TEST REPORT

REPORT NUMBER: 25B02W000010-001

ON

Type of Equipment:	**Handheld Wireless Terminal**
Type of Designation:	**T8F1C**
Brand Name:	**SUNMI**
Manufacturer:	**Shanghai Sunmi Technology Co.,Ltd.**
FCC ID:	**2AH25T8F1C**
IC:	**22621-T8F1C**

ACCORDING TO

FCC 47 CFR Part 24,FCC 47 CFR Part 22,FCC 47 CFR Part 2,ANSI C63.26-2015,RSS-Gen Issue 5, RSS-132 Issue 4, RSS-133 Issue 7

Chongqing Academy of Information and Communications Technology

Month date, year
August 14, 2025
Signature

Zhou Jin
Director

Note:
The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of Chongqing Academy of Information and Communications Technology.

Revision Version

Report Number	Revision	Date
25B02W000010-001	00	2025-08-14

CONTENTS

1. Test Laboratory

1.1. Testing Location

Name:	Chongqing Academy of Information and Communications Technology
Designation Number:	CN1239
IC Registration Number:	29397
Address:	No.19EastRoad,Xiantao Big-data Valley,Yubei District,Chongqing,People's Republic of China
Postal Code:	401336
Telephone:	0086-23-88069965
Fax:	0086-23-88608777

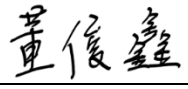
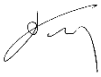
1.2. Testing Environment

Normal Temperature:	15-35℃
Relative Humidity:	30-60%RH

1.3. Project data

Testing Start Date:	2025-05-27
Testing End Date:	2025-07-04

1.4. Signature

	**2025-08-14**
Dong Junxin **(Prepared this test report)**	**Date**
	**2025-08-14**
Wang Lili **(Reviewed this test report)**	**Date**
	**2025-08-14**
Zhou Jin **Director of the laboratory** **(Approved this test report)**	**Date**

2. Client Information

2.1. Applicant Information

Company Name:	Shanghai Sunmi Technology Co.,Ltd.
Address /Post:	Room 505,No.388,Song Hu Road,Yang Pu District,Shanghai,China
City:	Shanghai
Country:	China
Telephone:	8618501703215
Fax:	N/A
Email:	fang.lu@sunmi.com
Contact Person:	Fang Lu

2.2. Manufacturer Information

Company Name:	Shanghai Sunmi Technology Co.,Ltd.
Address /Post:	Room 505,No.388,Song Hu Road,Yang Pu District,Shanghai,China
City:	Shanghai
Country:	China
Telephone:	8618501703215
Fax:	N/A
Email:	fang.lu@sunmi.com
Contact Person:	Fang Lu

3. Equipment under Test (EUT) and Ancillary Equipment (AE)

3.1. About EUT

EUT Description	Handheld Wireless Terminal
Model name	T8F1C
Brand name	SUNMI
GSM Frequency Band	GSM:850/900/1800/1900
WCDMA Frequency Band	WCDMA Band I/II/IV/V/VI/VIII/XIX
LTE Frequency Band	LTE Band 1/2/3/4/5/7/8/12/13/14/17/18/19/20/25/26/28/30/34/38/39/40/41/66/71
Type of GSM modulation	GMSK/8PSK
Power Class 2	N/A
Power Class 3	N/A
Extreme Temperature	-20/+55℃
Nominal Voltage	3.87 V
Extreme High Voltage	4.45 V
Extreme Low Voltage	3.6 V

Note1: Photographs of EUT are shown in ANNEX A of this test report.
Note2: High and low voltage values in extreme condition test are given by manufacturer.
Note3: The Extreme Temperature is provided by the manufacturer and has not been verified by the laboratory.

3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version	Date of receipt
25B02W000010#S2	IMEI:862072070057829;862072070057837	V00	4.0.0	2025-05-23
25B02W000010#S4	IMEI:862072070057688;862072070057696	V00	4.0.0	2025-05-23

*EUT ID: is used to identify the test sample in the lab internally.

3.3. Outline of Equipment under Test

Technology	Band	UL Freq.(MHz)	DL Freq.(MHz)	Note
2G	850	824-849	869-894	N/A
	1900	1850-1910	1930-1990	N/A

No.	Maximum of Antenna Gain	Data
1	GSM 850	-0.37 dBi
2	PCS 1900	2.19 dBi
Note: The data of antenna gain is provided by the customer may affect the validity of the test results in this report, and the impact and consequences of this shall be undertaken by the customer.		

3.4. Internal Identification of AE used during the test

AE ID*	Description	Note	dB*
AE1	RF cable	--	0.5
C1	USB Cable	SSM-A033A	--
A1	Adapter	TPA-141A050200UU01	--
A2	Adapter	UC13US	--
A3	Adapter	TPA-10120150UU	--
B1	Battery	GYPA	--

AE ID*: is used to identify the test sample in the lab internally.
dB*： is provided customer.

4. Reference Documents

4.1. Documents supplied by applicant

PICS/PIXIT, referring to Annex B for detailed information, is supplied by the client or manufacturer, which is the basis of testing.

4.2. Reference Documents for testing

The following documents listed in this section are referred for testing.

Reference	Title	Version
FCC 47 CFR Part 2	FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS	--
FCC 47 CFR Part 22	PUBLIC MOBILE SERVICES	--
FCC 47 CFR Part 24	PERSONAL COMMUNICATIONS SERVICES	--
RSS-Gen Issue 5	General Requirements For Compliance Of Radio Apparatus	2021-02
RSS-132 Issue 4	Cellular Systems Operating in the Bands 824-849 MHz and 869-894 MHz	2023-01
RSS-133 Issue 7	Personal Communications Service Equipment Operating in the Bands 1850-1915 MHz and 1930-1995 MHz	2024-07
ANSI C63.26	American National Standard of Procedures for Compliance Testing of Licensed Transmitters Used in Licensed Radio	2015
KDB 971168 D01	Measurement Guidance for Certification of Licensed Digital Transmitters	v03r01
Note: FCC 47 CFR Part 2 and KDB 971168 D01 is not A2LA certified.		

5. Test Equipments Utilized

5.1. RF Test System

No.	Equipment	Model	SN	HW Version	SW Version	Manufacture	Cal. Interval	Cal.Due Date
1	Universal Radio Communication Tester	CMW500	152395	--	--	R&S	1 Year	2026-06-15
2	Microstrip power divider	XBGF-G2A01-N	200827-4-3	--	--	Xi'an Xingbo Electronic Technology Co., Ltd	--	--

5.2. RSE Test System

No.	Equipment	Model	SN	HW Version	SW Version	Manufacture	Cal.Due Date
1	Universal Radio Communication Tester	CMW500	128181	--	--	R&S	2025-06-28
2	Test Receiver	ESU40	100350	01	4.43 SP3	R&S	2025-06-28
3	Ultra-wideband Log Periodic Antenna	VULB 9163	9163-586	--	--	Schwarzbeck	2026-10-28
4	Double Ridged Guide Antenna	9120D	9120D-1103	--	--	Schwarzbeck	2026-05-13
5	Ultra-wideband Log Periodic Antenna	VULB 9163	00995	--	--	Schwarzbeck	2025-09-11
6	Double Ridged Guide Antenna	9120D	9120D-1083	--	--	Schwarzbeck	2026-11-08
7	High gain horn antenna	DATE 1152	LM7127	--	--	ETS	2026-09-30
8	Generator	SMU 200A	104517	--	--	R&S	2026-06-15
9	Amplifier1	SCU-08F1	8320027	--	--	R&S	--
10	Amplifier2	SCU-18F	180093	--	--	R&S	--
11	Test Receiver	ESW 26	101382	00	1.50 SP1	R&S	2025-06-28

5.3. Anechoic chamber Vibration table

No.	Name	Type	SN	HW Version	SW Version	Manufacture	Cal.Due Date
1	Fully-Anechoic Chamber	FAC-5	--	--	--	TDK	2027-11-04
2	Anechoic Chamber	SAC-10	--	--	--	TDK	2027-11-05

5.4. Test software

No.	Name	version	SN	Manufacture
1	EMC32	V9.26.01	--	R&S
2	EMC 32	V10.20.01	--	R&S
3	2/3/4G-FCC/IC automated testing software	V2.1.5	--	Beijing Zhiwang Xince Technology Co., Ltd.

6. Test Results

6.1. Summary of Test Results

A brief summary of the tests carried out is shown as following.

GSM850

FCC rules	IC rules	Name of Test	Result
2.1046/24.232(c)	RSS-133 5.5	Output Power/EIRP	Pass
2.1053/24.238(a)	RSS-133 5.6	Emission Limit	Pass
2.1055/24.235	RSS-133 5.4	Frequency Stability	Pass(Note 2)
2.1049	RSS-GEN 6.7	Occupied Bandwidth	Pass(Note 2)
2.1049	RSS-GEN 6.7	Emission Bandwidth	Pass(Note 2)
2.1051/24.238(a)	RSS-133 5.6	Band Edge Compliance	Pass(Note 2)
2.1051/24.238(a)	RSS-133 5.6	Conducted Spurious Emission	Pass(Note 2)
24.232 (d)	RSS-133 5.5	Peak to Average Power Ratio	Pass(Note 2)

PCS1900

FCC rules	IC rules	Name of Test	Result
2.1046/22.913(a)	RSS-132 5.4	Output Power/ERP	Pass
2.1053/22.917(a)	RSS-132 5.5	Emission Limit	Pass(Note 2)
2.1055/22.355	RSS-132 5.3	Frequency Stability	Pass(Note 2)
2.1049	RSS-GEN 6.7	Occupied Bandwidth	Pass(Note 2)
2.1049	RSS-GEN 6.7	Emission Bandwidth	Pass(Note 2)
2.1051/22.917(a)	RSS-132 5.5	Band Edge Compliance	Pass(Note 2)
2.1051/22.917(a)	RSS-132 5.5	Conducted Spurious Emission	Pass(Note 2)
N/A	RSS-132 5.4	Peak to Average Power Ratio	Pass(Note 2)

Note 1:

The T8F1C, manufactured by Shanghai Sunmi Technology Co.,Ltd. is a variant product for testing.

This project is a variant project based on the original report 24T04I300217-055 issued by 3in with below changes:

- Added RFID function.
- Modified 2/3/4G Div Antenna and WIFI Antenna. Remove 1 NFC, Add RFID Antenna.
- PCB Changes,
- Removed: 8 Pin in behind.
- Mechanical shell changes.

Type of Service	Model Name	Super capacitor	pogopin	NFC	RFID
Original	T8F1B	Yes	8 Pin in behind &6 pin in bottom	Two-sided	No
Variant	T8F1C	No	6 Pin in bottom	Under screen	Yes

According to the Product Change Description, we tested Output Power and the worst mode of radiated spurious emission in the original report, and the test data was recorded in the report.

Note 2:

The test data is reported by reference to 24T04I300217-055 issued by 3in.

6.2. Output Power

Specifications:	FCC Part 2.1053/22.917(a)/24.238(a) RSS-133 5.6/ RSS-132 5.5
DUT Serial Number:	862072070057829;862072070057837
Test conditions:	Ambient Temperature:15℃-35℃ Relative Humidity:30%RH-60%RH Air pressure: 86kPa-106kPa
Test Results:	Pass

6.2.1. Measurement Limit

FCC §22.913(a) Mobile stations are limited to 7 watts.

FCC §24.232(c) Mobile and portable stations are limited to 2 watts.

RSS-133 5.5 :The maximum power spectral density of the equipment, measured in terms of average values, shall comply with the limits specified in table 2. These limits are either specified in terms of equivalent isotropically radiated power (e.i.r.p.) or TRP for the purpose of certification and may not apply to all deployment scenarios. Consult SRSP-510 for more deployment details in the bands 1850-1915 MHz and 1930-1995 MHz.

AAS equipment with eight antenna elements or less can demonstrate compliance with the e.i.r.p limit specified for non-AAS equipment in table, instead of the TRP limit.

Equipment type	Maximum power spectral density
Non-AAS fixed station and base station	3280 W/MHz e.i.r.p
AAS fixed station and base station	46 dBm/MHz TRP
Subscriber equipment	2 W /channel bandwidth e.i.r.p

In addition, the peak-to-average power ratio (PAPR) of the equipment shall not exceed 13 dB for more than 0.1% of the time, using a signal corresponding to the highest PAPR during periods of continuous transmission.

RSS-132 5.4 :The transmitter output power shall be measured in terms of average power. The equivalent radiated power (e.r.p.) shall not exceed 7 watts for mobile equipment and 3 watts for portable equipment. The effective isotropic radiated power (e.i.r.p.) shall not exceed the limits specified in SRSP-503 for base station equipment.

In addition, the peak-to-average power ratio (PAPR) of the transmitter shall not exceed 13 dB for more than 0.1% of the time using a signal corresponding to the highest PAPR during periods of continuous transmission.

6.2.2. Method of Measurements

Method of measurements please refer to KDB971168 D01 v03 clause 5.

The EUT was set up for the max output power with pseudo random data modulation.

The power was measured with Rhode & Schwarz base station CMW500.

These measurements were done at 3 frequencies.(bottom, middle and top of operational frequency range).

1. The transmitter output port was connected to base station.
2. Set the EUT at maximum power through base station.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Measure and record maximum average power for other modulation signal.
5. During the process of testing, the EUT was controlled Rhode & Schwarz Digital Radio.
6. Communication tester to ensure max power transmission and proper modulation.
7. This result contains output power and EIRP measurements for the EUT. In all cases, output power is within the specified limits.

EIRP= Conducted power+Gain, ERP = EIRP -2.15dBi.

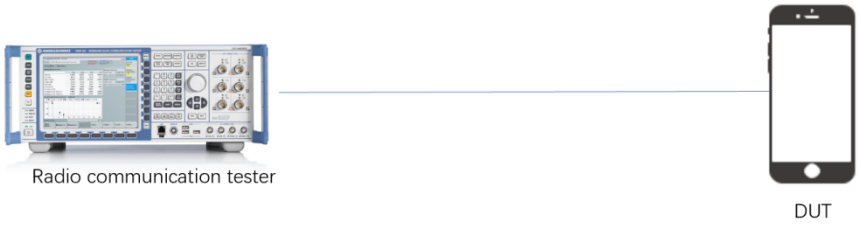
6.2.3. Measurement Uncertainty

Item	Uncertainty
Expanded Uncertainty	0.6 dB (k=2)

6.2.4. Test procedures

The transmitter output power was connected to calibrated attenuator, the other end of which was connected to signal analyzer. Transmitter output power was read off the power in dBm. The power outputs at the transmitter antenna port was determined by adding the value of attenuator to the base station reading.

6.2.5. Test Setup



6.2.6. Output Power Measurement results

GSM 850 (GMSK 1 Slot)	
Channel/fc(MHz)	**Conducted Output Power (dBm)**
Low 128/824.2	32.80
Mid 190/836.6	32.83
High 251/848.8	32.71
GPRS 850 (GMSK 1 Slot)	
Channel/fc(MHz)	**Conducted Output Power (dBm)**
Low 512/1850.2	32.77
Mid 661/1880	32.82
High 810/1909.8	32.70
EGPRS 850 (8PSK 1 Slot)	
Channel/fc(MHz)	**Conducted Output Power (dBm)**
Low 128/824.2	27.90
Mid 190/836.6	27.92
High 251/848.8	27.85
GSM 1900 (GMSK 1 Slot)	
Channel/fc(MHz)	**Conducted Output Power (dBm)**
Low 512/1850.2	30.10
Mid 661/1880	29.86
High 810/1909.8	29.52
GPRS 1900 (GMSK 1 Slot)	
Channel/fc(MHz)	**Conducted Output Power (dBm)**
Low 128/824.2	30.13
Mid 190/836.6	29.89
High 251/848.8	29.50
EGPRS 1900 (8PSK 1 Slot)	
Channel/fc(MHz)	**Conducted Output Power (dBm)**
Low 512/1850.2	25.79

Mid 661/1880	25.88
High 810/1909.8	25.90

6.2.7. EIRP/ERP results

GSM850

GSM(GMSK)

Frequency(MHz)	EIRP (dBm)	ERP (dBm)
824.2	32.43	30.28
836.6	32.46	30.31
848.8	32.34	30.19

GPRS(GMSK)

Frequency(MHz)	EIRP (dBm)	ERP (dBm)
824.2	32.40	30.25
836.6	32.45	30.30
848.8	32.33	30.18

EGPRS(8PSK)

Frequency(MHz)	EIRP (dBm)	ERP (dBm)
824.2	27.53	25.38
836.6	27.55	25.40
848.8	27.48	25.33

PCS 1900

GSM (GMSK)

Frequency(MHz)	EIRP (dBm)
1850.2	32.08
1880.0	31.87
1909.8	31.76

GPRS (GMSK)

Frequency(MHz)	EIRP (dBm)
1850.2	32.32
1880.0	32.08

1909.8	31.69

EGPRS(8PSK)

Frequency(MHz)	EIRP (dBm)
1850.2	27.98
1880.0	28.07
1909.8	28.09

6.3. EMISSION LIMIT

Specifications:	FCC Part 2.1053/22.917(a)/24.238(a) RSS-133 5.6/ RSS-132 5.5
DUT Serial Number:	862072070057688;862072070057696
Test conditions:	Ambient Temperature:15℃-35℃ Relative Humidity:30%RH-60%RH Air pressure: 86kPa-106kPa
Test Results:	Pass

6.3.1. Measurement Limit

FCC §22.917/24.238(a) 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 log10 p (watts). (ii) 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 log10 p (watts). If the measurement is performed using 1% of the occupied bandwidth, power integration over 100 kHz is required." Limit -13 dBm

RSS-133 5.6

Unwanted emissions shall be measured in terms of average values while the transmitter is operating at the manufacturer's rated power and modulated as specified in RSS-Gen.

Equipment shall meet the unwanted emission limits, specified in table 3, outside each frequency block group. For each channel bandwidth supported by the equipment under test, the unwanted emissions shall be measured and reported for two channel frequencies: one located as close as possible to the low end and one located as close as possible to the high end of the equipment's operating frequency range.

For the unwanted emission limits, in the 1 MHz bands immediately outside and adjacent to the frequency block group, the power shall be measured with a resolution bandwidth of at least 1% of the occupied bandwidth (OBW). Beyond these 1 MHz bands, a resolution bandwidth of 1 MHz shall be used. A narrower resolution bandwidth may be used, provided that the measured power is integrated over the full required measurement bandwidth of 1 MHz, or 1% of the OBW, as applicable.

For all equipment, the TRP or total conducted power (sum of conducted power across all antenna connectors), where applicable, of the unwanted emissions outside the frequency block or frequency block group shall not exceed the limits shown in the table.

Offset frequency from the edge of the frequency block group (MHz)	Unwanted emission limit
≤ 1	-13 dBm/(1% of OBW)
> 1	-13 dBm/MHz

RSS-132 5.5

Equipment shall meet the unwanted emission limits specified below:

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 below the transmitter output power P (dBW) by at least 43 + 10 log(p) dB.

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 below the transmitter output power P (dBW) by at least 43 + 10 log(p) dB. If the measurement is performed using 1% of the occupied bandwidth, power integration over 100 kHz is required.

p is the output power specified in watts.

6.3.2. Method of Measurement

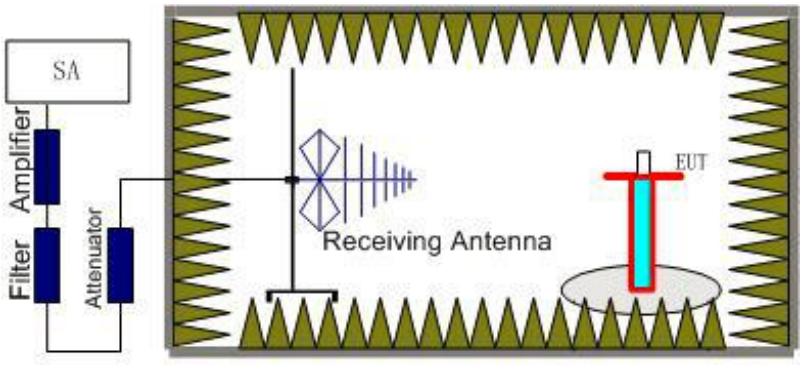
The measurements procedures in TIA-603E-2016 are used.

The spectrum was scanned from 30 MHz to the 10th harmonic of the highest frequency generated within the equipment. The resolution bandwidth is set as outlined in Part 24.238 and Part 24.917.

The spectrum is scanned with the mobile station transmitting at carrier frequencies that pertain to low, mid and high channels of GSM Bands.

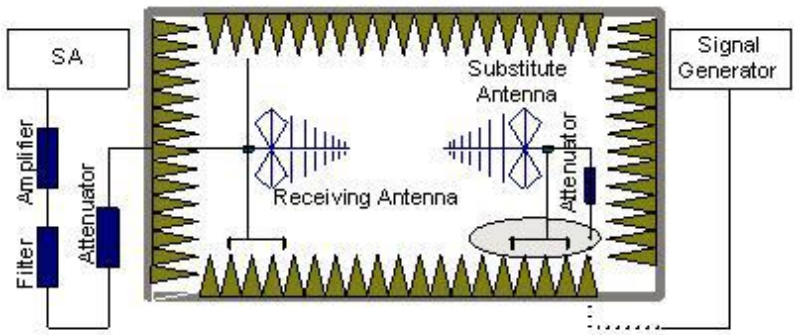
The procedure of radiated spurious emissions is as follows

1. 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 10thharmonic 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, an 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 (PMea) is applied to the input of the substitution antenna, and adjust the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (PMea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.

4. The Path loss (Pcl) between the Signal Source with the Substitution Antenna and the Substitution Antenna Gain (Ga) should be recorded after test.

A amplifier should be connected in for the test.

The Path loss (Pcl) is the summation of the cable loss .

The test results are obtained as described below:

Power(EIRP)=PMea- Pcl+ Ga

5. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power.

6. ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP -2.15dBi

6.3.3. Measurement Uncertainty

Expanded Uncertainty	30MHz-200MHz 3.48 dB (k=2) 200MHz-1000MHz 3.64 dB (k=2) 1000MHz-3000MHz 3.62 dB (k=2) 3000MHz-18000MHz 3.40 dB (k=2) 18000MHz-26500MHz 4.52 dB (k=2) 26500MHz-40000MHz 4.68 dB (k=2)

6.3.4. Measurement Results

RSE-G850-L

Frequency (MHz)	PMea (dBm)	Pcl (dBm)	Ga (dBd)	Test Result (dBm)	Limit (dBm)	Margin(dBm)	Polarization

2471.8	-34.36	5.4	5.6	-34.16	-13	21.16	V
3295.4	-29.37	6.2	6.9	-28.67	-13	15.67	H
4945.4	-36.68	7.7	9.6	-34.78	-13	21.78	V
5770.4	-31.41	8.5	10.2	-29.71	-13	16.71	V
8241.5	-24.23	10.1	12.4	-21.93	-13	8.93	H
9066.2	-33.05	10.5	12.6	-30.95	-13	17.95	H

RSE-G850-M

Frequency (MHz)	PMea (dBm)	Pcl (dBm)	Ga (dBd)	Test Result (dBm)	Limit (dBm)	Margin(dBm)	Polarization
2510.4	-30.21	5.4	5.6	-30.01	-13	17.01	H
4185.0	-35.72	7.0	8.9	-33.82	-13	20.82	H
5856.9	-32.29	8.4	10.2	-30.49	-13	17.49	H
6692.3	-32.6	9.1	10.9	-30.8	-13	17.80	H
7529.2	-26.89	9.7	11.6	-24.99	-13	11.99	V
8364.6	-23.66	10.1	12.4	-21.36	-13	8.36	H

RSE-G850-H

Frequency (MHz)	PMea (dBm)	Pcl (dBm)	Ga (dBd)	Test Result (dBm)	Limit (dBm)	Margin(dBm)	Polarization
1697.1	-40.11	4.5	4.7	-39.91	-13	26.91	V
2546.8	-29.11	5.4	5.6	-28.91	-13	15.91	H
4243.8	-33.65	7.1	8.9	-31.85	-13	18.85	V
5943.5	-33.78	8.5	10.2	-32.08	-13	19.08	V
8487.7	-30.91	10.3	12.6	-28.61	-13	15.61	H
9336.9	-30.13	10.7	12.7	-28.13	-13	15.13	V

Note: Only worse case is recorded in this report.

Annex A EUT Photos

See the document" 25B02W000010-External Photos".
See the document" 25B02W000010-Internal Photos".

Annex B Deviations from Prescribed Test Methods

No deviation from Prescribed Test Methods.

END OF REPORT