



## Modular Approval Letter

2020-04-28

Applicant: Xiaomi Communications Co.,Ltd.

Application Address: #019, 9th Floor, Building 6, 33Xi'erqi Middle Road,  
Haidian District, Beijing,China

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**Product Name:** 2.4Ghz WIFI+BLE dual-mode module

**Model Name:** MHCWB4P-IB

**FCC ID:** 2AFZZMHCWB4P-IB

### Section 15.212 Modular Transmitters

Request for Modular Approval ☒

Request for Limited Modular Approval ☐

### Single Modular Approval Requirements:

| Item | Requirements                                                                                                                                                                                                                     | EUT Conditions                                                                                                                                   | Comply(Y/N) |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| 1    | The radio elements of the modular transmitter must have their own shielding. The physical crystal and tuning capacitors may be located external to the shielded radio elements.                                                  | Refer to external photos. This module has shield cover.                                                                                          | Y           |
| 2    | The modular transmitter must have buffered modulation/data inputs (if such inputs are provided) to ensure that the module will comply with part 15.247 requirements under conditions of excessive data rates or over-modulation. | All inputs to the modules are buffered through logic or microprocessor inputs. Refer to Schematics.                                              | Y           |
| 3    | The modular transmitter must have its own power supply regulation.                                                                                                                                                               | The Module uses the chip ESP32-D0WD-V3 with built-in power management components, the module rated power is 3.0-3.6V power. Refer to schematics. | Y           |



| Item | Requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | EUT Conditions                                                                                                   | Comply(Y/N) |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-------------|
| 4    | <p>The modular transmitter must comply with the antenna and transmission system requirements of §15.203, §15.204(b) and §15.204(c).</p> <p>The antenna must either be permanently attached or employ a “unique” antenna coupler (at all connections between the module and the antenna, including the cable). The “professional installation” provision of §15.203 is not applicable to modules but can apply to limited modular approvals under paragraph (b) of this section.</p>                                                                                                                                                                                                                                                                                                                                                                                                | <p>The modular transmitter has a IPEX antenna arrangement for 2.4G Wi-Fi/Bluetooth. Refer to internal photo.</p> | Y           |
| 5    | <p>The modular transmitter must be tested in a stand-alone configuration, i.e., the module must not be inside another device during testing for compliance with part §15.247 requirements. Unless the transmitter module will be battery powered, it must comply with the AC line conducted requirements found in §15.207. AC or DC power lines and data input/output lines connected to the module must not contain ferrites, unless they will be marketed with the module (see §15.27(a)). The length of these lines shall be the length typical of actual use or, if that length is unknown, at least 10 centimeters to insure that there is no coupling between the case of the module and supporting equipment. Any accessories, peripherals, or support equipment connected to the module during testing shall be unmodified and commercially available (see §15.31(i)).</p> | <p>The modular transmitter is connected to the controlled board when testing. Please refer to setup photo.</p>   | Y           |



| Item | Requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | EUT Conditions      | Comply(Y/N) |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------------|
| 6    | <p>If using a permanently affixed label, the modular transmitter must be labeled with its own FCC identification number, and, if the FCC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following:</p> <p>“Contains Transmitter Module<br/>FCC ID: 2AFZZMHCWB4P-IB</p> <p>Any similar wording that expresses the same meaning may be used. The Grantee may either provide such a label, an example of which must be included in the application for equipment authorization, or, must provide adequate instructions along with the module which explain this requirement. In the latter case, a copy of these instructions must be included in the application for equipment authorization.</p> | Refer to the label. | Y           |
| 7    | <p>The modular transmitter must comply with any specific rules or operating requirements that ordinarily apply to a complete transmitter and the manufacturer must provide adequate instructions along with the module to explain any such requirements. A copy of these instructions must be included in the application for equipment authorization.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Refer to manual.    | Y           |



| Item | Requirements                                                                                                 | EUT Conditions                                                                                                                                                                    | Comply(Y/N) |
|------|--------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| 8    | The modular transmitter must comply with any applicable RF exposure requirements in its final configuration. | The EUT meets RF exposure evaluation § 2.1091.If the device built into a host as a portable usage, the additional RF exposure evaluation may be required as specified by § 2.1093 | Y           |

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