



# WLAN + Bluetooth LE Module LBEE0ZZ2KU Antenna Report

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# Summary



## Total efficiency

| Frequency [MHz] |      |      | [dB]    | [%]     |
|-----------------|------|------|---------|---------|
| 2400            | 2442 | 2484 | Average | Average |
| -4.6            | -5.2 | -6.4 | -5.3    | 29.5    |

## Peak Gain

| Frequency [MHz] |      |      | [dBi] |
|-----------------|------|------|-------|
| 2400            | 2442 | 2484 | Max.  |
| -0.7            | -1.2 | -3.0 | -0.7  |

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# Content

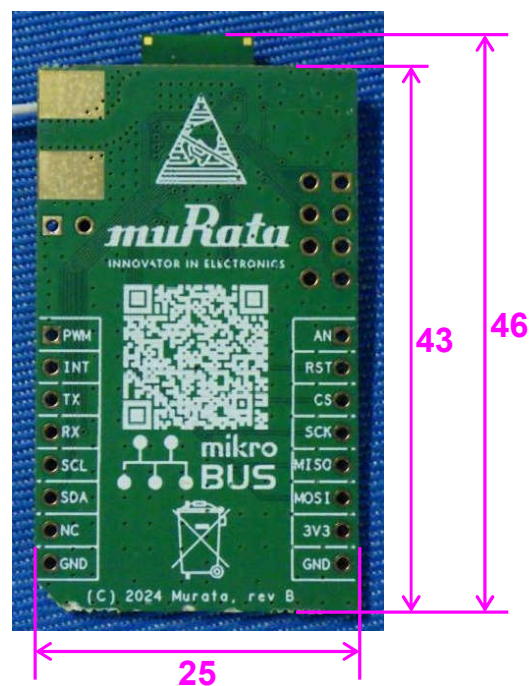
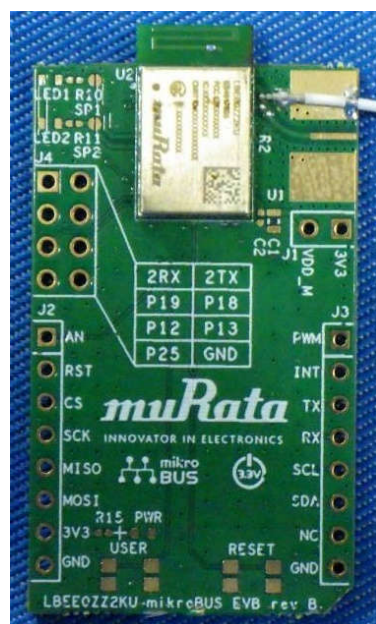
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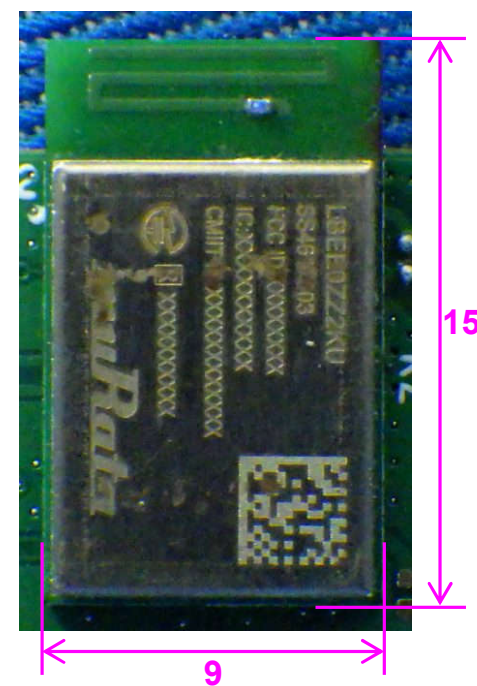
1. Appearance
2. Measurement condition
3. Measurement direction
4. Measurement result

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# 1. Appearance



<Type2KU>

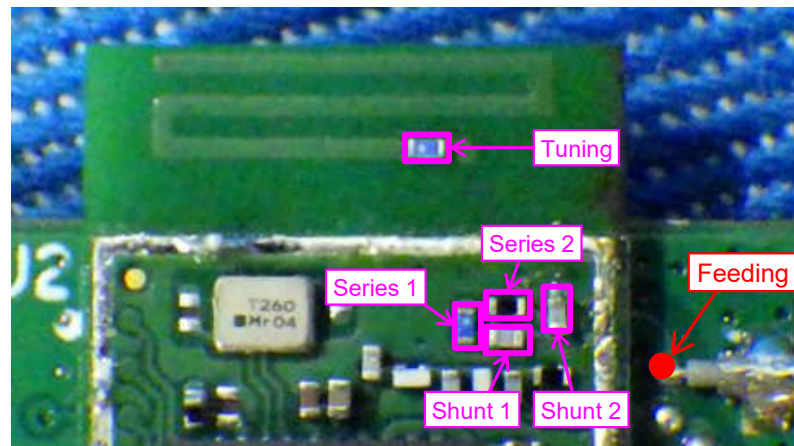


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UNIT : mm

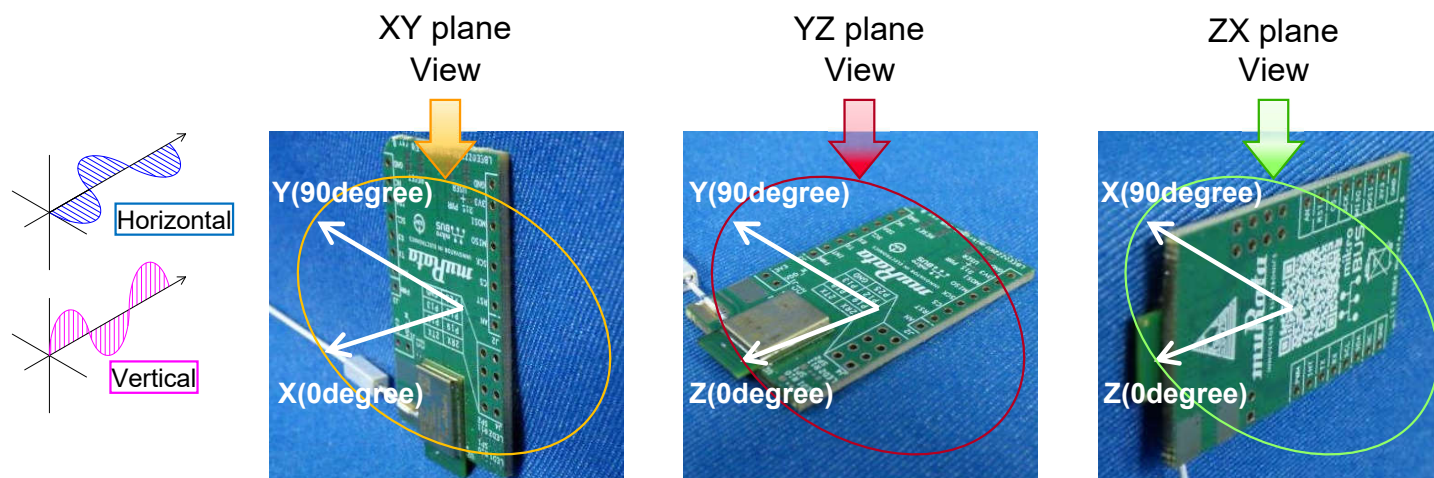
## 2. Measurement condition

| Tuning 1                           | Matching circuit |         |          |         |
|------------------------------------|------------------|---------|----------|---------|
|                                    | Series 1         | Shunt 1 | Series 2 | Shunt 2 |
| 6.8nH                              | 2.4nH            | 1.3pF   | 0ohm     | 1.0pF   |
| Size:0603 LQP03 / GRM03 / Resistor |                  |         |          |         |

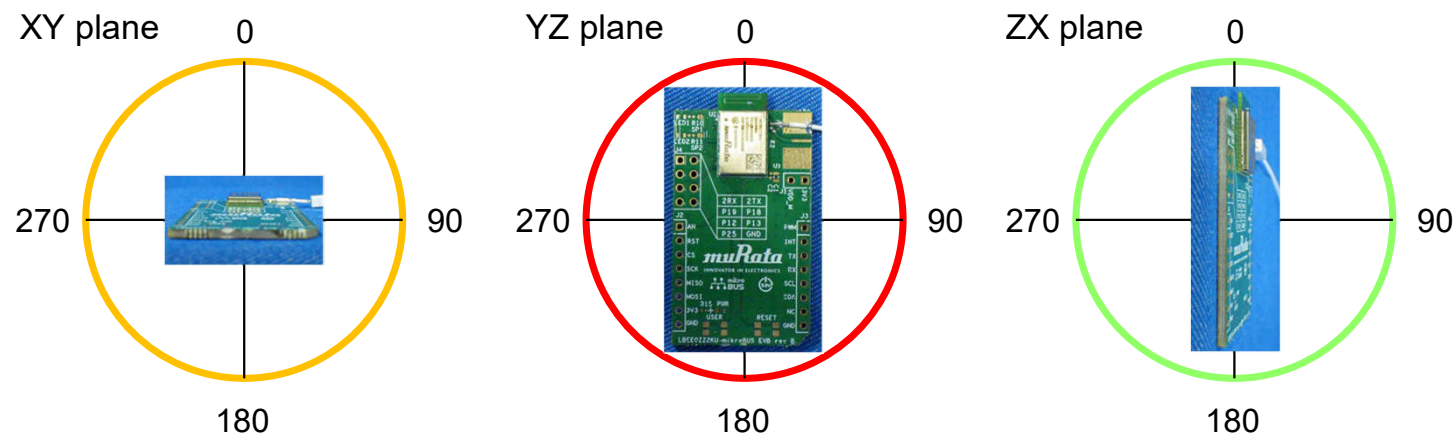


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# 3. Measurement direction

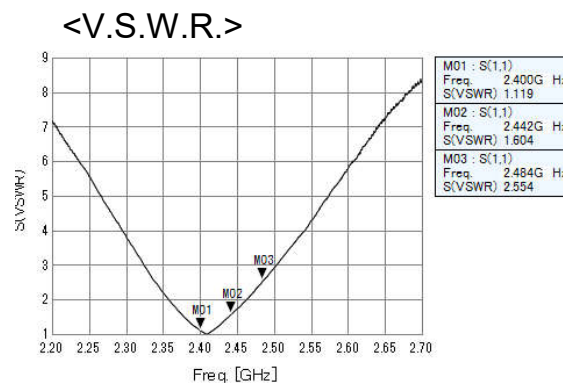
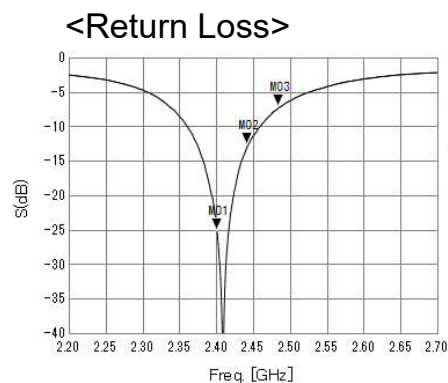


## 2D Directional indication



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## 4. Measurement result

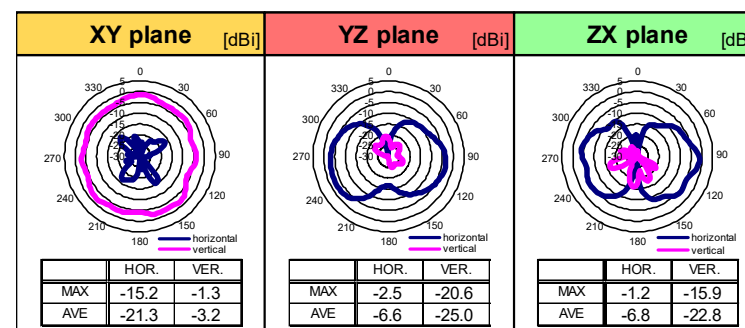


### <Efficiency>

| LINEAR POLAMIZATION |      | XY-plane [dBi] |      | YZ-plane [dBi] |       | ZX-plane [dBi] |       | Total Efficiency [dB] |
|---------------------|------|----------------|------|----------------|-------|----------------|-------|-----------------------|
|                     |      | hor.           | ver. | hor.           | ver.  | hor.           | ver.  |                       |
| 2400 MHz            | MAX. | -18.2          | -0.7 | -1.1           | -21.1 | -1.0           | -15.0 | -4.6                  |
|                     | AVE. | -23.4          | -2.7 | -5.8           | -25.5 | -6.7           | -22.0 |                       |
| 2442 MHz            | MAX. | -15.2          | -1.3 | -2.5           | -20.6 | -1.2           | -15.9 | -5.2                  |
|                     | AVE. | -21.3          | -3.2 | -6.6           | -25.0 | -6.8           | -22.8 |                       |
| 2484 MHz            | MAX. | -13.7          | -3.0 | -4.2           | -20.7 | -3.5           | -16.3 | -6.4                  |
|                     | AVE. | -20.5          | -4.6 | -8.6           | -25.9 | -7.9           | -23.4 |                       |

\*Red color shows peak gain

### <Directivity>



@2442MHz

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