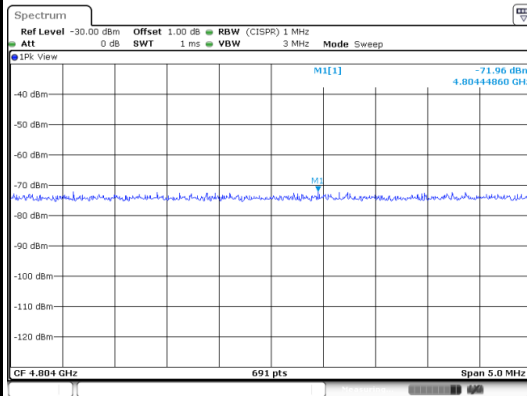
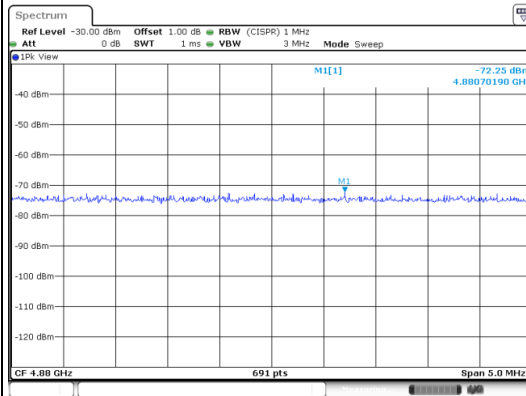


BT LE-1Mbps - Test Plots

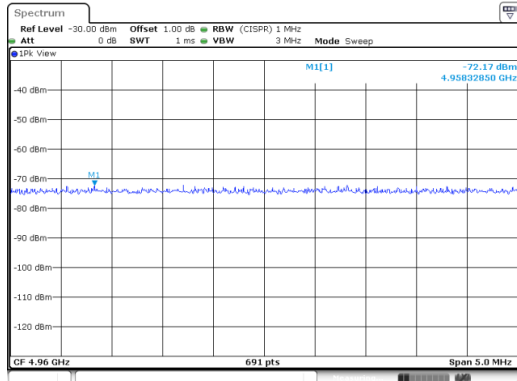
2402MHz - 4804MHz - PK



2440MHz 4880MHz - PK



2480 MHz - 4960MHz - PK



Transmitter Conducted Unwanted Emissions Results in Restricted Frequency Band							
Modulation Mode		BT LE-2Mbps		Frequency		2402MHz	
Freq. (MHz)	Remark	Max Value (dBm)	DG (dBi)	EIRP (dBm)	E-Field* (dBuV/m)	E-Field Limit (dBuV/m)	E-Field Margin (dB)
4804.00	PK	-71.82	2.00	-69.82	25.44	74.00	-48.56
4804.00	AV	-	2.00	-	-	54.00	-

Transmitter Conducted Unwanted Emissions Results in Restricted Frequency Band							
Modulation Mode		BT LE-2Mbps		Frequency		2440MHz	
Freq. (MHz)	Remark	Max Value (dBm)	DG (dBi)	EIRP (dBm)	E-Field* (dBuV/m)	E-Field Limit (dBuV/m)	E-Field Margin (dB)
4880.00	PK	-72.32	2.00	-70.32	24.94	74.00	-49.06
4880.00	AV	-	2.00	-	-	54.00	-

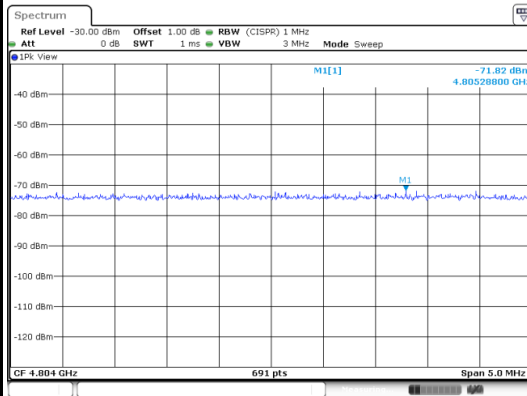
Transmitter Conducted Unwanted Emissions Results in Restricted Frequency Band							
Modulation Mode		BT LE-2Mbps		Frequency		2480MHz	
Freq. (MHz)	Remark	Max Value (dBm)	DG (dBi)	EIRP (dBm)	E-Field* (dBuV/m)	E-Field Limit (dBuV/m)	E-Field Margin (dB)
4960.00	PK	-72.22	2.00	-70.22	25.04	74.00	-48.96
4960.00	AV	-	2.00	-	-	54.00	-

Note:

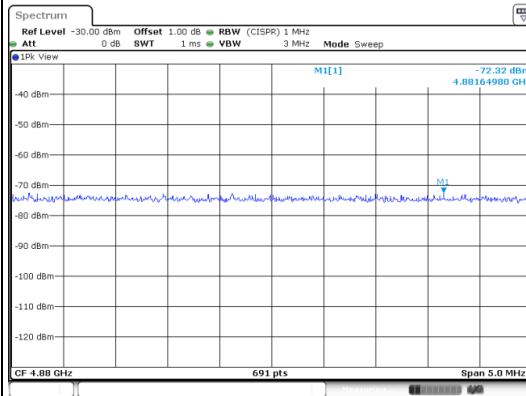
1. If the PK margin greater than 20 dB, there is no need to get AVG reading.
2. DG = Directional Gain
3. E-Field = EIRP – 20log(3) + 104.8

BT LE-2Mbps - Test Plots

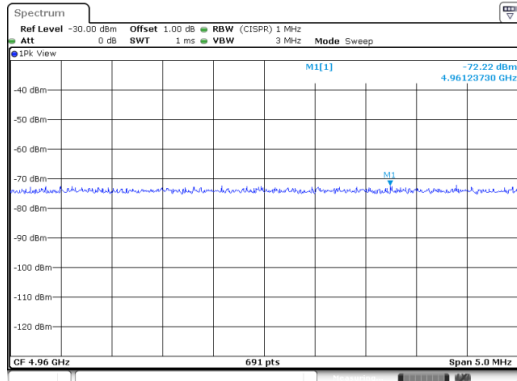
2402MHz - 4804MHz - PK



2440MHz 4880MHz - PK



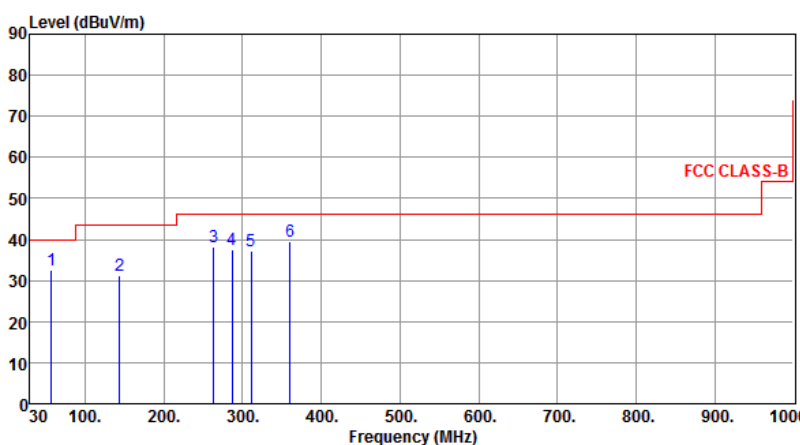
2480 MHz - 4960MHz - PK



Highest power level - Configuration 7: Laird NFC + 50Ω terminator

3.5.8 Transmitter Radiated Unwanted Emissions (Below 1GHz)

Modulation	GFSK/125kbps	Test Freq. (MHz)	2480
Polarization	Horizontal		

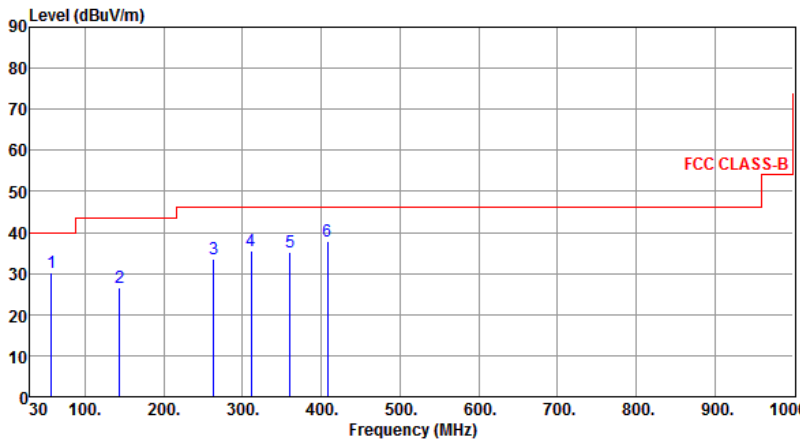


The graph displays the radiated unwanted emissions for Configuration 7. The y-axis represents the Level in dBuV/m, ranging from 0 to 90. The x-axis represents the Frequency in MHz, ranging from 30 to 1000. A red line indicates the FCC CLASS-B limit, which is 40 dBuV/m from 30 to 100 MHz, 50 dBuV/m from 100 to 300 MHz, and 60 dBuV/m from 300 to 1000 MHz. Six blue vertical lines represent measured emissions at the following frequencies: 57.21 MHz (Level 32.47 dBuV/m), 143.49 MHz (Level 31.35 dBuV/m), 263.66 MHz (Level 38.26 dBuV/m), 287.12 MHz (Level 37.54 dBuV/m), 311.10 MHz (Level 37.35 dBuV/m), and 360.68 MHz (Level 39.58 dBuV/m). All measured levels are below the FCC CLASS-B limit.

	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	57.21	32.47	40.00	-7.53	41.53	-9.06	Peak	---	---
2	143.49	31.35	43.50	-12.15	40.34	-8.99	Peak	---	---
3	263.66	38.26	46.00	-7.74	48.03	-9.77	Peak	---	---
4	287.12	37.54	46.00	-8.46	46.32	-8.78	Peak	---	---
5	311.10	37.35	46.00	-8.65	45.42	-8.07	Peak	---	---
6	360.68	39.58	46.00	-6.42	46.53	-6.95	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	GFSK/125kbps	Test Freq. (MHz)	2480
Polarization	Vertical		

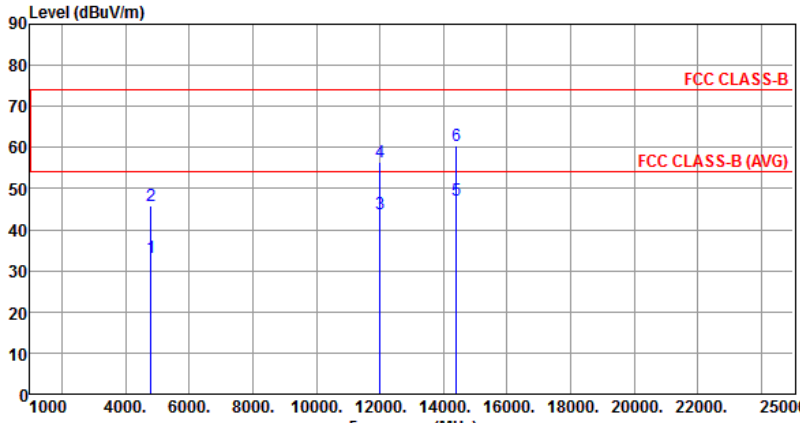


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	57.21	30.26	40.00	-9.74	39.32	-9.06	Peak	---	---
2	143.49	26.43	43.50	-17.07	35.42	-8.99	Peak	---	---
3	263.66	33.41	46.00	-12.59	43.18	-9.77	Peak	---	---
4	311.25	35.57	46.00	-10.43	43.63	-8.06	Peak	---	---
5	360.69	35.16	46.00	-10.84	42.11	-6.95	Peak	---	---
6	408.30	37.88	46.00	-8.12	43.50	-5.62	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.

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

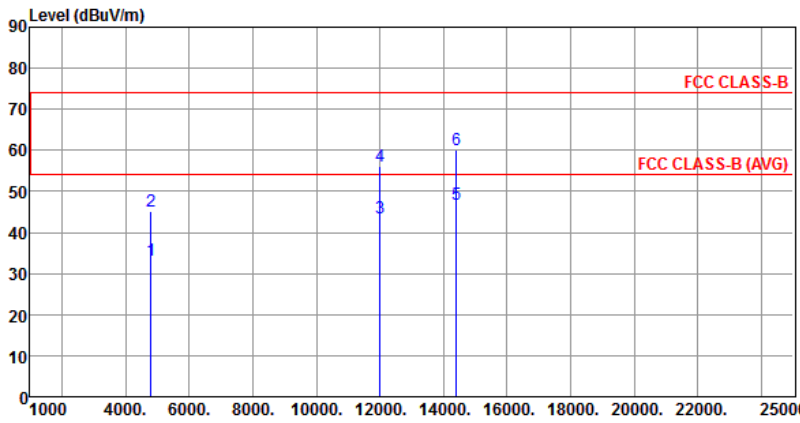
Modulation	GFSK/125kbps	Test Freq. (MHz)	2402
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4804.00	33.22	54.00	-20.78	28.42	4.80	Average	100	303
2	4804.00	45.86	74.00	-28.14	41.06	4.80	Peak	100	303
3	12010.00	43.92	54.00	-10.08	29.12	14.80	Average	100	30
4	12010.00	56.39	74.00	-17.61	41.59	14.80	Peak	100	30
5	14412.00	47.11	54.00	-6.89	29.23	17.88	Average	100	50
6	14412.00	60.44	74.00	-13.56	42.56	17.88	Peak	100	50

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).

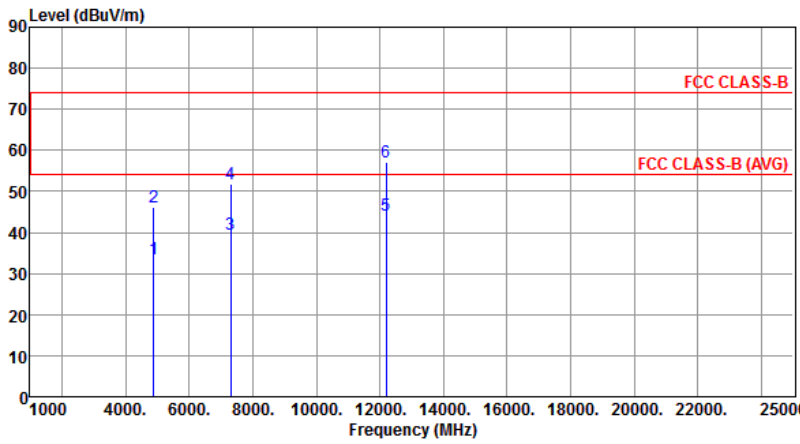
Modulation	GFSK/125kbps	Test Freq. (MHz)	2402
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4804.00	33.05	54.00	-20.95	28.25	4.80	Average	100	70
2	4804.00	45.07	74.00	-28.93	40.27	4.80	Peak	100	70
3	12010.00	43.37	54.00	-10.63	28.57	14.80	Average	100	40
4	12010.00	56.08	74.00	-17.92	41.28	14.80	Peak	100	40
5	14412.00	46.90	54.00	-7.10	29.02	17.88	Average	100	70
6	14412.00	60.19	74.00	-13.81	42.31	17.88	Peak	100	70

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/125kbps	Test Freq. (MHz)	2440
Polarization	Horizontal		



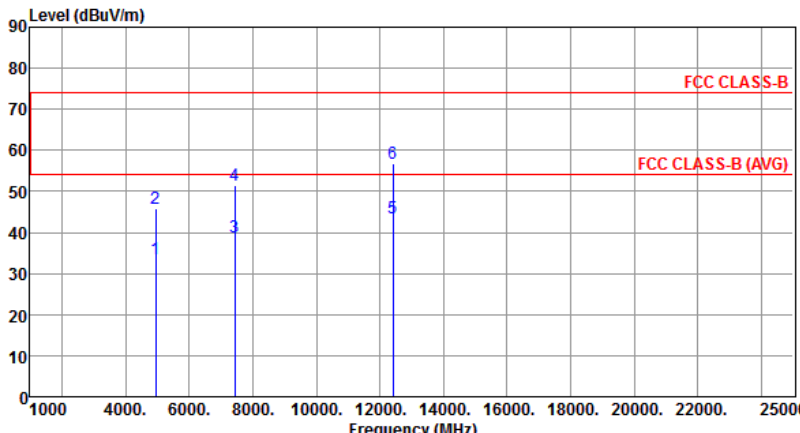
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4880.00	33.44	54.00	-20.56	28.53	4.91	Average	100	309
2	4880.00	46.07	74.00	-27.93	41.16	4.91	Peak	100	309
3	7320.00	39.38	54.00	-14.62	29.06	10.32	Average	100	306
4	7320.00	51.90	74.00	-22.10	41.58	10.32	Peak	100	306
5	12200.00	44.04	54.00	-9.96	29.20	14.84	Average	100	30
6	12200.00	57.12	74.00	-16.88	42.28	14.84	Peak	100	30

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/125kbps	Test Freq. (MHz)	2440
Polarization	Vertical		
Level (dBUV/m) <			

Modulation	GFSK/125kbps	Test Freq. (MHz)	2480
Polarization	Horizontal		
Level (dBUV/m) </			

Modulation	GFSK/125kbps	Test Freq. (MHz)	2480
Polarization	Vertical		

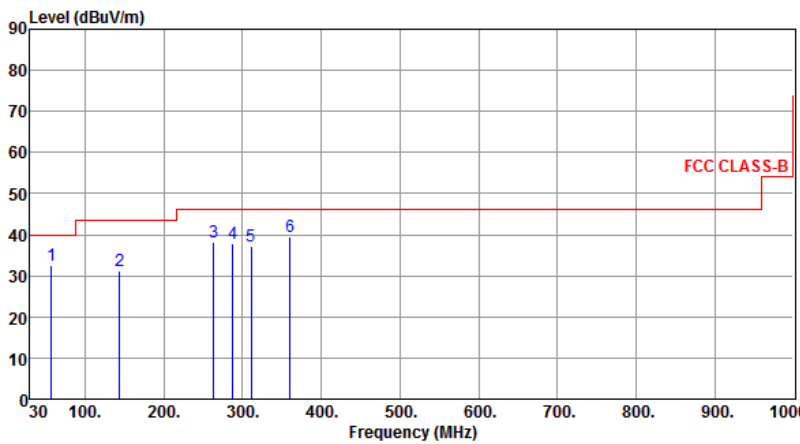


	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4960.00	33.45	54.00	-20.55	28.26	5.19	Average	100	30
2	4960.00	45.76	74.00	-28.24	40.57	5.19	Peak	100	30
3	7440.00	38.91	54.00	-15.09	28.56	10.35	Average	100	70
4	7440.00	51.58	74.00	-22.42	41.23	10.35	Peak	100	70
5	12400.00	43.42	54.00	-10.58	29.13	14.29	Average	100	60
6	12400.00	56.73	74.00	-17.27	42.44	14.29	Peak	100	60

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).

3.5.10 Transmitter Radiated Unwanted Emissions (Below 1GHz)

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

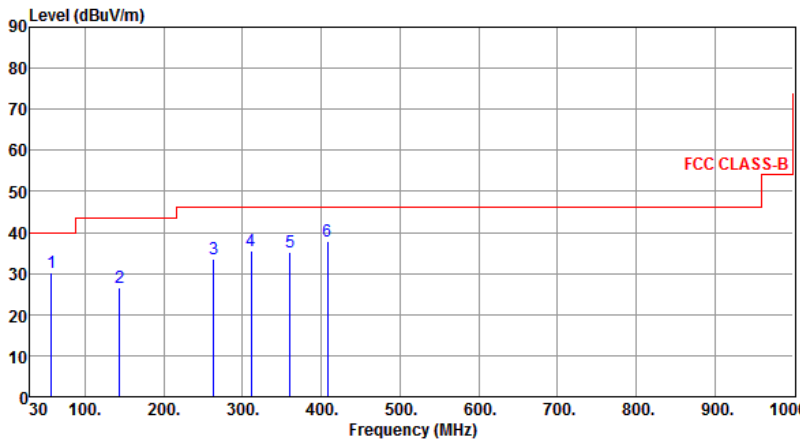


The graph displays the Level (dBuV/m) on the y-axis (0 to 90) against Frequency (MHz) on the x-axis (30 to 1000). A red line represents the FCC CLASS-B limit, which is 40 dBuV/m from 30 to 100 MHz, 45 dBuV/m from 100 to 300 MHz, and 50 dBuV/m from 300 to 1000 MHz. Six blue vertical lines represent measured emissions at 57.25, 143.49, 263.69, 287.21, 311.25, and 360.77 MHz, labeled 1 through 6 respectively.

	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	57.25	32.48	40.00	-7.52	41.55	-9.07	Peak	---	---
2	143.49	31.36	43.50	-12.14	40.35	-8.99	Peak	---	---
3	263.69	38.18	46.00	-7.82	47.95	-9.77	Peak	---	---
4	287.21	37.85	46.00	-8.15	46.63	-8.78	Peak	---	---
5	311.25	37.34	46.00	-8.66	45.40	-8.06	Peak	---	---
6	360.77	39.58	46.00	-6.42	46.53	-6.95	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	GFSK/1Mbps	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	57.21	30.28	40.00	-9.72	39.34	-9.06	Peak	---	---
2	143.52	26.49	43.50	-17.01	35.48	-8.99	Peak	---	---
3	263.65	33.68	46.00	-12.32	43.45	-9.77	Peak	---	---
4	311.30	35.58	46.00	-10.42	43.64	-8.06	Peak	---	---
5	360.64	35.12	46.00	-10.88	42.07	-6.95	Peak	---	---
6	408.28	37.87	46.00	-8.13	43.49	-5.62	Peak	---	---

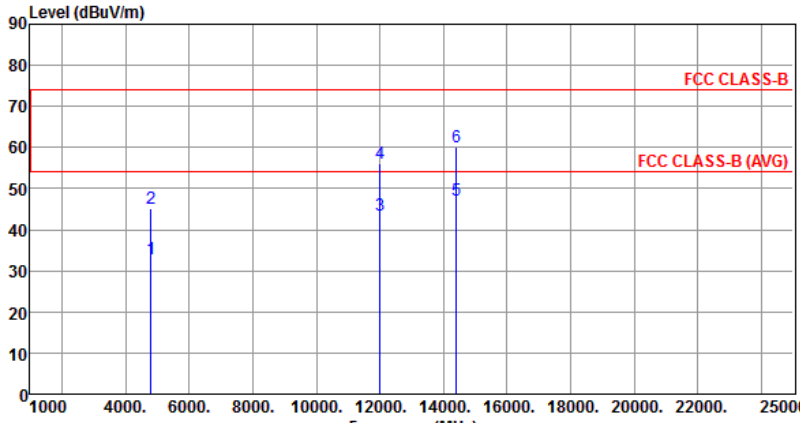
Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain

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.

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

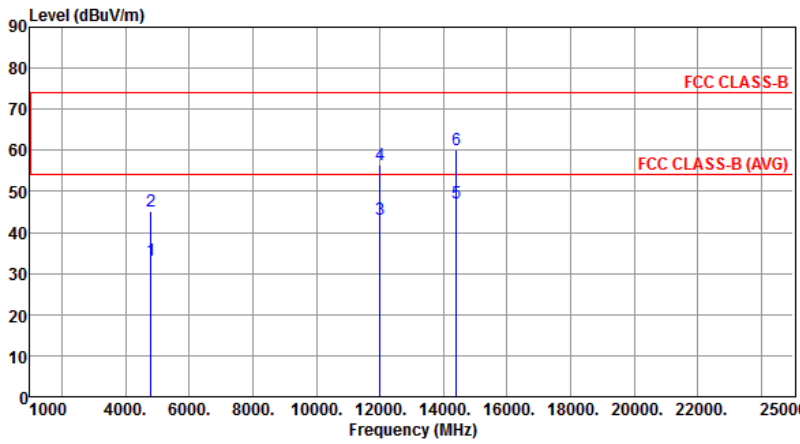
Modulation	GFSK/1Mbps	Test Freq. (MHz)	2402
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4804.00	32.93	54.00	-21.07	28.13	4.80	Average	100	50
2	4804.00	45.06	74.00	-28.94	40.26	4.80	Peak	100	50
3	12010.00	43.49	54.00	-10.51	28.69	14.80	Average	100	30
4	12010.00	56.08	74.00	-17.92	41.28	14.80	Peak	100	30
5	14412.00	47.12	54.00	-6.88	29.24	17.88	Average	100	70
6	14412.00	60.26	74.00	-13.74	42.38	17.88	Peak	100	70

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).

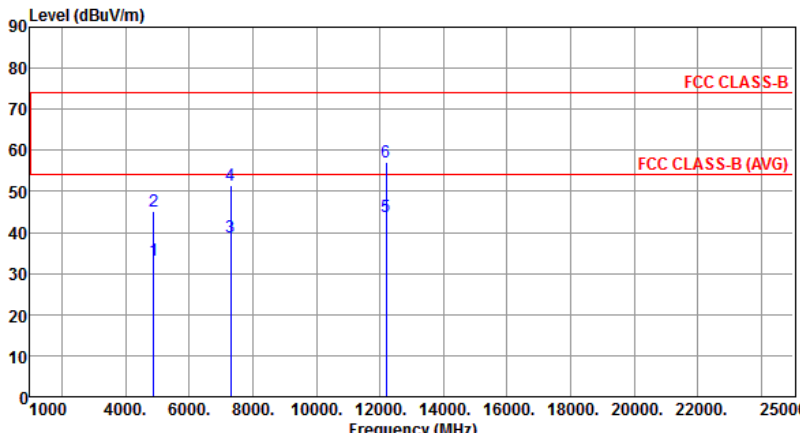
Modulation	GFSK/1Mbps	Test Freq. (MHz)	2402
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4804.00	33.10	54.00	-20.90	28.30	4.80	Average	100	60
2	4804.00	45.19	74.00	-28.81	40.39	4.80	Peak	100	60
3	12010.00	43.33	54.00	-10.67	28.53	14.80	Average	100	70
4	12010.00	56.34	74.00	-17.66	41.54	14.80	Peak	100	70
5	14412.00	47.13	54.00	-6.87	29.25	17.88	Average	100	30
6	14412.00	60.23	74.00	-13.77	42.35	17.88	Peak	100	30

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).

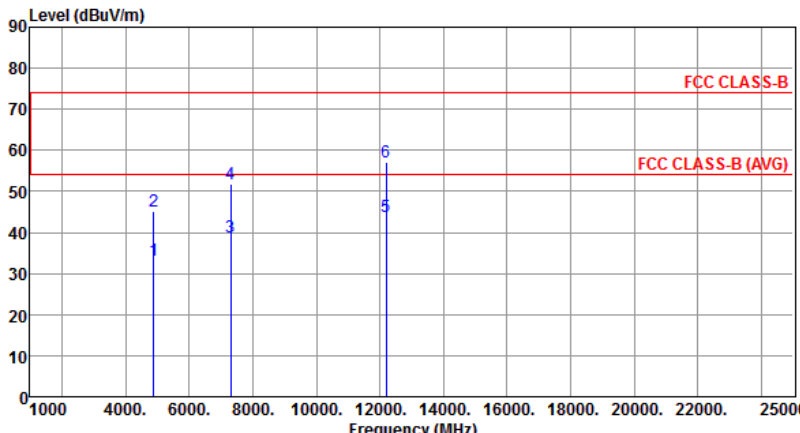
Modulation	GFSK/1Mbps	Test Freq. (MHz)	2440
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4880.00	33.16	54.00	-20.84	28.25	4.91	Average	100	50
2	4880.00	45.30	74.00	-28.70	40.39	4.91	Peak	100	50
3	7320.00	38.97	54.00	-15.03	28.65	10.32	Average	100	80
4	7320.00	51.55	74.00	-22.45	41.23	10.32	Peak	100	80
5	12200.00	43.90	54.00	-10.10	29.06	14.84	Average	100	40
6	12200.00	57.16	74.00	-16.84	42.32	14.84	Peak	100	40

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/1Mbps	Test Freq. (MHz)	2440
Polarization	Vertical		

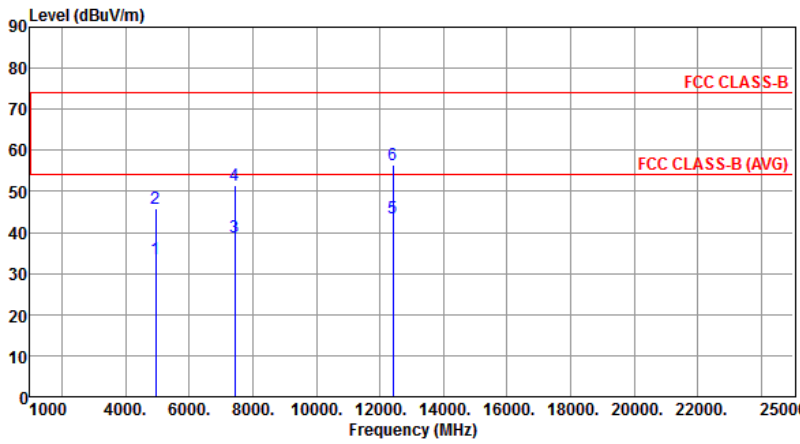


	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4880.00	33.12	54.00	-20.88	28.21	4.91	Average	100	30
2	4880.00	45.27	74.00	-28.73	40.36	4.91	Peak	100	30
3	7320.00	38.77	54.00	-15.23	28.45	10.32	Average	100	50
4	7320.00	51.88	74.00	-22.12	41.56	10.32	Peak	100	50
5	12200.00	43.89	54.00	-10.11	29.05	14.84	Average	100	70
6	12200.00	57.10	74.00	-16.90	42.26	14.84	Peak	100	70

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/1Mbps	Test Freq. (MHz)	2480
Polarization	Horizontal		
Level (dBUV/m)			

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



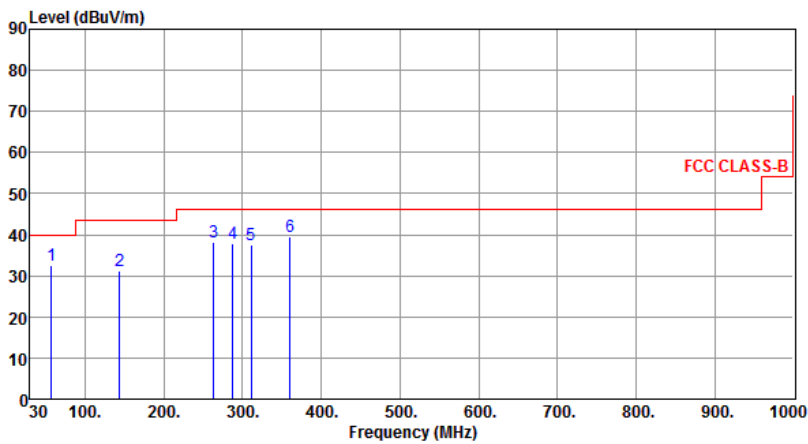
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4960.00	33.42	54.00	-20.58	28.23	5.19	Average	100	30
2	4960.00	45.75	74.00	-28.25	40.56	5.19	Peak	100	30
3	7440.00	39.01	54.00	-14.99	28.66	10.35	Average	100	50
4	7440.00	51.61	74.00	-22.39	41.26	10.35	Peak	100	50
5	12400.00	43.36	54.00	-10.64	29.07	14.29	Average	100	90
6	12400.00	56.49	74.00	-17.51	42.20	14.29	Peak	100	90

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).

3.5.12 Transmitter Radiated Unwanted Emissions (Below 1GHz)

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

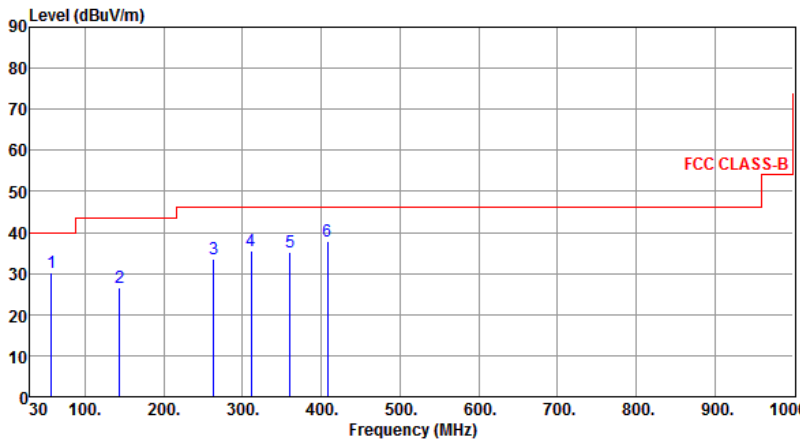


The graph displays the radiated unwanted emissions level in dBuV/m against frequency in MHz from 30 to 1000 MHz. A red line represents the FCC CLASS-B limit, which is 40 dBuV/m from 30 to 100 MHz, 45 dBuV/m from 100 to 300 MHz, and 50 dBuV/m from 300 to 1000 MHz. Six measured peaks are labeled with blue 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	57.23	32.68	40.00	-7.32	41.75	-9.07	Peak	---	---
2	143.49	31.36	43.50	-12.14	40.35	-8.99	Peak	---	---
3	263.69	38.25	46.00	-7.75	48.02	-9.77	Peak	---	---
4	287.48	37.86	46.00	-8.14	46.63	-8.77	Peak	---	---
5	311.25	37.38	46.00	-8.62	45.44	-8.06	Peak	---	---
6	360.77	39.57	46.00	-6.43	46.52	-6.95	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	GFSK/2Mbps	Test Freq. (MHz)	2480
Polarization	Vertical		

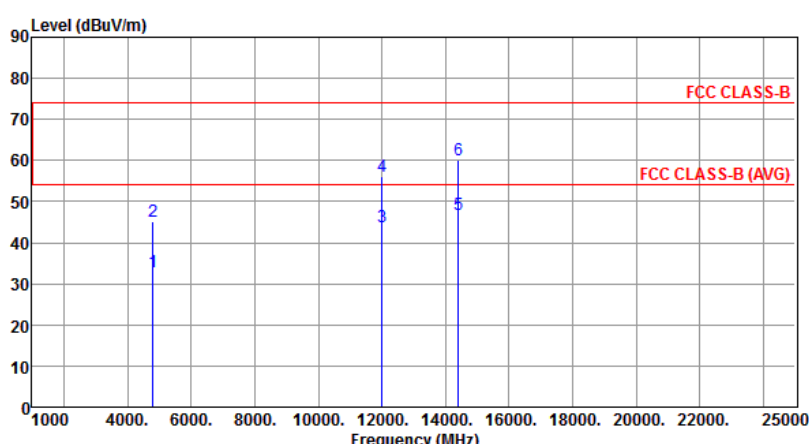


	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	57.16	30.28	40.00	-9.72	39.33	-9.05	Peak	---	---
2	143.40	26.48	43.50	-17.02	35.48	-9.00	Peak	---	---
3	263.63	33.48	46.00	-12.52	43.25	-9.77	Peak	---	---
4	311.30	35.49	46.00	-10.51	43.55	-8.06	Peak	---	---
5	360.69	35.12	46.00	-10.88	42.07	-6.95	Peak	---	---
6	408.25	37.85	46.00	-8.15	43.47	-5.62	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.

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

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



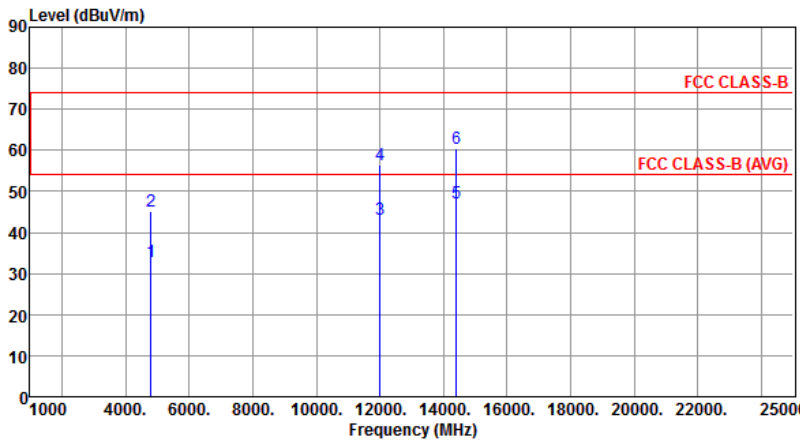
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4804.00	32.95	54.00	-21.05	28.15	4.80	Average	100	30
2	4804.00	45.07	74.00	-28.93	40.27	4.80	Peak	100	30
3	12010.00	43.83	54.00	-10.17	29.03	14.80	Average	100	25
4	12010.00	56.18	74.00	-17.82	41.38	14.80	Peak	100	25
5	14412.00	46.93	54.00	-7.07	29.05	17.88	Average	100	70
6	14412.00	60.26	74.00	-13.74	42.38	17.88	Peak	100	70

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).

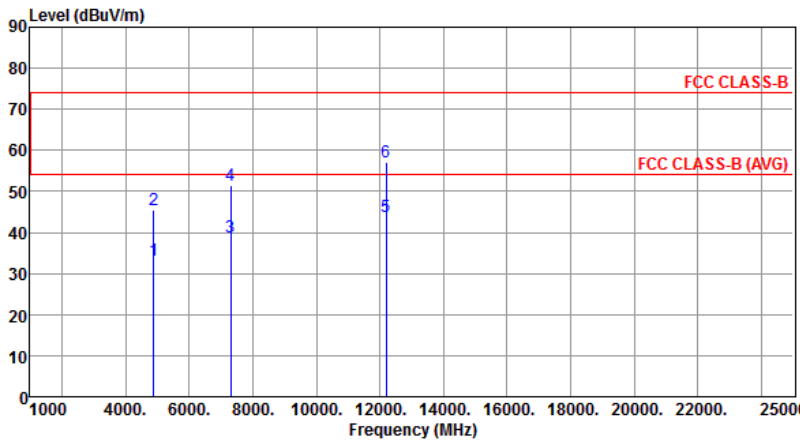
Modulation	GFSK/2Mbps	Test Freq. (MHz)	2402
Polarization	Vertical		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4804.00	32.98	54.00	-21.02	28.18	4.80	Average	100	60
2	4804.00	45.16	74.00	-28.84	40.36	4.80	Peak	100	60
3	12010.00	43.23	54.00	-10.77	28.43	14.80	Average	100	20
4	12010.00	56.36	74.00	-17.64	41.56	14.80	Peak	100	20
5	14412.00	47.02	54.00	-6.98	29.14	17.88	Average	100	35
6	14412.00	60.43	74.00	-13.57	42.55	17.88	Peak	100	35

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).

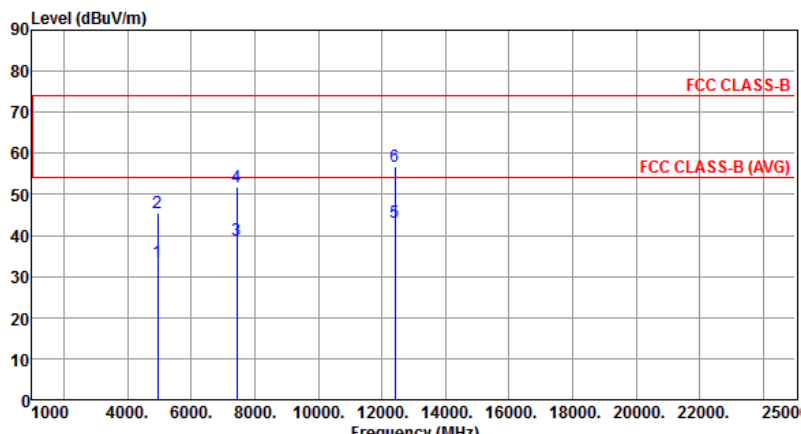
Modulation	GFSK/2Mbps	Test Freq. (MHz)	2440
Polarization	Horizontal		



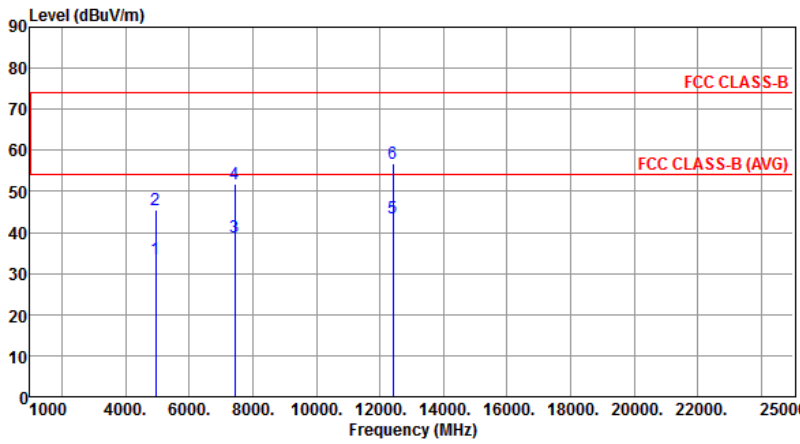
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4880.00	33.14	54.00	-20.86	28.23	4.91	Average	100	20
2	4880.00	45.47	74.00	-28.53	40.56	4.91	Peak	100	20
3	7320.00	38.95	54.00	-15.05	28.63	10.32	Average	100	35
4	7320.00	51.60	74.00	-22.40	41.28	10.32	Peak	100	35
5	12200.00	43.92	54.00	-10.08	29.08	14.84	Average	100	40
6	12200.00	57.16	74.00	-16.84	42.32	14.84	Peak	100	40

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/2Mbps	Test Freq. (MHz)	2440
Polarization	Vertical		
Level (dBuV/m) </			

Modulation	GFSK/2Mbps	Test Freq. (MHz)	2480																																																																						
Polarization	Horizontal																																																																								
 <table><thead><tr><th></th><th>Freq. MHz</th><th>Emission level dBUV/m</th><th>Limit dBUV/m</th><th>Margin dB</th><th>SA reading dBUV</th><th>Factor dB</th><th>Remark</th><th>ANT High cm</th><th>Turn Table deg</th></tr></thead><tbody><tr><td>1</td><td>4960.00</td><td>33.60</td><td>54.00</td><td>-20.40</td><td>28.41</td><td>5.19</td><td>Average</td><td>100</td><td>30</td></tr><tr><td>2</td><td>4960.00</td><td>45.54</td><td>74.00</td><td>-28.46</td><td>40.35</td><td>5.19</td><td>Peak</td><td>100</td><td>30</td></tr><tr><td>3</td><td>7440.00</td><td>38.89</td><td>54.00</td><td>-15.11</td><td>28.54</td><td>10.35</td><td>Average</td><td>100</td><td>70</td></tr><tr><td>4</td><td>7440.00</td><td>51.71</td><td>74.00</td><td>-22.29</td><td>41.36</td><td>10.35</td><td>Peak</td><td>100</td><td>70</td></tr><tr><td>5</td><td>12400.00</td><td>43.33</td><td>54.00</td><td>-10.67</td><td>29.04</td><td>14.29</td><td>Average</td><td>100</td><td>20</td></tr><tr><td>6</td><td>12400.00</td><td>56.74</td><td>74.00</td><td>-17.26</td><td>42.45</td><td>14.29</td><td>Peak</td><td>100</td><td>20</td></tr></tbody></table>					Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg	1	4960.00	33.60	54.00	-20.40	28.41	5.19	Average	100	30	2	4960.00	45.54	74.00	-28.46	40.35	5.19	Peak	100	30	3	7440.00	38.89	54.00	-15.11	28.54	10.35	Average	100	70	4	7440.00	51.71	74.00	-22.29	41.36	10.35	Peak	100	70	5	12400.00	43.33	54.00	-10.67	29.04	14.29	Average	100	20	6	12400.00	56.74	74.00	-17.26	42.45	14.29	Peak	100	20
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg																																																																
1	4960.00	33.60	54.00	-20.40	28.41	5.19	Average	100	30																																																																
2	4960.00	45.54	74.00	-28.46	40.35	5.19	Peak	100	30																																																																
3	7440.00	38.89	54.00	-15.11	28.54	10.35	Average	100	70																																																																
4	7440.00	51.71	74.00	-22.29	41.36	10.35	Peak	100	70																																																																
5	12400.00	43.33	54.00	-10.67	29.04	14.29	Average	100	20																																																																
6	12400.00	56.74	74.00	-17.26	42.45	14.29	Peak	100	20																																																																
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/2Mbps	Test Freq. (MHz)	2480
Polarization	Vertical		



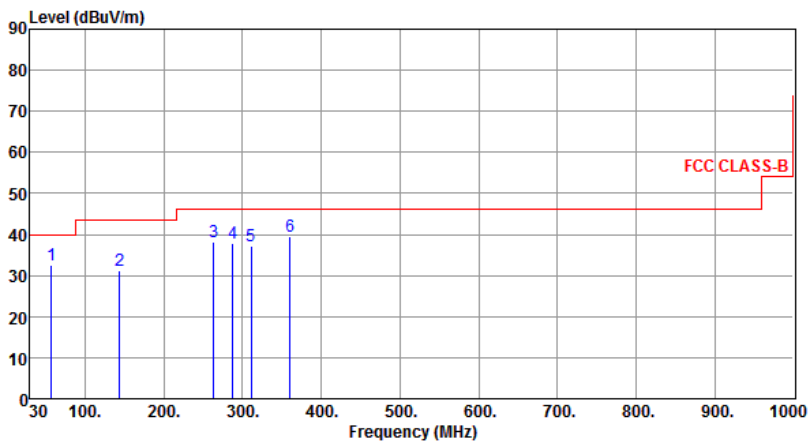
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4960.00	33.39	54.00	-20.61	28.20	5.19	Average	100	20
2	4960.00	45.56	74.00	-28.44	40.37	5.19	Peak	100	20
3	7440.00	38.77	54.00	-15.23	28.42	10.35	Average	100	30
4	7440.00	51.72	74.00	-22.28	41.37	10.35	Peak	100	30
5	12400.00	43.45	54.00	-10.55	29.16	14.29	Average	100	50
6	12400.00	56.66	74.00	-17.34	42.37	14.29	Peak	100	50

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).

Lowest power level- Configuration 7: Laird NFC + 50Ω terminator

3.5.14 Transmitter Radiated Unwanted Emissions (Below 1GHz)

Modulation	GFSK/125kbps	Test Freq. (MHz)	2480
Polarization	Horizontal		

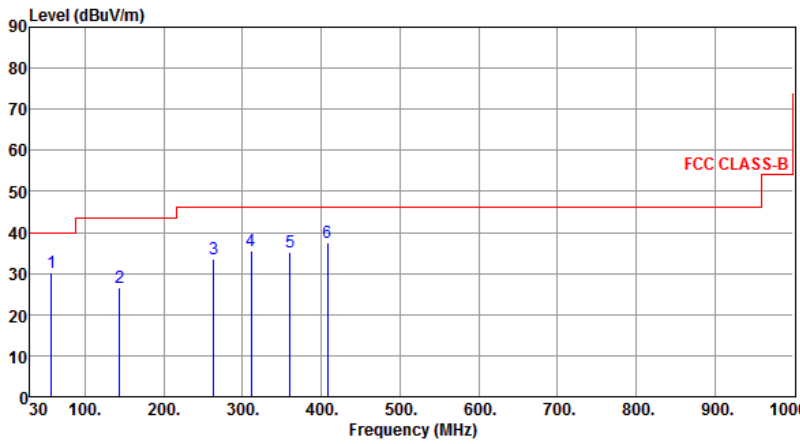


The graph displays the radiated unwanted emissions for a transmitter. The y-axis represents the Level in dBuV/m, ranging from 0 to 90. The x-axis represents the Frequency in MHz, ranging from 30 to 1000. A red line indicates the FCC CLASS-B limit, which is 40 dBuV/m from 30 MHz to 300 MHz, 46 dBuV/m from 300 MHz to 1000 MHz. Six blue vertical lines represent measured peaks, labeled 1 through 6. The data for these peaks is provided 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	57.16	32.41	40.00	-7.59	41.46	-9.05	Peak	---	---
2	143.51	31.36	43.50	-12.14	40.35	-8.99	Peak	---	---
3	263.69	38.15	46.00	-7.85	47.92	-9.77	Peak	---	---
4	287.18	37.85	46.00	-8.15	46.63	-8.78	Peak	---	---
5	311.30	37.31	46.00	-8.69	45.37	-8.06	Peak	---	---
6	360.66	39.57	46.00	-6.43	46.52	-6.95	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	GFSK/125kbps	Test Freq. (MHz)	2480
Polarization	Vertical		

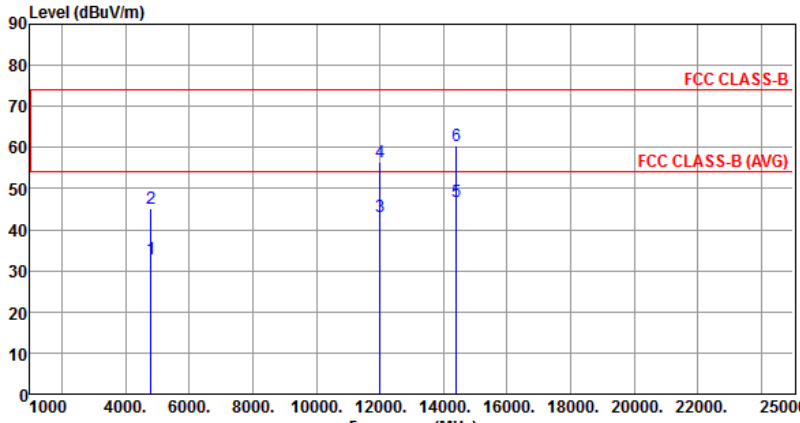


	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	57.24	30.21	40.00	-9.79	39.28	-9.07	Peak	---	---
2	143.49	26.48	43.50	-17.02	35.47	-8.99	Peak	---	---
3	263.66	33.47	46.00	-12.53	43.24	-9.77	Peak	---	---
4	311.25	35.47	46.00	-10.53	43.53	-8.06	Peak	---	---
5	360.77	35.32	46.00	-10.68	42.27	-6.95	Peak	---	---
6	408.28	37.64	46.00	-8.36	43.26	-5.62	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.

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

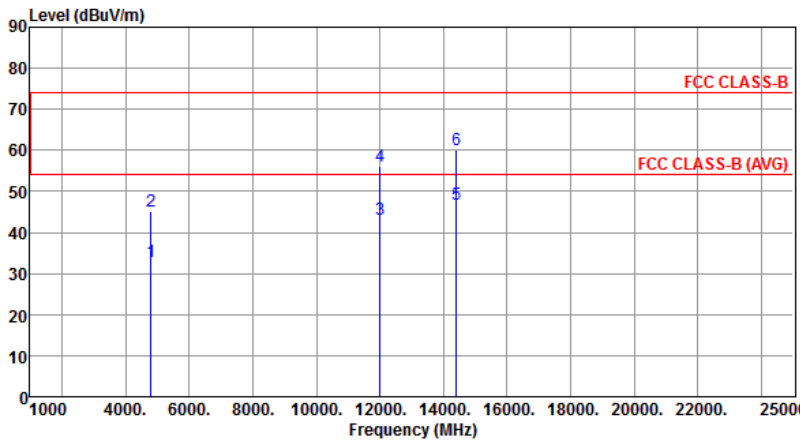
Modulation	GFSK/125kbps	Test Freq. (MHz)	2402
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4804.00	32.93	54.00	-21.07	28.13	4.80	Average	100	120
2	4804.00	45.13	74.00	-28.87	40.33	4.80	Peak	100	120
3	12010.00	43.25	54.00	-10.75	28.45	14.80	Average	100	25
4	12010.00	56.43	74.00	-17.57	41.63	14.80	Peak	100	25
5	14412.00	46.99	54.00	-7.01	29.11	17.88	Average	100	50
6	14412.00	60.50	74.00	-13.50	42.62	17.88	Peak	100	50

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/125kbps	Test Freq. (MHz)	2402
Polarization	Vertical		



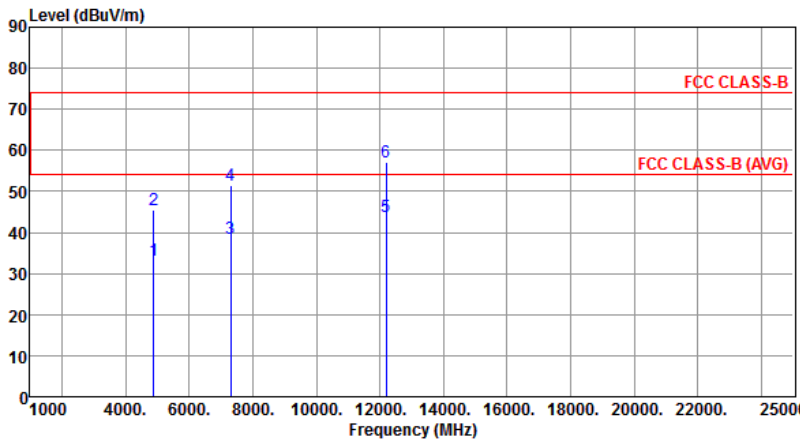
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4804.00	32.98	54.00	-21.02	28.18	4.80	Average	100	70
2	4804.00	45.14	74.00	-28.86	40.34	4.80	Peak	100	70
3	12010.00	43.22	54.00	-10.78	28.42	14.80	Average	100	35
4	12010.00	56.15	74.00	-17.85	41.35	14.80	Peak	100	35
5	14412.00	46.95	54.00	-7.05	29.07	17.88	Average	100	65
6	14412.00	60.13	74.00	-13.87	42.25	17.88	Peak	100	65

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/125kbps	Test Freq. (MHz)	2440
Polarization	Horizontal		



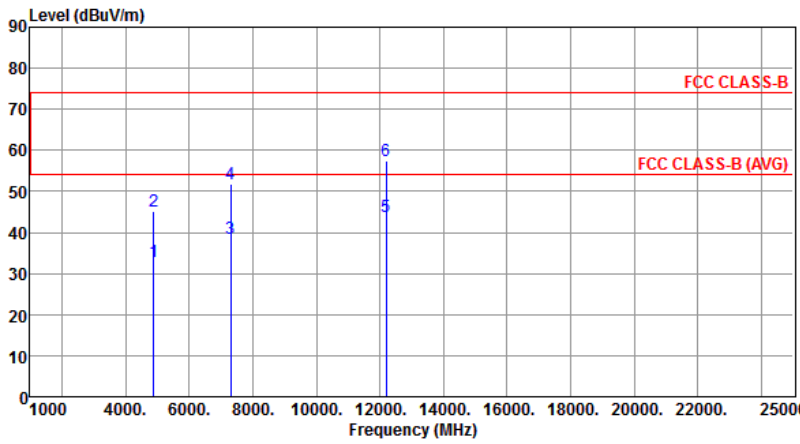
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4880.00	33.05	54.00	-20.95	28.14	4.91	Average	100	100
2	4880.00	45.44	74.00	-28.56	40.53	4.91	Peak	100	100
3	7320.00	38.66	54.00	-15.34	28.34	10.32	Average	100	90
4	7320.00	51.55	74.00	-22.45	41.23	10.32	Peak	100	90
5	12200.00	43.99	54.00	-10.01	29.15	14.84	Average	100	25
6	12200.00	57.20	74.00	-16.80	42.36	14.84	Peak	100	25

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).

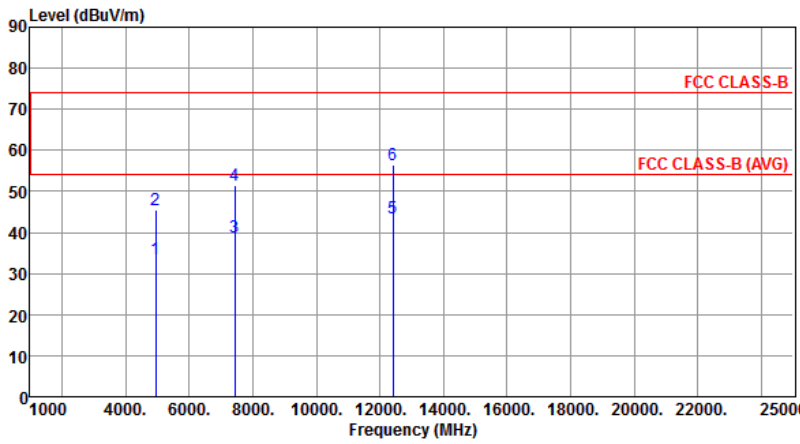
Modulation	GFSK/125kbps	Test Freq. (MHz)	2440
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4880.00	32.97	54.00	-21.03	28.06	4.91	Average	100	40
2	4880.00	45.30	74.00	-28.70	40.39	4.91	Peak	100	40
3	7320.00	38.65	54.00	-15.35	28.33	10.32	Average	100	50
4	7320.00	51.71	74.00	-22.29	41.39	10.32	Peak	100	50
5	12200.00	43.88	54.00	-10.12	29.04	14.84	Average	100	70
6	12200.00	57.47	74.00	-16.53	42.63	14.84	Peak	100	70

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).

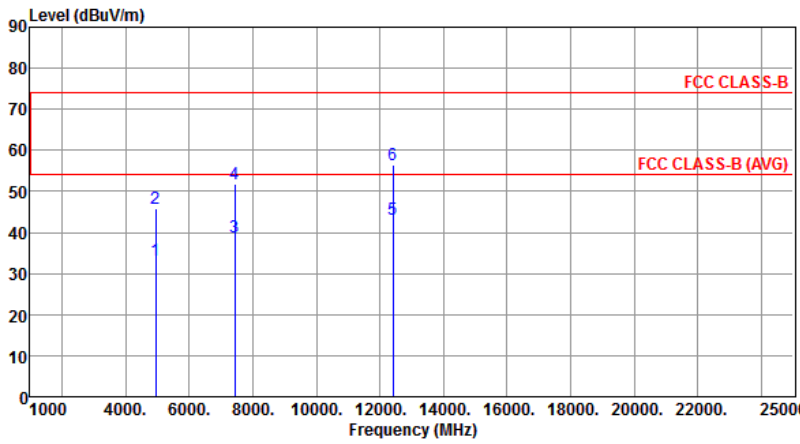
Modulation	GFSK/125kbps	Test Freq. (MHz)	2480
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4960.00	33.41	54.00	-20.59	28.22	5.19	Average	100	20
2	4960.00	45.54	74.00	-28.46	40.35	5.19	Peak	100	20
3	7440.00	38.88	54.00	-15.12	28.53	10.35	Average	100	60
4	7440.00	51.56	74.00	-22.44	41.21	10.35	Peak	100	60
5	12400.00	43.47	54.00	-10.53	29.18	14.29	Average	100	50
6	12400.00	56.54	74.00	-17.46	42.25	14.29	Peak	100	50

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/125kbps	Test Freq. (MHz)	2480
Polarization	Vertical		

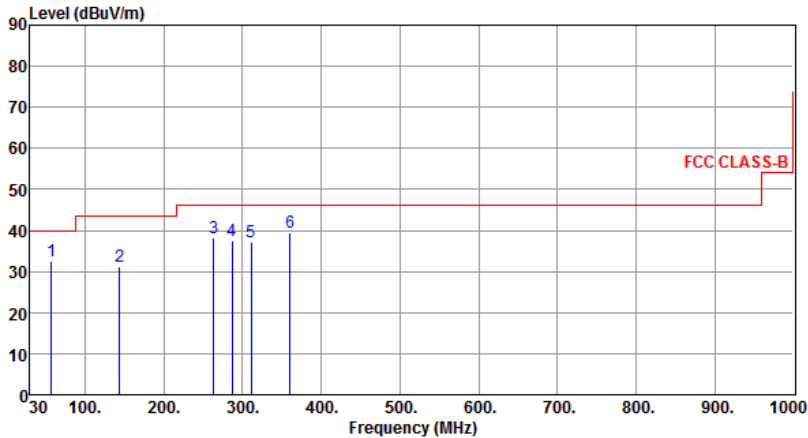


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4960.00	33.33	54.00	-20.67	28.14	5.19	Average	100	20
2	4960.00	45.87	74.00	-28.13	40.68	5.19	Peak	100	20
3	7440.00	38.76	54.00	-15.24	28.41	10.35	Average	100	65
4	7440.00	51.68	74.00	-22.32	41.33	10.35	Peak	100	65
5	12400.00	43.31	54.00	-10.69	29.02	14.29	Average	100	60
6	12400.00	56.60	74.00	-17.40	42.31	14.29	Peak	100	60

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).

3.5.16 Transmitter Radiated Unwanted Emissions (Below 1GHz)

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

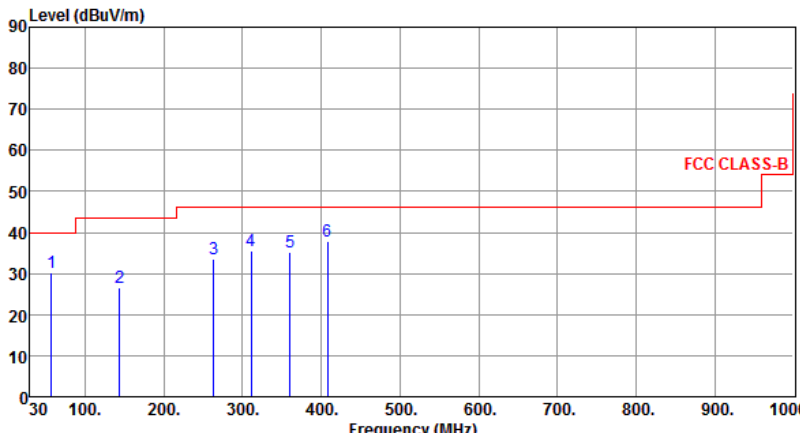


The graph displays the radiated unwanted emissions level in dBuV/m against frequency in MHz from 30 to 1000 MHz. A red line represents the FCC CLASS-B limit, which is 40 dBuV/m from 30 to 100 MHz, 45 dBuV/m from 100 to 300 MHz, and 50 dBuV/m from 300 to 1000 MHz. Six test results are plotted as blue vertical lines, labeled 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	57.18	32.56	40.00	-7.44	41.62	-9.06	Peak	---	---
2	143.49	31.35	43.50	-12.15	40.34	-8.99	Peak	---	---
3	263.69	38.27	46.00	-7.73	48.04	-9.77	Peak	---	---
4	287.12	37.63	46.00	-8.37	46.41	-8.78	Peak	---	---
5	311.25	37.35	46.00	-8.65	45.41	-8.06	Peak	---	---
6	360.77	39.53	46.00	-6.47	46.48	-6.95	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	GFSK/1Mbps	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	57.11	30.24	40.00	-9.76	39.28	-9.04	Peak	---	---
2	143.52	26.48	43.50	-17.02	35.47	-8.99	Peak	---	---
3	263.66	33.67	46.00	-12.33	43.44	-9.77	Peak	---	---
4	311.30	35.58	46.00	-10.42	43.64	-8.06	Peak	---	---
5	360.77	35.26	46.00	-10.74	42.21	-6.95	Peak	---	---
6	408.28	37.81	46.00	-8.19	43.43	-5.62	Peak	---	---

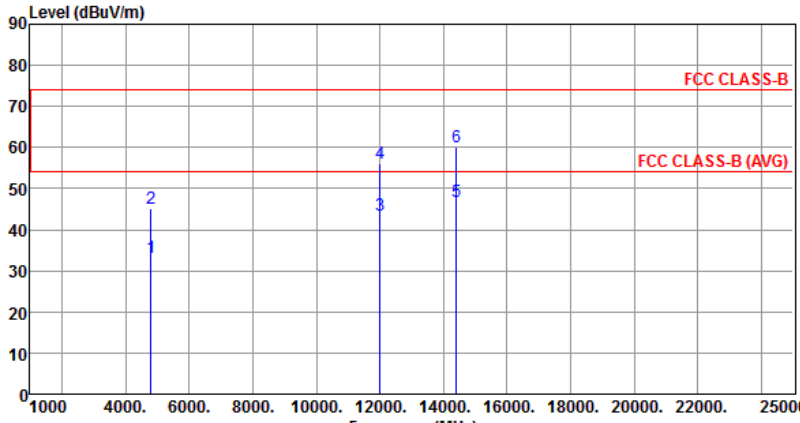
Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain

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.

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

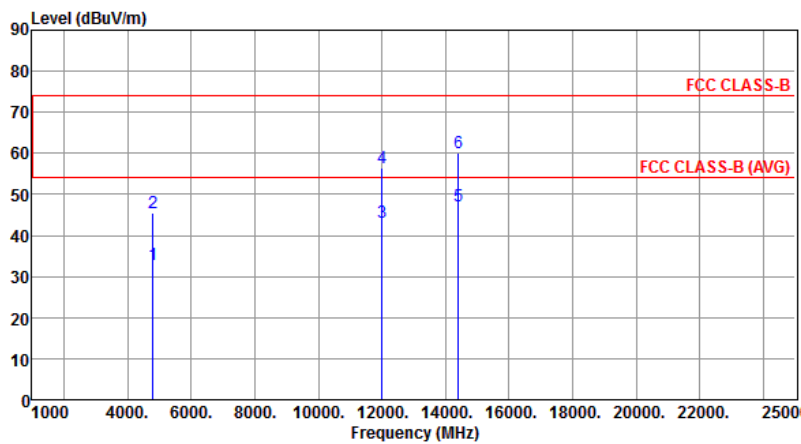
Modulation	GFSK/1Mbps	Test Freq. (MHz)	2402
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4804.00	33.06	54.00	-20.94	28.26	4.80	Average	100	50
2	4804.00	45.17	74.00	-28.83	40.37	4.80	Peak	100	50
3	12010.00	43.36	54.00	-10.64	28.56	14.80	Average	100	30
4	12010.00	56.13	74.00	-17.87	41.33	14.80	Peak	100	30
5	14412.00	46.99	54.00	-7.01	29.11	17.88	Average	100	70
6	14412.00	60.22	74.00	-13.78	42.34	17.88	Peak	100	70

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/1Mbps		Test Freq. (MHz)		2402				
Polarization	Vertical								



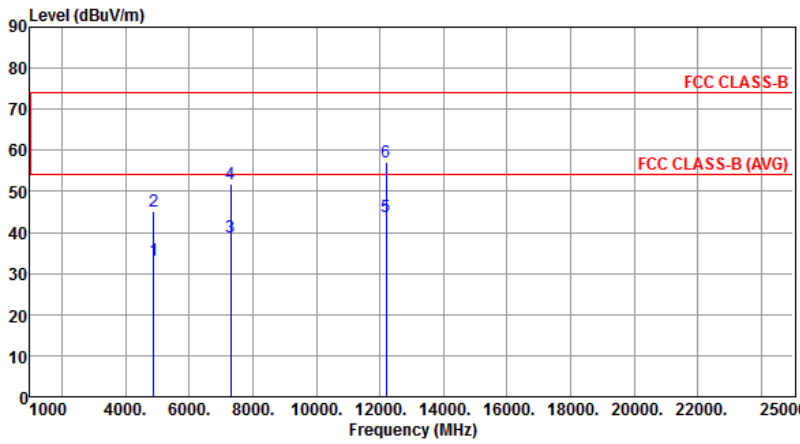
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4804.00	32.98	54.00	-21.02	28.18	4.80	Average	100	55
2	4804.00	45.34	74.00	-28.66	40.54	4.80	Peak	100	55
3	12010.00	43.21	54.00	-10.79	28.41	14.80	Average	100	70
4	12010.00	56.43	74.00	-17.57	41.63	14.80	Peak	100	70
5	14412.00	47.01	54.00	-6.99	29.13	17.88	Average	100	60
6	14412.00	60.10	74.00	-13.90	42.22	17.88	Peak	100	60

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/1Mbps	Test Freq. (MHz)	2440
Polarization	Horizontal		

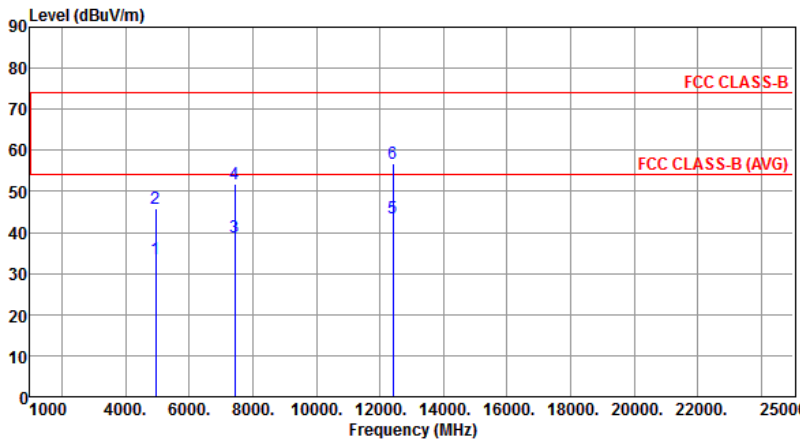


	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4880.00	33.07	54.00	-20.93	28.16	4.91	Average	100	50
2	4880.00	45.26	74.00	-28.74	40.35	4.91	Peak	100	50
3	7320.00	38.86	54.00	-15.14	28.54	10.32	Average	100	80
4	7320.00	51.66	74.00	-22.34	41.34	10.32	Peak	100	80
5	12200.00	43.96	54.00	-10.04	29.12	14.84	Average	100	40
6	12200.00	57.12	74.00	-16.88	42.28	14.84	Peak	100	40

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/1Mbps	Test Freq. (MHz)	2440
Polarization	Vertical		
Level (dBUV/m)			

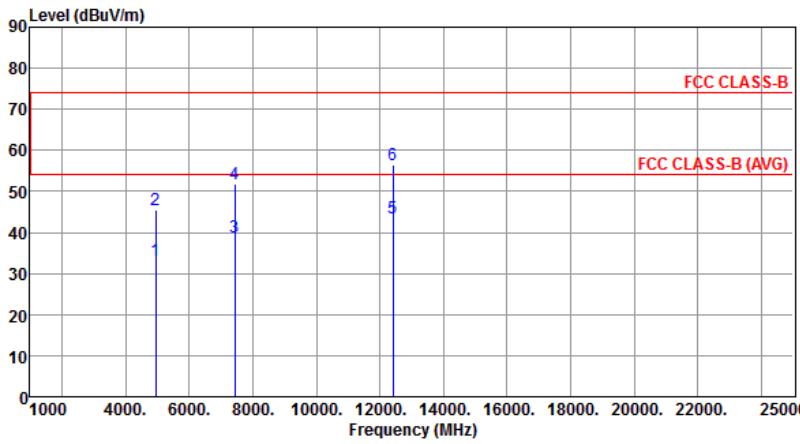
Modulation	GFSK/1Mbps	Test Freq. (MHz)	2480
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4960.00	33.43	54.00	-20.57	28.24	5.19	Average	100	40
2	4960.00	45.74	74.00	-28.26	40.55	5.19	Peak	100	40
3	7440.00	38.77	54.00	-15.23	28.42	10.35	Average	100	100
4	7440.00	51.66	74.00	-22.34	41.31	10.35	Peak	100	100
5	12400.00	43.38	54.00	-10.62	29.09	14.29	Average	100	55
6	12400.00	56.65	74.00	-17.35	42.36	14.29	Peak	100	55

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/1Mbps	Test Freq. (MHz)	2480
Polarization	Vertical		

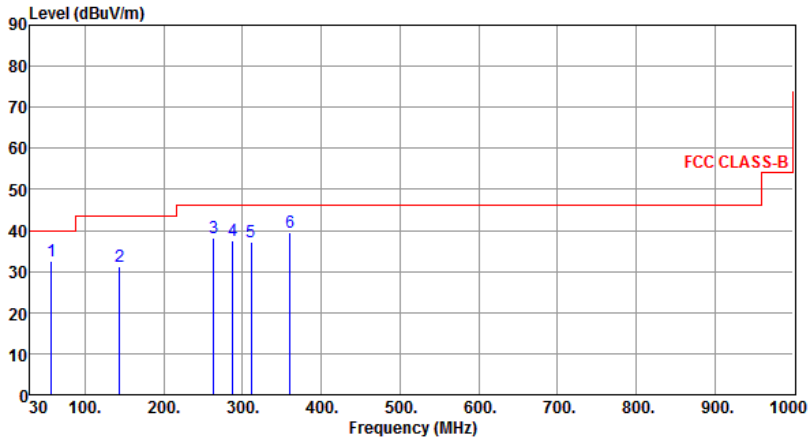


	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4960.00	33.32	54.00	-20.68	28.13	5.19	Average	100	30
2	4960.00	45.61	74.00	-28.39	40.42	5.19	Peak	100	30
3	7440.00	38.89	54.00	-15.11	28.54	10.35	Average	100	50
4	7440.00	51.74	74.00	-22.26	41.39	10.35	Peak	100	50
5	12400.00	43.53	54.00	-10.47	29.24	14.29	Average	100	90
6	12400.00	56.60	74.00	-17.40	42.31	14.29	Peak	100	90

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).

3.5.18 Transmitter Radiated Unwanted Emissions (Below 1GHz)

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

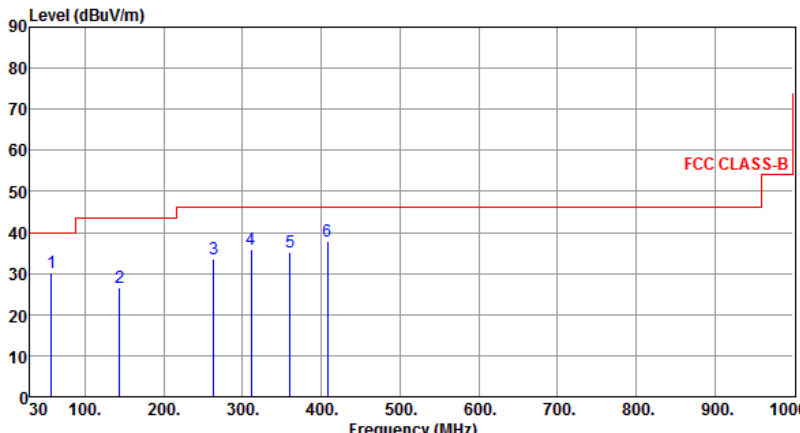


The graph displays the Level (dBUV/m) on the y-axis (0 to 90) against Frequency (MHz) on the x-axis (30 to 1000). A red line represents the FCC CLASS-B limit, which is 40 dBUV/m from 30 to 100 MHz, 45 dBUV/m from 100 to 300 MHz, and 50 dBUV/m from 300 to 1000 MHz. Six test results are plotted as blue vertical lines, labeled 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	57.22	32.46	40.00	-7.54	41.52	-9.06	Peak	---	---
2	143.51	31.38	43.50	-12.12	40.37	-8.99	Peak	---	---
3	263.77	38.15	46.00	-7.85	47.92	-9.77	Peak	---	---
4	287.19	37.64	46.00	-8.36	46.42	-8.78	Peak	---	---
5	311.25	37.31	46.00	-8.69	45.37	-8.06	Peak	---	---
6	360.66	39.58	46.00	-6.42	46.53	-6.95	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	GFSK/2Mbps	Test Freq. (MHz)	2480
Polarization	Vertical		

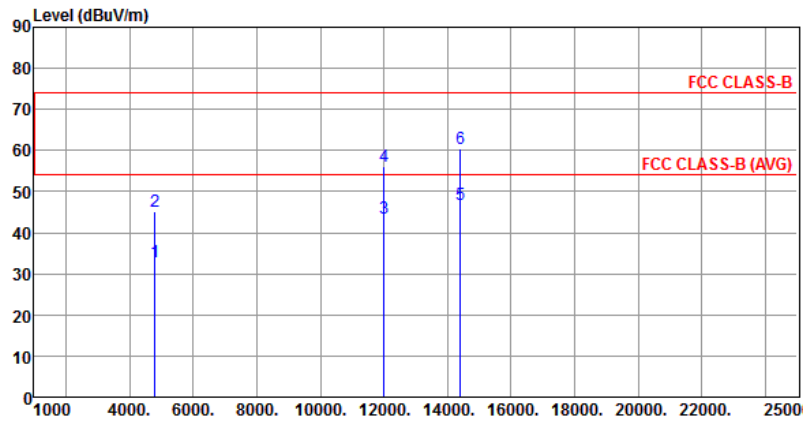


	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	57.11	30.13	40.00	-9.87	39.17	-9.04	Peak	---	---
2	143.50	26.54	43.50	-16.96	35.53	-8.99	Peak	---	---
3	263.77	33.46	46.00	-12.54	43.23	-9.77	Peak	---	---
4	311.26	35.87	46.00	-10.13	43.93	-8.06	Peak	---	---
5	360.63	35.23	46.00	-10.77	42.18	-6.95	Peak	---	---
6	408.27	37.84	46.00	-8.16	43.46	-5.62	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.

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

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



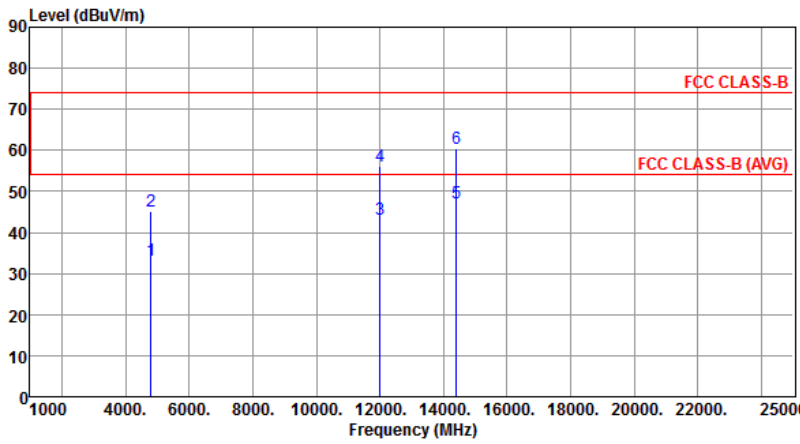
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4804.00	33.04	54.00	-20.96	28.24	4.80	Average	100	25
2	4804.00	45.12	74.00	-28.88	40.32	4.80	Peak	100	25
3	12010.00	43.49	54.00	-10.51	28.69	14.80	Average	100	30
4	12010.00	56.16	74.00	-17.84	41.36	14.80	Peak	100	30
5	14412.00	46.91	54.00	-7.09	29.03	17.88	Average	100	70
6	14412.00	60.28	74.00	-13.72	42.40	17.88	Peak	100	70

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/2Mbps	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	4804.00	33.07	54.00	-20.93	28.27	4.80	Average	100	60
2	4804.00	45.19	74.00	-28.81	40.39	4.80	Peak	100	60
3	12010.00	43.17	54.00	-10.83	28.37	14.80	Average	100	20
4	12010.00	56.22	74.00	-17.78	41.42	14.80	Peak	100	20
5	14412.00	47.05	54.00	-6.95	29.17	17.88	Average	100	40
6	14412.00	60.50	74.00	-13.50	42.62	17.88	Peak	100	40

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).

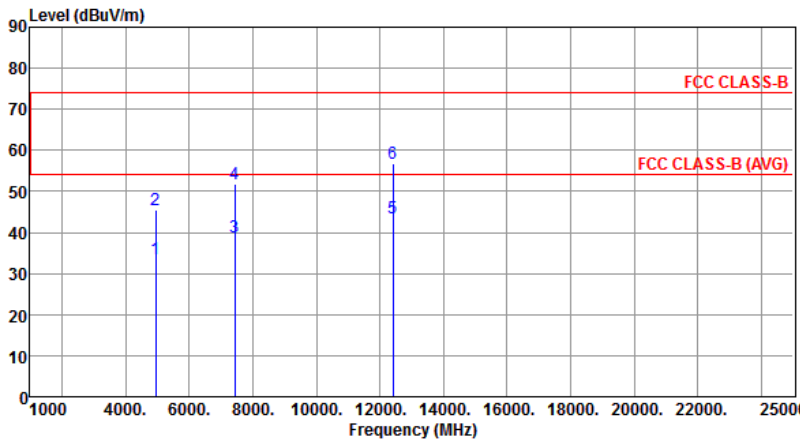
Modulation	GFSK/2Mbps	Test Freq. (MHz)	2440
Polarization	Horizontal		
Level (dBUV/m) <			

Modulation	GFSK/2Mbps	Test Freq. (MHz)	2440
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	4880.00	33.03	54.00	-20.97	28.12	4.91	Average	100	70
2	4880.00	45.17	74.00	-28.83	40.26	4.91	Peak	100	70
3	7320.00	38.78	54.00	-15.22	28.46	10.32	Average	100	40
4	7320.00	52.01	74.00	-21.99	41.69	10.32	Peak	100	40
5	12200.00	44.12	54.00	-9.88	29.28	14.84	Average	100	60
6	12200.00	57.30	74.00	-16.70	42.46	14.84	Peak	100	60

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).

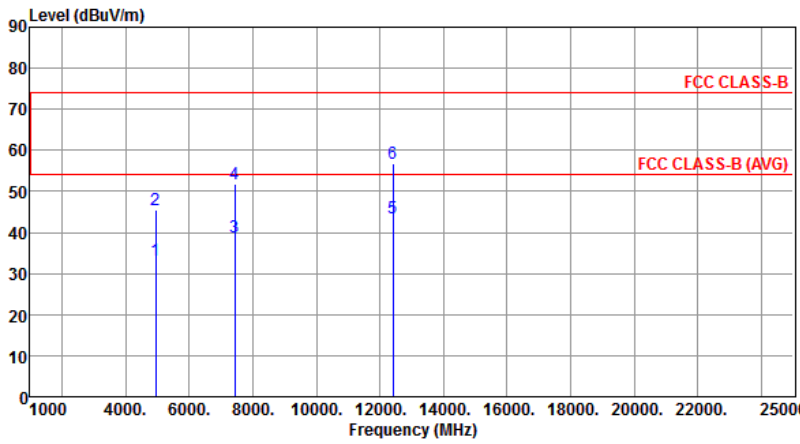
Modulation	GFSK/2Mbps	Test Freq. (MHz)	2480
Polarization	Horizontal		



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4960.00	33.40	54.00	-20.60	28.21	5.19	Average	100	30
2	4960.00	45.64	74.00	-28.36	40.45	5.19	Peak	100	30
3	7440.00	38.77	54.00	-15.23	28.42	10.35	Average	100	70
4	7440.00	51.69	74.00	-22.31	41.34	10.35	Peak	100	70
5	12400.00	43.45	54.00	-10.55	29.16	14.29	Average	100	20
6	12400.00	56.94	74.00	-17.06	42.65	14.29	Peak	100	20

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/2Mbps	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	4960.00	33.35	54.00	-20.65	28.16	5.19	Average	100	20
2	4960.00	45.59	74.00	-28.41	40.40	5.19	Peak	100	20
3	7440.00	38.90	54.00	-15.10	28.55	10.35	Average	100	30
4	7440.00	51.68	74.00	-22.32	41.33	10.35	Peak	100	30
5	12400.00	43.50	54.00	-10.50	29.21	14.29	Average	100	50
6	12400.00	56.85	74.00	-17.15	42.56	14.29	Peak	100	50

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).

3.6 Emissions in non-restricted Frequency Bands

3.6.1 Emissions in non-restricted frequency bands limit

Peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum in-band peak PSD level in 100 kHz.

3.6.2 Test Procedures

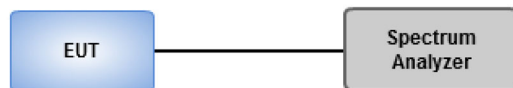
Reference level measurement

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

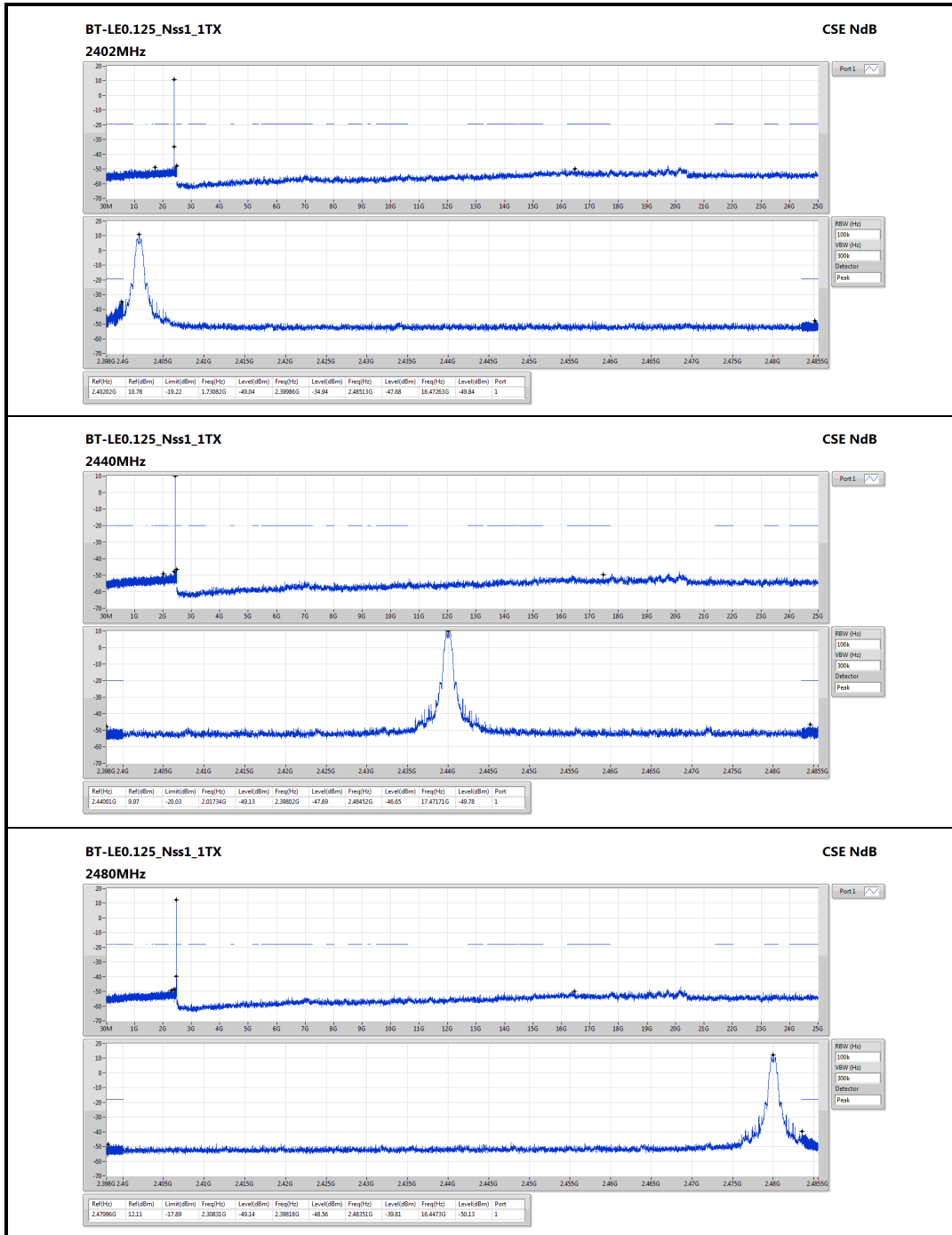
1. Set RBW=100kHz, VBW = 300kHz , Detector = Peak, Sweep time = Auto
2. Trace = max hold , Allow Trace to fully stabilize
3. Scan Frequency range is up to 25GHz
4. Use the peak marker function to determine the maximum amplitude level

3.6.3 Test Setup



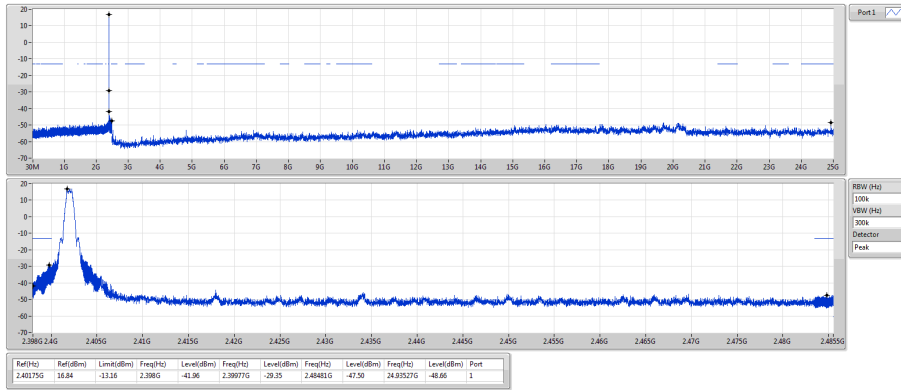
Highest power level

3.6.4 Test Result of Emissions in non-restricted Frequency Bands



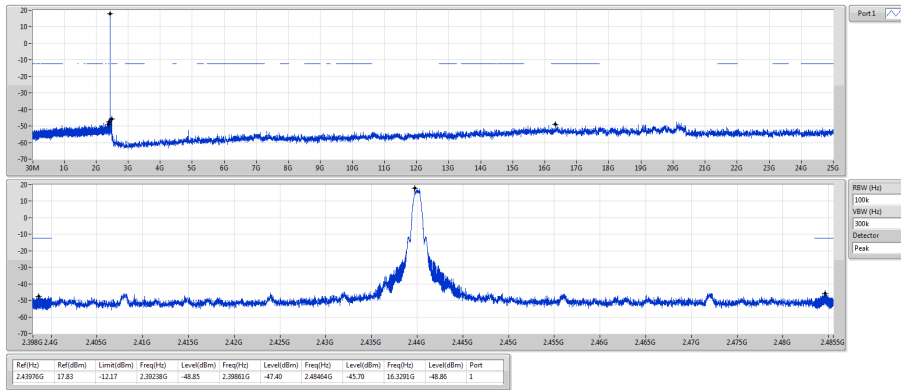
BT-LE(1Mbps)
2402MHz

CSE NdB



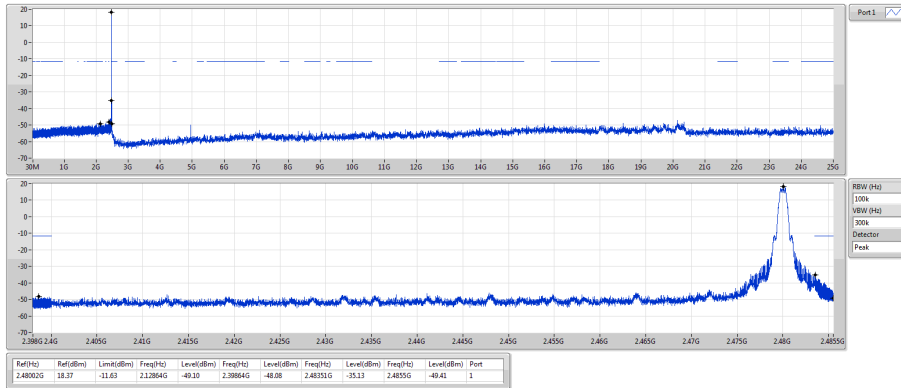
BT-LE(1Mbps)
2440MHz

CSE NdB



BT-LE(1Mbps)
2480MHz

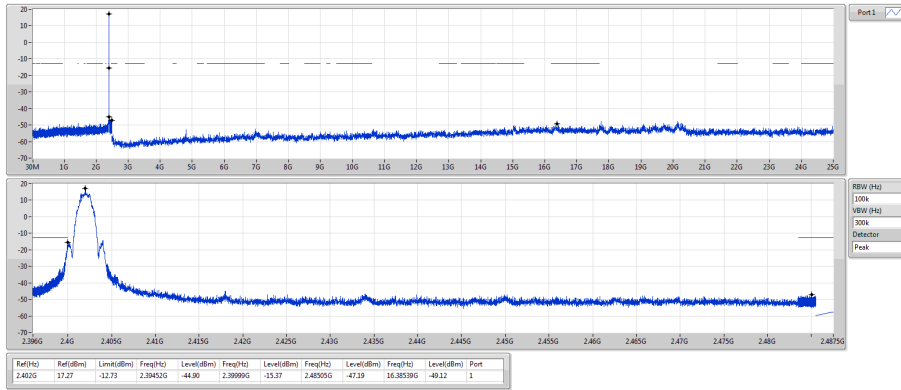
CSE NdB



BT-LE(2Mbps)

2402MHz

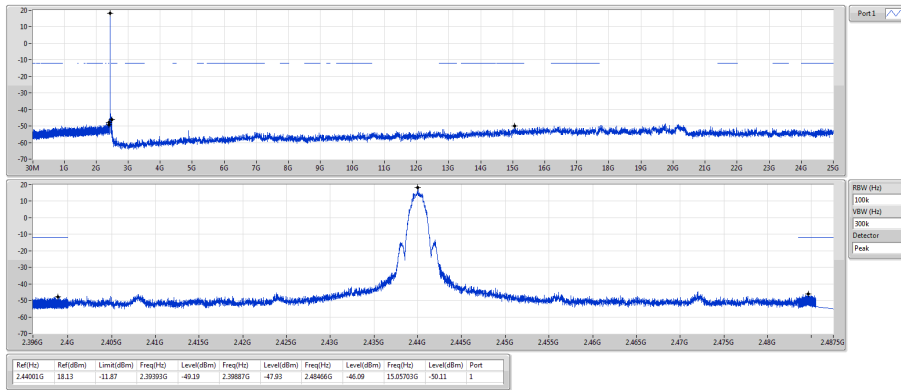
CSE NdB



BT-LE(2Mbps)

2440MHz

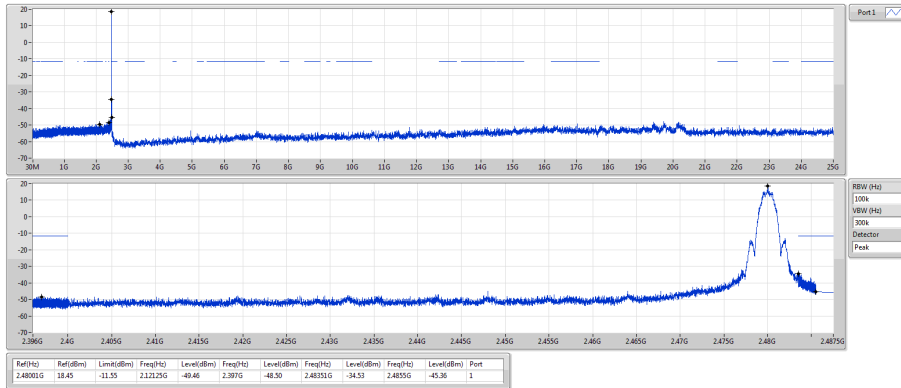
CSE NdB



BT-LE(2Mbps)

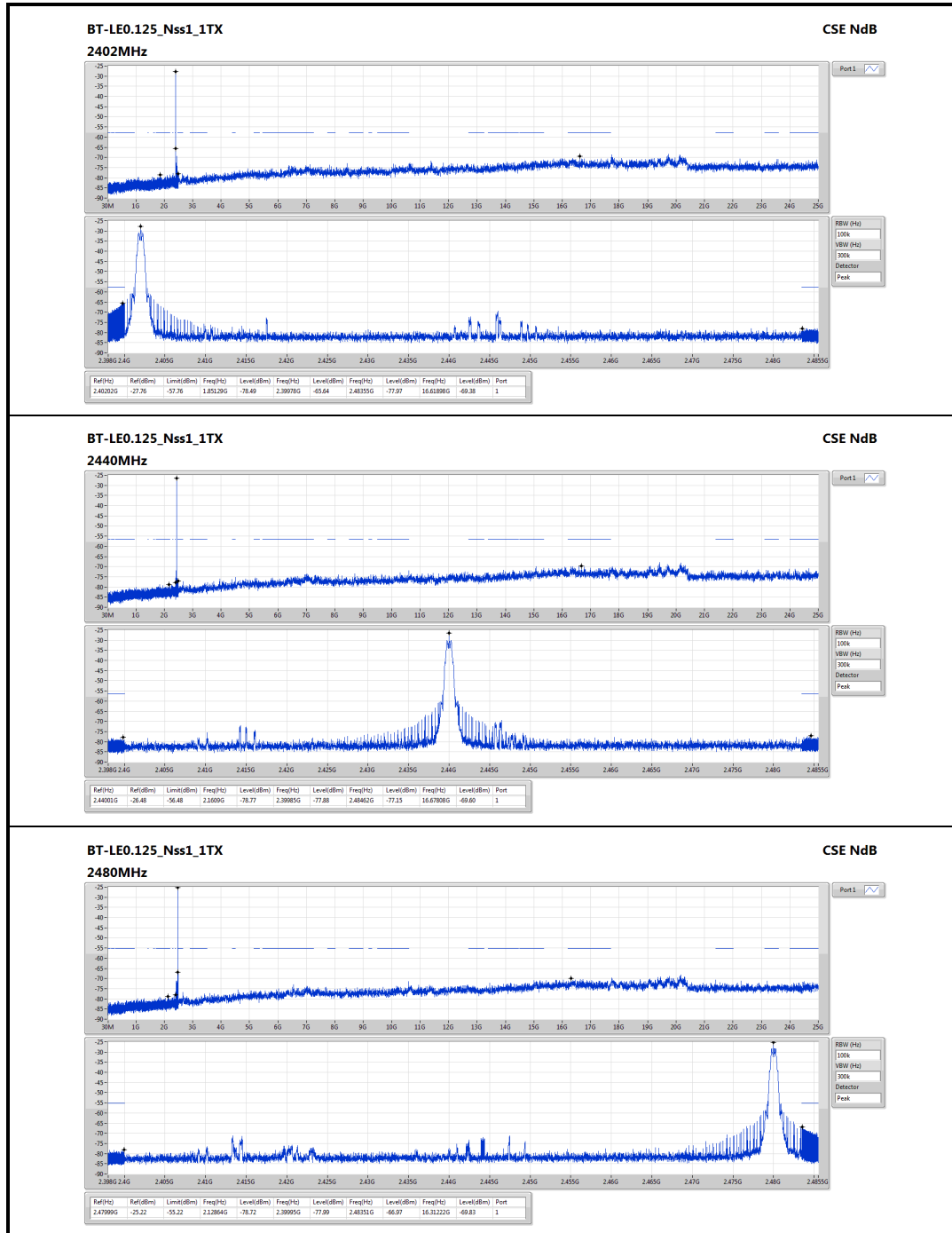
2480MHz

CSE NdB



Lowest power level

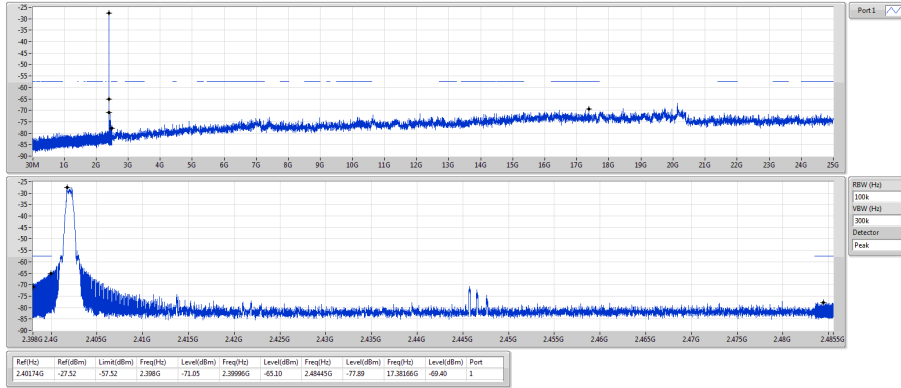
3.6.5 Test Result of Emissions in non-restricted Frequency Bands



BT-LE(1Mbps)

2402MHz

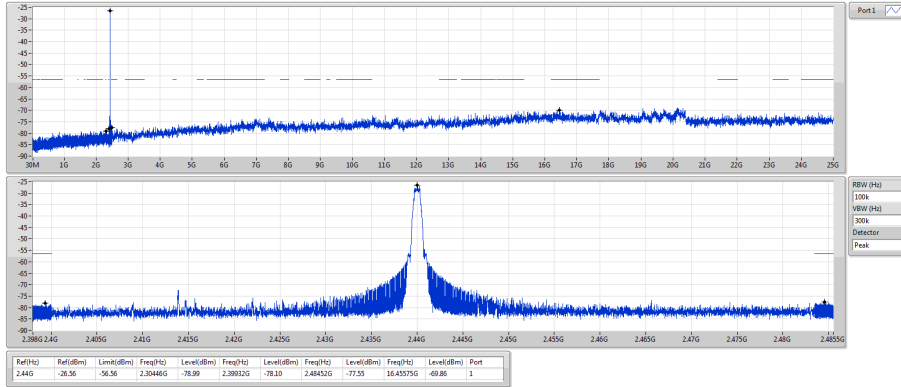
CSE NdB



BT-LE(1Mbps)

2440MHz

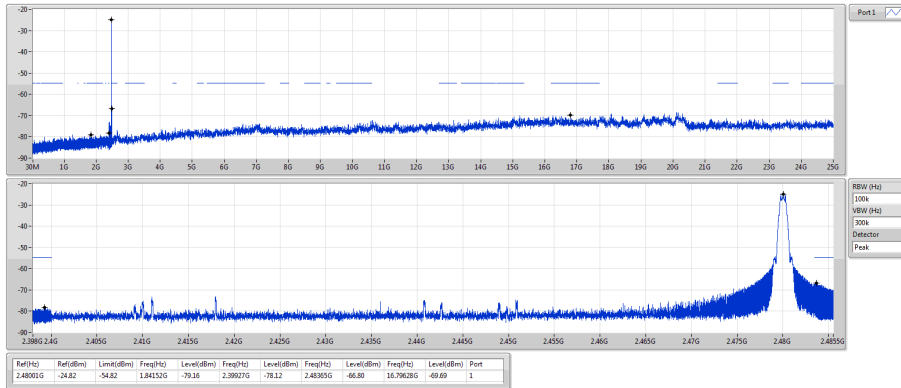
CSE NdB



BT-LE(1Mbps)

2480MHz

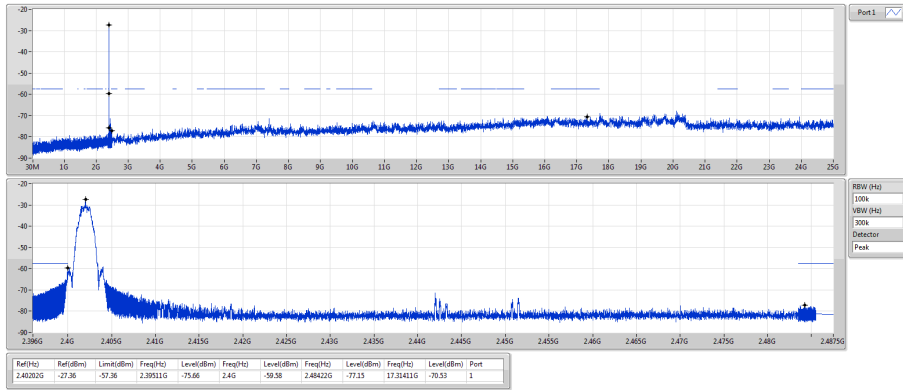
CSE NdB



BT-LE(2Mbps)

2402MHz

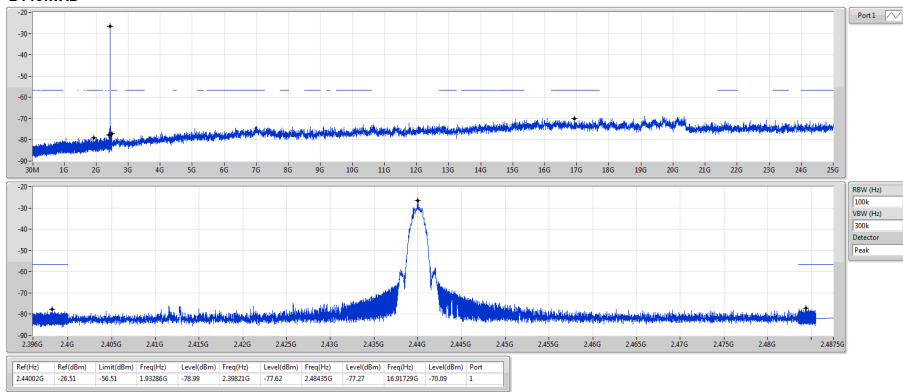
CSE NdB



BT-LE(2Mbps)

2440MHz

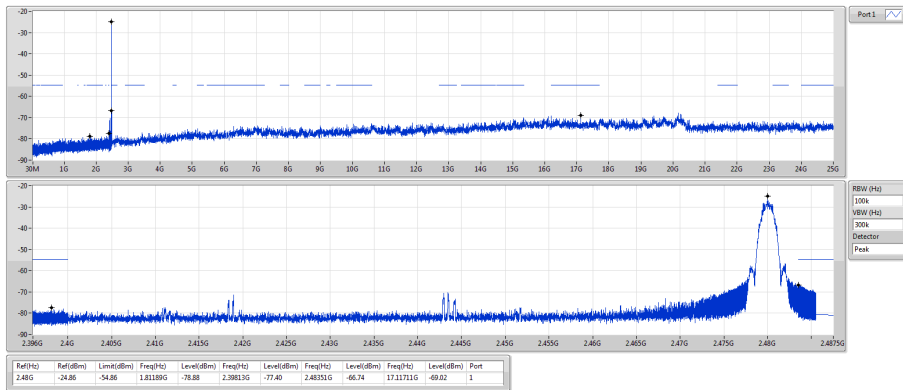
CSE NdB



BT-LE(2Mbps)

2480MHz

CSE NdB



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>.

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

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