

## UWB15F PAG Checklist (Subpart 15F and KDB 393764 D01) TCBC Workshop (April 27, 2022) and 15.521

Model Name : FOB-4F61U43

FCC ID : TQ8-FOB-4F61U43

UWB operation mode : Handheld UWB systems (Rule Part : 15.519)

| Common Requirements |                   | Check lists   | Remarks   |
|---------------------|-------------------|---|---|
| <b>P3</b>           | Technical         | Bandwidth: 10 dB BW $\geq$ 500 MHz, or Fractional BW $\geq$ .2 (15.503(a))              | Refer to the page on 22 of the test report(F690501-RF-RTL003257-4).<br>-The 10dB bandwidth is 563 MHz.  |
|                     |                   | Frequency of highest emission occurs within the UWB bandwidth (15.521(e))               | Refer to the page on 14 of the test report(F690501-RF-RTL003257-4).<br>-The frequency of highest emission is 6427.77 HMz.   |
|                     |                   | Digital circuitry are subject limits as specified in (15.521(c))                        | Refer to the page on 9 and 10 of the test report(F690501-RF-RTL003257-4).   |
|                     |                   | General Part 15 (15.209) limits apply below 960 MHz                                     | Refer to the page on 9 and 16 of the test report(F690501-RF-RTL003257-4).   |
|                     |                   | 15.505 Cross Reference (15.521(a))  | Refer to the page on 3 of the test report(F690501-RF-RTL003257-4) and the page on 1 of the user manual.<br>-This product(FOB-4F61U43) is a handheld device as Remote Keyless System or FOB Smart Key. |
|                     |                   | Unwanted emissions must be measured over the frequency ranges as specified in 15.521(h) | Refer to the page on 8, 17 and 19 of the test report(F690501-RF-RTL003257-4).   |
|                     | Grant Restriction | UWB devices may not be employed for the operation of toys.                              | Refer to the page on 6 of test report(F690501-RF-RTL003257-4) and the page on 3 of the user manual.   |
|                     |                   | Operation onboard an aircraft, a ship or a satellite is prohibited (15.521(a)).         | Refer to the page on 6 of test report(F690501-RF-RTL003257-4) and the page on 3 of the user manual.   |
| <b>Handheld UWB</b> |                   | <b>Check lists</b>  | <b>Remarks</b>  |

| Systems |                        |  |  |
|---------|------------------------|--|--|
| P11     | Technical Requirements | Must be primarily handheld while being operated (15.519(a))<br>- Per 393764 D01 Q5, if handheld operation is not practical, operator must be able to exercise control over the device, or the object to which the device is affixed – Evaluated on a case-by-case basis. | Refer to the page on 3 of test report(F690501-RF-RTL003257-4).<br>-This product(FOB-4F61U43) is a handheld device as FOB Smart Key.                                  |
|         |                        | Transmit only when it is sending information to an associated receiver and cease transmission unless it receives acknowledgement from an associated receiver at least every 10 seconds (15.519(a)(1))  | Refer to the page on 26 of the test report(F690501-RF-RTL003257-4).<br>-The transmission time is 173.91 ms.  |
|         |                        | The use of antennas mounted on outdoor structures prohibited (15.519(a)(2))  | Refer to the page on 6 of the test report(F690501-RF-RTL003257-4).   |
|         |                        | The use of antennas mounted on outdoor structures prohibited (15.519(a)(2))<br>- Antennas may be mounted only on the handheld UWB device   | Refer to the page on 27 of the test report(F690501-RF-RTL003257-4) and the page on 4 of the internal photos.<br>-The antenna used in this product is a chip antenna. |
|         |                        | Handheld UWB devices may operate indoors or outdoors (15.519(a)(3))  | Refer to the page on 6 of test report(F690501-RF-RTL003257-4) and the page on 1 of the user manual.<br>-This product(FOB-4F61U43) is a handheld device.              |
|         |                        | The UWB bandwidth shall be contained between 3100 MHz and 10,600 MHz (15.519(b))   | Refer to the page on 3 of the test report(F690501-RF-RTL003257-4).<br>-The center frequency of this product is 6489.6 MHz.   |
|         |                        | Radiated emissions above 960 MHz shall conform to the mask specified in 15.519(c)  | Refer to the page on 10 and 18 to 19 of the test report(F690501-RF-RTL003257-4).   |
|         |                        | Peak EIRP limit of 0 dBm/50 MHz applies (15.519(e))  | Refer to the page on 9 and 14 to 15 of the test report(F690501-RF-RTL003257-4).  |
|         |                        | Radiated emissions in the 1164-1240 MHz and 1559-1610 MHz bands limits as specified in 15.519(d)   | Refer to the page on 10 and 17 to 18 of the test report(F690501-RF-RTL003257-4).   |

|        |                    |   |   |
|--------|--------------------|---|---|
|        | Grant Restrictions | Antennas mounted on outdoor structures such, as antennas mounted on the outside of a building or on a telephone pole, or any fixed outdoors infrastructure are prohibited for use with this device.   | Refer to the page on 6 of test report(F690501-RF-RTL003257-4) and the page on 3 of the user manual.   |
|        | <b>Rule Part</b>   | <b>Check lists</b>  | <b>Remarks</b>  |
| 15.521 | (a)                | Grant Restriction   | Refer to the page on 6 of test report(F690501-RF-RTL003257-4) and the page on 3 of the user manual.   |
|        | (b)                | Antenna requirement for Part 15. 203 and 15. 204  | Refer to the page on 27 of the test report(F690501-RF-RTL003257-4).<br>-The antenna used in this product is a chip antenna.                                   |
|        | (c)                | Radiated spurious emission limit for part 15.209  | Refer to the page on 9 and 10 of the test report(F690501-RF-RTL003257-4).   |
|        | (d)                | Radiated spurious emission & test measured condition for part 15. 509 and 15. 519.  | Refer to the page on 9 and 16 of the test report(F690501-RF-RTL003257-4).<br>Refer to the page on 10 and 18 to 19 of the test report(F690501-RF-RTL003257-4). |
|        | (e)                | Max peak power test for UWB.  | Refer to the page on 14 of the test report(F690501-RF-RTL003257-4). -The frequency of highest emission is 6427.77MHz.   |
|        | (f)                | Imaging systems may be employed only for the type of information exchange described in their specific definitions contained in § 15.503. The detection of tags or the transfer or data or voice information is not permitted under the standards for imaging systems. | N/A(This is a handheld device.)   |
|        | (g)                | Max peak power test measurement condition for UWB with RBW.   | Refer to the page on 9 and 14 to 15 of the test report(F690501-RF-RTL003257-4).   |
|        | (h)                | Radiated spurious emission measured condition for part 15.33  | Refer to the page on 10 and 18 to 19 of the test report(F690501-RF-RTL003257-4).  |

|  |     |  |                                       |
|--|-----|--|---------------------------------------|
|  | (i) | The prohibition in § 2.201(f) and 15.5(d) of this chapter against Class B (damped wave) emissions does not apply to UWB devices operating under this subpart.          | N/A                                   |
|  | (j) | Responsible parties are reminded of the other standards and requirements cross referenced in § 15.505, such as a limit on emissions conducted onto the AC power lines. | N/A(This device uses a coin battery.) |