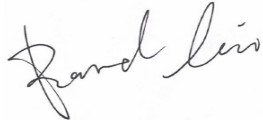


FCC PART 27
FCC PART 22H
TEST REPORT
For
Tersus GNSS Inc.

Rm 601, Bldg E2, No. 88, Jinjihu Ave, Suzhou, China

FCC ID: 2AMDJ-TC120

Report Type: Original Report	Product Name: Tablet
Report Number:	<u>RSHA250211001-00D</u>
Report Date:	<u>2025-05-13</u>
Reviewed By:	<u>Bard Liu</u> 
Approved By:	<u>Kyle Xu</u> 
Test Laboratory:	Bay Area Compliance Laboratories Corp. (Kunshan) No.248 Chenghu Road, Kunshan, Jiangsu Province, China Tel: +86-512-86175000 Fax: +86-512-88934268 www.baclcorp.com.cn

Note: This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. (Kunshan). This report must not be used by the customer to claim product certification, approval, or endorsement by NVLAP, or any agency of the U.S.Government.

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REPORT REVISION HISTORY

Number of Revisions	Report No.	Version	Issue Date	Description
0	RSHA250211001-00D	R1V1	2025-05-13	Initial Release

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Applicant:	Tersus GNSS Inc.
Tested Model:	TC120
Product Name:	Tablet
Power Supply:	DC 9-36 V
Maximum Conducted Output Power:	LTE: Band 5: 24.22 dBm Band 7: 22.09 dBm Band 38: 23.29 dBm Band 41: 23.72 dBm
RF Function:	LTE
Operating Band/Frequency:	LTE Band 5: 824-849 MHz(TX), 869-894 MHz(RX) LTE Band 7: 2500-2570 MHz(TX), 2620-2690 MHz(RX) LTE Band 38: 2570-2620 MHz(TX), 2570-2620 MHz(RX) LTE Band 41: 2496-2690 MHz(TX), 2496-2690 MHz(RX)
Modulation Type:	LTE: QPSK, 16QAM
Antenna Type:	FPC Antenna
★Maximum Antenna Gain :	LTE Band 5: -0.8 dBi LTE Band 7: 1.62 dBi LTE Band 38: 1.60 dBi LTE Band 41: 1.62 dBi

Note: The maximum antenna gain is provided by the applicant.

All measurement and test data in this report was gathered from production sample serial number: RSHA250211001-1 (Assigned by the BACL (Kunshan). The EUT supplied by the applicant was received on 2025-02-11.)

Objective

This type approval report is prepared for *Tersus GNSS Inc.* in accordance with Part 2, Part 22-Subpart H and Part 27 of the Federal Communication Commission's rules.

The objective is to determine the compliance of EUT with FCC rules for output power, modulation characteristic, occupied bandwidth, and spurious emission at antenna terminal, spurious radiated emission, frequency stability, and band edge.

Test Methodology

All tests and measurements indicated in this document were performed in accordance with the Code of Federal Regulations Title 47 Part 2, Sub-Part J as well as the following parts:

Part 22 Subpart H - Public Mobile Services

Part 27 – Miscellaneous wireless communications services

Applicable Standards: ANSI C63.26-2015.

Measurement Uncertainty

Item		Uncertainty
RF Frequency		0.082×10^{-7}
RF output power, conducted		0.73dB
RF conducted test with spectrum		0.9dB
Radiated emission	9 kHz~150 kHz	3.8dB
	150 kHz~30 MHz	3.4dB
	30MHz~1GHz	5.91dB
	1GHz~6GHz	4.68dB
	6GHz~18GHz	4.92dB
	18GHz~40GHz	5.21dB
Occupied Bandwidth		0.5kHz
Temperature		1.0°C
Humidity		6%
Supply voltages		$\pm 0.4\%$

Test Facility

The test site used by Bay Area Compliance Laboratories Corp. (Kunshan) to collect test data is located on the No.248 Chenghu Road, Kunshan, Jiangsu province, China.

Bay Area Compliance Laboratories Corp. (Kunshan) is accredited in accordance with ISO/IEC 17025:2017 by NVLAP (Lab code: 600338-0), and the lab has been recognized as the FCC accredited lab under the KDB 974614 D01, the FCC Designation No.: CN5055.

SYSTEM TEST CONFIGURATION

Justification

The EUT was configured for testing according to ANSI C63.26-2015.

The final qualification test was performed with the EUT operating at normal mode.

Channel List

Mode		Channel	Frequency (MHz)
LTE Band 5	1.4M	Low	824.7
		Middle	836.5
		High	848.3
	3M	Low	825.5
		Middle	836.5
		High	847.5
	5M	Low	826.5
		Middle	836.5
		High	846.5
	10M	Low	829.0
		Middle	836.5
		High	844.0
LTE Band 7	5M	Low	2502.5
		Middle	2535.0
		High	2567.5
	10M	Low	2505.0
		Middle	2535.0
		High	2565.0
	15M	Low	2507.5
		Middle	2535.0
		High	2562.5
	20M	Low	2510.0
		Middle	2535.0
		High	2560.0

Mode		Channel	Frequency (MHz)
LTE Band 38	5M	Low	2572.5
		Middle	2595.0
		High	2617.5
	10M	Low	2575.0
		Middle	2595.0
		High	2615.0
	15M	Low	2577.5
		Middle	2595.0
		High	2612.5
	20M	Low	2580.0
		Middle	2595.0
		High	2610.0
LTE Band 41	5M	Low	2498.5
		Middle	2593.0
		High	2687.5
	10M	Low	2501.0
		Middle	2593.0
		High	2685.0
	15M	Low	2503.5
		Middle	2593.0
		High	2682.5
	20M	Low	2506.0
		Middle	2593.0
		High	2680.0

Equipment Modifications

No modifications were made to the EUT.

Support Equipment List and Details

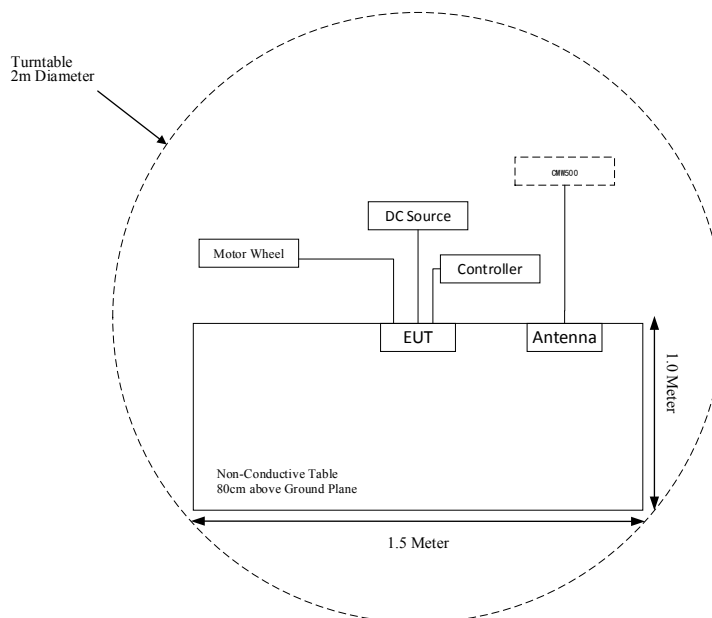
Manufacturer	Description	Model	Serial Number
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	104478
Shenzhen Zhaoxin Electronic Instrument Equipment Co., Ltd.	DC Source	RXN-605D	21R605D08132677
Tersus GNSS Inc.	Motor Wheel	AG993	/
Tersus GNSS Inc.	Controller	GC30	/

External I/O Cable

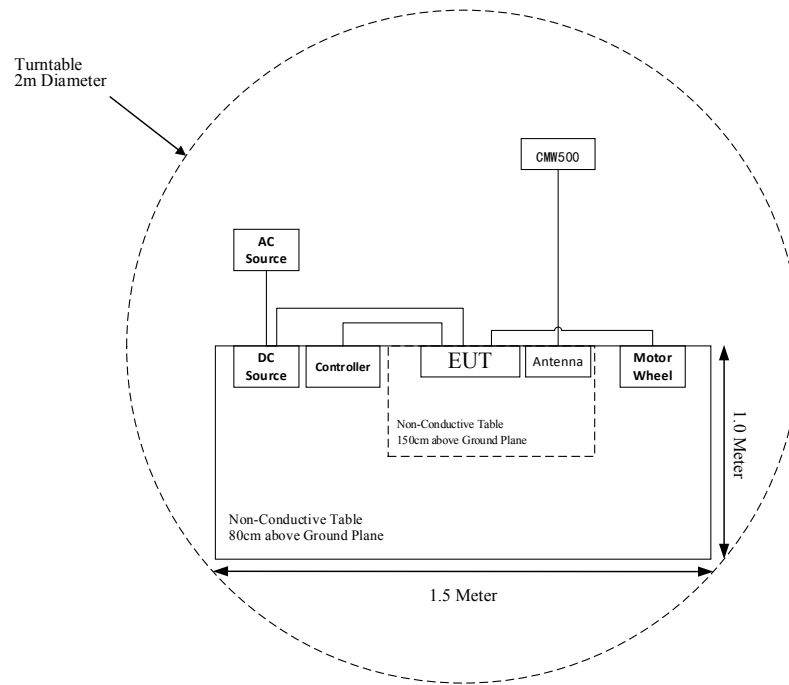
Cable Description	Length (m)	From Port	To Port
Power Cable 1	1.5	EUT	DC Source
Power Cable 2	1.0	DC Source	AC Source
Power Cable 3	2.5	EUT	Motor Wheel
Power Cable 4	3.0	EUT	Controller

Block Diagram of Test Setup

For Radiated Emissions(Below 1GHz):



For Radiated Emissions (Above 1 GHz):



TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test (Chamber #1)					
Rohde & Schwarz	EMI Test Receiver	ESCI	100195	2024-04-23	2025-04-22
Keysight	Signal Generator	N5183A	MY47420304	2024-04-24	2025-04-23
Sunol Sciences	Broadband Antenna	JB3	A090314-1	2024-11-08	2027-11-07
Sunol Sciences	Hybrid Antenna	JB3	A090314-2	2024-10-29	2027-10-28
Sonoma Instrument	Amplifier	310N	171205	2024-04-23	2025-04-22
Rohde & Schwarz	Auto Test Software	EMC32	100361	N/A	N/A
MICRO-COAX	Coaxial Cable	Cable-7	007	2024-04-23	2025-04-22
MICRO-COAX	Coaxial Cable	Cable-8	008	2024-04-23	2025-04-22
MICRO-COAX	Coaxial Cable	Cable-9	009	2024-04-23	2025-04-22
MICRO-COAX	Coaxial Cable	Cable-10	010	2024-04-23	2025-04-22
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	104478	2024-04-24	2025-04-23
Radiated Emission Test (Chamber #2)					
Keysight	Signal Generator	N5183A	MY47420304	2024-04-24	2025-04-23
Rohde & Schwarz	EMI Test Receiver	ESU40	100207/040	2024-04-25	2025-04-24
ETS-LINDGREN	Horn Antenna	3115	9207-3900	2024-11-03	2027-11-02
ETS-LINDGREN	Horn Antenna	3115	6229	2023-01-16	2026-01-15
ETS-LINDGREN	Horn Antenna	3116	2516	2024-12-08	2025-12-07
ETS-LINDGREN	Horn Antenna	3116	84159	2024-12-08	2025-12-07
A.H.Systems,inc	Amplifier	PAM-0118P	512	2024-04-25	2025-04-24
EM Electronics Corporation	Amplifier	EM18G40G	060726	2024-04-25	2025-04-24
Wi	Band reject filter	SN1	WRCGV5-804-824-849-869-30SS	2024-04-25	2025-04-24
Wi	Band reject filter	SN3	WRCJV8-2450-2500-2570-2620-40SS	2024-04-25	2025-04-24
Wi	Band reject filter	SN1	WRCJV8-2550-2570-2620-2640-30SS	2024-04-25	2025-04-24

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	Auto test Software	EMC32	100361	N/A	N/A
MICRO-COAX	Coaxial Cable	Cable-6	006	2024-04-25	2025-04-24
MICRO-COAX	Coaxial Cable	Cable-11	011	2024-04-25	2025-04-24
MICRO-COAX	Coaxial Cable	Cable-12	012	2024-04-25	2025-04-24
MICRO-COAX	Coaxial Cable	Cable-13	013	2024-04-25	2025-04-24
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	104478	2024-04-24	2025-04-23
RF Conducted Test					
Rohde & Schwarz	Signal Analyzer	FSV40	101116	2024-04-24	2025-04-23
Rohde & Schwarz	Signal Analyzer	FSV40	101116	2025-04-09	2026-04-08
BACL	Temperature & Humidity Chamber	BTH-150	30023	2024-04-25	2025-04-24
BACL	Temperature & Humidity Chamber	BTH-150	30023	2025-04-09	2026-04-08
EAST	Regulated DC Power Supply	MCH-303D-II	14070562	2024-10-10	2025-10-09
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	104478	2024-04-24	2025-04-23
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	104478	2025-04-09	2026-04-08
Narda	Attenuator	10dB	10dB-01	2024-04-24	2025-04-23
Narda	Attenuator	10dB	10dB-01	2025-04-08	2026-04-07
Eastsheep	Attenuator	2W-N-JK-18G	20dB-01	2024-04-24	2025-04-23
Eastsheep	Attenuator	2W-N-JK-18G	20dB-01	2025-04-08	2026-04-07
MACOM	Power Splitter	2090-6214-00	96341	2024-04-23	2025-04-22
MACOM	Power Splitter	2090-6214-00	96341	2025-04-09	2026-04-08
XHFDZ	RG316 Coaxial Cable	SMA-316	XHF-1175	Each time	N/A
Unknown	RF Cable	RF Cable C01	C01	Each Time	N/A

Statement of Traceability: Bay Area Compliance Laboratories Corp. (Kunshan) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§1.1310 & §2.1091	MAXIMUM PERMISSIBLE EXPOSURE (MPE)	Compliant
§2.1046; § 22.913 (a); §27.50 (h)	RF Output Power	Compliant
§ 2.1047	Modulation Characteristics	Not Applicable
§2.1049; §22.905; §22.917; §27.53	Occupied Bandwidth	Compliant
§2.1051; §22.917 (a); §27.53 (m);	Spurious Emissions at Antenna Terminal	Compliant
§2.1053; §22.917 (a) §27.53 (m);	Spurious Radiated Emissions	Compliant
§22.917 (a); §27.53 (m);	Band Edge	Compliant
§2.1055; §22.355; §27.54	Frequency stability	Compliant

FCC §1.1310 & §2.1091 - MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Applicable Standard

According to subpart §2.1091 and subpart §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

Limits for Maximum Permissible Exposure (MPE) (§1.1310, §2.1091)

(B) Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm²)	Averaging Time (minutes)
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

f = frequency in MHz; * = Plane-wave equivalent power density;

According to §1.1310 and §2.1091 RF exposure is calculated.

Calculated Formulary:

Predication of MPE limit at a given distance

$S = PG/4\pi R^2$ = power density (in appropriate units, e.g. mW/cm²);

P = power input to the antenna (in appropriate units, e.g., mW);

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain;

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm);

For simultaneously transmit system, the calculated power density should comply with:

$$\sum_i \frac{S_i}{S_{Limit,i}} \leq 1$$

Calculated Data:

Mode	Frequency Range (MHz)	Antenna Gain		Tune-up Output Power★		Evaluation Distance (cm)	Power Density (mW/cm ²)	MPE Limit (mW/cm ²)
		(dBi)	(numeric)	(dBm)	(mW)			
2.4G Wi-Fi	2412-2462	1.5	1.41	20.00	100.00	20	0.0280	1.00
BLE	2402-2480	1.5	1.41	-3.50	0.45	20	0.0001	1.00
BT	2402-2480	1.5	1.41	7.50	5.62	20	0.0016	1.00
5G Wi-Fi	5150-5250	1.2	1.32	11.50	14.13	20	0.0037	1.00
	5725-5850	1.2	1.32	10.50	11.22	20	0.0029	1.00
LTE band 5	824-849	-0.8	0.83	24.50	281.84	20	0.0466	0.5493
LTE band 7	2500-2570	1.62	1.45	22.50	177.83	20	0.0514	1.00
LTE band 38	2570-2620	1.60	1.45	23.50	223.87	20	0.0644	1.00
LTE band 41	2496-2690	1.62	1.45	24.00	251.19	20	0.0726	1.00

(1) The target output powers are all declared by the Manufacturer.

(2) Wi-Fi/BT/BLE and LTE can transmit simultaneously, the worst condition is 802.11b of Wi-Fi, LTE Band 5 as below:

$$\sum_i \frac{S_i}{S_{Limit,i}} = 0.0280/1.00 + 0.0466/0.5493 = 0.0280 + 0.0848 = 0.1128 < 1.0$$

Result: The device meet FCC MPE at 20 cm distance.

FCC §2.1047 - MODULATION CHARACTERISTIC

According to FCC § 2.1047(d), Part 22H & Part 27 there is no specific requirement for digital modulation, therefore modulation characteristic is not presented.

FCC §2.1046; § 22.913 (a); §27.50 (h) - RF OUTPUT POWER

Applicable Standards

According to FCC §2.1046 and §22.913 (a), the ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts (38.45dBm).

According to §27.50(h) (2), Mobile and other user stations. Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

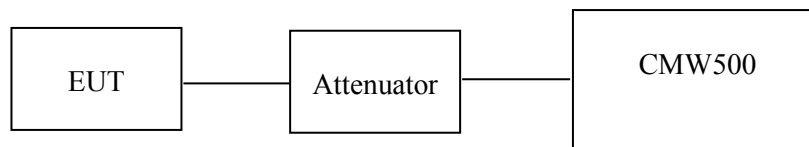
According to FCC §2.1046, The maximum output power of the transmitter for mobile stations is 100 watts (20 dBw)

The peak-to-average power ratio (PAPR) of the transmitter output power must not exceed 13 dB.

Test Procedure

Conducted method:

The RF output of the transmitter was connected to the CMW500 through sufficient attenuation.



Note: Offset (10.5dB) = Attenuator (10dB) + Cable Loss (0.5dB)

Test Data: See appendix A

FCC §2.1049, §22.917, §22.905, §27.53 - OCCUPIED BANDWIDTH

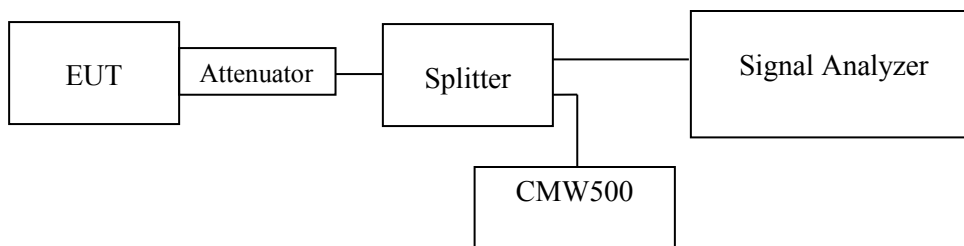
Applicable Standards

FCC 47 §2.1049, §22.917, §22.905, §27.53.

Test Procedure

The RF output of the transmitter was connected to the simulator and the spectrum analyzer through sufficient attenuation. The 26 dB & 99% bandwidth was recorded.

Note : The 15dB is the Insertion loss of the RF cable, Power Splitter, Attenuator, which was offset into the Spectrum Analyzer.



Note: Offset (15dB) = Attenuator (10dB) + Splitter (4.5dB) + Cable Loss (0.5dB)

Test Data: See Appendix B

FCC § 2.1051; § 22.917 (a); §27.53 (m); - SPURIOUS EMISSIONS AT ANTENNA TERMINALS

Applicable Standards

FCC §2.1051, §22.917(a), §27.53 (c) (f) (g) (h) (m).

The spectrum was to be investigated to the tenth harmonics of the highest fundamental frequency as specified in § 2.1051.

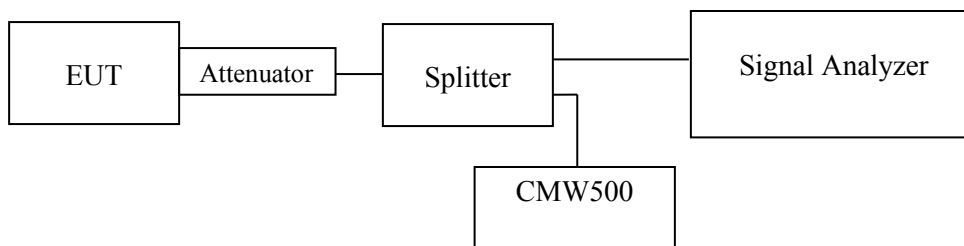
According to §22.917(a), the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

27.53m(4) 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 than $43 + 10 \log(P)$ 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.

Test Procedure

The RF output of the transceiver was connected to a spectrum analyzer and simulator through appropriate attenuation. The resolution bandwidth of the spectrum analyzer was set at 100 kHz for below 1GHz & 1MHz for above 1GHz. sufficient scans were taken to show any out of band emissions up to 10th harmonic.

Note : The 15dB is the Insertion loss of the RF cable, Power Splitter, Attenuator, which was offset into the Spectrum Analyzer.



Note: Offset (15dB) = Attenuator (10dB) + Splitter (4.5dB) + Cable Loss (0.5dB)

Test Data: See Appendix D

FCC § 2.1053; § 22.917 (a); §27.53 (m); - SPURIOUS RADIATED EMISSIONS

Applicable Standards

FCC § 2.1053, §22.917(a) and § 27.53 (m)

22.917 (a) Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

27.53m(4) 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 than $43 + 10 \log (P)$ 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.

Test Procedure

According to ANSI C63.26-2015 Section 5.5.3:

The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load which was also placed on the turntable.

The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.

The frequency range up to tenth harmonic of the fundamental frequency was investigated.

Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.

Test Data: See Appendix A

FCC § 22.917 (a); §27.53 (m); - BAND EDGES

Applicable Standards

22.917 (a) Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

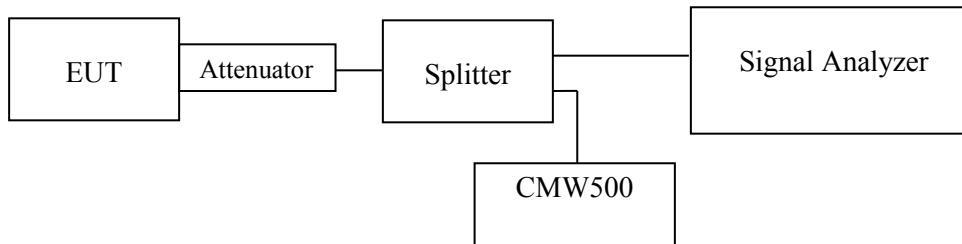
27.53m(4) For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ 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 than $43 + 10 \log (P)$ 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.

Test Procedure

The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation.

The center of the spectrum analyzer was set to block edge frequency.

Note : The 15dB is the Insertion loss of the RF cable, Power Splitter, Attenuator, which was offset into the Spectrum Analyzer.



Note: Offset (15dB) = Attenuator (10dB) + Splitter (4.5dB)+Cable Loss (0.5dB)

Test Data: See Appendix C

FCC §2.1055; §22.355; §27.54 - FREQUENCY STABILITY**Applicable Standards**

FCC § 2.1055, §22.355, §27.54.

According to FCC §2.1055, the frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

According to §22.355, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table below:

Frequency Tolerance for Transmitters in the Public Mobile Services

Frequency Range (MHz)	Base, fixed (ppm)	Mobile > 3 watts (ppm)	Mobile ≤ 3 watts (ppm)
25 to 50	20.0	20.0	50.0
50 to 450	5.0	5.0	50.0
450 to 512	2.5	5.0	5.0
821 to 896	1.5	2.5	2.5
928 to 929.	5.0	N/A	N/A
929 to 960.	1.5	N/A	N/A
2110 to 2220	10.0	N/A	N/A

According to §27.54 Frequency stability, the frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

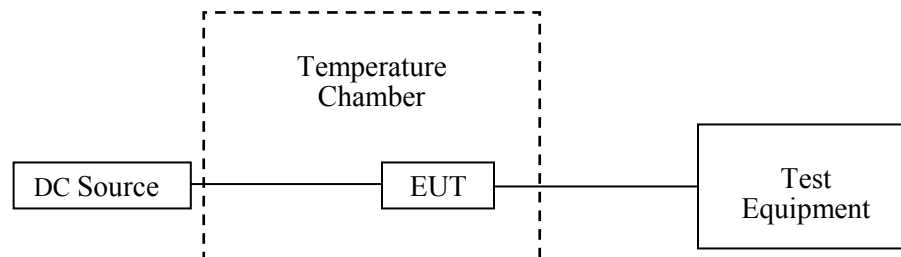
Test Procedure

According to ANSI C63.26-2015 Section 5.6:

Frequency Stability vs. Temperature: The equipment under test was connected to an external DC power supply and the RF output was connected to communication test set via feed-through attenuators. The EUT was placed inside the temperature chamber. The DC leads and RF output cable exited the chamber through an opening made for the purpose.

After the temperature stabilized for approximately 20 minutes, the frequency output was recorded from the communication test set.

Frequency Stability vs. Voltage: For hand carried, battery powered equipment; reduce primary supply voltage to the battery operating end point which shall be specified by the manufacturer.



Note: Offset (11dB) = Attenuator (10dB) + Cable Loss (1dB)

Test Data: See Appendix A

EUT PHOTOGRAPHS

Please refer to the attachment EXHIBIT A - EUT EXTERNAL PHOTOGRAPHS and EXHIBIT B - EUT INTERNAL PHOTOGRAPHS.

TEST SETUP PHOTOGRAPHS

Please refer to the attachment EXHIBIT E - TEST SETUP PHOTOGRAPHS.

APPENDIX A - TEST DATA

RF OUTPUT POWER

Environmental Conditions & Test Information

Test Date:	2025-02-24 to 2025-04-30
Temperature:	24.3-25.1 °C
Relative Humidity:	50-51 %
ATM Pressure:	102.9-103.2 kPa
Test Engineer:	Neil Zhou

LTE Band 5

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP (dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	1#0	23.63	23.32	23.41	20.68	20.37	20.46
		1#3	23.74	23.51	23.60	20.79	20.56	20.65
		1#5	23.59	23.33	23.41	20.64	20.38	20.46
		3#0	23.51	23.49	23.50	20.56	20.54	20.55
		3#3	23.50	23.54	23.54	20.55	20.59	20.59
		6#0	22.48	22.50	22.55	19.53	19.55	19.60
	16QAM	1#0	22.67	22.19	22.23	19.72	19.24	19.28
		1#3	22.92	22.36	22.38	19.97	19.41	19.43
		1#5	22.72	22.22	22.24	19.77	19.27	19.29
		3#0	22.70	22.64	22.57	19.75	19.69	19.62
		3#3	22.82	22.56	22.58	19.87	19.61	19.63
		6#0	21.41	21.68	21.73	18.46	18.73	18.78
3	QPSK	1#0	23.37	23.46	23.70	20.42	20.51	20.75
		1#8	23.38	23.48	23.68	20.43	20.53	20.73
		1#14	23.41	23.46	23.66	20.46	20.51	20.71
		6#0	22.49	22.57	22.58	19.54	19.62	19.63
		6#9	22.46	22.53	22.58	19.51	19.58	19.63
		15#0	22.43	22.61	22.50	19.48	19.66	19.55
	16QAM	1#0	22.22	22.47	22.84	19.27	19.52	19.89
		1#8	22.15	22.40	22.83	19.20	19.45	19.88
		1#14	22.13	22.41	22.85	19.18	19.46	19.90
		6#0	21.42	21.63	21.65	18.47	18.68	18.70
		6#9	21.46	21.57	21.65	18.51	18.62	18.70
		15#0	21.44	21.62	21.52	18.49	18.67	18.57
5	QPSK	1#0	23.98	23.44	23.40	21.03	20.49	20.45
		1#13	24.15	23.66	23.62	21.20	20.71	20.67
		1#24	23.96	23.40	23.36	21.01	20.45	20.41
		15#0	22.93	22.57	22.53	19.98	19.62	19.58
		15#10	23.00	22.57	22.56	20.05	19.62	19.61
		25#0	22.92	22.54	22.50	19.97	19.59	19.55
	16QAM	1#0	22.42	23.09	22.40	19.47	20.14	19.45
		1#13	22.64	23.29	22.62	19.69	20.34	19.67
		1#24	22.46	23.03	22.35	19.51	20.08	19.40
		15#0	21.57	21.71	21.62	18.62	18.76	18.67
		15#10	21.81	21.65	21.65	18.86	18.70	18.70
		25#0	21.81	21.67	21.56	18.86	18.72	18.61

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP (dBm)		
			Low	Mid	High	Low	Mid	High
10	QPSK	1#0	24.08	23.74	23.43	21.13	20.79	20.48
		1#25	24.22	23.88	23.50	21.27	20.93	20.55
		1#49	23.99	23.71	23.42	21.04	20.76	20.47
		25#0	23.01	22.65	22.59	20.06	19.70	19.64
		25#25	23.06	22.63	22.58	20.11	19.68	19.63
		50#0	23.04	22.62	22.57	20.09	19.67	19.62
	16QAM	1#0	22.47	22.91	22.57	19.52	19.96	19.62
		1#25	22.58	23.03	22.34	19.63	20.08	19.39
		1#49	22.46	22.88	22.43	19.51	19.93	19.48
		25#0	21.64	21.73	22.18	18.69	18.78	19.23
		25#25	21.78	21.71	21.69	18.83	18.76	18.74
		50#0	21.70	21.76	21.65	18.75	18.81	18.70

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd)

Antenna Gain(dBd) = Antenna Gain(dBi)-2.15

Limit: ERP≤38.45dBm

LTE Band 7

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP (dBm)		
			Low	Mid	High	Low	Mid	High
5	QPSK	1#0	20.34	20.54	21.69	21.96	22.16	23.31
		1#13	20.52	20.82	21.96	22.14	22.44	23.58
		1#24	20.25	20.66	21.86	21.87	22.28	23.48
		15#0	19.45	19.82	20.87	21.07	21.44	22.49
		15#10	19.51	19.83	20.90	21.13	21.45	22.52
		25#0	19.45	19.78	20.81	21.07	21.40	22.43
	16QAM	1#0	19.98	19.63	20.76	21.60	21.25	22.38
		1#13	20.16	19.90	21.03	21.78	21.52	22.65
		1#24	19.91	19.73	20.87	21.53	21.35	22.49
		15#0	18.53	18.85	19.90	20.15	20.47	21.52
		15#10	18.58	18.86	19.86	20.20	20.48	21.48
		25#0	18.54	18.78	19.82	20.16	20.40	21.44
10	QPSK	1#0	20.39	20.69	21.81	22.01	22.31	23.43
		1#25	20.42	20.91	22.09	22.04	22.53	23.71
		1#49	20.33	20.87	22.08	21.95	22.49	23.70
		25#0	19.49	19.96	20.78	21.11	21.58	22.40
		25#25	19.67	19.85	20.74	21.29	21.47	22.36
		50#0	19.58	19.90	20.73	21.20	21.52	22.35
	16QAM	1#0	19.24	19.86	21.00	20.86	21.48	22.62
		1#25	19.29	19.83	21.21	20.91	21.45	22.83
		1#49	19.19	18.97	21.26	20.81	20.59	22.88
		25#0	18.57	18.92	19.83	20.19	20.54	21.45
		25#25	18.71	18.89	19.79	20.33	20.51	21.41
		50#0	18.61	18.86	19.72	20.23	20.48	21.34
15	QPSK	1#0	20.52	20.60	21.64	22.14	22.22	23.26
		1#38	20.66	20.90	22.00	22.28	22.52	23.62
		1#74	20.43	20.85	21.99	22.05	22.47	23.61
		36#0	19.55	19.97	20.67	21.17	21.59	22.29
		36#39	19.72	19.94	20.84	21.34	21.56	22.46
		75#0	19.66	19.96	20.75	21.28	21.58	22.37
	16QAM	1#0	19.47	19.51	20.77	21.09	21.13	22.39
		1#38	19.67	19.88	21.17	21.29	21.50	22.79
		1#74	19.35	19.82	21.16	20.97	21.44	22.78
		36#0	18.48	18.91	19.59	20.10	20.53	21.21
		36#39	18.66	18.92	19.77	20.28	20.54	21.39
		75#0	18.62	18.94	19.71	20.24	20.56	21.33

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP (dBm)		
			Low	Mid	High	Low	Mid	High
20	QPSK	1#0	20.17	20.37	21.06	21.79	21.99	22.68
		1#50	20.41	20.85	21.60	22.03	22.47	23.22
		1#99	20.11	20.80	21.55	21.73	22.42	23.17
		50#0	19.36	19.98	20.29	20.98	21.60	21.91
		50#50	19.76	19.90	20.63	21.38	21.52	22.25
		100#0	19.65	19.99	20.47	21.27	21.61	22.09
	16QAM	1#0	19.52	20.04	20.44	21.14	21.66	22.06
		1#50	19.75	20.47	20.94	21.37	22.09	22.56
		1#99	19.42	20.45	20.94	21.04	22.07	22.56
		50#0	18.31	19.01	19.30	19.93	20.63	20.92
		50#50	18.81	18.88	19.65	20.43	20.50	21.27
		100#0	18.64	18.96	19.46	20.26	20.58	21.08

Note: EIRP (dBm) = Conducted Power(dBm) + Antenna Gain(dBi)

Limit: EIRP≤33dBm

LTE Band 38

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP (dBm)		
			Low	Mid	High	Low	Mid	High
5	QPSK	1#0	19.56	20.96	22.49	21.16	22.56	24.09
		1#13	19.93	21.38	22.87	21.53	22.98	24.47
		1#24	19.75	21.24	22.67	21.35	22.84	24.27
		15#0	18.52	19.98	21.56	20.12	21.58	23.16
		15#10	18.68	20.16	21.60	20.28	21.76	23.20
		25#0	18.59	20.02	21.59	20.19	21.62	23.19
	16QAM	1#0	18.69	20.16	21.65	20.29	21.76	23.25
		1#13	19.05	20.59	22.00	20.65	22.19	23.60
		1#24	18.89	20.44	21.84	20.49	22.04	23.44
		15#0	17.44	18.96	20.52	19.04	20.56	22.12
		15#10	17.62	19.17	20.57	19.22	20.77	22.17
		25#0	17.62	18.98	20.58	19.22	20.58	22.18
10	QPSK	1#0	20.04	20.77	22.72	21.64	22.37	24.32
		1#25	20.26	21.31	23.29	21.86	22.91	24.89
		1#49	20.01	21.38	23.23	21.61	22.98	24.83
		25#0	18.62	19.95	21.86	20.22	21.55	23.46
		25#25	18.91	20.58	22.03	20.51	22.18	23.63
		50#0	18.79	20.46	21.94	20.39	22.06	23.54
	16QAM	1#0	18.70	20.10	21.87	20.30	21.70	23.47
		1#25	19.16	20.64	22.41	20.76	22.24	24.01
		1#49	19.09	20.71	22.37	20.69	22.31	23.97
		25#0	17.60	19.30	20.91	19.20	20.90	22.51
		25#25	17.91	19.69	21.04	19.51	21.29	22.64
		50#0	17.80	19.53	20.99	19.40	21.13	22.59
15	QPSK	1#0	20.07	21.02	22.35	21.67	22.62	23.95
		1#38	20.67	21.81	23.05	22.27	23.41	24.65
		1#74	20.74	21.88	23.08	22.34	23.48	24.68
		36#0	19.18	20.38	21.70	20.78	21.98	23.30
		36#39	19.60	20.97	22.07	21.20	22.57	23.67
		75#0	19.37	20.70	21.89	20.97	22.30	23.49
	16QAM	1#0	19.28	20.09	21.48	20.88	21.69	23.08
		1#38	19.75	20.77	22.19	21.35	22.37	23.79
		1#74	19.95	20.93	22.32	21.55	22.53	23.92
		36#0	18.26	19.37	20.57	19.86	20.97	22.17
		36#39	18.68	19.94	20.92	20.28	21.54	22.52
		75#0	18.39	19.62	20.83	19.99	21.22	22.43

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP (dBm)		
			Low	Mid	High	Low	Mid	High
20	QPSK	1#0	19.98	20.81	21.87	21.58	22.41	23.47
		1#50	20.67	21.66	22.65	22.27	23.26	24.25
		1#99	21.00	21.98	22.88	22.60	23.58	24.48
		50#0	19.13	20.02	21.21	20.73	21.62	22.81
		50#50	19.82	20.81	21.71	21.42	22.41	23.31
		100#0	19.53	20.48	21.45	21.13	22.08	23.05
	16QAM	1#0	18.97	19.91	20.81	20.57	21.51	22.41
		1#50	19.66	20.74	21.60	21.26	22.34	23.20
		1#99	19.94	21.06	21.90	21.54	22.66	23.50
		50#0	18.17	19.04	20.19	19.77	20.64	21.79
		50#50	18.82	19.83	20.72	20.42	21.43	22.32
		100#0	18.62	19.47	20.46	20.22	21.07	22.06

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)
Limit: EIRP≤33dBm

LTE Band 41

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP (dBm)		
			Low	Mid	High	Low	Mid	High
5	QPSK	1#0	22.98	22.31	21.86	24.60	23.93	23.48
		1#13	23.11	22.68	21.87	24.73	24.30	23.49
		1#24	22.60	22.39	21.16	24.22	24.01	22.78
		15#0	22.55	21.22	21.16	24.17	22.84	22.78
		15#10	22.55	21.34	21.20	24.17	22.96	22.82
		25#0	22.57	21.21	21.07	24.19	22.83	22.69
	16QAM	1#0	22.62	21.48	21.07	24.24	23.10	22.69
		1#13	23.70	21.76	21.30	25.32	23.38	22.92
		1#24	23.72	21.49	21.12	25.34	23.11	22.74
		15#0	21.35	20.20	20.01	22.97	21.82	21.63
		15#10	21.46	20.33	20.05	23.08	21.95	21.67
		25#0	21.50	20.26	19.99	23.12	21.88	21.61
10	QPSK	1#0	19.92	22.21	21.73	21.54	23.83	23.35
		1#25	19.65	22.45	21.19	21.27	24.07	22.81
		1#49	22.61	22.22	21.21	24.23	23.84	22.83
		25#0	22.60	21.10	21.25	24.22	22.72	22.87
		25#25	18.57	21.27	21.15	20.19	22.89	22.77
		50#0	22.50	21.16	21.05	24.12	22.78	22.67
	16QAM	1#0	18.99	21.16	21.00	20.61	22.78	22.62
		1#25	18.75	21.51	21.13	20.37	23.13	22.75
		1#49	21.54	21.32	20.11	23.16	22.94	21.73
		25#0	21.57	20.11	20.10	23.19	21.73	21.72
		25#25	17.71	20.26	20.16	19.33	21.88	21.78
		50#0	21.50	20.24	20.13	23.12	21.86	21.75
15	QPSK	1#0	19.68	22.22	21.79	21.30	23.84	23.41
		1#38	19.33	22.60	21.44	20.95	24.22	23.06
		1#74	18.58	22.38	21.45	20.20	24.00	23.07
		36#0	22.83	21.34	21.46	24.45	22.96	23.08
		36#39	18.85	21.46	21.36	20.47	23.08	22.98
		75#0	18.59	21.38	21.09	20.21	23.00	22.71
	16QAM	1#0	21.64	21.33	20.95	23.26	22.95	22.57
		1#38	21.63	21.70	21.17	23.25	23.32	22.79
		1#74	17.58	21.54	20.28	19.20	23.16	21.90
		36#0	21.59	20.19	20.28	23.21	21.81	21.90
		36#39	21.22	20.37	20.28	22.84	21.99	21.90
		75#0	21.15	20.33	20.26	22.77	21.95	21.88

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP (dBm)		
			Low	Mid	High	Low	Mid	High
20	QPSK	1#0	19.76	21.89	21.75	21.38	23.51	23.37
		1#50	19.53	22.42	21.50	21.15	24.04	23.12
		1#99	22.50	22.16	21.10	24.12	23.78	22.72
		50#0	18.54	20.99	21.12	20.16	22.61	22.74
		50#50	18.43	21.33	21.12	20.05	22.95	22.74
		100#0	22.47	21.23	21.12	24.09	22.85	22.74
	16QAM	1#0	18.90	20.88	20.89	20.52	22.50	22.51
		1#50	18.65	21.36	20.85	20.27	22.98	22.47
		1#99	21.41	21.13	20.95	23.03	22.75	22.57
		50#0	17.61	20.04	20.06	19.23	21.66	21.68
		50#50	17.46	20.33	20.07	19.08	21.95	21.69
		100#0	21.38	20.19	20.11	23.00	21.81	21.73

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)
Limit: EIRP≤33dBm

Peak-to-average ratio (PAR):**LTE Band 5**

Test Modulation		Test Bandwidth	Low Channel (dB)	Middle Channel (dB)	High Channel (dB)	Limit(dB)
QPSK	1 RB	10M	3.91	4.41	4.87	≤ 13
	50 RB		4.72	5.10	4.90	≤ 13
16-QAM	1 RB	10M	4.84	5.10	5.57	≤ 13
	50 RB		5.68	6.00	5.80	≤ 13

LTE Band 7

Test Modulation		Test Bandwidth	Low Channel (dB)	Middle Channel (dB)	High Channel (dB)	Limit(dB)
QPSK	1 RB	20M	4.23	3.94	4.32	≤ 13
	100 RB		4.96	4.87	4.58	≤ 13
16-QAM	1 RB	20M	5.16	4.75	5.07	≤ 13
	100 RB		5.88	5.74	5.62	≤ 13

LTE Band 38

Test Modulation		Test Bandwidth	Low Channel (dB)	Middle Channel (dB)	High Channel (dB)	Limit(dB)
QPSK	1 RB	20M	4.78	4.41	4.70	≤ 13
	100 RB		5.45	5.39	5.54	≤ 13
16-QAM	1 RB	20M	5.54	5.51	5.57	≤ 13
	100 RB		6.32	6.29	6.49	≤ 13

LTE Band 41

Test Modulation		Test Bandwidth	Low Channel (dB)	Middle Channel (dB)	High Channel (dB)	Limit(dB)
QPSK	1 RB	20M	1.51	3.74	2.90	≤ 13
	100 RB		3.48	5.01	3.51	≤ 13
16-QAM	1 RB	20M	1.86	4.72	3.74	≤ 13
	100 RB		4.55	5.91	4.61	≤ 13

OCCUPIED BANDWIDTH**Environmental Conditions & Test Information**

Test Date:	2025-02-24 to 2025-04-30
Temperature:	24.3-25.1 °C
Relative Humidity:	50-51 %
ATM Pressure:	102.9-103.2 kPa
Test Engineer:	Neil Zhou

EUT operation mode: Transmitting

LTE: Please check the APPENDIX B_Occupied bandwidth for detail.

SPURIOUS EMISSIONS AT ANTENNA TERMINALS**Environmental Conditions & Test Information**

Test Date:	2025-02-25 to 2025-03-02
Temperature:	18.2-24.5 °C
Relative Humidity:	47-53 %
ATM Pressure:	100.9- 103.2 kPa
Test Engineer:	Neil Zhou

EUT operation mode: Transmitting

Test Result: Compliance

LTE: Please check the APPENDIX D_TX spurious for detail.

SPURIOUS RADIATED EMISSIONS**Environmental Conditions & Test Information**

Test Date:	2025-02-25 to 2025-03-02
Temperature:	18.2-24.5 °C
Relative Humidity:	47-53 %
ATM Pressure:	100.9- 103.2 kPa
Test Engineer:	Neil Zhou

Test mode: Transmitting (Pre-scan with 1RB of all the bandwidth, and worst case as below)

30 MHz ~ 10 GHz:

LTE Band 5:

Frequency (MHz)	Receiver Reading (dBμV)	Rx Antenna	Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
		Polar (H/V)	Submitted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 1.4MHz Bandwidth Low Channel								
153.08	53.85	H	-50.95	0.37	-6.01	-57.33	-13	44.33
153.08	50.73	V	-50.20	0.37	-6.01	-56.58	-13	43.58
1649.40	49.27	H	-64.07	0.84	8.44	-56.47	-13	43.47
1649.40	50.35	V	-62.99	0.84	8.44	-55.39	-13	42.39
2474.10	48.23	H	-63.37	0.89	10.04	-54.22	-13	41.22
2474.10	48.82	V	-62.78	0.89	10.04	-53.63	-13	40.63
16-QAM 1.4MHz Bandwidth Low Channel								
153.08	53.74	H	-51.06	0.37	-6.01	-57.44	-13	44.44
153.08	50.39	V	-50.54	0.37	-6.01	-56.92	-13	43.92
1649.40	48.75	H	-64.59	0.84	8.44	-56.99	-13	43.99
1649.40	49.74	V	-63.60	0.84	8.44	-56.00	-13	43.00
2474.10	47.75	H	-63.85	0.89	10.04	-54.70	-13	41.70
2474.10	48.58	V	-63.02	0.89	10.04	-53.87	-13	40.87
QPSK 1.4MHz Bandwidth Middle Channel								
153.08	54.18	H	-50.62	0.37	-6.01	-57.00	-13	44.00
153.08	51.47	V	-49.46	0.37	-6.01	-55.84	-13	42.84
1673.00	48.34	H	-64.83	0.84	8.48	-57.19	-13	44.19
1673.00	49.16	V	-64.01	0.84	8.48	-56.37	-13	43.37
2509.50	46.38	H	-64.76	0.89	10.09	-55.56	-13	42.56
2509.50	47.04	V	-64.10	0.89	10.09	-54.90	-13	41.90

16-QAM 1.4MHz Bandwidth Middle Channel								
153.08	53.53	H	-51.27	0.37	-6.01	-57.65	-13	44.65
153.08	50.58	V	-50.35	0.37	-6.01	-56.73	-13	43.73
1673.00	48.62	H	-64.55	0.84	8.48	-56.91	-13	43.91
1673.00	49.44	V	-63.73	0.84	8.48	-56.09	-13	43.09
2509.50	47.13	H	-64.01	0.89	10.09	-54.81	-13	41.81
2509.50	47.72	V	-63.42	0.89	10.09	-54.22	-13	41.22
QPSK 1.4MHz Bandwidth High Channel								
153.08	54.88	H	-49.92	0.37	-6.01	-56.30	-13	43.30
153.08	51.34	V	-49.59	0.37	-6.01	-55.97	-13	42.97
1696.60	47.72	H	-65.29	0.84	8.52	-57.61	-13	44.61
1696.60	49.17	V	-63.84	0.84	8.52	-56.16	-13	43.16
2544.90	47.63	H	-63.41	0.89	10.04	-54.26	-13	41.26
2544.90	46.39	V	-64.65	0.89	10.04	-55.50	-13	42.50
16-QAM 1.4MHz Bandwidth High Channel								
153.08	53.87	H	-50.93	0.37	-6.01	-57.31	-13	44.31
153.08	50.53	V	-50.40	0.37	-6.01	-56.78	-13	43.78
1696.60	48.88	H	-64.13	0.84	8.52	-56.45	-13	43.45
1696.60	49.45	H	-63.56	0.84	8.52	-55.88	-13	42.88
2544.90	47.99	H	-63.05	0.89	10.04	-53.90	-13	40.90
2544.90	47.34	V	-63.70	0.89	10.04	-54.55	-13	41.55

30 MHz ~ 27 GHz:**LTE Band 7:**

Frequency (MHz)	Receiver Reading (dBμV)	Rx Antenna	Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
		Polar (H/V)	Submitted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 5MHz Bandwidth Low Channel								
149.65	41.35	H	-63.42	0.37	6.15	-57.64	-25	32.64
149.65	36.51	V	-64.13	0.37	6.15	-58.35	-25	33.35
5005.00	43.36	H	-62.63	1.08	10.30	-53.41	-25	28.41
5005.00	42.74	V	-63.25	1.08	10.30	-54.03	-25	29.03
7507.50	61.42	H	-38.96	1.77	10.10	-30.63	-25	5.63
7507.50	62.65	V	-37.73	1.77	10.10	-29.40	-25	4.40
16-QAM 5MHz Bandwidth Low Channel								
149.65	41.62	H	-63.15	0.37	6.15	-57.37	-25	32.37
149.65	36.78	V	-63.86	0.37	6.15	-58.08	-25	33.08
5005.00	43.59	H	-62.40	1.08	10.30	-53.18	-25	28.18
5005.00	43.04	V	-62.95	1.08	10.30	-53.73	-25	28.73
7507.50	61.67	H	-38.71	1.77	10.10	-30.38	-25	5.38
7507.50	62.79	V	-37.59	1.77	10.10	-29.26	-25	4.26
QPSK 5MHz Bandwidth Middle Channel								
149.65	41.26	H	-63.51	0.37	6.15	-57.73	-25	32.73
149.65	36.80	V	-63.84	0.37	6.15	-58.06	-25	33.06
5070.00	42.93	H	-62.70	1.09	10.30	-53.49	-25	28.49
5070.00	42.58	V	-63.05	1.09	10.30	-53.84	-25	28.84
7605.00	61.91	H	-38.20	1.78	10.08	-29.90	-25	4.90
7605.00	63.15	V	-36.96	1.78	10.08	-28.66	-25	3.66
16-QAM 5MHz Bandwidth Middle Channel								
149.65	41.60	H	-63.17	0.37	6.15	-57.39	-25	32.39
149.65	36.78	V	-63.86	0.37	6.15	-58.08	-25	33.08
5070.00	43.25	H	-62.38	1.09	10.30	-53.17	-25	28.17
5070.00	42.46	V	-63.17	1.09	10.30	-53.96	-25	28.96
7605.00	62.04	H	-38.07	1.78	10.08	-29.77	-25	4.77
7605.00	62.99	V	-37.12	1.78	10.08	-28.82	-25	3.82

QPSK 5MHz Bandwidth High Channel								
149.65	41.14	H	-63.63	0.37	6.15	-57.85	-25	32.85
149.65	36.41	V	-64.23	0.37	6.15	-58.45	-25	33.45
5135.00	42.66	H	-62.61	1.10	10.30	-53.41	-25	28.41
5135.00	41.96	V	-63.31	1.10	10.30	-54.11	-25	29.11
7702.50	62.32	H	-37.52	1.80	10.06	-29.26	-25	4.26
7702.50	63.16	V	-36.68	1.80	10.06	-28.42	-25	3.42
16-QAM 5MHz Bandwidth High Channel								
149.65	41.49	H	-63.28	0.37	6.15	-57.50	-25	32.50
149.65	36.84	V	-63.80	0.37	6.15	-58.02	-25	33.02
5135.00	42.52	H	-62.75	1.10	10.30	-53.55	-25	28.55
5135.00	41.84	V	-63.43	1.10	10.30	-54.23	-25	29.23
7702.50	62.26	H	-37.58	1.80	10.06	-29.32	-25	4.32
7702.50	63.06	V	-36.78	1.80	10.06	-28.52	-25	3.52

LTE Band 38:

Frequency (MHz)	Receiver Reading (dBμV)	Rx Antenna	Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
		Polar (H/V)	Submitted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 5MHz Bandwidth Low Channel								
148.78	40.76	H	-64.06	0.37	6.15	-58.28	-25	33.28
148.78	37.09	V	-63.51	0.37	6.15	-57.73	-25	32.73
5145.00	44.69	H	-60.52	1.10	10.30	-51.32	-25	26.32
5145.00	43.61	V	-61.60	1.10	10.30	-52.40	-25	27.40
7717.50	51.35	H	-48.45	1.80	10.06	-40.19	-25	15.19
7717.50	51.98	V	-47.82	1.80	10.06	-39.56	-25	14.56
16-QAM 5MHz Bandwidth Low Channel								
148.78	40.65	H	-64.17	0.37	6.15	-58.39	-25	33.39
148.78	37.18	V	-63.42	0.37	6.15	-57.64	-25	32.64
5145.00	44.98	H	-60.23	1.10	10.30	-51.03	-25	26.03
5145.00	43.99	V	-61.22	1.10	10.30	-52.02	-25	27.02
7717.50	51.35	H	-48.45	1.80	10.06	-40.19	-25	15.19
7717.50	51.98	V	-47.82	1.80	10.06	-39.56	-25	14.56
QPSK 5MHz Bandwidth Middle Channel								
148.78	40.87	H	-63.95	0.37	6.15	-58.17	-25	33.17
148.78	37.22	V	-63.38	0.37	6.15	-57.60	-25	32.60
5190.00	44.52	H	-60.44	1.11	10.30	-51.25	-25	26.25
5190.00	43.43	V	-61.53	1.11	10.30	-52.34	-25	27.34
7785.00	51.40	H	-48.21	1.81	10.04	-39.98	-25	14.98
7785.00	52.24	V	-47.37	1.81	10.04	-39.14	-25	14.14
16-QAM 5MHz Bandwidth Middle Channel								
148.78	40.87	H	-63.95	0.37	6.15	-58.17	-25	33.17
148.78	37.50	V	-63.10	0.37	6.15	-57.32	-25	32.32
5190.00	44.90	H	-60.06	1.11	10.30	-50.87	-25	25.87
5190.00	44.68	V	-60.28	1.11	10.30	-51.09	-25	26.09
7785.00	51.35	H	-48.26	1.81	10.04	-40.03	-25	15.03
7785.00	52.11	V	-47.50	1.81	10.04	-39.27	-25	14.27

QPSK 5MHz Bandwidth High Channel								
148.78	42.51	H	-62.31	0.37	6.15	-56.53	-25	31.53
148.78	37.63	V	-62.97	0.37	6.15	-57.19	-25	32.19
5235.00	44.48	H	-60.23	1.12	10.30	-51.05	-25	26.05
5235.00	43.33	V	-61.38	1.12	10.30	-52.20	-25	27.20
7852.50	50.73	H	-48.69	1.83	10.03	-40.49	-25	15.49
7852.50	51.68	V	-47.74	1.83	10.03	-39.54	-25	14.54
16-QAM 5MHz Bandwidth High Channel								
148.78	42.27	H	-62.55	0.37	6.15	-56.77	-25	31.77
148.78	37.62	V	-62.98	0.37	6.15	-57.20	-25	32.20
5235.00	44.36	H	-60.35	1.12	10.30	-51.17	-25	26.17
5235.00	43.20	V	-61.51	1.12	10.30	-52.33	-25	27.33
7852.50	50.91	H	-48.51	1.83	10.03	-40.31	-25	15.31
7852.50	51.67	V	-47.75	1.83	10.03	-39.55	-25	14.55

30 MHz ~ 27 GHz:**LTE Band 41:**

Frequency (MHz)	Receiver Reading (dBμV)	Rx Antenna	Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
		Polar (H/V)	Submitted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 5MHz Bandwidth Low Channel								
147.00	42.22	H	-62.70	0.37	6.14	-56.93	-25	31.93
147.00	38.48	V	-62.04	0.37	6.14	-56.27	-25	31.27
4997.00	50.65	H	-55.38	1.08	10.30	-46.16	-25	21.16
4997.00	51.46	V	-54.57	1.08	10.30	-45.35	-25	20.35
7495.50	63.64	H	-36.78	1.76	10.10	-28.44	-25	3.44
7495.50	62.98	V	-37.44	1.76	10.10	-29.10	-25	4.10
16-QAM 5MHz Bandwidth Low Channel								
147.00	42.52	H	-62.40	0.37	6.14	-56.63	-25	31.63
147.00	38.83	V	-61.69	0.37	6.14	-55.92	-25	30.92
4997.00	50.46	H	-55.57	1.08	10.30	-46.35	-25	21.35
4997.00	51.60	V	-54.43	1.08	10.30	-45.21	-25	20.21
7495.50	63.88	H	-36.54	1.76	10.10	-28.20	-25	3.20
7495.50	63.49	V	-36.93	1.76	10.10	-28.59	-25	3.59
QPSK 5MHz Bandwidth Middle Channel								
147.00	42.43	H	-62.49	0.37	6.14	-56.72	-25	31.72
147.00	38.62	V	-61.90	0.37	6.14	-56.13	-25	31.13
5186.00	49.87	H	-55.12	1.10	10.30	-45.92	-25	20.92
5186.00	50.59	V	-54.40	1.10	10.30	-45.20	-25	20.20
7779.00	62.28	H	-37.35	1.81	10.04	-29.12	-25	4.12
7779.00	61.01	V	-38.62	1.81	10.04	-30.39	-25	5.39
16-QAM 5MHz Bandwidth Middle Channel								
147.00	41.92	H	-63.00	0.37	6.14	-57.23	-25	32.23
147.00	38.36	V	-62.16	0.37	6.14	-56.39	-25	31.39
5186.00	49.95	H	-55.04	1.10	10.30	-45.84	-25	20.84
5186.00	50.49	V	-54.50	1.10	10.30	-45.30	-25	20.30
7779.00	61.72	H	-37.91	1.81	10.04	-29.68	-25	4.68
7779.00	61.17	V	-38.46	1.81	10.04	-30.23	-25	5.23

QPSK 5MHz Bandwidth High Channel								
147.00	42.01	H	-62.91	0.37	6.14	-57.14	-25	32.14
147.00	38.51	V	-62.01	0.37	6.14	-56.24	-25	31.24
5375.00	48.69	H	-55.25	1.13	10.30	-46.08	-25	21.08
5375.00	49.05	V	-54.89	1.13	10.30	-45.72	-25	20.72
8062.50	61.68	H	-37.24	1.85	10.06	-29.03	-25	4.03
8062.50	60.43	V	-38.49	1.85	10.06	-30.28	-25	5.28
16-QAM 5MHz Bandwidth High Channel								
147.00	42.52	H	-62.40	0.37	6.14	-56.63	-25	31.63
147.00	38.78	V	-61.74	0.37	6.14	-55.97	-25	30.97
5375.00	49.05	H	-54.89	1.13	10.30	-45.72	-25	20.72
5375.00	49.72	V	-54.22	1.13	10.30	-45.05	-25	20.05
8062.50	60.97	H	-37.95	1.85	10.06	-29.74	-25	4.74
8062.50	60.08	V	-38.84	1.85	10.06	-30.63	-25	5.63

Note:

- 1) Absolute Level (dBm) = Submitted Level (dBm) - Cable loss (dB) + Antenna Gain (dBd/dBi)
- 2) Margin (dB) = Limit (dBm) - Absolute Level (dBm)

BAND EDGES**Environmental Conditions & Test Information**

Test Date:	2025-02-25 to 2025-04-30
Temperature:	17.6-25.1 °C
Relative Humidity:	47-53 %
ATM Pressure:	100.7- 103.3 kPa
Test Engineer:	Neil Zhou

EUT operation mode: Transmitting

Test Result: Compliant.

LTE: Please check the APPENDIX C_Band edge for detail.

FREQUENCY STABILITY**Environmental Conditions & Test Information**

Test Date:	2025-02-25 to 2025-04-30
Temperature:	17.6-25.1 °C
Relative Humidity:	47-53 %
ATM Pressure:	100.7- 103.3 kPa
Test Engineer:	Neil Zhou

*EUT operation mode: Transmitting***LTE Band 5:**

QPSK, 10.0 MHz, Middle channel				
Temperature (°C)	Voltage Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	12	-2.83	-0.00338	2.5
-20		-3.5	-0.00418	2.5
-10		-2.12	-0.00253	2.5
0		-1.5	-0.00179	2.5
10		-2.97	-0.00355	2.5
20		-2.53	-0.00302	2.5
30		-2.9	-0.00347	2.5
40		-1.66	-0.00198	2.5
50		-1.31	-0.00157	2.5
20	V min.= 9	-2.34	-0.00280	2.5
20	V max.= 36	-2.61	-0.00312	2.5

16-QAM, 10.0 MHz, Middle channel				
Temperature (°C)	Voltage Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	12	-1.73	-0.00207	2.5
-20		-2.98	-0.00356	2.5
-10		-1.56	-0.00186	2.5
0		-2.43	-0.00290	2.5
10		-2.58	-0.00308	2.5
20		-2.43	-0.00290	2.5
30		-2.31	-0.00276	2.5
40		-3.01	-0.00360	2.5
50		-2.10	-0.00251	2.5
20	V min.= 9	-2.14	-0.00256	2.5
20	V max.= 36	-2.54	-0.00304	2.5

LTE Band 7:

QPSK , 20 MHz, low channel& high channel					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	12	2500.086	2569.918	2500	2570
-20		2500.019	2569.989	2500	2570
-10		2500.023	2569.961	2500	2570
0		2500.034	2569.969	2500	2570
10		2500.053	2569.977	2500	2570
20		2500.023	2569.947	2500	2570
30		2500.065	2569.973	2500	2570
40		2500.082	2569.926	2500	2570
50		2500.068	2569.983	2500	2570
20	V min.= 9	2500.057	2569.939	2500	2570
20	V max.= 36	2500.077	2569.932	2500	2570

16-QAM, 20 MHz, low channel& high channel					
Temperature (°C)	Power Supplied (V _{DC})	F _L (MHz)	F _H (MHz)	F _L Limit (MHz)	F _H Limit (MHz)
-30	12	2500.076	2569.904	2500	2570
-20		2500.064	2569.998	2500	2570
-10		2500.047	2569.968	2500	2570
0		2500.036	2569.973	2500	2570
10		2500.026	2569.936	2500	2570
20		2500.027	2569.970	2500	2570
30		2500.067	2569.923	2500	2570
40		2500.013	2569.933	2500	2570
50		2500.067	2569.926	2500	2570
20	V min.= 9	2500.039	2569.944	2500	2570
20	V max.= 36	2500.078	2569.914	2500	2570

LTE Band 38:

QPSK, 20 MHz, low channel& high channel					
Temperature (°C)	Power Supplied (V_{DC})	F_L (MHz)	F_H (MHz)	F_L Limit (MHz)	F_H Limit (MHz)
-30	12	2570.076	2619.980	2570	2620
-20		2570.049	2619.980	2570	2620
-10		2570.072	2619.990	2570	2620
0		2570.067	2619.980	2570	2620
10		2570.038	2619.928	2570	2620
20		2570.037	2619.987	2570	2620
30		2570.045	2619.977	2570	2620
40		2570.038	2619.952	2570	2620
50		2570.051	2619.941	2570	2620
20	V min.= 9	2570.040	2619.922	2570	2620
20	V max.= 36	2570.022	2619.950	2570	2620

16-QAM, 20 MHz, low channel& high channel					
Temperature (°C)	Power Supplied (V_{DC})	F_L (MHz)	F_H (MHz)	F_L Limit (MHz)	F_H Limit (MHz)
-30	12	2570.054	2619.967	2570	2620
-20		2570.030	2619.932	2570	2620
-10		2570.072	2619.912	2570	2620
0		2570.042	2619.970	2570	2620
10		2570.058	2619.949	2570	2620
20		2570.041	2619.960	2570	2620
30		2570.045	2619.945	2570	2620
40		2570.057	2619.930	2570	2620
50		2570.036	2619.915	2570	2620
20	V min.= 9	2570.055	2619.938	2570	2620
20	V max.= 36	2570.069	2619.973	2570	2620

LTE Band 41:

QPSK, 20 MHz, low channel& high channel					
Temperature (°C)	Power Supplied (V_{DC})	F_L (MHz)	F_H (MHz)	F_L Limit (MHz)	F_H Limit (MHz)
-30	12	2496.013	2689.972	2496	2690
-20		2496.058	2689.928	2496	2690
-10		2496.043	2689.923	2496	2690
0		2496.072	2689.968	2496	2690
10		2496.072	2689.916	2496	2690
20		2496.014	2689.927	2496	2690
30		2496.067	2689.963	2496	2690
40		2496.034	2689.929	2496	2690
50		2496.045	2689.981	2496	2690
20	V min.= 9	2496.091	2689.952	2496	2690
20	V max.= 36	2496.031	2689.924	2496	2690

16-QAM, 20 MHz, low channel& high channel					
Temperature (°C)	Power Supplied (V_{DC})	F_L (MHz)	F_H (MHz)	F_L Limit (MHz)	F_H Limit (MHz)
-30	12	2496.022	2689.921	2496	2690
-20		2496.035	2689.984	2496	2690
-10		2496.062	2689.947	2496	2690
0		2496.087	2689.949	2496	2690
10		2496.082	2689.938	2496	2690
20		2496.077	2689.977	2496	2690
30		2496.024	2689.959	2496	2690
40		2496.072	2689.957	2496	2690
50		2496.029	2689.958	2496	2690
20	V min.= 9	2496.074	2689.951	2496	2690
20	V max.= 36	2496.023	2689.983	2496	2690

Declarations

1. The laboratory is not responsible for the authenticity of any information provided by the applicant. Information from the applicant that may affect test results is marked with “★”.
2. The test data was only valid for the test sample(s).
3. This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.
4. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.
5. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor $k=2$ with the 95.45% confidence interval.

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