



SAMSUNG ELECTRONICS AMERICA, INC.
American QA Lab
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Date: January 06, 2011

PCTEST TCB/CB
 Div. of PCTEST Engineering Lab., Inc.
 6660-B Dobbin Road
 Columbia, MD 21045

SUBJECT: Samsung Electronics Co., Ltd.
FCC ID: A3LSCHR930

To Whom It May Concern:

We attest to the following for this application:

1. MPR is permanently implemented for all channel BWs, modulations, frequency bands and RB sizes:
 Supported channel BWs, modulations, frequency bands:
 - a. LTE Band 2 (Channel BW 1.4 & 3 & 5 MHz)/QPSK & 16QAM
 - b. LTE Band 4 (Channel BW 5 & 10 MHz)/QPSK & 16QAM
 - c. LTE Band 5 (Channel BW 1.4 & 3 & 5 MHz)/QPSK & 16QAM
 - d. LTE Band 12 (Channel BW 5 & 10 MHz)/QPSK & 16QAM
2. MPR is implemented per 3GPP TS 36.101. With the MPR permanently implemented, this device will never operate at 23dBm or higher in QPSK and 16QAM.
3. We confirm the specific MPR targets and tolerances shown below

LTE Band 2 (PCS)								
Frequency [MHz]	Uplink Channel Number	BW [MHz]	Modulation	RB Size	RB Offset	Target Power [dBm]	MPR Target	MPR Allowed by 3GPP
Low 1850.7 Mid 1880.0 High 1909.3	Low 18607 Mid 18900 High 19193	1.4	QPSK	1	0	22.5+0.5	0	0
				1	5	22.5+0.5	0	0
				3	2	22.5+0.5	0	0
				6	0	21.5+0.5	1	0-1
			16-QAM	1	0	21.5+0.5	1	0-1
				1	5	21.5+0.5	1	0-1
				3	2	21.5+0.5	1	0-1
				6	0	20.5+0.5	2	0-2
Low 1851.5 Mid 1880.0 High 1908.5	Low 18615 Mid 18900 High 19185	3	QPSK	1	0	22.5+0.5	0	0
				1	14	22.5+0.5	0	0
				8	4	21.5+0.5	1	0-1
				15	0	21.5+0.5	1	0-1
			16-QAM	1	0	21.5+0.5	1	0-1
				1	14	21.5+0.5	1	0-1
				8	4	20.5+0.5	2	0-2
				15	0	20.5+0.5	2	0-2
Low 1852.5 Mid 1880.0 High 1907.5	Low 18625 Mid 18900 High 19175	5	QPSK	1	0	22.5+0.5	0	0
				1	24	22.5+0.5	0	0
				12	6	21.5+0.5	1	0-1
				25	0	21.5+0.5	1	0-1
			16-QAM	1	0	21.5+0.5	1	0-1
				1	24	21.5+0.5	1	0-1
				12	6	20.5+0.5	2	0-2
				25	0	20.5+0.5	2	0-2

LTE Band 4 (AWS)								
Frequency [MHz]	Uplink Channel Number	BW [MHz]	Modulation	RB Size	RB Offset	Target Power [dBm]	MPR Target	MPR Allowed by 3GPP
Low 1712.5 Mid 1732.5 High 1752.5	Low 19975 Mid 20175 High 20375	5	QPSK	1	0	22.5+0.5	0	0
			16-QAM	1	0	22.5+0.5	0	0
			QPSK	1	24	21.5+0.5	1	0-1
			16-QAM	1	24	21.5+0.5	1	0-1
			QPSK	12	6	21.5+0.5	1	0-1
			16-QAM	12	6	21.5+0.5	1	0-1
			QPSK	25	0	20.5+0.5	2	0-2
			16-QAM	25	0	20.5+0.5	2	0-2
Low 1715 Mid 1732.5 High 1750	Low 20000 Mid 20175 High 20350	10	QPSK	1	0	22.5+0.5	0	0
			16-QAM	1	0	22.5+0.5	0	0
			QPSK	1	49	21.5+0.5	1	0-1
			16-QAM	1	49	21.5+0.5	1	0-1
			QPSK	25	12	21.5+0.5	1	0-1
			16-QAM	25	12	21.5+0.5	1	0-1
			QPSK	50	0	20.5+0.5	2	0-2
			16-QAM	50	0	20.5+0.5	2	0-2

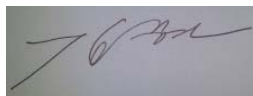
LTE Band 5								
Frequency [MHz]	Uplink Channel Number	BW [MHz]	Modulation	RB Size	RB Offset	Target Power [dBm]	MPR Target	MPR Allowed by 3GPP
Low 824.7 Mid 836.5 High 848.3	Low 20407 Mid 20525 High 20643	1.4	QPSK	1	0	22.5+0.5	0	0
				1	5	22.5+0.5	0	0
				3	2	22.5+0.5	0	0
				6	0	21.5+0.5	1	0-1
			16-QAM	1	0	21.5+0.5	1	0-1
				1	5	21.5+0.5	1	0-1
				3	2	21.5+0.5	1	0-1
				6	0	20.5+0.5	2	0-2
Low 825.5 Mid 836.5 High 847.5	Low 20415 Mid 20525 High 20635	3	QPSK	1	0	22.5+0.5	0	0
				1	14	22.5+0.5	0	0
				8	4	21.5+0.5	1	0-1
				15	0	21.5+0.5	1	0-1
			16-QAM	1	0	21.5+0.5	1	0-1
				1	14	21.5+0.5	1	0-1
				8	4	20.5+0.5	2	0-2
				15	0	20.5+0.5	2	0-2
Low 826.5 Mid 836.5 High 846.5	Low 20425 Mid 20525 High 20625	5	QPSK	1	0	22.5+0.5	0	0
				1	24	22.5+0.5	0	0
				12	6	21.5+0.5	1	0-1
				25	0	21.5+0.5	1	0-1
			16-QAM	1	0	21.5+0.5	1	0-1
				1	24	21.5+0.5	1	0-1
				12	6	20.5+0.5	2	0-2
				25	0	20.5+0.5	2	0-2

LTE Band 12								
Frequency [MHz]	Uplink Channel Number	BW [MHz]	Modulation	RB Size	RB Offset	Target Power [dBm]	MPR Target	MPR Allowed by 3GPP
Low 701.5 Mid 707.5 High 713.5	Low 23035 Mid 23095 High 23155	5	QPSK	1	0	22.5+0.5	0	0
			16-QAM	1	0	22.5+0.5	0	0
			QPSK	1	24	21.5+0.5	1	0-1
			16-QAM	1	24	21.5+0.5	1	0-1
			QPSK	12	6	21.5+0.5	1	0-1
			16-QAM	12	6	21.5+0.5	1	0-1
			QPSK	25	0	20.5+0.5	2	0-2
			16-QAM	25	0	20.5+0.5	2	0-2
Low 704 Mid 707.5 High 711	Low 23060 Mid 23095 High 23130	10	QPSK	1	0	22.5+0.5	0	0
			16-QAM	1	0	22.5+0.5	0	0
			QPSK	1	49	21.5+0.5	1	0-1
			16-QAM	1	49	21.5+0.5	1	0-1
			QPSK	25	12	21.5+0.5	1	0-1
			16-QAM	25	12	21.5+0.5	1	0-1
			QPSK	50	0	20.5+0.5	2	0-2
			16-QAM	50	0	20.5+0.5	2	0-2

4. A-MPR was disabled for all SAR test samples for SAR testing purposes only.
5. This device does not implement power back-off schemes for SAR compliance.
6. We attest to the Simultaneous Tx listed on Operational Description to be accurate and furthermore, any other simultaneous Tx combinations not listed on the SAR report are not supported by software/hardware design.
7. This device does not support 5GHz WLAN operation.

Should you have any questions or comments concerning the above, please contact the undersigned.

Sincerely,



JungHyun Kim, Senior Engineer
Samsung Electronics,.