

APPENDIX E: MULTI-TX AND ANTENNA SAR CONSIDERATIONS

E.1 Introduction

The following procedures adopted from FCC KDB Publication 447498 D04v01 are applicable to devices with built-in unlicensed transmitters such as 802.11 and Bluetooth devices which may simultaneously transmit.

E.2 Simultaneous Transmission Procedures

This device contains transmitters that may operate simultaneously. Therefore, simultaneous transmission analysis is required. Per FCC KDB Publication 447498 D04v01 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. Alternatively, simultaneous transmission SAR test exclusion may be evaluated using Total Exposure Ratio (TER).

Note:

This device is enabled with the manufacturer's time-averaged method of Tx power control for connectivity radios (WiFi, Bluetooth, NB U-NII and 802.15.4). Co-located connectivity antennas with significant overlap of RF exposure hotspots are grouped into a single cluster. There are two pre-defined antenna clusters (AC): AC0 (Ant WF7b, WF7a) and AC1 (Ant WF2a, WF2b).

When operating in the same antenna cluster, the compliance under dynamic transmission condition, including all supported simultaneous transmission scenarios, should be assessed and demonstrated in the TAS Report during algorithm validation. This applies to multiple antennas in the same antenna cluster or different modes transmitting simultaneously in the same antenna cluster. For the evaluation of simultaneous transmission analysis in this report, the highest SAR value across all modes in the same antenna cluster was considered for summation and most conservative to determine simultaneous SAR test exclusions.

E.3 Exposure Ratios

Exposure ratio (ER) for different transmitters is calculated as following:

$$ER_{SAR,n} = \frac{SAR_n}{SAR_{limit,n}}, 10 \text{ MHz} < f_u \leq 6 \text{ GHz}$$

$$ER_{APD,n} = \frac{APD_v}{APD_{limit,v}}, 6 \text{ GHz} < f_t \leq 10 \text{ GHz}$$

Where:

- SAR_n is the SAR value for the n -th transmitter/test frequency
- $SAR_{limit,n}$ is the basic restriction limit that is applicable to the n -th transmitter/test frequency
- APD_v is the APD value for the v -th transmitter/test frequency
- $APD_{limit,v}$ is the basic restriction limit that is applicable to the v -th transmitter/test frequency

FCC ID: BCGA3461	RF EXPOSURE REPORT	Approved by: Technical Manager
DUT Type: Tablet Device		APPENDIX E: Page 1 of 12

E.4 Body SAR Simultaneous Transmission Analysis

Table E-1
Simultaneous Transmission Scenario with 2.4 GHz WIFI MIMO, 5 GHz WIFI MIMO and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF7b ER	5 GHz WIFI Ant WF7a ER	2.4 GHz WIFI Ant WF2b ER	5 GHz WIFI Ant WF2a ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.128	0.103	0.116	0.081	0.000	0.244
	Top	0.362	0.746	0.008	0.029	0.000	0.775
	Bottom	0.007	0.006	0.324	0.744	0.000	0.751
	Right	0.000	0.006	0.274	0.096	0.000	0.280
	Left	0.032	0.023	0.005	0.028	0.000	0.060

Table E-2
Simultaneous Transmission Scenario with 2.4 GHz WIFI MIMO, 6 GHz WIFI MIMO and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF7b ER	6 GHz WIFI Ant WF7a ER	2.4 GHz WIFI Ant WF2b ER	6 GHz WIFI Ant WF2a ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.128	0.018	0.116	0.023	0.000	0.244
	Top	0.362	0.222	0.008	0.000	0.000	0.370
	Bottom	0.007	0.000	0.324	0.223	0.000	0.331
	Right	0.000	0.000	0.274	0.031	0.000	0.274
	Left	0.032	0.004	0.005	0.000	0.000	0.037

Table E-3
Simultaneous Transmission Scenario with 2.4 GHz WIFI MIMO, 5 GHz WIFI MIMO and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF7b ER	5 GHz WIFI Ant WF7b ER	2.4 GHz WIFI Ant WF2b ER	5 GHz WIFI Ant WF2a ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.128	0.032	0.116	0.081	0.000	0.244
	Top	0.362	0.367	0.008	0.029	0.000	0.396
	Bottom	0.007	0.003	0.324	0.744	0.000	0.751
	Right	0.000	0.001	0.274	0.096	0.000	0.275
	Left	0.032	0.056	0.005	0.028	0.000	0.084

Table E-4
Simultaneous Transmission Scenario with 2.4 GHz WIFI MIMO, 6 GHz WIFI MIMO and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF7b ER	6 GHz WIFI Ant WF7b ER	2.4 GHz WIFI Ant WF2b ER	6 GHz WIFI Ant WF2a ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.128	0.013	0.116	0.023	0.000	0.244
	Top	0.362	0.169	0.008	0.000	0.000	0.370
	Bottom	0.007	0.002	0.324	0.223	0.000	0.331
	Right	0.000	0.002	0.274	0.031	0.000	0.276
	Left	0.032	0.003	0.005	0.000	0.000	0.037

Table E-5
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth TxBF, NB U-NII TxBF and WPT

Simult Tx	Configuration	2.4 GHz Bluetooth Ant WF7b ER	NB U-NII Ant WF7a ER	2.4 GHz Bluetooth Ant WF2b ER	NB U-NII Ant WF2a ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.077	0.073	0.075	0.108	0.000	0.185
	Top	0.246	0.745	0.006	0.003	0.000	0.751
	Bottom	0.007	0.001	0.216	0.731	0.000	0.738
	Right	0.000	0.008	0.183	0.090	0.000	0.191
	Left	0.025	0.026	0.002	0.019	0.000	0.045

FCC ID: BCGA3461	RF EXPOSURE REPORT	Approved by: Technical Manager
DUT Type: Tablet Device		APPENDIX E: Page 2 of 12

Table E-6
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth TxBF, NB U-NII TxBF and WPT

Simult Tx	Configuration	2.4 GHz Bluetooth Ant WF7b ER	NB U-NII Ant WF7b ER	2.4 GHz Bluetooth Ant WF2b ER	NB U-NII Ant WF2a ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.077	0.021	0.075	0.108	0.000	0.185
	Top	0.246	0.336	0.006	0.003	0.000	0.342
	Bottom	0.007	0.003	0.216	0.731	0.000	0.738
	Right	0.000	0.000	0.183	0.090	0.000	0.183
	Left	0.025	0.069	0.002	0.019	0.000	0.088

Table E-7
Simultaneous Transmission Scenario with 2.4 GHz WIFI MIMO, NB U-NII TxBF and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF7b ER	NB U-NII Ant WF7a ER	2.4 GHz WIFI Ant WF2b ER	NB U-NII Ant WF2a ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.128	0.073	0.116	0.108	0.000	0.244
	Top	0.362	0.745	0.008	0.003	0.000	0.753
	Bottom	0.007	0.001	0.324	0.731	0.000	0.738
	Right	0.000	0.008	0.274	0.090	0.000	0.282
	Left	0.032	0.026	0.005	0.019	0.000	0.051

Table E-8
Simultaneous Transmission Scenario with 2.4 GHz WIFI MIMO, NB U-NII TxBF and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF7b ER	NB U-NII Ant WF7b ER	2.4 GHz WIFI Ant WF2b ER	NB U-NII Ant WF2a ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.128	0.021	0.116	0.108	0.000	0.244
	Top	0.362	0.336	0.008	0.003	0.000	0.370
	Bottom	0.007	0.003	0.324	0.731	0.000	0.738
	Right	0.000	0.000	0.274	0.090	0.000	0.274
	Left	0.032	0.069	0.005	0.019	0.000	0.088

Table E-9
Simultaneous Transmission Scenario with 5 GHz WIFI MIMO, 2.4 GHz Bluetooth TxBF and WPT

Simult Tx	Configuration	5 GHz WIFI Ant WF7a ER	2.4 GHz Bluetooth Ant WF7b ER	5 GHz WIFI Ant WF2a ER	2.4 GHz Bluetooth Ant WF2b ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.103	0.077	0.081	0.075	0.000	0.184
	Top	0.746	0.246	0.029	0.006	0.000	0.775
	Bottom	0.006	0.007	0.744	0.216	0.000	0.751
	Right	0.006	0.000	0.096	0.183	0.000	0.189
	Left	0.023	0.025	0.028	0.002	0.000	0.053

Table E-10
Simultaneous Transmission Scenario with 6 GHz WIFI MIMO, 2.4 GHz Bluetooth TxBF and WPT

Simult Tx	Configuration	6 GHz WIFI Ant WF7a ER	2.4 GHz Bluetooth Ant WF7b ER	6 GHz WIFI Ant WF2a ER	2.4 GHz Bluetooth Ant WF2b ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.018	0.077	0.023	0.075	0.000	0.152
	Top	0.222	0.246	0.000	0.006	0.000	0.252
	Bottom	0.000	0.007	0.223	0.216	0.000	0.230
	Right	0.000	0.000	0.031	0.183	0.000	0.183
	Left	0.004	0.025	0.000	0.002	0.000	0.027

FCC ID: BCGA3461	RF EXPOSURE REPORT	Approved by: Technical Manager
DUT Type: Tablet Device		APPENDIX E: Page 3 of 12

Table E-11
Simultaneous Transmission Scenario with 5 GHz WIFI MIMO, 2.4 GHz Bluetooth TxBF and WPT

Simult Tx	Configuration	5 GHz WIFI Ant WF7b ER	2.4 GHz Bluetooth Ant WF7b ER	5 GHz WIFI Ant WF2a ER	2.4 GHz Bluetooth Ant WF2b ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.032	0.077	0.081	0.075	0.000	0.158
	Top	0.367	0.246	0.029	0.006	0.000	0.396
	Bottom	0.003	0.007	0.744	0.216	0.000	0.751
	Right	0.001	0.000	0.096	0.183	0.000	0.184
	Left	0.056	0.025	0.028	0.002	0.000	0.084

Table E-12
Simultaneous Transmission Scenario with 6 GHz WIFI MIMO, 2.4 GHz Bluetooth TxBF and WPT

Simult Tx	Configuration	6 GHz WIFI Ant WF7b ER	2.4 GHz Bluetooth Ant WF7b ER	6 GHz WIFI Ant WF2a ER	2.4 GHz Bluetooth Ant WF2b ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.013	0.077	0.023	0.075	0.000	0.152
	Top	0.169	0.246	0.000	0.006	0.000	0.252
	Bottom	0.002	0.007	0.223	0.216	0.000	0.230
	Right	0.002	0.000	0.031	0.183	0.000	0.185
	Left	0.003	0.025	0.000	0.002	0.000	0.027

Table E-13
Simultaneous Transmission Scenario with 2.4 GHz WIFI, 5 GHz WIFI MIMO, 2.4 GHz Bluetooth and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF7b ER	5 GHz WIFI Ant WF7a ER	5 GHz WIFI Ant WF2a ER	2.4 GHz Bluetooth Ant WF2b ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.128	0.103	0.081	0.075	0.000	0.209
	Top	0.362	0.746	0.029	0.006	0.000	0.775
	Bottom	0.007	0.006	0.744	0.216	0.000	0.751
	Right	0.000	0.006	0.096	0.183	0.000	0.189
	Left	0.032	0.023	0.028	0.002	0.000	0.060

Table E-14
Simultaneous Transmission Scenario with 2.4 GHz WIFI, 6 GHz WIFI MIMO, 2.4 GHz Bluetooth and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF7b ER	6 GHz WIFI Ant WF7a ER	6 GHz WIFI Ant WF2a ER	2.4 GHz Bluetooth Ant WF2b ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.128	0.018	0.023	0.075	0.000	0.203
	Top	0.362	0.222	0.000	0.006	0.000	0.368
	Bottom	0.007	0.000	0.223	0.216	0.000	0.230
	Right	0.000	0.000	0.031	0.183	0.000	0.183
	Left	0.032	0.004	0.000	0.002	0.000	0.034

Table E-15
Simultaneous Transmission Scenario with 2.4 GHz WIFI, 5 GHz WIFI MIMO, 2.4 GHz Bluetooth and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF7b ER	5 GHz WIFI Ant WF7b ER	5 GHz WIFI Ant WF2a ER	2.4 GHz Bluetooth Ant WF2b ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.128	0.032	0.081	0.075	0.000	0.209
	Top	0.362	0.367	0.029	0.006	0.000	0.396
	Bottom	0.007	0.003	0.744	0.216	0.000	0.751
	Right	0.000	0.001	0.096	0.183	0.000	0.184
	Left	0.032	0.056	0.028	0.002	0.000	0.084

FCC ID: BCGA3461	RF EXPOSURE REPORT	Approved by: Technical Manager
DUT Type: Tablet Device		APPENDIX E: Page 4 of 12

Table E-16
Simultaneous Transmission Scenario with 2.4 GHz WIFI, 6 GHz WIFI MIMO, 2.4 GHz Bluetooth and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF7b ER	6 GHz WIFI Ant WF7b ER	6 GHz WIFI Ant WF2a ER	2.4 GHz Bluetooth Ant WF2b ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.128	0.013	0.023	0.075	0.000	0.203
	Top	0.362	0.169	0.000	0.006	0.000	0.368
	Bottom	0.007	0.002	0.223	0.216	0.000	0.230
	Right	0.000	0.002	0.031	0.183	0.000	0.185
	Left	0.032	0.003	0.000	0.002	0.000	0.034

Table E-17
Simultaneous Transmission Scenario with 2.4 GHz WIFI, 5 GHz WIFI MIMO, 2.4 GHz Bluetooth and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF2b ER	5 GHz WIFI Ant WF2a ER	5 GHz WIFI Ant WF7a ER	2.4 GHz Bluetooth Ant WF7b ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.116	0.081	0.103	0.077	0.000	0.219
	Top	0.008	0.029	0.746	0.246	0.000	0.775
	Bottom	0.324	0.744	0.006	0.007	0.000	0.751
	Right	0.274	0.096	0.006	0.000	0.000	0.280
	Left	0.005	0.028	0.023	0.025	0.000	0.053

Table E-18
Simultaneous Transmission Scenario with 2.4 GHz WIFI, 6 GHz WIFI MIMO, 2.4 GHz Bluetooth and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF2b ER	6 GHz WIFI Ant WF2a ER	6 GHz WIFI Ant WF7a ER	2.4 GHz Bluetooth Ant WF7b ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.116	0.023	0.018	0.077	0.000	0.193
	Top	0.008	0.000	0.222	0.246	0.000	0.254
	Bottom	0.324	0.223	0.000	0.007	0.000	0.331
	Right	0.274	0.031	0.000	0.000	0.000	0.274
	Left	0.005	0.000	0.004	0.025	0.000	0.030

Table E-19
Simultaneous Transmission Scenario with 2.4 GHz WIFI, 5 GHz WIFI MIMO, 2.4 GHz Bluetooth and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF2b ER	5 GHz WIFI Ant WF2a ER	5 GHz WIFI Ant WF7b ER	2.4 GHz Bluetooth Ant WF7b ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.116	0.081	0.032	0.077	0.000	0.193
	Top	0.008	0.029	0.367	0.246	0.000	0.396
	Bottom	0.324	0.744	0.003	0.007	0.000	0.751
	Right	0.274	0.096	0.001	0.000	0.000	0.275
	Left	0.005	0.028	0.056	0.025	0.000	0.084

Table E-20
Simultaneous Transmission Scenario with 2.4 GHz WIFI, 6 GHz WIFI MIMO, 2.4 GHz Bluetooth and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF2b ER	6 GHz WIFI Ant WF2a ER	6 GHz WIFI Ant WF7b ER	2.4 GHz Bluetooth Ant WF7b ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.116	0.023	0.013	0.077	0.000	0.193
	Top	0.008	0.000	0.169	0.246	0.000	0.254
	Bottom	0.324	0.223	0.002	0.007	0.000	0.331
	Right	0.274	0.031	0.002	0.000	0.000	0.276
	Left	0.005	0.000	0.003	0.025	0.000	0.030

FCC ID: BCGA3461	RF EXPOSURE REPORT	Approved by: Technical Manager
DUT Type: Tablet Device		APPENDIX E: Page 5 of 12

Table E-21
Simultaneous Transmission Scenario with 2.4 GHz WIFI, NB U-NII TxBF, 2.4 GHz Bluetooth and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF7b ER	NB U-NII Ant WF7a ER	2.4 GHz Bluetooth Ant WF2b ER	NB U-NII Ant WF2a ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.128	0.073	0.075	0.108	0.000	0.236
	Top	0.362	0.745	0.006	0.003	0.000	0.751
	Bottom	0.007	0.001	0.216	0.731	0.000	0.738
	Right	0.000	0.008	0.183	0.090	0.000	0.191
	Left	0.032	0.026	0.002	0.019	0.000	0.051

Table E-22
Simultaneous Transmission Scenario with 2.4 GHz WIFI, NB U-NII TxBF, 2.4 GHz Bluetooth and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF7b ER	NB U-NII Ant WF7b ER	2.4 GHz Bluetooth Ant WF2b ER	NB U-NII Ant WF2a ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.128	0.021	0.075	0.108	0.000	0.236
	Top	0.362	0.336	0.006	0.003	0.000	0.368
	Bottom	0.007	0.003	0.216	0.731	0.000	0.738
	Right	0.000	0.000	0.183	0.090	0.000	0.183
	Left	0.032	0.069	0.002	0.019	0.000	0.088

Table E-23
Simultaneous Transmission Scenario with 2.4 GHz WIFI, NB U-NII TxBF, 2.4 GHz Bluetooth and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF2b ER	NB U-NII Ant WF2a ER	2.4 GHz Bluetooth Ant WF7b ER	NB U-NII Ant WF7a ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.116	0.108	0.077	0.073	0.000	0.193
	Top	0.008	0.003	0.246	0.745	0.000	0.753
	Bottom	0.324	0.731	0.007	0.001	0.000	0.738
	Right	0.274	0.090	0.000	0.008	0.000	0.282
	Left	0.005	0.019	0.025	0.026	0.000	0.045

Table E-24
Simultaneous Transmission Scenario with 2.4 GHz WIFI, NB U-NII TxBF, 2.4 GHz Bluetooth and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF2b ER	NB U-NII Ant WF2a ER	2.4 GHz Bluetooth Ant WF7b ER	NB U-NII Ant WF7b ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.116	0.108	0.077	0.021	0.000	0.193
	Top	0.008	0.003	0.246	0.336	0.000	0.344
	Bottom	0.324	0.731	0.007	0.003	0.000	0.738
	Right	0.274	0.090	0.000	0.000	0.000	0.274
	Left	0.005	0.019	0.025	0.069	0.000	0.088

Table E-25
Simultaneous Transmission Scenario with 2.4 GHz WIFI, 5 GHz WIFI MIMO, 802.15.4 and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF7b ER	5 GHz WIFI Ant WF7a ER	5 GHz WIFI Ant WF2a ER	802.15.4 Ant WF2b ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.128	0.103	0.081	0.071	0.000	0.209
	Top	0.362	0.746	0.029	0.005	0.000	0.775
	Bottom	0.007	0.006	0.744	0.211	0.000	0.751
	Right	0.000	0.006	0.096	0.156	0.000	0.162
	Left	0.032	0.023	0.028	0.002	0.000	0.060

FCC ID: BCGA3461	RF EXPOSURE REPORT	Approved by: Technical Manager
DUT Type: Tablet Device		APPENDIX E: Page 6 of 12

Table E-26
Simultaneous Transmission Scenario with 2.4 GHz WIFI, 6 GHz WIFI MIMO, 802.15.4 and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF7b ER	6 GHz WIFI Ant WF7a ER	6 GHz WIFI Ant WF2a ER	802.15.4 Ant WF2b ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.128	0.018	0.023	0.071	0.000	0.199
	Top	0.362	0.222	0.000	0.005	0.000	0.367
	Bottom	0.007	0.000	0.223	0.211	0.000	0.230
	Right	0.000	0.000	0.031	0.156	0.000	0.156
	Left	0.032	0.004	0.000	0.002	0.000	0.034

Table E-27
Simultaneous Transmission Scenario with 2.4 GHz WIFI, 5 GHz WIFI MIMO, 802.15.4 and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF7b ER	5 GHz WIFI Ant WF7b ER	5 GHz WIFI Ant WF2a ER	802.15.4 Ant WF2b ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.128	0.032	0.081	0.071	0.000	0.209
	Top	0.362	0.367	0.029	0.005	0.000	0.396
	Bottom	0.007	0.003	0.744	0.211	0.000	0.751
	Right	0.000	0.001	0.096	0.156	0.000	0.157
	Left	0.032	0.056	0.028	0.002	0.000	0.084

Table E-28
Simultaneous Transmission Scenario with 2.4 GHz WIFI, 6 GHz WIFI MIMO, 802.15.4 and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF7b ER	6 GHz WIFI Ant WF7b ER	6 GHz WIFI Ant WF2a ER	802.15.4 Ant WF2b ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.128	0.013	0.023	0.071	0.000	0.199
	Top	0.362	0.169	0.000	0.005	0.000	0.367
	Bottom	0.007	0.002	0.223	0.211	0.000	0.230
	Right	0.000	0.002	0.031	0.156	0.000	0.158
	Left	0.032	0.003	0.000	0.002	0.000	0.034

Table E-29
Simultaneous Transmission Scenario with 2.4 GHz WIFI, 5 GHz WIFI MIMO, 802.15.4 and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF2b ER	5 GHz WIFI Ant WF2a ER	5 GHz WIFI Ant WF7a ER	802.15.4 Ant WF7b ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.116	0.081	0.103	0.065	0.000	0.219
	Top	0.008	0.029	0.746	0.279	0.000	0.775
	Bottom	0.324	0.744	0.006	0.006	0.000	0.750
	Right	0.274	0.096	0.006	0.000	0.000	0.280
	Left	0.005	0.028	0.023	0.016	0.000	0.051

Table E-30
Simultaneous Transmission Scenario with 2.4 GHz WIFI, 6 GHz WIFI MIMO, 802.15.4 and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF2b ER	6 GHz WIFI Ant WF2a ER	6 GHz WIFI Ant WF7a ER	802.15.4 Ant WF7b ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.116	0.023	0.018	0.065	0.000	0.181
	Top	0.008	0.000	0.222	0.279	0.000	0.287
	Bottom	0.324	0.223	0.000	0.006	0.000	0.330
	Right	0.274	0.031	0.000	0.000	0.000	0.274
	Left	0.005	0.000	0.004	0.016	0.000	0.021

FCC ID: BCGA3461	RF EXPOSURE REPORT	Approved by: Technical Manager
DUT Type: Tablet Device		APPENDIX E: Page 7 of 12

Table E-31
Simultaneous Transmission Scenario with 2.4 GHz WIFI, 5 GHz WIFI MIMO, 802.15.4 and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF2b ER	5 GHz WIFI Ant WF2a ER	5 GHz WIFI Ant WF7b ER	802.15.4 Ant WF7b ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.116	0.081	0.032	0.065	0.000	0.181
	Top	0.008	0.029	0.367	0.279	0.000	0.396
	Bottom	0.324	0.744	0.003	0.006	0.000	0.750
	Right	0.274	0.096	0.001	0.000	0.000	0.275
	Left	0.005	0.028	0.056	0.016	0.000	0.084

Table E-32
Simultaneous Transmission Scenario with 2.4 GHz WIFI, 6 GHz WIFI MIMO, 802.15.4 and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF2b ER	6 GHz WIFI Ant WF2a ER	6 GHz WIFI Ant WF7b ER	802.15.4 Ant WF7b ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.116	0.023	0.013	0.065	0.000	0.181
	Top	0.008	0.000	0.169	0.279	0.000	0.287
	Bottom	0.324	0.223	0.002	0.006	0.000	0.330
	Right	0.274	0.031	0.002	0.000	0.000	0.276
	Left	0.005	0.000	0.003	0.016	0.000	0.021

Table E-33
Simultaneous Transmission Scenario with 2.4 GHz WIFI, NB U-NII TxBF, 2.4 GHz Bluetooth and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF7b ER	NB U-NII Ant WF7a ER	2.4 GHz Bluetooth Ant WF2b ER	NB U-NII Ant WF2a ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.128	0.073	0.075	0.108	0.000	0.236
	Top	0.362	0.745	0.006	0.003	0.000	0.751
	Bottom	0.007	0.001	0.216	0.731	0.000	0.738
	Right	0.000	0.008	0.183	0.090	0.000	0.191
	Left	0.032	0.026	0.002	0.019	0.000	0.051

Table E-34
Simultaneous Transmission Scenario with 2.4 GHz WIFI, NB U-NII TxBF, 2.4 GHz Bluetooth and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF7b ER	NB U-NII Ant WF7b ER	2.4 GHz Bluetooth Ant WF2b ER	NB U-NII Ant WF2a ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.128	0.021	0.075	0.108	0.000	0.236
	Top	0.362	0.336	0.006	0.003	0.000	0.368
	Bottom	0.007	0.003	0.216	0.731	0.000	0.738
	Right	0.000	0.000	0.183	0.090	0.000	0.183
	Left	0.032	0.069	0.002	0.019	0.000	0.088

Table E-35
Simultaneous Transmission Scenario with 2.4 GHz WIFI, NB U-NII TxBF, 2.4 GHz Bluetooth and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF2b ER	NB U-NII Ant WF2a ER	2.4 GHz Bluetooth Ant WF7b ER	NB U-NII Ant WF7a ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.116	0.108	0.077	0.073	0.000	0.193
	Top	0.008	0.003	0.246	0.745	0.000	0.753
	Bottom	0.324	0.731	0.007	0.001	0.000	0.738
	Right	0.274	0.090	0.000	0.008	0.000	0.282
	Left	0.005	0.019	0.025	0.026	0.000	0.045

FCC ID: BCGA3461	RF EXPOSURE REPORT	Approved by: Technical Manager
DUT Type: Tablet Device		APPENDIX E: Page 8 of 12

Table E-36
Simultaneous Transmission Scenario with 2.4 GHz WIFI, NB U-NII TxBF, 2.4 GHz Bluetooth and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF2b ER	NB U-NII Ant WF2a ER	2.4 GHz Bluetooth Ant WF7b ER	NB U-NII Ant WF7b ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.116	0.108	0.077	0.021	0.000	0.193
	Top	0.008	0.003	0.246	0.336	0.000	0.344
	Bottom	0.324	0.731	0.007	0.003	0.000	0.738
	Right	0.274	0.090	0.000	0.000	0.000	0.274
	Left	0.005	0.019	0.025	0.069	0.000	0.088

Table E-37
Simultaneous Transmission Scenario with 2.4 GHz WIFI, 5 GHz WIFI MIMO, 802.15.4 and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF7b ER	5 GHz WIFI Ant WF7a ER	5 GHz WIFI Ant WF2a ER	802.15.4 Ant WF2b ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.128	0.103	0.081	0.071	0.000	0.209
	Top	0.362	0.746	0.029	0.005	0.000	0.775
	Bottom	0.007	0.006	0.744	0.211	0.000	0.751
	Right	0.000	0.006	0.096	0.156	0.000	0.162
	Left	0.032	0.023	0.028	0.002	0.000	0.060

Table E-38
Simultaneous Transmission Scenario with 2.4 GHz WIFI, 6 GHz WIFI MIMO, 802.15.4 and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF7b ER	6 GHz WIFI Ant WF7a ER	6 GHz WIFI Ant WF2a ER	802.15.4 Ant WF2b ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.128	0.018	0.023	0.071	0.000	0.199
	Top	0.362	0.222	0.000	0.005	0.000	0.367
	Bottom	0.007	0.000	0.223	0.211	0.000	0.230
	Right	0.000	0.000	0.031	0.156	0.000	0.156
	Left	0.032	0.004	0.000	0.002	0.000	0.034

Table E-39
Simultaneous Transmission Scenario with 2.4 GHz WIFI, 5 GHz WIFI MIMO, 802.15.4 and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF7b ER	5 GHz WIFI Ant WF7b ER	5 GHz WIFI Ant WF2a ER	802.15.4 Ant WF2b ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.128	0.032	0.081	0.071	0.000	0.209
	Top	0.362	0.367	0.029	0.005	0.000	0.396
	Bottom	0.007	0.003	0.744	0.211	0.000	0.751
	Right	0.000	0.001	0.096	0.156	0.000	0.157
	Left	0.032	0.056	0.028	0.002	0.000	0.084

Table E-40
Simultaneous Transmission Scenario with 2.4 GHz WIFI, 6 GHz WIFI MIMO, 802.15.4 and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF7b ER	6 GHz WIFI Ant WF7b ER	6 GHz WIFI Ant WF2a ER	802.15.4 Ant WF2b ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.128	0.013	0.023	0.071	0.000	0.199
	Top	0.362	0.169	0.000	0.005	0.000	0.367
	Bottom	0.007	0.002	0.223	0.211	0.000	0.230
	Right	0.000	0.002	0.031	0.156	0.000	0.158
	Left	0.032	0.003	0.000	0.002	0.000	0.034

FCC ID: BCGA3461	RF EXPOSURE REPORT	Approved by: Technical Manager
DUT Type: Tablet Device		APPENDIX E: Page 9 of 12

Table E-41
Simultaneous Transmission Scenario with 2.4 GHz WIFI, 5 GHz WIFI MIMO, 802.15.4 and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF2b ER	5 GHz WIFI Ant WF2a ER	5 GHz WIFI Ant WF7a ER	802.15.4 Ant WF7b ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.116	0.081	0.103	0.065	0.000	0.219
	Top	0.008	0.029	0.746	0.279	0.000	0.775
	Bottom	0.324	0.744	0.006	0.006	0.000	0.750
	Right	0.274	0.096	0.006	0.000	0.000	0.280
	Left	0.005	0.028	0.023	0.016	0.000	0.051

Table E-42
Simultaneous Transmission Scenario with 2.4 GHz WIFI, 6 GHz WIFI MIMO, 802.15.4 and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF2b ER	6 GHz WIFI Ant WF2a ER	6 GHz WIFI Ant WF7a ER	802.15.4 Ant WF7b ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.116	0.023	0.018	0.065	0.000	0.181
	Top	0.008	0.000	0.222	0.279	0.000	0.287
	Bottom	0.324	0.223	0.000	0.006	0.000	0.330
	Right	0.274	0.031	0.000	0.000	0.000	0.274
	Left	0.005	0.000	0.004	0.016	0.000	0.021

Table E-43
Simultaneous Transmission Scenario with 2.4 GHz WIFI, 5 GHz WIFI MIMO, 802.15.4 and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF2b ER	5 GHz WIFI Ant WF2a ER	5 GHz WIFI Ant WF7b ER	802.15.4 Ant WF7b ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.116	0.081	0.032	0.065	0.000	0.181
	Top	0.008	0.029	0.367	0.279	0.000	0.396
	Bottom	0.324	0.744	0.003	0.006	0.000	0.750
	Right	0.274	0.096	0.001	0.000	0.000	0.275
	Left	0.005	0.028	0.056	0.016	0.000	0.084

Table E-44
Simultaneous Transmission Scenario with 2.4 GHz WIFI, 6 GHz WIFI MIMO, 802.15.4 and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF2b ER	6 GHz WIFI Ant WF2a ER	6 GHz WIFI Ant WF7b ER	802.15.4 Ant WF7b ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.116	0.023	0.013	0.065	0.000	0.181
	Top	0.008	0.000	0.169	0.279	0.000	0.287
	Bottom	0.324	0.223	0.002	0.006	0.000	0.330
	Right	0.274	0.031	0.002	0.000	0.000	0.276
	Left	0.005	0.000	0.003	0.016	0.000	0.021

Table E-45
Simultaneous Transmission Scenario with 2.4 GHz WIFI, NB U-NII TxBF, 802.15.4 and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF7b ER	NB U-NII Ant WF7a ER	802.15.4 Ant WF2b ER	NB U-NII Ant WF2a ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.128	0.073	0.071	0.108	0.000	0.236
	Top	0.362	0.745	0.005	0.003	0.000	0.750
	Bottom	0.007	0.001	0.211	0.731	0.000	0.738
	Right	0.000	0.008	0.156	0.090	0.000	0.164
	Left	0.032	0.026	0.002	0.019	0.000	0.051

FCC ID: BCGA3461	RF EXPOSURE REPORT	Approved by: Technical Manager
DUT Type: Tablet Device		APPENDIX E: Page 10 of 12

Table E-46
Simultaneous Transmission Scenario with 2.4 GHz WIFI, NB U-NII TxBF, 802.15.4 and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF7b ER	NB U-NII Ant WF7b ER	802.15.4 Ant WF2b ER	NB U-NII Ant WF2a ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.128	0.021	0.071	0.108	0.000	0.236
	Top	0.362	0.336	0.005	0.003	0.000	0.367
	Bottom	0.007	0.003	0.211	0.731	0.000	0.738
	Right	0.000	0.000	0.156	0.090	0.000	0.156
	Left	0.032	0.069	0.002	0.019	0.000	0.088

Table E-47
Simultaneous Transmission Scenario with 2.4 GHz WIFI, NB U-NII TxBF, 802.15.4 and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF2b ER	NB U-NII Ant WF2a ER	802.15.4 Ant WF7b ER	NB U-NII Ant WF7a ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.116	0.108	0.065	0.073	0.000	0.189
	Top	0.008	0.003	0.279	0.745	0.000	0.753
	Bottom	0.324	0.731	0.006	0.001	0.000	0.737
	Right	0.274	0.090	0.000	0.008	0.000	0.282
	Left	0.005	0.019	0.016	0.026	0.000	0.045

Table E-48
Simultaneous Transmission Scenario with 2.4 GHz WIFI, NB U-NII TxBF, 802.15.4 and WPT

Simult Tx	Configuration	2.4 GHz WIFI Ant WF2b ER	NB U-NII Ant WF2a ER	802.15.4 Ant WF7b ER	NB U-NII Ant WF7b ER	WPT ER	Σ ER
		1	2	3	4	5	1+2+3+4+5
Body SAR	Back	0.116	0.108	0.065	0.021	0.000	0.181
	Top	0.008	0.003	0.279	0.336	0.000	0.344
	Bottom	0.324	0.731	0.006	0.003	0.000	0.737
	Right	0.274	0.090	0.000	0.000	0.000	0.274
	Left	0.005	0.019	0.016	0.069	0.000	0.088

FCC ID: BCGA3461	RF EXPOSURE REPORT	Approved by: Technical Manager
DUT Type: Tablet Device		APPENDIX E: Page 11 of 12

E.5 Simultaneous Transmission Conclusion

The above numerical summed TER results for all the worst-case simultaneous transmission conditions were below the TER limit. Therefore, the above analysis is 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 D04v01.

FCC ID: BCGA3461	RF EXPOSURE REPORT	Approved by: Technical Manager
DUT Type: Tablet Device		APPENDIX E: Page 12 of 12