

APPENDIX E: SIMULTANEOUS NUMERICAL CALCULATIONS

E.1 Introduction

The following procedures adopted from FCC KDB Publication 447498 D01v06 are applicable to devices with built-in unlicensed transmitters such as 802.11 and Bluetooth devices which may simultaneously transmit with the licensed transmitter.

E.2 Simultaneous Transmission Procedures

This device contains transmitters that may operate simultaneously. Therefore, simultaneous transmission analysis is required. Per FCC KDB Publication 447498 D01v06 4.3.2 and IEEE 1528-2013 Section 6.3.4.1.2, simultaneous transmission SAR test exclusion may be applied when the sum of the 1g SAR for all the simultaneous transmitting antennas in a specific physical test configuration is ≤ 1.6 W/kg. The different test positions in an exposure condition may be considered collectively to determine SAR test exclusion according to the sum of 1g or 10g SAR.

E.3 Body Simultaneous Transmission Analysis

Table E-1
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth

| Simult Tx | Configuration | Licensed SAR (W/kg) | Bluetooth LE SAR (W/kg) | Licensed + BT LE SAR (W/kg) |
|-----------|---------------|---------------------|-------------------------|-----------------------------|
| | | 1 | 2 | 1+2 |
| Body SAR | Right | 0.037 | 0.000 | 0.037 |
| | Left | 1.440 | 0.003 | 1.443 |

E.4 Extremity Simultaneous Transmission Analysis

Table E-2
Simultaneous Transmission Scenarios with 2.4 GHz Bluetooth

| Simult Tx | Configuration | Licensed SAR (W/kg) | Bluetooth LE SAR (W/kg) | Licensed + BT LE SAR (W/kg) |
|---------------|---------------|---------------------|-------------------------|-----------------------------|
| | | 1 | 2 | 1+2 |
| Extremity SAR | Top | 0.022 | 0.000 | 0.022 |

E.5 Simultaneous Transmission Conclusion

The above numerical summed SAR results and SPLSR are sufficient to determine that simultaneous transmission cases will not exceed the SAR limit and therefore no measured volumetric simultaneous SAR summation is required per FCC KDB Publication 447498 D01v06 and IEEE 1528- 2013 Section 6.3.4.1.

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|-------------------------|-----------------------|-----------------------------------|
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