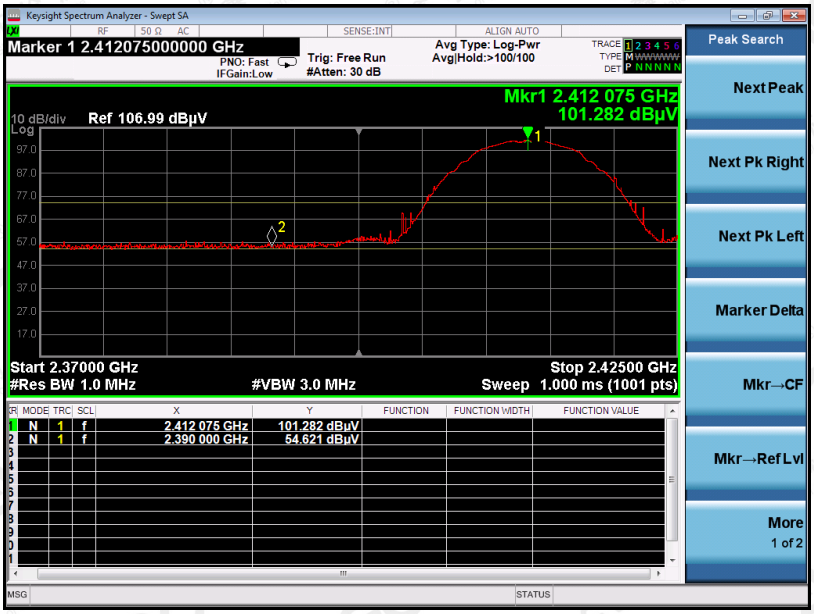
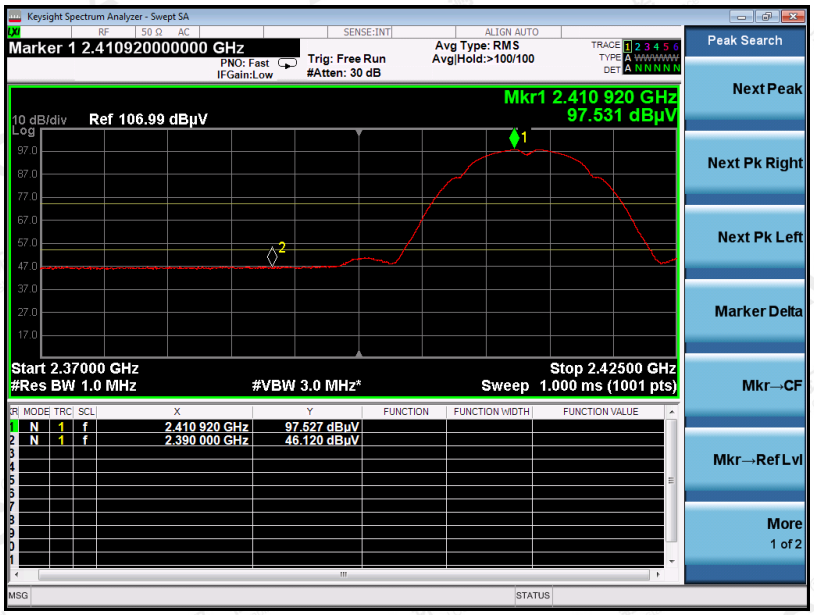
EUT	ac1x1+BT module	Model Name	SA
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with data rate 1 2412MHZ	Antenna	Vertical

PK



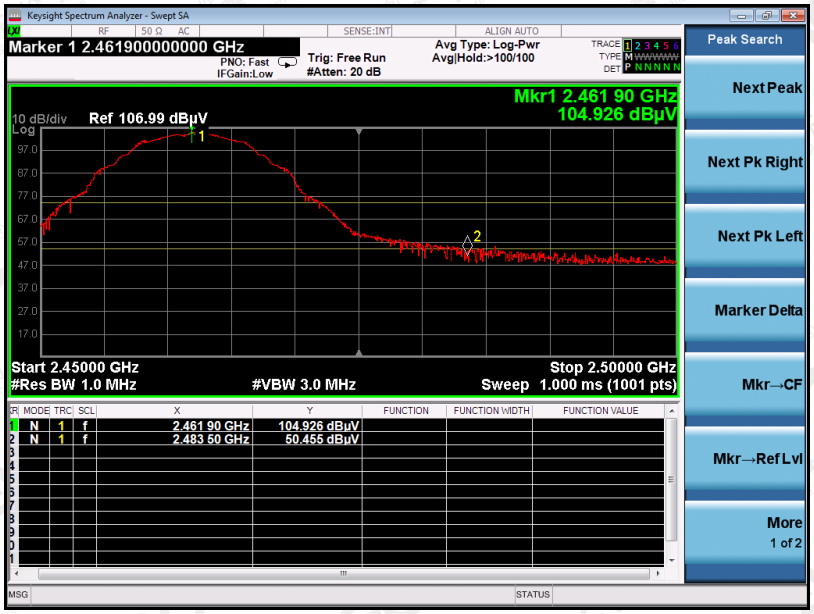
AV



RESULT: PASS

EUT	ac1x1+BT module	Model Name	SA
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with data rate 1 2462MHZ	Antenna	Horizontal

PK



AV

RESULT: PASS

EUT	ac1x1+BT module	Model Name	SA
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with data rate 1 2462MHZ	Antenna	Vertical

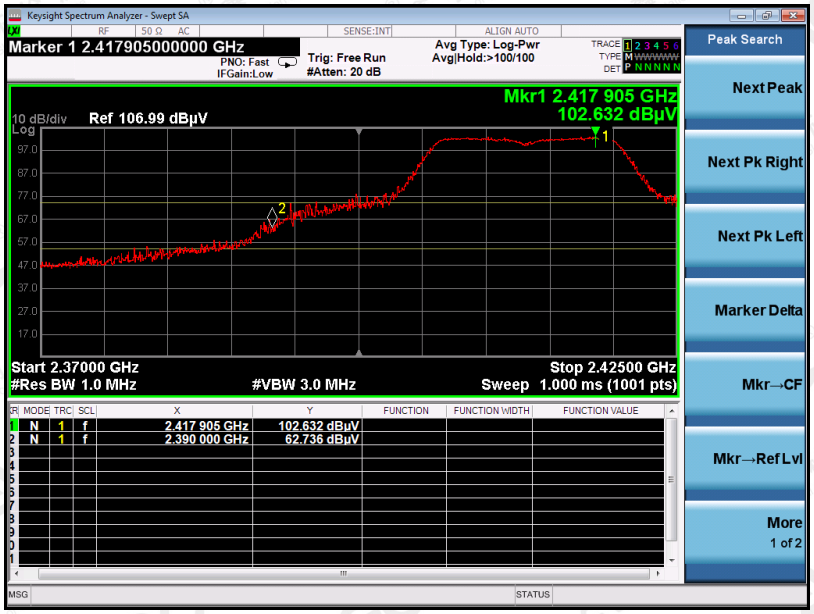
PK

AV

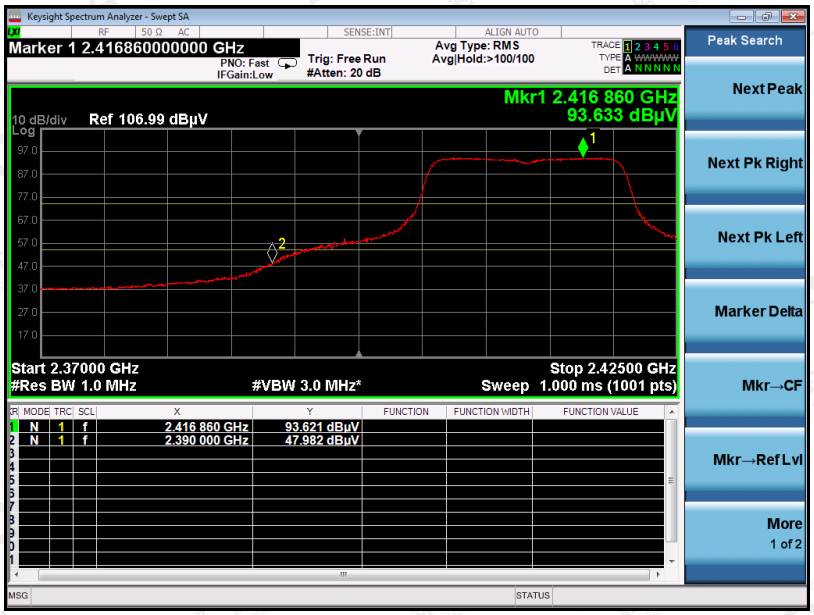
RESULT: PASS

EUT	ac1x1+BT module	Model Name	SA
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



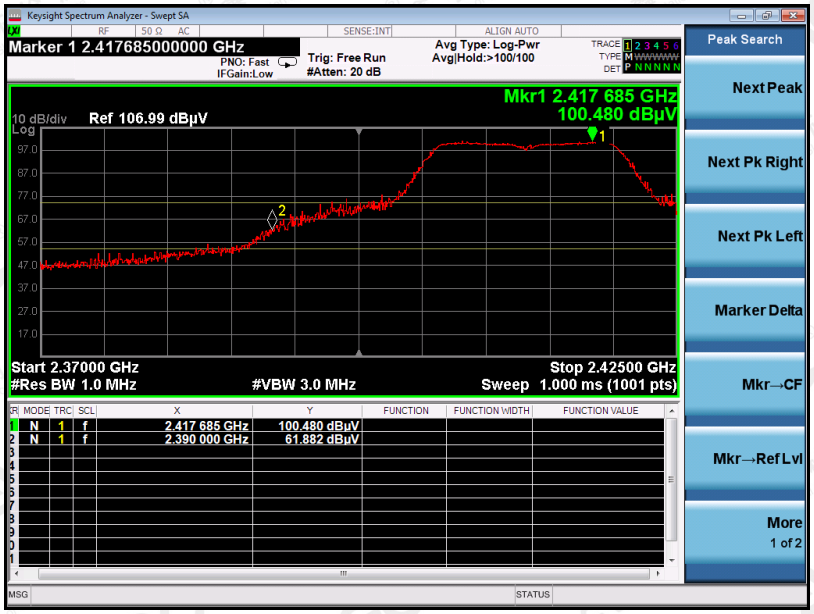
AV



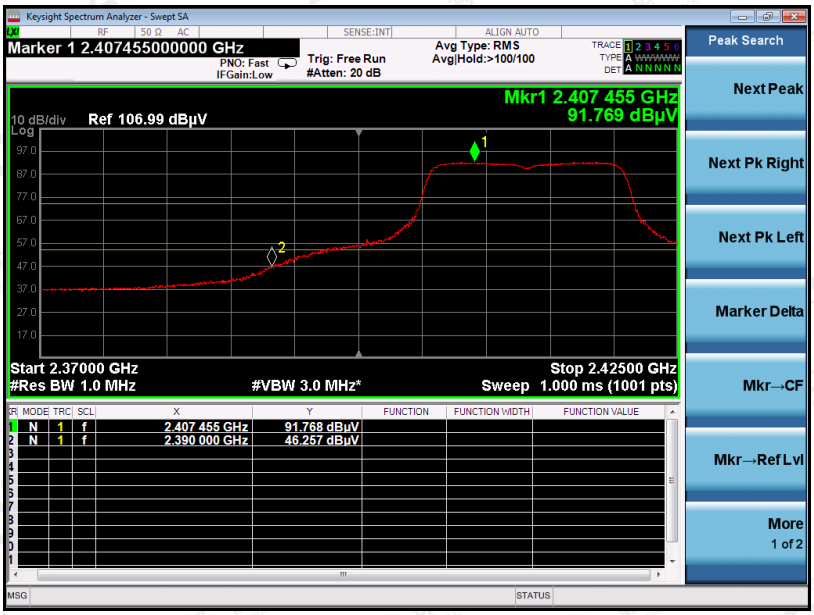
RESULT: PASS

EUT	ac1x1+BT module	Model Name	SA
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

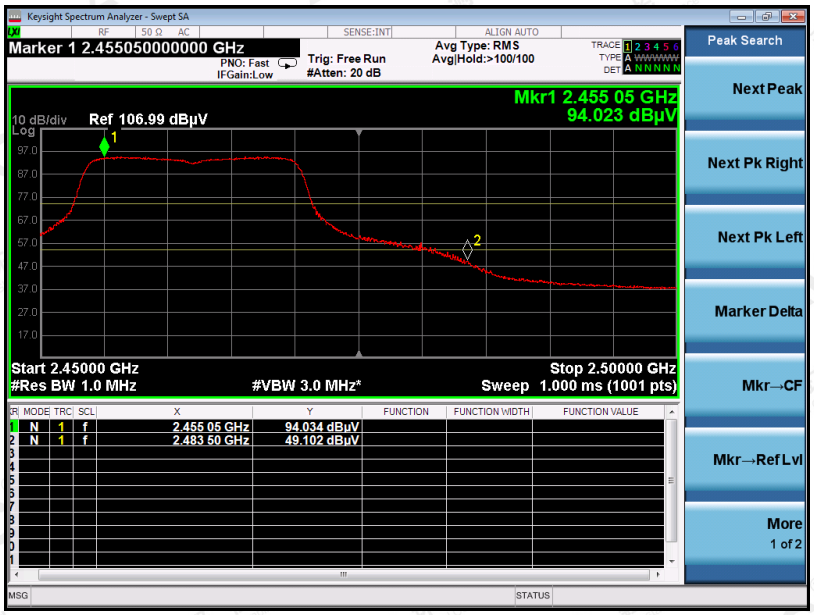


RESULT: PASS

EUT	ac1x1+BT module	Model Name	SA
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

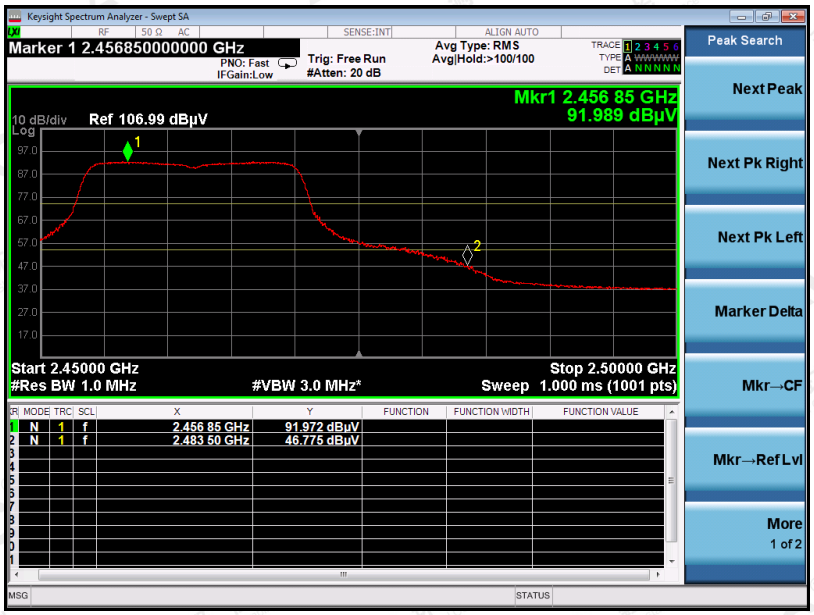


RESULT: PASS

EUT	ac1x1+BT module	Model Name	SA
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

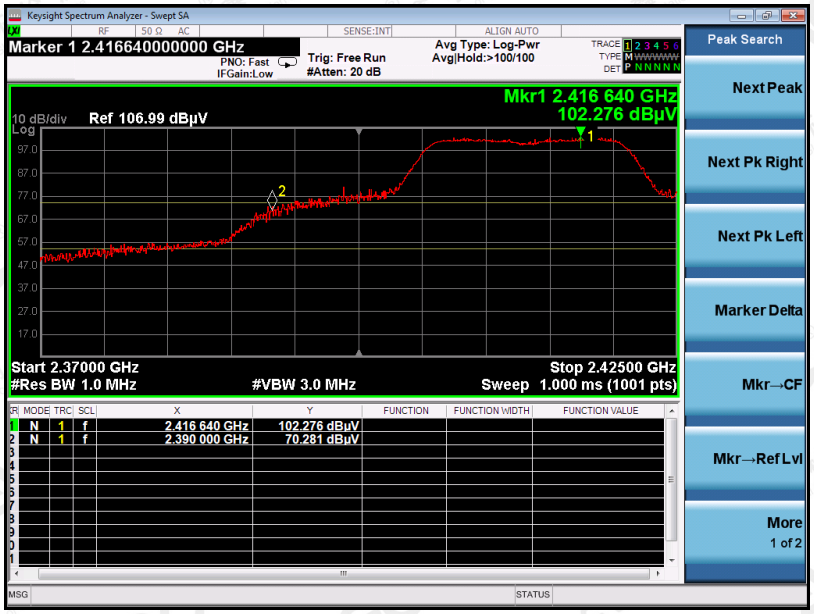
AV



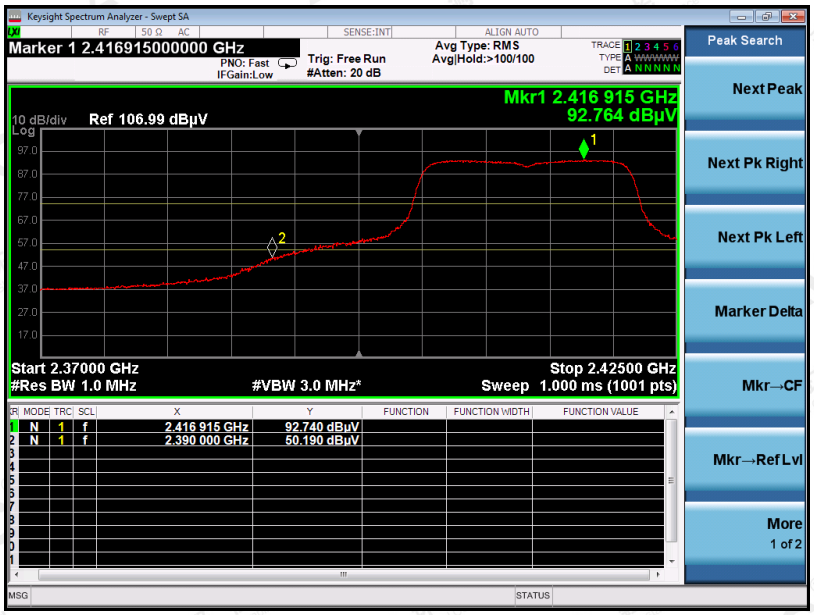
RESULT: PASS

EUT	ac1x1+BT module	Model Name	SA
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



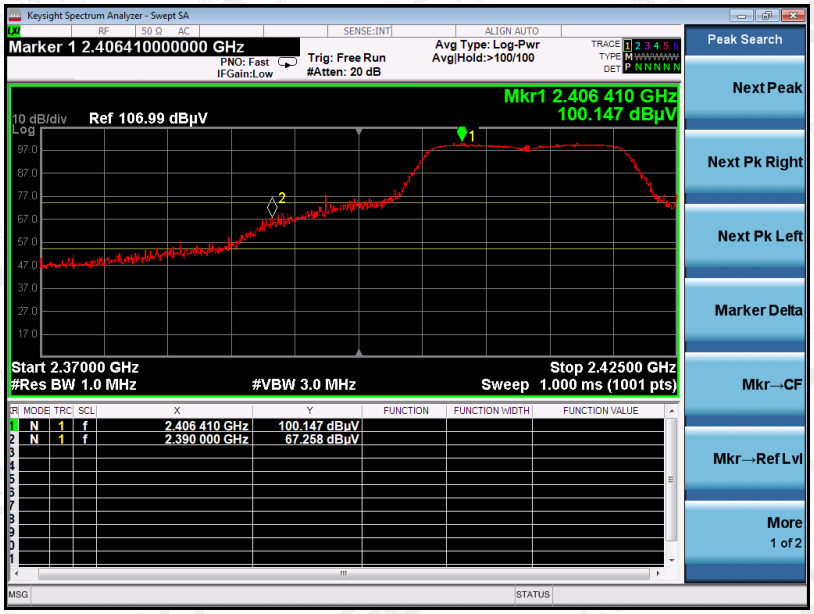
AV



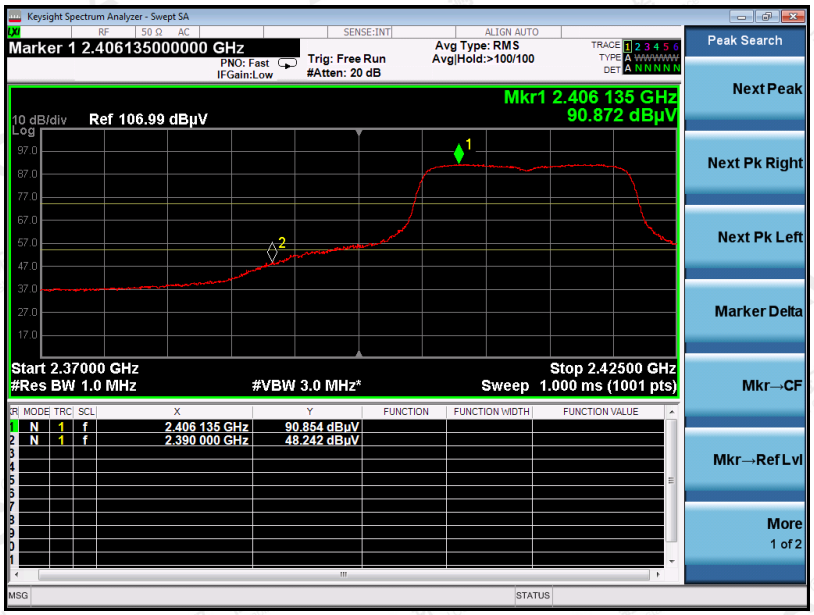
RESULT: PASS

EUT	ac1x1+BT module	Model Name	SA
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

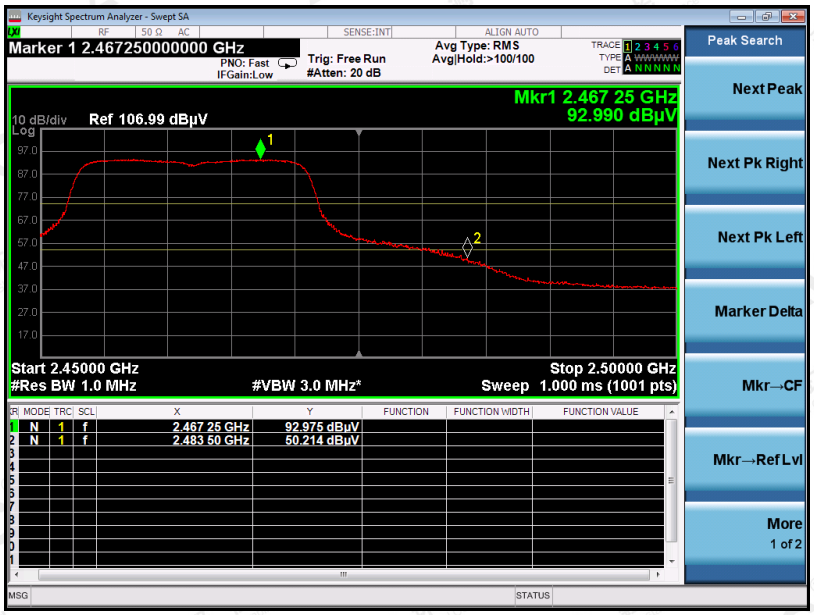


RESULT: PASS

EUT	ac1x1+BT module	Model Name	SA
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

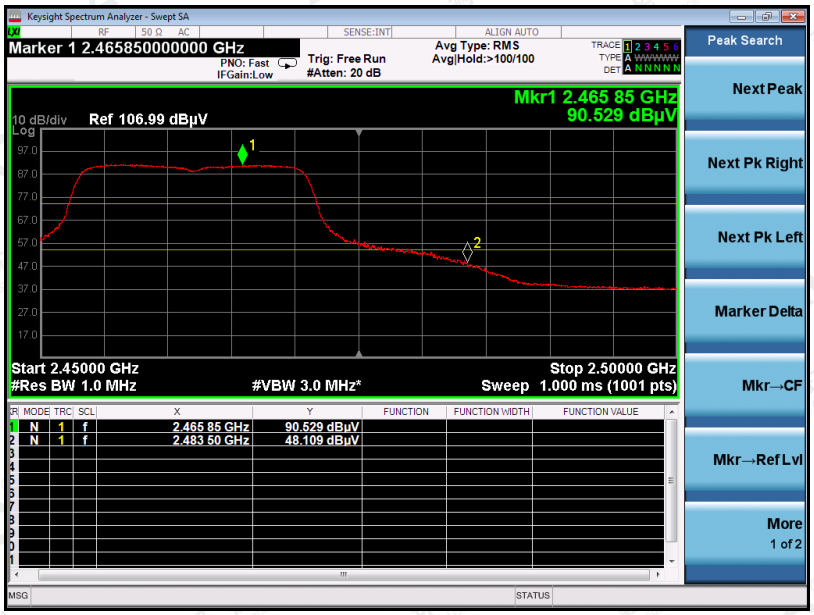


RESULT: PASS

EUT	ac1x1+BT module	Model Name	SA
Temperature	25℃	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11n 20 with data rate 6.5 2462MHZ	Antenna	Vertical

PK

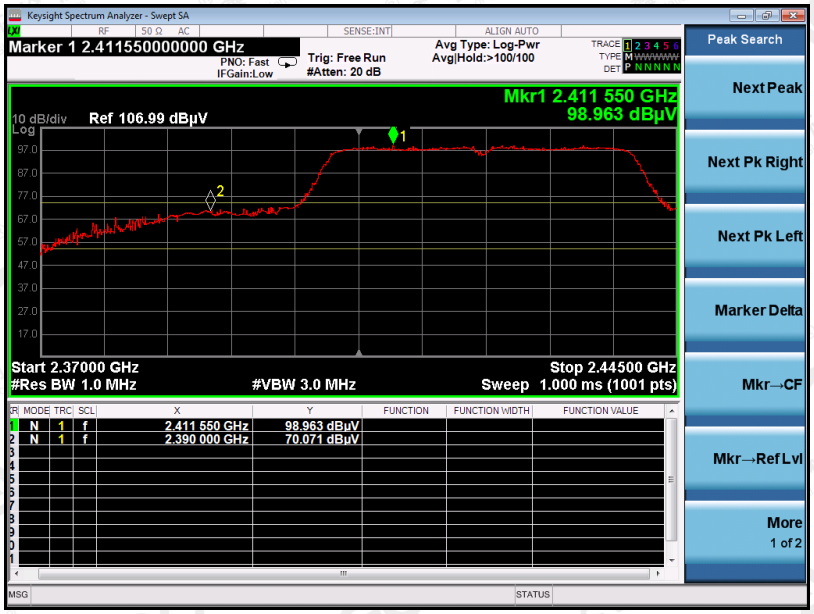
AV



RESULT: PASS

EUT	ac1x1+BT module	Model Name	SA
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

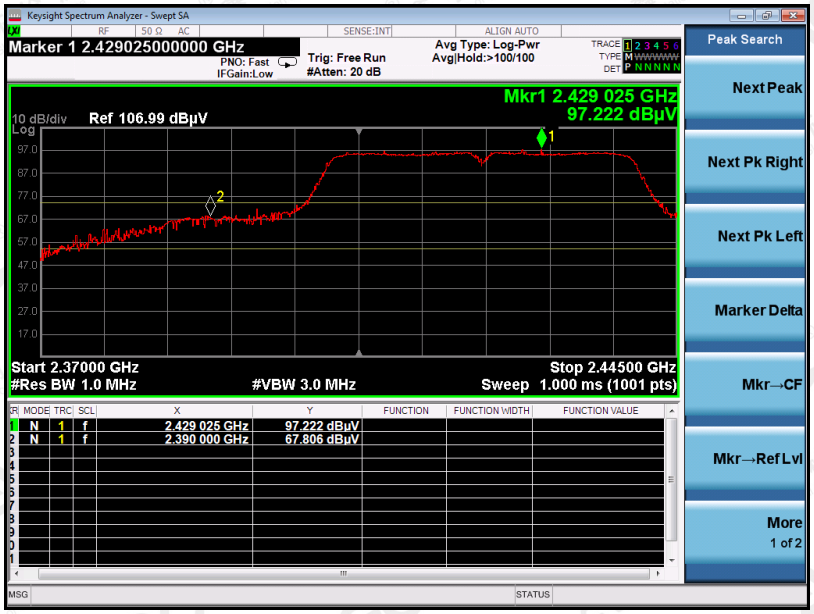


AV

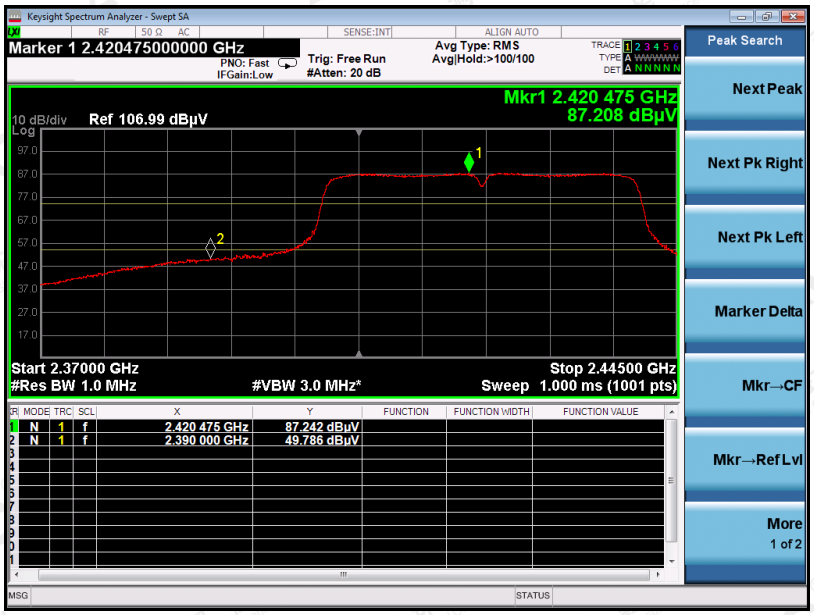
RESULT: PASS

EUT	ac1x1+BT module	Model Name	SA
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

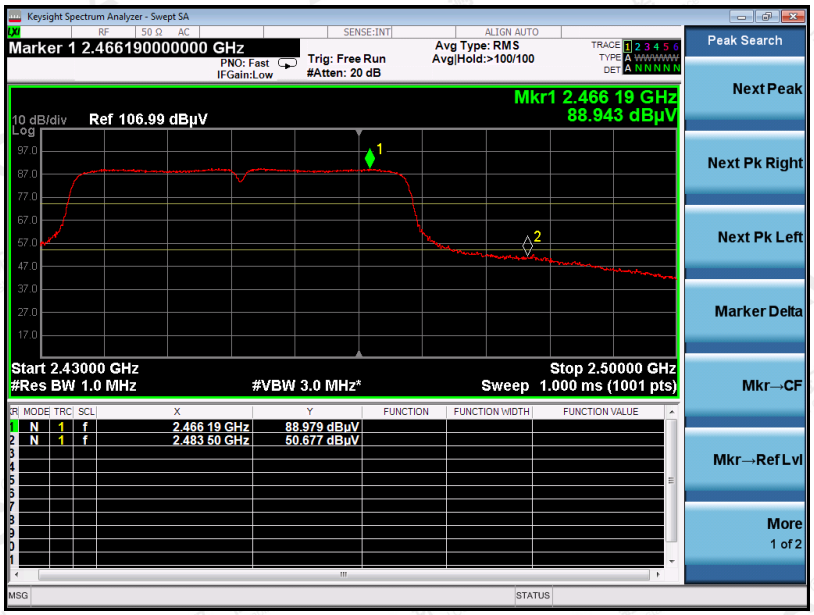


RESULT: PASS

EUT	ac1x1+BT module	Model Name	SA
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

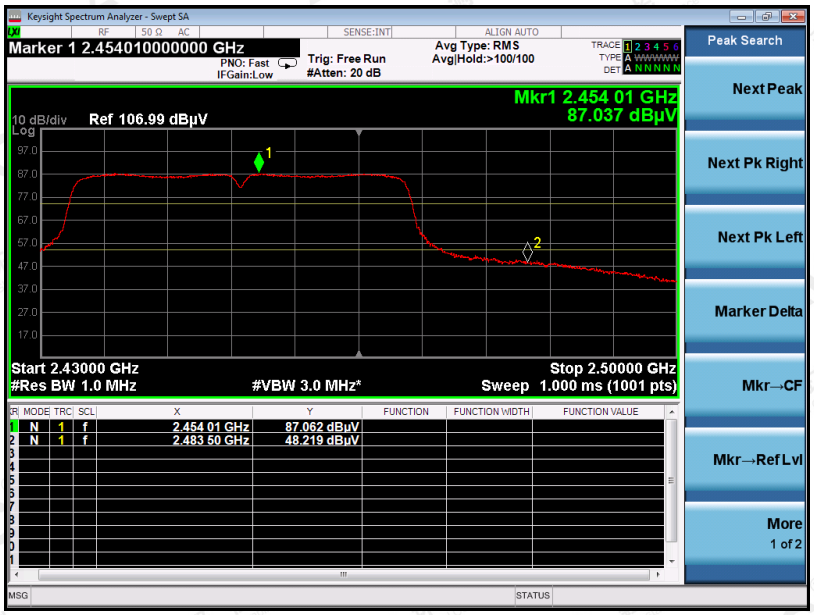


RESULT: PASS

EUT	ac1x1+BT module	Model Name	SA
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

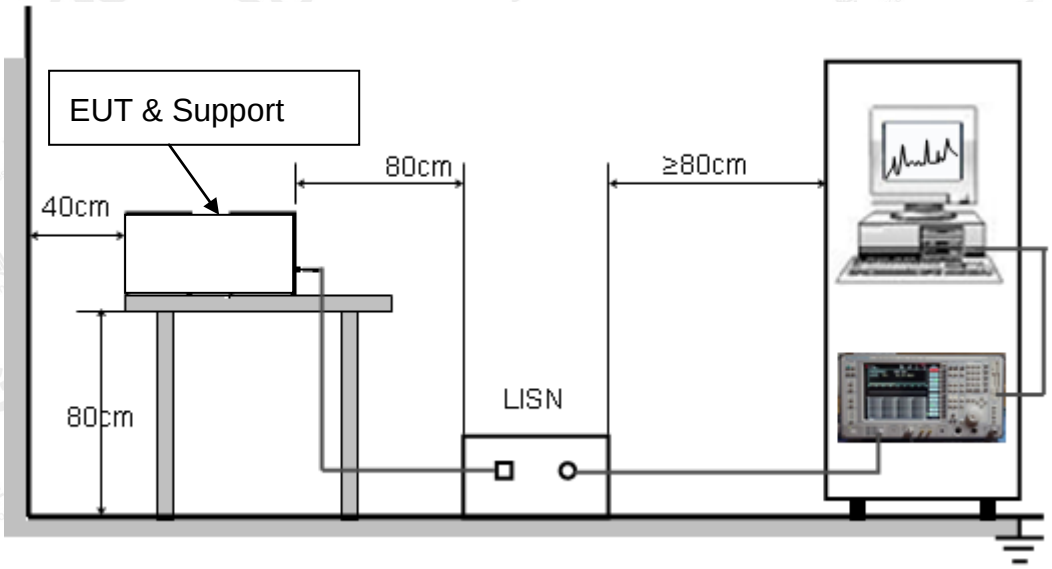
13. FCC LINE CONDUCTED EMISSION TEST

13.1. 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.

13.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST



13.3. 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 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.

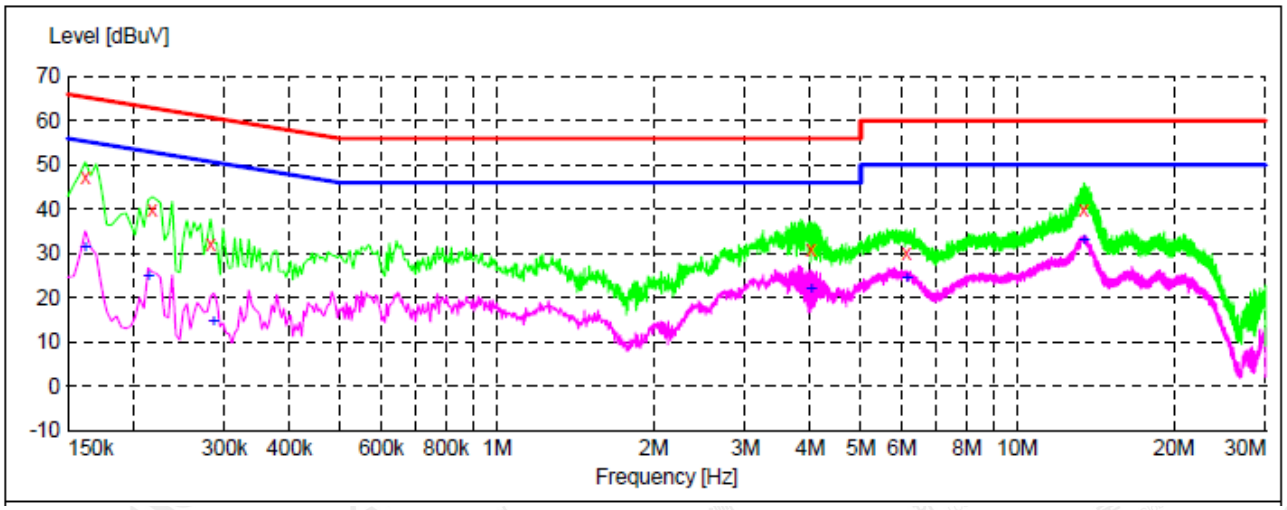
Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

13.4. 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.

13.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST

LINE CONDUCTED EMISSION TEST-L1



MEASUREMENT RESULT:

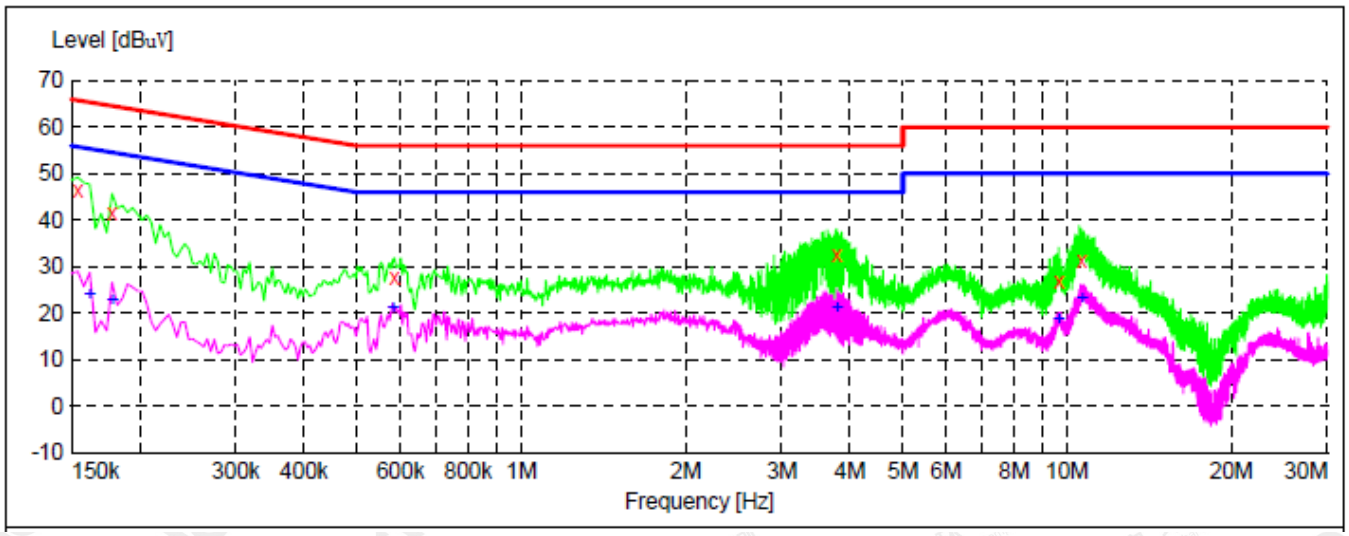
Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.162000	47.30	10.0	65	18.1	QP	L1	FLO
0.218000	39.90	10.1	63	23.0	QP	L1	FLO
0.282000	32.00	10.1	61	28.8	QP	L1	FLO
4.010000	31.00	10.1	56	25.0	QP	L1	FLO
6.122000	30.20	10.0	60	29.8	QP	L1	FLO
13.422000	39.80	9.8	60	20.2	QP	L1	FLO

MEASUREMENT RESULT:

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.162000	31.30	10.0	55	24.1	AV	L1	FLO
0.214000	24.70	10.1	53	28.3	AV	L1	FLO
0.286000	14.50	10.1	51	36.1	AV	L1	FLO
4.010000	22.10	10.1	46	23.9	AV	L1	FLO
6.134000	24.30	10.0	50	25.7	AV	L1	FLO
13.422000	33.10	9.8	50	16.9	AV	L1	FLO

RESULT: PASS

LINE CONDUCTED EMISSION TEST-N



MEASUREMENT RESULT: "TEST_fin"

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.154000	46.40	10.0	66	19.4	QP	N	FLO
0.178000	41.60	10.0	65	23.0	QP	N	FLO
0.586000	27.80	9.9	56	28.2	QP	N	FLO
3.782000	32.70	10.1	56	23.3	QP	N	FLO
9.646000	26.90	10.5	60	33.1	QP	N	FLO
10.634000	31.50	10.4	60	28.5	QP	N	FLO

MEASUREMENT RESULT: "TEST_fin2"

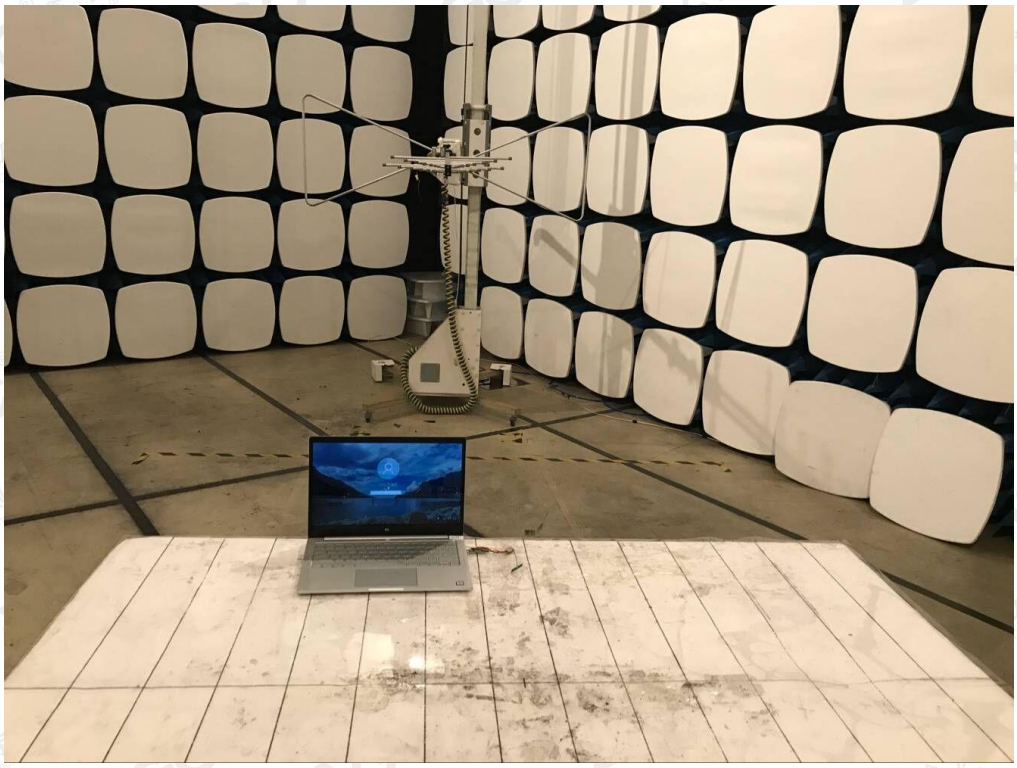
Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.162000	23.90	10.0	55	31.5	AV	N	FLO
0.178000	22.70	10.0	55	31.9	AV	N	FLO
0.582000	20.90	9.9	46	25.1	AV	N	FLO
3.782000	21.20	10.1	46	24.8	AV	N	FLO
9.646000	18.50	10.5	50	31.5	AV	N	FLO
10.634000	23.10	10.4	50	26.9	AV	N	FLO

RESULT: PASS

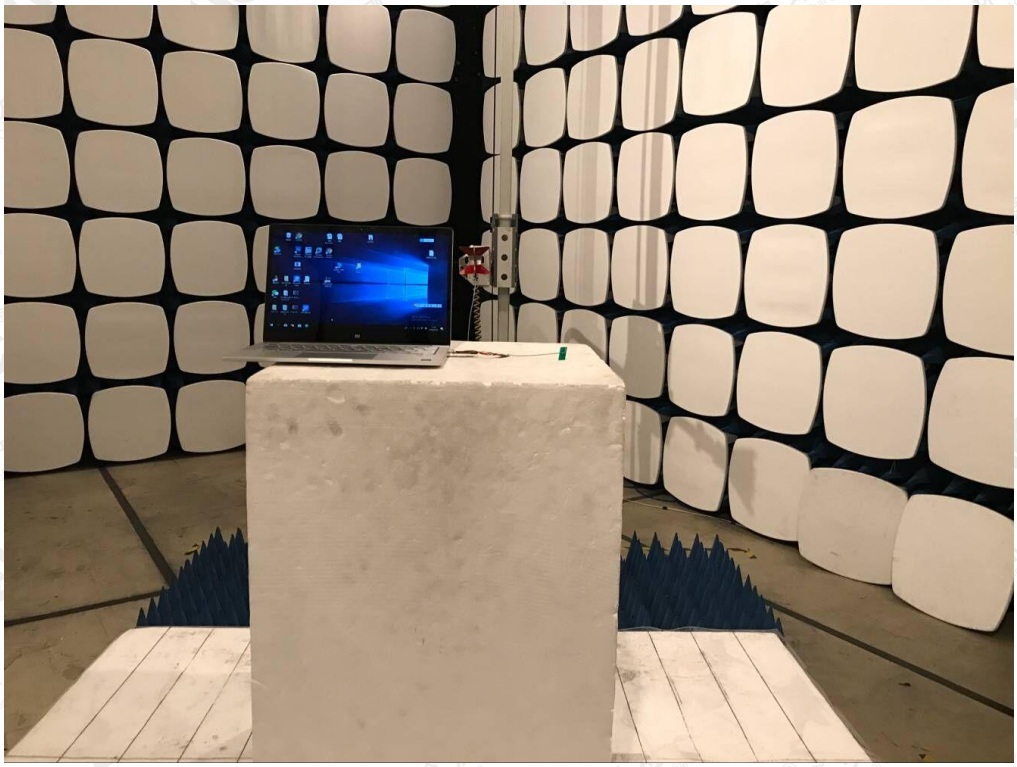
APPENDIX A: PHOTOGRAPHS OF TEST SETUP

FCC LINE CONDUCTED EMISSION TEST SETUP

FCC RADIATED EMISSION TEST SETUP BELOW 1GHZ



FCC RADIATED EMISSION TEST SETUP ABOVE 1GHZ



----END OF REPORT----