

Appendix G: Power Reduction Verification

G.1. Procedures

According to May 2017 TCBC Workshop notes, demonstration of proper functioning of the power reduction mechanisms is required to support the corresponding SAR configurations. The verification process includes evaluation of device state index (DSI for FastConnect and RSI for S.LSI) for individual or multiple triggering mechanisms for Radios under time-averaging algorithms. For Bluetooth, verification shows power levels for each triggering mechanism.

This device supports manufacturer's proprietary mechanism which configure the DSI/RSI with different time averaged power levels based on certain exposure scenarios. Details of this mechanism can be found in the Operational Description.

The power verification was performed using a base station simulator to establish a conducted RF connection for relevant modes and frequency bands. The DSI/RSI as displayed on the DUT was recorded before and after the mechanism was triggered. For Bluetooth, the power measurements were confirmed to be within the expected tolerances for all conditions before and after a power reduction mechanism was triggered.

G.2. Power Reduction Verification Result

Table G-1

Band/Mode	Exposure Conditions	Free-Space/Body-worn/Hotspot/Phablet	Head
	TARGET RSI	0	1
	Antenna	Device State Index (RSI)	
Low	A	0	1
Low	E	0	1
Mid	A	0	1
Mid	F	0	1
High	B	0	1
High	F	0	1
UHB	C	0	1
UHB	F	0	1

Note: Low band refers to GSM 850, UMTS B5, LTE B71/12/13/14/5/26 and NR n71/n12/n14/n5/n26. Mid band refers to GSM 1900, UMTS B4/2, LTE B66/4/25/2 and NR n70/n66/n25/n2. High band refers to LTE B30/7/38/41 and NR n30/n7/n38/n41. Ultra high band refers to LTE B48 and NR n48/n77/n78.

Table G-2

Band/Mode	Exposure Conditions	Free-Space/Body-worn/Hotspot/Phablet	Head
	TARGET DSI	0	1
	Antenna	Device State Index (DSI)	
2.4 GHz WLAN	H	0	1
2.4 GHz WLAN	J	0	1
5 GHz WLAN	H	0	1
5 GHz WLAN	E	0	1
6 GHz WLAN	H	0	1
6 GHz WLAN	E	0	1

Table G-3

Band/Mode	ANTENNA	Max	Red 2	Red 1
		Conducted Power [dBm]		
2.4 GHz BT	H	17.09	14.99	11.82
2.4 GHz BT	J	17.05	14.98	11.23

Red 1 Condition: RCV ON

Red 2 conditions: Simultaneous transmission with Cellular, 5 GHz WIFI, or/and 6 GHz WIFI.

BLE is not evaluated due to callbox limitation.