RF TEST REPORT

Applicant	Shanghai Sunmi Technology Co., Ltd.
FCC ID	2AH25T5F3AN
Product	Wireless data POS System
Brand	SUNMI
Model	T5F3A
Report No.	EFTA26050035-IE-02-R1V1
Issue Date	July 13, 2026

Eurofins TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC CFR47 Part 2 /FCC CFR 47 Part 22H / FCC CFR 47 Part 24E / FCC CFR47 Part 27C / FCC CFR 47 Part 90S**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Prepared by: Xu Ying *Approved by: Xu Kai*

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Version	Revision Description	Issue Date
Rev.0	Initial issue of report.	July 7, 2026
Rev.1	Updated information.	July 13, 2026
Note: This revised report (Report No.: EFTA26050035-IE-02-R1V1) supersedes and replaces the previously issued report (Report No.: EFTA26050035-IE-02-R1). Please discard or destroy the previously issued report and dispose of it accordingly.		

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Summary of Measurement Results

Test Case	Clause in FCC rules	Limits	Verdict
GSM 850; WCDMA Band 5; LTE Band 5/26 (824-849MHz)			
RF Power Output and Effective Radiated Power	2.1046 22.913(a)(5)	≤ 7 W (38.45 dBm)	PASS
Occupied Bandwidth	2.1049	No specific requirements	PASS
Band Edge Compliance	2.1051 22.917(a)	≤ -13 dBm	PASS
Peak-to-Average Power Ratio	22.913(d) KDB 971168 D01(5.7)	≤ 13 dB	PASS
Frequency Stability	2.1055 22.355(d)(1)	≤ 2.5 ppm	PASS
Spurious Emissions at Antenna Terminals	2.1051 22.917(a)	≤ -13 dBm	PASS
Radiated Spurious Emission	2.1053 22.917 (a)	≤ -13 dBm	PASS
GSM 1900; WCDMA Band 2; LTE Band 2			
RF Power Output and Effective Isotropic Radiated Power	2.1046 24.232(c)	≤ 2 W (33 dBm)	PASS
Occupied Bandwidth	2.1049	No specific requirements	PASS
Band Edge Compliance	2.1051 24.238(a)	≤ -13 dBm	PASS
Peak-to-Average Power Ratio	24.232 (d) KDB 971168 D01(5.7)	≤ 13 dB	PASS
Frequency Stability	2.1055 24.235	The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.	PASS
Spurious Emissions at Antenna Terminals	2.1051 24.238(a)	≤ -13 dBm	PASS
Radiated Spurious Emission	2.1053 24.238(a)	≤ -13 dBm	PASS
WCDMA Band 4; LTE Band 4			
RF Power Output and Effective Isotropic Radiated Power	2.1046 27.50(d)(4)	≤ 1 W (30 dBm)	PASS
Occupied Bandwidth	2.1049	No specific requirements	PASS
Band Edge Compliance	2.1051 27.53(h)	≤ -13 dBm	PASS

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Test Case	Clause in FCC rules	Limits	Verdict
Peak-to-Average Power Ratio	27.50(d)(5) KDB971168 D01(5.7)	≤ 13 dB	PASS
Frequency Stability	2.1055 27.54	Shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.	PASS
Spurious Emissions at Antenna Terminals	2.1051 27.53(h)	≤ -13 dBm	PASS
Radiated Spurious Emission	2.1053 27.53(h)	≤ -13 dBm	PASS
LTE Band 7/38/41			
RF Power Output and Effective Isotropic Radiated Power	2.1046 27.50(h)(2)	≤ 2 W (33 dBm)	PASS
Occupied Bandwidth	2.1049	No specific requirements	PASS
Band Edge Compliance	2.1051 27.53(m)(4)	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.	PASS
Peak-to-Average Power Ratio	27.50(d)(5) KDB971168 D01(5.7)	≤ 13 dB	PASS
Frequency Stability	2.1055 27.54	Shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.	PASS

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<table>
<tr><th>Test Case</th><th>Clause in FCC rules</th><th>Limits</th><th>Verdict</th></tr>
<tr><td>Spurious Emissions at Antenna Terminals</td><td>2.1051
27.53(m)</td><td>≤ -25 dBm</td><td>PASS</td></tr>
<tr><td>Radiated Spurious Emission</td><td>2.1053
27.53(m)</td><td>≤ -25 dBm</td><td>PASS</td></tr>
<tr><td colspan="4">LTE Band 26 (814-824MHz)</td></tr>
<tr><td>RF Power Output and Effective Radiated Power</td><td>2.1046
90.635(b)</td><td>≤ 100 W (50 dBm)</td><td>PASS</td></tr>
<tr><td>Occupied Bandwidth</td><td>2.1049</td><td>No specific requirements</td><td>PASS</td></tr>
<tr><td>Emission Masks</td><td>2.1051
90.691(a)(1)</td><td>For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 116 Log_{10}(f/6.1) decibels or 50 + 10 Log_{10}(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.</td><td>PASS</td></tr>
<tr><td>Peak-to-Average Power Ratio</td><td>KDB 971168 D01(5.7)</td><td>≤ 13 dB</td><td>PASS</td></tr>
<tr><td>Frequency Stability</td><td>2.1055
90.213</td><td><table><tr><th rowspan="2">Fixed and base stations</th><th colspan="2">Mobile stations</th></tr><tr><th>Over 2 watts output power</th><th>2 watts or less output power</th></tr><tr><td>1.5</td><td>2.5</td><td>2.5</td></tr></table></td><td>PASS</td></tr>
<tr><td>Spurious Emissions at Antenna Terminals</td><td>2.1051
90.691</td><td>≤ -13 dBm</td><td>PASS</td></tr>
<tr><td>Radiated Spurious Emission</td><td>2.1053
90.691</td><td>≤ -13 dBm</td><td>PASS</td></tr>
<tr><td colspan="4">Date of Testing: May 8, 2026 ~ May 27, 2026
Date of Sample Received: May 7, 2026</td></tr>
<tr><td colspan="4">Note: PASS: The EUT complies with the essential requirements in the standard.
FAIL: The EUT does not comply with the essential requirements in the standard.
All indications of Pass/Fail in this report are opinions expressed by Eurofins TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.</td></tr>
</table>

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1 Test Laboratory

1.1 Notes of the Test Report

This report shall not be reproduced in full or partial, without the written approval of **Eurofins TA Technology (Shanghai) Co., Ltd.** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

1.2. Test facility

FCC (Designation number: CN1179, Test Firm Registration Number: 446626)

Eurofins TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform measurements.

A2LA (Certificate Number: 3857.01)

Eurofins TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform measurement.

1.3 Testing Location

Company:	Eurofins TA Technology (Shanghai) Co., Ltd.
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2 General Description of Equipment under Test

2.1 Applicant and Manufacturer Information

Applicant	Shanghai Sunmi Technology Co., Ltd.
Applicant address	Room 505, No.388, Song Hu Road, Yang Pu District, Shanghai, China
Manufacturer	Shanghai Sunmi Technology Co., Ltd.
Manufacturer address	Room 505, No.388, Song Hu Road, Yang Pu District, Shanghai, China

2.2 General information

EUT Description				
Model	T5F3A			
SN	Conducted	VD21D64GJ0021		
	Radiated	VD21D64GJ0029		
Hardware Version	SM11 MB V1.1			
Software Version	4.0.0			
Power Supply	Battery / AC adapter			
Antenna Type	FPC Antenna			
Rated Power Supply Voltage	7.7VDC			
Operating Voltage	Minimum: 6.6 VDC Maximum: 8.9VDC			
Operating Temperature	Lowest: -10°C Highest: +50°C			
Testing Temperature	Lowest: -30°C Highest: +50°C			
Operating Frequency Range(s)	Mode	Tx (MHz)	Rx (MHz)	Gain (dBi)
	GSM850	824 ~ 849	869 ~ 894	3.5
	GSM1900	1850 ~ 1910	1930 ~ 1990	2.3
	WCDMA Band II	1850 ~ 1910	1930 ~ 1990	2.3
	WCDMA Band IV	1710 ~ 1755	2110 ~ 2155	1.7
	WCDMA Band V	824 ~ 849	869 ~ 894	3.5
	LTE Band 2	1850 ~ 1910	1930 ~ 1990	2.3
	LTE Band 4	1710 ~ 1755	2110 ~ 2155	1.7
	LTE Band 5	824 ~ 849	869 ~ 894	3.5
	LTE Band 7	2500 ~ 2570	2620 ~ 2690	0.0
	LTE Band 26 (824 ~ 849)	824 ~ 849	869 ~ 894	3.5
	LTE Band 26 (814 ~ 824)	814 ~ 824	859 ~ 869	3.5
	LTE Band 38	2570 ~ 2620	2570 ~ 2620	0.1

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	LTE Band 41	2496 ~ 2690	2496 ~ 2690	1.7
Test Modulation	(GPRS)GMSK, (EGPRS) GMSK/ 8PSK; (WCDMA) QPSK,16QAM; (LTE) QPSK, 16QAM;			
GPRS Multislot Class	33			
EGPRS Multislot Class	33			
HSDPA UE Category	24			
HSUPA UE Category	7			
DC-HSDPA UE Category	24			
HSPA+ UE Category	24			
LTE Category	4			
Power Class	GSM 850: 4 GSM 1900: 1 WCDMA / LTE: 3			
EUT Accessory				
Adapter	Manufacturer: Shenzhen Tianyin Electronics Co.,Ltd Model: TPA-418G050200UU01			
Battery 1	Manufacturer: Guangdong Highpower New Energy Technology Co., Ltd. Model: HPPA			
Battery 2	Manufacturer: Guangdong Fenghua New Energy Co.Ltd. Model: FHPO			
USB Cable	Manufacturer: Guangdong Saibao (Jiangxi) Industry Co., LTD Model: SSM-A033A			
Note: The EUT is sent from the applicant to Eurofins TA and the information of the EUT is declared by the applicant.				

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2.3 Maximum ERP/EIRP and Emission

FCC Rule	Frequency Band	Frequency Range (MHz)	Maximum ERP/EIRP (W)	Emission Designator
Part 22	GSM850(GPRS)	824.2 - 848.8	2.5004	247KGXW
Part 22	GSM850(EDGE)	824.2 - 848.8	0.5794	260KG7W
Part 24	GSM1900 (GPRS)	1850.2 - 1909.8	1.4028	246KGXW
Part 24	GSM1900 (EDGE)	1850.2 - 1909.8	0.7745	251KG7W

FCC Rule	Frequency Band	Frequency Range (MHz)	Maximum ERP/EIRP (W)	Emission Designator
Part 24	WCDMA Band II	1852.4 - 1907.6	0.3055	4M21F9W
Part 27	WCDMA Band IV	1712.44 - 1752.6	0.2673	4M21F9W
Part 22	WCDMA Band V	826.4 - 846.6	0.2692	4M19F9W

FCC Rule	Frequency Band	Frequency Range(MHz)	Maximum ERP/EIRP (W)	Emission Designator
Part 24	LTE Band 2 (QPSK)	1850.7 – 1909.3	0.2845	1M09G7D
Part 24	LTE Band 2 (QPSK)	1860-1900	0.2805	18M0G7D
Part 24	LTE Band 2 (QAM)	1855-1905	0.2393	8M95W7D
Part 24	LTE Band 2 (QAM)	1860-1900	0.2361	18M0W7D
Part 27	LTE Band 4 (QPSK)	1715-1750	0.2455	8M97G7D
Part 27	LTE Band 4 (QPSK)	1720-1745	0.2443	18M0G7D
Part 27	LTE Band 4 (QAM)	1715-1750	0.2113	8M98W7D
Part 27	LTE Band 4 (QAM)	1720-1745	0.2085	18M0W7D
Part 22	LTE Band 5 (QPSK)	829-844	0.2466	9M01G7D
Part 22	LTE Band 5 (QAM)	829-844	0.2148	8M98W7D
Part 27	LTE Band 7 (QPSK)	2510-2560	0.1866	17M9G7D
Part 27	LTE Band 7 (QAM)	2510-2560	0.1449	17M9W7D
Part 22	LTE Band 26 (824 ~ 849) (QPSK)	829-844	0.2500	8M97G7D
Part 22	LTE Band 26 (824 ~ 849) (QPSK)	831.5-841.5	0.2432	13M4G7D
Part 22	LTE Band 26 (824 ~ 849) (QAM)	829-844	0.2153	8M95W7D

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Part 22	LTE Band 26 (824 ~ 849) (QAM)	831.5-841.5	0.2037	13M4W7D
Part 90	LTE Band 26 (814 ~ 824) (QPSK)	814.7-823.3	0.2382	1M10G7D
Part 90	LTE Band 26 (814 ~ 824) (QPSK)	819	0.2361	9M01G7D
Part 90	LTE Band 26 (814 ~ 824) (QAM)	819	0.2046	8M99W7D
Part 27	LTE Band 38 (QPSK)	2575-2615	0.1778	8M96G7D
Part 27	LTE Band 38 (QPSK)	2580-2610	0.7129	17M9G7D
Part 27	LTE Band 38 (QAM)	2575-2615	0.1479	8M98W7D
Part 27	LTE Band 38 (QAM)	2580-2610	0.1472	18M0W7D
Part 27	LTE Band 41 (QPSK)	2501-2685	0.2565	8M95G7D
Part 27	LTE Band 41 (QPSK)	2506-2680	0.2541	17M9G7D
Part 27	LTE Band 41 (QAM)	2501-2685	0.2128	8M98W7D
Part 27	LTE Band 41 (QAM)	2506-2680	0.2109	17M9W7D

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3 Applied Standards

According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

Test standards:

FCC CFR 47 Part 22H

FCC CFR 47 Part 24E

FCC CFR 47 Part 27C

FCC CFR 47 Part 90S

Reference standard:

FCC CFR47 Part 2

ANSI C63.26-2015

KDB 971168 D01 Power Meas License Digital Systems v03r01

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4 Test Configuration

All mode and data rates and positions and RB size and modulations were investigated.
Subsequently, only the worst case emissions are reported.
The following testing in GSM/WCDMA/LTE is set based on the maximum RF Output Power.
The preliminary test was performed in all modes with. Test report only shows worst mode.
The following testing in different Bandwidth is set to detailin the following table:

Test items	**Modes/Modulation**	
	GSM 850 / GSM 1900	WCDMA Band 2/4/5
RF Power Output and Effective (Isotropic) Radiated power	GPRS EGPRS	RMC HSDPA/HSUPA DC-HSDPA/HSPA+
Occupied Bandwidth	GPRS(1Tx slot) EGPRS(1Tx slot)	RMC
Band Edge Compliance	GPRS(1Tx slot) EGPRS(1Tx slot)	RMC
Peak-to-Average Power Ratio	GPRS(1Tx slot) EGPRS(1Tx slot)	RMC
Frequency Stability	GPRS(1Tx slot)	RMC
Spurious Emissions at Antenna Terminals	GPRS(1Tx slot)	RMC
Radiated Spurious Emission	GPRS(1Tx slot)	RMC

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Test modes are chosen to be reported as the worst case configuration below for LTE Band:

Test items	Modes	Bandwidth (MHz)						Modulation		RB			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	1	50%	100%	L	M	H
RF Power Output and Effective Isotropic Radiated Power	LTE 2	O	O	O	O	O	O	O	O	O	O	O	O	O	O
	LTE 4	O	O	O	O	O	O	O	O	O	O	O	O	O	O
	LTE 5	O	O	O	O	-	-	O	O	O	O	O	O	O	O
	LTE 7	-	-	O	O	O	O	O	O	O	O	O	O	O	O
	LTE 26	O	O	O	O	O	-	O	O	O	O	O	O	O	O
	LTE 38	-	-	O	O	O	O	O	O	O	O	O	O	O	O
	LTE 41	-	-	O	O	O	O	O	O	O	O	O	O	O	O
Occupied Bandwidth	LTE 2	O	O	O	O	O	O	O	O	-	-	O	-	O	-
	LTE 4	O	O	O	O	O	O	O	O	-	-	O	-	O	-
	LTE 5	O	O	O	O	-	-	O	O	-	-	O	-	O	-
	LTE 7	-	-	O	O	O	O	O	O	-	-	O	-	O	-
	LTE 26	O	O	O	O	O	-	O	O	-	-	O	-	O	-
	LTE 38	-	-	O	O	O	O	O	O	-	-	O	-	O	-
	LTE 41	-	-	O	O	O	O	O	O	-	-	O	-	O	-
Band Edge Compliance	LTE 2	O	-	O	-	-	O	O	-	O	-	O	O	-	O
	LTE 4	O	-	O	-	-	O	O	-	O	-	O	O	-	O
	LTE 5	O	-	O	O	-	-	O	-	O	-	O	O	-	O
	LTE 7	-	-	O	O	-	O	O	-	O	-	O	O	-	O
	LTE 26	O	-	O	O	O	-	O	-	O	-	O	O	-	O
	LTE 38	-	-	O	O	-	O	O	-	O	-	O	O	-	O
	LTE 41	-	-	O	O	-	O	O	-	O	-	O	O	-	O
Peak-to-Average Power Ratio	LTE 2	-	-	-	-	-	O	O	O	-	-	O	-	O	-
	LTE 4	-	-	-	-	-	O	O	O	-	-	O	-	O	-
	LTE 5	-	-	-	O	-	-	O	O	-	-	O	-	O	-
	LTE 7	-	-	-	-	-	O	O	O	-	-	O	-	O	-
	LTE 26	-	-	-	O	O	-	O	O	-	-	O	-	O	-
	LTE 38	-	-	-	-	-	O	O	O	-	-	O	-	O	-
	LTE 41	-	-	-	-	-	O	O	O	-	-	O	-	O	-
Frequency Stability	LTE 2	O	O	O	O	O	O	O	-	-	-	O	O	-	O
	LTE 4	O	O	O	O	O	O	O	-	-	-	O	O	-	O
	LTE 5	O	O	O	O	-	-	O	-	-	-	O	-	O	-
	LTE 7	-	-	O	O	O	O	O	-	-	-	O	O	-	O
	LTE 26	O	O	O	O	O	-	O	-	-	-	O	-	O	-
	LTE 38	-	-	O	O	O	O	O	-	-	-	O	O	-	O
	LTE 41	-	-	O	O	O	O	O	-	-	-	O	O	-	O
Spurious Emissions at Antenna Terminals	LTE 2	O	-	O	-	-	O	O	-	O	-	-	O	O	O
	LTE 4	O	-	O	-	-	O	O	-	O	-	-	O	O	O
	LTE 5	O	-	O	O	-	-	O	-	O	-	-	O	O	O
	LTE 7	-	-	O	O	-	O	O	-	O	-	-	O	O	O
	LTE 26	O	-	O	O	O	-	O	-	O	-	-	O	O	O
	LTE 38	-	-	O	O	-	O	O	-	O	-	-	O	O	O
	LTE 41	-	-	O	O	-	O	O	-	O	-	-	O	O	O
Radiated	LTE 2	-	-	O	-	-	-	O	-	O	-	-	-	O	-

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Spurious Emission	LTE 4	-	-	O	-	-	-	O	-	O	-	-	-	O	-
	LTE 5	-	-	O	-	-	-	O	-	O	-	-	-	O	-
	LTE 7	-	-	O	-	-	-	O	-	O	-	-	-	O	-
	LTE 26	-	-	O	-	-	-	O	-	O	-	-	-	O	-
	LTE 38	-	-	O	-	-	-	O	-	O	-	-	-	O	-
	LTE 41	-	-	O	-	-	-	O	-	O	-	-	-	O	-
Note	1. The mark “O” means that this configuration is chosen for testing. 2. The mark “-” means that this configuration is not testing.														

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5 Test Case Results

5.1 RF Power Output and Effective Isotropic Radiated Power

Ambient condition

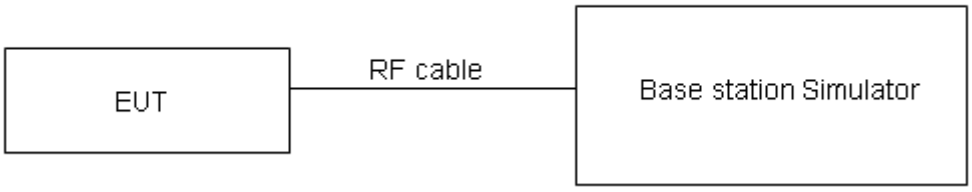
Temperature	Relative humidity	Pressure
15°C ~ 35°C	20% ~ 80%	86 kPa ~ 106 kPa

Methods of Measurement

During the process of the testing, The EUT was connected to the Base Station Simulator with a known loss. The EUT is controlled by the Base Station Simulator test set to ensure max power transmission with proper modulation.

ERP can then be calculated as follows:
EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)
EIRP (dBm) = ERP (dBm) + 2.15 (dB.)

Test Setup



Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U=0.4 dB for RF power output, k = 2, U= 1.19 dB for ERP/EIRP.

Test Results

The detailed test data see EFTA26050035-IE-02-R1-ANNEX A Test Result

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5.2 Occupied Bandwidth

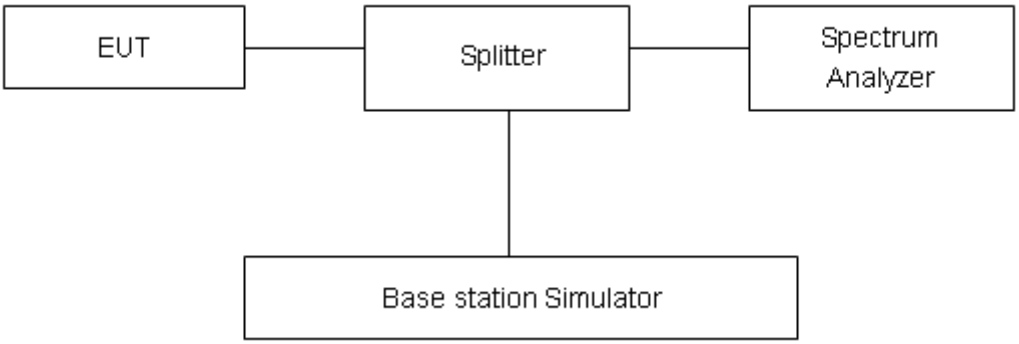
Ambient condition

Temperature	Relative humidity	Pressure
15°C ~ 35°C	20% ~ 80%	86 kPa ~ 106 kPa

Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The occupied bandwidth is measured using spectrum analyzer.
RBW is set to ⩾1%EBW, VBW is set to 3x RBW.
99% power and -26dBc occupied bandwidths are recorded. Spectrum analyzer plots are included on the following pages.

Test Setup



Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U=624Hz.

Test Results

The detailed test data see EFTA26050035-IE-02-R1-ANNEX B Test Result

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5.3 Band Edge Compliance

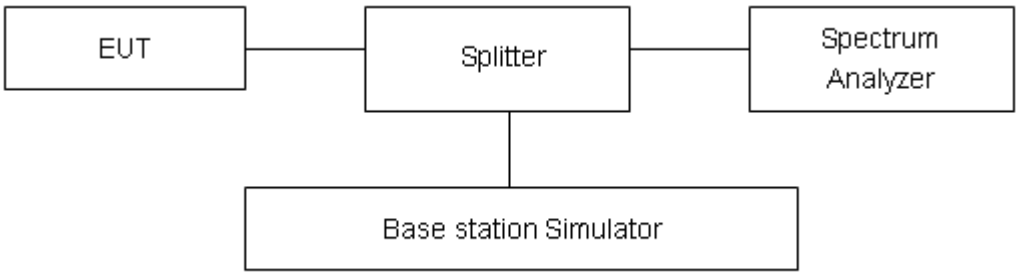
Ambient condition

Temperature	Relative humidity	Pressure
15°C ~ 35°C	20% ~ 80%	86 kPa ~ 106 kPa

Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The band edge of the lowest and highest channels were measured.
The testing follows KDB 971168 D01 v03r01 Section 6.0
The EUT was connected to spectrum analyzer and system simulator via a power divider.
The band edges of low and high channels for the highest RF powers were measured.
For LTE Band 7/38 set RBW >= 1% EBW in the 1MHz band immediately outside and adjacent to the band edge. Beyond the 1 MHz band from the band edge, RBW=1MHz was used.
For LTE Band 41 the middle channel, high channel set RBW >= 1% EBW in the 1MHz band immediately outside and adjacent to the band edge. Beyond the 1 MHz band from the band edge, RBW=1MHz was used; Low channel set RBW >= 2% EBW in the 1MHz band immediately outside and adjacent to the band edge. Beyond the 1 MHz band from the band edge, RBW=1MHz was used.
RBW is set to ⩾1%EBW, VBW is set to 3x RBW on spectrum analyzer.
Set spectrum analyzer with RMS detector.
The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
Checked that all the results comply with the emission limit line.

Test Setup



Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor *k* = 1.96, *U*=0.684dB.

Test Results

The detailed test data see EFTA26050035-IE-02-R1-ANNEX C Test Result

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5.4 Peak-to-Average Power Ratio (PAPR)

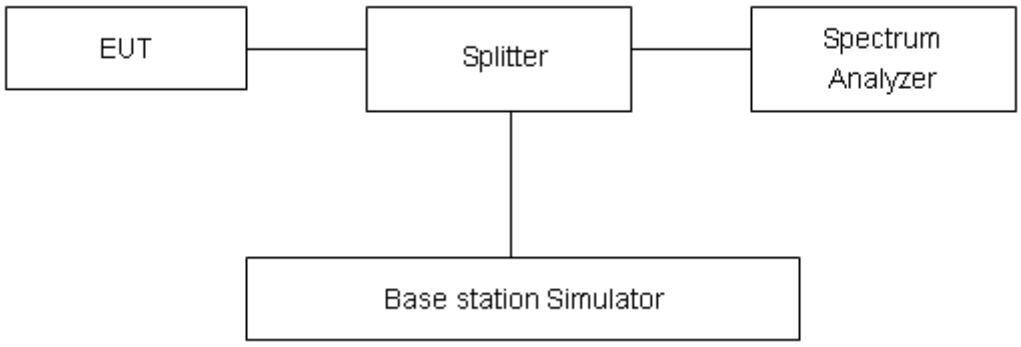
Ambient condition

Temperature	Relative humidity	Pressure
15°C ~ 35°C	20% ~ 80%	86 kPa ~ 106 kPa

Methods of Measurement

The testing follows ANSI C63.26 Section 5.2.3.4 (CCDF).
The EUT was connected to spectrum and system simulator via a power divider and Set the CCDF in spectrum analyzer. Record the maximum PAPR level associated with a probability of 0.1%.

Test Setup



Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for thenormal distribution is with the coverage factor k = 2, U= 0.4 dB.

Test Results

The detailed test data see EFTA26050035-IE-02-R1-ANNEX D Test Result

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5.5 Frequency Stability

Ambient condition

Temperature	Relative humidity	Pressure
15°C ~ 35°C	20% ~ 80%	86 kPa ~ 106 kPa

Method of Measurement

Frequency Stability (Temperature Variation)

The temperature inside the climate chamber is varied from -30°C to +50°C in 10°C step size.

(1)With all power removed, the temperature was decreased to -10°C and permitted to stabilize for three hours.

(2)Measure the carrier frequency with the test equipment in a “call mode”. These measurements should be made within 1 minute of powering up the mobile station, to prevent significant self warming.

(3) Repeat the above measurements at 10°C increments from -30°C to +50°C. Allow at least 1.5 hours at each temperature, un-powered, before making measurements.

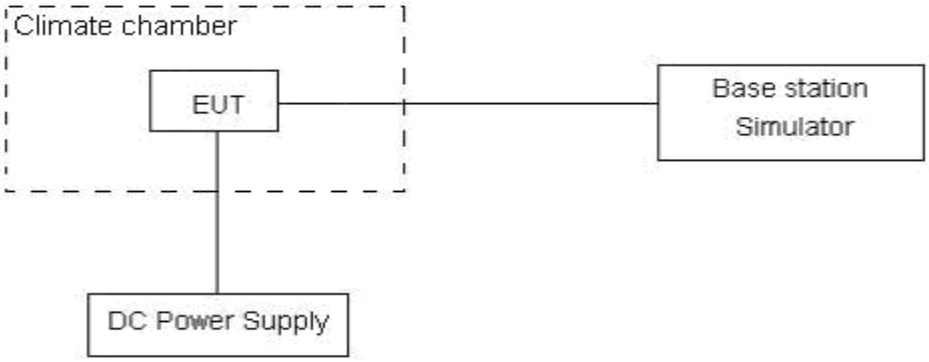
Frequency Stability (Voltage Variation)

The frequency stability shall be measured with variation of primary supply voltage as follows:

Primary Supply Voltage: The primary supply voltage is varied from 85% to 115% of the nominal value for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

This transceiver is specified to operate with an input voltage of between 6.6 V and 8.9 V, with a nominal voltage of 7.7V.

Test setup



Measurement Uncertainty

The assessed measurement uncertainty to ensure 99.75％ confidence level for the normal distribution is with the coverage factor k = 3,U=0.01ppm.

Test Results

The detailed test data see EFTA26050035-IE-02-R1-ANNEX E Test Result

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5.6 Spurious Emissions at Antenna Terminals

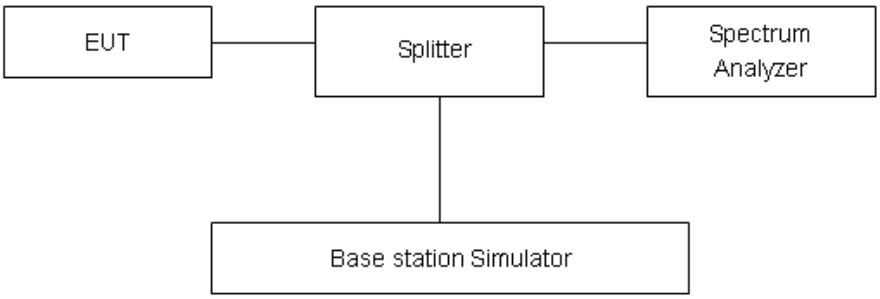
Ambient condition

Temperature	Relative humidity	Pressure
15°C ~ 35°C	20% ~ 80%	86 kPa ~ 106 kPa

Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The measurement is carried out using a spectrum analyzer. The spectrum analyzer scans from 9kHz to the 10th harmonic of the carrier. The peak detector is used.
RBW is set to 1 kHz (0.009MHz~ 0.15 MHz),
RBW is set to 10 kHz (0.15 MHz~ 30 MHz)
RBW is set to 1000 kHz (30MHz~1000 MHz)
RBW is set to 1000 kHz (above 1000MHz)
For Band 2/7/38/41/66, the RBW is set to 100KHz below 1G, and the factor is 10dB for 1MHz.
Sweep is set to AUTO.
Of those disturbances below (limit – 20 dB), the mark is not required for the EUT.
The modulation mode and RB allocation refer to section 5.1, using the maximum output power configuration.

Test setup



Measurement Uncertainty

The assessed measurement uncertainty to ensure 99.75％ confidence level for the normal distribution is with the coverage factor *k* = 1.96.

Frequency	Uncertainty
9kHz-1GHz	0.684 dB
above 1GHz	1.407 dB

Test Results

The detailed test data see EFTA26050035-IE-02-R1-ANNEX F Test Result

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5.7 Radiated Spurious Emission

Ambient condition

Temperature	Relative humidity	Pressure
15°C ~ 35°C	20% ~ 80%	86 kPa ~ 106 kPa

Method of Measurement

1. The testing follows FCC KDB 971168 D01 v03r01 Section 5.8 and ANSI C63.26-2015.
2. Below 1GHz: The EUT is placed on a turntable 0.8 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H). Above 1GHz: (Note: the FCC's permission to use 1.5m as an alternative per TCBC Conf call of Dec. 2, 2014.) The EUT is placed on a turntable 1.5 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H).
3. A loop antenna, A log-periodic antenna or horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
4. The EUT is then put into continuously transmitting mode at its maximum power level during the test. Set Test Receiver or Spectrum RBW=100kHz, VBW=300kHz for 30MHz to 1GHz and RBW=1MHz, VBW=3MHz for above 1GHz, and the maximum value of the receiver should be recorded as (Pr).
5. The EUT shall be replaced by a substitution antenna. 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.
6. A amplifier should be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna. The cable loss (Pcl) ,the Substitution Antenna Gain (Ga) and the Amplifier Gain (PAg) should be recorded after test.
7. The measurement results are obtained as described below:
Power(EIRP)=PMea- PAg - Pcl + Ga
The measurement results are amend as described below:
Power(EIRP)=PMea- Pcl + Ga
8. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dB) and known input power. ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP-2.15dB.

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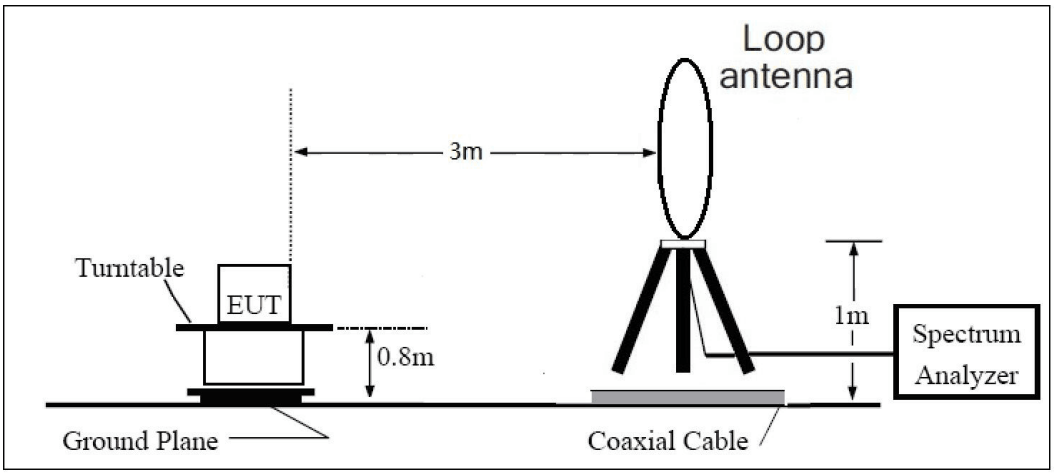
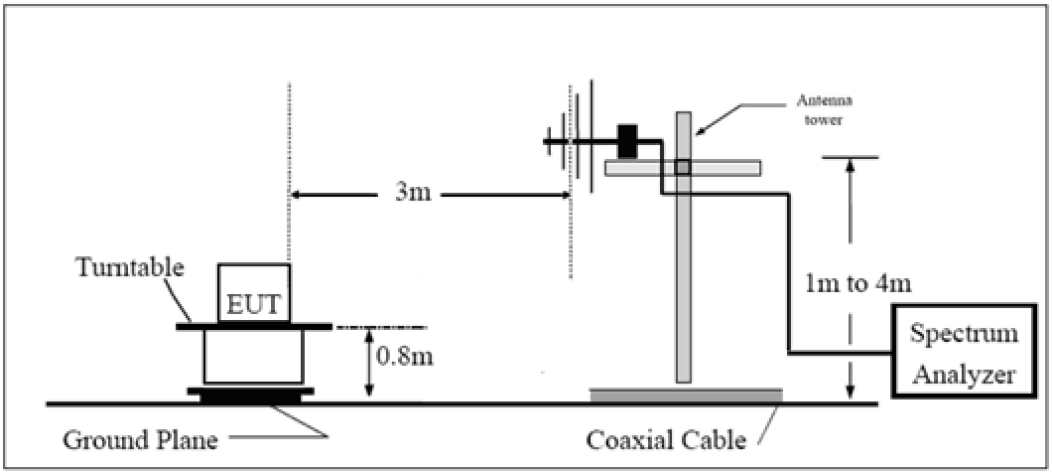
The modulation mode and RB allocation refer to section 5.1, using the maximum output power configuration.

Test setup

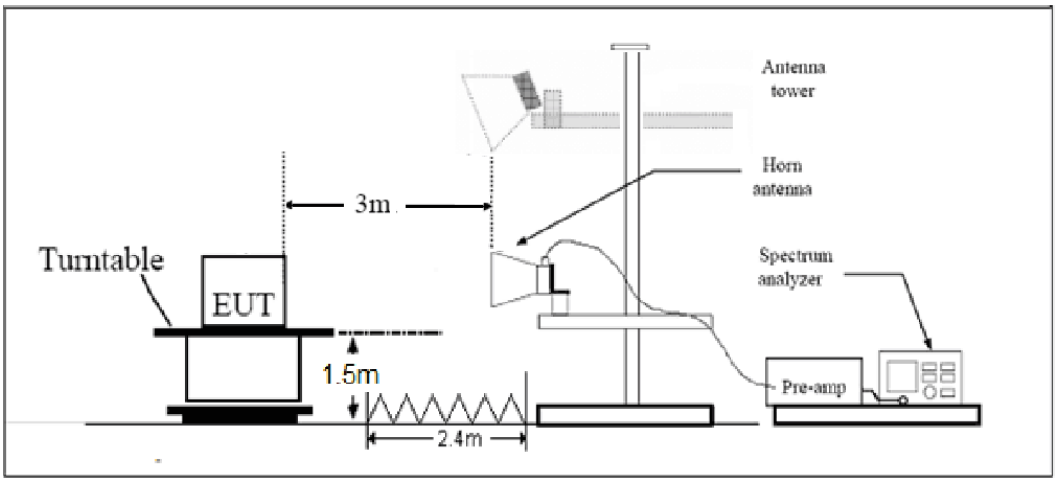
9KHz~ 30MHz



30MHz~ 1GHz



Above 1GHz



Note: Area side:2.4mX3.6m

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Measurement Uncertainty

The assessed measurement uncertainty to ensure 95％ confidence level for the normal distribution is with the coverage factor *k* = ±1.96, *U*= ±3.55 dB.

Test Results

The detailed test data see EFTA26050035-IE-02-R1-ANNEX G Test Result

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6 Main Test Instruments

Name	Manufacturer	Type	Serial Number	Calibration Date	Expiration Date
Wireless Communication Tester	Anritsu	MT8821C	6201538758	2026-04-21	2027-04-20
Climate Chamber	WEISS	VT 4002	58226119450010	2026-04-20	2027-04-19
Spectrum Analyzer	Keysight	N9020A	MY52330084	2026-04-20	2027-04-19
Wireless Communication Tester	Agilent	E5515C	MY48367192	2026-04-22	2027-04-21
DC Power Supply	UNI-T	UTP1310+	C220795889	2026-04-20	2027-04-19
Spectrum Analyzer	R&S	FSV40	101298	2026-04-20	2027-04-19
Software	MW	MTS 8200	V2.0.0.0	/	/
Attenuator	HASCO	HA18A-10	0003	/	/
Spectrum Analyzer	R&S	FSV30	104028	2026-04-20	2027-04-19
TRILOG Broadband Antenna	SCHWARZBECK	VULB 9163	1439	2024-07-06	2027-07-05
Horn Antenna	SCHWARZBECK	BBHA 9120D	1594	2023-12-05	2026-12-04
Software	R&S	EMC32	10.35.10	/	/

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7 The EUT Appearance

Refer to *EUT Appearance*.

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8 Test Setup Photos

Refer to *Part22_24_27_90 Test Setup.*

******** END OF REPORT ********

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