RF Exposure Statement

Test Report

Equipment Under Test	**VW OCU module**
Model Name	**TUVM01IU-G**
Variant Model Name	**TUVM01IU-R, TUVP01IU-G, TUVP01IU-R**
Applicant	**LG Electronics Inc.**
FCC ID	**BEJTUVM01IU**
IC Number	**2703K-TUVM01IU**
Manufacturer	**LG Electronics Vietnam Haiphong Co.,Ltd**
Date of Test(s)	**2015. 02. 24**
Date of Issue	**2015. 03. 24**

In the configuration tested, the EUT complied with the standards specified above.

Issue to	Issue by
LG Electronics Inc. 2621, Nambusunhwan-ro, Gangnam-gu, Seoul, Korea Tel.: +82-2-6971-0515	**MOVON CORPORATION** 498-2, Geumeo-ro, Pogok-eup, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea, 449-812 Tel.: +82-31-338-8837 Fax: +82-31-338-8847

Revision history

Revision	Date of issue	Description	Revised by
--	Mar 24, 2015	Initial	--

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1. Attestation of test results

1.1. Details of applicant

Applicant	:	LG Electronics Inc.
Address	:	2621, Nambusunhwan-ro,Gangnam-gu, Seoul, Korea
Contact Person	:	Steve Jeon
Telephone	:	+ 82-2-6971-0515
Fax	:	-

1.2. Manufacturer / Factory Information

1.2.1 Manufacturer Information

Manufacturer	:	LG Electronics Vietnam Haiphong Co.,Ltd
Address	:	LG Electronics Vietnam Haiphong Co.,Ltd Lots CN2 and CN3, Trang Due Industrial Zone,An Duong District within Dinh Vu Cat Hai Economic Zone, Hai Phong City, Vietnam

Approval Signatories

Test and Report Completed by :	Report Approval by :
	
Jungmoo Her Test Engineer MOVON CORPORATION	Issac Jin Technical Manager MOVON CORPORATION

2. EUT Description

Kind of product	VW OCU module
FCC ID	BEJTUVM01IU
Model Name	TUVM01IU-G
Variant Model Name	TUVM01IU-R, TUVP01IU-G, TUVP01IU-R
Serial Number	N/A
Power supply	DC 12.0V
Tx Frequency	824.2 ~ 848.8 MHz (GSM850)
	1 850.2 ~ 1909.8 MHz (GSM1900)
	826.4~846.6 MHz (WCDMA V)
	1 852.4~1 907.6 MHz (WCDMA II)
Rx Frequency	869.2 ~ 893.8 MHz (GSM850)
	1 930.2 ~ 1989.8 MHz (GSM1900)
	871.4~891.6 MHz (WCDMA V)
	1 932.4~1 987.6 MHz (WCDMA II)
Antenna gain (External Antenna)	0 ㏈i (Max.) (GSM850/WCDMA II)
	5.5 ㏈i (Max.) (GSM1900/WCDMA V)
Antenna gain (Internal Antenna)	2.1 ㏈i (Max.) (GSM850/WCDMA II)
	4.609 ㏈i (Max.) (GSM1900/WCDMA V)

2.1. Declarations by the manufacturer

None

2.2. Details of modification

None

3. Limits

Acconrding to §1.1310 and §2.1091 RF exposure is calculated

(B) Limits for General Population/Uncontrolled Exposures

Frequency range (MHz)	Electric field Strength (V/m)	Magnetic field Strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
0.3 - 1.34	614	1.63	*(100)	30
1.34 - 30	824/f	2.19/f	*(180/ f^2)	30
30 - 300	27.5	0.073	0.2	30
300 - 1500	.....	.....	f/1500	30
1500 - 100.000	.....	.....	1.0	30

F = frequency in MHz

* = Plane-wave equivalent power density

4. Maximum Permissible Exposure Prediction

Prediction of MPE limit at a given distance

$S = PG/4\pi R^2$

S = Power Density
P = Power input to antenna
G = Power gain of the antenna in the direction of interest relative to an isotronpic radiator
R = distance to the center of radiation of the antenna

5. Results

5.1 GSM 850 Band

EUT parameter (data from the separate report)	
Max Peak output Power at antenna input terminal (dBm)	33.81
Max Peak output Power at antenna input terminal (mW)	2404.36
Prediction distance (Cm)	30.00
Prediction frequency (MHz)	836.60
Antenna Gain (typical) (dBi)	0
Antenna Gain (numeric)	1.00
Power density at prediction frequency (mW/Cm^2)	0.2127
MPE limit for uncontrolled exposure at prediction frequency (mW/Cm^2)	0.558

5.2 GSM 1900 Band

EUT parameter (data from the separate report)	
Max Peak output Power at antenna input terminal (dBm)	30.39
Max Peak output Power at antenna input terminal (mW)	1093.96
Prediction distance (Cm)	30.00
Prediction frequency (MHz)	1880.00
Antenna Gain (typical) (dBi)	5.5
Antenna Gain (numeric)	3.55
Power density at prediction frequency (mW/Cm^2)	0.3434
MPE limit for uncontrolled exposure at prediction frequency (mW/Cm^2)	1.00

5.3 WCDMA V Band

EUT parameter (data from the separate report)	
Max Peak output Power at antenna input terminal (dBm)	20.66
Max Peak output Power at antenna input terminal (mW)	116.41
Prediction distance (Cm)	30.00
Prediction frequency (MHz)	836.60
Antenna Gain (typical) (dBi)	0
Antenna Gain (numeric)	1.00
Power density at prediction frequency (mW/Cm^2)	0.0103
MPE limit for uncontrolled exposure at prediction frequency (mW/Cm^2)	0.558

5.4 WCDMA II Band

EUT parameter (data from the separate report)	
Max Peak output Power at antenna input terminal (dBm)	20.68
Max Peak output Power at antenna input terminal (mW)	116.95
Prediction distance (Cm)	30.00
Prediction frequency (MHz)	1907.60
Antenna Gain (typical) (dBi)	5.5
Antenna Gain (numeric)	3.55
Power density at prediction frequency (mW/Cm^2)	0.0367
MPE limit for uncontrolled exposure at prediction frequency (mW/Cm^2)	1.00