

## RADIO FREQUENCY EXPOSURE

### Limit

According to section 4.3.1 of KDB 447498 D01 General RF Exposure Guidance v06, SAR evaluation is required if the separation distance between the user and/or bystander and the antenna and/or radiating element of the device is less than or equal to 20 cm, except when the device operates at or below the applicable output power level (adjusted for tune-up tolerance) for the specified separation distance defined in Appendix A.

### Appendix A

#### SAR Test Exclusion Thresholds for 100 MHz – 6 GHz and $\leq 50$ mm

| MHz  | 5   | 10  | 15  | 20  | 25  | mm                                         |
|------|-----|-----|-----|-----|-----|--------------------------------------------|
| 150  | 39  | 77  | 116 | 155 | 194 | SAR Test<br>Exclusion<br>Threshold<br>(mW) |
| 300  | 27  | 55  | 82  | 110 | 137 |                                            |
| 450  | 22  | 45  | 67  | 89  | 112 |                                            |
| 835  | 16  | 33  | 49  | 66  | 82  |                                            |
| 900  | 16  | 32  | 47  | 63  | 79  |                                            |
| 1500 | 12  | 24  | 37  | 49  | 61  |                                            |
| 1900 | 11  | 22  | 33  | 44  | 54  |                                            |
| 2450 | 10  | 19  | 29  | 38  | 48  |                                            |
| 3600 | 8   | 16  | 24  | 32  | 40  |                                            |
| 5200 | 7   | 13  | 20  | 26  | 33  |                                            |
| 5400 | 6   | 13  | 19  | 26  | 32  |                                            |
| 5800 | 6   | 12  | 19  | 25  | 31  |                                            |
| MHz  | 30  | 35  | 40  | 45  | 50  | mm                                         |
| 150  | 232 | 271 | 310 | 349 | 387 | SAR Test<br>Exclusion<br>Threshold<br>(mW) |
| 300  | 164 | 192 | 219 | 246 | 274 |                                            |
| 450  | 134 | 157 | 179 | 201 | 224 |                                            |
| 835  | 98  | 115 | 131 | 148 | 164 |                                            |
| 900  | 95  | 111 | 126 | 142 | 158 |                                            |
| 1500 | 73  | 86  | 98  | 110 | 122 |                                            |
| 1900 | 65  | 76  | 87  | 98  | 109 |                                            |
| 2450 | 57  | 67  | 77  | 86  | 96  |                                            |
| 3600 | 47  | 55  | 63  | 71  | 79  |                                            |
| 5200 | 39  | 46  | 53  | 59  | 66  |                                            |
| 5400 | 39  | 45  | 52  | 58  | 65  |                                            |
| 5800 | 37  | 44  | 50  | 56  | 62  |                                            |

Note: Manufacturer declared that the maximum antenna gain is -3.38dBi(Max.).

**Conducted Power Results**

| Test Mode      | Channel | Frequency (MHz) | Measured Peak Output Power (dBm) |
|----------------|---------|-----------------|----------------------------------|
| GFSK           | 00      | 2402            | 3.65                             |
|                | 39      | 2441            | 3.75                             |
|                | 78      | 2480            | 3.79                             |
| $\pi/4$ -DQPSK | 00      | 2402            | 4.18                             |
|                | 39      | 2441            | 4.23                             |
|                | 78      | 2480            | 4.29                             |
| 8-DPSK         | 00      | 2402            | 4.49                             |
|                | 39      | 2441            | 4.67                             |
|                | 78      | 2480            | 4.71                             |

**Manufacturing tolerance**

| GFSK (Peak)           |           |            |            |
|-----------------------|-----------|------------|------------|
| Channel               | Channel 0 | Channel 39 | Channel 78 |
| Target (dBm)          | 3.5       | 3.5        | 3.5        |
| Tolerance $\pm$ (dB)  | 1.0       | 1.0        | 1.0        |
| $\pi/4$ -DQPSK (Peak) |           |            |            |
| Channel               | Channel 0 | Channel 39 | Channel 78 |
| Target (dBm)          | 4.0       | 4.0        | 4.0        |
| Tolerance $\pm$ (dB)  | 1.0       | 1.0        | 1.0        |
| 8-DPSK (Peak)         |           |            |            |
| Channel               | Channel 0 | Channel 39 | Channel 78 |
| Target (dBm)          | 4.0       | 4.5        | 4.5        |
| Tolerance $\pm$ (dB)  | 1.0       | 1.0        | 1.0        |

**Results**

| Test Mode      | Channel Frequency (MHz) | Max. Tune Up Power (dBm, Peak) | Max. Eirp including Tune Up (dBm, Peak) | Max. Eirp including Tune Up (mW, Peak) | Exemption Limit (mW) |
|----------------|-------------------------|--------------------------------|-----------------------------------------|----------------------------------------|----------------------|
| GFSK           | 2402                    | 4.5                            | 4.5                                     | 2.82                                   | 10                   |
|                | 2441                    | 4.5                            | 4.5                                     | 2.82                                   | 10                   |
|                | 2480                    | 4.5                            | 4.5                                     | 2.82                                   | 10                   |
| $\pi/4$ -DQPSK | 2402                    | 5.0                            | 5.0                                     | 3.16                                   | 10                   |
|                | 2441                    | 5.0                            | 5.0                                     | 3.16                                   | 10                   |
|                | 2480                    | 5.0                            | 5.0                                     | 3.16                                   | 10                   |
| 8-DPSK         | 2402                    | 5.0                            | 5.0                                     | 3.16                                   | 10                   |
|                | 2441                    | 5.5                            | 5.5                                     | 3.55                                   | 10                   |
|                | 2480                    | 5.5                            | 5.5                                     | 3.55                                   | 10                   |

The antenna gain of the EUT for BT is 1 dBi(Max). the Maximum Eirp is used for Routine Evaluation Exemption according to section 4.3.1 of KDB 447498 D01.  
So, the SAR evaluation is not required.