

## 12. TIME OF OCCUPANCY (DWELL TIME)

### 12.1. MEASUREMENT PROCEDURE

The EUT shall have its hopping function enabled. Use the following spectrum analyzer settings:

1. Span: Zero span, centered on a hopping channel.
2. RBW shall be  $\leq$  channel spacing and where possible RBW should be set  $\gg 1/T$ , where T is the expected dwell time per channel.
3. Sweep: As necessary to capture the entire dwell time per hopping channel; where possible use a video trigger and trigger delay so that the transmitted signal starts a little to the right of the start of the plot. The trigger level might need slight adjustment to prevent triggering when the system hops on an adjacent channel; a second plot might be needed with a longer sweep time to show two successive hops on a channel.
4. Detector function: Peak. Trace: Max hold.
5. Use the marker-delta function to determine the transmit time per hop.
6. Repeat the measurement using a longer sweep time to determine the number of hops over the period specified in the requirements. The sweep time shall be equal to, or less than, the period specified in the requirements. Determine the number of hops over the sweep time and calculate the total number of hops in the period specified in the requirements, using the following equation:

(Number of hops in the period specified in the requirements) = (number of hops on spectrum analyzer)  $\times$  (period specified in the requirements / analyzer sweep time)

7. The average time of occupancy is calculated from the transmit time per hop multiplied by the number of hops in the period specified in the requirements.

### 12.2. TEST SETUP (BLOCK DIAGRAM OF CONFIGURATION)

Same as described in section 8.2

### 12.3. MEASUREMENT EQUIPMENT USED

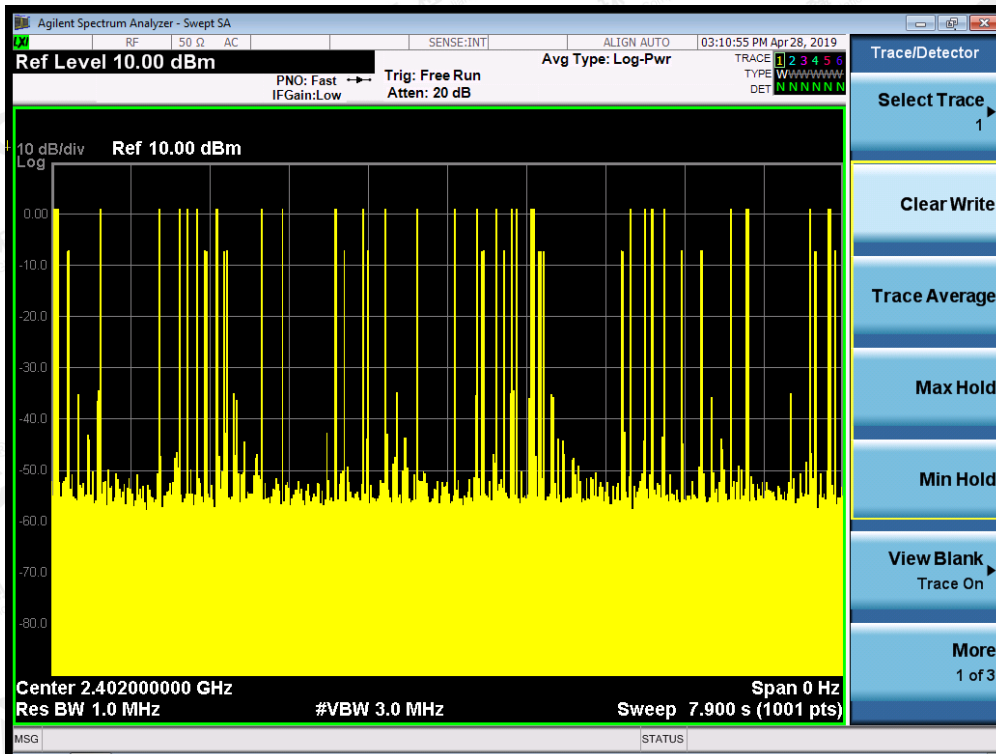
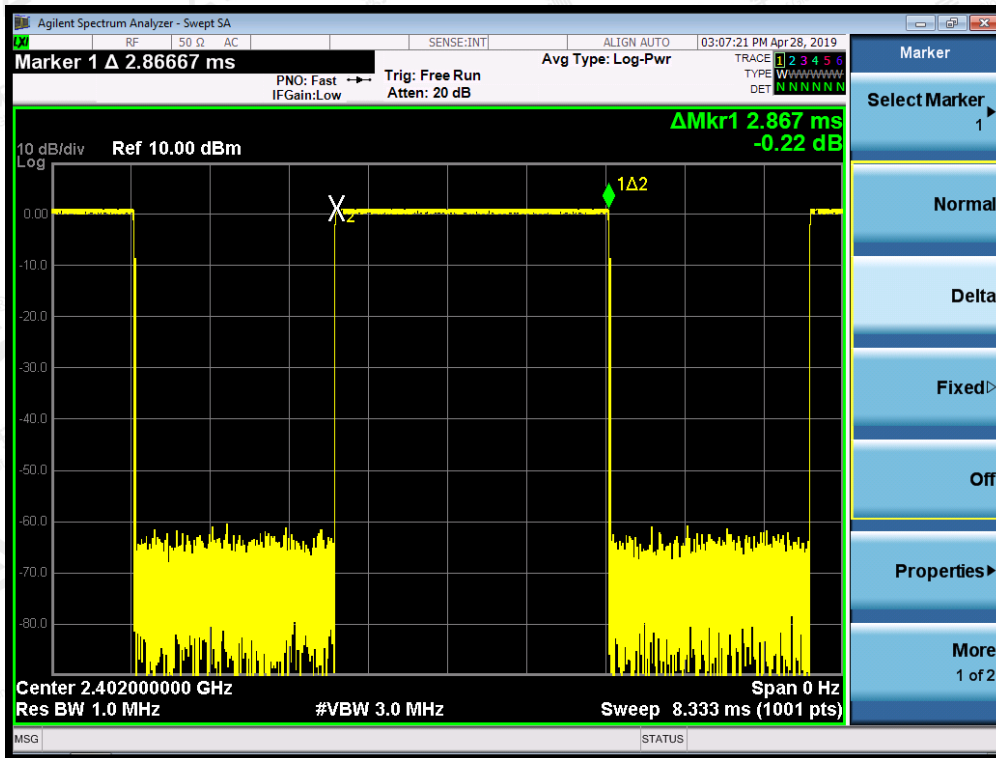
The same as described in section 6

### 12.4. LIMITS AND MEASUREMENT RESULT

Channel	Time of Pulse for DH5 (ms)	Number of hops in the period specified in the requirements	Sweep Time (ms)	Limit (ms)
Low	2.867	27*4	309.636	400
Middle	2.858	31*4	354.392	400
High	2.858	30*4	342.960	400

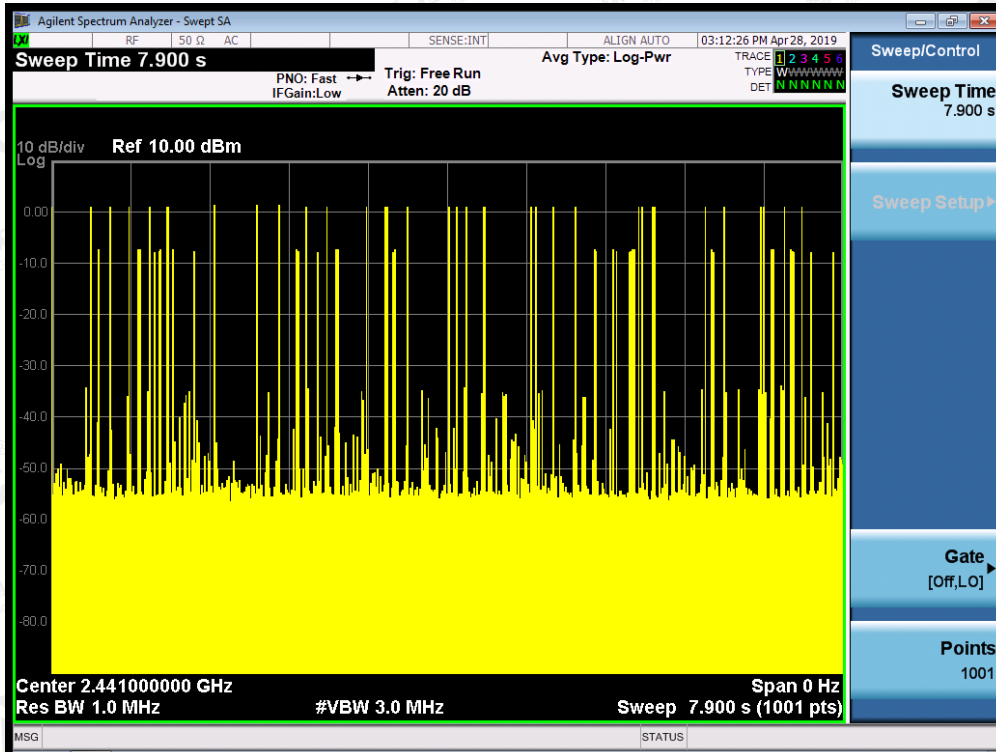
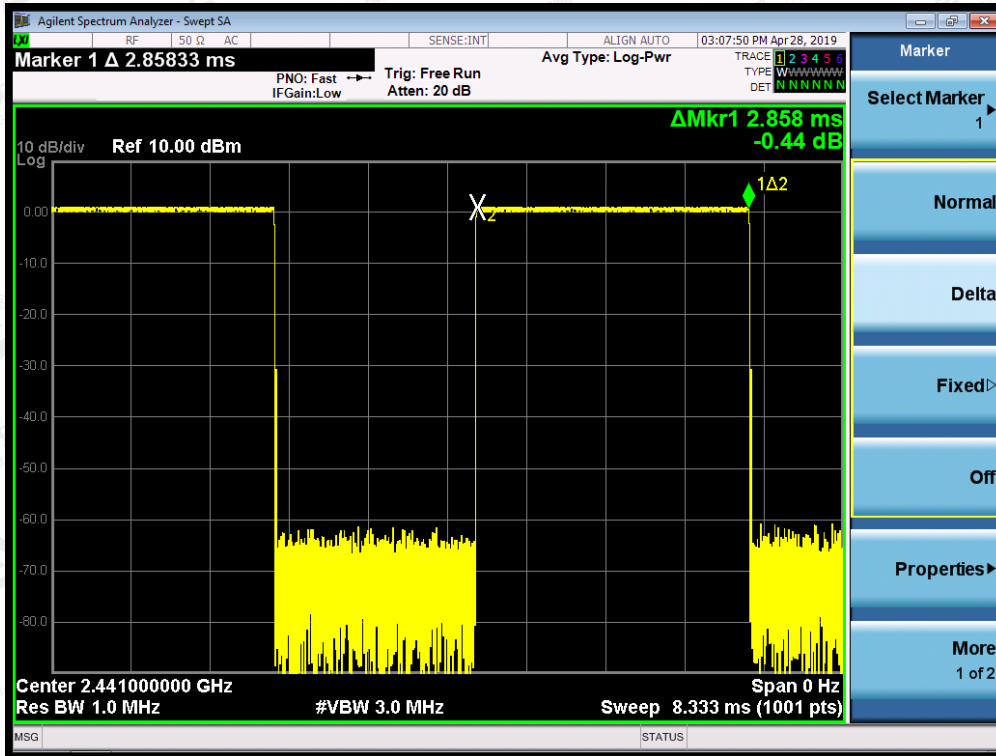
Note: The 8-DPSK modulation is the worst case and recorded in the report.

TEST PLOT OF LOW CHANNEL



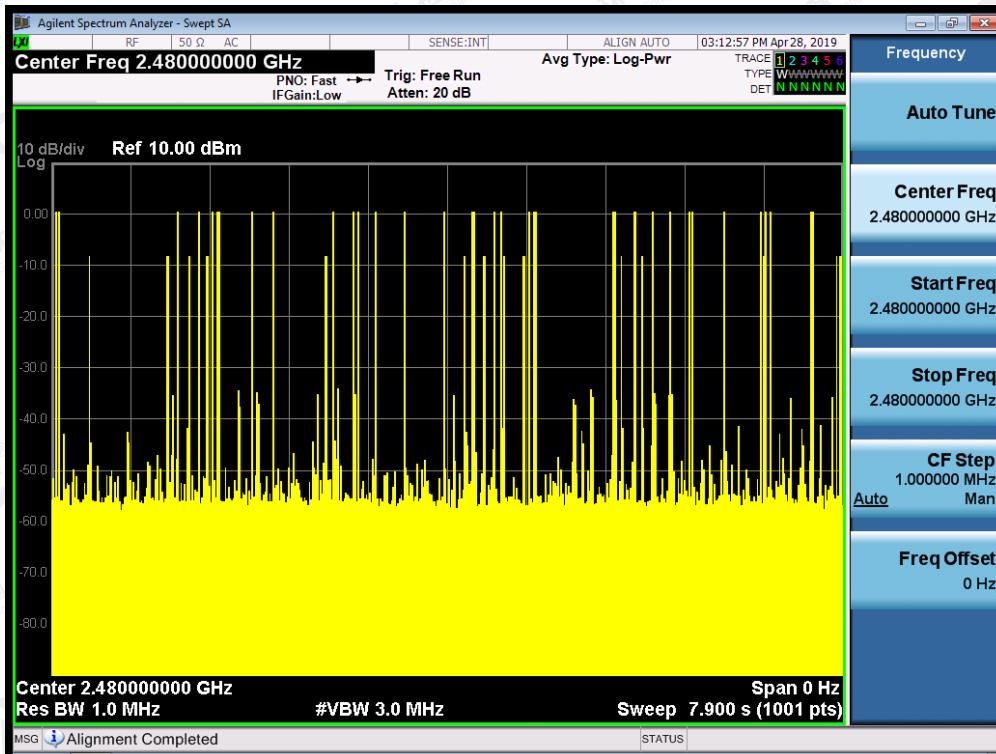
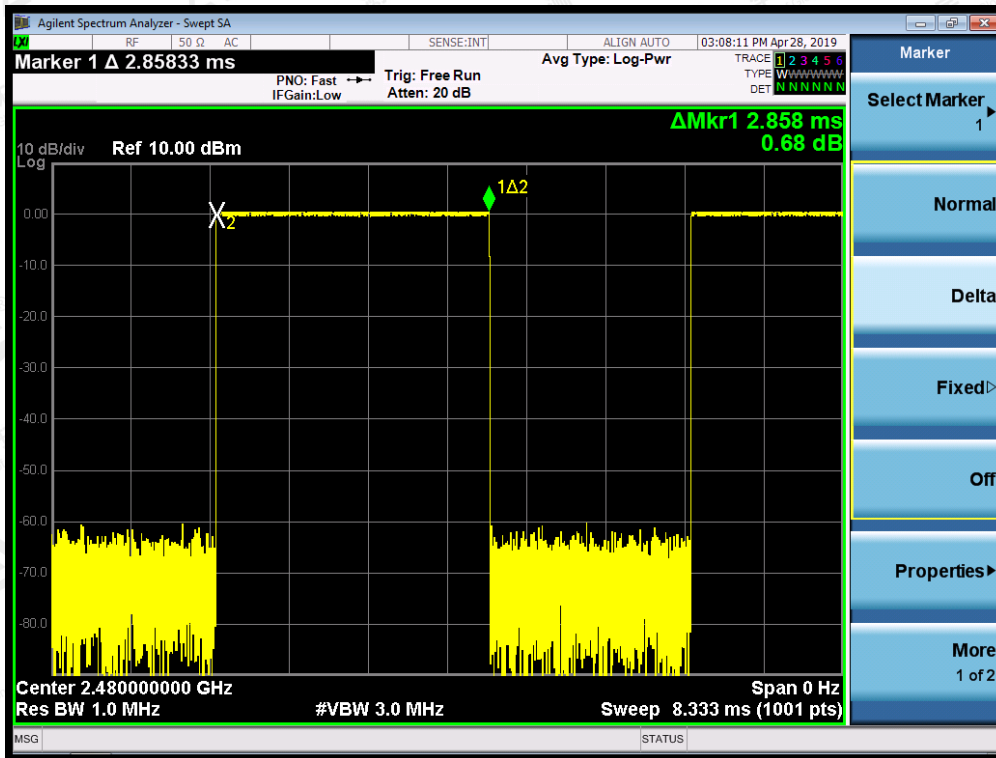
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TEST PLOT OF MIDDLE CHANNEL



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TEST PLOT OF HIGH CHANNEL



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### 13. FREQUENCY SEPARATION

#### 13.1. MEASUREMENT PROCEDURE

The EUT shall have its hopping function enabled. Use the following spectrum analyzer settings:

1. Span: Wide enough to capture the peaks of two adjacent channels.
2. RBW: Start with the RBW set to approximately 30% of the channel spacing; adjust as necessary to best identify the center of each individual channel.
3. Video (or average) bandwidth (VBW)  $\geq$  RBW.
4. Sweep: Auto. e) Detector function: Peak. f) Trace: Max hold. g) Allow the trace to stabilize.

Use the marker-delta function to determine the separation between the peaks of the adjacent channels.

#### 13.2. TEST SETUP (BLOCK DIAGRAM OF CONFIGURATION)

Same as described in section 6.2

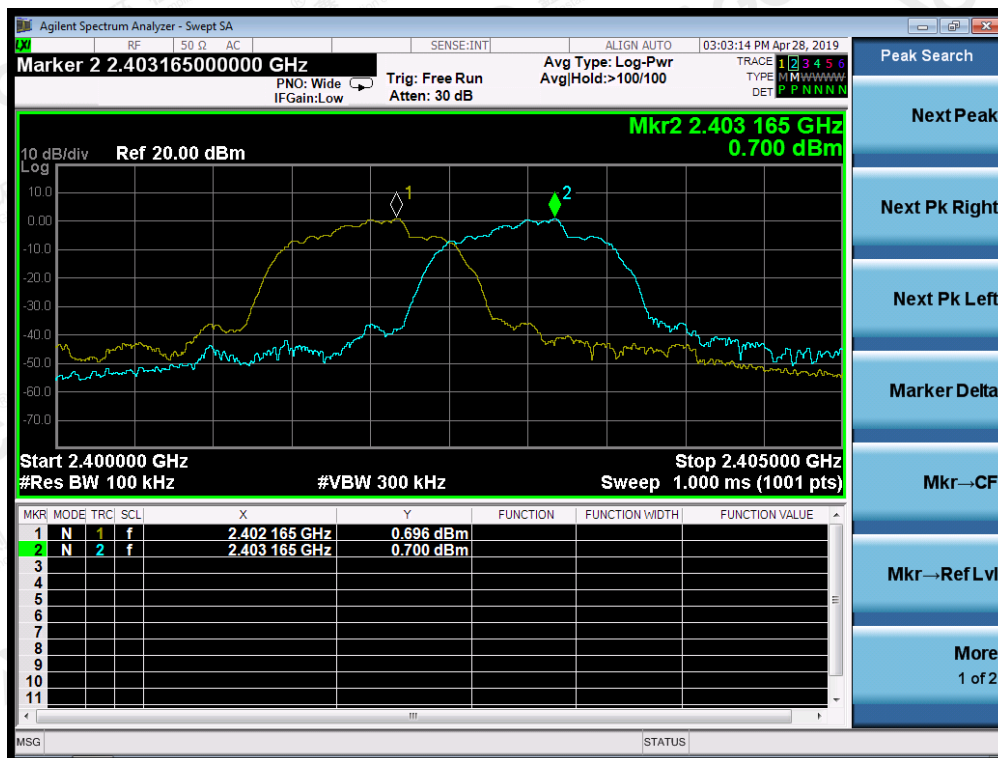
#### 13.3. MEASUREMENT EQUIPMENT USED

The same as described in section 6.3

#### 13.4. LIMITS AND MEASUREMENT RESULT

CHANNEL	CHANNEL SEPARATION	LIMIT	RESULT
	KHz	KHz	
CH01-CH02	1000	$\geq$ 25 KHz or 2/3 20 dB BW	Pass

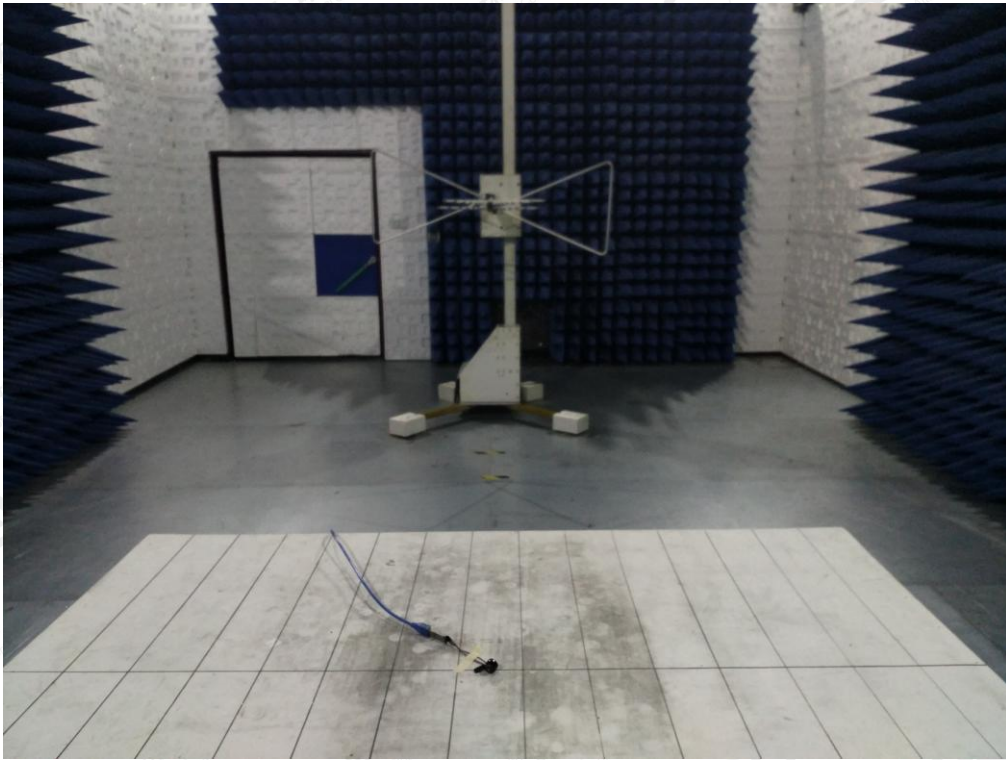
TEST PLOT FOR FREQUENCY SEPARATION



Note: The 8-DPSK modulation is the worst case and recorded in the report.

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**APPENDIX A: PHOTOGRAPHS OF TEST SETUP**  
RADIATED EMISSION TEST SETUP BELOW 1GHZ



RADIATED EMISSION TEST SETUP ABOVE 1GHZ



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**APPENDIX B: PHOTOGRAPHS OF EUT**  
ALL VIEW OF EUT



TOP VIEW OF EUT



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BOTTOM VIEW OF EUT



FRONT VIEW OF EUT



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BACK VIEW OF EUT

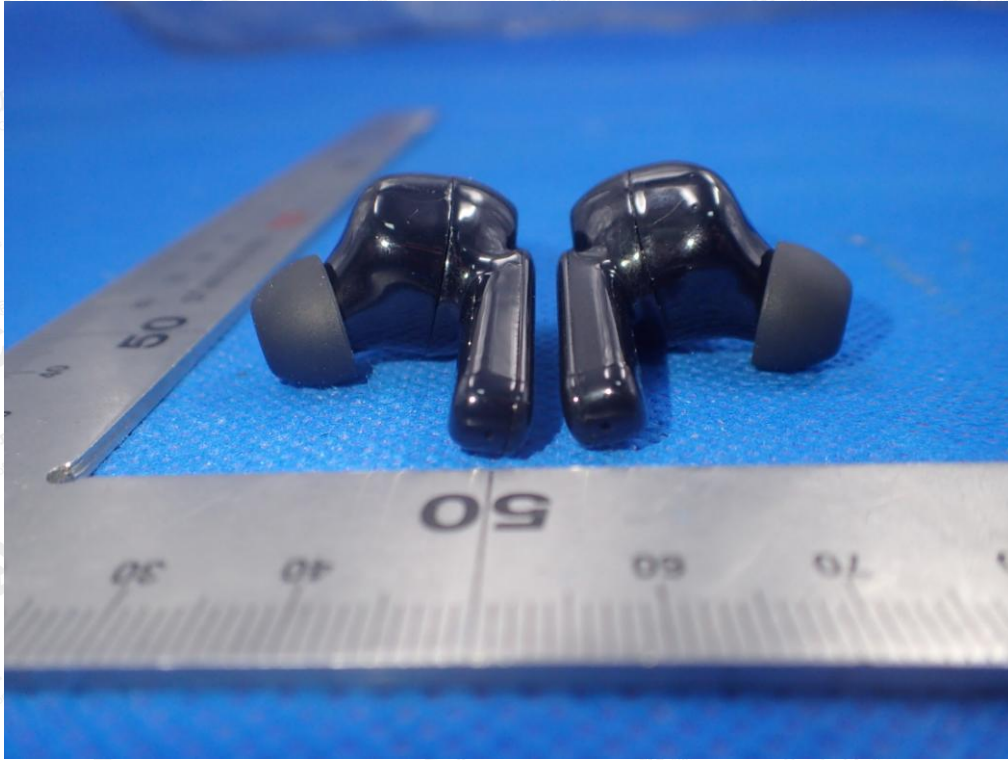


LEFT VIEW OF EUT



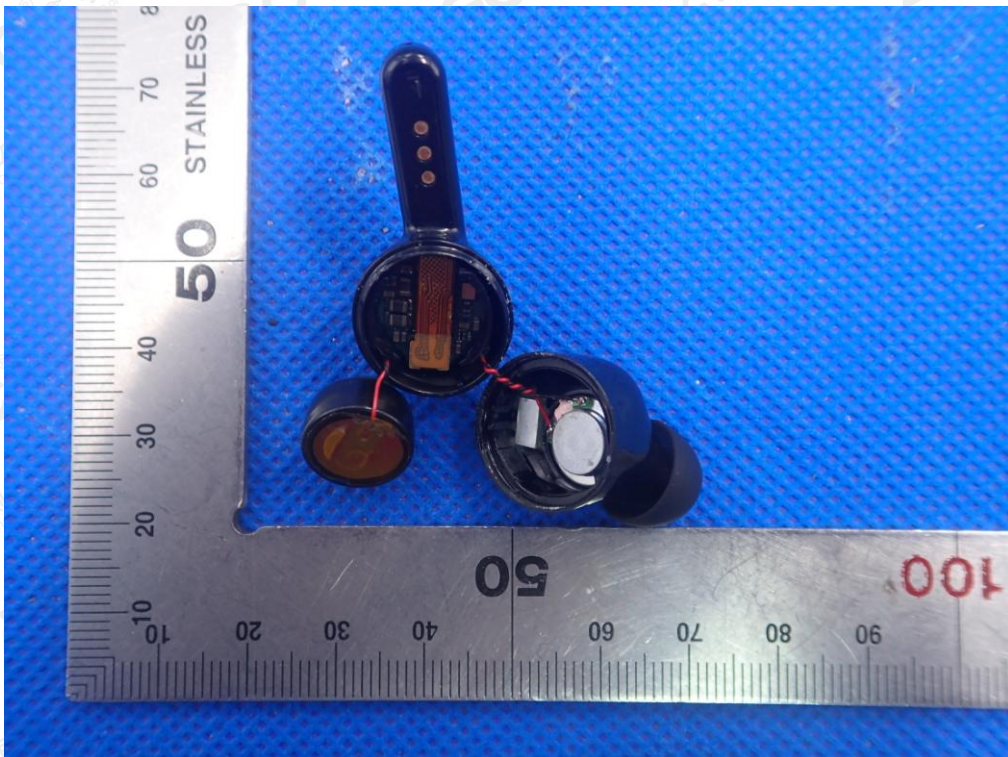
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RIGHT VIEW OF EUT



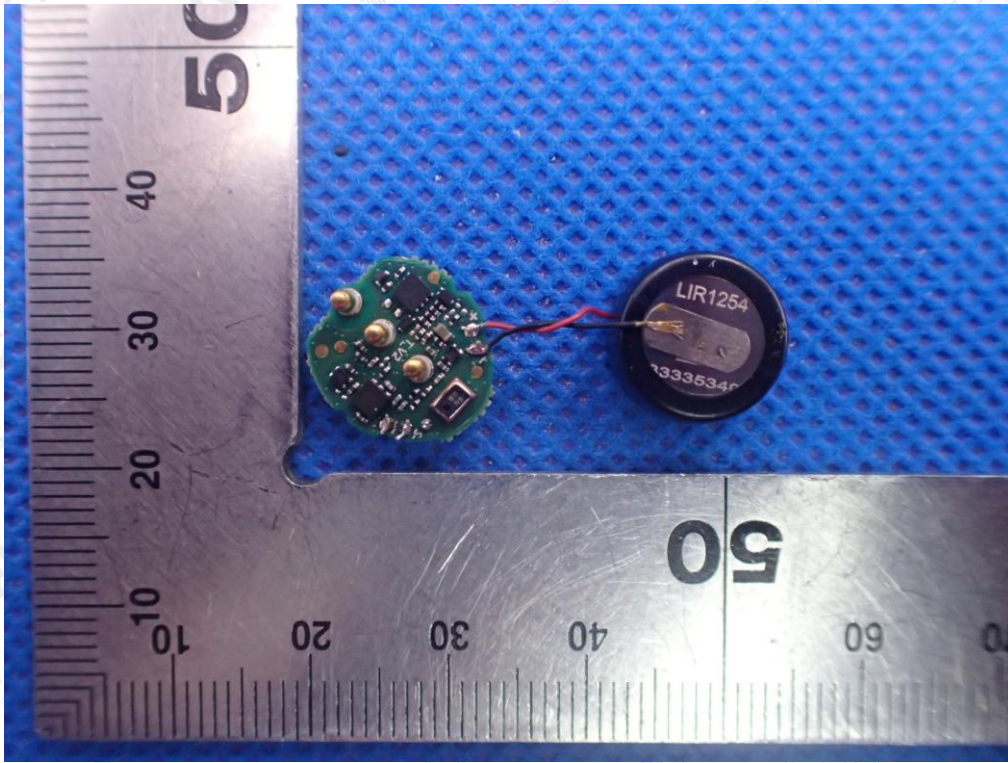
Left

OPEN VIEW OF EUT

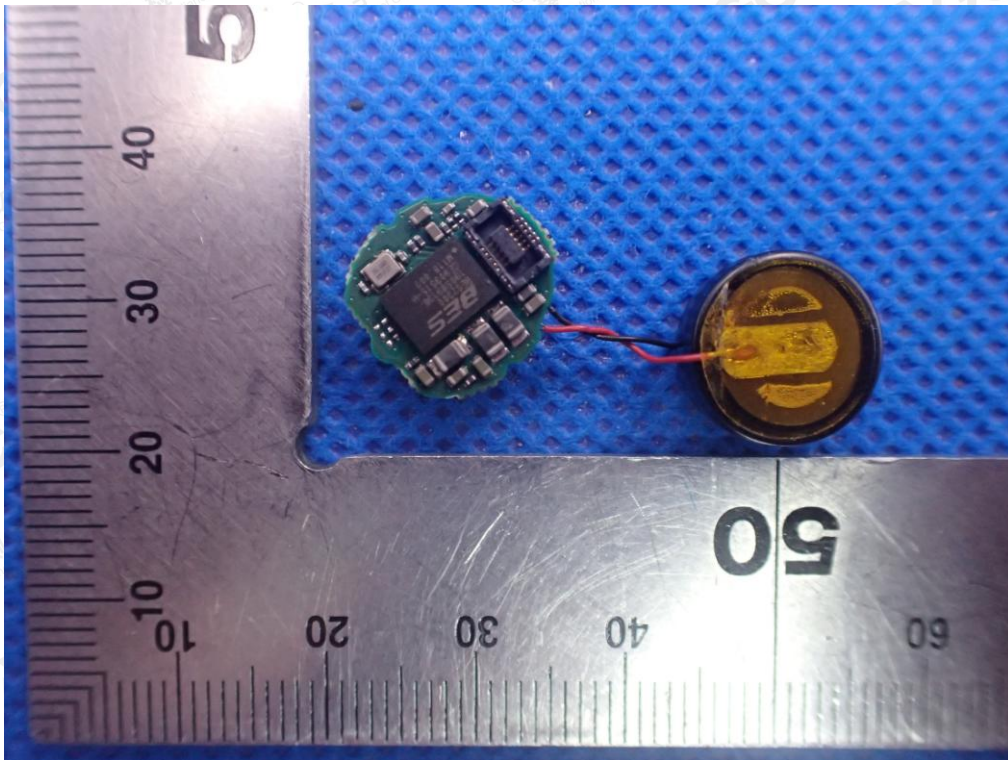


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INTERNAL VIEW OF EUT-1

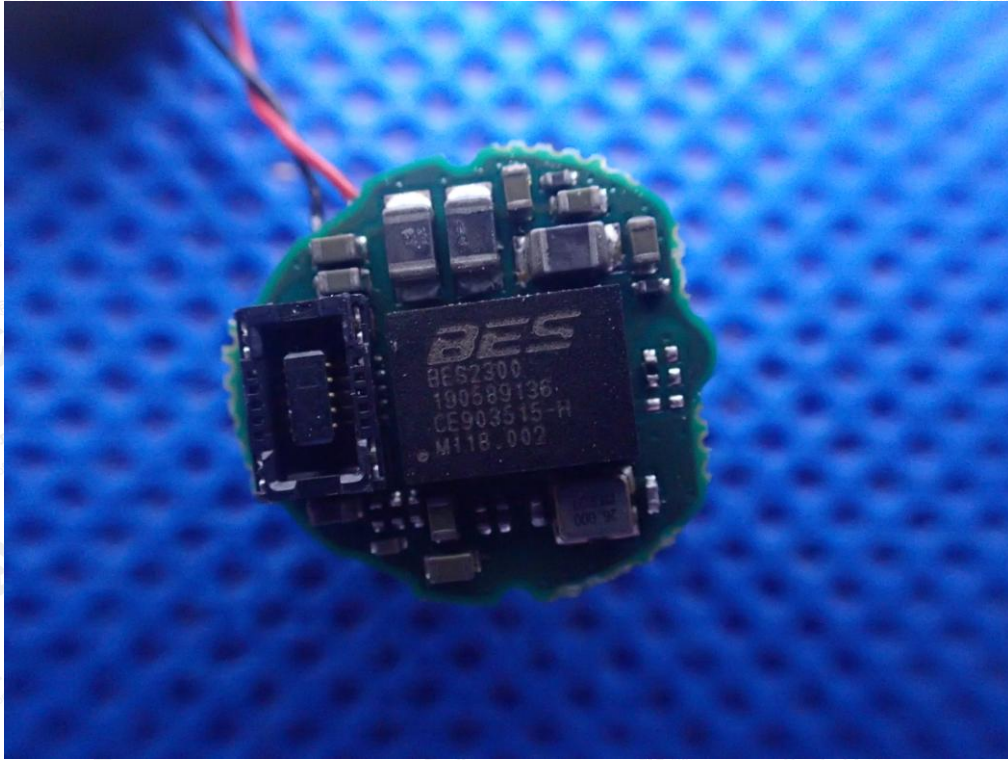


INTERNAL VIEW OF EUT-2



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INTERNAL VIEW OF EUT-3



INTERNAL VIEW OF EUT-4



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INTERNAL VIEW OF EUT-5

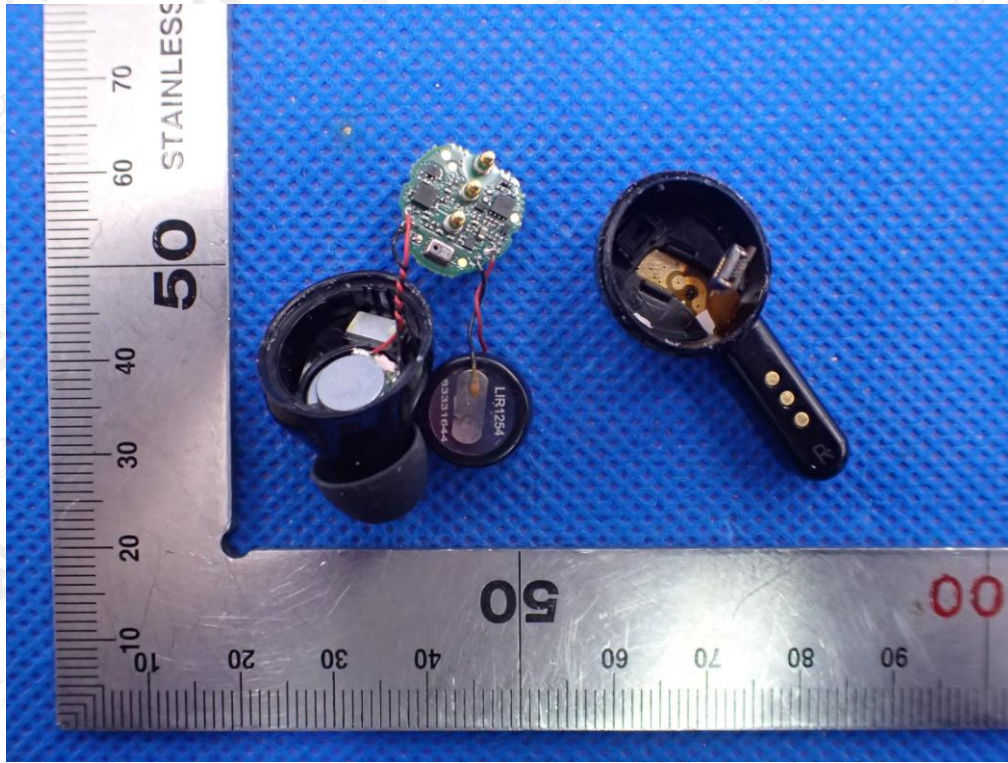


Right  
OPEN VIEW OF EUT-1

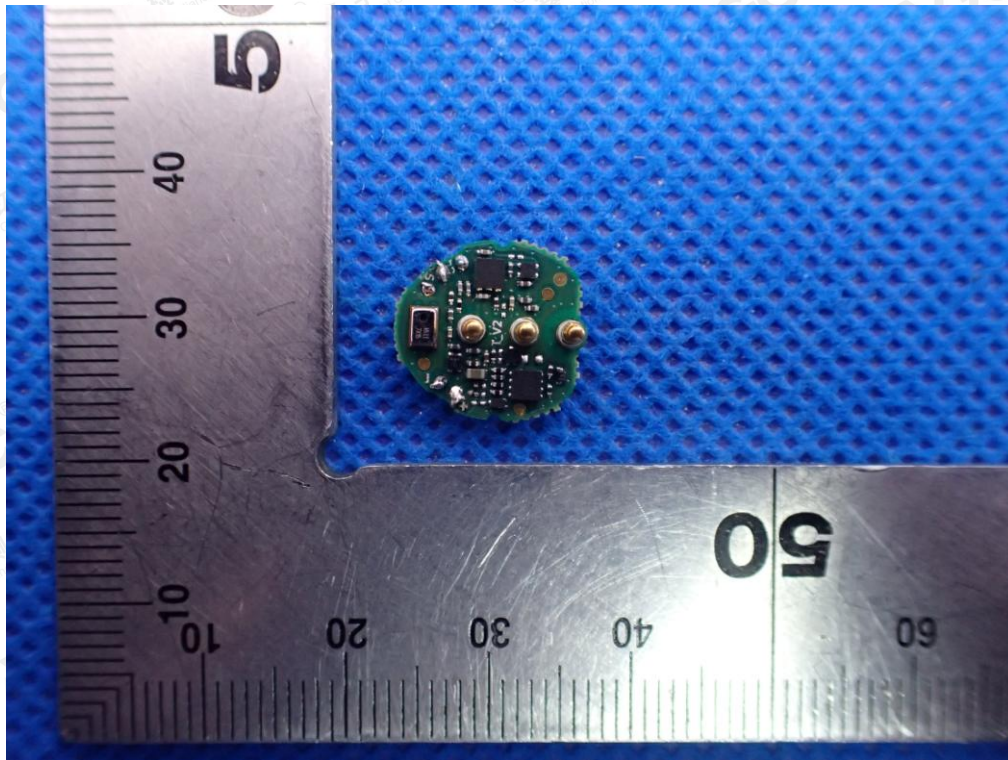


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OPEN VIEW OF EUT-2

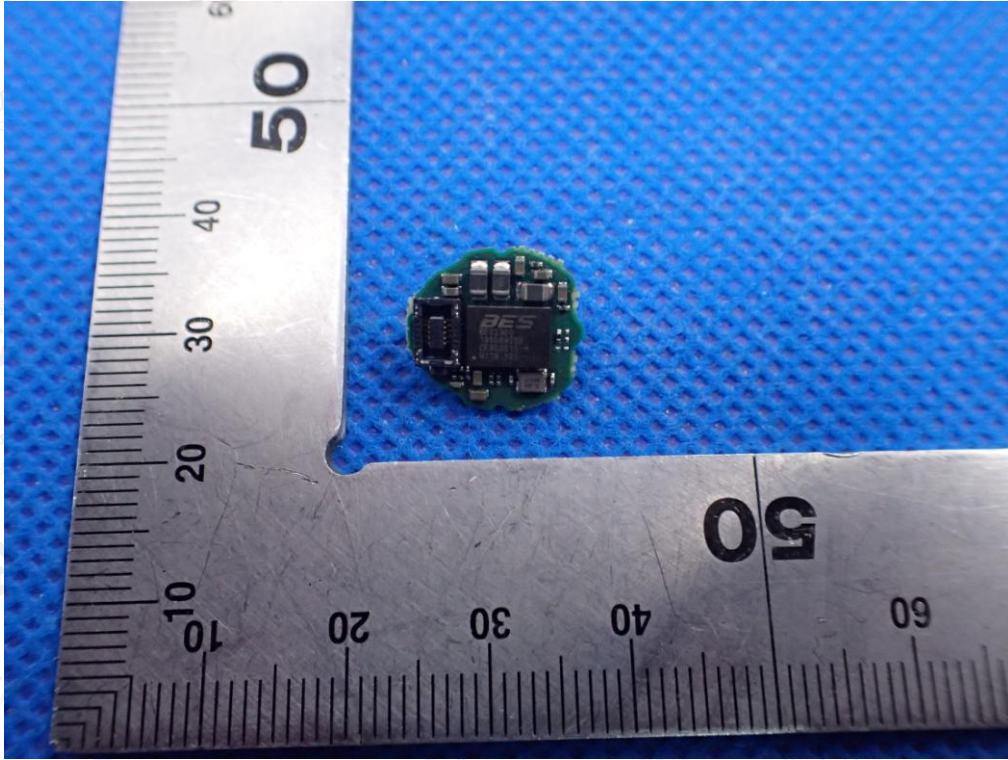


INTERNAL VIEW OF EUT-1

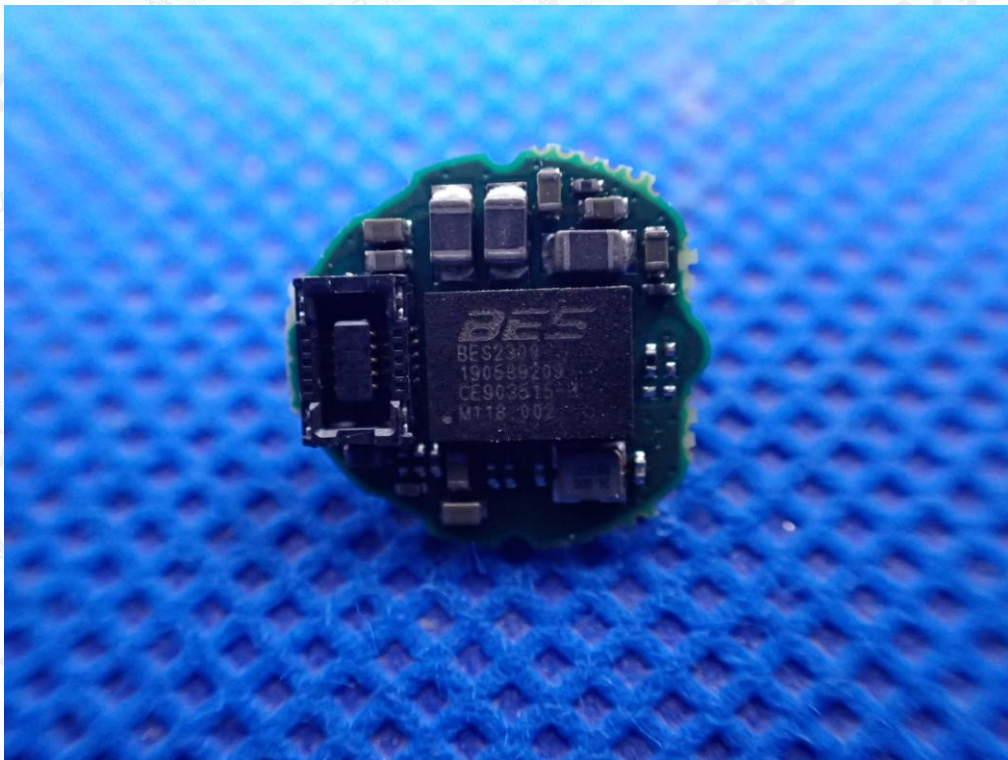


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INTERNAL VIEW OF EUT-2



INTERNAL VIEW OF EUT-3

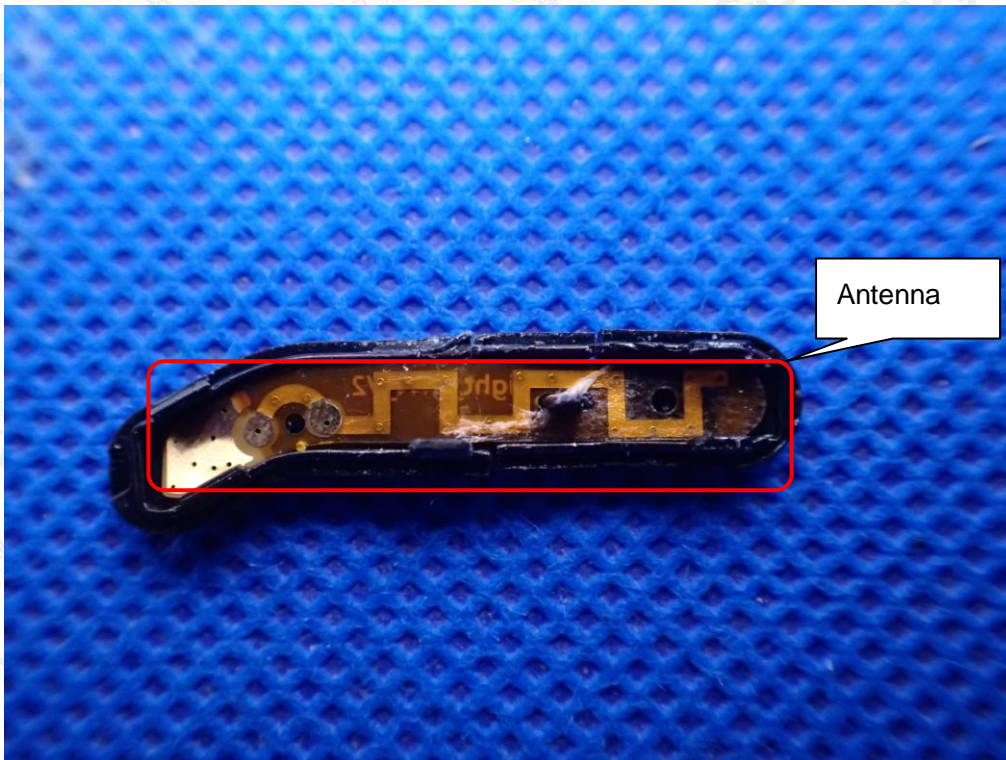


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INTERNAL VIEW OF EUT-4



INTERNAL VIEW OF EUT-5



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ALL VIEW OF EUT



TOP VIEW OF EUT

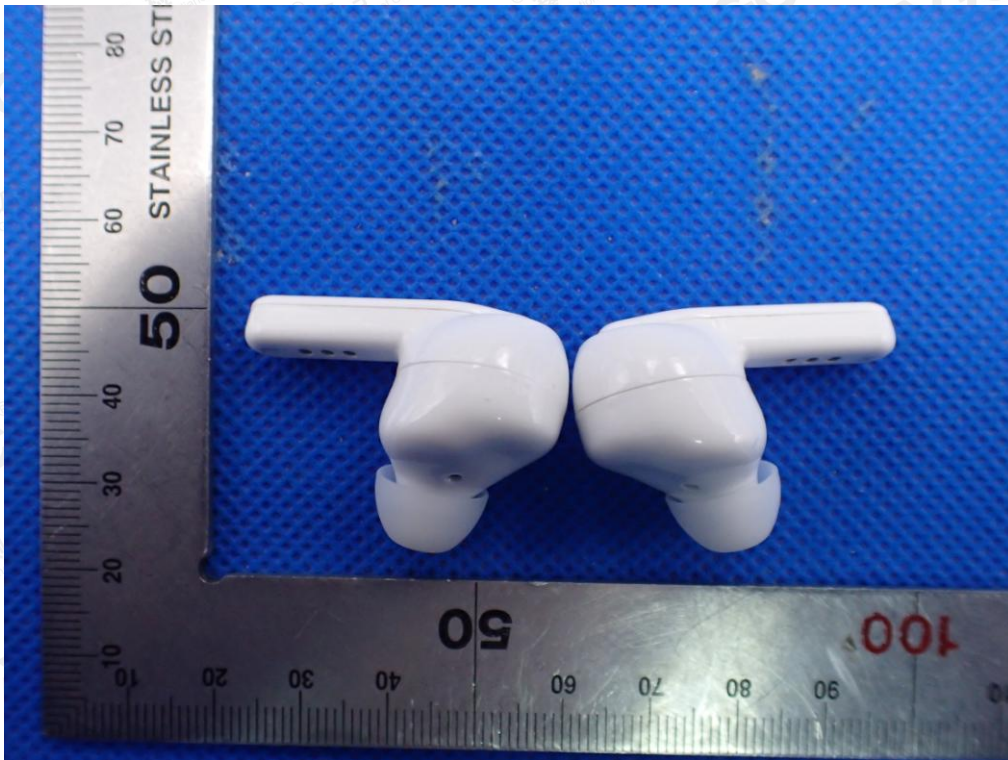


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BOTTOM VIEW OF EUT

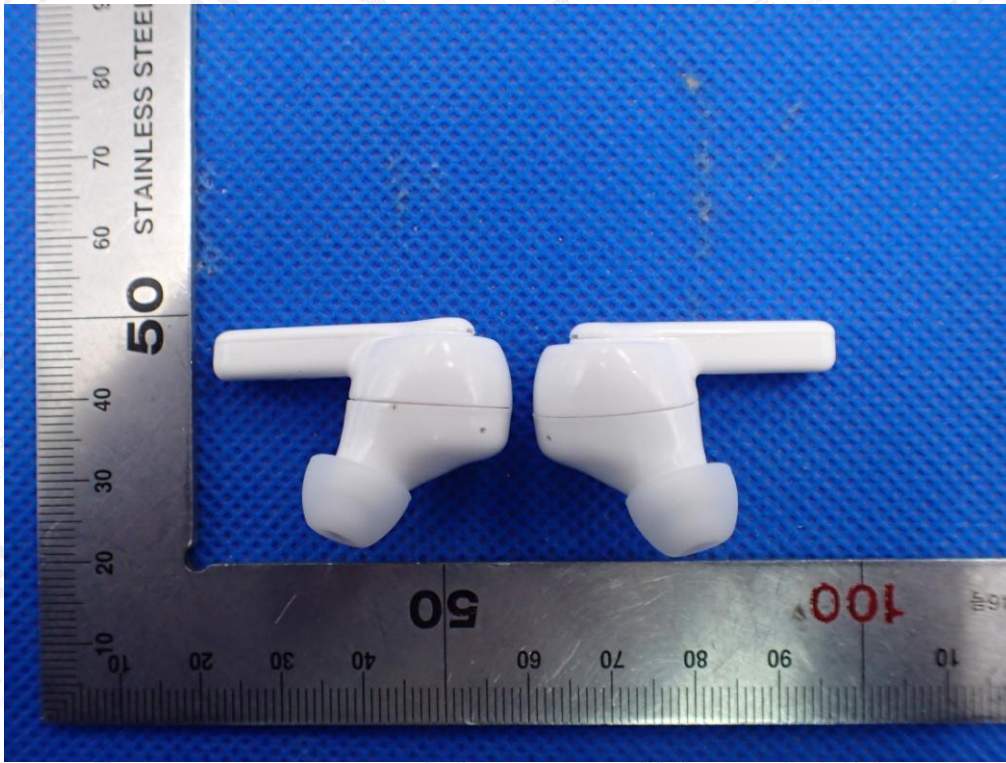


FRONT VIEW OF EUT



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BACK VIEW OF EUT



LEFT VIEW OF EUT



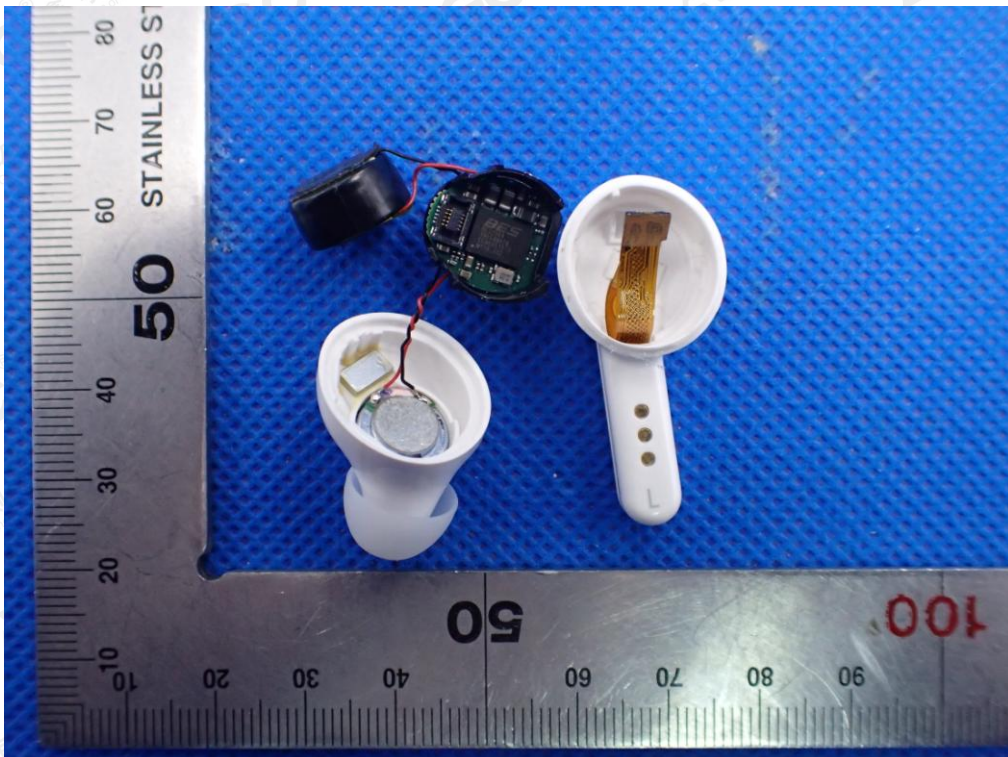
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RIGHT VIEW OF EUT



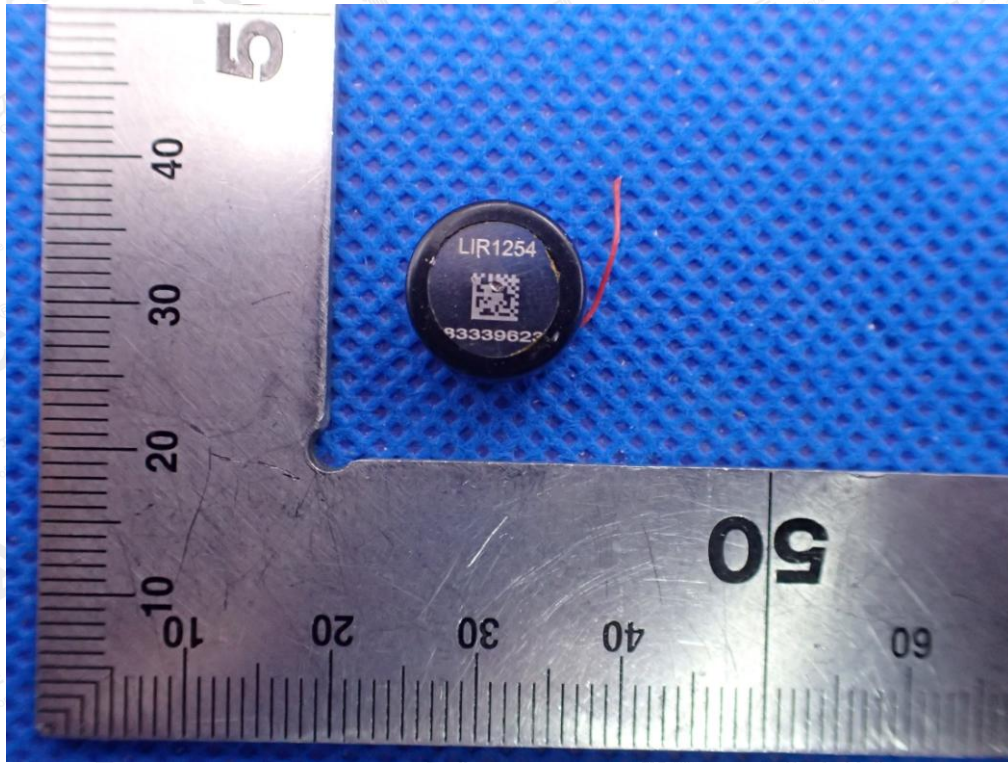
Lift

OPEN VIEW OF EUT

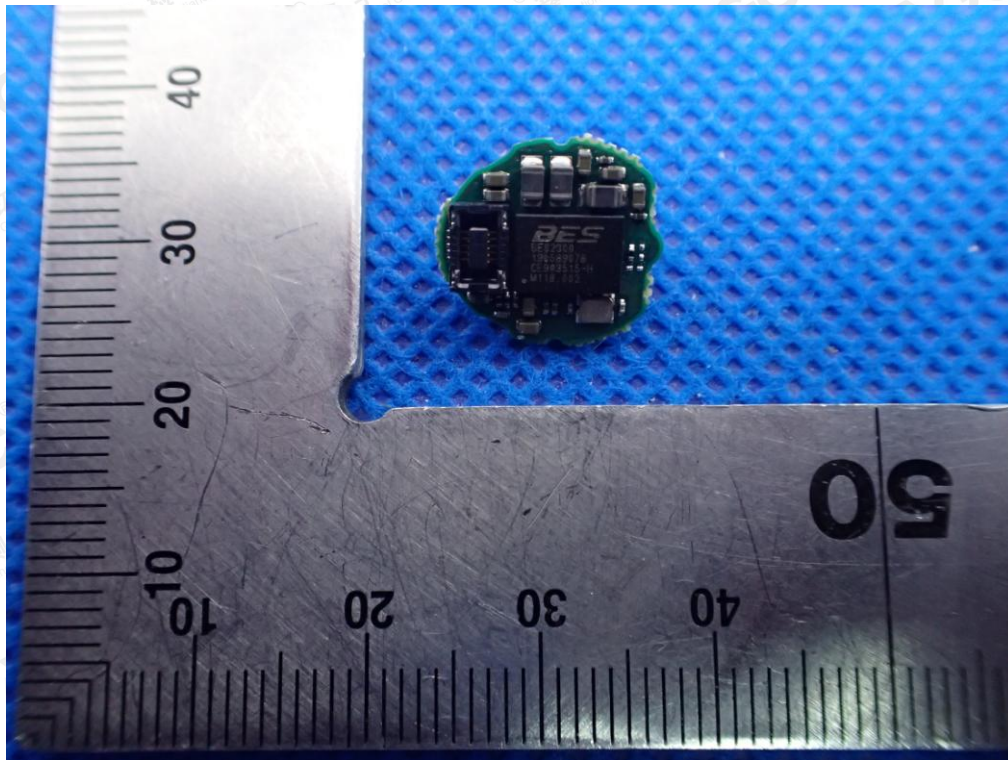


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INTERNAL VIEW OF EUT-1

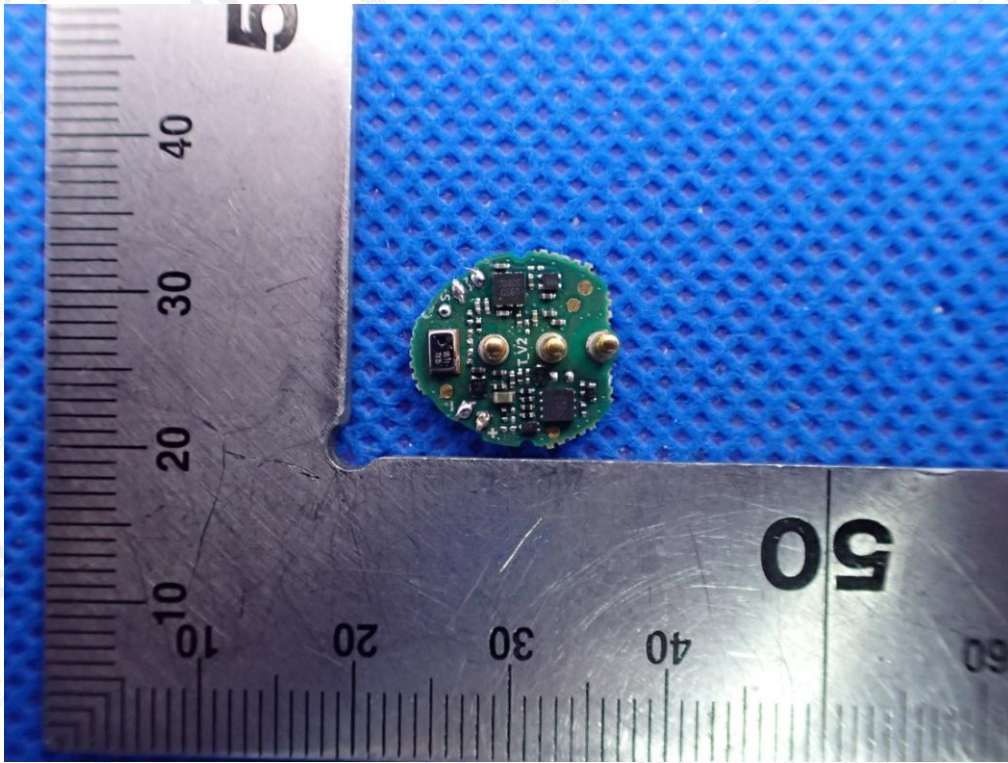


INTERNAL VIEW OF EUT-2

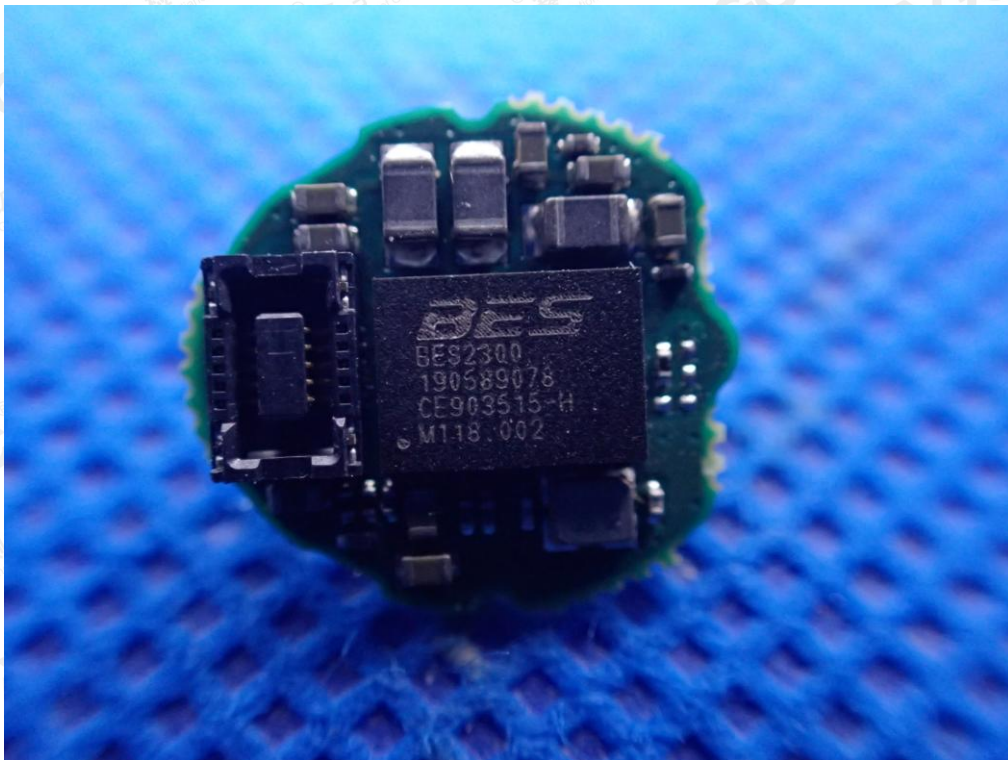


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INTERNAL VIEW OF EUT-3

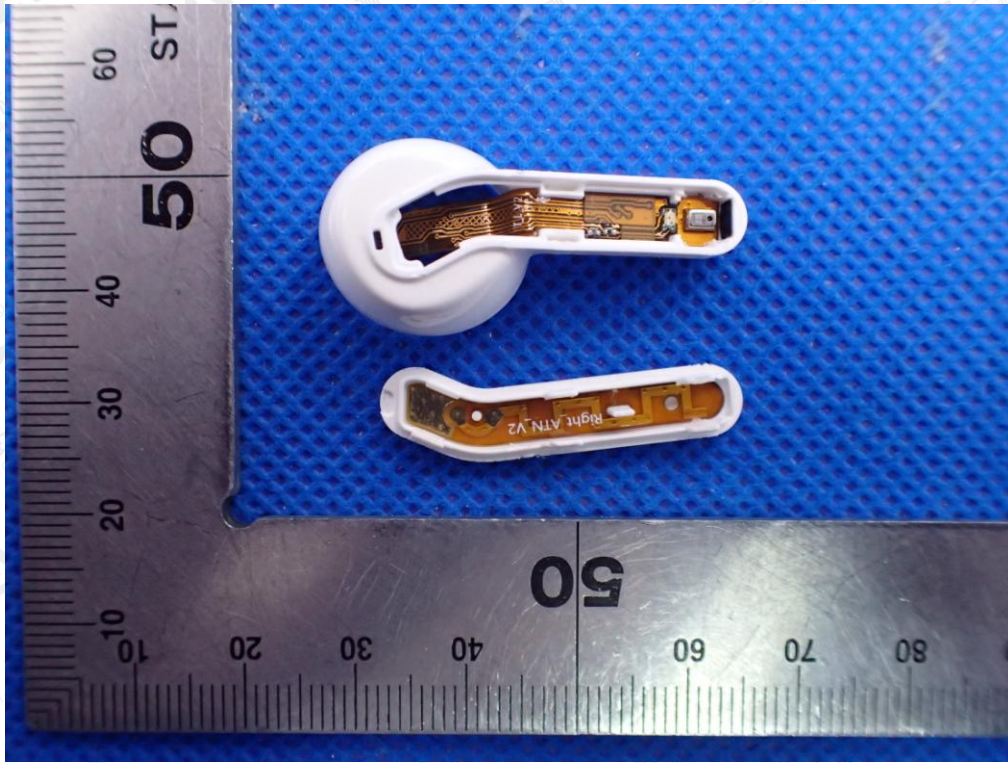


INTERNAL VIEW OF EUT-4



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INTERNAL VIEW OF EUT-5

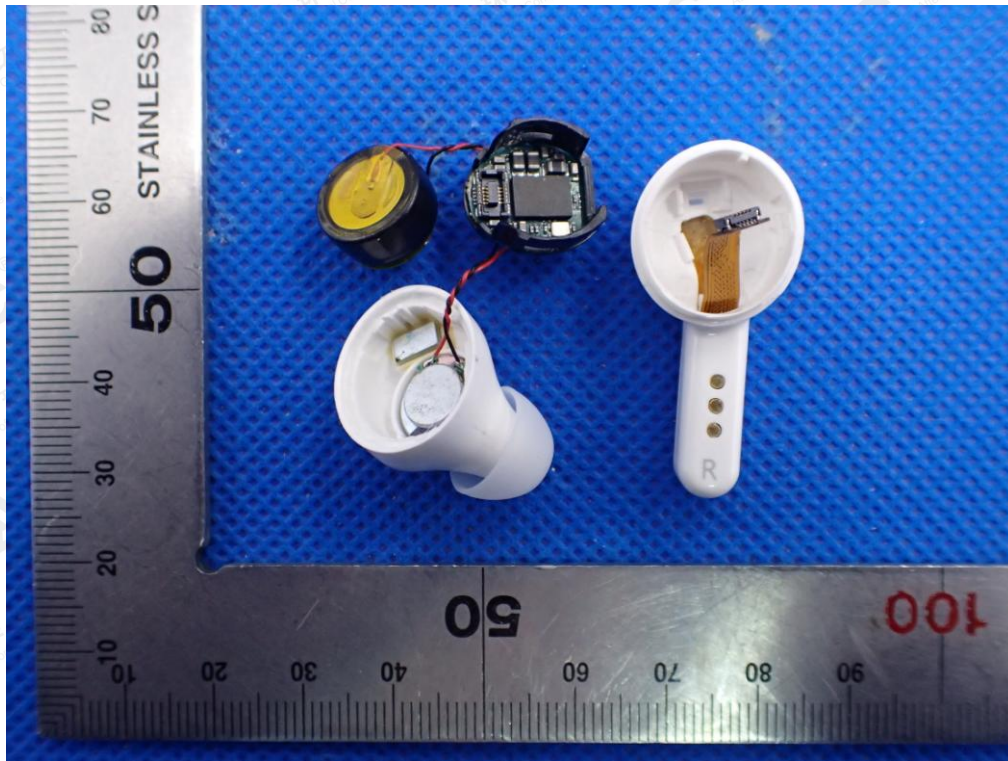


INTERNAL VIEW OF EUT-6

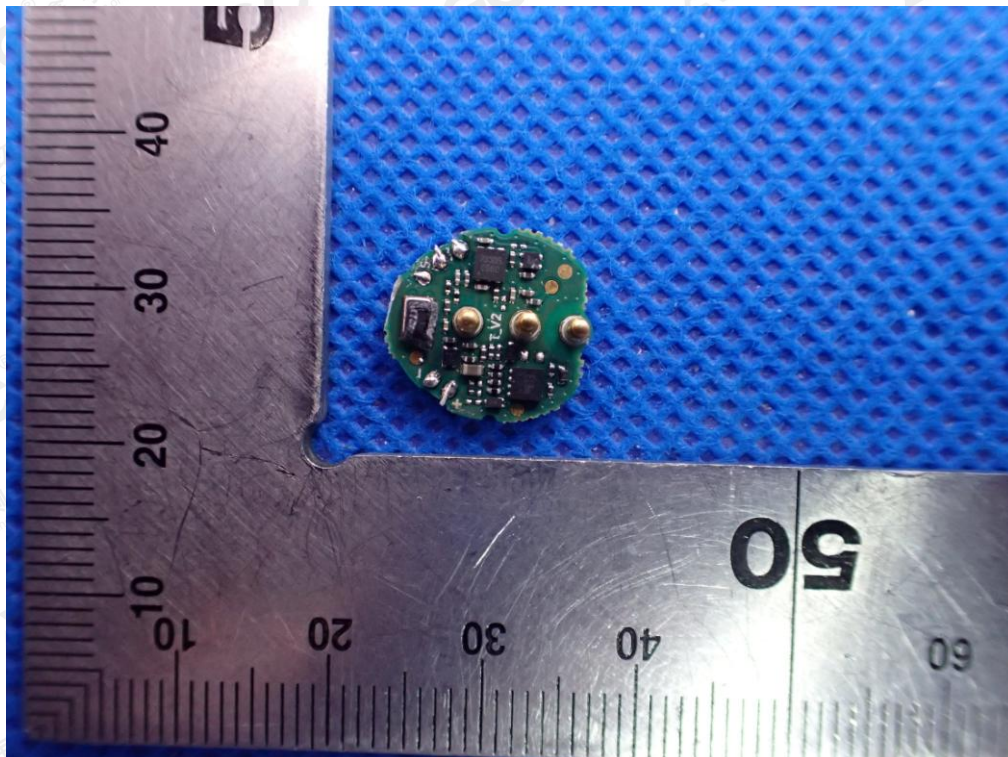


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**Right**  
**OPEN VIEW OF EUT**



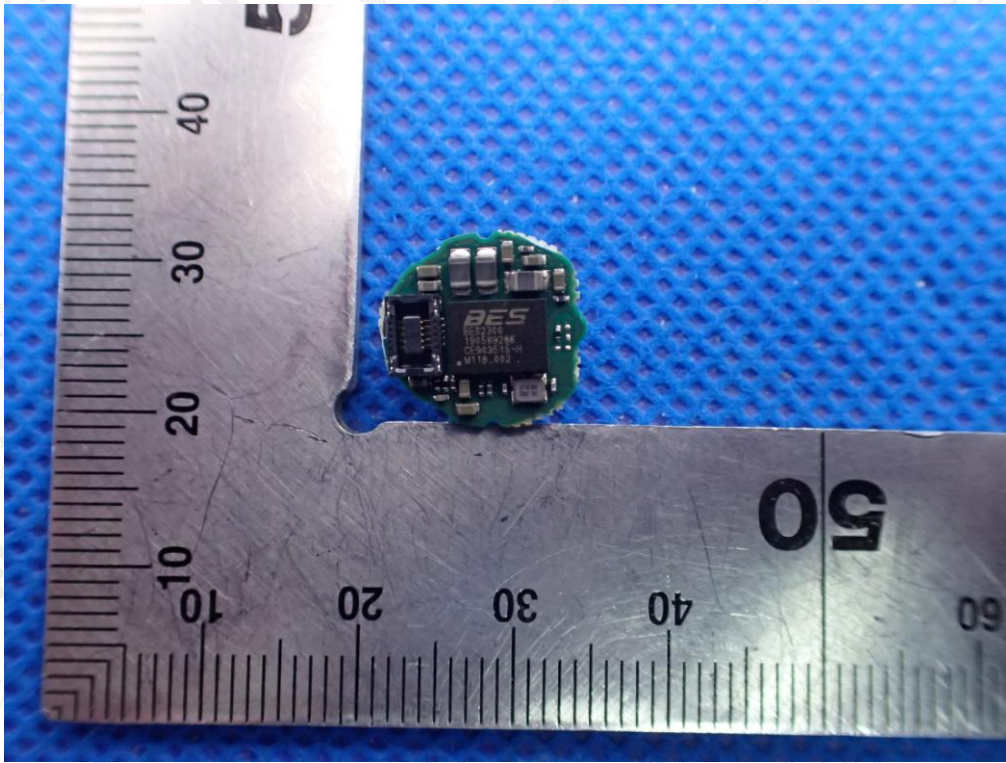
**INTERNAL VIEW OF EUT-1**



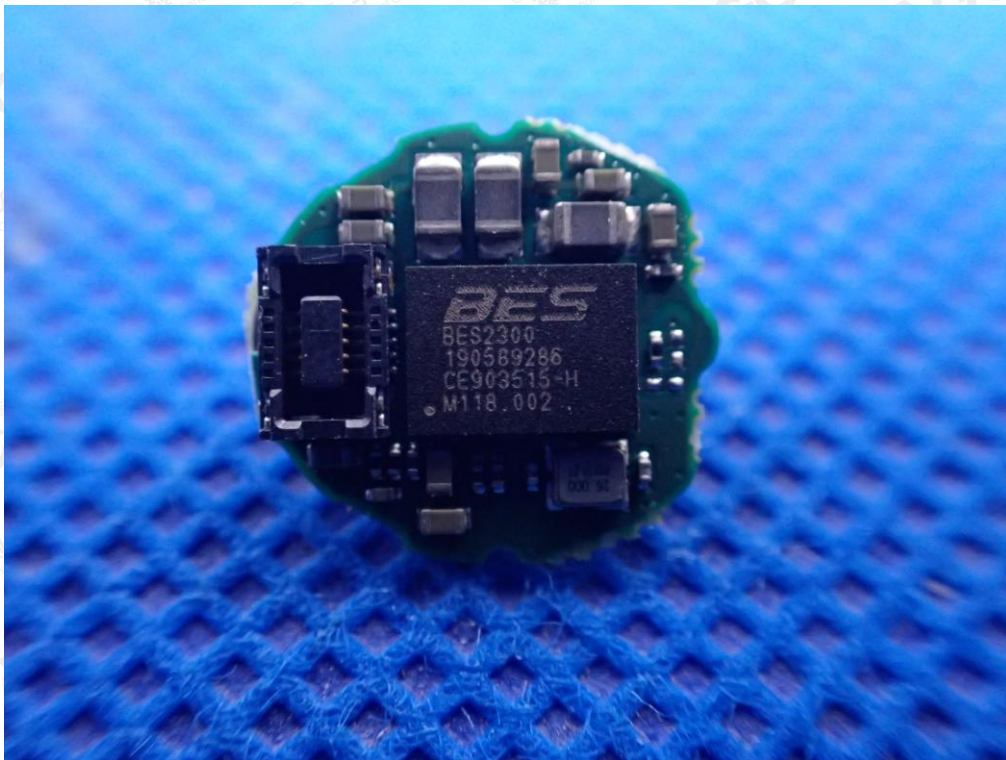
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INTERNAL VIEW OF EUT-2

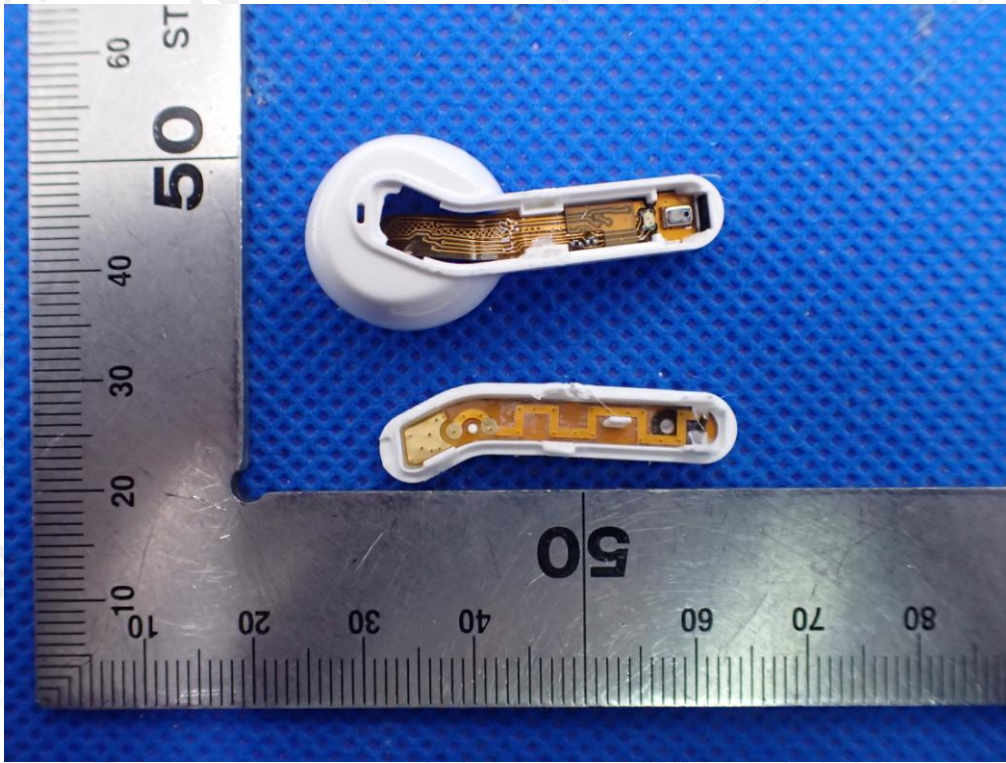


INTERNAL VIEW OF EUT-3

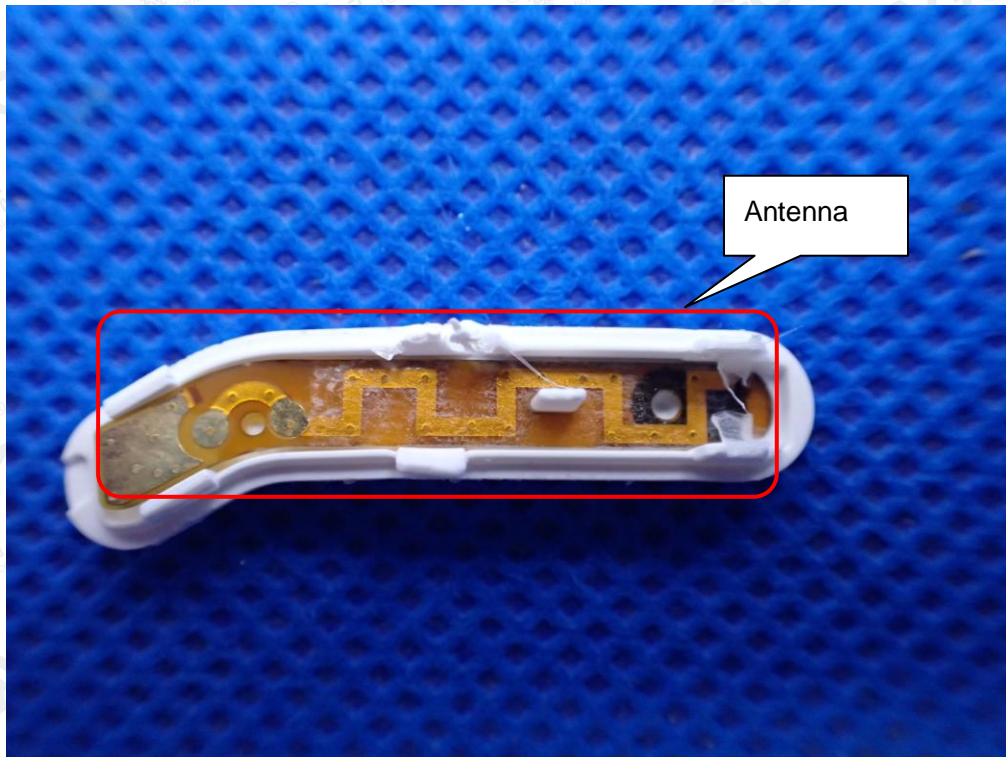


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INTERNAL VIEW OF EUT-4



INTERNAL VIEW OF EUT-5



----END OF REPORT----

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