

EVALUATION REPORT

Applicant Name:
 LG Electronics MobileComm U.S.A., Inc.

Date of Evaluation:
 June 25, 2018

Address:
 1000 Sylvan Avenue, Englewood Cliffs NJ 07632

Test Site/Location:
 HCT CO., LTD.,
 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si,
 Gyeonggi-do, 17383, Rep. of KOREA

FCC ID: ZNFX210JM

APPLICANT: LG Electronics MobileComm U.S.A., Inc.

Equipment Class(es) : PCE, DTS, DSS

Rule Part(s) : 15, 22, 24

Application's Statement : The applicant takes full responsibility that the test data referenced below represents compliance for this FCC ID.

Differences
 Brief Description : Bluetooth & WLAN hardware and software of this device are identical to the implementation in ZNFX210EM. The operational description includes detailed information about the changes between the devices. The data from that application has been verified through appropriate spot checks to demonstrate compliance for this device as shown in the summary table below.

Test Reference : KDB 484596 D01 Reference Test Data v01

The detail test data can be found in this documents, Appendix A.

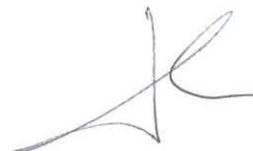
Category	Spot Check	Verdict
Licensed EMC	ERP / EIRP	Share
	RSE	Share
Unlicensed EMC	Band Edge	Share
	Spurious Emissions	Share

Reference Detail Section

Reference FCC ID	Equipment Class	Report Title	Section
ZNFX210EM	PCE	2G, 3G Report	All sections (Except for WDMA850)
	DSS	Bluetooth Report	All sections
	DTS	WLAN DTS Report	All sections (Except for 12,13 Channel)
		BT LE Report	All sections



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 Engineer of Telecommunication Testing Center



Report approved by : Yong Hyun Lee
 Manager of Telecommunication Testing Center

Appendix A. The Spot check test data

1. Summary of the spot check for Licensed EMC

1.1 EFFECTIVE RADIATED POWER

Modulation	Frequency		Mode	ZNFX210EM (dBm)	ZNFX210JM (dBm)	Deviation (dB)
	MHz	Ch.				
GSM850	824.2	128	VOICE	30.79	30.36	-0.43

1.2 EQUIVALENT ISOTROPIC RADIATED POWER

Modulation	Frequency		Mode	ZNFX210EM (dBm)	ZNFX210JM (dBm)	Deviation (dB)
	MHz	Ch.				
GSM1900	1880.0	661	VOICE	31.00	30.99	-0.01
WCDMA1900	1852.4	9262	RMC	24.79	24.65	-0.14

1.3 RADIATED SPURIOUS EMISSIONS

Modulation	Frequency		Mode	ZNFX210EM (dBm)	ZNFX210JM (dBm)	Deviation (dB)
	MHz	Ch.				
GSM850	2472.60	128	VOICE	-45.54	-44.54	1.00

Modulation	Frequency		Mode	ZNFX210EM (dBm)	ZNFX210JM (dBm)	Deviation (dB)
	MHz	Ch.				
GSM1900	5550.60	512	VOICE	-40.80	-42.95	-2.15
WCDMA1900	7630.40	9538	RMC	-39.61	-42.52	-2.91

2. Summary of the spot check for Unlicensed EMC

Report	Test Item	Channel	Measured Frequency [MHz]	ZNFX210EM (dBuV/m)		ZNFX210JM (dBuV/m)		Deviation (dB)	
				Peak	Average	Peak	Average	Peak	Average
BT	Band Edge	78	2483.5 MHz~ 2500 MHz	71.56	42.07	68.00	38.31	-3.56	-3.76
	RSE	0	4804 MHz	52.42	42.57	50.68	37.21	-1.74	-5.36
		39	7323 MHz	60.69	27.75	57.26	19.33	-3.43	-8.42
BT LE	Band Edge	39	2483.5 MHz~ 2500 MHz	55.72	46.32	54.97	45.33	-0.75	-0.99
	RSE	39	4960 MHz	51.68	41.32	51.82	41.63	0.14	0.31
			7440 MHz	57.87	47.72	57.68	47.30	-0.19	-0.42
DTS	Band Edge	11	2483.5 MHz~ 2500 MHz	61.25	47.95	62.69	48.48	1.44	0.53
	Band Edge	9	2483.5 MHz~ 2500 MHz	62.00	48.42	62.04	48.01	0.04	-0.41
	RSE	6	4874 MHz	51.75	41.81	51.42	41.24	-0.33	-0.57
		1	7236 MHz	58.28	46.43	57.82	45.39	-0.46	-1.04

3. List of test equipment for Licensed EMC

Manufacture	Model/ Equipment	Calibration Date	Calibration Interval	Serial Number
REOHDE & SCHWARZ	SCU 18 / AMPLIFIER	04/17/2018	Annual	10094
Wainwright	WHK1.2/15G-10EF/H.P.F	04/04/2018	Annual	4
Wainwright	WHK3.3/18G-10EF/H.P.F	04/04/2018	Annual	2
Schwarzbeck	UHAP/ Dipole Antenna	03/31/2017	Biennial	557
Schwarzbeck	UHAP/ Dipole Antenna	03/31/2017	Biennial	558
Schwarzbeck	BBHA 9120D/ Horn Antenna(1~18GHz)	09/09/2016	Biennial	147
Schwarzbeck	BBHA 9120D/ Horn Antenna(1~18GHz)	10/14/2016	Biennial	9120D-1298
Schwarzbeck	BBHA 9170/ Horn Antenna(15~40GHz)	04/25/2017	Biennial	BBHA917034 2
Schwarzbeck	BBHA 9170/ Horn Antenna(15~40GHz)	04/25/2017	Biennial	BBHA917012 4
REOHDE & SCHWARZ	FSV40/Spectrum Analyzer(10Hz~40GHz)	10/30/2017	Annual	100931
Agilent	8960 (E5515C)/ Base Station	09/26/2017	Annual	MY48360800
Schwarzbeck	FMZB1513/ Loop Antenna(9kHz~30MHz)	04/19/2017	Biennial	1513-175
Schwarzbeck	VULB 9168 / Hybrid Antenna	04/06/2017	Biennial	760
Anritsu Corp.	MT8820C/Wideband Radio Communication Tester	02/13/2018	Annual	6200863156
Anritsu Corp.	MT8820C/Wideband Radio Communication Tester	02/08/2018	Annual	6201026545
REOHDE & SCHWARZ	SMB100A/ SIGNAL GENERATOR (100kHz~40GHz)	07/18/2017	Annual	177633
REOHDE & SCHWARZ	ESU40 / EMI TEST RECEIVER	08/16/2017	Annual	100524

4. List of test equipment for Unlicensed EMC

Manufacturer	Model / Equipment	Calibration Date	Calibration Interval	Serial No.
Innco system	CO3000 / Controller(Antenna mast)	N/A	N/A	CO3000-4p
Innco system	MA4640 /800-XP-ET / Antenna Position Tower	N/A	N/A	N/A
Audix	EM1000 / Controller	N/A	N/A	060520
Audix	Turn Table	N/A	N/A	N/A
Rohde & Schwarz	Loop Antenna	04/06/2017	Biennial	1513-175
Schwarzbeck	VULB 9168 / Hybrid Antenna	04/06/2017	Biennial	760
Schwarzbeck	BBHA 9120D / Horn Antenna	06/30/2017	Biennial	9120D-1300
Schwarzbeck	BBHA9170 / Horn Antenna(15 GHz ~ 40 GHz)	12/04/2017	Biennial	BBHA9170541
Rohde & Schwarz	FSP(9 kHz ~ 30 GHz) / Spectrum Analyzer	07/27/2017	Annual	100843
Rohde & Schwarz	FSV40-N / Spectrum Analyzer	09/27/2017	Annual	101068-SZ
Wainwright Instruments	F6_HP3.0 / High Pass Filter	01/03/2018	Annual	F6
Wainwright Instruments	WHKX8-6090-7000-18000-40SS / High Pass Filter	10/27/2017	Annual	24
Wainwright Instruments	WRCJV2400/2483.5-2370/2520-60/12SS / Band Reject Filter	06/30/2017	Annual	2
Wainwright Instruments	WRCJV5100/5850-40/50-8EEK / Band Reject Filter	01/03/2018	Annual	2
Api tech.	18B-03 / Attenuator (3 dB)	06/07/2018	Annual	1
Agilent	8493C-10 / Attenuator(10 dB)	07/19/2017	Annual	08285
CERNEX	CBLU1183540B-01 / Power Amplifier	12/26/2017	Annual	25540
CERNEX	CBL06185030 / Power Amplifier	03/28/2018	Annual	28550
CERNEX	CBL18265035 / Power Amplifier	01/10/2018	Annual	22966
CERNEX	CBL26405040 / Power Amplifier	06/30/2017	Annual	25956