



June 10, 2015

TUV SUD BABT
Octagon House, Concorde Way
Segensworth Rd N, Fareham
PO15 5RL

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 ²)
WLAN (802.11 b/g)	14.33 dBm	0.0055
Bluetooth 3.0	6.58 dBm	0.0009
CDMA/1xEV-DO	24.85 dBm ERP	0.0259

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 and CDMA/1xEV-DO
Bluetooth 3.0	WLAN (802.11 b/g) and CDMA/1xEV-DO
CDMA/1xEV-DO	WLAN (802.11 b/g) and Bluetooth 3.0

3. Simultaneous Transmission MPE:

Transmitter type	MPE (mw/cm ²)	Limit (mW/cm ²)	MPE ratio (MPE/Limit)
WLAN (802.11 b/g)	0.0051	1.0	0.0051
Bluetooth 3.0	0.0009	1.0	0.0009
CDMA/1xEV-DO	0.0259	0.558	0.0464
Sum of the ratios (should be <1.0)			0.0524



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:	14.33	(dBm)
Maximum peak output power at antenna input terminal:	27.10	(mW)
Antenna gain(typical):	-0.22	(dBi)
Maximum antenna gain:	0.951	(numeric)
Prediction distance:	20	(cm)
Source Based Time Average Duty Cycle:	100	(%)
Prediction frequency:	2412	(MHz)
MPE limit for uncontrolled exposure at prediction frequency:	1.000	(mW/cm ²)
Power density at prediction frequency:	0.0051	(mW/cm ²)
Power density at prediction frequency:	0.051	(W/m ²)
Margin of Compliance:	-22.90	(dB)

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

Maximum peak output power at antenna input terminal:	6.58	(dBm)
Maximum peak output power at antenna input terminal:	4.55	(mW)
Antenna gain(typical):	-0.22	(dBi)
Maximum antenna gain:	0.951	(numeric)
Prediction distance:	20	(cm)
Source Based Time Average Duty Cycle:	100	(%)
Prediction frequency:	2440	(MHz)
MPE limit for uncontrolled exposure at prediction frequency:	1.000	(mW/cm ²)
Power density at prediction frequency:	0.0009	(mW/cm ²)
Power density at prediction frequency:	0.009	(W/m ²)
Margin of Compliance:	-30.65	(dB)



6. Mobile MPE Calculation using a 20cm separation distance (CDMA/1xEV-DO):

Maximum peak output power at antenna input terminal:	24.85	(dBm)
Maximum peak output power at antenna input terminal:	305.49	(mW)
Antenna gain(typical):	-3.71*	(dBi)
Maximum antenna gain:	0.426	(numeric)
Prediction distance:	20	(cm)
Source Based Time Average Duty Cycle:	100	(%)
Prediction frequency:	836.52	(MHz)
MPE limit for uncontrolled exposure at prediction frequency:	0.558	(mW/cm ²)
Power density at prediction frequency:	0.0259	(mW/cm ²)
Power density at prediction frequency:	0.259	(W/m ²)
Margin of Compliance:	-13.34	(dB)

* Antenna Gain value includes cable loss between the antenna and the EUT at the specified frequency range.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ferdie S. Custodio', written over a horizontal line.

Ferdie S. Custodio

Name

Authorized Signatory

Title: Senior EMC/Wireless Test Engineer