

FCC
Federal Communications Commission

Peter de Wit
22 April 2003
Phone: +31 (0) 6 22 47 00 55
Fax: +31 (0) 46 442 2192
Email: peter.dewit@7layers.de

request for a Limited Modular Approval - FCC ID: PI4_TDK_BTISM

Dear Application Examiner,

TDK Systems Europe are requesting for a modular approval for the device 'Bluetooth Intelligent Serial Module'. As the device is considered an OEM installation, according to FCC Public Notice DA00-1407, a **Limited Modular Approval** could be granted.

The further requirements of the FCC Public notice DA00-1407 are met:

1. The modular transmitter must have its own RF shielding

The radio portion of the module is contained in its own RF shielding. See photos in exhibits.

2. The modular transmitter must have buffered modulation / data inputs

The modulation/Data inputs are buffered.

3. The modular transmitter must have its own power supply regulation

The modular transmitter has its own power supply regulation.

4. The modular transmitter must comply with the antenna requirements of Section 15.203 and 15.204c

The transmitter shall only be used with the tested internal antenna.

5. The modular transmitter must be tested in a stand-alone configuration

The EUT was tested in the requested a stand-alone configuration.

6. The modular transmitter must be labelled with its own FCC ID number

The EUT will be labelled with its own FCC ID number. The label is specified in related exhibit. If the module is installed inside of an end-product, the label will not be visible. In this case the OEM customer will be instructed to how to apply the exterior label.

7. The modular transmitter must comply with any specific rule or operating requirements applicable to the transmitter and the manufacturer must provide adequate instructions along with the module to explain any such requirements.

The EUT is compliant with all applicable FCC rules. Detail instructions are given in the Users Guide.

8. The modular transmitter must comply with any applicable RF exposure requirements.

The maximum measured power output is 3,3 mW (5,19 dBm), the maximum antenna gain is 2 dBi = numeric gain 1,585 (see also FCC test report)

The maximum permissible exposure is defined in 47 CFR 1.1310 with 1 mW/cm². The distance from the EUT's transmitting antenna where the exposure level reaches the maximum permitted level is calculated using the general equation:

$$S = P * G / 4\pi R^2$$

$S_{\max} = 1\text{mW/cm}^2$, $P = 3,3 \text{ mW}$, linear power gain relative to the isotropic radiator = 2,0 dBi = 1,585 (numeric gain), R = distance in cm

Solving for R , the 1mW/cm² limit is reached in a distance of 0,645 cm to the transmitting antenna.

After installation of the Serial Module, the minimum distance of 0,645 cm must always be ensured. During normal use of the Serial Module it is impossible that the user gets closer to the transmitting antenna.

Please contact us if you have any additional questions.

Best Regards

7layers AG