

## EVALUATION REPORT

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

**Date of Evaluation:**  
 March 27, 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 : ZNFQ610EA**

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

Equipment Class(es) : PCE, DTS, DSS

Rule Part(s) : 15, 22, 24, 27

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

Differences  
 Brief Description : Some Cellular parts, Bluetooth & WLAN hardware and software of this device are identical to the implementation in ZNFQ610FA. 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.

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                                    |
|------------------|-----------------|------------------|--------------------------------------------|
| ZNFQ610FA        | PCE             | 2G, 3G Report    | All sections<br>(Except for WCDMA B4)      |
|                  |                 | LTE Report       | All sections<br>(Except for LTE B2,4,7,66) |
|                  | DSS             | Bluetooth Report | All sections                               |
|                  | DTS             | WLAN DTS Report  | All sections                               |
|                  |                 | BT LE Report     | All sections                               |



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Report approved by : Jong Seok 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  | ZNFQ610FA<br>(dBm) | ZNFQ610EA<br>(dBm) | Deviation<br>(dB) |
|------------|-----------|------|-------|--------------------|--------------------|-------------------|
|            | MHz       | Ch.  |       |                    |                    |                   |
| GSM850     | 836.6     | 190  | VOICE | 26.97              | 26.69              | -0.28             |
| WCDMA850   | 836.6     | 4183 | RMC   | 18.68              | 18.07              | -0.61             |

| Modulation    | Frequency |       | Mod/<br>Bandwidth | ZNFQ610FA<br>(dBm) | ZNFQ610EA<br>(dBm) | Deviation<br>(dB) |
|---------------|-----------|-------|-------------------|--------------------|--------------------|-------------------|
|               | MHz       | Ch.   |                   |                    |                    |                   |
| LTE – B5      | 836.5     | 20525 | QPSK(10M)         | 17.94              | 17.64              | -0.30             |
| LTE – B12(17) | 707.5     | 23095 | QPSK(3M)          | 18.02              | 17.96              | -0.06             |

#### 1.2 EQUIVALENT ISOTROPIC RADIATED POWER

| Modulation | Frequency |      | Mode  | ZNFQ610FA<br>(dBm) | ZNFQ610EA<br>(dBm) | Deviation<br>(dB) |
|------------|-----------|------|-------|--------------------|--------------------|-------------------|
|            | MHz       | Ch.  |       |                    |                    |                   |
| GSM1900    | 1880.0    | 661  | VOICE | 28.84              | 27.41              | -1.43             |
| WCDMA1900  | 1880.0    | 9400 | RMC   | 21.66              | 20.67              | -0.99             |

### 1.3 RADIATED SPURIOUS EMISSIONS

| Modulation | Frequency |      | Mode  | ZNFQ610FA<br>(dBm) | ZNFQ610EA<br>(dBm) | Deviation<br>(dB) |
|------------|-----------|------|-------|--------------------|--------------------|-------------------|
|            | MHz       | Ch.  |       |                    |                    |                   |
| GSM850     | 2472.60   | 128  | VOICE | -42.17             | -39.37             | 2.80              |
| WCDMA850   | 2539.80   | 4233 | RMC   | -54.13             | -52.58             | 1.55              |

| Modulation    | Frequency |       | Mod/<br>Bandwidth | ZNFQ610FA<br>(dBm) | ZNFQ610EA<br>(dBm) | Deviation<br>(dB) |
|---------------|-----------|-------|-------------------|--------------------|--------------------|-------------------|
|               | MHz       | Ch.   |                   |                    |                    |                   |
| LTE – B5      | 2509.5    | 20525 | QPSK(5M)          | -51.27             | -53.99             | -2.72             |
| LTE – B12(17) | 2122.50   | 23095 | QPSK(3M)          | -38.59             | -40.90             | -2.31             |

| Modulation | Frequency |      | Mode  | ZNFQ610FA<br>(dBm) | ZNFQ610EA<br>(dBm) | Deviation<br>(dB) |
|------------|-----------|------|-------|--------------------|--------------------|-------------------|
|            | MHz       | Ch.  |       |                    |                    |                   |
| GSM1900    | 9251.00   | 512  | VOICE | -29.64             | -32.59             | -2.95             |
| WCDMA1900  | 7409.60   | 9262 | RMC   | -43.72             | -42.02             | 1.70              |

## 2. Summary of the spot check for Unlicensed EMC

| Report | Test Item | Channel | Measured Frequency [MHz] | ZNFQ610FA<br>(dBuV/m) |         | ZNFQ610EA<br>(dBuV/m) |         | Deviation<br>(dB) |         |
|--------|-----------|---------|--------------------------|-----------------------|---------|-----------------------|---------|-------------------|---------|
|        |           |         |                          | Peak                  | Average | Peak                  | Average | Peak              | Average |
| BT     | Band Edge | 78      | 2483.5<br>~2500          | 63.92                 | 58.72   | 62.53                 | 57.67   | 1.39              | 1.05    |
|        | RSE       | 39      | 4882                     | 50.25                 | 37.88   | 51.17                 | 37.71   | -0.92             | 0.17    |
|        |           | 78      | 7440                     | 57.15                 | 43.80   | 58.06                 | 43.89   | -0.91             | -0.09   |
| BT LE  | Band Edge | 39      | 2483.5<br>~2500          | 54.55                 | 46.19   | 54.80                 | 45.93   | -0.25             | 0.26    |
|        | RSE       | 19      | 4880                     | 51.53                 | 41.65   | 50.86                 | 41.36   | 0.67              | 0.29    |
|        |           | 39      | 7440                     | 57.70                 | 47.75   | 58.37                 | 47.50   | -0.67             | 0.25    |
| DTS    | Band Edge | 13      | 2483.5<br>~2500          | 59.49                 | 46.86   | 58.00                 | 46.32   | 1.49              | 0.54    |
|        | RSE       | 1       | 4824                     | 51.49                 | 40.77   | 51.02                 | 40.70   | 0.47              | 0.07    |
|        |           | 1       | 7236                     | 57.01                 | 45.10   | 56.70                 | 44.69   | 0.31              | 0.41    |