RF Exposure Statement: JP232NN1 002

Client:	**HOUWA SYSTEM DESIGN K.K.** 3-22-14 Higashi, Shibuya-ku, Tokyo, 150-0011 JAPAN
Test item:	**BLE Module**
Identification:	**BLEAD-MOD33QDNA (Model A), BLEAD-MOD33QDA (Model B)**

FCC Requirement

According to FCC 2.1091, mobile equipment must comply with the following applicable limit for maximum permissible exposure (MPE) specified in FCC 1.1310:

Equipment Use	Frequency Range	Power Density [mW/cm^2]	Average Time [min]
General Population / Uncontrolled Exposure	1.5 – 100GHz	1	30

Measurement Result

The maximum measured transmitter power is given in the following table:

Conducted Output Power P_{out} [mW]	Maximum Antenna Gain [dBi]	Power Density at 20cm [mW/cm^2]
7.78	2.24	0.002

Note:

The power density S in mW/cm^2 is calculated according to the Friis formula: $S = (P_{out} \cdot G) / (4\pi \cdot D^2)$, where
P_{out} = antenna conducted output power in mW,
G = antenna gain in linear scale (here: 2.24dBi = 1.67 linear),
D = distance between observation point and radiating structure in cm (here: 20cm).

Conclusion

The device complies with the FCC RF exposure requirements since the maximum transmitter power density is below the FCC limit.

Refer to test report JP232NN1 001 for more details.

NOTE:

BLEAD-MOD33QDNA (Model A), BLEAD-MOD33QDA (Model B) are identical except antennas. BLEAD-MOD33QDNA has UFL antenna connector for an external antenna. BLEAD-MOD33QDA has an integrated antenna which is not detachable. These 2 models are subject to certification application under one common FCC ID. Model A is subject to full assessment according to Part 15.247 while Model B is subject to radiated spurious test only.