Report No.: GTS201710000053F01

FCC REPORT

Applicant:	Attenti
Address of Applicant:	2 Habarzel St. PO Box 13236. Tel Aviv 69710 , Israel
Manufacturer/Factory:	PM - PARTNER MANUFACTURING
Address of Manufacturer/Factory:	6 Efal St.Kiriat Arie,Petach Tikva - 4951106, ISRAEL

Equipment Under Test (EUT)

Product description:	RF transceiver
Model No.:	TRXS-840-2
Trade Mark:	Attenti
FCC ID:	LSQ-TRXS-840-2
Applicable standards:	FCC CFR Title 47 Part 15 Subpart C Section 15.231:2017
Date of sample receipt:	January 09, 2018
Date of Test:	January 10-16, 2018
Date of report issued:	January 17, 2018
Test Result :	PASS *

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Robinson Lo
Laboratory Manager

2 Version

Version No.	Date	Description
00	*January 17, 2018*	*Original*

Prepared By: *Date:* *January 17, 2018*

Project Engineer

Check By: *Date:* *January 17, 2018*

Reviewer

3 Contents

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4 Test Summary

Test Item	Section in CFR 47	Result
Spurious emissions	15.231(e) &15.209	Pass

Pass: The EUT complies with the essential requirements in the standard.

4.1 Measurement Uncertainty

Test Item	Frequency Range	Measurement Uncertainty	Notes
Radiated Emission	9kHz ~ 30MHz	± 4.34dB	(1)
Radiated Emission	30MHz ~ 1000MHz	± 4.24dB	(1)
Radiated Emission	1GHz ~ 26.5GHz	± 4.68dB	(1)
AC Power Line Conducted Emission	0.15MHz ~ 30MHz	± 3.45dB	(1)
Note (1): The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%.			

5 General Information

5.1 General Description of EUT

Product description:	RF transceiver
Model No.:	TRXS-840-2
Operation Frequency:	433.92MHz
Modulation technology:	FSK
Antenna Type:	Integral Antenna
Power supply:	DC 3.6V battery

5.2 Test mode

Transmitting mode	Keep the EUT in transmitting mode.

Per-test mode.

We have verified the construction and function in typical operation, The EUT was placed on three different polar directions; i.e. X axis, Y axis, Z axis. which was shown in this test report and defined as follows:

	Axis	X	Y	Z
433.92MHz	Field Strength(dBuV/m)	60.76	64.72	62.11

Final Test Mode:

According to ANSI C63.10 standards, the test results are both the “worst case” and “worst setup”:

Y axis (see the test setup photo)

5.3 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

● **FCC —Registration No.: 381383**

Global United Technology Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fuly described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in files. Registration 381383, Jan. 08, 2018.

● **Industry Canada (IC) —Registration No.: 9079A-2**

The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 9079A-2, August 15, 2016.

5.4 Test Location

All tests were performed at:

Global United Technology Services Co., Ltd.
No. 301-309, 3/F., Jinyuan Business Building, No.2, Laodong Industrial Zone,
Xixiang Road, Baoan District, Shenzhen, Guangdong, China
Tel: 0755-27798480
Fax: 0755-27798960

5.5 Other Information Requested by the Customer

None.

5.6 Description of Support Units

Manufacturer	Description	Model	Serial Number
Supplied by client	Key	MRD 1.4	N/A
Supplied by client	Officer Mobile Unit	2PV4 OMU	N/A

6 Test Instruments list

Radiated Emission:						
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal.Date (mm-dd-yy)**	**Cal.Due date (mm-dd-yy)**
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	GTS250	July 03 2015	July 02 2020
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A
3	Spectrum Analyzer	Agilent	E4440A	GTS533	June 28 2017	June 27 2018
4	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	June 28 2017	June 27 2018
5	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS214	June 28 2017	June 27 2018
6	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	9120D-829	GTS208	June 28 2017	June 27 2018
7	Horn Antenna	ETS-LINDGREN	3160	GTS217	June 28 2017	June 27 2018
8	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
9	Coaxial Cable	GTS	N/A	GTS213	June 28 2017	June 27 2018
10	Coaxial Cable	GTS	N/A	GTS211	June 28 2017	June 27 2018
11	Coaxial cable	GTS	N/A	GTS210	June 28 2017	June 27 2018
12	Coaxial Cable	GTS	N/A	GTS212	June 28 2017	June 27 2018
13	Amplifier(100kHz-3GHz)	HP	8347A	GTS204	June 28 2017	June 27 2018
14	Amplifier(2GHz-20GHz)	HP	8349B	GTS206	June 28 2017	June 27 2018
15	Amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	June 28 2017	June 27 2018
16	Band filter	Amindeon	82346	GTS219	June 28 2017	June 27 2018
17	Power Meter	Anritsu	ML2495A	GTS540	June 28 2017	June 27 2018
18	Power Sensor	Anritsu	MA2411B	GTS541	June 28 2017	June 27 2018

General used equipment:						
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal.Date (mm-dd-yy)**	**Cal.Due date (mm-dd-yy)**
1	Barometer	ChangChun	DYM3	GTS257	June 28 2017	June 27 2018

7 Test results and Measurement Data

7.1 Radiated Emission Method

Test Requirement:	FCC Part15 C Section 15.209
Test Method:	ANSI C63.10:2013
Test Frequency Range:	30MHz to 5000MHz
Test site:	Measurement Distance: 3m
Receiver setup:	

Frequency	Detector	RBW	VBW	Remark
30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak Value
Above 1GHz	Peak	1MHz	3MHz	Peak Value

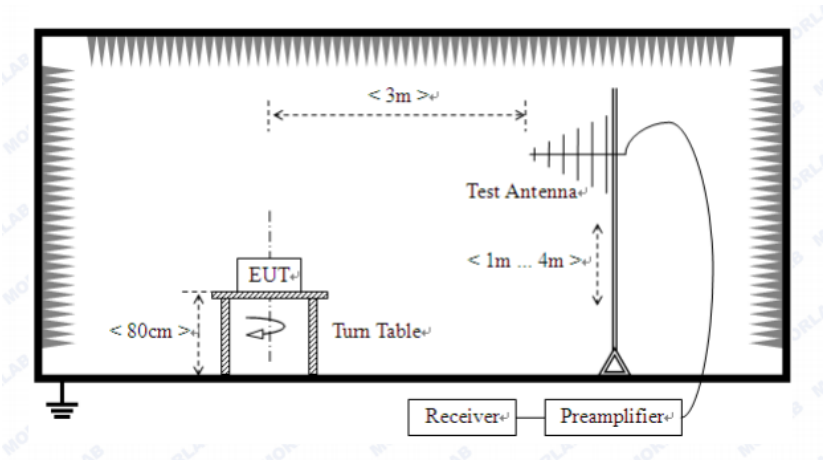
Limit:
(Spurious Emissions)

Frequency	Limit (dBuV/m @3m)	Remark
30MHz-88MHz	40.00	Quasi-peak Value
88MHz-216MHz	43.50	Quasi-peak Value
216MHz-960MHz	46.00	Quasi-peak Value
960MHz-1GHz	54.00	Quasi-peak Value
Above 1GHz	54.00	Average Value
	74.00	Peak Value

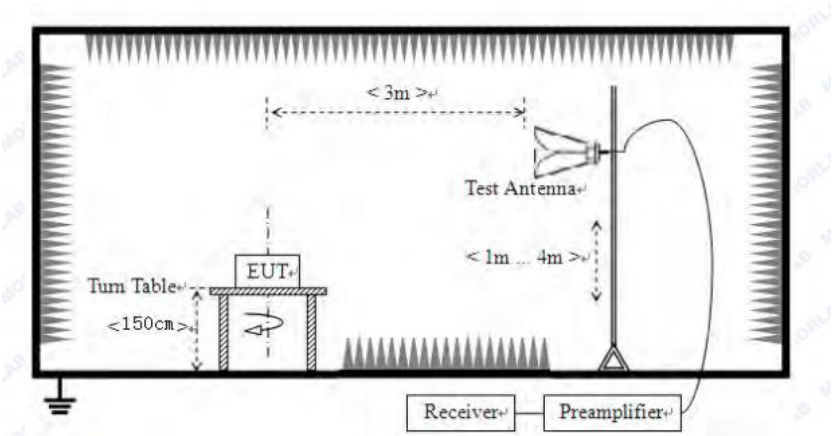
Or The maximum permitted unwanted emission level is 20 dB below the maximum permitted fundamental level whichever limit permits a higher field strength.

Test setup:

Below 1GHz



Above 1GHz

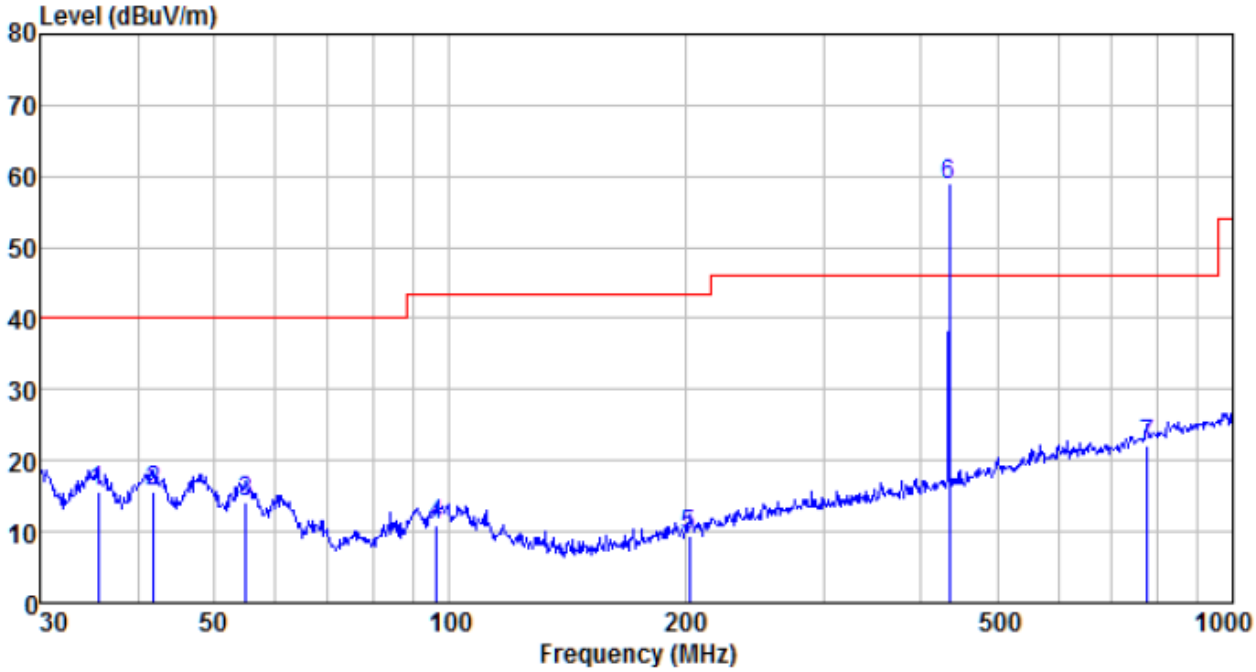
	
Test Procedure:	1. During the test, the New Battery was used. 2. The EUT was placed on the top of a rotating table (0.8 meters for below 1GHz and 1.5 meters for above 1GHz) above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. 3. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 4. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. 5. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading. 6. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 7. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

Measurement data:

7.1.1 Spurious emissions

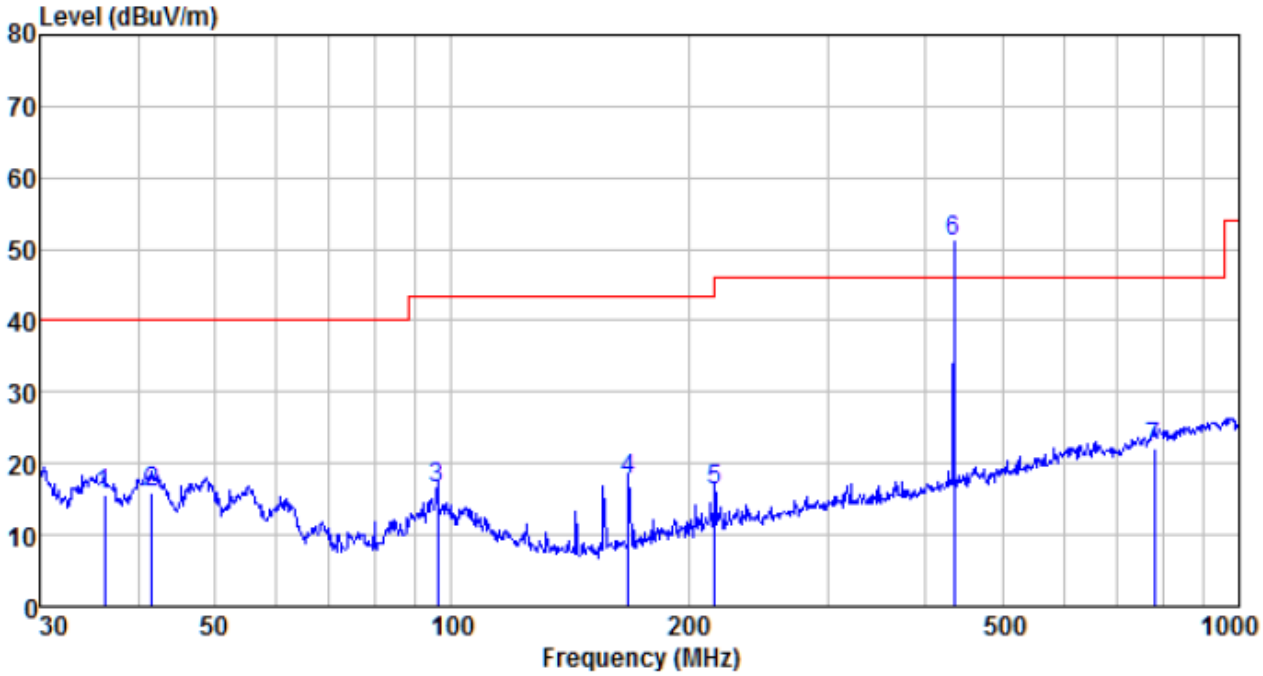
Below 1G

Horizontal:



Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
35.624	38.96	11.42	0.62	35.40	15.60	40.00	-24.40	QP
41.860	38.42	12.22	0.68	35.77	15.55	40.00	-24.45	QP
55.027	37.89	11.78	0.82	36.25	14.24	40.00	-25.76	QP
96.436	34.69	11.72	1.16	36.69	10.88	43.50	-32.62	QP
202.100	34.52	10.47	1.85	37.33	9.51	43.50	-33.99	QP
433.920	77.34	16.03	3.02	37.52	58.87	46.00	12.87	Peak
776.878	34.44	21.03	4.37	37.62	22.22	46.00	-23.78	QP

Vertical:



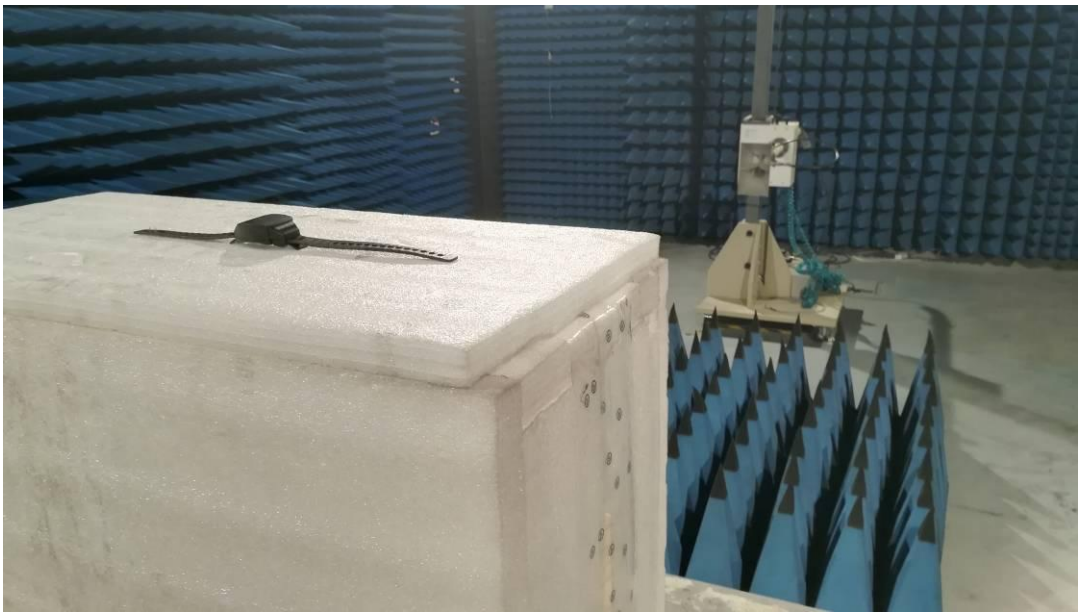
Freq	Reading level	Antenna factor	Cable loss	Preamp factor	level	Limit level	Over limit	Remark
MHz	dBuV	dB/m	dB	dB	dBuV	dBuV/m	dB	
36.254	38.94	11.55	0.62	35.44	15.67	40.00	-24.33	QP
41.713	38.68	12.22	0.68	35.76	15.82	40.00	-24.18	QP
96.099	40.45	11.65	1.16	36.69	16.57	43.50	-26.93	QP
167.824	44.67	8.46	1.67	37.18	17.62	43.50	-25.88	QP
216.024	40.56	11.02	1.93	37.35	16.16	46.00	-29.84	QP
433.920	69.59	16.03	3.02	37.52	51.12	46.00	5.12	Peak
779.607	34.28	21.03	4.38	37.62	22.07	46.00	-23.93	QP

Above 1G

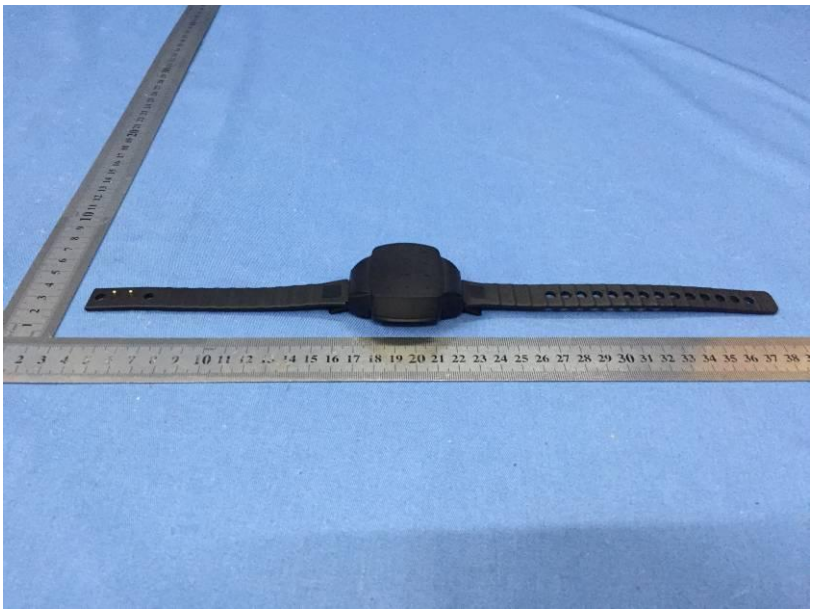
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	PK Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
1250.00	39.99	25.52	4.50	33.18	36.83	74.00	-37.17	Vertical
2250.00	37.14	28.02	5.24	34.17	36.23	74.00	-37.77	Vertical
3560.00	33.22	29.09	7.07	32.67	36.71	74.00	-37.29	Vertical
4360.00	27.53	30.97	8.21	31.87	34.84	74.00	-39.16	Vertical
4780.00	27.98	31.75	8.58	32.07	36.24	74.00	-37.76	Vertical
5865.00	26.68	32.72	10.02	32.21	37.21	74.00	-36.79	Vertical
1300.00	37.16	25.63	4.54	33.27	34.06	74.00	-39.94	Horizontal
2085.00	38.19	26.85	5.06	34.36	35.74	74.00	-38.26	Horizontal
2950.00	38.23	28.43	5.88	33.37	39.17	74.00	-34.83	Horizontal
3755.00	31.70	29.30	7.44	32.46	35.98	74.00	-38.02	Horizontal
4400.00	28.42	31.09	8.25	31.89	35.87	74.00	-38.13	Horizontal
5540.00	27.27	32.09	9.56	32.41	36.51	74.00	-37.49	Horizontal

8 Test Setup Photo

Radiated Emission



9 EUT Constructional Details

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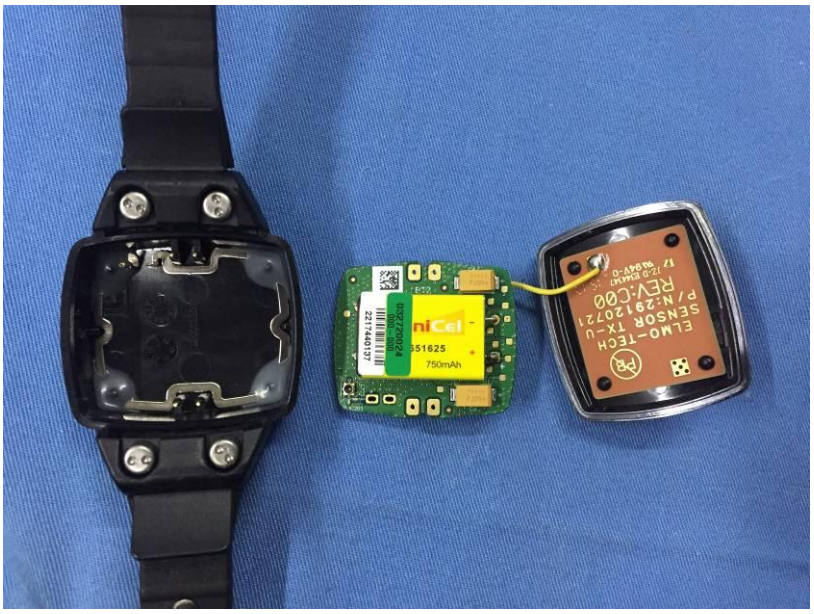
REV:C00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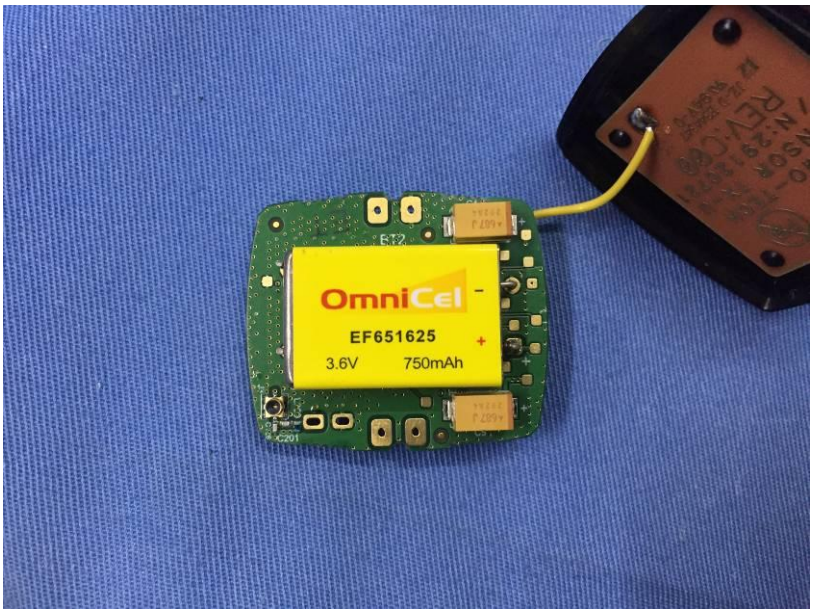
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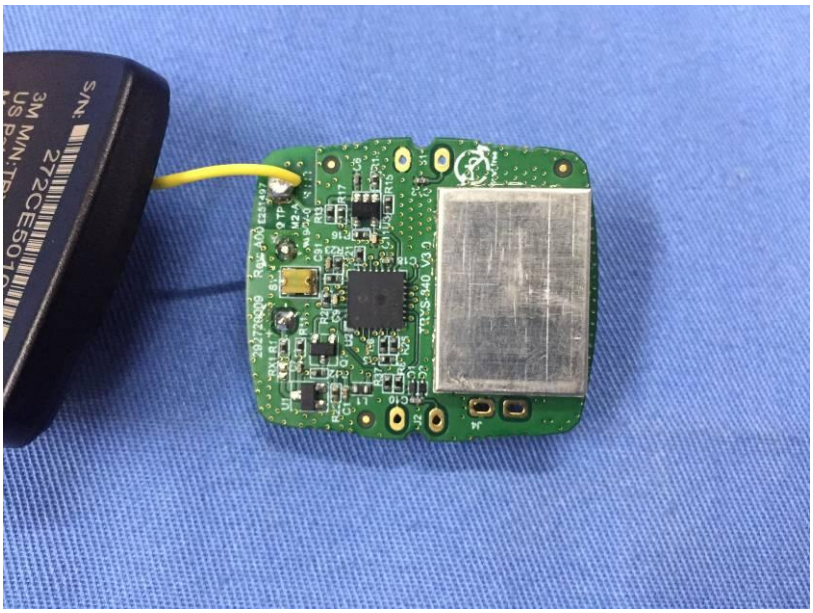

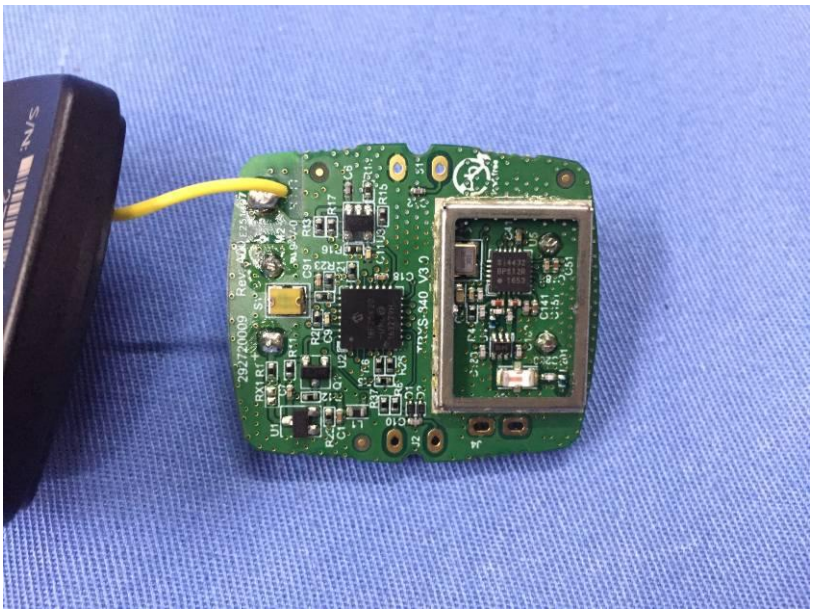

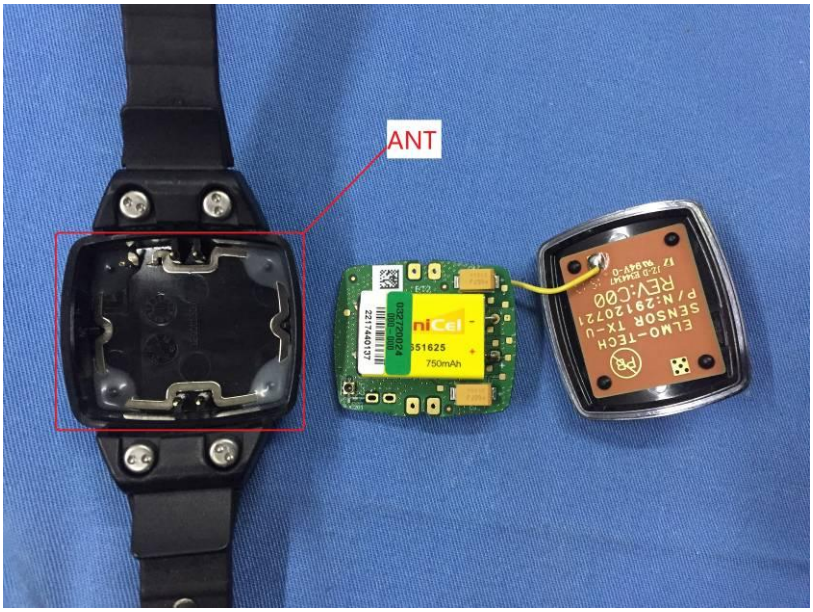

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