Class II Permissive Change Letter

Date: 2011-09-08
Federal Communications Commission
Equipment Authorization Division, Application Processing Branch
7435 Oakland Mills Road
Columbia, Maryland 21046

Attn: OET Dept.
Ref: FCC Class II Permissive change for FCC ID: VV7-MBMF5521GW1
Grant Date: 2010-09-17
Applicant: Ericsson AB

Dear Sir/Madam:
Ericsson AB is submitting an application for Class II Permissive Change to our Mini-PCIe wireless WAN card, Model F5521gw (FCC ID: VV7-MBMF5521GW1), whereby we have performed additional SAR measurements in a typical host to define the strategy for end product level certification that will cover portable devices under the following stated conditions:

Description of filing:

1) The product VV7-MBMF5521GW1 has been SAR tested according to Appendix of the supplement to KDB 616217: 'Configuring Conservative SAR Test Conditions'. KDB inquiry 351923 has been followed to determine the approach used for testing. Results can be found in SAR reports 1-2205-03-02_10, 1-2205-03-02_10_Caldata, EAB-11:028990 and EAB-11: 048101 supporting this C2PC assessment.

2) The product VV7-MBMF5521GW1 was tested connected to four different terminal antennas transmitting at the maximum output power level for each supported mode and band. The SAR measurements for each antenna were conducted at three different antenna orientations with respect to the phantom. The three orientations were: front of antenna, back of antenna, and top of antenna facing the phantom. Two of the antennas were coupling type antennas and two antennas were IFA (Inverted F Antenna) type antennas.

Antenna	Test position	Mode	Channel/ Frequency (MHz)	Max SAR1g (W/kg)
Ant #1	Rear facing phantom (30 mm)	GSM 850 (GPRS, 2TS)	251 / 848.8	0.353
	Front facing phantom (30 mm)	UMTS FDD V (RMC 12.2)	4182 / 836.6	0.289
	Rear facing phantom (30 mm)	PCS 1900 (GPRS, 2TS)	661 / 1880	0.264
	Rear facing phantom (30 mm)	UMTS FDD II (RMC 12.2)	9262 / 1852.4	0.266
Ant #2	Front facing phantom (40 mm)	GSM 850 (GPRS, 2TS)	251 / 848.8	0.122
	Front facing phantom (35 mm)	UMTS FDD V (RMC 12.2)	4233 / 846.6	0.224
	Top facing phantom (35 mm)	PCS 1900 (GPRS, 2TS)	512 / 1850.2	0.275
	Top facing phantom (35 mm)	UMTS FDD II (RMC 12.2)	9262 / 1852.4	0.270
Ant #3	Front facing phantom (30 mm)	GSM 850 (GPRS, 2TS)	190 / 836.6	0.271
	Front facing phantom (30 mm)	UMTS FDD V (RMC 12.2)	4183 / 836.6	0.234
	Front facing phantom (30 mm)	PCS 1900 (GPRS, 2TS)	661 / 1880	0.188
	Front facing phantom (30 mm)	UMTS FDD II (RMC 12.2)	9400 / 1800	0.196
Ant #4	Top facing phantom (35 mm)	GSM 850 (GPRS, 2TS)	190 / 836.6	0.089
	Back facing phantom (35 mm)	UMTS FDD V (RMC 12.2)	4183 / 836.6	0.087
	Back facing phantom (35 mm)	PCS 1900 (GPRS, 2TS)	661 / 1880	0.135
	Top facing phantom (35 mm)	UMTS FDD II (RMC 12.2)	9400 / 1800	0.182

3) The antennas that were connected to the FCC ID: VV7-MBMF5521GW1 is located as shown in the supporting documents has a gain of less than**:**
Coupling antenna, top: 1.70 dBi in the low bands and **3.33 dBi** in the high bands.
IFA antenna, top: 1.86 dBi in the low bands and **3.23 dBi** in the high bands.
Coupling antenna, side: 0.69 dBi in the low bands and **2.32 dBi** in the high bands.
IFA antenna, side: 1.61 dBi in the low bands and **2.16 dBi** in the high bands.

Cable lengths on all antennas are 150 mm.

There is no hardware modification made to the applying modular transmitter itself.
We hereby certify that no party to this application is subject to a denial of benefits, including FCC benefits, pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C.853(a).

End products in portable exposure conditions integrating FCC ID: VV7-MBMF5521GW1 utilizing the above approach need to use the same type of antennas as indicated in section 3 above. The cable length needs to be longer than **150 mm**. Sufficient testing has to be performed on the end product to make sure that the end product is compliant under these configurations.

Please contact me if you have any questions or need further information regarding this application.

Sincerely.

Fredrik Claesson
Certification Approval Manager

Mobile Broadband Modules

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