

3.2 De facto Equivalent isotropic radiated power

Because using an internal antenna there are no deviations from the radiated test results according 3.1.

3.2.1 Transmitter

Integral Antenna:

At the transmitter the measurement was transacted with the modulation declared by the manufacturer and the maximum available output power of the EUT.

In this arrangement the EUT fulfils the requirements of the FCC rules § 15.247, subpart c, section b. This unit uses internal antenna. There is no provision for an external antenna (see photo).

3.3 RF Exposure Compliance Requirements

According to Supplement C, Edition 01-01 to OET Bulletin 65, Edition 97-01 this spread spectrum transmitter is categorically excluded from routine environmental evaluation because of the low power level, where there is a high likelihood of compliance with RF exposure standards.

The antenna used for this Bluetooth transceiver module must not be co-located or operating in conjunction with any other antenna or transmitter.

3.4 Out of Band Radiated Emissions

FCC Rule: 15.247(c) , 15.35

For out of band emissions that are close to or that exceed the 20 dB attenuation requirement described in the specification, radiated measurements were performed at a 3 m separation distance to determine whether these emissions complied with the general radiated emission requirement.

Limits:

For frequencies below 1GHz :

Max. reading – 20 dB

$90,92 \text{ dB}\mu\text{V/m} - 20 \text{ dB} = 70,92 \text{ dB}\mu\text{V/m}$

Guidance on Measurement of FHSS Systems:

“If the emission is pulsed, modify the unit for continuous operation , use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation.” Here the correction was added to the limit instead subtracted from the reading.

Duty Cycle correction = $20 \log (\text{dwell time}/100\text{ms})$

For frequencies above 1GHz (Peak measurements).

Limit = max. aver. reading-20dB +20dB(because Peak detector is used)

$90,92 \text{ dB}\mu\text{V/m}$

For frequencies above 1GHz (Average measurements).

Max. reading – 20 dB - duty cycle correction:

No duty cycle correction was added to the reading

$90,72 \text{ dB}\mu\text{V/m} - 20 \text{ dB} = 70,72 \text{ dB}\mu\text{V/m}$

Remarks: See attached diagrams.

Test equipment used: ETS 0125, ETS 0271