

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.

A Base station simulator was used to establish a conducted RF connection and output power was monitored. The power measurements were confirmed to be within expected tolerance for all DSI. before and after a power reduction mechanism was triggered. 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

1. Power Reduction Verification for Main ANT

This device utilizes a power reduction mechanism for some wireless modes under DSI(Device State Index).

For this device DSI = 0 is configured when the device cannot detect the use conditions, and DSI = 3 is configured when Hotspot mode activated. DSI = 2 is configured when receiver mode on.

Table 1.1 Power Reduction Verification for Antenna A

Mechanism		Band	DSI		
#1	#2		FREE	#1	#2
RCV ON	Hotspot On	GSM 850 Voice	0	2	2
Hotspot On	RCV ON	GSM 850 Voice	0	3	2
RCV ON	Hotspot On	GSM 850 1Tx	0	2	2
Hotspot On	RCV ON	GSM 850 1Tx	0	3	2
RCV ON	Hotspot On	GSM 850 2Tx	0	2	2
Hotspot On	RCV ON	GSM 850 2Tx	0	3	2
RCV ON	Hotspot On	GSM 850 3Tx	0	2	2
Hotspot On	RCV ON	GSM 850 3Tx	0	3	2
RCV ON	Hotspot On	GSM 850 4Tx	0	2	2
Hotspot On	RCV ON	GSM 850 4Tx	0	3	2
RCV ON	Hotspot On	GSM 1900 Voice	0	2	2
Hotspot On	RCV ON	GSM 1900 Voice	0	3	2
RCV ON	Hotspot On	GSM 1900 1Tx	0	2	2
Hotspot On	RCV ON	GSM 1900 1Tx	0	3	2
RCV ON	Hotspot On	GSM 1900 2Tx	0	2	2
Hotspot On	RCV ON	GSM 1900 2Tx	0	3	2
RCV ON	Hotspot On	GSM 1900 3Tx	0	2	2
Hotspot On	RCV ON	GSM 1900 3Tx	0	3	2
RCV ON	Hotspot On	GSM 1900 4Tx	0	2	2
Hotspot On	RCV ON	GSM 1900 4Tx	0	3	2
RCV ON	Hotspot On	UMTS Band 5	0	2	2
Hotspot On	RCV ON	UMTS Band 5	0	3	2
RCV ON	Hotspot On	UMTS Band 4	0	2	2
Hotspot On	RCV ON	UMTS Band 4	0	3	2
RCV ON	Hotspot On	UMTS Band 2	0	2	2
Hotspot On	RCV ON	UMTS Band 2	0	3	2
RCV ON	Hotspot On	LTE Band 12	0	2	2
Hotspot On	RCV ON	LTE Band 12	0	3	2
RCV ON	Hotspot On	LTE Band 13	0	2	2
Hotspot On	RCV ON	LTE Band 13	0	3	2
RCV ON	Hotspot On	LTE Band 26	0	2	2
Hotspot On	RCV ON	LTE Band 26	0	3	2
RCV ON	Hotspot On	LTE Band 5	0	2	2
Hotspot On	RCV ON	LTE Band 5	0	3	2
RCV ON	Hotspot On	LTE Band 66	0	2	2
Hotspot On	RCV ON	LTE Band 66	0	3	2
RCV ON	Hotspot On	LTE Band 4	0	2	2
Hotspot On	RCV ON	LTE Band 4	0	3	2
RCV ON	Hotspot On	LTE Band 25	0	2	2
Hotspot On	RCV ON	LTE Band 25	0	3	2
RCV ON	Hotspot On	LTE Band 2	0	2	2
Hotspot On	RCV ON	LTE Band 2	0	3	2
RCV ON	Hotspot On	NR Band n5	0	2	2
Hotspot On	RCV ON	NR Band n5	0	3	2
RCV ON	Hotspot On	NR Band n66	0	2	2
Hotspot On	RCV ON	NR Band n66	0	3	2
RCV ON	Hotspot On	NR Band n25	0	2	2
Hotspot On	RCV ON	NR Band n25	0	3	2
RCV ON	Hotspot On	NR Band n2	0	2	2
Hotspot On	RCV ON	NR Band n2	0	3	2

Table 1.2 Power Reduction Verification for Antenna B

Mechanism		Band	DSI		
#1	#2		FREE	#1	#2
RCV ON	Hotspot On	LTE Band 41 PC3	0	2	2
Hotspot On	RCV ON	LTE Band 41 PC3	0	3	2
RCV ON	Hotspot On	LTE Band 41 PC2	0	2	2
Hotspot On	RCV ON	LTE Band 41 PC2	0	3	2

Table 1.3 Power Reduction Verification for Antenna I

Mechanism		Band	DSI		
#1	#2		FREE	#1	#2
RCV ON	Hotspot On	LTE Band 25	0	2	2
Hotspot On	RCV ON	LTE Band 25	0	3	2
RCV ON	Hotspot On	LTE Band 2	0	2	2
Hotspot On	RCV ON	LTE Band 2	0	3	2
RCV ON	Hotspot On	LTE Band 41 PC3	0	2	2
Hotspot On	RCV ON	LTE Band 41 PC3	0	3	2
RCV ON	Hotspot On	LTE Band 41 PC2	0	2	2
Hotspot On	RCV ON	LTE Band 41 PC2	0	3	2
RCV ON	Hotspot On	NR Band n25	0	2	2
Hotspot On	RCV ON	NR Band n25	0	3	2
RCV ON	Hotspot On	NR Band n2	0	2	2
Hotspot On	RCV ON	NR Band n2	0	3	2
RCV ON	Hotspot On	NR Band n41	0	2	2
Hotspot On	RCV ON	NR Band n41	0	3	2
RCV ON	Hotspot On	NR Band n77	0	2	2
Hotspot On	RCV ON	NR Band n77	0	3	2

Table 1.4 Power Reduction Verification for Antenna F

Mechanism		Band	DSI		
#1	#2		FREE	#1	#2
RCV ON	Hotspot On	NR Band n41	0	2	2
Hotspot On	RCV ON	NR Band n41	0	3	2
RCV ON	Hotspot On	NR Band n77	0	2	2
Hotspot On	RCV ON	NR Band n77	0	3	2

Table 1.5 Power Reduction Verification for Antenna E

Mechanism		Band	DSI		
#1	#2		FREE	#1	#2
RCV ON	Hotspot On	NR Band n77	0	2	2
Hotspot On	RCV ON	NR Band n77	0	3	2

Table 1.6 Power Reduction Verification for Antenna C

Mechanism		Band	DSI		
#1	#2		FREE	#1	#2
RCV ON	Hotspot On	NR Band n41	0	2	2
Hotspot On	RCV ON	NR Band n41	0	3	2
RCV ON	Hotspot On	NR Band n77	0	2	2
Hotspot On	RCV ON	NR Band n77	0	3	2