

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	Extremity
1	2.4 GHz WIFI + NFC	Yes
2	2.4 GHz Bluetooth + NFC	Yes
3	2.4 GHz ANT/ANT+ + NFC	Yes

E.2. Procedures

This device contains transmitters that may operate simultaneously. Therefore, simultaneous transmission analysis is required. Per FCC KDB Publication 447498 D04v01 and IEEE 1528-2013 Section 6.3.4.1.2, simultaneous transmission SAR test exclusion may be applied when the sum of the 10g SAR for all the simultaneous transmitting antennas in a specific physical test configuration is ≤ 4.0 W/kg. The different test positions in an exposure condition may be considered collectively to determine SAR test exclusion according to the sum of 10g SAR.

E.3. Simultaneous Transmission Analysis

Table E-2 – Simultaneous Transmission Sum SAR

Exposure Condition	Max 2.4 GHz WIFI SAR (W/kg)	Max 2.4 GHz Bluetooth SAR (W/kg)	Max 2.4 GHz ANT/ANT+ SAR (W/kg)	Max NFC SAR (W/kg)	Max 2.4 GHz WIFI + NFC SAR (W/kg)	Max 2.4 GHz Bluetooth + NFC SAR (W/kg)	Max 2.4 GHz ANT/ANT+ + NFC SAR (W/kg)
Extremity	0.741	0.208	0.000	0.000	0.741	0.208	0.000

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 and IEEE 1528- 2013 Section 6.3.4.1.