



RF EXPOSURE REPORT

REPORT NO.: SA150203D02A R2

MODEL NO.: NA

FCC ID: PY7-RD0101

RECEIVED: Feb. 3, 2015

TESTED: Feb. 3 ~ 4, 2015

ISSUED: Apr. 28, 2015

APPLICANT: Sony Mobile Communications, INC.

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ISSUED BY: Bureau Veritas Consumer Products Services (H.K.)
Ltd., Taoyuan Branch

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA150203D02A	Original release.	Feb. 26, 2015
SA150203D02A R1	Added SAR Evaluation of EUT on page 7	Apr. 24, 2015
SA150203D02A R1	Added internal photograph of EUT on page 7	Apr. 28, 2015



1. CERTIFICATION

PRODUCT: Bluetooth keyboard
BRAND NAME: SONY
MODEL NO.: NA
APPLICANT: Sony Mobile Communications, INC.
TESTED: Feb. 3 ~ 4, 2015
TEST SAMPLE: ENGINEERING SAMPLE
STANDARDS: **FCC Part 2 (Section 2.1093)**
KDB 447498 D03
IEEE C95.1

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : Jessica Cheng , **DATE:** Apr. 28, 2015
(Jessica Cheng / Senior Specialist)

APPROVED BY : Rex Lai , **DATE:** Apr. 28, 2015
(Rex Lai / Assistant Manager)

2. EVALUATION RESULT

Following FCC KDB 447498 D01 “General SAR test exclusion guidance”

The corresponding SAR Exclusion Threshold condition, listed below:

Standalone SAR test exclusion:

1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, 16 where

- Ø $f(\text{GHz})$ is the RF channel transmit frequency in GHz.
- Ø Power and distance are rounded to the nearest mW and mm before calculation.
- Ø The result is rounded to one decimal place for comparison. The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

2) At 100 MHz to 6 GHz and for test separation distances > 50 mm, the SAR test exclusion threshold is determined according to the following:

- a) [Threshold at 50 mm in step 1) + (test separation distance - 50mm) · ($f(\text{MHz})/150$)] mW, at 100MHz to 1500 MHz
- b) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · 10] mW at > 1500 MHz and ≤ 6 GHz

3) At frequencies below 100 MHz, the following may be considered for SAR test exclusion.

- a) The threshold at the corresponding test separation distance at 100 MHz in step 2) is multiplied by $[1 + \log(100/f(\text{MHz}))]$ for test separation distances > 50 mm and < 200 mm.
- b) The threshold determined by the equation in a) for 50 mm and 100 MHz is multiplied by $\frac{1}{2}$ for test separation distances ≤ 50 mm.
- c) SAR measurement procedures are not established below 100 MHz. When SAR test exclusion cannot be applied, a KDB inquiry is required to determine SAR evaluation requirements for any test results to be acceptable.

Simultaneous transmission SAR test exclusion:

When the standalone SAR test exclusion of applied to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to the following to determine simultaneous transmission SAR test exclusion:

- I [(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [\sqrt{f} (GHz)/x]W/kg for test separation distances \leq 50 mm

Where x = 7.5 for 1-g SAR, and x = 18.75 for 10-g SAR.

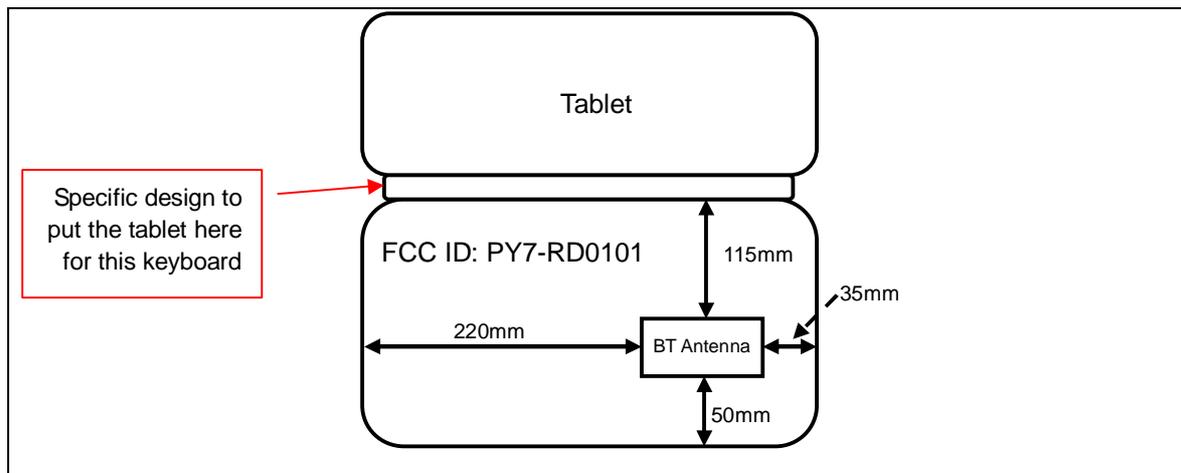
- I 0.4 W/kg for 1-g SAR and 1.0 W/kg for 10-g SAR, when the test separation distances is > 50 mm.

3. SAR TEST EXCLUSION THRESHOLDS

Maximum measured transmitter power of EUT:

Frequency (GHz)	Max. Power (mW)	Min. test separation distance (mm)	SAR test exclusion calculation value ^(NOTE 2)	1-g SAR test thresholds	Result
2.402 ~ 2.480	2.7	5	0.837	3	Pass

- NOTE:**
1. The antenna type is PCB antenna with -1.22dBi gain.
 2. Calculate SAR test exclusion thresholds from condition "1" formulas.
 3. RF Exposure Evaluation of the combination with the intended tablet (FCC ID:PY7-TM0061/PY7-TM0062/PY7-TM0063/PY7-TS0050) will be included in the tablet RF Exposure reports."
 4. RF exposure evaluation for the use of this keyboard with other tablets is provided below based on an estimated SAR value for the Bluetooth transmitter and an assumed worst case SAR of 1.6 W/Kg for the tablet's transmitter(s). The calculation for SPLSR assumes that the tablet transmitter is located along the bottom edge of the tablet at the closest point along the tablet resting place to the Bluetooth antenna. Please refer to the drawings.





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Estimated SAR for EUT

Frequency (GHz)	Max. Power (mW)	Min. test separation distance (mm)	Estimated SAR Value W/kg (1-g)
2.402 ~ 2.480	2.7	5	0.113

SAR to peak location separation ratio (SPLSR) requirement:

SAR ₁ (EUT) W/kg (1-g)	SAR ₂ Worst value from any tablet W/kg (1-g)	Minimum Separate distance (mm)	SPLSR result	SPLSR limit	Result
0.113	1.6	115	0.019	0.04	Pass

$$(SAR_1 + SAR_2)^{1.5} / R_i \leq 0.04$$

Note: R_i is the separation distance between the peak SAR locations for the antenna pair in mm.

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