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RF EXPOSURE REPORT

REPORT NO.: SA121031C14A
MODEL NO.: SBG6782-HH, SBG6782U-HH,
SBG6782U-HH Diagnostic
FCC ID: WH5SBG6782HH
RECEIVED: Nov. 26, 2012
TESTED: Dec. 03 ~ Dec. 10, 2012
ISSUED: Dec. 12, 2012

APPLICANT: GENERAL INSTRUMENT OF TAIWAN, LTD.

ADDRESS: 1, Lane 232 , Pao Chiao Road , Shin Dian,
Taipei, Taiwan 231 , R.O.C

ISSUED BY: Bureau Veritas Consumer Products Services
(H.K.) Ltd., Taoyuan Branch

LAB ADDRESS: No. 47, 14th Ling, Chia Pau Vil., Lin Kou Dist.,
New Taipei City, Taiwan, R.O.C.

TEST LOCATION: No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei
Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

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A D T

TABLE OF CONTENTS

RELEASE CONTROL RECORD.....	3
1. CERTIFICATION	4
2. RF EXPOSURE	5
2.1 LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)	5
2.2 MPE CALCULATION FORMULA	5
2.3 CLASSIFICATION	5
2.4 CALCULATION RESULT OF MAXIMUM CONDUCTED POWER	6



RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA121031C14A	Original release	Dec. 12, 2012



1. CERTIFICATION

PRODUCT: Wireless Gateway
MODEL NO.: SBG6782-HH, SBG6782U-HH, SBG6782U-HH Diagnostic
BRAND: Motorola
APPLICANT: GENERAL INSTRUMENT OF TAIWAN, LTD.
TESTED: Dec. 03 ~ Dec. 10, 2012
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-HH) 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 : Celine Chou , **DATE :** Dec. 12, 2012
Celine Chou / Specialist

APPROVED BY : Ken Lin , **DATE :** Dec. 12, 2012
Ken Lin / Manager

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

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

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

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**.

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	27.59	9.17	20	0.943	1
5180-5240	16.34	8.27	20	0.058	1
5745-5825	28.48	8.27	20	0.941	1

NOTE:

2.4GHz: Directional gain = 4.4dBi + 10log(3) = 9.17dBi

5.0GHz: Directional gain = 3.5dBi + 10log(3) = 8.27dBi