

mmWave Radar Sensor Module

Part Name: LBVA0ZZ2LP

Model Number : 2LP

[FCC]

FCC ID: VPYLBVA0ZZ2LP

Note:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC CAUTION

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This module is not sold directly to the general end user.

OEM integrators should be careful not to provide information to the end user on how to install or remove this RF module in the user's manual of the end product that integrates this module. Also, the end-user manual must contain all required regulatory information/warnings as indicated in this document.

This manual is based on KDB 996369, which is designed to ensure that module manufacturer correctly communication the necessary information to host manufacturers that incorporate their modules.

INTEGRATION INSTRUCTIONS

1. General: Applicable

Sections 2 through 12 describe the items that must be provided in the integration instructions for host product manufacturers (e.g., OEM instruction manual) to use when integrating a module in a host product. This Modular transmitter applicant(muRata) should include information in their instructions for all these items indicating clearly when they are not applicable.

2. List of applicable FCC rules: Applicable

This device complies with part 15 Subpart C of FCC Rules.

3. Summarize the specific operational use conditions: Applicable

We will provide to end product by the installation manual and others, which it complies with the antenna and transmission system requirements of §15.203.

4. Limited module procedures: Not Applicable

Meets module requirements (no limited module procedures).

5. Trace antenna designs: Not Applicable

Not applicable because it is an integrated antenna.

6. RF exposure considerations: Applicable

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines. This equipment should be installed and operated keeping the radiator at least 20cm or more away from person's body.

When embedding in a portable device,

It is necessary to take a SAR test with your set mounting this module.

Class II permissive change application is necessary using the SAR report. Please contact Murata.

And an application for a Class II permissive change from a Mobile equipment to a Portable equipment is also required.



- **Portable equipment:** Equipment for which the spaces between human body and antenna are used within 20 cm.
- **Mobile equipment:** Equipment used at position in which the spaces between human body and antenna exceeded 20 cm.

7. Antennas: Applicable

It uses a module-integrated Patch antenna).

(Refer to the installation manual for the antenna appearance)

8. Label and compliance information: Applicable

The following statements must be present on the host device for this module,

Contains Transmitter Module FCC ID: VPYLBVA0ZZ2LP or Contains FCC ID: VPYLBVA0ZZ2LP

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

* If the product size is small or it is not practical to display it on the product (including design reasons, etc.), and if the product is not equipped with an electronic display, the following (1) or (2) shall be described.

- (1) Manual (paper media)
- (2) "Manual (electronic media)" and "Package or removable label"

9. Information on test modes and additional testing requirements: Applicable

Please contact Murata if you have any questions when conducting the RF certification test on the host.

We (Murata Manufacturing Co., Ltd.) are ready to present the control manual and others for the RF certification test.

10. Additional testing, Part 15 Subpart B disclaimer: Applicable

The modular transmitter is only FCC authorized for the specific rule parts (i.e., FCC transmitter rules) listed on the grant, and the host product manufacturer is responsible for compliance to any other FCC rules that apply to the host not covered by the modular transmitter grant of certification.

The final host product still requires Part 15 Subpart B compliance testing with the modular transmitter installed.

If the final product with this module is FCC Class A digital device, include the following in the manual of the final product:

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

If the final product with this module is FCC Class B digital device, include the following in the manual of the final product:

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

11. Note on EMI Considerations: Applicable

A host manufacture is recommended to use KDB 996369 D04 Module Integration Guide recommending as "best practice" RF design engineering testing and evaluation in case non-linear interactions generate additional non-compliant limits due to module placement to host components or properties.

For standalone mode, reference the guidance in D04 Module Integration Guide and for simultaneous mode⁷; see D02 Module Q&A Question 12, which permits the host manufacturer to confirm compliance.

12. How to Make Changes: Applicable

When changing from the conditions of approval, please present technical documentation that it is equivalent to a Class I change. For example, when adding or changing an antenna, the following technical documents are required.

1. The document indicating the same type as the original antenna.
2. Technical document showing that the gain is the same or lower than the gain at the time of the original approval.
3. Technical document showing that the spurious is no more than 3 dB worse than when it was originally certified.