FCC Co-Location Test Report

FCC ID	:	**AK8DHUKSY22**
Equipment	:	**WLAN/BT Module**
Model No.	:	**DHUK-SY22**
Brand Name	:	**Wistron NeWeb Corporation**
Applicant	:	**Sony Corporation**
Address	:	**1-7-1 Konan Minato-ku,Tokyo ,108-0075 Japan**
Standard	:	**47 CFR FCC Part 15.247** **47 CFR FCC Part 15.407**
Received Date	:	**Jul. 26, 2019**
Tested Date	:	**Aug. 13, 2019**

We, International Certification Corp., would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It may be duplicated completely for legal use with the approval of the applicant. It shall not be reproduced except in full without the written approval of our laboratory.

Reviewed by:

Along Chen / Assistant Manager

Approved by:

Gary Chang / Manager

Testing Laboratory 2732

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Release Record

Report No.	Version	Description	Issued Date
FR972601CO	Rev. 01	Initial issue	Oct. 22, 2019

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.247(d) 15.407(b) 15.209	Radiated Emissions	[dBuV/m at 3m]: 385.56MHz 42.99 (Margin -3.01dB) - PK	Pass

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

1 General Description

1.1 Information

1.1.1 Specification of the Equipment under Test (EUT)

WLAN	
Operating Frequency	802.11b/g/n: 2412 MHz ~ 2472 MHz 802.11a/n/ac: 5180 MHz ~ 5240 MHz; 5260 MHz ~ 5320 MHz; 5500 MHz ~ 5700 MHz; 5725 ~ 5850 MHz
Modulation Type	802.11b: DSSS (DBPSK / DQPSK / CCK) 802.11a/g/n/ac: OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)
Antenna Type	PIFA antenna
BT	
Operating Frequency	2402 MHz ~ 2480 MHz
Modulation Type	Bluetooth 4.2 LE: GFSK Bluetooth BR(1Mbps): GFSK Bluetooth EDR (2Mbps): π/4-DQPSK Bluetooth EDR (3Mbps): 8-DPSK
Antenna Type	PIFA antenna

1.1.2 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	3.3Vdc from host

1.1.3 Antenna Details

For WLAN

Ant. No.	Model	Type	Connector	Operating Frequencies (MHz) / Antenna Gain (dBi)				
				2400~2483.5	5150~5250	5250~5350	5470~5725	5725~5850
1	ANT 0	PIFA	No	-0.52	3.96	4.24	4.21	3.74
	ANT 1	PIFA	No	2.82	1.71	1.91	1.91	1.89

For BT

Ant. No.	Brand	Model	Antenna Gain(dBi) (included cable loss)	Antenna type	Connector type	Cable loss (dB)	Cable length (mm)
1	FOXCONN	WDAN-S1TV0100-DH	-0.82	PIFA	i-pex(MHF)	0.19	100
2	FOXCONN	ANTS2M1-CSG02-EF	-0.84	PIFA	i-pex(MHF)	0.21	110
3	FOXCONN	ANTS2M1-CSG03-EF	-0.86	PIFA	i-pex(MHF)	0.23	120
4	FOXCONN	ANTS2M1-CSG04-EF	-0.88	PIFA	i-pex(MHF)	0.25	130
5	FOXCONN	ANTS2M1-CSG05-EF	-0.90	PIFA	i-pex(MHF)	0.27	140
6	FOXCONN	ANTS2M1-CSG06-EF	-0.92	PIFA	i-pex(MHF)	0.29	150
7	FOXCONN	ANTS2M1-CSG07-EF	-0.93	PIFA	i-pex(MHF)	0.30	160
8	FOXCONN	ANTS2M1-CSG08-EF	-0.95	PIFA	i-pex(MHF)	0.32	170
9	FOXCONN	ANTS2M1-CSG09-EF	-0.97	PIFA	i-pex(MHF)	0.34	180
10	FOXCONN	ANTS2M1-CSG10-EF	-0.99	PIFA	i-pex(MHF)	0.36	190
11	FOXCONN	ANTS2M1-CSG01-EF	-1.01	PIFA	i-pex(MHF)	0.38	200
12	FOXCONN	ANTS2M1-CSG11-EF	-1.03	PIFA	i-pex(MHF)	0.40	210
13	FOXCONN	ANTS2M1-CSG12-EF	-1.05	PIFA	i-pex(MHF)	0.42	220
14	FOXCONN	ANTS2M1-CSG13-EF	-1.07	PIFA	i-pex(MHF)	0.44	230
15	FOXCONN	ANTS2M1-CSG14-EF	-1.09	PIFA	i-pex(MHF)	0.46	240
16	FOXCONN	ANTS2M1-CSG15-EF	-1.11	PIFA	i-pex(MHF)	0.48	250
17	FOXCONN	ANTS2M1-CSG16-EF	-1.12	PIFA	i-pex(MHF)	0.49	260
18	FOXCONN	ANTS2M1-CSG17-EF	-1.14	PIFA	i-pex(MHF)	0.51	270
19	FOXCONN	ANTS2M1-CSG18-EF	-1.16	PIFA	i-pex(MHF)	0.53	280
20	FOXCONN	ANTS2M1-CSG19-EF	-1.18	PIFA	i-pex(MHF)	0.55	290
21	FOXCONN	WDAN-S1TV0300-DH	-1.20	PIFA	i-pex(MHF)	0.57	300
22	FOXCONN	WDAN-S1TV0310-DH	-1.22	PIFA	i-pex(MHF)	0.59	310
23	FOXCONN	WDAN-S1TV0320-DH	-1.24	PIFA	i-pex(MHF)	0.61	320
24	FOXCONN	WDAN-S1TV0330-DH	-1.26	PIFA	i-pex(MHF)	0.63	330
25	FOXCONN	WDAN-S1TV0340-DH	-1.28	PIFA	i-pex(MHF)	0.65	340
26	FOXCONN	WDAN-S1TV0350-DH	-1.30	PIFA	i-pex(MHF)	0.67	350
27	FOXCONN	WDAN-S1TV0360-DH	-1.31	PIFA	i-pex(MHF)	0.68	360
28	FOXCONN	WDAN-S1TV0370-DH	-1.33	PIFA	i-pex(MHF)	0.70	370
29	FOXCONN	WDAN-S1TV0380-DH	-1.35	PIFA	i-pex(MHF)	0.72	380
30	FOXCONN	WDAN-S1TV0390-DH	-1.37	PIFA	i-pex(MHF)	0.74	390
31	FOXCONN	WDAN-S1TV0400-DH	-1.39	PIFA	i-pex(MHF)	0.76	400
32	FOXCONN	WDAN-S1TV0410-DH	-1.41	PIFA	i-pex(MHF)	0.78	410
33	FOXCONN	WDAN-S1TV0420-DH	-1.43	PIFA	i-pex(MHF)	0.80	420

34	FOXCONN	WDAN-S1TV0430-DH	-1.45	PIFA	i-pex(MHF)	0.82	430
35	FOXCONN	WDAN-S1TV0440-DH	-1.47	PIFA	i-pex(MHF)	0.84	440
36	FOXCONN	WDAN-S1TV0450-DH	-1.49	PIFA	i-pex(MHF)	0.86	450
37	FOXCONN	WDAN-S1TV0460-DH	-1.50	PIFA	i-pex(MHF)	0.87	460
38	FOXCONN	WDAN-S1TV0470-DH	-1.52	PIFA	i-pex(MHF)	0.89	470
39	FOXCONN	WDAN-S1TV0480-DH	-1.54	PIFA	i-pex(MHF)	0.91	480
40	FOXCONN	WDAN-S1TV0490-DH	-1.56	PIFA	i-pex(MHF)	0.93	490
41	FOXCONN	WDAN-S1TV0500-DH	-1.58	PIFA	i-pex(MHF)	0.95	500
42	FOXCONN	WDAN-S1TV0510-DH	-1.60	PIFA	i-pex(MHF)	0.97	510
43	FOXCONN	WDAN-S1TV0520-DH	-1.62	PIFA	i-pex(MHF)	0.99	520
44	FOXCONN	WDAN-S1TV0530-DH	-1.64	PIFA	i-pex(MHF)	1.01	530
45	FOXCONN	WDAN-S1TV0540-DH	-1.66	PIFA	i-pex(MHF)	1.03	540
46	FOXCONN	WDAN-S1TV0550-DH	-1.68	PIFA	i-pex(MHF)	1.05	550
47	FOXCONN	WDAN-S1TV0560-DH	-1.69	PIFA	i-pex(MHF)	1.06	560
48	FOXCONN	WDAN-S1TV0570-DH	-1.71	PIFA	i-pex(MHF)	1.08	570
49	FOXCONN	ANTS2M1-CSG20-EF	-1.72	PIFA	i-pex(MHF)	1.09	575
50	FOXCONN	WDAN-S1TV0580-DH	-1.73	PIFA	i-pex(MHF)	1.10	580
51	FOXCONN	WDAN-S1TV0590-DH	-1.75	PIFA	i-pex(MHF)	1.12	590
52	FOXCONN	WDAN-S1TV0600-DH	-1.77	PIFA	i-pex(MHF)	1.14	600
53	FOXCONN	WDAN-S1TV0610-DH	-1.79	PIFA	i-pex(MHF)	1.16	610
54	FOXCONN	WDAN-S1TV0620-DH	-1.81	PIFA	i-pex(MHF)	1.18	620
55	FOXCONN	WDAN-S1TV0630-DH	-1.83	PIFA	i-pex(MHF)	1.20	630
56	FOXCONN	WDAN-S1TV0640-DH	-1.85	PIFA	i-pex(MHF)	1.22	640
57	FOXCONN	WDAN-S1TV0650-DH	-1.87	PIFA	i-pex(MHF)	1.24	650
58	FOXCONN	WDAN-S1TV0660-DH	-1.88	PIFA	i-pex(MHF)	1.25	660
59	FOXCONN	WDAN-S1TV0670-DH	-1.90	PIFA	i-pex(MHF)	1.27	670
60	FOXCONN	WDAN-S1TV0680-DH	-1.92	PIFA	i-pex(MHF)	1.29	680
61	FOXCONN	WDAN-S1TV0690-DH	-1.94	PIFA	i-pex(MHF)	1.31	690
62	FOXCONN	WDAN-S1TV0700-DH	-1.96	PIFA	i-pex(MHF)	1.33	700
63	FOXCONN	WDAN-S1TV0710-DH	-1.98	PIFA	i-pex(MHF)	1.35	710
64	FOXCONN	WDAN-S1TV0720-DH	-2.00	PIFA	i-pex(MHF)	1.37	720
65	FOXCONN	WDAN-S1TV0730-DH	-2.02	PIFA	i-pex(MHF)	1.39	730
66	FOXCONN	WDAN-S1TV0740-DH	-2.04	PIFA	i-pex(MHF)	1.41	740
67	FOXCONN	WDAN-S1TV0750-DH	-2.06	PIFA	i-pex(MHF)	1.43	750
68	FOXCONN	WDAN-S1TV0760-DH	-2.07	PIFA	i-pex(MHF)	1.44	760
69	FOXCONN	WDAN-S1TV0770-DH	-2.09	PIFA	i-pex(MHF)	1.46	770

70	FOXCONN	WDAN-S1TV0780-DH	-2.11	PIFA	i-pex(MHF)	1.48	780
71	FOXCONN	WDAN-S1TV0790-DH	-2.13	PIFA	i-pex(MHF)	1.50	790
72	FOXCONN	WDAN-S1TV0800-DH	-2.15	PIFA	i-pex(MHF)	1.52	800
73	FOXCONN	WDAN-S1TV0810-DH	-2.17	PIFA	i-pex(MHF)	1.54	810
74	FOXCONN	WDAN-S1TV0820-DH	-2.19	PIFA	i-pex(MHF)	1.56	820
75	FOXCONN	WDAN-S1TV0830-DH	-2.21	PIFA	i-pex(MHF)	1.58	830
76	FOXCONN	WDAN-S1TV0840-DH	-2.23	PIFA	i-pex(MHF)	1.60	840
77	FOXCONN	WDAN-S1TV0850-DH	-2.25	PIFA	i-pex(MHF)	1.62	850
78	FOXCONN	WDAN-S1TV0860-DH	-2.26	PIFA	i-pex(MHF)	1.63	860
79	FOXCONN	WDAN-S1TV0870-DH	-2.28	PIFA	i-pex(MHF)	1.65	870
80	FOXCONN	WDAN-S1TV0880-DH	-2.30	PIFA	i-pex(MHF)	1.67	880
81	FOXCONN	WDAN-S1TV0890-DH	-2.32	PIFA	i-pex(MHF)	1.69	890
82	FOXCONN	WDAN-S1TV0900-DH	-2.34	PIFA	i-pex(MHF)	1.71	900
83	FOXCONN	WDAN-S1TV0910-DH	-2.36	PIFA	i-pex(MHF)	1.73	910
84	FOXCONN	WDAN-S1TV0920-DH	-2.38	PIFA	i-pex(MHF)	1.75	920
85	FOXCONN	WDAN-S1TV0930-DH	-2.40	PIFA	i-pex(MHF)	1.77	930
86	FOXCONN	WDAN-S1TV0940-DH	-2.42	PIFA	i-pex(MHF)	1.79	940
87	FOXCONN	WDAN-S1TV0950-DH	-2.44	PIFA	i-pex(MHF)	1.81	950
88	FOXCONN	WDAN-S1TV0960-DH	-2.45	PIFA	i-pex(MHF)	1.82	960
89	FOXCONN	WDAN-S1TV0970-DH	-2.47	PIFA	i-pex(MHF)	1.84	970
90	FOXCONN	WDAN-S1TV0980-DH	-2.49	PIFA	i-pex(MHF)	1.86	980
91	FOXCONN	WDAN-S1TV0990-DH	-2.51	PIFA	i-pex(MHF)	1.88	990
92	FOXCONN	WDAN-S1TV1000-DH	-2.53	PIFA	i-pex(MHF)	1.90	1000
93	FOXCONN	WDAN-S1TV1010-DH	-2.55	PIFA	i-pex(MHF)	1.92	1010
94	FOXCONN	WDAN-S1TV1020-DH	-2.57	PIFA	i-pex(MHF)	1.94	1020
95	FOXCONN	WDAN-S1TV1030-DH	-2.59	PIFA	i-pex(MHF)	1.96	1030
96	FOXCONN	WDAN-S1TV1040-DH	-2.61	PIFA	i-pex(MHF)	1.98	1040
97	FOXCONN	WDAN-S1TV1050-DH	-2.63	PIFA	i-pex(MHF)	2.00	1050
98	FOXCONN	WDAN-S1TV1060-DH	-2.64	PIFA	i-pex(MHF)	2.01	1060
99	FOXCONN	WDAN-S1TV1070-DH	-2.66	PIFA	i-pex(MHF)	2.03	1070
100	FOXCONN	WDAN-S1TV1080-DH	-2.68	PIFA	i-pex(MHF)	2.05	1080
101	FOXCONN	WDAN-S1TV1090-DH	-2.70	PIFA	i-pex(MHF)	2.07	1090
102	FOXCONN	WDAN-S1TV1100-DH	-2.72	PIFA	i-pex(MHF)	2.09	1100
103	FOXCONN	WDAN-S1TV1110-DH	-2.74	PIFA	i-pex(MHF)	2.11	1110
104	FOXCONN	WDAN-S1TV1120-DH	-2.76	PIFA	i-pex(MHF)	2.13	1120
105	FOXCONN	WDAN-S1TV1130-DH	-2.78	PIFA	i-pex(MHF)	2.15	1130

106	FOXCONN	WDAN-S1TV1140-DH	-2.80	PIFA	i-pex(MHF)	2.17	1140
107	FOXCONN	WDAN-S1TV1150-DH	-2.82	PIFA	i-pex(MHF)	2.19	1150
108	FOXCONN	WDAN-S1TV1160-DH	-2.83	PIFA	i-pex(MHF)	2.20	1160
109	FOXCONN	WDAN-S1TV1170-DH	-2.85	PIFA	i-pex(MHF)	2.22	1170
110	FOXCONN	WDAN-S1TV1180-DH	-2.87	PIFA	i-pex(MHF)	2.24	1180
111	FOXCONN	WDAN-S1TV1190-DH	-2.89	PIFA	i-pex(MHF)	2.26	1190
112	FOXCONN	WDAN-S1TV1200-DH	-2.91	PIFA	i-pex(MHF)	2.28	1200
347	SAA	SN6506-11-010-C	-2.92	PIFA	i-pex(MHF)	0.50	100
348	SAA	SN6506-11-011-C	-2.95	PIFA	i-pex(MHF)	0.53	110
349	SAA	SN6506-11-012-C	-2.97	PIFA	i-pex(MHF)	0.55	120
350	SAA	SN6506-11-013-C	-3.00	PIFA	i-pex(MHF)	0.58	130
351	SAA	SN6506-11-014-C	-3.03	PIFA	i-pex(MHF)	0.61	140
352	SAA	SN6506-11-015-C	-3.05	PIFA	i-pex(MHF)	0.63	150
353	SAA	SN6506-11-016-C	-3.08	PIFA	i-pex(MHF)	0.66	160
354	SAA	SN6506-11-017-C	-3.11	PIFA	i-pex(MHF)	0.69	170
355	SAA	SN6506-11-018-C	-3.13	PIFA	i-pex(MHF)	0.71	180
356	SAA	SN6506-11-019-C	-3.16	PIFA	i-pex(MHF)	0.74	190
357	SAA	SN6506-11-020-C	-3.19	PIFA	i-pex(MHF)	0.77	200
358	SAA	SN6506-11-021-C	-3.21	PIFA	i-pex(MHF)	0.79	210
359	SAA	SN6506-11-022-C	-3.24	PIFA	i-pex(MHF)	0.82	220
360	SAA	SN6506-11-023-C	-3.27	PIFA	i-pex(MHF)	0.85	230
361	SAA	SN6506-11-024-C	-3.29	PIFA	i-pex(MHF)	0.87	240
362	SAA	SN6506-11-025-C	-3.32	PIFA	i-pex(MHF)	0.90	250
363	SAA	SN6506-11-026-C	-3.35	PIFA	i-pex(MHF)	0.93	260
364	SAA	SN6506-11-027-C	-3.37	PIFA	i-pex(MHF)	0.95	270
365	SAA	SN6506-11-028-C	-3.40	PIFA	i-pex(MHF)	0.98	280
366	SAA	SN6506-11-029-C	-3.43	PIFA	i-pex(MHF)	1.01	290
367	SAA	SN6506-11-030-C	-3.48	PIFA	i-pex(MHF)	1.06	300
368	SAA	SN6506-11-031-C	-3.50	PIFA	i-pex(MHF)	1.08	310
369	SAA	SN6506-11-032-C	-3.53	PIFA	i-pex(MHF)	1.11	320
370	SAA	SN6506-11-033-C	-3.56	PIFA	i-pex(MHF)	1.14	330
371	SAA	SN6506-11-034-C	-3.58	PIFA	i-pex(MHF)	1.16	340
372	SAA	SN6506-11-035-C	-3.61	PIFA	i-pex(MHF)	1.19	350
373	SAA	SN6506-11-036-C	-3.63	PIFA	i-pex(MHF)	1.21	360
374	SAA	SN6506-11-037-C	-3.66	PIFA	i-pex(MHF)	1.24	370
375	SAA	SN6506-11-038-C	-3.69	PIFA	i-pex(MHF)	1.27	380

376	SAA	SN6506-11-039-C	-3.71	PIFA	i-pex(MHF)	1.29	390
377	SAA	SN6506-11-040-C	-3.74	PIFA	i-pex(MHF)	1.32	400
378	SAA	SN6506-11-041-C	-3.77	PIFA	i-pex(MHF)	1.35	410
379	SAA	SN6506-11-042-C	-3.79	PIFA	i-pex(MHF)	1.37	420
380	SAA	SN6506-11-043-C	-3.82	PIFA	i-pex(MHF)	1.40	430
381	SAA	SN6506-11-044-C	-3.85	PIFA	i-pex(MHF)	1.43	440
382	SAA	SN6506-11-045-C	-3.87	PIFA	i-pex(MHF)	1.45	450
383	SAA	SN6506-11-046-C	-3.90	PIFA	i-pex(MHF)	1.48	460
384	SAA	SN6506-11-047-C	-3.92	PIFA	i-pex(MHF)	1.50	470
385	SAA	SN6506-11-048-C	-3.95	PIFA	i-pex(MHF)	1.53	480
386	SAA	SN6506-11-049-C	-3.98	PIFA	i-pex(MHF)	1.56	490
387	SAA	SN6506-11-050-C	-4.00	PIFA	i-pex(MHF)	1.58	500
388	SAA	SN6506-11-051-C	-4.03	PIFA	i-pex(MHF)	1.61	510
389	SAA	SN6506-11-052-C	-4.06	PIFA	i-pex(MHF)	1.64	520
390	SAA	SN6506-11-053-C	-4.08	PIFA	i-pex(MHF)	1.66	530
391	SAA	SN6506-11-054-C	-4.11	PIFA	i-pex(MHF)	1.69	540
392	SAA	SN6506-11-055-C	-4.13	PIFA	i-pex(MHF)	1.71	550
393	SAA	SN6506-11-056-C	-4.16	PIFA	i-pex(MHF)	1.74	560
394	SAA	SN6506-11-057-C	-4.19	PIFA	i-pex(MHF)	1.77	575
395	SAA	SN6506-11-058-C	-4.21	PIFA	i-pex(MHF)	1.79	580
396	SAA	SN6506-11-059-C	-4.24	PIFA	i-pex(MHF)	1.82	590
397	SAA	SN6506-11-060-C	-4.27	PIFA	i-pex(MHF)	1.85	600
398	SAA	SN6506-11-061-C	-4.29	PIFA	i-pex(MHF)	1.87	610
399	SAA	SN6506-11-062-C	-4.32	PIFA	i-pex(MHF)	1.90	620
400	SAA	SN6506-11-063-C	-4.35	PIFA	i-pex(MHF)	1.93	630
401	SAA	SN6506-11-064-C	-4.37	PIFA	i-pex(MHF)	1.95	640
402	SAA	SN6506-11-065-C	-4.40	PIFA	i-pex(MHF)	1.98	650
403	SAA	SN6506-11-066-C	-4.42	PIFA	i-pex(MHF)	2.00	660
404	SAA	SN6506-11-067-C	-4.45	PIFA	i-pex(MHF)	2.03	670
405	SAA	SN6506-11-068-C	-4.48	PIFA	i-pex(MHF)	2.06	680
406	SAA	SN6506-11-069-C	-4.50	PIFA	i-pex(MHF)	2.08	690
407	SAA	SN6506-11-070-C	-4.53	PIFA	i-pex(MHF)	2.11	700
408	SAA	SN6506-11-071-C	-4.56	PIFA	i-pex(MHF)	2.14	710
409	SAA	SN6506-11-072-C	-4.58	PIFA	i-pex(MHF)	2.16	720
410	SAA	SN6506-11-073-C	-4.61	PIFA	i-pex(MHF)	2.19	730
411	SAA	SN6506-11-074-C	-4.63	PIFA	i-pex(MHF)	2.21	740

412	SAA	SN6506-11-075-C	-4.66	PIFA	i-pex(MHF)	2.24	750
413	SAA	SN6506-11-076-C	-4.69	PIFA	i-pex(MHF)	2.27	760
414	SAA	SN6506-11-077-C	-4.71	PIFA	i-pex(MHF)	2.29	770
415	SAA	SN6506-11-078-C	-4.74	PIFA	i-pex(MHF)	2.32	780
416	SAA	SN6506-11-079-C	-4.77	PIFA	i-pex(MHF)	2.35	790
417	SAA	SN6506-11-080-C	-4.79	PIFA	i-pex(MHF)	2.37	800
418	SAA	SN6506-11-081-C	-4.82	PIFA	i-pex(MHF)	2.40	810
419	SAA	SN6506-11-082-C	-4.85	PIFA	i-pex(MHF)	2.43	820
420	SAA	SN6506-11-083-C	-4.87	PIFA	i-pex(MHF)	2.45	830
421	SAA	SN6506-11-084-C	-4.90	PIFA	i-pex(MHF)	2.48	840
422	SAA	SN6506-11-085-C	-4.92	PIFA	i-pex(MHF)	2.50	850
423	SAA	SN6506-11-086-C	-4.95	PIFA	i-pex(MHF)	2.53	860
424	SAA	SN6506-11-087-C	-4.98	PIFA	i-pex(MHF)	2.56	870
425	SAA	SN6506-11-088-C	-5.00	PIFA	i-pex(MHF)	2.58	880
426	SAA	SN6506-11-089-C	-5.03	PIFA	i-pex(MHF)	2.61	890
427	SAA	SN6506-11-090-C	-5.06	PIFA	i-pex(MHF)	2.64	900
428	SAA	SN6506-11-091-C	-5.08	PIFA	i-pex(MHF)	2.66	910
429	SAA	SN6506-11-092-C	-5.11	PIFA	i-pex(MHF)	2.69	920
430	SAA	SN6506-11-093-C	-5.13	PIFA	i-pex(MHF)	2.71	930
431	SAA	SN6506-11-094-C	-5.16	PIFA	i-pex(MHF)	2.74	940
432	SAA	SN6506-11-095-C	-5.19	PIFA	i-pex(MHF)	2.77	950
433	SAA	SN6506-11-096-C	-5.21	PIFA	i-pex(MHF)	2.79	960
434	SAA	SN6506-11-097-C	-5.24	PIFA	i-pex(MHF)	2.82	970
435	SAA	SN6506-11-098-C	-5.27	PIFA	i-pex(MHF)	2.85	980
436	SAA	SN6506-11-099-C	-5.29	PIFA	i-pex(MHF)	2.87	990
437	SAA	SN6506-11-100-C	-5.32	PIFA	i-pex(MHF)	2.90	1000
438	SAA	SN6506-11-101-C	-5.35	PIFA	i-pex(MHF)	2.93	1010
439	SAA	SN6506-11-102-C	-5.37	PIFA	i-pex(MHF)	2.95	1020
440	SAA	SN6506-11-103-C	-5.40	PIFA	i-pex(MHF)	2.98	1030
441	SAA	SN6506-11-104-C	-5.42	PIFA	i-pex(MHF)	3.00	1040
442	SAA	SN6506-11-105-C	-5.45	PIFA	i-pex(MHF)	3.03	1050
443	SAA	SN6506-11-106-C	-5.48	PIFA	i-pex(MHF)	3.06	1060
444	SAA	SN6506-11-107-C	-5.50	PIFA	i-pex(MHF)	3.08	1070
445	SAA	SN6506-11-108-C	-5.53	PIFA	i-pex(MHF)	3.11	1080
446	SAA	SN6506-11-109-C	-5.56	PIFA	i-pex(MHF)	3.14	1090
447	SAA	SN6506-11-110-C	-5.58	PIFA	i-pex(MHF)	3.16	1100

448	SAA	SN6506-11-111-C	-5.61	PIFA	i-pex(MHF)	3.19	1110
449	SAA	SN6506-11-112-C	-5.63	PIFA	i-pex(MHF)	3.21	1120
450	SAA	SN6506-11-113-C	-5.66	PIFA	i-pex(MHF)	3.24	1130
451	SAA	SN6506-11-114-C	-5.69	PIFA	i-pex(MHF)	3.27	1140
452	SAA	SN6506-11-115-C	-5.71	PIFA	i-pex(MHF)	3.29	1150
453	SAA	SN6506-11-116-C	-5.74	PIFA	i-pex(MHF)	3.32	1160
454	SAA	SN6506-11-117-C	-5.77	PIFA	i-pex(MHF)	3.35	1170
455	SAA	SN6506-11-118-C	-5.79	PIFA	i-pex(MHF)	3.37	1180
456	SAA	SN6506-11-119-C	-5.82	PIFA	i-pex(MHF)	3.40	1190
457	SAA	SN6506-11-120-C	-5.85	PIFA	i-pex(MHF)	3.43	1200
458	Wanshih	A20AWFI0010A0	-0.26	PIFA	i-pex(MHF)	0.60	100
459	Wanshih	A20AWFI0011A0	-0.29	PIFA	i-pex(MHF)	0.63	110
460	Wanshih	A20AWFI0012A0	-0.32	PIFA	i-pex(MHF)	0.66	120
461	Wanshih	A20AWFI0013A0	-0.35	PIFA	i-pex(MHF)	0.69	130
462	Wanshih	A20AWFI0014A0	-0.38	PIFA	i-pex(MHF)	0.72	140
463	Wanshih	A20AWFI0015A0	-0.41	PIFA	i-pex(MHF)	0.75	150
464	Wanshih	A20AWFI0016A0	-0.44	PIFA	i-pex(MHF)	0.78	160
465	Wanshih	A20AWFI0017A0	-0.47	PIFA	i-pex(MHF)	0.81	170
466	Wanshih	A20AWFI0018A0	-0.50	PIFA	i-pex(MHF)	0.84	180
467	Wanshih	A20AWFI0019A0	-0.53	PIFA	i-pex(MHF)	0.87	190
468	Wanshih	A20AWFI0020A0	-0.57	PIFA	i-pex(MHF)	0.91	200
469	Wanshih	A20AWFI0021A0	-0.60	PIFA	i-pex(MHF)	0.94	210
470	Wanshih	A20AWFI0022A0	-0.63	PIFA	i-pex(MHF)	0.97	220
471	Wanshih	A20AWFI0023A0	-0.66	PIFA	i-pex(MHF)	1.00	230
472	Wanshih	A20AWFI0024A0	-0.69	PIFA	i-pex(MHF)	1.03	240
473	Wanshih	A20AWFI0025A0	-0.72	PIFA	i-pex(MHF)	1.06	250
474	Wanshih	A20AWFI0026A0	-0.75	PIFA	i-pex(MHF)	1.09	260
475	Wanshih	A20AWFI0027A0	-0.78	PIFA	i-pex(MHF)	1.12	270
476	Wanshih	A20AWFI0028A0	-0.81	PIFA	i-pex(MHF)	1.15	280
477	Wanshih	A20AWFI0029A0	-0.84	PIFA	i-pex(MHF)	1.18	290
478	Wanshih	A20AWFI0030A0	-0.87	PIFA	i-pex(MHF)	1.21	300
479	Wanshih	A20AWFI0031A0	-0.90	PIFA	i-pex(MHF)	1.24	310
480	Wanshih	A20AWFI0032A0	-0.93	PIFA	i-pex(MHF)	1.27	320
481	Wanshih	A20AWFI0033A0	-0.96	PIFA	i-pex(MHF)	1.30	330
482	Wanshih	A20AWFI0034A0	-0.99	PIFA	i-pex(MHF)	1.33	340
483	Wanshih	A20AWFI0035A0	-1.03	PIFA	i-pex(MHF)	1.37	350

484	Wanshih	A20AWFI0036A0	-1.06	PIFA	i-pex(MHF)	1.40	360
485	Wanshih	A20AWFI0037A0	-1.09	PIFA	i-pex(MHF)	1.43	370
486	Wanshih	A20AWFI0038A0	-1.12	PIFA	i-pex(MHF)	1.46	380
487	Wanshih	A20AWFI0039A0	-1.15	PIFA	i-pex(MHF)	1.49	390
488	Wanshih	A20AWFI0040A0	-1.18	PIFA	i-pex(MHF)	1.52	400
489	Wanshih	A20AWFI0041A0	-1.21	PIFA	i-pex(MHF)	1.55	410
490	Wanshih	A20AWFI0042A0	-1.24	PIFA	i-pex(MHF)	1.58	420
491	Wanshih	A20AWFI0043A0	-1.27	PIFA	i-pex(MHF)	1.61	430
492	Wanshih	A20AWFI0044A0	-1.30	PIFA	i-pex(MHF)	1.64	440
493	Wanshih	A20AWFI0045A0	-1.33	PIFA	i-pex(MHF)	1.67	450
494	Wanshih	A20AWFI0046A0	-1.36	PIFA	i-pex(MHF)	1.70	460
495	Wanshih	A20AWFI0047A0	-1.39	PIFA	i-pex(MHF)	1.73	470
496	Wanshih	A20AWFI0048A0	-1.42	PIFA	i-pex(MHF)	1.76	480
497	Wanshih	A20AWFI0049A0	-1.45	PIFA	i-pex(MHF)	1.79	490
498	Wanshih	A20AWFI0005A0	-1.49	PIFA	i-pex(MHF)	1.83	500
499	Wanshih	A20AWFI0050A0	-1.52	PIFA	i-pex(MHF)	1.86	510
500	Wanshih	A20AWFI0051A0	-1.55	PIFA	i-pex(MHF)	1.89	520
501	Wanshih	A20AWFI0052A0	-1.58	PIFA	i-pex(MHF)	1.92	530
502	Wanshih	A20AWFI0001A0	-1.61	PIFA	i-pex(MHF)	1.95	540
503	Wanshih	A20AWFI0053A0	-1.64	PIFA	i-pex(MHF)	1.98	550
504	Wanshih	A20AWFI0054A0	-1.67	PIFA	i-pex(MHF)	2.01	560
505	Wanshih	A20AWFI0055A0	-1.70	PIFA	i-pex(MHF)	2.04	570
506	Wanshih	A20AWFI0006A0	-1.72	PIFA	i-pex(MHF)	2.06	575
507	Wanshih	A20AWFI0056A0	-1.73	PIFA	i-pex(MHF)	2.07	580
508	Wanshih	A20AWFI0057A0	-1.76	PIFA	i-pex(MHF)	2.10	590
509	Wanshih	A20AWFI0058A0	-1.79	PIFA	i-pex(MHF)	2.13	600
510	Wanshih	A20AWFI0002A0	-1.82	PIFA	i-pex(MHF)	2.16	610
511	Wanshih	A20AWFI0059A0	-1.85	PIFA	i-pex(MHF)	2.19	620
512	Wanshih	A20AWFI0060A0	-1.88	PIFA	i-pex(MHF)	2.22	630
513	Wanshih	A20AWFI0003A0	-1.91	PIFA	i-pex(MHF)	2.25	640
514	Wanshih	A20AWFI0061A0	-1.95	PIFA	i-pex(MHF)	2.29	650
515	Wanshih	A20AWFI0062A0	-1.98	PIFA	i-pex(MHF)	2.32	660
516	Wanshih	A20AWFI0063A0	-2.01	PIFA	i-pex(MHF)	2.35	670
517	Wanshih	A20AWFI0064A0	-2.04	PIFA	i-pex(MHF)	2.38	680
518	Wanshih	A20AWFI0065A0	-2.07	PIFA	i-pex(MHF)	2.41	690
519	Wanshih	A20AWFI0007A0	-2.10	PIFA	i-pex(MHF)	2.44	700

520	Wanshih	A20AWFI0066A0	-2.13	PIFA	i-pex(MHF)	2.47	710
521	Wanshih	A20AWFI0067A0	-2.16	PIFA	i-pex(MHF)	2.50	720
522	Wanshih	A20AWFI0068A0	-2.19	PIFA	i-pex(MHF)	2.53	730
523	Wanshih	A20AWFI0069A0	-2.22	PIFA	i-pex(MHF)	2.56	740
524	Wanshih	A20AWFI0070A0	-2.25	PIFA	i-pex(MHF)	2.59	750
525	Wanshih	A20AWFI0004A0	-2.28	PIFA	i-pex(MHF)	2.62	760
526	Wanshih	A20AWFI0071A0	-2.31	PIFA	i-pex(MHF)	2.65	770
527	Wanshih	A20AWFI0008A0	-2.34	PIFA	i-pex(MHF)	2.68	780
528	Wanshih	A20AWFI0072A0	-2.37	PIFA	i-pex(MHF)	2.71	790
529	Wanshih	A20AWFI0073A0	-2.41	PIFA	i-pex(MHF)	2.75	800
530	Wanshih	A20AWFI0074A0	-2.44	PIFA	i-pex(MHF)	2.78	810
531	Wanshih	A20AWFI0075A0	-2.47	PIFA	i-pex(MHF)	2.81	820
532	Wanshih	A20AWFI0076A0	-2.50	PIFA	i-pex(MHF)	2.84	830
533	Wanshih	A20AWFI0077A0	-2.53	PIFA	i-pex(MHF)	2.87	840
534	Wanshih	A20AWFI0078A0	-2.56	PIFA	i-pex(MHF)	2.90	850
535	Wanshih	A20AWFI0079A0	-2.59	PIFA	i-pex(MHF)	2.93	860
536	Wanshih	A20AWFI0080A0	-2.62	PIFA	i-pex(MHF)	2.96	870
537	Wanshih	A20AWFI0081A0	-2.65	PIFA	i-pex(MHF)	2.99	880
538	Wanshih	A20AWFI0009A0	-2.68	PIFA	i-pex(MHF)	3.02	890
539	Wanshih	A20AWFI0082A0	-2.71	PIFA	i-pex(MHF)	3.05	900
540	Wanshih	A20AWFI0083A0	-2.74	PIFA	i-pex(MHF)	3.08	910
541	Wanshih	A20AWFI0084A0	-2.77	PIFA	i-pex(MHF)	3.11	920
542	Wanshih	A20AWFI0085A0	-2.80	PIFA	i-pex(MHF)	3.14	930
543	Wanshih	A20AWFI0086A0	-2.83	PIFA	i-pex(MHF)	3.17	940
544	Wanshih	A20AWFI0087A0	-2.87	PIFA	i-pex(MHF)	3.21	950
545	Wanshih	A20AWFI0088A0	-2.90	PIFA	i-pex(MHF)	3.24	960
546	Wanshih	A20AWFI0089A0	-2.93	PIFA	i-pex(MHF)	3.27	970
547	Wanshih	A20AWFI0090A0	-2.96	PIFA	i-pex(MHF)	3.30	980
548	Wanshih	A20AWFI0091A0	-2.99	PIFA	i-pex(MHF)	3.33	990
549	Wanshih	A20AWFI0092A0	-3.02	PIFA	i-pex(MHF)	3.36	1000
550	Wanshih	A20AWFI0093A0	-3.05	PIFA	i-pex(MHF)	3.39	1010
551	Wanshih	A20AWFI0094A0	-3.08	PIFA	i-pex(MHF)	3.42	1020
552	Wanshih	A20AWFI0095A0	-3.11	PIFA	i-pex(MHF)	3.45	1030
553	Wanshih	A20AWFI0096A0	-3.14	PIFA	i-pex(MHF)	3.48	1040
554	Wanshih	A20AWFI0097A0	-3.17	PIFA	i-pex(MHF)	3.51	1050
555	Wanshih	A20AWFI0098A0	-3.20	PIFA	i-pex(MHF)	3.54	1060

556	Wanshih	A20AWFI0099A0	-3.23	PIFA	i-pex(MHF)	3.57	1070
557	Wanshih	A20AWFI0100A0	-3.26	PIFA	i-pex(MHF)	3.60	1080
558	Wanshih	A20AWFI0101A0	-3.29	PIFA	i-pex(MHF)	3.63	1090
559	Wanshih	A20AWFI0102A0	-3.33	PIFA	i-pex(MHF)	3.67	1100
560	Wanshih	A20AWFI0103A0	-3.36	PIFA	i-pex(MHF)	3.70	1110
561	Wanshih	A20AWFI0104A0	-3.39	PIFA	i-pex(MHF)	3.73	1120
562	Wanshih	A20AWFI0105A0	-3.42	PIFA	i-pex(MHF)	3.76	1130
563	Wanshih	A20AWFI0106A0	-3.45	PIFA	i-pex(MHF)	3.79	1140
564	Wanshih	A20AWFI0107A0	-3.48	PIFA	i-pex(MHF)	3.82	1150
565	Wanshih	A20AWFI0108A0	-3.51	PIFA	i-pex(MHF)	3.85	1160
566	Wanshih	A20AWFI0109A0	-3.54	PIFA	i-pex(MHF)	3.88	1170
567	Wanshih	A20AWFI0110A0	-3.57	PIFA	i-pex(MHF)	3.91	1180
568	Wanshih	A20AWFI0111A0	-3.60	PIFA	i-pex(MHF)	3.94	1190
569	Wanshih	A20AWFI0112A0	-3.63	PIFA	i-pex(MHF)	3.97	1200

1.2 The Equipment List

Test Item	Radiated Emission				
Test Site	966 chamber1 / (03CH01-WS)				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101498	Dec. 27, 2018	Dec. 26, 2019
Receiver	R&S	ESR3	101658	Dec. 11, 2018	Dec. 10, 2019
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-522	Jul. 12, 2019	Jul. 11, 2020
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1096	Dec. 18, 2018	Dec. 17, 2019
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Nov. 15, 2018	Nov. 14, 2019
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 09, 2018	Nov. 08, 2019
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Oct. 08, 2018	Oct. 07, 2019
Preamplifier	EMC	EMC02325	980225	Jul. 09, 2019	Jul. 08, 2020
Preamplifier	Agilent	83017A	MY39501308	Oct. 04, 2018	Oct. 03, 2019
Preamplifier	EMC	EMC184045B	980192	Aug. 01, 2019	Jul. 31, 2020
RF Cable	EMC	EMC105-SM-SM-8000	180512	Oct. 22, 2018	Oct. 21, 2019
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16018/4	Oct. 22, 2018	Oct. 21, 2019
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16015/4	Oct. 22, 2018	Oct. 21, 2019
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-003	Oct. 22, 2018	Oct. 21, 2019
LF cable 10M	EMCC	CFD400-E	CFD400-001	Oct. 22, 2018	Oct. 21, 2019
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

1.3 Test Standards

According to the specification of EUT, the EUT must comply with following standards and KDB documents.

47 CFR FCC Part 15.247
47 CFR FCC Part 15.407
ANSI C63.10-2013
FCC KDB 558074 D01 15.247 Meas Guidance v05r02
FCC KDB 662911 D01 Multiple Transmitter Output v02r01
FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01
FCC KDB 412172 D01 Determining ERP and EIRP v01r01

1.4 Deviation from Test Standard and Measurement Procedure

None

1.5 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)

Measurement Uncertainty	
Parameters	**Uncertainty**
Radiated emission ≤ 1GHz	±3.41 dB
Radiated emission > 1GHz	±4.59 dB

2 Test Configuration

2.1 Testing Condition

Test Item	Test Site	Ambient Condition	Tested By
Radiated Emissions	03CH01-WS	26°C / 63%	Akun Chung

- FCC Designation No.: TW2732
- FCC site registration No.: 181692
- ISED#: 10807A
- CAB identifier: TW2732

2.2 The Worst Test Modes and Channel Details

Test item	Test Mode	Test Configuration
Radiated Emissions ≤ 1GHz	BT 8DPSK-CH39 + WIFI 2.4G 11N20-CH06	1, 2
	BT 8DPSK-CH39 + WIFI 5G VHT40 CH110	
Radiated Emissions > 1GHz	BT 8DPSK-CH39 + WIFI 2.4G 11N20-CH06	1
	BT 8DPSK-CH39 + WIFI 5G VHT40 CH110	

NOTE:

1. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The **Y-plane** results were found as the worst case and were shown in this report.
2. Test configurations are as follows:
   1) Test Configuration 1: Wi-Fi ANT 0 + Wi-Fi ANT1 + BT Ant. No. 458 / highest antenna gain
   2) Test Configuration 2: Wi-Fi ANT 0 + Wi-Fi ANT1 + BT Ant. No. 112 / longest cable
3. The selected channels are the maximum power channel of Wi-Fi & BT mode.

3 Transmitter Test Results

3.1 Unwanted Emissions into Restricted Frequency Bands

3.1.1 Limit of Unwanted Emissions into Restricted Frequency Bands

Restricted Band Emissions Limit			
Frequency Range (MHz)	**Field Strength (uV/m)**	**Field Strength (dBuV/m)**	**Measure Distance (m)**
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1:
Qusai-Peak value is measured for frequency below 1GHz except for 9–90 kHz, 110–490 kHz frequency band. Peak and average value are measured for frequency above 1GHz. The limit on average radio frequency emission is as above table. The limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit
Note 2:
Measurements may be performed at a distance other than what is specified provided. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor as below, Frequency at or above 30 MHz: 20 dB/decade Frequency below 30 MHz: 40 dB/decade.

3.1.2 Test Procedures

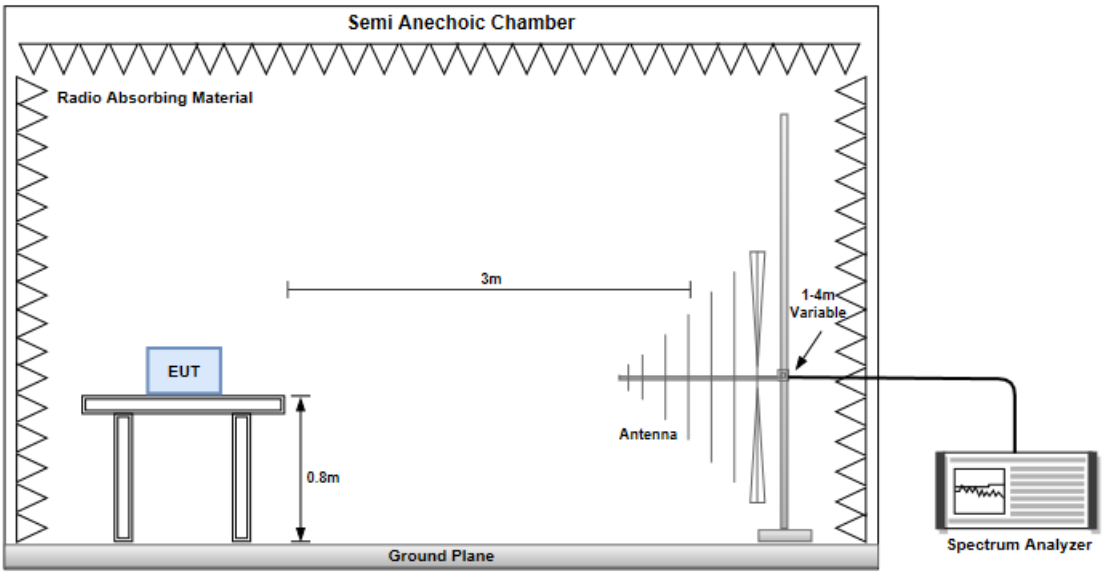
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission frequency. The EUT is placed at test table. For emissions testing at or below 1 GHz, the table height is 80 cm above the reference ground plane. For emission measurements above 1 GHz, the table height is 1.5 m
2. Measurement is made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna is varied in height (1m ~ 4m) above the reference ground plane to obtain the maximum signal strength. Distance between EUT and antenna is 3 m.
3. This investigation is performed with the EUT rotated 360°, the antenna height scanned between 1 m and 4 m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations.

Note:

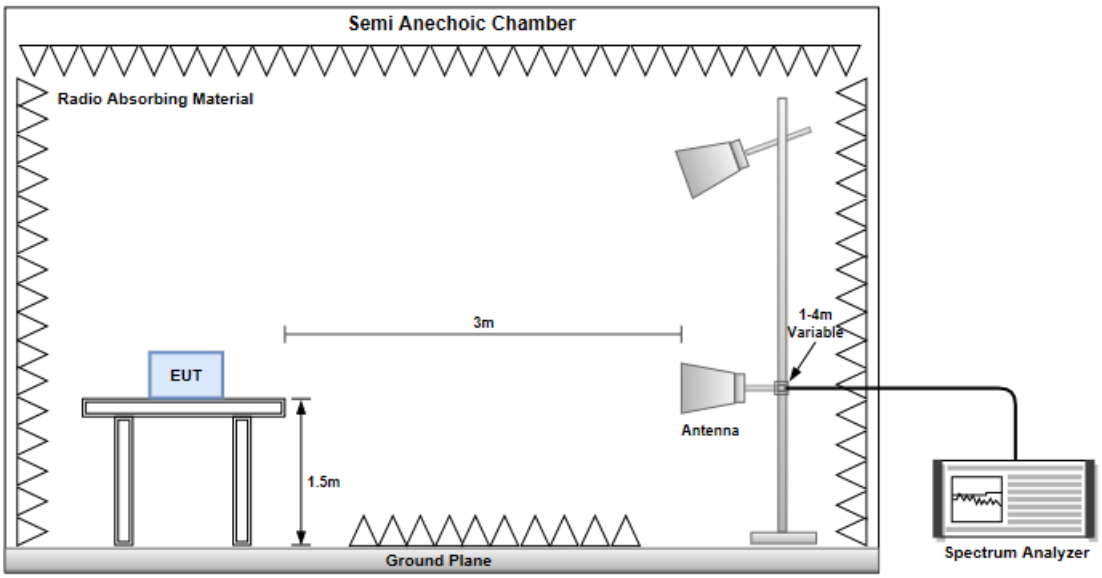
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above 1GHz.

3.1.3 Test Setup

Radiated Emissions below 1 GHz



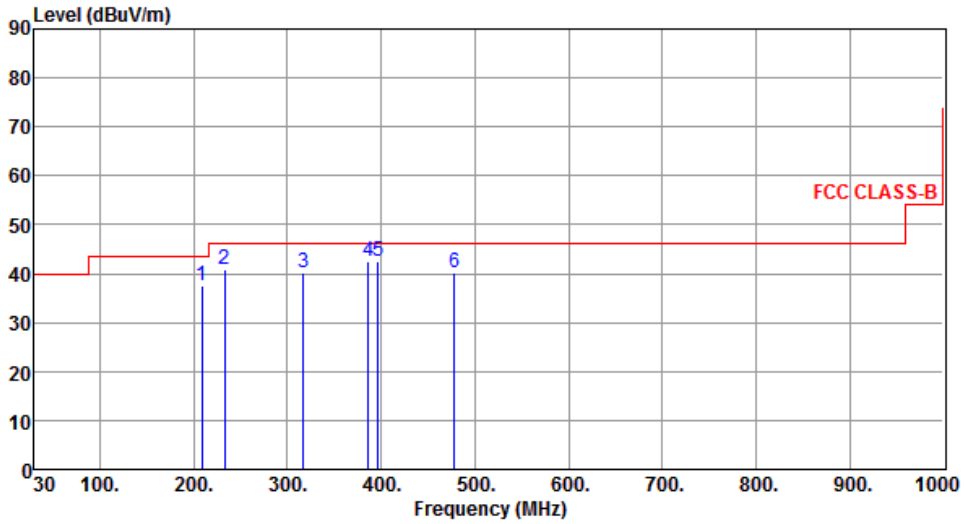
Radiated Emissions above 1 GHz



Test Configuration 1: Ant. No. 458

3.1.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)

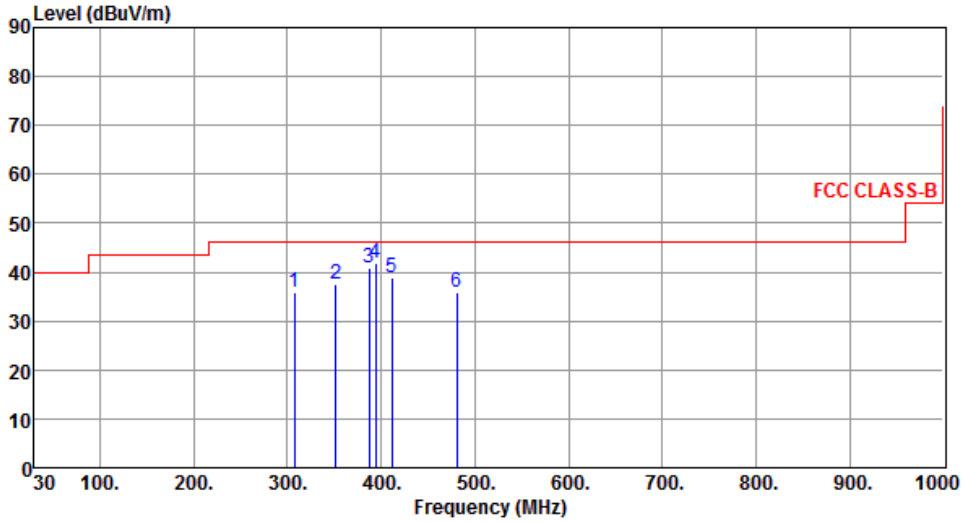
Test Mode	BT 8DPSK-CH39 + WIFI 2.4G 11N20-CH06
Polarization	Horizontal



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	208.48	37.38	43.50	-6.12	49.56	-12.18	Peak	---	---
2	232.73	40.93	46.00	-5.07	52.17	-11.24	Peak	---	---
3	317.12	40.04	46.00	-5.96	47.53	-7.49	Peak	---	---
4	385.99	42.48	46.00	-3.52	48.29	-5.81	Peak	---	---
5	396.66	42.39	46.00	-3.61	47.98	-5.59	Peak	---	---
6	478.14	40.16	46.00	-5.84	43.77	-3.61	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

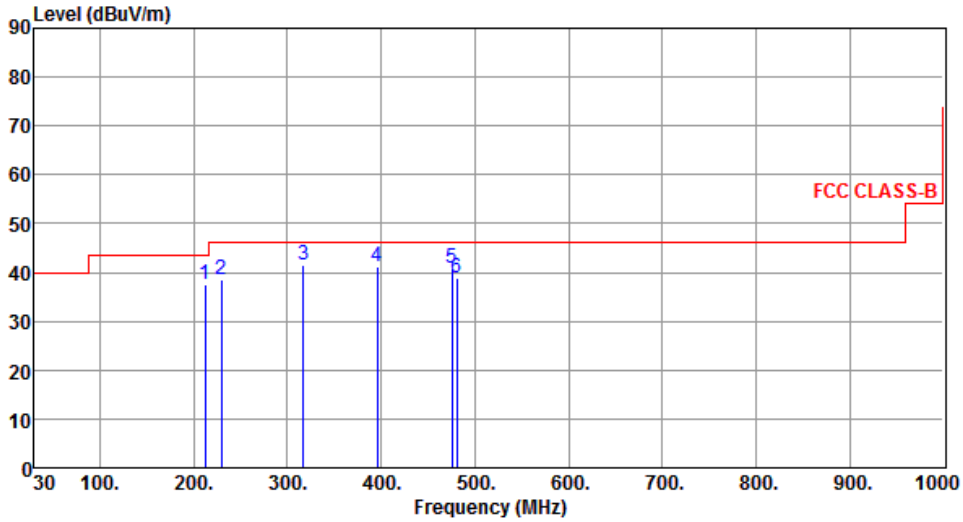
Test Mode	BT 8DPSK-CH39 + WIFI 2.4G 11N20-CH06
Polarization	Vertical



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	307.42	36.02	46.00	-9.98	43.84	-7.82	Peak	---	---
2	352.04	37.60	46.00	-8.40	44.51	-6.91	Peak	---	---
3	386.96	40.78	46.00	-5.22	46.57	-5.79	QP	113	105
4	394.12	41.75	46.00	-4.25	47.37	-5.62	QP	112	104
5	411.21	38.90	46.00	-7.10	44.19	-5.29	Peak	---	---
6	481.05	35.82	46.00	-10.18	39.37	-3.55	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

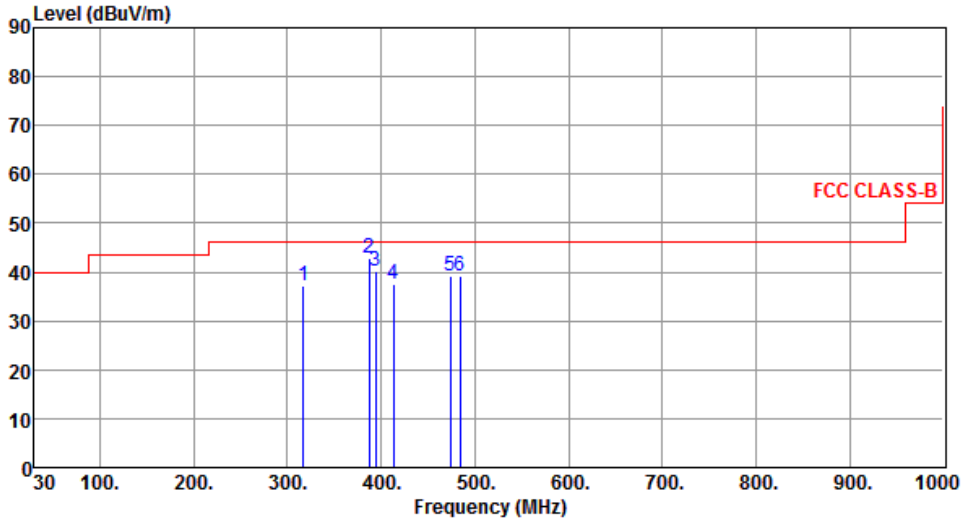
Test Mode	BT 8DPSK-CH39 + WIFI 5G VHT40 CH110
Polarization	Horizontal



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	212.36	37.67	43.50	-5.83	49.84	-12.17	Peak	---	---
2	229.82	38.48	46.00	-7.52	50.19	-11.71	Peak	---	---
3	317.12	41.62	46.00	-4.38	49.11	-7.49	Peak	---	---
4	395.69	41.22	46.00	-4.78	46.81	-5.59	Peak	---	---
5	475.23	40.77	46.00	-5.23	44.45	-3.68	QP	174	196
6	481.04	38.75	46.00	-7.25	42.30	-3.55	QP	174	196

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Test Mode	BT 8DPSK-CH39 + WIFI 5G VHT40 CH110
Polarization	Vertical

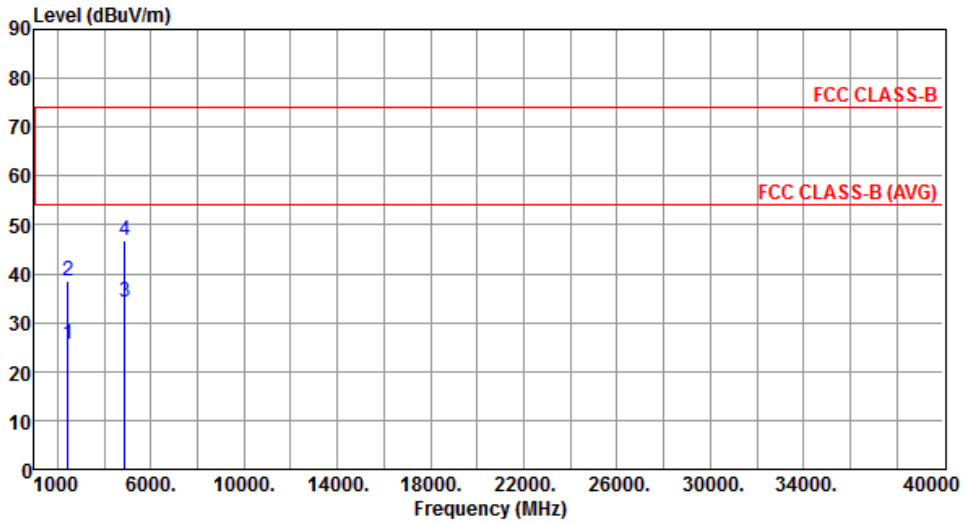


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	317.12	37.23	46.00	-8.77	44.72	-7.49	Peak	---	---
2	386.96	42.94	46.00	-3.06	48.73	-5.79	Peak	---	---
3	393.75	40.12	46.00	-5.88	45.75	-5.63	QP	101	101
4	413.15	37.67	46.00	-8.33	42.87	-5.20	Peak	---	---
5	474.26	39.06	46.00	-6.94	42.74	-3.68	Peak	---	---
6	483.96	39.16	46.00	-6.84	42.64	-3.48	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

3.1.5 Transmitter Radiated Unwanted Emissions (Above 1GHz)

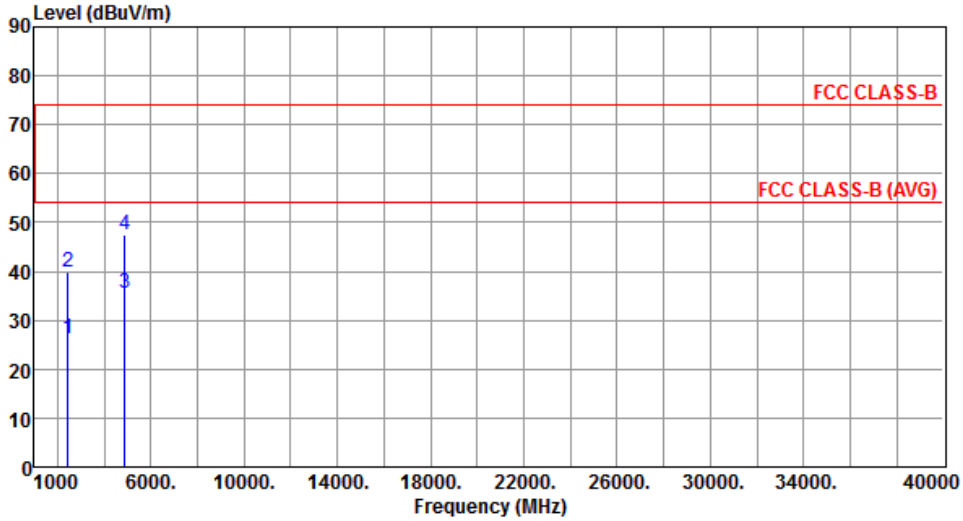
Test Mode	BT 8DPSK-CH39 + WIFI 2.4G 11N20-CH06
Polarization	Horizontal



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2433.00	25.49	54.00	-28.51	28.61	-3.12	Average	100	256
2	2433.00	38.44	74.00	-35.56	41.56	-3.12	Peak	100	256
3	4878.00	34.31	54.00	-19.69	30.70	3.61	Average	100	150
4	4878.00	46.85	74.00	-27.15	43.24	3.61	Peak	100	150

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

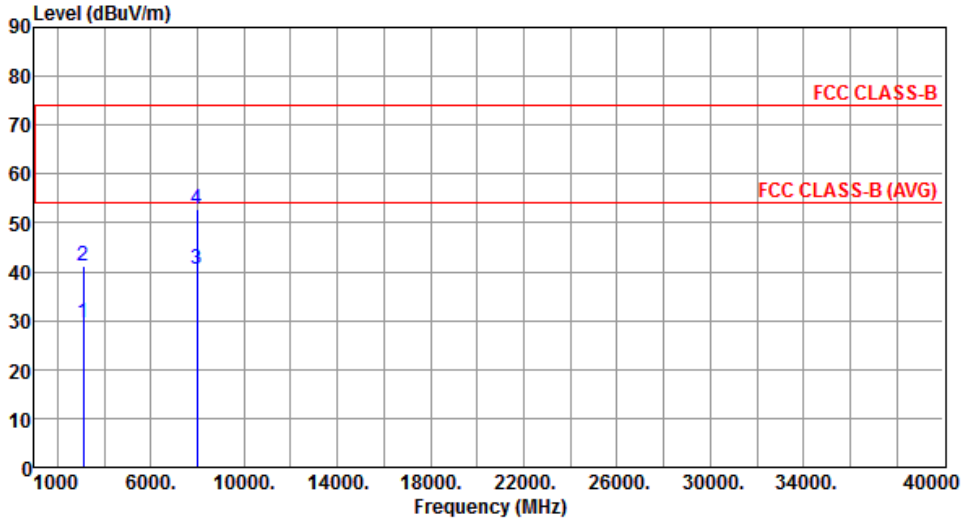
Test Mode	BT 8DPSK-CH39 + WIFI 2.4G 11N20-CH06
Polarization	Vertical



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2433.00	26.33	54.00	-27.67	29.45	-3.12	Average	100	269
2	2433.00	39.73	74.00	-34.27	42.85	-3.12	Peak	100	269
3	4878.00	35.42	54.00	-18.58	31.81	3.61	Average	100	275
4	4878.00	47.45	74.00	-26.55	43.84	3.61	Peak	100	275

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

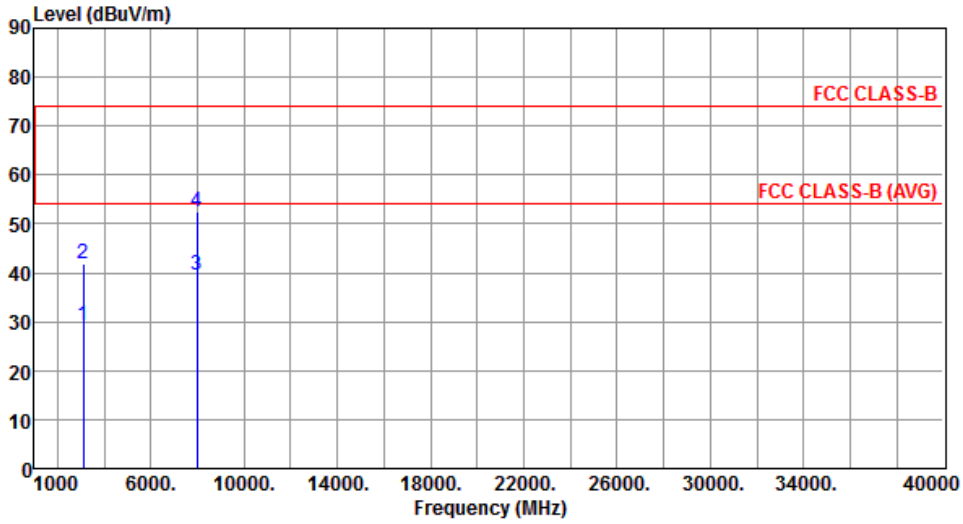
Test Mode	BT 8DPSK-CH39 + WIFI 5G VHT40 CH110
Polarization	Horizontal



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3109.00	29.55	54.00	-24.45	30.54	-0.99	Average	100	245
2	3109.00	41.26	74.00	-32.74	42.25	-0.99	Peak	100	245
3	7991.00	40.56	54.00	-13.44	31.09	9.47	Average	100	135
4	7991.00	52.91	74.00	-21.09	43.44	9.47	Peak	100	135

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Test Mode	BT 8DPSK-CH39 + WIFI 5G VHT40 CH110
Polarization	Vertical



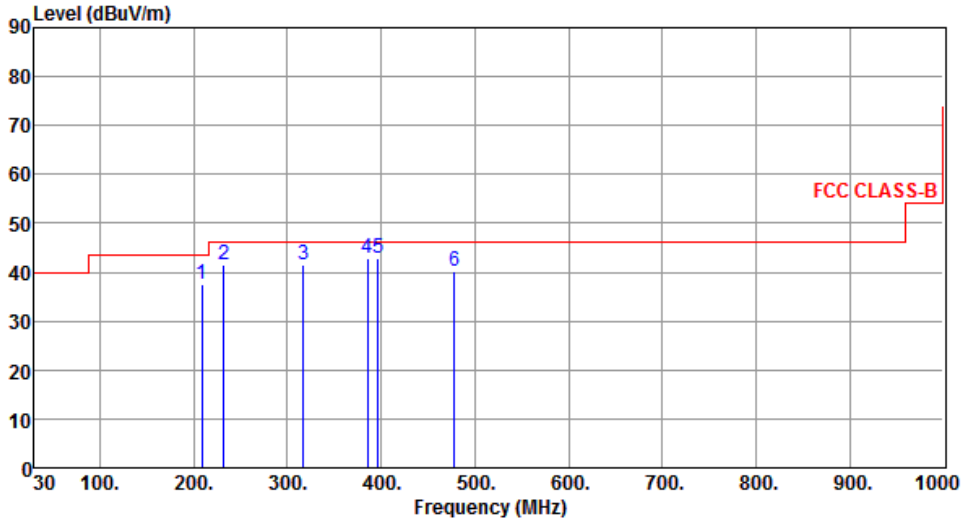
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3109.00	29.21	54.00	-24.79	30.20	-0.99	Average	100	160
2	3109.00	41.69	74.00	-32.31	42.68	-0.99	Peak	100	160
3	7991.00	39.68	54.00	-14.32	30.21	9.47	Average	100	215
4	7991.00	52.46	74.00	-21.54	42.99	9.47	Peak	100	215

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Test Configuration 2: Ant. No. 112

3.1.6 Transmitter Radiated Unwanted Emissions (Below 1GHz)

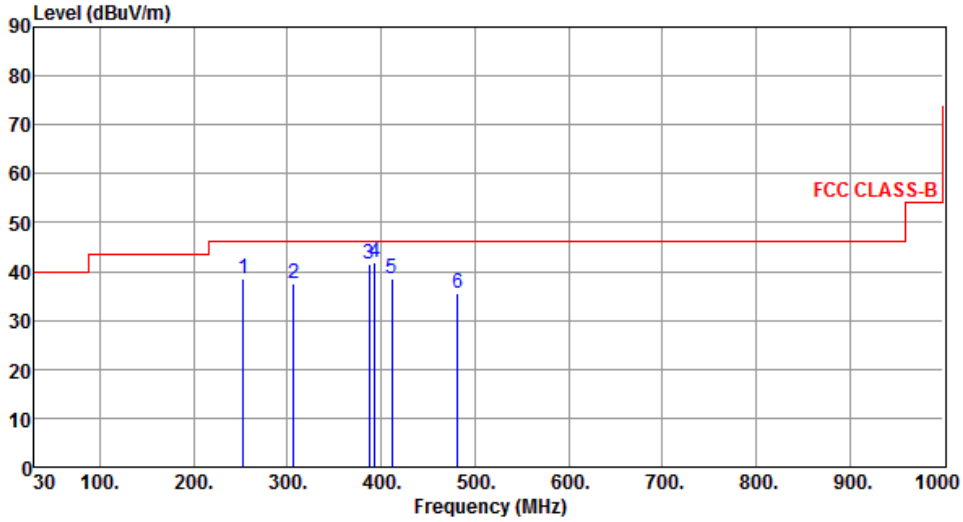
Test Mode	BT 8DPSK-CH39 + WIFI 2.4G 11N20-CH06
Polarization	Horizontal



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	208.48	37.38	43.50	-6.12	49.56	-12.18	Peak	---	---
2	232.21	41.64	46.00	-4.36	52.97	-11.33	Peak	---	---
3	317.25	41.55	46.00	-4.45	49.03	-7.48	Peak	---	---
4	385.63	42.88	46.00	-3.12	48.70	-5.82	Peak	---	---
5	396.41	42.84	46.00	-3.16	48.43	-5.59	Peak	---	---
6	478.52	40.26	46.00	-5.74	43.86	-3.60	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

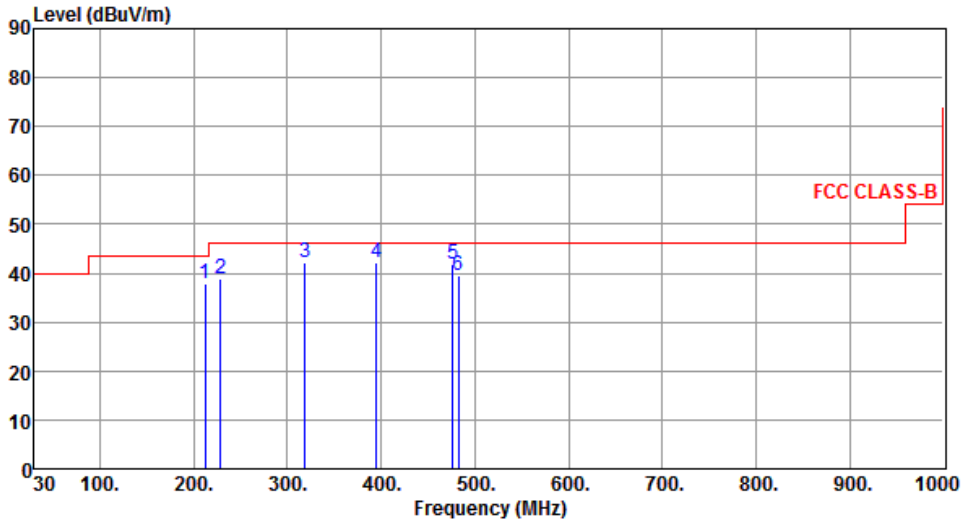
Test Mode	BT 8DPSK-CH39 + WIFI 2.4G 11N20-CH06
Polarization	Vertical



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	253.32	38.64	46.00	-7.36	48.51	-9.87	Peak	---	---
2	306.65	37.64	46.00	-8.36	45.48	-7.84	Peak	---	---
3	387.51	41.58	46.00	-4.42	47.36	-5.78	QP	112	104
4	393.35	41.88	46.00	-4.12	47.51	-5.63	QP	115	109
5	411.52	38.66	46.00	-7.34	43.94	-5.28	Peak	---	---
6	481.52	35.63	46.00	-10.37	39.16	-3.53	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

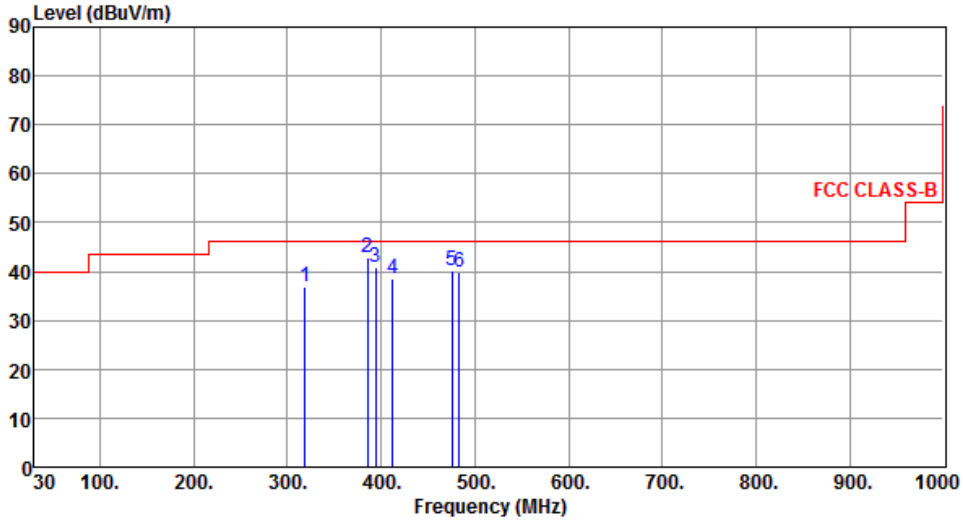
Test Mode	BT 8DPSK-CH39 + WIFI 5G VHT40 CH110
Polarization	Horizontal



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	212.52	37.89	43.50	-5.61	50.06	-12.17	Peak	---	---
2	228.86	38.96	46.00	-7.04	50.75	-11.79	Peak	---	---
3	318.52	42.30	46.00	-3.70	49.76	-7.46	Peak	---	---
4	394.97	42.32	46.00	-3.68	47.92	-5.60	Peak	---	---
5	476.62	41.85	46.00	-4.15	45.50	-3.65	QP	175	189
6	482.32	39.63	46.00	-6.37	43.14	-3.51	QP	175	199

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Test Mode	BT 8DPSK-CH39 + WIFI 5G VHT40 CH110
Polarization	Vertical



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	318.51	36.94	46.00	-9.06	44.40	-7.46	Peak	---	---
2	385.56	42.99	46.00	-3.01	48.81	-5.82	Peak	---	---
3	394.52	40.84	46.00	-5.16	46.45	-5.61	QP	105	95
4	412.62	38.64	46.00	-7.36	43.87	-5.23	Peak	---	---
5	475.39	40.20	46.00	-5.80	43.87	-3.67	Peak	---	---
6	483.54	39.87	46.00	-6.13	43.36	-3.49	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

4 Test laboratory information

Established in 2012, ICC provides foremost EMC & RF Testing and advisory consultation services by our skilled engineers and technicians. Our services employ a wide variety of advanced edge test equipment and one of the widest certification extents in the business.

International Certification Corp (EMC and Wireless Communication Laboratory), it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

Our Test sites are located at Linkou District and Kwei Shan District. Location map can be found on our website http://www.icertifi.com.tw.

Linkou	**Kwei Shan**	**Kwei Shan Site II**
Tel: 886-2-2601-1640	Tel: 886-3-271-8666	Tel: 886-3-271-8640
No. 30-2, Ding Fwu Tsuen, Lin Kou District, New Taipei City, Taiwan, R.O.C.	No. 3-1, Lane 6, Wen San 3rd St., Kwei Shan District, Tao Yuan City 333, Taiwan, R.O.C.	No. 14-1, Lane 19, Wen San 3rd St., Kwei Shan District, Tao Yuan City 333, Taiwan, R.O.C..

If you have any suggestion, please feel free to contact us as below information

Tel: 886-3-271-8666
Fax: 886-3-318-0155
Email: ICC_Service@icertifi.com.tw

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