



Industrial Internet Innovation Center (Shanghai) Co.,Ltd.

SRD TEST REPORT

PRODUCT	Handheld Wireless Terminal
BRAND	SUNMI
MODEL	T8F1A
APPLICANT	Shanghai Sunmi Technology Co.,Ltd.
FCC ID	2AH25T8F1A
IC	22621-T8F1A
ISSUE DATE	February 19, 2025
STANDARD(S)	FCC Part15C, RSS-247 Issue 3, RSS-Gen Issue 5

Prepared by: *Li Haisheng*

李海生

Reviewed by: *Yang Fan*

杨帆

Approved by: *Zhang Min*

张曼

CAUTION:

This report shall not be reproduced except in full without the written permission of the test laboratory and shall not be quoted out of context.

CONTENTS

1. SUMMARY OF TEST REPORT	3
1.1 TEST STANDARD(S)	3
1.2 REFERENCE DOCUMENT(S)	3
1.3 SUMMARY OF TEST RESULTS	3
1.4 DATA PROVIDED BY APPLICANT	4
2. GENERAL INFORMATION OF THE LABORATORY	5
2.1 TESTING LABORATORY	5
2.2 LABORATORY ENVIRONMENTAL REQUIREMENTS	5
2.3 PROJECT INFORMATION	5
3. GENERAL INFORMATION OF THE CUSTOMER	6
3.1 APPLICANT	6
3.2 MANUFACTURER	6
4. GENERAL INFORMATION OF THE PRODUCT	7
4.1 PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	7
4.2 INTERNAL IDENTIFICATION OF AE USED DURING THE TEST	7
4.3 ADDITIONAL INFORMATION	7
5. TEST CONFIGURATION INFORMATION	9
5.1 LABORATORY ENVIRONMENTAL CONDITIONS	9
5.2 TEST EQUIPMENTS UTILIZED	9
5.3 MEASUREMENT UNCERTAINTY	11
6. TEST RESULTS	12
6.1 RADIATED EMISSION	12
6.2 AC POWERLINE CONDUCTED EMISSION	24
ANNEX A: REVISED HISTORY	27
ANNEX B: ACCREDITATION CERTIFICATE	28

1. Summary of Test Report

1.1 Test Standard(s)

No.	Test Standard	Title	Version
1	FCC Part15C	FCC CFR 47, Part 15, Subpart C: 15.205 Restricted bands of operation; 15.209 Radiated emission limits, general requirements; 15.247 Operation within the bands 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz.	--
2	RSS-247 Issue 3	Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices	2023
3	RSS-Gen Issue 5	General Requirements for Compliance of Radio Apparatus	2021

1.2 Reference Document(s)

No.	Test Standard	Title	Version
1	ANSI C63.10	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices	2013

NOTE: The standard of KDB 558074 D01 15.247 Meas Guidance v05r02 has not been accredited by A2LA

1.3 Summary of Test Results

No.	Measurement Items	FCC Rules	IC Rules	Verdict
1	Maximum Peak Output Power	15.247(b)	RSS-247 5.4	Pass ^{Note3}
2	Peak Power Spectral Density	15.247(e)	RSS-247 5.2	Pass ^{Note3}
3	6dB Occupied Bandwidth	15.247(a)	RSS-247 5.2	Pass ^{Note3}
4	99% Occupied Bandwidth	15.247(d)	RSS-GEN 6.7	Pass ^{Note3}
5	Band Edges Compliance	15.247(d)	RSS-247 5.5	Pass ^{Note3}
6	Transmitter Spurious Emission- Conducted	15.247(d)	RSS-247 5.5	Pass ^{Note3}
7	Transmitter Spurious Emission- Radiated	15.247/15.205/15.209	RSS-GEN 8.9, 8.10	Pass
8	AC Powerline Conducted Emission	15.207	RSS-GEN 8.8	Pass
9	Antenna requirement	15.203/15.247(c)	RSS Gen 6.8, RSS-247 5.4	Pass ^{Note 2}

Note 1:

The T8F1A manufactured by Shanghai Sunmi Technology Co.,Ltd. is a new product for testing. This project is a project based on the module report SZCR231100354202 and SZCR240300072502. According to the Product Change Description, we tested the worst mode of radiated spurious emission in the original report, and the test data of the radiated spurious emission was recorded in the report. Industrial Internet Innovation Center (Shanghai) Co., Ltd. only performed test cases which identified with Pass/Fail/Inc result in section 1.3.

Industrial Internet Innovation Center (Shanghai) Co., Ltd. has verified that the compliance of the tested device specified in section 4 of this test report is successfully evaluated according to the procedure and

test methods as defined in type certification requirement listed in section 1 of this test report.

Note 2:

Hallow 802.11ah used a Internal antenna with max Gain -1.47 dBi that complied with 15.203 Requirements.

NOTE3:

The test verdict of this item come form the original report.

Note:

a. All the test data for each data were verified, but only the worst case was reported.

1.4 Data Provided by Applicant

No.	Item(s)	Data
1	Antenna gain of EUT	-1.47 dBi

Note: The data of antenna gain is provided by the Antenna specification may affect the validity of the test results in this report, and the impact and consequences of this shall be undertaken by the customer.

2. General Information of The Laboratory

2.1 Testing Laboratory

Lab Name	Industrial Internet Innovation Center (Shanghai) Co.,Ltd.
Address	Building 4, No. 766, Jingang Road, Pudong, Shanghai, China
Telephone	021-68866880
FCC Registration No.	708870
FCC Designation No.	CN1364
IC Designation No.	10766A
CAB identifier	CN0067

2.2 Laboratory Environmental Requirements

Temperature	15°C~35°C
Relative Humidity	25%RH~75%RH
Atmospheric Pressure	86kPa~106kPa

2.3 Project Information

Project Manager	Gao Hongning
Test Date	November 29, 2024 to January 17, 2025

3. General Information of The Customer

3.1 Applicant

Company	Shanghai Sunmi Technology Co.,Ltd.
Address	Room 505,No.388,Song Hu Road,Yang Pu District,Shanghai,China
Telephone	8618501703215

3.2 Manufacturer

Company	Shanghai Sunmi Technology Co.,Ltd.
Address	Room 505,No.388,Song Hu Road,Yang Pu District,Shanghai,China
Telephone	8618501703215

4. General Information of The Product

4.1 Product Description for Equipment under Test (EUT)

Product Name	Handheld Wireless Terminal
Model name	T8F1A
Date of Receipt	S05aa/S10aa: November 29,2024
EUT ID*	S05aa/S10aa
SN/IMEI	S05aa: L303E4BL00005 S10aa: L303E4BL00002
Supported Radio Technology and Bands	BT 5.2 BR/EDR/BLE WLAN 802.11b,g,n WLAN 802.11a,n,ac Hallow WI-FI 802.11ah GPS/GLONASS/Galileo/BDS NFC
Hardware Version	V00
Software Version	1.00.00.20241113_186_userdebug
HVIN	T8F1A
FCC ID	2AH25T8F1A
IC	22621-T8F1A
NOTE1: EUT ID is the internal identification code of the laboratory. NOTE2: Samples in the test report are provided by the customer. The test results are only applicable to the samples received by the laboratory.	

4.2 Internal Identification of AE used during the test

AE ID*	Description	Model	SN/Remark
CA01	Adapter	TPA-141A050200UU01	SHENZHEN TIANYIN ELECTRONICS CO., LTD. OUTPUT: 5V 2A
CB01	Adapter	UC13US	Jiangsu Chenyang Electron Co., Ltd. OUTPUT: 5V 2A
UA01	AC Cable	SSM-A033A	Saibao (Jiangxi) Industry Co., LTD
BA07	Battery	GYPA	HUNAN GAOYUAN BATTERY CO.,LTD. 5000mAh 3.87V
AE1	RF cable	N/A	Cable loss: 1dB
NOTE: *AE ID is the internal identification code of the laboratory.			

4.3 Additional Information

Test frequency list:

Bandwidth (MHz)	Low Channel (MHz)	Middle Channel (MHz)	High Channel (MHz)
1	903.5	915.5	926.5
2	905	915	925
4	906	914	922

Note: This report is for Hallow WI-FI 802.11ah only.

5. Test Configuration Information

5.1 Laboratory Environmental Conditions

5.1.1 Permanent Facilities

Relative Humidity	Min. = 45 %, Max. = 55 %		
Atmospheric Pressure	101kPa		
Temperature	Normal	Minimum	Maximum
	25°C	-20°C	55°C
Working Voltage of EUT	Normal	Minimum	Maximum
	3.87V	3.4V	4.4V

5.2 Test Equipments Utilized

5.2.1 Radiated Emission Test System

No.	Name	Model	S/N	SW Version	HW Version	Manufacturer	Cal. Date	Cal. Interval
1	Universal Radio Communication Tester	CMU200	123126	V5.2.1	B12	R&S	2024-10-09	1 Year
2	Universal Radio Communication Tester	CMW500	104178	V3.7.20	1206.0600.00	R&S	2024-10-09	1 Year
3	EMI Test Receiver	ESU40	100307	V5.1-24-3	01	R&S	2023-12-19 2024-12-13	1 Year
4	TRILOG Broadband Antenna	VULB9163	01345	N/A	N/A	Schwarzbeck	2024-03-29	1 Year
5	Double- ridged Waveguide Antenna	ETS-3117	00135890	N/A	N/A	ETS	2024-03-16	1 Year
6	EMI Test Software	EMC32 V10.35.02	N/A	V10.35.02	N/A	R&S	N/A	N/A
7	Horn Antenna	3160-09	LM6321	N/A	N/A	R&S	2024-07-15	1 Year
8	Horn Antenna	3160-10	LM5942	N/A	N/A	R&S	2024-07-15	1 Year
9	Loop Antenna	AL-130R	121083	N/A	N/A	COM-POWER	2024-08-31	1 Year
10	Preamplifier	SCU08F1	8320024	N/A	N/A	R&S	2024-10-09	1 Year

11	Preamplifier	SCU18	10155	N/A	N/A	R&S	2024-10-09	1 Year
12	Preamplifier	SCU26	10025	N/A	N/A	R&S	2024-10-09	1 Year
13	Preamplifier	SCU40	10020	N/A	N/A	R&S	2024-10-09	1 Year
14	2-Line V-Network	ENV216	10138 0	N/A	N/A	R&S	2023-12-19 2024-12-13	1 Year
15	EMI Test Software	EMC32 V10.35.02	N/A	N/A	N/A	R&S	N/A	N/A
16	Test Receiver	ESCI	10123 5	V5.1-24- 3	0	R&S	2023-12-19 2024-12-13	1 Year
17	Antenna Tower	TPMDC-LF	N/A	N/A	N/A	Top Precision	N/A	N/A
18	Antenna Tower	TPMDC-HF	N/A	N/A	N/A	Top Precision	N/A	N/A

5.2.3 Test Environment

Shielding Room1 (6.0 meters×3.0 meters×2.7 meters) did not exceed following limits along the conducted RF performance testing:

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. = 20 %, Max. = 75 %
Shielding effectiveness	> 100 dB
Ground system resistance	< 0.5 Ω
Temperature	Min. = 15 °C, Max. = 35 °C

Control room did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. = 30 %, Max. = 60 %
Shielding effectiveness	> 100 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω

Fully-anechoic chamber1 (9.8 meters×6.7 meters×6.7 meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. = 25 %, Max. = 75 %
Shielding effectiveness	> 100 dB
Electrical insulation	> 10 kΩ

Ground system resistance	< 0.5 Ω
VSWR	Between 0 and 6 dB, from 1GHz to 18GHz
Site Attenuation Deviation	Between -4 and 4 dB, 30MHz to 1GHz

5.3 Measurement Uncertainty

Measurement Uncertainty of Radiation test

Measurement Items	Uncertainty(dB)
Radiated Emission 30MHz-1000MHz	± 5.10
Radiated Emission 1000MHz-18000MHz	± 5.66
Radiated Emission 18000MHz-40000MHz	± 5.22
AC Powerline Conducted Emission	± 4.38
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

6. Test Results

6.1 Radiated Emission

6.1.1 Measurement Limit

According to the FCC 15.205&15.209/RSS-Gen section 8.9&1.0

Limit in restricted band

Frequency of emission (MHz)	Field strength (mV/m)	Field strength (dBuV/m)
0.009~0.49	2400/F (kHz)	129-94
0.49~1.705	24000/F (kHz)	74-63
1.705~30	30	70
30~88	100	40
88~216	150	43.5
216~960	200	46
Above 960	500	54

6.1.2 Test Method

Portable, small, lightweight, or modular devices that may be handheld, worn on the body, or placed on a table during operation shall be positioned on a non-conducting platform, the top of which is 80 cm above the reference ground plane. The preferred area occupied by the EUT arrangement is 1 m by 1.5 m, but it may be larger or smaller to accommodate various sized EUTs. For testing purposes, ceiling- and wall-mounted devices also shall be positioned on a tabletop (see also ANSI C63.10-2013 section 6.3.4 and 6.3.5). In making any tests involving handheld, body-worn, or ceiling-mounted equipment, it is essential to recognize that the measured levels may be dependent on the orientation (attitude) of the three orthogonal axes of the EUT. Thus, exploratory tests as specified in 8.3.1 shall be carried out for various axes orientations to determine the attitude having maximum or near-maximum emission level.

The EUT was placed on a non-conductive table. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

Test Settings – Below 1GHz (Quasi-Peak Field Strength Measurements)

1. Set the center frequency and span to encompass frequency range to be measured.
2. Set the RBW = 100 kHz.
3. Set the VBW = 300 kHz.
4. Detector = quasi-peak.
5. Sweep time = auto couple.
6. Trace mode = max hold.
7. Trace was allowed to stabilize.

Test Settings – Above 1GHz (Peak Field Strength Measurements)

1. Set the center frequency and span to encompass frequency range to be measured.
2. Set the RBW = 1MHz.
3. Set the VBW = 3MHz.

4. Detector = peak
5. Trace mode = max hold
6. Sweep time = auto
7. Trace (RMS) averaging was performed over at least 100 traces.

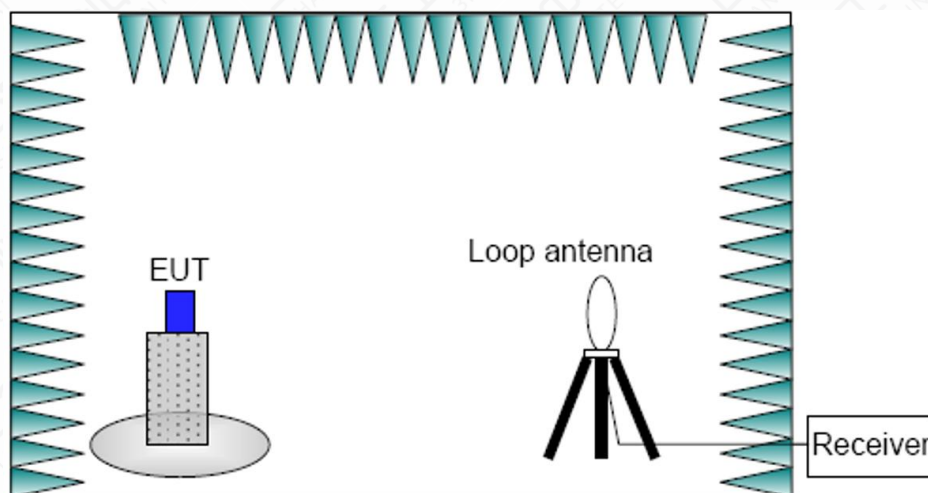
Test Settings – Above 1GHz (Average Field Strength Measurements)

1. Set the center frequency and span to encompass frequency range to be measured.
2. Set the RBW = 1MHz.
3. Set the VBW = 3MHz.
4. Detector = power average (RMS).
5. Number of measurement points = 1001 (Number of points must be $\geq 2 \times \text{span} \backslash \text{RBW}$)
6. Sweep time = auto
7. Trace (RMS) averaging was performed over at least 100 traces.

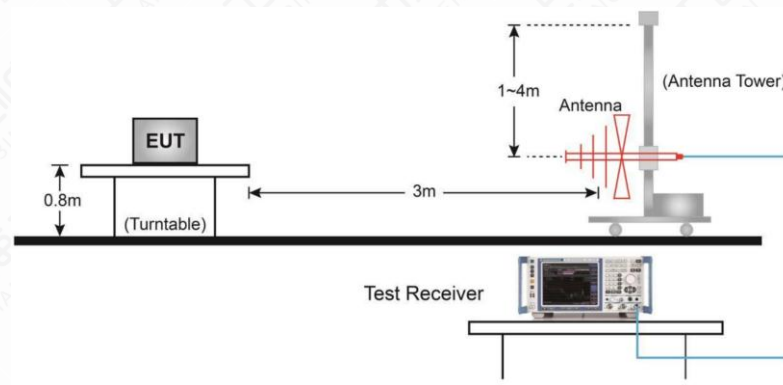
Frequency of emission (MHz)	RBW/VBW	Sweep Time (s)
0.009~30	9KHz/30KHz	Auto
30~1000	100KHz/300KHz	5
1000~4000	1MHz/3MHz	15
4000~18000	1MHz/3MHz	40
18000~26500	1MHz/3MHz	20

6.1.3 Test Setup

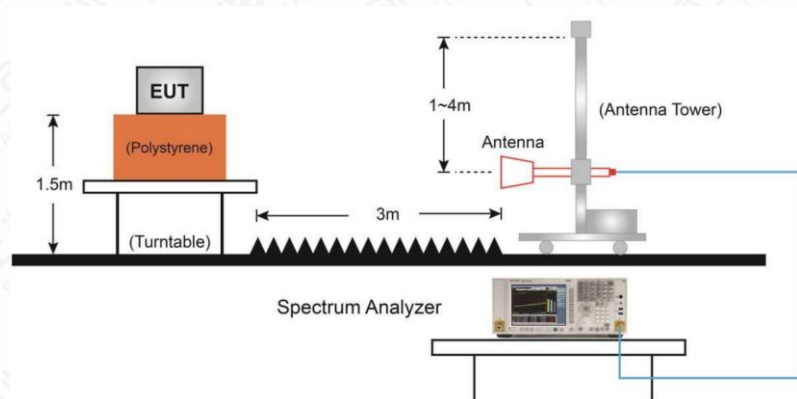
Below 30MHz Test Setup



Below 1GHz Test Setup



Above 1GHz Test Setup



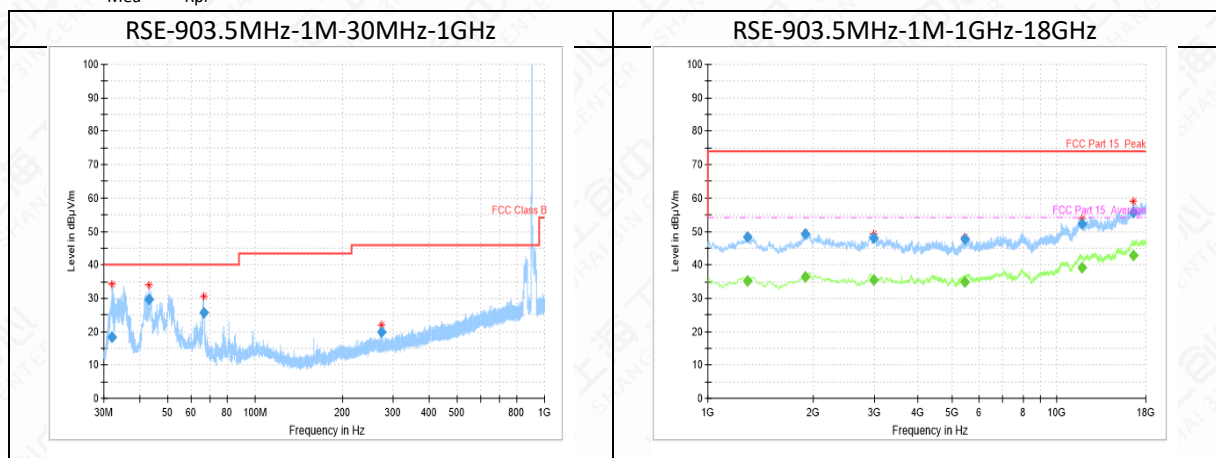
6.1.4 Measurement Results

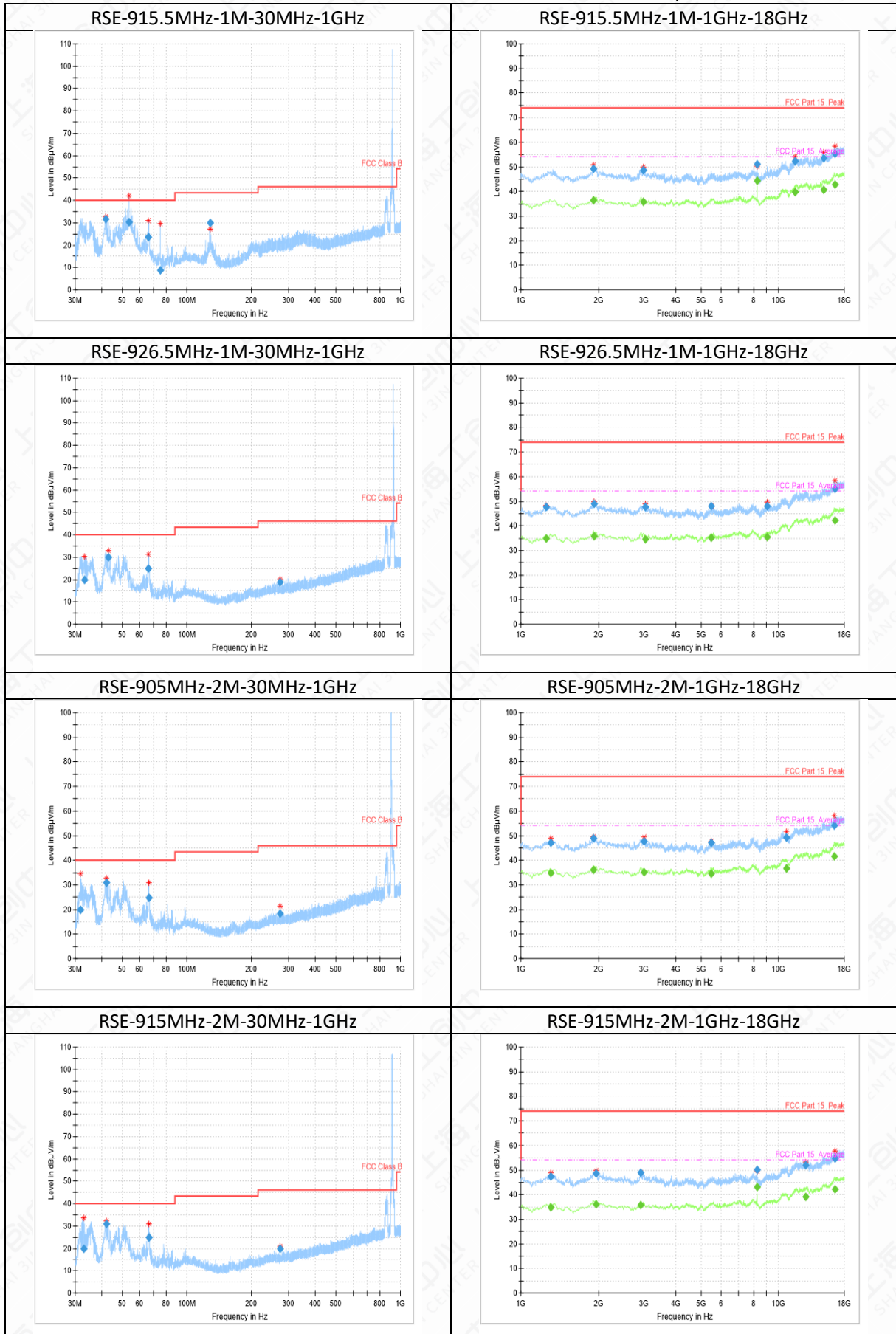
A “reference path loss” is established and AR_{pi} is the attenuation of “reference path loss”, and including the gain of receive antenna, the gain of the preamplifier, the cable loss.

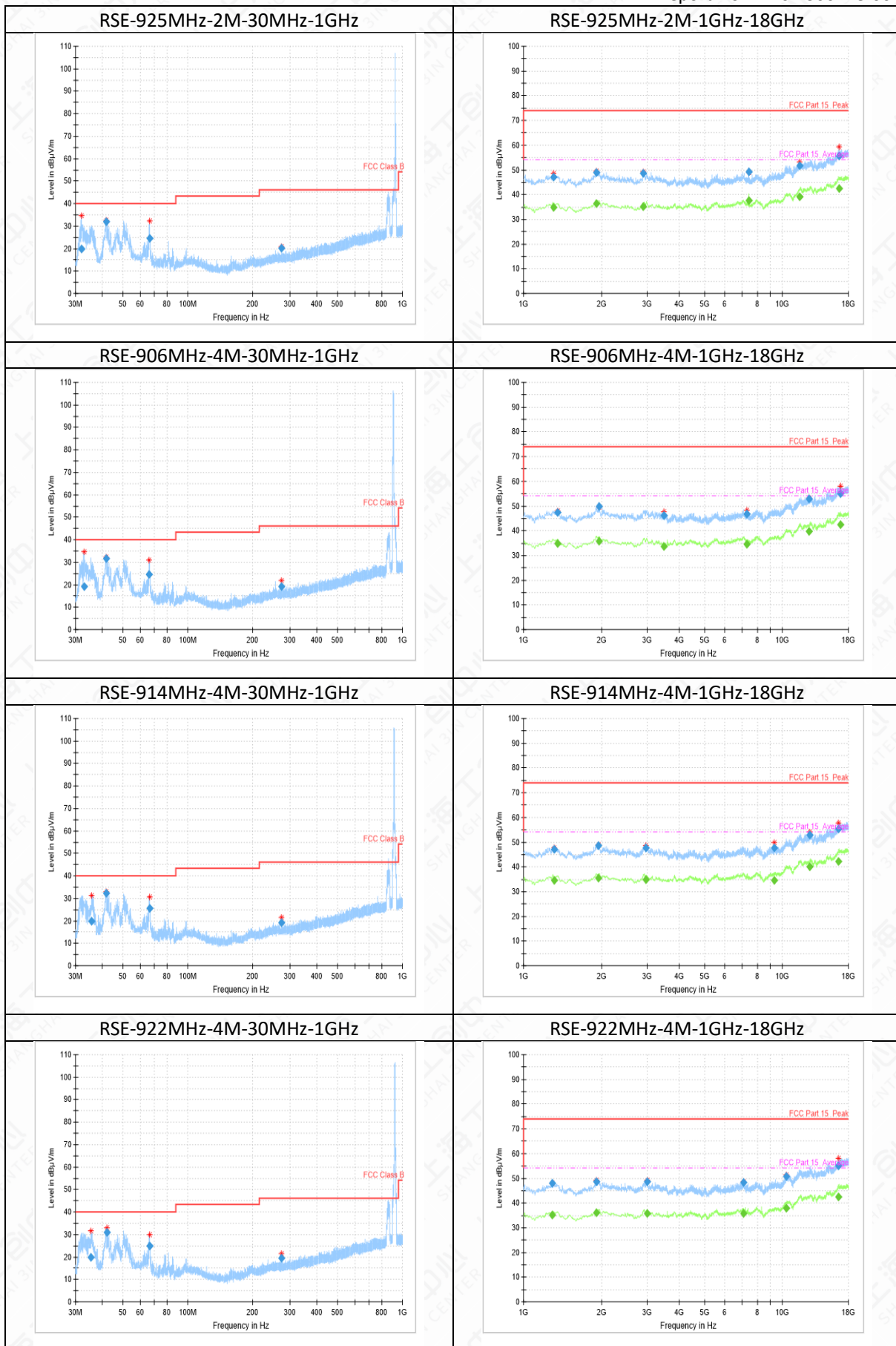
The measurement results are obtained as described below:

$AR_{pi} = \text{Cable loss} + \text{Antenna Factor} - \text{Preamplifier gain}$

$\text{Result} = P_{\text{Mea}} + AR_{pi}$







Note:

1. The out-of- limit signal in the picture is the main frequency signal.
2. Only data in worst mode is provided.
3. Sweep the whole frequency band through the range from 30MHz to the 10th harmonic of the carrier, the Emissions in the frequency band 18GHz-26.5GHz is more than 20dB below the limit are not report.
4. The test data below 30MHz is more than 20dB lower than the limit value, so it is not provided in the report.
5. Horizontal and vertical polarity is all have been tested, the result of them is synthesized in the above data diagram.

RSE-903.5MHz-1M-30MHz-1GHz

Frequency (MHz)	QuasiPeak(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
31.9	18.43	-15	33.43	21.57	40.00	V
42.9	29.51	-13	42.51	10.49	40.00	V
66.3	25.64	-14	39.64	14.36	40.00	V
273.0	19.9	-11	30.9	26.10	46.00	H

RSE-903.5MHz-1M-1GHz-18GHz

Frequency (MHz)	MaxPeak(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
1297.0	48.4	4	44.4	25.60	74.00	V
1906.2	49.25	5	44.25	24.75	74.00	H
2994.9	48.14	3	45.14	25.86	74.00	V
5445.0	47.68	3	44.68	26.32	74.00	H
11803.5	52.16	11	41.16	21.84	74.00	H
16515.1	55.53	18	37.53	18.47	74.00	H

RSE-903.5MHz-1M-1GHz-18GHz

Frequency (MHz)	Average(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
1297.0	35.3	4	31.3	18.70	54.00	V
1906.2	36.4	5	31.4	17.60	54.00	H
2994.9	35.4	3	32.4	18.60	54.00	V
5445.0	34.93	3	31.93	19.07	54.00	H
11803.5	39.23	11	28.23	14.77	54.00	H
16515.1	42.78	18	24.78	11.22	54.00	H

RSE-915.5MHz-1M-30MHz-1GHz

Frequency (MHz)	QuasiPeak(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
41.6	31.72	-13	44.72	8.28	40.00	V
53.8	30.43	-12	42.43	9.57	40.00	V
66.2	23.48	-14	37.48	16.52	40.00	V
75.0	8.65	-17	25.65	31.35	40.00	V
128.2	29.97	-16	45.97	13.53	43.50	H

RSE-915.5MHz-1M-1GHz-18GHz

Frequency (MHz)	MaxPeak(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
1912.1	49.27	5	44.27	24.73	74.00	H
2994.2	48.64	3	45.64	25.36	74.00	H
8239.4	51.04	4	47.04	22.96	74.00	H
11591.0	52.2	10	42.2	21.80	74.00	H
14997.9	53.57	14	39.57	20.43	74.00	H
16515.8	55.4	18	37.4	18.60	74.00	H

RSE-915.5MHz-1M-1GHz-18GHz

Frequency (MHz)	Average(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
1912.1	36.43	5	31.43	17.57	54.00	H
2994.2	35.78	3	32.78	18.23	54.00	H
8239.4	44.46	4	40.46	9.54	54.00	H
11591.0	39.79	10	29.79	14.21	54.00	H
14997.9	40.67	14	26.67	13.33	54.00	H
16515.8	42.75	18	24.75	11.25	54.00	H

RSE-926.5MHz-1M-30MHz-1GHz

Frequency (MHz)	QuasiPeak(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
33.2	19.76	-15	34.76	20.24	40.00	V
42.9	29.82	-13	42.82	10.18	40.00	V
66.3	24.84	-14	38.84	15.16	40.00	V
273.0	18.68	-11	29.68	27.33	46.00	H

RSE-926.5MHz-1M-1GHz-18GHz

Frequency (MHz)	MaxPeak(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
1257.1	47.65	3	44.65	26.35	74.00	H
1924.9	48.96	5	43.96	25.04	74.00	V
3038.9	47.68	1	46.68	26.32	74.00	H
5484.2	47.94	3	44.94	26.06	74.00	H
9015.5	48.07	5	43.07	25.93	74.00	V
16565.1	54.95	18	36.95	19.05	74.00	V

RSE-926.5MHz-1M-1GHz-18GHz

Frequency (MHz)	Average(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
1257.1	34.85	3	31.85	19.15	54.00	H
1924.9	35.85	5	30.85	18.15	54.00	V
3038.9	34.46	1	33.46	19.54	54.00	H
5484.2	35.06	3	32.06	18.94	54.00	H
9015.5	35.5	5	30.5	18.50	54.00	V
16565.1	42.11	18	24.11	11.89	54.00	V

RSE-905MHz-2M-30MHz-1GHz

Frequency (MHz)	QuasiPeak(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
31.8	19.87	-16	35.87	20.13	40.00	V
42.1	30.98	-13	43.98	9.02	40.00	V
66.3	24.73	-14	38.73	15.27	40.00	V
273.0	18.47	-11	29.47	27.53	46.00	H

RSE-905MHz-2M-1GHz-18GHz

Frequency (MHz)	MaxPeak(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
1309.1	47.09	3	44.09	26.91	74.00	H
1916.9	48.86	5	43.86	25.14	74.00	V
3002.2	47.71	3	44.71	26.29	74.00	V
5479.5	47.03	3	44.03	26.97	74.00	V
10700.6	49.27	8	41.27	24.73	74.00	H
16483.2	54.12	18	36.12	19.88	74.00	V

RSE-905MHz-2M-1GHz-18GHz

Frequency (MHz)	Average(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
1309.1	34.93	3	31.93	19.07	54.00	H
1916.9	36.14	5	31.14	17.86	54.00	V
3002.2	35.1	3	32.1	18.90	54.00	V
5479.5	34.49	3	31.49	19.51	54.00	V
10700.6	36.7	8	28.7	17.30	54.00	H
16483.2	41.51	18	23.51	12.49	54.00	V

RSE-915MHz-2M-30MHz-1GHz

Frequency (MHz)	QuasiPeak(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
32.9	19.88	-15	34.88	20.12	40.00	V
42.1	30.82	-13	43.82	9.18	40.00	V
66.3	24.75	-14	38.75	15.25	40.00	V
273.0	19.72	-11	30.72	26.28	46.00	H

RSE-915MHz-2M-1GHz-18GHz

Frequency (MHz)	MaxPeak(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
1307.6	47.54	3	44.54	26.46	74.00	V
1955.1	48.73	5	43.73	25.27	74.00	V
2919.4	49	3	46	25.00	74.00	H
8235.1	50.25	4	46.25	23.75	74.00	H
12710.9	52.04	11	41.04	21.96	74.00	V
16604.4	54.86	17	37.86	19.14	74.00	H

RSE-915MHz-2M-1GHz-18GHz

Frequency (MHz)	Average(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
1307.6	35.01	3	32.01	18.99	54.00	V
1955.1	35.99	5	30.99	18.01	54.00	V
2919.4	35.93	3	32.93	18.07	54.00	H
8235.1	43.18	4	39.18	10.82	54.00	H
12710.9	39.27	11	28.27	14.73	54.00	V
16604.4	42.06	17	25.06	11.94	54.00	H

RSE-925MHz-2M-30MHz-1GHz

Frequency (MHz)	QuasiPeak(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
32.0	19.9	-15	34.9	20.10	40.00	V
41.6	32.06	-13	45.06	7.94	40.00	V
66.3	24.46	-14	38.46	15.54	40.00	V
273.0	20.2	-11	31.2	25.80	46.00	H

RSE-925MHz-2M-1GHz-18GHz

Frequency (MHz)	MaxPeak(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
1310.2	47.19	3	44.19	26.81	74.00	V
1909.0	49.05	5	44.05	24.95	74.00	V
2900.8	48.5	2	46.5	25.50	74.00	V
7399.4	49.1	3	46.1	24.90	74.00	H
11643.0	51.63	11	40.63	22.37	74.00	H
16530.0	55.57	18	37.57	18.43	74.00	V

RSE-925MHz-2M-1GHz-18GH

Frequency (MHz)	Average(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
1310.2	34.9	3	31.9	19.10	54.00	V
1909.0	36.38	5	31.38	17.62	54.00	V
2900.8	35.31	2	33.31	18.69	54.00	V
7399.4	37.64	3	34.64	16.36	54.00	H
11643.0	39.25	11	28.25	14.75	54.00	H
16530.0	42.4	18	24.4	11.60	54.00	V

SE-906MHz-4M-30MHz-1GHz

Frequency (MHz)	QuasiPeak(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
32.9	19.17	-15	34.17	20.83	40.00	V
41.6	31.52	-13	44.52	8.48	40.00	V
66.3	24.66	-14	38.66	15.34	40.00	V
273.0	19.18	-11	30.18	26.82	46.00	H

RSE-906MHz-4M-1GHz-18GHz

Frequency (MHz)	MaxPeak(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
1356.0	47.36	3	44.36	26.64	74.00	V
1960.0	49.97	5	44.97	24.03	74.00	H
3478.8	46.18	1	45.18	27.82	74.00	H
7305.4	46.67	4	42.67	27.33	74.00	H
12688.5	52.93	11	41.93	21.07	74.00	V
16806.2	54.99	18	36.99	19.01	74.00	V

RSE-906MHz-4M-1GHz-18GHz

Frequency (MHz)	Average(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
1356.0	34.93	3	31.93	19.07	54.00	V
1960.0	35.8	5	30.8	18.20	54.00	H
3478.8	33.76	1	32.76	20.24	54.00	H
7305.4	34.55	4	30.55	19.45	54.00	H
12688.5	39.71	11	28.71	14.30	54.00	V
16806.2	42.4	18	24.4	11.60	54.00	V

RSE-914MHz-4M-30MHz-1GHz

Frequency (MHz)	QuasiPeak(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
35.7	19.82	-14	33.82	20.18	40.00	V
41.6	32.25	-13	45.25	7.75	40.00	V
66.3	25.41	-14	39.41	14.59	40.00	V
273.0	19.14	-11	30.14	26.86	46.00	H

RSE-914MHz-4M-1GHz-18GHz

Frequency (MHz)	MaxPeak(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
1317.8	47.21	3	44.21	26.79	74.00	H
1941.9	48.66	5	43.66	25.34	74.00	H
2966.6	47.77	2	45.77	26.23	74.00	H
9319.9	47.66	5	42.66	26.34	74.00	H
12739.0	52.82	12	40.82	21.18	74.00	H
16466.8	55.29	17	38.29	18.71	74.00	H

RSE-914MHz-4M-1GHz-18GHz

Frequency (MHz)	Average(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
1317.8	34.69	3	31.69	19.31	54.00	H
1941.9	35.59	5	30.59	18.41	54.00	H
2966.6	35	2	33	19.00	54.00	H
9319.9	34.64	5	29.64	19.36	54.00	H
12739.0	39.98	12	27.98	14.02	54.00	H
16466.8	42.21	17	25.21	11.79	54.00	H

RSE-922MHz-4M-30MHz-1GHz

Frequency (MHz)	QuasiPeak(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
35.4	19.79	-14	33.79	20.21	40.00	V
42.1	30.98	-13	43.98	9.02	40.00	V
66.3	25.06	-14	39.06	14.94	40.00	V
273.0	19.46	-11	30.46	26.54	46.00	H

RSE-922MHz-4M-1GHz-18GHz

Frequency (MHz)	MaxPeak(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
1291.6	47.98	3	44.98	26.02	74.00	H
1906.9	48.74	5	43.74	25.26	74.00	H
3002.9	48.7	3	45.7	25.30	74.00	H
7090.2	48.47	5	43.47	25.53	74.00	H
10381.9	50.64	8	42.64	23.36	74.00	H
16471.0	54.9	17	37.9	19.10	74.00	H

RSE-922MHz-4M-1GHz-18GHz

Frequency (MHz)	Average(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
1291.6	35.05	3	32.05	18.95	54.00	H
1906.9	36.13	5	31.13	17.87	54.00	H
3002.9	35.68	3	32.68	18.32	54.00	H
7090.2	35.66	5	30.66	18.34	54.00	H
10381.9	37.87	8	29.87	16.13	54.00	H
16471.0	42.49	17	25.49	11.51	54.00	H

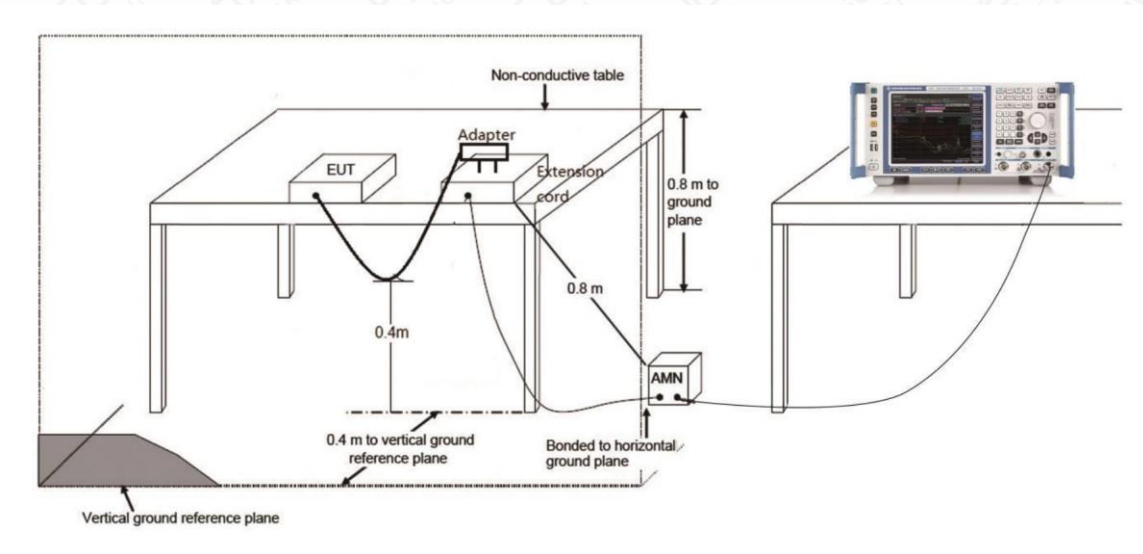
6.2 AC Powerline Conducted Emission

6.2.1 Method of Measurement: ANSI C63.10-2013-clause 6.2

1. The one EUT cable configuration and arrangement and mode of operation that produced the emission with the highest amplitude relative to the limit is selected for the final measurement, while applying the appropriate modulating signal to the EUT.
2. If the EUT is relocated from an exploratory test site to a final test site, the highest emissions shall be remaximized at the final test location before final ac power-line conducted emission measurements are performed.
3. The final test on all current-carrying conductors of all of the power cords to the equipment that comprises the EUT (but not the cords associated with other non-EUT equipment in the system) is then performed for the full frequency range for which the EUT is being tested for compliance without further variation of the EUT arrangement, cable positions, or EUT mode of operation.
4. If the EUT is comprised of equipment units that have their own separate ac power connections, e.g., floor-standing equipment with independent power cords for each shelf that are able to connect directly to the ac power network, each current-carrying conductor of one unit is measured while the other units are connected to a second (or more) LISN(s). All units shall be separately measured. If a power strip is provided by the manufacturer, to supply all of the units making up the EUT, only the conductors in the power cord of the power strip shall be measured.

If the EUT uses a detachable antenna, these measurements shall be made with a suitable dummy load connected to the antenna output terminals; otherwise, the tests shall be made with the antenna connected and, if adjustable, fully extended. When measuring the ac conducted emissions from a device that operates between 150 kHz and 30 MHz a non-detachable antenna may be replaced with a dummy load for the measurements within the fundamental emission band of the transmitter, but only for those measurements.³⁶ Record the six highest EUT emissions relative to the limit of each of the current-carrying conductors of the power cords of the equipment that comprises the EUT over the frequency range specified by the procuring or regulatory agency. Diagram or photograph the test setup that was used. See Clause 8 for full reporting requirements.

6.2.2 Test Setup



6.2.3 Test Condition

Voltage (V)	Frequency (Hz)
120	60

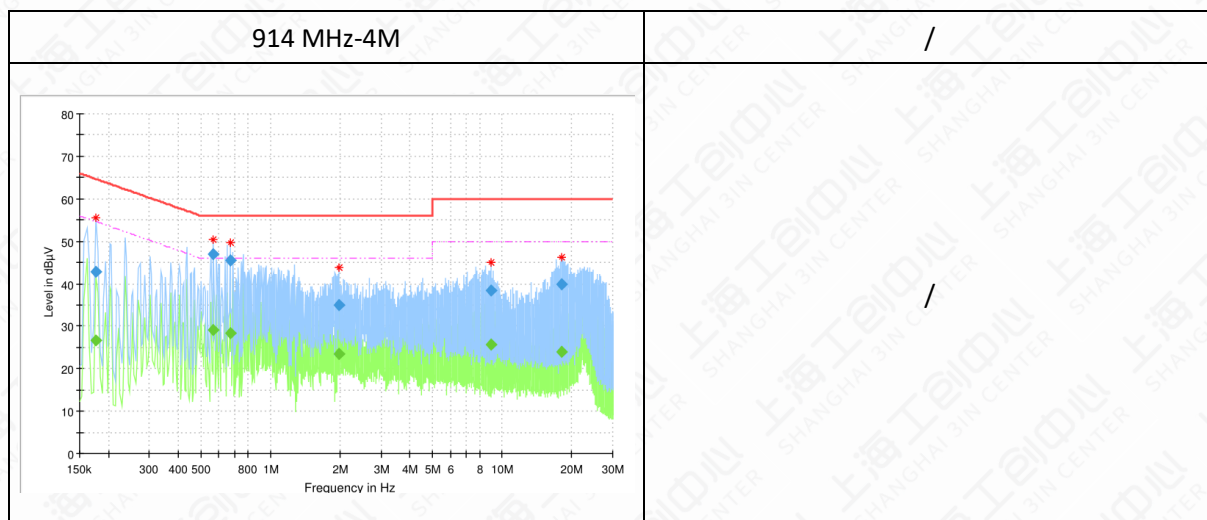
6.2.4 Measurement limit

(Quasi-peak-average Limit)

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Conclusion
0.15 to 0.5	66 to 56	56 to 46	P
0.5 to 5	56	46	
5 to 30	60	50	

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

6.2.5 Measurement Result



Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Meas.Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.176119	---	26.61	54.67	28.05	15000.0	9.000	N	ON	10.0
0.176119	42.92	---	64.67	21.75	15000.0	9.000	N	ON	10.0
0.567900	---	29.23	46.00	16.77	15000.0	9.000	N	ON	9.9
0.567900	47.00	---	56.00	9.00	15000.0	9.000	N	ON	9.9
0.668644	---	28.28	46.00	17.72	15000.0	9.000	N	ON	9.9
0.668644	45.63	---	56.00	10.37	15000.0	9.000	N	ON	9.9
1.970850	---	23.57	46.00	22.43	15000.0	9.000	N	ON	9.9
1.970850	34.87	---	56.00	21.13	15000.0	9.000	N	ON	9.9
8.963213	---	25.78	50.00	24.22	15000.0	9.000	N	ON	9.6
8.963213	38.34	---	60.00	21.66	15000.0	9.000	N	ON	9.6
18.026419	---	24.05	50.00	25.95	15000.0	9.000	N	ON	9.5
18.026419	39.91	---	60.00	20.09	15000.0	9.000	N	ON	9.5

Note:

- 1.All modes have been tested and only the worst mode is recorded in the report.
2. L1 and N is all have been tested, the result of them is synthesized in the above data diagram.

Annex A: Revised History

Version	Revised Content
V0	Initial

Annex B: Accreditation Certificate



END OF REPORT