

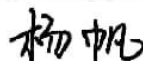
Industrial Internet Innovation Center (Shanghai) Co.,Ltd.**FCC/IC LTE TEST REPORT**

PRODUCT	Wireless data POS System
BRAND	SUNMI
MODEL	T5820
APPLICANT	Shanghai Sunmi Technology Co.,Ltd.
FCC ID	2AH25T5820
IC	22621-T5820
ISSUE DATE	February 23, 2023
STANDARD(S)	FCC Part 2, FCC Part 22, FCC Part 24, FCC Part 27, RSS-Gen Issue 5, RSS-130 Issue 2, RSS-132 Issue 3, RSS-133 Issue 6, RSS-139 Issue 3, RSS-199 Issue 3

Prepared by: Wu Rui



Reviewed by: Yang Fan



Approved by: Zhang Min

**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 DOCUMENTS.....	3
1.3 SUMMARY OF TEST RESULTS.....	4
1.4 DATA PROVIDED BY APPLICANT.....	8
2. GENERAL INFORMATION OF THE LABORATORY	9
2.1 TESTING LABORATORY	9
2.2 LABORATORY ENVIRONMENTAL REQUIREMENTS.....	9
2.3 PROJECT INFORMATION	9
3. GENERAL INFORMATION OF THE CUSTOMER.....	10
3.1 APPLICANT	10
3.2 MANUFACTURER	10
4. GENERAL INFORMATION OF THE PRODUCT12	11
4.1 PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT).....	11
4.2 DESCRIPTION FOR AUXILIARY EQUIPMENT (AE)	11
4.3 ADDITIONAL INFORMATION	11
5. TEST CONFIGURATION INFORMATION	12
5.1 LABORATORY ENVIRONMENTAL CONDITIONS.....	12
5.2 TEST EQUIPMENTS UTILIZED.....	12
5.3 MEASUREMENT UNCERTAINTY	13
6. TEST RESULTS	14
6.1 EMISSION LIMIT	14
ANNEX A: REVISED HISTORY	20
ANNEX B: ACCREDITATION CERTIFICATE.....	21

1. Summary of Test Report

1.1 Test Standard (s)

No.	Test Standard	Title	Version
1	FCC Part 2	FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS	2021-10-01
2	FCC Part 22	PUBLIC MOBILE SERVICES	2021-10-01
3	FCC Part 24	PERSONAL COMMUNICATIONS SERVICES	2021-10-01
4	FCC Part 27	MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES	2021-10-01
5	RSS-Gen Issue 5	RSS-Gen —General Requirements for Compliance of Radio Apparatus	2021-02
6	RSS-130 Issue 2	Equipment Operating in the Frequency Bands 617-652 MHz, 663-698 MHz, 698-756 MHz and 777-787 MHz	2019-02
7	RSS-132 Issue 3	Cellular Telephone Systems Operating in the Bands 824-849 MHz and 869-894 MHz	2013-01
8	RSS-133 Issue 6	2 GHz Personal Communications Services	2018-01
9	RSS-139 Issue 3	Advanced Wireless Services (AWS) Equipment Operating in the Bands 1710-1780 MHz and 2110-2180 MHz	2015-07
10	RSS-199 Issue 3	Broadband Radio Service (BRS) Equipment Operating in the Band 2500–2690 MHz	2016-12

1.2 Reference Documents

No.	Test Standard	Title	Version
1	ANSI/TIA-603-E	Land Mobile FM or PM Communications Equipment Measurement and Performance Standards	2016
2	ANSI C63.26	American National Standard of Procedures for Compliance Testing of Licensed Transmitters Used in Licensed Radio	2015
3	KDB 971168 D01	Measurement Guidance for Certification of Licensed Digital Transmitters	v03r01

1.3 Summary of Test Results

LTE Band 2

Items	Test Name	Clause in FCC rules	Sub-clause of IC	Verdict
1	Output Power	24.232(c)	RSS-133 6.4	Pass
2	Emission Limit	24.238(a), 2.1051	RSS-133 6.5	Pass
3	Frequency Stability	24.235, 2.1055	RSS-133 6.3	Pass (Note2)
4	Occupied Bandwidth	2.1049(h)(i)	RSS-Gen 6.7	Pass (Note2)
5	Emission Bandwidth	24.238(a)	RSS-Gen 6.7	Pass (Note2)
6	Band Edge Compliance	24.238(a)	RSS-133 6.5	Pass (Note2)
7	Conducted Spurious Emission	24.238, 2.1057	RSS-133 6.5	Pass (Note2)
8	Peak to Average Power Ratio	24.232 (d)	RSS-133 6.4	Pass (Note2)

LTE Band 4

Items	Test Name	Clause in FCC rules	Sub-clause of IC	Verdict
1	Output Power	27.50(d)(4)	RSS-139 6.5	Pass
2	Emission Limit	27.53(h), 2.1051	RSS-139 6.6	Pass
3	Frequency Stability	27.54, 2.1055	RSS-139 6.4	Pass (Note2)
4	Occupied Bandwidth	2.1049(h)(i)	RSS-Gen 6.7	Pass (Note2)
5	Emission Bandwidth	27.53(h)	RSS-Gen 6.7	Pass (Note2)
6	Band Edge Compliance	27.53(h)	RSS-139 6.6	Pass (Note2)
7	Conducted Spurious Emission	27.53(h), 2.1057	RSS-139 6.6	Pass (Note2)
8	Peak to Average Power Ratio	27.50(a)	RSS-139 6.5	Pass (Note2)

LTE Band 5

Items	Test Name	Clause in FCC rules	Sub-clause of IC	Verdict
1	Output Power	2.1046(a), 22.913(a)	RSS-132 5.4	Pass
2	Emission Limit	22.917, 2.1051	RSS-132 5.5	Pass
3	Frequency Stability	22.235, 2.1055	RSS-132 5.3	Pass (Note2)

4	Occupied Bandwidth	2.1049(h)(i)	RSS-Gen 6.7	Pass (Note2)
5	Emission Bandwidth	22.917(b)	RSS-Gen 6.7	Pass (Note2)
6	Band Edge Compliance	22.917(b)	RSS-132 5.5	Pass (Note2)
7	Conducted Spurious Emission	22.917, 2.1057	RSS-132 5.5	Pass (Note2)

LTE Band 7

Items	Test Name	Clause in FCC rules	Sub-clause of IC	Verdict
1	Output Power	27.50(d)(4)	RSS-199 4.4	Pass
2	Emission Limit	27.53(h), 2.1051	RSS-199 4.5	Pass
3	Frequency Stability	27.54, 2.1055	RSS-199 4.3	Pass (Note2)
4	Occupied Bandwidth	2.1049(h)(i)	RSS-Gen 6.7	Pass (Note2)
5	Emission Bandwidth	27.53(h)	RSS-Gen 6.7	Pass (Note2)
6	Band Edge Compliance	27.53(h)	RSS-199 4.5	Pass (Note2)
7	Conducted Spurious Emission	27.53(h), 2.1057	RSS-199 4.5	Pass (Note2)
8	Peak to Average Power Ratio	27.50(a)	RSS-199 4.4	Pass (Note2)

LTE Band 12

Items	Test Name	Clause in FCC rules	Sub-clause of IC	Verdict
1	Output Power	27.50(d)(4)	RSS-130 4.6	Pass
2	Emission Limit	27.53(h), 2.1051	RSS-130 4.7	Pass
3	Frequency Stability	27.54, 2.1055	RSS-130 4.5	Pass (Note2)
4	Occupied Bandwidth	2.1049(h)(i)	RSS-Gen 6.7	Pass (Note2)
5	Emission Bandwidth	27.53(h)	RSS-Gen 6.7	Pass (Note2)
6	Band Edge Compliance	27.53(h)	RSS-130 4.7	Pass (Note2)
7	Conducted Spurious Emission	27.53(h), 2.1057	RSS-130 4.7	Pass (Note2)
8	Peak to Average Power Ratio	27.50(a)	RSS-130 4.6	Pass (Note2)

LTE Band 17

Items	Test Name	Clause in FCC rules	Sub-clause of IC	Verdict
1	Output Power	27.50(d)(4)	RSS-130 4.6	Pass
2	Emission Limit	27.53(h), 2.1051	RSS-130 4.7	Pass

3	Frequency Stability	27.54, 2.1055	RSS-130 4.5	Pass (Note2)
4	Occupied Bandwidth	2.1049(h)(i)	RSS-Gen 6.7	Pass (Note2)
5	Emission Bandwidth	27.53(h)	RSS-Gen 6.7	Pass (Note2)
6	Band Edge Compliance	27.53(h)	RSS-130 4.7	Pass (Note2)
7	Conducted Spurious Emission	27.53(h), 2.1057	RSS-130 4.7	Pass (Note2)
8	Peak to Average Power Ratio	27.50(a)	RSS-130 4.6	Pass (Note2)

LTE Band 38

Items	Test Name	Clause in FCC rules	Sub-clause of IC	Verdict
1	Output Power	27.50(d)(4)	RSS-199 4.4	Pass
2	Emission Limit	27.53(h), 2.1051	RSS-199 4.5	Pass
3	Frequency Stability	27.54, 2.1055	RSS-199 4.3	Pass (Note2)
4	Occupied Bandwidth	2.1049(h)(i)	RSS-Gen 6.7	Pass (Note2)
5	Emission Bandwidth	27.53(h)	RSS-Gen 6.7	Pass (Note2)
6	Band Edge Compliance	27.53(h)	RSS-199 4.5	Pass (Note2)
7	Conducted Spurious Emission	27.53(h), 2.1057	RSS-199 4.5	Pass (Note2)
8	Peak to Average Power Ratio	27.50(a)	RSS-199 4.4	Pass (Note2)

LTE Band 41

Items	Test Name	Clause in FCC rules	Sub-clause of IC	Verdict
1	Output Power	27.50(d)(4)	RSS-199 4.4	Pass
2	Emission Limit	27.53(h), 2.1051	RSS-199 4.5	Pass
3	Frequency Stability	27.54, 2.1055	RSS-199 4.3	Pass (Note2)
4	Occupied Bandwidth	2.1049(h)(i)	RSS-Gen 6.7	Pass (Note2)
5	Emission Bandwidth	27.53(h)	RSS-Gen 6.7	Pass (Note2)
6	Band Edge Compliance	27.53(h)	RSS-199 4.5	Pass (Note2)
7	Conducted Spurious Emission	27.53(h), 2.1057	RSS-199 4.5	Pass (Note2)
8	Peak to Average Power Ratio	27.50(a)	RSS-199 4.4	Pass (Note2)

Note 1:

The T5820, manufactured by Shanghai Sunmi Technology Co.,Ltd. is a variant product for testing.

This project is a variant project based on the I22I30121-RF01-V00, original FCC ID 2AH25T5820C and IC 22621-T5820C. we tested the worst mode of the original report, and the test data of the worst mode was recorded in the report. Verify the power of the variant product ,and the test results meet the limit requirement.The main difference of EUT is as below:

Type of Certification	Configuration type	NFC function	Cradle (Pogo PIN)	AC adapter	Panel dimension
Parent	High configuration	Yes	Yes	input : 5V/2A	5.0 inch
Variant (Based on Parent)	Basic configuration	No	No	input : 5V/1A	4.95 inch

The product's Band 41 uses only 2535-2655 MHz.

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:

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

1.4 Data Provided by Applicant

No.	Item(s)	Data
N/A	N/A	N/A

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.	958356
FCC Designation No.	CN1177
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	101kPa

2.3 Project Information

Project Manager	Gao Hongning
Test Date	October 20, 2022 to Novmber 30, 2022

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	13510126210

3.2 Manufacturer

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

4. General Information of The Product¹²

4.1 Product Description for Equipment under Test (EUT)

Product	Wireless data POS System
Model	T5820
Date of Receipt	S02aa:October 20,2022
EUT ID*	S02aa
SN/IMEI	S02aa: 860450060011182 860450060011190
Supported Radio Technology and Bands	GSM850/GSM900/DCS1800/PCS1900 WCDMA Band I/II/IV/V/VIII LTE Band 2/4/5/7/12/17/38/41 BT 5.1 BR/EDR ,BLE WLAN 802.11b/g/n WLAN 802.11a/n/ac GPS/Glonass/BDS/OTDOA
HVIN	T5820
Hardware Version	V01
Software Version	XQT530_V004_20220923
FCC ID	2AH25T5820
IC	22621-T5820
NOTE: EUT ID is the internal identification code of the laboratory.	

4.2 Description for Auxiliary Equipment (AE)

AE ID*	Description	Model	SN/Remark
AE1	RF Cable	N/A	N/A
NOTE: AE ID is the internal identification code of the laboratory.			

4.3 Additional Information

Type of modulation	QPSK/16QAM
--------------------	------------

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	0°C	45°C
Working Voltage of EUT	Normal	Minimum	Maximum
	7.2V	6.8V	8.4V

5.2 Test Equipments Utilized

Radiated emission test system

No.	Name	Model	S/N	Manufacturer	Cal. Date	Cal. Interval
1	Universal Radio Communication Tester	CMU200	123123	R&S	October 17,2022	1Year
					March 10, 2021	1.5 Years
2	Universal Radio Communication Tester	CMW500	104178	R&S	October 17,2022	1Year
					March 10, 2021	1.5 Years
3	EMI Test Receiver	ESU40	100307	R&S	February 23, 2022	1 Year
4	TRILOG Broadband Antenna	VULB9163	VULB9163-515	Schwarzbeck	March 11, 2022	1 Year
5	Double- ridged Waveguide Antenna	ETS-3117	00135890	ETS	March 9, 2022	2 Years
6	2-Line V-Network	ENV216	101380	R&S	February 21, 2022	1 Year
7	EMI Test Software	EMC32 V9.15.00	N/A	R&S	N/A	N/A

Anechoic chamber

Fully anechoic chamber by ETS.

Conducted Test System

No.	Name	Model	S/N	Manufacturer	Cal. Date	Cal. Interval
1	Universal Radio Communication	CMW500	148874	R&S	August. 23,2022	1 Year

	Tester					
2	Vector Signal Analyzer	FSQ26	101091	R&S	August. 23,2022	1 Year
3	Programmable power supply	Keithley 2303	4039070	Keithley	July 12,2022	1 Year
4	Eagle Test Software	Eagle V3.3 FCC BT/WIFI	N/A	ECIT	N/A	N/A
5	Temperature Chamber	B-TF-107C	BTF107C-201804107	BoYi	June 30,2022	1Year

5.3 Measurement Uncertainty

Measurement Items	Range	Confidence Level	Calculated Uncertainty
Maximum Peak Output Power	30MHz-3600MHz	95%	±0.544dB
EBW and VBW	30MHz-3600MHz	95%	±62.04Hz
Transmitter Spurious Emission-Conducted	30MHz-2GHz	95%	±0.90dB
Transmitter Spurious Emission-Conducted	2GHz-3.6GHz	95%	±0.88dB
Transmitter Spurious Emission-Conducted	3.6GHz-8GHz	95%	±0.96dB
Transmitter Spurious Emission-Conducted	8GHz-20GHz	95%	±0.94dB
Transmitter Spurious Emission-Radiated	9KHz-30MHz	95%	±5.66dB
Transmitter Spurious Emission-Radiated	30MHz-1000MHz	95%	±4.98dB
Transmitter Spurious Emission-Radiated	1000MHz -18000MHz	95%	±5.06dB
Transmitter Spurious Emission-Radiated	18000MHz -40000MHz	95%	±5.20dB
Frequency stability	1MHz-16GHz	95%	±62.04Hz

6. Test Results

6.1 Emission Limit

Reference

CFR 2.1051,2.1053,22.917,24.238(a), 27.53(g), 27.53(h), 27.53(m),90.669.

Rule RSS-130 4.7; Rule RSS-132 5.5; Rule RSS-133 6.5; Rule RSS-139 6.6; Rule RSS-199 4.5

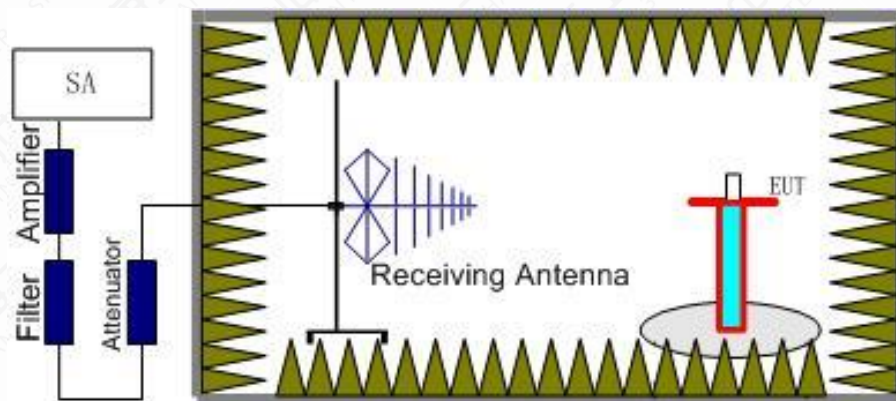
6.2.1 Measurement Method

The measurements procedures in TIA-603E-2016 are used. This measurement is carried out in fully-anechoic chamber FAC-3.

The spectrum was scanned from 30 MHz to the 10th harmonic of the highest frequency generated within the equipment, which is the transmitted carrier. The resolution bandwidth is set 1MHz as outlined in Part 27.53(g), Part 27.53(h), Part 27.53(m). The spectrum was scanned with the mobile station transmitting at carrier frequencies that pertain to low, mid and high channels of the LTE Bands 7.

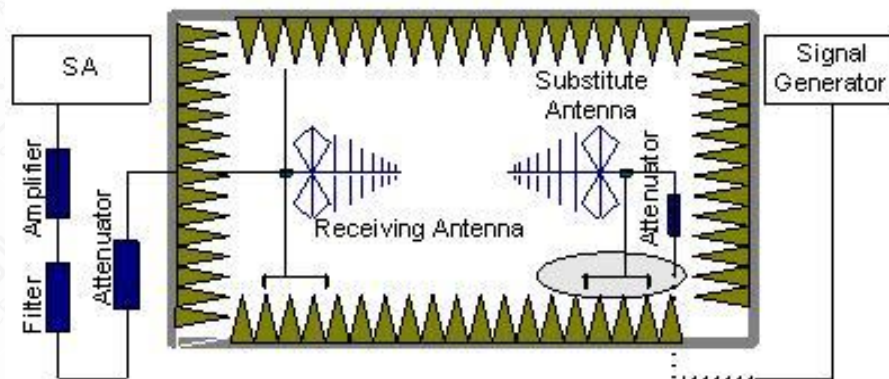
The procedure of radiated spurious emissions is as follows:

1. Below 1 GHz, EUT was placed on a 0.8 meter high non-conductive stand at a 3 meter test distance from the receive antenna. Above 1 GHz, EUT was placed on a 1.5 meter high non-conductive stand at a 3 meter test distance from the receive antenna. EUT was placed on a 1.5 meter high non-conductive stand at a 3 meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. The height of receiving antenna is 1.5m. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the EUT through 360° and adjusting the receiving antenna polarization. The radiated emission measurements of all non-harmonic and harmonics of the transmit frequency through the 10th harmonic were measured with peak detector.



2. The EUT is then put into continuously transmitting mode at its maximum power level during the test. And the maximum value of the receiver should be recorded as (Pr).

3. The EUT shall be replaced by a substitution antenna. The test setup refers to figure below.



In the chamber, a substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (P_{Mea}) is applied to the input of the substitution antenna. Adjust the level of the signal generator output until the value of the receiver reaches the previously recorded (P_r). The power of signal source (P_{Mea}) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.

4. The Path loss (P_{pl}) between the Signal Source with the Substitution Antenna and the Substitution Antenna Gain (G_a) should be recorded after test.

An amplifier should be connected in for the test.

The Path loss (P_{pl}) is the summation of the cable loss and the gain of the amplifier.

The measurement results are obtained as described below:

$$\text{Power (EIRP)} = P_{Mea} - P_{pl} + G_a$$

5. This value is EIRP since the measurement is calibrated using an antenna of known gain (unit: dBi) and known input power.

6. ERP can be calculated from EIRP by subtracting the gain of the dipole, $ERP = EIRP - 2.15\text{dBi}$.

6.2.2 Measurement Limit

Part 27.53(g), 27.53(h), 27.53(m) state that on any frequency outside frequency band of the US Cellular/PCS spectrum, the power of any emission shall be attenuated below the transmitter power (P , in Watts) by at least $43 + 10\log(P)$ dB. For all power levels +30 dBm to 0 dBm, this becomes a constant specification limit of -13 dBm.

According to KDB 971168 6, a relaxation of the reference bandwidth is often provided for measurements within a specified frequency range at the edge of the authorized frequency block/band. This is often implemented by permitting the use of a narrower RBW (typically limited to a minimum RBW of 1% of the OBW) for measuring the out-of-band emissions without a requirement to integrate the result over the full reference bandwidth.

Part 27.53(m) states that for mobile digital stations, the attenuation factor shall be not less than $40 + 10\log(P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10\log(P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10\log(P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that $43 + 10\log(P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10\log(P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

Rule RSS-132: 5.5 specifies that " In the first 1.0 MHz band immediately outside and adjacent to each of the sub-bands specified in Section 5.1, the power of emissions per any 1% of the occupied bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least $43 + 10 \log_{10} p$ (watts).

After the first 1.0 MHz immediately outside and adjacent to each of the sub-bands, the power of emissions in any 100 kHz bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least $43 + 10 \log_{10} p$ (watts). If the measurement is performed using 1% of the occupied bandwidth, power integration over 100 kHz is required. Limit -13 dBm

Rule RSS-133 6.5 specifies that " In the 1.0 MHz bands immediately outside and adjacent to the equipment's operating frequency block, the emission power per any 1% of the emission bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least $43 + 10 \log_{10} p$ (watts).

After the first 1.0 MHz, the emission power in any 1 MHz bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least $43 + 10 \log_{10} p$ (watts). If the measurement is performed using 1% of the emission bandwidth, power integration over 1.0 MHz is required." Limit -13 dBm

Rule RSS-139 6.6 specifies that "In the first 1.0 MHz bands immediately outside and adjacent to the equipment's smallest operating frequency block, Footnote 2 which can contain the equipment's occupied bandwidth, the emission power per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in dBW) by at least $43 + 10 \log_{10} p$ (watts) dB.

After the first 1.0 MHz outside the equipment's smallest operating frequency block, which can contain the equipment's occupied bandwidth, the emission power in any 1 MHz bandwidth shall be attenuated below the transmitter output power P (in dBW) by at least $43 + 10 \log_{10} p$ (watts) dB.

Limit -13 dBm

6.2.3 Measurement Results

Radiated emissions measurements were made only at the upper, middle, and lower carrier frequencies of the LTE Bands 5. It was decided that measurements at these three carrier frequencies would be sufficient to demonstrate compliance with emissions limits because it was seen that all the significant spurs occur well outside the band and no radiation was seen from a carrier in one block of the LTE Bands 5. Into any of the other blocks. The equipment must still, however, meet emissions requirements with the carrier at all frequencies over which it is capable of operating and it is the manufacturer's responsibility to verify this. The evaluated frequency range is from 30MHz to 26GHz.

BAND	Channel		Result
2	L	18607	N/A
	M	18900	N/A
	H	19193	N/A
4	L	19957	N/A
	M	20175	N/A
	H	20393	N/A
5	L	20407	Pass
	M	20525	Pass

	H	20643	Pass
7	L	20775	N/A
	M	21100	N/A
	H	21425	N/A
	L	23017	N/A
12	M	23095	N/A
	H	23173	N/A
	L	23755	N/A
17	M	23790	N/A
	H	23825	N/A
	L	37775	N/A
38	M	38000	N/A
	H	38225	N/A
	L	40065	N/A
41	M	40640	N/A
	H	41215	N/A
	L		

RSE-LTE5-S02aa-H

Frequency (MHz)	PMea (dBm)	Pcl (dBm)	Ga (dBd)	Peak ERP (dBm)	Limit (dBm)	Polarization
1696.4	-43.63	4.5	4.7	-43.43	-13	H
2719.6	-42.49	5.6	6.1	-41.99	-13	H
3512.0	-53.73	6.4	7.8	-52.33	-13	V
4232.0	-53.19	7.1	8.9	-51.39	-13	V
5331.2	-52.59	8.1	9.4	-51.29	-13	H
6961.6	-52.53	9.3	11.1	-50.73	-13	V

RSE-LTE5-S02aa-L

Frequency (MHz)	PMea (dBm)	Pcl (dBm)	Ga (dBd)	Peak ERP (dBm)	Limit (dBm)	Polarization
1649.7	-47.94	4.2	4.7	-47.44	-13	H

2956.9	-39.86	5.8	6.7	-38.96	-13	H
3327.2	-53.6	6.2	6.9	-52.9	-13	H
4131.2	-53.05	7.0	8.9	-51.15	-13	V
5239.2	-51.59	8.0	9.4	-50.19	-13	V
7646.5	-52.45	9.7	11.8	-50.35	-13	H

RSE-LTE5-S02aa-M

Frequency (MHz)	PMea (dBm)	Pcl (dBm)	Ga (dBd)	Peak ERP (dBm)	Limit (dBm)	Polarization
1672.9	-40.83	4.5	4.7	-40.63	-13	H
2666.2	-41.98	5.5	6.1	-41.38	-13	H
3345.6	-52.12	6.2	6.9	-51.42	-13	H
4188.4	-51.06	7.0	8.9	-49.16	-13	V
5488.4	-53.44	8.2	9.8	-51.84	-13	H
7204.0	-52.48	9.5	11.4	-50.58	-13	V

6.2 OutPut Power

Note1: The power of the worst part is verified to meet the requirements.

BAND	Mode	original data(dBm)	verified power(dBm)
Band2	QPSK	23.44	23.01
Band 4	QPSK	23.23	23.04
Band 5	QPSK	23.43	23.3
Band 7	QPSK	24.35	24.21
Band 12	QPSK	23.69	23.41
Band 17	QPSK	23.60	23.35
Band 38	QPSK	24.30	24.17
Band 41	QPSK	24.27	24.21

Note2:

The verified power is still in the tune-up power range and meets the requirements of KDB484596 D01 data reference. The power listed in the original certificate still applies to this case.

Annex A: Revised History

Version	Revised Content
V00	Initial
V01	The original FCC ID was added
V02	Added power description
V03	Added validation power data

Annex B: Accreditation Certificate

Accredited Laboratory

A2LA has accredited

**INDUSTRIAL INTERNET INNOVATION CENTER
(SHANGHAI) CO., LTD.**
Shanghai, People's Republic of China

for technical competence in the field of
Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 12th day of April 2021.



Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 3682.01
Valid to February 28, 2023

For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.

END OF REPORT