

RF EXPOSURE REPORT

REPORT NO.: SA130806E06B R1

MODEL NO.: F@ST 3284u

FCC ID: VW3FAST3284U

RECEIVED: July 14, 2014

TESTED: Sep. 23, 2014

ISSUED: Oct. 30, 2014

APPLICANT: Sagemcom

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ISSUED BY: Bureau Veritas Consumer Products Services
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TABLE OF CONTENTS

RELEASE CONTROL RECORD	3
1. CERTIFICATION.....	4
2. RF EXPOSURE LIMIT	5
3. MPE CALCULATION FORMULA.....	5
4. CLASSIFICATION.....	5
5. ANTENNA GAIN	6
6. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER	7



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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA130806E06B	Original release	Oct. 13, 2014
SA130806E06B R1	Modified the section 1 information	Oct. 30, 2014



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1. CERTIFICATION

PRODUCT: Cable modem
BRAND NAME: Sagemcom
MODEL NO.: F@ST 3284u
TEST SAMPLE: ENGINEERING SAMPLE
APPLICANT: Sagemcom
TESTED DATE: Sep. 23, 2014
STANDARDS: FCC Part 2 (Section 2.1091)
KDB 447498 D03
IEEE C95.1

The above equipment (Model: F@ST 3284u) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan 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.

PREPARED BY : C. L. , **DATE:** Oct. 30, 2014
(Claire Kuan, Specialist)

APPROVED BY : May Chen , **DATE:** Oct. 30, 2014
(May Chen, Manager)

2. RF EXPOSURE LIMIT

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

FREQUENCY RANGE (MHz)	ELECTRIC FIELD STRENGTH (V/m)	MAGNETIC FIELD STRENGTH (A/m)	POWER DENSITY (mW/cm ²)	AVERAGE TIME (minutes)
LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE				
300-1500	...	...	F/1500	30
1500-100,000	...	...	1.0	30

F = Frequency in MHz

3. MPE CALCULATION FORMULA

$$P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$$

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

r = distance between observation point and center of the radiator in cm

4. CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

5. ANTENNA GAIN

The antennas provided to the EUT, please refer to the following table:

Transmitter Circuit	Brand	Model	Gain(dBi) Include cable loss	Antenna Type	Frequency range (MHz to MHz)	Connector Type
Chain (0)	MASTER WAVE	902P00089S0	2.89	PIFA	2400~2500	NA
Chain (1)	NA	NA	2.84	Print	2400~2500	NA

6. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

802.11b

FREQUENCY (MHz)	CONDUCTED POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm ²)	LIMIT (mW/cm ²)
2412 - 2462	83.368	2.89	20	0.03226	1.00

802.11g

FREQUENCY (MHz)	CONDUCTED POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm ²)	LIMIT (mW/cm ²)
2412 - 2462	411.493	5.88	20	0.31702	1.00

NOTE: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20})^2 / 2] = 5.88\text{dBi}$.

802.11n (HT20)

FREQUENCY BAND (MHz)	CONDUCTED POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm ²)	LIMIT (mW/cm ²)
2412 - 2462	387.743	5.88	20	0.29873	1.00

NOTE: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20})^2 / 2] = 5.88\text{dBi}$.

802.11n (HT40)

FREQUENCY BAND (MHz)	CONDUCTED POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm ²)	LIMIT (mW/cm ²)
2422 - 2452	257.437	5.88	20	0.19834	1.00

NOTE: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20})^2 / 2] = 5.88\text{dBi}$.

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