

Test Mode: WIFI 5GHz- Band 4(11a)
Sensor off

SAR Test Record For WIFI 5G Powersetting:17

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conducted Power(dBm)	Tune up Power(dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g(W/kg)	power drift
13mm	Back	149	1	0.721	0.28	14.84	16	1.306171	0.94	0.37	0.1
13mm	Top	149	1	0.384	0.164	14.84	16	1.306171	0.50	0.21	-0.07
13mm	Left	149	1	0.479	0.191	14.84	16	1.306171	0.63	0.25	-0.18
13mm	Back	157	1	0.688	0.268	14.64	16	1.367729	0.94	0.37	-0.01
13mm	Back	165	1	0.671	0.273	14.79	16	1.321296	0.89	0.36	0.08

Conclusion: PASS

Note:

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

Sensor on

SAR Test Record For WIFI 5G Powersetting:11

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conducted Power(dBm)	Tune up Power(dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g(W/kg)	power drift
0mm	Back	149	1	0.884	0.2	8.12	9	1.224616	1.08	0.24	0
0mm	Top	149	1	0.406	0.144	8.12	9	1.224616	0.50	0.18	-0.12
0mm	Left	149	1	0.487	0.155	8.12	9	1.224616	0.60	0.19	0.1
0mm	Back	157	1	0.871	0.17	8.09	9	1.233105	1.07	0.21	0.05
0mm	Back	165	1	0.855	0.164	8.1	9	1.230269	1.05	0.20	0.09

Conclusion: PASS

Note:

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

Test Mode: GSM850(2TX Slots)
Sensor off

SAR Test Record For GSM850

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conducted Power(dBm)	Tune up Power(dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g(W/kg)	power drift
14 mm	Back	128	0.9	0.29	0.195	31.69	32	1.073989	0.35	0.23	-0.15
14 mm	Top	128	0.9	0.158	0.11	31.69	32	1.073989	0.19	0.13	0
13 mm	Right	128	0.9	0.122	0.0776	31.69	32	1.073989	0.15	0.09	0.11

Conclusion: PASS

Note:

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

Sensor on

SAR Test Record For GSM850

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conducted Power(dBm)	Tune up Power(dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g(W/kg)	power drift
0 mm	Back	128	0.9	0.912	0.489	30.56	31	1.106624	1.12	0.60	0
0 mm	Top	128	0.9	0.411	0.133	30.56	31	1.106624	0.51	0.16	0.1
0 mm	Right	128	0.9	0.427	0.243	30.56	31	1.106624	0.53	0.30	0.01
0 mm	Back	190	0.9	0.854	0.443	30.44	31	1.137627	1.08	0.56	0.02
0 mm	Back	251	0.9	0.865	0.447	30.41	31	1.145513	1.10	0.57	0.04

Conclusion: PASS

Note:

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

Test Mode: GSM1900(2TX Slots)
Sensor off

SAR Test Record For GSM1900

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conducted Power(dBm)	Tune up Power(dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g(W/kg)	power drift
14 mm	Back	512	0.9	0.144	0.079	28.09	29	1.233105	0.20	0.11	0.13
14 mm	Top	512	0.9	0.134	0.0725	28.09	29	1.233105	0.18	0.10	0.04
13 mm	Right	512	0.9	0.106	0.0547	28.09	29	1.233105	0.15	0.07	0

Conclusion: PASS

Note:

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

Sensor on

SAR Test Record For GSM1900

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conducted Power(dBm)	Tune up Power(dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g(W/kg)	power drift
0 mm	Back	512	0.9	0.622	0.266	16.11	17	1.227439	0.85	0.36	-0.1
0 mm	Top	512	0.9	0.517	0.207	16.11	17	1.227439	0.71	0.28	0
0 mm	Right	512	0.9	0.293	0.112	16.11	17	1.227439	0.40	0.15	0.07

Conclusion: PASS

Note:

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

Sensor on

SAR Test Record For GSM1900

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conducted Power(dBm)	Tune up Power(dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g(W/kg)	power drift
0 mm	Back	661	0.9	0.617	0.253	16.08	17	1.235947	0.85	0.35	0.14
0 mm	Back	810	0.9	0.612	0.261	16.09	17	1.233105	0.84	0.36	0.05

Conclusion: PASS

Note:

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

Test Mode: UMTS Band 2
Sensor off

SAR Test Record For UMTS Band2

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conducted Power(dBm)	Tune up Power(dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g(W/kg)	power drift
14 mm	Back	9538	1	0.427	0.233	21.47	23	1.595879	0.68	0.37	-0.13
14 mm	Top	9538	1	0.133	0.0685	21.47	23	1.595879	0.21	0.11	0.01
13 mm	Right	9538	1	0.0569	0.029	21.47	23	1.422329	0.08	0.04	0

Conclusion: PASS

Note:

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

Sensor on

SAR Test Record For UMTS Band2

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conducted Power(dBm)	Tune up Power (dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g(W/kg)	power drift
0 mm	Top	9538	1	0.913	0.408	15.12	15.5	1.09144	1.00	0.45	0.2
0 mm	Back	9538	1	0.633	0.257	15.12	15.5	1.09144	0.69	0.28	0.07
0 mm	Right	9538	1	0.34	0.127	15.12	15.5	1.09144	0.37	0.14	0
0 mm	Back	9262	1	0.907	0.401	15.11	15.5	1.093956	0.99	0.44	0.02
0 mm	Back	9400	1	0.901	0.407	15.1	15.5	1.096478	0.99	0.45	0

Conclusion: PASS

Note:

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

Test Mode: UMTS Band 4
Sensor off
SAR Test Record For UMTS Band4

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conducted Power(dBm)	Tune up Power(dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g(W/kg)	power drift
14 mm	Back	1312	1	0.519	0.273	21.36	23	1.458814	0.76	0.40	0.1
14 mm	Top	1312	1	0.208	0.107	21.36	23	1.458814	0.30	0.16	-0.06
13 mm	Right	1312	1	0.0313	0.016	21.36	23	1.458814	0.05	0.02	0

Conclusion: PASS

Note:

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

Sensor on
SAR Test Record For UMTS Band4

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conducted Power(dBm)	Tune up Power(dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g	power drift
0 mm	Back	1312	1	0.653	0.322	13.06	14	1.241652	0.81	0.40	0.05
0 mm	Top	1312	1	0.713	0.358	13.06	14	1.241652	0.89	0.44	-0.01
0 mm	Right	1312	1	0.233	0.101	13.06	14	1.241652	0.29	0.13	0.01

Conclusion: PASS

Note:

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

Sensor on
SAR Test Record For UMTS Band4

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conducted Power(dBm)	Tune up Power (dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g(W/kg)	power drift
0mm	Back	1413	1	0.601	0.291	12.97	14	1.267652	0.76	0.37	-1
0 mm	Back	1513	1	0.614	0.011	13.01	14	1.25603	0.77	0.01	0
0 mm	Top	1413	1	0.689	0.312	12.97	14	1.267652	0.87	0.40	-1
0 mm	Top	1513	1	0.701	0.333	13.01	14	1.25603	0.88	0.42	0

Conclusion: PASS

Note:

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

Test Mode: UMTS Band 5
Sensor off
SAR Test Record For UMTS Band5

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conducted Power(dBm)	Tune up Power(dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g(W/kg)	power drift
14 mm	Back	4132	1	0.295	0.191	22.34	24	1.465548	0.43	0.28	0.07
14 mm	Top	4132	1	0.0394	0.0264	22.34	24	1.465548	0.06	0.04	0.18
13 mm	Right	4132	1	0.00905	0.00583	22.34	24	1.465548	0.01	0.01	0

Conclusion: PASS

Note:

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

Sensor on
SAR Test Record For UMTS Band5

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conducted Power(dBm)	Tune up Power(dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g(W/kg)	power drift
0 mm	Back	4132	1	0.793	0.407	18.14	19	1.21899	0.97	0.50	-0.05
0 mm	Top	4132	1	0.226	0.0904	18.14	19	1.21899	0.28	0.11	0.17
0 mm	Right	4132	1	0.155	0.0849	18.14	19	1.21899	0.19	0.10	0.09

Conclusion: PASS

Note:

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

Sensor on
SAR Test Record For UMTS Band5

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conducted Power(dBm)	Tune up Power(dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g(W/kg)	power drift
0 mm	Back	4182	1	0.733	0.403	18.03	19	1.250259	0.92	0.50	0.18
0 mm	Back	4233	1	0.714	0.406	18.11	19	1.227439	0.88	0.50	0.08

Conclusion: PASS

Note:

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

Test Mode: E-UTRA Band 2
Sensor off

SAR Test Record For LTE Band2

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conducted Power (dBm)	Tune up Power (dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g(W/kg)	power drift
14 mm	Back	19100 (1rb50%)	1	0.604	0.33	22.66	24	1.361445	0.82	0.45	0.06
14 mm	Top	19100 (1rb50%)	1	0.6	0.314	22.66	24	1.361445	0.82	0.43	0.19
13 mm	Right	19100 (1rb50%)	1	0.378	0.201	22.66	24	1.361445	0.51	0.27	0.16
14 mm	Back	19100 (50rb-mid)	1	0.599	0.328	21.5	23	1.412538	0.85	0.46	0.14
14 mm	Back	18700 (1rb50%)	1	0.587	0.316	22.11	24	1.545254	0.91	0.49	0.03
14 mm	Back	18900 (1rb50%)	1	0.595	0.32	22.08	24	1.555966	0.93	0.50	0.11
14 mm	Top	18700 (1rb50%)	1	0.597	0.307	22.11	24	1.545254	0.92	0.47	0.07
14 mm	Top	18900 (1rb50%)	1	0.589	0.297	22.08	24	1.555966	0.92	0.46	0.12
14 mm	Top	19100 (1rb100%)	1	0.59	0.415	21.52	23	1.406048	0.83	0.58	0
14 mm	Back	19100 (1rb100%)	1	0.585	0.323	21.52	23	1.406048	0.82	0.45	0.1

Conclusion: PASS

Note:

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

Sensor on

SAR Test Record For LTE Band2

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conducted Power (dBm)	Tune up Power (dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g(W/kg)	power drift
0 mm	Back	19100 (1rb50%)	1	0.927	0.438	15.66	16	1.081434	1.00	0.47	-0.05
0 mm	Top	19100 (1rb50%)	1	0.804	0.338	15.66	16	1.081434	0.87	0.37	0.01
0 mm	Right	19100 (1rb50%)	1	0.617	0.319	15.66	16	1.081434	0.67	0.34	0.09
0 mm	Back	19100 (50rb mid)	1	0.911	0.421	15.61	16	1.093956	1.00	0.46	0.14
0 mm	Back	18700 (1rb50%)	1	0.877	0.425	15.43	16	1.14025	1.00	0.48	-0.04
0 mm	Back	18900 (1rb50%)	1	0.891	0.419	15.6	16	1.096478	0.98	0.46	0.03
0 mm	Top	18700 (1rb50%)	1	0.744	0.326	15.43	16	1.14025	0.85	0.37	0
0 mm	Top	18900 (1rb50%)	1	0.756	0.319	15.6	16	1.096478	0.83	0.35	0.1
0 mm	Top	19100 (100rb)	1	0.793	0.327	15.62	16	1.09144	0.87	0.36	0
0 mm	Back	19100 (100rb)	1	0.907	0.417	15.62	16	1.09144	0.99	0.46	0.1

Conclusion: PASS

Note:

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

Test Mode: E-UTRA Band 4
Sensor off

SAR Test Record For LTE Band4

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conducted Power (dBm)	Tune up Power (dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g(W/kg)	power drift
14 mm	Back	20300 (1rb50%)	1	0.717	0.39	22.7	24	1.348963	0.97	0.53	0.06
14 mm	Top	20300 (1rb50%)	1	0.669	0.353	22.7	24	1.348963	0.90	0.48	0.06
13 mm	Right	20300 (1rb50%)	1	0.205	0.108	22.7	24	1.348963	0.28	0.15	0.08
14 mm	Back	20300 (50RB mid)	1	0.673	0.366	21.5	23	1.412538	0.95	0.52	-0.01
14 mm	Top	20050 (1rb50%)	1	0.658	0.347	22.56	24	1.393157	0.92	0.48	0.01
14 mm	Top	20175 (1rb50%)	1	0.663	0.35	22.4	24	1.44544	0.96	0.51	-0.03
14 mm	Back	20050 (1rb50%)	1	0.671	0.358	22.56	24	1.393157	0.93	0.50	-0.01
14 mm	Back	20175 (1rb50%)	1	0.67	0.364	22.4	24	1.44544	0.97	0.53	-0.04
14 mm	Top	20300 (100rb)	1	0.653	0.341	21.4	23	1.44544	0.94	0.49	-0.07
14 mm	Back	20300 (100rb)	1	0.649	0.338	21.4	23	1.44544	0.94	0.49	-0.13

Conclusion: PASS

Note:

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

Sensor on
SAR Test Record For LTE Band4

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conduct ed Power (dBm)	Tune up Power (dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g(W/kg)	power drift
0mm	Top	20300 (1rb50%)	1	0.881	0.401	13.73	15	1.339677	1.18	0.54	0.16
0mm	Back	20300 (1rb50%)	1	0.693	0.311	13.73	15	1.339677	0.93	0.42	0.11
0mm	Right	20300 (1rb50%)	1	0.213	0.101	13.73	15	1.339677	0.29	0.14	0.16
0mm	Top	20300 (50rb mid)	1	0.844	0.367	13.61	15	1.377209	1.16	0.51	-0.01
0mm	Top	20050 (1rb50%)	1	0.855	0.391	13.66	15	1.361445	1.16	0.53	0.06
0mm	Top	20175 (1rb50%)	1	0.879	0.395	13.79	15	1.321296	1.16	0.52	-0.01
0mm	Back	20050 (1rb50%)	1	0.633	0.309	13.66	15	1.361445	0.86	0.42	0.07
0mm	Back	20175 (1rb50%)	1	0.658	0.301	13.79	15	1.321296	0.87	0.40	-0.05
0mm	Top	20300 (100rb)	1	0.832	0.357	13.64	15	1.367729	1.14	0.49	-0.07
0mm	Back	20300 (100rb)	1	0.651	0.297	13.64	15	1.367729	0.89	0.41	-0.13

Conclusion: PASS

Note:

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

Test Mode: E-UTRA Band 5
Sensor off
SAR Test Record For LTE Band5

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conducted Power(dBm)	Tune up Power(dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g(W/kg)	power drift
14 mm	Back	20600 (1rb50%)	1	0.393	0.259	23.27	24	1.183042	0.46	0.31	0.01
14 mm	Top	20600 (1rb50%)	1	0.277	0.189	23.27	24	1.183042	0.33	0.22	0.06
13 mm	Right	20600 (1rb50%)	1	0.115	0.0766	23.27	24	1.183042	0.14	0.09	0.2
14 mm	Back	20600 (25rb mid)	1	0.389	0.257	22.19	23	1.20504	0.47	0.31	0.03

Conclusion: PASS

Note:

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

Sensor on
SAR Test Record For LTE Band5

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conducted Power (dBm)	Tune up Power (dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g(W/kg)	power drift
0mm	Back	20600 (1rb50%)	1	0.912	0.401	19.33	20	1.16681	1.06	0.47	0.12
0mm	Top	20600 (1rb50%)	1	0.577	0.298	19.33	20	1.16681	0.67	0.35	0.11
0mm	Right	20600 (1rb50%)	1	0.475	0.196	19.33	20	1.16681	0.55	0.23	-0.09
0mm	Back	20600 (25rb mid)	1	0.893	0.376	19.07	20	1.2388	1.11	0.47	0.03
0mm	Back	20450 (1rb50%)	1	0.833	0.389	19.23	20	1.193988	0.99	0.46	-0.01
0mm	Back	20525 (1rb50%)	1	0.821	0.394	19.25	20	1.188502	0.98	0.47	0.03
0mm	Back	20600 (50rb)	1	0.889	0.368	19.26	20	1.185769	1.05	0.44	0.12

Conclusion: PASS

Note:

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

Test Mode: E-UTRA Band 7
Sensor off

SAR Test Record For LTE Band7

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conducted Power (dBm)	Tune up Power (dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g(W/kg)	power drift
14 mm	Back	21100 (1rb50%)	1	0.867	0.408	23.05	24	1.244515	1.08	0.51	-0.01
14 mm	Top	21100 (1rb50%)	1	0.912	0.487	23.05	24	1.244515	1.13	0.61	0.08
13 mm	Right	21100 (1rb50%)	1	0.797	0.382	23.05	24	1.244515	0.99	0.48	0.08
14 mm	Top	21100 (50rb mid)	1	0.759	0.388	21.39	23	1.448772	1.10	0.56	0.03
14 mm	Back	20850 (1rb50%)	1	0.833	0.389	22.73	24	1.339677	1.12	0.52	-0.02
14 mm	Back	2135 (1rb50%)	1	0.821	0.397	22.66	24	1.361445	1.12	0.54	0.01
14 mm	Top	20850 (1rb50%)	1	0.819	0.478	22.73	24	1.339677	1.10	0.64	-0.03
14 mm	Top	21350 (1rb50%)	1	0.804	0.475	22.66	24	1.361445	1.09	0.65	0.01
14 mm	Back	21100 (100rb)	1	0.801	0.379	21.56	23	1.393157	1.12	0.53	0.11
14 mm	Top	21100 (100rb)	1	0.801	0.447	21.56	23	1.393157	1.12	0.62	-0.12

Conclusion: PASS

Note:

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

Sensor on
SAR Test Record For LTE Band7

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conducted Power(dBm)	Tune up Power (dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g(W/kg)	power drift
0mm	Back	21100 (1rb50%)	1	0.921	0.512	13.11	14	1.227439	1.13	0.63	0.12
0mm	Top	21100 (1rb50%)	1	0.699	0.289	13.11	14	1.227439	0.86	0.35	0
0mm	Right	21100 (1rb50%)	1	0.417	0.215	13.11	14	1.227439	0.51	0.26	0.19
0mm	Top	21100 (50rb mid)	1	0.906	0.483	13.07	14	1.238797	1.12	0.60	0.03
0mm	Back	20850 (1rb50%)	1	0.897	0.497	13.03	14	1.250259	1.12	0.62	0.03
0mm	Back	21350 (1rb50%)	1	0.888	0.503	13.01	14	1.25603	1.12	0.63	0.01
0mm	Top	20850 (1rb50%)	1	0.636	0.276	13.03	14	1.250259	0.80	0.35	0.03
0mm	Top	21350 (1rb50%)	1	0.622	0.274	13.01	14	1.25603	0.78	0.34	-0.11
0mm	Back	21100 (100rb)	1	0.897	0.473	13.05	14	1.244515	1.12	0.59	0.11
0mm	Top	21100 (100rb)	1	0.679	0.276	13.05	14	1.244515	0.85	0.34	-0.12

Conclusion: PASS

Note:

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

Test Mode: E-UTRA Band 12
Sensor off
SAR Test Record For LTE Band12

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conducted Power(dBm)	Tune up Power (dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g(W/kg)	power drift
14 mm	Back	23095 (1rb50%)	1	0.306	0.211	22.42	23.5	1.282330583	0.39	0.27	0.2
14 mm	Top	23095 (1rb50%)	1	0.24	0.162	22.42	23.5	1.282330583	0.31	0.21	0.09
13 mm	Right	23095 (1rb50%)	1	0.066	0.044	22.42	23.5	1.282330583	0.08	0.06	0.2
14 mm	Back	23095 (25rb mid)	1	0.302	0.208	20.97	22.5	1.422328787	0.43	0.30	0.05

Conclusion: PASS

Note:

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

Sensor on
SAR Test Record For LTE Band12

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conducted Power(dBm)	Tune up Power (dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g(W/kg)	power drift
0mm	Back	23095 (1rb50%)	1	0.866	0.447	20.15	21	1.216186001	1.05	0.54	0.08
0mm	Top	23095 (1rb50%)	1	0.752	0.305	20.15	21	1.216186001	0.91	0.37	0.02
0mm	Right	23095 (1rb50%)	1	0.253	0.131	20.15	21	1.216186001	0.31	0.16	0.15
0mm	Back	23095 (25rb mid)	1	0.851	0.428	20.12	21	1.224616199	1.04	0.52	0.05
0mm	Back	23060 (1rb50%)	1	0.853	0.425	20.11	21	1.227439231	1.05	0.52	0.05
0mm	Back	23130 (1rb50%)	1	0.841	0.436	20.09	21	1.233104833	1.04	0.54	0.01
0mm	Top	23060 (1rb50%)	1	0.741	0.291	20.11	21	1.227439231	0.91	0.36	-0.03
0mm	Top	23130 (1rb50%)	1	0.749	0.297	20.09	21	1.233104833	0.92	0.37	-0.01
0mm	Back	23095 (50rb)	1	0.844	0.438	20.07	21	1.238796587	1.05	0.54	0.01
0mm	Top	23095 (50rb)	1	0.743	0.294	20.07	21	1.238796587	0.92	0.36	-0.03

Conclusion: PASS

Note:

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

Test Mode: E-UTRA Band 13
Sensor off
SAR Test Record For LTE Band13

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conducted Power(dBm)	Tune up Power (dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g(W/kg)	power drift
14 mm	Back	23230 (1rb50%)	1	0.307	0.208	22.37	24	1.455459	0.45	0.30	0.07
14 mm	Top	23230 (1rb50%)	1	0.309	0.203	22.37	24	1.455459	0.45	0.30	0.12
13 mm	Right	23230 (1rb50%)	1	0.083	0.055	22.37	24	1.455459	0.12	0.08	0.08
14 mm	Top	23230 (25rb mid)	1	0.273	0.182	21.22	23	1.50661	0.41	0.27	0.03

Conclusion: PASS

Note:

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

Sensor on
SAR Test Record For LTE Band13

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conducted Power (dBm)	Tune up Power (dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g(W/kg)	power drift
0mm	Back	23230 (1rb50%)	1	0.713	0.474	19.21	20	1.199499	0.86	0.57	0.03
0mm	Top	23230 (1rb50%)	1	0.566	0.298	19.21	20	1.199499	0.68	0.36	0.1
0mm	Right	23230 (1rb50%)	1	0.333	0.183	19.21	20	1.199499	0.40	0.22	0.04
0mm	Back	23230 (25rb mid)	1	0.687	0.314	19.11	20	1.227439	0.84	0.39	0.03
0mm	Back	23230 (50rb)	1	0.666	0.311	18.98	20	1.264736	0.84	0.39	0.12

Conclusion: PASS

Note:

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

Test Mode: E-UTRA Band 17
Sensor off
SAR Test Record For LTE Band17

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conducted Power (dBm)	Tune up Power (dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g(W/kg)	power drift
14 mm	Back	23780 (1rb50%)	1	0.264	0.185	22.81	24	1.315224832	0.35	0.24	0.19
14 mm	Top	23780 (1rb50%)	1	0.269	0.178	22.81	24	1.315224832	0.35	0.23	0.15
13 mm	Right	23780 (1rb50%)	1	0.0547	0.0372	22.81	24	1.315224832	0.07	0.05	0.14
14 mm	Top	23780 (25rb mid)	1	0.272	0.18	21.63	23	1.370881766	0.37	0.25	0.14

Conclusion: PASS

Note:

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

Sensor on
SAR Test Record For LTE Band17

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conducted Power (dBm)	Tune up Power (dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g(W/kg)	power drift
0 mm	Back	23780 (1rb50%)	1	0.824	0.445	19.56	20	1.106623784	0.91	0.49	0.15
0 mm	Top	23780 (1rb50%)	1	0.832	0.328	19.56	20	1.106623784	0.92	0.36	0.08
0 mm	Right	23780 (1rb50%)	1	0.242	0.128	19.56	20	1.106623784	0.27	0.14	0.07
0 mm	Top	23780 (25rb mid)	1	0.813	0.423	19.51	20	1.119437883	0.91	0.47	0.14
0 mm	Back	23790 (1rb50%)	1	0.803	0.417	19.49	20	1.124604974	0.90	0.47	-0.01
0 mm	Back	23800 (1rb50%)	1	0.816	0.423	19.47	20	1.129795915	0.92	0.48	0.03
0 mm	Top	23790 (1rb50%)	1	0.803	0.306	19.49	20	1.124604974	0.90	0.34	0.1
0 mm	Top	23800 (1rb50%)	1	0.811	0.315	19.47	20	1.129795915	0.92	0.36	-0.11
0 mm	Top	23780 (50rb)	1	0.815	0.426	19.52	20	1.116863248	0.91	0.48	0.14

Conclusion: PASS

Note:

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

Test Mode: E-UTRA Band 38
Sensor off

SAR Test Record For LTE Band38

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conducted Power (dBm)	Tune up Power (dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g(W/kg)	power drift
14 mm	Back	37850 (1rb50%)	1	0.212	0.116	22.5	24	1.412537545	0.30	0.16	-0.08
14 mm	Top	37850 (1rb50%)	1	0.587	0.269	22.5	24	1.412537545	0.83	0.38	0.12
13 mm	Right	37850 (1rb50%)	1	0.275	0.134	22.5	24	1.412537545	0.39	0.19	0.02
14 mm	Top	37850 (50rb mid)	1	0.555	0.254	21.4	23	1.445439771	0.80	0.37	0.07
14 mm	Top	38000 (1rb50%)	1	0.539	0.227	22.19	24	1.517050367	0.82	0.34	-0.01
14 mm	Top	38150 (1rb50%)	1	0.545	0.241	22.18	24	1.52054753	0.83	0.37	0.04
14 mm	Top	37850 (100rb)	1	0.547	0.239	21.37	23	1.455459081	0.80	0.35	0.07

Conclusion: PASS

Note:

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

Sensor on
SAR Test Record For LTE Band38

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conducted Power (dBm)	Tune up Power (dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g(W/kg)	power drift
0 mm	Top	37850 (1rb50%)	1	0.963	0.433	15.12	16	1.224616199	1.18	0.53	0.11
0 mm	Back	37850 (1rb50%)	1	0.813	0.322	15.12	16	1.224616199	1.00	0.39	0.01
0 mm	Right	37850 (1rb50%)	1	0.615	0.257	15.12	16	1.224616199	0.75	0.31	0.2
0 mm	Top	37850 (50rb mid)	1	0.949	0.427	15.08	16	1.235947433	1.17	0.53	0.07
0 mm	Top	38000 (1rb50%)	1	0.957	0.415	15.1	16	1.230268771	1.18	0.51	-0.03
0 mm	Top	38150 (1rb50%)	1	0.953	0.405	15.11	16	1.227439231	1.17	0.50	0.11
0 mm	Back	38000 (1rb50%)	1	0.793	0.308	15.1	16	1.230268771	0.98	0.38	0.01
0 mm	Back	38150 (1rb50%)	1	0.797	0.31	15.11	16	1.227439231	0.98	0.38	0.02
0 mm	Top	37850 (100rb)	1	0.943	0.407	15.07	16	1.238796587	1.17	0.50	-0.03
0 mm	Back	37850 (100rb)	1	0.789	0.308	15.07	16	1.238796587	0.98	0.38	0.01
Conclusion: PASS											
Note: Factor= Max. Scaled AV Power(W)/Measured Power(W) Scaled SAR-1= Measured SAR*Factor Scaled-Final= Scaled SAR-1*(1/Duty Cycle)											

Test Mode: E-UTRA Band 41
Sensor off
SAR Test Record For LTE Band41

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conducted Power (dBm)	Tune up Power (dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g(W/kg)	power drift
14 mm	Back	39750 (1rb50%)	1	0.303	0.144	22.69	24	1.352073	0.41	0.19	0.14
14 mm	Top	39750 (1rb50%)	1	0.554	0.257	22.69	24	1.352073	0.75	0.35	-0.19
13 mm	Right	39750 (1rb50%)	1	0.328	0.158	22.69	24	1.352073	0.44	0.21	-0.03
14 mm	Top	39750 (50rb mid)	1	0.593	0.275	21.48	23	1.419058	0.84	0.39	-0.19
14 mm	Top	40620 (50rb mid)	1	0.567	0.264	21.32	23	1.472313	0.83	0.39	-0.03
14 mm	Top	41490 (50rb mid)	1	0.557	0.271	21.33	23	1.468926	0.82	0.40	-0.01
14 mm	Top	39750 (100rb)	1	0.544	0.268	21.55	23	1.396368	0.76	0.37	0.02

Conclusion: PASS

Note:

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

Sensor on
SAR Test Record For LTE Band41

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conducted Power (dBm)	Tune up Power (dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g(W/kg)	power drift
0 mm	Right	39750 (1rb50%)	1	0.932	0.423	13.67	14	1.078947	1.01	0.46	0.12
0 mm	Back	39750 (1rb50%)	1	0.587	0.231	13.67	14	1.078947	0.63	0.25	0.14
0 mm	Top	39750 (1rb50%)	1	0.488	0.178	13.67	14	1.078947	0.53	0.19	0.12
0 mm	Right	39750 (50rb mid)	1	0.921	0.413	13.65	14	1.083927	1.00	0.45	-0.19
0 mm	Right	40620 (1rb50%)	1	0.899	0.401	13.55	14	1.109175	1.00	0.44	0.11
0 mm	Right	41490 (1rb50%)	1	0.904	0.411	13.61	14	1.093956	0.99	0.45	0.13
0 mm	Right	39750 (100rb)	1	0.907	0.402	13.63	14	1.08893	0.99	0.44	0.12

Conclusion: PASS

Note:

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

Test Mode: E-UTRA Band 66
Sensor off
SAR Test Record For LTE Band66

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conducted Power(dBm)	Tune up Power (dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g(W/kg)	power drift
14 mm	Back	132072 (1rb0)	1	0.592	0.321	22.11	23.5	1.377209	0.82	0.44	0.05
14 mm	Top	132072 (1rb0)	1	0.677	0.352	22.11	23.5	1.377209	0.93	0.48	0.18
13 mm	Right	132072 (1rb0)	1	0.12	0.0644	22.11	23.5	1.377209	0.17	0.09	0.06
14 mm	Top	132072 (50rb mid)	1	0.679	0.352	21.02	22.5	1.406048	0.95	0.49	0.12
14 mm	Back	132322 (1rb0)	1	0.584	0.266	21.99	23.5	1.415794	0.83	0.38	0.01
14 mm	Back	132572 (1rb0)	1	0.59	0.315	21.64	23.5	1.534617	0.91	0.48	0.12
14 mm	Top	132322 (50rb mid)	1	0.579	0.248	21.06	22.5	1.393157	0.81	0.35	-0.01
14 mm	Top	132572 (50rb mid)	1	0.543	0.209	21.06	22.5	1.393157	0.76	0.29	0.03
14 mm	Back	132072 (100rb)	1	0.438	0.218	20.97	22.5	1.422329	0.62	0.31	0.05
14 mm	Top	132072 (100rb)	1	0.499	0.255	20.97	22.5	1.422329	0.71	0.36	0.12

Conclusion: PASS

Note:

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

Sensor on

SAR Test Record For LTE Band66

Test distance	Test Position	Test CH	Duty Cycle	Measure SAR 1g(W/kg)	Measure SAR 10g(W/kg)	Conducted Power (dBm)	Tune up Power (dBm)	Factor	Scaled Final SAR 1g(W/kg)	Scaled Final SAR 10g(W/kg)	power drift
0 mm	Top	132072 (1rb0)	1	0.913	0.458	13.21	14	1.199499	1.10	0.55	0.01
0 mm	Back	132072 (1rb0)	1	0.811	0.359	13.21	14	1.199499	0.97	0.43	0
0 mm	Right	132072 (1rb0)	1	0.651	0.245	13.21	14	1.199499	0.78	0.29	0.12
0 mm	Top	132072 (50rb mid)	1	0.902	0.437	13.18	14	1.207814	1.09	0.53	0.12
0 mm	Top	132322 (1rb0)	1	0.904	0.449	13.18	14	1.207814	1.09	0.54	0.01
0 mm	Top	132572 (1rb0)	1	0.902	0.451	13.16	14	1.213389	1.09	0.55	0.03
0 mm	Back	132322 (1rb0)	1	0.801	0.343	13.18	14	1.207814	0.97	0.41	0.07
0 mm	Back	132572 (1rb0)	1	0.81	0.351	13.16	14	1.213389	0.98	0.43	0.1
0 mm	Top	132072 (100rb)	1	0.893	0.443	13.17	14	1.210598	1.08	0.54	0.03
0 mm	Back	132072 (100rb)	1	0.796	0.337	13.17	14	1.210598	0.96	0.41	0.07

Conclusion: PASS

Note:

Factor= Max. Scaled AV Power(W)/Measured Power(W)

Scaled SAR-1= Measured SAR*Factor

Scaled-Final= Scaled SAR-1*(1/Duty Cycle)

8.4.SAR Measurement Variability

SAR measurement variability must be assessed for each frequency band, which is determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media are required for SAR measurements in a frequency band, the variability measurement procedures should be applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue equivalent medium.

The following procedures are applied to determine if repeated measurements are required.

- 1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg; steps 2) through 4) do not apply.
- 2) When the original highest measured SAR is ≥ 0.80 W/kg, repeat that measurement once.
- 3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45 W/kg ($\sim 10\%$ from the 1-g SAR limit).
- 4) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20

SAR Measurement Variability for Body (1g)

Band	CH	set up	original SAR (1g W/kg)	first repeat SAR (1g W/kg)	ratio
GSM850	128	0mm-Back	0.91	0.87	1.044674
3GBand2	9538	0mm-Top	0.91	0.89	1.030474
4GBand2	19100	0mm-Back	0.93	0.91	1.024309
4GBand2	19100	0mm-Top	0.80	0.79	1.016435
4GBand4	20300	0mm-Top	0.88	0.83	1.066586
4GBand5	20600	0mm-Back	0.91	0.86	1.059233
4GBand7	21100	15mm-Top	0.91	0.88	1.041096
4GBand7	21100	15mm-Back	0.87	0.85	1.015222
4GBand7	21100	0mm-Back	0.92	0.88	1.043035
4GBand12	23095	0mm-Back	0.87	0.82	1.062577
4GBand17	23780	0mm-Top	0.83	0.80	1.038702
4GBand17	23780	0mm-Back	0.82	0.79	1.037783
4GBand38	37850	0mm-Top	0.96	0.92	1.043337
4GBand38	37850	0mm-Back	0.81	0.78	1.049032
4GBand41	39750	0mm-Right	0.93	0.90	1.039019
4GBand66	132072	0mm-Top	0.91	0.89	1.026997
4GBand66	132072	0mm-Back	0.81	0.78	1.037084
WiFi5G	120	0mm-Back	0.87	0.86	1.018713
WiFi5G	149	0mm-Back	0.88	0.86	1.033918

8.5.Evaluation of Simultaneous

8.5.1. Introduction

The following procedures adopted from “FCC SAR Considerations for Cell Phones with Multiple Transmitters” are applicable to handsets with built-in unlicensed transmitters such as WLAN and Bluetooth devices which may simultaneously transmit with the licensed transmitter. KDB 447498 D01 provides two procedures for determining simultaneous transmission SAR test exclusion: Sum of SAR and SAR to Peak Location Ratio (SPLSR)

8.5.2. Sum of SAR

To qualify for simultaneous transmission SAR test exclusion based upon Sum of SAR the sum of the reported standalone SARs for all simultaneously transmitting antennas shall be below the applicable standalone SAR limit. If the sum of the SARs is above the applicable limit then simultaneous transmission SAR test exclusion may still apply if the requirements of the SAR to Peak Location Ratio (SPLSR) evaluation are met.

8.5.3. SAR to Peak Location Ratio (SPLSR)

KDB 447498 D01 General RF Exposure Guidance explains how to calculate the SAR to Peak Location Ratio (SPLSR) between pairs of simultaneously transmitting antennas:

$$\text{SPLSR} = (\text{SAR1} + \text{SAR2})^{1.5} / R_i$$

Where:

SAR1 is the highest reported or estimated SAR for the first of a pair of simultaneous transmitting antennas, in a specific test operating mode and exposure condition.

SAR2 is the highest reported or estimated SAR for the second of a pair of simultaneous transmitting antennas, in the same test operating mode and exposure condition as the first.

R_i is the separation distance between the pair of simultaneous transmitting antennas. When the SAR is measured, for both antennas in the pair, it is determined by the actual x, y and z coordinates in the 1-g SAR for each SAR peak location, based on the extrapolated and interpolated result in the zoom scan measurement, using the formula of

$$[(x1-x2)^2 + (y1-y2)^2 + (z1-z2)^2]$$

In order for a pair of simultaneous transmitting antennas with the sum of 1-g SAR > 1.6 W/kg to qualify for exemption from Simultaneous Transmission SAR measurements, it has to satisfy the condition of :

$$(\text{SAR1} + \text{SAR2})^{1.5} / R_i \leq 0.04$$

When an individual antenna transmits at on two bands simultaneously, the sum of the highest reported SAR for the frequency bands should be used to determine SAR1 or SAR2. When SPLSR is necessary, the smallest distance between the peak SAR locations for the antenna pair with respect to the peaks from each antenna should be used.

8.5.4. Simultaneous Transmission Description

NO	Type
1	WWAN + WLAN 2.4GHz
2	WWAN + WLAN 2.4GHz + BT
3	WWAN + WLAN 5GHz
4*	WWAN + WLAN 5GHz + BT

Note: According to exploratory test, * means worse mode and reported

8.5.5. SPLSR Evaluation and Analysis

According to KDB447498 D01, When the sum of SAR is larger than the limit, SAR test exclusion is determined by the SAR to peak location separation ratio(SPLSR). When the SAR to peak location ratio for each pair of antennas is $\leq 1\text{-g } 0.04$ and $10\text{-g } 0.10$, simultaneous SAR evaluation is not required. When SAR is measured for both antennas in the pair, the peak location separation distance is computed by the following formula:

$$\text{Distance}_{\text{Tx1-Tx2}} = R_i = \sqrt{(x_1-x_2)^2 + (y_1-y_2)^2 + (z_1-z_2)^2}$$

$$\text{SPLS Ratio} = (\text{SAR}_1 + \text{SAR}_2)^{1.5} / R_i$$

8.5.6. Evaluation of Simultaneous

Test Position	Band	WWAN (1g W/kg)	BT(1g W/kg)	WLAN 2.4G (1g W/kg)	WLAN 5G (1g W/kg)	Pair SAR of 2.4G+BT+WWAN (1g W/kg) (1)	sum > 1.6W/kg (1)	Pair SAR of WWAN+BT+5G (1g W/kg) (2)	sum > 1.6W/kg (2)	Pair SAR of 2.4G+BT+WWAN (1g W/kg) (1)	Distance (mm)	SPLSR (1)	Pair SAR of WWAN+BT+5G (1g W/kg) (2)	Distance (mm)	SPLSR (2)
Back	GSM850	1.12	0.40	0.80	1.09	2.32	YES	2.62	YES	2.32	118.4	0.030	2.62	120.1	0.035
	GSM1900	0.85	0.40	0.80	1.09	2.05	YES	2.35	YES	2.05	115.6	0.025	2.35	114.7	0.031
	3G Band2	1.00	0.40	0.80	1.09	2.20	YES	2.49	YES	2.20	104.3	0.031	2.49	111.3	0.035
	3G Band4	0.79	0.40	0.80	1.09	1.99	YES	2.29	YES	1.99	117.8	0.024	2.29	114.5	0.030
	3G Band5	0.97	0.40	0.80	1.09	2.17	YES	2.46	YES	2.17	113.7	0.028	2.46	119.3	0.032
	LTE Band2	1.00	0.40	0.80	1.09	2.20	YES	2.50	YES	2.20	115.7	0.028	2.50	116.4	0.034
	LTE Band4	0.93	0.40	0.80	1.09	2.13	YES	2.43	YES	2.13	112.3	0.028	2.43	113.7	0.033
	LTE Band5	1.06	0.40	0.80	1.09	2.27	YES	2.56	YES	2.27	103.4	0.034	2.56	120.1	0.035
	LTE Band7	1.13	0.40	0.80	1.09	2.33	YES	2.63	YES	2.33	109.3	0.033	2.63	120.1	0.035
	LTE Band12	1.05	0.40	0.80	1.09	2.25	YES	2.55	YES	2.25	116.3	0.029	2.55	117.5	0.035
	LTE Band13	0.86	0.40	0.80	1.09	2.06	YES	2.35	YES	2.06	97.4	0.030	2.35	103.4	0.035
	LTE Band17	0.91	0.40	0.80	1.09	2.11	YES	2.41	YES	2.11	103.5	0.030	2.41	107.3	0.035
	LTE Band38	1.00	0.40	0.80	1.09	2.20	YES	2.49	YES	2.20	107.9	0.030	2.49	112.5	0.035
	LTE Band41	0.63	0.40	0.80	1.09	1.83	YES	2.13	YES	1.83	104.9	0.024	2.13	105.6	0.029
	LTE Band66	0.97	0.40	0.80	1.09	2.17	YES	2.47	YES	2.17	110.3	0.029	2.47	111.2	0.035

Test Position	Band	WWAN (1g W/kg)	BT (1g W/kg)	WLAN 2.4G (1g W/kg)	WLAN 5G (1g W/kg)	2.4G+BT+WWAN (1g W/kg) (1)	sum > 1.6W/kg (1)	WWAN+BT+5G (1g W/kg) (2)	sum > 1.6W/kg (2)	pair SAR of WWAN+BT+5G (1g W/kg) (2)	Distance (mm)	SPLSR
Top	GSM850	0.51	0.08	0.23	0.50	0.82	\	1.09	\	\	\	\
	GSM1900	0.71	0.08	0.23	0.50	1.02	\	1.29	\	\	\	\
	3G Band2	1.00	0.08	0.23	0.50	1.31	\	1.58	\	\	\	\
	3G Band4	0.89	0.08	0.23	0.50	1.20	\	1.47	\	\	\	\
	3G Band5	0.28	0.08	0.23	0.50	0.59	\	0.86	\	\	\	\
	LTE Band2	0.87	0.08	0.23	0.50	1.19	\	1.45	\	\	\	\
	LTE Band4	1.18	0.08	0.23	0.50	1.50	\	1.76	YES	1.76	103.4	0.023
	LTE Band5	0.67	0.08	0.23	0.50	0.99	\	1.25	\	\	\	\
	LTE Band7	1.12	0.08	0.23	0.50	1.44	\	1.70	YES	1.70	99.1	0.022
	LTE Band12	0.91	0.08	0.23	0.50	1.23	\	1.50	\	\	\	\
	LTE Band13	0.68	0.08	0.23	0.50	1.00	\	1.26	\	\	\	\
	LTE Band17	0.92	0.08	0.23	0.50	1.24	\	1.50	\	\	\	\
	LTE Band38	1.18	0.08	0.23	0.50	1.50	\	1.76	YES	1.76	98.9	0.024
	LTE Band41	0.53	0.08	0.23	0.50	0.84	\	1.11	\	\	\	\
	LTE Band66	1.10	0.08	0.23	0.50	1.41	\	1.68	YES	1.68	104.6	0.021

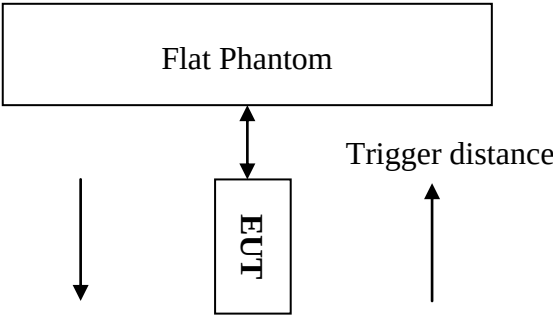
8.5.7. Conclusion

According to the above tables, the highest simultaneous transmission reported SAR values is 1.58W/kg (1g). The sum of reported SAR values is < 1.6W/kg.

9. PROXIMITY SENSOR TRIGGERING TEST

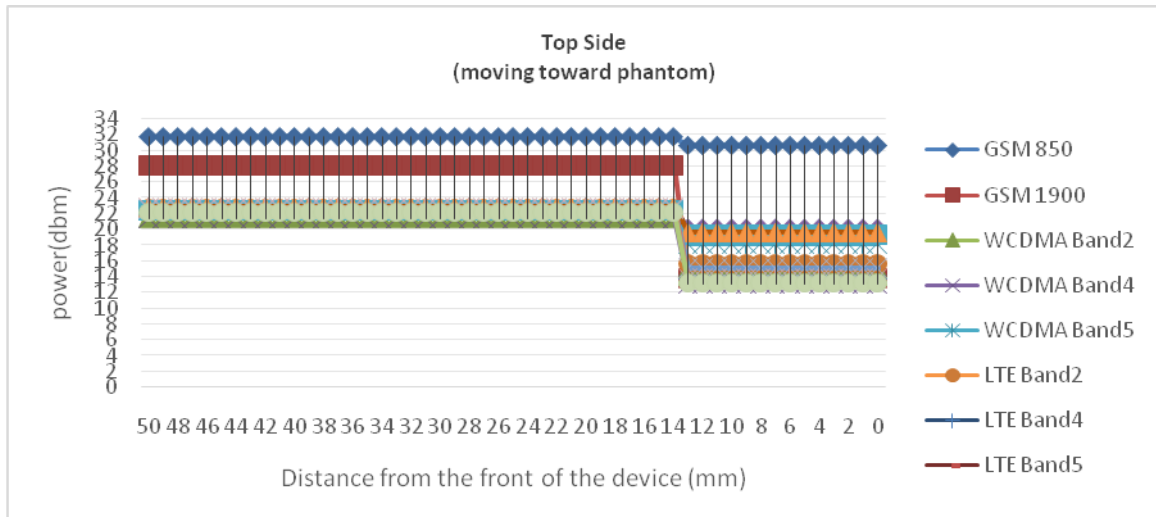
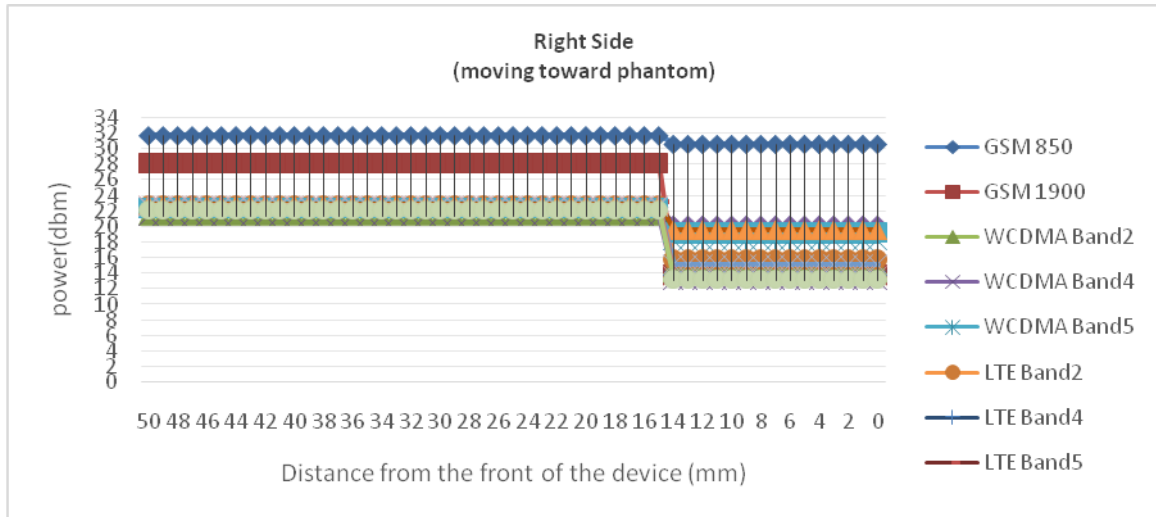
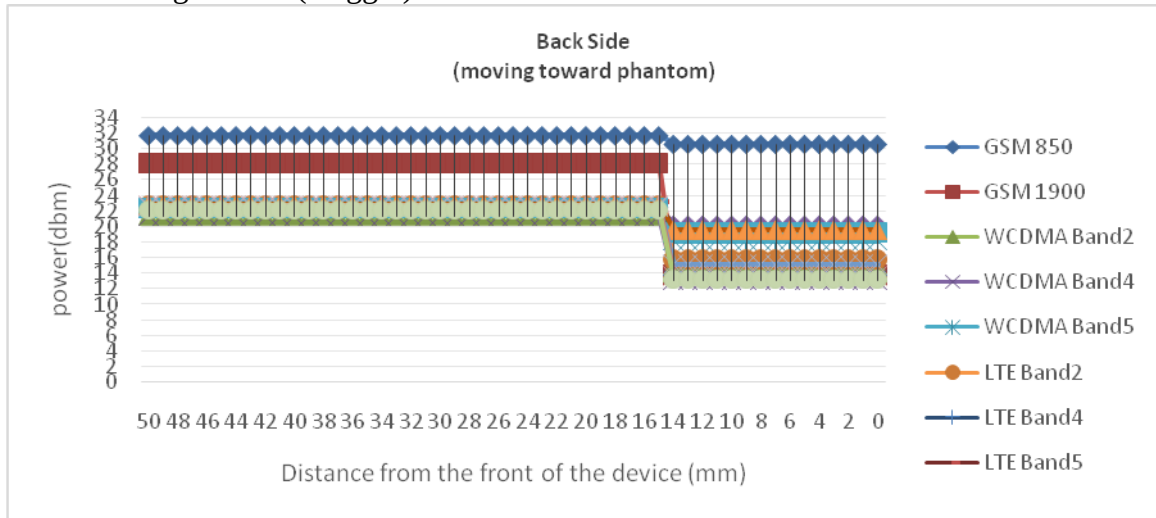
1) Proximity sensor triggering distances

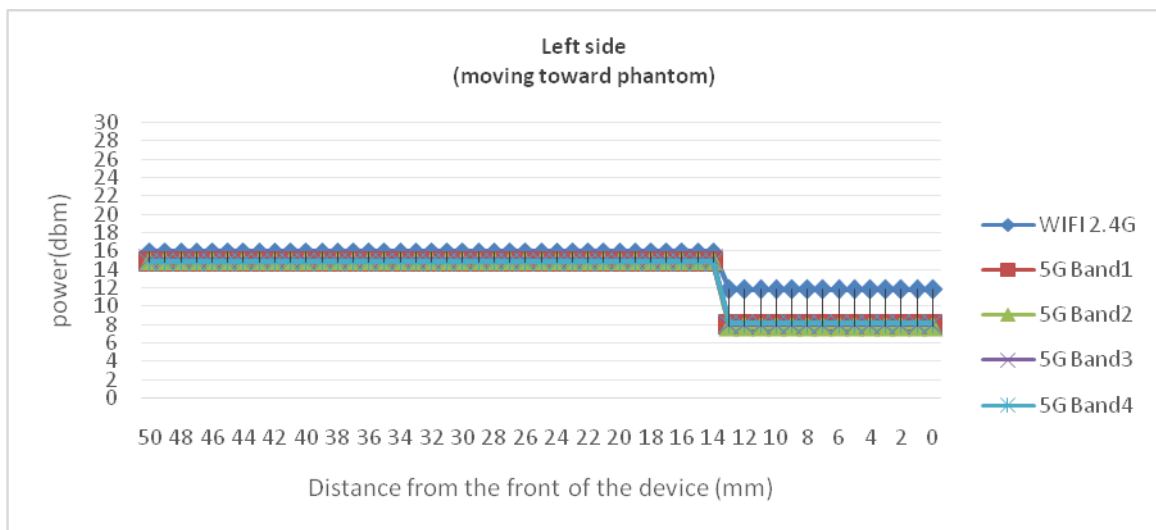
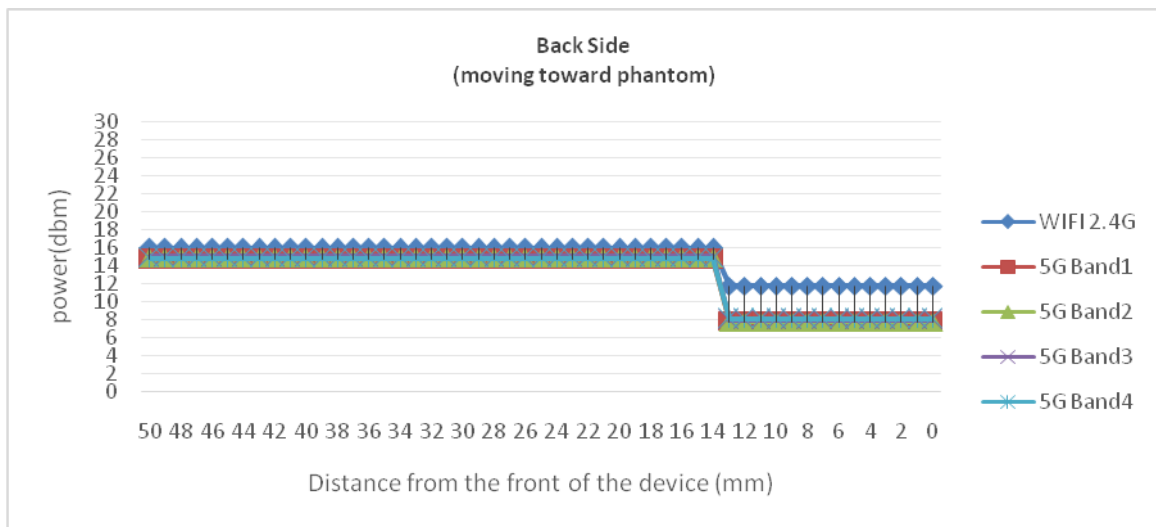
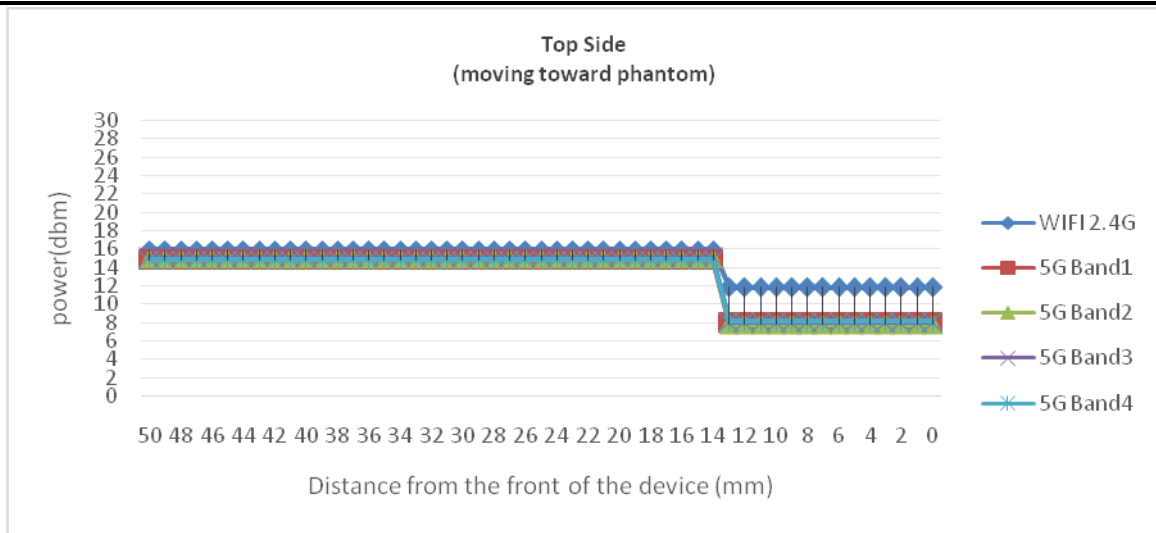
The Proximity sensor triggering was applied to WWAN/ WLAN antenna. Proximity sensor triggering distance testing was performed which the EUT moving further away from the flat phantom and EUT moving toward the flat phantom were both assessed.



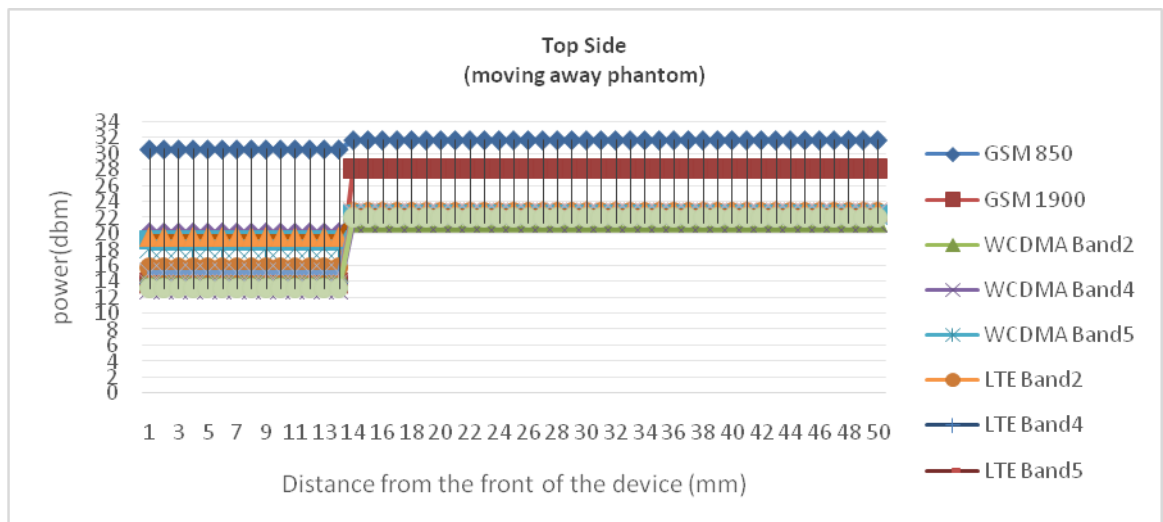
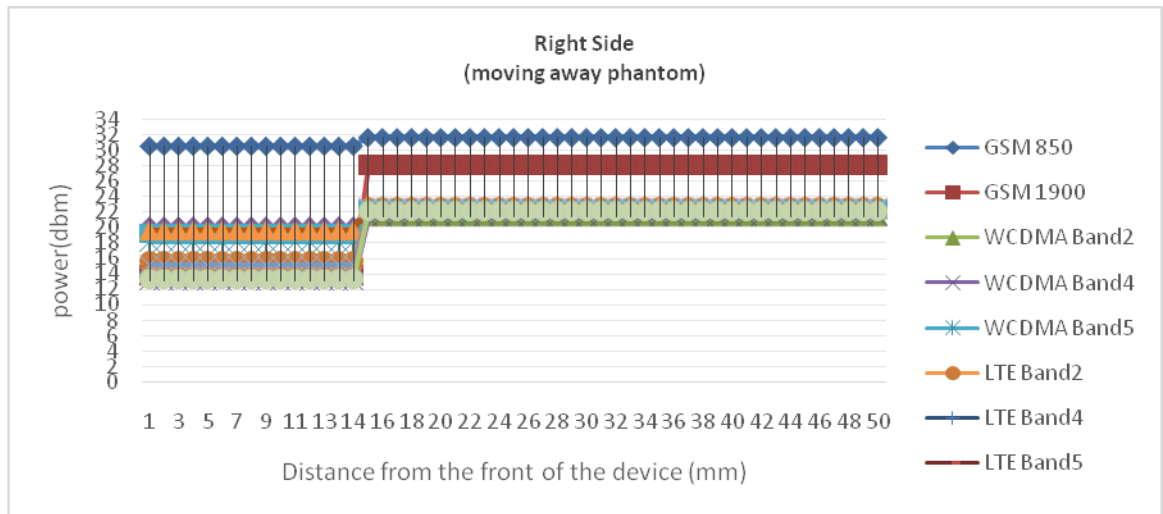
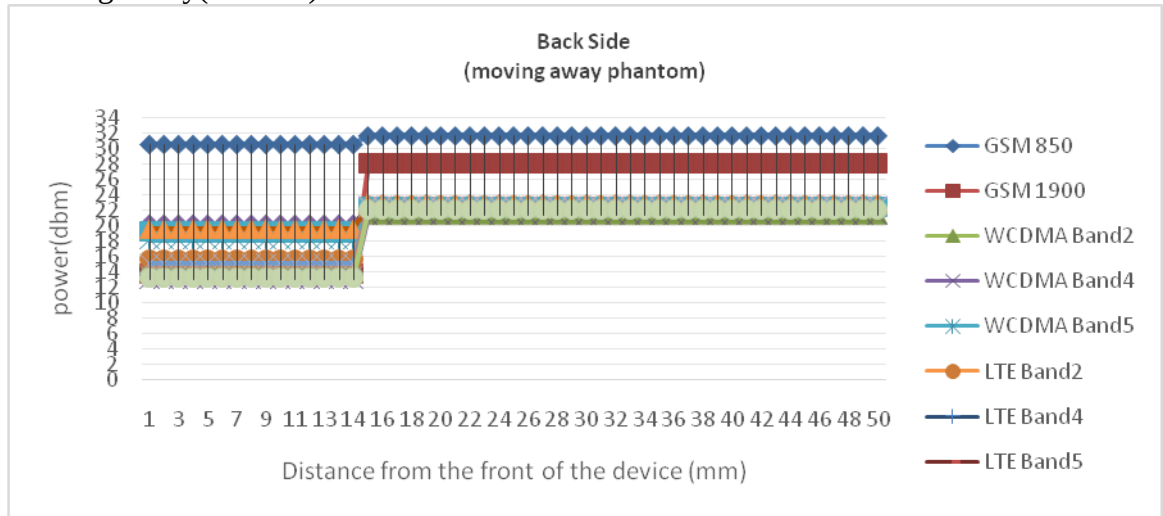
Proximity Sensor Triggering Distance(mm)						
EUT	WLAN			WWAN		
Position	Back side	Top side	Left side	Back side	Top side	Right side
Minimum	13mm	13mm	13mm	14mm	14mm	13mm
Required SAR Test	13mm	13mm	13mm	14mm	14mm	13mm

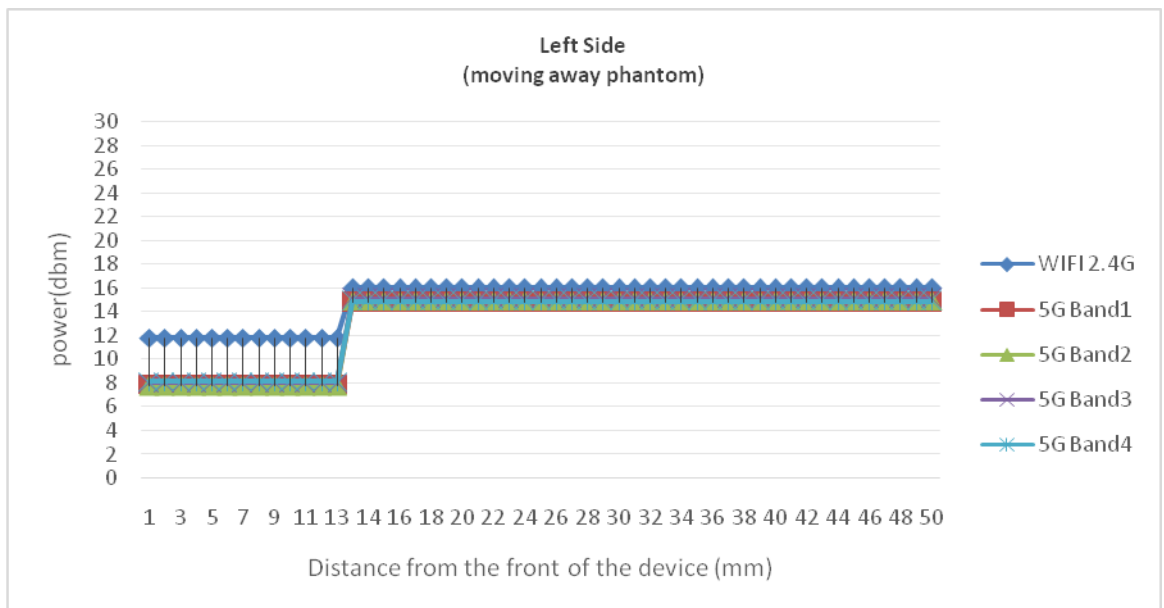
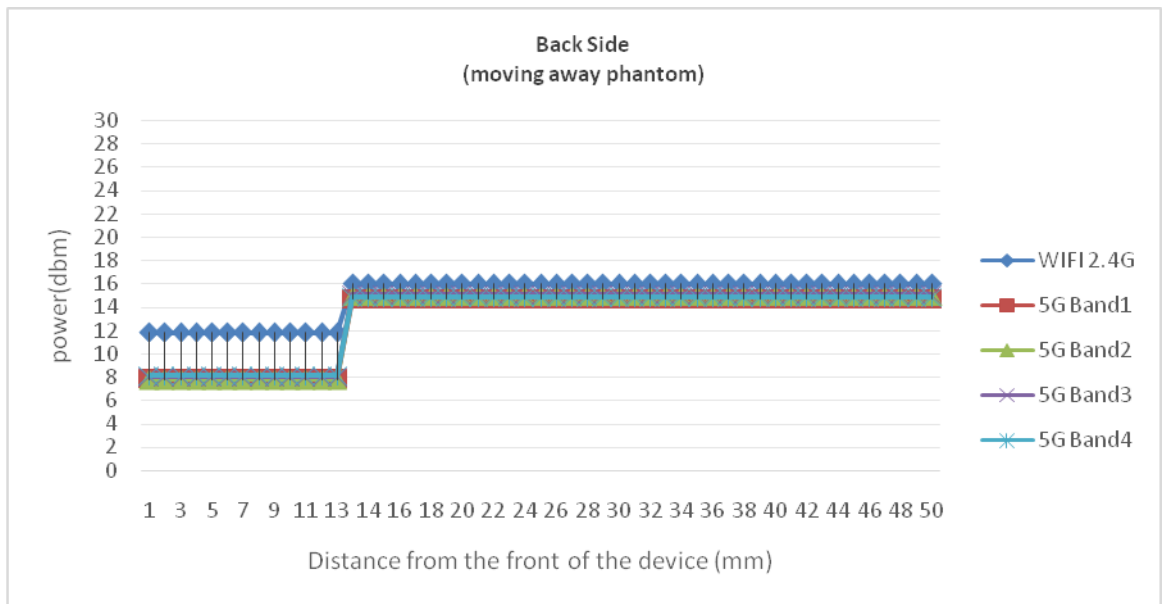
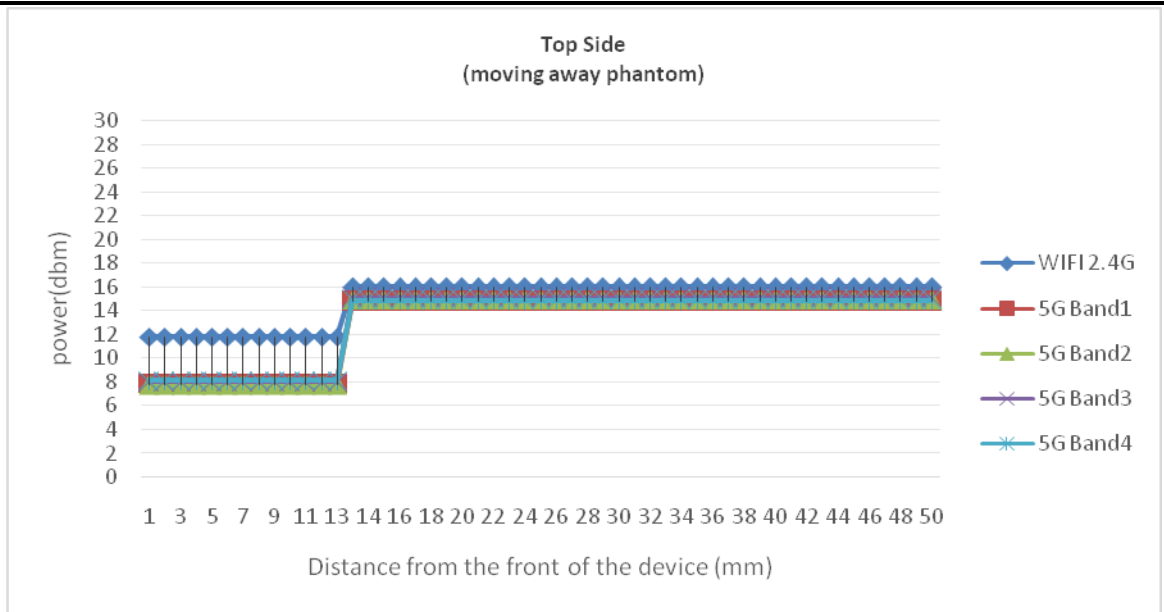
EUT Moving Toward(Trigger)the Phantom





EUT Moving Away(Release) from the Phantom





2) Proximity sensor coverage

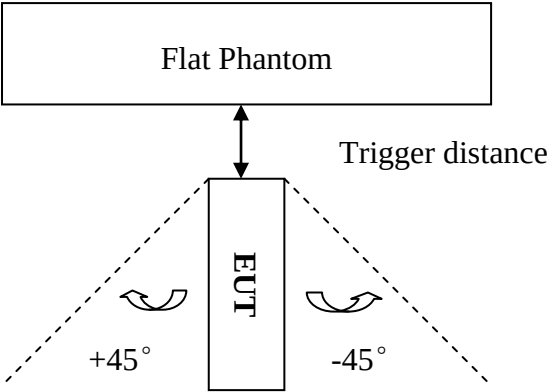
If a sensor is spatially offset from the antenna(s), it is necessary to verify sensor triggering for conditions where the antenna is next to the user but the sensor is laterally further away to ensure sensor coverage is sufficient for reducing the power to maintain compliance. For p-sensor coverage testing, the device is moved and “along the direction of maximum antenna and sensor offset”.

The proximity sensor and main antenna use same metallic electrode, so there is no spatial offset.

3) Device tilt angle influences to proximity sensor triggering

The influence of device tilt angles to proximity sensor triggering was determined by positioning each tablet edge that contains a transmitting antenna, perpendicular to the flat phantom.

Rotating the tablet around the edge next to the phantom in $\leq 10^\circ$ increments until the tablet is $\pm 45^\circ$ from the vertical position at 0° , and the maximum output power remains in the reduced mode.



Summary of Tablet Tilt Angle Influence to Proximity Sensor Triggering												
Band	Minimum trigger distance at which power reduction was maintained over $\pm 45^\circ$	Power Reduction Status										
		-45°	-35°	-25°	-15°	-5°	0°	5°	15°	25°	35°	45°
WLAN	Top Side 13mm	on	on	on	on	on	on	on	on	on	on	on