

TEST REPORT

Report Number: 15941282-E13V2

Applicant : APPLE INC.
1 APPLE PARK WAY
CUPERTINO, CA 95104, U.S.A.

Model : A3575 (Parent)
A3634 (Variants)

Brand : APPLE

FCC ID : BCG-E9145A (Parent)
BCG-E9147A (Variants)

IC : 579C-E9145A (Parent)
579C-E9147A (Variants)

EUT Description : SMARTPHONE

Test Standard(s) : FCC 47 CFR PART 2, PART 25
ISED RSS-GEN ISSUE 5 + A1 + A2, RSS-170 ISSUE 4

Date Of Issue:
December 29, 2025

Prepared by:
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Revision History

Rev.	Issue Date	Revisions	Revised By
V1	12/15/2025	Initial Issue	--
V2	12/29/2025	Added Antenna Type in Section 6.4; Reformatted Due Date in Section 7; Reformatted Rules in Sections 8, 9.2, 9.3, 10.1, 10.2, 10.3 and 10.4; Added Limit (dBm) in Sections 10.1.1, 10.1.2, 10.1.3 and 10.1.4;	Thu Chan

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1. ATTESTATION OF TEST RESULTS

Applicant Name and Address	APPLE INC. 1 APPLE PARK WAY CUPERTINO, CA 95014, U.S.A.		
Model	A3575 (Parent) A3634 (Variants)		
Brand	APPLE		
FCC ID	BCG-E9145A (Parent) BCG-E9147A (Variants)		
IC	579C-E9145A (Parent) 579C-E9147A (Variants)		
EUT Description	SMARTPHONE		
Serial Number	C07HHV0000V00016Y (Conducted) DL4RYVMX42 & GJF656CX93 (Radiated)		
Sample Receipt Date	2025-07-29		
Date Tested	2025-09-09 to 2025-12-02		
Applicable Standards	FCC 47 CFR PART 2, PART 25 ISED RSS-GEN ISSUE 5 + A1 + A2, RSS-170 ISSUE 4		
Test Results	COMPLIES		
UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report. The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise. This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document.			
Approved & Released By:		Prepared & Reviewed By:	
			
Thu Chan Staff Engineer UL Verification Services, Inc.		Chris Xiong Laboratory Engineer UL Verification Services, Inc.	

2. SUMMARY OF TEST RESULTS

This report contains data provided by the customer which can impact the validity of results. UL Verification Services Inc. is only responsible for the validity of results after the integration of the data provided by the customer.

Below is a list of the data provided by the customer:

1. Antenna gain and type (see Section 6.4)
2. Cable loss (see Section 8)

Requirement Description	Requirement Clause Number (FCC)	Requirement Clause Number (ISED)	Result	Remarks
RF Output Power Verification	25.204 (a)	RSS-170 §5.5	Complies	N/A
Occupied Bandwidth	2.1049	RSS-170 RSS-GEN	Reporting purposes only	N/A
Emissions Mask - within 250% of Authorized Bandwidth	25.202 (f)(1)&(2)	RSS-170 §5.8 (a) (b)	Complies	N/A
Out of Band Emissions	25.202 (f)(3)	RSS-170 §5.8 (c)	Complies	N/A
Additional Unwanted Emission (1559-1610MHz)	25.216 (c)&(g) FCC 03-283	RSS-170 §5.9.1	Complies	N/A
Carrier-Off State Emissions (1559-1610MHz)	25.216 (i) FCC 03-283	RSS-170 §5.10	Complies	N/A
Frequency Stability	25.202 (d)	RSS-170 §5.3	Complies	N/A

3. TEST METHODOLOGY

The tests documented in this report were performed in accordance with the following.

FCC published lists of [measurement procedures](#) for compliance testing.

ISED published lists of [normative test standards and acceptable alternatives procedures](#).

- ANSI C63.26:2015
- ANSI/TIA-603-E (2016)
- FCC 47 CFR Part 2, Part 25
- [FCC KDB 971168 D01](#) : Power Meas License Digital Systems (ISED acceptable alternative procedure)
- [FCC KDB 971168 D02](#) : Misc Rev Approv License Devices
- [FCC KDB 412172 D01](#) : Determining ERP and EIRP
- ISED RSS-GEN ISSUE 5 + A1 + A2, RSS-170 ISSUE 4

4. FACILITIES AND ACCREDITATION

UL Verification Services Inc. is accredited by A2LA, certification #0751.05, for all testing performed within the scope of this report. Testing was performed at the locations noted below.

	Address	ISED CABID	ISED Company Number	FCC Registration
☒	Building 1: 47173 Benicia Street, Fremont, CA 94538 USA	US0104	2324A	550739
☒	Building 2: 47266 Benicia Street, Fremont, CA 94538 USA			
☐	Building 3: 843 Auburn Court, Fremont, CA 94538 USA			
☐	Building 4: 47658 Kato Rd, Fremont, CA 94538 USA			
☒	Building 5: 47670 Kato Rd, Fremont, CA 94538 USA			

5. DECISION RULES AND MEASUREMENT UNCERTAINTY

5.1. METROLOGICAL TRACEABILITY

All test and measuring equipment utilized to perform the tests documented in this report are calibrated on a regular basis, with a maximum time between calibrations of one year or the manufacturers' recommendation, whichever is less, and where applicable is traceable to recognized national standards.

5.2. DECISION RULES

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4:2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

5.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	U _{Lab}
Worst Case Conducted Disturbance, 9KHz to 0.15 MHz	3.78 dB
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.40 dB
Worst Case Radiated Disturbance, 9KHz to 30 MHz	2.87 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	6.01 dB
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.73 dB
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.51 dB
Worst Case Radiated Disturbance, 26000 to 40000 MHz	5.29 dB
Occupied Channel Bandwidth	±1.22 %
Temperature	±0.57 °C
Supply voltages	±0.57 %
Time	±3.39 %

Uncertainty figures are valid to a confidence level of 95%.

5.4. SAMPLE CALCULATION

RADIATED EMISSIONS

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m)
 = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)
 = 36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

6. EQUIPMENT UNDER TEST

6.1. DESCRIPTION OF EUT

The Apple iPhone is a smartphone with GSM, GPRS, EGPRS, WCDMA, LTE, 5G NR1, IEEE 802.11a/b/g/n/ac/ax, Bluetooth (BT), Global Positioning System (GPS), Near-Field Communication (NFC) and Mobile Satellite Service (MSS) technologies. The rechargeable battery is not user accessible.

6.2. MAXIMUM OUTPUT POWER

EIRP/ERP TEST PROCEDURE

ANSI C63.26:2015

KDB 971168 D01 Section 5.6

$$\text{EIRP} = \text{PMeas} + \text{GT} - \text{LC}$$

where: EIRP = effective isotropic radiated power, respectively (expressed in the same units as PMeas, typically dBW or dBm);

PMeas = measured transmitter output power or PSD, in dBm or dBW;

GT = gain of the transmitting antenna, in dBi (EIRP);

LC = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

For devices utilizing multiple antennas, KDB 662911 provides guidance for determining the effective array transmit antenna gain term to be used in the above equation.

The transmitter has a maximum average conducted and EIRP output powers as follows:

FCC Part 25 & ISSED RSS-170 (1610 - 1626.5MHz):

Frequency (MHz)	Conducted Average Power (dBm)	Antenna Gain (dBi)	Limit (W)	EIRP		99% BW (kHz)	Emission Designator
				(dBm)	(W)		
1610.17	28.70	-1.4	10000	27.30	0.537	204.30	204KG1D
1618.40	28.70		10000	27.30	0.537	205.61	206KG1D
1626.03	28.68		10000	27.28	0.535	204.24	204KG1D

6.3. SOFTWARE AND FIRMWARE

The Software and Firmware version used at test is: 2.00.60-7

6.4. MAXIMUM ANTENNA GAIN

The IFA antenna(s) gain as provided by the manufacturer are as follow:

Frequency Range (MHz)	Antenna Gain ANT 1 (dBi)	Antenna Gain ANT 4 (dBi)
1610-1626.5	-2.7	-1.4

6.5. WORST-CASE CONFIGURATION AND MODE

The EUT was investigated in three orthogonal orientations: X (Flatbed), Y (Landscape), and Z (Portrait) on both ANT 1 and ANT 4. It was determined that X (Flatbed) orientation was the worst-case orientation with AC/DC adapter for both ANT 1 and ANT 4.

The emissions mask tests were performed based on declared authorized bandwidths of 200kHz, 230kHz and 280kHz.

Radiated spurious emissions below 1GHz were performed with the highest output power on both ANT 1 and ANT 4 as worst-case scenario.

Radiated spurious emissions below 30MHz were investigated and there were no emissions found with less than 20dB of margin below the specified emissions limits.

For simultaneous transmission of multiple channels in the 2.4GHz/5GHz WLAN, tests were conducted for various configurations having the highest power, least separation in frequencies and widest operation bandwidths. No noticeable new emission was found.

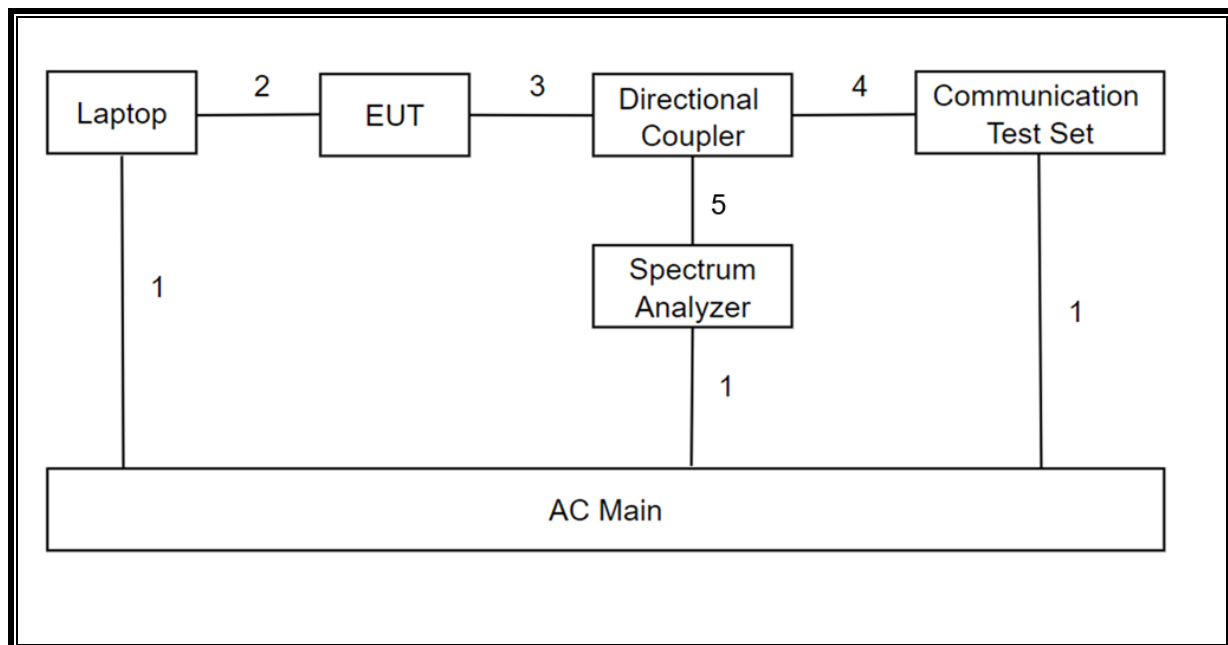
6.6. DESCRIPTION OF TEST SETUP

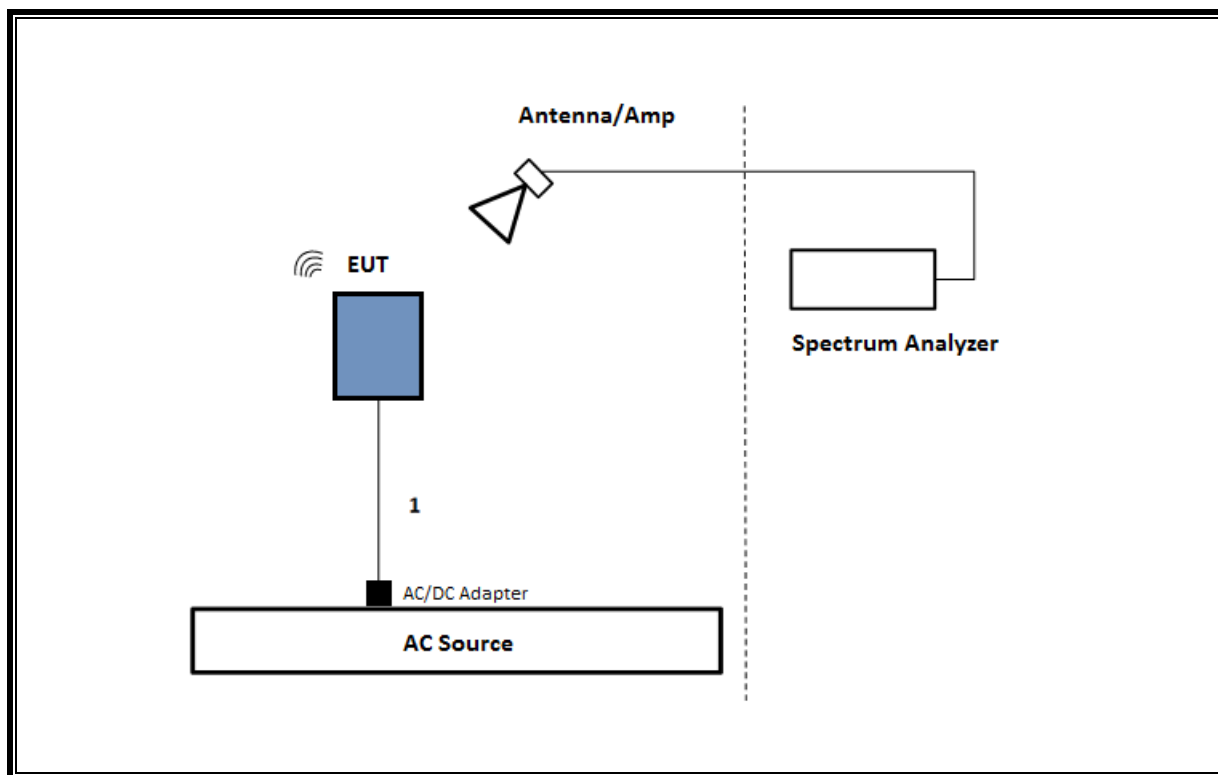
SUPPORT TEST EQUIPMENT				
Description	Manufacturer	Model	Serial Number	FCC ID/ DoC
Laptop	Apple	MacBook Pro	F5JJ42D7R9	DoC
Laptop AC/DC Adapter	Apple	61W Charger	C06939403RAJFYFBU	DoC
EUT AC/DC Cable	Apple	A246F	FTLHDB001KW0001061	DoC
EUT AC/DC Adapter	Apple	B820	C4H9516000GPF4F4H	DoC

I/O CABLES (RF CONDUCTED TEST)						
Cable No.	Port	# Of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	AC	3	US 115V	Un-shielded	2.0	N/A
2	USB	1	Type-C	Shielded	2.0	N/A
3	RF In/Out	1	SMA	Shielded	1.0	N/A
4	RF In/Out	1	SMA	Shielded	0.5	N/A
5	RF In/Out	1	SMA Adapter	N/A	N/A	N/A

I/O CABLES (RF RADIATED TEST)						
Cable No.	Port	# Of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	AC	1	Type-C	Un-shielded	1.0	N/A

CONDUCTED SETUP



RADIATED SETUP

7. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Description	Manufacturer	Model	ID Num	Cal Due
PXA Signal Analyzer	Keysight Technologies Inc	N9030B	222072	2026-01-31
PXA Signal Analyzer	Keysight Technologies Inc	N9030B	222071	2026-01-31
Directional Coupler	KRYTAR	152610	231740	2026-07-31
Wideband Communication Test Set, Call Box	Rohde & Schwarz	CMW500	AOU396816	2027-08-06
Environmental Chamber	Cincinnati Sub Zero - division of Weiss Technik	ZPHS-8-3.5-SCT/WC	82472	2026-03-31
EMI TEST RECEIVER, with B8 option	Rohde & Schwarz	ESW44	169937	2026-02-28
Antenna, Horn 1-18GHz	ETS-Lindgren (Cedar Park, Texas)	3117	81886	2027-03-31
Filter Box	UL-FR1	RATS 1.0, 2 Amp, 6 Port	168535	2026-01-26
Antenna, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences Corp.	JB3	85150	2025-12-31
Amplifier, 9KHz to 1GHz, 32dB	SONOMA INSTRUMENT	310N	170649	2026-01-31
Antenna, Passive Loop 30Hz - 1MHz	ELECTRO-METRICS	EM-6871	29637	2026-09-30
Antenna, Passive Loop 100kHz to 30MHz	ELECTRO-METRICS	EM-6872	29640	2026-09-30
Power Meter, P-series single channel	Keysight Technologies Inc	N1911A	90733	2026-01-31
Power Sensor, P - series, 50MHz to 18GHz, Wideband	Keysight Technologies Inc	N1921A	257705	2026-03-03

UL AUTOMATION SOFTWARE			
Radiated Software	UL	UL EMC	Ver 9.5, May 1, 2023

NOTES:

1. * = Testing is completed before equipment expiration date.
2. Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.

8. RF OUTPUT POWER MEASUREMENT

LIMITS

FCC: §25.204 Power and out-of-band emission limits for earth stations.

(a) In bands shared coequally with terrestrial radio communication services, the equivalent isotropically radiated power transmitted in any direction towards the horizon by an earth station, other than an ESV, operating in frequency bands between 1 and 15 GHz, shall not exceed the following limits except as provided for in paragraph (c) of this section:

+ 40 dBW in any 4 kHz band for $\theta \leq 0^\circ$

+ 40 + 3 θ dBW in any 4 kHz band for $0^\circ < \theta \leq 5^\circ$

where θ is the angle of elevation of the horizon viewed from the center of radiation of the antenna of the earth station and measured in degrees as positive above the horizontal plane and negative below it.

ISED RSS-170 §5.5 Transmitter output power for MESs

The application for MES certification shall state the MES e.i.r.p. that is necessary for satisfactory communication. The maximum permissible e.i.r.p. will be the stated e.i.r.p. plus a 2 dB margin. If a detachable antenna is used, the certification application shall state the recommended antenna type and manufacturer, the antenna gain and the maximum transmitter output power at the antenna terminal.

TEST PROCEDURE

The transmitter output is connected to a wideband power meter/sensor which is greater than the occupied bandwidth as worst-case scenario, also the total power readings still comply with the required limit.

The cable assembly insertion loss of 13.40 dB (ANT 1) / 13.20 dB (ANT 4) (including 10.70 dB coupler and 2.70 dB cable (ANT 1) and 2.50 dB cable (ANT 4)) was entered as an offset in the power meter to allow for a gated average reading of power.

RESULTS

Test Engineer:	32546
Test Date:	2025-09-09

Test Frequency (MHz)	Conducted Average Power (dBm)		Antenna Gain (dBi)		EIRP Average Power (dBm)	
	ANT 1	ANT 4	ANT 1	ANT 4	ANT 1	ANT 4
1610.17	27.10	28.70	-2.7	-1.4	24.400	27.300
1618.40	27.02	28.70			24.320	27.300
1626.03	27.20	28.68			24.500	27.280

9. CONDUCTED TEST RESULTS

9.1. OCCUPIED BANDWIDTH

RULE PART(S)

FCC: §2.1049
ISED RSS-170 and RSS-GEN

LIMITS

For reporting purposes only.

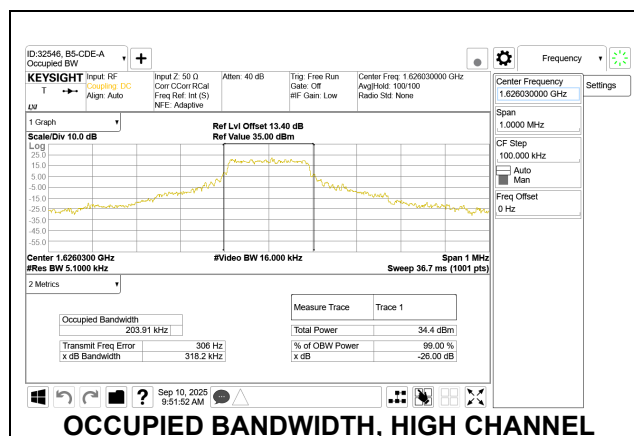
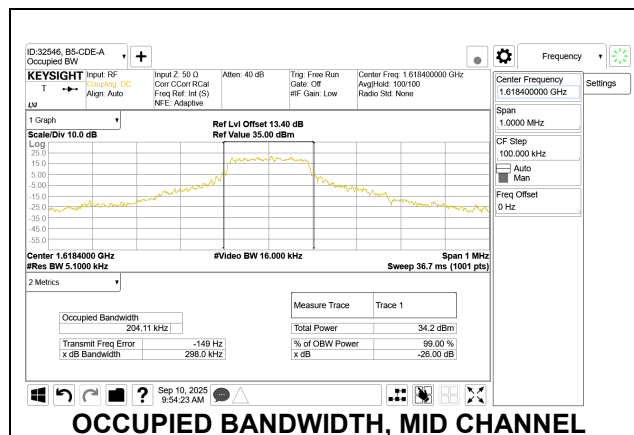
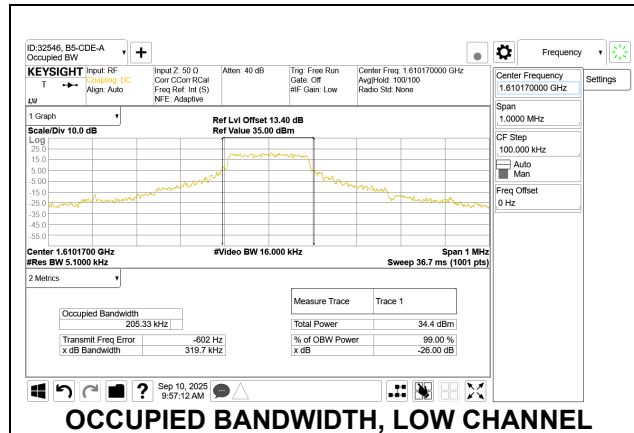
TEST PROCEDURE

The transmitter output was connected to a calibrated coaxial cable and coupler, the other end of which was connected to a spectrum analyzer. The occupied bandwidth was measured with the spectrum analyzer at the middle channel in each band. The nominal RBW shall be in the range of 1% to 5% of the anticipated OBW, and the VBW shall be set $\geq 3 \times$ RBW. The 99% bandwidths were measured and recorded.

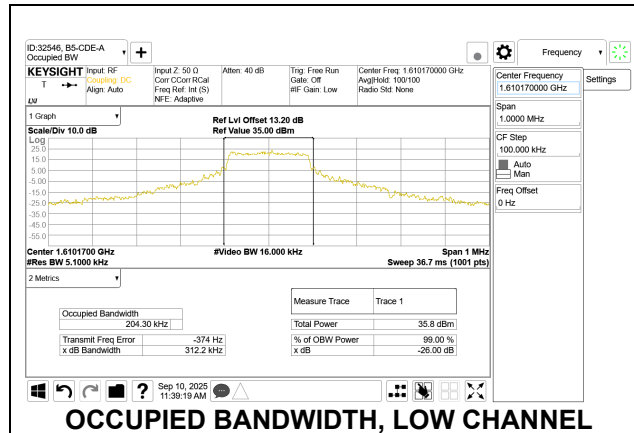
RESULTS

Test Engineer:	32546
Test Date:	2025-09-10

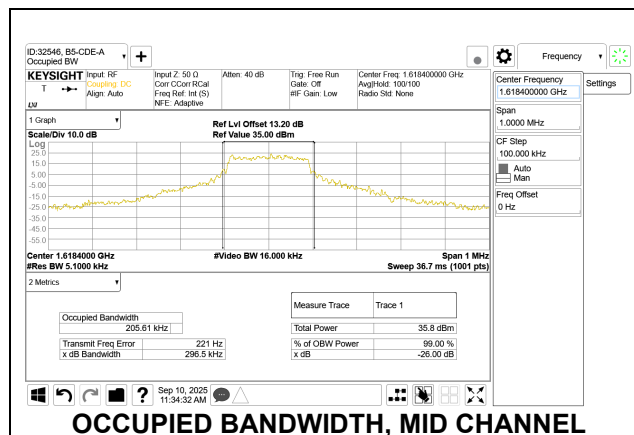
Test Frequency (MHz)	99% Bandwidth (kHz) ANT 1	99% Bandwidth (kHz) ANT 4
1610.17	205.33	204.30
1618.40	204.11	205.61
1626.03	203.91	204.24

9.1.1. ANT 1

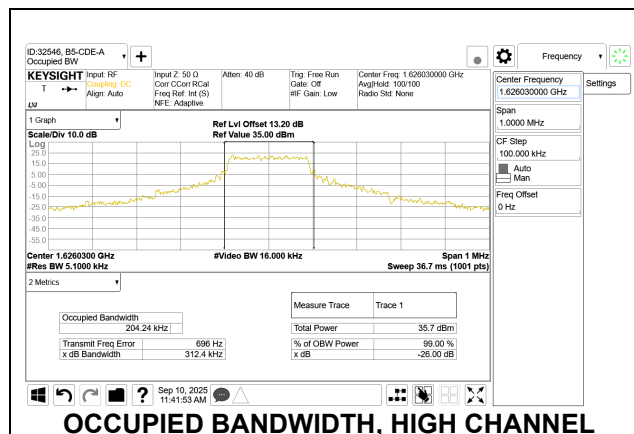
9.1.2. ANT 4



OCCUPIED BANDWIDTH, LOW CHANNEL



OCCUPIED BANDWIDTH, MID CHANNEL



OCCUPIED BANDWIDTH, HIGH CHANNEL

9.2. EMISSIONS MASK WITHIN 250% OF AUTHORIZED BANDWIDTH

LIMITS

FCC §25.202 Frequencies, Frequency Tolerance, and Emission Limits.

(f) Emission limitations. Except for SDARS terrestrial repeaters and as provided for in paragraph (i), the mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the schedule set forth in paragraphs (f)(1) through (f)(4) of this section. The out-of-band emissions of SDARS terrestrial repeaters shall be attenuated in accordance with the schedule set forth in paragraph (h) of this section.

(1) In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 50 percent up to and including 100 percent of the authorized bandwidth: 25 dB;

(2) In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 100 percent up to and including 250 percent of the authorized bandwidth: 35 dB;

ISED RSS-170 §5.8 Unwanted emission limits for MESs in all frequency bands

The average power of unwanted emissions shall be attenuated below the average output power, P (dBW), of the transmitter, as specified below:

- a. 25 dB in any 4 kHz, the frequency of which is offset from the channel centre frequency by more than 50%, up to and including 100% of the occupied bandwidth or necessary bandwidth, whichever is greater.
- b. 35 dB in any 4 kHz, the frequency of which is offset from the channel centre frequency by more than 100%, up to and including 250% of the occupied bandwidth or necessary bandwidth, whichever is greater.

TEST PROCEDURE

The transmitter output was connected to a calibrated coaxial cable and coupler, the other end of which was connected to a spectrum analyzer. The channel edge emissions were measured on the low, mid and high channels. The limits within 250% of the authorized bandwidth are relative to the total in-band (channel) power. The measurement bandwidth (RBW) is set to ≥ 4 kHz and VBW set to at least 3 times the RBW. To measure the average value of the emissions the detector is set to rms while observing the minimum required number of points as detailed in ANSI C63.26 for average rms measurements. The sweep time is set to 2ms multiplied by the number of points to obtain the average over 2ms. Multiple sweeps with max hold enabled are made to capture the maximum average value.

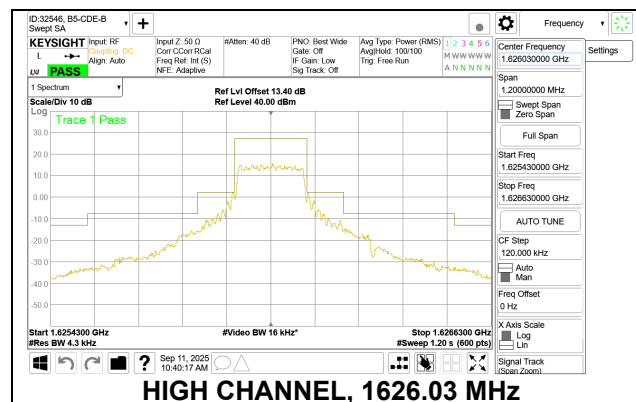
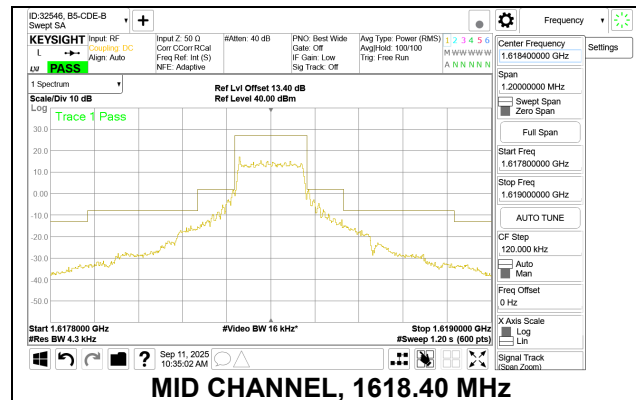
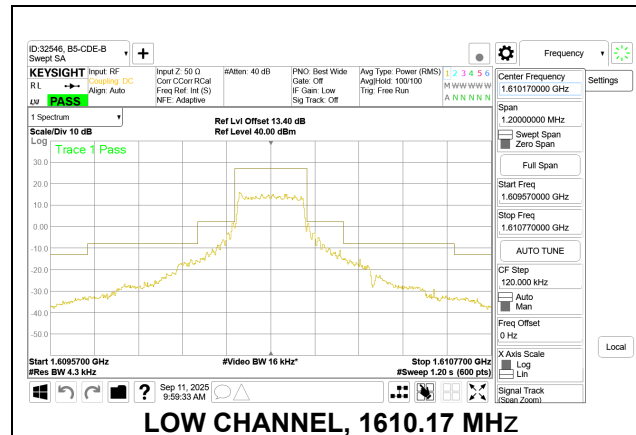
RESULTS

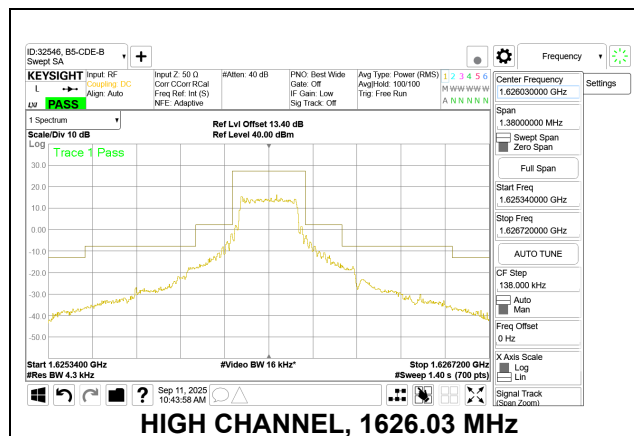
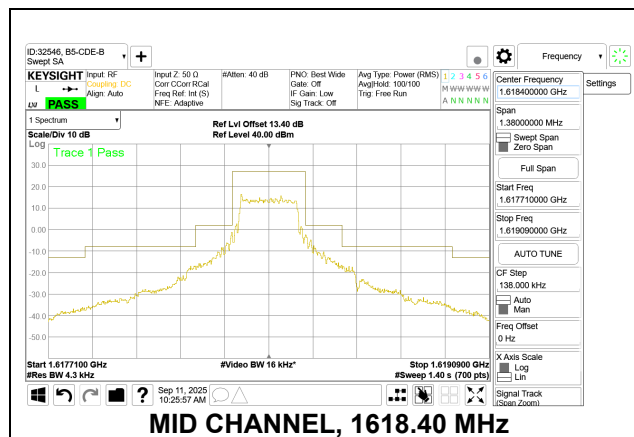
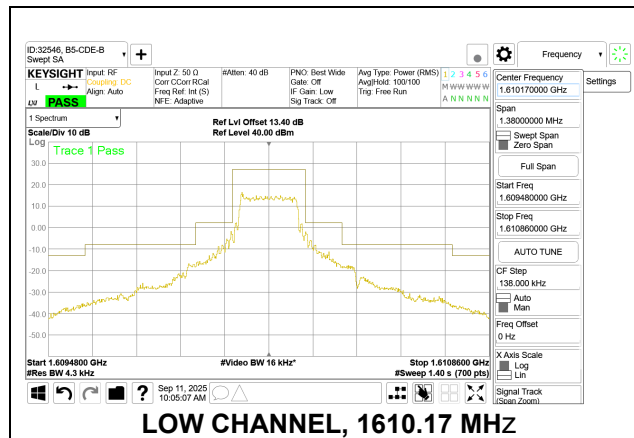
The tests were performed based on declared authorized bandwidths of 200 kHz, 230 kHz and 280 kHz.

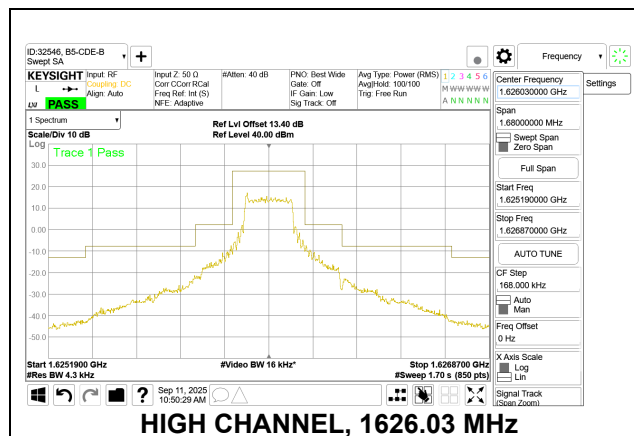
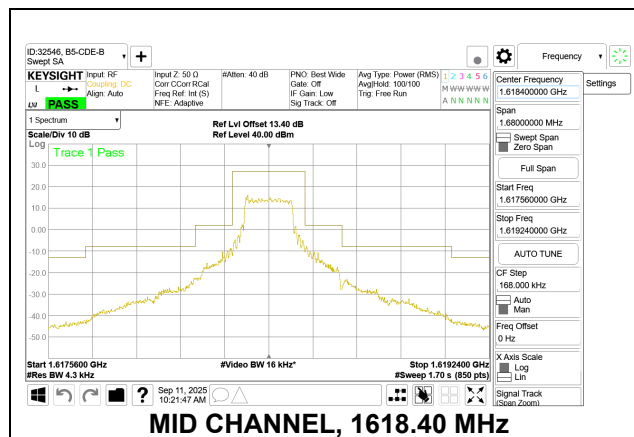
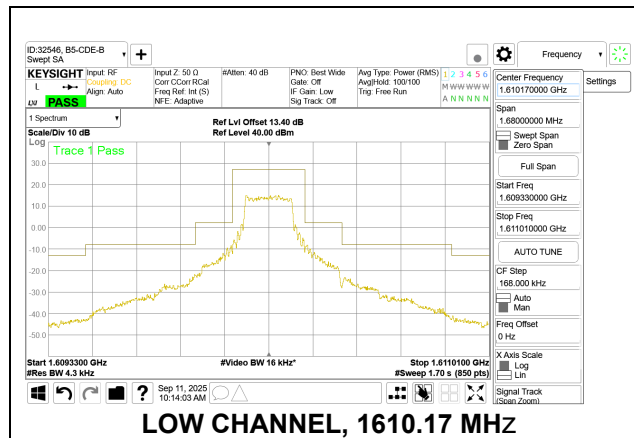
Test Engineer:	32546
Test Date:	2025-09-10

9.2.1. ANT 1

200 kHz Authorized Bandwidth

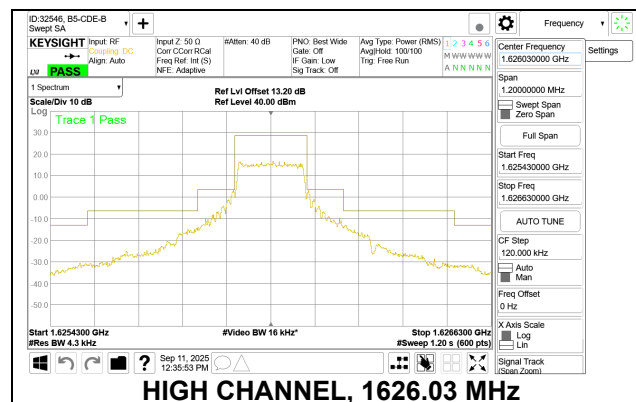
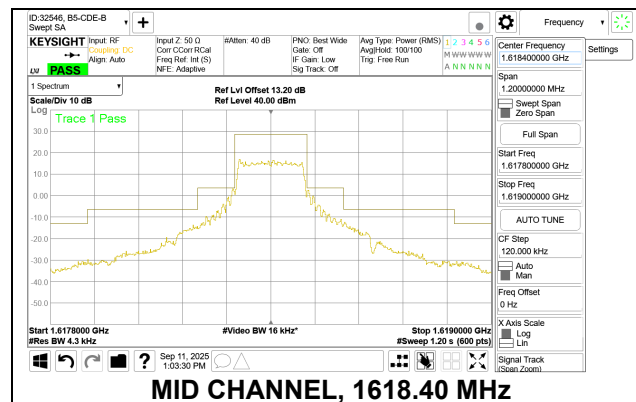
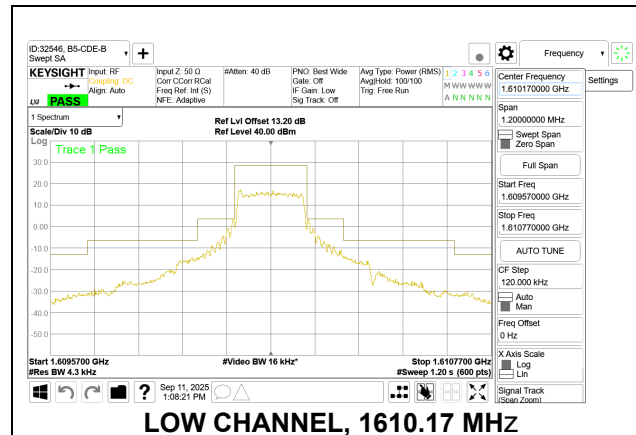


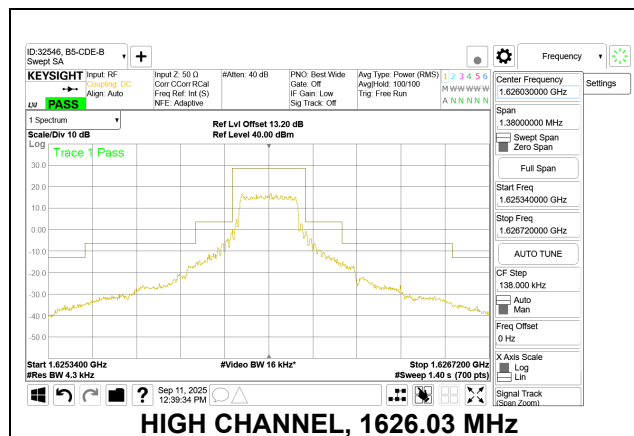
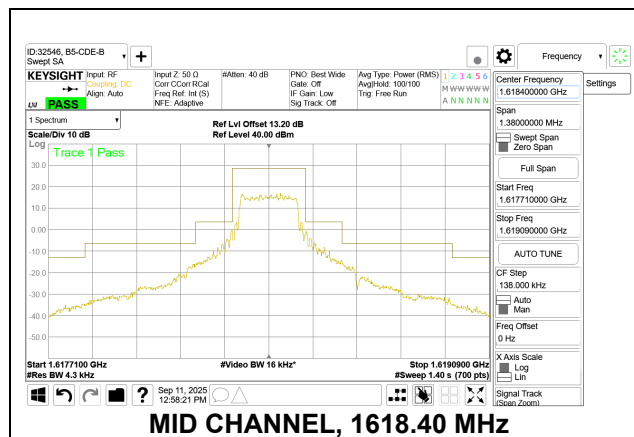
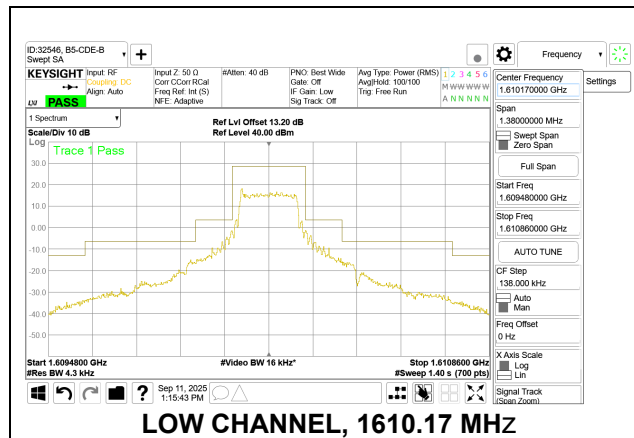
230 kHz Authorized Bandwidth

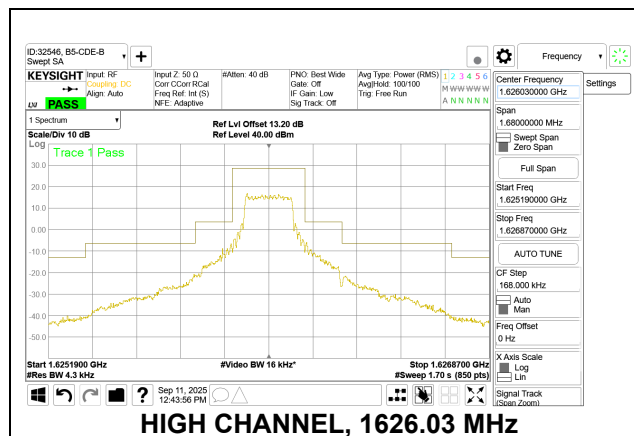
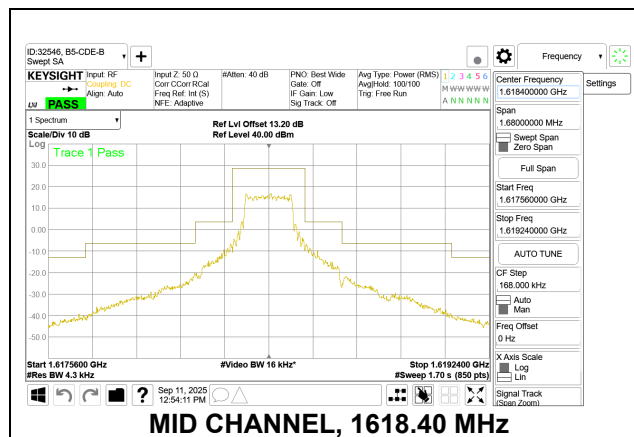
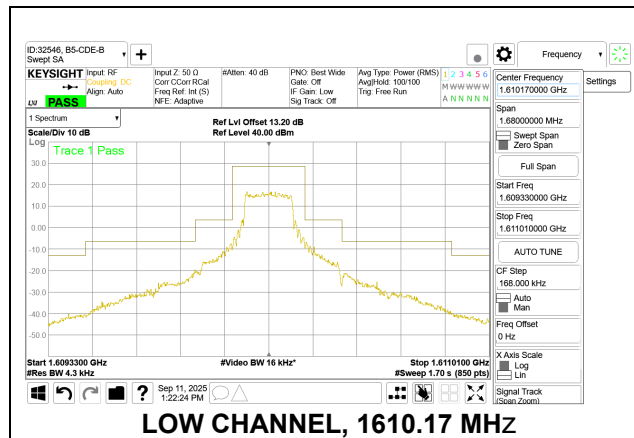
280 kHz Authorized Bandwidth

9.2.2. ANT 4

200 kHz Authorized Bandwidth



230 kHz Authorized Bandwidth

280 kHz Authorized Bandwidth

9.3. OUT OF BAND EMISSIONS

LIMITS

FCC §25.202 Frequencies, frequency tolerance, and emission limits.

(f) Emission limitations. Except for SDARS terrestrial repeaters and as provided for in paragraph (i), the mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the schedule set forth in paragraphs (f)(1) through (f)(4) of this section. The out-of-band emissions of SDARS terrestrial repeaters shall be attenuated in accordance with the schedule set forth in paragraph (h) of this section.

(3) In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 250 percent of the authorized bandwidth: An amount equal to 43 dB plus 10 times the logarithm (to the base 10) of the transmitter power in watts.

ISED RSS-170 §5.8 Unwanted emission limits for MESs in all frequency bands

c. $43 + 10 \log p$ (watts) in any 4 kHz, the frequency of which is offset from the channel centre frequency by more than 250% of the occupied bandwidth or necessary bandwidth, whichever is greater.

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02r02

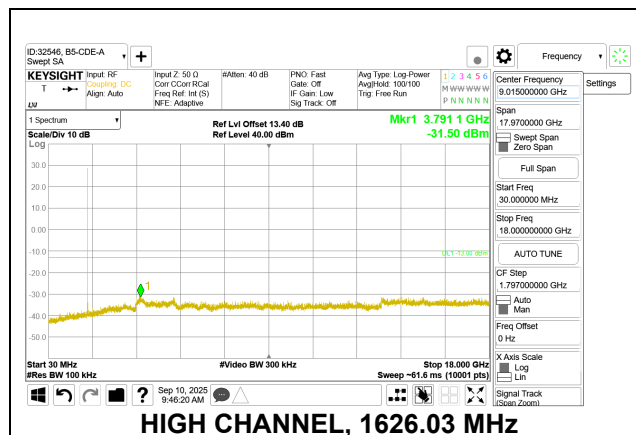
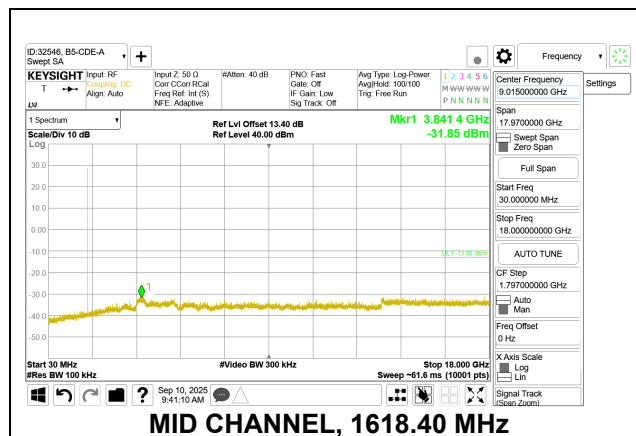
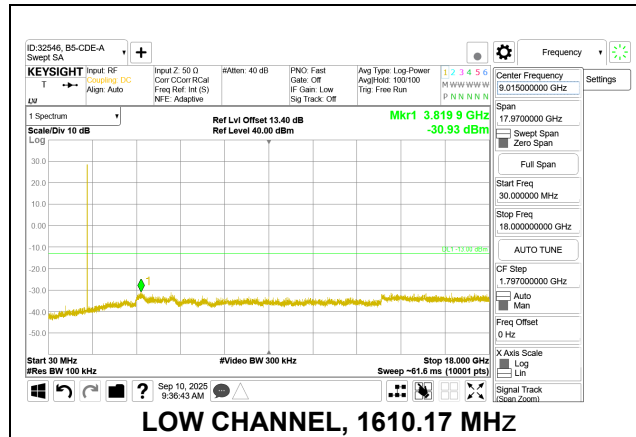
For each out of band emissions measurement:

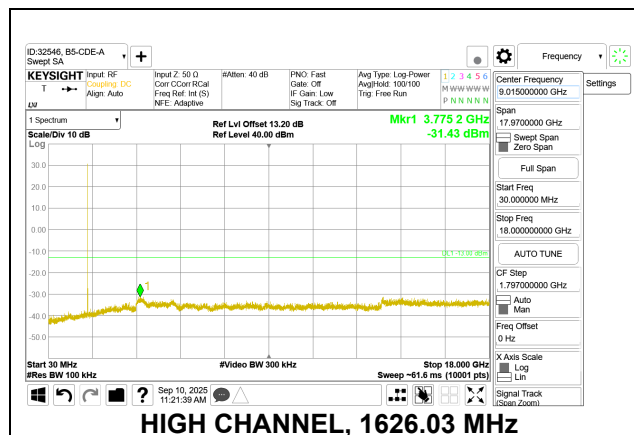
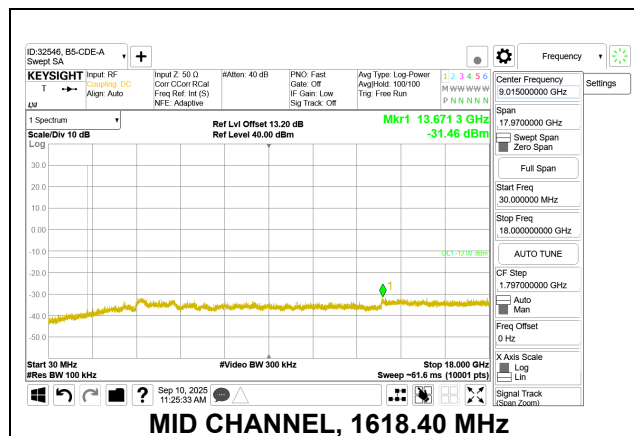
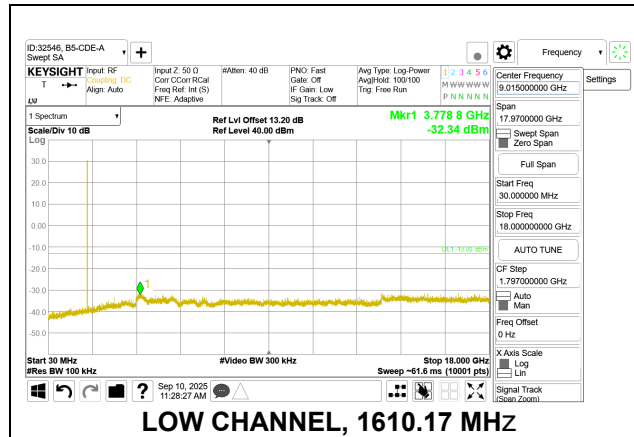
- Set display line at -13 dBm (the limit of $43 + 10\log(P)$)
- Set RBW $\geq 4\text{kHz}$ and VBW $\geq 3 \times \text{RBW}$ with peak detector for all measurements. The limit is an average limit so any emissions that exceed the limit using the peak detector are measured using rms detection with an averaging time of 2ms.

RESULTS

Test Engineer:	32546
Test Date:	2025-09-10

9.3.1. ANT 1



9.3.2. ANT 4

10. RADIATED TEST RESULTS

Radiated measurement using the Field Strength Method

Using the test configuration shown in Figure 6 below, we measure the radiated emissions directly from the EUT and convert the measured field strength or received power to EIRP, as required, for comparison to the applicable limits. As stated in 5.5.1 of ANSI C63.26-2015, the field strength measurement method using a test site validated to the requirements of ANSI C63.4 is an alternative to the substitution measurement method.

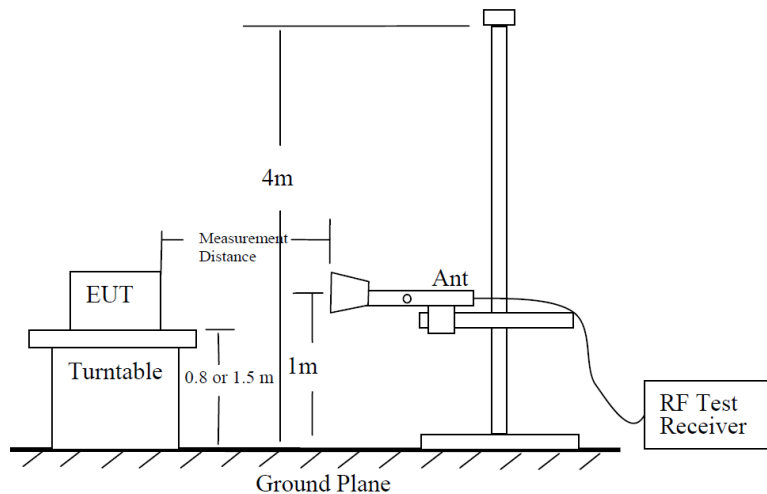


Figure 6—Test site-up for radiated ERP and/or EIRP measurements

Radiated Power Measurement Calculation According to ANSI C63.26-2015

- a) $E \text{ (dB}\mu\text{V/m)} = \text{Measured amplitude level (dB}\mu\text{V)} + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$
- b) $E \text{ (dB}\mu\text{V/m)} = \text{Measured amplitude level (dBm)} + 107 + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$
- c) $E \text{ (dB}\mu\text{V/m)} = \text{EIRP (dBm)} - 20 \cdot \log(D) + 104.8$; where D is the measurement distance (in the far field region) in m
- d) $\text{EIRP (dBm)} = E \text{ (dB}\mu\text{V/m)} + 20 \cdot \log(D) - 104.8$; where D is the measurement distance (in the far field region) in m

So, from d)

The measuring distance is usually at 3m, then $20 \cdot \log(3) = 9.5424$

Then, $\text{EIRP (dBm)} = E \text{ (dB}\mu\text{V/m)} + 9.5424 - 104.8 = E \text{ (dB}\mu\text{V/m)} - 95.2576$

10.1. FIELD STRENGTH OF SPURIOUS RADIATION

LIMITS

FCC §25.202 Frequencies, frequency tolerance, and emission limits.

(f) Emission limitations. Except for SDARS terrestrial repeaters and as provided for in paragraph (i), the mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the schedule set forth in paragraphs (f)(1) through (f)(4) of this section. The out-of-band emissions of SDARS terrestrial repeaters shall be attenuated in accordance with the schedule set forth in paragraph (h) of this section.

(3) In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 250 percent of the authorized bandwidth: An amount equal to 43 dB plus 10 times the logarithm (to the base 10) of the transmitter power in watts;

ISED RSS-170 §5.8 Unwanted emission limits for MESs in all frequency bands

c. $43 + 10 \log p$ (watts) in any 4 kHz, the frequency of which is offset from the channel centre frequency by more than 250% of the occupied bandwidth or necessary bandwidth, whichever is greater.

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02r02

For each out of band emissions measurement:

- Set display line at -13 dBm (the limit of $43 + 10\log(P)$)
- Set RBW $\geq 4\text{kHz}$ and VBW $\geq 3 \times \text{RBW}$ with peak detector for all measurements. The limit is an average limit so any emissions that exceed the limit using the peak detector are measured using rms detection with an averaging time of 2ms.

RESULTS

Plots are provided for the center channel. Tabular data for all channels is presented.

10.1.1. ANT 1 (Above 1 GHz)

Date:	2025-10-30
Test Engineer:	112113
Configuration:	EUT+Charger
Mode:	TX
Chamber:	01-RDE-B

LOW CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF (dB/m)	EIRP CF (dB)	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	3.220368	39.22	Pk	33.3	-95.2	-33.47	-56.15	-13	-43.15	0-360	150	H
2	3.219891	33.43	Pk	33.3	-95.2	-33.4	-61.87	-13	-48.87	0-360	150	V
3	4.830198	35.57	Pk	34.1	-95.2	-30.2	-55.73	-13	-42.73	0-360	150	H
4	4.830198	38.22	Pk	34.1	-95.2	-30.2	-53.08	-13	-40.08	0-360	150	V
5	7.130091	29.48	Pk	35.6	-95.2	-26.59	-56.71	-13	-43.71	0-360	150	H
6	7.126755	27.33	Pk	35.6	-95.2	-26.52	-58.79	-13	-45.79	0-360	150	V

Pk - Peak detector

MID CHANNEL DATA

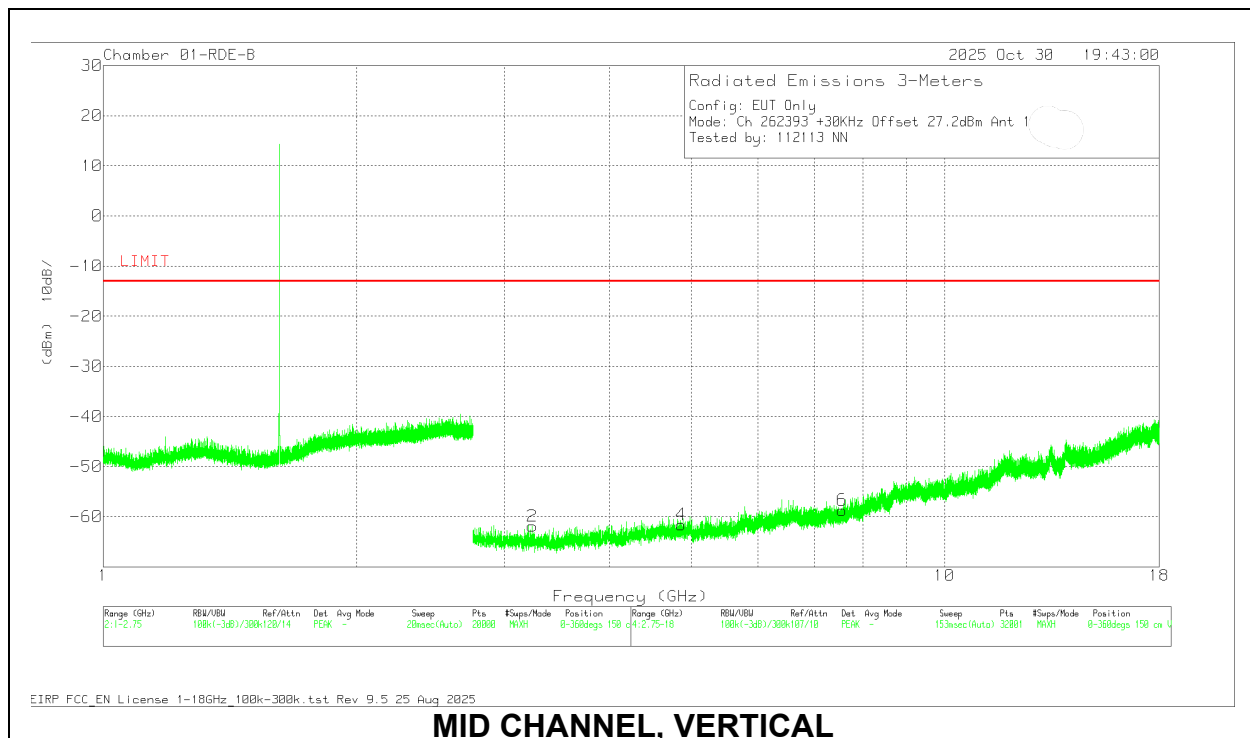
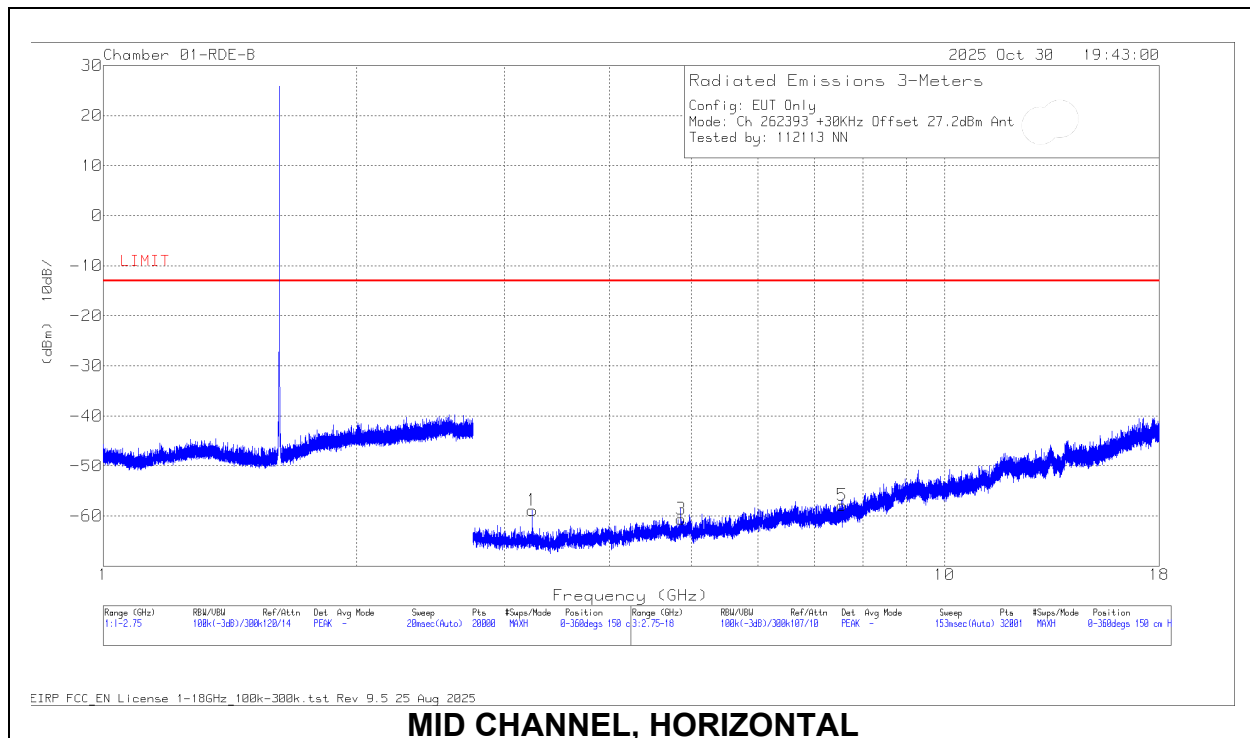
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF (dB/m)	EIRP CF (dB)	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	3.236571	36.46	Pk	33.3	-95.2	-33.4	-58.84	-13	-45.84	0-360	150	H
2	3.236571	33.4	Pk	33.3	-95.2	-33.4	-61.9	-13	-48.9	0-360	150	V
3	4.862127	30.6	Pk	34.1	-95.2	-30.1	-60.6	-13	-47.6	0-360	150	H
4	4.86594	29.6	Pk	34.1	-95.2	-30.1	-61.6	-13	-48.6	0-360	150	V
5	7.556614	28.05	Pk	35.7	-95.2	-26.4	-57.85	-13	-44.85	0-360	150	H
6	7.561857	27.2	Pk	35.7	-95.2	-26.4	-58.7	-13	-45.7	0-360	150	V

Pk - Peak detector

HIGH CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF (dB/m)	EIRP CF (dB)	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	3.251821	38.99	Pk	33.2	-95.2	-33.48	-56.49	-13	-43.49	0-360	150	H
2	3.247532	33.43	Pk	33.3	-95.2	-33.5	-61.97	-13	-48.97	0-360	150	V
3	4.922174	29.85	Pk	34.1	-95.2	-29.78	-61.03	-13	-48.03	0-360	150	H
4	4.922174	30.42	Pk	34.1	-95.2	-29.78	-60.46	-13	-47.46	0-360	150	V
5	6.906106	27.02	Pk	35.7	-95.2	-26.41	-58.89	-13	-45.89	0-360	150	H
6	6.908012	27.06	Pk	35.7	-95.2	-26.4	-58.84	-13	-45.84	0-360	150	V

Pk - Peak detector



10.1.2. ANT 4 (Above 1 GHz)

Date:	2025-10-30
Test Engineer:	112113
Configuration:	EUT+Charger
Mode:	TX
Chamber:	01-RDE-B

LOW CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF (dB/m)	EIRP CF (dB)	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT (dBm)	Margin(dB)	Azimuth (Degs)	Height (cm)	Polarity
1	3.187485	33.63	Pk	33.3	-95.2	-33.4	-61.67	-13	-48.67	0-360	150	H
2	3.187008	31.8	Pk	33.3	-95.2	-33.4	-63.5	-13	-50.5	0-360	150	V
3	4.830198	30.59	Pk	34.1	-95.2	-30.2	-60.71	-13	-47.71	0-360	150	H
4	4.830198	34.11	Pk	34.1	-95.2	-30.2	-57.19	-13	-44.19	0-360	150	V
5	6.930411	27.15	Pk	35.7	-95.2	-26.4	-58.75	-13	-45.75	0-360	150	H
6	6.929934	28.34	Pk	35.7	-95.2	-26.41	-57.57	-13	-44.57	0-360	150	V

Pk - Peak detector

MID CHANNEL DATA

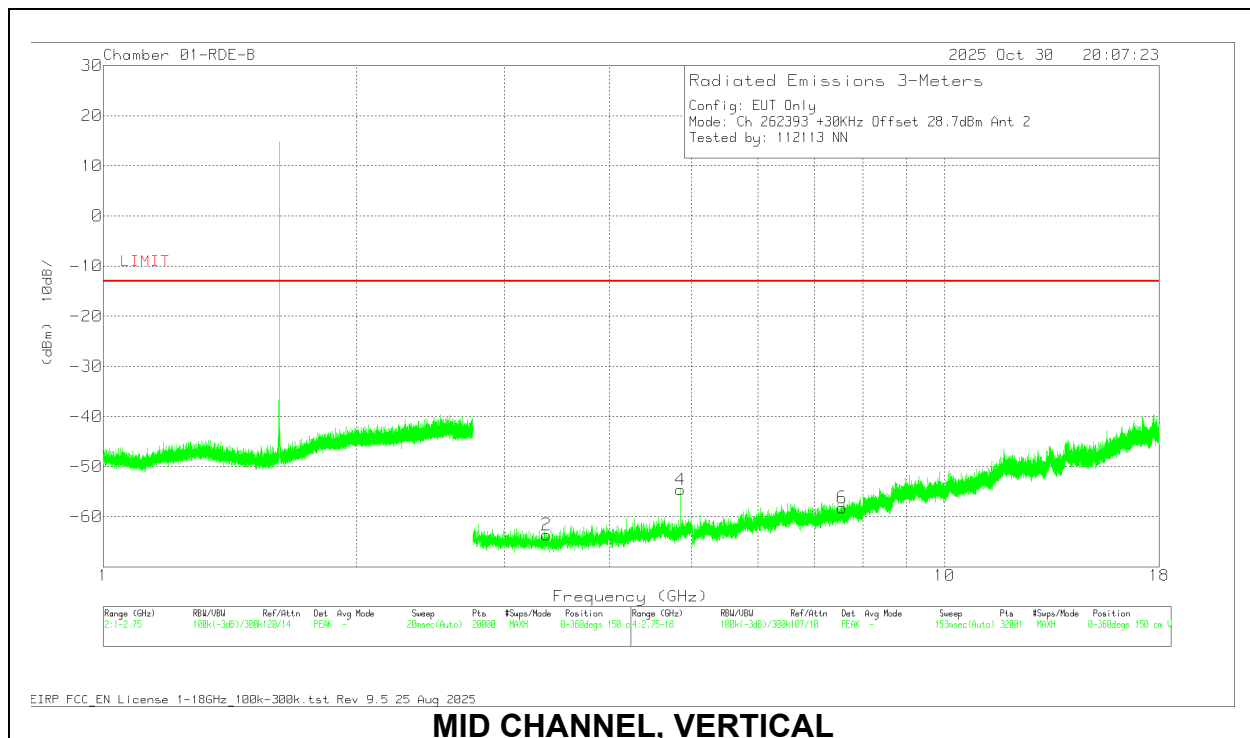
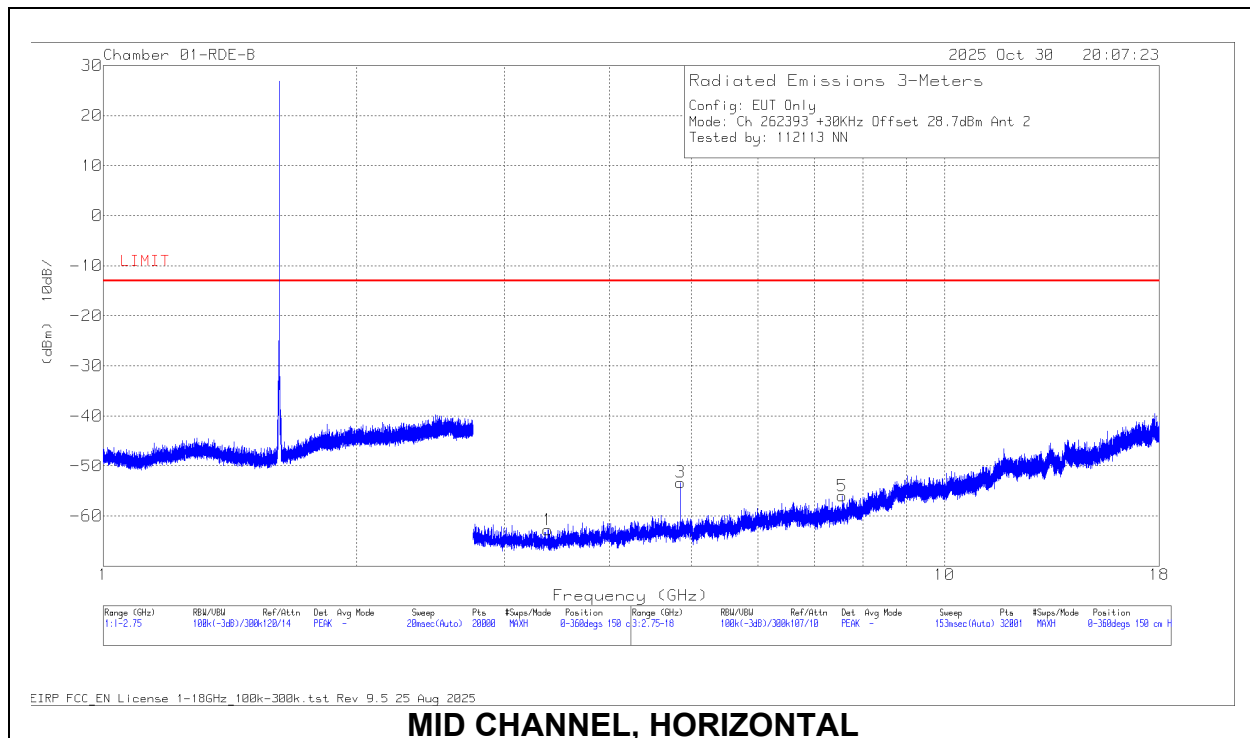
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF (dB/m)	EIRP CF (dB)	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	3.374774	32.84	Pk	32.8	-95.2	-33.22	-62.78	-13	-49.78	0-360	150	H
2	3.366196	31.93	Pk	32.9	-95.2	-33.22	-63.59	-13	-50.59	0-360	150	V
3	4.854979	38.02	Pk	34.1	-95.2	-30.2	-53.28	-13	-40.28	0-360	150	H
4	4.854979	36.68	Pk	34.1	-95.2	-30.2	-54.62	-13	-41.62	0-360	150	V
5	7.553755	29.83	Pk	35.7	-95.2	-26.3	-55.97	-13	-42.97	0-360	150	H
6	7.558997	27.59	Pk	35.7	-95.2	-26.3	-58.21	-13	-45.21	0-360	150	V

Pk - Peak detector

HIGH CHANNEL DATA

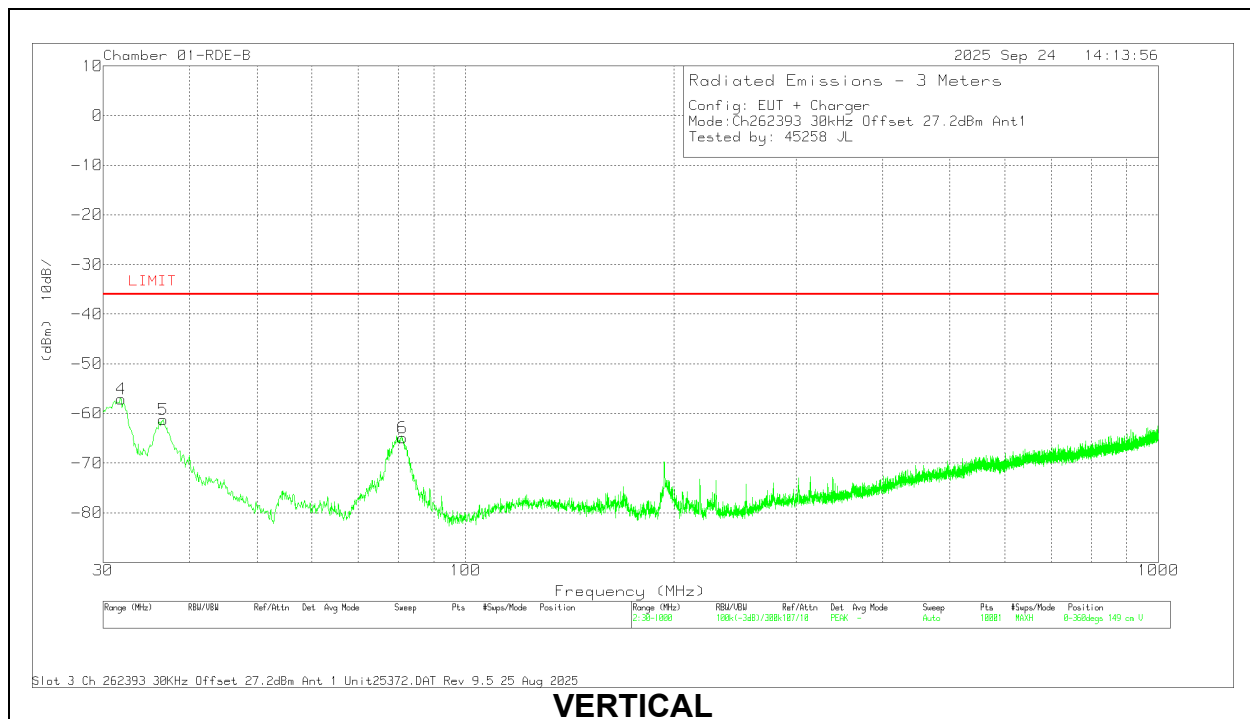
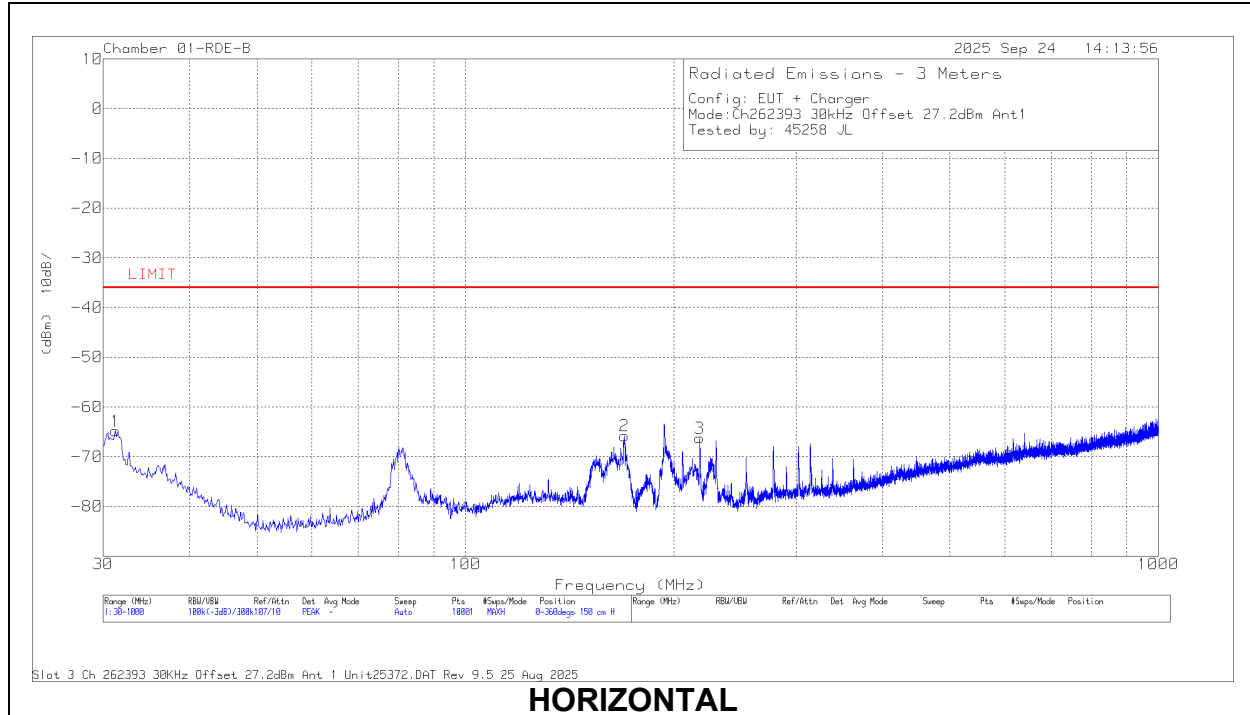
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	81886 ACF (dB/m)	EIRP CF (dB)	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	3.537759	32.18	Pk	32.9	-95.2	-32.8	-62.92	-13	-49.92	0-360	150	H
2	3.538235	33.97	Pk	32.9	-95.2	-32.8	-61.13	-13	-48.13	0-360	150	V
3	5.801909	29.08	Pk	34.9	-95.2	-28	-59.22	-13	-46.22	0-360	150	H
4	5.804292	28.23	Pk	34.9	-95.2	-28.07	-60.14	-13	-47.14	0-360	150	V
5	8.747069	30.2	Pk	36	-95.2	-23.71	-52.71	-13	-39.71	0-360	150	H
6	8.744209	32.15	Pk	36	-95.2	-23.72	-50.77	-13	-37.77	0-360	150	V

Pk - Peak detector



10.1.3. ANT 1 (Below 1GHz)

Date:	2025-09-24
Test Engineer:	45258
Configuration:	EUT+Charger
Mode:	TX
Chamber:	01-RDE-B



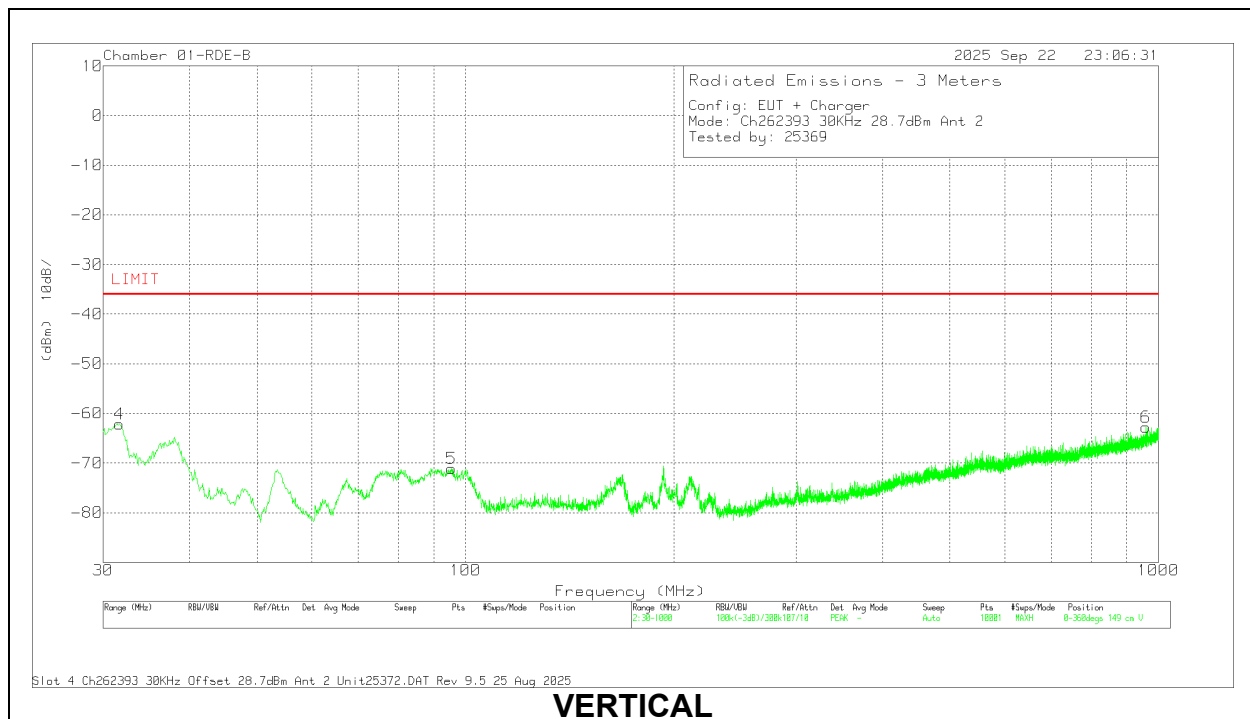
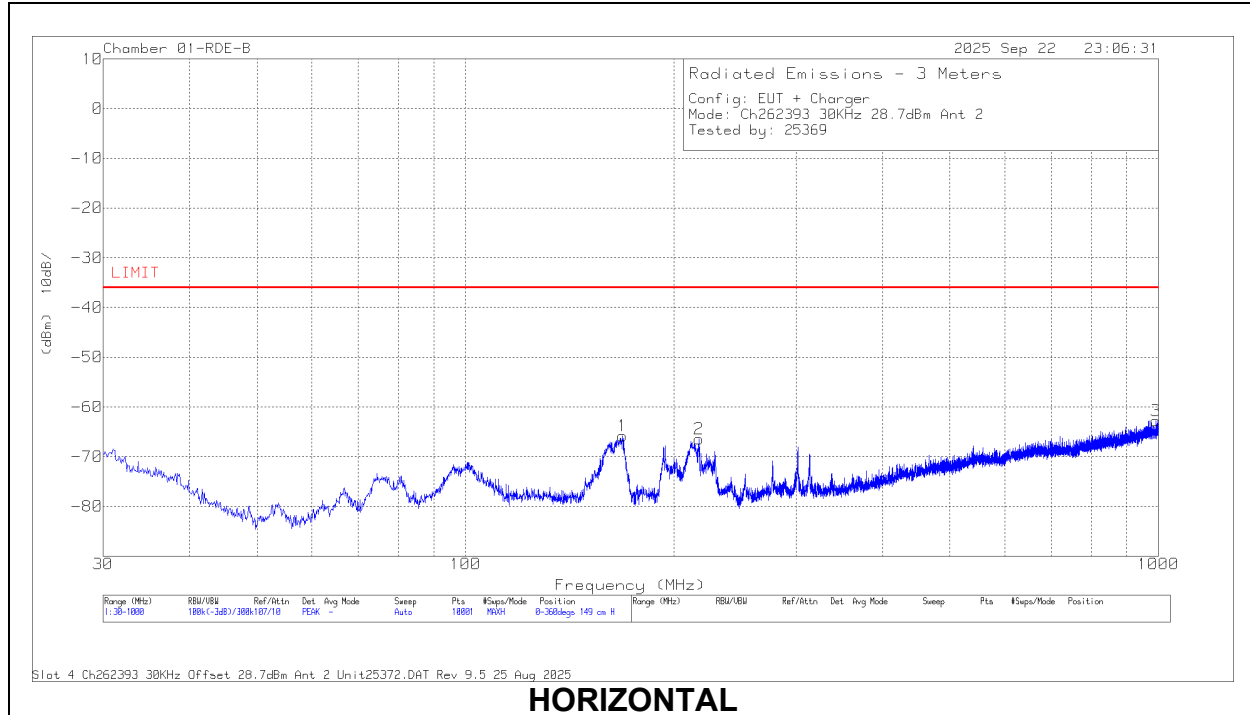
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	85150 ACF (dB/m)	Amp/Cbl (dB)	EIRP CF (dB)	Corrected Reading (dBm)	LIMIT (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	31.261	35.54	Pk	26.3	-31.5	-95.2	-64.86	-36	-28.86	0-360	150	H
2	169.68	41.9	Pk	17.8	-30.3	-95.2	-65.8	-36	-29.8	0-360	150	H
3	217.792	42.65	Pk	16.4	-30.1	-95.2	-66.25	-36	-30.25	0-360	150	H
4	31.843	43.57	Pk	26	-31.5	-95.2	-57.13	-36	-21.13	0-360	149	V
5	36.596	42.31	Pk	23	-31.4	-95.2	-61.29	-36	-25.29	0-360	149	V
6	81.119	47.82	Pk	13.4	-30.9	-95.2	-64.88	-36	-28.88	0-360	149	V

Pk - Peak detector

10.1.4. ANT 4 (Below 1GHz)

Date:	2025-09-22
Test Engineer:	25369
Configuration:	EUT+Charger
Mode:	TX
Chamber:	01-RDE-B



DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	85150 ACF (dB/m)	Amp/Cbl (dB)	EIRP CF (dB)	Corrected Reading (dBm)	LIMIT (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	168.516	41.89	Pk	17.8	-30.3	-95.2	-65.81	-36	-29.81	0-360	149	H
2	217.307	42.55	Pk	16.3	-30.1	-95.2	-66.45	-36	-30.45	0-360	149	H
3	992.143	29.52	Pk	28.9	-26	-95.2	-62.78	-36	-26.78	0-360	149	H
4	31.649	38.49	Pk	26.1	-31.5	-95.2	-62.11	-36	-26.11	0-360	149	V
5	95.475	39.89	Pk	15	-30.8	-95.2	-71.11	-36	-35.11	0-360	149	V
6	959.842	30.31	Pk	28.6	-26.5	-95.2	-62.79	-36	-26.79	0-360	149	V

Pk - Peak detector

10.2. ADDITIONAL UNWANTED EMISSION (1559MHz – 1610MHz)

LIMITS

FCC §25.216 Limits on emissions from mobile earth stations for protection of aeronautical radionavigation-satellite service

(a) The e.i.r.p. density of emissions from mobile earth stations placed in service on or before July 21, 2002 ...

(b) The e.i.r.p. density of emissions from mobile earth stations placed in service on or before July 21, 2002 ...

(c) The e.i.r.p. density of emissions from mobile earth stations placed in service after July 21, 2002 with assigned uplink frequencies between 1610 MHz and 1660.5 MHz shall not exceed -70 dBW/MHz, averaged over any 2 millisecond active transmission interval, in the band 1559-1605 MHz. The e.i.r.p. of discrete emissions of less than 700 Hz bandwidth from such stations shall not exceed -80 dBW, averaged over any 2 millisecond active transmission interval, in the 1559-1605 MHz band.

FCC §25.216 Limits on emissions from mobile earth stations for protection of aeronautical radionavigation-satellite service.

(g) Mobile earth stations manufactured more than six months after Federal Register publication of the rule changes adopted in FCC 03-283 with assigned uplink frequencies in the 1610-1626.5 MHz band shall suppress the power density of emissions in the 1605-1610 MHz band-segment to an extent determined by linear interpolation from -70 dBW/MHz at 1605 MHz to -10 dBW/MHz at 1610 MHz averaged over any 2 millisecond active transmission interval. The e.i.r.p. of discrete emissions of less than 700 Hz bandwidth from such stations shall not exceed a level determined by linear interpolation from -80 dBW at 1605 MHz to -20 dBW at 1610 MHz, averaged over any 2 millisecond active transmission interval.

ISED RSS-170 §5.9.1 Band 1610-1626.5 MHz

For MESs with transmitting frequencies between 1610 MHz and 1626.5 MHz, the e.i.r.p. density of unwanted emissions shall not exceed the limits shown below, which are the same as those for the band 1605-1610 MHz, averaged over any 2 ms active transmission interval:

a. -70 dBW/MHz at 1605 MHz, linearly interpolated to -10 dBW/MHz at 1610 MHz, for broadband Emissions.

b. -80 dBW/kHz at 1605 MHz, linearly interpolated to -20 dBW/kHz at 1610 MHz, for discrete Emissions.

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02r02

Measure wideband emissions using either:

RBW = 1MHz, VB = 3MHz

RBW < 1MHz, integrate over 1MHz if necessary

Measure narrowband emissions using:

RBW = 10kHz, VB = 30kHz as worst-case setting

Set detector = rms, sweep time ~ number of points x 2ms, and sweep multiple times with max hold enabled. When the detector is set to rms the number of points is set to exceed the minimum number required by ANSI C63.26 for average measurements. A peak detector may be used (e.g. to avoid slow

sweep times for the narrowband emissions measurements) in lieu of average rms detection as this will provide a more conservative (higher) measured value than the rms value.

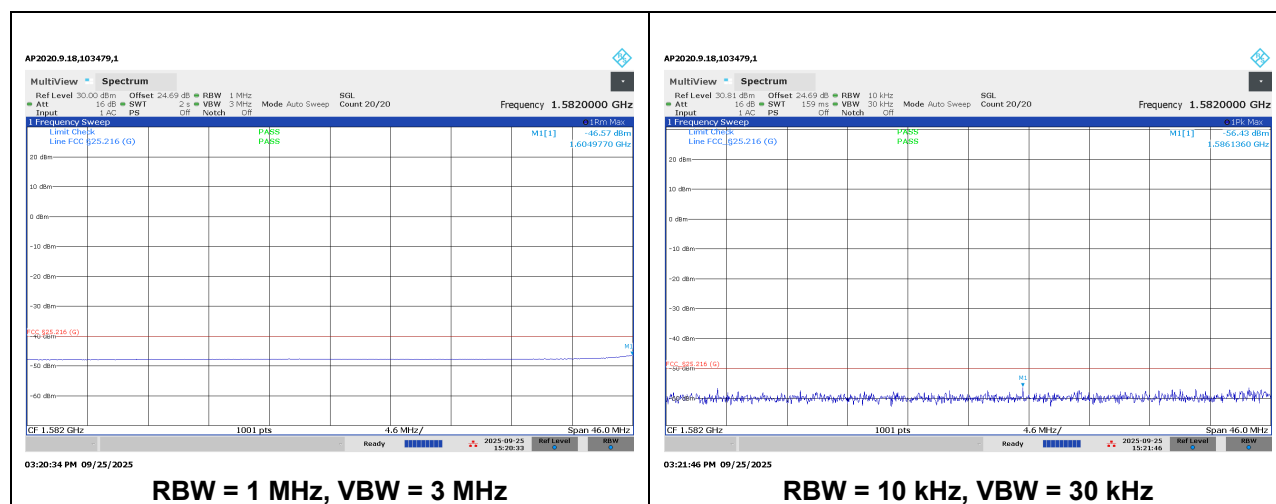
RESULTS

Both horizontal / vertical polarizations and low/ mid/ high channels were investigated on ANT 1 and ANT 4. It was found low channel to be worst case for both antennas.

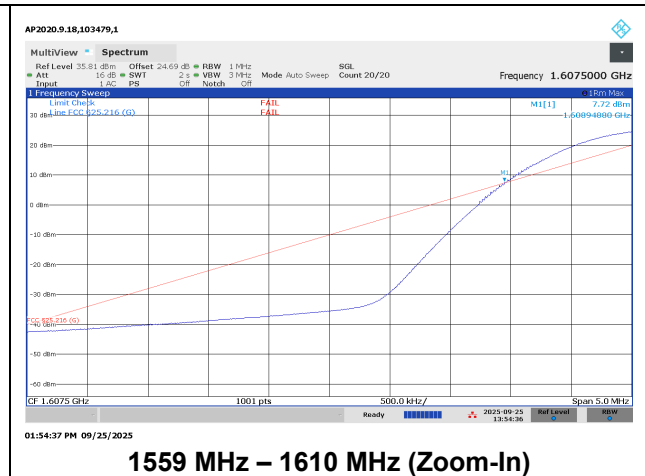
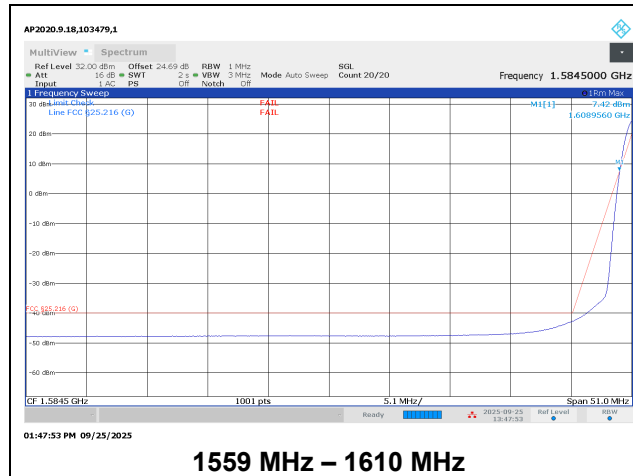
Date:	2025-09-25
Test Engineer:	103479
Configuration:	EUT+Charger
Mode:	TX
Chamber:	01-RDE-B

Antenna Factor (dB/m)	Amp/Cbl/Fitr/Pad (dB)	EIRP CF	Offset (dB)
28.2	-15.31	11.8	24.69

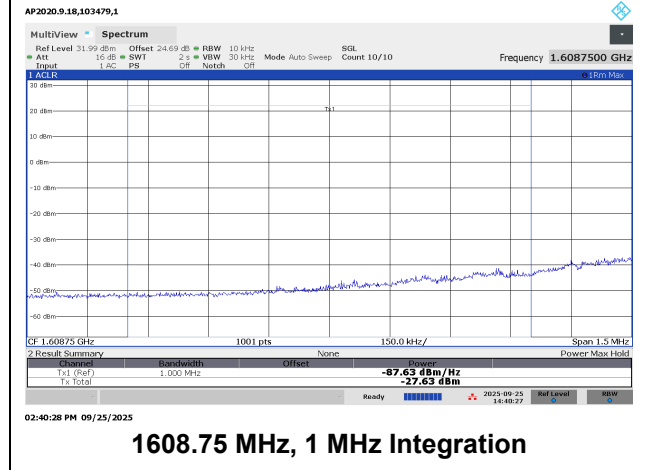
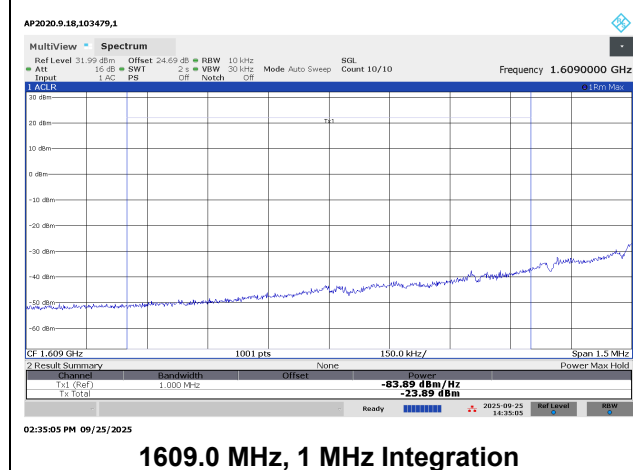
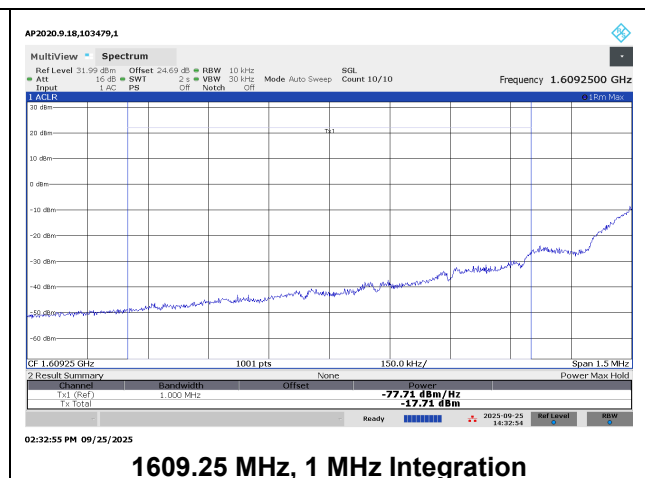
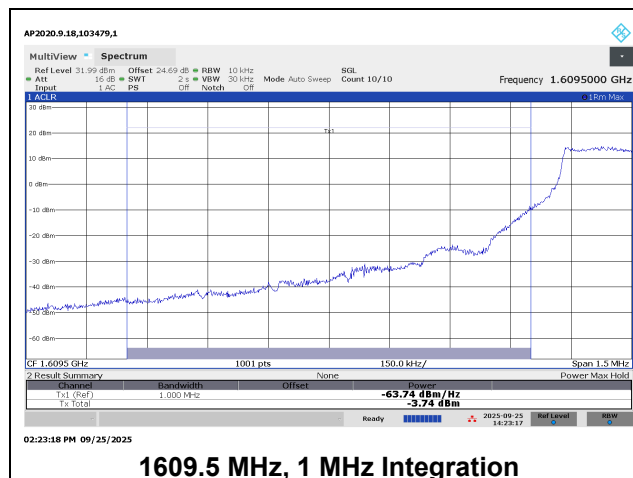
Plots for Determining Wide Band or Narrow Band Emissions

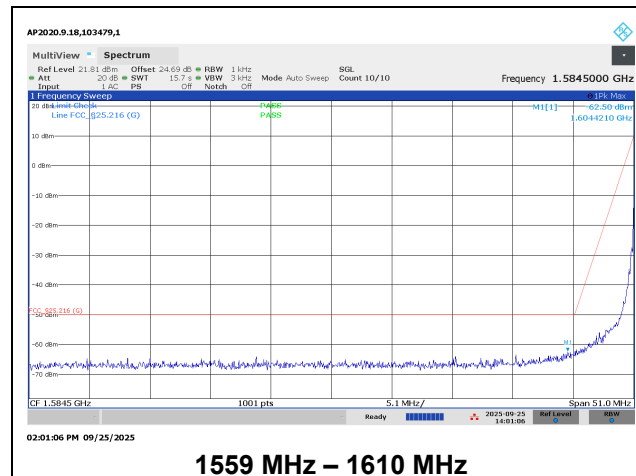


Note: No emissions were found.

10.2.1. ANT 1**HORIZONTAL DATA****Wideband Low Channel 1610.17 MHz:**

Plots below show passing result using integration method:



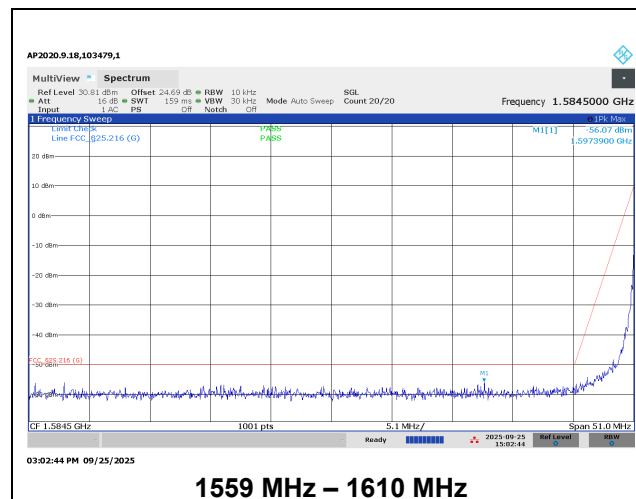
Narrowband Low Channel 1610.17 MHz:

VERTICAL DATA

Wideband Low Channel 1610.17 MHz:

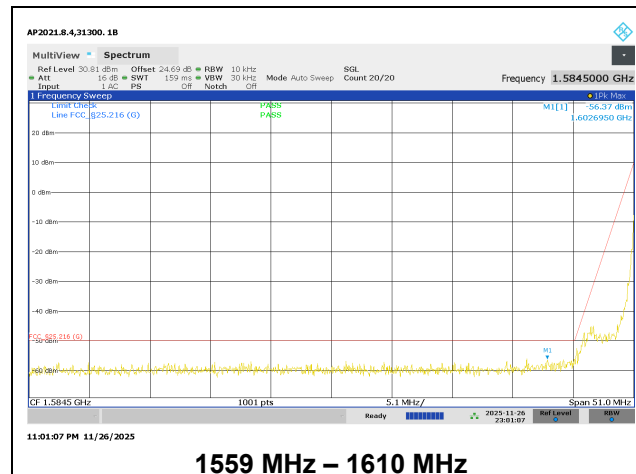


Narrowband Low Channel 1610.17 MHz:



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UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701i
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Narrowband Low Channel 1610.17 MHz:

10.3. CARRIER-OFF STATE EMISSIONS (1559 MHz – 1610 MHz)

LIMITS

FCC §25.216 Limits on emissions from mobile earth stations for protection of aeronautical radionavigation-satellite service

(i) The e.i.r.p density of carrier-off state emissions from mobile earth stations manufactured more than six months after Federal Register publication of the rule changes adopted in FCC 03-283 with assigned uplink frequencies between 1 and 3 GHz shall not exceed -80 dBW/MHz in the 1559-1610 MHz band averaged over any two millisecond interval.

ISED RSS-170 §5.10 Carrier-off State Emissions

Mobile equipment with transmitting frequencies between 1 GHz and 3 GHz shall have the e.i.r.p. density of carrier-off state emissions in the band 1559-1610 MHz not exceed -80 dBW/MHz.

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02r02

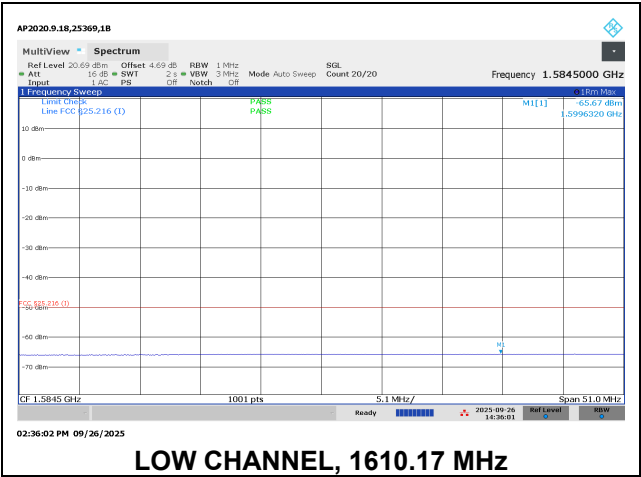
Set RBW = 1MHz, VB = 3MHz, Detector = RMS, Sweep Time = Number of Points x 2ms, and sweep multiple times with Max Hold enabled.

RESULTS

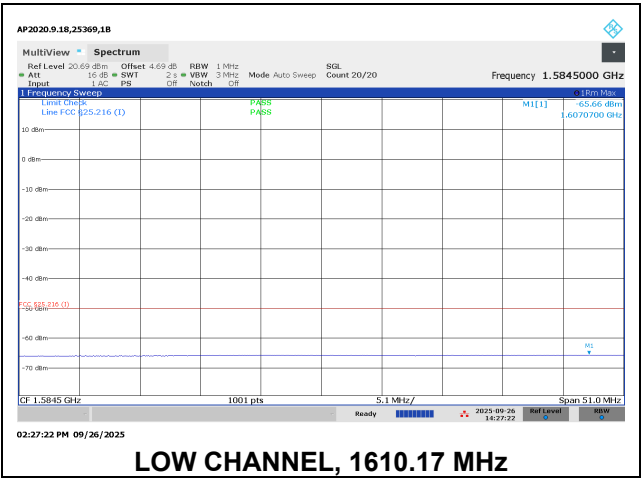
No emissions were found on both horizontal and vertical polarization for ANT 1 and ANT 4.

Date:	2025-09-26
Test Engineer:	25369
Configuration:	EUT+Charger
Mode:	RX (TX Off)
Chamber:	01-RDE-B

10.3.1. ANT 1



10.3.2. ANT 4



10.4. FREQUENCY STABILITY

LIMITS

FCC §25.202 Frequencies, frequency tolerance, and emission limits.

(d) Frequency tolerance, Earth stations. The carrier frequency of each earth station transmitter authorized in these services shall be maintained within 0.001 percent of the reference frequency.

ISED RSS-170 §5.3 Frequency stability

For mobile earth station equipment, the carrier frequency shall not depart from the reference frequency by more than ± 10 ppm.

TEST PROCEDURE

Use spectrum with Frequency Error measurement capability.

- Temp. = -30°C to $+50^{\circ}\text{C}$

- Voltage = (85% - 115%)

Low Voltage = 3.23 VDC

Normal Voltage = 3.80 VDC

High Voltage = 4.37 VDC

End Voltage = 3.00 VDC

Frequency Stability vs Temperature:

The EUT is placed inside a temperature chamber. The temperature is set to 20°C and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured. The temperature is increased by $+10$ degrees, allowed to stabilize and soak, and then the measurement is repeated. This is repeated until $+50^{\circ}\text{C}$ is reached.

Frequency Stability vs Voltage:

The peak frequency error is recorded (worst-case).

RESULTS

Test Engineer:	32546
Test Date:	2025-09-25

Frequency Reference (MHz)		1610.17003		Frequency Reading (MHz)	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -10dB BW (MHz)	F high @ -10dB BW (MHz)			
Temperature	Voltage					
Normal (20 C)	Normal	1610.079438	1610.260625	1610.170031		
Extreme (50C)		1610.077438	1610.260375	1610.168906	-1125.00	-0.70
Extreme (40C)		1610.080063	1610.261875	1610.170969	937.50	0.58
Extreme (30C)		1610.079688	1610.263063	1610.171375	1343.75	0.83
Extreme (10C)		1610.078688	1610.261688	1610.170188	156.25	0.10
Extreme (0C)		1610.078188	1610.260938	1610.169563	-468.75	-0.29
Extreme (-10C)		1610.078875	1610.261688	1610.170281	250.00	0.16
Extreme (-20C)		1610.079750	1610.261625	1610.170688	656.25	0.41
Extreme (-30C)		1610.078563	1610.261500	1610.170031	0.00	0.00
20C	+15%	1610.079500	1610.260688	1610.170094	62.50	0.04
	-15%	1610.079000	1610.261250	1610.170125	93.75	0.06
	End Point	1610.078875	1610.262063	1610.170469	437.50	0.27

11. SETUP PHOTOS

Please refer to 15496282-EP1V1 for setup photos.

APPENDIX A - SPOT CHECK EVALUATION

MODEL DIFFERENCES

The manufacturer hereby declares the following for models A3575 and A3634.

These models have the same PCB layout, design, common components, antennas, antenna locations and housing cases, except for disabled/enabled cellular bands via software as shown below.

Model	FCC ID	IC ID	Feature Difference	Sim Support	Reference Model
A3575	BCG-E9145A	579C-E9145A		eSIM only	-
A3634	BCG-E9147A	579C-E9147A	No B14/29/71	eSIM + pSIM	A3575

The spot check plan allows for data reuse from the reference model where the variant model data meets the limits and has not changed by more than the criteria from KDB 484596 D01 v03 equation (4).

$$d_{dB} = |V_{dB} - R_{dB}| \quad (1)$$

$$d_{dB} \leq d_{dBmax} \quad (2)$$

$$d_{dBmax}(M_{dB}) = \begin{cases} (3 + M_{dB}/20) \text{ dB} & , \text{ for } 0 \leq M_{dB} \leq 60 \text{ dB} \\ 6 \text{ dB} & , \text{ for } M_{dB} > 60 \text{ dB} \end{cases} \quad (4)$$

Where d_{dB} is deviation between the variant and the reference model, V_{dB} is variant spot check level, R_{dB} is the corresponding reference measurement level, d_{dBmax} is the maximum deviation d_{dB} allowed, and M_{dB} is the margin in dB.

SPOT CHECK VERIFICATION RESULTS SUMMARY FOR A3634

A3634 SPOT CHECK RESULTS								
Technology	Worst Mode	Test Item	Measured Frequency (MHz)	Original Model: A3575	Sub Model: A3634	Delta (dB)	Margin	Remarks
				FCC ID : BCG-E9145A IC : 579C-E9145A	FCC ID : BCG-E9147A IC : 579C-E9147A			
TNE / MSS	Ant 4 (Mid, -1.4dBi)	Avg EIRP Power (dBm)	1618.40	27.30	27.23	-0.07	-0.70	Note 1
	Ant 4 (Low, Hor)	Additional Unwated Emission (dBm)	1609.5	-1.51	-2.32	-0.81	-15.51	Note 1
	Ant 4 (High, Vert)	Out-Of-Band Emission (dBm)	8,744.21	-50.77	-51.17	-0.40	-37.77	Note 1

Note 1: Deviation from reference to variant within the value allowed by equation (2) in KDB 484596. Additional tests not required.

Note 2: Deviation from reference to variant exceeds the value allowed by equation (2) in KDB 484596. Additional tests performed on second channel.