



Dec. 28, 2015

RE: Analysis of RF Exposure for Portable and Mobile use per KDB 447498 D01 Mobile Portable RF Exposure v05r02 and RSS-102 Issue 5 March 2015.

FCC ID: QKLSCL1

**1. Mobile MPE Calculation Summary using a 20cm separation distance:**

Mode	Output Power	Power Density (mW/cm <sup>2</sup> )
Bluetooth LE	-0.33 dBm	0.00047

**2. Co-Located Transmitters transmission table:**

Transmitter type	Transmitter type that can transmit at the same time
Bluetooth LE	N/A

**3. Simultaneous Transmission MPE:**

Transmitter type	MPE (mw/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	MPE ratio (MPE/Limit)
Bluetooth LE	0.00047	1.0	0.00047
-	-	-	-
Sum of the ratios (should be <1.0)			0.00047



**4. Mobile MPE Calculation using a 20cm separation distance (Bluetooth LE):**

Using Power Density formula:

$$S = \frac{PG}{4\pi R^2}$$

where: S = power density

P = power input to the antenna

G = power gain of the antenna in the direction of interest relative to isotropic

R = distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal:	<b>-0.33</b>	(dBm)
Maximum peak output power at antenna input terminal:	<b>0.93</b>	(mW)
Antenna gain(typical):	<b>4.1</b>	(dBi)
Maximum antenna gain:	<b>2.57</b>	(numeric)
Prediction distance:	<b>20</b>	(cm)
Source Based Time Average Duty Cycle:	<b>100</b>	(%)
Prediction frequency:	<b>2402</b>	(MHz)
MPE limit for uncontrolled exposure at prediction frequency:	<b>1.000</b>	(mW/cm <sup>2</sup> )
Power density at prediction frequency:	<b>0.0004739</b>	(mW/cm <sup>2</sup> )
Power density at prediction frequency:	<b>0.004739</b>	(W/m <sup>2</sup> )
Margin of Compliance:	<b>-33.24</b>	(dB)

Sincerely,

Xiaoying Zhang

Name

Authorized Signatory

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