

RADIO TEST REPORT

Test Report No. 15951638H-A-R3

Customer	Audio-Technica Corporation
Description of EUT	HANDHELD TRANSMITTER
Model Number of EUT	ATW-DT3202/C510DF2
FCC ID	JFZDT3202DF2
Test Regulation	FCC Part 74
Test Result	Complied
Issue Date	February 20, 2026
Remarks	-

Representative test engineerTetsuro Yoshida
Engineer**Approved by**Satofumi Matsuyama
Engineer

CERTIFICATE 5107.02

- ☐ The testing in which "Non-accreditation" is displayed is outside the accreditation scopes in UL Japan, Inc.
- ☒ There is no testing item of "Non-accreditation".

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- For any test report referred in this report, the latest version (including any revisions) is always referred to.
- If the latest version is a revision, it replaces the previous version. See the table below for revisions and versions.

REVISION HISTORY

Revision	Test Report No.	Date	Page Revised Contents
- (Original)	15951638H-A	November 27, 2025	-
1	15951638H-A-R1	February 16, 2026	Section 2.1 -Modified test date October 7 to November 11, 2025 October 7, 2025 to February 13, 2026 Section 2.2 -Modified Supplied Voltage Information This EUT provides the stable voltage constantly to RF Module regardless of input voltage.→ This EUT provides the stable voltage constantly to RF part regardless of input voltage. Section 6 -Modified below text for Frequency stability. The power supply set to 100 % nominal setting, raise EUT operating temperature to 45 deg. C. Repeat measurements at each 10 deg. C decrement to -5 deg. C. → The power supply set to 100 % nominal setting, raise EUT operating temperature to 50 deg. C. Repeat measurements at each 10 deg. C decrement to -20 deg. C. Appendix 1 <u>Occupied Bandwidth</u> -Modified power setting 1 mW → STD 1 mW 20 mW → STD 20 mW <u>Frequency stability</u> -Replaced test data of Frequency stability. -Added to below note. *It cannot operate below -20°C. Appendix 1 <u>Frequency stability</u> -Modified below text. *It cannot operate below -20°C. → *The test was not conducted because transmission stopped at -30°C.
2	15951638H-A-R2	February 19, 2026	Appendix 1 <u>Frequency stability</u> -Modified below text. *It cannot operate below -20°C. → *The test was not conducted because transmission stopped at -30°C.
3	15951638H-A-R3	February 20, 2026	Section 6 <u>Frequency stability</u> -Modified below text. Repeat measurements at each 10 deg. C decrement to -20 deg. C. → Repeat measurements at each 10 deg. C decrement to -30 deg. C. -Added to below text. The test was conducted even at -30 deg. C, but the EUT did not transmit, so the measurement could not be performed. Appendix 1 <u>Frequency stability</u> -Modified below text. *The test was not conducted because transmission stopped at -30°C. → *The test was conducted even at -30 deg. C, but the EUT did not transmit, so the measurement could not be performed.

Reference: Abbreviations (Including words undescribed in this report)

A2LA	The American Association for Laboratory Accreditation	ICES	Interference-Causing Equipment Standard
AC	Alternating Current	IEC	International Electrotechnical Commission
AFH	Adaptive Frequency Hopping	IEEE	Institute of Electrical and Electronics Engineers
AM	Amplitude Modulation	IF	Intermediate Frequency
Amp, AMP	Amplifier	ILAC	International Laboratory Accreditation Conference
ANSI	American National Standards Institute	ISED	Innovation, Science and Economic Development Canada
Ant, ANT	Antenna	ISO	International Organization for Standardization
AP	Access Point	JAB	Japan Accreditation Board
ASK	Amplitude Shift Keying	LAN	Local Area Network
Atten., ATT	Attenuator	LIMS	Laboratory Information Management System
AV	Average	MCS	Modulation and Coding Scheme
BPSK	Binary Phase-Shift Keying	MRA	Mutual Recognition Arrangement
BR	Bluetooth Basic Rate	N/A	Not Applicable
BT	Bluetooth	NIST	National Institute of Standards and Technology
BT LE	Bluetooth Low Energy	NS	No signal detect.
BW	BandWidth	NSA	Normalized Site Attenuation
Cal Int	Calibration Interval	NVLAP	National Voluntary Laboratory Accreditation Program
CCK	Complementary Code Keying	OBW	Occupied Band Width
Ch., CH	Channel	OFDM	Orthogonal Frequency Division Multiplexing
CISPR	Comite International Special des Perturbations Radioelectriques	P/M	Power meter
CW	Continuous Wave	PCB	Printed Circuit Board
DBPSK	Differential BPSK	PER	Packet Error Rate
DC	Direct Current	PHY	Physical Layer
D-factor	Distance factor	PK	Peak
DFS	Dynamic Frequency Selection	PN	Pseudo random Noise
DQPSK	Differential QPSK	PRBS	Pseudo-Random Bit Sequence
DSSS	Direct Sequence Spread Spectrum	PSD	Power Spectral Density
EDR	Enhanced Data Rate	QAM	Quadrature Amplitude Modulation
EIRP, e.i.r.p.	Equivalent Isotropically Radiated Power	QP	Quasi-Peak
EMC	ElectroMagnetic Compatibility	QPSK	Quadri-Phase Shift Keying
EMI	ElectroMagnetic Interference	RBW	Resolution Band Width
EN	European Norm	RDS	Radio Data System
ERP, e.r.p.	Effective Radiated Power	RE	Radio Equipment
EU	European Union	RF	Radio Frequency
EUT	Equipment Under Test	RMS	Root Mean Square
Fac.	Factor	RSS	Radio Standards Specifications
FCC	Federal Communications Commission	Rx	Receiving
FHSS	Frequency Hopping Spread Spectrum	SA, S/A	Spectrum Analyzer
FM	Frequency Modulation	SG	Signal Generator
Freq.	Frequency	SVSWR	Site-Voltage Standing Wave Ratio
FSK	Frequency Shift Keying	TR	Test Receiver
GFSK	Gaussian Frequency-Shift Keying	Tx	Transmitting
GNSS	Global Navigation Satellite System	VBW	Video BandWidth
GPS	Global Positioning System	Vert.	Vertical
Hori.	Horizontal	WLAN	Wireless LAN

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SECTION 1: Customer Information

Company Name	Audio-Technica Corporation
Address	2-46-1 Nishi-naruse, Machida, Tokyo 194-8666, Japan
Telephone Number	+81-42-739-9121
Contact Person	Hidetomo Ikeda

The information provided by the customer is as follows;

- Customer, Description of EUT, Model Number of EUT, FCC ID on the cover and other relevant pages
- Operating/Test Mode(s) (Mode(s)) on all the relevant pages
- SECTION 1: Customer Information
- SECTION 2: Equipment Under Test (EUT) other than the Receipt Date and Test Date
- SECTION 4: Operation of EUT during testing

SECTION 2: Equipment Under Test (EUT)

2.1 Identification of EUT

Description	HANDHELD TRANSMITTER
Model Number	ATW-DT3202/C510DF2
Serial Number	Refer to SECTION 4.2
Condition	Production prototype (Not for Sale: This sample is equivalent to mass-produced items.)
Modification	No Modification by the test lab
Receipt Date	October 7, 2025
Test Date	October 7, 2025 to February 13, 2026

2.2 Product Description

General Specification

Rating	DC 3.6 V (Battery)
Operating temperature	-5 deg. C to 45 deg. C

Radio Specification

This report contains data provided by the customer which can impact the validity of results. UL Japan, Inc. is only responsible for the validity of results after the integration of the data provided by the customer. The data provided by the customer is marked "a)" in the table below.

Radio type	Transmitter
Modulation type	Digital Modulation (STD mode: 8PSK, HD mode: 16QAM)
Necessary bandwidth	STD: 192 kHz HD: 96 kHz
Declared Channel Bandwidth (B)	STD: 200 kHz HD: 100 kHz
Frequency of operation	470.125 MHz to 607.875 MHz
RF power setting	STD: 1 mW, 10 mW, 20 mW HD: 1 mW
Antenna gain ^{a)}	0.676 dBi max

Supplied Voltage Information

This EUT provides the stable voltage constantly to RF part regardless of input voltage.

SECTION 3: Test Summary

3.1 Test Specification

Test Specification	FCC Part 74 The latest version on the first day of the testing period
Title	FCC 47CFR Part74 EXPERIMENTAL RADIO, AUXILIARY, SPECIAL BROADCAST AND OTHER PROGRAM DISTRIBUTIONAL SERVICES

3.2 Reference Standards

KDB 206256 D01 v03
ANSI C63.26-2015
ETSI EN 300 422-1 v2.2.1

3.3 Summary of Test Results

Item	Test Specification & Procedure	Results	Remarks
RF Power Output	FCC: Section 2.1046 FCC: Section 74.861 (e) (1)	Complied	Conducted
Modulation Characteristics	FCC: Section 2.1047 FCC: Section 74.861 (e) (3)	Complied	Conducted
Occupied Bandwidth	FCC: Section 2.1049 FCC: Section 74.861 (e) (5)	Complied	Conducted
Spurious emissions at antenna terminals	FCC: Section 2.1051 FCC: Section 74.861 (e) (6)	Complied	Conducted
Transmitter Unwanted Emissions in the Out of Band Domain	FCC: Section 74.861 (d) (ii)	Complied	Conducted
Transmitter unwanted emissions in the spurious domain	FCC: Section 2.1053 FCC: Section 74.861 (d) (iv)	Complied	Radiated
Frequency stability	FCC: Section 2.1055 FCC: Section 74.861 (e) (4)	Complied	Conducted
Note: UL Japan, Inc.'s EMI Work Procedures: Work Instructions-ULID-003591 and Work Instructions-ULID-003593.			

3.4 Addition to standard

No addition, exclusion nor deviation has been made from the standard.

3.5 Uncertainty

Measurement uncertainty is not taken into account when stating conformity with a specified requirement.
Note: When margins obtained from test results are less than the measurement uncertainty, the test results may exceed the limit.

The following uncertainties have been calculated to provide a confidence level of 95 % using a coverage factor $k = 2$.

Transmitter unwanted emissions in the spurious domain (EUT height: 1.5 m) (Measurement Distance 3 m)	Unit	Calculated Uncertainty (+/-)
25 MHz to 200 MHz	dB	5.9
200 MHz to 1000 MHz	dB	3.9
1 GHz to 12.75 GHz	dB	4.7

Antenna Terminal Conducted

Item	Unit	Calculated Uncertainty (+/-)
Antenna terminated conducted emission / Power density / Burst power	dB	3.50
Adjacent channel power (ACP)	dB	2.32
Bandwidth (OBW)	%	0.96
Time readout (time span upto 100 msec)	%	0.11
Time readout (time span upto 1000 msec)	%	0.11
Time readout (time span upto 60 sec)	%	0.02
Power measurement (Power meter < 8 GHz)	dB	1.43
Power measurement (Call box < 6 GHz)	dB	1.89
Frequency readout (Frequency counter)	ppm	0.67
Frequency readout (Spectrum analyzer frequency readout function)	ppm	2.13
Temperature (constant temperature bath)	deg. C	0.69
Humidity (constant temperature bath)	%RH	2.98
Modulation characteristics	%	6.93
Frequency for mobile	ppm	0.08
Contention-based protocol	dB	2.97

3.6 Test Location

UL Japan, Inc. Ise EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 Japan

Telephone: +81-596-24-8999

*A2LA Certificate Number: 5107.02 / FCC Test Firm Registration Number: 884919

ISED Lab Company Number: 2973C / CAB identifier: JP0002

Test site	Width x Depth x Height (m)	Size of reference ground plane (m) / horizontal conducting plane	Other rooms	Maximum measurement distance
No.1 semi-anechoic chamber (SAC1)	19.2 x 11.2 x 7.7	7.0 x 6.0	No.1 Power source room	10 m
No.2 semi-anechoic chamber (SAC2)	7.5 x 5.8 x 5.2	4.0 x 4.0	-	3 m
No.3 semi-anechoic chamber (SAC3)	12.0 x 8.5 x 5.9	6.8 x 5.75	No.3 Preparation room (PR3)	3 m
No.3 shielded room (SR3)	4.0 x 6.0 x 2.7	N/A	-	-
No.4 semi-anechoic chamber (SAC4)	12.0 x 8.5 x 5.9	6.8 x 5.75	No.4 Preparation room (PR4)	3 m
No.4 shielded room (SR4)	4.0 x 6.0 x 2.7	N/A	-	-
No.5 semi-anechoic chamber (SAC5)	6.0 x 6.0 x 3.9	6.0 x 6.0	-	-
No.5 measurement room (MR5)	6.4 x 6.4 x 3.0	6.4 x 6.4	-	-
No.6 shielded room (SR6)	4.0 x 4.5 x 2.7	4.0 x 4.5	-	-
No.6 measurement room (MR6)	4.75 x 5.4 x 3.0	4.75 x 4.15	-	-
No.7 shielded room (SR7)	4.7 x 7.5 x 2.7	4.7 x 7.5	-	-
No.8 measurement room (MR8)	3.1 x 5.0 x 2.7	3.1 x 5.0	-	-
No.9 measurement room (MR9)	8.8 x 4.6 x 2.8	2.4 x 2.4	-	-
No.10 shielded room (SR10)	3.8 x 2.8 x 2.8	3.8 x 2.8	-	-
No.11 measurement room (MR11)	4.0 x 3.4 x 2.5	N/A	-	-
No.12 measurement room (MR12)	2.6 x 3.4 x 2.5	N/A	-	-
Large Chamber	16.9 x 22.1 x 10.17	16.9 x 22.1	-	10 m
Small Chamber	5.3 x 6.69 x 3.59	5.3 x 6.69	-	-

3.7 Test data, Test instruments, and Test set up

Refer to APPENDIX.

SECTION 4: Operation of EUT during testing

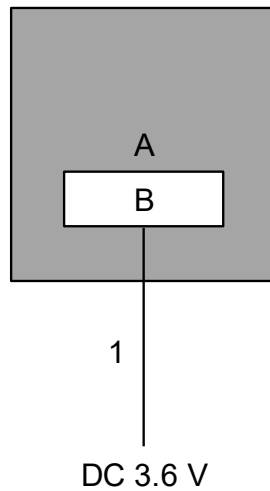
4.1 Operating Mode(s)

Mode	Remarks*
Transmitting (Tx)	-
*Transmitting duty was 100 % on all tests.	
*Power of the EUT was set by the software as follows;	
Power Setting: STD : 1 mW, 20 mW HD : 1 mW Software: V999.999.012 (Date: October 7, 2025, Storage location: EUT memory)	
*This setting of software is the worst case. Any conditions under the normal use do not exceed the condition of setting. In addition, end users cannot change the settings of the output power of the product without 1mW, 10mW or 20mW settings.	

*The details of Operating mode(s)

Test Item	Tested frequency	Mode	Power setting	Modulation	Remarks
RF power output	470.125 MHz (Low)	STD	1 mW, 20 mW	Digital modulation (PN9 data packet)	-
	539.000 MHz (Mid)				
	607.875 MHz (High)	HD	1 mW	Digital modulation (PN9 data packet)	-
Occupied Bandwidth	470.125 MHz (Low)	STD	1 mW, 20 mW	Digital modulation (PN9 data packet)	-
	539.000 MHz (Mid)				
	607.875 MHz (High)	HD	1 mW	Digital modulation (PN9 data packet)	-
Spurious emissions at antenna terminals	470.125 MHz (Low) 539.000 MHz (Mid) 607.875 MHz (High)	STD	20 mW	Digital modulation (PN9 data packet)	-
Spurious emissions at antenna terminals (Side band spectrum measurement)	470.125 MHz (Low)	STD	1 mW, 20 mW	Digital modulation (PN9 data packet)	-
	539.000 MHz (Mid)				
	607.875 MHz (High)	HD	1 mW	Digital modulation (PN9 data packet)	-
Transmitter Unwanted Emissions in the Out of Band Domain	470.125 MHz (Low)	STD	1 mW, 20 mW	Digital modulation (PN9 data packet)	-
	539.000 MHz (Mid)				
	607.875 MHz (High)	HD	1 mW	Digital modulation (PN9 data packet)	-
Transmitter Unwanted Emissions in the Out of Band Domain	470.125 MHz (Low) 539.000 MHz (Mid) 607.875 MHz (High)	STD	20 mW	Digital modulation (PN9 data packet)	-
Frequency stability	470.125 MHz (Low) 539.000 MHz (Mid) 607.875 MHz (High)	STD	20 mW	No modulation	

4.2 Configuration and peripherals



* Cabling and setup(s) were taken into consideration and test data was taken under worse case conditions.

Description of EUT and Support equipment

No.	Item	Model number	Serial Number	Manufacturer	Remark
A	HANDHELD TRANSMITTER	ATW-DT3202/C510DF2	TP001	Audio-Technica Corporation	EUT
B	Battery	LI-320	21061500797	Audio-Technica Corporation	*RE test only
	Battery Jig	-	-	Audio-Technica Corporation	*AT test only

List of Cables Used

No.	Name	Length (m)	Shield		Remark
			Cable	Connector	
1	DC Cable	2.2	Unshielded	Unshielded	* AT test only

SECTION 5: Transmitter unwanted emissions in the spurious domain

Test Procedure

[Radiated method]

- 1) EUT was placed on the platform of nominal size, 0.5 m by 0.5 m, raised 1.5 m above the conducting ground plane.
Test was made with the antenna positioned in both the horizontal and vertical planes of polarization.
The Radiated Electric Field Strength has been measured in semi anechoic chamber at a distance of 3 m.
The measuring antenna height was varied between 1 to 4 m and the turn table was rotated a full revolution in order to obtain the maximum value of the electric field strength.
The measurements were performed for both vertical and horizontal antenna polarization.
- 2) Exchanged the EUT to the Substitution Antenna, the measurement was set for the same height 1.5 m as the EUT. The frequency below 1 GHz of the Substitution Antenna was used the Half wave dipole Antenna, which was tuned the measured frequency in 1).
The frequency above 1 GHz of the Substitution Antenna was used Horn Antenna.
The Substitution Antenna was connected to the Signal Generator, and the polarized electromagnetic radiation of the Substitution Antenna was matched with the one of the measuring Antenna, which was set with the Signal Generator to the measured frequency in 1). Then, we set with the Output power (CW) of the Signal Generator where the measuring electromagnetic field strength is equal to the measured value in 1) by means of varying the measuring antenna height between 1 to 4 m to obtain maximum receiving level.
Its Output power of Signal Generator was recorded.
- 3) Effective radiated power was calculated by subtracting the cable loss and the attenuator loss connected between the Signal Generator and the Substitution Antenna from the Output power of the Signal Generator recorded in 2).
For the usage of the Antenna (Horn Antenna) except for the Half wave dipole Antenna (2.15dBi) for the Substitution Antenna, the Effective radiated power was calculated by compensating the finite difference in the Antenna gain of the Half wave dipole Antenna, and Substitution Antenna.

Test Antennas for radiated method are used as below;

Frequency	30 MHz to 200 MHz	200 MHz to 1 GHz	Above 1 GHz
Antenna Type	Biconical	Logperiodic	Horn

Measured setting

Frequency	Instrument used	Detector	RBW	Test Distance
30 MHz to 1 GHz	Spectrum Analyzer	RMS	$f_c + 2,5 B \leq f \leq f_c + 4 B$: 1 kHz $f_c + 4 B < f \leq f_c + 10 B$: 10 kHz $f > f_c + 10 B$: 100 kHz $f < f_c - 10 B$: 100 kHz $f_c - 10 B \leq f < f_c - 4 B$: 10 kHz $f_c - 4 B \leq f \leq f_c - 2,5 B$: 1 kHz	3 m
Above 1 GHz	Spectrum Analyzer	RMS	1 MHz	3 m

The carrier level and noise levels were confirmed at each position of X, Y and Z axes of EUT to see the position of maximum noise, and the test was made at the position that has the maximum noise.

The test results are rounded off to one decimal place, so some differences might be observed.

Test data : APPENDIX
Test result : Pass

SECTION 6: Antenna Terminal Tests

Test Procedure

The tests were made with below setting connected to the antenna port.

Test	Span	RBW	VBW	Sweep time	Detector	Trace	Instrument used
RF power output	-	-	-	Auto	Average	-	Power Meter (Sensor: 50 MHz BW)
Occupied Bandwidth	Enough width to display emission skirts	1 to 5% of Occupied bandwidth	Three times of RBW	Auto	Peak *1)	Max Hold *1)	Spectrum Analyzer
Spurious emissions at antenna terminals *2)	9 kHz to 150 kHz	200 Hz	620 Hz	Auto	Peak	Max Hold	Spectrum Analyzer
	150 kHz to 30 MHz	10 kHz	30 kHz				
	30 MHz to 1 GHz	100 kHz	300 kHz				
	Above 1 GHz	1 MHz	3 MHz				
Frequency stability	-	-	-	-	-	-	Frequency Counter

*1) The measurement was performed with Peak and Max Hold since the modulation method was FM.

*2) In the frequency range below 30MHz, RBW was narrowed to separate the noise contents.

Then, wide-band noise near the limit was checked separately, however the noise was low enough as shown in the chart.
(9 kHz - 150 kHz: RBW = 200 Hz, 150 kHz - 30 MHz: RBW = 10 kHz).

[Frequency stability]

The power supply set to 100 % nominal setting, raise EUT operating temperature to 50 deg. C.

Record the frequency of the EUT.

Repeat measurements at each 10 deg. C decrement to -30 deg. C.

The test was conducted even at -30 deg. C, but the EUT did not transmit, so the measurement could not be performed.

EUT power supply was varied between 85 % and 115 % of nominal and the frequency of the EUT was recorded when temperature is 20 deg. C. The additional test was performed at battery end point voltage.

The test results and limit are rounded off to two decimals place, so some differences might be observed.

Test data : APPENDIX

Test result : Pass

SECTION 7: Transmitter Unwanted Emissions in the Out of Band Domain

The tests were made with below setting connected to the antenna port.

Test Procedure

The tests were made with spectrum analyzer with below setting connected to the antenna port.

The EUT was operated at its maximum RF output power and was modulated with the test signal specified in clause 5.3.2.1 of EN 300 422-1.

Transmitting channel of the EUT was adjusted to the middle of each frequency band within the tuning range of the EUT.

[For digital modulated equipment]

Centre Frequency	Span	RBW / VBW	Sweep Points	Detector	Trace Mode	Sweep Time / Mode
f_{cm} (declared centre frequency)	$5 \times B$	1 kHz / 1 kHz	Span / RBW or more	RMS	Clear Write	20 s / Single sweep

B: Declared Channel Bandwidth

f_{cm} is the result of Transmitter Frequency Stability test.

The measurements were made under normal condition.

Test data : **APPENDIX**
Test result : **Pass**

APPENDIX 1: Test data

RF Output Power

Mode	Tx (470.125 MHz - 607.875 MHz)			
Date	Test site	Temperature	Humidity	Engineer
October 7, 2025	SAC2	20 deg. C	60 % RH	Tetsuro Yoshida
October 10, 2025	MR6	23 deg. C	54 % RH	Tetsuro Yoshida

Power Setting	Channel	Freq. [MHz]	Reading Average [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result Average [Conducted] [dBm] [mW]		Limit [Conducted] [mW]	Margin [dB]	Remarks
STD 1 mW	Low	470.125	-11.27	0.30	9.90	-1.07	0.782	250	25.05	
	Mid	539.000	-10.97	0.32	9.90	-0.75	0.841	250	24.73	
	High	607.875	-10.95	0.34	9.91	-0.70	0.851	250	24.68	
STD 20 mW	Low	470.125	1.15	0.83	9.76	11.74	14.93	250	12.24	
	Mid	539.000	1.43	0.89	9.76	12.08	16.14	250	11.90	
	High	607.875	1.25	0.95	9.77	11.97	15.74	250	12.01	
HD 1mW	Low	470.125	-11.12	0.30	9.90	-0.92	0.809	250	24.90	
	Mid	539.000	-10.85	0.32	9.90	-0.63	0.865	250	24.61	
	High	607.875	-10.74	0.34	9.91	-0.49	0.894	250	24.47	

Calculation formula:

$$\text{Result} = \text{Reading} + \text{Cable Loss} + \text{Atten. Loss}$$

Occupied Bandwidth

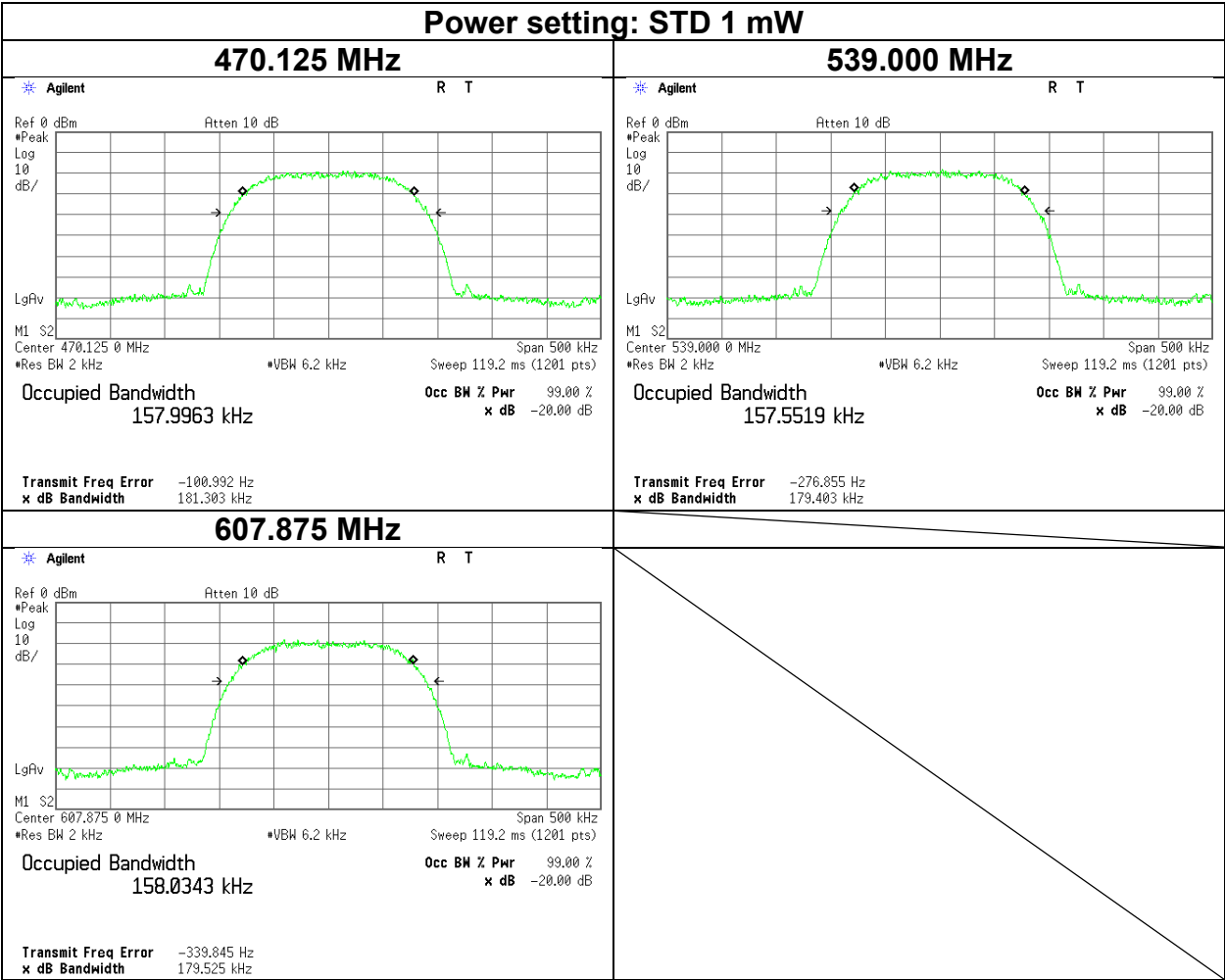
Mode	Tx (470.125 MHz - 607.875 MHz)			
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Date	Test site	Temperature	Humidity	Engineer
October 14, 2025	MR6	22 deg. C	62 % RH	Junki Nagatomi

Power Setting	Channel	Freq. [MHz]	99% Occupied Bandwidth [kHz]	Limit [kHz]	Margin [kHz]
STD 1 mW	Low	470.125	157.9963	200	42.0037
	Mid	539.000	157.5519	200	42.4481
	High	607.875	158.0343	200	41.9657
STD 20 mW	Low	470.125	159.0739	200	40.9261
	Mid	539.000	158.1568	200	41.8432
	High	607.875	158.3005	200	41.6995
HD 1 mW	Low	470.125	78.9873	200	121.0127
	Mid	539.000	78.9169	200	121.0831
	High	607.875	79.8729	200	120.1272

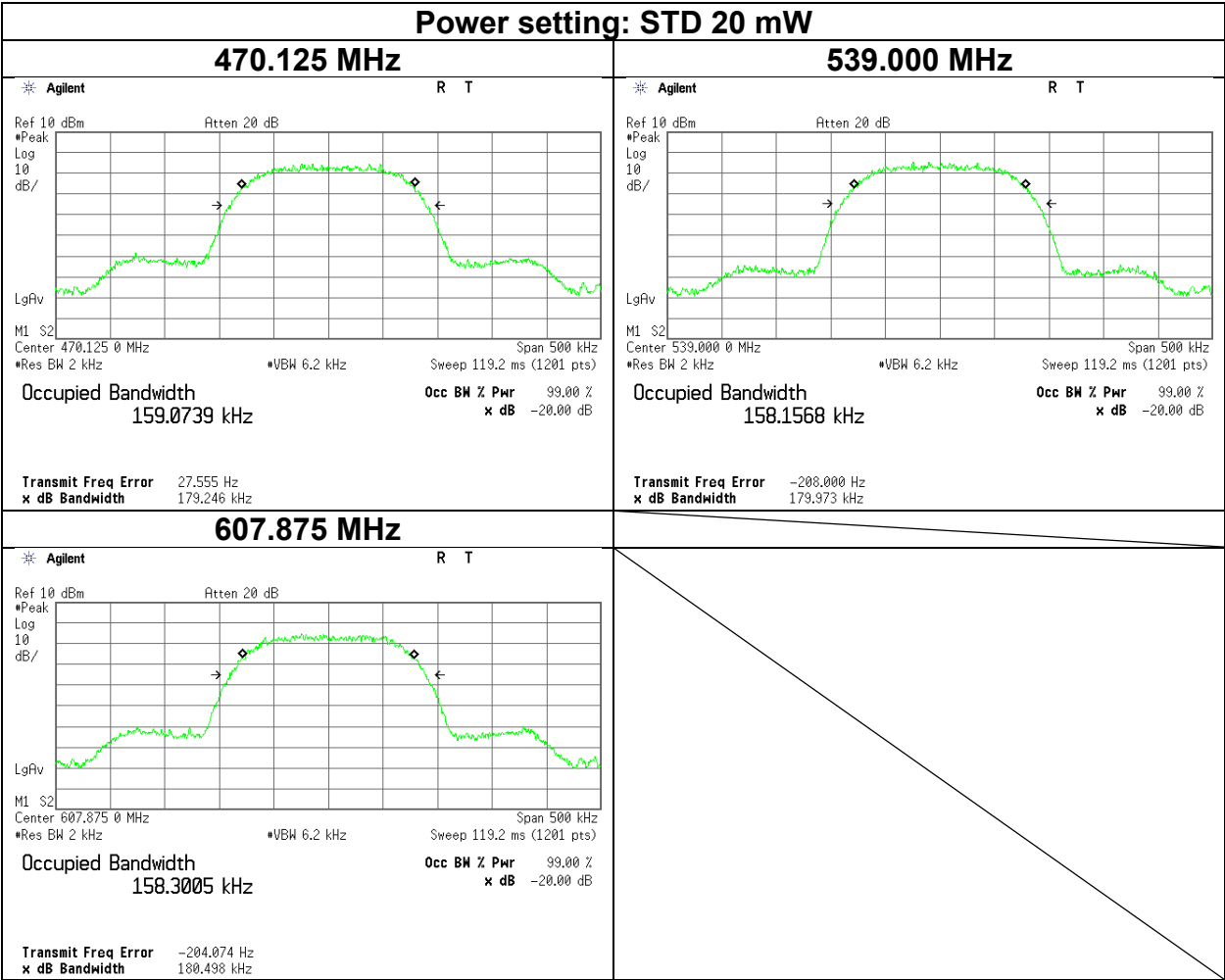
Occupied Bandwidth

Mode	Tx (470.125 MHz - 607.875 MHz)			
Date	Test site	Temperature	Humidity	Engineer
October 14, 2025	MR6	22 deg. C	62 % RH	Junki Nagatomi



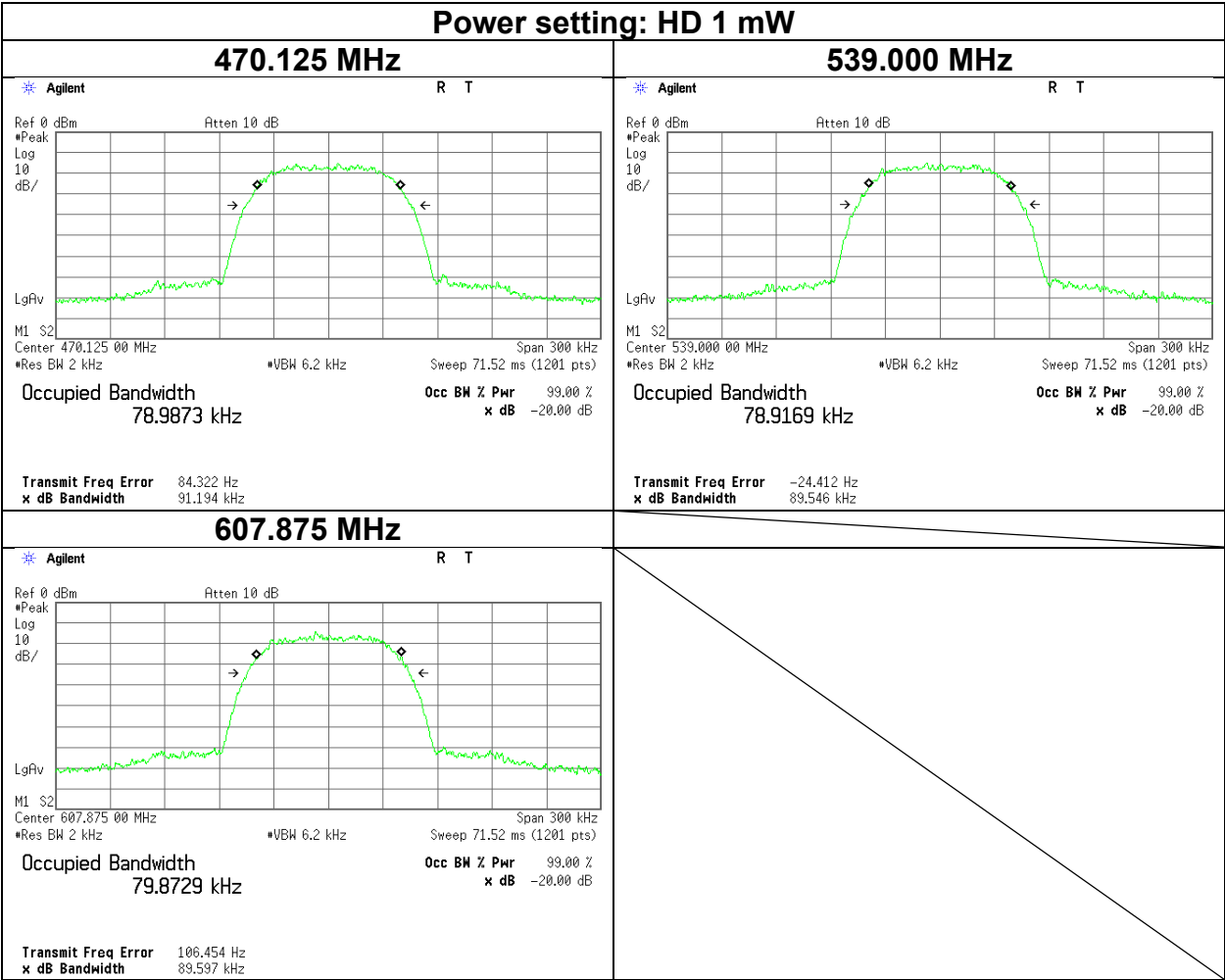
Occupied Bandwidth

Mode	Tx (470.125 MHz - 607.875 MHz)			
Date	Test site	Temperature	Humidity	Engineer
October 14, 2025	MR6	22 deg. C	62 % RH	Junki Nagatomi



Occupied Bandwidth

Mode	Tx (470.125 MHz - 607.875 MHz)			
Date	Test site	Temperature	Humidity	Engineer
October 14, 2025	MR6	22 deg. C	62 % RH	Junki Nagatomi



Spurious emissions at antenna terminals

Mode	Tx (470.125 MHz - 607.875 MHz), STD 20 mW
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Date	Test site	Temperature	Humidity	Engineer
October 14, 2025	MR6	22 deg. C	62 % RH	Junki Nagatomi

Power Setting	Channel	Tested Freq. [MHz]	Reading		Cable Loss [dB]	Atten. Loss [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
			Freq. [MHz]	Level [dBm]					
20 mW	Low	470.125	0.128004	-89.11	0.30	9.84	-78.97	-13	65.97
			0.165	-79.76	0.30	9.84	-69.62	-13	56.62
			110.12	-61.99	0.30	9.86	-51.83	-13	38.83
			393.225	-63.31	0.30	9.90	-53.11	-13	40.11
			940.25	-45.20	0.30	9.93	-34.97	-13	21.97
			2988	-59.88	0.30	10.00	-49.58	-13	36.58
			3009	-59.18	0.30	9.75	-49.13	-13	36.13
			7118	-57.88	0.30	9.87	-47.71	-13	34.71
	Mid	539.000	0.128004	-88.61	0.32	9.84	-78.45	-13	65.45
			0.236	-80.18	0.32	9.84	-70.02	-13	57.02
			71.18	-61.55	0.32	9.86	-51.37	-13	38.37
			393.1875	-63.20	0.32	9.90	-52.98	-13	39.98
			639.05	-68.16	0.32	9.91	-57.93	-13	44.93
			2955.25	-60.32	0.32	10.00	-50.00	-13	37.00
			3028.5	-58.44	0.32	9.75	-48.37	-13	35.37
			6798.5	-57.27	0.32	9.83	-47.12	-13	34.12
	High	607.875	0.013794	-90.38	0.34	9.83	-80.21	-13	67.21
			0.217	-80.15	0.34	9.84	-69.97	-13	56.97
			91.19	-62.02	0.34	9.86	-51.82	-13	38.82
			393.2625	-61.46	0.34	9.89	-51.23	-13	38.23
			620.9	-67.40	0.34	9.91	-57.15	-13	44.15
			2769.5	-59.36	0.34	9.99	-49.03	-13	36.03
			3096.375	-58.01	0.34	9.75	-47.92	-13	34.92
			7144.5	-57.53	0.34	9.87	-47.32	-13	34.32

Calculation formula:

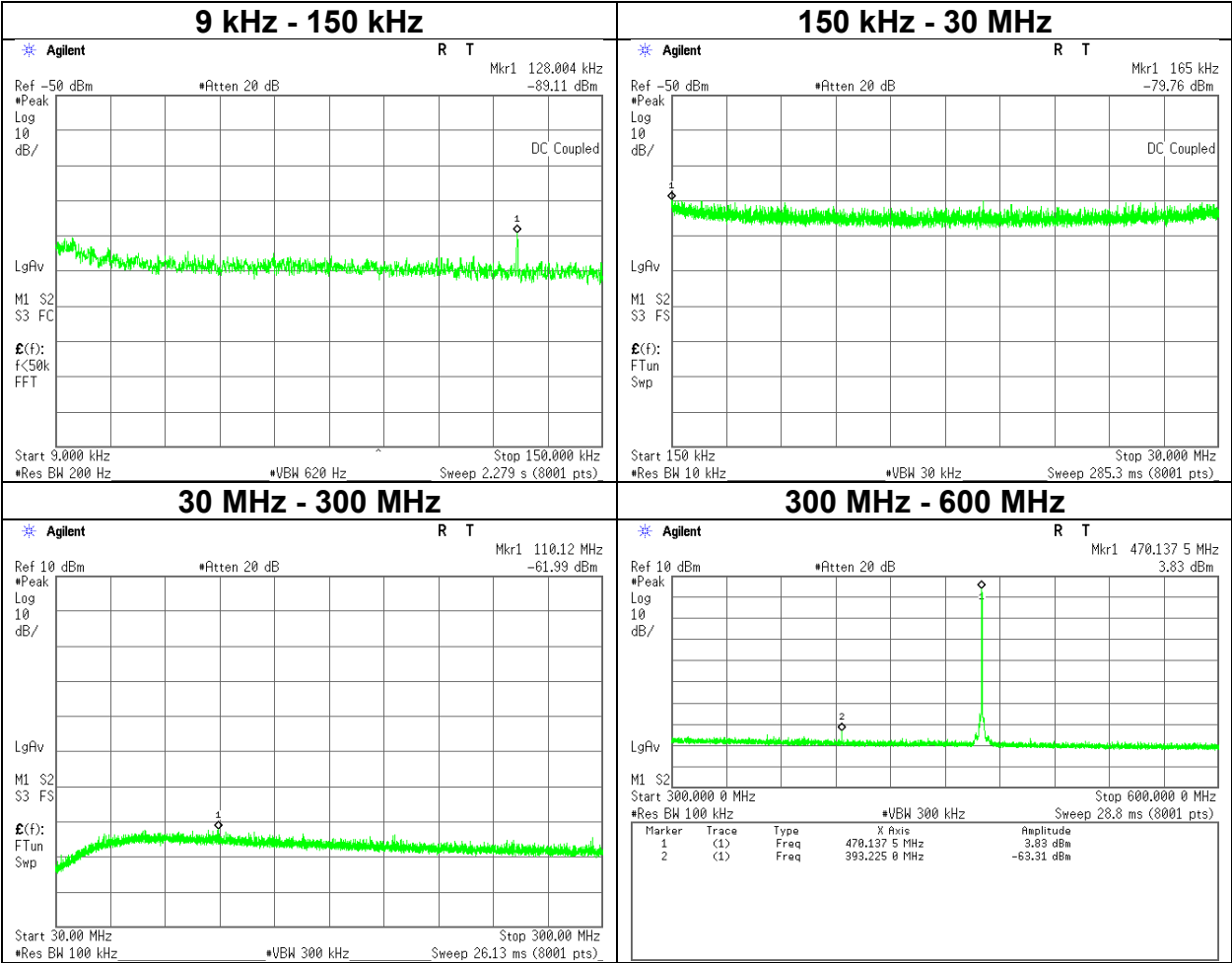
$$\text{Result} = \text{Reading} + \text{Cable Loss} + \text{Attenuator Loss}$$

$$\text{Limit} = \text{mean output power in dBm} - (43 + 10 \log_{10} (\text{mean output power in watts})) \text{ dB} = -13 \text{ dBm}$$

Spurious emissions at antenna terminals

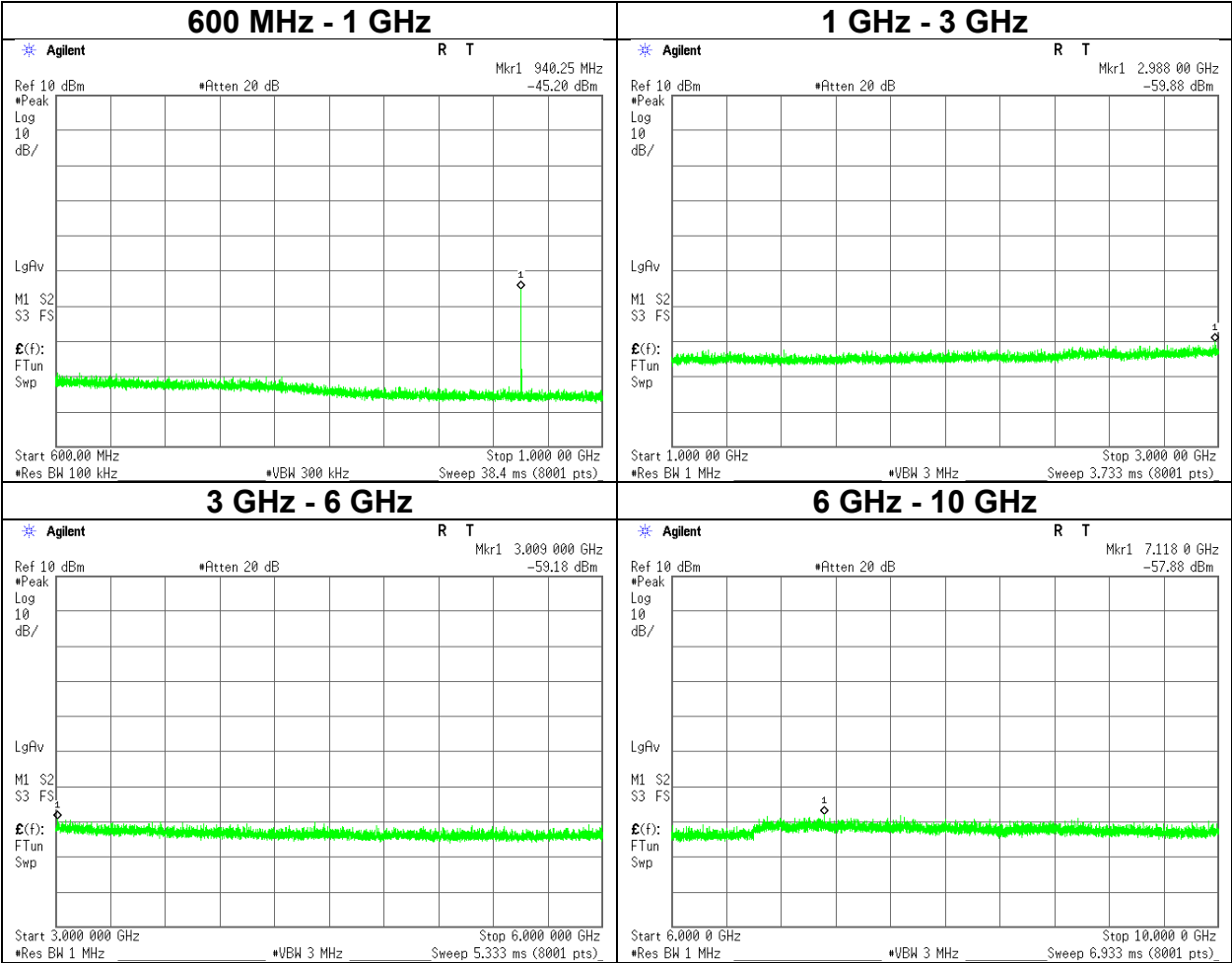
Mode	Tx 470.125 MHz, STD 20 mW		
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Date	Test site	Temperature	Humidity	Engineer
October 14, 2025	MR6	22 deg. C	62 % RH	Junki Nagatomi



Spurious emissions at antenna terminals

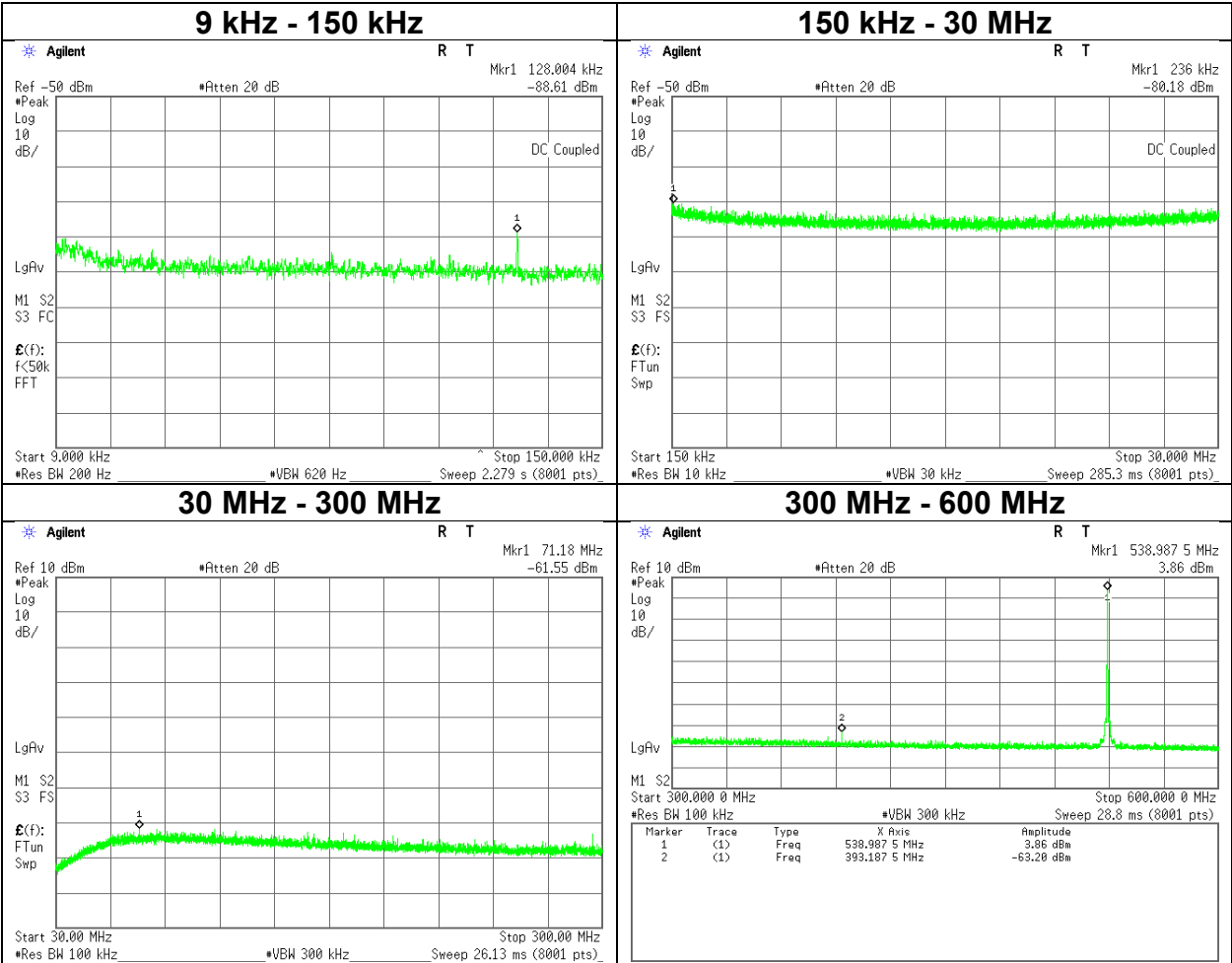
Mode	Tx 470.125 MHz, STD 20mW			
Date	Test site	Temperature	Humidity	Engineer
October 14, 2025	MR6	22 deg. C	62 % RH	Junki Nagatomi



Spurious emissions at antenna terminals

Mode	Tx 539.000 MHz, STD 20mW
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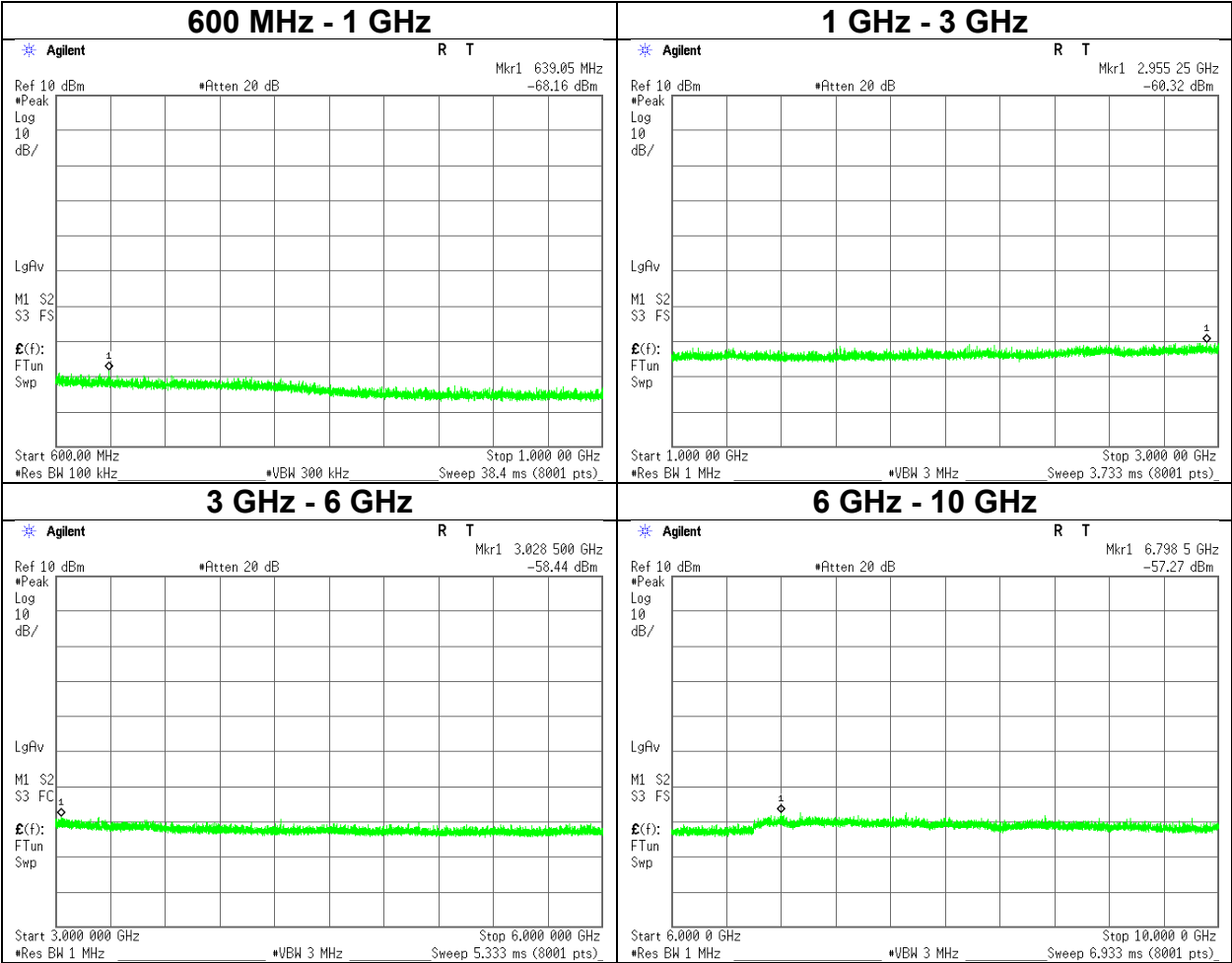
Date	Test site	Temperature	Humidity	Engineer
October 14, 2025	MR6	22 deg. C	62 % RH	Junki Nagatomi



Spurious emissions at antenna terminals

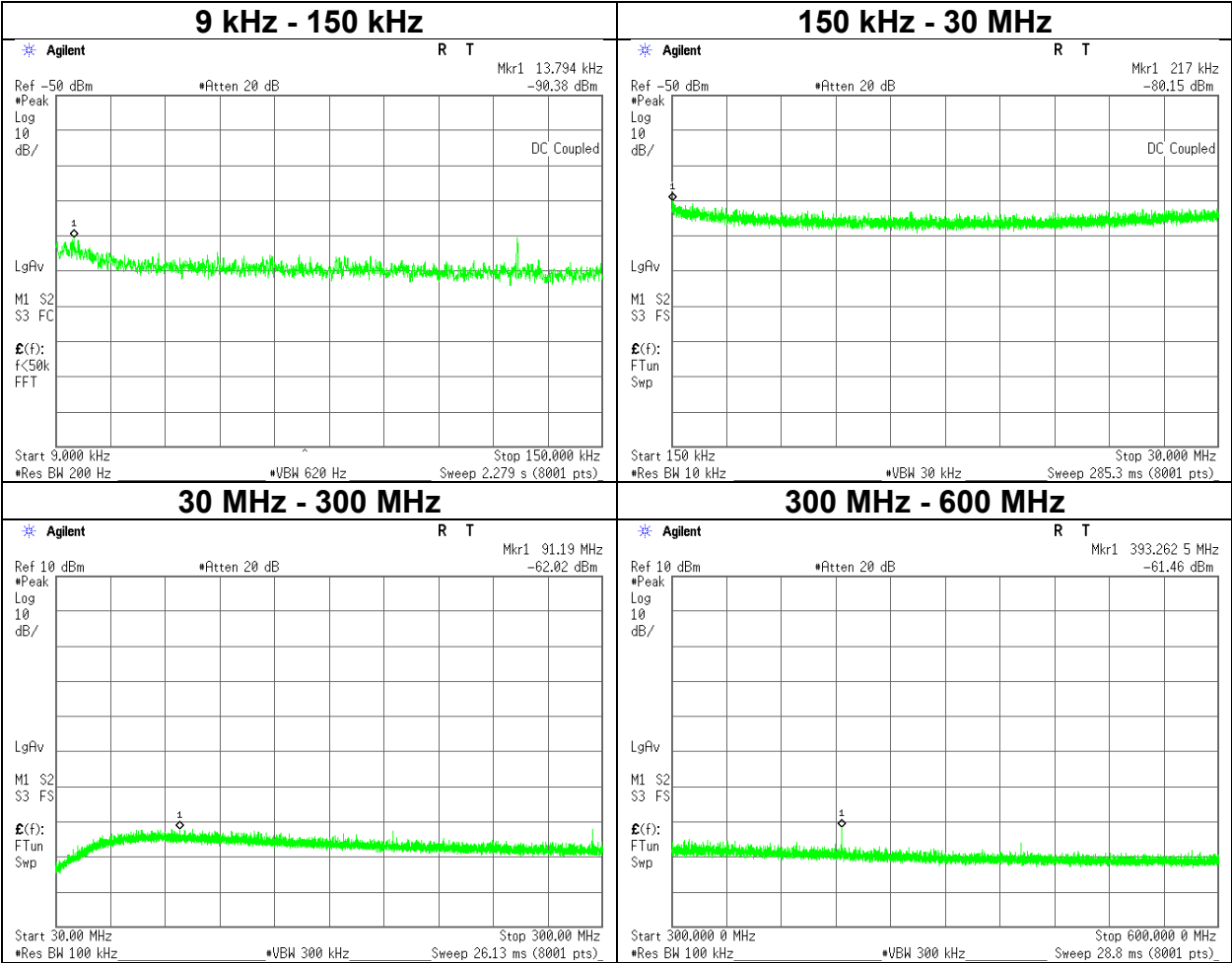
Mode	Tx 539.000 MHz, STD 20mW
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Date	Test site	Temperature	Humidity	Engineer
October 14, 2025	MR6	22 deg. C	62 % RH	Junki Nagatomi



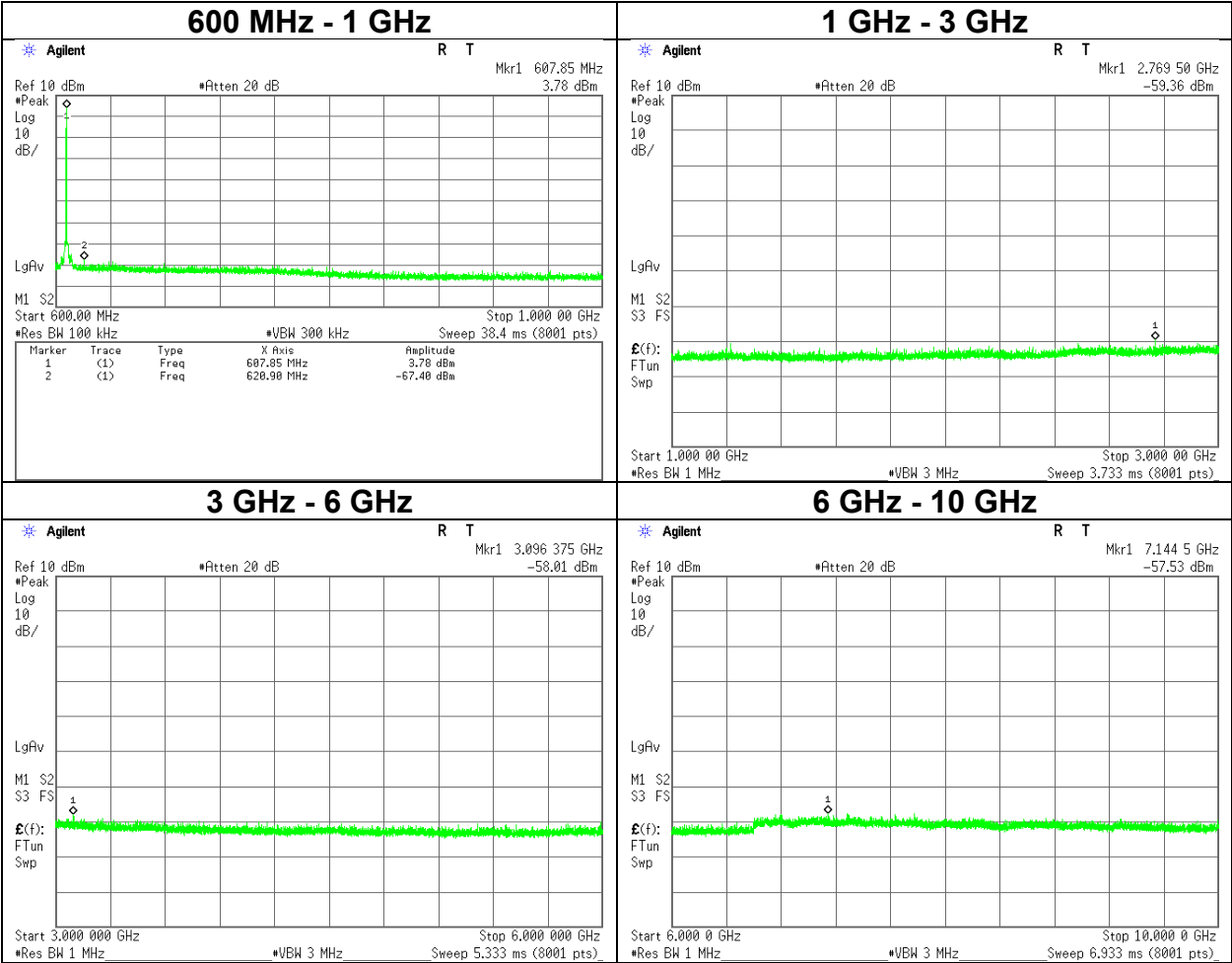
Spurious emissions at antenna terminals

Mode	Tx 607.875 MHz, STD 20mW			
Date	Test site	Temperature	Humidity	Engineer
October 14, 2025	MR6	22 deg. C	62 % RH	Junki Nagatomi



Spurious emissions at antenna terminals

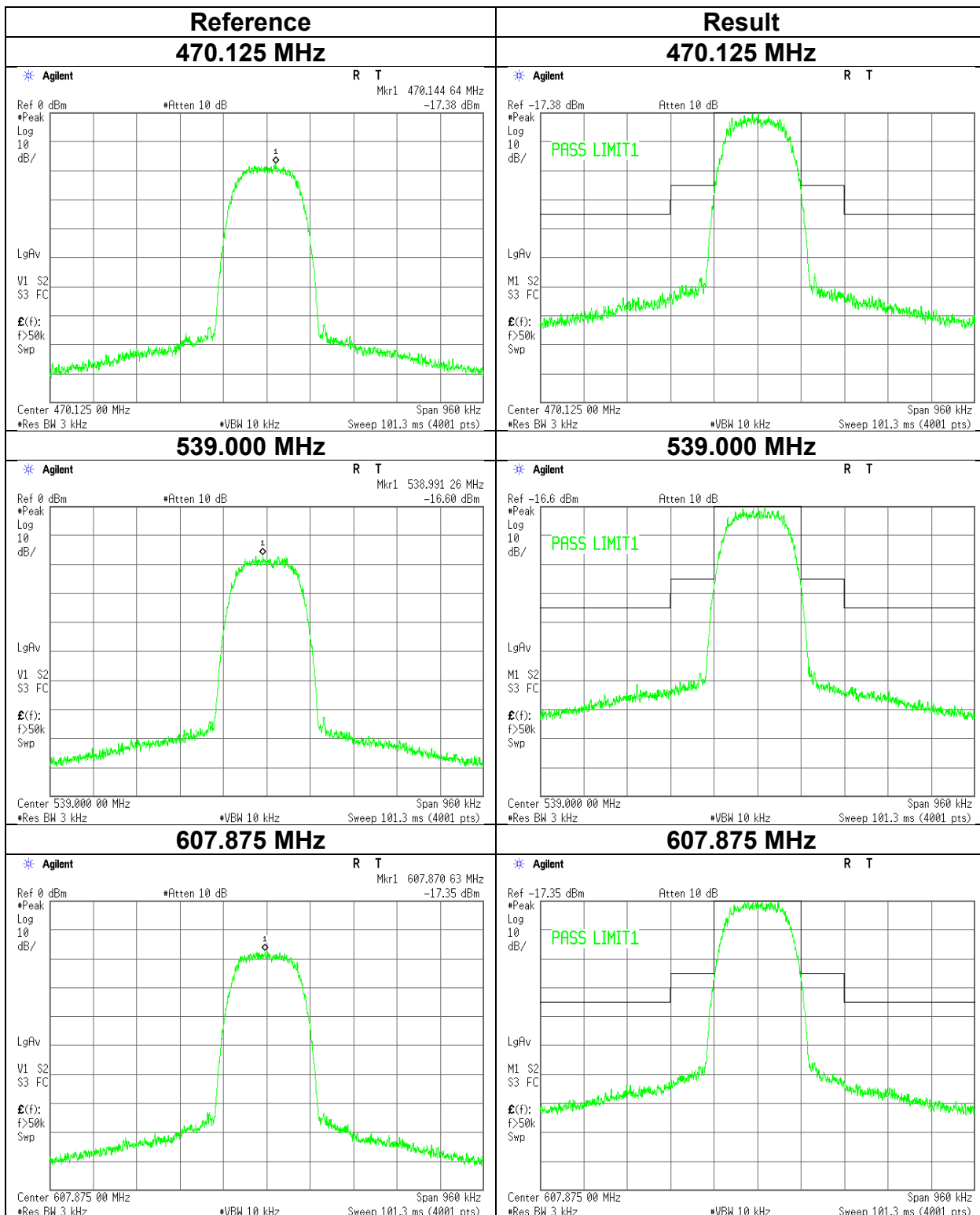
Mode	Tx 607.875 MHz, STD 20mW			
Date	Test site	Temperature	Humidity	Engineer
October 14, 2025	MR6	22 deg. C	62 % RH	Junki Nagatomi



Spurious emissions at antenna terminals [Side band spectrum measurement]

Mode	Tx (470.125 MHz - 607.875 MHz), STD 1 mW			
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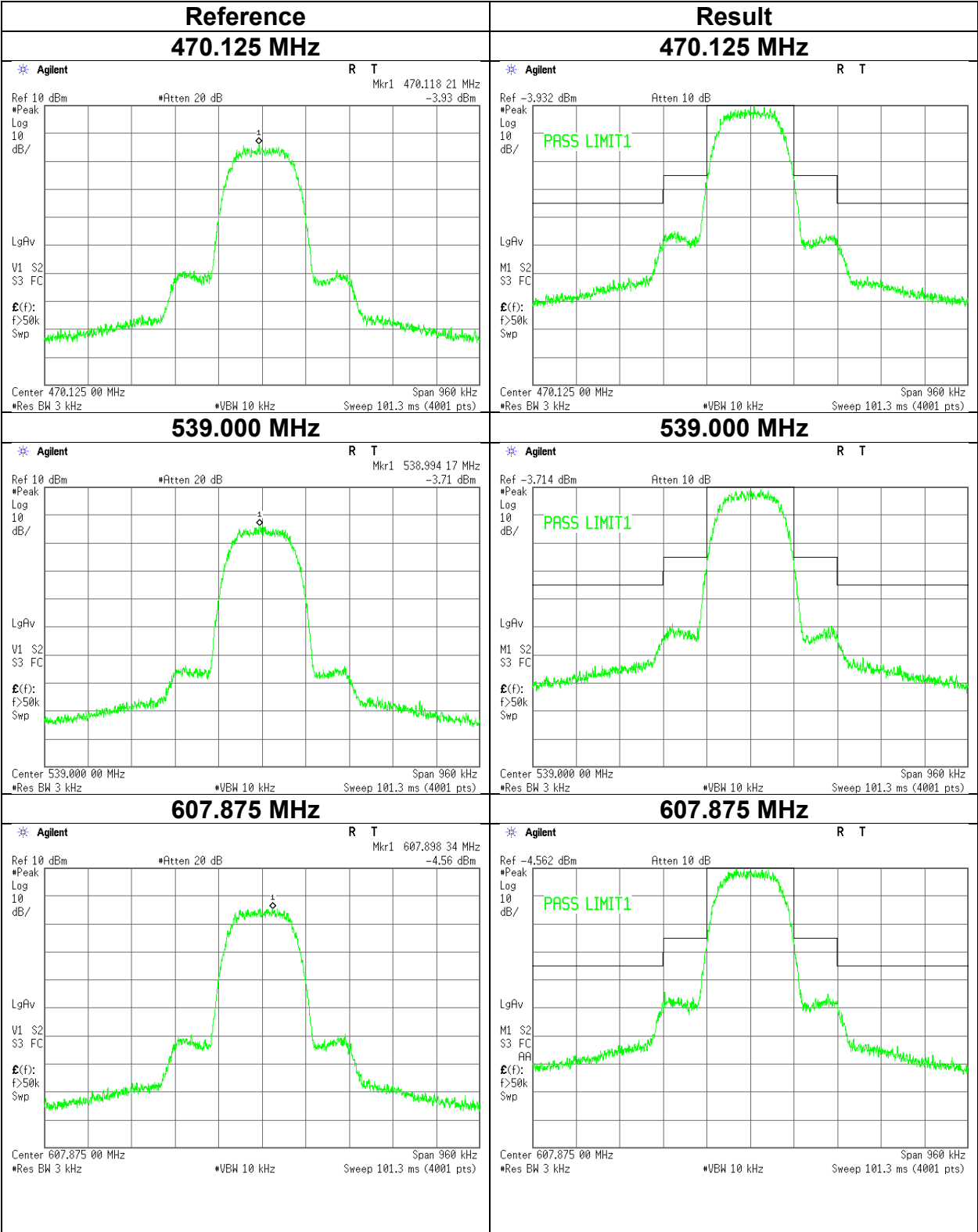
Date	Test site	Temperature	Humidity	Engineer
October 29, 2025	MR8	24 deg. C	42 % RH	Tetsuro Yoshida



Spurious emissions at antenna terminals
[Side band spectrum measurement]

Mode	Tx (470.125 MHz - 607.875 MHz), STD 20 mW			
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Date	Test site	Temperature	Humidity	Engineer
October 29, 2025	MR8	24 deg. C	42 % RH	Tetsuro Yoshida

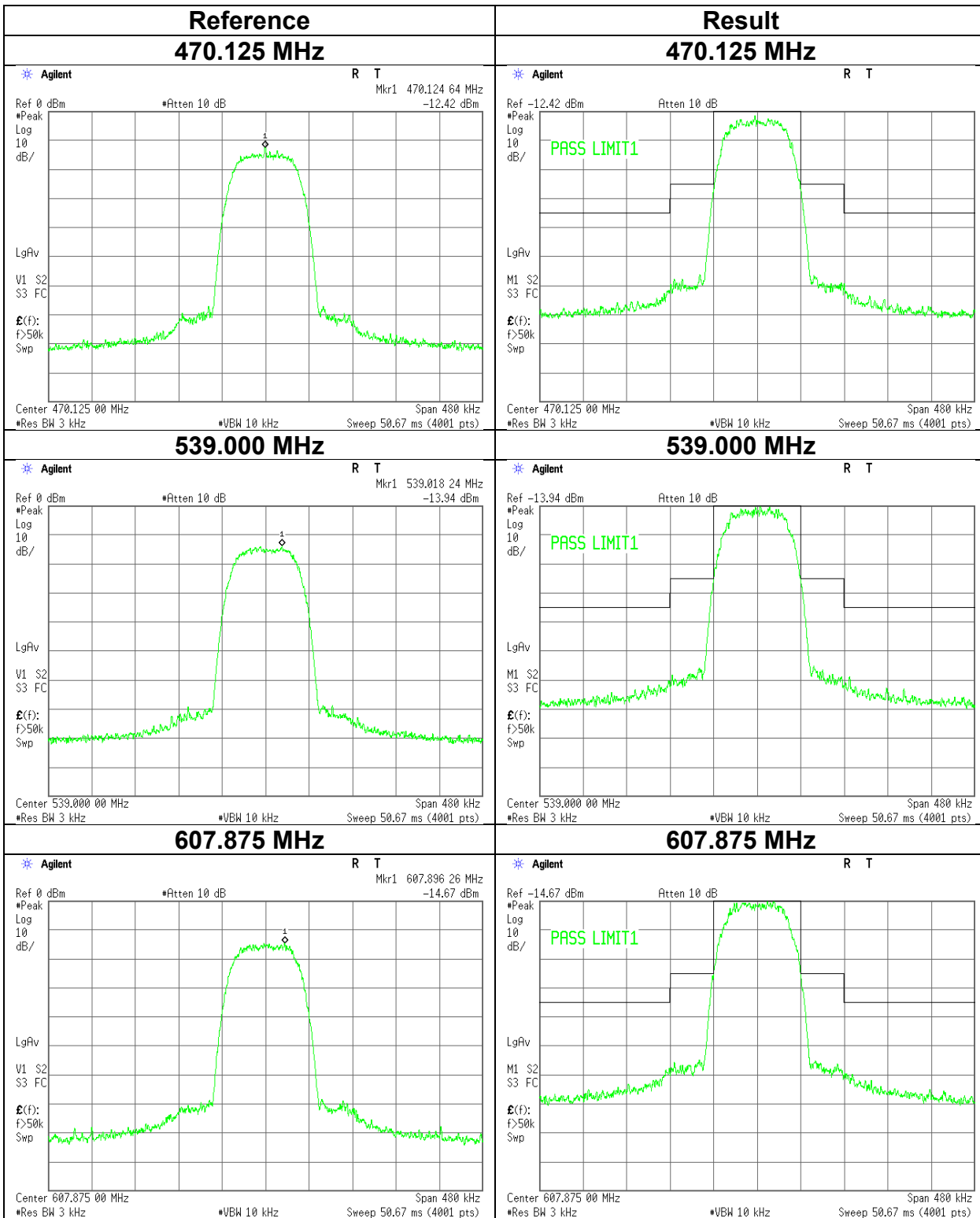


Spurious emissions at antenna terminals

[Side band spectrum measurement]

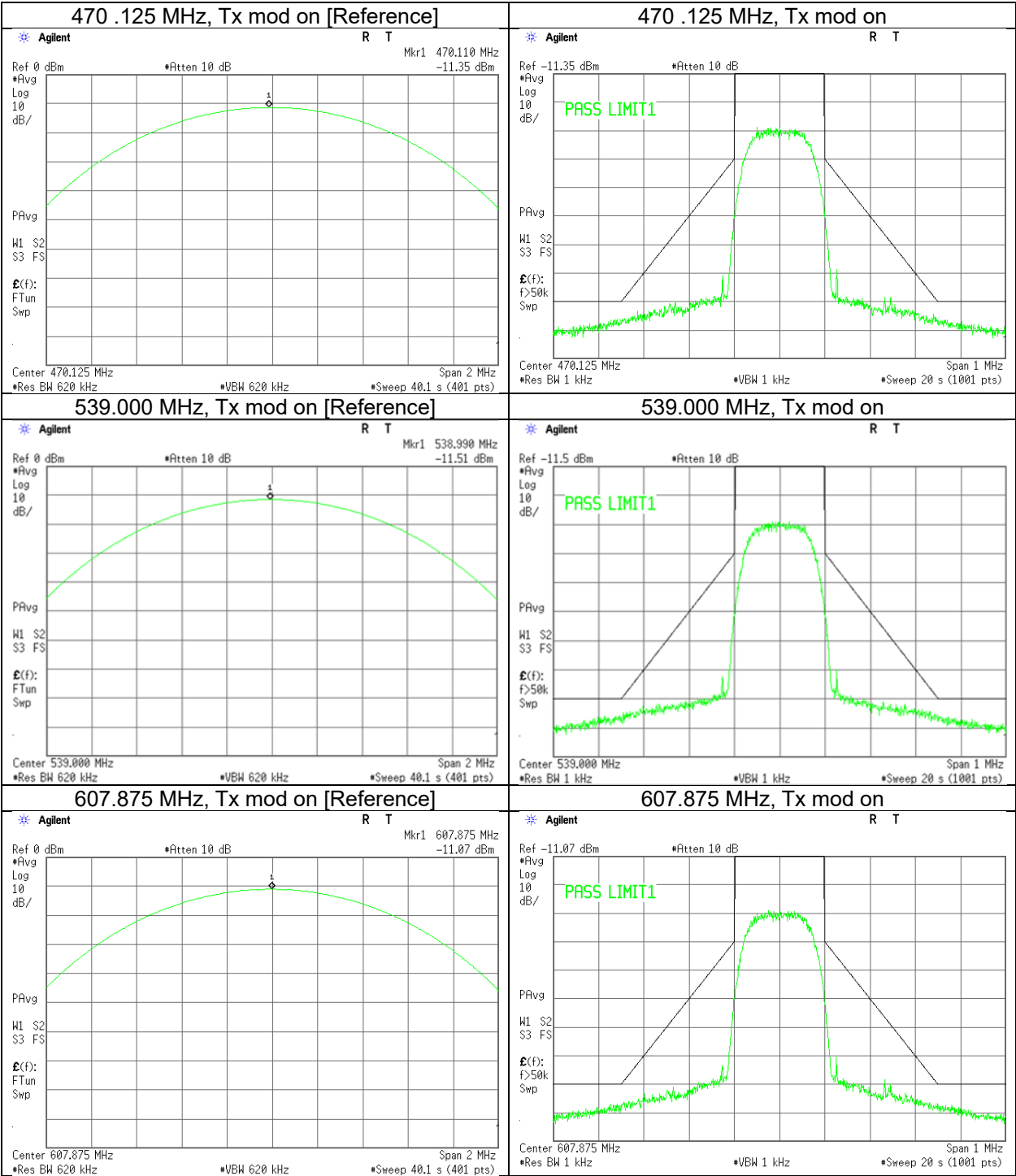
Mode	Tx (470.125 MHz - 607.875 MHz), HD 1 mW			
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Date	Test site	Temperature	Humidity	Engineer
October 29, 2025	MR8	24 deg. C	42 % RH	Tetsuro Yoshida



Transmitter Unwanted Emissions in the Out of Band Domain

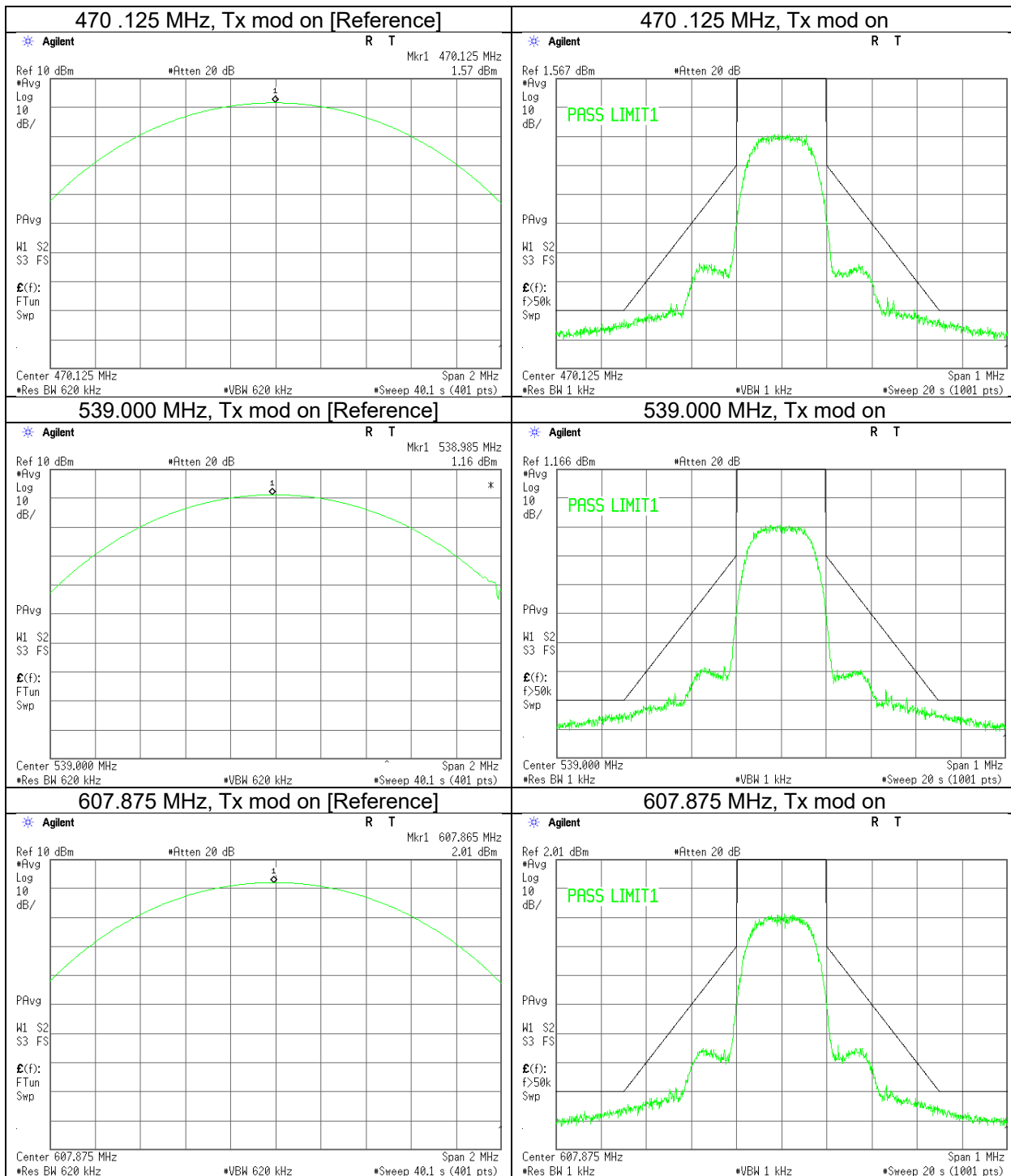
Mode	Tx (470.125 MHz - 607.875 MHz), STD 1 mW			
Date	Test site	Temperature	Humidity	Engineer
October 7, 2025	SAC2	20 deg. C	60 % RH	Tetsuro Yoshida
October 14, 2025	MR6	22 deg. C	62 % RH	Junki Nagatomi



Transmitter Unwanted Emissions in the Out of Band Domain

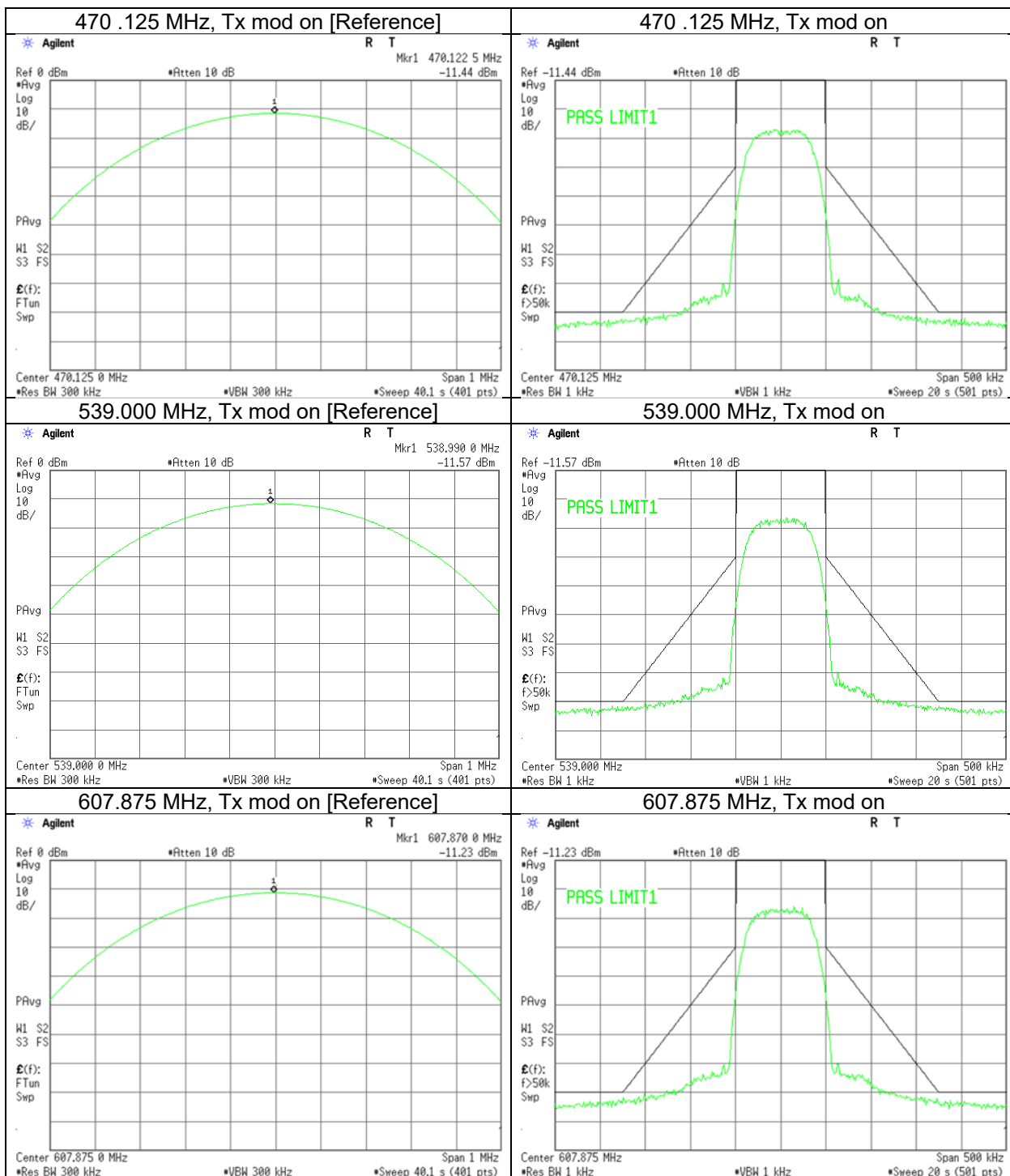
Mode	Tx (470.125 MHz - 607.875 MHz), STD 20 mW			
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Date	Test site	Temperature	Humidity	Engineer
October 7, 2025	SAC2	20 deg. C	60 % RH	Tetsuro Yoshida
October 14, 2025	MR6	22 deg. C	62 % RH	Junki Nagatomi



Transmitter Unwanted Emissions in the Out of Band Domain

Mode	Tx (470.125 MHz - 607.875 MHz), HD 1 mW			
Date	Test site	Temperature	Humidity	Engineer
October 24, 2025	MR8	24 deg. C	51 % RH	Tomoya Sone
October 29, 2025	MR8	24 deg. C	42 % RH	Tetsuro Yoshida



Transmitter unwanted emissions in the spurious domain

Mode	Tx 470.125 MHz
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Date	Test site	Temperature	Humidity	Engineer	Measurement Range
October 15, 2025	SAC3	20 deg. C	69 % RH	Tetsuro Yoshida	Below 1 GHz
November 10, 2025	SAC2	22 deg. C	45 % RH	Tetsuro Yoshida	Above 1 GHz
November 11, 2025	SAC2	21 deg. C	42 % RH	Tetsuro Yoshida	Below 1 GHz

Frequency	Rx SA/TR		Tx SG		Tx	Tx	Result		Limit	Margin		Horizontal		Vertical		Remarks
	Reading		Reading		Cable Loss	Ant. Gain	(ERP)	(ERP)	Margin	Rx Ant. Height	Turn Table	Rx Ant. Height	Turn Table			
	[dBuV]		[dBm]											[dBm]	[dBm]	
[MHz]	Hori.	Vert.	Hori.	Vert.	[dB]	[dBi]	Hori.	Vert.	[dBm]	Hori.	Vert.	[cm]	[deg.]	[cm]	[deg.]	
468.12	31.7	30.5	-56.8	-56.4	3.9	-7.8	-70.6	-70.2	-36.0	34.6	34.2	110	90	140	0	*1)
469.32	30.9	29.7	-58.8	-57.2	3.9	-7.8	-72.5	-71.0	-36.0	36.5	35.0	110	90	140	0	*2)
469.63	21.8	20.6	-66.1	-65.8	3.9	-7.8	-79.9	-79.5	-36.0	43.9	43.5	110	90	140	0	*3)
470.63	21.8	20.6	-66.2	-65.8	3.9	-7.8	-80.0	-79.5	-54.0	26.0	25.5	110	90	140	0	*4)
470.93	31.0	29.8	-58.7	-57.1	3.9	-7.8	-72.5	-70.9	-54.0	18.5	16.9	110	90	140	0	*5)
472.13	31.9	30.6	-56.6	-56.3	3.9	-7.8	-70.4	-70.1	-54.0	16.4	16.1	110	90	140	0	*6)
491.52	32.6	29.4	-56.5	-57.7	4.6	-7.8	-71.0	-72.2	-54.0	17.0	18.2	100	95	130	0	*6)
940.25	33.4	27.5	-45.3	-49.8	5.4	-8.5	-61.3	-65.9	-36.0	25.3	29.9	125	310	250	180	*6)
1410.38	46.6	38.2	-61.7	-70.4	0.8	7.2	-57.4	-66.1	-30.0	27.4	36.1	130	285	122	270	
1880.50	NS	NS	-	-	-	-	-	-	-30.0	-	-	-	-	-	-	
2350.63	NS	NS	-	-	-	-	-	-	-30.0	-	-	-	-	-	-	
2820.75	39.6	37.6	-68.2	-70.0	1.1	10.9	-60.6	-62.3	-30.0	30.6	32.3	105	50	160	0	
3290.88	NS	NS	-	-	-	-	-	-	-30.0	-	-	-	-	-	-	
3761.00	NS	NS	-	-	-	-	-	-	-30.0	-	-	-	-	-	-	
4231.13	NS	NS	-	-	-	-	-	-	-30.0	-	-	-	-	-	-	
4701.25	55.0	52.5	-49.5	-52.5	1.4	12.3	-40.8	-43.8	-30.0	10.8	13.8	107	145	152	145	

Calculation Result = SG Reading - Tx Cable Loss + Tx Antenna Gain - 2.15

Rx-ANTENNA : Biconical Antenna(30 MHz - 200 MHz), Logperiodic Antenna(200 MHz - 1000 MHz), Horn Antenna(1 GHz - 15 GHz)

Tx-ANTENNA : 120 MHz tuned Dipole Antenna(30 MHz - 120 MHz), Dipole Antenna(120 MHz - 1000 MHz), Horn Antenna(1 GHz - 15 GHz)

Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

NS : No signal detect.

Detector : Below 1 GHz: Spectrum Analyzer RMS Average (RBW: Refer to the table below / VBW: About 3 times RBW),

Above 1 GHz: Spectrum Analyzer RMS Average (RBW: 1 MHz / VBW: 3 MHz)

	Frequency Range	RBW
*1)	$f < F_c - 10 B$	100 kHz
*2)	$F_c - 10 B \leq f < F_c - 4 B$	10 kHz
*3)	$F_c - 4 B \leq f \leq F_c - 2.5 B$	1 kHz
*4)	$F_c + 2.5 B \leq f \leq F_c + 4 B$	1 kHz
*5)	$F_c + 4 B < f \leq F_c + 10 B$	10 kHz
*6)	$F_c + 10 B < f$	100 kHz

B is Declared Channel Bandwidth

B = 0.2 MHz

Transmitter unwanted emissions in the spurious domain

Mode	Tx 539.000 MHz				
Date	Test site	Temperature	Humidity	Engineer	Measurement Range
October 15, 2025	SAC3	20 deg. C	69 % RH	Tetsuro Yoshida	Below 1 GHz
November 10, 2025	SAC2	22 deg. C	45 % RH	Tetsuro Yoshida	Above 1 GHz
November 11, 2025	SAC2	21 deg. C	42 % RH	Tetsuro Yoshida	Below 1 GHz

Frequency	Rx SATR		Tx SG		Tx	Tx	Result		Limit	Margin		Horizontal		Vertical		Remarks
	Reading		Reading		Cable	Ant.	(ERP)			(ERP)	[dB]	Rx Ant.	Turn	Rx Ant.	Turn	
	[dBuV]		[dBm]				Loss	Gain								
[MHz]	Hori.	Vert.	Hori.	Vert.	[dB]	[dBi]	Hori.	Vert.	[dBm]	Hori.	Vert.	[cm]	[deg.]	[cm]	[deg.]	
491.52	32.8	29.7	-56.4	-57.5	4.6	-7.8	-70.9	-72.0	-54.0	16.9	18.0	100	86	142	0	*1)
537.00	32.8	29.6	-54.8	-56.3	4.1	-7.8	-68.9	-70.4	-54.0	14.9	16.4	100	90	135	0	*1)
538.20	31.2	27.3	-56.5	-58.6	4.1	-7.8	-70.6	-72.7	-54.0	16.6	18.7	100	90	135	0	*2)
538.50	22.0	18.1	-64.8	-67.8	4.1	-7.8	-78.9	-81.9	-54.0	24.9	27.9	100	90	135	0	*3)
539.50	21.9	18.1	-65.0	-67.8	4.1	-7.8	-79.0	-81.9	-54.0	25.0	27.9	100	90	135	0	*4)
539.80	31.0	27.2	-56.7	-58.8	4.1	-7.8	-70.8	-72.9	-54.0	16.8	18.9	100	90	135	0	*5)
541.00	32.6	29.4	-55.1	-56.6	4.1	-7.8	-69.2	-70.7	-54.0	15.2	16.7	100	90	135	0	*6)
1078.00	40.9	NS	-70.2	-	0.7	5.9	-67.1	-	-30.0	37.1	-	112	53	-	-	
1617.00	NS	NS	-	-	-	-	-	-	-30.0	-	-	-	-	-	-	
2156.00	NS	NS	-	-	-	-	-	-	-30.0	-	-	-	-	-	-	
2695.00	NS	NS	-	-	-	-	-	-	-30.0	-	-	-	-	-	-	
3234.00	NS	NS	-	-	-	-	-	-	-30.0	-	-	-	-	-	-	
3773.00	NS	NS	-	-	-	-	-	-	-30.0	-	-	-	-	-	-	
4312.00	58.7	57.0	-47.1	-49.4	1.4	12.4	-38.3	-40.6	-30.0	8.3	10.6	100	23	162	12	
4851.00	NS	NS	-	-	-	-	-	-	-30.0	-	-	-	-	-	-	
5390.00	NS	NS	-	-	-	-	-	-	-30.0	-	-	-	-	-	-	

Calculation Result = SG Reading - Tx Cable Loss + Tx Antenna Gain - 2.15
Rx-ANTENNA : Biconical Antenna(30 MHz - 200 MHz), Logperiodic Antenna(200 MHz - 1000 MHz), Horn Antenna(1 GHz - 15 GHz)
Tx-ANTENNA : 120 MHz tuned Dipole Antenna(30 MHz - 120 MHz), Dipole Antenna(120 MHz - 1000 MHz), Horn Antenna(1 GHz - 15 GHz)
Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).
NS : No signal detect.
Detector : Below 1 GHz: Spectrum Analyzer RMS Average (RBW: Refer to the table below / VBW: About 3 times RBW),
Above 1 GHz: Spectrum Analyzer RMS Average (RBW: 1 MHz / VBW: 3 MHz)

	Frequency Range	RBW
*1)	$f < F_c - 10 B$	100 kHz
*2)	$F_c - 10 B \leq f < F_c - 4 B$	10 kHz
*3)	$F_c - 4 B \leq f \leq F_c - 2.5 B$	1 kHz
*4)	$F_c + 2.5 B \leq f \leq F_c + 4 B$	1 kHz
*5)	$F_c + 4 B < f \leq F_c + 10 B$	10 kHz
*6)	$F_c + 10 B < f$	100 kHz

B is Declared Channel Bandwidth
B = 0.2 MHz

Transmitter unwanted emissions in the spurious domain

Mode	Tx 607.875 MHz
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Date	Test site	Temperature	Humidity	Engineer	Measurement Range
October 15, 2025	SAC3	20 deg. C	69 % RH	Tetsuro Yoshida	Below 1 GHz
November 10, 2025	SAC2	22 deg. C	45 % RH	Tetsuro Yoshida	Above 1 GHz
November 11, 2025	SAC2	21 deg. C	42 % RH	Tetsuro Yoshida	Below 1 GHz

Frequency	Rx SA/TR		Tx SG		Tx	Tx	Result		Limit	Margin		Horizontal		Vertical		Remarks
	Reading [dBuV]		Reading [dBm]		Cable Loss [dB]	Ant. Gain [dBi]	(ERP) [dBm]		(ERP) [dBm]	[dB]		Rx Ant. Height [cm]	Turn Table [deg.]	Rx Ant. Height [cm]	Turn Table [deg.]	
	Hori.	Vert.	Hori.	Vert.			Hori.	Vert.								
491.52	35.3	31.5	-53.9	-55.7	4.6	-7.8	-68.4	-70.2	-54.0	14.4	16.2	100	84	149	0	*1)
605.87	30.9	28.0	-54.9	-55.7	4.3	-7.8	-69.2	-70.0	-54.0	15.2	16.0	130	75	225	180	*1)
607.07	29.5	26.1	-56.4	-57.6	4.3	-7.8	-70.7	-71.9	-54.0	16.7	17.9	130	75	225	180	*2)
607.38	20.5	16.2	-64.4	-66.6	4.3	-7.8	-78.7	-80.9	-54.0	24.7	26.9	130	75	225	180	*3)
608.38	20.6	17.2	-64.3	-65.6	4.3	-7.8	-78.6	-79.9	-54.0	24.6	25.9	130	75	225	180	*4)
608.68	29.5	26.1	-56.3	-57.6	4.3	-7.8	-70.6	-71.9	-54.0	16.6	17.9	130	75	225	180	*5)
609.88	31.7	27.9	-54.2	-55.8	4.3	-7.8	-68.5	-70.1	-54.0	14.5	16.1	130	75	225	180	*6)
1215.75	NS	NS	-	-	-	-	-	-	-30.0	-	-	-	-	-	-	
1823.63	41.2	39.9	-71.6	-72.4	0.9	10.0	-64.6	-65.4	-30.0	34.6	35.4	125	323	113	150	
2431.50	NS	NS	-	-	-	-	-	-	-30.0	-	-	-	-	-	-	
3039.38	NS	NS	-	-	-	-	-	-	-30.0	-	-	-	-	-	-	
3647.25	NS	NS	-	-	-	-	-	-	-30.0	-	-	-	-	-	-	
4255.13	NS	NS	-	-	-	-	-	-	-30.0	-	-	-	-	-	-	
4863.00	45.9	43.7	-58.5	-60.9	1.5	12.4	-49.7	-52.1	-30.0	19.7	22.1	118	138	133	180	
5470.88	NS	NS	-	-	-	-	-	-	-30.0	-	-	-	-	-	-	
6078.75	NS	NS	-	-	-	-	-	-	-30.0	-	-	-	-	-	-	

Calculation Result = SG Reading - Tx Cable Loss + Tx Antenna Gain - 2.15

Rx-ANTENNA : Biconical Antenna(30 MHz - 200 MHz), Logperiodic Antenna(200 MHz - 1000 MHz), Horn Antenna(1 GHz - 15 GHz)

Tx-ANTENNA : 120 MHz tuned Dipole Antenna(30 MHz - 120 MHz), Dipole Antenna(120 MHz - 1000 MHz), Horn Antenna(1 GHz - 15 GHz)

Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

NS : No signal detect.

Detector : Below 1 GHz: Spectrum Analyzer RMS Average (RBW: Refer to the table below / VBW: About 3 times RBW),

Above 1 GHz: Spectrum Analyzer RMS Average (RBW: 1 MHz / VBW: 3 MHz)

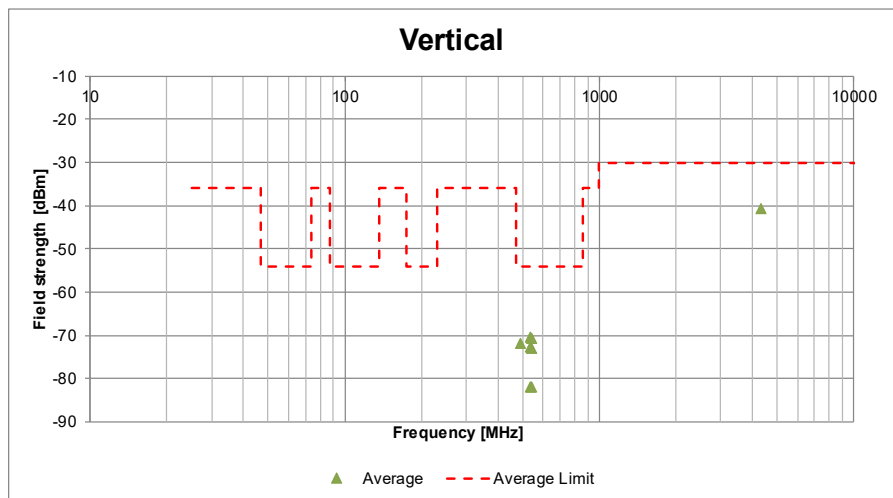
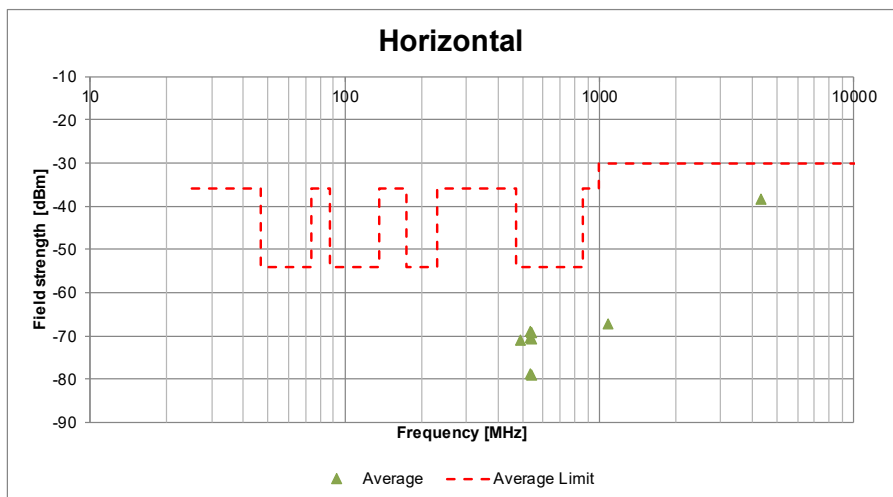
	Frequency Range	RBW
*1)	$f < F_c - 10 B$	100 kHz
*2)	$F_c - 10 B \leq f < F_c - 4 B$	10 kHz
*3)	$F_c - 4 B \leq f \leq F_c - 2.5 B$	1 kHz
*4)	$F_c + 2.5 B \leq f \leq F_c + 4 B$	1 kHz
*5)	$F_c + 4 B < f \leq F_c + 10 B$	10 kHz
*6)	$F_c + 10 B < f$	100 kHz

B is Declared Channel Bandwidth
B = 0.2 MHz

Transmitter unwanted emissions in the spurious domain (Plot data, Worst case)

Mode	Tx 539.000 MHz
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Date	Test site	Temperature	Humidity	Engineer	Measurement Range
October 15, 2025	SAC3	20 deg. C	69 % RH	Tetsuro Yoshida	Below 1 GHz
November 10, 2025	SAC2	22 deg. C	45 % RH	Tetsuro Yoshida	Above 1 GHz
November 11, 2025	SAC2	21 deg. C	42 % RH	Tetsuro Yoshida	Below 1 GHz



*These plots data contains sufficient number to show the trend of characteristic features for EUT.

Frequency stability

Mode	Tx 470.125 MHz						
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Date	Test site	Temperature	Humidity	Engineer
February 13, 2026	MR6	23 deg. C	40 % RH	Tomoya Sone

Varying Temperature

Test condition		Tested frequency	Measured frequency	Frequency error	Result	Limit	Remarks
Temp. [deg. C]	Voltage [V]	[MHz]	[MHz]	[MHz]	[%]	[+/- %]	
50	3.60	470.125	470.124849	-0.000151	-0.00003	0.005	
40	3.60	470.125	470.124865	-0.000135	-0.00003	0.005	
30	3.60	470.125	470.124883	-0.000117	-0.00002	0.005	
20	3.60	470.125	470.124943	-0.000057	-0.00001	0.005	
10	3.60	470.125	470.124957	-0.000043	-0.00001	0.005	
0	3.60	470.125	470.124964	-0.000036	-0.00001	0.005	
-10	3.60	470.125	470.124970	-0.000030	-0.00001	0.005	
-20	3.60	470.125	470.124965	-0.000035	-0.00001	0.005	

Calculation formula: Frequency error = Measured frequency - Tested frequency

Result [%] = Frequency error / Tested frequency * 100

*The test was conducted even at -30 deg. C, but the EUT did not transmit, so the measurement could not be performed.

Limit (+/-): 0.005 % (+/- 50ppm)

*The test was begun from 50 deg.C and the temperature was lowered each 10 deg.C.

Varying Supply Voltage

Test condition		Tested frequency	Measured frequency	Frequency error	Result	Limit	Remarks
Temp. [deg. C]	Voltage [V]	[MHz]	[MHz]	[MHz]	[%]	[+/- %]	
20	3.60	470.125	470.124943	-0.000057	-0.00001	0.005	Nominal
20	3.06	470.125	470.124947	-0.000053	-0.00001	0.005	
20	4.14	470.125	470.124945	-0.000055	-0.00001	0.005	
20	2.58	470.125	470.124947	-0.000053	-0.00001	0.005	Battery End Point

Calculation formula: Frequency error = Measured frequency - Tested frequency

Result [%] = Frequency error / Tested frequency * 100

Frequency stability

Mode	Tx 539.000 MHz
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Date	Test site	Temperature	Humidity	Engineer
February 13, 2026	MR6	23 deg. C	40 % RH	Tomoya Sone

Varying Temperature

Test condition Temp. [deg. C]	Voltage [V]	Tested frequency [MHz]	Measured frequency [MHz]	Frequency error [MHz]	Result [%]	Limit [+/- %]	Remarks
50	3.60	539.000	538.999827	-0.000173	-0.00003	0.005	
40	3.60	539.000	538.999846	-0.000154	-0.00003	0.005	
30	3.60	539.000	538.999865	-0.000135	-0.00003	0.005	
20	3.60	539.000	538.999940	-0.000060	-0.00001	0.005	
10	3.60	539.000	538.999953	-0.000047	-0.00001	0.005	
0	3.60	539.000	538.999959	-0.000041	-0.00001	0.005	
-10	3.60	539.000	538.999969	-0.000031	-0.00001	0.005	
-20	3.60	539.000	538.999971	-0.000029	-0.00001	0.005	

Calculation formula: Frequency error = Measured frequency - Tested frequency

Result [%] = Frequency error / Tested frequency * 100

*The test was conducted even at -30 deg. C, but the EUT did not transmit, so the measurement could not be performed.

Limit (+/-): 0.005 % (+/- 50ppm)

*The test was begun from 50 deg.C and the temperature was lowered each 10 deg.C.

Varying Supply Voltage

Test condition Temp. [deg. C]	Voltage [V]	Tested frequency [MHz]	Measured frequency [MHz]	Frequency error [MHz]	Result [%]	Limit [+/- %]	Remarks
20	3.60	539.000	538.999940	-0.000060	-0.00001	0.005	Nominal
20	3.06	539.000	538.999944	-0.000056	-0.00001	0.005	
20	4.14	539.000	538.999943	-0.000057	-0.00001	0.005	
20	2.58	539.000	538.999942	-0.000058	-0.00001	0.005	Battery End Point

Calculation formula: Frequency error = Measured frequency - Tested frequency

Result [%] = Frequency error / Tested frequency * 100

Frequency stability

Mode	Tx 607.875 MHz						
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Date	Test site	Temperature	Humidity	Engineer
February 13, 2026	MR6	23 deg. C	40 % RH	Tomoya Sone

Varying Temperature

Test condition Temp. [deg. C]	Voltage [V]	Tested frequency [MHz]	Measured frequency [MHz]	Frequency error [MHz]	Result [%]	Limit [+/- %]	Remarks
50	3.60	607.875	607.874816	-0.000184	-0.00003	0.005	
40	3.60	607.875	607.874826	-0.000174	-0.00003	0.005	
30	3.60	607.875	607.874852	-0.000148	-0.00002	0.005	
20	3.60	607.875	607.874934	-0.000066	-0.00001	0.005	
10	3.60	607.875	607.874945	-0.000055	-0.00001	0.005	
0	3.60	607.875	607.874945	-0.000055	-0.00001	0.005	
-10	3.60	607.875	607.874964	-0.000036	-0.00001	0.005	
-20	3.60	607.875	607.874967	-0.000033	-0.00001	0.005	

Calculation formula: Frequency error = Measured frequency - Tested frequency

Result [%] = Frequency error / Tested frequency * 100

*The test was conducted even at -30 deg. C, but the EUT did not transmit, so the measurement could not be performed.

Limit (+/-): 0.005 % (+/- 50ppm)

*The test was begun from 50 deg.C and the temperature was lowered each 10 deg.C.

Varying Supply Voltage

Test condition Temp. [deg. C]	Voltage [V]	Tested frequency [MHz]	Measured frequency [MHz]	Frequency error [MHz]	Result [%]	Limit [+/- %]	Remarks
20	3.60	607.875	607.874934	-0.000066	-0.00001	0.005	Nominal
20	3.06	607.875	607.874935	-0.000065	-0.00001	0.005	
20	4.14	607.875	607.874935	-0.000065	-0.00001	0.005	
20	2.58	607.875	607.874935	-0.000065	-0.00001	0.005	Battery End Point

Calculation formula: Frequency error = Measured frequency - Tested frequency

Result [%] = Frequency error / Tested frequency * 100

APPENDIX 2: Test instruments

Test Equipment (1/2)

Test Item	LIMS ID	Description	Manufacturer	Model	Serial	Last Calibration Date	Cal Int
AT	244707	Thermo-Hygrometer	HIOKI E. E. CORPORATION	LR5001	231202102	01/19/2025	12
AT	141542	Digital Tester	Fluke Corporation	FLUKE 26-3	78030611	08/01/2025	12
AT	141805	Power Meter	Anritsu Corporation	ML2495A	6K00003338	08/26/2025	12
AT	141840	Power sensor	Anritsu Corporation	MA2411B	011737	08/26/2025	12
AT	141410	Microwave cable	Huber+Suhner	SUCOFLEX 102	37953/2	09/03/2025	12
AT	141244	Attenuator(10dB)	Weinschel - API Technologies Corp	WA8-10-34	A198	02/04/2025	12
AT	141156	Attenuator(10dB)	Weinschel Corp	2	BL1173	11/04/2025	12
AT	141419	Attenuator	Weinschel Associates	WA56-10	56100305	05/20/2025	12
AT	141547	DIGITAL HiTESTER	HIOKI E. E. CORPORATION	3805	60500120	02/25/2025	12
AT	141558	Digital Tester(TRUE RMS MULTIMETER)	Fluke Corporation	115	17930030	05/13/2025	12
AT	141567	Thermo-Hygrometer	CUSTOM. Inc	CTH-201	0008	01/19/2025	12
AT	141901	Spectrum Analyzer	Keysight Technologies Inc	E4440A	MY48250080	02/04/2025	12
AT	244712	Thermo-Hygrometer	HIOKI E. E. CORPORATION	LR5001	231202106	01/19/2025	12
RE	141266	Logperiodic Antenna (200-1000MHz)	Schwarzbeck Mess-Elektronik OHG	VUSLP9111B	9111B-191	08/14/2025	12
RE	141277	Signal Generator	Rohde & Schwarz	SMIQ03B	839657/039	08/27/2025	12
RE	141323	Coaxial cable	UL-ISE	-	-	09/08/2025	12
RE	141405	High Pass Filter 0.7-5GHz	TOKIMEC	TF305CCA	601	06/23/2025	12
RE	141532	DIGITAL HiTESTER	HIOKI E. E. CORPORATION	3805	051201197	01/16/2025	12
RE	141594	Pre Amplifier	Keysight Technologies Inc	8447D	2944A10150	02/19/2025	12
RE	141951	EMI Test Receiver	Rohde & Schwarz	ESR26	101408	05/07/2025	12
RE	141978	Spectrum Analyzer	Keysight Technologies Inc	E4448A	MY46180899	05/14/2025	12
RE	142008	AC3 Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-10005	07/09/2025	24
RE	142230	Measure, Tape, Steel	KOMELON	KMC-36	-	-	-
RE	142314	Attenuator	Pasternack Enterprises	PE7390-6	D/C 1504	06/24/2025	12
RE	178648	EMI measurement program	TSJ (Techno Science Japan)	TEPTO-DV	-	-	-
RE	197990	Biconical Antenna	Schwarzbeck Mess-Elektronik OHG	VHBB 9124 + BBA 9106	01365	11/18/2024	12
RE	244709	Thermo-Hygrometer	HIOKI E. E. CORPORATION	LR5001	231202103	01/19/2025	12
RE	141318	Coaxial Cable	UL-ISE	-	-	07/04/2025	12
RE	147006	Dipole Antenna	Schwarzbeck Mess-Elektronik OHG	UHAP	601	06/25/2025	12
AT	141429	Temperature and Humidity Chamber	Espec	PL-2KP	14015723	08/28/2025	12
AT	141903	Spectrum Analyzer	Keysight Technologies Inc	E4440A	MY46186390	01/30/2025	12
AT	263297	Coaxial Cable	GigaLane Co., Ltd	G03SMC005-GUL200HT-G03SMC005-2000mm	#002	05/20/2025	12
AT	141498	Microwave Counter	ADVANTEST	R5373	120100309	07/22/2025	12
AT	244711	Thermo-Hygrometer	HIOKI E. E. CORPORATION	LR5001	231202105	01/19/2025	12
AT	141557	DIGITAL HiTESTER	HIOKI E. E. CORPORATION	3805	070900530	01/15/2025	12
RE	244707	Thermo-Hygrometer	HIOKI E. E. CORPORATION	LR5001	231202102	01/19/2025	12
RE	141542	Digital Tester	Fluke Corporation	FLUKE 26-3	78030611	08/01/2025	12
RE	142228	Measure, Tape, Steel	KOMELON	KMC-36	-	-	-
RE	141902	Spectrum Analyzer	Keysight Technologies Inc	E4440A	MY46187105	10/06/2025	12

Test Equipment (2/2)

Test Item	LIMS ID	Description	Manufacturer	Model	Serial	Last Calibration Date	Cal Int
RE	141511	Horn Antenna 1-18GHz	Schwarzbeck Mess-Elektronik OHG	BBHA9120D	253	09/17/2025	12
RE	252663	Microwave Cable	Huber+Suhner	SF126E/11PC35/11 PC35/1000MM,5000 MM	616276/126E / 616275/126E	09/03/2025	12
RE	253739	Pre Amplifier	Keysight Technologies Inc	8449B	3008A01919	10/17/2025	12
RE	242978	High Pass Filter 1-13 GHz	Pasternak	PE87FL1018	D.C. 2215	02/14/2025	12
RE	141892	Signal Generator	Keysight Technologies Inc	E8257D	US49280311	11/13/2025	12
RE	141414	Microwave Cable	Junkosha	MWX221	1207S407	07/04/2025	12
RE	141514	Horn Antenna 1-18GHz	Schwarzbeck Mess-Elektronik OHG	BBHA9120D	01611	06/18/2025	12
RE	141404	High Pass Filter 3.5-24GHz	TOKIMEC	TF323DCA	601	05/12/2025	12
RE	238713	Double Ridge Horn Antenna	Schwarzbeck Mess-Elektronik OHG	BBHA 9120 C	688	09/17/2025	12
RE	142004	AC2_Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-06902	07/08/2025	24
RE	141427	Biconical Antenna	Schwarzbeck Mess-Elektronik OHG	VHA9103B+BBA9106	08031	07/22/2025	12
RE	141265	Logperiodic Antenna (200-1000MHz)	Schwarzbeck Mess-Elektronik OHG	VUSLP9111B	9111B-190	07/22/2025	12
RE	266727	Attenuator	Huber+Suhner	6806 N-50-1	40701613	07/09/2025	12
RE	141317	Coaxial Cable	UL-ISE	-	-	09/29/2025	12
RE	141219	Coaxial Cable	UL-ISE	-	-	07/04/2025	12

*Hyphens for Last Calibration Date and Cal Int (month) are instruments that Calibration is not required (e.g. software), or instruments checked in advance before use.

The expiration date of the calibration is the end of the expired month.

As for some calibrations performed after the tested dates, those test equipment have been controlled by means of an unbroken chains of calibrations.

All equipment is calibrated with valid calibrations. Each measurement data is traceable to the national or international standards.

Test item:

AT: Antenna Terminal Conducted

RE: Transmitter unwanted emissions in the spurious domain