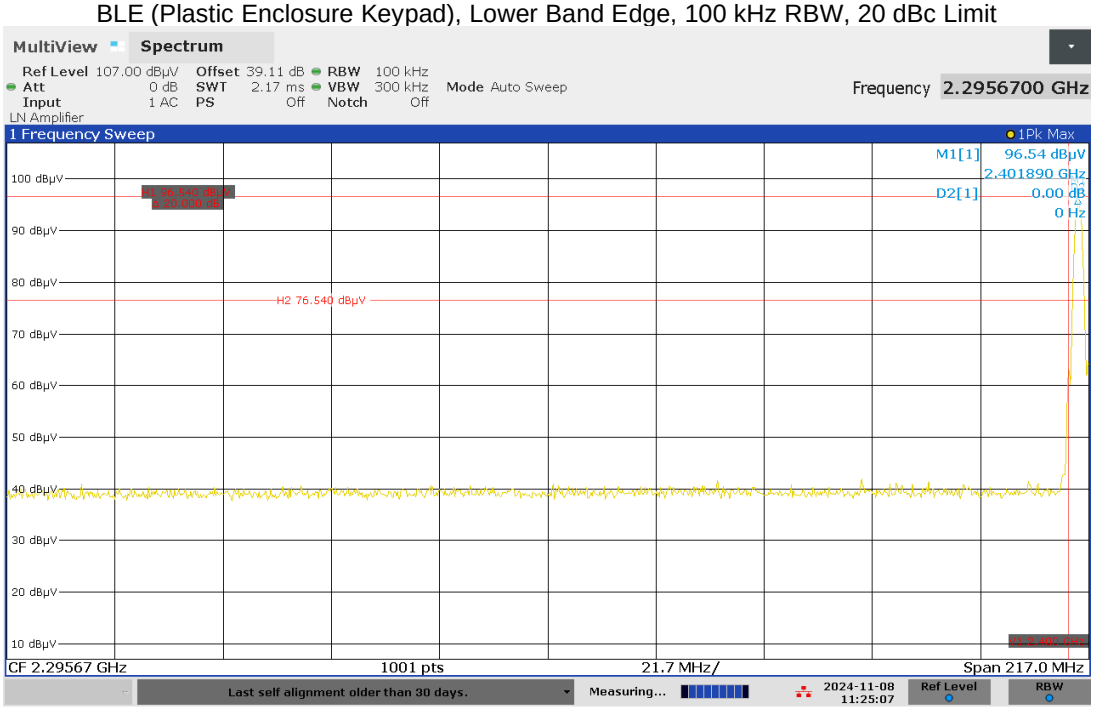
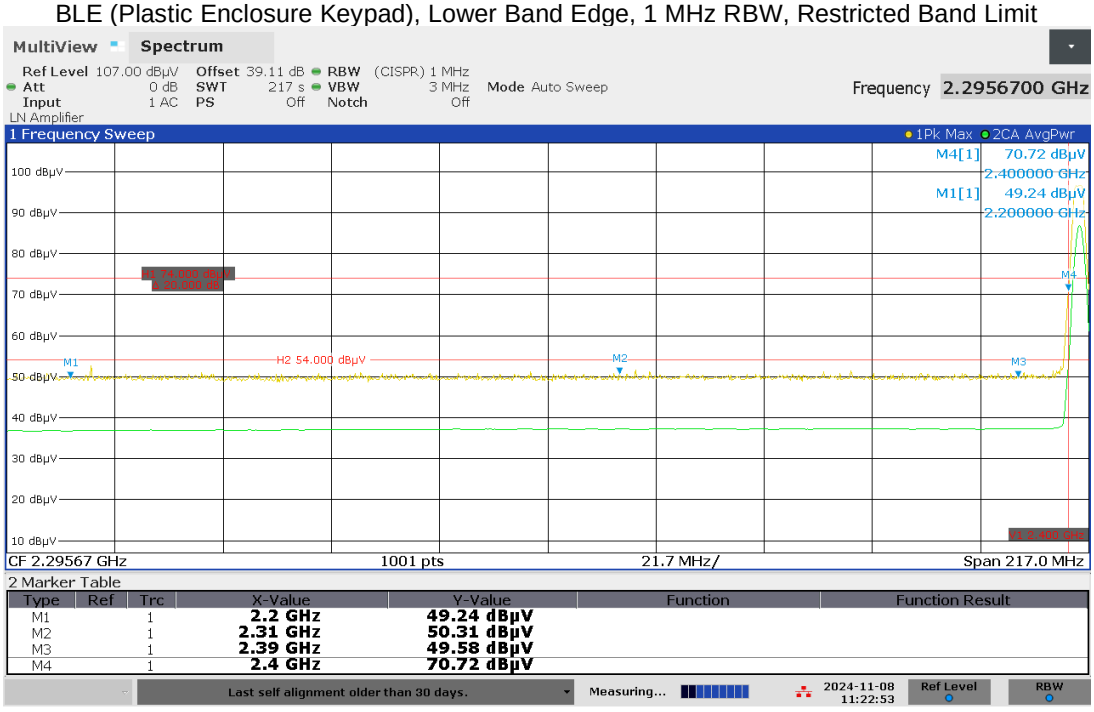
===POE Powered===

BLE (Plastic Enclosure Keypad), Lower Band Edge, 100 kHz RBW, 20 dBc Limit



11:25:08 AM 11/08/2024

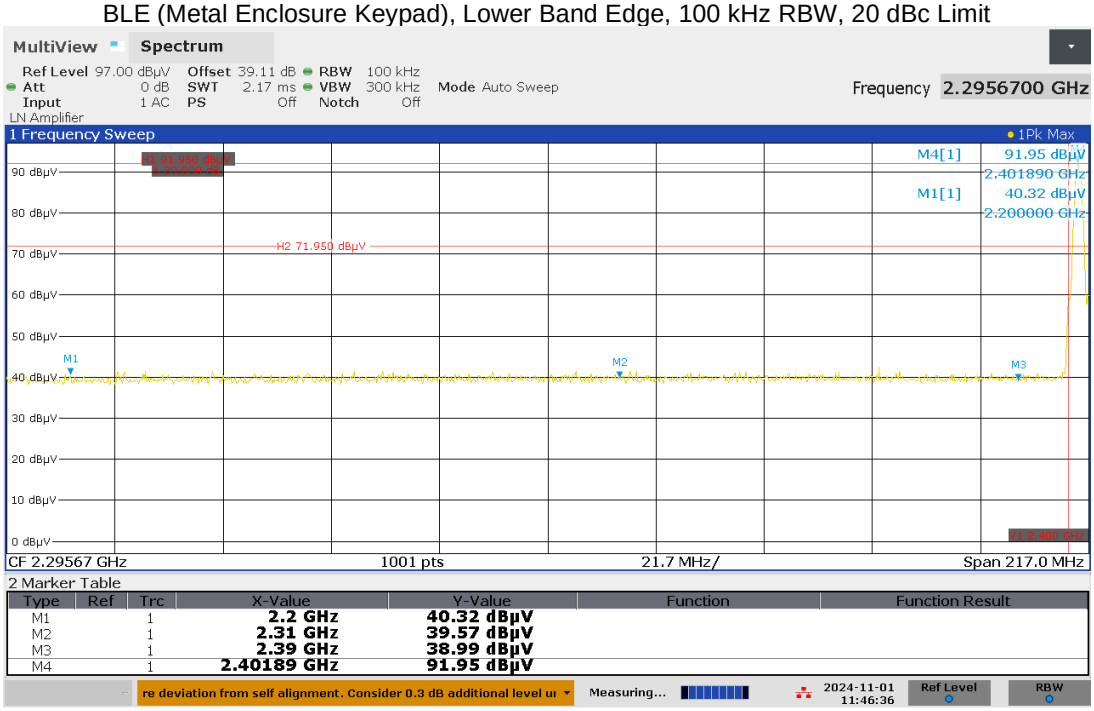
BLE (Plastic Enclosure Keypad), Lower Band Edge, 1 MHz RBW, Restricted Band Limit



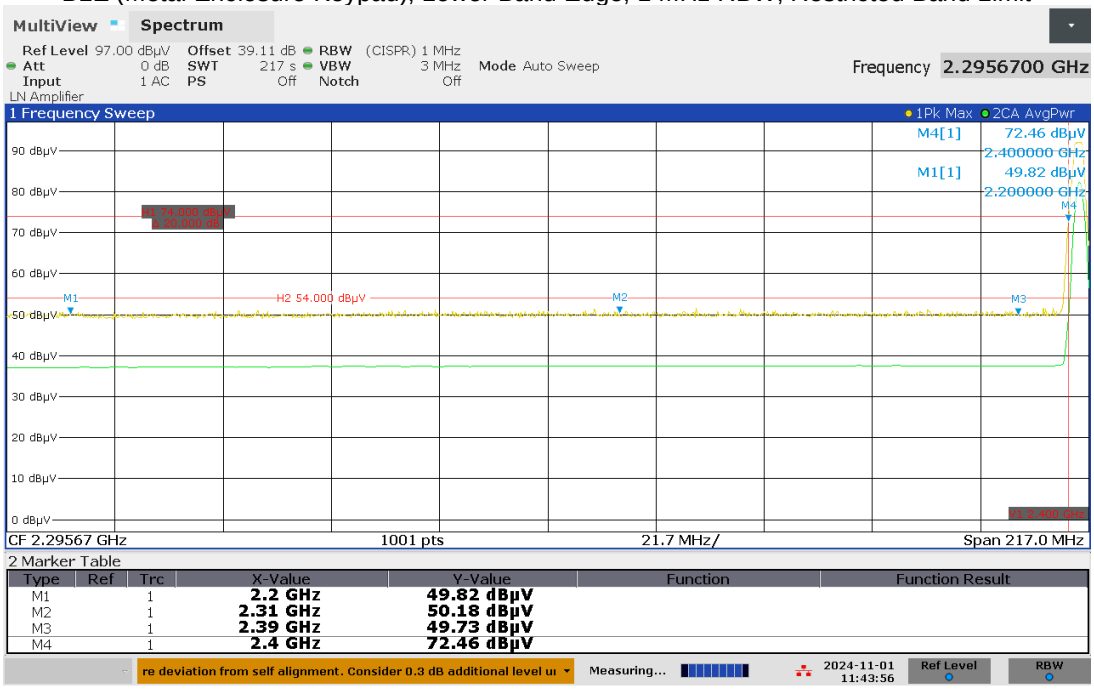
11:22:53 AM 11/08/2024

Notes: Offset includes cable loss and antenna factor.

BLE (Metal Enclosure Keypad), Lower Band Edge, 100 kHz RBW, 20 dBc Limit

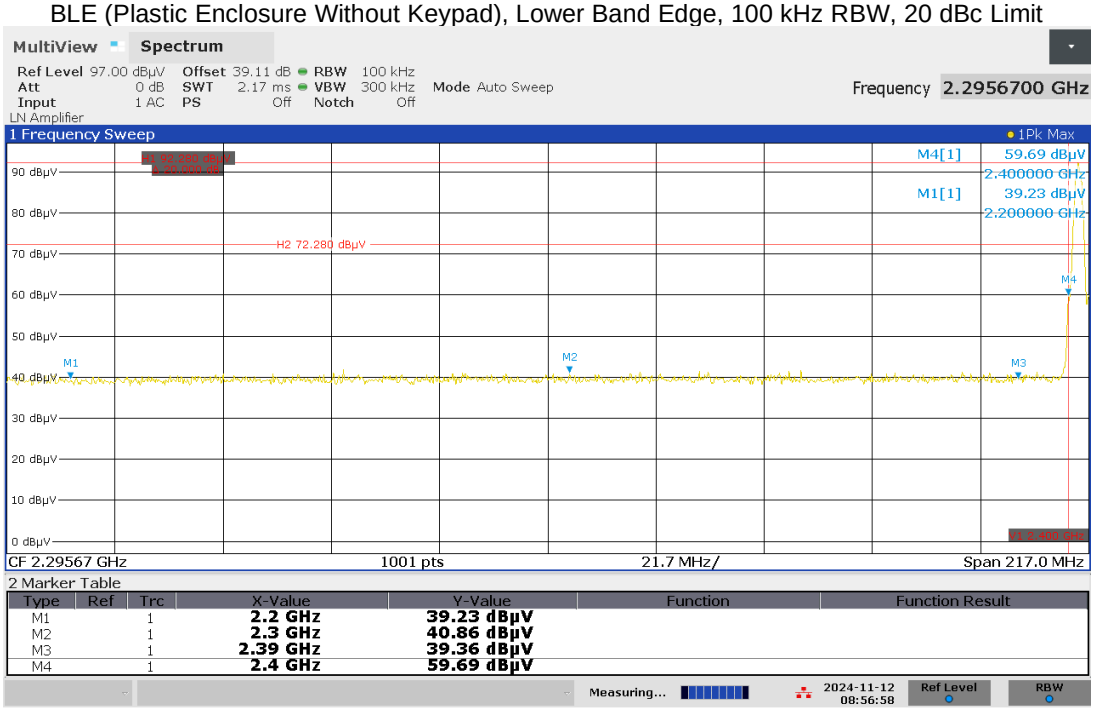


BLE (Metal Enclosure Keypad), Lower Band Edge, 1 MHz RBW, Restricted Band Limit

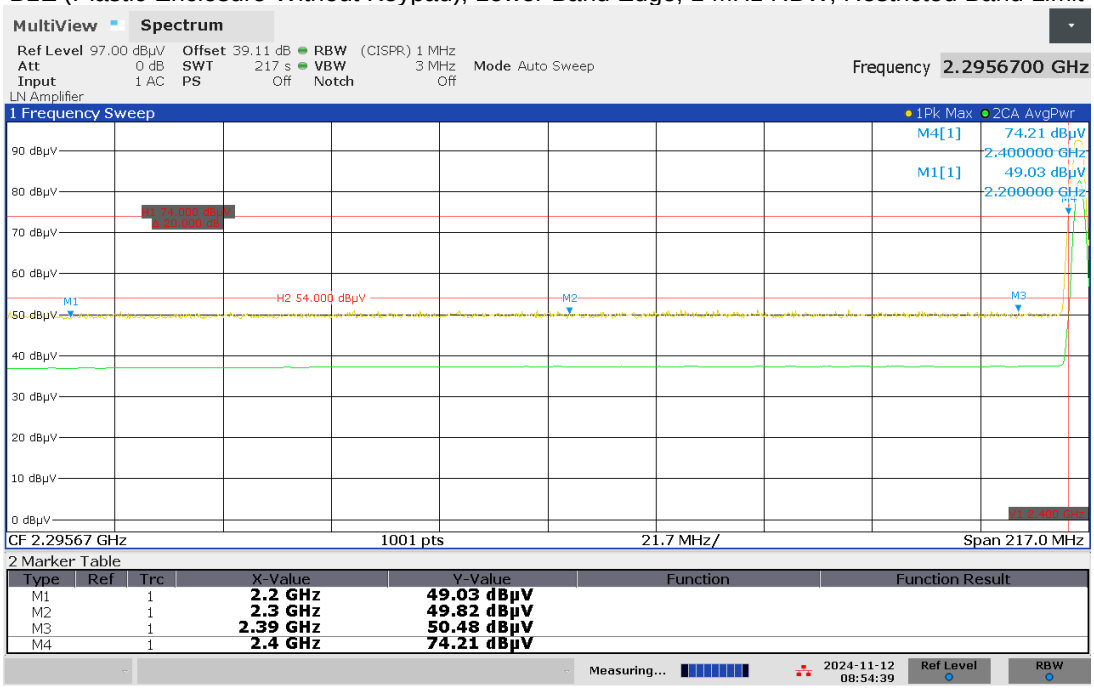


Notes: Offset includes cable loss and antenna factor.

BLE (Plastic Enclosure Without Keypad), Lower Band Edge, 100 kHz RBW, 20 dBc Limit

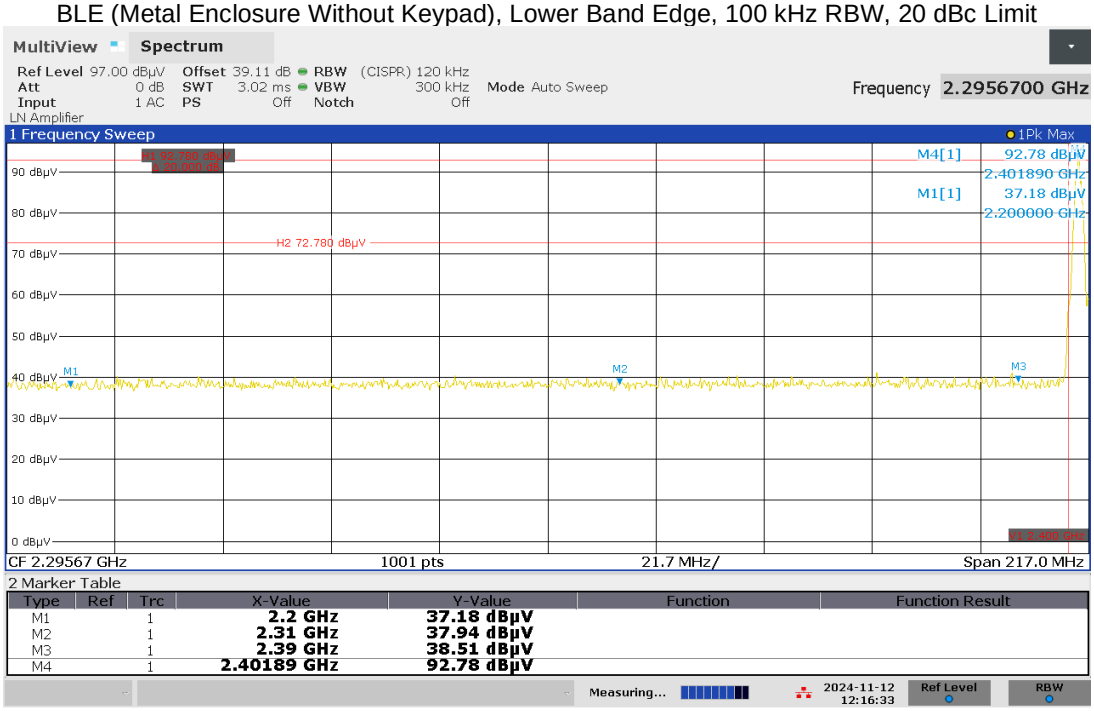


BLE (Plastic Enclosure Without Keypad), Lower Band Edge, 1 MHz RBW, Restricted Band Limit



Notes: Offset includes cable loss and antenna factor.

BLE (Metal Enclosure Without Keypad), Lower Band Edge, 100 kHz RBW, 20 dBc Limit



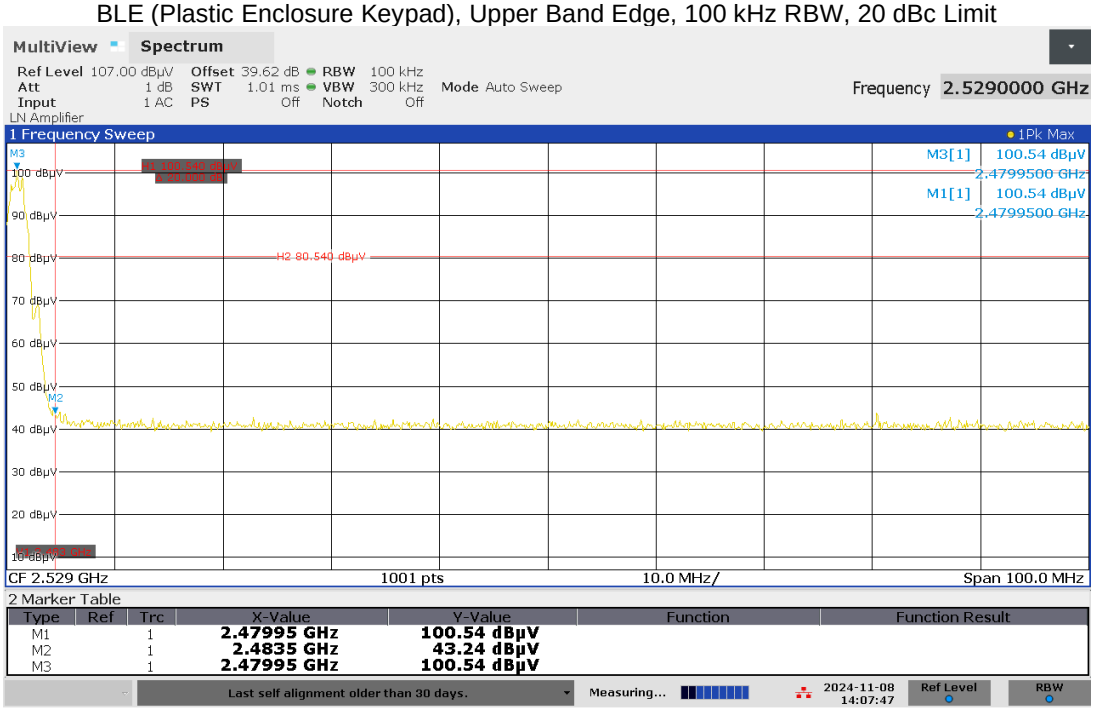
12:16:33 PM 11/12/2024

BLE (Metal Enclosure Without Keypad), Lower Band Edge, 1 MHz RBW, Restricted Band Limit

12:14:19 PM 11/12/2024

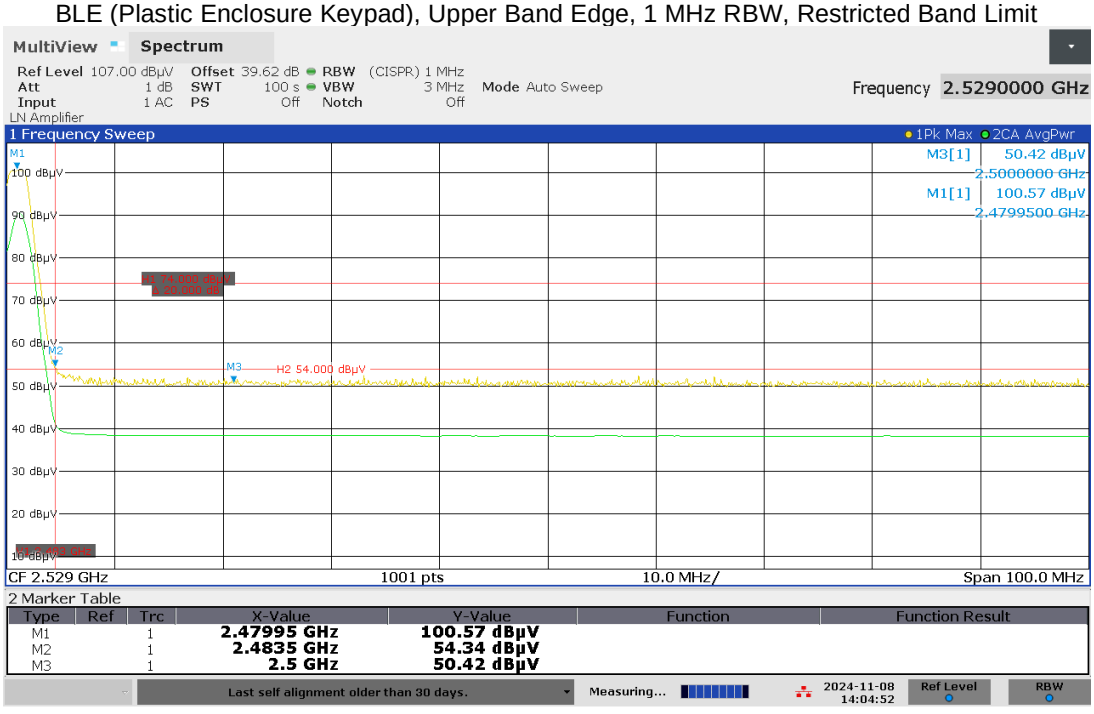
Notes: Offset includes cable loss and antenna factor.

BLE (Plastic Enclosure Keypad), Upper Band Edge, 100 kHz RBW, 20 dBc Limit



02:07:48 PM 11/08/2024

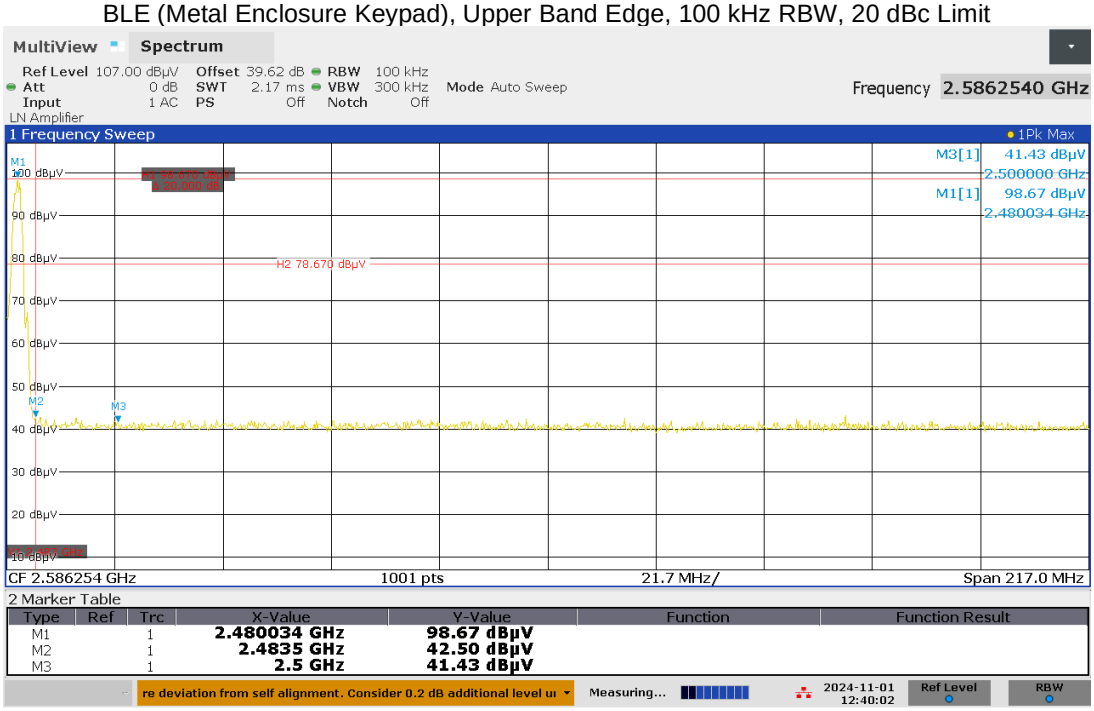
BLE (Plastic Enclosure Keypad), Upper Band Edge, 1 MHz RBW, Restricted Band Limit



02:04:52 PM 11/08/2024

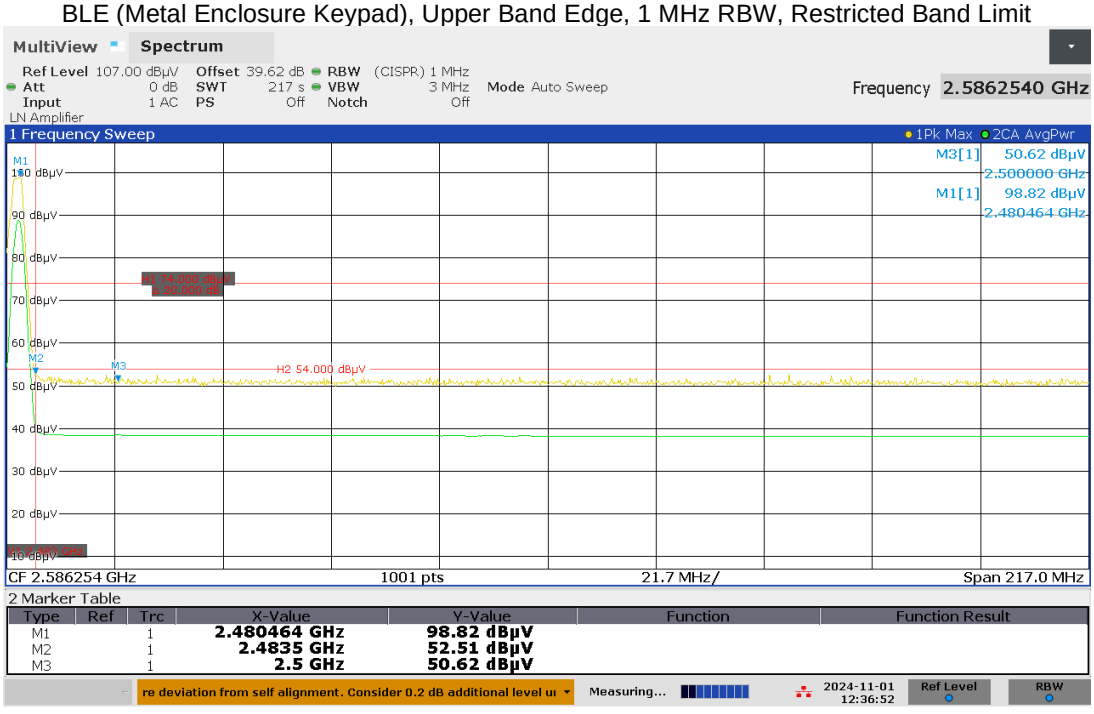
Notes: Offset includes cable loss and antenna factor.

BLE (Metal Enclosure Keypad), Upper Band Edge, 100 kHz RBW, 20 dBc Limit



12:40:02 PM 11/01/2024

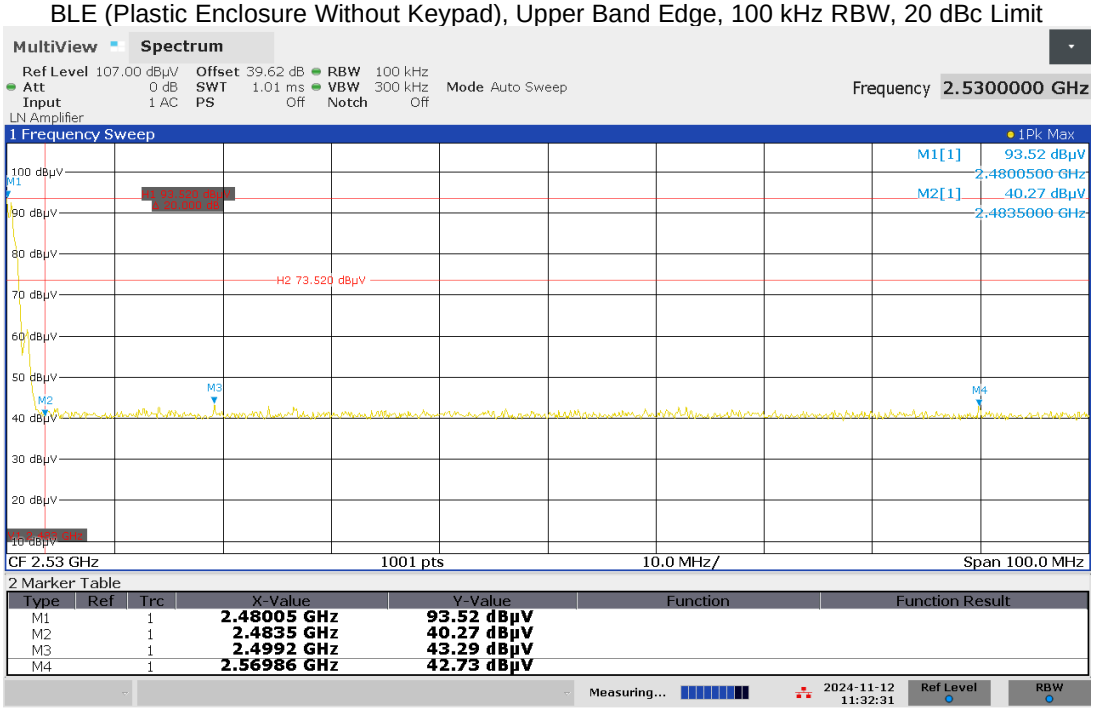
BLE (Metal Enclosure Keypad), Upper Band Edge, 1 MHz RBW, Restricted Band Limit



12:36:53 PM 11/01/2024

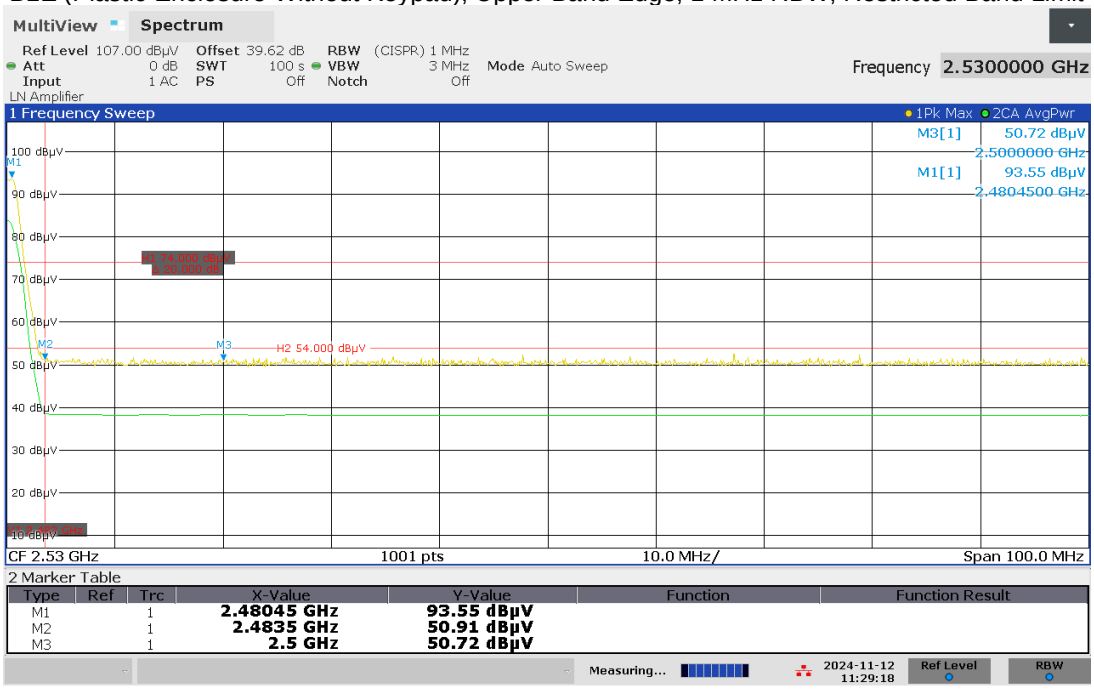
Notes: Offset includes cable loss and antenna factor.

BLE (Plastic Enclosure Without Keypad), Upper Band Edge, 100 kHz RBW, 20 dBc Limit



11:32:31 AM 11/12/2024

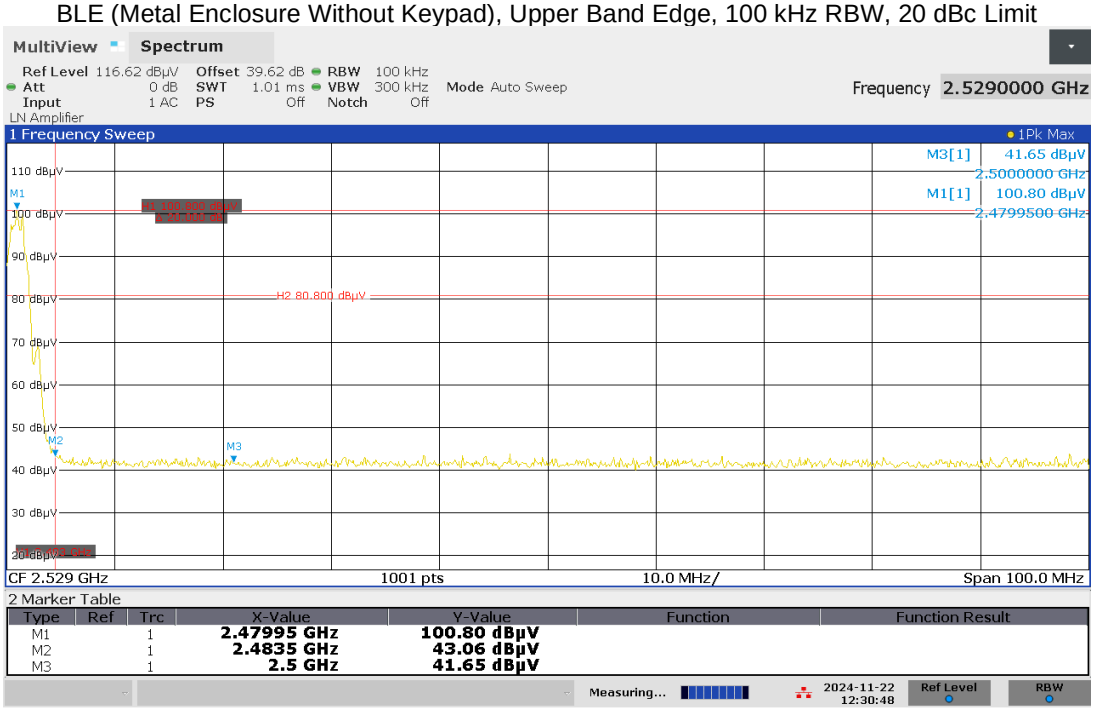
BLE (Plastic Enclosure Without Keypad), Upper Band Edge, 1 MHz RBW, Restricted Band Limit



11:29:18 AM 11/12/2024

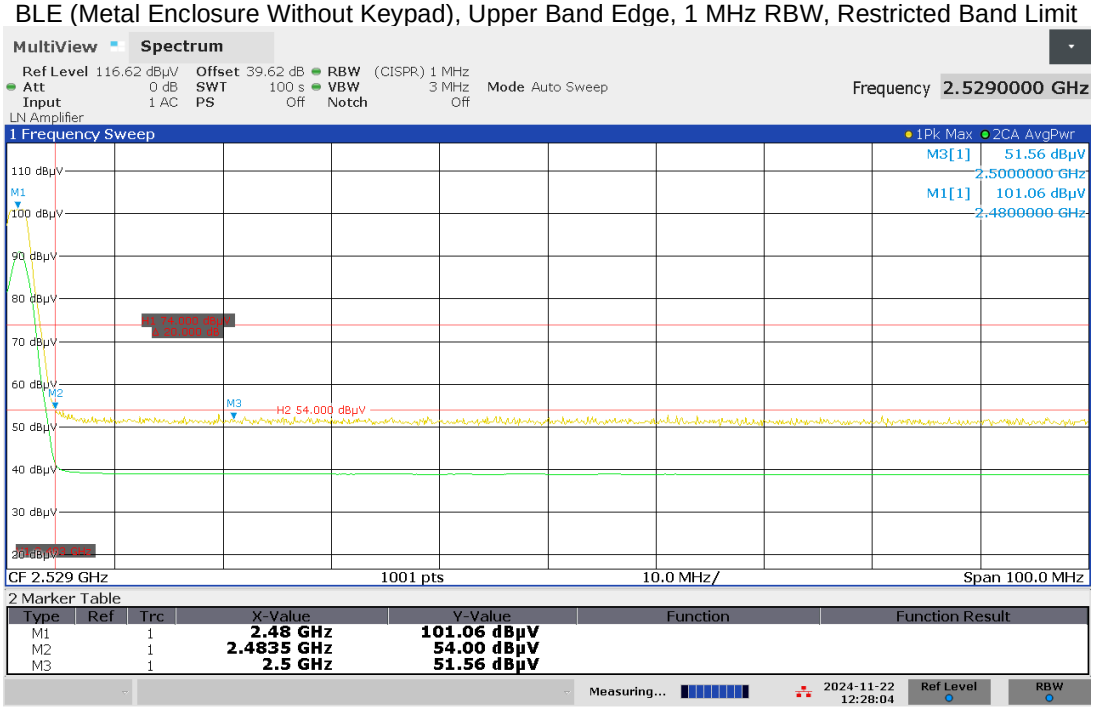
Notes: Offset includes cable loss and antenna factor.

BLE (Metal Enclosure Without Keypad), Upper Band Edge, 100 kHz RBW, 20 dBc Limit



12:30:48 PM 11/22/2024

BLE (Metal Enclosure Without Keypad), Upper Band Edge, 1 MHz RBW, Restricted Band Limit



12:28:04 PM 11/22/2024

Notes: Offset includes cable loss and antenna factor.

Product Standard: CFR47 FCC Part 15.247, RSS-247				Limit applied: See Report Section 9.2			
Test Date	Test Personnel/ Initials	Supervising Engineer/ Initials	Input Voltage	Mode	Atmospheric Data		
					Temp C°	Relative Humidity %	Atmospheric Pressure mbar
10/09/2024	Kouma Sinn KPS	N/A	Battery Powered	Continuous Transmitting	22	42	1003
10/10/2024	Kouma Sinn KPS	N/A	Battery Powered	Continuous Transmitting	22	39	1005
10/14/2024	Kouma Sinn KPS	N/A	Battery Powered	Continuous Transmitting	24	35	995
11/01/2024	Kouma Sinn KPS	N/A	Powered	Continuous Transmitting	21	41	1000
11/08/2024	Kouma Sinn KPS	N/A	POE Powered	Continuous Transmitting	23	35	1003
11/12/2024	Kouma Sinn KPS	N/A	POE Powered	Continuous Transmitting	23	34	999
11/22/2024	Kouma Sinn KPS	N/A	POE Powered	Continuous Transmitting	23	35	986

Deviations, Additions, or Exclusions: None

10 Transmitter spurious emissions

10.1 Method

Tests are performed in accordance with FCC Part 15 Subpart C 15.247, RSS 247, and ANSI C 63.10.

TEST SITE: 10m ALSE

The 10m ALSE is 13m (Length) x 21m (Depth) x 10m (Height) with the effective size in terms of space from the tips of the absorber is 12m (Length) x 20m (Depth) x 8.5m (Height). This chamber achieves broadband performance using a unique arrangement of hybrid and ferrite tile absorber. This chamber has a built in 3m diameter turntable (Embedded type). The metal structure of the table makes electrical connection around the entire circumference of the turntable to the ground plane with a metal brush type connection. The turntable is located on one end of the chamber and the antennas are mounted 3 and 10 meters away at the other end of the chamber on the adjustable an Antenna Mast. The antenna mast is a non-conductive bore sighted type with remote control of antenna height and polarization. The Antenna Mast and the turntable can be remotely controlled through the controller located in the adjacent Control room. A Styrofoam table 80 cm high is used for table-top equipment.

Measurement Uncertainty

Measurement	Frequency Range	Expanded Uncertainty (k=2)	Ucispr
Radiated Emissions, 10m	30-1000 MHz	4.6dB	6.3 dB
Radiated Emissions, 3m	30-1000 MHz	5.3 dB	6.3 dB
Radiated Emissions, 3m	1-6 GHz	4.5 dB	5.2 dB
Radiated Emissions, 3m	6-15 GHz	5.2 dB	5.5 dB
Radiated Emissions, 3m	15-18 GHz	5.0 dB	5.5 dB
Radiated Emissions, 3m	18-40 GHz	5.0 dB	5.5 dB

As shown in the table above our radiated emissions U_{lab} is less than the corresponding U_{CISPR} reference value in CISPR 16-4-2 Table 1, hence the compliance of the product is only based on the measured value, and no measurement uncertainty correction is required, based on CISPR 22 and CISPR 11 (for 2006 and later revisions) Clause 11.

Sample Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follows:

FS = RA + AF + CF - AG
Where FS = Field Strength in dBμV/m
RA = Receiver Amplitude (including preamplifier) in dBμV
CF = Cable Attenuation Factor in dB
AF = Antenna Factor in dB
AG = Amplifier Gain in dB

In the following table(s), the reading shown on the data table reflects the preamplifier gain. An example for the calculations in the following table is as follows.

Assume a receiver reading of 52.0 dBμV is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted, giving a field strength of 32 dBμV/m. This value in dBμV/m was converted to its corresponding level in μV/m.

RA = 52.0 dBμV
AF = 7.4 dB/m
CF = 1.6 dB
AG = 29.0 dB
FS = 32 dBμV/m

To convert from dBμV to μV or mV the following was used:

$UF = 10^{(NF / 20)}$ where UF = Net Reading in μV
NF = Net Reading in dBμV

Example:

FS = RA + AF + CF – AG = 52.0 + 7.4 + 1.6 – 29.0 = 32.0
$UF = 10^{(32\ dB\mu V / 20)}$ = 39.8 μV/m

Alternately, when BAT-EMC Emission Software is used, the “Level” includes all losses and gains and is compared directly in the “Margin” column to the “Limit”. The “Correction” includes Antenna Factor, Preamp, and Cable Loss. These are already accounted for in the “Level” column.

10.2 Limits

Limits – FCC Part §15.247 (d) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c))

Notes: The limits for RSS-247 are the same as the FCC limits above.

10.3 Test Equipment Used:

Test equipment used from 9 kHz-30 MHz

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DAV007'	Weather Station Vantage Vue	Davis	6250	MS191212003	03/27/2024	03/27/2025
ROS014'	Receiver 1Hz-44GHz	Rhode & Schwarz	ESW 44	103232	06/10/2024	06/10/2025
145-420'	Receiver to floor cable	Utiflex	UFB311A-2-0591-70070	145-420	02/27/2024	02/27/2025
145-414'	Cable 145-414	Huber + Suhner	3m Track A cable	145-414	07/15/2024	07/15/2025
145-422'	10Amp Pre-amp to under floor	Utiflex	UFB311A-0-2756-70070	145-422	03/26/2024	03/26/2025
IW003'	8.4 meter cable	Insulated Wire	2800-NPS	003	01/17/2024	01/17/2025
ETS003'	9kHz-30MHz Active Loop Antenna	ETS Lindgren	6502	00143396	01/25/2024	01/25/2025
CBL053'	BNC cable 7.62 meters	MookEERF	RG58U	cbl053	11/20/2023	11/20/2024
145019'	Active Loop Antenna (9 KHz to 30 MHz)	EMCO	6502/1	9902-3267	03/05/2024	03/05/2025

Test equipment used from 30-1000 MHz

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DAV007'	Weather Station Vantage Vue	Davis	6250	MS191212003	03/27/2024	03/27/2025
ROS014'	Receiver 1Hz-44GHz	Rhode & Schwarz	ESW 44	103232	06/10/2024	06/10/2025
145-420'	Receiver to floor cable	Utiflex	UFB311A-2-0591-70070	145-420	02/27/2024	02/27/2025
HS003'	10m under floor cable	Huber-Schuner	10m-1	HS003	02/27/2024	02/27/2025
IW006'	DC-18GHz cable 8.4m long	Insulated Wire	2800-NPS	IW006	05/23/2024	05/23/2025
HS001'	DC-18GHz cable 1.5m long	Huber & Suhner	SucoFlex 106A	HS001	01/30/2024	01/30/2025
145145'	Broadband Hybrid Antenna 30 MHz - 3 GHz	Sunol Sciences Corp.	JB3	A122313	07/11/2024	07/11/2025
PRE10'	30-1000MHz pre-amp	ITS	PRE10	PRE10	02/27/2024	02/27/2025

Test equipment used from 1-3 GHz

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DAV007'	Weather Station Vantage Vue	Davis	6250	MS191212003	03/27/2024	03/27/2025
ROS014'	Receiver 1Hz-44GHz	Rhode & Schwarz	ESW 44	103232	06/10/2024	06/10/2025
145-420'	Receiver to floor cable	Utiflex	UFB311A-2-0591-70070	145-420	02/27/2024	02/27/2025
145-414'	Cable 145-414	Huber + Suhner	3m Track A cable	145-414	07/15/2024	07/15/2025
145-422'	10Amp Pre-amp to under floor	Utiflex	UFB311A-0-2756-70070	145-422	03/26/2024	03/26/2025
IW003'	8.4 meter cable	Insulated Wire	2800-NPS	003	01/17/2024	01/17/2025
ETS002	1-18GHz DRG Horn Antenna	ETS Lindgren	3117	00143260	09/04/2024	09/04/2025
BONN001	1-18GHz low noise pre-amp	Bonn	BLMA 0118-M	1811749	07/24/2024	07/24/2025
REA008	band reject filter 2.4GHz	Reactel, Inc	12RX7-2441.75-x140 S	17-01	10/31/2023	10/31/2024
WEI32	10 dB 18GHz 5W Attenuator	Weinschel	WA2-10-0403	WEI32	01/08/2024	01/08/2025

Test equipment used from 3-18 GHz

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DAV007'	Weather Station Vantage Vue	Davis	6250	MS191212003	03/27/2024	03/27/2025
ROS014'	Receiver 1Hz-44GHz	Rhode & Schwarz	ESW 44	103232	06/10/2024	06/10/2025
145-420'	Receiver to floor cable	Utiflex	UFB311A-2-0591-70070	145-420	02/27/2024	02/27/2025
145-414'	Cable 145-414	Huber + Suhner	3m Track A cable	145-414	07/15/2024	07/15/2025
145-422'	10Amp Pre-amp to under floor	Utiflex	UFB311A-0-2756-70070	145-422	03/26/2024	03/26/2025
IW003'	8.4 meter cable	Insulated Wire	2800-NPS	003	01/17/2024	01/17/2025
ETS002'	1-18GHz DRG Horn Antenna	ETS Lindgren	3117	00143260	09/04/2024	09/04/2025
BONN001'	1-18GHz low noise pre-amp	Bonn	BLMA 0118-M	1811749	07/24/2024	07/24/2025
REA004'	3GHz High Pass Filter	Reactel, Inc	7HSX-3G/18G-S11	06-1	02/27/2024	02/27/2025

Software Utilized:

Name	Manufacturer	Version
BAT-EMC	Nexio	2023.0.9.0

Test equipment used from 18-25 GHz

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DAV007'	Weather Station Vantage Vue	Davis	6250	MS191212003	03/27/2024	03/27/2025
ROS005-1'	Signal and Spectrum Analyzer	Rohde and Shwartz	FSW43	100646	11/22/2023	11/22/2024
CBLHF2012-5M-2'	5m 9kHz-40GHz Coaxial Cable - SET2	Huber & Suhner	SF102	252676002	02/27/2024	02/27/2025
CBLHF2012-2M-1'	2m 9kHz-40GHz Coaxial Cable - SET1	Huber & Suhner	SF102	252675001	02/27/2024	02/27/2025
EMC018'	18-40GHz Pre-amp 40dB gain	The EMC Shop	PA40G	27490-01	08/06/2024	08/06/2025
EMC04'	ANTENNA, RIDGED GUIDE, 18-40 GHZ	EMCO	3116	2090	02/13/2024	02/13/2025
REA006'	18GHz High Pass Filter	Reactel, Inc	7HS-18G/40G K11	(06)1	04/23/2024	04/23/2025

Software Utilized:

Name	Manufacturer	Version
None	N/A	N/A

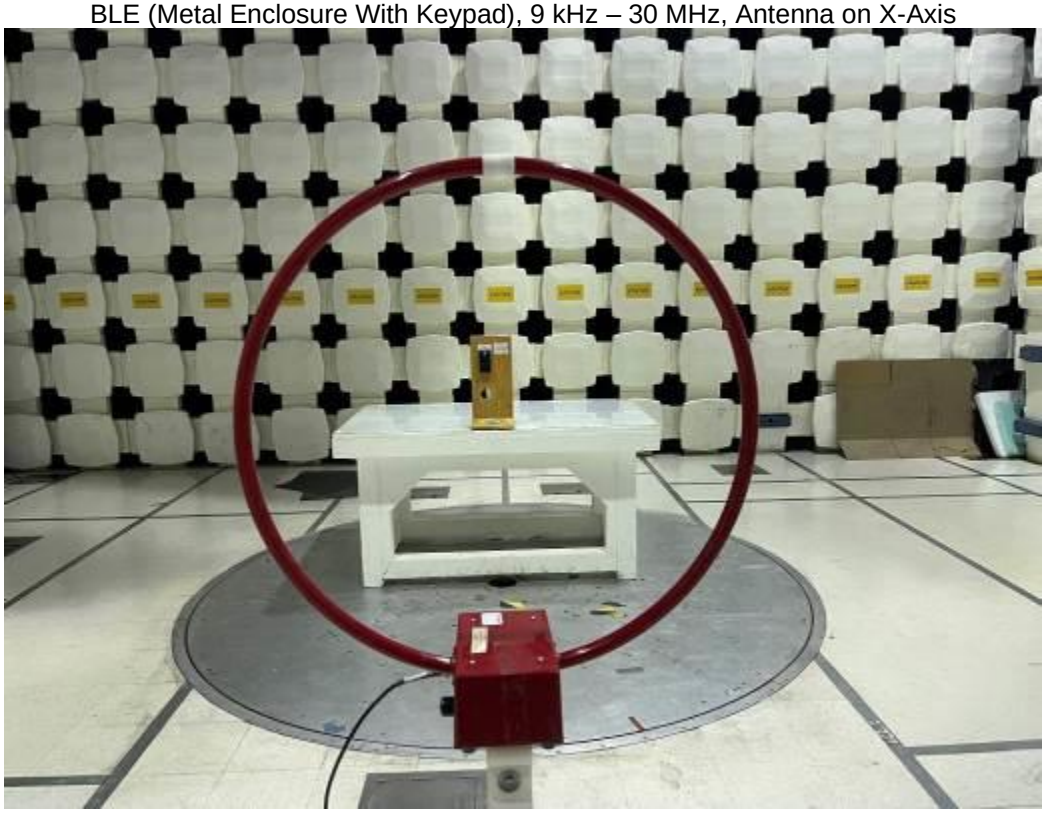
10.4 Results:

The sample tested was found to Comply.

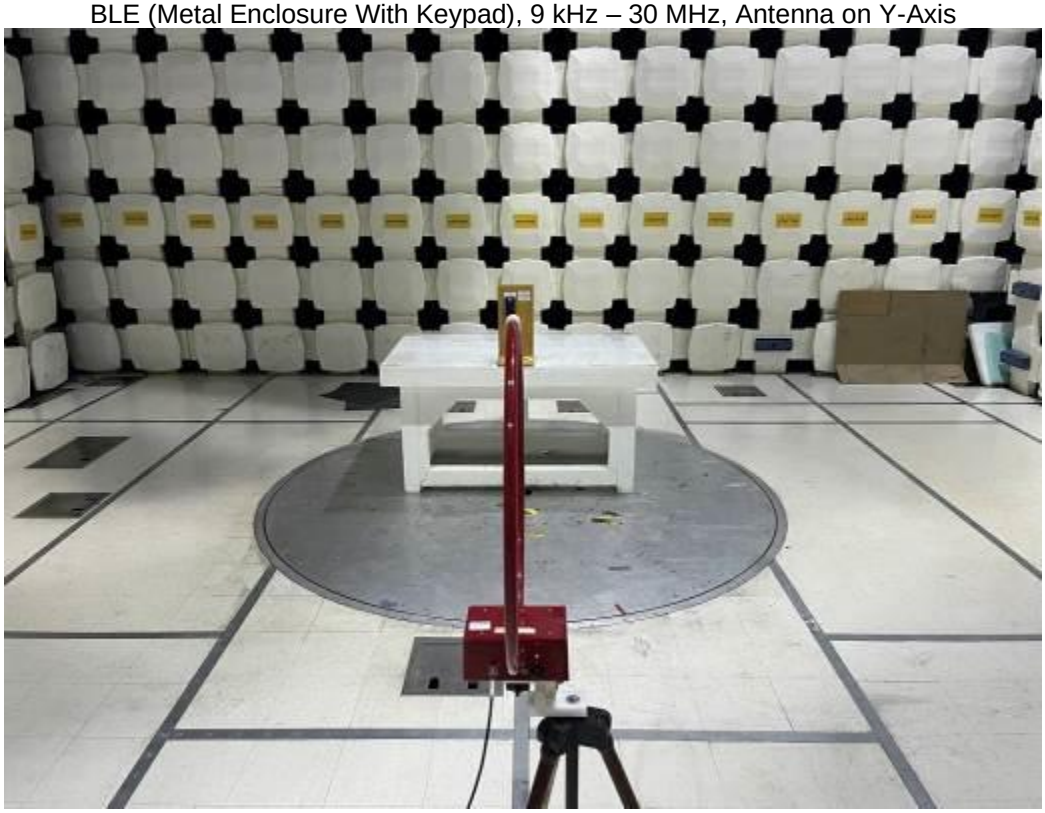
10.5 Setup Photographs:

===Battery Powered===

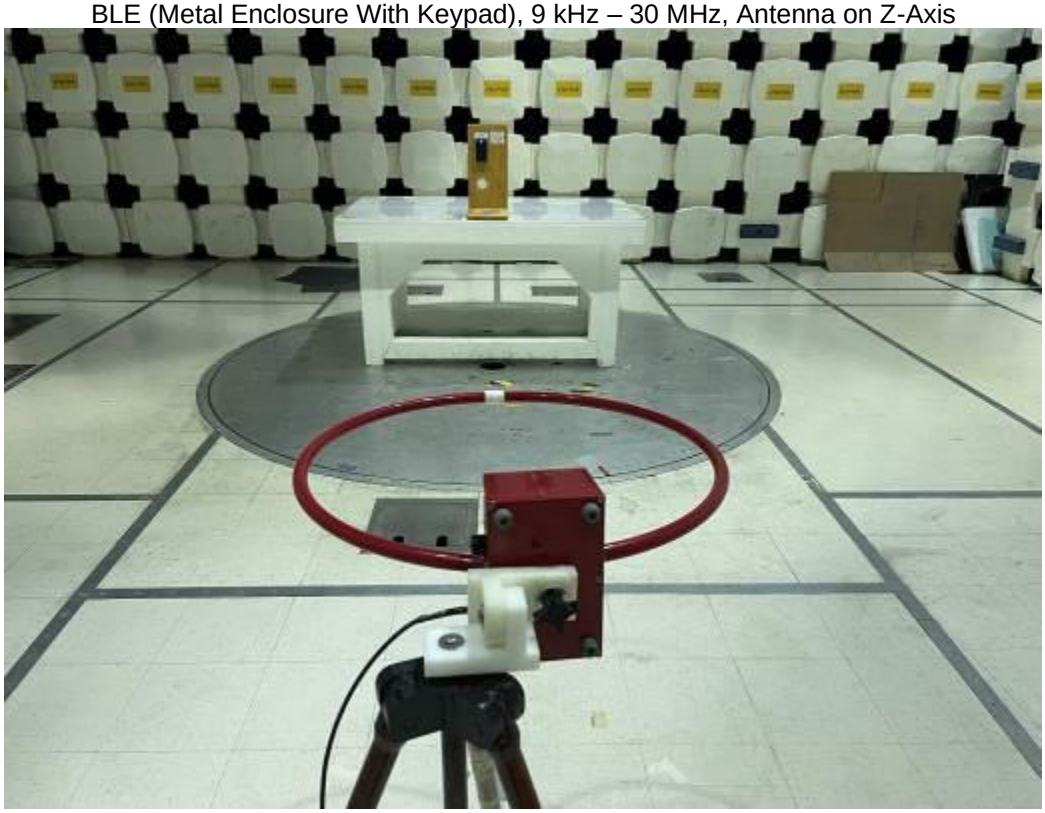
BLE (Metal Enclosure With Keypad), 9 kHz – 30 MHz, Antenna on X-Axis



BLE (Metal Enclosure With Keypad), 9 kHz – 30 MHz, Antenna on Y-Axis

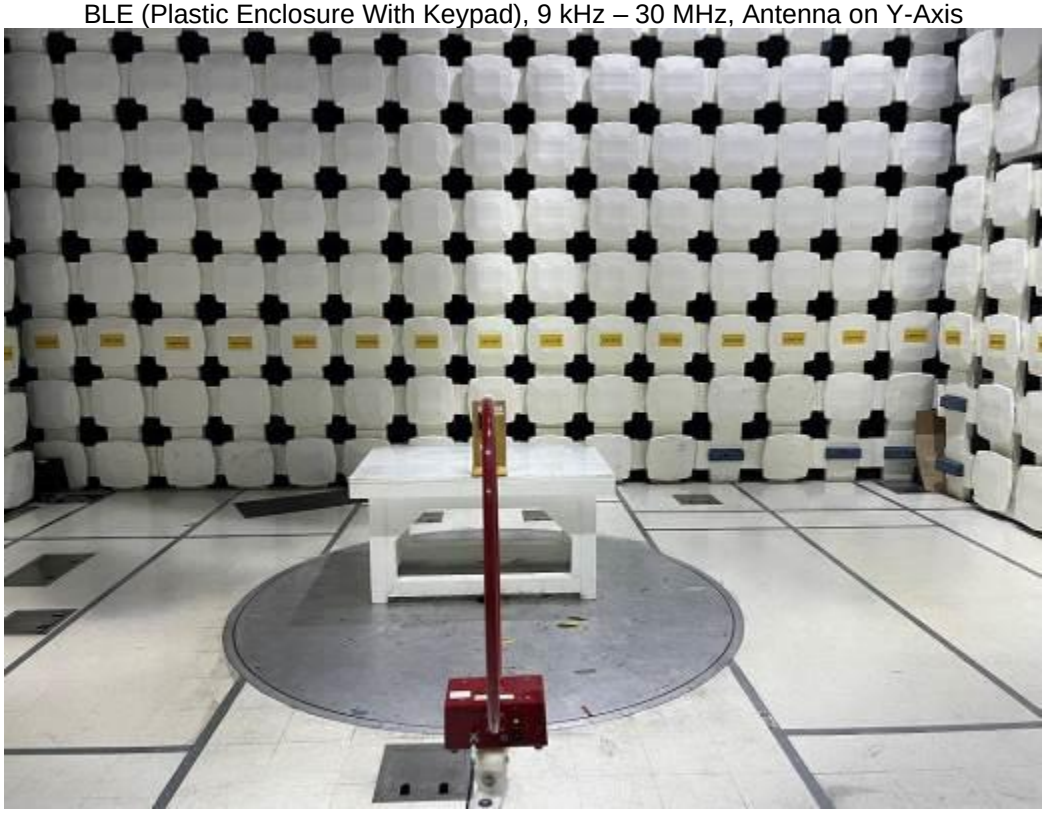


BLE (Metal Enclosure With Keypad), 9 kHz – 30 MHz, Antenna on Z-Axis

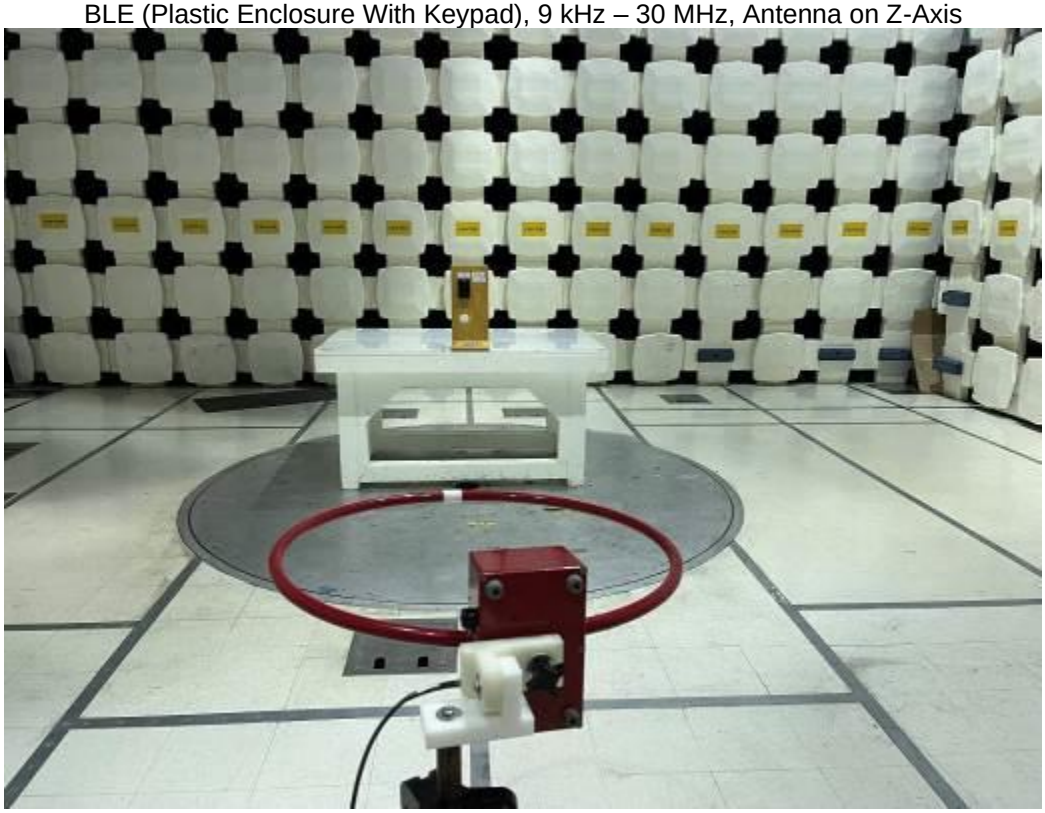


BLE (Plastic Enclosure With Keypad), 9 kHz – 30 MHz, Antenna on X-Axis

BLE (Plastic Enclosure With Keypad), 9 kHz – 30 MHz, Antenna on Y-Axis

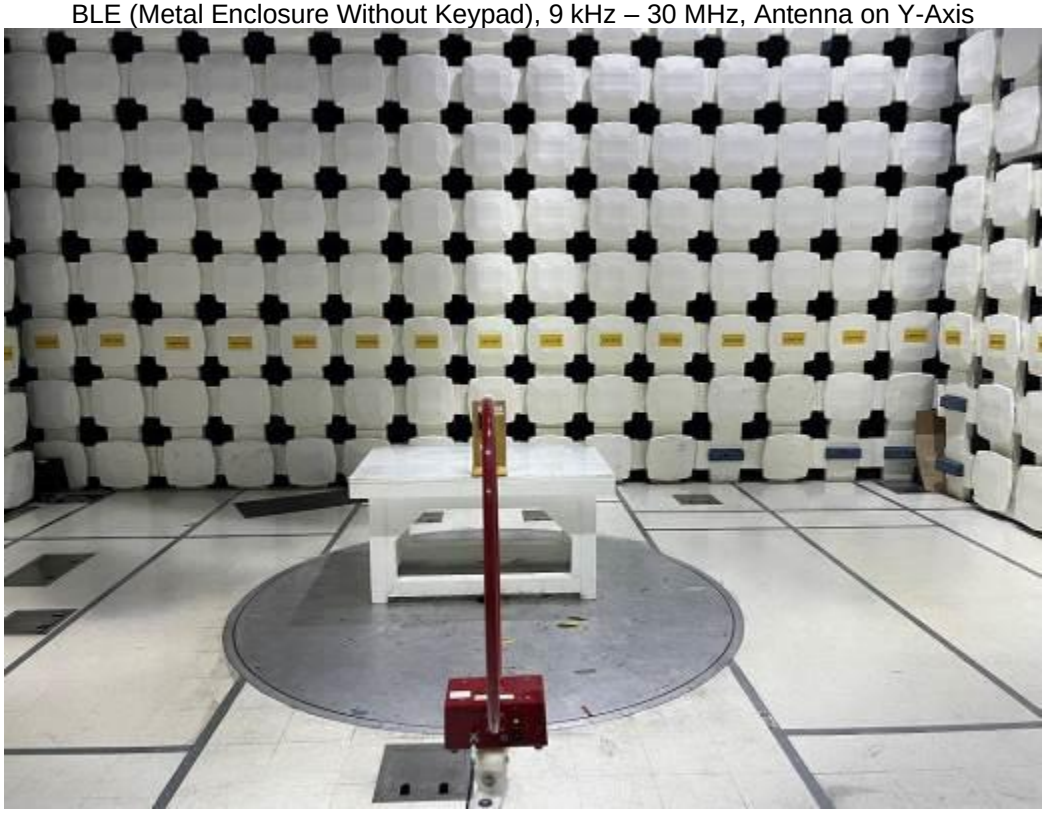


BLE (Plastic Enclosure With Keypad), 9 kHz – 30 MHz, Antenna on Z-Axis

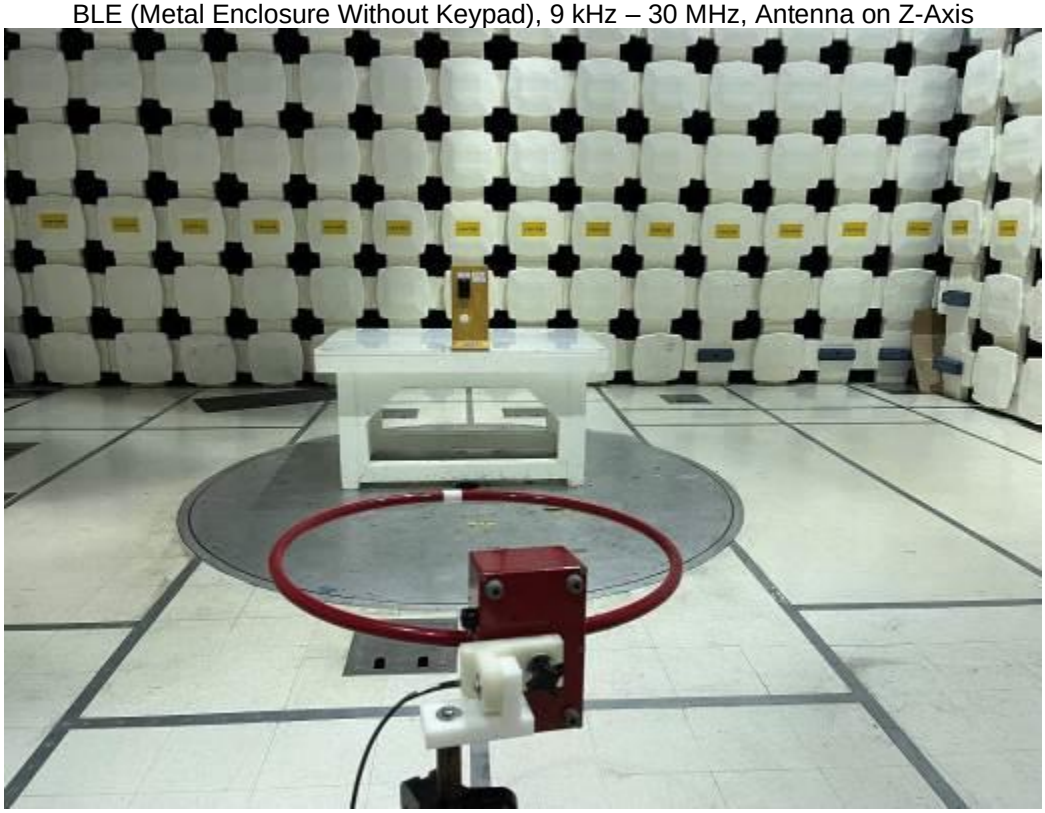


BLE (Metal Enclosure Without Keypad), 9 kHz – 30 MHz, Antenna on X-Axis

BLE (Metal Enclosure Without Keypad), 9 kHz – 30 MHz, Antenna on Y-Axis

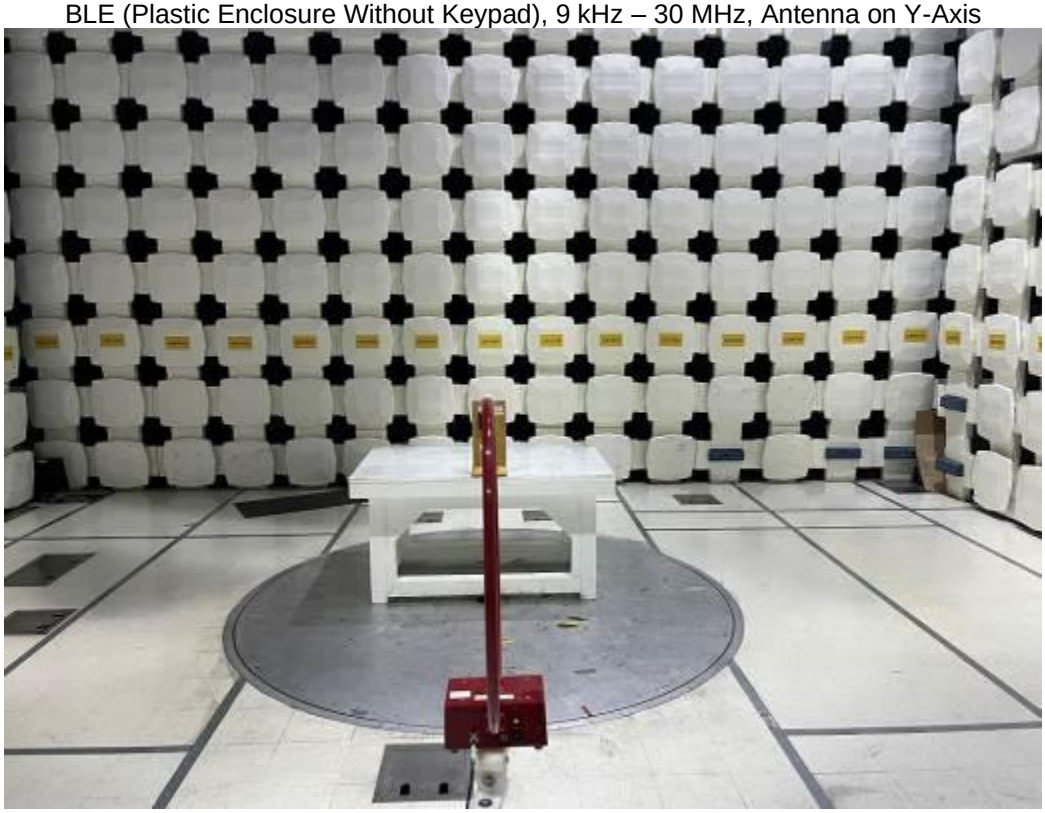


BLE (Metal Enclosure Without Keypad), 9 kHz – 30 MHz, Antenna on Z-Axis

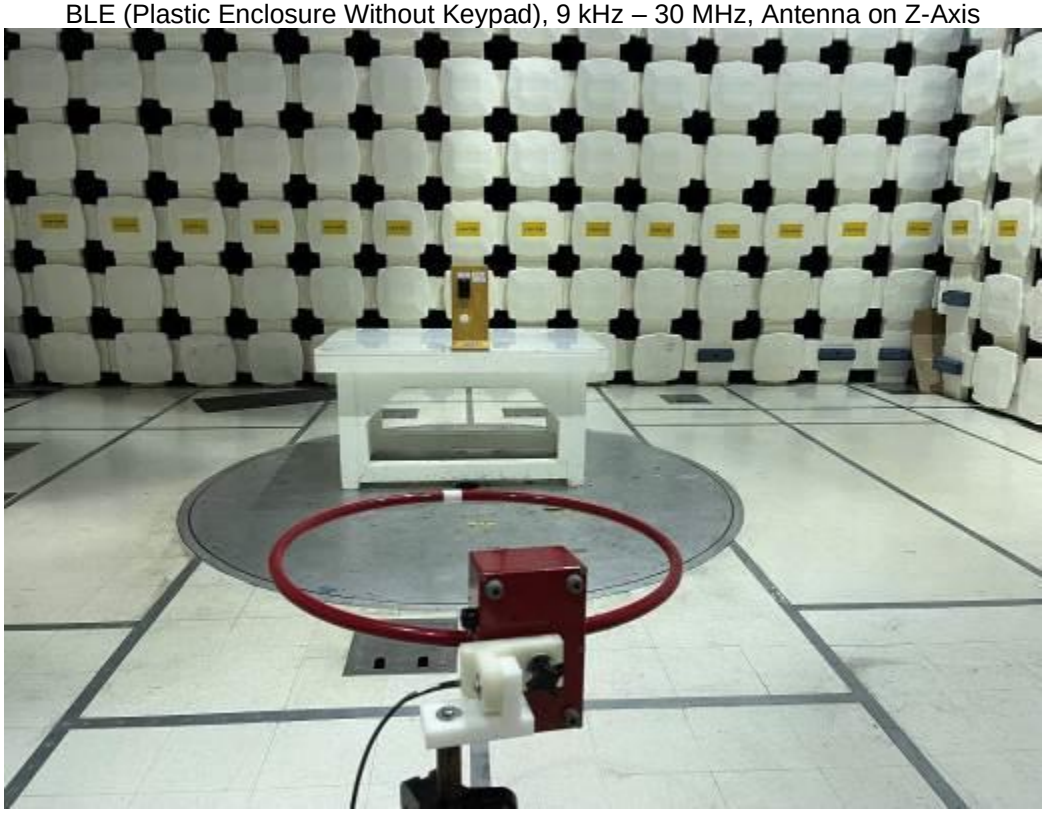


BLE (Plastic Enclosure Without Keypad), 9 kHz – 30 MHz, Antenna on X-Axis

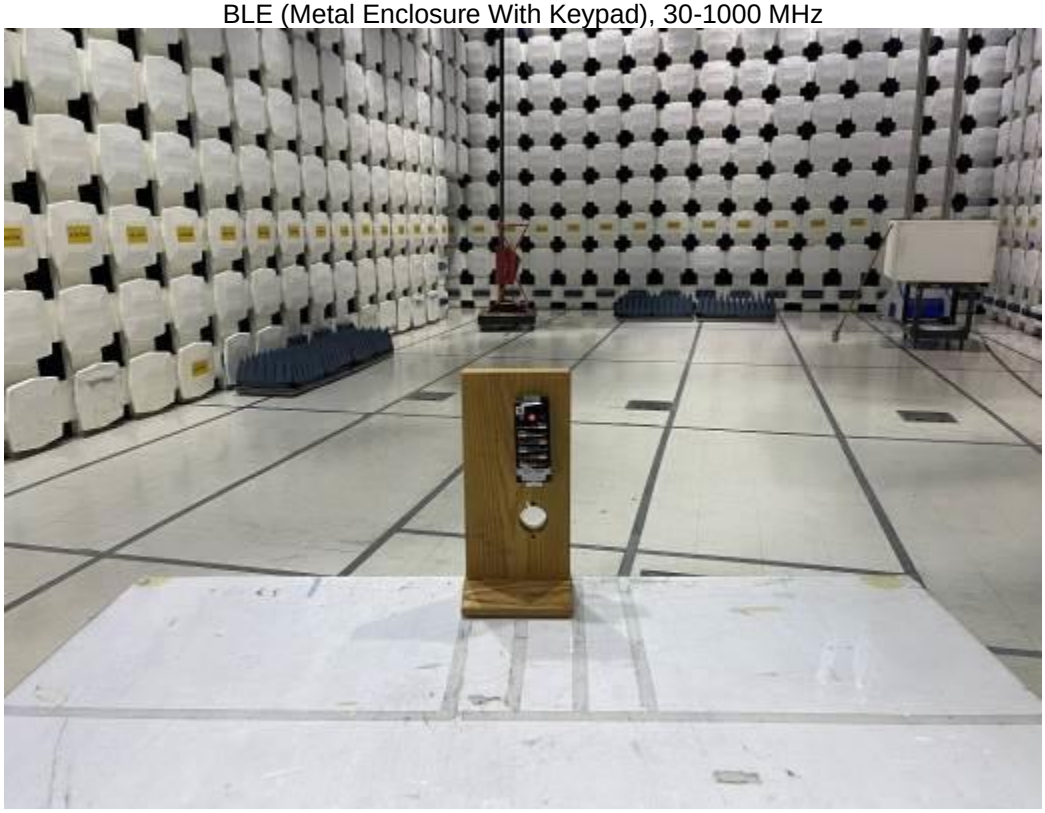
BLE (Plastic Enclosure Without Keypad), 9 kHz – 30 MHz, Antenna on Y-Axis



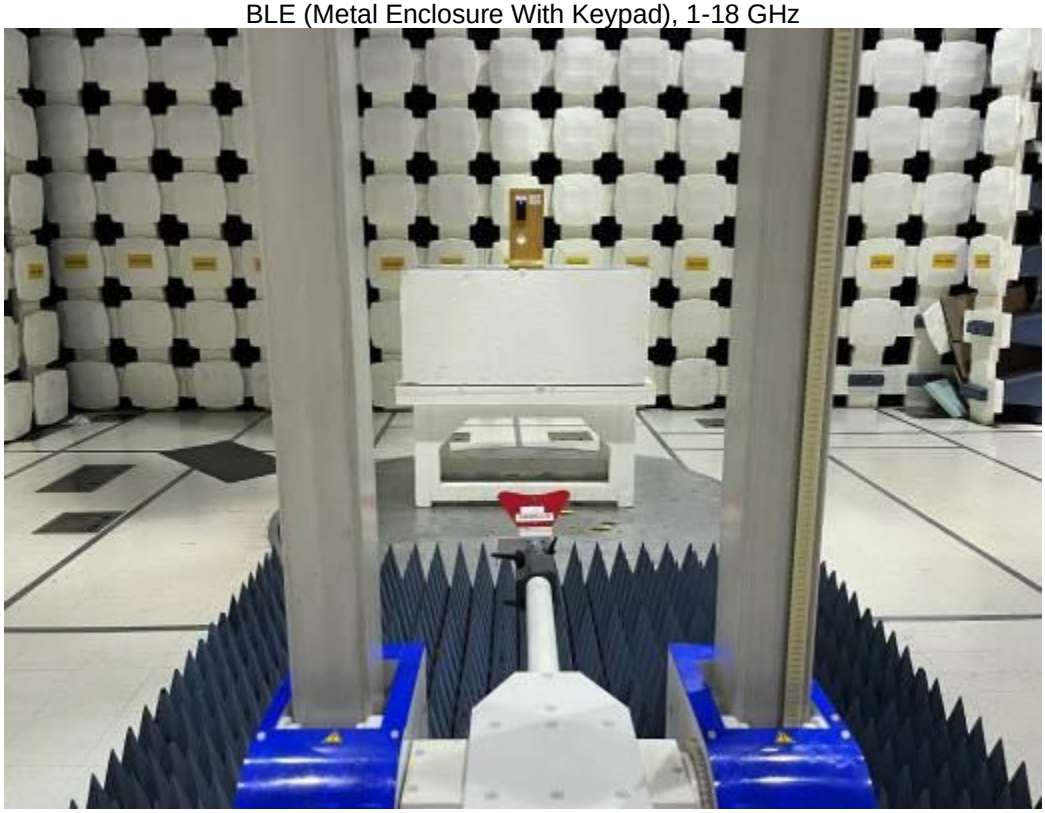
BLE (Plastic Enclosure Without Keypad), 9 kHz – 30 MHz, Antenna on Z-Axis



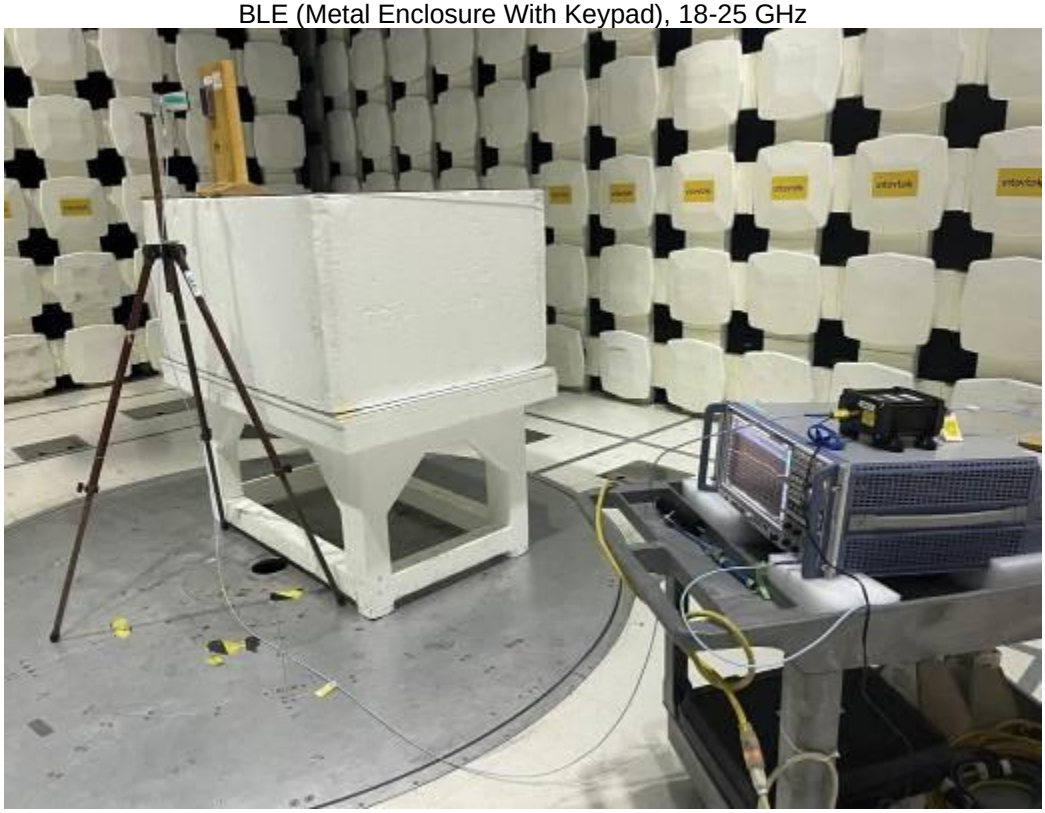
BLE (Metal Enclosure With Keypad), 30-1000 MHz



BLE (Metal Enclosure With Keypad), 1-18 GHz



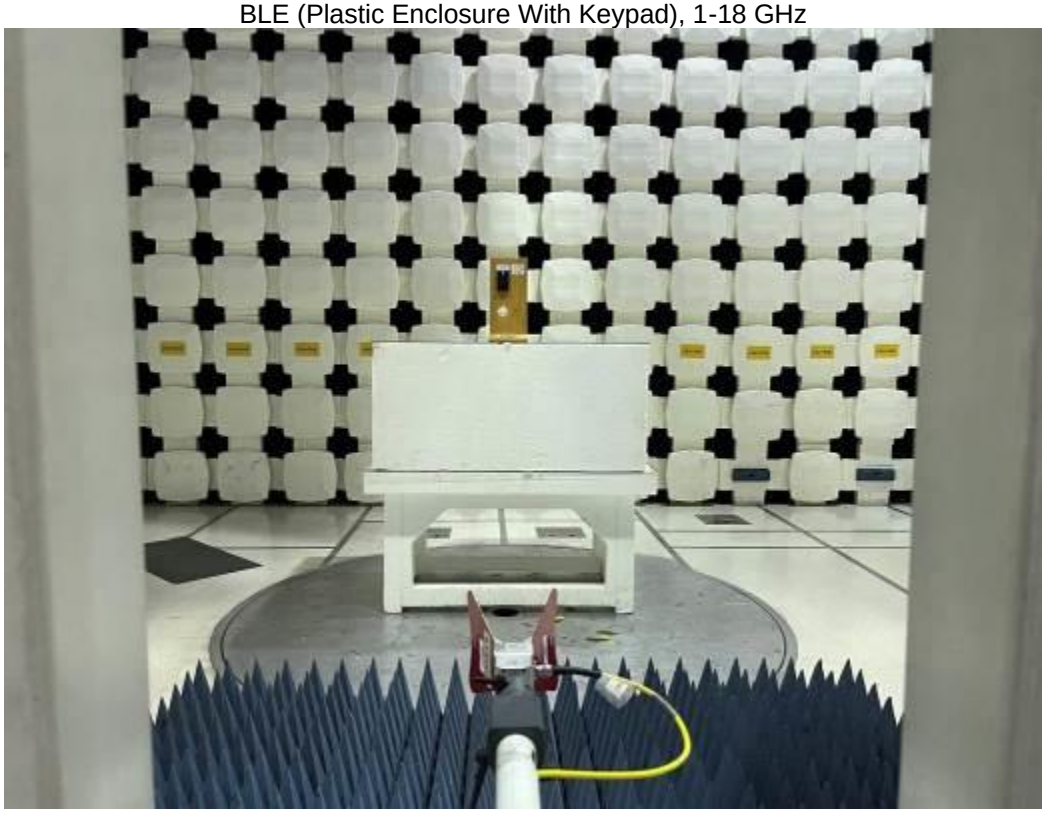
BLE (Metal Enclosure With Keypad), 18-25 GHz



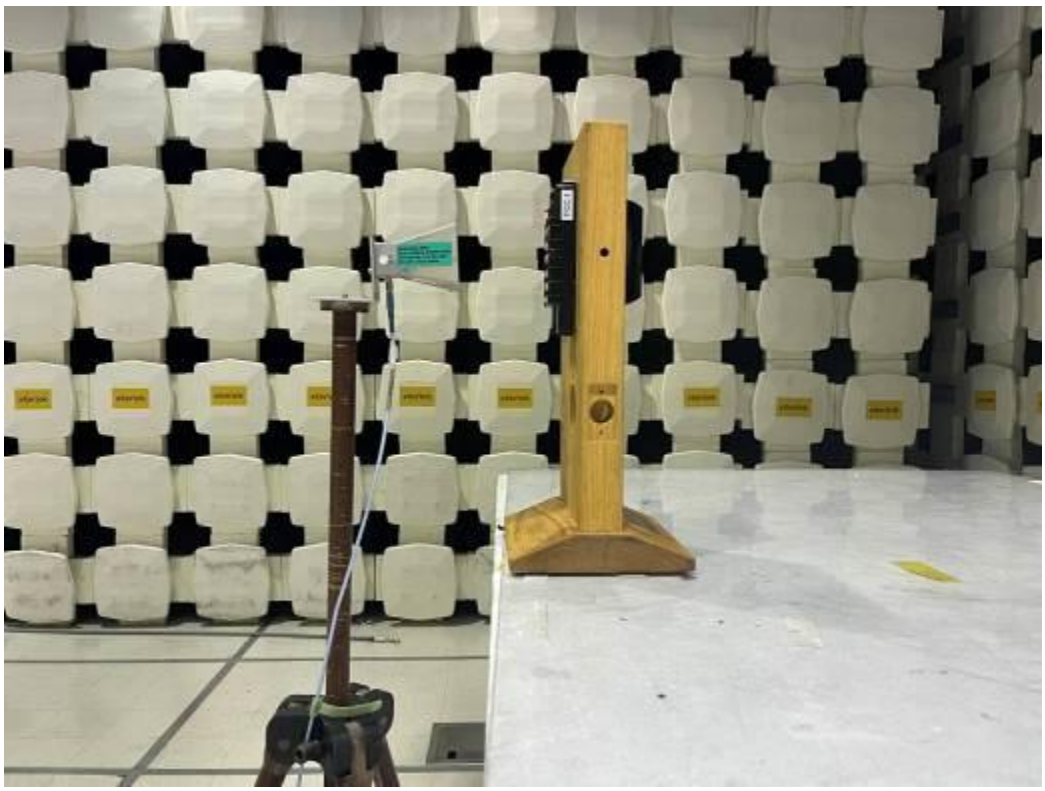
Notes: Testing was performed manually around the EUT from 18-25 GHz at 10 cm distance.

BLE (Plastic Enclosure With Keypad), 30-1000 MHz

BLE (Plastic Enclosure With Keypad), 1-18 GHz



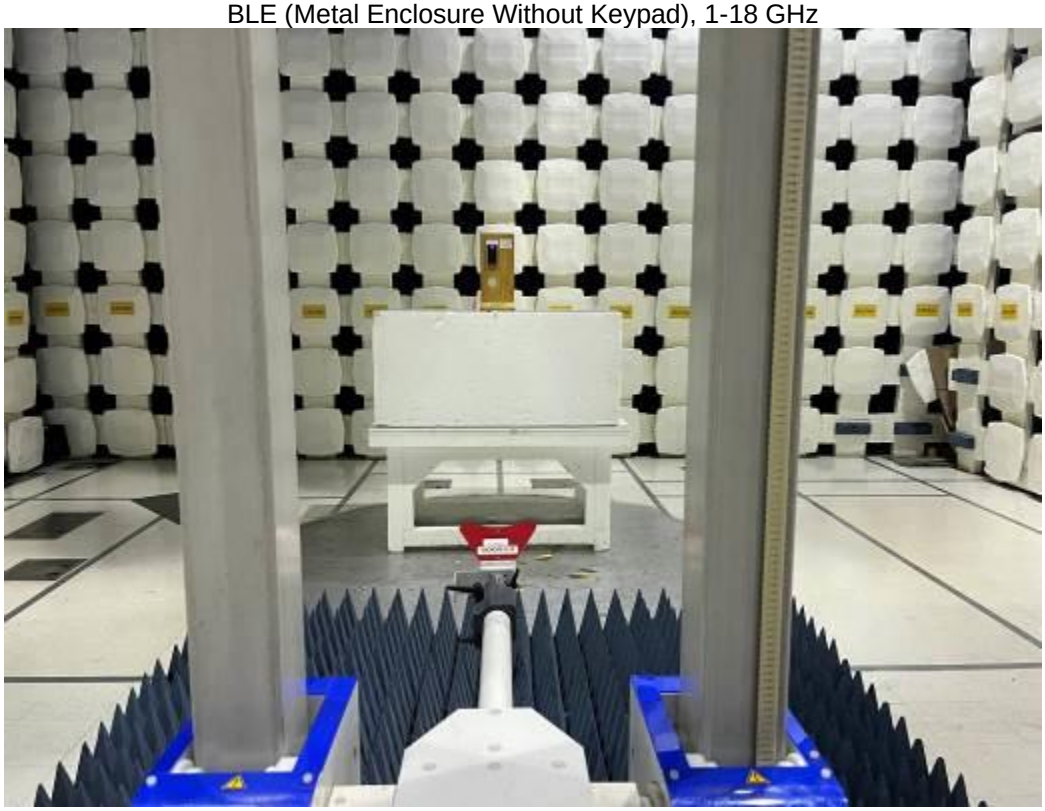
BLE (Plastic Enclosure With Keypad), 18-25 GHz



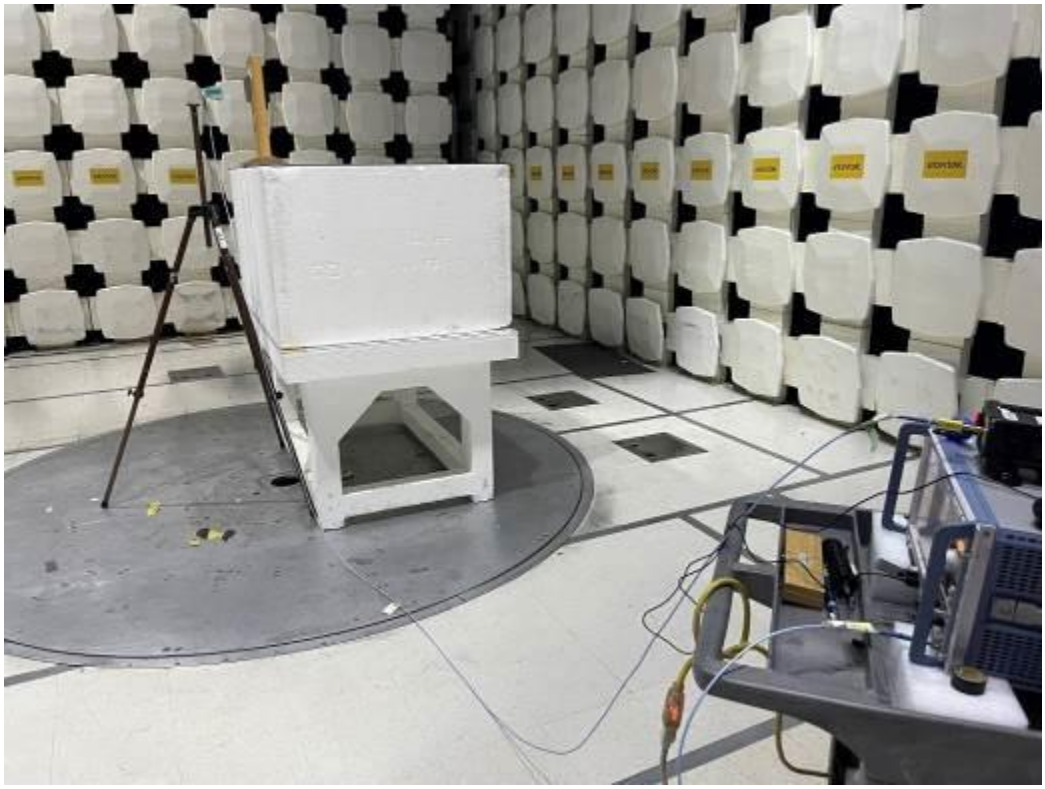
Notes: Testing was performed manually around the EUT from 18-25 GHz at 10 cm distance.

BLE & RFID (Metal Enclosure Without Keypad), 30-1000 MHz

BLE (Metal Enclosure Without Keypad), 1-18 GHz



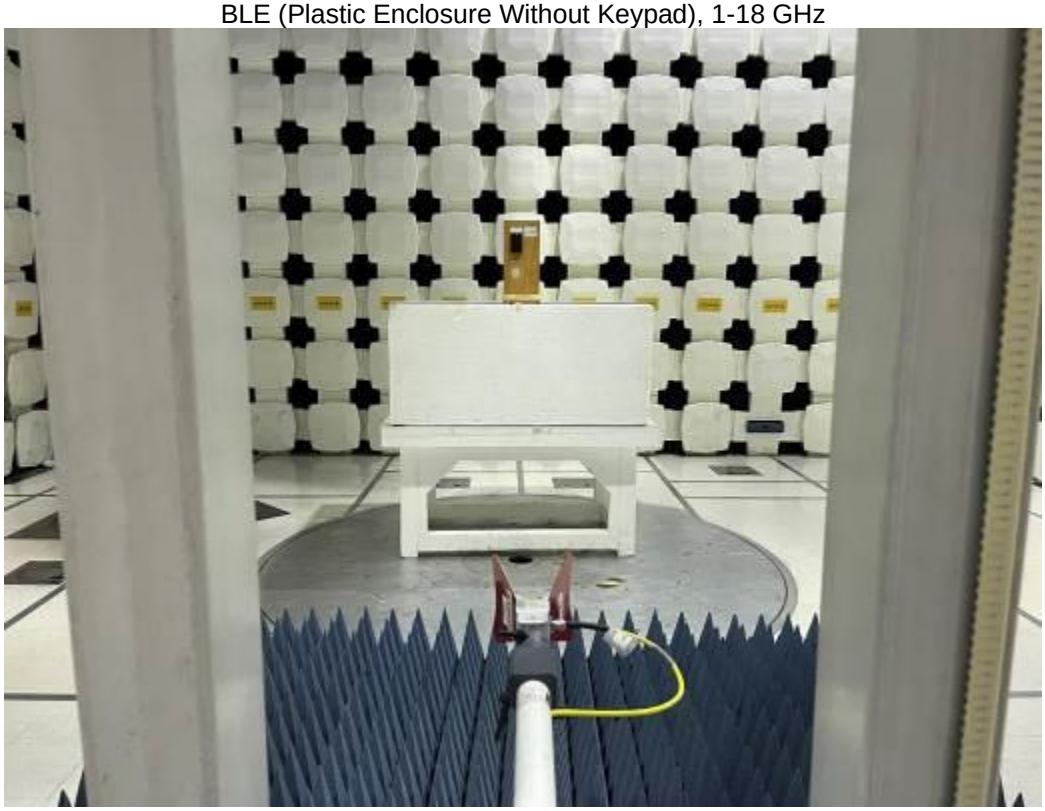
BLE (Metal Enclosure Without Keypad), 18-25 GHz



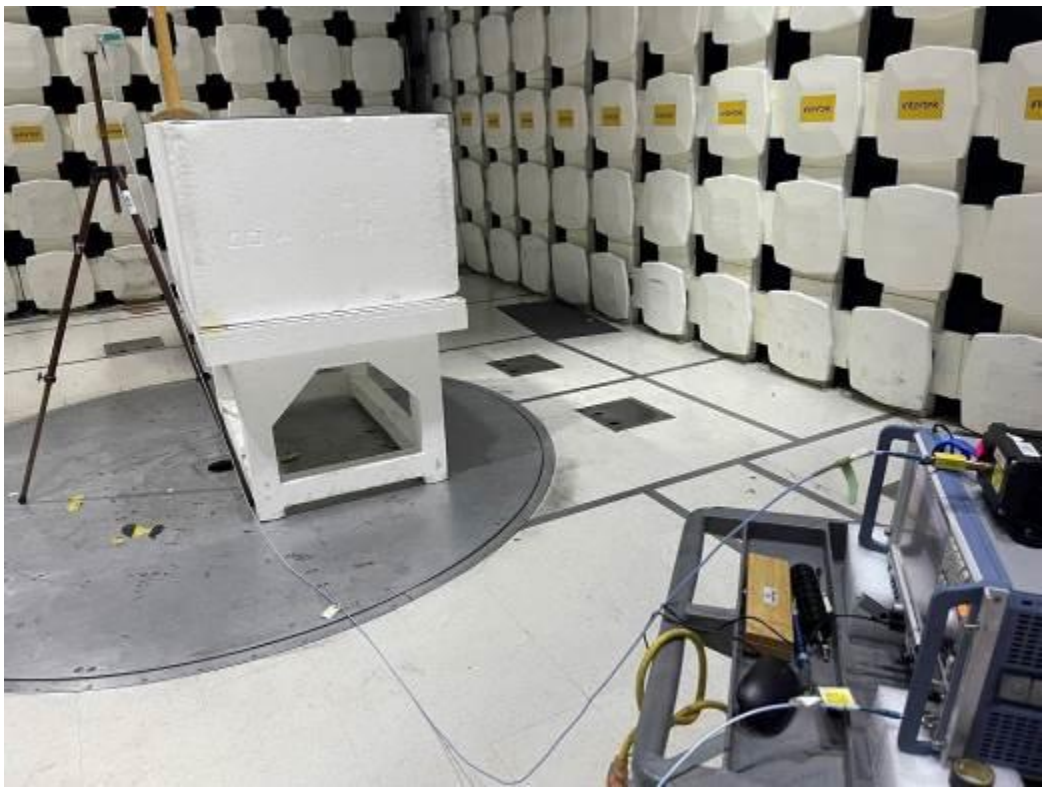
Notes: Testing was performed manually around the EUT from 18-25 GHz at 10 cm distance.

BLE (Plastic Enclosure Without Keypad), 30-1000 MHz

BLE (Plastic Enclosure Without Keypad), 1-18 GHz



BLE (Plastic Enclosure Without Keypad), 18-25 GHz



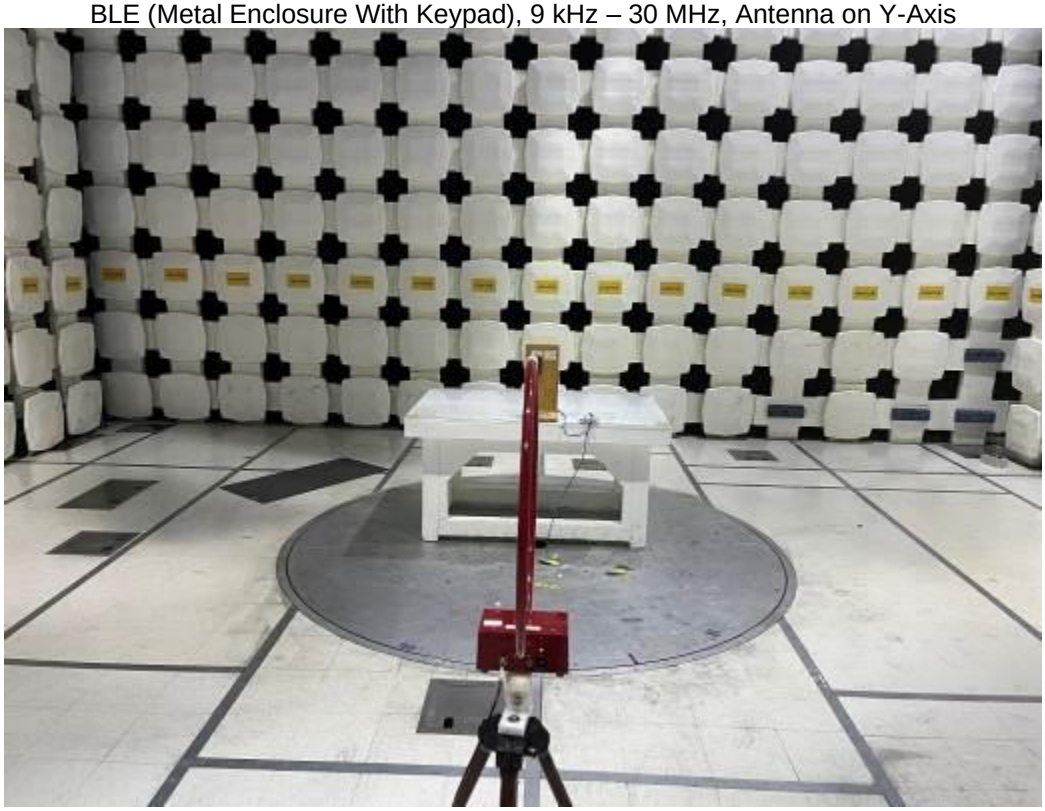
Notes: Testing was performed manually around the EUT from 18-25 GHz at 10 cm distance.

===POE Powered===

BLE (Metal Enclosure With Keypad), 9 kHz – 30 MHz, Antenna on X-Axis

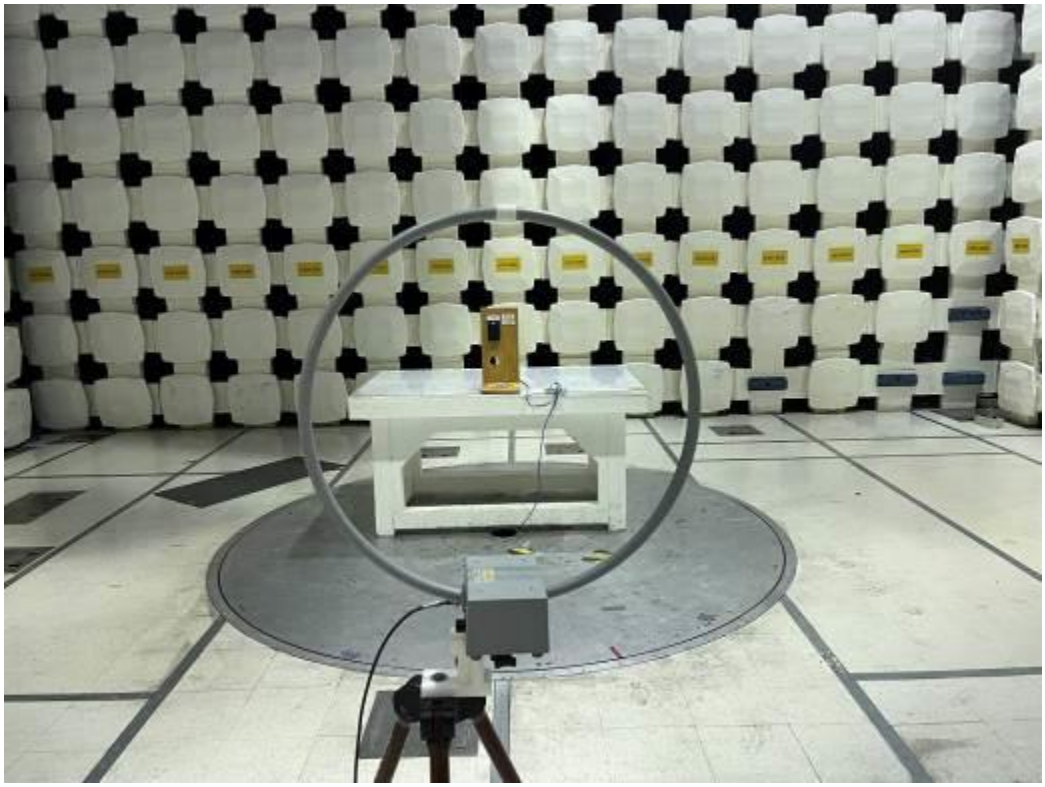
Photo was not taken

BLE (Metal Enclosure With Keypad), 9 kHz – 30 MHz, Antenna on Y-Axis

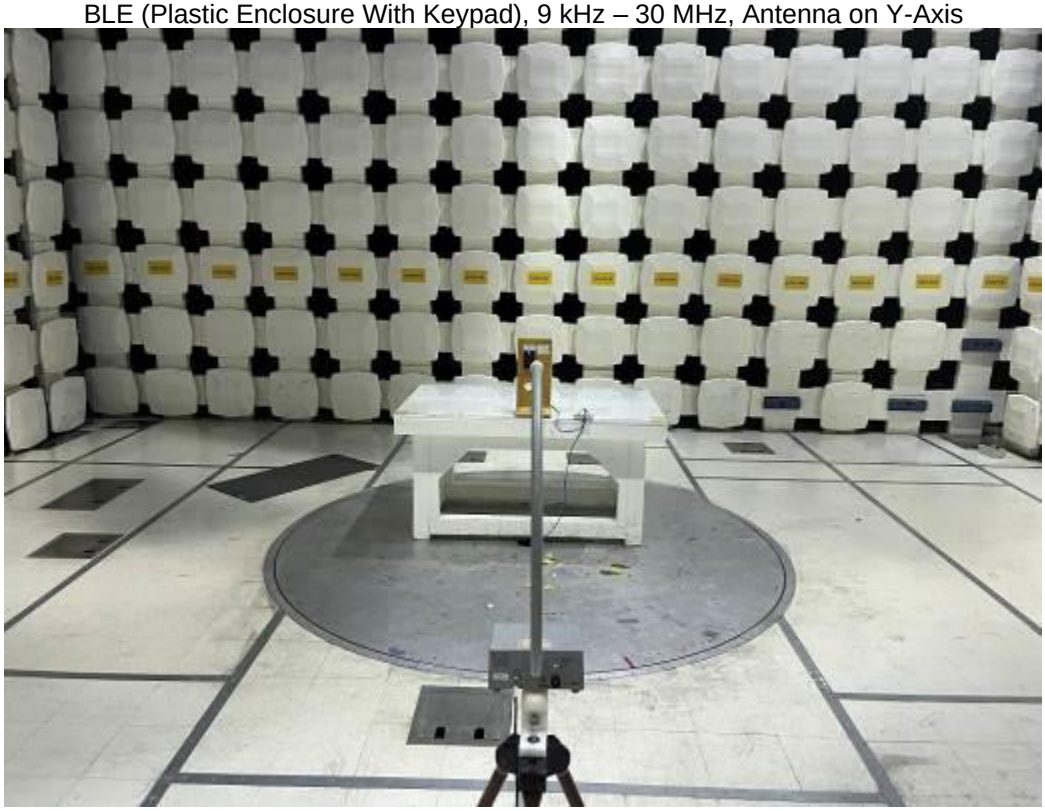


BLE (Metal Enclosure With Keypad), 9 kHz – 30 MHz, Antenna on Z-Axis

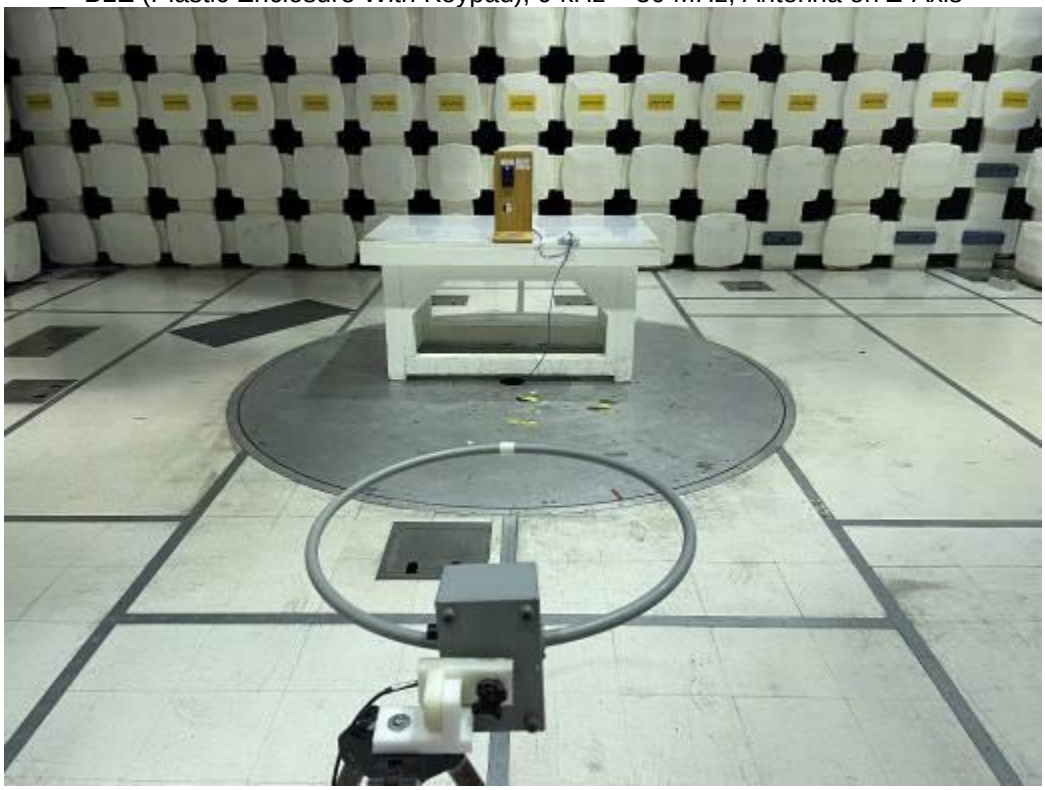
BLE (Plastic Enclosure With Keypad), 9 kHz – 30 MHz, Antenna on X-Axis



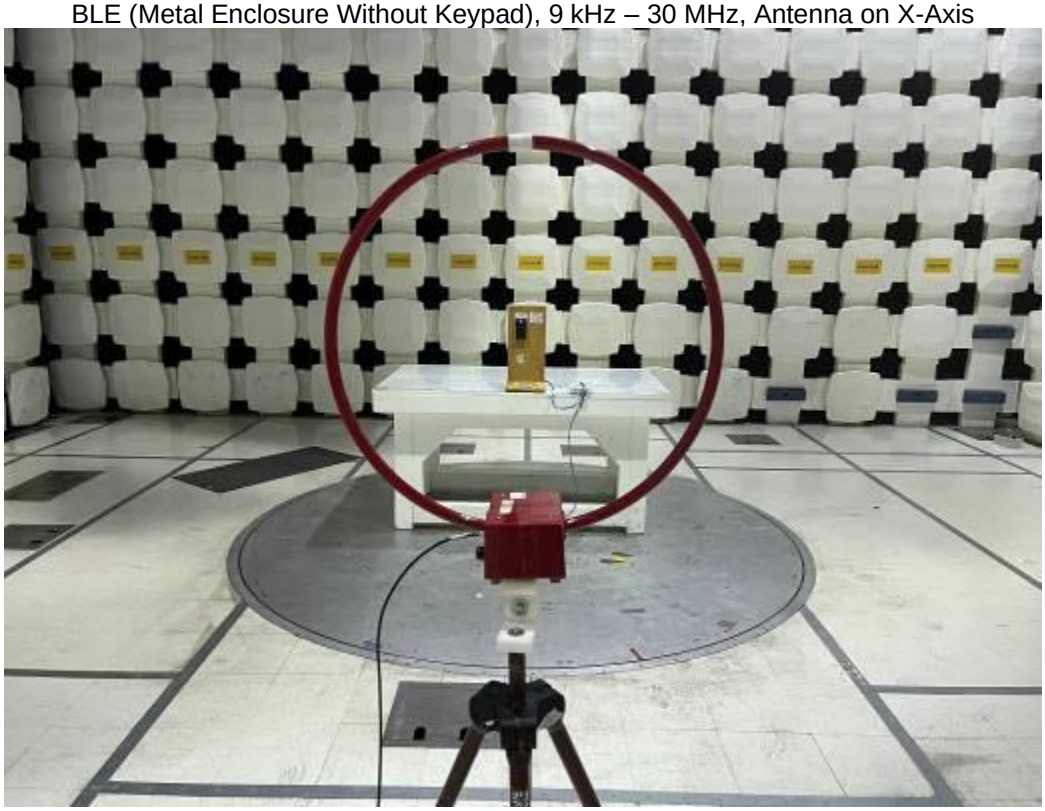
BLE (Plastic Enclosure With Keypad), 9 kHz – 30 MHz, Antenna on Y-Axis



BLE (Plastic Enclosure With Keypad), 9 kHz – 30 MHz, Antenna on Z-Axis

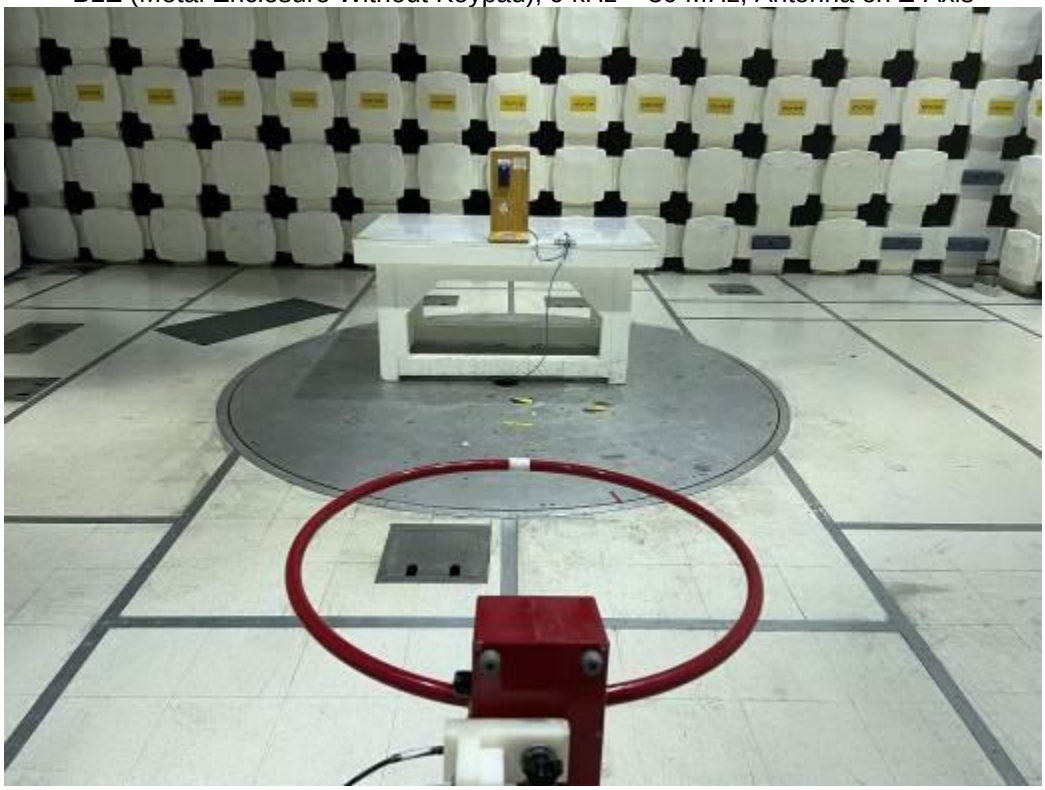


BLE (Metal Enclosure Without Keypad), 9 kHz – 30 MHz, Antenna on X-Axis



BLE (Metal Enclosure Without Keypad), 9 kHz – 30 MHz, Antenna on Y-Axis

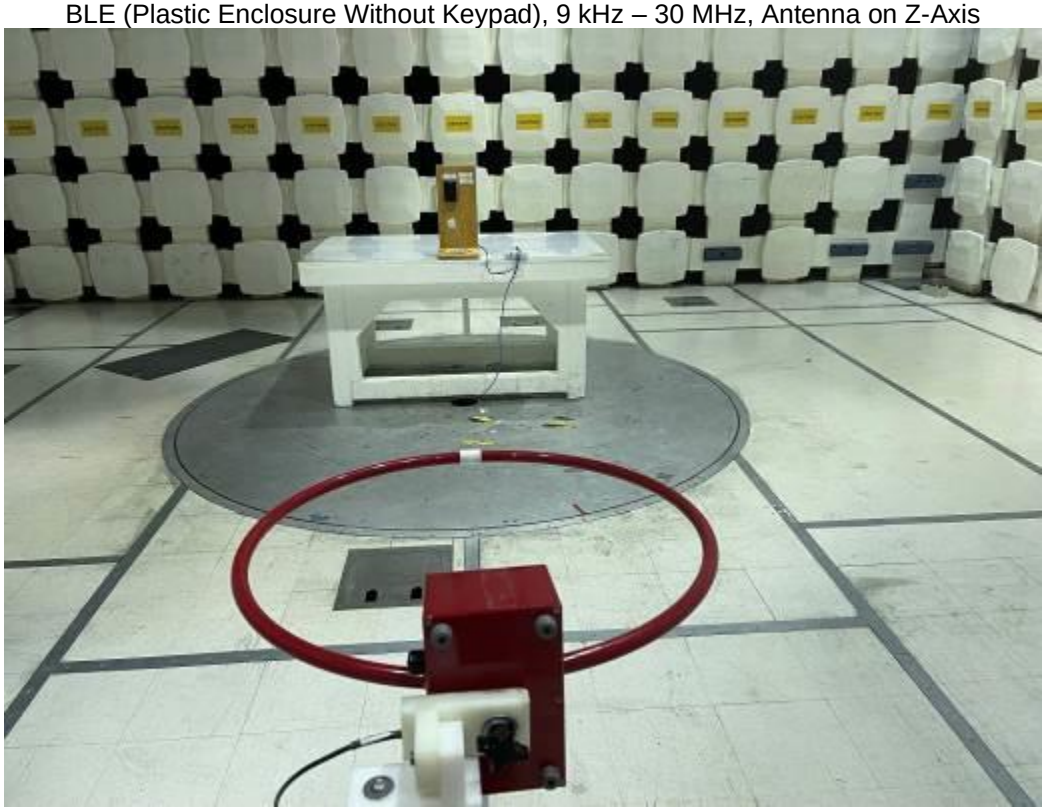
BLE (Metal Enclosure Without Keypad), 9 kHz – 30 MHz, Antenna on Z-Axis



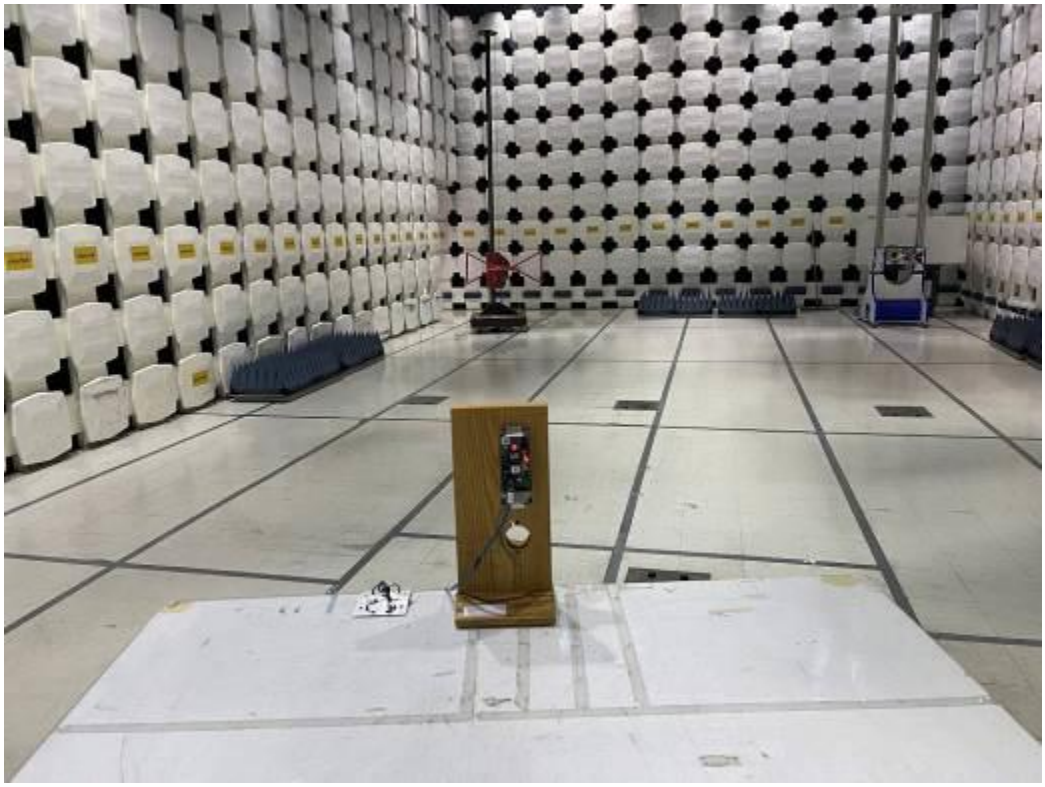
BLE (Plastic Enclosure Without Keypad), 9 kHz – 30 MHz, Antenna on X-Axis

BLE (Plastic Enclosure Without Keypad), 9 kHz – 30 MHz, Antenna on Y-Axis

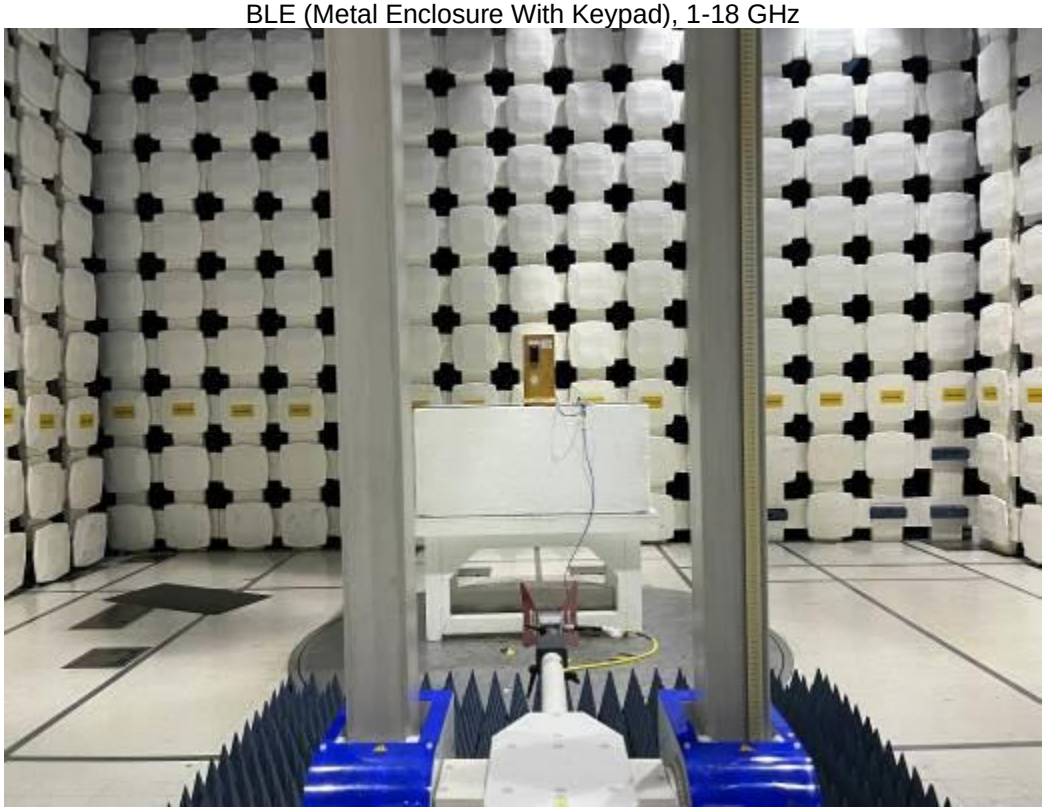
BLE (Plastic Enclosure Without Keypad), 9 kHz – 30 MHz, Antenna on Z-Axis



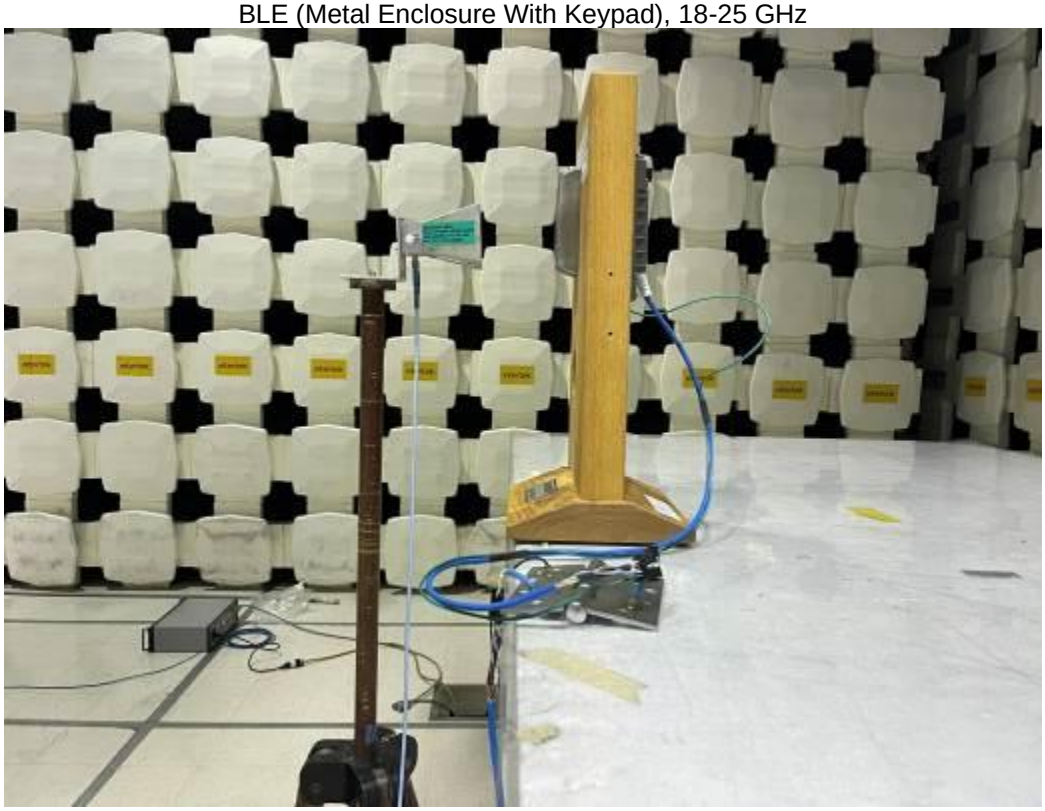
BLE (Metal Enclosure With Keypad), 30-1000 MHz

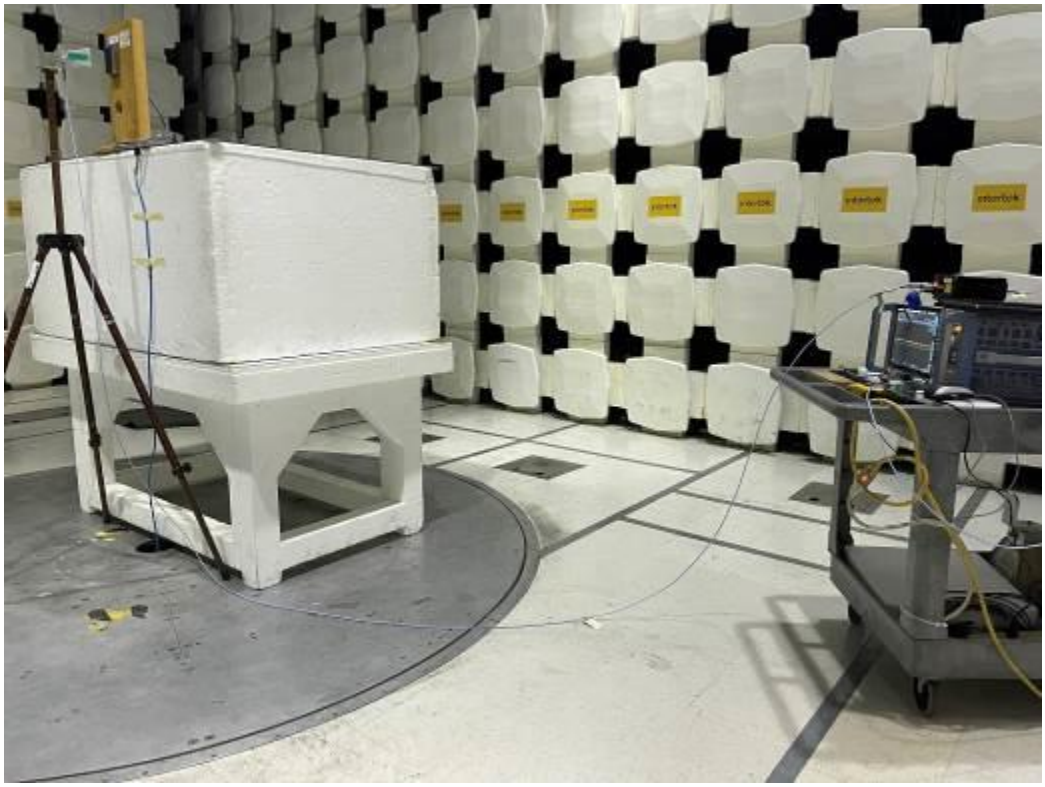


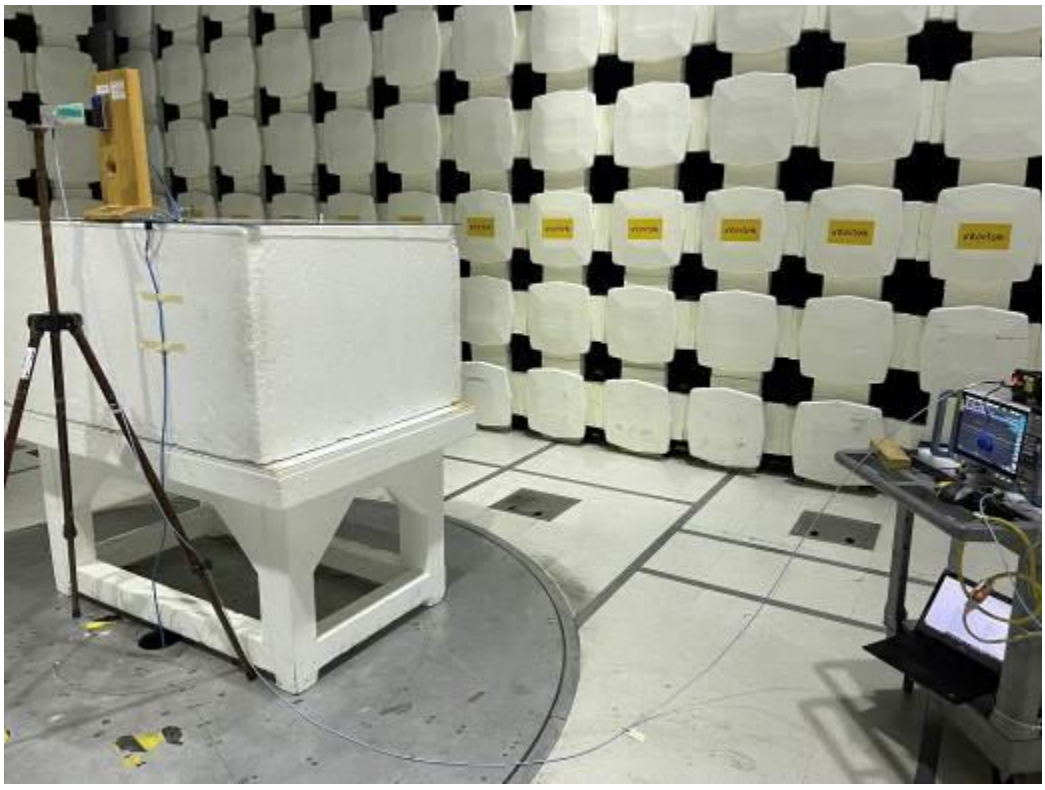
BLE (Metal Enclosure With Keypad), 1-18 GHz



BLE (Metal Enclosure With Keypad), 18-25 GHz

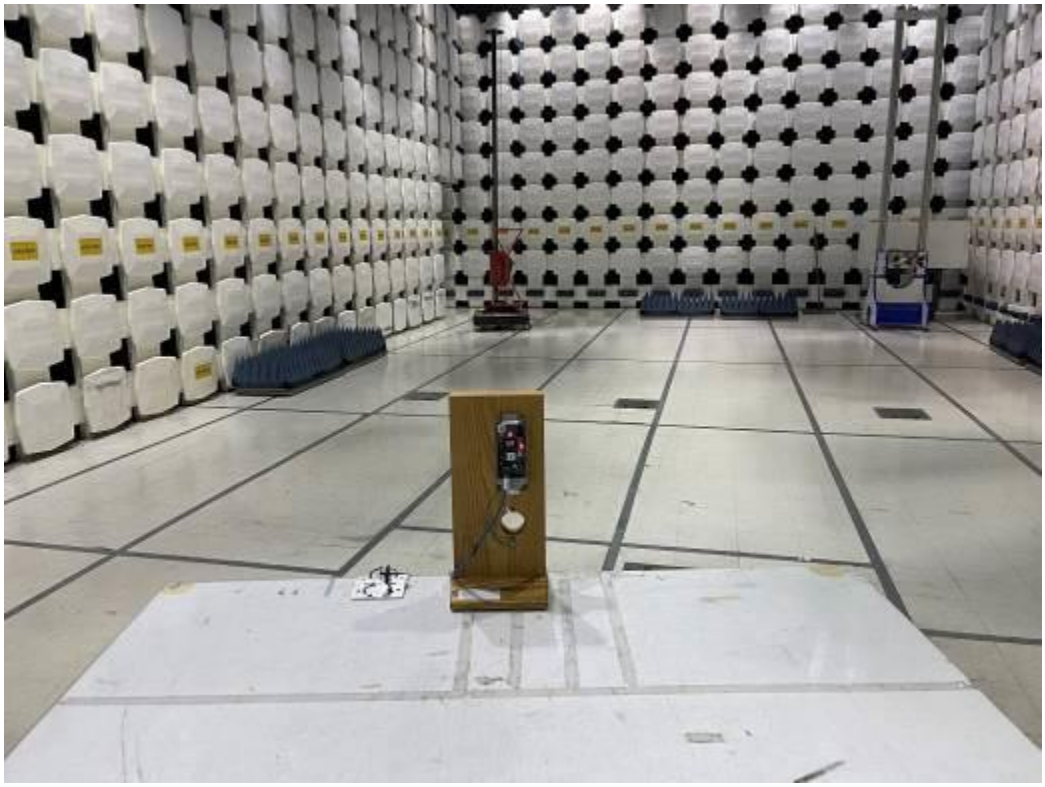




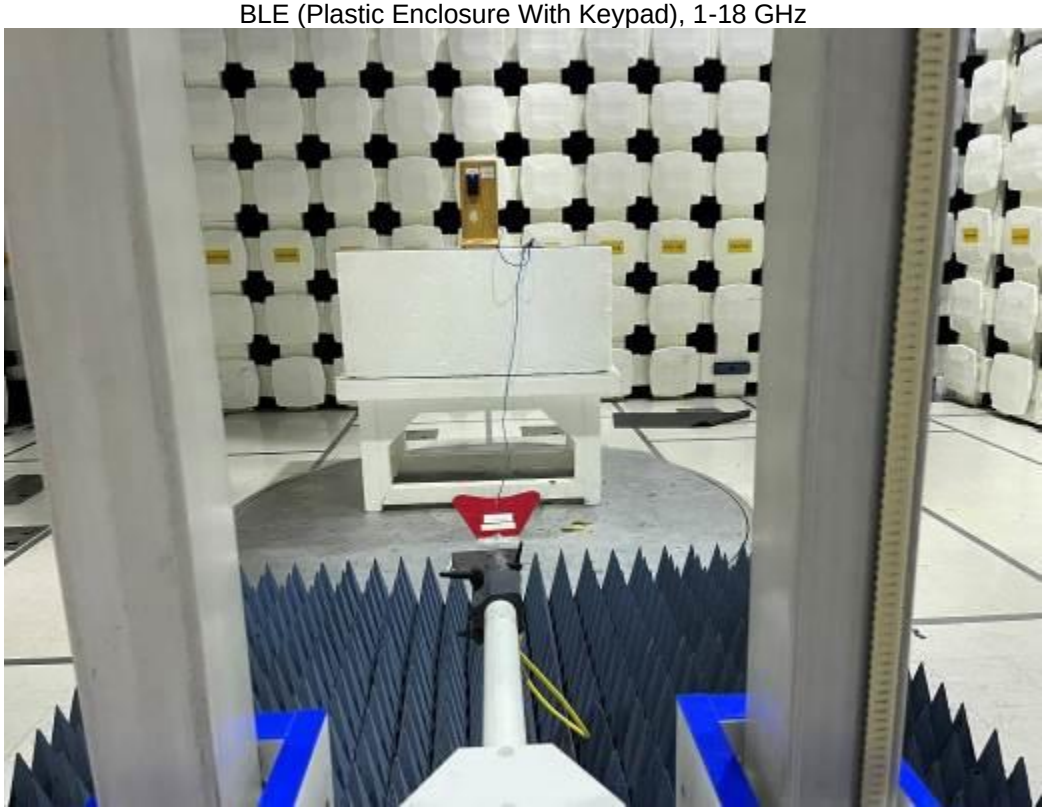


Notes: Testing was performed manually around the EUT from 18-25 GHz at 10 cm distance.

BLE (Plastic Enclosure With Keypad), 30-1000 MHz



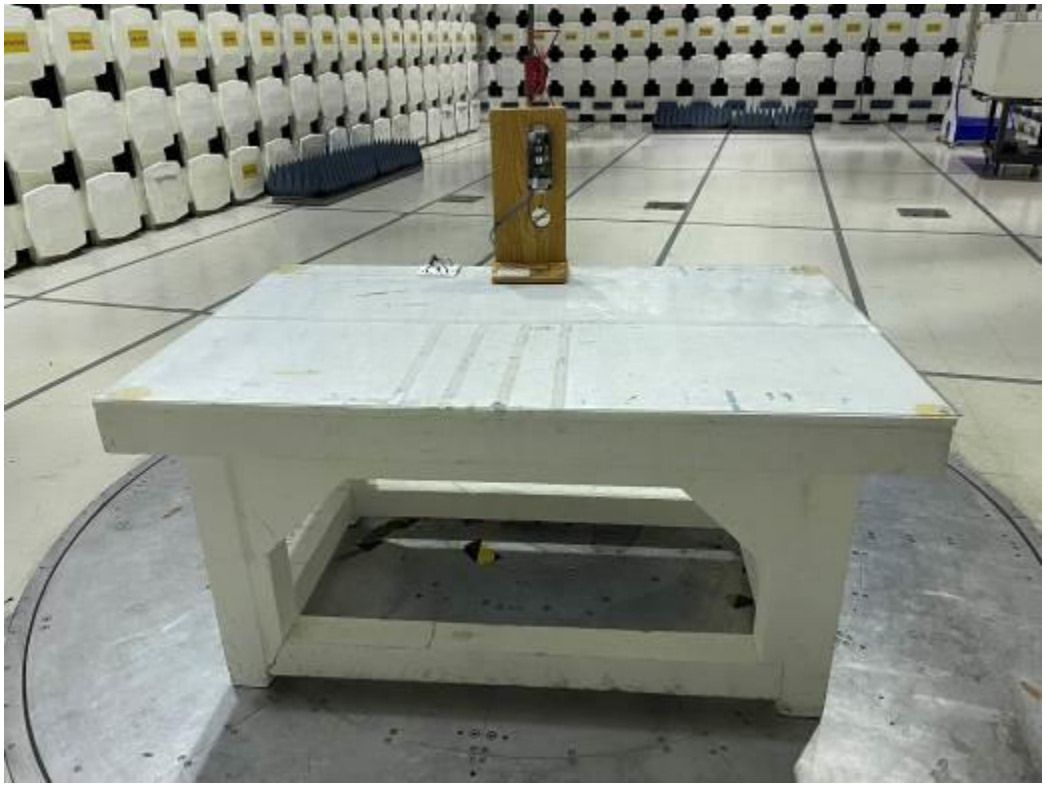
BLE (Plastic Enclosure With Keypad), 1-18 GHz



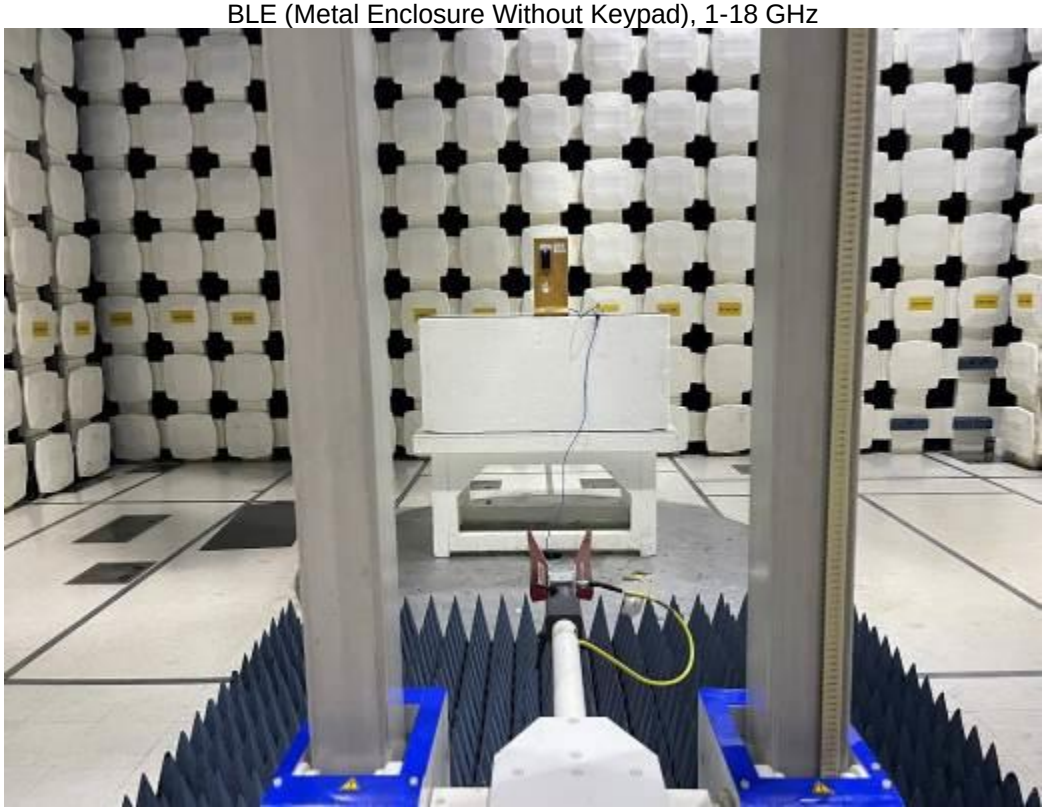
BLE (Plastic Enclosure With Keypad), 18-25 GHz

Photo was not taken – The test setup is identical to Metal Enclosure With Keypad

BLE (Metal Enclosure Without Keypad), 30-1000 MHz



BLE (Metal Enclosure Without Keypad), 1-18 GHz

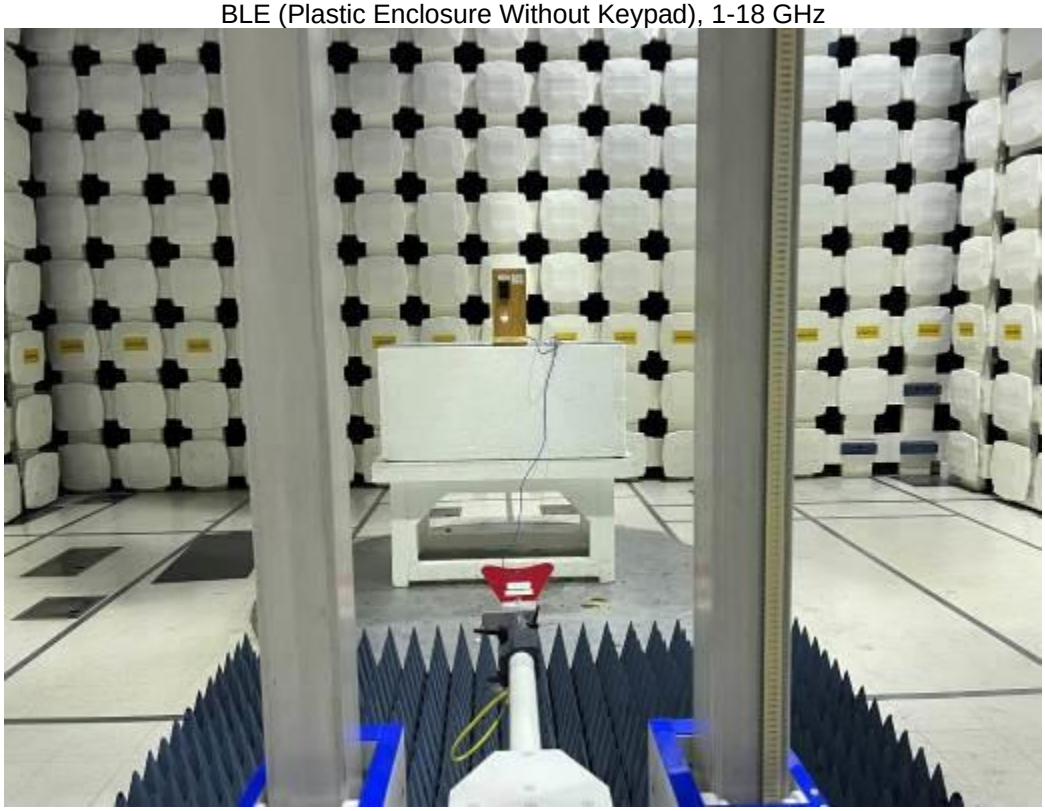


BLE (Metal Enclosure Without Keypad), 18-25 GHz

Photo was not taken – The test setup is identical to Metal Enclosure With Keypad

BLE (Plastic Enclosure Without Keypad), 30-1000 MHz

BLE (Plastic Enclosure Without Keypad), 1-18 GHz



BLE (Plastic Enclosure Without Keypad), 18-25 GHz

Photo was not taken – The test setup is identical to Metal Enclosure With Keypad

10.6 Plots/Data:

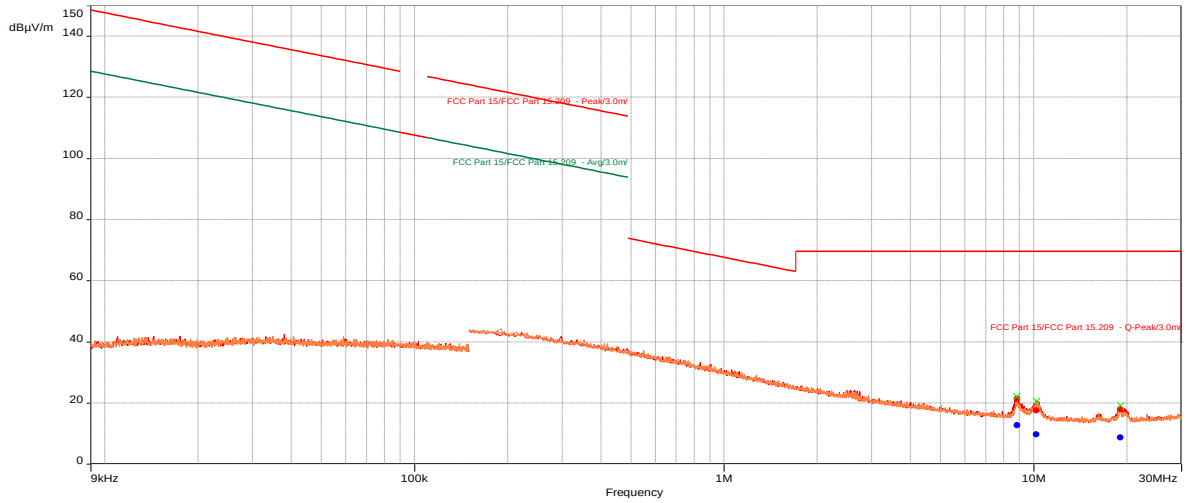
===Battery Powered===

BLE Tx Mid – Worst-case Output Power (Metal Enclosure, With Keypad),
RE 9kHz-30MHz, 3m (X, Y, Z Polarities)

Test Information:

Date and Time	10/15/2024 10:34:35 AM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	24 deg C
Humidity	34 %
Atmospheric Pressure	999 mbars
Comments	Scan 85_BLE Tx Mid (Worst-case output power), Metal Enclosure - With Keypad), RE 9kHz-30MHz, 3m distance

Graph:



Results:

QuasiPeak (PASS) (3)

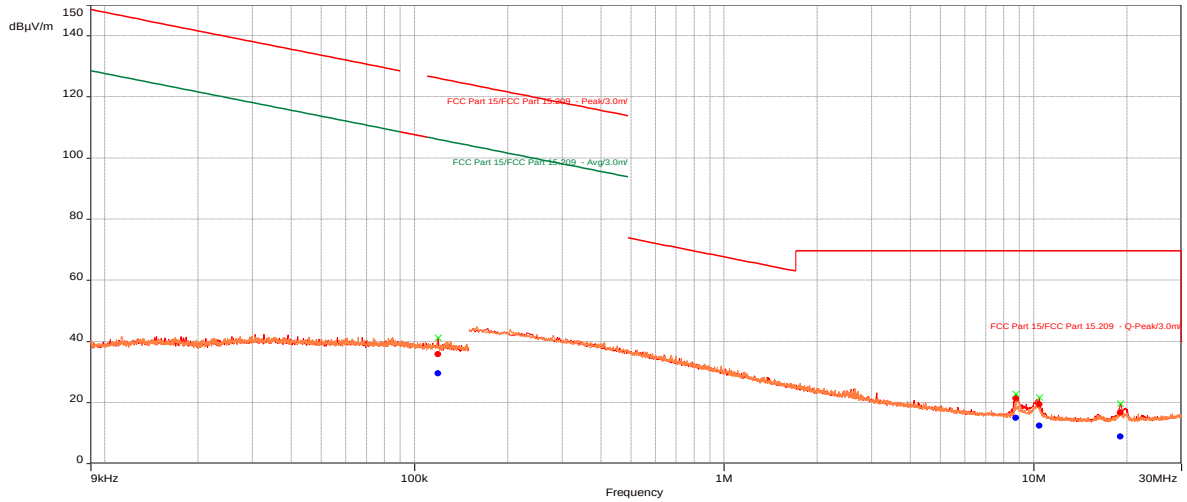
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Pol.	RBW	Meas.Time (s)	Correction (dB)
8.83024	12.75	69.54	-56.79	239.70	Z-axis	9k	0.10	0.28
10.21391	9.70	69.54	-59.84	293.50	Z-axis	9k	0.10	0.30
19.08578	8.77	69.54	-60.77	99.00	Z-axis	9k	0.10	0.38

BLE Tx Mid – Worst-case Output Power (Plastic Enclosure, With Keypad),
RE 9kHz-30MHz, 3m (X, Y, Z Polarities)

Test Information:

Date and Time	10/15/2024 11:05:26 AM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	24 deg C
Humidity	34 %
Atmospheric Pressure	999 mbars
Comments	Scan 86_BLE Tx Mid (Worst-case output power), Plastic Enclosure - With Keypad), RE 9kHz-30MHz, 3m distance

Graph:



Results:

QuasiPeak (PASS) (4)

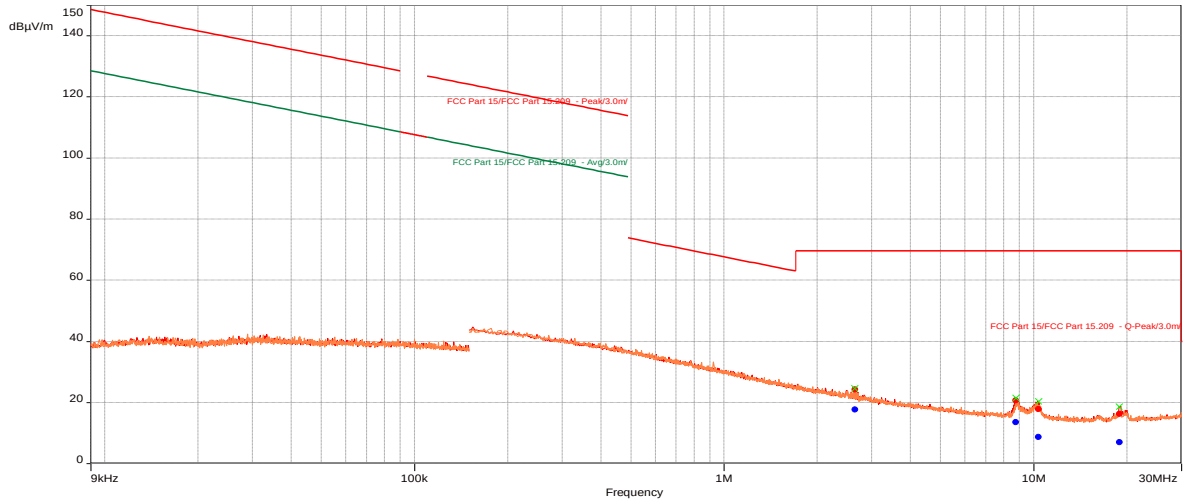
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Pol.	RBW	Meas.Time (s)	Correction (dB)
0.1191753	29.50			281.40	Z-axis	200	0.10	11.04
8.76019	14.92	69.54	-54.62	66.10	Z-axis	9k	0.10	0.28
10.42901	12.35	69.54	-57.19	17.60	Z-axis	9k	0.10	0.30
19.08132	8.88	69.54	-60.66	55.60	Z-axis	9k	0.10	0.38

BLE Tx High – Worst-case Output Power (Plastic Enclosure, With no Keypad),
RE 9kHz-30MHz, 3m (X, Y, Z Polarities)

Test Information:

Date and Time	10/15/2024 11:37:32 AM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	24 deg C
Humidity	34 %
Atmospheric Pressure	999 mbars
Comments	Scan 87_BLE Tx High (Worst-case output power), Plastic Enclosure - With no Keypad), RE 9kHz-30MHz, 3m distance

Graph:



Results:

QuasiPeak (PASS) (4)

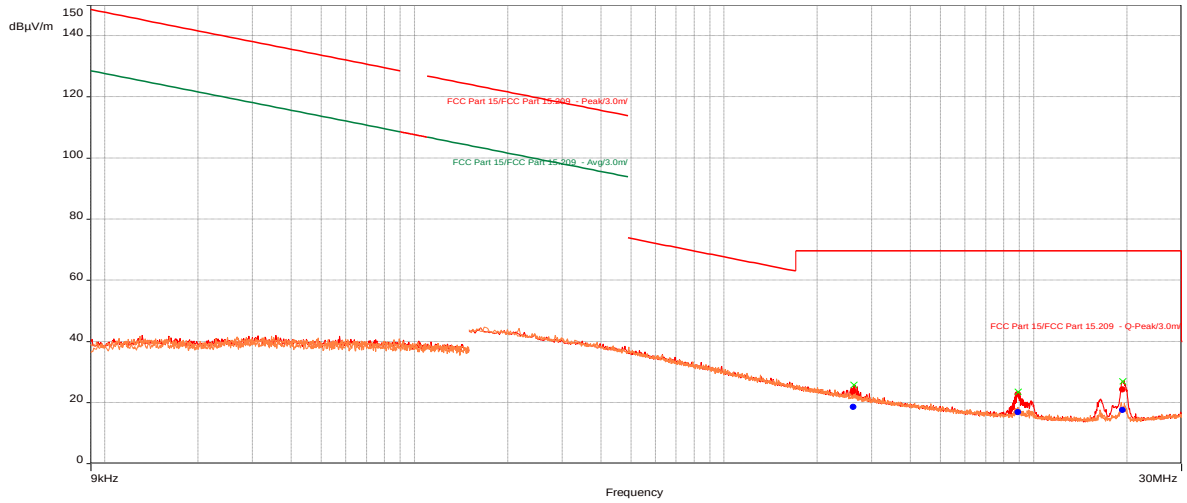
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Pol.	RBW	Meas.Time (s)	Correction (dB)
2.64457	17.71	69.54	-51.83	115.20	Z-axis	9k	0.10	0.18
8.75872	13.60	69.54	-55.94	326.60	Z-axis	9k	0.10	0.28
10.35633	8.64	69.54	-60.90	228.60	Z-axis	9k	0.10	0.30
18.93078	6.97	69.54	-62.57	109.70	Z-axis	9k	0.10	0.38

BLE Tx High – Worst-case Output Power (Metal Enclosure, With no Keypad),
RE 9kHz-30MHz, 3m (X, Y, Z Polarities)

Test Information:

Date and Time	10/23/2024 12:17:33 PM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	26 deg C
Humidity	36 %
Atmospheric Pressure	1007 mbars
Comments	Scan 88_BLE Tx High (Worst-case output power), Metal Enclosure - With no Keypad), RE 9kHz-30MHz, 3m distance

Graph:



Results:

QuasiPeak (PASS) (3)

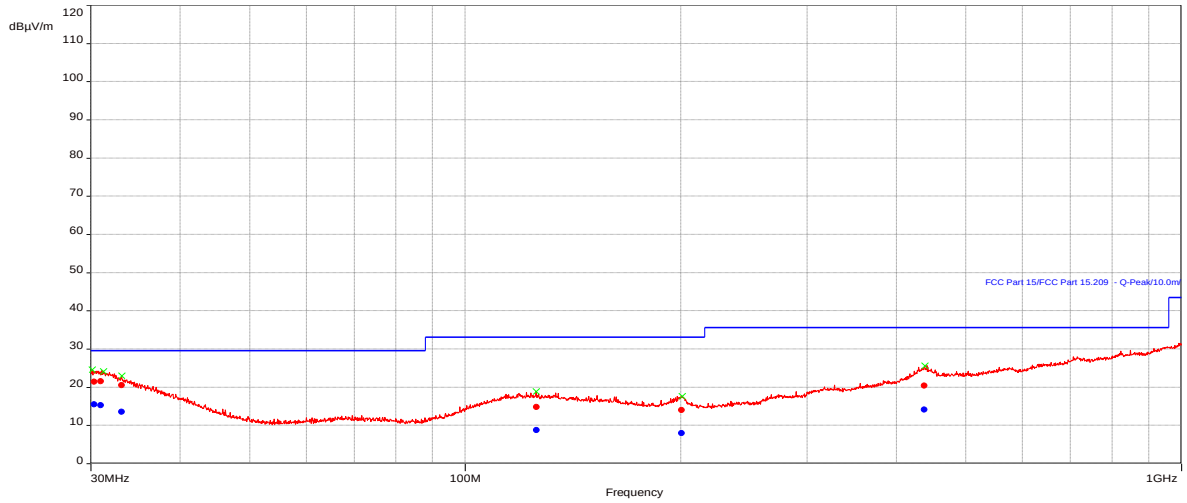
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Pol.	RBW	Meas.Time (s)	Correction (dB)
2.61848	18.57	69.54	-50.97	76.80	Z-axis	9k	0.10	0.18
8.9007	16.90	69.54	-52.64	55.30	Z-axis	9k	0.10	0.28
19.39627	17.51	69.54	-52.03	250.30	Z-axis	9k	0.10	0.38

BLE (Metal Enclosure, With Keypad), Low Channel, 30-1000 MHz, Test Distance at 10m, (V/H Polarities)

Test Information:

Date and Time	10/1/2024 3:09:22 PM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	23 deg C
Humidity	45 %
Atmospheric Pressure	1011 mbars
Comments	Scan 41 BLE Tx Low (Metal Enclosure - With Keypad), RE 30-1000MHz

Graph:



Results:

QuasiPeak (PASS) (6)

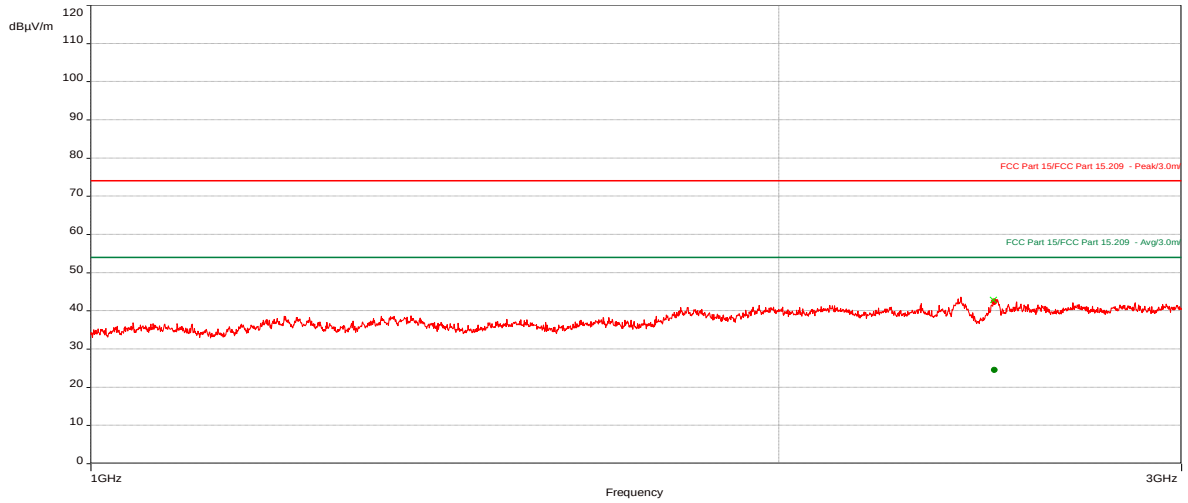
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time (s)	Correction (dB)
30.3659	15.55	29.54	-13.99	191.20	3.83	Vertical	120k	0.10	-13.04
30.9817	15.28	29.54	-14.26	255.60	3.49	Vertical	120k	0.10	-13.28
33.1545	13.61	29.54	-15.93	321.00	1.38	Vertical	120k	0.10	-14.86
125.6939	8.80	33.06	-24.26	234.00	4.00	Horizontal	120k	0.10	-18.65
200.5821	8.00	33.06	-25.06	299.30	4.00	Vertical	120k	0.10	-19.64
437.6918	14.12	35.56	-21.44	130.90	4.00	Vertical	120k	0.10	-14.67

BLE (Metal Enclosure, With Keypad), Low Channel, 1-3 GHz, Test Distance at 3m, (V/H Polarities)

Test Information:

Date and Time	10/9/2024 10:27:26 AM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	22 deg C
Humidity	42 %
Atmospheric Pressure	1003 mbars
Comments	Scan 45 BLE Tx High (Metal Enclosure - With Keypad), RE 1-3 GHz

Graph:



Results:

Peak (PASS) (1)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
2485.079	42.42	74.00	-31.58	0.00	1.00	Horizontal	1M	1.00	-14.52

AVG (PASS) (1)

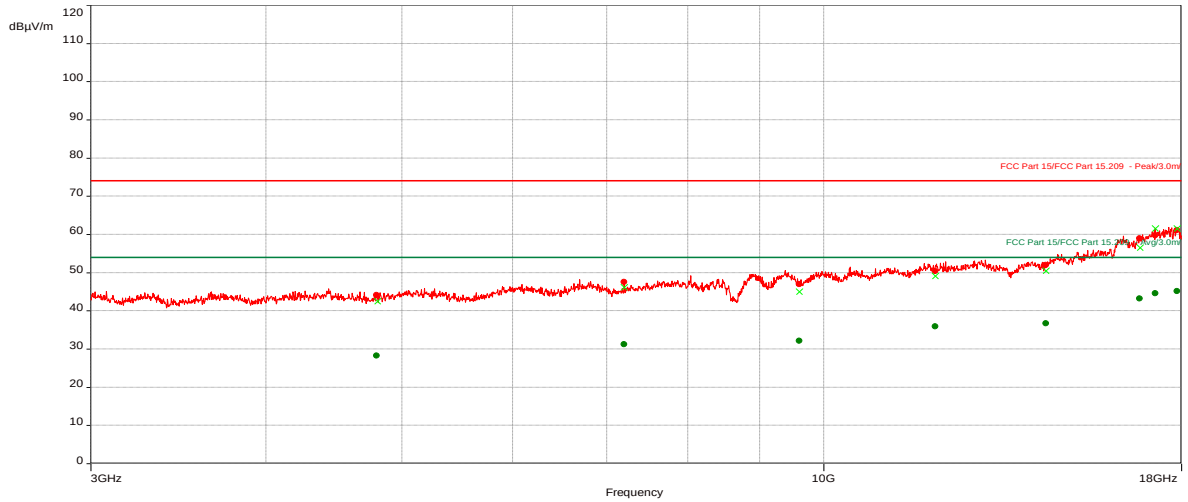
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
2485.079	24.48	54.00	-29.52	0.00	1.00	Horizontal	1M	1.00	-14.52

BLE (Metal Enclosure, With Keypad), Low Channel, 3-18 GHz, Test Distance at 3m, (V/H Polarities)

Test Information:

Date and Time	10/9/2024 12:49:53 PM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	22 deg C
Humidity	42 %
Atmospheric Pressure	1003 mbars
Comments	Scan 50 BLE Tx Low (Metal Enclosure - With Keypad), RE 3-18 GHz

Graph:



Results:

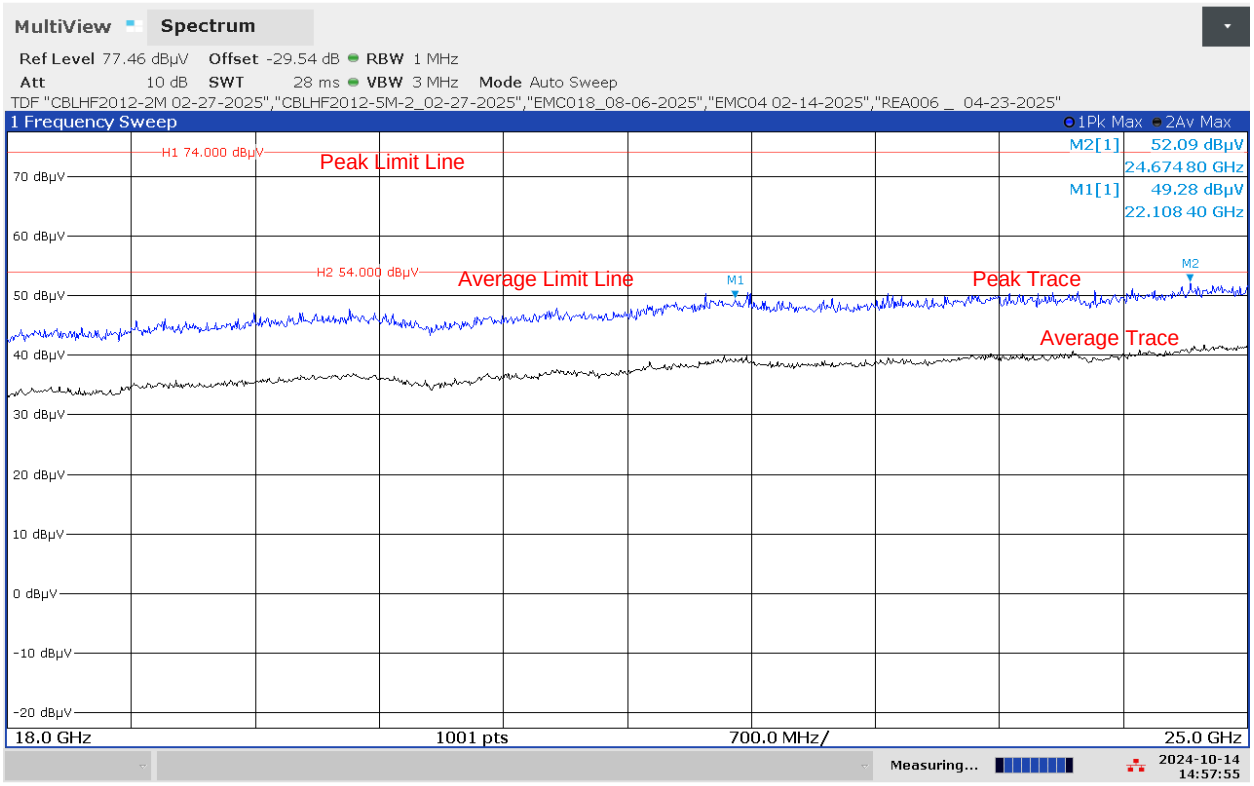
Peak (PASS) (8)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	RBW	Meas.Time(s)	Correction (dB)
4799.586	44.21	74.00	-29.79	265.70	4.00	Vertical	1000000.00	1M	1.00	-9.70
7204.803	47.52	74.00	-26.48	0.00	1.00	Horizontal	1000000.00	1M	1.00	-5.81
9607.614	47.01	74.00	-26.99	265.50	1.00	Horizontal	1000000.00	1M	1.00	-2.97
12009.689	50.44	74.00	-23.56	360.00	4.00	Vertical	1000000.00	1M	1.00	1.09
14409.519	52.01	74.00	-21.99	265.80	1.00	Vertical	1000000.00	1M	1.00	3.28
16809.386	58.94	74.00	-15.06	0.00	1.00	Vertical	1000000.00	1M	1.00	7.71
17243.256	59.80	74.00	-14.20	360.00	1.00	Vertical	1000000.00	1M	1.00	7.87
17866.387	61.16	74.00	-12.84	0.00	1.00	Horizontal	1000000.00	1M	1.00	8.67

AVG (PASS) (8)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	RBW	Meas.Time(s)	Correction (dB)
4799.586	28.27	54.00	-25.73	265.70	4.00	Vertical	1000000.00	1M	1.00	-9.70
7204.803	31.24	54.00	-22.76	0.00	1.00	Horizontal	1000000.00	1M	1.00	-5.81
9607.614	32.15	54.00	-21.85	265.50	1.00	Horizontal	1000000.00	1M	1.00	-2.97
12009.689	35.93	54.00	-18.07	360.00	4.00	Vertical	1000000.00	1M	1.00	1.09
14409.519	36.78	54.00	-17.22	265.80	1.00	Vertical	1000000.00	1M	1.00	3.28
16809.386	43.28	54.00	-10.72	0.00	1.00	Vertical	1000000.00	1M	1.00	7.71
17243.256	44.57	54.00	-9.43	360.00	1.00	Vertical	1000000.00	1M	1.00	7.87
17866.387	45.15	54.00	-8.85	0.00	1.00	Horizontal	1000000.00	1M	1.00	8.67

BLE (Metal Enclosure, With Keypad), Low Channel, 18-25 GHz, Test Distance at 10 cm, (V/H Polarities)



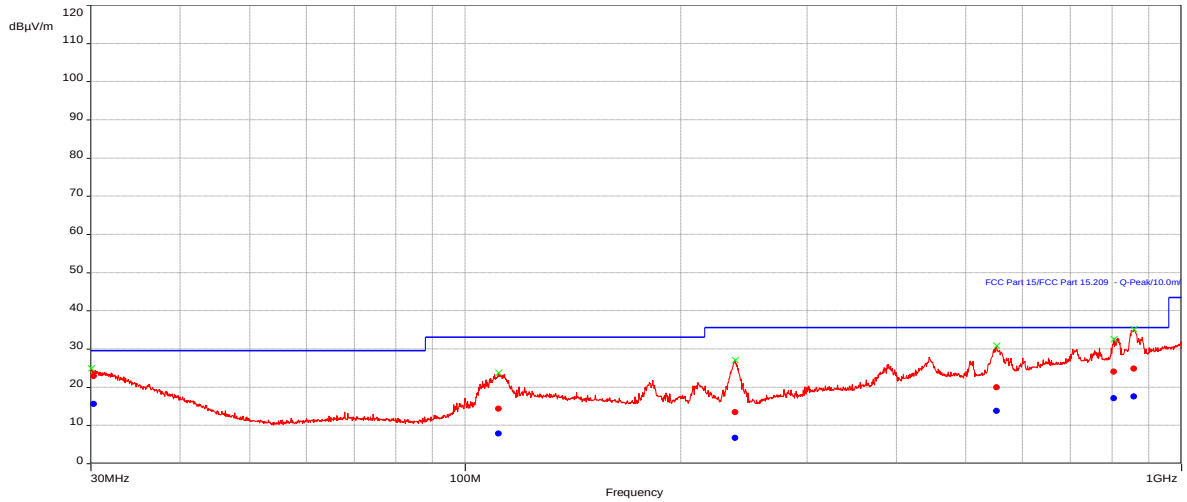
02:57:56 PM 10/14/2024

BLE (Metal Enclosure, With Keypad), Mid Channel, 30-1000 MHz, Test Distance at 10m, (V/H Polarities)

Test Information:

Date and Time	10/15/2024 8:30:51 AM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	24 deg C
Humidity	34 %
Atmospheric Pressure	999 mbars
Comments	Scan 82 BLE Tx Mid (Metal Enclosure - With Keypad), RE 30-1000 MHz

Graph:



Results:

QuasiPeak (PASS) (6)

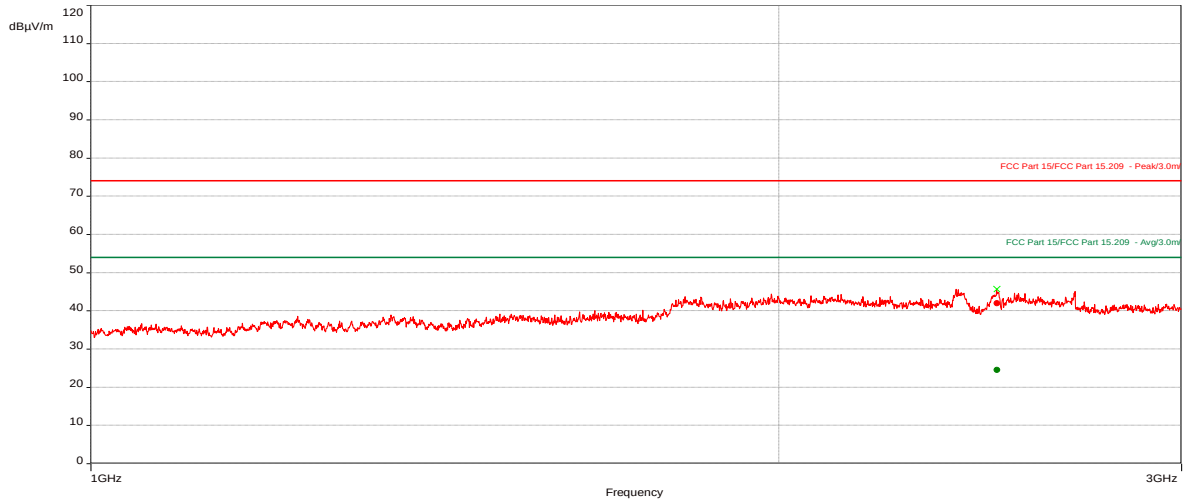
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	RBW	Meas.Time(s)	Correction (dB)
30.2865	15.63	29.54	-13.91	126.20	4.00	Vertical	120000.00	120k	0.10	-13.01
111.2835	7.85	33.06	-25.21	360.00	1.31	Horizontal	120000.00	120k	0.10	-19.83
238.2405	6.78	35.56	-28.78	277.10	4.00	Horizontal	120000.00	120k	0.10	-20.55
551.9491	13.78	35.56	-21.78	360.00	4.00	Horizontal	120000.00	120k	0.10	-12.63
805.0463	17.15	35.56	-18.41	201.50	4.00	Horizontal	120000.00	120k	0.10	-8.04
858.112	17.62	35.56	-17.94	6.90	4.00	Horizontal	120000.00	120k	0.10	-7.15

BLE (Metal Enclosure, With Keypad), Mid Channel, 1-3 GHz, Test Distance at 3m, (V/H Polarities)

Test Information:

Date and Time	10/9/2024 12:29:36 PM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	22 deg C
Humidity	42 %
Atmospheric Pressure	1003 mbars
Comments	Scan 48 BLE Tx Mid (Metal Enclosure - With Keypad), RE 1-3 GHz

Graph:



Results:

Peak (PASS) (1)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
2491.659	41.95	74.00	-32.05	35.10	1.44	Horizontal	1M	1.00	-14.50

AVG (PASS) (1)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
2491.659	24.54	54.00	-29.46	35.10	1.44	Horizontal	1M	1.00	-14.50

BLE (Metal Enclosure, With Keypad), Mid Channel, 3-18 GHz, Test Distance at 3m, (V/H Polarities)

Test Information:

Date and Time	10/9/2024 11:34:33 AM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	22 deg C
Humidity	42 %
Atmospheric Pressure	1003 mbars
Comments	Scan 47 BLE Tx Mid (Metal Enclosure - With Keypad), RE 3-18 GHz

Graph:

Results:

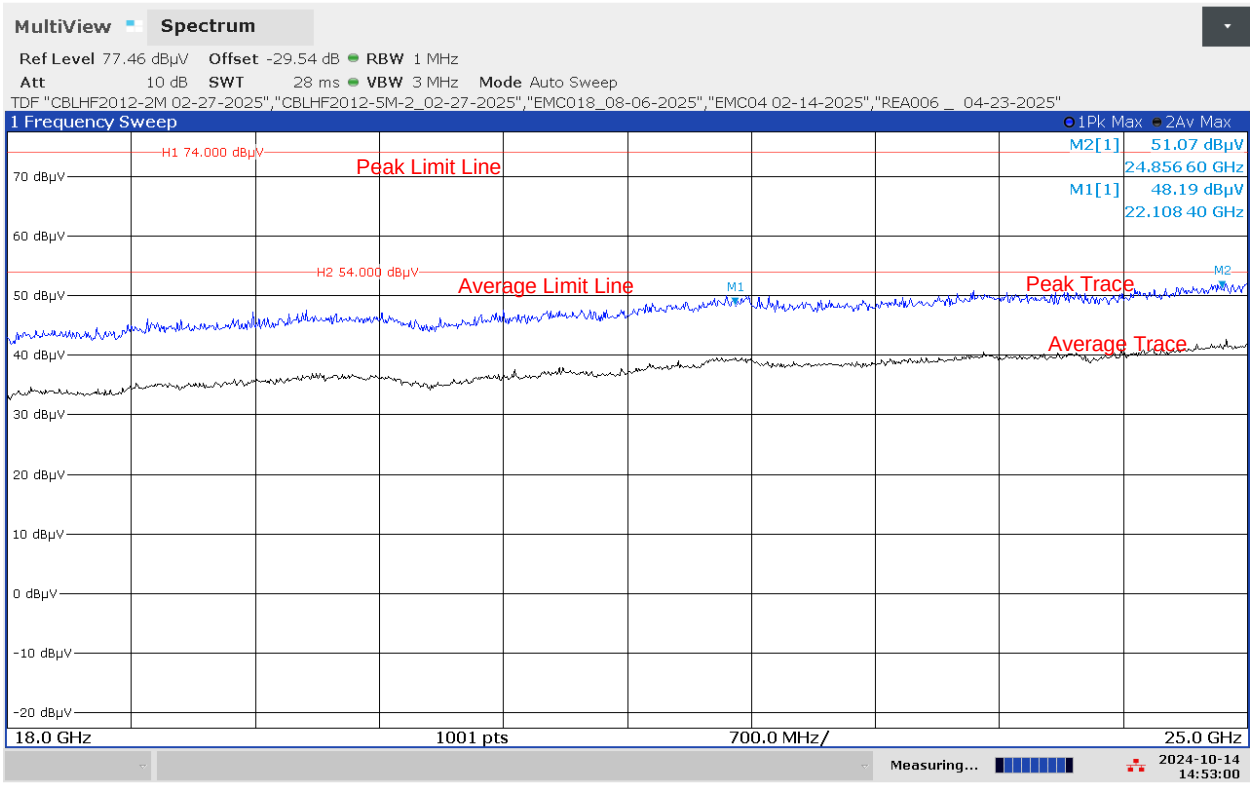
Peak (PASS) (9)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)(s)	Correction (dB)
4881.272	45.04	74.00	-28.96	265.80	4.00	Horizontal	1M	1.00	-9.60
7322.431	47.08	74.00	-26.92	360.00	4.00	Horizontal	1M	1.00	-5.62
9757.905	48.70	74.00	-25.30	0.00	1.00	Vertical	1M	1.00	-2.45
12198.778	51.60	74.00	-22.40	265.70	1.00	Vertical	1M	1.00	1.49
12834.976	52.53	74.00	-21.47	360.00	1.00	Vertical	1M	1.00	2.29
14639.614	55.11	74.00	-18.89	265.80	4.00	Horizontal	1M	1.00	3.59
16363.625	58.79	74.00	-15.21	360.00	4.00	Horizontal	1M	1.00	6.36
17079.638	59.46	74.00	-14.54	360.00	4.00	Vertical	1M	1.00	7.74
17934.188	61.65	74.00	-12.35	360.00	4.00	Vertical	1M	1.00	8.75

AVG (PASS) (9)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)(s)	Correction (dB)
4881.272	29.68	54.00	-24.32	265.80	4.00	Horizontal	1M	1.00	-9.60
7322.431	31.71	54.00	-22.29	360.00	4.00	Horizontal	1M	1.00	-5.62
9757.905	33.69	54.00	-20.31	0.00	1.00	Vertical	1M	1.00	-2.45
12198.778	37.47	54.00	-16.53	265.70	1.00	Vertical	1M	1.00	1.49
12834.976	38.13	54.00	-15.87	360.00	1.00	Vertical	1M	1.00	2.29
14639.614	39.54	54.00	-14.46	265.80	4.00	Horizontal	1M	1.00	3.59
16363.625	43.89	54.00	-10.11	360.00	4.00	Horizontal	1M	1.00	6.36
17079.638	44.39	54.00	-9.61	360.00	4.00	Vertical	1M	1.00	7.74
17934.188	46.18	54.00	-7.82	360.00	4.00	Vertical	1M	1.00	8.75

BLE (Metal Enclosure, With Keypad), Mid Channel, 18-25 GHz, Test Distance at 10cm, (V/H Polarities)



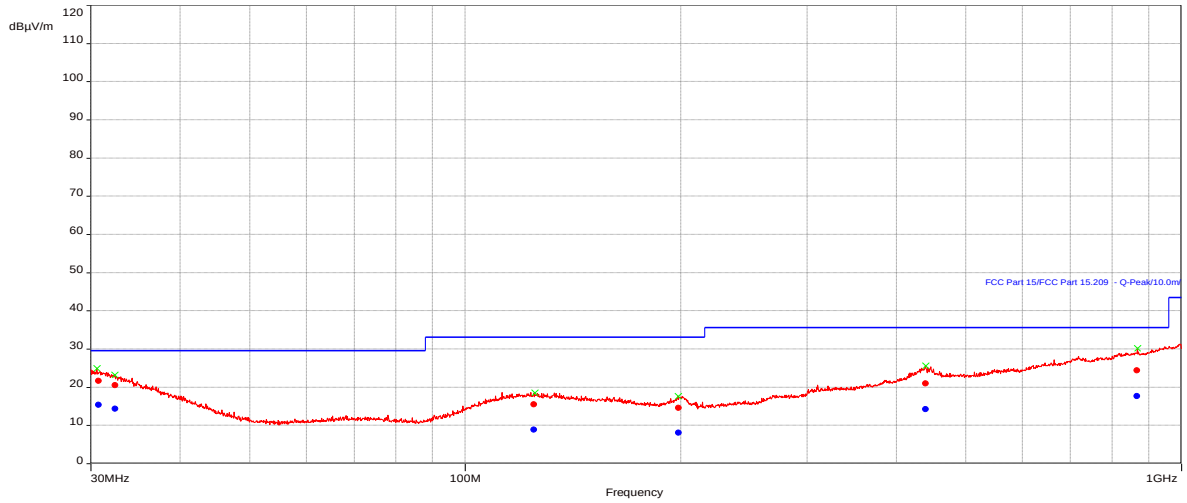
02:53:01 PM 10/14/2024

BLE (Metal Enclosure, With Keypad), High Channel, 30-1000 MHz, Test Distance at 10m, (V/H Polarities)

Test Information:

Date and Time	10/15/2024 9:02:52 AM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	24 deg C
Humidity	34 %
Atmospheric Pressure	999 mbars
Comments	Scan 83 BLE Tx High (Metal Enclosure - With Keypad), RE 30-1000 MHz

Graph:



Results:

QuasiPeak (PASS) (6)

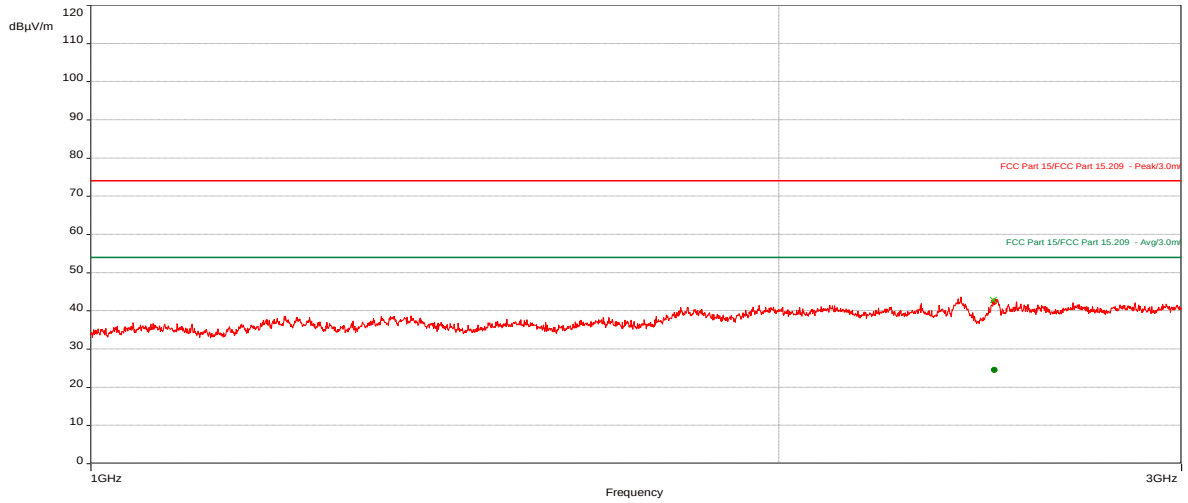
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time	Correction (dB)
30.766	15.45	29.54	-14.09	99.00	3.58	Vertical	120k	0.10	-13.20
32.4314	14.36	29.54	-15.18	360.00	4.00	Horizontal	120k	0.10	-14.24
124.7918	8.95	33.06	-24.11	331.80	4.00	Horizontal	120k	0.10	-18.66
198.6308	8.15	33.06	-24.91	348.60	2.14	Vertical	120k	0.10	-19.63
439.4043	14.21	35.56	-21.35	186.10	4.00	Vertical	120k	0.10	-14.63
867.4221	17.72	35.56	-17.84	169.70	2.59	Horizontal	120k	0.10	-7.02

BLE (Metal Enclosure, With Keypad), High Channel, 1-3 GHz, Test Distance at 3m, (V/H Polarities)

Test Information:

Date and Time	10/9/2024 10:27:26 AM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	22 deg C
Humidity	42 %
Atmospheric Pressure	1003 mbars
Comments	Scan 45 BLE Tx High (Metal Enclosure - With Keypad), RE 1-3 GHz

Graph:



Results:

Peak (PASS) (1)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
2485.079	42.42	74.00	-31.58	0.00	1.00	Horizontal	1M	1.00	-14.52

AVG (PASS) (1)

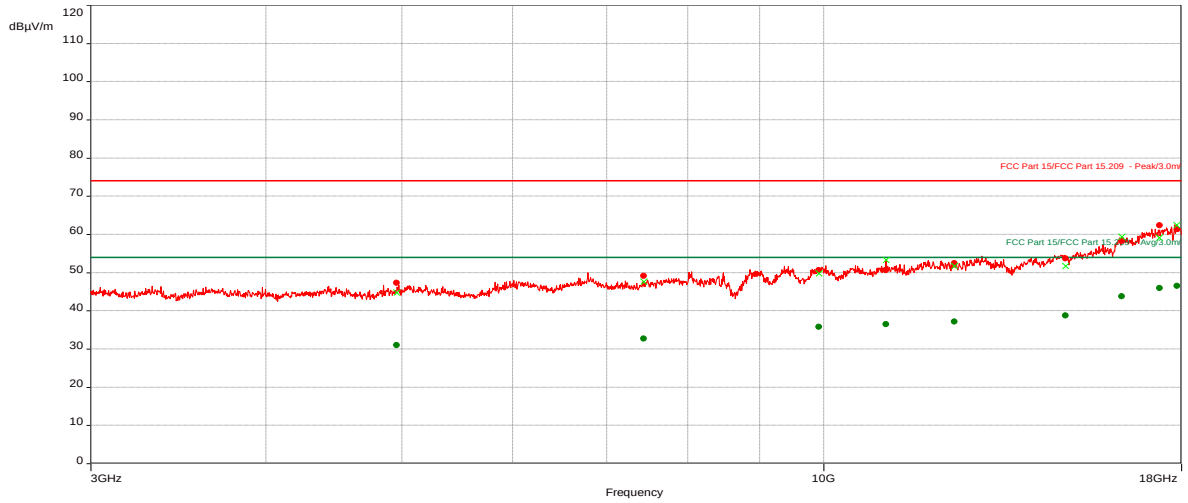
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
2485.079	24.48	54.00	-29.52	0.00	1.00	Horizontal	1M	1.00	-14.52

BLE (Metal Enclosure, With Keypad), High Channel, 3-18 GHz, Test Distance at 3m, (V/H Polarities)

Test Information:

Date and Time	10/9/2024 10:38:28 AM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	22 deg C
Humidity	42 %
Atmospheric Pressure	1003 mbars
Comments	Scan 46 BLE Tx High (Metal Enclosure - With Keypad), RE 3-18 GHz

Graph:



Results:

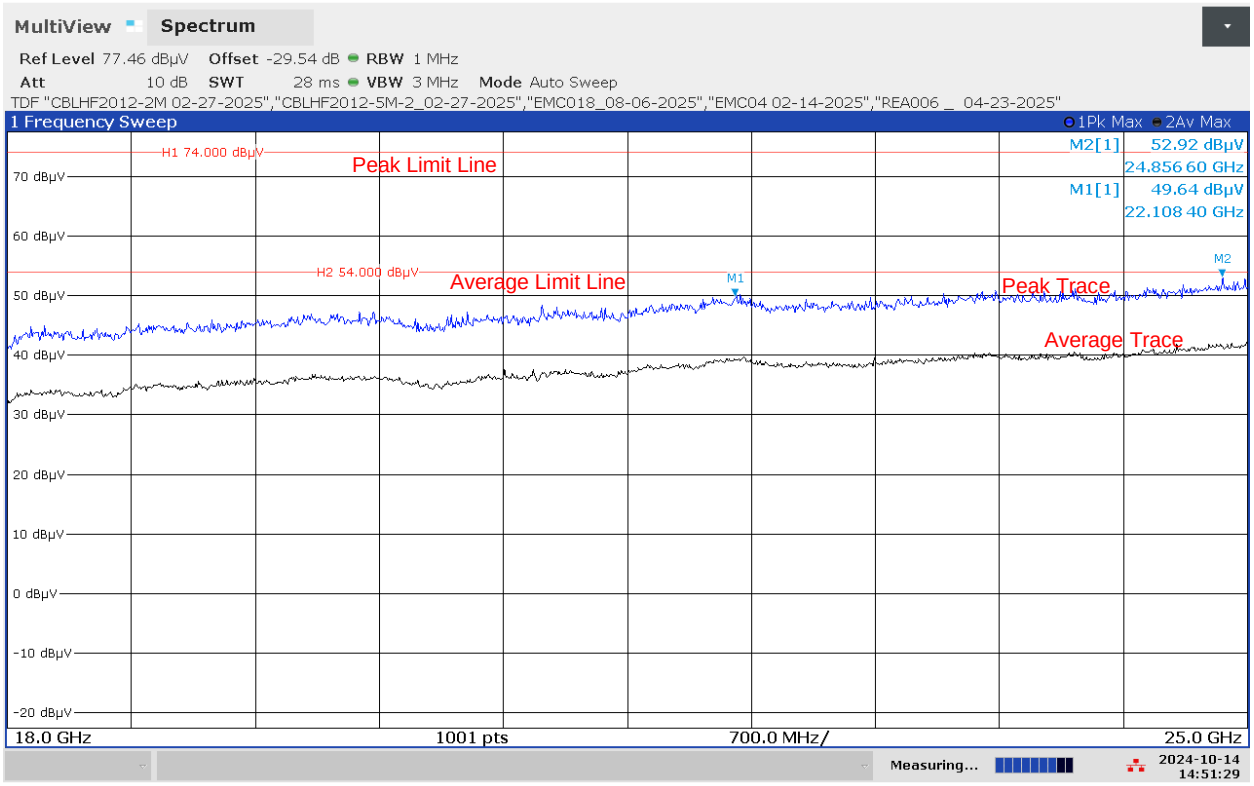
Peak (PASS) (9)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
4959.052	47.40	74.00	-26.60	360.00	1.00	Horizontal	1M	1.00	-9.55
7441.346	49.21	74.00	-24.79	360.00	1.00	Horizontal	1M	1.00	-5.37
9920.449	50.62	74.00	-23.38	0.00	4.00	Horizontal	1M	1.00	-2.27
11079.047	50.68	74.00	-23.32	0.00	1.00	Horizontal	1M	1.00	-0.43
12397.544	52.49	74.00	-21.51	360.00	4.00	Horizontal	1M	1.00	2.08
14879.888	53.72	74.00	-20.28	360.00	1.00	Vertical	1M	1.00	3.89
16321.687	58.33	74.00	-15.67	0.00	1.00	Horizontal	1M	1.00	6.26
17362.506	62.38	74.00	-11.62	0.00	1.00	Horizontal	1M	1.00	7.92
17865.524	61.39	74.00	-12.61	360.00	1.00	Vertical	1M	1.00	8.66

AVG (PASS) (9)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
4959.052	31.01	54.00	-22.99	360.00	1.00	Horizontal	1M	1.00	-9.55
7441.346	32.79	54.00	-21.21	360.00	1.00	Horizontal	1M	1.00	-5.37
9920.449	35.83	54.00	-18.17	0.00	4.00	Horizontal	1M	1.00	-2.27
11079.047	36.54	54.00	-17.46	0.00	1.00	Horizontal	1M	1.00	-0.43
12397.544	37.23	54.00	-16.77	360.00	4.00	Horizontal	1M	1.00	2.08
14879.888	38.82	54.00	-15.18	360.00	1.00	Vertical	1M	1.00	3.89
16321.687	43.77	54.00	-10.23	0.00	1.00	Horizontal	1M	1.00	6.26
17362.506	45.93	54.00	-8.07	0.00	1.00	Horizontal	1M	1.00	7.92
17865.524	46.52	54.00	-7.48	360.00	1.00	Vertical	1M	1.00	8.66

BLE (Metal Enclosure, With Keypad), High Channel, 18-25 GHz, Test Distance at 10cm, (V/H Polarities)



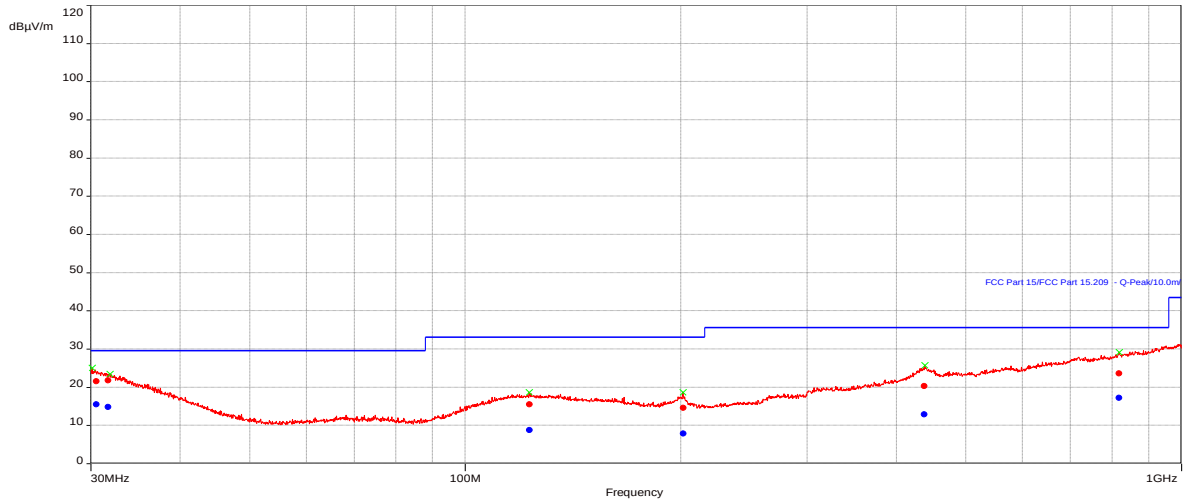
02:51:29 PM 10/14/2024

BLE (Plastic Enclosure, With Keypad), Low Channel, 30-1000 MHz, Test Distance at 10m, (V/H Polarities)

Test Information:

Date and Time	10/1/2024 12:54:52 PM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	23 deg C
Humidity	45 %
Atmospheric Pressure	1011 mbars
Comments	Scan 37 BLE Tx Low (Plastic Enclosure - With Keypad), RE 30-1000MHz

Graph:



Results:

QuasiPeak (PASS) (6)

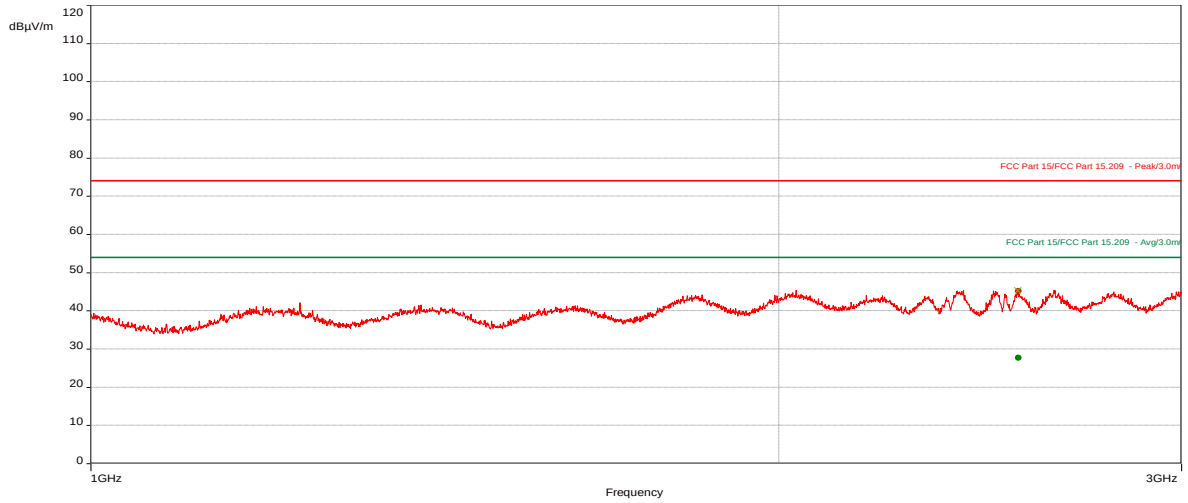
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
30.5289	15.56	29.54	-13.98	180.20	4.00	Horizontal	120k	0.10	-13.10
31.7165	14.82	29.54	-14.72	39.20	2.68	Horizontal	120k	0.10	-13.70
122.9338	8.84	33.06	-24.22	212.80	4.00	Vertical	120k	0.10	-18.77
201.5772	7.88	33.06	-25.18	255.80	4.00	Vertical	120k	0.10	-19.85
437.8357	12.86	35.56	-22.70	158.40	4.00	Vertical	120k	0.10	-14.66
818.8713	17.27	35.56	-18.29	283.50	4.00	Vertical	120k	0.10	-7.65

BLE (Plastic Enclosure, With Keypad), Low Channel, 1-3 GHz, Test Distance at 3m, (V/H Polarities)

Test Information:

Date and Time	10/10/2024 10:26:57 AM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	22 deg C
Humidity	39 %
Atmospheric Pressure	1005 mbars
Comments	Scan 59 BLE Tx Low (Plastic Enclosure - With Keypad), RE 1-3 GHz 72

Graph:



Results:

Peak (PASS) (1)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
2545.682	45.23	74.00	-28.77	309.10	1.00	Horizontal	1M	1.00	-14.02

AVG (PASS) (1)

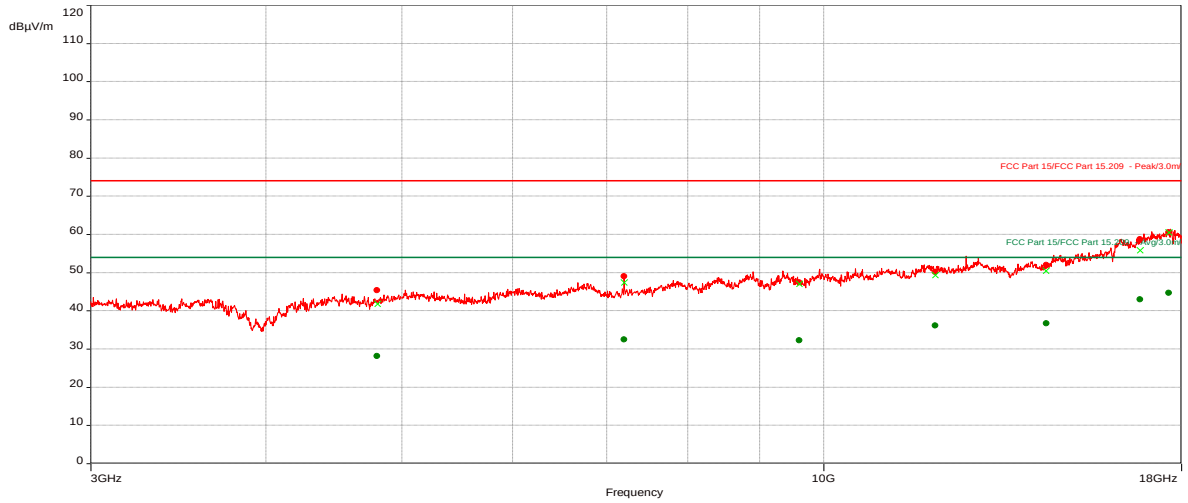
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
2545.682	27.76	54.00	-26.24	309.10	1.00	Horizontal	1M	1.00	-14.02

BLE (Plastic Enclosure, With Keypad), Low Channel, 3-18 GHz, Test Distance at 3m, (V/H Polarities)

Test Information:

Date and Time	10/10/2024 9:40:43 AM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	22 deg C
Humidity	39 %
Atmospheric Pressure	1005 mbars
Comments	Scan 58 BLE Tx Low (Plastic Enclosure - With Keypad), RE 3-18 GHz 72

Graph:



Results:

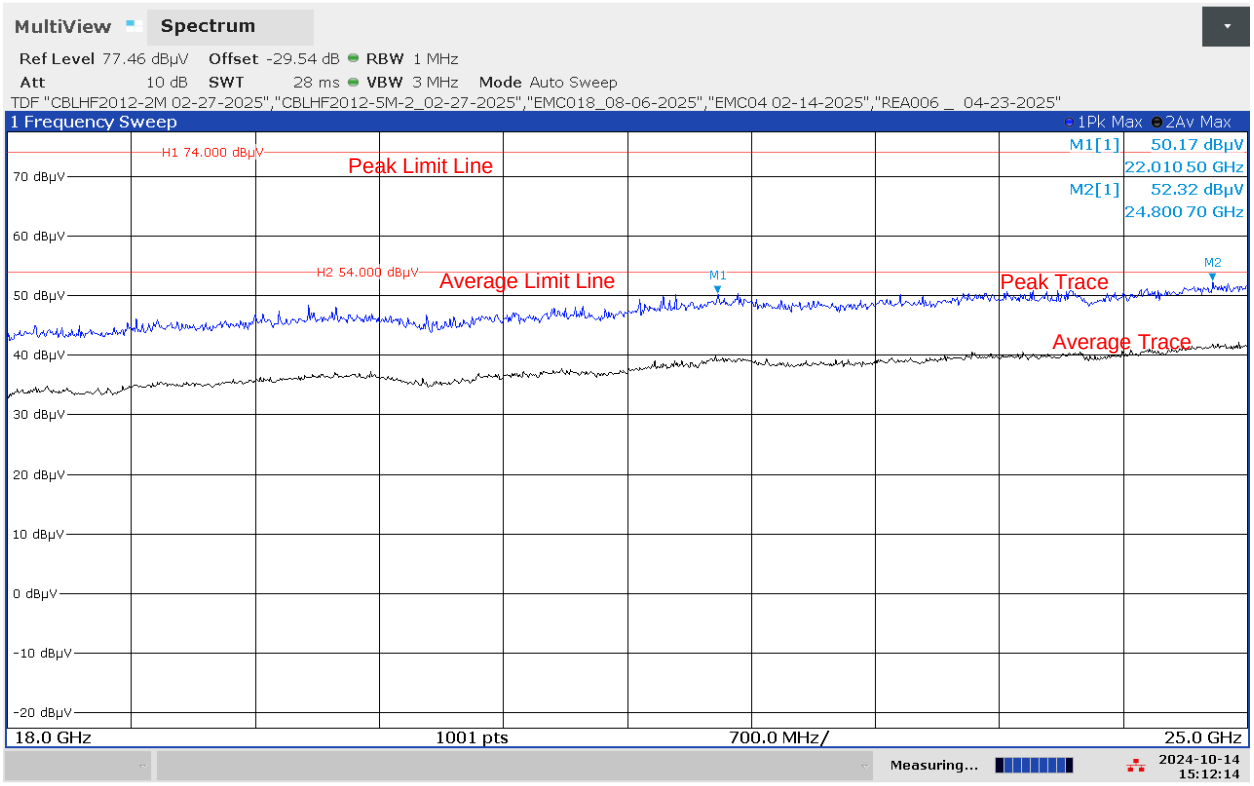
Peak (PASS) (7)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
4803.04	45.39	74.00	-28.61	360.00	4.00	Vertical	1M	1.00	-9.68
7204.616	49.11	74.00	-24.89	0.00	1.00	Vertical	1M	1.00	-5.81
9607.152	47.43	74.00	-26.57	360.00	4.00	Horizontal	1M	1.00	-2.97
12009.788	50.20	74.00	-23.80	0.00	4.00	Horizontal	1M	1.00	1.09
14413.534	51.97	74.00	-22.03	265.60	4.00	Vertical	1M	1.00	3.29
16812.865	58.72	74.00	-15.28	360.00	4.00	Vertical	1M	1.00	7.72
17627.131	60.54	74.00	-13.46	360.00	4.00	Vertical	1M	1.00	8.37

AVG (PASS) (7)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
4803.04	28.21	54.00	-25.79	360.00	4.00	Vertical	1M	1.00	-9.68
7204.616	32.52	54.00	-21.48	0.00	1.00	Vertical	1M	1.00	-5.81
9607.152	32.30	54.00	-21.70	360.00	4.00	Horizontal	1M	1.00	-2.97
12009.788	36.18	54.00	-17.82	0.00	4.00	Horizontal	1M	1.00	1.09
14413.534	36.70	54.00	-17.30	265.60	4.00	Vertical	1M	1.00	3.29
16812.865	43.02	54.00	-10.98	360.00	4.00	Vertical	1M	1.00	7.72
17627.131	44.74	54.00	-9.26	360.00	4.00	Vertical	1M	1.00	8.37

BLE (Plastic Enclosure, With Keypad), Low Channel, 18-25 GHz, Test Distance at 10cm, (V/H Polarities)



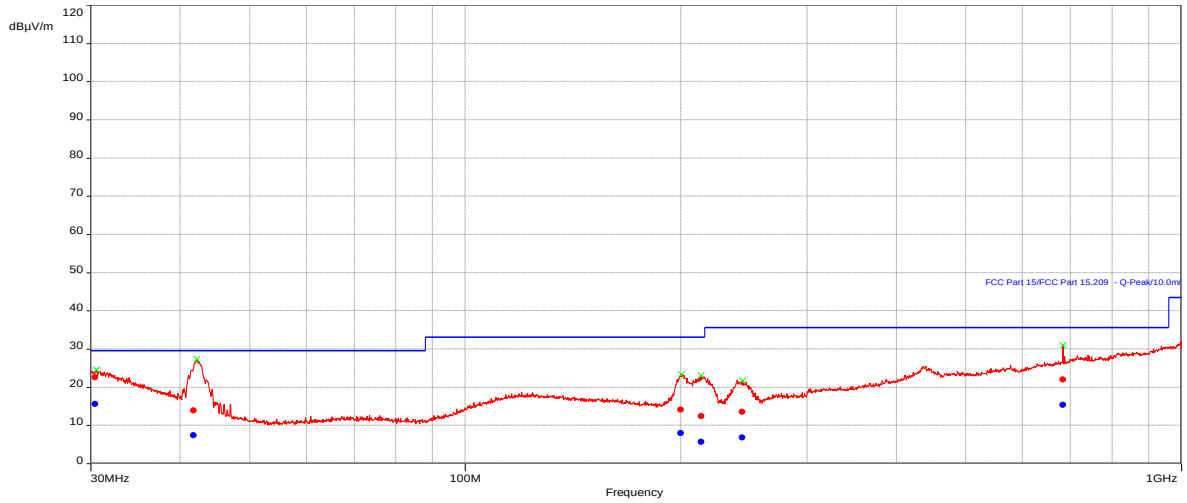
03:12:14 PM 10/14/2024

BLE (Plastic Enclosure, With Keypad), Mid Channel, 30-1000 MHz, Test Distance at 10m, (V/H Polarities)

Test Information:

Date and Time	10/1/2024 1:25:15 PM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	23 deg C
Humidity	45 %
Atmospheric Pressure	1011 mbars
Comments	Scan 38 BLE Tx Mid (Plastic Enclosure - With Keypad), RE 30-1000MHz

Graph:



Results:

QuasiPeak (PASS) (6)

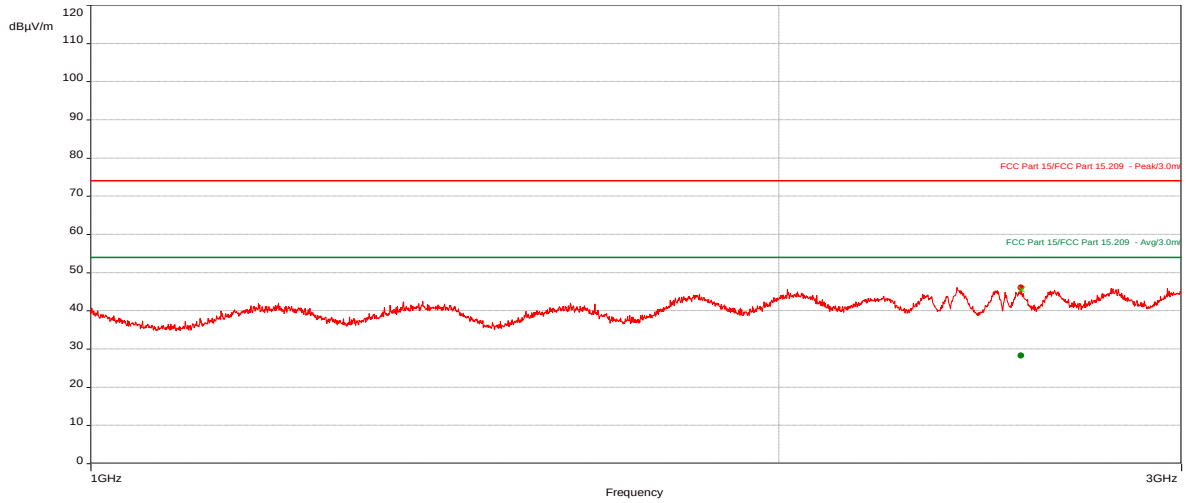
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
30.4218	15.58	29.54	-13.96	228.70	3.83	Horizontal	120k	0.10	-13.06
41.7701	7.37	29.54	-22.17	266.70	3.50	Horizontal	120k	0.10	-20.94
199.8938	8.00	33.06	-25.06	245.30	4.00	Vertical	120k	0.10	-19.59
213.4992	5.75	33.06	-27.31	39.30	2.14	Vertical	120k	0.10	-21.58
243.4885	6.86	35.56	-28.70	77.00	2.97	Horizontal	120k	0.10	-20.42
683.4402	15.37	35.56	-20.19	1.30	1.98	Vertical	120k	0.10	-10.30

BLE (Plastic Enclosure, With Keypad), Mid Channel, 1-3 GHz, Test Distance at 3m, (V/H Polarities)

Test Information:

Date and Time	10/10/2024 8:36:45 AM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	22 deg C
Humidity	39 %
Atmospheric Pressure	1005 mbars
Comments	Scan 56 BLE Tx Mid (Plastic Enclosure - With Keypad), RE 1-3 GHz 72

Graph:



Results:

Peak (PASS) (1)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
2552.392	46.04	74.00	-27.96	113.20	3.58	Vertical	1M	1.00	-13.97

AVG (PASS) (1)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
2552.392	28.31	54.00	-25.69	113.20	3.58	Vertical	1M	1.00	-13.97

BLE (Plastic Enclosure, With Keypad), Mid Channel, 3-18 GHz, Test Distance at 3m, (V/H Polarities)

Test Information:

Date and Time	10/10/2024 8:49:08 AM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	22 deg C
Humidity	39 %
Atmospheric Pressure	1005 mbars
Comments	Scan 57 BLE Tx Mid (Plastic Enclosure - With Keypad), RE 3-18 GHz 72

Graph:

Results:

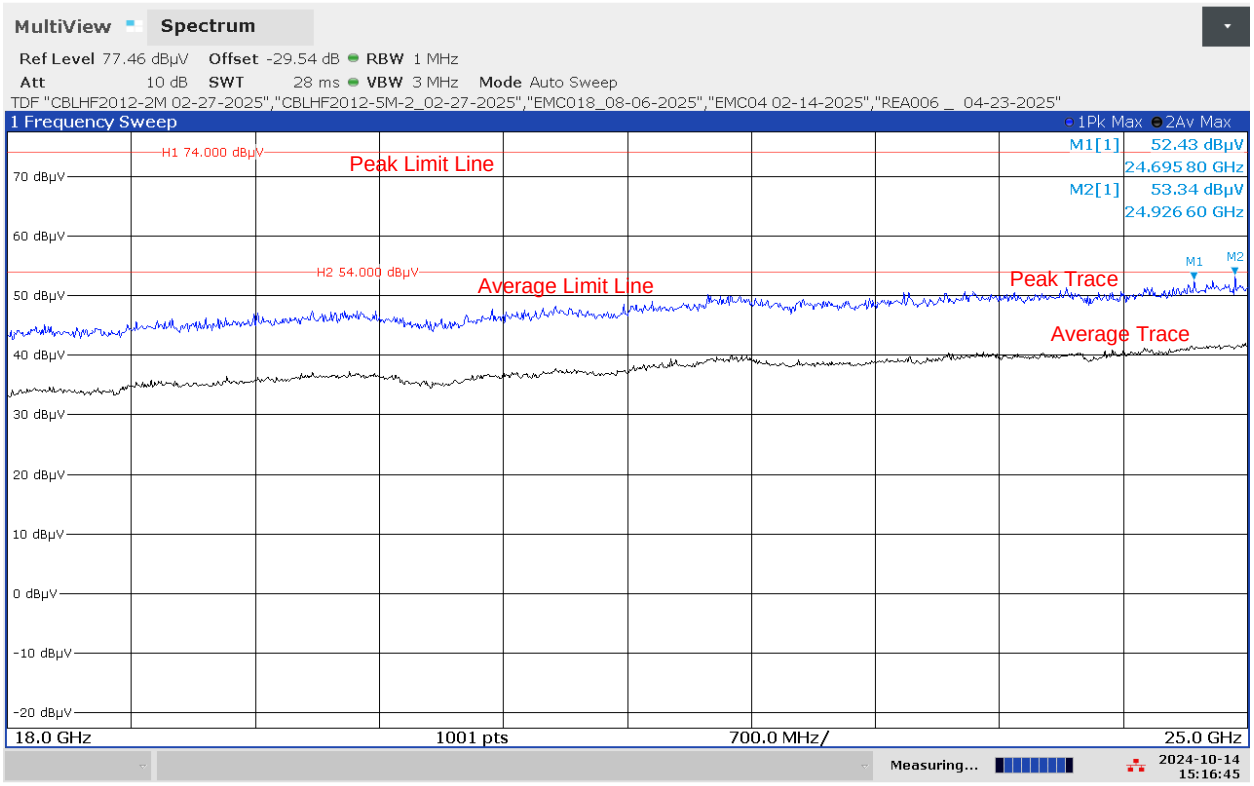
Peak (PASS) (7)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
4879.04	45.49	74.00	-28.51	360.00	1.00	Horizontal	1M	1.00	-9.60
7318.442	48.09	74.00	-25.91	0.00	1.00	Horizontal	1M	1.00	-5.63
9756.035	47.81	74.00	-26.19	360.00	1.00	Horizontal	1M	1.00	-2.45
12202.731	50.79	74.00	-23.21	360.00	1.00	Horizontal	1M	1.00	1.49
14640.936	53.32	74.00	-20.68	360.00	1.00	Vertical	1M	1.00	3.60
17080.599	59.27	74.00	-14.73	265.60	4.00	Horizontal	1M	1.00	7.74
17710.099	61.28	74.00	-12.72	265.80	1.00	Horizontal	1M	1.00	8.51

AVG (PASS) (7)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
4879.04	28.97	54.00	-25.03	360.00	1.00	Horizontal	1M	1.00	-9.60
7318.442	31.61	54.00	-22.39	0.00	1.00	Horizontal	1M	1.00	-5.63
9756.035	33.20	54.00	-20.80	360.00	1.00	Horizontal	1M	1.00	-2.45
12202.731	36.65	54.00	-17.35	360.00	1.00	Horizontal	1M	1.00	1.49
14640.936	38.70	54.00	-15.30	360.00	1.00	Vertical	1M	1.00	3.60
17080.599	44.05	54.00	-9.95	265.60	4.00	Horizontal	1M	1.00	7.74
17710.099	45.77	54.00	-8.23	265.80	1.00	Horizontal	1M	1.00	8.51

BLE (Plastic Enclosure, With Keypad), Mid Channel, 18-25 GHz, Test Distance at 10cm, (V/H Polarities)



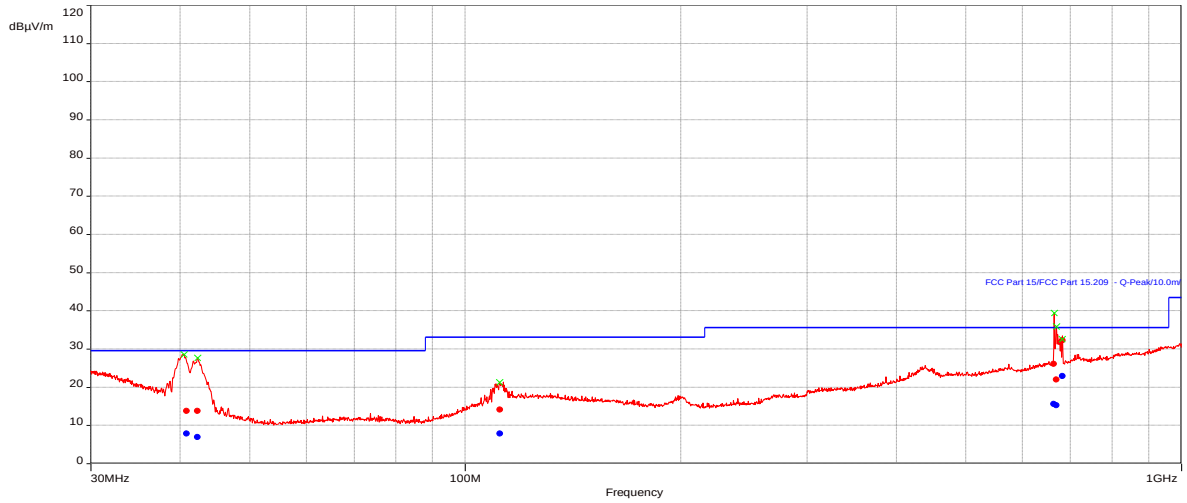
03:16:46 PM 10/14/2024

BLE (Plastic Enclosure, With Keypad), High Channel, 30-1000 MHz, Test Distance at 10m, (V/H Polarities)

Test Information:

Date and Time	10/1/2024 1:58:08 PM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	23 deg C
Humidity	45 %
Atmospheric Pressure	1011 mbars
Comments	Scan 39 BLE Tx High (Plastic Enclosure - With Keypad), RE 30-1000MHz

Graph:



Results:

QuasiPeak (PASS) (6)

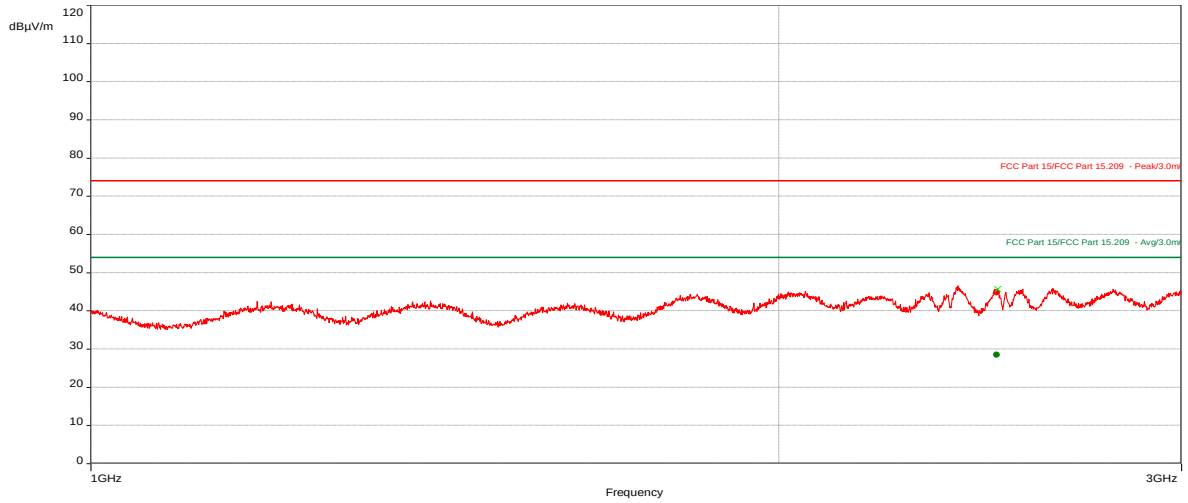
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
40.8666	7.89	29.54	-21.65	66.30	3.95	Horizontal	120k	0.10	-20.33
42.3075	6.98	29.54	-22.56	234.00	2.30	Horizontal	120k	0.10	-21.33
111.8319	7.92	33.06	-25.14	266.20	2.37	Horizontal	120k	0.10	-19.77
663.6266	15.58	35.56	-19.98	39.30	3.03	Vertical	120k	0.10	-10.49
668.6187	15.33	35.56	-20.23	6.80	4.00	Vertical	120k	0.10	-10.48
681.9265	22.90	35.56	-12.66	212.70	3.72	Vertical	120k	0.10	-10.40

BLE (Plastic Enclosure, With Keypad), High Channel, 1-3 GHz, Test Distance at 3m, (V/H Polarities)

Test Information:

Date and Time	10/10/2024 8:22:36 AM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	22 deg C
Humidity	39 %
Atmospheric Pressure	1005 mbars
Comments	Scan 55 BLE Tx High (Plastic Enclosure - With Keypad), RE 1-3 GHz 72

Graph:



Results:

Peak (PASS) (1)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
2490.343	44.82	74.00	-29.18	74.20	2.51	Vertical	1M	1.00	-14.50

AVG (PASS) (1)

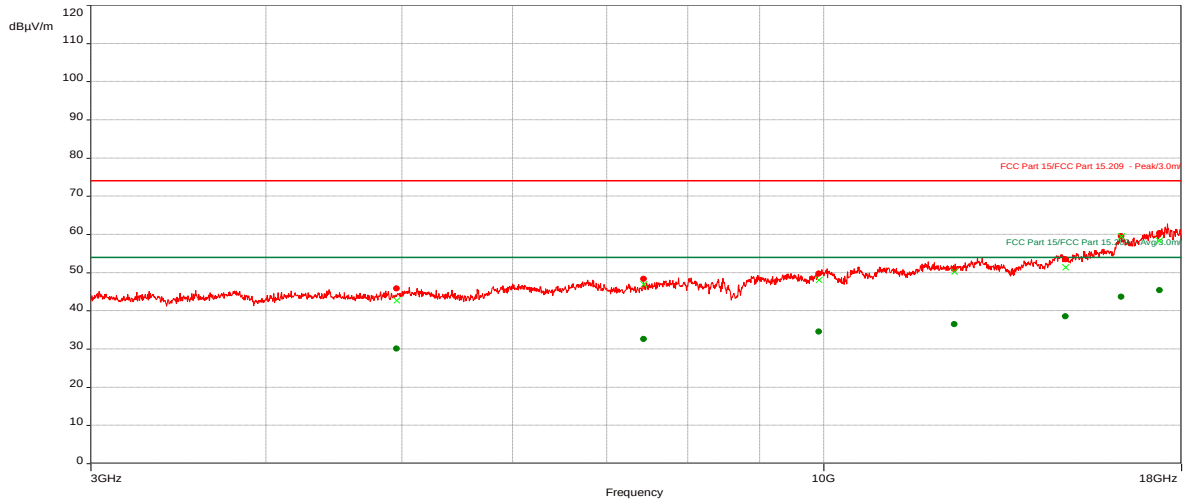
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
2490.343	28.50	54.00	-25.50	74.20	2.51	Vertical	1M	1.00	-14.50

BLE (Plastic Enclosure, With Keypad), High Channel, 3-18 GHz, Test Distance at 3m, (V/H Polarities)

Test Information:

Date and Time	10/9/2024 3:07:14 PM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	22 deg C
Humidity	42 %
Atmospheric Pressure	1003 mbars
Comments	Scan 54 BLE Tx High (Plastic Enclosure - With Keypad), RE 3-18 GHz

Graph:



Results:

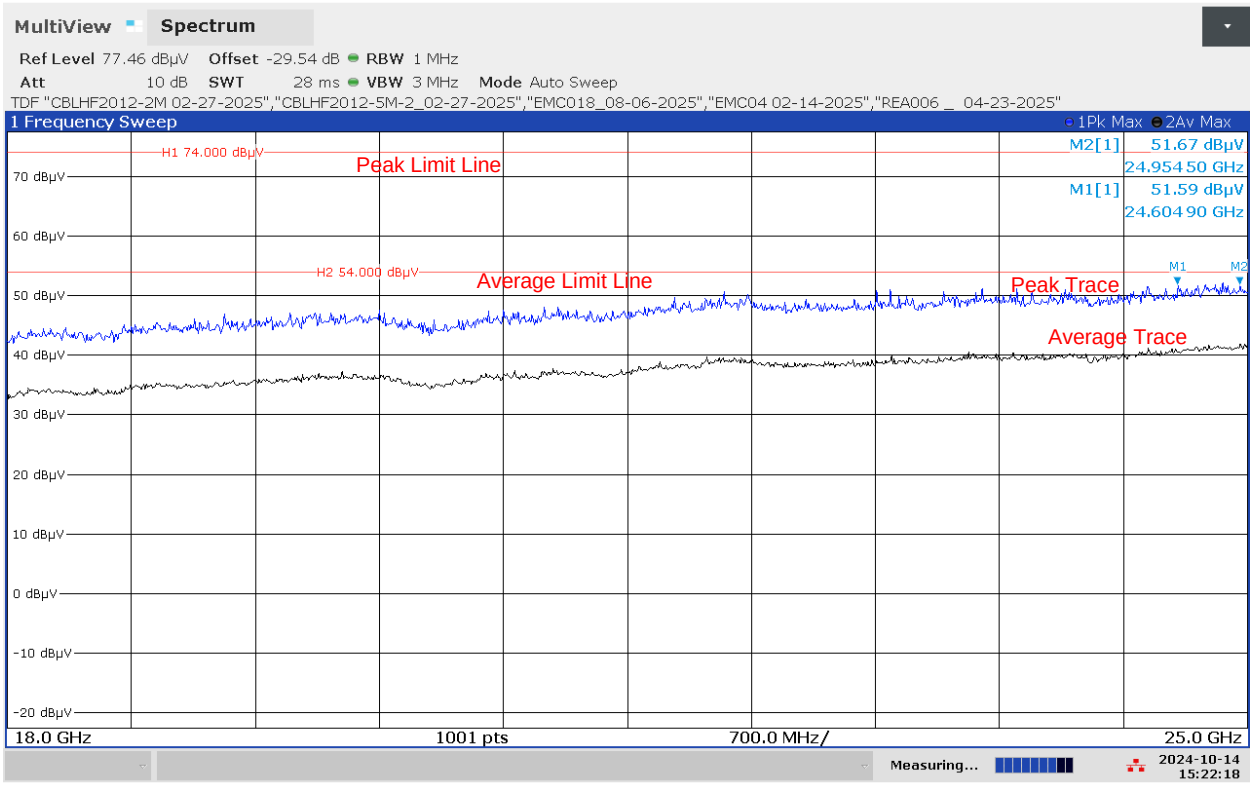
Peak (PASS) (7)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
4959.863	45.92	74.00	-28.08	360.00	1.00	Vertical	1M	1.00	-9.55
7438.903	48.32	74.00	-25.68	360.00	1.00	Vertical	1M	1.00	-5.38
9919.938	49.76	74.00	-24.24	0.00	1.00	Horizontal	1M	1.00	-2.27
12396.796	51.06	74.00	-22.94	360.00	4.00	Vertical	1M	1.00	2.08
14879.638	53.47	74.00	-20.53	360.00	1.00	Vertical	1M	1.00	3.89
16306.25	59.56	74.00	-14.44	0.00	4.00	Horizontal	1M	1.00	6.23
17362.706	60.39	74.00	-13.61	265.80	1.00	Horizontal	1M	1.00	7.92

AVG (PASS) (7)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
4959.863	30.12	54.00	-23.88	360.00	1.00	Vertical	1M	1.00	-9.55
7438.903	32.60	54.00	-21.40	360.00	1.00	Vertical	1M	1.00	-5.38
9919.938	34.53	54.00	-19.47	0.00	1.00	Horizontal	1M	1.00	-2.27
12396.796	36.56	54.00	-17.44	360.00	4.00	Vertical	1M	1.00	2.08
14879.638	38.56	54.00	-15.44	360.00	1.00	Vertical	1M	1.00	3.89
16306.25	43.71	54.00	-10.29	0.00	4.00	Horizontal	1M	1.00	6.23
17362.706	45.46	54.00	-8.54	265.80	1.00	Horizontal	1M	1.00	7.92

BLE (Plastic Enclosure, With Keypad), High Channel, 18-25 GHz, Test Distance at 10cm, (V/H Polarities)



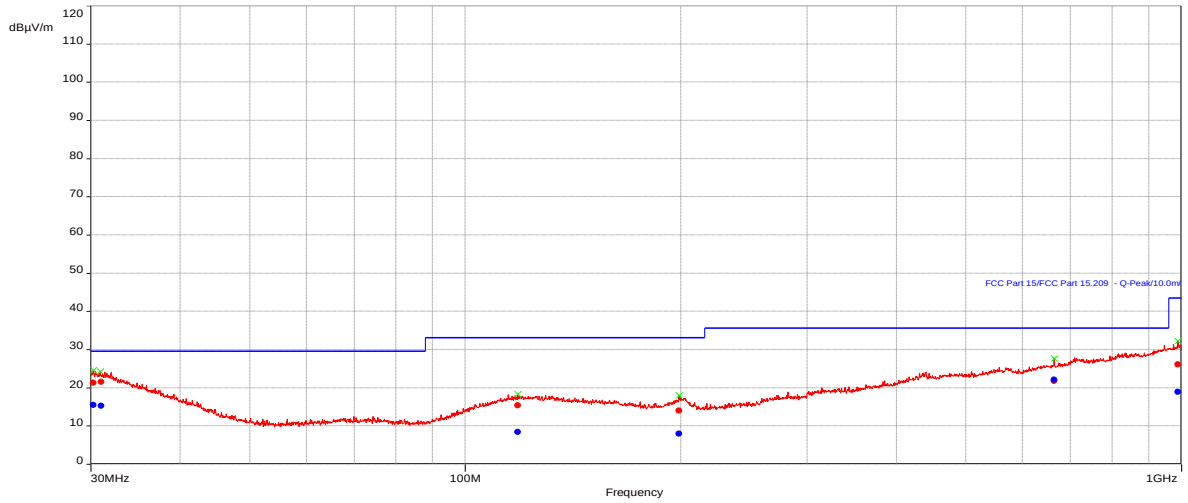
03:22:19 PM 10/14/2024

BLE (Metal Enclosure, Without Keypad), Low Channel, 30-1000 MHz, Test Distance at 10m, (V/H Polarities)

Test Information:

Date and Time	10/1/2024 8:32:43 AM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	23 deg C
Humidity	45 %
Atmospheric Pressure	1011 mbars
Comments	Scan 29_BLE Tx Low Channel With Modulation (Metal Enclosure - Without Keypad), RE 30-1000MHz

Graph:



Results:

QuasiPeak (PASS) (6)

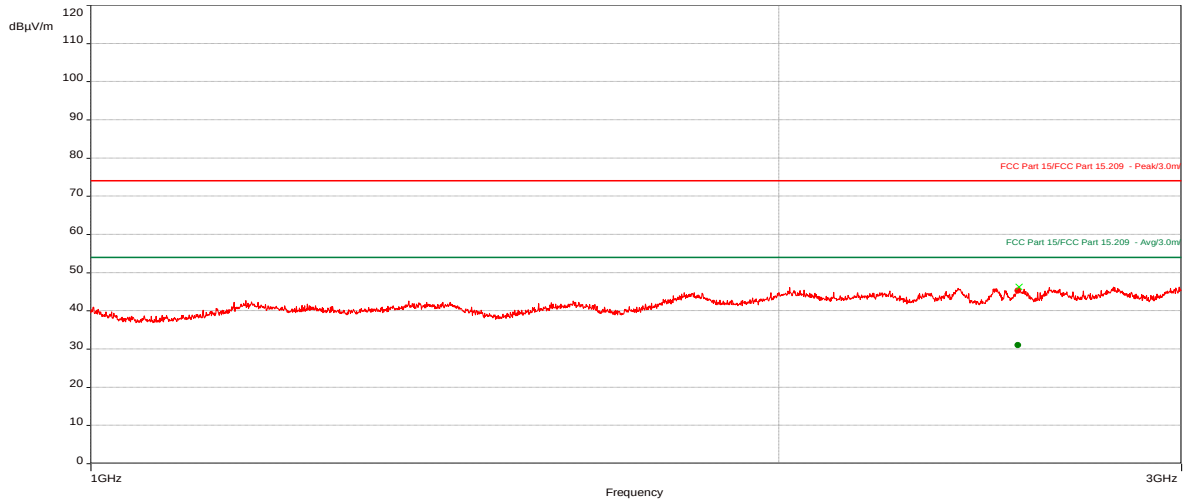
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
30.2716	15.54	29.54	-14.00	142.10	3.50	Vertical	120k	0.10	-13.00
31.0228	15.24	29.54	-14.30	305.10	3.74	Horizontal	120k	0.10	-13.30
118.4264	8.44	33.06	-24.62	282.70	2.82	Vertical	120k	0.10	-18.87
198.8536	8.00	33.06	-25.06	326.80	1.30	Vertical	120k	0.10	-19.61
664.1322	22.15	35.56	-13.41	163.90	1.76	Vertical	120k	0.10	-10.49
988.7833	18.90	43.52	-24.62	61.00	2.89	Vertical	120k	0.10	-5.08

BLE (Metal Enclosure, Without Keypad), Low Channel, 1-3 GHz, Test Distance at 3m, (V/H Polarities)

Test Information:

Date and Time	10/14/2024 11:57:20 AM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	24 deg C
Humidity	35 %
Atmospheric Pressure	995 mbars
Comments	Scan 76 BLE Tx Low (Metal Enclosure - Without Keypad), RE 1-3 GHz

Graph:



Results:

Peak (PASS) (1)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
2544.754	45.32	74.00	-28.68	360.00	2.51	Horizontal	1M	1.00	-14.03

AVG (PASS) (1)

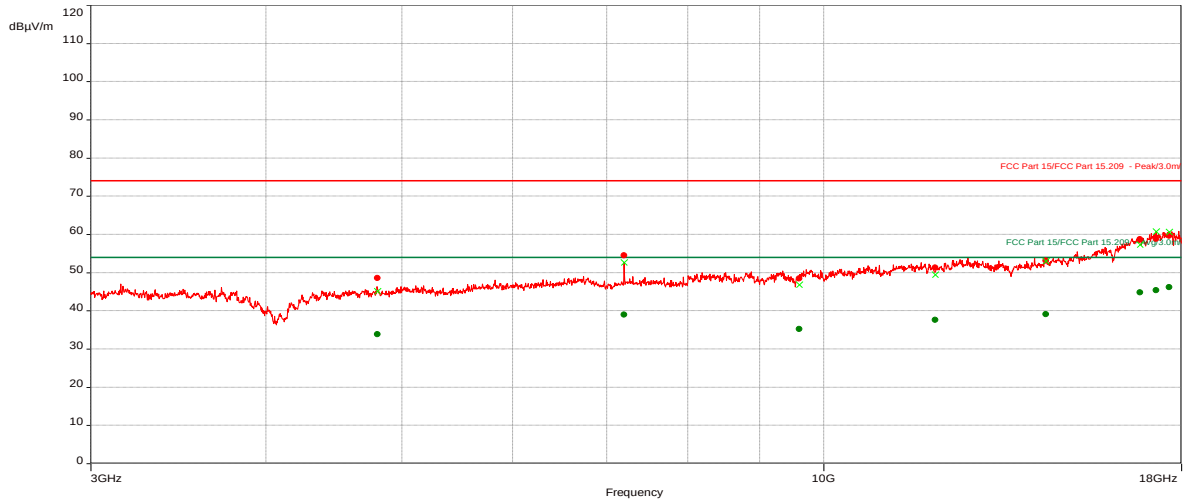
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
2544.754	31.09	54.00	-22.91	360.00	2.51	Horizontal	1M	1.00	-14.03

BLE (Metal Enclosure, Without Keypad), Low Channel, 3-18 GHz, Test Distance at 3m, (V/H Polarities)

Test Information:

Date and Time	10/14/2024 12:06:24 PM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	24 deg C
Humidity	35 %
Atmospheric Pressure	995 mbars
Comments	Scan 77 BLE Tx Low (Metal Enclosure - Without Keypad), RE 3-18 GHz

Graph:



Results:

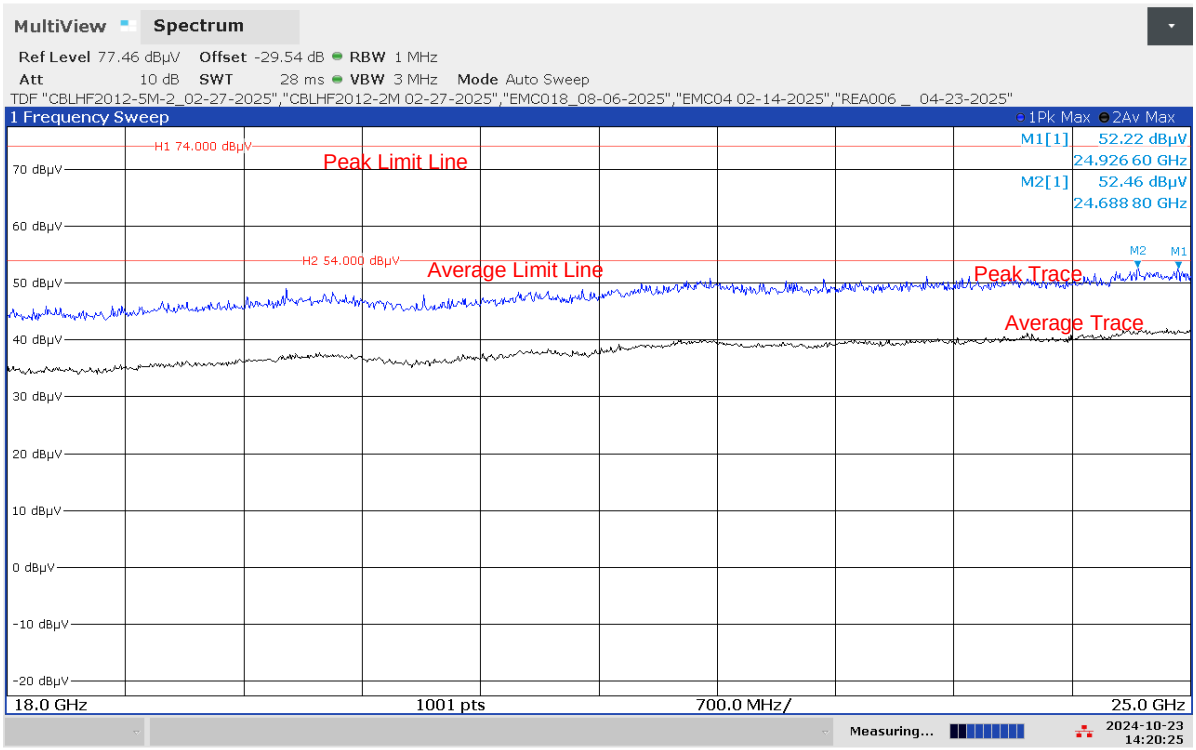
Peak (PASS) (8)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
4803.152	48.65	74.00	-25.35	0.00	4.00	Horizontal	1M	1.00	-9.68
7207.509	54.55	74.00	-19.45	265.60	4.00	Horizontal	1M	1.00	-5.80
9606.99	48.47	74.00	-25.53	265.60	4.00	Horizontal	1M	1.00	-2.97
12012.207	51.39	74.00	-22.61	0.00	1.00	Horizontal	1M	1.00	1.09
14409.855	53.22	74.00	-20.78	265.70	1.00	Horizontal	1M	1.00	3.28
16816.132	58.71	74.00	-15.29	265.50	1.00	Vertical	1M	1.00	7.72
17268.184	58.91	74.00	-15.09	265.50	1.00	Vertical	1M	1.00	7.86
17643.212	59.70	74.00	-14.30	265.70	1.00	Vertical	1M	1.00	8.39

AVG (PASS) (8)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
4803.152	33.92	54.00	-20.08	0.00	4.00	Horizontal	1M	1.00	-9.68
7207.509	39.02	54.00	-14.98	265.60	4.00	Horizontal	1M	1.00	-5.80
9606.99	35.30	54.00	-18.70	265.60	4.00	Horizontal	1M	1.00	-2.97
12012.207	37.64	54.00	-16.36	0.00	1.00	Horizontal	1M	1.00	1.09
14409.855	39.13	54.00	-14.87	265.70	1.00	Horizontal	1M	1.00	3.28
16816.132	44.88	54.00	-9.12	265.50	1.00	Vertical	1M	1.00	7.72
17268.184	45.46	54.00	-8.54	265.50	1.00	Vertical	1M	1.00	7.86
17643.212	46.21	54.00	-7.79	265.70	1.00	Vertical	1M	1.00	8.39

BLE (Metal Enclosure, Without Keypad), Low Channel, 18-25 GHz, Test Distance at 10cm, (V/H Polarities)



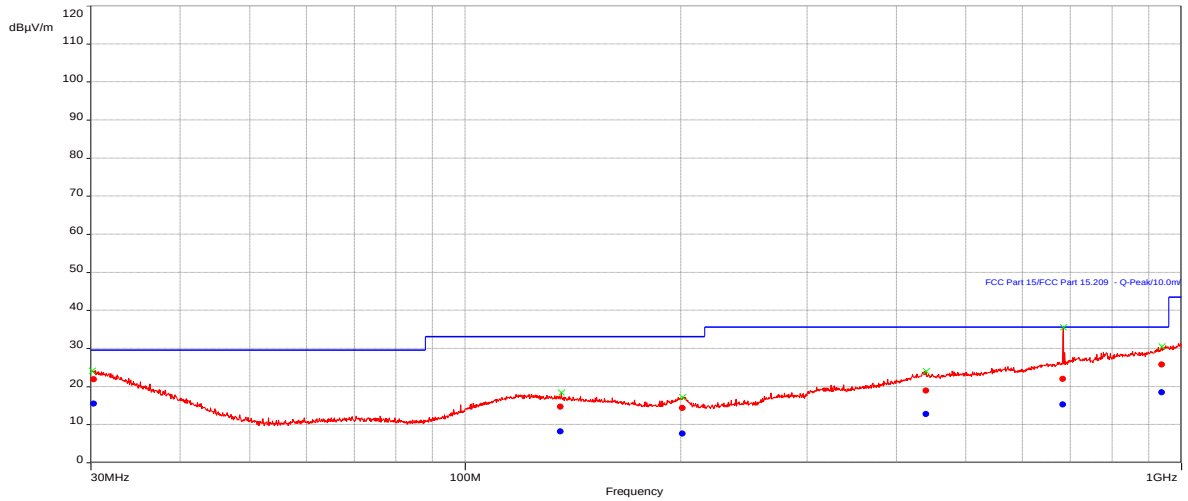
02:20:25 PM 10/23/2024

BLE (Metal Enclosure, Without Keypad), Mid Channel, 30-1000 MHz, Test Distance at 10m, (V/H Polarities)

Test Information:

Date and Time	10/1/2024 9:05:03 AM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	23 deg C
Humidity	45 %
Atmospheric Pressure	1011 mbars
Comments	Scan 30_BLE Tx Mid Channel With Modulation (Metal Enclosure - Without Keypad), RE 30-1000MHz

Graph:



Results:

QuasiPeak (PASS) (6)

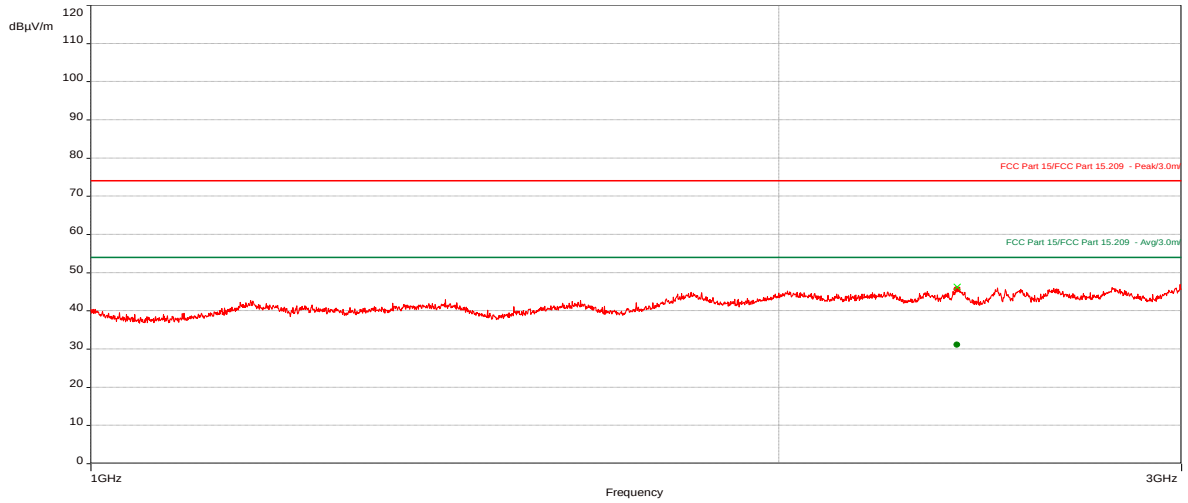
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	RBW	Meas.Time(s)	Correction (dB)
30.3105	15.55	29.54	-13.99	185.30	1.84	Horizontal	120000.00	120k	0.10	-13.02
135.9051	8.21	33.06	-24.85	283.50	4.00	Horizontal	120000.00	120k	0.10	-19.17
201.0675	7.69	33.06	-25.37	50.10	1.39	Horizontal	120000.00	120k	0.10	-19.70
439.9827	12.80	35.56	-22.76	71.70	1.62	Horizontal	120000.00	120k	0.10	-14.63
683.6101	15.32	35.56	-20.24	114.80	3.27	Horizontal	120000.00	120k	0.10	-10.30
939.3992	18.49	35.56	-17.07	315.50	2.58	Horizontal	120000.00	120k	0.10	-5.80

BLE (Metal Enclosure, Without Keypad), Mid Channel, 1-3 GHz, Test Distance at 3m, (V/H Polarities)

Test Information:

Date and Time	10/14/2024 11:46:40 AM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	24 deg C
Humidity	35 %
Atmospheric Pressure	995 mbars
Comments	Scan 75 BLE Tx Mid (Metal Enclosure - Without Keypad), RE 1-3 GHz

Graph:



Results:

Peak (PASS) (1)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
2392.677	45.64	74.00	-28.96	348.40	1.00	Vertical	1M	0.00	-14.48

AVG (PASS) (1)

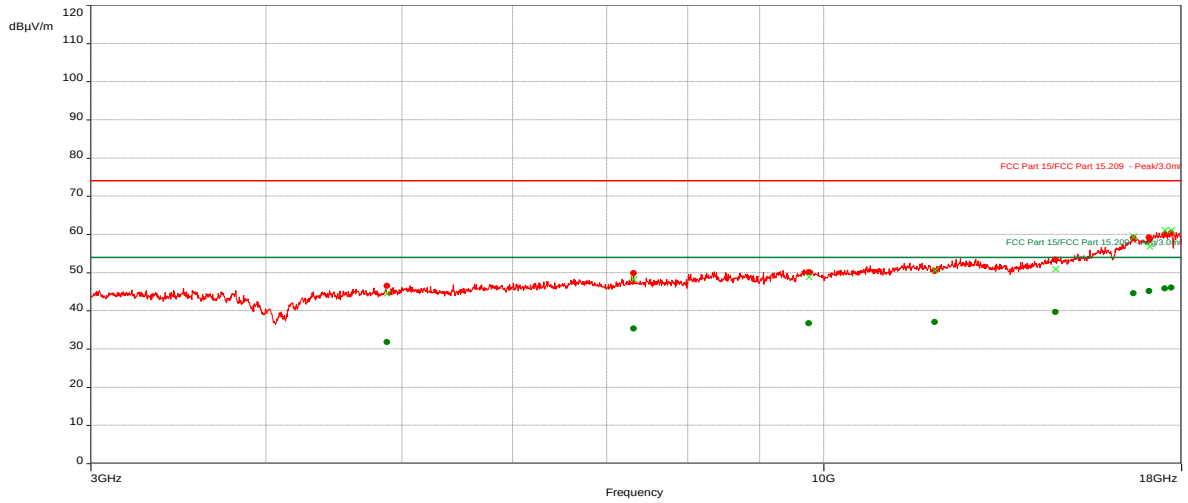
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
2392.677	31.15	54.00	-22.85	348.40	1.00	Vertical	1M	0.00	-14.48

BLE (Metal Enclosure, Without Keypad), Mid Channel, 3-18 GHz, Test Distance at 3m, (V/H Polarities)

Test Information:

Date and Time	10/14/2024 10:51:11 AM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	24 deg C
Humidity	35 %
Atmospheric Pressure	995 mbars
Comments	Scan 74 BLE Tx Mid (Metal Enclosure - Without Keypad), RE 3-18 GHz

Graph:



Results:

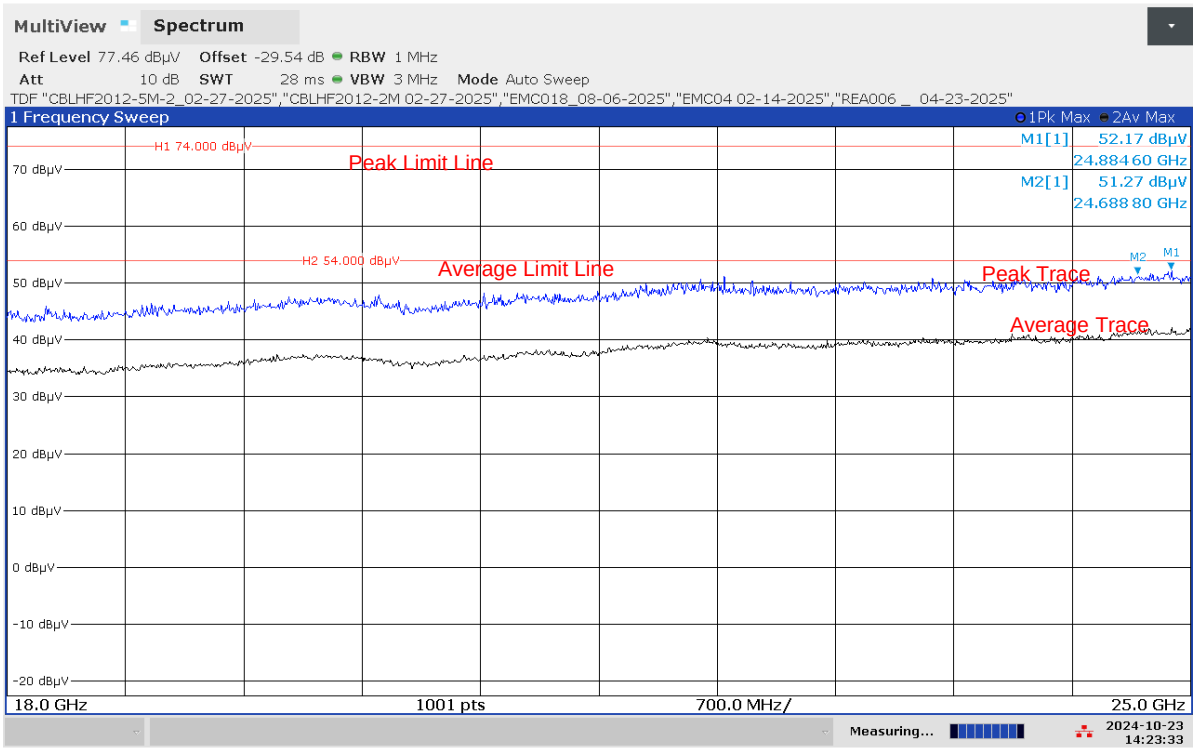
Peak (PASS) (9)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
4880.137	46.58	74.00	-27.42	0.00	4.00	Vertical	1M	1.00	-9.60
7321.621	49.90	74.00	-24.10	360.00	1.00	Horizontal	1M	1.00	-5.62
9758.042	50.11	74.00	-23.89	265.70	4.00	Vertical	1M	1.00	-2.45
12001.983	50.46	74.00	-23.54	0.00	1.00	Vertical	1M	1.00	1.08
14637.931	53.43	74.00	-20.57	265.70	1.00	Horizontal	1M	1.00	3.59
16639.648	59.04	74.00	-14.96	360.00	1.00	Vertical	1M	1.00	7.27
17077.98	59.16	74.00	-14.84	0.00	1.00	Horizontal	1M	1.00	7.74
17522.944	59.96	74.00	-14.04	265.80	1.00	Horizontal	1M	1.00	8.17
17700.732	60.30	74.00	-13.70	0.00	1.00	Vertical	1M	1.00	8.50

AVG (PASS) (9)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
4880.137	31.84	54.00	-22.16	0.00	4.00	Vertical	1M	1.00	-9.60
7321.621	35.40	54.00	-18.60	360.00	1.00	Horizontal	1M	1.00	-5.62
9758.042	36.75	54.00	-17.25	265.70	4.00	Vertical	1M	1.00	-2.45
12001.983	37.11	54.00	-16.89	0.00	1.00	Vertical	1M	1.00	1.08
14637.931	39.66	54.00	-14.34	265.70	1.00	Horizontal	1M	1.00	3.59
16639.648	44.58	54.00	-9.42	360.00	1.00	Vertical	1M	1.00	7.27
17077.98	45.15	54.00	-8.85	0.00	1.00	Horizontal	1M	1.00	7.74
17522.944	45.86	54.00	-8.14	265.80	1.00	Horizontal	1M	1.00	8.17
17700.732	46.11	54.00	-7.89	0.00	1.00	Vertical	1M	1.00	8.50

BLE (Metal Enclosure, Without Keypad), Mid Channel, 18-25 GHz, Test Distance at 10cm, (V/H Polarities)



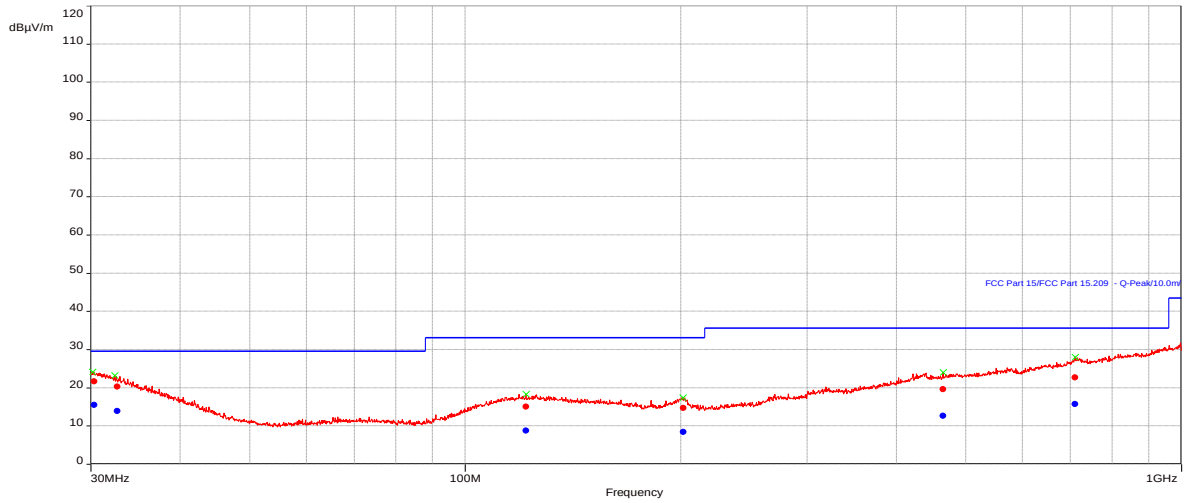
02:23:34 PM 10/23/2024

BLE (Metal Enclosure, Without Keypad), High Channel, 30-1000 MHz, Test Distance at 10m, (V/H Polarities)

Test Information:

Date and Time	10/1/2024 9:35:40 AM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	23 deg C
Humidity	45 %
Atmospheric Pressure	1011 mbars
Comments	Scan 31_BLE Tx High Channel With Modulation (Metal Enclosure - Without Keypad), RE 30-1000MHz

Graph:



Results:

QuasiPeak (PASS) (6)

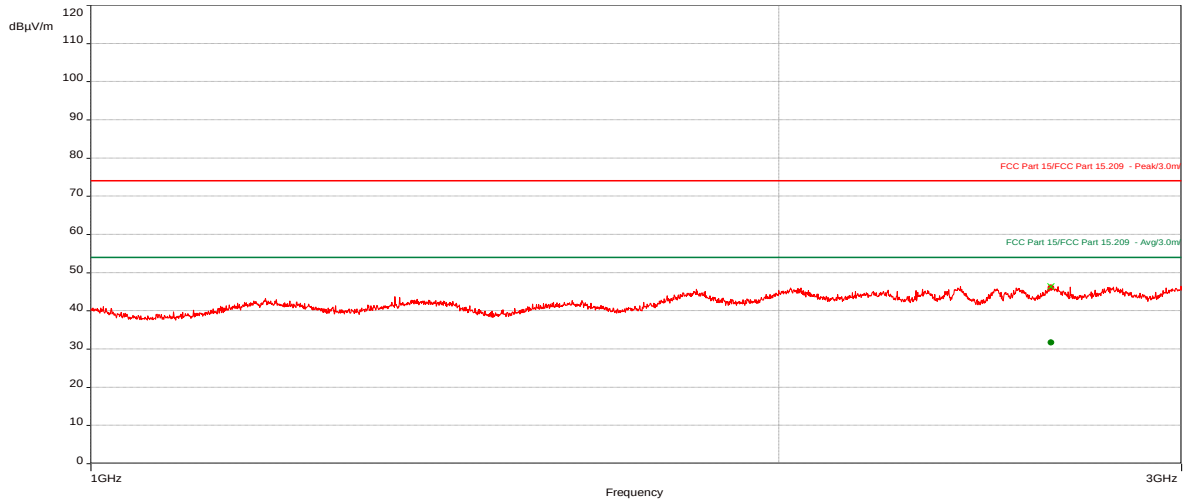
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
30.3718	15.50	29.54	-14.04	245.00	1.55	Horizontal	120k	0.10	-13.04
32.6798	13.98	29.54	-15.56	190.80	4.00	Vertical	120k	0.10	-14.46
121.6109	8.78	33.06	-24.28	326.50	1.38	Vertical	120k	0.10	-18.79
201.5743	8.40	33.06	-24.66	99.00	2.23	Vertical	120k	0.10	-19.85
465.0326	12.71	35.56	-22.85	12.20	1.99	Horizontal	120k	0.10	-14.05
710.715	15.75	35.56	-19.81	299.80	2.51	Horizontal	120k	0.10	-9.76

BLE (Metal Enclosure, Without Keypad), High Channel, 1-3 GHz, Test Distance at 3m, (V/H Polarities)

Test Information:

Date and Time	10/14/2024 9:51:58 AM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	24 deg C
Humidity	35 %
Atmospheric Pressure	995 mbars
Comments	Scan 72 BLE Tx High (Metal Enclosure - Without Keypad), RE 1-3 GHz

Graph:



Results:

Peak (PASS) (1)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time	Correction (dB)
2630.385	46.14	74.00	-39.14	309.10	4.00	Horizontal	1M	0.00	-13.78

AVG (PASS) (1)

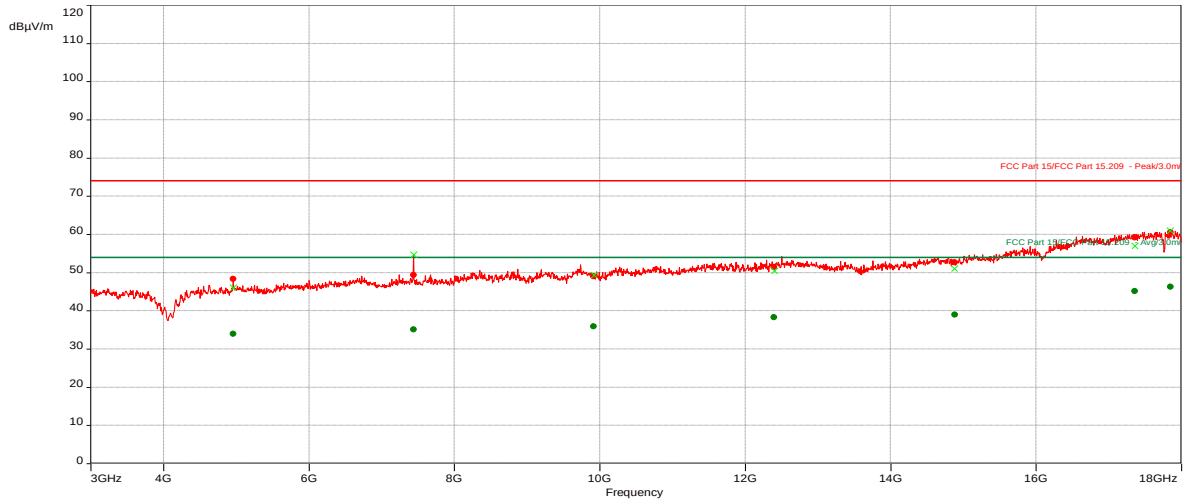
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time	Correction (dB)
2630.385	31.72	54.00	-22.28	309.10	4.00	Horizontal	1M	0.00	-13.78

BLE (Metal Enclosure, Without Keypad), High Channel, 3-18 GHz, Test Distance at 3m, (V/H Polarities)

Test Information:

Date and Time	10/14/2024 10:04:01 AM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	24 deg C
Humidity	35 %
Atmospheric Pressure	995 mbars
Comments	Scan 73 BLE Tx High (Metal Enclosure - Without Keypad), RE 3-18 GHz

Graph:



Results:

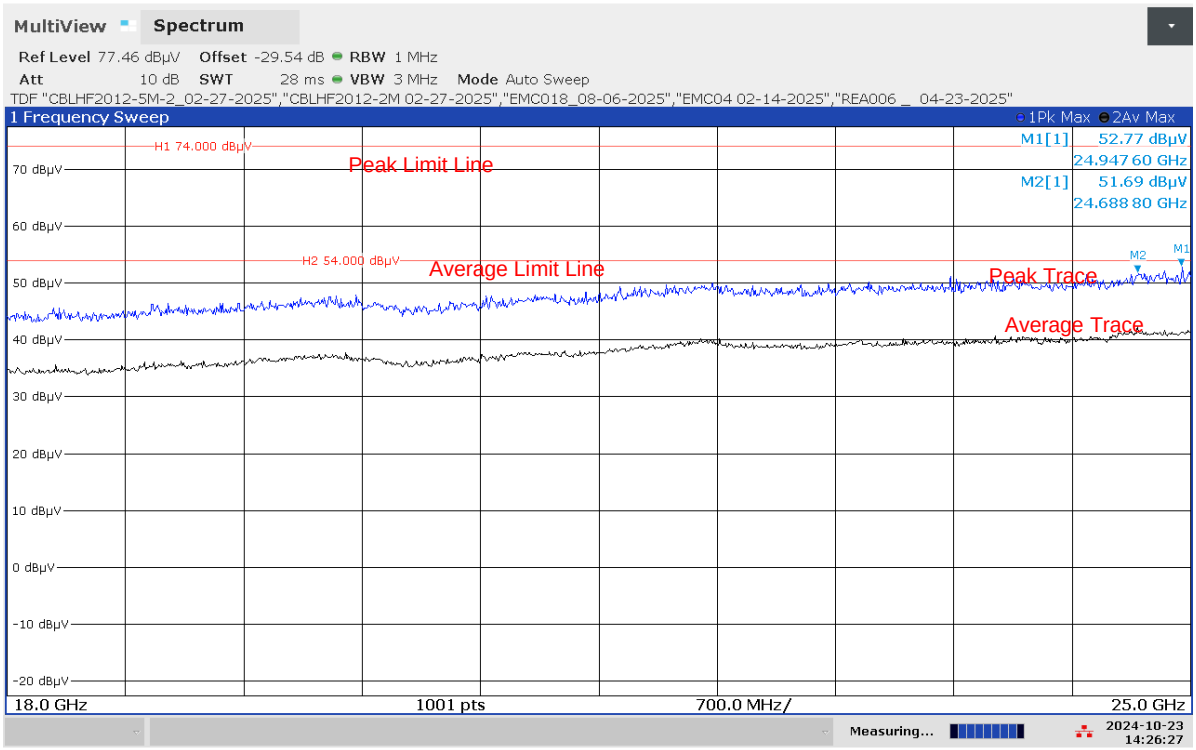
Peak (PASS) (7)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
4960.886	48.41	74.00	-25.59	360.00	1.00	Horizontal	1M	1.00	-9.54
7438.176	49.35	74.00	-24.65	360.00	1.00	Horizontal	1M	1.00	-5.39
9915.548	49.03	74.00	-24.97	0.00	4.00	Vertical	1M	1.00	-2.27
12395.947	51.50	74.00	-22.50	265.60	4.00	Vertical	1M	1.00	2.08
14882.132	52.70	74.00	-21.30	0.00	1.00	Horizontal	1M	1.00	3.89
17361.446	59.24	74.00	-14.76	360.00	4.00	Vertical	1M	1.00	7.92
17847.146	60.62	74.00	-13.38	0.00	1.00	Vertical	1M	1.00	8.65

AVG (PASS) (7)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
4960.886	33.95	54.00	-20.05	360.00	1.00	Horizontal	1M	1.00	-9.54
7438.176	35.18	54.00	-18.82	360.00	1.00	Horizontal	1M	1.00	-5.39
9915.548	35.96	54.00	-18.04	0.00	4.00	Vertical	1M	1.00	-2.27
12395.947	38.32	54.00	-15.68	265.60	4.00	Vertical	1M	1.00	2.08
14882.132	39.05	54.00	-14.95	0.00	1.00	Horizontal	1M	1.00	3.89
17361.446	45.18	54.00	-8.82	360.00	4.00	Vertical	1M	1.00	7.92
17847.146	46.32	54.00	-7.68	0.00	1.00	Vertical	1M	1.00	8.65

BLE (Metal Enclosure, Without Keypad), High Channel, 18-25 GHz, Test Distance at 10cm, (V/H Polarities)



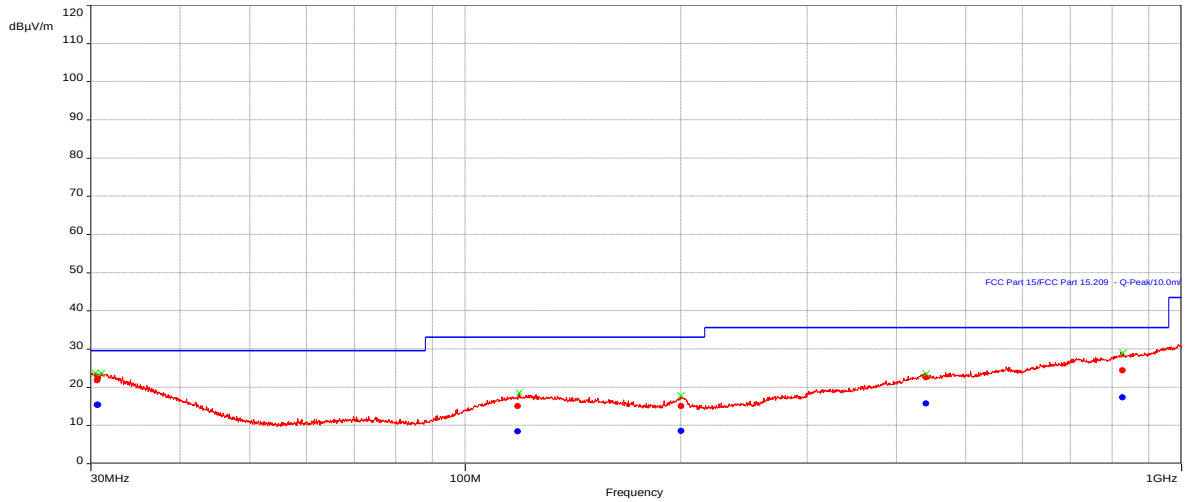
02:26:27 PM 10/23/2024

BLE (Plastic Enclosure, Without Keypad), Low Channel, 30-1000 MHz, Test Distance at 10m, (V/H Polarities)

Test Information:

Date and Time	10/1/2024 10:49:56 AM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	23 deg C
Humidity	45 %
Atmospheric Pressure	1011 mbars
Comments	Scan 33 BLE Tx Low (Plastic Enclosure - Without Keypad), RE 30-1000MHz

Graph:



Results:

Peak (PASS) (6)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
30.6489	21.82	29.54	-7.72	360.00	3.89	Horizontal	120k	0.10	-13.15
30.7342	22.48	29.54	-7.06	348.40	3.56	Horizontal	120k	0.10	-13.18
118.3797	15.03	33.06	-18.03	185.50	2.97	Horizontal	120k	0.10	-18.87
200.2719	15.06	33.06	-18.00	256.00	2.14	Vertical	120k	0.10	-19.61
440.0425	22.57	35.56	-12.99	126.00	2.47	Vertical	120k	0.10	-14.63
828.1935	24.46	35.56	-11.10	114.70	2.43	Vertical	120k	0.10	-7.48

QuasiPeak (PASS) (6)

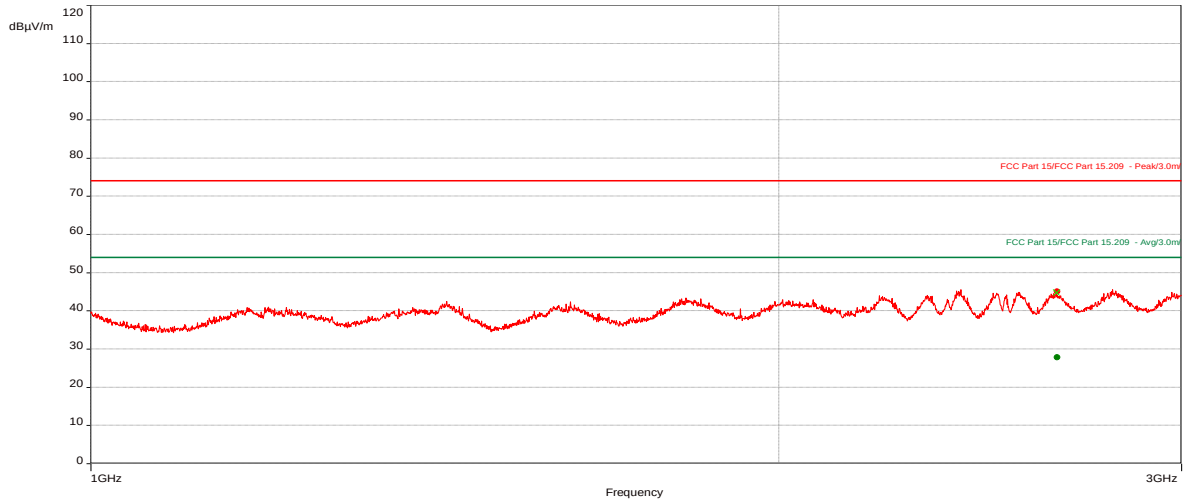
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
30.6489	15.46	29.54	-14.08	360.00	3.89	Horizontal	120k	0.10	-13.15
30.7342	15.45	29.54	-14.09	348.40	3.56	Horizontal	120k	0.10	-13.18
118.3797	8.47	33.06	-24.59	185.50	2.97	Horizontal	120k	0.10	-18.87
200.2719	8.54	33.06	-24.52	256.00	2.14	Vertical	120k	0.10	-19.61
440.0425	15.78	35.56	-19.78	126.00	2.47	Vertical	120k	0.10	-14.63
828.1935	17.36	35.56	-18.20	114.70	2.43	Vertical	120k	0.10	-7.48

BLE (Plastic Enclosure, Without Keypad), Low Channel, 1-3 GHz, Test Distance at 3m, (V/H Polarities)

Test Information:

Date and Time	10/10/2024 2:06:59 PM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	22 deg C
Humidity	39 %
Atmospheric Pressure	1005 mbars
Comments	Scan 67 BLE Tx Low (Plastic Enclosure - Without Keypad), RE 1-3 GHz

Graph:



Results:

Peak (PASS) (1)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)(s)	Correction (dB)
2647.694	45.08	74.00	-28.92	309.10	2.51	Horizontal	1M	1.00	-13.73

AVG (PASS) (1)

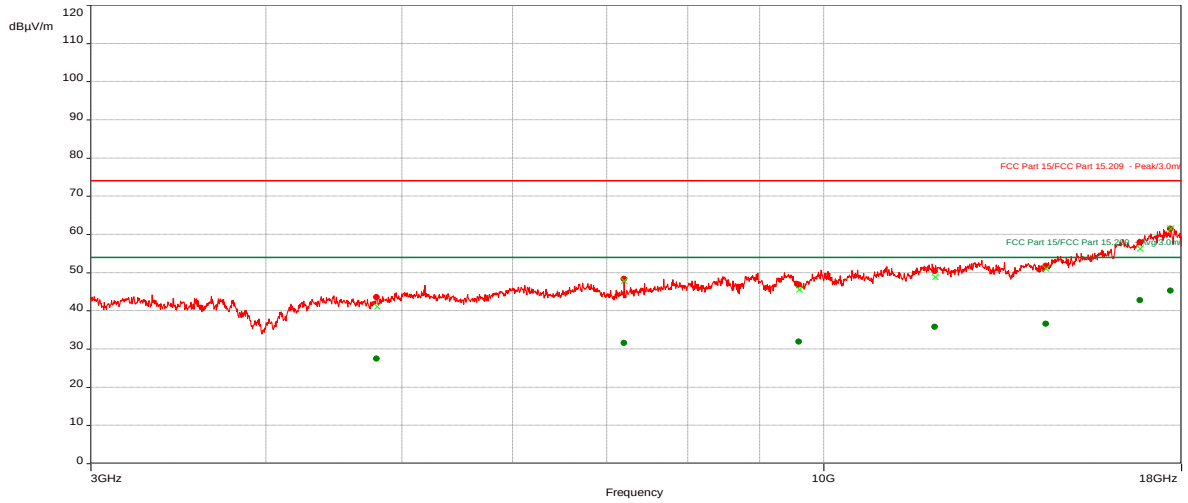
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)(s)	Correction (dB)
2647.694	27.84	54.00	-26.16	309.10	2.51	Horizontal	1M	1.00	-13.73

BLE (Plastic Enclosure, Without Keypad), Low Channel, 3-18 GHz, Test Distance at 3m, (V/H Polarities)

Test Information:

Date and Time	10/10/2024 2:16:56 PM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	22 deg C
Humidity	39 %
Atmospheric Pressure	1005 mbars
Comments	Scan 68 BLE Tx Low (Plastic Enclosure - Without Keypad), RE 3-18 GHz

Graph:



Results:

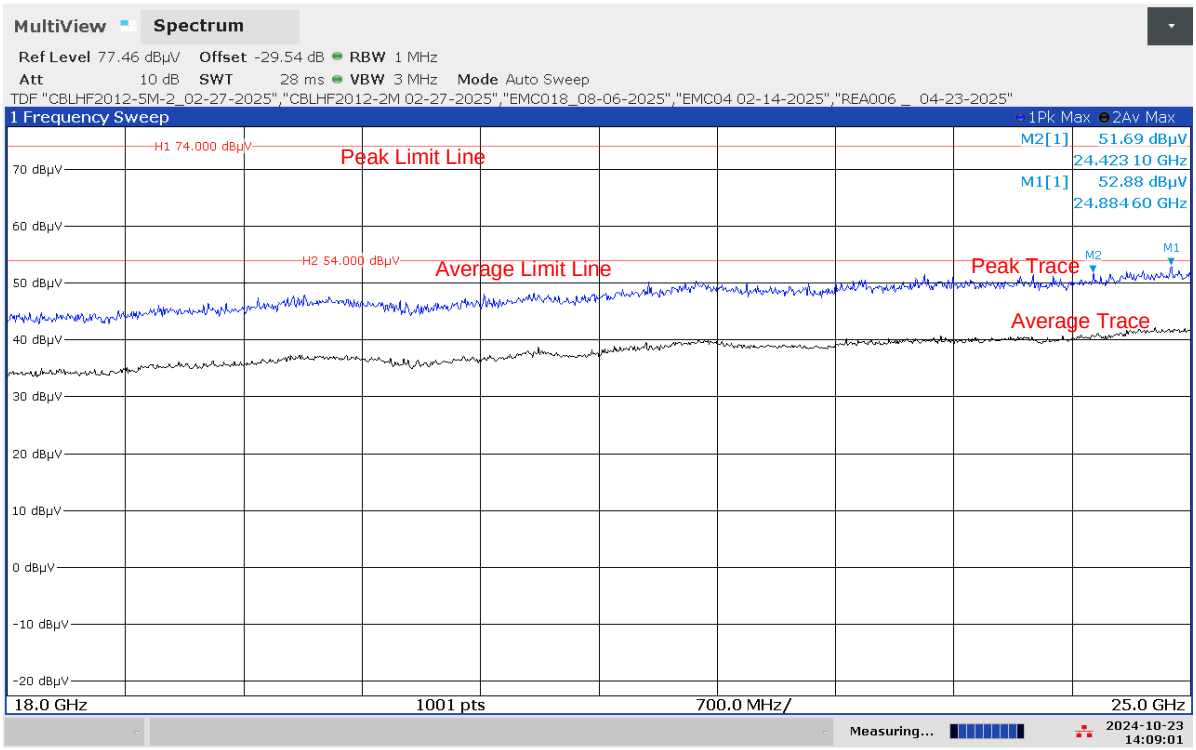
Peak (PASS) (7)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
4798.404	43.63	74.00	-30.37	0.00	1.00	Vertical	1M	1.00	-9.70
7206.137	48.36	74.00	-25.64	360.00	1.00	Vertical	1M	1.00	-5.80
9604.621	46.91	74.00	-27.09	360.00	1.00	Horizontal	1M	1.00	-2.98
12006.397	50.40	74.00	-23.60	360.00	1.00	Horizontal	1M	1.00	1.09
14411.651	51.81	74.00	-22.19	265.70	1.00	Horizontal	1M	1.00	3.29
16812.367	57.98	74.00	-16.02	0.00	1.00	Vertical	1M	1.00	7.72
17683.792	61.54	74.00	-12.46	0.00	4.00	Vertical	1M	1.00	8.46

AVG (PASS) (7)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
4798.404	27.45	54.00	-26.55	0.00	1.00	Vertical	1M	1.00	-9.70
7206.137	31.61	54.00	-22.39	360.00	1.00	Vertical	1M	1.00	-5.80
9604.621	32.00	54.00	-22.00	360.00	1.00	Horizontal	1M	1.00	-2.98
12006.397	35.81	54.00	-18.19	360.00	1.00	Horizontal	1M	1.00	1.09
14411.651	36.67	54.00	-17.33	265.70	1.00	Horizontal	1M	1.00	3.29
16812.367	42.75	54.00	-11.25	0.00	1.00	Vertical	1M	1.00	7.72
17683.792	45.25	54.00	-8.75	0.00	4.00	Vertical	1M	1.00	8.46

BLE (Plastic Enclosure, Without Keypad), Low Channel, 18-25 GHz, Test Distance at 10cm, (V/H Polarities)

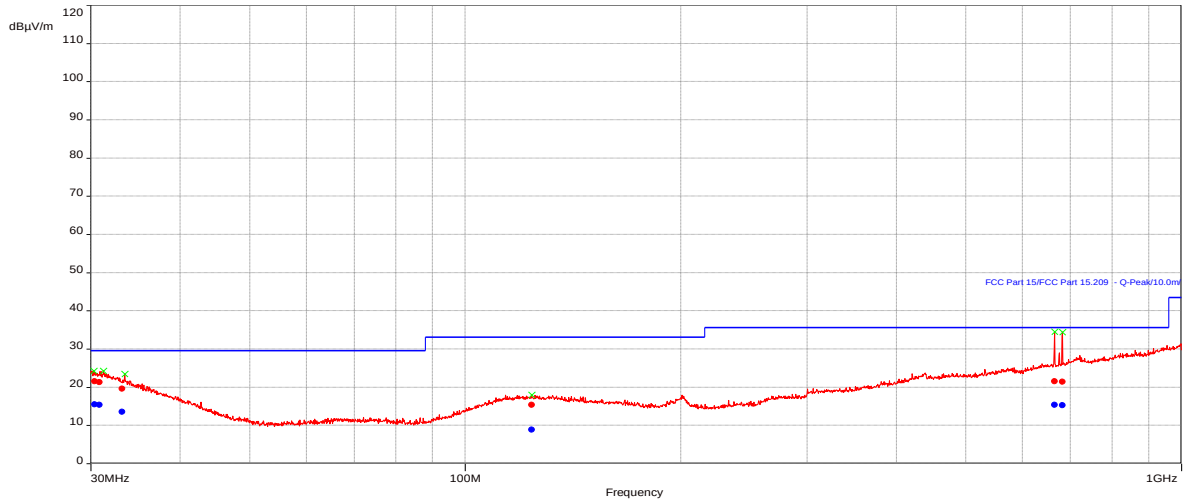


BLE (Plastic Enclosure, Without Keypad), Mid Channel, 30-1000 MHz, Test Distance at 10m, (V/H Polarities)

Test Information:

Date and Time	10/1/2024 11:20:44 AM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	23 deg C
Humidity	45 %
Atmospheric Pressure	1011 mbars
Comments	Scan 34 BLE Tx Mid (Plastic Enclosure - Without Keypad), RE 30-1000MHz

Graph:



Results:

QuasiPeak (PASS) (6)

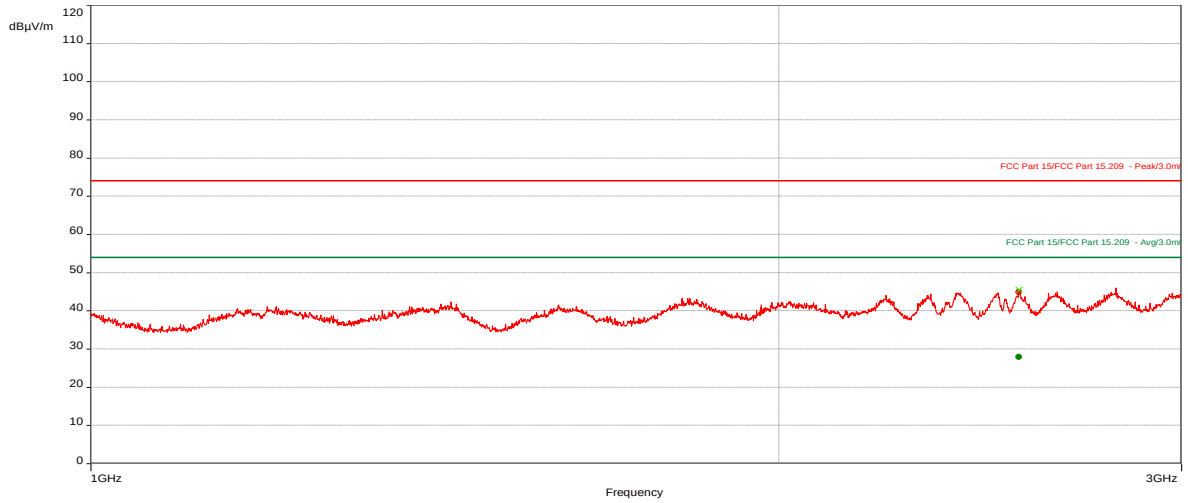
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
30.3913	15.55	29.54	-13.99	255.80	2.46	Horizontal	120k	0.10	-13.05
30.8351	15.36	29.54	-14.18	244.90	3.27	Horizontal	120k	0.10	-13.22
33.1838	13.60	29.54	-15.94	283.40	3.50	Horizontal	120k	0.10	-14.88
123.9072	8.93	33.06	-24.13	153.00	2.69	Vertical	120k	0.10	-18.68
665.3684	15.42	35.56	-20.14	202.00	2.27	Vertical	120k	0.10	-10.48
681.8923	15.30	35.56	-20.26	288.80	2.43	Vertical	120k	0.10	-10.40

BLE (Plastic Enclosure, Without Keypad), Mid Channel, 1-3 GHz, Test Distance at 3m, (V/H Polarities)

Test Information:

Date and Time	10/10/2024 1:55:15 PM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	22 deg C
Humidity	39 %
Atmospheric Pressure	1005 mbars
Comments	Scan 66 BLE Tx Mid (Plastic Enclosure - Without Keypad), RE 1-3 GHz

Graph:



Results:

Peak (PASS) (1)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)(s)	Correction (dB)
2547.188	44.90	74.00	-29.1	152.50	1.44	Horizontal	1M	1.00	-14.01

AVG (PASS) (1)

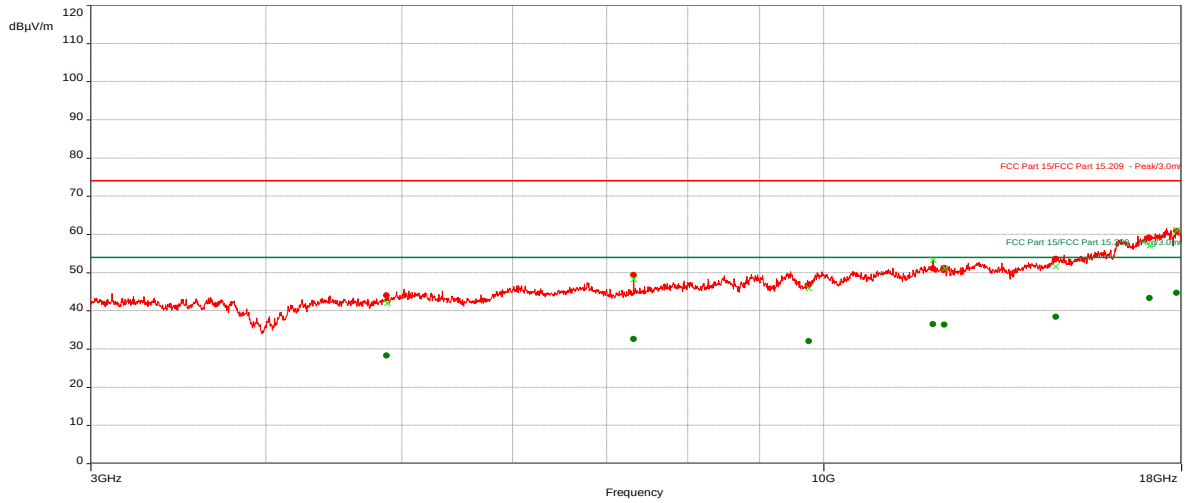
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)(s)	Correction (dB)
2547.188	27.90	54.00	-26.10	152.50	1.44	Horizontal	1M	1.00	-14.01

BLE (Plastic Enclosure, Without Keypad), Mid Channel, 3-18 GHz, Test Distance at 3m, (V/H Polarities)

Test Information:

Date and Time	10/10/2024 1:02:51 PM
Client and Project Number	Sargent Assa Abloy
Engineer	Kouma Sinn
Temperature	22 deg C
Humidity	39 %
Atmospheric Pressure	1005 mbars
Comments	Scan 65 BLE Tx Mid (Plastic Enclosure - Without Keypad), RE 3-18 GHz

Graph:



Results:

Peak (PASS) (8)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
4879.401	43.98	74.00	-30.02	360.00	1.00	Horizontal	1M	1.00	-9.60
7321.263	49.37	74.00	-24.63	360.00	1.00	Vertical	1M	1.00	-5.62
9763.018	46.73	74.00	-27.27	360.00	4.00	Horizontal	1M	1.00	-2.45
11968.022	51.10	74.00	-22.90	0.00	4.00	Vertical	1M	1.00	1.06
12196.983	51.18	74.00	-22.82	360.00	1.00	Horizontal	1M	1.00	1.49
14641.77	53.67	74.00	-20.33	265.80	4.00	Horizontal	1M	1.00	3.60
17082.232	59.10	74.00	-14.90	0.00	4.00	Vertical	1M	1.00	7.74
17860.492	60.93	74.00	-13.07	265.60	1.00	Vertical	1M	1.00	8.66

AVG (PASS) (8)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW	Meas.Time(s)	Correction (dB)
4879.401	28.28	54.00	-25.72	360.00	1.00	Horizontal	1M	1.00	-9.60
7321.263	32.59	54.00	-21.41	360.00	1.00	Vertical	1M	1.00	-5.62
9763.018	32.01	54.00	-21.99	360.00	4.00	Horizontal	1M	1.00	-2.45
11968.022	36.50	54.00	-17.50	0.00	4.00	Vertical	1M	1.00	1.06
12196.983	36.34	54.00	-17.66	360.00	1.00	Horizontal	1M	1.00	1.49
14641.77	38.43	54.00	-15.57	265.80	4.00	Horizontal	1M	1.00	3.60
17082.232	43.31	54.00	-10.69	0.00	4.00	Vertical	1M	1.00	7.74
17860.492	44.76	54.00	-9.24	265.60	1.00	Vertical	1M	1.00	8.66