

Test Report (Co-Location)

Prepared for: Icom Inc.

Model: IC-A120
Description: VHF Mobile Transceiver
Serial Number: 34000211

FCC ID: AFJ369720
ISED ID: 202D-369720

Project #: p2630008

Test Results: Pass

To

FCC Part 87
ISED RSS-141 issue 2 (June 2010)
&
FCC 15.209
RSS-Gen §7.4.3

Date of Issue: August 21, 2026

For the FCC:
On behalf of the applicant:

Attention of:

For ISED:
On behalf of the applicant:

Attention of:

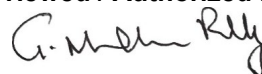
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ISED Site Reg. #2044A-2
CAB ID: US0122

Reviewed / Authorized By:



Madhava Gooduru
EMC RF Test Engineer

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All results contained herein relate only to the sample tested.

Test Results Summary
Test Date Range: Aug 20, 2026

Specification		Test Name	Pass, Fail, N/A	Comments
FCC	ISED			
15.209(a), 15.205 87.139(a)(3)	RSS-141 section 5.2.2(c) RSS-Gen §7.4.3	Radiated Spurious Emissions	Pass	As per KDB 996369 ⁽¹⁾

(1) Only Simultaneous Transmission Radiated Spurious Emissions test was performed

Statements of conformity are reported as:

- Pass - the measured value is below the acceptance limit, *acceptance limit = test limit*.
- Fail - the measured value is above the acceptance limit, *acceptance limit = test limit*.

References/Methods	Description
ANSI C63.4-2014	Method and Measurements of Radio-Noise Emissions from low-Voltage Electrical and Electronic Equipment in the range 9kHz to 40GHz.
ANSI C63.10:2020	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
Ansi C63.26:2015	American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services
ISO/IEC 17025:2017	General requirements for the Competence of Testing and Calibrations Laboratories
RSP-100 Issue 12 (August 2019)	Certification of Radio Apparatus and Broadcasting Equipment
RSS-GEN Issue 5 (April 2018)	General Requirements for Compliance of Radio Apparatus
RSS-141 Issue 2 (June 2010)	Aeronautical Radiocommunication Equipment in the Frequency Band - 117.975-137 MHz
RBR-1 Issue 2 (November 2009)	Technical Requirements for the Operation of Mobile Stations in the Aeronautical Service
FCC CFR Part 87	Aviation Services

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Test Report Revision History

Revision	Date	Revised By	Reason for Revision
1.0	8/21/2026	Madhava Gooduru	Original Document

Current revision of the test report replaces any prior versions. Only the current version of the test report is valid.

ANAB

Compliance Testing, LLC, has been accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to the joint ISO-ILAC-IAF Communiqué dated January 2009).

The tests results contained within this test report all fall within our scope of accreditation, unless noted below.

Please refer to <http://www.compliancetesting.com/labscope.html> for current scope of accreditation.



Test and Measurement Data- Applicable standards

All tests and measurement data shown were performed in accordance with following FCC Rules and Regulations, Volume II; Part 2, Sub-part J, Sections 2.947, 2.1033(c), 2.1041, 2.1046, 2.1047, 2.1051, 2.1053, 2.1055, 2.1057, ANSI C63.26-2015, the following individual Parts: FCC Part 87. ISSED RSS-Gen, RSS-141.

Standard Test Conditions and Engineering Practices

Except as noted herein, the following conditions and procedures were observed during the testing.

In accordance with ANSI/TIA 603C, and unless otherwise indicated in the specific measurement results, the ambient temperature of the actual EUT was maintained within the range of 20° to 35°C (68° to 95°F) unless the particular equipment requirements specified testing over a different temperature range. Also, unless otherwise indicated, the levels were in the range of 45% to 75% relative humidity and 860 hPa to 1060 hPa (860 mbar to 1060 mbar) Atmospheric Pressure.

Environmental Conditions		
Temp (°C)	Humidity (%)	Pressure (mbar)
27.6 – 30.5	42.8 – 49.8	967.2 – 970.5

Measurement results, unless otherwise noted, are worse case measurements.

EUT Description

Model:	IC-A120
Serial:	24094219
Firmware:	CPU version 1.05
HVIN	369720-01
PMN	369720-01
UPN	369720-01
FVIN	N/A
Description:	VHF Mobile Radio
Additional Information:	The IC-A120 is a 10-watt VHF mobile radio used for ground communication. The radio operates from 118.000 – 136.9916 MHz with 8.33 kHz / 25 kHz channel spacing using AM modulation. This also has Bluetooth® Headset Connectivity*
Power	13.75- or 28.5-volts DC
Receipt of Sample(s):	3/26/2026, 8/3/2026
EUT Condition:	Visual Damage No State of Development Production/Production Equivalent
Customer Furnished Data	None Note: The customer is responsible for any data supplied that may affect the final test results. This includes all EUT and antenna specifications.

Emission Designators

Channel Spacing	FCC Designator	IC Designator
8.33 kHz	5K60A3E	5K60A3E
25 kHz	6K00A3E	6K00A3E

Test Frequencies

Channel BW (kHz)	8.333	25	8.333	25	8.333	25
VHF Freq entered on front panel display (MHz)	118.030	118.025	127.530	127.525	136.975	136.975
VHF Actual Test Freq (MHz)	118.025	118.025	127.525	127.525	136.975	136.975
Note: When selecting the 8.33 kHz CH spacing, the radio front panel display is set 5 kHz higher than the desired frequency. For example: To select 118.025 MHz with 8.33 kHz CH spacing set the radio to 118.030 MHz If 118.025 MHz is selected the radio will operate at 118.025 with 25 kHz CH spacing.						

Bluetooth Module Information

The Bluetooth transmitter data used for this evaluation are referenced from the previously certified Icom UT-133 Bluetooth radio, FCC ID: AFJ356100 and IC ID: 202D-356100.

Referenced Bluetooth Radio	Icom UT-133
Referenced FCC ID	AFJ356100
Referenced IC ID	202D-356100
Referenced Test Report	UL Japan 10171657H-A-R1
Operating Frequency	2402 - 2480 MHz
Antenna Type	Multilayer Monopole Antenna
Maximum Antenna Gain	2.7 dBi

EUT Operation during Tests

The EUT was operated under normal operating conditions at maximum output power.
The radio can be powered at either 13.75 vdc or 28.5 vdc. The radio was tested with 13.75.

Accessories:

Qty	Description	Length	Model	S/No	Comments
1	USB to UART PCB	N/A	N/A	N/A	Placed on the EUT temporarily
1	USB cable	1 m	N/A	N/A	Laptop to UART PCB
1	Laptop*	N/A	N/A	OFC-85	

*Laptop was used only for sending commands and not used/placed during testing

Radiated Emissions

Engineer: Madhava Gooduru

Test Date: 8/20/26

Limit: Mobile Radio:

As per 87.139(a)(3) & RSS-141 section 5.2.2(c)

Limit = $43 + 10 \log_{10} P$ (in watts) dB = -13 dBm or 82.23 dBuV @3 m

Bluetooth: The emissions from an **intentional radiator** shall not exceed the field strength levels specified in the following table:

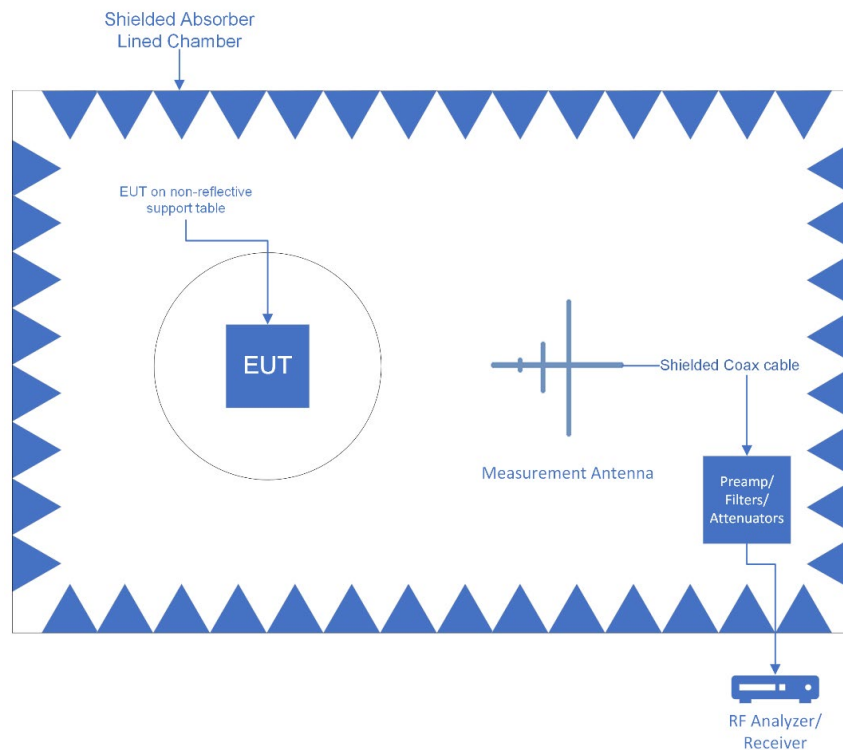
Frequency (MHz)	Field strength (microvolts/meter)	Measurement Distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Test Procedure

The EUT was tested in a semi-anechoic chamber with the turntable set 3m from the receiving antenna. A spectrum analyzer was used to verify that the EUT met the requirements for Radiated Emissions. The EUT was tested by rotating it 360 degrees with the antennas in both the vertical and horizontal orientation while raised from 1 to 4 meters to ensure the signal levels were maximized. All emissions from 30 MHz to 26 GHz were examined.

BT and VHF mobile radios were transmitted at maximum power in test cases from 30- 26000 MHz

Basic Test Setup



Sample Calculations

Corrected Value = Measured Value + Correction factor

Correction factor = Antenna Correction Factor + Cable loss + Preamp/Attenuator Factor

Summary of Test results

Freq Range	VHF Radio Freq	BT Radio Freq	Detector	Measured Frequency	Measured Amplitude	Limit	Margin
MHz	MHz	MHz	NA	MHz	dBuV/m	dBuV/m	dB
30-1000	136.975	2402	Peak	986.42	33.289	54	-20.71
30-1000	136.975	2441	Peak	981.76	31.898	54	-22.10
30-1000	136.975	2480	Peak	982.54	31.487	54	-22.51
1000-18000	136.975	2402	Peak	17981.30	51.843	74	-22.16
1000-18000	136.975	2402	Avg	17996.60	48.586	54	-5.41
1000-18000	136.975	2441	Peak	17981.30	52.140	74	-21.86
1000-18000	136.975	2441	Avg	17996.60	48.658	54	-5.34
1000-18000	136.975	2480	Peak	17981.30	54.550	74	-19.45
1000-18000	136.975	2480	Avg	17996.60	49.211	54	-4.79
18000-26000	136.975	2402	Avg	25549.60	51.917	54	-2.08
18000-26000	136.975	2402	Peak	25817.60	54.905	74	-19.10
18000-26000	136.975	2441	Avg	25332.00	51.430	54	-2.57
18000-26000	136.975	2441	Peak	25554.40	54.304	74	-19.70
18000-26000	136.975	2480	Avg	25644.00	51.000	54	-3.00
18000-26000	136.975	2480	Peak	25883.20	53.896	74	-20.10

Note 1: All other markers in the below plots from 30 - 26000MHz are the fundamental or its harmonics of mobile radio or Bluetooth signal.

Note 2: The emissions exceeding the FCC §15.209 limits are not the result of intermodulation between the two radios.

Radiated Emissions 30-1000 MHz

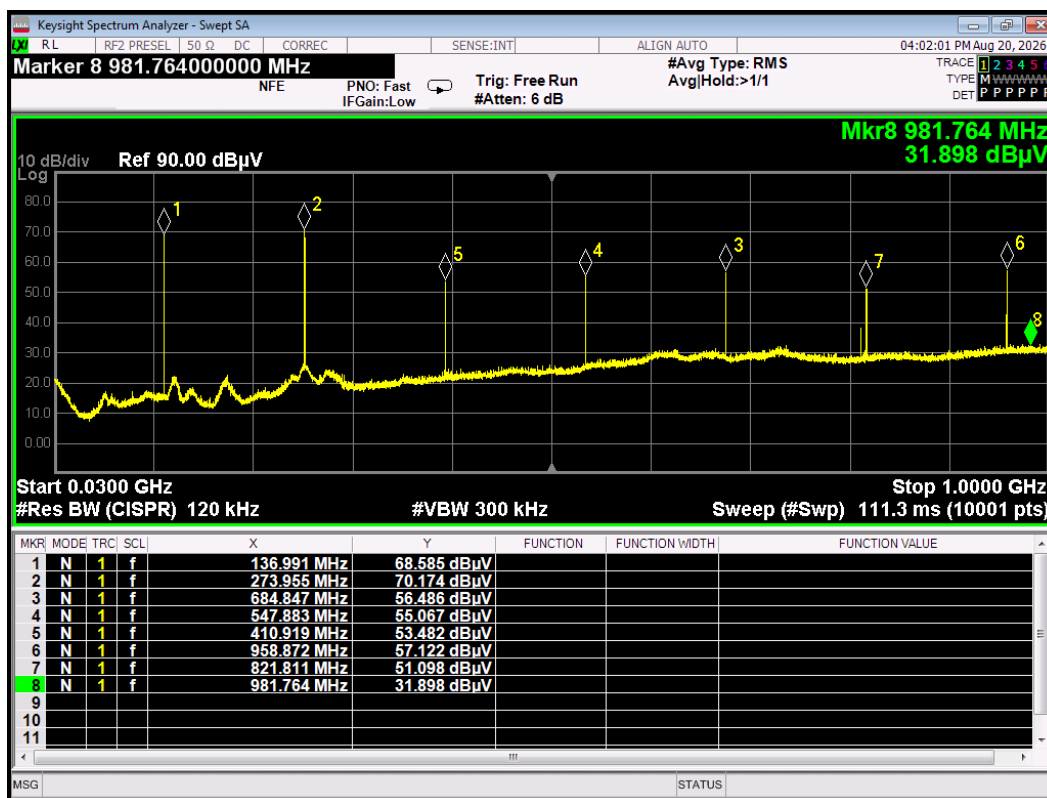


Figure 1: RE 30-1000 MHz_LMR-136.975MHz_BT-2402MH

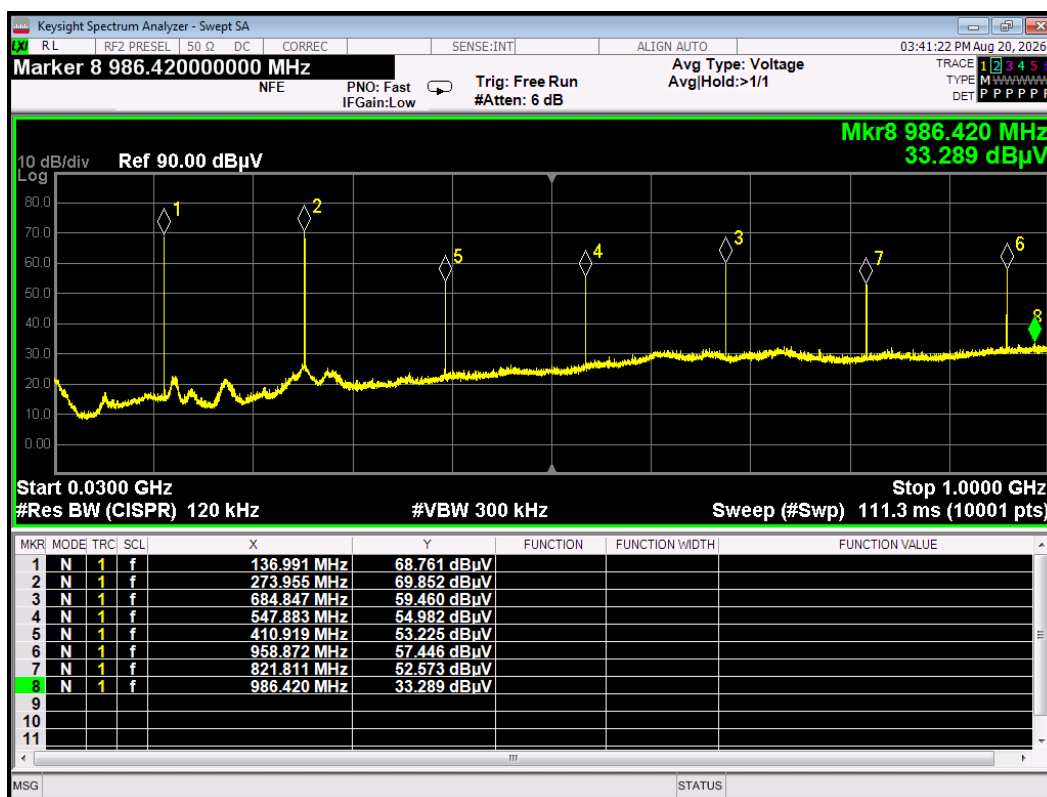


Figure 2: RE 30-1000 MHz_LMR-136.975MHz_BT-2441MH

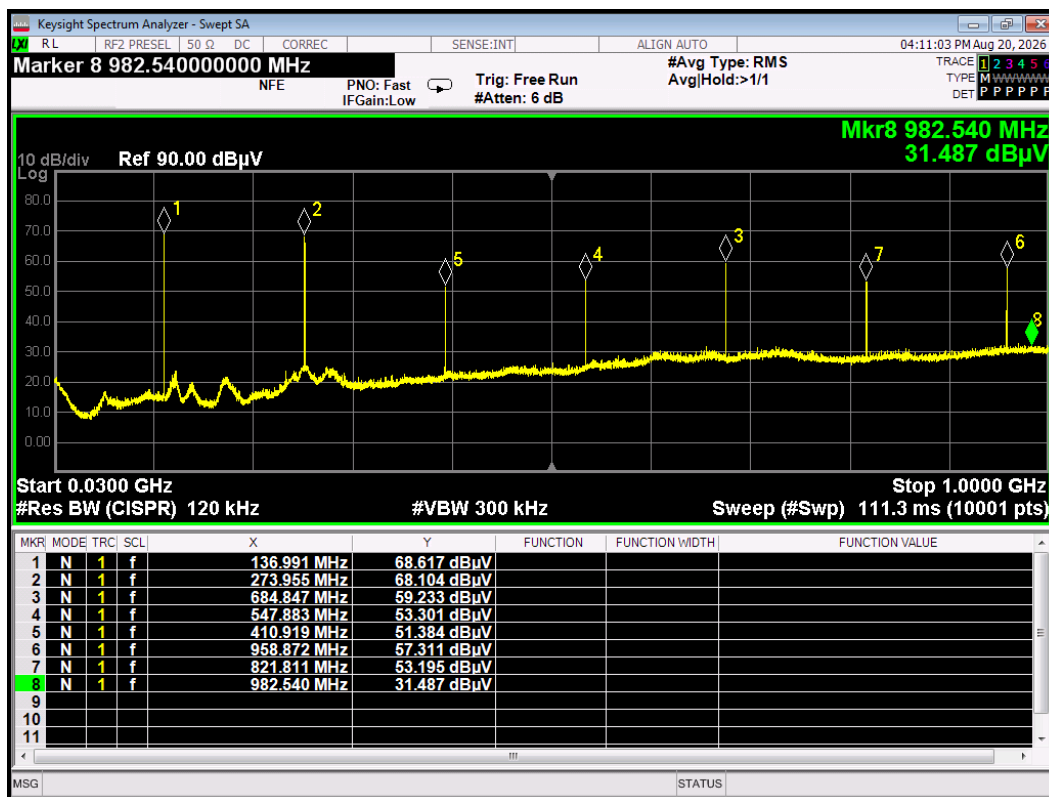


Figure 3: RE 30-1000 MHz_LMR-136.975MHz_BT-2480MH

Radiated Emissions 1 – 18 GHz

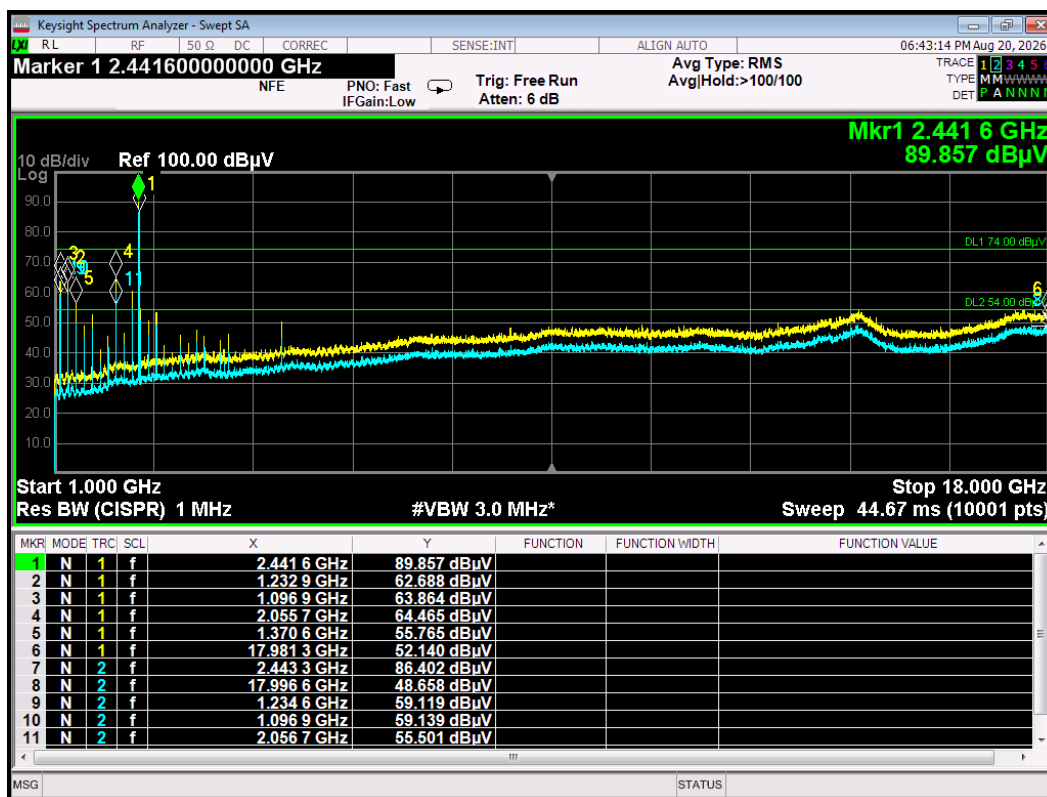


Figure 4: RE 1-18 GHz_LMR-136.975MHz_BT-2441MH

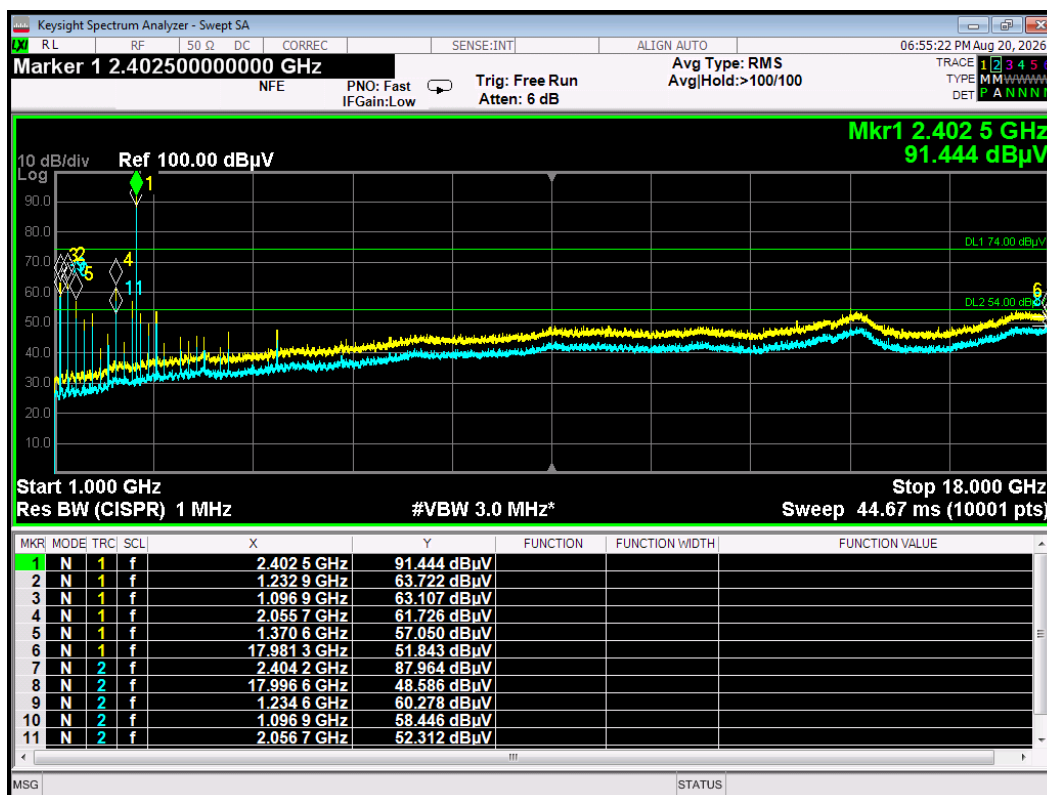


Figure 5: RE 1-18 GHz_LMR-136.975MHz_BT-2402MH

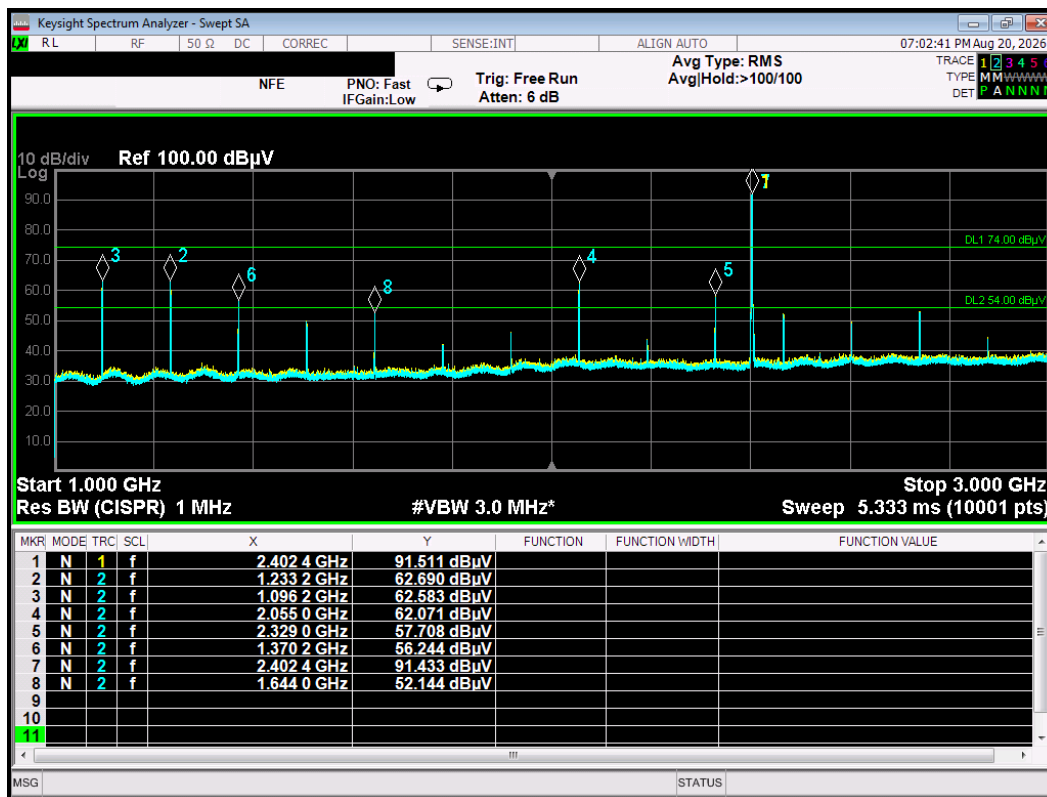


Figure 6: RE 1-18 GHz_LMR-136.975MHz_BT-2480MH

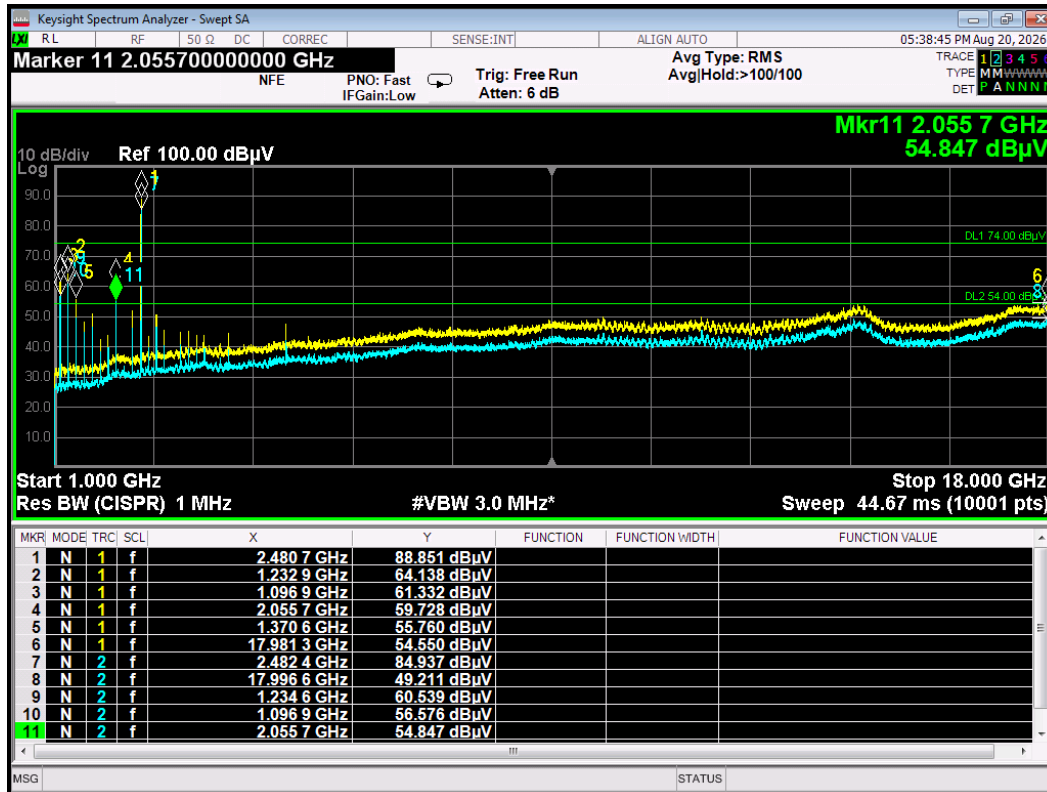


Figure 7: RE 1-3 GHz_LMR-136.975MHz_BT-2480MH

Radiated Emissions 18 -26 GHz

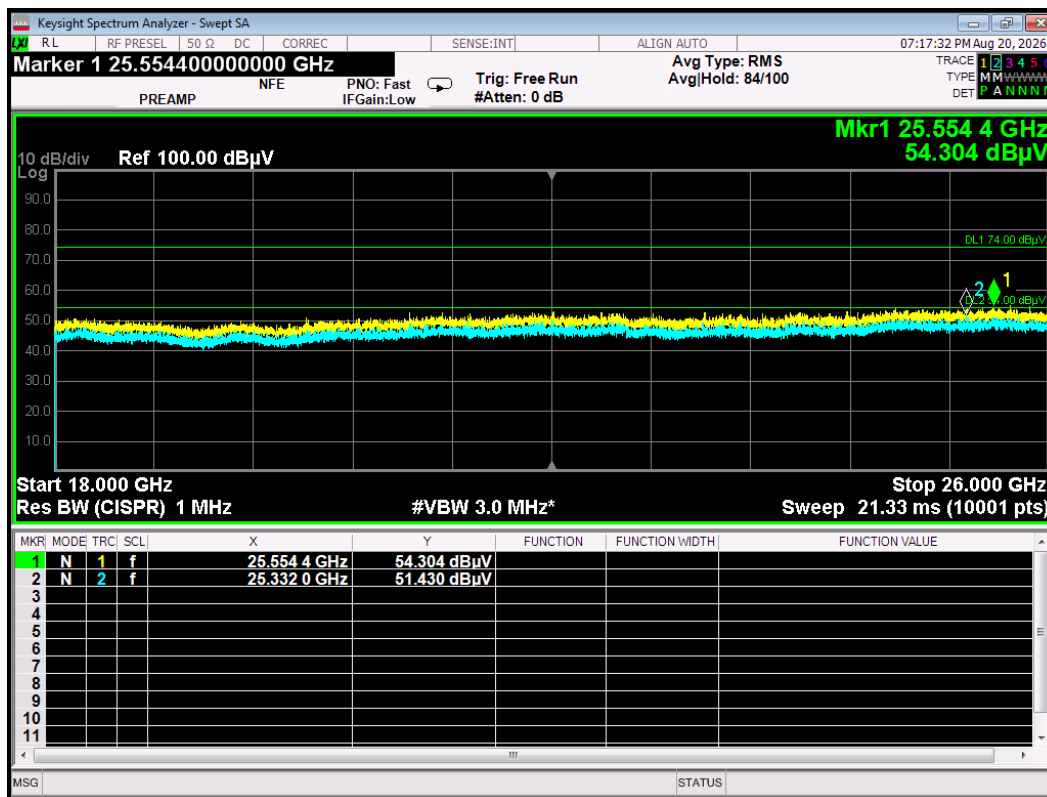


Figure 8: RE 18-26 GHz_LMR-136.975MHz_BT-2402MH

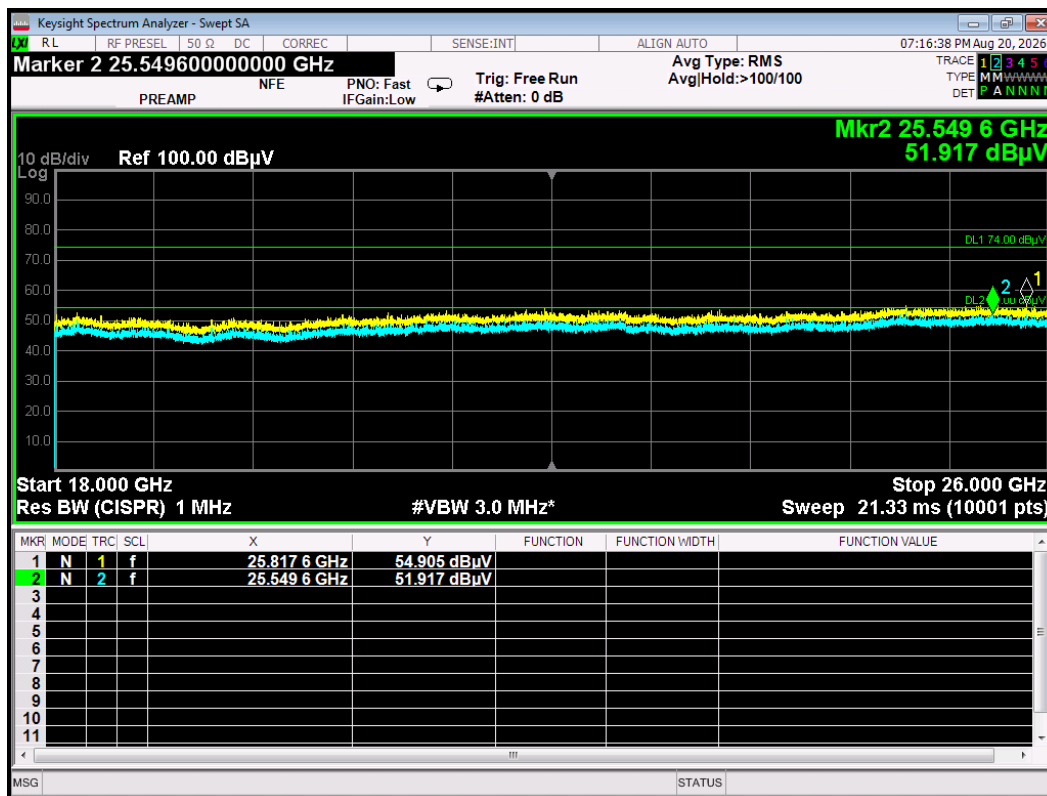


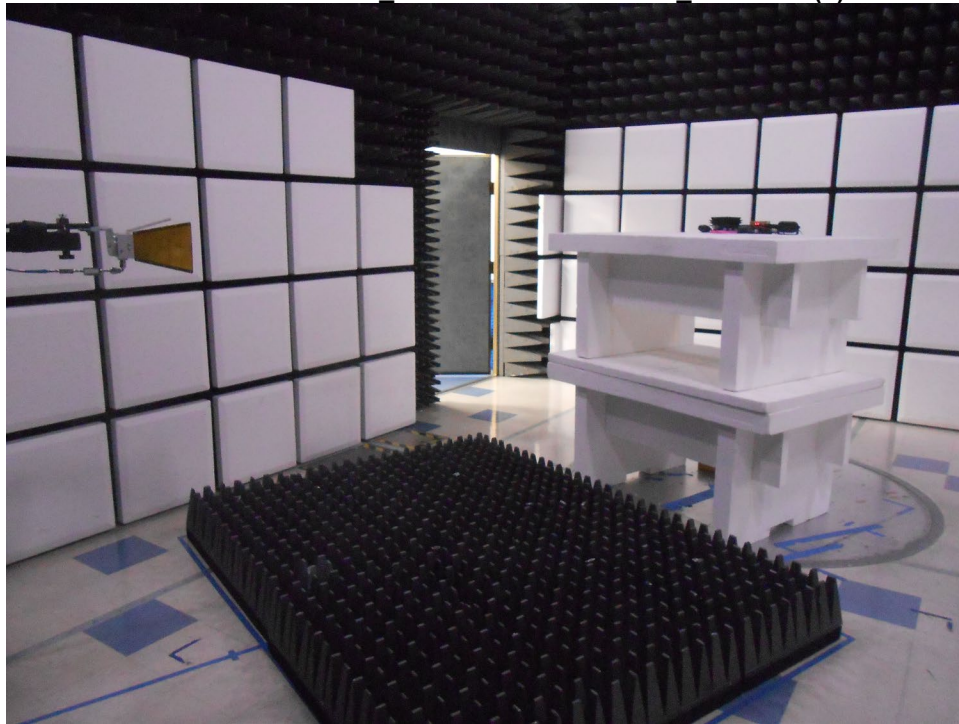
Figure 9: RE 18-26 GHz_LMR-136.975MHz_BT-2440MH



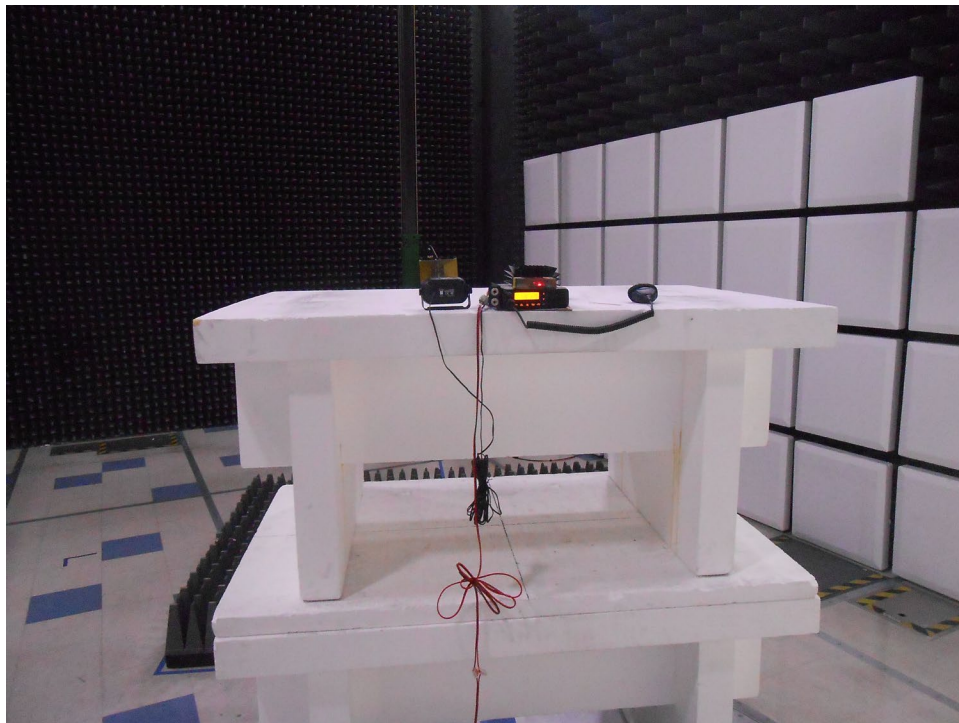
Figure 10: RE 18-26 GHz_LMR-136.975MHz_BT-2480MH

Radiated Emissions Test Setup Photos

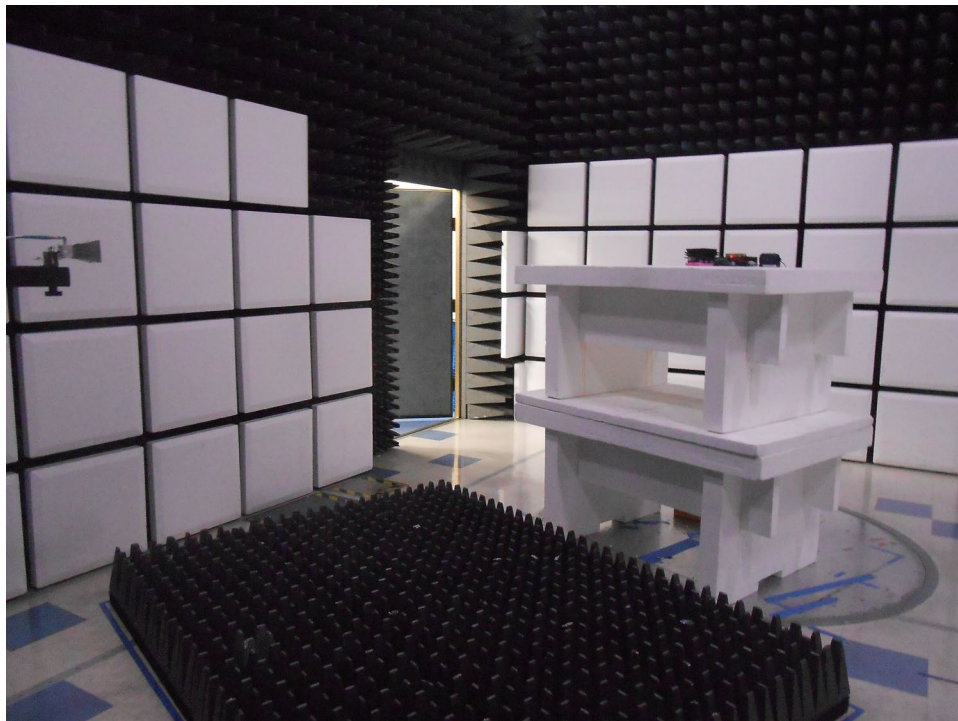
Radiated Emissions_ BT+VHF Radio TX ON_ 1-18 GHz (1)



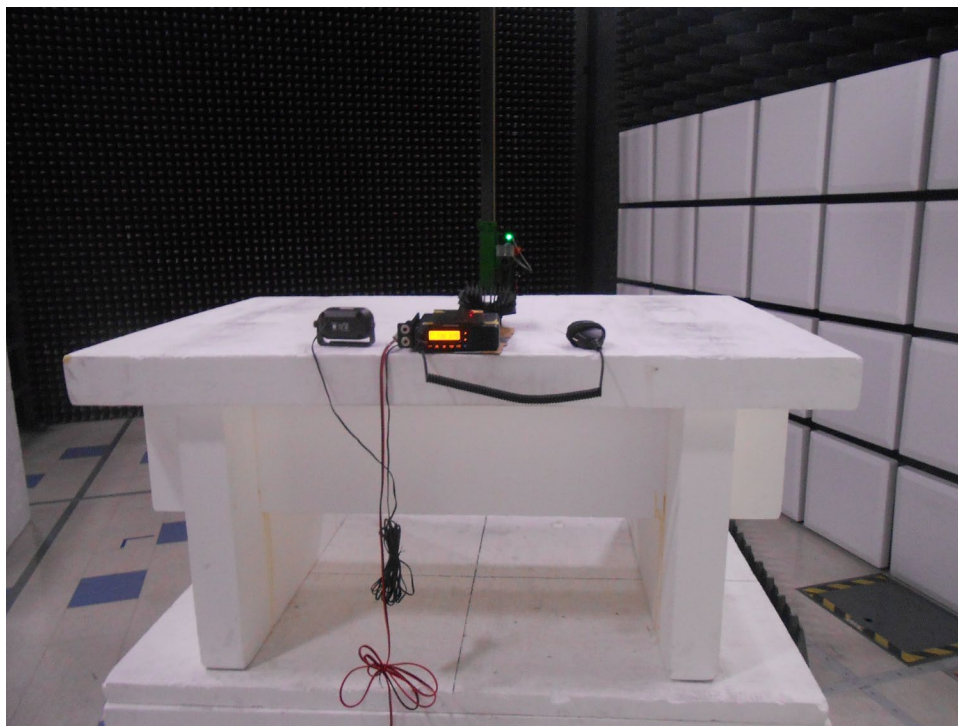
Radiated Emissions_ BT+ VHF Radio _TX ON_1-18 GHz (2)



Radiated Emissions_ BT+ VHF Radio _TX ON_18 - 26 GHz (1)



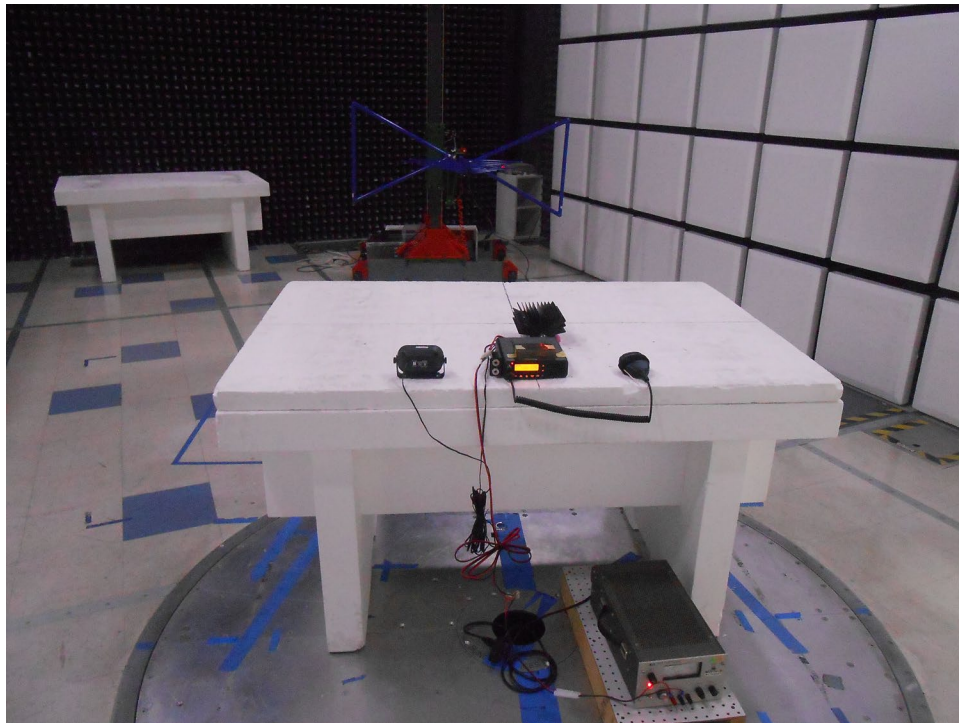
Radiated Emissions_ BT+ VHF Radio _TX ON_18 - 26 GHz (2)



Radiated Emissions_ BT+ VHF Radio _TX ON_30-1000 MHz (1)



Radiated Emissions_ BT+ VHF Radio _TX ON_30-1000 MHz (2)



Test Equipment Utilized

Description	Manufacturer	Model #	CT Asset #	Last Cal Date	Cal Due Date
Temp./Humidity/Pressure Monitor (Main Lab)	Omega Engineering	iBTHX-W-5	i00686	1/25/26	1/25/27
3 Meter Semi-Anechoic Chamber	Panashield	3 Meter Semi-Anechoic Chamber	i00428	7/13/23	7/13/26*
44GHz EMI receiver	Keysight	N9038A	i00552	3/23/26	3/23/27
Bi-Log Antenna	Schaffner	CBL 6111D	i00349	2/27/25	2/27/27
Horn Antenna (1-18GHz)	EMCO	3115	i00271	02/24/25	02/24/27
Preamplifier	COM-Power	PAM-103	i00734	Verified on: 7/13/26	
Preamplifier	Eravant	STB-0114034018-KFKF-WP	i00787	Verified on: 7/13/26	

In addition to the above listed equipment, standard RF connectors and cables were utilized in the testing of the equipment described. Prior to testing, these components were tested to verify proper operation.

Note: * A two-month extension to the calibration due date was approved by the QC Manager.

Measurement Uncertainty

Measurement Uncertainty (U_{lab}) for Compliance Testing is listed in the table below.

Measurement	U_{lab}
Radio Frequency	$\pm 3.3 \times 10^{-8}$
RF Power, conducted	± 1.5 dB
RF Power Density, conducted	± 1.0 dB
Conducted Emissions	± 1.8 dB
Radiated Emissions 9kHz-30MHz	± 3.6 dB
Radiated Emissions 30MHz-1000MHz	± 4.25 dB
Radiated Emissions – 1GHz-18GHz	± 4.5 dB
Temperature	± 1.5 deg C
Humidity	± 4.3 %
DC voltage	± 0.20 VDC
AC Voltage	± 1.2 VAC

The reported expanded uncertainty $\pm U_{lab}(\text{dB})$ has been estimated at a 95% confidence level ($k=2$)

U_{lab} is less than or equal to U_{ETSI} therefore

- Compliance is deemed to occur if no measured disturbance exceeds the disturbance limit
- Non-Compliance is deemed to occur if any measured disturbance exceeds the disturbance limit

END OF TEST REPORT