RF Exposure Report

Report No.:	SA180313C07
FCC ID:	PY7-77587P
Received Date:	Feb. 06, 2018
Test Date:	Feb. 06, 2018
Issued Date:	Mar. 19, 2018
Applicant:	Sony Mobile Communications Inc.
Address:	4-12-3, Higashi-shinagawa, Shinagawa-ku, Tokyo, 140-0002, Japan
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan, R.O.C.
Test Location:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)
FCC Registration / Designation Number:	788550 / TW0003

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Release Control Record

Issue No.	Description	Date Issued
SA180313C07	Original release	Mar. 19, 2018

1 Certificate of Conformity

Product: Wireless Charging Dock

Brand: Sony

Sample Status: Engineering sample

Applicant: Sony Mobile Communications Inc.

Test Date: Mar. 16, 2018

Standards: FCC Part 1 (Section 1.1307(b), 1.1310)

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 RF characteristics under the conditions specified in this report.

Prepared by : Celine Chou , **Date:** Mar. 19, 2018

Celine Chou / Specialist

Approved by : Bruce Chen , **Date:** Mar. 19, 2018

Bruce Chen / Project Engineer

2 General Information

2.1 General Description of EUT

Product	Wireless Charging Dock
Sample Status	Engineering sample
Power Supply Rating	9Vdc or 12Vdc (adapter)
Operating Frequency	115-148kHz
Antenna Type	Loop antenna
Field Strength	90.9dBuV/m
Dimensions	65mm (W) x 100mm (L) x 46mm (D)
Accessory Device	Adapter
Data Cable Supplied	NA
Maximum Power Output from the Charging Coil	Less than 9W

Note: The EUT uses following adapter.

Brand	Sony
Model	UCH12 (AC-0051-US)
Input power	100-240Vac, 50-60Hz, Max. 0.4A
Output power	9Vdc, 1.8A; 12Vdc, 1.35A

2.2 Description of Test Modes

1 channel is provided to this EUT

Channel	Freq. (kHz)
1	122 (Note)

Note: The worse frequency is 122kHz.

3 RF Exposure

3.1 Description of Support Units

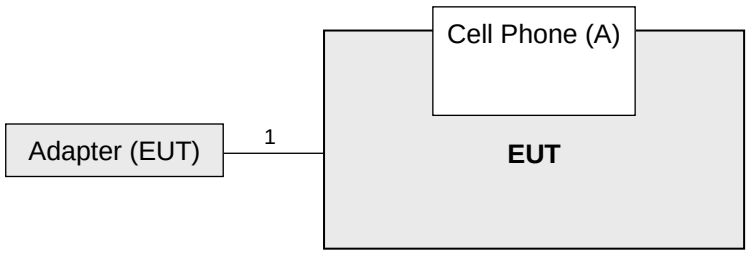
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Cell Phone	Sony Mobile	NA	QV7000XA1B	NA	Provided by manufacturer

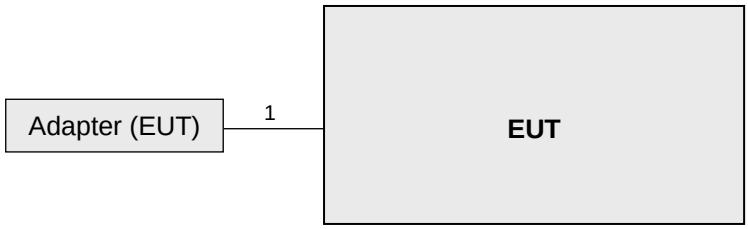
ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	USB	1	0.94	Y	0	Provided by manufacturer

3.1.1 Configuration of System Under Test

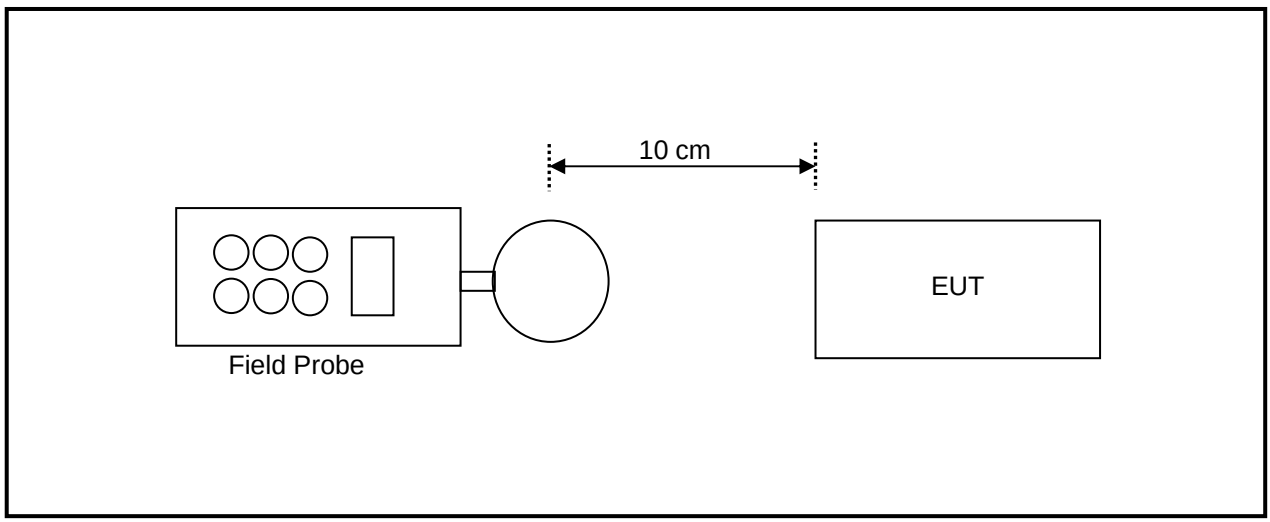
Charging Mode (Test Mode A)



Standby Mode (Test Mode B)



3.2 Test Setup



Note: Measurements should be made from all sides and the top of the primary/client pair, with the 10 cm measured from the center of the probe(s) to the edge of the device.

3.3 Test Instruments

Description	Brand	Model No.	Frequency Range	Calibrated Date	Calibrated Until
Broadband Field Meter	NARDA	NBM-550	-	Feb. 9, 2016	Feb. 8, 2018
Magnetic Field Meter	NARDA	ELT-400	1 – 400kHz	Feb. 11, 2016	Feb. 10, 2018
Broadband Field Meter	NARDA	NBM-550	-	Feb. 9, 2016	Feb. 8, 2018
Magnetic Field Probe	NARDA	2300/90.10	1Hz – 400kHz	Feb. 11, 2016	Feb. 10, 2018
E-Field Probe	NARDA	EF 0391	100kHz – 3GHz	Feb. 9, 2016	Feb. 8, 2018

Note: 1. The calibration interval of the above test instruments is 12/24 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa RF Chamber

3.4 Limits for Maximum Permissible Exposure (MPE)

§ 1.1310 The criteria listed in table 1 shall be used to evaluate the environmental impact of human exposure to radiofrequency(RF) radiation as specified in § 1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of § 2.1093 of this chapter.

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*(900/f²)	6
30–300	61.4	0.163	1.0	6
300–1500			f/300	6
1500–100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f²)	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

NOTE 1 TO TABLE 1: Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

NOTE 2 TO TABLE 1: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

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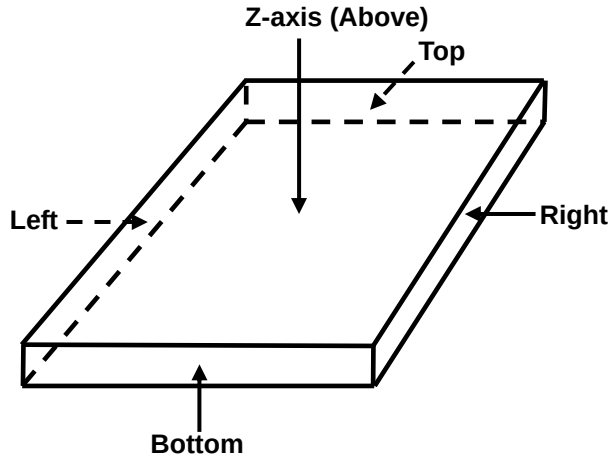
Aggregate leakage fields at 10 cm surrounding the device from all simultaneous transmitting coils are demonstrated to be less than 30% of the MPE limit.

3.5 Test Point Description



4 Calculation Result Of Maximum Conducted Power

Charging Mode with Mobile Phone 10% Charge

Test Frequency Range: 100kHz to 3GHz					
E-Field Measurement (10cm)					
EUT Side	Left	Right	Top	Bottom	Z-axis (Above)
Max E-field (V/m)	0.47	0.45	0.44	0.53	0.52
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-613.53	-613.55	-613.56	-613.47	-613.48
70 % Limit (V/m)	429.8	429.8	429.8	429.8	429.8
70 % Margin (V/m)	-429.471	-429.485	-429.492	-429.429	-429.436

Test Frequency Range: 1Hz to 400kHz					
H-Field Measurement (10cm)					
EUT Side	Left	Right	Top	Bottom	Z-axis (Above)
Max H-field (uT)	0.268	0.274	0.273	0.276	0.353
Max H-field (A/m)	0.2144	0.2192	0.2184	0.2208	0.2824
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.4156	-1.4108	-1.4116	-1.4092	-1.3476
70 % Limit (A/m)	1.141	1.141	1.141	1.141	1.141
70 % Margin (A/m)	-0.99092	-0.98756	-0.98812	-0.98644	-0.94332

Measurements were made from all sides and the top of the primary/client pair, with the 10 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode with Mobile Phone 50% Charge

Test Frequency Range: 100kHz to 3GHz					
E-Field Measurement (10cm)					
EUT Side	Left	Right	Top	Bottom	Z-axis (Above)
Max E-field (V/m)	0.49	0.47	0.42	0.56	0.46
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-613.51	-613.53	-613.58	-613.44	-613.54
70 % Limit (V/m)	429.8	429.8	429.8	429.8	429.8
70 % Margin (V/m)	-429.457	-429.471	-429.506	-429.408	-429.478

Test Frequency Range: 1Hz to 400kHz					
H-Field Measurement (10cm)					
EUT Side	Left	Right	Top	Bottom	Z-axis (Above)
Max H-field (uT)	0.279	0.277	0.272	0.268	0.341
Max H-field (A/m)	0.2232	0.2216	0.2176	0.2144	0.2728
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.4068	-1.4084	-1.4124	-1.4156	-1.3572
70 % Limit (A/m)	1.141	1.141	1.141	1.141	1.141
70 % Margin (A/m)	-0.98476	-0.98588	-0.98868	-0.99092	-0.95004

Measurements were made from all sides and the top of the primary/client pair, with the 10 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode with Mobile Phone 90% Charge

Test Frequency Range: 100kHz to 3GHz					
E-Field Measurement (10cm)					
EUT Side	Left	Right	Top	Bottom	Z-axis (Above)
Max E-field (V/m)	0.46	0.45	0.44	0.47	0.43
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-613.54	-613.55	-613.56	-613.53	-613.57
70 % Limit (V/m)	429.8	429.8	429.8	429.8	429.8
70 % Margin (V/m)	-429.478	-429.485	-429.492	-429.471	-429.499

Test Frequency Range: 1Hz to 400kHz					
H-Field Measurement (10cm)					
EUT Side	Left	Right	Top	Bottom	Z-axis (Above)
Max H-field (uT)	0.271	0.277	0.272	0.274	0.351
Max H-field (A/m)	0.2168	0.2216	0.2176	0.2192	0.2808
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.4132	-1.4084	-1.4124	-1.4108	-1.3492
70 % Limit (A/m)	1.141	1.141	1.141	1.141	1.141
70 % Margin (A/m)	-0.98924	-0.98588	-0.98868	-0.98756	-0.94444

Measurements were made from all sides and the top of the primary/client pair, with the 10 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Standby Mode

Test Frequency Range: 100kHz to 3GHz					
E-Field Measurement (10cm)					
EUT Side	Left	Right	Top	Bottom	Z-axis (Above)
Max E-field (V/m)	0.74	1.03	0.88	0.66	1.16
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-613.26	-612.97	-613.12	-613.34	-612.84
70 % Limit (V/m)	429.8	429.8	429.8	429.8	429.8
70 % Margin (V/m)	-429.282	-429.079	-429.184	-429.338	-428.988

Test Frequency Range: 1Hz to 400kHz					
H-Field Measurement (10cm)					
EUT Side	Left	Right	Top	Bottom	Z-axis (Above)
Max H-field (uT)	0.44	0.389	0.351	0.358	1.194
Max H-field (A/m)	0.352	0.3112	0.2808	0.2864	0.9552
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.278	-1.3188	-1.3492	-1.3436	-0.6748
70 % Limit (A/m)	1.141	1.141	1.141	1.141	1.141
70 % Margin (A/m)	-0.8946	-0.92316	-0.94444	-0.94052	-0.47236

Measurements were made from all sides and the top of the primary/client pair, with the 10 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

5 Photographs of the Test Configuration

Please refer to the attached file (Test Setup Photo).

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