

12.4 Simultaneous Multi-band Transmission Analysis

No.	Applicable Simultaneous Transmission Combination
1.	WWAN (data) + WLAN 2.4GHz (hotspot)
2.	WWAN (data) + WLAN 5.8GHz (hotspot)
3.	WWAN (data) + Bluetooth

Note:

1. WLAN module, FCC ID: EW4DWMW091, is also going to be integrated into this Tablet via WLAN module C2PC filing. To address simultaneous transmission SAR compliance, 2.4GHz and 5.8GHz WLAN SAR was tested at the exposure positions at which WWAN SAR testing is necessary, which are bottom face and edge4.
2. This device will choose either WLAN2.4GHz or WLAN5GHz according to the network signal condition; therefore, they will not transmit simultaneously.
3. WLAN and Bluetooth share the same antenna (WLAN/BT antenna B), and cannot transmit simultaneously.
4. This device, WLAN 2.4GHz and 5.8GHz supports hotspot operation; WLAN 5.2/ 5.3/ 5.5 GHz do not support those operations. WWAN transmitter would transmit simultaneously with WLAN 2.4GHz and 5.8GHz only.
5. The Scaled SAR summation is calculated based on the same configuration and test position.
6. For simultaneous transmission analysis, Bluetooth SAR is estimated per KDB 447498 D01v05 based on the formula below.
 - i) $(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm}) \cdot [\sqrt{f(\text{GHz})} / x] \text{ W/kg}$ for test separation distances $\leq 50 \text{ mm}$; where $x = 7.5$ for 1-g SAR, and $x = 18.75$ for 10-g SAR.
 - ii) 0.4 W/kg for 1-g SAR and 1.0 W/kg for 10-g SAR, when the test separation distances is $> 50 \text{ mm}$.

In this report, 50mm separation is applied to conservatively estimate SAR value for separation distance $> 50 \text{ mm}$

Max Power	Exposure Position	Bottom Face 0cm gap	Bottom Face 1cm gap	Edge 3 0 cm gap	Edge 3 0.8 cm gap	Edge 4 0 cm gap
	Test separation	0 mm	10 mm	0 mm	8 mm	0 mm
9.5 dBm	Antenna to user distance	5 mm	10 mm	66 mm	74 mm	275.22 mm
	Estimated SAR (W/kg)	0.374 W/kg	0.187 W/kg	0.037W/kg	0.037W/kg	0.037W/kg

7. Per KDB 447498 D01v05, simultaneous transmission SAR is compliant if,
 - i) Scalar SAR summation $< 1.6 \text{ W/kg}$.
 - ii) $\text{SPLSR} = (\text{SAR}_1 + \text{SAR}_2)^{1.5} / (\text{min. separation distance, mm})$, and the peak separation distance is determined from the square root of $[(x_1 - x_2)^2 + (y_1 - y_2)^2 + (z_1 - z_2)^2]$, where (x_1, y_1, z_1) and (x_2, y_2, z_2) are the coordinates of the extrapolated peak SAR locations in the zoom scan
If $\text{SPLSR} \leq 0.04$, simultaneously transmission SAR measurement is not necessary
 - iii) Simultaneously transmission SAR measurement, and the reported multi-band SAR $< 1.6 \text{ W/kg}$

**12.5 Co-location Simultaneous Transmission Analysis**

Standalone SAR testing					
	Bottom Face	Edge 1	Edge 2	Edge 3	Edge 4
WWAN	YES			YES	YES
WLAN Antenna A	YES				YES
WLAN Antenna B	YES		YES		
Simultaneous Transmission Analysis					
	Bottom Face	Edge 1	Edge 2	Edge 3	Edge 4
WWAN + WLAN Antenna A	YES				YES
WWAN + WLAN Antenna B	YES				
WWAN + Bluetooth	YES	YES	YES	YES	YES

**<WWAN + WLAN2.4GHz Antenna A>**

Position	WWAN			WLAN2.4GHz-DTS		WWAN + WLAN	SPLSR	Case No	Multi-Band Combined SAR (W/kg)
	WWAN Band	Plot No	Max. Reported SAR (W/kg)	Plot No	Max. Reported SAR (W/kg)				
Bottom Face At 1 cm	GSM850	124	1.245	33	0.132	1.38			
	GSM1900	50	0.641	33	0.132	0.77			
	WCDMA V	103	0.804	33	0.132	0.94			
	WCDMA IV	601	0.787	33	0.132	0.92			
	WCDMA II	64	0.84	33	0.132	0.97			
	CDMA BC10	452	0.657	33	0.132	0.79			
	CDMA BC0	139	0.705	33	0.132	0.84			
	CDMA BC1	77	0.959	33	0.132	1.09			
	LTE Band17	321	0.343	33	0.132	0.48			
	LTE Band13	342	0.869	33	0.132	1.00			
	LTE Band5	424	0.663	33	0.132	0.80			
	LTE Band4	366	0.699	33	0.132	0.83			
	LTE Band2	500	0.71	33	0.132	0.84			
Edge3 At 0.8 cm	LTE Band25	416	0.6	33	0.132	0.73			
	GSM850	127	1.019			1.02			
	GSM1900	51	0.784			0.78			
	WCDMA V	106	0.757			0.76			
	WCDMA IV	605	1.318			1.32			
	WCDMA II	67	1.058			1.06			
	CDMA BC10	453	0.39			0.39			
	CDMA BC0	140	0.394			0.39			
	CDMA BC1	80	1.108			1.11			
	LTE Band17	323	0.199			0.20			
	LTE Band13	337	0.721			0.72			
	LTE Band5	425	0.553			0.55			
	LTE Band4	370	1.377			1.38			
Bottom Face At 0cm	LTE Band2	502	0.762			0.76			
	LTE Band25	418	0.788			0.79			
	GSM850	133	1.411	24	1.438	2.85	0.06	1	1.44
	GSM1900	54	1.424	24	1.438	2.86	0.08	2	1.44
	WCDMA V	108	1.237	24	1.438	2.68	0.06	3	1.39
	WCDMA IV	610	0.971	24	1.438	2.41	0.05	14	1.42
	WCDMA II	74	1.249	24	1.438	2.69	0.07	4	1.46
	CDMA BC10	455	1.187	24	1.438	2.63	0.05	12	1.4
	CDMA BC0	143	1.365	24	1.438	2.80	0.06	5	1.41
	CDMA BC1	83	1.45	24	1.438	2.89	0.08	6	1.48
	LTE Band17	316	1.11	24	1.438	2.55	0.07	7	1.42
	LTE Band13	333	1.41	24	1.438	2.85	0.06	8	1.55
	LTE Band5	432	1.166	24	1.438	2.60	0.05	11	1.4
Edge3 At 0cm	LTE Band4	352	1.224	24	1.438	2.66	0.05	9	1.36
	LTE Band2	510	1.3	24	1.438	2.74	0.08	13	1.42
	LTE Band25	412	1.283	24	1.438	2.72	0.07	10	1.41
	GSM850	134	0.614			0.61			
	GSM1900	56	0.549			0.55			
	WCDMA V	111	0.591			0.59			
	WCDMA IV	611	0.766			0.77			
	WCDMA II	73	0.626			0.63			
	CDMA BC10	456	0.689			0.69			
	CDMA BC0	145	0.507			0.51			
	CDMA BC1	85	0.833			0.83			
	LTE Band17	313	0.919			0.92			
	LTE Band13	334	0.685			0.69			
Edge4 At 0cm	LTE Band5	437	0.734			0.73			
	LTE Band4	363	1.308			1.31			
	LTE Band2	513	0.487			0.49			
	LTE Band25	415	0.773			0.77			
	GSM850	130	0.253	2	0.412	0.67			
	GSM1900	52	0.578	2	0.412	0.99			
	WCDMA V	107	0.077	2	0.412	0.49			
	WCDMA IV	607	0.092	2	0.412	0.50			
	WCDMA II	70	0.891	2	0.412	1.30			
	CDMA BC10	454	0.216	2	0.412	0.63			
	CDMA BC0	141	0.161	2	0.412	0.57			
	CDMA BC1	81	0.468	2	0.412	0.88			
	LTE Band17	325	0.185	2	0.412	0.60			
	LTE Band13	340	0.132	2	0.412	0.54			
	LTE Band5	426	0.198	2	0.412	0.61			
	LTE Band4	375	0.068	2	0.412	0.48			
	LTE Band2	504	0.794	2	0.412	1.21			
	LTE Band25	420	0.461	2	0.412	0.87			

<WWAN + WLAN 2.4GHz Antenna B>

Position	WWAN			WLAN2.4GHZ-DTS		WWAN + WLAN	SPLSR	Case No
	WWAN Band	Plot No	Max. Reported SAR (W/kg)	Plot No	Max. Reported SAR (W/kg)			
Bottom Face At 1 cm	GSM850	124	1.245	27	1.254	2.50	0.02	18
	GSM1900	50	0.641	27	1.254	1.90	0.01	19
	WCDMA V	103	0.804	27	1.254	2.06	0.01	20
	WCDMA IV	601	0.787	27	1.254	2.04	0.01	69
	WCDMA II	64	0.84	27	1.254	2.09	0.01	21
	CDMA BC10	452	0.657	27	1.254	1.91	0.01	62
	CDMA BC0	139	0.705	27	1.254	1.96	0.01	22
	CDMA BC1	77	0.959	27	1.254	2.21	0.02	23
	LTE Band17	321	0.343	27	1.254	1.60	0.01	51
	LTE Band13	342	0.869	27	1.254	2.12	0.01	24
	LTE Band5	424	0.663	27	1.254	1.92	0.01	60
	LTE Band4	366	0.699	27	1.254	1.95	0.01	25
	LTE Band2	500	0.71	27	1.254	1.96	0.01	65
	LTE Band25	416	0.6	27	1.254	1.85	0.01	26
	GSM850	127	1.019			1.02		
Edge3 At 0.8 cm	GSM1900	51	0.784			0.78		
	WCDMA V	106	0.757			0.76		
	WCDMA IV	605	1.318			1.32		
	WCDMA II	67	1.058			1.06		
	CDMA BC10	453	0.39			0.39		
	CDMA BC0	140	0.394			0.39		
	CDMA BC1	80	1.108			1.11		
	LTE Band17	323	0.199			0.20		
	LTE Band13	337	0.721			0.72		
	LTE Band5	425	0.553			0.55		
	LTE Band4	370	1.377			1.38		
	LTE Band2	502	0.762			0.76		
	LTE Band25	418	0.788			0.79		
	GSM850	133	1.411	27	1.254	2.67	0.02	27
	GSM1900	54	1.424	27	1.254	2.68	0.02	28
Bottom Face At 0cm	WCDMA V	108	1.237	27	1.254	2.49	0.02	29
	WCDMA IV	610	0.971	27	1.254	2.23	0.02	70
	WCDMA II	74	1.249	27	1.254	2.50	0.02	30
	CDMA BC10	455	1.187	27	1.254	2.44	0.02	63
	CDMA BC0	143	1.365	27	1.254	2.62	0.02	31
	CDMA BC1	83	1.45	27	1.254	2.70	0.02	32
	LTE Band17	316	1.11	27	1.254	2.36	0.02	33
	LTE Band13	333	1.41	27	1.254	2.66	0.02	34
	LTE Band5	432	1.166	27	1.254	2.42	0.02	61
	LTE Band4	352	1.224	27	1.254	2.48	0.02	35
	LTE Band2	510	1.3	27	1.254	2.55	0.02	66
	LTE Band25	412	1.283	27	1.254	2.54	0.02	36
	GSM850	134	0.614			0.61		
	GSM1900	56	0.549			0.55		
	WCDMA V	111	0.591			0.59		
Edge3 At 0cm	WCDMA IV	611	0.766			0.77		
	WCDMA II	73	0.626			0.63		
	CDMA BC10	456	0.689			0.69		
	CDMA BC0	145	0.507			0.51		
	CDMA BC1	85	0.833			0.83		
	LTE Band17	313	0.919			0.92		
	LTE Band13	334	0.685			0.69		
	LTE Band5	437	0.734			0.73		
	LTE Band4	363	1.308			1.31		
	LTE Band2	513	0.487			0.49		
	LTE Band25	415	0.773			0.77		
	GSM850	130	0.253			0.25		
	GSM1900	52	0.578			0.58		
	WCDMA V	107	0.077			0.08		
Edge4 At 0cm	WCDMA IV	607	0.092			0.09		
	WCDMA II	70	0.891			0.89		
	CDMA BC10	454	0.216			0.22		
	CDMA BC0	141	0.161			0.16		
	CDMA BC1	81	0.468			0.47		
	LTE Band17	325	0.185			0.19		
	LTE Band13	340	0.132			0.13		
	LTE Band5	426	0.198			0.20		
	LTE Band4	375	0.068			0.07		
	LTE Band2	504	0.794			0.79		
	LTE Band25	420	0.461			0.46		



<WWAN + WLAN5.8GHz Antenna A>

Position	WWAN			WLAN 5.8GHz-DTS		WWAN + WLAN	SPLSR	Case No
	WWAN Band	Plot No	Max. Reported SAR (W/kg)	Plot No	Max. Reported SAR (W/kg)			
Bottom Face At 1 cm	GSM850	124	1.245	12	0.238	1.48		
	GSM1900	50	0.641	12	0.238	0.88		
	WCDMA V	103	0.804	12	0.238	1.04		
	WCDMA IV	601	0.787	12	0.238	1.03		
	WCDMA II	64	0.84	12	0.238	1.08		
	CDMA BC10	452	0.657	12	0.238	0.90		
	CDMA BC0	139	0.705	12	0.238	0.94		
	CDMA BC1	77	0.959	12	0.238	1.20		
	LTE Band17	321	0.343	12	0.238	0.58		
	LTE Band13	342	0.869	12	0.238	1.11		
	LTE Band5	424	0.663	12	0.238	0.90		
	LTE Band4	366	0.699	12	0.238	0.94		
	LTE Band2	500	0.71	12	0.238	0.95		
	LTE Band25	416	0.6	12	0.238	0.84		
Edge3 At 0.8 cm	GSM850	127	1.019			1.02		
	GSM1900	51	0.784			0.78		
	WCDMA V	106	0.757			0.76		
	WCDMA IV	605	1.318			1.32		
	WCDMA II	67	1.058			1.06		
	CDMA BC10	453	0.39			0.39		
	CDMA BC0	140	0.394			0.39		
	CDMA BC1	80	1.108			1.11		
	LTE Band17	323	0.199			0.20		
	LTE Band13	337	0.721			0.72		
	LTE Band5	425	0.553			0.55		
	LTE Band4	370	1.377			1.38		
	LTE Band2	502	0.762			0.76		
	LTE Band25	418	0.788			0.79		
Bottom Face At 0cm	GSM850	133	1.411	12	0.238	1.65	0.03	43
	GSM1900	54	1.424	12	0.238	1.66	0.03	44
	WCDMA V	108	1.237	12	0.238	1.48		
	WCDMA IV	610	0.971	12	0.238	1.21		
	WCDMA II	74	1.249	12	0.238	1.49		
	CDMA BC10	455	1.187	12	0.238	1.43		
	CDMA BC0	143	1.365	12	0.238	1.60	0.03	45
	CDMA BC1	83	1.45	12	0.238	1.69	0.03	71
	LTE Band17	316	1.11	12	0.238	1.35		
	LTE Band13	333	1.41	12	0.238	1.65	0.03	46
	LTE Band5	432	1.166	12	0.238	1.40		
	LTE Band4	352	1.224	12	0.238	1.46		
	LTE Band2	510	1.3	12	0.238	1.54		
	LTE Band25	412	1.283	12	0.238	1.52		
Edge3 At 0cm	GSM850	134	0.614			0.61		
	GSM1900	56	0.549			0.55		
	WCDMA V	111	0.591			0.59		
	WCDMA IV	611	0.766			0.77		
	WCDMA II	73	0.626			0.63		
	CDMA BC10	456	0.689			0.69		
	CDMA BC0	145	0.507			0.51		
	CDMA BC1	85	0.833			0.83		
	LTE Band17	313	0.919			0.92		
	LTE Band13	334	0.685			0.69		
	LTE Band5	437	0.734			0.73		
	LTE Band4	363	1.308			1.31		
	LTE Band2	513	0.487			0.49		
	LTE Band25	415	0.773			0.77		
Edge4 At 0cm	GSM850	130	0.253	13	0.249	0.50		
	GSM1900	52	0.578	13	0.249	0.83		
	WCDMA V	107	0.077	13	0.249	0.33		
	WCDMA IV	607	0.092	13	0.249	0.34		
	WCDMA II	70	0.891	13	0.249	1.14		
	CDMA BC10	454	0.216	13	0.249	0.47		
	CDMA BC0	141	0.161	13	0.249	0.41		
	CDMA BC1	81	0.468	13	0.249	0.72		
	LTE Band17	325	0.185	13	0.249	0.43		
	LTE Band13	340	0.132	13	0.249	0.38		
	LTE Band5	426	0.198	13	0.249	0.45		
	LTE Band4	375	0.068	13	0.249	0.32		
	LTE Band2	504	0.794	13	0.249	1.04		
	LTE Band25	420	0.461	13	0.249	0.71		



<WWAN + WLAN5.8GHz Antenna B>

Position	WWAN			WLAN 5.8GHz-DTS		WWAN + WLAN	SPLSR	Case No
	WWAN Band	Plot No	Max. Reported SAR (W/kg)	Plot No	Max. Reported SAR (W/kg)			
Bottom Face At 1 cm	GSM850	124	1.245	22	0.408	1.65	0.01	47
	GSM1900	50	0.641	22	0.408	1.05		
	WCDMA V	103	0.804	22	0.408	1.21		
	WCDMA IV	601	0.787	22	0.408	1.20		
	WCDMA II	64	0.84	22	0.408	1.25		
	CDMA BC10	452	0.657	22	0.408	1.07		
	CDMA BC0	139	0.705	22	0.408	1.11		
	CDMA BC1	77	0.959	22	0.408	1.37		
	LTE Band17	321	0.343	22	0.408	0.75		
	LTE Band13	342	0.869	22	0.408	1.28		
	LTE Band5	424	0.663	22	0.408	1.07		
	LTE Band4	366	0.699	22	0.408	1.11		
	LTE Band2	500	0.71	22	0.408	1.12		
	LTE Band25	416	0.6	22	0.408	1.01		
Edge3 At 0.8 cm	GSM850	127	1.019			1.02		
	GSM1900	51	0.784			0.78		
	WCDMA V	106	0.757			0.76		
	WCDMA IV	605	1.318			1.32		
	WCDMA II	67	1.058			1.06		
	CDMA BC10	453	0.39			0.39		
	CDMA BC0	140	0.394			0.39		
	CDMA BC1	80	1.108			1.11		
	LTE Band17	323	0.199			0.20		
	LTE Band13	337	0.721			0.72		
	LTE Band5	425	0.553			0.55		
	LTE Band4	370	1.377			1.38		
	LTE Band2	502	0.762			0.76		
	LTE Band25	418	0.788			0.79		
Bottom Face At 0cm	GSM850	133	1.411	22	0.408	1.82	0.01	37
	GSM1900	54	1.424	22	0.408	1.83	0.01	38
	WCDMA V	108	1.237	22	0.408	1.65	0.01	48
	WCDMA IV	610	0.971	22	0.408	1.38		
	WCDMA II	74	1.249	22	0.408	1.66	0.01	49
	CDMA BC10	455	1.187	22	0.408	1.60	0.01	64
	CDMA BC0	143	1.365	22	0.408	1.77	0.01	39
	CDMA BC1	83	1.45	22	0.408	1.86	0.01	40
	LTE Band17	316	1.11	22	0.408	1.52		
	LTE Band13	333	1.41	22	0.408	1.82	0.01	41
	LTE Band5	432	1.166	22	0.408	1.57		
	LTE Band4	352	1.224	22	0.408	1.63	0.01	50
	LTE Band2	510	1.3	22	0.408	1.71	0.01	67
	LTE Band25	412	1.283	22	0.408	1.69	0.01	42
Edge3 At 0cm	GSM850	134	0.614			0.61		
	GSM1900	56	0.549			0.55		
	WCDMA V	111	0.591			0.59		
	WCDMA IV	611	0.766			0.77		
	WCDMA II	73	0.626			0.63		
	CDMA BC10	456	0.689			0.69		
	CDMA BC0	145	0.507			0.51		
	CDMA BC1	85	0.833			0.83		
	LTE Band17	313	0.919			0.92		
	LTE Band13	334	0.685			0.69		
	LTE Band5	437	0.734			0.73		
	LTE Band4	363	1.308			1.31		
	LTE Band2	513	0.487			0.49		
	LTE Band25	415	0.773			0.77		
Edge4 At 0cm	GSM850	130	0.253			0.25		
	GSM1900	52	0.578			0.58		
	WCDMA V	107	0.077			0.08		
	WCDMA IV	607	0.092			0.09		
	WCDMA II	70	0.891			0.89		
	CDMA BC10	454	0.216			0.22		
	CDMA BC0	141	0.161			0.16		
	CDMA BC1	81	0.468			0.47		
	LTE Band17	325	0.185			0.19		
	LTE Band13	340	0.132			0.13		
	LTE Band5	426	0.198			0.20		
	LTE Band4	375	0.068			0.07		
	LTE Band2	504	0.794			0.79		
	LTE Band25	420	0.461			0.46		



<WWAN + Bluetooth 2.4GHz>

Position	WWAN			Bluetooth-DSS	WWAN + Bluetooth	SPLSR	Case No
	WWAN Band	Plot No	Max. Reported SAR (W/kg)	Estimated SAR (W/kg)			
Bottom Face At 1 cm	GSM850	124	1.245	0.187	1.43		
	GSM1900	50	0.641	0.187	0.83		
	WCDMA V	103	0.804	0.187	0.99		
	WCDMA IV	601	0.787	0.187	0.97		
	WCDMA II	64	0.84	0.187	1.03		
	CDMA BC10	452	0.657	0.187	0.84		
	CDMA BC0	139	0.705	0.187	0.89		
	CDMA BC1	77	0.959	0.187	1.15		
	LTE Band17	321	0.343	0.187	0.53		
	LTE Band13	342	0.869	0.187	1.06		
	LTE Band5	424	0.663	0.187	0.85		
	LTE Band4	366	0.699	0.187	0.89		
	LTE Band2	500	0.71	0.187	0.90		
	LTE Band25	416	0.6	0.187	0.79		
Edge3 At 0.8 cm	GSM850	127	1.019	0.037	1.06		
	GSM1900	51	0.784	0.037	0.82		
	WCDMA V	106	0.757	0.037	0.79		
	WCDMA IV	605	1.318	0.037	1.36		
	WCDMA II	67	1.058	0.037	1.10		
	CDMA BC10	453	0.39	0.037	0.43		
	CDMA BC0	140	0.394	0.037	0.43		
	CDMA BC1	80	1.108	0.037	1.15		
	LTE Band17	323	0.199	0.037	0.24		
	LTE Band13	337	0.721	0.037	0.76		
	LTE Band5	425	0.553	0.037	0.59		
	LTE Band4	370	1.377	0.037	1.41		
	LTE Band2	502	0.762	0.037	0.80		
	LTE Band25	418	0.788	0.037	0.83		
Bottom Face At 0cm	GSM850	133	1.411	0.374	1.79	0.01	72
	GSM1900	54	1.424	0.374	1.80	0.01	73
	WCDMA V	108	1.237	0.374	1.61	0.01	52
	WCDMA IV	610	0.971	0.374	1.35		
	WCDMA II	74	1.249	0.374	1.62	0.01	53
	CDMA BC10	455	1.187	0.374	1.56		
	CDMA BC0	143	1.365	0.374	1.74	0.01	74
	CDMA BC1	83	1.45	0.374	1.82	0.01	15
	LTE Band17	316	1.11	0.374	1.48		
	LTE Band13	333	1.41	0.374	1.78	0.01	16
	LTE Band5	432	1.166	0.374	1.54		
	LTE Band4	352	1.224	0.374	1.60	0.01	54
	LTE Band2	510	1.3	0.374	1.67	0.01	68
	LTE Band25	412	1.283	0.374	1.66	0.01	17
Edge3 At 0cm	GSM850	134	0.614	0.037	0.65		
	GSM1900	56	0.549	0.037	0.59		
	WCDMA V	111	0.591	0.037	0.63		
	WCDMA IV	611	0.766	0.037	0.80		
	WCDMA II	73	0.626	0.037	0.66		
	CDMA BC10	456	0.689	0.037	0.73		
	CDMA BC0	145	0.507	0.037	0.54		
	CDMA BC1	85	0.833	0.037	0.87		
	LTE Band17	313	0.919	0.037	0.96		
	LTE Band13	334	0.685	0.037	0.72		
	LTE Band5	437	0.734	0.037	0.77		
	LTE Band4	363	1.308	0.037	1.35		
	LTE Band2	513	0.487	0.037	0.52		
	LTE Band25	415	0.773	0.037	0.81		
Edge4 At 0cm	GSM850	130	0.253	0.037	0.29		
	GSM1900	52	0.578	0.037	0.62		
	WCDMA V	107	0.077	0.037	0.11		
	WCDMA IV	607	0.092	0.037	0.13		
	WCDMA II	70	0.891	0.037	0.93		
	CDMA BC10	454	0.216	0.037	0.25		
	CDMA BC0	141	0.161	0.037	0.20		
	CDMA BC1	81	0.468	0.037	0.51		
	LTE Band17	325	0.185	0.037	0.22		
	LTE Band13	340	0.132	0.037	0.17		
	LTE Band5	426	0.198	0.037	0.24		
	LTE Band4	375	0.068	0.037	0.11		
	LTE Band2	504	0.794	0.037	0.83		
	LTE Band25	420	0.461	0.037	0.50		

12.6 Simultaneous analysis - SPLSR calculation

Note:

1. For SPLSR calculation Bluetooth SAR peak position is estimated using WLAN 2.4GHz peak location, due to the WLAN and Bluetooth shares the same RF trace to the same antenna, and the operational frequency range is the same.
2. For test cases with SPLSR larger than 0.04, for each band the transmitting channel resulting the worst SPLSR was chosen for volume scan testing
3. Volume scan results are in section 12.7

< SPLSR Calculated: WWAN + WLAN2.4GHz Antenna A >

Case 1	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
133	GSM850	Bottom Face	1.411	0	-0.0845	-0.0775	-0.175	78.9	2.85	0.061	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				
131	GSM850	Bottom Face	1.326	0	-0.0845	-0.0755	-0.175	80.0	2.76	0.057	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				
132	GSM850	Bottom Face	1.342	0	-0.083	-0.079	-0.175	76.9	2.78	0.060	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				

Case 2	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
54	GSM1900	Bottom Face	1.424	0	-0.074	-0.089	-0.174	64.0	2.86	0.076	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				
53	GSM1900	Bottom Face	1.244	0	-0.0725	-0.089	-0.175	62.7	2.68	0.070	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				
55	GSM1900	Bottom Face	1.206	0	-0.0725	-0.089	-0.175	62.7	2.64	0.069	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				

Case 3	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
108	WCDMA V	Bottom Face	1.237	0	-0.086	-0.0785	-0.176	79.7	2.68	0.055	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				
109	WCDMA V	Bottom Face	1.224	0	-0.0859	-0.08	-0.176	78.8	2.66	0.055	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				
110	WCDMA V	Bottom Face	1.18	0	-0.0875	-0.0785	-0.176	80.9	2.62	0.052	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				

Case 4	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
74	WCDMA II	Bottom Face	1.249	0	-0.0755	-0.0965	-0.175	62.1	2.69	0.071	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				
150	WCDMA II	Bottom Face	1.065	0	-0.074	-0.097	-0.175	60.5	2.50	0.065	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				
151	WCDMA II	Bottom Face	1.182	0	-0.0725	-0.089	-0.175	62.7	2.62	0.068	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				

Case 5	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
143	CDMA BC0	Bottom Face	1.365	0	-0.0845	-0.0755	-0.175	80.0	2.80	0.059	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				
142	CDMA BC0	Bottom Face	1.335	0	-0.0845	-0.0755	-0.175	80.0	2.77	0.058	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				
144	CDMA BC0	Bottom Face	1.298	0	-0.0845	-0.0755	-0.175	80.0	2.74	0.057	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				

Case 6	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
83	CDMA BC1	Bottom Face	1.45	0	-0.0784	-0.098	-0.175	64.3	2.89	0.076	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				
82	CDMA BC1	Bottom Face	1.425	0	-0.0785	-0.0965	-0.175	64.9	2.86	0.075	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				
84	CDMA BC1	Bottom Face	1.446	0	-0.0784	-0.098	-0.175	64.3	2.88	0.076	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				

Case 7	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
316	LTE Band 17	Bottom Face	1.11	0	-0.075	-0.094	-0.178	62.7	2.55	0.065	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				
314	LTE Band 17	Bottom Face	0.94	0	-0.075	-0.094	-0.178	62.7	2.38	0.059	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				
315	LTE Band 17	Bottom Face	1.097	0	-0.075	-0.094	-0.178	62.7	2.54	0.064	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				

Case 8	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
333	LTE Band 13	Bottom Face	1.41	0	-0.0845	-0.075	-0.179	80.4	2.85	0.060	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				

Case 9	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
352	LTE Band 4	Bottom Face	1.224	0	-0.086	-0.065	-0.178	87.5	2.66	0.050	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				
353	LTE Band 4	Bottom Face	1.201	0	-0.086	-0.065	-0.178	87.5	2.64	0.049	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				
354	LTE Band 4	Bottom Face	1.176	0	-0.086	-0.0635	-0.178	88.4	2.61	0.048	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				

Case 10	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
412	LTE Band 25	Bottom Face	1.283	0	-0.074	-0.0875	-0.175	64.8	2.72	0.069	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				
410	LTE Band 25	Bottom Face	1.22	0	-0.074	-0.094	-0.175	61.7	2.66	0.070	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				
411	LTE Band 25	Bottom Face	1.259	0	-0.074	-0.094	-0.175	61.7	2.70	0.072	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				

Case 11	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
432	LTE Band 5	Bottom Face	1.166	0	-0.086	-0.075	-0.178	81.6	2.60	0.052	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				
430	LTE Band 5	Bottom Face	1.096	0	-0.086	-0.0735	-0.177	82.4	2.53	0.049	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				
431	LTE Band 5	Bottom Face	1.152	0	-0.086	-0.0735	-0.178	82.4	2.59	0.051	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				

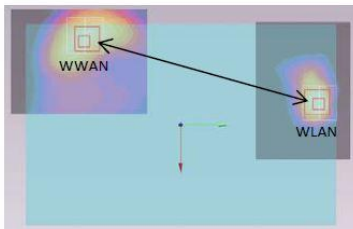
Case 12	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
455	CDMA BC10	Bottom Face	1.187	0	-0.0845	-0.0675	-0.179	84.8	2.63	0.050	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				

Case 13	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
510	LTE Band2	Bottom Face	1.3	0	-0.07	-0.097	-0.177	56.9	2.74	0.080	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				
509	LTE Band2	Bottom Face	1.241	0	-0.07	-0.097	-0.177	56.9	2.68	0.077	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				
511	LTE Band2	Bottom Face	1.288	0	-0.07	-0.097	-0.177	56.9	2.73	0.079	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				

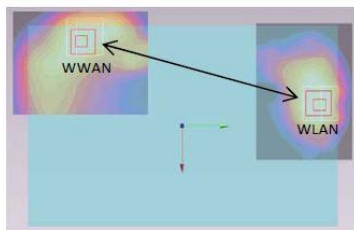
Case 14	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
610	WCDMA IV	Bottom Face	0.971	0	-0.0815	-0.0845	-0.175	72.8	2.41	0.051	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				
609	WCDMA IV	Bottom Face	0.97	0	-0.0815	-0.0845	-0.175	72.8	2.41	0.051	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				
608	WCDMA IV	Bottom Face	0.908	0	-0.0815	-0.0845	-0.175	72.8	2.35	0.049	Required
24	WLAN2.4G		1.438	0	-0.018	-0.12	-0.176				

< SPLSR Calculated: WWAN + WLAN2.4GHz Antenna B >

Case 18	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
124	GSM850	Bottom Face	1.245	1	-0.0705	-0.0845	-0.176	212.8	2.50	0.02	Not required
27	WLAN2.4G		1.254	1	-0.0192	0.122	-0.176				



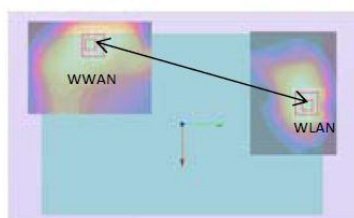
Case 19	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
50	GSM1900	Bottom Face	0.641	1	-0.0705	-0.094	-0.175	222.0	1.90	0.01	Not required
27	WLAN2.4G		1.254	1	-0.0192	0.122	-0.176				



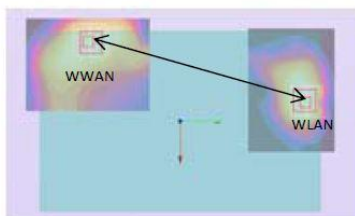
Case 20	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
103	WCDMA V	Bottom Face	0.804	1	-0.0815	-0.0845	-0.176	215.7	2.06	0.01	Not required
27	WLAN2.4G		1.254	1	-0.0192	0.122	-0.176				



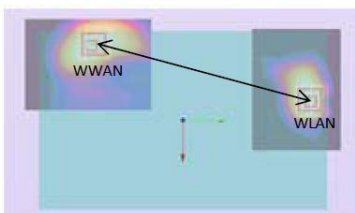
Case 21	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
64	WCDMA II	Bottom Face	0.84	1	-0.0785	-0.0875	-0.175	217.7	2.09	0.01	Not required
27	WLAN2.4G		1.254	1	-0.0192	0.122	-0.176				



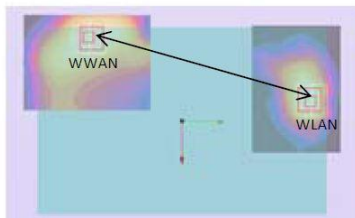
Case 21	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
64	WCDMA II	Bottom Face	0.84	1	-0.0785	-0.0875	-0.175	217.7	2.09	0.01	Not required
27	WLAN2.4G		1.254	1	-0.0192	0.122	-0.176				



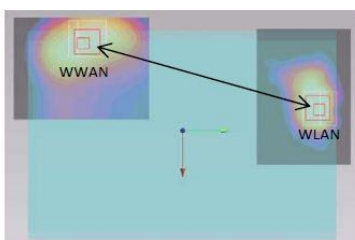
Case 22	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
139	CDMA BC0	Bottom Face	0.705	1	-0.069	-0.0925	-0.176	220.2	1.96	0.01	Not required
27	WLAN2.4G		1.254	1	-0.0192	0.122	-0.176				



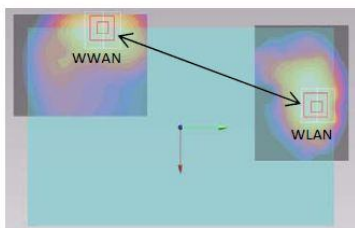
Case 23	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
77	CDMA BC1	Bottom Face	0.959	1	-0.08	-0.0875	-0.175	218.1	2.21	0.02	Not required
27	WLAN2.4G		1.254	1	-0.0192	0.122	-0.176				



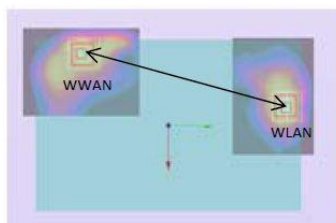
Case 24	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
342	LTE Band 13	Bottom Face	0.869	1	-0.0735	-0.0925	-0.179	221.3	2.12	0.01	Not required
27	WLAN2.4G		1.254	1	-0.0192	0.122	-0.176				



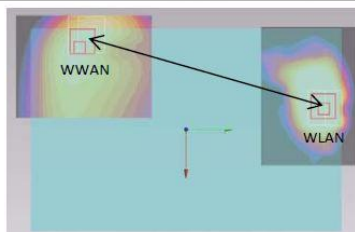
Case 25	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
366	LTE Band 4	Bottom Face	0.699	1	-0.086	-0.0695	-0.178	202.8	1.95	0.01	Not required
27	WLAN2.4G		1.254	1	-0.0192	0.122	-0.176				



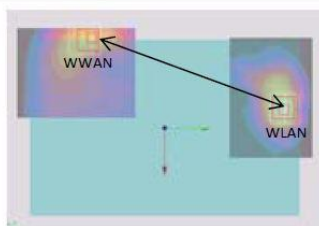
Case 26	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
416	LTE Band 25	Bottom Face	0.6	1	-0.08	-0.083	-0.175	213.8	1.85	0.01	Not required
27	WLAN2.4G		1.254	1	-0.0192	0.122	-0.176				



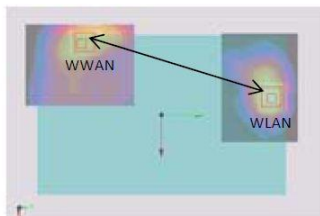
Case 51	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
321	LTE Band 17	Bottom Face	0.343	1	-0.067	-0.0955	-0.179	222.7	1.60	0.01	Not required
27	WLAN2.4G		1.254	1	-0.0192	0.122	-0.176				



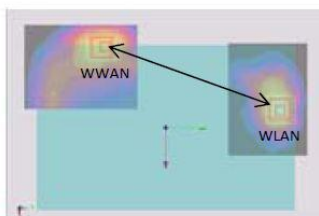
Case 60	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
424	LTE Band 5	Bottom Face	0.663	1	-0.089	-0.0735	-0.179	207.6	1.92	0.01	Not required
27	WLAN2.4G		1.254	1	-0.0192	0.122	-0.176				



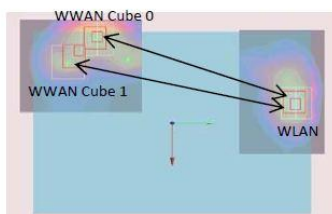
Case 62	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
452	CDMA BC10	Bottom Face	0.657	1	-0.075	-0.0925	-0.179	221.7	1.91	0.01	Not required
27	WLAN2.4G		1.254	1	-0.0192	0.122	-0.176				



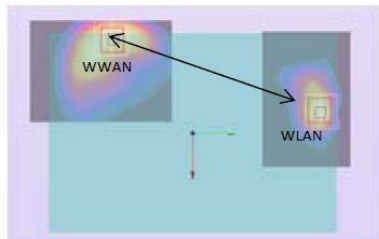
Case 65	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
500	LTE Band2	Bottom Face	0.71	1	-0.0885	-0.06	-0.178	194.8	1.96	0.01	Not required
27	WLAN2.4G		1.254	1	-0.0192	0.122	-0.176				



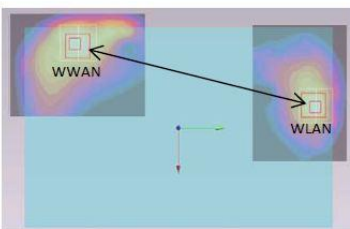
Case 69	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
601	WCDMA IV	Bottom Face	0.787	1	-0.0815	-0.074	-0.175	205.7	2.04	0.01	Not required
27	WLAN2.4G		1.254	1	-0.0192	0.122	-0.176				
601	WCDMA IV	Bottom Face	0.467	1	-0.075	-0.0865	-0.175	215.8	1.72	0.01	Not required
27	WLAN2.4G		1.254	1	-0.0192	0.122	-0.176				



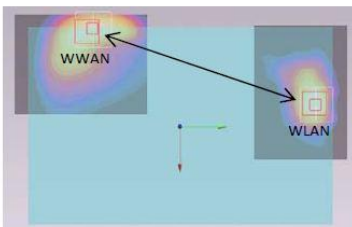
Case 27	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
133	GSM850	Bottom Face	1.411	0	-0.0845	-0.0775	-0.175	209.9	2.67	0.02	Not required
27	WLAN2.4G		1.254	0	-0.0192	0.122	-0.176				



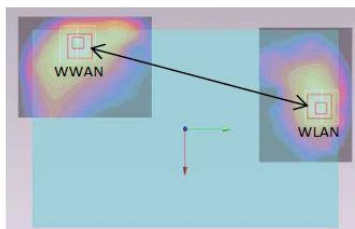
Case 28	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
54	GSM1900	Bottom Face	1.424	0	-0.074	-0.089	-0.174	218.0	2.68	0.02	Not required
27	WLAN2.4G		1.254	0	-0.0192	0.122	-0.176				



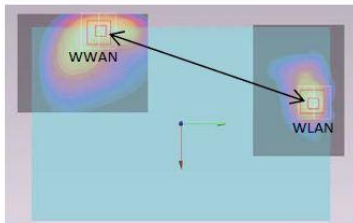
Case 29	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
108	WCDMA V	Bottom Face	1.237	0	-0.086	-0.0785	-0.176	211.3	2.49	0.02	Not required
27	WLAN2.4G		1.254	0	-0.0192	0.122	-0.176				



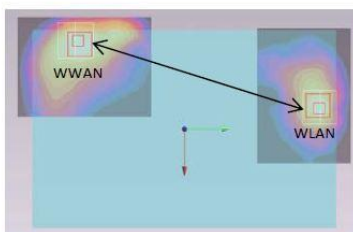
Case 30	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
74	WCDMA II	Bottom Face	1.249	0	-0.0755	-0.0965	-0.175	225.6	2.50	0.02	Not required
27	WLAN2.4G		1.254	0	-0.0192	0.122	-0.176				



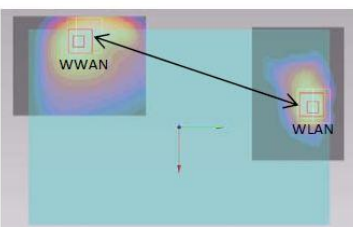
Case 31	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
143	CDMA BC0	Bottom Face	1.365	0	-0.0845	-0.0755	-0.175	208.0	2.62	0.02	Not required
27	WLAN2.4G		1.254	0	-0.0192	0.122	-0.176				



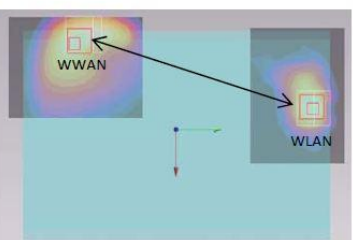
Case 32	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
83	CDMA BC1	Bottom Face	1.45	0	-0.0784	-0.098	-0.175	227.8	2.70	0.02	Not required
27	WLAN2.4G		1.254	0	-0.0192	0.122	-0.176				



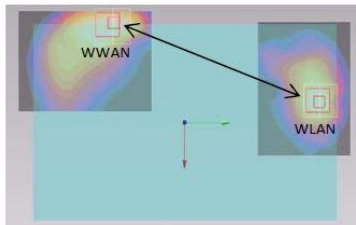
Case 33	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
316	LTE Band 17	Bottom Face	1.11	0	-0.075	-0.094	-0.178	223.1	2.36	0.02	Not required
27	WLAN2.4G		1.254	0	-0.0192	0.122	-0.176				



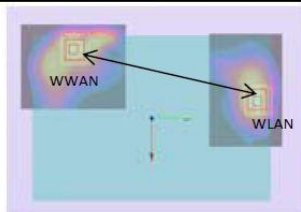
Case 34	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
333	LTE Band 13	Bottom Face	1.41	0	-0.0845	-0.075	-0.179	207.6	2.66	0.02	Not required
27	WLAN2.4G		1.254	0	-0.0192	0.122	-0.176				



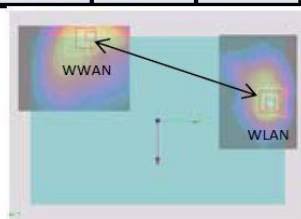
Case 35	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
352	LTE Band 4	Bottom Face	1.224	0	-0.086	-0.065	-0.178	198.6	2.48	0.02	Not required
27	WLAN2.4G		1.254	0	-0.0192	0.122	-0.176				



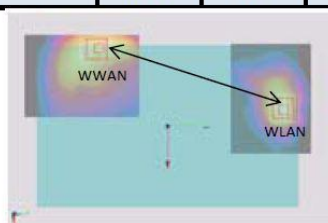
Case 36	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
412	LTE Band 25	Bottom Face	1.283	0	-0.074	-0.0875	-0.175	216.6	2.54	0.02	Not required
27	WLAN2.4G		1.254	0	-0.0192	0.122	-0.176				



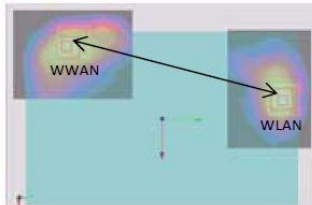
Case 61	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
432	LTE Band 5	Bottom Face	1.166	0	-0.086	-0.075	-0.178	208.0	2.42	0.02	Not required
27	WLAN2.4G		1.254	0	-0.0192	0.122	-0.176				



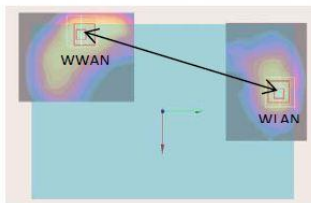
Case 63	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
455	CDMA BC10	Bottom Face	1.187	0	-0.0845	-0.0675	-0.179	200.5	2.44	0.02	Not required
27	WLAN2.4G		1.254	0	-0.0192	0.122	-0.176				



Case 66	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
510	LTE Band2	Bottom Face	1.3	0	-0.07	-0.097	-0.177	224.8	2.55	0.02	Not required
27	WLAN2.4G		1.254	0	-0.0192	0.122	-0.176				



Case 70	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
610	WCDMA IV	Bottom Face	0.971	0	-0.0815	-0.0845	-0.175	215.7	2.23	0.02	Not required
27	WLAN2.4G		1.254	0	-0.0192	0.122	-0.176				

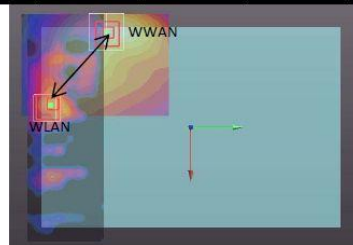


< SPLSR Calculated: WWAN + WLAN5.8GHz Antenna A >

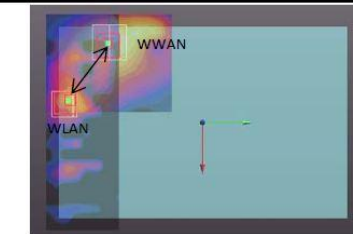
Case 71	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
83	CDMA BC1	Bottom Face	1.45	0	-0.0784	-0.098	-0.175	64.3	1.69	0.03	Not required
12	WLAN5G		0.238	0	-0.018	-0.12	-0.176				



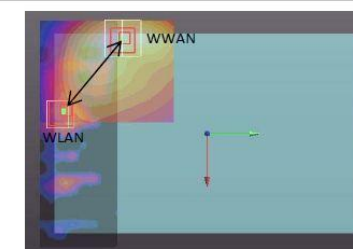
Case 43	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
133	GSM850	Bottom Face	1.411	0	-0.0845	-0.0775	-0.175	78.9	1.65	0.03	Not required
12	WLAN5G		0.238	0	-0.018	-0.12	-0.176				



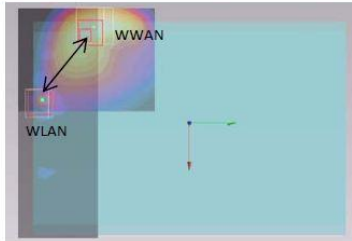
Case 44	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
54	GSM1900	Bottom Face	1.424	0	-0.074	-0.089	-0.174	64.0	1.66	0.03	Not required
12	WLAN5G		0.238	0	-0.018	-0.12	-0.176				



Case 45	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
143	CDMA BC0	Bottom Face	1.365	0	-0.0845	-0.0755	-0.175	80.0	1.60	0.03	Not required
12	WLAN5G		0.238	0	-0.018	-0.12	-0.176				

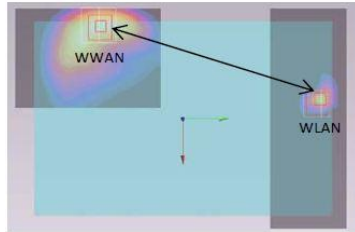


Case 46	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No					X	Y	Z				
333	LTE Band 13	Bottom Face	1.41	0	-0.0845	-0.075	-0.179	80.4	1.65	0.03	Not required
12	WLAN5G		0.238	0	-0.018	-0.12	-0.176				

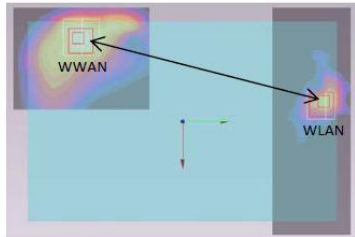


< SPLSR Calculated: WWAN + WLAN5.8GHz Antenna B >

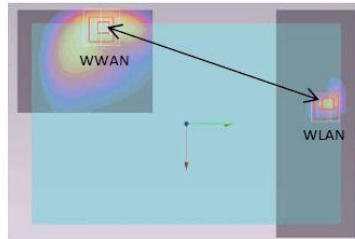
Case 37	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
133	GSM850	Bottom Face	1.411	0	-0.0845	-0.0775	-0.175	215.0	1.82	0.01	Not required
22	WLAN5G		0.408	0	-0.018	0.127	-0.175				



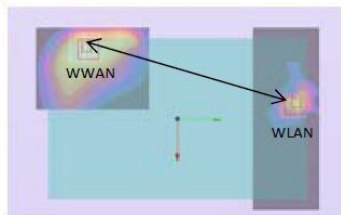
Case 38	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
54	GSM1900	Bottom Face	1.424	0	-0.074	-0.089	-0.174	223.1	1.83	0.01	Not required
22	WLAN5G		0.408	0	-0.018	0.127	-0.175				



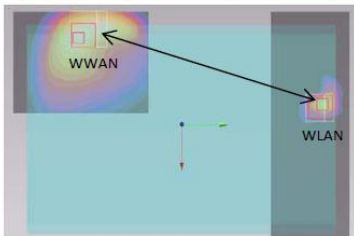
Case 39	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
143	CDMA BC0	Bottom Face	1.365	0	-0.0845	-0.0755	-0.175	213.1	1.77	0.01	Not required
22	WLAN5G		0.408	0	-0.018	0.127	-0.175				



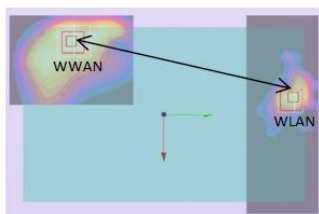
Case 40	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
83	CDMA BC1	Bottom Face	1.45	0	-0.0784	-0.098	-0.175	233.0	1.86	0.01	Not required
22	WLAN5G		0.408	0	-0.018	0.127	-0.175				



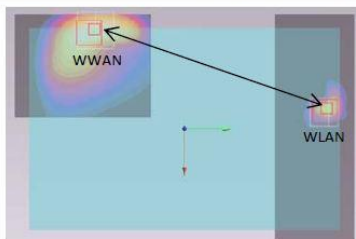
Case 41	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
333	LTE Band 13	Bottom Face	1.41	0	-0.0845	-0.075	-0.179	212.7	1.82	0.01	Not required
22	WLAN5G		0.408	0	-0.018	0.127	-0.175				



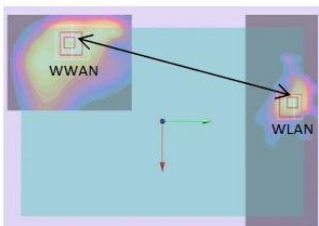
Case 47	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
124	GSM850	Bottom Face	1.245	1	-0.0705	-0.0845	-0.176	217.9	1.65	0.01	Not required
22	WLAN5G		0.408	0	-0.018	0.127	-0.175				



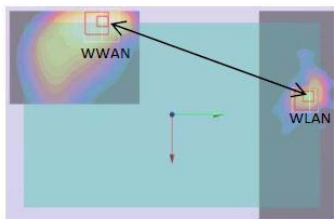
Case 48	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
108	WCDMA V	Bottom Face	1.237	0	-0.086	-0.0785	-0.176	216.5	1.65	0.01	Not required
22	WLAN5G		0.408	0	-0.018	0.127	-0.175				



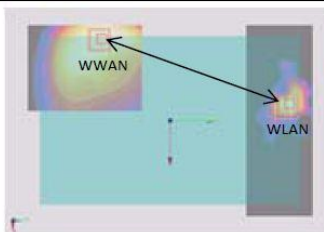
Case 49	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
74	WCDMA II	Bottom Face	1.249	0	-0.0755	-0.0965	-0.175	230.8	1.66	0.01	Not required
22	WLAN5G		0.408	0	-0.018	0.127	-0.175				



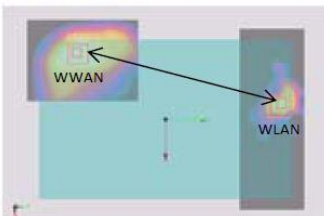
Case 50	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
352	LTE Band 4	Bottom Face	1.224	0	-0.086	-0.065	-0.178	203.7	1.63	0.01	Not required
22	WLAN5G		0.408	0	-0.018	0.127	-0.175				



Case 64	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
455	CDMA BC10	Bottom Face	1.187	0	-0.0845	-0.0675	-0.179	205.6	1.60	0.01	Not required
22	WLAN5G		0.408	0	-0.018	0.127	-0.175				

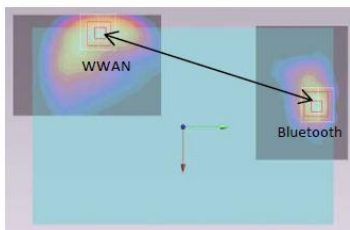


Case 67	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
510	LTE Band2	Bottom Face	1.3	0	-0.07	-0.097	-0.177	230.0	1.71	0.01	Not required
22	WLAN5G		0.408	0	-0.018	0.127	-0.175				

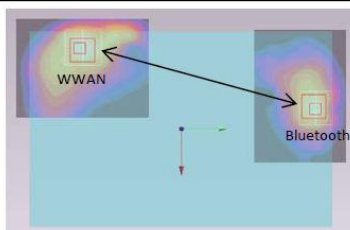


< SPLSR Calculated: WWAN + Bluetooth >

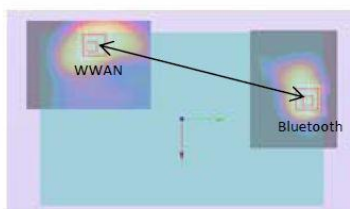
Case 72	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance	Pair SAR	SPLSR	Simultaneous
Plot No				(cm)	X	Y	Z	(mm)	sum (W/kg)		SAR
133	GSM850	Bottom Face	1.411	0	-0.0845	-0.0775	-0.175	209.9	1.79	0.01	Not required
Bluetooth			0.374	0	-0.0192	0.122	-0.176				



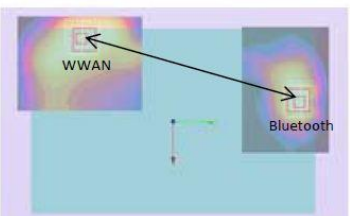
Case 73	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance	Pair SAR	SPLSR	Simultaneous
Plot No				(cm)	X	Y	Z	(mm)	sum (W/kg)		SAR
54	GSM1900	Bottom Face	1.424	0	-0.074	-0.089	-0.174	218.0	1.80	0.01	Not required
Bluetooth			0.374	0	-0.0192	0.122	-0.176				



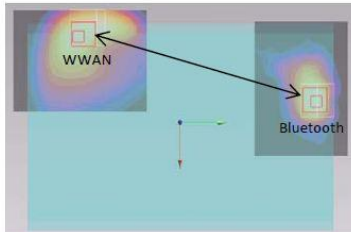
Case 74	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance	Pair SAR	SPLSR	Simultaneous
Plot No				(cm)	X	Y	Z	(mm)	sum (W/kg)		SAR
143	CDMA BC0	Bottom Face	1.365	0	-0.0845	-0.0755	-0.175	208.0	1.74	0.01	Not required
Bluetooth			0.374	0	-0.0192	0.122	-0.176				



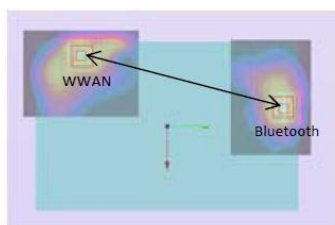
Case 15	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance	Pair SAR	SPLSR	Simultaneous
Plot No				(cm)	X	Y	Z	(mm)	sum (W/kg)		SAR
83	CDMA BC1	Bottom Face	1.45	0	-0.0784	-0.098	-0.175	227.8	1.82	0.01	Not required
Bluetooth			0.374	0	-0.0192	0.122	-0.176				



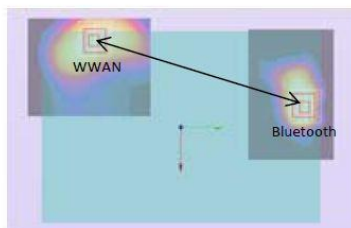
Case 16	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
333	LTE Band 13	Bottom Face	1.41	0	-0.0845	-0.075	-0.179	207.6	1.78	0.01	Not required
	Bluetooth		0.374	0	-0.0192	0.122	-0.176				



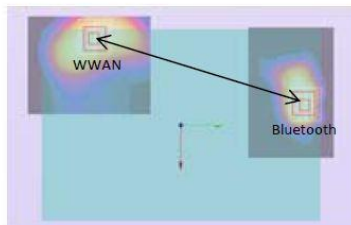
Case 17	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
412	LTE Band 25	Bottom Face	1.283	0	-0.074	-0.0875	-0.175	216.6	1.66	0.01	Not required
	Bluetooth		0.374	0	-0.0192	0.122	-0.176				



Case 52	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
108	WCDMA V	Bottom Face	1.237	0	-0.086	-0.0785	-0.176	211.3	1.61	0.01	Not required
	Bluetooth		0.374	0	-0.0192	0.122	-0.176				



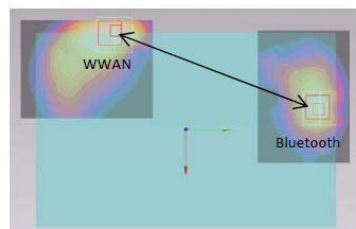
Case 52	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
108	WCDMA V	Bottom Face	1.237	0	-0.086	-0.0785	-0.176	211.3	1.61	0.01	Not required
	Bluetooth		0.374	0	-0.0192	0.122	-0.176				



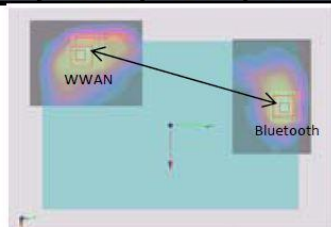
Case 53	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
74	WCDMA II	Bottom Face	1.249	0	-0.0755	-0.0965	-0.175	225.6	1.62	0.01	Not required
Bluetooth			0.374	0	-0.0192	0.122	-0.176				



Case 54	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
352	LTE Band4	Bottom Face	1.224	0	-0.086	-0.065	-0.178	198.6	1.60	0.01	Not required
Bluetooth			0.374	0	-0.0192	0.122	-0.176				



Case 68	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Pair SAR sum (W/kg)	SPLSR	Simultaneous SAR
Plot No				(cm)	X	Y	Z				
510	LTE Band2	Bottom Face	1.3	0	-0.07	-0.097	-0.177	224.8	1.67	0.01	Not required
Bluetooth			0.374	0	-0.0192	0.122	-0.176				



**12.7 Volume Scan Result****Note:**

- During multi-band SAR combination, the SAR scaling factors were input into the SEMCAD X software to account for tune-up tolerance.

Case NO.	Plot No.	Band	BW (MHz)	Mode	Test Position	Gap (cm)	WLAN Antenna	Ch.	Freq. (MHz)	Power Back-off	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured SAR 1g (W/kg)	Tune-up Scaling Factor	Multi Band Reported SAR 1g (W/kg)
1	156	GSM850		GPRS (2 Tx slots)	Bottom Face	0cm		251	848.8	ON	27.76	28.5	-0.147	1.2	1.186	1.44
	31	WLAN2.4GHz		802.11b	Bottom Face	0cm	Ant A	1	2412		16.14	17	0.056	1.08	1.219	
2	152	GSM1900		GPRS (2 Tx slots)	Bottom Face	0cm		661	1880	ON	24.57	25	-0.18	1.21	1.104	1.44
	31	WLAN2.4GHz		802.11b	Bottom Face	0cm	Ant A	1	2412		16.14	17	0.056	1.08	1.219	
3	155	WCDMA V		RMC 12.2Kbps	Bottom Face	0cm		4132	826.4	ON	20.44	22	0.11	0.912	1.432	1.39
	31	WLAN2.4GHz		802.11b	Bottom Face	0cm	Ant A	1	2412		16.14	17	0.056	1.08	1.219	
14	625	WCDMA IV		RMC 12.2Kbps	Bottom Face	0cm		1513	1752.6	ON	20.26	20.5	-0.122	0.948	1.057	1.42
	31	WLAN2.4G		802.11b	Bottom Face	0cm	Ant A	1	2412		16.14	17	0.056	1.08	1.219	
4	154	WCDMA II		RMC 12.2Kbps	Bottom Face	0cm		9538	1907.6	ON	17.64	19	-0.11	0.884	1.368	1.46
	31	WLAN2.4GHz		802.11b	Bottom Face	0cm	Ant A	1	2412		16.14	17	0.056	1.08	1.219	
12	461	CDMA BC10		RTAP 153.6kbps	Bottom Face	0cm		476	817.9	ON	21.62	22.5	0.01	1.02	1.225	1.4
	31	WLAN2.4G		802.11b	Bottom Face	0cm	Ant A	1	2412		16.14	17	0.056	1.08	1.219	
5	157	CDMA BC0		RTAP 153.6kbps	Bottom Face	0cm		1013	824.7	ON	21.68	22.5	0.02	1.11	1.208	1.41
	31	WLAN2.4GHz		802.11b	Bottom Face	0cm	Ant A	1	2412		16.14	17	0.056	1.08	1.219	
6	153	CDMA BC1		RTAP 153.6kbps	Bottom Face	0cm		600	1880	ON	19.06	19.5	-0.141	1.25	1.107	1.48
	31	WLAN2.4GHz		802.11b	Bottom Face	0cm	Ant A	1	2412		16.14	17	0.056	1.08	1.219	
7	379	LTE Band 17	10M	QPSK 1RB 24offset	Bottom Face	0cm		23800	711	ON	21.59	22	0.045	1.07	1.099	1.42
	31	WLAN2.4GHz		802.11b	Bottom Face	0cm	Ant A	1	2412		16.14	17	0.056	1.08	1.219	
8	380	LTE Band 13	10M	QPSK 25RB 0offset	Bottom Face	0cm		23230	782	ON	20.55	22	-0.01	1	1.396	1.55
	31	WLAN2.4GHz		802.11b	Bottom Face	0cm	Ant A	1	2412		16.14	17	0.056	1.08	1.219	
11	460	LTE Band 5	10M	QPSK 1RB 24offset	Bottom Face	0cm		20600	844	ON	20.54	21.5	0.122	0.934	1.247	1.4
	31	WLAN2.4G		802.11b	Bottom Face	0cm	Ant A	1	2412		16.14	17	0.056	1.08	1.219	
9	381	LTE Band 4	20M	QPSK 1RB 0offset	Bottom Face	0cm		20050	1720	ON	20.69	21	-0.041	1.14	1.074	1.36
	31	WLAN2.4GHz		802.11b	Bottom Face	0cm	Ant A	1	2412		16.14	17	0.056	1.08	1.219	
13	626	LTE Band 2	20M	QPSK 50RB 0offset	Bottom Face	0cm		18700	1860	ON	17.76	19	0.168	0.991	1.330	1.42
	31	WLAN2.4G		802.11b	Bottom Face	0cm	Ant A	1	2412		16.14	17	0.056	1.08	1.219	
10	423	LTE Band 25	20M	QPSK 50RB 0offset	Bottom Face	0cm		26590	1905	ON	17.19	19	-0.067	0.865	1.517	1.41
	31	WLAN2.4GHz		802.11b	Bottom Face	0cm	Ant A	1	2412		16.14	17	0.056	1.08	1.219	

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13. Uncertainty Assessment

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 12.1

Uncertainty Distributions	Normal	Rectangular	Triangular	U-Shape
Multi-plying Factor ^(a)	1/k ^(b)	1/√3	1/√6	1/√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

Table 13.1 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.

Error Description	Uncertainty Value (±%)	Probability Distribution	Divisor	Ci (1g)	Ci (10g)	Standard Uncertainty (1g)	Standard Uncertainty (10g)
Measurement System							
Probe Calibration	6.0	Normal	1	1	1	± 6.0 %	± 6.0 %
Axial Isotropy	4.7	Rectangular	√3	0.7	0.7	± 1.9 %	± 1.9 %
Hemispherical Isotropy	9.6	Rectangular	√3	0.7	0.7	± 3.9 %	± 3.9 %
Boundary Effects	1.0	Rectangular	√3	1	1	± 0.6 %	± 0.6 %
Linearity	4.7	Rectangular	√3	1	1	± 2.7 %	± 2.7 %
System Detection Limits	1.0	Rectangular	√3	1	1	± 0.6 %	± 0.6 %
Readout Electronics	0.3	Normal	1	1	1	± 0.3 %	± 0.3 %
Response Time	0.8	Rectangular	√3	1	1	± 0.5 %	± 0.5 %
Integration Time	2.6	Rectangular	√3	1	1	± 1.5 %	± 1.5 %
RF Ambient Noise	3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %
RF Ambient Reflections	3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %
Probe Positioner	0.4	Rectangular	√3	1	1	± 0.2 %	± 0.2 %
Probe Positioning	2.9	Rectangular	√3	1	1	± 1.7 %	± 1.7 %
Max. SAR Eval.	1.0	Rectangular	√3	1	1	± 0.6 %	± 0.6 %
Test Sample Related							
Device Positioning	2.9	Normal	1	1	1	± 2.9 %	± 2.9 %
Device Holder	3.6	Normal	1	1	1	± 3.6 %	± 3.6 %
Power Drift	5.0	Rectangular	√3	1	1	± 2.9 %	± 2.9 %
Phantom and Setup							
Phantom Uncertainty	4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %
Liquid Conductivity (Target)	5.0	Rectangular	√3	0.64	0.43	± 1.8 %	± 1.2 %
Liquid Conductivity (Meas.)	2.5	Normal	1	0.64	0.43	± 1.6 %	± 1.1 %
Liquid Permittivity (Target)	5.0	Rectangular	√3	0.6	0.49	± 1.7 %	± 1.4 %
Liquid Permittivity (Meas.)	2.5	Normal	1	0.6	0.49	± 1.5 %	± 1.2 %
Combined Standard Uncertainty						± 11.0 %	± 10.8 %
Coverage Factor for 95 %						K=2	
Expanded Uncertainty						± 22.0 %	± 21.5 %

Table 13.2 Uncertainty budget for frequency range 300 MHz to 3 GHz

Error Description	Uncertainty Value (±%)	Probability Distribution	Divisor	Ci (1g)	Ci (10g)	Standard Uncertainty (1g)	Standard Uncertainty (10g)
Measurement System							
Probe Calibration	6.55	Normal	1	1	1	± 6.55 %	± 6.55 %
Axial Isotropy	4.7	Rectangular	√3	0.7	0.7	± 1.9 %	± 1.9 %
Hemispherical Isotropy	9.6	Rectangular	√3	0.7	0.7	± 3.9 %	± 3.9 %
Boundary Effects	2.0	Rectangular	√3	1	1	± 1.2 %	± 1.2 %
Linearity	4.7	Rectangular	√3	1	1	± 2.7 %	± 2.7 %
System Detection Limits	1.0	Rectangular	√3	1	1	± 0.6 %	± 0.6 %
Readout Electronics	0.3	Normal	1	1	1	± 0.3 %	± 0.3 %
Response Time	0.8	Rectangular	√3	1	1	± 0.5 %	± 0.5 %
Integration Time	2.6	Rectangular	√3	1	1	± 1.5 %	± 1.5 %
RF Ambient Noise	3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %
RF Ambient Reflections	3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %
Probe Positioner	0.8	Rectangular	√3	1	1	± 0.5 %	± 0.5 %
Probe Positioning	9.9	Rectangular	√3	1	1	± 5.7 %	± 5.7 %
Max. SAR Eval.	4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %
Test Sample Related							
Device Positioning	2.9	Normal	1	1	1	± 2.9 %	± 2.9 %
Device Holder	3.6	Normal	1	1	1	± 3.6 %	± 3.6 %
Power Drift	5.0	Rectangular	√3	1	1	± 2.9 %	± 2.9 %
Phantom and Setup							
Phantom Uncertainty	4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %
Liquid Conductivity (Target)	5.0	Rectangular	√3	0.64	0.43	± 1.8 %	± 1.2 %
Liquid Conductivity (Meas.)	2.5	Normal	1	0.64	0.43	± 1.6 %	± 1.1 %
Liquid Permittivity (Target)	5.0	Rectangular	√3	0.6	0.49	± 1.7 %	± 1.4 %
Liquid Permittivity (Meas.)	2.5	Normal	1	0.6	0.49	± 1.5 %	± 1.2 %
Combined Standard Uncertainty						± 12.8 %	± 12.6 %
Coverage Factor for 95 %						K=2	
Expanded Uncertainty						± 25.6 %	± 25.2 %

Table 13.3 Uncertainty budget for frequency range 3 GHz to 6 GHz

14. References

- [1] FCC 47 CFR Part 2 "Frequency Allocations and Radio Treaty Matters; General Rules and Regulations"
- [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. 1528-2003, "Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
- [4] FCC OET Bulletin 65 (Edition 97-01) Supplement C (Edition 01-01), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields", June 2001
- [5] SPEAG DASY System Handbook
- [6] FCC KDB 248227 D01 v01r02, "SAR Measurement Procedures for 802.11 a/b/g Transmitters", May 2007
- [7] FCC KDB 447498 D01 v05, "Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies", October 2012
- [8] FCC KDB 648474 D01 v01r05, "SAR Evaluation Considerations for Handsets with Multiple Transmitters and Antennas", September 2008
- [9] FCC KDB 941225 D02 v02 "3GPP R6 HSPA and R7 HSPA+ SAR Guidance", December 2009.
- [10] FCC KDB 941225 D03 v01, "Recommended SAR Test Reduction Procedures for GSM / GPRS / EDGE", December 2008
- [11] FCC KDB 941225 D04 v01, "Evaluating SAR for GSM/(E)GPRS Dual Transfer Mode", January 27 2010
- [12] FCC KDB 941225 D06 v01, "SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities", April 2011



Appendix A. Plots of System Performance Check

The plots are shown as follows.



Appendix B. Plots of SAR Measurement

The plots are shown as follows.



Appendix C. DASY Calibration Certificate

The DASY calibration certificates are shown as follows.