



RF EXPOSURE REPORT

REPORT NO.: SA130319C23

MODEL NO.: SBG6782-ACHU DIAGNOSTIC, SBG6782-ACH

FCC ID: W5HSBG6782ACH

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TESTED: Apr. 01 ~ Apr. 18, 2013

ISSUED: May 09, 2013

APPLICANT: GENERAL INSTRUMENT OF TAIWAN, LTD.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA130319C23	Original release	May 09, 2013



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1. CERTIFICATION

PRODUCT: Wireless Gateway

MODEL NO.: SBG6782-ACHU DIAGNOSTIC, SBG6782-ACH

BRAND: Motorola

APPLICANT: GENERAL INSTRUMENT OF TAIWAN, LTD.

TESTED: Apr. 01 ~ Apr. 18, 2013

TEST SAMPLE: ENGINEERING SAMPLE

STANDARDS: FCC Part 2 (Section 2.1091)

FCC OET Bulletin 65, Supplement C (01-01)

IEEE C95.1

The above equipment (model: SBG6782-ACHU DIAGNOSTIC) 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.

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Celine Chou / Specialist

APPROVED BY : Ken Liu , **DATE :** May 09, 2013
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2. RF EXPOSURE

2.1 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

2.2 MPE calculation Formula

$$Pd = (Pout * G) / (4 * \pi * r^2)$$

where

Pd = power density in mW/cm²

Pout = 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

2.3 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**.



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2.4 Calculation result of maximum conducted power

FREQUENCY BAND (MHz)	MAX POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm ²)	LIMIT (mW/cm ²)
2412-2462	24.89	9.17	20	0.507	1
5180-5240	16.95	8.27	20	0.066	1
5745-5825	28.55	8.27	20	0.975	1

NOTE:

2.4GHz: Directional gain = $4.4\text{dBi} + 10\log(3) = 9.17\text{dBi}$

5GHz: Directional gain = $3.5\text{dBi} + 10\log(3) = 8.27\text{dBi}$