



A D T

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.

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. The report must not be used by the client to claim product certification, approval, or endorsement or any government agencies.



Table of Contents

Report Issue History Record of EUT (MC1790)	3
Release Control Record	3
1 Certificate of Conformity	4
2 RF Exposure	5
2.1 Limits for Maximum Permissible Exposure (MPE)	5
2.2 MPE Calculation Formula	5
2.3 Classification	5
3 Antenna Gain	5
4 Calculation Result of Maximum Conducted Power	6

**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



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

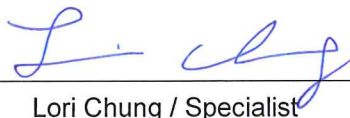
Standards: FCC Part 2 (Section 2.1091)

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 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

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 ²)	Limit (mW/cm ²)
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 ²)	Limit (mW/cm ²)
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 ²)	Limit (mW/cm ²)
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

--- END ---