

# FCC Test Report

**Report No.:** 2405Z107559EB

**Applicant:** Zhuhai Glory Technology Co., Ltd

**Address:** 8F, Bldg 7, No. 178 Dingxing Road, Tangjiawan Town, Zhuhai, Guangdong, China

**Product Name:** WIRELESS NETWORK VIDEO RECORDER

**Product Model:** GLH-1008HR

**Multiple Models:** N/A

**Trade Mark:** N/A

**FCC ID:** 2BMPT-H1008HR

**Standards:** FCC CFR Title 47 Part 15C (§15.247)

**Test Date:** 2024-12-05 to 2025-02-13

**Test Result:** Complied

**Report Date:** 2025-02-17

**Reviewed by:**

*Frank Yin*

**Approved by:**

*Jacob Kong*

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Project Engineer

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Jacob Kong  
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**Prepared by:**

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4. The information marked “#” is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report. Customer model name, addresses, names, trademarks etc. are included.

## Revision History

Version No.	Issued Date	Description
00	2025-02-17	<i>Original</i>

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# 1 General Information

## 1.1 Client Information

Applicant:	Zhuhai Glory Technology Co., Ltd
Address:	8F, Bldg 7, No. 178 Dingxing Road, Tangjiawan Town, Zhuhai, Guangdong, China
Manufacturer:	Zhuhai Glory Technology Co., Ltd
Address:	8F, Bldg 7, No. 178 Dingxing Road, Tangjiawan Town, Zhuhai, Guangdong, China

## 1.2 Product Description of EUT

The EUT is WIRELESS NETWORK VIDEO RECORDER that contains Wi-Fi HaLow radio, this report covers the full testing of the Wi-Fi HaLow radio.

Sample Serial Number	2V9R-1 for CE&RE test, 2V9R-2 for RF test conducted test (assigned by WATC)
Sample Received Date	2024-12-02
Sample Status	Good Condition
Frequency Range	903.5-926.5MHz for 802.11ah(1MHz channel bandwidth) 905-925MHz for 802.11ah(2MHz channel bandwidth) 906-926MHz for 802.11ah(4MHz channel bandwidth) 908-924MHz for 802.11ah(8MHz channel bandwidth)
Maximum Conducted Peak Output Power	23.44dBm
Modulation Technology	OFDM
Spatial Streams	1T1R
Antenna Gain <sup>#</sup>	2.45dBi(It is provided by the applicant.)
Power Supply	DC 12V from AC Adapter
Adapter Information	N/A
Modification	Sample No Modification by the test lab

## 1.3 Antenna information

<b>15.203 requirement:</b>
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.
<b>Device Antenna information:</b>
The Wi-Fi antenna is an external antenna which with unique antenna connector. Please see product external photos for details.

## 1.4 Measurement Uncertainty

Parameter	Expanded Uncertainty (Confidence of 95%(U = 2Uc(y)))	
AC Power Lines Conducted Emissions	$\pm 3.14\text{dB}$	
Emissions, Radiated	Below 30MHz	$\pm 2.78\text{dB}$
	Below 1GHz	$\pm 4.84\text{dB}$
	Above 1GHz	$\pm 5.44\text{dB}$
Emissions, Conducted	$1.75\text{dB}$	
Conducted Power	$0.74\text{dB}$	
Frequency Error	$150\text{Hz}$	
Bandwidth	$0.34\%$	
Power Spectral Density	$0.74\text{dB}$	

**Note:** The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

## 1.5 Laboratory Location

World Alliance Testing & Certification (Shenzhen) Co., Ltd

No. 1002, East Block, Laobing Building, Xingye Road 3012, Xixiang street, Bao'an District, Shenzhen, Guangdong, People's Republic of China

Tel: +86-755-29691511, Email: [qa@wutc.com.cn](mailto:qa@wutc.com.cn)

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 463912, the FCC Designation No. : CN5040.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0160.

## 1.6 Test Methodology

FCC CFR 47 Part 2

FCC CFR 47 Part 15

KDB 558074 D01 15.247 Meas Guidance v05r02

ANSI C63.10-2013

Unless otherwise stated there are no any additions to, deviations, or exclusions from the method

## 2 Description of Measurement

### 2.1 Test Configuration

Operating channels: (903.5MHz-926.5MHz, 1MHz bandwidth)					
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
1	903.5	9	911.5	17	919.5
2	904.5	10	912.5	18	920.5
3	905.5	11	913.5	19	921.5
4	906.5	12	914.5	20	922.5
5	907.5	13	915.5	21	923.5
6	908.5	14	916.5	22	924.5
7	909.5	15	917.5	23	925.5
8	910.5	16	918.5	24	926.5

According to ANSI C63.10-2013 chapter 5.6.1 Table 11 requirement, select lowest channel, middle channel, and highest channel in the frequency range in which device operates for testing. The detailed frequency points are as follows:

Lowest channel		Middle channel		Highest channel	
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
1	903.5	12	914.5	24	926.5

Operating channels: (905MHz-925MHz, 2MHz Bandwidth)					
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
1	905	5	913	9	921
2	907	6	915	10	923
3	909	7	917	11	925
4	911	8	919	/	/

According to ANSI C63.10-2013 chapter 5.6.1 Table 11 requirement, select lowest channel, middle channel, and highest channel in the frequency range in which device operates for testing. The detailed frequency points are as follows:

Lowest channel		Middle channel		Highest channel	
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
1	905	6	915	11	925

Operating channels: (906MHz-926MHz, 4MHz Bandwidth)					
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
1	906	3	914	5	922
2	910	4	918	6	926

According to ANSI C63.10-2013 chapter 5.6.1 Table 11 requirement, select lowest channel, middle channel, and highest channel in the frequency range in which device operates for testing. The detailed frequency points are as follows:

Lowest channel		Middle channel		Highest channel	
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
1	906	3	914	6	926

<b>Operating channels:(908MHz-924MHz, 8MHz Bandwidth)</b>					
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
1	908	2	916	3	924
According to ANSI C63.10-2013 chapter 5.6.1 Table 11 requirement, select lowest channel, middle channel, and highest channel in the frequency range in which device operates for testing. The detailed frequency points are as follows:					
Lowest channel		Middle channel		Highest channel	
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
1	908	2	916	3	924

<b>Test Mode:</b>					
Transmitting mode:	The system was configured for testing in Engineering Mode, which was provided by the manufacturer.				
Exercise software <sup>#</sup> :	SecureCRT				
Mode	Data rate	<b>Power Level Setting<sup>#</sup></b>			
		Low Channel	Middle Channel	High Channel	
802.11ah(1MHz BW)	MCS0	8	8	8	
802.11ah(2MHz BW)	MCS0	8	8	8	
802.11ah(4MHz BW)	MCS0	9	9	9	
802.11ah(8MHz BW)	MCS0	11	11	11	

Note: The exercise software and the maximum power setting that provided by manufacturer.

<b>Worst-Case Configuration:</b>					
For AC power line conducted emission and radiated emission 9kHz-30MHz was performed with the EUT transmits at the channel with highest output power as worst-case scenario.					
For radiated emission 30MHz-1GHz was performed with the EUT transmits at the mode with highest output power as worst-case scenario.					
For radiated emissions below 30MHz, three antenna orientations (parallel, perpendicular, ground-parallel) were tested, only record the worse case test data in report.					

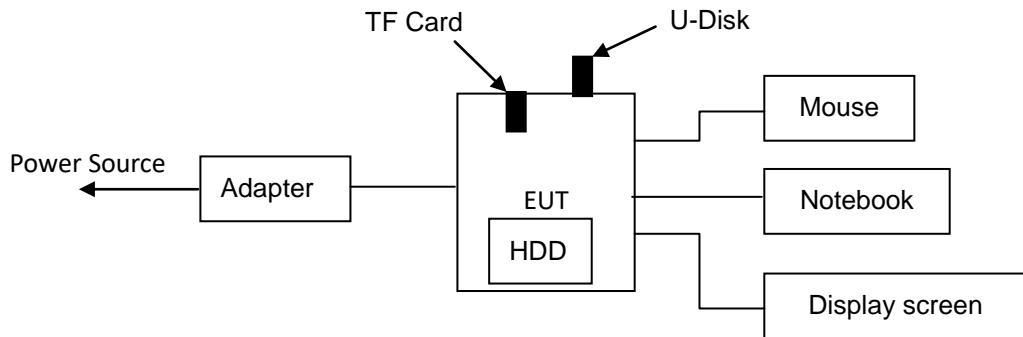
## 2.2 Test Auxiliary Equipment

Manufacturer	Description	Model	Serial Number
unknown	HDD	unknown	unknown
unknown	Display screen	unknown	unknown
unknown	AC adapter	unknown	unknown
unknown	U-Disk	unknown	unknown
unknown	TF Card	unknown	unknown
DELL	Notebook	unknown	unknown
unknown	Mouse	unknown	unknown

## 2.3 Interconnecting Cables

Manufacturer	Description	Length(m)	From	To
unknown	DC cable	1.2	Adapter	EUT
Unknown	HDMI Cable (shielding, with Magnetic ring)	1.5	EUT	Display screen
unknown	RJ45 Cable	10	EUT	Notebook
Unknown	USB Cable	1.5	EUT	Display screen

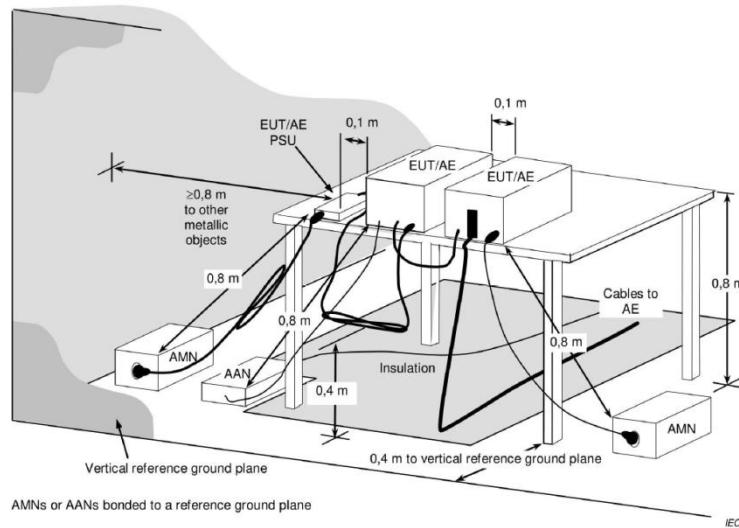
## 2.4 Block Diagram of Connection between EUT and AE



*Note: for reference only, the actual connection setup used for testing please refer to the test photos.*

## 2.5 Test Setup

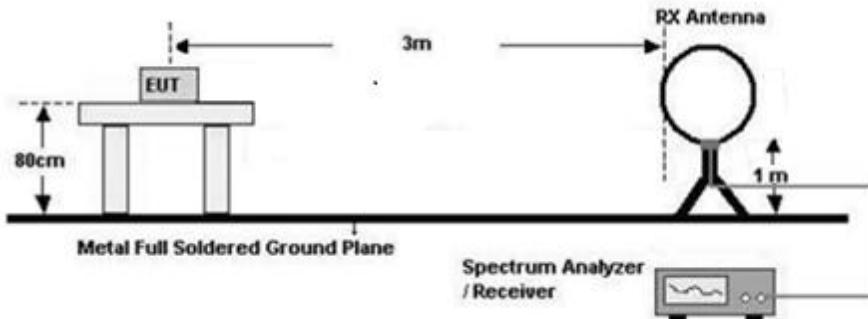
### 1) Conducted emission measurement:



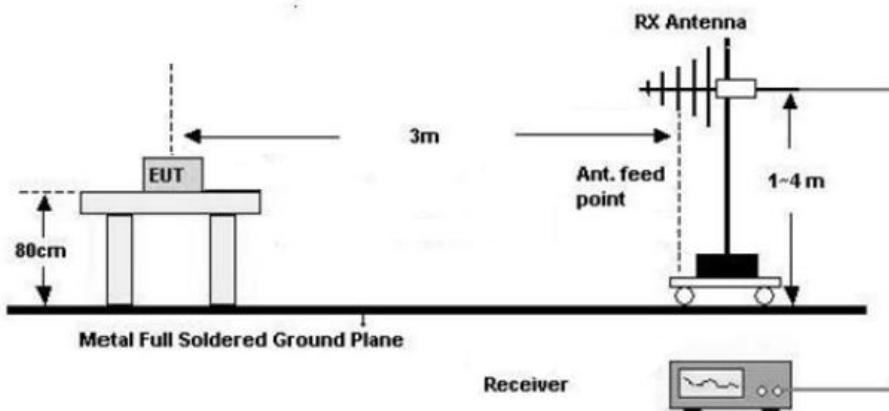
**Note:** The 0.8 m distance specified between EUT/AE/PSU and AMN/AAN, is applicable only to the EUT being measured. If the device is AE then it shall be >0.8 m.

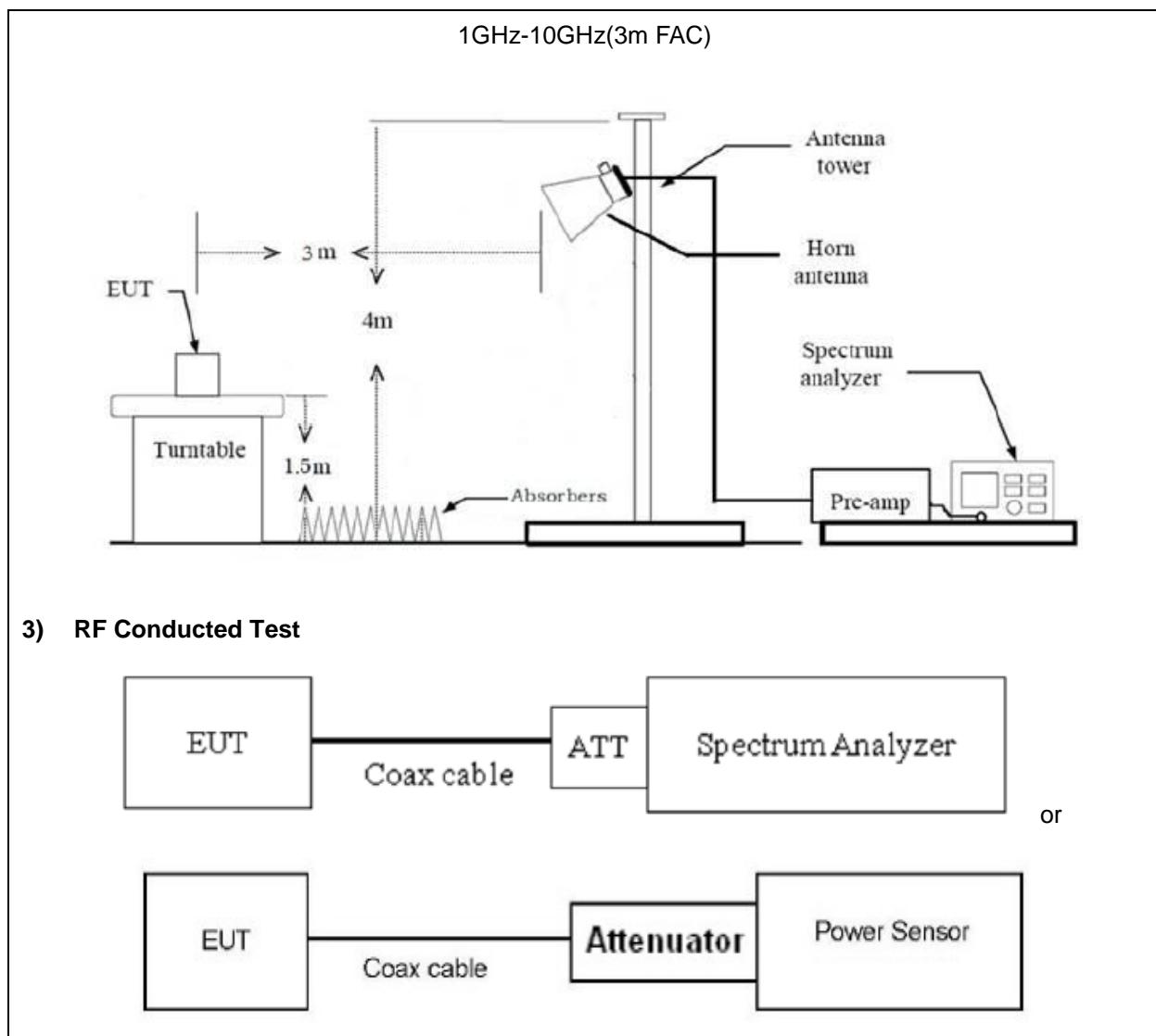
### 2) Radiated emission measurement:

Below 30MHz (3m SAC)



30MHz-1GHz (3m SAC)





## 2.6 Test Procedure

### Conducted emission:

1. The E.U.T is placed on a non-conducting table 40cm from the vertical ground plane and 80cm above the horizontal ground plane (Please refer to the block diagram of the test setup and photographs).
2. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.
3. Line conducted data is recorded for both Line and Neutral

### Radiated Emission Procedure:

#### a) For below 30MHz

1. All measurements were made at a test distance of 3 m. The measured data was extrapolated from the test distance (3m) to the specification distance (300 m from 9-490 kHz and 30 m from 490 kHz- 30 MHz) to clearly show the relative levels of fundamental and spurious emissions and demonstrate compliance with the requirement that the level of any spurious emissions be below the level of the intentionally transmitted signal. The extrapolation factor for the limits were  $40 * \log$  (test distance /

specification distance).

2. Loop antenna use, investigation was done on the three antenna orientations (parallel, perpendicular, ground-parallel)
3. The RBW/VBW of receiver is set to 200Hz/1kHz for 9kHz to 150kHz range, to 9kHz/30kHz for 150kHz to 30MHz range for scan Peak emission, 200Hz/9kHz IF BW was used for final measurement in the Quasi-peak or average detection mode for frequency range 9~150kHz/150kHz~30MHz respectively.
4. If the Peak emission complies with the QP limit, then perform final measurement is optional.

**b) For 30MHz-1GHz:**

1. The EUT was placed on the tabletop of a rotating table 0.8 m the ground at a 3 m semi anechoic chamber. The measurement distance from the EUT to the receiving antenna is 3 m.
2. EUT works in each mode of operation that needs to be tested. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations.
3. The RBW/VBW of receiver is set to 100kHz/300kHz for scan Peak emission, 120kHz IF BW was used for final measurement in the Quasi-peak detection mode.
4. If the Peak emission complies with the QP limit, then perform final measurement is optional.

**c) For above 1GHz:**

1. The EUT was placed on the tabletop of a rotating table 1.5 m the ground at a 3 m fully anechoic room. The measurement distance from the EUT to the receiving antenna is 3 m (1-18GHz) and 1.5 m (above 18GHz).
2. EUT works in each mode of operation that needs to be tested, and having the EUT continuously working. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations.
3. The RBW/VBW of spectrum analyzer is set to 1MHz/3MHz for scan Peak emission, for measured average emission, reduce the VBW to 10Hz(for duty cycle $\geq$ 98%), or  $\geq 1/T$ (for duty cycle $<$ 98%). T is minimum transmission duration. (Note: a high VBW (for example 1kHz, not less than 1/T) may be used to scan average emissions to avoid long sweep time.)
4. If the Peak emission complies with the Average limit, then perform average measurement is optional.
5. Open the test software to control the test antenna and test turntable. Perform the test, save the test results, and export the test data.

**RF Conducted Test:**

1. The antenna port of EUT was connected to the RF port of the test equipment (Power Meter or Spectrum analyzer) through Attenuator and RF cable.
2. The cable assembly insertion loss of 8dB (including 6dB Attenuator and 2dB cable) was entered as an offset in the power meter. Note: Actual cable loss was unavailable at the time of testing, therefore a loss of 2dB was assumed as worst case. This was later verified to be true by laboratory. ( if the RF cable provided by client, the cable loss declared by client)
3. The EUT is kept in continuous transmission mode and tested in all modulation modes.

## 2.7 Measurement Method

Description of Test	Measurement Method
AC Line Conducted Emissions	ANSI C63.10-2013 Section 6.2
Maximum Conducted Output Power	ANSI C63.10-2013 Section 11.9.1.3
Power Spectral Density	ANSI C63.10-2013 Section 11.10.2
6 dB Emission Bandwidth	ANSI C63.10-2013 Section 11.8.1
99% Occupied Bandwidth	ANSI C63.10-2013 Section 6.9.3
100kHz Bandwidth of Frequency Band Edge	ANSI C63.10-2013 Section 6.10
Radiated emission	ANSI C63.10-2013 Section 11.11&11.12.1
Duty Cycle	ANSI C63.10-2013 Section 11.6

## 2.8 Measurement Equipment

Manufacturer	Description	Model	Management No.	Calibration Date	Calibration Due Date
Conducted Emission Test					
ROHDE& SCHWARZ	EMI TEST RECEIVER	ESR	101817	2024/6/4	2025/6/3
R&S	LISN	ENV216	101748	2024/6/4	2025/6/3
N/A	Coaxial Cable	NO.12	N/A	2024/6/4	2025/6/3
Farad	Test Software	EZ-EMC	Ver. EMEC-3A1	/	/
Radiated Emission Test					
R&S	EMI test receiver	ESR3	102758	2024/6/4	2025/6/3
ROHDE& SCHWARZ	SPECTRUM ANALYZER	FSV40-N	101608	2024/6/4	2025/6/3
SONOMA INSTRUMENT	Low frequency amplifier	310	186014	2024/6/4	2025/6/3
A.H. Systems	PREAMPLIFIER	PAM-0118P	531	2024/6/4	2025/6/3
BACL	Loop Antenna	1313-1A	4010611	2024/2/7	2027/2/6
SCHWARZBECK	Log - periodic wideband antenna	VULB 9163	9163-872	2023/7/7	2026/7/6
Astro Antenna Ltd	Horn antenna	AHA-118S	3015	2023/7/6	2026/7/5
Oulitong	Band Reject Filter	OBSF-902-928-4 OS	OE02104362	2024/6/4	2025/6/3
N/A	Coaxial Cable	NO.9	N/A	2024/6/4	2025/6/3
N/A	Coaxial Cable	NO.15	N/A	2024/6/4	2025/6/3
N/A	Coaxial Cable	NO.16	N/A	2024/6/4	2025/6/3
N/A	Coaxial Cable	NO.17	N/A	2024/6/4	2025/6/3
Audix	Test Software	E3	191218 V9	/	/
RF Conducted Test					
ROHDE& SCHWARZ	SPECTRUM ANALYZER	FSU-26	200680/026	2024/6/4	2025/6/3
ANRITSU	USB Power Sensor	MA24418A	12620	2024/6/4	2025/6/3
MEEA	6dB attenuator	603-06-1	N/A	2024/6/4	2025/6/3

Note: All equipment is calibrated with valid calibrations. Each measurement data is traceable to the national or International standards.

### 3 Test Results

#### 3.1 Test Summary

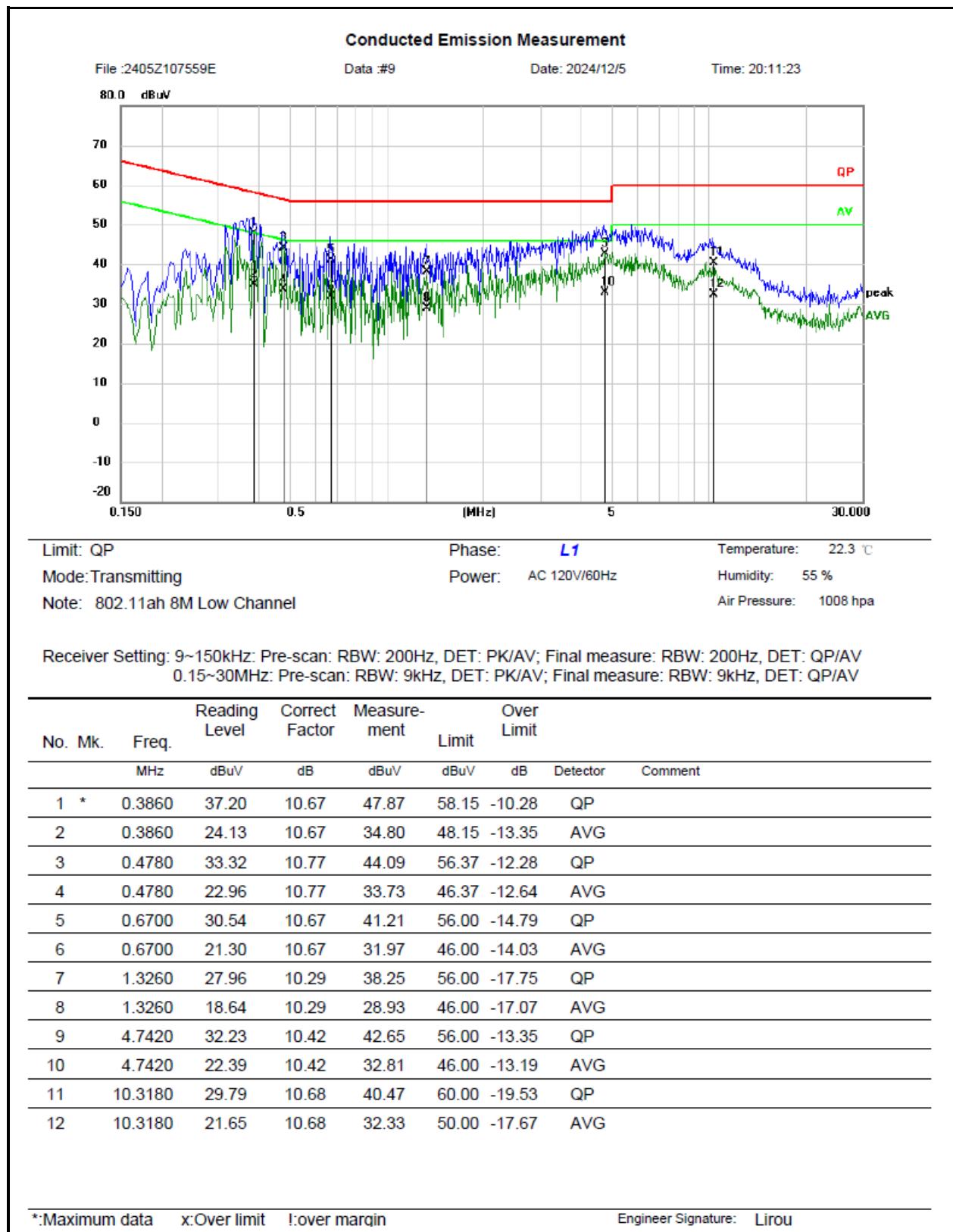
FCC Rules	Description of Test	Result
§15.203	Antenna Requirement	Compliance
§15.207 (a)	AC Line Conducted Emissions	Compliance
§15.247(b)(3)	Maximum Conducted Output Power	Compliance
§15.247(e)	Power Spectral Density	Compliance
§15.247 (a)(2)	6 dB Emission Bandwidth	Compliance
-	99% Occupied Bandwidth	Report only
§15.247(d)	100kHz Bandwidth of Frequency Band Edge	Compliance
§15.205, §15.209, §15.247(d)	Radiated emission	Compliance
-	Duty Cycle	Report only

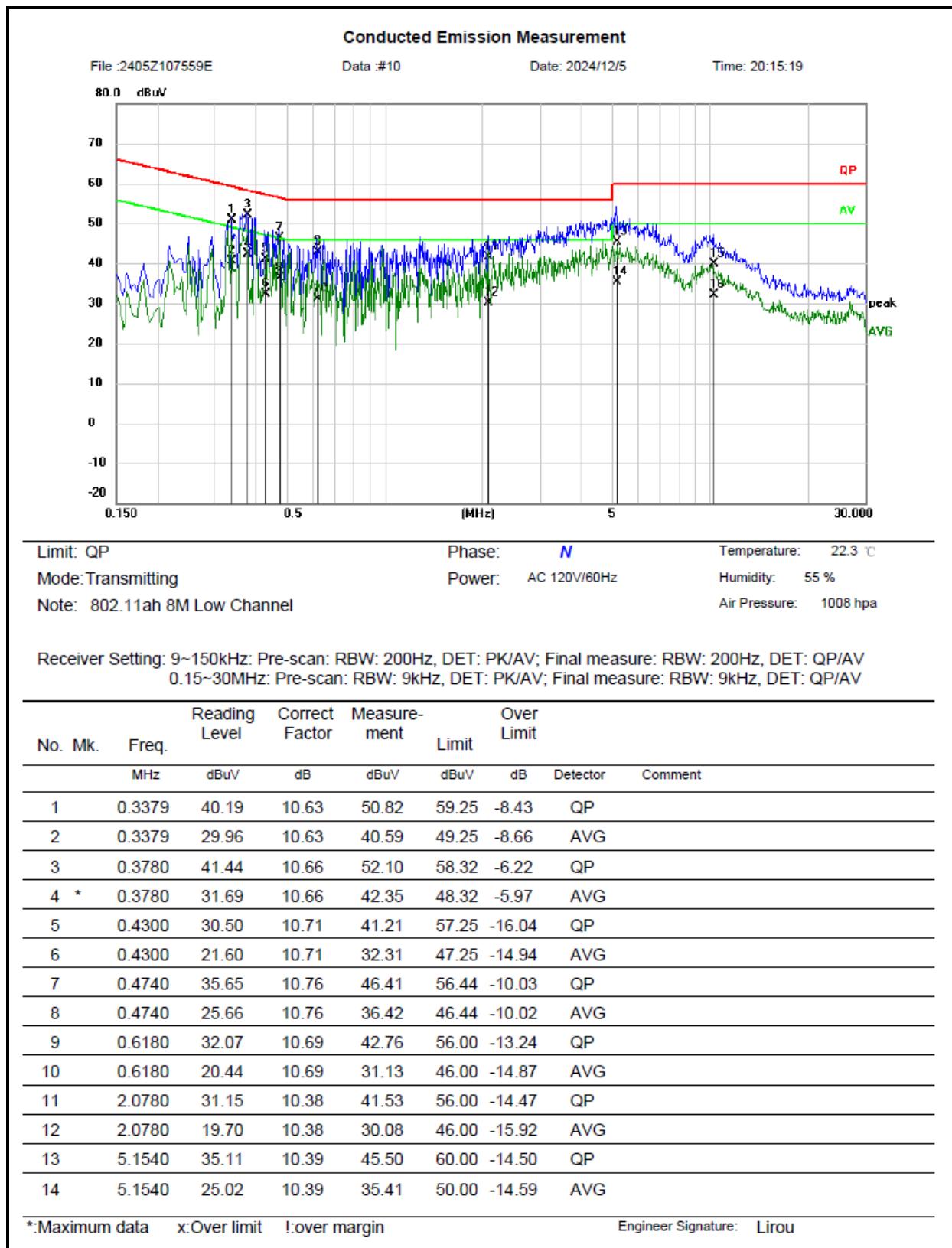
### 3.2 Limit

Test items	Limit
AC Line Conducted Emissions	See details §15.207 (a)
Conducted Output Power	For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt.
6dB Emission Bandwidth	The minimum 6 dB bandwidth shall be at least 500 kHz.
Power Spectral Density	For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.
Spurious Emissions, 100kHz Bandwidth of Frequency Band Edge	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

### 3.3 AC Line Conducted Emissions Test Data

Test Date:	2024-12-05	Test By:	Lirou Li
Environment condition:	Temperature: 22.3°C; Relative Humidity: 55%; ATM Pressure: 100.8kPa		





Limit: QP  
 Mode: Transmitting  
 Note: 802.11ah 8M Low Channel

Phase: **N**  
 Power: AC 120V/60Hz  
 Temperature: 22.3 °C  
 Humidity: 55 %  
 Air Pressure: 1008 hpa

Receiver Setting: 9~150kHz: Pre-scan: RBW: 200Hz, DET: PK/AV; Final measure: RBW: 200Hz, DET: QP/AV  
 0.15~30MHz: Pre-scan: RBW: 9kHz, DET: PK/AV; Final measure: RBW: 9kHz, DET: QP/AV

No.	Mk.	Freq.	Reading	Correct	Measure-	Over	Limit	
			Level	Factor	ment			
		MHz	dBuV	dB	dBuV	dB	Detector	Comment
15		10.2580	29.22	10.68	39.90	60.00	-20.10	QP
16		10.2580	21.33	10.68	32.01	50.00	-17.99	AVG

\*:Maximum data   x:Over limit   !:over margin

Engineer Signature: Lirou

**Remark:**

Measurement (dBuV)= Reading Level (dBuV) + Correct Factor(dB)

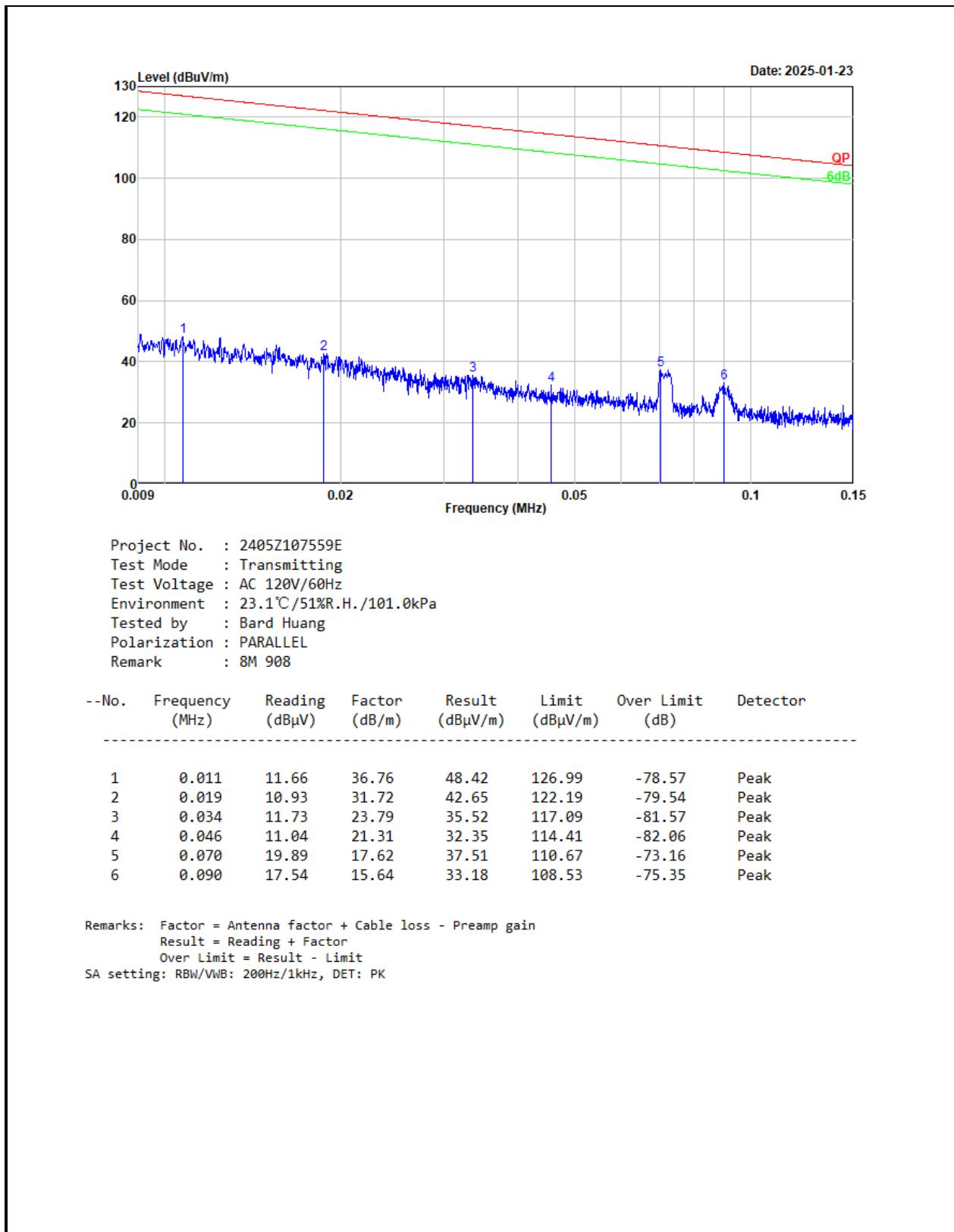
Correct Factor(dB)= LISN Voltage Division Factor (dB)+ Cable loss(dB)

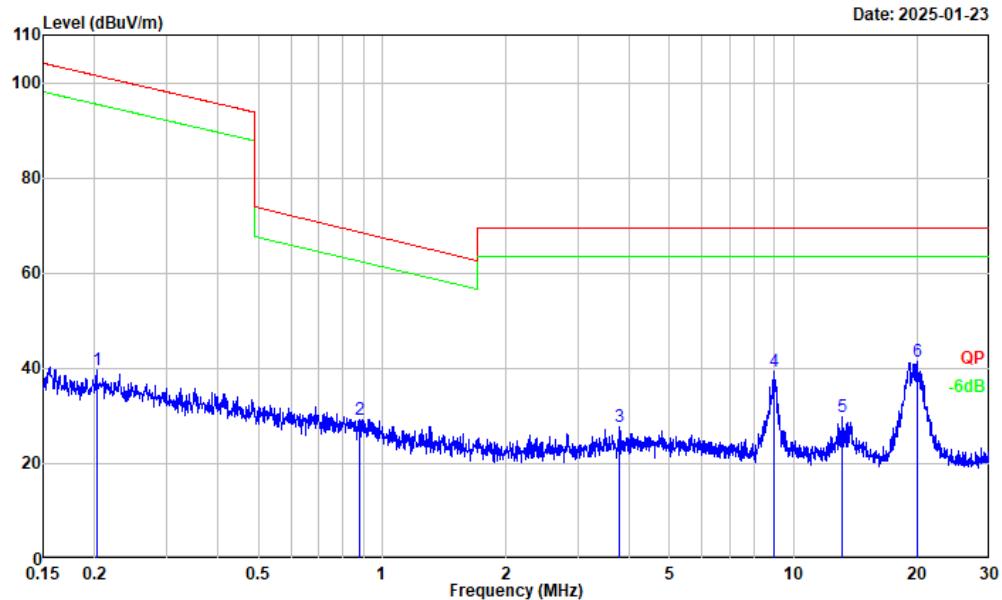
Over Limit = Measurement – Limit

### 3.4 Radiated emission Test Data

9 kHz-30MHz:

Test Date:	2025-01-23	Test By:	Bard Huang
Environment condition:	Temperature: 23.1°C; Relative Humidity:51%; ATM Pressure: 101.0kPa		





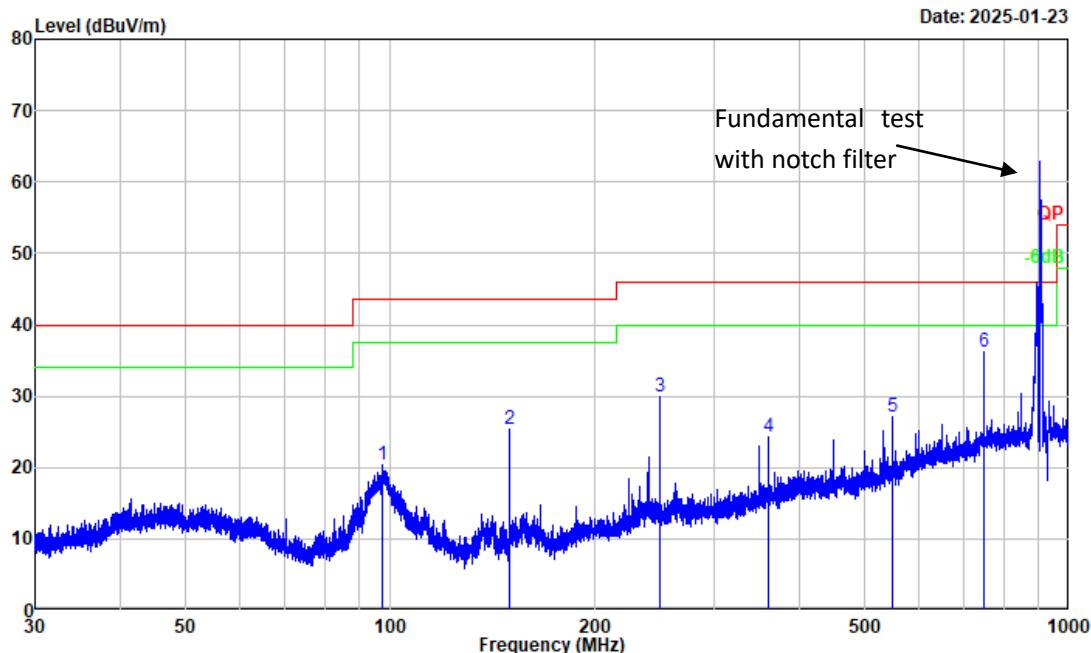
Project No. : 2405Z107559E  
 Test Mode : Transmitting  
 Test Voltage : AC 120V/60Hz  
 Environment : 23.1°C/51%R.H./101.0kPa  
 Tested by : Bard Huang  
 Polarization : PARALLEL  
 Remark : 8M 908

--No.	Frequency (MHz)	Reading (dB $\mu$ V)	Factor (dB/m)	Result (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Over Limit (dB)	Detector
-----							
1	0.203	27.59	12.17	39.76	101.47	-61.71	Peak
2	0.882	27.67	1.69	29.36	68.58	-39.22	Peak
3	3.783	31.38	-3.65	27.73	69.54	-41.81	Peak
4	8.944	42.87	-3.63	39.24	69.54	-30.30	Peak
5	13.170	33.30	-3.43	29.87	69.54	-39.67	Peak
6	19.947	44.48	-3.08	41.40	69.54	-28.14	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain  
 Result = Reading + Factor  
 Over Limit = Result - Limit  
 SA setting: RBW/WB: 9kHz/30kHz, DET: PK

## 30MHz-1GHz:

Test Date:	2025-01-23	Test By:	Bard Huang
Environment condition:	Temperature: 23.1°C; Relative Humidity: 51%; ATM Pressure: 101.0kPa		



Project No. : 2405Z107559E-RF  
 Test Mode : Transmitting  
 Test Voltage : AC 120V/60Hz  
 Environment : 23.1°C/51%R.H./101.0kPa  
 Tested by : Bard Huang  
 Polarization : horizontal  
 Remark : 8M 908MHz

--No.	Frequency (MHz)	Reading (dB $\mu$ V)	Factor (dB/m)	Result (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Over Limit (dB)	Detector
1	97.285	34.81	-14.42	20.39	43.50	-23.11	Peak
2	150.011	42.61	-17.33	25.28	43.50	-18.22	Peak
3	249.972	42.33	-12.37	29.96	46.00	-16.04	Peak
4	359.974	33.83	-9.53	24.30	46.00	-21.70	Peak
5	549.983	33.48	-6.40	27.08	46.00	-18.92	Peak
6	750.108	38.88	-2.66	36.22	46.00	-9.78	Peak

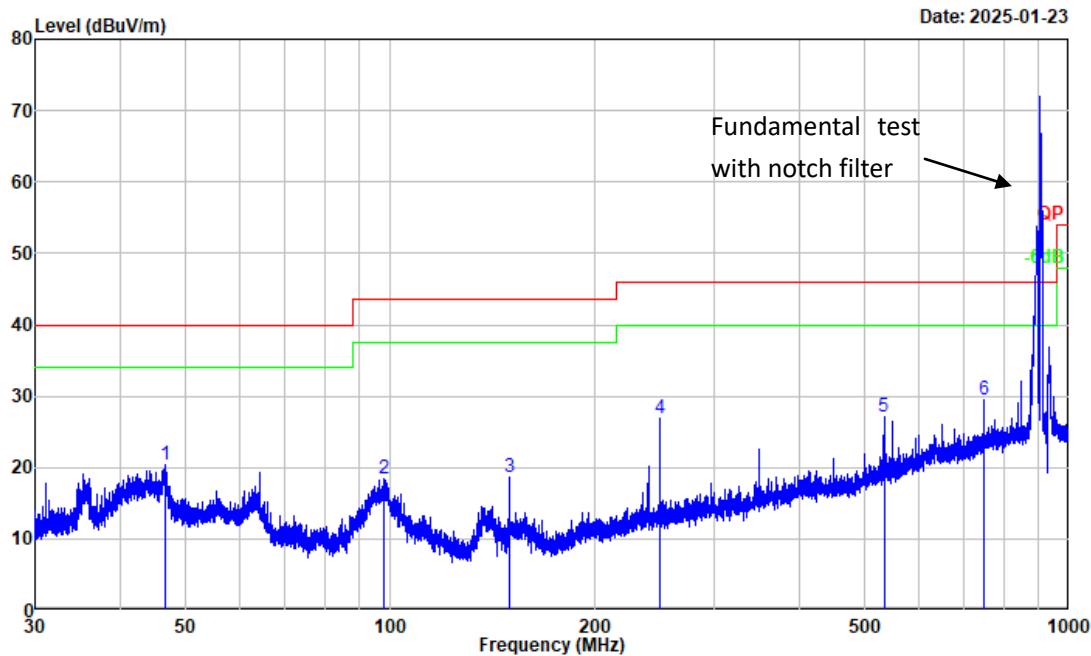
Remarks: Factor = Antenna factor + Cable loss - Preamp gain

Result = Reading + Factor

Over Limit = Result - Limit

SA setting: Pre-scan: RBW/VWB: 100kHz/300kHz, DET: PK

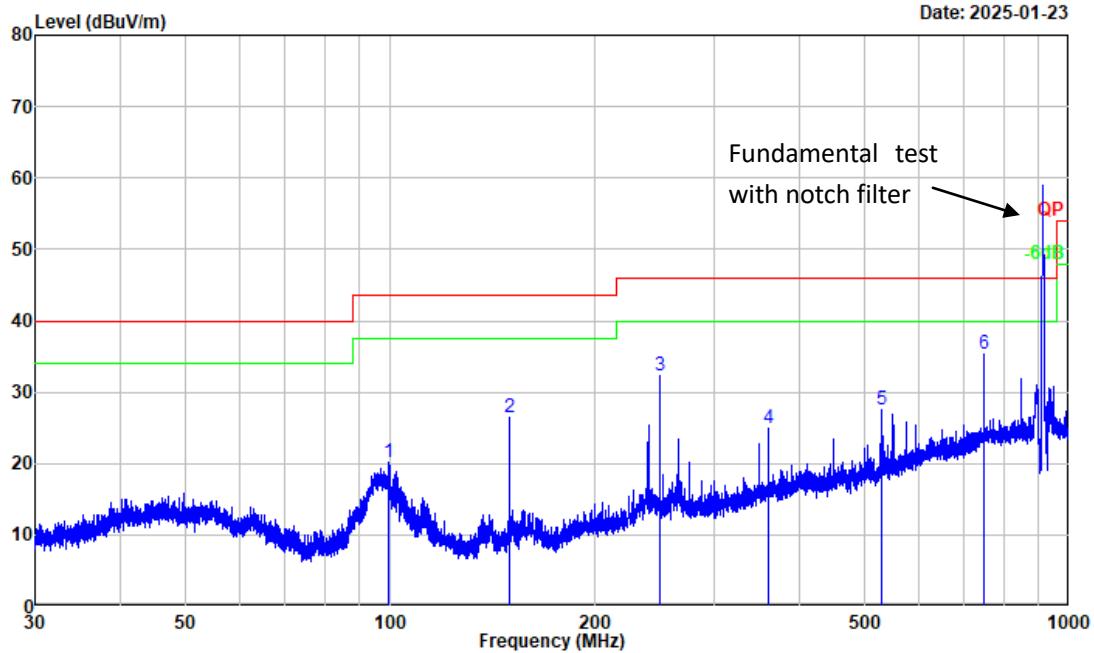
Final measure: RBW: 120kHz, DET: QP



Project No. : 2405Z107559E-RF  
 Test Mode : Transmitting  
 Test Voltage : AC 120V/60Hz  
 Environment : 23.1°C/51%R.H./101.0kPa  
 Tested by : Bard Huang  
 Polarization : vertical  
 Remark : 8M 908MHz

--No.	Frequency (MHz)	Reading (dB $\mu$ V)	Factor (dB/m)	Result (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Over Limit (dB)	Detector
<hr/>							
1	46.564	32.39	-12.09	20.30	40.00	-19.70	Peak
2	97.755	32.84	-14.37	18.47	43.50	-25.03	Peak
3	150.011	36.02	-17.33	18.69	43.50	-24.81	Peak
4	249.972	39.21	-12.37	26.84	46.00	-19.16	Peak
5	533.598	33.76	-6.68	27.08	46.00	-18.92	Peak
6	750.108	32.09	-2.66	29.43	46.00	-16.57	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain  
 Result = Reading + Factor  
 Over Limit = Result - Limit  
 SA setting: Pre-scan: RBW/VWB: 100kHz/300kHz, DET: PK  
 Final measure: RBW: 120kHz, DET: QP



Project No. : 2405Z107559E-RF  
 Test Mode : Transmitting  
 Test Voltage : AC 120V/60Hz  
 Environment : 23.1°C/51%R.H./101.0kPa  
 Tested by : Bard Huang  
 Polarization : horizontal  
 Remark : 8M 916MHz

--No.	Frequency (MHz)	Reading (dB $\mu$ V)	Factor (dB/m)	Result (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Over Limit (dB)	Detector
1	99.354	34.37	-14.17	20.20	43.50	-23.30	Peak
2	150.011	43.76	-17.33	26.43	43.50	-17.07	Peak
3	249.972	44.78	-12.37	32.41	46.00	-13.59	Peak
4	359.974	34.42	-9.53	24.89	46.00	-21.11	Peak
5	528.246	34.33	-6.72	27.61	46.00	-18.39	Peak
6	750.108	38.03	-2.66	35.37	46.00	-10.63	Peak

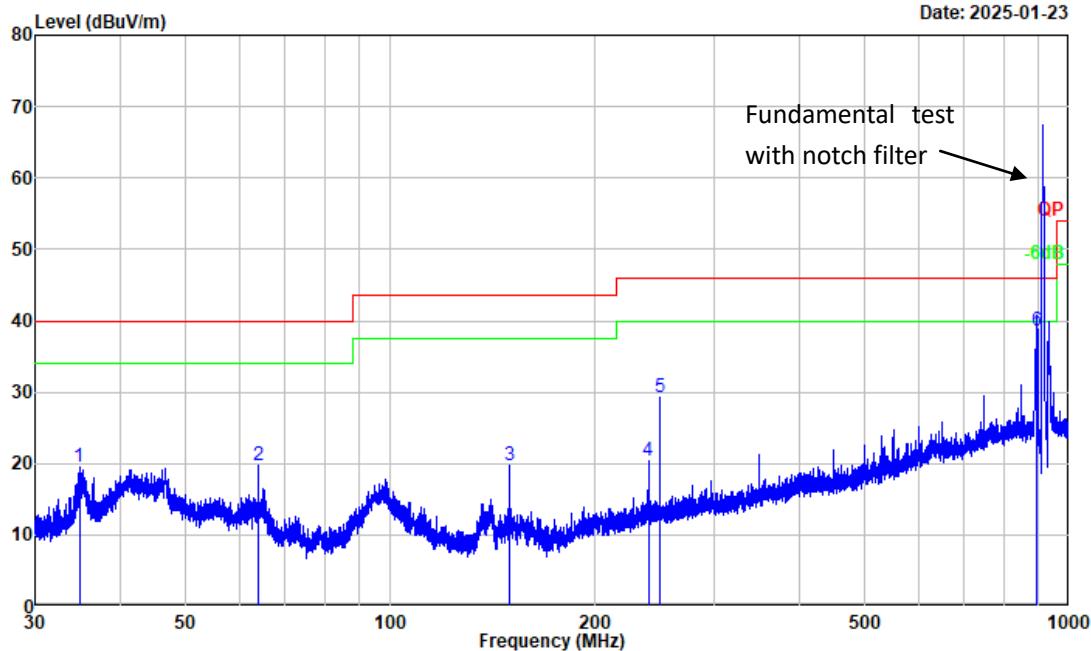
Remarks: Factor = Antenna factor + Cable loss - Preamp gain

Result = Reading + Factor

Over Limit = Result - Limit

SA setting: Pre-scan: RBW/VWB: 100kHz/300kHz, DET: PK

Final measure: RBW: 120kHz, DET: QP



Project No. : 2405Z107559E-RF  
 Test Mode : Transmitting  
 Test Voltage : AC 120V/60Hz  
 Environment : 23.1°C/51%R.H./101.0kPa  
 Tested by : Bard Huang  
 Polarization : vertical  
 Remark : 8M 916MHz

--No.	Frequency (MHz)	Reading (dB $\mu$ V)	Factor (dB/m)	Result (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Over Limit (dB)	Detector
1	34.852	34.29	-14.71	19.58	40.00	-20.42	Peak
2	64.011	33.79	-14.17	19.62	40.00	-20.38	Peak
3	150.011	37.07	-17.33	19.74	43.50	-23.76	Peak
4	239.987	33.03	-12.65	20.38	46.00	-25.62	Peak
5	249.972	41.71	-12.37	29.34	46.00	-16.66	Peak
6	896.211	40.10	-1.44	38.66	46.00	-7.34	QP

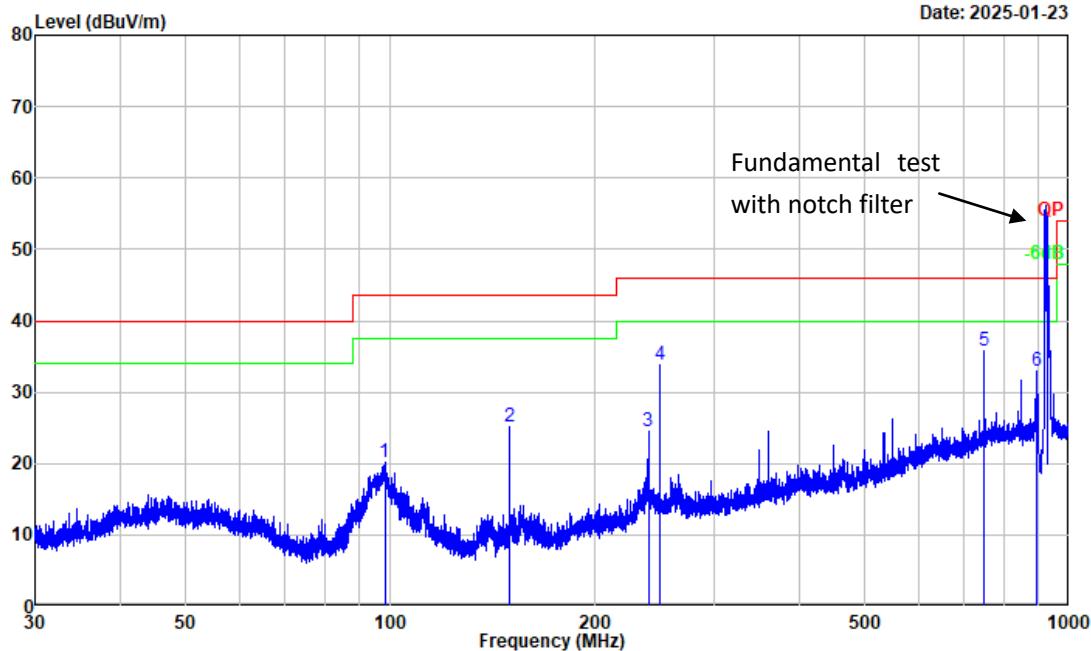
Remarks: Factor = Antenna factor + Cable loss - Preamp gain

Result = Reading + Factor

Over Limit = Result - Limit

SA setting: Pre-scan: RBW/VWB: 100kHz/300kHz, DET: PK

Final measure: RBW: 120kHz, DET: QP



Project No. : 2405Z107559E-RF  
 Test Mode : Transmitting  
 Test Voltage : AC 120V/60Hz  
 Environment : 23.1°C/51%R.H./101.0kPa  
 Tested by : Bard Huang  
 Polarization : horizontal  
 Remark : 8M 924MHz

--No.	Frequency (MHz)	Reading (dB $\mu$ V)	Factor (dB/m)	Result (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Over Limit (dB)	Detector
<hr/>							
1	98.185	34.50	-14.32	20.18	43.50	-23.32	Peak
2	150.011	42.48	-17.33	25.15	43.50	-18.35	Peak
3	239.987	37.19	-12.65	24.54	46.00	-21.46	Peak
4	249.972	46.24	-12.37	33.87	46.00	-12.13	Peak
5	750.108	38.49	-2.66	35.83	46.00	-10.17	Peak
6	896.211	34.36	-1.44	32.92	46.00	-13.08	Peak

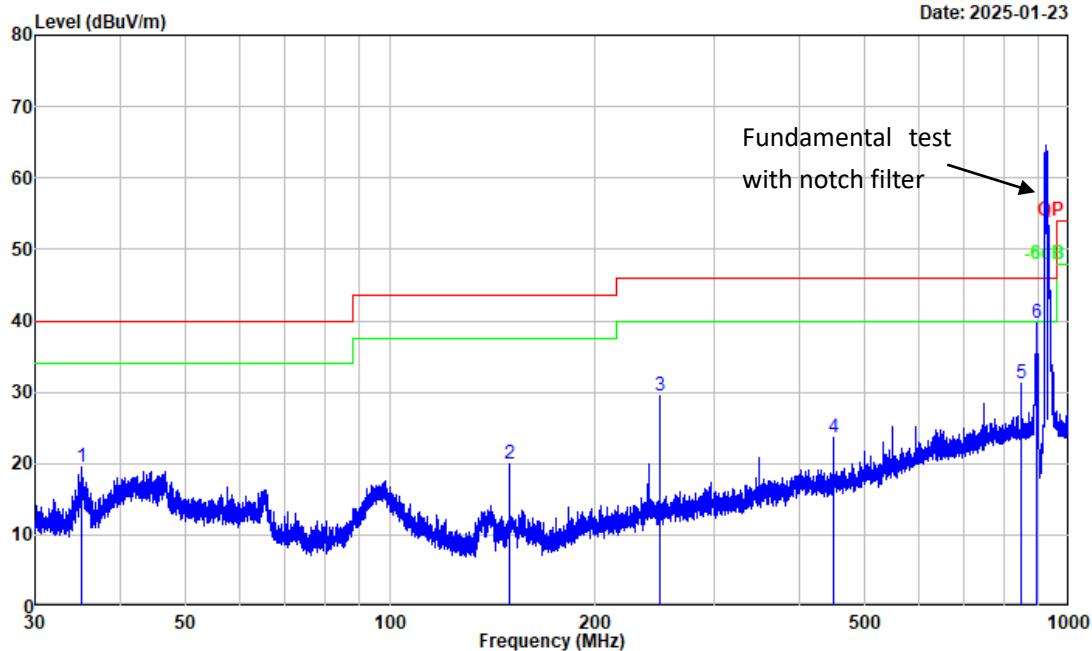
Remarks: Factor = Antenna factor + Cable loss - Preamp gain

Result = Reading + Factor

Over Limit = Result - Limit

SA setting: Pre-scan: RBW/VWB: 100kHz/300kHz, DET: PK

Final measure: RBW: 120kHz, DET: QP



Project No. : 2405Z107559E-RF  
 Test Mode : Transmitting  
 Test Voltage : AC 120V/60Hz  
 Environment : 23.1°C/51%R.H./101.0kPa  
 Tested by : Bard Huang  
 Polarization : vertical  
 Remark : 8M 924MHz

--No.	Frequency (MHz)	Reading (dB $\mu$ V)	Factor (dB/m)	Result (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Over Limit (dB)	Detector
1	35.143	34.18	-14.62	19.56	40.00	-20.44	Peak
2	150.011	37.18	-17.33	19.85	43.50	-23.65	Peak
3	249.972	41.76	-12.37	29.39	46.00	-16.61	Peak
4	450.147	31.91	-8.27	23.64	46.00	-22.36	Peak
5	850.290	33.27	-2.08	31.19	46.00	-14.81	Peak
6	896.211	41.12	-1.44	39.68	46.00	-6.32	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain

Result = Reading + Factor

Over Limit = Result - Limit

SA setting: Pre-scan: RBW/VWB: 100kHz/300kHz, DET: PK

Final measure: RBW: 120kHz, DET: QP

**Above 1GHz:**

<b>Test Date:</b>	2025-01-20	<b>Test By:</b>	Bard Huang
<b>Environment condition:</b>	Temperature: 22.8°C; Relative Humidity:40%; ATM Pressure:101kPa		

Frequency (MHz)	Reading level (dB $\mu$ V)	Polar	Corrected Factor (dB/m)	Corrected Amplitude (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Remark
1M Lowest channel							
1807.000	55.97	horizontal	-3.76	52.21	74.00	-21.79	Peak
1807.000	51.21	vertical	-3.76	47.45	54.00	-6.55	Average
1807.000	66.97	vertical	-3.76	63.21	74.00	-10.79	Peak
1M Middle Channel							
1829.000	43.66	horizontal	-3.83	39.83	54.00	-14.17	Average
1829.000	59.57	horizontal	-3.83	55.74	74.00	-18.26	Peak
1829.000	54.50	vertical	-3.83	50.67	54.00	-3.33	Average
1829.000	71.22	vertical	-3.83	67.39	74.00	-6.61	Peak
1M Highest Channel							
1853.000	55.02	horizontal	-3.91	51.11	74.00	-22.89	Peak
1853.000	50.83	vertical	-3.91	46.92	54.00	-7.08	Average
1853.000	67.24	vertical	-3.91	63.33	74.00	-10.67	Peak
2M Lowest channel							
1810.000	47.67	horizontal	-3.77	43.90	54.00	-10.10	Average
1810.000	57.96	horizontal	-3.77	54.19	74.00	-19.81	Peak
1810.000	50.87	vertical	-3.77	47.10	54.00	-6.90	Average
1810.000	67.23	vertical	-3.77	63.46	74.00	-10.54	Peak
2M Middle Channel							
1830.000	57.75	horizontal	-3.83	53.92	74.00	-20.08	Peak
1830.000	53.89	vertical	-3.83	50.06	54.00	-3.94	Average
1830.000	70.30	vertical	-3.83	66.47	74.00	-7.53	Peak
2M Highest Channel							
1850.000	54.28	horizontal	-3.89	50.39	74.00	-23.61	Peak
1850.000	50.46	vertical	-3.89	46.57	54.00	-7.43	Average
1850.000	67.65	vertical	-3.89	63.76	74.00	-10.24	Peak
4M Lowest channel							
1812.000	53.13	horizontal	-3.77	49.36	74.00	-24.64	Peak
1812.000	48.64	vertical	-3.77	44.87	54.00	-9.13	Average
1812.000	63.71	vertical	-3.77	59.94	74.00	-14.06	Peak
4M Middle Channel							
1828.000	53.38	horizontal	-3.83	49.55	74.00	-24.45	Peak

1828.000	53.02	vertical	-3.83	49.19	54.00	-4.81	Average
1828.000	65.59	vertical	-3.83	61.76	74.00	-12.24	Peak
4M Highest Channel							
1852.000	51.79	horizontal	-3.91	47.88	74.00	-26.12	Peak
1852.000	52.38	vertical	-3.91	48.47	54.00	-5.53	Average
1852.000	64.59	vertical	-3.91	60.68	74.00	-13.32	Peak
8M Lowest channel							
1816.000	50.99	horizontal	-3.78	47.21	74.00	-26.79	Peak
1816.000	48.48	vertical	-3.78	44.70	54.00	-9.30	Average
1816.000	62.62	vertical	-3.78	58.84	74.00	-15.16	Peak
8M Middle Channel							
1832.000	53.61	horizontal	-3.83	49.78	74.00	-24.22	Peak
1832.000	54.24	vertical	-3.83	50.41	54.00	-3.59	Average
1832.000	66.00	vertical	-3.83	62.17	74.00	-11.83	Peak
8M Highest Channel							
1848.000	52.56	horizontal	-3.88	48.68	74.00	-25.32	Peak
1848.000	52.08	vertical	-3.88	48.20	54.00	-5.80	Average
1848.000	63.81	vertical	-3.88	59.93	74.00	-14.07	Peak

Remark:

Corrected Amplitude= Reading level + corrected Factor

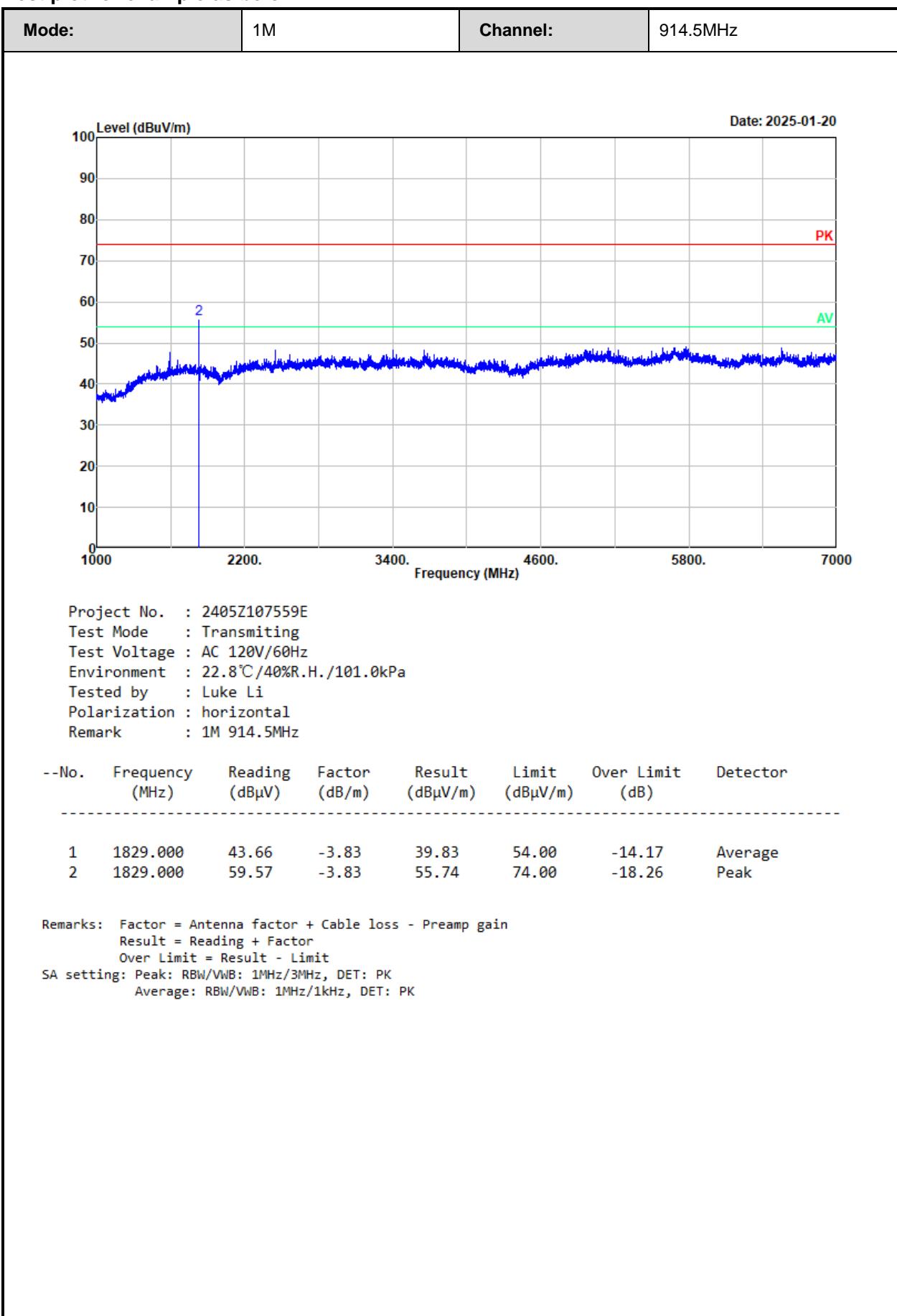
Corrected Factor = Antenna factor + Cable loss – Amplifier gain

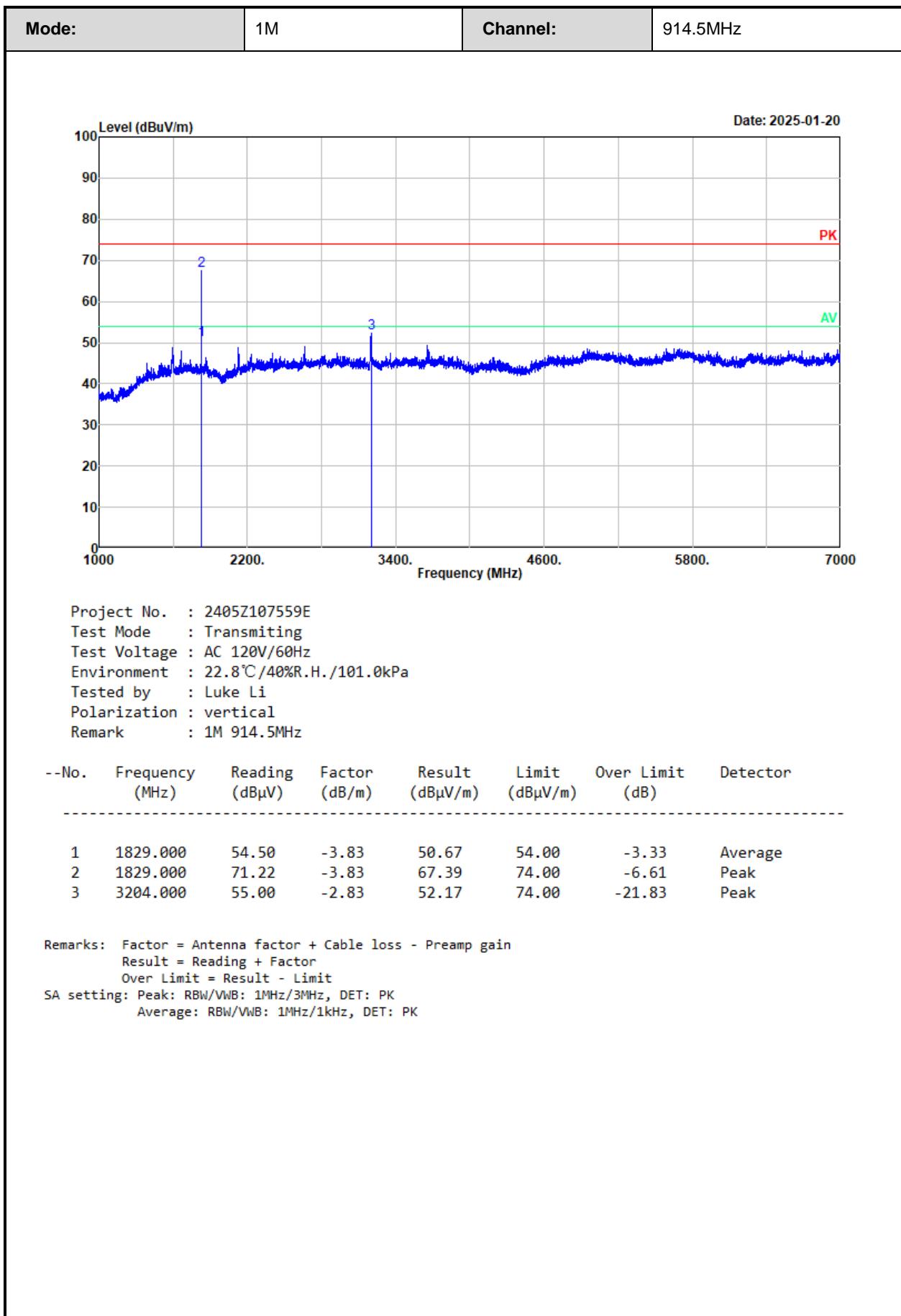
Margin = Corrected Amplitude – Limit

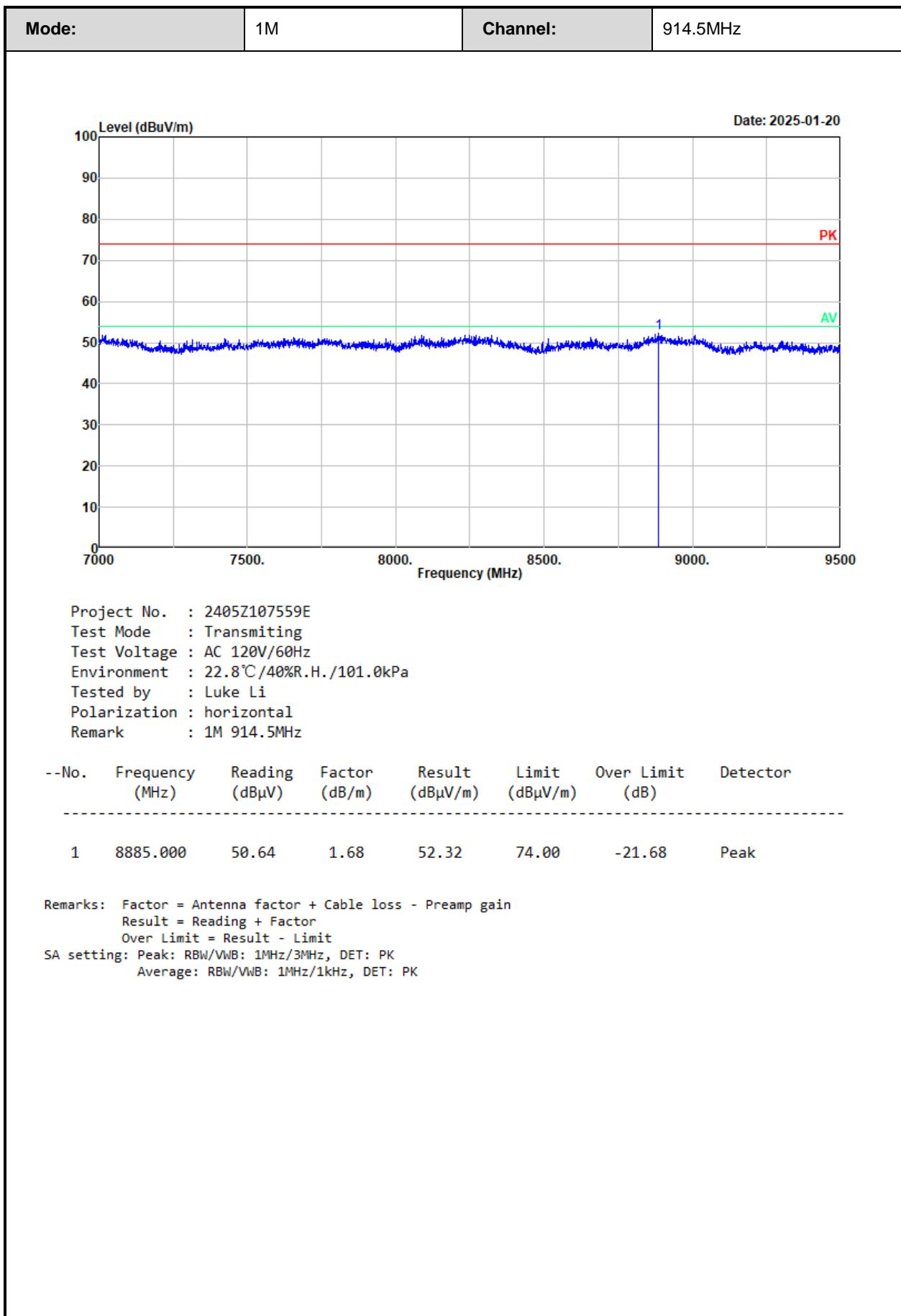
For the test result of Peak below the Peak limit more than 20dB, which can compliance with the average limit, just the Peak level was recorded.

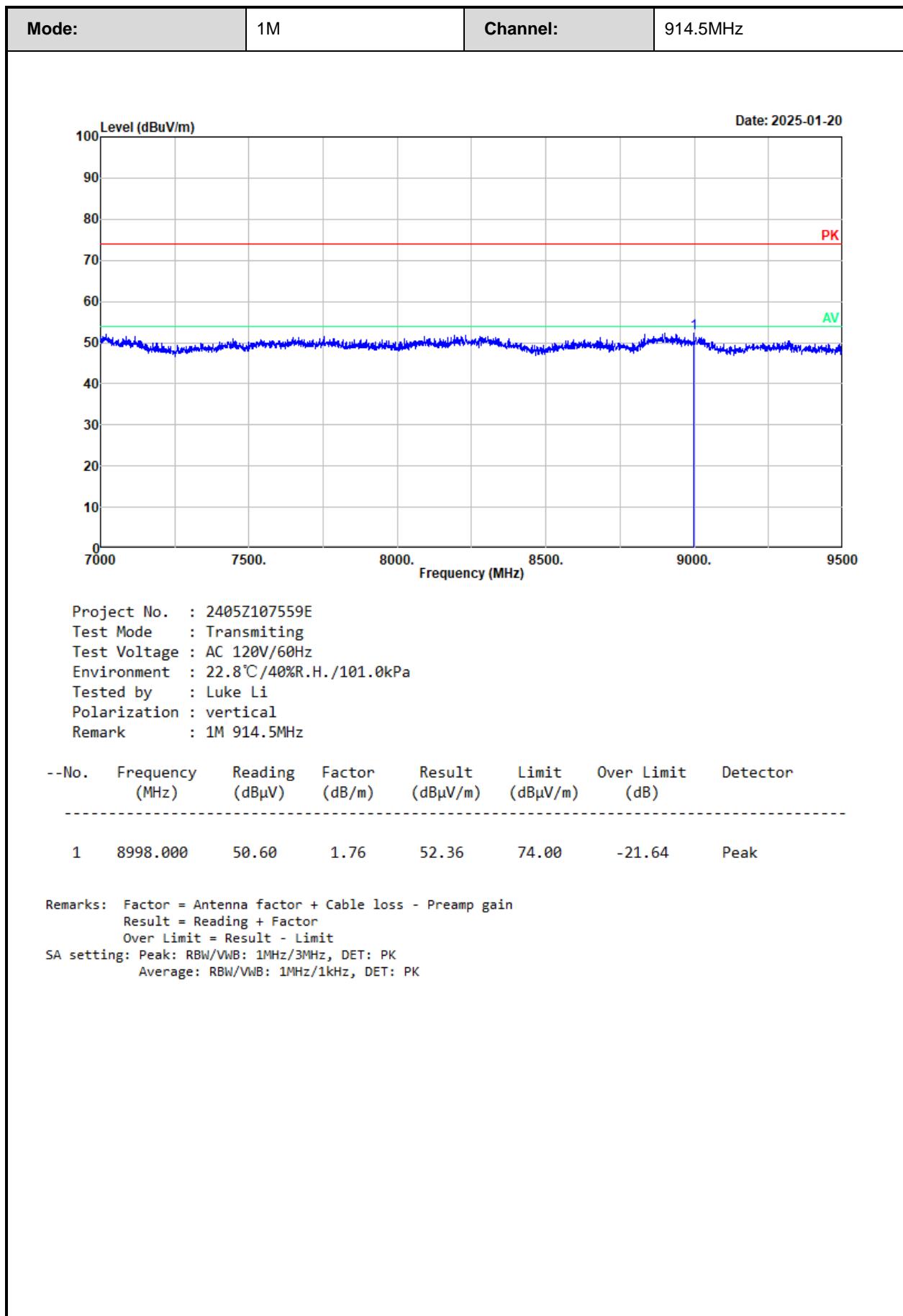
The emission levels of other frequencies that were lower than the limit 20dB not show in test report.

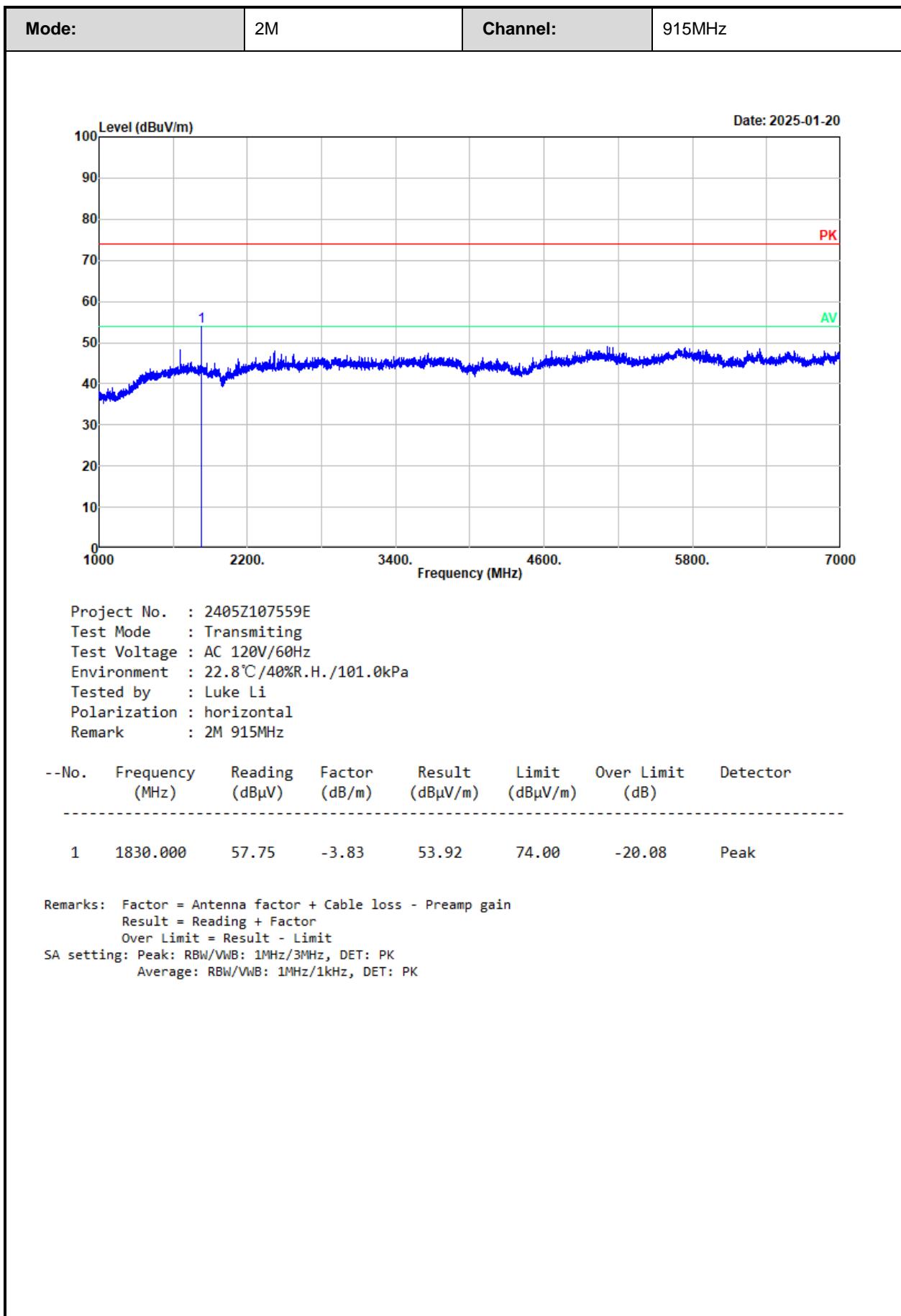
## Test plot for example as below:

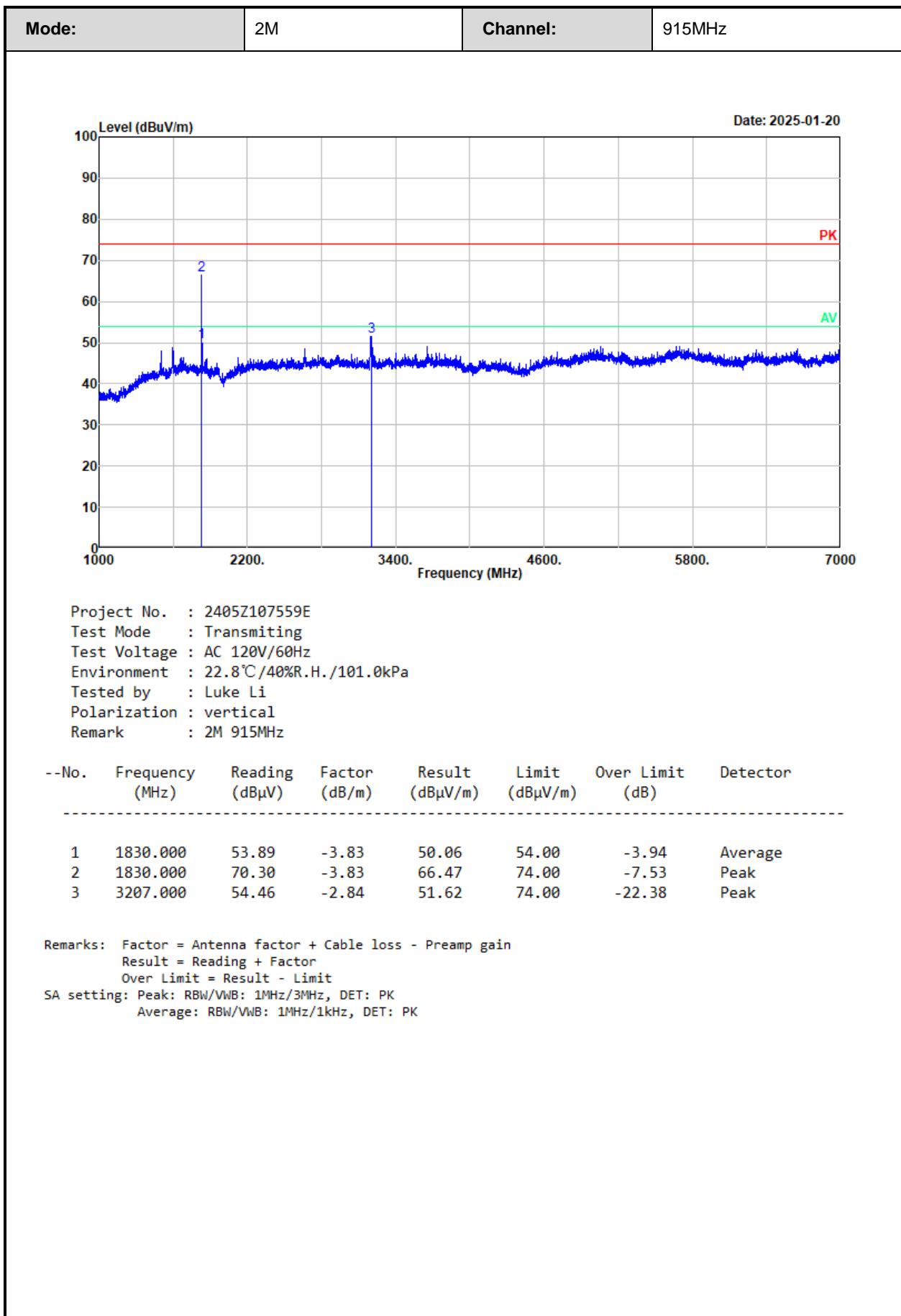


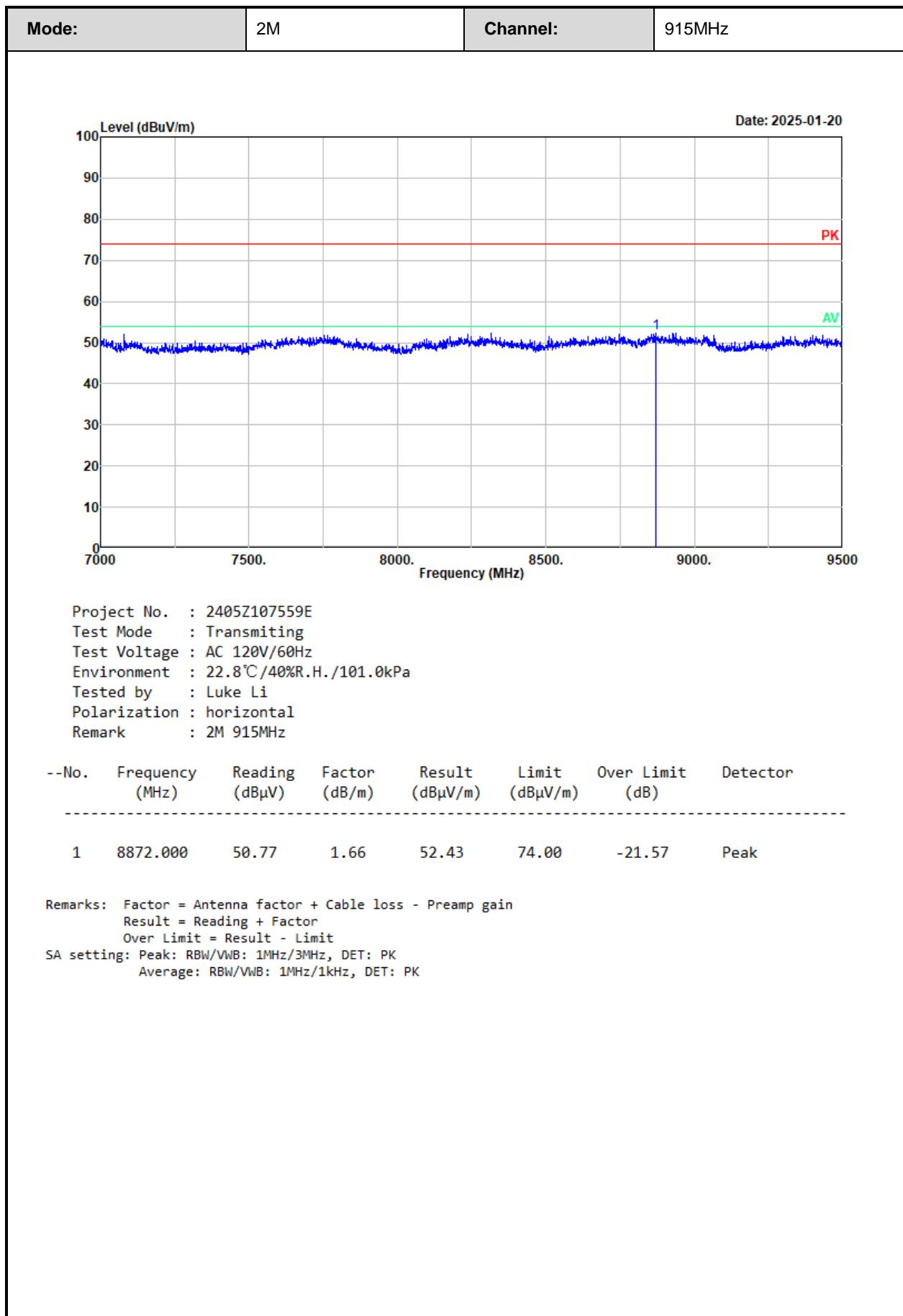


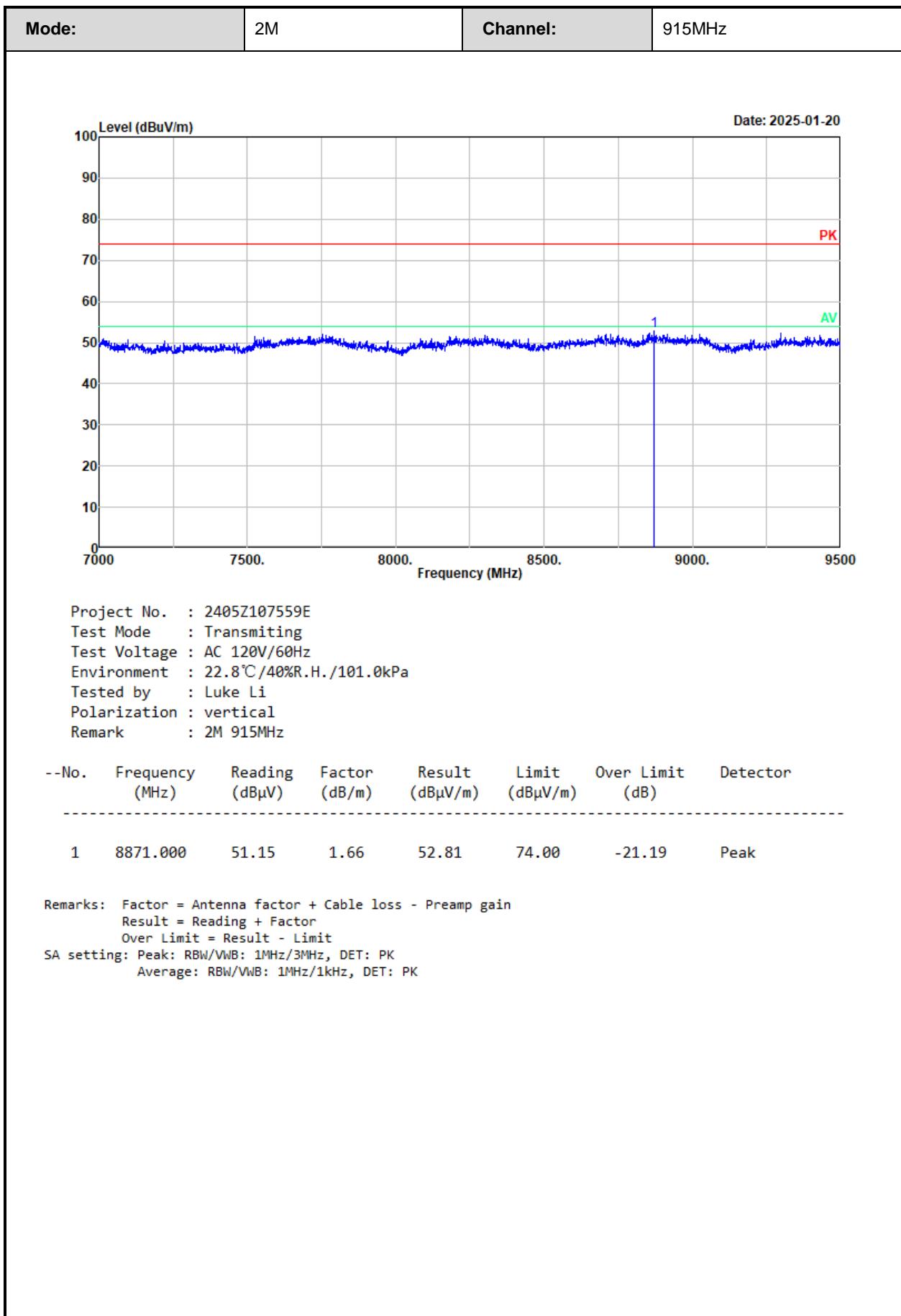


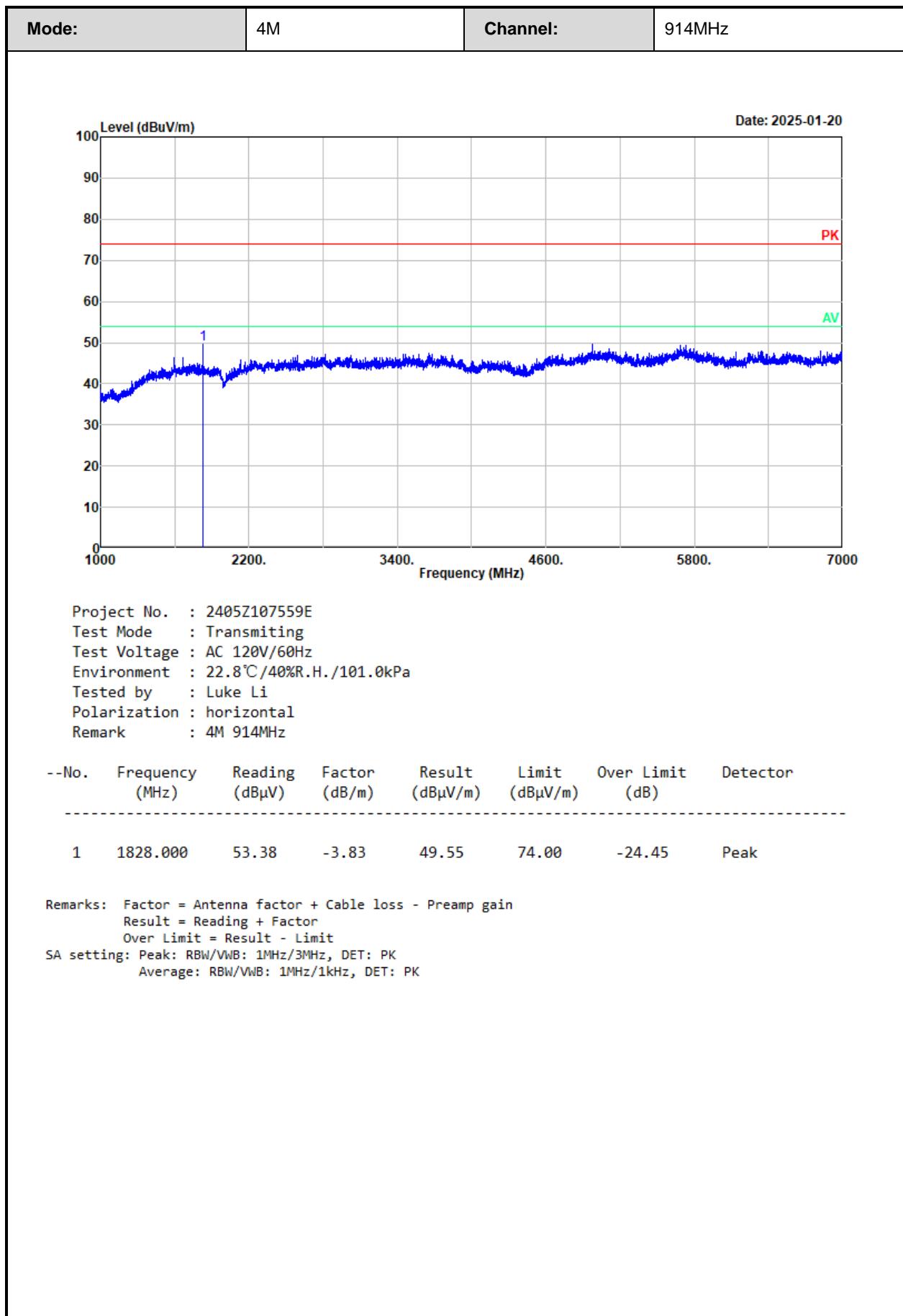


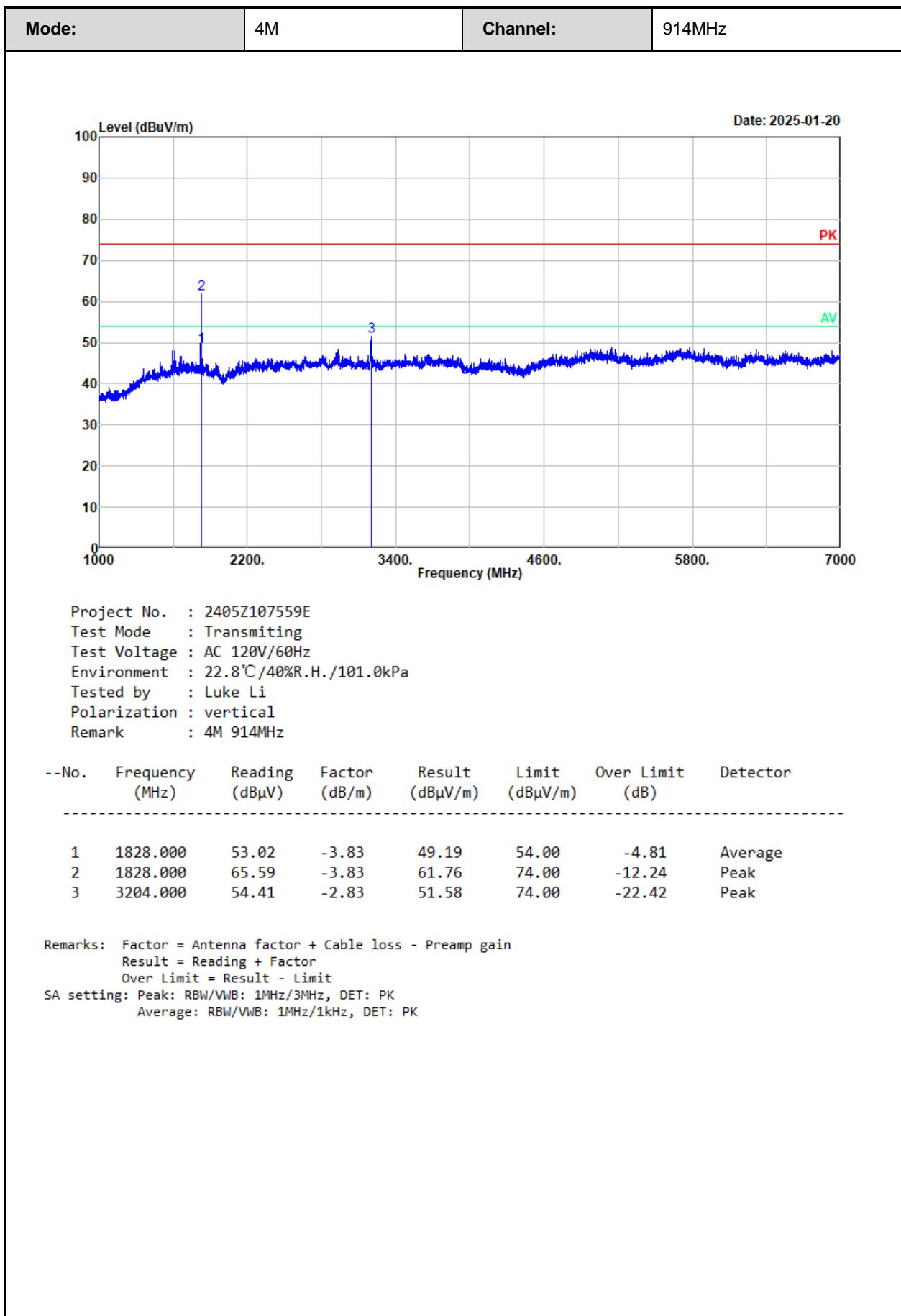


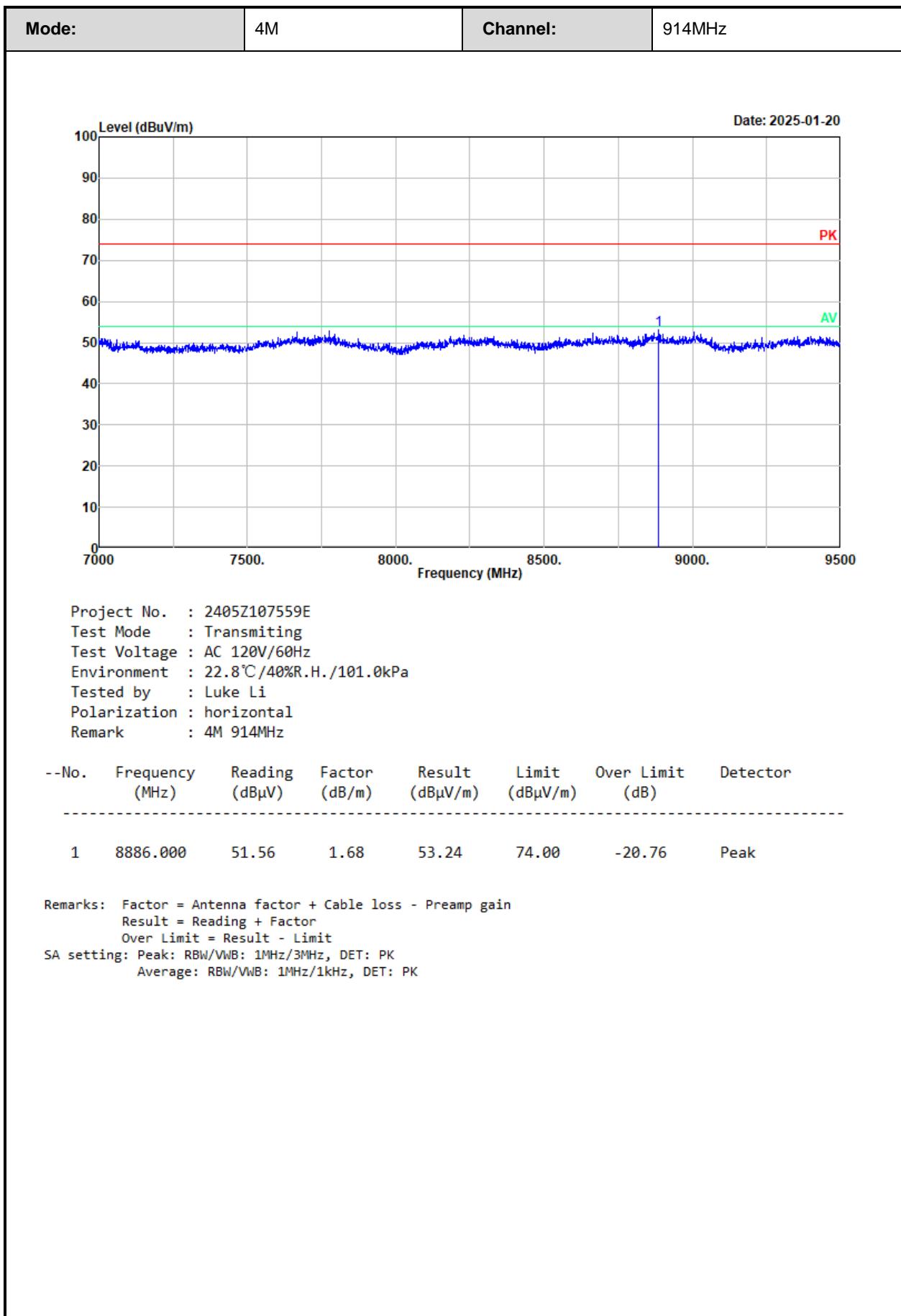


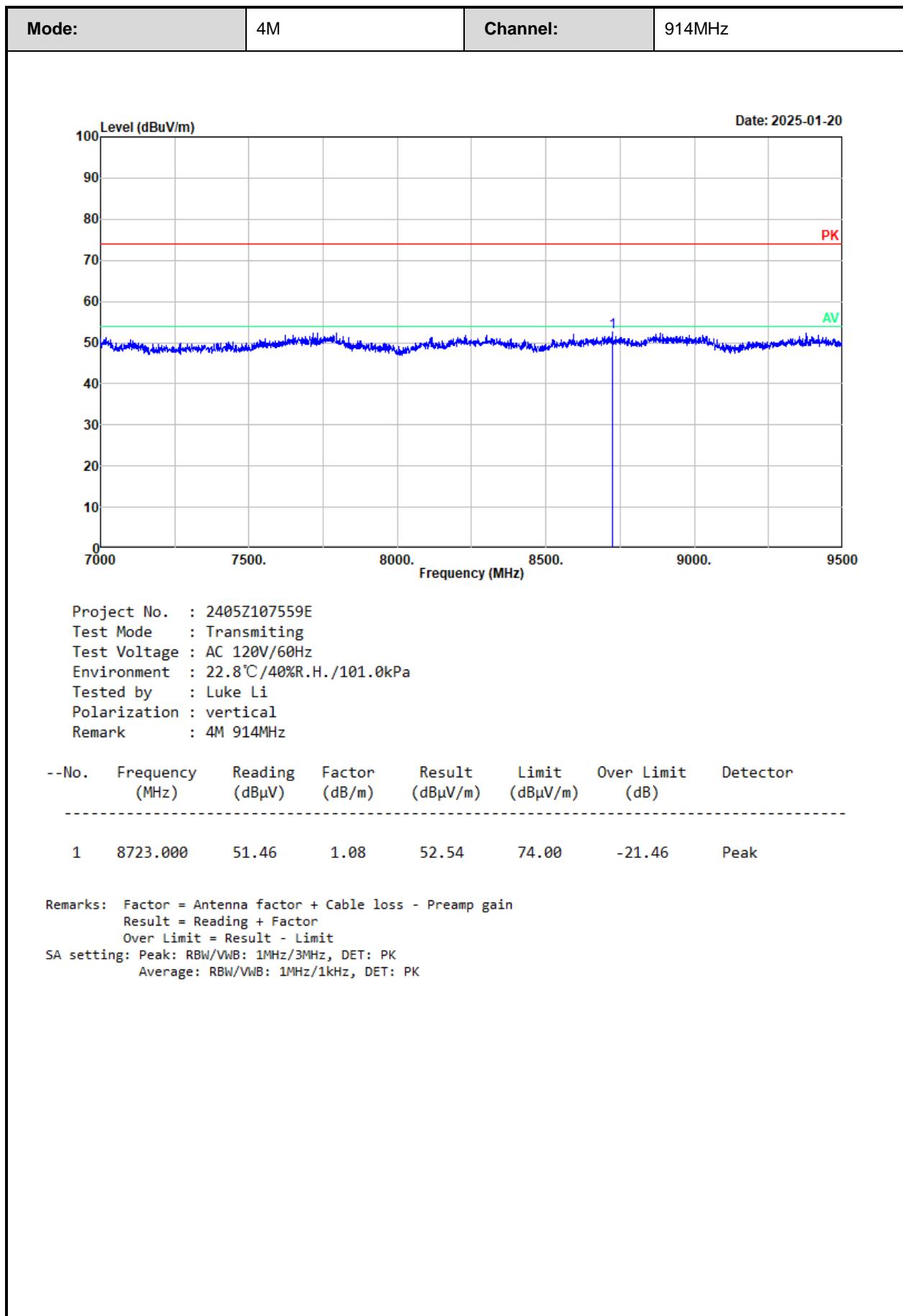


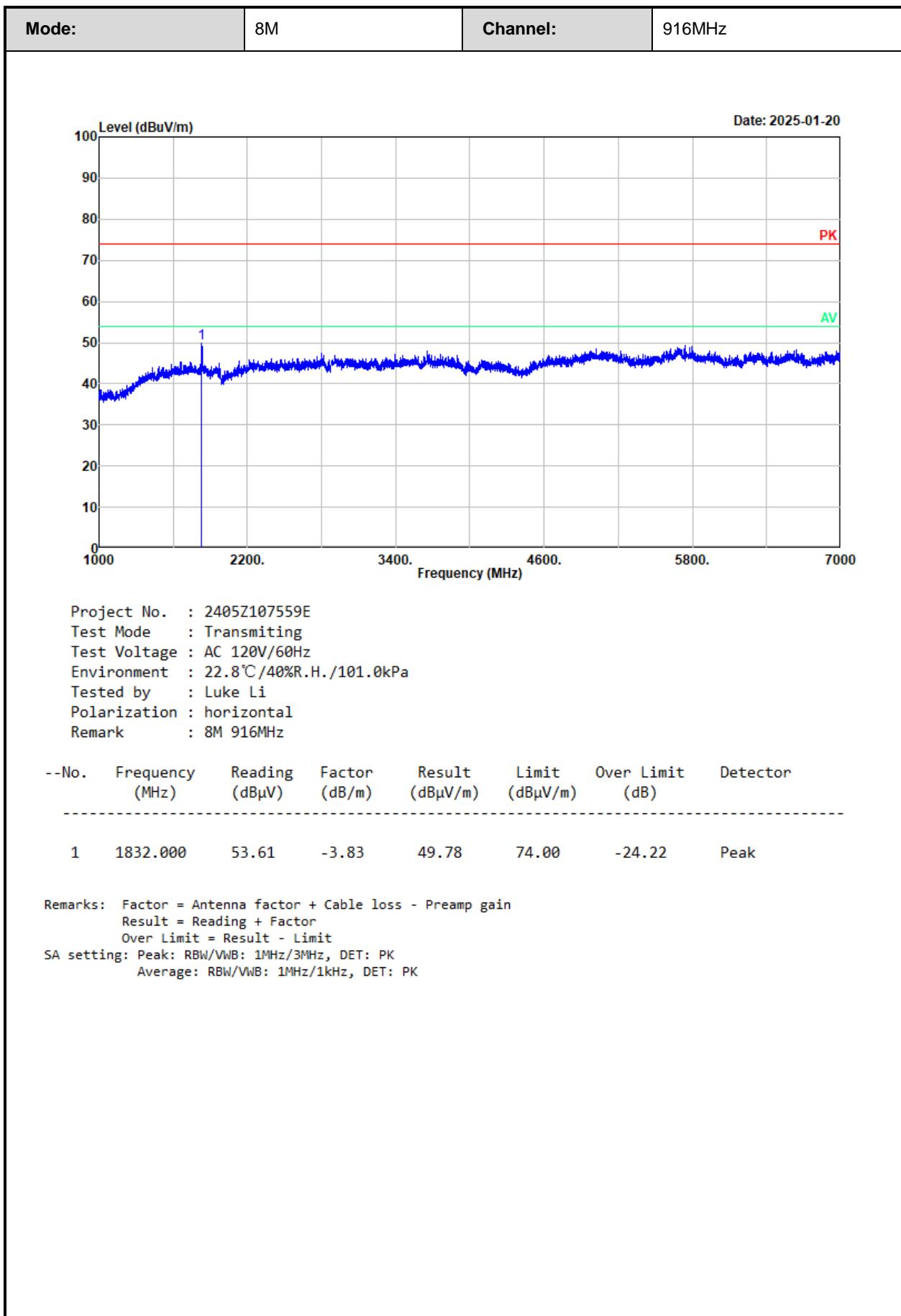


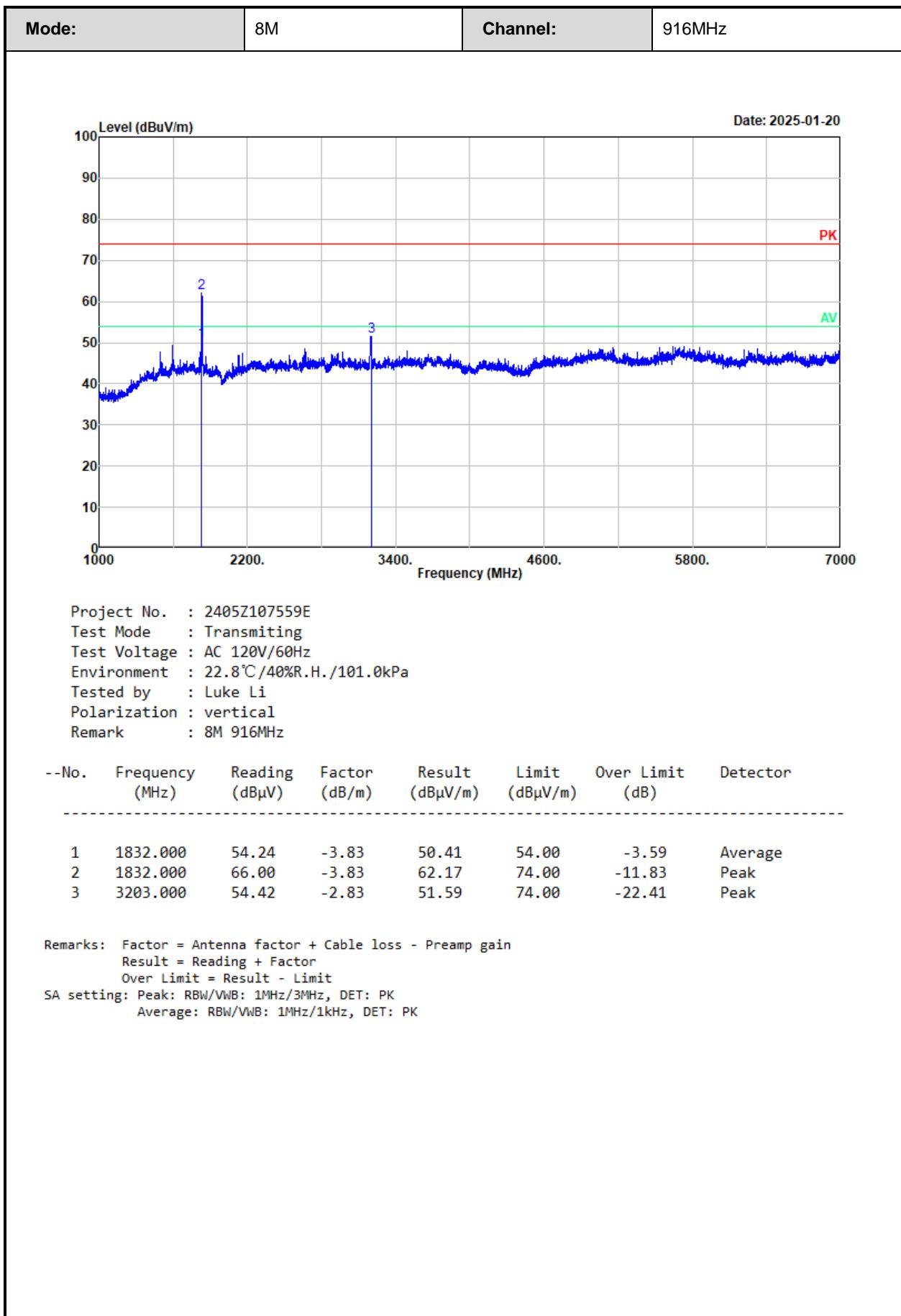


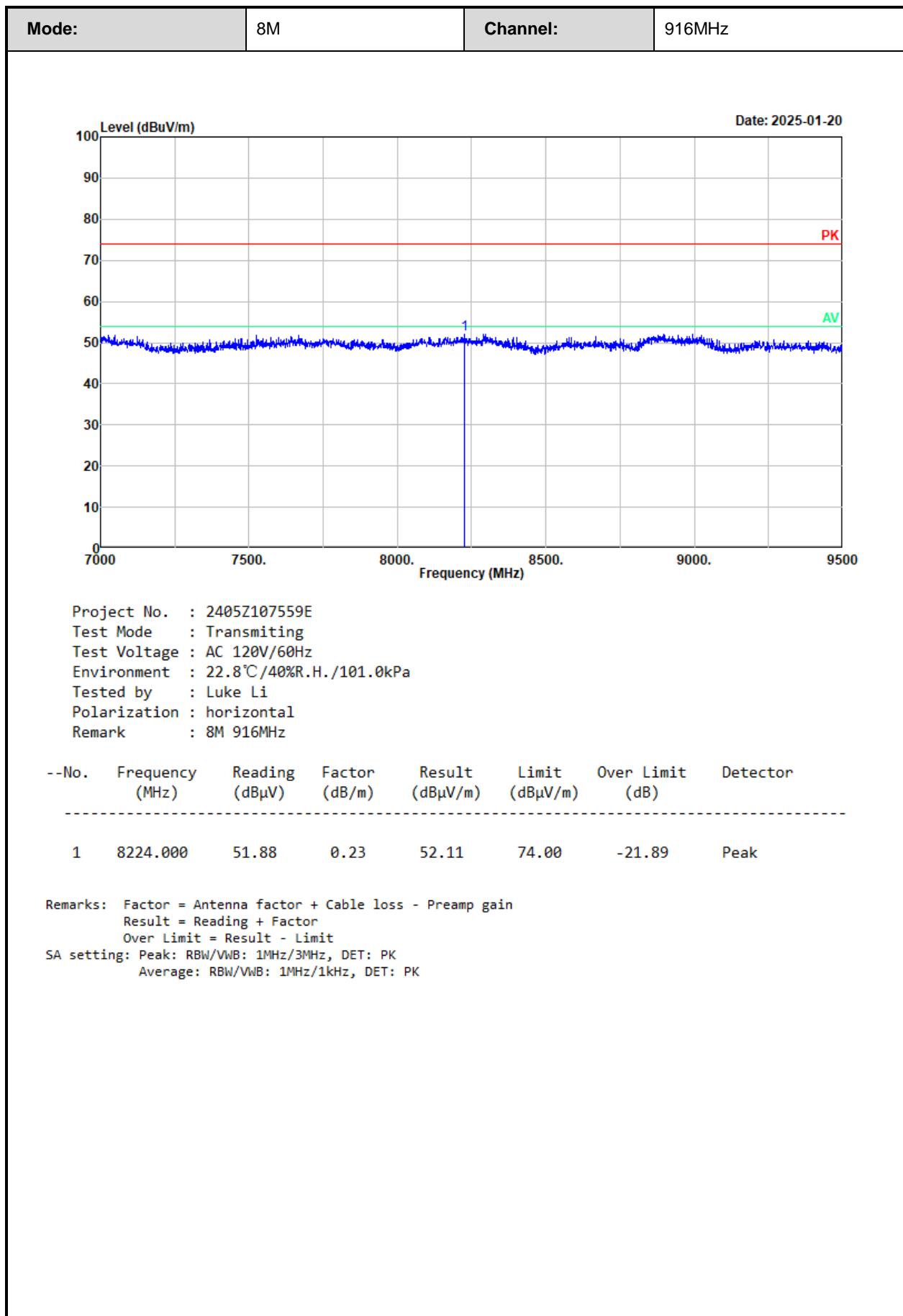


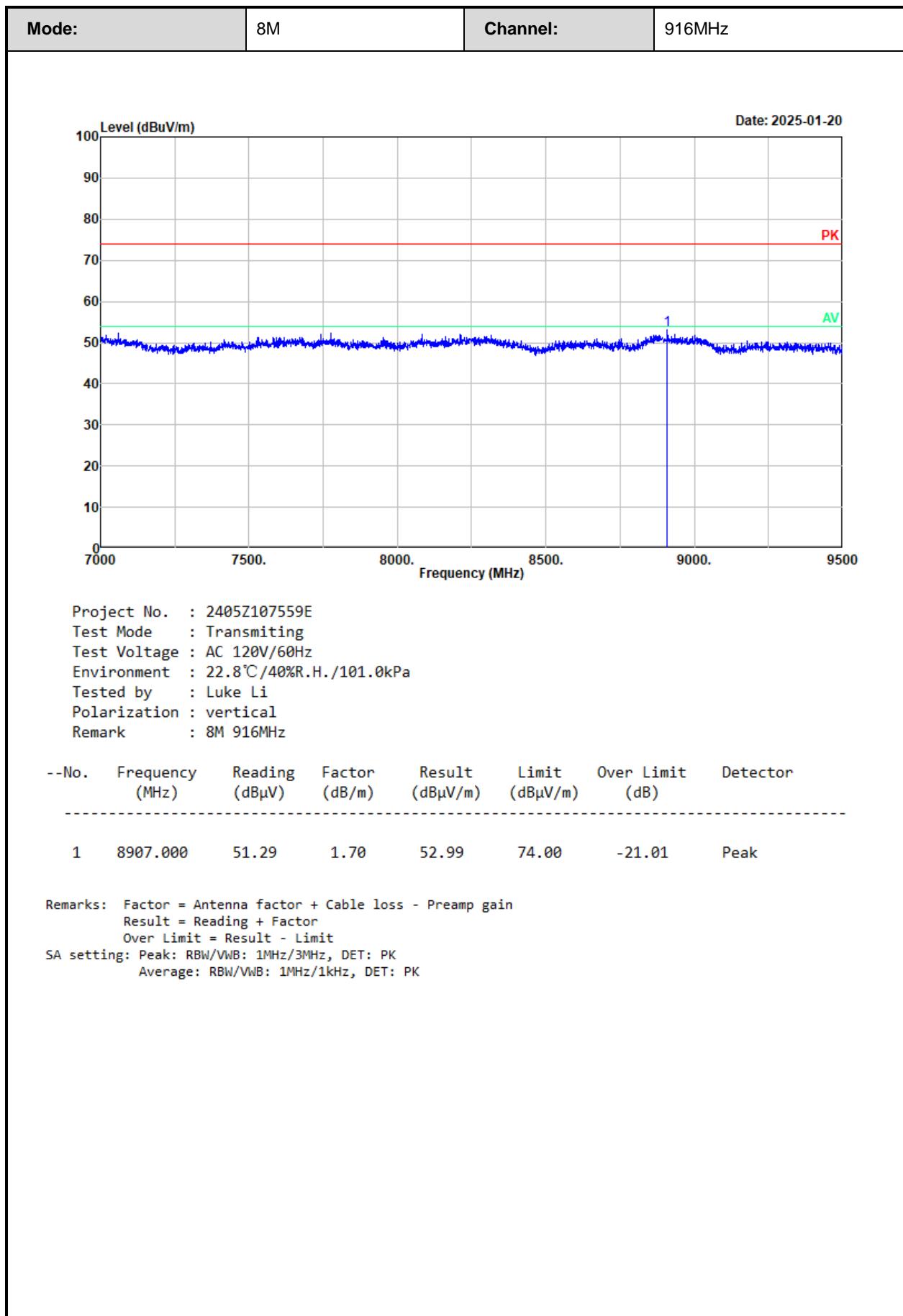












### 3.5 RF Conducted Test Data

Test Date:	2025-01-22~2025-02-13	Test By:	Ryan Zhang
Environment condition:	Temperature: 23.1~23.9°C; Relative Humidity:40~41%; ATM Pressure: 100.8~101.5kPa		

#### 3.5.1 6 dB Emission Bandwidth

Mode	Test Frequency (MHz)	Result (MHz)	Limit (MHz)	Verdict
1M	903.5	0.860	≥0.5	Pass
	914.5	0.884	≥0.5	Pass
	926.5	0.884	≥0.5	Pass
2M	905	1.816	≥0.5	Pass
	915	1.808	≥0.5	Pass
	925	1.832	≥0.5	Pass
4M	906	3.664	≥0.5	Pass
	914	3.680	≥0.5	Pass
	926	3.680	≥0.5	Pass
8M	908	7.584	≥0.5	Pass
	916	7.616	≥0.5	Pass
	924	7.392	≥0.5	Pass

#### 3.5.2 99% Occupied Bandwidth

Mode	Test Frequency (MHz)	99% OBW (MHz)
1M	903.5	0.916
	914.5	0.916
	926.5	0.920
2M	905	1.824
	915	1.824
	925	1.824
4M	906	3.680
	914	3.664
	926	3.664
8M	908	7.584
	916	7.584
	924	7.584

### 3.5.3 Maximum Conducted Peak Output Power

Mode	Test Frequency (MHz)	Peak Output Power(dBm)	Limit (dBm)	Verdict
1M	903.5	20.59	30	Pass
	914.5	20.25	30	Pass
	926.5	19.82	30	Pass
2M	905	20.89	30	Pass
	915	20.53	30	Pass
	925	19.88	30	Pass
4M	906	21.16	30	Pass
	914	21.80	30	Pass
	926	20.92	30	Pass
8M	908	23.44	30	Pass
	916	22.60	30	Pass
	924	22.86	30	Pass

### 3.5.4 Power Spectral Density

Mode	Test Frequency (MHz)	Result (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
1M	903.5	-4.29	8	Pass
	914.5	-4.44	8	Pass
	926.5	-5.14	8	Pass
2M	905	-7.46	8	Pass
	915	-6.42	8	Pass
	925	-7.70	8	Pass
4M	906	-9.33	8	Pass
	914	-8.98	8	Pass
	926	-10.50	8	Pass
8M	908	-10.09	8	Pass
	916	-11.37	8	Pass
	924	-10.72	8	Pass

### 3.5.5 100 kHz Bandwidth of Frequency Band Edge

Mode	Test Frequency (MHz)	Result (dB)	Limit (dB)	Verdict
1M	903.5	45.54	20	Pass
	926.5	43.74	20	Pass
2M	905	46.32	20	Pass
	925	43.74	20	Pass
4M	906	39.26	20	Pass
	926	31.70	20	Pass
8M	908	37.36	20	Pass
	924	29.33	20	Pass

### 3.5.6 Duty Cycle

Mode	Test Frequency (MHz)	Ton (ms)	Ton+Toff (ms)	Duty Cycle (%)	Duty Cycle Factor(dB)	1/Ton (Hz)	VBW Setting (kHz)
1M	914.5	100	100	100	/	/	0.010
2M	915	100	100	100	/	/	0.010
4M	914	100	100	100	/	/	0.010
8M	916	100	100	100	/	/	0.010

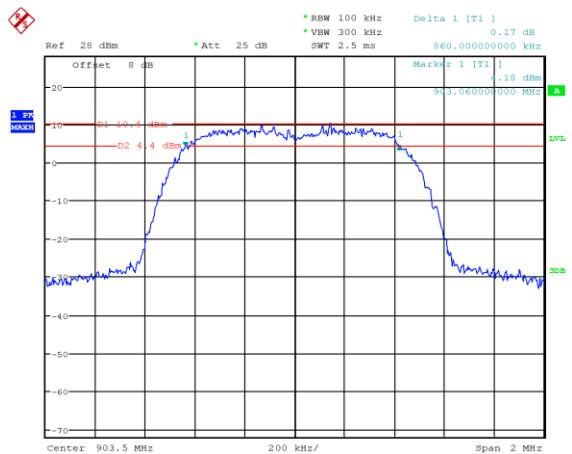
Duty Cycle =  $Ton/(Ton+Toff) * 100\%$

## Test Plots:

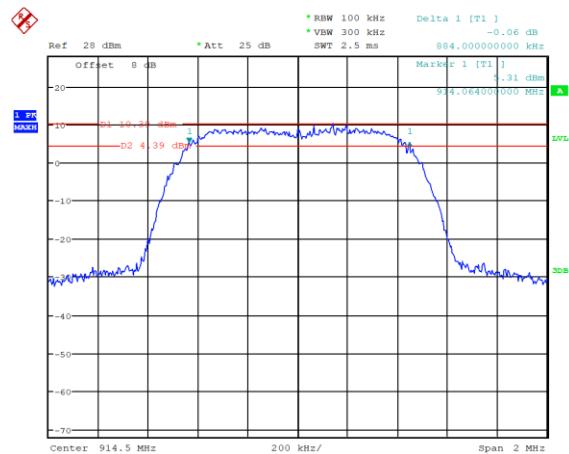
### 6 dB Emission Bandwidth:

902~928

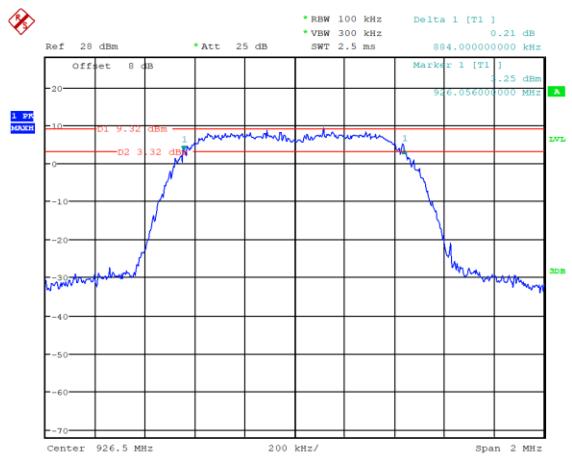
1M\_903.5MHz



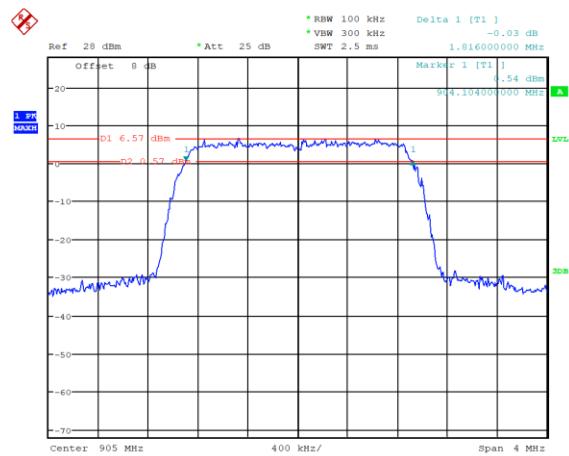
1M\_914.5MHz



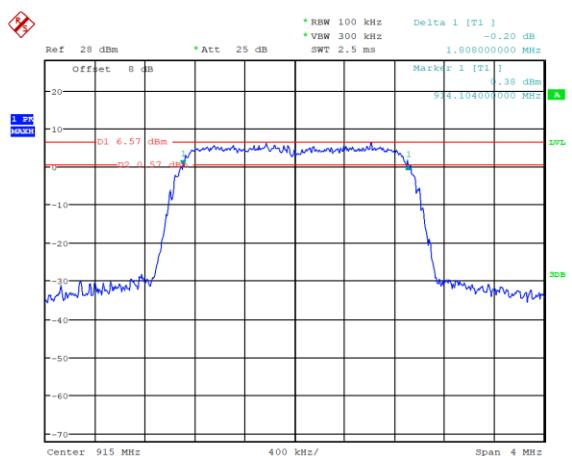
1M\_926.5MHz



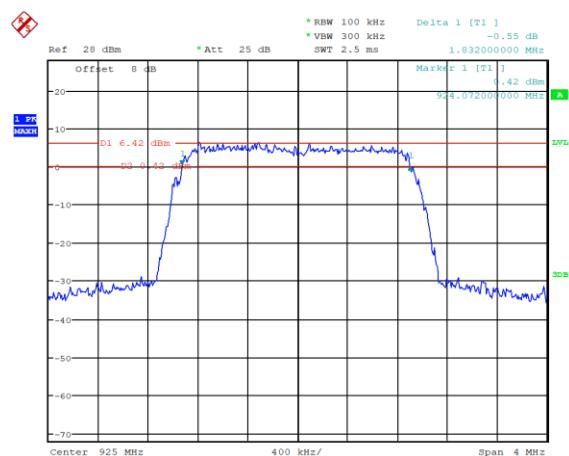
2M\_905MHz



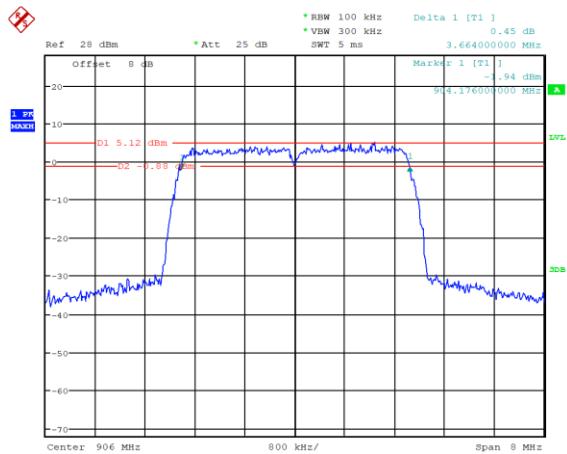
2M\_915MHz



2M\_925MHz

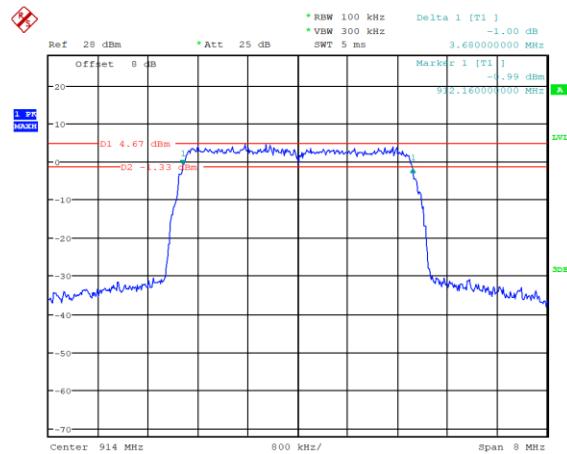


4M\_906MHz



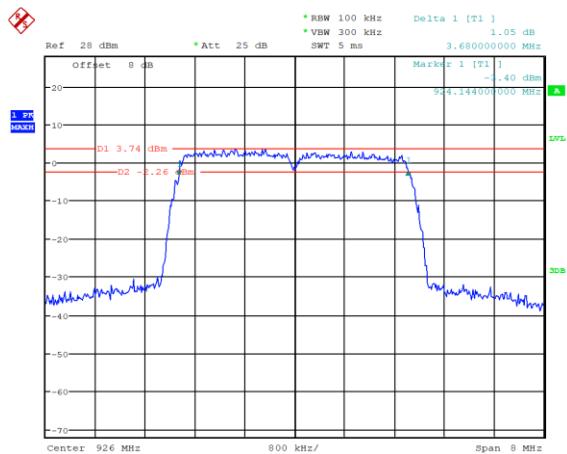
Project:2405Z107559E-RF Tester: Ryan Zhang  
Date: 22.JAN.2025 15:39:10

4M\_914MHz



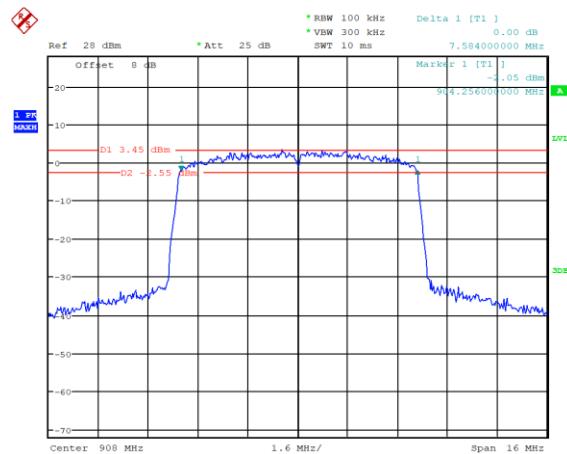
Project:2405Z107559E-RF Tester: Ryan Zhang  
Date: 22.JAN.2025 15:51:56

4M\_926MHz



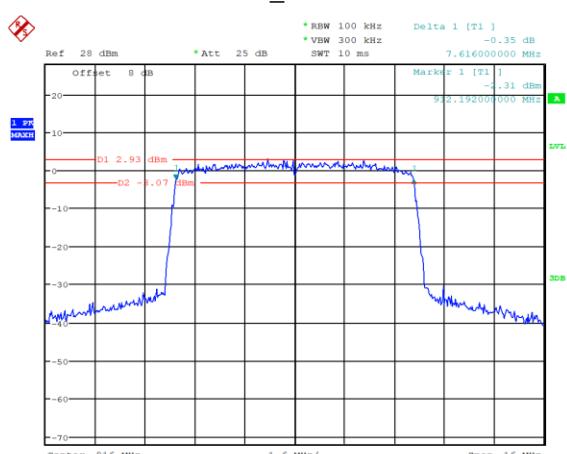
Project:2405Z107559E-RF Tester: Ryan Zhang  
Date: 22.JAN.2025 15:53:57

8M\_908MHz



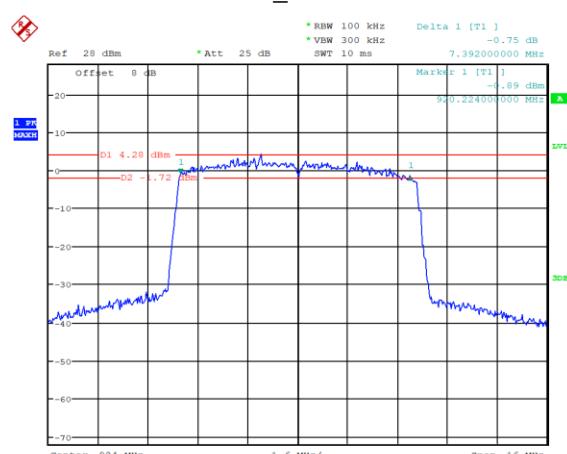
Project:2405Z107559E-RF Tester: Ryan Zhang  
Date: 22.JAN.2025 15:59:21

8M 916MHz



Project:2405Z107559E-RF Tester: Ryan Zhang

8M 924MHz

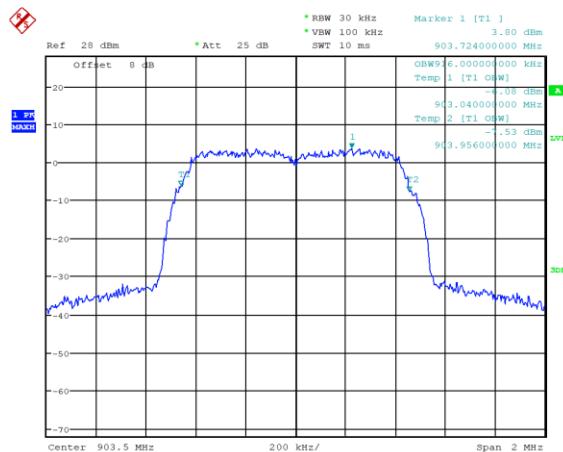


Project:2405Z107559E-RF Tester: Ryan Zhang  
Date: 22.JAN.2025 16:20:57

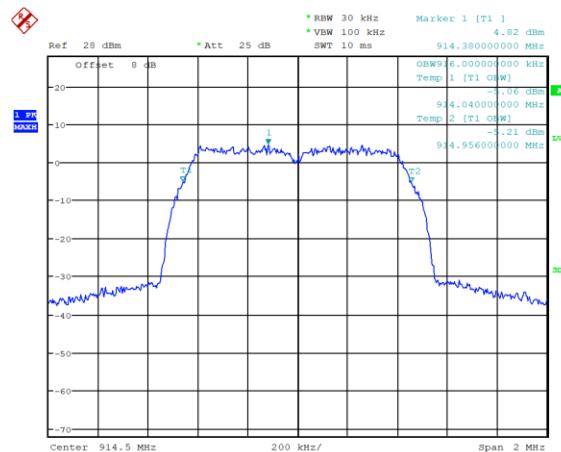
## 99% Occupied Bandwidth:

902~928

## 1M\_903.5MHz



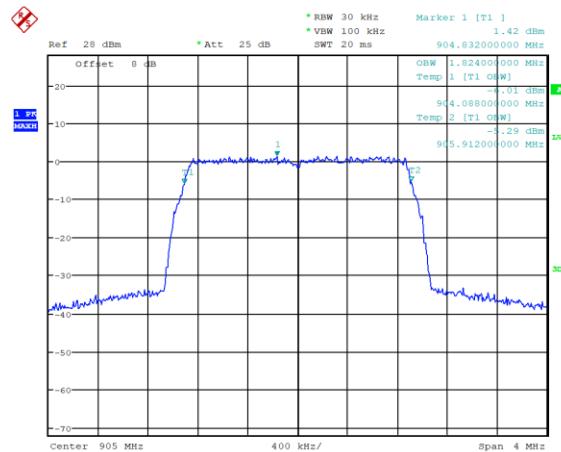
## 1M\_914.5MHz



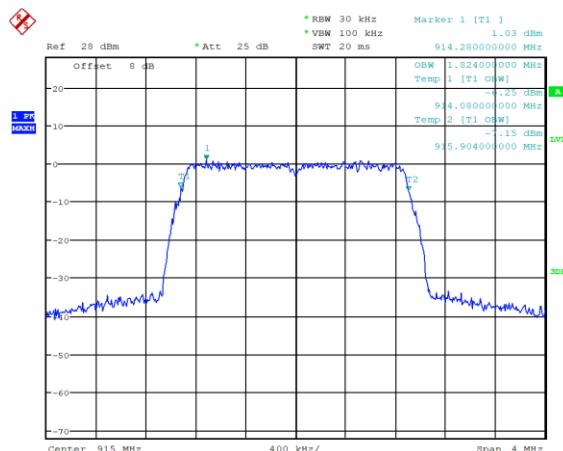
## 1M\_926.5MHz



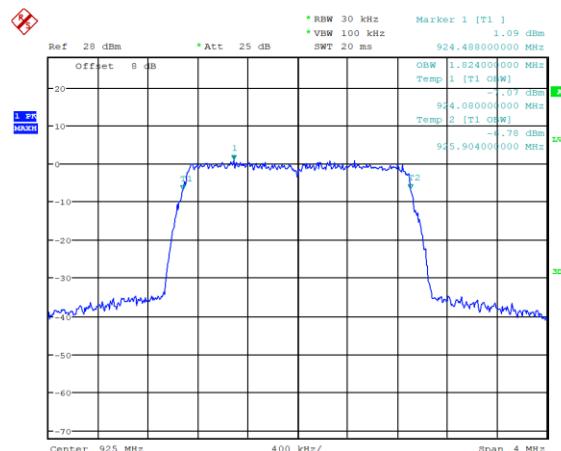
## 2M\_905MHz



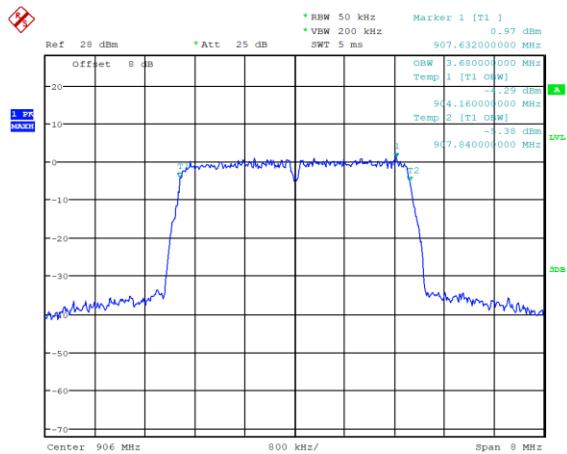
## 2M\_915MHz



## 2M\_925MHz

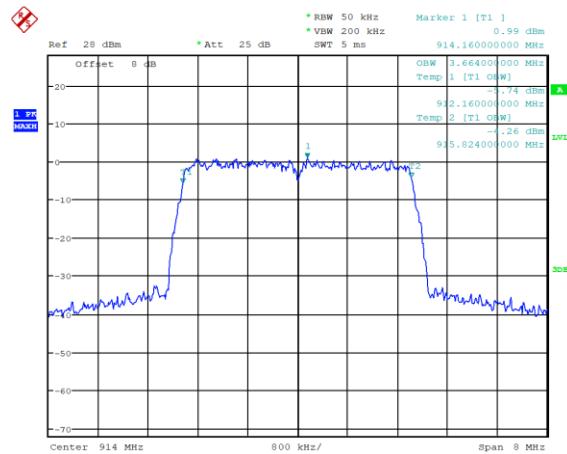


## 4M\_906MHz



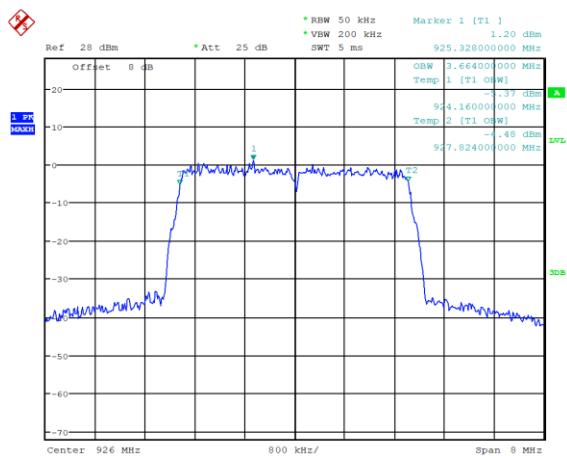
Project:2405Z107559E-RF Tester: Ryan Zhang  
Date: 22.JAN.2025 15:39:24

## 4M\_914MHz



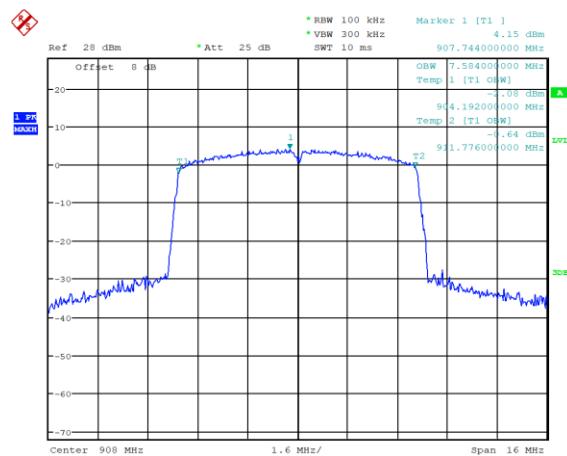
Project:2405Z107559E-RF Tester: Ryan Zhang  
Date: 22.JAN.2025 15:52:10

## 4M\_926MHz



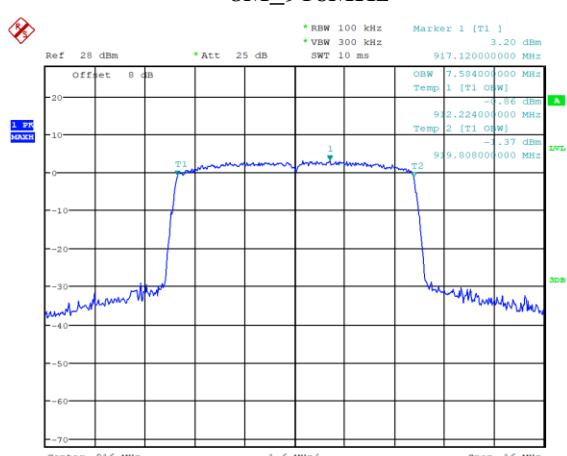
Project:2405Z107559E-RF Tester: Ryan Zhang  
Date: 22.JAN.2025 15:54:08

## 8M\_908MHz



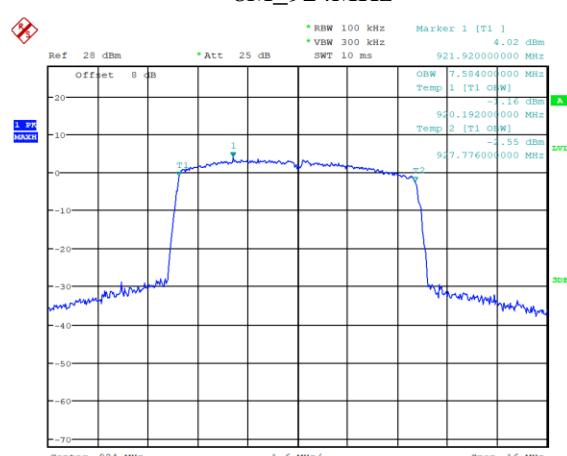
Project:2405Z107559E-RF Tester: Ryan Zhang  
Date: 23.JAN.2025 16:35:37

## 8M\_916MHz



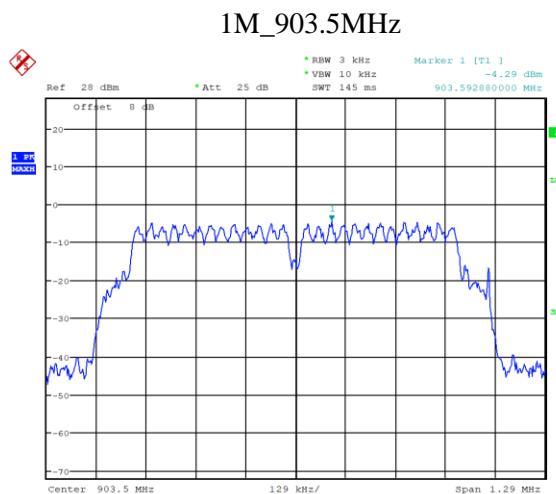
Project:2405Z107559E-RF Tester: Ryan Zhang  
Date: 23.JAN.2025 16:36:58

## 8M\_924MHz

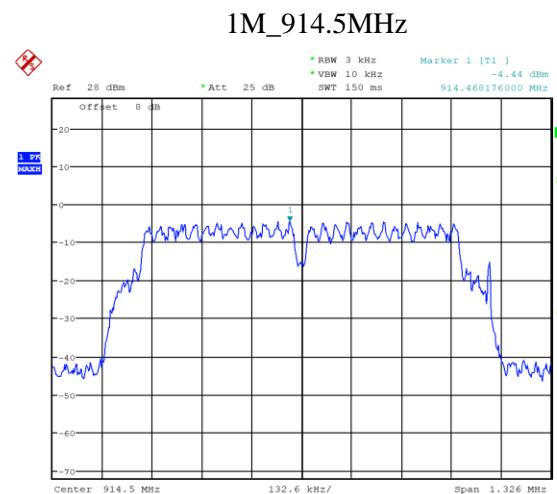


Project:2405Z107559E-RF Tester: Ryan Zhang  
Date: 23.JAN.2025 16:39:30

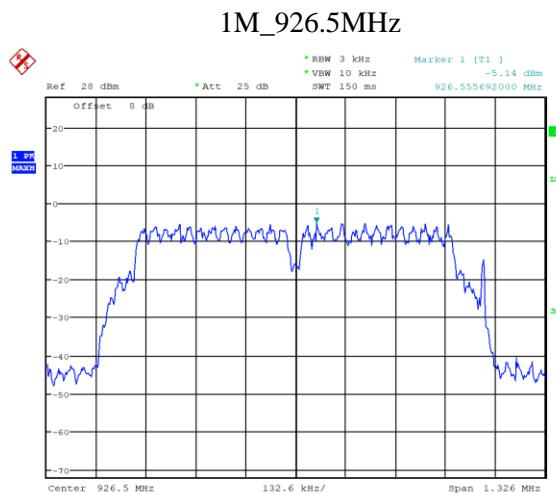
## Power Spectral Density: 902~928



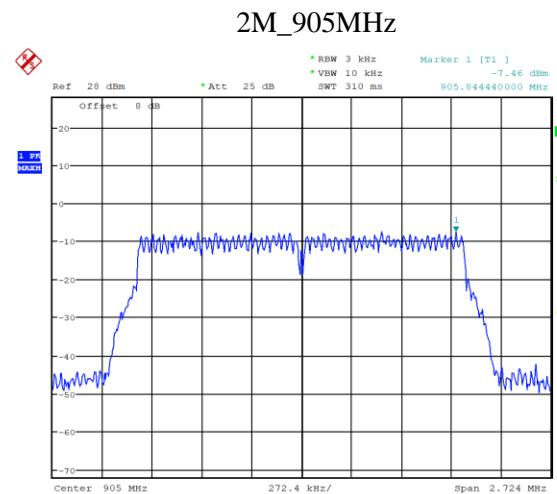
Project:2405Z107559E-RF Tester: Ryan Zhang  
Date: 22.JAN.2025 14:17:35



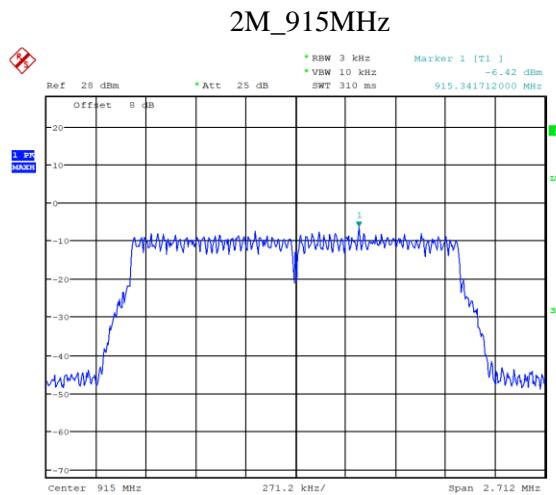
Project:2405Z107559E-RF Tester: Ryan Zhang  
Date: 22.JAN.2025 14:28:10



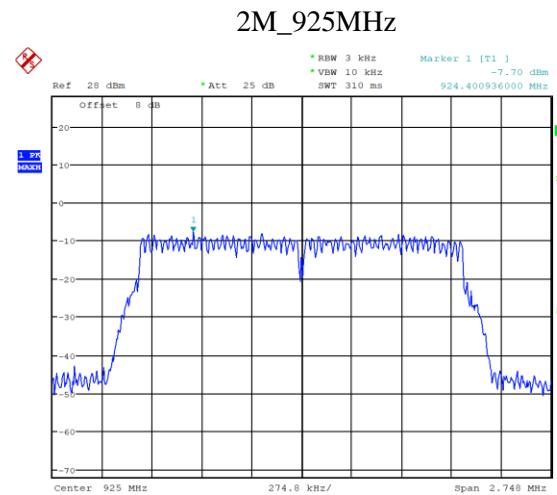
Project:2405Z107559E-RF Tester: Ryan Zhang  
Date: 22.JAN.2025 15:09:22



Project:2405Z107559E-RF Tester: Ryan Zhang  
Date: 22.JAN.2025 15:13:34

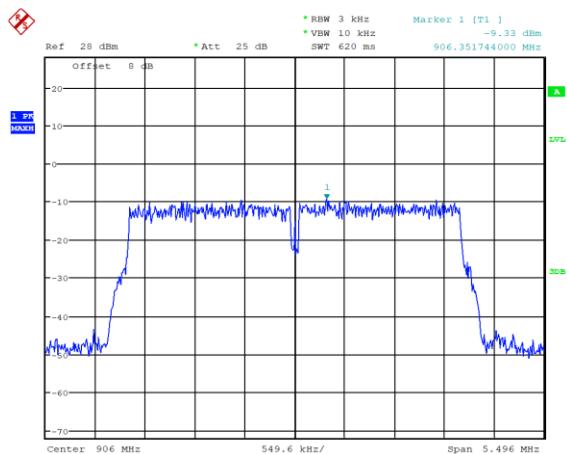


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Date: 22.JAN.2025 15:28:39



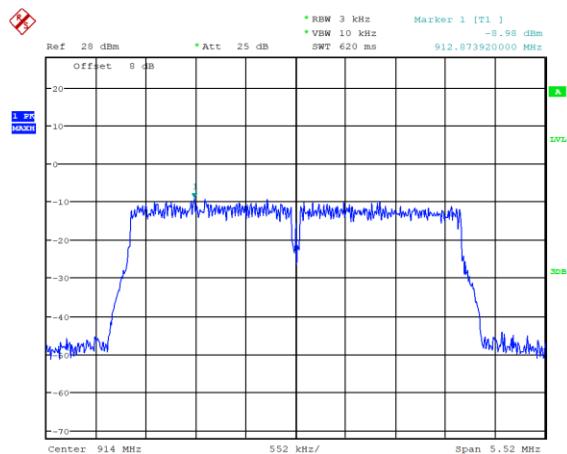
Project:2405Z107559E-RF Tester: Ryan Zhang  
Date: 22.JAN.2025 15:29:59

## 4M\_906MHz



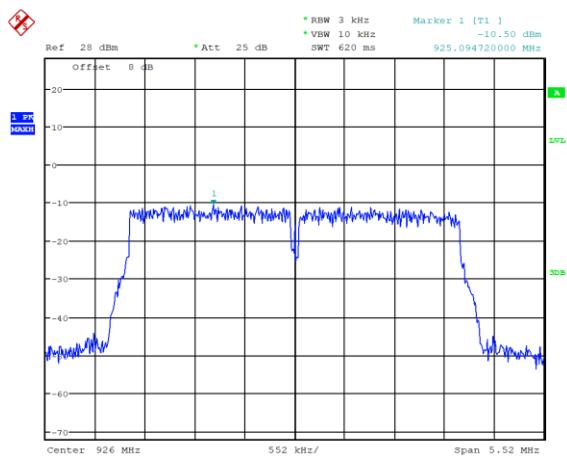
Project:2405Z107559E-RF Tester: Ryan Zhang  
Date: 22.JAN.2025 15:39:37

## 4M\_914MHz



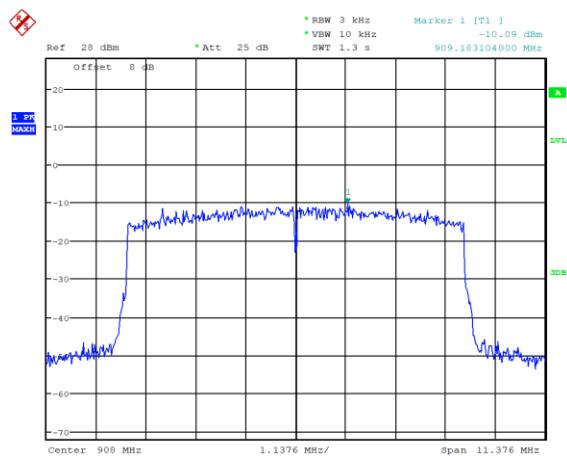
Project:2405Z107559E-RF Tester: Ryan Zhang  
Date: 22.JAN.2025 15:52:24

## 4M\_926MHz



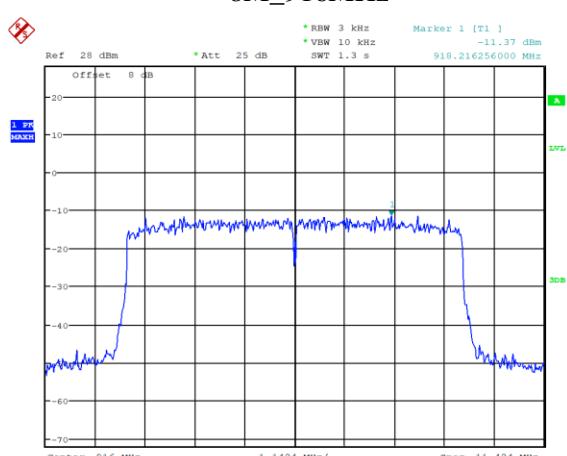
Project:2405Z107559E-RF Tester: Ryan Zhang  
Date: 22.JAN.2025 15:54:22

## 8M\_908MHz



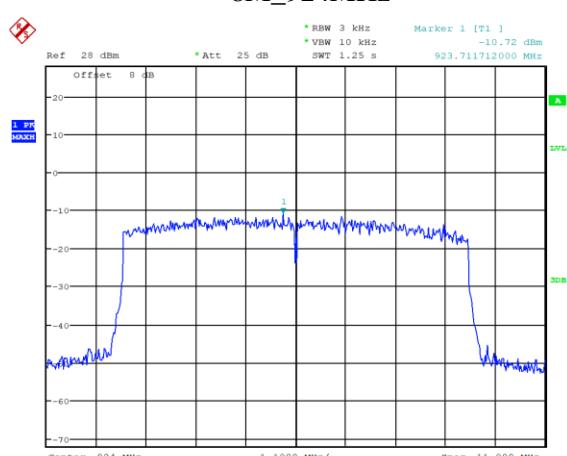
Project:2405Z107559E-RF Tester: Ryan Zhang  
Date: 22.JAN.2025 16:00:56

## 8M\_916MHz



Project:2405Z107559E-RF Tester: Ryan Zhang  
Date: 22.JAN.2025 16:19:48

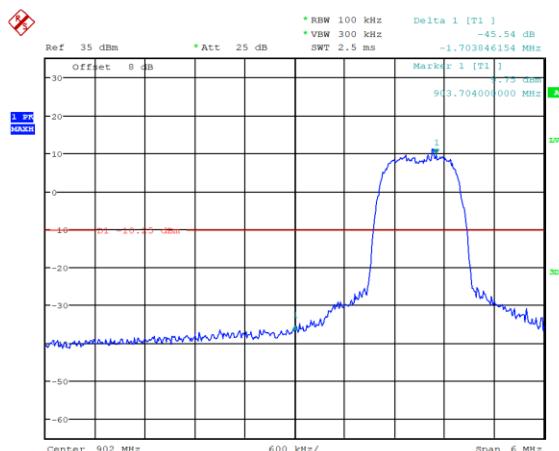
## 8M\_924MHz



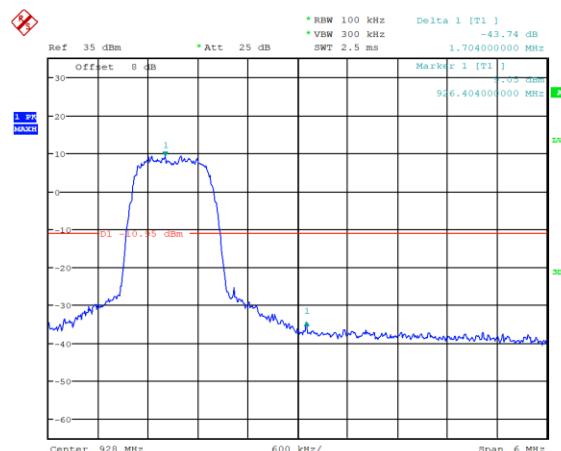
Project:2405Z107559E-RF Tester: Ryan Zhang  
Date: 22.JAN.2025 16:22:56

## 100kHz Bandwidth of Frequency Band Edge: 902~928

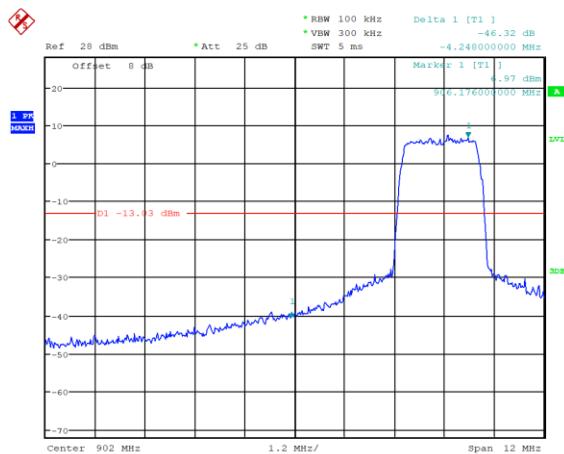
1M\_903.5MHz



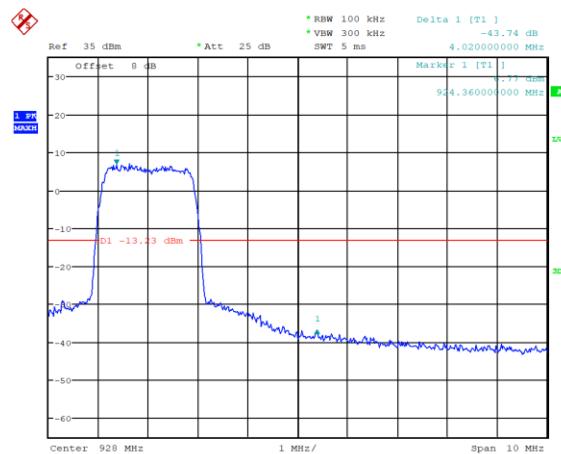
1M\_926.5MHz



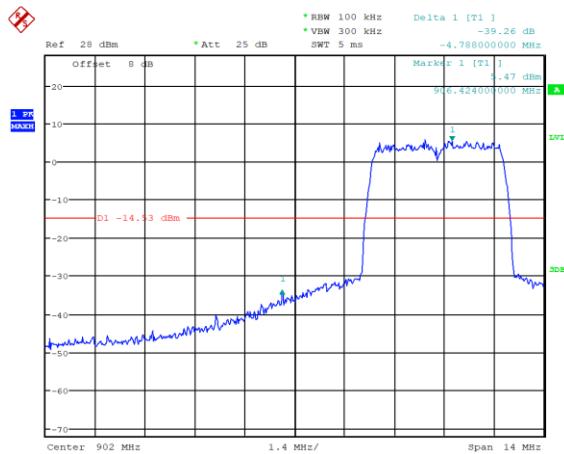
2M\_905MHz



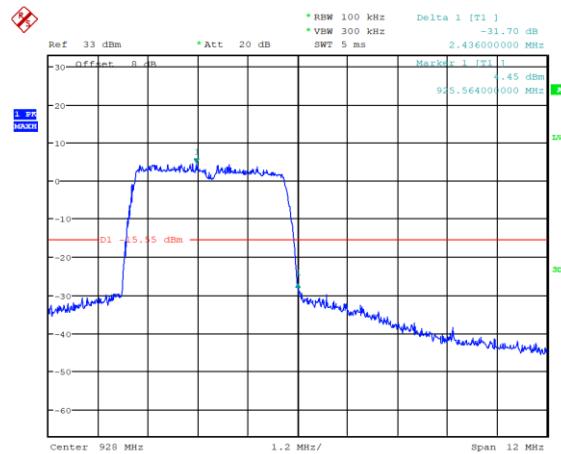
2M\_925MHz



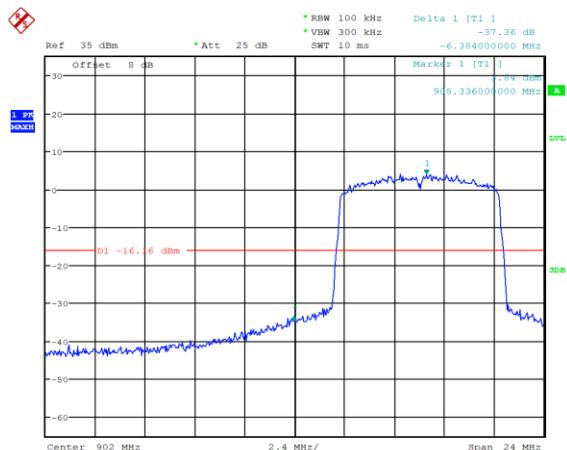
4M\_906MHz



4M\_926MHz

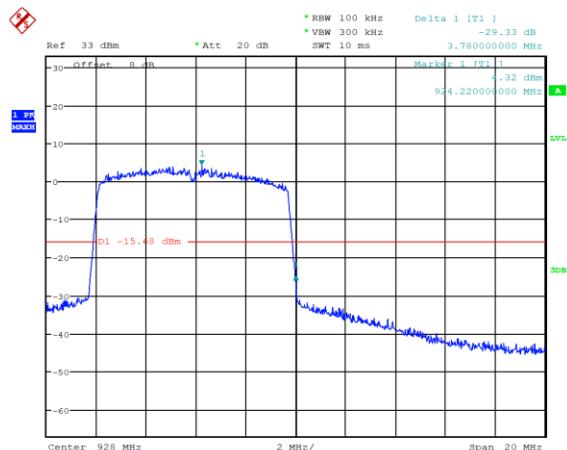


## 8M\_908MHz



Project:2405Z107559E-RF Tester: Ryan Zhang  
Date: 22.JAN.2025 16:07:21

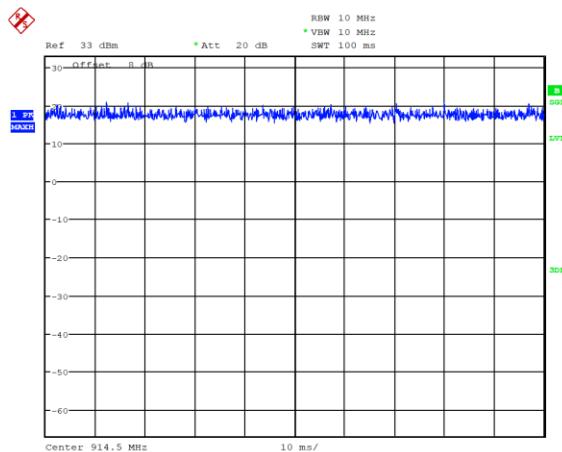
## 8M\_924MHz



Project:2405Z107559E-RF Tester: Ryan Zhang  
Date: 13.FEB.2025 16:42:52

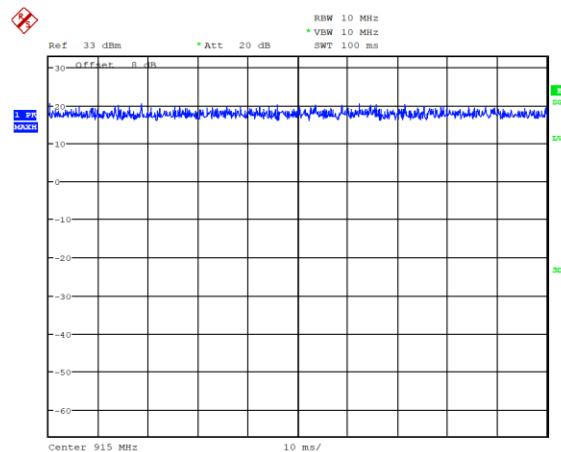
**Duty Cycle:**  
902~928

1M\_914.5MHz



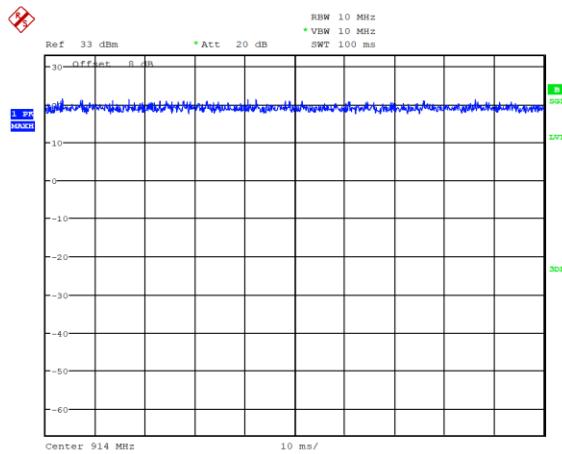
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Date: 13.FEB.2025 18:43:04

2M\_915MHz



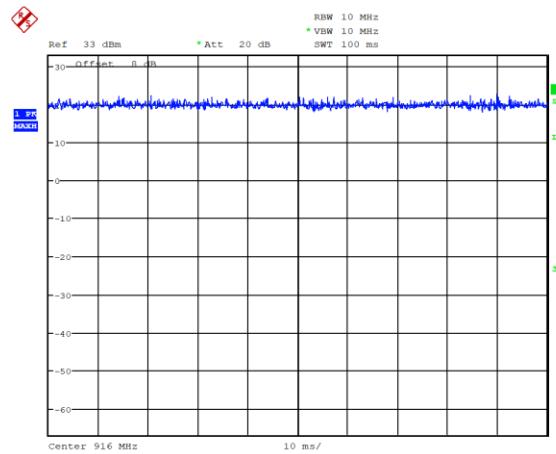
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Date: 13.FEB.2025 18:44:05

4\_914MHz



Project:2405Z107559E-RF Tester: Ryan Zhang  
Date: 13.FEB.2025 18:44:44

8\_916MHz



Project:2405Z107559E-RF Tester: Ryan Zhang  
Date: 13.FEB.2025 18:45:24

## 4 Test Setup Photo

Please refer to the attachment 2405Z107559E Test Setup photo.

## 5 E.U.T Photo

Please refer to the attachment 2405Z107559E External photo and 2405Z107559E Internal photo.

**---End of Report---**