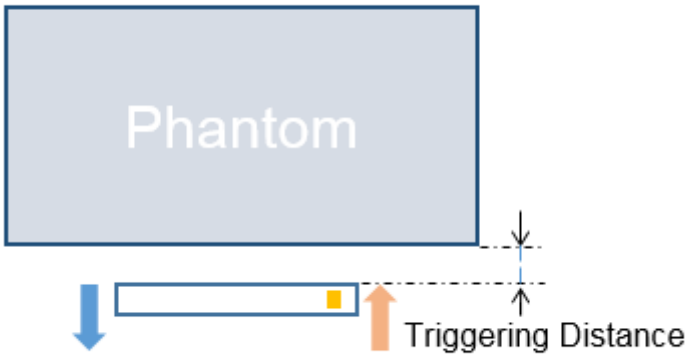
Appendix G. Power Reduction Verification

Proximity Sensor Triggering Distance (KDB 616217 §6.2)

Rear, Front, 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 mearsurementes

Tissue simulating liquid	Band	Trigger distance – Rear		
		Moving toward phantom	Moving from phantom	Worst case distance for SAR
1750 Head	WCDMA Band 4	11 mm	11 mm	10 mm
	LTE Band 4			
	LTE Band 66			
	NR Band n66			
1900 Head	GSM 1900	11 mm	11 mm	10 mm
	WCDMA Band 2			
	LTE Band 2			
2600 Head	LTE Band 41	11 mm	11 mm	10 mm

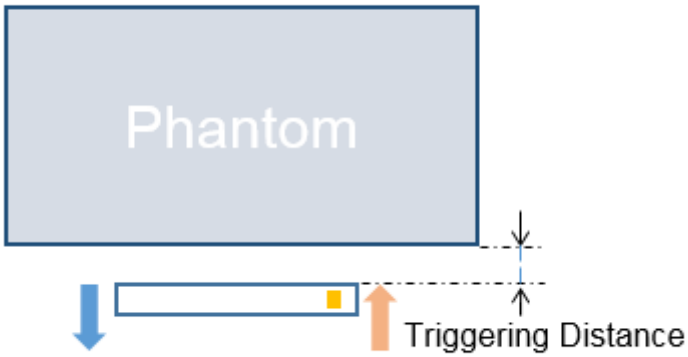
Proximity Sensor Triggering Distance Measurement Results – Rear Side

DUT Moving Toward (Trigger) to the Phantom

Distance to DUT Output Power (dBm)										
Distance (mm)	16	15	14	13	12	11	10	9	8	7
GSM 1900	30.51	30.44	30.46	30.41	30.50	27.10	27.11	27.05	27.09	27.06
WCMDA Band 2	23.33	23.29	23.31	23.22	23.25	19.50	19.41	19.44	19.49	19.42
WCDMA Band 4	23.33	23.30	23.25	23.29	23.20	20.44	20.50	20.41	20.48	20.49
LTE Band 2	22.88	22.90	22.91	22.85	22.84	19.90	19.91	19.88	19.85	19.81
LTE Band 4	23.55	23.51	23.60	23.50	23.52	20.46	20.50	20.41	20.42	20.49
LTE Band 41	22.50	22.51	22.44	22.49	22.52	19.10	19.05	19.11	19.09	19.04
LTE Band 66	23.50	23.44	23.49	23.51	23.52	20.44	20.48	20.41	20.46	20.50
NR Band n66	22.70	22.58	22.61	22.65	22.66	20.01	19.95	19.91	19.90	19.98

DUT Moving Away (Release) from the Phantom

Distance to DUT Output Power (dBm)										
Distance (mm)	7	8	9	10	11	12	13	14	15	16
GSM 1900	27.03	26.96	26.93	26.97	27.01	30.42	30.36	30.37	30.30	30.41
WCMDA Band 2	19.41	19.27	19.34	19.39	19.30	23.27	23.22	23.22	23.10	23.11
WCDMA Band 4	20.30	20.42	20.28	20.38	20.41	23.21	23.19	23.14	23.21	23.08
LTE Band 2	19.77	19.80	19.80	19.77	19.75	22.78	22.77	22.84	22.78	22.79
LTE Band 4	20.32	20.37	20.29	20.36	20.40	23.44	23.42	23.48	23.42	23.44
LTE Band 41	18.96	18.96	18.96	18.95	18.97	22.45	22.39	22.38	22.40	22.45
LTE Band 66	20.29	20.38	20.29	20.32	20.42	23.36	23.31	23.35	23.36	23.42
NR Band n66	19.89	19.81	19.82	19.83	19.93	22.56	22.46	22.56	22.54	22.60



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 mearsurementes

Tissue simulating liquid	Band	Trigger distance – Front		
		Moving toward phantom	Moving from phantom	Worst case distance for SAR
1750 Head	WCDMA Band 4	8 mm	8 mm	7 mm
	LTE Band 4			
	LTE Band 66			
	NR Band n66			
1900 Head	GSM 1900	8 mm	8 mm	7 mm
	WCDMA Band 2			
	LTE Band 2			
2600 Head	LTE Band 41	8 mm	8 mm	7 mm

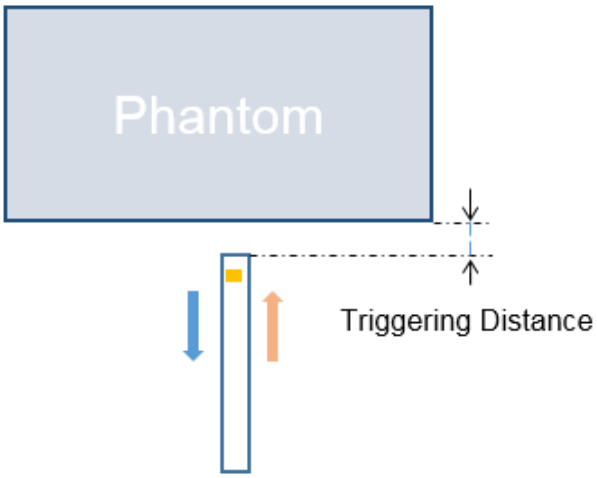
Proximity Sensor Triggering Distance Measurement Results – Front Side

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
GSM 1900	30.36	30.30	30.35	30.28	30.37	26.98	27.05	26.98	27.03	26.95
WCMDA Band 2	23.23	23.22	23.25	23.10	23.14	19.37	19.32	19.31	19.37	19.33
WCDMA Band 4	23.18	23.22	23.14	23.21	23.07	20.35	20.44	20.26	20.36	20.37
LTE Band 2	22.78	22.82	22.80	22.76	22.74	19.80	19.82	19.80	19.71	19.74
LTE Band 4	23.49	23.40	23.45	23.44	23.43	20.31	20.43	20.26	20.37	20.36
LTE Band 41	22.43	22.46	22.36	22.35	22.46	18.97	18.98	18.98	18.98	18.89
LTE Band 66	23.40	23.32	23.35	23.41	23.40	20.39	20.41	20.35	20.40	20.43
NR Band n66	22.59	22.48	22.53	22.60	22.54	19.96	19.81	19.77	19.79	19.87

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
GSM 1900	27.00	26.97	27.00	26.99	26.93	30.46	30.35	30.33	30.33	30.45
WCMDA Band 2	19.44	19.31	19.34	19.43	19.31	23.26	23.19	23.20	23.08	23.10
WCDMA Band 4	20.38	20.36	20.28	20.37	20.35	23.18	23.24	23.14	23.20	23.05
LTE Band 2	19.76	19.84	19.74	19.74	19.76	22.75	22.85	22.76	22.74	22.74
LTE Band 4	20.38	20.39	20.33	20.32	20.39	23.42	23.38	23.46	23.42	23.38
LTE Band 41	19.05	18.91	19.03	18.98	18.95	22.44	22.44	22.37	22.41	22.40
LTE Band 66	20.39	20.38	20.36	20.40	20.38	23.43	23.39	23.38	23.36	23.47
NR Band n66	19.95	19.81	19.82	19.77	19.92	22.58	22.48	22.55	22.53	22.61



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 mearsurementes

Tissue simulating liquid	Band	Trigger distance – Bottom		
		Moving toward phantom	Moving from phantom	Worst case distance for SAR
1750 Head	WCDMA Band 4	15 mm	15 mm	14 mm
	LTE Band 4			
	LTE Band 66			
	NR Band n66			
1900 Head	GSM 1900	15 mm	15 mm	14 mm
	WCDMA Band 2			
	LTE Band 2			
2600 Head	LTE Band 41	15 mm	15 mm	14 mm

Proximity Sensor Triggering Distance Measurement Results – Bottom Side

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
GSM 1900	30.44	30.35	30.37	30.28	30.45	26.99	27.06	26.90	26.99	26.96
WCMDA Band 2	23.20	23.15	23.17	23.13	23.17	19.43	19.35	19.29	19.43	19.28
WCDMA Band 4	23.23	23.21	23.17	23.18	23.06	20.30	20.38	20.34	20.38	20.43
LTE Band 2	22.74	22.83	22.86	22.77	22.69	19.84	19.76	19.73	19.75	19.74
LTE Band 4	23.44	23.46	23.52	23.39	23.38	20.34	20.35	20.36	20.31	20.43
LTE Band 41	22.43	22.36	22.37	22.35	22.41	19.03	18.92	19.04	18.94	18.93
LTE Band 66	23.35	23.32	23.42	23.42	23.43	20.37	20.36	20.35	20.32	20.43
NR Band n66	22.61	22.47	22.48	22.57	22.56	19.87	19.80	19.84	19.79	19.83

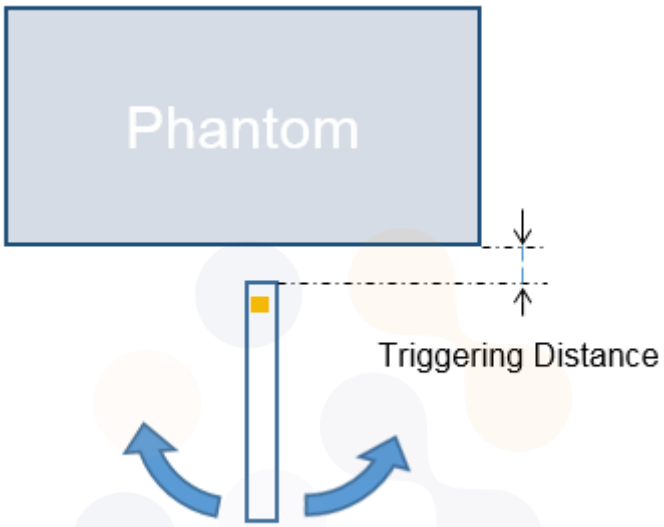
DUT Moving Away (Release) from the Phantom

Distance to DUT Output Power (dBm)										
Distance (mm)	11	12	13	14	15	16	17	18	19	20
GSM 1900	27.03	27.00	26.92	26.95	27.00	30.43	30.31	30.31	30.32	30.43
WCMDA Band 2	19.44	19.30	19.34	19.34	19.37	23.18	23.19	23.22	23.09	23.14
WCDMA Band 4	20.38	20.41	20.36	20.33	20.43	23.25	23.22	23.15	23.20	23.08
LTE Band 2	19.78	19.82	19.78	19.72	19.69	22.77	22.81	22.80	22.71	22.76
LTE Band 4	20.33	20.37	20.29	20.34	20.37	23.46	23.40	23.52	23.37	23.38
LTE Band 41	18.95	18.98	19.05	19.03	18.93	22.37	22.45	22.39	22.44	22.41
LTE Band 66	20.32	20.33	20.28	20.41	20.41	23.45	23.38	23.44	23.46	23.43
NR Band n66	19.86	19.88	19.82	19.78	19.92	22.59	22.45	22.49	22.59	22.58

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 (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°
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

End of test report