

14. FCC LINE CONDUCTED EMISSION TEST

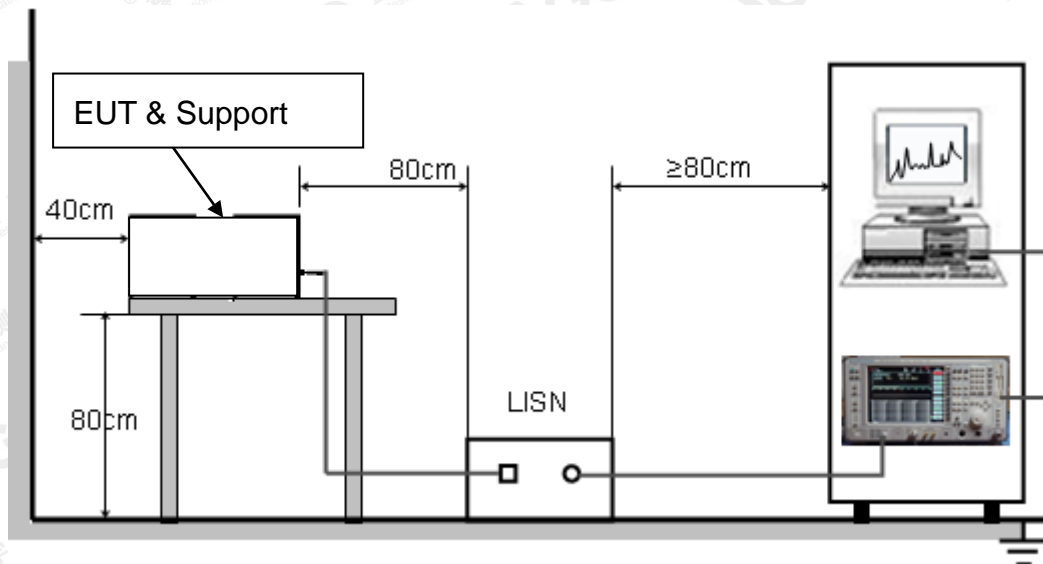
14.1. LIMITS OF LINE CONDUCTED EMISSION TEST

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



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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 120V/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

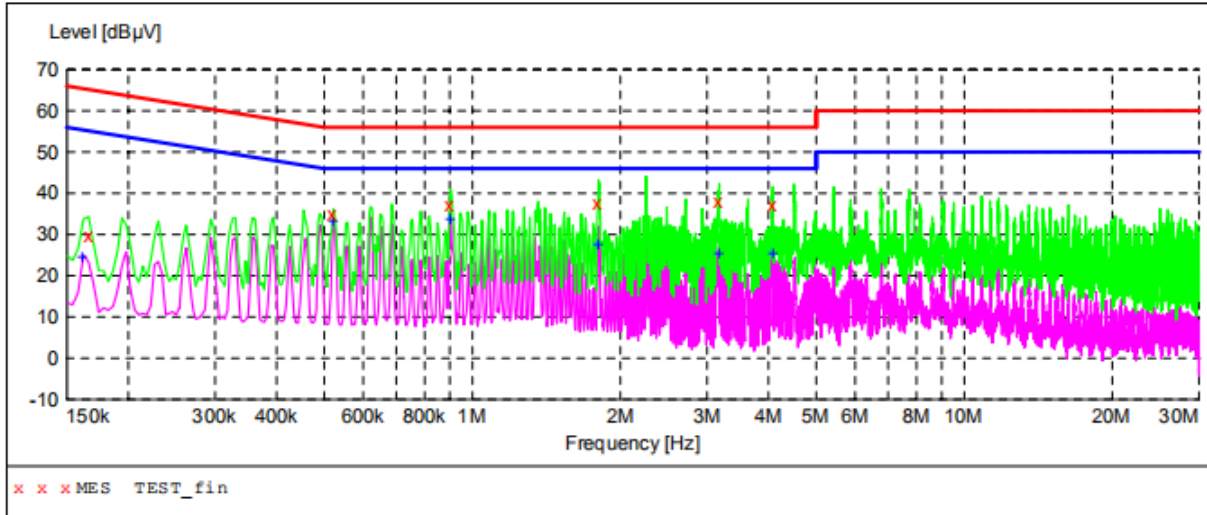
1. EUT and support equipment was set up on the test bench as per step 2 of the preliminary test.
2. A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used 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.

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14.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST

LINE CONDUCTED EMISSION TEST LINE 1-L

SCAN TABLE: "Voltage (9K-30M)FS L"
Short Description: 9k-30M Voltage



MEASUREMENT RESULT: "TEST_fin"

3/25/2019 3:53PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.166000	29.70	10.3	65	35.5	QP	L1	FLO
0.522000	34.80	10.3	56	21.2	QP	L1	FLO
0.902000	37.20	10.4	56	18.8	QP	L1	FLO
1.806000	37.80	10.4	56	18.2	QP	L1	FLO
3.178000	38.00	10.4	56	18.0	QP	L1	FLO
4.082000	37.10	10.4	56	18.9	QP	L1	FLO

MEASUREMENT RESULT: "TEST_fin2"

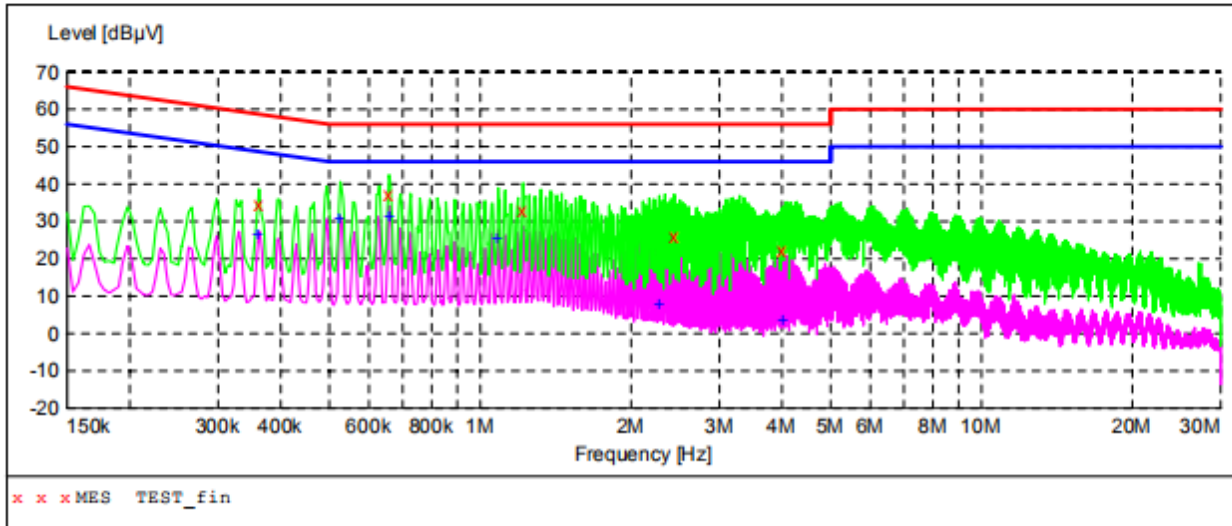
3/25/2019 3:53PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.162000	24.40	10.3	55	31.0	AV	L1	FLO
0.522000	33.10	10.3	46	12.9	AV	L1	FLO
0.906000	33.70	10.4	46	12.3	AV	L1	FLO
1.806000	27.70	10.4	46	18.3	AV	L1	FLO
3.178000	25.10	10.4	46	20.9	AV	L1	FLO
4.082000	25.50	10.4	46	20.5	AV	L1	FLO

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LINE CONDUCTED EMISSION TEST LINE 2-N

SCAN TABLE: "Voltage (9K-30M)FS L"
Short Description: 9k-30M Voltage



MEASUREMENT RESULT: "TEST_fin"

3/25/2019 3:39PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.362000	34.30	10.3	59	24.4	QP	N	FLO
0.658000	37.00	10.3	56	19.0	QP	N	FLO
1.218000	33.10	10.4	56	22.9	QP	N	FLO
2.438000	25.90	10.4	56	30.1	QP	N	FLO
4.018000	22.00	10.4	56	34.0	QP	N	FLO

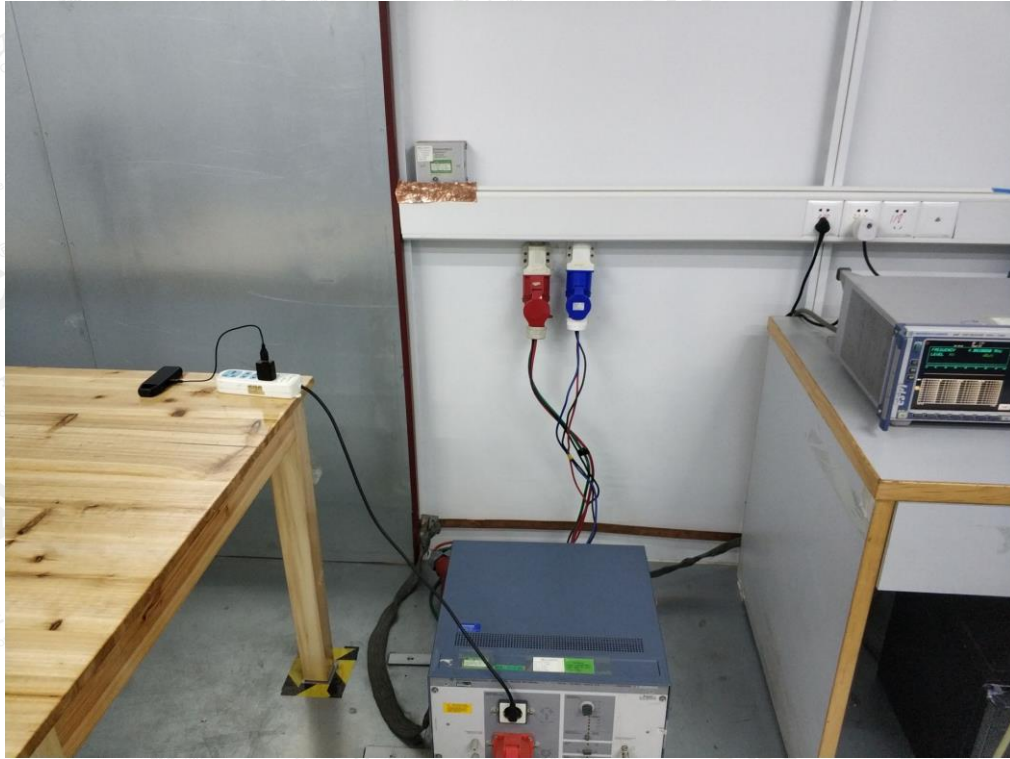
MEASUREMENT RESULT: "TEST_fin2"

3/25/2019 3:39PM

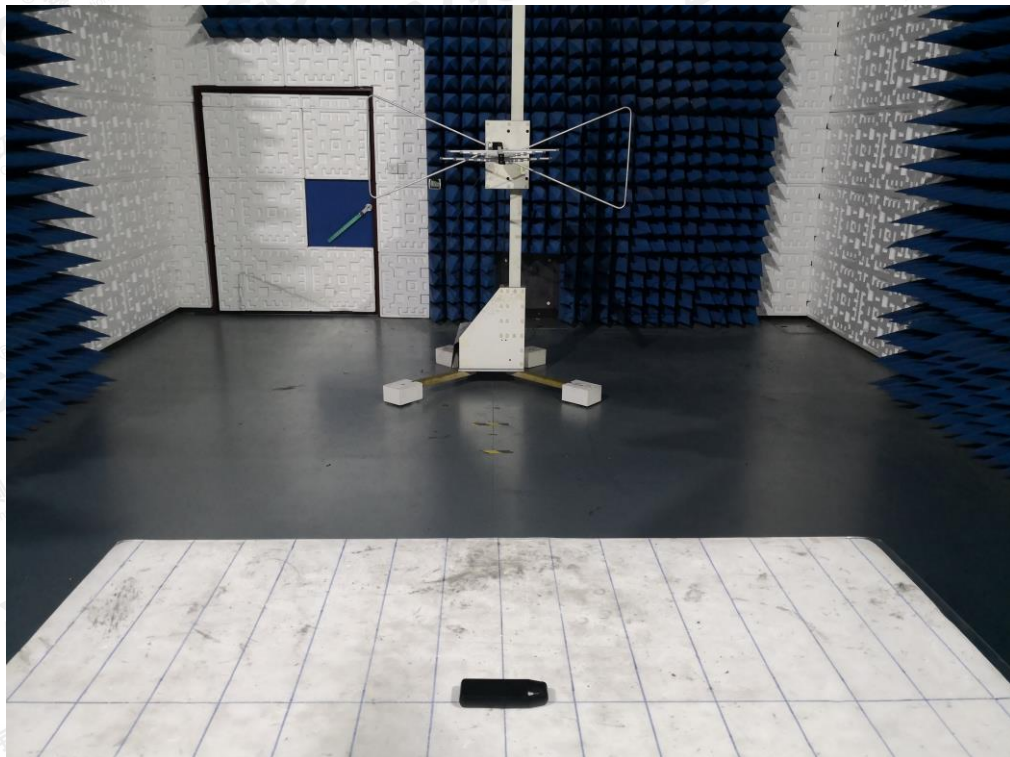
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.362000	26.60	10.3	49	22.1	AV	N	FLO
0.526000	30.70	10.3	46	15.3	AV	N	FLO
0.658000	31.30	10.3	46	14.7	AV	N	FLO
1.086000	25.40	10.4	46	20.6	AV	N	FLO
2.274000	7.90	10.4	46	38.1	AV	N	FLO
4.018000	3.40	10.4	46	42.6	AV	N	FLO

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APPENDIX A: PHOTOGRAPHS OF TEST SETUP
LINE CONDUCTED EMISSION TEST SETUP

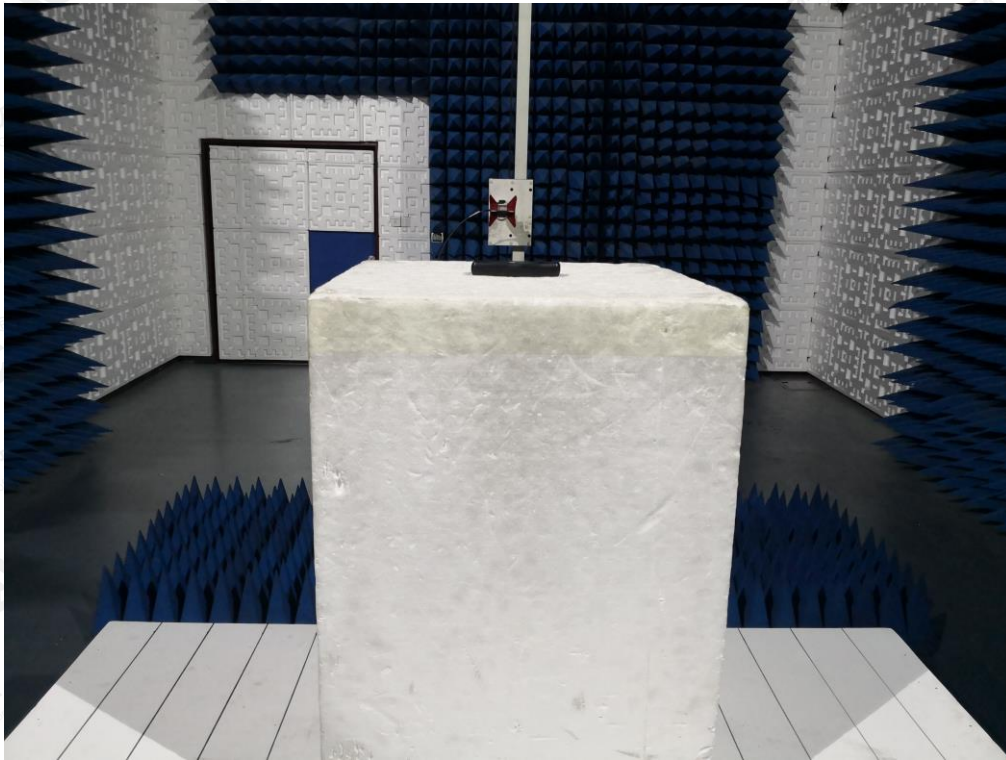


RADIATED EMISSION TEST SETUP



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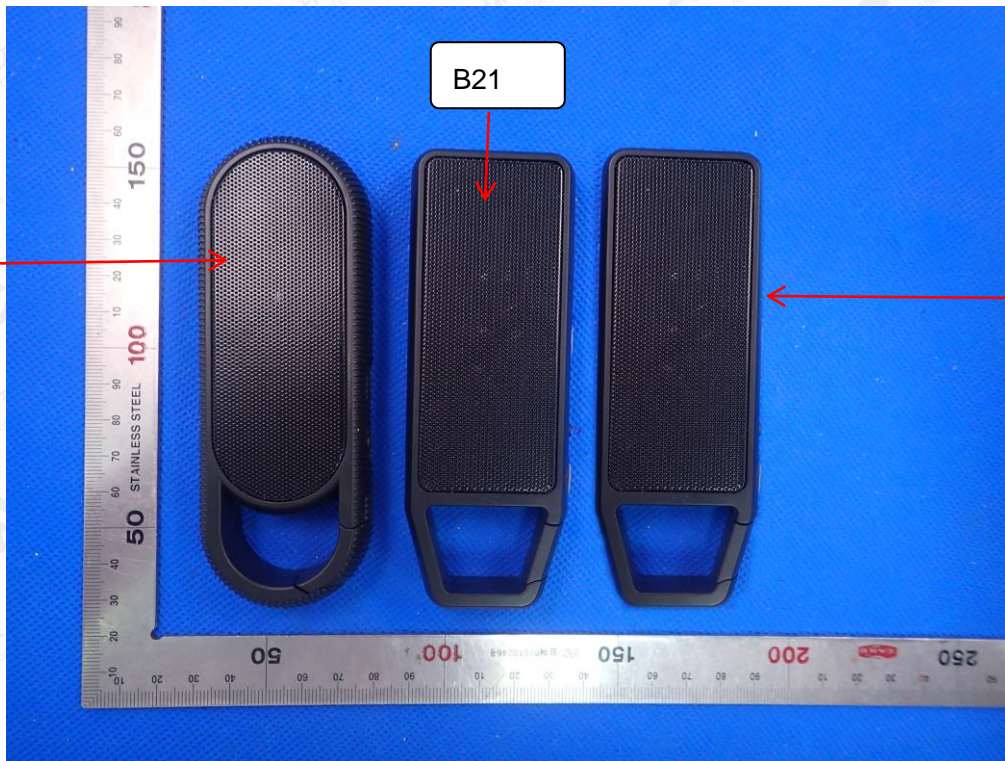
RADIATED EMISSION ABOVE 1G TEST SETUP



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APPENDIX B: PHOTOGRAPHS OF TEST SETUP

ALL VIEW OF EUT

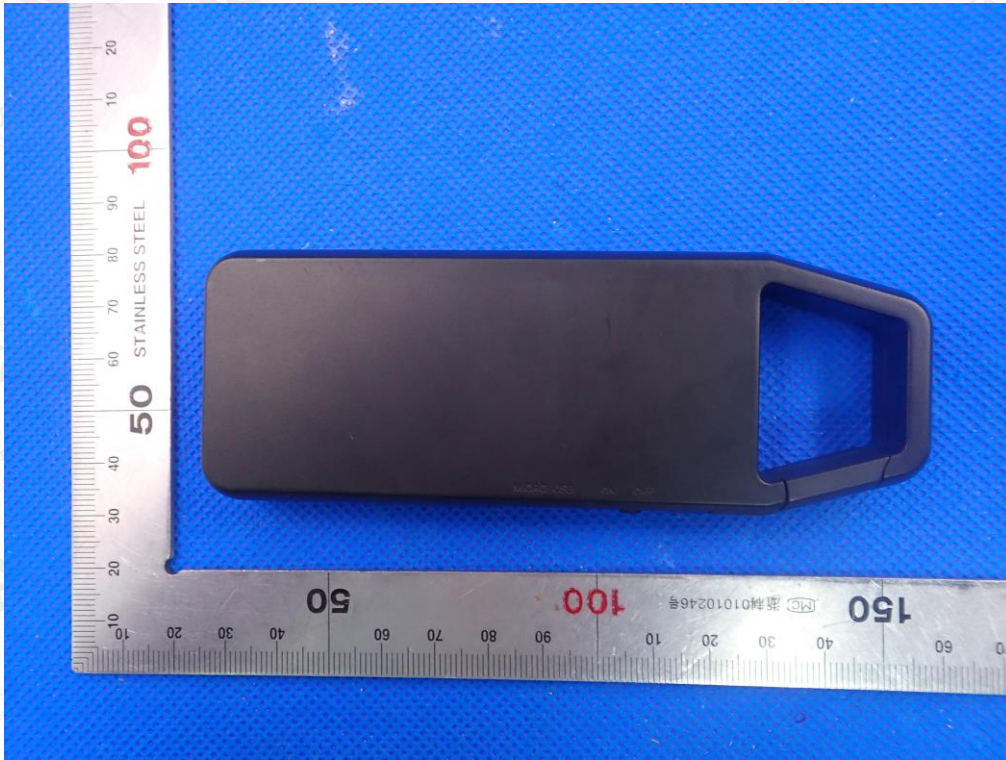


THE MODEL NAME OF B21
TOP VIEW OF EUT

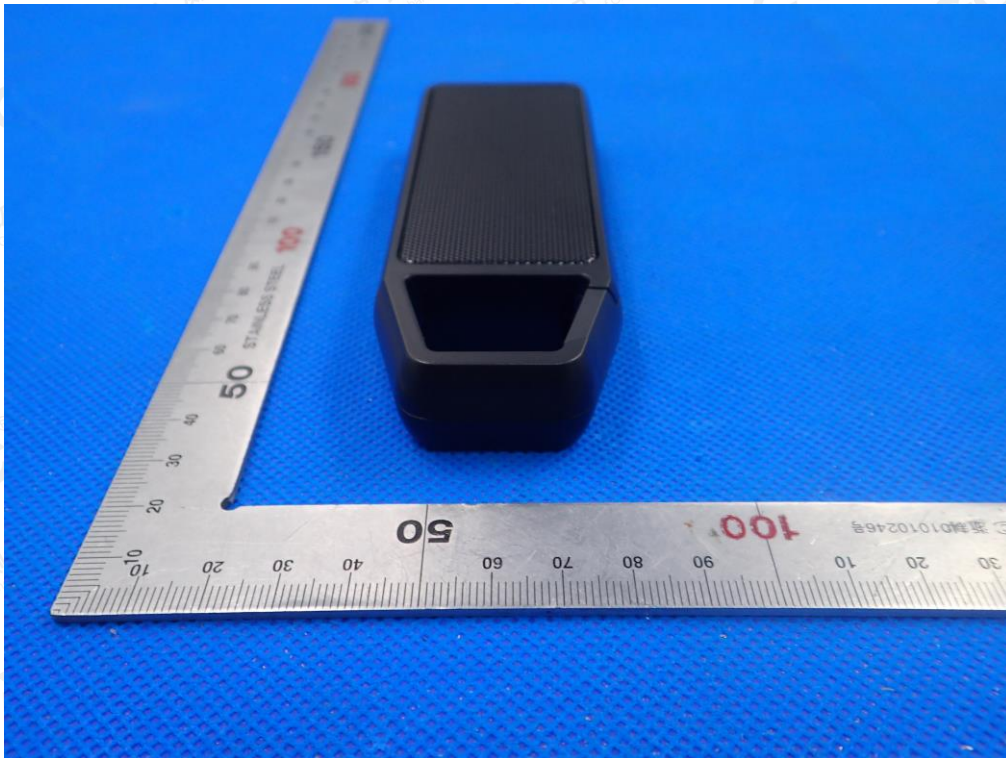


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BOTTOM VIEW OF EUT

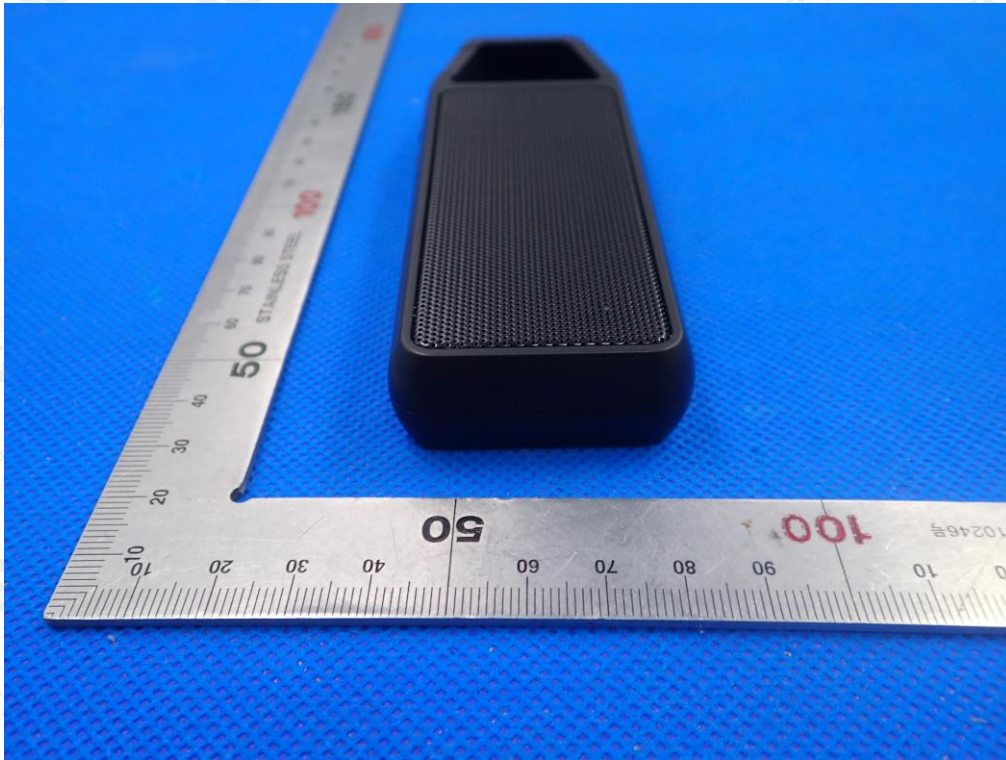


FRONT VIEW OF EUT



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BACK VIEW OF EUT



LEFT VIEW OF EUT

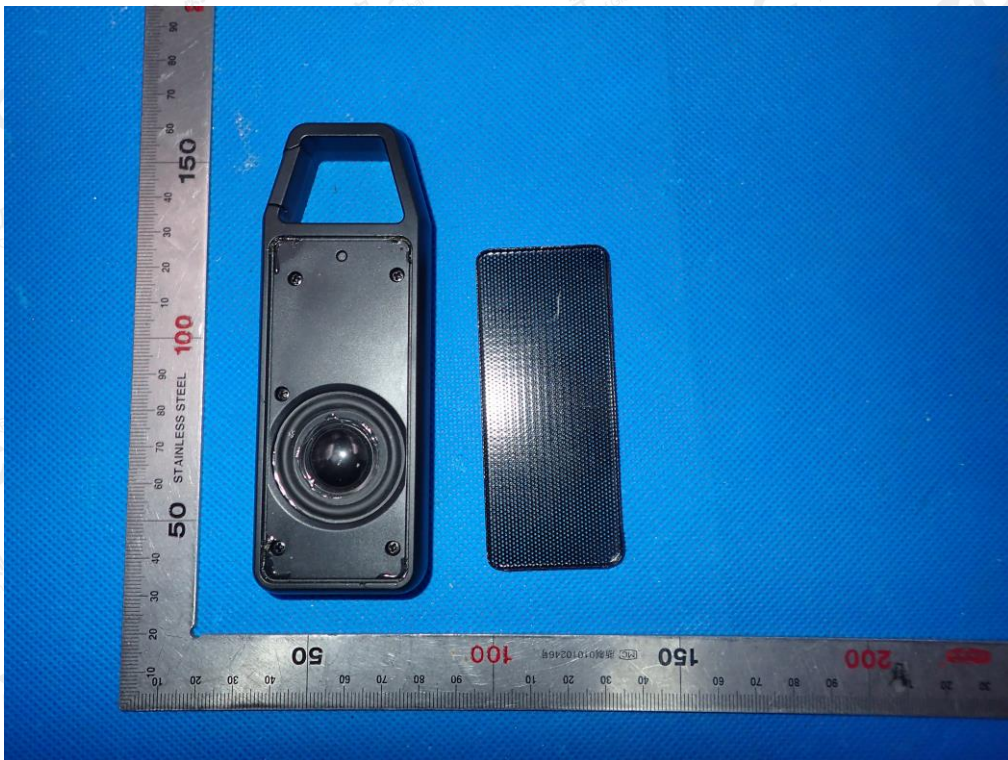


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RIGHT VIEW OF EUT



OPEN VIEW OF EUT-1



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OPEN VIEW OF BATTERY

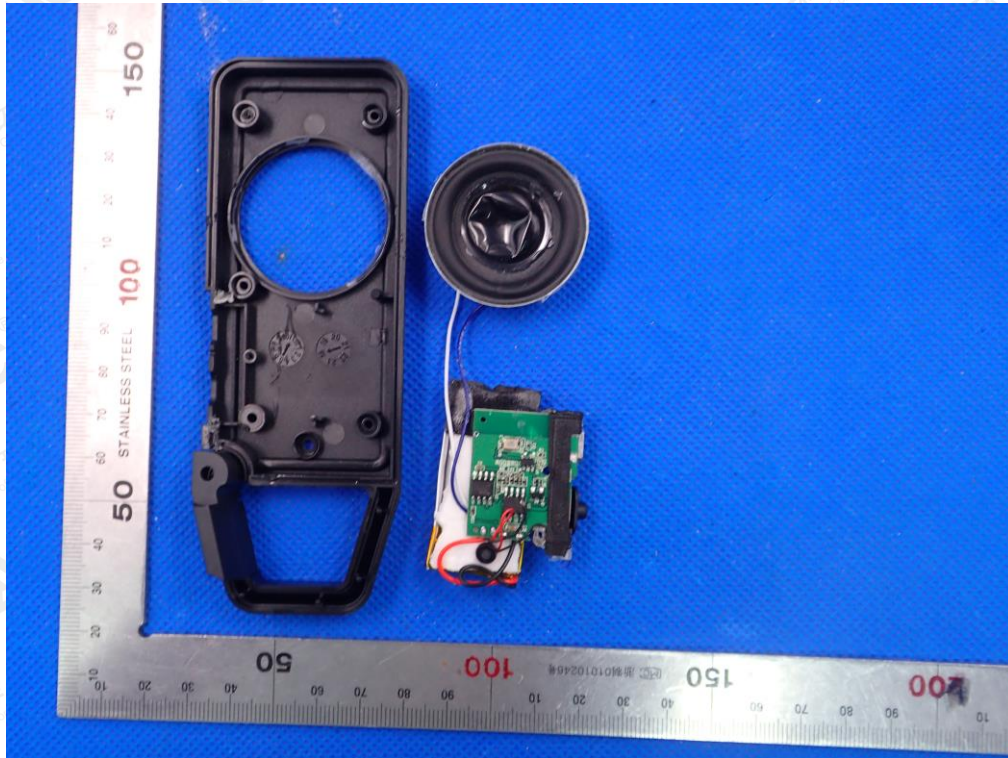


OPEN VIEW OF EUT-2

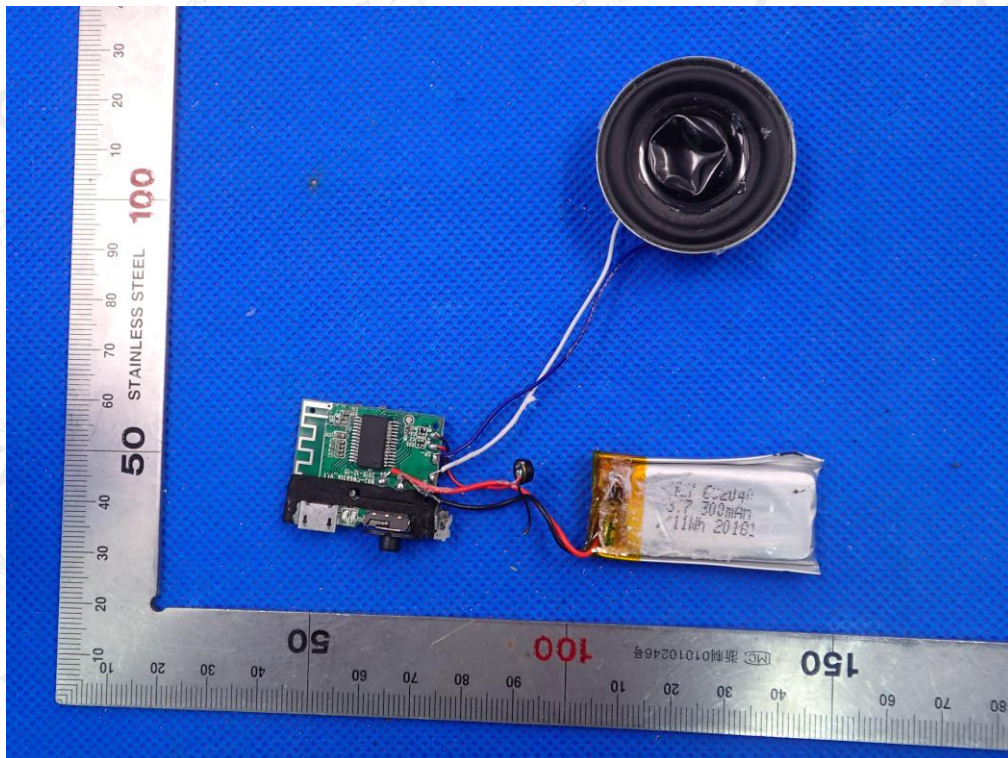


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OPEN VIEW OF EUT-3

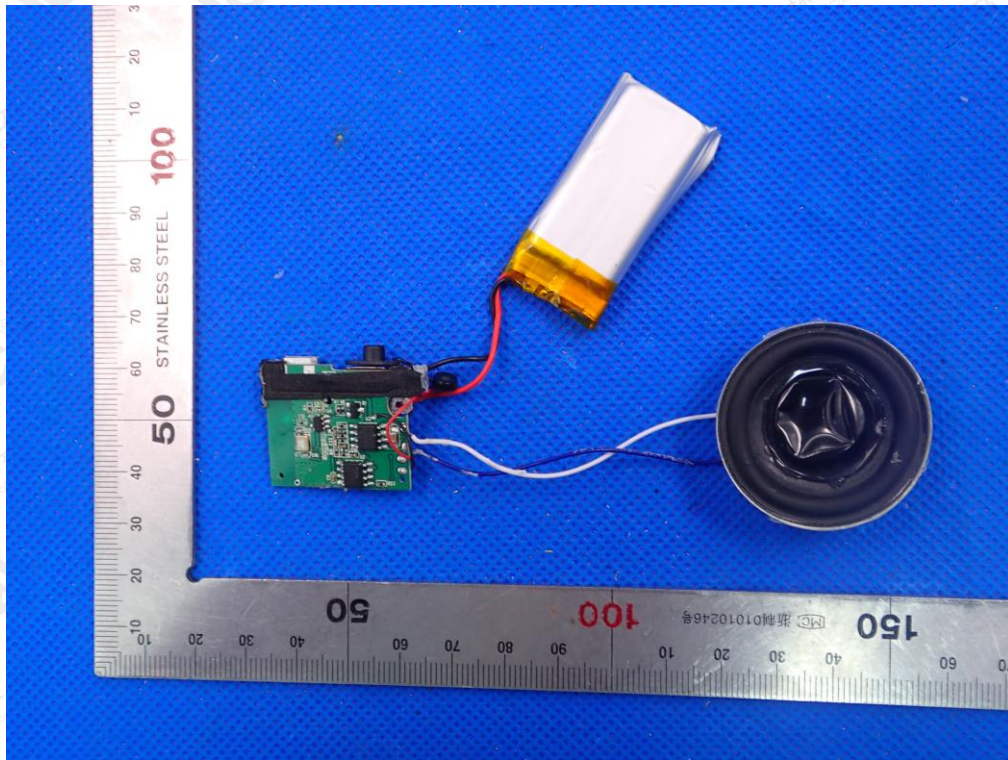


INTERNAL VIEW OF EUT-1

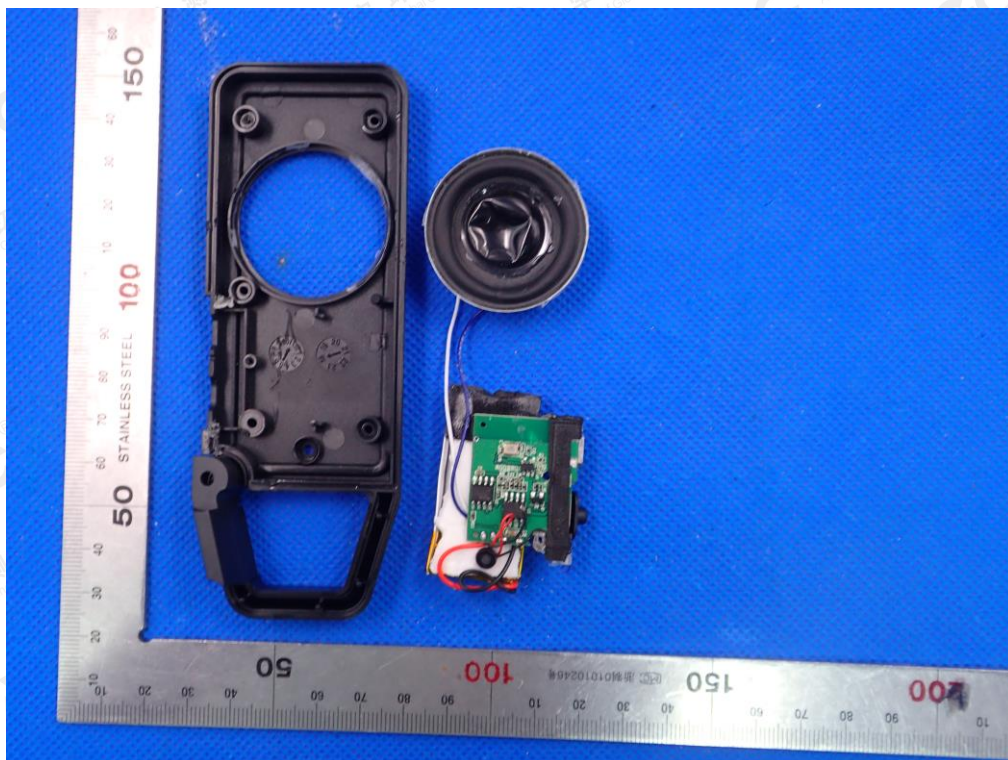


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INTERNAL VIEW OF EUT-2

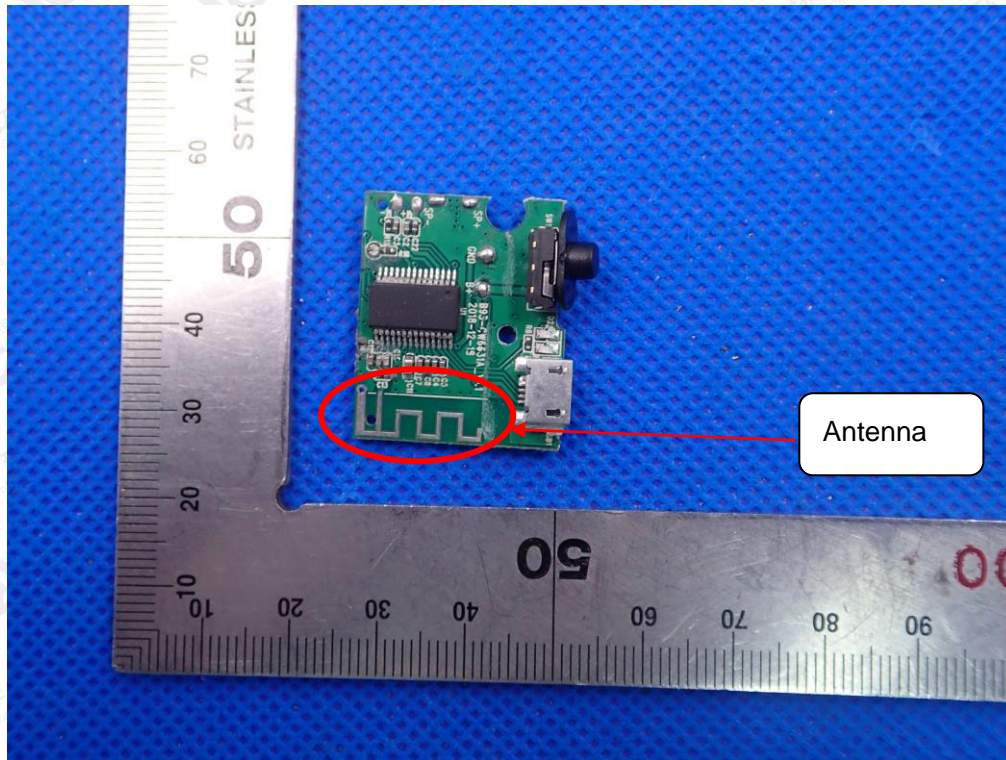


INTERNAL VIEW OF EUT-3

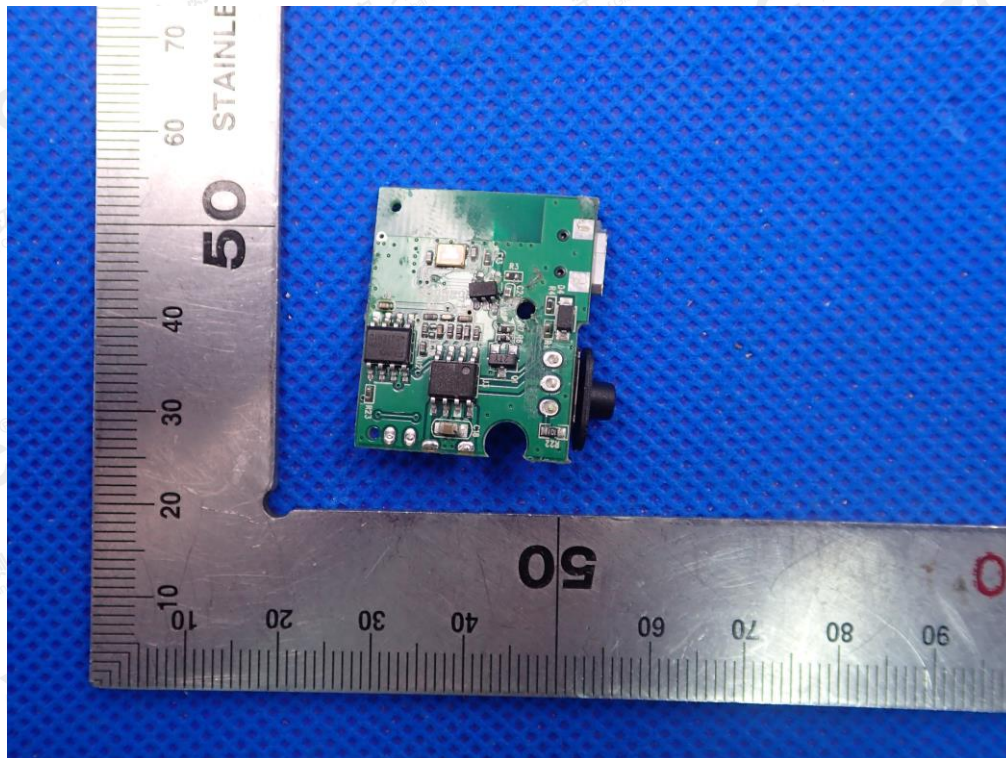


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INTERNAL VIEW OF EUT-4



INTERNAL VIEW OF EUT-5

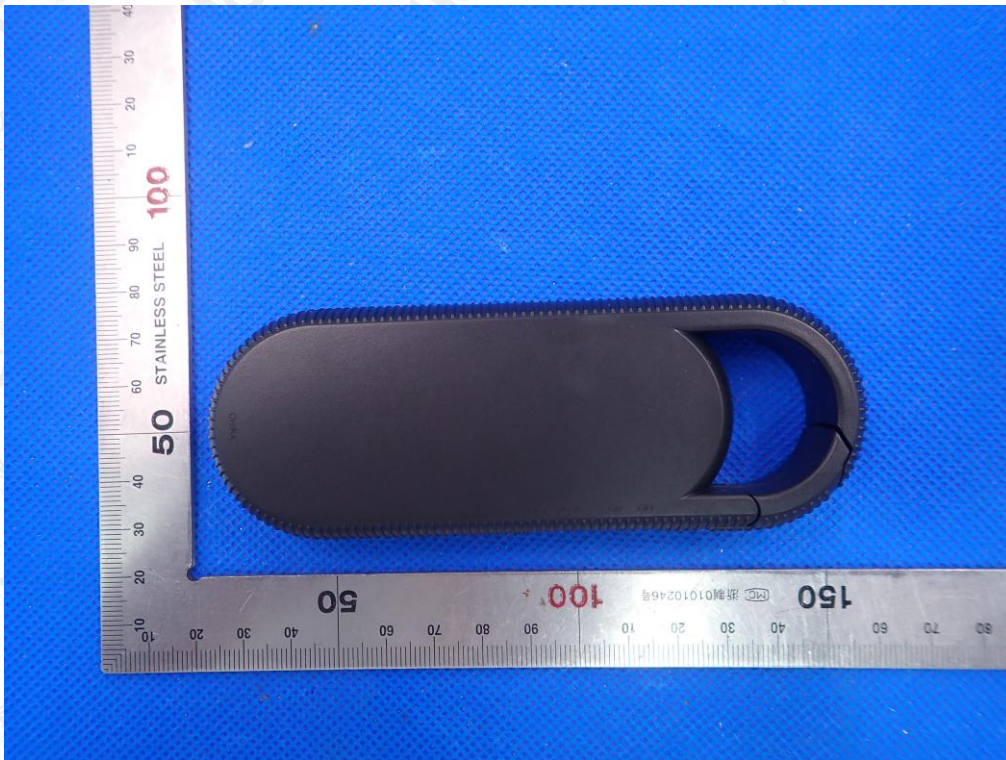


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THE MODEL NAME OF B93
TOP VIEW OF EUT



BOTTOM VIEW OF EUT



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FRONT VIEW OF EUT



BACK VIEW OF EUT



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LEFT VIEW OF EUT



RIGHT VIEW OF EUT



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THE MODEL NAME OF LC-D201
TOP VIEW OF EUT

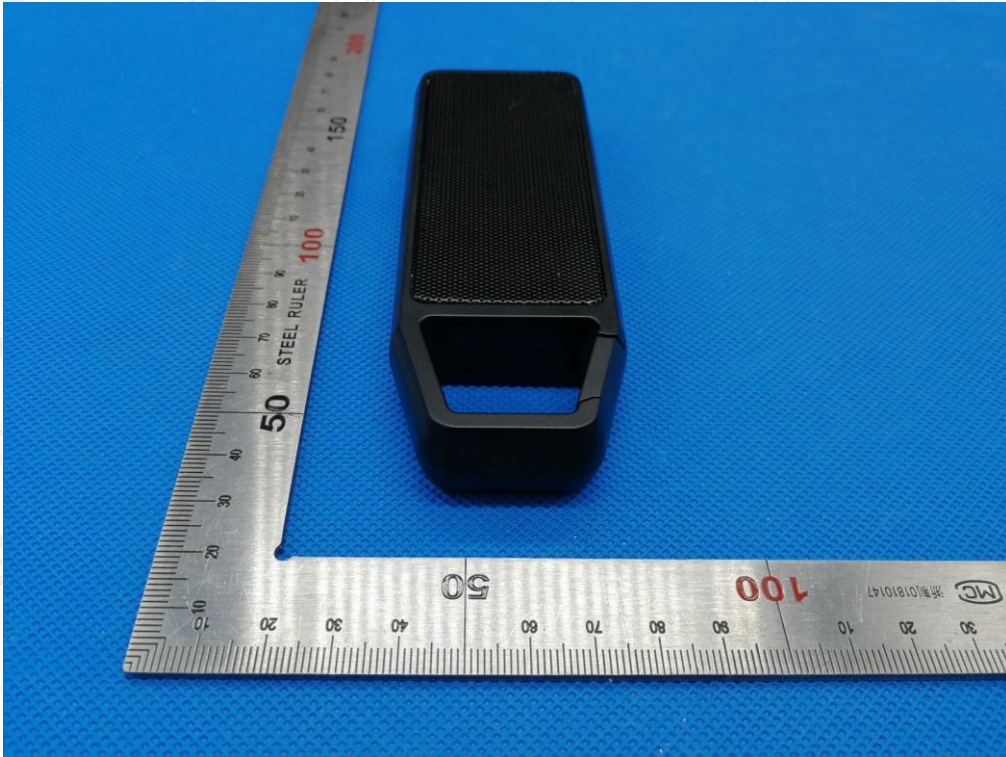


BOTTOM VIEW OF EUT

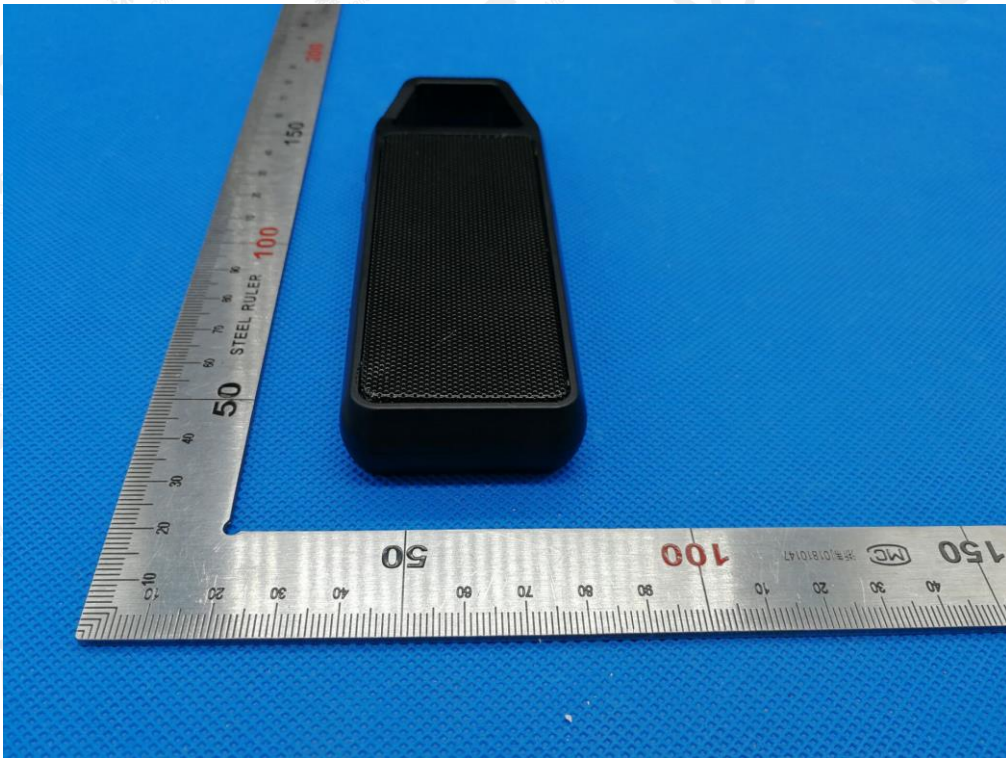


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FRONT VIEW OF EUT



BACK VIEW OF EUT



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LEFT VIEW OF EUT



RIGHT VIEW OF EUT



----THE END ----

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