

TEST REPORT

FCC Test for PSR-78-9533-UB
Class II Permissive Change

APPLICANT
ADRF KOREA, Inc.

REPORT NO.
HCT-RF-2109-FC037-R1

DATE OF ISSUE
October 12, 2021

Tested by
Kyung Soo Kang



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TEST REPORT

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PSR-78-9533-UB

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Additional Model

-

Applicant

ADRF KOREA, Inc.

5-5, Mojeon-Ri, Backsa-Myun, Icheon-Citi, Kyunggi-Do, Korea

Eut Type Model Name

REPEATER

PSR-78-9533-UB

FCC ID

N52-PSR-78-9533B

Date of Test

August 23, 2021~ September 16, 2021

FCC Rule Parts:

CFR 47 Part 2, Part 90

The result shown in this test report refer only to the sample(s) tested unless otherwise stated.

This test results were applied only to the test methods required by the standard.

REVISION HISTORY

The revision history for this test report is shown in table.

Revision No.	Date of Issue	Description
0	September 24, 2021	Initial Release
1	October 12, 2021	Revised the frequency range on section 1.2 and 3.2.

The measurements shown in this report were made in accordance with the procedures indicated, and the emissions from this equipment were found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them. It is further stated that upon the basis of the measurements made, the equipment tested is capable of operation in accordance with the requirements of the FCC Rules under normal use and maintenance.

If this report is required to confirmation of authenticity, please contact to www.hct.co.kr

CONTENTS

1. GENERAL INFORMATION	5
1.1. APPLICANT INFORMATION	5
1.2. PRODUCT INFORMATION	5
1.3. TEST INFORMATION	5
2. FACILITIES AND ACCREDITATIONS	6
2.1. FACILITIES	6
2.2. EQUIPMENT	6
3. TEST SPECIFICATIONS	7
3.1. STANDARDS	7
3.2. ADDITIONAL DESCRIPTIONS ABOUT TEST	8
3.3. MEASUREMENT UNCERTAINTY	10
3.4. STANDARDS ENVIRONMENTAL TEST CONDITIONS	10
3.5. TEST DIAGRAMS	11
4. TEST EQUIPMENTS	12
5. TEST RESULT	13
5.1. INPUT/OUTPUT POWER AND AMPLIFIER/BOOSTER GAIN	13
5.2. RADIATED SPURIOUS EMISSIONS	20
6. Annex A_EUT AND TEST SETUP PHOTO	23

1. GENERAL INFORMATION

1.1. APPLICANT INFORMATION

Company Name	ADRF KOREA, Inc.
Company Address	5-5, Mojeon-Ri, Backsa-Myun, Icheon-Citi, Kyunggi-Do, Korea

1.2. PRODUCT INFORMATION

EUT Type	REPEATER		
EUT Serial Number	P789533U210001		
Power Supply	100 ~ 240 VAC		
Frequency Range		Downlink	Uplink
	FirstNet + PS 700	758 ~ 768 MHz	788 ~ 798 MHz
		769 ~ 775 MHz (768 ~ 769 MHz Guard band)	799 ~ 805 MHz (798 ~ 799 MHz Guard band)
	PS 800	851 ~ 861 MHz	806 ~ 816 MHz
Tx Output Power		Downlink	Uplink
	FirstNet / PS 700 / FirstNet + PS 700	33 dBm	30 dBm
	PS 800	33 dBm	30 dBm
	FirstNet + PS 700 + PS 800	36 dBm (33 dBm + 33 dBm)	30 dBm
Antenna Peak Gain	Manufacturer does not provide an antenna		

1.3. TEST INFORMATION

FCC Rule Parts	Part 2, Part 90
Measurement Standards	KDB 935210 D05 v01r04, ANSI C63.26-2015
Test Location	HCT CO., LTD. 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA

2. FACILITIES AND ACCREDITATIONS

2.1. FACILITIES

The SAC(Semi-Anechoic Chamber) and conducted measurement facility used to collect the radiated data are located at the 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA.

The site is constructed in conformance with the requirements of ANSI C63.4 (Version: 2014) and CISPR Publication 22.

Detailed description of test facility was submitted to the Commission and accepted dated April 02, 2018 (Registration Number: KR0032).

2.2. EQUIPMENT

Radiated emissions are measured with one or more of the following types of linearly polarized antennas: tuned dipole, bi-conical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with pre-selectors and quasi-peak detectors are used to perform radiated measurements.

Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.

All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

3. TEST SPECIFICATIONS

3.1. STANDARDS

The following tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with FCC Part 2, Part 90

Description	Reference	Results
AGC threshold	KDB 935210 D05 v01r04 3.2 KDB 935210 D05 v01r04 4.2	Not Tested* ^{Note2}
Out-of-band rejection	KDB 935210 D05 v01r04 3.3 KDB 935210 D05 v01r04 4.3	Not Tested* ^{Note2}
Occupied Bandwidth	§ 2.1049 § 90.219(e)(4)(ii)	Not Tested* ^{Note2}
Input-versus-output signal comparison	§ 90.210, § 90.219(e)(4)(iii)	Not Tested* ^{Note2}
Input/output power and amplifier/booster gain	§ 2.1046, § 90.219(e)(1), § 90.541, § 90.542, § 90.635	Compliant* ^{Note3}
Noise Figure	§ 90.219(e)(2)	Not Tested* ^{Note2}
Out-of-band/out-of-block emissions and spurious emissions	§ 2.1051, § 90.219(e)(3), § 90.543	Not Tested* ^{Note2}
Spurious emissions radiated	§ 2.1053	Compliant* ^{Note2}

Note:

- C2PC models are electrically identical to the Original models.
The Product Equality Declaration includes detailed information about the changes between the devices.
- The data from that application has been verified through appropriate spot checks to demonstrate compliance for this device as shown in the test result.
- Output power was verified to be within the expected tune up tolerances prior to performing the spot checks for radiated spurious emissions.
- Original models
FCC ID : N52-PSR-78-9533B report. (Previously report no. HCT-R-1704-F010-1)

3.2. ADDITIONAL DESCRIPTIONS ABOUT TEST

Except for the following cases, EUT was tested under normal operating conditions.
 : Out-of-band rejection test requires maximum gain condition without AGC.

The test was generally based on the method of KDB 935210 D05 v01r04 and only followed ANSI C63.26-2015 if there was no test method in KDB standard.

EUT was tested with following modulated signals provide by applicant.

Band Name	Downlink Freq.	Uplink Freq.	Modulation
FirstNet + PS 700	758 ~ 768 MHz	788 ~ 798 MHz	LTE (5 MHz)
	769 ~ 775 MHz (768 ~ 769 MHz Guard band)	799 ~ 805 MHz (798 ~ 799 MHz Guard band)	APCO 25
PS 800	851 ~ 861 MHz	806 ~ 816 MHz	

The frequency stability measurement has been omitted in accordance with section 3.7 of KDB 935210 D05 v01r04.
 : It can be confirmed through input-versus-output signal comparison test that EUT does not alter the input signal.

The tests results included actual loss value for attenuator and cable combination as shown in the table below.

: Input Path

Correction factor table			
Frequency (MHz)	Factor (dB)	Frequency (MHz)	Factor (dB)
600	0.711	800	0.732
650	0.801	850	0.766
700	0.757	900	0.708
750	0.750	950	0.750

: Output Path

Correction factor table			
Frequency (MHz)	Factor (dB)	Frequency (MHz)	Factor (dB)
2	30.241	1 600	32.172
10	29.563	1 700	32.084
30	29.540	1 800	32.100
50	29.587	1 900	32.179
100	29.734	2 000	32.342
200	29.992	2 100	32.497
300	30.423	2 200	32.529
400	30.673	2 300	32.602
500	30.866	2 400	32.766
600	31.018	2 500	32.836
700	31.158	2 600	33.004
800	31.216	2 700	32.788
900	31.263	3 000	33.437
1 000	31.331	4 000	34.259
1 100	31.436	5 000	34.441
1 200	31.716	6 000	34.988
1 300	31.787	7 000	35.917
1 400	31.906	8 000	35.966
1 500	31.987	9 000	36.684

3.3. MEASUREMENT UNCERTAINTY

Description	Condition	Uncertainty
Radiated Disturbance	9 kHz ~ 30 MHz	± 3.40 dB
	30 MHz ~ 1 GHz	± 4.80 dB
	1 GHz ~ 18 GHz	± 5.70 dB
	18 GHz ~ 40 GHz	± 5.05 dB

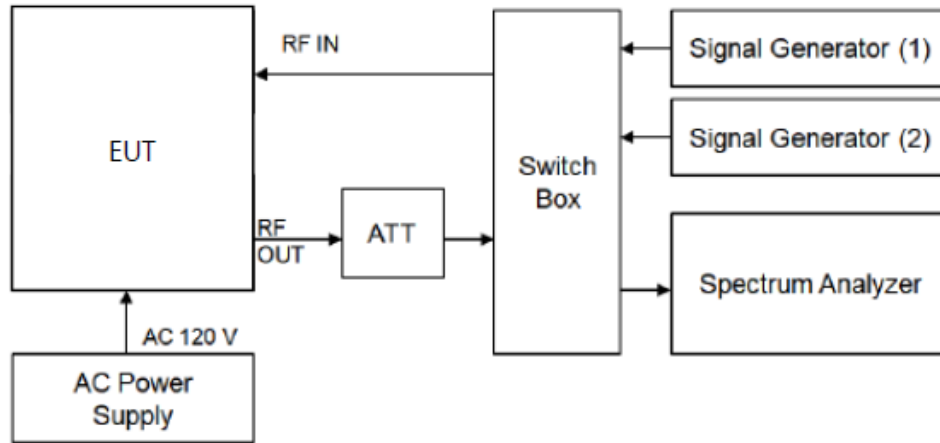
* Coverage factor $k = 2$, Confidence levels of 95 %

3.4. STANDARDS ENVIRONMENTAL TEST CONDITIONS

Temperature	+15 °C to +35 °C
Relative humidity	30 % to 60 %
Air pressure	860 mbar to 1 060 mbar

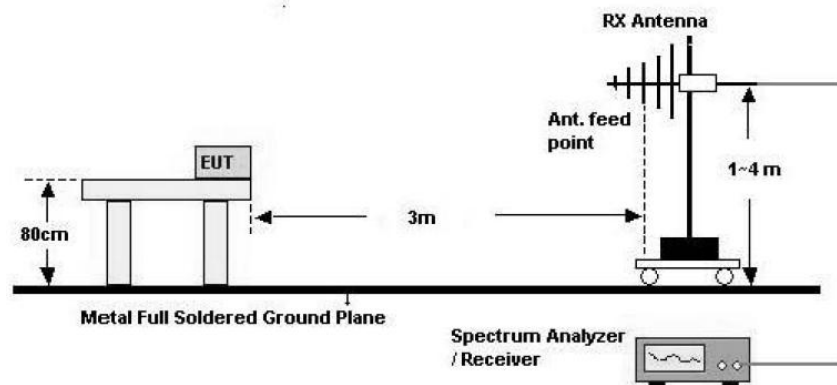
3.5. TEST DIAGRAMS

Conducted Test

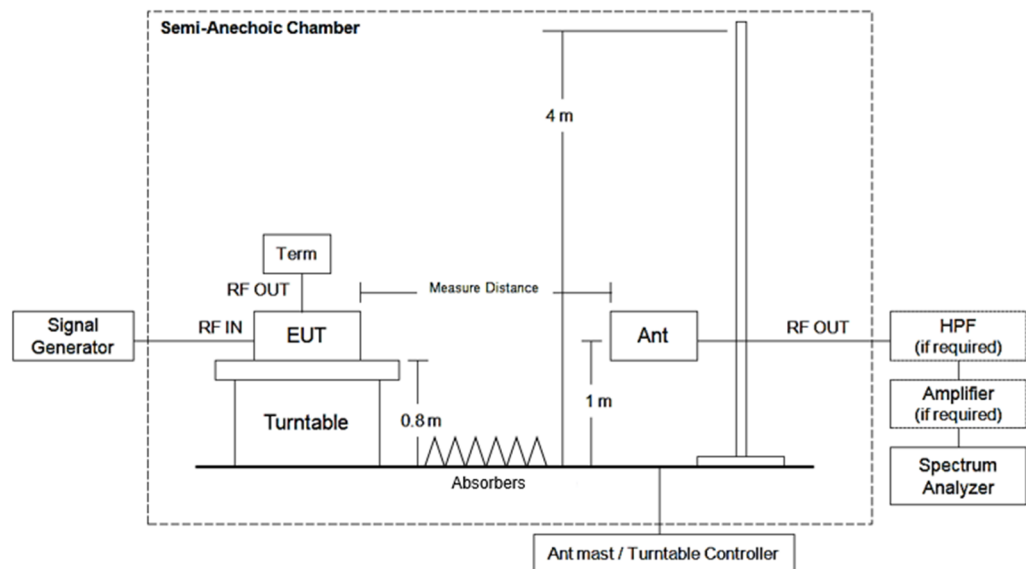


Radiated Test

30 MHz ~ 1 GHz



Above 1 GHz



4. TEST EQUIPMENTS

Equipment	Model	Manufacturer	Serial No.	Due to Calibration	Calibration Interval
MXA Signal Analyzer	N9020A	Agilent	MY52440870	07/27/2022	Annual
MXG Vector Signal Generator	N5182A	Agilent	MY50140312	08/26/2022	Annual
MXG Vector Signal Generator	N5182A	Agilent	MY47070406	01/08/2022	Annual
30 dB Attenuator	WA93-30-33	Weinschel Associates	0202	03/30/2022	Annual
Switch	S46	KEITHLEY	1088024	N/A	N/A
AC, DC Power Supply	PCR4000M	KIKUSUI	VM002269	10/14/2021	Annual
Controller (Antenna mast)	CO3000	Innco system	CO3000-4p	N/A	N/A
Antenna Position Tower	MA4640/800-XP-EP	Innco system	N/A	N/A	N/A
Controller	2090	Emco	060520	N/A	N/A
Turn Table	Turn Table	Ets	N/A	N/A	N/A
Loop Antenna	Loop Antenna	Rohde & Schwarz	1513-333	03/19/2022	Biennial
Hybrid Antenna	VULB 9168	Schwarzbeck	9168-0895	09/04/2022	Biennial
Horn Antenna	BBHA 9120D	Schwarzbeck	9120D-1191	11/18/2021	Biennial
Spectrum Analyzer	FSP (9 kHz ~ 30 GHz)	Rohde & Schwarz	836650/016	09/14/2021	Annual
Spectrum Analyzer	FSV40-N	Rohde & Schwarz	101068-SZ	09/22/2021	Annual
Attenuator (10 dB)	CBLU1183540B-01	CERNEX	N/A	12/23/2021	Annual
56-10	56-10	WEINSCHTEL	N/A	12/23/2021	Annual
Broadband Low Noise Amplifier	CBL06185030	CERNEX	N/A	12/23/2021	Annual
Attenuator (3 dB)	18B-03	Api tech.	N/A	12/23/2021	Annual
Thru	COAXIAL ATTENUATOR	T&M SYSTEM	N/A	12/23/2021	Annual
Power Amplifier	CBL18265035	CERNEX	22966	12/04/2021	Annual
Power Amplifier	CBL26405040	CERNEX	25956	03/23/2022	Annual

Note:

- Equipment listed above that calibrated during the testing period was set for test after the calibration.
- Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.

5. TEST RESULT

5.1. INPUT/OUTPUT POWER AND AMPLIFIER/BOOSTER GAIN

Test Requirement:

§ 2.1046 Measurements required: RF power output.

- (a) For transmitters other than single sideband, independent sideband and controlled carrier radiotelephone, power output shall be measured at the RF output terminals when the transmitter is adjusted in accordance with the tune-up procedure to give the values of current and voltage on the circuit elements specified in § 2.1033(c)(8). The electrical characteristics of the radio frequency load attached to the output terminals when this test is made shall be stated.
- (b) For single sideband, independent sideband, and single channel, controlled carrier radiotelephone transmitters the procedure specified in paragraph (a) of this section shall be employed and, in addition, the transmitter shall be modulated during the test as specified and applicable in § 2.1046 (b) (1-5). In all tests, the input level of the modulating signal shall be such as to develop rated peak envelope power or carrier power, as appropriate, for the transmitter.
- (c) For measurements conducted pursuant to paragraphs (a) and (b) of this section, all calculations and methods used by the applicant for determining carrier power or peak envelope power, as appropriate, on the basis of measured power in the radio frequency load attached to the transmitter output terminals shall be shown. Under the test conditions specified, no components of the emission spectrum shall exceed the limits specified in the applicable rule parts as necessary for meeting occupied bandwidth or emission limitations.

§ 90.219 Use of signal boosters.

- (e) Device Specifications. In addition to the general rules for equipment certification in § 90.203(a)(2) and part 2, subpart J of this chapter, a signal booster must also meet the rules in this paragraph.
 - (1) The output power capability of a signal booster must be designed for deployments providing a radiated power not exceeding 5 Watts ERP for each retransmitted channel.

§ 90.541 Transmitting power and antenna height limits.

The transmitting power and antenna height of base, mobile, portable and control stations operating in the 769-775 MHz and 799-805 MHz frequency bands must not exceed the maximum limits in this section. Power limits are listed in effective radiated power (ERP).

- (a) The transmitting power and antenna height of base stations must not exceed the limits given in paragraph (a) of § 90.635.

§ 90.542 Broadband transmitting power limits.

- (a) The following power limits apply to the 758-768/788-798 MHz band:
- (1) Fixed and base stations transmitting a signal in the 758-768 MHz band with an emission bandwidth of 1 MHz or less must not exceed an ERP of 1000 watts and an antenna height of 305 m HAAT, except that antenna heights greater than 305 m HAAT are permitted if power levels are reduced below 1000 watts ERP in accordance with Table 1 of this section.
 - (2) Fixed and base stations located in a county with population density of 100 or fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, and transmitting a signal in the 758-768 MHz band with an emission bandwidth of 1 MHz or less must not exceed an ERP of 2000 watts and an antenna height of 305 m HAAT, except that antenna heights greater than 305 m HAAT are permitted if power levels are reduced below 2000 watts ERP in accordance with Table 2 of this section.
 - (3) Fixed and base stations transmitting a signal in the 758-768 MHz band with an emission bandwidth greater than 1 MHz must not exceed an ERP of 1000 watts/MHz and an antenna height of 305 m HAAT, except that antenna heights greater than 305 m HAAT are permitted if power levels are reduced below 1000 watts/MHz ERP in accordance with Table 3 of this section.
 - (4) Fixed and base stations located in a county with population density of 100 or fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, and transmitting a signal in the 758-768 MHz band with an emission bandwidth greater than 1 MHz must not exceed an ERP of 2000 watts/MHz and an antenna height of 305 m HAAT, except that antenna heights greater than 305 m HAAT are permitted if power levels are reduced below 2000 watts/MHz ERP in accordance with Table 4 of this section.
 - (5) Licensees of fixed or base stations transmitting a signal in the 758-768 MHz band at an ERP greater than 1000 watts must comply with the provisions set forth in paragraph (b) of this section.
 - (6) Control stations and mobile stations transmitting in the 758-768 MHz band and the 788-798 MHz band are limited to 30 watts ERP.
 - (7) Portable stations (hand-held devices) transmitting in the 758-768 MHz band and the 788-798 MHz band are limited to 3 watts ERP.
 - (8) For transmissions in the 758-768 MHz and 788-798 MHz bands, licensees may employ equipment operating in compliance with either of the following measurement techniques:
 - (i) The maximum composite transmit power shall be measured over any interval of continuous transmission using instrumentation calibrated in terms of RMS-equivalent voltage. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, etc., so as to obtain a true maximum composite measurement for the emission in question over the full bandwidth of the channel.
 - (ii) A Commission-approved average power technique.

Table 1 to § 90.542(a)—Permissible Power and Antenna Heights for Base and Fixed Stations in the 758-768 MHz Band Transmitting a Signal With an Emission Bandwidth of 1 MHz or Less

Antenna height (AAT) in meters (feet)	Effective radiated power (ERP) (watts)
Above 1372 (4500)	65
Above 1220 (4000) To 1372 (4500)	70
Above 1067 (3500) To 1220 (4000)	75
Above 915 (3000) To 1067 (3500)	100
Above 763 (2500) To 915 (3000)	140
Above 610 (2000) To 763 (2500)	200
Above 458 (1500) To 610 (2000)	350
Above 305 (1000) To 458 (1500)	600
Up to 305 (1000)	1000

Table 2 to § 90.542(a)—Permissible Power and Antenna Heights for Base and Fixed Stations in the 758-768 MHz Band Transmitting a Signal With an Emission Bandwidth of 1 MHz or Less

Antenna height (AAT) in meters (feet)	Effective radiated power (ERP) (watts)
Above 1372 (4500)	130
Above 1220 (4000) To 1372 (4500)	140
Above 1067 (3500) To 1220 (4000)	150
Above 915 (3000) To 1067 (3500)	200
Above 763 (2500) To 915 (3000)	280
Above 610 (2000) To 763 (2500)	400
Above 458 (1500) To 610 (2000)	700
Above 305 (1000) To 458 (1500)	1200
Up to 305 (1000)	2000

Table 3 to § 90.542(a)—Permissible Power and Antenna Heights for Base and Fixed Stations in the 758-768 MHz Band Transmitting a Signal With an Emission Bandwidth Greater Than 1 MHz

Antenna height (AAT) in meters (feet)	Effective radiated power (ERP) per MHz (watts/MHz)
Above 1372 (4500)	65
Above 1220 (4000) To 1372 (4500)	70
Above 1067 (3500) To 1220 (4000)	75
Above 915 (3000) To 1067 (3500)	100
Above 763 (2500) To 915 (3000)	140
Above 610 (2000) To 763 (2500)	200
Above 458 (1500) To 610 (2000)	350
Above 305 (1000) To 458 (1500)	600
Up to 305 (1000)	1000

Table 4 to § 90.542(a)—Permissible Power and Antenna Heights for Base and Fixed Stations in the 758-768 MHz Band Transmitting a Signal With an Emission Bandwidth Greater Than 1 MHz

Antenna height (AAT) in meters (feet)	Effective radiated power (ERP) per MHz (watts/MHz)
Above 1372 (4500)	130
Above 1220 (4000) To 1372 (4500)	140
Above 1067 (3500) To 1220 (4000)	150
Above 915 (3000) To 1067 (3500)	200
Above 763 (2500) To 915 (3000)	280
Above 610 (2000) To 763 (2500)	400
Above 458 (1500) To 610 (2000)	700
Above 305 (1000) To 458 (1500)	1200
Up to 305 (1000)	2000

- (b) For base and fixed stations operating in the 758-768 MHz band in accordance with the provisions of paragraph (a)(5) of this section, the power flux density that would be produced by such stations through a combination of antenna height and vertical gain pattern must not exceed 3000 microwatts per square meter on the ground over the area extending to 1 km from the base of the antenna mounting structure.

§ 90.635 Limitations on power and antenna height.

- (a) The effective radiated power and antenna height for base stations may not exceed 1 kilowatt (30 dBw) and 304 m. (1,000 ft.) above average terrain (AAT), respectively, or the equivalent thereof as determined from the Table. These are maximum values, and applicants will be required to justify power levels and antenna heights requested.

**Table—Equivalent Power and Antenna Heights for Base Stations in the 851-869 MHz and 935-940 MHz Bands
Which Have a Requirement for a 32 km (20 mi) Service Area Radius**

Antenna height (ATT) meters (feet)	Effective radiated power (watts)
Above 1,372 (4,500)	65
Above 1,220 (4,000) to 1,372 (4,500)	70
Above 1,067 (3,500) to 1,220 (4,000)	75
Above 915 (3,000) to 1,067 (3,500)	100
Above 763 (2,500) to 915 (3,000)	140
Above 610 (2,000) to 763 (2,500)	200
Above 458 (1,500) to 610 (2,000)	350
Above 305 (1,000) to 458 (1,500)	600
Up to 305 (1,000)	1,000

Test Procedures:

Measurements were in accordance with the test methods section 3.5 of KDB 935210 D05 v01r04.

- a) Adjust the internal gain control of the EUT to the maximum gain for which the equipment certification is being sought. Any EUT attenuation settings shall be set to their minimum value.
- b) Input power levels (uplink and downlink) should be set to maximum input ratings while confirming that the device is not capable of operating in saturation (non-linear mode) at the rated input levels, including during the performance of the input/output power measurements.

3.5.2 Measuring the EUT mean input and output power

- a) Connect a signal generator to the input of the EUT.
- b) Configure to generate the test signal.
- c) The frequency of the signal generator shall be set to the frequency f_0 as determined from out-of-band rejection test.
- d) Connect a spectrum analyzer or power meter to the output of the EUT using appropriate attenuation as necessary.
- e) Set the signal generator output power to a level that produces an EUT output level that is just below the AGC threshold, but not more than 0.5 dB below.
- f) Measure and record the output power of the EUT; use ANSI C63.26-2015 subclause 5.2.4.4.1, for power measurement.

- g) Remove the EUT from the measurement setup. Using the same signal generator settings, repeat the power measurement at the signal generator port, which was used as the input signal to the EUT, and record as the input power. EUT gain may be calculated as described in 3.5.5.
- h) Repeat steps f) and g) with input signal amplitude set to 3 dB above the AGC threshold level.
- i) Repeat steps e) to h) with the narrowband test signal.
- j) Repeat steps e) to i) for all frequency bands authorized for use by the EUT.

3.5.5 Calculating amplifier, repeater, or industrial booster gain

After the input and output power levels have been measured as described in the preceding subclauses, the gain of the EUT can be determined from:

$$\text{Gain (dB)} = \text{output power (dBm)} - \text{input power (dBm)}.$$

Report the gain for each authorized operating frequency band, and each test signal stimulus.

Measurements were in accordance with the test methods section 4.5 of KDB 935210 D05 v01r04.

4.5.2 Measuring input and output power levels for determining amplifier/booster gain

Apply the same guidance as in 3.5.2 to measure the maximum input and output power levels necessary for computing the mean EUT gain, but with the following modifications:

- a) Configure the signal generator for CW operation, instead of AWGN,
- b) Select the spectrum analyzer positive peak detector, instead of the power averaging (rms) detector,
- c) Activate the max hold function, instead of the trace averaging function,
- d) Use in conjunction with the guidance in 4.5.3.

4.5.3 Power measurement Method 1: using a spectrum or signal analyzer

- a) Set the span to at least 1 MHz.
- b) Set the RBW 100 kHz.
- c) Set the VBW to $\geq 3 \times \text{RBW}$.
- d) Set the detector to PEAK with the trace to MAX HOLD.
- e) Place a marker on the peak of the signal, and record the value as the maximum power.
- f) Repeat step e) but with the EUT in place.
- g) EUT gain may be calculated as described in 4.5.5.

4.5.5 Calculating amplifier, repeater, or industrial booster gain

After the input and output power levels have been measured as described in the preceding subclauses, the gain of the EUT can be determined from:

$$\text{Gain (dB)} = \text{output power (dBm)} - \text{input power (dBm)}.$$

Report the gain for each authorized operating frequency band, and each test signal stimulus.

Test Results:
[Downlink]

Test Band	Frequency (MHz)	Original		Permissive Change		Deviation	
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)
FistNet	765.500000	33.46	2.218	33.11	2.046	0.35	0.172
PS 700	769.003125	33.07	2.028	33.00	1.997	0.07	0.031
PS 800	856.000000	33.56	2.270	33.21	2.096	0.35	0.174

[Uplink]

Test Band	Frequency (MHz)	Original		Permissive Change		Deviation	
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)
FistNet	795.500000	30.48	1.117	30.17	1.040	0.31	0.077
PS 700	804.996875	30.66	1.164	30.20	1.047	0.46	0.117
PS 800	806.003125	30.80	1.202	30.21	1.050	0.59	0.152

* Note: Test data were the worst power signal for each band.

5.2. RADIATED SPURIOUS EMISSIONS

Test Requirements:

§ 2.1053 Measurements required: Field strength of spurious radiation.

- (a) Measurements shall be made to detect spurious emissions that may be radiated directly from the cabinet, control circuits, power leads, or intermediate circuit elements under normal conditions of installation and operation. Curves or equivalent data shall be supplied showing the magnitude of each harmonic and other spurious emission. For this test, single sideband, independent sideband, and controlled carrier transmitters shall be modulated under the conditions specified in paragraph (c) of § 2.1049, as appropriate. For equipment operating on frequencies below 890 MHz, an open field test is normally required, with the measuring instrument antenna located in the far-field at all test frequencies. In the event it is either impractical or impossible to make open field measurements (e.g. a broadcast transmitter installed in a building) measurements will be accepted of the equipment as installed. Such measurements must be accompanied by a description of the site where the measurements were made showing the location of any possible source of reflections which might distort the field strength measurements. Information submitted shall include the relative radiated power of each spurious emission with reference to the rated power output of the transmitter, assuming all emissions are radiated from halfwave dipole antennas.
- (b) The measurements specified in paragraph (a) of this section shall be made for the following equipment:
 - (1) Those in which the spurious emissions are required to be 60 dB or more below the mean power of the transmitter.
 - (2) All equipment operating on frequencies higher than 25 MHz.
 - (3) All equipment where the antenna is an integral part of, and attached directly to the transmitter.
 - (4) Other types of equipment as required, when deemed necessary by the Commission.

Test Procedures:

Because KDB 935210 D05 procedure does not provide this requirement, measurements were in accordance with the test methods section 5.5 of ANSI C63.26-2015

- a) Place the EUT in the center of the turntable. The EUT shall be configured to transmit into the standard non-radiating load (for measuring radiated spurious emissions), connected with cables of minimal length unless specified otherwise. If the EUT uses an adjustable antenna, the antenna shall be positioned to the length that produces the worst case emission at the fundamental operating frequency.
- b) Each emission under consideration shall be evaluated:
 - 1) Raise and lower the measurement antenna in accordance 5.5.2, as necessary to enable detection of the maximum emission amplitude relative to measurement antenna height.
 - 2) Rotate the EUT through 360° to determine the maximum emission level relative to the axial position.
 - 3) Return the turntable to the azimuth where the highest emission amplitude level was observed.
 - 4) Vary the measurement antenna height again through 1 m to 4 m again to find the height associated with the maximum emission amplitude.

- 5) Record the measured emission amplitude level and frequency using the appropriate RBW.
- c) Repeat step b) 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.

Test Result:

Original		Permissive Change	
Frequency (MHz)	Result (dBm/m)	Frequency (MHz)	Result (dBm/m)
No Critical Peaks Found		No Critical Peaks Found	

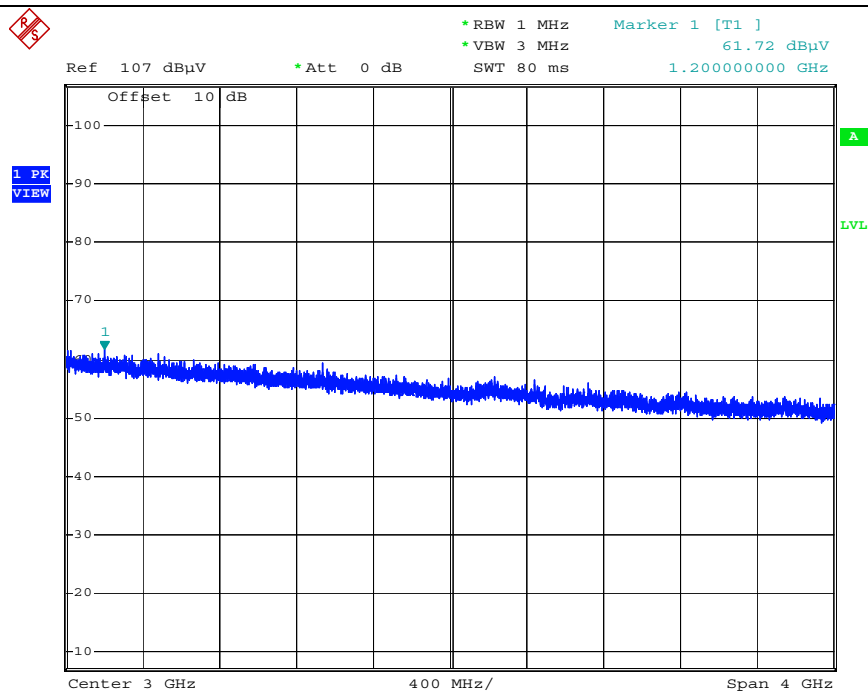
Note1. We have done horizontal and vertical polarization in detecting antenna.

Note2. The amplitude of the spurious domain emission attenuated by more than 20 dB over the permissible value was not recorded according to ANSI C63.26, clause 5.1.1., c).

Note3. Test data were only the worst case.

Plot data of radiated spurious emissions

Downlink



Date: 6.SEP.2021 11:02:30

Note : Only the worst case plots for Radiated Spurious Emissions.

6. Annex A_EUT AND TEST SETUP PHOTO

Please refer to test setup photo file no. as follows;

No.	Description
1	HCT-RF-2109-FC037-P