



June 10, 2015

TUV SUD BAPT  
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Attention: Director of Certification

**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: QNG-BE2813  
 IC: 6434C-BE2813

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

Mode	Output Power	Power Density (mW/m <sup>2</sup> )
WLAN (802.11 b/g)	14.33 dBm	0.0055
Bluetooth 3.0	6.58 dBm	0.0009

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

Transmitter type	Transmitter type that can transmit at the same time
WLAN (802.11 b/g)	Bluetooth 3.0
Bluetooth 3.0	WLAN (802.11 b/g)

**3. Simultaneous Transmission MPE:**

Transmitter type	MPE (mw/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	MPE ratio (MPE/Limit)
WLAN (802.11 b/g)	0.0051	1.0	0.0051
Bluetooth 3.0	0.0009	1.0	0.0009
Sum of the ratios (should be <1.0)			0.0060

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

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>14.33</b>	(dBm)
Maximum peak output power at antenna input terminal:	<b>27.10</b>	(mW)
Antenna gain(typical):	<b>-0.22</b>	(dBi)
Maximum antenna gain:	<b>0.951</b>	(numeric)
Prediction distance:	<b>20</b>	(cm)
Source Based Time Average Duty Cycle:	<b>100</b>	(%)
Prediction frequency:	<b>2412</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>0.0051</b>	(mW/cm <sup>2</sup> )
Power density at prediction frequency:	<b>0.051</b>	(W/m <sup>2</sup> )
Margin of Compliance:	<b>-22.90</b>	(dB)

**5. Mobile MPE Calculation using a 20cm separation distance (Bluetooth 3.0):**

Maximum peak output power at antenna input terminal:	<b>6.58</b>	(dBm)
Maximum peak output power at antenna input terminal:	<b>4.55</b>	(mW)
Antenna gain(typical):	<b>-0.22</b>	(dBi)
Maximum antenna gain:	<b>0.951</b>	(numeric)
Prediction distance:	<b>20</b>	(cm)
Source Based Time Average Duty Cycle:	<b>100</b>	(%)
Prediction frequency:	<b>2440</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>0.0009</b>	(mW/cm <sup>2</sup> )
Power density at prediction frequency:	<b>0.009</b>	(W/m <sup>2</sup> )
Margin of Compliance:	<b>-30.65</b>	(dB)

Sincerely,

Ferdie S. Custodio

Name

Authorized Signatory

Title: Senior EMC/Wireless Test Engineer