICATIONS TEST SET	HP	8920B	US35320976	Oct. 30, 2021	Oct. 29, 2022
Signal & Spectrum analyzer	R&S	FSW	1312.8000K26-103950-sj	Oct.31, 2021	Oct.30, 2022
MXG Vector Signal Generator	Keysight	N5182B	MY56200284	Oct.30, 2021	Oct.29, 2022
MXG Vector Signal Generator	Keysight	N5172B	MY56200301	Oct.30, 2021	Oct.29, 2022
DC power supply	Array	3662A	A1512015	Oct.30, 2021	Oct.29, 2022

6. TRANSMITTER TEST PARAMETERS

6.1. FREQUENCY STABILITY

LIMITS

(a) Unless noted elsewhere, transmitters used in the services governed by this part must have a minimum frequency stability as specified in the following table.

Minimum Frequency Stability
[Parts per million (ppm)]

Frequency range (MHz)	Fixed and base stations	Mobile stations	
		Over 2 watts output power	2 watts or less output power
Below 25	[1] [2] [3]100	100	200
25-50	20	20	50
72-76	5		50
150-174	[5] [11]5	[6]5	[4] [6]50
216-220	1.0		1.0
220-222[12]	0.1	1.5	1.5
421-512	[7] [11] [14]2.5	[8]5	[8]5
806-809	[14]1.0	1.5	1.5
809-824	[14]1.5	2.5	2.5
851-854	1.0	1.5	1.5
854-869	1.5	2.5	2.5
896-901	[14]0.1	1.5	1.5
902-928	2.5	2.5	2.5
902-928[13]	2.5	2.5	2.5
929-930	1.5		
935-940	0.1	1.5	1.5
1427-1435	[9]300	300	300
Above 2450[10]			

[1]Fixed and base stations with over 200 watts transmitter power must have a frequency stability of 50 ppm except for equipment used in the Public Safety Pool where the frequency stability is 100 ppm.

[2]For single sideband operations below 25 MHz, the carrier frequency must be maintained within 50 Hz of the authorized carrier frequency.

[3]Travelers information station transmitters operating from 530-1700 kHz and transmitters exceeding 200 watts peak envelope power used for disaster communications and long distance circuit operations pursuant to §§90.242 and 90.264 must maintain the carrier frequency to within 20 Hz of the authorized frequency.

[4]Stations operating in the 154.45 to 154.49 MHz or the 173.2 to 173.4 MHz bands must have a frequency stability of 5 ppm.

[5]In the 150-174 MHz band, fixed and base stations with a 12.5 kHz channel bandwidth must have a frequency stability of 2.5 ppm. Fixed and base stations with a 6.25 kHz channel bandwidth must have a frequency stability of 1.0 ppm.

[6]In the 150-174 MHz band, mobile stations designed to operate with a 12.5 kHz channel bandwidth or designed to operate on a frequency specifically designated for itinerant use or designed for low-power operation of two watts or less, must have a frequency stability of 5.0 ppm. Mobile stations designed to operate with a 6.25 kHz channel bandwidth must have a frequency stability of 2.0 ppm.

[7]In the 421-512 MHz band, fixed and base stations with a 12.5 kHz channel bandwidth must have a frequency stability of 1.5 ppm. Fixed and base stations with a 6.25 kHz channel bandwidth must have a frequency stability of 0.5 ppm.

[8]In the 421-512 MHz band, mobile stations designed to operate with a 12.5 kHz channel bandwidth must have a frequency stability of 2.5 ppm. Mobile stations designed to operate with a 6.25 kHz channel bandwidth must have a frequency stability of 1.0 ppm.

[9]Fixed stations with output powers above 120 watts and necessary bandwidth less than 3 kHz must operate with a frequency stability of 100 ppm. Fixed stations with output powers less than 120 watts and using time-division multiplex, must operate with a frequency stability of 500 ppm.

[10]Except for DSRCS equipment in the 5850-5925 MHz band, frequency stability is to be specified in the station authorization. Frequency stability for DSRCS equipment in the 5850-5925 MHz band is specified in subpart M of this part.

[11]Paging transmitters operating on paging-only frequencies must operate with frequency stability of 5 ppm in the 150-174 MHz band and 2.5 ppm in the 421-512 MHz band.

[12]Mobile units may utilize synchronizing signals from associated base stations to achieve the specified carrier stability.

[13]Fixed non-multilateration transmitters with an authorized bandwidth that is more than 40 kHz from the band edge, intermittently operated hand-held readers, and mobile transponders are not subject to frequency tolerance restrictions.

[14]Control stations may operate with the frequency tolerance specified for associated mobile frequencies.

(b) For the purpose of determining the frequency stability limits, the power of a transmitter is considered to be the maximum rated output power as specified by the manufacturer.

PROCEDURE

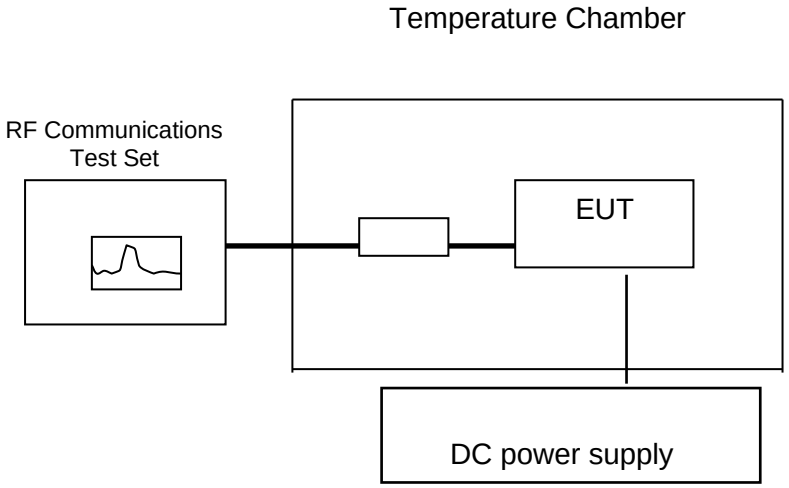
Frequency stability over variations in temperature:

1) The EUT transmitter output port was connected to communication tester.
2) The EUT was placed inside the temperature chamber.
3) Supply the EUT with a DC 4.5 V voltage by DC power supply.
4) Turn EUT off and set the chamber temperature to -30 °C. After the temperature stabilized for approximately 30 minutes recorded the frequency as MCF_{MHz}.
5) Calculate the ppm frequency error by the following:
   ppm error=($MCF_{MHZ}/ACF_{MHZ}-1$) * 10^6
   where
   MCF_{MHz} is the Measured Carrier Frequency in MHz ACF_{MHz} is the Assigned Carrier Frequency in MHz
6) Repeat step 4 measure with 10 °C increased per stage until the highest temperature of +50 °C reached.

Frequency stability when varying supply voltage:

7) The EUT transmitter output port was connected to communication tester.
8) The EUT was placed inside the temperature chamber at +15 °C to +25 °C.
9) Supply the EUT with a DC 4.5 V voltage by power supply.
10) Recorded the frequency as MCF_{MHz}.
11) Calculate the ppm frequency error by the following:
    ppm error=($MCF_{MHZ}/ACF_{MHZ}-1$) * 10^6
    where
    MCF_{MHz} is the Measured Carrier Frequency in MHz ACF_{MHz} is the Assigned Carrier Frequency in MHz
12) Repeat step 4 measure with vary primary supply voltage from 85 % to 115 % of the nominal value for other than hand carried battery equipment.

TEST SETUP



RESULTS

Compare to the limit of the standard:

Frequency / Channel Spacing	851.0125 MHz / 25 kHz				
Temperature, °C	25				
Voltage	Voltage	Frequency	Frequency Stability	Low Limit	High Limit
%	V	MHz	PPM	PPM	PPM
85	6.38	851.012431	-0.08	-2.5	2.5
90	6.75	851.012443	-0.07	-2.5	2.5
95	7.13	851.012444	-0.07	-2.5	2.5
100	7.50	851.012429	-0.08	-2.5	2.5
105	7.88	851.012428	-0.08	-2.5	2.5
110	8.25	851.012428	-0.08	-2.5	2.5
115	8.63	851.012426	-0.09	-2.5	2.5

Frequency / Channel Spacing	851.0125 MHz / 25 kHz			
Temperature	Frequency	Frequency Stability	Low Limit	High Limit
°C	MHz	PPM	PPM	PPM
-30	851.012441	-0.07	-2.5	2.5
-20	851.012436	-0.08	-2.5	2.5
-10	851.012433	-0.08	-2.5	2.5
0	851.012430	-0.08	-2.5	2.5
10	851.012441	-0.07	-2.5	2.5
20	851.012442	-0.07	-2.5	2.5
30	851.012427	-0.09	-2.5	2.5
40	851.012429	-0.08	-2.5	2.5
50	851.012437	-0.07	-2.5	2.5
60	851.012433	-0.08	-2.5	2.5

Frequency / Channel Spacing	935.0125 MHz / 12.5 kHz				
Temperature, 0C	25				
Voltage	Voltage	Frequency	Frequency Stability	Low Limit	High Limit
%	V	MHz	PPM	PPM	PPM
85	6.38	935.012406	-0.10	-1.5	1.5
90	6.75	935.012402	-0.10	-1.5	1.5
95	7.13	935.012401	-0.11	-1.5	1.5
100	7.50	935.012402	-0.10	-1.5	1.5
105	7.88	935.012403	-0.10	-1.5	1.5
110	8.25	935.012406	-0.10	-1.5	1.5
115	8.63	935.012407	-0.10	-1.5	1.5

Frequency / Channel Spacing	935.0125 MHz / 12.5 kHz			
Temperature	Frequency	Frequency Stability	Low Limit	High Limit
°C	MHz	PPM	PPM	PPM
-30	935.012404	-0.10	-1.5	1.5
-20	935.012402	-0.10	-1.5	1.5
-10	935.012403	-0.10	-1.5	1.5
0	935.012407	-0.10	-1.5	1.5
10	935.012401	-0.11	-1.5	1.5
20	935.012402	-0.10	-1.5	1.5
30	935.012405	-0.10	-1.5	1.5
40	935.012405	-0.10	-1.5	1.5
50	935.012403	-0.10	-1.5	1.5
60	935.012403	-0.10	-1.5	1.5

Frequency / Channel Spacing	901.5 MHz / 12.5 kHz				
Temperature, 0C	25				
Voltage	Voltage	Frequency	Frequency Stability	Low Limit	High Limit
%	V	MHz	PPM	PPM	PPM
85	6.38	901.500077	0.09	-1	1
90	6.75	901.500017	0.02	-1	1
95	7.13	901.500001	0.00	-1	1
100	7.50	901.499984	-0.02	-1	1
105	7.88	901.499983	-0.02	-1	1
110	8.25	901.499975	-0.03	-1	1
115	8.63	901.499969	-0.03	-1	1

Frequency / Channel Spacing	901.5 MHz / 12.5 kHz			
Temperature	Frequency	Frequency Stability	Low Limit	High Limit
°C	MHz	PPM	PPM	PPM
-30	901.500072	0.08	-1	1
-20	901.500077	0.09	-1	1
-10	901.500064	0.07	-1	1
0	901.500057	0.06	-1	1
10	901.500021	0.02	-1	1
20	901.500031	0.03	-1	1
30	901.499989	-0.01	-1	1
40	901.500009	0.01	-1	1
50	901.500019	0.02	-1	1
60	901.499977	-0.03	-1	1

Frequency / Channel Spacing	940.5 MHz / 12.5 kHz				
Temperature, 0C	25				
Voltage	Voltage	Frequency	Frequency Stability	Low Limit	High Limit
%	V	MHz	PPM	PPM	PPM
85	6.38	940.499842	-0.17	-1	1
90	6.75	940.499841	-0.17	-1	1
95	7.13	940.499846	-0.16	-1	1
100	7.50	940.499832	-0.18	-1	1
105	7.88	940.499837	-0.17	-1	1
110	8.25	940.499838	-0.17	-1	1
115	8.63	940.499847	-0.16	-1	1

Frequency / Channel Spacing	940.5 MHz / 12.5 kHz			
Temperature	Frequency	Frequency Stability	Low Limit	High Limit
°C	MHz	PPM	PPM	PPM
-30	940.499845	-0.16	-1	1
-20	940.499837	-0.17	-1	1
-10	940.499841	-0.17	-1	1
0	940.499841	-0.17	-1	1
10	940.499848	-0.16	-1	1
20	940.49984	-0.17	-1	1
30	940.499841	-0.17	-1	1
40	940.499842	-0.17	-1	1
50	940.499834	-0.18	-1	1
60	940.499839	-0.17	-1	1

Compare to the limit declared by manufacturer (which is more strict than standard):

Frequency / Channel Spacing	851.0125 MHz / 25 kHz				
Temperature, °C	25				
Voltage	Voltage	Frequency	Frequency Stability	Low Limit	High Limit
%	V	MHz	PPM	PPM	PPM
85	6.38	851.012431	-0.08	-0.5	0.5
90	6.75	851.012443	-0.07	-0.5	0.5
95	7.13	851.012444	-0.07	-0.5	0.5
100	7.50	851.012429	-0.08	-0.5	0.5
105	7.88	851.012428	-0.08	-0.5	0.5
110	8.25	851.012428	-0.08	-0.5	0.5
115	8.63	851.012426	-0.09	-0.5	0.5

Frequency / Channel Spacing	851.0125 MHz / 25 kHz			
Temperature	Frequency	Frequency Stability	Low Limit	High Limit
°C	MHz	PPM	PPM	PPM
-30	851.012441	-0.07	-0.5	0.5
-20	851.012436	-0.08	-0.5	0.5
-10	851.012433	-0.08	-0.5	0.5
0	851.012430	-0.08	-0.5	0.5
10	851.012441	-0.07	-0.5	0.5
20	851.012442	-0.07	-0.5	0.5
30	851.012427	-0.09	-0.5	0.5
40	851.012429	-0.08	-0.5	0.5
50	851.012437	-0.07	-0.5	0.5
60	851.012433	-0.08	-0.5	0.5

Frequency / Channel Spacing	935.0125 MHz / 12.5 kHz				
Temperature, 0C	25				
Voltage	Voltage	Frequency	Frequency Stability	Low Limit	High Limit
%	V	MHz	PPM	PPM	PPM
85	6.38	935.012406	-0.10	-0.5	0.5
90	6.75	935.012402	-0.10	-0.5	0.5
95	7.13	935.012401	-0.11	-0.5	0.5
100	7.50	935.012402	-0.10	-0.5	0.5
105	7.88	935.012403	-0.10	-0.5	0.5
110	8.25	935.012406	-0.10	-0.5	0.5
115	8.63	935.012407	-0.10	-0.5	0.5

Frequency / Channel Spacing	935.0125 MHz / 12.5 kHz			
Temperature	Frequency	Frequency Stability	Low Limit	High Limit
°C	MHz	PPM	PPM	PPM
-30	935.012404	-0.10	-0.5	0.5
-20	935.012402	-0.10	-0.5	0.5
-10	935.012403	-0.10	-0.5	0.5
0	935.012407	-0.10	-0.5	0.5
10	935.012401	-0.11	-0.5	0.5
20	935.012402	-0.10	-0.5	0.5
30	935.012405	-0.10	-0.5	0.5
40	935.012405	-0.10	-0.5	0.5
50	935.012403	-0.10	-0.5	0.5
60	935.012403	-0.10	-0.5	0.5

Frequency / Channel Spacing	901.5 MHz / 12.5 kHz				
Temperature, 0C	25				
Voltage	Voltage	Frequency	Frequency Stability	Low Limit	High Limit
%	V	MHz	PPM	PPM	PPM
85	6.38	901.500077	0.09	-0.5	0.5
90	6.75	901.500017	0.02	-0.5	0.5
95	7.13	901.500001	0.00	-0.5	0.5
100	7.50	901.499984	-0.02	-0.5	0.5
105	7.88	901.499983	-0.02	-0.5	0.5
110	8.25	901.499975	-0.03	-0.5	0.5
115	8.63	901.499969	-0.03	-0.5	0.5

Frequency / Channel Spacing	901.5 MHz / 12.5 kHz			
Temperature	Frequency	Frequency Stability	Low Limit	High Limit
°C	MHz	PPM	PPM	PPM
-30	901.500072	0.08	-0.5	0.5
-20	901.500077	0.09	-0.5	0.5
-10	901.500064	0.07	-0.5	0.5
0	901.500057	0.06	-0.5	0.5
10	901.500021	0.02	-0.5	0.5
20	901.500031	0.03	-0.5	0.5
30	901.499989	-0.01	-0.5	0.5
40	901.500009	0.01	-0.5	0.5
50	901.500019	0.02	-0.5	0.5
60	901.499977	-0.03	-0.5	0.5

Frequency / Channel Spacing	940.5 MHz / 12.5 kHz				
Temperature, 0C	25				
Voltage	Voltage	Frequency	Frequency Stability	Low Limit	High Limit
%	V	MHz	PPM	PPM	PPM
85	6.38	940.499842	-0.17	-0.5	0.5
90	6.75	940.499841	-0.17	-0.5	0.5
95	7.13	940.499846	-0.16	-0.5	0.5
100	7.50	940.499832	-0.18	-0.5	0.5
105	7.88	940.499837	-0.17	-0.5	0.5
110	8.25	940.499838	-0.17	-0.5	0.5
115	8.63	940.499847	-0.16	-0.5	0.5

Frequency / Channel Spacing	940.5 MHz / 12.5 kHz			
Temperature	Frequency	Frequency Stability	Low Limit	High Limit
°C	MHz	PPM	PPM	PPM
-30	940.499845	-0.16	-0.5	0.5
-20	940.499837	-0.17	-0.5	0.5
-10	940.499841	-0.17	-0.5	0.5
0	940.499841	-0.17	-0.5	0.5
10	940.499848	-0.16	-0.5	0.5
20	940.49984	-0.17	-0.5	0.5
30	940.499841	-0.17	-0.5	0.5
40	940.499842	-0.17	-0.5	0.5
50	940.499834	-0.18	-0.5	0.5
60	940.499839	-0.17	-0.5	0.5

6.2. RF OUTPUT POWER

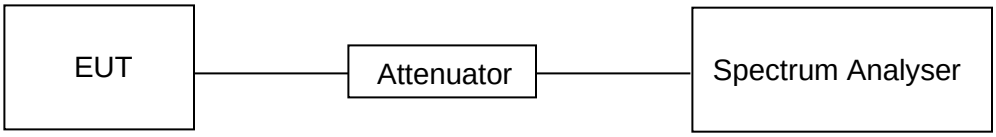
LIMITS

Per FCC §2.1046 and §90.205: Maximum ERP is dependent upon the station's antenna HAAT and required service area.
RS-119 and §5.4: The output power shall be within ±1.0 dB of the manufacturer's rated power.

TEST PROCEDURE

(1) The DUT transmitter connected to Power Meter using the 30 dB attenuator and power sensor with above setup.
(2) Path loss for the measurement included.
(3) All the measurement was done at low, mid, high frequency for each band.
(4) Record the power into the test report.

TEST SETUP



TEST ENVIRONMENT

Temperature	23.8 °C	Relative Humidity	59 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 7.5 V

RESULT

EIRP:

Test Channel	Frequency (MHz)	EIRP (dBm) High Power	EIRP (dBm) Low Power
1	806.0125	35.23	30.68
2	814.9875	35.20	30.42
3	823.9875	35.30	30.40
4	851.0125	35.33	30.58
5	860.0125	35.20	30.31
6	868.8875	35.23	30.14
7	896.0125	35.13	30.15
8	900.9875	35.27	30.45
9	901.5000	35.03	30.32
10	935.0125	34.98	30.43
11	939.9875	35.55	29.83
12	940.5000	35.46	29.93

Test Channel	Frequency (MHz)	Conducted output power (dBm) High Power	Conducted output power (dBm) Low Power
1	806.0125	34.23	29.68
2	814.9875	34.20	29.42
3	823.9875	34.30	29.40
4	851.0125	34.33	29.58
5	860.0125	34.20	29.31
6	868.8875	34.23	29.14
7	896.0125	34.13	29.15
8	900.9875	34.27	29.45
9	901.5000	34.03	29.32
10	935.0125	33.98	29.43
11	939.9875	34.55	28.83
12	940.5000	34.46	28.93

6.3. EFFECTIVE RADIATED POWER (FCC 24.132 and RSS-134)

LIMITS

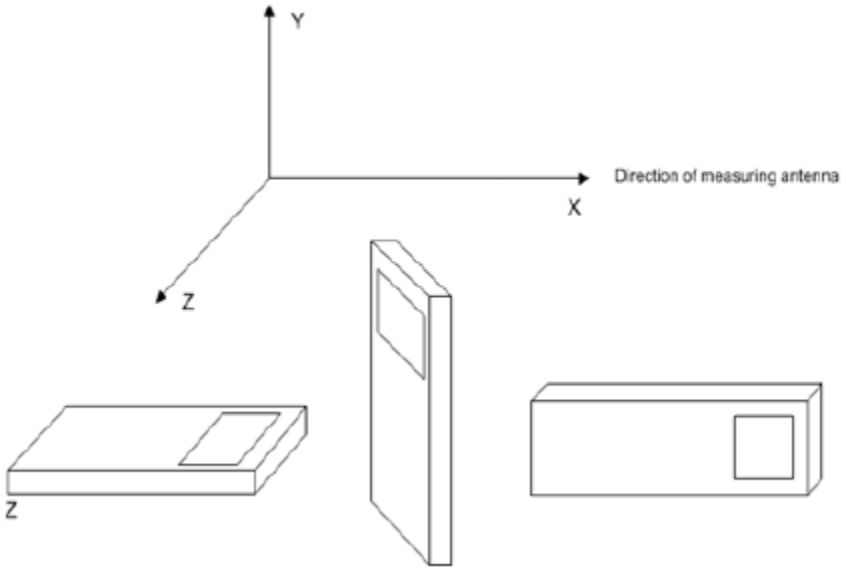
Refer to FCC 24.132 and RSS-134 ISSUE 2 clause 4.3
901-902 MHz band are limited to 7 watts e.r.p.
930-931 MHz and 940-941 MHz bands are limited to 7 watts e.r.p.

TEST PROCEDURE

1. Place the EUT in the center of the turntable.
   a) For radiated emissions measurements performed at frequencies less than or equal to 1 GHz, the EUT shall be placed on a RF-transparent table at a nominal height of 80 cm above the reference ground plane
   b) For radiated measurements performed at frequencies above 1 GHz, the EUT shall be placed on an RF transparent table at a nominal height of 1.5 m above the ground plane.
2. Unless the EUT uses an integral antenna, the EUT shall be terminated with a non-radiating transmitter load. In cases where the EUT uses an adjustable antenna, the antenna shall be adjusted through typical positions and lengths to maximize emissions levels.
3. The EUT shall be tested while operating on the frequency per manufacturer specification. Set the transmitter to operate in continuous transmit mode.
4. Receiver or Spectrum set as follow:
   Below 1GHz, RBW=100kHz, VBW=300kHz, Detector=RMS, Sweep time = Auto
   Above 1GHz, RBW=1MHz, VBW=3MHz, Detector=RMS, Sweep time=Auto
5. Each emission under consideration shall be evaluated:
   a) Raise and lower the measurement antenna from 1 m to 4 m, as necessary to enable detection of the maximum emission amplitude relative to measurement antenna height.
   b) Rotate the EUT through 360° to determine the maximum emission level relative to the axial position.
   c) Return the turntable to the azimuth where the highest emission amplitude level was observed.
   d) Vary the measurement antenna height again through 1 m to 4 m again to find the height associated with the maximum emission amplitude.
   e) Record the measured emission amplitude level and frequency
6. Repeat step 5 for each emission frequency with the measurement antenna oriented in both the horizontal and vertical polarizations to determine the orientation that gives the maximum emissions amplitude.
7. Set-up the substitution measurement with the reference point of the substitution antenna located as near as possible to where the center of the EUT radiating element was located during the initial EUT measurement.
8. Maintain the previous measurement instrument settings and test set-up, with the exception that the EUT is removed and replaced by the substitution antenna.
9. Connect a signal generator to the substitution antenna; locate the signal generator so as to minimize any potential influences on the measurement results. Set the signal generator to the frequency where emissions are detected and set an output power level such that the radiated signal can be detected by

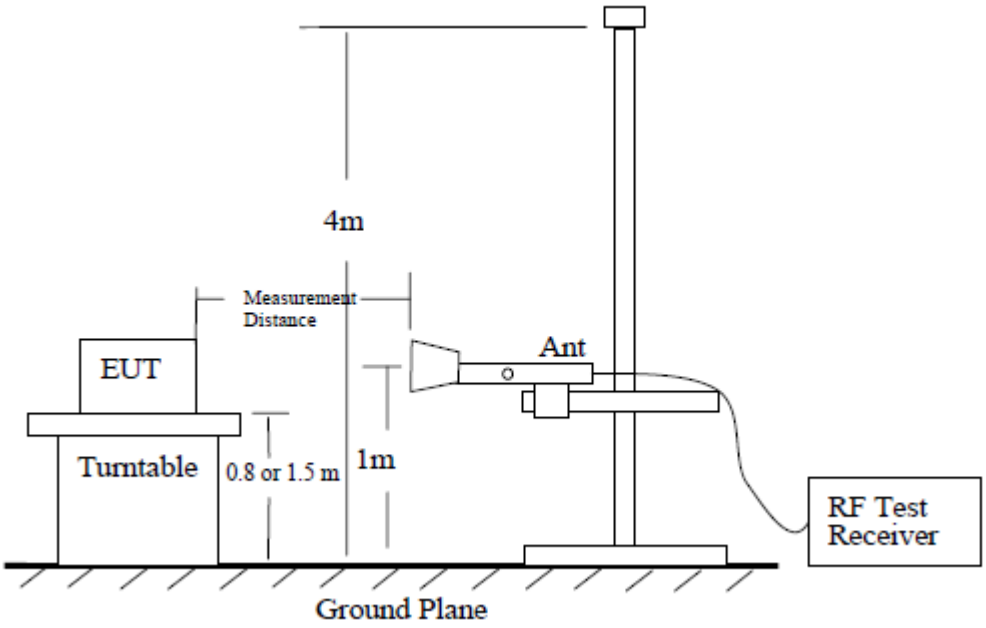
the measurement instrument, with sufficient dynamic range relative to the noise floor.

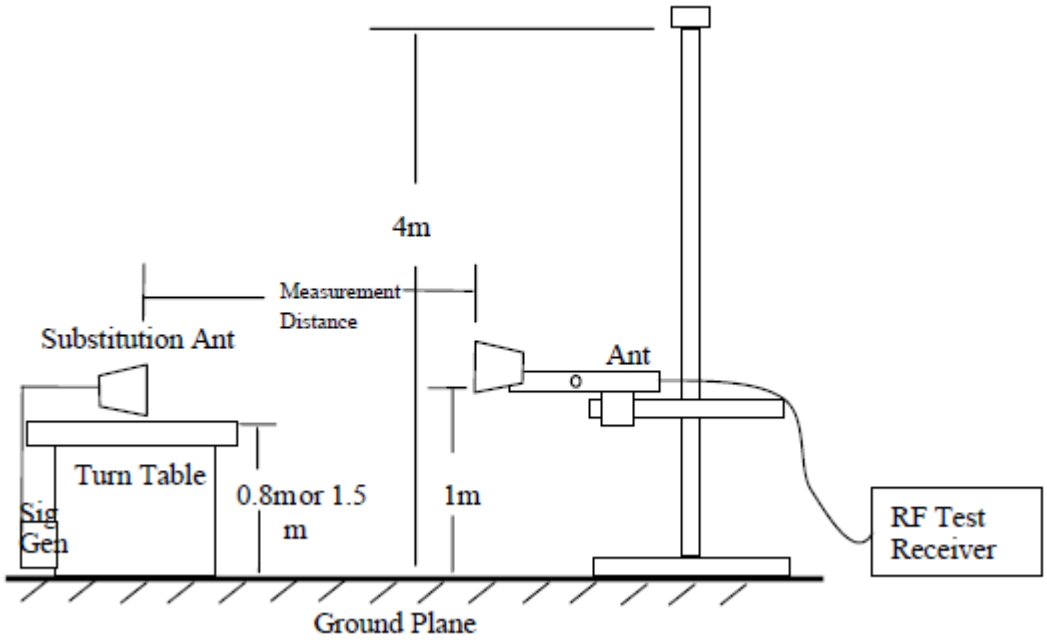
10. For each emission that was detected and measured in the initial test
    a) Vary the measurement antenna height between 1 m to 4 m to maximize the received (measured) signal amplitude.
    b) Adjust the signal generator output power level until the amplitude detected by the measurement instrument equals the amplitude level of the emission previously measured directly in step 5 and step 6.
    c) Record the output power level of the signal generator when equivalence is achieved in step b).
11. Repeat step 8 through step 10 with the measurement antenna oriented in the opposite polarization.
12. Calculate the emission power in dBm referenced to a half-wave dipole using the following equation: Pe = Ps(dBm) − cable loss (dB) + antenna gain (dBd)
    where
    Pe = equivalent emission power in dBm
    Ps = source (signal generator) power in dBm
    NOTE—dBd refers to the measured antenna gain in decibels relative to a half-wave dipole.
13. Correct the antenna gain of the substitution antenna if it's necessary to reference the emission power to a half-wave dipole. When using measurement antennas with the gain specified in dBi, the equivalent dipole-referenced gain can be determined from:
    gain (dBd) = gain (dBi) − 2.15 dB.
    If necessary, the antenna gain can be calculated from calibrated antenna factor information
14. Provide the complete measurement results as a part of the test report.
15. EUT in each of three orthogonal axis emissions need to be tested.



EUT configuration positions

TEST SETUP





TEST ENVIRONMENT

Temperature	23.8°C	Relative Humidity	59%
Atmosphere Pressure	101kPa	Test Voltage	DC 7.5V

RESULT

For all radiated test, EUT in each of three orthogonal axis emissions had been tested, but only the worst case (Y axis) data recorded in the report.

Channel/Frequency	Rated power	EIRP (dBm)	ERP (dBm)
901.5000 MHz	High Power	32.94	30.79
901.5000 MHz	Low Power	26.93	24.78
940.5000 MHz	High Power	29.97	27.82
940.5000 MHz	Low Power	25.74	23.59

6.4. TRANSMITTER CONDUCTED SPURIOUS EMISSION

LIMITS

EIRP (dBm) = E (dBμV/m) + 20log(D) - 104.8; where D is the measurement distance (in the far field region) in m. when m = 3, EIRP (dBm) = E (dBμV/m) – 95.2

For 12.5 kHz Channel Separation mode: 50 + 10 log (Pwatts)
Calculation: Limit (dBm) =EL-50-10log10 (TP)

Notes: EL is the emission level of the Output Power expressed in dBm, In this application, the EL is P(dBm).

Limit (dBm) = P(dBm)-50-10 log (Pwatts) = -20 dBm
Limit (dBuV/m) = -20+95.2 = 75.2 dBuV/m

For 25 kHz Channel Separation mode: 43 + 10 log (Pwatts)
Calculation: Limit (dBm) =EL-43-10log10 (TP)

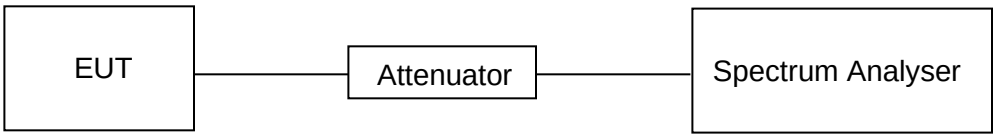
Notes: EL is the emission level of the Output Power expressed in dBm, In this application, the EL is P(dBm).

Limit (dBm) = P(dBm)-43-10 log (Pwatts) = -13 dBm
Limit (dBuV/m) = -13+95.2 = 82.2 dBuV/m

TEST PROCEDURE

(1) The DUT transmitter connected to Power Meter using the 30 dB attenuator and power sensor with above setup.
(2) Path loss for the measurement included.
(3) All the measurement was done at low, mid, high frequency for each band.
(4) Record the test result into the test report.

TEST SETUP



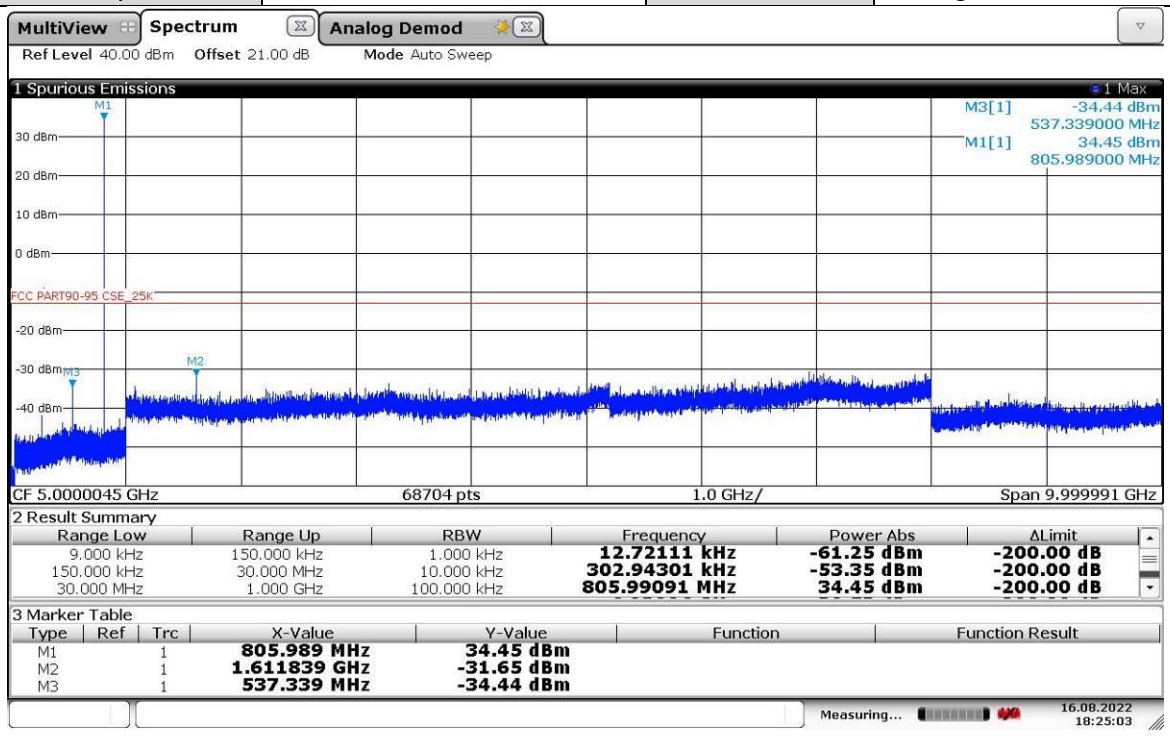
TEST ENVIRONMENT

Temperature	23.8 °C	Relative Humidity	59 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 7.5 V

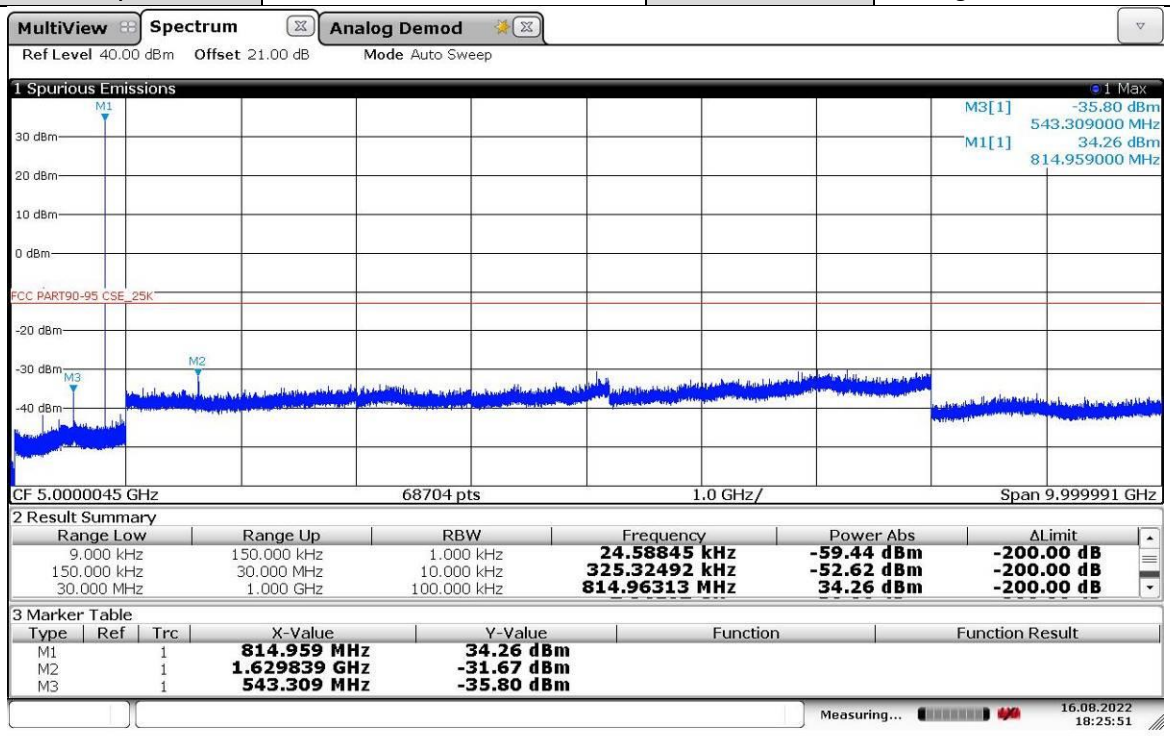
RESULT

High Power

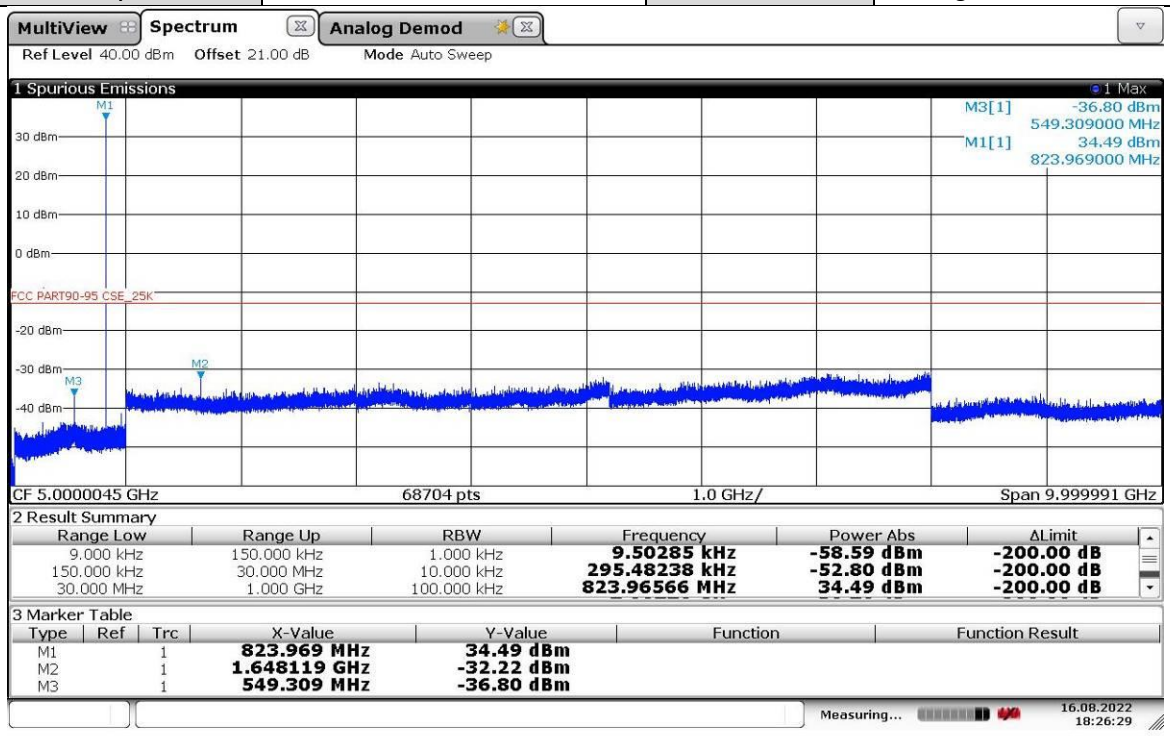
Measurement Method	Conducted	Test Channel	806.0125 MHz
Channel Separation	25 kHz	Modulation	Analog



Measurement Method	Conducted	Test Channel	814.9875 MHz
Channel Separation	25 kHz	Modulation	Analog

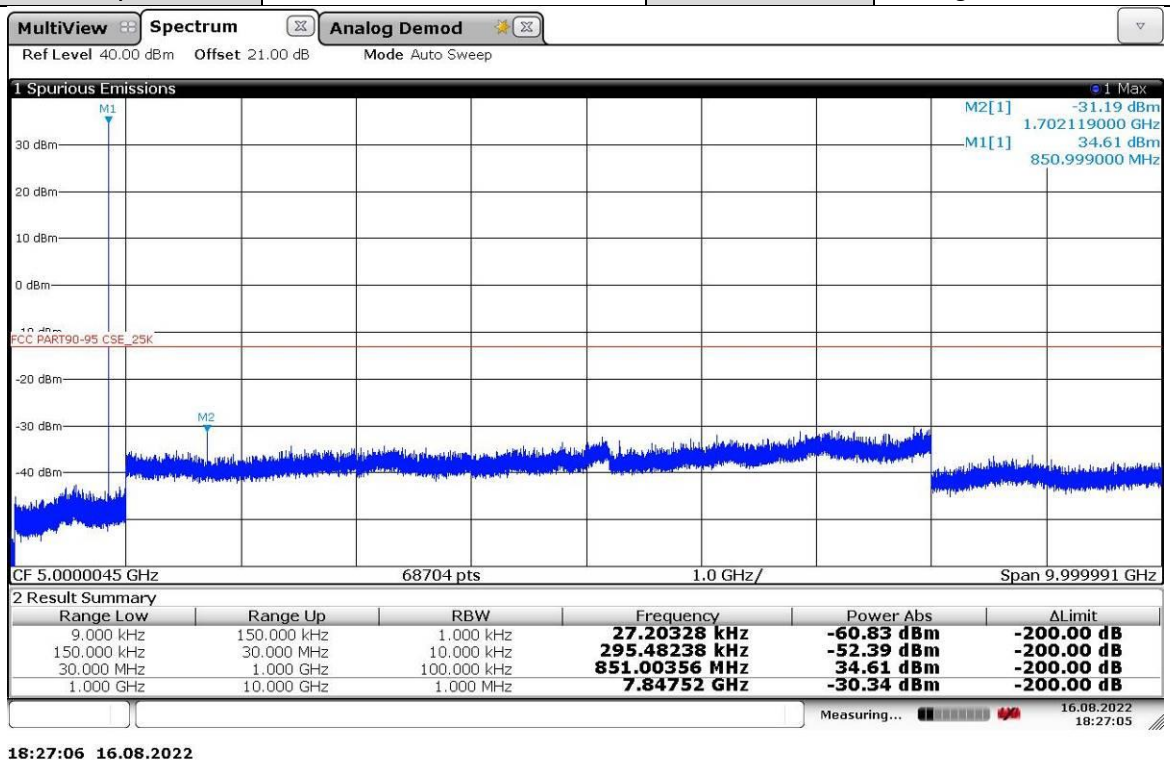


Measurement Method	Conducted	Test Channel	823.9875 MHz
Channel Separation	25 kHz	Modulation	Analog

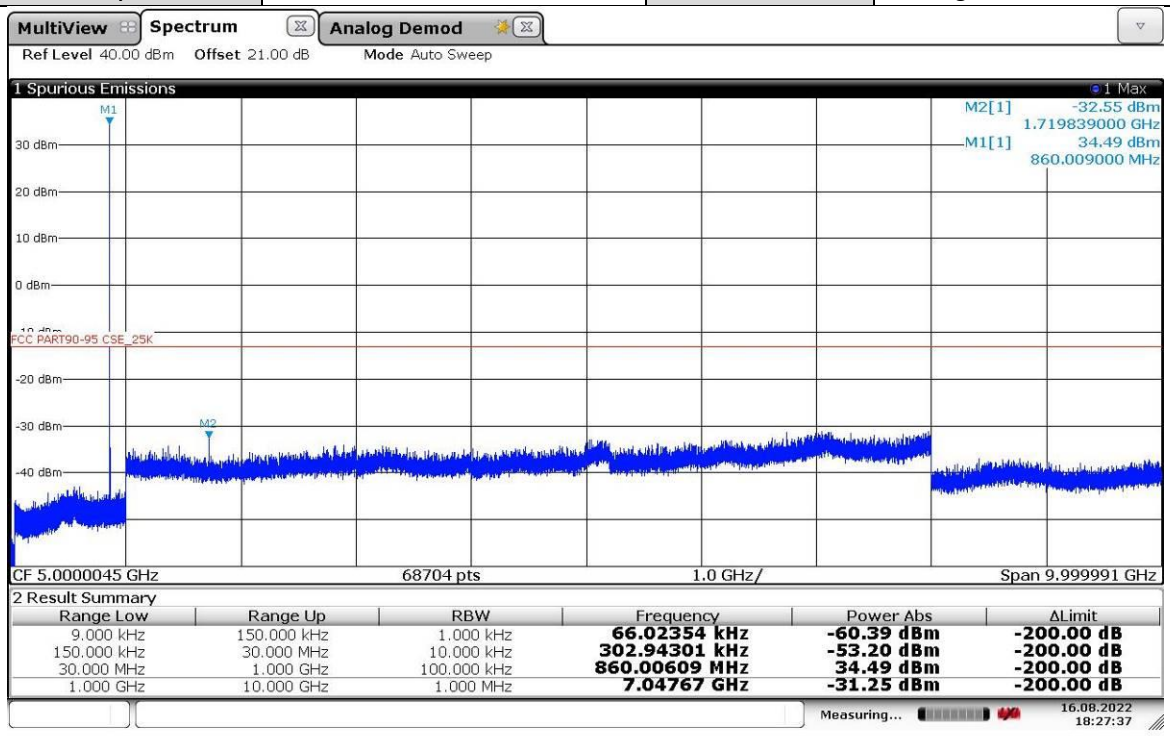


18:26:29 16.08.2022

Measurement Method	Conducted	Test Channel	851.0125 MHz
Channel Separation	25 kHz	Modulation	Analog

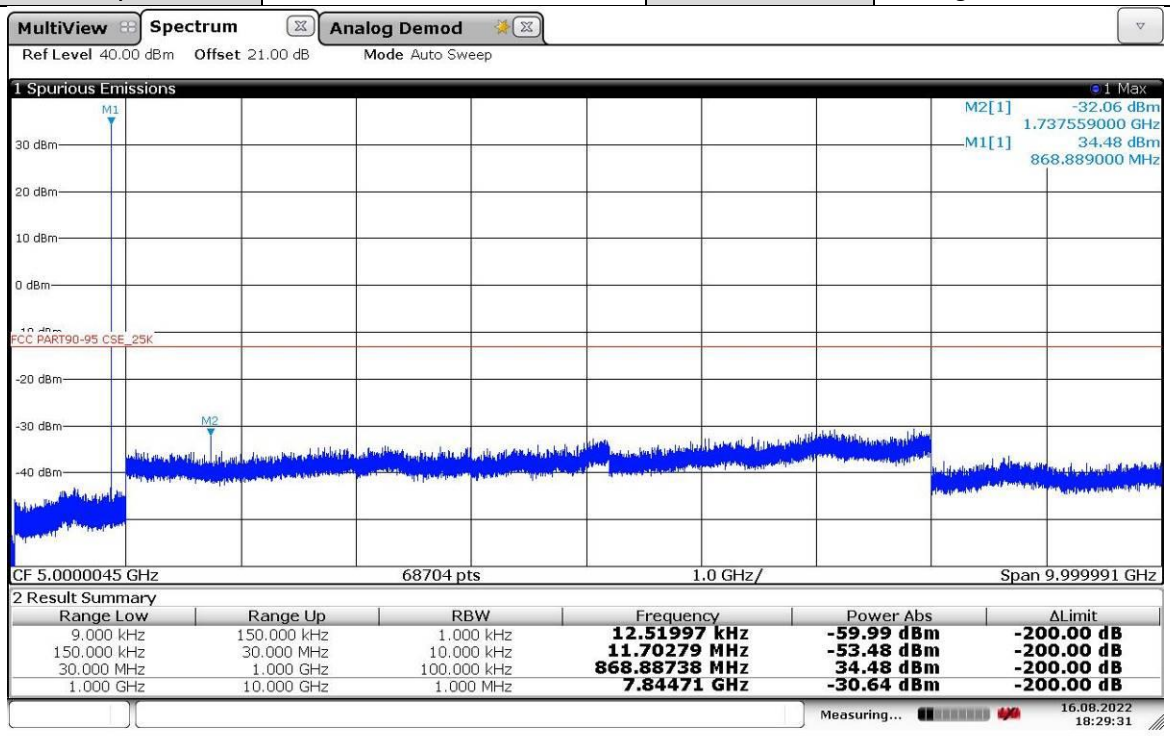


Measurement Method	Conducted	Test Channel	860.0125 MHz
Channel Separation	25 kHz	Modulation	Analog

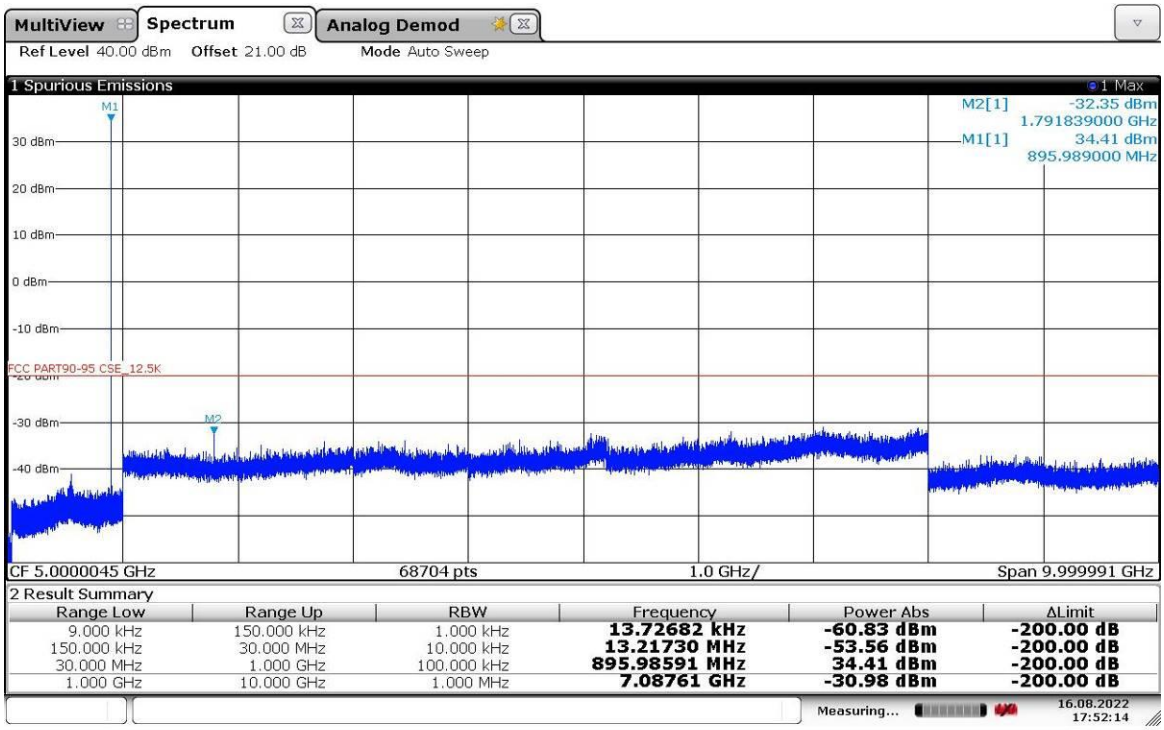


18:27:37 16.08.2022

Measurement Method	Conducted	Test Channel	868.8875 MHz
Channel Separation	25 kHz	Modulation	Analog

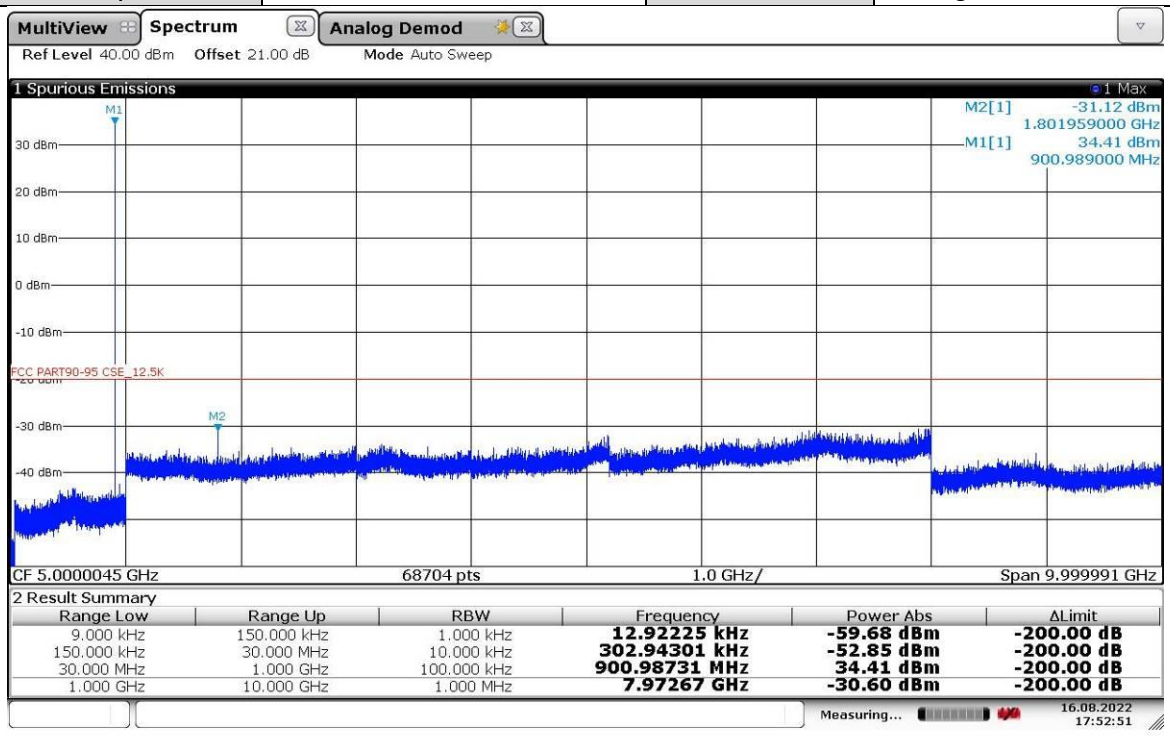


Measurement Method	Conducted	Test Channel	896.0125 MHz
Channel Separation	12.5 kHz	Modulation	Analog

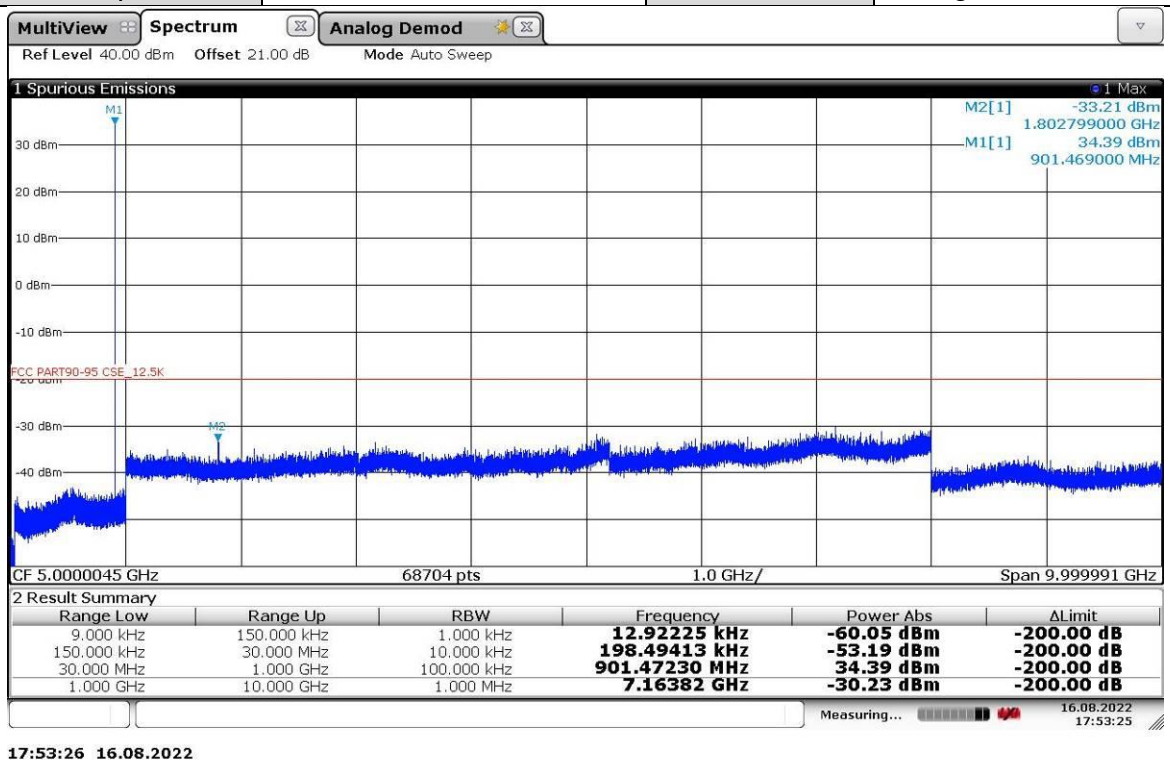


17:52:14 16.08.2022

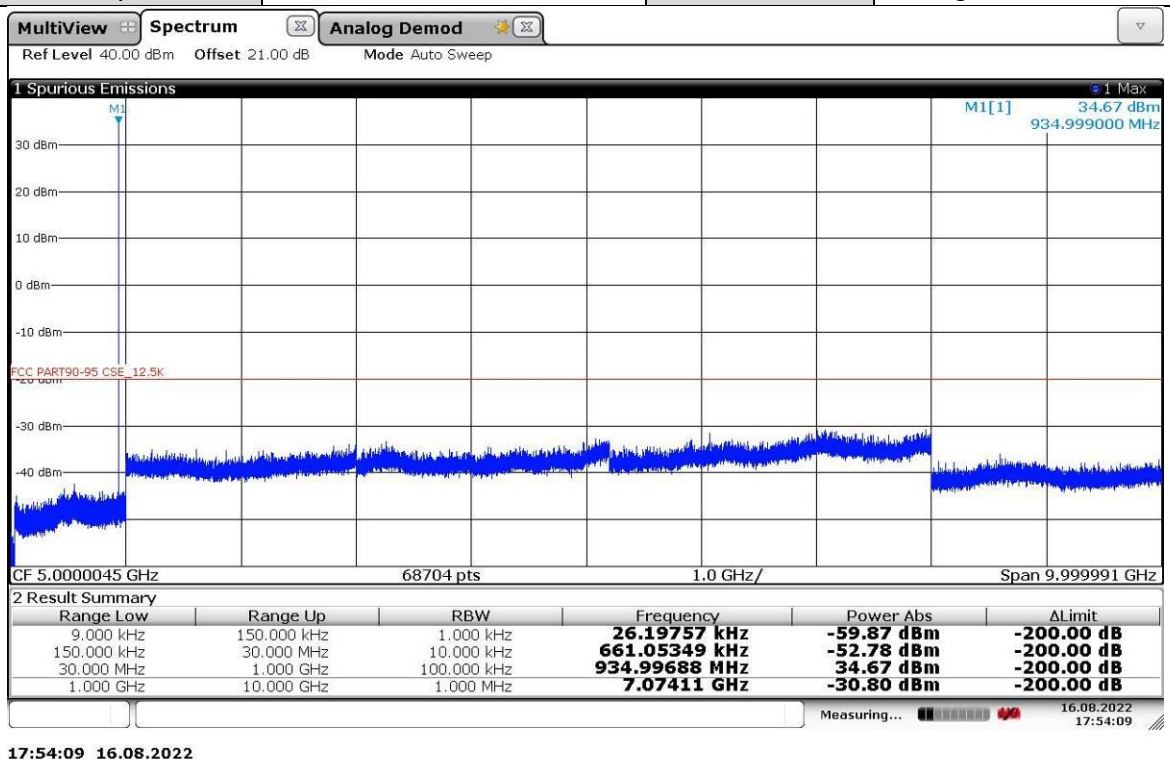
Measurement Method	Conducted	Test Channel	900.9875MHz
Channel Separation	12.5 kHz	Modulation	Analog



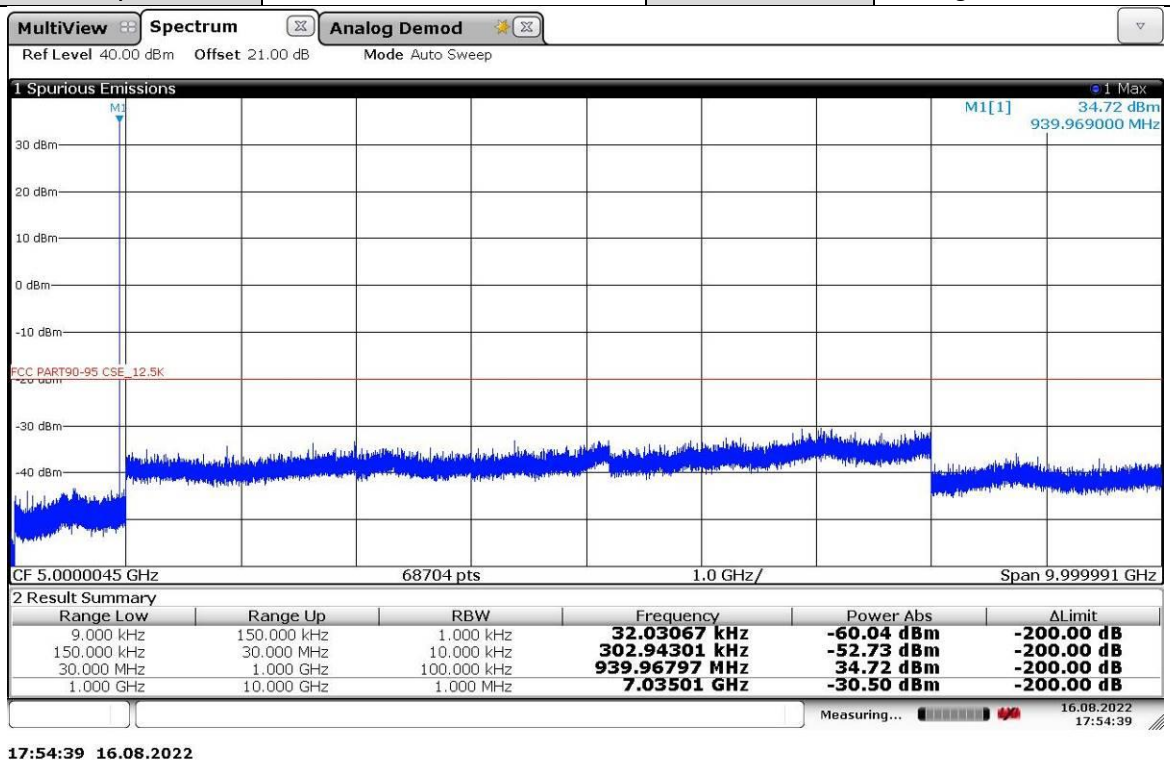
Measurement Method	Conducted	Test Channel	901.5 MHz
Channel Separation	12.5 kHz	Modulation	Analog



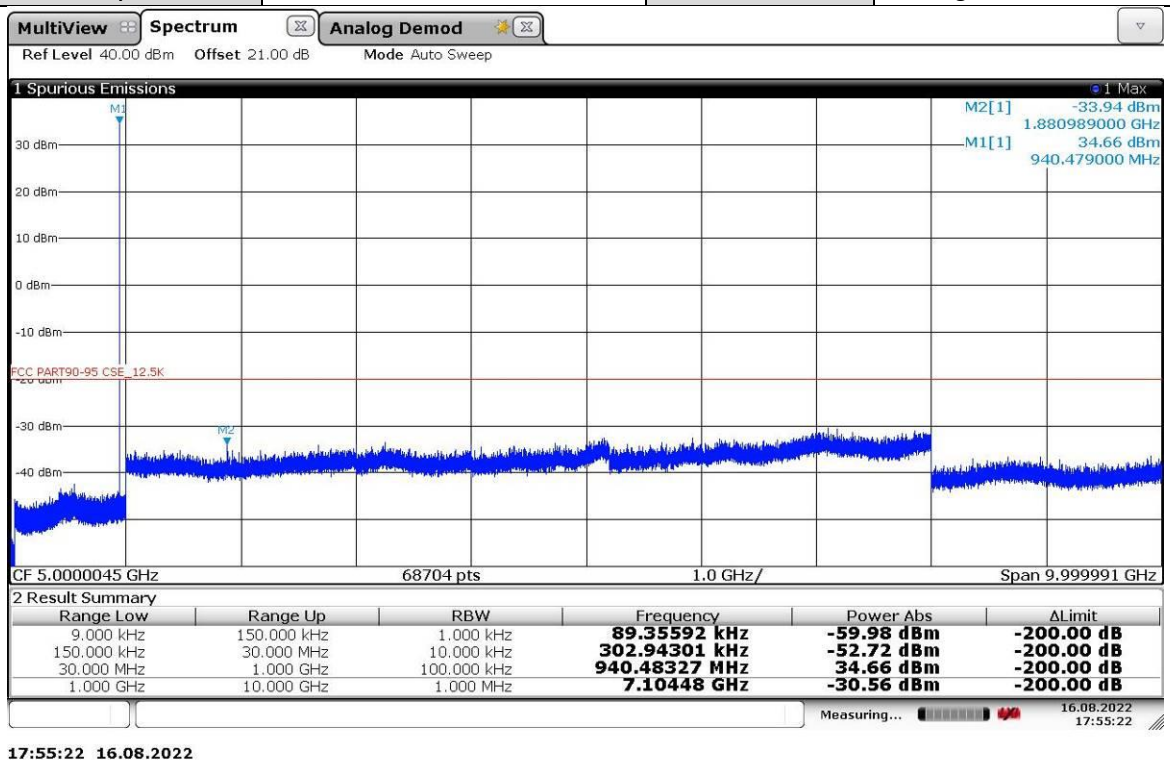
Measurement Method	Conducted	Test Channel	935.0125 MHz
Channel Separation	12.5 kHz	Modulation	Analog



Measurement Method	Conducted	Test Channel	939.9875 MHz
Channel Separation	12.5 kHz	Modulation	Analog

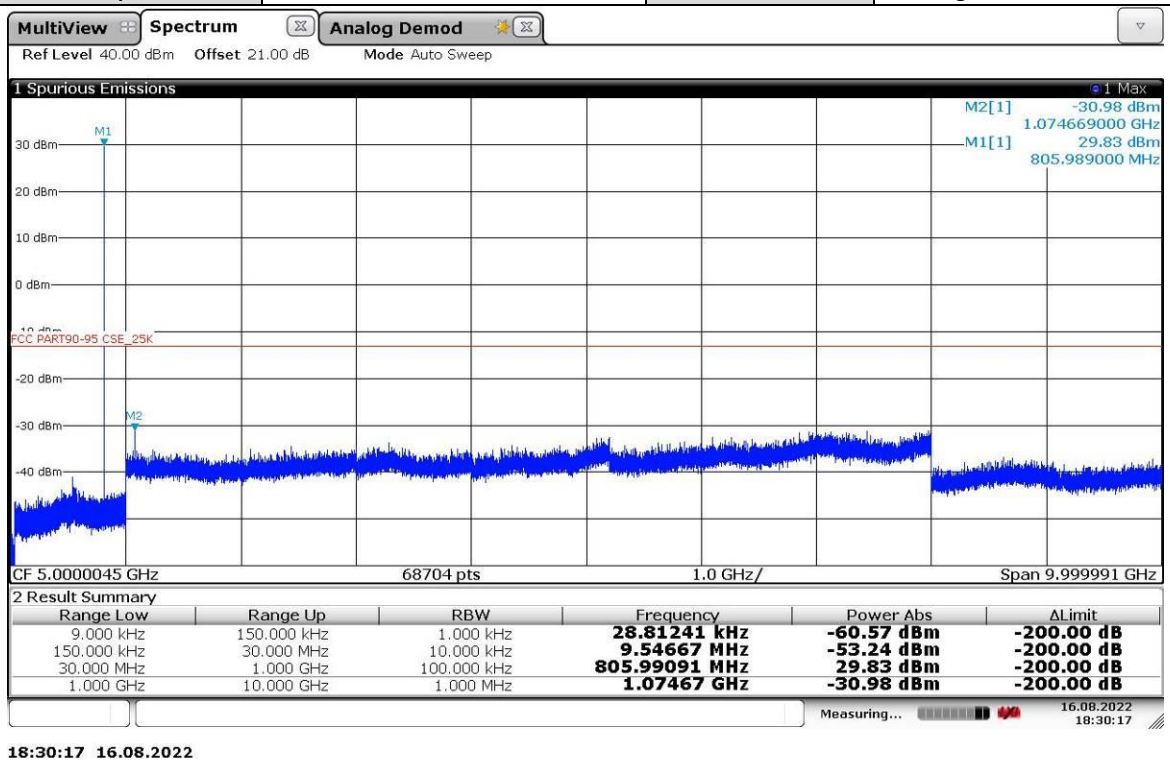


Measurement Method	Conducted	Test Channel	940.5 MHz
Channel Separation	12.5 kHz	Modulation	Analog

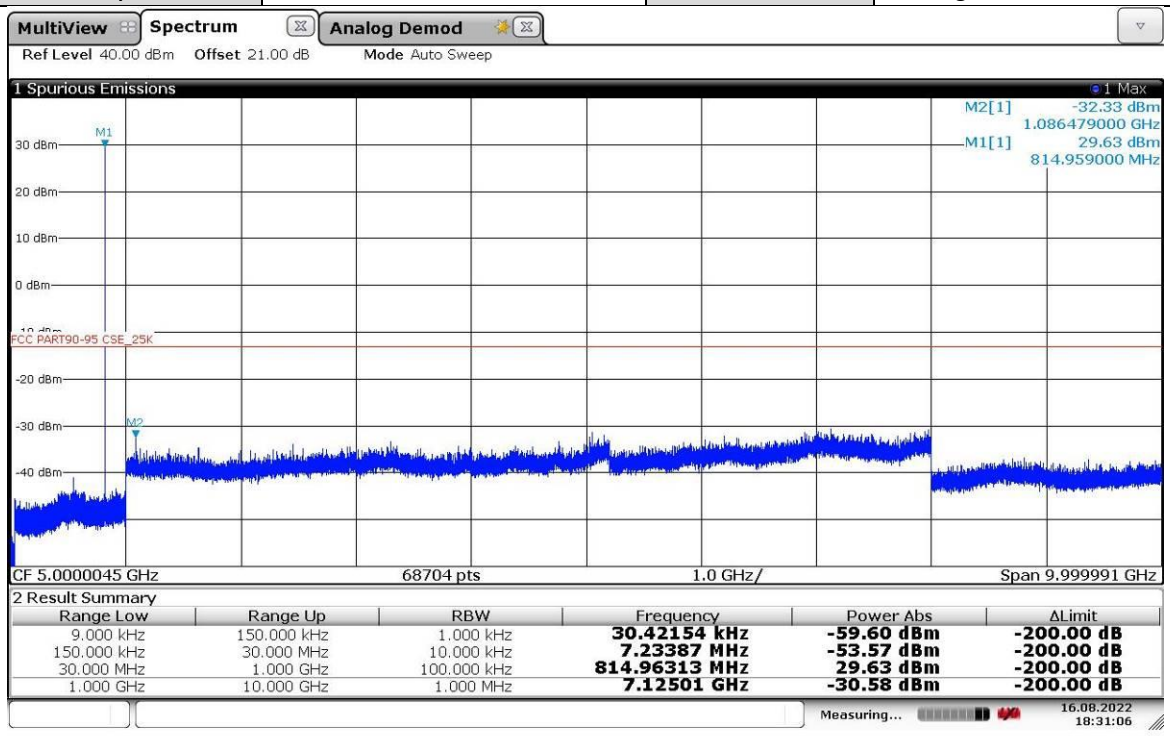


Low Power

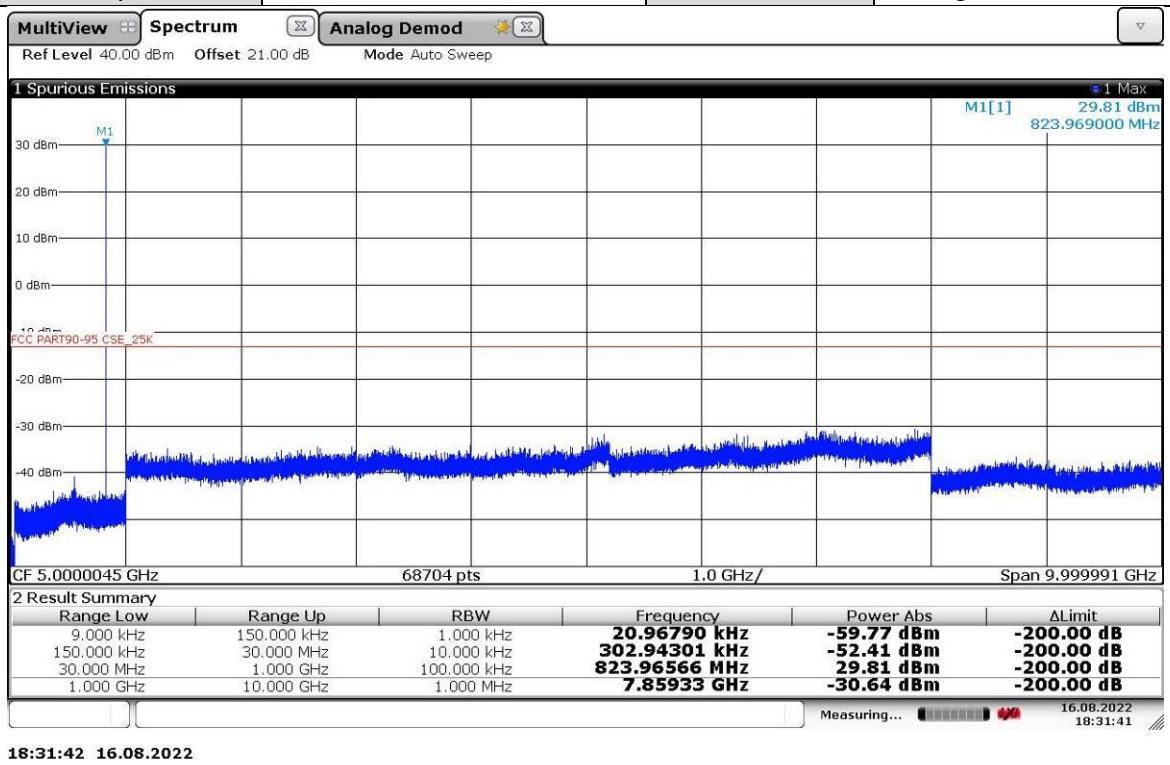
Measurement Method	Conducted	Test Channel	806.0125 MHz
Channel Separation	25 kHz	Modulation	Analog



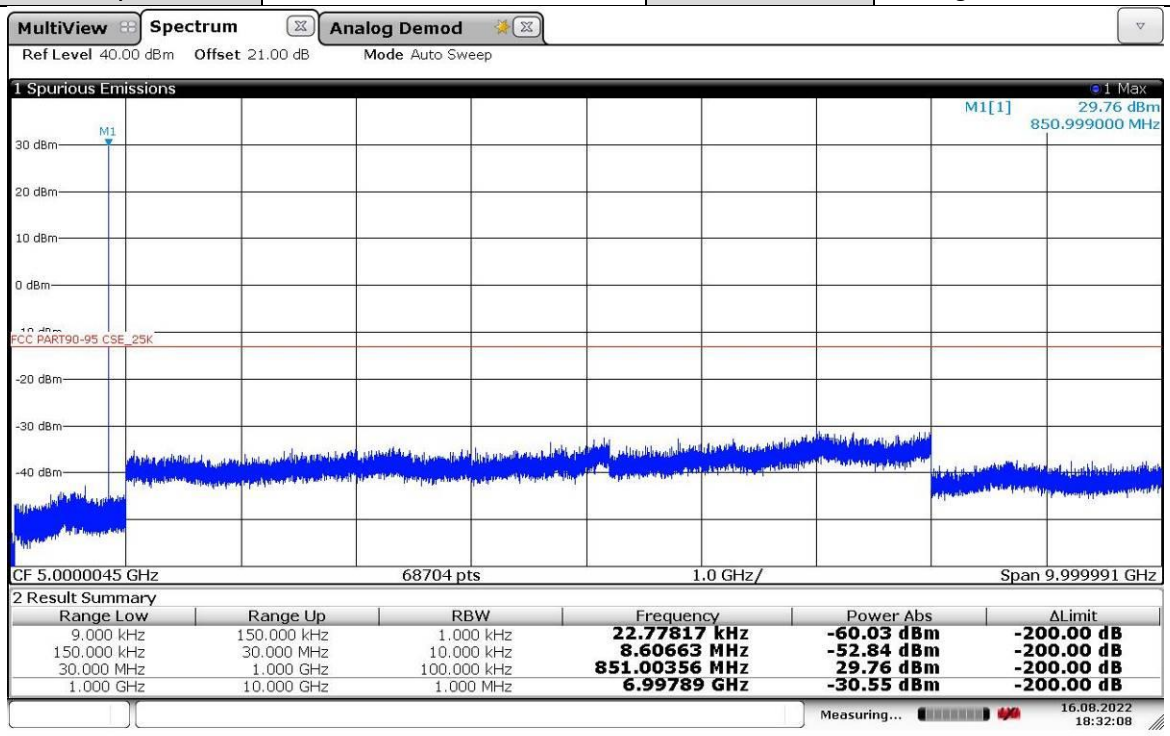
Measurement Method	Conducted	Test Channel	814.9875 MHz
Channel Separation	25 kHz	Modulation	Analog



Measurement Method	Conducted	Test Channel	823.9875 MHz
Channel Separation	25 kHz	Modulation	Analog

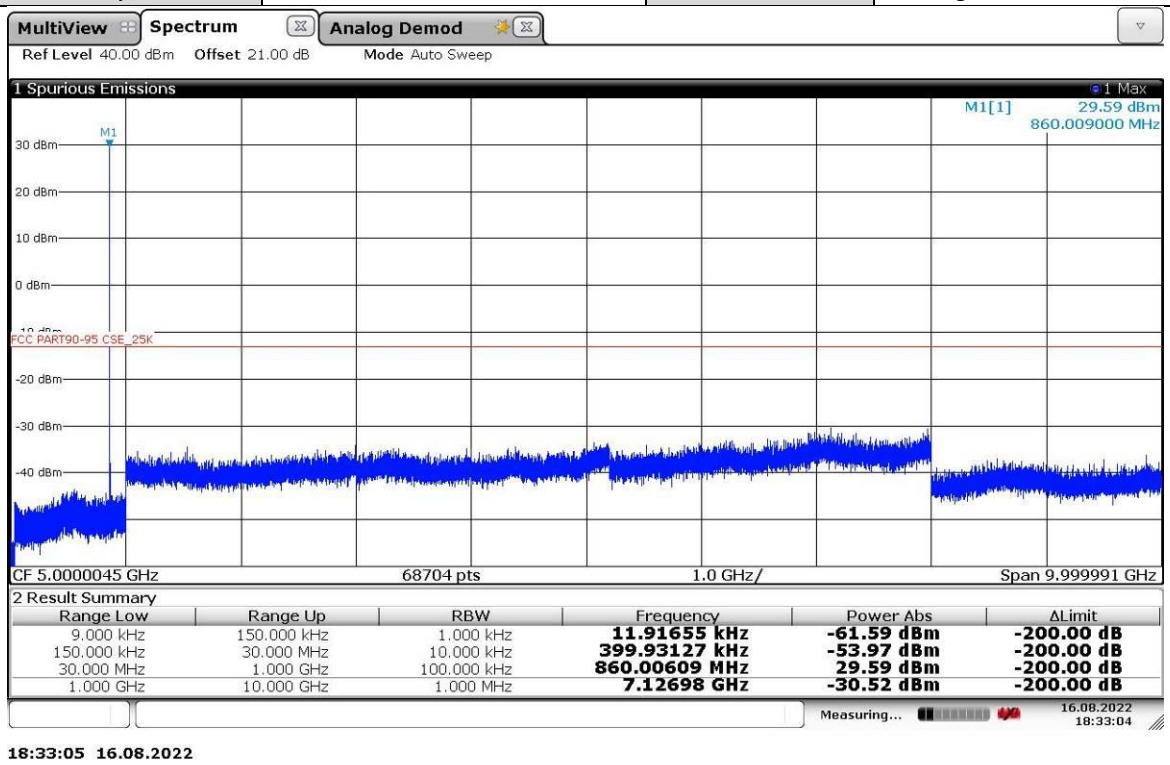


Measurement Method	Conducted	Test Channel	851.0125 MHz
Channel Separation	25 kHz	Modulation	Analog



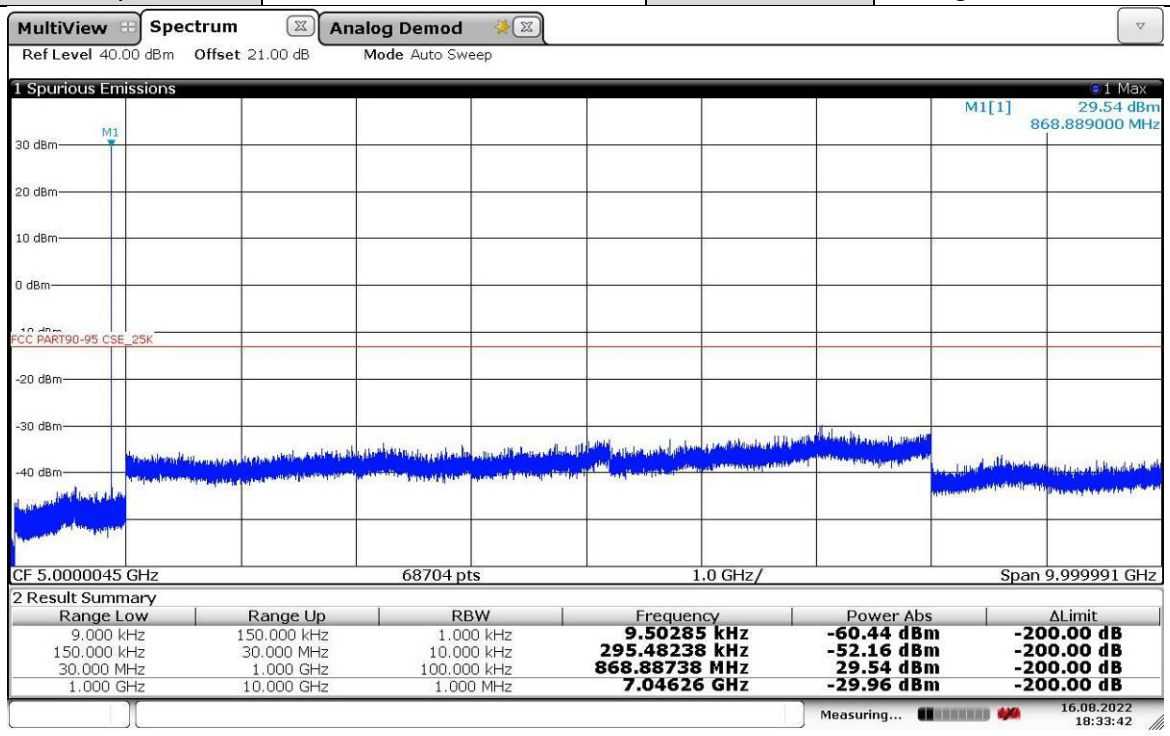
18:32:10 16.08.2022

Measurement Method	Conducted	Test Channel	860.0125 MHz
Channel Separation	25 kHz	Modulation	Analog



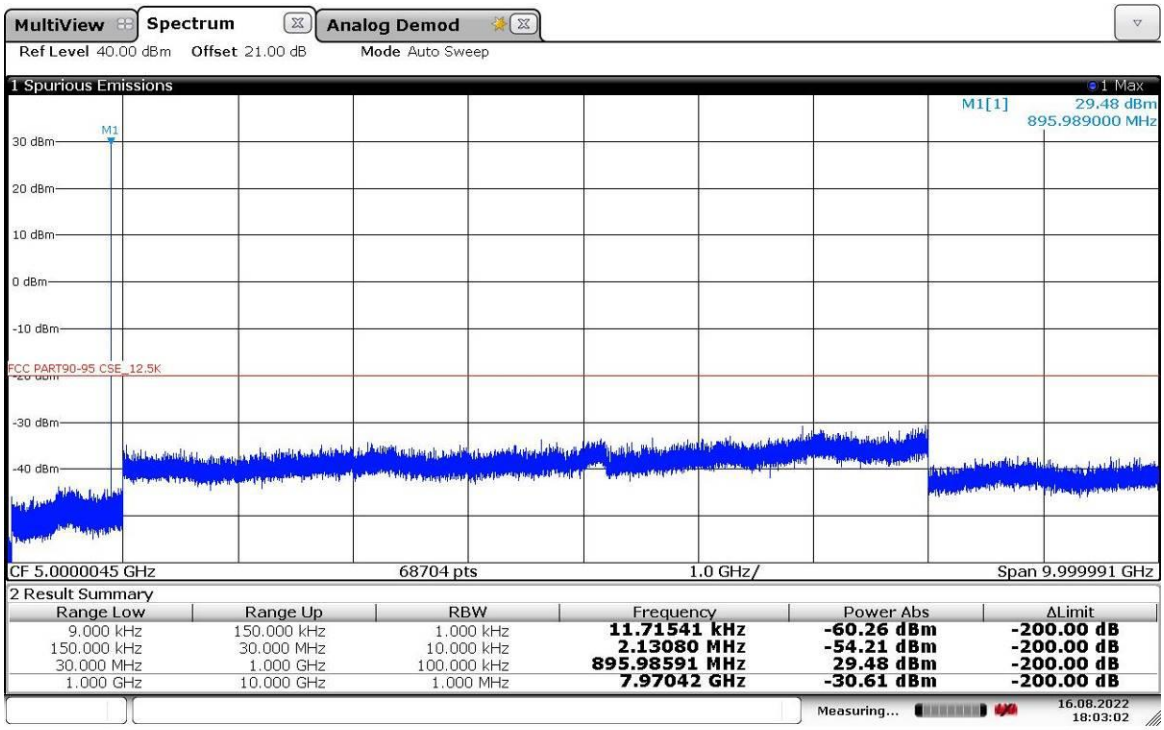
18:33:05 16.08.2022

Measurement Method	Conducted	Test Channel	868.8875 MHz
Channel Separation	25 kHz	Modulation	Analog

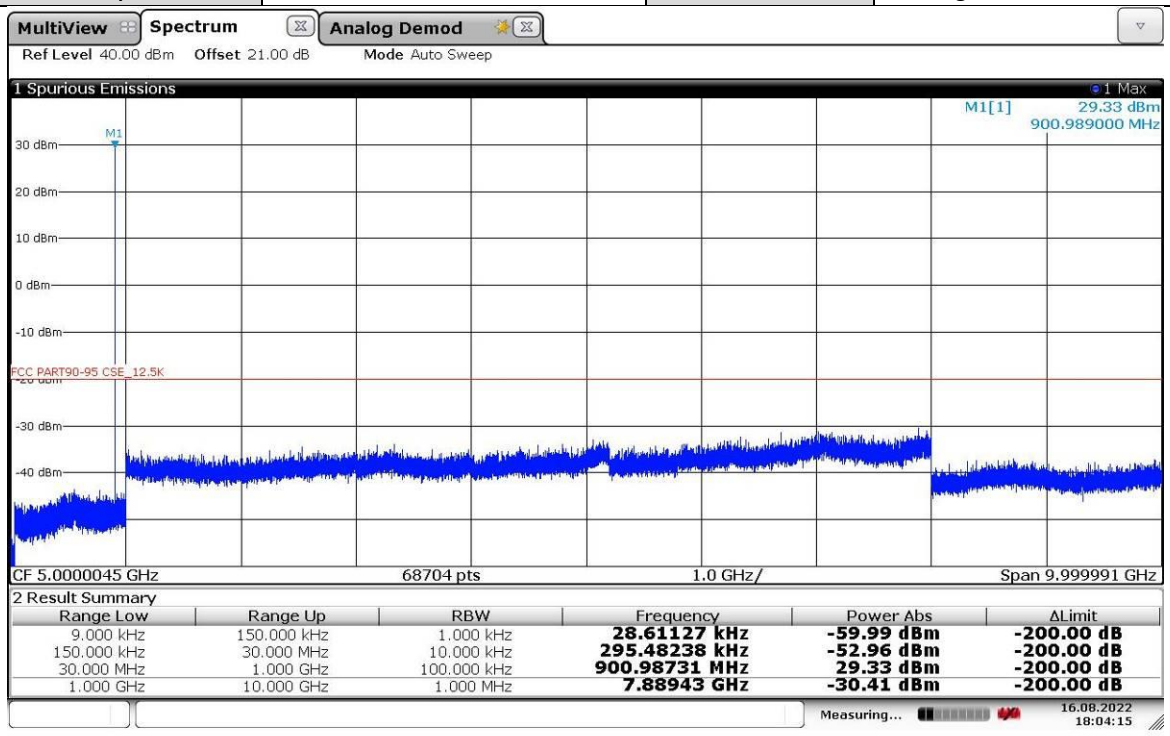


18:33:42 16.08.2022

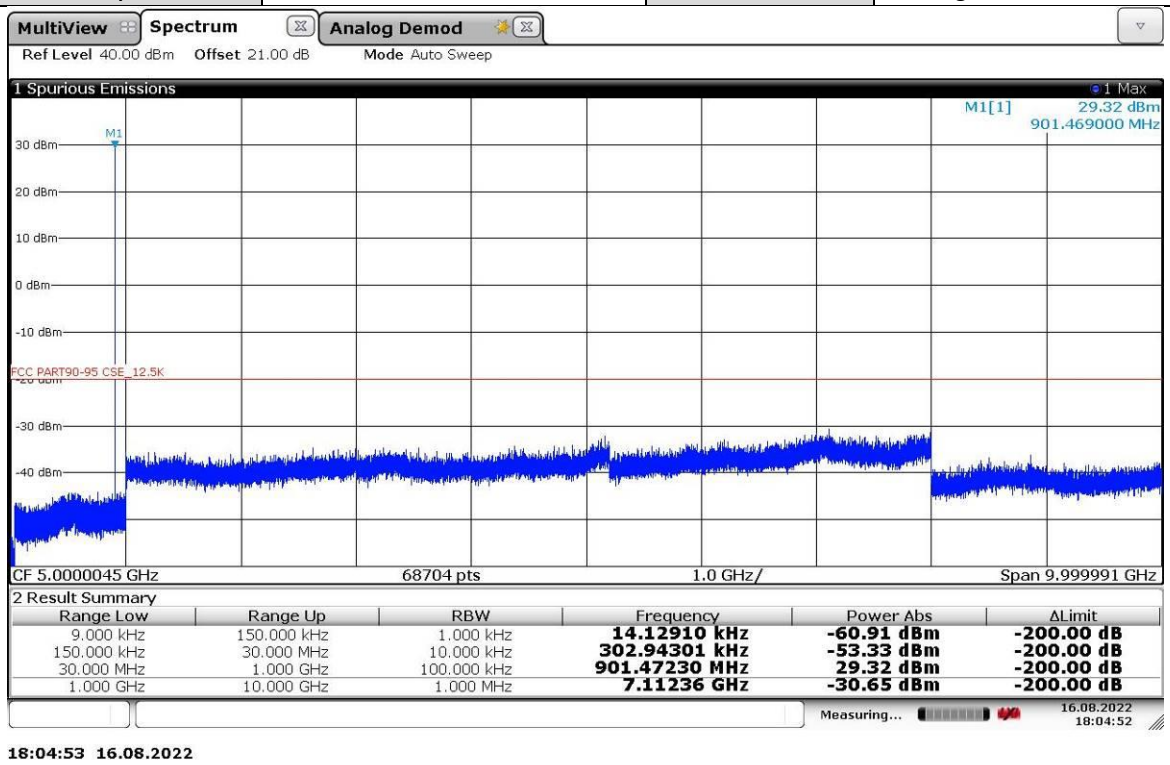
Measurement Method	Conducted	Test Channel	896.0125 MHz
Channel Separation	12.5 kHz	Modulation	Analog



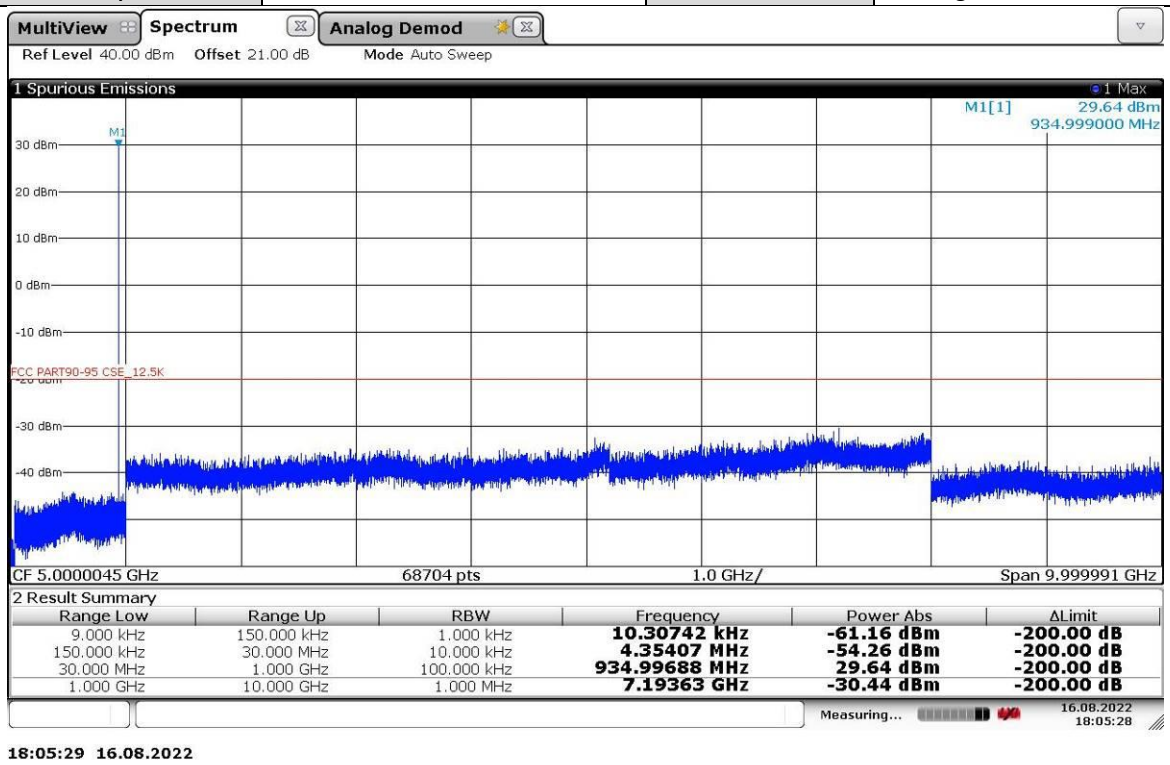
Measurement Method	Conducted	Test Channel	900.9875MHz
Channel Separation	12.5 kHz	Modulation	Analog



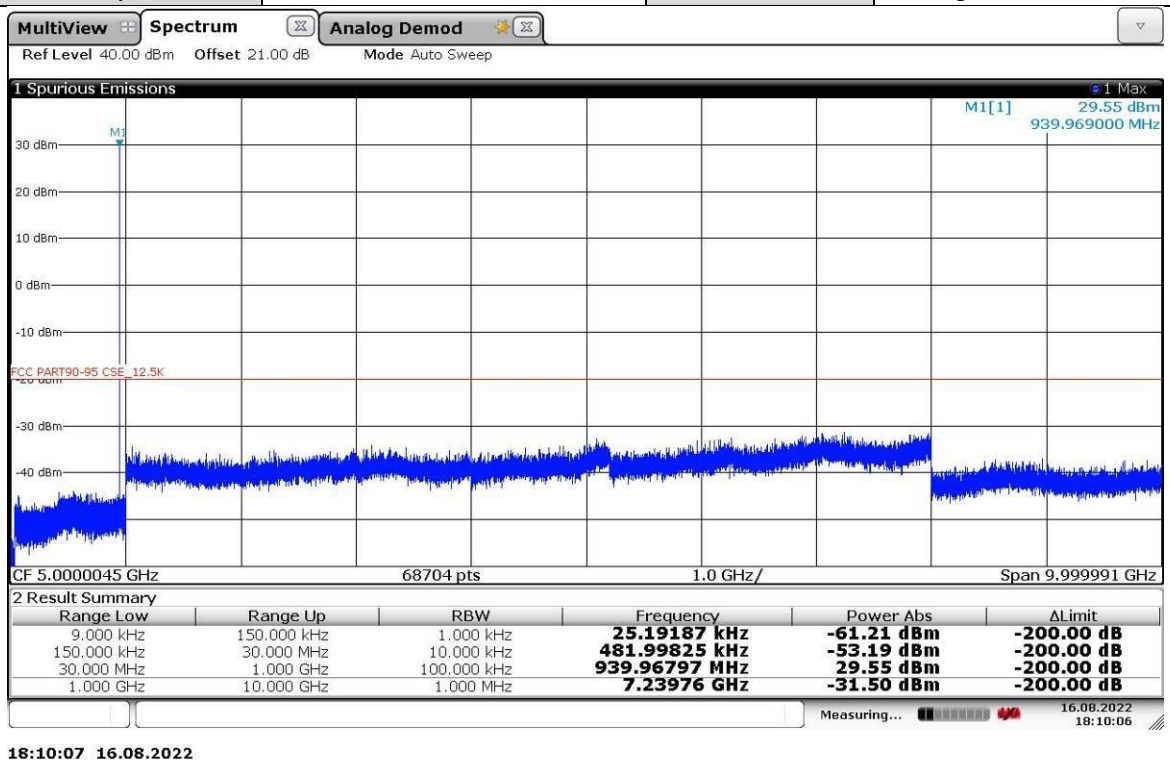
Measurement Method	Conducted	Test Channel	901.5 MHz
Channel Separation	12.5 kHz	Modulation	Analog



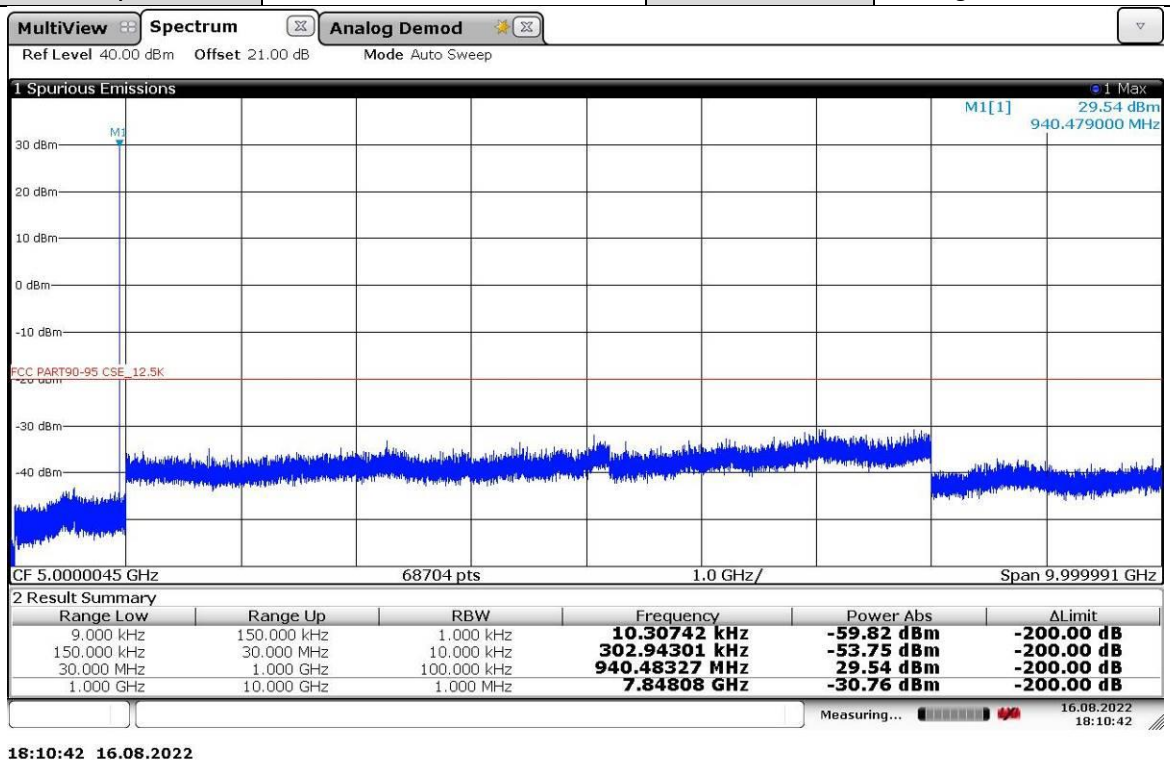
Measurement Method	Conducted	Test Channel	935.0125 MHz
Channel Separation	12.5 kHz	Modulation	Analog



Measurement Method	Conducted	Test Channel	939.9875 MHz
Channel Separation	12.5 kHz	Modulation	Analog



Measurement Method	Conducted	Test Channel	940.5 MHz
Channel Separation	12.5 kHz	Modulation	Analog



Note: All the modes had been tested, but only the worst data recorded in the report.

6.5. TRANSMITTER RADIATED SPURIOUS EMISSION

LIMITS

EIRP (dBm) = E (dBμV/m) + 20log(D) - 104.8; where D is the measurement distance (in the far field region) in m. when m = 3, EIRP (dBm) = E (dBμV/m) – 95.2

For 12.5 kHz Channel Separation mode: 50 + 10 log (Pwatts)
Calculation: Limit (dBm) =EL-50-10log10 (TP)

Notes: EL is the emission level of the Output Power expressed in dBm, In this application, the EL is P(dBm).

Limit (dBm) = P(dBm)-50-10 log (Pwatts) = -20 dBm
Limit (dBuV/m) = -20+95.2 = 75.2 dBuV/m

For 25 kHz Channel Separation mode: 43 + 10 log (Pwatts)
Calculation: Limit (dBm) =EL-43-10log10 (TP)

Notes: EL is the emission level of the Output Power expressed in dBm, In this application, the EL is P(dBm).

Limit (dBm) = P(dBm)-43-10 log (Pwatts) = -13 dBm
Limit (dBuV/m) = -13+95.2 = 82.2 dBuV/m

TEST PROCEDURE

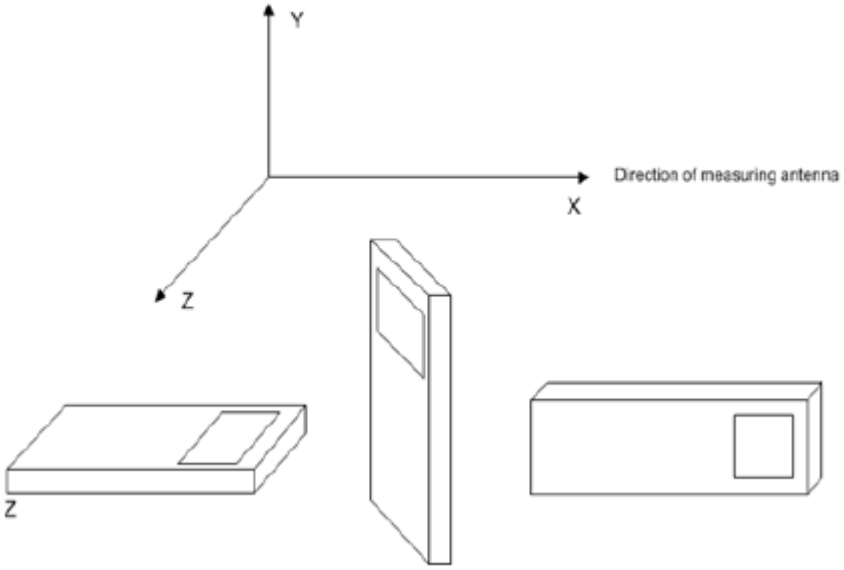
a. The measuring distance of at 3m shall be used for measurements at frequency up to 1 GHz.

b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

c. The height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

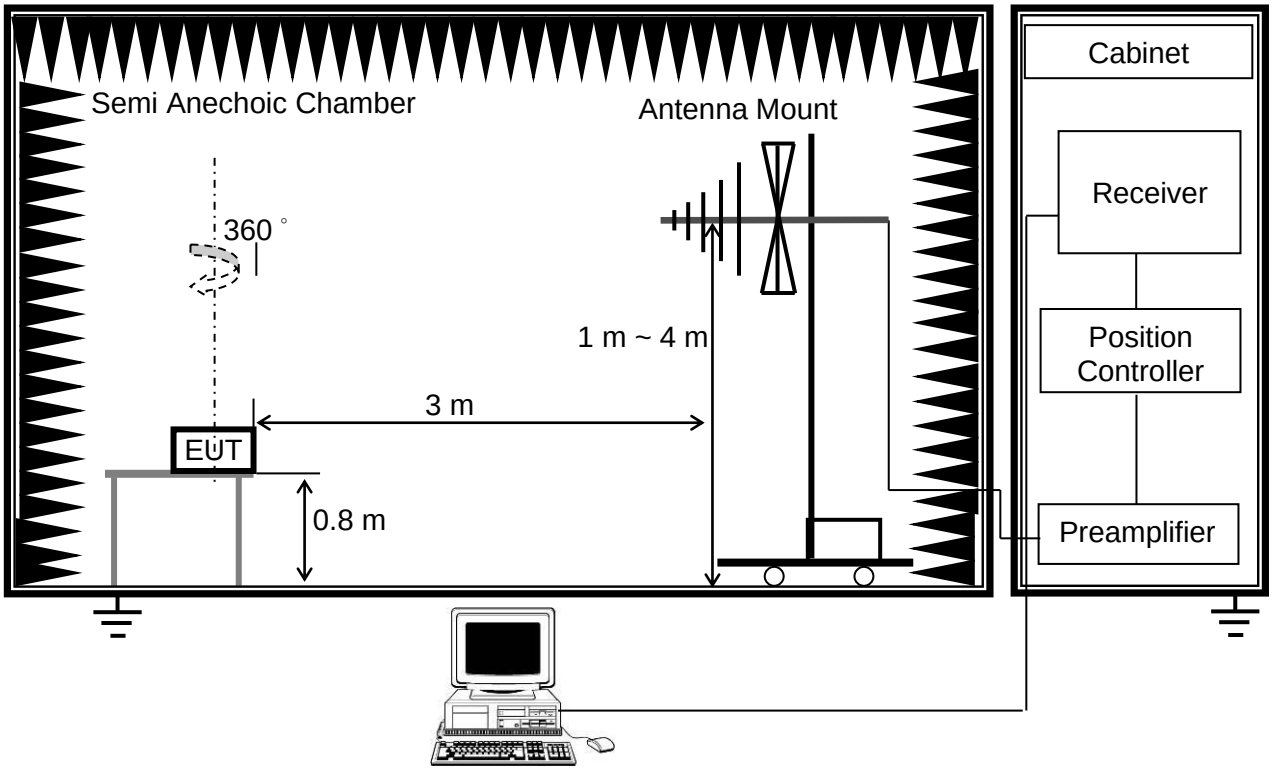
d. EIRP (dBm) = E (dBμV/m) + 20log(D) − 104.8; where D is the measurement distance (in the far field region) in m.
So, EIRP (dBm) = E (dBμV/m) – 95.2

e. EUT in each of three orthogonal axis emissions need to be tested.



EUT configuration positions

TEST SETUP



TEST ENVIRONMENT

For below 1GHz

Temperature	24.1°C	Relative Humidity	55%
Atmosphere Pressure	101kPa		

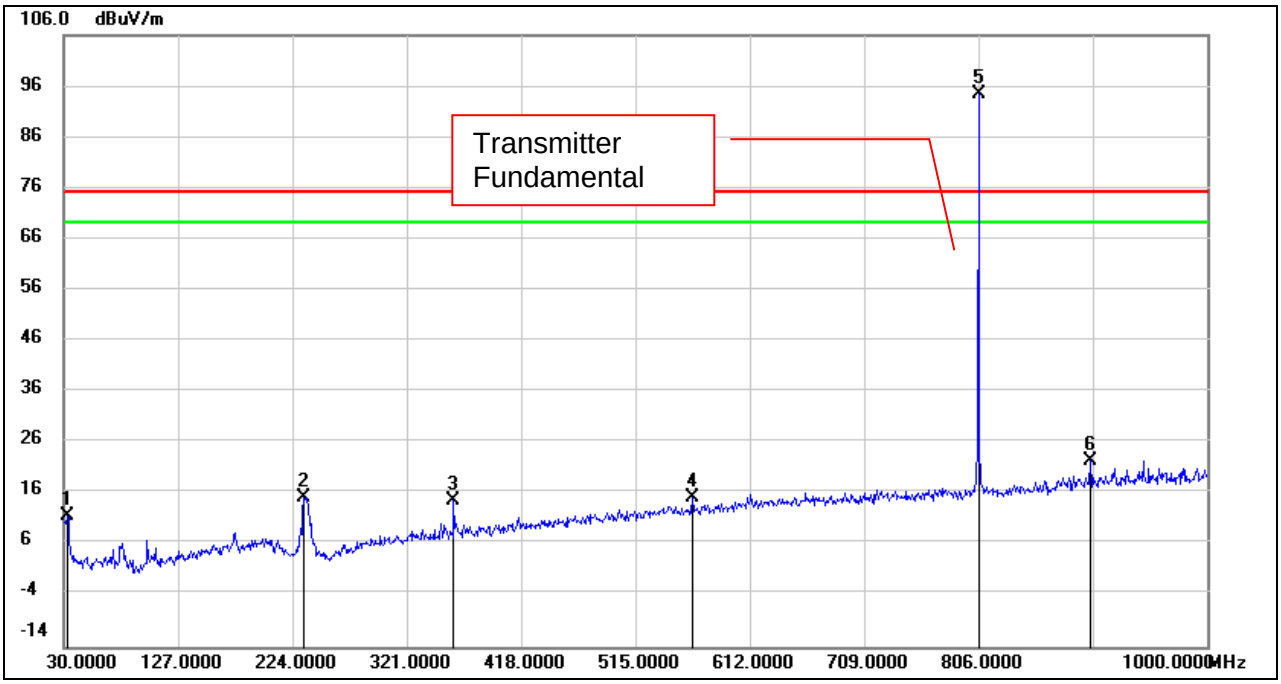
For above 1GHz

Temperature	25.5°C	Relative Humidity	62%
Atmosphere Pressure	101kPa		

RESULT – BELOW 1 GHz

For all radiated test, EUT in each of three orthogonal axis emissions had been tested, but only the worst case (Y axis) data recorded in the report.
The frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line was not reported.
Note, both battery PMNN4809A and PMNN4810 were tested with radio, only the worst data (PMNN4809A) was recorded in the report.

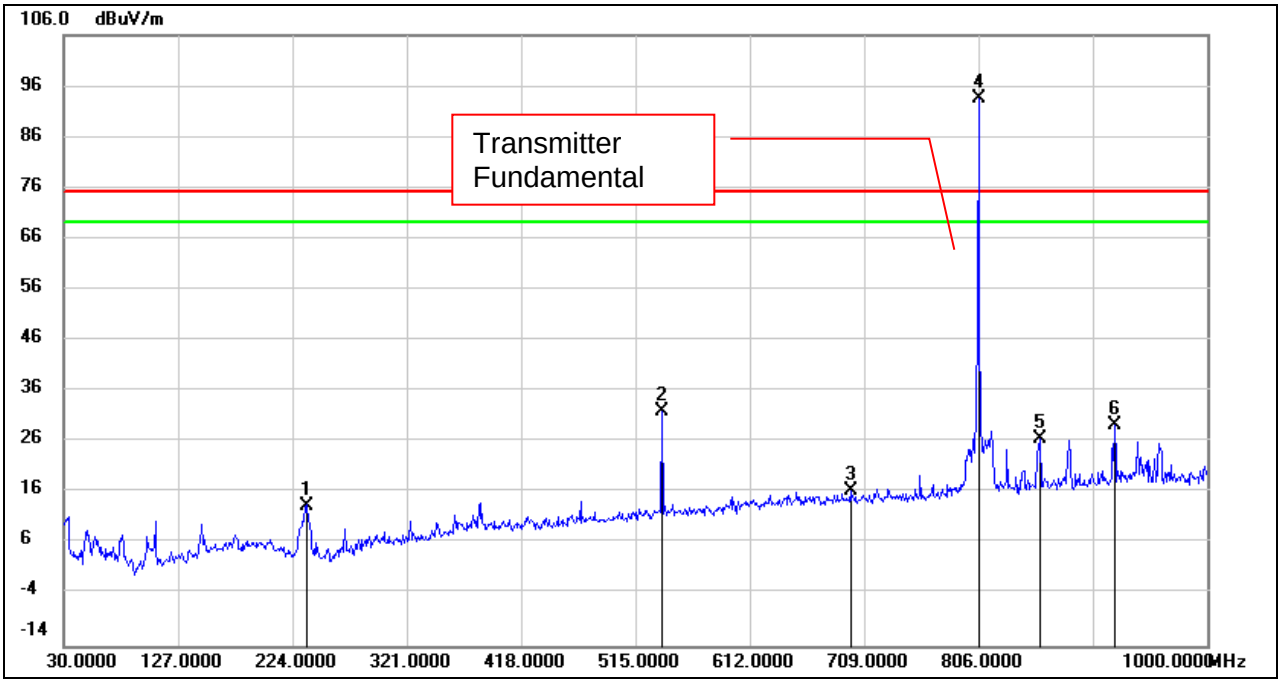
Measurement Method	Radiated	Test Channel	806.0125 MHz
Channel Separation	12.5 kHz	Modulation	Digital
Polar	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	32.9100	30.74	-19.22	11.52	75.20	-63.68	peak
2	233.7000	34.24	-18.85	15.39	75.20	-59.81	peak
3	360.7700	28.79	-14.08	14.71	75.20	-60.49	peak
4	563.5000	25.42	-10.23	15.19	75.20	-60.01	peak
5	806.0125	/	/	/	/	/	/
6	901.0600	27.51	-5.18	22.33	75.20	-52.87	peak

Note: 1. Limit (dBuV/m) = -20+95.2 = 75.2 dBuV/m
2. Margin = Limit – Result

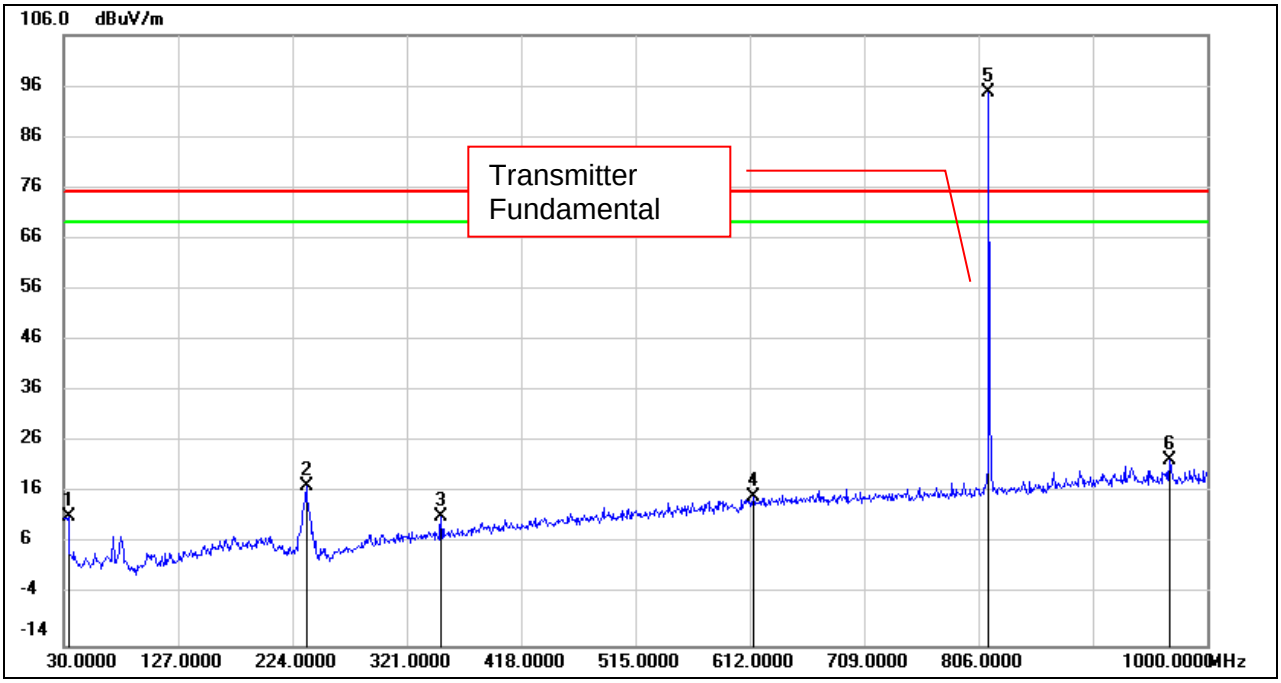
Measurement Method	Radiated	Test Channel	806.0125 MHz
Channel Separation	12.5 kHz	Modulation	Digital
Polar	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	235.6400	32.56	-18.96	13.60	75.20	-61.60	peak
2	537.3100	42.64	-10.58	32.06	75.20	-43.14	peak
3	697.3600	24.79	-8.32	16.47	75.20	-58.73	peak
4	806.0000	/	/	/	/	/	/
5	858.3800	32.59	-6.05	26.54	75.20	-48.66	peak
6	921.4300	34.23	-4.76	29.47	75.20	-45.73	peak

Note: 1. Limit (dBuV/m) = -20+95.2 = 75.2 dBuV/m
2. Margin = Limit – Result

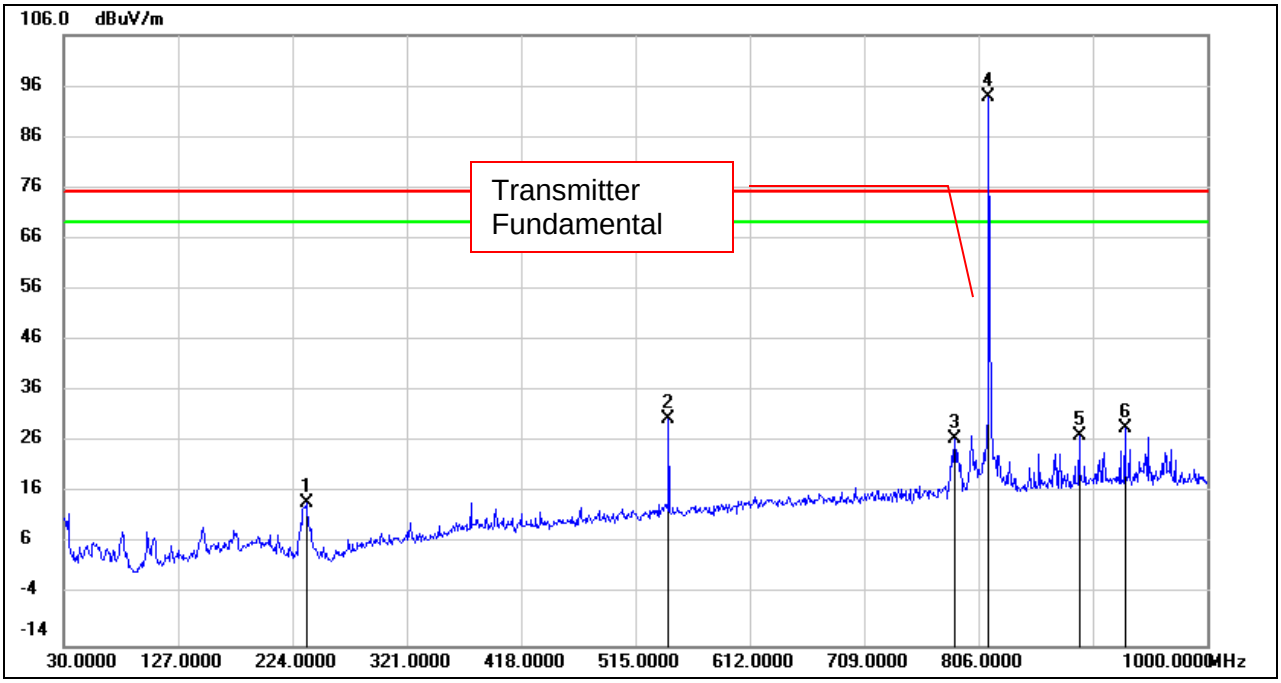
Measurement Method	Radiated	Test Channel	814.9875 MHz
Channel Separation	12.5 kHz	Modulation	Digital
Polar	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	33.8800	30.66	-19.31	11.35	75.20	-63.85	peak
2	235.6400	36.21	-18.96	17.25	75.20	-57.95	peak
3	350.1000	25.59	-14.32	11.27	75.20	-63.93	peak
4	614.9099	24.65	-9.42	15.23	75.20	-59.97	peak
5	814.7300	/	/	/	/	/	/
6	967.9900	26.93	-4.43	22.50	75.20	-52.70	peak

Note: 1. Limit (dBuV/m) = -20+95.2 = 75.2 dBuV/m
2. Margin = Limit – Result

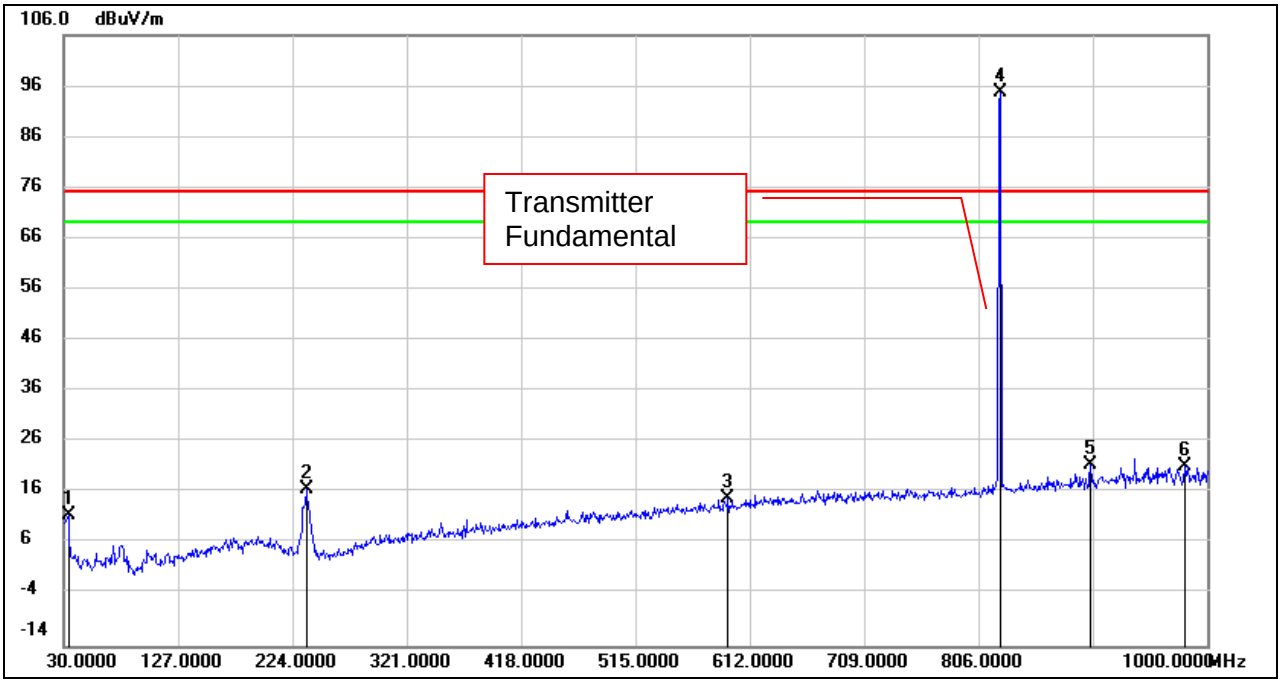
Measurement Method	Radiated	Test Channel	814.9875 MHz
Channel Separation	12.5 kHz	Modulation	Digital
Polar	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	235.6400	32.92	-18.96	13.96	75.20	-61.24	peak
2	543.1300	41.03	-10.49	30.54	75.20	-44.66	peak
3	785.6300	34.09	-7.50	26.59	75.20	-48.61	peak
4	814.7300	/	/	/	/	/	/
5	891.3600	32.44	-5.24	27.20	75.20	-48.00	peak
6	930.1600	33.63	-4.79	28.84	75.20	-46.36	peak

Note: 1. Limit (dBuV/m) = -20+95.2 = 75.2 dBuV/m
2. Margin = Limit – Result

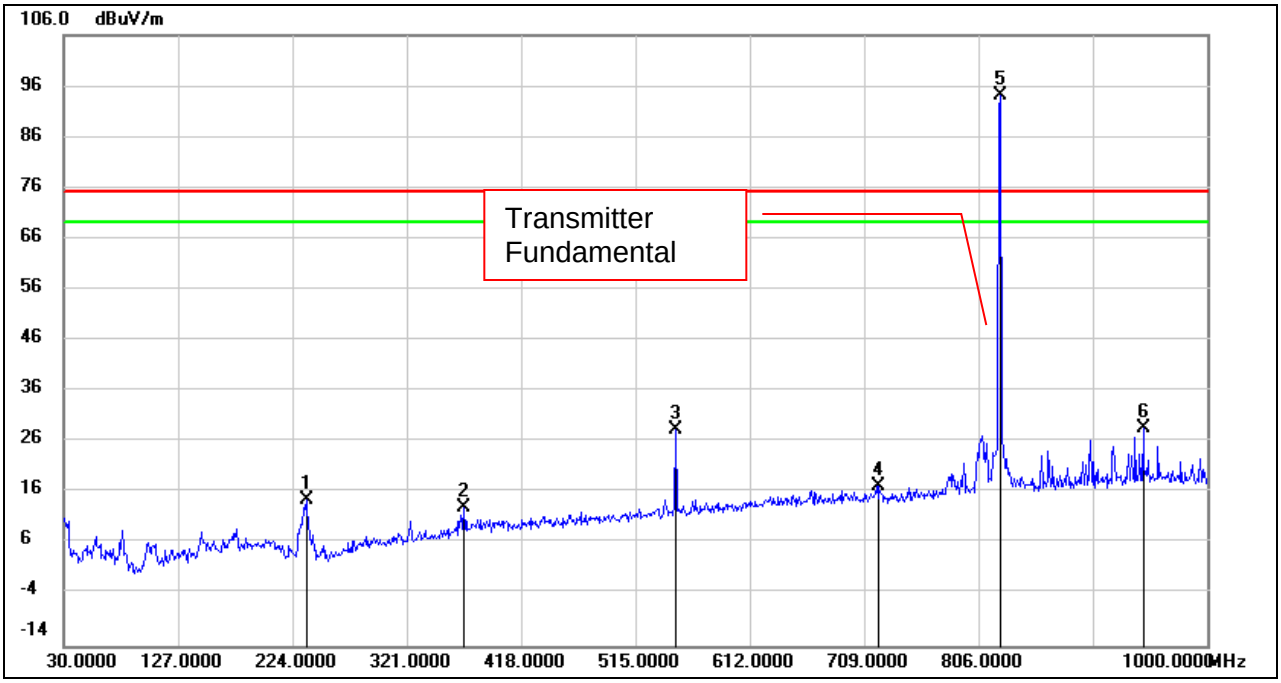
Measurement Method	Radiated	Test Channel	823.9875 MHz
Channel Separation	12.5 kHz	Modulation	Digital
Polar	Horizontal		



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	33.8800	30.92	-19.31	11.61	75.20	-63.59	peak
2	235.6400	35.86	-18.96	16.90	75.20	-58.30	peak
3	593.5700	24.67	-9.72	14.95	75.20	-60.25	peak
4	824.4300	/	/	/	/	/	/
5	901.0600	26.60	-5.18	21.42	75.20	-53.78	peak
6	980.6000	25.68	-4.34	21.34	75.20	-53.86	peak

Note: 1. Limit (dBuV/m) = -20+95.2 = 75.2 dBuV/m
2. Margin = Limit – Result

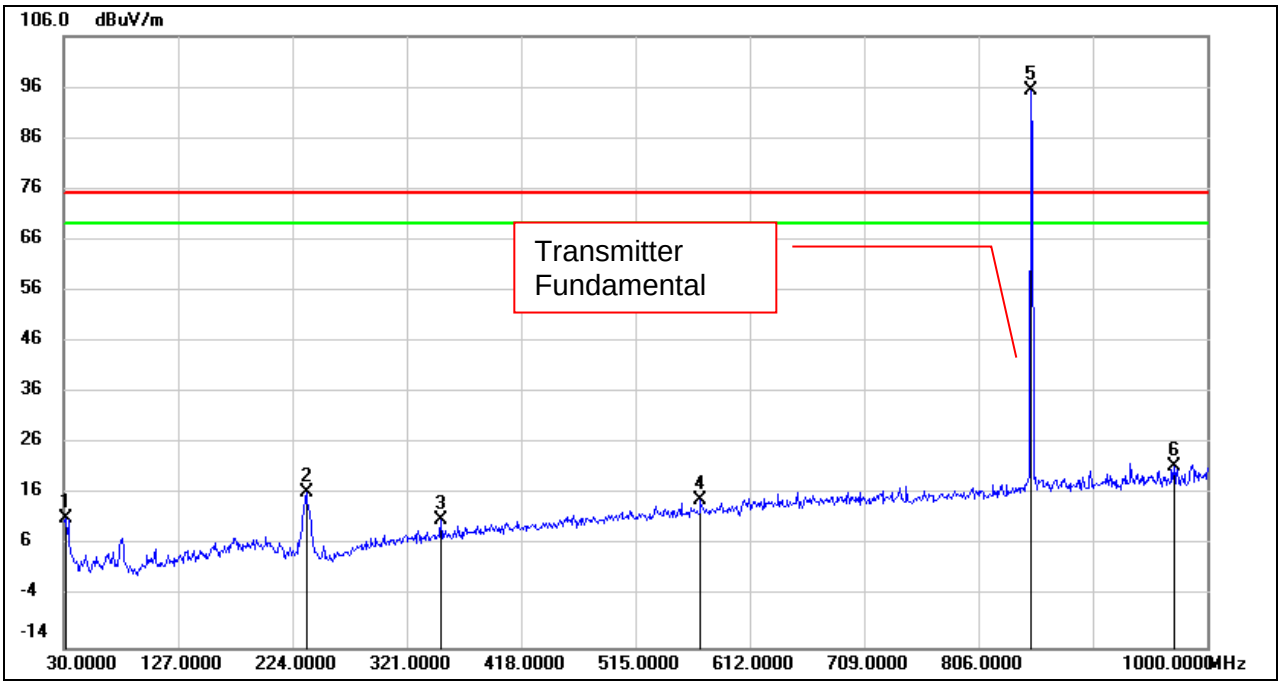
Measurement Method	Radiated	Test Channel	823.9875 MHz
Channel Separation	12.5 kHz	Modulation	Digital
Polar	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	235.6400	33.68	-18.96	14.72	75.20	-60.48	peak
2	369.5000	27.16	-13.97	13.19	75.20	-62.01	peak
3	548.9500	38.84	-10.49	28.35	75.20	-46.85	peak
4	721.6100	25.41	-8.09	17.32	75.20	-57.88	peak
5	824.4300	/	/	/	/	/	/
6	945.6800	33.05	-4.44	28.61	75.20	-46.59	peak

Note: 1. Limit (dBuV/m) = -20+95.2 = 75.2 dBuV/m
2. Margin = Limit – Result

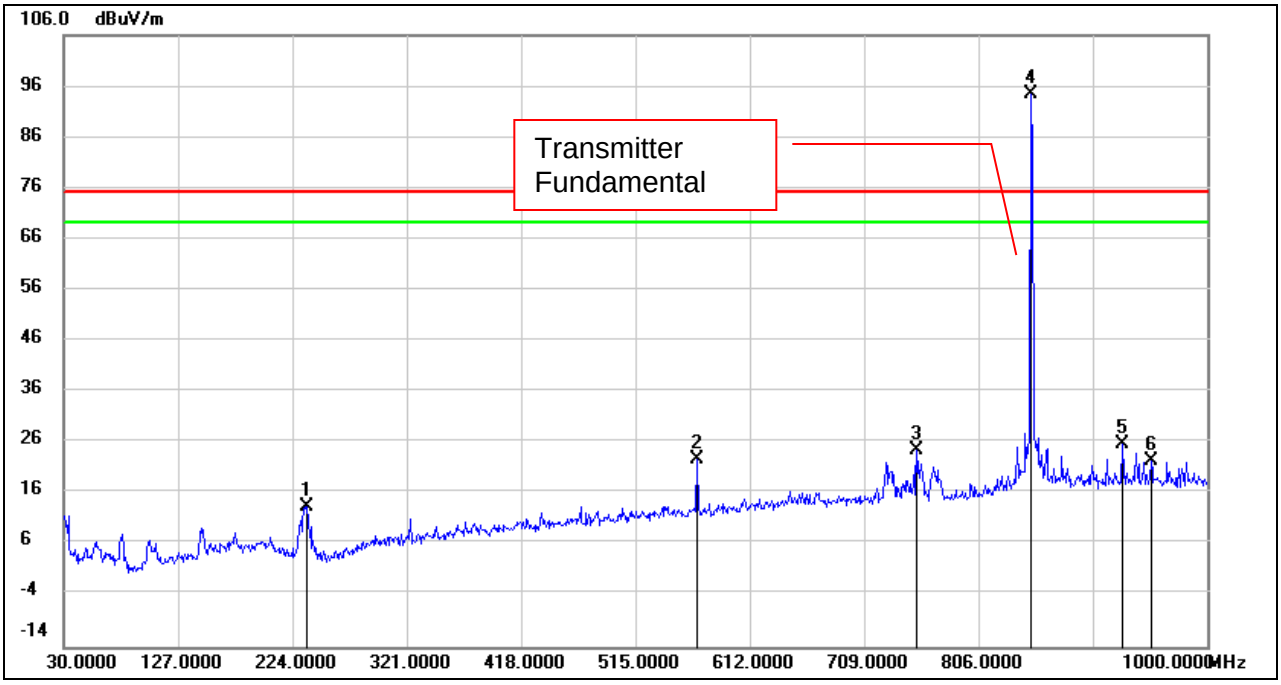
Measurement Method	Radiated	Test Channel	851.0125 MHz
Channel Separation	12.5 kHz	Modulation	Digital
Polar	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	31.9400	30.37	-19.13	11.24	75.20	-63.96	peak
2	235.6400	35.49	-18.96	16.53	75.20	-58.67	peak
3	350.1000	25.49	-14.32	11.17	75.20	-64.03	peak
4	570.2900	25.02	-10.07	14.95	75.20	-60.25	peak
5	850.6200	/	/	/	/	/	/
6	971.8700	26.04	-4.38	21.66	75.20	-53.54	peak

Note: 1. Limit (dBuV/m) = -20+95.2 = 75.2 dBuV/m
2. Margin = Limit – Result

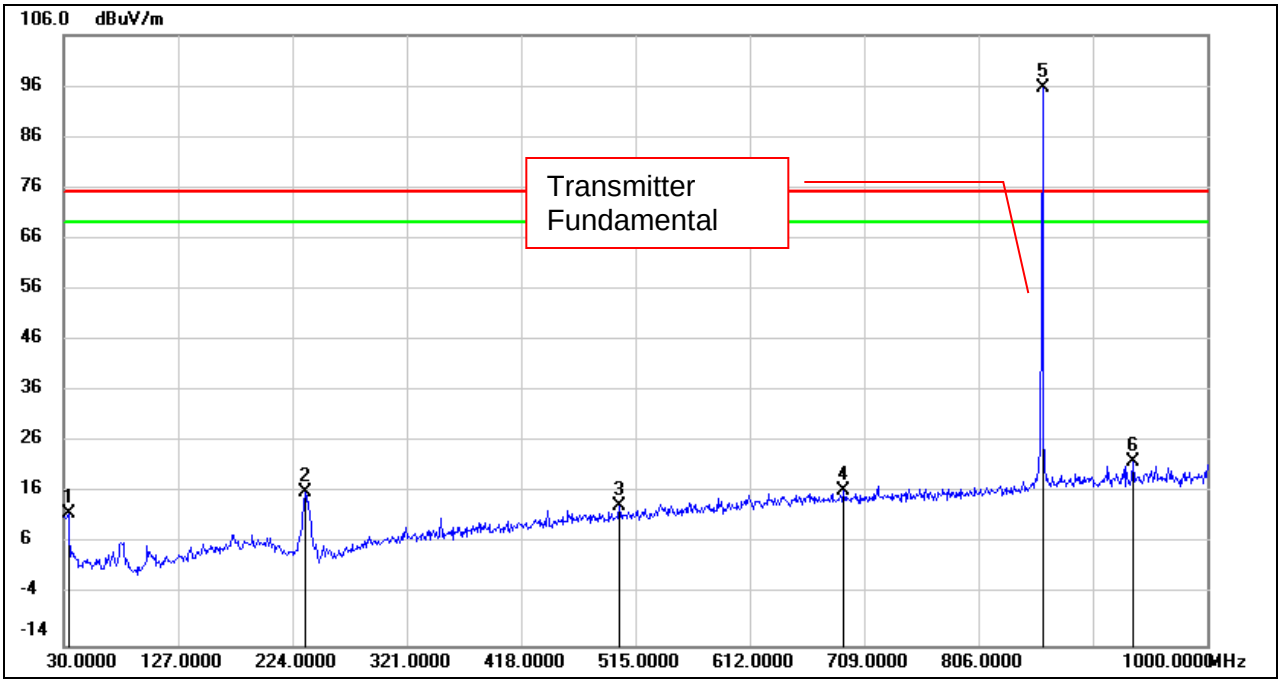
Measurement Method	Radiated	Test Channel	851.0125 MHz
Channel Separation	12.5 kHz	Modulation	Digital
Polar	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	236.6100	32.50	-19.01	13.49	75.20	-61.71	peak
2	567.3800	32.90	-10.13	22.77	75.20	-52.43	peak
3	753.6200	32.47	-7.86	24.61	75.20	-50.59	peak
4	850.6200	/	/	/	/	/	/
5	928.2200	30.48	-4.79	25.69	75.20	-49.51	peak
6	952.4700	26.89	-4.44	22.45	75.20	-52.75	peak

Note: 1. Limit (dBuV/m) = -20+95.2 = 75.2 dBuV/m
2. Margin = Limit – Result

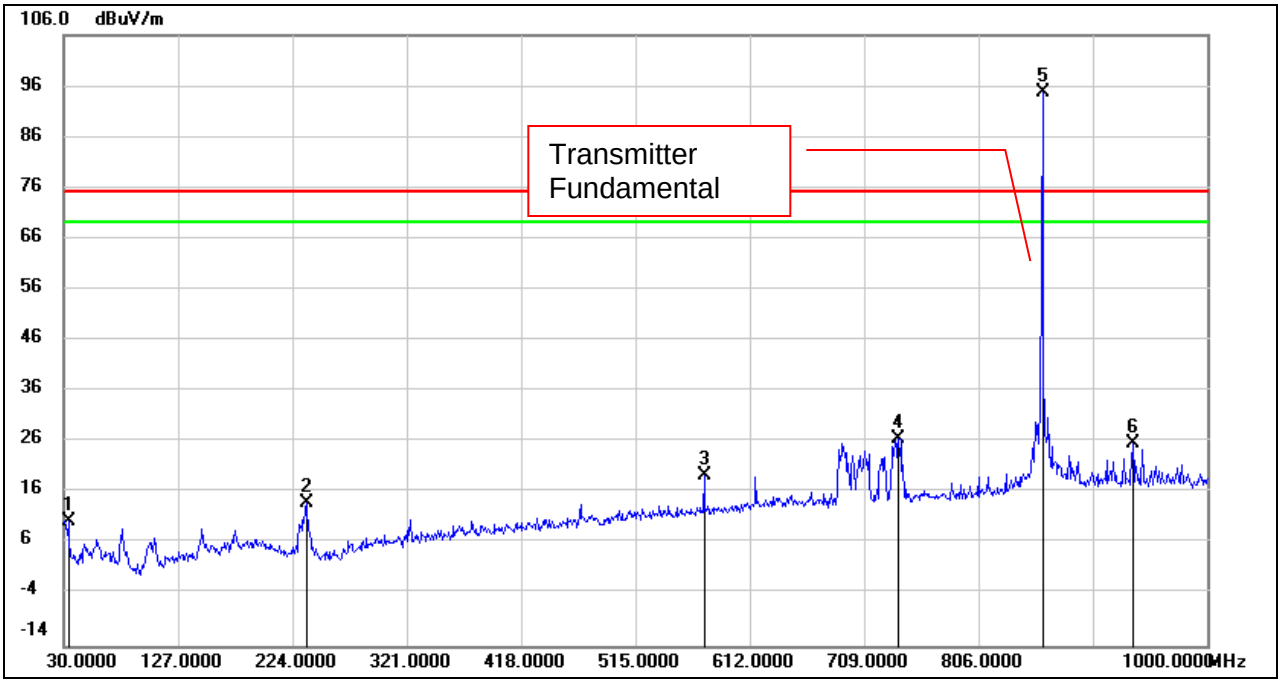
Measurement Method	Radiated	Test Channel	860.0125 MHz
Channel Separation	12.5 kHz	Modulation	Digital
Polar	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	33.8800	31.35	-19.31	12.04	75.20	-63.16	peak
2	234.6700	35.06	-18.90	16.16	75.20	-59.04	peak
3	501.4200	24.92	-11.44	13.48	75.20	-61.72	peak
4	691.5400	24.69	-8.34	16.35	75.20	-58.85	peak
5	860.3200	/	/	/	/	/	/
6	936.9500	26.74	-4.59	22.15	75.20	-53.05	peak

Note: 1. Limit (dBuV/m) = -20+95.2 = 75.2 dBuV/m
2. Margin = Limit – Result

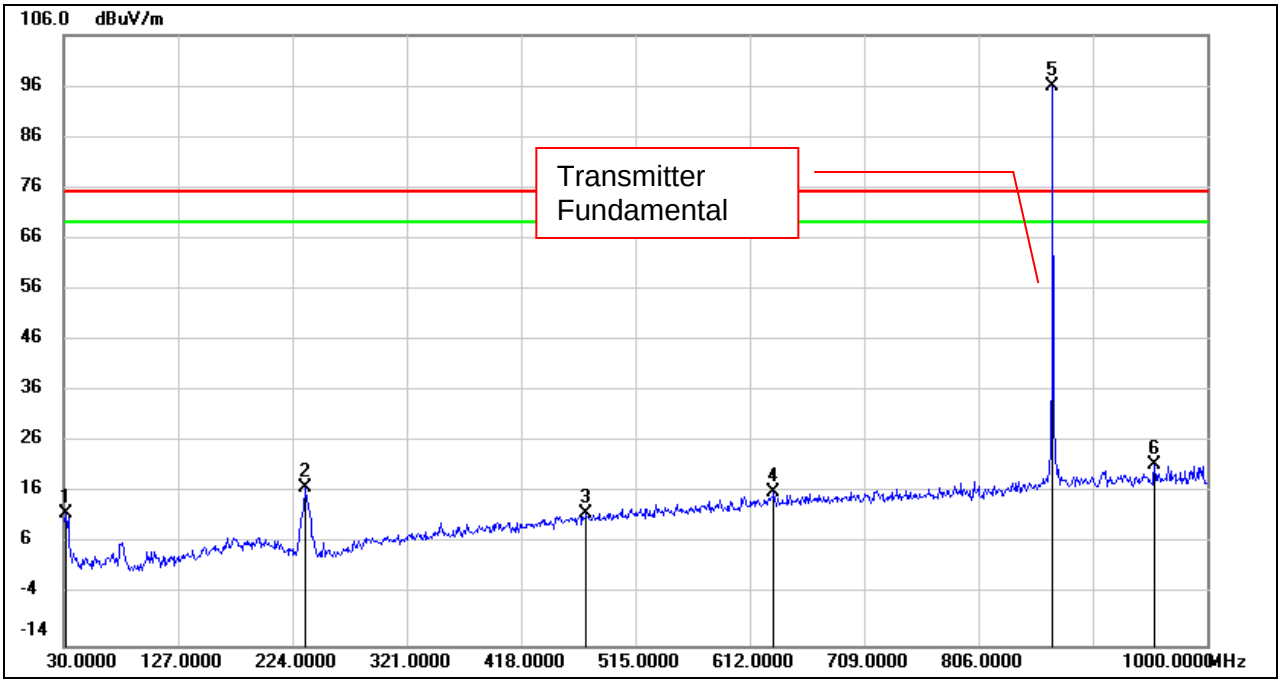
Measurement Method	Radiated	Test Channel	860.0125 MHz
Channel Separation	12.5 kHz	Modulation	Digital
Polar	Vertical		



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	33.8800	29.65	-19.31	10.34	75.20	-64.86	peak
2	235.6400	32.90	-18.96	13.94	75.20	-61.26	peak
3	573.2000	29.46	-10.05	19.41	75.20	-55.79	peak
4	738.1000	34.62	-7.94	26.68	75.20	-48.52	peak
5	860.3200	/	/	/	/	/	/
6	936.9500	30.45	-4.59	25.86	75.20	-49.34	peak

Note: 1. Limit (dBuV/m) = -20+95.2 = 75.2 dBuV/m
2. Margin = Limit – Result

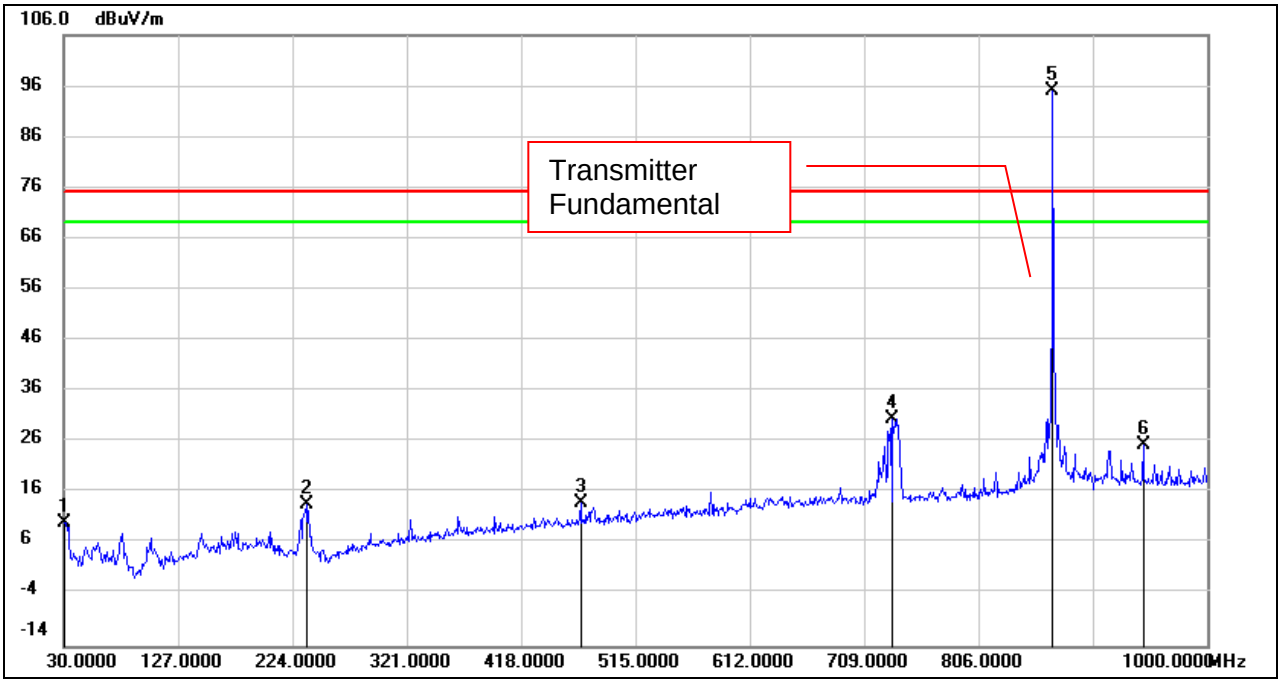
Measurement Method	Radiated	Test Channel	868.8875 MHz
Channel Separation	12.5 kHz	Modulation	Digital
Polar	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	31.9400	31.12	-19.13	11.99	75.20	-63.21	peak
2	234.6700	36.07	-18.90	17.17	75.20	-58.03	peak
3	473.2900	23.83	-11.95	11.88	75.20	-63.32	peak
4	632.3700	25.33	-9.13	16.20	75.20	-59.00	peak
5	869.0500	/	/	/	/	/	/
6	955.3800	26.11	-4.47	21.64	75.20	-53.56	peak

Note: 1. Limit (dBuV/m) = -20+95.2 = 75.2 dBuV/m
2. Margin = Limit – Result

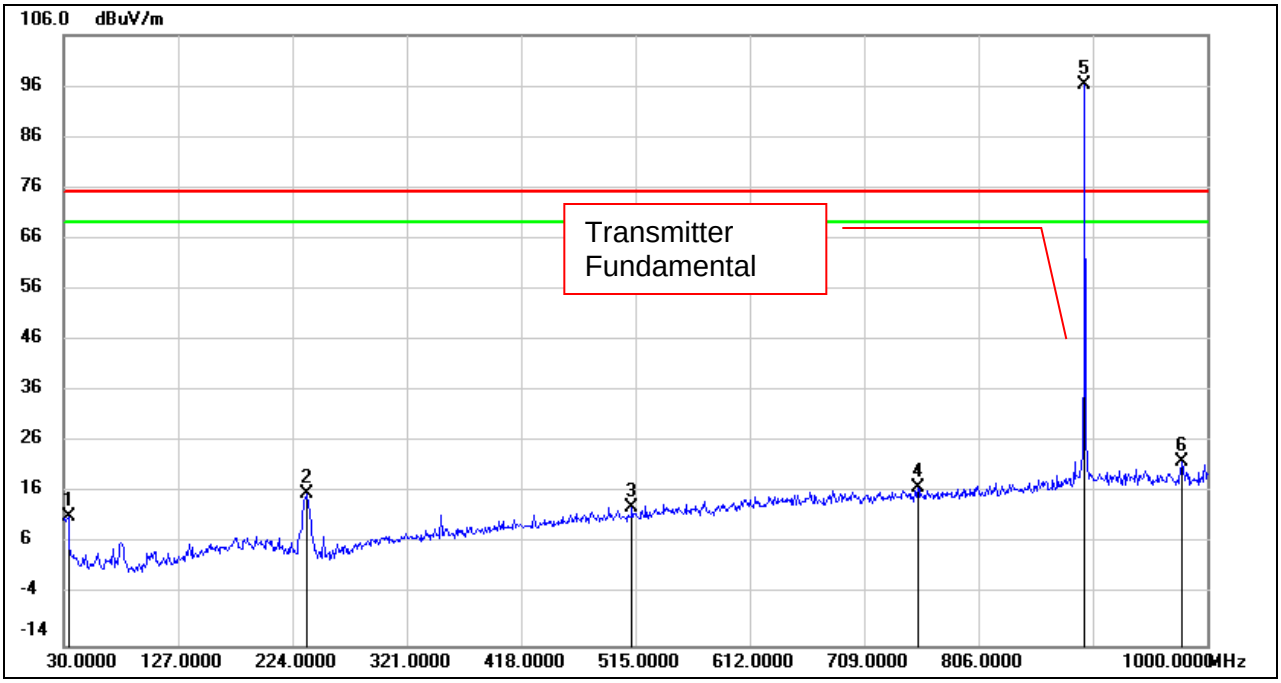
Measurement Method	Radiated	Test Channel	868.8875 MHz
Channel Separation	12.5 kHz	Modulation	Digital
Polar	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	30.9700	29.33	-19.04	10.29	75.20	-64.91	peak
2	235.6400	32.61	-18.96	13.65	75.20	-61.55	peak
3	468.4400	26.13	-12.04	14.09	75.20	-61.11	peak
4	733.2500	38.68	-8.04	30.64	75.20	-44.56	peak
5	869.0500	/	/	/	/	/	/
6	945.6800	29.97	-4.44	25.53	75.20	-49.67	peak

Note: 1. Limit (dBuV/m) = -20+95.2 = 75.2 dBuV/m
2. Margin = Limit – Result

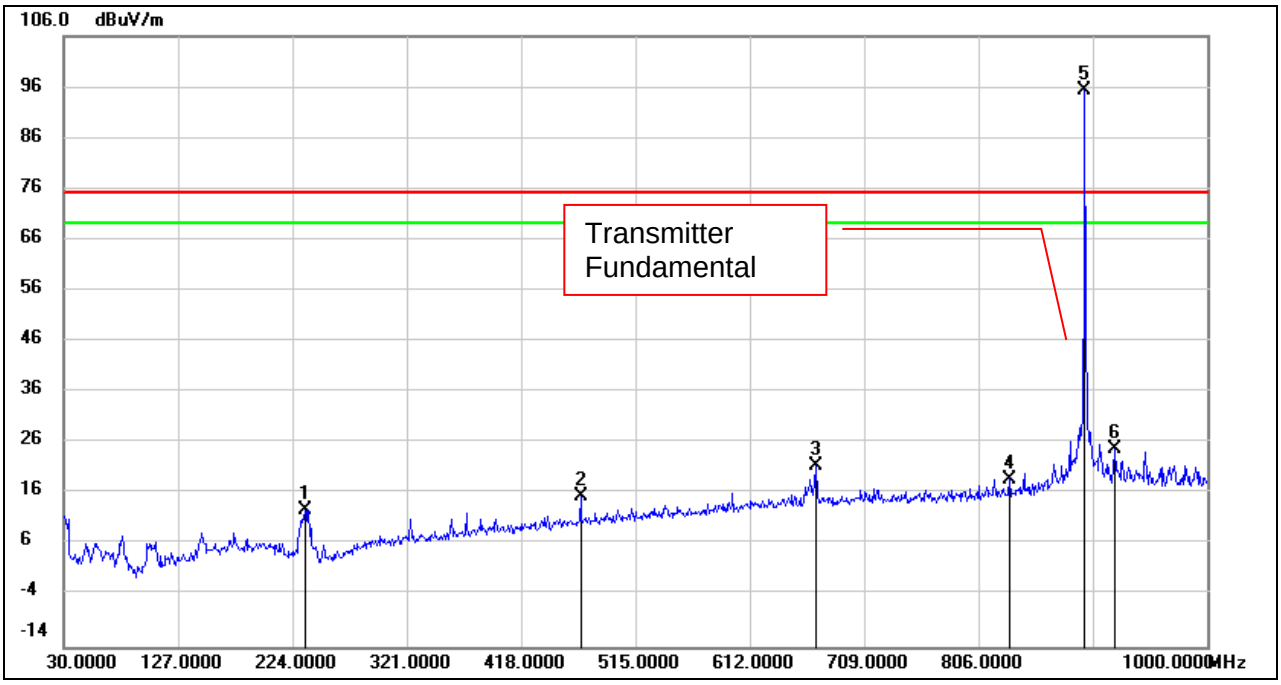
Measurement Method	Radiated	Test Channel	896.0125 MHz
Channel Separation	12.5 kHz	Modulation	Analog
Polar	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	33.8800	30.58	-19.31	11.27	75.20	-63.93	peak
2	236.6100	34.78	-19.01	15.77	75.20	-59.43	peak
3	512.0900	24.43	-11.20	13.23	75.20	-61.97	peak
4	754.5900	24.91	-7.83	17.08	75.20	-58.12	peak
5	896.2100	/	/	/	/	/	/
6	978.6600	26.51	-4.35	22.16	75.20	-53.04	peak

Note: 1. Limit (dBuV/m) = -20+95.2 = 75.2 dBuV/m
2. Margin = Limit – Result

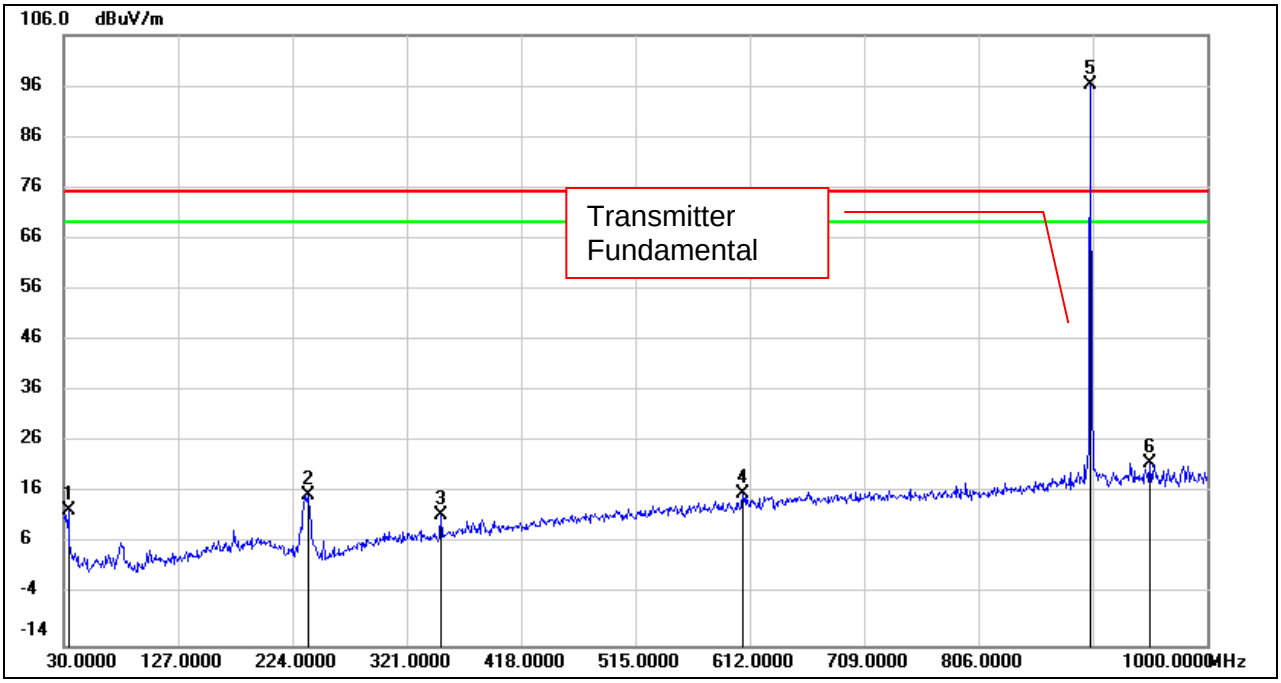
Measurement Method	Radiated	Test Channel	896.0125 MHz
Channel Separation	12.5 kHz	Modulation	Analog
Polar	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	234.6700	31.75	-18.90	12.85	75.20	-62.35	peak
2	468.4400	27.67	-12.04	15.63	75.20	-59.57	peak
3	668.2600	30.32	-8.65	21.67	75.20	-53.53	peak
4	832.1900	25.63	-6.63	19.00	75.20	-56.20	peak
5	896.2100	/	/	/	/	/	/
6	921.4300	29.62	-4.76	24.86	75.20	-50.34	peak

Note: 1. Limit (dBuV/m) = -20+95.2 = 75.2 dBuV/m
2. Margin = Limit – Result

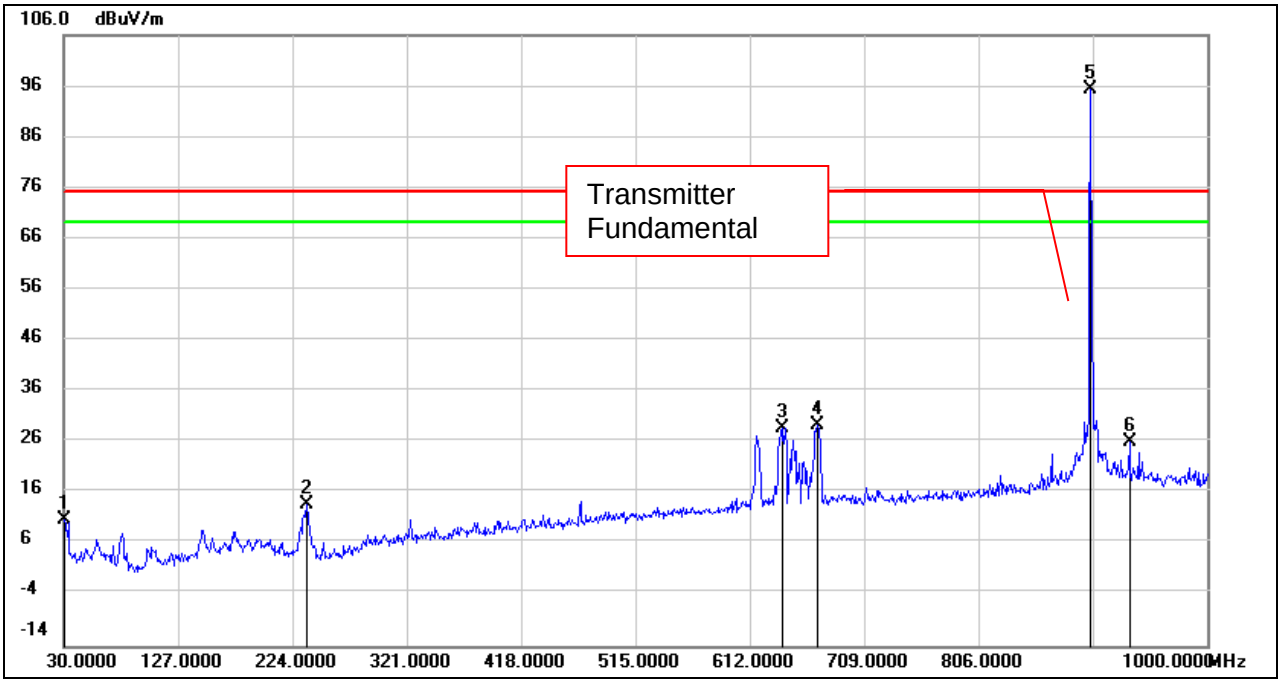
Measurement Method	Radiated	Test Channel	900.9875MHz
Channel Separation	12.5 kHz	Modulation	Analog
Polar	Horizontal		



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	33.8800	31.98	-19.31	12.67	75.20	-62.53	peak
2	237.5800	34.62	-19.06	15.56	75.20	-59.64	peak
3	350.1000	26.05	-14.32	11.73	75.20	-63.47	peak
4	606.1800	25.17	-9.45	15.72	75.20	-59.48	peak
5	901.0600	/	/	/	/	/	/
6	951.5000	26.14	-4.43	21.71	75.20	-53.49	peak

Note: 1. Limit (dBuV/m) = -20+95.2 = 75.2 dBuV/m
2. Margin = Limit – Result

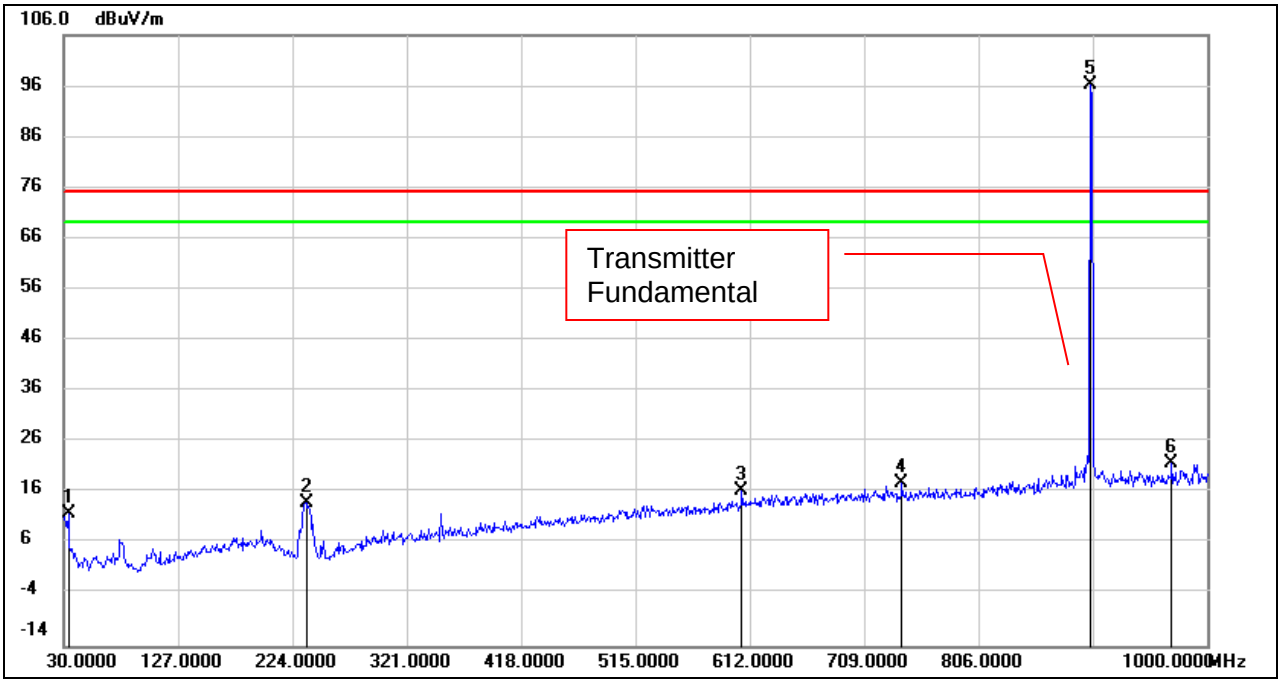
Measurement Method	Radiated	Test Channel	900.9875MHz
Channel Separation	12.5 kHz	Modulation	Analog
Polar	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	30.9700	29.73	-19.04	10.69	75.20	-64.51	peak
2	235.6400	32.57	-18.96	13.61	75.20	-61.59	peak
3	639.1599	37.91	-9.04	28.87	75.20	-46.33	peak
4	669.2300	37.96	-8.64	29.32	75.20	-45.88	peak
5	901.0600	/	/	/	/	/	/
6	934.0400	30.85	-4.67	26.18	75.20	-49.02	peak

Note: 1. Limit (dBuV/m) = -20+95.2 = 75.2 dBuV/m
2. Margin = Limit – Result

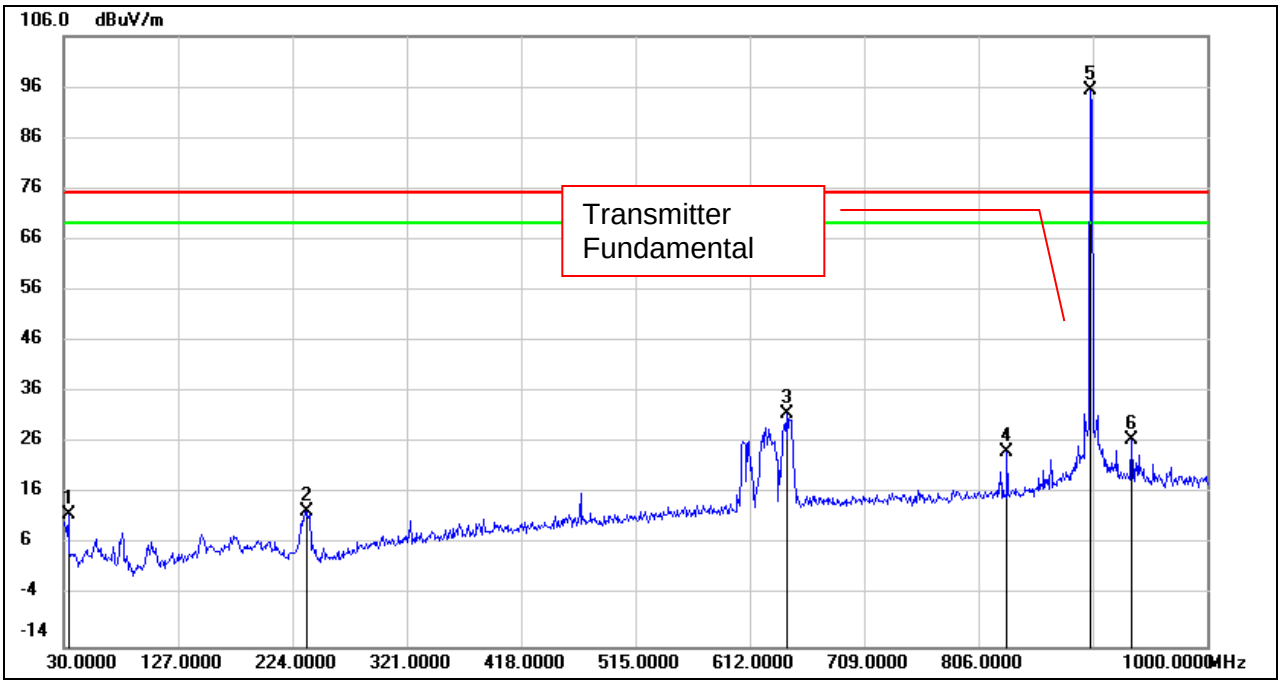
Measurement Method	Radiated	Test Channel	901.5 MHz
Channel Separation	12.5 kHz	Modulation	Analog
Polar	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	33.8800	31.37	-19.31	12.06	75.20	-63.14	peak
2	235.6400	32.96	-18.96	14.00	75.20	-61.20	peak
3	605.2100	25.88	-9.46	16.42	75.20	-58.78	peak
4	741.0100	25.90	-7.90	18.00	75.20	-57.20	peak
5	901.0600	/	/	/	/	/	/
6	969.9300	26.30	-4.40	21.90	75.20	-53.30	peak

Note: 1. Limit (dBuV/m) = -20+95.2 = 75.2 dBuV/m
2. Margin = Limit – Result

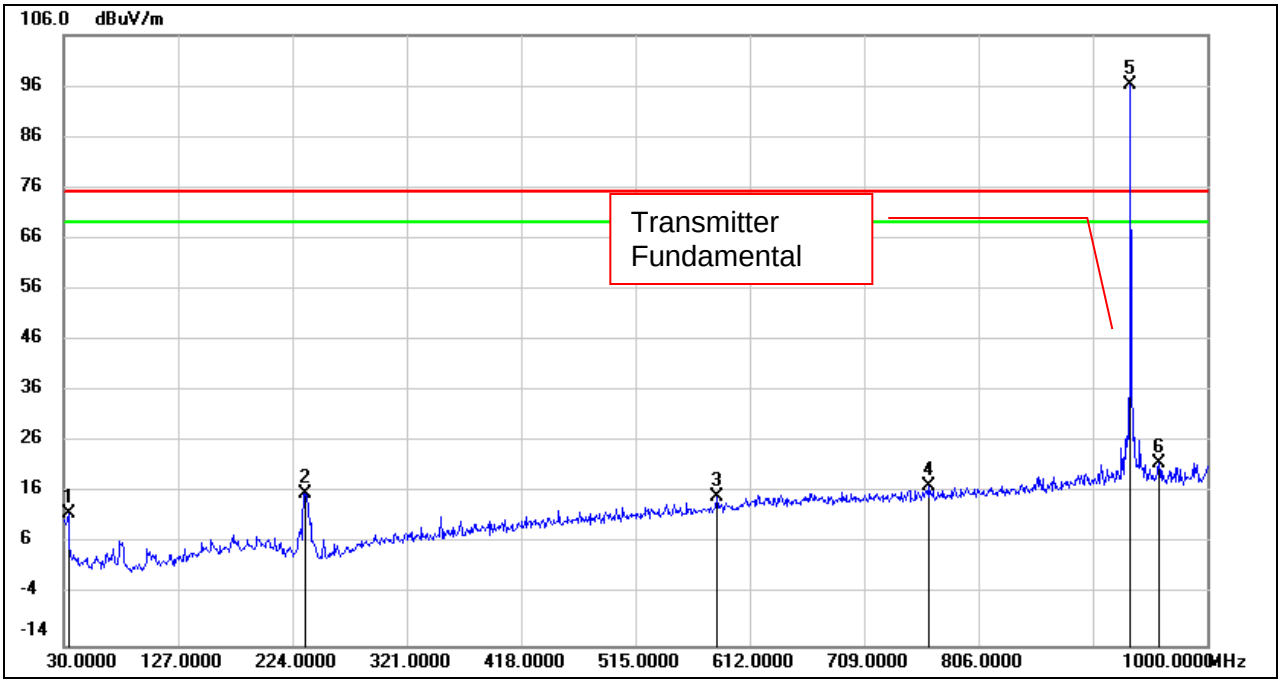
Measurement Method	Radiated	Test Channel	901.5 MHz
Channel Separation	12.5 kHz	Modulation	Analog
Polar	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	33.8800	31.13	-19.31	11.82	75.20	-63.38	peak
2	235.6400	31.48	-18.96	12.52	75.20	-62.68	peak
3	643.0400	40.88	-9.03	31.85	75.20	-43.35	peak
4	830.2500	30.86	-6.68	24.18	75.20	-51.02	peak
5	901.0600	/	/	/	/	/	/
6	935.9800	31.37	-4.61	26.76	75.20	-48.44	peak

Note: 1. Limit (dBuV/m) = -20+95.2 = 75.2 dBuV/m
2. Margin = Limit – Result

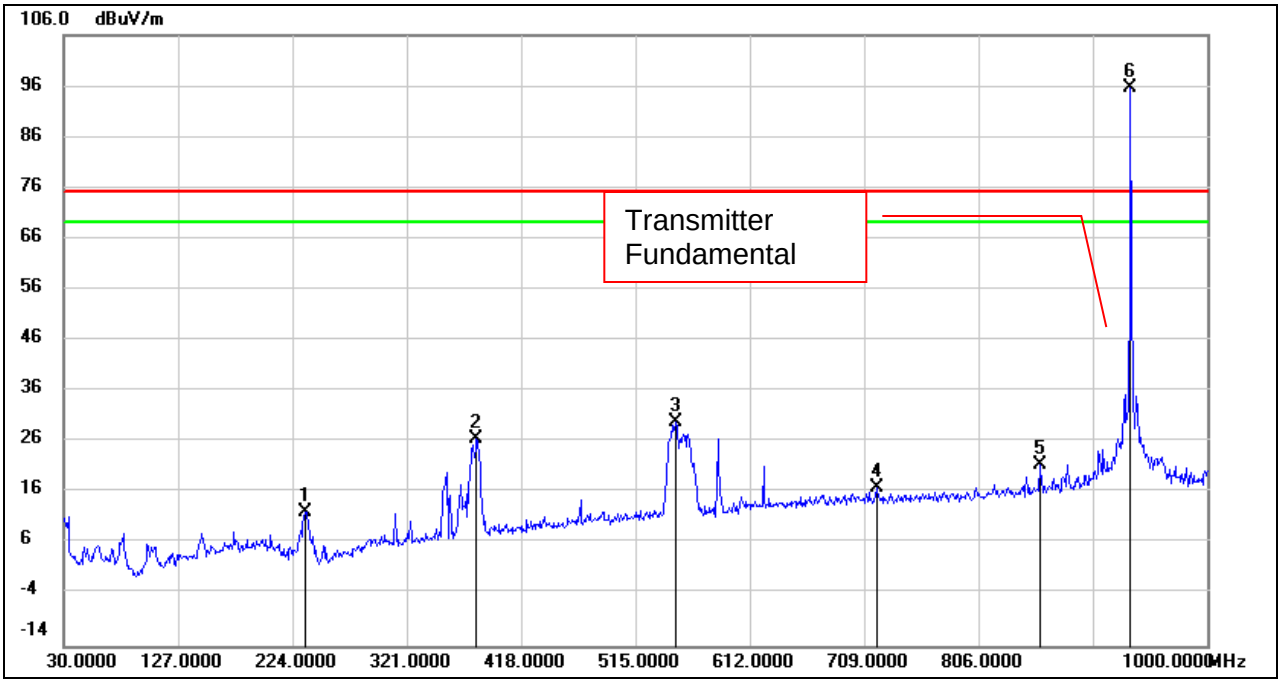
Measurement Method	Radiated	Test Channel	935.0125 MHz
Channel Separation	12.5 kHz	Modulation	Analog
Polar	Horizontal		



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	33.8800	31.15	-19.31	11.84	75.20	-63.36	peak
2	234.6700	34.89	-18.90	15.99	75.20	-59.21	peak
3	583.8700	25.29	-9.92	15.37	75.20	-59.83	peak
4	764.2900	25.11	-7.65	17.46	75.20	-57.74	peak
5	935.0100	/	/	/	/	/	/
6	959.2600	26.42	-4.52	21.90	75.20	-53.30	peak

Note: 1. Limit (dBuV/m) = -20+95.2 = 75.2 dBuV/m
2. Margin = Limit – Result

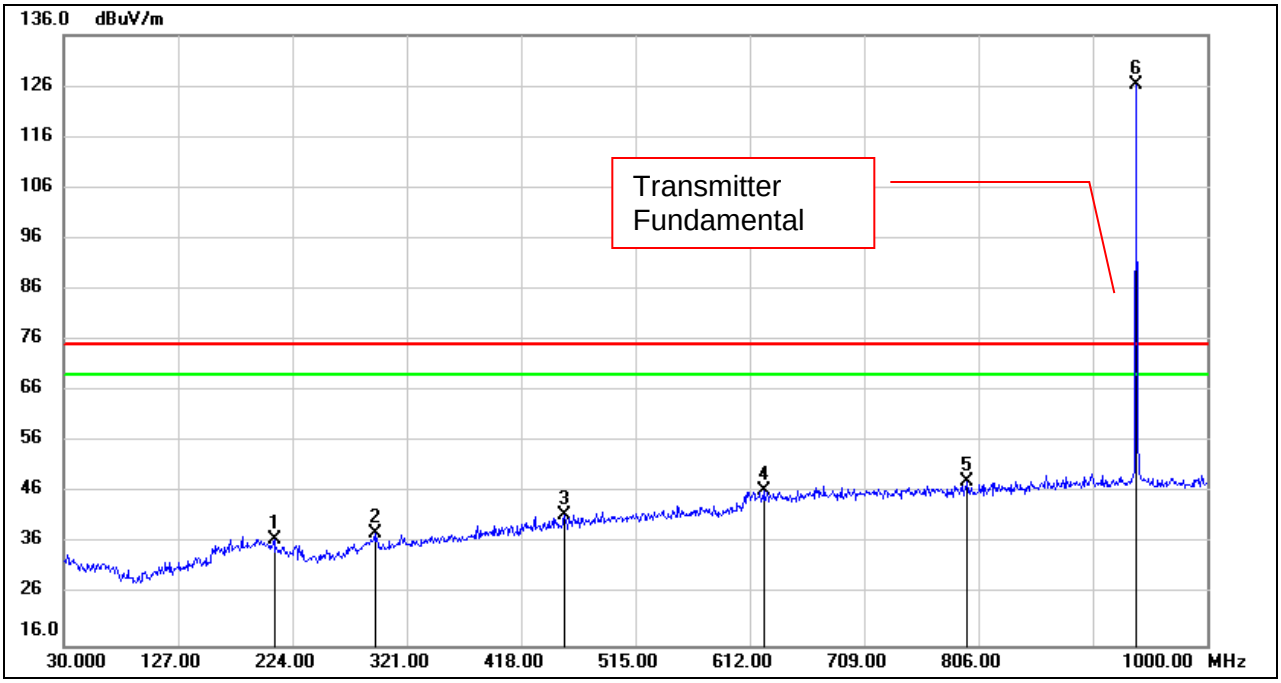
Measurement Method	Radiated	Test Channel	935.0125 MHz
Channel Separation	12.5 kHz	Modulation	Analog
Polar	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	234.6700	31.26	-18.90	12.36	75.20	-62.84	peak
2	380.1700	40.39	-13.64	26.75	75.20	-48.45	peak
3	548.9500	40.34	-10.49	29.85	75.20	-45.35	peak
4	719.6700	25.16	-8.08	17.08	75.20	-58.12	peak
5	858.3800	27.68	-6.05	21.63	75.20	-53.57	peak
6	935.0100	/	/	/	/	/	/

Note: 1. Limit (dBuV/m) = -20+95.2 = 75.2 dBuV/m
2. Margin = Limit – Result

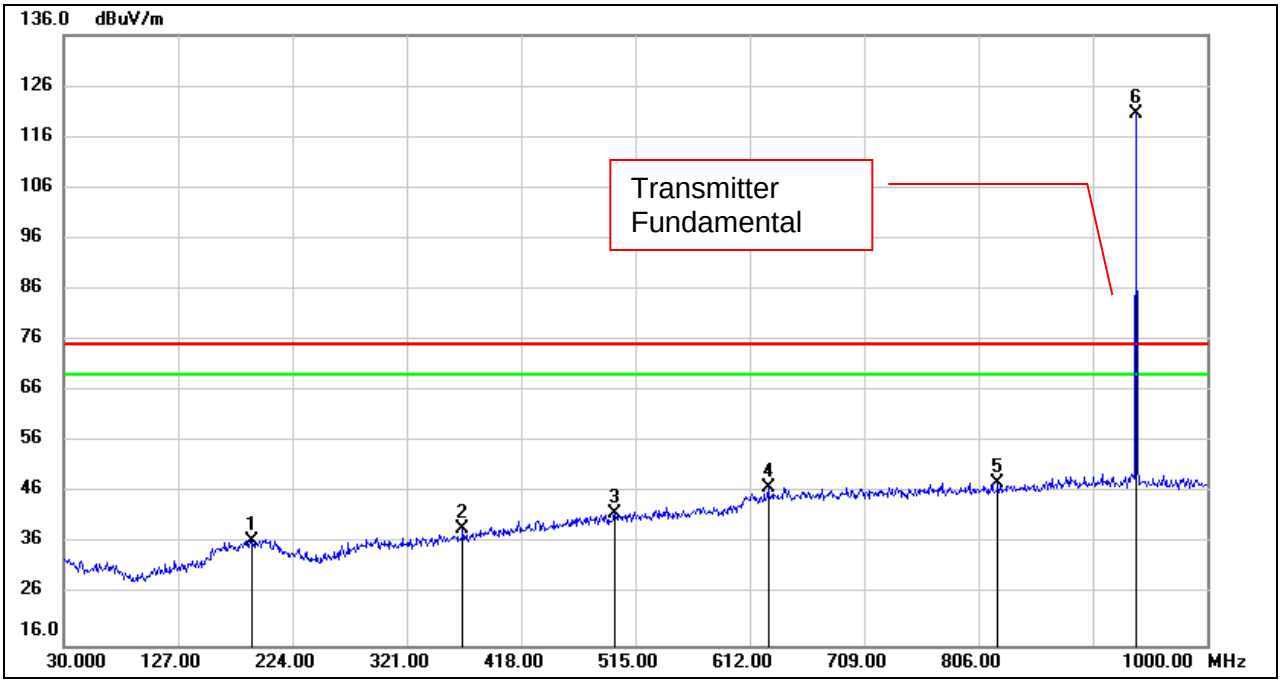
Measurement Method	Radiated	Test Channel	939.9875 MHz
Channel Separation	12.5 kHz	Modulation	Analog
Polar	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	208.4800	23.73	13.20	36.93	75.20	-38.27	QP
2	293.8400	23.75	14.16	37.91	75.20	-37.29	QP
3	454.8600	23.27	18.31	41.58	75.20	-33.62	QP
4	623.6400	25.08	21.42	46.50	75.20	-28.70	QP
5	796.3000	25.06	23.06	48.12	75.20	-27.08	QP
6	939.8600	/	/	/	/	/	/

Note: 1. Limit (dBuV/m) = -20+95.2 = 75.2 dBuV/m
2. Margin = Limit – Result

Measurement Method	Radiated	Test Channel	939.9875 MHz
Channel Separation	12.5 kHz	Modulation	Analog
Polar	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	189.0800	22.89	13.79	36.68	75.20	-38.52	QP
2	368.5300	22.67	16.23	38.90	75.20	-36.30	QP
3	497.5400	22.59	19.26	41.85	75.20	-33.35	QP
4	627.5200	25.50	21.52	47.02	75.20	-28.18	QP
5	822.4900	24.45	23.46	47.91	75.20	-27.29	QP
6	939.8600	/	/	/	/	/	/

Note: 1. Limit (dBuV/m) = -20+95.2 = 75.2 dBuV/m
2. Margin = Limit – Result