

RADIO TEST REPORT

S T S

Report No: STS1906231W01

Issued for

Telecell Mobile (H.K) Ltd.

RM 801 Metro Ctr II, 21 Lam Hing Street, KIn Bay, Hong Kong

Product Name:	Vision
Brand Name:	HORIZON
Model Name:	1232
Series Model:	N/A
FCC ID:	2ADX3I232
Test Standard:	FCC Part 22H and 24E, 27

Any reproduction of this document must be done in full. No single part of this document may be reproduced we permission from STS, All Test Data Presented in this report is only applicable to presented Test sample VAL

Shenzhen STS Test Services Co., Ltd. 1/F., Building B, Zhuoke Science Park, No.190, Chongqing Road, Fuyong Street, Bao'an District, Shenzhen, Guangdong, China TEL: +86-755 3688 6288 FAX: +86-755 3688 6277 E-mail:sts@stsapp.com



TEST RESULT CERTIFICATION

Applicant's Name:	Telecell Mobile (H.K) Ltd.
Address:	RM 801 Metro Ctr II, 21 Lam Hing Street, KIn Bay, Hong Kong
Manufacture's Name:	Telecell Mobile (H.K) Ltd.
Address	RM 801 Metro Ctr II, 21 Lam Hing Street, KIn Bay, Hong Kong
Product Description	
Product Description Product Name:	Vision
·	

	1232
Series Model:	N/A
Test Standards	FCC Part 22H and 24E, 27
Test Procedure:	KDB 971168 D01 v03r01,ANSI C63.26(2015)

This device described above has been tested by STS, the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

This report shall not be reproduced except in full, without the written approval of STS, this document may be altered or revised by STS, personal only, and shall be noted in the revision of the document...

Date of Test.....

Date (s) of performance of tests .: 26 June 2019 ~ 08 Aug. 2019

Date of Issue 08 Aug. 2019

Test Result Pass

Testing Engineer

(Chris Chen)

Technical Manager

(Sunday Hu)



Authorized Signatory :

(Vita Li)

 1/F., Building B, Zhuoke Science Park, No.190, Chongqing Road, Fuyong Street, Bao'an District, Shenzhen, Guangdong, China

 Tel: + 86-755
 3688
 6288
 Fax:+ 86-755
 3688
 6277
 Http://www.stsapp.com
 E-mail: sts@stsapp.com

Report No.: STS1906231W01



Table of Contents	Page
1 INTRODUCTION	6
1.1 TEST FACTORY	6
1.2 MEASUREMENT UNCERTAINTY	6
2 PRODUCT INFORMATION	7
3 TEST CONFIGURATION OF EQUIPMENT UNDER TEST	9
4 MEASUREMENT INSTRUMENTS	10
5 TEST ITEMS	11
5.1 CONDUCTED OUTPUT POWER	11
5.2 PEAK TO AVERAGE RATIO	12
5.3 TRANSMITTER RADIATED POWER (EIRP/ERP)	13
5.4 OCCUPIED BANDWIDTH	14
5.5 FREQUENCY STABILITY	15
5.6 SPURIOUS EMISSIONS AT ANTENNA TERMINALS	16
5.7 BAND EDGE	17
5.8 FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT	18
APPENDIX A.TESTRESULT	20
A1.CONDUCTED OUTPUT POWER	20
A2. PEAK-TO-AVERAGE RADIO	26
A3. TRANSMITTER RADIATED POWER (EIRP/ERP)	38
A4. OCCUPIED BANDWIDTH (99% OCCUPIED BANDWIDTH/26DB BANDV	VIDTH)43
A5.FREQUENCY STABILITY	56
A6. SPURIOUS EMISSIONS AT ANTENNA TERMINALS	65
A7. BAND EDGE	74
A8. FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT	81
APPENDIX-PHOTOS OF TEST SETUP	105

Page 3 of 105

APPENDIX-PHOTOS OF TEST SETUP

Shenzhen STS Test Services Co., Ltd.



Page 4 of 105

Report No.: STS1906231W01

Revision History

Rev.	Issue Date	Report NO.	Effect Page	Contents
00	08 Aug. 2019	STS1906231W01	ALL	Initial Issue



П

Shenzhen STS Test Services Co., Ltd.





SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

The radiated emission testing was performed according to the procedures of KDB 971168 D01 v03r01 and ANSI C63.26(2015)

FCC Rules	Test Description	Test Limit	Test Result	Reference
2.1046	Conducted OutputPower	Reporting Only	PASS	
22.913d 24.232d 27.50a	Peak-to-AverageRatio	< 13 dB	PASS	
2.1046 22.913 24.232 27.50	Effective Radiated Power/Equivalent Isotropic Radiated Power	< 7 Watts max. ERP(Part 22) < 2 Watts max. EIRP(Part 24) <1 Watts max. EIRP(Part 27)	PASS	
2.1049 22.917 24.238 27.53	Occupied Bandwidth	Reporting Only	PASS	
2.1055 22.355 24.235 27.54	Frequency Stability	< 2.5 ppm (Part 22) Emission must remain in band (Part 24) Emission must remain in band (Part 27)	PASS	
2.1051 22.917 24.238 27.53	Spurious Emission at Antenna Terminals	< 43+10log10(P[Watts])	PASS	
2.1053 22.917 24.238 27.53	Field Strength of Spurious Radiation	< 43+10log10(P[Watts])	PASS	
2.1051 22.917 24.238 27.53	Band Edge	< 43+10log10(P[Watts])	PASS	

Shenzhen STS Test Services Co., Ltd.



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 FCC test Firm Registration Number: 625569 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.

No.	Item	Uncertainty
1	RF output power, conducted	±0.71dB
2	Unwanted Emissions, conducted	±0.63dB
3	All emissions, radiated 30-200MHz	±3.43dB
4	All emissions, radiated 200MHz-1GHz	±3.57dB
5	All emissions,radiated>1G	±4.13dB
6	Conducted Emission(9KHz-150KHz)	±3.18dB
7	Conducted Emission(150KHz-30MHz)	±2.70dB

Shenzhen STS Test Services Co., Ltd.



Page 7 of 105

Report No.: STS1906231W01

2 PRODUCT INFORMATION

Product Name	Vision
Trade Name	HORIZON
Model Name	1232
Series Model	N/A
Model Difference	N/A
Tx Frequency:	GPRS/EDGE: 850: 824 MHz ~ 849MHz 1900: 1850 MHz ~ 1910MHz WCDMA: Band V: 824 MHz ~ 849 MHz Band II: 1850 MHz ~ 1910 MHz Band IV: 1710 MHz ~ 1755 MHz EVDO&CDMA: BC0: 824.70 MHz~ 848.31 MHz BC1: 1851.25 MHz~ 1908.75 MHz
Rx Frequency:	GPRS/EDGE: 850: 869 MHz ~ 894 MHz 1900: 1930 MHz ~ 1990MHz WCDMA: Band V: 869 MHz ~ 894 MHz Band II: 1930 MHz ~ 1990 MHz Band IV: 2110 MHz ~ 2155 MHz EVDO&CDMA: BC0: 869.70 MHz~ 894.30 MHz BC1: 1931.25 MHz~ 1988.75 MHz
Max RF Output Power:GPRS850(1-Slot):27.52dBm, GPRS1900(1-Slot):24.35dBm GPRS850(2-Slot):27.03dBm, GPRS1900(2-Slot):23.88Bm GPRS850(3-Slot):26.57dBm, GPRS1900(3-Slot):23.43dBm GPRS850(4-Slot):26.09dBm, GPRS1900(4-Slot):22.99dBm EDGE 850(1-Slot):27.55dBm, EDGE 1900(1-Slot):23.68dBm EDGE 850(2-Slot):26.77dBm, EDGE 1900(2-Slot):22.92dBm EDGE 850(3-Slot):25.99dBm, EDGE 1900(3-Slot):22.16dBm EDGE 850(4-Slot):25.27dBm, EDGE 1900(4-Slot):21.36dBm WCDMA Band V:22.72dBm, WCDMA Band II:22.62dBm WCDMA Band IV:23.14dBm EVDO BC0:23.89dBm, EVDO BC1:24.20dBm CDMA BC0:24.12dBm, CDMA BC1:24.76dBm	
Type of Emission:	GPRS(850): 316KGXW; GPRS(1900): 316KGXW EDGE(850): 318KG7W; EDGE(1900): 312KG7W WCDMA850: 4M67F9W; WCDMA1900: 4M69F9W WCDMA1700: 4M68F9W EVDO BC0: 1M43F9W; EVDO BC1: 1M43F9W CDMA BC0: 1M43F9W; CDMA BC1: 1M41F9W

Shenzhen STS Test Services Co., Ltd.

Page 8 of 105



Report No.: STS1906231W01

SIM Card:	Only support single SIM Card.		
Antenna:	External Antennal		
Antonno goini	GSM 850: 1.5dBi ,PCS 1900:2.5dBi, WCDMA 850: 1.5dBi,		
Antenna gain:	WCDMA1900: 2.5dBi, WCDMA1700:2.5dBi		
Adaptar:	Input: 100-240V, 50/60Hz, 0.5A Max		
Adapter:	Output: DC12V,1A		
GPRS/EDGE Class:	Multi-Class12		
Extreme Vol. Limits:	AC 109V/60Hz to AC 132V/60Hz (Nominal AC 120V/60Hz)		
Extreme Temp.	-30℃ to +50℃		
Tolerance:			
Hardware version number:	SLT768_V1.0.3		
Software version number:	I232S_EQ103_00B.B8E980.B8A1B01_N180928_1012_C07_V01-normal		



П

Shenzhen STS Test Services Co., Ltd.

Ð

3 TEST CONFIGURATION OF EQUIPMENT UNDER TEST

Antenna port conducted and radiated test items were performed according to KDB 971168 D01 and ANSI C63.26 2015 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 WCDMA Band IV.

3. 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	GPRS/EDGE CLASS 12 LINK	GPRS/EDGE CLASS 12 LINK	
GSM 1900	GPRS/EDGE CLASS 12 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	
WCDMA BAND IV	RMC 12.2KBPS LINK	RMC 12.2KBPS LINK	

Shenzhen STS Test Services Co., Ltd.



Report No.: STS1906231W01

4 MEASUREMENT INSTRUMENTS

Radiation Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Test Receiver	R&S	ESCI	101427	2018.10.13	2019.10.12
Signal Analyzer	Agilent	N9020A	MY51110105	2019.03.02	2020.03.01
Wireless Communications Test Set	R&S	CMW 500	133884	2019.03.02	2020.03.01
Bilog Antenna	TESEQ	CBL6111D	34678	2017.11.02	2020.11.1
Horn Antenna	SCHWARZBECK	BBHA 9120D(1201)	9120D-1343	2018.10.19	2021.10.18
SHF-EHF Horn Antenna (18G-40GHz)	A-INFO	LB-180400-KF	J211020657	2018.03.11	2021.03.10
Pre-Amplifier (0.1M-3GHz)	EM	EM330	060665	2018.10.13	2019.10.12
Pre-Amplifier (1G-18GHz)	SKET	LNPA-01018G-45	SK2018080901	2018.10.13	2019.10.12
turn table	EM	SC100_1	60531	N/A	N/A
Antenna mast	EM	SC100	N/A	N/A	N/A
Temperature & Humidity	HH660	Mieo	N/A	2018.10.11	2019.10.10
Test SW	BULUN	BL410-E/18.905			
RF Connected Test		_			
Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Universal Radio communication tester	R&S	CMU200	11764	2018.10.13	2019.10.12
Wireless Communications Test Set	R&S	CMW 500	133884	2019.03.02	2020.03.01
Signal Analyzer	Agilent	N9020A	MY49100060	2018.10.13	2019.10.12
Temperature & Humidity	HH660	Mieo	N/A	2018.10.11	2019.10.10
Test SW	FARAD	LZ-RF /LzRf-3A3			

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

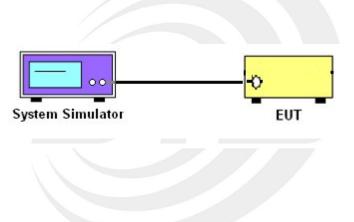
Test overview

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





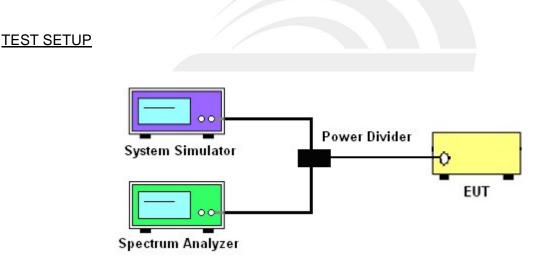
5.2 PEAK TO AVERAGE RATIO

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 v03r01 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



Shenzhen STS Test Services Co., Ltd.



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 C63.26 2015 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 C63.26-2015 Section 5.2.

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 ANSI C63.26-2015. 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.

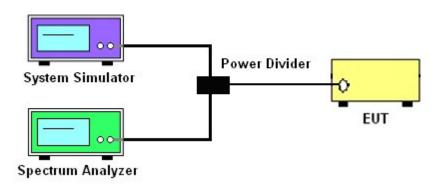
All modes of operation were investigated and the worst case configuration results are reported in this section.

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 \ge 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 C63.26 2015. 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 $\pm 0.00025\%$ (± 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

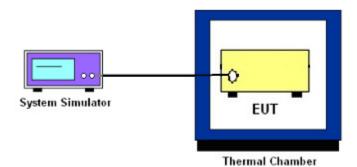
1. The testing follows FCC KDB 971168 D01 Section 9.0.

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



Shenzhen STS Test Services Co., Ltd.



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 v03r01 Section 6.0. and ANSI C63.26-2015-Section 5.5

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.

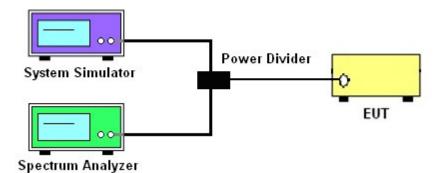
5. The conducted spurious emission for the whole frequency range was taken.

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



Shenzhen STS Test Services Co., Ltd.



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 v03r01 Section 6.0. and ANSI C63.26-2015-Section 5.7

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.

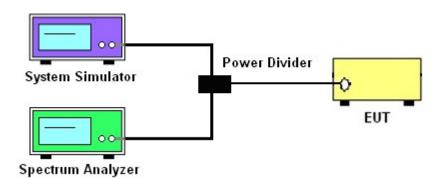
7.The limit line is derived from 43 + 10log(P) dB below the transmitter power P(Watts)

= P(W) - [43 + 10log(P)] (dB)

= [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)

= -13dBm.

TEST SETUP





5.8 FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT

Test overview

Radiated spurious emissions measurements are performed using the substitution method described in ANSI C63.26-2015 with the EUT transmitting into an integral antenna. Measurements on signalsoperating below 1GHz are performed using horizontally and vertically polarized tuned dipole antennas.Measurements on signals operating above 1GHz are performed using vertically and horizontally polarizedhorn 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 C63.26-2015-Section 5.5.
- 2. RBW = 100kHz for emissions below 1GHz and 1MHz for emissions above 1GHz
- 3. VBW \ge 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.

Shenzhen STS Test Services Co., Ltd.

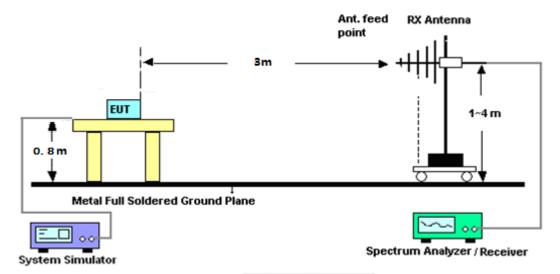
Page 19 of 105 Re

Report No.: STS1906231W01

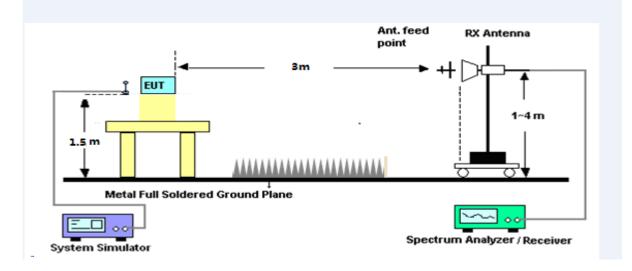
Ð

TEST SETUP

For radiated test from 30MHz to 1GHz



For radiated test from above 1GHz



Shenzhen STS Test Services Co., Ltd.



APPENDIX A.TESTRESULT A1.CONDUCTED OUTPUT POWER

GSM 850:

	GSM 850	
Mode	Frequency (MHz)	AVG Power(dBm)
	824.2	27.02
GPRS (GMSK,1-Slot)	836.6	27.30
(0	848.8	27.52
	824.2	26.61
GPRS (GMSK,2-Slot)	836.6	26.87
(0	848.8	27.03
	824.2	26.14
GPRS (GMSK,3-Slot)	836.6	26.42
(emerge elety	848.8	26.57
/	824.2	25.69
GPRS (GMSK,4-Slot)	836.6	25.94
(emore, relet)	848.8	26.09
	824.2	27.00
EGPRS (8PSK,1-Slot)	836.6	27.30
	848.8	27.55
	824.2	26.22
EGPRS (8PSK,2-Slot)	836.6	26.53
	848.8	26.77
	824.2	25.48
EGPRS (8PSK,3-Slot)	836.6	25.74
(0) 01(,0-0)0()	848.8	25.99
	824.2	24.70
EGPRS (8PSK,4-Slot)	836.6	25.03
	848.8	25.27

Shenzhen STS Test Services Co., Ltd.



PCS 1900:

	PCS 1900	
Mode	Frequency (MHz)	AVG Power(dBm)
GPRS (GMSK,1-Slot)	1850.2	24.35
	1880.0	23.96
	1909.8	23.53
GPRS (GMSK,2-Slot)	1850.2	23.88
	1880.0	23.49
	1909.8	23.11
GPRS (GMSK,3-Slot)	1850.2	23.43
	1880.0	23.06
	1909.8	22.66
GPRS (GMSK,4-Slot)	1850.2	22.99
	1880.0	22.58
	1909.8	22.20
EGPRS (8PSK,1-Slot)	1850.2	23.68
	1880.0	23.32
	1909.8	23.19
EGPRS (8PSK,2-Slot)	1850.2	22.92
	1880.0	22.62
	1909.8	22.40
EGPRS (8PSK,3-Slot)	1850.2	22.16
	1880.0	21.87
	1909.8	21.65
EGPRS (8PSK,4-Slot)	1850.2	21.36
	1880.0	21.12
	1909.8	20.87

Ħ