



FCC TEST REPORT (PART 24)

REPORT NO.: RF121010N015-2

MODEL NO.: Sonim XP3410 IS

(C21F010AB)

FCC ID: XAM500041GR01

RECEIVED: Oct. 10, 2012

TESTED: Oct. 10 ~ Dec. 7, 2012

ISSUED: Dec. 10, 2012

APPLICANT: ecom instruments GmbH

ADDRESS: Industriestraße 2, 97959 Assamstadt, Germany

ISSUED BY: Bureau Veritas Shenzhen Co., Ltd.

Dongguan Branch

LAB ADDRESS: No. 34, Chenwulu Section, Guantai Road, Houjie

Town, Dongguan City, Guangdong 523942, China

TEST LOCATION: No. 34, Chenwulu Section, Guantai Road, Houjie

Town, Dongguan City, Guangdong 523942, China

This report should not be used by the client to claim product certification, approval, or endorsement by A2LA or any government agencies.

This report is for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents. Unless specific mention, the uncertainty of measurement has been explicitly taken into account to declare the compliance or non-compliance to the specification.



TABLE OF CONTENTS

RELEASE CONTROL RECORD	4
1 CERTIFICATION	5
2 SUMMARY OF TEST RESULTS	6
2.1 MEASUREMENT UNCERTAINTY	6
3 GENERAL INFORMATION	8
3.1 GENERAL DESCRIPTION OF EUT	
3.2 CONFIGURATION OF SYSTEM UNDER TEST	9
3.3 DESCRIPTION OF SUPPORT UNITS	9
3.4 TEST ITEM AND TEST CONFIGURATION	
3.5 EUT OPERATING CONDITIONS	
3.6 GENERAL DESCRIPTION OF APPLIED STANDARDS	11
4 TEST TYPES AND RESULTS	
4.1 OUTPUT POWER MEASUREMENT	
4.1.1 LIMITS OF OUTPUT POWER MEASUREMENT	
4.1.2 TEST PROCEDURES	
4.1.3 TEST SETUP	
4.1.4 TEST RESULTS	
4.2 FREQUENCY STABILITY MEASUREMENT	
4.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT	
4.2.2 TEST PROCEDURE	
4.2.3 TEST SETUP	
4.2.4 TEST RESULTS	
4.3 OCCUPIED BANDWIDTH MEASUREMENT	
4.3.1 TEST PROCEDURES	
4.3.2 TEST SETUP	
4.4 BAND EDGE MEASUREMENT	
4.4.1 LIMITS OF BAND EDGE MEASUREMENT	
4.4.2 TEST SETUP	
4.4.3 TEST PROCEDURES	
4.4.4. TEST RESULTS	_
4.5 CONDUCTED SPURIOUS EMISSIONS	
4.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT	
4.5.2 TEST PROCEDURE	
4.5.3 TEST SETUP	
4.6 RADIATED EMISSION MEASUREMENT	
4.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT	23
4.6.2 TEST PROCEDURES	
4.6.3 DEVIATION FROM TEST STANDARD	23

Bureau Veritas Shenzhen Co., Ltd. Dongguan Branch

No. 34, Chenwulu Section, Guantai Rd., Houjie Town, Dongguan City, Guangdong 523942, China

Tel: +86 769 8593 5656 Fax: +86 769 8593 1080

Email: <u>customerservice.dg@cn.bureauveritas.com</u>



4.6	6.4 TEST SETUP	24
4.6	6.5 TEST RESULTS	25
4.7	7 PEAK TO AVERAGE RATIO	26
4.7	7.1 LIMITS OF PEAK TO AVERAGE RATIO MEASUREMENT	26
4.7	7.2 TEST SETUP	26
4.7	7.3 TEST PROCEDURES	26
4.7	7.4 TEST RESULTS	27
5	PHOTOGRAPHS OF THE TEST CONFIGURATION	28
6	INFORMATION ON THE TESTING LABORATORIES	29
7	APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO)
	THE EUT BY THE LAB	30

Email: <u>customerservice.dg@cn.bureauveritas.com</u>

Page 3 of 30

Tel: +86 769 8593 5656



RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF121010N015-2	Original release	Dec. 10, 2012

Email: customerservice.dg@cn.bureauveritas.com

Tel: +86 769 8593 5656

Fax: +86 769 8593 1080

Page 4 of 30 Report Version 1



1 CERTIFICATION

PRODUCT: MOBILE PHONE

MODEL: Sonim XP3410 IS (C21F010AB)

BRAND: Sonim

APPLICANT: ecom instruments GmbH

TESTED: Oct. 10 ~ Dec. 7, 2012

TEST SAMPLE: Production Unit

STANDARDS: FCC Part 24, Subpart E

The above equipment (model: Sonim XP3410 IS (C21F010AB)) has been tested by **Bureau Veritas Shenzhen Co.**, **Ltd. Dongguan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

TESTED BY : , DATE : Dec. 11, 2012

Kent Liu / Project Engineer

APPROVED BY : ______ , DATE : _____ Dec. 11, 2012

Sam Tung / Technical Manager

Tel: +86 769 8593 5656



2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 24 & Part 2					
STANDARD SECTION	TEST TYPE	RESULT	REMARK		
2.1046 24.232	Equivalent Isotropic Radiated Power	PASS	Meet the requirement of limit.		
2.1055 24.235 Frequency Stability		PASS	Meet the requirement of limit.		
2.1049 24.238(b)	Occupied Bandwidth	PASS	Meet the requirement of limit.		
24.238(b) Band Edge Measurements		PASS	Meet the requirement of limit.		
2.1051 24.238	Conducted Spurious Emissions	PASS	Meet the requirement of limit.		
2.1053 24.238	Radiated Spurious Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -14.98dB at 3760MHz.		

2.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	FREQUENCY	UNCERTAINTY
Conducted emissions	9kHz~30MHz	2.94dB
	30MHz ~ 1GHz	3.64dB
Radiated emissions	1GHz ~ 18GHz	2.2dB
	18GHz ~ 40GHz	1.94dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Page 6 of 30

Email: customerservice.dg@cn.bureauveritas.com

Tel: +86 769 8593 5656

Fax: +86 769 8593 1080

Report Version 1



2.2 TEST SITE AND INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Spectrum Analyzer Agilent	E4446A	MY46180622	May 02, 12	May 01, 13
Test Receiver ROHDE & SCHWARZ	ESVD	841431/004	May 15,12	May 14,13
Bilog Antenna TESEQ	CBL 6111D	27089	July 16,12	July 15,13
Horn Antenna EMCO	3117	00062558	Oct.18,12	Oct.17,13
10m Semi-anechoic Chamber ETS-LINDGREN	21.4m*12.1m*8.8m	NSEMC006	Mar. 24,12	Mar. 23,13
Signal Amplifier EMCI	EMC330	980095	Nov 02,12	Nov 01,13
Signal Amplifier SONOMA	310N	186955	Mar. 14,12	Mar. 13,13
Signal Amplifier HP	8449B	3008A00409	May 31,12	May 30,13
Spectrum Analyzer Agilent	E7405A	MY45118807	May 15,12	May 14,13
Digital Multimeter FLUKE	15B	A1220010DG	Jan 14,12	Jan 13,13
Power Meter Anritsu	ML2495A	1139001	Nov. 05,12	Nov. 04,13
Universal Radio Communication Tester Rohde & Schwarz	CMU 200	123259	Apr 16,12	Apr 15,13
Test software ADT	ADT_Radiated_V7. 6.15	N/A	N/A	N/A

- NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA and NIM/CHINA.
 - 2. The test was performed in Dongguan Chamber 10m.
 - 3. The horn antenna are used only for the measurement of emission frequency above 1GHz if tested.

Email: customerservice.dg@cn.bureauveritas.com

Tel: +86 769 8593 5656



3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	MOBILE PHONE		
MODEL NO.	Sonim XP3410 IS (C21F010AB)		
POWER SUPPLY	5.0Vdc (adapter or host equipment)		
POWER SUPPLI	3.7Vdc (battery)		
MODULATION TYPE	CDMA & 1xEVDO: QPSK, OQPSK, HPSK		
FREQUENCY RANGE CDMA & 1xEVDO: 1851.25MHz ~ 1908.75MHz			
MAX. EIRP POWER	0.557 Watts		
ANTENNA TYPE	Fixed Internal antenna with -1.5 dBi gain		
I/O PORTS	Refer to user's manual		
CABLE SUPPLIED	USB Cable: Non-Shielded, Detachable, 1.0m		
CABLE SUFFLIED	Earphone Cable: Non-shielded, Detachable, 1.6 m		
ACCESSORY DEVICES Refer to user's manual			

NOTE:

- 1. Bluetooth, CDMA technologies were used for the EUT.
- 2. The EUT was powered by the following adapters:

ADAPTER				
BRAND:	Sonim			
MODEL:	3202			
INPUT:	AC 100 - 240V, 50/60Hz 0.15A			
OUTPUT:	DC 5V, 700mA			
DC LINE:	N/A			

3. The above EUT information was declared by manufacturer and for more detailed feature description, please refer to the manufacturer's specifications or User's Manual.

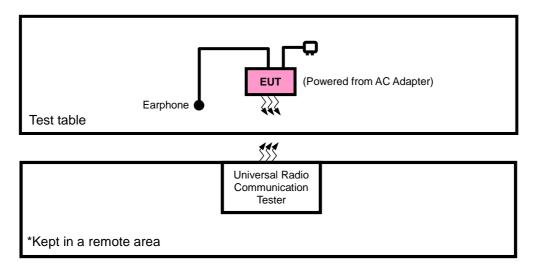
Email: customerservice.dg@cn.bureauveritas.com

Tel: +86 769 8593 5656



3.2 CONFIGURATION OF SYSTEM UNDER TEST

FOR RADIATION EMISSION TEST



3.3 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	N/A				

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	N/A

NOTE: All power cords of the above support units are non shielded (1.8m).

Email: customerservice.dg@cn.bureauveritas.com

Tel: +86 769 8593 5656



3.4 TEST ITEM AND TEST CONFIGURATION

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports The worst case was found when positioned on X-axis for EIRP and radiated emission. Following channel(s) was (were) selected for the final test as listed below:

EUT CONFIGURE MODE	DESCRIPTION	
Α	EUT + Adapter + Earphone with CDMA link	
В	EUT + Battery + Earphone with CDMA link	
С	EUT + USB Charger + Earphone with CDMA	

CDMA MODE

EUT CONFIGURE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	MODE
MODE		0-1 11-	0- 000 44	D00 0000/ F00//
-	EIRP	25 to 1175	25, 600, 1175	RC3+SO32(+ F-SCH)
-	FREQUENCY STABILITY	25 to 1175	600	RC3+SO32(+ F-SCH)
-	OCCUPIED BANDWIDTH	25 to 1175	25, 600, 1175	RC3+SO32(+ F-SCH)
-	BAND EDGE	25 to 1175	25, 1175	RC3+SO32(+ F-SCH)
-	CONDCUDETED EMISSION	25 to 1175	600	RC3+SO32(+ F-SCH)
-	RADIATED EMISSION	25 to 1175	600	RC3+SO32(+ F-SCH)
-	RADIATED EMISSION	25 to 1175	600	RC3+SO32(+ F-SCH)

TEST CONDITION:

TEST ITEM	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
ERP	21deg. C, 62%RH	5Vdc from adapter	Venless Long
FREQUENCY STABILITY	21deg. C, 62%RH	5Vdc from adapter	Venless Long
OCCUPIED BANDWIDTH	21deg. C, 62%RH	5Vdc from adapter	Venless Long
BAND EDGE	21deg. C, 62%RH	5Vdc from adapter	Venless Long
CONDCUDETED EMISSION	21deg. C, 62%RH	5Vdc from adapter	Venless Long
RADIATED EMISSION	25deg. C, 60%RH	5Vdc from adapter	Venless Long

Email: customerservice.dg@cn.bureauveritas.com

Tel: +86 769 8593 5656

Fax: +86 769 8593 1080

Page 10 of 30 Report Version 1



3.5 EUT OPERATING CONDITIONS

The EUT makes a call to the communication simulator. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency

3.6 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC 47 CFR Part 2 FCC 47 CFR Part 24 ANSI/TIA/EIA-603-C 2004

NOTE: All test items have been performed and recorded as per the above standards.

Tel: +86 769 8593 5656



4 TEST TYPES AND RESULTS

4.1 OUTPUT POWER MEASUREMENT

4.1.1 LIMITS OF OUTPUT POWER MEASUREMENT

Mobile and portable stations are limited to 2 watts EIRP

4.1.2 TEST PROCEDURES

EIRP MEASUREMENT:

- a. All measurements were done at low, middle and high operational frequency range. RBW and VBW is 5MHz for CDMA mode.
- b. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- c. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a tx cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value" of step b. Record the power level of S.G
- d. EIRP = Output power level of S.G TX cable loss + Antenna gain of substitution horn.

CONDUCTED POWER MEASUREMENT:

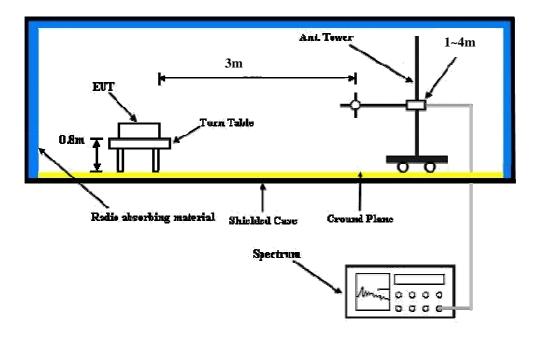
The EUT was set up for the maximum power with CDMA link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

Tel: +86 769 8593 5656



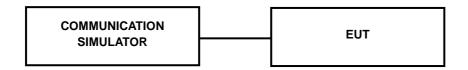
4.1.3 TEST SETUP

EIRP MEASUREMENT:



For the actual test configuration, please refer to the attached file (Test Setup Photo).

CONDUCTED POWER MEASUREMENT:



For the actual test configuration, please refer to the attached file (Test Setup Photo).

Page 13 of 30

Email: customerservice.dg@cn.bureauveritas.com

Report Version 1

Tel: +86 769 8593 5656



4.1.4 TEST RESULTS

CONDUCTED OUTPUT POWER (dBm)

Band	CDMA2000 BC0		
Channel	25	600	1175
Frequency (MHz)	1851.25	1880	1908.75
RC1+SO55	24.70	24.80	24.64
RC3+SO55	24.79	24.92	24.85
RC3+SO32(+ F-SCH)	24.91	25.02	24.98
RC3+SO32(+SCH)	24.76	24.86	24.80
RTAP 153.6	24.73	24.78	24.88
RETAP 4096	24.82	24.91	24.85

EIRP POWER (dBm)

FOR 1xRTT RC3+SO32(+ F-SCH) MODE

Channel	Frequency (MHz)	LVL (dBm)	Correction Factor(dB)	EIRP(dBm)	EIRP(W)	Polarization (H/V)
25	1851.25	-20.23	44.03	23.80	0.24	Н
600	1880.00	-20.89	44.37	23.48	0.22	Н
1175	1908.75	-19.99	43.25	23.26	0.21	Н
25	1851.25	-18.99	46.45	27.46	0.56	V
600	1880.00	-19.59	45.72	26.13	0.41	V
1175	1908.75	-20.32	45.03	24.71	0.30	V

REMARKS: 1. EIRP Output Power (dBm) = SPA Reading (dBm) + Correction Factor (dB).

2. Correction factor (dB) = Free Space Loss + Antenna Factor + Cable Loss

Email: customerservice.dg@cn.bureauveritas.com

Page 14 of 30

Tel: +86 769 8593 5656



4.2 FREQUENCY STABILITY MEASUREMENT

4.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

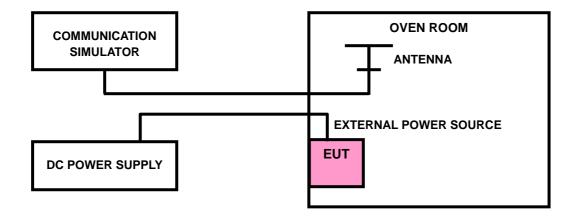
The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

4.2.2 TEST PROCEDURE

- a. Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.
- b. EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.
- c. The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the $\pm 0.5\,^{\circ}\mathrm{C}$ during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

NOTE: The frequency error was recorded frequency error from the communication simulator.

4.2.3 TEST SETUP



Email: customerservice.dg@cn.bureauveritas.com

Page 15 of 30

Tel: +86 769 8593 5656



4.2.4 TEST RESULTS

1xRTT RC3+SO32(+ F-SCH) MODE

FREQUENCY ERROR VS. VOLTAGE

VOLTAGE (Volts)	FREQUENCY ERROR (ppm)	LIMIT (ppm)
4.2	-0.01	2.5
3.7	-0.01	2.5
3.4	-0.01	2.5

NOTE: The applicant defined the normal working voltage of the battery is from 3.4Vdc to 4.2Vdc.

FREQUENCY ERROR vs. TEMPERATURE.

TEMP. (℃)	FREQUENCY ERROR (ppm)	LIMIT (ppm)
-30	-0.01	2.5
-20	-0.01	2.5
-10	-0.01	2.5
0	-0.01	2.5
10	-0.01	2.5
20	-0.01	2.5
30	-0.01	2.5
40	-0.01	2.5
50	-0.01	2.5
55	-0.01	2.5

Page 16 of 30

Email: customerservice.dg@cn.bureauveritas.com

Report Version 1

Tel: +86 769 8593 5656

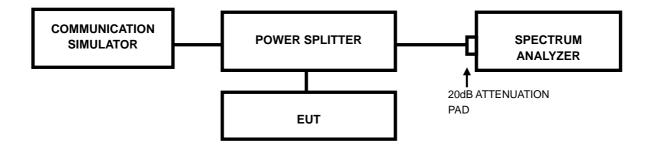


4.3 OCCUPIED BANDWIDTH MEASUREMENT

4.3.1 TEST PROCEDURES

The EUT makes a call to the communication simulator. All measurements were done at low, middle and high operational frequency range. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.

4.3.2 TEST SETUP



Page 17 of 30

Email: customerservice.dg@cn.bureauveritas.com

Report Version 1

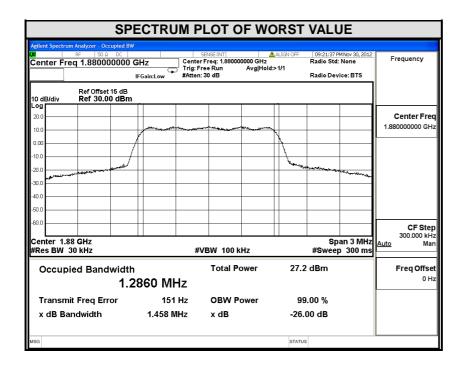
Tel: +86 769 8593 5656



4.3.3 TEST RESULTS

1xRTT RC3+SO32(+ F-SCH) MODE

CHANNEL	FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH (MHz)
25	1851.25	1.2846
600	1880	1.2860
1175	1908.75	1.2834



Page 18 of 30

Email: customerservice.dg@cn.bureauveritas.com

Tel: +86 769 8593 5656

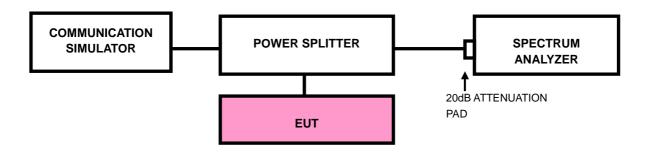


4.4 BAND EDGE MEASUREMENT

4.4.1 LIMITS OF BAND EDGE MEASUREMENT

Power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

4.4.2 TEST SETUP



4.4.3 TEST PROCEDURES

- a. All measurements were done at low and high operational frequency range.
- b. The center frequency of spectrum is the band edge frequency and span is 2 MHz. RB of the spectrum is 13kHz and VB of the spectrum is 51kHz.
- c. Record the max trace plot into the test report.

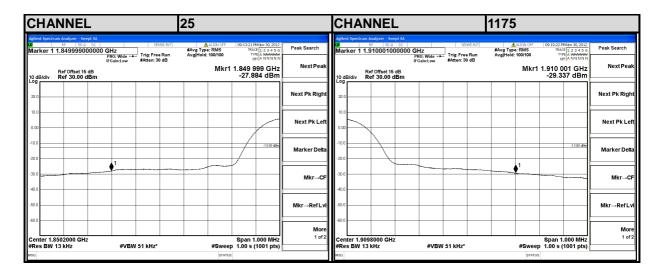
4.4.4 TEST RESULTS

1xRTT RC3+SO32(+ F-SCH)

Tel: +86 769 8593 5656 Fax: +86 769 8593 1080

Email: customerservice.dg@cn.bureauveritas.com





Email: customerservice.dg@cn.bureauveritas.com

Page 20 of 30

Tel: +86 769 8593 5656



4.5 CONDUCTED SPURIOUS EMISSIONS

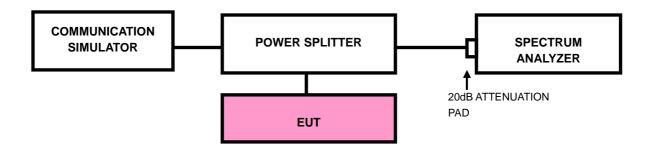
4.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. The emission limit equal to -13dBm.

4.5.2 TEST PROCEDURE

- a. The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.
- Measuring frequency range is from 9 kHz to 19.1GHz. 20dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz is used for conducted emission measurement.

4.5.3 TEST SETUP



Page 21 of 30

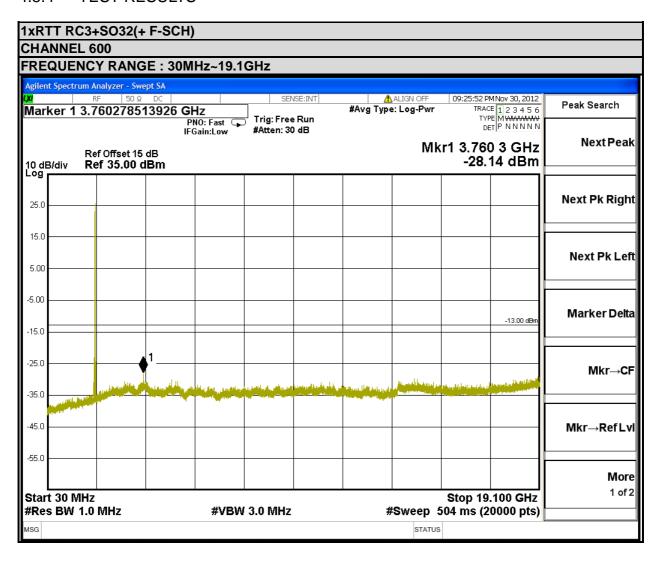
Email: customerservice.dg@cn.bureauveritas.com

Report Version 1

Tel: +86 769 8593 5656



4.5.4 TEST RESULTS



Email: customerservice.dg@cn.bureauveritas.com

Tel: +86 769 8593 5656



4.6 RADIATED EMISSION MEASUREMENT

4.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. The emission limit equal to -13dBm.

4.6.2 TEST PROCEDURES

- a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- b. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value" of step a. Record the power level of S.G
- c. EIRP = Output power level of S.G TX cable loss + Antenna gain of substitution horn.

NOTE: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

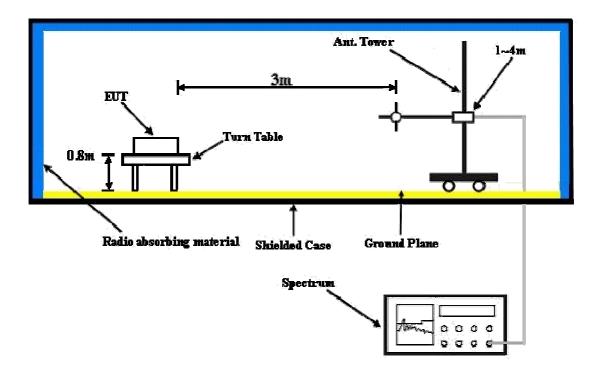
4.6.3 DEVIATION FROM TEST STANDARD

No deviation

Tel: +86 769 8593 5656



4.6.4 TEST SETUP



For the actual test configuration, please refer to the attached file (Test Setup Photo).

Email: customerservice.dg@cn.bureauveritas.com

Page 24 of 30

Tel: +86 769 8593 5656



4.6.5 TEST RESULTS

1xRTT RC3+SO32(+ F-SCH)

FREQUENCY RANGE	Above 1000MHz	INPUT POWER	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH	TESTED BY	Venless Long

	ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M					
No.	Freq. (MHz)	SPA READING (dBm)	Limit (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)
1	3760	-52.57	-13	-40.49	4.07	-36.42
2	5640	-61.37	-13	-49.16	4.81	-44.35
3	7520	-67.5	-13	-58.25	5.48	-52.77
4	11280	-66.07	-13	-43.27	4.48	-38.79
	ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M					
No.	No. Freq. (MHz) SPA READING (dBm) Limit (dBm) S.G Power Value (dBm) Factor (dB) EIRP (dBm)					
1	3760	-45.27	-13	-32.05	4.07	-27.98
2	5640	-62.81	-13	-50.32	4.81	-45.51
3	7520	-69.4	-13	-58.32	5.48	-52.84
4	11280	-68.84	-13	-54.11	4.48	-49.63

REMARKS:

- 1. EIRP(dBm) = S.G Power Value (dBm) + Correction Factor (dB).
- 2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB)

Email: customerservice.dg@cn.bureauveritas.com

Page 25 of 30

Tel: +86 769 8593 5656

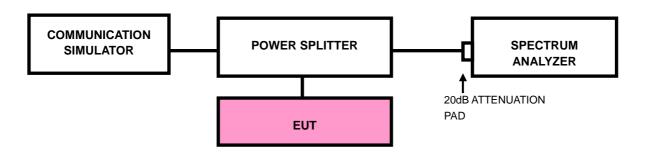


4.7 PEAK TO AVERAGE RATIO

4.7.1 LIMITS OF PEAK TO AVERAGE RATIO MEASUREMENT

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.

4.7.2 TEST SETUP



4.7.3 TEST PROCEDURES

- 1. Set resolution/measurement bandwidth ≥ signal's occupied bandwidth;
- 2. Set the number of counts to a value that stabilizes the measured CCDF curve;
- 3. Record the maximum PAPR level associated with a probability of 0.1%.

Email: customerservice.dg@cn.bureauveritas.com

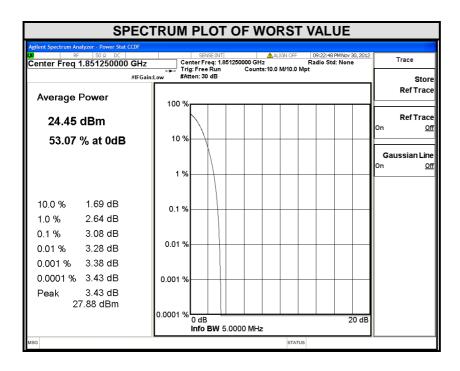
Tel: +86 769 8593 5656



4.7.4 TEST RESULTS

1xRTT RC3+SO32(+ F-SCH) MODE

CHANNEL	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
25	1851.25	3.08
600	1880	2.58
1175	1908.75	2.90



Page 27 of 30

Email: <u>customerservice.dg@cn.bureauveritas.com</u>

Tel: +86 769 8593 5656



5 PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).

Email: customerservice.dg@cn.bureauveritas.com

Tel: +86 769 8593 5656

Fax: +86 769 8593 1080

Page 28 of 30 Report Version 1



6 INFORMATION ON THE TESTING LABORATORIES

We, Bureau Veritas Shenzhen Co., Ltd. Dongguan Branch, were founded in 2002 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

Dongguan EMC/RF Lab:

Tel: +86-769-85935656 Fax: +86-769-85931080

Email: customerservice.dg@cn.bureauveritas.com

Web Site: www.adt.com.tw

The address and road map of all our labs can be found in our web site also.

Email: customerservice.dg@cn.bureauveritas.com

Page 29 of 30

Tel: +86 769 8593 5656



7 APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.

---END---

Email: customerservice.dg@cn.bureauveritas.com

Tel: +86 769 8593 5656

Fax: +86 769 8593 1080

Page 30 of 30 Report Version 1