



# **RADIO TEST REPORT**

## **EN 301 511 V12.5.1 (2017-03)**

**Product :** Smartphone

**Trade Mark :** CUBOT

**Model Name :** J20

**Family Model :** N/A

**Report No. :** S22090900505006

### **Prepared for**

Shenzhen Huafurui Technology Co., Ltd

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

### **Prepared by**

Shenzhen NTEK Testing Technology Co., Ltd.

1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street  
Bao'an District, Shenzhen 518126 P.R. China

Tel. 400-800-6106, 0755-2320 0050, 0755-2320 0090

Website: <http://www.ntek.org.cn>

**TEST RESULT CERTIFICATION**

**Applicant's name** .....: Shenzhen Huafurui Technology Co., Ltd  
Unit 1401 &1402, 14/F, Jinqi Zhigu Mansion (No. 4 Building of  
Address .....: Chongwen Garden), Crossing of the Liuxian Street and Tangling  
Road, Taoyuan Street, Nanshan District, Shenzhen, P.R. China

**Manufacturer's Name** .....: Shenzhen Huafurui Technology Co., Ltd  
Unit 1401 &1402, 14/F, Jinqi Zhigu Mansion (No. 4 Building of  
Address .....: Chongwen Garden), Crossing of the Liuxian Street and Tangling  
Road, Taoyuan Street, Nanshan District, Shenzhen, P.R. China

**Product description**

Product name .....: Smartphone  
Trademark .....: CUBOT  
Model Name .....: J20  
Family Model .....: N/A  
Sample number .....: S220909005009

**Standards** .....: EN 301 511 V12.5.1 (2017-03)

This device described above has been tested by NTEK, and the test results show that the equipment under test (EUT) is in compliance with the of Radio Equipment Regulations (SI 2017/1206) requirements. And it is applicable only to the tested sample identified in the report.

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**Date of Test** .....

Date (s) of performance of tests ..... Sep 14. 2022 ~ Oct 21. 2022

Date of Issue ..... Oct 24. 2022

Test Result ..... **Pass**

Testing Engineer :



(Allen Liu)

Authorized Signatory :



(Alex Li)

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## 1. SUMMARY OF TEST RESULTS

### Leading Reference Documents For Testing:

No.	Identity	Document Title
1	EN 301 511 V12.5.1 (2017-03)	Global System for Mobile communications (GSM); Mobile Stations (MS) equipment; Harmonised Standard covering the essential requirements of Radio Equipment Regulations (SI 2017/1206)

### Specific Reference Documents For Testing:

No.	Identity	Document Title
2	ETSI TS 151 010-1 V12.8.0 (2016-05)	Digital cellular telecommunications system (Phase 2+); Mobile Station (MS) conformance specification; Part 1: Conformance specification (3GPP TS 51.010-1 version 12.8.0 Release 12)

### 1.1 TEST FACILITY

Shenzhen NTEK Testing Technology Co., Ltd.

Add. : 1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen 518126 P.R. China

FCC Registered No.: 463705 IC Registered No.:9270A-1

CNAS Registration No.:L5516

### 1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement  $y \pm U$ , where expended uncertainty  $U$  is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	Conducted Emission Test	$\pm 3.6\text{dB}$
2	RF power,conducted	$\pm 0.16\text{dB}$
3	Spurious emissions,conducted	$\pm 0.21\text{dB}$
4	All emissions,radiated(<1G)	$\pm 4.8\text{dB}$
5	All emissions,radiated(>1G)	$\pm 5.0\text{dB}$
6	Temperature	$\pm 0.5^{\circ}\text{C}$
7	Humidity	$\pm 2\%$

## Revision History

Report No.	Version	Description	Issued Date
S22090900505006	Rev.01	Initial issue of report	Oct 24. 2022

## 2. GENERAL INFORMATION

### 2.1 GENERAL DESCRIPTION OF EUT

Equipment :	Smartphone
Trade Mark:	CUBOT
Model Name:	J20
Family Model:	N/A
Model Difference:	N/A
Support Band:	<input checked="" type="checkbox"/> GSM 900 (EU-Band) <input checked="" type="checkbox"/> DCS 1800 (EU-Band) <input type="checkbox"/> GSM 850 (U.S.-Band) <input type="checkbox"/> PCS 1900(U.S.-Band)
Release Version:	R99
GPRS Class:	12
Frequency Bands:	Uplink:GSM/GPRS/ EGPRS 900:880~915MHz GSM/GPRS /EGPRS 1800:1710~1785 MHz
	Downlink:GSM/GPRS/EGPRS 900:925~960MHz GSM/GPRS/EGPRS 1800:1805~1880MHz
Modulation Mode:	GMSK/8-PSK
Power Class:	GPRS 900: 4,GPRS 1800: 1,
SIM CARD :	SIM 1 and SIM 2 is a chipset unit and tested as a single chipset. The SIM 1 is chosen for test.
Antenna Description:	PIFA antenna (GSM900: -1.5dBi)/(DCS1800: -1.5dBi)
Adapter	Model: HJ-0501000B3-UK Input: 100-240V~50/60Hz, 0.15A Output: 5.0V ---1.0A 5.0W
Battery	DC 3.8V, 2350mAh
Rating	DC 3.8V from battery or DC 5V from Adapter.
Hard Ware Version	G2241E-MH-V1.1
Soft Ware Version	CUBOT_J20_C041C_V01_20221026

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

## 2.2 LIST OF TEST EQUIPMENTS

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Spectrum Analyzer	Agilent	E4407B	MY45108040	2022.04.06	2023.04.05	1 year
2	Test Receiver	R&S	ESPI7	101318	2022.04.06	2023.04.05	1 year
3	Bilog Antenna	TESEQ	CBL6111D	31216	2022.03.30	2023.03.29	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200983705	2020.05.11	2023.05.10	3 year
5	Spectrum Analyzer	Agilent	N9020A	MY46471732	2022.04.06	2023.04.05	1 year
6	Horn Antenna	EM	EM-AH-20180	2011071402	2022.03.31	2023.03.30	1 year
7	Horn Ant	Schwarzbeck	BBHA 9170	9170-181	2022.04.06	2023.04.05	1 year
8	Amplifier	EMC	EMC051835S E	980246	2022.06.17	2023.06.16	1 year
9	Loop Antenna	ARA	PLA-2030/B	1029	2022.04.06	2023.04.05	1 year
10	Temperature & Humidity Chamber	GIANT FORCE	GTH-056P	GF-94454-1	2022.06.16	2023.06.15	1 year
11	LTE Wireless Communications Test Set	R&S	CMW500	1100.008.02	2022.06.17	2023.06.16	1 year
12	Power Splitter	Mini-Circuits	ZN2PD-63-S+	SF025101428	2020.04..07	2023.04.06	3 year
13	Wireless Communication Test	Anritsu	MT8821C	6262192315	2021.11.04	2022.11.03	1 year
14	Power Meter	DARE	RPR3006W	15I00041SNO8 4	2022.06.16	2023.06.15	1 year
15	ESG VETCTOR SIGNAL GENERAROR	Agilent	E4438C	MY45093347	2022.04.06	2023.04.05	1 year
16	Spectrum Analyzer	R&S	FSV40	101417	2022.04.06	2023.04.05	1 year



## 2.3 TYPE OF MOBILE STATION AND ADDITIONAL INFORMATION

Table A.2: Type of Mobile Station (Re. EN 301 511 Annex A)

Item	Type of Mobile Station	Support	Mnemonic
1	HSCSD Multislot MS	NO	Type_HSCSD_Multislot
2	R-GSM MS	NO	Type_R-GSM
3	Support of GPRS Multislot class on the uplink	YES	Type_GPRS_Multislot_uplink
4	EGPRS	YES	Type_EGPRS
5	EGPRS capable of 8PSK in Uplink, of all Multislot classes	YES	Type_EGPRS_8PSK_uplink

Type A.3: Additional information (Re. EN 301 511 Annex A)

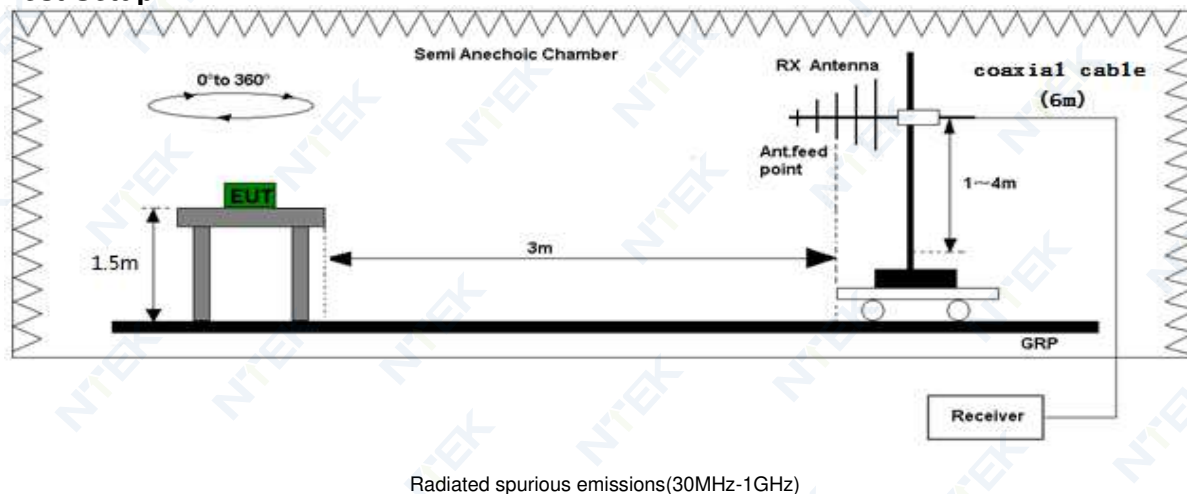
Item	Additional Information	Support	Mnemonic
1	Telephony.	YES	TSPC_Serv_TS11
2	Permanent Antenna Connector	YES	TSPC_AddInfo_PermAntenna

## 2.4 TEST ENVIRONMENT/CONDITIONS

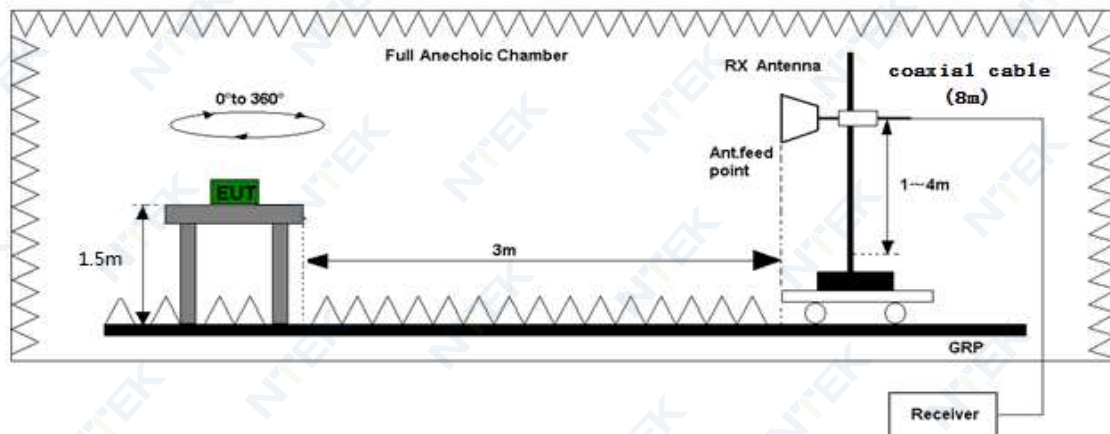
Normal Temperature (NT):	20 ... 25 °C
Relative Humidity:	30 ... 75 %
Air Pressure:	980 ... 1020 hPa
Extreme Temperature:	Low Temperature (LT) = -10°C High Temperature (HT) = 40°C
Extreme Voltage of the EUT (Declared by manufacturer):	Normal Voltage (NV) = DC 3.87V Low Voltage (LV) = DC 3.4V High Voltage (HV) = DC 4.2V

Note: The High Voltage DC 4.2V and Low Voltage DC 3.4V was declared by manufacturer, The EUT couldn't be operate normally with higher or lower voltage. The High temperature and Low temperature was declared by manufacturer

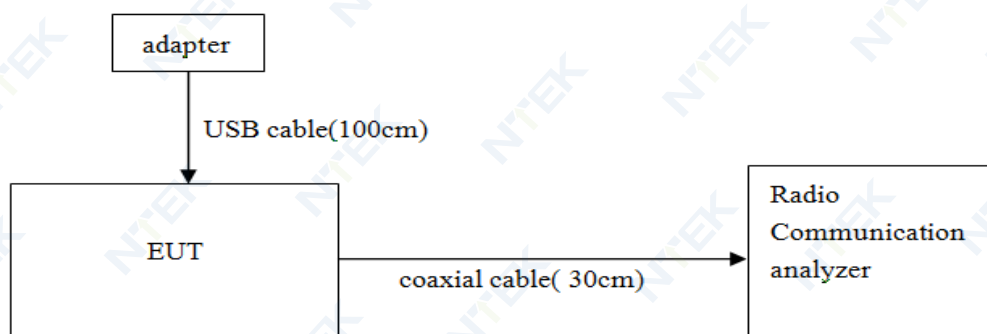
## 2.5 Test Setup



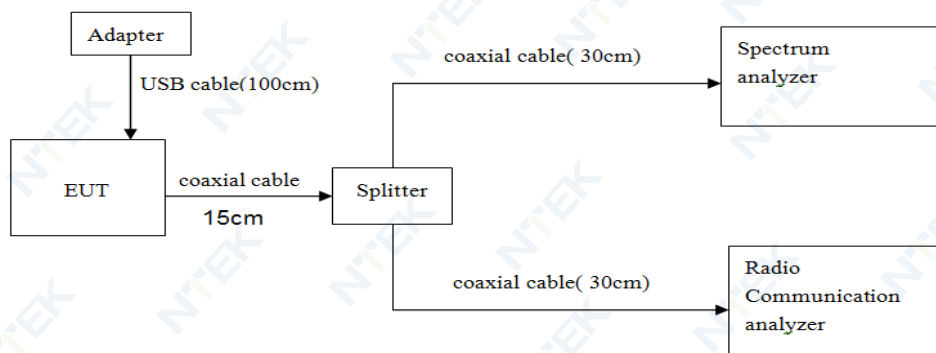




Radiated spurious emissions(Above 1G)



Conducted Test



Conducted spurious emissions

### 3. SUMMARY OF TEST REPORT

#### 3.1 TERMS IN THE COLUMN “VERDICT” FOR THE TEST RESULTS LIST OF THIS SECTION:

Verdict	Description
PASS	EUT passed this test case
FAIL	EUT failed this test case
Decl.	“Declaration”: NTEK has received documents from the applicant and/or manufacturer which show conformity to the applied standards for this test case.
N/A	Test case not applicable for the EUT, please see the column “Note” for detailed

#### 3.2 TABLE 1 EN REQUIREMENTS TABLE

Testcase in ETSI EN 301511 V12.5.1	Testcase in 3GPP TS 51.010-1	Description	Condition	GSM/GPRS/EGPRS 900		GSM/GPRS/EGPRS 1800		Test Data
				Sample	Result	Sample	Result	
Section 4.2.1	13.1.5	Transmitter - Frequency error and phase error	NT / NV	A01	PASS	A01	PASS	Appendix A - GSM - Normal
			LT / LV	A01	PASS	A01	PASS	Appendix B - GSM -Extreme
			LT / HV	A01	PASS	A01	PASS	Appendix B - GSM -Extreme
			HT / LV	A01	PASS	A01	PASS	Appendix B - GSM -Extreme
			HT / HV	A01	PASS	A01	PASS	Appendix B - GSM -Extreme
			Vibration(X)	A01	PASS	A01	PASS	Appendix B - GSM -Extreme
			Vibration(Y)	A01	PASS	A01	PASS	Appendix B - GSM -Extreme
			Vibration(Z)	A01	PASS	A01	PASS	Appendix B - GSM -Extreme
Section 4.2.2	13.2.5	Transmitter - Frequency error under multipath and interference conditions	NT / NV	A01	PASS	A01	PASS	Appendix A - GSM - Normal
			LT / LV	A01	PASS	A01	PASS	Appendix B - GSM -Extreme
			LT / HV	A01	PASS	A01	PASS	Appendix B - GSM -Extreme
			HT / LV	A01	PASS	A01	PASS	Appendix B - GSM -Extreme
			HT / HV	A01	PASS	A01	PASS	Appendix B - GSM -Extreme
Section 4.2.4	13.16.1.5	Frequency error and phase error in GPRS multislot configuration	NT / NV	A01	PASS	A01	PASS	Appendix A - GSM - Normal
			LT / LV	A01	PASS	A01	PASS	Appendix B - GSM -Extreme
			LT / HV	A01	PASS	A01	PASS	Appendix B - GSM -Extreme
			HT / LV	A01	PASS	A01	PASS	Appendix B - GSM -Extreme
			HT / HV	A01	PASS	A01	PASS	Appendix B - GSM -Extreme
			Vibration(X)	A01	PASS	A01	PASS	Appendix B - GSM -Extreme
			Vibration(Y)	A01	PASS	A01	PASS	Appendix B - GSM -Extreme
			Vibration(Z)	A01	PASS	A01	PASS	Appendix B - GSM -Extreme

Testcase in ETSI EN 301511 V12.5.1	Testcase in 3GPP TS 51.010-1	Description	Condition	GSM/GPRS/EGPRS 900		GSM/GPRS/EGPRS 1800		Test Data
				Sample	Result	Sample	Result	
Section 4.2.5	13.3.5	Transmitter output power and burst timing	NT / NV	A01	PASS	A01	PASS	Appendix A -GSM-Normal
			LT / LV	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
			LT / HV	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
			HT / LV	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
			HT / HV	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
Section 4.2.6	13.4.5	Transmitter - Output RF spectrum	NT / NV	A01	PASS	A01	PASS	Appendix A -GSM-Normal
			LT / LV	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
			LT / HV	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
			HT / LV	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
			HT / HV	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
Section 4.2.10	13.16.2.5	Transmitter output power in GPRS multislot configuration	NT / NV	A01	PASS	A01	PASS	Appendix A -GSM-Normal
			LT / LV	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
			LT / HV	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
			HT / LV	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
			HT / HV	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
Section 4.2.11	13.16.3.5	Output RF spectrum in GPRS multislot configuration	NT / NV	A01	PASS	A01	PASS	Appendix A -GSM-Normal
			LT / LV	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
			LT / HV	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
			HT / LV	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
			HT / HV	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
Section 4.2.12	12.1.1.5	Conducted spurious emissions - MS allocated a channel	NT / NV	A01	PASS	A01	PASS	Appendix A -GSM-Normal (Only record the worst test data)
			NT / LV	A01	PASS	A01	PASS	
			NT / HV	A01	PASS	A01	PASS	
Section 4.2.13	12.1.2.5	Conducted spurious emissions - MS in idle mode	NT / NV	A01	PASS	A01	PASS	Appendix A -GSM-Normal (Only record the worst test data)
			NT / LV	A01	PASS	A01	PASS	
			NT / HV	A01	PASS	A01	PASS	
Section 4.2.16	12.2.1.5	Radiated spurious emissions - MS allocated a channel	NT / NV	A01	PASS	A01	PASS	Refer to the report
			NT / LV	A01	PASS	A01	PASS	
			NT / HV	A01	PASS	A01	PASS	
Section 4.2.17	12.2.2.5	Radiated spurious emissions - MS in idle mode	NT / NV	A01	PASS	A01	PASS	Refer to the report
			NT / LV	A01	PASS	A01	PASS	
			NT / HV	A01	PASS	A01	PASS	
Section 4.2.20	14.7.1.5	Receiver Blocking and spurious response - speech channels	NT / NV	A01	PASS	A01	PASS	Appendix C -GSM-Blocking

Testcase in ETSI EN 301511 V12.5.1	Testcase in 3GPP TS 51.010-1	Description	Condition	GSM/GPRS/EGPRS 900		GSM/GPRS/EGPRS 1800		Test Data
				Sample	Result	Sample	Result	
Section 4.2.26	13.17.1.5	Frequency error and Modulation accuracy in EGPRS Configuration	NT / NV	A01	PASS	A01	PASS	Appendix A -GSM-Normal
			LT / LV	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
			LT / HV	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
			HT / LV	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
			HT / HV	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
			Vibration(X)	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
			Vibration(Y)	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
			Vibration(Z)	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
Section 4.2.27	13.17.2.5	Frequency error under multipath and interference conditions in EGPRS Configuration	NT / NV	A01	PASS	A01	PASS	Appendix A -GSM-Normal
			LT / LV	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
			LT / HV	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
			HT / LV	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
			HT / HV	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
Section 4.2.28	13.17.3.5	EGPRS Transmitter output power	NT / NV	A01	PASS	A01	PASS	Appendix A -GSM-Normal
			LT / LV	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
			LT / HV	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
			HT / LV	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
			HT / HV	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
Section 4.2.29	13.17.4.5	Output RF spectrum in EGPRS configuration	NT / NV	A01	PASS	A01	PASS	Appendix A -GSM-Normal
			LT / LV	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
			LT / HV	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
			HT / LV	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
			HT / HV	A01	PASS	A01	PASS	Appendix B -GSM-Extreme
Section 4.2.30	14.18.5.5	Blocking and spurious response in EGPRS configuration	NT / NV	A01	PASS	A01	PASS	Appendix C -GSM-Blocking
Section 4.2.31	14.18.5b.5	Blocking and spurious response in DLMT configuration	NT / NV	A01	N/A	A01	N/A	N/A
Section 4.2.32	14.6.1.5	Intermodulation rejection - speech channels	NT / NV	A01	PASS	A01	PASS	Appendix A -GSM-Normal
Section 4.2.33	14.6.2.5	Intermodulation rejection - control channels	NT / NV	A01	PASS	A01	PASS	Appendix A -GSM-Normal
Section 4.2.34	14.18.4.5	Intermodulation rejection - EGPRS	NT / NV	A01	PASS	A01	PASS	Appendix A -GSM-Normal

Testcase in ETSI EN 301511 V12.5.1	Testcase in 3GPP TS 51.010-1	Description	Condition	GSM/GPRS/EGPRS 900		GSM/GPRS/EGPRS 1800		Test Data
				Sample	Result	Sample	Result	
Section 4.2.35	14.8.1.5	AM suppression - speech channels	NT / NV	A01	PASS	A01	PASS	Appendix A -GSM-Normal
Section 4.2.36	14.8.2.5	AM suppression - control channels	NT / NV	A01	PASS	A01	PASS	Appendix A -GSM-Normal
Section 4.2.37	14.8.3.5	AM suppression - packet channels	NT / NV	A01	PASS	A01	PASS	Appendix A -GSM-Normal
Section 4.2.38	14.5.1.1.5	Adjacent channel rejection - speech channels (TCH/FS)	NT / NV	A01	PASS	A01	PASS	Appendix A -GSM-Normal
Section 4.2.39	14.5.2.5	Adjacent channel rejection - control channels	NT / NV	A01	PASS	A01	PASS	Appendix A -GSM-Normal
Section 4.2.40	14.18.3.5	Adjacent channel rejection - EGPRS	NT / NV	A01	PASS	A01	PASS	Appendix A -GSM-Normal
Section 4.2.41	14.18.3d.5	Adjacent channel rejection in DLMT configuration	NT / NV	A01	N/A	A01	N/A	N/A
Section 4.2.42	14.2.1.5	Reference sensitivity - TCH/FS	NT / NV	A01	PASS	A01	PASS	Appendix A -GSM-Normal
Section 4.2.43	14.2.3.5	Reference sensitivity - FACCH/F	NT / NV	A01	PASS	A01	PASS	Appendix A -GSM-Normal
Section 4.2.44	14.16.1.5	Minimum Input level for Reference Performance - GPRS	NT / NV	A01	PASS	A01	PASS	Appendix A -GSM-Normal
Section 4.2.45	14.18.1.5	Minimum Input level for Reference Performance - EGPRS	NT / NV	A01	PASS	A01	PASS	Appendix A -GSM-Normal

#### 4. RADIATED SPURIOUS EMISSIONS

##### 4.1 RADIATED SPURIOUS EMISSIONS – MS ALLOCATED A CHANNEL

###### Environmental Conditions

Temperature	25°C
Relative Humidity	56%
ATM Pressure	100.2kPa

###### Test Requirements:

Frequency range		Power level in dBm		
		GSM 400, GSM 700, T-GSM810, GSM 850, GSM 900	DCS 1 800	PCS 1 900
30 MHz to	1 GHz	-36	-36	-36
1 GHz to	4 GHz	-30	-36	-30
1 GHz to	1 710 MHz		-30	
1 710 MHz to	1 785 MHz		-36	
1 785 MHz to	4 GHz		-30	

###### TEST RESULT

###### GSM 900

Normal Voltage,Middle Channel

Frequency (MHz)	Polar (H/V)	ReadingLevel (dBm)	Factor	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
operation frequency:Middle channel						
44.906	V	-63.67	11.22	-52.45	-36.00	-16.45
76.813	V	-66.11	12.45	-53.66	-36.00	-17.66
170.446	V	-67.72	12.88	-54.84	-36.00	-18.84
1245.221	V	-67.1	16.38	-50.72	-30.00	-20.72
2379.647	V	-68.78	14.83	-53.95	-30.00	-23.95
4586.459	V	-67.69	15.64	-52.05	-30.00	-22.05
40.468	H	-60.08	12.29	-47.79	-36.00	-11.79
76.544	H	-68.14	9.79	-58.35	-36.00	-22.35
333.707	H	-61.05	16.72	-44.33	-36.00	-8.33
1258.201	H	-65.96	15.95	-50.01	-30.00	-20.01
2506.636	H	-60.79	12.86	-47.93	-30.00	-17.93
5379.539	H	-60.48	14.69	-45.79	-30.00	-15.79



### GSM 1800

Normal Voltage,Middle Channel

Frequency (MHz)	Polar (H/V)	ReadingLevel (dBm)	Factor	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
operation frequency:Middle channel						
30.816	V	-64.64	10.68	-51.07	-36.00	-15.07
76.101	V	-62.37	13.13	-46.35	-36.00	-10.35
426.139	V	-69.64	12.44	-54.31	-36.00	-18.31
1398.623	V	-61.93	14.96	-44.08	-30.00	-14.08
2227.465	V	-64.29	13.91	-47.49	-30.00	-17.49
4485.12	V	-59.49	10.51	-46.09	-30.00	-16.09
47.85	H	-63.49	15.02	-45.58	-36.00	-9.58
74.429	H	-61.74	16.36	-42.49	-36.00	-6.49
439.299	H	-68.45	12.22	-53.34	-36.00	-17.34
1898.544	H	-59.46	14.14	-42.43	-30.00	-12.43
2308.724	H	-67.59	11.31	-53.39	-30.00	-23.39
3199.344	H	-66.48	12.74	-50.85	-30.00	-20.85

Emission Level = Meter Reading + Factor, Margin= Emission Level - Limit

The test were carried out for all uder normal and extreme voltage conditions. The worst test data was showed in the report.



## 4.2 RADIATED SPURIOUS EMISSIONS – MS IN IDLE MODE

### Environmental Conditions

Temperature	25°C
Relative Humidity	56%
ATM Pressure	100.2kPa

### Test Requirements:

Frequency range		Power level in dBm	
		GSM 400, T-GSM810, GSM900, DCS 1 800	GSM 700, GSM 850, PCS 1 900
30 MHz to	880 MHz	-57	-57
880 MHz to	915 MHz	-59	-57
915 MHz to	1 000 MHz	-57	-57
1 GHz to	1 710 MHz	-47	
1 710 MHz to	1 785 MHz	-53	
1 785 MHz to	4GHz	-47	
1 GHz to	1 850 MHz		-47
1 850 MHz to	1 910 MHz		-53
1 910 MHz to	4GHz		-47

# TEST RESULT

## GSM 900

Frequency (MHz)	Polar (H/V)	ReadingLevel (dBm)	Factor	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
operation frequency:Middle channel						
60.804	V	-80.75	14.90	-65.85	-57.00	-8.85
292.124	V	-86.82	15.17	-71.65	-57.00	-14.65
317.775	V	-87.69	14.05	-73.64	-57.00	-16.64
1252.322	V	-86.4	15.58	-70.82	-47.00	-23.82
2978.134	V	-89.18	14.06	-75.12	-47.00	-28.12
4281.806	V	-86.94	13.93	-73.01	-47.00	-26.01
43.811	H	-87.86	11.78	-76.08	-57.00	-19.08
224.201	H	-70.91	10.46	-60.45	-57.00	-3.45
596.633	H	-73.37	11.73	-61.64	-57.00	-4.64
1669.335	H	-77.15	12.83	-64.32	-47.00	-17.32
2690.173	H	-72.55	12.64	-59.91	-47.00	-12.91
5785.907	H	-70.66	9.82	-60.84	-47.00	-13.84

## GSM 1800

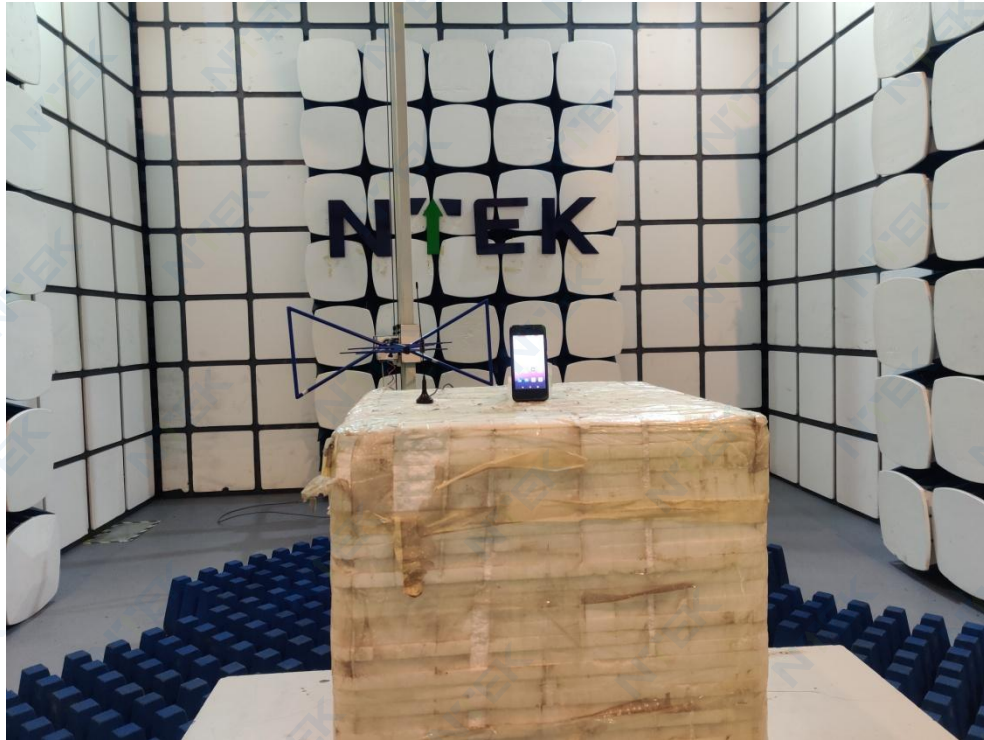
Frequency (MHz)	Polar (H/V)	ReadingLevel (dBm)	Factor	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
operation frequency:Middle channel						
89.346	V	-85.78	14.39	-71.39	-57.00	-14.39
135.46	V	-82.09	13.74	-68.35	-57.00	-11.35
840.928	V	-73.19	10.20	-62.99	-57.00	-5.99
1500.917	V	-70.26	13.33	-56.93	-47.00	-9.93
2501.318	V	-77.29	11.86	-65.43	-47.00	-18.43
4214.176	V	-71.19	14.51	-56.68	-47.00	-9.68
68.272	H	-82.12	9.89	-72.23	-57.00	-15.23
289.217	H	-76.3	12.81	-63.49	-57.00	-6.49
537.702	H	-87.25	16.85	-70.40	-57.00	-13.40
1628.915	H	-81.01	14.98	-66.03	-47.00	-19.03
2439.872	H	-80.65	9.28	-71.37	-47.00	-24.37
3227.016	H	-79.69	11.36	-68.33	-47.00	-21.33

Note: Emission Level = Meter Reading + Factor, Margin= Emission Level - Limit

The test were carried out for all uder normal and extreme voltage conditions. The worst test data was showed in the report.

## 5. PHOTOGRAPHS OF THE TEST SETUP

### Radiated Spurious Emission Test



END OF REPORT