TEST REPORT

Applicant/Manufacturer:	Shenzhen Huafurui Technology Co., Ltd.
Address:	Unit 601-03, 6/F, Block A, Building 1, Ganfeng Technology Building, No. 993 Jiaxian Road, Xiangjiaotang Community, Bantian Street, Longgang District, Shenzhen, P.R. China
Report Number :	2601R49433E-RF-22I

Test Standard (s)

ETSI EN 303 413 V1.2.1 (2021-04)

Sample Description

Product Type:	Smartphone
Model No.:	KINGKONG ES 5
Multiple Model(s) No.:	N/A
Trade Mark:	CUBOT
Date Received:	2026-03-08
Issue Date:	2026-05-29

Test Result:	Pass▲

▲In the configuration tested, the EUT complied with the standards above.

Prepared and Checked By:

GaLa Liu
RF Engineer

Approved By:

Jim Cheng
RF Supervisor

Note: The information marked# is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report. Customer model name, addresses, names, trademarks etc. are included.

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	2601R49433E-RF-22I	Original Report	2026-05-29

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Frequency Range	GPS L1 C/A, BDS B1I, Galileo E1: 1559-1610 MHz
Modulation Technique	GPS L1C/A: BPSK BDS B1I: BPSK Galileo E1: CBOC
Nominal Power Supply	DC 5/9V from adapter or DC 3.91V from Battery
Sample serial number	3IUC-9 (Assigned by BACL, Shenzhen)
Sample/EUT Status	Good condition
Adapter Information	Model: TD-203G200170VF01 Input: AC 100-240V, 50/60Hz, 0.6A Output: DC 5V/3A, 9V/3A, 12V/2.5A, 15V/2A, 20V/1.5A PPS: 3.3V-16V/2A, 3.3V-11V/3A

Objective

This test report is in accordance with ETSI EN 303 413 V1.2.1 (2021-04), Satellite Earth Stations and Systems (SES); Global Navigation Satellite System (GNSS) receivers; Radio equipment operating in the 1 164 MHz to 1 300 MHz and 1 559 MHz to 1 610 MHz frequency bands; Harmonised Standard for access to radio spectrum.

The objective is to determine the compliance of EUT with ETSI EN 303 413 V1.2.1 (2021-04).

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 5F(B-West) , 6F, 7F, the 3rd Phase of Wan Li Industrial Building D, Shihua Rd, FuTian Free Trade Zone, Shenzhen, China.

Each test item follows test standards and with no deviation.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in a typical fashion (as normally used by a typical user).

EUT Exercise Software

No exercise software.

Special Accessories

No special accessory.

Equipment Modifications

No modification was made to the EUT.

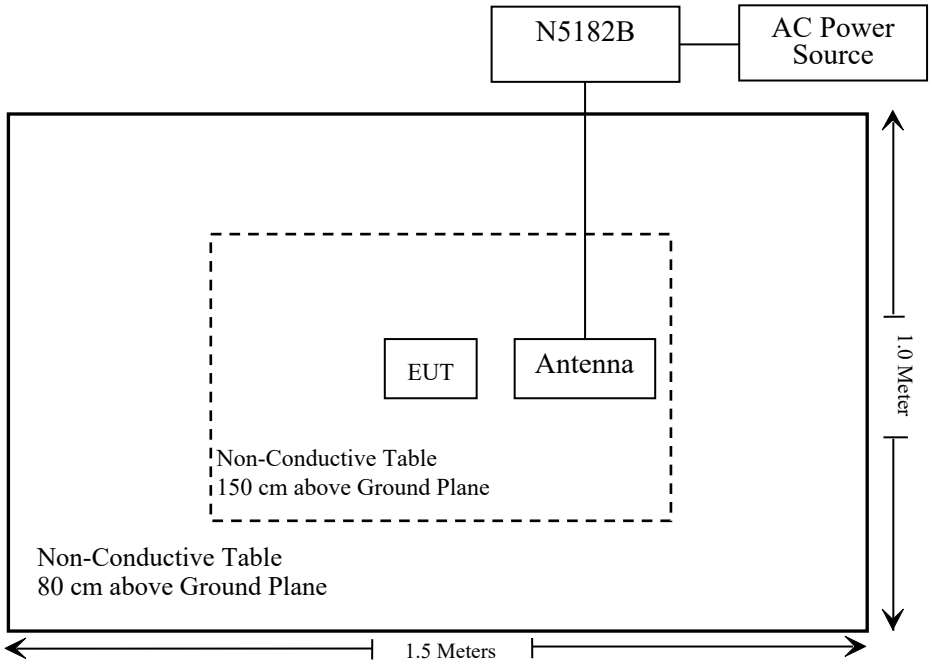
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
KEYSIGHT	Vector signal source	N5182B	MY53051503

External I/O Cable

Cable Description	Length (m)	From Port	To
/	/	/	/

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

ETSI EN 303 413 V1.2.1 (2021-04)	Description of Test	Test Result
§ 4.2.1	Receiver blocking	Compliant
§ 4.2.2	Receiver spurious emissions test	Compliant

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test & Receiver Blocking Test					
Rohde & Schwarz	EMI Test Receiver	ESR3	102455	2025/09/01	2026/08/31
Sonoma instrument	Pre-amplifier	310 N	186238	2025/09/08	2026/09/07
Sunol Sciences	Broadband Antenna	JB1	A040904-1	2023/07/20	2026/07/19
Unknown	Chamber A Cable	Cable A1	Cable A1	2025/09/08	2026/09/07
Unknown	Chamber A Cable	Cable A2	Cable A2	2025/09/08	2026/09/07
TDK	Chamber	Chamber A	2#	2023/07/12	2026/07/11
COM-POWER	Dipole Antenna	3121C	9209-860	NCR	NCR
Rohde & Schwarz	Spectrum Analyzer	FSV40	101605	2025/09/01	2026/08/31
A.H.System	Preamplifier	PAM-0118P	489	2025/09/08	2026/09/07
Schwarzbeck	Horn Antenna	BBHA9120D (1201)	1143	2023/07/26	2026/07/25
The Electro-Mechanics Co.	Horn Antenna	3115	9107-3694	2024/06/06	2027/06/05
Unknown	Chamber B Cable	Cable B1	Cable B1	2025/09/08	2026/09/07
Unknown	Chamber B Cable	Cable B2	Cable B2	2025/09/08	2026/09/07
Unknown	Chamber B Cable	Cable B3	Cable B3	2025/09/08	2026/09/07
Agilent	Signal Generator	N5183A	MY50140588	2025/09/18	2026/09/17
Keysight	MXG Vector Signal Generator	N5182B	MY53051503	2025/09/18	2026/09/17
JD	Filter Switch Unit	DT7220FSU	DS79906	2025/08/12	2026/08/11
JD	Multiplex Switch Test Control Set	DT7220SCU	DS79903	2025/08/12	2026/08/11
TDK	Chamber	Chamber B	1#	2023/07/14	2026/07/13

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

ETSI EN 303 413 V1.2.1 (2021-04) §4.2.1 - RECEIVER BLOCKING

Applicable Standard

Receiver blocking is a measure of the capability of the GUE to receive a wanted signal without exceeding a given degradation due to the presence of an unwanted input signal operating in accordance with the allocation table of the ITU Radio Regulations [i.13] in frequency bands adjacent or near-adjacent to the relevant RNSS band.

Test Procedure

For GUE utilizing the 1 559 MHz to 1 610 MHz RNSS band:

1) Configure the GNSS signal generator to simulate the GNSS constellations and GNSS signals from table 4-1 declared as supported by the GUE, with power levels and other details as specified in clause B.2.

2) With the blocking signal switched off, the EUT shall be given sufficient time to acquire all simulated satellites from the declared GNSS constellations.

3) Record the C/N0 value(s) reported by the EUT under the condition in step 2). Sufficient filtering shall be used to obtain stable value(s). C/N0 may be averaged over time and across all the simulated satellites for a particular GNSS constellation and GNSS signal. However, C/N0 shall not be averaged across different satellite signals in the same GNSS constellation or across different GNSS constellations. For a multi-GNSS constellation and/or multi-GNSS signal EUT, there shall be a separate C/N0 value recorded for each GNSS constellation and each GNSS signal supported.

4) The blocking signal generator shall be configured to generate the signal defined in table 4-4, at the first test point centre frequency and signal power level as specified in table 4-2.

5) The blocking signal shall be switched on, and the EUT's C/N0 value(s) recorded as in step 3). The difference(s) between this value(s) and the value(s) recorded in step 3) is the C/N0 degradation caused by the blocking signal for this test point.

6) Test point Pass/Fail Criteria: If the C/N0 degradation from step 5) does not exceed the value in equation (4-1), then this test point is set to "pass". If the C/N0 degradation exceeds the value in equation (4-1), then this test point is set to "fail". For a multi-GNSS constellation and/or multi-GNSS signal EUT, there shall be a separate pass/fail determination for each GNSS constellation and for each GNSS signal supported. If the C/N0 degradation exceeds the value in equation (4-1) for any supported GNSS constellation or supported GNSS signal, then this test point is set to "fail".

7) Step 1) through step 6) shall be repeated for all test point centre frequencies (and associated signal power level) specified in table 4-2.

For GUE utilizing the 1 164 MHz to 1 300 MHz RNSS bands:

For a GUE also utilizing the RNSS bands in the 1 164 MHz to 1 300 MHz range, the test method in clause 5.4.3 (step 1) through step 7), inclusive), shall be repeated using the adjacent frequency test point centre frequencies and associated signal power levels specified in table 4-3.

If the EUT passes the C/N0 degradation tests as defined in both clause 5.4.3 and clause 5.4.4, the EUT shall be deemed to "pass". If the C/N0 degradation test fails tests as defined in either or both of clause 5.4.3 or clause 5.4.4, the EUT shall be deemed to "fail".

Test Data

Environmental Conditions

Temperature:	25.8 ℃
Relative Humidity:	48 %
ATM Pressure:	100.6 kPa

The testing was performed by Zenos Qiao on 2026-03-27.

EUT operation mode: Receiving

Supported GNSS	Frequency band (MHz)	Test point centre frequency (MHz)	Blocking signal power level (dBm)	Measured C/N_0 (dB-Hz)			Limit (dB)	Result
				Without interfering signal	With interfering signal	Decrease of C/N_0		
GPS L1 C/A	1518-1525	1523	-65	37.5	36.7	0.8	1	Pass
	1525-1549	1548	-95	37.5	36.9	0.6	1	Pass
	1549-1559	1556	-105	37.5	36.8	0.7	1	Pass
	1610-1626	1618	-105	37.4	36.5	0.9	1	Pass
	1626-1640	1629	-85	37.3	36.9	0.4	1	Pass
BDS B1I	1518-1525	1523	-65	37.4	36.5	0.9	1	Pass
	1525-1549	1548	-95	37.3	36.9	0.4	1	Pass
	1549-1559	1556	-105	37.1	36.7	0.4	1	Pass
	1610-1626	1618	-105	37.2	36.8	0.4	1	Pass
	1626-1640	1629	-85	37.1	36.6	0.5	1	Pass
Galileo E1	1518-1525	1523	-65	37.6	36.9	0.7	1	Pass
	1525-1549	1548	-95	37.5	36.7	0.8	1	Pass
	1549-1559	1556	-105	37.3	36.8	0.5	1	Pass
	1610-1626	1618	-105	37.6	36.9	0.7	1	Pass
	1626-1640	1629	-85	37.2	36.4	0.8	1	Pass

Note: Engineering mode was used to test the C/N_0

Test Result: Pass

ETSI EN 303 413 V1.2.1 (2021-04) §4.2.2 - RECEIVER SPURIOUS EMISSIONS TEST

Test conditions

See clause 5.1 for the environmental test conditions. These measurements shall only be performed at the normal test conditions stated in clause 5.1.

Testing shall be performed when the EUT is in receive-only operating mode and the manufacturer shall ensure that the receiver remains active for the duration of the test. For this reason, GNSS signals may be required for this test. The manufacturer shall indicate whether GNSS signals were present or not in the test report.

The level of spurious emissions shall be measured as, either:

a) their power in a specified load (conducted spurious emissions) and their effective radiated power when radiated by the cabinet or structure of the EUT (cabinet radiation); or

b) the effective radiated power when radiated by cabinet and antenna in case of an EUT with integral antenna and with no temporary antenna connector.

Test Procedure

Pre-scan:

The procedure in step 1) to step 4) below shall be used to identify potential unwanted emissions of the EUT:

1) The sensitivity of the spectrum analyzer should be such that the noise floor is at least 12 dB below the limits given in table 4-5.

2) The emissions over the range 30 MHz to 1 000 MHz shall be identified.

Spectrum analyzer settings:

. Resolution bandwidth: 100 kHz

. Video bandwidth: 300 kHz

. Filter type: 3 dB (Gaussian)

. Detector mode: Peak

. Trace Mode: Max Hold
. Sweep Points: ≥19 400 (for spectrum analyzers not supporting this high number of sweep points, the frequency band may be segmented)

. Sweep time: Auto

Wait for the trace to stabilize. Any emissions identified during the sweeps above and that fall within the 6 dB range below the applicable limit or above, shall be individually measured using the procedure in clause 5.5.2.1.3 and compared to the limits given in table 4-5.

3) The emissions over the range 1 GHz to 8,3 GHz shall be identified.

Spectrum analyzer settings:

. Resolution bandwidth: 1 MHz

. Video bandwidth: 3 MHz

. Filter type: 3 dB (Gaussian)

. Detector mode: Peak

. Trace Mode: Max Hold

. Sweep Points: ≥14 600 (for spectrum analyzers not supporting this high number of sweep points, the frequency band may be segmented)

. Sweep time: Auto

Wait for the trace to stabilize. Any emissions identified during the sweeps above that fall within the 6 dB range below the applicable limit or above, shall be individually measured using the procedure in clause 5.5.2.1.3 and compared to the limits given in table 4-5.

4) In case of conducted measurements on smart antenna systems (equipment with multiple receive chains), step 2) and step 3) shall be repeated for each of the active receive chains, A_{ch}.

The limits used to identify emissions during this pre-scan shall be reduced by $10\times \log_{10}(A_{ch})$.

Measurement of the emissions identified during the pre-scan:

The procedure in step 1) to step 4) below shall be used to accurately measure the individual unwanted emissions identified during the pre-scan measurements above. This method assumes the spectrum analyzer has a Time Domain Power function.

1) The level of the emissions shall be measured using the following spectrum analyzer settings:
- Measurement Mode: Time Domain Power.

- Centre Frequency: Frequency of the emission identified during the pre-scan.

- Resolution Bandwidth: 100 kHz (< 1 GHz) / 1 MHz (> 1 GHz).

- Video Bandwidth: 300 kHz (< 1 GHz) / 3 MHz (> 1 GHz).

- Frequency Span: Zero Span.

- Sweep mode: Single Sweep.

- Sweep time: 30 ms.

- Sweep points: ⩾ 30 000.

- Trigger: Video (for burst signals) or Manual (for continuous signals).

- Detector: RMS.

2) Set a window where the start and stop indicators match the start and end of the burst with the highest level and record the RMS value of the power measured within this window. If the spurious emission to be measured is a continuous transmission, the measurement window shall be set to the start and stop times of the sweep.

3) In case of conducted measurements on smart antenna systems (equipment with multiple receive chains), step 2) shall be repeated for each of the active receive chains, Ach. Sum the measured power (within the observed window) for each of the active receive chains.

4) The value defined in step 3) shall be compared to the limits defined in table 4-5.

Radiated measurement:

The test site as described in ETSI EN 300 328 [1], annex B and the applicable measurement procedures as described in ETSI EN 300 328 [1], annex C shall be used.

The test procedure is further described in clause 5.5.2.1.

Test Data

Environmental Conditions

Temperature:	24.8~25.8 ℃
Relative Humidity:	48~52 %
ATM Pressure:	100.3~100.6 kPa

The testing was performed by Anson Su on 2026-03-31 for below 1GHz and Zenos Qiao on 2026-03-27 for above 1GHz..

Test Mode: Receiving (Worst case: GPS L1 C/A)

Frequency (MHz)	Receiver Reading (dBµV)	Polar (H/V)	Substituted			Absolute Level (dBm)	EN 303 413	
			Substituted Level (dBm)	Cable (dB)	Antenna Gain (dBd/dBi)		Limit (dBm)	Margin (dB)
75.54	42.17	H	-72.22	0.75	0	-71.47	-57.00	14.47
152.58	31.76	V	-72.3	0.84	0	-71.46	-57.00	14.46
1184.80	61.12	H	-53.08	1.10	6.70	-58.68	-47.00	11.68
1351.42	62.28	V	-52.72	0.90	7.80	-59.62	-47.00	12.62

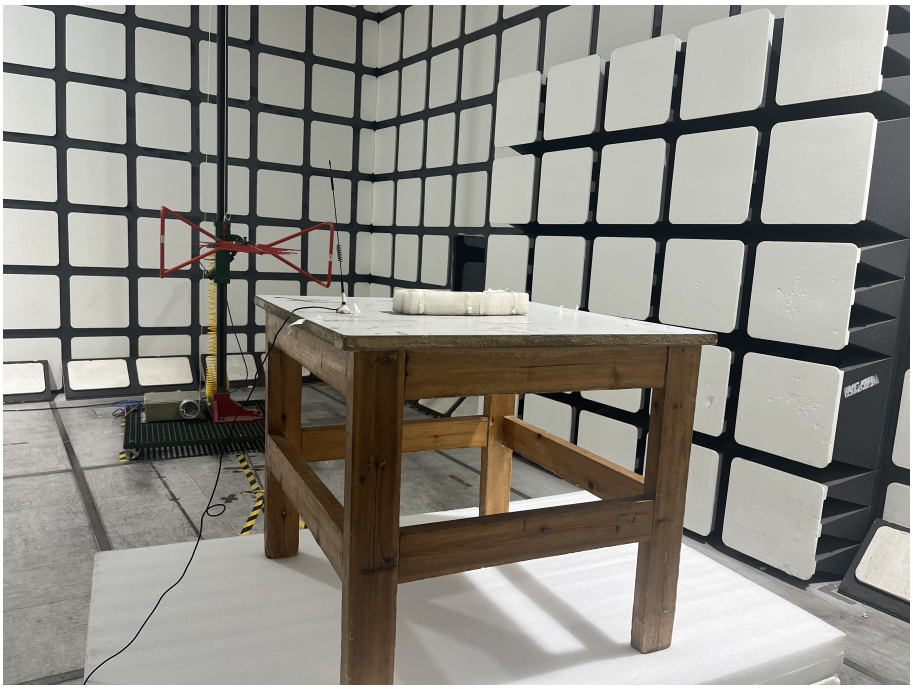
Note 1: The unit of antenna gain is dBd for frequency below 1GHz and is dBi for frequency above 1GHz.
Note 2:
Absolute Level = Substituted Level - Cable loss + Antenna Gain
Margin = Limit- Absolute Level

EXHIBIT A - EUT PHOTOGRAPHS

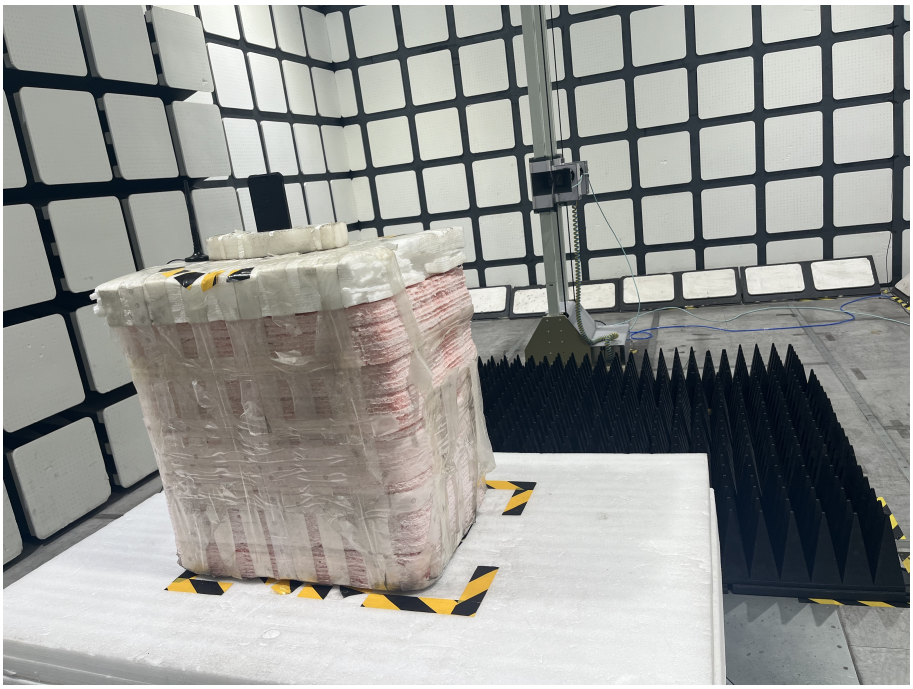
Please refer to the report number is 2601R49433E-EUT.

EXHIBIT B - TEST SETUP PHOTOGRAPHS

Radiated Spurious Emissions Test View (Below 1GHz)



Radiated Spurious Emissions Test View (Above 1GHz)



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