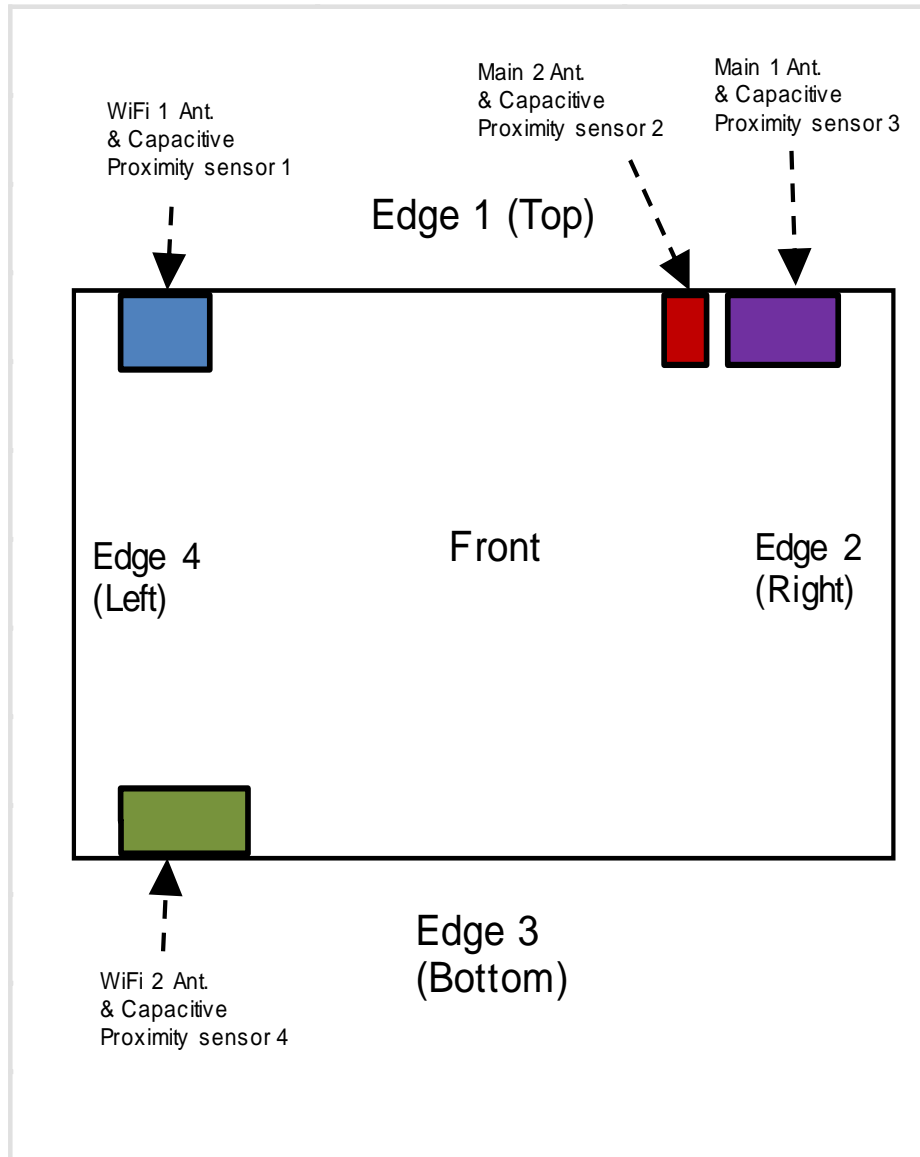


pendix G. Proximity sensor feature

The DUT has four proximity sensors to reduce the output power. The position of the sensors and antenna are as shown in the graphic.

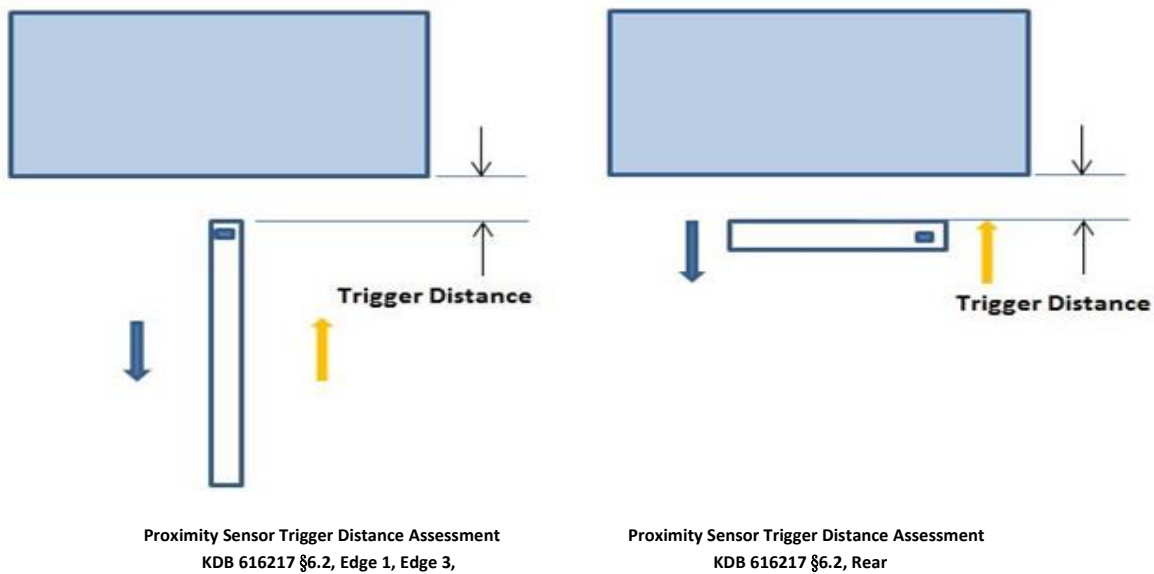


G.1 Proximity Sensor Triggering Distance (KDB 616217 §6.2)

Rear, Edge 1, Edge 3 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. Section 9 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

Summary of Trigger Distances

Antenna	Trigger distance – Rear		Trigger distance – Edge 1	
	Moving toward phantom	Moving from phantom	Moving toward phantom	Moving from phantom
WiFi 1 Ant.	15 mm	15 mm	17 mm	17 mm
Antenna	Trigger distance – Rear		Trigger distance – Edge 1	
	Moving toward phantom	Moving from phantom	Moving toward phantom	Moving from phantom
Main 1 Ant.	17 mm	17 mm	17 mm	17 mm
Antenna	Trigger distance – Rear		Trigger distance – Edge 1	
	Moving toward phantom	Moving from phantom	Moving toward phantom	Moving from phantom
Main 2 Ant.	15 mm	15 mm	12 mm	12 mm
Antenna	Trigger distance – Rear		Trigger distance – Edge 3	
	Moving toward phantom	Moving from phantom	Moving toward phantom	Moving from phantom
WiFi 2 Ant.	15 mm	15 mm	14 mm	14 mm

Proximity Sensor Triggering Distance Measurement Results

WiFi 1 Ant.

Rear, DUT Moving Toward (Trigger) and Away (Release) from the Phantom

Distance to DUT vs. Output Power in dBm										
Distance (mm)	11	12	13	14	15	16	17	18	19	20
2.4GHz WLAN 11b	9.96	9.63	10.24	9.92	9.81	18.75	19.18	18.87	19.20	19.23
2.4GHz WLAN 11g	10.24	10.22	10.09	10.24	10.16	18.04	18.07	18.17	17.95	18.05
2.4GHz WLAN 11n	10.04	10.15	9.99	9.96	9.82	17.20	17.03	17.11	17.13	16.93
2.4GHz WLAN 11ax	9.97	10.08	9.92	9.89	9.75	17.13	17.09	17.04	17.06	16.86
5GHz WLAN(20MHz BW) 11a	7.05	7.17	7.23	7.17	7.09	16.99	17.22	17.05	17.16	17.09
5GHz WLAN(20MHz BW) 11n	7.05	7.17	7.23	7.17	7.09	15.99	16.19	16.23	16.16	16.24
5GHz WLAN(20MHz BW) 11ac	7.11	6.92	7.27	6.88	7.24	16.05	16.11	16.20	15.92	16.37
5GHz WLAN(20MHz BW) 11ax	6.90	7.12	6.88	7.20	6.91	16.05	16.04	15.99	16.25	16.14
5GHz WLAN(40MHz BW) 11n	6.98	7.09	7.17	7.04	6.97	15.93	16.21	16.20	16.04	15.96
5GHz WLAN(40MHz BW) 11ac	6.96	6.89	7.14	7.08	6.96	14.21	14.02	14.05	13.88	13.90
5GHz WLAN(40MHz BW) 11ax	7.30	7.08	6.90	7.10	7.14	16.17	16.17	15.98	16.24	16.05
5GHz WLAN(80MHz BW) 11ac	7.02	7.11	6.82	7.19	6.99	12.97	13.09	13.09	13.18	12.91
5GHz WLAN(80MHz BW) 11ax	6.97	7.19	7.15	7.06	7.14	14.88	15.14	14.93	15.27	15.03
Bluetooth BDR	7.53	7.47	7.57	7.44	7.69	18.12	18.02	18.19	18.05	18.08
Bluetooth EDR	8.54	8.81	8.62	8.75	8.57	16.71	16.57	16.93	16.57	16.42

Edge 1, DUT Moving Toward (Trigger) and Away (Release) from the Phantom

Distance to DUT vs. Output Power in dBm										
Distance (mm)	13	14	15	16	17	18	19	20	21	22
2.4GHz WLAN 11b	10.00	9.67	10.28	9.96	9.85	18.79	19.22	18.91	19.24	19.27
2.4GHz WLAN 11g	10.28	10.26	10.13	10.28	10.20	18.08	18.11	18.21	17.99	18.09
2.4GHz WLAN 11n	10.08	10.19	10.03	10.00	9.86	17.24	17.07	17.15	17.17	16.97
2.4GHz WLAN 11ax	10.01	10.12	9.96	9.93	9.79	17.17	17.13	17.08	17.10	16.90
5GHz WLAN(20MHz BW) 11a	7.26	7.23	7.22	7.13	7.10	17.03	17.26	17.09	17.20	17.13
5GHz WLAN(20MHz BW) 11n	7.09	7.21	7.27	7.21	7.13	16.03	16.23	16.27	16.20	16.28
5GHz WLAN(20MHz BW) 11ac	7.15	6.96	7.31	6.92	7.28	16.09	16.15	16.24	15.96	16.41
5GHz WLAN(20MHz BW) 11ax	6.94	7.16	6.92	7.24	6.95	16.09	16.08	16.03	16.29	16.18
5GHz WLAN(40MHz BW) 11n	7.02	7.13	7.21	7.08	7.01	15.97	16.25	16.24	16.08	16.00
5GHz WLAN(40MHz BW) 11ac	7.00	6.93	7.18	7.12	7.00	14.25	14.06	14.09	13.92	13.94
5GHz WLAN(40MHz BW) 11ax	7.34	7.12	6.94	7.14	7.18	16.21	16.21	16.02	16.28	16.09
5GHz WLAN(80MHz BW) 11ac	7.06	7.15	6.86	7.23	7.03	13.01	13.13	13.13	13.22	12.95
5GHz WLAN(80MHz BW) 11ax	7.01	7.23	7.19	7.10	7.18	14.92	15.18	14.97	15.31	15.07
Bluetooth BDR	7.59	7.53	7.63	7.50	7.75	18.25	18.11	18.14	18.12	18.19
Bluetooth EDR	8.60	8.87	8.68	8.81	8.63	16.99	16.63	16.48	16.74	16.59

Main 1 Ant.

Rear, DUT Moving Toward (Trigger) and Away (Release) from the Phantom

Distance to DUT vs. Output Power in dBm										
Distance (mm)	13	14	15	16	17	18	19	20	21	22
GSM 850 Voice, GPRS 1Tx	23.17	23.06	22.73	23.17	23.44	32.18	32.04	32.19	32.41	32.29
GSM 850 GPRS 2Tx	19.81	19.95	20.17	19.79	19.95	31.05	31.18	31.37	31.32	31.27
GSM 850 GPRS 3Tx	18.28	18.24	18.15	17.74	17.90	28.94	28.77	29.17	28.90	28.76
GSM 850 GPRS 4Tx	17.60	18.15	18.18	17.73	17.97	28.13	28.39	27.97	28.25	27.80
GSM 1900 Voice	20.08	19.83	19.87	20.06	20.13	27.94	27.84	28.17	27.97	28.40
GSM1900 GPRS 1Tx	20.25	20.48	20.04	20.23	20.30	27.97	27.87	28.20	28.00	28.43
GSM 1900 GPRS 2Tx	17.07	17.19	16.83	17.08	16.96	25.92	25.77	25.42	25.42	25.75
GSM 1900 GPRS 3Tx	14.84	15.17	15.08	14.83	14.92	22.97	23.23	22.84	22.86	23.24
GSM 1900 GPRS 4Tx	13.81	13.95	14.07	13.79	13.95	22.02	21.88	21.86	21.79	22.13
WCDMA 2	11.25	11.67	11.26	11.23	11.67	21.64	21.34	21.48	21.56	21.53
WCDMA 4	12.07	12.19	11.83	12.08	11.96	22.26	22.09	21.83	21.74	22.12
WCDMA5	14.10	14.25	14.09	13.96	14.03	24.05	24.18	24.05	23.76	23.89
LTE B2	11.78	11.84	11.78	11.67	11.84	21.80	22.00	21.98	22.04	21.98
LTE B4	11.83	12.07	12.12	12.08	11.90	22.48	22.47	22.40	22.38	22.31
LTE B5	14.83	14.87	14.92	15.17	14.84	24.29	24.29	24.13	23.83	23.85
LTE B12	13.79	13.93	14.15	13.77	13.93	23.86	23.85	24.31	23.80	23.66
LTE B13	13.94	14.27	14.18	13.93	13.82	23.23	24.15	23.74	24.19	23.86
LTE B17	16.13	16.25	15.89	16.14	16.02	23.35	23.19	24.31	24.13	23.68
LTE B25	11.80	11.92	11.56	11.81	11.69	21.73	21.87	21.72	21.79	21.74
LTE B26	15.86	16.03	16.16	15.81	16.05	24.24	24.16	23.99	23.88	24.16
LTE B66	12.20	12.07	12.24	12.19	12.08	21.95	22.00	22.11	22.11	22.06
NR n5	16.30	16.26	16.17	15.76	15.92	24.15	24.03	23.95	24.27	24.15
NR n66	11.64	11.97	11.88	11.63	11.52	22.87	22.99	23.20	23.20	22.71

Edge 1, DUT Moving Toward (Trigger) and Away (Release) from the Phantom

Distance to DUT vs. Output Power in dBm										
Distance (mm)	13	14	15	16	17	18	19	20	21	22
GSM 850 Voice, GPRS 1Tx	23.75	23.17	22.93	23.17	23.44	32.23	32.04	32.45	32.04	32.19
GSM 850 GPRS 2Tx	20.12	19.81	20.17	19.79	19.95	31.49	31.18	31.34	31.18	31.57
GSM 850 GPRS 3Tx	17.74	18.28	18.15	17.74	17.90	29.29	28.77	29.26	28.77	29.17
GSM 850 GPRS 4Tx	17.86	17.90	18.18	17.93	17.97	28.20	28.39	28.30	28.39	27.97
GSM 1900 Voice	19.75	20.08	19.87	20.06	20.13	28.28	28.44	28.16	28.24	28.17
GSM1900 GPRS 1Tx	20.41	20.21	20.25	20.13	20.40	28.84	28.74	28.07	28.87	28.30
GSM 1900 GPRS 2Tx	17.12	17.07	16.83	17.08	16.96	25.25	25.77	25.79	25.77	25.42
GSM 1900 GPRS 3Tx	15.06	14.84	15.08	14.83	14.72	22.92	23.23	23.28	23.23	22.84
GSM 1900 GPRS 4Tx	14.12	13.81	14.17	13.79	13.95	22.29	21.88	22.24	21.88	21.86
WCDMA 2	11.60	11.19	11.16	11.60	11.87	21.27	21.41	21.49	21.46	21.27
WCDMA 4	12.12	12.07	11.83	12.08	11.96	22.03	22.09	22.39	22.09	21.83
WCDMA5	14.38	14.10	14.09	13.96	14.30	23.90	24.18	24.10	24.18	24.05
LTE B2	11.80	11.78	11.78	11.67	11.84	21.87	22.00	22.04	22.00	21.98
LTE B4	12.19	11.83	12.12	12.08	11.90	22.40	22.47	22.04	22.47	22.40
LTE B5	15.08	14.83	14.92	15.17	14.84	23.92	24.29	23.76	24.29	24.13
LTE B12	14.10	13.79	14.15	13.77	13.93	24.11	23.85	24.24	23.85	24.31
LTE B13	14.16	13.94	14.18	13.93	13.82	24.15	24.15	23.97	24.15	23.94
LTE B17	16.18	16.13	15.89	16.14	16.02	23.80	24.19	24.05	24.19	24.31
LTE B25	11.85	11.80	11.56	11.81	11.69	21.79	21.87	22.02	21.87	21.72
LTE B26	15.94	15.68	16.26	15.81	16.05	23.94	24.16	23.72	24.16	23.99
LTE B66	12.12	12.40	12.04	12.39	12.28	22.36	22.00	22.17	22.00	22.11
NR n5	15.76	16.30	16.17	15.76	15.92	23.84	24.03	24.15	24.03	23.95
NR n66	11.86	11.64	11.97	11.88	11.63	22.99	23.20	23.20	22.71	23.21

Main 2 Ant.

Rear, DUT Moving Toward (Trigger) and Away (Release) from the Phantom

Distance to DUT vs. Output Power in dBm										
Distance (mm)	11	12	13	14	15	16	17	18	19	20
LTE B41	13.8	13.9	13.8	14.2	14.0	23.5	23.6	23.3	23.6	23.8

Edge 1, DUT Moving Toward (Trigger) and Away (Release) from the Phantom

Distance to DUT vs. Output Power in dBm										
Distance (mm)	8	9	10	11	12	13	14	15	16	17
LTE B41	14.08	14.17	13.89	13.83	14.19	23.57	22.91	23.53	23.49	23.27

WiFi 2 Ant.

Rear, DUT Moving Toward (Trigger) and Away (Release) from the Phantom

Distance to DUT vs. Output Power in dBm										
Distance (mm)	11	12	13	14	15	16	17	18	19	20
2.4GHz WLAN 11b	9.92	9.59	10.20	9.88	9.77	18.71	19.14	18.83	19.16	19.19
2.4GHz WLAN 11g	10.20	10.18	10.05	10.20	10.12	18.00	18.03	18.13	17.91	18.01
2.4GHz WLAN 11n	10.00	10.11	9.95	9.92	9.78	17.16	16.99	17.07	17.09	16.89
2.4GHz WLAN 11ax	9.93	10.04	9.88	9.85	9.71	17.09	17.05	17.00	17.02	16.82
5GHz WLAN(20MHz BW) 11a	7.18	7.15	7.14	7.05	7.02	16.95	17.18	17.01	17.12	17.05
5GHz WLAN(20MHz BW) 11n	7.01	7.13	7.19	7.13	7.05	15.95	16.15	16.19	16.12	16.20
5GHz WLAN(20MHz BW) 11ac	7.07	6.88	7.23	6.84	7.20	16.01	16.07	16.16	15.88	16.33
5GHz WLAN(20MHz BW) 11ax	6.86	7.08	6.84	7.16	6.87	16.01	16.00	15.95	16.21	16.10
5GHz WLAN(40MHz BW) 11n	6.94	7.05	7.13	7.00	6.93	15.89	16.17	16.16	16.00	15.92
5GHz WLAN(40MHz BW) 11ac	6.92	6.85	7.10	7.04	6.92	14.17	13.98	14.01	13.84	13.86
5GHz WLAN(40MHz BW) 11ax	7.26	7.04	6.86	7.06	7.10	16.13	16.13	15.94	16.20	16.01
5GHz WLAN(80MHz BW) 11ac	6.98	7.07	6.78	7.15	6.95	12.93	13.05	13.05	13.14	12.87
5GHz WLAN(80MHz BW) 11ax	6.93	7.15	7.11	7.02	7.10	14.84	15.10	14.89	15.23	14.99
Bluetooth BDR	7.50	7.44	7.54	7.41	7.66	18.09	17.99	18.16	18.02	18.05
Bluetooth EDR	8.51	8.78	8.59	8.72	8.54	16.68	16.54	16.90	16.54	16.39

Edge 3, DUT Moving Toward (Trigger) and Away (Release) from the Phantom

Distance to DUT vs. Output Power in dBm										
Distance (mm)	10	11	12	13	14	15	16	17	18	19
2.4GHz WLAN 11b	10.16	10.19	9.98	9.65	10.26	18.77	19.20	18.89	19.22	19.25
2.4GHz WLAN 11g	10.13	10.16	10.26	10.24	10.11	18.06	18.09	18.19	17.97	18.07
2.4GHz WLAN 11n	10.09	10.12	10.06	10.17	10.01	17.22	17.05	17.13	17.15	16.95
2.4GHz WLAN 11ax	10.02	10.05	9.99	10.10	9.94	17.15	17.11	17.06	17.08	16.88
5GHz WLAN(20MHz BW) 11a	7.12	7.15	7.24	7.21	7.20	17.01	17.24	17.07	17.18	17.11
5GHz WLAN(20MHz BW) 11n	7.28	7.31	7.07	7.19	7.25	16.01	16.21	16.25	16.18	16.26
5GHz WLAN(20MHz BW) 11ac	6.96	6.99	7.13	6.94	7.29	16.07	16.13	16.22	15.94	16.39
5GHz WLAN(20MHz BW) 11ax	7.08	7.11	6.92	7.14	6.90	16.07	16.06	16.01	16.27	16.16
5GHz WLAN(40MHz BW) 11n	6.81	6.84	7.00	7.11	7.19	15.95	16.23	16.22	16.06	15.98
5GHz WLAN(40MHz BW) 11ac	7.08	7.11	6.98	6.91	7.16	14.23	14.04	14.07	13.90	13.92
5GHz WLAN(40MHz BW) 11ax	6.90	6.93	7.32	7.10	6.92	16.19	16.19	16.00	16.26	16.07
5GHz WLAN(80MHz BW) 11ac	7.08	7.11	7.04	7.13	6.84	12.99	13.11	13.11	13.20	12.93
5GHz WLAN(80MHz BW) 11ax	6.92	6.95	6.99	7.21	7.17	14.90	15.16	14.95	15.29	15.05
Bluetooth BDR	7.47	7.65	7.48	7.42	7.52	17.97	18.14	18.00	18.03	18.01
Bluetooth EDR	8.68	8.46	8.49	8.76	8.57	16.52	16.88	16.52	16.37	16.63

Summary of Tablet Tilt Angle Influence to Proximity Sensor Triggering (Edge 3)

Antenna	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°
WiFi 2 Ant	14 mm	14 mm	On	On	On	On	On	On	On	On	On	On	On

G.4 Resulting test positions for SAR measurements

Wireless technologies	Position	§6.2 Triggering Distance	§6.3 Coverage	§6.4 Tilt Angle	Worst case distance for SAR
WiFi 1 Ant.	Rear	15 mm	N/A	N/A	14 mm
	Edge 1	17 mm	N/A	17 mm	16 mm
Main 1 Ant.	Rear	17 mm	N/A	N/A	16 mm
	Edge 1	17 mm	N/A	17 mm	16 mm
Main 2 Ant.	Rear	15 mm	N/A	N/A	14 mm
	Edge 1	12 mm	N/A	12 mm	11 mm
WiFi 2 Ant.	Rear	15 mm	N/A	N/A	14 mm
	Edge 3	14 mm	N/A	14 mm	13 mm

-End-