

APPENDIX F: POWER REDUCTION VERIFICATION

Per the 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 included the evaluation of output power levels or device state indices for individual or multiple triggering mechanisms.

F.1 Power Verification Procedure

The power verification was performed according to the following procedure:

1. A base station simulator was used to establish a conducted RF connection and the output power was monitored for all states before and after a power reduction mechanism was triggered.
2. Step 1 was repeated for all relevant modes and frequency bands for the mechanism being investigated.
3. Steps 1 and 2 were repeated for all individual power reduction mechanisms. The device state index as displayed on the device UI was recorded before and after the mechanism was triggered.

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F.2 Main Antenna Verification Summary

- Low band refers to: GSM850, UMTS B5, LTE B12/17/13/26/5, NR n5; Mid band refers to: GSM1900, UMTS B2/4, LTE B2/4/25/66, NR n66/25/2; High band refers to: LTE B41, NR n41; Ultra High band refers to: NR n77.
- This device uses different Device State Indices (DSI) to configure different time averaged power levels based on certain exposure scenarios. For this device, DSI = 1 represents the case where the device is held-to-ear. DSI = 0 is configured when the device cannot detect the held-to-ear use conditions.

Table F-1
Power Measurement Verification for WWAN Antennas

Mode/Band	Device State Index (DSI)	
	Free Space	Mechanism #1 (Head)
Low Band Ant E	0	1
Mid Band Ant A	0	1
Mid Band Ant F	0	1
High Band Ant B	0	1
High Band Ant F	0	1
Ultra High Band Ant F	0	1

F.3 WIFI Verification Summary

Table F-2
Power Measurement Verification WIFI

Mode/Band	Device State Index (DSI)	
	Un-triggered	Mechanism #1 (Head)
2.4 GHz WLAN Ant G	0	1
2.4 GHz WLAN Ant I	0	1
5 GHz WLAN Ant G	0	1
5 GHz WLAN Ant E	0	1
6 GHz WLAN Ant G	0	1
6 GHz WLAN Ant E	0	1

*Note: MIMO WIFI modes were not evaluated due to equipment limitations.

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