

FCC 15B Test Report

Equipment : Bluetooth v4.0 Dual-Mode UART HCI Module
Model No. : BT830-SA, BT830-ST
(Please refer to item 1.1.1 for more details.)
Brand Name : Laird Technologies
Applicant : Laird Technologies
Address : 11160 Thompson Ave., Lenexa, Kansas 66219,
USA
Standard : FCC Part 15, Subpart B, Class B
ICES-003 Issue 5
ANSI C63.4:2009
Received Date : Apr. 28, 2014
Tested Date : May 13 ~ May 16, 2014

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. 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.

Approved & Reviewed by:


Kent Chen / Assistant Manager



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Release Record

Report No.	Version	Description	Issued Date
FD442804	Rev. 01	Initial issue	May 29, 2014

Summary of Test Results

FCC Part 15, Subpart B Emission Tests				
Ref. Std. Clause	Test Standard	Test Items	Measured	Result
15.107	FCC Part 15, Subpart B, Class B	Conducted Emissions	-8.24dB AV@ 0.155MHz.	Pass
15.109	FCC Part 15, Subpart B, Class B	Radiated Emissions	-3.25dB PK@ 62.98MHz.	Pass

1 General Description

1.1 Information

1.1.1 Product Details

The following models are provided to this EUT.

Brand Name	Model Name	Product Name	Description
Laird Technologies	BT830-SA	Bluetooth v4.0 Dual-Mode UART HCI Module	chip antenna
	BT830-ST	Bluetooth v4.0 Dual-Mode UART HCI Module	trace to external antenna

1.1.2 Specification of the Equipment under Test (EUT)

Operating Frequency	2402 MHz ~ 2480 MHz
Modulation Type	Bluetooth 4.0 LE: GFSK Bluetooth BR(1Mbps): GFSK Bluetooth EDR (2Mbps): $\pi/4$ -DQPSK Bluetooth EDR (3Mbps): 8-DPSK

1.1.3 Antenna Details

Ant. No.	EUT Model	Type	Ant. Brand / Model	Gain (dBi)	Connector
1	BT830-SA	Chip	ACX AT3216-B2R7HAA_3216	0.5	N/A
2	BT830-ST	Dipole	Nearson S181FL-L-RMM-2450S	2.0	UFL
3	BT830-ST	PCB Dipole	Laird EBL2449A1-15UFL	2.0	UFL
4	BT830-ST	Dipole	Laird MAF94190	2.0	UFL
5	BT830-ST	Dipole	Laird WRR2400- IP04-B(MAF94019)	1.5	UFL

Note1: Ant.2 & Ant.4 were pretested and found that Ant. 2 was the worst case. Therefore, Ant.2 & Ant.3 were selected for final testing for model BT830-ST.

1.1.4 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	3.3Vdc from host.
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1.1.5 Accessories

N/A

1.2 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
EMC Receiver	R&S	ESCS 30	100169	Oct. 15, 2013	Oct. 14, 2014
LISN	SCHWARZBECK	Schwarzbeck 8127	8127-667	Nov. 23, 2013	Nov. 22, 2014
LISN (Support Unit)	SCHWARZBECK	Schwarzbeck 8127	8127-666	Dec. 04, 2013	Dec. 03, 2014
RF Cable-CON	Woken	CFD200-NL	CFD200-NL-001	Apr. 23, 2014	Apr. 22, 2015
50 ohm terminal (Support Unit)	NA	50	04	Apr. 18, 2014	Apr. 17, 2015
Note: Calibration Interval of instruments listed above is one year.					

Test Item	Radiated Emission				
Test Site	966 chamber 3 / (03CH03-WS)				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	Agilent	N9010A	MY53400091	Oct. 07, 2013	Oct. 06, 2014
Receiver	Agilent	N9038A	MY53290044	Jan. 08, 2014	Jan. 07, 2015
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-562	Feb. 07, 2014	Feb. 06, 2015
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1206	Feb. 20, 2014	Feb. 19, 2015
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Dec. 27, 2013	Dec. 26, 2014
Preamplifier	EMC	EMC02325	980187	Nov. 22, 2013	Nov. 21, 2014
Preamplifier	Agilent	83017A	MY53270014	Nov. 22, 2013	Nov. 21, 2014
Preamplifier	EM	EM18G40G	060572	Jun. 20, 2013	Jun. 19, 2014
RF cable-3M	HUBER+SUHNER	SUCOFLEX104	MY22620/4	Feb. 19, 2014	Feb. 18, 2015
RF cable-8M	HUBER+SUHNER	SUCOFLEX104	MY22601/4	Feb. 19, 2014	Feb. 18, 2015
RF cable-1M	HUBER+SUHNER	SUCOFLEX104	MY22624/4	Feb. 19, 2014	Feb. 18, 2015
LF cable-0.8M	EMC	EMC8D-NM-NM-800	EMC8D-NM-NM-800-001	Feb. 17, 2014	Feb. 16, 2015
LF cable-3M	EMC	EMC8D-NM-NM-3000	131103	Feb. 17, 2014	Feb. 16, 2015
LF cable-13M	EMC	EMC8D-NM-NM-13000	131104	Feb. 17, 2014	Feb. 16, 2015
Note: Calibration Interval of instruments listed above is one year.					

1.3 Testing Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

FCC Part 15, Subpart B, Class B
ICES-003 Issue 5
ANSI C63.4:2009

1.4 Measurement Uncertainty

CISPR 16-4-2 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		
Test Item	Frequency	Uncertainty
Conducted Emissions	150kHz ~ 30MHz	± 2.92 dB
Radiated Emissions	30MHz ~ 1GHz	± 3.56 dB
	Above 1GHz	± 4.94 dB

2 Test Configuration

2.1 Testing Condition

Test Item	Test Site	Ambient Condition	Tested By
AC Conduction	CO01-WS	25°C / 66%	Skys Huang
Radiated Emissions	03CH03-WS	24-26°C / 62-67%	Aska Huang

2.2 The Worst Test Modes and Channel Details

Test item	Modulation Mode	Test Frequency (MHz)	Data rate (Mbps / MCS)	Test Configuration
Conducted Emissions	GFSK	2480	1Mbps	1, 2, 5, 6
Radiated Emissions (below 1GHz)	GFSK	2480	1Mbps	1, 2, 3, 4, 5, 6
Radiated Emissions (above 1GHz)	GFSK	2402, 2441, 2480	1Mbps	1, 2, 3, 4, 5, 6

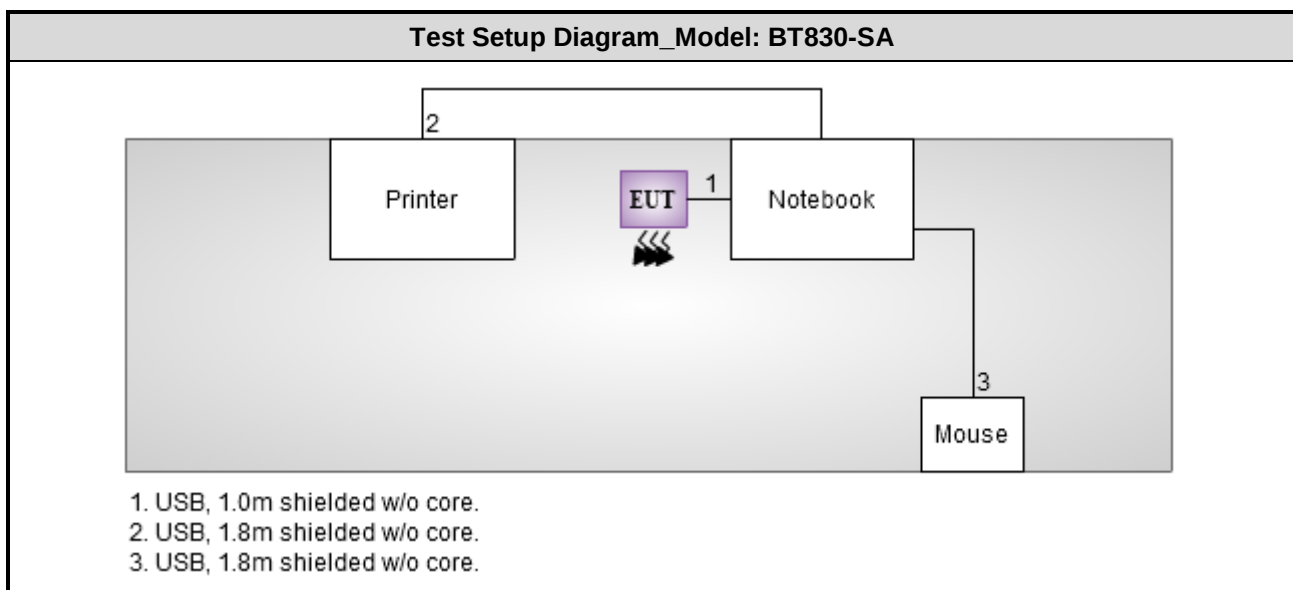
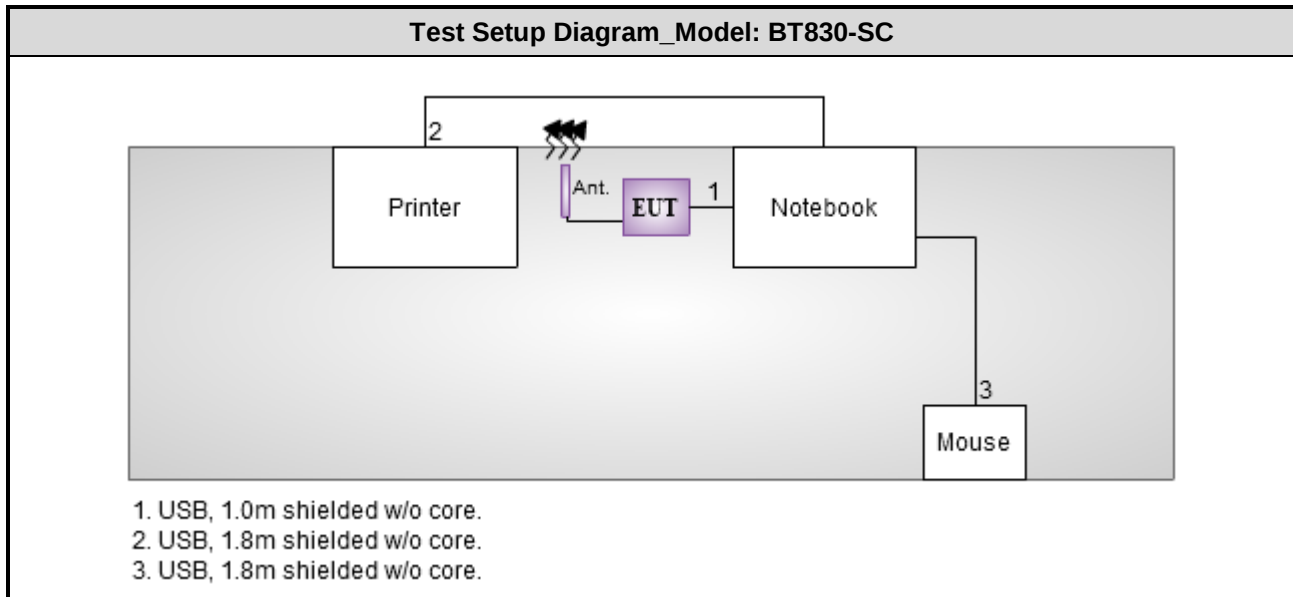
NOTE:

- This device supports BT EDR and BT LE function, each function is selected to perform tests as below test configuration.
- 3 types antenna are used for this device, each type is selected to perform radiated emission test as below test configuration.
- The test configuration listed as follows:
 - Configuration 1: BT830-SA with Ant.1 Chip antenna, BT EDR mode.
 - Configuration 2: BT830-SA with Ant.1 Chip antenna, BT LE mode.
 - Configuration 3: BT830-ST with Ant.2 Dipole antenna, BT EDR mode.
 - Configuration 4: BT830-ST with Ant.2 Dipole antenna, BT LE mode.
 - Configuration 5: BT830-ST with Ant.3 PCB Dipole antenna, BT EDR mode.
 - Configuration 6: BT830-ST with Ant.3 PCB Dipole antenna, BT LE mode.

2.3 Local Support Equipment List

Support Equipment List						
No.	Equipment	Brand	Model	S/N	FCC ID	Signal cable / Length (m)
1	Notebook	DELL	Latitude E5430	6R4RWW1	DoC	USB, 1m shielded w/o core.
2	Printer	EPSON	XP-30	QSDK002410	---	USB, 1.8m shielded w/o core.
3	Mouse	DELL	MS111-L	2C3-00MM	---	USB, 1.8m shielded w/o core.

2.4 Test Setup Chart



2.5 Test Software and Operating Condition

- a. To enable all functions of test system.
- b. The EUT was set to receive BT signal continuously.
- c. The notebook ran "EMCTest.exe" to send "H" patterns to its monitor and the monitor displayed them.
- d. The notebook ran "EMCTest.exe" to send "H" patterns to the printer.

3 Emission Tests Results

3.1 Conducted Emissions

3.1.1 Limit of Conducted Emissions

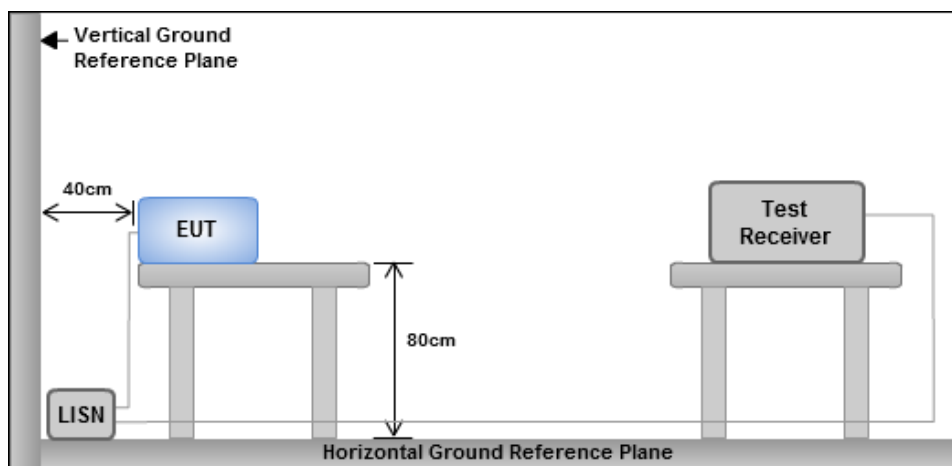
Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

Note 1: * Decreases with the logarithm of the frequency.

3.1.2 Test Procedures

- 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.
- 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.
- AC conducted emission measurements is made over frequency range from 150 kHz to 30 MHz.
- This measurement was performed with AC 120V / 60Hz.

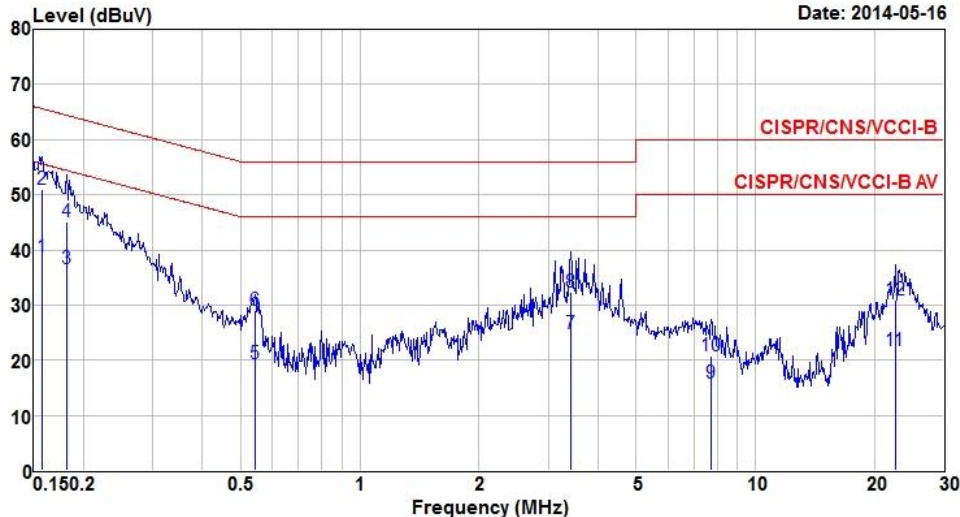
3.1.3 Test Setup



- 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	GFSK	Test Freq. (MHz)	2480
Power Phase	Line	Test Configuration	1



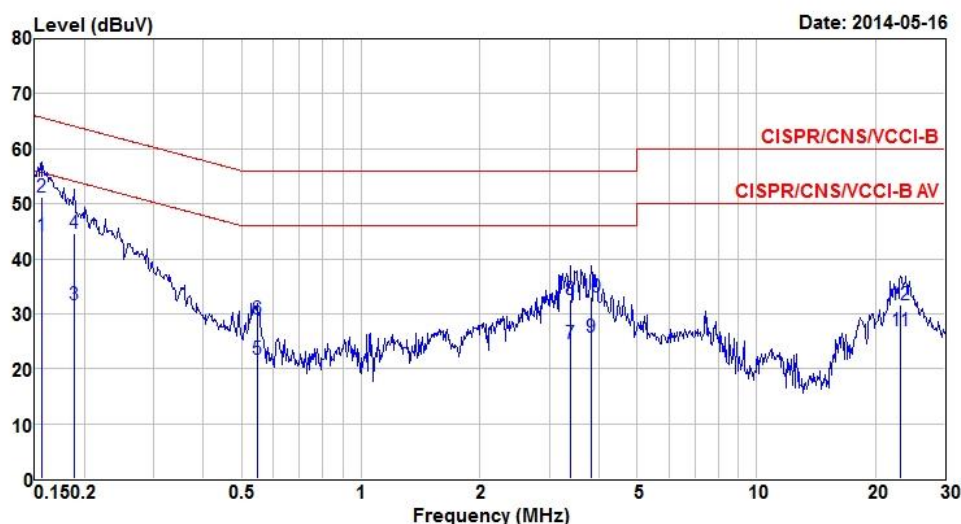
The graph shows the conducted emission level in dBuV versus frequency in MHz. The y-axis ranges from 0 to 80 dBuV, and the x-axis ranges from 0.15 to 30 MHz. Two red limit lines are shown: CISPR/CNS/VCCI-B (upper) and CISPR/CNS/VCCI-B AV (lower). A blue test result line is plotted, showing several peaks. Vertical lines connect specific peaks to the data table below, labeled 1 through 12.

Date: 2014-05-16

	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.157	38.71	55.60	-16.89	38.29	0.40	0.02	Average
2*	0.157	50.88	65.60	-14.72	50.46	0.40	0.02	QP
3	0.182	36.64	54.42	-17.78	36.24	0.39	0.01	Average
4	0.182	45.10	64.42	-19.32	44.70	0.39	0.01	QP
5	0.544	19.35	46.00	-26.65	18.87	0.40	0.08	Average
6	0.544	29.02	56.00	-26.98	28.54	0.40	0.08	QP
7	3.417	24.83	46.00	-21.17	24.26	0.45	0.12	Average
8	3.417	32.36	56.00	-23.64	31.79	0.45	0.12	QP
9	7.728	15.77	50.00	-34.23	15.03	0.52	0.22	Average
10	7.728	20.74	60.00	-39.26	20.00	0.52	0.22	QP
11	22.535	21.67	50.00	-28.33	20.69	0.55	0.43	Average
12	22.535	30.96	60.00	-29.04	29.98	0.55	0.43	QP

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

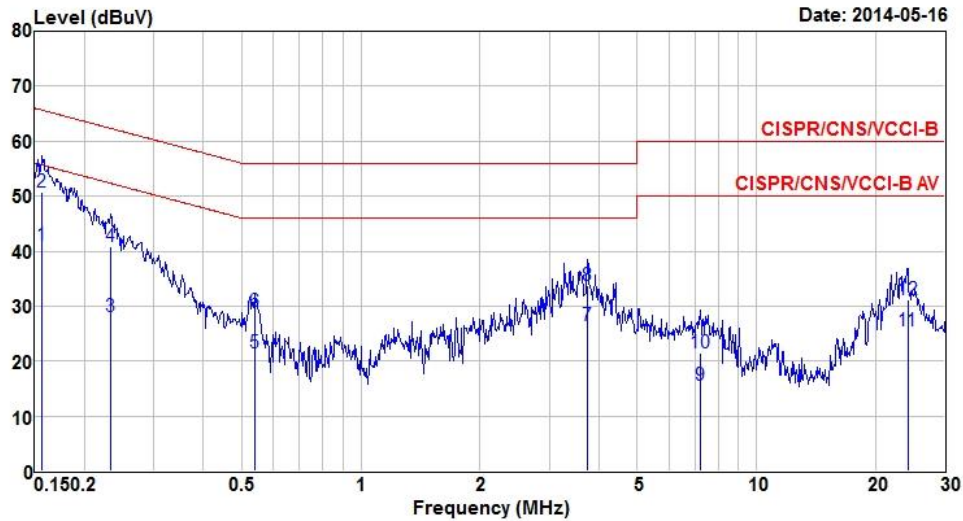
Modulation Mode	GFSK	Test Freq. (MHz)	2480
Power Phase	Neutral	Test Configuration	1



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1*	0.156	44.20	55.69	-11.49	43.70	0.48	0.02	Average
2	0.156	51.17	65.69	-14.52	50.67	0.48	0.02	QP
3	0.188	31.59	54.11	-22.52	31.10	0.48	0.01	Average
4	0.188	44.56	64.11	-19.55	44.07	0.48	0.01	QP
5	0.546	21.75	46.00	-24.25	21.20	0.47	0.08	Average
6	0.546	29.13	56.00	-26.87	28.58	0.47	0.08	QP
7	3.399	24.54	46.00	-21.46	23.90	0.52	0.12	Average
8	3.399	32.58	56.00	-23.42	31.94	0.52	0.12	QP
9	3.820	25.81	46.00	-20.19	25.15	0.52	0.14	Average
10	3.820	33.15	56.00	-22.85	32.49	0.52	0.14	QP
11	23.140	26.82	50.00	-23.18	25.85	0.54	0.43	Average
12	23.140	31.52	60.00	-28.48	30.55	0.54	0.43	QP

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

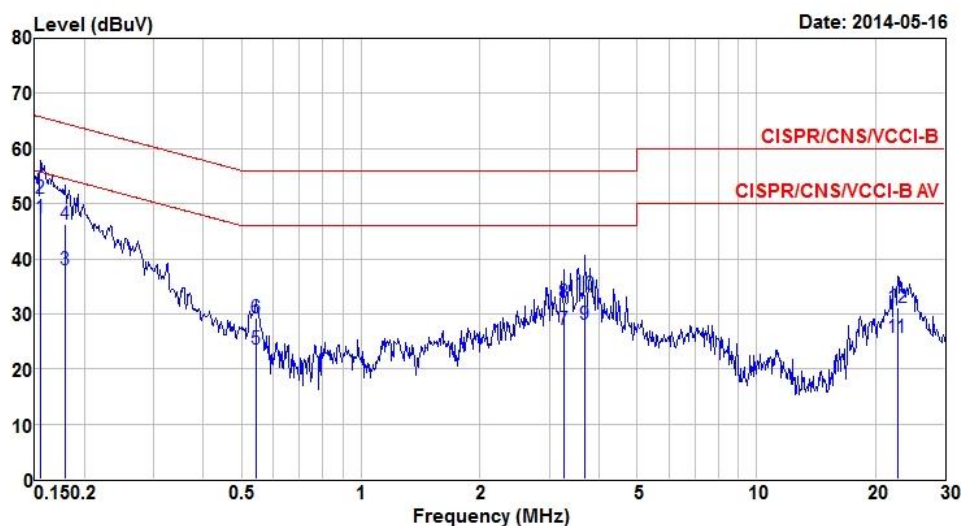
Modulation Mode	GFSK	Test Freq. (MHz)	2480
Power Phase	Line	Test Configuration	2



	Freq	Level	Limit	Over	Read	LISN	cable	
	MHz	dBuV	Line	Limit	Level	factor	loss	Remark
			dBuV	dB	dBuV	dB	dB	
1*	0.156	41.08	55.65	-14.57	40.66	0.40	0.02	Average
2	0.156	50.81	65.65	-14.84	50.39	0.40	0.02	QP
3	0.233	28.20	52.35	-24.15	27.80	0.39	0.01	Average
4	0.233	40.90	62.35	-21.45	40.50	0.39	0.01	QP
5	0.541	21.49	46.00	-24.51	21.01	0.40	0.08	Average
6	0.541	29.14	56.00	-26.86	28.66	0.40	0.08	QP
7	3.740	26.54	46.00	-19.46	25.94	0.46	0.14	Average
8	3.740	33.72	56.00	-22.28	33.12	0.46	0.14	QP
9	7.213	15.69	50.00	-34.31	14.97	0.51	0.21	Average
10	7.213	21.56	60.00	-38.44	20.84	0.51	0.21	QP
11	24.142	25.46	50.00	-24.54	24.47	0.55	0.44	Average
12	24.142	31.15	60.00	-28.85	30.16	0.55	0.44	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	GFSK	Test Freq. (MHz)	2480
Power Phase	Neutral	Test Configuration	2

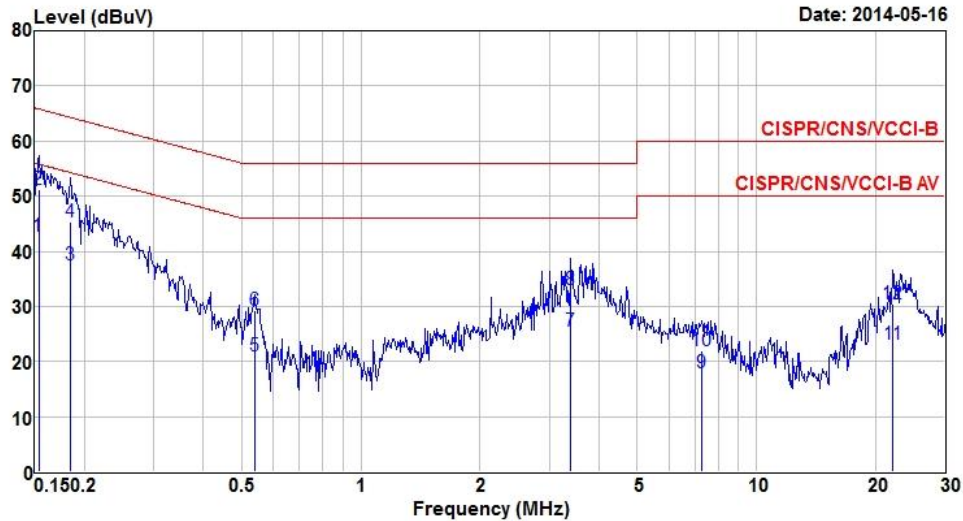


	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1*	0.155	47.50	55.74	-8.24	47.00	0.48	0.02	Average
2	0.155	50.95	65.74	-14.79	50.45	0.48	0.02	QP
3	0.179	38.00	54.55	-16.55	37.51	0.48	0.01	Average
4	0.179	46.29	64.55	-18.26	45.80	0.48	0.01	QP
5	0.544	23.60	46.00	-22.40	23.05	0.47	0.08	Average
6	0.544	29.17	56.00	-26.83	28.62	0.47	0.08	QP
7	3.258	27.17	46.00	-18.83	26.55	0.51	0.11	Average
8	3.258	32.14	56.00	-23.86	31.52	0.51	0.11	QP
9	3.681	27.99	46.00	-18.01	27.34	0.52	0.13	Average
10	3.681	33.45	56.00	-22.55	32.80	0.52	0.13	QP
11	22.775	25.81	50.00	-24.19	24.84	0.54	0.43	Average
12	22.775	31.23	60.00	-28.77	30.26	0.54	0.43	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).

Note 2: Over Limit (dB) = Level (dBuV) - Limit Line (dBuV).

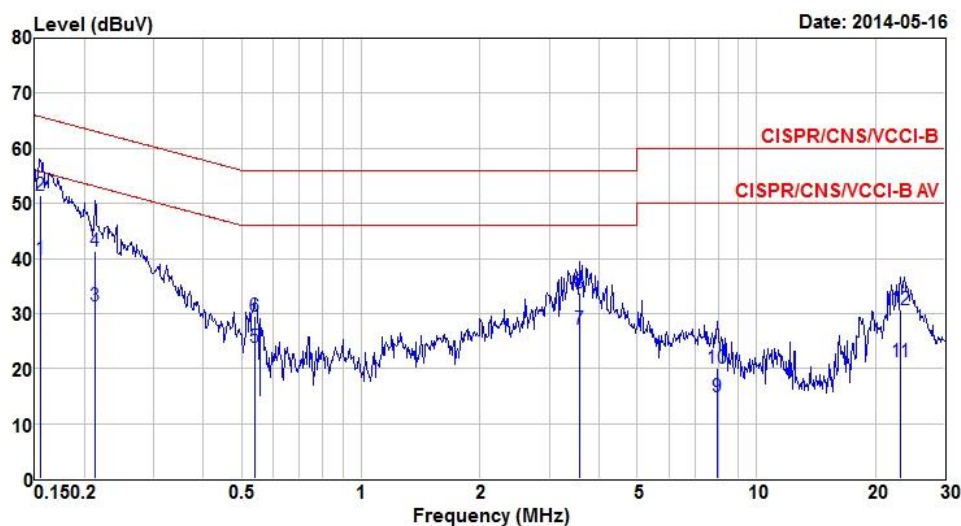
Modulation Mode	GFSK	Test Freq. (MHz)	2480
Power Phase	Line	Test Configuration	5



	Freq	Level	Limit	Over	Read	LISN	cable	
	MHz	dBuV	Line dBuV	Limit dB	Level dBuV	factor dB	loss dB	Remark
1*	0.153	42.73	55.82	-13.09	42.31	0.40	0.02	Average
2	0.153	51.14	65.82	-14.68	50.72	0.40	0.02	QP
3	0.184	37.57	54.28	-16.71	37.17	0.39	0.01	Average
4	0.184	45.23	64.28	-19.05	44.83	0.39	0.01	QP
5	0.538	21.11	46.00	-24.89	20.63	0.40	0.08	Average
6	0.538	29.17	56.00	-26.83	28.69	0.40	0.08	QP
7	3.399	25.48	46.00	-20.52	24.91	0.45	0.12	Average
8	3.399	32.94	56.00	-23.06	32.37	0.45	0.12	QP
9	7.290	18.06	50.00	-31.94	17.33	0.51	0.22	Average
10	7.290	22.02	60.00	-37.98	21.29	0.51	0.22	QP
11	22.180	23.07	50.00	-26.93	22.10	0.55	0.42	Average
12	22.180	30.54	60.00	-29.46	29.57	0.55	0.42	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	GFSK	Test Freq. (MHz)	2480
Power Phase	Neutral	Test Configuration	5

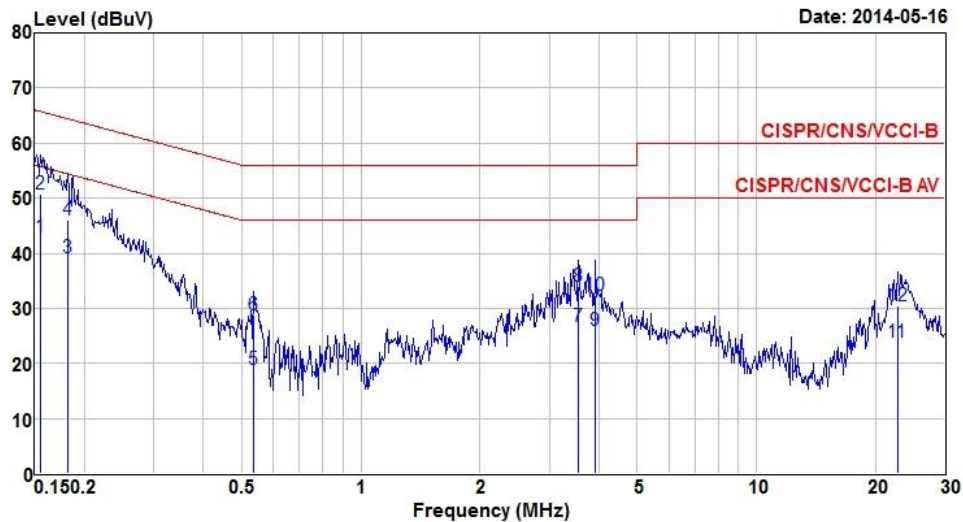


	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.155	39.96	55.74	-15.78	39.46	0.48	0.02	Average
2*	0.155	51.39	65.74	-14.35	50.89	0.48	0.02	QP
3	0.213	31.45	53.10	-21.65	30.96	0.48	0.01	Average
4	0.213	41.21	63.10	-21.89	40.72	0.48	0.01	QP
5	0.538	23.76	46.00	-22.24	23.21	0.47	0.08	Average
6	0.538	29.47	56.00	-26.53	28.92	0.47	0.08	QP
7	3.565	27.18	46.00	-18.82	26.53	0.52	0.13	Average
8	3.565	33.86	56.00	-22.14	33.21	0.52	0.13	QP
9	7.977	14.85	50.00	-35.15	14.07	0.55	0.23	Average
10	7.977	20.01	60.00	-39.99	19.23	0.55	0.23	QP
11	23.140	21.34	50.00	-28.66	20.37	0.54	0.43	Average
12	23.140	30.77	60.00	-29.23	29.80	0.54	0.43	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).

Note 2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

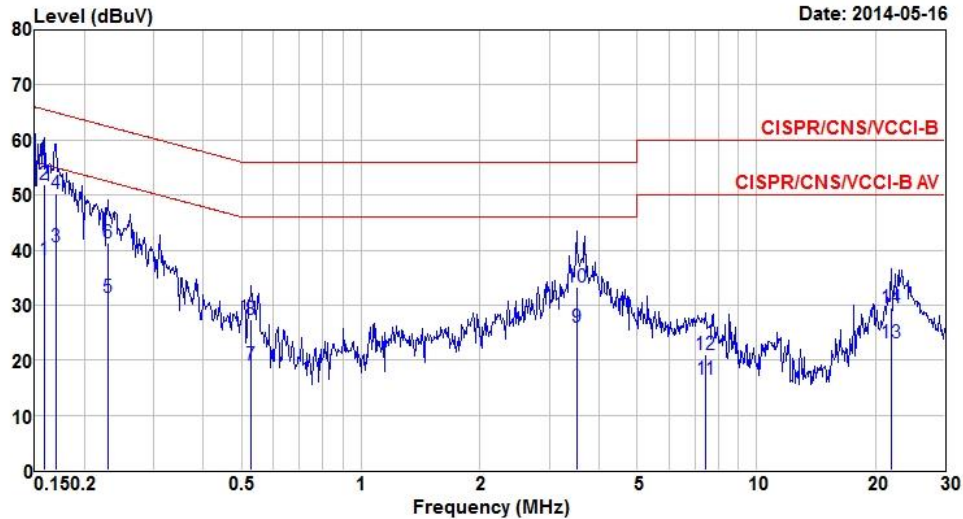
Modulation Mode	GFSK	Test Freq. (MHz)	2480
Power Phase	Line	Test Configuration	6



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1*	0.155	43.01	55.74	-12.73	42.59	0.40	0.02	Average
2	0.155	50.71	65.74	-15.03	50.29	0.40	0.02	QP
3	0.182	39.30	54.42	-15.12	38.90	0.39	0.01	Average
4	0.182	45.96	64.42	-18.46	45.56	0.39	0.01	QP
5	0.535	18.88	46.00	-27.12	18.40	0.40	0.08	Average
6	0.535	28.78	56.00	-27.22	28.30	0.40	0.08	QP
7	3.547	26.69	46.00	-19.31	26.11	0.45	0.13	Average
8	3.547	33.98	56.00	-22.02	33.40	0.45	0.13	QP
9	3.922	25.96	46.00	-20.04	25.35	0.46	0.15	Average
10	3.922	32.43	56.00	-23.57	31.82	0.46	0.15	QP
11	22.775	23.89	50.00	-26.11	22.91	0.55	0.43	Average
12	22.775	30.45	60.00	-29.55	29.47	0.55	0.43	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	GFSK	Test Freq. (MHz)	2480
Power Phase	Neutral	Test Configuration	6



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.159	38.23	55.52	-17.29	37.73	0.48	0.02	Average
2*	0.159	51.83	65.52	-13.69	51.33	0.48	0.02	QP
3	0.169	40.69	54.99	-14.30	40.19	0.48	0.02	Average
4	0.169	50.23	64.99	-14.76	49.73	0.48	0.02	QP
5	0.229	31.42	52.48	-21.06	30.93	0.48	0.01	Average
6	0.229	41.38	62.48	-21.10	40.89	0.48	0.01	QP
7	0.529	19.02	46.00	-26.98	18.48	0.47	0.07	Average
8	0.529	27.37	56.00	-28.63	26.83	0.47	0.07	QP
9	3.509	25.91	46.00	-20.09	25.27	0.52	0.12	Average
10	3.509	33.35	56.00	-22.65	32.71	0.52	0.12	QP
11	7.446	16.61	50.00	-33.39	15.84	0.55	0.22	Average
12	7.446	21.10	60.00	-38.90	20.33	0.55	0.22	QP
13	21.946	23.05	50.00	-26.95	22.08	0.55	0.42	Average
14	21.946	29.58	60.00	-30.42	28.61	0.55	0.42	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 Radiated Emissions

3.2.1 Limit of Radiated Emissions

According to FCC Part 15, Subpart B §15.109, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency of Emission (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)
30 - 88	100	40	3
88 - 216	150	43.5	3
216 - 960	200	46	3
Above 960	500	54	3

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.705	30
1.705-108	1000
108-500	2000
500-1000	5000
Above 1000	5th harmonic of the highest frequency or 40 GHz, whichever is lower

Note: According to FCC Part 15, Subpart B §15.33: For an unintentional radiator is shown in the table above.

3.2.2 Test Procedures

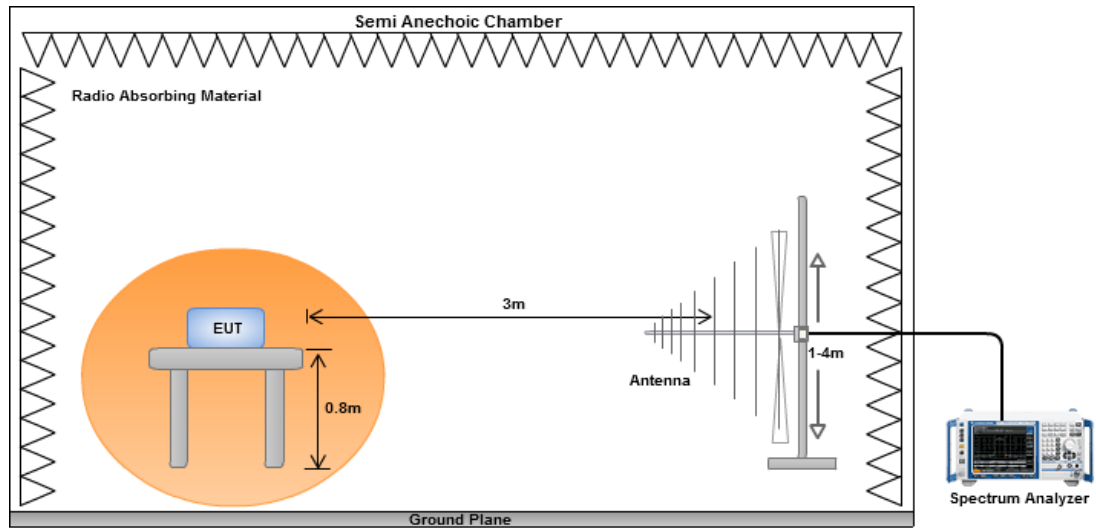
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission frequency. The EUT is placed at a height of 0.8 m test table above the ground plane.
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:

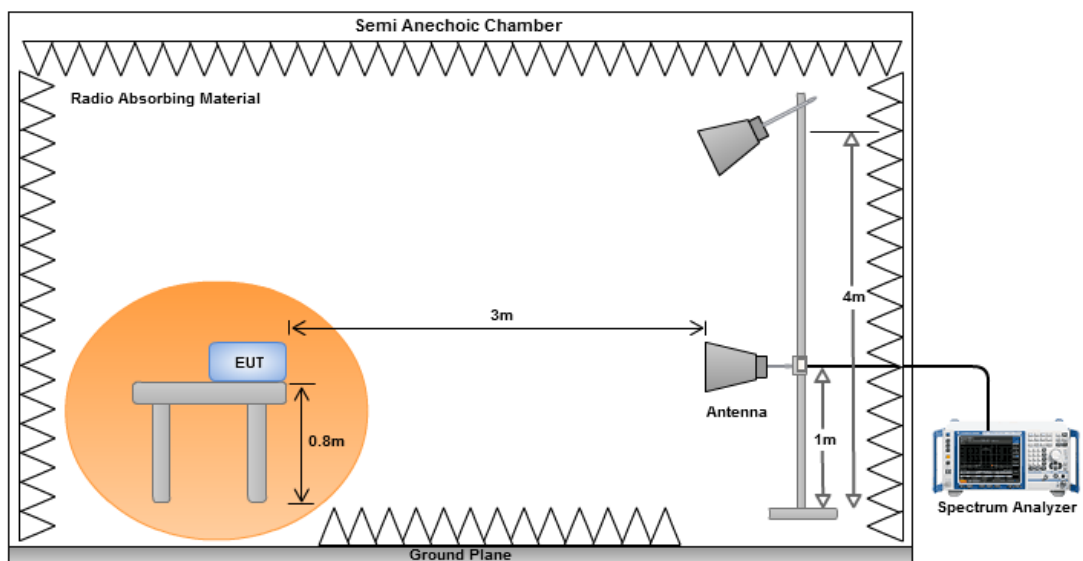
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=3MHz and RMS detector is for average measured value of radiated emission above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

3.2.3 Test Setup

Radiated Emissions below 1 GHz

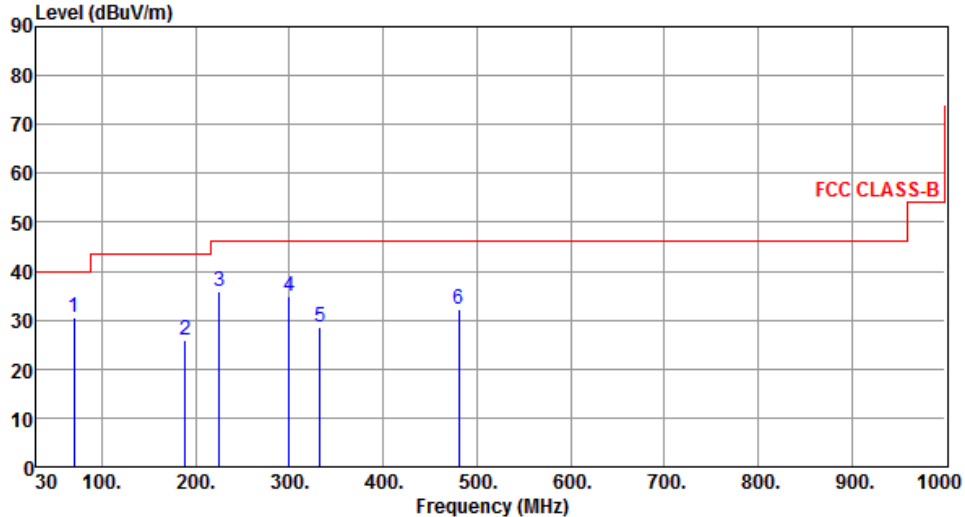


Radiated Emissions above 1 GHz



3.2.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)

Modulation	GFSK	Test Freq. (MHz)	2480
Polarization	Horizontal	Test Configuration	1

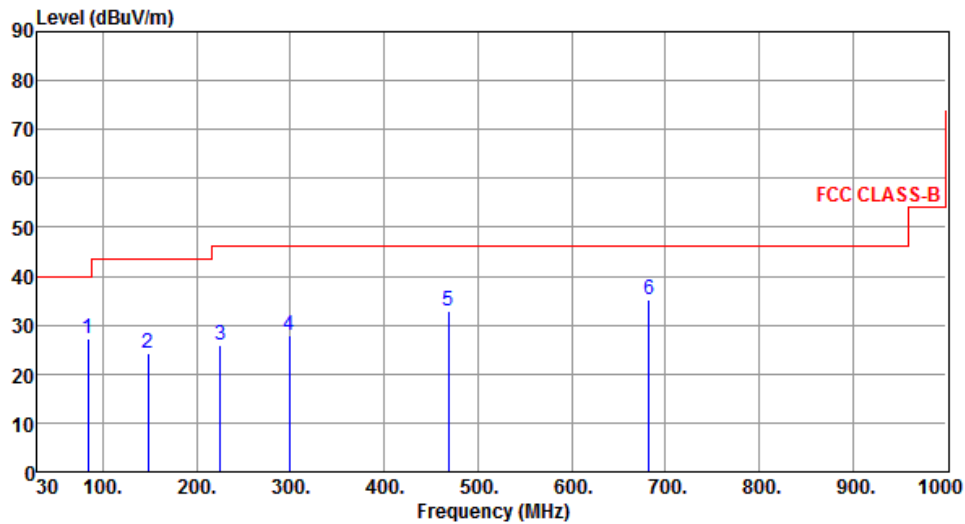


The graph displays the radiated unwanted emissions level in dBUV/m against frequency in MHz from 30 to 1000. A red line represents the FCC CLASS-B limit, which is 40 dBUV/m from 30 to 100 MHz, 45 dBUV/m from 100 to 300 MHz, and 55 dBUV/m from 300 to 1000 MHz. Six measured peaks are labeled with blue numbers 1 through 6, corresponding to the data in the table below.

	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	69.77	30.42	40.00	-9.58	45.83	-15.41	Peak	---	---
2	189.08	26.06	43.50	-17.44	42.04	-15.98	Peak	---	---
3	224.97	35.82	46.00	-10.18	51.48	-15.66	Peak	---	---
4	299.56	34.85	46.00	-11.15	47.54	-12.69	Peak	---	---
5	332.64	28.63	46.00	-17.37	40.48	-11.85	Peak	---	---
6	481.05	32.35	46.00	-13.65	40.64	-8.29	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).

Modulation	GFSK	Test Freq. (MHz)	2480
Polarization	Vertical	Test Configuration	1



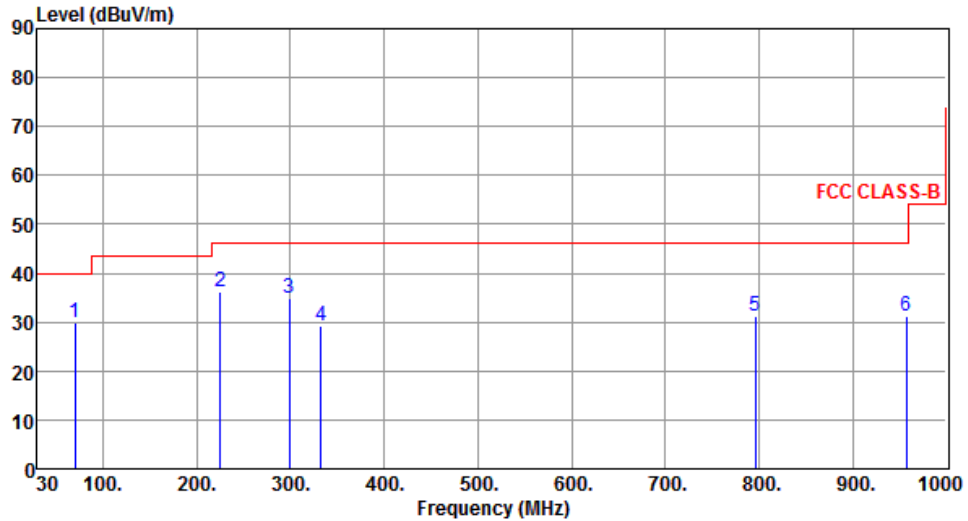
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	84.32	27.18	40.00	-12.82	45.58	-18.40	Peak	---	---
2	148.34	24.29	43.50	-19.21	37.68	-13.39	Peak	---	---
3	224.97	25.89	46.00	-20.11	41.55	-15.66	Peak	---	---
4	298.69	27.87	46.00	-18.13	40.58	-12.71	Peak	---	---
5	468.44	32.91	46.00	-13.09	41.35	-8.44	Peak	---	---
6	682.81	35.19	46.00	-10.81	39.67	-4.48	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).

Modulation	GFSK	Test Freq. (MHz)	2480
Polarization	Horizontal	Test Configuration	2



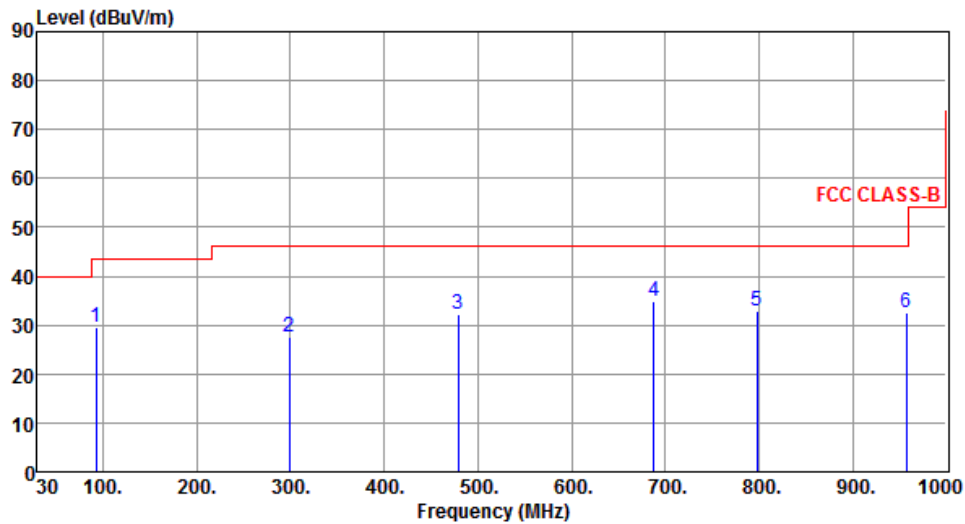
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	69.77	30.01	40.00	-9.99	45.42	-15.41	Peak	---	---
2	224.97	36.28	46.00	-9.72	51.94	-15.66	Peak	---	---
3	298.69	34.99	46.00	-11.01	47.70	-12.71	Peak	---	---
4	332.64	29.13	46.00	-16.87	40.98	-11.85	Peak	---	---
5	796.30	31.17	46.00	-14.83	33.73	-2.56	Peak	---	---
6	957.32	31.26	46.00	-14.74	31.02	0.24	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).

Modulation	GFSK	Test Freq. (MHz)	2480
Polarization	Vertical	Test Configuration	2



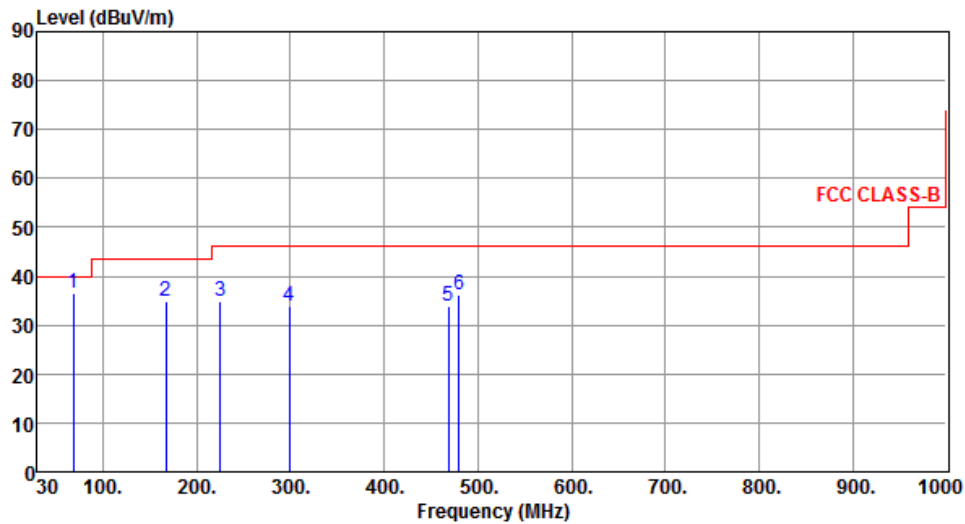
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	93.05	29.61	43.50	-13.89	48.54	-18.93	Peak	---	---
2	298.69	27.48	46.00	-18.52	40.19	-12.71	Peak	---	---
3	479.11	32.21	46.00	-13.79	40.52	-8.31	Peak	---	---
4	687.66	34.86	46.00	-11.14	39.25	-4.39	Peak	---	---
5	798.24	32.83	46.00	-13.17	35.35	-2.52	Peak	---	---
6	957.32	32.42	46.00	-13.58	32.18	0.24	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).

Modulation	GFSK	Test Freq. (MHz)	2480
Polarization	Horizontal	Test Configuration	3



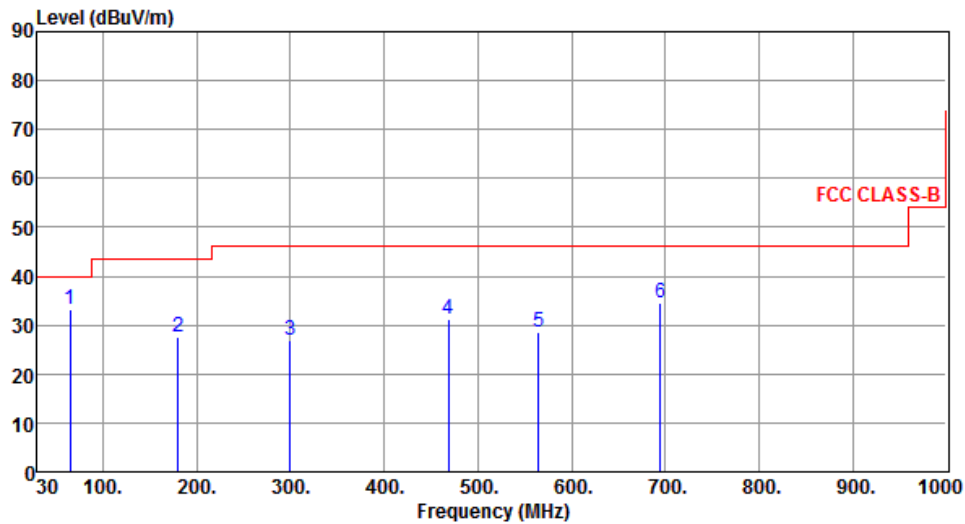
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	68.80	36.59	40.00	-3.41	51.82	-15.23	Peak	---	---
2	167.56	34.74	43.50	-8.76	48.55	-13.81	Peak	---	---
3	224.92	34.76	46.00	-11.24	50.42	-15.66	Peak	---	---
4	298.69	33.73	46.00	-12.27	46.44	-12.71	Peak	---	---
5	468.52	33.98	46.00	-12.02	42.41	-8.43	Peak	---	---
6	480.12	36.08	46.00	-9.92	44.38	-8.30	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).

Modulation	GFSK	Test Freq. (MHz)	2480
Polarization	Vertical	Test Configuration	3



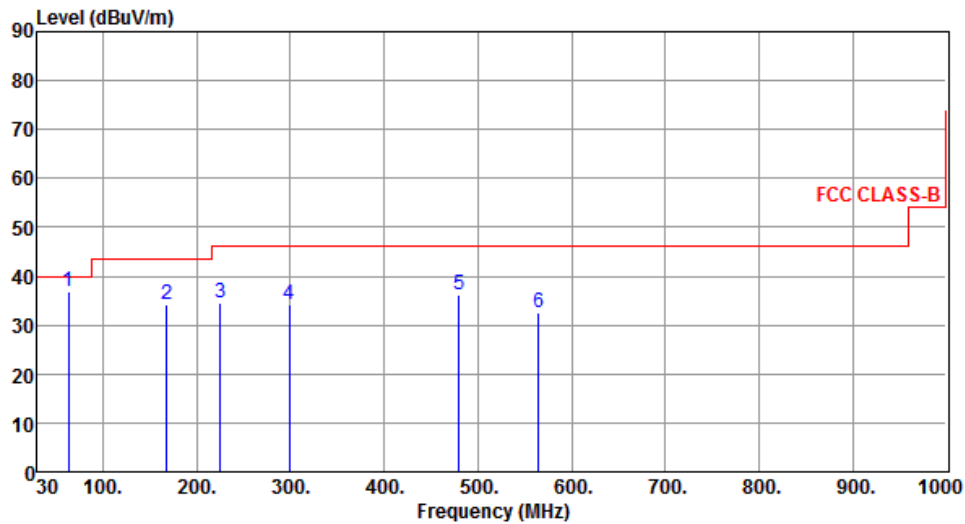
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	64.88	33.35	40.00	-6.65	47.85	-14.50	Peak	---	---
2	180.22	27.61	43.50	-15.89	42.82	-15.21	Peak	---	---
3	299.88	26.98	46.00	-19.02	39.66	-12.68	Peak	---	---
4	468.44	31.38	46.00	-14.62	39.82	-8.44	Peak	---	---
5	564.40	28.73	46.00	-17.27	35.48	-6.75	Peak	---	---
6	694.45	34.39	46.00	-11.61	38.67	-4.28	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).

Modulation	GFSK	Test Freq. (MHz)	2480
Polarization	Horizontal	Test Configuration	4



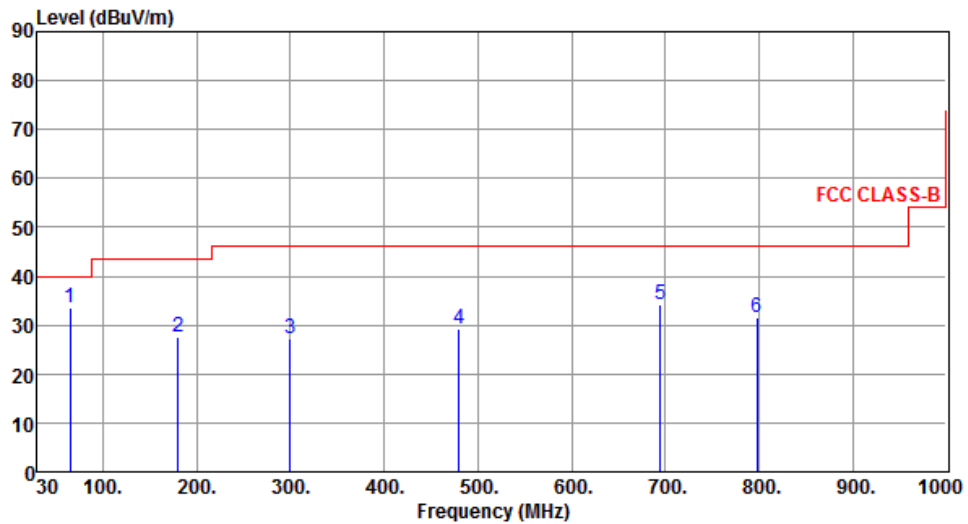
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	62.98	36.75	40.00	-3.25	50.90	-14.15	Peak	---	---
2	167.74	34.31	43.50	-9.19	48.13	-13.82	Peak	---	---
3	224.97	34.48	46.00	-11.52	50.14	-15.66	Peak	---	---
4	298.69	34.04	46.00	-11.96	46.75	-12.71	Peak	---	---
5	480.08	36.25	46.00	-9.75	44.55	-8.30	Peak	---	---
6	564.47	32.45	46.00	-13.55	39.19	-6.74	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).

Modulation	GFSK	Test Freq. (MHz)	2480
Polarization	Vertical	Test Configuration	4



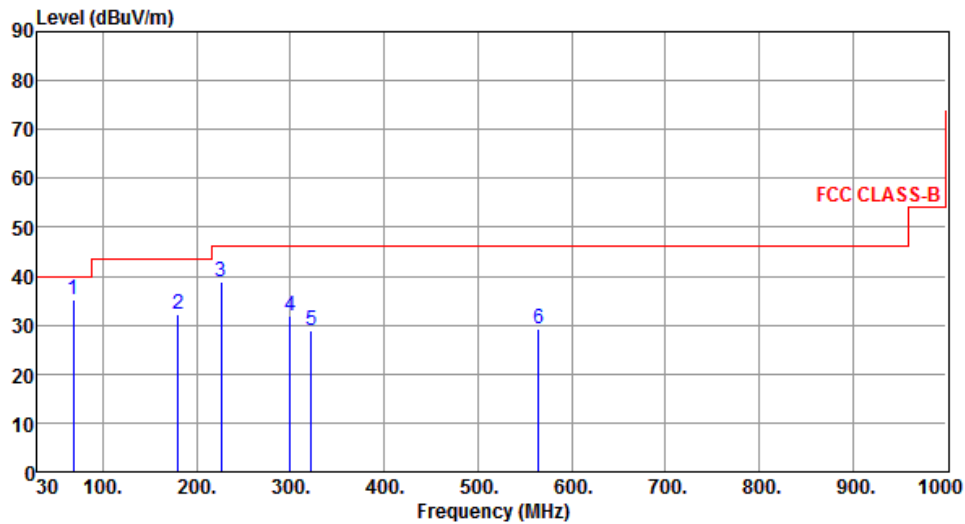
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	64.92	33.43	40.00	-6.57	47.93	-14.50	Peak	---	---
2	180.35	27.70	43.50	-15.80	42.92	-15.22	Peak	---	---
3	299.66	27.14	46.00	-18.86	39.83	-12.69	Peak	---	---
4	480.08	29.07	46.00	-16.93	37.37	-8.30	Peak	---	---
5	694.45	34.35	46.00	-11.65	38.63	-4.28	Peak	---	---
6	798.24	31.52	46.00	-14.48	34.04	-2.52	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).

Modulation	GFSK	Test Freq. (MHz)	2480
Polarization	Horizontal	Test Configuration	5



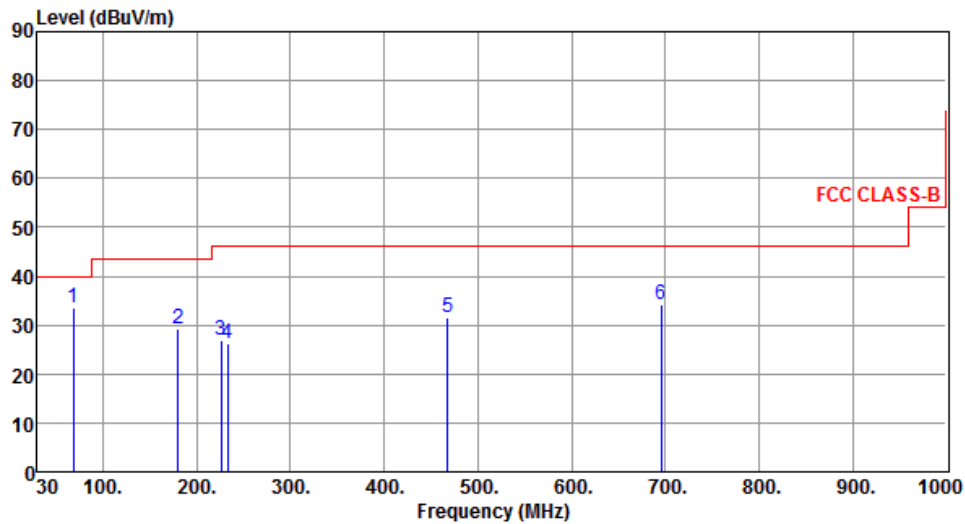
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	68.62	35.29	40.00	-4.71	50.49	-15.20	Peak	---	---
2	180.38	32.35	43.50	-11.15	47.57	-15.22	Peak	---	---
3	225.68	38.72	46.00	-7.28	54.34	-15.62	Peak	---	---
4	299.73	31.88	46.00	-14.12	44.57	-12.69	Peak	---	---
5	322.54	28.82	46.00	-17.18	40.92	-12.10	Peak	---	---
6	564.52	29.10	46.00	-16.90	35.84	-6.74	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).

Modulation	GFSK	Test Freq. (MHz)	2480
Polarization	Vertical	Test Configuration	5



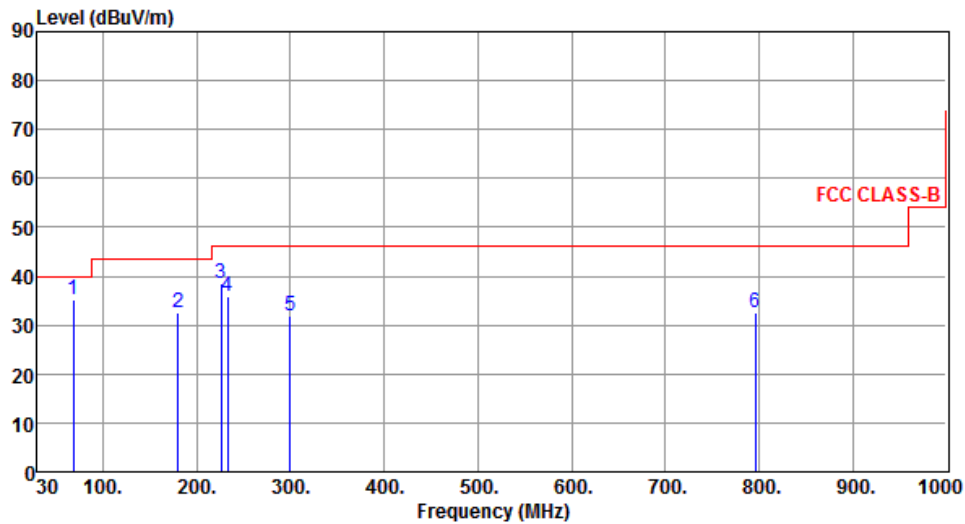
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	68.66	33.56	40.00	-6.44	48.77	-15.21	Peak	---	---
2	180.52	29.14	43.50	-14.36	44.38	-15.24	Peak	---	---
3	225.86	26.77	46.00	-19.23	42.38	-15.61	Peak	---	---
4	232.64	26.38	46.00	-19.62	41.57	-15.19	Peak	---	---
5	467.48	31.41	46.00	-14.59	39.87	-8.46	Peak	---	---
6	695.52	34.22	46.00	-11.78	38.48	-4.26	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).

Modulation	GFSK	Test Freq. (MHz)	2480
Polarization	Horizontal	Test Configuration	6



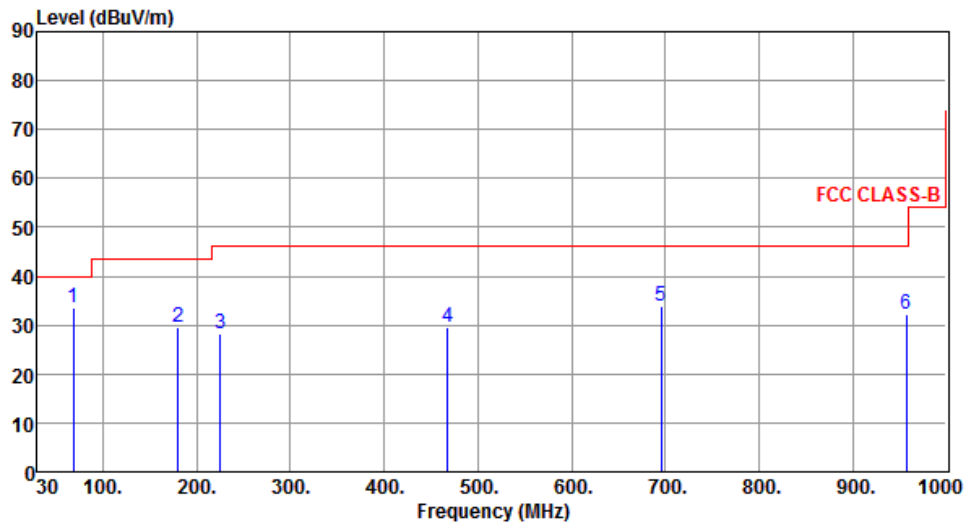
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	68.80	35.11	40.00	-4.89	50.34	-15.23	Peak	---	---
2	180.35	32.47	43.50	-11.03	47.69	-15.22	Peak	---	---
3	225.94	38.37	46.00	-7.63	53.97	-15.60	Peak	---	---
4	232.73	35.82	46.00	-10.18	51.01	-15.19	Peak	---	---
5	299.66	31.84	46.00	-14.16	44.53	-12.69	Peak	---	---
6	796.30	32.46	46.00	-13.54	35.02	-2.56	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).

Modulation	GFSK	Test Freq. (MHz)	2480
Polarization	Vertical	Test Configuration	6



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	68.80	33.65	40.00	-6.35	48.88	-15.23	Peak	---	---
2	180.35	29.55	43.50	-13.95	44.77	-15.22	Peak	---	---
3	224.97	28.10	46.00	-17.90	43.76	-15.66	Peak	---	---
4	467.47	29.52	46.00	-16.48	37.98	-8.46	Peak	---	---
5	695.42	34.00	46.00	-12.00	38.26	-4.26	Peak	---	---
6	957.32	32.31	46.00	-13.69	32.07	0.24	Peak	---	---

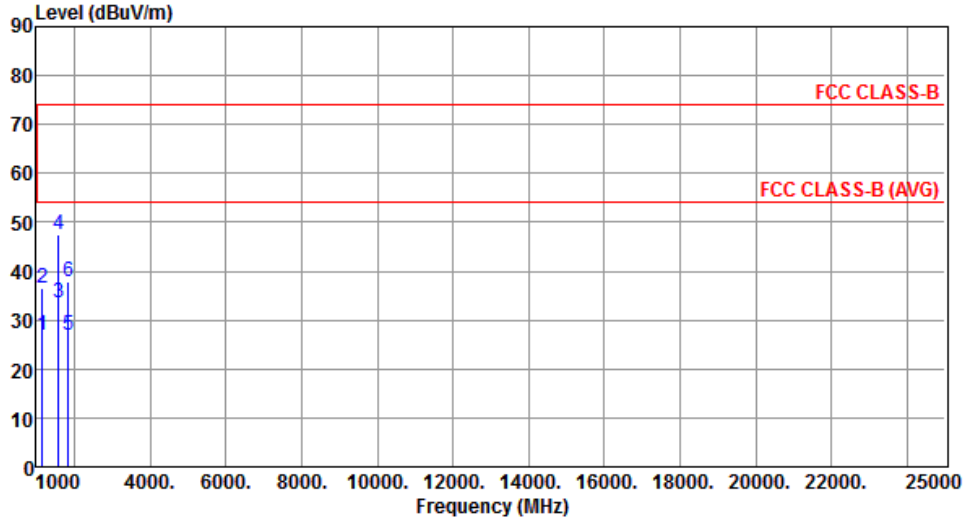
Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

3.2.5 Transmitter Radiated Unwanted Emissions (Above 1GHz)

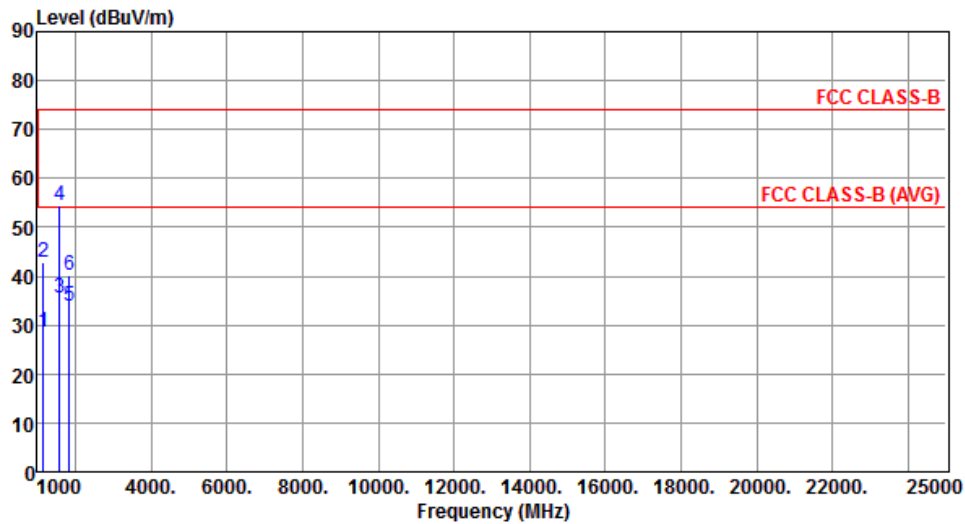
Modulation	GFSK	Test Freq. (MHz)	2402
Polarization	Horizontal	Test Configuration	1



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	26.80	54.00	-27.20	34.48	-7.68	Average	---	---
2	1151.00	36.45	74.00	-37.55	44.13	-7.68	Peak	---	---
3	1591.00	33.70	54.00	-20.30	38.45	-4.75	Average	---	---
4	1591.00	47.47	74.00	-26.53	52.22	-4.75	Peak	---	---
5	1848.00	26.78	54.00	-27.22	30.72	-3.94	Average	---	---
6	1848.00	37.91	74.00	-36.09	41.85	-3.94	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).

Modulation	GFSK	Test Freq. (MHz)	2402
Polarization	Vertical	Test Configuration	1



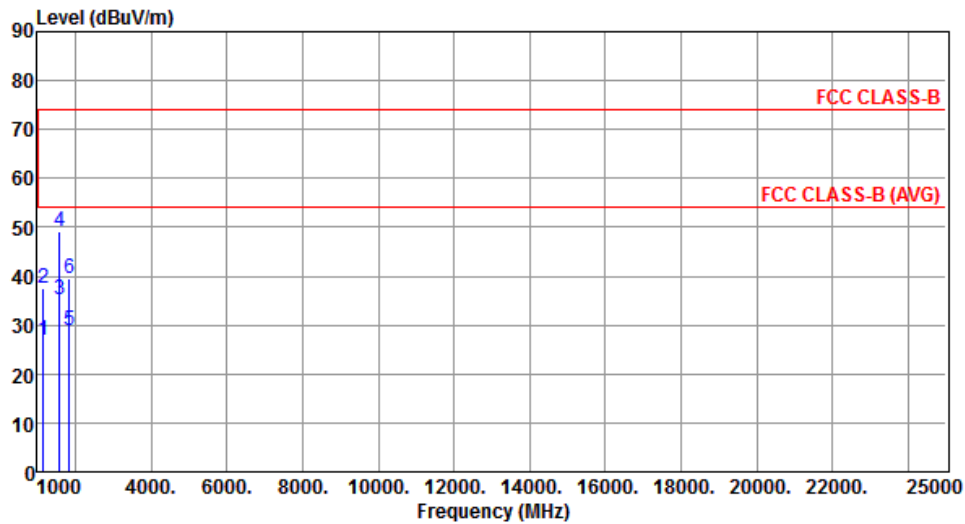
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	28.73	54.00	-25.27	36.41	-7.68	Average	---	---
2	1151.00	43.01	74.00	-30.99	50.69	-7.68	Peak	---	---
3	1591.00	35.61	54.00	-18.39	40.36	-4.75	Average	---	---
4	1591.00	54.47	74.00	-19.53	59.22	-4.75	Peak	---	---
5	1848.00	33.73	54.00	-20.27	37.67	-3.94	Average	---	---
6	1848.00	40.23	74.00	-33.77	44.17	-3.94	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).

Modulation	GFSK	Test Freq. (MHz)	2441
Polarization	Horizontal	Test Configuration	1



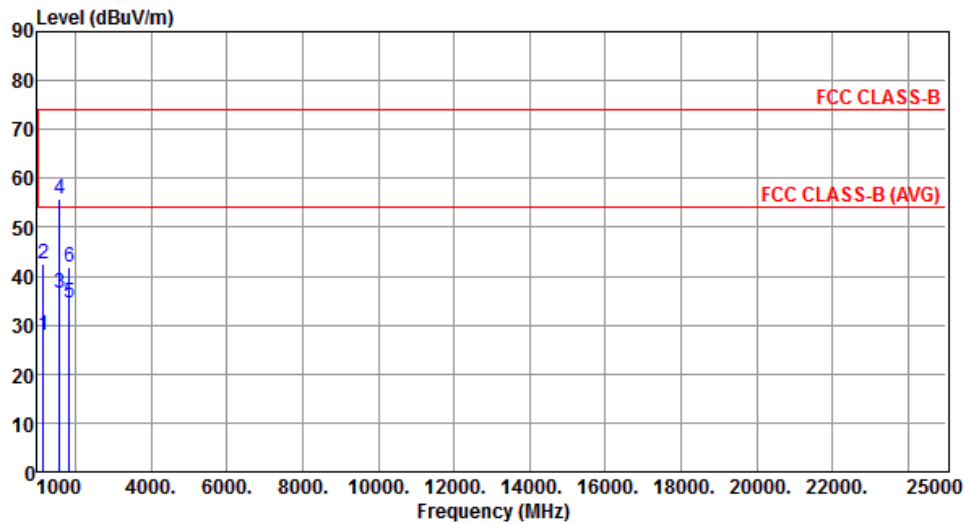
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	26.89	54.00	-27.11	34.57	-7.68	Average	---	---
2	1151.00	37.55	74.00	-36.45	45.23	-7.68	Peak	---	---
3	1591.00	35.11	54.00	-18.89	39.86	-4.75	Average	---	---
4	1591.00	49.00	74.00	-25.00	53.75	-4.75	Peak	---	---
5	1848.00	28.99	54.00	-25.01	32.93	-3.94	Average	---	---
6	1848.00	39.55	74.00	-34.45	43.49	-3.94	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).

Modulation	GFSK	Test Freq. (MHz)	2441
Polarization	Vertical	Test Configuration	1



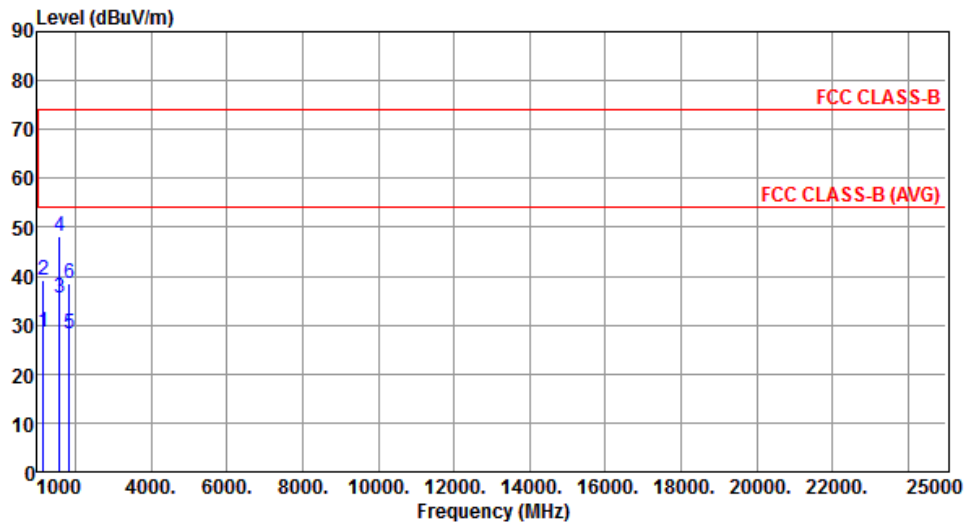
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	28.02	54.00	-25.98	35.70	-7.68	Average	---	---
2	1151.00	42.60	74.00	-31.40	50.28	-7.68	Peak	---	---
3	1591.00	36.56	54.00	-17.44	41.31	-4.75	Average	---	---
4	1591.00	55.66	74.00	-18.34	60.41	-4.75	Peak	---	---
5	1848.00	34.56	54.00	-19.44	38.50	-3.94	Average	---	---
6	1848.00	42.01	74.00	-31.99	45.95	-3.94	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).

Modulation	GFSK	Test Freq. (MHz)	2480
Polarization	Horizontal	Test Configuration	1



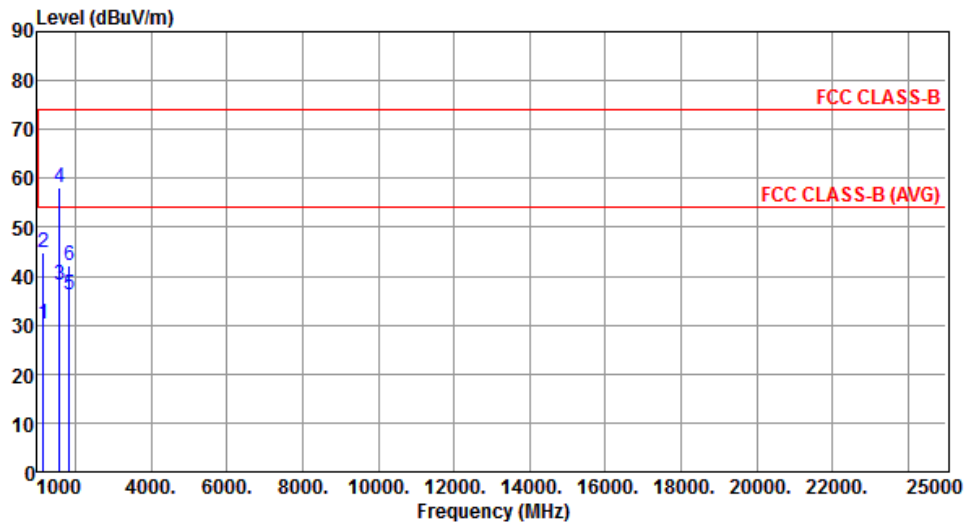
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	28.44	54.00	-25.56	36.12	-7.68	Average	---	---
2	1151.00	39.04	74.00	-34.96	46.72	-7.68	Peak	---	---
3	1591.00	35.55	54.00	-18.45	40.30	-4.75	Average	---	---
4	1591.00	48.11	74.00	-25.89	52.86	-4.75	Peak	---	---
5	1848.00	28.11	54.00	-25.89	32.05	-3.94	Average	---	---
6	1848.00	38.44	74.00	-35.56	42.38	-3.94	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).

Modulation	GFSK	Test Freq. (MHz)	2480
Polarization	Vertical	Test Configuration	1



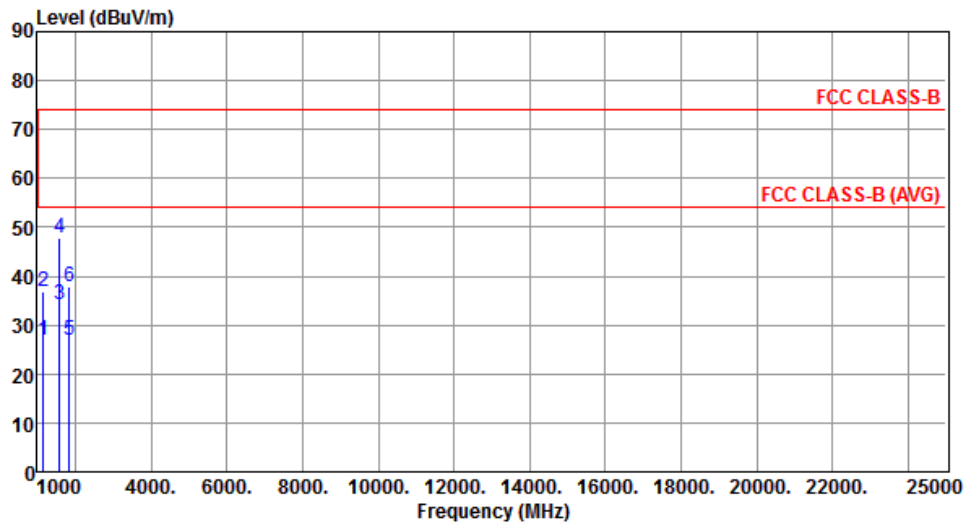
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	30.22	54.00	-23.78	37.90	-7.68	Average	---	---
2	1151.00	44.67	74.00	-29.33	52.35	-7.68	Peak	---	---
3	1591.00	38.12	54.00	-15.88	42.87	-4.75	Average	---	---
4	1591.00	58.12	74.00	-15.88	62.87	-4.75	Peak	---	---
5	1848.00	36.12	54.00	-17.88	40.06	-3.94	Average	---	---
6	1848.00	42.12	74.00	-31.88	46.06	-3.94	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).

Modulation	GFSK	Test Freq. (MHz)	2402
Polarization	Horizontal	Test Configuration	2



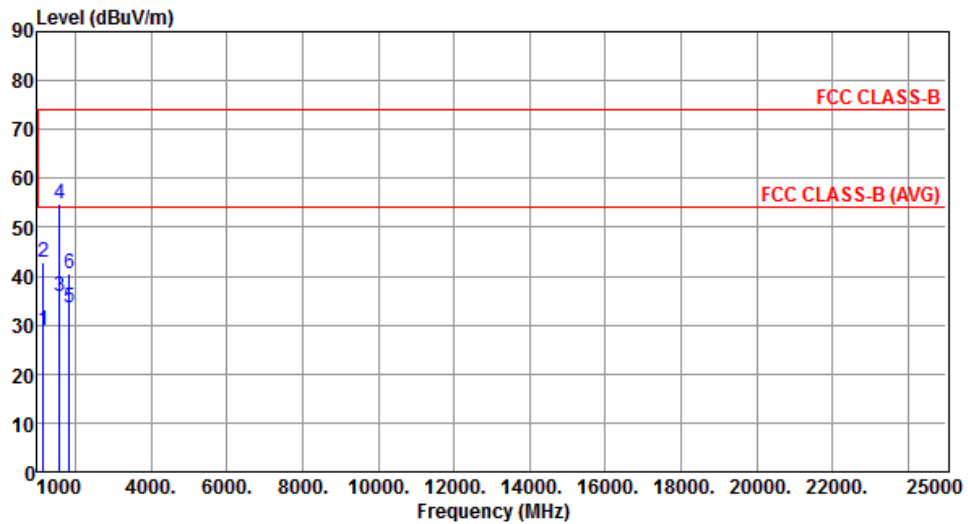
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	26.95	54.00	-27.05	34.63	-7.68	Average	---	---
2	1151.00	36.83	74.00	-37.17	44.51	-7.68	Peak	---	---
3	1591.00	34.20	54.00	-19.80	38.95	-4.75	Average	---	---
4	1591.00	47.93	74.00	-26.07	52.68	-4.75	Peak	---	---
5	1848.00	26.81	54.00	-27.19	30.75	-3.94	Average	---	---
6	1848.00	37.72	74.00	-36.28	41.66	-3.94	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).

Modulation	GFSK	Test Freq. (MHz)	2402
Polarization	Vertical	Test Configuration	2



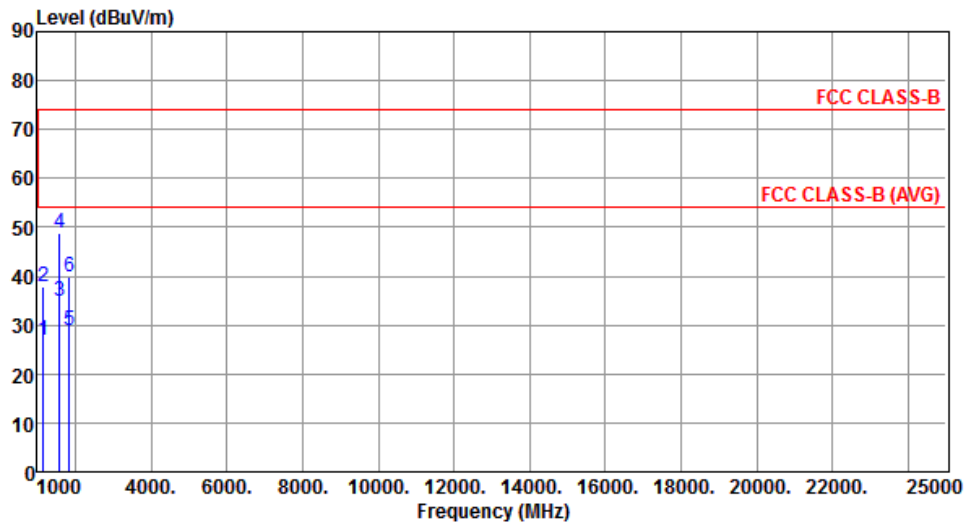
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	28.89	54.00	-25.11	36.57	-7.68	Average	---	---
2	1151.00	42.81	74.00	-31.19	50.49	-7.68	Peak	---	---
3	1591.00	35.73	54.00	-18.27	40.48	-4.75	Average	---	---
4	1591.00	54.88	74.00	-19.12	59.63	-4.75	Peak	---	---
5	1848.00	33.54	54.00	-20.46	37.48	-3.94	Average	---	---
6	1848.00	40.60	74.00	-33.40	44.54	-3.94	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).

Modulation	GFSK	Test Freq. (MHz)	2441
Polarization	Horizontal	Test Configuration	2



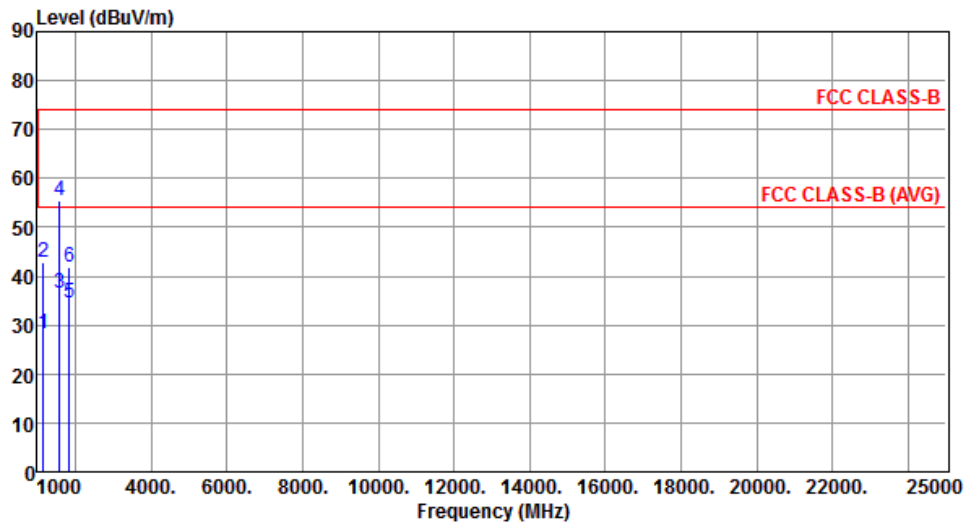
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	27.00	54.00	-27.00	34.68	-7.68	Average	---	---
2	1151.00	37.80	74.00	-36.20	45.48	-7.68	Peak	---	---
3	1591.00	34.74	54.00	-19.26	39.49	-4.75	Average	---	---
4	1591.00	48.91	74.00	-25.09	53.66	-4.75	Peak	---	---
5	1848.00	28.87	54.00	-25.13	32.81	-3.94	Average	---	---
6	1848.00	39.99	74.00	-34.01	43.93	-3.94	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).

Modulation	GFSK	Test Freq. (MHz)	2441
Polarization	Vertical	Test Configuration	2



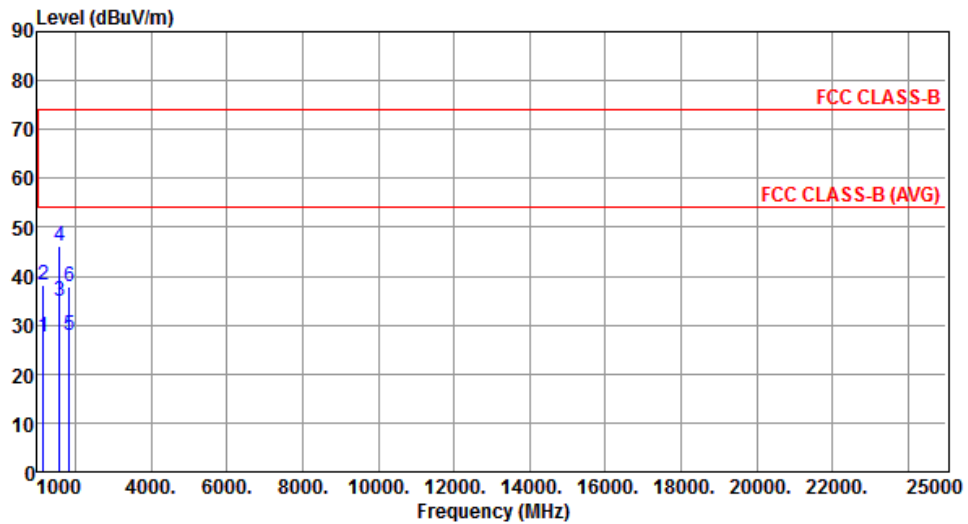
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	28.08	54.00	-25.92	35.76	-7.68	Average	---	---
2	1151.00	42.78	74.00	-31.22	50.46	-7.68	Peak	---	---
3	1591.00	36.68	54.00	-17.32	41.43	-4.75	Average	---	---
4	1591.00	55.57	74.00	-18.43	60.32	-4.75	Peak	---	---
5	1848.00	34.61	54.00	-19.39	38.55	-3.94	Average	---	---
6	1848.00	41.84	74.00	-32.16	45.78	-3.94	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).

Modulation	GFSK	Test Freq. (MHz)	2480
Polarization	Horizontal	Test Configuration	2



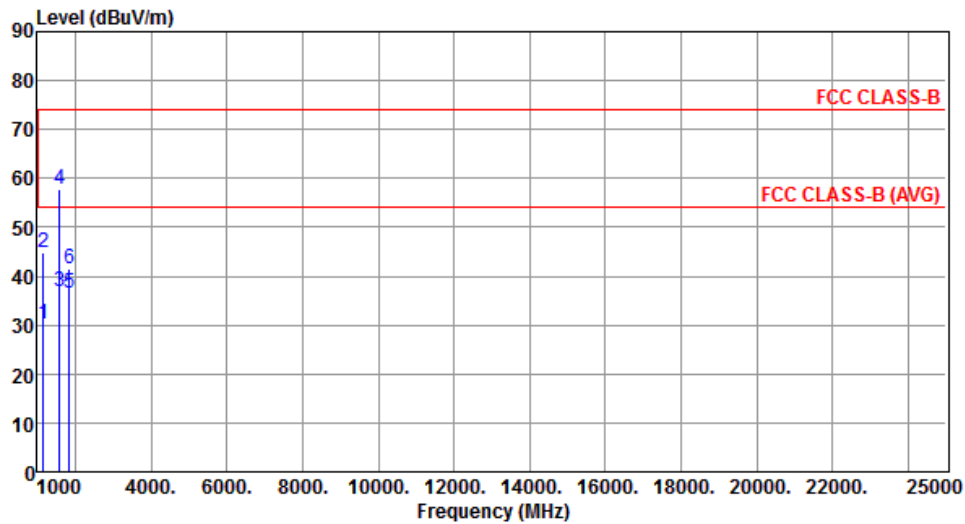
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	27.56	54.00	-26.44	35.24	-7.68	Average	---	---
2	1151.00	38.11	74.00	-35.89	45.79	-7.68	Peak	---	---
3	1591.00	35.01	54.00	-18.99	39.76	-4.75	Average	---	---
4	1591.00	46.32	74.00	-27.68	51.07	-4.75	Peak	---	---
5	1848.00	27.89	54.00	-26.11	31.83	-3.94	Average	---	---
6	1848.00	37.92	74.00	-36.08	41.86	-3.94	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).

Modulation	GFSK	Test Freq. (MHz)	2480
Polarization	Vertical	Test Configuration	2



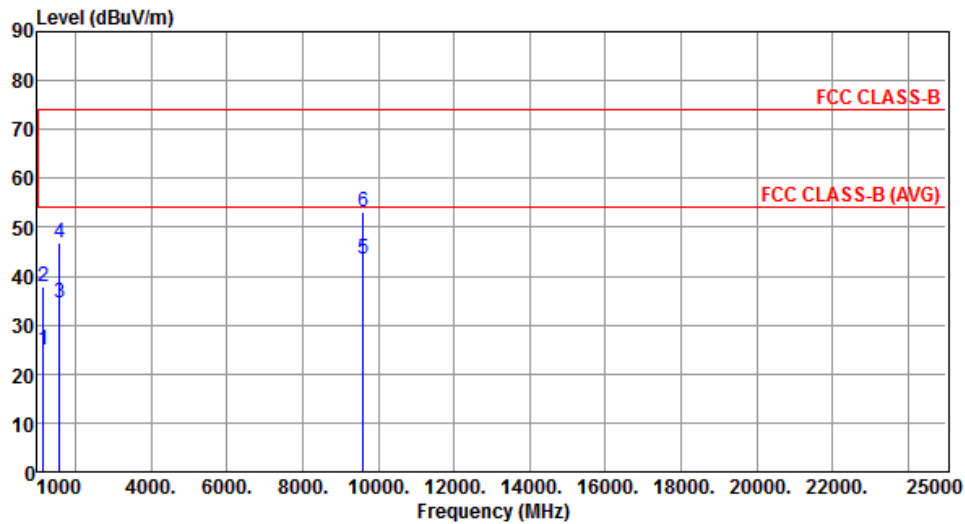
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	30.17	54.00	-23.83	37.85	-7.68	Average	---	---
2	1151.00	44.81	74.00	-29.19	52.49	-7.68	Peak	---	---
3	1591.00	36.90	54.00	-17.10	41.65	-4.75	Average	---	---
4	1591.00	57.79	74.00	-16.21	62.54	-4.75	Peak	---	---
5	1848.00	36.50	54.00	-17.50	40.44	-3.94	Average	---	---
6	1848.00	41.63	74.00	-32.37	45.57	-3.94	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).

Modulation	GFSK	Test Freq. (MHz)	2402
Polarization	Horizontal	Test Configuration	3



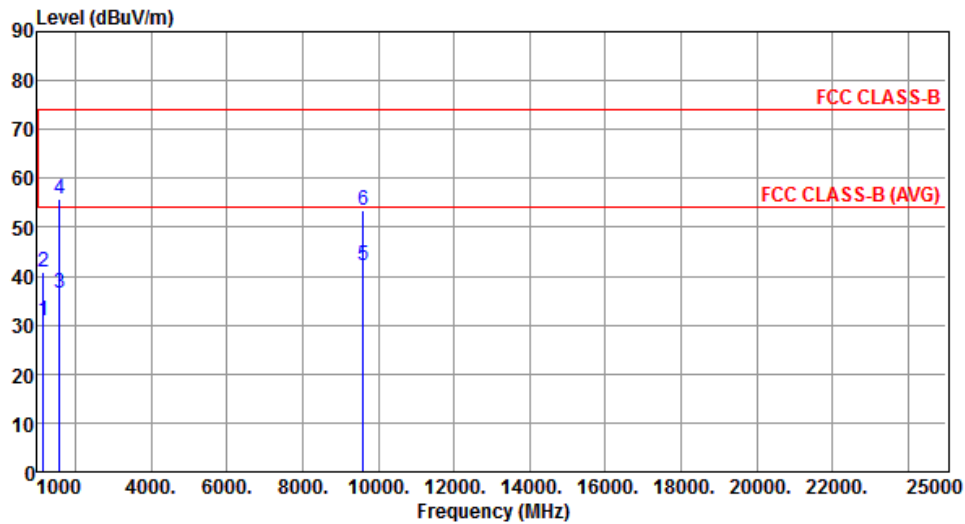
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	24.86	54.00	-29.14	32.54	-7.68	Average	---	---
2	1151.00	37.94	74.00	-36.06	45.62	-7.68	Peak	---	---
3	1591.00	34.67	54.00	-19.33	39.42	-4.75	Average	---	---
4	1591.00	46.68	74.00	-27.32	51.43	-4.75	Peak	---	---
5	9608.00	43.48	54.00	-10.52	27.55	15.93	Average	---	---
6	9608.00	53.08	74.00	-20.92	37.15	15.93	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).

Modulation	GFSK	Test Freq. (MHz)	2402
Polarization	Vertical	Test Configuration	3



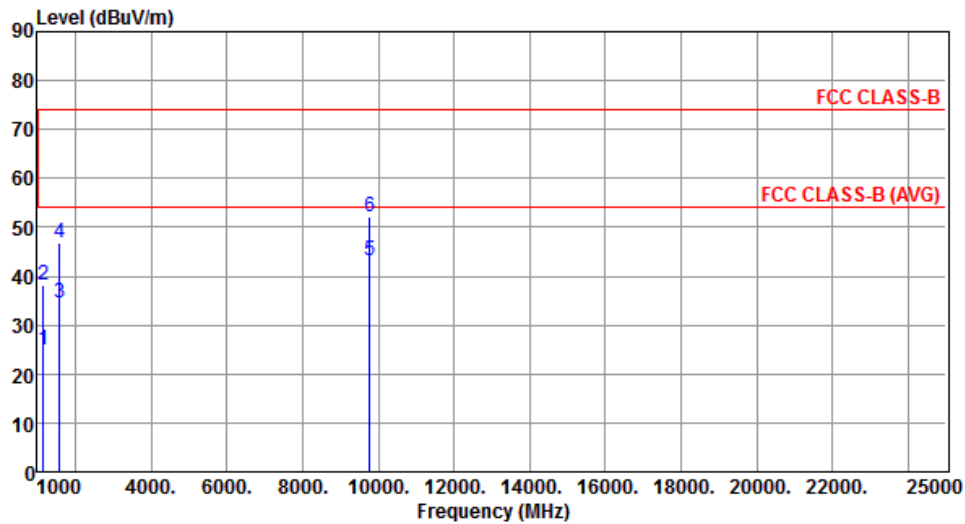
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	30.76	54.00	-23.24	38.44	-7.68	Average	---	---
2	1151.00	40.88	74.00	-33.12	48.56	-7.68	Peak	---	---
3	1591.00	36.69	54.00	-17.31	41.44	-4.75	Average	---	---
4	1591.00	55.67	74.00	-18.33	60.42	-4.75	Peak	---	---
5	9608.00	42.06	54.00	-11.94	26.13	15.93	Average	---	---
6	9608.00	53.46	74.00	-20.54	37.53	15.93	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).

Modulation	GFSK	Test Freq. (MHz)	2441
Polarization	Horizontal	Test Configuration	3



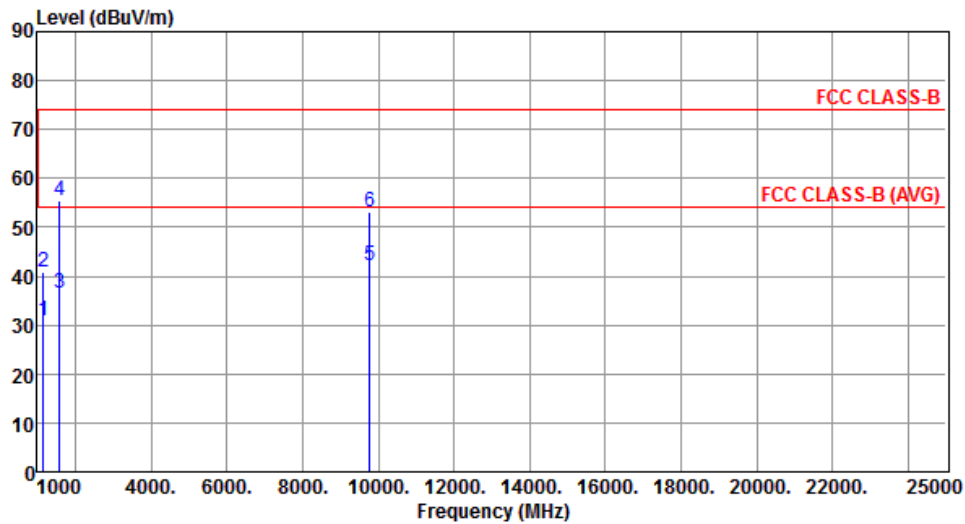
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	24.87	54.00	-29.13	32.55	-7.68	Average	---	---
2	1151.00	38.03	74.00	-35.97	45.71	-7.68	Peak	---	---
3	1591.00	34.68	54.00	-19.32	39.43	-4.75	Average	---	---
4	1591.00	46.87	74.00	-27.13	51.62	-4.75	Peak	---	---
5	9764.00	43.16	54.00	-10.84	27.44	15.72	Average	---	---
6	9764.00	52.24	74.00	-21.76	36.52	15.72	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).

Modulation	GFSK	Test Freq. (MHz)	2441
Polarization	Vertical	Test Configuration	3



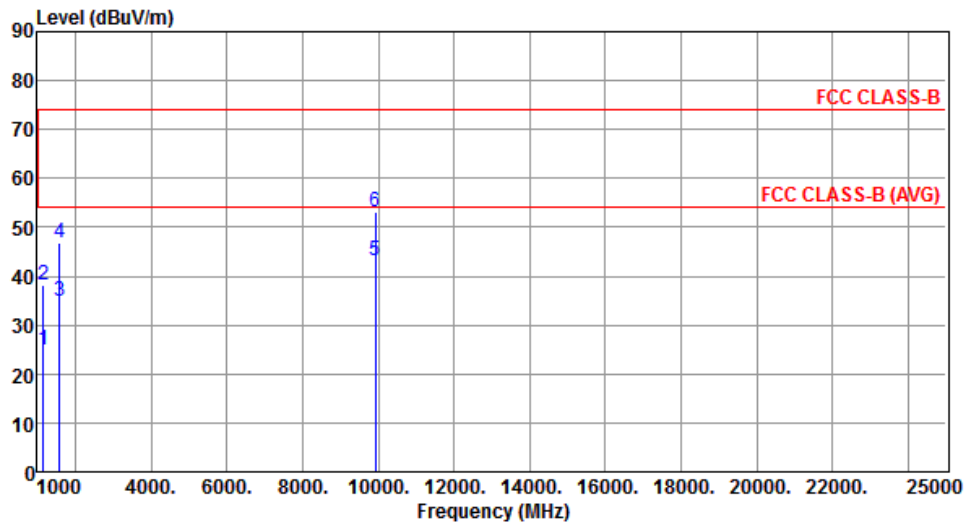
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	30.74	54.00	-23.26	38.42	-7.68	Average	---	---
2	1151.00	40.75	74.00	-33.25	48.43	-7.68	Peak	---	---
3	1591.00	36.49	54.00	-17.51	41.24	-4.75	Average	---	---
4	1591.00	55.43	74.00	-18.57	60.18	-4.75	Peak	---	---
5	9764.00	42.12	54.00	-11.88	26.40	15.72	Average	---	---
6	9764.00	53.29	74.00	-20.71	37.57	15.72	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).

Modulation	GFSK	Test Freq. (MHz)	2480
Polarization	Horizontal	Test Configuration	3



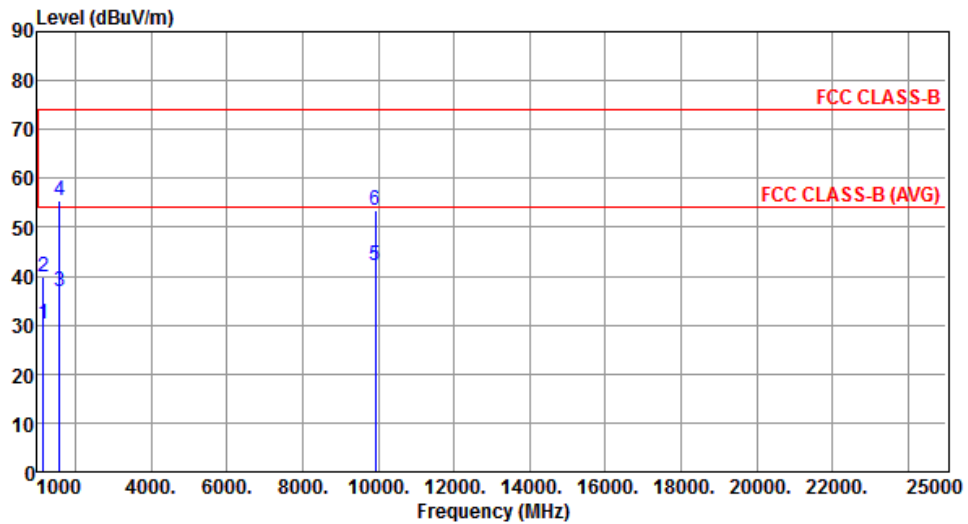
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	24.80	54.00	-29.20	32.48	-7.68	Average	---	---
2	1151.00	38.03	74.00	-35.97	45.71	-7.68	Peak	---	---
3	1591.00	34.91	54.00	-19.09	39.66	-4.75	Average	---	---
4	1591.00	46.67	74.00	-27.33	51.42	-4.75	Peak	---	---
5	9920.00	43.03	54.00	-10.97	27.24	15.79	Average	---	---
6	9920.00	53.23	74.00	-20.77	37.44	15.79	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).

Modulation	GFSK	Test Freq. (MHz)	2480
Polarization	Vertical	Test Configuration	3



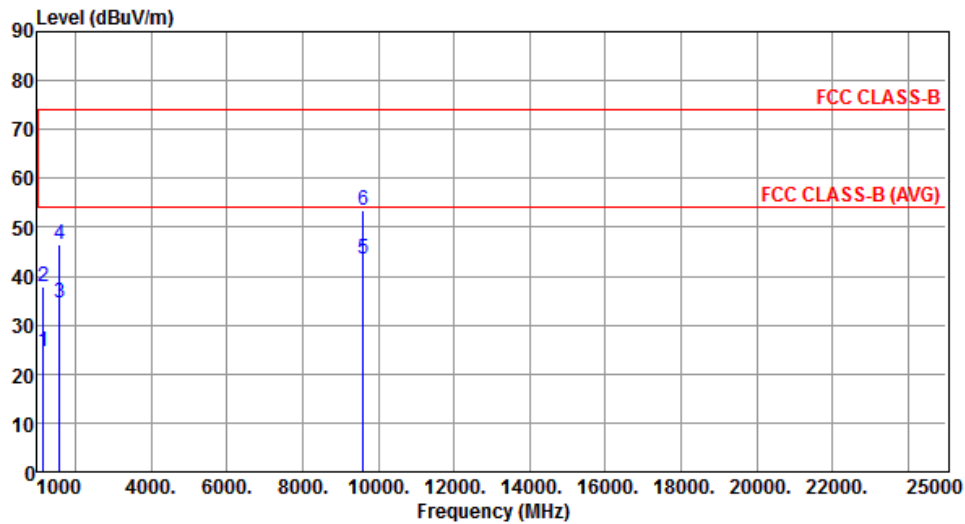
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	30.36	54.00	-23.64	38.04	-7.68	Average	---	---
2	1151.00	39.88	74.00	-34.12	47.56	-7.68	Peak	---	---
3	1591.00	36.73	54.00	-17.27	41.48	-4.75	Average	---	---
4	1591.00	55.59	74.00	-18.41	60.34	-4.75	Peak	---	---
5	9920.00	42.04	54.00	-11.96	26.25	15.79	Average	---	---
6	9920.00	53.43	74.00	-20.57	37.64	15.79	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).

Modulation	GFSK	Test Freq. (MHz)	2402
Polarization	Horizontal	Test Configuration	4



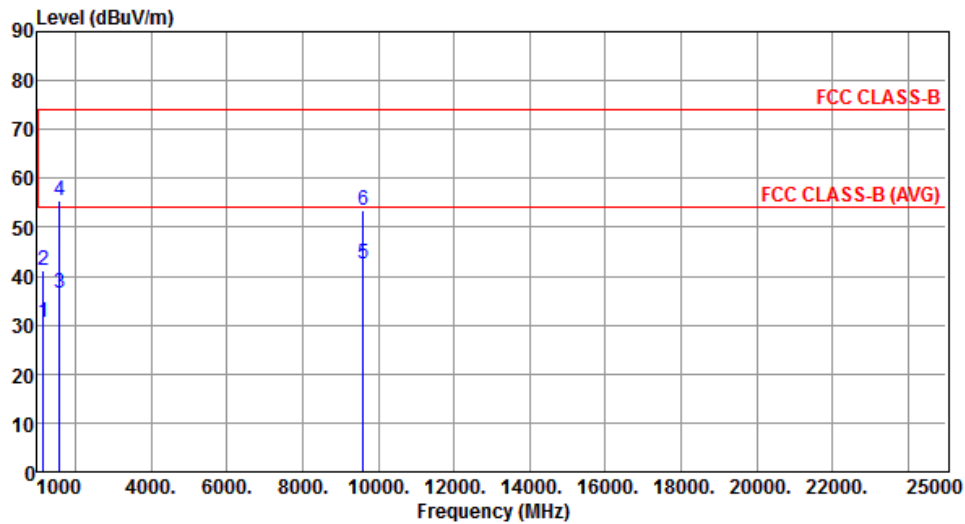
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	24.63	54.00	-29.37	32.31	-7.68	Average	---	---
2	1151.00	37.76	74.00	-36.24	45.44	-7.68	Peak	---	---
3	1591.00	34.58	54.00	-19.42	39.33	-4.75	Average	---	---
4	1591.00	46.33	74.00	-27.67	51.08	-4.75	Peak	---	---
5	9608.00	43.42	54.00	-10.58	27.49	15.93	Average	---	---
6	9608.00	53.39	74.00	-20.61	37.46	15.93	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).

Modulation	GFSK	Test Freq. (MHz)	2402
Polarization	Vertical	Test Configuration	4



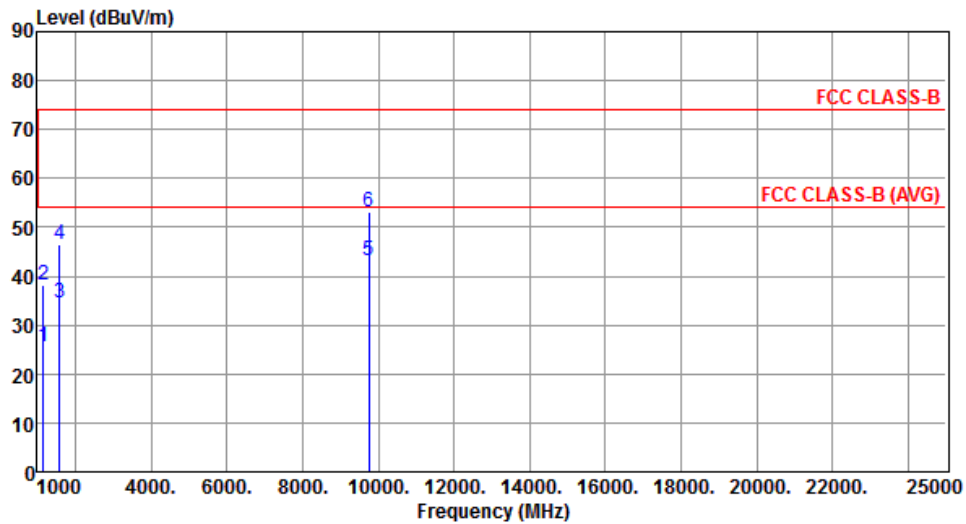
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	30.67	54.00	-23.33	38.35	-7.68	Average	---	---
2	1151.00	41.07	74.00	-32.93	48.75	-7.68	Peak	---	---
3	1591.00	36.52	54.00	-17.48	41.27	-4.75	Average	---	---
4	1591.00	55.56	74.00	-18.44	60.31	-4.75	Peak	---	---
5	9608.00	42.40	54.00	-11.60	26.47	15.93	Average	---	---
6	9608.00	53.49	74.00	-20.51	37.56	15.93	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).

Modulation	GFSK	Test Freq. (MHz)	2441
Polarization	Horizontal	Test Configuration	4



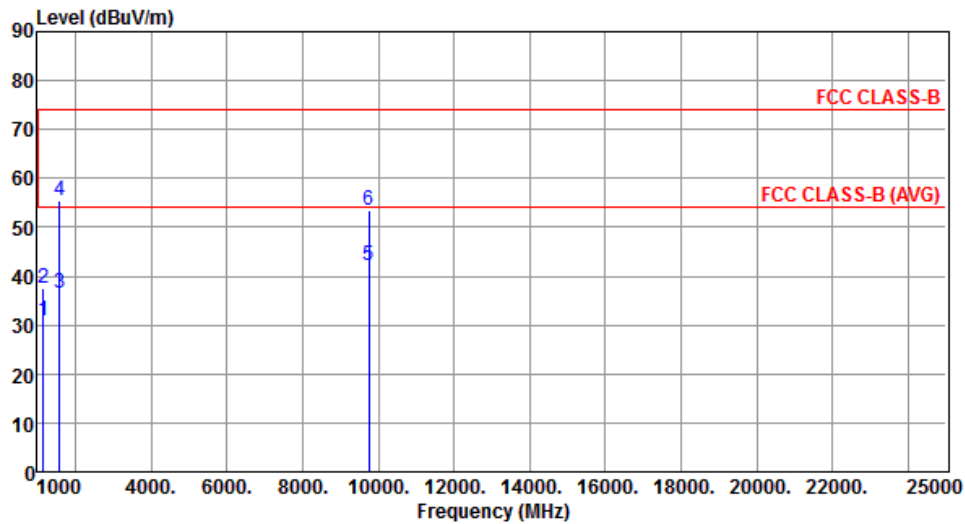
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	25.63	54.00	-28.37	33.31	-7.68	Average	---	---
2	1151.00	38.04	74.00	-35.96	45.72	-7.68	Peak	---	---
3	1591.00	34.63	54.00	-19.37	39.38	-4.75	Average	---	---
4	1591.00	46.50	74.00	-27.50	51.25	-4.75	Peak	---	---
5	9760.00	43.20	54.00	-10.80	27.48	15.72	Average	---	---
6	9760.00	53.28	74.00	-20.72	37.56	15.72	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).

Modulation	GFSK	Test Freq. (MHz)	2441
Polarization	Vertical	Test Configuration	4



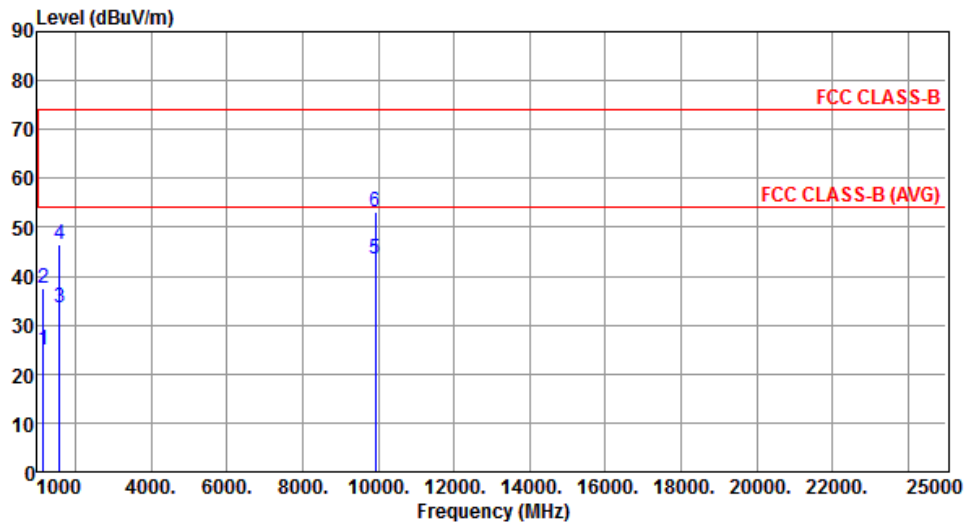
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	30.80	54.00	-23.20	38.48	-7.68	Average	---	---
2	1151.00	37.56	74.00	-36.44	45.24	-7.68	Peak	---	---
3	1591.00	36.69	54.00	-17.31	41.44	-4.75	Average	---	---
4	1591.00	55.63	74.00	-18.37	60.38	-4.75	Peak	---	---
5	9760.00	42.20	54.00	-11.80	26.48	15.72	Average	---	---
6	9760.00	53.35	74.00	-20.65	37.63	15.72	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).

Modulation	GFSK	Test Freq. (MHz)	2480
Polarization	Horizontal	Test Configuration	4



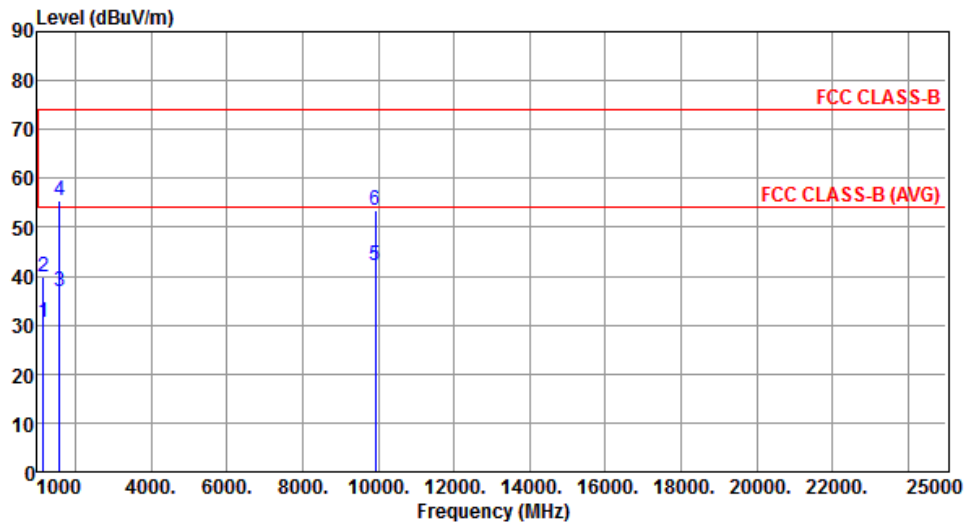
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	24.83	54.00	-29.17	32.51	-7.68	Average	---	---
2	1151.00	37.56	74.00	-36.44	45.24	-7.68	Peak	---	---
3	1591.00	33.66	54.00	-20.34	38.41	-4.75	Average	---	---
4	1591.00	46.50	74.00	-27.50	51.25	-4.75	Peak	---	---
5	9920.00	43.43	54.00	-10.57	27.64	15.79	Average	---	---
6	9920.00	53.17	74.00	-20.83	37.38	15.79	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).

Modulation	GFSK	Test Freq. (MHz)	2480
Polarization	Vertical	Test Configuration	4



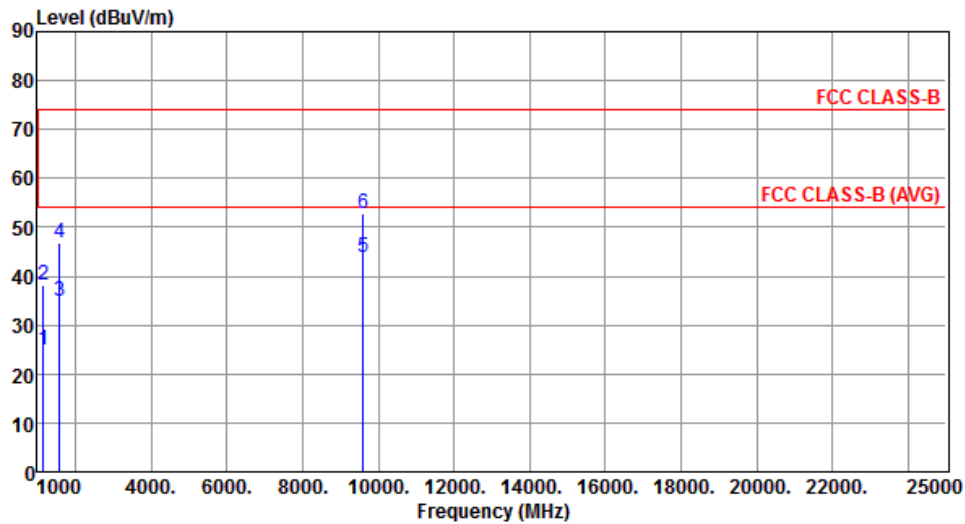
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	30.47	54.00	-23.53	38.15	-7.68	Average	---	---
2	1151.00	40.00	74.00	-34.00	47.68	-7.68	Peak	---	---
3	1591.00	36.73	54.00	-17.27	41.48	-4.75	Average	---	---
4	1591.00	55.60	74.00	-18.40	60.35	-4.75	Peak	---	---
5	9920.00	42.14	54.00	-11.86	26.35	15.79	Average	---	---
6	9920.00	53.36	74.00	-20.64	37.57	15.79	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).

Modulation	GFSK	Test Freq. (MHz)	2402
Polarization	Horizontal	Test Configuration	5



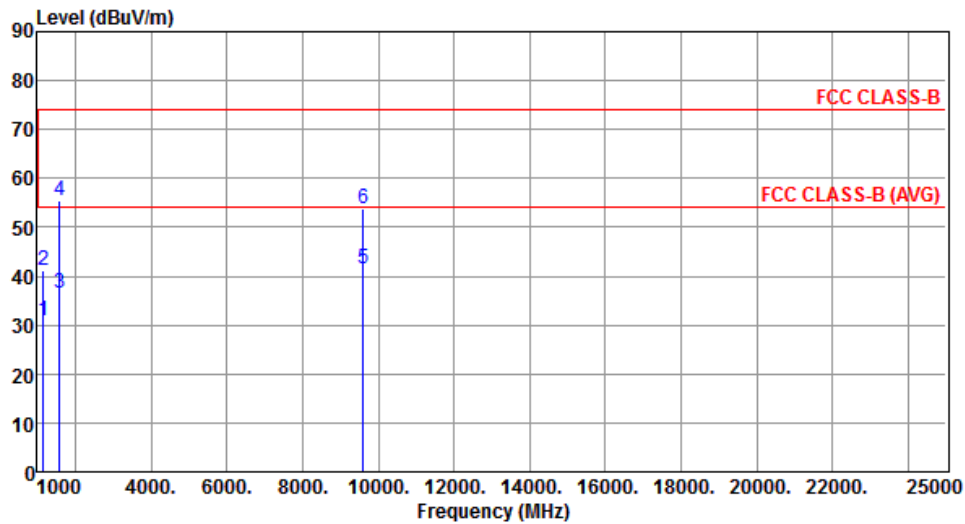
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	24.79	54.00	-29.21	32.47	-7.68	Average	---	---
2	1151.00	38.19	74.00	-35.81	45.87	-7.68	Peak	---	---
3	1591.00	34.76	54.00	-19.24	39.51	-4.75	Average	---	---
4	1591.00	46.73	74.00	-27.27	51.48	-4.75	Peak	---	---
5	9608.00	43.69	54.00	-10.31	27.76	15.93	Average	---	---
6	9608.00	52.67	74.00	-21.33	36.74	15.93	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).

Modulation	GFSK	Test Freq. (MHz)	2402
Polarization	Vertical	Test Configuration	5



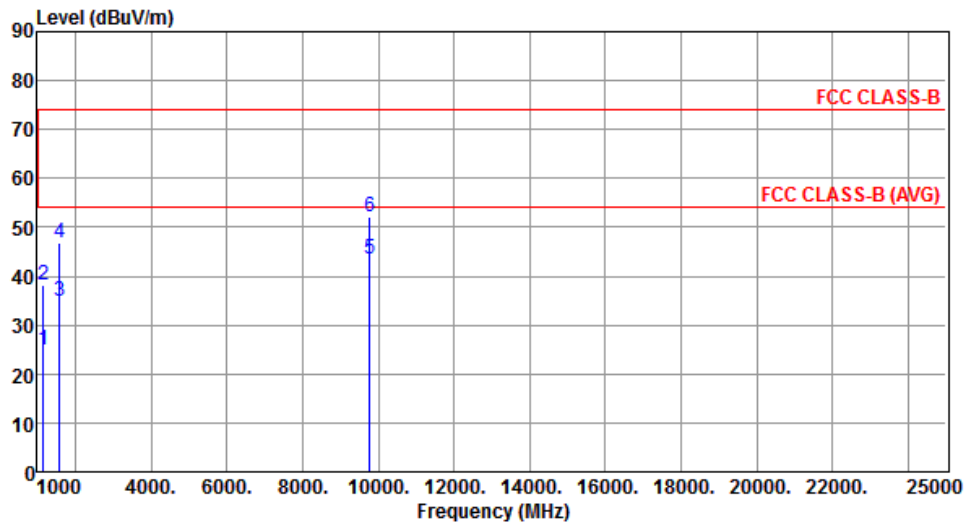
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	30.81	54.00	-23.19	38.49	-7.68	Average	---	---
2	1151.00	41.21	74.00	-32.79	48.89	-7.68	Peak	---	---
3	1591.00	36.60	54.00	-17.40	41.35	-4.75	Average	---	---
4	1591.00	55.57	74.00	-18.43	60.32	-4.75	Peak	---	---
5	9608.00	41.44	54.00	-12.56	25.51	15.93	Average	---	---
6	9608.00	53.76	74.00	-20.24	37.83	15.93	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).

Modulation	GFSK	Test Freq. (MHz)	2441
Polarization	Horizontal	Test Configuration	5



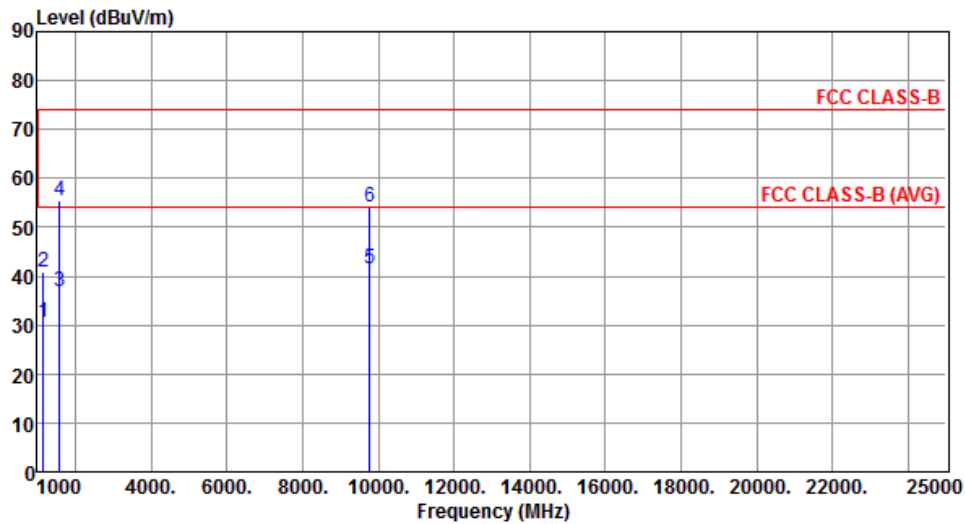
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	25.00	54.00	-29.00	32.68	-7.68	Average	---	---
2	1151.00	38.17	74.00	-35.83	45.85	-7.68	Peak	---	---
3	1591.00	34.88	54.00	-19.12	39.63	-4.75	Average	---	---
4	1591.00	46.85	74.00	-27.15	51.60	-4.75	Peak	---	---
5	9764.00	43.57	54.00	-10.43	27.85	15.72	Average	---	---
6	9764.00	52.20	74.00	-21.80	36.48	15.72	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).

Modulation	GFSK	Test Freq. (MHz)	2441
Polarization	Vertical	Test Configuration	5



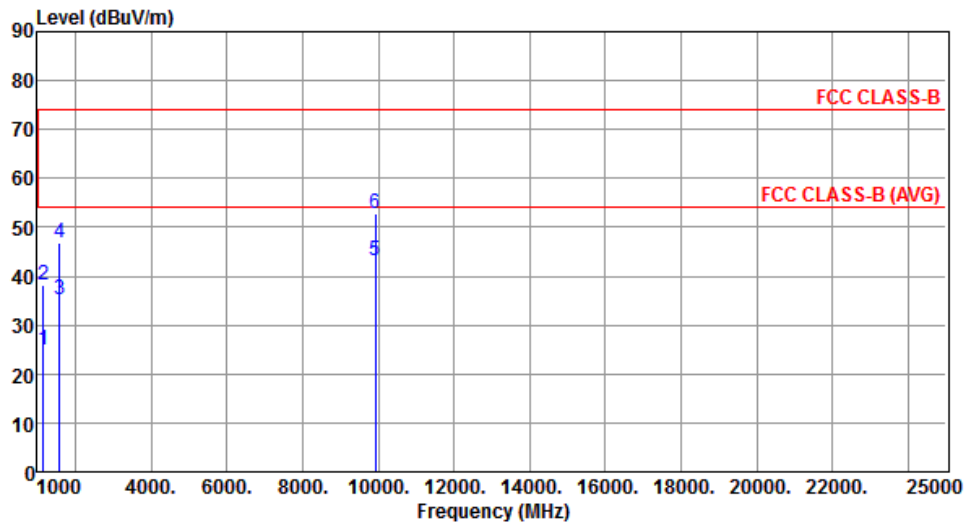
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	30.56	54.00	-23.44	38.24	-7.68	Average	---	---
2	1151.00	40.87	74.00	-33.13	48.55	-7.68	Peak	---	---
3	1591.00	36.73	54.00	-17.27	41.48	-4.75	Average	---	---
4	1591.00	55.59	74.00	-18.41	60.34	-4.75	Peak	---	---
5	9764.00	41.57	54.00	-12.43	25.85	15.72	Average	---	---
6	9764.00	54.03	74.00	-19.97	38.31	15.72	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).

Modulation	GFSK	Test Freq. (MHz)	2480
Polarization	Horizontal	Test Configuration	5



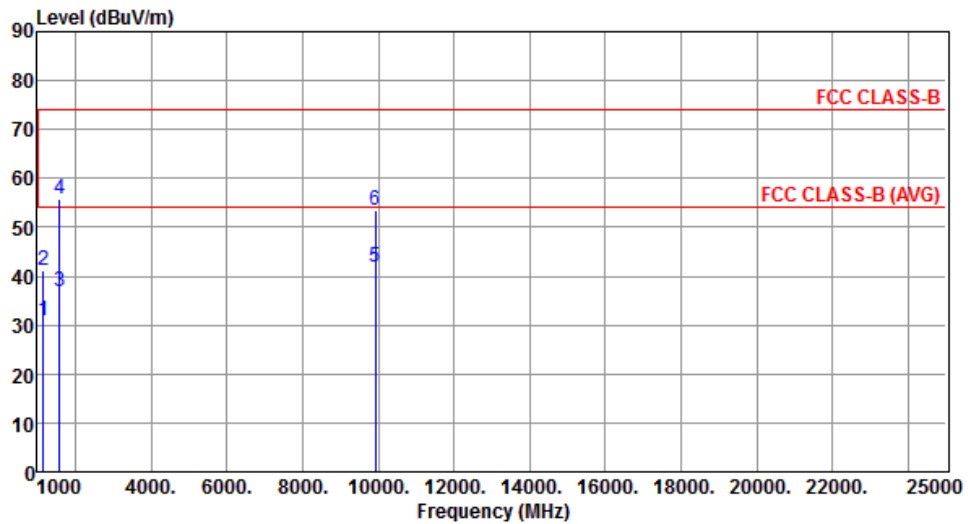
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	24.88	54.00	-29.12	32.56	-7.68	Average	---	---
2	1151.00	38.07	74.00	-35.93	45.75	-7.68	Peak	---	---
3	1591.00	35.06	54.00	-18.94	39.81	-4.75	Average	---	---
4	1591.00	46.89	74.00	-27.11	51.64	-4.75	Peak	---	---
5	9920.00	43.28	54.00	-10.72	27.49	15.79	Average	---	---
6	9920.00	52.95	74.00	-21.05	37.16	15.79	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).

Modulation	GFSK	Test Freq. (MHz)	2480
Polarization	Vertical	Test Configuration	5



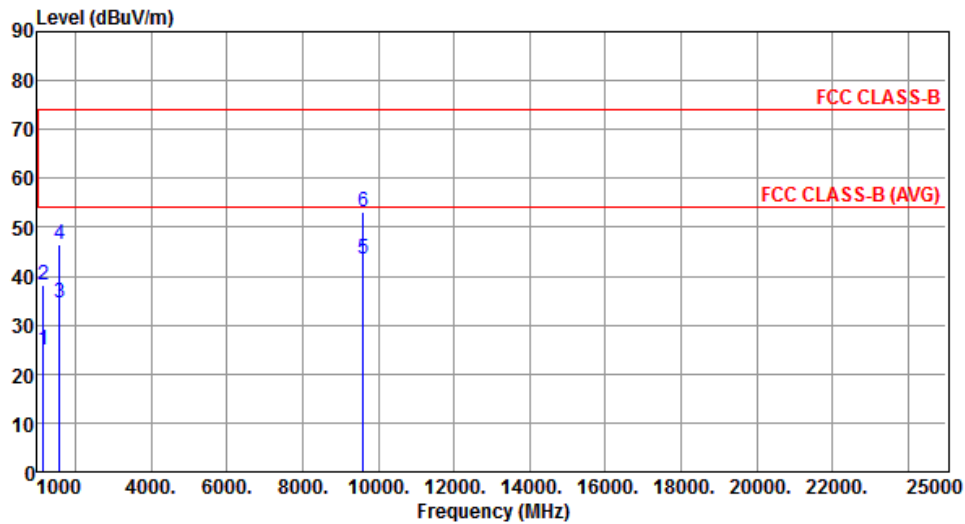
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	30.76	54.00	-23.24	38.44	-7.68	Average	---	---
2	1151.00	41.04	74.00	-32.96	48.72	-7.68	Peak	---	---
3	1591.00	36.78	54.00	-17.22	41.53	-4.75	Average	---	---
4	1591.00	55.66	74.00	-18.34	60.41	-4.75	Peak	---	---
5	9920.00	42.00	54.00	-12.00	26.21	15.79	Average	---	---
6	9920.00	53.36	74.00	-20.64	37.57	15.79	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).

Modulation	GFSK	Test Freq. (MHz)	2402
Polarization	Horizontal	Test Configuration	6



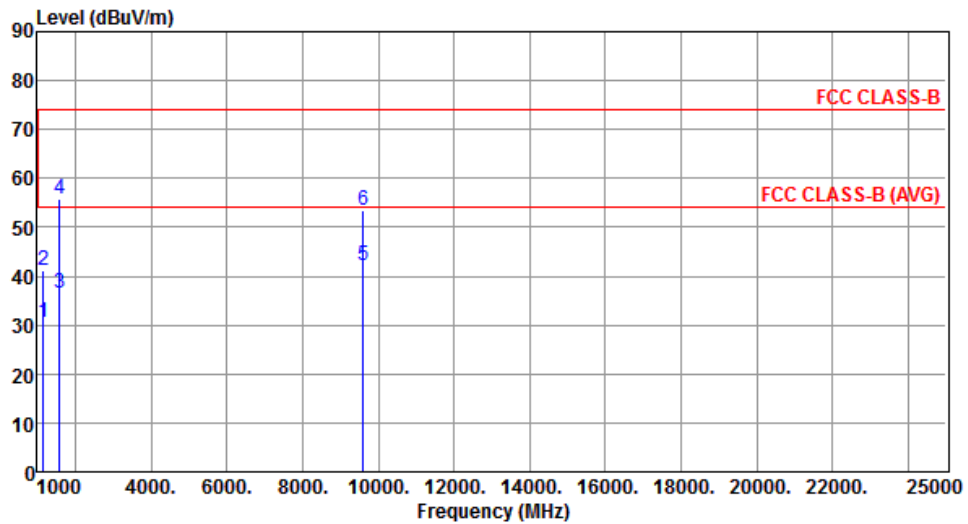
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	24.88	54.00	-29.12	32.56	-7.68	Average	---	---
2	1151.00	38.04	74.00	-35.96	45.72	-7.68	Peak	---	---
3	1591.00	34.63	54.00	-19.37	39.38	-4.75	Average	---	---
4	1591.00	46.51	74.00	-27.49	51.26	-4.75	Peak	---	---
5	9608.00	43.59	54.00	-10.41	27.66	15.93	Average	---	---
6	9608.00	53.28	74.00	-20.72	37.35	15.93	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).

Modulation	GFSK	Test Freq. (MHz)	2402
Polarization	Vertical	Test Configuration	6



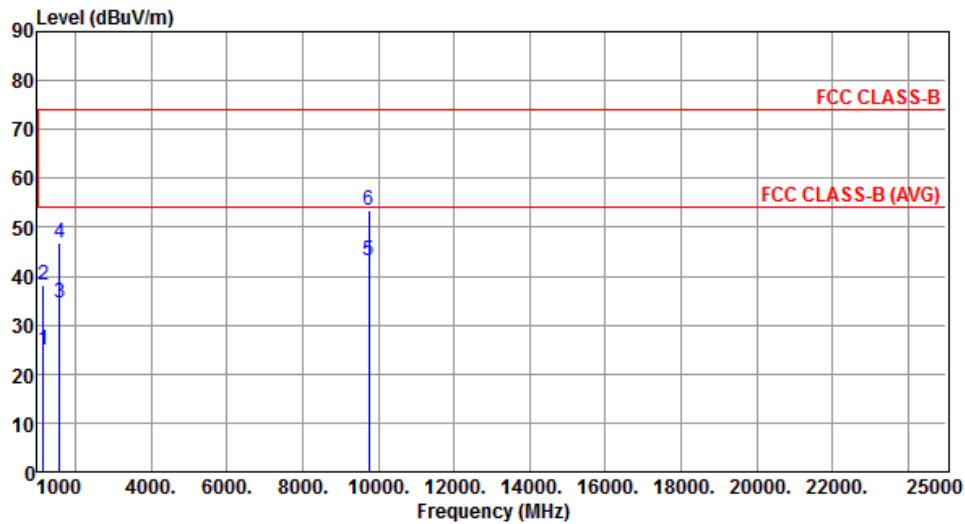
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	30.69	54.00	-23.31	38.37	-7.68	Average	---	---
2	1151.00	41.27	74.00	-32.73	48.95	-7.68	Peak	---	---
3	1591.00	36.53	54.00	-17.47	41.28	-4.75	Average	---	---
4	1591.00	55.72	74.00	-18.28	60.47	-4.75	Peak	---	---
5	9608.00	42.24	54.00	-11.76	26.31	15.93	Average	---	---
6	9608.00	53.56	74.00	-20.44	37.63	15.93	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).

Modulation	GFSK	Test Freq. (MHz)	2441
Polarization	Horizontal	Test Configuration	6



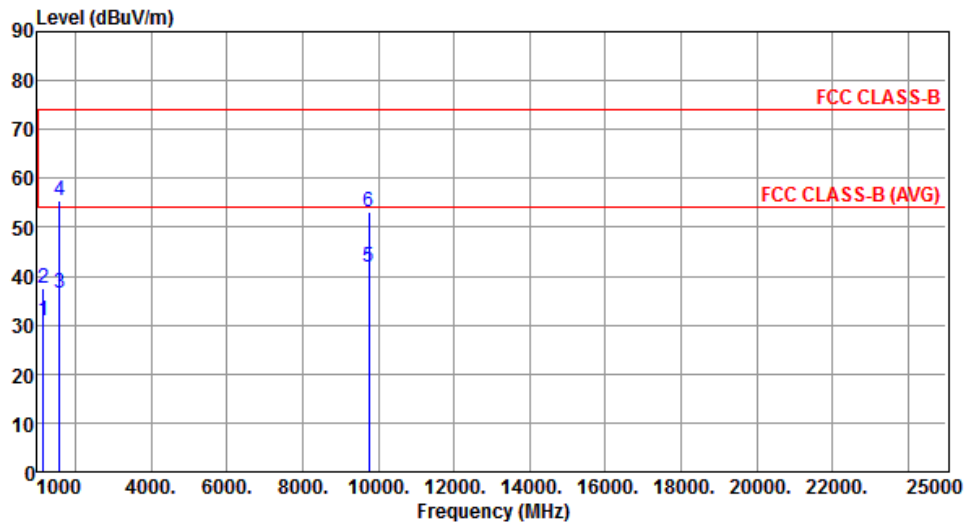
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	24.80	54.00	-29.20	32.48	-7.68	Average	---	---
2	1151.00	38.08	74.00	-35.92	45.76	-7.68	Peak	---	---
3	1591.00	34.62	54.00	-19.38	39.37	-4.75	Average	---	---
4	1591.00	46.70	74.00	-27.30	51.45	-4.75	Peak	---	---
5	9760.00	43.25	54.00	-10.75	27.53	15.72	Average	---	---
6	9760.00	53.38	74.00	-20.62	37.66	15.72	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).

Modulation	GFSK	Test Freq. (MHz)	2441
Polarization	Vertical	Test Configuration	6



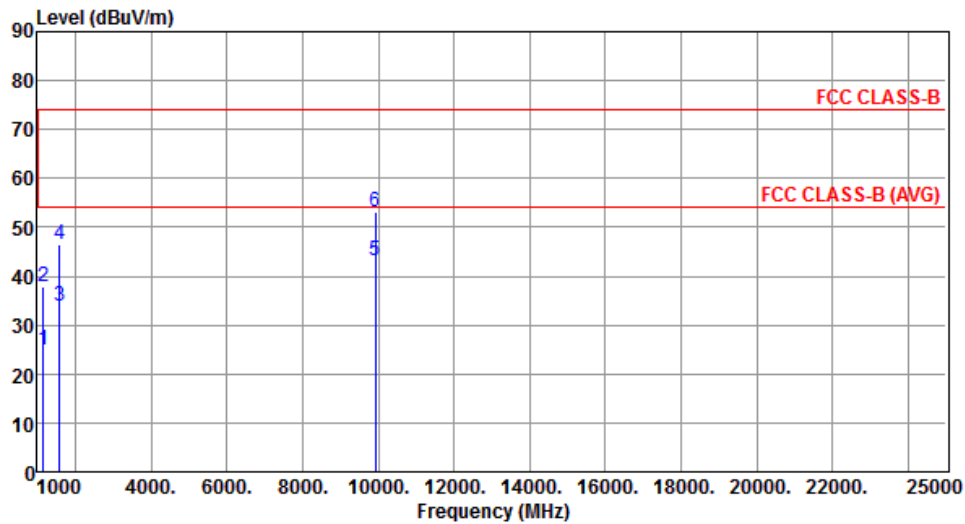
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	30.77	54.00	-23.23	38.45	-7.68	Average	---	---
2	1151.00	37.63	74.00	-36.37	45.31	-7.68	Peak	---	---
3	1591.00	36.57	54.00	-17.43	41.32	-4.75	Average	---	---
4	1591.00	55.49	74.00	-18.51	60.24	-4.75	Peak	---	---
5	9760.00	41.99	54.00	-12.01	26.27	15.72	Average	---	---
6	9760.00	53.19	74.00	-20.81	37.47	15.72	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).

Modulation	GFSK	Test Freq. (MHz)	2480
Polarization	Horizontal	Test Configuration	6



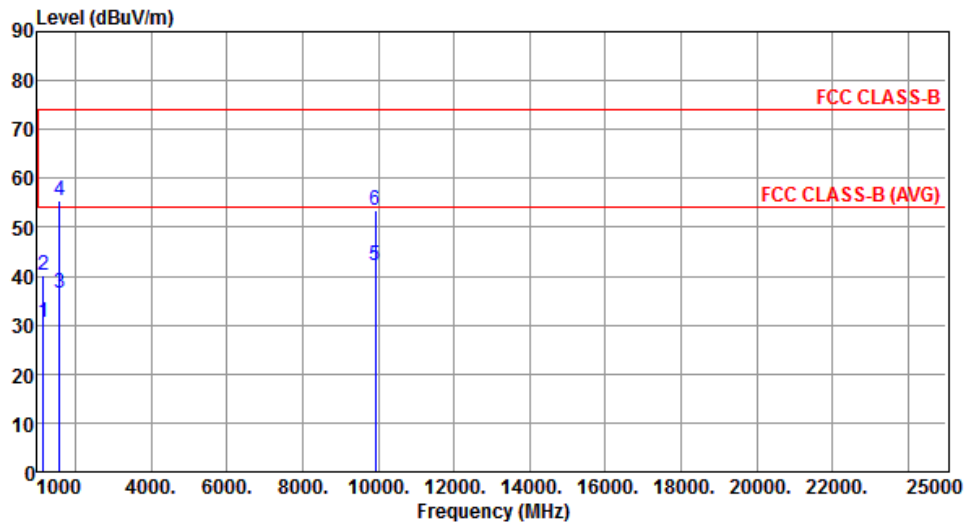
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	24.80	54.00	-29.20	32.48	-7.68	Average	---	---
2	1151.00	37.98	74.00	-36.02	45.66	-7.68	Peak	---	---
3	1591.00	33.73	54.00	-20.27	38.48	-4.75	Average	---	---
4	1591.00	46.52	74.00	-27.48	51.27	-4.75	Peak	---	---
5	9920.00	43.32	54.00	-10.68	27.53	15.79	Average	---	---
6	9920.00	53.28	74.00	-20.72	37.49	15.79	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).

Modulation	GFSK	Test Freq. (MHz)	2480
Polarization	Vertical	Test Configuration	6



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1151.00	30.65	54.00	-23.35	38.33	-7.68	Average	---	---
2	1151.00	40.25	74.00	-33.75	47.93	-7.68	Peak	---	---
3	1591.00	36.49	54.00	-17.51	41.24	-4.75	Average	---	---
4	1591.00	55.55	74.00	-18.45	60.30	-4.75	Peak	---	---
5	9920.00	42.23	54.00	-11.77	26.44	15.79	Average	---	---
6	9920.00	53.40	74.00	-20.60	37.61	15.79	Peak	---	---

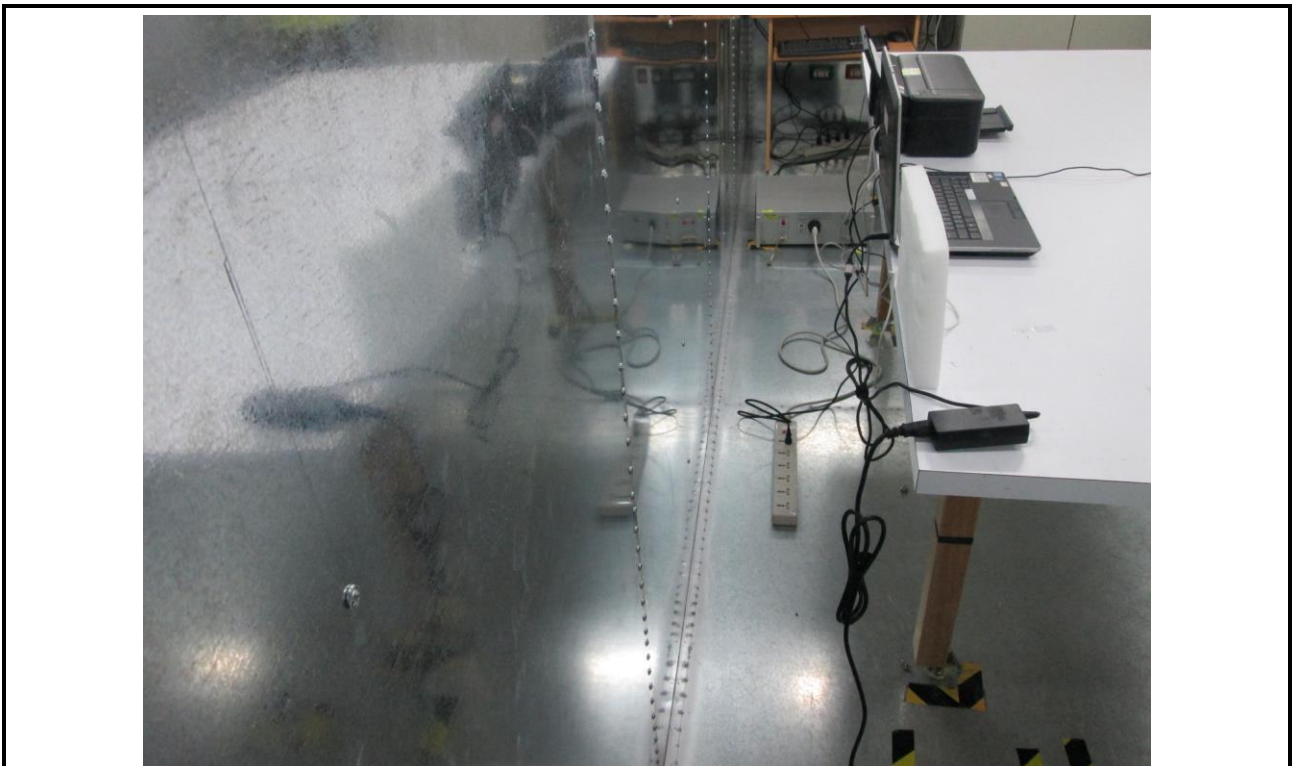
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

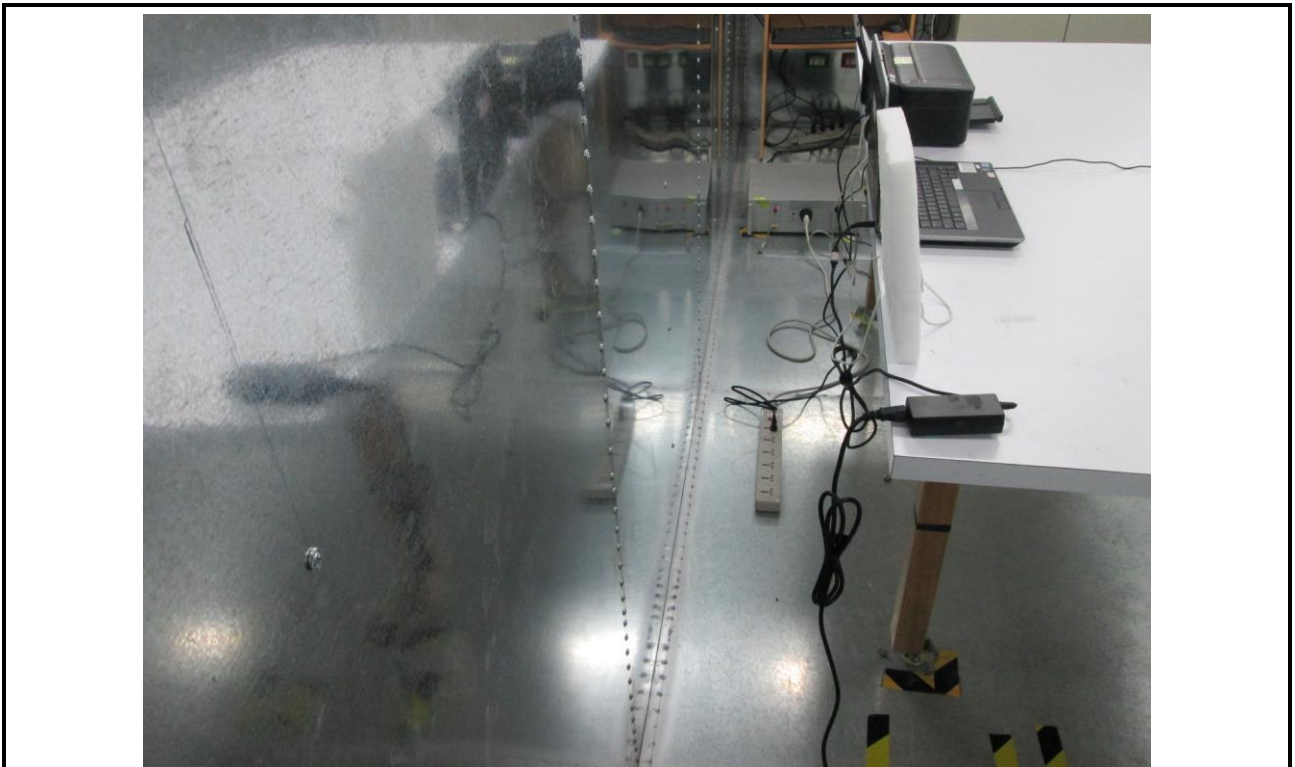
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

4 Photographs of the Test Configuration

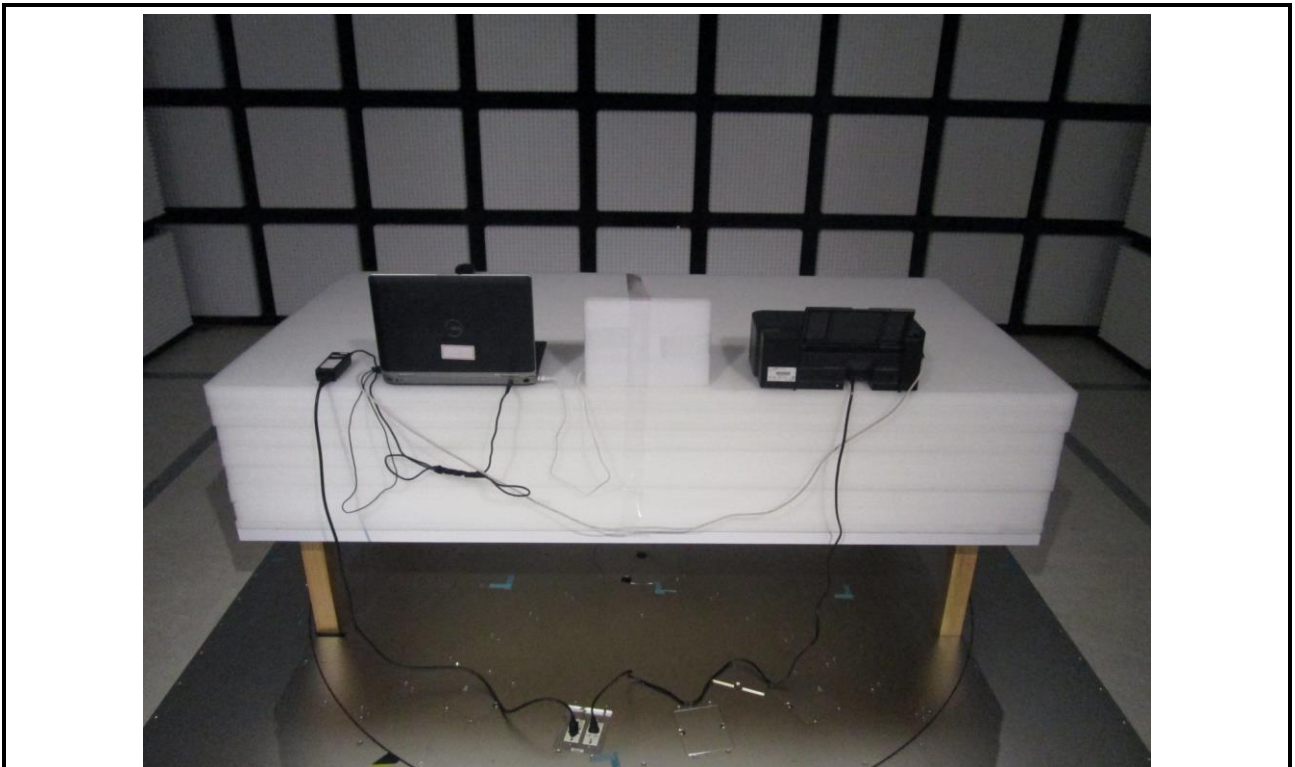
Conducted Emission Test (Model: BT830-SA with antenna 1)



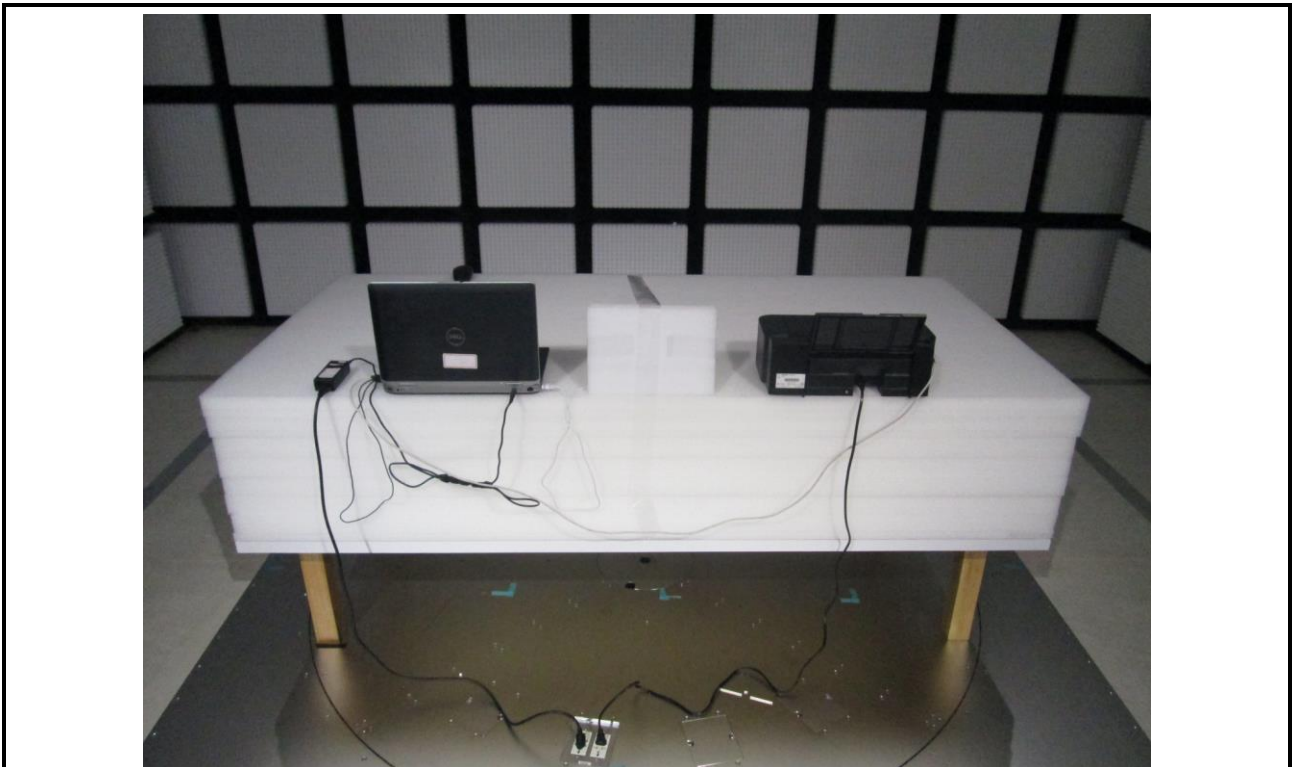
Conducted Emission Test (Model: BT830-SC with antenna 5)



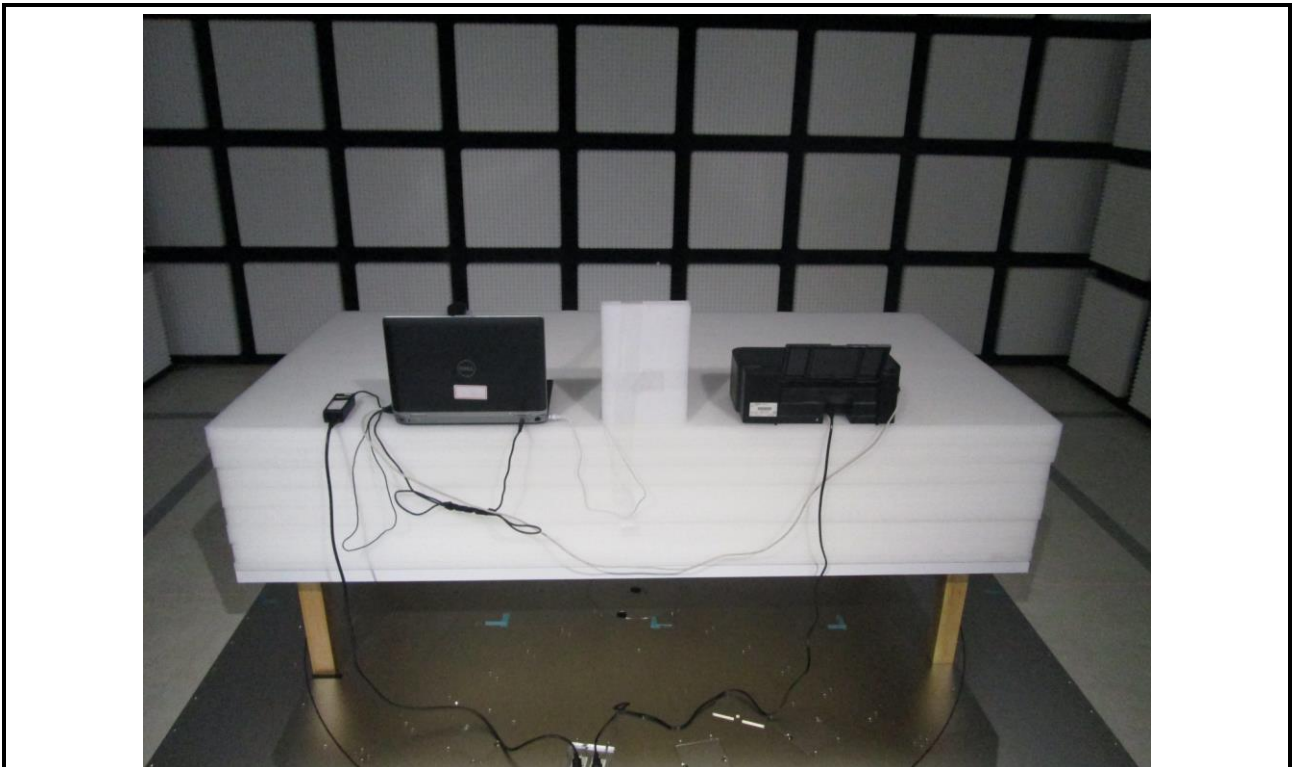
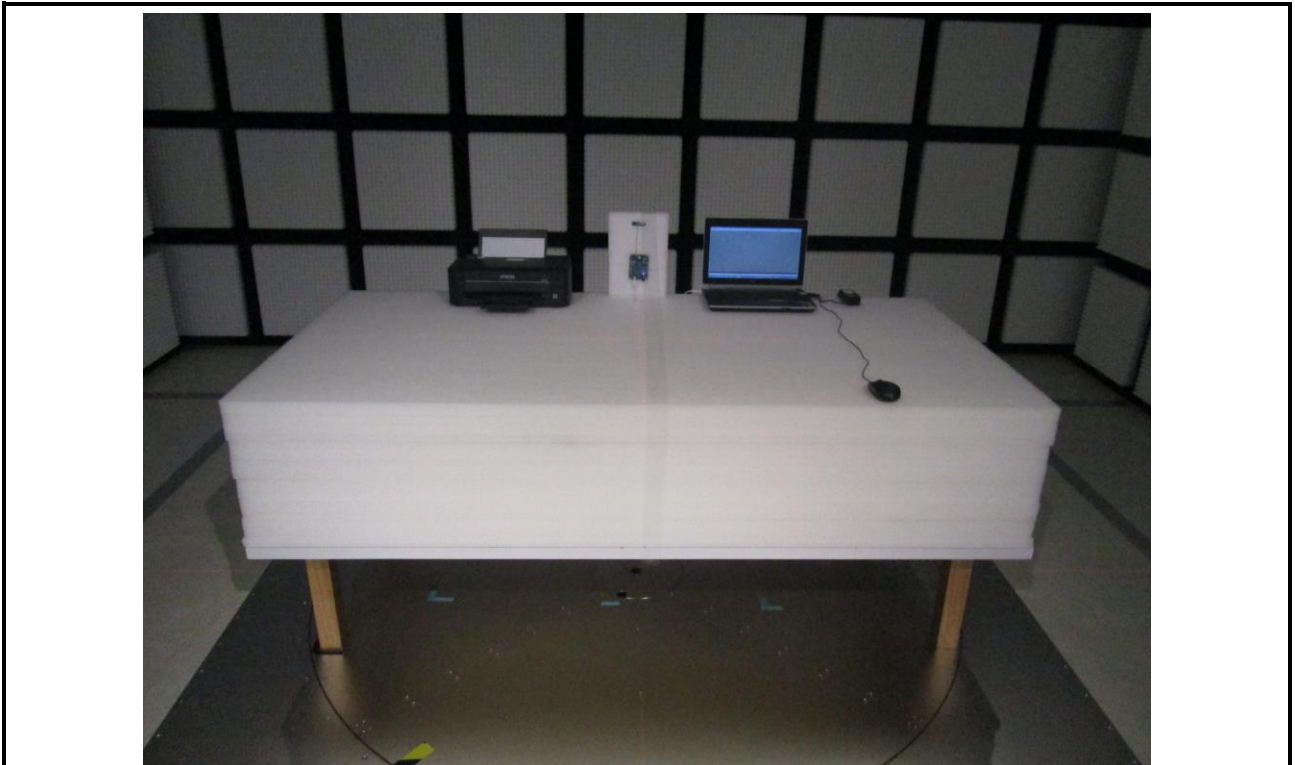
Radiated Emission below 1GHz Test (Model: BT830-SA with antenna 1)



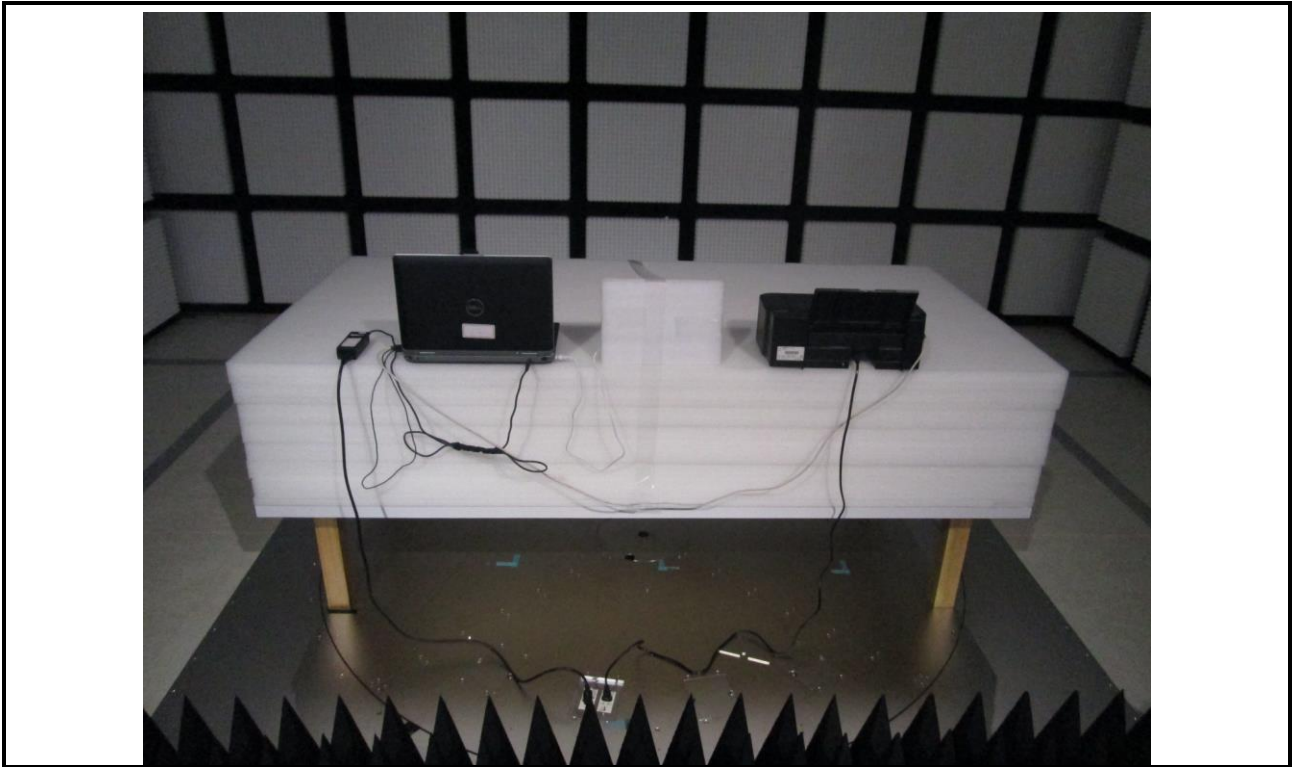
Radiated Emission below 1GHz Test (Model: BT830-SC with antenna 2)



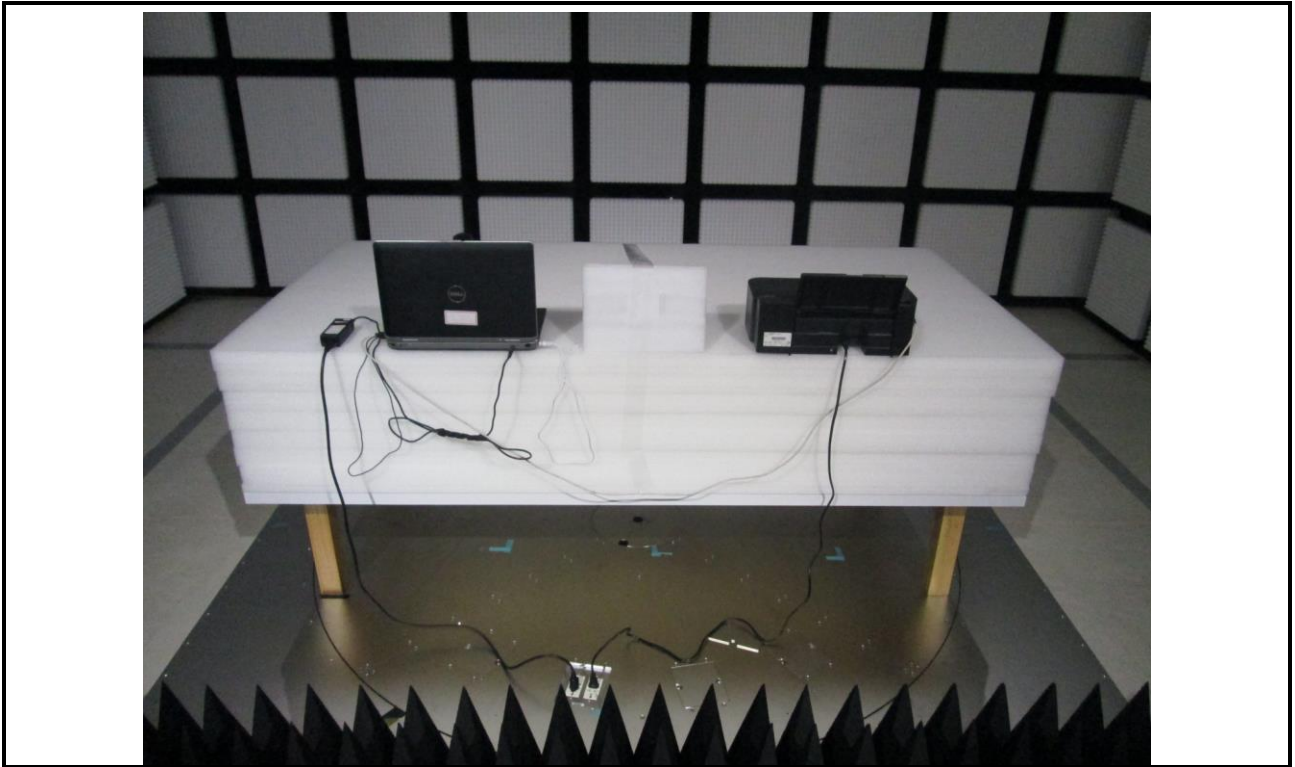
Radiated Emission below 1GHz Test (Model: BT830-SC with antenna 3)



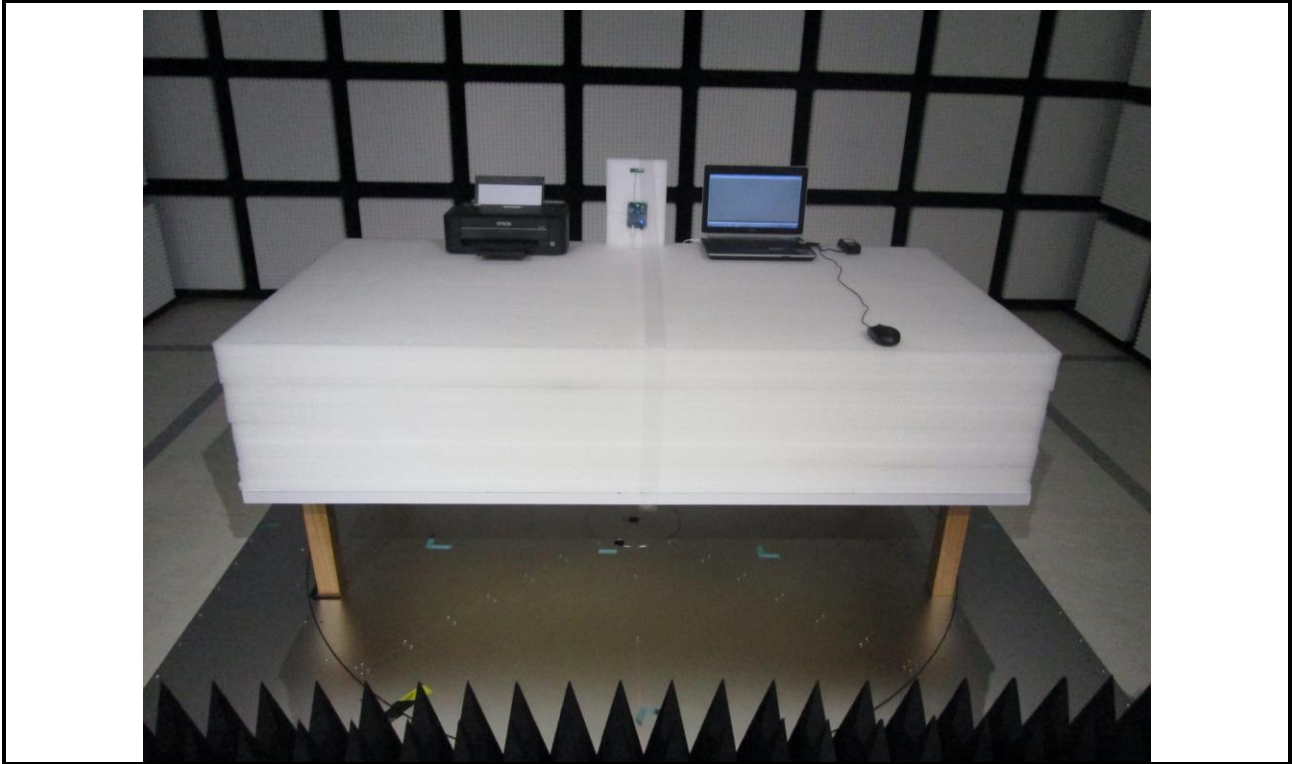
Radiated Emission above 1GHz Test (Model: BT830-SA with antenna 1)



Radiated Emission above 1GHz Test (Model: BT830-SC with antenna 2)



Radiated Emission above 1GHz Test (Model: BT830-SC with antenna 3)



5 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, 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 Hsiang. Location map can be found on our website <http://www.icertifi.com.tw>.

Linkou

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Kwei Shan

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No. 3-1, Lane 6, Wen San 3rd
St., Kwei Shan Hsiang, Tao Yuan
Hsien 333, Taiwan, R.O.C.

Kwei Shan Site II

Tel: 886-3-271-8640

No. 14-1, Lane 19, Wen San 3rd
St., Kwei Shan Hsiang, Tao Yuan
Hsien 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

==END==