

# Spot Check Evaluation

**FCC ID** : PY7-48130K  
**Equipment** : GSM/WCDMA/LTE Phone with BT, DTS/UNII  
a/b/g/n/ac, GPS and NFC  
**Brand Name** : Sony  
**Applicant** : Sony Mobile Communications Inc.  
4-12-3 Higashi-Shinagawa, Shinagawa-ku,  
Tokyo, 140-0002, Japan  
**Manufacturer** : Sony Mobile Communications Inc.  
4-12-3 Higashi-Shinagawa, Shinagawa-ku,  
Tokyo, 140-0002, Japan  
**Standard** : 47 CFR Part 2, 22(H), 24(E), 27(L)  
FCC Part 15 Subpart C §15.247  
FCC Part 15 Subpart C §15.225  
FCC Part 15 Subpart E §15.407

The product was received on Nov. 01, 2018 and testing was started from Apr. 15, 2019 and completed on Apr. 26, 2019. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.



Approved by: Jones Tsai / Manager



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## History of this test report

| Version | Description                                                      | Issued Date  |
|---------|------------------------------------------------------------------|--------------|
| 01      | Initial issue of report                                          | May 07, 2019 |
| 02      | Remove Appendix A. Spot Check Test Result and update description | May 16, 2019 |
| 03      | update description                                               | May 16, 2019 |
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## **1. Introduction Section**

PY7-24117P (parent model) and PY7-48130K (data reuse model) is HW identical for  
GSM/WCDMA/LTE/WLAN/BT/NFC



## **2. Difference Section**

The difference between PY7-24117P (parent model) and PY7-48130K (data reuse model) is the power of cellular LTE B2/B4/B25/B66. The power is increased by SW and hence a new FCC ID is required and data re-use strategy is used for PY7-48130K.

For the cellular LTE bands not only LTE B2/B4/B25/B66, but all bands have been fully tested per customer request.



### 3. Spot Check Verification Data Section

Radiated spurious emission test against the variant model based on the worst-case condition from the original model was performed in this filing to demonstrate the test data from original model remains representative for the variant model.

Summary of the spot check:

| Test Item                              | MIMO Mode              | PY7-24117P<br>Worst Result | PY7-48130K<br>Worst Result | Difference (dB) |
|----------------------------------------|------------------------|----------------------------|----------------------------|-----------------|
| Average<br>Conducted<br>Power<br>(dBm) | 802.11b                | 17.12                      | 17.02                      | 0.1             |
|                                        | 802.11g                | 17.57                      | 17.47                      | 0.1             |
|                                        | 11n HT20               | 17.67                      | 17.32                      | 0.35            |
|                                        | BT (1Mbps)             | 11.35                      | 11.05                      | 0.3             |
|                                        | BT (2Mbps)             | 7.71                       | 7.78                       | -0.07           |
|                                        | BT (3Mbps)             | 7.68                       | 7.82                       | -0.14           |
|                                        | BT-LE(1Mbps)           | 5.20                       | 5.30                       | -0.1            |
|                                        | BT-LE(2Mbps)           | 5.10                       | 5.40                       | -0.3            |
|                                        | 11a, 5.2GHz            | 15.84                      | 15.74                      | 0.1             |
|                                        | 11n HT20, 5.2GHz       | 16.02                      | 15.92                      | 0.1             |
|                                        | 11n HT40, 5.2GHz       | 16.02                      | 15.86                      | 0.16            |
|                                        | 11ac VHT20, 5.2GHz     | 15.92                      | 15.82                      | 0.1             |
|                                        | 11ac VHT40, 5.2GHz     | 15.92                      | 15.76                      | 0.16            |
|                                        | 11ac VHT80, 5.2GHz     | 15.97                      | 15.87                      | 0.1             |
|                                        | 11a, 5.3GHz            | 15.99                      | 15.89                      | 0.1             |
|                                        | 11n HT20, 5.3GHz       | 16.09                      | 15.92                      | 0.17            |
|                                        | 11n HT40, 5.3GHz       | 16.02                      | 15.89                      | 0.13            |
|                                        | 11ac VHT20, 5.3GHz     | 16.02                      | 15.89                      | 0.13            |
|                                        | 11ac VHT40, 5.3GHz     | 15.92                      | 15.82                      | 0.1             |
|                                        | 11ac VHT80, 5.3GHz     | 16.09                      | 15.85                      | 0.24            |
|                                        | 11a, 5.5GHz            | 15.95                      | 15.75                      | 0.2             |
|                                        | 11n HT20, 5.5GHz       | 16.12                      | 16.02                      | 0.1             |
|                                        | 11n HT40, 5.5GHz       | 16.02                      | 15.86                      | 0.16            |
|                                        | 11ac VHT20, 5.5GHz     | 15.92                      | 15.79                      | 0.13            |
|                                        | 11ac VHT40, 5.5GHz     | 15.92                      | 15.79                      | 0.13            |
|                                        | 11ac VHT80, 5.5GHz     | 16.05                      | 15.92                      | 0.13            |
|                                        | 11a, 5.8GHz            | 16.09                      | 15.82                      | 0.27            |
|                                        | 11n HT20, 5.8GHz       | 15.99                      | 15.82                      | 0.17            |
|                                        | 11n HT40, 5.8GHz       | 15.96                      | 15.74                      | 0.22            |
|                                        | 11ac VHT20, 5.8GHz     | 15.89                      | 15.72                      | 0.17            |
|                                        | 11ac VHT40, 5.8GHz     | 15.86                      | 15.76                      | 0.1             |
|                                        | 11ac VHT80, 5.8GHz     | 15.80                      | 15.66                      | 0.14            |
|                                        | S/N of test sample     | BH97006BFU                 | QV71006R1S                 |                 |
|                                        | Test date              | 2019/01/31~2019/03/13      | 2019/04/15~2019/04/16      |                 |
|                                        | GSM 850 (GPRS)         | 31.31                      | 31.23                      | 0.08            |
|                                        | GSM 850 (EDGE)         | 26.87                      | 26.76                      | 0.11            |
|                                        | GSM1900(GPRS)          | 27.65                      | 27.65                      | 0               |
|                                        | GSM1900(EDGE)          | 25.93                      | 26.11                      | -0.18           |
|                                        | UMTS B2 (RMC 12.2Kbps) | 19.05                      | 18.97                      | 0.08            |
|                                        | UMTS B4 (RMC 12.2Kbps) | 19.44                      | 19.49                      | -0.05           |
|                                        | UMTS B5 (RMC 12.2Kbps) | 24.18                      | 24.07                      | 0.11            |
|                                        | S/N of test sample     | BH97002AFU                 | BH97007BFR                 |                 |
|                                        | Test date              | 2019/02/20~2019/02/21      | 2019/04/17~2019/04/20      |                 |



| Test Item                                                              | MIMO Mode              | PY7-24117P<br>Worst Result | PY7-48130K<br>Worst Result | Difference (dB) |
|------------------------------------------------------------------------|------------------------|----------------------------|----------------------------|-----------------|
| Peak Radiated<br>Spurious<br>Emission (Band<br>Edge)<br>(dBuV/m)       | 802.11b                | 57.05                      | 52.84                      | 4.21            |
|                                                                        | 802.11g                | 70.31                      | 68.12                      | 2.19            |
|                                                                        | BT (2Mbps)             | 59.85                      | 49.91                      | 9.94            |
|                                                                        | BT-LE (2Mbps)          | 59.71                      | 56.77                      | 2.94            |
|                                                                        | 802.11n HT40 5.2GHz    | 55.21                      | 49.92                      | 5.29            |
|                                                                        | 802.11ac VHT80, 5.3GHz | 62.51                      | 62.95                      | -0.44           |
|                                                                        | 802.11n HT20, 5.5GHz   | 64.65                      | 62.05                      | 2.6             |
|                                                                        | 802.11ac VHT80, 5.8GHz | 59.60                      | 60.21                      | -0.61           |
|                                                                        | S/N of test sample     | BH9700K3FU                 | QV71002F1S<br>QV71007L1S   |                 |
|                                                                        | Test date              | 2019/02/20~2019/02/27      | 2019/04/19~2019/04/26      |                 |
| Average<br>Radiated<br>Spurious<br>Emission (Band<br>Edge)<br>(dBuV/m) | 802.11b                | 50.51                      | 43.07                      | 7.44            |
|                                                                        | 802.11g                | 50.86                      | 49.67                      | 1.19            |
|                                                                        | BT (2Mbps)             | 35.06                      | 25.15                      | 9.91            |
|                                                                        | BT-LE (2Mbps)          | 46.82                      | 43.09                      | 3.73            |
|                                                                        | 802.11n HT40 5.2GHz    | 46.87                      | 40.53                      | 6.34            |
|                                                                        | 802.11ac VHT80, 5.3GHz | 49.63                      | 50.80                      | -1.17           |
|                                                                        | S/N of test sample     | BH9700K3FU                 | QV71002F1S<br>QV71007L1S   |                 |
|                                                                        | Test date              | 2019/02/20~2019/02/27      | 2019/04/19~2019/04/26      |                 |
|                                                                        |                        |                            |                            |                 |
| Radiated<br>Spurious<br>Emission<br>(Harmonic)<br>(dBuV/m)             | 802.11b                | 45.24                      | 44.03                      | 1.21            |
|                                                                        | 802.11g                | 43.45                      | 44.10                      | -0.65           |
|                                                                        | BT (2Mbps)             | 45.66                      | 43.38                      | 2.28            |
|                                                                        | BT-LE (2Mbps)          | 41.43                      | 36.42                      | 5.01            |
|                                                                        | 802.11n HT40 5.2GHz    | 47.56                      | 47.77                      | -0.21           |
|                                                                        | 802.11ac VHT80, 5.3GHz | 46.96                      | 46.85                      | 0.11            |
|                                                                        | 802.11n HT20, 5.5GHz   | 48.07                      | 48.02                      | 0.05            |
|                                                                        | 802.11ac VHT80, 5.8GHz | 50.02                      | 48.73                      | 1.29            |
|                                                                        | S/N of test sample     | BH9700K3FU                 | QV71002F1S<br>QV71007L1S   |                 |
|                                                                        | Test date              | 2019/02/20~2019/02/27      | 2019/04/19~2019/04/26      |                 |
| NFC<br>(dBuV/m)                                                        | RSE (30MHz to1GHz)     | 37.09                      | 35.08                      | 2.01            |
|                                                                        | S/N of test sample     | BH97006GFR                 | BH97006GFR                 |                 |
|                                                                        | Test date              | 2019/02/22                 | 2019/04/13                 |                 |
| WWAN                                                                   |                        |                            |                            |                 |
| Radiated<br>Spurious<br>Emission<br>(Harmonic)<br>(dBuV/m)             | GSM 850 (GPRS)         | -45.45                     | -44.50                     | -0.95           |
|                                                                        | GSM 850 (EDGE)         | -52.53                     | -57.27                     | 4.74            |
|                                                                        | GSM1900(GPRS)          | -48.50                     | -49.61                     | 1.11            |
|                                                                        | GSM1900(EDGE)          | -48.89                     | -49.86                     | 0.97            |
|                                                                        | UMTS B2 (RMC 12.2Kbps) | -48.93                     | -49.90                     | 0.97            |
|                                                                        | UMTS B4 (RMC 12.2Kbps) | -50.25                     | -50.66                     | 0.41            |
|                                                                        | UMTS B5 (RMC 12.2Kbps) | -55.39                     | -57.95                     | 2.56            |
|                                                                        | S/N of test sample     | BH9700G3FR                 | QV71005J1S                 |                 |
|                                                                        | Test date              | 2019/02/15~2019/02/18      | 2019/04/09~2019/04/23      |                 |



## 4. Reference detail Section

| Rule Part     | Equipment Class | Wireless Technology      | Frequency Band (MHz)                             | Reference FCC ID | Type Grant/Permissive Change | Reference Report Title | Reference Application | Reference Report Sections                    |
|---------------|-----------------|--------------------------|--------------------------------------------------|------------------|------------------------------|------------------------|-----------------------|----------------------------------------------|
| 15C           | DTS             | Bluetooth – LE<br>Wii-Fi | 2400~2483.5                                      | PY7-24117P       | Original Grant               | FCC RF<br>Test Report  | PY7-48130K            | Part 15C<br>(FR802417-03B,<br>FR802417-03C)  |
|               | DSS             | Bluetooth                | 2400~2483.5                                      | PY7-24117P       | Original Grant               | FCC RF<br>Test Report  | PY7-48130K            | Part 15C<br>(FR802417-03A)                   |
|               | DXX             | NFC                      | 13.56                                            | PY7-24117P       | Original Grant               | FCC RF<br>Test Report  | PY7-43143E            | Part 15C<br>(FR802417-03D)                   |
| 15E           | NII             | Wi-Fi                    | 5150~5250<br>5250~5350<br>5470~5725<br>5725~5850 | PY7-24117P       | Original Grant               | FCC RF<br>Test Report  | PY7-43143E            | Part 15E<br>(FR802417-03E,<br>FR802417-03F ) |
| Part 22.24.27 | PCE             | GSM /WCDMA               | GSM 850/1900<br>WCDMA B2/B4/B5                   | PY7-24117P       | Original Grant               | FCC RF<br>Test Report  | PY7-43143E            | Part 22.24.27<br>(FG802417-03A )             |

End of this report