

SPECTRUM REPORT

(GSM)

Applicant: Shenzhen Huafurui Technology Co., Ltd.

Address of Applicant: Unit 1401 & 1402, 14/F, Jinqi zhigu mansion (No. 4 building of Chongwen Garden), Crossing of the Liuxian street and Tangling road, Taoyuan street, Nanshan district, Shenzhen, P.R. China

Equipment Under Test (EUT)

Product Name: Smartphone

Model No.: K30

Trade mark: HAFURY

Applicable standards: ETSI EN 301 511 V12.5.1 (2017-03)

Date of sample receipt: 09 Apr., 2020

Date of Test: 09 Apr., to 22 Apr., 2020

Date of report issue: 16 Jun., 2020

Test Result: PASS*

* In the configuration tested, the EUT complied with the standards specified above.

The CE mark as shown below can be used, under the responsibility of the manufacturer, after completion of an EC Declaration of Conformity and compliance with all relevant EC Directives. The protection requirements with respect to electromagnetic compatibility contained in Directive 2014/53/EU are considered.



Bruce Zhang
Laboratory Manager



This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the CCIS product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

2 Version

Version No.	Date	Description
00	16 Jun., 2020	Original

Remark: This report was revised by CCISE200402405 report, which was released and tested by Shenzhen Zhongjian Nanfang Testing Co., Ltd. The differences between them as below: Update model, product name, trademark and software version. So no needs to be retested.

Tested by:

YT Yang
Test Engineer

Date:

16 Jun., 2020

Reviewed by:

Winner Zhang
Project Engineer

Date:

16 Jun., 2020

3 Contents

	Page
1 COVER PAGE.....	1
2 VERSION	2
3 CONTENTS	3
4 TEST SUMMARY	4
5 GENERAL INFORMATION	6
5.1 CLIENT INFORMATION	6
5.2 GENERAL DESCRIPTION OF E.U.T.....	6
5.3 TEST ENVIRONMENT AND MODE	7
5.4 DESCRIPTION OF SUPPORT UNITS	7
5.5 MEASUREMENT UNCERTAINTY.....	7
5.6 LABORATORY FACILITY	7
5.7 LABORATORY LOCATION	7
5.8 TEST INSTRUMENTS LIST.....	8
6 RADIO REQUIREMENTS SPECIFICATION IN ETSI EN 301 511.....	9
6.1 JUSTIFICATION	9
6.2 TEST CONFIGURATION OF EUT	9
6.3 TEST SETUP BLOCK	10
6.4 TEST RESULTS.....	11
6.4.1 TEST RESULT SUMMARY	11
6.4.2 RADIATED SPURIOUS EMISSIONS - MS ALLOCATED A CHANNEL.....	13
6.4.3 RADIATED SPURIOUS EMISSIONS - MS IN IDLE MODE.....	15
6.4.4 RECEIVER BLOCKING AND SPURIOUS RESPONSES – SPEECH CHANNELS	17
6.4.5 BLOCKING AND SPURIOUS RESPONSE IN EGPRS CONFIGURATION.....	17
7 TEST SETUP PHOTO.....	18
8 EUT CONSTRUCTIONAL DETAILS.....	19

4 Test Summary

Clauses	Description of Test	Result
Clause 4.2.1	Transmitter – Frequency error and phase error	PASS
Clause 4.2.2	Transmitter – Frequency error under multi path and interference conditions	PASS
Clause 4.2.3	Transmitter – Frequency error and Phase Error in HSCSD Multi slot Configuration	N/A
Clause 4.2.4	Frequency error and phase error in GPRS multi slot configuration	PASS
Clause 4.2.5	Transmitter output power and burst timing	PASS
Clause 4.2.6	Transmitter – Output RF spectrum	PASS
Clause 4.2.7	Transmitter output power and burst timing in HSCSD multi slot configuration	N/A
Clause 4.2.8	Transmitter – Output RF spectrum in HSCSD multi slot configuration	N/A
Clause 4.2.9	Transmitter – Output RF spectrum for MS supporting the R-GSM or ER-GSM frequency band	N/A
Clause 4.2.10	Transmitter output power in GPRS multi slot configuration	PASS
Clause 4.2.11	Output RF spectrum in GPRS multi slot configuration	PASS
Clause 4.2.12	Conducted spurious emissions – MS allocated a channel	PASS
Clause 4.2.13	Conducted spurious emission – MS in idle mode	PASS
Clause 4.2.14	Conducted spurious emissions for MS supporting the R-GSM or ER-GSM frequency band – MS allocated a channel	N/A
Clause 4.2.15	Conducted spurious emissions for MS supporting the R-GSM or ER-GSM frequency band – MS in idle mode	N/A
Clause 4.2.16	Radiated spurious emissions – MS allocated a channel	PASS
Clause 4.2.17	Radiated spurious emissions – MS in idle mode	PASS
Clause 4.2.18	Radiated spurious emissions for MS supporting the R-GSM or ER-GSM frequency band – MS allocated a channel	N/A
Clause 4.2.19	Radiated spurious emissions for MS supporting the R-GSM or ER-GSM frequency band – MS in idle mode	N/A
Clause 4.2.20	Receiver blocking and spurious responses – speech channels	PASS
Clause 4.2.21	Receiver blocking and spurious response – speech channels for MS supporting the R-GSM or ER-GSM frequency band	N/A
Clause 4.2.22	Improved Receiver Blocking and spurious response - speech channels for 8W MS supporting the R-GSM or ER-GSM frequency band	N/A
Clause 4.2.23	Improved Receiver Blocking and spurious response – speech channels for 2W MS supporting the R-GSM or ER-GSM frequency band	N/A
Clause 4.2.24	Improved Receiver Blocking and spurious response – control channels for 8W MS supporting the R-GSM or ER-GSM frequency band not supporting speech	N/A
Clause 4.2.25	Improved Receiver Blocking and spurious response – control channels for 2W MS supporting the R-GSM or ER-GSM frequency band not supporting speech	N/A
Clause 4.2.26	Frequency error and Modulation accuracy in EGPRS Configuration	PASS
Clause 4.2.27	Frequency error under multipath and interference conditions in EGPRS Configuration	PASS
Clause 4.2.28	EGPRS Transmitter output power	PASS

Clause 4.2.29	Output RF spectrum in EGPRS configuration	PASS
Clause 4.2.30	Blocking and spurious response in EGPRS configuration	PASS
Clause 4.2.31	Blocking and spurious response in DLMT configuration	N/A
Clause 4.2.32	Intermodulation rejection - speech channels	PASS
Clause 4.2.33	Intermodulation rejection - control channels	N/A
Clause 4.2.34	Intermodulation rejection - EGPRS	PASS
Clause 4.2.35	AM suppression - speech channels	PASS
Clause 4.2.36	AM suppression - control channels	N/A
Clause 4.2.37	AM suppression - packet channels	N/A
Clause 4.2.38	Adjacent channel rejection - speech channels (TCH/FS)	PASS
Clause 4.2.39	Adjacent channel rejection - control channels	N/A
Clause 4.2.40	Adjacent channel rejection - EGPRS	PASS
Clause 4.2.41	Adjacent channel rejection in DLMT configuration	N/A
Clause 4.2.42	Reference sensitivity - TCH/FS	PASS
Clause 4.2.43	Reference sensitivity - FACCH/F	PASS
Clause 4.2.44	Minimum Input level for Reference Performance - GPRS	PASS
Clause 4.2.45	Minimum Input level for Reference Performance - EGPRS	PASS
Clause 4.2.46	Reference sensitivity - TCH/FS for MS supporting the R-GSM or ER-GSM band	N/A
<i>Remark:</i> <i>Pass: Meet the requirement.</i> <i>N/A: Not Applicable.</i>		

5 General Information

5.1 Client Information

Applicant:	Shenzhen Huafurui Technology Co., Ltd.
Address:	Unit 1401 & 1402, 14/F, Jinqi zhigu mansion (No. 4 building of Chongwen Garden), Crossing of the Liuxian street and Tangling road, Taoyuan street, Nanshan district, Shenzhen, P.R. China
Manufacturer/ Factory:	Shenzhen Huafurui Technology Co., Ltd.
Address:	Unit 1401 & 1402, 14/F, Jinqi zhigu mansion (No. 4 building of Chongwen Garden), Crossing of the Liuxian street and Tangling road, Taoyuan street, Nanshan district, Shenzhen, P.R. China

5.2 General Description of E.U.T.

Product Name:	Smartphone	
Model No.:	K30	
Hardware version:	TE626_MAIN_PCB_V1.0	
Software version:	HAFURY_K30_A011CH_V01_20200615	
GPRS class	12	
EGPRS class	12	
Modulation technology	<input checked="" type="checkbox"/> GSM	<input checked="" type="checkbox"/> GMSK
	<input checked="" type="checkbox"/> GPRS:	<input checked="" type="checkbox"/> GMSK (CS1 ~ CS4) <input checked="" type="checkbox"/> Uplink <input checked="" type="checkbox"/> Downlink
	<input checked="" type="checkbox"/> EGPRS	<input type="checkbox"/> GMSK (MCS1 ~ MCS5) <input type="checkbox"/> Uplink <input type="checkbox"/> Downlink
		<input checked="" type="checkbox"/> 8PSK (MCS6 ~ MCS9) <input checked="" type="checkbox"/> Uplink <input checked="" type="checkbox"/> Downlink
Operating frequency bands	E-GSM900	Tx: 880---915MHz
		Rx: 925---960 MHz
	DCS1800	Tx: 1710---1785 MHz
		Rx: 1805---1880 MHz
Antenna Type:	Internal Antenna	
Antenna Gain:	E-GSM900: -0.80 dBi (declare by Applicant) DCS1800: -0.82 dBi (declare by Applicant)	
Power supply:	Rechargeable Li-ion polymer Battery DC3.85V/4200mAh	
AC adapter:	Model No.: HJ-0501500W2-EU Input: AC100-240V, 50/60Hz 0.3A Output: DC 5.0V, 1.5A	

5.3 Test environment and mode

Operating Environment:	
Temperature:	Normal: 15°C ~ 35°C, Extreme: -20°C ~ +55°C
Humidity:	20 % ~ 75 % RH
Atmospheric Pressure:	1008 mbar
Voltage:	Nominal: 3.85Vdc, Extreme: Low 3.5Vdc, High 4.40Vdc
Test mode:	
GSM mode	Keep the EUT communication with simulated station in GSM Voice mode
GPRS mode	Keep the EUT communication with simulated station in GPRS mode
EGPRS mode	Keep the EUT communication with simulated station in EGPRS mode
Note: 1. All the test environments and test modes required following ETSI TS 151 010-1 and 3GPP TS 05.05. 2. During the test, pre-scan SIM 1 and SIM 2, found SIM 1 was worse case. The report only reflects the worst case.	

5.4 Description of Support Units

Test Equipment	Manufacturer	Model No.	Serial No.
Simulated Station	Anritsu	MT8820C	6201026545
Simulated Station	Rohde & Schwarz	CMU200	122477

5.5 Measurement Uncertainty

Parameter	Expanded Uncertainty (Confidence of 95%)
Radio Frequency	$\pm 1.2 \times 10^{-9}$
RF Power, Conducted	± 0.64 dB
Spurious emission, Conducted	± 1.18 dB
Temperature	± 0.3 °C
Voltage	± 0.1 %
Humidity	± 2 %
Time	± 10 %
Radiated Emission (30MHz ~ 1000MHz)	± 4.32 dB
Radiated Emission (1GHz ~ 18GHz)	± 5.38 dB

5.6 Laboratory Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **FCC - Designation No.: CN1211**

Shenzhen Zhongjian Nanfang Testing Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551.

- **ISED – CAB identifier.: CN0021**

The 3m Semi-anechoic chamber of Shenzhen Zhongjian Nanfang Testing Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

- **A2LA - Registration No.: 4346.01**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: <https://portal.a2la.org/scopepdf/4346-01.pdf>

5.7 Laboratory Location

Shenzhen ZhongjianNanfang Testing Co.,Ltd.

Address: No.110~116, Building B, Jinyuan Business Building, Xixiang Road, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755-23118282, Fax:+86-755-23116366

Email: info@ccis-cb.com, Website: <http://www.ccis-cb.com>

5.8 Test Instruments list

Radiated Emission:					
Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
3m SAC	SAEMC	9m*6m*6m	966	07-22-2017	07-21-2020
BiConiLog Antenna	SCHWARZBECK	VULB9163	497	03-18-2020	03-17-2021
Biconical Antenna	SCHWARZBECK	VUBA9117	359	06-22-2017	06-21-2020
Horn Antenna	SCHWARZBECK	BBHA9120D	916	03-18-2020	03-17-2021
Horn Antenna	SCHWARZBECK	BBHA9120D	1805	06-22-2017	06-21-2020
EMI Test Software	AUDIX	E3	Version: 6.110919b		
Pre-amplifier	HP	8447D	2944A09358	03-18-2020	03-17-2021
Pre-amplifier	CD	PAP-1G18	11804	03-18-2020	03-17-2021
Spectrum analyzer	Rohde & Schwarz	FSP30	101454	03-18-2020	03-17-2021
EMI Test Receiver	Rohde & Schwarz	ESRP7	101070	03-18-2020	03-17-2021
Signal Generator	Rohde & Schwarz	SMX	835454/016	03-18-2020	03-17-2021
Signal Generator	Rohde & Schwarz	SMR20	1008100050	03-18-2020	03-17-2021
Cable	ZDECL	Z108-NJ-NJ-81	1608458	03-18-2020	03-17-2021
Cable	MICRO-COAX	MFR64639	K10742-5	03-18-2020	03-17-2021
Cable	SUHNER	SUCOFLEX100	58193/4PE	03-18-2020	03-17-2021
RF Switch Unit	MWRFTTEST	MW200	N/A	N/A	N/A
Test Software	MWRFTTEST	MTS8200	Version: 2.0.0.0		

Conducted method:					
Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
Spectrum Analyzer	Agilent	N9020A	MY50510123	11-18-2019	11-17-2020
Vector Signal Generator	Agilent	N5182A	MY49060014	11-18-2019	11-17-2020
Signal Generator	Rohde & Schwarz	SMR20	1008100050	03-18-2020	03-17-2021
Simulated Station	Rohde & Schwarz	CMW500	140493	07-22-2019	07-21-2020
RF Switch Unit	MWRFTTEST	MW200	N/A	N/A	N/A
Test Software	MWRFTTEST	MTS8200	Version: 2.0.0.0		
DC Power Supply	XinNuoEr	WYK-10020K	1409050110020	09-25-2019	09-24-2020
Temperature Humidity Chamber	HengPu	HPGDS-500	20140828008	11-01-2019	10-31-2020

6 Radio Requirements Specification in ETSI EN 301 511

6.1 Justification

The EUT and test equipment were configured for testing according to ETSI EN 301 511 V12.5.1 (2017-03) and ETSI TS 151 010-1.

The EUT was tested in the normal operating mode to represent worst-case results during the final qualification test.

The EUT was tested with a dummy battery.

6.2 Test Configuration of EUT

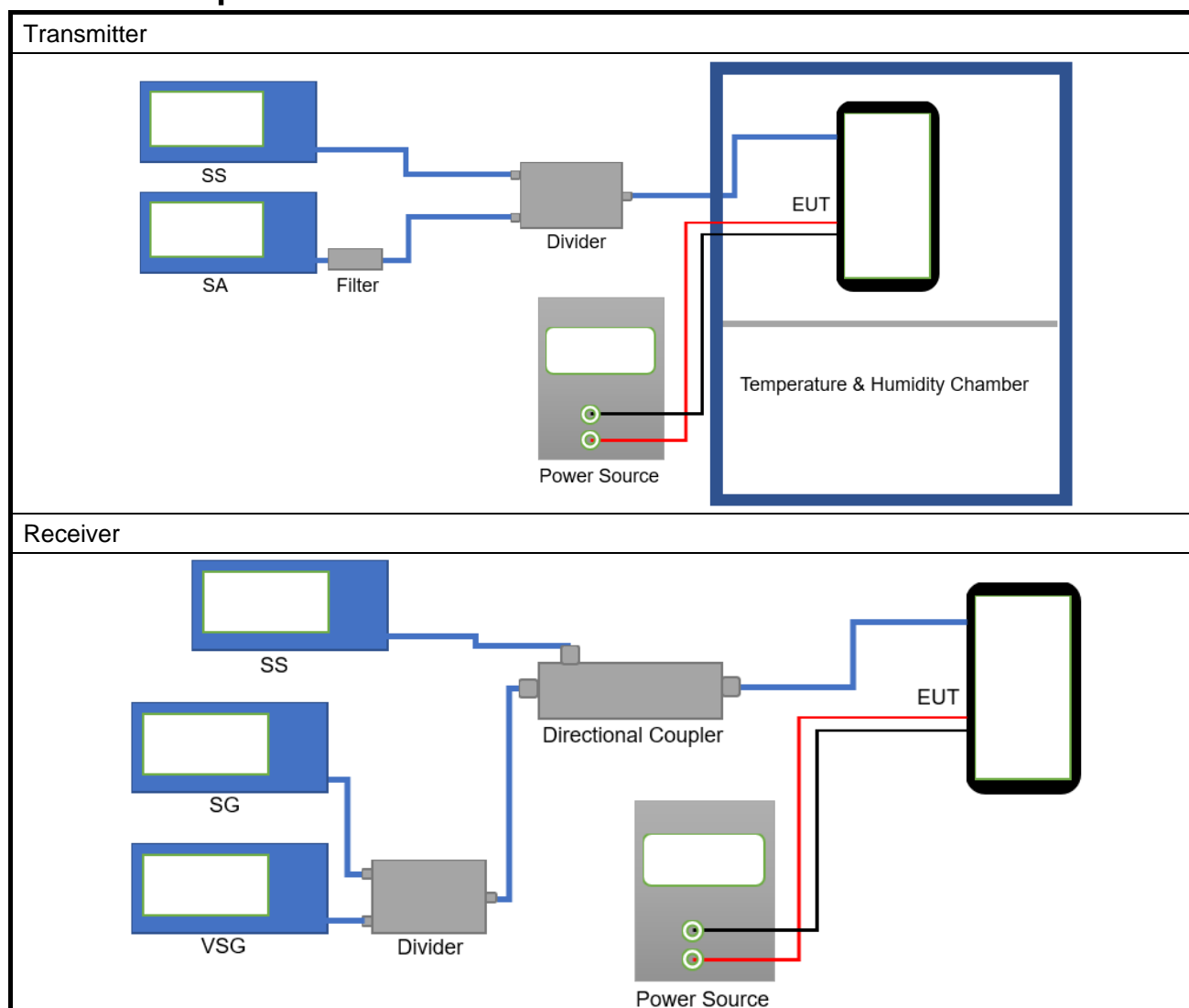
EGSM 900			DCS 1800		
Channel Number		Frequency (MHz)	Channel Number		Frequency (MHz)
Low channel	975	880.2	Low channel	512	1710.2
Middle channel	60	902.0	Middle channel	700	1747.8
High channel	124	914.8	High channel	885	1784.8

Clause No.	Test Conditions						Test Channel			Modulation		Uplink Slot Allocation	
	NTNV	LTLV	LTHV	HTLV	HTHV	Vib.	Low	Middle	High	GMSK	8PSK	1 slot	4 slots
4.2.1	√	√	√	√	√	√	√	√	√	√		√	
4.2.2	√	√	√	√	√		√	√	√	√		√	
4.2.4	√	√	√	√	√	√	√	√	√	√			√
4.2.5	√	√	√	√	√		√	√	√	√		√	
4.2.6	√	√	√	√	√		√	√	√	√		√	
4.2.10	√	√	√	√	√		√	√	√	√			√
4.2.11	√	√	√	√	√		√	√	√	√			√
4.2.12	√	√	√					√		√		√	
4.2.13	√	√	√					√		√		√	
4.2.16	√	√	√					√		√		√	
4.2.17	√	√	√					√		√		√	
4.2.20	√							√		√		√	
4.2.26	√	√	√	√	√		√	√	√		√		√
4.2.27	√	√	√	√	√		√	√	√		√		√
4.2.28	√	√	√	√	√		√	√	√		√		√
4.2.29	√	√	√	√	√		√	√	√		√		√
4.2.30	√							√			√		√
4.2.32	√							√		√		√	
4.2.34	√							√			√		√
4.2.35	√							√		√		√	
4.2.38	√							√		√		√	
4.2.40	√							√			√		√
4.2.42	√							√		√		√	
4.2.43	√							√		√		√	
4.2.44	√							√		√		√	
4.2.45	√							√			√		√

Note:

1. "√" means that this configuration is chosen for test.
2. "NTNV" means Normal Temperature Normal Voltage, "LTLV" means Low Temperature Low Voltage, "LTHV" means Low Temperature High Voltage, "HTLV" means High Temperature Low Voltage, "HTHV" means High Temperature High Voltage. "Vib." means Vibration.

6.3 Test Setup Block



6.4 Test Results

6.4.1 Test Result Summary

Clause No.	Test Mode	Test Condition	Test Band	
			GSM900, DCS1800	
			Test Data	Verdict
4.2.1	GSM	NTNV	Appendix A - GSM - NTVN	Pass
		LTLV	Appendix B - GSM - LTLV	Pass
		LTHV	Appendix C - GSM - LTHV	Pass
		HTLV	Appendix D - GSM - HTLV	Pass
		HTHV	Appendix E - GSM - HTHV	Pass
		Vib.	Appendix F - GSM - Vibration	Pass
4.2.2	GSM	NTNV	Appendix A - GSM - NTVN	Pass
		LTLV	Appendix B - GSM - LTLV	Pass
		LTHV	Appendix C - GSM - LTHV	Pass
		HTLV	Appendix D - GSM - HTLV	Pass
		HTHV	Appendix E - GSM - HTHV	Pass
4.2.4	GPRS	NTNV	Appendix A - GSM - NTVN	Pass
		LTLV	Appendix B - GSM - LTLV	Pass
		LTHV	Appendix C - GSM - LTHV	Pass
		HTLV	Appendix D - GSM - HTLV	Pass
		HTHV	Appendix E - GSM - HTHV	Pass
		Vib.	Appendix F - GSM - Vibration	Pass
4.2.5	GSM	NTNV	Appendix A - GSM - NTVN	Pass
		LTLV	Appendix B - GSM - LTLV	Pass
		LTHV	Appendix C - GSM - LTHV	Pass
		HTLV	Appendix D - GSM - HTLV	Pass
		HTHV	Appendix E - GSM - HTHV	Pass
4.2.6	GSM	NTNV	Appendix A - GSM - NTVN	Pass
		LTLV	Appendix B - GSM - LTLV	Pass
		LTHV	Appendix C - GSM - LTHV	Pass
		HTLV	Appendix D - GSM - HTLV	Pass
		HTHV	Appendix E - GSM - HTHV	Pass
4.2.10	GPRS	NTNV	Appendix A - GSM - NTVN	Pass
		LTLV	Appendix B - GSM - LTLV	Pass
		LTHV	Appendix C - GSM - LTHV	Pass
		HTLV	Appendix D - GSM - HTLV	Pass
		HTHV	Appendix E - GSM - HTHV	Pass
4.2.11	GPRS	NTNV	Appendix A - GSM - NTVN	Pass
		LTLV	Appendix B - GSM - LTLV	Pass
		LTHV	Appendix C - GSM - LTHV	Pass
		HTLV	Appendix D - GSM - HTLV	Pass
		HTHV	Appendix E - GSM - HTHV	Pass
4.2.12	GSM	NV	Appendix A - GSM - NTVN	Pass
		LV	Appendix B - GSM - LTLV	Pass
		HV	Appendix C - GSM - LTHV	Pass
4.2.13	GSM	NV	Appendix A - GSM - NTVN	Pass
		LV	Appendix B - GSM - LTLV	Pass
		HV	Appendix C - GSM - LTHV	Pass
4.2.16	GSM	NV	See Section 6.4.2	Pass
		LV	See Section 6.4.2	Pass
		HV	See Section 6.4.2	Pass
4.2.17	GSM	NV	See Section 6.4.3	Pass
		LV	See Section 6.4.3	Pass
		HV	See Section 6.4.3	Pass

Continued

Clause No.	Test Mode	Test Condition	Test Band	
			GSM900, DCS1800	
			Test Data	Verdict
4.2.20	GSM	NTNV	See Section 6.4.4	Pass
4.2.26	EGPRS	NTNV	Appendix A - GSM - NTNV	Pass
		LTLV	Appendix B - GSM - LTLV	Pass
		LTHV	Appendix C - GSM - LTHV	Pass
		HTLV	Appendix D - GSM - HTLV	Pass
		HTHV	Appendix E - GSM - HTHV	Pass
4.2.27	EGPRS	NTNV	Appendix A - GSM - NTNV	Pass
		LTLV	Appendix B - GSM - LTLV	Pass
		LTHV	Appendix C - GSM - LTHV	Pass
		HTLV	Appendix D - GSM - HTLV	Pass
		HTHV	Appendix E - GSM - HTHV	Pass
4.2.28	EGPRS	NTNV	Appendix A - GSM - NTNV	Pass
		LTLV	Appendix B - GSM - LTLV	Pass
		LTHV	Appendix C - GSM - LTHV	Pass
		HTLV	Appendix D - GSM - HTLV	Pass
		HTHV	Appendix E - GSM - HTHV	Pass
4.2.29	EGPRS	NTNV	Appendix A - GSM - NTNV	Pass
		LTLV	Appendix B - GSM - LTLV	Pass
		LTHV	Appendix C - GSM - LTHV	Pass
		HTLV	Appendix D - GSM - HTLV	Pass
		HTHV	Appendix E - GSM - HTHV	Pass
4.2.30	EGPRS	NTNV	See Section 6.4.5	Pass
4.2.32	GSM	NTNV	Appendix A - GSM - NTNV	Pass
4.2.34	EGPRS	NTNV	Appendix A - GSM - NTNV	Pass
4.2.35	GSM	NTNV	Appendix A - GSM - NTNV	Pass
4.2.38	GSM	NTNV	Appendix A - GSM - NTNV	Pass
4.2.40	EGPRS	NTNV	Appendix A - GSM - NTNV	Pass
4.2.42	GSM	NTNV	Appendix A - GSM - NTNV	Pass
4.2.43	GSM	NTNV	Appendix A - GSM - NTNV	Pass
4.2.44	GPRS	NTNV	Appendix A - GSM - NTNV	Pass
4.2.45	EGPRS	NTNV	Appendix A - GSM - NTNV	Pass

6.4.2 Radiated spurious emissions - MS allocated a channel

GSM 900 band: Middle Channel, Normal Voltage					
Frequency (MHz)	Spurious Emission		Limit (dBm)	Test Result	
	polarization	Level(dBm)			
30.32	Vertical	-66.32	-36.00	Pass	
52.03	V	-67.19			
1804.00	V	-52.62	-30.00		
2706.00	V	-54.23			
3608.00	V	-50.84	-36.00		
193.10	Horizontal	-69.02			
259.23	H	-67.42	-30.00		
1804.00	H	-49.51			
2706.00	H	-53.92			
3608.00	H	-50.42			
GSM 900 band: Middle Channel, Low Voltage					
Frequency (MHz)	Spurious Emission		Limit (dBm)	Test Result	
	polarization	Level(dBm)			
30.32	Vertical	-67.25	-36.00	Pass	
52.03	V	-68.26			
1804.00	V	-42.63	-30.00		
2706.00	V	-51.62			
3608.00	V	-50.33	-36.00		
193.10	Horizontal	-69.36			
259.23	H	-70.14	-30.00		
1804.00	H	-48.52			
2706.00	H	-52.25			
3608.00	H	-49.73			
GSM 900 band: Middle Channel, High Voltage					
Frequency (MHz)	Spurious Emission		Limit (dBm)	Test Result	
	polarization	Level(dBm)			
30.32	Vertical	-66.32	-36.00	Pass	
52.03	V	-65.47			
1804.00	V	-41.32	-30.00		
2706.00	V	-49.62			
3608.00	V	-48.57	-36.00		
193.10	Horizontal	-67.12			
259.23	H	-69.53	-30.00		
1804.00	H	-47.25			
2706.00	H	-51.36			
3608.00	H	-48.75			

DCS 1800 band: Middle Channel, Normal Voltage				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Test Result
	polarization	Level(dBm)		
30.32	Vertical	-66.25	-36.00	Pass
52.03	V	-64.13		
3495.60	V	-44.26	-30.00	
193.10	Horizontal	-65.79	-36.00	
259.23	H	-69.01		
3495.60	H	-45.80	-30.00	
DCS 1800 band: Middle Channel, Low Voltage				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Test Result
	polarization	Level(dBm)		
30.32	Vertical	-66.35	-36.00	Pass
52.03	V	-64.95		
3495.60	V	-45.26	-30.00	
193.10	Horizontal	-68.19	-36.00	
259.23	H	-67.45		
3495.60	H	-46.72	-30.00	
DCS 1800 band: Middle Channel, High Voltage				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Test Result
	polarization	Level(dBm)		
30.32	Vertical	-65.25	-36.00	Pass
52.03	V	-64.19		
3495.60	V	-44.63	-30.00	
193.10	Horizontal	-66.25	-36.00	
259.23	H	-65.74		
3495.60	H	-45.28	-30.00	

6.4.3 Radiated spurious emissions - MS in idle mode

GSM 900 band: Middle Channel, Normal Voltage				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Test Result
	polarization	Level(dBm)		
30.32	Vertical	-65.36	-57.00	Pass
52.03	V	-68.21		
1804.00	V	-59.71	-47.00	
193.10	Horizontal	-68.15	-57.00	
259.23	H	-67.91		
1804.00	H	-60.22	-47.00	
GSM 900 band: Middle Channel, Low Voltage				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Test Result
	polarization	Level(dBm)		
30.32	Vertical	-66.32	-57.00	Pass
52.03	V	-69.62		
1804.00	V	-60.27	-47.00	
193.10	Horizontal	-67.81	-57.00	
259.23	H	-68.54		
1804.00	H	-59.37	-47.00	
GSM 900 band: Middle Channel, High Voltage				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Test Result
	polarization	Level(dBm)		
30.32	Vertical	-69.62	-57.00	Pass
52.03	V	-68.21		
1804.00	V	-59.27	-47.00	
193.10	Horizontal	-68.26	-57.00	
259.23	H	-67.18		
1804.00	H	-60.37	-47.00	

DCS 1800 band: Middle Channel, Normal Voltage				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Test Result
	polarization	Level(dBm)		
30.32	Vertical	-64.32	-57.00	Pass
52.03	V	-68.92		
3495.60	V	-60.27	-47.00	
193.10	Horizontal	-67.36	-57.00	
259.23	H	-68.52		
3495.60	H	-61.27		
DCS 1800 band: Middle Channel, Low Voltage				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Test Result
	polarization	Level(dBm)		
30.32	Vertical	-66.32	-57.00	Pass
52.03	V	-69.62		
3495.60	V	-59.08	-47.00	
193.10	Horizontal	-67.82	-57.00	
259.23	H	-68.15		
3495.60	H	-60.37		
DCS 1800 band: Middle Channel, High Voltage				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Test Result
	polarization	Level(dBm)		
30.32	Vertical	-65.26	-57.00	Pass
52.03	V	-69.62		
3495.60	V	-61.27	-47.00	
193.10	Horizontal	-68.32	-57.00	
259.23	H	-66.98		
3495.60	H	-62.17		

6.4.4 Receiver blocking and spurious responses – speech channels

GSM 900 band:

Channel frequency (MHz)	FBER (%)	Number of test samples	Limit (%)	Result
880.2	0.000	10000	2.439	pass
902.0	0.000	10000	2.439	pass
914.8	0.000	10000	2.439	pass

DCS 1800 band:

Channel frequency (MHz)	FBER (%)	Number of test samples	Limit (%)	Result
1710.2	0.000	10000	2.439	pass
1747.8	0.000	10000	2.439	pass
1784.8	0.000	10000	2.439	pass

6.4.5 Blocking and spurious response in EGPRS configuration

GSM900 band:

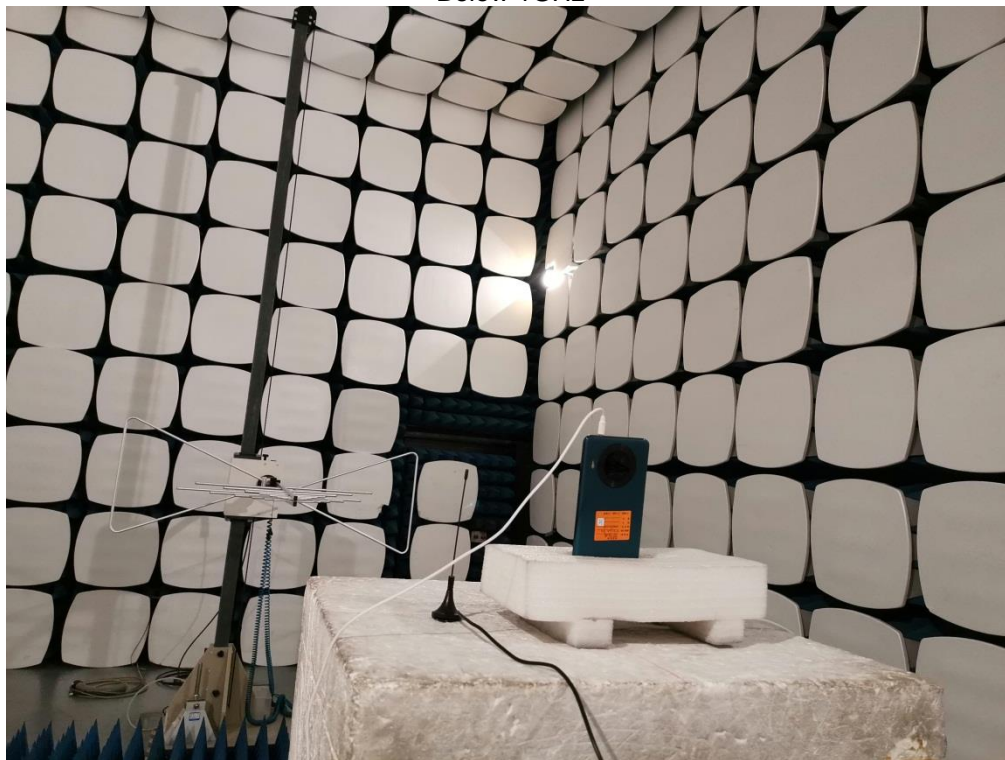
Frequency range (MHz)	BLER (%)	Number of RLC Blocks	Limit (%)	Type of Sub-test	Result
880.2	0.000	6000	1	USF/MCS-9	Pass
898.4	0.000	6000	1	USF/MCS-9	Pass
914.8	0.000	6000	1	USF/MCS-9	Pass

DCS1800 Band:

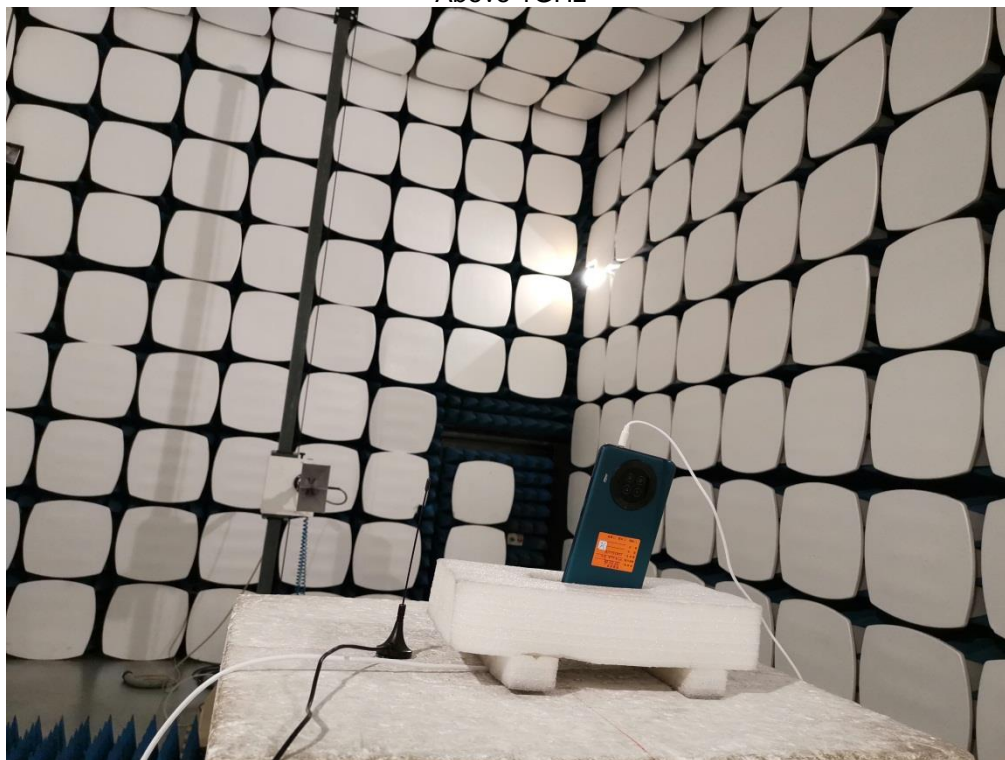
Frequency range (MHz)	BLER (%)	Number of RLC Blocks	Limit (%)	Type of Sub-test	Result
1710.2	0.000	6000	1	USF/MCS-9	Pass
1747.8	0.000	6000	1	USF/MCS-9	Pass
1784.8	0.000	6000	1	USF/MCS-9	Pass

7 Test Setup Photo

Radiated Spurious Emission
Below 1GHz



Above 1GHz



8 EUT Constructional Details

Reference to the test report No. CCISE200603701

-----End of report-----