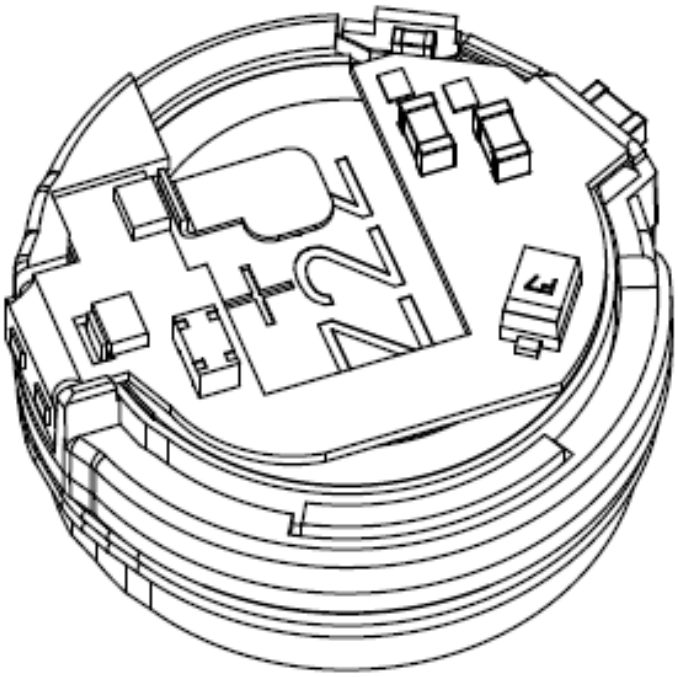


Fig. 1a

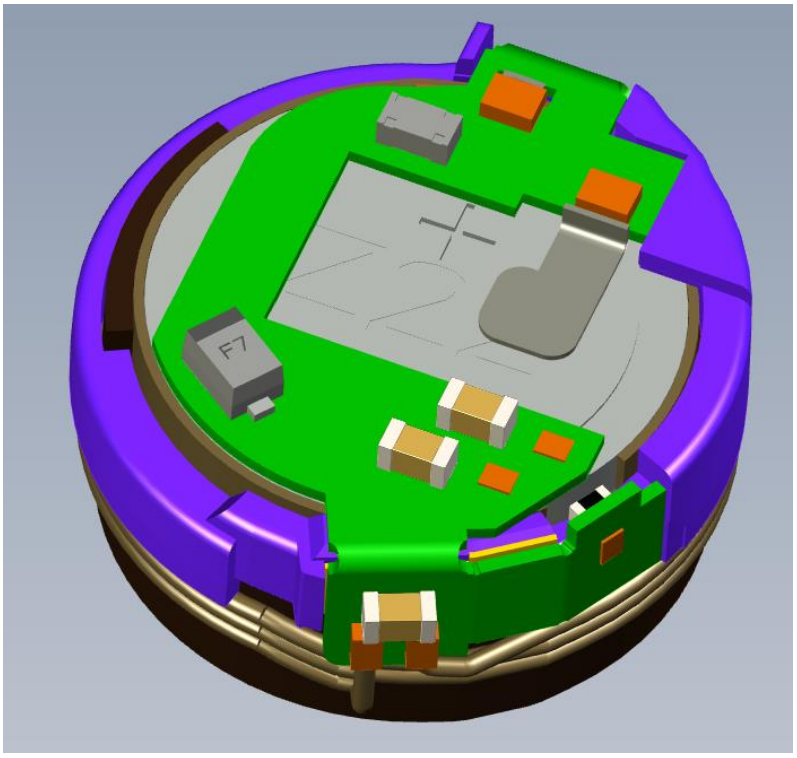


Fig. 1b

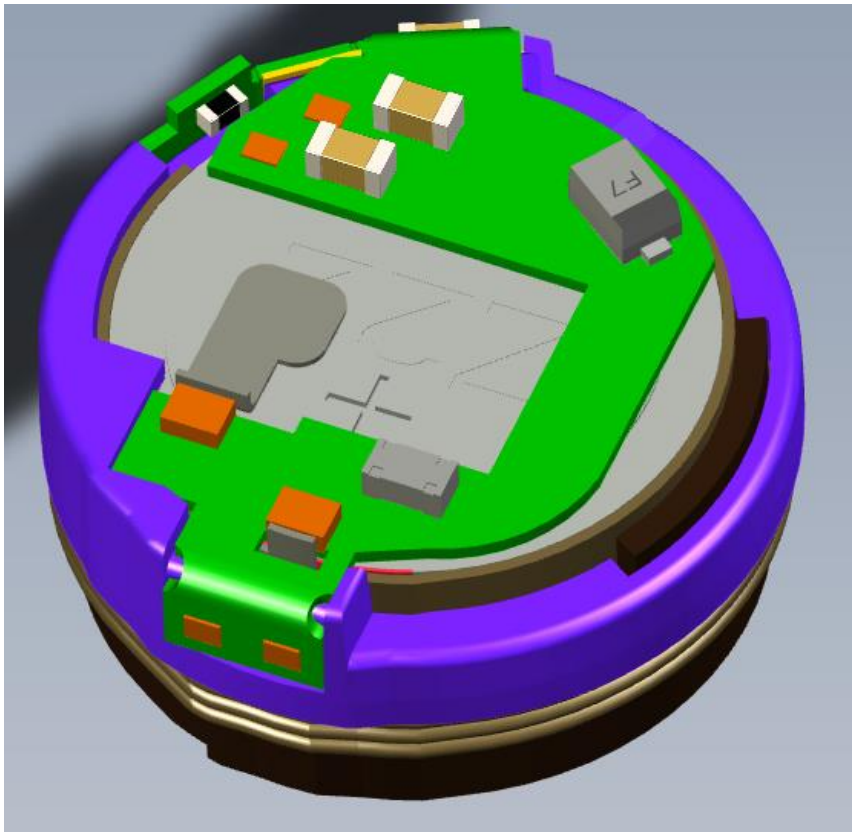


Fig. 1c

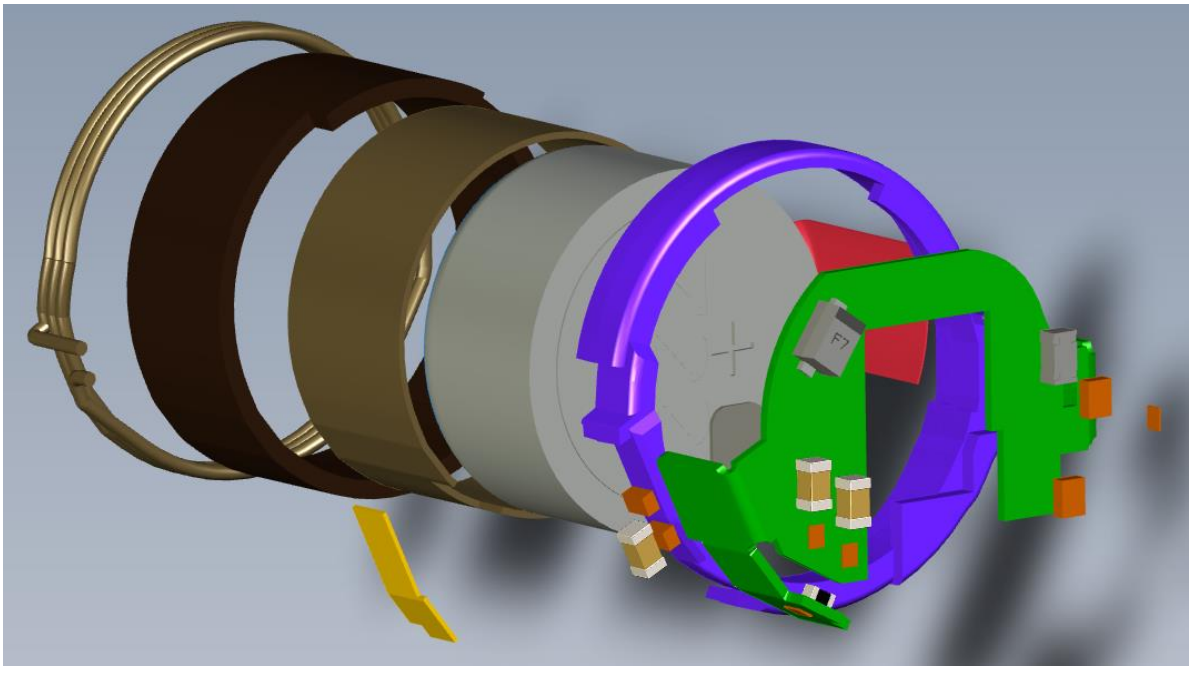


Fig. 2

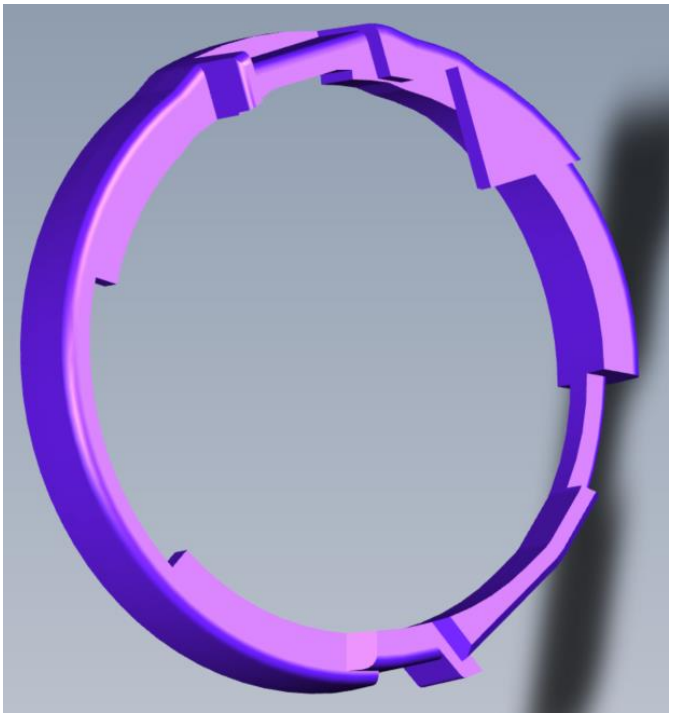


Fig. 3



Fig. 4

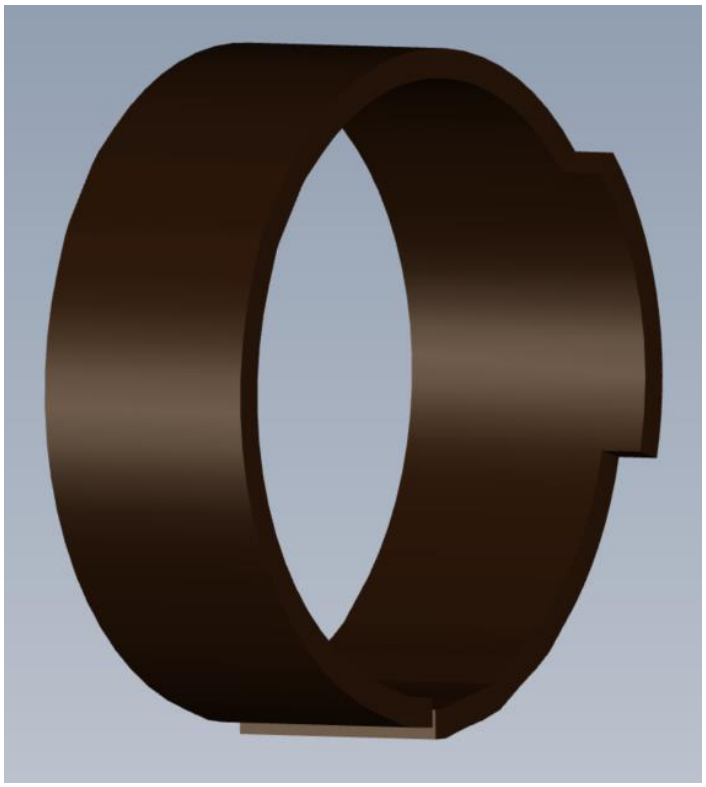


Fig. 5

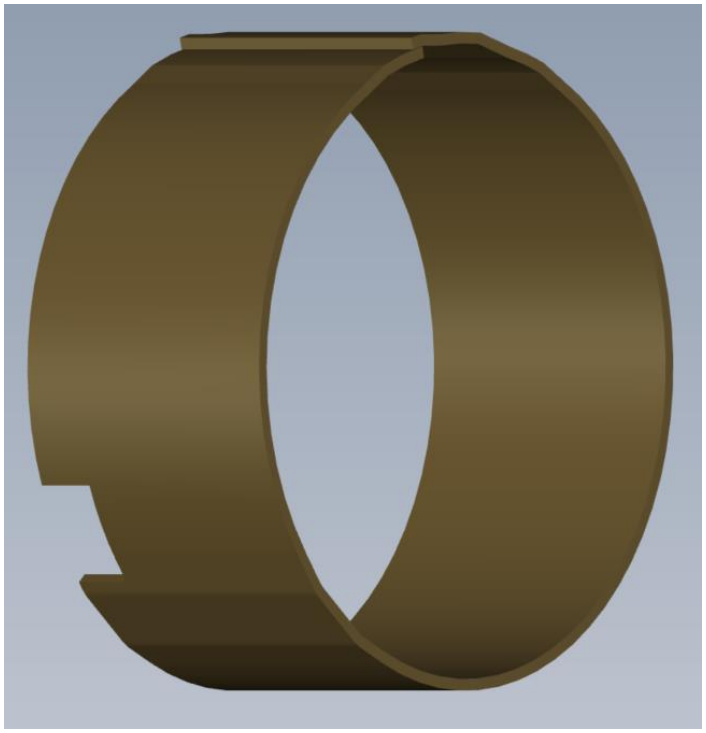


Fig. 6

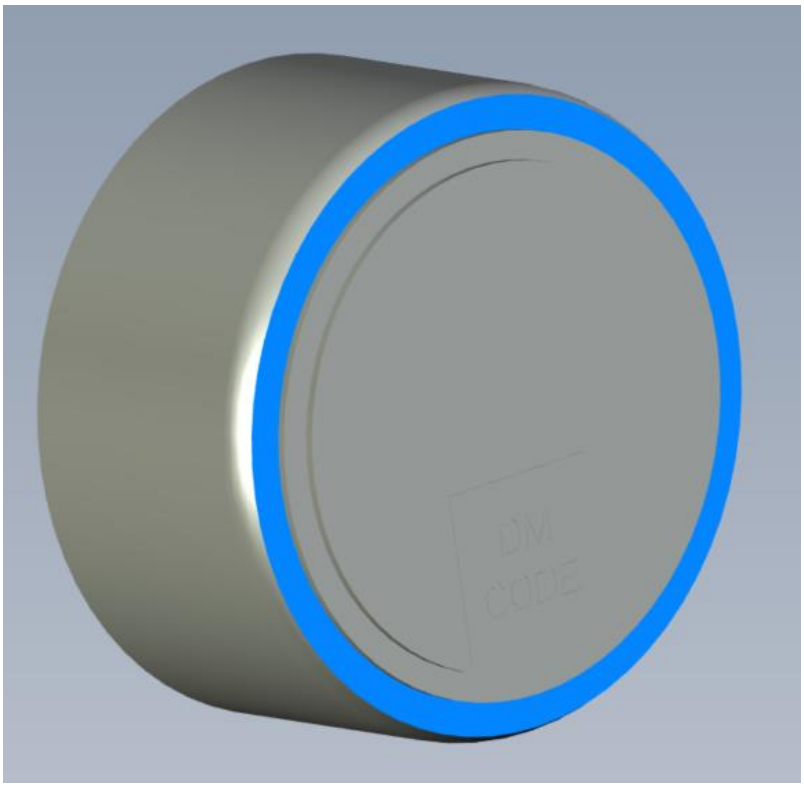


Fig. 7

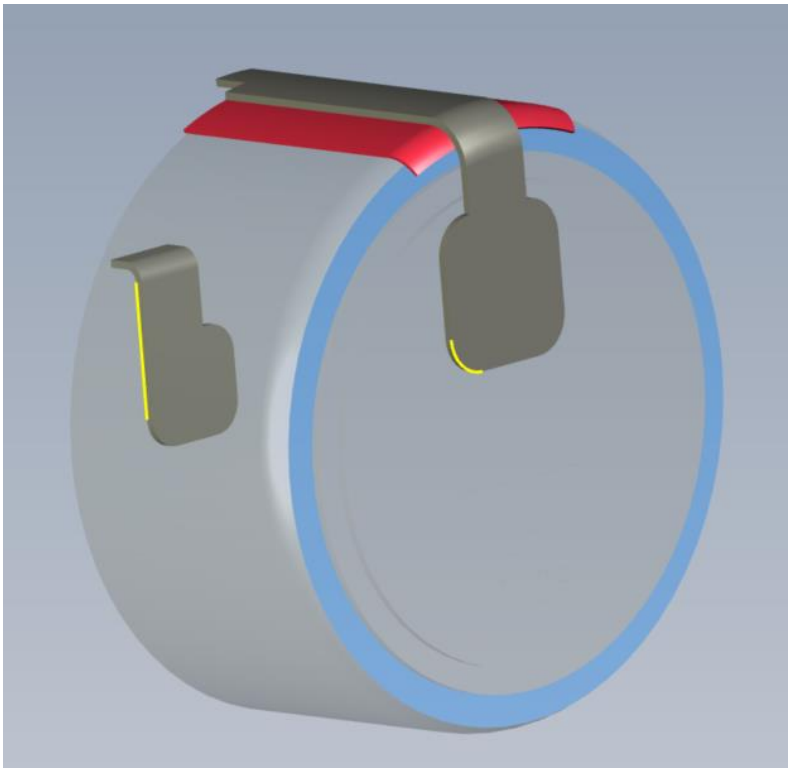


Fig. 8

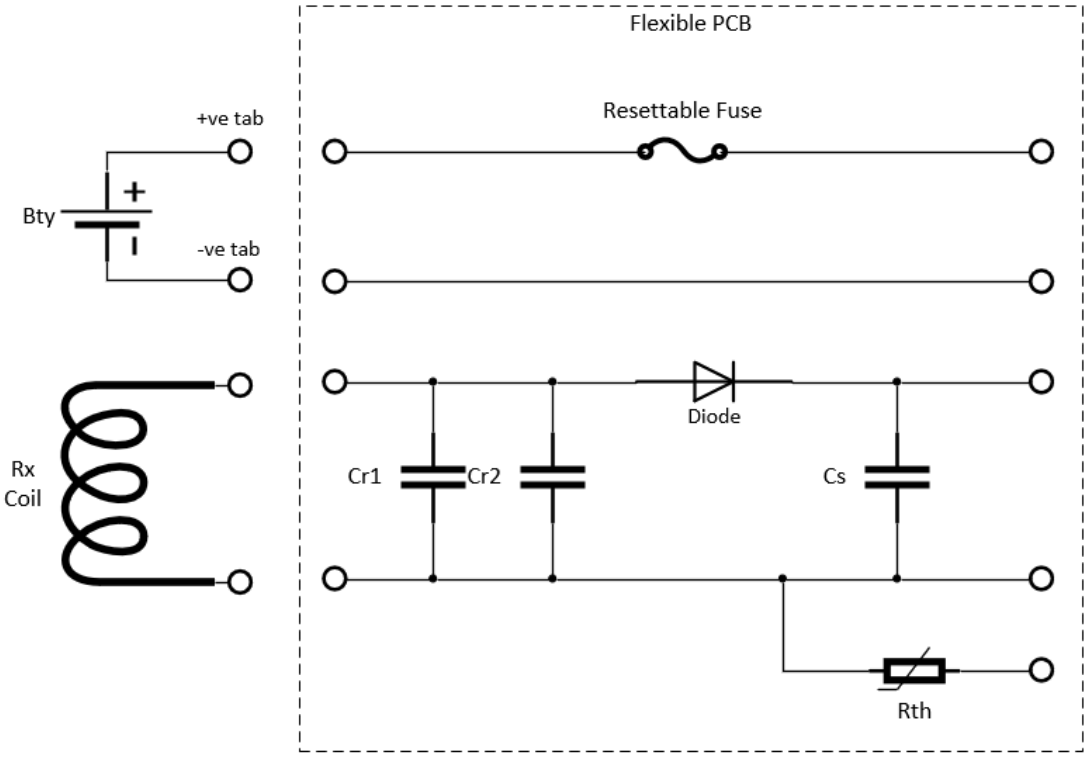

Flexible PCB
+ve tab
Resettable Fuse
Bty
-ve tab
Diode
Rx
Coil
Cr1
Cr2
Cs
Rth

Fig. 9a

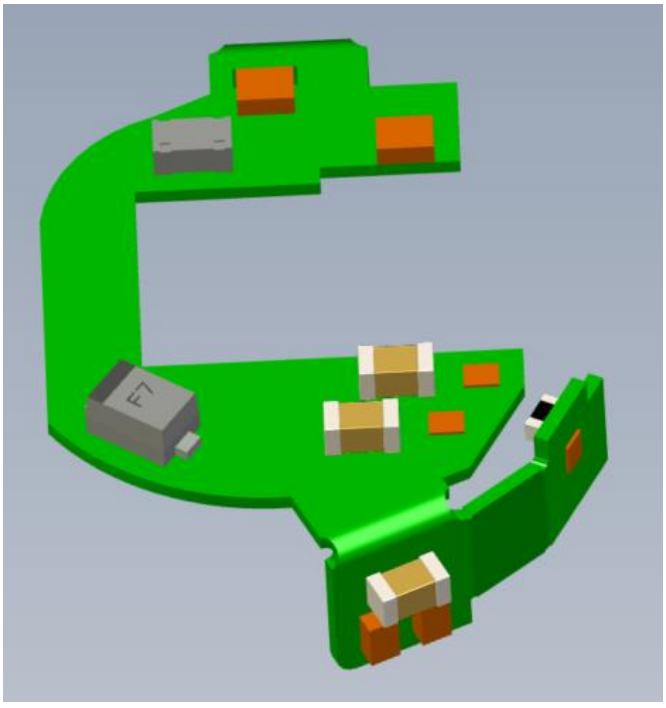


Fig. 9b

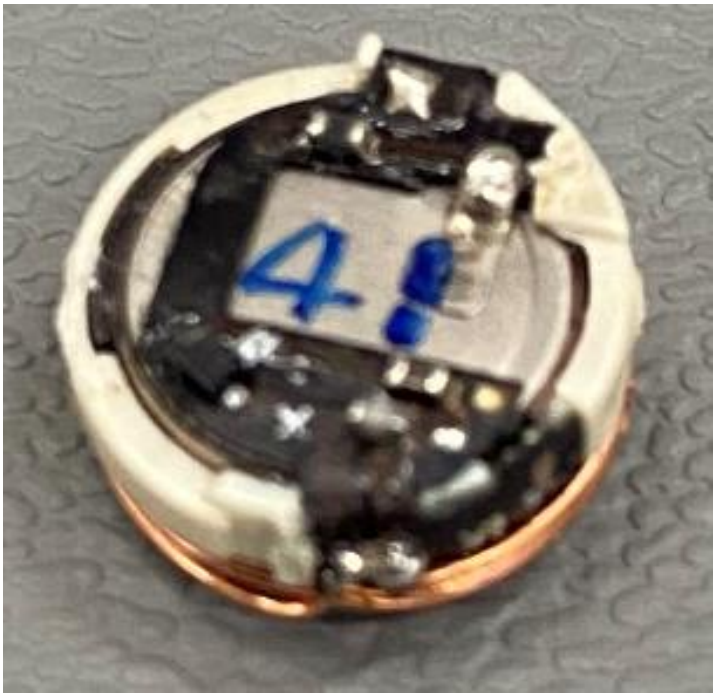


Fig. 10a



Fig. 10b

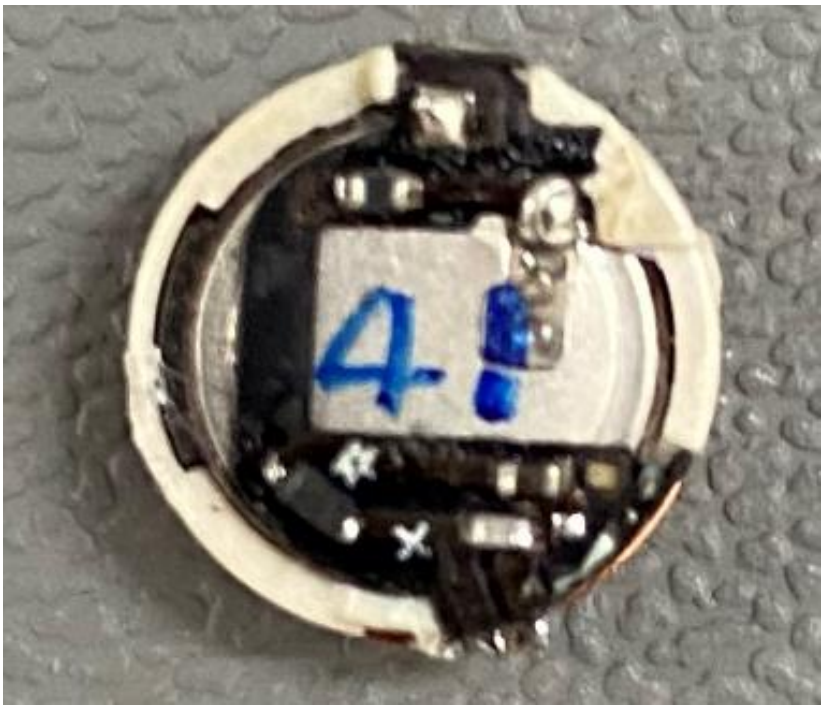


Fig. 10c



Fig. 10d



Fig. 10e

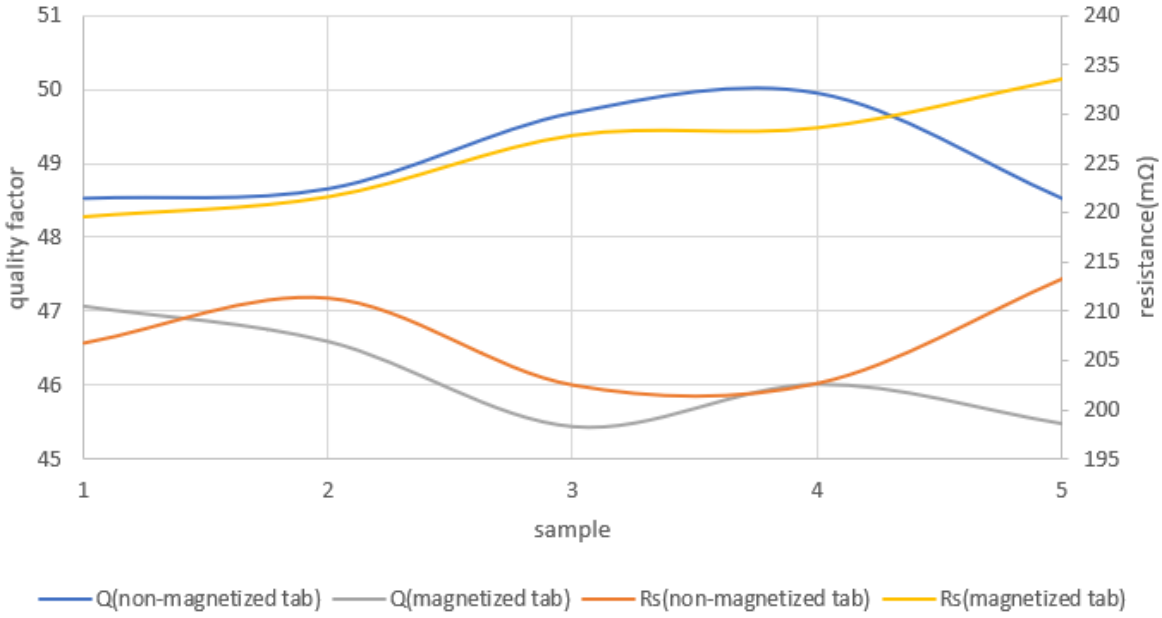


Fig. 11

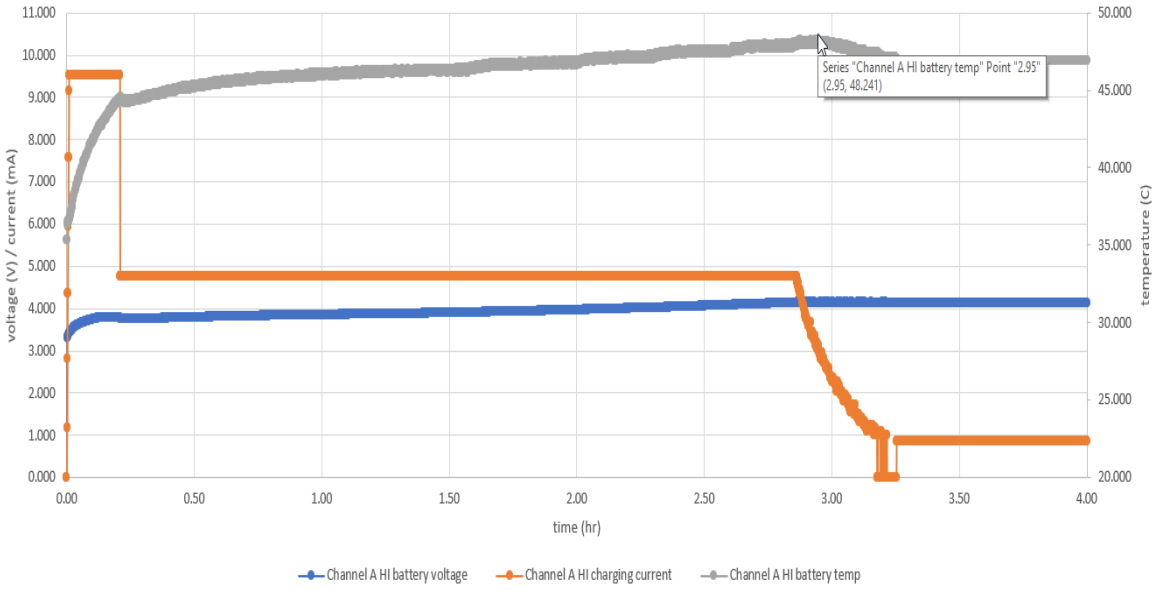


Fig. 12a

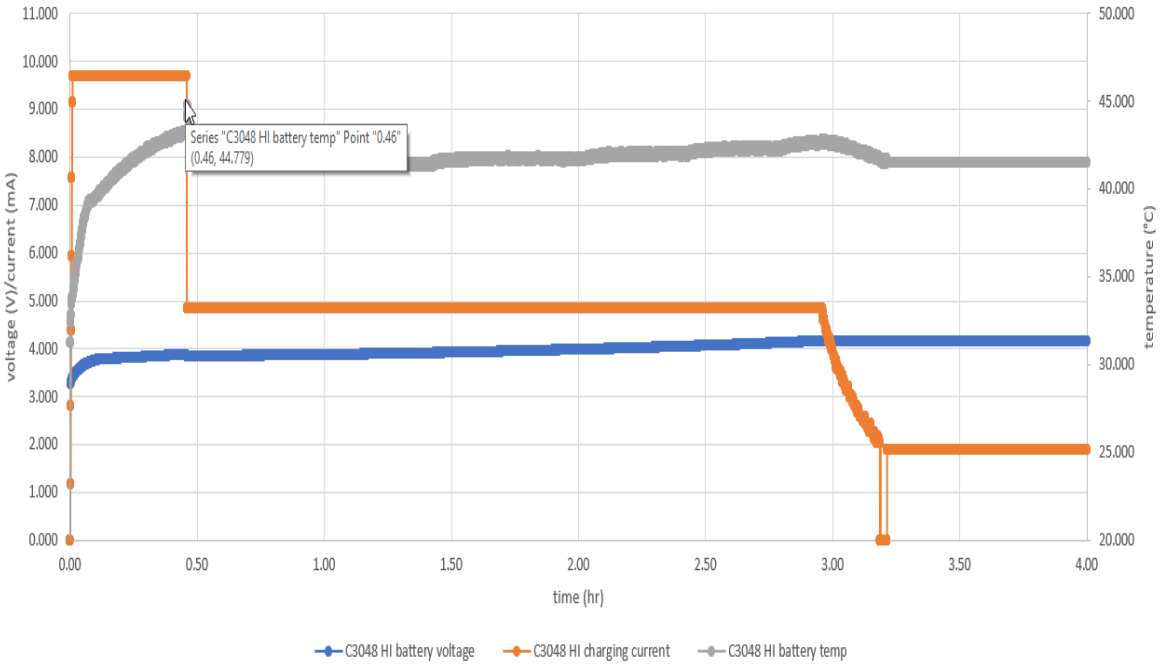


Fig. 12b

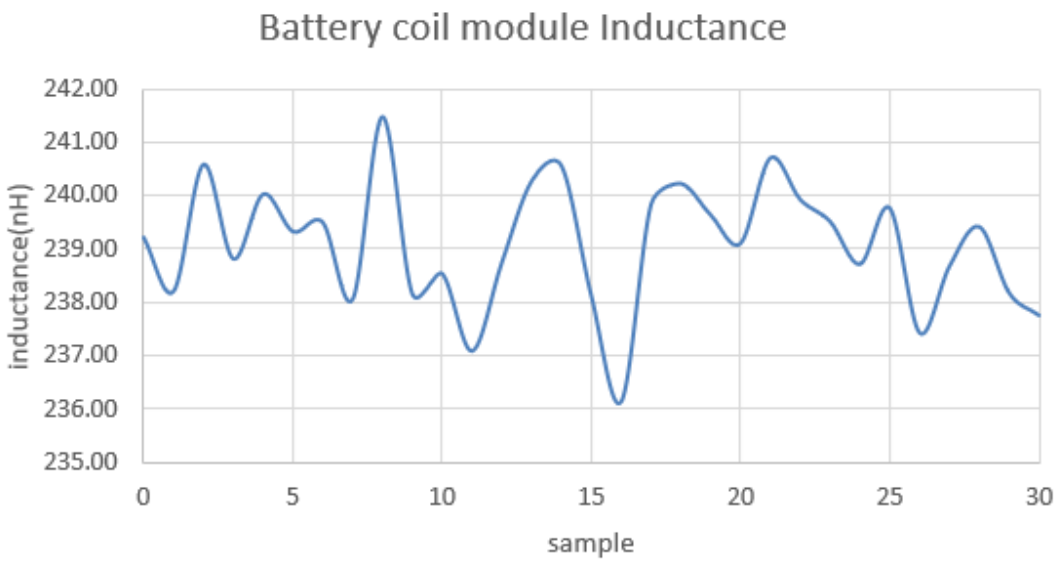

Battery coil module Inductance
242.00
241.00
240.00
239.00
238.00
237.00
236.00
235.00
inductance(nH)
0
5
10
15
20
25
30
sample

Fig. 13

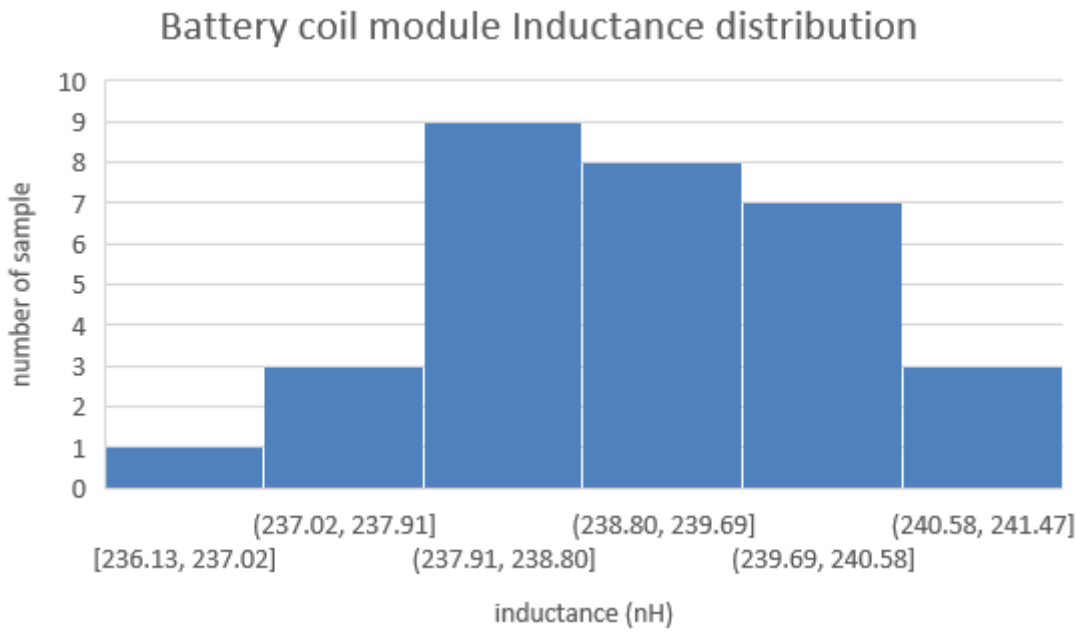

Battery coil module Inductance distribution
10
9
8
7
6
5
4
3
2
1
0
number of sample
[236.13, 237.02]
(237.02, 237.91]
(237.91, 238.80]
(238.80, 239.69]
(239.69, 240.58]
(240.58, 241.47]
inductance (nH)

Fig. 14

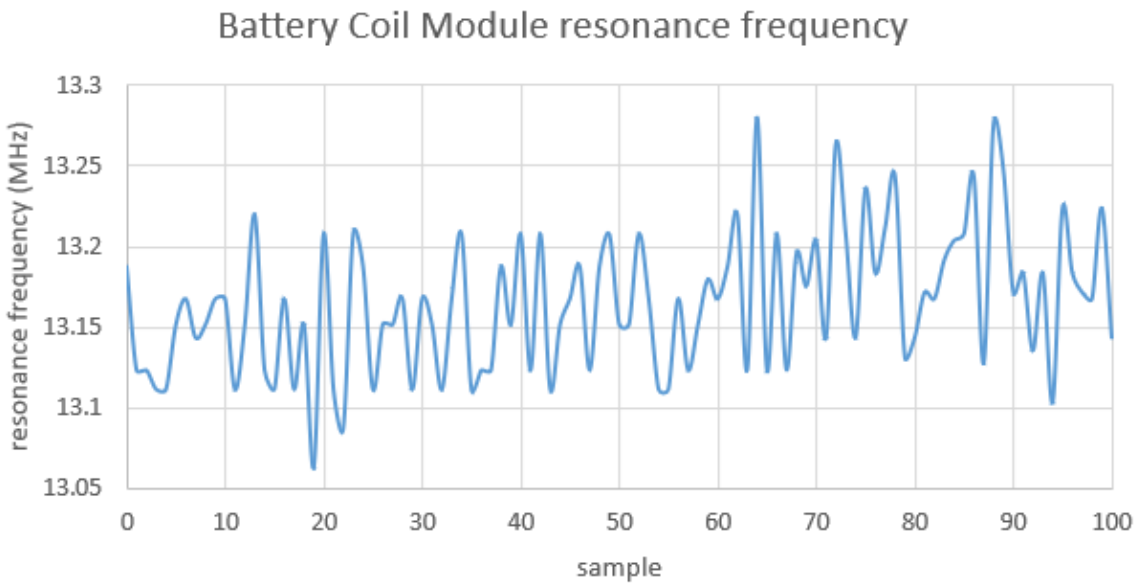

Battery Coil Module resonance frequency
resonance frequency (MHz)
13.3
13.25
13.2
13.15
13.1
13.05
0
10
20
30
40
50
60
70
80
90
100
sample

Fig. 15

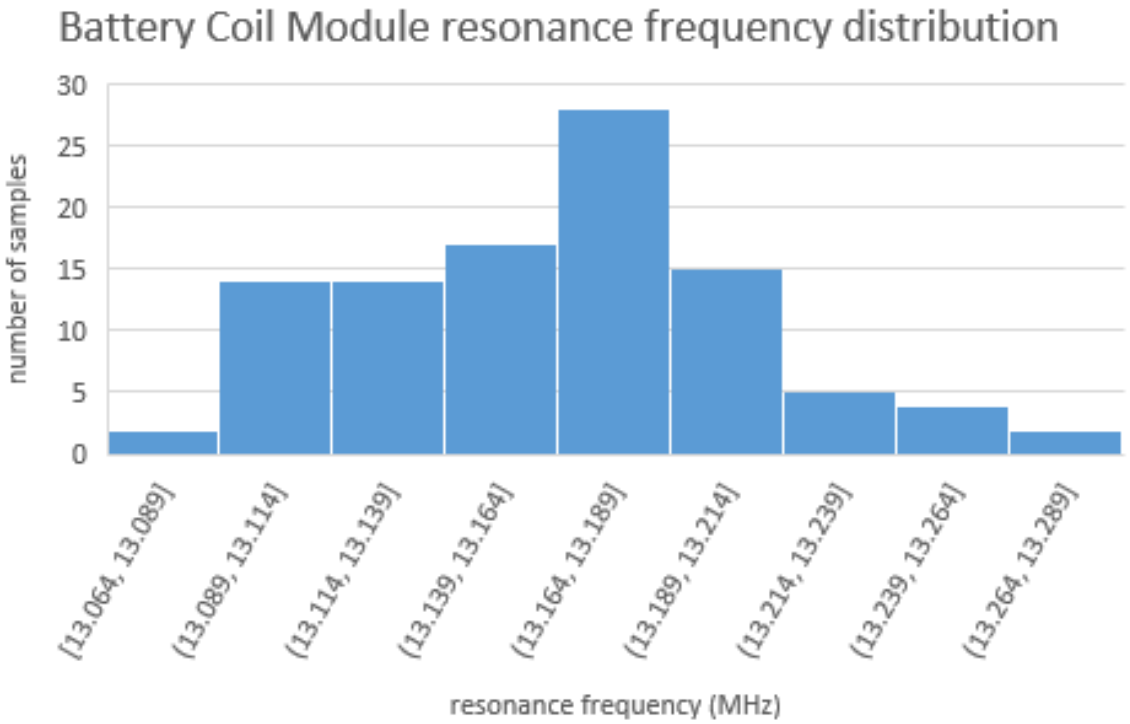

Battery Coil Module resonance frequency distribution
number of samples
30
25
20
15
10
5
0
[13.064, 13.089]
(13.089, 13.114]
(13.114, 13.139]
(13.139, 13.164]
(13.164, 13.189]
(13.189, 13.214]
(13.214, 13.239]
(13.239, 13.264]
(13.264, 13.289]
resonance frequency (MHz)

Fig. 16

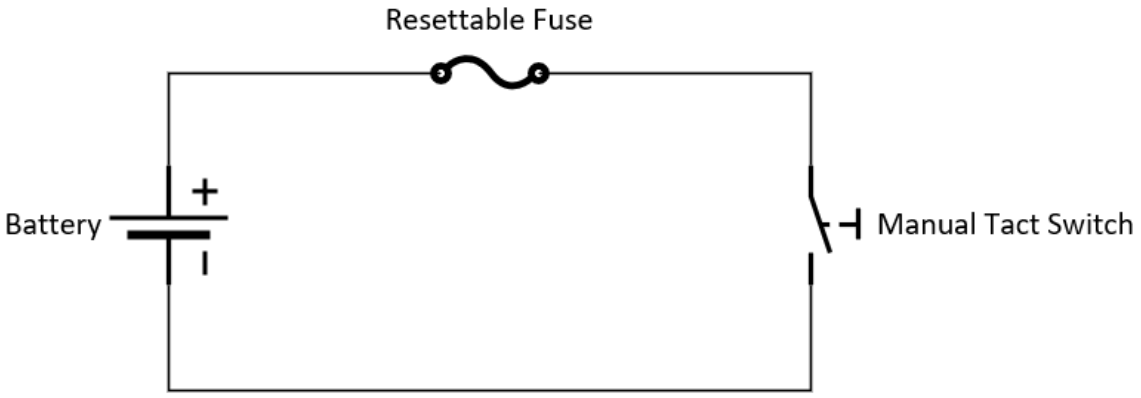

Resettable Fuse
Battery
+
Manual Tact Switch

Fig. 17

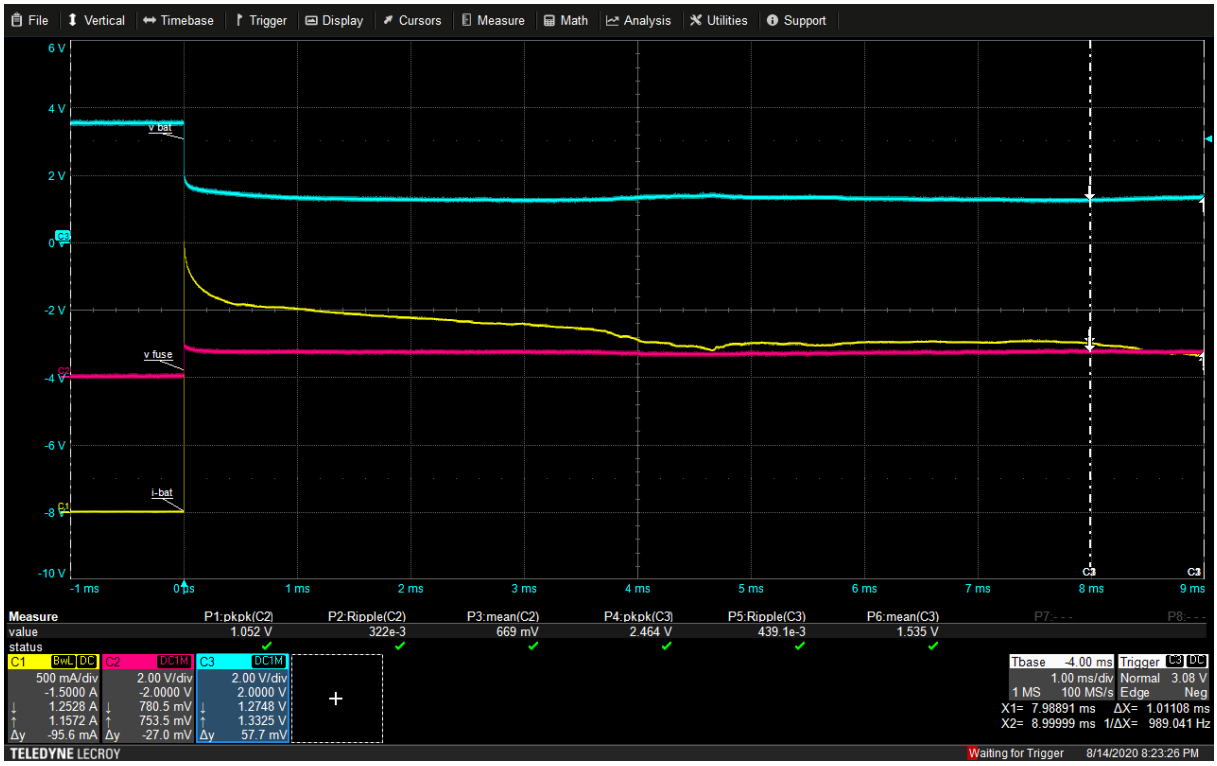

File
Vertical
Timebase
Trigger
Display
Cursors
Measure
Math
Analysis
Utilities
Support
6 V
4 V
2 V
0 V
-2 V
-4 V
-6 V
-8 V
-10 V
v bat
v fuse
i-bat
-1 ms
0 ps
1 ms
2 ms
3 ms
4 ms
5 ms
6 ms
7 ms
8 ms
9 ms
Measure
P1:pkpk(C2)
P2:Ripple(C2)
P3:mean(C2)
P4:pkpk(C3)
P5:Ripple(C3)
P6:mean(C3)
value
1.052 V
322e-3
669 mV
2.464 V
439.1e-3
1.535 V
status
C1
C2
C3
500 mA/div
2.00 V/div
-1.5000 A
-2.0000 V
1.2528 A
780.5 mV
1.1572 A
753.5 mV
-95.6 mA
-27.0 mV
1.2748 V
1.3325 V
57.7 mV
Tbase -4.00 ms
1.00 ms/div
1 MS 100 MS/s
Trigger
Normal 3.08 V
Edge Neg
X1= 7.98891 ms
ΔX= 1.01108 ms
X2= 8.99999 ms
1/ΔX= 989.041 Hz
TELEDYNE LECROY
Waiting for Trigger
8/14/2020 8:23:26 PM

Fig. 18