

Appendix H. – Power reduction verification

Per the May 2017 TCBC Workshop notes, demonstration of proper functioning of the power reduction mechanism is required to support the corresponding SAR Configurations.

The verification process includes evaluation of output power levels for individual or multiple triggering mechanism

1. Power reduction Verification for Main 2[Ant B]

This device uses a power reduction mechanism for SAR compliance for operations during voice or VoIP held to ear scenarios.

When a user makes or receives a voice call or VoIP call for Sub 1 the audio of the call is sent through the Receiver at the top of the device will trigger the Power reduction for Sub 1 (i.e. reducing output power for DSI=1, Head SAR)

Detailed descriptions of the power reduction mechanism are included in the Main operational description document

Condition For Power reduction	Wireless Technologies	Conducted Power[dBm]	
		Un-Triggered (Max Power)	Triggered (Reduced Power)
RCV-on	LTE Band 41 (PC3)	24.12	20.98
RCV-on	LTE Band 41 (PC2)	25.72	22.57

2. Power reduction Verification for Sub 1[Ant E]

This device uses a power reduction mechanism for SAR compliance for operations during voice or VoIP held to ear scenarios.

When a user makes or receives a voice call or VoIP call for Sub 1 the audio of the call is sent through the Receiver at the top of the device will trigger the Power reduction for Sub 1 (i.e. reducing output power for DSI=1, Head SAR)

Detailed descriptions of the power reduction mechanism are included in the Main operational description document

Condition For Power reduction	Wireless Technologies	Conducted Power[dBm]	
		Un-Triggered (Max Power)	Triggered (Reduced Power)
RCV-on	GSM850 Voice	33.51	29.97
RCV-on	GSM/GPRS/EDGE850 1Tx	31.64	27.24
RCV-on	GSM/GPRS/EDGE850 2Tx	29.85	25.10
RCV-on	GSM/GPRS/EDGE850 3Tx	28.11	24.21
RCV-on	UMTS Band 5	24.92	21.61
RCV-on	LTE Band 71	24.84	21.53
RCV-on	LTE Band 12	24.52	21.25
RCV-on	LTE Band 13	24.40	21.49
RCV-on	LTE Band 14	24.81	21.43
RCV-on	LTE Band 26 (Cell)	24.36	21.41
RCV-on	LTE Band 5 (Cell)	24.34	21.59
RCV-on	NR Band n71	24.72	21.61
RCV-on	NR Band n12	24.24	21.06
RCV-on	NR Band n5	24.65	21.50
RCV-on	NR Band n26	24.31	21.12
RCV-on	NR Band n41 (PC2 only)	20.71	17.18
RCV-on	NR Band n41 (PC2 only)_Hopping	17.92	13.09

3. Power reduction Verification for Sub 2 [Ant F]

This device uses a power reduction mechanism for SAR compliance for operations during voice or VoIP held to ear scenarios.

When a user makes or receives a voice call or VoIP call for Sub 2 the audio of the call is sent through the Receiver at the top of the device will trigger the Power reduction for Sub 2 (i.e. DSI=0 reducing output power for DSI=1, Head SAR compliance)

Detailed descriptions of the power reduction mechanism are included in the Main operational description document

Condition For Power reduction	Wireless Technologies	Conducted Power[dBm]	
		Un-Triggered (Max Power)	Triggered (Reduced Power)
RCV-on	LTE Band 66 (AWS)_HOPPING	20.18	18.07
RCV-on	LTE Band 4 (AWS)_HOPPING	20.17	18.07
RCV-on	LTE Band 25 (PCS)_HOPPING	20.03	18.33
RCV-on	LTE Band 2 (PCS)_HOPPING	20.11	18.12
RCV-on	LTE Band 30	20.05	16.87
RCV-on	LTE Band 7_HOPPING	19.53	15.48
RCV-on	LTE Band 48	20.99	18.01
RCV-on	LTE Band 41 (PC3)	19.27	17.76
RCV-on	LTE Band 41 (PC2)	21.05	19.66
RCV-on	LTE Band 38	21.32	19.36
RCV-on	NR Band n66_HOPPING	20.47	17.47
RCV-on	NR Band n25_HOPPING	20.19	18.32
RCV-on	NR Band n2 (PCS)_HOPPING	20.01	18.06
RCV-on	NR Band n70_HOPPING	20.13	17.84
RCV-on	NR Band n30	20.06	17.03
RCV-on	NR Band n7_HOPPING	20.01	15.78
RCV-on	NR Band n41 Path 1 (PC2 only)	19.52	17.69
RCV-on	NR Band n41 Path 2 (PC2 only)_HOPPING	19.54	16.85
RCV-on	NR Band n38 (PC3 only)	19.59	17.43
RCV-on	NR Band n48 (PC3 only)	19.62	16.80
RCV-on	NR Band n77 DoD (PC2 only)	17.88	16.96
RCV-on	NR Band n77 (PC2 only)	17.75	16.83
RCV-on	NR Band n78 (PC2 only)	19.71	15.64

4. Power reduction Verification for WLAN Ant [Sub 1,Sub 4,Sub 6]

This device uses a power reduction mechanism for SAR compliance for WLAN operations during voice or VoIP held to ear scenarios.

When a user makes or receives a WLAN voice or WLAN VOIP call for WLAN Ant the audio of the call is sent through the Receiver at the top of the device will trigger the Power reduction for WLAN Ant (i.e. reducing output power for DSI=1, Head SAR compliance)

Detailed descriptions of the power reduction mechanism are included in the Main operational description document

Power Measurement Verification for WLAN

Condition For Power reduction	Wireless Technologies	Conducted Power[dBm]					
		Un-Triggered (Max Power)			Triggered (Reduced Power)		
		Ant1	Ant2	MIMO	Ant1	Ant2	MIMO
RCV-on	2.4GHz 802.11b	19.01	18.53	21.79	13.76	13.54	16.67
RCV-on	2.4GHz 802.11g	17.13	16.51	19.84	13.62	13.22	16.43
RCV-on	2.4GHz 802.11n	17.08	16.47	19.80	13.29	13.19	16.25
RCV-on	2.4GHz 802.11ac	16.82	16.32	19.59	12.95	12.89	15.93
RCV-on	2.4GHz 802.11ax	15.80	15.09	18.46	13.29	13.04	16.17
RCV-on	5GHz 802.11a	15.49	15.06	18.29	12.36	11.63	15.02
RCV-on	5GHz 802.11n 20MHz	15.44	14.79	18.13	12.45	11.75	15.12
RCV-on	5GHz 802.11n 40MHz	15.97	14.84	18.45	12.75	11.91	15.36
RCV-on	5GHz 802.11ac 20MHz	15.85	15.26	18.58	12.40	11.70	15.08
RCV-on	5GHz 802.11ac 40MHz	15.81	15.12	18.49	12.76	11.90	15.36
RCV-on	5GHz 802.11ac 80MHz	14.29	13.89	17.10	12.99	12.80	15.91
RCV-on	5GHz 802.11ac 160MHz	12.98	12.78	15.89	12.09	12.54	15.33
RCV-on	5GHz 802.11ax 20MHz	15.47	14.96	18.24	12.28	11.61	14.97
RCV-on	5GHz 802.11ax 40MHz	15.74	14.90	18.35	12.25	11.48	14.90
RCV-on	5GHz 802.11ax 80MHz	14.66	13.77	17.25	11.90	11.19	14.57
RCV-on	5GHz 802.11ax 160MHz	13.23	12.37	15.84	11.92	11.93	14.94