

RADIATED EMISSION ABOVE 1GHZ

EUT	In-Vehicle Receipt Printer	Model Name	VP-420
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2412MHZ	Antenna	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4824.106	42.59	3.72	46.31	74	-27.69	peak
4824.051	38.62	3.72	42.34	54	-11.66	AVG
7236.086	41.88	8.15	50.03	74	-23.97	peak
7236.043	37.56	8.15	45.71	54	-8.29	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

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Temperature	25°C	Relative Humidity	55.4%
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Test Mode	802.11b with date rate 1 2412MHZ	Antenna	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4824.060	43.06	3.72	46.78	74	-27.22	peak
4824.107	39.11	3.72	42.83	54	-11.17	AVG
7236.085	41.28	8.15	49.43	74	-24.57	peak
7236.034	37.62	8.15	45.77	54	-8.23	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

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EUT	In-Vehicle Receipt Printer	Model Name	VP-420
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2437MHZ	Antenna	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4874.034	45.87	3.75	49.62	74	-24.38	peak
4874.047	40.25	3.75	44	54	-10	AVG
7311.089	44.91	8.16	53.07	74	-20.93	peak
7311.094	37.84	8.16	46	54	-8	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

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Test Mode	802.11b with date rate 1 2437MHZ	Antenna	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4874.041	44.68	3.75	48.43	74	-25.57	peak
4874.079	40.24	3.75	43.99	54	-10.01	AVG
7311.071	43.71	8.16	51.87	74	-22.13	peak
7311.096	36.72	8.16	44.88	54	-9.12	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

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Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2462MHZ	Antenna	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4924.086	42.33	3.81	46.14	74	-27.86	peak
4924.049	39.88	3.81	43.69	54	-10.31	AVG
7386.020	41.02	8.19	49.21	74	-24.79	peak
7386.067	33.94	8.19	42.13	54	-11.87	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

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Test Mode	802.11b with date rate 1 2462MHZ	Antenna	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4924.046	44.12	3.81	47.93	74	-26.07	peak
4924.084	39.18	3.81	42.99	54	-11.01	AVG
7386.046	40.32	8.19	48.51	74	-25.49	peak
7386.096	36.57	8.19	44.76	54	-9.24	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

RESULT: PASS

Note:

Other emissions from 1G to 25 GHz are considered as ambient noise. No recording in the test report.

Factor = Antenna Factor + Cable loss - Amplifier gain, Over=Measure-Limit.

The "Factor" value can be calculated automatically by software of measurement system.

All test modes had been pre-tested. The 802.11b mode is the worst case and recorded in the report.

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12. BAND EDGE EMISSION

12.1. LIMITS

Frequency Band	Limit of the Field Strength (dB μ V/m)	
	Peak	Average
$f \leq 2390\text{MHz}$	74	54
$f \geq 2483.5\text{MHz}$	74	54

12.2. MEASUREMENT PROCEDURE

Radiated restricted band edge measurements

The radiated restricted band edge measurements are measured with an EMI test receiver connected to the receive antenna while the EUT is transmitting

12.3. TEST SET-UP

same as 11.2

Note:

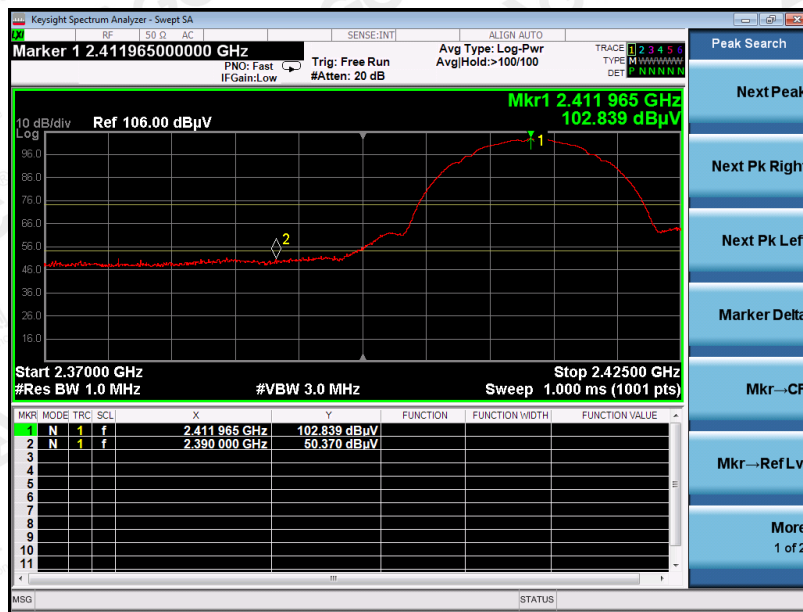
- Factor=Antenna Factor + Cable loss - Amplifier gain. Field Strength=Factor + Reading level
- The factor had been edited in the "Input Correction" of the Spectrum Analyzer. So the Amplitude of test plots is equal to Reading level plus the Factor in dB. Use the A dB(μ V) to represent the Amplitude. Use the F dB(μ V/m) to represent the Field Strength. So A=F.

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12.4. TEST RESULT

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Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with data rate 1 2412MHZ	Antenna	Horizontal

PK



AV

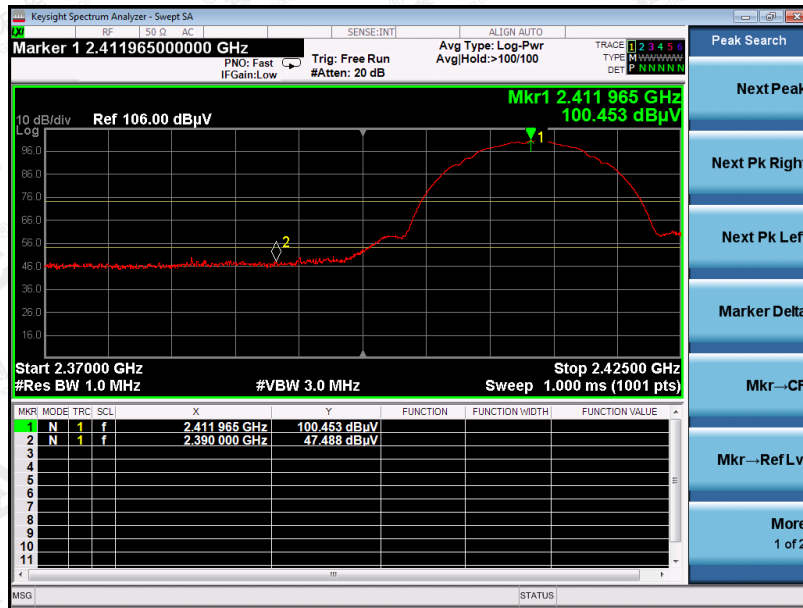


RESULT: PASS

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Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with data rate 1 2412MHZ	Antenna	Vertical

PK



AV

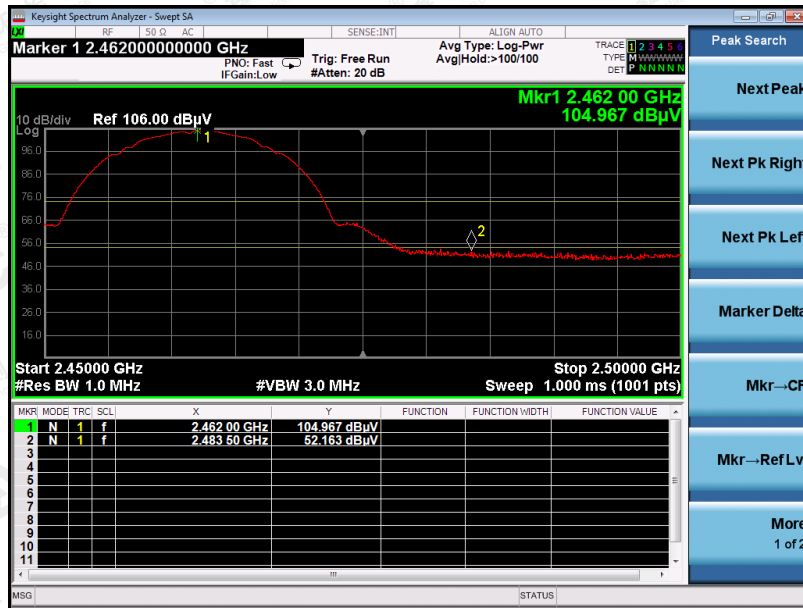


RESULT: PASS

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Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with data rate 1 2462MHZ	Antenna	Horizontal

PK



AV

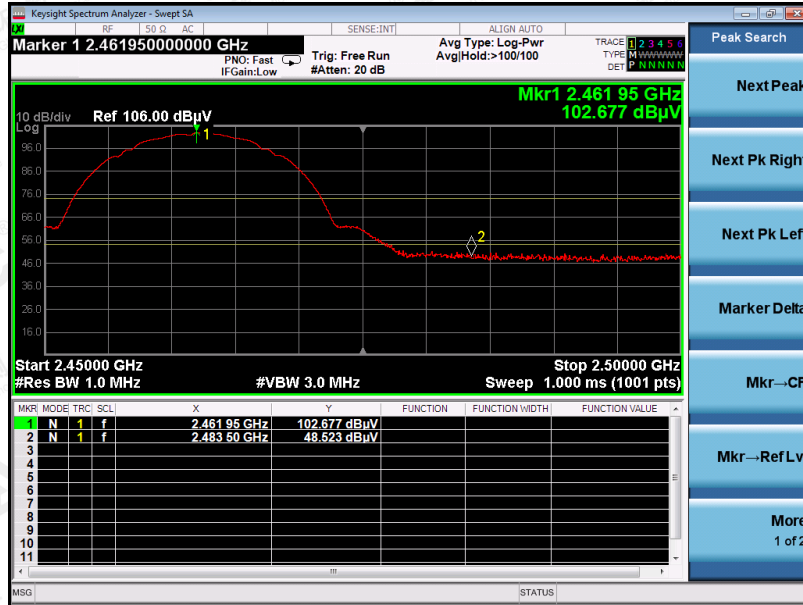


RESULT: PASS

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Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with data rate 1 2462MHZ	Antenna	Vertical

PK



AV

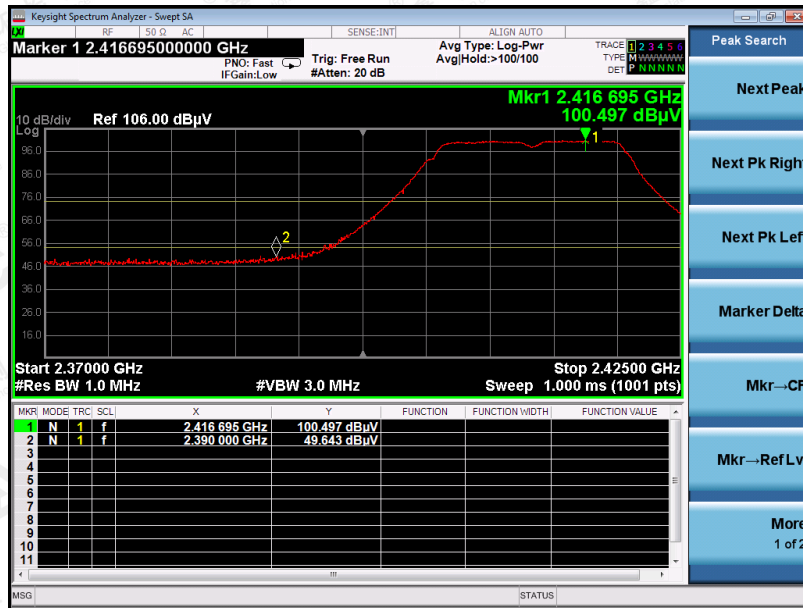


RESULT: PASS

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EUT	In-Vehicle Receipt Printer	Model Name	VP-420
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11g with data rate 6 2412MHZ	Antenna	Horizontal

PK



AV



RESULT: PASS

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EUT	In-Vehicle Receipt Printer	Model Name	VP-420
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11g with data rate 6 2412MHZ	Antenna	Vertical

PK



AV

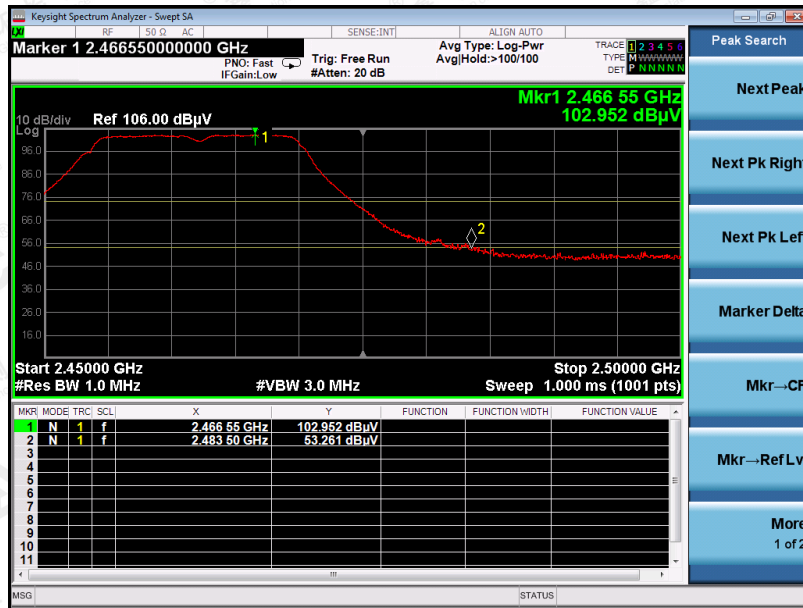


RESULT: PASS

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EUT	In-Vehicle Receipt Printer	Model Name	VP-420
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11g with data rate 6 2462MHZ	Antenna	Horizontal

PK



AV

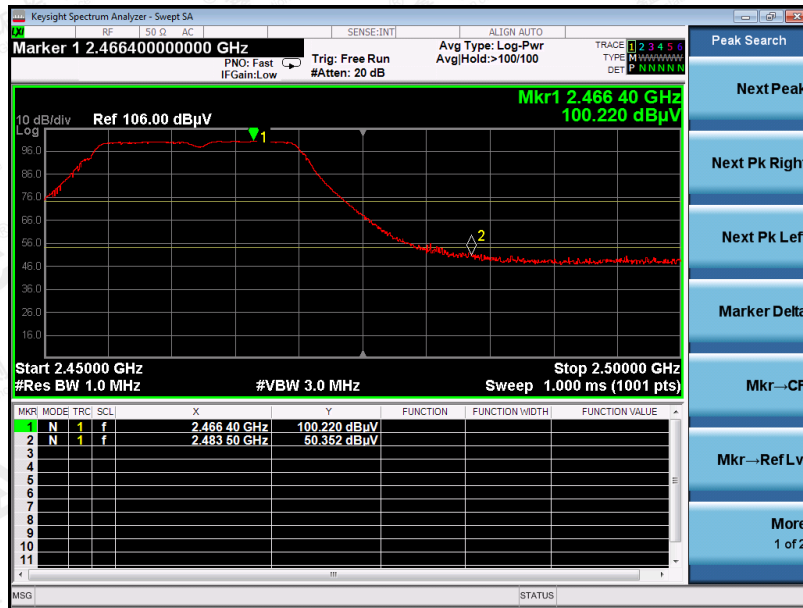


RESULT: PASS

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Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11g with data rate 6 2462MHZ	Antenna	Vertical

PK



AV

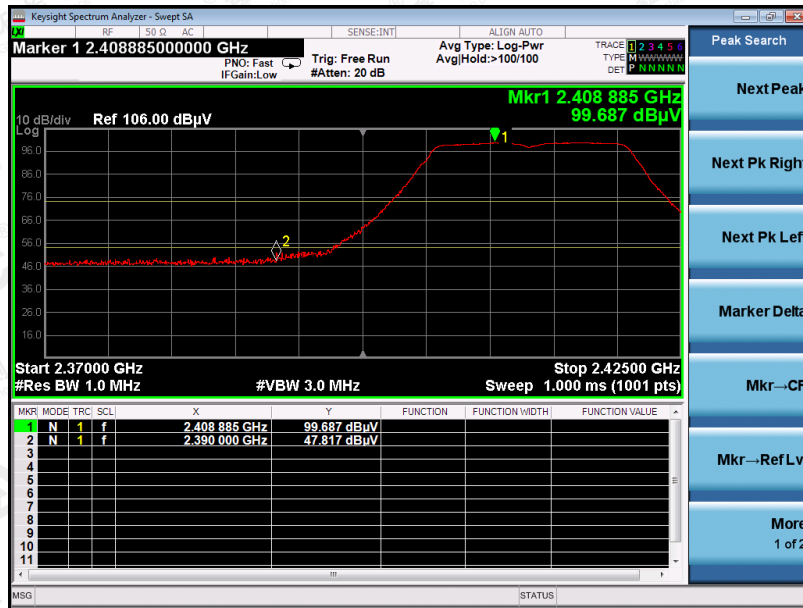


RESULT: PASS

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EUT	In-Vehicle Receipt Printer	Model Name	VP-420
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11n 20 with data rate 6.5 2412MHZ	Antenna	Horizontal

PK



AV



RESULT: PASS

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EUT	In-Vehicle Receipt Printer	Model Name	VP-420
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11n 20 with data rate 6.5 2412MHZ	Antenna	Vertical

PK



AV

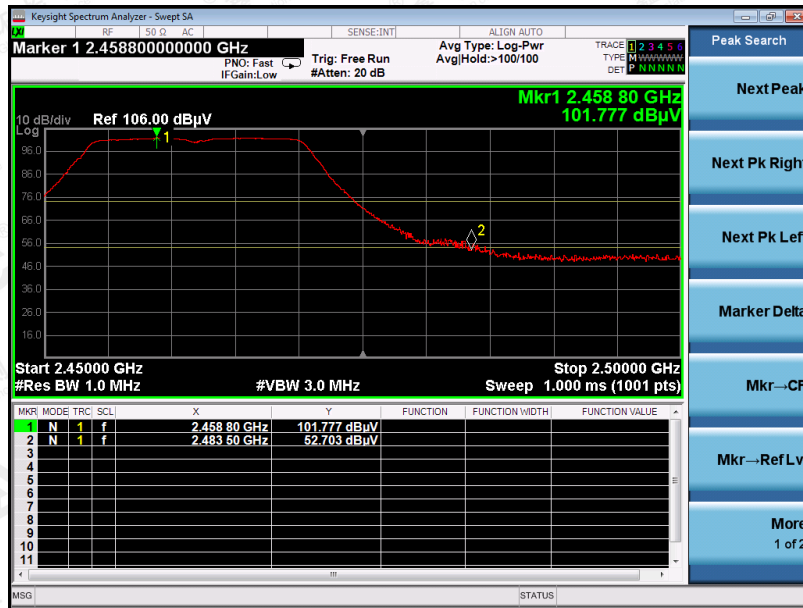


RESULT: PASS

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EUT	In-Vehicle Receipt Printer	Model Name	VP-420
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11n 20 with data rate 6.5 2462MHZ	Antenna	Horizontal

PK



AV

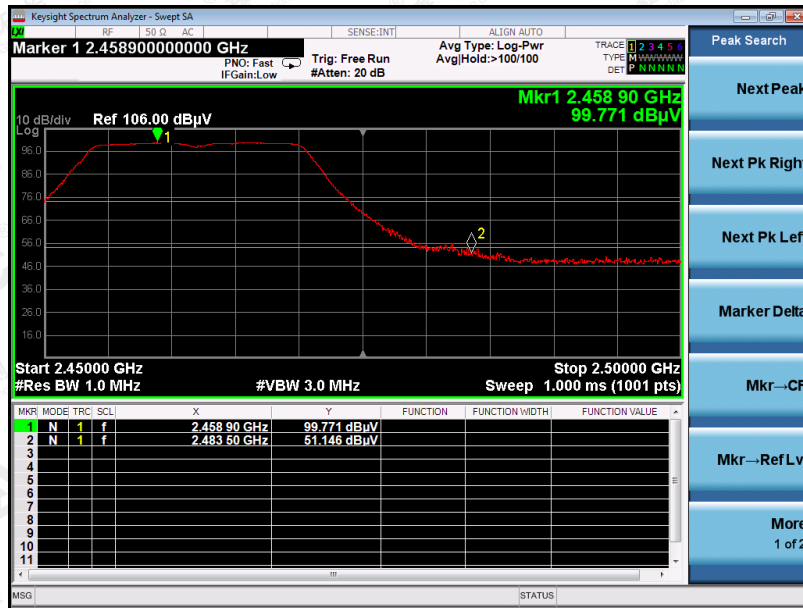


RESULT: PASS

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Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11n 20 with data rate 6.5 2462MHZ	Antenna	Vertical

PK



AV



RESULT: PASS

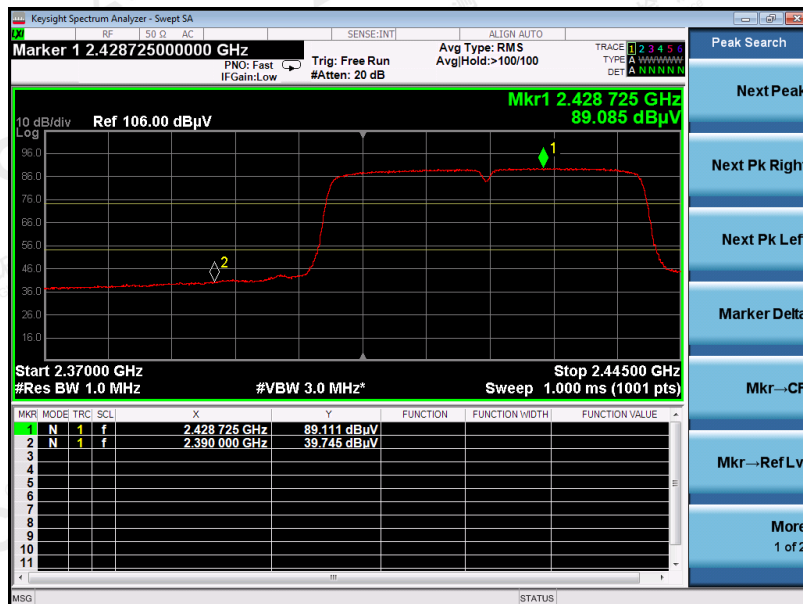
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EUT	In-Vehicle Receipt Printer	Model Name	VP-420
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11n 40 with data rate 13.5 2422MHZ	Antenna	Horizontal

PK



AV

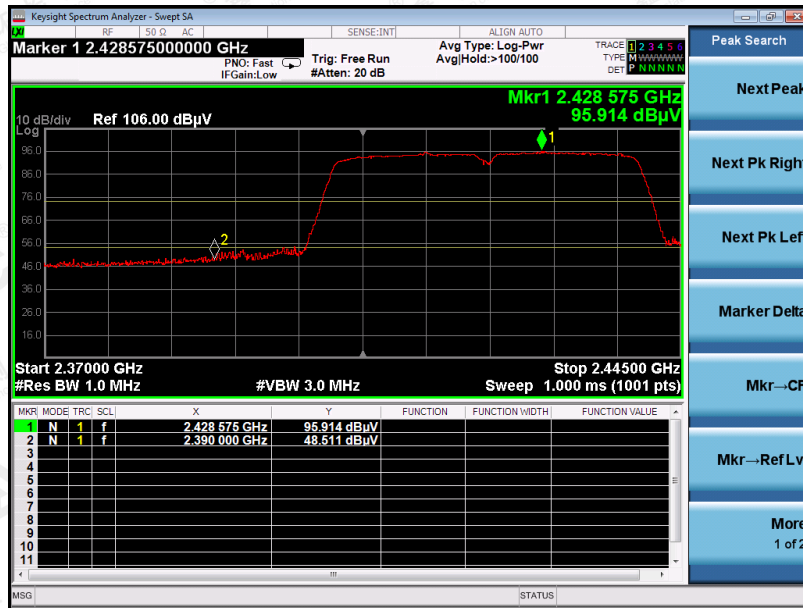


RESULT: PASS

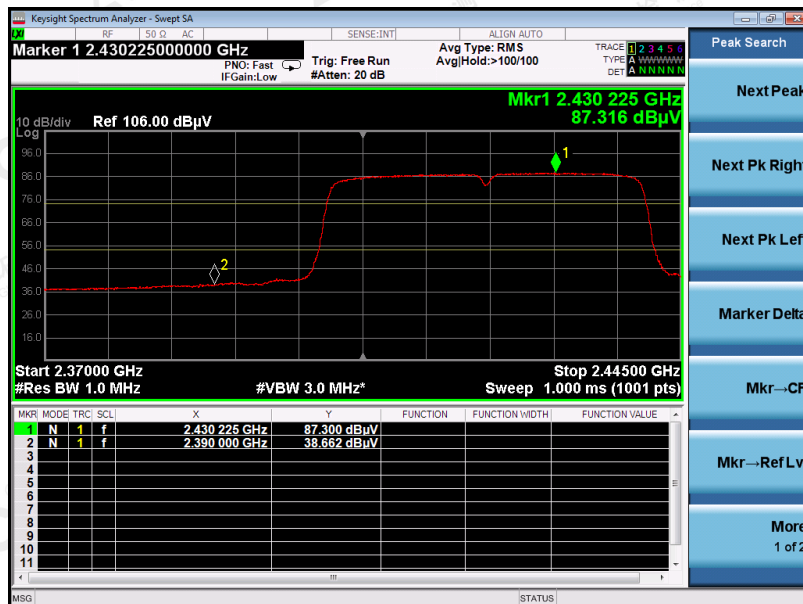
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EUT	In-Vehicle Receipt Printer	Model Name	VP-420
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11n 40 with data rate 13.5 2422MHZ	Antenna	Vertical

PK



AV

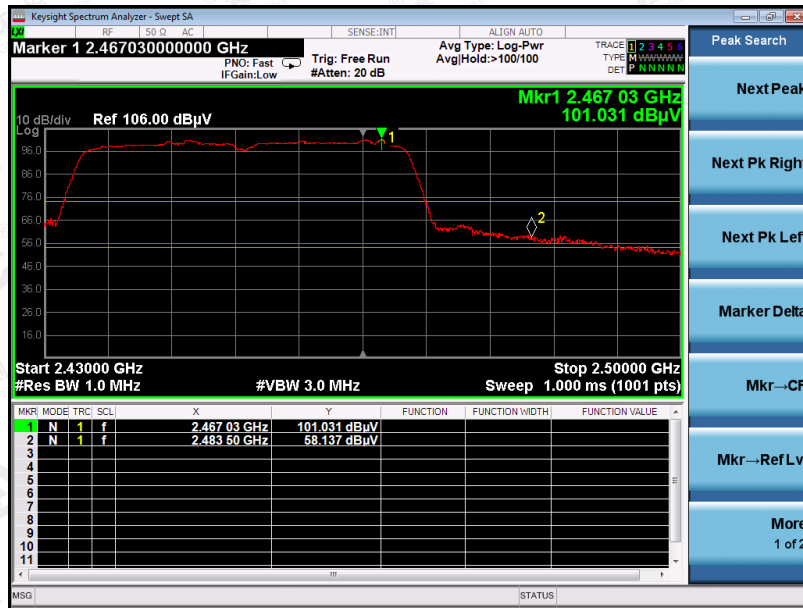


RESULT: PASS

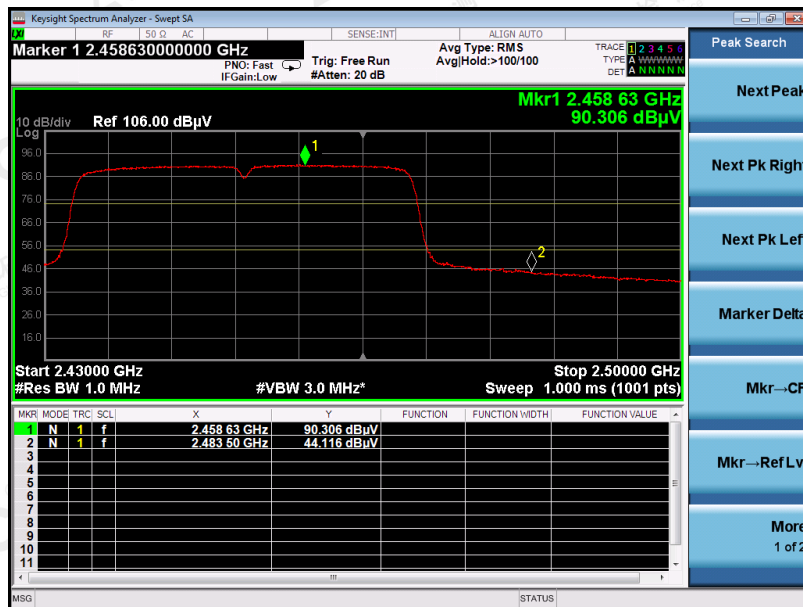
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EUT	In-Vehicle Receipt Printer	Model Name	VP-420
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11n 40with data rate 13.5 2452MHZ	Antenna	Horizontal

PK



AV

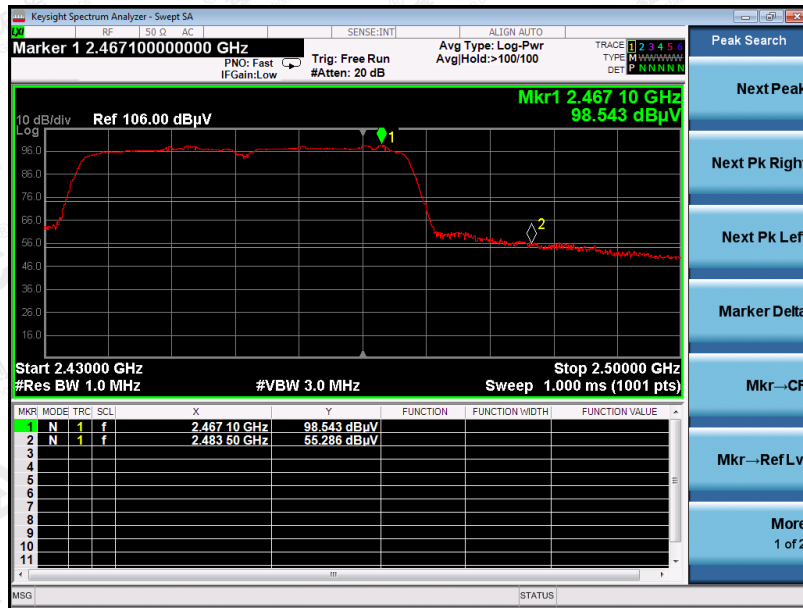


RESULT: PASS

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EUT	In-Vehicle Receipt Printer	Model Name	VP-420
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11n 40 with data rate 13.5 2452MHZ	Antenna	Vertical

PK



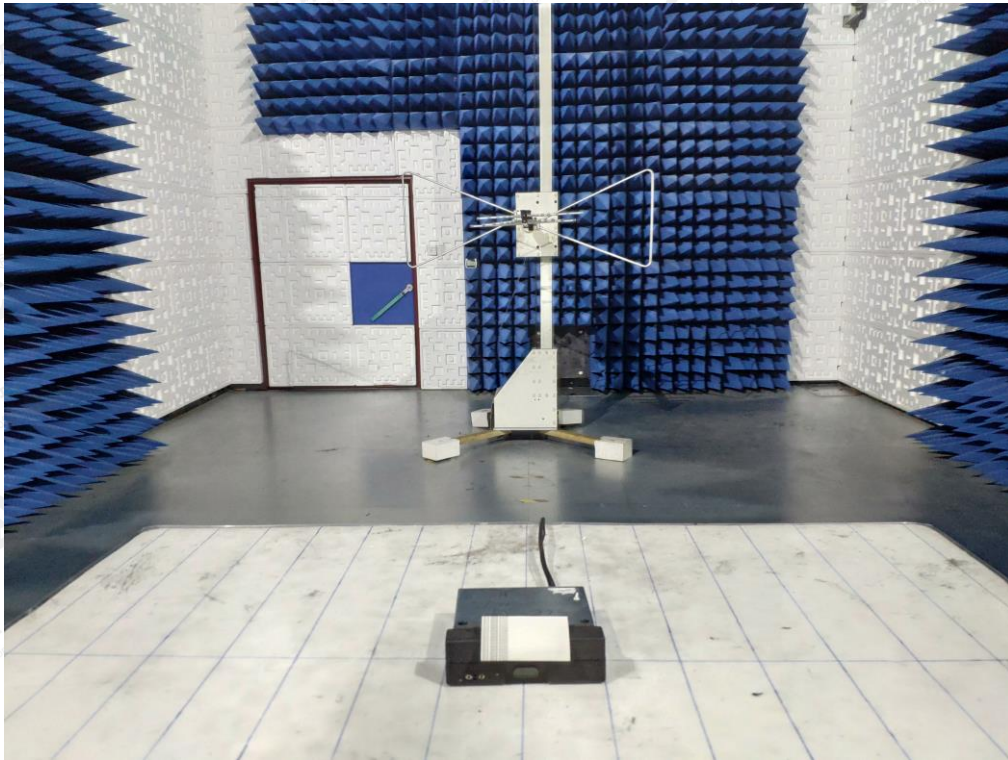
AV



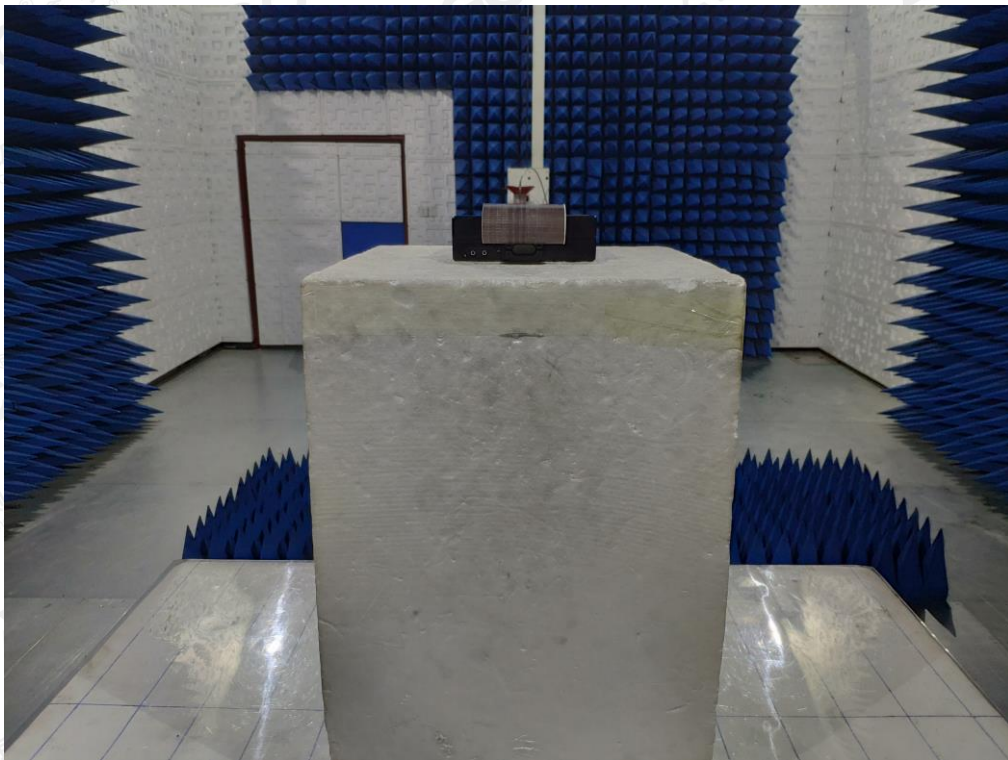
RESULT: PASS

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

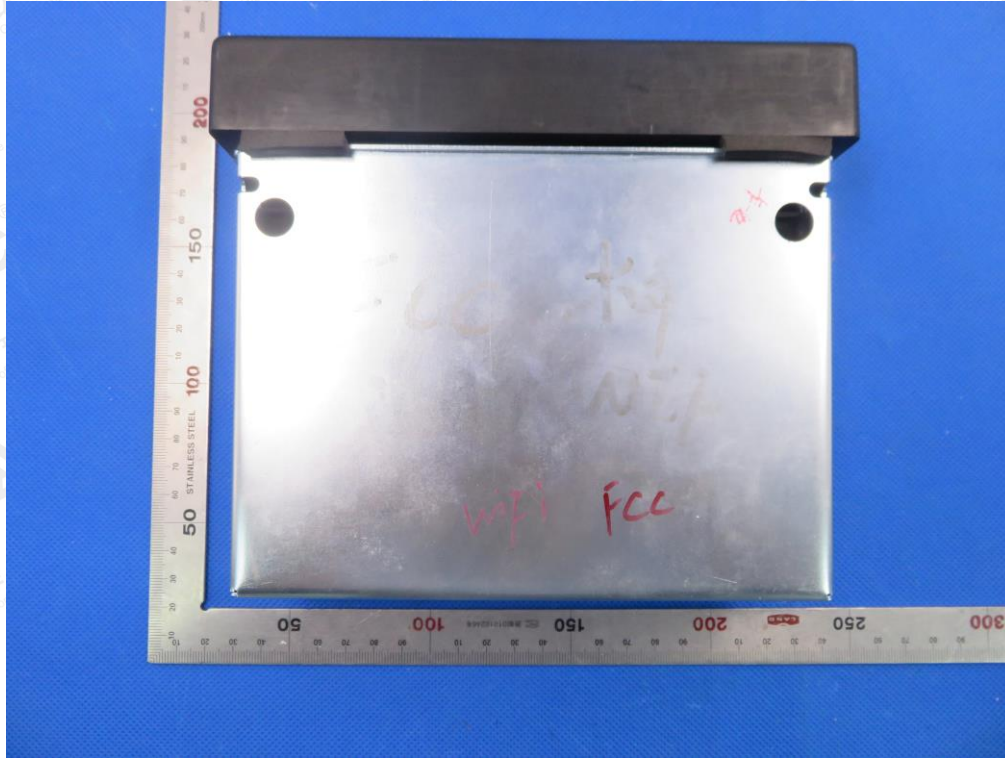


FCC RADIATED EMISSION TEST SETUP ABOVE 1GHZ

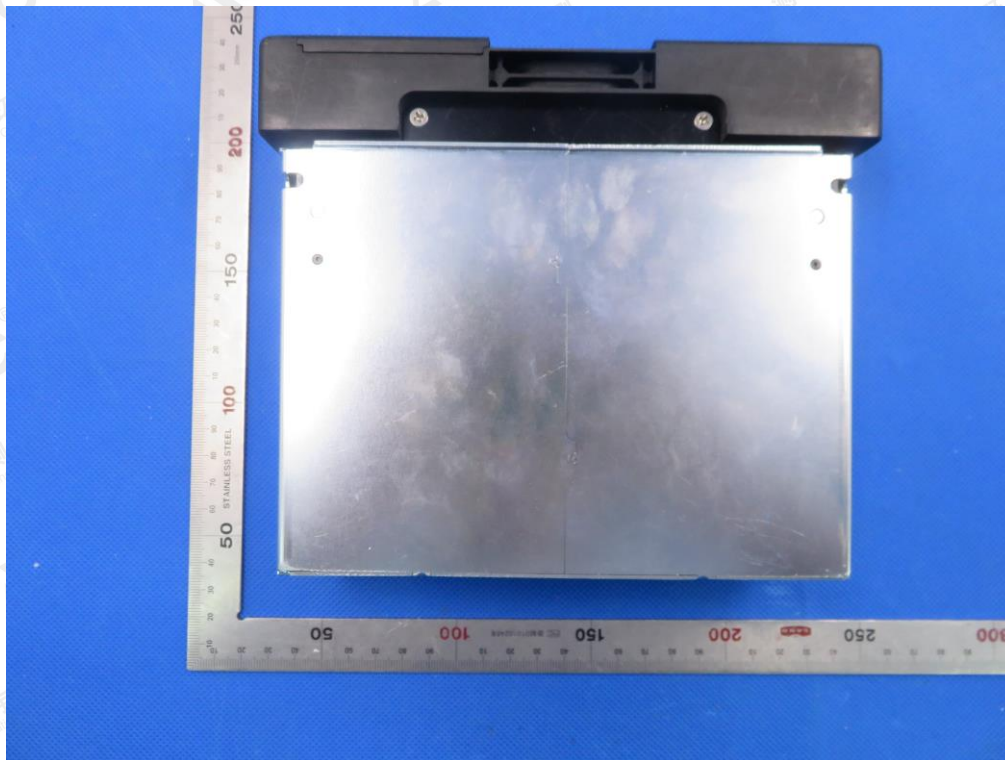


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APPENDIX B: PHOTOGRAPHS OF EUT
TOP VIEW OF EUT

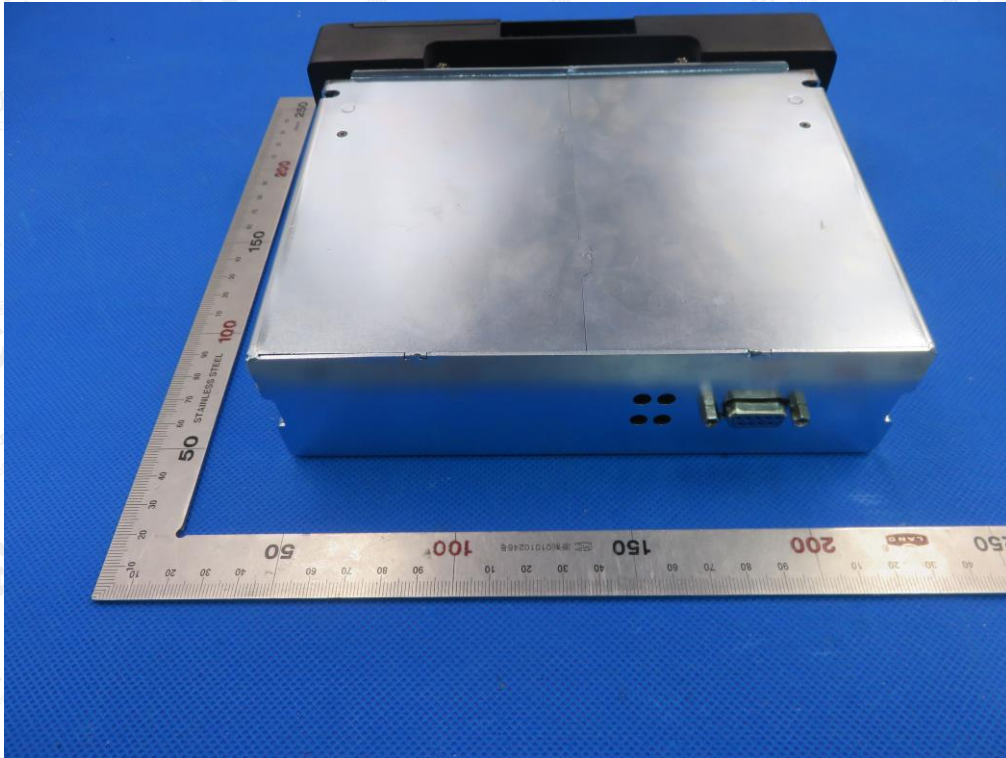


BOTTOM VIEW OF EUT



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FRONT VIEW OF EUT

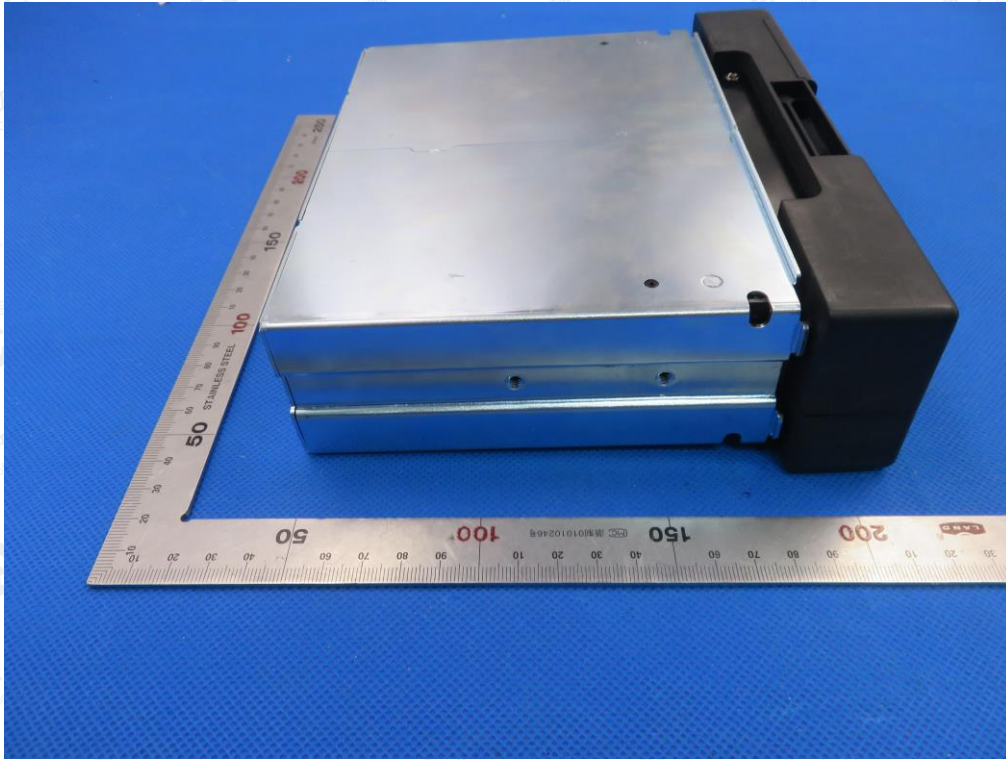


BACK VIEW OF EUT

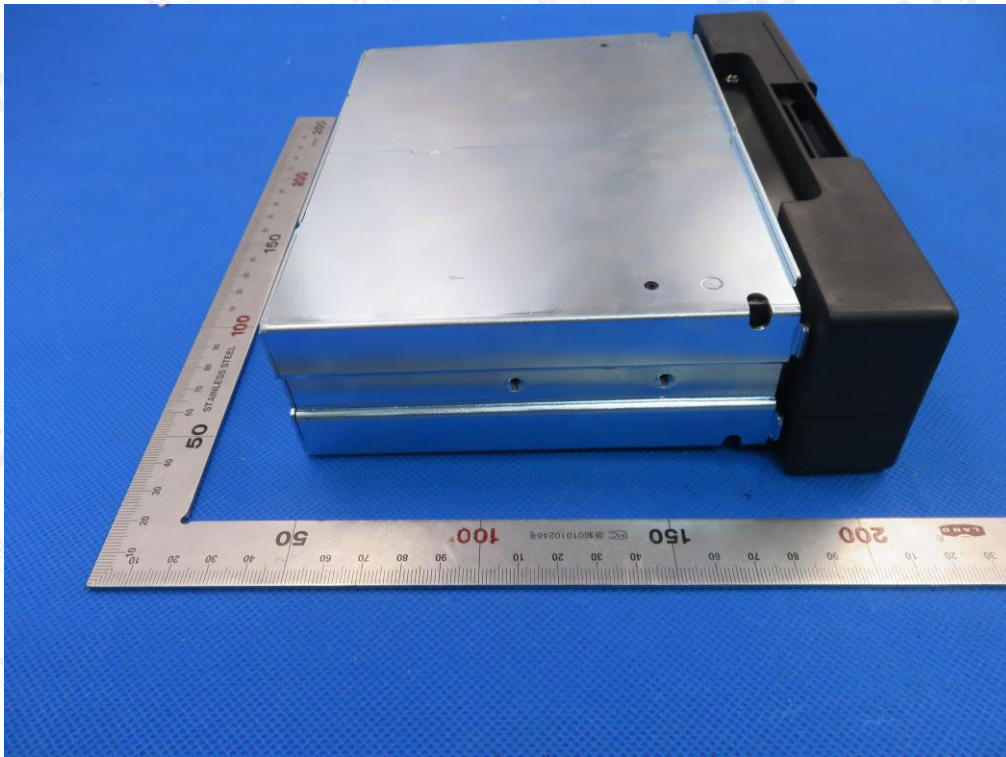


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LEFT VIEW OF EUT

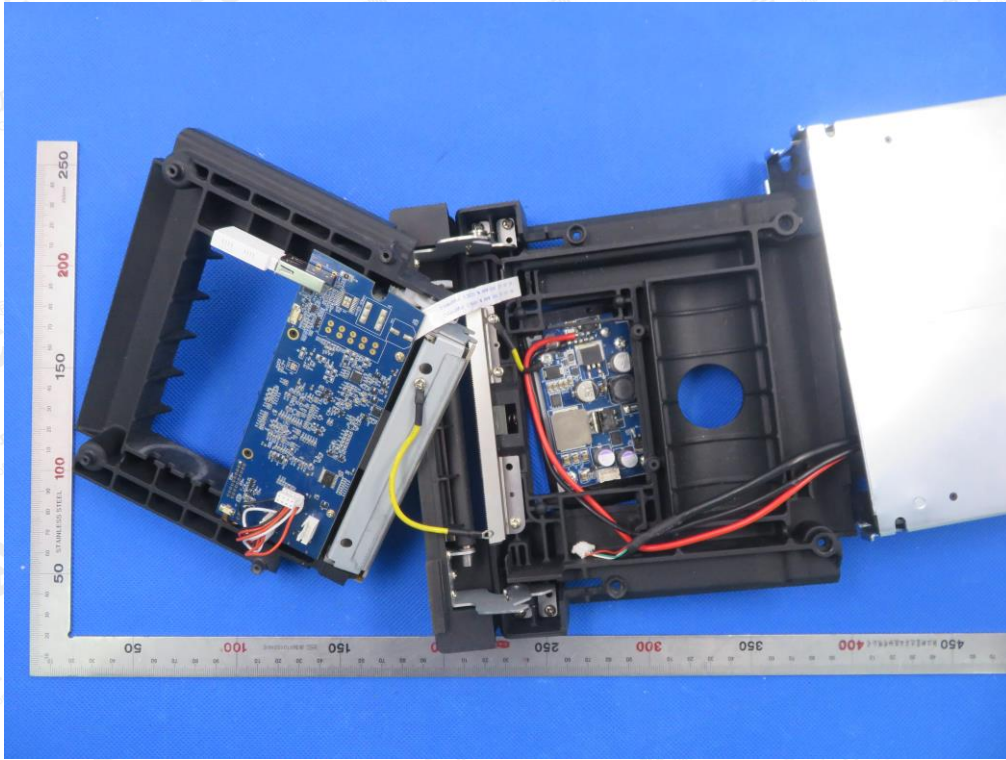


RIGHT VIEW OF EUT

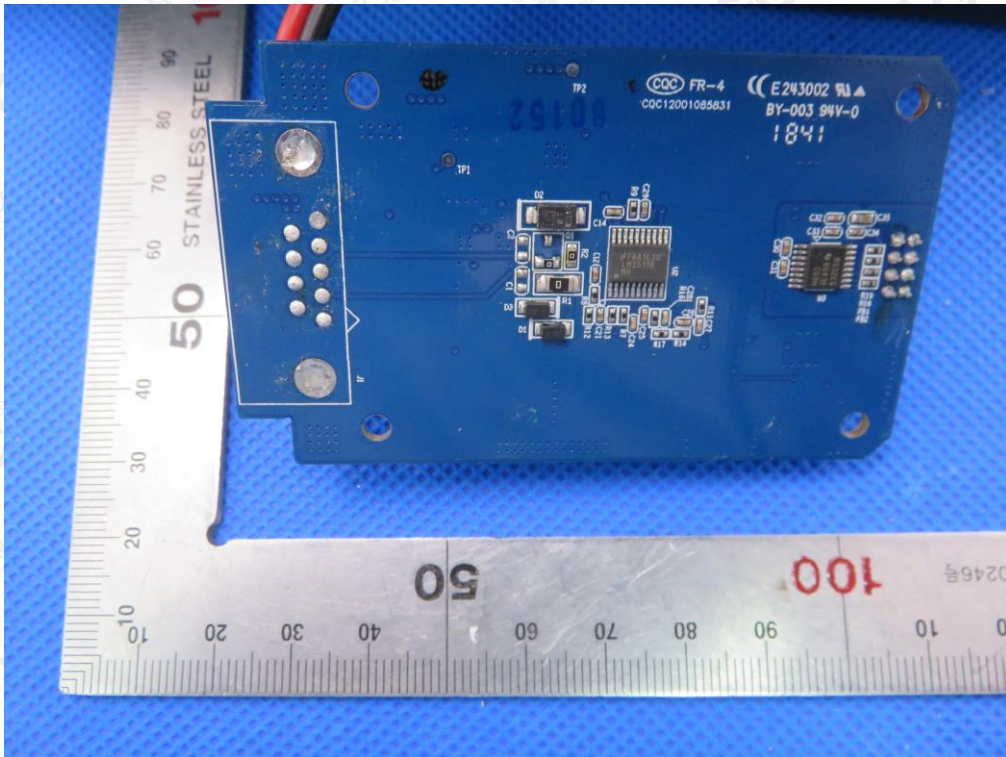


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OPEN VIEW OF EUT-1

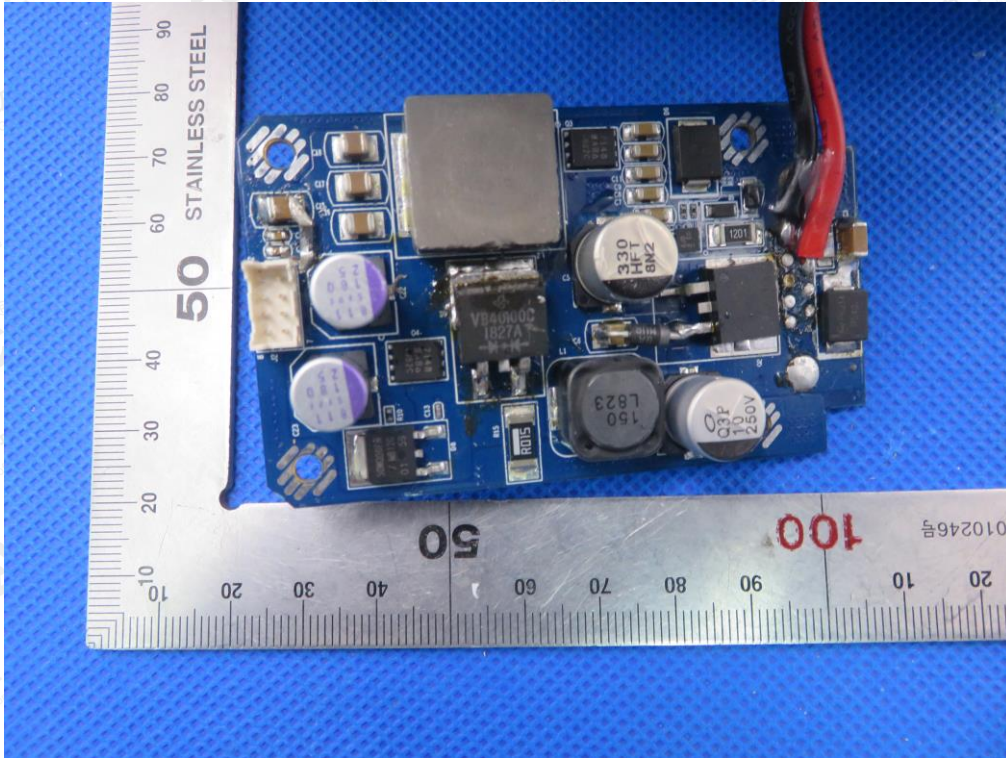


INTERNAL VIEW OF EUT-1

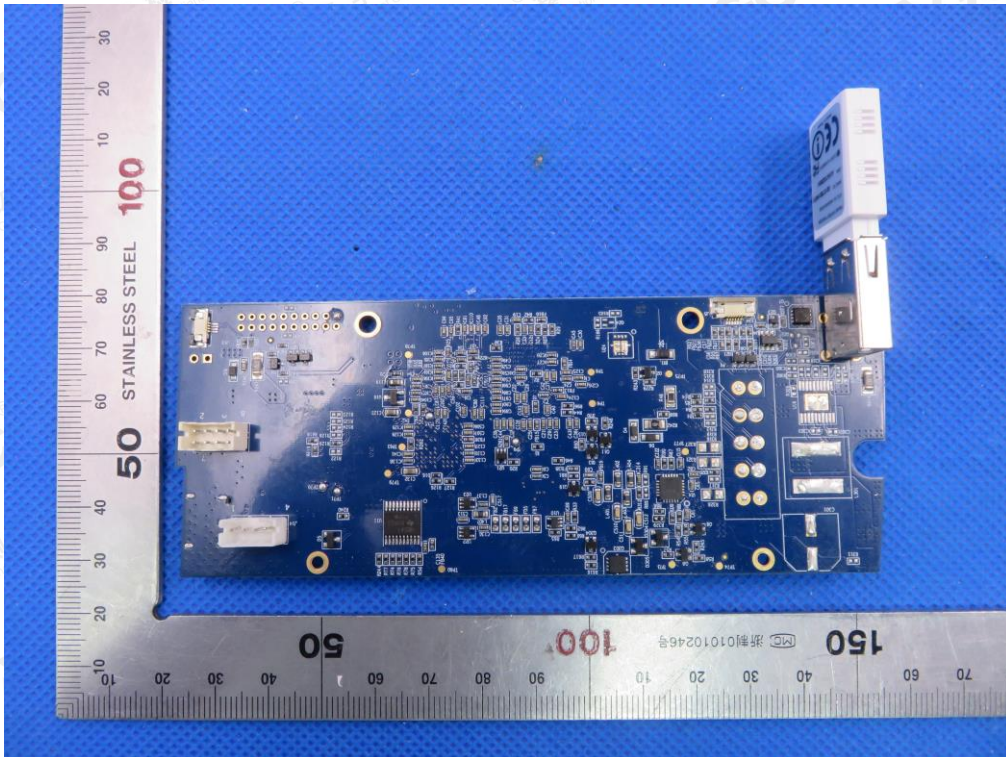


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INTERNAL VIEW OF EUT-2

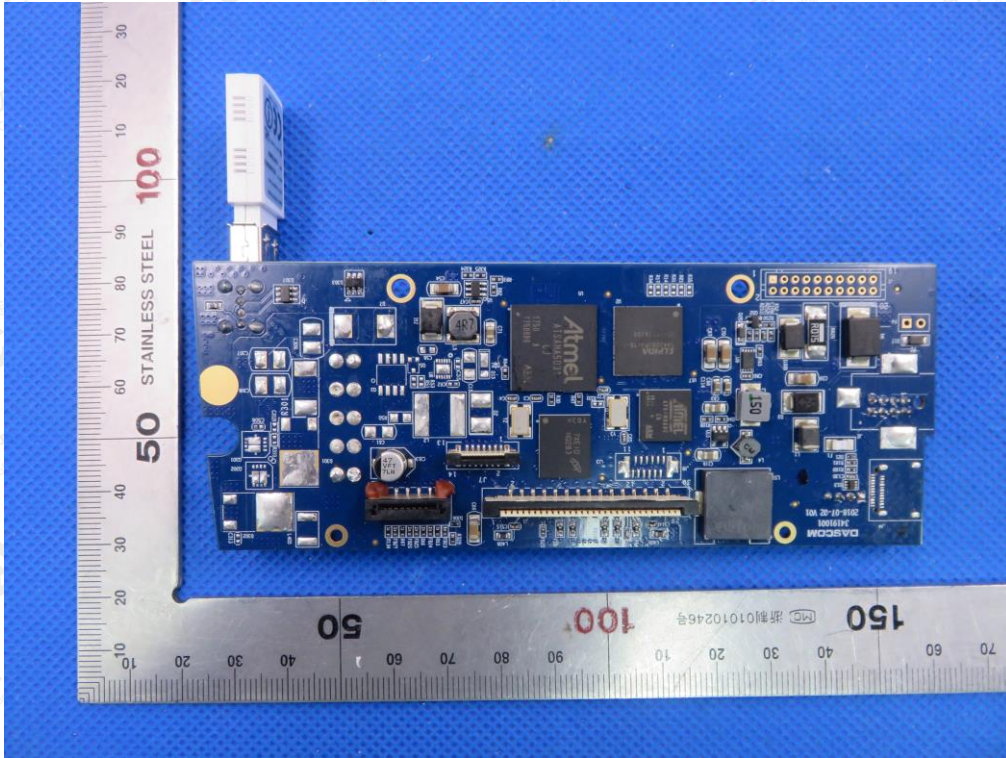


INTERNAL VIEW OF EUT-3

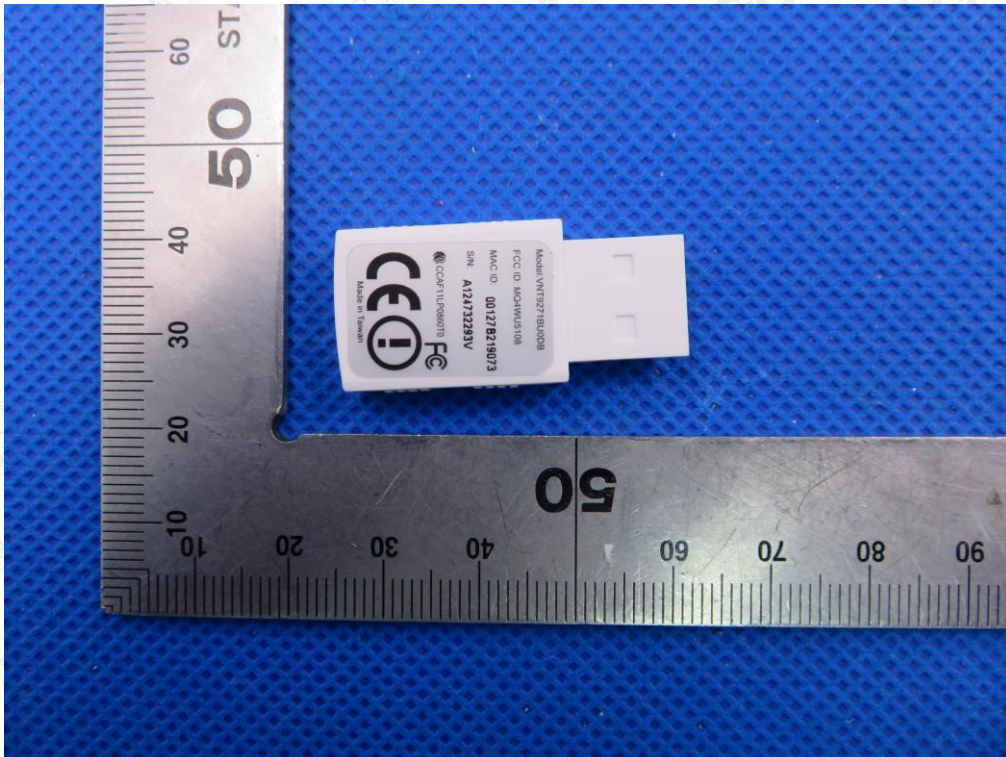


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INTERNAL VIEW OF EUT-4

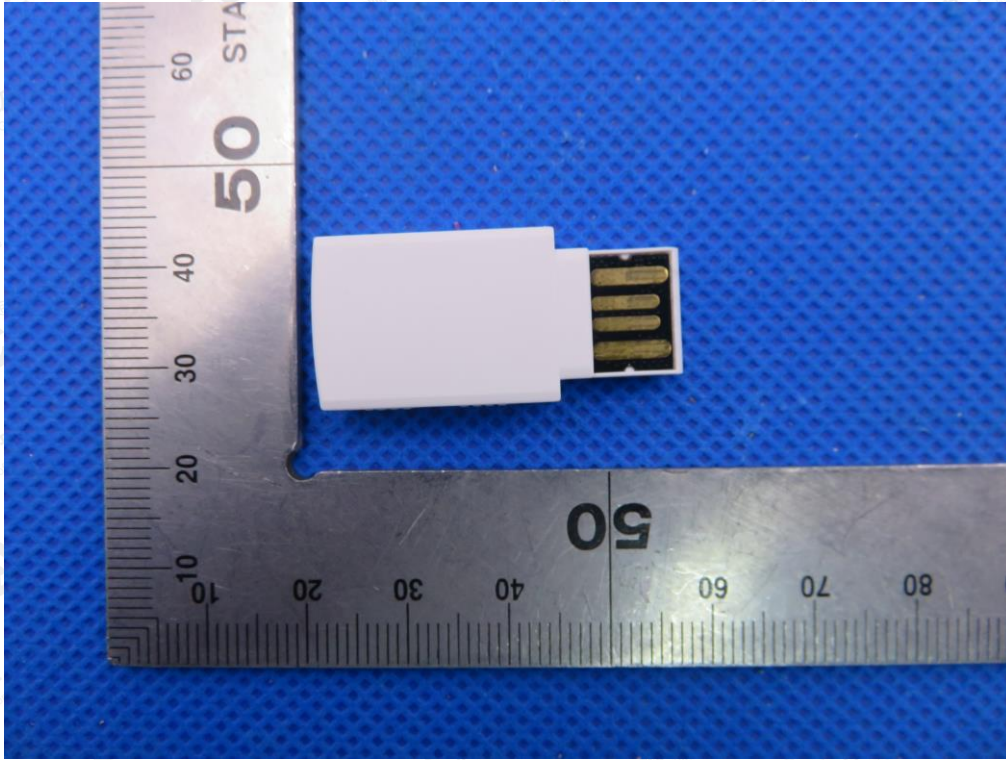


FRONT VIEW OF EUT

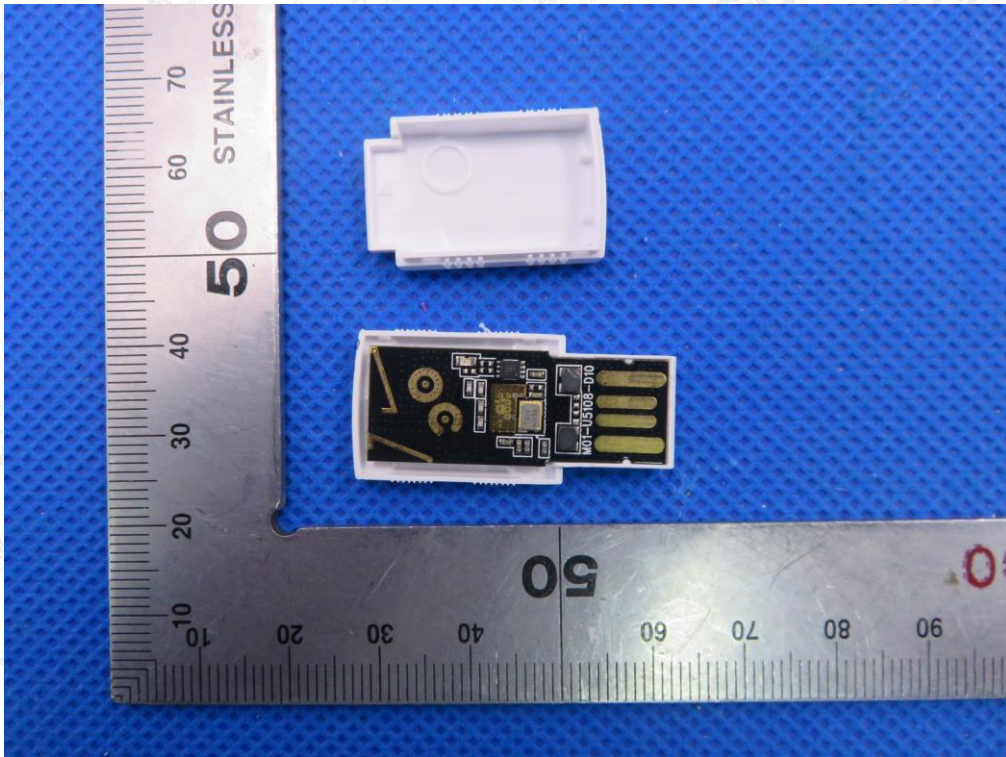


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BACK VIEW OF EUT

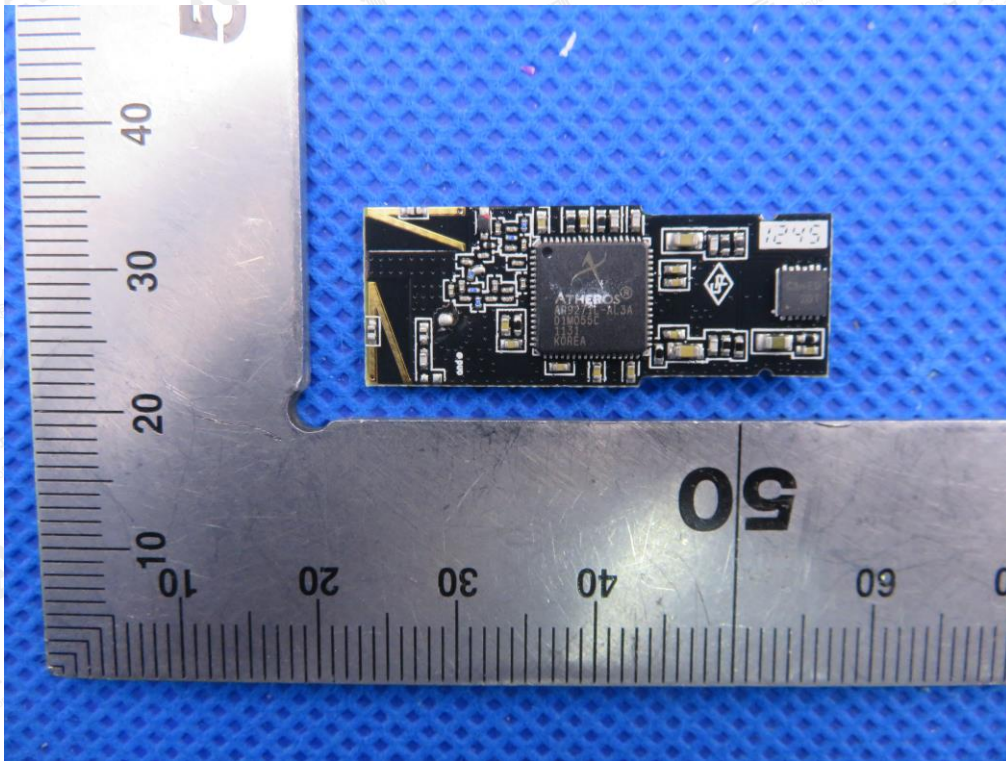


OPEN VIEW OF EUT-1

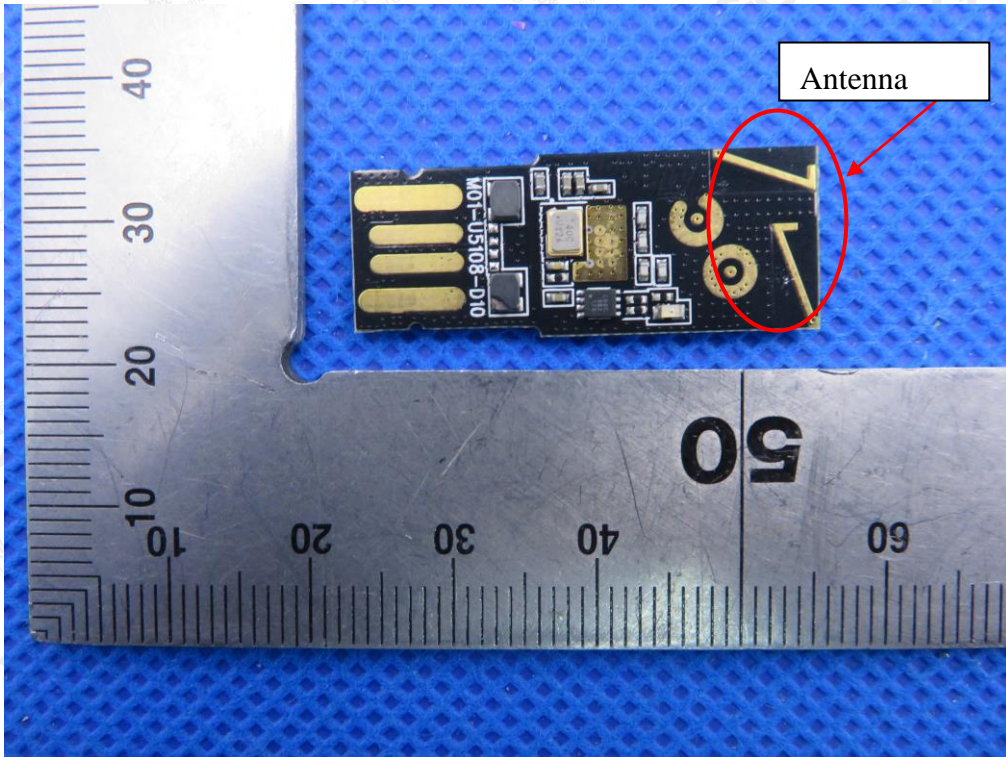


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INTERNAL VIEW OF EUT-1



INTERNAL VIEW OF EUT-2



---END OF REPORT---

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