

別紙 TEST DATA

(for Bluetooth Low Energy)

1. 周波数の偏差

1.1. 試験結果

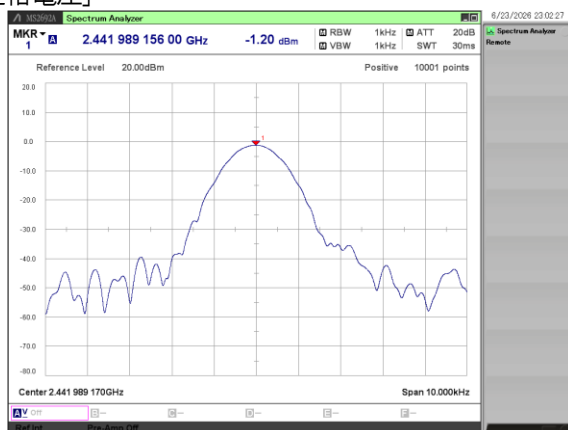
Test Voltage	Channel [MHz]	Read. Frequency [MHz]	Tolerance [kHz]	Tolerance [ppm]	Limit [ppm]
DC 3.85 V	2442	2441.98916	-10.84	-4.44	± 50.0

$$\text{Tolerance [kHz]} = (\text{Read. Frequency [MHz]} - \text{Channel [MHz]}) \times 10^3$$

$$\text{Tolerance [ppm]} = \text{Tolerance [kHz]} \times 10^{-3} / \text{Channel [MHz]} \times 10^6$$

1.2. 測定器画面データ

[定格電圧]



2. 占有周波数帯幅 / 拡散帯域幅

2.1. 試験結果

[2 Mbps / 占有周波数帯域幅 / 38 ホッピング]

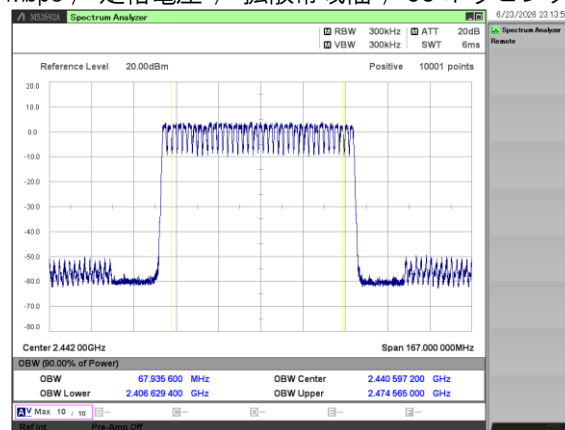
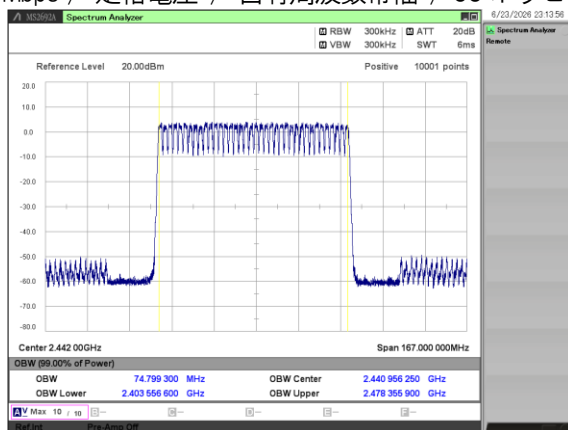
Mode	Channel [MHz]	Result [MHz]	Limit [MHz]
DC 3.85 V	2442	74.799	≤ 83.5

[2 Mbps / 拡散帯域幅 / 38 ホッピング]

Mode	Channel [MHz]	Result [MHz]
DC 3.85 V	2442	67.936

2.2. 測定器画面データ

[2 Mbps / 定格電圧 / 占有周波数帯幅 / 38 ホッピング] [2 Mbps / 定格電圧 / 拡散帯域幅 / 38 ホッピング]



3. スプリアス発射または不要発射の強度

3.1. 試験結果

[2 Mbps]

Test Voltage	Channel [MHz]	Frequency [MHz]	S/A Read. [dBm]	C.F. [dB]	Result [dBm]	Result [uW]	Limit [dBm]	Limit [uW]	Margin [dB]
DC 3.85 V	2442	2259.37	-60.92	11.15	-49.77	0.01055	≤ -26.02	≤ 2.5	23.75
		2372.59	-49.91	11.16	-38.75	0.13344	≤ -26.02	≤ 2.5	12.73
		2378.42	-47.20	11.17	-36.03	0.24963	≤ -26.02	≤ 2.5	10.01
		2399.42	-50.95	11.17	-39.78	0.10520	≤ -16.02	≤ 25.0	23.76
		2492.07	-50.97	11.18	-39.79	0.10493	≤ -16.02	≤ 25.0	23.77
		2503.39	-47.47	11.18	-36.29	0.23480	≤ -26.02	≤ 2.5	10.27
		2517.49	-49.76	11.18	-38.58	0.13880	≤ -26.02	≤ 2.5	12.56
		2622.39	-61.29	11.19	-50.10	0.00976	≤ -26.02	≤ 2.5	24.08

$$\text{Result [uW]} = 10^{\{(S/A \text{ Read. [dBm]} + C.F. [dB])/10\}} \times 10^3$$

※ 1 GHz 未満は RBW : 1 MHz で実施した結果を記載

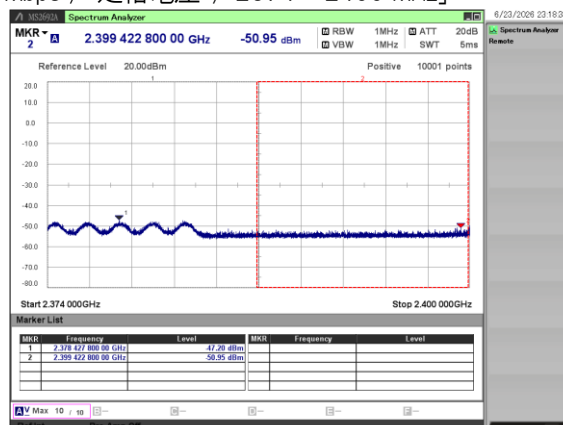
参照帯域幅 (RBW : 100 kHz) 当たりに換算した値、および RBW : 100 kHz で実施した結果を RBW : 1 MHz 当たりに換算した値については、上記結果より小さくなるため記載を省略

3.2. 測定器画面データ

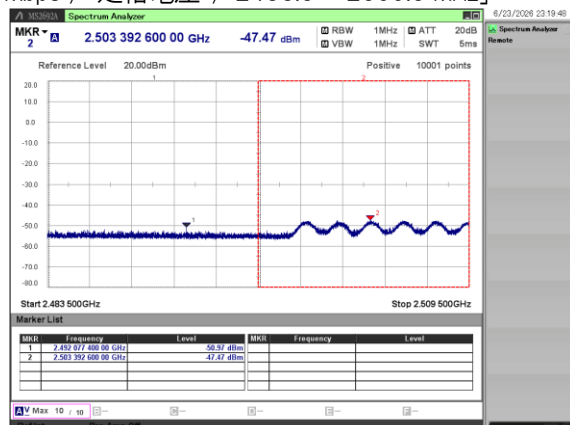
[2 Mbps / 定格電圧 / 30 - 2374 MHz]



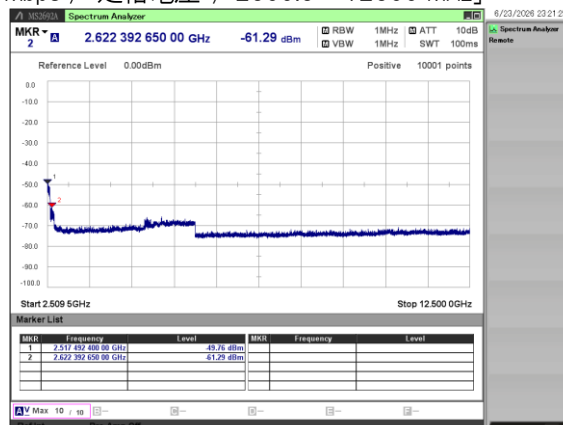
[2 Mbps / 定格電圧 / 2374 - 2400 MHz]



[2 Mbps / 定格電圧 / 2483.5 - 2509.5 MHz]



[2 Mbps / 定格電圧 / 2509.5 - 12500 MHz]



4. 空中線電力の偏差

4.1. 試験結果

[2 Mbps]

Test Voltage	Channel [MHz]	P/M Read. [dBm]	C.F. [dB]	Spread BW [MHz]	Power [mW/MHz]	Power Limit [mW/MHz]	Tolerance [%]	Tolerance Limit [%]
DC 3.85 V	2442	4.02	11.50	67.936	0.5247	≤ 3.0000	-26.10	$\leq +20$
	* 15Hop	4.02	11.50	27.000	1.3202	≤ 3.0000	-25.41	$\leq +20$

$$\text{Power [mW]} = 10^{\{(P/M \text{ Read. [dBm]} + C.F. [dB])/10\}} / \text{Spread BW [MHz]}$$

$$\text{Tolerance [\%]} = \text{Power [mW]} / \text{申請定格電力 [mW]} * 100 - 100$$

5. 副次的に発する電波等の限度

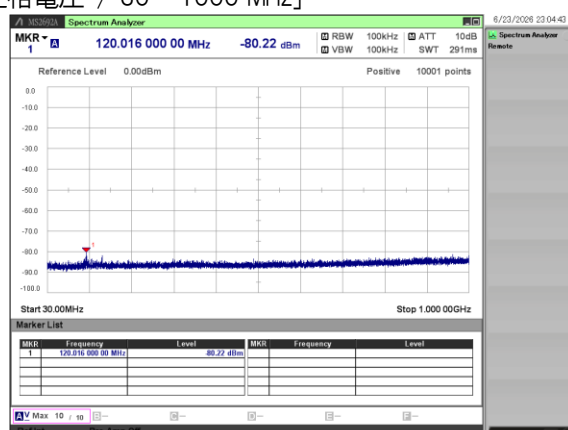
5.1. 試験結果

Test Voltage	Channel [MHz]	Frequency [MHz]	S/A Read. [dBm]	C.F. [dB]	Result [dBm]	Result [nW]	Limit [dBm]	Limit [nW]	Margin [dB]
DC 3.85 V	2442	120.01	-80.22	0.88	-79.34	0.01163	≤ -53.97	≤ 4.0	25.37
		5100.90	-66.54	1.36	-65.18	0.30374	≤ -46.98	≤ 20.0	18.20

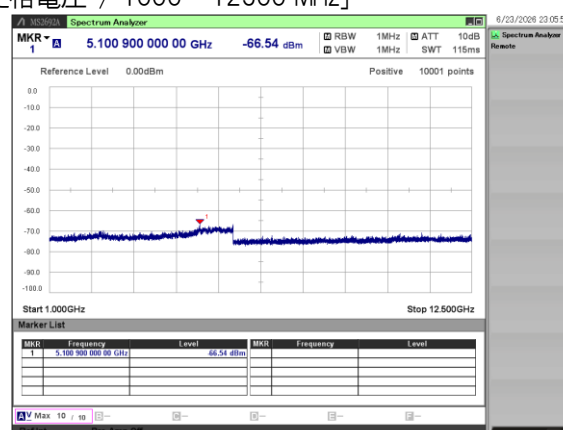
$$\text{Result [nW]} = 10^{\{(S/A \text{ Read. [dBm]} + C.F. [dB])/10\}} * 10^6$$

5.2. 測定器画面データ

[定格電圧 / 30 - 1000 MHz]



[定格電圧 / 1000 - 12500 MHz]



6. ホッピング周波数滞留時間

6.1. 試験結果

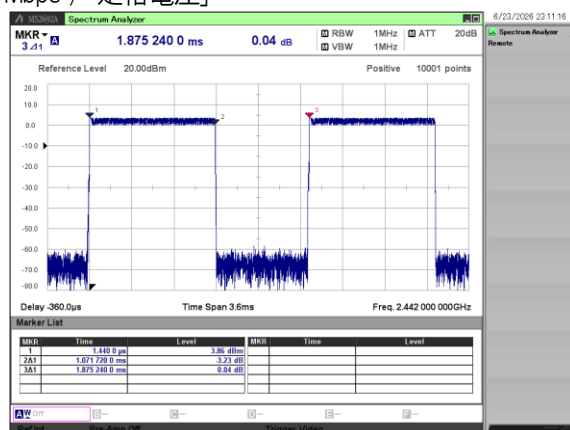
[2 Mbps]

Test Voltage	Mode	Channel [MHz]	ON Time [msec]	ON+OFF [msec]	送信速度に等しい周波数 [MHz]	Spread BW [MHz]	Hopping 数	Dwell Time [sec]	Limit [sec]
DC 3.85 V	2 Mbps	2442	1.072	1.875	2.00	67.936	38	0.204	≤ 0.4

$$\text{Dwell Time [sec]} = 0.4 * (\text{Spread BW} / \text{送信速度に等しい周波数}) / (\text{ON+OFF [msec]} * \text{Hopping 数}) * \text{ON Time [msec]}$$

6.2. 測定器画面データ

[2 Mbps / 定格電圧]



7. 混信防止機能

7.1. 試験結果

識別符号	A4:C1:F8:00:02:5B
良否判定	良

End of Test Report