Pantech Co Ltd
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Date: Aug. 16, 2012
HCT Co. Ltd.

Subject: Pantech Co., Ltd.
FCC ID: JYCSPARKLE

To Whom It May Concern:

We attest the following regarding FCC ID: JYCSPARKLE

1. Supported LTE Transmission Bands, channel BWs, and modulations:
   a) LTE Band 4 (Channel BW 5 , 10, 15, 20 MHz)/QPSK & 16QAM
   b) LTE Band 13 (Channel BW 10 MHz)/QPSK & 16QAM

2. MPR is enabled for this device, according to 3GPP TS 36.101 Section 6.2.3 – 6.2.5 under Table 6.2.3 – 1. With the MPR permanently implemented, this device will never operate at a power higher than 23.5 dBm in QPSK and 16QAM.

3. We confirm the specific MPR targets and tolerances shown below:
   a) The LTE MPR Targets for Band 4 (5 MHz) are:

Low channel

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
5 MHz	19975	1712.5	QPSK	1	0	23.96	0	0.03
				1	24	23.99	0	0.00
				12	6	22.97	1	1.02
				25	0	22.82	1	1.17
			16QAM	1	0	22.51	1	1.48
				1	24	22.62	1	1.37
				12	6	21.90	2	2.09
				25	0	21.85	2	2.14

Middle channel

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
5 MHz	20175	1732.5	QPSK	1	0	23.86	0	0.00
				1	24	23.74	0	0.12
				12	6	22.83	1	1.03
				25	0	22.70	1	1.16
			16QAM	1	0	22.65	1	1.21
				1	24	22.57	1	1.29
				12	6	21.70	2	2.16
				25	0	21.68	2	2.18

High Channel

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
5 MHz	20375	1752.5	QPSK	1	0	23.65	0	0.24
				1	24	23.89	0	0.00
				12	6	22.73	1	1.16
				25	0	22.70	1	1.19
			16QAM	1	0	22.39	1	1.50
				1	24	22.69	1	1.20
				12	6	21.65	2	2.24
				25	0	21.73	2	2.16

b) The LTE MPR Targets for Band 4 (10 MHz) are:

Low channel

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
10 MHz	20000	1715	QPSK	1	0	23.76	0	0.16
				1	49	23.92	0	0.00
				25	12	22.80	1	1.12
				50	0	22.75	1	1.17
			16QAM	1	0	22.47	1	1.45
				1	49	22.62	1	1.30
				25	12	21.81	2	2.11
				50	0	21.78	2	2.14

Middle Channel

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
10 MHz	20175	1732.5	QPSK	1	0	23.79	0	0.00
				1	49	23.69	0	0.10
				25	12	22.71	1	1.08
				50	0	22.73	1	1.06
			16QAM	1	0	22.45	1	1.34
				1	49	22.36	1	1.43
				25	12	21.75	2	2.04
				50	0	21.69	2	2.10

High Channel

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
10 MHz	20350	1750	QPSK	1	0	23.54	0	0.02
				1	49	23.56	0	0.00
				25	12	22.30	1	1.26
				50	0	22.20	1	1.36
			16QAM	1	0	22.06	1	1.50
				1	49	22.24	1	1.32
				25	12	21.38	2	2.18
				50	0	21.18	2	2.38

c) The LTE MPR Targets for Band 4 (15 MHz) are:

Low channel

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
15 MHz	20025	1717.5	QPSK	1	0	23.99	0	0.00
				1	74	23.92	0	0.07
				36	18	22.80	1	1.19
				75	0	22.70	1	1.29
			16QAM	1	0	22.72	1	1.27
				1	74	22.67	1	1.32
				36	18	21.77	2	2.22
				75	0	21.72	2	2.27

Middle Channel

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
15 MHz	20175	1732.5	QPSK	1	0	23.68	0	0.00
				1	74	23.67	0	0.01
				36	18	22.47	1	1.21
				75	0	22.48	1	1.20
			16QAM	1	0	22.51	1	1.17
				1	74	22.40	1	1.28
				36	18	21.46	2	2.22
				75	0	21.33	2	2.35

High channel

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
15 MHz	20325	1747.5	QPSK	1	0	23.60	0	0.10
				1	74	23.70	0	0.00
				36	18	22.32	1	1.38
				75	0	22.36	1	1.34
			16QAM	1	0	22.23	1	1.47
				1	74	22.57	1	1.13
				36	18	21.35	2	2.35
				75	0	21.33	2	2.37

d) The LTE MPR Targets for Band 4 (20 MHz) are:

Low Channel

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
20 MHz	20050	1720	QPSK	1	0	23.90	0	0.03
				1	99	23.93	0	0.00
				50	25	22.74	1	1.19
				100	0	22.73	1	1.20
			16QAM	1	0	22.78	1	1.15
				1	99	22.72	1	1.21
				50	25	21.68	2	2.25
				100	0	21.74	2	2.19

Middle Channel

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
20 MHz	20175	1732.5	QPSK	1	0	23.83	0	0.00
				1	99	23.53	0	0.30
				50	25	22.61	1	1.22
				100	0	22.59	1	1.24
			16QAM	1	0	22.78	1	1.05
				1	99	22.33	1	1.50
				50	25	21.55	2	2.28
				100	0	21.58	2	2.25

High Channel

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
20 MHz	20300	1745.0	QPSK	1	0	23.63	0	0.00
				1	99	23.55	0	0.08
				50	25	22.23	1	1.40
				100	0	22.29	1	1.34
			16QAM	1	0	22.65	1	0.98
				1	99	22.60	1	1.03
				50	25	21.30	2	2.33
				100	0	21.38	2	2.25

e) The LTE MPR Targets for Band 13 (10 MHz) are:

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
10 MHz	23230	782	QPSK	1	0	23.10	0	0.05
				1	49	23.15	0	0.00
				25	12	21.69	1	1.46
				50	0	21.69	1	1.46
			16QAM	1	0	21.75	1	1.40
				1	49	21.76	1	1.39
				25	12	20.72	2	2.43
				50	0	20.68	2	2.47

4. A-MPR was disabled for all SAR test samples for SAR testing purposes only.
5. 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.

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

Sincerely,

Ki-Pyeo Son/ Manager
Pantech Co., Ltd.