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Federal Communications Commission,
Authorization & Evaluation Division,
7435 Oakland Mills Road,
Columbia, MD. 21046

Attention: Equipment Authorization Branch

Statement to address FCC response on 10/03/2012

1(a) Please describe the purpose of the MPR reduction

Response: The purpose of MPR and AMPR is to reduce TX power to guarantee that the TX emissions don't exceed -57 dBm/6.25 KHz in the frequency range 763-775 MHz (700 MHz Public Safety Band). This is specified in Verizon Supplemental RF Specification section 2.5 NS_07 Spurious Emissions (attached).

1(b) Provide LTE functionality and conducted power table that shows the actual reduced power that complies with the MPR.

Response: A revised SAR report is submitted in which Appendix G presents the LTE measured powers in the format requested. The "Max Average Power (dBm)" column lists measured powers with A-MPR deactivated; in other words, these were the powers generated by the device during SAR testing with permanent and mandatory MPR (as defined by 3GPP TS 36.521-1) active. The "Reduced Power" column lists measured powers with A-MPR fully active.

2. Review WCDMA and HSUPA Subtest mode conducted powers table in page 59 of rev SAR report, provide conducted power for each subtest 1-5 and confirm/explain if MPR is applicable.

Response: A revised SAR report is submitted in which Appendix G presents the LTE measured powers in the format requested. The "Max Average Power (dBm)" column lists measured powers with A-MPR deactivated; in other words, these were the powers generated by the device during SAR testing with permanent and mandatory MPR (as defined by 3GPP TS 36.101) active. The "Reduced Power" column lists measured powers with MPR and A-MPR both fully active."

3. Conducted power/slot in pages 57 of the rev SAR report for GSM/GPRS/EGPRS1900 SAR Head, Body-worn appear to be incorrect based on average power difference per slot. Please review/explain and correct

Response: The GSM/GPRS/EGPRS1900 measured powers presented in Appendix I of the SAR report (table repeated immediately below for convenience) are peak powers in each timeslot; they are not average powers.

GSM 1900			
Slot configuration	Low channel	Mid channel	High channel
GSM 1-slot	29.3	29.3	29
GPRS 2-slot	26.7	26.7	26.4
GPRS 3-slot	24.9	24.9	24.6
GPRS 4-slot	23.8	23.7	23.5
EGPRS 1-slot	25.5	25.4	25.3
EGPRS 2-slot	23.9	23.8	23.6
EGPRS 3-slot	23.9	23.8	23.6
EGPRS 4-slot	22.6	22.6	22.4

To derive the average power, these measured power values must be multiplied by: *(number of active timeslots in the timeframe / total number of timeslots in the timeframe)* i.e. average mid channel power for 1-slot GSM is 29.3dBm/8, for 2-slot GPRS is 26.7dBm/4, etc. The peak slot powers given above are converted to average powers in the table below and compared to the measured SAR values for Left Cheek test configuration as presented in Section 7.1 Head SAR of the SAR report:

GSM/GPRS/EGPRS1900						
	Low Channel		Mid Channel		High Channel	
Slot configuration	Average Power	Measured SAR value Left Cheek	Average Power	Measured SAR value Left Cheek	Average Power	Measured SAR value Left Cheek
GSM 1-slot	20.3		20.3	0.504	20.0	
GPRS 2-slot	20.7	0.608	20.7	0.578	20.4	0.527
GPRS 3-slot	20.6		20.6	0.554	20.3	
GPRS 4-slot	20.8		20.7	0.569	20.5	
EGPRS 1-slot	16.8		16.4		16.3	
EGPRS 2-slot	17.9	0.315	17.8		17.6	
EGPRS 3-slot	19.6		19.5		19.3	
EGPRS 4-slot	19.6		19.6		19.4	

In conclusion, Nokia believes the measured SAR values in this band are in correct alignment with the time-average output powers.

4. Provide dipole calibration certificate for all applicable frequencies. what is the value of the uncertainty factor $k=2$ in the 700MHz dipole certificate in page 2 of SAR report.

Response: The first table presented in Section 4.1 of the SAR report lists the Probes that were used in the SAR evaluation of the product. These were: s/ns 1399, 1739, 3131, 3165, 3573 and 3834. The Calibration Certificates for all these Probes are presented in Appendix E of the SAR report.

Of these, only Probes 3573 and 3834 were used in the 700MHz testing of the product; for both of these Probes, the $k=2$ Calibration Uncertainty at 750MHz is given as 12.0%.

5. What is the frequency range for the uncertainty evaluation table (6.1) in page 39 of the SAR report? How was the $k=1$ deduced to be 5.9 in table 6.1. Please add the frequency range on table 6.1

Response: The Measurement Uncertainty table in Section 6 of the SAR report is intended to cover all of the SAR measurements made in evaluating the product i.e. it covers the entire 782 – 5805MHz range. As such it contains the worst-case magnitudes for all individual uncertainties that comprise the table. Note that the table had not been updated to include the Probe Calibration for the 5GHz WLAN tests – for which the Calibration Uncertainty ($k=2$) is given as 13.1% on the Calibration sheet; the table in Section 6 has now been corrected.

NOKIA INC.

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