

TESTING CERT#4338, 01

## RADIO TEST REPORT

Report No: STS1801196W01

Issued for

DaFaith Trading, LLC

12934 Hideaway Lane, San Diego, California, United States

Product Name:	Smart phone
Brand Name:	NEOIX
Model Name:	BRISA II
Series Model:	S402RG, S402GD, S402BK
FCC ID:	2ALWUBRISAII
Test Standard:	FCC Part 22H and 24E

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#### **TEST RESULT CERTIFICATION**

	TEST RESOLT CERTIFICATION
Applicant's name:	DaFaith Trading, LLC
Address:	12934 Hideaway Lane, San Diego, California, United States
Manufacture's Name:	Shenzhen Hexiang Enterprises Limited
Address:	Room:3-006AB, 3F., Tianxia IC Industrial Park, No. 133, Yiyuan Road, Nanshan District, Shenzhen, 518052 China
Product discription	
Product Name:	Smart phone
Brand Name:	NEOIX
Model Name:	BRISA II
Series Model:	S402RG, S402GD, S402BK
Test Standards:	FCC Part 22H and 24E
Test procedure	ANSI/TIA 603-D (2010)
under test (EUT) is in complian sample identified in the report. This report shall not be reprodu	as been tested by STS and the test results show that the equipment ce with the FCC requirements. And it is applicable only to the tested aced except in full, without the written approval of STS, this document S, personal only, and shall be noted in the revision of the document.
Date of Test	
Date of performance of tests	18 Jan. 2018~27 Jan. 2018
Date of Issue	27 Jan. 2018
Test Result	Pass

Testing Engineer : (Chris chen)

Technical Manager:

(Sean she)

Authorized Signatory:

(Vita Li)



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## **Revision History**

Rev.	Issue Date	Report NO.	Effect Page	Contents
00	27 Jan. 2018	STS1801196W01	ALL	Initial Issue





## SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

The radiated emission testing was performed according to the procedures of ANSI/TIA-603-D: 2010,KDB 971168 D01 v02r02 and KDB 648474 D03 v01r04

FCC Rules	Test Description	Test Limit	Test Result	Reference
2.1049	Conducted OutputPower	Reporting Only	PASS	
2.0146 24.232	Peak-to-AverageRatio	< 13 dB	PASS	
2.1046 22.913 24.232	Effective Radiated Pow- er/Equivalent Isotropic Radiated Power	< 7 Watts max. ERP(Part 22) < 2 Watts max. EIRP(Part 24)	PASS	
2.1049 22.917 24.238	Occupied Bandwidth	Reporting Only	PASS	
2.1055 22.355 24.235	Frequency Stability	< 2.5 ppm (Part 22) Emission must remain in band (Part 24)	PASS	
2.1051 22.917 24.238	Spurious Emission at Antenna Terminals	< 43+10log10(P[Watts])	PASS	
2.1053 22.917 24.238	Field Strength of Spurious Radiation	< 43+10log10(P[Watts])	PASS	
2.1051 22.917 24.238	Band Edge	< 43+10log10(P[Watts])	PASS	



#### 1 INTRODUCTION

#### 1.1 TEST FACTORY

Shenzhen STS Test Services Co., Ltd.

Add.: 1/F., Building B, Zhuoke Science Park, No.190, Chongqing Road,

Fuyong Street, Bao'an District, Shenzhen, Guangdong, China CNAS Registration No.: L7649; FCC Registration No.: 625569 IC Registration No.: 12108A; A2LA Certificate No.: 4338.01;

#### 1.2 MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.4-2014. All measurement uncertainty values are shown with a coverage factor of k=2 to indicate a 95% level of confidence. The measurement data shown herein meets or exceeds the UCISPR measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.  $\circ$ 

No.	Item	Uncertainty
1	RF power,conducted	±0.70dB
2	Spurious emissions,conducted	±1.19dB
5	All emissions,radiated(<1G) 30MHz-200MHz	±2.83dB
6	All emissions,radiated(<1G) 200MHz-1000MHz	±2.94dB
7	All emissions,radiated(>1G)	±3.03dB
8	Temperature	±0.5°C
9	Humidity	±2%



## 2 PRODUCT INFORMATION

Draduct Nama	Smart phone
Product Name	Smart phone
Hardware version number:	C5-V1.1
Software version number:	C5_72KK_KK_3GW_B25_EMMC_32_4_WVGA_JKS_L1_J_BRISA 20180113.151941
FCC ID:	2ALWUBRISAII
	GSM/GPRS:
	850: 824 MHz ~ 849MHz
Ty Fraguency	1900: 1850 MHz ~ 1910MHz
Tx Frequency:	WCDMA:
	Band V: 824 MHz ~ 849 MHz
	Band II: 1850 MHz ~ 1910 MHz
	GSM/GPRS:
	850: 869 MHz ~ 894 MHz
D. F	1900: 1930 MHz ~ 1990MHz
Rx Frequency:	WCDMA:
	Band V: 869 MHz ~ 894 MHz
	Band II: 1930 MHz ~ 1990 MHz
Max RF Output Power:	GSM850:32.69dBm, PCS1900:29.44dBm GPRS850(1-Slot):32.61dBm, GPRS1900(1-Slot):29.38dBm GPRS850(2-Slot):32.14dBm, GPRS1900(2-Slot):28.94dBm GPRS850(3-Slot):31.73dBm, GPRS1900(3-Slot):28.49dBm GPRS850(4-Slot):31.24dBm, GPRS1900(4-Slot):28.04dBm WCDMABand V:23.52dBm, WCDMA Band II:22.84dBm
Type of Emission:	GSM(850): 318KGXW; GSM(1900): 316KGXW GPRS(850): 321KGXW; GPRS(1900): 319KGXW WCDMA850: 4M68F9W WCDMA1900: 4M65F9W
SIM Card:	SIM 1 and SIM 2 is a chipset unit and tested as single chipset,SIM 1 is used to tested
Antenna:	PIFA Antenna
	GSM 850: -0.60dBi ,PCS 1900:0.6dBi
Antenna gain:	WCDMA 850: -0.10dBi, WCDMA1900: 0.6dBi
Power Supply:	DC 3.7V by battery
D-11	Capacity: 1000mAh, Rated Voltage: 3.7V
Battery parameter:	Capacity. 1000mAn, Kaleu Vollage. 5.7 V
· ·	Input: AC 100-240V, 50/60Hz, 0.15A
Adapter:	
· ·	Input: AC 100-240V, 50/60Hz, 0.15A



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Extreme Temp. Toler ance:	-30℃ to +50℃
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\*\* Note: The High Voltage 4.2 V and Low Voltage 3.5 V was declared by manufacturer, The EUT couldn't be operate normally with higher or lower voltage.





#### 3 TEST CONFIGURATION OF EQUIPMENT UNDER TEST

Antenna port conducted and radiated test items were performed according to KDB 971168 D01 Power Meas. License Digital Systems with maximum output power.

Radiated measurements were performed with rotating EUT in different three orthogonal test planes to find the maximum emission.

Radiated emissions were investigated as following frequency range:

- 1. 30 MHz to 10th harmonic for GSM850 and WCDMA Band V.
- 2. 30 MHz to 10th harmonic for GSM1900 and WCDMA Band II.

All modes and data rates and positions were investigated.

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

	TEST MODES		
BAND	RADIATED TCS	CONDUCTED TCS	
GSM 850	GSM LINK GPRS/EDGE CLASS 12 LINK	GSM LINK GPRS/EDGE CLASS 12 LINK	
GSM 1900	GSM LINK GPRS/EDGE CLASS 12 LINK	GSM LINK GPRS/EDGE CLASS 12 LINK	
WCDMA BAND V	RMC 12.2KBPS LINK	RMC 12.2KBPS LINK	
WCDMA BAND II	RMC 12.2KBPS LINK	RMC 12.2KBPS LINK	



## **4 MEASUREMENT INSTRUMENTS**

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibra- tion	Calibrated Until
EMI Test Receiver	R&S	ESW	101535	2017.06.01	2018.05.31
Signal Analyzer	Agilent	N9020A	MY49100060	2017.03.11	2018.03.10
Test Receiver	R&S	ESCI	101427	2017.10.15	2018.10.14
Universal Radio Communication Tester	R&S	CMW500	117239	2017.06.15	2018.06.14
Bilog Antenna	TESEQ	CBL6111D	34678	2017.03.24	2018.03.23
Horn Antenna	Schwarzbeck	BBHA 9120D	9120D-1343	2017.03.06	2018.03.05
SHF-EHF Horn Antenna (15G-40GHz)	BBHA 9170	SCHWARZBECK	BBHA9170367	2017.05.02	2018.05.01
Low frequency cable	EM	R01	N/A	2017.03.12	2018.03.11
Low frequency cable	EM	R06	N/A	2017.03.12	2018.03.11
High frequency cable	SCHWARZBECK	R04	N/A	2017.03.12	2018.03.11
High frequency cable	SCHWARZBECK	R02	N/A	2017.03.12	2018.03.11
Pre-mplifier (0.1M-3GHz)	EM	EM330	60538	2017.03.12	2018.03.11
PreAmplifier (1G-26.5GHz)	Agilent	8449B	60538	2017.10.15	2018.10.14
Pre-mplifier (18G-40G)	MINI-CIRCUITS	AP-040G	1382501	2017.05.15	2018.05.14
Band Reject fil- ter(1920-1980MHz)	COM-MW	ZBSF-1920-1980	0092	2017.10.15	2018.10.14
Band Reject fil- ter(880-915MHz)	COM-MW	ZBSF-C897.5-35	707	2017.10.15	2018.10.14
Band Reject fil- ter(1710-1785MHz)	COM-MW	ZBSF-C1747.5-75	708	2017.10.15	2018.10.14
Band Reject fil- ter(1850-1910MHz)	COM-MW	ZBSF-C1880-60	709	2017.10.15	2018.10.14
Band Reject fil- ter(2500-2570MHz)	COM-MW	ZBSF-C2535-70	710	2017.10.15	2018.10.14
Highpass Filter	WHKX7.0/18G-8SS	Wainwright	18	2017.10.15	2018.10.14
trun table	EM	SC100_1	60531	N/A	N/A
Antnna mast	EM	SC100	N/A	N/A	N/A
	•				•

Equipment with a calibration date of "NCR" shown in this list was not used to make direct calibrated measurements.



#### **5 TEST ITEMS**

#### **5.1 CONDUCTED OUTPUT POWER**

#### Test overview

A system simulator was used to establish communication with the EUT. Its parameters were set to enforce EUT transmitting at the maximum power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

#### Test procedures

- 1. The transmitter output port was connected to the system simulator.
- 2. Set eut at maximum power through the system simulator.
- 3. Select lowest, middle, and highest channels for each band and different modulation.
- 4. Measure and record the power level from the system simulator.

#### Test setup



#### 5.2 PEAK TO AVERAGE RATIO

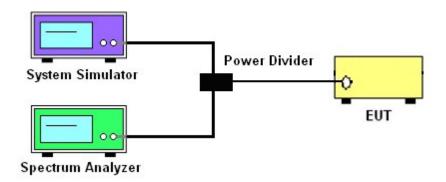
#### **TEST OVERVIEW**

According to §24.232(d), power measurements for transmissions by stations authorized under this section may be made either in accordance with a commission-approved average power technique or in compliance with paragraph (e) of this section. In both instances, equipment employed must be authorized in accordance with the provisions of §24.51. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 db.

## TEST PROCEDURES

- 1. The testing follows fcckdb 971168 v02r02 section
- 2. The eut was connected to the and peak and av system simulator& spectrum analysis reads
- 3. Select lowest, middle, and highest channels for each band and different modulation.
- 4. Set the test probe and measure average power of the spectrum analysis

#### TEST SETUP





## 5.3 TRANSMITTER RADIATED POWER (EIRP/ERP) TEST OVERVIEW

Effective Radiated Power (ERP) and Equivalent Isotropic Radiated Power (EIRP) measurements are performed using the substitution method described in ANSI/TIA-603-D-2010 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using vertically polarized tuned dipole antennas. Measurements on signals operating above 1GHz are performed using vertically polarized broadband horn antennas. All measurements are performed as RMS average measurements while the EUT is operating at maximum power, and at the appropriate frequencies.

#### TEST PROCEDURE

- 1. The testing follows FCC KDB 971168 D01 Section 5.2.1. (for CDMA/WCDMA), Section 5.2.2 (for GSM/GPRS/EDGE) and ANSI / TIA-603-D-2010 Section 2.2.17.
- 2. The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load which was also placed on the turntable.
- 3. 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.
- 4. The frequency range up to tenth harmonic of the fundamental frequency was investigated.
- 5. Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a nonradiating cable. The absolute levels of the spurious emissions were measured by the substitution.
- 6. Effective Isotropic Radiated Power (EIRP) was measured by substitution method according to TIA/EIA-603-D. The EUT was replaced by the substitution antenna at same location, and then a known power from S.G. was applied into the dipole antenna through a Tx cable, and then recorded the maximum Analyzer reading through raised and lowered the test antenna. The correction factor (in dB) = S.G. Tx Cable loss + Substitution antenna gain Analyzer reading. Then the EUT's EIRP/ERP was calculated with the correction factor, ERP/EIRP = P.SG + GT LC

ERP/EIRP = effective or equivalent radiated power, respectively (expressed in the same units as PMe as, typically dBW or dBm);

PMeas(PK) = measured transmitter output power or PSD, in dBm or dBW;

GT = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

LC = signal attenuation in the connecting cable between the transmitter and antenna, in dB.



#### 5.4 OCCUPIED BANDWIDTH

#### **TEST OVERVIEW**

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured.

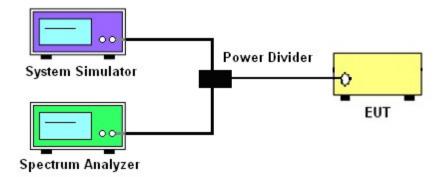
The 26 dB emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

All modes of operation were investigated and the worst case configuration results are reported in this section.

#### **TEST PROCEDURE**

- 1. The signal analyzer's automatic bandwidth measurement capability was used to perform the 99% occupied bandwidth and the 26dB bandwidth. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
- 2. RBW = 1 5% of the expected OBW
- 3. VBW ≥ 3 x RBW
- 4. Detector = Peak
- 5. Trace mode = max hold
- 6. Sweep = auto couple
- 7. The trace was allowed to stabilize
- 8. If necessary, steps 2 7 were repeated after changing the RBW such that it would be within
- 1 5% of the 99% occupied bandwidth observed in Step 7

#### TEST SETUP





## 5.5 FREQUENCY STABILITY Test Overview

Frequency stability testing is performed in accordance with the guidelines of ANSI/TIA-603-D-2010. The frequency stability of the transmitter is measured by:

- a.) Temperature: The temperature is varied from -30°C to +50°C in 10°C increments using an environmental chamber.
- b.) Primary Supply Voltage: The primary supply voltage is varied from 85% to 115% of the nominal value for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

For Part 22, the frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5 ppm) of the center frequency. For Part 24 the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

#### **Test Procedure**

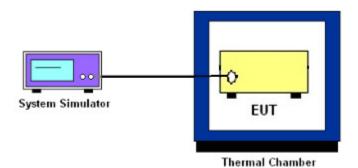
Temperature Variation

- 1. The testing follows fcckdb 971168 D01 section 9.0
- 2. The EUT was set up in the thermal chamber and connected with the system simulator.
- 3. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
- 4. With power OFF, the temperature was raised in 10°C steps up to 50°C. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

Voltage Variation

- 1. The testing follows FCC KDB 971168 D01 Section 9.0.
- 2. The EUT was placed in a temperature chamber at 25±5° C and connected with the system simulator.
- 3. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
- 4. The variation in frequency was measured for the worst case.

#### **TEST SETUP**



## 5.6 SPURIOUS EMISSIONS AT ANTENNA TERMINALS Test Overview

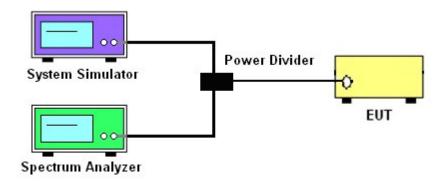
The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

#### Test procedure

- 1. The testing FCC KDB 971168 D01 v02r02 Section 6.0. and ANSI/TIA-603-D-2010-Section 2.2.13.2(d)
- 2. The EUT was connected to the spectrum analyzer and system simulator via a power divider.
- 3. The RF output of EUT was connected to the spectrum analyzer by an RF cable and attenuator. The path loss was compensated to the results for each measurement.
- 4. The middle channel for the highest RF power within the transmitting frequency was measured.
- 5. The conducted spurious emission for the whole frequency range was taken.
- 6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
- 7. The limit line is derived from 43 + 10log(P) dB below the transmitter power P(Watts)
- = P(W) [43 + 10log(P)] (dB)
- = [30 + 10log(P)] (dBm) [43 + 10log(P)] (dB)
- = -13dBm.

### Test Setup





#### 5.7 BAND EDGE

#### **OVERVIEW**

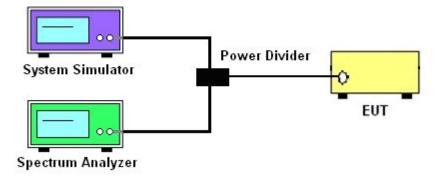
All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

The minimum permissible attenuation level of any spurious emission is 43 + log10(P[Watts]), where P is the transmitter power in Watts.

#### TEST PROCEDURE

- 1.The testing FCC KDB 971168 D01 v02r02 Section 6.0. and ANSI/TIA-603-D-2010-Section 2.2.13.2(d)
- 2. Start and stop frequency were set such that the band edge would be placed in the center of the Plot.
- 3. The EUT was connected to the spectrum analyzer and system simulator via a power divider.
- 4. The RF output of EUT was connected to the spectrum analyzer by an RF cable and attenuator. The path loss was compensated to the results for each measurement.
- 5. The band edges of low and high channels for the highest RF powers were measured.
- 6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
- 7. The limit line is derived from  $43 + 10\log(P)$  dB below the transmitter power P(Watts)
- = P(W) [43 + 10log(P)] (dB)
- = [30 + 10log(P)] (dBm) [43 + 10log(P)] (dB)
- = -13dBm.

#### **TEST SETUP**





## 5.8 FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT Test overview

Radiated spurious emissions measurements are performed using the substitution method described in ANSI/TIA-603-D-2010 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using horizontally and vertically polarized tuned dipole antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized horn antennas. All measurements are performed as peak measurements while the EUT isoperating at maximum power and at the appropriate frequencies.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

#### Test procedure

- 1. The testing FCC KDB 971168 D01 Section 5.8 and ANSI/TIA-603-D-2010-Section 2.2.12.2(b)
- 2. RBW = 100kHz for emissions below 1GHz and 1MHz for emissions above 1GHz
- 3. VBW  $\geq$  3 x RBW
- 4. Span = 1.5 times the OBW
- 5.No. of sweep points > 2 x span/RBW
- 6. Detector = Peak
- 7. Trace mode = max hold
- 8. The trace was allowed to stabilize
- 9. Effective Isotropic Spurious Radiation was measured by substitution method according to TIA/EIA-603-D. The EUT was replaced by the substitution antenna at same location, and then a known power from S.G. was applied into the dipole antenna through a Tx cable, and then recorded the maximum Analyzer reading through raised and lowered the test antenna. The correction factor (in dB) = S.G. Tx Cable loss + Substitution antenna gain Analyzer reading. Then the EUT's EIRP/ERP was calculated with the correction factor, ERP/EIRP = P.SG + GT LC

ERP/EIRP = effective or equivalent radiated power, respectively (expressed in the same units as PMeas, t ypically dBW or dBm);

P.SG = measured transmitter output power or PSD, in dBm or dBW;

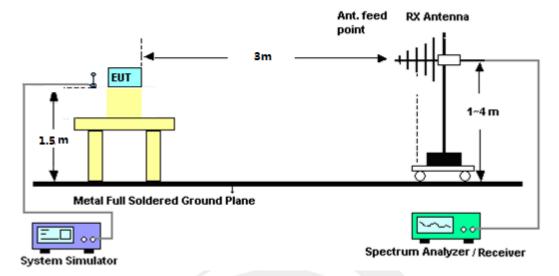
GT = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

LC = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

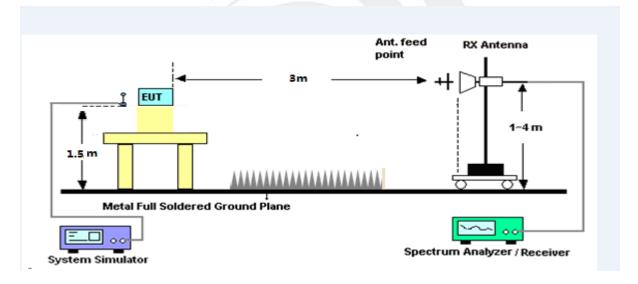


#### **TEST SETUP**

#### For radiated test from 30MHz to 1GHz



## For radiated test from above 1GHz





## APPENDIX A.TESTRESULT A1.CONDUCTED OUTPUT POWER GSM 850:

Mode	Frequency (MHz)	AVG Power(dBm)
	824.2	32.40
GSM	836.6	32.58
	848.8	32.69
	824.2	32.34
GPRS(GMSK,1-Slot)	836.6	32.49
	848.8	32.61
	824.2	31.90
GPRS(GMSK,2-Slot)	836.6	32.05
	848.8	32.14
	824.2	31.47
GPRS(GMSK,3-Slot)	836.6	31.62
	848.8	31.73
	824.2	31.02
GPRS(GMSK,4-Slot)	836.6	31.16
	848.8	31.24

## PCS 1900:

Mode	Frequency (MHz)	AVG Power(dBm)
	1850.2	29.23
GSM	1880.0	29.25
	1909.8	29.44
	1850.2	29.18
GPRS(GMSK,1-Slot)	1880.0	29.19
	1909.8	29.38
	1850.2	28.69
GPRS(GMSK,2-Slot)	1880.0	28.72
	1909.8	28.94
	1850.2	28.27
GPRS(GMSK,3-Slot)	1880.0	28.28
	1909.8	28.49
	1850.2	27.82
GPRS(GMSK,4-Slot)	1880.0	27.87
	1909.8	28.04



#### UMTS BAND V

Mode	Frequency(MHz)	AVG Power
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	826.4	23.52
WCDMA 850 RMC	836.6	22.43
	846.6	22.40

## UMTS BAND II

Mode	Frequency(MHz)	AVG Power
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	1852.4	22.84
WCDMA 1900 RMC	1880	21.75
KWO	1907.6	22.74



## A2. PEAK-TO-AVERAGE RADIO

Mada	Frequency	PEAK Power	AVG Power	PAR
Mode	(MHz)	(dBm)	(dBm)	(dB)
	824.2	32.50	32.40	0.10
GSM850	836.6	32.69	32.58	0.11
	848.8	32.80	32.69	0.11
	824.2	32.45	32.34	0.11
GPRS850	836.6	32.59	32.49	0.10
	848.8	32.72	32.61	0.11
	1850.2	29.33	29.23	0.10
PCS1900	1880	29.36	29.25	0.11
	1909.8	29.56	29.44	0.12
GPRS1900	1850.2	29.28	29.18	0.10
	1880	29.30	29.19	0.11
	1909.8	29.49	29.38	0.11

Mode	Frequency	PEAK Power	AVG Power	PAR
iviode	(MHz)	(dBm)	(dBm)	(dB)
	826.4	26.42	23.52	2.90
WCDMA 850 RMC	836.6	25.38	22.43	2.95
	846.6	25.37	22.40	2.97
WCDMA 1900 RMC	1852.4	25.79	22.84	2.95
	1880	24.40	21.75	2.65
	1907.6	25.70	22.74	2.96



## A3. TRANSMITTER RADIATED POWER (EIRP/ERP)

	Radiated Power (ERP) for GSM 850 MHZ							
				Re	esult			
Mode	Frequency	S G. Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	Conclusion	
	824.2	24.09	0.44	6.5	30.15	Horizontal	Pass	
	824.2	25.82	0.44	6.5	31.88	Vertical	Pass	
CCMOTO	836.6	24.08	0.45	6.5	30.13	Horizontal	Pass	
GSM850	836.6	25.97	0.45	6.5	32.02	Vertical	Pass	
	848.8	24.36	0.46	6.5	30.40	Horizontal	Pass	
	848.8	26.12	0.46	6.5	32.16	Vertical	Pass	
	824.2	24.12	0.44	6.5	30.18	Horizontal	Pass	
	824.2	25.68	0.44	6.5	31.74	Vertical	Pass	
CDDC050	836.6	24.10	0.45	6.5	30.15	Horizontal	Pass	
GPRS850	836.6	25.89	0.45	6.5	31.94	Vertical	Pass	
	848.8	24.29	0.46	6.5	30.33	Horizontal	Pass	
	848.8	26.11	0.46	6.5	32.15	Vertical	Pass	

Radiated Power (EIRP) for PCS 1900 MHZ							
				F	Result		
Mode	Frequency	S G. Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP.	Conclusion
	1850.2	18.89	2.41	10.35	26.83	Horizontal	Pass
	1850.2	20.74	2.41	10.35	28.68	Vertical	Pass
PCS1900	1880.0	19.06	2.42	10.35	26.99	Horizontal	Pass
PC31900	1880.0	20.77	2.42	10.35	28.70	Vertical	Pass
	1909.8	19.12	2.43	10.35	27.04	Horizontal	Pass
	1909.8	20.90	2.43	10.35	28.82	Vertical	Pass
	1850.2	18.94	2.41	10.35	26.88	Horizontal	Pass
	1850.2	20.47	2.41	10.35	28.41	Vertical	Pass
CDDC1000	1880.0	18.77	2.42	10.35	26.70	Horizontal	Pass
GPRS1900	1880.0	20.71	2.42	10.35	28.64	Vertical	Pass
	1909.8	19.11	2.43	10.35	27.03	Horizontal	Pass
	1909.8	20.70	2.43	10.35	28.62	Vertical	Pass



Radiated Power (ERP) for WCDMA Band V								
				Re	esult			
Mode	Frequency	S G. Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P (dBm)	Polarization Of Max.ERP	Conclusion	
	826.4	15.03	0.44	6.5	21.09	Horizontal	Pass	
	826.4	16.95	0.44	6.5	23.01	Vertical	Pass	
Band V	836.6	13.83	0.45	6.5	19.88	Horizontal	Pass	
Band V	836.6	15.83	0.45	6.5	21.88	Vertical	Pass	
	846.6	14.07	0.46	6.5	20.11	Horizontal	Pass	
	846.6	15.80	0.46	6.5	21.84	Vertical	Pass	

	Radiated Power (EIRP) for WCDMA Band II									
			Result							
Mode	Frequency	S G. Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max.EIRP	Conclusion			
	1852.4	12.43	2.41	10.35	20.37	Horizontal	Pass			
	1852.4	14.37	2.41	10.35	22.31	Vertical	Pass			
Band II	1880.0	11.47	2.42	10.35	19.4	Horizontal	Pass			
Danu II	1880.0	13.3	2.42	10.35	21.23	Vertical	Pass			
	1907.6	12.3	2.43	10.35	20.22	Horizontal	Pass			
	1907.6	14.3	2.43	10.35	22.22	Vertical	Pass			



## A4. OCCUPIED BANDWIDTH (99% OCCUPIED BANDWIDTH/26dB BANDWIDTH)

Occupied Bandwidth for GSM 850 band					
NAI -	Fraguency/MHz)	Occupied Bandwidth	Emission Bandwidth		
Mode	Frequency(MHz)	(99%)( kHz)	(-26dBc)( kHz)		
Low Channel	824.2	245.10	312.6		
Middle Channel	836.6	245.82	318.1		
High Channel	848.8	247.17	314.6		
	Occupied Band	width for GPRS 850 band			
Mode	Fraguenov(MHz)	Occupied Bandwidth	Emission Bandwidth		
Mode	Frequency(MHz)	(99%)( kHz)	(-26dBc)( kHz)		
Low Channel	824.2	244.32	320.9		
Middle Channel	836.6	238.48	314.3		
High Channel	848.8	243.39	317.9		

Occupied Bandwidth for GSM1900 band						
NAI -	Fragues av (MHz)	Occupied Bandwidth	Emission Bandwidth			
Mode	Frequency(MHz)	(99%)( kHz)	(-26dBc)( kHz)			
Low Channel	1850.2	247.25	313.0			
Middle Channel	1880.0	248.10	316.2			
High Channel	1909.8	242.48	310.5			
	Occupied Bandy	width for GPRS 1900 band				
Mode	Fraguanay/MHz)	Occupied Bandwidth	Emission Bandwidth			
Mode	Frequency(MHz)	(99%)( kHz)	(-26dBc)( kHz)			
Low Channel	1850.2	246.88	315.2			
Middle Channel	1880.0	244.29	313.9			
High Channel	1909.8	246.21	318.6			



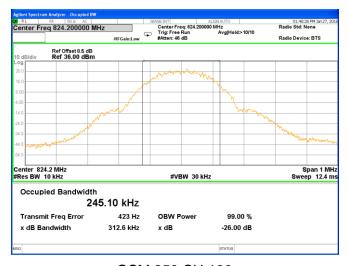
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Occupied Bandwidth for UMTS band V						
Mode	Occupied Bandwidth		Emission Bandwidth			
iviode	Frequency(MHz)	(99%)( MHz)	(-26dBc)( MHz)			
Low Channel	826.4	4.1603	4.622			
Middle Channel	836.6	4.1571	4.682			
High Channel	846.6	4.1493	4.637			

Occupied Bandwidth for UMTS band II						
Modo	Fraguency(MHz)	Occupied Bandwidth				
Mode	Frequency(MHz)	(99%)( MHz)	(-26dBc)( MHz)			
Low Channel	1852.4	4.1494	4.638			
Middle Channel	1880	4.1550	4.647			
High Channel	1907.6	4.1475	4.646			



#### GSM 850 CH 128



#### GSM 850 CH 190



## GSM 850 CH 251





#### GPRS 850 CH 128



#### GPRS 850 CH 190



## GPRS 850 CH 251





## PCS 1900 CH 512



#### PCS 1900 CH 661



#### PCS 1900 CH 810





#### GPRS 1900 CH 512



## GPRS 1900 CH 661



#### GPRS 1900 CH 810

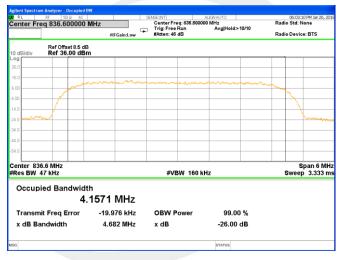




#### UMTS BAND V CH 4132



#### UMTS BAND V CH 4183

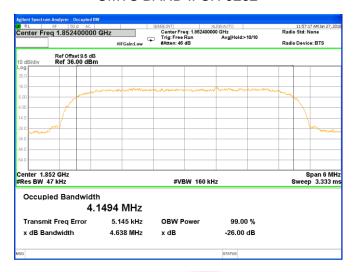


#### UMTS BAND V CH 4233

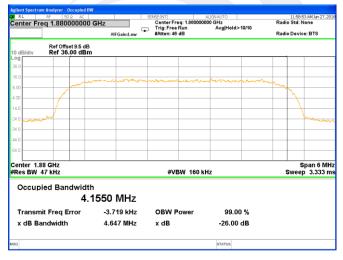




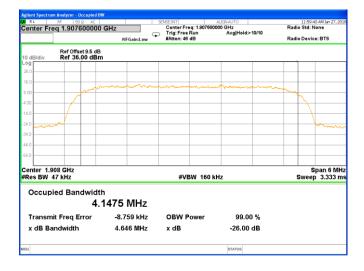
#### UMTS BAND II CH 9262



#### UMTS BAND II CH 9400



## UMTS BAND II CH 9538





## A5.FREQUENCY STABILITY

Normal Voltage = 3.7V.; Battery End Point (BEP) = 3.5 V.; Maximum Voltage = 4.2 V

GSM 850 Middle Channel/836.6MHz						
Temperature (°C)	Voltage (Volt)	Freq. Dev. (Hz)	Freq. Dev. (ppm)	Limit	Result	
50		16.50	0.020	2.5ppm	PASS	
40		25.68	0.031			
30	Normal Voltage	13.32	0.016			
20		28.73	0.034			
10		16.69	0.020			
0		28.87	0.035			
-10		18.64	0.022			
-20		15.09	0.018			
-30		29.51	0.035			
25	Maximum Voltage	25.48	0.030			
25	BEP	30.82	0.037			

GPRS 850 Middle Channel/836.6MHz						
Temperature (°C)	Voltage (Volt)	Freq. Dev. (Hz)	Freq. Dev. (ppm)	Limit	Result	
50		26.80	0.032		PASS	
40		11.69	0.014	2.5ppm		
30	Normal Voltage	21.61	0.026			
20		23.75	0.028			
10		25.05	0.030			
0		28.11	0.034			
-10		24.49	0.029			
-20		35.15	0.042			
-30		27.22	0.033			
25	Maximum Voltage	29.57	0.035			
25	BEP	34.25	0.041			





GSM 1900 Middle Channel/1880MHz						
Temperature (°C)	Voltage (Volt)	Freq. Dev. (Hz)	Freq. Dev. (ppm)	Limit	Result	
50		16.80	0.009			
40		23.21	0.012			
30		26.01	0.014	Within Au-		
20	Normal Voltage	16.47	0.009			
10		17.16	0.009			
0		13.66	0.007	thorized	PASS	
-10		26.36	0.014	Band		
-20		22.58	0.012			
-30		28.96	0.015			
25	Maximum Voltage	33.04	0.018			
25	BEP	18.44	0.010			

GPRS 1900 Middle Channel/1880MHz						
Temperature (°C)	Voltage (Volt)	Freq. Dev. (Hz)	Freq. Dev. (ppm)	Limit	Result	
50		22.37	0.012			
40		21.61	0.011			
30		31.82	0.017			
20		33.74	0.018			
10	Normal Voltage	26.12	0.014	Within Au-		
0		28.48	0.015	thorized	PASS	
-10		26.74	0.014	Band		
-20		24.91	0.013			
-30		19.41	0.010			
25	Maximum Voltage	24.32	0.013			
25	BEP	20.54	0.011			



WCDMA V Middle Channel/836.6MHz						
Temperature (°C)	Voltage (Volt)	Freq. Dev. (Hz)	Freq. Dev. (ppm)	Limit	Result	
50		21.81	0.026	2.5ppm	PASS	
40		33.51	0.040			
30	Normal Voltage	24.93	0.030			
20		21.13	0.025			
10		27.26	0.033			
0		13.78	0.016			
-10		14.17	0.017			
-20		16.38	0.020			
-30		26.00	0.031			
25	Maximum Voltage	32.65	0.039			
25	BEP	32.86	0.039			

1. The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.

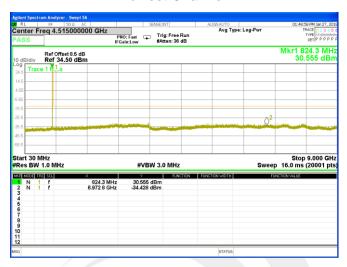
WCDMA II Middle Channel/1880MHz						
Temperature (°C)	Voltage (Volt)	Freq. Dev. (Hz)	Freq. Dev. (ppm)	Limit	Result	
50		15.84	0.008			
40		13.13	0.007			
30		15.21	0.008			
20		23.60	0.013			
10	Normal Voltage	17.03	0.009	Within Au-		
0		28.18	0.015	thorized	PASS	
-10		24.62	0.013	Band		
-20		23.45	0.012			
-30		25.85	0.014			
25	Maximum Voltage	16.14	0.009			
25	BEP	29.95	0.016			

<sup>1.</sup> The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.



# A6. SPURIOUS EMISSIONS AT ANTENNA TERMINALS GSM 850 BAND

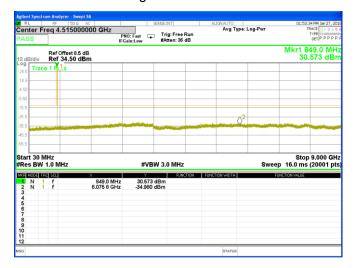
#### **Lowest Channel**



#### Middle Channel



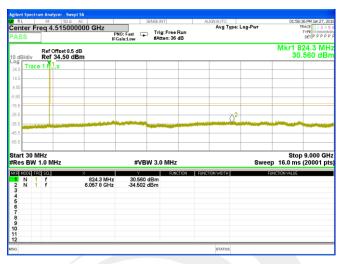
#### **Highest Channel**



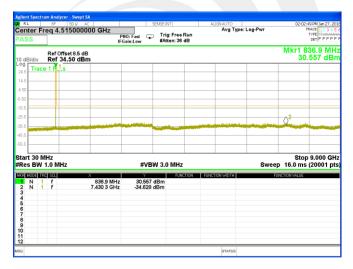


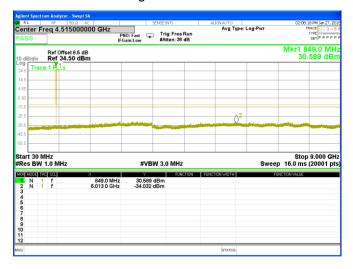
## **GPRS 850 BAND**

#### **Lowest Channel**



## Middle Channel

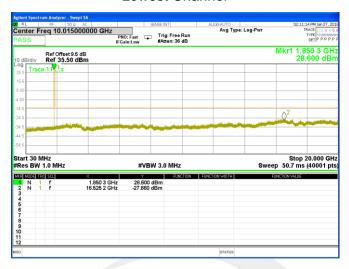




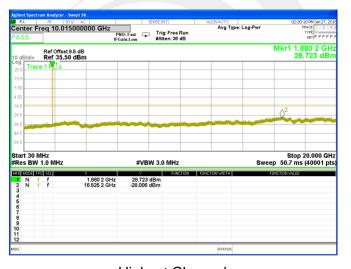


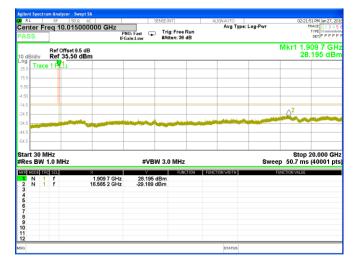
## GSM1900 BAND(30M-20G)

## Lowest Channel



## Middle Channel

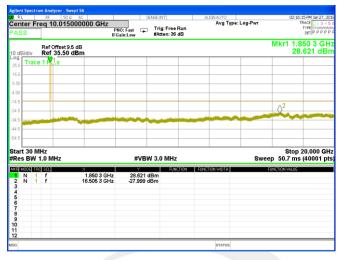




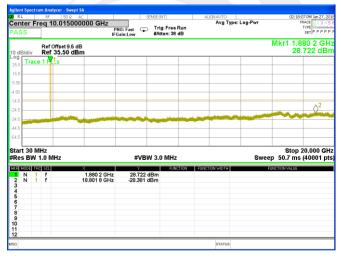


# GPRS1900 BAND(30M-20G)

## Lowest Channel



# Middle Channel

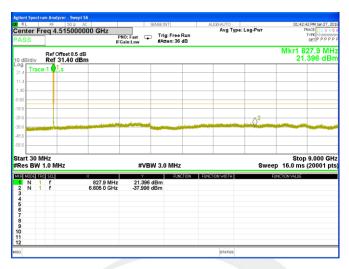




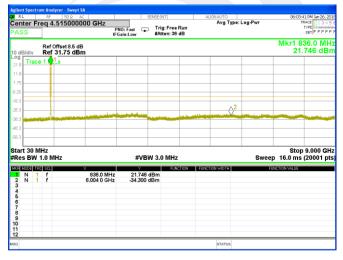


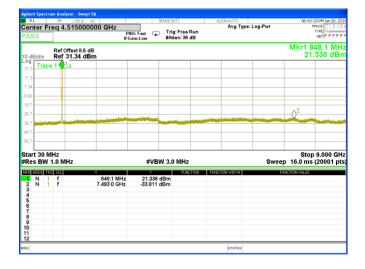
## WCDMA Band V (RMC 12.2Kbps)

## **Lowest Channel**



## Middle Channel

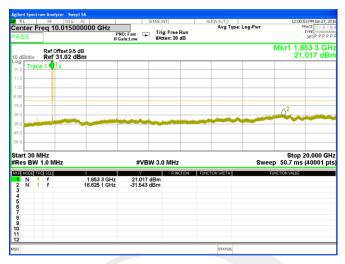




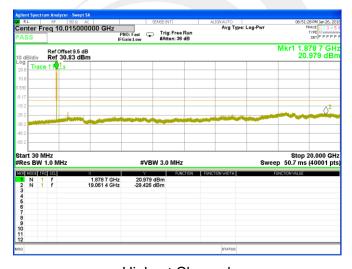


# WCDMA Band II (RMC 12.2Kbps)(30M-20G)

## **Lowest Channel**



#### Middle Channel







## **GSM 850**

## Lowest Band Edge







#### **GPRS 850**

# Lowest Band Edge







## **GSM 1900**

## Lowest Band Edge





### **GPRS 1900**

# Lowest Band Edge







## WCDMA Band VRMC 12.2Kbps

# Lowest Band Edge







## WCDMA Band IIRMC 12.2Kbps

# Lowest Band Edge







Report No.: STS1801196W01

# A8. FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT GSM 850: (30-9000)MHz

		GSM 8	350: (30-9	000)MHz			
	The Wo	rst Test R	esults Ch	annel 128	/824.2 MHz		
	S G.Lev	l Ant(dBi) l		PMea	Limit	Margin	Polarity
Frequency(MHz)	(dBm)		Loss	(dBm)	(dBm)	(dB)	
1648.27	-40.13	9.40	4.75	-35.48	-13.00	-22.48	Н
2472.63	-39.16	10.60	8.39	-36.95	-13.00	-23.95	Η
3296.91	-30.85	12.00	11.79	-30.64	-13.00	-17.64	Н
1648.02	-43.14	9.40	4.75	-38.49	-13.00	-25.49	V
2472.41	-43.95	10.60	8.39	-41.74	-13.00	-28.74	V
3296.78	-42.49	12.00	11.79	-42.28	-13.00	-29.28	V
	The Wo	rst Test R	esults Ch	annel 190	/836.6 MHz		
Fragues (MHz)	S G.Lev	/	dD:)	PMea	Limit	Margin	Polarity
Frequency(MHz)	(dBm)	Ant(dBi)	Loss	(dBm)	(dBm)	(dB)	
1673.14	-36.46	9.50	4.76	-31.72	-13.00	-18.72	Н
2509.64	-43.02	10.70	8.40	-40.72	-13.00	-27.72	Н
3346.12	-38.11	12.20	11.80	-37.71	-13.00	-24.71	Н
1672.87	-37.50	9.40	4.75	-32.85	-13.00	-19.85	V
2509.55	-31.80	10.60	8.39	-29.59	-13.00	-16.59	V
3346.04	-36.66	12.20	11.82	-36.28	-13.00	-23.28	V
	The Wo	rst Test R	esults Ch	annel 251	/848.8 MHz		
Frequency(MHz)	S G.Lev	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
Frequency(IVII12)	(dBm)	Anti(ubi)	L088	(dBm)	(dBm)	(dB)	Polarity
1697.61	-36.23	9.60	4.77	-31.40	-13.00	-18.40	Н
2546.37	-43.13	10.80	8.50	-40.83	-13.00	-27.83	Н
3394.99	-38.14	12.50	11.90	-37.54	-13.00	-24.54	Н
1697.67	-37.56	9.60	4.77	-32.73	-13.00	-19.73	V
2546.23	-31.77	10.80	8.50	-29.47	-13.00	-16.47	V
3395.19	-36.54	12.50	11.90	-35.94	-13.00	-22.94	V

**Note:** (1) Below 30MHz no Spurious found is the worst condition.

(2) Above 3.5GHz amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value





GPRS 850: (30-9000)MHz

		GPRS	850: (30-9	9000)MHz			
	The Wo	rst Test R	esults Ch	annel 128	/824.2 MHz		
F (N411)	S G.Lev	۸ - ۱ ( ما D: )	Loss	PMea	Limit	Margin	Polarity
Frequency(MHz)	(dBm)	Ant(dBi)		(dBm)	(dBm)	(dB)	
1648.20	-40.13	9.40	4.75	-35.48	-13.00	-22.48	Н
2472.66	-39.16	10.60	8.39	-36.95	-13.00	-23.95	Н
3296.68	-30.85	12.00	11.79	-30.64	-13.00	-17.64	Н
1648.04	-43.14	9.40	4.75	-38.49	-13.00	-25.49	V
2472.22	-43.95	10.60	8.39	-41.74	-13.00	-28.74	V
3296.65	-42.49	12.00	11.79	-42.28	-13.00	-29.28	V
	The Wo	rst Test R	esults Ch	annel 190	/836.6 MHz		
Fragues ov/MH=\	S G.Lev	Lev Ant/dD:\	Ant(dBi) Loss PMea (dBm)	Limit	Margin	Dolority	
Frequency(MHz)	(dBm) Ant(d	Ani(ubi)		(dBm)	(dBm)	(dB)	Polarity
1672.90	-36.46	9.50	4.76	-31.72	-13.00	-18.72	Н
2509.62	-43.02	10.70	8.40	-40.72	-13.00	-27.72	Н
3346.02	-38.11	12.20	11.80	-37.71	-13.00	-24.71	Н
1673.26	-37.50	9.40	4.75	-32.85	-13.00	-19.85	V
2509.83	-31.80	10.60	8.39	-29.59	-13.00	-16.59	V
3346.04	-36.66	12.20	11.82	-36.28	-13.00	-23.28	V
	The Wo	rst Test R	esults Ch	annel 251	/848.8 MHz		
Fragues ov/MH=\	S G.Lev	Ant/dDi)	Loop	PMea	Limit	Margin	Polarity
Frequency(MHz)	(dBm)	Ant(dBi)	Loss	(dBm)	(dBm)	(dB)	
1697.58	-36.23	9.60	4.77	-31.40	-13.00	-18.40	Н
2546.33	-43.13	10.80	8.50	-40.83	-13.00	-27.83	Н
3394.88	-38.14	12.50	11.90	-37.54	-13.00	-24.54	Н
1697.61	-37.56	9.60	4.77	-32.73	-13.00	-19.73	V
2546.15	-31.77	10.80	8.50	-29.47	-13.00	-16.47	V
3394.92	-36.54	12.50	11.90	-35.94	-13.00	-22.94	V
					•	•	

Note: (1) Below 30MHz no Spurious found is the worst condition.

(2) Above 3.5GHz amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value



PCS 1900: (30-20000)MHz

5 1900. (30-20000)	, <u> </u>	DCS 19	900: (30-2	0000)MHz					
The Worst Test Results for Channel 512/1850.2MHz									
	S G.Lev	Ant(dBi)   Lo	Loss PMea (dBm)	PMea	Limit	Margin	Delevitor		
Frequency(MHz)	(dBm)			(dBm)	(dB)	Polarity			
3700.01	-33.44	12.60	12.93	-33.77	-13.00	-20.77	Н		
5550.32	-33.99	13.10	17.11	-38.00	-13.00	-25.00	Н		
7400.82	-32.15	11.50	22.20	-42.85	-13.00	-29.85	Н		
3700.51	-34.52	12.60	12.93	-34.85	-13.00	-21.85	V		
5550.63	-33.75	13.10	17.11	-37.76	-13.00	-24.76	V		
7400.79	-31.71	11.50	22.20	-42.41	-13.00	-29.41	V		
	The Wors	t Test Res	ults for C	hannel 66	1/1880.0MH	-lz			
Frequency(MHz)	S G.Lev	/ Ant/dBi	Loss	PMea	Limit	Margin	Polarity		
Frequency(MH2)	(dBm)	Ant(dBi)	LUSS	(dBm)	(dBm)	(dB)			
3760.04	-33.44	12.60	12.93	-33.77	-13.00	-20.77	Н		
5640.26	-33.99	13.10	17.11	-38.00	-13.00	-25.00	Н		
7519.93	-32.15	11.50	22.20	-42.85	-13.00	-29.85	Ι		
3759.98	-34.52	12.60	12.93	-34.85	-13.00	-21.85	V		
5640.29	-33.75	13.10	17.11	-37.76	-13.00	-24.76	V		
7520.13	-31.71	11.50	22.20	-42.41	-13.00	-29.41	V		
	The Wors	t Test Res	ults for C	hannel 81	0/1909.8MH	Ηz			
Frequency(MHz)	S G.Lev	Ant(dBi)	1	PMea	Limit	Margin	Polarity		
Frequency(IVII-12)	(dBm)	Anti(ubi)	Loss	(dBm)	(dBm)	(dB)	Polarity		
3819.66	-33.44	12.60	12.93	-33.77	-13.00	-20.77	Н		
5729.18	-33.99	13.10	17.11	-38.00	-13.00	-25.00	Н		
7639.30	-32.15	11.50	22.20	-42.85	-13.00	-29.85	Н		
3819.77	-34.52	12.60	12.93	-34.85	-13.00	-21.85	V		
5729.25	-33.75	13.10	17.11	-37.76	-13.00	-24.76	V		
7639.39	-31.71	11.50	22.20	-42.41	-13.00	-29.41	V		

**Note:** (1) Below 30MHz no Spurious found is the worst condition.

(2) Above 8GHz amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value





GPRS 1900: (30-20000)MHz

RS 1900. (30-2000	- ,···· <b>·</b> -	GPRS1	900: (30-2	:0000)MHz					
The Worst Test Results for Channel 512/1850.2MHz									
	S G.Lev	A ( ( -ID : )	Loss	PMea	Limit	Margin	Polarity		
Frequency(MHz)	(dBm)	Ant(dBi)		(dBm)	(dBm)	(dB)			
3700.16	-33.44	12.60	12.93	-33.77	-13.00	-20.77	Н		
5550.31	-33.99	13.10	17.11	-38.00	-13.00	-25.00	Н		
7400.83	-32.15	11.50	22.20	-42.85	-13.00	-29.85	Н		
3700.51	-34.52	12.60	12.93	-34.85	-13.00	-21.85	V		
5550.62	-33.75	13.10	17.11	-37.76	-13.00	-24.76	V		
7400.83	-31.71	11.50	22.20	-42.41	-13.00	-29.41	V		
	The Wors	t Test Res	ults for C	hannel 66	1/1880.0MH	·lz			
Frequency(MHz)	S G.Lev	Ant(dRi)	i) Loss	PMea	Limit	Margin	Polarity		
Frequency(IVIFIZ)	(dBm)	Ant(dBi)		(dBm)	(dBm)	(dB)			
3759.96	-33.44	12.60	12.93	-33.77	-13.00	-20.77	Н		
5639.85	-33.99	13.10	17.11	-38.00	-13.00	-25.00	Н		
7520.28	-32.15	11.50	22.20	-42.85	-13.00	-29.85	Н		
3760.35	-34.52	12.60	12.93	-34.85	-13.00	-21.85	V		
5640.28	-33.75	13.10	17.11	-37.76	-13.00	-24.76	V		
7520.14	-31.71	11.50	22.20	-42.41	-13.00	-29.41	V		
	The Wors	t Test Res	ults for C	hannel 81	0/1909.8MH	Ηz			
Frequency(MHz)	S G.Lev	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity		
Frequency(IVII12)	(dBm)	Anti(ubi)	L055	(dBm)	(dBm)	(dB)	Polarity		
3819.53	-33.44	12.60	12.93	-33.77	-13.00	-20.77	Н		
5729.02	-33.99	13.10	17.11	-38.00	-13.00	-25.00	Н		
7638.94	-32.15	11.50	22.20	-42.85	-13.00	-29.85	Н		
3819.46	-34.52	12.60	12.93	-34.85	-13.00	-21.85	V		
5729.32	-33.75	13.10	17.11	-37.76	-13.00	-24.76	V		
7639.21	-31.71	11.50	22.20	-42.41	-13.00	-29.41	V		

Note: (1) Below 30MHz no Spurious found is the worst condition.

(2) Above 8GHz amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value

Report No.: STS1801196W01



## UMTS band V(30-9000)MHz

S band V(30-9000	)IVIHZ						
		WCDMA E	Band V: (3	30- <mark>9000</mark> )M	Hz		
	The w	ost testres	sults chan	nel 4132/8	826.4MHz		
Frequency(MHz)	S G.Lev	Ant(dBi)	Loop	PMea	Limit	Margin	Polarity
Frequency(IVIFIZ)	(dBm)	Anti(ubi)	Loss	(dBm)	(dBm)	(dB)	
1652.21	-41.41	9.40	4.75	-36.76	-13.00	-23.76	Н
2479.65	-40.56	10.60	8.39	-38.35	-13.00	-25.35	Н
3305.74	-32.20	12.00	11.79	-31.99	-13.00	-18.99	Н
1652.17	-43.89	9.40	4.75	-39.24	-13.00	-26.24	V
2479.36	-45.24	10.60	8.39	-43.03	-13.00	-30.03	V
3305.70	-43.34	12.00	11.79	-43.13	-13.00	-30.13	V
	The Wo	rst Test Re	esults Cha	annel 418	3/836.6MHz	1	
Fragues ov/MHz)	S G.Lev	/	Ant/dDi)	PMea	Limit	Margin	Delevity
Frequency(MHz)	(dBm)	Ant(dBi)	Loss	(dBm)	(dBm)	(dB) -23.36	Polarity
1673.14	-41.10	9.50	4.76	-36.36	-13.00	-23.36	Н
2509.43	-39.73	10.70	8.40	-37.43	-13.00	-24.43	Н
3346.03	-32.27	12.20	11.80	-31.87	-13.00	-18.87	Н
1672.93	-44.13	9.40	4.75	-39.48	-13.00	-26.48	V
2509.82	-44.05	10.60	8.39	-41.84	-13.00	-28.84	V
3346.37	-42.51	12.20	11.82	-42.13	-13.00	-29.13	V
	The Wo	rst Test Re	esults Cha	annel 423	3/846.6MHz	1	
Frequency(MHz)	S G.Lev	Ant(dBi)	1	PMea	Limit	Margin	Polority
Frequency(wiriz)	(dBm)	Ant(dBi)	Loss	(dBm)	(dBm)	(dB)	Polarity
1693.25	-40.63	9.60	4.77	-35.80	-13.00	-22.80	Н
2539.07	-40.02	10.80	8.50	-37.72	-13.00	-24.72	Н
3386.06	-31.05	12.50	11.90	-30.45	-13.00	-17.45	Н
1693.24	-43.25	9.60	4.77	-38.42	-13.00	-25.42	V
2539.38	-44.97	10.80	8.50	-42.67	-13.00	-29.67	V
3386.10	-43.83	12.50	11.90	-43.23	-13.00	-30.23	V

Note: (1) Below 30MHz no Spurious found is the worst condition.

(2) Above 3GHz amplitude of spurious emissions which are attenuated by more than 20Db below the permissible value

Report No.: STS1801196W01



# UMTS band II(30-20000)MHz

S band II(30-2000	U)IVIHZ								
		WCDMA E	Band II: (3	0-20000)M	lHz				
The Worst Test Results for Channel 9262/1852.4MHz									
Fragues av/MUz)	S G.Lev	۸ ۳۴( ماD: /	1	PMea	Limit	Margin	Polarity		
Frequency(MHz)	(dBm)	Ant(dBi)	LUSS	Loss (dBm)	(dBm)	(dB)			
3704.47	-34.21	12.60	12.93	-34.54	-13.00	-21.54	Н		
5557.42	-35.43	13.10	17.11	-39.44	-13.00	-26.44	Н		
7409.65	-32.99	11.50	22.20	-43.69	-13.00	-30.69	Н		
3704.43	-34.75	12.60	12.93	-35.08	-13.00	-22.08	V		
5557.50	-34.93	13.10	17.11	-38.94	-13.00	-25.94	V		
7409.71	-32.29	11.50	22.20	-42.99	-13.00	-29.99	V		
	The Wors	t Test Res	sults for C	hannel 94	00/1880MF	łz			
	S G.Lev	.ev		PMea	Limit	Margin	Polarity		
Frequency(MHz)	(dBm)	Ant(dBi)	Loss	(dBm)	(dBm)				
3759.95	-34.39	12.60	12.93	-34.72	-13.00	-21.72	Н		
5640.19	-34.04	13.10	17.11	-38.05	-13.00	-25.05	Н		
7520.17	-32.93	11.50	22.20	-43.63	-13.00	-30.63	Н		
3760.28	-36.00	12.60	12.93	-36.33	-13.00	-23.33	V		
5640.24	-34.12	13.10	17.11	-38.13	-13.00	-25.13	V		
7519.97	-33.14	11.50	22.20	-43.84	-13.00	-30.84	V		
•	The Worst	Test Resu	ults for Ch	nannel 953	38/1907.6M	Hz			
Fragues ov/MHz)	S G.Lev	Ant/dDi)	Loop	PMea	Limit	Margin	Dolority		
Frequency(MHz)	(dBm)	Ant(dBi)	Loss	(dBm)	(dBm)	(dB)	Polarity		
3815.41	-34.48	12.60	12.93	-34.81	-13.00	-21.81	Н		
5722.47	-34.96	13.10	17.11	-38.97	-13.00	-25.97	Н		
7630.18	-32.42	11.50	22.20	-43.12	-13.00	-30.12	Н		
3815.58	-34.82	12.60	12.93	-35.15	-13.00	-22.15	V		
5722.13	-33.95	13.10	17.11	-37.96	-13.00	-24.96	V		
7630.21	-31.82	11.50	22.20	-42.52	-13.00	-29.52	V		

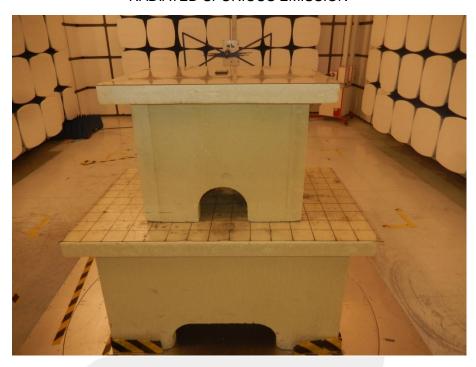
Note: (1) Below 30MHz no Spurious found is the worst condition.

(2) Above 6GHz amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value



## APPENDIX BPHOTOS OF TEST SETUP

## RADIATED SPURIOUS EMISSION





\*\*\*\*\*END OF THE REPORT\*\*\*