

## Supplementary RF Exposure Report

**Report No.:** SA970612H01I

**FCC ID:** H9PMC1790

**Test Model:** MC1790

**Received Date:** June 12, 2008

**Test Date:** July 30, 2008 and Apr. 22, 2015

**Issued Date:** May 12, 2015

**Applicant:** Symbol Technologies, Inc.

**Address:** 1 Zebra Plaza, Holtsville, NY 11742

**Manufacturer:** Symbol Technologies, Inc.

**Address:** 1 Zebra Plaza, Holtsville, NY 11742

**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch  
Hsin Chu Laboratory

**Lab Address:** No. 81-1, Lu Liao Keng, 9th Ling, Wu Lung Tsuen, Chiung Lin Hsiang, Hsin  
Chu Hsien 307, Taiwan R.O.C.

**Test Location (1):** No. 81-1, Lu Liao Keng, 9th Ling, Wu Lung Tsuen, Chiung Lin Hsiang, Hsin  
Chu Hsien 307, Taiwan R.O.C.

**Test Location (2):** No. 49, Ln. 206, Wende Rd., Shangshan Tsuen, Chiung Lin Hsiang, Hsin  
Chu Hsien 307, Taiwan R.O.C.

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**Report Issue History Record of EUT (MC1790)**

Attachment No.	Issue Date	Description
970612H01	Aug. 28, 2008	Original
970612H01I	May 12, 2015	1. Upgrade the versions of the standard to section 15.407 under new rule. 2. Changed the version of EUT information.

**Release Control Record**

Issue No.	Description	Date Issued
SA970612H01I	Original release.	May 12, 2015



A D T

## 1 Certificate of Conformity

**Product:** PERSONAL SHOPPING SYSTEM-BARCODE SCANNER

**Brand:** Symbol

**Test Model:** MC1790

**Sample Status:** MASS-PRODUCTION

**Applicant:** Symbol Technologies, Inc.

**Test Date:** July 30, 2008 and Apr. 22, 2015

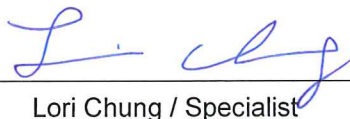
**Standards:** FCC Part 2 (Section 2.1091)

KDB 447498 D03

IEEE C95.1

The above equipment 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 :**

  
Lori Chung / Specialist

**Date:**

May 12, 2015

**Approved by :**

  
May Chen / Manager

**Date:**

May 12, 2015

## 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 <sup>2</sup> )	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/cm<sup>2</sup>

$P_{out}$  = output power to antenna in mW

G = gain of antenna in linear scale

$\pi$  = 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**.

## 3 Antenna Gain

PIFA antenna without Connector (for 2.4GHz antenna gain: 2.04dBi, for 5GHz antenna gain: 4.08dBi)

#### 4 Calculation Result of Maximum Conducted Power

For 15.247 and 15.407 (U-NII-1 band, U-NII-2A band & U-NII-2C band) data was copied from the original test report (Report No.: SA970612H01)

For 15.247:  
802.11b

Frequency Band (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
2412-2462	35.156	2.04	20	0.011	1

802.11g

Frequency Band (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
2412-2462	77.446	2.04	20	0.025	1

For 15.407:  
802.11a

Frequency Band (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
5180-5240	24.831	4.08	20	0.013	1
5260-5320	18.535	4.08	20	0.009	1
5500-5700	16.069	4.08	20	0.008	1
5745-5825	34.277	4.08	20	0.01745	1

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