

## Appendix E: Simultaneous Transmission Analysis

### E.1. Introduction

According to FCC KDB Publication 447498 D04v01, transmitters are considered to be operating simultaneously when there is overlapping transmission, with the exception of transmissions during network hand-offs with maximum hand-off duration less than 30 seconds.

Table E-1 - Supported Simultaneous Transmission Scenarios

#	Scenario	Face	Body
1	LTE + 2.4 GHz WIFI + 5 GHz WIFI + 2.4 GHz Bluetooth	Yes	Yes

### E.2. Procedures

This device contains transmitters that may operate simultaneously. Therefore, simultaneous transmission analysis is required. Per FCC KDB Publication 447498 D04v01, IEEE 1528-2013 Section 6.3.4.1.2 and IEC/IEEE 62209-1528 Section 7.4.4, simultaneous transmission SAR test exclusion may be applied when the sum of the 1g/10g SAR for all the simultaneous transmitting antennas in a specific a physical test configuration is  $\leq 1.6$  W/kg for 1g SAR or  $\leq 4.0$  W/kg for 10g SAR. 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. Simultaneous Transmission Analysis

Table E-2 - Simultaneous Transmission Analysis

Exposure Condition	Max LTE SAR (W/kg)	Max 2.4 GHz WIFI SAR (W/kg)	Max 5 GHz WIFI SAR (W/kg)	Max BT SAR (W/kg)	$\Sigma \text{SAR}_{1g}$ (W/kg)
Face	0.185	0.011	0.034	0.000	0.230
Body	0.457	0.030	0.293	0.008	0.788

The above analysis of the simultaneous transmission scenarios is sufficient to show that simultaneous transmission cases will not exceed the SAR limit. Therefore, no measured volumetric simultaneous SAR summation is required per FCC KDB Publication 447498 D04v01, IEEE 1528- 2013 Section 6.3.4.1, and IEC/IEEE 62209-1528 Section 7.4.4.