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Additional declaration part according to FCC 15.247 for Bluetooth™ devices

1. Output power and channel separation of a Bluetooth device in different operating modes

The different operating modes of a Bluetooth device do not influence the output power and the channel spacing. There is only one transmitter, which is driven by identical input parameters. Only different hopping modes will be used. So the checking of RF parameters in one operation mode is sufficient. Requirement fulfilled.

2. Frequency range

The frequency range of this device is 2402 to 2480 MHz. This is in accordance to the Bluetooth Core Specification and was tested during the Bluetooth qualification tests of the Bluetooth module.

3. Examples of hopping sequences

Example of a 79 hopping sequence in data mode:

40, 21, 44, 23, 42, 53, 46, 55, 48, 33, 52, 35, 50, 65,
54, 67, 56, 37, 60, 39, 58, 69, 62, 71, 64, 25, 68, 27,
66, 57, 70, 59, 72, 29, 76, 31, 74, 61, 78, 63, 01, 41,
05, 43, 03, 73, 07, 75, 09, 45, 13, 47, 11, 77, 15, 00,
64, 49, 66, 53, 68, 02, 70, 06, 01, 51, 03, 55, 05, 04

Example of a hopping sequence in inquiry mode:

48, 50, 09, 13, 52, 54, 41, 45, 56, 58, 11, 15, 60, 62, 43, 47,
00, 02, 64, 68, 04, 06, 17, 21, 08, 10, 66, 70, 12, 14, 19, 23

Example of a hopping sequence in paging mode:

08, 57, 68, 70, 51, 02, 42, 40, 04, 61, 44, 46, 63, 14, 50, 48,
16, 65, 52, 54, 67, 18, 58, 56, 20, 53, 60, 62, 55, 06, 66, 64

4. Equally average use of frequencies in data mode

The use of frequencies will be pseudo randomly generated in dependence of the lower address part, the upper address part of the Bluetooth device and the internal master clock. So the used hopping sequence will be always different from the one before and an equally average use of the frequencies is guaranteed.

5 The receiver input bandwidth

The input bandwidth of the receiver is 1 MHz.

This will be part of the Bluetooth RF parameter test, and is part of the Bluetooth core specification.

6. Dwell time in data mode

The dwell time will be defined in the Bluetooth core specification. Therefore all Bluetooth devices comply with the FCC dwell time requirement. This will be checked during the Bluetooth qualification tests.

7. Spread rate / data rate of the direct sequence signal

The spread rate / data rate in inquiry and paging mode can be defined via the access code. The access code is the only criterion for the system to check if there is a valid transmission or not. If you regard the presence of a valid access code as one bit of information, and compare it with the length of the access code of 68 bits, the spread rate / data rate will be 68/1.

8 Spurious emissions in hybrid mode

The dwell time in hybrid mode is shorter than in data mode, so the average emission level will be higher in data mode. The peak level in both modes will be the same. For this reason the emissions caused in data mode representing the worst case.