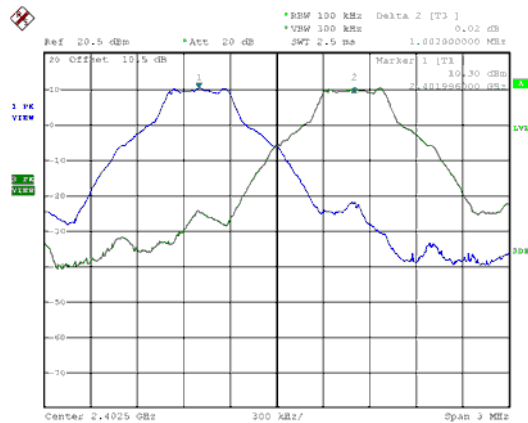
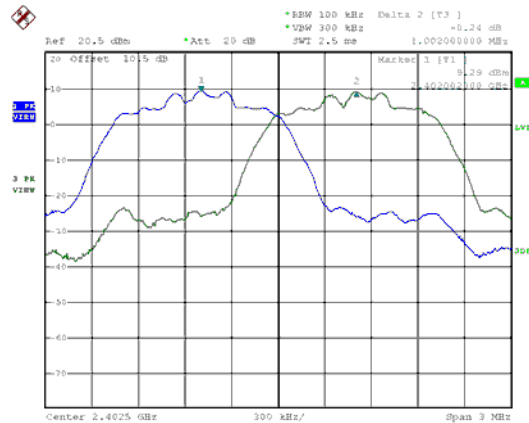




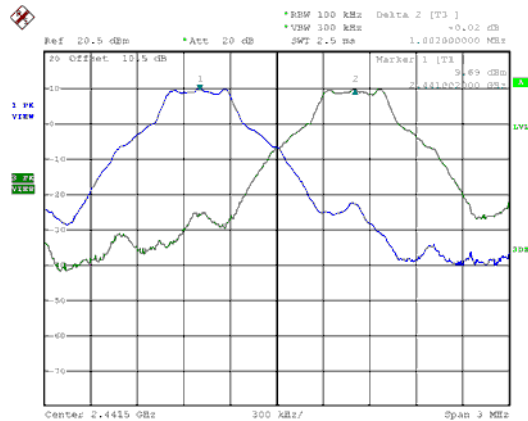
Modulation Standard: GFSK (1Mbps)
Channel: 00



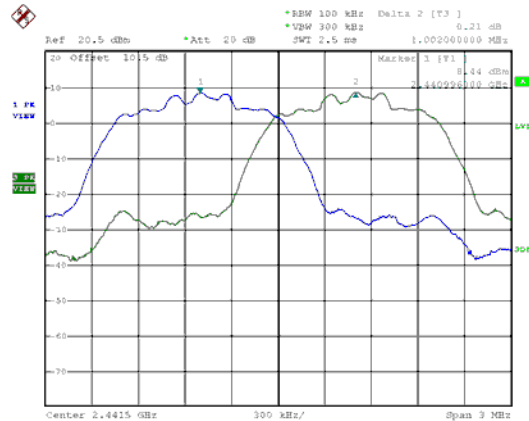
Modulation Standard: $\pi/4$ -DQPSK (2Mbps)
Channel: 00



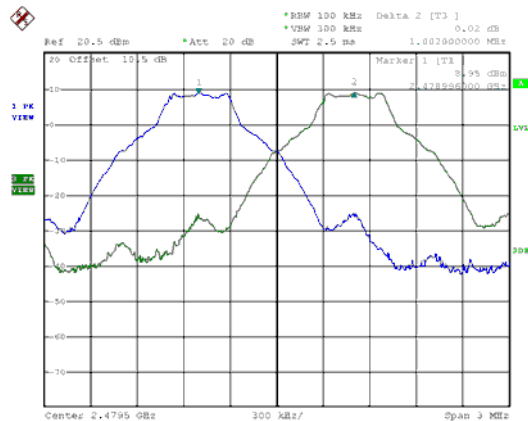
CH39



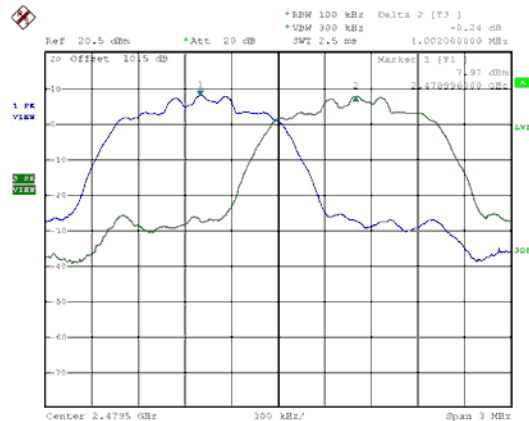
CH39



CH78

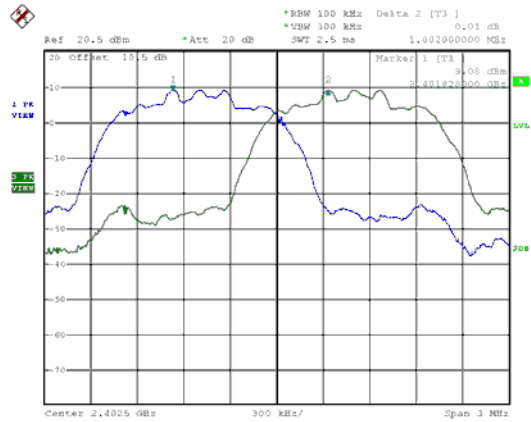


CH78

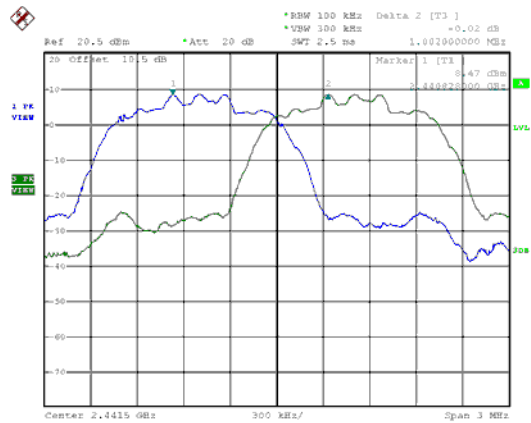




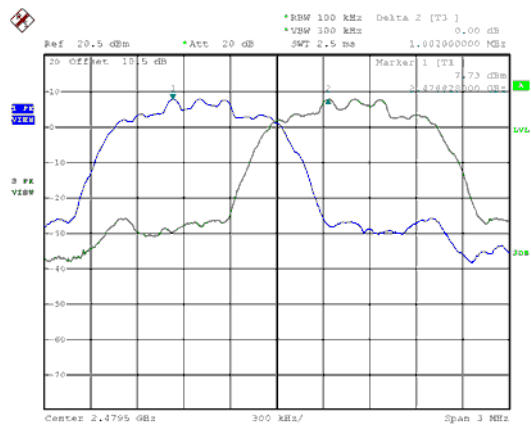
Modulation Standard: 8DPSK (3Mbps)
Channel: 00



CH39



CH78





8. 頻率佔用時間之規定

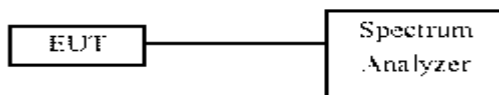
8.1. 適用標準

對使用跳頻系統之低功率發射機，依據國家通訊傳播委員會低功率射頻電機技術規範 3.10.1.6 節之(1)(A)(a)規定，操作於 2400MHz~2483.5MHz 之展頻跳頻系統，須使用至少 15 個無重疊的頻道，在 0.4 秒乘以跳頻頻道數之週期內，任一頻率佔用之平均時間應小於或等於 0.4 秒。應使用智慧型跳頻技術，以避免占用於特定跳頻頻道。

8.2. 測試方法

- 將待測物和儀器相連接。
- 設定儀器解析頻寬和視訊頻寬為 1MHz。
- 量測頻率佔用時間並記錄於報告中。

8.3. 測試配置





8.4. 頻率佔用時間之測試結果及數據

Test Result : PASS Temperature : 20°C
 Test Date : Feb. 14, 2019 Humidity : 40%
 Test Period = 0.4 (second/ channel) x 79 Channel = 31.6 sec

Modulation Type	Frequency (MHz)	Length of transmission time (ms)	Number of transmission in a 31.6 (79 Hopping*0.4)	Dwell Time (ms)	Limit (ms)
GFSK (DH1)	2402	0.516	320.10	165.17	400
GFSK (DH3)	2402	1.786	159.90	285.58	400
GFSK (DH5)	2402	3.046	106.81	325.34	400
$\pi/4$ -DQPSK (DH1)	2402	0.540	320.10	172.85	400
$\pi/4$ -DQPSK (DH3)	2402	1.810	159.90	289.42	400
$\pi/4$ -DQPSK (DH5)	2402	3.070	106.81	327.91	400
8DPSK (DH1)	2402	0.552	320.10	176.70	400
8DPSK (DH3)	2402	1.810	159.90	289.42	400
8DPSK (DH5)	2402	3.070	106.81	327.91	400

Modulation Type	Frequency (MHz)	Length of transmission time (ms)	Number of transmission in a 31.6 (79 Hopping*0.4)	Dwell Time (ms)	Limit (ms)
AFH-DH1	2402-2421	0.516	160.00	82.56	400
AFH-DH3	2402-2421	1.786	80.00	142.88	400
AFH-DH5	2402-2421	3.046	53.33	162.44	400

備註：繪圖資料請參考下頁。

DH1 模式:

本系統每秒跳頻 1600 次，故每次跳頻時間 $1/1600=0.625\text{ms}$ 。而每個 package 需要 1 次發射及 1 次接收，故每秒於 79 個頻道中只發射 800 次，平均每秒每個頻道之發射次數為 $800/79=10.13$ 次。故於週期(31.6 秒)內每個頻道發射次數為 $10.13 \times 31.6 = 320.1$ 次。

DH3 模式:

本系統每秒跳頻 1600 次，故每次跳頻時間 $1/1600=0.625\text{ms}$ 。而每個 package 需要 3 次發射及 1 次接收，故每秒於 79 個頻道中只發射 400 次，平均每秒每個頻道之發射次數為 $400/79=5.06$ 次。故於週期(31.6 秒)內每個頻道發射次數為 $5.06 \times 31.6 = 159.9$ 次。

DH5 模式:

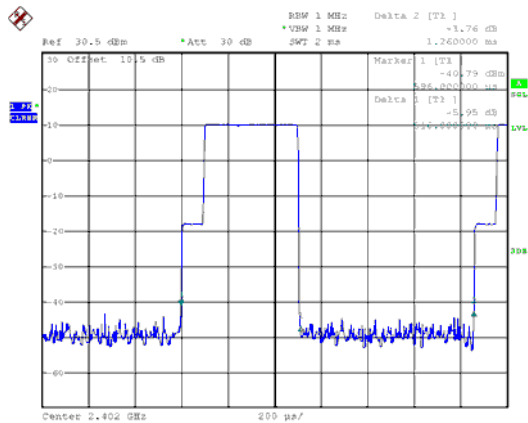
本系統每秒跳頻 1600 次，故每次跳頻時間 $1/1600=0.625\text{ms}$ 。而每個 package 需要 5 次發射及 1 次接收，故每秒於 79 個頻道中只發射 266.7 次，平均每秒每個頻道之發射次數為 $266.7/79=3.38$ 次。故於週期(31.6 秒)內每個頻道發射次數為 $3.38 \times 31.6 = 106.81$ 次。

8.5. 結果判定

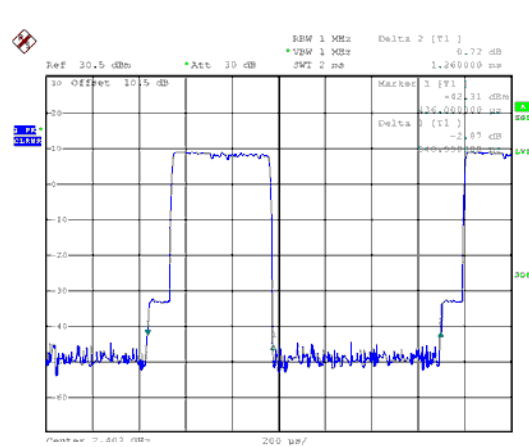
高、中、低頻段的頻率佔用時間皆小於 0.4 秒，合乎標準規定。



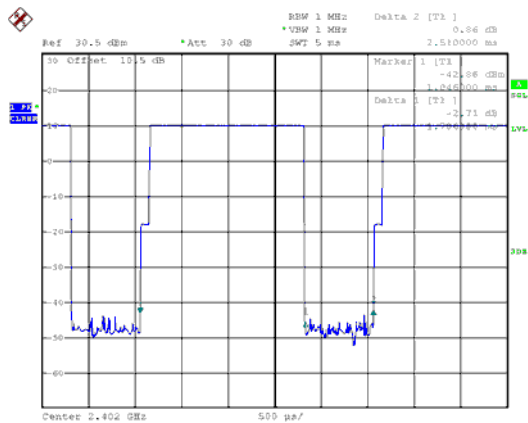
Modulation Standard: GFSK (DH1)
Channel: 00



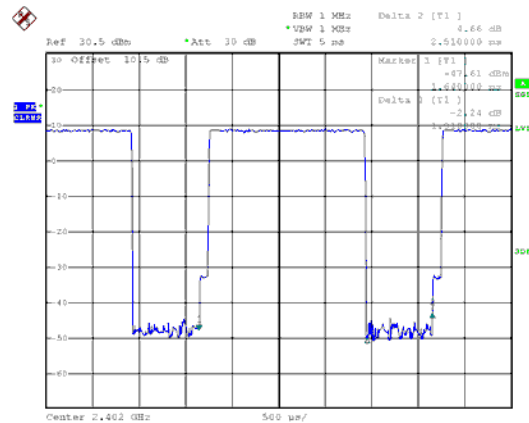
Modulation Standard: $\pi/4$ -DQPSK (DH1)
Channel: 00



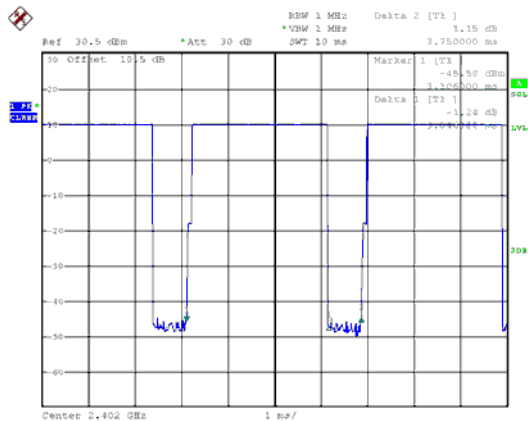
Modulation Standard: GFSK (DH3)
Channel: 39



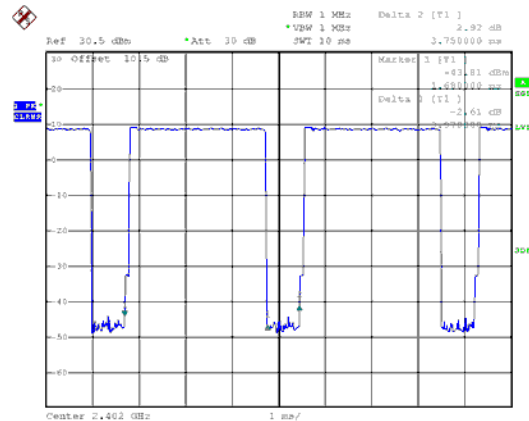
Modulation Standard: $\pi/4$ -DQPSK (DH3)
Channel: 39



Modulation Standard: GFSK (DH5)
Channel: 78

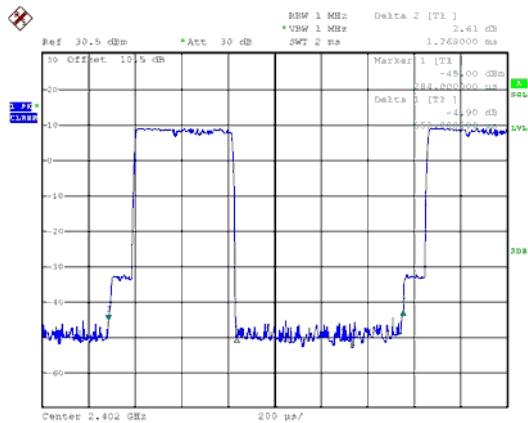


Modulation Standard: $\pi/4$ -DQPSK (DH5)
Channel: 78

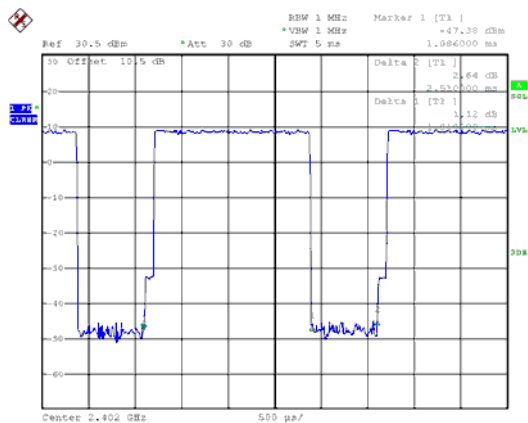




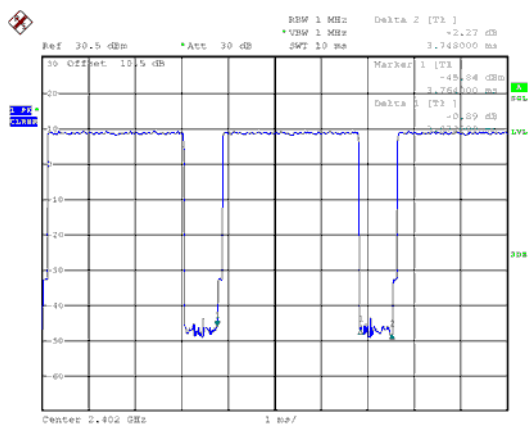
Modulation Standard: 8DPSK (DH1)
Channel: 00



Modulation Standard: 8DPSK (DH3)
Channel: 39



Modulation Standard: 8DPSK (DH5)
Channel: 78

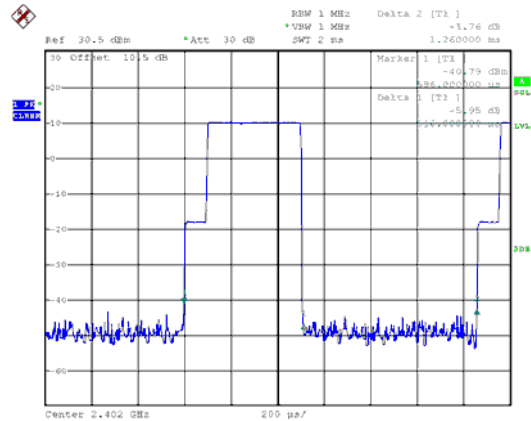




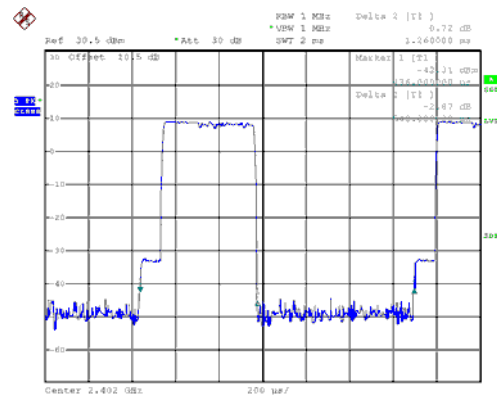
AFH

Modulation Standard: GFSK (DH1)

Channel: 00

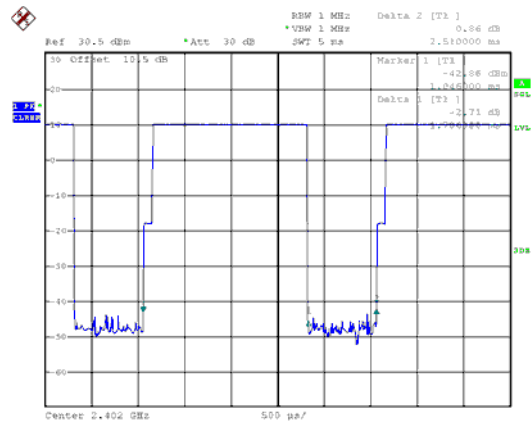
Modulation Standard: $\pi/4$ -DQPSK (DH1)

Channel: 00

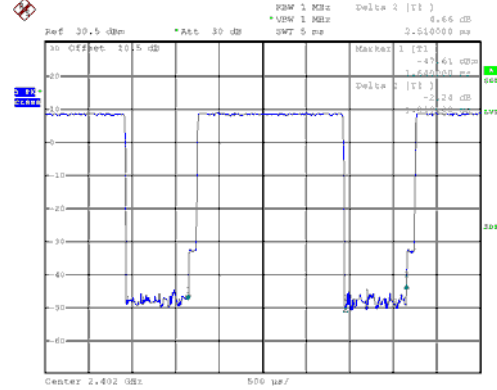


Modulation Standard: GFSK (DH3)

Channel: 39

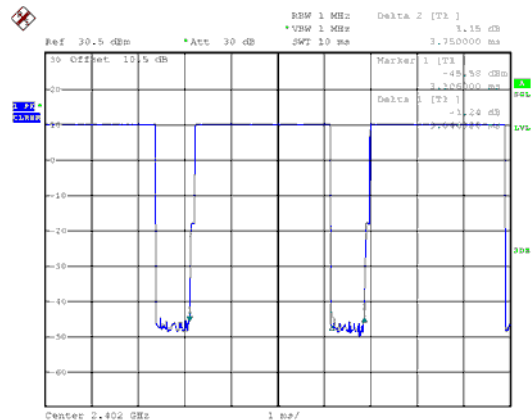
Modulation Standard: $\pi/4$ -DQPSK (DH3)

Channel: 39

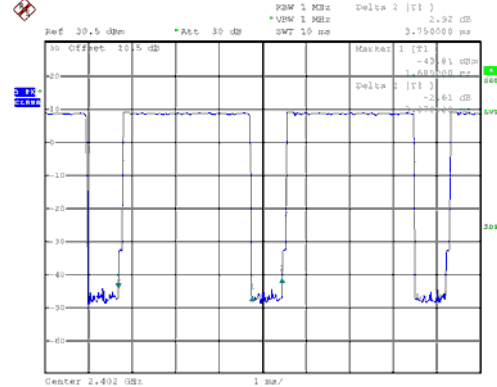


Modulation Standard: GFSK (DH5)

Channel: 78

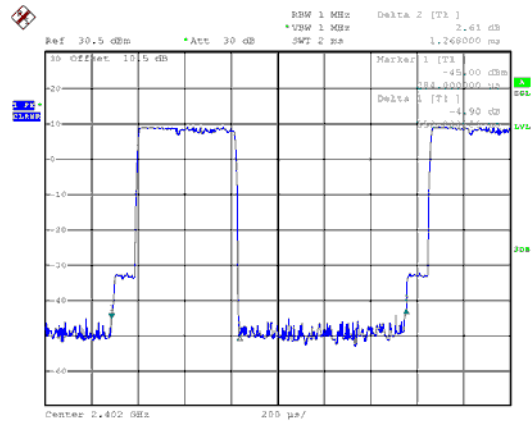
Modulation Standard: $\pi/4$ -DQPSK (DH5)

Channel: 78

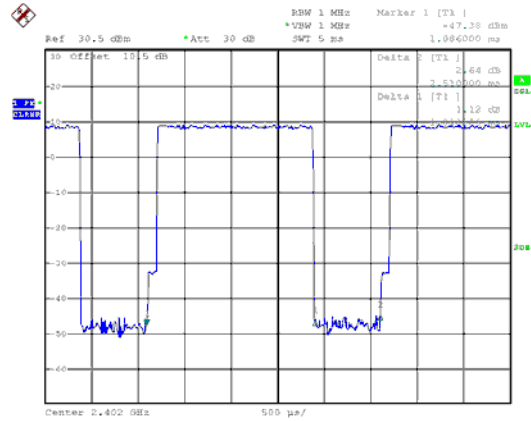




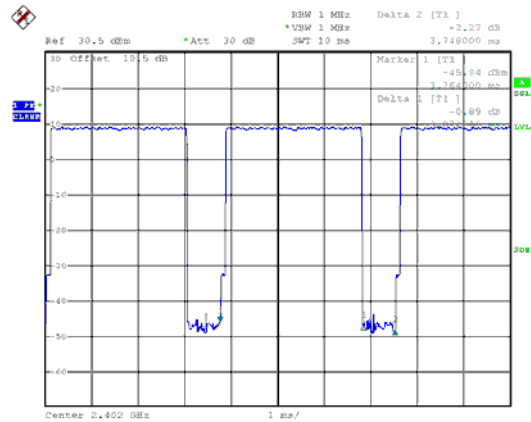
Modulation Standard: 8DPSK (DH1)
Channel: 00



Modulation Standard: 8DPSK (DH3)
Channel: 39



Modulation Standard: 8DPSK (DH5)
Channel: 78





9. 跳頻頻道使用數量之規定

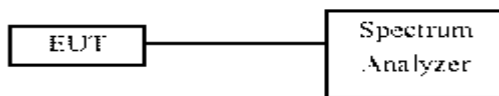
9.1. 適用標準

對使用跳頻系統之低功率發射機，依據國家通訊傳播委員會低功率射頻電機技術規範 3.10.1.6 節之(1)(A)(a)規定，須使用至少 15 個無重疊的頻道。

9.2. 測試方法

- 將待測物和儀器相連接。
- 設定儀器解析頻寬 100KHz 和視訊頻寬為 300 KHz。
- 將待測物設定於跳頻模式，並記錄每個頻道之所有訊號。

9.3. 測試配置



9.4. 跳頻頻道使用數量之測試結果及數據

Test Result : PASS Temperature : 20°C
Test Date : Feb. 14, 2019 Humidity : 40%

Modulation Type	Number of hopping channels
GFSK	79
$\pi/4$ -DQPSK	79
8DPSK	79

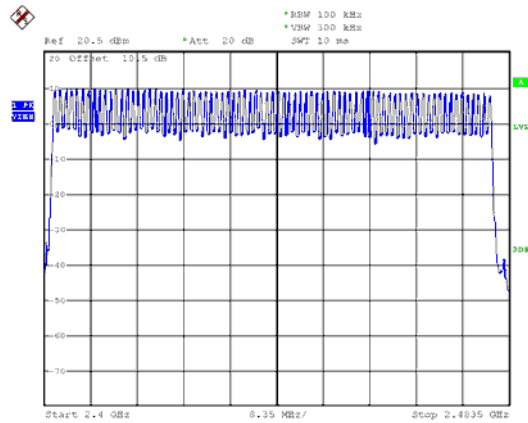
備註：繪圖資料請參考下頁。

9.5. 結果判定

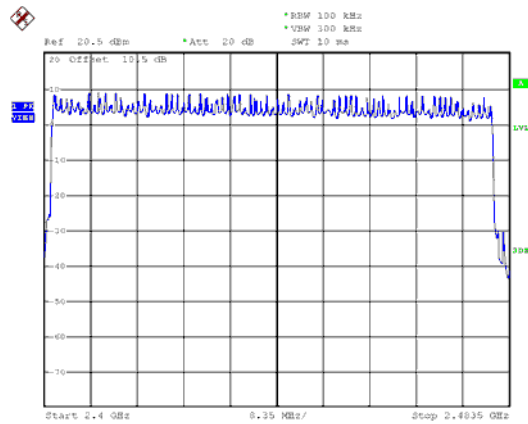
高、中、低頻段的跳頻頻道使用數量皆多於 15 個無重疊的頻道，合乎標準規定。



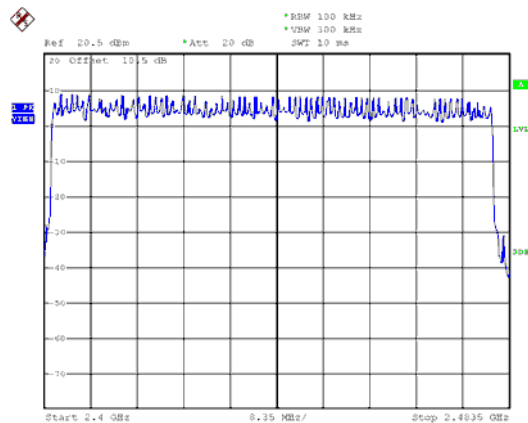
Modulation Standard: GFSK (1Mbps)



Modulation Standard: $\pi/4$ -DQPSK (2Mbps)



Modulation Standard: 8DPSK (3Mbps)





10. 峰值輸出功率之規定

10.1. 適用標準

對使用跳頻系統之低功率發射機，依據國家通訊傳播委員會低功率射頻電機技術規範 3.10.1.2 節之(1)規定，操作於 2400MHz~2483.5MHz 者，

(A)：至少使用 75 個跳頻頻道之跳頻系統：1W(含)以下。

(B)：除(A)外，依 3.10.1.6(A)(a)之跳頻系統：0.125 瓦(W)(含)以下。

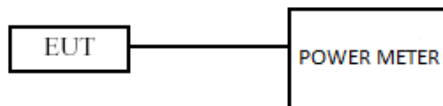
(C)：數位調變技術系統：1W(含)以下。

10.2. 測試方法

- a. 將待測物和儀器相連接。
- b. 量測輸出功率並記錄於報告中。

備註:此測試項目檢驗之擴充不準確定度 $\pm 1.4\text{dB}$ 。

10.3. 測試配置



**10.4. 峰值輸出功率之測試結果及數據**

Test Result : PASS

Temperature : 20°C

Test Date : Feb. 14, 2019

Humidity : 40%

Modulation Type	Channel	Frequency (MHz)	PK Output Power (dBm)	PK Output Power (mW)	e.i.r.p. Power (dBm)	e.i.r.p. Power (mW)
GFSK	0	2402	9.91	9.795	11.980	15.776
	39	2441	9.28	8.472	11.350	13.646
	78	2480	8.66	7.345	10.730	11.830
$\pi/4$ -DQPSK	0	2402	9.34	8.590	11.410	13.836
	39	2441	8.74	7.482	10.810	12.050
	78	2480	8.07	6.412	10.140	10.328
8DPSK	0	2402	9.47	8.851	11.540	14.256
	39	2441	8.83	7.638	10.900	12.303
	78	2480	8.23	6.653	10.300	10.715

Modulation Type	Channel	Frequency (MHz)	AV Output Power (dBm)	AV Output Power (mW)	e.i.r.p. Power (dBm)	e.i.r.p. Power (mW)
GFSK	0	2402	9.73	9.397	11.800	15.136
	39	2441	9.10	8.128	11.170	13.092
	78	2480	8.47	7.031	10.540	11.324
$\pi/4$ -DQPSK	0	2402	7.20	5.248	9.270	8.453
	39	2441	6.53	4.498	8.600	7.244
	78	2480	5.85	3.846	7.920	6.194
8DPSK	0	2402	7.20	5.248	9.270	8.453
	39	2441	6.51	4.477	8.580	7.211
	78	2480	5.84	3.837	7.910	6.180

AFH:

Modulation Type	Channel	Frequency (MHz)	PK Output Power (dBm)	PK Output Power (mW)	e.i.r.p. Power (dBm)	e.i.r.p. Power (mW)
GFSK	0-19	2402-2421	9.91	9.795	11.980	15.776
$\pi/4$ -DQPSK	0-19	2402-2421	9.34	8.590	11.410	13.836
8DPSK	0-19	2402-2421	9.47	8.851	11.540	14.256

Modulation Type	Channel	Frequency (MHz)	AV Output Power (dBm)	AV Output Power (mW)	e.i.r.p. Power (dBm)	e.i.r.p. Power (mW)
GFSK	0-19	2402-2421	9.73	9.397	11.800	15.136
$\pi/4$ -DQPSK	0-19	2402-2421	7.20	5.248	9.270	8.453
8DPSK	0-19	2402-2421	7.20	5.248	9.270	8.453

備註：繪圖資料請參考下頁。

10.5. 結果判定

高、中、低頻段的峰值輸出功率皆低於 30 dBm，合乎標準規定。



11. 混附波發射限制之規定

11.1. 適用方法

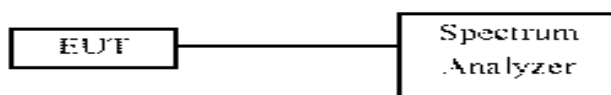
對使用跳頻系統之低功率發射機，依據國家通訊傳播委員會低功率射頻電機技術規範 3.10.1.5 節之規定，操作頻帶範圍外之任意 100 千赫(kHz)內，發射機所產生的射頻功率相較於使用頻帶範圍中包含最高所需功率之 100 千赫(kHz)內的射頻功率，其衰減值限制如下：

- (1) 輸出功率以附件二峰值輸出功率方式測量者，至少須衰減 20 分貝(dB)，可使用射頻傳導或輻射方式測量。
 - (2) 輸出功率以 3.10.1.2(1)(C)之最大傳導輸出功率測量方式者，至少須衰減 30 分貝(dB)。
- 此外，落於第 2.7 節禁用頻段之輻射發射，應符合第 2.8 節之規定。

11.2. 測試方法

1. 將待測物和儀器相連接。
2. 設定儀器解析頻寬 100KHz 和視訊頻寬為 300 KHz。
3. 將頻寬展開至 100 MHz。
4. 量測並記錄於報告中。

11.3. 測試配置



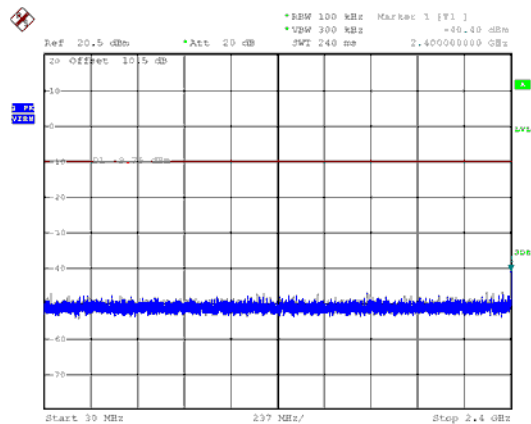
11.4. 結果判定

下邊緣頻帶：距下頻帶邊緣 40MHz 內最大混附波比主波低 20dB 以上，合乎標準規定。
上邊緣頻帶：距上頻帶邊緣 40MHz 內最大混附波比主波低 20dB 以上，合乎標準規定。

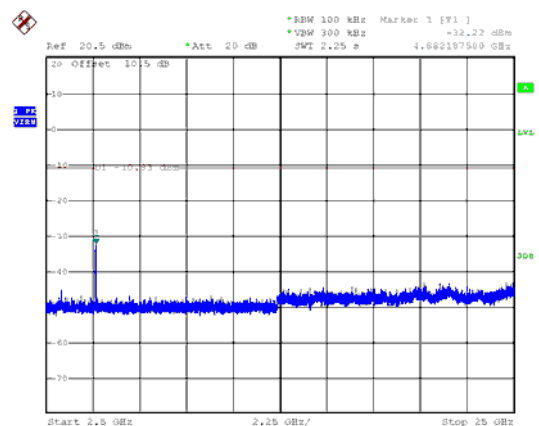
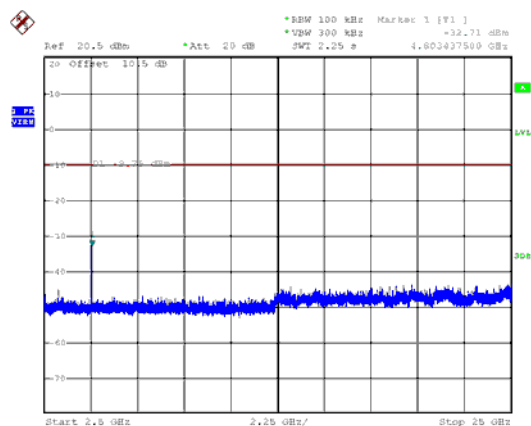
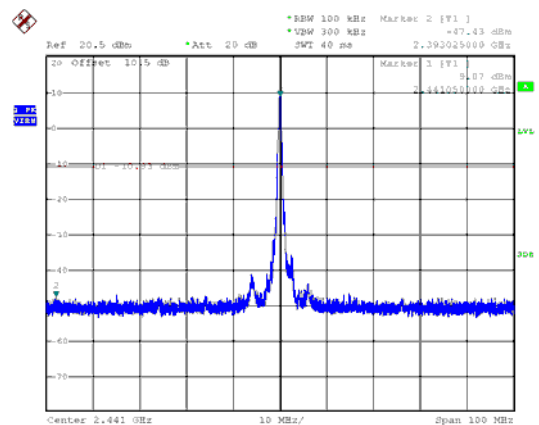
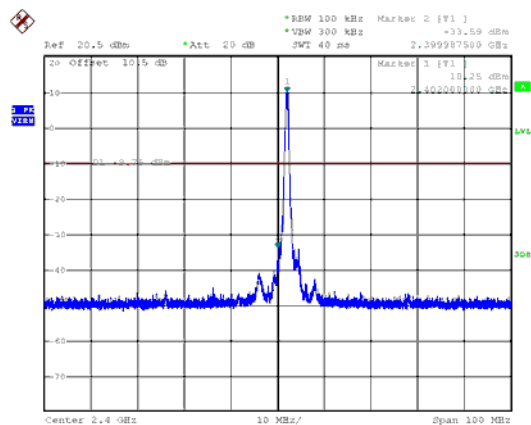
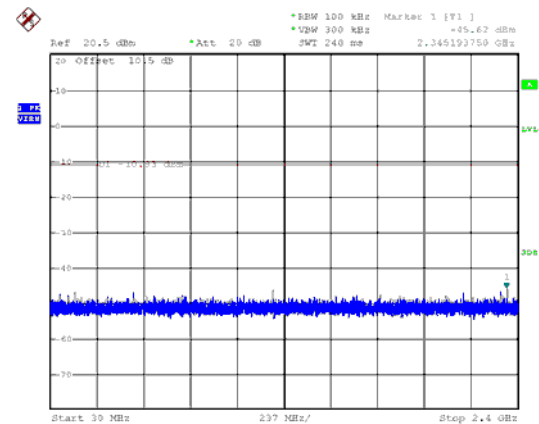


11.5. 混附波發射限制之測試結果及數據

Modulation Standard: GFSK (1Mbps)
Channel: 00

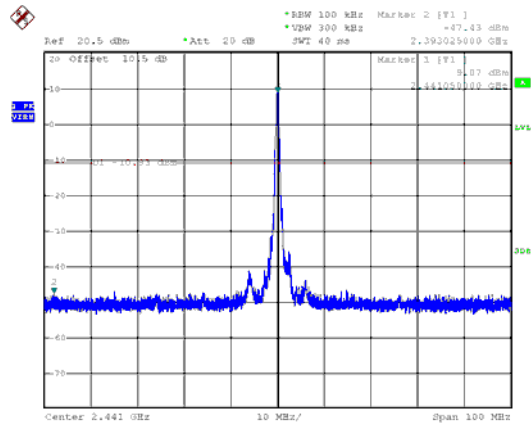


Modulation Standard: GFSK (1Mbps)
Channel: 39

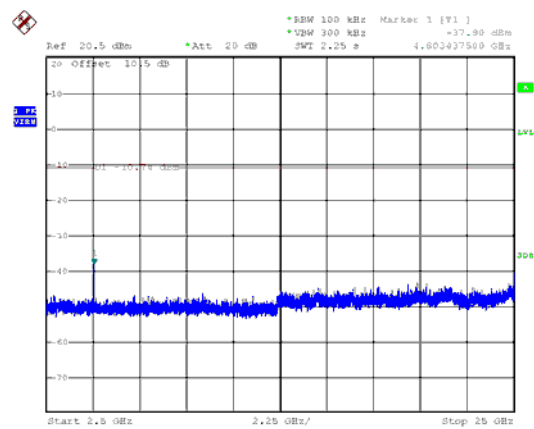
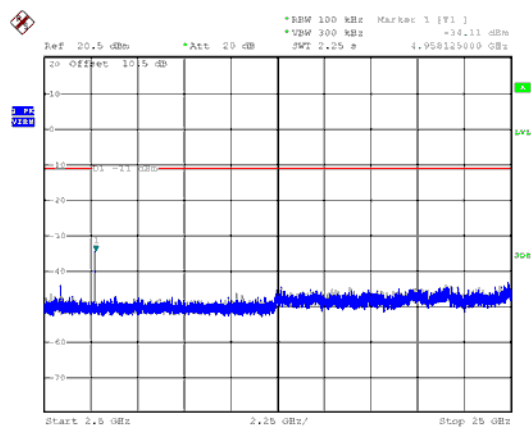
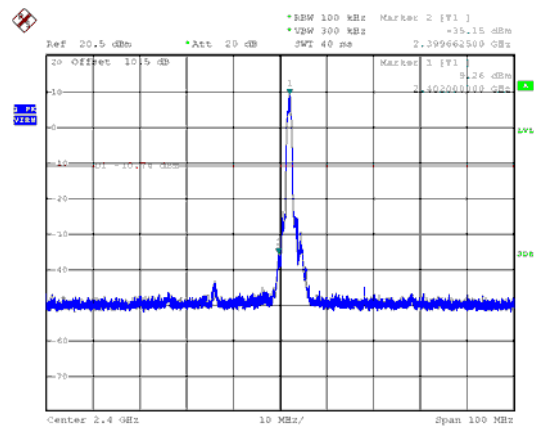
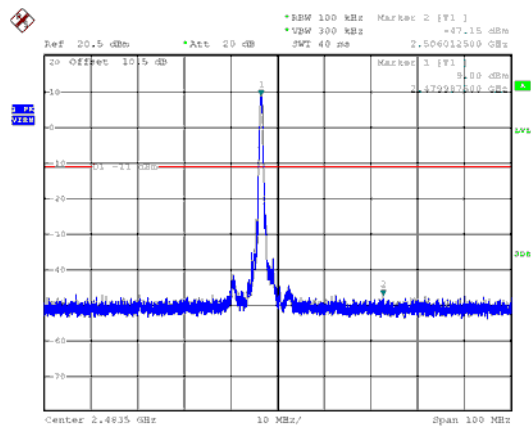
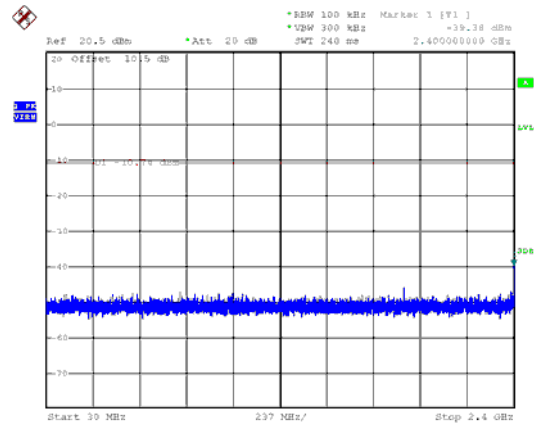


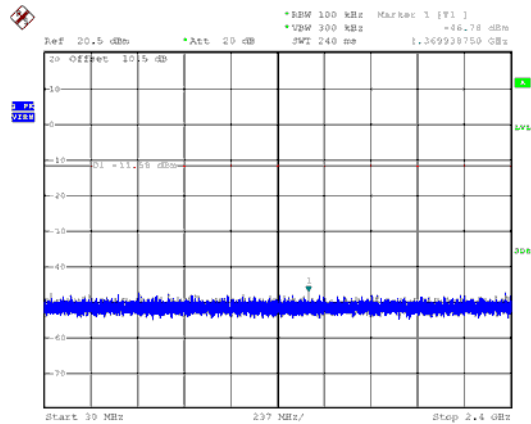
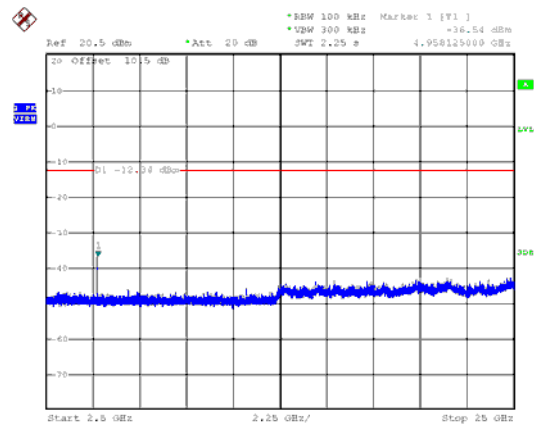
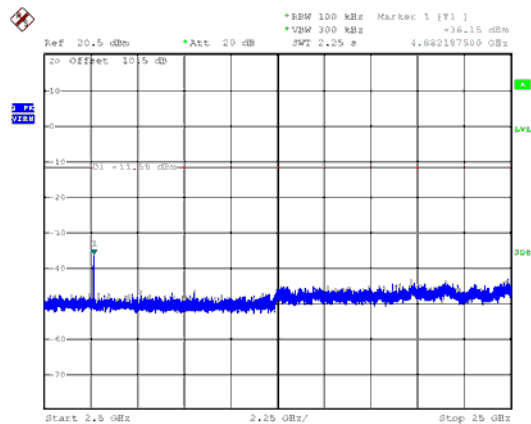
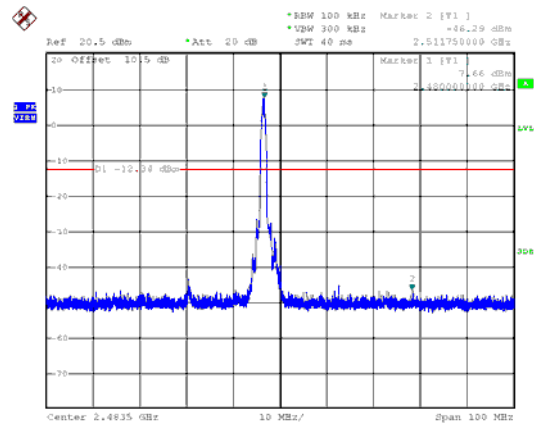
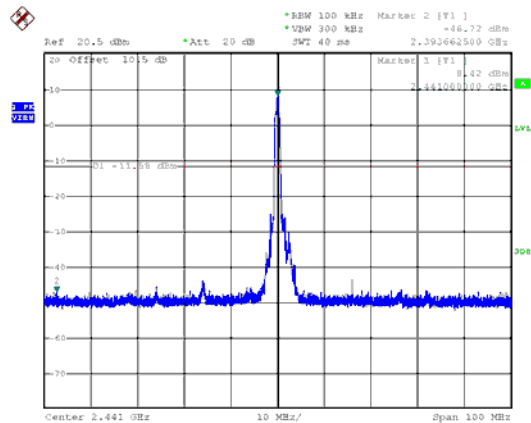
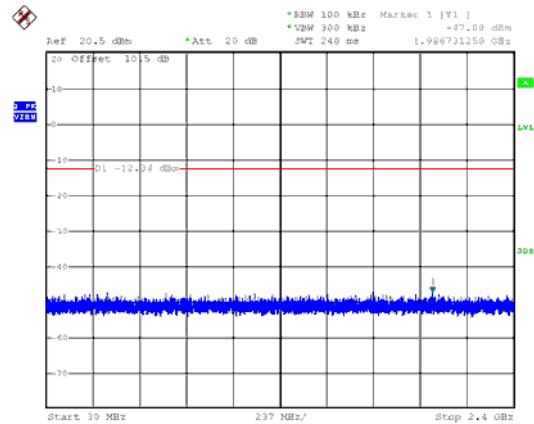


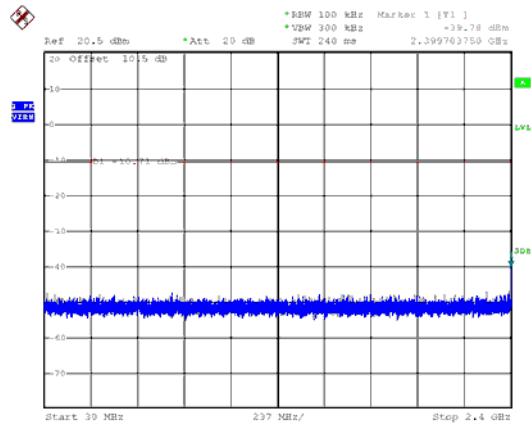
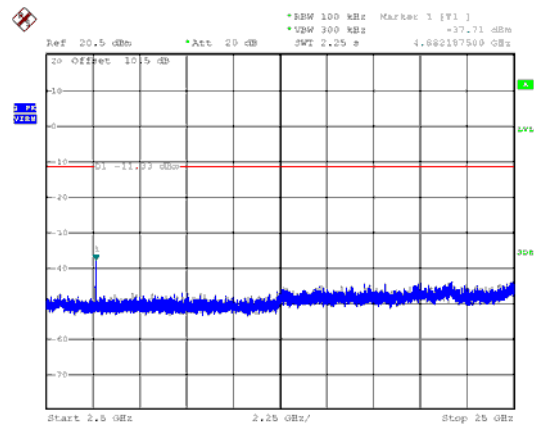
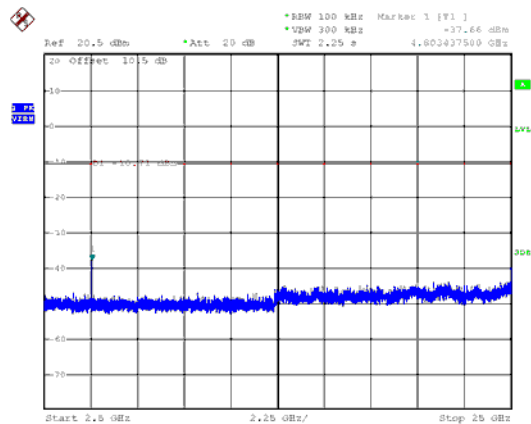
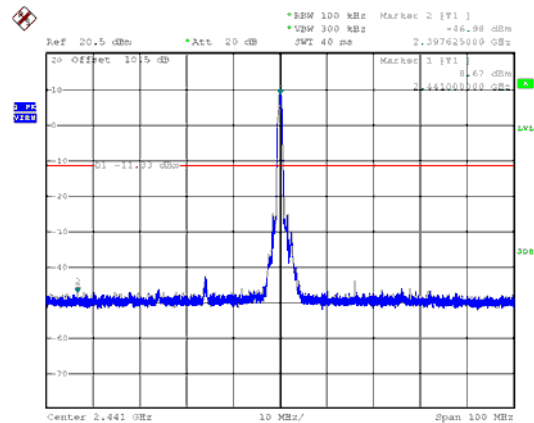
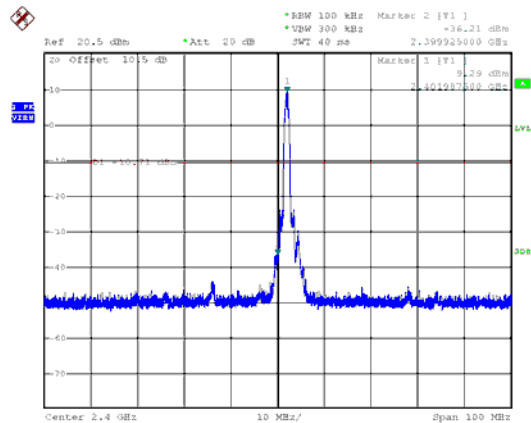
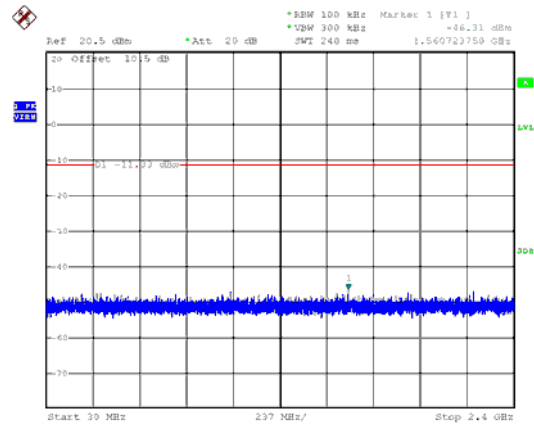
Modulation Standard: GFSK (1Mbps)
Channel: 78



Modulation Standard: $\pi/4$ -DQPSK (2Mbps)
Channel: 00



Modulation Standard: $\pi/4$ -DQPSK (2Mbps)
Channel: 39Modulation Standard: $\pi/4$ -DQPSK (2Mbps)
Channel: 78

Modulation Standard: 8DPSK (3Mbps)
Channel: 00Modulation Standard: 8DPSK (3Mbps)
Channel: 39



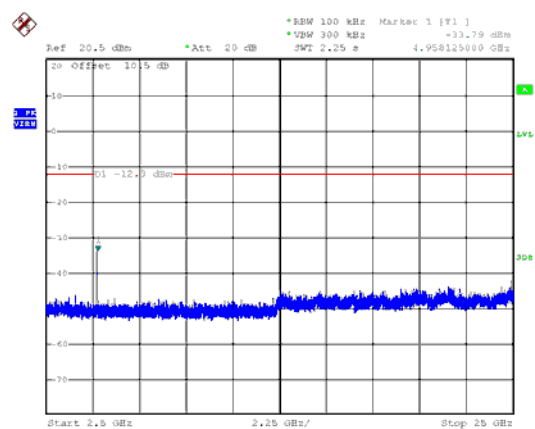
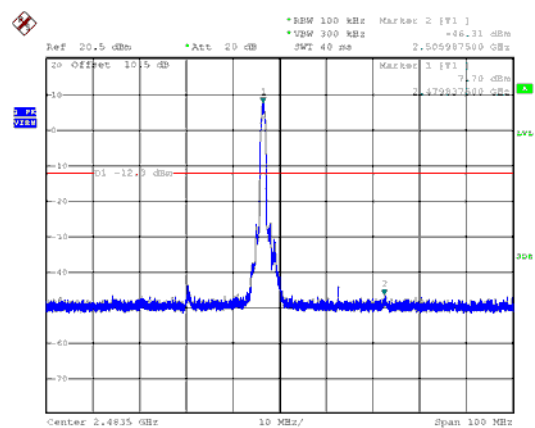
Ref 20.5 dBm Att 20 dB BW 100 kHz Markers 1 [V1] =46.89 dBm
 VSWR 300 kHz SWT 240 ms 1.91353750 GHz

20 Offset 1015 dB

3 PA VIEW

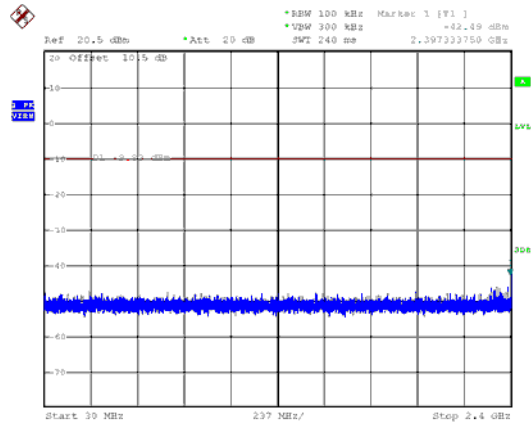
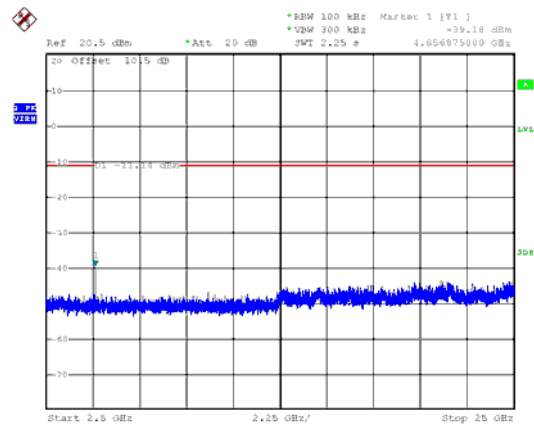
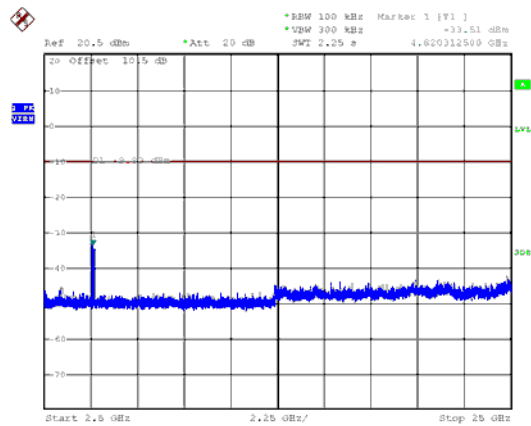
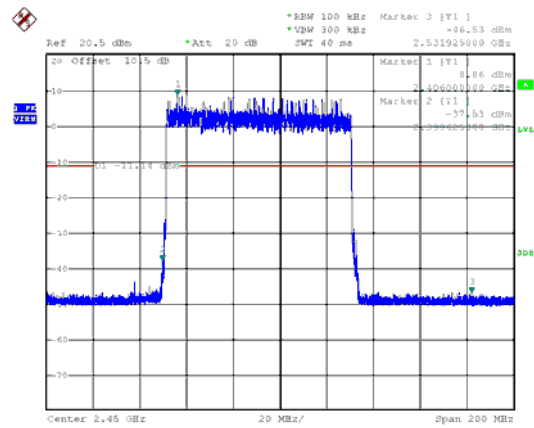
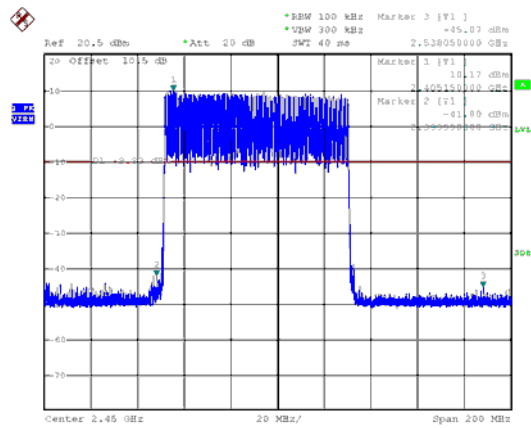
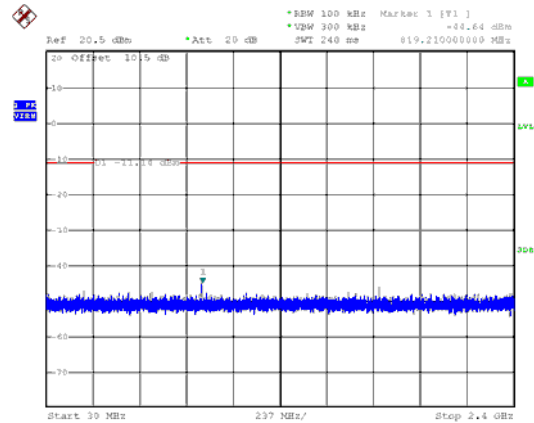
01 -12.0 dBm

Start 30 MHz 237 MHz/ Step 2.4 GHz



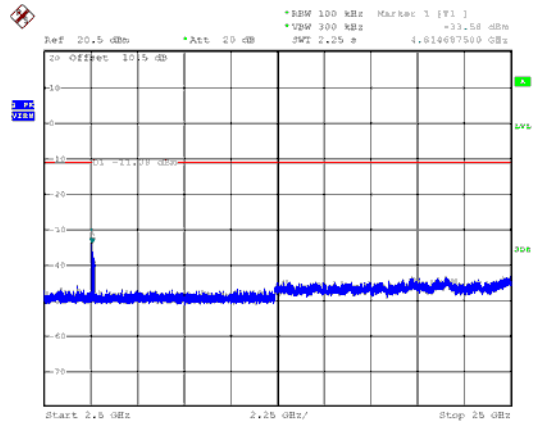
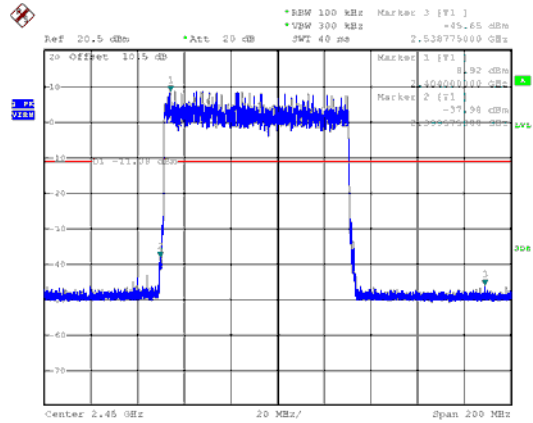
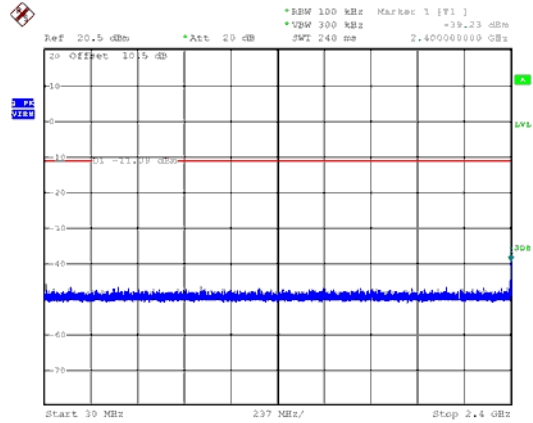
**Hopping Mode:**

Modulation Standard: GFSK

Modulation Standard: $\pi/4$ -DQPSK



Modulation Standard: 8DPSK





12. 電波暴露量之評估

12.1. 適用標準

依據國家通訊傳播委員會低功率射頻電機技術規範 5.20 節之(5.20.2)規定，若受測物於正常操作模式下，其發射機距離人體 20 公分以上者，可測試最大暴露允許值(Maximum Permissible Exposure, MPE)以證明其符電波暴露量之要求。限制值如下：

(1) 職業性/可控制之暴露

頻率範圍 (MHz)	電場強度 (V/m)	磁場強度 (A/m)	功率密度 (mW/cm ²)	平均時間 (minutes)
0.3-3.0	614	1.63	*100	6
3-30	1842/f	4.89/f	*900/f ²	6
30-300	61.4	0.163	1.0	6
300-1,500	-----	-----	f/300	6
1,500-100,000	-----	-----	5.0	6

註 1：標記*表平面波等效功率密度。

註 2：f 表測試頻率，單位：百萬赫(MHz)。

(2) 一般人/不可控制之暴露

頻率範圍 (MHz)	電場強度 (V/m)	磁場強度 (A/m)	功率密度 (mW/cm ²)	平均時間 (minutes)
0.3-3.0	614	1.63	*100	30
3-30	1842/f	4.89/f	*180/f ²	30
30-300	27.5	0.073	1.0	30
300-1,500	-----	-----	f/1500	30
1,500-100,000	-----	-----	1.0	30

註 1：標記*表平面波等效功率密度。

註 2：f 表測試頻率，單位：百萬赫(MHz)。



12.2. 電波暴露量之評估結果及數據

Test Result : PASS Temperature : 20°C
Test Date : Feb. 14, 2019 Humidity : 40%

Modulation Mode	Channel Frequency (MHz)	Max. Conducted output power(dBm)	Max. Conducted output power(mW)	Distance (mm)	SAR test exclusion thresholds (mW)
GFSK	2402-2480	9.91	9.79	5	10.0000
$\pi/4$ -DQPS	2402-2480	9.34	8.59	5	10.0000
8DPSK	2402-2480	9.47	8.85	5	10.0000

12.3. 結果判定

高、中、低頻段的電波暴露量皆低於限制值，合乎標準規定。



13. 限制使用之頻帶

Only spurious emissions are permitted in any of the frequency bands listed below:

頻率(兆赫)	頻率(兆赫)	頻率(兆赫)
0.090 - 0.110	240.00 - 285.00	3332.0 - 3339.0
0.490 - 0.510	322.00 - 335.40	3345.8 - 3358.0
2.172 - 2.198	399.90 - 410.00	3500.0 - 4400.0
3.013 - 3.033	485.00 - 510.00	4500.0 - 5250.0
4.115 - 4.198	608.00 - 614.00	5350.0 - 5460.0
5.670 - 5.690	703.00 - 748.00	7250.0 - 7750.0
6.200 - 6.300	758.00 - 803.00	8025.0 - 8500.0
8.230 - 8.400	825.00 - 915.00	9000.0 - 9200.0
12.265 - 12.600	930.00 - 1240.0	9300.0 - 9500.0
13.340 - 13.430	1300.0 - 1427.0	10600 - 12700
14.965 - 15.020	1435.0 - 1626.5	13250 - 13400
16.700 - 16.755	1660.0 - 1770.0	14470 - 14500
19.965 - 20.020	1805.0 - 1865.0	15350 - 16200
25.500 - 25.700	1885.0 - 1900.0	17700 - 21400
37.475 - 38.275	1905.0 - 1985.0	22010 - 23120
73.500 - 75.400	2015.0 - 2025.0	23600 - 24000
108.00 - 138.00	2125.0 - 2165.0	31200 - 31800
149.90 - 150.05	2200.0 - 2300.0	36430 - 36500
156.70 - 156.90	2310.0 - 2390.0	38600 以上
162.01 - 167.17	2483.5 - 2900.0	
167.72 - 173.20	3260.0 - 3267.0	



附錄 A. 產品照

ARGOX / 條碼閱讀器 / AR-3101, AR-3201, AR-3121

Model No.: AR-3101



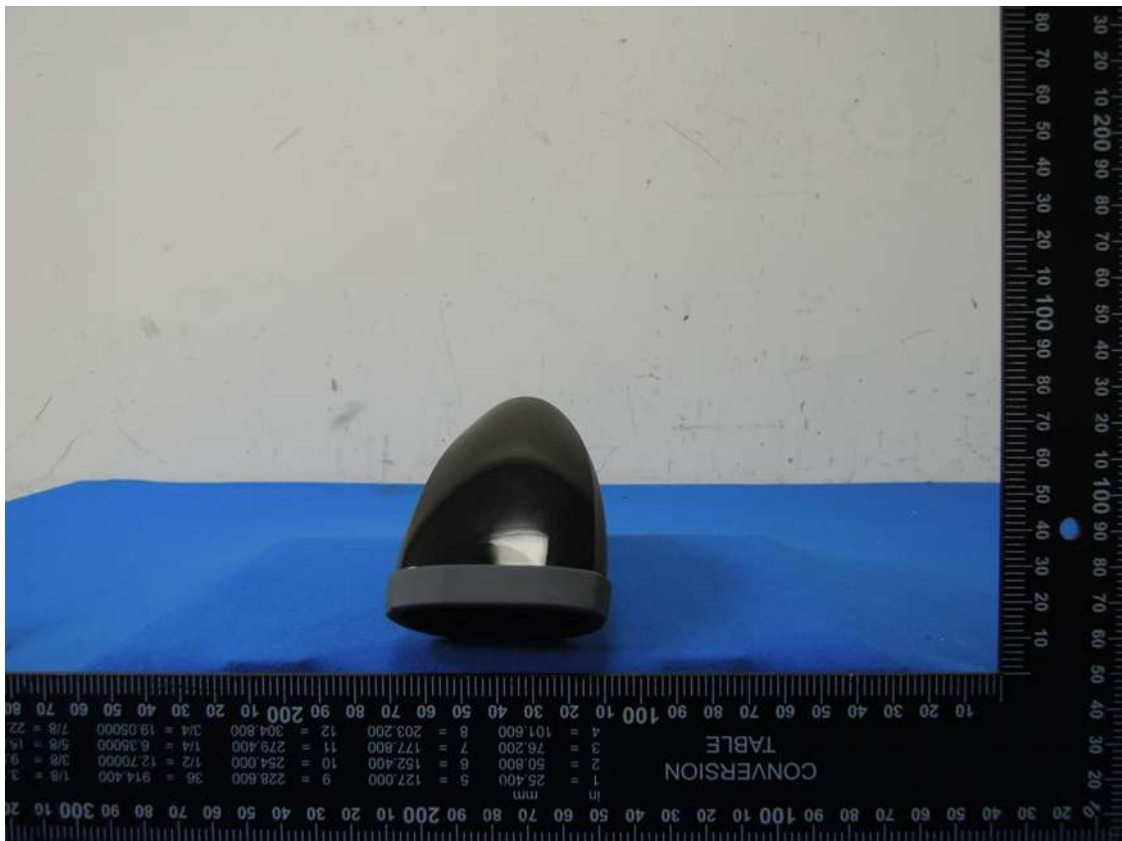


ARGOX / 條碼閱讀器 / AR-3101, AR-3201, AR-3121



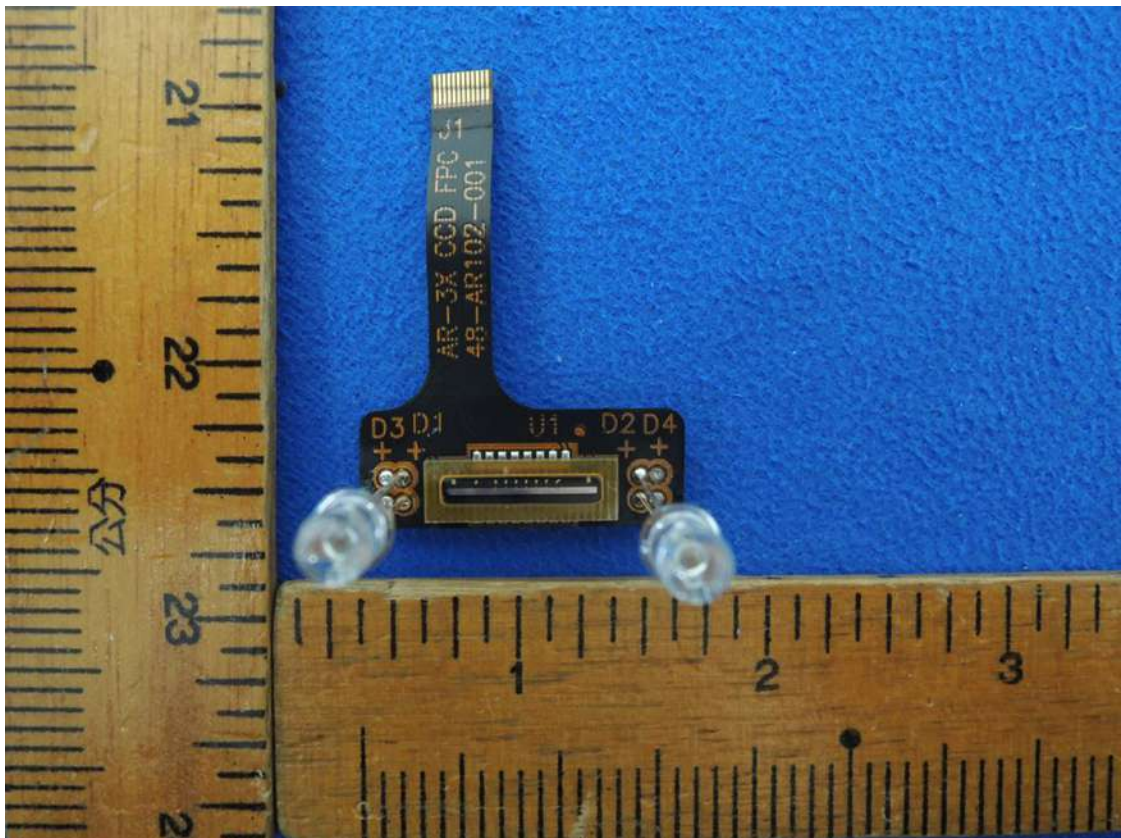


ARGOX / 條碼閱讀器 / AR-3101, AR-3201, AR-3121



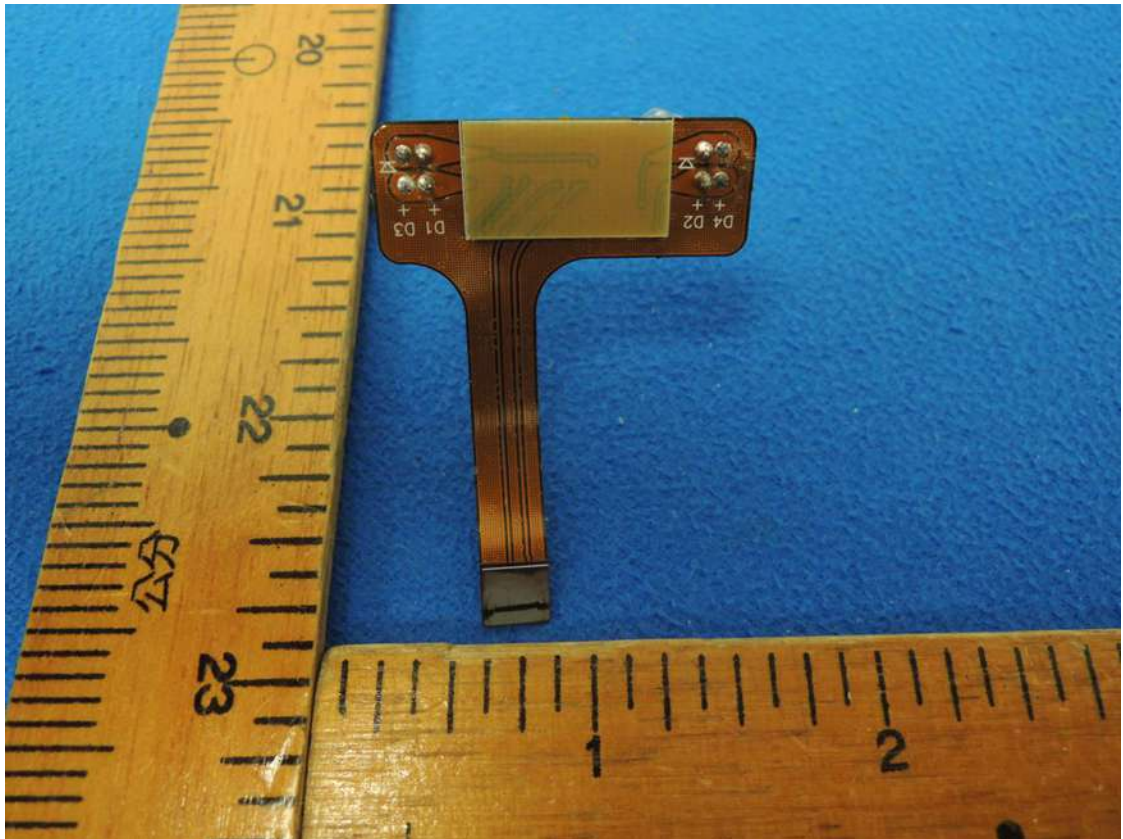


ARGOX / 條碼閱讀器 / AR-3101, AR-3201, AR-3121





ARGOX / 條碼閱讀器 / AR-3101, AR-3201, AR-3121



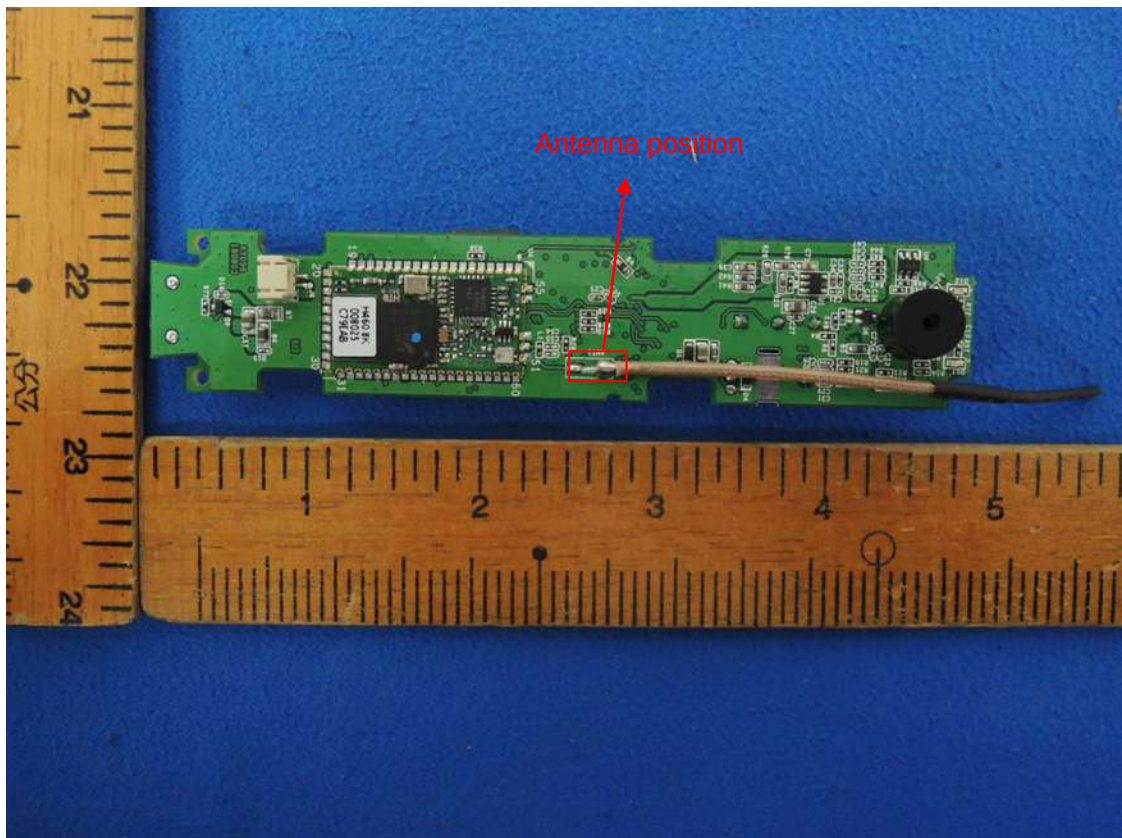
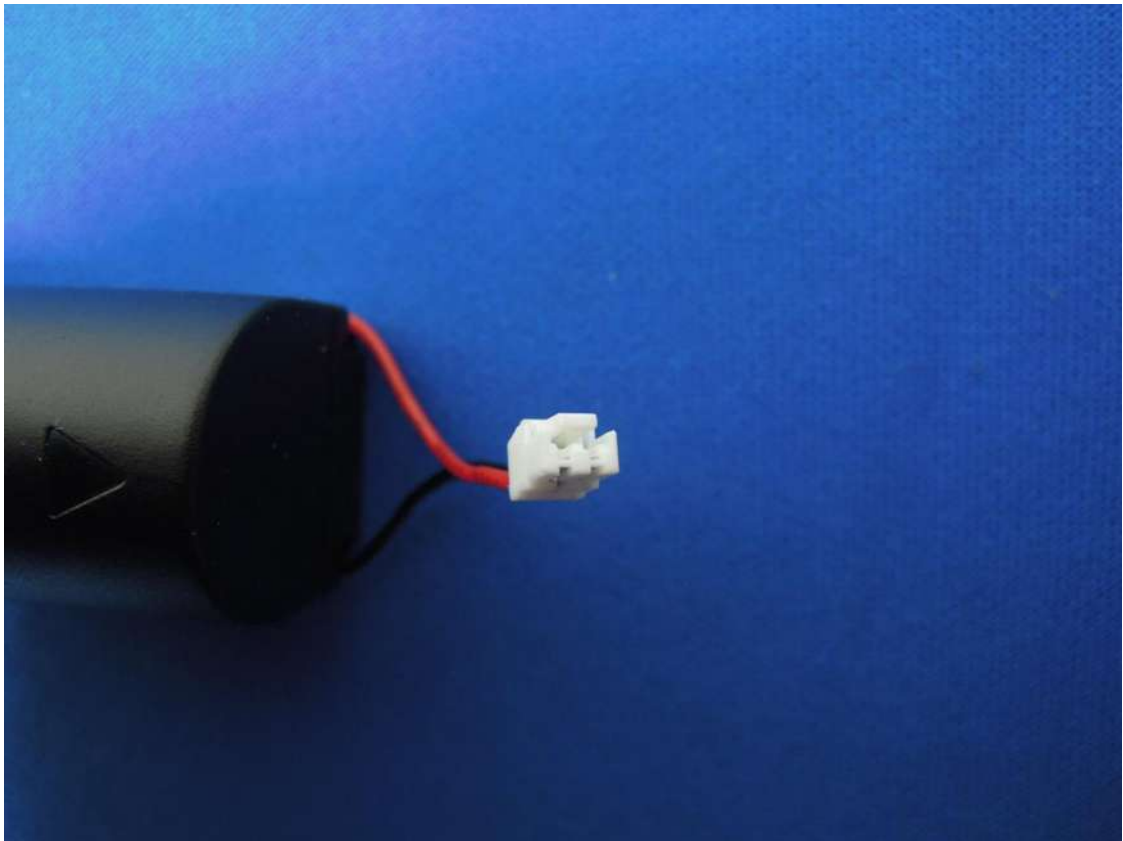


ARGOX / 條碼閱讀器 / AR-3101, AR-3201, AR-3121



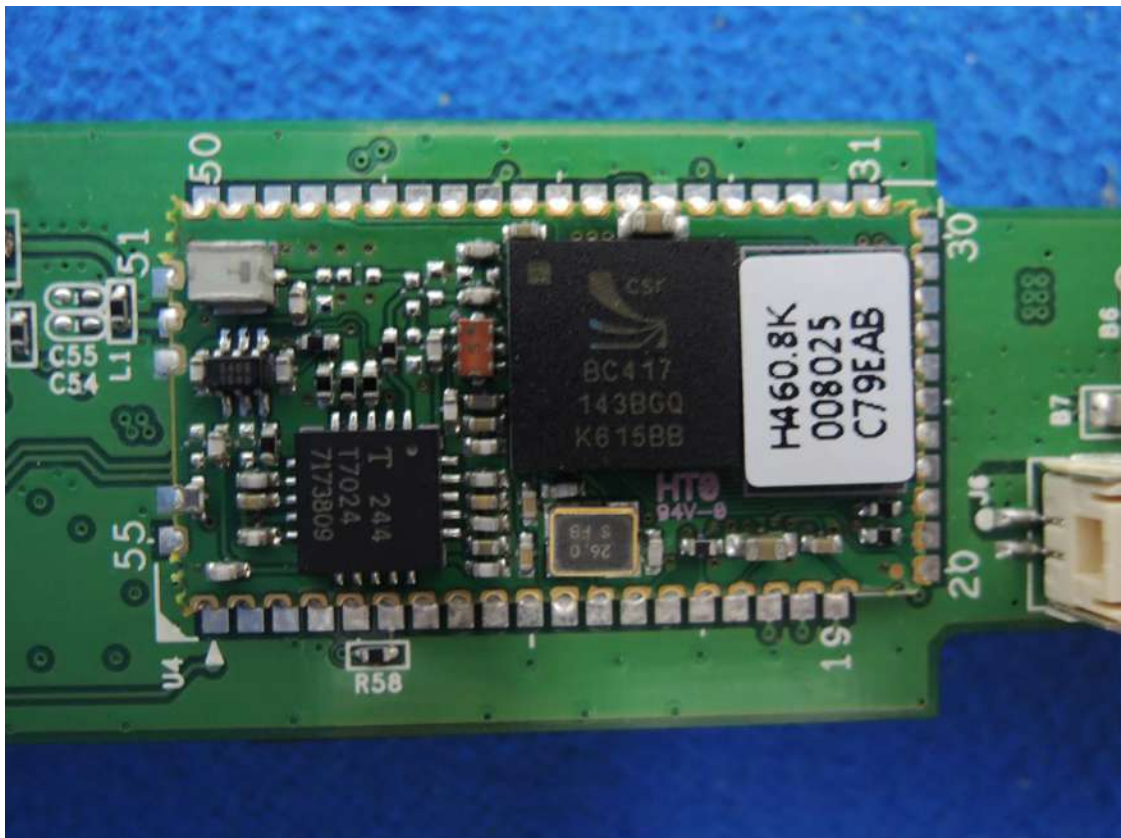
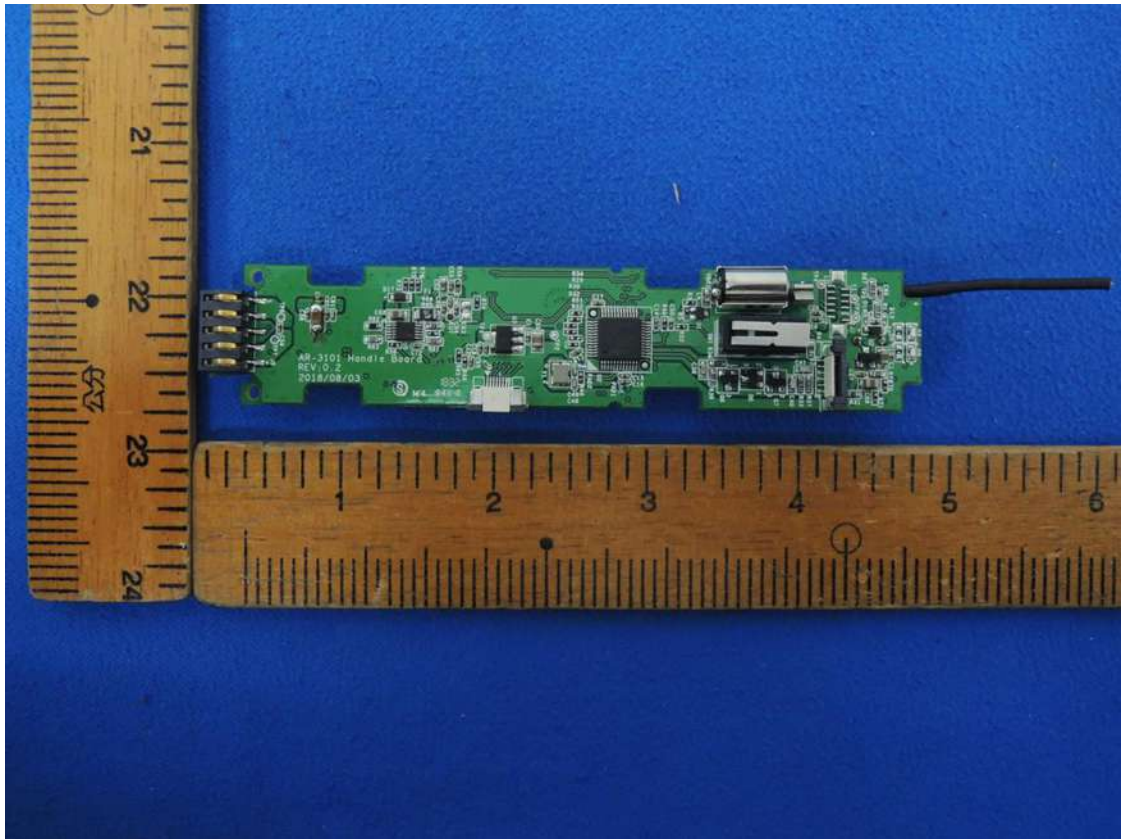


ARGOX / 條碼閱讀器 / AR-3101, AR-3201, AR-3121



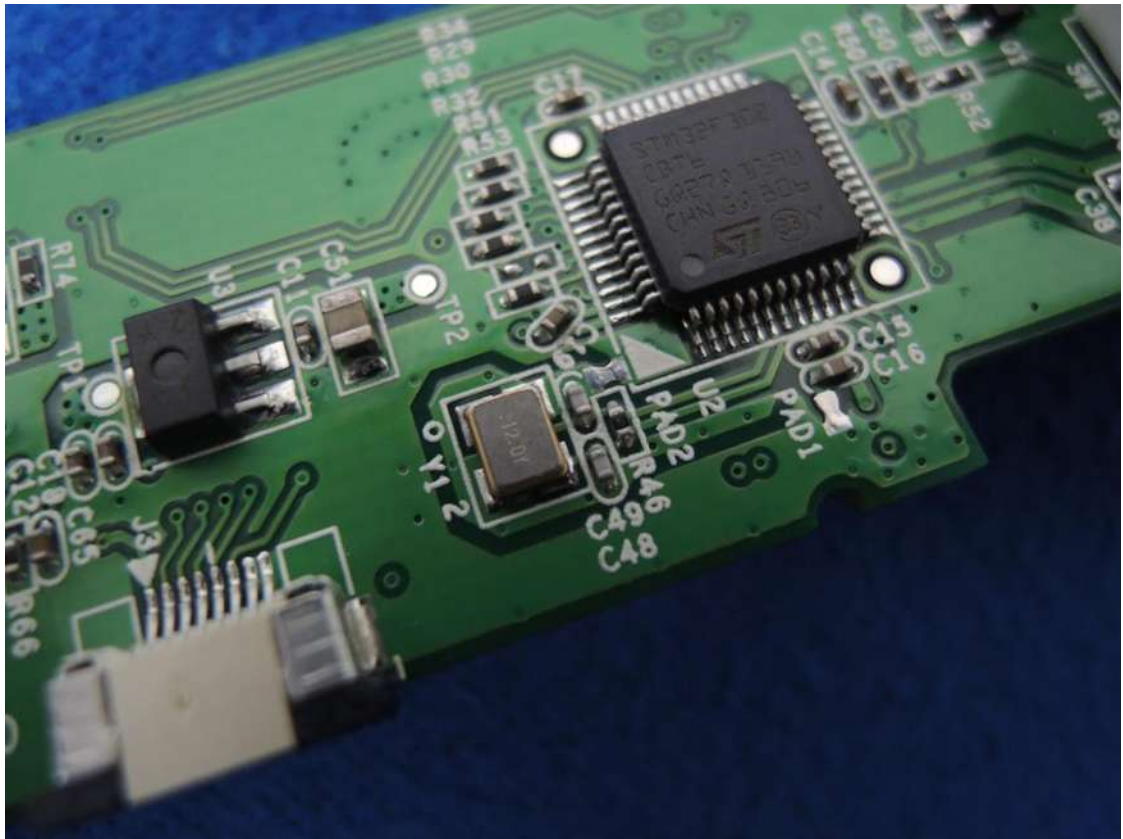


ARGOX / 條碼閱讀器 / AR-3101, AR-3201, AR-3121





ARGOX / 條碼閱讀器 / AR-3101, AR-3201, AR-3121





ARGOX / 條碼閱讀器 / AR-3101, AR-3201, AR-3121

Model No.: AR-3201

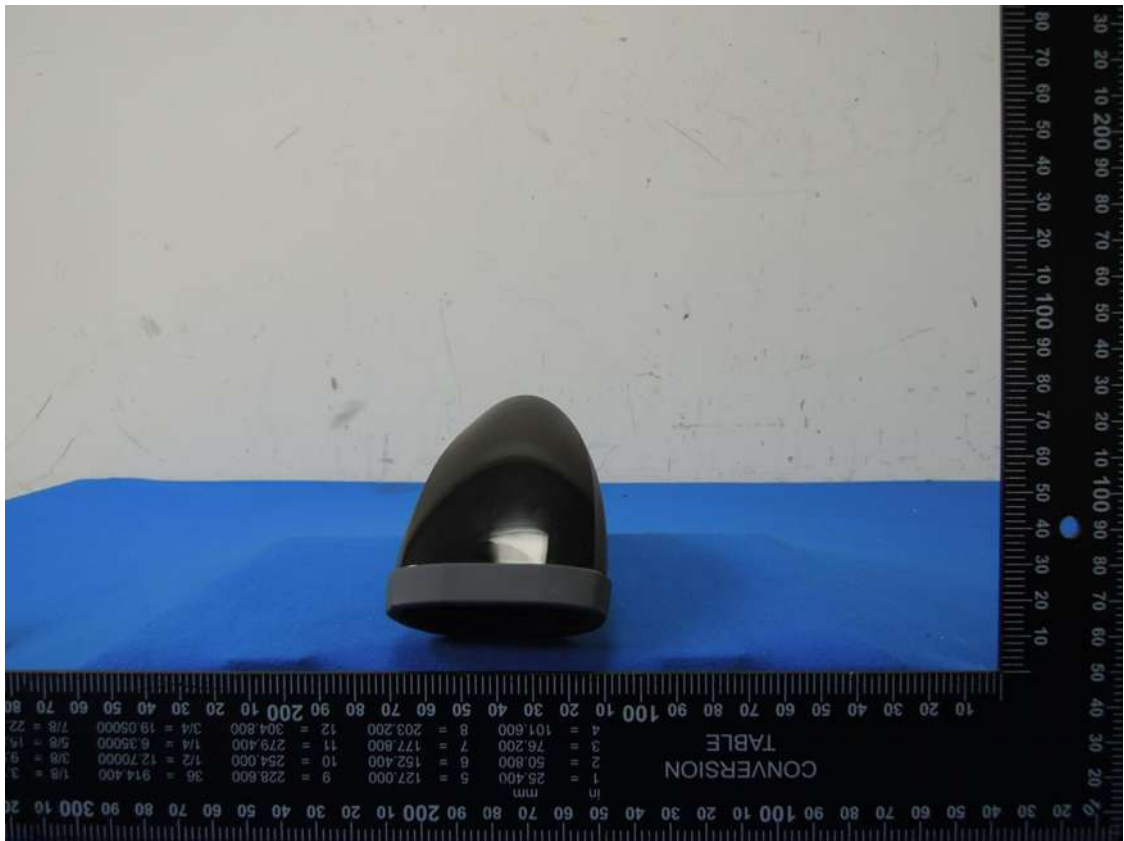




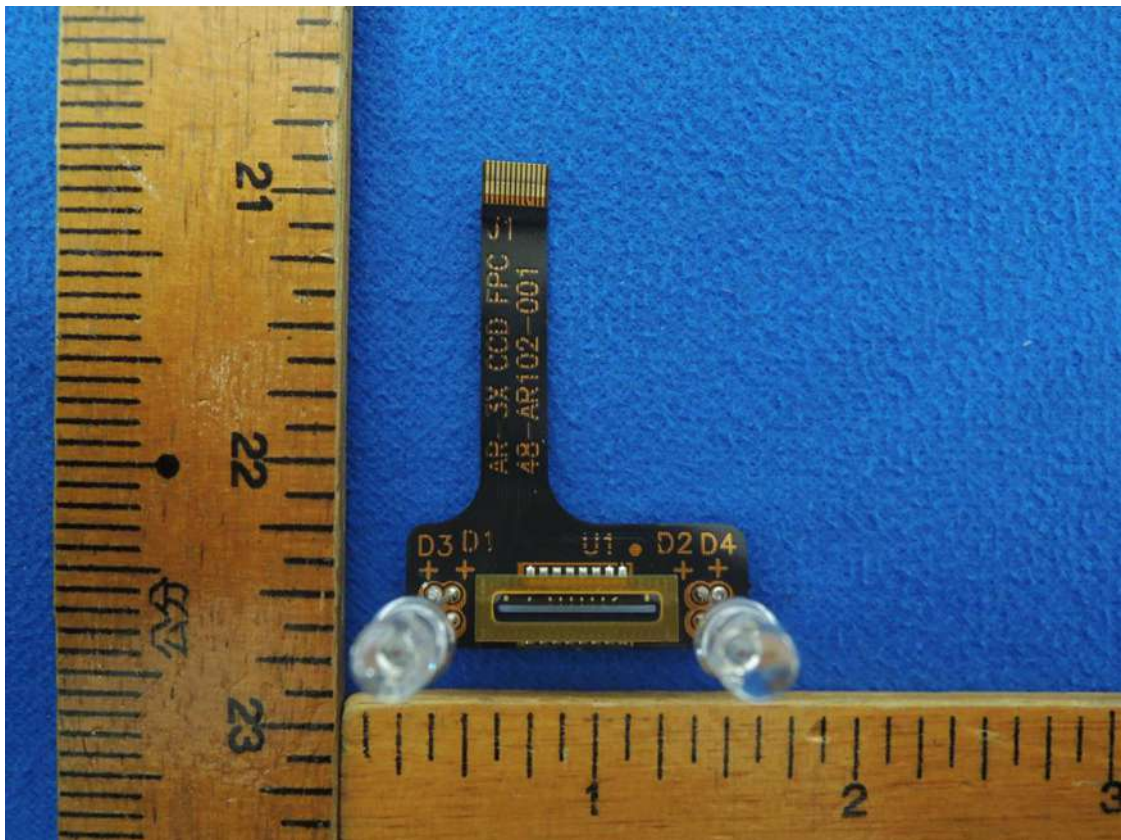
ARGOX / 條碼閱讀器 / AR-3101, AR-3201, AR-3121



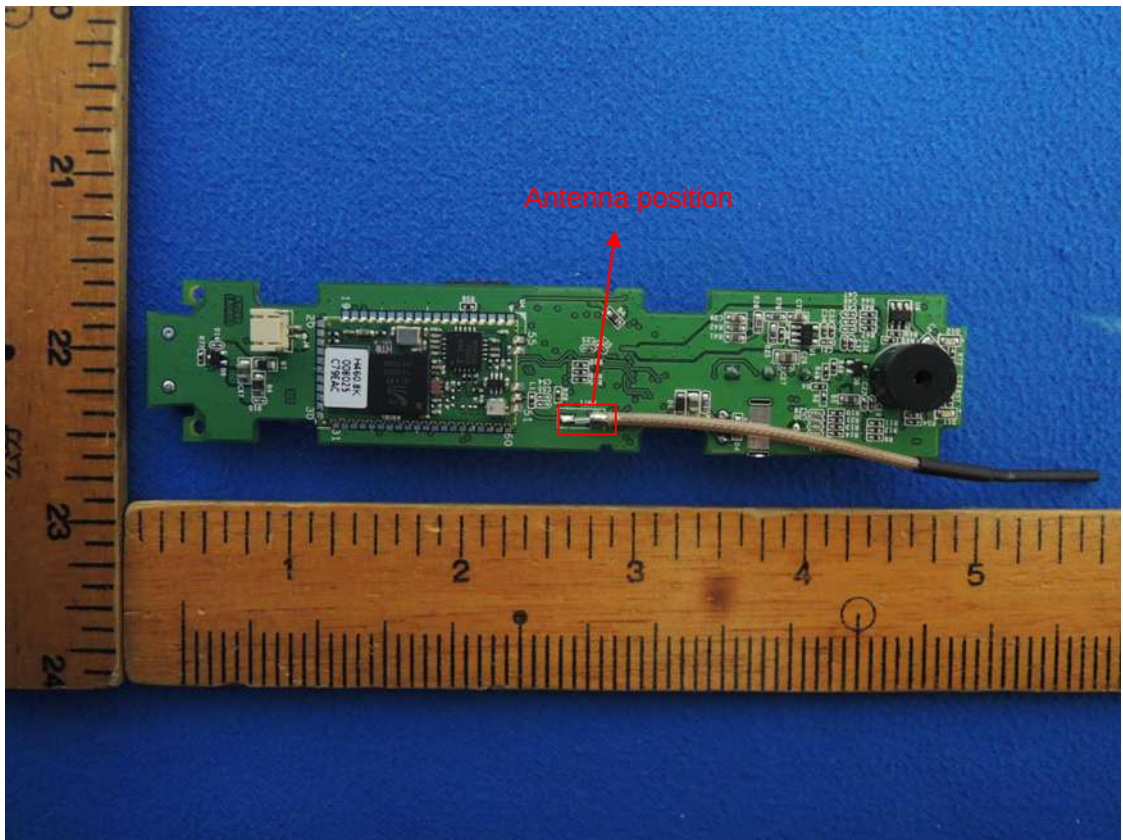
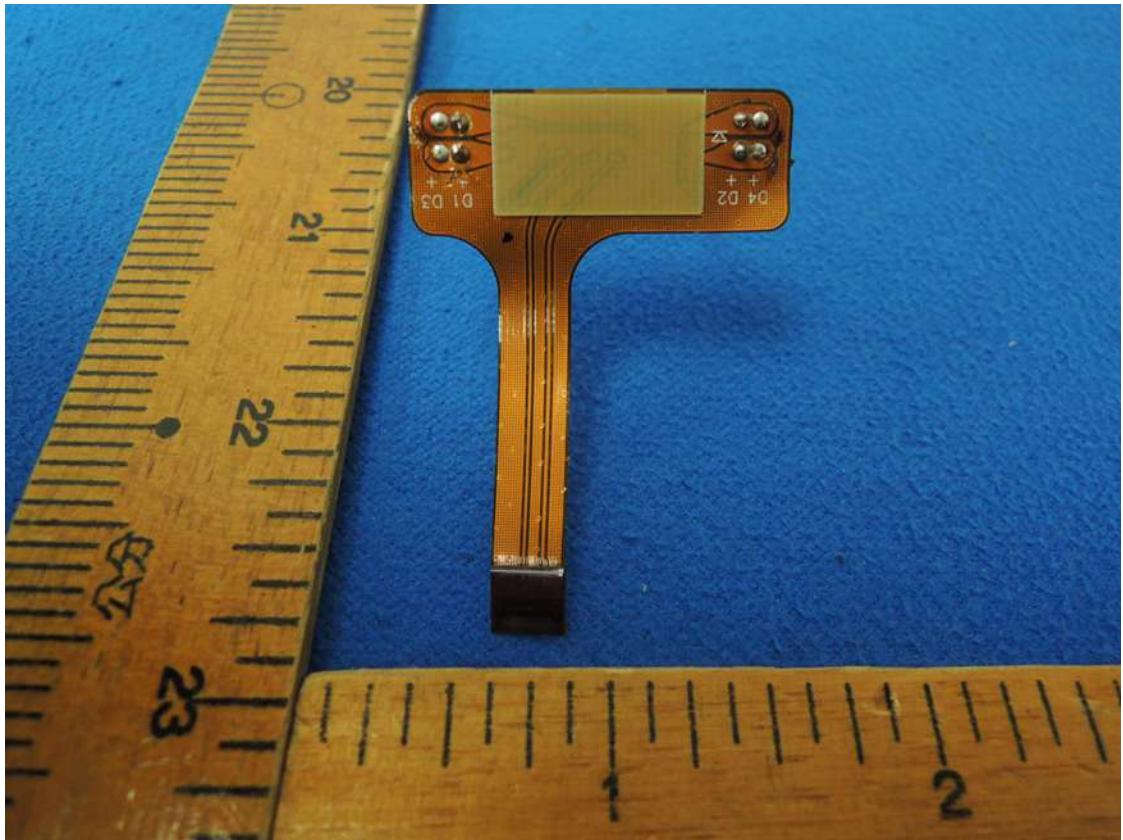
ARGOX / 條碼閱讀器 / AR-3101, AR-3201, AR-3121



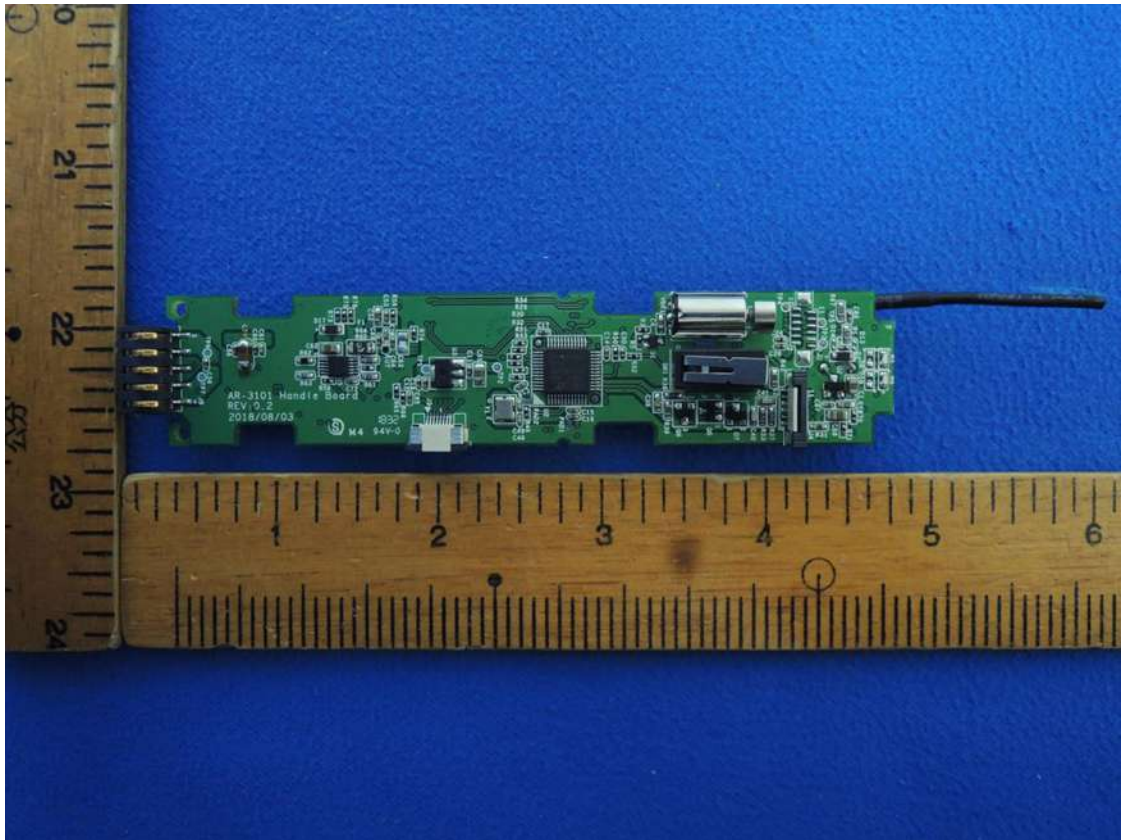
ARGOX / 條碼閱讀器 / AR-3101, AR-3201, AR-3121



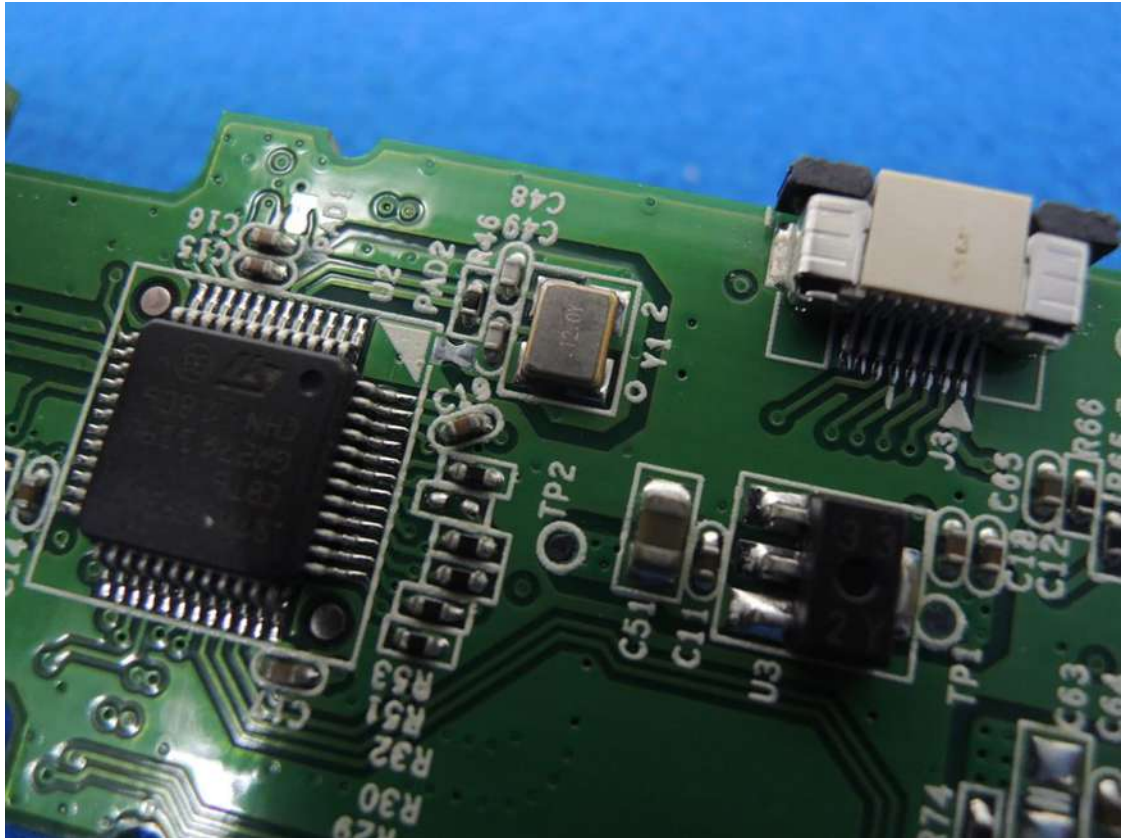
ARGOX / 條碼閱讀器 / AR-3101, AR-3201, AR-3121



ARGOX / 條碼閱讀器 / AR-3101, AR-3201, AR-3121



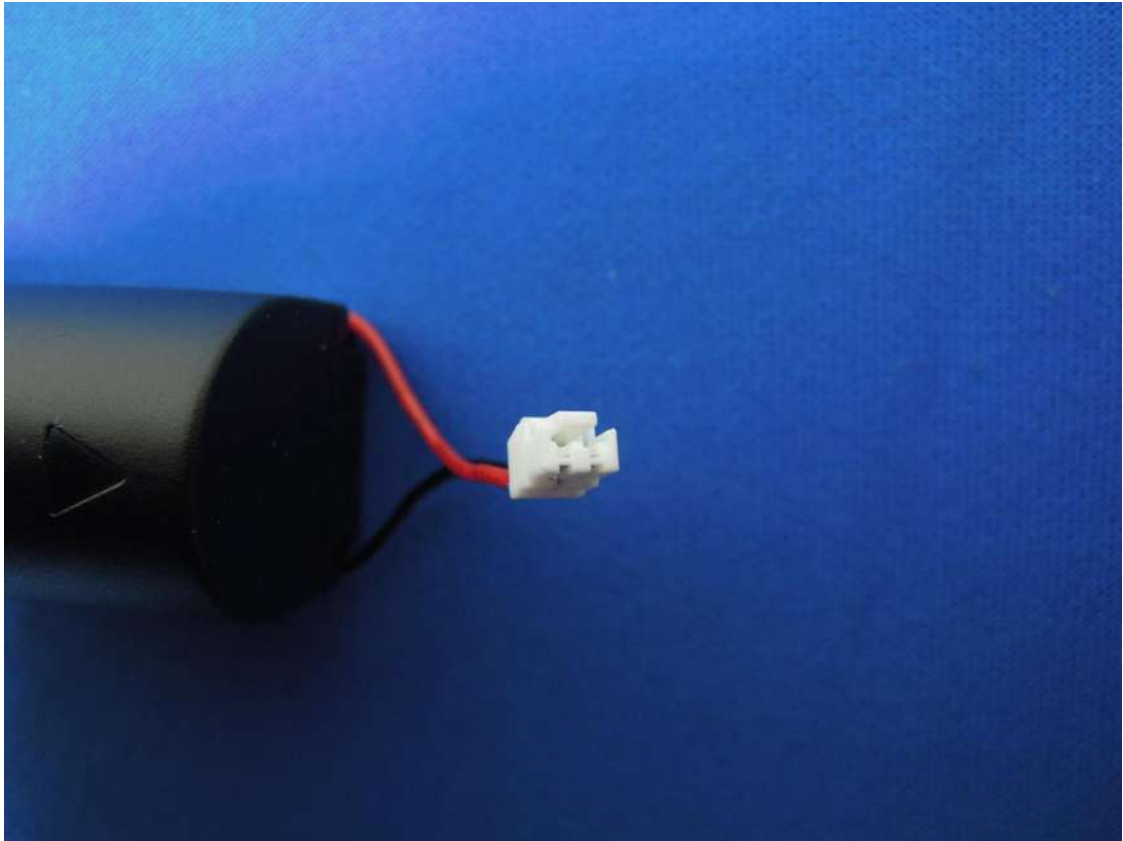
ARGOX / 條碼閱讀器 / AR-3101, AR-3201, AR-3121



ARGOX / 條碼閱讀器 / AR-3101, AR-3201, AR-3121



ARGOX / 條碼閱讀器 / AR-3101, AR-3201, AR-3121





ARGOX / 條碼閱讀器 / AR-3101, AR-3201, AR-3121

Model No.: AR-3121





ARGOX / 條碼閱讀器 / AR-3101, AR-3201, AR-3121



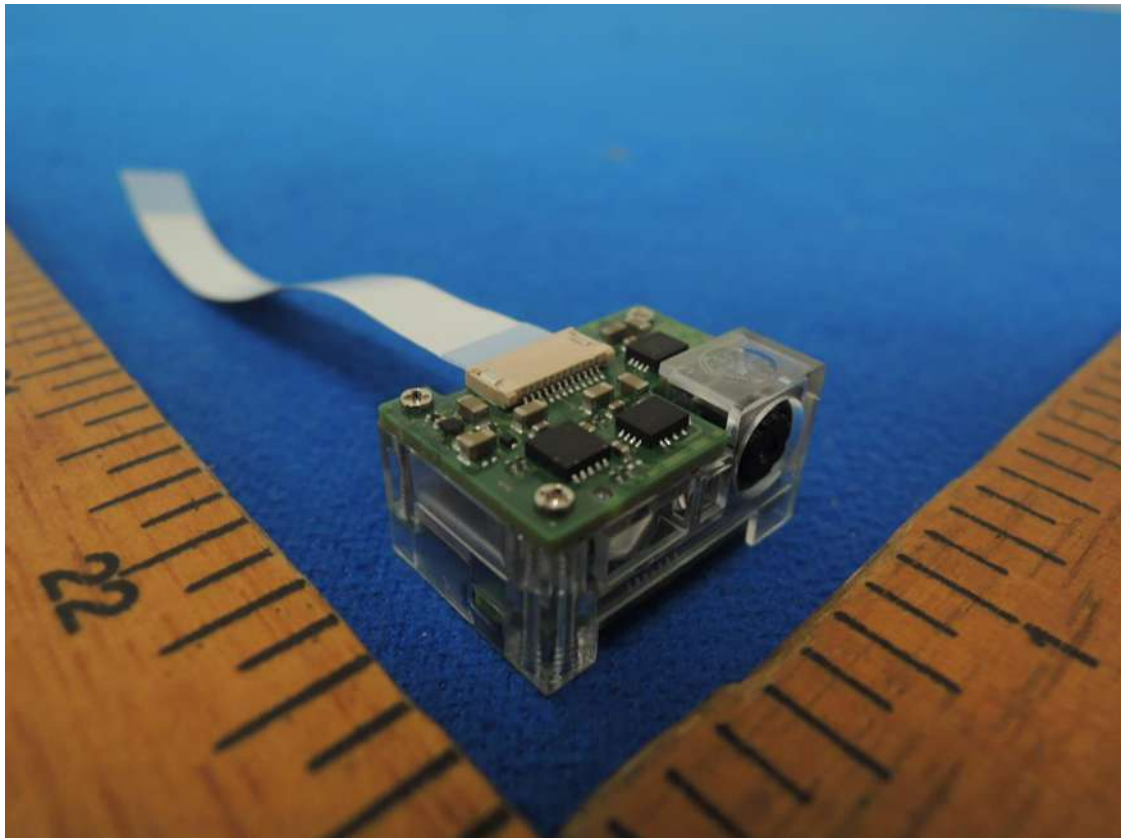


ARGOX / 條碼閱讀器 / AR-3101, AR-3201, AR-3121



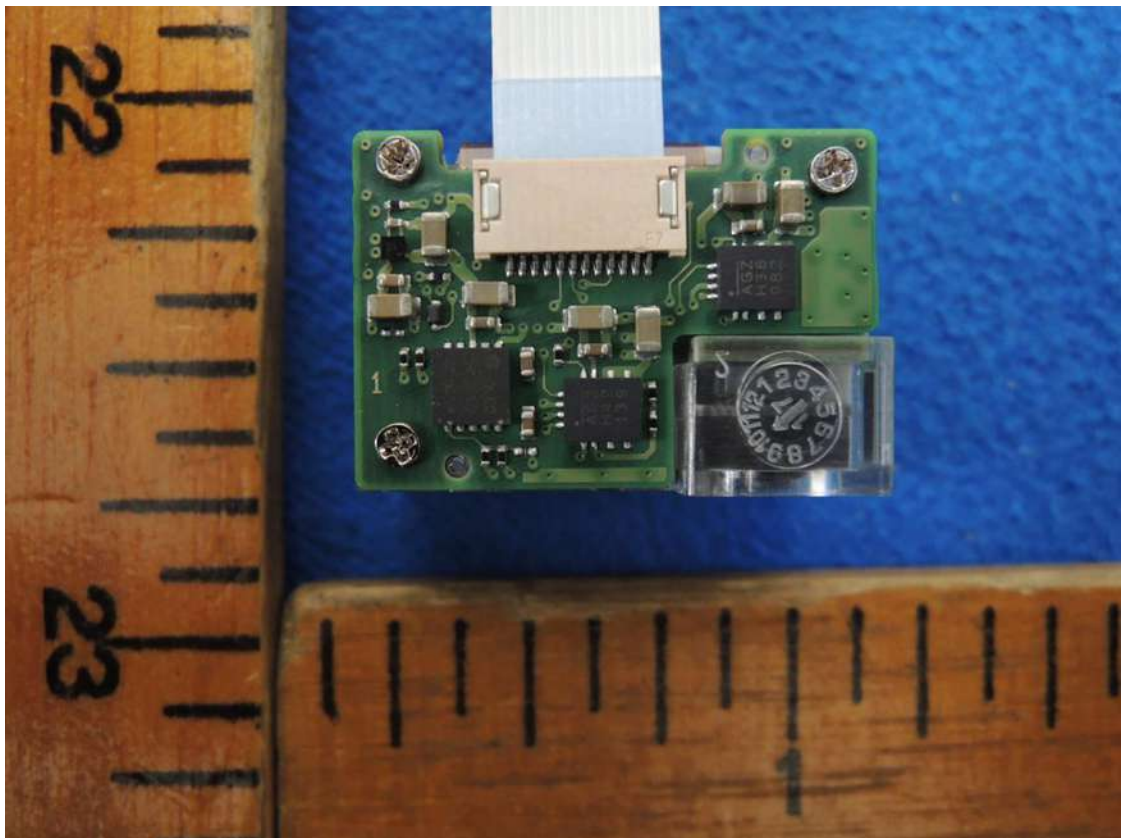
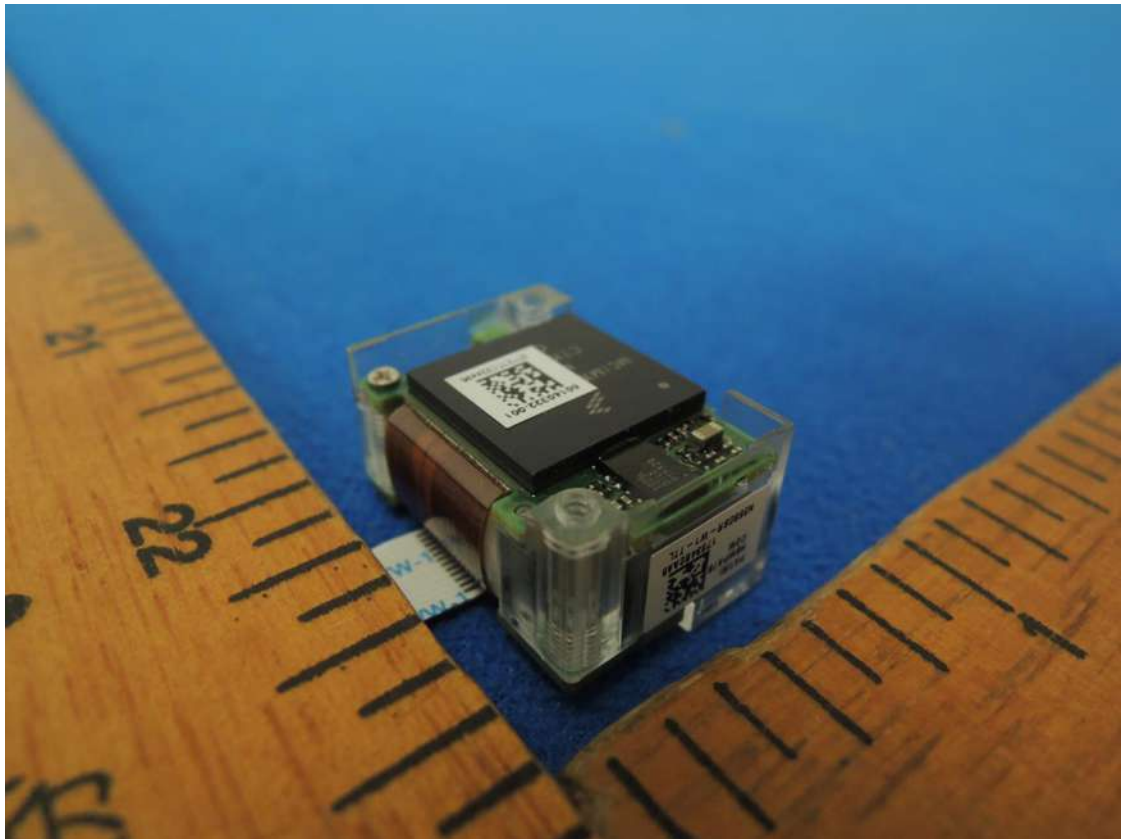


ARGOX / 條碼閱讀器 / AR-3101, AR-3201, AR-3121



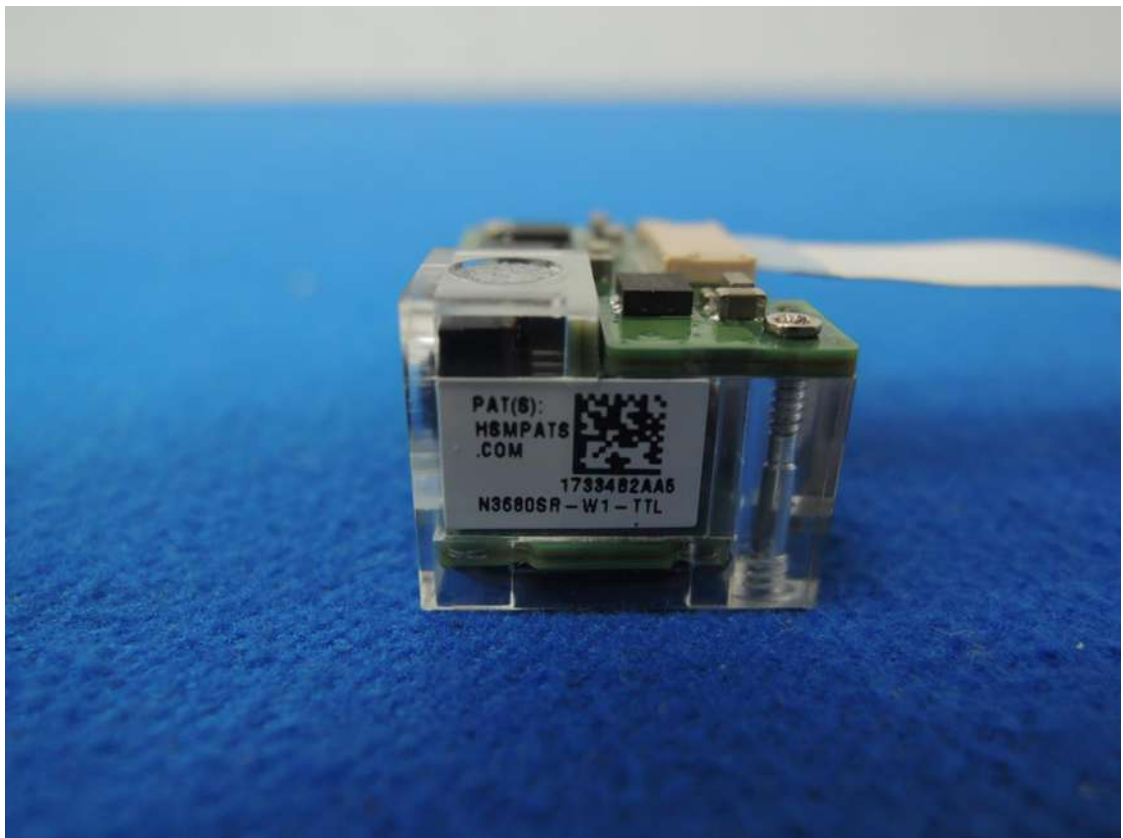
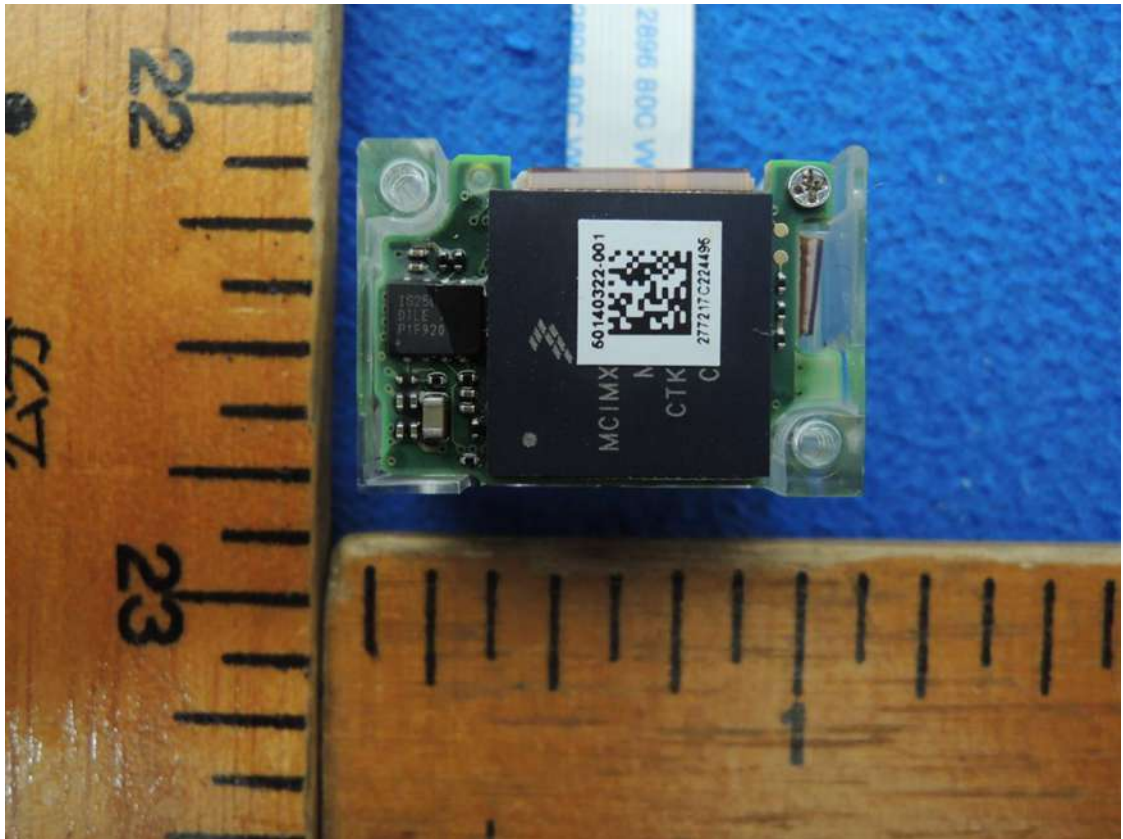


ARGOX / 條碼閱讀器 / AR-3101, AR-3201, AR-3121





ARGOX / 條碼閱讀器 / AR-3101, AR-3201, AR-3121



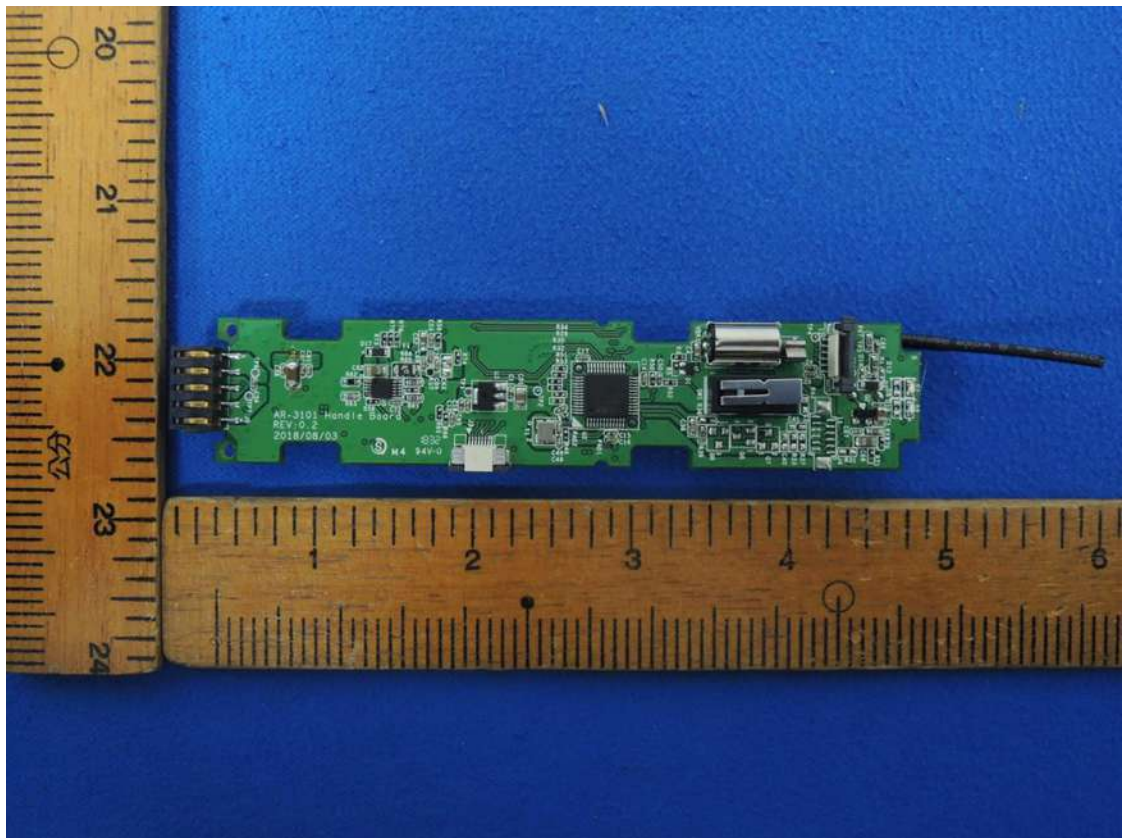
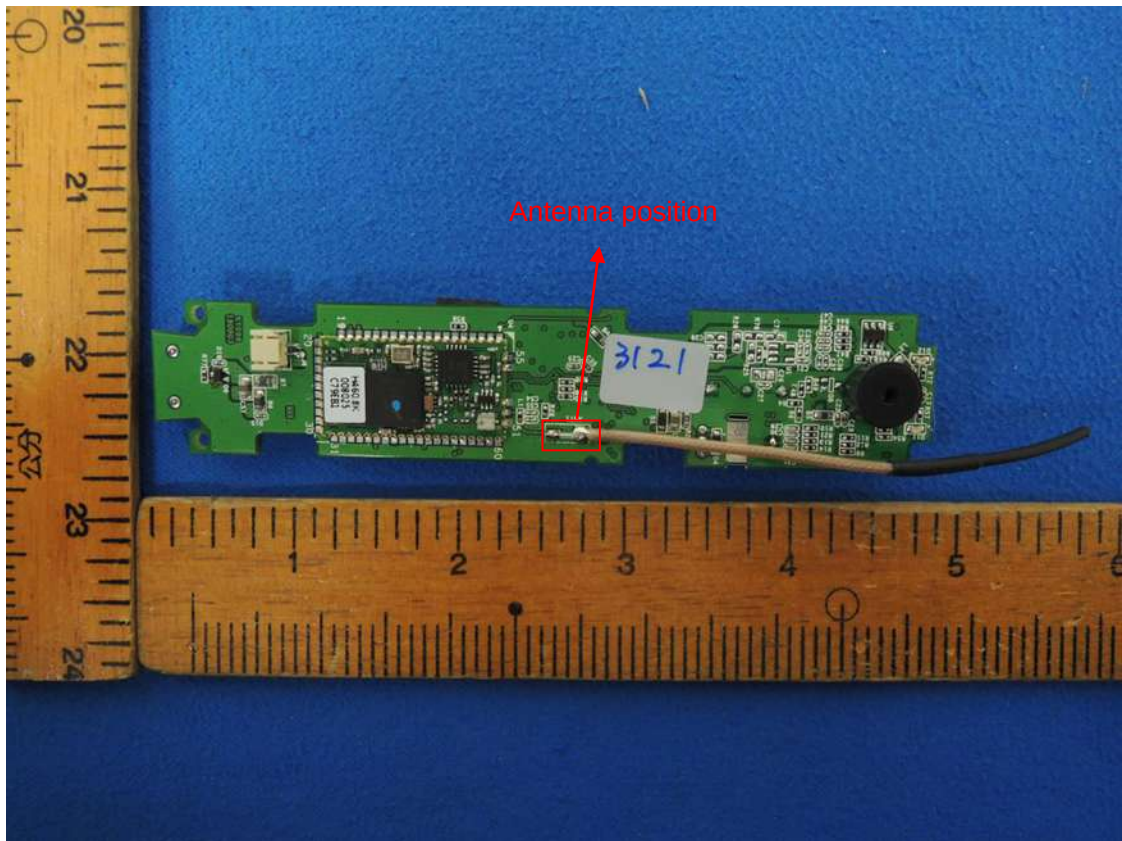


ARGOX / 條碼閱讀器 / AR-3101, AR-3201, AR-3121



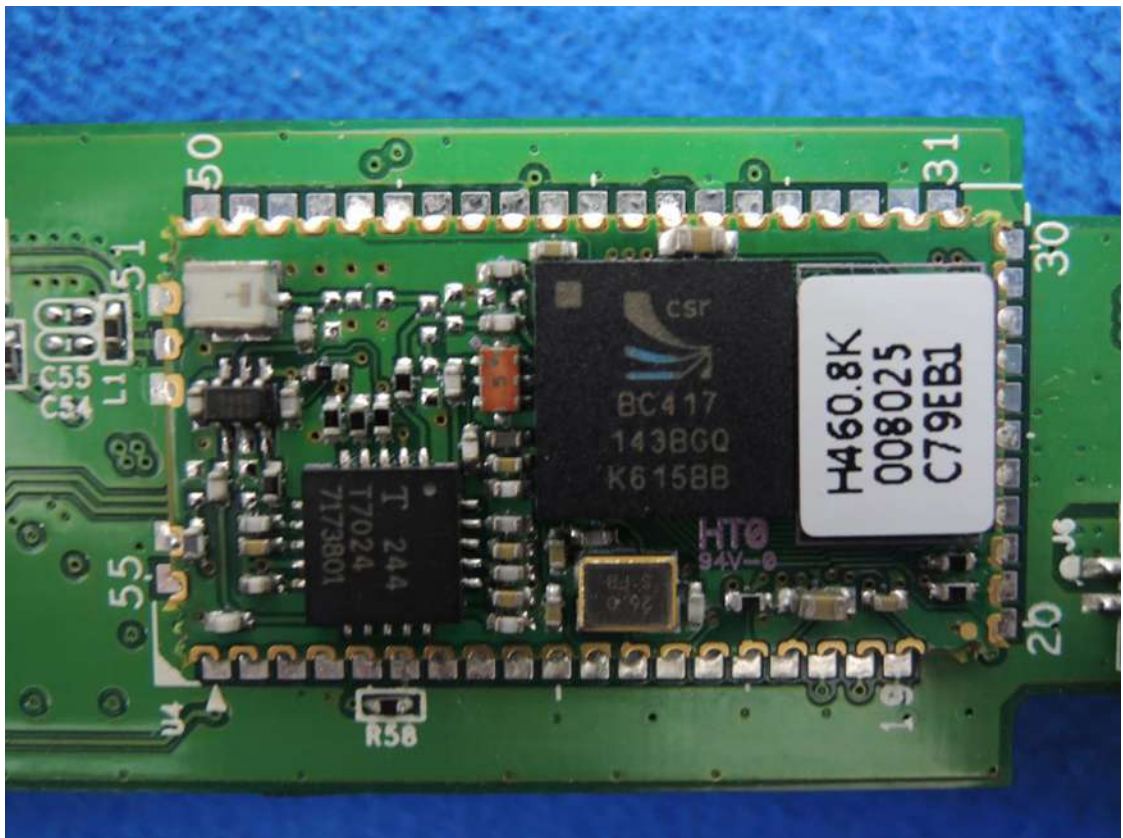
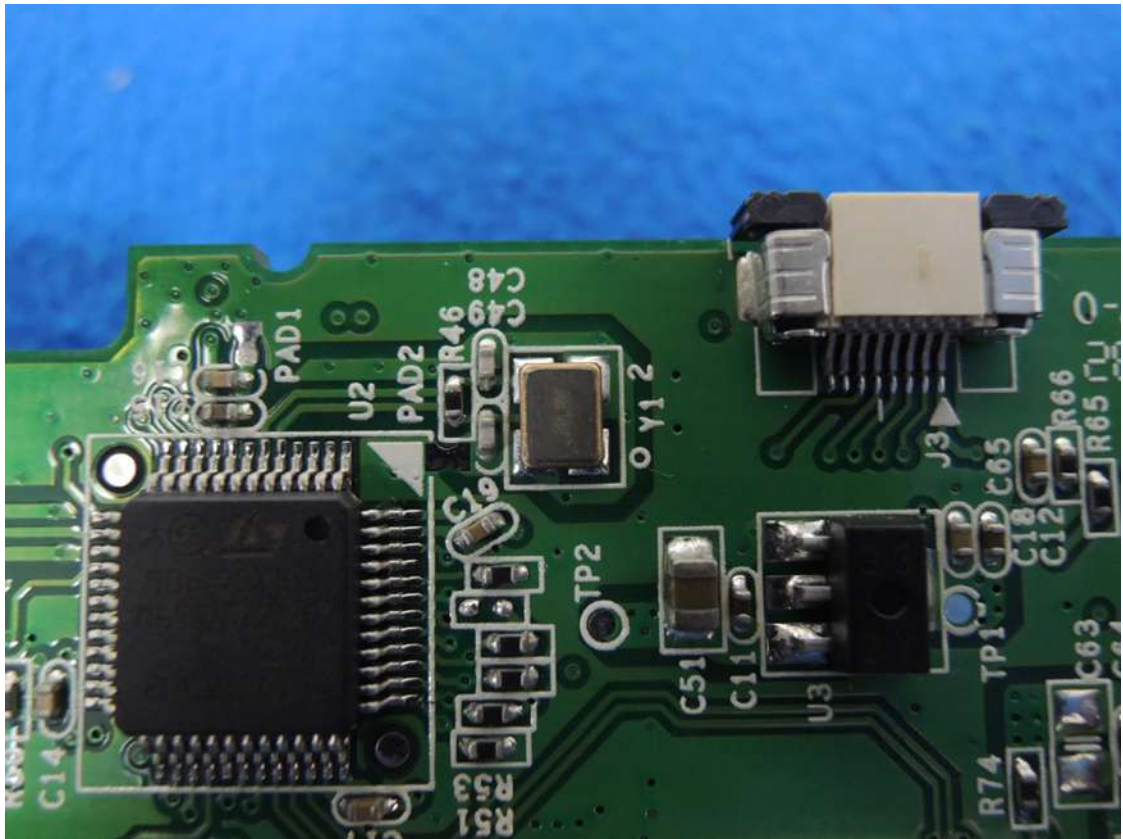


ARGOX / 條碼閱讀器 / AR-3101, AR-3201, AR-3121





ARGOX / 條碼閱讀器 / AR-3101, AR-3201, AR-3121





ARGOX / 條碼閱讀器 / AR-3101, AR-3201, AR-3121





ARGOX / 條碼閱讀器 / AR-3101, AR-3201, AR-3121





ARGOX / 條碼閱讀器 / AR-3101, AR-3201, AR-3121

