

17. Simultaneous Transmission Analysis

No.	Simultaneous Transmission Configurations	Portable Handset			
		Head	Body-worn	Hotspot	Product specific 10g SAR
1.	WWAN + 2.4GHz WLAN	Yes	Yes	Yes	Yes
2.	WWAN + 5GHz WLAN	Yes	Yes	Yes	Yes
3.	WWAN + 6GHz WLAN	Yes	Yes		Yes
4.	WWAN + Bluetooth	Yes	Yes	Yes	Yes
5.	5GHz WLAN + Bluetooth	Yes	Yes	Yes	Yes
6.	6GHz WLAN + Bluetooth	Yes	Yes		Yes
7.	WWAN + 5GHz WLAN + Bluetooth	Yes	Yes	Yes	Yes
8.	WWAN + 6GHz WLAN + Bluetooth	Yes	Yes		Yes
9.	WWAN + 2.4GHz WLAN+NFC				Yes
10.	WWAN + 5GHz WLAN+NFC				Yes
11.	WWAN + 6GHz WLAN+NFC				Yes
12.	WWAN + Bluetooth + NFC				Yes
13.	5GHz WLAN + Bluetooth + NFC				Yes
14.	6GHz WLAN + Bluetooth + NFC				Yes
15.	WWAN +5GHz WLAN + Bluetooth + NFC				Yes
16.	WWAN +6GHz WLAN + Bluetooth + NFC				Yes

General Note:

1. This device supports VoIP in GPRS, EGPRS, WCDMA, LTE and 5GNR (e.g. for 3rd-party VoIP), LTE supports VoLTE operation.
2. WWAN above includes 5G NR bands and EN-DC combination.
3. EUT will choose each GSM, WCDMA, LTE and 5GNR according to the network signal condition; therefore, they will not operate simultaneously at any moment.
4. For EN-DC mode, Qualcomm Smart Transmit algorithm in WWAN adds directly the time-averaged RF exposure from 4G(LTE) and time-averaged RF exposure from 5G NR. Smart Transmit algorithm controls the total RF exposure from both 4G and 5G NR to not exceed SAR exposure limit. Therefore, simultaneous transmission compliance between 4G+5G NR operations within an antenna group is demonstrated in the Part 2 Report during algorithm validation.
5. This device WLAN 2.4GHz support hotspot operation and Bluetooth support tethering applications.
6. This device 5.2GHz WLAN/5.8GHz WLAN support hotspot operation, and 5.2GHz WLAN/5.8GHz WLAN supports WLAN Direct (GC/GO), and 5.3GHz / 5.5GHz supports WLAN Direct (GC only). WLAN 6GHz has no hotspot function.
7. According to the EUT characteristic, WLAN 2.4GHz and Bluetooth cannot transmit simultaneously.
8. According to the EUT characteristic, WLAN 5GHz/6GHz and Bluetooth can transmit simultaneously.
9. According to the EUT characteristic, WLAN 5GHz/6GHz and WLAN 2.4GHz cannot transmit simultaneously.
10. According to the EUT characteristic, WLAN 5GHz and WLAN 6GHz cannot transmit simultaneously.
11. NFC can transmit simultaneously with other Radios in extremity exposure condition.
12. The worst case 5 GHz WLAN SAR for each configuration was used for SAR summation.
13. For Headset SAR and non-Headset SAR always chose higher SAR to do co-located analysis.
14. For standalone WWAN, always choose the highest SAR among all WWAN bands within the selected antenna for each exposure position to perform simultaneous transmission analysis with WLAN/BT. This is the worst co-located analysis and can represent each band.
15. Qualcomm Smart Transmit algorithm support to WWAN except WIFI/BT and NFC. And this device supports inter-band ULCA and EN-DC combination operations with component carriers from different antenna groups. Each antenna group has controlled the total RF exposure from all transmitter to not exceed FCC limit. Therefore, in this report, it is evaluated whether the sum of the groups of each antenna does not exceed FCC limit or spatial separation is applied. In addition, each antenna group need to satisfy simultaneous transmission analysis with External radios (WIFI/BT and NFC) in this report.
16. The maximum SAR summation is calculated based on the same configuration and test position.
17. Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
 - i) 1g Scalar SAR summation < 1.6W/kg and 10g Scalar SAR summation < 4.0W/kg.

- ii) $SPLSR = (SAR1 + SAR2)^{1.5} / (\text{min. separation distance, mm})$, and the peak separation distance is determined from the square root of $[(x1-x2)^2 + (y1-y2)^2 + (z1-z2)^2]$, where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
- iii) If $SPLSR \leq 0.04$ for 1g SAR and $SPLSR \leq 0.10$ for 10g SAR, simultaneously transmission SAR measurement is not necessary.
- iv) Simultaneously transmission SAR measurement, and the reported multi-band 1g SAR < 1.6W/kg and 10g SAR < 4.0W/kg.
- v) The SPLSR calculated results please refer to section 17.7.

17.1 Sub6 Antenna Groups

The Qualcomm® Smart Transmit™ 3.0 of Smart Transmit (GEN2) Feature operates based on pre-defined sub6 antenna groups (AG). Sub6 Tx antennas in the device are grouped based on spatial variation of RF exposure distributions, where the RF exposure of one AG is mutually exclusive from other AG. This is accomplished by demonstrating below conditions for all exposure positions under each DSI for a given exposure category.

- 1) Case 1: Demonstrate that Sum of maximum reported SAR from each of the sub6 AGs and the reported normalized SAR values from radios outside Smart Transmit should be less than regulatory limits for each supported DSI. This condition must be demonstrated for all antenna combinations of sub6 AGs.
 - i. For a given DSI, obtain the highest *reported* SAR for each antenna out of all supported technologies and frequency bands. Obtain the maximum *reported* SAR for each AG by taking the maximum out of *reported* SAR for all antennas belonging to each AG.
 - ii. Demonstrate that the sum of maximum reported SAR (normalized to regulatory limit) from each of the sub6 AGs and the sum of reported SAR (normalized to regulatory limit) from all supported radios outside of Smart Transmit should be less than 1.0
- 2) Case 2: If the Case 1 is NOT met, then for a given antenna grouping scheme plus external radios/antennas (ERs) (referred to as 'configuration'), demonstrate all AG pairs, all ER pairs and all (AG, ER) pairs in the configuration meet SPLSR criteria (Section 4.3.2 (c) in FCC KDB 447498 D01 v06) for each exposure position under each supported DSI. For a given exposure position under a given DSI, prove all AG pairs, all ER pairs and all (AG, ER) pairs (if there are external radios outside Smart Transmit) in the configuration meet SPLSR.

This device supports two sub6 AG: AG0 and AG1, the detailed please refer to the below table:

Antenna Group 0 (AG0)	ANT0 & ANT2 & ANT8
Antenna Group 1 (AG1)	ANT1 & ANT4 & ANT5 & ANT7 & ANT9

- 3) This model's multi_Tx_factor is 1.0.

The conditions are verified through the following criterias:

- i) (SAR1 + SAR2 criteria): If SPLSR criteria is not used, then the highest reported SAR at *Plimit* for each antenna should be obtained out of all supported technologies and frequency bands for each DSI. Demonstrate that the sum of reported SAR of one antenna from each of the sub6 AGs and the sum of RF exposure from all supported radios outside of Smart Transmit should be less than the regulatory limit as given below for each DSI.
 1. Obtain the worst-case reported SAR for each antenna group (i.e., maximum *reported* SAR at *Plimit* out of all supported technologies, frequency bands and antennas in AG0 and AG1), denoted as max.SAR.AG0 and max.SAR.AG1, and obtain the worst-case RF exposure for each external radio, and demonstrate that the sum of these RF exposures meets: $\{ [\text{max.SAR.AG0} + \text{max.SAR.AG1}] + \text{each external radio worst-case reported SAR (ex: NFC)} \} \leq 1.6$ (for 1g, or 4.0 for 10g). (each external radio worst-case reported SAR is the worst SAR in all combinations of each external radio simultaneous transmission).
- ii) (SPLSR criteria): For each antenna, obtain the highest reported SAR value at *Plimit* out of all supported technologies for each frequency band. Using these values, demonstrate for a given DSI that every antenna from one sub6 AG meets SPLSR criteria with every antenna in another sub6 AG for all frequency bands. This criteria must be demonstrated for all antenna pair combinations irrespective of supported simultaneous transmission scenarios as given below for each DSI:
 - a. SPLSR criteria should be met for all antenna pair combinations of AG0 and AG1. As it can be seen, these include all combinations of antenna groups, antennas, and frequency bands.
 - b. Obtain combined SAR per AG: Obtain the worst-case conservative combined SAR and its peak location for each AG.
 - c. Use the 'closest' peak location out of all antennas of AGj to evaluate SPLSR with other AGs in the configuration. Note, by 'closest', select the peak location out of all antennas ($\in$ AGj) that is closest to the peak location of other AG where SPLSR is evaluated.
- iii) (combination of SPLSR SAR1+SAR2 criteria): If SPLSR criteria for all the combinations of sub6g antenna groups in (i) is demonstrated to show that each AG is mutually exclusive from other AGs, and if the WIFI/BT antennas supported outside of Smart Transmit do not meet SPLSR criteria, then the condition in (ii) reduces to: $\{ \text{max.SAR.AG0} + \text{worst-case reported SAR} \} \leq 1.6$ and $\{ \text{max.SAR.AG1} + \text{worst-case reported SAR} \} \leq 1.6$ for compliance demonstration (for 1g, or 4.0 for 10g).
- iv) Obtain the worst-case reported SAR for each antenna group, (i.e., maximum *reported* SAR at *Plimit* out of all supported technologies, frequency bands and antennas in AG0 and AG1), denoted as max.SAR.AG0 and max.SAR.AG1, and WIFI/BT antennas supported Smart Transmit technology and there is no other radios in this report, and demonstrate that the sum of these RF exposures meets: $\{ [\text{max.SAR.AG0} + \text{max.SAR.AG1}] \} \leq 1.6$ (for 1g, or 4.0 for 10g).

For summed SAR results and SPLSR detailed analysis please refer to section 17.2 / 17.3 / 17.4 / 17.5 / 17.6 / 17.7 of this report. All of the combinations of sub6 antenna groups are sufficient to show that AG0 is mutually exclusive from AG1 and 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.

17.2 Head Exposure Conditions

General Note: The unit of SAR evaluation is W/kg.

Simultaneous Transmission Evaluation of WWAN+WLAN+BT:

<AG0 maximum reported SAR>:

Test Position	Ant0	Ant2	Ant8	MAX
Right Cheek	0.171	0.238	0.173	0.238
Right Tilted	0.074	0.113	0.074	0.113
Left Cheek	0.201	0.177	0.107	0.201
Left Tilted	0.11	0.128	0.115	0.128

<AG1 maximum reported SAR>:

Test Position	Ant1	Ant4	Ant5	Ant7	Ant9	MAX
Right Cheek	0.891	0.526	0.522	0.879	0.841	0.891
Right Tilted	0.885	0.667	0.655	0.422	0.142	0.885
Left Cheek	0.524	0.746	0.864	0.252	0.9	0.900
Left Tilted	0.537	0.886	0.875	0.187	0.129	0.886

<WLAN2.4GHz/5GHz/6GHz+BT Worse-case SAR>:

Test Position	WLAN2.4GHz Ant3	WLAN5GHz Ant4	WLAN5GHz Ant6	WLAN6GHz Ant4	WLAN6GHz Ant6	BT Ant3	WLAN5GHz Ant4+BT Ant3	WLAN5GHz Ant6+BT Ant3	WLAN6GHz Ant4+BT Ant3	WLAN6GHz Ant6+BT Ant3	MAX
Right Cheek	0.137	0.225	0.092	0.092	0.096	0.122	0.347	0.214	0.214	0.218	0.347
Right Tilted	0.161	0.257	0.066	0.119	0.084	0.151	0.408	0.217	0.270	0.235	0.408
Left Cheek	0.395	0.293	0.287	0.221	0.286	0.200	0.493	0.487	0.421	0.486	0.493
Left Tilted	0.244	0.292	0.275	0.383	0.042	0.189	0.481	0.464	0.572	0.231	0.572

<Simultaneous Transmission analysis of AG0 + AG1 + WLAN+BT Worse-case>:

Test Position	AG0	AG1	WLAN/BT worst case	AG1+AG0+WLAN +BT worse case
Right Cheek	0.238	0.891	0.347	1.48
Right Tilted	0.113	0.885	0.408	1.41
Left Cheek	0.201	0.900	0.493	1.59
Left Tilted	0.128	0.886	0.572	1.59

<Simultaneous Transmission analysis of WLAN/BT only and WWAN cell-off>:

Test Position	WLAN2.4GHz Ant3	WLAN5GHz Ant4	WLAN5GHz Ant6	WLAN6GHz Ant4	WLAN6GHz Ant6	BT Ant3	WLAN5GHz Ant4+BT Ant3	WLAN5GHz Ant6+BT Ant3	WLAN6GHz Ant4+BT Ant3	WLAN6GHz Ant6+BT Ant3	MAX
Right Cheek	0.490	0.688	0.291	0.257	0.124	0.158	0.846	0.449	0.415	0.282	0.85
Right Tilted	0.572	0.812	0.205	0.313	0.095	0.196	1.008	0.401	0.509	0.291	1.01
Left Cheek	1.355	1.086	1.188	0.478	0.460	0.401	1.487	1.589	0.879	0.861	1.59
Left Tilted	1.041	1.040	0.951	0.893	0.052	0.343	1.383	1.294	1.236	0.395	1.38

17.3 Hotspot Exposure Conditions

General Note: The unit of SAR evaluation is W/kg.

Simultaneous Transmission Evaluation of WWAN+WLAN+BT:

<AG0 maximum reported SAR>:

Test Position	Ant0	Ant2	Ant8	MAX
Front	0.648	1.127	0.337	1.127
Back	1.292	1.289	0.484	1.292
Left Side	0.562	0.215		0.562
Right Side		0.518	1.143	1.143
Top Side				0.000
Bottom Side	1.239	1.289	0.096	1.289

<AG1 maximum reported SAR>:

Test Position	Ant1	Ant4	Ant5	Ant7	Ant9	MAX
Front	0.402	0.253	0.275	0.388	0.204	0.402
Back	0.628	0.369	0.523	0.628	0.298	0.628
Left Side	0.337	0.13		0.62	0.642	0.642
Right Side		0.069	0.621			0.621
Top Side	0.628	0.624	0.149	0.163	0.01	0.628
Bottom Side						0.000

<WLAN2.4GHz/5GHz+BT Worse-case SAR>:

Test Position	WLAN2.4GHz Ant3	WLAN5GHz Ant4	WLAN5GHz Ant6	BT Ant3	WLAN5GHz Ant4+BT Ant3	WLAN5GHz Ant6+BT Ant3	WLAN6GHz Ant4+BT Ant3	WLAN6GHz Ant6+BT Ant3	MAX
Front	0.419	0.403	0.456	0.179	0.582	0.635	0.179	0.179	0.635
Back	0.649	0.447	0.586	0.273	0.72	0.859	0.273	0.273	0.859
Left Side									0.000
Right Side	0.236	0.069	0.615	0.112	0.181	0.727	0.112	0.112	0.727
Top Side	0.401	0.604	0.096	0.189	0.793	0.285	0.189	0.189	0.793
Bottom Side									0.000

<Simultaneous Transmission analysis of AG0 + AG1 + WLAN+BT Worse-case>:

Test Position	AG0	AG1	WLAN/BT worst case	AG1+AG0+WLAN +BT worse case
Front	1.127	0.402	0.635	2.16
Back	1.292	0.628	0.859	2.78
Left Side	0.562	0.642	0.000	1.20
Right Side	1.143	0.621	0.727	2.49
Top Side	0.000	0.628	0.793	1.42
Bottom Side	1.289	0.000	0.000	1.29

Note: The results marked yellow in above table refers to the detailed analysis corresponding to each position below tables.

Front					
Ant combination	AG0	AG1	WLAN/BT worst case	AG1+AG0+WLAN +BT worse case	SPLSR
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
Ant0-Ant1	0.648	0.402	0.635	1.69	41
Ant0-Ant4	0.648	0.253	0.635	1.54	
Ant0-Ant5	0.648	0.275	0.635	1.56	
Ant0-Ant7	0.648	0.388	0.635	1.67	42
Ant0-Ant9	0.648	0.204	0.635	1.49	
Ant2-Ant1	1.127	0.402	0.635	2.16	43
Ant2-Ant4	1.127	0.253	0.635	2.02	44
Ant2-Ant5	1.127	0.275	0.635	2.04	45
Ant2-Ant7	1.127	0.388	0.635	2.15	46
Ant2-Ant9	1.127	0.204	0.635	1.97	47
Ant8-Ant1	0.337	0.402	0.635	1.37	
Ant8-Ant4	0.337	0.253	0.635	1.23	
Ant8-Ant5	0.337	0.275	0.635	1.25	
Ant8-Ant7	0.337	0.388	0.635	1.36	
Ant8-Ant9	0.337	0.204	0.635	1.18	

Back					
Ant combination	AG0	AG1	WLAN/BT worst case	AG1+AG0+WLAN +BT worse case	SPLSR
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
Ant0-Ant1	1.292	0.628	0.859	2.78	48
Ant0-Ant4	1.292	0.369	0.859	2.52	49
Ant0-Ant5	1.292	0.523	0.859	2.67	50
Ant0-Ant7	1.292	0.628	0.859	2.78	51
Ant0-Ant9	1.292	0.298	0.859	2.45	52
Ant2-Ant1	1.289	0.628	0.859	2.78	53
Ant2-Ant4	1.289	0.369	0.859	2.52	54
Ant2-Ant5	1.289	0.523	0.859	2.67	55
Ant2-Ant7	1.289	0.628	0.859	2.78	56
Ant2-Ant9	1.289	0.298	0.859	2.45	57
Ant8-Ant1	0.484	0.628	0.859	1.97	58
Ant8-Ant4	0.484	0.369	0.859	1.71	59
Ant8-Ant5	0.484	0.523	0.859	1.87	60
Ant8-Ant7	0.484	0.628	0.859	1.97	61
Ant8-Ant9	0.484	0.298	0.859	1.64	62

Right Side					
Ant combination	AG0	AG1	WLAN/BT worst case	AG1+AG0+WLAN +BT worse case	SPLSR
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
Ant0-Ant1			0.727	0.73	
Ant0-Ant4		0.069	0.727	0.80	
Ant0-Ant5		0.621	0.727	1.35	
Ant0-Ant7			0.727	0.73	
Ant0-Ant9			0.727	0.73	
Ant2-Ant1	0.518		0.727	1.25	
Ant2-Ant4	0.518	0.069	0.727	1.31	
Ant2-Ant5	0.518	0.621	0.727	1.87	63
Ant2-Ant7	0.518		0.727	1.25	
Ant2-Ant9	0.518		0.727	1.25	
Ant8-Ant1	1.143		0.727	1.87	64
Ant8-Ant4	1.143	0.069	0.727	1.94	65
Ant8-Ant5	1.143	0.621	0.727	2.49	66
Ant8-Ant7	1.143		0.727	1.87	67
Ant8-Ant9	1.143		0.727	1.87	68

<Simultaneous Transmission analysis of WLAN/BT only and WWAN cell-off>:

Test Position	WLAN2.4GHz Ant3	WLAN5GHz Ant4	WLAN5GHz Ant6	BT Ant 3	WLAN5GHz Ant4+BT Ant 3	WLAN5GHz Ant6+BT Ant 3	WLAN6GHz Ant4+BT Ant 3	WLAN6GHz Ant6+BT Ant 3	WLAN+BT worst case
Front	0.419	0.403	0.456	0.179	0.582	0.635	0.179	0.179	0.64
Back	0.649	0.447	0.586	0.273	0.720	0.859	0.273	0.273	0.86
Left Side					0.000	0.000	0.000	0.000	0.00
Right Side	0.235	0.069	0.615	0.112	0.181	0.727	0.112	0.112	0.73
Top Side	0.401	0.604	0.096	0.189	0.793	0.285	0.189	0.189	0.79

17.4 Body-Worn Accessory Exposure Conditions

General Note: The unit of SAR evaluation is W/kg.

Simultaneous Transmission Evaluation of WWAN+WLAN+BT:

<AG0 maximum reported SAR>:

Test Position	Ant0	Ant2	Ant8	MAX
Front	0.7	1.259	0.414	1.259
Back	1.292	1.303	0.595	1.303

<AG1 maximum reported SAR>:

Test Position	Ant1	Ant4	Ant5	Ant7	Ant9	MAX
Front	0.533	0.63	0.598	0.56	0.63	0.630
Back	0.898	0.902	0.887	0.895	0.892	0.902

<WLAN2.4GHz/5GHz/6GHz+BT Worse-case SAR>:

Test Position	WLAN2.4GHz Ant3	WLAN5GHz Ant4	WLAN5GHz Ant6	WLAN6GHz Ant4	WLAN6GHz Ant6	BT Ant3	WLAN5GHz Ant4+BT Ant3	WLAN5GHz Ant6+BT Ant3	WLAN6GHz Ant4+BT Ant3	WLAN6GHz Ant6+BT Ant3	MAX
Front	0.227	0.348	0.24	0.281	0.128	0.179	0.527	0.419	0.46	0.307	0.527
Back	0.373	0.392	0.374	0.39	0.377	0.273	0.665	0.647	0.663	0.65	0.665

<Simultaneous Transmission analysis of AG0 + AG1 + WLAN+BT Worse-case>:

Test Position	AG0	AG1	WLAN/BT worst case	AG1+AG0+WLAN +BT worse case
Front	1.259	0.630	0.527	2.42
Back	1.303	0.902	0.665	2.87

Note: The results marked yellow in above table refers to the detailed analysis corresponding to each position below tables.

Front					
Ant combination	AG0	AG1	WLAN/BT worst case	AG1+AG0+WLAN +BT worse case	SPLSR
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
Ant0-Ant1	0.700	0.533	0.527	1.76	13
Ant0-Ant4	0.700	0.630	0.527	1.86	14
Ant0-Ant5	0.700	0.598	0.527	1.83	15
Ant0-Ant7	0.700	0.560	0.527	1.79	16
Ant0-Ant9	0.700	0.630	0.527	1.86	17
Ant2-Ant1	1.259	0.533	0.527	2.32	18
Ant2-Ant4	1.259	0.630	0.527	2.42	19
Ant2-Ant5	1.259	0.598	0.527	2.38	20
Ant2-Ant7	1.259	0.560	0.527	2.35	21
Ant2-Ant9	1.259	0.630	0.527	2.42	22
Ant8-Ant1	0.414	0.533	0.527	1.47	
Ant8-Ant4	0.414	0.630	0.527	1.57	
Ant8-Ant5	0.414	0.598	0.527	1.54	
Ant8-Ant7	0.414	0.560	0.527	1.50	
Ant8-Ant9	0.414	0.630	0.527	1.57	

Back					
Ant combination	AG0	AG1	WLAN/BT worst case	AG1+AG0+WLAN +BT worse case	SPLSR
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
Ant0-Ant1	1.292	0.898	0.665	2.86	23
Ant0-Ant4	1.292	0.902	0.665	2.86	24
Ant0-Ant5	1.292	0.887	0.665	2.84	25
Ant0-Ant7	1.292	0.895	0.665	2.85	26
Ant0-Ant9	1.292	0.892	0.665	2.85	27
Ant2-Ant1	1.303	0.898	0.665	2.87	28
Ant2-Ant4	1.303	0.902	0.665	2.87	29
Ant2-Ant5	1.303	0.887	0.665	2.86	30
Ant2-Ant7	1.303	0.895	0.665	2.86	31
Ant2-Ant9	1.303	0.892	0.665	2.86	32
Ant8-Ant1	0.595	0.898	0.665	2.16	33
Ant8-Ant4	0.595	0.902	0.665	2.16	34
Ant8-Ant5	0.595	0.887	0.665	2.15	35
Ant8-Ant7	0.595	0.895	0.665	2.16	36
Ant8-Ant9	0.595	0.892	0.665	2.15	37

<Simultaneous Transmission analysis of WLAN/BT only and WWAN cell-off>:

Test Position	WLAN2.4GHz Ant3	WLAN5GHz Ant4	WLAN5GHz Ant6	WLAN6GHz Ant4	WLAN6GHz Ant6	BT Ant 3	WLAN5GHz Ant4+BT Ant 3	WLAN5GHz Ant6+BT Ant 3	WLAN6GHz Ant4+BT Ant 3	WLAN6GHz Ant6+BT Ant 3	WLAN+BT worst case
Front	0.691	1.106	0.964	0.209	0.128	0.237	1.343	1.201	0.446	0.365	1.34
Back	1.094	1.183	1.199	0.687	0.445	0.393	1.576	1.592	1.080	0.838	1.59

<Sensor off>

General Note: The unit of SAR evaluation is W/kg.

Simultaneous Transmission Evaluation of WWAN+WLAN+BT:

<AG0 maximum reported SAR>:

Test Position	Ant0	Ant2	Ant8	MAX
Front	0.423	0.379		0.423
Back	0.79	0.484		0.790

<AG1 maximum reported SAR>:

Test Position	Ant1	Ant4	Ant5	Ant7	Ant9	MAX
Front	0.622	0.314	0.299	0.484		0.622
Back	1.116	0.372	0.43	0.866		1.116

<WLAN2.4GHz/5GHz/6GHz+BT Worse-case SAR>:

Test Position	WLAN2.4GHz Ant3	WLAN5GHz Ant4	WLAN5GHz Ant6	WLAN6GHz Ant4	WLAN6GHz Ant6	BT Ant3	WLAN5GHz Ant4+BT Ant3	WLAN5GHz Ant6+BT Ant3	WLAN6GHz Ant4+BT Ant3	WLAN6GHz Ant6+BT Ant3	MAX
Front	0.137	0.277	0.196	0.048	0.064	0.061	0.338	0.257	0.109	0.125	0.338
Back	0.204	0.238	0.198	0.133	0.091	0.103	0.341	0.301	0.236	0.194	0.341

<Simultaneous Transmission analysis of AG0 + AG1 + WLAN+BT Worse-case>:

Test Position	AG0	AG1	WLAN/BT worst case	AG1+AG0+WLAN +BT worse case
Front	0.423	0.622	0.338	1.38
Back	0.790	1.116	0.341	2.25

Note: The results marked yellow in above table refers to the detailed analysis corresponding to each position below tables.

Back					
Ant combination	AG0	AG1	WLAN/BT worst case	AG1+AG0+WLAN +BT worse case	SPLSR
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
Ant0-Ant1	0.790	1.116	0.341	2.25	38
Ant0-Ant4	0.790	0.372	0.341	1.50	
Ant0-Ant5	0.790	0.430	0.341	1.56	
Ant0-Ant7	0.790	0.866	0.341	2.00	39
Ant0-Ant9	0.790		0.341	1.13	
Ant2-Ant1	0.484	1.116	0.341	1.94	40
Ant2-Ant4	0.484	0.372	0.341	1.20	
Ant2-Ant5	0.484	0.430	0.341	1.26	
Ant2-Ant7	0.484	0.866	0.341	1.69	48
Ant2-Ant9	0.484		0.341	0.83	
Ant8-Ant1		1.116	0.341	1.46	
Ant8-Ant4		0.372	0.341	0.71	
Ant8-Ant5		0.430	0.341	0.77	
Ant8-Ant7		0.866	0.341	1.21	
Ant8-Ant9			0.341	0.34	

17.5 Product specific 10g SAR Exposure Conditions

Remark:

- For WLAN2.4G/Bluetooth Product specific 10g stand-alone SAR is not required for a transmitter or antenna, due to 1g hotspot SAR is <1.2W/kg.

General Note: The unit of SAR evaluation is W/kg.

Simultaneous Transmission Evaluation of WWAN+WLAN+BT+NFC:
<AG0 maximum reported SAR>:

Test Position	Ant0	Ant2	Ant8	MAX
Front	1.428	1.734		1.734
Back	3.227	3.148		3.227
Left Edge	1.210			1.210
Right Edge			1.196	1.196
Top Edge				0.000
Bottom Edge	1.965	3.318		3.318

<AG1 maximum reported SAR>:

Test Position	Ant1	Ant4	Ant5	Ant7	Ant9	MAX
Front	2.362		1.178	1.691	0.813	2.362
Back	2.715	0.584	0.540	2.502	1.823	2.715
Left Edge	1.116			2.146	2.485	2.485
Right Edge			1.727			1.727
Top Edge	2.438	2.512				2.512
Bottom Edge						0.000

<WLAN2.4GHz/5GHz/6GHz+BT Worse-case SAR>:

Test Position	WLAN2.4GHz Ant3	WLAN5GHz Ant4	WLAN5GHz Ant6	WLAN6GHz Ant4	WLAN6GHz Ant6	BT Ant3	WLAN5GHz Ant4+BT Ant3	WLAN5GHz Ant6+BT Ant3	WLAN6GHz Ant4+BT Ant3	WLAN6GHz Ant6+BT Ant3	MAX
Front		0.706	1.075	0.157	0.156		0.706	1.075	0.157	0.156	1.075
Back	0.417	0.219	0.386	0.046	0.059		0.219	0.386	0.046	0.059	0.417
Left Edge		0.163	0.001	0.018	0.001		0.163	0.001	0.018	0.001	0.163
Right Edge		0.142	1.001	0.020	0.456		0.142	1.001	0.020	0.456	1.001
Top Edge		0.911	0.087	0.317	0.040		0.911	0.087	0.317	0.040	0.911
Bottom Edge		0.015	0.052	0.001	0.001		0.015	0.052	0.001	0.001	0.052

<Simultaneous Transmission analysis of AG0 + AG1 + WLAN+BT + NFC Worse-case>:

Test Position	AG0	AG1	WLAN/BT worst case	NFC	AG1+AG0+WLAN +BT worse case
Front	1.734	2.362	1.075	0.001	5.17
Back	3.227	2.715	0.417	0.050	6.41
Left Edge	1.210	2.485	0.163	0.001	3.86
Right Edge	1.196	1.727	1.001	0.001	3.93
Top Edge	0.000	2.512	0.911	0.001	3.42
Bottom Edge	3.318	0.000	0.052	0.001	3.37

Note: The results marked yellow in above table refers to the detailed analysis corresponding to each position below tables.

Front						
Ant combination	AG0	AG1	WLAN/BT worst case	NFC	AG1+AG0+WLAN +BT worse case	SPLSR
	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	
Ant0-Ant1	1.428	2.362	1.075	0.001	4.87	1
Ant0-Ant4	1.428		1.075	0.001	2.50	
Ant0-Ant5	1.428		1.075	0.001	2.50	
Ant0-Ant7	1.428	1.691	1.075	0.001	4.20	2
Ant0-Ant9	1.428	0.813	1.075	0.001	3.32	
Ant2-Ant1	1.734	2.362	1.075	0.001	5.17	3
Ant2-Ant4	1.734		1.075	0.001	2.81	
Ant2-Ant5	1.734		1.075	0.001	2.81	
Ant2-Ant7	1.734	1.691	1.075	0.001	4.50	4
Ant2-Ant9	1.734	0.813	1.075	0.001	3.62	
Ant8-Ant1		2.362	1.075	0.001	3.44	
Ant8-Ant4			1.075	0.001	1.08	
Ant8-Ant5			1.075	0.001	1.08	
Ant8-Ant7		1.691	1.075	0.001	2.77	
Ant8-Ant9		0.813	1.075	0.001	1.89	

Back						
Ant combination	AG0	AG1	WLAN/BT worst case	NFC	AG1+AG0+WLAN +BT worse case	SPLSR
	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	
Ant0-Ant1	3.227	2.715	0.417	0.050	6.41	5
Ant0-Ant4	3.227	0.584	0.417	0.050	4.28	6
Ant0-Ant5	3.227		0.417	0.050	3.69	
Ant0-Ant7	3.227	2.502	0.417	0.050	6.20	7
Ant0-Ant9	3.227	1.823	0.417	0.050	5.52	8
Ant2-Ant1	3.148	2.715	0.417	0.050	6.33	9
Ant2-Ant4	3.148	0.584	0.417	0.050	4.20	10
Ant2-Ant5	3.148		0.417	0.050	3.62	
Ant2-Ant7	3.148	2.502	0.417	0.050	6.12	11
Ant2-Ant9	3.148	1.823	0.417	0.050	5.44	12
Ant8-Ant1		2.715	0.417	0.050	3.18	
Ant8-Ant4		0.584	0.417	0.050	1.05	
Ant8-Ant5			0.417	0.050	0.47	
Ant8-Ant7		2.502	0.417	0.050	2.97	
Ant8-Ant9		1.823	0.417	0.050	2.29	

<Simultaneous Transmission analysis of WLAN/BT/NFC only and WWAN cell-off>:

Test Position	WLAN2.4GHz Ant3	WLAN5GHz Ant4	WLAN5GHz Ant6	WLAN6GHz Ant4	WLAN6GHz Ant6	BT Ant3	WLAN5GHz Ant4+BT Ant3	WLAN5GHz Ant6+BT Ant3	WLAN6GHz Ant4+BT Ant3	WLAN6GHz Ant6+BT Ant3	MAX	NFC	NFC+WLAN +BT worst case
Front		1.046	1.075	0.157	0.156		1.046	1.075	0.157	0.156	1.08	0.001	1.08
Back	0.417	0.325	0.400	0.066	0.059		0.325	0.400	0.066	0.059	0.42	0.050	0.47
Left Edge		0.163	0.001	0.018	0.001		0.163	0.001	0.018	0.001	0.16	0.001	0.16
Right Edge		0.147	1.435	0.020	0.456		0.147	1.435	0.020	0.456	1.44	0.001	1.44
Top Edge		1.349	0.137	0.317	0.040		1.349	0.137	0.317	0.040	1.35	0.001	1.35
Bottom Edge		0.015	0.081	0.001	0.001		0.015	0.081	0.001	0.001	0.08	0.001	0.08

<Sensor off>
<AG0 maximum reported SAR>:

Test Position	Ant0	Ant2	Ant8	MAX
Front	0.827			0.827
Back	0.774	0.584		0.774
Left Edge	0.456			0.456
Right Edge				0.000
Top Edge				0.000
Bottom Edge	0.683	0.620		0.683

<AG1 maximum reported SAR>:

Test Position	Ant1	Ant4	Ant5	Ant7	Ant9	MAX
Front	1.140			0.709		1.140
Back	0.889	0.352		0.475		0.889
Left Edge	0.516			0.650		0.650
Right Edge						0.000
Top Edge	1.043	0.510				1.043
Bottom Edge						0.000

<WLAN2.4GHz/5GHz/6GHz+BT Worse-case SAR>:

Test Position	WLAN2.4GHz Ant3	WLAN5GHz Ant4	WLAN5GHz Ant6	WLAN6GHz Ant4	WLAN6GHz Ant6	BT Ant3	WLAN5GHz Ant4+BT Ant3	WLAN5GHz Ant6+BT Ant3	WLAN6GHz Ant4+BT Ant3	WLAN6GHz Ant6+BT Ant3	MAX
Front		0.136	0.157	0.029	0.036		0.136	0.157	0.029	0.036	0.157
Back	0.256	0.163	0.174	0.066	0.050		0.163	0.174	0.066	0.050	0.256
Left Edge							0.000	0.000	0.000	0.000	0.000
Right Edge		0.202	0.241	0.012	0.073		0.202	0.241	0.012	0.073	0.241
Top Edge		0.263	0.132	0.082	0.035		0.263	0.132	0.082	0.035	0.263
Bottom Edge							0.000	0.000	0.000	0.000	0.000

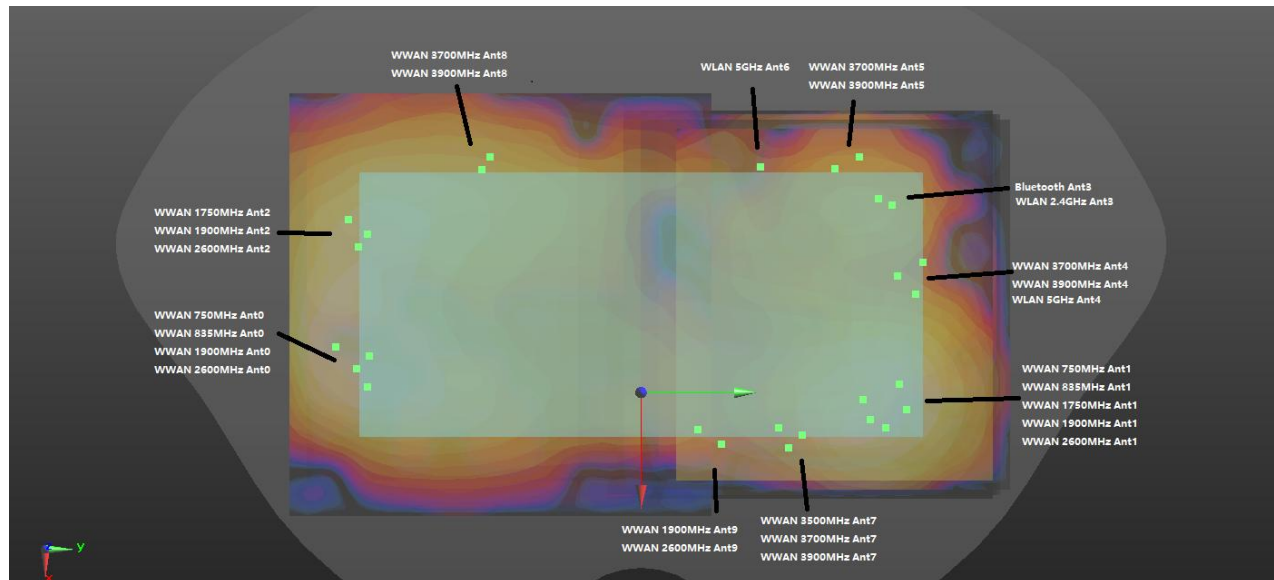
<Simultaneous Transmission analysis of AG0 + AG1 + WLAN+BT + NFC Worse-case>:

Test Position	AG0	AG1	WLAN/BT worst case	NFC	AG1+AG0+WLAN +BT worse case
Front	0.827	1.140	0.157	0.001	2.13
Back	0.774	0.889	0.256	0.050	1.97
Left Edge	0.456	0.650	0.000	0.001	1.11
Right Edge	0.000	0.000	0.241	0.001	0.24
Top Edge	0.000	1.043	0.263	0.001	1.31
Bottom Edge	0.683	0.000	0.000	0.001	0.68

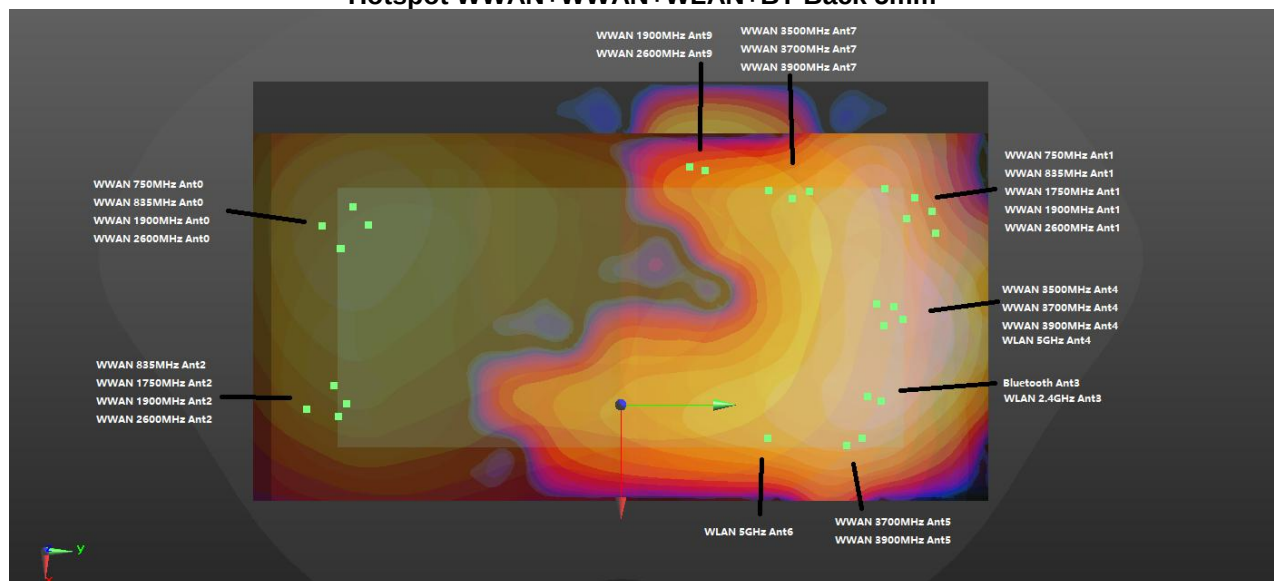
17.6 SPLSR Evaluation and Analysis

General Note:

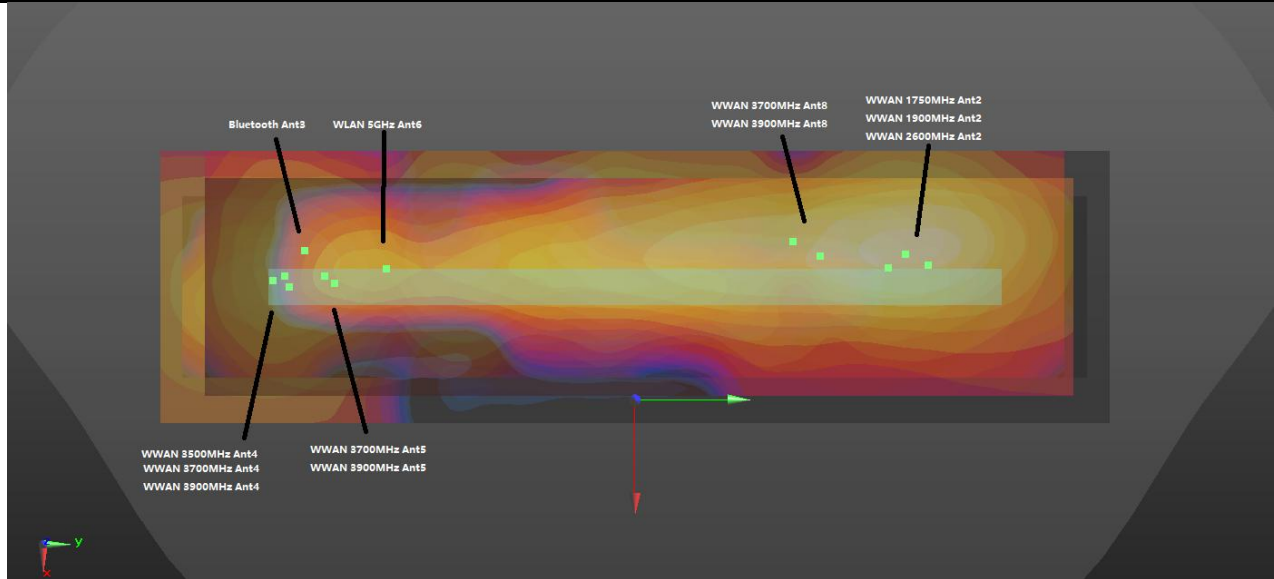
1. When standalone SAR is measured for both antennas in the pair, the peak location separation distance is computed by the square root of $[(x1-x2)^2 + (y1-y2)^2 + (z1-z2)^2]$, where $(x1, y1, z1)$ and $(x2, y2, z2)$ are the coordinates in the area scans or extrapolated peak SAR locations in the zoom scans, as appropriate.
2. $SPLSR = (SAR1 + SAR2)1.5 / (\text{min. separation distance, mm})$. If $SPLSR \leq 0.04$ for 1g SAR and $SPLSR \leq 0.10$ for 10g SAR, simultaneously transmission SAR measurement is not necessary.
3. Per April 2022 TCB Workshop Notes, AG1 was summed algebraically with the WIFI Antenna 3/6/4/5 for the purposes of hybrid SPLSR combination and they are located at the top of the device.
4. Per April 2022 TCB Workshop, instead of doing a small volume scan over a co-located antenna pair, used summing the SAR values of the co-located pair and using that value in SPLSR calculation. In the calculation used the minimum distance between the spatially separated antenna and the closest antenna of the co-located antenna pair to be conservative.
5. The detail hotspot point for each transmitter in each exposure condition are showing as below figure and the minimum 3D distance for each sum combination is used for SPLSR analysis.
6. The axis peak locations refer to Section 17.8.



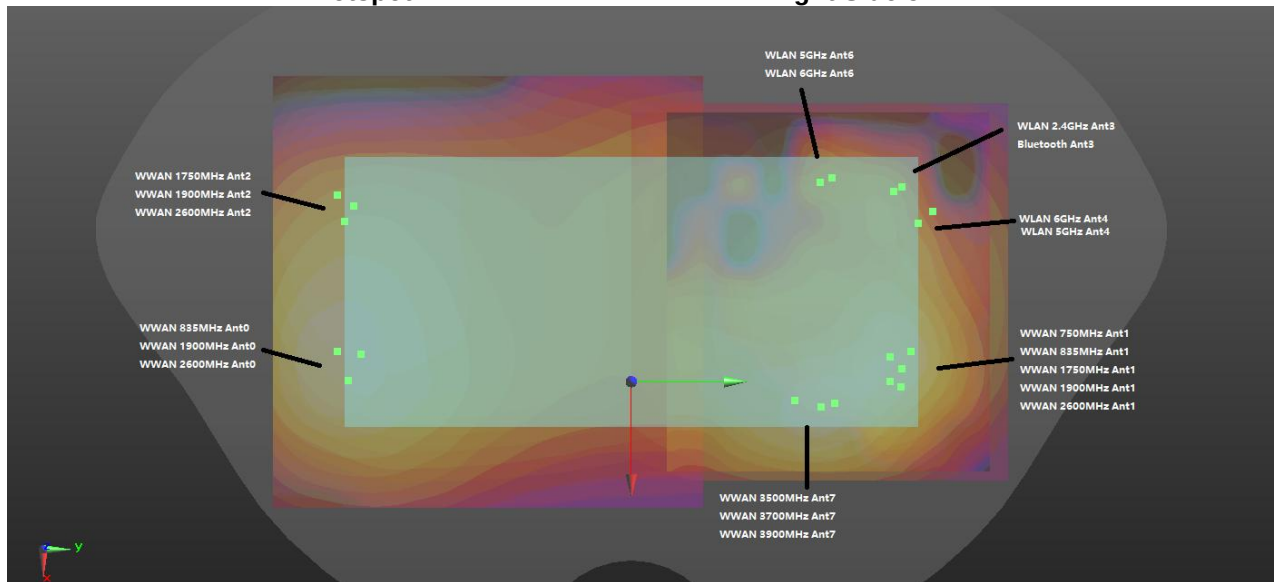
Hotspot WWAN+WWAN+WLAN+BT Back 5mm



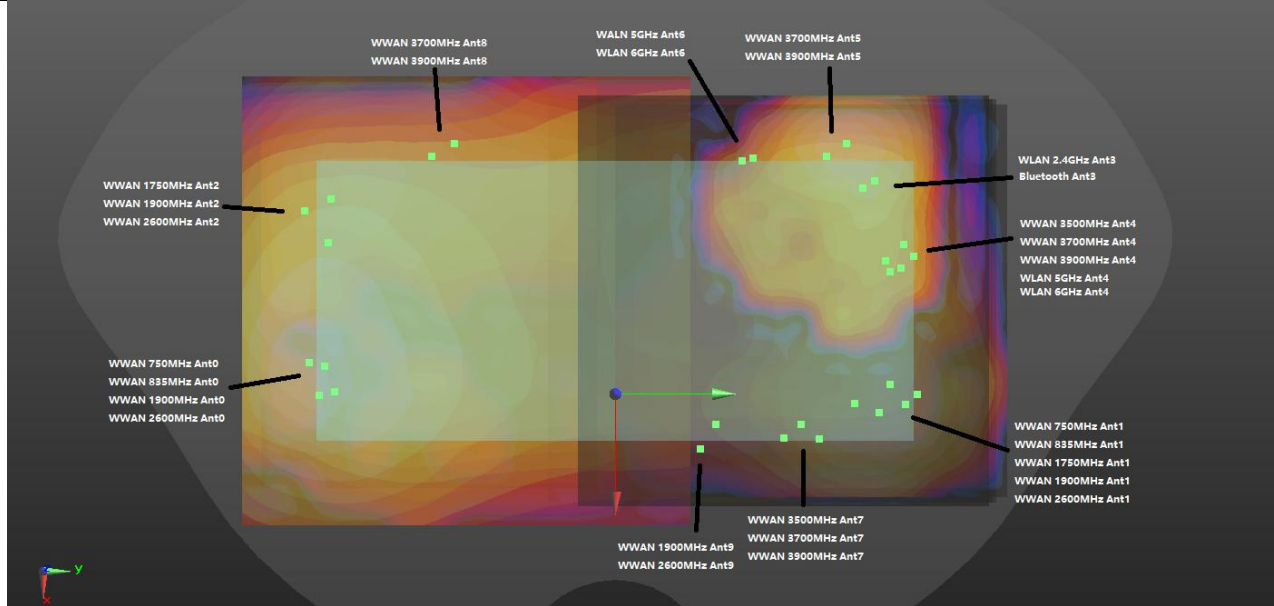
Hotspot WWAN+WWAN+WLAN+BT Front 5mm



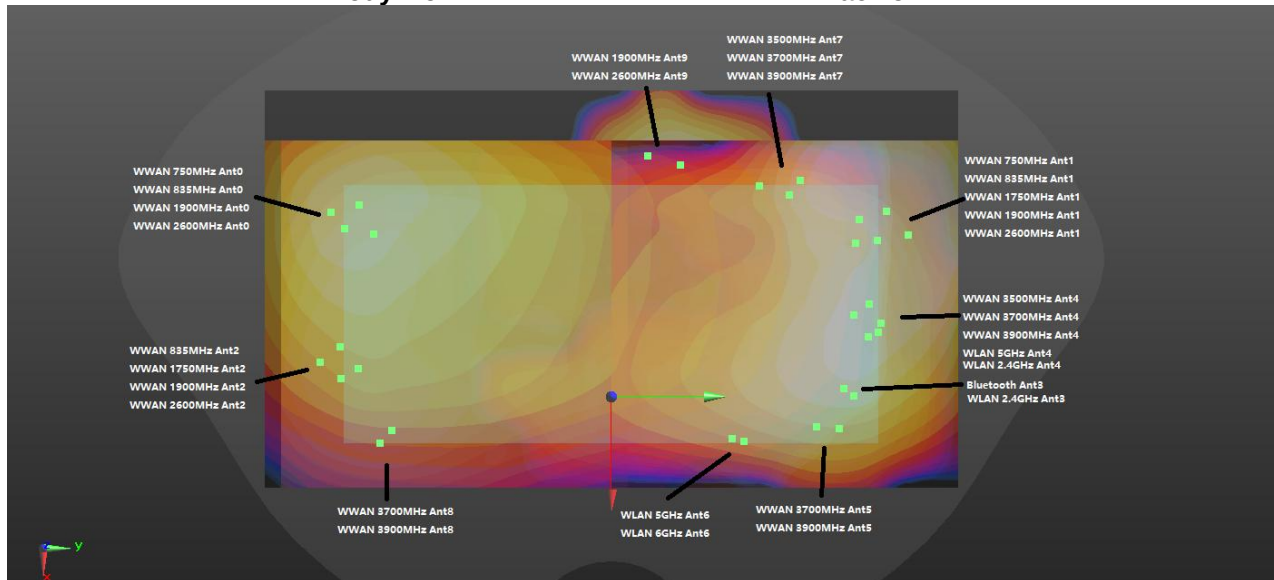
Hotspot WWAN+WWAN+WLAN+BT Right Side 5mm



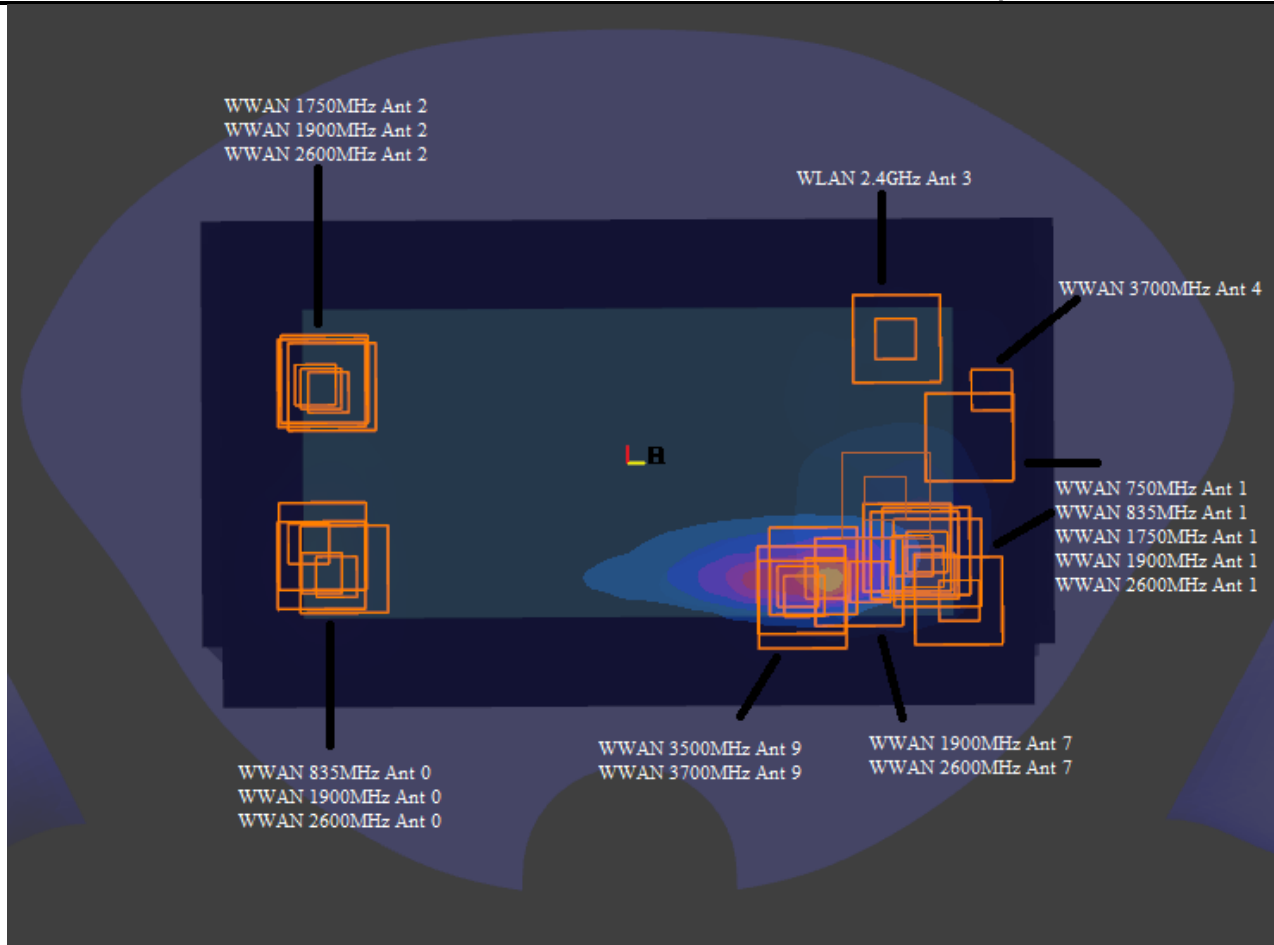
Body worn WWAN+WWAN+WLAN Back 14mm



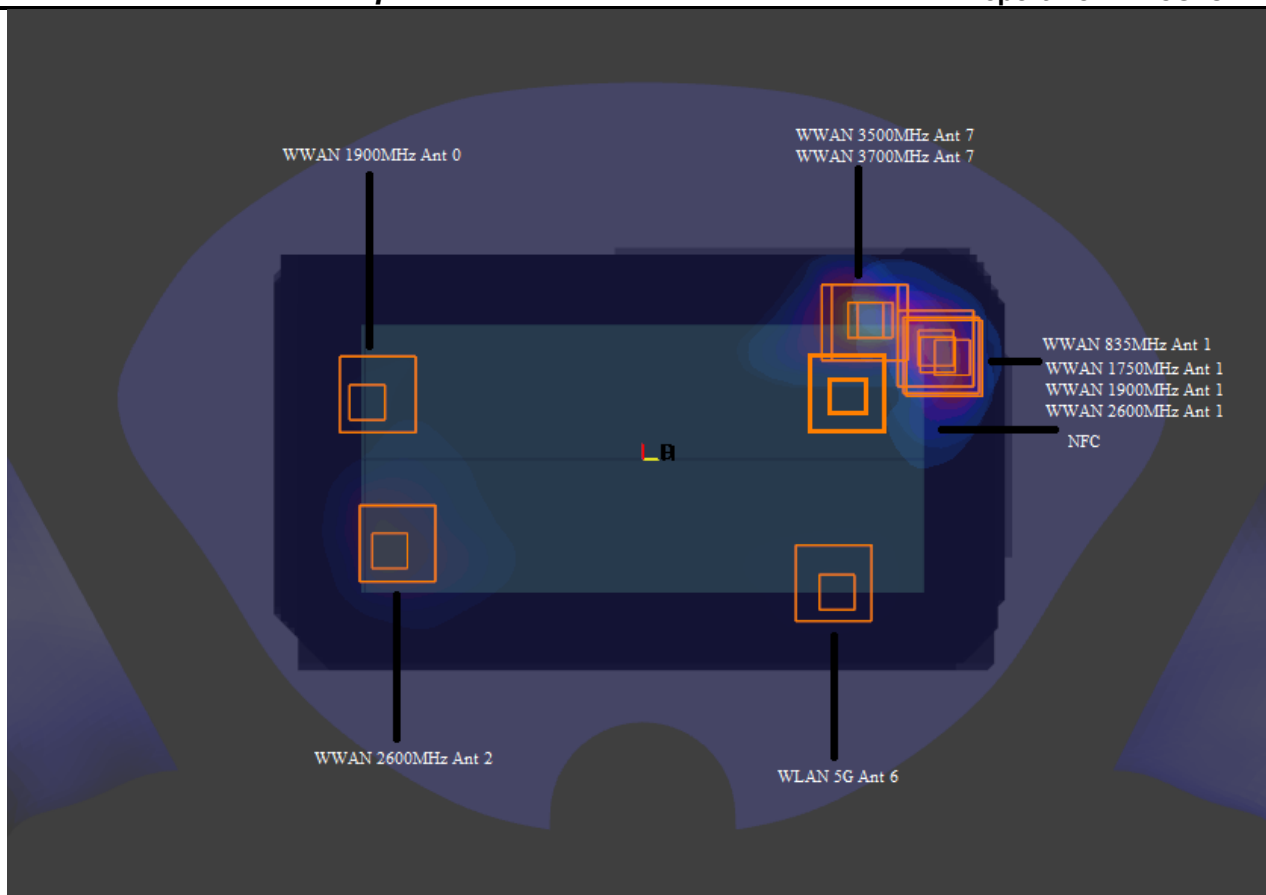
Body worn WWAN+WWAN+WLAN+BT Back 5mm



Bodyworn WWAN+WWAN+WLAN+BT Front 5mm



Extremity WWAN+WWAN+WLAN Back 0mm



Extremity WWAN+WWAN+WLAN Front 0mm

<Hotspot>

No.41 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Ant0	Front	0.648	0.648	5mm	X	Y	Z	159.6	1.69	0.01	Not required
Ant1		0.402	1.037	5mm	-37.1	-78.5	-1.08				
WLAN5GHz Ant6		0.456		5mm	-28.6	80.9	-1.02				
BT Ant3		0.179		5mm							
Ant0	Front	0.648	0.648	5mm	X	Y	Z	122.3	1.69	0.02	Not required
Ant1		0.402	1.037	5mm	-37.1	-78.5	-1.08				
WLAN5GHz Ant6		0.456		5mm	26.5	26	-1.16				
BT Ant3		0.179		5mm							
Ant0	Front	0.648	0.648	5mm	X	Y	Z	161.2	1.69	0.01	Not required
Ant1		0.402	1.037	5mm	-37.1	-78.5	-1.08				
WLAN5GHz Ant6		0.456		5mm							
BT Ant3		0.179		5mm	25.4	70.1	-0.95				
No.42 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Ant0	Front	0.648	0.648	5mm	X	Y	Z	128.1	1.67	0.02	Not required
Ant7		0.388	1.023	5mm	-37.1	-78.5	-1.08				
WLAN5GHz Ant6		0.456		5mm	-37.7	49.6	-1.08				
BT Ant3		0.179		5mm							
Ant0	Front	0.648	0.648	5mm	X	Y	Z	122.3	1.67	0.02	Not required
Ant7		0.388	1.023	5mm	-37.1	-78.5	-1.08				



FCC SAR Test Report

Report No. : FA5O2822-02

WLAN5GHz Ant6		0.456		5mm	26.5	26	-1.16				
BT Ant3		0.179		5mm							
Ant0	Front	0.648	0.648	5mm	-37.1	-78.5	-1.08	161.2	1.67	0.01	Not required
Ant7		0.388		5mm							
WLAN5GHz Ant6		0.456	1.023	5mm							
BT Ant3		0.179		5mm	25.4	70.1	-0.95				
No.43 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant2	Front	1.127	1.127	5mm	16.9	-83.3	-0.93	170.4	2.16	0.02	Not required
Ant1		0.402		5mm	-28.6	80.9	-1.02				
WLAN5GHz Ant6		0.456	1.037	5mm							
BT Ant3		0.179		5mm							
Ant2	Front	1.127	1.127	5mm	16.9	-83.3	-0.93	109.7	2.16	0.03	Not required
Ant1		0.402		5mm							
WLAN5GHz Ant6		0.456	1.037	5mm	26.5	26	-1.16				
BT Ant3		0.179		5mm							
Ant2	Front	1.127	1.127	5mm	16.9	-83.3	-0.93	153.6	2.16	0.02	Not required
Ant1		0.402		5mm							
WLAN5GHz Ant6		0.456	1.037	5mm							
BT Ant3		0.179		5mm	25.4	70.1	-0.95				
No.44 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant2	Front	1.127	1.127	5mm	19.7	-82.9	-0.9	164.7	2.02	0.02	Not required
Ant4		0.253		5mm	10.1	81.5	-1.01				
WLAN5GHz Ant6		0.456	0.888	5mm							
BT Ant3		0.179		5mm							
Ant2	Front	1.127	1.127	5mm	19.7	-82.9	-0.9	109.1	2.02	0.03	Not required
Ant4		0.253		5mm							
WLAN5GHz Ant6		0.456	0.888	5mm	26.5	26	-1.16				
BT Ant3		0.179		5mm							
Ant2	Front	1.127	1.127	5mm	19.7	-82.9	-0.9	153.1	2.02	0.02	Not required
Ant4		0.253		5mm							
WLAN5GHz Ant6		0.456	0.888	5mm							
BT Ant3		0.179		5mm	25.4	70.1	-0.95				
No.45 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant2	Front	1.127	1.127	5mm	19.7	-82.9	-0.9	150.0	2.04	0.02	Not required
Ant5		0.275		5mm	39.3	65.8	-0.88				
WLAN5GHz Ant6		0.456	0.910	5mm							
BT Ant3		0.179		5mm							
Ant2	Front	1.127	1.127	5mm	19.7	-82.9	-0.9	109.1	2.04	0.03	Not required
Ant5		0.275		5mm							
WLAN5GHz Ant6		0.456	0.910	5mm	26.5	26	-1.16				
BT Ant3		0.179		5mm							
Ant2	Front	1.127	1.127	5mm	19.7	-82.9	-0.9	153.1	2.04	0.02	Not required
Ant5		0.275		5mm							
WLAN5GHz Ant6		0.456	0.910	5mm							
BT Ant3		0.179		5mm	25.4	70.1	-0.95				
No.46 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant2	Front	1.127	1.127	5mm	18.2	-83.3	-1.01	144.2	2.15	0.02	Not required
Ant7		0.388	1.023	5mm	-37.7	49.6	-1.08				



FCC SAR Test Report

Report No. : FA5O2822-02

WLAN5GHz Ant6		0.456		5mm								
BT Ant3		0.179		5mm								
Ant2	Front	1.127	1.127	5mm	18.2	-83.3	-1.01	109.6	2.15	0.03	Not required	
Ant7		0.388		5mm								
WLAN5GHz Ant6		0.456	1.023	5mm	26.5	26	-1.16					
BT Ant3		0.179		5mm								
Ant2	Front	1.127	1.127	5mm	18.2	-83.3	-1.01	153.6	2.15	0.02	Not required	
Ant7		0.388		5mm								
WLAN5GHz Ant6		0.456	1.023	5mm								
BT Ant3		0.179		5mm	25.4	70.1	-0.95					
No.47 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	
					X	Y	Z					
Ant2	Front	1.127	1.127	5mm	16.9	-83.3	-0.93	121.0	1.97	0.02	Not required	
Ant9		0.204		5mm	-41.1	22.9	-1.2					
WLAN5GHz Ant6		0.456	0.839	5mm								
BT Ant3		0.179		5mm								
Ant2	Front	1.127	1.127	5mm	16.9	-83.3	-0.93	109.7	1.97	0.03	Not required	
Ant9		0.204		5mm								
WLAN5GHz Ant6		0.456	0.839	5mm	26.5	26	-1.16					
BT Ant3		0.179		5mm								
Ant2	Front	1.127	1.127	5mm	16.9	-83.3	-0.93	153.6	1.97	0.02	Not required	
Ant9		0.204		5mm								
WLAN5GHz Ant6		0.456	0.839	5mm								
BT Ant3		0.179		5mm	25.4	70.1	-0.95					

No.48 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	
					X	Y	Z					
Ant0	Back	1.292	1.292	5mm	22.5	-82	-0.52	154.4	2.78	0.03	Not required	
Ant1		0.628		5mm	21.8	72.4	-0.8					
WLAN5GHz Ant6		0.586	1.487	5mm								
BT Ant3		0.273		5mm								
Ant0	Back	1.292	1.292	5mm	22.5	-82	-0.52	137.2	2.78	0.03	Not required	
Ant1		0.628		5mm								
WLAN5GHz Ant6		0.586	1.487	5mm	-27	46	-1.3					
BT Ant3		0.273		5mm								
Ant0	Back	1.292	1.292	5mm	22.5	-82	-0.52	159.7	2.78	0.03	Not required	
Ant1		0.628		5mm								
WLAN5GHz Ant6		0.586	1.487	5mm								
BT Ant3		0.273		5mm	-28.1	69.5	-0.86					
No.49 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	
					X	Y	Z					
Ant0	Back	1.292	1.292	5mm	22.5	-82	-0.52	165.1	2.52	0.02	Not required	
Ant4		0.369		5mm	-14.9	78.8	-1.01					
WLAN5GHz Ant6		0.586	1.228	5mm								
BT Ant3		0.273		5mm								
Ant0	Back	1.292	1.292	5mm	22.5	-82	-0.52	137.2	2.52	0.03	Not required	
Ant4		0.369		5mm								
WLAN5GHz Ant6		0.586	1.228	5mm	-27	46	-1.3					
BT Ant3		0.273		5mm								
Ant0	Back	1.292	1.292	5mm	22.5	-82	-0.52	159.7	2.52	0.03	Not required	
Ant4		0.369		5mm								
WLAN5GHz		0.586	1.228	5mm								



FCC SAR Test Report

Report No. : FA5O2822-02

Ant6												
BT Ant3		0.273		5mm	-28.1	69.5	-0.86					
No.50 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	
					X	Y	Z					
Ant0	Back	1.292	1.292	5mm	22.5	-82	-0.52	155.4	2.67	0.03	Not required	
Ant5		0.523	1.382	5mm	-25.6	65.8	-1.25					
WLAN5GHz Ant6		0.586		5mm								
BT Ant3		0.273		5mm								
Ant0	Back	1.292	1.292	5mm	22.5	-82	-0.52	137.2	2.67	0.03	Not required	
Ant5		0.523	1.382	5mm								
WLAN5GHz Ant6		0.586		5mm	-27	46	-1.3					
BT Ant3		0.273		5mm								
Ant0	Back	1.292	1.292	5mm	22.5	-82	-0.52	159.7	2.67	0.03	Not required	
Ant5		0.523	1.382	5mm								
WLAN5GHz Ant6		0.586		5mm								
BT Ant3		0.273		5mm	-28.1	69.5	-0.86					
No.51 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	
					X	Y	Z					
Ant0	Back	1.292	1.292	5mm	22.5	-82	-0.52	134.6	2.78	0.03	Not required	
Ant7		0.628	1.487	5mm	33.2	52.2	-2.15					
WLAN5GHz Ant6		0.586		5mm								
BT Ant3		0.273		5mm								
Ant0	Back	1.292	1.292	5mm	22.5	-82	-0.52	137.2	2.78	0.03	Not required	
Ant7		0.628	1.487	5mm								
WLAN5GHz Ant6		0.586		5mm	-27	46	-1.3					
BT Ant3		0.273		5mm								
Ant0	Back	1.292	1.292	5mm	22.5	-82	-0.52	159.7	2.78	0.03	Not required	
Ant7		0.628	1.487	5mm								
WLAN5GHz Ant6		0.586		5mm								
BT Ant3		0.273		5mm	-28.1	69.5	-0.86					
No.52 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	
					X	Y	Z					
Ant0	Back	1.292	1.292	5mm	22.5	-82	-0.52	106.4	2.45	0.04	Not required	
Ant9		0.298	1.157	5mm	33.9	23.8	-0.81					
WLAN5GHz Ant6		0.586		5mm								
BT Ant3		0.273		5mm								
Ant0	Back	1.292	1.292	5mm	22.5	-82	-0.52	137.2	2.45	0.03	Not required	
Ant9		0.298	1.157	5mm								
WLAN5GHz Ant6		0.586		5mm	-27	46	-1.3					
BT Ant3		0.273		5mm								
Ant0	Back	1.292	1.292	5mm	22.5	-82	-0.52	159.7	2.45	0.02	Not required	
Ant9		0.298	1.157	5mm								
WLAN5GHz Ant6		0.586		5mm								
BT Ant3		0.273		5mm	-28.1	69.5	-0.86					
No.53 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	
					X	Y	Z					
Ant2	Back	1.289	1.289	5mm	-23.3	-80.6	-0.72	159.5	2.78	0.03	Not required	
Ant1		0.628	1.487	5mm	21.8	72.4	-0.8					
WLAN5GHz Ant6		0.586		5mm								
BT Ant3		0.273		5mm								
Ant2	Back	1.289	1.289	5mm	-23.3	-80.6	-0.72	126.7	2.78	0.04	Not required	
Ant1		0.628	1.487	5mm								



FCC SAR Test Report

Report No. : FA5O2822-02

WLAN5GHz Ant6		0.586		5mm	-27	46	-1.3				
BT Ant3		0.273		5mm							
Ant2	Back	1.289	1.289	5mm	-23.3	-80.6	-0.72	150.2	2.78	0.03	Not required
Ant1		0.628	1.487	5mm							
WLAN5GHz Ant6		0.586		5mm							
BT Ant3		0.273		5mm	-28.1	69.5	-0.86				
No.54 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant2	Back	1.289	1.289	5mm	-23.3	-80.6	-0.72	159.6	2.52	0.03	Not required
Ant4		0.369	1.228	5mm	-14.9	78.8	-1.01				
WLAN5GHz Ant6		0.586		5mm							
BT Ant3		0.273		5mm							
Ant2	Back	1.289	1.289	5mm	-23.3	-80.6	-0.72	126.7	2.52	0.03	Not required
Ant4		0.369	1.228	5mm							
WLAN5GHz Ant6		0.586		5mm	-27	46	-1.3				
BT Ant3		0.273		5mm							
Ant2	Back	1.289	1.289	5mm	-23.3	-80.6	-0.72	150.2	2.52	0.03	Not required
Ant4		0.369	1.228	5mm							
WLAN5GHz Ant6		0.586		5mm							
BT Ant3		0.273		5mm	-28.1	69.5	-0.86				
No.55 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant2	Back	1.289	1.289	5mm	-23.3	-80.6	-0.72	146.4	2.67	0.03	Not required
Ant5		0.523	1.382	5mm	-25.6	65.8	-1.25				
WLAN5GHz Ant6		0.586		5mm							
BT Ant3		0.273		5mm							
Ant2	Back	1.289	1.289	5mm	-23.3	-80.6	-0.72	126.7	2.67	0.03	Not required
Ant5		0.523	1.382	5mm							
WLAN5GHz Ant6		0.586		5mm	-27	46	-1.3				
BT Ant3		0.273		5mm							
Ant2	Back	1.289	1.289	5mm	-23.3	-80.6	-0.72	150.2	2.67	0.03	Not required
Ant5		0.523	1.382	5mm							
WLAN5GHz Ant6		0.586		5mm							
BT Ant3		0.273		5mm	-28.1	69.5	-0.86				
No.56 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant2	Back	1.289	1.289	5mm	-22.5	-80.6	-0.77	144.0	2.78	0.03	Not required
Ant7		0.628	1.487	5mm	33.2	52.2	-1.15				
WLAN5GHz Ant6		0.586		5mm							
BT Ant3		0.273		5mm							
Ant2	Back	1.289	1.289	5mm	-22.5	-80.6	-0.077	126.7	2.78	0.04	Not required
Ant7		0.628	1.487	5mm							
WLAN5GHz Ant6		0.586		5mm	-27	46	-1.3				
BT Ant3		0.273		5mm							
Ant2	Back	1.289	1.289	5mm	-22.5	-80.6	-0.77	150.2	2.78	0.03	Not required
Ant7		0.628	1.487	5mm							
WLAN5GHz Ant6		0.586		5mm							
BT Ant3		0.273		5mm	-28.1	69.5	-0.86				
No.57 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant2	Back	1.289	1.289	5mm	-22.5	-80.6	-0.077	122.7	2.45	0.03	Not required
Ant9		0.298	1.157	5mm	38.6	25.8	-0.84				



FCC SAR Test Report

Report No. : FA5O2822-02

WLAN5GHz Ant6		0.586		5mm							
BT Ant3		0.273		5mm							
Ant2	Back	1.289	1.289	5mm	-22.5	-80.6	-0.077	126.7	2.45	0.03	Not required
Ant9		0.298	1.157	5mm							
WLAN5GHz Ant6		0.586		5mm	-27	46	-1.3				
BT Ant3		0.273		5mm							
Ant2	Back	1.289	1.289	5mm	-22.5	-80.6	-0.077	150.2	2.45	0.03	Not required
Ant9		0.298	1.157	5mm							
WLAN5GHz Ant6		0.586		5mm							
BT Ant3		0.273		5mm	-28.1	69.5	-0.86				
No.58 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant8	Back	0.484	0.484	5mm	-39.7	-49.5	-0.97	136.0	1.97	0.02	Not required
Ant1		0.628	1.487	5mm	18	73.6	-0.65				
WLAN5GHz Ant6		0.586		5mm							
BT Ant3		0.273		5mm							
Ant8	Back	0.484	0.484	5mm	-39.7	-49.5	-0.97	96.3	1.97	0.03	Not required
Ant1		0.628	1.487	5mm							
WLAN5GHz Ant6		0.586		5mm	-27	46	-1.3				
BT Ant3		0.273		5mm							
Ant8	Back	0.484	0.484	5mm	-39.7	-49.5	-0.97	119.6	1.97	0.02	Not required
Ant1		0.628	1.487	5mm							
WLAN5GHz Ant6		0.586		5mm							
BT Ant3		0.273		5mm	-28.1	69.5	-0.86				
No.59 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant8	Back	0.484	0.484	5mm	-39.7	-49.5	-0.97	130.7	1.71	0.02	Not required
Ant4		0.369	1.228	5mm	-14.9	78.8	-1.01				
WLAN5GHz Ant6		0.586		5mm							
BT Ant3		0.273		5mm							
Ant8	Back	0.484	0.484	5mm	-39.7	-49.5	-0.97	96.3	1.71	0.02	Not required
Ant4		0.369	1.228	5mm							
WLAN5GHz Ant6		0.586		5mm	-27	46	-1.3				
BT Ant3		0.273		5mm							
Ant8	Back	0.484	0.484	5mm	-39.7	-49.5	-0.97	119.6	1.71	0.02	Not required
Ant4		0.369	1.228	5mm							
WLAN5GHz Ant6		0.586		5mm							
BT Ant3		0.273		5mm	-28.1	69.5	-0.86				
No.60 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant8	Back	0.484	0.484	5mm	-39.7	-49.5	-0.97	116.2	1.87	0.02	Not required
Ant5		0.523	1.382	5mm	-25.6	65.8	-1.25				
WLAN5GHz Ant6		0.586		5mm							
BT Ant3		0.273		5mm							
Ant8	Back	0.484	0.484	5mm	-39.7	-49.5	-0.97	96.3	1.87	0.03	Not required
Ant5		0.523	1.382	5mm							
WLAN5GHz Ant6		0.586		5mm	-27	46	-1.3				
BT Ant3		0.273		5mm							
Ant8	Back	0.484	0.484	5mm	-39.7	-49.5	-0.97	119.6	1.87	0.02	Not required
Ant5		0.523	1.382	5mm							
WLAN5GHz Ant6		0.586		5mm							



FCC SAR Test Report

Report No. : FA5O2822-02

BT Ant3		0.273		5mm	-28.1	69.5	-0.86				
No.61 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant8	Back	0.484	0.484	5mm	-39.7	-49.5	-0.97	125.1	1.97	0.02	Not required
Ant7		0.628	1.487	5mm	33.2	52.2	-1.15				
WLAN5GHz Ant6		0.586		5mm							
BT Ant3		0.273		5mm							
Ant8	Back	0.484	0.484	5mm	-39.7	-49.5	-0.97	96.3	1.97	0.03	Not required
Ant7		0.628	1.487	5mm							
WLAN5GHz Ant6		0.586		5mm	-27	46	-1.3				
BT Ant3		0.273		5mm							
Ant8	Back	0.484	0.484	5mm	-39.7	-49.5	-0.97	119.6	1.97	0.02	Not required
Ant7		0.628	1.487	5mm							
WLAN5GHz Ant6		0.586		5mm							
BT Ant3		0.273		5mm	-28.1	69.5	-0.86				
No.62 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant8	Back	0.484	0.484	5mm	-39.7	-49.5	-0.97	108.6	1.64	0.02	Not required
Ant9		0.298	1.157	5mm	38.6	25.8	-0.84				
WLAN5GHz Ant6		0.586		5mm							
BT Ant3		0.273		5mm							
Ant8	Back	0.484	0.484	5mm	-39.7	-49.5	-0.97	96.3	1.64	0.02	Not required
Ant9		0.298	1.157	5mm							
WLAN5GHz Ant6		0.586		5mm	-27	46	-1.3				
BT Ant3		0.273		5mm							
Ant8	Back	0.484	0.484	5mm	-39.7	-49.5	-0.97	119.6	1.64	0.02	Not required
Ant9		0.298	1.157	5mm							
WLAN5GHz Ant6		0.586		5mm							
BT Ant3		0.273		5mm	-28.1	69.5	-0.86				

No.63 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant2	Back	0.518	0.518	5mm	-2.9	60.5	-1.13	131.2	1.87	0.02	Not required
Ant5		0.621	1.348	5mm	-8	-70.6	-1.14				
WLAN5GHz Ant6		0.615		5mm							
BT Ant3		0.112		5mm							
Ant2	Back	0.518	0.518	5mm	-2.9	60.5	-1.13	116.3	1.87	0.02	Not required
Ant5		0.621	1.348	5mm							
WLAN5GHz Ant6		0.615		5mm	-4	-55.8	-1.41				
BT Ant3		0.112		5mm							
Ant2	Back	0.518	0.518	5mm	-2.9	60.5	-1.13	137.1	1.87	0.02	Not required
Ant5		0.621	1.348	5mm							
WLAN5GHz Ant6		0.615		5mm							
BT Ant3		0.112		5mm	-2.4	-76.6	-1.21				
No.65 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant8	Back	1.143	1.143	5mm	-7	48.2	-1.25	125.0	1.94	0.02	Not required
Ant4		0.069	0.796	5mm	1.2	-76.5	-1.1				
WLAN5GHz Ant6		0.615		5mm							



FCC SAR Test Report

Report No. : FA5O2822-02

BT Ant3		0.112		5mm							
Ant8	Back	1.143	1.143	5mm	-7	48.2	-1.25	104.0	1.94	0.03	Not required
Ant4		0.069	0.796	5mm							
WLAN5GHz Ant6		0.615		5mm	-4	-55.8	-1.41				
BT Ant3		0.112		5mm							
Ant8	Back	1.143	1.143	5mm	-7	48.2	-1.25	124.9	1.94	0.02	Not required
Ant4		0.069	0.796	5mm							
WLAN5GHz Ant6		0.615		5mm							
BT Ant3		0.112		5mm	-2.4	-76.6	-1.21				
No.66 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant8	Back	1.143	1.143	5mm	-7	48.2	-1.25	118.8	2.49	0.03	Not required
Ant5		0.621	1.348	5mm	-8	-70.6	-1.14				
WLAN5GHz Ant6		0.615		5mm							
BT Ant3		0.112		5mm							
Ant8	Back	1.143	1.143	5mm	-7	48.2	-1.25	104.0	2.49	0.04	Not required
Ant5		0.621	1.348	5mm							
WLAN5GHz Ant6		0.615		5mm	-4	-55.8	-1.41				
BT Ant3		0.112		5mm							
Ant8	Back	1.143	1.143	5mm	-7	48.2	-1.25	124.9	2.49	0.03	Not required
Ant5		0.621	1.348	5mm							
WLAN5GHz Ant6		0.615		5mm							
BT Ant3		0.112		5mm	-2.4	-76.6	-1.21				
No.64&67&68 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant8	Back	1.143	1.143	5mm	-7	48.2	-1.25	104.0	1.87	0.02	Not required
WLAN5GHz Ant6		0.615	0.727	5mm	-4	-55.8	-1.41				
BT Ant3		0.112		5mm							
Ant8	Back	1.143	1.143	5mm	-7	48.2	-1.25	124.9	1.87	0.02	Not required
WLAN5GHz Ant6		0.615	0.727	5mm							
BT Ant3		0.112		5mm	-2.4	-76.6	-1.21				

<Body-worn>

No.13 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant0	Front	0.700	0.700	5mm	-35.3	-75.8	-1.02	156.5	1.76	0.01	Not required
Ant1		0.533	1.060	5mm	-28.7	80.6	-1.02				
WLAN5GHz Ant4		0.348		5mm							
BT Ant3		0.179		5mm							
Ant0	Front	0.700	0.700	5mm	-35.3	-75.8	-1.02	155.4	1.76	0.02	Not required
Ant1		0.533	1.060	5mm							
WLAN5GHz Ant4		0.348		5mm	2.8	74.9	-1.13				
BT Ant3		0.179		5mm							
Ant0	Front	0.700	0.700	5mm	-35.3	-75.8	-1.02	159.3	1.76	0.01	Not required
Ant1		0.533	1.060	5mm							
WLAN5GHz Ant4		0.348		5mm							
BT Ant3		0.179		5mm	26.2	71.2	-0.88				
No.14 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant0	Front	0.700	0.700	5mm	-34.5	-75.9	-0.99	162.6	1.86	0.02	Not required
Ant4		0.630	1.157	5mm	9.8	80.6	-1.01				
WLAN5GHz Ant4		0.348		5mm							
BT Ant3		0.179		5mm							
Ant0	Front	0.700	0.700	5mm	-34.5	-75.9	-0.99	155.3	1.86	0.02	Not required
Ant4		0.630	1.157	5mm							
WLAN5GHz Ant4		0.348		5mm	2.8	74.9	-1.13				
BT Ant3		0.179		5mm							
Ant0	Front	0.700	0.700	5mm	-34.5	-75.9	-0.99	159.1	1.86	0.02	Not required
Ant4		0.630	1.157	5mm							
WLAN5GHz Ant4		0.348		5mm							
BT Ant3		0.179		5mm	26.2	71.2	-0.88				
No.15 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant0	Front	0.700	0.700	5mm	-30.9	-76.7	-1.06	158.3	1.83	0.02	Not required
Ant5		0.598	1.125	5mm	37.5	66.1	-0.82				
WLAN5GHz Ant4		0.348		5mm							
BT Ant3		0.179		5mm							
Ant0	Front	0.700	0.700	5mm	-30.9	-76.7	-1.06	155.3	1.83	0.02	Not required
Ant5		0.598	1.125	5mm							
WLAN5GHz Ant4		0.348		5mm	2.8	74.9	-1.13				
BT Ant3		0.179		5mm							
Ant0	Front	0.700	0.700	5mm	-30.9	-76.7	-1.06	158.5	1.83	0.02	Not required
Ant5		0.598	1.125	5mm							
WLAN5GHz Ant4		0.348		5mm							
BT Ant3		0.179		5mm	26.2	71.2	-0.88				
No.16 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant0	Front	0.700	0.700	5mm	-35.3	-75.8	-1.02	126.4	1.79	0.02	Not required
Ant7		0.560	1.087	5mm	-34.8	50.6	-1.05				
WLAN5GHz Ant4		0.348		5mm							
BT Ant3		0.179		5mm							
Ant0	Front	0.700	0.700	5mm	-35.3	-75.8	-1.02	155.4	1.79	0.02	Not required
Ant7		0.560	1.087	5mm							



FCC SAR Test Report

Report No. : FA5O2822-02

WLAN5GHz Ant4	Front	0.348		5mm	2.8	74.9	-1.13	159.3	1.79	0.02	Not required
BT Ant3		0.179		5mm							
Ant0		0.700	0.700	5mm	-35.3	-75.8	-1.02				
Ant7		0.560	1.087	5mm							
WLAN5GHz Ant4		0.348		5mm							
BT Ant3	0.179		5mm	26.2	71.2	-0.88					
No.17 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant0	Front	0.700	0.700	5mm	-35.3	-75.8	-1.02	100.7	1.86	0.03	Not required
Ant9		0.630	1.157	5mm	-37.3	24.9	-1.02				
WLAN5GHz Ant4		0.348		5mm							
BT Ant3		0.179		5mm							
Ant0	Front	0.700	0.700	5mm	-35.3	-75.8	-1.02	155.4	1.86	0.02	Not required
Ant9		0.630	1.157	5mm							
WLAN5GHz Ant4		0.348		5mm	2.8	74.9	-1.13				
BT Ant3		0.179		5mm							
Ant0	Front	0.700	0.700	5mm	-35.3	-75.8	-1.02	159.3	1.86	0.02	Not required
Ant9		0.630	1.157	5mm							
WLAN5GHz Ant4		0.348		5mm							
BT Ant3		0.179		5mm	26.2	71.2	-0.88				
No.18 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant2	Front	1.259	1.259	5mm	18.7	-79.1	-0.89	165.7	2.32	0.02	Not required
Ant1		0.533	1.060	5mm	-26.8	80.2	-0.99				
WLAN5GHz Ant4		0.348		5mm							
BT Ant3		0.179		5mm							
Ant2	Front	1.259	1.259	5mm	18.7	-79.1	-0.89	154.8	2.32	0.02	Not required
Ant1		0.533	1.060	5mm							
WLAN5GHz Ant4		0.348		5mm	2.8	74.9	-1.13				
BT Ant3		0.179		5mm							
Ant2	Front	1.259	1.259	5mm	18.7	-79.1	-0.89	150.5	2.32	0.02	Not required
Ant1		0.533	1.060	5mm							
WLAN5GHz Ant4		0.348		5mm							
BT Ant3		0.179		5mm	26.2	71.2	-0.88				
No.19 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant2	Front	1.259	1.259	5mm	18.7	-79.1	-0.89	159.9	2.42	0.02	Not required
Ant4		0.630	1.157	5mm	9.8	80.6	-1.01				
WLAN5GHz Ant4		0.348		5mm							
BT Ant3		0.179		5mm							
Ant2	Front	1.259	1.259	5mm	18.7	-79.1	-0.89	154.8	2.42	0.02	Not required
Ant4		0.630	1.157	5mm							
WLAN5GHz Ant4		0.348		5mm	2.8	74.9	-1.13				
BT Ant3		0.179		5mm							
Ant2	Front	1.259	1.259	5mm	18.7	-79.1	-0.89	150.5	2.42	0.03	Not required
Ant4		0.630	1.157	5mm							
WLAN5GHz Ant4		0.348		5mm							
BT Ant3		0.179		5mm	26.2	71.2	-0.88				
No.20 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant2	Front	1.259	1.259	5mm	18.7	-79.1	-0.89	146.4	2.38	0.03	Not required
Ant5		0.598	1.125	5mm	37.5	66.1	-0.82				



FCC SAR Test Report

Report No. : FA5O2822-02

WLAN5GHz Ant4		0.348		5mm							
BT Ant3		0.179		5mm							
Ant2	Front	1.259	1.259	5mm	18.7	-79.1	-0.89	154.8	2.38	0.02	Not required
Ant5		0.598		5mm							
WLAN5GHz Ant4		0.348	1.125	5mm	2.8	74.9	-1.13				
BT Ant3		0.179		5mm							
Ant2		1.259	1.259	5mm	18.7	-79.1	-0.89				
Ant5	Front	0.598		5mm				150.5	2.38	0.02	Not required
WLAN5GHz Ant4		0.348	1.125	5mm							
BT Ant3		0.179		5mm	26.2	71.2	-0.88				
Ant2		1.259	1.259	5mm	18.7	-79.1	-0.89				
No.21 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant2	Front	1.259	1.259	5mm	18.7	-79.1	-0.89	136.7	2.35	0.03	Not required
Ant7		0.560		5mm	-32.5	47.7	-0.97				
WLAN5GHz Ant4		0.348	1.087	5mm							
BT Ant3		0.179		5mm							
Ant2	Front	1.259	1.259	5mm	18.7	-79.1	-0.89	154.8	2.35	0.02	Not required
Ant7		0.560		5mm							
WLAN5GHz Ant4		0.348	1.087	5mm	2.8	74.9	-1.13				
BT Ant3		0.179		5mm							
Ant2	Front	1.259	1.259	5mm	18.7	-79.1	-0.89	150.5	2.35	0.02	Not required
Ant7		0.560		5mm							
WLAN5GHz Ant4		0.348	1.087	5mm							
BT Ant3		0.179		5mm	26.2	71.2	-0.88				
No.22 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant2	Front	1.259	1.259	5mm	18.7	-79.1	-0.89	117.5	2.42	0.03	Not required
Ant9		0.630		5mm	-35.3	25.3	-1.03				
WLAN5GHz Ant4		0.348	1.157	5mm							
BT Ant3		0.179		5mm							
Ant2	Front	1.259	1.259	5mm	18.7	-79.1	-0.89	154.8	2.42	0.02	Not required
Ant9		0.630		5mm							
WLAN5GHz Ant4		0.348	1.157	5mm	2.8	74.9	-1.13				
BT Ant3		0.179		5mm							
Ant2	Front	1.259	1.259	5mm	18.7	-79.1	-0.89	150.5	2.42	0.03	Not required
Ant9		0.630		5mm							
WLAN5GHz Ant4		0.348	1.157	5mm							
BT Ant3		0.179		5mm	26.2	71.2	-0.88				

No.23 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant0	Back	1.292	1.292	5mm	18.7	-82.2	-0.59	152.4	2.86	0.03	Not required
Ant1		0.898		5mm	25.4	70.1	-0.63				
WLAN5GHz Ant4		0.392	1.563	5mm							
BT Ant3		0.273		5mm							
Ant0	Back	1.292	1.292	5mm	18.7	-82.2	-0.59	164.3	2.86	0.03	Not required
Ant1		0.898		5mm							
WLAN5GHz Ant4		0.392	1.563	5mm	-12.5	79.1	-1.08				
BT Ant3		0.273		5mm							
Ant0	Back	1.292	1.292	5mm	18.7	-82.2	-0.59	160.5	2.86	0.03	Not required
Ant1		0.898	1.563	5mm							



FCC SAR Test Report

Report No. : FA5O2822-02

WLAN5GHz Ant4		0.392		5mm							
BT Ant3		0.273		5mm	-35	69.1	-0.89				
No.24 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant0	Back	1.292	1.292	5mm	18.7	-82.2	-0.59	166.1	2.86	0.03	Not required
Ant4		0.902	1.567	5mm	-16.5	80.1	-1.03				
WLAN5GHz Ant4		0.392		5mm							
BT Ant3		0.273		5mm							
Ant0	Back	1.292	1.292	5mm	18.7	-82.2	-0.59	164.3	2.86	0.03	Not required
Ant4		0.902	1.567	5mm							
WLAN5GHz Ant4		0.392		5mm	-12.5	79.1	-1.08				
BT Ant3		0.273		5mm							
Ant0	Back	1.292	1.292	5mm	18.7	-82.2	-0.59	160.5	2.86	0.03	Not required
Ant4		0.902	1.567	5mm							
WLAN5GHz Ant4		0.392		5mm							
BT Ant3		0.273		5mm	-35	69.1	-0.89				
No.25 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant0	Back	1.292	1.292	5mm	18.7	-82.2	-0.59	153.1	2.84	0.03	Not required
Ant5		0.887	1.552	5mm	-23.9	64.9	-1.21				
WLAN5GHz Ant4		0.392		5mm							
BT Ant3		0.273		5mm							
Ant0	Back	1.292	1.292	5mm	18.7	-82.2	-0.59	164.3	2.84	0.03	Not required
Ant5		0.887	1.552	5mm							
WLAN5GHz Ant4		0.392		5mm	-12.5	79.1	-1.08				
BT Ant3		0.273		5mm							
Ant0	Back	1.292	1.292	5mm	18.7	-82.2	-0.59	160.5	2.84	0.03	Not required
Ant5		0.887	1.552	5mm							
WLAN5GHz Ant4		0.392		5mm							
BT Ant3		0.273		5mm	-35	69.1	-0.89				
No.26 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant0	Back	1.292	1.292	5mm	18.7	-82.2	-0.59	136.0	2.85	0.04	Not required
Ant7		0.895	1.560	5mm	30.6	53.3	-0.79				
WLAN5GHz Ant4		0.392		5mm							
BT Ant3		0.273		5mm							
Ant0	Back	1.292	1.292	5mm	18.7	-82.2	-0.59	164.3	2.85	0.03	Not required
Ant7		0.895	1.560	5mm							
WLAN5GHz Ant4		0.392		5mm	-12.5	79.1	-1.08				
BT Ant3		0.273		5mm							
Ant0	Back	1.292	1.292	5mm	18.7	-82.2	-0.59	160.5	2.85	0.03	Not required
Ant7		0.895	1.560	5mm							
WLAN5GHz Ant4		0.392		5mm							
BT Ant3		0.273		5mm	-35	69.1	-0.89				
No.27 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant0	Back	1.292	1.292	5mm	18.7	-82.2	-0.59	121.4	2.85	0.04	Not required
Ant9		0.892	1.557	5mm	40.8	37.2	-0.92				
WLAN5GHz Ant4		0.392		5mm							
BT Ant3		0.273		5mm							
Ant0	Back	1.292	1.292	5mm	18.7	-82.2	-0.59	164.3	2.85	0.03	Not required



FCC SAR Test Report

Report No. : FA5O2822-02

Ant9		0.892		5mm								
WLAN5GHz Ant4		0.392	1.557	5mm	-12.5	79.1	-1.08					
BT Ant3		0.273		5mm								
Ant0		1.292	1.292	5mm	18.7	-82.2	-0.59					
Ant9		0.892		5mm								
WLAN5GHz Ant4	Back	0.392	1.557	5mm				160.5	2.85	0.03	Not required	
BT Ant3		0.273		5mm	-35	69.1	-0.89					
No.28 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	
					X	Y	Z					
Ant2		1.303	1.303	5mm	-23.3	-80.6	-0.72					
Ant1		0.898		5mm	21.9	70.7	-0.77					
WLAN5GHz Ant4	Back	0.392	1.563	5mm				157.9	2.87	0.03	Not required	
BT Ant3		0.273		5mm								
Ant2		1.303	1.303	5mm	-23.3	-80.6	-0.72					
Ant1		0.898		5mm								
WLAN5GHz Ant4	Back	0.392	1.563	5mm	-12.5	79.1	-1.08	160.1	2.87	0.03	Not required	
BT Ant3		0.273		5mm								
Ant2		1.303	1.303	5mm	-23.3	-80.6	-0.72					
Ant1		0.898		5mm								
WLAN5GHz Ant4	Back	0.392	1.563	5mm				150.2	2.87	0.03	Not required	
BT Ant3		0.273		5mm	-35	69.1	-0.89					
No.29 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	
					X	Y	Z					
Ant2		1.303	1.303	5mm	-23.3	-80.6	-0.72					
Ant4		0.902		5mm	-16.5	80.1	-1.03					
WLAN5GHz Ant4	Back	0.392	1.567	5mm				160.8	2.87	0.03	Not required	
BT Ant3		0.273		5mm								
Ant2		1.303	1.303	5mm	-23.3	-80.6	-0.72					
Ant4		0.902		5mm								
WLAN5GHz Ant4	Back	0.392	1.567	5mm	-12.5	79.1	-1.08	160.1	2.87	0.03	Not required	
BT Ant3		0.273		5mm								
Ant2		1.303	1.303	5mm	-23.3	-80.6	-0.72					
Ant4		0.902		5mm								
WLAN5GHz Ant4	Back	0.392	1.567	5mm				150.2	2.87	0.03	Not required	
BT Ant3		0.273		5mm	-35	69.1	-0.89					
No.30 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	
					X	Y	Z					
Ant2		1.303	1.303	5mm	-23.3	-80.6	-0.72					
Ant5		0.887		5mm	-23.9	64.9	-1.21					
WLAN5GHz Ant4	Back	0.392	1.552	5mm				145.5	2.86	0.03	Not required	
BT Ant3		0.273		5mm								
Ant2		1.303	1.303	5mm	-23.3	-80.6	-0.72					
Ant5		0.887		5mm								
WLAN5GHz Ant4	Back	0.392	1.552	5mm	-12.5	79.1	-1.08	160.1	2.86	0.03	Not required	
BT Ant3		0.273		5mm								
Ant2		1.303	1.303	5mm	-23.3	-80.6	-0.72					
Ant5		0.887		5mm								
WLAN5GHz Ant4	Back	0.392	1.552	5mm				150.2	2.86	0.03	Not required	
BT Ant3		0.273		5mm	-35	69.1	-0.89					
No.31 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	
					X	Y	Z					



FCC SAR Test Report

Report No. : FA5O2822-02

Ant2	Back	1.303	1.303	5mm	-23.3	-80.6	-0.72	144.3	2.86	0.03	Not required
Ant7		0.895	1.560	5mm	30.6	53.3	-0.79				
WLAN5GHz Ant4		0.392		5mm							
BT Ant3		0.273		5mm							
Ant2	Back	1.303	1.303	5mm	-23.3	-80.6	-0.72	160.1	2.86	0.03	Not required
Ant7		0.895	1.560	5mm							
WLAN5GHz Ant4		0.392		5mm	-12.5	79.1	-1.08				
BT Ant3		0.273		5mm							
Ant2	Back	1.303	1.303	5mm	-23.3	-80.6	-0.72	150.2	2.86	0.03	Not required
Ant7		0.895	1.560	5mm							
WLAN5GHz Ant4		0.392		5mm							
BT Ant3		0.273		5mm	-35	69.1	-0.89				
No.32 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant2	Back	1.303	1.303	5mm	-21.2	-81.6	-0.81	134.0	2.86	0.04	Not required
Ant9		0.892	1.557	5mm	40.8	37.2	-0.92				
WLAN5GHz Ant4		0.392		5mm							
BT Ant3		0.273		5mm							
Ant2	Back	1.303	1.303	5mm	-21.2	-81.6	-0.81	160.9	2.86	0.03	Not required
Ant9		0.892	1.557	5mm							
WLAN5GHz Ant4		0.392		5mm	-12.5	79.1	-1.08				
BT Ant3		0.273		5mm							
Ant2	Back	1.303	1.303	5mm	-21.2	-81.6	-0.81	151.3	2.86	0.03	Not required
Ant9		0.892	1.557	5mm							
WLAN5GHz Ant4		0.392		5mm							
BT Ant3		0.273		5mm	-35	69.1	-0.89				
No.33 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant8	Back	0.595	0.595	5mm	-41.9	-47.5	-1.01	134.3	2.16	0.02	Not required
Ant1		0.898	1.563	5mm	21.9	70.7	-0.77				
WLAN5GHz Ant4		0.392		5mm							
BT Ant3		0.273		5mm							
Ant8	Back	0.595	0.595	5mm	-41.9	-47.5	-1.01	130.0	2.16	0.02	Not required
Ant1		0.898	1.563	5mm							
WLAN5GHz Ant4		0.392		5mm	-12.5	79.1	-1.08				
BT Ant3		0.273		5mm							
Ant8	Back	0.595	0.595	5mm	-41.9	-47.5	-1.01	116.8	2.16	0.03	Not required
Ant1		0.898	1.563	5mm							
WLAN5GHz Ant4		0.392		5mm							
BT Ant3		0.273		5mm	-35	69.1	-0.89				
No.34 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant8	Back	0.595	0.595	5mm	-41.9	-47.5	-1.01	130.1	2.16	0.02	Not required
Ant4		0.902	1.567	5mm	-16.5	80.1	-1.03				
WLAN5GHz Ant4		0.392		5mm							
BT Ant3		0.273		5mm							
Ant8	Back	0.595	0.595	5mm	-41.9	-47.5	-1.01	130.0	2.16	0.02	Not required
Ant4		0.902	1.567	5mm							
WLAN5GHz Ant4		0.392		5mm	-12.5	79.1	-1.08				
BT Ant3		0.273		5mm							
Ant8	Back	0.595	0.595	5mm	-41.9	-47.5	-1.01	116.8	2.16	0.03	Not required

Ant4		0.902	1.567	5mm							
WLAN5GHz Ant4		0.392		5mm							
BT Ant3		0.273		5mm	-35	69.1	-0.89				
No.35 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant8	Back	0.595	0.595	5mm	-41.9	-47.5	-1.01	113.8	2.15	0.03	Not required
Ant5		0.887	1.552	5mm	-23.9	64.9	-1.21				
WLAN5GHz Ant4		0.392		5mm							
BT Ant3		0.273		5mm							
Ant8	Back	0.595	0.595	5mm	-41.9	-47.5	-1.01	130.0	2.15	0.02	Not required
Ant5		0.887	1.552	5mm							
WLAN5GHz Ant4		0.392		5mm	-12.5	79.1	-1.08				
BT Ant3		0.273		5mm							
Ant8	Back	0.595	0.595	5mm	-41.9	-47.5	-1.01	116.8	2.15	0.03	Not required
Ant5		0.887	1.552	5mm							
WLAN5GHz Ant4		0.392		5mm							
BT Ant3		0.273		5mm	-35	69.1	-0.89				
No.36 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant8	Back	0.595	0.595	5mm	-41.9	-47.5	-1.01	95.7	2.16	0.03	Not required
Ant7		0.895	1.560	5mm	-32.5	47.7	-0.97				
WLAN5GHz Ant4		0.392		5mm							
BT Ant3		0.273		5mm							
Ant8	Back	0.595	0.595	5mm	-41.9	-47.5	-1.01	130.0	2.16	0.02	Not required
Ant7		0.895	1.560	5mm							
WLAN5GHz Ant4		0.392		5mm	-12.5	79.1	-1.08				
BT Ant3		0.273		5mm							
Ant8	Back	0.595	0.595	5mm	-41.9	-47.5	-1.01	116.8	2.16	0.03	Not required
Ant7		0.895	1.560	5mm							
WLAN5GHz Ant4		0.392		5mm							
BT Ant3		0.273		5mm	-35	69.1	-0.89				
No.37 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant8	Back	0.595	0.595	5mm	-41.9	-47.5	-1.01	118.4	2.15	0.03	Not required
Ant9		0.892	1.557	5mm	40.8	37.2	-0.92				
WLAN5GHz Ant4		0.392		5mm							
BT Ant3		0.273		5mm							
Ant8	Back	0.595	0.595	5mm	-41.9	-47.5	-1.01	130.0	2.15	0.02	Not required
Ant9		0.892	1.557	5mm							
WLAN5GHz Ant4		0.392		5mm	-12.5	79.1	-1.08				
BT Ant3		0.273		5mm							
Ant8	Back	0.595	0.595	5mm	-41.9	-47.5	-1.01	116.8	2.15	0.03	Not required
Ant9		0.892	1.557	5mm							
WLAN5GHz Ant4		0.392		5mm							
BT Ant3		0.273		5mm	-35	69.1	-0.89				

Sensor off

No.38 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant0	Back	0.79	0.79	14mm	23.1	-80.2	-0.49	151.0	2.25	0.02	Not required
Ant1		1.116	1.457	14mm	20.2	70.8	-0.82				
WLAN5GHz Ant4		0.238		14mm							
BT Ant3		0.103		14mm							
Ant0	Back	0.79	0.79	14mm	23.1	-80.2	-0.49	194.0	2.25	0.02	Not required
Ant1		1.116	1.457	14mm							
WLAN5GHz Ant4		0.238		14mm	-13	77.2	-108				
BT Ant3		0.103		14mm							
Ant0	Back	0.79	0.79	14mm	23.1	-80.2	-0.49	152.8	2.25	0.02	Not required
Ant1		1.116	1.457	14mm							
WLAN5GHz Ant4		0.238		14mm							
BT Ant3		0.103		14mm	-27	64.2	-1.25				
No.39 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant0	Back	0.79	0.79	14mm	23.1	-80.2	-0.49	129.2	2.00	0.02	Not required
Ant7		0.866	1.207	14mm	33.6	48.6	-0.73				
WLAN5GHz Ant4		0.238		14mm							
BT Ant3		0.103		14mm							
Ant0	Back	0.79	0.79	14mm	23.1	-80.2	-0.49	194.0	2.00	0.01	Not required
Ant7		0.866	1.207	14mm							
WLAN5GHz Ant4		0.238		14mm	-13	77.2	-108				
BT Ant3		0.103		14mm							
Ant0	Back	0.79	0.79	14mm	23.1	-80.2	-0.49	152.8	2.00	0.02	Not required
Ant7		0.866	1.207	14mm							
WLAN5GHz Ant4		0.238		14mm							
BT Ant3		0.103		14mm	-27	64.2	-1.25				
No.40 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant2	Back	0.484	0.484	14mm	-23.3	-79.7	-0.71	156.7	1.94	0.02	Not required
Ant1		1.116	1.457	14mm	20.2	70.8	-0.82				
WLAN5GHz Ant4		0.238		14mm							
BT Ant3		0.103		14mm							
Ant2	Back	0.484	0.484	14mm	-23.3	-79.7	-0.71	190.4	1.94	0.01	Not required
Ant1		1.116	1.457	14mm							
WLAN5GHz Ant4		0.238		14mm	-13	77.2	-108				
BT Ant3		0.103		14mm							
Ant2	Back	0.484	0.484	14mm	-23.3	-79.7	-0.71	143.9	1.94	0.02	Not required
Ant1		1.116	1.457	14mm							
WLAN5GHz Ant4		0.238		14mm							
BT Ant3		0.103		14mm	-27	64.2	-1.25				
No.48 Band	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant2	Back	0.484	0.484	14mm	-23.3	-79.7	-0.71	140.4	1.69	0.02	Not required
Ant7		0.866	1.207	14mm	33.6	48.6	-0.73				
WLAN5GHz Ant4		0.238		14mm							
BT Ant3		0.103		14mm							
Ant2	Back	0.484	0.484	14mm	-23.3	-79.7	-0.71	190.4	1.69	0.01	Not required
Ant7		0.866	1.207	14mm							



WLAN5GHz Ant4		0.238		14mm	-13	77.2	-108				
BT Ant3		0.103		14mm							
Ant2	Back	0.484	0.484	14mm	-23.3	-79.7	-0.71	143.9	1.69	0.02	Not required
Ant7		0.866		14mm							
WLAN5GHz Ant4		0.238	1.207	14mm							
BT Ant3		0.103		14mm	-27	64.2	-1.25				

<Extremity>

No.1 Band	Position	SAR	10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
						X	Y	Z				
Ant0	Front	1.428		1.428	0mm	-40	-80.5	-203	162.9	4.87	0.07	Not required
Ant1		2.362			0mm	-55	81.7	-205				
WLAN5GHz Ant6		1.075	3.438		0mm							
NFC		0.001			0mm							
Ant0	Front	1.428		1.428	0mm	-40	-80.5	-203	157.7	4.87	0.07	Not required
Ant1		2.362			0mm							
WLAN5GHz Ant6		1.075	3.438		0mm	15	67.3	-203				
NFC		0.001			0mm							
Ant0	Front	1.428		1.428	0mm	-40	-80.5	-203	162.3	4.87	0.07	Not required
Ant1		2.362			0mm							
WLAN5GHz Ant6		1.075	3.438		0mm							
NFC		0.001			0mm	-55	81.1	-203				
No.2 Band	Position	SAR	10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
						X	Y	Z				
Ant0	Front	1.428		1.428	0mm	-40	-80.5	-203	156.6	4.20	0.05	Not required
Ant7		1.691			0mm	-65	74.1	-203				
WLAN5GHz Ant6		1.075	2.767		0mm							
NFC		0.001			0mm							
Ant0	Front	1.428		1.428	0mm	-40	-80.5	-203	157.7	4.20	0.05	Not required
Ant7		1.691			0mm							
WLAN5GHz Ant6		1.075	2.767		0mm	15	67.3	-203				
NFC		0.001			0mm							
Ant0	Front	1.428		1.428	0mm	-40	-80.5	-203	162.3	4.20	0.05	Not required
Ant7		1.691			0mm							
WLAN5GHz Ant6		1.075	2.767		0mm							
NFC		0.001			0mm	-55	81.1	-203				
No.3 Band	Position	SAR	10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
						X	Y	Z				
Ant2	Front	1.734		1.734	0mm	5	-72.2	-203	165.2	5.17	0.07	Not required
Ant1		2.362			0mm	-55	81.7	-205				
WLAN5GHz Ant6		1.075	3.438		0mm							
NFC		0.001			0mm							
Ant2	Front	1.734		1.734	0mm	5	-72.2	-203	139.9	5.17	0.08	Not required
Ant1		2.362			0mm							
WLAN5GHz Ant6		1.075	3.438		0mm	15	67.3	-203				
NFC		0.001			0mm							
Ant2	Front	1.734		1.734	0mm	5	-72.2	-203	164.6	5.17	0.07	Not required
Ant1		2.362			0mm							
WLAN5GHz Ant6		1.075	3.438		0mm							



FCC SAR Test Report

Report No. : FA5O2822-02

NFC		0.001		0mm	-55	81.1	-203				
No.4 Band	Position	SAR 10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Ant2	Front	1.734	1.734	0mm	5	-72.2	-203	162.2	4.50	0.06	Not required
Ant7		1.691	2.767	0mm	-65	74.1	-203				
WLAN5GHz Ant6		1.075		0mm							
NFC		0.001		0mm							
Ant2	Front	1.734	1.734	0mm	5	-72.2	-203	139.9	4.50	0.07	Not required
Ant1		1.691	2.767	0mm							
WLAN5GHz Ant6		1.075		0mm	15	67.3	-203				
NFC		0.001		0mm							
Ant2	Front	1.734	1.734	0mm	5	-72.2	-203	164.6	4.50	0.06	Not required
Ant7		1.691	2.767	0mm							
WLAN5GHz Ant6		1.075		0mm							
NFC		0.001		0mm	-55	81.1	-203				

No.5 Band	Position	SAR 10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Ant0	Back	3.227	3.227	0mm	-3.1	-82.4	-207	162.8	6.41	0.10	Not required
Ant1		2.715	3.182	0mm	6.6	80.1	-207				
WLAN2.4GHz Ant3		0.417		0mm							
NFC		0.050		0mm							
Ant0	Back	3.227	3.227	0mm	-3.1	-82.4	-207	177.8	6.41	0.09	Not required
Ant1		2.715	3.182	0mm							
WLAN2.4GHz Ant3		0.417		0mm	-55	87.6	-203				
NFC		0.050		0mm							
Ant0	Back	3.227	3.227	0mm	-3.1	-82.4	-207	163.1	6.41	0.10	Not required
Ant1		2.715	3.182	0mm							
WLAN2.4GHz Ant3		0.417		0mm							
NFC		0.050		0mm	11.3	80	-203				
No.6 Band	Position	SAR 10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Ant0	Back	3.227	3.227	0mm	-3.1	-82.4	-207	178.1	4.28	0.05	Not required
Ant4		0.584	1.051	0mm	-45	90.7	-203				
WLAN2.4GHz Ant3		0.417		0mm							
NFC		0.050		0mm							
Ant0	Back	3.227	3.227	0mm	-3.1	-82.4	-207	177.8	4.28	0.05	Not required
Ant4		0.584	1.051	0mm							
WLAN2.4GHz Ant3		0.417		0mm	-55	87.6	-203				
NFC		0.050		0mm							
Ant0	Back	3.227	3.227	0mm	-3.1	-82.4	-207	164.6	4.28	0.05	Not required
Ant4		0.584	1.051	0mm							
WLAN2.4GHz Ant3		0.417		0mm							
NFC		0.050		0mm	10	81.6	-203				
No.7 Band	Position	SAR 10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Ant0	Back	3.227	3.227	0mm	-3.1	-82.4	-207	162.5	6.20	0.09	Not required
Ant7		2.502	2.969	0mm	8.5	79.7	-207				
WLAN2.4GHz Ant3		0.417		0mm							
NFC		0.050		0mm							
Ant0	Back	3.227	3.227	0mm	-3.1	-82.4	-207	177.8	6.20	0.09	Not required



Ant7		2.502	2.969	0mm							
WLAN2.4GHz Ant3		0.417		0mm	-55	87.6	-203				
NFC		0.050		0mm							
Ant0	Back	3.227	3.227	0mm	-3.1	-82.4	-207	164.6	6.20	0.09	Not required
Ant7		2.502	2.969	0mm							
WLAN2.4GHz Ant3		0.417		0mm							
NFC		0.050		0mm	10	81.6	-203				
No.8 Band	Position	SAR 10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant0	Back	3.227	3.227	0mm	-3.1	-82.4	-207	142.4	5.52	0.09	Not required
Ant9		1.823	2.290	0mm	5	59.7	-203				
WLAN2.4GHz Ant3		0.417		0mm							
NFC		0.050		0mm							
Ant0	Back	3.227	3.227	0mm	-3.1	-82.4	-207	177.8	5.52	0.07	Not required
Ant9		1.823	2.290	0mm							
WLAN2.4GHz Ant3		0.417		0mm	-55	87.6	-203				
NFC		0.050		0mm							
Ant0	Back	3.227	3.227	0mm	-3.1	-82.4	-207	164.6	5.52	0.08	Not required
Ant9		1.823	2.290	0mm							
WLAN2.4GHz Ant3		0.417		0mm							
NFC		0.050		0mm	10	81.6	-203				
No.9 Band	Position	SAR 10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant2	Back	3.148	3.148	0mm	-41.5	-73.5	-204	160.0	6.33	0.10	Not required
Ant1		2.715	3.182	0mm	-1	81.3	-207				
WLAN2.4GHz Ant3		0.417		0mm							
NFC		0.050		0mm							
Ant2	Back	3.148	3.148	0mm	-41.5	-73.5	-204	161.7	6.33	0.10	Not required
Ant1		2.715	3.182	0mm							
WLAN2.4GHz Ant3		0.417		0mm	-55	87.6	-203				
NFC		0.050		0mm							
Ant2	Back	3.148	3.148	0mm	-41.5	-73.5	-204	163.4	6.33	0.10	Not required
Ant1		2.715	3.182	0mm							
WLAN2.4GHz Ant3		0.417		0mm							
NFC		0.050		0mm	10	81.6	-203				
No.10 Band	Position	SAR 10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant2	Back	3.148	3.148	0mm	-45	-73.1	-203	163.8	4.20	0.05	Not required
Ant4		0.584	1.051	0mm	-45	90.7	-203				
WLAN2.4GHz Ant3		0.417		0mm							
NFC		0.050		0mm							
Ant2	Back	3.148	3.148	0mm	-45	-73.1	-203	161.0	4.20	0.05	Not required
Ant4		0.584	1.051	0mm							
WLAN2.4GHz Ant3		0.417		0mm	-55	87.6	-203				
NFC		0.050		0mm							
Ant2	Back	3.148	3.148	0mm	-45	-73.1	-203	164.2	4.20	0.05	Not required
Ant4		0.584	1.051	0mm							
WLAN2.4GHz Ant3		0.417		0mm							
NFC		0.050		0mm	10	81.6	-203				
No.11 Band	Position	SAR 10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				

Ant2	Back	3.148	3.148	0mm	-41.5	-73.5	-204	161.2	6.12	0.09	Not required
Ant7		2.502	2.969	0mm	8.5	79.7	-207				
WLAN2.4GHz Ant3		0.417		0mm							
NFC		0.050		0mm							
Ant2	Back	3.148	3.148	0mm	-41.5	-73.5	-204	161.7	6.12	0.09	Not required
Ant7		2.502	2.969	0mm							
WLAN2.4GHz Ant3		0.417		0mm	-55	87.6	-203				
NFC		0.050		0mm							
Ant2	Back	3.148	3.148	0mm	-41.5	-73.5	-204	163.4	6.12	0.09	Not required
Ant7		2.502	2.969	0mm							
WLAN2.4GHz Ant3		0.417		0mm							
NFC		0.050		0mm	10	81.6	-203				
No.12 Band	Position	SAR 10g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant2	Back	3.148	3.148	0mm	-41.5	-73.5	-204	141.1	5.44	0.09	Not required
Ant9		1.823	2.290	0mm	5	59.7	-203				
WLAN2.4GHz Ant3		0.417		0mm							
NFC		0.050		0mm							
Ant2	Back	3.148	3.148	0mm	-41.5	-73.5	-204	161.7	5.44	0.08	Not required
Ant9		1.823	2.290	0mm							
WLAN2.4GHz Ant3		0.417		0mm	-55	87.6	-203				
NFC		0.050		0mm							
Ant2	Back	3.148	3.148	0mm	-41.5	-73.5	-204	163.4	5.44	0.08	Not required
Ant9		1.823	2.290	0mm							
WLAN2.4GHz Ant3		0.417		0mm							
NFC		0.050		0mm	10	81.6	-203				

17.7 Maximum Reported SAR and SAR Peak Locations

General Note:

1. The maximum reported SAR and SAR Peak Locations corresponding to each position of each frequency band of each antenna in the below tables are as follows.
2. The unit of SAR evaluation is W/kg. The unit of x, y, z with Axis (x, y, z) evaluation is mm.

<Hotspot>

		Front																	
Band		Ant0			Ant1			Ant2			Ant4			Ant5			Ant7		
GSM850	SAR	0.396			0.197														
	Axis	-36.1	-78.9	-1.15	-31.3	83.5	-1.12												
GSM1900	SAR				0.283			0.541											
	Axis				-27.6	87.1	-1.01	20.1	-84.5	-0.97									
WCDMA II	SAR				0.330			1.093											
	Axis				-31.5	82.5	-1.05	20.8	-85.6	-0.88									
WCDMA IV	SAR				0.240			0.709											
	Axis				-33.2	83.7	-1.02	18.6	-83.3	-0.92									
WCDMA V	SAR	0.393			0.198														
	Axis	-35.5	-79.9	-1.16	-31	84.4	-0.98												
LTE Band 2	SAR	0.579			0.401			1.127											
	Axis	-36.9	-78.7	-1.15	-30.6	82.6	-0.97	17.9	-85.2	-1.02								-39.5	23.8
LTE Band 7	SAR	0.482			0.374			0.778											
	Axis	-37.1	-78.5	-1.08	-30.2	82.4	-1.1	18.6	-84.4	-0.99								-41.1	22.9
LTE Band 12	SAR	0.199			0.207														
	Axis	-37.8	-81.3	-1.25	-28.6	80.9	-1.02												
LTE Band 13	SAR	0.436			0.242														
	Axis	-37.3	-80.1	-1.03	-29.8	82.1	-1.05												
LTE Band 26	SAR	0.583			0.254														
	Axis	-36.3	-81.3	-1.24	-33.1	86	-1.11												
LTE Band 66	SAR				0.402			0.929											
	Axis				-32.5	86.5	-1.01	19.2	-87.2	-0.88									
LTE Band 41	SAR	0.452			0.324			0.722											
	Axis	-36.6	-79.9	-1.15	-27.9	85.4	-1.14	16.9	-83.3	-0.93								-42	24
LTE Band 42	SAR							0.241						0.388					
	Axis							10.1	81.5	-1.01				-37.7	49.6	-1.08			
FR1 n2	SAR				0.295			0.915											
	Axis				-30.4	88.4	-1.18	17.3	-84.5	-0.92									
FR1 n7	SAR				0.342			0.850											
	Axis				-28.6	83.5	-1.01	17.5	-85	-0.97									
FR1 n66	SAR				0.337			0.946											
	Axis				-33.6	82.9	-1.13	20.1	-86.1	-0.89									
FR1 n38	SAR							0.759											
	Axis							19.7	-82.9	-0.9									
FR1 n41	SAR	0.664			0.289			0.678											
	Axis	-35.5	-80.1	-1.19	-28.7	86.5	-1.02	18.2	-83.3	-1.01								-39.9	22.8
FR1 n77	SAR							0.253			0.275			0.330					
	Axis							8.2	82.8	-1.07	39.3	65.8	-0.88	-39.2	50.8	-1.12			
WLAN5GHz Ant4	SAR (W/kg)	0.403			BT Ant3 SAR (W/kg)			0.179			WLAN2.4GHz Ant3 SAR (W/kg)			0.419					
	Axis	1.3	73.6	-1.17				25.4	70.1	-0.95				27.3	68.9	-0.95			
WLAN5GHz Ant6	SAR (W/kg)	0.456																	
	Axis	26.5	26	-1.16															



Back																										
Band		Ant0			Ant1			Ant2			Ant4			Ant5			Ant7			Ant8			Ant9			
GSM850	SAR	1.289			0.627																					
	Axis	25.8	-83.6	-0.62	21.8	72.4	-0.8																			
GSM1900	SAR				0.628			0.734																		
	Axis				27.3	76.7	-0.59	-24.1	-88.4	-0.74																
WCDMA II	SAR				0.619			1.289																		
	Axis				26.8	74.5	-0.61	-25.7	-82	-0.78																
WCDMA IV	SAR				0.627			0.978																		
	Axis				25.8	76.1	-0.55	-24.4	-83	-0.77																
WCDMA V	SAR	1.187			0.626																					
	Axis	22.5	-82	-0.52	18	73.6	-0.65																			
LTE Band 2	SAR	1.280			0.612			1.166															0.266			
	Axis	19.4	-86.7	-0.68	25.8	75	-0.74	-24.7	-81	-0.76													43.4	29.7	-0.6	
LTE Band 7	SAR	1.283			0.603			1.036															0.298			
	Axis	22.1	-83.5	-0.66	23.4	75.1	-0.66	-22.5	-80.6	-0.77													37.3	28.7	-0.71	
LTE Band 12	SAR	0.535			0.622																					
	Axis	20.1	-84.5	-0.69	23.8	75.5	-0.62																			
LTE Band 13	SAR	0.999			0.623																					
	Axis	19.7	-85.2	-0.58	24.3	76.5	-0.63																			
LTE Band 26	SAR	1.292			0.616																					
	Axis	18.1	-83.6	-0.61	24.3	76.8	-0.61																			
LTE Band 66	SAR				0.617			1.004																		
	Axis				26.1	75.7	-0.59	-27	-88.4	-0.83																
LTE Band 41	SAR	1.282			0.574			1.111															0.295			
	Axis	17	-84.8	-0.68	25.5	74.9	-0.55	-24	-82.2	-0.89													40.6	26	-0.62	
LTE Band 42	SAR										0.369						0.623									
	Axis										-15.8	80	-1.08				32.2	54.6	-0.82							
FR1 n2	SAR				0.619			1.159																		
	Axis				24.8	73.9	-0.7	-25.1	-83.3	-0.71																
FR1 n7	SAR				0.626			1.268																		
	Axis				23.6	74.7	-0.69	-24.9	-82.3	-0.75																
FR1 n66	SAR				0.625			1.040																		
	Axis				22.7	75.5	-0.66	-25.8	-84.2	-0.72																
FR1 n38	SAR																									
	Axis																									
FR1 n41	SAR	1.195			0.620			0.790															0.194			
	Axis	18.8	-86.6	-0.58	24.2	76.2	-0.68	-23.9	-81.1	-0.78													38.6	25.8	-0.84	
FR1 n77	SAR										0.362			0.523			0.628			0.484						
	Axis										-14.9	78.8	-1.01	-25.6	65.8	-1.25	33.2	52.2	-1.15	-39.7	-49.5	-0.97				
WLAN5GHz Ant4	SAR (W/kg)	0.447			BT	SAR (W/kg)			0.273			WLAN2.4GHz Ant3	SAR (W/kg)			0.649										
	Axis	-13.3	73.1	-1.02		Axis			-28.1	69.5	-0.86		Axis			-27.6	67.9	-0.93								
WLAN5GHz Ant6	SAR (W/kg)	0.586																								
	Axis	-27	46	-1.3																						

Right Side													
Band		Ant2			Ant4			Ant5			Ant8		
GSM1900	SAR	0.260											
	Axis	-4.4	64.9	-1.18									
WCDMA II	SAR	0.518											
	Axis	-3.2	63.2	-1.15									
WCDMA IV	SAR	0.323											
	Axis	-2.9	60.5	-1.13									
LTE Band 2	SAR	0.472											
	Axis	-7	64.3	-1.29									
LTE Band 7	SAR	0.281											
	Axis	-6.2	64.3	-1.15									
LTE Band 66	SAR	0.371											
	Axis	-6.4	61.7	-1.26									
LTE Band 41	SAR	0.304											
	Axis	-5.5	62.3	-1.21									
LTE Band 42	SAR				0.066								
	Axis				1.2	-76.5	-1.1						
FR1 n2	SAR	0.425											
	Axis	-5.3	64.5	-1.17									
FR1 n7	SAR	0.320											
	Axis	-6.6	61.8	-1.17									
FR1 n66	SAR	0.387											
	Axis	-3.2	65.3	-1.08									
FR1 n41	SAR	0.331											
	Axis	-7.2	63.8	-1.28									
FR1 n77	SAR				0.069			0.621			1.143		
	Axis				1	-79.1	-1.07	-8	-70.6	-1.14	-7	48.2	-1.25
WLAN5GHz Ant6	SAR (W/kg)	0.615				BT ANT3	SAR (W/kg)	0.112					
	Axis	-4	-55.8	-1.41			Axis	-2.4	-76.6	-1.21			



<Body-worn>

		Front																							
Band		Ant0			Ant1			Ant2			Ant4			Ant5			Ant7			Ant8			Ant9		
GSM850	SAR	0.396			0.280																				
	Axis	-31.5	-78.7	-1.05	-27.2	81.5	-1.02																		
GSM1900	SAR				0.342			0.569																	
	Axis				-30.5	85.9	-1.06	17.8	-83.3	-0.89															
WCDMA II	SAR				0.473			1.093																	
	Axis				-32.1	82	-0.99	19.5	-81.6	-0.93															
WCDMA IV	SAR				0.332			1.074																	
	Axis				-33.5	83.7	-0.94	18.7	-79.1	-0.89															
WCDMA V	SAR	0.393			0.279																				
	Axis	-32.3	-77.9	-0.97	-28.8	82.5	-1.03																		
LTE Band 2	SAR	0.606			0.516			1.259															0.406		
	Axis	-34.5	-75.9	-0.99	-29.6	81.6	-1.02	21.2	-82.5	-0.96													-37.3	-24.9	-1.02
LTE Band 7	SAR	0.482			0.533			1.041															0.630		
	Axis	-33.1	-80.2	-1.03	-27.5	81.7	-0.95	17.9	-80.6	-1.02													-35.2	-26.3	-0.97
LTE Band 12	SAR	0.199			0.292																				
	Axis	-32.7	-79.1	-0.95	-29.1	84.4	-1.07																		
LTE Band 13	SAR	0.380			0.346																				
	Axis	-33.9	-78.5	-1.03	-31.3	85.9	-0.97																		
LTE Band 26	SAR	0.583			0.360																				
	Axis	-32.4	-78.6	-1.01	-28.6	82.1	-1.11																		
LTE Band 66	SAR				0.529			1.178																	
	Axis				-28.7	80.6	-1.02	18.3	-80.3	-0.91															
LTE Band 41	SAR	0.452			0.493			0.823															0.509		
	Axis	-35.3	-75.8	-1.02	-32.1	86.7	-1.04	20.7	-83.7	-0.96													-33.9	-27.1	-0.92
LTE Band 42	SAR										0.547						0.560								
	Axis										9.8	80.6	-1.01				-34.8	50.6	-1.05						
FR1 n2	SAR				0.403			1.022																	
	Axis				-27.9	86.1	-1.02	17.6	-83.4	-0.88															
FR1 n7	SAR				0.483			0.856																	
	Axis				-26.8	80.2	-0.99	19.3	-82.5	-0.92															
FR1 n66	SAR				0.482			1.038																	
	Axis				-27.6	87.2	-1.07	17.5	-83.9	-0.96															
FR1 n38	SAR							0.954																	
	Axis							17.7	-84.4	-0.94															
FR1 n41	SAR	0.700			0.413			1.109															0.556		
	Axis	-30.9	-76.7	-1.06	-28.9	83.3	-1.09	20.1	-86.3	-0.86													-35.3	-25.3	-1.03
FR1 n77	SAR										0.630			0.598			0.453			0.414					
	Axis										11.2	81.7	-1.03	37.5	66.1	-0.82	-32.5	47.7	-0.97	43	-66	-0.8			
WLAN5GHz Ant4	SAR (W/kg)	0.348			BT			SAR (W/kg) 0.179			WLAN2.4GHz Ant3			SAR (W/kg) 0.227											
	Axis	2.8	74.9	-1.13				Axis	26.2	71.2	-0.88	Axis	26.8	70.2	-0.89										
WLAN5GHz Ant6	SAR (W/kg)	0.240			WLAN6GHz Ant4			SAR (W/kg) 0.281			WLAN6GHz Ant6			SAR (W/kg) 0.128											
	Axis	25.1	27.2	-1.13				Axis	2.5	71.7	-1.09	Axis	25.3	28.1	-1.09										



Back																									
Band		Ant0			Ant1			Ant2			Ant4			Ant5			Ant7			Ant8			Ant9		
GSM850	SAR	1.289			0.893																				
	Axis	25.8	-83.6	-0.62	22.7	74.5	-0.77																		
GSM1900	SAR				0.898			0.734																	
	Axis				20.6	73.5	-0.71	-25.8	-82.5	-0.85															
WCDMA II	SAR				0.894			1.289																	
	Axis				26.8	70.8	-0.69	-22.3	-81.5	-0.87															
WCDMA IV	SAR				0.890			1.270																	
	Axis				25.4	70.1	-0.63	-23.3	-80.6	-0.72															
WCDMA V	SAR	1.187			0.892																				
	Axis	22.5	-82	-0.52	22.3	73.1	-0.81																		
LTE Band 2	SAR	1.289			0.883			1.303															0.876		
	Axis	25.6	-85.1	-0.6	25.5	72.6	-0.72	-26.1	-82.3	-0.81												43.4	37.9	-0.6	
LTE Band 7	SAR	1.283			0.884			1.268															0.881		
	Axis	18.4	-84.4	-0.7	26.2	70.2	-0.65	-24.5	-84.4	-0.72												40.8	38.8	-0.71	
LTE Band 12	SAR	0.535			0.878																				
	Axis	19.7	-85.2	-0.58	26.7	75.3	-0.73																		
LTE Band 13	SAR	0.871			0.892																				
	Axis	18.7	-82.2	-0.59	23.8	73.5	-0.8																		
LTE Band 26	SAR	1.292			0.874																				
	Axis	18.1	-83.6	-0.61	24.3	72.8	-0.66																		
LTE Band 66	SAR				0.883			1.272																	
	Axis				21.9	70.7	-0.77	-24.3	-85.3	-0.77															
LTE Band 41	SAR	1.282			0.889			1.266															0.892		
	Axis	19.2	-82.7	-0.77	22.9	73.3	-0.61	-23.9	-85.9	-0.79												40.6	38.9	-0.62	
LTE Band 42	SAR										0.902						0.895								
	Axis										-17.7	82.1	-1.05				30.6	53.3	-0.79						
FR1 n2	SAR				0.890			1.293																	
	Axis				26.1	73.6	-0.73	-20.9	-85.5	-0.71															
FR1 n7	SAR				0.884			1.279																	
	Axis				22.7	70.9	-0.75	-24.2	-80.6	-0.76															
FR1 n66	SAR				0.894			1.140																	
	Axis				25.9	75.1	-0.68	-25.1	-84.3	-0.77															
FR1 n38	SAR							1.289																	
	Axis							-21.7	-82.7	-0.78															
FR1 n41	SAR	1.289			0.893			1.292															0.886		
	Axis	18.8	-86.6	-0.58	26.5	72.4	-0.66	-21.2	-81.6	-0.81												40.8	37.2	-0.92	
FR1 n77	SAR										0.892			0.887			0.888			0.595					
	Axis										-16.5	80.1	-1.03	-23.9	64.9	-1.21	29.2	54.5	-0.71	-41.9	-47.5	-1.01			
WLAN5GHz Ant4	SAR (W/kg)	0.392			BT	SAR (W/kg)	0.273				WLAN2.4GHz Ant3	SAR (W/kg)	0.373												
	Axis	-12.5	79.1	-1.08		Axis	-35	69.1	-0.89			Axis	-27.6	67.3	-0.92										
WLAN5GHz Ant6	SAR (W/kg)	0.374			WLAN6GHz Ant4	SAR (W/kg)	0.390				WLAN6GHz Ant6	SAR (W/kg)	0.377												
	Axis	-27	48.1	-1.3		Axis	-14.9	77.2	-1.02			Axis	-19.9	47.3	-1.09										



Sensor off

Back																
Band		Ant0			Ant1			Ant2			Ant4			Ant7		
GSM850	SAR	0.289			0.273											
	Axis	22.6	83.6	-0.58	20.2	70.8	-0.82									
GSM1900	SAR				0.492											
	Axis				24.5	73.1	-0.78									
WCDMA II	SAR				1.003			0.453								
	Axis				26.9	75.6	-0.69	-22.7	-81.1	-0.62						
WCDMA IV	SAR				0.623			0.484								
	Axis				27.2	72.6	-0.73	-20.5	-83.5	-0.59						
WCDMA V	SAR	0.297			0.307											
	Axis	23.1	80.2	-0.49	25.3	69.4	-0.75									
LTE Band 2	SAR	0.790			1.116			0.400								
	Axis	24.2	85.3	-0.68	22.6	75.9	-0.77	-23.3	-79.7	-0.71						
LTE Band 7	SAR	0.329			0.948			0.295								
	Axis	22.7	82.5	-0.72	27.1	76.1	-0.82	-20.9	-85.1	-0.99						
LTE Band 12	SAR				0.169											
	Axis				26.3	69.9	-0.85									
LTE Band 13	SAR				0.283											
	Axis				25.5	72.1	-0.73									
LTE Band 26	SAR				0.243											
	Axis				26.9	70.6	-0.71									
LTE Band 66	SAR				1.089			0.442								
	Axis				23.5	73.8	-0.69	-24.7	-82.2	-0.81						
LTE Band 41	SAR	0.267			0.543			0.255								
	Axis	23.5	81.1	-0.53	23.4	74.5	-0.73	-23.5	-83.1	-0.69						
LTE Band 42	SAR										0.052			0.785		
	Axis										-15.9	82.3	-0.97	31.2	50.1	-0.68
FR1 n2	SAR				0.769			0.299								
	Axis				22.1	75.6	-0.79	-24.1	-85.6	-0.77						
FR1 n7	SAR				0.727			0.260								
	Axis				26.9	73.9	-0.68	-24.7	-80.1	-0.65						
FR1 n66	SAR				0.535											
	Axis				23.2	70.7	-0.81									
FR1 n38	SAR															
	Axis															
FR1 n41	SAR	0.191			0.480			0.344								
	Axis	25.2	83.7	-0.56	27.1	71.5	-0.75	-23.5	-82.8	-0.81						
FR1 n77	SAR										0.372			0.868		
	Axis										-15.2	80.1	-0.94	33.6	48.6	-0.73
WLAN2.4GHz Ant3	SAR (W/kg)	0.204			WLAN5GHz Ant4			SAR (W/kg) 0.238			WLAN6GHz Ant4			SAR (W/kg) 0.133		
	Axis	-28	66.4	-0.91				Axis -13 77.2 -108						Axis -16.3 79.6 -1.06		
BT Ant4	SAR (W/kg)	0.103			WLAN5GHz Ant6			SAR (W/kg) 0.198			WLAN6GHz Ant6			SAR (W/kg) 0.091		
	Axis	-27	64.2	-1.25				Axis -41.6 49.2 -0.88						Axis -19.9 47.3 -1.09		



<Extremity>

Front												
Band		Ant0			Ant1			Ant2			Ant7	
GSM850	SAR											
	Axis											
GSM1900	SAR											
	Axis											
WCDMA II	SAR				1.604							
	Axis				-55	88.1	-203					
WCDMA IV	SAR				1.071							
	Axis				-55	88.4	-203					
WCDMA V	SAR											
	Axis											
LTE Band 2	SAR	1.428			1.720							
	Axis	-40	-80.5	-203	-55	85.4	-206					
LTE Band 7	SAR				2.177			1.734				
	Axis				-55	84	-203	5	-72.2	-203		
LTE Band 12(17)	SAR											
	Axis											
LTE Band 13	SAR											
	Axis											
LTE Band 25	SAR											
	Axis											
LTE Band 26(5)	SAR											
	Axis											
LTE Band 66(4)	SAR				1.486							
	Axis				-55	85.7	-203					
LTE Band 38	SAR											
	Axis											
LTE Band 41	SAR				2.362							
	Axis				-55	82	-205					
LTE Band 42	SAR										1.691	
	Axis										-65	76.5 -203
FR1 n2	SAR				1.559							
	Axis				-55	85.9	-203					
FR1 n7	SAR				2.357							
	Axis				-55	82.6	-203					
FR1 n26	SAR											
	Axis											
FR1 n66	SAR											
	Axis											
FR1 n41	SAR				1.810							
	Axis				-55	81.7	-205					
FR1 n77(78)	SAR										1.311	
	Axis										-65	74.1 -203
WLAN5GHz Ant6	SAR (W/kg)	1.075				NFC	SAR (W/kg)	0.001				
	Axis	15	67.3	-203			Axis	-55	81.1	-203		

Back																			
Band		Ant0			Ant1			Ant2			Ant4			Ant7			Ant9		
GSM850	SAR				1.475														
	Axis				-1	83.5	-204												
GSM1900	SAR				1.894														
	Axis				0.3	82	-207												
WCDMA II	SAR				2.559			2.537											
	Axis				6.6	83.1	-207	-41.5	-73.5	-204									
WCDMA IV	SAR				2.715			3.017											
	Axis				6.6	80.1	-207	-41.5	-73.5	-204									
WCDMA V	SAR	1.777			1.581														
	Axis	-10	-84	-203	5	83.2	-203												
LTE Band 2	SAR	3.218			2.630												1.284		
	Axis	3.5	-83	-204	-1	81.3	-207										5	59.7	-203
LTE Band 7	SAR	3.014			2.449			3.059									1.656		
	Axis	-4.7	-83.6	-207	5	82.4	-204	-45	-79	-204							5	60	-203
LTE Band 12(17)	SAR																		
	Axis																		
LTE Band 13	SAR				2.505														
	Axis				5	82.5	-207												
LTE Band 25	SAR																		
	Axis																		
LTE Band 26(5)	SAR				2.024														
	Axis				5	83	-207												
LTE Band 66(4)	SAR				2.461			2.885											
	Axis				3	80.5	-207	-46.5	-80	-207									
LTE Band 38	SAR																		
	Axis																		
LTE Band 41	SAR	3.227			2.218			2.314									1.823		
	Axis	-3	-83	-205	5	83	-203	-45	-73.1	-203							7.2	61.3	-203
LTE Band 42	SAR													2.502					
	Axis													8.5	79.7	-207			
FR1 n2	SAR				2.468														
	Axis				1.2	81.3	-207												
FR1 n7	SAR				2.460			3.148											
	Axis				5	81.9	-203	-45	-73.4	-203									
FR1 n26	SAR																		
	Axis																		
FR1 n66	SAR				2.484														
	Axis				2.8	80.7	-207												
FR1 n38	SAR																		
	Axis																		
FR1 n41	SAR	2.743			1.802			2.319											
	Axis	-3.1	-82.4	-207	-5	84.7	-203	-45	-73.1	-203									
FR1 n77(78)	SAR										0.584			2.481					
	Axis										-45	90.7	-203	9.9	81.3	-207			
WLAN2.4GHz Ant3	SAR (W/kg)	0.417				NFC	SAR (W/kg)	0.050											
	Axis	-55	87.6	-203			Axis	10	81.6	-203									

18. Supplemental Tuner Tests Results

General Note:

1. This device implements impedance tuner antenna tuning techniques, and the number of supported tune codes is different for each frequency band as shown:
 - a. This device implements impedance tuner (208 states) antenna tuning techniques in the LTE Band 5/12/17/26 for ANT0.
 - b. This device implements impedance tuner (208 states) antenna tuning techniques in the LTE Band 4/5/26/12/13/17/66 and 5GNR n7/n66 for ANT1.
2. According to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced, and 5GNR bands are similar to LTE bands:
 - a. LTE B17 / B5 / B4 SAR test was covered by LTE B12 / B26 / B66;
3. The following test procedure was followed to demonstrate that the SAR results in this report represent the appropriate SAR test conditions. For bands with dynamic tuning implemented, SAR will be measured according to the required FCC SAR test procedures with the dynamic tuner active to allow the device to automatically tune to the antenna state for the respective RF exposure test configurations. Additional single point SAR time-sweep measurements will be evaluated for other tuner states to determine that the other tuner configurations would result in equivalent or lower SAR values.
4. The tuner state was established remotely through Wi-Fi so that the device is not moved for the entire series of single point SAR for the tuner states in each combination (band, mode, exposure conditions).
5. Per KDB388624 D02v18r08, for each air interface, exposure condition, and antenna that supports dynamic antenna tuning (DAT), the following procedure shall be followed:
 - 5.1 An area scan is performed with the DUT positioned for the exposure condition with auto-tuner enabled to determine the peak SAR location.
 - 5.2 A single-point SAR measurement (i.e., time sweep) is performed at the peak SAR location of step 5.1 (that is, with auto-tuner enabled). The auto-tuner state shall be recorded, after verifying that it is stable. If fluctuations occur, the scan procedure can be restarted, or the state with the highest SAR needs to be recorded.
 - 5.3 Without moving the probe, or introducing any other perturbation, the auto-tuner shall be disabled, and two other adjacent tune states shall be chosen by increasing and decreasing the state identification number by 1.
 - 5.4 A single point SAR measurement is then performed on both chosen adjacent states and compared with the value of step 5.2. The measured SAR for auto-tuner disabled is expected to be less than or equal to the recorded SAR of step 5.2.
 - a. If the measured SAR is higher beyond documented tolerance, then the auto-tuning feature is not working as intended and is not suitable for compliance. DAT functionality shall be removed or adjusted by the manufacturer.
 - b. If the measured SAR is higher than the value of step 5.2 but within tolerance, the next adjacent state(s) shall be chosen and the measure repeated until a lower SAR value can be shown; otherwise, the DAT is considered inoperative and shall be removed or adjusted by the manufacturer.
 - 5.5 Repeat step 5.2 with auto-tuning enabled as a test for variability within tolerance: the previous measured value in step 5.2 shall be recovered. If the measured SAR is outside the expected tolerance, then the auto-tuning feature is considered not working as intended and not suitable for compliance. DAT functionality shall be removed or adjusted by the manufacturer
6. SAR is measured according to required procedures for each mode of operation with the dynamic tuner active, allowing the DUT to automatically tune and find the best impedance match. The auto-tune state determined by device during normal SAR measurement shall be verified and listed in the reported SAR results. This process is based on single point SAR evaluations to verify that the conditions leading to the largest SAR have been captured. The SAR probe shall remain stationary for the entire series of measurements. The functionality of the tuner configurations is checked to ensure that the tuned state corresponds to the maximum SAR for that particular transmission configuration.
7. If any single-point SAR measurement result is >1.4 W/kg for 1gSAR or >3.5 W/kg for 10gSAR, then all tune states for that particular combination of air interface, exposure condition, and antenna selection shall be evaluated with single-point SAR measurements.
8. The operational decryption contains more information about the design and implementation of the dynamic antenna tuning.

18.1 Supplemental Tuner Head & Body SAR Results

Please refer to Appendix G.

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19. Uncertainty Assessment

Per KDB 865664 D01 SAR measurement 100MHz to 6GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg and the measured 10-g SAR within a frequency band is < 3.75 W/kg. The expanded SAR measurement uncertainty must be $\leq 30\%$, for a confidence interval of $k = 2$. If these conditions are met, extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval. For this device, the highest measured 1-g SAR is less 1.5W/kg and highest measured 10-g SAR is less 3.75W/kg. Therefore, the measurement uncertainty table is not required in this report.

Declaration of Conformity:

The test results with all measurement uncertainty excluded is presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

The component of uncertainty may generally be categorized according to the methods used to evaluate them. The evaluation of uncertainty by the statistical analysis of a series of observations is termed a Type A evaluation of uncertainty. The evaluation of uncertainty by means other than the statistical analysis of a series of observation is termed a Type B evaluation of uncertainty. Each component of uncertainty, however evaluated, is represented by an estimated standard deviation, termed standard uncertainty, which is determined by the positive square root of the estimated variance.

A Type A evaluation of standard uncertainty may be based on any valid statistical method for treating data. This includes calculating the standard deviation of the mean of a series of independent observations; using the method of least squares to fit a curve to the data in order to estimate the parameter of the curve and their standard deviations; or carrying out an analysis of variance in order to identify and quantify random effects in certain kinds of measurement.

A type B evaluation of standard uncertainty is typically based on scientific judgment using all of the relevant information available. These may include previous measurement data, experience, and knowledge of the behavior and properties of relevant materials and instruments, manufacture's specification, data provided in calibration reports and uncertainties assigned to reference data taken from handbooks. Broadly speaking, the uncertainty is either obtained from an outdoor source or obtained from an assumed distribution, such as the normal distribution, rectangular or triangular distributions indicated in table below.

Uncertainty Distributions	Normal	Rectangular	Triangular	U-Shape
Multi-plying Factor ^(a)	$1/k^{(b)}$	$1/\sqrt{3}$	$1/\sqrt{6}$	$1/\sqrt{2}$

(a) standard uncertainty is determined as the product of the multiplying factor and the estimated range of variations in the measured quantity

(b) k is the coverage factor

Standard Uncertainty for Assumed Distribution

The combined standard uncertainty of the measurement result represents the estimated standard deviation of the result. It is obtained by combining the individual standard uncertainties of both Type A and Type B evaluation using the usual "root-sum-squares" (RSS) methods of combining standard deviations by taking the positive square root of the estimated variances.

Expanded uncertainty is a measure of uncertainty that defines an interval about the measurement result within which the measured value is confidently believed to lie. It is obtained by multiplying the combined standard uncertainty by a coverage factor. Typically, the coverage factor ranges from 2 to 3. Using a coverage factor allows

the true value of a measured quantity to be specified with a defined probability within the specified uncertainty range. For purpose of this document, a coverage factor two is used, which corresponds to confidence interval of about 95 %. The DASy uncertainty Budget is shown in the following tables.

The judgment of conformity in the report is based on the measurement results excluding the measurement uncertainty.

Uncertainty Budget According to IEC/IEEE 62209-1528 (Frequency band: 4 MHz - 10 GHz range)							
Error Description	Uncert. Value (±%)	Prob. Dist.	Div.	(Ci) 1g	(Ci) 10g	Standard Uncertainty (1g) (±%)	Standard Uncertainty (10g) (±%)
Measurement System errors							
Probe calibration	18.6	N	2	1	1	9.3	9.3
Probe calibration drift	1.7	R	1.732	1	1	1.0	1.0
Probe linearity and detection Limit	4.7	R	1.732	1	1	2.7	2.7
Broadband signal	2.8	R	1.732	1	1	1.6	1.6
Probe isotropy	7.6	R	1.732	1	1	4.4	4.4
Other probe and data acquisition errors	2.4	N	1	1	1	2.4	2.4
RF ambient and noise	1.8	N	1	1	1	1.8	1.8
Probe positioning errors	0.006	N	1	0.5	0.5	0.0	0.0
Data processing errors	4.0	N	1	1	1	4.0	4.0
Phantom and Device Errors							
Measurement of phantom conductivity (σ)	2.5	N	1	0.78	0.71	2.0	1.8
Temperature effects (medium)	5.4	R	1.732	0.78	0.71	2.4	2.2
Shell permittivity	14.0	R	1.732	0.5	0.5	4.0	4.0
Distance between the radiating element of the DUT and the phantom medium	2.0	N	1	2	2	4.0	4.0
Repeatability of positioning the DUT or source against the phantom	1.0	N	1	1	1	1.0	1.0
Device holder effects	3.6	N	1	1	1	3.6	3.6
Effect of operating mode on probe sensitivity	2.4	R	1.732	1	1	1.4	1.4
Time-average SAR	1.7	R	1.732	1	1	1.0	1.0
Variation in SAR due to drift in output of DUT	2.5	N	1	1	1	2.5	2.5
Validation antenna uncertainty (validation measurement only)	0.0	N	1	1	1	0.0	0.0
Uncertainty in accepted power (validation measurement only)	0.0	N	1	1	1	0.0	0.0
Correction to the SAR results							
Phantom deviation from target (ϵ' , σ)	1.9	N	1	1	0.84	1.9	1.6
SAR scaling	0.0	R	1.732	1	1	0.0	0.0
Combined Std. Uncertainty						14.5%	14.4%
Coverage Factor for 95 %						K=2	K=2
Expanded STD Uncertainty						29.0%	28.8%

SAR Uncertainty Budget for frequency range 4MHz to 10GHz

cDASY6 Module mmWave Uncertainty Budget Evaluation Distances to the Antennas > $\lambda/2\pi$ In Compliance with IEC TR 63170					
Error Description	Uncertainty Value (±dB)	Probability	Divisor	(Ci)	Standard Uncertainty (±dB)
Uncertainty terms dependent on the measurement system					
Probe Calibration	0.49	N	1	1	0.49
Probe correction	0.00	R	1.732	1	0.00
Frequency response	0.20	R	1.732	1	0.12
Sensor cross coupling	0.00	R	1.732	1	0.00
Isotropy	0.50	R	1.732	1	0.29
Linearity	0.20	R	1.732	1	0.12
Probe scattering	0.00	R	1.732	1	0.00
Probe positioning offset	0.30	R	1.732	1	0.17
Probe positioning repeatability	0.04	R	1.732	1	0.02
Sensor mechanical offset	0.00	R	1.732	1	0.00
Probe spatial resolution	0.00	R	1.732	1	0.00
Field impedance dependence	0.00	R	1.732	1	0.00
Amplitude and phase drift	0.00	R	1.732	1	0.00
Amplitude and phase noise	0.04	R	1.732	1	0.02
Measurement area truncation	0.00	R	1.732	1	0.00
Data acquisition	0.03	N	1	1	0.03
Sampling	0.00	R	1.732	1	0.00
Field reconstruction	2.00	R	1.732	1	1.15
Forward transformation	0.00	R	1.732	1	0.00
Power density scaling	0.00	R	1.732	1	0.00
Spatial averaging	0.10	R	1.732	1	0.06
System detection limit	0.04	R	1.732	1	0.02
Uncertainty terms dependent on the DUT and environmental factors					
Probe coupling with DUT	0.00	R	1.732	1	0.0
Modulation response	0.40	R	1.732	1	0.2
Integration time	0.00	R	1.732	1	0.0
Response time	0.00	R	1.732	1	0.0
Device holder influence	0.10	R	1.732	1	0.1
DUT alignment	0.00	R	1.732	1	0.0
RF ambient conditions	0.04	R	1.732	1	0.0
Ambient reflections	0.04	R	1.732	1	0.0
Immunity / secondary reception	0.00	R	1.732	1	0.0
Drift of the DUT		R	1.732	1	
Combined Std. Uncertainty					1.34
Expanded STD Uncertainty (95%)					2.68

PD Uncertainty Budget

20. References

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- [2] ANSI/IEEE Std. C95.1-1992, "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz", September 1992
- [3] IEEE Std. 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", Sep 2013
- [4] SPEAG DASY System Handbook
- [5] FCC KDB 865664 D01 v01r04, "SAR Measurement Requirements for 100 MHz to 6 GHz", Aug 2015.
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- [17] IEC TR 63170: 2018 Measurement procedure for the evaluation of power density related to human exposure to radio frequency fields from wireless communication devices operating between 6 GHz and 100 GHz
- [18] SPEAG DASY6 Application Note (Interim Procedures for Devices Operating at 6-10 GHz)

Appendixes

Please refer to separated files for the following appendixes

Appendix A. Plots of System Performance Check

Appendix B. Plots of High SAR and PD Measurement

Appendix C. DASY Calibration Certificate

Appendix D. Test Setup Photos

Appendix E. Conducted RF Output Power Table

Appendix F. Power measurement connection diagram and CA Conducted RF Output Power Table

Appendix G. Supplemental Tuner Head & Body SAR Results

Appendix H. Power reduction mechanism verification

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