

## RF Exposure Report

**Report No.:** SA150713C13

**FCC ID:** VPYLB1CL

**Test Model:** LBEQ6ZZ1CL

**Received Date:** Jul. 13, 2015

**Test Date:** Jul. 21 ~ Sep. 17, 2015

**Issued Date:** Sep. 21, 2015

**Applicant:** Murata Manufacturing Co., Ltd.

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

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### Release Control Record

Issue No.	Description	Date Issued
SA150713C13	Original release	Sep. 21, 2015



# 1 Certificate of Conformity

**Product:** Communication Module  
**Brand:** MURATA  
**Test Model:** LBEQ6ZZ1CL  
**Sample Status:** Engineering sample  
**Applicant:** Murata Manufacturing Co., Ltd.  
**Test Date:** Jul. 21 ~ Sep. 17, 2015  
**Standards:** FCC Part 2 (Section 2.1091)  
KDB Publication 447498 D01 General RF Exposure Guidance v06  
865664 D02 RF Exposure Reporting v01r02  
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 :**  , **Date:** Sep. 21, 2015  
Pettie Chen / Senior Specialist

**Approved by :**  , **Date:** Sep. 21, 2015  
Ken Liu / Senior 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 <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

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

where

Pd = power density in mW/cm<sup>2</sup>

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 Calculation Result Of Maximum Conducted Power

Frequency Band	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
WLAN: 2412-2462 MHz	23.42	2.07	20	0.070	1
WLAN: 5180-5240 MHz	13.58	2.43	20	0.008	1
WLAN: 5260-5320 MHz	12.96	2.43	20	0.007	1
WLAN: 5500-5700 MHz	12.74	2.43	20	0.007	1
WLAN: 5745-5825 MHz	12.44	2.43	20	0.006	1
Bluetooth EDR	8.27	2.07	20	0.002	1
Bluetooth LE	8.54	2.07	20	0.002	1

#### Conclusion:

The formula of calculated the MPE is:

$CPD1 / LPD1 + CPD2 / LPD2 + \dots \text{etc.} < 1$

CPD = Calculation power density

LPD = Limit of power density

WLAN+ Bluetooth =  $0.070 + 0.002 = 0.072$

Therefore, the maximum calculation of this situation is 0.072, which is less than the "1" limit.

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