

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 was to evaluate output power levels 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. The power measurements were confirmed to be within expected tolerances 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 and combinations thereof. For the combination cases, one mechanism was switched to a 'triggered' state at a time; powers were confirmed to be within tolerances after each additional mechanism was activated.

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REV 2.0

F.2 WIFI Verification Summary

Table F-1
Power Measurement Verification 6 GHz WIFI – Antenna 1 with RCV active

Mode/Band	Conducted Power (dBm)	
	Un-triggered (Max)	Mechanism #1 RCV Active (Reduced)
802.11a (6 GHz, 20 MHz BW)	10.82	9.91
802.11ax (6 GHz, 20 MHz BW)	10.83	9.87
802.11ax (6 GHz, 40 MHz BW)	10.79	9.86
802.11ax (6 GHz, 80 MHz BW)	10.91	9.85
802.11ax (6 GHz, 160 MHz BW)	10.75	9.81

Table F-2
Power Measurement Verification 6 GHz WIFI – Antenna 2 with RCV active

Mode/Band	Conducted Power (dBm)	
	Un-triggered (Max)	Mechanism #1 RCV Active (Reduced)
802.11a (6 GHz, 20 MHz BW)	11.08	9.98
802.11ax (6 GHz, 20 MHz BW)	11.10	10.17
802.11ax (6 GHz, 40 MHz BW)	11.14	10.08
802.11ax (6 GHz, 80 MHz BW)	11.03	10.12
802.11ax (6 GHz, 160 MHz BW)	10.98	10.10

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Table F-3
Power Measurement Verification 6 GHz WIFI – Antenna 1 with 5G FR2 NR active

Mode/Band	Conducted Power (dBm)	
	Un-triggered (Max)	Mechanism #1 NR FR2 Active (Reduced)
802.11a (6 GHz, 20 MHz BW)	10.86	9.94
802.11ax (6 GHz, 20 MHz BW)	10.82	9.91
802.11ax (6 GHz, 40 MHz BW)	10.81	9.89
802.11ax (6 GHz, 80 MHz BW)	10.97	9.92
802.11ax (6 GHz, 160 MHz BW)	10.78	9.96

Table F-4
Power Measurement Verification 6 GHz WIFI – Antenna 2 with 5G FR2 NR active

Mode/Band	Conducted Power (dBm)	
	Un-triggered (Max)	Mechanism #1 NR FR2 Active (Reduced)
802.11a (6 GHz, 20 MHz BW)	11.06	10.02
802.11ax (6 GHz, 20 MHz BW)	11.12	10.13
802.11ax (6 GHz, 40 MHz BW)	11.12	10.15
802.11ax (6 GHz, 80 MHz BW)	11.01	10.14
802.11ax (6 GHz, 160 MHz BW)	11.04	10.12

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