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UWB15F PRE-APPROVAL GUIDANCE CHECKLIST

Date: 2024-12-18

To:
Federal Communications Commission
Authorization and Evaluation Division
7435 Oakland Mills Road
Columbia, MD

FCC ID: NBGFBD6

Subjects: 388624 D02 Pre-Approval Guidance List v18r07 APPENDIX UWB15F

	SCOPE	Description	Comment
PAG	Pre approval guidance for UWB	Show that device mode operation is permissible under the specific Part 15 subpart F.	**It's shown at UWB test report "DDT-RE24101724-2E06 FCC Part15F Report UWB-F". This test has been performed following ANSI C63.10:2013 and test results for FCC rules: 15.519, 15.209, 15.203, 15.521 are performed with a pass result. User manual has shown the device is a small size UWB device that is intended to operated outdoors (in vehicles), it has internal antenna and without the need for fixed infrastructure installation. The operator can**

			exercise control over the device, or the object to which the device is affixed, while the device is operating. Please see the user manual page 4, page 6, page 12 for detail information. The device is defined as a hand-held system which apply to part 15.519.
		Specify if § 15.250 (15C) is used alternative to §15.517 or §15.519 (15F).	**Rule 15.250 (15C) is not used alternative to 15.517 or 15.519 (15F). Rules 15.519 has been tested following ANSI C63.10:2013 at UWB Test report "DDT-RE24101724-2E06 FCC Part15F Report UWB-F".**
		Show that KDB 393764 Q6 is being followed.	**1. All general application information please see the UWB Test report "DDT-RE24101724-2E06 FCC Part15F Report UWB-F" Page 7 and user manual.** **2. The UWB application category: hand-held UWB systems which apply part 15.519, please see the user manual page 4, page 6, page 12 for detailed description and rule section please see UWB Test report "DDT-RE24101724-2E06 FCC Part15F Report UWB-F" page 6.** **3. -10dB bandwidth test please see the UWB Test report "DDT-RE24101724-2E06 FCC Part15F Report UWB-F" page 11~12;** **4. Radiated emissions test please see UWB Test report "DDT-RE24101724-2E06 FCC Part15F Report UWB-F" page 20~35;** **5. All digital circuitry emissions please see UWB Test report "DDT-RE24101724-2E06 FCC Part15F Report UWB-F" page 20~23. According**

			exploratory test no any obvious emission was detected from 9 kHz to 30 MHz, 18GHz to 40GHz. So does not record in the report. 6. Frequency vs. amplitude plots depicting the measured fundamental emission, the out-of-band emission domain, and the emissions into the GPS frequency bands test please see UWB Test report "S24041204202001-UWB" page 24~35. 7. The restriction statement has been attached in the user manual page 4. 8. Test setup has been uploaded, please check the "FBD6 Setup Photo" .
		Account for all technical requirements specific to each UWB mode of operation.	Yes, The technical requirements specific to each UWB mode of operation has accounted.
		Verify that §15.519 devices do not utilize fixed infrastructure.	The product is a Smart Car Access Device with UWB. The device is a small size UWB device that is intended to operated outdoors (in vehicles), it has internal antenna and without the need for fixed infrastructure installation. The operator can exercise control over the device, or the object to which the device is affixed, while the device is operating. Please see the user manual page 4, page 6, page 12 for detail information. The device is defined as a hand-held system which apply to part 15.519.

		Verify that grant restrictions and notices are in accordance with specific rule part.	**Yes, the grant comment and user manual page 19 has indicate the restrictions and notice for the UWB operation.**
		Verify requirements and restrictions for UWB modular approvals.	**Yes, device is module approval and integrated restricted for hand-held host device use. Users manual page 15&19 has indicated the information.**

		TCB to include §15.521(a) statement on Grant Restrictions and verify the required device/user manual for all UWB modes of operation.	**Yes, Grant comment has include the information.**

UWB15F Checklist for Common Requirements-According to April 2022 FCC presentation TCB Workshop "Checklist for UWB15F"
1. Technical
--Bandwidth: 10dB BW⩾500MHz, Or Fractional BW⩾.2(15.503)(a).
A: Yes, 10dB BW is 519MHz & 526MHz, which⩾500MHz, Please see report **"DDT-RE24101724-2E06 FCC Part15F Report UWB-F" page 12.**
--Frequency of highest emission occurs within the UWB bandwidth(15.521(e)).
A: Yes, The frequency of highest emission occurs in 7508MHz & 7562MHz, which within band 7.22GHz – 7.738GHz and in 7948MHz & 7970MHz which within band 7.73GHz – 8.25GHz. Please see report **"DDT-RE24101724-2E06 FCC Part15F Report UWB-F" page 32~35.**
--Digital circuitry are subject limits as specified in 15.521(c).
A: Yes, The emission has been compliance with the requirement. Please see **"DDT-RE24101724-2E06 FCC Part15F Report UWB-F" page 20~23.**

--General part 15.209 limits apply below 960MHz。
A: Yes, Please see **“DDT-RE24101724-2E06 FCC Part15F Report UWB-F” page 20~23.**
--15.505 cross reference 15.521(a).
A: Yes, Compliance.
--Unwanted emissions must be measured over the frequency ranges as specified in 15.521(h).
Grant Restrictions:
--UWB Device may not be employed for the operation of toys.
A: Yes, Grant comment has included the restricted information.
--Operation onboard an aircraft, a ship or a satellite is prohibited 15.521(a).
A: Yes, Grant comment has included the restricted information.

If you have any questions, please feel free to contact us at the address shown below

Sincerely

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