FCC 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**
Received Date	:	**Jul. 26, 2019**
Tested Date	:	**Aug. 12 ~ Oct. 02, 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: **Approved by:**

Along Chen / Assistant Manager **Gary Chang / Manager**

Testing Laboratory 2732

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Release Record

Report No.	Version	Description	Issued Date
FR972601AD	Rev. 01	Initial issue	Oct. 22, 2019

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	Conducted Emissions	[dBuV]: 0.156MHz 50.82 (Margin -14.87dB) - QP	Pass
15.247(d) 15.209	Radiated Emissions	[dBuV/m at 3m]: 477.17MHz 39.97 (Margin -6.03dB) - PK	Pass
15.247(d)	Band Edge	Meet the requirement of limit	Pass
15.247(b)(1)	Conducted Output Power	Power [dBm]: 7.42	Pass
15.247(a)(1)(iii)	Number of Hopping Channels	Meet the requirement of limit	Pass
15.247(a)(1)	Hopping Channel Separation	Meet the requirement of limit	Pass
15.247(a)(1)(iii)	Dwell Time	Meet the requirement of limit	Pass
15.203	Antenna Requirement	Meet the requirement of limit	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)

RF General Information				
Frequency Range (MHz)	**Bluetooth Mode**	**Ch. Frequency (MHz)**	**Channel Number**	**Data Rate**
2400-2483.5	BR	2402-2480	0-78 [79]	1 Mbps
2400-2483.5	EDR	2402-2480	0-78 [79]	2 Mbps
2400-2483.5	EDR	2402-2480	0-78 [79]	3 Mbps
Note 1: RF output power specifies that Maximum Peak Conducted Output Power. Note 2: Bluetooth BR uses a GFSK. Note 3: Bluetooth EDR uses a combination of π/4-DQPSK and 8DPSK.				

1.1.2 Antenna Details

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

1.1.3 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	3.3Vdc from host

1.1.4 Channel List

Frequency band (MHz)				2400~2483.5			
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2402	20	2422	40	2442	60	2462
1	2403	21	2423	41	2443	61	2463
2	2404	22	2424	42	2444	62	2464
3	2405	23	2425	43	2445	63	2465
4	2406	24	2426	44	2446	64	2466
5	2407	25	2427	45	2447	65	2467
6	2408	26	2428	46	2448	66	2468
7	2409	27	2429	47	2449	67	2469
8	2410	28	2430	48	2450	68	2470
9	2411	29	2431	49	2451	69	2471
10	2412	30	2432	50	2452	70	2472
11	2413	31	2433	51	2453	71	2473
12	2414	32	2434	52	2454	72	2474
13	2415	33	2435	53	2455	73	2475
14	2416	34	2436	54	2456	74	2476
15	2417	35	2437	55	2457	75	2477
16	2418	36	2438	56	2458	76	2478
17	2419	37	2439	57	2459	77	2479
18	2420	38	2440	58	2460	78	2480
19	2421	39	2441	59	2461	---	---

1.1.5 Test Tool and Duty Cycle

Test Tool	CBT control	
Modulation Mode	**Duty Cycle (%)**	**Duty Factor (dB)**
DH5	77.99%	1.08
2DH5	78.38%	1.06
3DH5	78.38%	1.06

1.1.6 Power Index of Test Tool

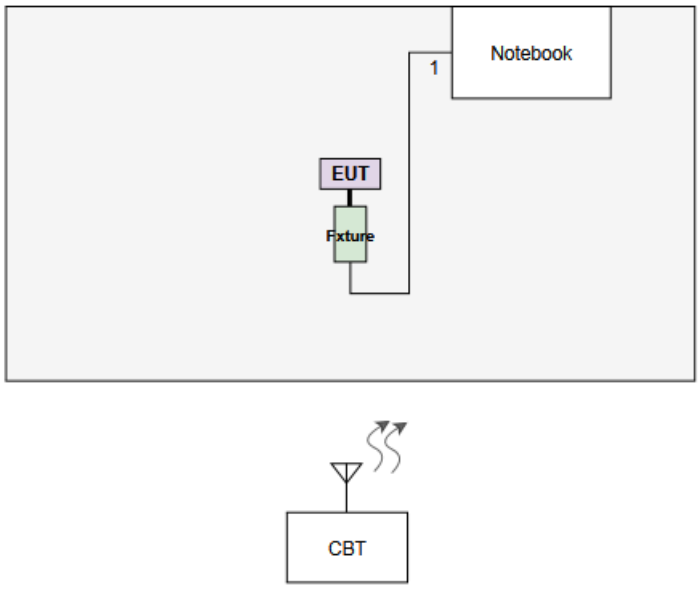
Modulation Mode	Test Frequency (MHz)		
	2402	**2441**	**2480**
GFSK/1Mbps	Default	Default	Default
π/4-DQPSK /2Mbps	Default	Default	Default
8DPSK/3Mbps	Default	Default	Default

1.2 Local Support Equipment List

Support Equipment List					
No.	**Equipment**	**Brand**	**Model**	**FCC ID**	**Remarks**
1	Notebook	DELL	Latitude E6430	DoC	---
2	Fixture	---	---	---	Provided by applicant

1.3 Test Setup Chart

Test Setup Diagram



No.	Signal cable / Length (m)
1	USB, 1m shielded.

1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Tested Date	Aug. 21, 2019				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Receiver	R&S	ESR3	101657	Jan. 08, 2019	Jan. 07, 2020
LISN	SCHWARZBECK	Schwarzbeck 8127	8127-667	Nov. 05, 2018	Nov. 04, 2019
RF Cable-CON	Woken	CFD200-NL	CFD200-NL-001	Oct. 23, 2018	Oct. 23, 2019
Measurement Software	AUDIX	e3	6.120210k	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	Radiated Emission				
Test Site	966 chamber1 / (03CH01-WS)				
Tested Date	Aug. 12 ~ Aug. 13, 2019				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Bluetooth Tester	R&S	CBT	100959	Sep. 24, 2018	Sep. 23, 2019
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.					

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Tested Date	Oct. 02, 2019				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101063	Apr. 17, 2019	Apr. 16, 2020
Power Meter	Anritsu	ML2495A	1241002	Oct. 09, 2018	Oct. 08, 2019
Power Sensor	Anritsu	MA2411B	1207366	Oct. 09, 2018	Oct. 08, 2019
DC POWER SOURCE	GW INSTEK	GPC-6030D	EM892433	Oct. 25, 2018	Oct. 24, 2019
Measurement Software	SENSE-15247_FS	SENSE-15247_FS	V5.10.1	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

1.5 Test Standards

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

47 CFR FCC Part 15.247
ANSI C63.10-2013
FCC KDB 558074 D01 15.247 Meas Guidance v05r02

1.6 Deviation from Test Standard and Measurement Procedure

None

1.7 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**
Bandwidth	±34.130 Hz
Conducted power	±0.808 dB
Power density	±0.583 dB
Conducted emission	±2.715 dB
AC conducted emission	±2.92 dB
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
AC Conduction	CO01-WS	23°C / 60%	Alex Tsai
Radiated Emissions	03CH01-WS	24-26°C / 63-64%	Akun Chung
RF Conducted	TH01-WS	22°C / 62%	Brad Wu

- 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	Mode	Test Frequency (MHz)	Data Rate (Mbps)	Test Configuration
Conducted Emissions	8DPSK	2441	3Mbps	1
Radiated Emissions ≤ 1GHz	8DPSK	2441	3Mbps	1, 2
Radiated Emissions > 1GHz	GFSK 8DPSK	2402, 2441, 2480 2402, 2441, 2480	1Mbps 3Mbps	1
Conducted Output Power	GFSK π/4 DQPSK 8DPSK	2402, 2441, 2480 2402, 2441, 2480 2402, 2441, 2480	1Mbps 2Mbps 3Mbps	1
Number of Hopping Channels	GFSK π/4 DQPSK 8DPSK	2402~2480 2402~2480 2402~2480	1Mbps 2Mbps 3Mbps	1
Hopping Channel Separation 20dB and Occupied bandwidth	GFSK π/4 DQPSK 8DPSK	2402, 2441, 2480 2402, 2441, 2480 2402, 2441, 2480	1Mbps 2Mbps 3Mbps	1
Dwell Time	GFSK π/4 DQPSK 8DPSK	2441 2441 2441	1Mbps 2Mbps 3Mbps	1

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. Ant. No. 112 & 458 (please see item 1.1.2) are chosen for final testing and test Configurations are as follows:
   1) Test Configuration 1: Ant. No. 458 / highest antenna gain
   2) Test Configuration 2: Ant. No. 112 / longest cable

3 Transmitter Test Results

3.1 Conducted Emissions

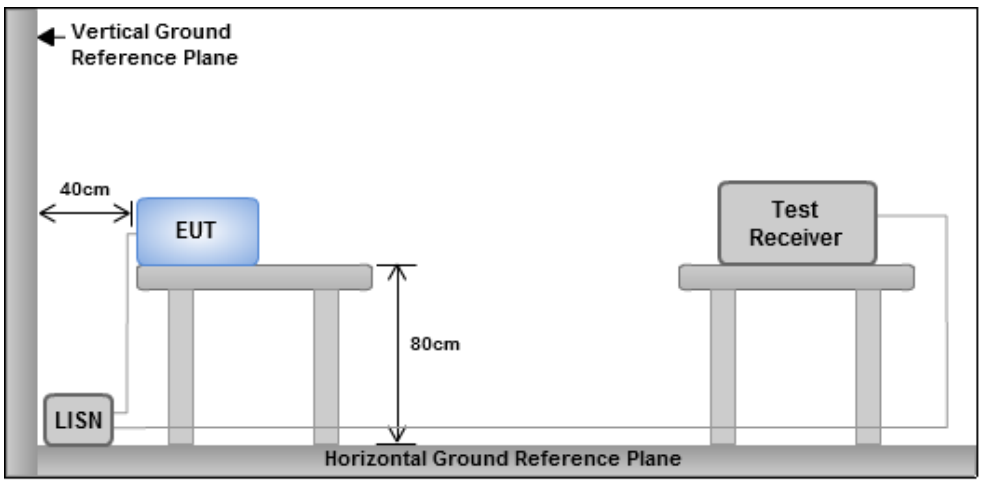
3.1.1 Limit of Conducted Emissions

Conducted Emissions Limit		
Frequency Emission (MHz)	**Quasi-Peak**	**Average**
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50
Note 1: * Decreases with the logarithm of the frequency.		

3.1.2 Test Procedures

1. The device is placed on a test table, raised 80 cm above the reference ground plane. The vertical conducting plane is located 40 cm to the rear of the device.
2. The device is connected to line impedance stabilization network (LISN) and other accessories are connected to other LISN. Measured levels of AC power line conducted emission are across the 50 Ω LISN port.
3. AC conducted emission measurements is made over frequency range from 150 kHz to 30 MHz.
4. This measurement was performed with AC 120V/60Hz

3.1.3 Test Setup

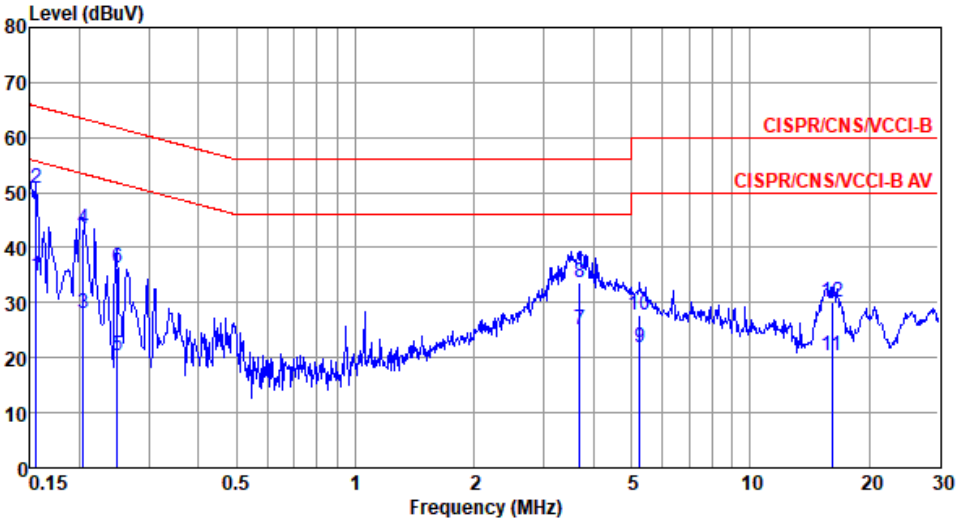


Note: 1. Support units were connected to second LISN.

2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

3.1.4 Test Result of Conducted Emissions

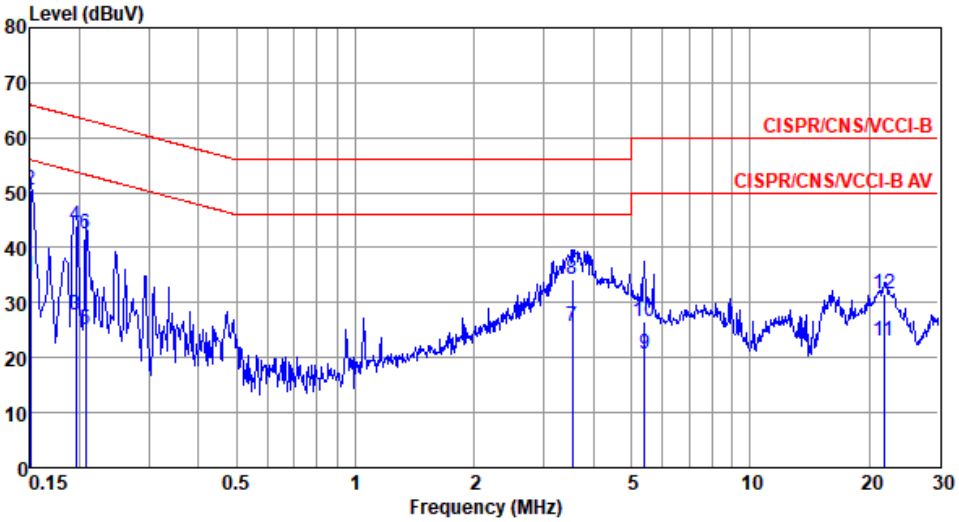
Modulation Mode	8DPSK	Test Freq. (MHz)	2441
Power Phase	Line		



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuA	dBuA	dB	dBuA	dB	dB	
1	0.156	34.78	55.69	-20.91	25.20	9.53	0.05	Average
2*	0.156	50.82	65.69	-14.87	41.24	9.53	0.05	QP
3	0.204	27.96	53.45	-25.49	18.35	9.54	0.07	Average
4	0.204	43.42	63.45	-20.03	33.81	9.54	0.07	QP
5	0.249	20.41	51.78	-31.37	10.79	9.55	0.07	Average
6	0.249	36.37	61.78	-25.41	26.75	9.55	0.07	QP
7	3.700	25.19	46.00	-20.81	15.31	9.61	0.27	Average
8	3.700	33.53	56.00	-22.47	23.65	9.61	0.27	QP
9	5.249	21.82	50.00	-28.18	11.87	9.62	0.33	Average
10	5.249	27.66	60.00	-32.34	17.71	9.62	0.33	QP
11	16.140	20.38	50.00	-29.62	10.15	9.66	0.57	Average
12	16.140	30.07	60.00	-29.93	19.84	9.66	0.57	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).
2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

Modulation Mode	8DPSK	Test Freq. (MHz)	2441
Power Phase	Neutral		



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuA	dBuA	dB	dBuA	dB	dB	
1	0.150	34.78	56.00	-21.22	25.16	9.57	0.05	Average
2*	0.150	50.54	66.00	-15.46	40.92	9.57	0.05	QP
3	0.195	27.83	53.80	-25.97	18.18	9.58	0.07	Average
4	0.195	43.99	63.80	-19.81	34.34	9.58	0.07	QP
5	0.207	25.05	53.32	-28.27	15.40	9.58	0.07	Average
6	0.207	42.56	63.32	-20.76	32.91	9.58	0.07	QP
7	3.547	25.72	46.00	-20.28	15.80	9.66	0.26	Average
8	3.547	34.28	56.00	-21.72	24.36	9.66	0.26	QP
9	5.390	20.68	50.00	-29.32	10.67	9.68	0.33	Average
10	5.390	26.49	60.00	-33.51	16.48	9.68	0.33	QP
11	21.830	23.13	50.00	-26.87	12.69	9.81	0.63	Average
12	21.830	31.58	60.00	-28.42	21.14	9.81	0.63	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).
2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

3.2 Unwanted Emissions into Restricted Frequency Bands

3.2.1 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.

3.2.2 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:

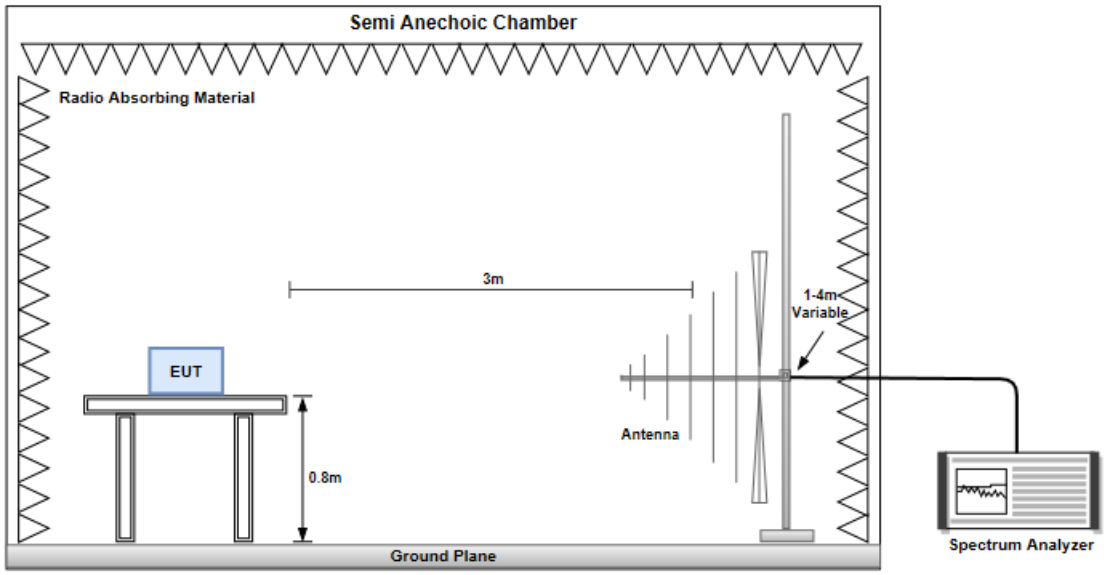
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. Radiated emission above 1GHz / Peak value
   RBW=1MHz, VBW=3MHz and Peak detector
3. Radiated emission above 1GHz / Average value for harmonics
   The average value is: Average = Peak value + 20log(Duty cycle) Where the duty factor is calculated from following formula for DH5 packet type which has worst duty factor:

$$20\log(\text{Duty cycle}) = 20\log\frac{1\text{s} / 1600 * 5}{100\text{ ms}} = -30.1\text{dB}$$

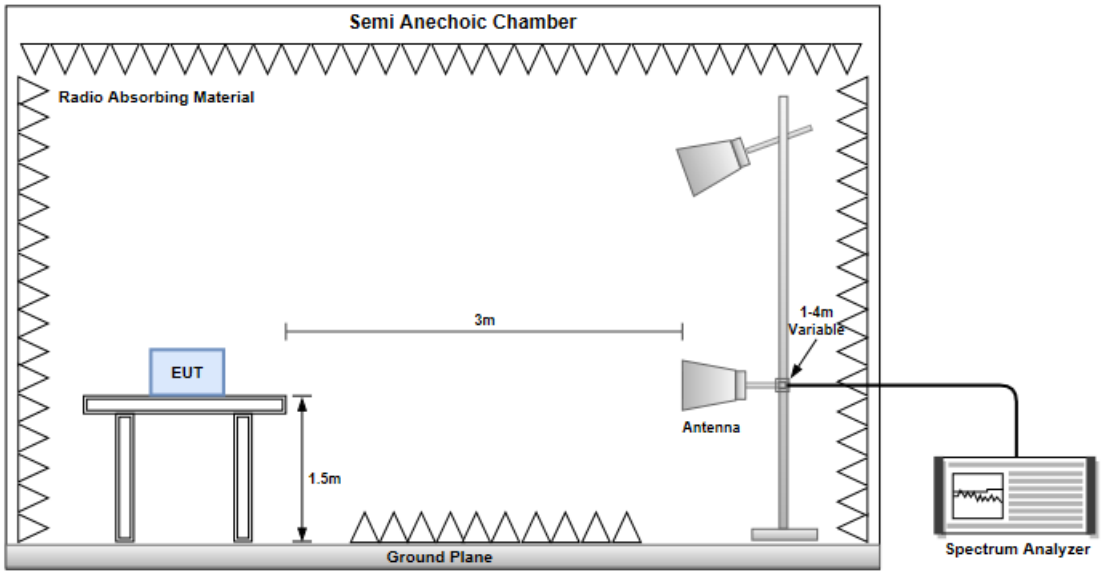
4. Radiated emission above 1GHz / Average value for other emissions
   RBW=1MHz, VBW=1/T and Peak detector

3.2.3 Test Setup

Radiated Emissions below 1 GHz



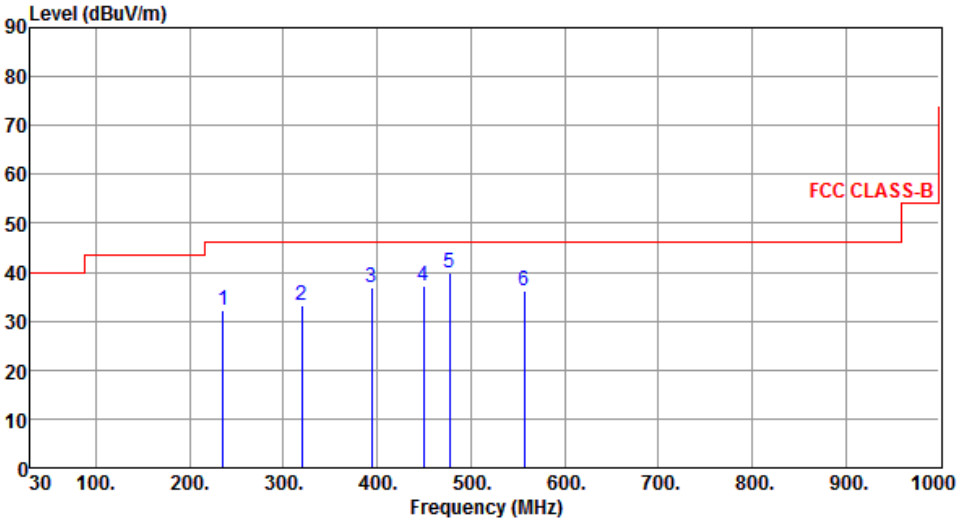
Radiated Emissions above 1 GHz



Test Configuration 1: Ant. No. 458

3.2.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)

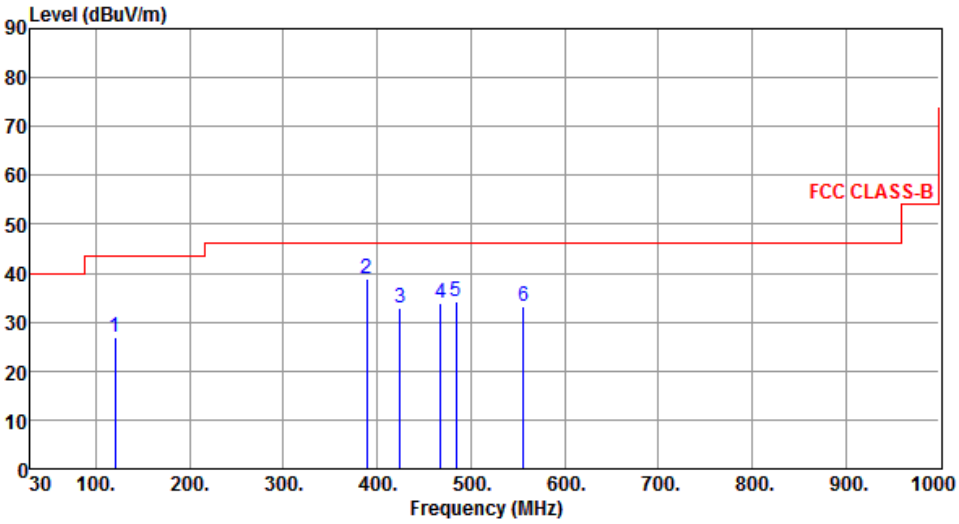
Modulation	8DPSK	**Test Freq. (MHz)**	2441
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	235.64	32.36	46.00	-13.64	43.15	-10.79	Peak	---	---
2	320.03	33.16	46.00	-12.84	40.58	-7.42	Peak	---	---
3	393.75	36.89	46.00	-9.11	42.52	-5.63	Peak	---	---
4	450.01	37.34	46.00	-8.66	41.48	-4.14	Peak	---	---
5	477.17	39.97	46.00	-6.03	43.60	-3.63	Peak	---	---
6	556.71	36.33	46.00	-9.67	38.69	-2.36	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.

Modulation	8DPSK	**Test Freq. (MHz)**	2441
Polarization	Vertical		

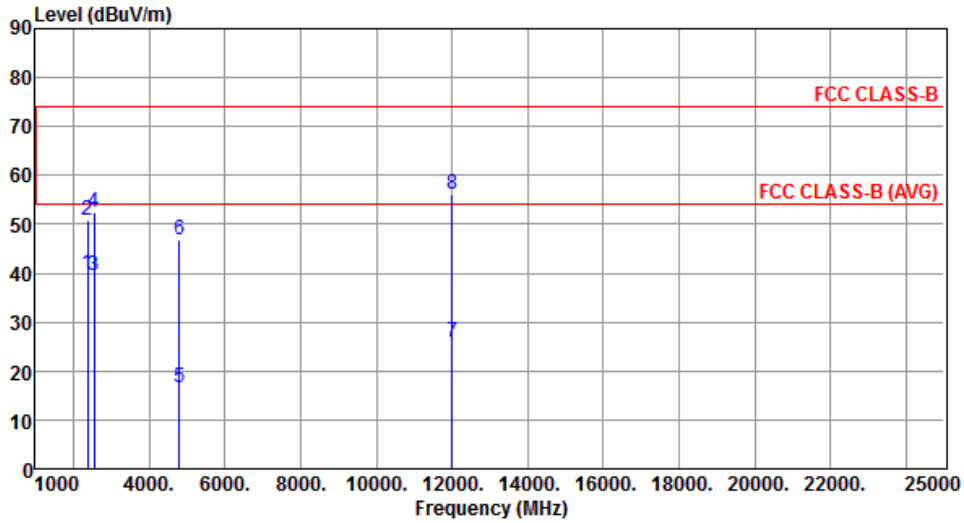


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	120.21	26.79	43.50	-16.71	37.47	-10.68	Peak	---	---
2	388.90	38.77	46.00	-7.23	44.51	-5.74	Peak	---	---
3	424.79	33.02	46.00	-12.98	37.83	-4.81	Peak	---	---
4	467.47	33.73	46.00	-12.27	37.48	-3.75	Peak	---	---
5	483.96	34.19	46.00	-11.81	37.67	-3.48	Peak	---	---
6	555.74	33.21	46.00	-12.79	35.59	-2.38	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.

3.2.5 Transmitter Radiated Unwanted Emissions (Above 1GHz) for GFSK

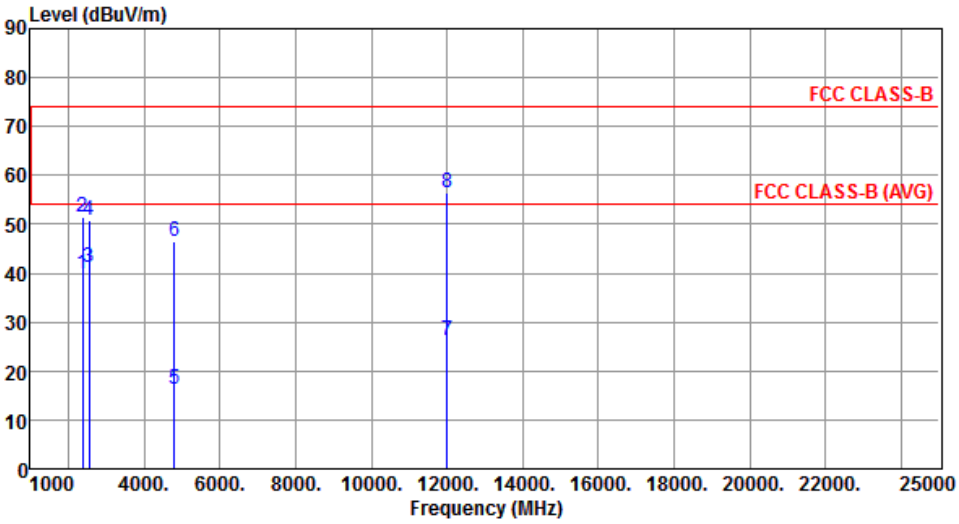
Modulation	GFSK	Test Freq. (MHz)	2402
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	39.77	54.00	-14.23	42.84	-3.07	Average	177	56
2	2390.00	50.88	74.00	-23.12	53.95	-3.07	Peak	177	56
3	2562.00	39.57	54.00	-14.43	42.75	-3.18	Average	177	56
4	2562.00	52.51	74.00	-21.49	55.69	-3.18	Peak	177	56
5	4804.00	16.69	54.00	-37.31	13.19	3.50	Average	100	221
6	4804.00	46.79	74.00	-27.21	43.29	3.50	Peak	100	221
7	12010.00	26.07	54.00	-27.93	12.81	13.26	Average	100	211
8	12010.00	56.17	74.00	-17.83	42.91	13.26	Peak	100	211

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).

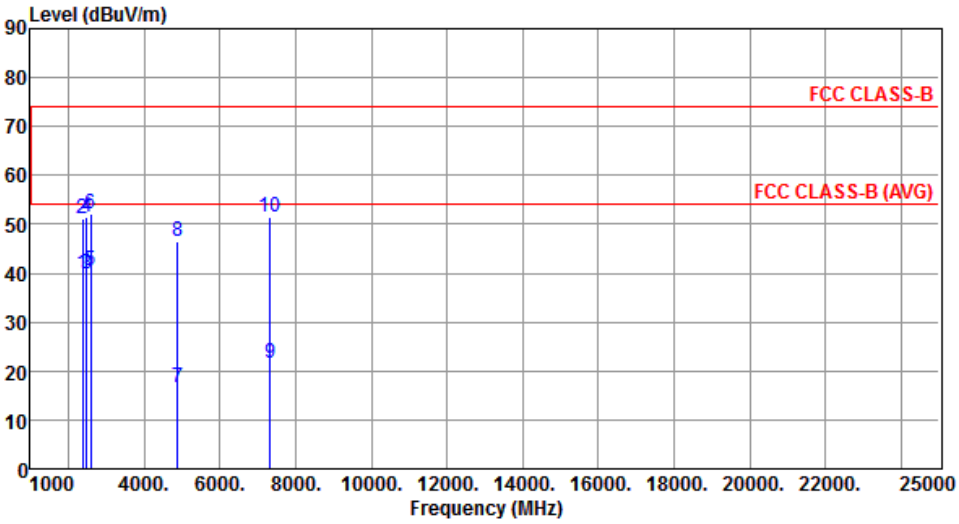
Modulation	GFSK	**Test Freq. (MHz)**	2402
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	39.77	54.00	-14.23	42.84	-3.07	Average	100	319
2	2390.00	51.45	74.00	-22.55	54.52	-3.07	Peak	100	319
3	2562.00	41.03	54.00	-12.97	44.21	-3.18	Average	100	319
4	2562.00	50.68	74.00	-23.32	53.86	-3.18	Peak	100	319
5	4804.00	16.35	54.00	-37.65	12.85	3.50	Average	100	188
6	4804.00	46.45	74.00	-27.55	42.95	3.50	Peak	100	188
7	12010.00	26.36	54.00	-27.64	13.10	13.26	Average	100	171
8	12010.00	56.46	74.00	-17.54	43.20	13.26	Peak	100	171

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).

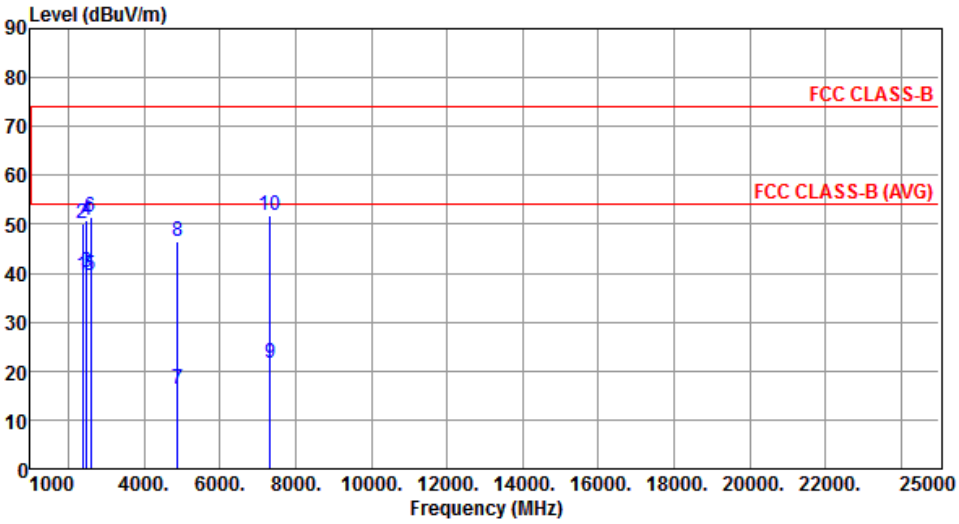
Modulation	GFSK	**Test Freq. (MHz)**	2441
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	39.77	54.00	-14.23	42.84	-3.07	Average	215	63
2	2390.00	51.24	74.00	-22.76	54.31	-3.07	Peak	215	63
3	2483.50	39.72	54.00	-14.28	42.94	-3.22	Average	215	63
4	2483.50	51.41	74.00	-22.59	54.63	-3.22	Peak	215	63
5	2601.00	40.58	54.00	-13.42	43.64	-3.06	Average	215	63
6	2601.00	52.12	74.00	-21.88	55.18	-3.06	Peak	215	63
7	4882.00	16.46	54.00	-37.54	12.85	3.61	Average	100	228
8	4882.00	46.56	74.00	-27.44	42.95	3.61	Peak	100	228
9	7323.00	21.54	54.00	-32.46	12.75	8.79	Average	100	225
10	7323.00	51.64	74.00	-22.36	42.85	8.79	Peak	100	225

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).

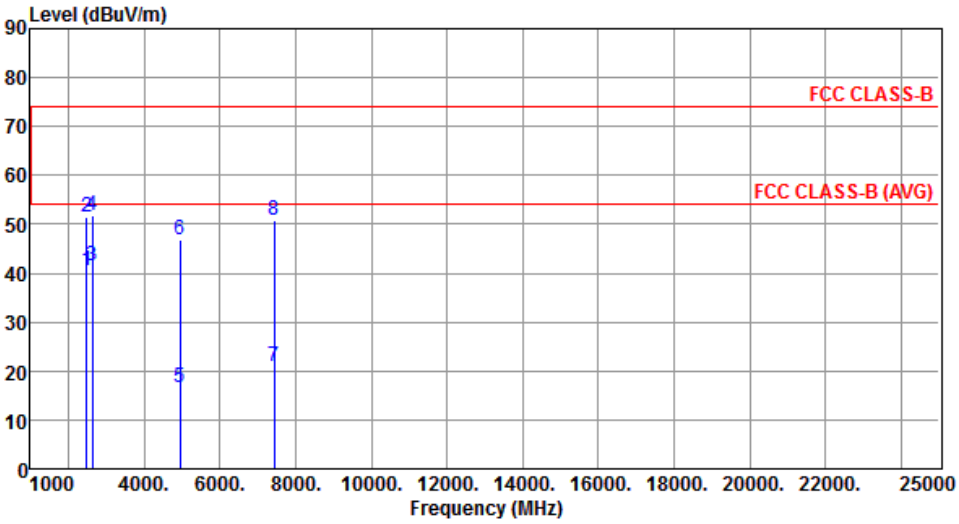
Modulation	GFSK	Test Freq. (MHz)	2441
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	39.37	54.00	-14.63	42.44	-3.07	Average	100	343
2	2390.00	50.21	74.00	-23.79	53.28	-3.07	Peak	100	343
3	2483.50	40.05	54.00	-13.95	43.27	-3.22	Average	100	343
4	2483.50	50.68	74.00	-23.32	53.90	-3.22	Peak	100	343
5	2601.00	39.45	54.00	-14.55	42.51	-3.06	Average	100	343
6	2601.00	51.57	74.00	-22.43	54.63	-3.06	Peak	100	343
7	4882.00	16.26	54.00	-37.74	12.65	3.61	Average	100	169
8	4882.00	46.36	74.00	-27.64	42.75	3.61	Peak	100	169
9	7323.00	21.55	54.00	-32.45	12.76	8.79	Average	100	159
10	7323.00	51.65	74.00	-22.35	42.86	8.79	Peak	100	159

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).

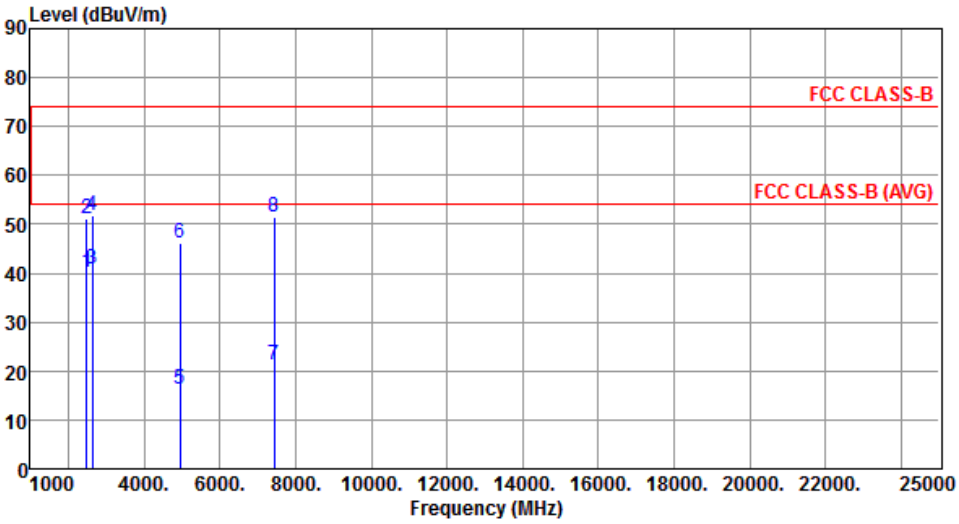
Modulation	GFSK	**Test Freq. (MHz)**	2480
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	40.62	54.00	-13.38	43.84	-3.22	Average	145	66
2	2483.50	51.42	74.00	-22.58	54.64	-3.22	Peak	145	66
3	2640.00	41.66	54.00	-12.34	44.50	-2.84	Average	140	67
4	2640.00	51.92	74.00	-22.08	54.76	-2.84	Peak	140	67
5	4960.00	16.60	54.00	-37.40	12.74	3.86	Average	100	228
6	4960.00	46.70	74.00	-27.30	42.84	3.86	Peak	100	228
7	7440.00	20.80	54.00	-33.20	12.26	8.54	Average	100	224
8	7440.00	50.90	74.00	-23.10	42.36	8.54	Peak	100	224

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).

Modulation	GFSK	Test Freq. (MHz)	2480
Polarization	Vertical		

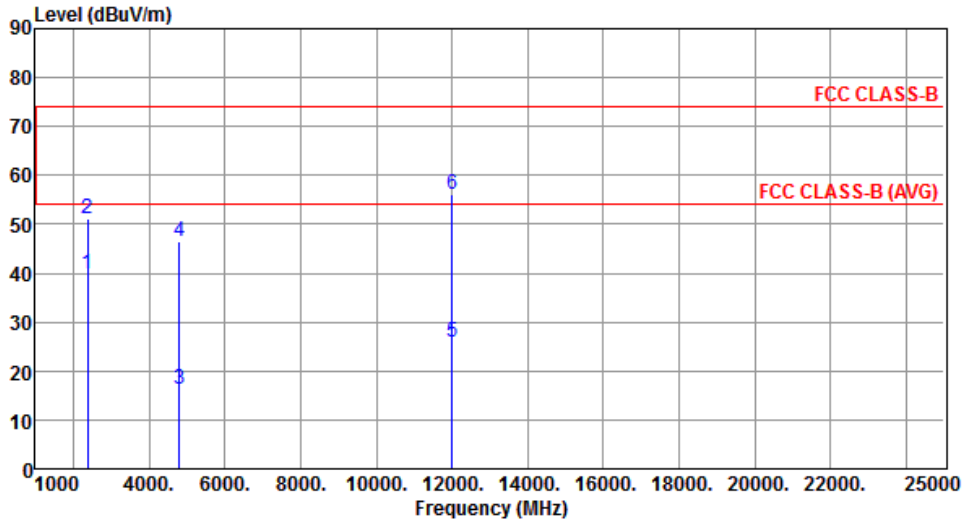


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	40.32	54.00	-13.68	43.54	-3.22	Average	100	339
2	2483.50	51.06	74.00	-22.94	54.28	-3.22	Peak	100	339
3	2640.00	40.99	54.00	-13.01	43.83	-2.84	Average	100	339
4	2640.00	51.79	74.00	-22.21	54.63	-2.84	Peak	100	339
5	4960.00	16.23	54.00	-37.77	12.37	3.86	Average	100	163
6	4960.00	46.33	74.00	-27.67	42.47	3.86	Peak	100	163
7	7440.00	21.40	54.00	-32.60	12.86	8.54	Average	100	159
8	7440.00	51.50	74.00	-22.50	42.96	8.54	Peak	100	159

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).

3.2.6 Transmitter Radiated Unwanted Emissions (Above 1GHz) for 8DPSK

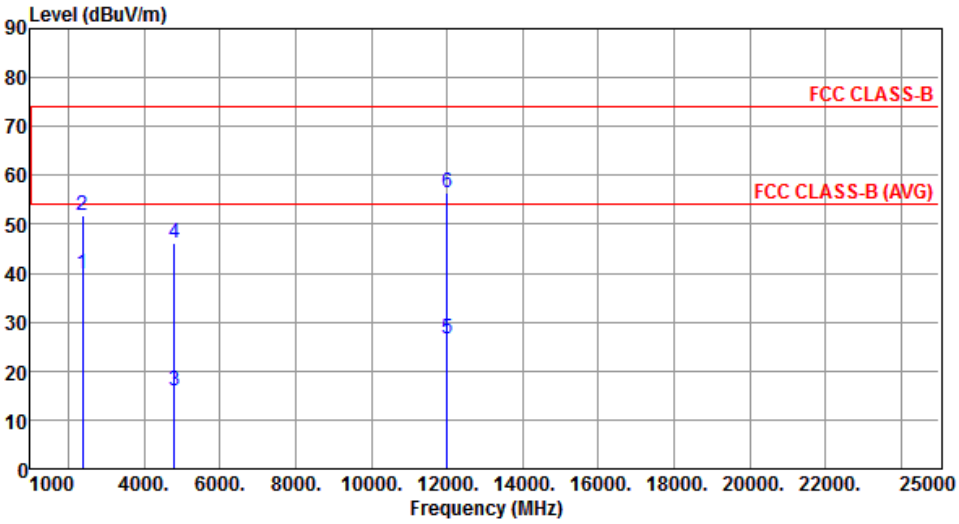
Modulation	8DPSK	Test Freq. (MHz)	2402
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	39.89	54.00	-14.11	42.96	-3.07	Average	179	62
2	2390.00	51.21	74.00	-22.79	54.28	-3.07	Peak	179	62
3	4804.00	16.30	54.00	-37.70	12.80	3.50	Average	100	225
4	4804.00	46.40	74.00	-27.60	42.90	3.50	Peak	100	225
5	12010.00	26.04	54.00	-27.96	12.78	13.26	Average	100	218
6	12010.00	56.14	74.00	-17.86	42.88	13.26	Peak	100	218

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).

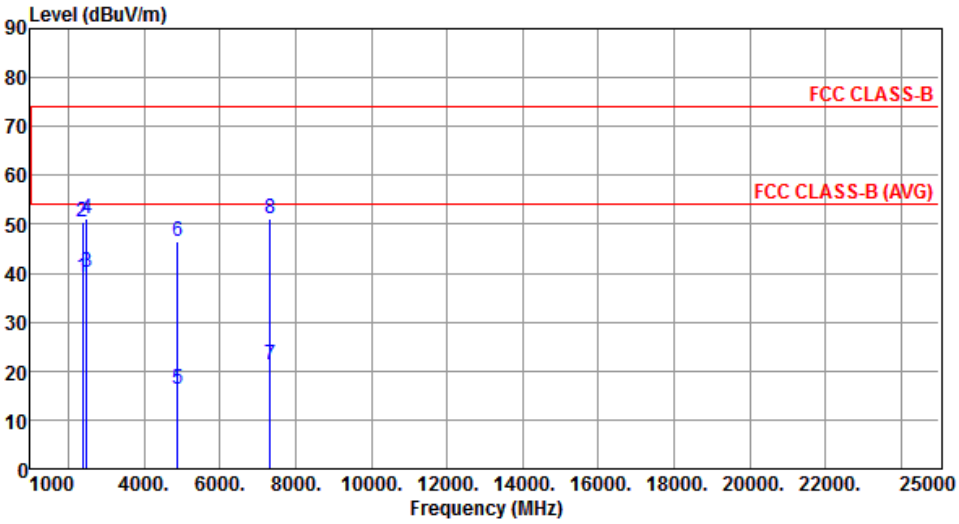
Modulation	8DPSK	**Test Freq. (MHz)**	2402
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	39.88	54.00	-14.12	42.95	-3.07	Average	100	328
2	2390.00	51.78	74.00	-22.22	54.85	-3.07	Peak	100	328
3	4804.00	15.94	54.00	-38.06	12.44	3.50	Average	100	192
4	4804.00	46.04	74.00	-27.96	42.54	3.50	Peak	100	192
5	12010.00	26.41	54.00	-27.59	13.15	13.26	Average	100	176
6	12010.00	56.51	74.00	-17.49	43.25	13.26	Peak	100	176

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).

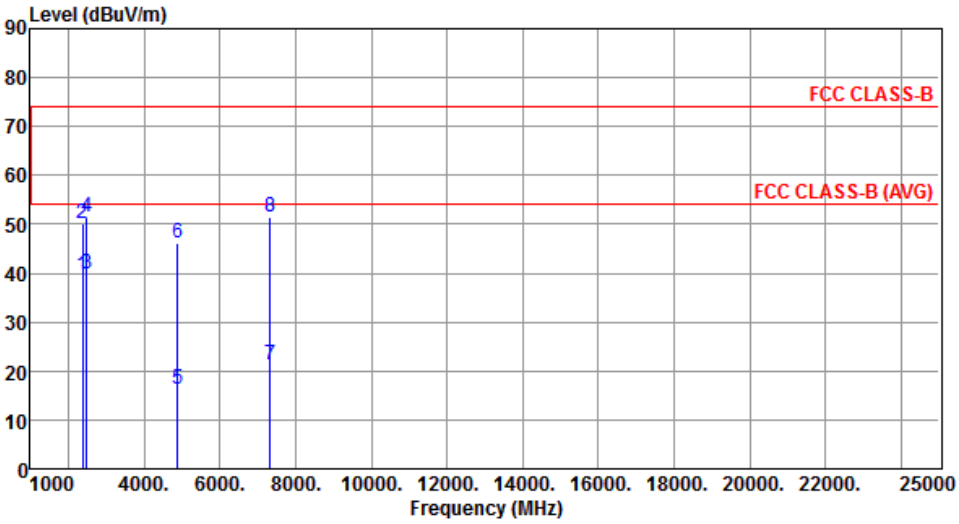
Modulation	8DPSK	Test Freq. (MHz)	2441
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	39.23	54.00	-14.77	42.30	-3.07	Average	222	59
2	2390.00	50.33	74.00	-23.67	53.40	-3.07	Peak	222	59
3	2483.50	40.34	54.00	-13.66	43.56	-3.22	Average	222	59
4	2483.50	51.06	74.00	-22.94	54.28	-3.22	Peak	222	59
5	4882.00	16.23	54.00	-37.77	12.62	3.61	Average	100	230
6	4882.00	46.33	74.00	-27.67	42.72	3.61	Peak	100	230
7	7323.00	21.15	54.00	-32.85	12.36	8.79	Average	100	224
8	7323.00	51.25	74.00	-22.75	42.46	8.79	Peak	100	224

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).

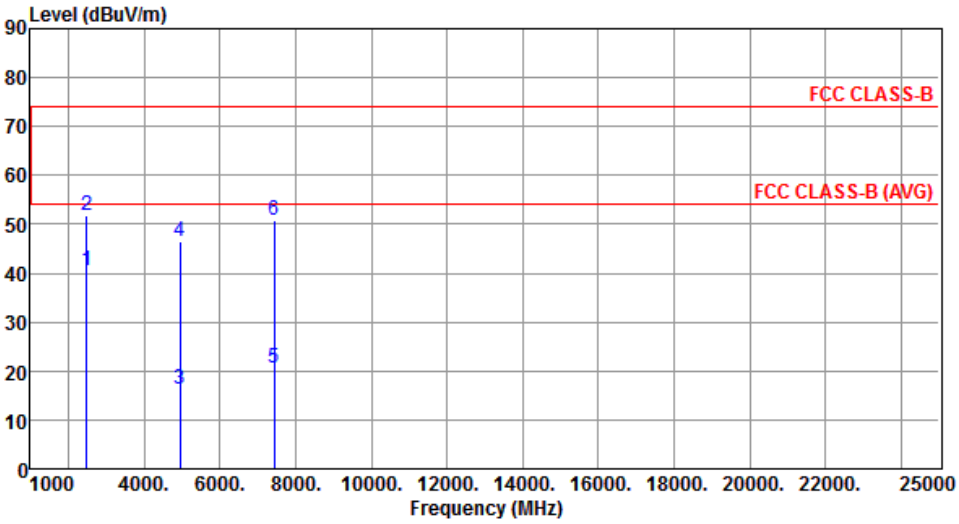
Modulation	8DPSK	Test Freq. (MHz)	2441
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	39.57	54.00	-14.43	42.64	-3.07	Average	100	338
2	2390.00	50.17	74.00	-23.83	53.24	-3.07	Peak	100	338
3	2483.50	39.98	54.00	-14.02	43.20	-3.22	Average	100	338
4	2483.50	51.38	74.00	-22.62	54.60	-3.22	Peak	100	338
5	4882.00	16.16	54.00	-37.84	12.55	3.61	Average	100	175
6	4882.00	46.26	74.00	-27.74	42.65	3.61	Peak	100	175
7	7323.00	21.41	54.00	-32.59	12.62	8.79	Average	100	161
8	7323.00	51.51	74.00	-22.49	42.72	8.79	Peak	100	161

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).

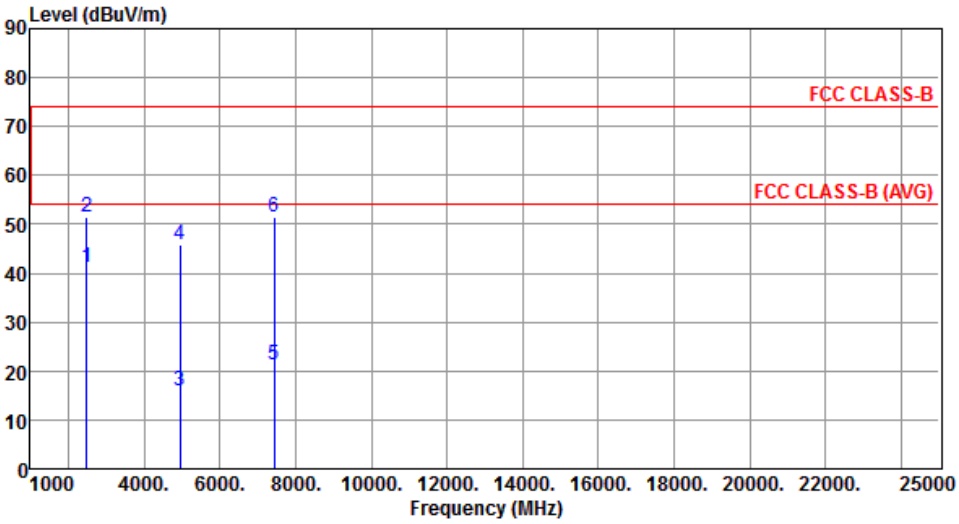
Modulation	8DPSK	**Test Freq. (MHz)**	2480
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	40.36	54.00	-13.64	43.58	-3.22	Average	144	69
2	2483.50	51.74	74.00	-22.26	54.96	-3.22	Peak	145	144
3	4960.00	16.24	54.00	-37.76	12.38	3.86	Average	100	225
4	4960.00	46.34	74.00	-27.66	42.48	3.86	Peak	100	225
5	7440.00	20.65	54.00	-33.35	12.11	8.54	Average	100	226
6	7440.00	50.75	74.00	-23.25	42.21	8.54	Peak	100	226

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).

Modulation	8DPSK	Test Freq. (MHz)	2480
Polarization	Vertical		



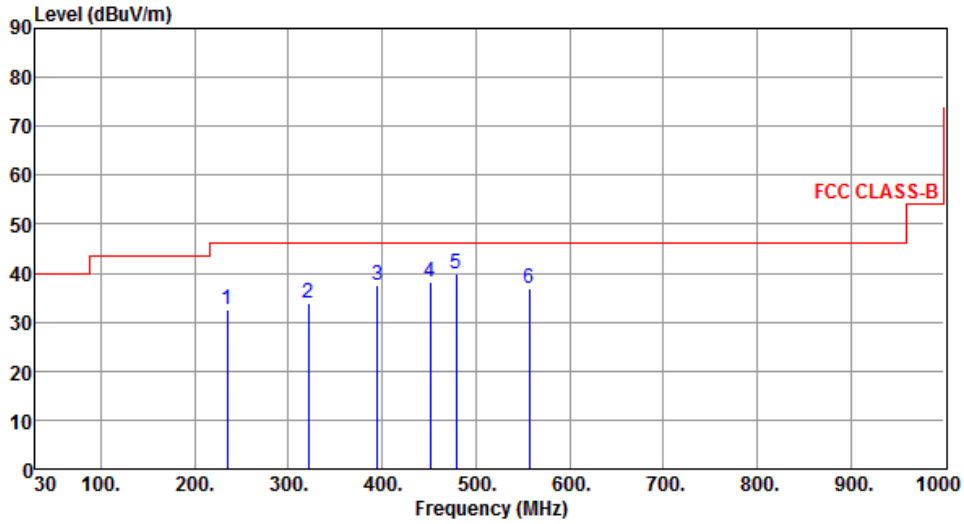
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	41.18	54.00	-12.82	44.40	-3.22	Average	100	328
2	2483.50	51.34	74.00	-22.66	54.56	-3.22	Peak	100	328
3	4960.00	15.89	54.00	-38.11	12.03	3.86	Average	100	159
4	4960.00	45.99	74.00	-28.01	42.13	3.86	Peak	100	159
5	7440.00	21.28	54.00	-32.72	12.74	8.54	Average	100	161
6	7440.00	51.38	74.00	-22.62	42.84	8.54	Peak	100	161

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 1: Ant. No. 112

3.2.7 Transmitter Radiated Unwanted Emissions (Below 1GHz)

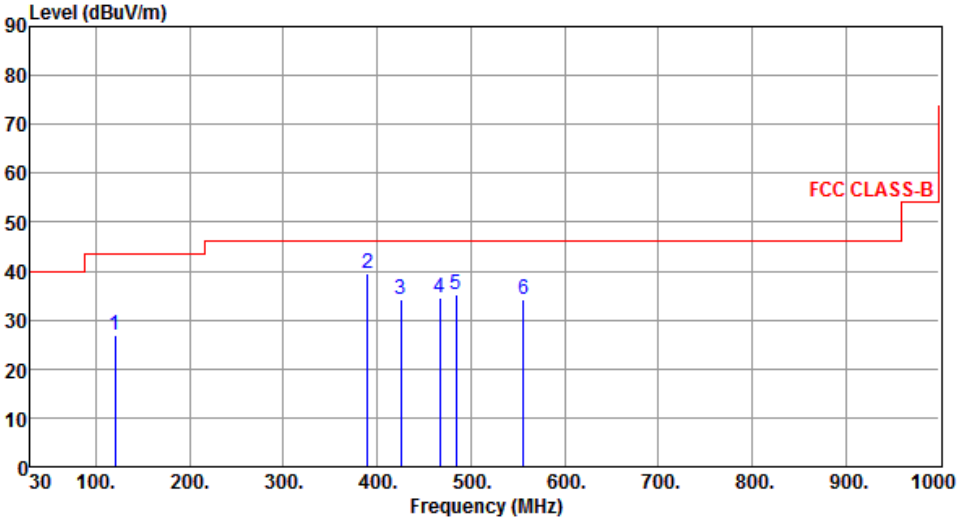
Modulation	8DPSK	**Test Freq. (MHz)**	2441
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	234.62	32.66	46.00	-13.34	43.60	-10.94	Peak	---	---
2	321.32	33.84	46.00	-12.16	41.23	-7.39	Peak	---	---
3	394.64	37.64	46.00	-8.36	43.25	-5.61	Peak	---	---
4	451.63	38.31	46.00	-7.69	42.42	-4.11	Peak	---	---
5	478.65	39.95	46.00	-6.05	43.55	-3.60	Peak	---	---
6	557.25	36.99	46.00	-9.01	39.33	-2.34	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.

Modulation	8DPSK	**Test Freq. (MHz)**	2441
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	120.65	26.82	43.50	-16.68	37.50	-10.68	Peak	---	---
2	389.58	39.63	46.00	-6.37	45.36	-5.73	Peak	---	---
3	425.25	34.28	46.00	-11.72	39.08	-4.80	Peak	---	---
4	466.58	34.52	46.00	-11.48	38.29	-3.77	Peak	---	---
5	484.52	35.25	46.00	-10.75	38.72	-3.47	Peak	---	---
6	556.32	34.17	46.00	-11.83	36.53	-2.36	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.

3.3 Unwanted Emissions into Non-Restricted Frequency Bands

3.3.1 Limit of Unwanted Emissions into Non-Restricted Frequency Bands

Peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz.

3.3.2 Test Procedures

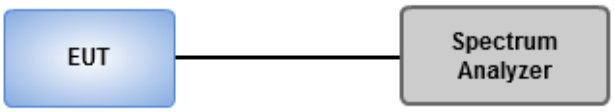
Reference level measurement

1. Set RBW=100kHz, VBW = 300kHz , Detector = Peak, Sweep time = Auto
2. Trace = max hold , Allow Trace to fully stabilize
3. Use the peak marker function to determine the maximum PSD level

Emission level measurement

1. Set RBW=100kHz, VBW = 300kHz , Detector = Peak, Sweep time = Auto
2. Trace = max hold , Allow Trace to fully stabilize
3. Scan Frequency range is up to 25GHz
4. Use the peak marker function to determine the maximum amplitude level

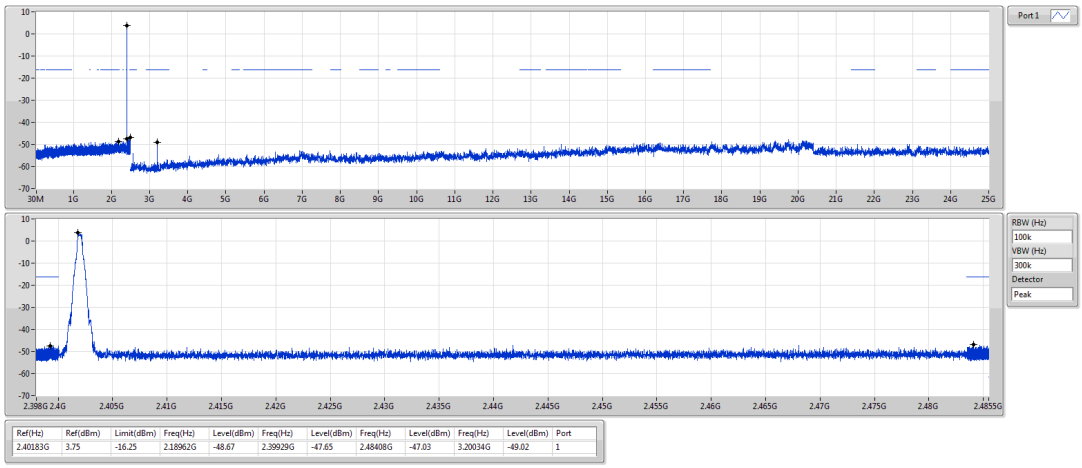
3.3.3 Test Setup



3.3.4 Unwanted Emissions into Non-Restricted Frequency Bands

BT-BR(1Mbps) **CSE NdB**

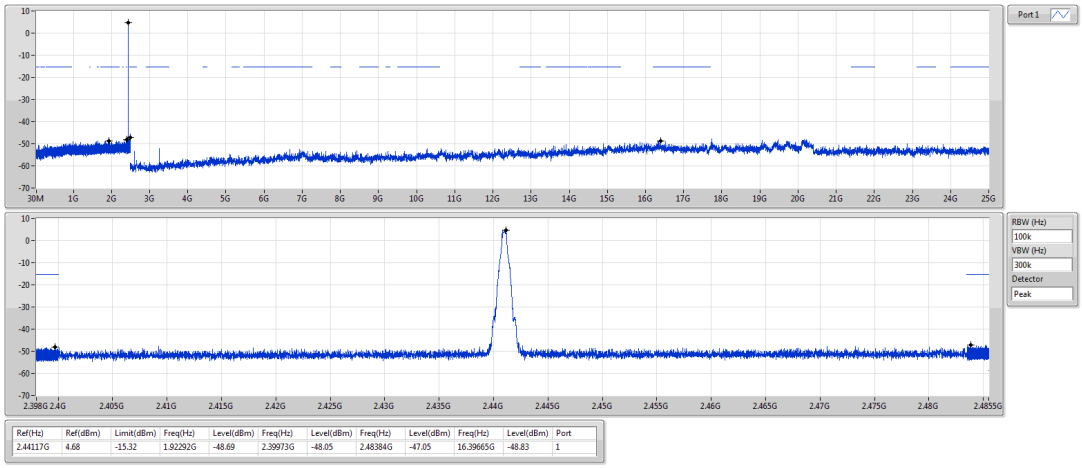
2402MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.40183G	3.75	-16.25	2.18962G	-48.67	2.39929G	-47.65	2.48408G	-47.03	3.20034G	-49.02	1

BT-BR(1Mbps) **CSE NdB**

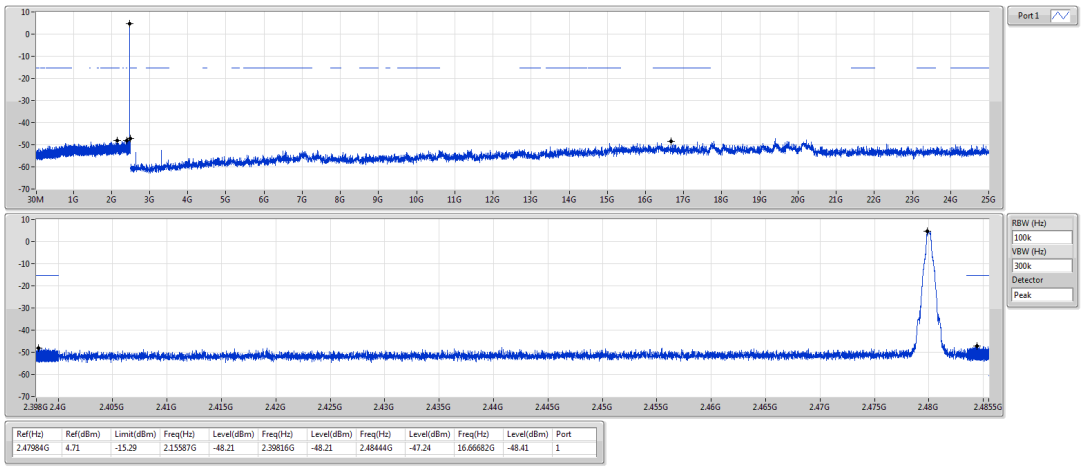
2441MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44117G	4.68	-15.32	1.92292G	-48.69	2.39973G	-48.05	2.48384G	-47.05	16.39665G	-48.83	1

BT-BR(1Mbps) **CSE NdB**

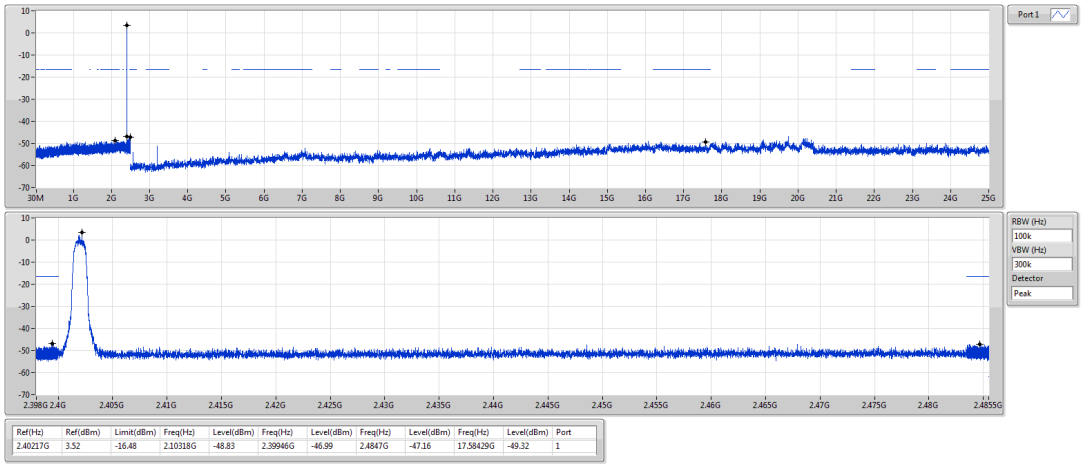
2480MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.47984G	4.71	-15.29	2.15587G	-48.21	2.39816G	-48.21	2.48444G	-47.24	16.66682G	-48.41	1

BT-EDR(2Mbps) **CSE NdB**

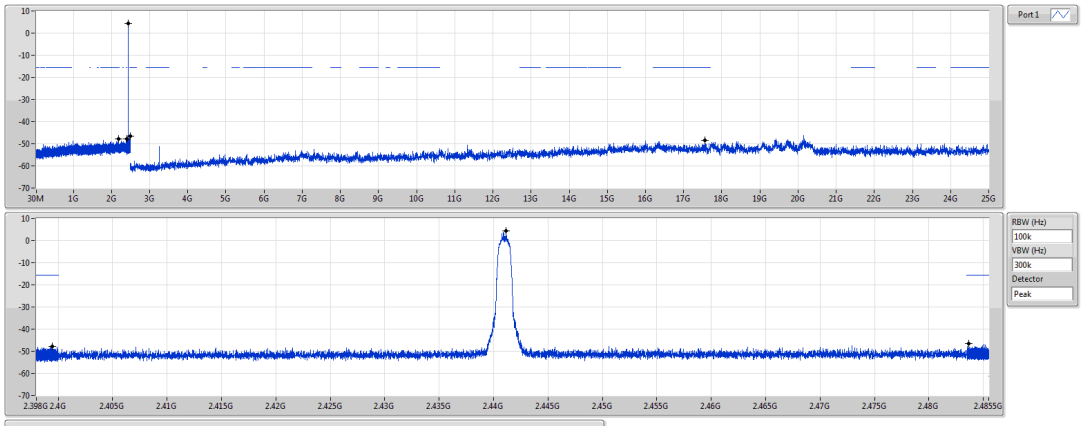
2402MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.40217G	3.52	-16.48	2.10318G	-48.83	2.39946G	-46.99	2.4847G	-47.16	17.5842 9G	-49.32	1

BT-EDR(2Mbps) **CSE NdB**

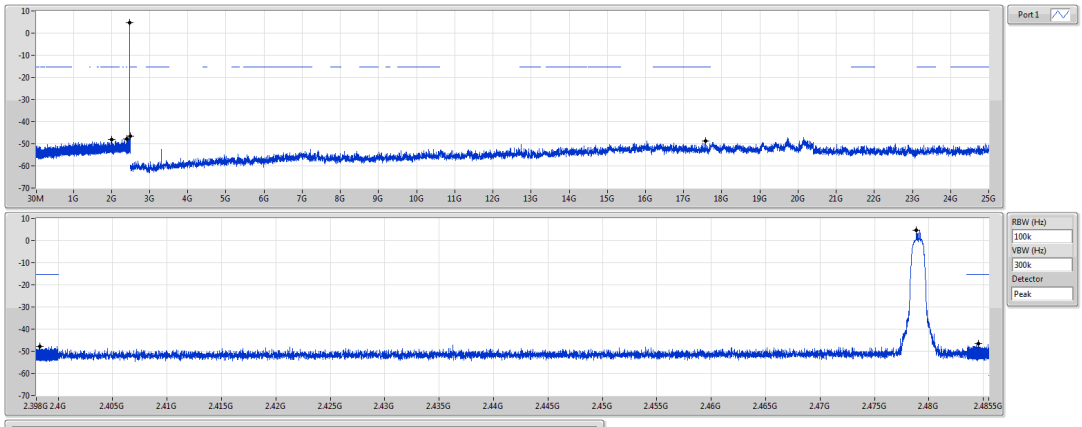
2441MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44118G	4.48	-15.52	2.18962G	-47.90	2.39946G	-47.92	2.48366G	-46.65	17.56459G	-48.33	1

BT-EDR(2Mbps) **CSE NdB**

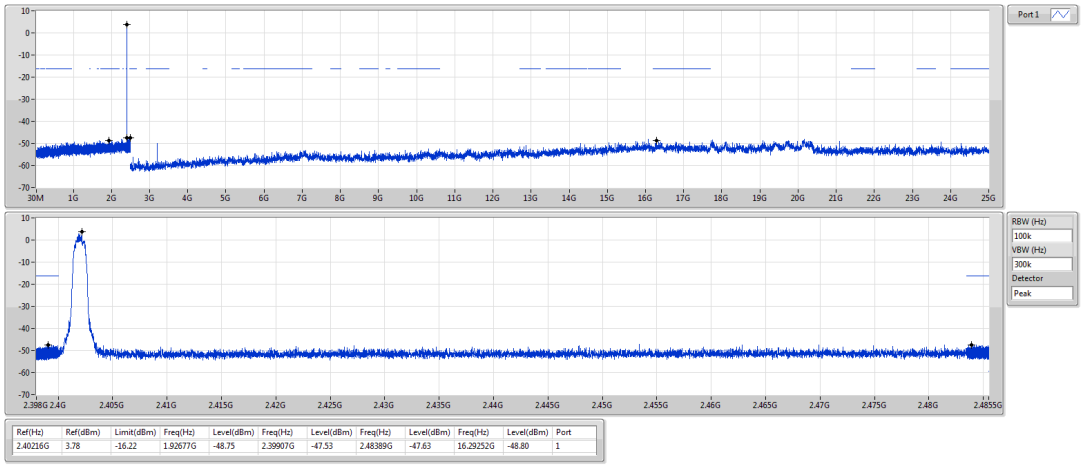
2480MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.47884G	4.61	-15.39	2.00639G	-48.26	2.39832G	-47.74	2.48454G	-46.41	17.57022G	-48.75	1

BT-EDR(3Mbps) **CSE NdB**

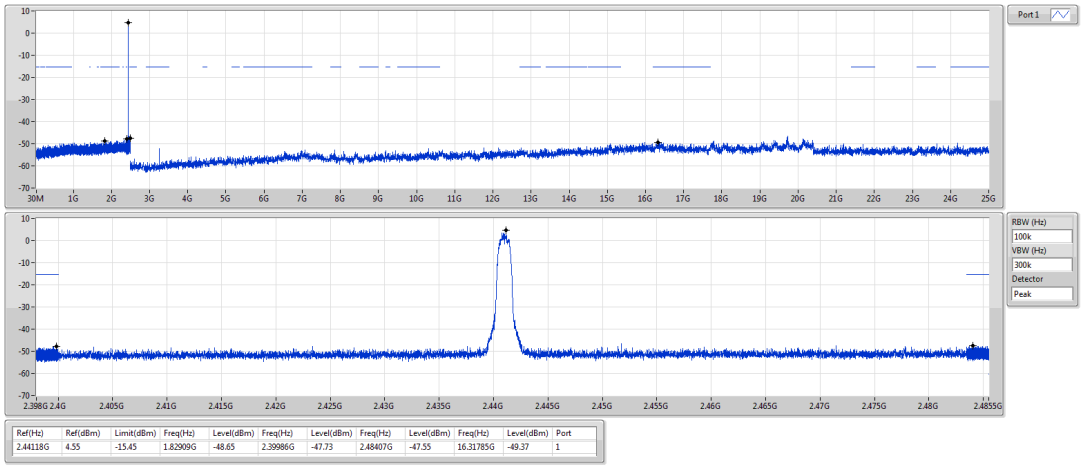
2402MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.40216G	3.78	-16.22	1.92677G	-48.75	2.39907G	-47.53	2.48389G	-47.63	16.29252G	-48.80	1

BT-EDR(3Mbps) **CSE NdB**

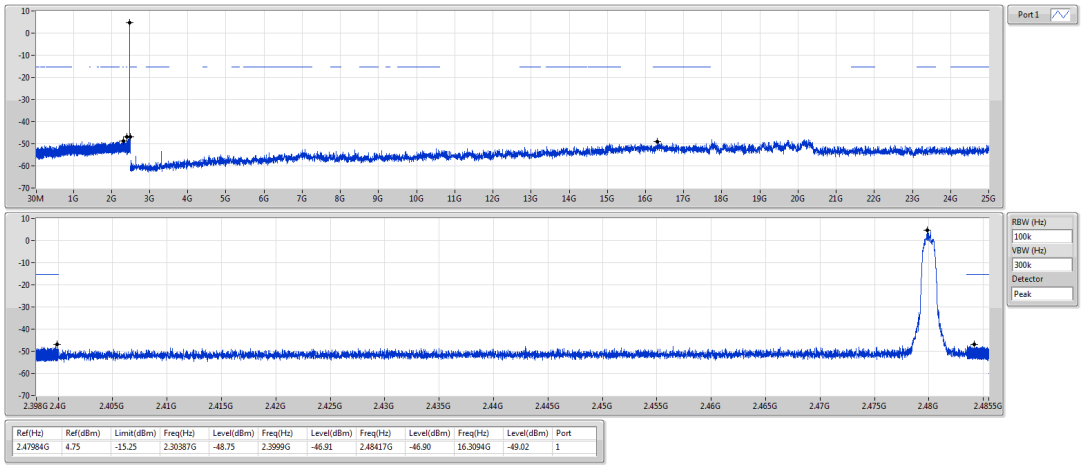
2441MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44118G	4.55	-15.45	1.82909G	-48.65	2.39986G	-47.73	2.48407G	-47.55	16.31785G	-49.37	1

BT-EDR(3Mbps) **CSE NdB**

2480MHz

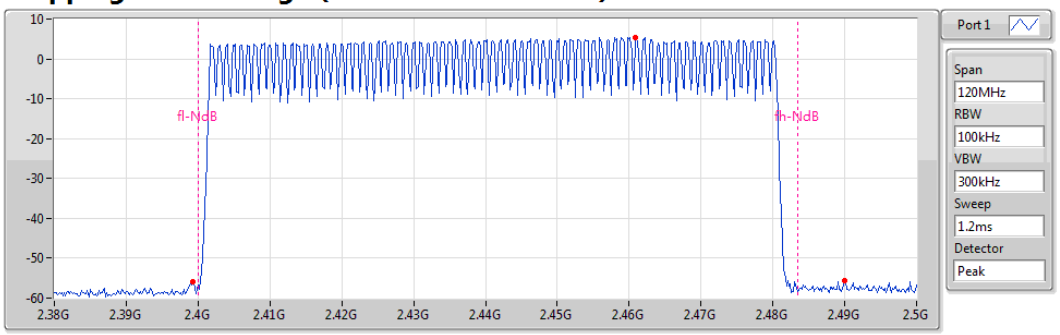


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.47984G	4.75	-15.25	2.30387G	-48.75	2.3999G	-46.91	2.48417G	-46.90	16.3094G	-49.02	1

BT-BR(1Mbps)

2441MHz

Hopping Ch Bandedge (Non-restricted Band)

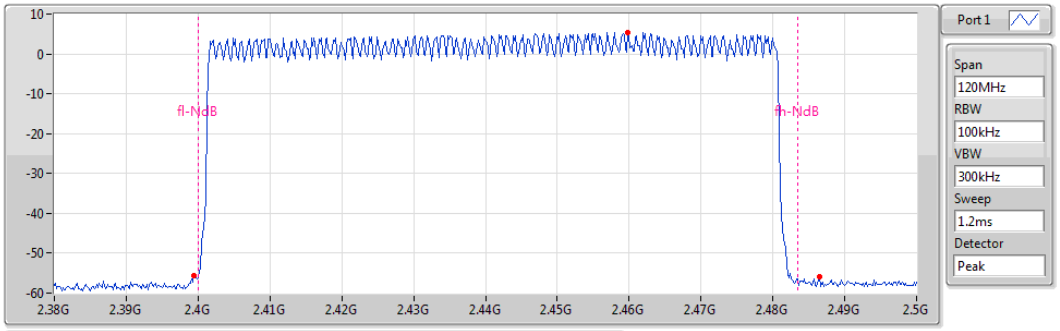


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-14.58	2.46087G	5.42	2.399304G	-55.87	2.489913G	-55.76

BT-EDR(2Mbps)

2441MHz

Hopping Ch Bandedge (Non-restricted Band)

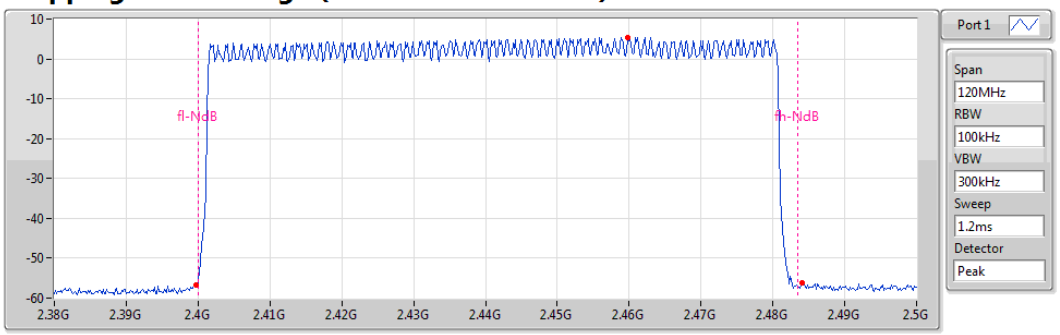


Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-14.56	2.459826G	5.44	2.399478G	-55.55	2.486435G	-55.98

BT-EDR(3Mbps)

2441MHz

Hopping Ch Bandedge (Non-restricted Band)



Limit(dBm)	Ref(Hz)	Ref(dBm)	BE-l(Hz)	BE-l(dBm)	BE-h(Hz)	BE-h(dBm)
-14.55	2.459826G	5.45	2.399652G	-56.68	2.484G	-56.05

3.4 Conducted Output Power

3.4.1 Limit of Conducted Output Power

☐ 1 Watt
For frequency hopping systems operating in the 2400–2483.5 MHz band employing at least 75 non overlapping hopping channels, and all frequency hopping systems in the 5725–5850 MHz band.

☒ 0.125 Watt
For all other frequency hopping systems in the 2400–2483.5 MHz band.

☐ 0.125 Watt
For Frequency hopping systems operating in the 2400–2483.5 MHz band have hopping channel carrier frequencies that are separated by two-thirds of the 20 dB bandwidth of the hopping channel.

3.4.2 Test Procedures

1. A wideband power meter is used for power measurement. Bandwidth of power senor and meter is 50MHz

2 If duty cycle of test signal is not 100 %, trigger and gating function of power meter will be enabled to capture transmission burst for measuring output power

3.4.3 Test Setup

3.4.4 Test Result of Conducted Output Power

Summary of Peak Conducted Output Power

Mode	Power (dBm)	Power (W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	5.64	0.00366
BT-EDR(2Mbps)	6.93	0.00493
BT-EDR(3Mbps)	7.42	0.00552

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	-0.26	4.79	21.00
2441MHz	Pass	-0.26	5.64	21.00
2480MHz	Pass	-0.26	5.63	21.00
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	-0.26	6.10	21.00
2441MHz	Pass	-0.26	6.93	21.00
2480MHz	Pass	-0.26	6.92	21.00
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	-0.26	6.64	21.00
2441MHz	Pass	-0.26	7.42	21.00
2480MHz	Pass	-0.26	7.41	21.00

Summary of Conducted (Average) Output Power

Mode	Power	Power
	(dBm)	(W)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	5.36	0.00344
BT-EDR(2Mbps)	4.36	0.00273
BT-EDR(3Mbps)	4.38	0.00274

Result

Mode	Result	Gain (dBi)	Power (dBm)	Power Limit (dBm)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	-0.26	4.48	
2441MHz	Pass	-0.26	5.36	
2480MHz	Pass	-0.26	5.35	
BT-EDR(2Mbps)	-	-	-	
2402MHz	Pass	-0.26	3.48	
2441MHz	Pass	-0.26	4.36	
2480MHz	Pass	-0.26	4.35	
BT-EDR(3Mbps)	-	-	-	
2402MHz	Pass	-0.26	3.52	
2441MHz	Pass	-0.26	4.38	
2480MHz	Pass	-0.26	4.36	

Note: Average power is for reference only.

3.5 Number of Hopping Frequency

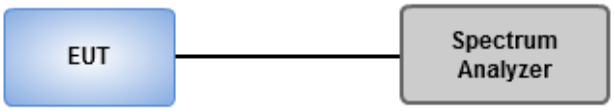
3.5.1 Limit of Number of Hopping Frequency

Frequency hopping systems in the 2400–2483.5 MHz band shall use at least 15 channels.

3.5.2 Test Procedures

1. Set RBW = 100kHz, VBW = 300kHz, Sweep time = Auto, Detector = Peak Trace max hold.
2 Allow trace to stabilize.

3.5.3 Test Setup



3.5.4 Test Result of Number of Hopping Frequency

Summary

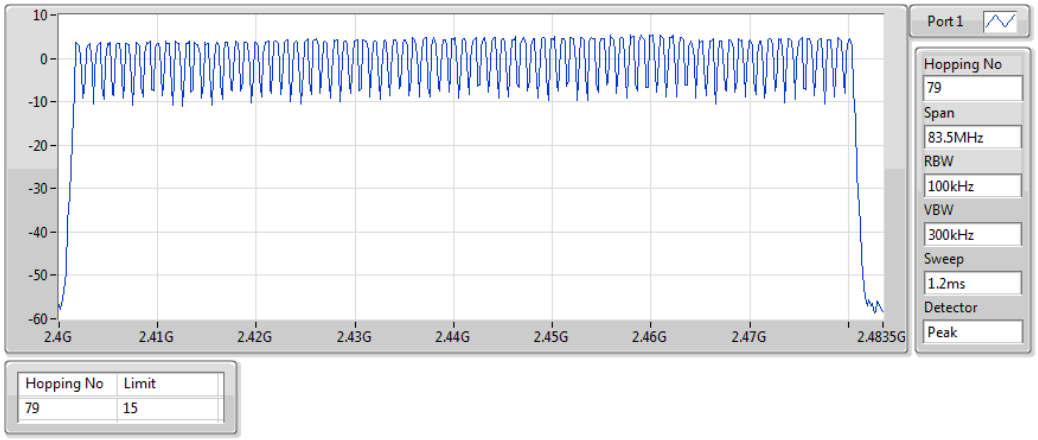
Mode	Max-Hop No
2.4-2.4835GHz	-
BT-BR(1Mbps)	79
BT-EDR(2Mbps)	79
BT-EDR(3Mbps)	79

Result

Mode	Result	Hopping No	Limit
BT-BR(1Mbps)	-	-	-
2441MHz	Pass	79	15
BT-EDR(2Mbps)	-	-	-
2441MHz	Pass	79	15
BT-EDR(3Mbps)	-	-	-
2441MHz	Pass	79	15

BT-BR(1Mbps) **Hopping Ch**

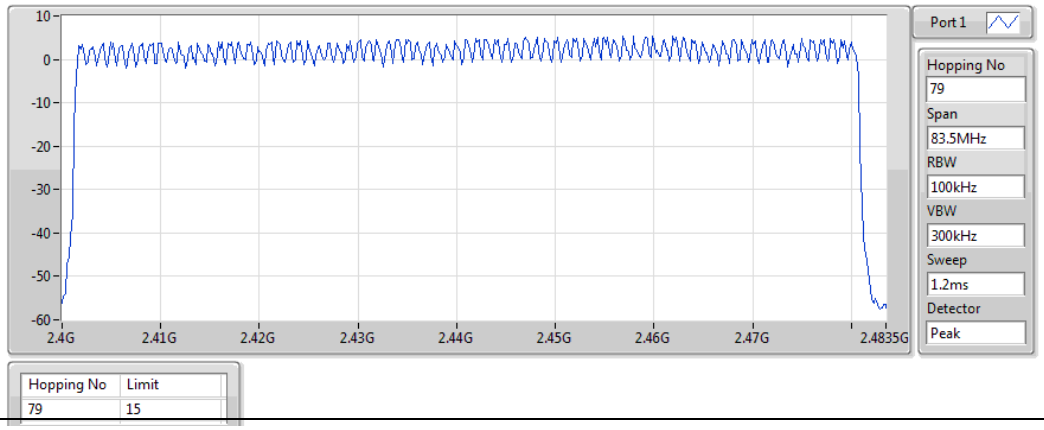
2441MHz



Hopping No	Limit
79	15

BT-EDR(2Mbps) **Hopping Ch**

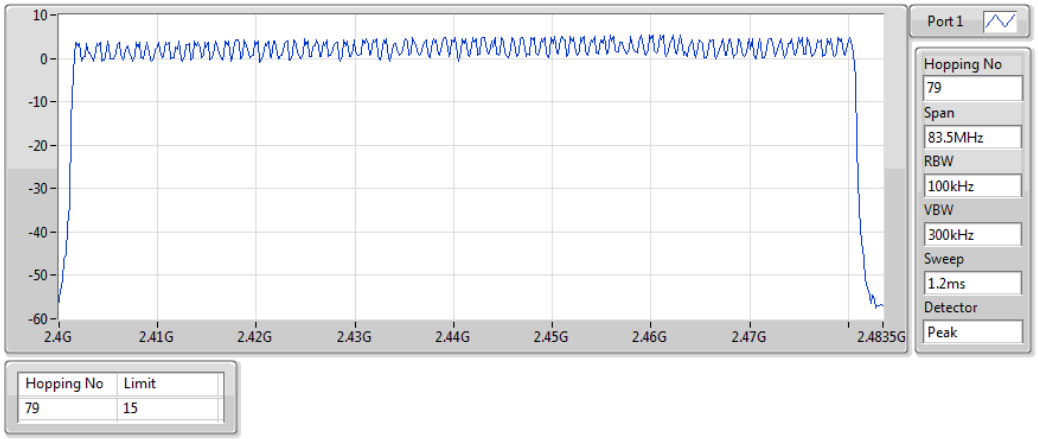
2441MHz



Hopping No	Limit
79	15

BT-EDR(3Mbps) **Hopping Ch**

2441MHz



Hopping No	Limit
79	15

3.6 20dB and Occupied Bandwidth

3.6.1 Test Procedures

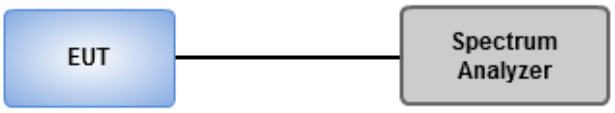
20dB Bandwidth

1. Set RBW=10kHz VBW= 30kHz for BT BR mode, RBW=20kHz, VBW=100kHz for other modes, Sweep time = Auto, Detector=Peak , Trace max hold
2 Allow trace to stabilize
3 Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 20 dB relative to the maximum level measured in the fundamental emission.

Occupied Bandwidth

1. Set RBW=10kHz VBW= 30kHz for BT BR mode, RBW=20kHz, VBW=100kHz for other modes, Sweep time = Auto, Detector=Sample , Trace max hold
2 Allow trace to stabilize
3. Use Occupied bandwidth function of spectrum analyzer to measuring 99% occupied bandwidth

3.6.2 Test Setup



3.6.3 Test result of 20dB and Occupied Bandwidth

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
BT-BR(1Mbps)	923.913k	871.925k	872KF1D	920.29k	857.453k
BT-EDR(2Mbps)	1.333M	1.169M	1M17G1D	1.239M	1.161M
BT-EDR(3Mbps)	1.275M	1.172M	1M17G1D	1.246M	1.158M

Max-N dB = Maximum20dB downbandwidth; **Max-OBW** = Maximum99% occupied bandwidth;
Min-N dB = Minimum20dB downbandwidth; **Min-OBW** = Minimum99% occupied bandwidth;

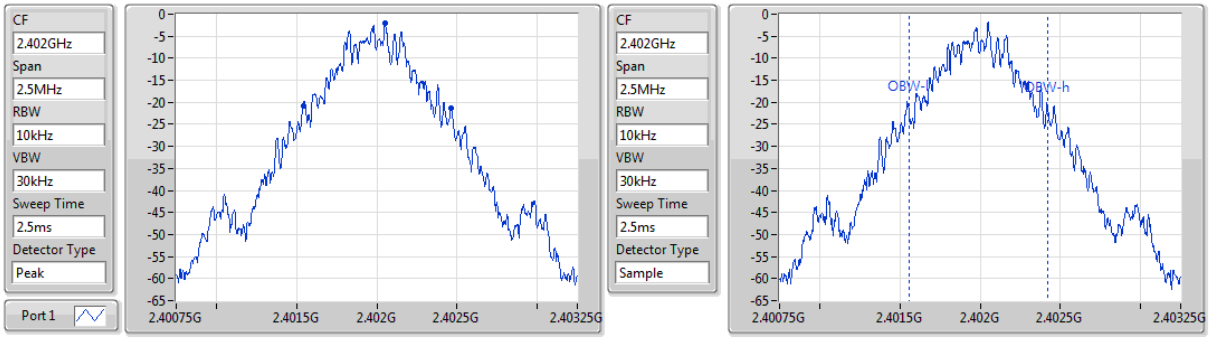
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-BR(1Mbps)	-	-	-	-
2402MHz	Pass	Inf	920.29k	868.307k
2441MHz	Pass	Inf	920.29k	857.453k
2480MHz	Pass	Inf	923.913k	871.925k
BT-EDR(2Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.239M	1.169M
2441MHz	Pass	Inf	1.333M	1.161M
2480MHz	Pass	Inf	1.312M	1.169M
BT-EDR(3Mbps)	-	-	-	-
2402MHz	Pass	Inf	1.264M	1.165M
2441MHz	Pass	Inf	1.246M	1.172M
2480MHz	Pass	Inf	1.275M	1.158M

Port X-N dB = Port **X**20dB downbandwidth; **Port X-OBW** = Port **X**99% occupied bandwidth;

BT-BR(1Mbps) **EBW**

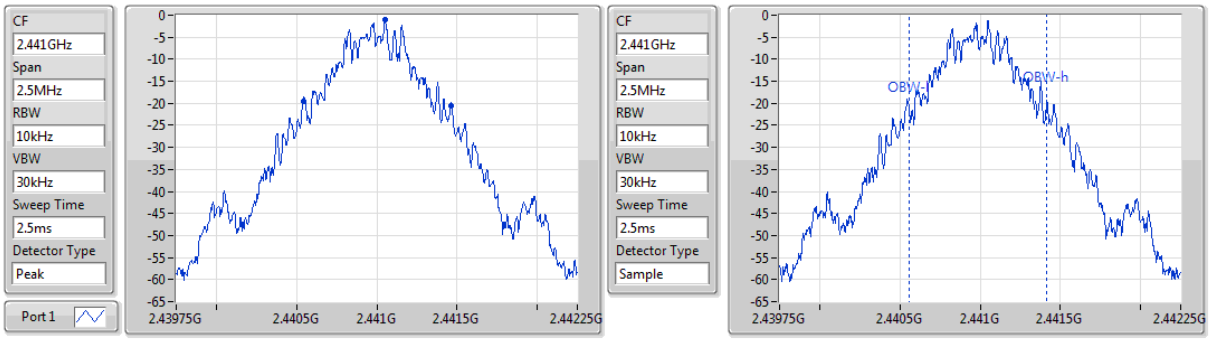
2402MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
920.29k	2.401543G	2.402464G	868.307k	2.401555G	2.402423G	Inf	1

BT-BR(1Mbps) **EBW**

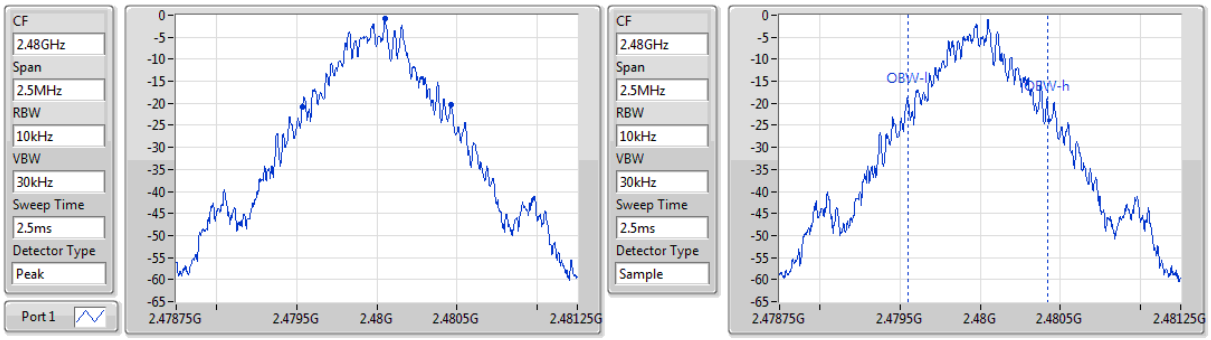
2441MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
920.29k	2.440543G	2.441464G	857.453k	2.440559G	2.441416G	Inf	1

BT-BR(1Mbps) **EBW**

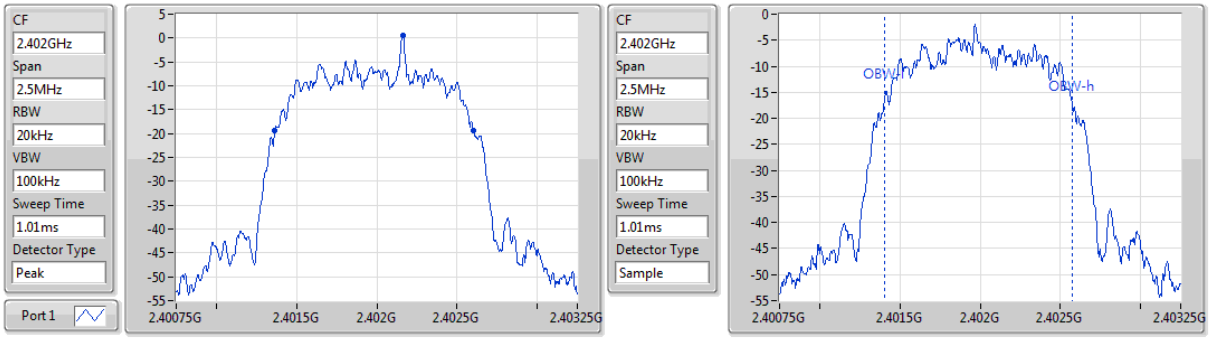
2480MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
923.913k	2.47954G	2.480464G	871.925k	2.479551G	2.480423G	Inf	1

BT-EDR(2Mbps) **EBW**

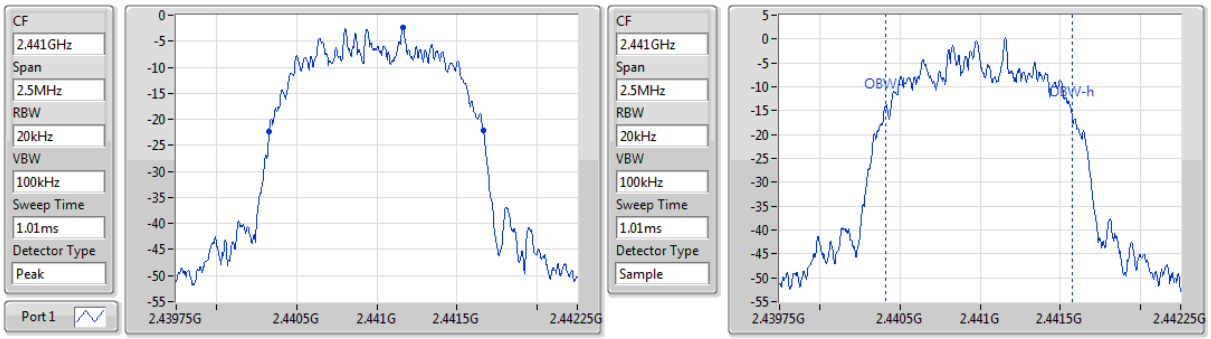
2402MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.239M	2.401366G	2.402605G	1.169M	2.401407G	2.402575G	Inf	1

BT-EDR(2Mbps) **EBW**

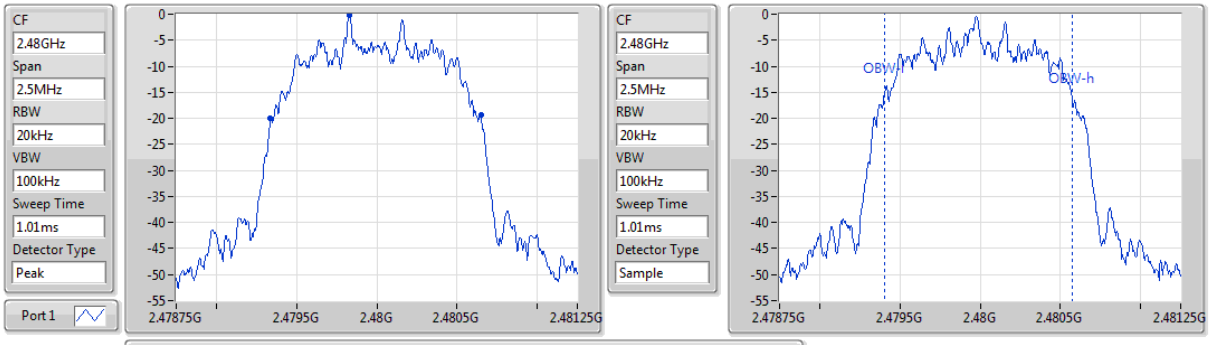
2441MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.333M	2.44033G	2.441663G	1.161M	2.44041G	2.441572G	Inf	1

BT-EDR(2Mbps) **EBW**

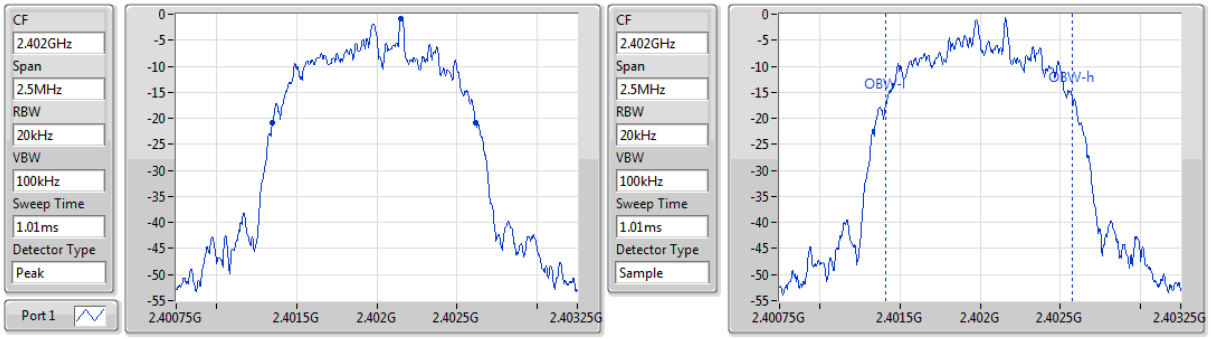
2480MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.312M	2.479337G	2.480649G	1.169M	2.479407G	2.480575G	Inf	1

BT-EDR(3Mbps) **EBW**

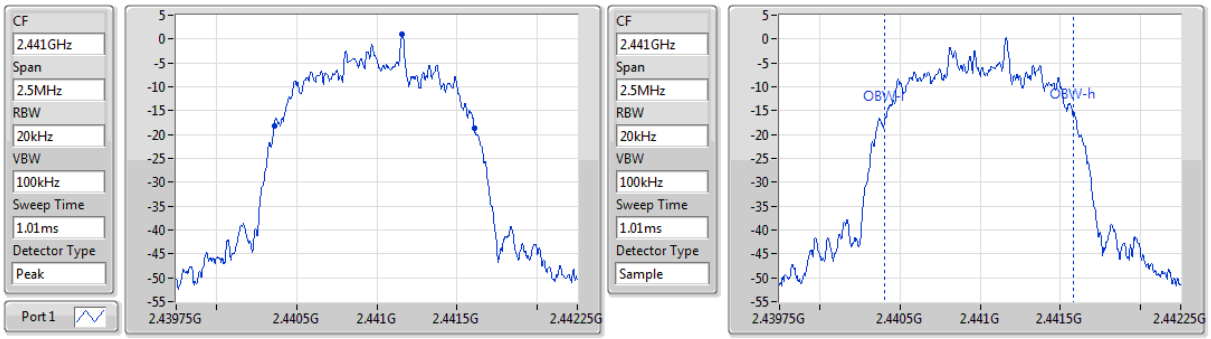
2402MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.264M	2.401351G	2.402616G	1.165M	2.40141G	2.402575G	Inf	1

BT-EDR(3Mbps) **EBW**

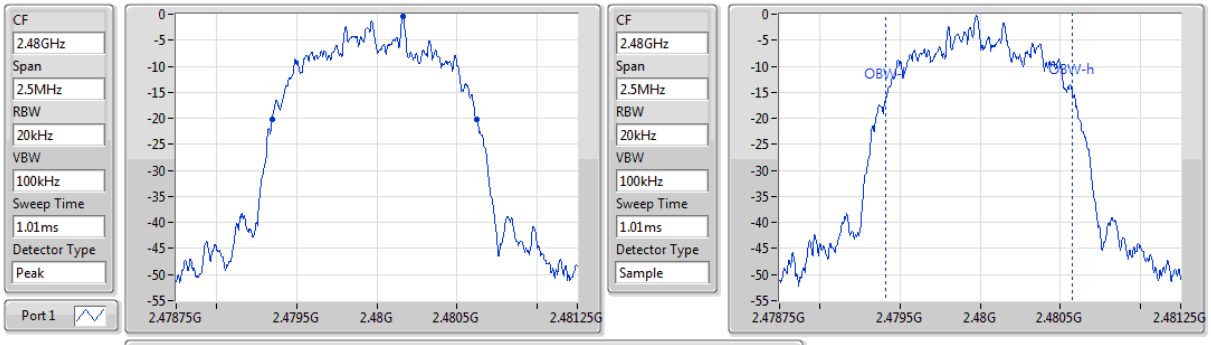
2441MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.246M	2.440362G	2.441609G	1.172M	2.440407G	2.441579G	Inf	1

BT-EDR(3Mbps) **EBW**

2480MHz



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.275M	2.479348G	2.480623G	1.158M	2.479414G	2.480572G	Inf	1

3.7 Channel Separation

3.7.1 Limit of Channel Separation

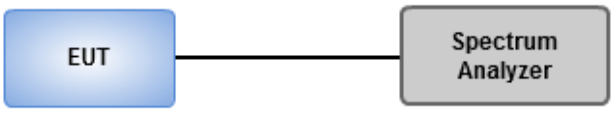
☐ Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

☒ Frequency hopping systems operating in the 2400–2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater.

3.7.2 Test Procedures

1. Set RBW=30kHz, VBW=100kHz,Sweep time = Auto, Detector=Peak Trace max hold
2. Allow trace to stabilize
3. Use the marker-delta function to determine the separation between the peaks of the adjacent channels. The EUT shall show compliance with the appropriate regulatory limit

3.7.3 Test Setup



3.7.4 Test result of Channel Separation

Summary

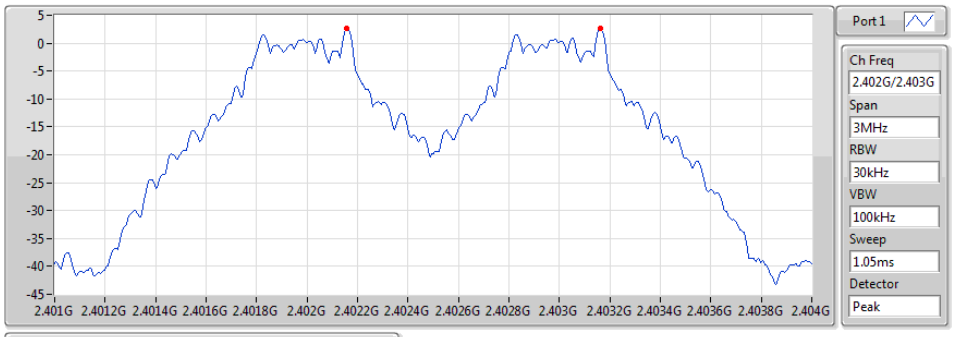
Mode	Max-Space (Hz)	Min-Space (Hz)
2.4-2.4835GHz	-	-
BT-BR(1Mbps)	1.004348M	1M
BT-EDR(2Mbps)	1M	1M
BT-EDR(3Mbps)	1.004348M	1M

Result

Mode	Result	Fl (Hz)	Fh (Hz)	Ch.Space (Hz)	Limit (Hz)
BT-BR(1Mbps)	-	-	-	-	-
2402MHz	Pass	2.402157G	2.403161G	1.004348M	612.91314k
2441MHz	Pass	2.441161G	2.442161G	1M	612.91314k
2480MHz	Pass	2.479161G	2.480161G	1M	615.326058k
BT-EDR(2Mbps)	-	-	-	-	-
2402MHz	Pass	2.402161G	2.403161G	1M	825.174k
2441MHz	Pass	2.441161G	2.442161G	1M	887.778k
2480MHz	Pass	2.479161G	2.480161G	1M	873.792k
BT-EDR(3Mbps)	-	-	-	-	-
2402MHz	Pass	2.402157G	2.403161G	1.004348M	841.824k
2441MHz	Pass	2.441157G	2.442161G	1.004348M	829.836k
2480MHz	Pass	2.479161G	2.480161G	1M	849.15k

BT-BR(1Mbps) **Channel Separation**

2.402G/2.403GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.402157G	2.403161G	1.004348M	612.91314k

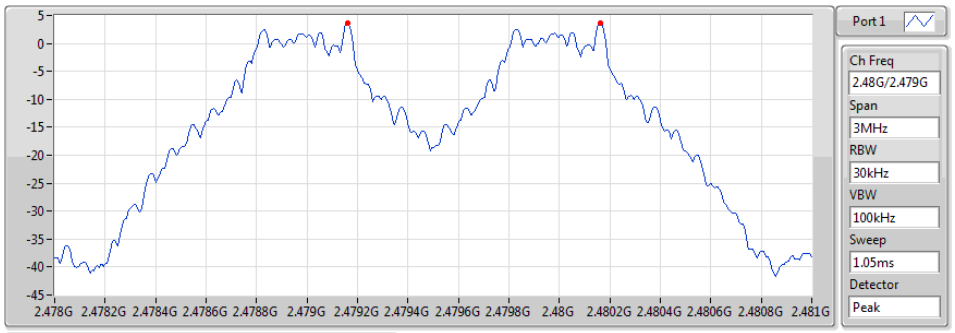
BT-BR(1Mbps) **Channel Separation**

2.441G/2.442GHz

Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.441161G	2.442161G	1M	612.91314k

BT-BR(1Mbps) **Channel Separation**

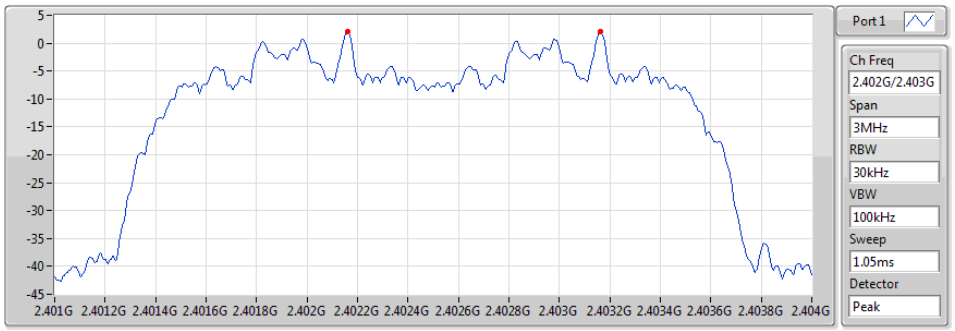
2.48G/2.479GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.479161G	2.480161G	1M	615.326058k

BT-EDR(2Mbps) **Channel Separation**

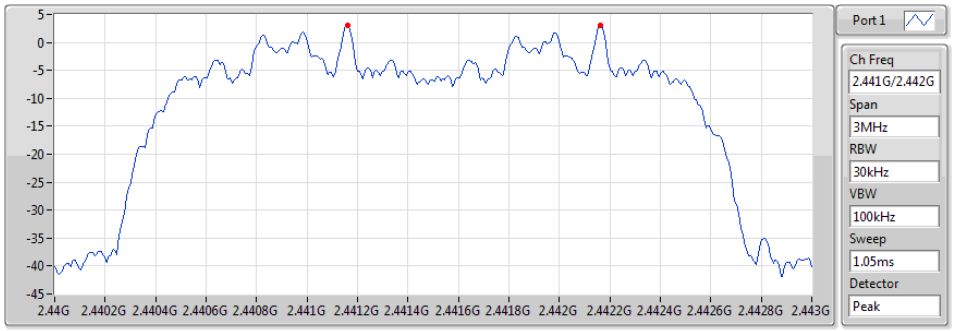
2.402G/2.403GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.402161G	2.403161G	1M	825.174k

BT-EDR(2Mbps) **Channel Separation**

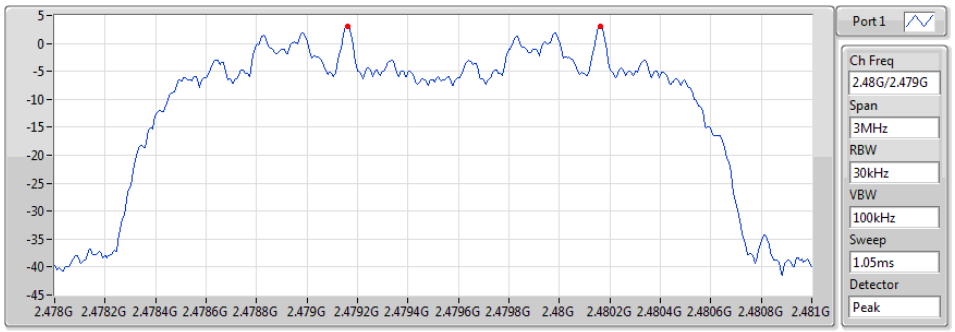
2.441G/2.442GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.441161G	2.442161G	1M	887.778k

BT-EDR(2Mbps) **Channel Separation**

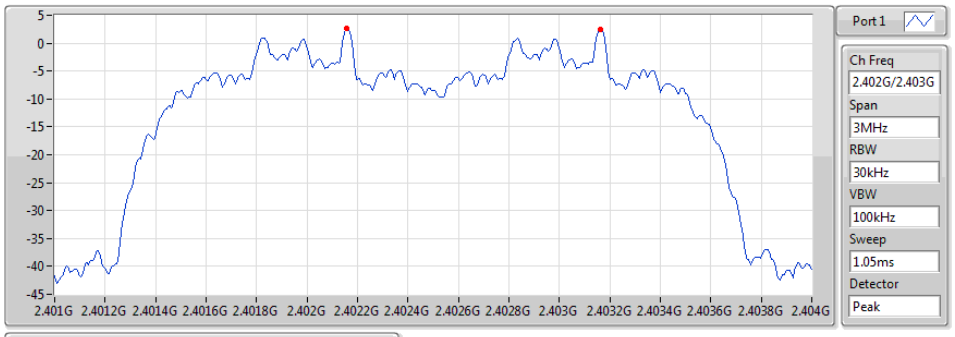
2.48G/2.479GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.479161G	2.480161G	1M	873.792k

BT-EDR(3Mbps) **Channel Separation**

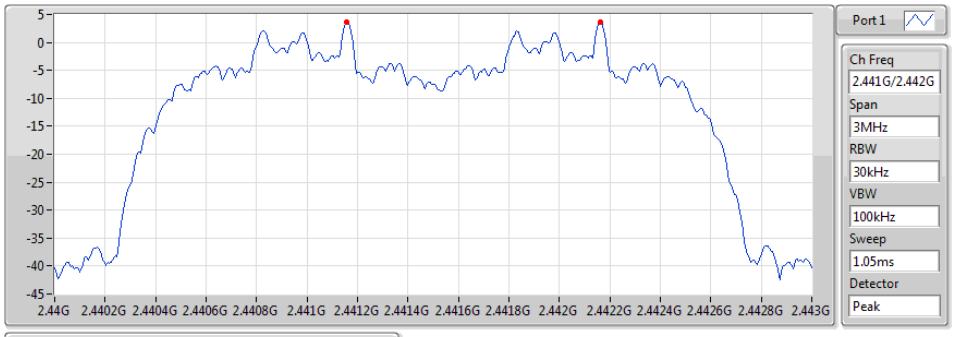
2.402G/2.403GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.402157G	2.403161G	1.004348M	841.824k

BT-EDR(3Mbps) **Channel Separation**

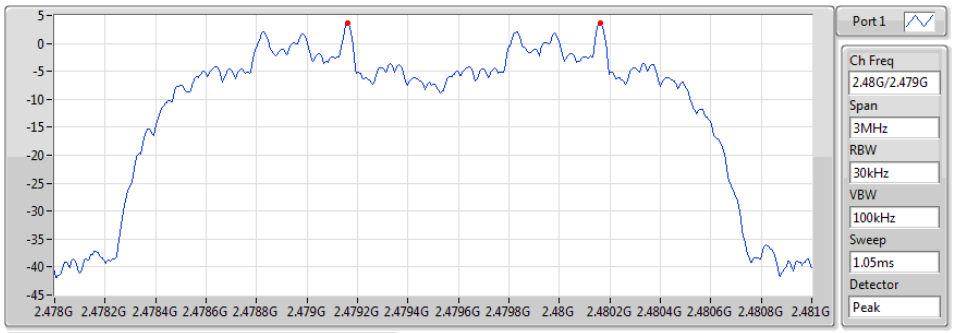
2.441G/2.442GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.441157G	2.442161G	1.004348M	829.836k

BT-EDR(3Mbps) **Channel Separation**

2.48G/2.479GHz



Fl(Hz)	Fh(Hz)	Ch.Space(Hz)	Limit(Hz)
2.479161G	2.480161G	1M	849.15k

3.8 Number of Dwell Time

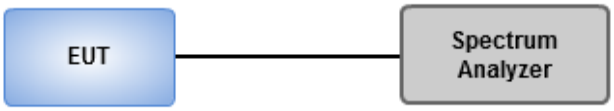
3.8.1 Limit of Dwell time

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

3.8.2 Test Procedures

1. Set RBW=300kHz,VBW=1MHz,Sweep time = 10 ms, Detector=Peak, Span=0Hz,Trace max hold
2. Enable gating and trigger function of spectrum analyzer to measure burst on time.
3. The DH1 packet can cover a single time slot. A maximum length packet has duration of 1 time slots.
   Non AFH mode
   The hopping rate is 1600 hops/second so the maximum dwell time is 1/1600 seconds. DH1 Packet permit maximum 1600 / 79 /2 = 10.12 hops per second in each channel (1 time slot TX, 1 time slot RX). So, the dwell time is the time duration of the pulse times 10.12 x 31.6 = 320 within 31.6 seconds.
   AFH mode
   The hopping rate is 800 hops/second so the maximum dwell time is 1/800 seconds. DH1 Packet permit maximum 800 /20/2 = 20 hops per second in each channel (1 time slot TX, 1 time slot RX). So, the dwell time is the time duration of the pulse times 20 x 8 = 160 within 8 seconds.
4. The DH3 packet can cover up to 3 time slots. A maximum length packet has duration of 3 time slots.
   Non AFH mode
   The hopping rate is 1600 hops/second so the maximum dwell time is 3/1600 seconds. DH3 Packet permit maximum 1600 / 79 / 4 = 5.06 hops per second in each channel (3 time slots TX, 1 time slot RX). So, the dwell time is the time duration of the pulse times 5.06 x 31.6 = 160 within 31.6 seconds.
   AFH mode
   The hopping rate is 800hops/second so the maximum dwell time is 3/800 seconds. DH3 Packet permit maximum 800 / 20 / 4 = 10 hops per second in each channel (3 time slots TX, 1 time slot RX). So, the dwell time is the time duration of the pulse times 10 x 8 = 80 within 8 seconds.
5. The DH5 packet can cover up to 5 time slots. Operate DH5 at maximum dwell time and maximum duty cycle. A maximum length packet has duration of 5 time slots.
   Non AFH mode
   The hopping rate is 1600 hops/second so the maximum dwell time is 5/1600 seconds, or 3.125ms. DH5 Packet permit maximum 1600/ 79 / 6 = 3.37 hops per second in each channel (5 time slots TX, 1 time slot RX). So, the dwell time is the time duration of the pulse times 3.37 x 31.6 = 106.6 within 31.6 seconds
   AFH mode
   The hopping rate is 800 hops/second so the maximum dwell time is 5/800 seconds. DH5 Packet permit maximum 800/20 / 6 =6.667 hops per second in each channel (5 time slots TX, 1 time slot RX). So, the dwell time is the time duration of the pulse times6.667 x 8 = 53.33 within 8 seconds

3.8.3 Test Setup



3.8.4 Test Result of Dwell Time

Summary

Mode	Max-Dwell (s)
2.4-2.4835GHz	-
BT-BR(1Mbps)	310.530435m_DH5
BT-EDR(2Mbps)	308.985507m_DH5
BT-EDR(3Mbps)	310.530435m_DH5

Result/ Non AFH mode

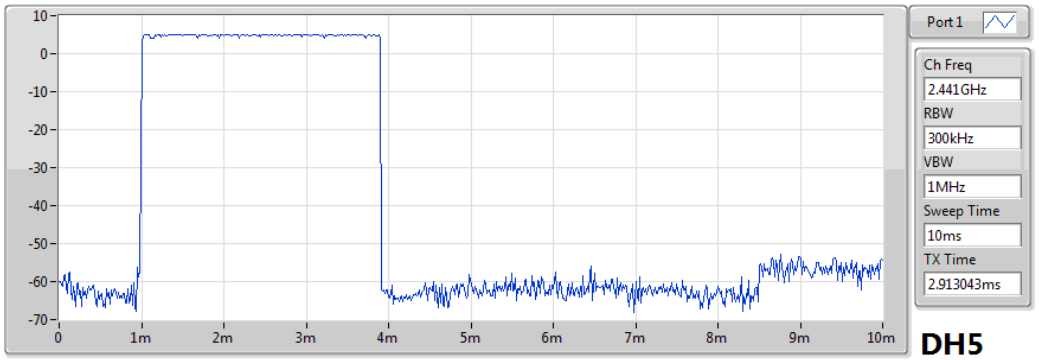
Mode	Result	Period (s)	Dwell (s)	Limit (s)	Tx On (s)
BT-BR(1Mbps)	-	-	-	-	-
2441MHz	Pass	31.6	310.530435m_DH5	400m	2.913043m
2441MHz	Pass	31.6	264.347826m_DH3	400m	1.652174m
2441MHz	Pass	31.6	129.855072m_DH1	400m	405.797101u
BT-EDR(2Mbps)	-	-	-	-	-
2441MHz	Pass	31.6	308.985507m_DH5	400m	2.898551m
2441MHz	Pass	31.6	266.666667m_DH3	400m	1.666667m
2441MHz	Pass	31.6	129.855072m_DH1	400m	405.797101u
BT-EDR(3Mbps)	-	-	-	-	-
2441MHz	Pass	31.6	310.530435m_DH5	400m	2.913043m
2441MHz	Pass	31.6	266.666667m_DH3	400m	1.666667m
2441MHz	Pass	31.6	129.855072m_DH1	400m	405.797101u

Result/ AFH mode

Mode	Result	Period (s)	Dwell (s)	Limit (s)	Tx On (s)
BT-BR(1Mbps)	-	-	-	-	-
2441MHz	Pass	8	155.3526m_DH5	400m	2.913043m
2441MHz	Pass	8	132.1739m_DH3	400m	1.652174m
2441MHz	Pass	8	64.92754m_DH1	400m	405.797101u
BT-EDR(2Mbps)	-	-	-	-	-
2441MHz	Pass	8	154.5797m_DH5	400m	2.898551m
2441MHz	Pass	8	133.3334m_DH3	400m	1.666667m
2441MHz	Pass	8	64.92754m_DH1	400m	405.797101u
BT-EDR(3Mbps)	-	-	-	-	-
2441MHz	Pass	8	155.3526m_DH5	400m	2.913043m
2441MHz	Pass	8	133.3334m_DH3	400m	1.666667m
2441MHz	Pass	8	64.92754m_DH1	400m	405.797101u

BT-BR(1Mbps) **Dwell**

2441MHz

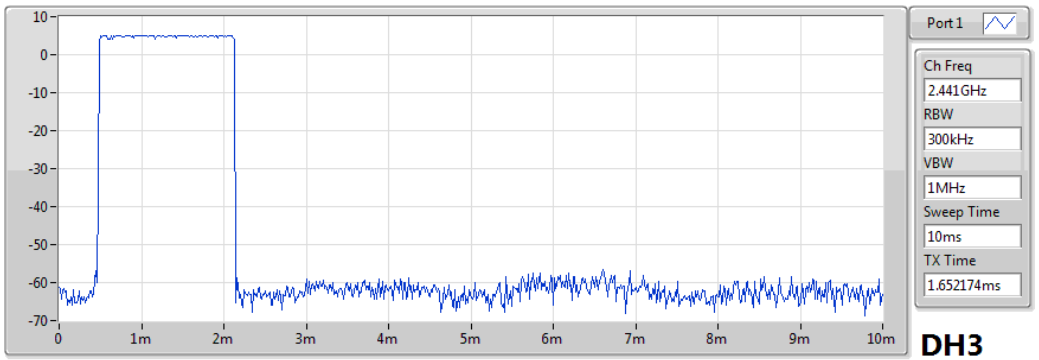


DH5

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	310.530435m_D	400m	2.913043m

BT-BR(1Mbps) **Dwell**

2441MHz

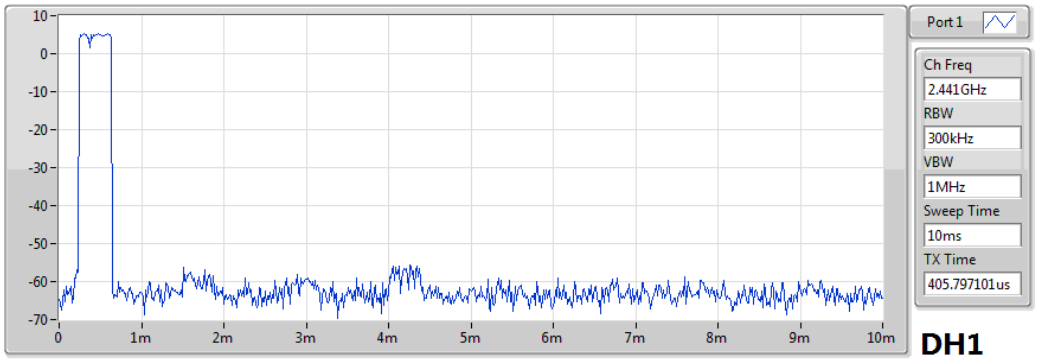


DH3

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	264.347826m_D	400m	1.652174m

BT-BR(1Mbps) **Dwell**

2441MHz

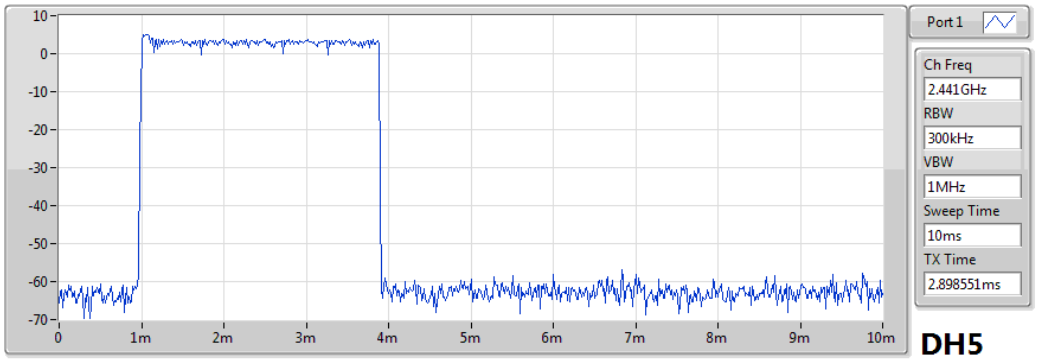


DH1

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	129.855072m_D	400m	405.797101u

BT-EDR(2Mbps) **Dwell**

2441MHz

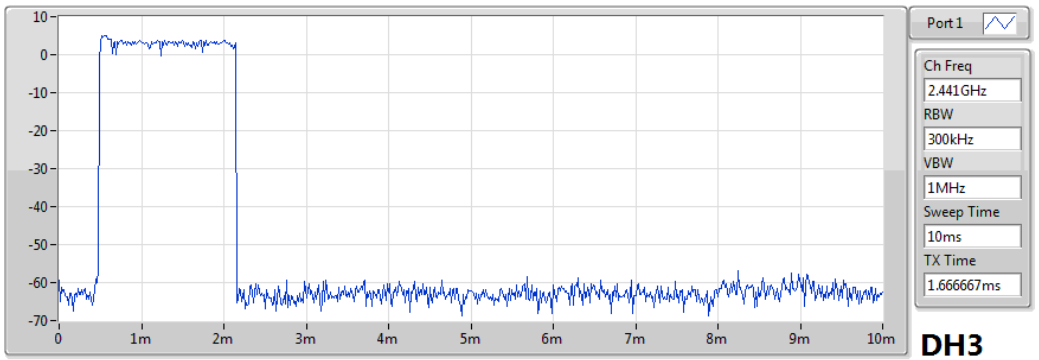


DH5

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	308.985507m_D	400m	2.898551m

BT-EDR(2Mbps) **Dwell**

2441MHz

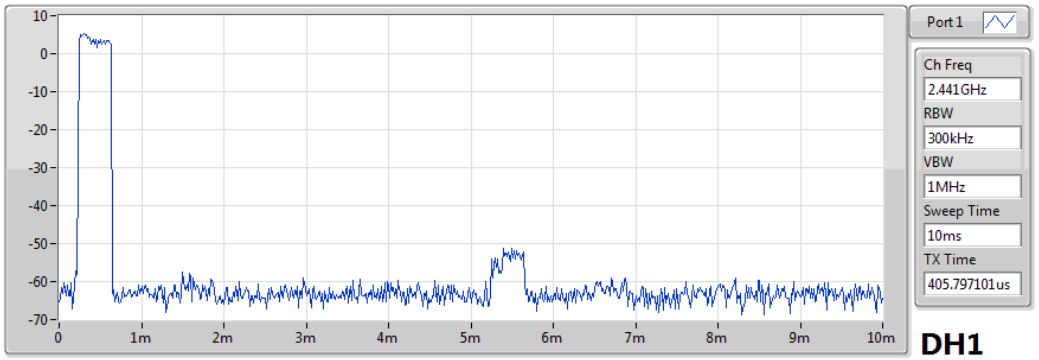


DH3

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	266.666667m_D	400m	1.666667m

BT-EDR(2Mbps) **Dwell**

2441MHz

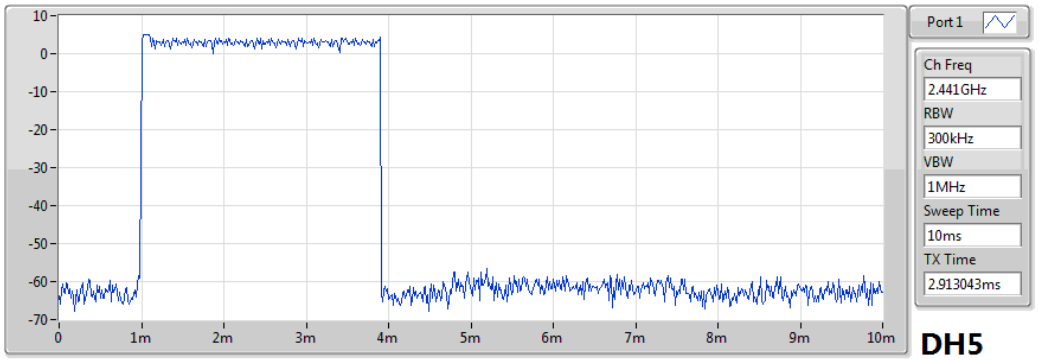


DH1

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	129.855072m_D	400m	405.797101u

BT-EDR(3Mbps) **Dwell**

2441MHz

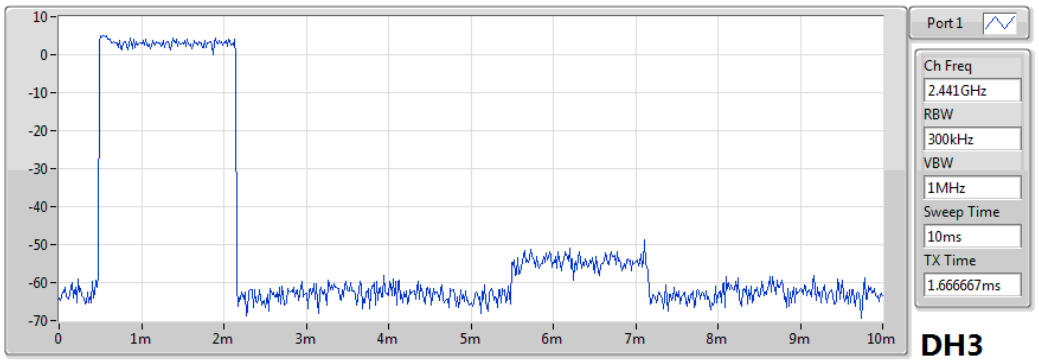


DH5

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	310.530435m_D	400m	2.913043m

BT-EDR(3Mbps) **Dwell**

2441MHz

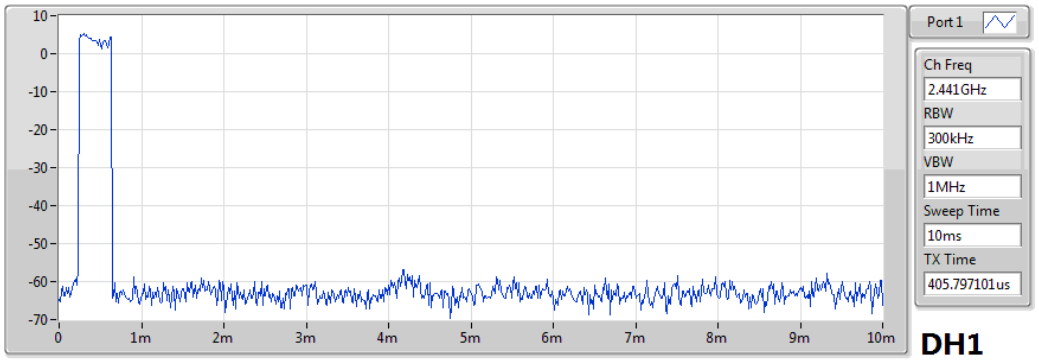


DH3

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	266.666667m_D	400m	1.666667m

BT-EDR(3Mbps) **Dwell**

2441MHz



DH1

Period(s)	Dwell(s)	Limit(s)	Tx On(s)
31.6	129.855072m_D	400m	405.797101u

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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