

Appendix B. SAR Tissue Specification

The brain mixtures consist of a viscous gel using hydrox-ethyl cellulose(HEC) gelling agent and saline solution. Preservation with a bactericide is added and visual inspection is made to make sure air bubbles are not trapped during the mixing process. The mixture is calibrated to obtain proper dielectric constant (permittivity) and conductivity of the desired tissue.

Frequency (MHz)	750 ~ 835		1 750		1 900		2 450		5 200 ~ 5 800	
Tissue Type	Head	Body	Head	Body	Head	Body	Head	Body	Head	Body
Ingredient	% by weight									
Water	40.29	51.97	53.00	68.00	55.00	70.50	72.00	73.00	65.52	80.00
Salt (NaCl)	1.38	0.93	0.40	0.20	0.35	0.30	0.10	0.10	0	0
Sugar	57.90	47.00	0	0	0	0	0	0	0	0
HEC	0.24	0	0	0	0	0	0	0	0	0
Bactericide	0.19	0.10	0	0	0	0	0	0	0	0
Triton X-100	0	0	0	0	0	0	20.00	0	17.24	0
DGBE	0	0	46.60	31.80	44.65	29.20	0	26.90	0	0
Diethylene glycol hexyl ether	0	0	0	0	0	0	7.90	0	17.24	0
Polysorbate (Tween) 80	0	0	0	0	0	0	0	0	0	20.00
Tissue parameter target by C. Gabriel and G. Harts grove.										
Salt: 99 % Pure Sodium Chloride					Sucrose: 98 % Pure Sucrose					
Water: De-ionized, 16 M resistivity					HEC: Hydroxyethyl Cellulose					
DGBE: 99 % Di(ethylene glycol) butyl ether, [2-(2-butoxyethoxy) ethanol]										
Triton X-100(ultra-pure): Polyethylene glycol mono[4-(1,1,3,3-tetramethylbutyl)phenyl] ether										

Appendix C. LTE CA RF Conducted Power

C.1 LTE Downlink Carrier Aggregation

The tables below show the supported frequency bands of the device for DL Inter-band and DL Intra-band combinations.

Power measurements were performed on the channel with the highest maximum output power from Tune-up Procedure.

In applying the power measurement procedures of KDB 941225 D05A for DL CA to qualify for UL SAR test exclusion, power measurement is required only for the subset in each row with the largest combination of frequency bands and CCs

Index	2CC	Restriction	Completely Covered by Measurement Superset	Reverse
2CC #1	2A-2A			N/A
2CC #2	2C			N/A
2CC #3	2A-4A		3CC #1	Yes
2CC #4	2A-5A		3CC #3	Yes
2CC #5	2A-12A			Yes
2CC #6	2A-13A		3CC #2	Yes
2CC #7	2A-17A	17A SCC only		N/A
2CC #8	2A-66A		3CC #3	Yes
2CC #9	4A-4A		3CC #4	N/A
2CC #10	4A-5A		3CC #1	Yes
2CC #11	4A-12A		3CC #4	Yes
2CC #12	4A-13A		3CC #2	Yes
2CC #13	4A-17A			Yes
2CC #14	5A-41A	41A SCC only		N/A
2CC #15	5A-66A		3CC #5	Yes
2CC #16	12A-66A		3CC #6	Yes
2CC #17	26A-41A	41A SCC only	3CC #7	N/A
2CC #18	41A-41A		3CC #8	N/A
2CC #19	41C		3CC #7	N/A
2CC #20	66A-66A		3CC #5	N/A
2CC #21	66B			N/A
2CC #22	66C			N/A

Index	3CC	Restriction	Completely Covered by Measurement Superset	Reverse
3CC #1	2A-4A-5A			Yes
3CC #2	2A-4A-13A			Yes
3CC #3	2A-5A-66A			Yes
3CC #4	4A-4A-12A			Yes
3CC #5	5A-66A-66A			Yes
3CC #6	12A-66A-66A			Yes
3CC #7	26A-41C	41C SCC only		No
3CC #1	2A-4A-5A			N/A

Note: Only yellow highlight cells need power measurement according to LTE DL CA SAR test Exclusion in TCB workshop (April 2018).

In applying the power measurement procedures of KDB 941225 D05A for DL CA to qualify for UL SAR test exclusion, power measurement is required only for the CA configuration with the largest aggregated DL CA BW in each frequency band, independently for contiguous and non-contiguous CA; however, if the same frequency band is used for both contiguous and non-contiguous CA, power measurement was performed using the configuration with the largest aggregated BW and maximum output power among contiguous and non-contiguous CA.



C.1.1 Downlink Carrier Aggregation RF Conducted Powers

C.1.1.1 LTE Band 2 as PCC

Combination	PCC								SCC 1				SCC 2				SCC 3				SCC 4				Power					
	Band	BW [MHz]	(UL) Ch.	(UL) Freq.	Mod.	(UL) RB Size	(UL) RB	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	LTE Tx. Power with DL CA
CA_2A-2A	B2	20	18700	1860.0	QPSK	1	49	700	1940.0	B2	20	1100	1980.0	N/A								23.91	23.93							
CA_2C	B2	20	18700	1860.0	QPSK	1	49	700	1940.0	B2	20	898	1959.8	N/A								23.89	23.93							
CA_2A-12A	B2	20	18700	1860.0	QPSK	1	49	700	1940.0	B12	10	5095	737.5	N/A								23.87	23.93							
CA_2A-17A	B2	20	18700	1860.0	QPSK	1	49	700	1940.0	B17	10	5790	740.0	N/A								23.88	23.93							
CA_2A-4A-5A	B2	20	18700	1860.0	QPSK	1	49	700	1940.0	B4	20	2175	2132.5	B5	10	2525	881.5	N/A								23.92	23.93			
CA_2A-4A-5A	B2	20	18700	1860.0	QPSK	1	49	700	1940.0	B5	10	2525	881.5	B4	20	2175	2132.5	N/A								23.90	23.93			
CA_2A-4A-13A	B2	20	18700	1860.0	QPSK	1	49	700	1940.0	B4	20	2175	2132.5	B13	10	5230	751.0	N/A								23.87	23.93			
CA_2A-4A-13A	B2	20	18700	1860.0	QPSK	1	49	700	1940.0	B13	10	5230	751.0	B4	20	2175	2132.5	N/A								23.86	23.93			
CA_2A-5A-66A	B2	20	18700	1860.0	QPSK	1	49	700	1940.0	B5	10	2525	881.5	B66	20	66786	2145.0	N/A								23.88	23.93			
CA_2A-5A-66A	B2	20	18700	1860.0	QPSK	1	49	700	1940.0	B66	20	66786	2145.0	B5	10	2525	881.5	N/A								23.92	23.93			

C.1.1.2 LTE Band 4 as PCC

Combination	PCC								SCC 1				SCC 2				SCC 3				SCC 4				Power					
	Band	BW [MHz]	(UL) Ch.	(UL) Freq.	Mod.	(UL) RB Size	(UL) RB	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	LTE Tx. Power with DL CA
CA_4A-17A	B4	10	20175	1732.5	QPSK	1	49	2175	2132.5	B17	10	5790	740.0	N/A								24.13	24.15							
CA_2A-4A-5A	B4	20	20175	1732.5	QPSK	1	49	2175	2132.5	B2	20	900	1960.0	B5	10	2525	881.5	N/A								24.11	24.15			
CA_2A-4A-5A	B4	20	20175	1732.5	QPSK	1	49	2175	2132.5	B5	10	2525	881.5	B2	20	900	1960.0	N/A								24.13	24.15			
CA_2A-4A-13A	B4	20	20175	1732.5	QPSK	1	49	2175	2132.5	B2	20	900	1960.0	B13	10	5230	751.0	N/A								24.11	24.15			
CA_2A-4A-13A	B4	20	20175	1732.5	QPSK	1	49	2175	2132.5	B13	10	5230	751.0	B2	20	900	1960.0	N/A								24.12	24.15			
CA_4A-4A-12A	B4	20	20175	1732.5	QPSK	1	49	2175	2132.5	B4	20	2300	2145.0	B12	10	5095	737.5	N/A								24.08	24.15			

C.1.1.3 LTE Band 5 as PCC

Combination	PCC								SCC 1				SCC 2				SCC 3				SCC 4				Power					
	Band	BW [MHz]	(UL) Ch.	(UL) Freq.	Mod.	(UL) RB Size	(UL) RB	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	LTE Tx. Power with DL CA
CA_5A-41A	B5	10	20525	836.5	QPSK	1	0	2525	881.5	B41	20	40620	2593.0	N/A								24.06	24.09							
CA_2A-4A-5A	B5	10	20525	836.5	QPSK	1	0	2525	881.5	B2	20	900	1960.0	B4	20	2175	2132.5	N/A								24.08	24.09			
CA_2A-4A-5A	B5	10	20525	836.5	QPSK	1	0	2525	881.5	B4	20	2175	2132.5	B2	20	900	1960.0	N/A								24.07	24.09			
CA_2A-5A-66A	B5	10	20525	836.5	QPSK	1	0	2525	881.5	B2	20	900	1960.0	B66	20	66786	2145.0	N/A								24.05	24.09			
CA_2A-5A-66A	B5	10	20525	836.5	QPSK	1	0	2525	881.5	B66	20	66786	2145.0	B2	20	900	1960.0	N/A								24.02	24.09			
CA_5A-66A-66A	B5	10	20525	836.5	QPSK	1	0	2525	881.5	B66	20	66786	2145.0	B66	20	67036	2170.0	N/A								24.06	24.09			

C.1.1.4 LTE Band 12 as PCC

Combination	PCC								SCC 1				SCC 2				SCC 3				SCC 4				Power					
	Band	BW [MHz]	(UL) Ch.	(UL) Freq.	Mod.	(UL) RB Size	(UL) RB	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	LTE Tx. Power with DL CA
CA_2A-12A	B12	10	23095	707.5	QPSK	1	0	5095	737.5	B2	20	900	1960.0	N/A								24.05	24.07							
CA_4A-4A-12A	B12	10	23095	707.5	QPSK	1	0	5095	737.5	B4	20	2175	2132.5	B4	20	2300	2145.0	N/A								24.03	24.07			
CA_12A-66A-66A	B12	10	23095	707.5	QPSK	1	0	5095	737.5	B66	20	66786	2145.0	B66	20	67036	2170.0	N/A								24.01	24.07			

C.1.1.5 LTE Band 13 as PCC

Combination	PCC								SCC 1				SCC 2				SCC 3				SCC 4				Power	
	Band	BW [MHz]	(UL) Ch.	(UL) Freq.	Mod.	(UL) RB Size	(UL) RB	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	LTE Tx. Power with DL CA
CA_2A-4A-13A	B13	10	23230	782.0	QPSK	1	0	5230	751.0	B2	20	900	1960.0	B4	20	2175	2132.5	N/A				23.77	23.78			
CA_2A-4A-13A	B13	10	23230	782.0	QPSK	1	0	5230	751.0	B4	20	2175	2132.5	B2	20	900	1960.0	N/A				23.75	23.78			

C.1.1.6 LTE Band 17 as PCC

Combination	PCC								SCC 1				SCC 2				SCC 3				SCC 4				Power	
	Band	BW [MHz]	(UL) Ch.	(UL) Freq.	Mod.	(UL) RB Size	(UL) RB	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	LTE Tx. Power with DL CA
CA_4A-17A	B17	10	23790	710.0	QPSK	1	0	5790	740.0	B4	10	2175	2132.5	N/A								23.82	23.83			

C.1.1.7 LTE Band 26 as PCC

Combination	PCC								SCC 1				SCC 2				SCC 3				SCC 4				Power	
	Band	BW [MHz]	(UL) Ch.	(UL) Freq.	Mod.	(UL) RB Size	(UL) RB	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	LTE Tx. Power with DL CA
CA_26A-41C	B26	15	26865	831.5	QPSK	1	0	8865	876.5	B41	20	40620	2593.0	B41	20	41490	2680.0	N/A				23.92	23.94			

C.1.1.8 LTE Band 66 as PCC

Combination	PCC								SCC 1				SCC 2				SCC 3				SCC 4				Power	
	Band	BW [MHz]	(UL) Ch.	(UL) Freq.	Mod.	(UL) RB Size	(UL) RB	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	LTE Tx. Power with DL CA
CA_66B	B66	15	132322	1745.0	QPSK	1	74	66786	2145.0	B66	5	66879	2154.3	N/A								24.35	24.37			
CA_66C	B66	20	132322	1745.0	QPSK	1	49	66786	2145.0	B66	20	66984	2164.8	N/A								24.45	24.48			
CA_2A-5A-66A	B66	20	132322	1745.0	QPSK	1	49	66786	2145.0	B2	20	900	1960.0	B5	10	2525	881.5	N/A				24.41	24.48			
CA_2A-5A-66A	B66	20	132322	1745.0	QPSK	1	49	66786	2145.0	B5	10	2525	881.5	B2	20	900	1960.0	N/A				24.44	24.48			
CA_5A-66A-66A	B66	20	132322	1745.0	QPSK	1	49	66786	2145.0	B66	20	67036	2170.0	B5	10	2525	881.5	N/A				24.42	24.48			
CA_12A-66A-66A	B66	20	132322	1745.0	QPSK	1	49	66786	2145.0	B66	20	67036	2170.0	B12	10	5095	737.5	N/A				24.43	24.48			

C.2 LTE Downlink Carrier Aggregation with 4X4 MIMO

This device supports downlink 4x4 MIMO operations for some LTE bands.

Uplink transmission is limited to a single output stream. When carrier aggregation was applicable, the general test selection and setup procedures described in Appendix C.1 were applied.

According to LTE Test conditions in TCB workshop(May, 2017), SAR is excluded for LTE downlink 4x4 MIMO operation when uplink output with DL MIMO does not exceed highest uplink output power configuration without DL MIMO by more than a 1/4 dB. And for DL MIMO with carrier aggregation, the same SAR test exclusion procedure is considered.

Index	2CC	Restriction	Completely Covered by Measurement Superset	Reverse
2CC #1	2A-[4A]		3CC #1	N/A
2CC #2	[4A]-4A		3CC #4	N/A
2CC #3	4A-[4A]		3CC #5	N/A
2CC #4	[4A]-[4A]		3CC #6	N/A
2CC #5	[4A]-5A		3CC #1	Yes
2CC #6	[4A]-12A		3CC #5	Yes
2CC #7	[4A]-13A		3CC #2	Yes
2CC #8	[4A]-17A			Yes
2CC #9	5A-[41A]	41A SCC only		N/A
2CC #10	5A-[66A]		3CC #7	Yes
2CC #11	12A-[66A]		3CC #10	Yes
2CC #12	26A-[41A]	41A SCC only	3CC #13	N/A
2CC #13	[41A]-41A		3CC #14	N/A
2CC #14	41A-[41A]		3CC #15	N/A
2CC #15	[41A]-[41A]		3CC #16	N/A
2CC #16	[41C]		3CC #13	N/A
2CC #17	[66A]-66A		3CC #7	N/A
2CC #18	66A-[66A]		3CC #8	N/A
2CC #19	[66A]-[66A]		3CC #9	N/A
2CC #20	[66B]			N/A
2CC #21	[66C]			N/A

Index	3CC	Restriction	Completely Covered by Measurement Superset	Reverse
3CC #1	2A-[4A]-5A			Yes
3CC #2	2A-[4A]-13A			Yes
3CC #3	2A-5A-[66A]			Yes
3CC #4	[4A]-4A-12A			Yes
3CC #5	4A-[4A]-12A			Yes
3CC #6	[4A]-[4A]-12A			Yes
3CC #7	5A-[66A]-66A			Yes
3CC #8	5A-66A-[66A]			Yes
3CC #9	5A-[66A]-[66A]			Yes
3CC #10	12A-[66A]-66A			Yes
3CC #11	12A-66A-[66A]			Yes
3CC #12	12A-[66A]-[66A]			Yes
3CC #13	26A-[41C]	41C SCC only		N/A

Note: “[]” is 4X4 MIMO Configuration.



C.2.1 Downlink Carrier Aggregation RF Conducted Powers

C.2.1.1 LTE 4X4 MIMO DL Standalone Powers

LTE Band	BW [MHz]	Ch.	Freq. [MHz]	Mod.	RB Size	RB Offset	4X4 DL MIMO Tx. Power (dBm)	Single Antenna Tx Power (dBm)
4	20	20175	1732.5	QPSK	1	49	24.12	24.15
41	20	41490	2680.0	QPSK	1	49	24.38	24.41
66	20	132572	1770.0	QPSK	1	49	24.44	24.48

C.2.1.2 LTE Band 2 as PCC

Combination	PCC								SCC 1				SCC 2				SCC 3				SCC 4				Power	
	Band	BW [MHz]	(UL) Ch.	(UL) Freq.	Mod.	(UL) RB Size	(UL) RB	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	LTE Tx. Power with DL CA
CA_2A-[4A]-5A	B2	20	18700	1860.0	QPSK	1	49	700	1940.0	B4	20	2175	2132.5	B5	10	2525	881.5	N/A				23.88	23.93			
CA_2A-[4A]-5A	B2	20	18700	1860.0	QPSK	1	49	700	1940.0	B5	10	2525	881.5	B4	20	2175	2132.5	N/A				23.81	23.93			
CA_2A-[4A]-13A	B2	20	18700	1860.0	QPSK	1	49	700	1940.0	B4	20	2175	2132.5	B13	10	5230	751.0	N/A				23.82	23.93			
CA_2A-[4A]-13A	B2	20	18700	1860.0	QPSK	1	49	700	1940.0	B13	10	5230	751.0	B4	20	2175	2132.5	N/A				23.80	23.93			
CA_2A-5A-[66A]	B2	20	18700	1860.0	QPSK	1	49	700	1940.0	B5	10	2525	881.5	B66	20	66786	2145	N/A				23.89	23.93			
CA_2A-5A-[66A]	B2	20	18700	1860.0	QPSK	1	49	700	1940.0	B66	20	66786	2145	B5	10	2525	881.5	N/A				23.88	23.93			

C.2.1.3 LTE Band 4 as PCC

Combination	PCC								SCC 1				SCC 2				SCC 3				SCC 4				Power	
	Band	BW [MHz]	(UL) Ch.	(UL) Freq.	Mod.	(UL) RB Size	(UL) RB	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	LTE Tx. Power with DL CA
CA_[4A]-17A	B4	10	20175	1732.5	QPSK	1	49	2175	2132.5	B17	10	5790	740.0	N/A				N/A				24.10	24.15			
CA_2A-[4A]-5A	B4	20	20175	1732.5	QPSK	1	49	2175	2132.5	B2	20	900	1960.0	B5	10	2525	881.5	N/A				24.09	24.15			
CA_2A-[4A]-5A	B4	20	20175	1732.5	QPSK	1	49	2175	2132.5	B5	10	2525	881.5	B2	20	900	1960.0	N/A				24.10	24.15			
CA_2A-[4A]-13A	B4	20	20175	1732.5	QPSK	1	49	2175	2132.5	B2	20	900	1960.0	B13	10	5230	751.0	N/A				24.12	24.15			
CA_2A-[4A]-13A	B4	20	20175	1732.5	QPSK	1	49	2175	2132.5	B13	10	5230	751.0	B2	20	900	1960.0	N/A				24.09	24.15			
CA_[4A]-4A-12A	B4	20	20175	1732.5	QPSK	1	49	2175	2132.5	B4	20	2300	2145	B12	10	5095	737.5	N/A				24.06	24.15			
CA_[4A]-4A-12A	B4	20	20175	1732.5	QPSK	1	49	2175	2132.5	B4	20	2300	2145	B12	10	5095	737.5	N/A				24.09	24.15			
CA_[4A]-[4A]-12A	B4	20	20175	1732.5	QPSK	1	49	2175	2132.5	B4	20	2300	2145	B12	10	5095	737.5	N/A				24.11	24.15			

C.2.1.4 LTE Band 5 as PCC

Combination	PCC								SCC 1				SCC 2				SCC 3				SCC 4				Power	
	Band	BW [MHz]	(UL) Ch.	(UL) Freq.	Mod.	(UL) RB Size	(UL) RB	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	LTE Tx. Power with DL CA
CA_5A-[41A]	B5	10	20525	836.5	QPSK	1	0	2525	881.5	B41	20	40620	2593.0	N/A				N/A				24.04	24.09			
CA_2A-[4A]-5A	B5	10	20525	836.5	QPSK	1	0	2525	881.5	B2	20	900	1960.0	B4	20	2175	2132.5	N/A				24.05	24.09			
CA_2A-[4A]-5A	B5	10	20525	836.5	QPSK	1	0	2525	881.5	B4	20	2175	2132.5	B2	20	900	1960.0	N/A				24.04	24.09			
CA_2A-5A-[66A]	B5	10	20525	836.5	QPSK	1	0	2525	881.5	B2	20	900	1960.0	B66	20	66786	2145.0	N/A				24.02	24.09			
CA_2A-5A-[66A]	B5	10	20525	836.5	QPSK	1	0	2525	881.5	B66	20	66786	2145.0	B2	20	900	1960.0	N/A				23.99	24.09			
CA_5A-[66A]-66A	B5	10	20525	836.5	QPSK	1	0	2525	881.5	B66	20	66786	2145.0	B66	20	67036	2170.0	N/A				24.03	24.09			
CA_5A-66A-[66A]	B5	10	20525	836.5	QPSK	1	0	2525	881.5	B66	20	66786	2145.0	B66	20	67036	2170.0	N/A				24.04	24.09			
CA_12A-[66A]-[66A]	B5	10	20525	836.5	QPSK	1	0	2525	881.5	B66	20	66786	2145.0	B66	20	67036	2170.0	N/A				24.02	24.09			

C.2.1.5 LTE Band 12 as PCC

Combination	PCC								SCC 1				SCC 2				SCC 3				SCC 4				Power	
	Band	BW [MHz]	(UL) Ch.	(UL) Freq.	Mod.	(UL) RB Size	(UL) RB	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	LTE Tx. Power with DL CA
CA_[4A]-4A-12A	B12	10	23095	707.5	QPSK	1	0	5095	737.5	B4	20	2175	2132.5	B4	20	2300	2145.0	N/A				23.99	24.07			
CA_4A-[4A]-12A	B12	10	23095	707.5	QPSK	1	0	5095	737.5	B4	20	2175	2132.5	B4	20	2300	2145.0	N/A				24.02	24.07			
CA_[4A]-[4A]-12A	B12	10	23095	707.5	QPSK	1	0	5095	737.5	B4	20	2175	2132.5	B4	20	2300	2145.0	N/A				23.98	24.07			
CA_12A-[66A]-66A	B12	10	23095	707.5	QPSK	1	0	5095	737.5	B66	20	66786	2145	B66	20	67036	2170.0	N/A				24.00	24.07			
CA_12A-66A-[66A]	B12	10	23095	707.5	QPSK	1	0	5095	737.5	B66	20	66786	2145	B66	20	67036	2170.0	N/A				23.98	24.07			
CA_12A-[66A]-[66A]	B12	10	23095	707.5	QPSK	1	0	5095	737.5	B66	20	66786	2145	B66	20	67036	2170.0	N/A				24.03	24.07			

C.2.1.6 LTE Band 13 as PCC

Combination	PCC								SCC 1				SCC 2				SCC 3				SCC 4				Power	
	Band	BW [MHz]	(UL) Ch.	(UL) Freq.	Mod.	(UL) RB Size	(UL) RB	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	LTE Tx. Power with DL CA
CA_2A-[4A]-13A	B13	10	23230	782.0	QPSK	1	0	5230	751.0	B2	20	900	1960.0	B4	20	2175	2132.5	N/A				23.68	23.78			
CA_2A-[4A]-13A	B13	10	23230	782.0	QPSK	1	0	5230	751.0	B4	20	2175	2132.5	B2	20	900	1960.0	N/A				23.66	23.78			

C.2.1.7 LTE Band 17 as PCC


Combination	PCC								SCC 1				SCC 2				SCC 3				SCC 4				Power	
	Band	BW [MHz]	(UL) Ch.	(UL) Freq.	Mod.	(UL) RB Size	(UL) RB	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	LTE Tx. Power with DL CA
CA_[4A]-17A	B17	10	23790	710.0	QPSK	1	0	5790	740.0	B4	10	2175	2132.5	N/A				23.78	23.83							

C.2.1.8 LTE Band 26 as PCC

Combination	PCC								SCC 1				SCC 2				SCC 3				SCC 4				Power	
	Band	BW [MHz]	(UL) Ch.	(UL) Freq.	Mod.	(UL) RB Size	(UL) RB	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	LTE Tx. Power with DL CA
CA_26A-[41C]	B26	15	26865	831.5	QPSK	1	0	8865	876.5	B41	20	40620	2593.0	B41	20	41490	2680.0	N/A				23.88	23.94			

C.2.1.9 LTE Band 66 as PCC

Combination	PCC								SCC 1				SCC 2				SCC 3				SCC 4				Power	
	Band	BW [MHz]	(UL) Ch.	(UL) Freq.	Mod.	(UL) RB Size	(UL) RB	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	Band	BW [MHz]	(DL) Ch.	(DL) Freq.	LTE Tx. Power with DL CA
CA_[66B]	B66	15	132322	1745.0	QPSK	1	74	66786	2145.0	B66	5	66879	2154.3	N/A				23.32	24.37							
CA_[66C]	B66	20	132322	1745.0	QPSK	1	49	66786	2145.0	B66	20	66984	2164.8	N/A				24.41	24.48							
2A-5A-[66A]	B66	20	132322	1745.0	QPSK	1	49	66786	2145.0	B2	20	900	1960.0	B5	10	2525	881.5	N/A				24.42	24.48			
2A-5A-[66A]	B66	20	132322	1745.0	QPSK	1	49	66786	2145.0	B5	10	2525	881.5	B2	20	900	1960.0	N/A				24.40	24.48			
CA_5A-[66A]-66A	B66	20	132322	1745.0	QPSK	1	49	66786	2145.0	B66	20	67036	2170.0	B5	10	2525	881.5	N/A				24.39	24.48			
CA_5A-66A-[66A]	B66	20	132322	1745.0	QPSK	1	49	66786	2145.0	B66	20	67036	2170.0	B5	10	2525	881.5	N/A				24.38	24.48			
CA_5A-[66A]-[66A]	B66	20	132322	1745.0	QPSK	1	49	66786	2145.0	B66	20	67036	2170.0	B5	10	2525	881.5	N/A				24.44	24.48			
CA_12A-[66A]-66A	B66	20	132322	1745.0	QPSK	1	49	66786	2145.0	B66	20	67036	2170.0	B12	10	5095	737.5	N/A				24.42	24.48			
CA_12A-66A-[66A]	B66	20	132322	1745.0	QPSK	1	49	66786	2145.0	B66	20	67036	2170.0	B12	10	5095	737.5	N/A				24.43	24.48			
CA_12A-[66A]-[66A]	B66	20	132322	1745.0	QPSK	1	49	66786	2145.0	B66	20	67036	2170.0	B12	10	5095	737.5	N/A				24.42	24.48			

<p>Eurofins KCTL Co.,Ltd. 65, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Korea TEL: 82-70-5008-1021 FAX: 82-505-299-8311 www.kctl.co.kr</p>	<p>Report No.: KR23-SPF0039-A Page (537) of (575)</p>	<p> KCTL</p>
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Appendix D. Power Reduction Verification

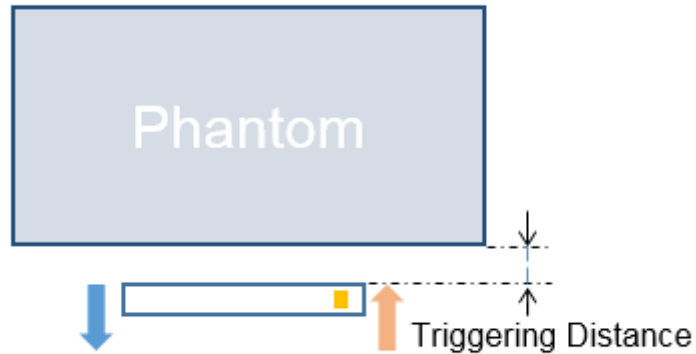
Proximity Sensor Triggering Distance (KDB 616217 §6.2)

Rear, Left, Right, Top, Bottom of the DUT was placed directly below the flat phantom. The DUT was moved toward the phantom in accordance with the steps outlined in KDB 616217 §6.2 to determine the trigger distance for enabling power reduction. The DUT was moved away from the phantom to determine the trigger distance for resuming full power.



The DUT featured a visual indicator on its display that showed the status of the proximity sensor (Triggered or not triggered). This was used to determine the status of the sensor during the proximity sensor assessment as monitoring the output power directly was not practical without affecting the measurement.

It was confirmed separately that the output power was altered according to the proximity sensor status indication. This was achieved by observing the proximity sensor status at the same time as monitoring the conducted power contains both the full and reduced conducted power measurements.





LEGEND

-  Direction of DUT travel for determination of power reduction triggering point
-  Direction of DUT travel for determination of full power resumption triggering point

Resulting test positions for SAR measurements

Tissue simulating liquid	Band	Trigger distance – Rear		
		Moving toward phantom	Moving from phantom	Worst case distance for SAR
750 Head	LTE Band 12	20 mm	20 mm	19 mm
	LTE Band 13			
	LTE Band 17			
850 Head	GSM 850	20 mm	20 mm	19 mm
	WCDMA Band 5			
	LTE Band 5			
	LTE Band 26			
	5G NR n5			
1750 Head	WCDMA Band 4	20 mm	20 mm	19 mm
	LTE Band 4			
	LTE Band 66			
	5G NR n66			
1900 Head	GSM 1900	20 mm	20 mm	19 mm
	WCDMA Band 2			
	LTE Band 2			
	LTE Band 2(Sub)			
2600 Head	LTE Band 41	19 mm	19 mm	18 mm
2450 Head	WLAN Ant. 1	16 mm	16 mm	15 mm
	Bluetooth Ant. 1			
5000 Head	WLAN Ant. 1	16 mm	16 mm	15 mm
2450 Head	WLAN Ant. 2	15 mm	15 mm	14 mm
5000 Head	WLAN Ant. 2	15 mm	15 mm	14 mm

Proximity Sensor Triggering Distance Measurement Results – Rear Side(Main1 Ant)

DUT Moving Toward (Trigger) to the Phantom

Distance to DUT Output Power (dBm)										
Distance (mm)	25	24	23	22	21	20	19	18	17	16
GSM850 Voice & GPRS 1Tx	32.71	32.69	32.73	32.82	32.67	23.21	23.27	23.18	23.22	23.25
GSM850 GPRS 2Tx	30.59	30.60	30.66	30.65	30.75	20.13	20.18	20.19	20.06	20.17
GSM850 GPRS 3Tx	28.95	28.90	28.95	28.94	28.97	18.95	18.87	18.97	18.89	18.86
GSM850 GPRS 4Tx	27.78	27.65	27.79	27.79	27.70	17.58	17.68	17.62	17.65	17.58
GSM1900 Voice &GPRS 1Tx	30.08	30.07	30.20	30.12	30.09	20.39	20.40	20.46	20.33	20.44
GSM1900 GPRS 2Tx	28.55	28.50	28.51	28.60	28.53	18.47	18.41	18.42	18.46	18.43
GSM1900 GPRS 3Tx	27.45	27.50	27.46	27.51	27.50	17.46	17.57	17.52	17.54	17.55
GSM1900 GPRS 4Tx	26.39	26.29	26.42	26.37	26.34	16.47	16.50	16.47	16.42	16.38
WCDMA II	23.36	23.38	23.38	23.38	23.37	13.38	13.37	13.38	13.29	13.41
WCDMA IV	24.01	23.99	23.96	24.04	24.04	13.95	13.86	14.01	13.98	13.90
WCDMA V	24.16	24.10	24.10	24.08	24.19	17.15	17.23	17.25	17.16	17.20
LTE Band 2 (Main1)	23.75	23.73	23.80	23.77	23.69	14.01	14.01	14.06	13.97	13.99
LTE Band 4	24.03	24.11	24.07	24.06	24.13	13.39	13.42	13.38	13.41	13.40
LTE Band 5	23.98	24.06	24.05	24.09	24.02	16.22	16.33	16.35	16.25	16.28
LTE Band 12	23.93	23.97	23.94	24.05	24.07	15.32	15.35	15.34	15.32	15.31
LTE Band 13	23.75	23.66	23.74	23.65	23.76	15.15	15.24	15.13	15.17	15.19
LTE Band 17	23.78	23.82	23.80	23.79	23.78	16.27	16.24	16.25	16.29	16.29
LTE Band 26	23.94	23.88	23.86	23.82	23.81	16.20	16.18	16.29	16.24	16.30
LTE Band 66	24.11	24.17	24.15	24.25	24.24	11.28	11.15	11.21	11.24	11.26
5G NR n5	24.15	24.27	24.19	24.27	24.16	16.31	16.35	16.33	16.29	16.37
5G NR n66	24.71	24.75	24.79	24.80	24.72	11.62	11.55	11.67	11.63	11.61

DUT Moving Away (Release) from the Phantom

Distance to DUT Output Power (dBm)										
Distance (mm)	16	17	18	19	20	21	22	23	24	25
GSM850 Voice & GPRS 1Tx	23.21	23.21	23.23	23.18	23.17	32.80	32.78	32.82	32.68	32.68
GSM850 GPRS 2Tx	20.08	20.05	20.06	20.10	20.15	30.68	30.73	30.72	30.69	30.66
GSM850 GPRS 3Tx	18.93	18.95	18.85	18.95	18.91	28.91	28.89	28.89	28.92	28.97
GSM850 GPRS 4Tx	17.72	17.60	17.68	17.64	17.65	27.65	27.80	27.70	27.73	27.72
GSM1900 Voice &GPRS 1Tx	20.36	20.49	20.44	20.42	20.36	30.08	30.20	30.09	30.15	30.18
GSM1900 GPRS 2Tx	18.50	18.43	18.55	18.44	18.49	28.53	28.59	28.47	28.46	28.57
GSM1900 GPRS 3Tx	17.51	17.56	17.56	17.47	17.60	27.44	27.49	27.55	27.54	27.52
GSM1900 GPRS 4Tx	16.45	16.36	16.41	16.50	16.43	26.40	26.30	26.31	26.33	26.29
WCDMA II	13.26	13.33	13.25	13.16	13.41	23.22	23.35	23.39	23.24	23.23
WCDMA IV	13.90	13.83	13.87	13.81	13.80	24.02	23.96	23.78	23.84	23.89
WCDMA V	16.95	17.23	17.12	17.06	17.07	24.14	23.93	24.11	24.01	24.19
LTE Band 2 (Main1)	13.82	13.86	13.88	13.88	13.81	23.75	23.73	23.60	23.57	23.56
LTE Band 4	13.26	13.31	13.34	13.41	13.34	23.99	24.12	23.89	23.87	23.97
LTE Band 5	16.22	16.29	16.20	16.11	16.10	23.83	23.89	23.97	24.01	23.94
LTE Band 12	15.14	15.29	15.24	15.18	15.26	23.74	23.95	23.94	24.03	23.88
LTE Band 13	15.18	15.07	15.12	15.14	15.09	23.71	23.62	23.70	23.57	23.62
LTE Band 17	16.24	16.23	16.09	16.24	16.17	23.65	23.68	23.72	23.66	23.60
LTE Band 26	16.17	16.13	16.17	16.21	16.26	23.87	23.73	23.69	23.62	23.75
LTE Band 66	11.24	11.11	11.17	11.07	11.23	23.99	24.10	24.09	24.11	24.09
5G NR n5	16.22	16.27	16.29	16.13	16.17	24.00	24.12	24.17	24.17	24.04
5G NR n66	11.50	11.47	11.53	11.51	11.47	24.63	24.71	24.75	24.65	24.66

Proximity Sensor Triggering Distance Measurement Results – Rear Side (Main2 Ant)

DUT Moving Toward (Trigger) to the Phantom

Distance to DUT Output Power (dBm)										
Distance (mm)	24	23	22	21	20	19	18	17	16	15
LTE Band 41(PC3)	23.73	23.78	23.63	23.71	23.78	11.51	11.58	11.46	11.51	11.48
LTE Band 41(PC2)	25.66	25.79	25.72	25.76	25.80	11.46	11.41	11.37	11.44	11.43

DUT Moving Away (Release) from the Phantom

Distance to DUT Output Power (dBm)										
Distance (mm)	15	16	17	18	19	20	21	22	23	24
LTE Band 41(PC3)	11.34	11.64	11.38	11.48	11.46	23.62	23.59	23.49	23.54	23.77
LTE Band 41(PC2)	11.36	11.35	11.42	11.49	11.29	25.46	25.76	25.64	25.78	25.80

Proximity Sensor Triggering Distance Measurement Results – Rear Side(sub1 Ant)

DUT Moving Toward (Trigger) to the Phantom

Distance to DUT Output Power (dBm)										
Distance (mm)	25	24	23	22	21	20	19	18	17	16
LTE Band 2 (Sub1)	24.32	24.35	24.29	24.33	24.32	14.31	14.30	14.43	14.40	14.36

DUT Moving Away (Release) from the Phantom

Distance to DUT Output Power (dBm)										
Distance (mm)	16	17	18	19	20	21	22	23	24	25
LTE Band 2 (Sub1)	14.13	14.31	14.32	14.36	14.21	24.33	24.27	24.13	24.24	24.26

Proximity Sensor Triggering Distance Measurement Results – Rear Side (WIFI Ant.1)

DUT Moving Toward (Trigger) to the Phantom

Distance to DUT Output Power (dBm)										
Distance (mm)	21	20	19	18	17	16	15	14	13	12
2.4 GHz 802.11b	18.45	18.41	18.47	18.47	18.43	9.80	9.78	9.84	9.91	9.90
2.4 GHz 802.11g	17.62	17.58	17.67	17.53	17.68	9.19	9.17	9.19	9.23	9.29
2.4 GHz 802.11n	17.60	17.61	17.64	17.57	17.67	9.15	9.20	9.18	9.10	9.19
2.4 GHz 802.11ax SU	17.55	17.50	17.48	17.51	17.44	9.22	9.15	9.05	9.14	9.16
5 GHz 802.11a	16.13	16.32	16.32	16.23	16.34	4.99	5.17	5.18	5.11	5.01
5 GHz 802.11n 20MHz	15.08	15.22	15.14	15.26	15.13	4.47	4.59	4.48	4.69	4.56
5 GHz 802.11n 40MHz	13.82	13.69	13.85	13.76	13.86	4.51	4.37	4.65	4.57	4.55
5 GHz 802.11ac 20MHz	15.43	15.42	15.35	15.42	15.64	4.75	4.51	4.73	4.77	4.80
5 GHz 802.11ac 40MHz	13.83	13.93	13.88	13.85	13.89	4.61	4.60	4.67	4.61	4.52
5 GHz 802.11ac 80MHz	12.64	12.82	12.66	12.72	12.65	4.72	4.78	4.75	4.76	4.74
5 GHz 802.11ax SU(20M)	15.06	15.23	15.16	15.14	15.13	4.52	4.69	4.41	4.66	4.64
5 GHz 802.11ax SU(40M)	13.80	13.69	13.80	13.82	13.87	4.63	4.53	4.53	4.43	4.49
5 GHz 802.11ax SU(80M)	12.70	12.68	12.56	12.64	12.70	4.81	4.74	4.85	4.67	4.71
Bluetooth(DH5)	14.93	14.98	14.96	14.94	14.94	10.77	10.77	10.75	10.71	10.76
Bluetooth(125 Coded 255)	14.88	14.89	14.90	14.89	14.96	10.41	10.43	10.52	10.52	10.45

DUT Moving Away (Release) from the Phantom

Distance to DUT Output Power (dBm)										
Distance (mm)	12	13	14	15	16	17	18	19	20	21
2.4 GHz 802.11b	9.76	9.71	9.84	9.71	9.74	18.34	18.23	18.34	18.31	18.39
2.4 GHz 802.11g	9.13	9.09	9.01	9.18	9.18	17.49	17.47	17.62	17.43	17.49
2.4 GHz 802.11n	9.08	9.17	9.01	8.90	9.06	17.50	17.53	17.44	17.55	17.65
2.4 GHz 802.11ax SU	9.04	9.07	9.03	9.02	9.17	17.37	17.48	17.42	17.31	17.37
5 GHz 802.11a	4.87	5.13	4.98	4.95	5.02	16.08	16.17	16.26	16.19	16.22
5 GHz 802.11n 20MHz	4.33	4.46	4.37	4.50	4.45	14.90	15.22	15.13	15.22	14.98
5 GHz 802.11n 40MHz	4.43	4.17	4.51	4.41	4.46	13.66	13.51	13.72	13.62	13.85
5 GHz 802.11ac 20MHz	4.75	4.33	4.69	4.76	4.71	15.26	15.43	15.34	15.34	15.58
5 GHz 802.11ac 40MHz	4.61	4.59	4.63	4.62	4.42	13.82	13.73	13.68	13.69	13.85
5 GHz 802.11ac 80MHz	4.54	4.69	4.67	4.63	4.73	12.47	12.82	12.53	12.70	12.57
5 GHz 802.11ax SU(20M)	4.51	4.69	4.33	4.52	4.53	14.86	15.06	15.07	15.10	14.97
5 GHz 802.11ax SU(40M)	4.63	4.46	4.47	4.27	4.42	13.73	13.55	13.71	13.73	13.82
5 GHz 802.11ax SU(80M)	4.77	4.63	4.75	4.58	4.72	12.70	12.68	12.47	12.47	12.66
Bluetooth(DH5)	10.75	10.77	10.59	10.62	10.57	14.91	14.84	14.87	14.82	14.91
Bluetooth(125 Coded 255)	10.42	10.25	10.46	10.49	10.25	14.69	14.77	14.88	14.76	14.95

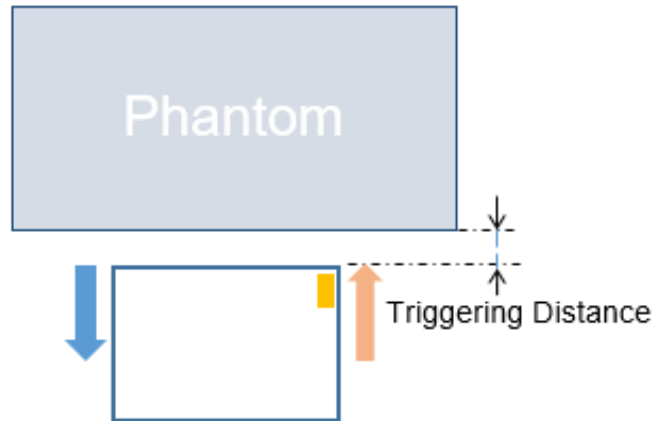
Proximity Sensor Triggering Distance Measurement Results – Rear Side (WIFI Ant.2)

DUT Moving Toward (Trigger) to the Phantom



Distance to DUT Output Power (dBm)										
Distance (mm)	20	19	18	17	16	15	14	13	12	11
2.4 GHz 802.11b	18.45	18.42	18.33	18.37	18.44	9.76	9.75	9.84	9.78	9.74
2.4 GHz 802.11g	17.62	17.47	17.59	17.50	17.68	8.99	9.11	9.16	9.10	9.26
2.4 GHz 802.11n	17.55	17.50	17.55	17.52	17.51	8.97	9.14	9.08	8.91	9.09
2.4 GHz 802.11ax SU	17.50	17.50	17.28	17.34	17.32	9.18	8.97	8.98	8.97	9.14
5 GHz 802.11a	16.08	16.25	16.23	16.21	16.27	4.84	5.06	5.14	4.93	4.99
5 GHz 802.11n 20MHz	15.09	15.04	15.08	15.26	14.95	4.40	4.58	4.37	4.65	4.45
5 GHz 802.11n 40MHz	13.76	13.67	13.76	13.72	13.81	4.47	4.29	4.60	4.40	4.45
5 GHz 802.11ac 20MHz	15.35	15.33	15.18	15.28	15.52	4.76	4.44	4.65	4.59	4.76
5 GHz 802.11ac 40MHz	13.84	13.84	13.74	13.71	13.74	4.49	4.42	4.64	4.47	4.43
5 GHz 802.11ac 80MHz	12.57	12.64	12.47	12.63	12.58	4.58	4.77	4.70	4.76	4.68
5 GHz 802.11ax SU(20M)	14.98	15.12	15.04	14.94	15.11	4.46	4.61	4.26	4.57	4.64
5 GHz 802.11ax SU(40M)	13.63	13.59	13.67	13.73	13.75	4.48	4.33	4.51	4.39	4.35
5 GHz 802.11ax SU(80M)	12.65	12.49	12.38	12.59	12.69	4.72	4.61	4.81	4.48	4.56

DUT Moving Away (Release) from the Phantom

Distance to DUT Output Power (dBm)										
Distance (mm)	11	12	13	14	15	16	17	18	19	20
2.4 GHz 802.11b	9.80	9.67	9.83	9.74	9.88	18.40	18.31	18.42	18.39	18.43
2.4 GHz 802.11g	9.20	9.16	9.00	9.15	9.13	17.45	17.55	17.52	17.34	17.62
2.4 GHz 802.11n	9.02	9.01	9.08	9.10	9.16	17.42	17.59	17.56	17.40	17.60
2.4 GHz 802.11ax SU	9.13	8.97	9.01	9.14	8.96	17.39	17.41	17.31	17.43	17.36
5 GHz 802.11a	4.90	5.11	5.05	5.02	4.85	16.00	16.23	16.31	16.05	16.33
5 GHz 802.11n 20MHz	4.43	4.43	4.48	4.51	4.56	14.93	15.05	14.95	15.14	15.11
5 GHz 802.11n 40MHz	4.37	4.38	4.66	4.53	4.38	13.71	13.59	13.67	13.56	13.73
5 GHz 802.11ac 20MHz	4.76	4.35	4.54	4.59	4.78	15.43	15.42	15.25	15.25	15.50
5 GHz 802.11ac 40MHz	4.54	4.46	4.64	4.42	4.42	13.73	13.76	13.84	13.82	13.69
5 GHz 802.11ac 80MHz	4.68	4.58	4.65	4.64	4.75	12.59	12.78	12.60	12.60	12.58
5 GHz 802.11ax SU(20M)	4.34	4.54	4.22	4.53	4.52	14.93	15.07	14.98	15.01	15.06
5 GHz 802.11ax SU(40M)	4.52	4.42	4.53	4.41	4.34	13.73	13.57	13.78	13.74	13.82
5 GHz 802.11ax SU(80M)	4.75	4.71	4.81	4.61	4.70	12.62	12.53	12.36	12.53	12.66



LEGEND

-  Direction of DUT travel for determination of power reduction triggering point
-  Direction of DUT travel for determination of full power resumption triggering point

Resulting test positions for SAR measurements

Tissue simulating liquid	Band	Trigger distance – Left		
		Moving toward phantom	Moving from phantom	Worst case distance for SAR
2450 Head	WLAN Ant. 1	10 mm	10 mm	9 mm
	Bluetooth Ant. 1			
5000 Head	WLAN Ant. 1	10 mm	10 mm	9 mm

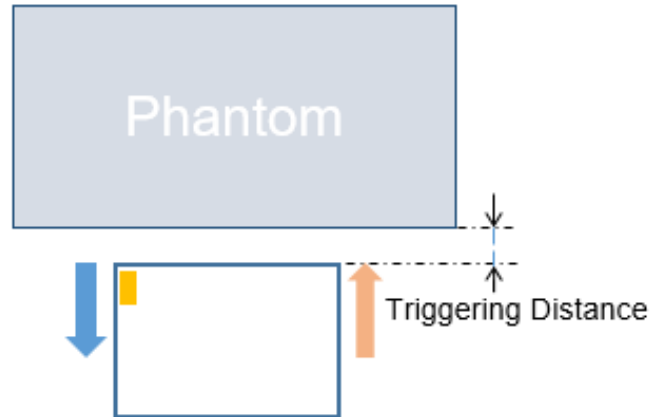
Proximity Sensor Triggering Distance Measurement Results – Left Edge (WIFI Ant.1)

DUT Moving Toward (Trigger) to the Phantom



Distance to DUT Output Power (dBm)										
Distance (mm)	15	14	13	12	11	10	9	8	7	6
2.4 GHz 802.11b	18.38	18.32	18.33	18.34	18.47	9.80	9.77	9.84	9.90	9.83
2.4 GHz 802.11g	17.54	17.58	17.56	17.67	17.60	9.20	9.20	9.22	9.25	9.23
2.4 GHz 802.11n	17.56	17.70	17.63	17.57	17.71	9.18	9.11	9.18	9.22	9.15
2.4 GHz 802.11ax SU	17.44	17.49	17.43	17.41	17.40	9.09	9.10	8.85	9.01	9.00
5 GHz 802.11a	15.97	16.12	16.15	16.16	16.32	4.79	5.12	5.04	5.10	4.86
5 GHz 802.11n 20MHz	15.01	15.17	14.94	15.06	14.99	4.30	4.47	4.31	4.64	4.49
5 GHz 802.11n 40MHz	13.68	13.64	13.84	13.74	13.73	4.38	4.30	4.56	4.58	4.48
5 GHz 802.11ac 20MHz	15.39	15.29	15.31	15.30	15.60	4.73	4.38	4.56	4.58	4.61
5 GHz 802.11ac 40MHz	13.84	13.86	13.80	13.69	13.79	4.41	4.58	4.67	4.53	4.40
5 GHz 802.11ac 80MHz	12.54	12.68	12.51	12.59	12.62	4.52	4.63	4.58	4.69	4.58
5 GHz 802.11ax SU(20M)	14.88	15.04	14.96	15.11	14.97	4.37	4.54	4.28	4.51	4.64
5 GHz 802.11ax SU(40M)	13.60	13.67	13.70	13.81	13.71	4.59	4.43	4.33	4.43	4.33
5 GHz 802.11ax SU(80M)	12.61	12.60	12.55	12.53	12.68	4.71	4.63	4.65	4.61	4.58
Bluetooth(DH5)	14.96	15.00	14.97	14.98	14.90	10.81	10.77	10.77	10.75	10.70
Bluetooth(125 Coded 255)	14.94	14.86	14.88	14.82	14.91	10.56	10.44	10.51	10.42	10.49

DUT Moving Away (Release) from the Phantom

Distance to DUT Output Power (dBm)										
Distance (mm)	6	7	8	9	10	11	12	13	14	15
2.4 GHz 802.11b	9.72	9.58	9.65	9.82	9.76	18.33	18.19	18.25	18.20	18.30
2.4 GHz 802.11g	9.05	9.04	9.19	9.11	9.11	17.55	17.44	17.55	17.63	17.55
2.4 GHz 802.11n	8.98	8.95	9.00	9.03	8.97	17.50	17.61	17.49	17.39	17.72
2.4 GHz 802.11ax SU	9.16	8.97	9.05	9.04	9.01	17.35	17.46	17.38	17.34	17.41
5 GHz 802.11a	4.99	4.98	5.02	5.00	4.83	16.09	16.27	16.24	16.09	16.20
5 GHz 802.11n 20MHz	4.37	4.60	4.46	4.50	4.50	15.08	15.17	15.00	15.19	15.02
5 GHz 802.11n 40MHz	4.44	4.38	4.52	4.56	4.40	13.79	13.55	13.67	13.66	13.69
5 GHz 802.11ac 20MHz	4.61	4.38	4.58	4.74	4.69	15.23	15.42	15.28	15.31	15.63
5 GHz 802.11ac 40MHz	4.46	4.40	4.59	4.60	4.51	13.64	13.78	13.77	13.68	13.83
5 GHz 802.11ac 80MHz	4.66	4.60	4.75	4.57	4.55	12.45	12.65	12.63	12.64	12.66
5 GHz 802.11ax SU(20M)	4.36	4.59	4.36	4.55	4.56	14.88	15.03	15.06	15.08	15.03
5 GHz 802.11ax SU(40M)	4.56	4.41	4.35	4.41	4.39	13.75	13.64	13.80	13.76	13.68
5 GHz 802.11ax SU(80M)	4.74	4.54	4.82	4.67	4.61	12.62	12.66	12.52	12.55	12.61
Bluetooth(DH5)	10.71	10.58	10.78	10.70	10.50	14.77	15.00	14.77	14.79	14.84
Bluetooth(125 Coded 255)	10.40	10.45	10.48	10.26	10.49	14.75	14.87	14.81	14.81	14.81



LEGEND

-  Direction of DUT travel for determination of power reduction triggering point
-  Direction of DUT travel for determination of full power resumption triggering point

Resulting test positions for SAR measurements

Tissue simulating liquid	Band	Trigger distance – Right		
		Moving toward phantom	Moving from phantom	Worst case distance for SAR
750 Head	LTE Band 12	8 mm	8 mm	7 mm
	LTE Band 13			
	LTE Band 17			
850 Head	GSM 850	8 mm	8 mm	7 mm
	WCDMA Band 5			
	LTE Band 5			
	LTE Band 26			
1750 Head	5G NR n5	8 mm	8 mm	7 mm
	WCDMA Band 4			
	LTE Band 4			
	LTE Band 66			
1900 Head	5G NR n66	8 mm	8 mm	7 mm
	GSM 1900			
	WCDMA Band 2			
	LTE Band 2(Main)			
	LTE Band 2(Sub)			

Proximity Sensor Triggering Distance Measurement Results – Right Edge(Main1 Ant)

DUT Moving Toward (Trigger) to the Phantom

Distance to DUT Output Power (dBm)										
Distance (mm)	13	12	11	10	9	8	7	6	5	4
GSM850 Voice & GPRS 1Tx	32.80	32.78	32.78	32.68	32.80	23.22	23.20	23.20	23.30	23.31
GSM850 GPRS 2Tx	30.59	30.71	30.65	30.70	30.61	20.09	20.11	20.12	20.07	20.14
GSM850 GPRS 3Tx	29.00	29.00	28.86	28.86	29.00	18.82	18.89	18.94	18.93	18.83
GSM850 GPRS 4Tx	27.65	27.67	27.79	27.72	27.67	17.65	17.63	17.63	17.65	17.62
GSM1900 Voice &GPRS 1Tx	30.09	30.08	30.23	30.16	30.18	20.48	20.47	20.47	20.34	20.46
GSM1900 GPRS 2Tx	28.61	28.61	28.47	28.56	28.53	18.47	18.42	18.42	18.45	18.48
GSM1900 GPRS 3Tx	27.41	27.44	27.41	27.57	27.52	17.54	17.51	17.46	17.49	17.55
GSM1900 GPRS 4Tx	26.33	26.37	26.34	26.31	26.36	16.48	16.36	16.49	16.34	16.48
WCDMA II	23.44	23.39	23.44	23.36	23.32	13.30	13.31	13.31	13.27	13.35
WCDMA IV	24.02	23.94	24.03	23.94	24.00	13.97	13.92	13.90	13.98	14.01
WCDMA V	24.16	24.11	24.18	24.15	24.18	17.10	17.17	17.11	17.18	17.24
LTE Band 2 (Main1)	23.66	23.70	23.79	23.78	23.77	14.05	14.10	14.11	14.01	14.03
LTE Band 4	24.14	24.11	24.10	24.13	24.09	13.42	13.45	13.39	13.37	13.38
LTE Band 5	23.96	24.07	23.99	24.00	23.99	16.20	16.32	16.35	16.21	16.35
LTE Band 12	23.98	23.98	23.92	24.01	24.03	15.26	15.32	15.34	15.36	15.25
LTE Band 13	23.74	23.66	23.68	23.65	23.63	15.22	15.19	15.16	15.21	15.23
LTE Band 17	23.71	23.75	23.74	23.82	23.81	16.29	16.24	16.25	16.25	16.29
LTE Band 26	23.79	23.83	23.85	23.93	23.88	16.29	16.16	16.15	16.29	16.26
LTE Band 66	24.14	24.25	24.11	24.11	24.26	11.18	11.27	11.16	11.21	11.18
5G NR n5	24.25	24.27	24.14	24.19	24.21	16.28	16.33	16.27	16.25	16.37
5G NR n66	24.80	24.73	24.84	24.75	24.76	11.55	11.67	11.56	11.55	11.53

DUT Moving Away (Release) from the Phantom

Distance to DUT Output Power (dBm)										
Distance (mm)	4	5	6	7	8	9	10	11	12	13
GSM850 Voice & GPRS 1Tx	23.23	23.27	23.22	23.19	23.23	32.71	32.79	32.66	32.81	32.79
GSM850 GPRS 2Tx	20.20	20.14	20.15	20.12	20.05	30.63	30.72	30.74	30.66	30.61
GSM850 GPRS 3Tx	18.82	18.87	18.93	18.91	18.93	28.85	28.90	28.93	28.85	28.88
GSM850 GPRS 4Tx	17.59	17.58	17.59	17.65	17.69	27.76	27.81	27.68	27.70	27.74
GSM1900 Voice &GPRS 1Tx	20.49	20.40	20.46	20.35	20.42	30.18	30.19	30.16	30.22	30.16
GSM1900 GPRS 2Tx	18.49	18.44	18.44	18.56	18.51	28.46	28.52	28.49	28.51	28.45
GSM1900 GPRS 3Tx	17.50	17.48	17.55	17.51	17.47	27.47	27.50	27.45	27.51	27.55
GSM1900 GPRS 4Tx	16.39	16.48	16.47	16.43	16.38	26.40	26.35	26.37	26.35	26.33
WCDMA II	13.13	13.27	13.19	13.14	13.35	23.24	23.30	23.39	23.17	23.22
WCDMA IV	13.87	13.75	13.72	13.88	13.83	23.94	23.76	23.90	23.90	23.94
WCDMA V	17.10	16.98	16.92	17.01	17.05	24.11	23.99	24.19	24.00	24.19
LTE Band 2 (Main1)	13.88	14.01	14.11	13.98	13.92	23.54	23.52	23.76	23.74	23.70
LTE Band 4	13.40	13.46	13.22	13.22	13.35	24.07	23.92	23.97	24.06	23.98
LTE Band 5	16.03	16.21	16.32	16.07	16.16	23.81	23.93	24.00	23.99	23.95
LTE Band 12	15.15	15.16	15.25	15.20	15.05	23.80	23.93	23.82	23.92	23.85
LTE Band 13	15.23	15.08	15.13	15.19	15.11	23.70	23.67	23.54	23.60	23.56
LTE Band 17	16.13	16.06	16.16	16.08	16.12	23.51	23.58	23.64	23.65	23.69
LTE Band 26	16.15	15.99	16.14	16.21	16.16	23.74	23.72	23.71	23.94	23.70
LTE Band 66	11.17	11.27	11.00	11.10	10.98	24.00	24.26	24.07	24.00	24.19
5G NR n5	16.13	16.32	16.13	16.21	16.19	24.07	24.17	24.14	24.13	24.02
5G NR n66	11.38	11.56	11.44	11.53	11.43	24.68	24.67	24.70	24.68	24.71

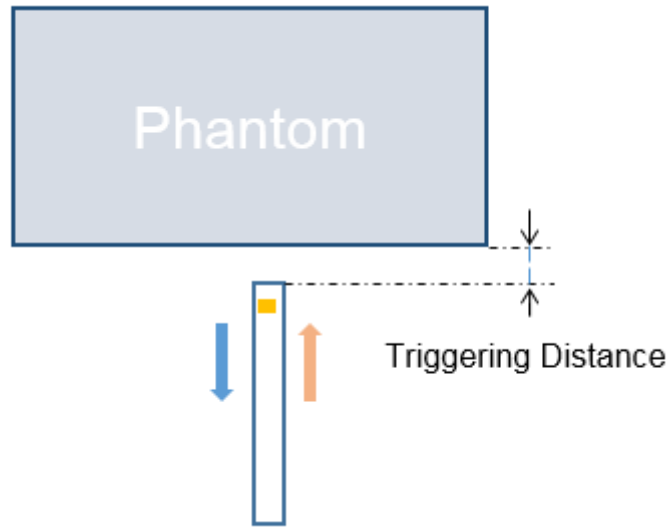
Proximity Sensor Triggering Distance Measurement Results – Right Edge(Sub1 Ant)

DUT Moving Toward (Trigger) to the Phantom



Distance to DUT Output Power (dBm)										
Distance (mm)	13	12	11	10	9	8	7	6	5	4
LTE Band 2 (Sub1)	24.29	24.29	24.27	24.33	24.35	14.31	14.39	14.32	14.31	14.35

DUT Moving Away (Release) from the Phantom

Distance to DUT Output Power (dBm)										
Distance (mm)	4	5	6	7	8	9	10	11	12	13
LTE Band 2 (Sub1)	14.27	14.31	14.24	14.31	14.16	24.29	24.25	24.09	24.34	24.16



LEGEND

-  Direction of DUT travel for determination of power reduction triggering point
-  Direction of DUT travel for determination of full power resumption triggering point

Resulting test positions for SAR measurements

Tissue simulating liquid	Band	Trigger distance – Top		
		Moving toward phantom	Moving from phantom	Worst case distance for SAR
750 Head	LTE Band 12	15 mm	15 mm	14 mm
	LTE Band 13			
	LTE Band 17			
850 Head	GSM 850	15 mm	15 mm	14 mm
	WCDMA Band5			
	LTE Band 5			
	5G NR n5			
1750 Head	WCDMA Band 4	15 mm	15 mm	14 mm
	LTE Band 4			
	LTE Band 66			
	5G NR n66			
1900 Head	GSM 1900	15 mm	15 mm	14 mm
	WCDMA Band 2			
	LTE Band 2			
2600 Head	LTE Band 41			
2450 Head	WLAN Ant. 2	13 mm	13 mm	12 mm
5000 Head	WLAN Ant. 2	13 mm	13 mm	12 mm

Proximity Sensor Triggering Distance Measurement Results – Top(Main1 Ant.)

DUT Moving Toward (Trigger) to the Phantom

Distance to DUT Output Power (dBm)										
Distance (mm)	20	19	18	17	16	15	14	13	12	11
GSM850 Voice & GPRS 1Tx	32.69	32.76	32.71	32.79	32.77	23.16	23.25	23.31	23.27	23.21
GSM850 GPRS 2Tx	30.63	30.69	30.60	30.67	30.61	20.19	20.09	20.18	20.19	20.15
GSM850 GPRS 3Tx	28.99	28.85	28.89	28.86	28.86	18.92	18.94	18.84	18.97	18.94
GSM850 GPRS 4Tx	27.74	27.68	27.72	27.72	27.75	17.66	17.72	17.59	17.63	17.66
GSM1900 Voice &GPRS 1Tx	30.10	30.23	30.23	30.15	30.11	20.47	20.42	20.35	20.39	20.36
GSM1900 GPRS 2Tx	28.59	28.55	28.53	28.48	28.48	18.55	18.54	18.48	18.55	18.48
GSM1900 GPRS 3Tx	27.44	27.53	27.48	27.52	27.49	17.46	17.50	17.48	17.49	17.49
GSM1900 GPRS 4Tx	26.35	26.32	26.28	26.38	26.39	16.36	16.39	16.47	16.48	16.34
WCDMA II	23.31	23.39	23.39	23.41	23.36	13.31	13.38	13.31	13.40	13.35
WCDMA IV	23.94	23.91	23.90	24.02	23.92	13.87	13.86	13.93	13.90	14.01
WCDMA V	24.19	24.18	24.06	24.14	24.11	17.17	17.12	17.14	17.17	17.23
LTE Band 2	23.69	23.75	23.71	23.71	23.73	14.01	13.97	14.10	14.05	14.08
LTE Band 4	24.03	24.01	24.09	24.08	24.00	13.41	13.38	13.37	13.41	13.40
LTE Band 5	24.02	24.02	23.99	24.04	24.04	16.32	16.23	16.29	16.23	16.35
LTE Band 12	23.98	23.97	23.96	23.99	23.99	15.29	15.30	15.38	15.34	15.26
LTE Band 13	23.68	23.69	23.71	23.72	23.77	15.11	15.19	15.21	15.16	15.17
LTE Band 17	23.82	23.71	23.75	23.76	23.77	16.34	16.21	16.25	16.24	16.23
LTE Band 26	23.92	23.89	23.82	23.84	23.88	16.20	16.19	16.26	16.27	16.29
LTE Band 41(PC3)	23.75	23.76	23.64	23.68	23.78	11.53	11.51	11.55	11.59	11.59
LTE Band 41(PC2)	25.69	25.69	25.73	25.69	25.74	11.45	11.35	11.44	11.41	11.47
LTE Band 66	24.11	24.20	24.25	24.23	24.19	11.26	11.20	11.17	11.22	11.23
5G NR n5	24.28	24.13	24.17	24.18	24.28	16.37	16.36	16.35	16.29	16.38
5G NR n66	24.82	24.80	24.83	24.76	24.83	11.55	11.58	11.65	11.62	11.57

DUT Moving Away (Release) from the Phantom

Distance to DUT Output Power (dBm)										
Distance (mm)	11	12	13	14	15	16	17	18	19	20
GSM850 Voice & GPRS 1Tx	23.21	23.22	23.31	23.28	23.28	32.80	32.81	32.68	32.75	32.73
GSM850 GPRS 2Tx	20.18	20.05	20.17	20.17	20.18	30.72	30.72	30.66	30.61	30.75
GSM850 GPRS 3Tx	18.82	18.96	18.90	18.88	18.86	28.99	28.88	28.95	28.95	28.97
GSM850 GPRS 4Tx	17.66	17.70	17.66	17.66	17.71	27.70	27.75	27.71	27.69	27.79
GSM1900 Voice &GPRS 1Tx	20.48	20.39	20.45	20.43	20.35	30.08	30.07	30.18	30.22	30.18
GSM1900 GPRS 2Tx	18.51	18.49	18.51	18.40	18.48	28.59	28.53	28.47	28.58	28.54
GSM1900 GPRS 3Tx	17.45	17.50	17.59	17.60	17.55	27.49	27.48	27.46	27.48	27.44
GSM1900 GPRS 4Tx	16.45	16.45	16.43	16.47	16.39	26.38	26.30	26.37	26.36	26.26
WCDMA II	13.17	13.34	13.15	13.31	13.29	23.18	23.37	23.38	23.21	23.33
WCDMA IV	13.80	13.72	13.92	13.80	13.85	23.90	23.87	23.81	23.83	23.87
WCDMA V	16.97	17.06	16.94	17.16	17.17	24.17	24.06	24.04	23.96	24.10
LTE Band 2	14.00	13.86	14.01	13.89	14.04	23.57	23.72	23.64	23.52	23.53
LTE Band 4	13.22	13.24	13.37	13.27	13.25	23.85	23.87	23.89	23.91	23.91
LTE Band 5	16.12	16.20	16.12	16.19	16.19	23.93	23.84	23.89	24.03	24.02
LTE Band 12	15.14	15.26	15.28	15.17	15.19	23.91	23.93	23.92	23.94	23.96
LTE Band 13	15.06	15.09	15.19	15.13	15.12	23.63	23.56	23.68	23.68	23.69
LTE Band 17	16.18	16.09	16.23	16.17	16.07	23.82	23.68	23.69	23.61	23.61
LTE Band 26	16.14	16.16	16.20	16.17	16.10	23.93	23.76	23.76	23.78	23.83
LTE Band 41(PC3)	11.36	11.48	11.44	11.51	11.51	23.61	23.62	23.50	23.49	23.69
LTE Band 41(PC2)	11.46	11.35	11.31	11.21	11.31	25.54	25.66	25.57	25.67	25.55
LTE Band 66	11.19	11.20	11.13	11.13	11.06	24.00	24.01	24.12	24.03	24.03
5G NR n5	16.35	16.18	16.32	16.19	16.24	24.18	23.98	24.13	24.16	24.23
5G NR n66	11.54	11.38	11.65	11.59	11.51	24.70	24.62	24.69	24.57	24.66

Proximity Sensor Triggering Distance Measurement Results – Top(Main2 Ant.)

DUT Moving Toward (Trigger) to the Phantom

Distance to DUT Output Power (dBm)										
Distance (mm)	20	19	18	17	16	15	14	13	12	11
LTE Band 41(PC3)	23.75	23.76	23.64	23.68	23.78	11.53	11.51	11.55	11.59	11.59
LTE Band 41(PC2)	25.69	25.69	25.73	25.69	25.74	11.45	11.35	11.44	11.41	11.47

DUT Moving Away (Release) from the Phantom

Distance to DUT Output Power (dBm)										
Distance (mm)	11	12	13	14	15	16	17	18	19	20
LTE Band 41(PC3)	11.36	11.48	11.44	11.51	11.51	23.61	23.62	23.50	23.49	23.69
LTE Band 41(PC2)	11.46	11.35	11.31	11.21	11.31	25.54	25.66	25.57	25.67	25.55



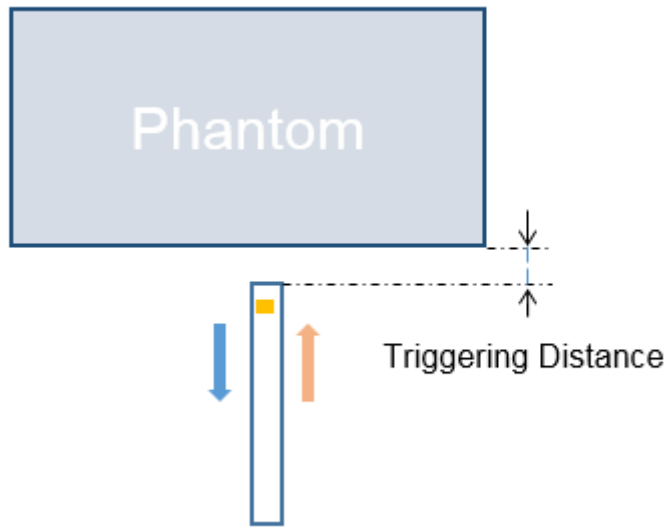
Proximity Sensor Triggering Distance Measurement Results – Top (WIFI Ant.2)

DUT Moving Toward (Trigger) to the Phantom

Distance to DUT Output Power (dBm)										
Distance (mm)	18	17	16	15	14	13	12	11	10	9
2.4 GHz 802.11b	18.44	18.29	18.16	18.29	18.44	9.71	9.60	9.84	9.75	9.60
2.4 GHz 802.11g	17.53	17.28	17.54	17.44	17.66	8.88	8.97	9.11	8.98	9.10
2.4 GHz 802.11n	17.43	17.30	17.55	17.47	17.35	8.87	9.06	8.99	8.87	9.10
2.4 GHz 802.11ax SU	17.46	17.35	17.14	17.34	17.32	9.03	8.92	8.87	8.95	9.08
5 GHz 802.11a	16.41	16.42	16.45	16.38	16.38	5.20	5.10	5.16	5.17	5.16
5 GHz 802.11n 20MHz	15.20	15.30	15.29	15.33	15.33	4.70	4.64	4.65	4.70	4.66
5 GHz 802.11n 40MHz	13.78	13.79	13.87	13.81	13.78	4.61	4.63	4.57	4.65	4.59
5 GHz 802.11ac 20MHz	15.51	15.64	15.64	15.53	15.56	4.79	4.78	4.70	4.71	4.68
5 GHz 802.11ac 40MHz	13.90	13.95	13.92	13.97	13.85	4.68	4.68	4.75	4.61	4.71
5 GHz 802.11ac 80MHz	12.69	12.75	12.79	12.81	12.72	4.79	4.88	4.82	4.90	4.77
5 GHz 802.11ax SU(20M)	14.81	15.00	14.93	14.83	15.09	4.47	4.49	4.20	4.50	4.49
5 GHz 802.11ax SU(40M)	13.53	13.56	13.63	13.55	13.55	4.33	4.20	4.47	4.40	4.32
5 GHz 802.11ax SU(80M)	12.56	12.48	12.25	12.40	12.53	4.56	4.59	4.82	4.47	4.43

DUT Moving Away (Release) from the Phantom

Distance to DUT Output Power (dBm)										
Distance (mm)	9	10	11	12	13	14	15	16	17	18
2.4 GHz 802.11b	9.64	9.52	9.78	9.61	9.45	18.25	18.20	18.03	18.27	18.28
2.4 GHz 802.11g	8.75	8.84	9.00	8.98	9.01	17.41	17.15	17.51	17.24	17.67
2.4 GHz 802.11n	8.72	9.03	8.97	8.80	9.07	17.25	17.31	17.52	17.38	17.23
2.4 GHz 802.11ax SU	9.01	8.77	8.75	8.82	8.89	17.26	17.16	17.00	17.30	17.30
5 GHz 802.11a	5.05	5.09	5.12	5.03	5.02	16.36	16.31	16.27	16.33	16.33
5 GHz 802.11n 20MHz	4.71	4.63	4.55	4.51	4.49	15.00	15.11	15.19	15.13	15.19
5 GHz 802.11n 40MHz	4.41	4.59	4.46	4.65	4.51	13.62	13.64	13.82	13.82	13.68
5 GHz 802.11ac 20MHz	4.73	4.58	4.53	4.54	4.57	15.40	15.62	15.51	15.43	15.45
5 GHz 802.11ac 40MHz	4.58	4.63	4.64	4.61	4.61	13.80	13.94	13.80	13.98	13.83
5 GHz 802.11ac 80MHz	4.68	4.82	4.66	4.70	4.77	12.70	12.71	12.71	12.66	12.69
5 GHz 802.11ax SU(20M)	4.44	4.35	4.18	4.35	4.35	14.73	14.93	14.84	14.83	15.05
5 GHz 802.11ax SU(40M)	4.23	4.16	4.28	4.40	4.12	13.47	13.49	13.57	13.55	13.45
5 GHz 802.11ax SU(80M)	4.41	4.43	4.65	4.36	4.39	12.51	12.28	12.13	12.39	12.38



LEGEND

- Direction of DUT travel for determination of power reduction triggering point
- Direction of DUT travel for determination of full power resumption triggering point

Resulting test positions for SAR measurements

Tissue simulating liquid	Band	Trigger distance – Bottom		
		Moving toward phantom	Moving from phantom	Worst case distance for SAR
1900 Head	LTE Band 2(Sub)	16 mm	16 mm	15 mm

Proximity Sensor Triggering Distance Measurement Results – Bottom(Sub1 Ant)

DUT Moving Toward (Trigger) to the Phantom

Distance to DUT Output Power (dBm)										
Distance (mm)	21	20	19	18	17	16	15	14	13	12
LTE Band 2 (Sub1)	24.32	24.33	24.31	24.29	24.32	14.38	14.36	14.33	14.40	14.32

DUT Moving Away (Release) from the Phantom

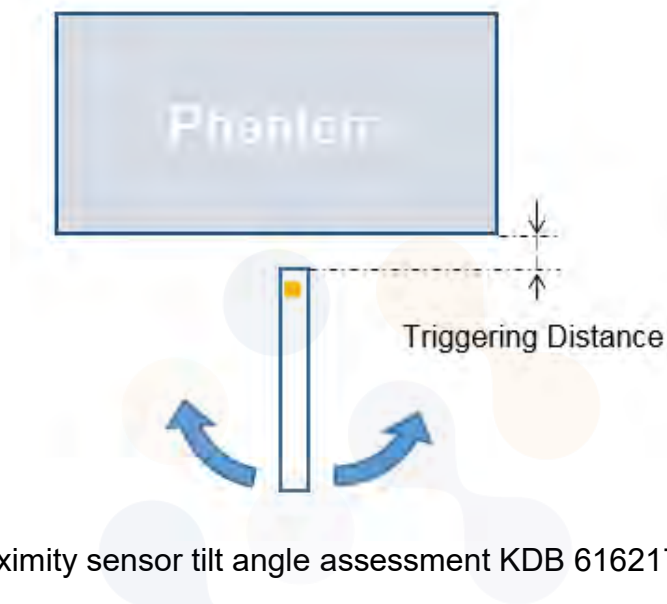
Distance to DUT Output Power (dBm)										
Distance (mm)	12	13	14	15	16	17	18	19	20	21
LTE Band 2 (Sub1)	14.19	14.24	14.25	14.39	14.33	24.14	24.32	24.22	24.18	24.22

Proximity Sensor Tilt Angle Assessment (KDB 616217 §6.4)

The DUT was positioned directly below the flat phantom at the minimum measured trigger distance with Bottom parallel to the base of the flat phantom for each band.

The EUT was rotated about Bottom for angles up to +/- 45°. If the output power increased during the rotation the DUT was moved 1mm toward the phantom and the rotation repeated.

This procedure was repeated until the power remained reduced for all angles up to +/- 45°.



Proximity sensor tilt angle assessment KDB 616217 §6.4

Summary of Tilt Angle Influence to Proximity Sensor Triggering (Top)

Band [MHz]	Minimum trigger distance measured according to KDB 616217 §6.2	Minimum distance at which power reduction was maintained over +/-45°	Power reduction status										
			-45°	-40°	-30°	-20°	-10°	0°	10°	20°	30°	40°	45°
750	15 mm	15 mm	On	On	On	On	On	On	On	On	On	On	On
850	15 mm	15 mm	On	On	On	On	On	On	On	On	On	On	On
1750	15 mm	15 mm	On	On	On	On	On	On	On	On	On	On	On
1900	15 mm	15 mm	On	On	On	On	On	On	On	On	On	On	On
2600	15 mm	15 mm	On	On	On	On	On	On	On	On	On	On	On
2450 (Ant.2)	13 mm	13 mm	On	On	On	On	On	On	On	On	On	On	On
5000 (Ant.2)	13 mm	13 mm	On	On	On	On	On	On	On	On	On	On	On

Summary of Tilt Angle Influence to Proximity Sensor Triggering (Left)

Band [MHz]	Minimum trigger distance measured according to KDB 616217 §6.2	Minimum distance at which power reduction was maintained over +/-45°	Power reduction status										
			-45°	-40°	-30°	-20°	-10°	0°	10°	20°	30°	40°	45°
2450 (Ant.1)	10 mm	10 mm	On	On	On	On	On	On	On	On	On	On	On
5000 (Ant.1)	10 mm	10 mm	On	On	On	On	On	On	On	On	On	On	On

Summary of Tilt Angle Influence to Proximity Sensor Triggering (Right)

Band [MHz]	Minimum trigger distance measured according to KDB 616217 §6.2	Minimum distance at which power reduction was maintained over +/-45°	Power reduction status										
			-45°	-40°	-30°	-20°	-10°	0°	10°	20°	30°	40°	45°
750	8 mm	8 mm	On	On	On	On	On	On	On	On	On	On	On
850	8 mm	8 mm	On	On	On	On	On	On	On	On	On	On	On
1750	8 mm	8 mm	On	On	On	On	On	On	On	On	On	On	On
1900 (Main1)	8 mm	8 mm	On	On	On	On	On	On	On	On	On	On	On
1900 (Sub1)	8 mm	8 mm	On	On	On	On	On	On	On	On	On	On	On

Summary of Tilt Angle Influence to Proximity Sensor Triggering (Bottom)

Band [MHz]	Minimum trigger distance measured according to KDB 616217 §6.2	Minimum distance at which power reduction was maintained over +/-45°	Power reduction status										
			-45°	-40°	-30°	-20°	-10°	0°	10°	20°	30°	40°	45°
1900 (Sub1)	16 mm	16 mm	On	On	On	On	On	On	On	On	On	On	On