

RF EXPOSURE REPORT

REPORT NO.: SA140515E03 R1

MODEL NO.: J20H084ac, J20H084

FCC ID: AK8J20H084AC

RECEIVED: May 15, 2014

TESTED: May 16, 2014

ISSUED: July 29, 2014

APPLICANT: Sony Corporation

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Japan

ISSUED BY: Bureau Veritas Consumer Products Services
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A D T

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA140515E03	Original release	June 27, 2014
SA140515E03 R1	Modified information of applicant.	July 29, 2014

1. CERTIFICATION

PRODUCT: WLAN Module
BRAND NAME: FOXCONN
MODEL NO.: J20H084ac, J20H084
TEST SAMPLE: ENGINEERING SAMPLE
APPLICANT: Sony Corporation
TESTED DATE: May 16, 2014
STANDARDS: FCC Part 2 (Section 2.1091)
FCC OET Bulletin 65, Supplement C (01-01)
IEEE C95.1

The above equipment (Model: J20H084ac) 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 : Phoenix Huang , **DATE:** July 29, 2014
(Phoenix Huang, Specialist)

APPROVED BY : May Chen , **DATE:** July 29, 2014
(May Chen, Manager)

2. RF EXPOSURE LIMIT

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

FREQUENCY RANGE (MHz)	ELECTRIC FIELD STRENGTH (V/m)	MAGNETIC FIELD STRENGTH (A/m)	POWER DENSITY (mW/cm ²)	AVERAGE TIME (minutes)
LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE				
300-1500	...	...	F/1500	30
1500-100,000	...	...	1.0	30

F = Frequency in MHz

3. MPE CALCULATION FORMULA

$$P_d = (P_{out} * G) / (4 * \pi * r^2)$$

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

r = distance between observation point and center of the radiator in cm

4. CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

5. ANTENNA GAIN

1. The antennas provided to the EUT, please refer to the following table:

1. The antennas provided to the ECU, please refer to the following table:

For WLAN								
Antenna No.	Transmitter Circuit	Brand	Model	Antenna Gain(dBi) < including cable loss>	Frequency range (GHz)	Antenna Type	Connector Type	Cable Length
1	Chain (0)	Foxconn WiFi	J20H084	2.81	2.4	PCB printing	NA	NA
				3.05	2.45			
				3.40	2.5			
				3.50	5.15			
				3.28	5.45			
				3.79	5.85			
2	Chain (1)	Foxconn WiFi	J20H084	2.93	2.4	PCB printing	NA	NA
				2.91	2.45			
				2.76	2.5			
				2.96	5.15			
				2.57	5.45			
				2.82	5.85			
For BT used								
Antenna No.	Brand	Model	Antenna Gain(dBi) <exclude cable loss>	Frequency range (MHz to MHz)	Cable Loss(dB)	Antenna Type	Connector Type	Cable Length (mm)
3	Foxconn Corporation	WDAN-S1TV0100-DH	-0.58	2400-2500	0.24	PIFA	UFL	100
4	Foxconn Corporation	WDAN-S1TV0300-DH	-0.58	2400-2500	0.7	PIFA	UFL	300
5	Foxconn Corporation	WDAN-S1TV0310-DH	-0.58	2400-2500	0.8	PIFA	UFL	310
6	Foxconn Corporation	WDAN-S1TV0320-DH	-0.58	2400-2500	0.8	PIFA	UFL	320
7	Foxconn Corporation	WDAN-S1TV0330-DH	-0.58	2400-2500	0.8	PIFA	UFL	330
8	Foxconn Corporation	WDAN-S1TV0340-DH	-0.58	2400-2500	0.8	PIFA	UFL	340
9	Foxconn Corporation	WDAN-S1TV0350-DH	-0.58	2400-2500	0.9	PIFA	UFL	350
10	Foxconn Corporation	WDAN-S1TV0360-DH	-0.58	2400-2500	0.9	PIFA	UFL	360

Antenna No.	Brand	Model	Antenna Gain(dBi) <exclude cable loss>	Frequency range (MHz to MHz)	Cable Loss(dB)	Antenna Type	Connector Type	Cable Length (mm)
11	Foxconn Corporation	WDAN-S1TV0370-DH	-0.58	2400-2500	0.9	PIFA	UFL	370
12	Foxconn Corporation	WDAN-S1TV0380-DH	-0.58	2400-2500	0.9	PIFA	UFL	380
13	Foxconn Corporation	WDAN-S1TV0390-DH	-0.58	2400-2500	1.0	PIFA	UFL	390
14	Foxconn Corporation	WDAN-S1TV0400-DH	-0.58	2400-2500	1.0	PIFA	UFL	400
15	Foxconn Corporation	WDAN-S1TV0410-DH	-0.58	2400-2500	1.0	PIFA	UFL	410
16	Foxconn Corporation	WDAN-S1TV0420-DH	-0.58	2400-2500	1.0	PIFA	UFL	420
17	Foxconn Corporation	WDAN-S1TV0430-DH	-0.58	2400-2500	1.1	PIFA	UFL	430
18	Foxconn Corporation	WDAN-S1TV0440-DH	-0.58	2400-2500	1.1	PIFA	UFL	440
19	Foxconn Corporation	WDAN-S1TV0450-DH	-0.58	2400-2500	1.1	PIFA	UFL	450
20	Foxconn Corporation	WDAN-S1TV0460-DH	-0.58	2400-2500	1.1	PIFA	UFL	460
21	Foxconn Corporation	WDAN-S1TV0470-DH	-0.58	2400-2500	1.2	PIFA	UFL	470
22	Foxconn Corporation	WDAN-S1TV0480-DH	-0.58	2400-2500	1.2	PIFA	UFL	480
23	Foxconn Corporation	WDAN-S1TV0490-DH	-0.58	2400-2500	1.2	PIFA	UFL	490
24	Foxconn Corporation	WDAN-S1TV0500-DH	-0.58	2400-2500	1.2	PIFA	UFL	500
25	Foxconn Corporation	WDAN-S1TV0510-DH	-0.58	2400-2500	1.2	PIFA	UFL	510
26	Foxconn Corporation	WDAN-S1TV0520-DH	-0.58	2400-2500	1.3	PIFA	UFL	520
27	Foxconn Corporation	WDAN-S1TV0530-DH	-0.58	2400-2500	1.3	PIFA	UFL	530
28	Foxconn Corporation	WDAN-S1TV0540-DH	-0.58	2400-2500	1.3	PIFA	UFL	540
29	Foxconn Corporation	WDAN-S1TV0550-DH	-0.58	2400-2500	1.3	PIFA	UFL	550
30	Foxconn Corporation	WDAN-S1TV0560-DH	-0.58	2400-2500	1.4	PIFA	UFL	560

Antenna No.	Brand	Model	Antenna Gain(dBi) <exclude cable loss>	Frequency range (MHz to MHz)	Cable Loss(dB)	Antenna Type	Connector Type	Cable Length (mm)
31	Foxconn Corporation	WDAN-S1TV0570-DH	-0.58	2400-2500	1.4	PIFA	UFL	570
32	Foxconn Corporation	WDAN-S1TV0580-DH	-0.58	2400-2500	1.4	PIFA	UFL	580
33	Foxconn Corporation	WDAN-S1TV0590-DH	-0.58	2400-2500	1.4	PIFA	UFL	590
34	Foxconn Corporation	WDAN-S1TV0600-DH	-0.58	2400-2500	1.5	PIFA	UFL	600
35	Foxconn Corporation	WDAN-S1TV0610-DH	-0.58	2400-2500	1.5	PIFA	UFL	610
36	Foxconn Corporation	WDAN-S1TV0620-DH	-0.58	2400-2500	1.5	PIFA	UFL	620
37	Foxconn Corporation	WDAN-S1TV0630-DH	-0.58	2400-2500	1.5	PIFA	UFL	630
38	Foxconn Corporation	WDAN-S1TV0640-DH	-0.58	2400-2500	1.6	PIFA	UFL	640
39	Foxconn Corporation	WDAN-S1TV0650-DH	-0.58	2400-2500	1.6	PIFA	UFL	650
40	Foxconn Corporation	WDAN-S1TV0660-DH	-0.58	2400-2500	1.6	PIFA	UFL	660
41	Foxconn Corporation	WDAN-S1TV0670-DH	-0.58	2400-2500	1.6	PIFA	UFL	670
42	Foxconn Corporation	WDAN-S1TV0680-DH	-0.58	2400-2500	1.7	PIFA	UFL	680
43	Foxconn Corporation	WDAN-S1TV0690-DH	-0.58	2400-2500	1.7	PIFA	UFL	690
44	Foxconn Corporation	WDAN-S1TV0700-DH	-0.58	2400-2500	1.7	PIFA	UFL	700
45	Foxconn Corporation	WDAN-S1TV0710-DH	-0.58	2400-2500	1.7	PIFA	UFL	710
46	Foxconn Corporation	WDAN-S1TV0720-DH	-0.58	2400-2500	1.7	PIFA	UFL	720
47	Foxconn Corporation	WDAN-S1TV0730-DH	-0.58	2400-2500	1.8	PIFA	UFL	730
48	Foxconn Corporation	WDAN-S1TV0740-DH	-0.58	2400-2500	1.8	PIFA	UFL	740
49	Foxconn Corporation	WDAN-S1TV0750-DH	-0.58	2400-2500	1.8	PIFA	UFL	750
50	Foxconn Corporation	WDAN-S1TV0760-DH	-0.58	2400-2500	1.8	PIFA	UFL	760

Antenna No.	Brand	Model	Antenna Gain(dBi) <exclude cable loss>	Frequency range (MHz to MHz)	Cable Loss(dB)	Antenna Type	Connector Type	Cable Length (mm)
51	Foxconn Corporation	WDAN-S1TV0770-DH	-0.58	2400-2500	1.9	PIFA	UFL	770
52	Foxconn Corporation	WDAN-S1TV0780-DH	-0.58	2400-2500	1.9	PIFA	UFL	780
53	Foxconn Corporation	WDAN-S1TV0790-DH	-0.58	2400-2500	1.9	PIFA	UFL	790
54	Foxconn Corporation	WDAN-S1TV0800-DH	-0.58	2400-2500	1.9	PIFA	UFL	800
55	Foxconn Corporation	WDAN-S1TV0810-DH	-0.58	2400-2500	2.0	PIFA	UFL	810
56	Foxconn Corporation	WDAN-S1TV0820-DH	-0.58	2400-2500	2.0	PIFA	UFL	820
57	Foxconn Corporation	WDAN-S1TV0830-DH	-0.58	2400-2500	2.0	PIFA	UFL	830
58	Foxconn Corporation	WDAN-S1TV0840-DH	-0.58	2400-2500	2.0	PIFA	UFL	840
59	Foxconn Corporation	WDAN-S1TV0850-DH	-0.58	2400-2500	2.1	PIFA	UFL	850
60	Foxconn Corporation	WDAN-S1TV0860-DH	-0.58	2400-2500	2.1	PIFA	UFL	860
61	Foxconn Corporation	WDAN-S1TV0870-DH	-0.58	2400-2500	2.1	PIFA	UFL	870
62	Foxconn Corporation	WDAN-S1TV0880-DH	-0.58	2400-2500	2.1	PIFA	UFL	880
63	Foxconn Corporation	WDAN-S1TV0890-DH	-0.58	2400-2500	2.2	PIFA	UFL	890
64	Foxconn Corporation	WDAN-S1TV0900-DH	-0.58	2400-2500	2.2	PIFA	UFL	900
65	Foxconn Corporation	WDAN-S1TV0910-DH	-0.58	2400-2500	2.2	PIFA	UFL	910
66	Foxconn Corporation	WDAN-S1TV0920-DH	-0.58	2400-2500	2.2	PIFA	UFL	920
67	Foxconn Corporation	WDAN-S1TV0930-DH	-0.58	2400-2500	2.3	PIFA	UFL	930
68	Foxconn Corporation	WDAN-S1TV0940-DH	-0.58	2400-2500	2.3	PIFA	UFL	940
69	Foxconn Corporation	WDAN-S1TV0950-DH	-0.58	2400-2500	2.3	PIFA	UFL	950
70	Foxconn Corporation	WDAN-S1TV0960-DH	-0.58	2400-2500	2.3	PIFA	UFL	960

Antenna No.	Brand	Model	Antenna Gain(dBi) <exclude cable loss>	Frequency range (MHz to MHz)	Cable Loss(dB)	Antenna Type	Connector Type	Cable Length (mm)
71	Foxconn Corporation	WDAN-S1TV0970-DH	-0.58	2400-2500	2.3	PIFA	UFL	970
72	Foxconn Corporation	WDAN-S1TV0980-DH	-0.58	2400-2500	2.4	PIFA	UFL	980
73	Foxconn Corporation	WDAN-S1TV0990-DH	-0.58	2400-2500	2.4	PIFA	UFL	990
74	Foxconn Corporation	WDAN-S1TV1000-DH	-0.58	2400-2500	2.4	PIFA	UFL	1000
75	Foxconn Corporation	WDAN-S1TV1010-DH	-0.58	2400-2500	2.4	PIFA	UFL	1010
76	Foxconn Corporation	WDAN-S1TV1020-DH	-0.58	2400-2500	2.5	PIFA	UFL	1020
77	Foxconn Corporation	WDAN-S1TV1030-DH	-0.58	2400-2500	2.5	PIFA	UFL	1030
78	Foxconn Corporation	WDAN-S1TV1040-DH	-0.58	2400-2500	2.5	PIFA	UFL	1040
79	Foxconn Corporation	WDAN-S1TV1050-DH	-0.58	2400-2500	2.5	PIFA	UFL	1050
80	Foxconn Corporation	WDAN-S1TV1060-DH	-0.58	2400-2500	2.6	PIFA	UFL	1060
81	Foxconn Corporation	WDAN-S1TV1070-DH	-0.58	2400-2500	2.6	PIFA	UFL	1070
82	Foxconn Corporation	WDAN-S1TV1080-DH	-0.58	2400-2500	2.6	PIFA	UFL	1080
83	Foxconn Corporation	WDAN-S1TV1090-DH	-0.58	2400-2500	2.6	PIFA	UFL	1090
84	Foxconn Corporation	WDAN-S1TV1100-DH	-0.58	2400-2500	2.7	PIFA	UFL	1100
85	Foxconn Corporation	WDAN-S1TV1110-DH	-0.58	2400-2500	2.7	PIFA	UFL	1110
86	Foxconn Corporation	WDAN-S1TV1120-DH	-0.58	2400-2500	2.7	PIFA	UFL	1120
87	Foxconn Corporation	WDAN-S1TV1130-DH	-0.58	2400-2500	2.7	PIFA	UFL	1130
88	Foxconn Corporation	WDAN-S1TV1140-DH	-0.58	2400-2500	2.8	PIFA	UFL	1140
89	Foxconn Corporation	WDAN-S1TV1150-DH	-0.58	2400-2500	2.8	PIFA	UFL	1150
90	Foxconn Corporation	WDAN-S1TV1160-DH	-0.58	2400-2500	2.8	PIFA	UFL	1160

Antenna No.	Brand	Model	Antenna Gain(dBi) <exclude cable loss>	Frequency range (MHz to MHz)	Cable Loss(dB)	Antenna Type	Connector Type	Cable Length (mm)
91	Foxconn Corporation	WDAN-S1TV1170-DH	-0.58	2400-2500	2.8	PIFA	UFL	1170
92	Foxconn Corporation	WDAN-S1TV1180-DH	-0.58	2400-2500	2.8	PIFA	UFL	1180
93	Foxconn Corporation	WDAN-S1TV1190-DH	-0.58	2400-2500	2.9	PIFA	UFL	1190
94	Foxconn Corporation	WDAN-S1TV1200-DH	-0.58	2400-2500	2.9	PIFA	UFL	1200
95	Foxconn Corporation	WDAN-S1TV1210-DH	-0.58	2400-2500	2.9	PIFA	UFL	1210
96	Foxconn Corporation	WDAN-S1TV1220-DH	-0.58	2400-2500	2.9	PIFA	UFL	1220
97	Foxconn Corporation	WDAN-S1TV1230-DH	-0.58	2400-2500	3.0	PIFA	UFL	1230
98	Foxconn Corporation	WDAN-S1TV1240-DH	-0.58	2400-2500	3.0	PIFA	UFL	1240
99	Foxconn Corporation	WDAN-S1TV1250-DH	-0.58	2400-2500	3.0	PIFA	UFL	1250
100	Foxconn Corporation	WDAN-S1TV1260-DH	-0.58	2400-2500	3.0	PIFA	UFL	1260
101	Foxconn Corporation	WDAN-S1TV1270-DH	-0.58	2400-2500	3.1	PIFA	UFL	1270
102	Foxconn Corporation	WDAN-S1TV1280-DH	-0.58	2400-2500	3.1	PIFA	UFL	1280
103	Foxconn Corporation	WDAN-S1TV1290-DH	-0.58	2400-2500	3.1	PIFA	UFL	1290
104	Foxconn Corporation	WDAN-S1TV1300-DH	-0.58	2400-2500	3.1	PIFA	UFL	1300
105	Foxconn Corporation	WDAN-S1TV1310-DH	-0.58	2400-2500	3.2	PIFA	UFL	1310
106	Foxconn Corporation	WDAN-S1TV1320-DH	-0.58	2400-2500	3.2	PIFA	UFL	1320
107	Foxconn Corporation	WDAN-S1TV1330-DH	-0.58	2400-2500	3.2	PIFA	UFL	1330
108	Foxconn Corporation	WDAN-S1TV1340-DH	-0.58	2400-2500	3.2	PIFA	UFL	1340
109	Foxconn Corporation	WDAN-S1TV1350-DH	-0.58	2400-2500	3.3	PIFA	UFL	1350
110	Foxconn Corporation	WDAN-S1TV1360-DH	-0.58	2400-2500	3.3	PIFA	UFL	1360

Antenna No.	Brand	Model	Antenna Gain(dBi) <exclude cable loss>	Frequency range (MHz to MHz)	Cable Loss(dB)	Antenna Type	Connector Type	Cable Length (mm)
111	Foxconn Corporation	WDAN-S1TV1370-DH	-0.58	2400-2500	3.3	PIFA	UFL	1370
112	Foxconn Corporation	WDAN-S1TV1380-DH	-0.58	2400-2500	3.3	PIFA	UFL	1380
113	Foxconn Corporation	WDAN-S1TV1390-DH	-0.58	2400-2500	3.3	PIFA	UFL	1390
114	Foxconn Corporation	WDAN-S1TV1400-DH	-0.58	2400-2500	3.4	PIFA	UFL	1400
115	Foxconn Corporation	WDAN-S1TV1410-DH	-0.58	2400-2500	3.4	PIFA	UFL	1410
116	Foxconn Corporation	WDAN-S1TV1420-DH	-0.58	2400-2500	3.4	PIFA	UFL	1420
117	Foxconn Corporation	WDAN-S1TV1430-DH	-0.58	2400-2500	3.4	PIFA	UFL	1430
118	Foxconn Corporation	WDAN-S1TV1440-DH	-0.58	2400-2500	3.5	PIFA	UFL	1440
119	Foxconn Corporation	WDAN-S1TV1450-DH	-0.58	2400-2500	3.5	PIFA	UFL	1450
120	Foxconn Corporation	WDAN-S1TV1460-DH	-0.58	2400-2500	3.5	PIFA	UFL	1460
121	Foxconn Corporation	WDAN-S1TV1470-DH	-0.58	2400-2500	3.5	PIFA	UFL	1470
122	Foxconn Corporation	WDAN-S1TV1480-DH	-0.58	2400-2500	3.6	PIFA	UFL	1480
123	Foxconn Corporation	WDAN-S1TV1490-DH	-0.58	2400-2500	3.6	PIFA	UFL	1490
124	Foxconn Corporation	WDAN-S1TV1500-DH	-0.58	2400-2500	3.6	PIFA	UFL	1500
125	Foxconn Corporation	WDAN-S1TV1510-DH	-0.58	2400-2500	3.6	PIFA	UFL	1510
126	Foxconn Corporation	WDAN-S1TV1520-DH	-0.58	2400-2500	3.7	PIFA	UFL	1520
127	Foxconn Corporation	WDAN-S1TV1530-DH	-0.58	2400-2500	3.7	PIFA	UFL	1530
128	Foxconn Corporation	WDAN-S1TV1540-DH	-0.58	2400-2500	3.7	PIFA	UFL	1540
129	Foxconn Corporation	WDAN-S1TV1550-DH	-0.58	2400-2500	3.7	PIFA	UFL	1550
130	Foxconn Corporation	WDAN-S1TV1560-DH	-0.58	2400-2500	3.8	PIFA	UFL	1560

Antenna No.	Brand	Model	Antenna Gain(dBi) <exclude cable loss>	Frequency range (MHz to MHz)	Cable Loss(dB)	Antenna Type	Connector Type	Cable Length (mm)
131	Foxconn Corporation	WDAN-S1TV1570-DH	-0.58	2400-2500	3.8	PIFA	UFL	1570
132	Foxconn Corporation	WDAN-S1TV1580-DH	-0.58	2400-2500	3.8	PIFA	UFL	1580
133	Foxconn Corporation	WDAN-S1TV1590-DH	-0.58	2400-2500	3.8	PIFA	UFL	1590
134	Foxconn Corporation	WDAN-S1TV1600-DH	-0.58	2400-2500	3.9	PIFA	UFL	1600
135	Foxconn Corporation	WDAN-S1TV1610-DH	-0.58	2400-2500	3.9	PIFA	UFL	1610
136	Foxconn Corporation	WDAN-S1TV1620-DH	-0.58	2400-2500	3.9	PIFA	UFL	1620
137	Foxconn Corporation	WDAN-S1TV1630-DH	-0.58	2400-2500	3.9	PIFA	UFL	1630
138	Foxconn Corporation	WDAN-S1TV1640-DH	-0.58	2400-2500	3.9	PIFA	UFL	1640
139	Foxconn Corporation	WDAN-S1TV1650-DH	-0.58	2400-2500	4.0	PIFA	UFL	1650
140	Foxconn Corporation	WDAN-S1TV1660-DH	-0.58	2400-2500	4.0	PIFA	UFL	1660
141	Foxconn Corporation	WDAN-S1TV1670-DH	-0.58	2400-2500	4.0	PIFA	UFL	1670
142	Foxconn Corporation	WDAN-S1TV1680-DH	-0.58	2400-2500	4.0	PIFA	UFL	1680
143	Foxconn Corporation	WDAN-S1TV1690-DH	-0.58	2400-2500	4.1	PIFA	UFL	1690
144	Foxconn Corporation	WDAN-S1TV1700-DH	-0.58	2400-2500	4.1	PIFA	UFL	1700
145	Foxconn Corporation	WDAN-S1TV1710-DH	-0.58	2400-2500	4.1	PIFA	UFL	1710
146	Foxconn Corporation	WDAN-S1TV1720-DH	-0.58	2400-2500	4.1	PIFA	UFL	1720
147	Foxconn Corporation	WDAN-S1TV1730-DH	-0.58	2400-2500	4.2	PIFA	UFL	1730
148	Foxconn Corporation	WDAN-S1TV1740-DH	-0.58	2400-2500	4.2	PIFA	UFL	1740
149	Foxconn Corporation	WDAN-S1TV1750-DH	-0.58	2400-2500	4.2	PIFA	UFL	1750
150	Foxconn Corporation	WDAN-S1TV1760-DH	-0.58	2400-2500	4.2	PIFA	UFL	1760

Antenna No.	Brand	Model	Antenna Gain(dBi) <exclude cable loss>	Frequency range (MHz to MHz)	Cable Loss(dB)	Antenna Type	Connector Type	Cable Length (mm)
151	Foxconn Corporation	WDAN-S1TV1770-DH	-0.58	2400-2500	4.3	PIFA	UFL	1770
152	Foxconn Corporation	WDAN-S1TV1780-DH	-0.58	2400-2500	4.3	PIFA	UFL	1780
153	Foxconn Corporation	WDAN-S1TV1790-DH	-0.58	2400-2500	4.3	PIFA	UFL	1790
154	Foxconn Corporation	WDAN-S1TV1800-DH	-0.58	2400-2500	4.3	PIFA	UFL	1800
155	Foxconn Corporation	WDAN-S1TV2000-DH	-0.58	2400-2500	4.8	PIFA	UFL	2000
156	SAA	SN6506-11-010-C	-2.42	2400-2500	0.5	PIFA	UFL	100
157	SAA	SN6506-11-030-C	-2.42	2400-2500	1.1	PIFA	UFL	300
158	SAA	SN6506-11-031-C	-2.42	2400-2500	1.1	PIFA	UFL	310
159	SAA	SN6506-11-032-C	-2.42	2400-2500	1.1	PIFA	UFL	320
160	SAA	SN6506-11-033-C	-2.42	2400-2500	1.1	PIFA	UFL	330
161	SAA	SN6506-11-034-C	-2.42	2400-2500	1.2	PIFA	UFL	340
162	SAA	SN6506-11-035-C	-2.42	2400-2500	1.2	PIFA	UFL	350
163	SAA	SN6506-11-036-C	-2.42	2400-2500	1.2	PIFA	UFL	360
164	SAA	SN6506-11-037-C	-2.42	2400-2500	1.2	PIFA	UFL	370
165	SAA	SN6506-11-038-C	-2.42	2400-2500	1.3	PIFA	UFL	380
166	SAA	SN6506-11-039-C	-2.42	2400-2500	1.3	PIFA	UFL	390
167	SAA	SN6506-11-040-C	-2.42	2400-2500	1.3	PIFA	UFL	400
168	SAA	SN6506-11-041-C	-2.42	2400-2500	1.3	PIFA	UFL	410
169	SAA	SN6506-11-042-C	-2.42	2400-2500	1.4	PIFA	UFL	420
170	SAA	SN6506-11-043-C	-2.42	2400-2500	1.4	PIFA	UFL	430
171	SAA	SN6506-11-044-C	-2.42	2400-2500	1.4	PIFA	UFL	440
172	SAA	SN6506-11-045-C	-2.42	2400-2500	1.5	PIFA	UFL	450
173	SAA	SN6506-11-046-C	-2.42	2400-2500	1.5	PIFA	UFL	460
174	SAA	SN6506-11-047-C	-2.42	2400-2500	1.5	PIFA	UFL	470
175	SAA	SN6506-11-048-C	-2.42	2400-2500	1.5	PIFA	UFL	480
176	SAA	SN6506-11-049-C	-2.42	2400-2500	1.6	PIFA	UFL	490
177	SAA	SN6506-11-050-C	-2.42	2400-2500	1.6	PIFA	UFL	500
178	SAA	SN6506-11-051-C	-2.42	2400-2500	1.6	PIFA	UFL	510
179	SAA	SN6506-11-052-C	-2.42	2400-2500	1.6	PIFA	UFL	520
180	SAA	SN6506-11-053-C	-2.42	2400-2500	1.7	PIFA	UFL	530

Antenna No.	Brand	Model	Antenna Gain(dBi) <exclude cable loss>	Frequency range (MHz to MHz)	Cable Loss(dB)	Antenna Type	Connector Type	Cable Length (mm)
181	SAA	SN6506-11-054-C	-2.42	2400-2500	1.7	PIFA	UFL	540
182	SAA	SN6506-11-055-C	-2.42	2400-2500	1.7	PIFA	UFL	550
183	SAA	SN6506-11-056-C	-2.42	2400-2500	1.7	PIFA	UFL	560
184	SAA	SN6506-11-057-C	-2.42	2400-2500	1.8	PIFA	UFL	570
185	SAA	SN6506-11-058-C	-2.42	2400-2500	1.8	PIFA	UFL	580
186	SAA	SN6506-11-059-C	-2.42	2400-2500	1.8	PIFA	UFL	590
187	SAA	SN6506-11-060-C	-2.42	2400-2500	1.8	PIFA	UFL	600
188	SAA	SN6506-11-061-C	-2.42	2400-2500	1.9	PIFA	UFL	610
189	SAA	SN6506-11-062-C	-2.42	2400-2500	1.9	PIFA	UFL	620
190	SAA	SN6506-11-063-C	-2.42	2400-2500	1.9	PIFA	UFL	630
191	SAA	SN6506-11-064-C	-2.42	2400-2500	2.0	PIFA	UFL	640
192	SAA	SN6506-11-065-C	-2.42	2400-2500	2.0	PIFA	UFL	650
193	SAA	SN6506-11-066-C	-2.42	2400-2500	2.0	PIFA	UFL	660
194	SAA	SN6506-11-067-C	-2.42	2400-2500	2.0	PIFA	UFL	670
195	SAA	SN6506-11-068-C	-2.42	2400-2500	2.1	PIFA	UFL	680
196	SAA	SN6506-11-069-C	-2.42	2400-2500	2.1	PIFA	UFL	690
197	SAA	SN6506-11-070-C	-2.42	2400-2500	2.1	PIFA	UFL	700
198	SAA	SN6506-11-071-C	-2.42	2400-2500	2.1	PIFA	UFL	710
199	SAA	SN6506-11-072-C	-2.42	2400-2500	2.2	PIFA	UFL	720
200	SAA	SN6506-11-073-C	-2.42	2400-2500	2.2	PIFA	UFL	730
201	SAA	SN6506-11-074-C	-2.42	2400-2500	2.2	PIFA	UFL	740
202	SAA	SN6506-11-075-C	-2.42	2400-2500	2.2	PIFA	UFL	750
203	SAA	SN6506-11-076-C	-2.42	2400-2500	2.3	PIFA	UFL	760
204	SAA	SN6506-11-077-C	-2.42	2400-2500	2.3	PIFA	UFL	770
205	SAA	SN6506-11-078-C	-2.42	2400-2500	2.3	PIFA	UFL	780
206	SAA	SN6506-11-079-C	-2.42	2400-2500	2.3	PIFA	UFL	790
207	SAA	SN6506-11-080-C	-2.42	2400-2500	2.4	PIFA	UFL	800
208	SAA	SN6506-11-081-C	-2.42	2400-2500	2.4	PIFA	UFL	810
209	SAA	SN6506-11-082-C	-2.42	2400-2500	2.4	PIFA	UFL	820
210	SAA	SN6506-11-083-C	-2.42	2400-2500	2.5	PIFA	UFL	830
211	SAA	SN6506-11-084-C	-2.42	2400-2500	2.5	PIFA	UFL	840
212	SAA	SN6506-11-085-C	-2.42	2400-2500	2.5	PIFA	UFL	850
213	SAA	SN6506-11-086-C	-2.42	2400-2500	2.5	PIFA	UFL	860
214	SAA	SN6506-11-087-C	-2.42	2400-2500	2.6	PIFA	UFL	870
215	SAA	SN6506-11-088-C	-2.42	2400-2500	2.6	PIFA	UFL	880

Antenna No.	Brand	Model	Antenna Gain(dBi) <exclude cable loss>	Frequency range (MHz to MHz)	Cable Loss(dB)	Antenna Type	Connector Type	Cable Length (mm)
216	SAA	SN6506-11-089-C	-2.42	2400-2500	2.6	PIFA	UFL	890
217	SAA	SN6506-11-090-C	-2.42	2400-2500	2.6	PIFA	UFL	900
218	SAA	SN6506-11-091-C	-2.42	2400-2500	2.7	PIFA	UFL	910
219	SAA	SN6506-11-092-C	-2.42	2400-2500	2.7	PIFA	UFL	920
220	SAA	SN6506-11-093-C	-2.42	2400-2500	2.7	PIFA	UFL	930
221	SAA	SN6506-11-094-C	-2.42	2400-2500	2.7	PIFA	UFL	940
222	SAA	SN6506-11-095-C	-2.42	2400-2500	2.8	PIFA	UFL	950
223	SAA	SN6506-11-096-C	-2.42	2400-2500	2.8	PIFA	UFL	960
224	SAA	SN6506-11-097-C	-2.42	2400-2500	2.8	PIFA	UFL	970
225	SAA	SN6506-11-098-C	-2.42	2400-2500	2.8	PIFA	UFL	980
226	SAA	SN6506-11-099-C	-2.42	2400-2500	2.9	PIFA	UFL	990
227	SAA	SN6506-11-100-C	-2.42	2400-2500	2.9	PIFA	UFL	1000
228	SAA	SN6506-11-101-C	-2.42	2400-2500	2.9	PIFA	UFL	1010
229	SAA	SN6506-11-102-C	-2.42	2400-2500	3.0	PIFA	UFL	1020
230	SAA	SN6506-11-103-C	-2.42	2400-2500	3.0	PIFA	UFL	1030
231	SAA	SN6506-11-104-C	-2.42	2400-2500	3.0	PIFA	UFL	1040
232	SAA	SN6506-11-105-C	-2.42	2400-2500	3.0	PIFA	UFL	1050
233	SAA	SN6506-11-106-C	-2.42	2400-2500	3.1	PIFA	UFL	1060
234	SAA	SN6506-11-107-C	-2.42	2400-2500	3.1	PIFA	UFL	1070
235	SAA	SN6506-11-108-C	-2.42	2400-2500	3.1	PIFA	UFL	1080
236	SAA	SN6506-11-109-C	-2.42	2400-2500	3.1	PIFA	UFL	1090
237	SAA	SN6506-11-110-C	-2.42	2400-2500	3.2	PIFA	UFL	1100
238	SAA	SN6506-11-111-C	-2.42	2400-2500	3.2	PIFA	UFL	1110
239	SAA	SN6506-11-112-C	-2.42	2400-2500	3.2	PIFA	UFL	1120
240	SAA	SN6506-11-113-C	-2.42	2400-2500	3.2	PIFA	UFL	1130
241	SAA	SN6506-11-114-C	-2.42	2400-2500	3.3	PIFA	UFL	1140
242	SAA	SN6506-11-115-C	-2.42	2400-2500	3.3	PIFA	UFL	1150
243	SAA	SN6506-11-116-C	-2.42	2400-2500	3.3	PIFA	UFL	1160
244	SAA	SN6506-11-117-C	-2.42	2400-2500	3.3	PIFA	UFL	1170
245	SAA	SN6506-11-118-C	-2.42	2400-2500	3.4	PIFA	UFL	1180
246	SAA	SN6506-11-119-C	-2.42	2400-2500	3.4	PIFA	UFL	1190
247	SAA	SN6506-11-120-C	-2.42	2400-2500	3.4	PIFA	UFL	1200
248	SAA	SN6506-11-121-C	-2.42	2400-2500	3.5	PIFA	UFL	1210
249	SAA	SN6506-11-122-C	-2.42	2400-2500	3.5	PIFA	UFL	1220
250	SAA	SN6506-11-123-C	-2.42	2400-2500	3.5	PIFA	UFL	1230

Antenna No.	Brand	Model	Antenna Gain(dBi) <exclude cable loss>	Frequency range (MHz to MHz)	Cable Loss(dB)	Antenna Type	Connector Type	Cable Length (mm)
251	SAA	SN6506-11-124-C	-2.42	2400-2500	3.5	PIFA	UFL	1240
252	SAA	SN6506-11-125-C	-2.42	2400-2500	3.6	PIFA	UFL	1250
253	SAA	SN6506-11-126-C	-2.42	2400-2500	3.6	PIFA	UFL	1260
254	SAA	SN6506-11-127-C	-2.42	2400-2500	3.6	PIFA	UFL	1270
255	SAA	SN6506-11-128-C	-2.42	2400-2500	3.6	PIFA	UFL	1280
256	SAA	SN6506-11-129-C	-2.42	2400-2500	3.7	PIFA	UFL	1290
257	SAA	SN6506-11-130-C	-2.42	2400-2500	3.7	PIFA	UFL	1300
258	SAA	SN6506-11-131-C	-2.42	2400-2500	3.7	PIFA	UFL	1310
259	SAA	SN6506-11-132-C	-2.42	2400-2500	3.7	PIFA	UFL	1320
260	SAA	SN6506-11-133-C	-2.42	2400-2500	3.8	PIFA	UFL	1330
261	SAA	SN6506-11-134-C	-2.42	2400-2500	3.8	PIFA	UFL	1340
262	SAA	SN6506-11-135-C	-2.42	2400-2500	3.8	PIFA	UFL	1350
263	SAA	SN6506-11-136-C	-2.42	2400-2500	3.8	PIFA	UFL	1360
264	SAA	SN6506-11-137-C	-2.42	2400-2500	3.9	PIFA	UFL	1370
265	SAA	SN6506-11-138-C	-2.42	2400-2500	3.9	PIFA	UFL	1380
266	SAA	SN6506-11-139-C	-2.42	2400-2500	3.9	PIFA	UFL	1390
267	SAA	SN6506-11-140-C	-2.42	2400-2500	4.0	PIFA	UFL	1400
268	SAA	SN6506-11-141-C	-2.42	2400-2500	4.0	PIFA	UFL	1410
269	SAA	SN6506-11-142-C	-2.42	2400-2500	4.0	PIFA	UFL	1420
270	SAA	SN6506-11-143-C	-2.42	2400-2500	4.0	PIFA	UFL	1430
271	SAA	SN6506-11-144-C	-2.42	2400-2500	4.1	PIFA	UFL	1440
272	SAA	SN6506-11-145-C	-2.42	2400-2500	4.1	PIFA	UFL	1450
273	SAA	SN6506-11-146-C	-2.42	2400-2500	4.1	PIFA	UFL	1460
274	SAA	SN6506-11-147-C	-2.42	2400-2500	4.1	PIFA	UFL	1470
275	SAA	SN6506-11-148-C	-2.42	2400-2500	4.2	PIFA	UFL	1480
276	SAA	SN6506-11-149-C	-2.42	2400-2500	4.2	PIFA	UFL	1490
277	SAA	SN6506-11-150-C	-2.42	2400-2500	4.2	PIFA	UFL	1500
278	SAA	SN6506-11-151-C	-2.42	2400-2500	4.2	PIFA	UFL	1510
279	SAA	SN6506-11-152-C	-2.42	2400-2500	4.3	PIFA	UFL	1520
280	SAA	SN6506-11-153-C	-2.42	2400-2500	4.3	PIFA	UFL	1530
281	SAA	SN6506-11-154-C	-2.42	2400-2500	4.3	PIFA	UFL	1540
282	SAA	SN6506-11-155-C	-2.42	2400-2500	4.3	PIFA	UFL	1550
283	SAA	SN6506-11-156-C	-2.42	2400-2500	4.4	PIFA	UFL	1560
284	SAA	SN6506-11-157-C	-2.42	2400-2500	4.4	PIFA	UFL	1570
285	SAA	SN6506-11-158-C	-2.42	2400-2500	4.4	PIFA	UFL	1580

Antenna No.	Brand	Model	Antenna Gain(dBi) <exclude cable loss>	Frequency range (MHz to MHz)	Cable Loss(dB)	Antenna Type	Connector Type	Cable Length (mm)
286	SAA	SN6506-11-159-C	-2.42	2400-2500	4.5	PIFA	UFL	1590
287	SAA	SN6506-11-160-C	-2.42	2400-2500	4.5	PIFA	UFL	1600
288	SAA	SN6506-11-161-C	-2.42	2400-2500	4.5	PIFA	UFL	1610
289	SAA	SN6506-11-162-C	-2.42	2400-2500	4.5	PIFA	UFL	1620
290	SAA	SN6506-11-163-C	-2.42	2400-2500	4.6	PIFA	UFL	1630
291	SAA	SN6506-11-164-C	-2.42	2400-2500	4.6	PIFA	UFL	1640
292	SAA	SN6506-11-165-C	-2.42	2400-2500	4.6	PIFA	UFL	1650
293	SAA	SN6506-11-166-C	-2.42	2400-2500	4.6	PIFA	UFL	1660
294	SAA	SN6506-11-167-C	-2.42	2400-2500	4.7	PIFA	UFL	1670
295	SAA	SN6506-11-168-C	-2.42	2400-2500	4.7	PIFA	UFL	1680
296	SAA	SN6506-11-169-C	-2.42	2400-2500	4.7	PIFA	UFL	1690
297	SAA	SN6506-11-170-C	-2.42	2400-2500	4.7	PIFA	UFL	1700
298	SAA	SN6506-11-171-C	-2.42	2400-2500	4.8	PIFA	UFL	1710
299	SAA	SN6506-11-172-C	-2.42	2400-2500	4.8	PIFA	UFL	1720
300	SAA	SN6506-11-173-C	-2.42	2400-2500	4.8	PIFA	UFL	1730
301	SAA	SN6506-11-174-C	-2.42	2400-2500	4.8	PIFA	UFL	1740
302	SAA	SN6506-11-175-C	-2.42	2400-2500	4.9	PIFA	UFL	1750
303	SAA	SN6506-11-176-C	-2.42	2400-2500	4.9	PIFA	UFL	1760
304	SAA	SN6506-11-177-C	-2.42	2400-2500	4.9	PIFA	UFL	1770
305	SAA	SN6506-11-178-C	-2.42	2400-2500	5.0	PIFA	UFL	1780
306	SAA	SN6506-11-179-C	-2.42	2400-2500	5.0	PIFA	UFL	1790
307	SAA	SN6506-11-180-C	-2.42	2400-2500	5.0	PIFA	UFL	1800
308	SAA	SN6506-11-200-C	-2.42	2400-2500	5.5	PIFA	UFL	2000

From the above antennas for BT used, the **Ant. No.: 3** (BT max antenna gain: -0.82dBi) were selected as representative value for the test and its data was recorded in this report.

6. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

For WLAN: 15.247(2.4GHz)

802.11b

FREQUENCY (MHz)	CONDUCTED POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm ²)	LIMIT (mW/cm ²)
2412 - 2462	325.835	6.18	20	0.26898	1.00

NOTE: Directional gain = $10 \log[(10^{G_{1/20}} + 10^{G_{2/20}})^2 / 2] = 6.18\text{dBi}$.

802.11g

FREQUENCY (MHz)	CONDUCTED POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm ²)	LIMIT (mW/cm ²)
2412 - 2462	709.261	6.18	20	0.58551	1.00

NOTE: Directional gain = $10 \log[(10^{G_{1/20}} + 10^{G_{2/20}})^2 / 2] = 6.18\text{dBi}$.

802.11n (HT20)

FREQUENCY BAND (MHz)	CONDUCTED POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm ²)	LIMIT (mW/cm ²)
2412 - 2462	700.427	6.18	20	0.57822	1.00

NOTE: Directional gain = $10 \log[(10^{G_{1/20}} + 10^{G_{2/20}})^2 / 2] = 6.18\text{dBi}$.

For WLAN: 15.407(5GHz)

802.11a

FREQUENCY (MHz)	CONDUCTED POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm ²)	LIMIT (mW/cm ²)
5180 - 5240, 5260 - 5320, 5500 - 5700 & 5745 - 5825	233.91	6.33	20	0.19988	1.00

NOTE: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20})^2 / 2] = 6.33\text{dBi}$.

802.11ac (VHT20)

FREQUENCY (MHz)	CONDUCTED POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm ²)	LIMIT (mW/cm ²)
5180 - 5240, 5260 - 5320, 5500 - 5700 & 5745 - 5825	328.794	6.33	20	0.28097	1.00

NOTE: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20})^2 / 2] = 6.33\text{dBi}$.

802.11ac (VHT40)

FREQUENCY (MHz)	CONDUCTED POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm ²)	LIMIT (mW/cm ²)
5190 - 5230, 5270 - 5310, 5510 - 5670 & 5755 - 5795	145.631	6.33	20	0.12445	1.00

NOTE: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20})^2 / 2] = 6.33\text{dBi}$.

802.11ac (VHT80)

FREQUENCY (MHz)	CONDUCTED POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm ²)	LIMIT (mW/cm ²)
5210 - 5290, 5530, 5610 & 5775	180.565	5.94	20	0.14105	1.00

NOTE: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20})^2 / 2] = 5.94\text{dBi}$.

For Bluetooth:

GFSK

FREQUENCY (MHz)	CONDUCTED POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
2402-2480	2.858	-0.82	20	0.00047	1.00

8DPSK

FREQUENCY (MHz)	CONDUCTED POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
2402-2480	5.212	-0.82	20	0.00086	1.00

BT-LE (GFSK)

FREQUENCY (MHz)	CONDUCTED POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
2402 - 2480	2.421	-0.82	20	0.00040	1.00

CONCLUSION:

Both of the Bluetooth and WLAN can transmit simultaneously, the formula of calculated the MPE is:

$$CPD_1 / LPD_1 + CPD_2 / LPD_2 + \dots \text{etc.} < 1$$

CPD = Calculation power density

LPD = Limit of power density

For WLAN (2.4G) and Bluetooth:

Therefore, the worst-case situation is $0.58551 / 1 + 0.00086 / 1 = 0.586$, which is less than "1". This confirmed that the device comply with FCC 1.1310 MPE limit.

For WLAN (5G) and Bluetooth:

Therefore, the worst-case situation is $0.28097 / 1 + 0.00086 / 1 = 0.282$, which is less than "1". This confirmed that the device comply with FCC 1.1310 MPE limit.

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