

RF Exposure / MPE Calculation

Customer	Murata Manufacturing Co., Ltd.
Description of EUT	Communication module
Model Number of EUT	LBEE5XV2EA
FCC ID	VPYLB2EA003

Murata Manufacturing Co., Ltd. declares that Model: LBEE5XV2EA complies with FCC radiation exposure requirement specified in the FCC Rule 2.1091 (for mobile).

RF Exposure Calculations:

The following information provides the minimum separation distance for the highest gain antenna provided with the "LBEE5XV2EA" as calculated from (B) Limits for General Population / Uncontrolled Exposure of TABLE 1- LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE) of §1.1310 Radiofrequency radiation exposure limits.

This calculation is based on the highest EIRP possible from the system, considering maximum power and antenna gain, and considering a 1mW/cm² uncontrolled exposure limit. The Friis formula used was:

$$S = \frac{P \times G}{4 \times \pi \times r^2}$$

[Bluetooth (LE) part]

4.47 mW (Maximum average output power)

- ☐ Time average was used for the above value in consideration of 6-minutes time-averaging
☒ Burst power average was used for the above value in consideration of worst condition.

G = 1.000 Numerical Antenna gain; equal to 0 dBi

r = 20 cm (Separation distance)

Power Density Result S = 0.00089 mW/cm²

[Bluetooth (BR / EDR) part]

P = 5.62 mW (Maximum average output power)

- ☐ Time average was used for the above value in consideration of 6-minutes time-averaging
☒ Burst power average was used for the above value in consideration of worst condition.

G = 1.000 Numerical Antenna gain; equal to 0 dBi

r = 20 cm (Separation distance)

Power Density Result S = 0.00112 mW/cm²

[WLAN 2.4 GHz band part]

$P =$ 31.62 mW (Maximum average output power)

☐ Time average was used for the above value in consideration of 6-minutes time-averaging

☒ Burst power average was used for the above value in consideration of worst condition.

$G =$ 2.000 Numerical Antenna gain; equal to 3.01 dBi

$r =$ 20 cm (Separation distance)

Power Density Result $S =$ 0.01258 mW/cm²

[WLAN 5 GHz band part]

$P =$ 19.95 mW (Maximum average output power)

☐ Time average was used for the above value in consideration of 6-minutes time-averaging

☒ Burst power average was used for the above value in consideration of worst condition.

$G =$ 2.825 Numerical Antenna gain; equal to 4.51 dBi

$r =$ 20 cm (Separation distance)

Power Density Result $S =$ 0.01121 mW/cm²

[WLAN 6 GHz band part]

$P =$ 6.31 mW (Maximum average output power)

☐ Time average was used for the above value in consideration of 6-minutes time-averaging

☒ Burst power average was used for the above value in consideration of worst condition.

$G =$ 3.170 Numerical Antenna gain; equal to 5.01 dBi

$r =$ 20 cm (Separation distance)

Power Density Result $S =$ 0.00398 mW/cm²