

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 radio 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 output power was verified to change according to each radio state index, and the corresponding radio state index 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; High band refers to: LTE B41, NR n41; Ultra High band refers to: NR n77.
- This device uses different Radio State Indices (RSI) to configure different time averaged power levels based on certain exposure scenarios. For this device, RSI = 1 represents the case where the device is held-to-ear. RSI = 0 is configured when the device cannot detect the held-to-ear use conditions.

Table F-1
Power Measurement Verification for WWAN Antennas

Mechanism(s)	Mode/Band	Radio State Index (RSI)	
1st		Free Space (Non Head)	Mechanism #1 (Head)
Held-to-Ear	Low Band Ant A	0	1
Held-to-Ear	Mid Band Ant A	0	1
Held-to-Ear	High Band Ant B	0	1

F.3 WIFI Verification Summary

Table F-2
Power Measurement Verification WIFI

Mechanism(s)	Mode/Band	Radio State Index (RSI)	
1st		Un-triggered (Non Head)	Mechanism #1 (Head)
Held-to-Ear	2.4 GHz WLAN Ant H	0	1
Held-to-Ear	2.4 GHz WLAN Ant J	0	1
Held-to-Ear	5 GHz WLAN Ant E	0	1
Held-to-Ear	5 GHz WLAN Ant G	0	1

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

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