**Dmitriy Moskovkin**
Manager Codes Standards & Compliance

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| **Applicant/Grantee** | **Leviton Manufacturing Co Inc** | | |
| **FCC ID:** | **2ASLN-ODS15** | | |
| **Section 15.212 Modular Transmitters** | | | |
| **Request for Modular Approval** | ☐ | **Request for Limited Modular Approval** | ☒ |
| | Requirements | EUT Conditions | **Comply (Y/N)** |
| **Single Modular Approval Requirements** | | | |
| 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. | The device does not meet this requirement – limited modular approval is requested. | **No** |
| 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 requirements under conditions of excessive data rates or over-modulation. | The module is tested for LE Bluetooth 5.0 protocol and all the TX-RX modulation schemes were found in compliance. | **Yes** |
| 3 | The modular transmitter must have its own power supply regulation. | The module integrates on-board linear regulator and radio circuit power supplies to maintain power supply requirements. | **Yes** |
| 4 | The modular transmitter must comply with the antenna and transmission system requirements of Sections 15.203, 15.204(b) and 15.204(c). 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 Section 15.203 is not applicable to modules but can apply to limited modular approvals under paragraph (b) of this section. | The module includes an embedded patch antenna with set of antenna tuning values to maintain compliance for different host devices. | **Yes** |
| 5 | 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 requirements. Unless the transmitter module will be battery powered, it must comply with the AC line conducted requirements found in Section 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 Section 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 Section 15.31(i)). | As the device has no shield limited modular applies and requires testing of the device in a representative host system. Testing has been performed on the module in three different host devices to represent a total of ten different hosts – refer to additional details at the end of this document. | **N/A** |

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| 6 | The modular transmitter must be equipped with either a permanently affixed label or must be capable of electronically displaying its FCC identification number.<br>*(A) 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: "Contains Transmitter Module FCC ID: XYZMODEL1" or "Contains FCC ID: XYZMODEL1." 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.*<br>*(B) If the modular transmitter uses an electronic display of the FCC identification number, the information must be readily accessible and visible on the modular transmitter or on the device in which it is installed. If the module is installed inside another device, then the outside of the device into which the module is installed must display a label referring to the enclosed module. This exterior label can use wording such as the following: "Contains FCC certified transmitter module(s)." Any similar wording that expresses the same meaning may be used. The user manual must include instructions on how to access the electronic display. A copy of these instructions must be included in the application for equipment authorization.* | The module has a label affixed. Please see the label exhibit for the label module and end-product label. | **Yes** |
| 7 | 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. | The module is compliant with all applicable FCC rules. Detailed instructions for remaining compliance are given in the User Manual (datasheet). | **Yes** |
| 8 | The modular transmitter must comply with any applicable RF exposure requirements in its final configuration. | The module complies with RF exposure requirement. The module's application is intended to be used in wall mount products maintaining >20 cm distance from the user. | **Yes** |

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| | | RF exposure is addressed in the RF exposure exhibition. | |
| A **limited modular approval** may be granted for single or split modular transmitters that do not comply with all of the above requirements, *e.g.*, shielding, minimum signaling amplitude, buffered modulation/data inputs, or power supply regulation, if the manufacturer can demonstrate by alternative means in the application for equipment authorization that the modular transmitter meets all the applicable Part 15 requirements under the operating conditions in which the transmitter will be used. Limited modular approval also may be granted in those instances where compliance with RF exposure rules is demonstrated only for particular product configurations. The applicant for certification must state how control of the end product into which the module will be installed will be maintained such that full compliance of the end product is always ensured. | | | |

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Host Device Considerations:

As this module has no shield it is subject to limited modular approval with approvals limited only to the host device, and substantially equivalent hosts, in which it was tested for compliance with radiated spurious emissions requirements.

The module is designed for use in Leviton's wall-mount products and there are currently two different models of light switch that will use this module. Testing was performed on the module installed in wall switch units which we consider representing the two different models.

The RF module itself consists of the RF circuitry and logic circuitry with some slightly different stuffing options on the logic circuitry. These changes do not affect the RF circuitry and are within the scope of a Permissive Change. In addition, the RF circuitry has a version of antenna matching circuitry which is used to best match antenna and RF output based on the power board portion of the host switch. Full details are provided in the Operational Description exhibit.

The end-product assembly (host) can support switch functions, a voice sensor, PIR sensor (supported on all models). The different options for each of the two-host end-product assemblies are described below. The host tested represent the most configured configurations (both PIR and voice sensors installed), Power supply assembly and switch-only functions.

The host versions tested is ODS15-MD.

| FCC ID# | ISED ID# | Leviton Part # | Configuration | | Logic PCB | | | | Power PCB | | | |
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| | | | PIR / PIR + Microphone | Switch / Dimmer | PCB | Antenna Tuning | Assembly Variant | Assembly Difference | PCB | Assembly Variant | Assembly Difference | Voltage |
| 2ASLN-ODS15 | 25037-ODS15 | ODS15-GD | PIR | Switch | B8224 | Tuning #1 | D01 | D02 without microphone components | B8656 | D01 | -- | 120-277VAC |
| | | ODS15-MD | PIR + Microphone | Switch | | | D02 | -- | | | | |

Sincerely,

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