

RF Exposure Analysis

FCC ID: 2ALZB-MU1MWMO146

Analysis for FCC portable use

Standalone SAR test exclusion considerations are defined in KDB 447498 D01, Chapter 4.3.1 where the 1-g head or body and 10-g extremity SAR exclusion threshold is defined by the following formula:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] * [\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR}$$

- $f(\text{GHz})$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

Bluetooth 2.4GHz:

For the MU1MWMO146 installed in the specific host SYS-D90-ITE the maximum conducted output power for BT (including tolerance +0.5dBm) is + 5.55dBm (3.6mW) at 2.4GHz

Applying the above data using the given KDB 447498 D01 formula, and minimum separation distance of 30mm, the following results:

$$(3.6\text{mW} / 30 \text{ mm}) \times \sqrt{2.4 \text{ GHz}} = 0.19$$

(i.e.: ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR)

BLE 2.4GHz:

For the MU1MWMO146 installed in the specific host SYS-D90-ITE the maximum conducted output power for BT (including tolerance +0.5dBm) is + 8.95dBm (7.9mW) at 2.4GHz

Applying the above data using the given KDB 447498 D01 formula, and minimum separation distance of 30mm, the following results:

$$(7.9\text{mW} / 30 \text{ mm}) \times \sqrt{2.4 \text{ GHz}} = 0.41$$

(i.e.: ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR)

WLAN 2.4GHz:

For the MU1MWMO146 installed in the specific host SYS-D90-ITE the maximum conducted average output power for WLAN (including tolerance +0.5dBm) is + 17.33dBm (54.1mW) at 2.4GHz

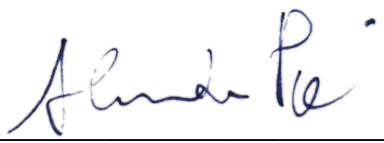
Applying the above data using the given KDB 447498 D01 formula, and minimum separation distance of 30mm, the following results:

$$(54.1\text{mW} / 30 \text{ mm}) \times \sqrt{2.4 \text{ GHz}} = 2.79$$

(i.e.: ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR)

Conclusion

This demonstrates the MU1MWMO146 installed in the specific host SYS-D90-ITE meets the criteria for 1-g head / body and 10-g extremity SAR test exemption.

Signature:  Date: 07/29/2024