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≤channel spacing and where possible RBW should be set >> 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) × (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

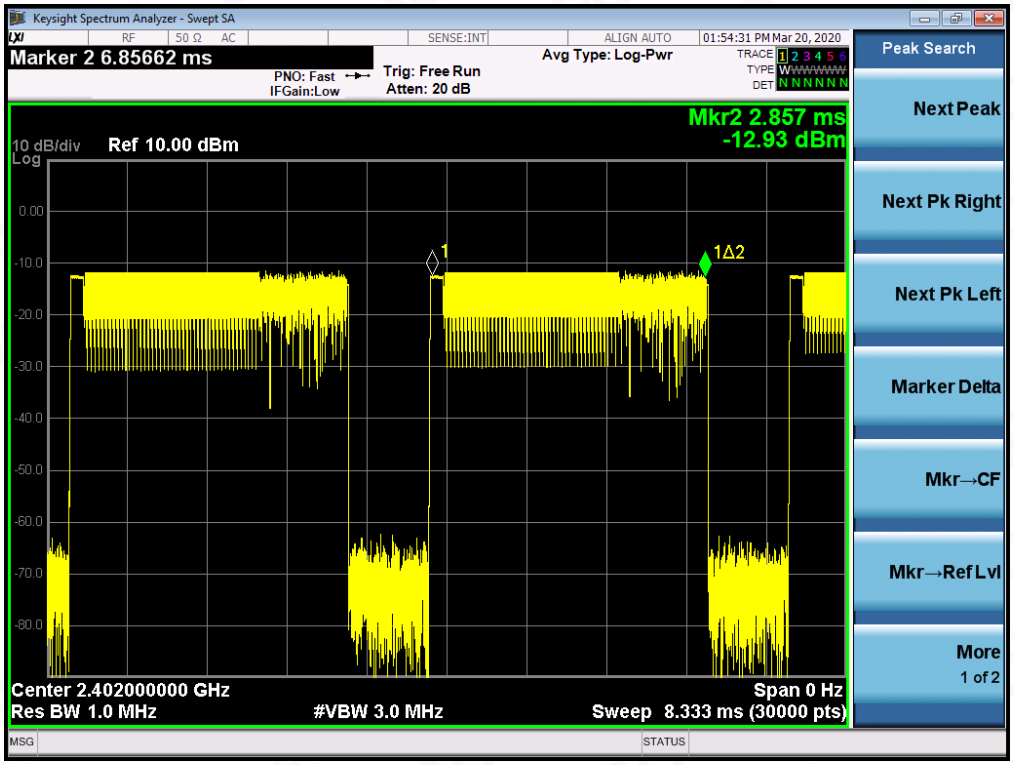
The same as described in section 6

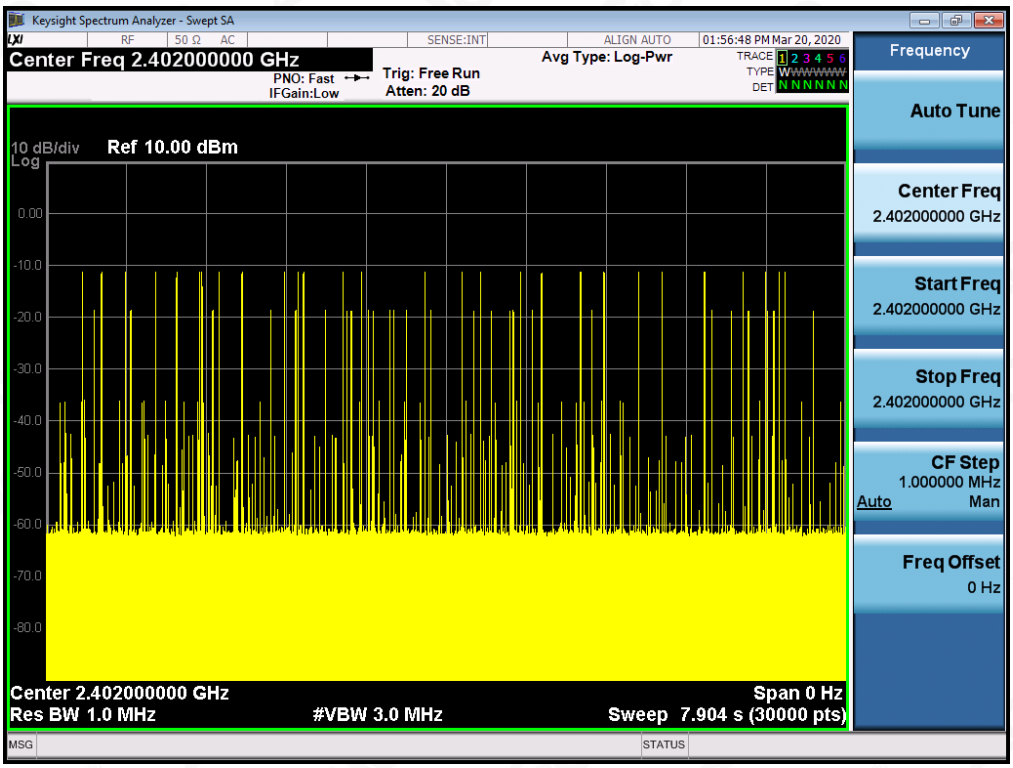
12.4. LIMITS AND MEASUREMENT RESULT

Channel	Time of Pulse for DH5 (ms)	Number of hops in the period specified in the requirements	Sweep Time (ms)	Limit (ms)
Low	2.857	28*4	319.984	400
Middle	2.859	32*4	365.952	400
High	2.881	27*4	311.148	400

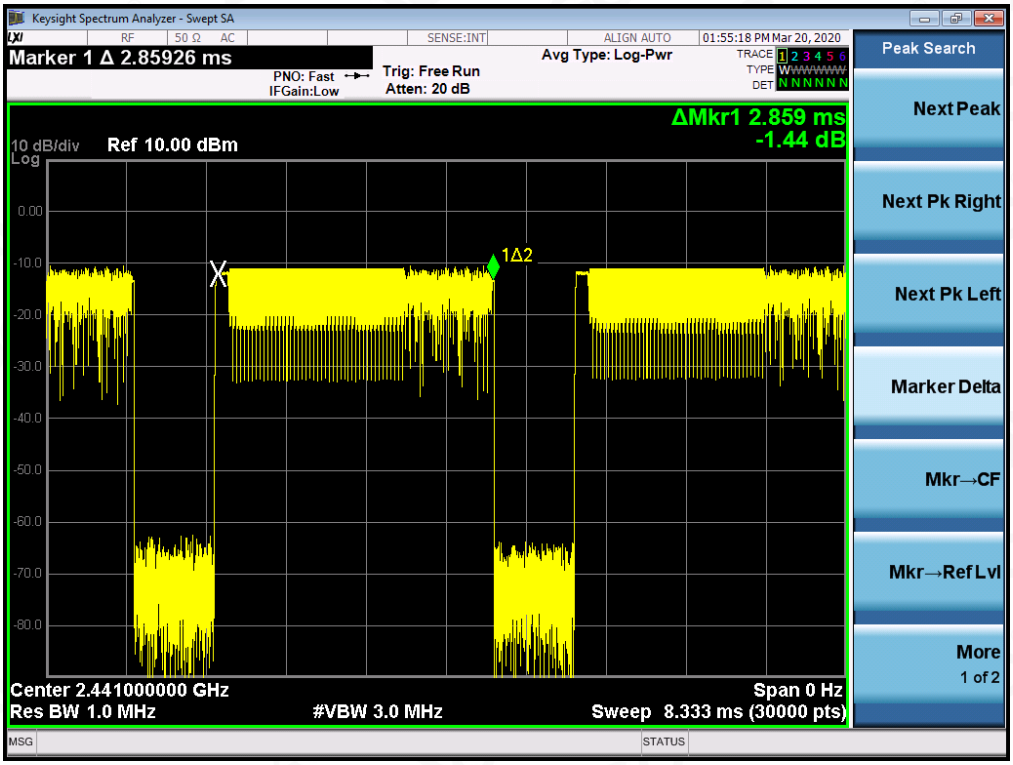
Note: The 8DPSK modulation is the worst case and recorded in the report.

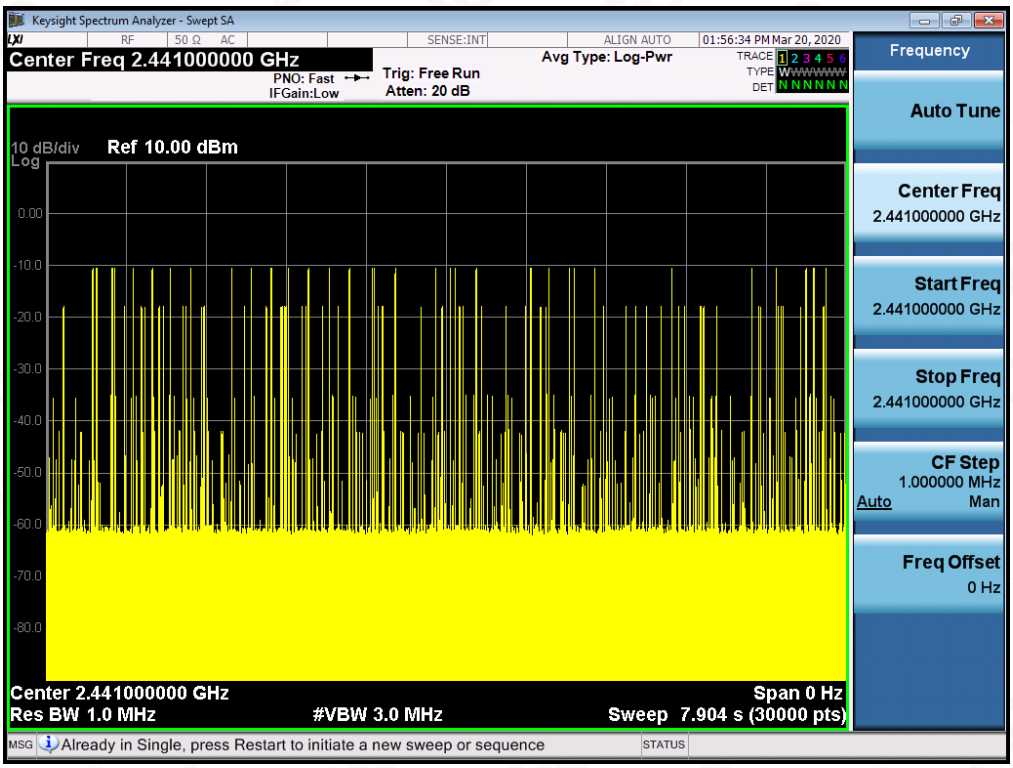
TEST PLOT OF LOW CHANNEL



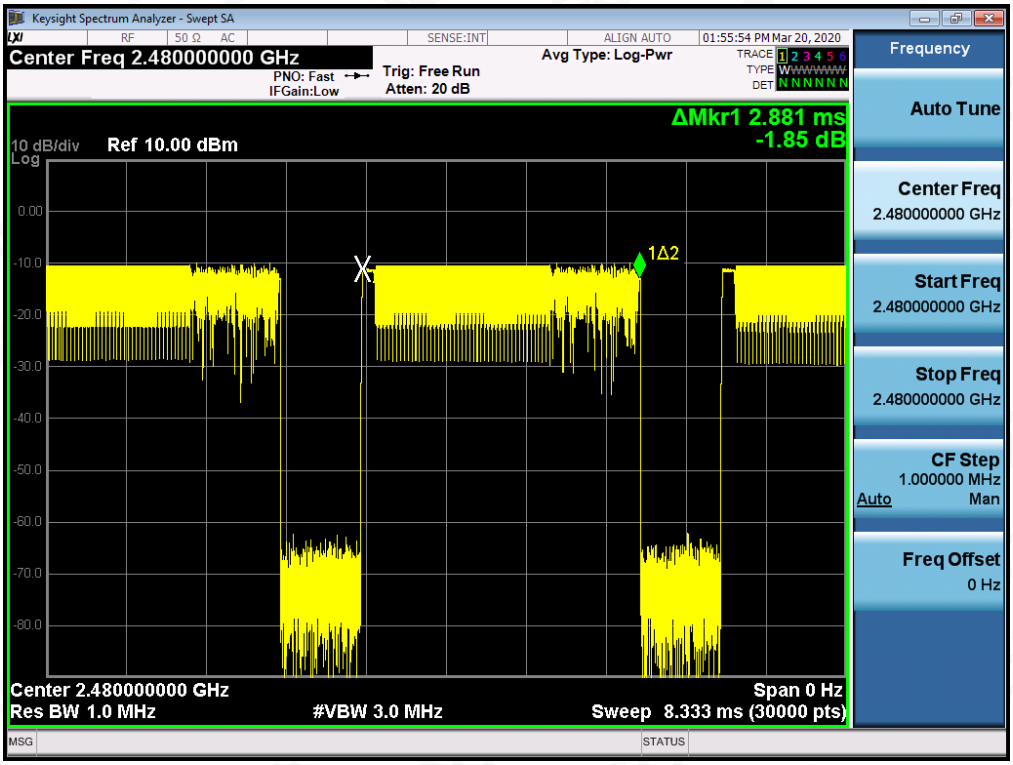


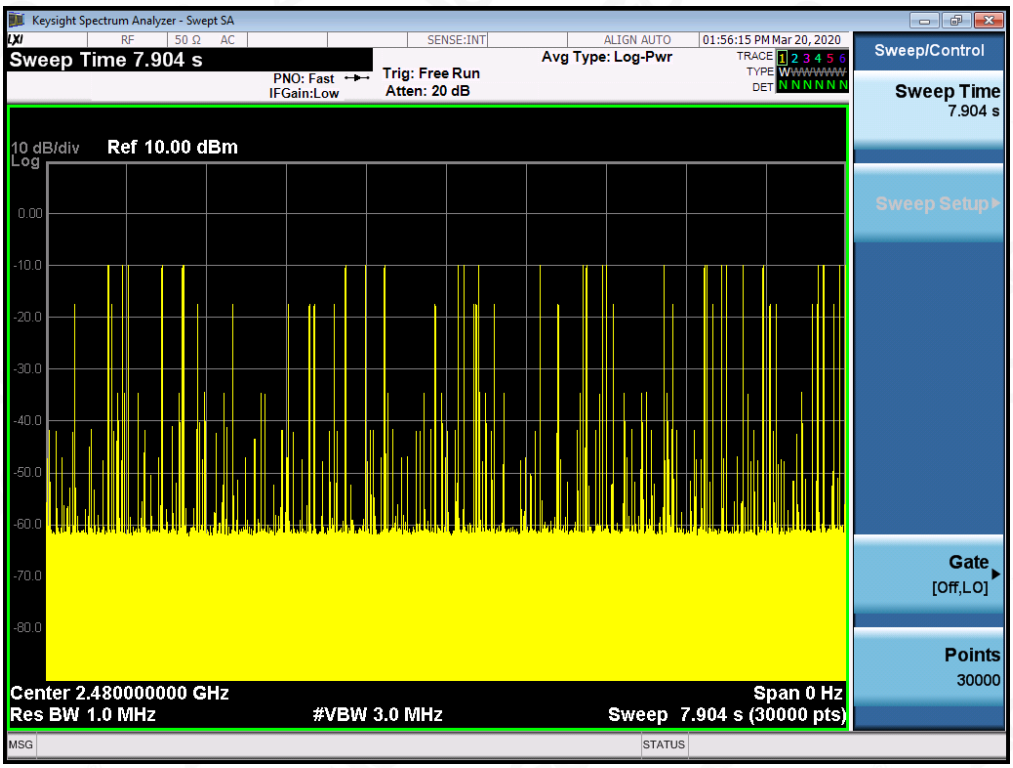
TEST PLOT OF MIDDLE CHANNEL





TEST PLOT OF HIGH CHANNEL





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) ≥ 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 KHz	LIMIT (KHz)	RESULT
CH01-CH02	1000	>=25 KHz or 2/3 20 dB BW	PASS

TEST PLOT FOR FREQUENCY SEPARATION

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

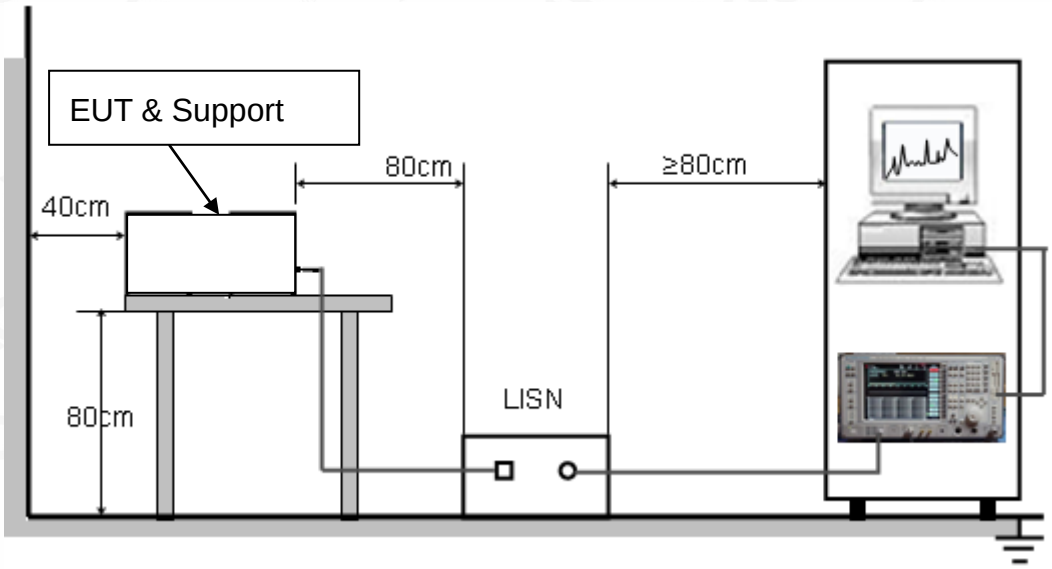
14. FCC LINE CONDUCTED EMISSION TEST

14.1. LIMITS OF LINE CONDUCTED EMISSION TEST

Frequency	Maximum RF Line Voltage	
	Q.P.(dBuV)	Average(dBuV)
150kHz~500kHz	66-56	56-46
500kHz~5MHz	56	46
5MHz~30MHz	60	50

Note: 1. The lower limit shall apply at the transition frequency.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.

14.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST



14.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST

1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
2. Support equipment, if needed, was placed as per ANSI C63.10.
3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
4. All support equipments received AC120V/60Hz power from a LISN, if any.
5. The EUT received DC charging voltage by adapter which received AC120V/60Hz power by a LISN.
6. The test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
7. Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
8. During the above scans, the emissions were maximized by cable manipulation.
9. The test mode(s) were scanned during the preliminary test.

Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

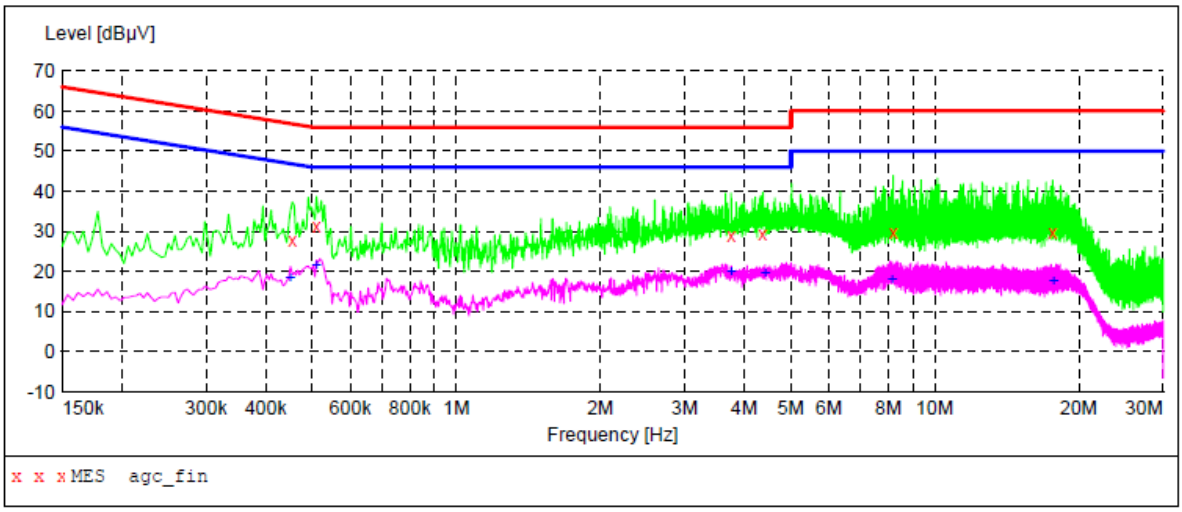
14.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST

1. EUT and support equipment was set up on the test bench as per step 2 of the preliminary test.
2. A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less –2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.
3. The test data of the worst case condition(s) was reported on the Summary Data page.

14.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST

The model name of S9

Line Conducted Emission Test Line 1-L



MEASUREMENT RESULT: "agc_fin"

2020/3/14 16:28

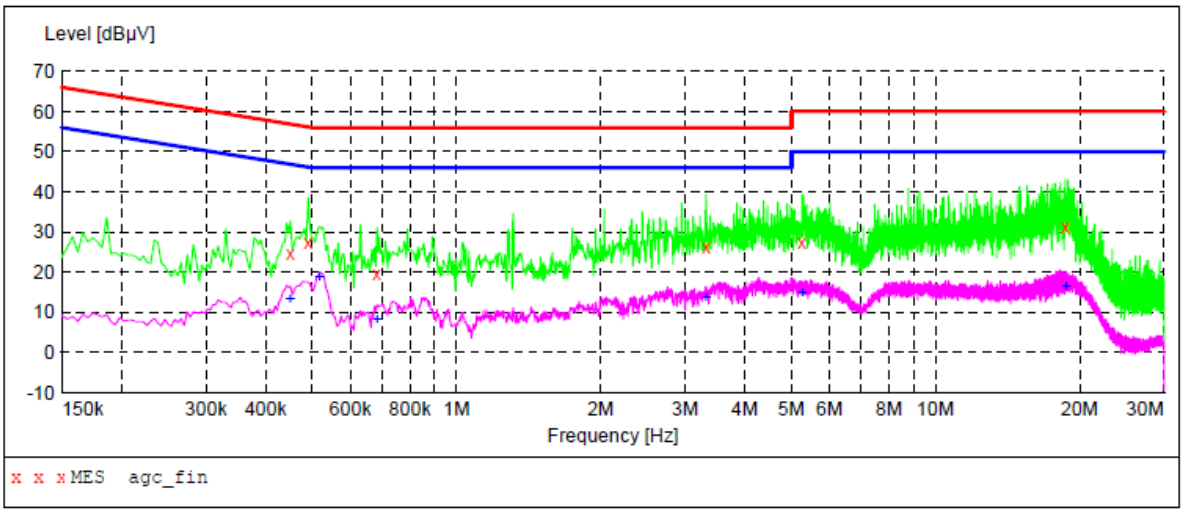
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.454000	27.70	11.3	57	29.1	QP	L1	FLO
0.510000	31.40	11.3	56	24.6	QP	L1	FLO
3.750000	28.80	11.4	56	27.2	QP	L1	FLO
4.370000	29.30	11.4	56	26.7	QP	L1	FLO
8.182000	29.80	11.5	60	30.2	QP	L1	FLO
17.610000	29.50	12.1	60	30.5	QP	L1	FLO

MEASUREMENT RESULT: "agc_fin2"

2020/3/14 16:28

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.450000	18.20	11.3	47	28.7	AV	L1	FLO
0.510000	21.40	11.3	46	24.6	AV	L1	FLO
3.750000	20.00	11.4	46	26.0	AV	L1	FLO
4.418000	19.50	11.4	46	26.5	AV	L1	FLO
8.138000	18.10	11.5	50	31.9	AV	L1	FLO
17.674000	17.50	12.1	50	32.5	AV	L1	FLO

Line Conducted Emission Test Line 2-N



MEASUREMENT RESULT: "agc_fin"

2020/3/14 16:23

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.450000	24.50	11.3	57	32.4	QP	N	FLO
0.490000	27.40	11.3	56	28.8	QP	N	FLO
0.682000	19.70	11.3	56	36.3	QP	N	FLO
3.318000	26.10	11.4	56	29.9	QP	N	FLO
5.262000	27.20	11.4	60	32.8	QP	N	FLO
18.658000	31.10	12.2	60	28.9	QP	N	FLO

MEASUREMENT RESULT: "agc_fin2"

2020/3/14 16:23

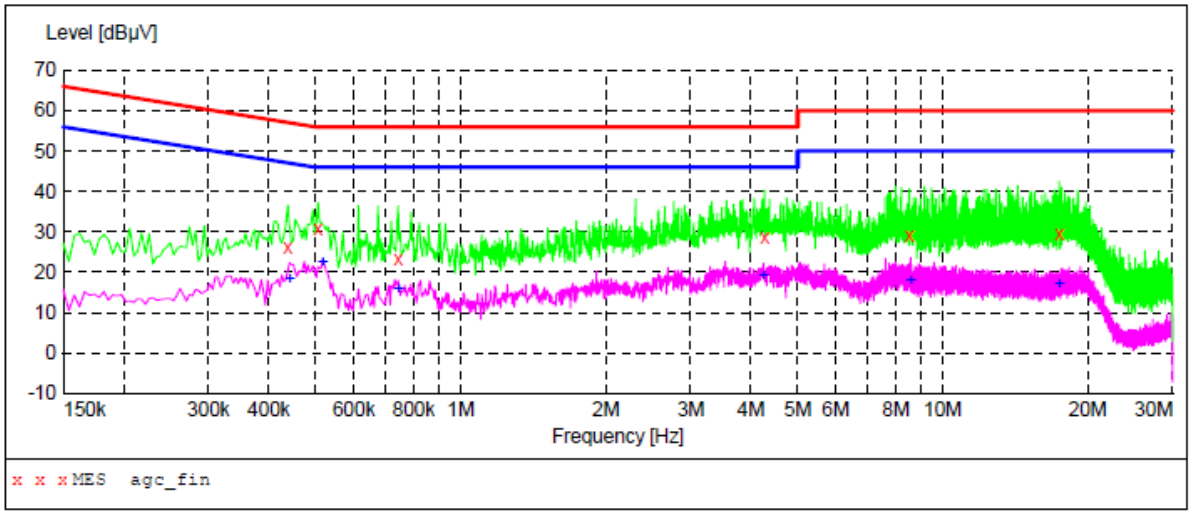
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.450000	13.30	11.3	47	33.6	AV	N	FLO
0.518000	18.70	11.3	46	27.3	AV	N	FLO
0.682000	8.40	11.3	46	37.6	AV	N	FLO
3.318000	13.70	11.4	46	32.3	AV	N	FLO
5.262000	14.80	11.4	50	35.2	AV	N	FLO
18.710000	16.50	12.2	50	33.5	AV	N	FLO

RESULT: PASS

Note: All the test modes had been tested, the mode 9 was the worst case. Only the data of the worst case would be record in this test report.

The model name of S9C

Line Conducted Emission Test Line 1-L



MEASUREMENT RESULT: "agc_fin"

2020/3/14 16:35

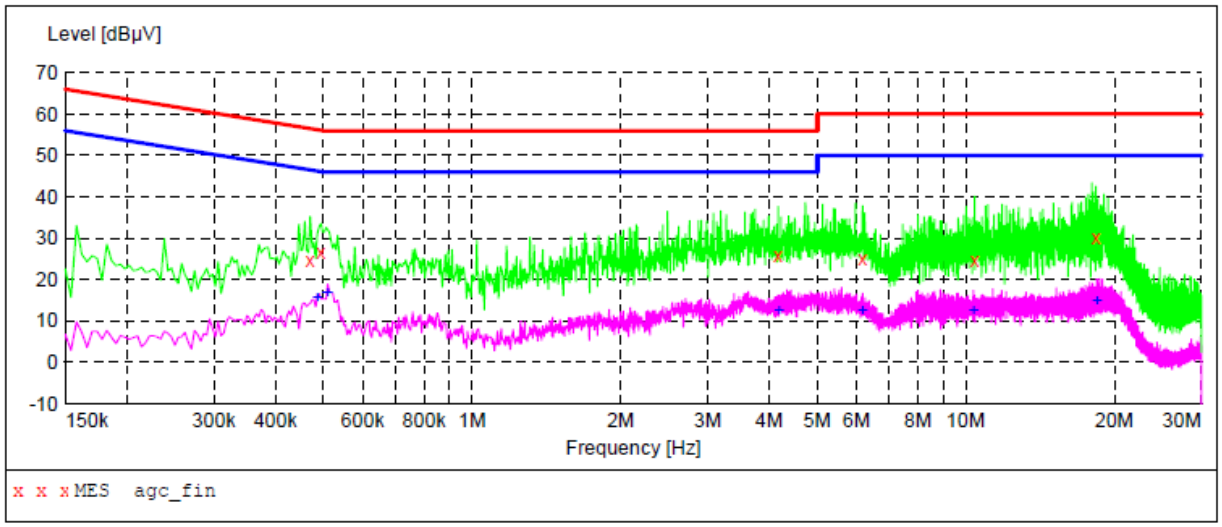
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.438000	26.30	11.3	57	30.8	QP	L1	FLO
0.506000	30.80	11.3	56	25.2	QP	L1	FLO
0.742000	23.20	11.3	56	32.8	QP	L1	FLO
4.270000	28.80	11.4	56	27.2	QP	L1	FLO
8.530000	28.90	11.6	60	31.1	QP	L1	FLO
17.450000	29.30	12.1	60	30.7	QP	L1	FLO

MEASUREMENT RESULT: "agc_fin2"

2020/3/14 16:35

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.442000	18.50	11.3	47	28.5	AV	L1	FLO
0.518000	22.40	11.3	46	23.6	AV	L1	FLO
0.742000	16.00	11.3	46	30.0	AV	L1	FLO
4.250000	19.00	11.4	46	27.0	AV	L1	FLO
8.586000	17.70	11.6	50	32.3	AV	L1	FLO
17.450000	17.10	12.1	50	32.9	AV	L1	FLO

Line Conducted Emission Test Line 2-N



MEASUREMENT RESULT: "agc_fin"

2020/3/14 16:40

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.470000	24.80	11.3	57	31.7	QP	N	FLO
0.494000	26.70	11.3	56	29.4	QP	N	FLO
4.166000	25.70	11.4	56	30.3	QP	N	FLO
6.170000	24.90	11.5	60	35.1	QP	N	FLO
10.418000	24.60	11.6	60	35.4	QP	N	FLO
18.334000	30.10	12.2	60	29.9	QP	N	FLO

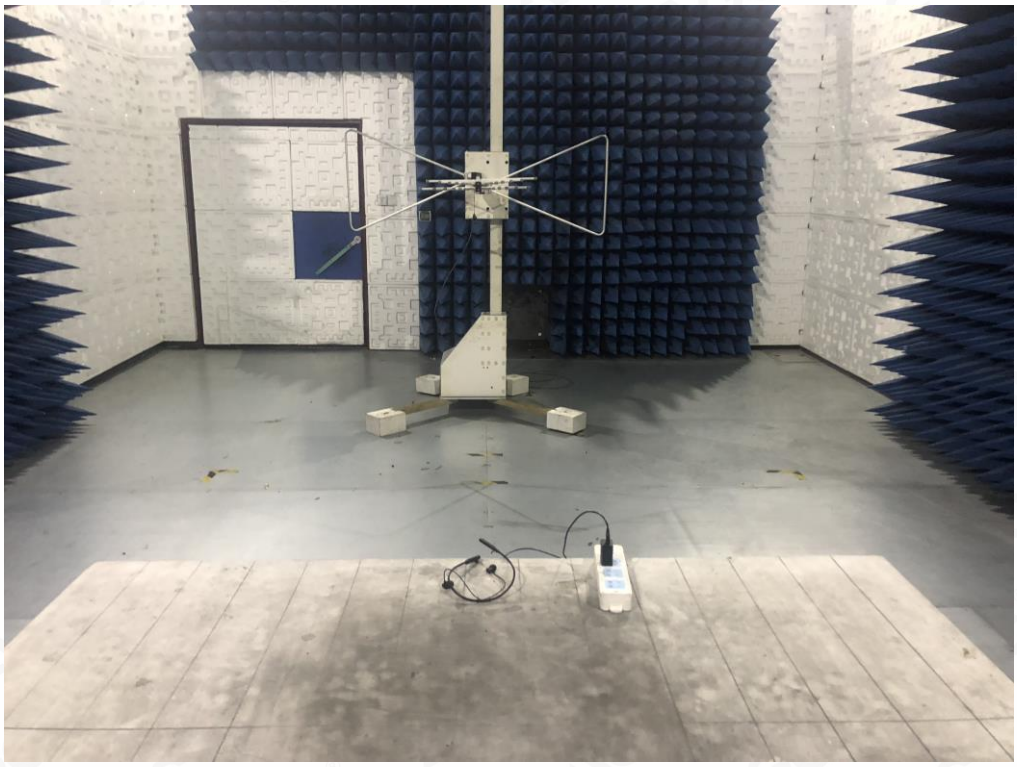
MEASUREMENT RESULT: "agc_fin2"

2020/3/14 16:40

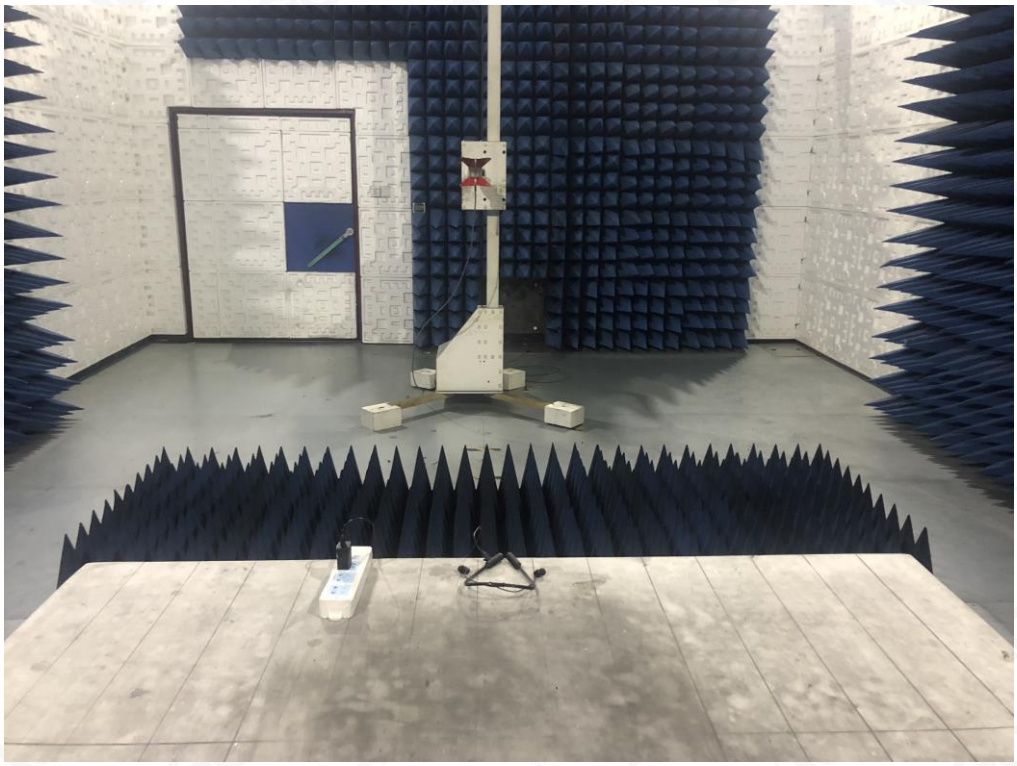
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.486000	15.50	11.3	46	30.7	AV	N	FLO
0.510000	17.00	11.3	46	29.0	AV	N	FLO
4.174000	12.70	11.4	46	33.3	AV	N	FLO
6.170000	12.40	11.5	50	37.6	AV	N	FLO
10.346000	12.60	11.6	50	37.4	AV	N	FLO
18.418000	14.90	12.2	50	35.1	AV	N	FLO

APPENDIX A: PHOTOGRAPHS OF TEST SETUP

RADIATED EMISSION TEST SETUP BELOW 1GHZ

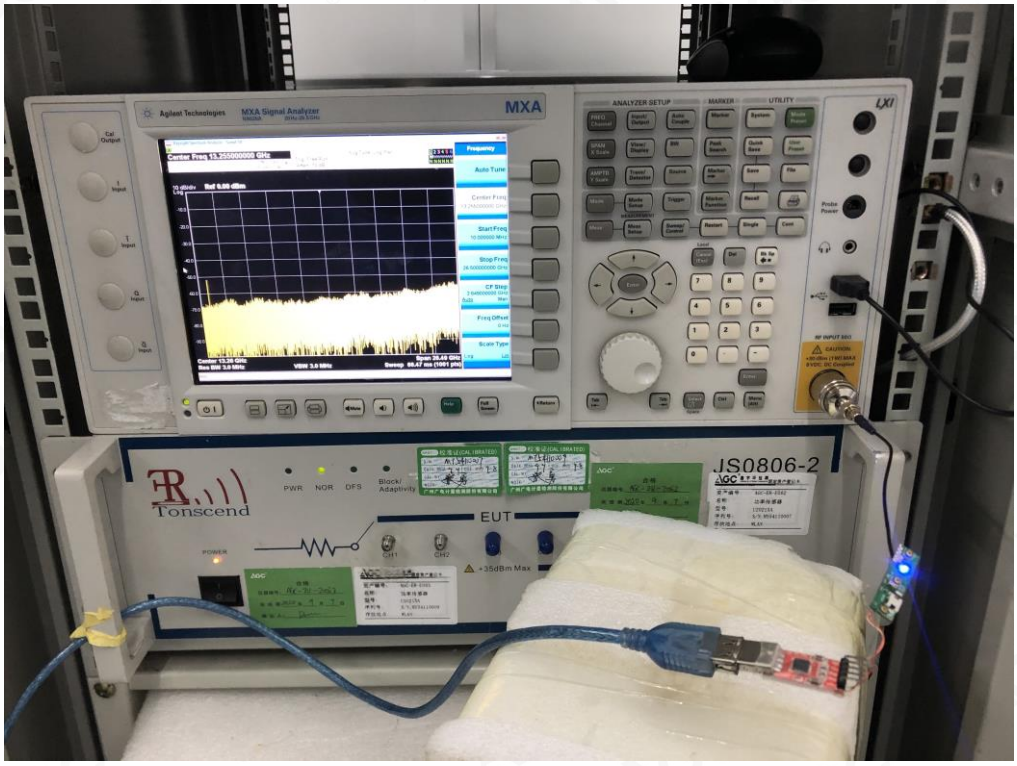


RADIATED EMISSION TEST SETUP ABOVE 1GHZ



CONDUCTED EMISSION TEST SETUP

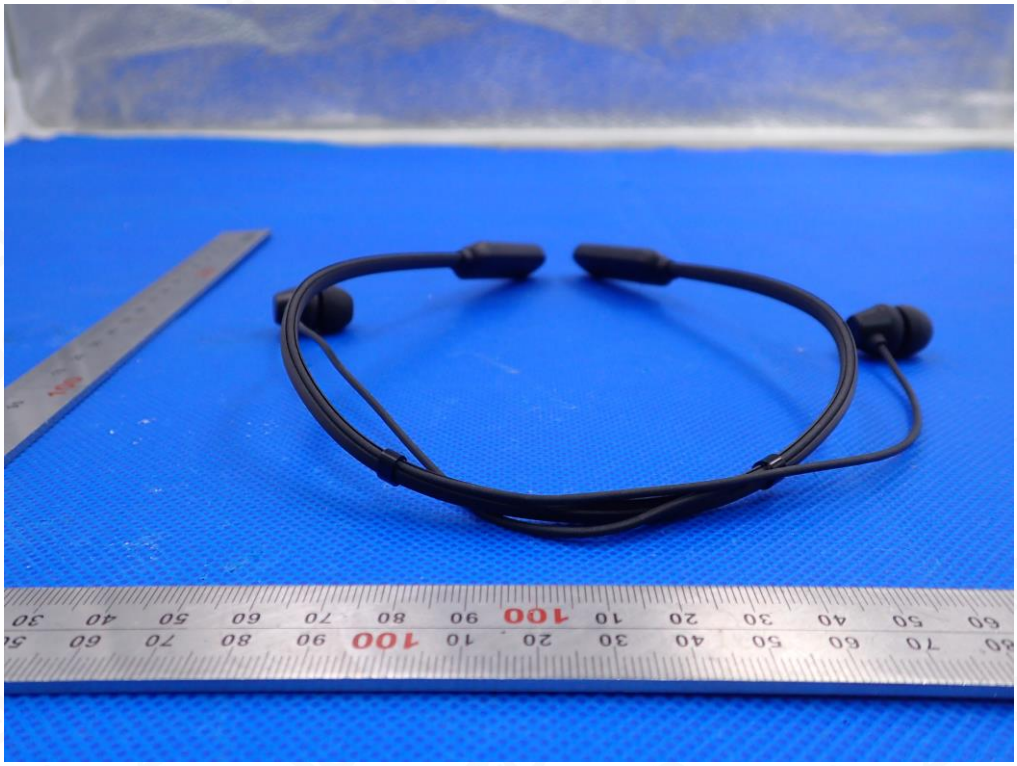
CONDUCTED TEST SETUP



APPENDIX B: PHOTOGRAPHS OF EUT

TOTAL VIEW OF EUT

TOP VIEW OF EUT (S9)



BOTTOM VIEW OF EUT

FRONT VIEW OF EUT

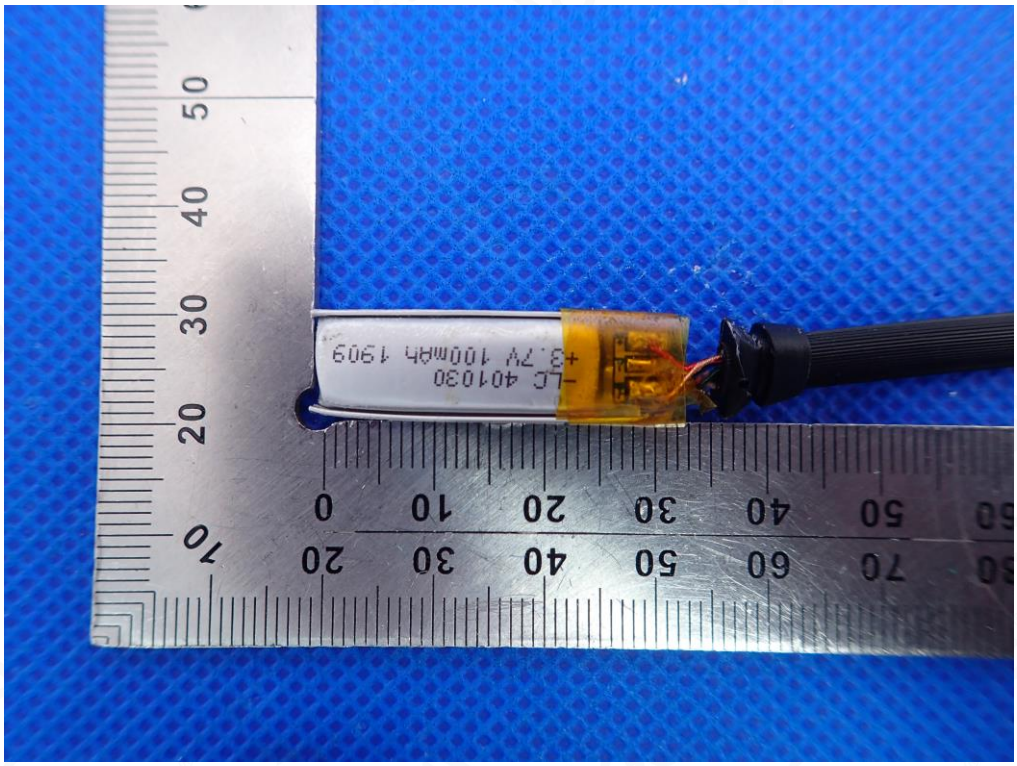
BACK VIEW OF EUT

LEFT VIEW OF EUT

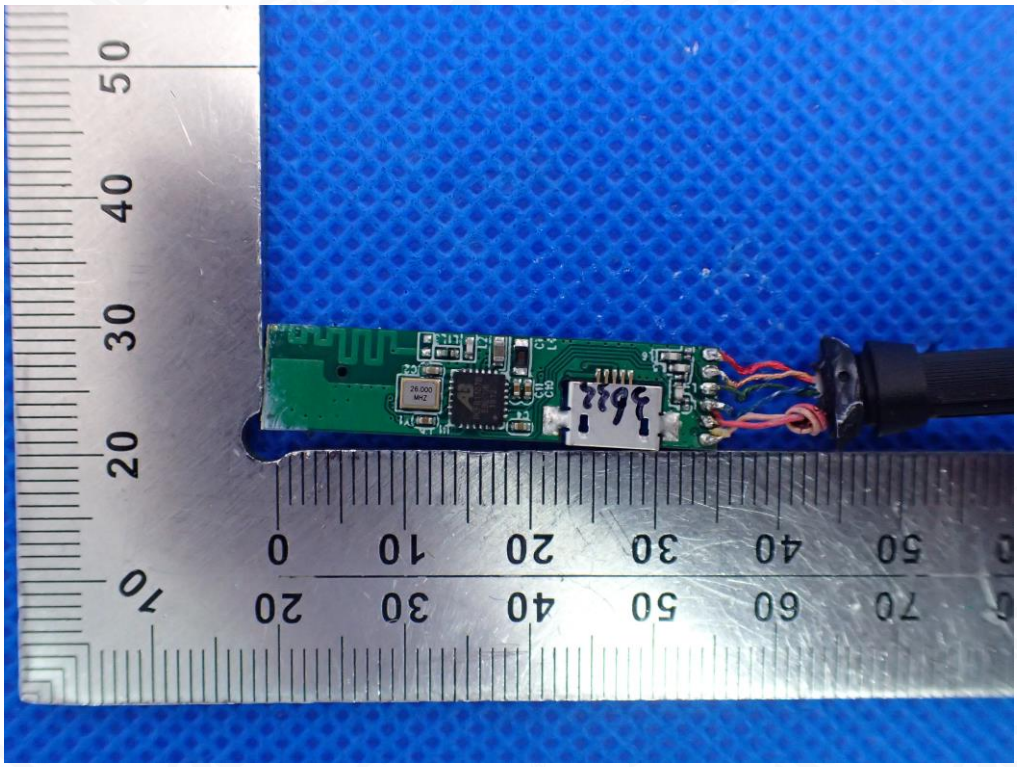
RIGHT VIEW OF EUT

OPEN VIEW OF EUT-1

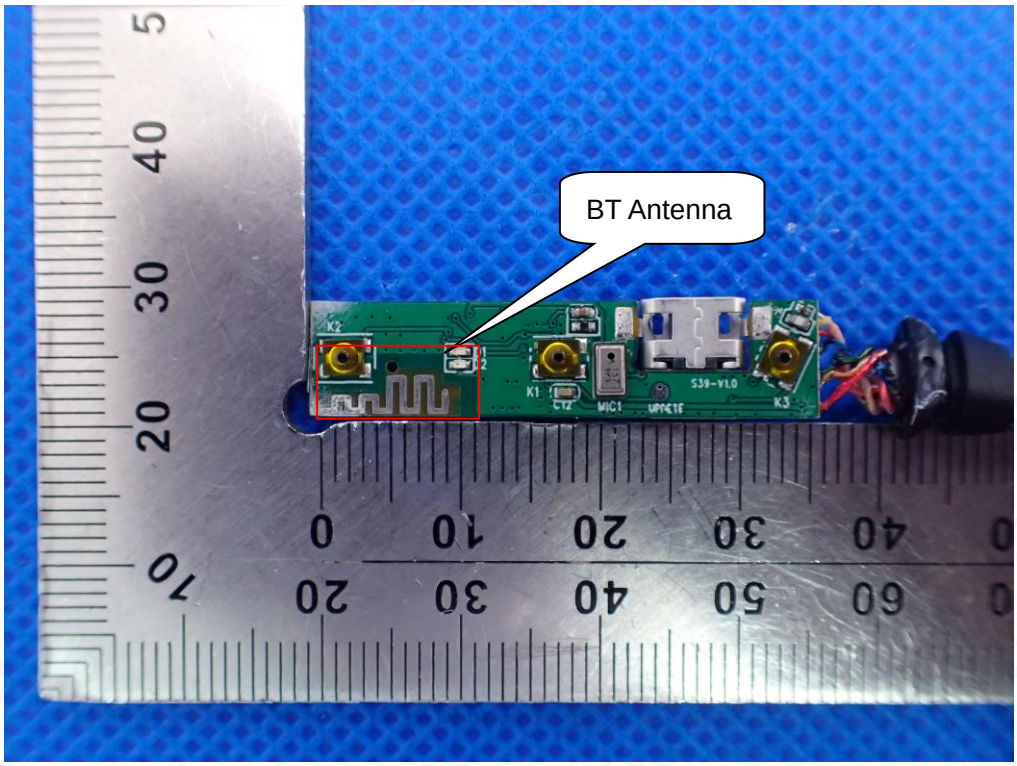
VIEW OF BATTERY



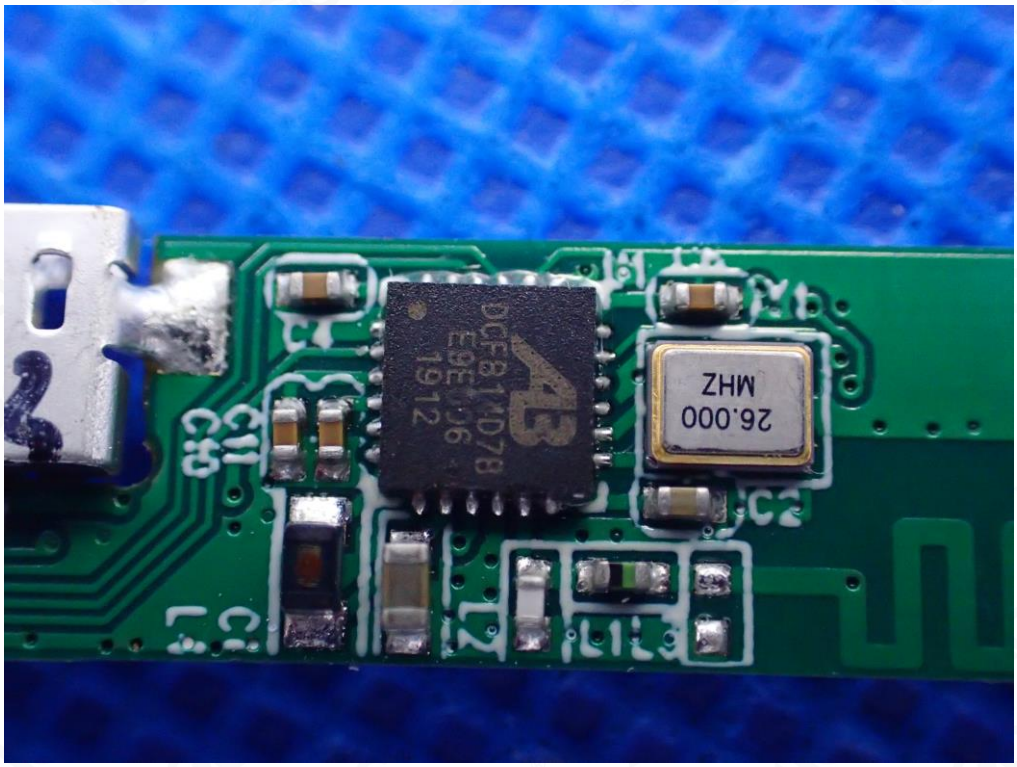
INTERNAL VIEW OF EUT-1



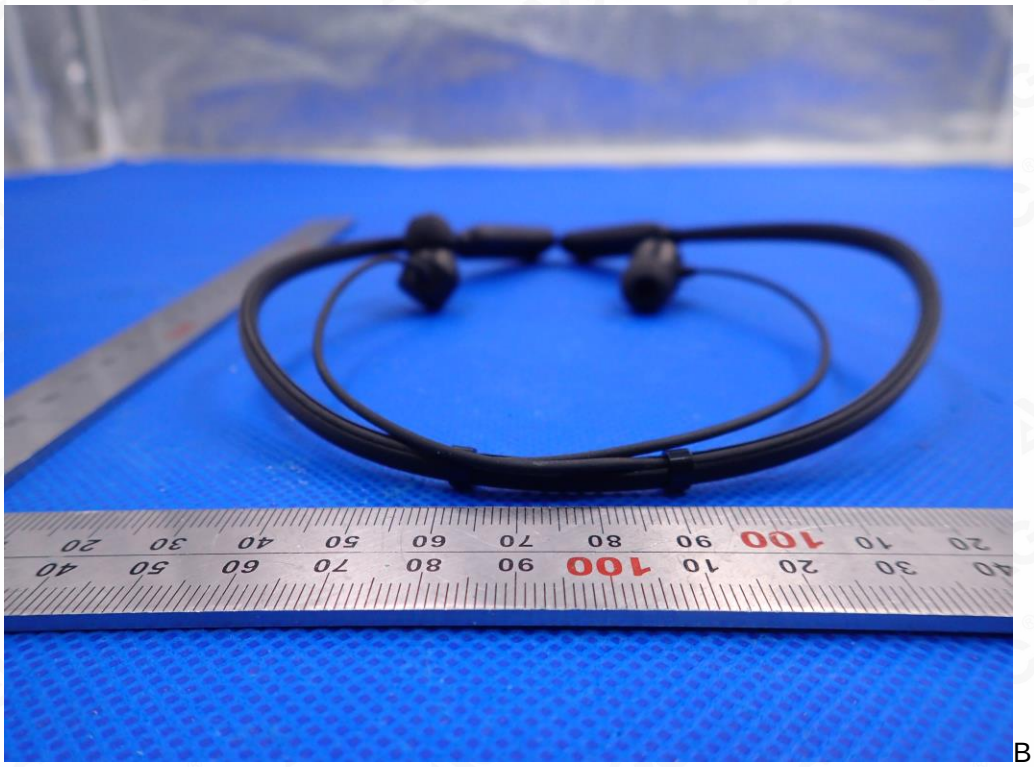
INTERNAL VIEW OF EUT-2



INTERNAL VIEW OF EUT-3



TOP VIEW OF EUT (S9C)



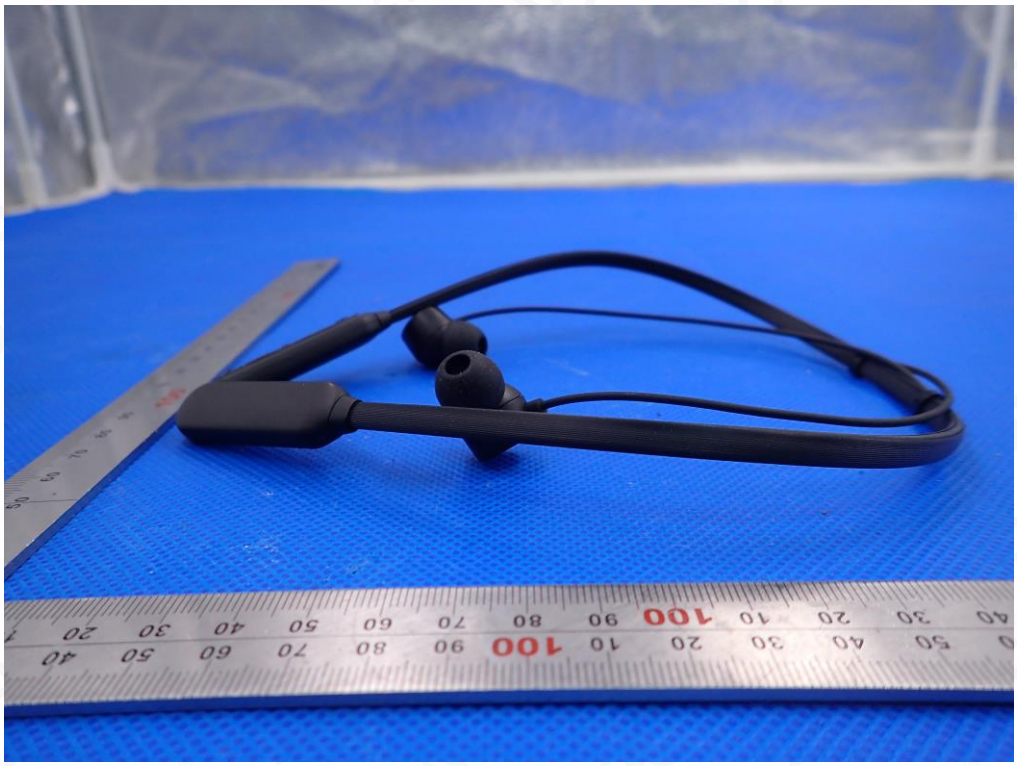
B

BOTTOM VIEW OF EUT

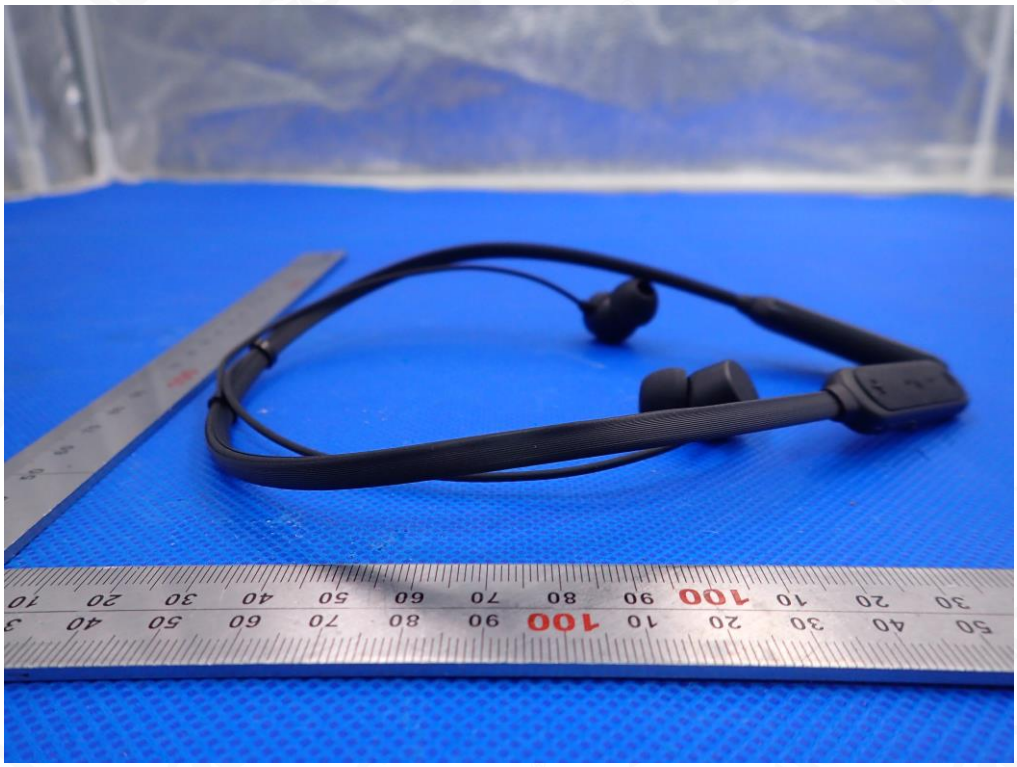
FRONT VIEW OF EUT

BACK VIEW OF EUT

LEFT VIEW OF EUT

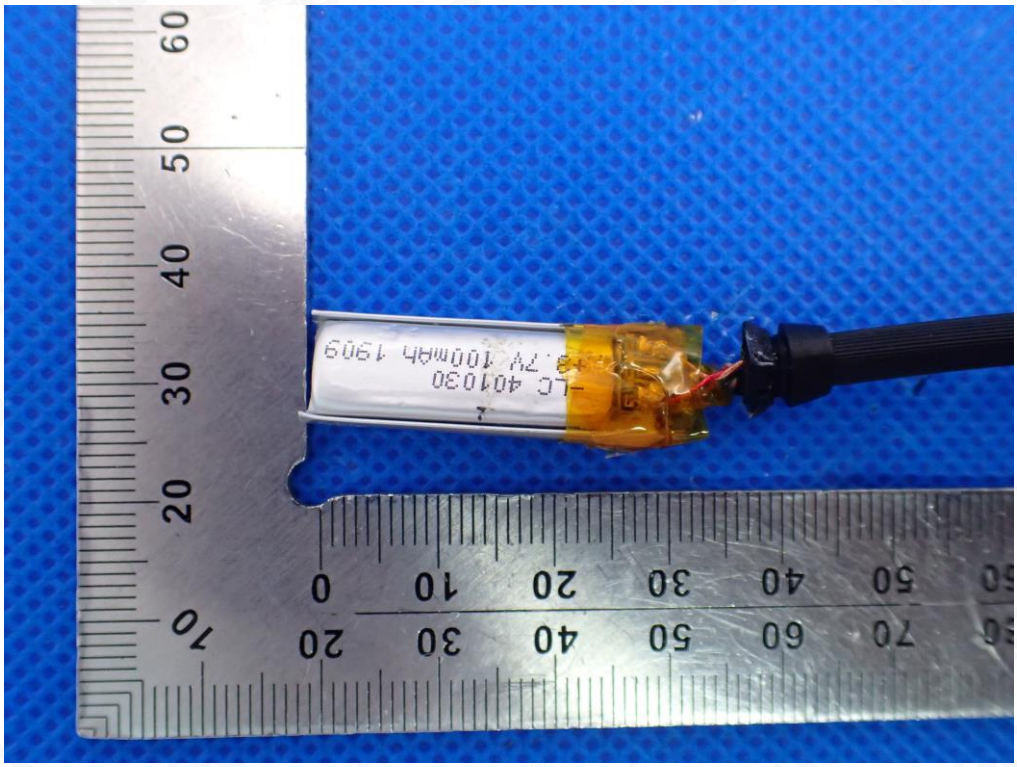


RIGHT VIEW OF EUT

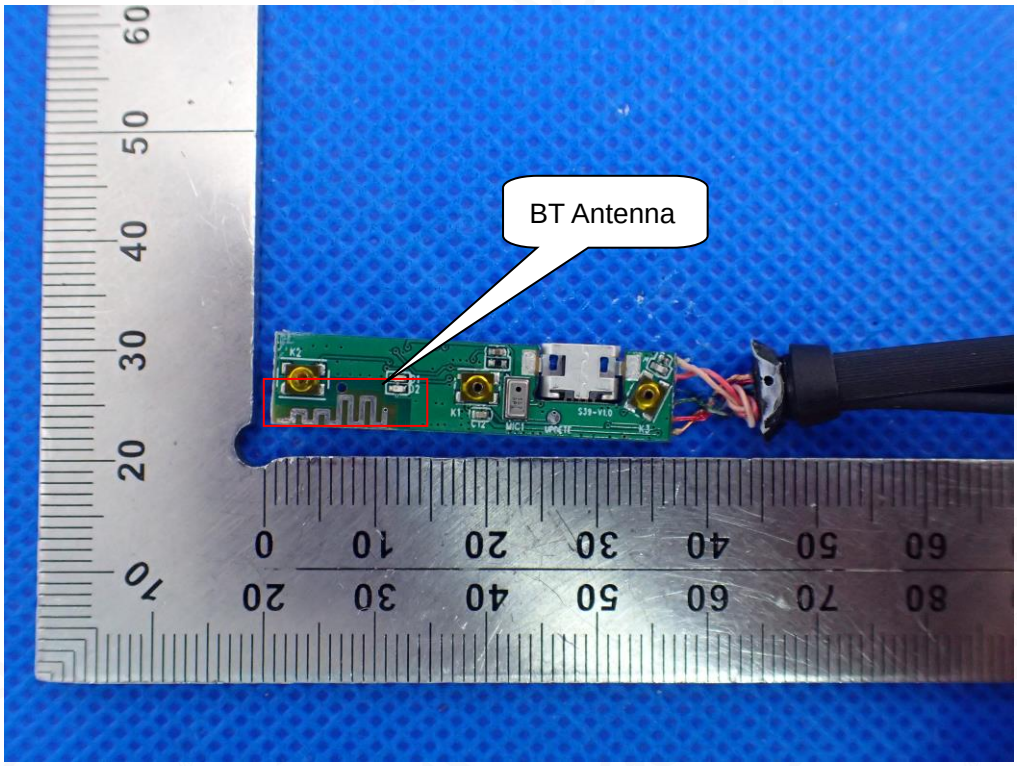


OPEN VIEW OF EUT-1

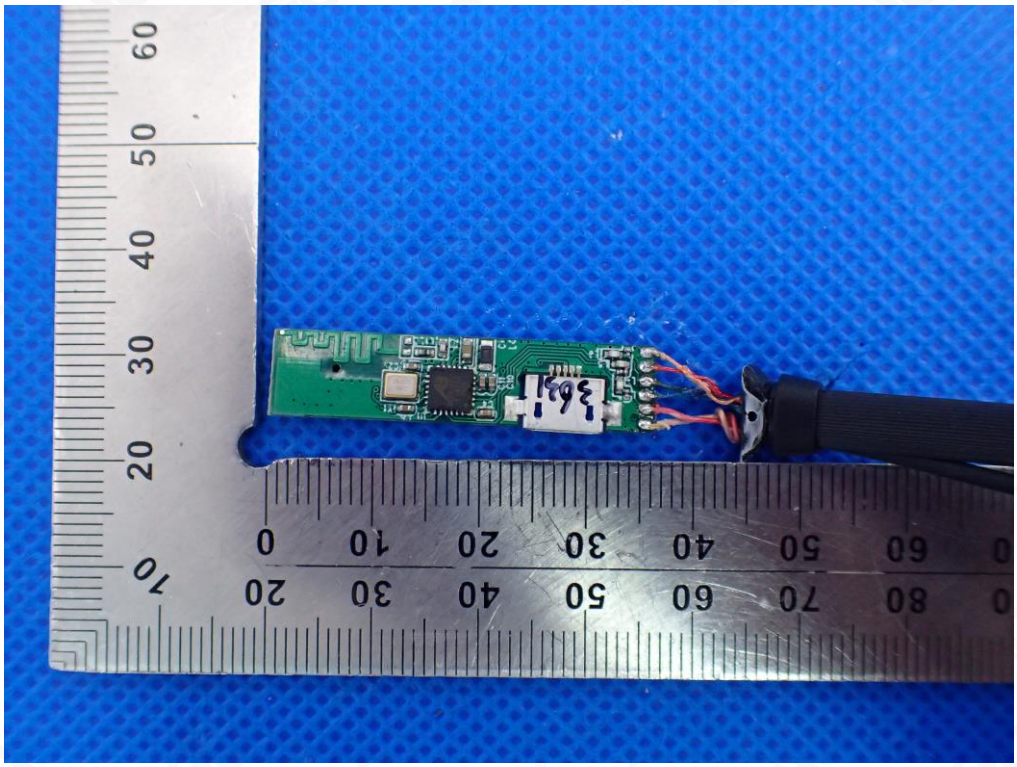
VIEW OF BATTERY



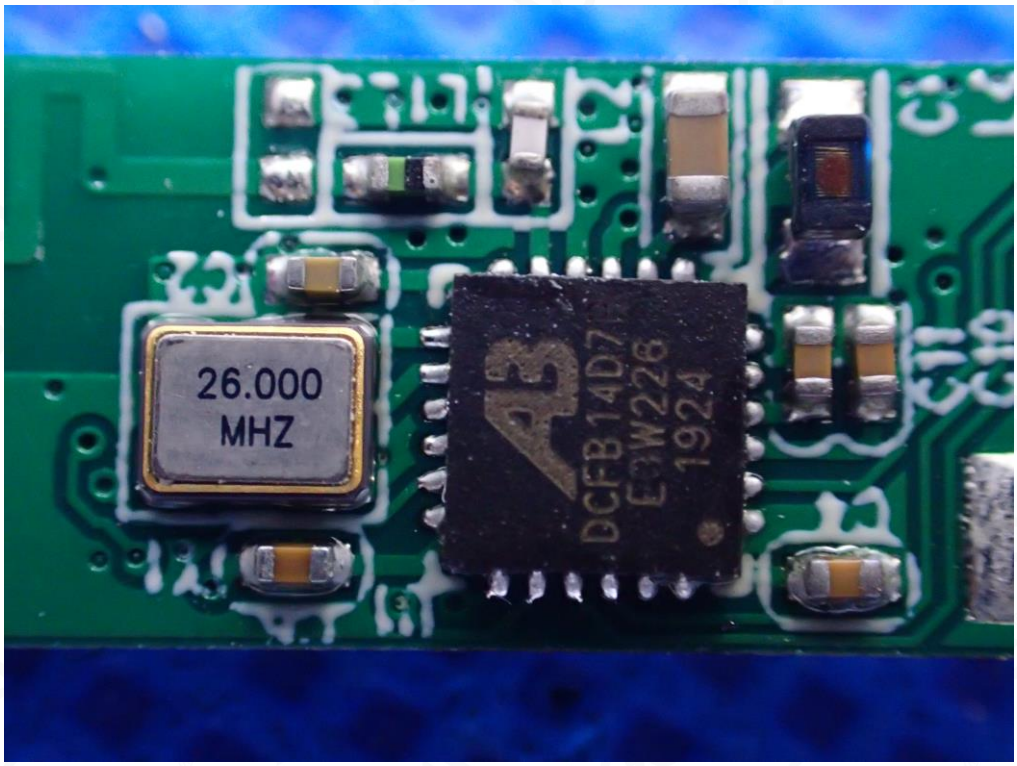
INTERNAL VIEW OF EUT-1



INTERNAL VIEW OF EUT-2



INTERNAL VIEW OF EUT-3



----END OF REPORT----