

RADIO TEST REPORT

Test Report No. 16169399H-A-R2

Customer	DENSO CORPORATION
Description of EUT	Millimeter Wave Radar Sensor
Model Number of EUT	DNMWR020
FCC ID	HYQDNMWR020
Test Regulation	FCC Part 95 Subpart M
Test Result	Complied
Issue Date	March 31, 2026
Remarks	-

Representative test engineerJunya Okuno
Engineer**Approved by**Ryota Yamanaka
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)	16169399H-A	February 19, 2026	-
1	16169399H-A-R1	March 4, 2026	Change the following content in SECTION 5: - Correction of the Test Distance for 110 GHz to 170 GHz; from 1.0 m to 0.50 m - Correction of the Ts value in the FMCW Desensitization Factor Calculation Table; FCM1 (Low/Mid/High): from 59.0 to 55.2. FCM2: from 38.0 to 33.7. Correction of the Radiated Power data (reflecting the FMCW Desensitization factor due to the above correction) Change the following test data in Field strength of spurious radiation (Above 40 GHz) for APPENNDIX1: <u>Normal operating mode (Mode 1)</u> - Reading for frequency 184.774 GHz; from -80.00 to -89.45 - Plot data (in horizontal axis to 243 GHz) <u>Normal operating mode (Mode 2)</u> - Meas. range (110 GHz to 170 GHz); from 1.00 m to 0.50 m - Plot data <u>Normal operating mode (Mode 3)</u> - Reading for frequency 86.260 GHz; from -80.00 to -54.07 - Plot data (in horizontal axis to 243 GHz)
2	16169399H-A-R2	March 31, 2026	Correction to the Power Setting for Mode 1 in Clause 4.1: From “33.71 dBm” to “35.71 dBm”

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	DENSO CORPORATION
Address	1-1, Showa-cho, Kariya-shi, Aichi-ken, 448-8661, Japan
Telephone Number	+81-50-2027-2197
Contact Person	Hideshi Izuhara

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	Millimeter Wave Radar Sensor
Model Number	DNMWR020
Serial Number	Refer to SECTION 4.2
Condition	Pre-production (Not for Sale: This sample is equivalent to production version.)
Modification	No Modification by the test lab
Receipt Date	January 9, 2026
Test Date	January 13 to 30, 2026

2.2 Product Description

General Specification

Rating	DC 12 V (Car battery), DC 5.8 V to 16 V (Operating range)
Operating temperature	-40 deg. C to +85 deg. C

Radio Specification

Equipment Type	Transceiver
Frequency of Operation	76 GHz to 77 GHz (FCM 1: 76.3 GHz, 76.5 GHz, 76.7 GHz / FCM 2: 76.5 GHz / Tx BIST: 76.5 GHz)
Bandwidth	FCM 1: 500 MHz (Max) / FCM 2: 980 MHz (Max) / Tx_BIST: 300 MHz (Max)
Type of Modulation	Fast chirp modulation (FCM)
Emission Classification	QXN
Antenna Gain	FCM 1: 16.91 dBi (typ) / FCM 2: 16.87 dBi (typ) / Tx_BIST: 15.04 dBi (typ)
Steerable Antenna	Fixed beam
Usage location	Vehicle-mounted

SECTION 3: Test Summary

3.1 Test Specification

Test Specification	FCC Part 95 Subpart M The latest version on the first day of the testing period
Title	FCC 47CFR Part95 – PERSONAL RADIO SERVICES Subpart M – The 76-81 GHz Band Radar Service

3.2 Reference Standards

ANSI C63.26-2015
KDB 971168 D01 v03r01
KDB 653005 D01 v01r02 for FCC

3.3 Summary of Test Results

Item	Specification	Results	Remarks
Conducted emission	FCC: N/A	N/A	*1)
Occupied bandwidth	FCC: Section 2.1049	Complied	Radiated
Radiated Power / Modulation characteristics	FCC: Section 95.3367 Section 2.1046 Section 2.1047	Complied	Radiated
Field strength of spurious radiation	FCC: Section 95.3379 (a) Section 2.1053 Section 2.1057	Complied	Radiated
Frequency stability	FCC: Section 95.3379 (b) Section 2.1055	Complied	Radiated
Note: UL Japan, Inc.'s EMI Work Procedures: Work Instructions-ULID-003591 and Work Instructions-ULID-003593.			
*1) The test is not applicable since the EUT is not the device that is designed to be connected to the public utility (AC) power line.			

Supplied Voltage Information

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

Antenna Information

The antenna is not removable from the EUT.

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 $k = 2$.

Radiated emission

Measurement distance	Frequency range	Unit	Calculated Uncertainty (+/-)
3 m	9 kHz to 30 MHz	dB	4.8
10 m		dB	4.7
3 m	30 MHz to 200 MHz	Horizontal	5.0
		Vertical	5.0
	200 MHz to 1000 MHz	Horizontal	5.2
		Vertical	6.2
10 m	30 MHz to 200 MHz	Horizontal	5.5
		Vertical	5.4
	200 MHz to 1000 MHz	Horizontal	5.5
		Vertical	5.5
3 m	1 GHz to 6 GHz	dB	5.1
	6 GHz to 18 GHz	dB	5.5
1 m	6 GHz to 18 GHz	dB	5.5
	18 GHz to 26.5 GHz	dB	5.7
	26.5 GHz to 40 GHz	dB	4.8
0.5 m	18 GHz to 40 GHz	dB	5.8
>= 0.5 m	40 GHz to 50 GHz	dB	5.2
	50 GHz to 75 GHz	dB	5.0
	75 GHz to 110 GHz	dB	4.8
>= 3.8 cm	110 GHz to 170 GHz	dB	5.5*
>= 2.5 cm	170 GHz to 260 GHz	dB	5.0*

*under consideration about Uncertainty for testing at 1 cm distance.

Radiated emission (with Block downconverter)

Measurement distance	Frequency range	Uncertainty (+/-)
>= 0.5 m	75 GHz to 83 GHz	3.4 dB*

*This value was used for 75 GHz - 83 GHz in this report.

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)

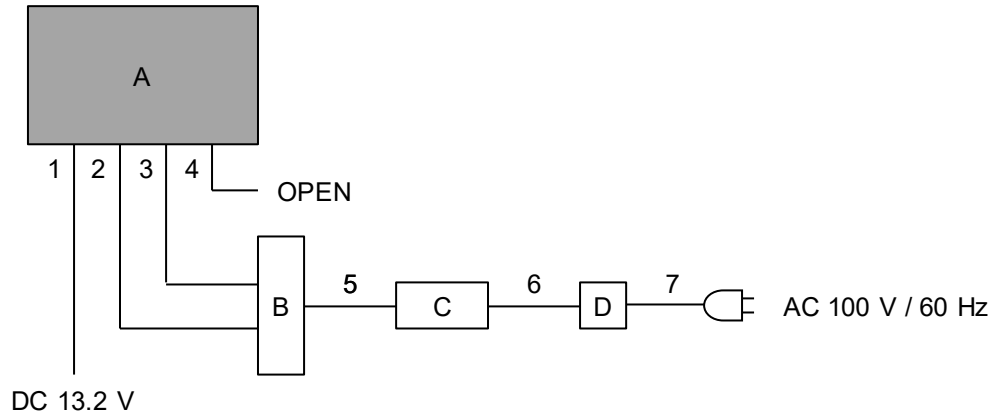
Mode	Test Item
Transmitting mode (Tx) - Mode 1 • FCM 1 Low (76.3 GHz) • FCM 1 Mid (76.5 GHz) • FCM 1 High (76.7 GHz) • FCM 2	- Occupied bandwidth - Radiated Power
Transmitting mode (Tx) - Mode 1 • FCM 1 Low (76.3 GHz) • FCM 2	- Modulation characteristics
Transmitting mode (Tx) - Mode 2 • FCM 1 Low (76.3 GHz) • FCM 1 Mid (76.5 GHz) • FCM 1 High (76.7 GHz) • FCM 2	- Occupied bandwidth - Radiated Power
Transmitting mode (Tx) - Mode 2 • FCM 1 Low (76.3 GHz) • FCM 2	- Modulation characteristics
Transmitting mode (Tx) - Mode 3 • FCM 1 Low (76.3 GHz) • FCM 1 Mid (76.5 GHz) • FCM 1 High (76.7 GHz) • FCM 2	- Occupied bandwidth - Radiated Power
Transmitting mode (Tx) - Mode 3 • FCM 1 Low (76.3 GHz) • FCM 2	- Modulation characteristics
Transmitting mode (Tx) ^{*1), *2)} • Tx_BIST1 • Tx_BIST2 • Tx_BIST3	- Occupied bandwidth - Radiated Power - Modulation characteristics
Normal operating mode - Mode 1 - Mode 2 - Mode 3	- Field strength of spurious radiation - Frequency Stability

*Refer to the Remarks on the next page for *1) and *2).

Remarks
- In actual operation, there are FCM1, FCM2 and Tx_BIST modulation parts in sequence within one transmission burst. - First, the EUT transmits FCM1 modulation. (FCM1 is switched the transmission frequency band for each period at random.) - After that, FCM2 is transmitted immediately. - After FCM2 transmission, Tx BIST is transmitted immediately. (Tx_BIST is repeated in the order to Tx_BIST1, Tx_BIST2, and Tx_BIST3 at every cycle.) - *1) Tx_BIST is common to Mode1, Mode2 and Mode 3. - *2) Tx_BIST transmits simultaneously in the following combinations: • Tx_BIST1: ch 1 & ch 2 • Tx_BIST2: ch 2 & ch 3 • Tx_BIST3: ch 3 & ch 4
*Power of the EUT was set by the software as follows; Power Setting: Mode 1: 35.71 dBm (EIRP) Mode 2: 29.61 dBm (EIRP) Mode 3: 23.21 dBm (EIRP) Software: mwr_gen7_0096_t13239 (Date: 2026.01.13, 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.

4.2 Configuration and peripherals

Transmitting mode (Tx)



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

* The test voltage was referred to KDB653005 5.1(e) (FCC), and the test was performed with DC 13.2 V (1.1 times of nominal voltage DC 12 V).

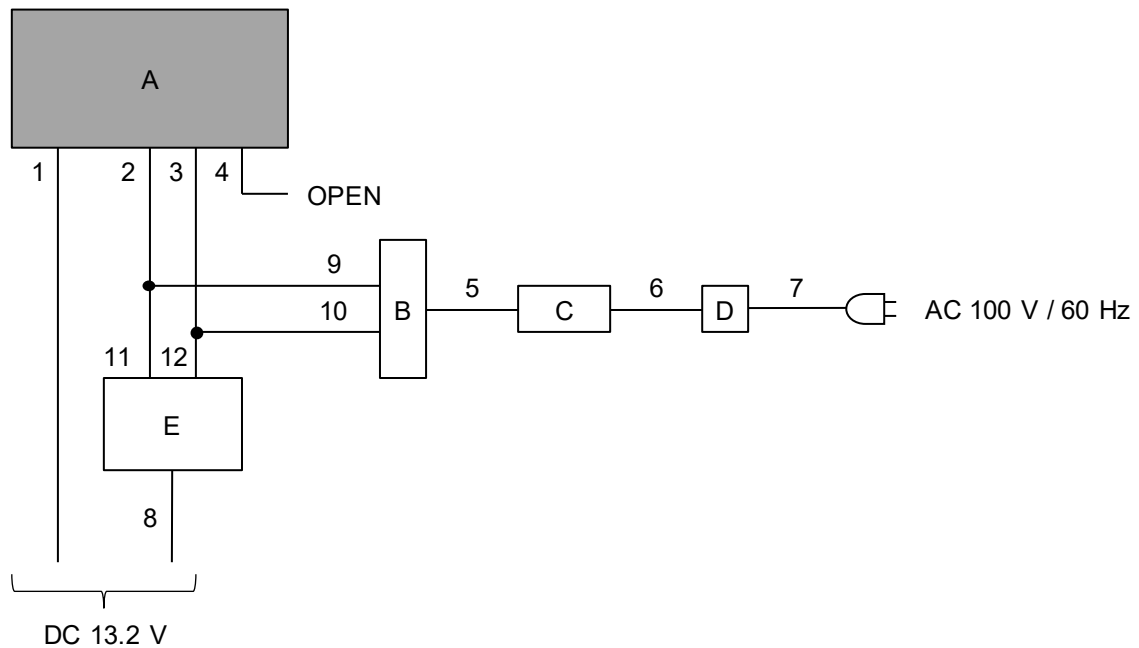
Description of EUT and Support equipment

No.	Item	Model number	Serial number	Manufacturer	Remarks
A	Millimeter Wave Radar Sensor	DNMWR020	H1T_2.3W0475	DENSO CORPORATION	EUT
B	CAN/LIN Interface	VN1630	7	Vector Japan Co., Ltd.	-
C	Laptop PC	8265NGW	5CD922C9PF	HP	-
D	AC Adapter	HSTNN-CA41	-	HP	-

List of cables used

No.	Name	Length (m)	Shield Cable	Connector	Remarks
1	DC Cable	5.2	Unshielded	Unshielded	-
2	CAN1 Cable	5.2	Unshielded	Unshielded	-
3	CAN2 Cable	5.2	Unshielded	Unshielded	-
4	Signal Cable	5.2	Unshielded	Unshielded	-
5	USB Cable	1.6	Shielded	Shielded	-
6	DC Cable	1.8	Unshielded	Unshielded	-
7	AC Cable	1.0	Unshielded	Unshielded	-

Normal operating mode



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

* The test voltage was referred to KDB653005 5.1(e) (FCC), and the test was performed with DC 13.2 V (1.1 times of nominal voltage DC 12 V).

Description of EUT and Support equipment

No.	Item	Model number	Serial number	Manufacturer	Remarks
A	Millimeter Wave Radar Sensor	DNMWR020	H1T_2.3W0475	DENSO CORPORATION	EUT
B	CAN/LIN Interface	VN1630	7	Vector Japan Co., Ltd.	-
C	Laptop PC	8265NGW	5CD922C9PF	HP	-
D	AC Adapter	HSTNN-CA41	-	HP	-
E	CAN Simulator	RX Sencer	-	DENSO CORPORATION	-

List of cables used

No.	Name	Length (m)	Shield		Remarks
			Cable	Connector	
1	DC Cable	5.2	Unshielded	Unshielded	-
2	CAN1 Cable	5.4	Unshielded	Unshielded	-
3	CAN2 Cable	5.4	Unshielded	Unshielded	-
4	Signal Cable	5.2	Unshielded	Unshielded	-
5	USB Cable	1.6	Shielded	Shielded	-
6	DC Cable	1.8	Unshielded	Unshielded	-
7	AC Cable	1.0	Unshielded	Unshielded	-
8	DC Cable	0.5	Unshielded	Unshielded	-
9	CAN1 Cable	0.1	Unshielded	Unshielded	-
10	CAN2 Cable	0.1	Unshielded	Unshielded	-
11	CAN1 Cable	0.4	Unshielded	Unshielded	-
12	CAN2 Cable	0.4	Unshielded	Unshielded	-

SECTION 5: Radiated Spurious Emission

Test Procedure

[For below 30 MHz]

The EUT was placed on the platform of nominal size, 1.0 m by 1.5 m, raised 0.8 m above the conducting ground plane.

The Radiated Electric Field Strength has been measured in a Semi Anechoic Chamber with absorbent materials lined on a ground plane.

The loop antenna was fixed height at 1.0 m.

The EUT was rotated a full revolution in order to obtain the maximum value of the electric field intensity.

The measurements were performed for vertical polarization (antenna angle: 0 deg., 45 deg., 90 deg., 135 deg., and 180 deg.) and horizontal polarization.

*Refer to Figure 1 about Direction of the Loop Antenna.

[For above 30 MHz, up to 1 GHz]

The EUT was placed on the platform of nominal size, 1.0 m by 1.5 m, raised 0.8 m above the conducting ground plane. The Radiated Electric Field Strength has been measured in a Semi Anechoic Chamber with a ground plane.

The height of the measuring antenna varied between 1 m and 4 m and EUT was rotated a full revolution in order to obtain the maximum value of the electric field strength.

[For above 1 GHz, up to 40 GHz]

The 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.

The Radiated Electric Field Strength has been measured in a Semi Anechoic Chamber with absorbent materials lined on a ground plane.

The height of the measuring antenna varied between 1 m and 4 m and EUT was rotated a full revolution in order to obtain the maximum value of the electric field strength.

Test antenna was aimed at the EUT for receiving the maximum signal and always kept within the illumination area of the 3 dB beamwidth of the antenna.

The measurements were performed for both vertical and horizontal antenna polarization with the Test Receiver, or the Spectrum Analyzer.

The measurements were made with the following detector function of the test receiver and the Spectrum analyzer.

The test was made with the detector (RBW/VBW) in the following table.

Test Antennas are used as below;

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

Frequency	9 kHz to 150 kHz	150 kHz to 30 MHz	30 MHz to 1 GHz	1 GHz to 40 GHz
Instrument used	Test Receiver			Spectrum Analyzer
Detector	CISPR QP, Average	CISPR QP, Average	CISPR QP	Average *1)
IF Bandwidth	200 Hz	9 kHz	120 kHz	RBW: 1 MHz VBW: 3 MHz

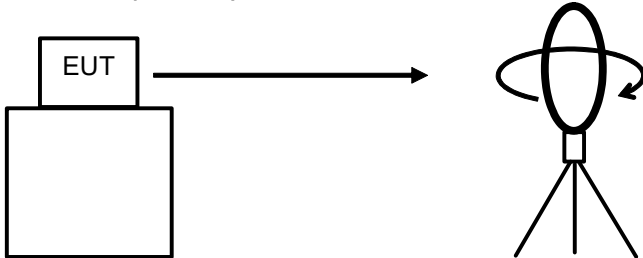
*1) A RMS average mode was applied according to KDB653005 4 (b) and 5.4 (f).

[Test setup]

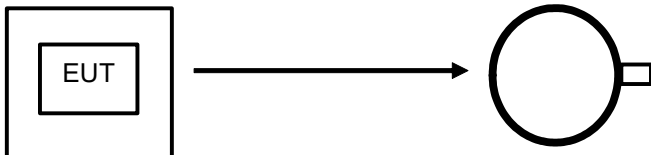
Below 1 GHz	
× : Center of turn table	Test Distance: 3 m
1 GHz to 10 GHz	
× : Center of turn table	Test Distance: 3 m
10 GHz to 40 GHz	
× : Center of turn table	Distance Factor: $20 \times \log (1.0 \text{ m}^* / 3.0 \text{ m}) = -9.5 \text{ dB}$ *Test Distance: 1 m

Figure 1: Direction of the Loop Antenna

Side View (Vertical)

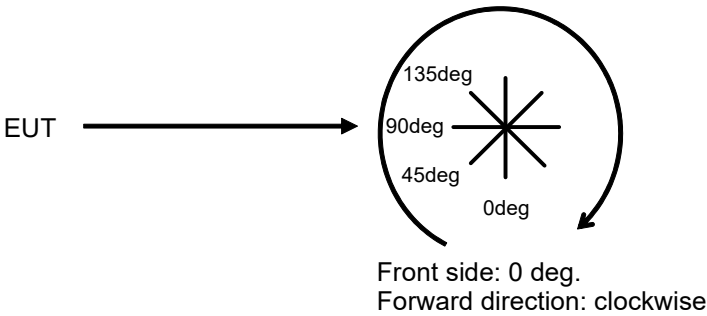


Top View (Horizontal)



Antenna was not rotated.

Top View (Vertical)



[Above 40 GHz (Except for fundamental measurement)]

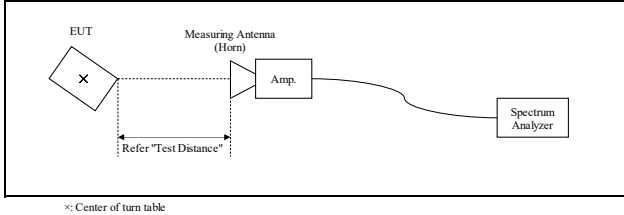
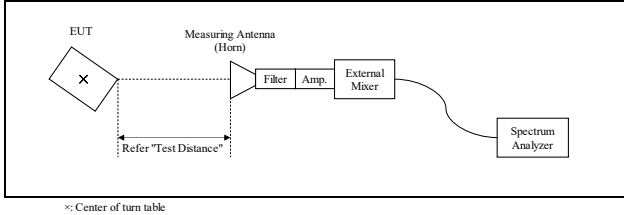
The test was performed based on ANSI C63.26-2015 and KDB 653005.
The EUT was placed on the platform, raised 1.5 m above the conducting ground plane.
The measurements were performed on handheld method.

Set spectrum analyzer RBW, VBW, span, etc., to the proper values. Note these values. Enable two traces—one set to “clear write,” and the other set to “max hold.” Begin hand-held measurements with the test antenna (horn) at a distance of 1 m from the EUT in a horizontally polarized position. Slowly adjust its position, entirely covering the plane 1 m from the EUT. Observation of the two active traces on the spectrum analyzer will allow refined horn positioning at the point(s) of maximum field intensity. Repeat with the horn in a vertically polarized position. If the emission cannot be detected at 1 m, reduce the RBW to increase system sensitivity. Note the value. If the emission still cannot be detected, move the horn closer to the EUT, noting the distance at which a measurement is made.

Note the maximum level indicated on the spectrum analyzer. Adjust this level, if necessary, by the antenna gain, filter loss, conversion loss of the external mixer and gain of LNA used, at the frequency under investigation. Calculate the field strength of the emission at the measurement distance from the Friis’ transmission equation.

The final test was performed with a 1 MHz RMS detector at the following distances;

[Test setup]

40 GHz to 50 GHz															
	*Test Distance: 1.0 m														
Above 50 GHz															
	<table><tr><th colspan="2">*Test Distance:</th></tr><tr><td>50 GHz to 75 GHz</td><td>0.75 m</td></tr><tr><td>75 GHz to 76 GHz</td><td>0.65 m</td></tr><tr><td>81 GHz to 83 GHz</td><td></td></tr><tr><td>83 GHz to 110 GHz</td><td>0.50 m</td></tr><tr><td>110 GHz to 170 GHz</td><td>0.50 m</td></tr><tr><td>170 GHz to 243 GHz</td><td>0.01 m</td></tr></table>	*Test Distance:		50 GHz to 75 GHz	0.75 m	75 GHz to 76 GHz	0.65 m	81 GHz to 83 GHz		83 GHz to 110 GHz	0.50 m	110 GHz to 170 GHz	0.50 m	170 GHz to 243 GHz	0.01 m
*Test Distance:															
50 GHz to 75 GHz	0.75 m														
75 GHz to 76 GHz	0.65 m														
81 GHz to 83 GHz															
83 GHz to 110 GHz	0.50 m														
110 GHz to 170 GHz	0.50 m														
170 GHz to 243 GHz	0.01 m														

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

The 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.

[About fundamental measurement]

The test was performed based on ANSI C63.26-2015 and KDB 653005.

The EUT was placed on a platform, raised 1.5 m above the conducting ground plane.

The measurements were performed on handheld method.

The carrier levels were confirmed at maximum direction of transmission. The maximum direction was searched under carefully since beam-widths are extremely narrow.

The carrier levels were measured in the far field. The distance of the far field was calculated from follow equation.

$$r = \frac{2D^2}{\lambda}$$

where

r is the distance from the radiating element of the EUT to the edge of the far field, in m

D is the largest dimension of both the radiating element and the test antenna (horn), in m

(The antenna aperture size of test antenna was used for this calculation.)

λ is the wavelength of the emission under investigation [$300/f$ (MHz)], in m

Frequency [GHz]	Wavelength λ [mm]	Maximum Dimension			Far Field Boundary r [m]	Tested Distance [m]
		EUT [m]	Test Antenna [m]	Maximum D [m]		
77	3.9	0.018560	0.026162	0.026162	0.352	0.65

In order to maximize the carrier level, the EUT, which has a horizontally polarized antenna, and the polarization plane of the measurement antenna were aligned for the test.

The Peak Power results was applied to the desensitization correction factor by KDB653005 4 (c) and 5.4 (d).

The derivation of the FMCW Desensitization Factor is given in Keysight Application Note 5952 1039 Appendix B.

Desensitization factor was calculated from follow equation;

$$\alpha = \frac{1}{\sqrt[4]{1 + \left(\frac{2\ln(2)}{\pi}\right)^2 \left(\frac{F_s}{T_s B^2}\right)^2}}$$

and

FMCW Desensitization factor = 20 Log (α)

Where

F_s is FMCW Sweep Width or Chirp Width, is used the actual measurement value.

T_s is FMCW Sweep Time, is referred to the values in the specifications.

B is -3dB Bandwidth of Gaussian RBW Filter, is used the actual measurement value.

Mode		F_s [MHz]	T_s [us]	B [MHz]	α	FMCW Desensitization factor [dB]
Mode 1	FCM 1 Low	374.2710	55.2	1.0	0.563	-4.99
	FCM 1 Mid	374.6249	55.2	1.0	0.563	-4.99
	FCM 1 High	373.6933	55.2	1.0	0.563	-4.98
	FCM 2	896.2680	33.7	1.0	0.291	-10.71
Mode 2	FCM 1 Low	374.3231	55.2	1.0	0.563	-4.99
	FCM 1 Mid	374.3556	55.2	1.0	0.563	-4.99
	FCM 1 High	373.9643	55.2	1.0	0.563	-4.99
	FCM 2	896.2824	33.7	1.0	0.291	-10.71
Mode 3	FCM 1 Low	374.7487	55.2	1.0	0.563	-4.99
	FCM 1 Mid	374.4052	55.2	1.0	0.563	-4.99
	FCM 1 High	374.3068	55.2	1.0	0.563	-4.99
	FCM 2	897.0099	33.7	1.0	0.291	-10.71

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

Measurement range : 9 kHz to 243 GHz
Test data : APPENDIX
Test result : Pass

SECTION 6: Frequency Stability

Test Procedure

Test Procedure The block downconverter was placed in side of the temperature chamber's drain hole.

The power supply was set to nominal operating voltage (110 %), and the 99 % OBW was measured at 20 deg. C.

After that, EUT power supply was varied between 85 % and 115 % of nominal voltage and the 99 % OBW was measured.

The EUT operating temperature was raised to 50 deg. C, and the frequency excursion of the 99 % OBW was measured. Measurements were repeated at each 10 deg. C decrement down to -20 deg. C.

Both lower and upper frequencies of the 99 % OBW were recorded.

Test data : APPENDIX

Test result : Pass

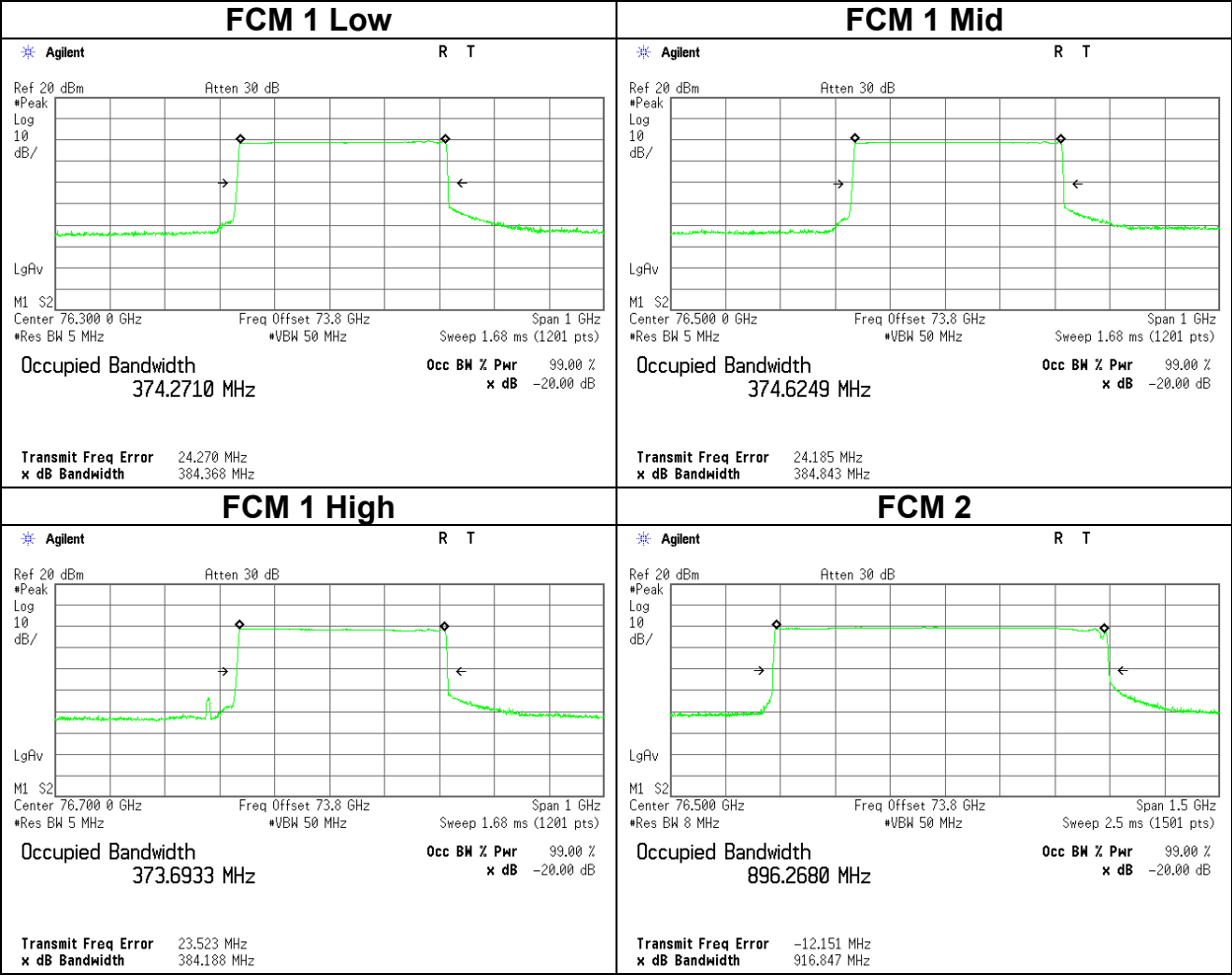
APPENDIX 1: Test data

Occupied bandwidth

Mode	Tx (Mode 1)			
Date	Test site	Temperature	Humidity	Engineer
January 15, 2026	SAC4	23 deg. C	37 % RH	Nachi Konegawa

Mode	Center Frequency [GHz]	99 % Occupied Bandwidth [MHz]
FCM 1 Low	76.3	374.2710
FCM 1 Mid	76.5	374.6249
FCM 1 High	76.7	373.6933
FCM 2	76.5	896.2680

[Data]



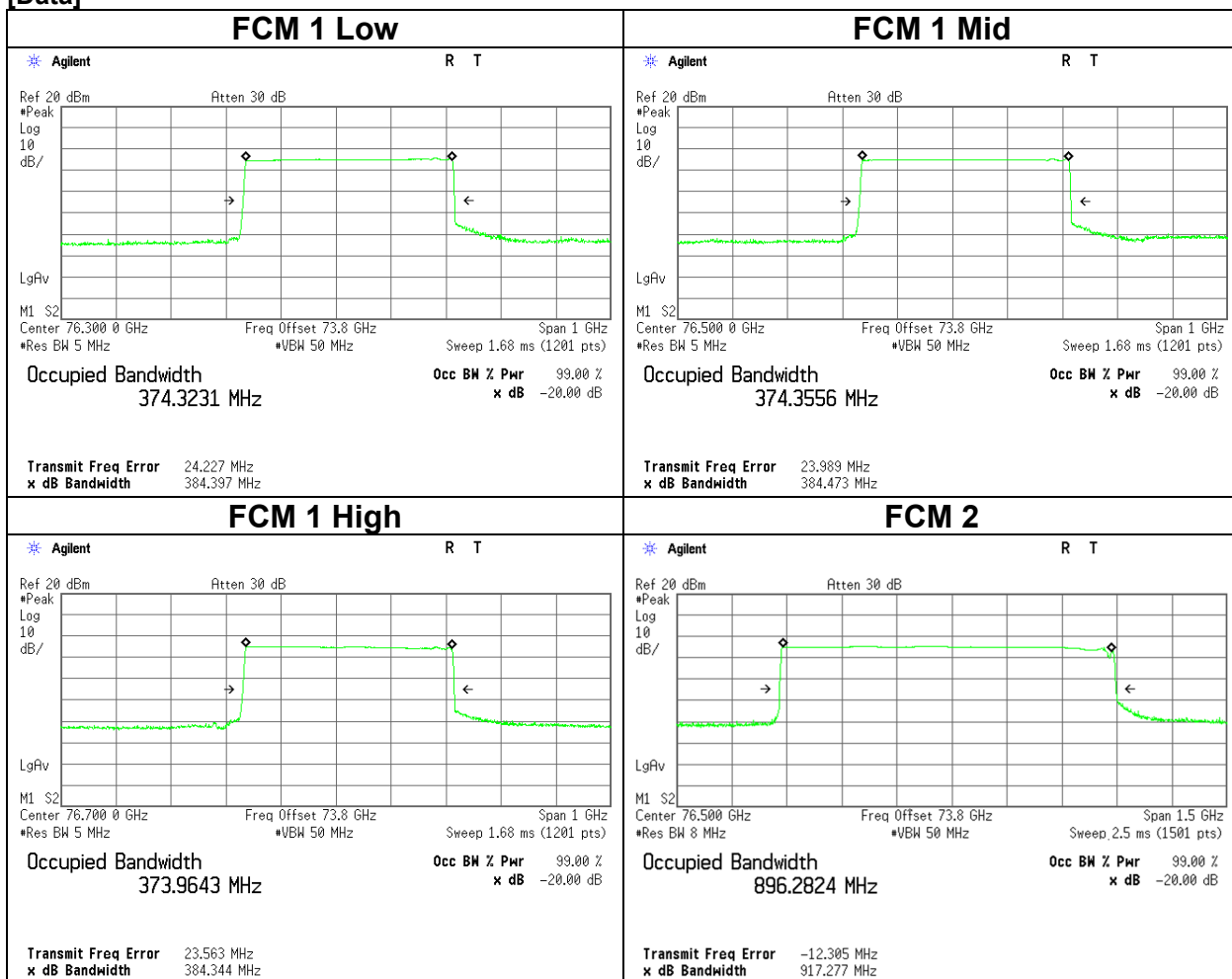
The measurement was performed with Peak detector and Max Hold since the duty cycle was not 100 %.

Occupied bandwidth

Mode	Tx (Mode 2)			
Date	Test site	Temperature	Humidity	Engineer
January 15, 2026	SAC4	23 deg. C	37 % RH	Nachi Konegawa

Mode	Center Frequency [GHz]	99 % Occupied Bandwidth [MHz]
FCM 1 Low	76.3	374.3231
FCM 1 Mid	76.5	374.3556
FCM 1 High	76.7	373.9643
FCM 2	76.5	896.2824

[Data]



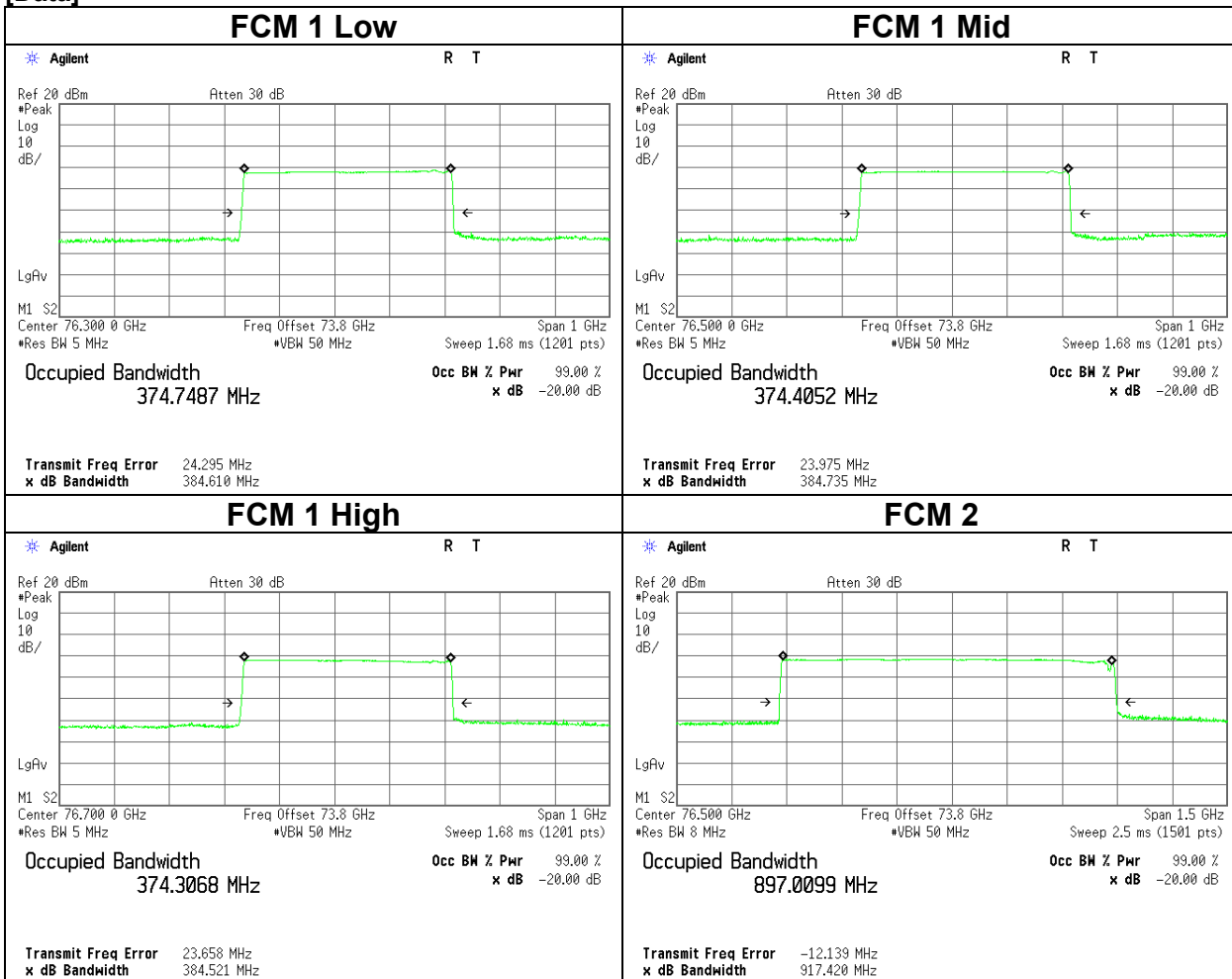
The measurement was performed with Peak detector and Max Hold since the duty cycle was not 100 %.

Occupied bandwidth

Mode	Tx (Mode 3)			
Date	Test site	Temperature	Humidity	Engineer
January 15, 2026	SAC4	23 deg. C	37 % RH	Nachi Konegawa

Mode	Center Frequency [GHz]	99 % Occupied Bandwidth [MHz]
FCM 1 Low	76.3	374.7487
FCM 1 Mid	76.5	374.4052
FCM 1 High	76.7	374.3068
FCM 2	76.5	897.0099

[Data]



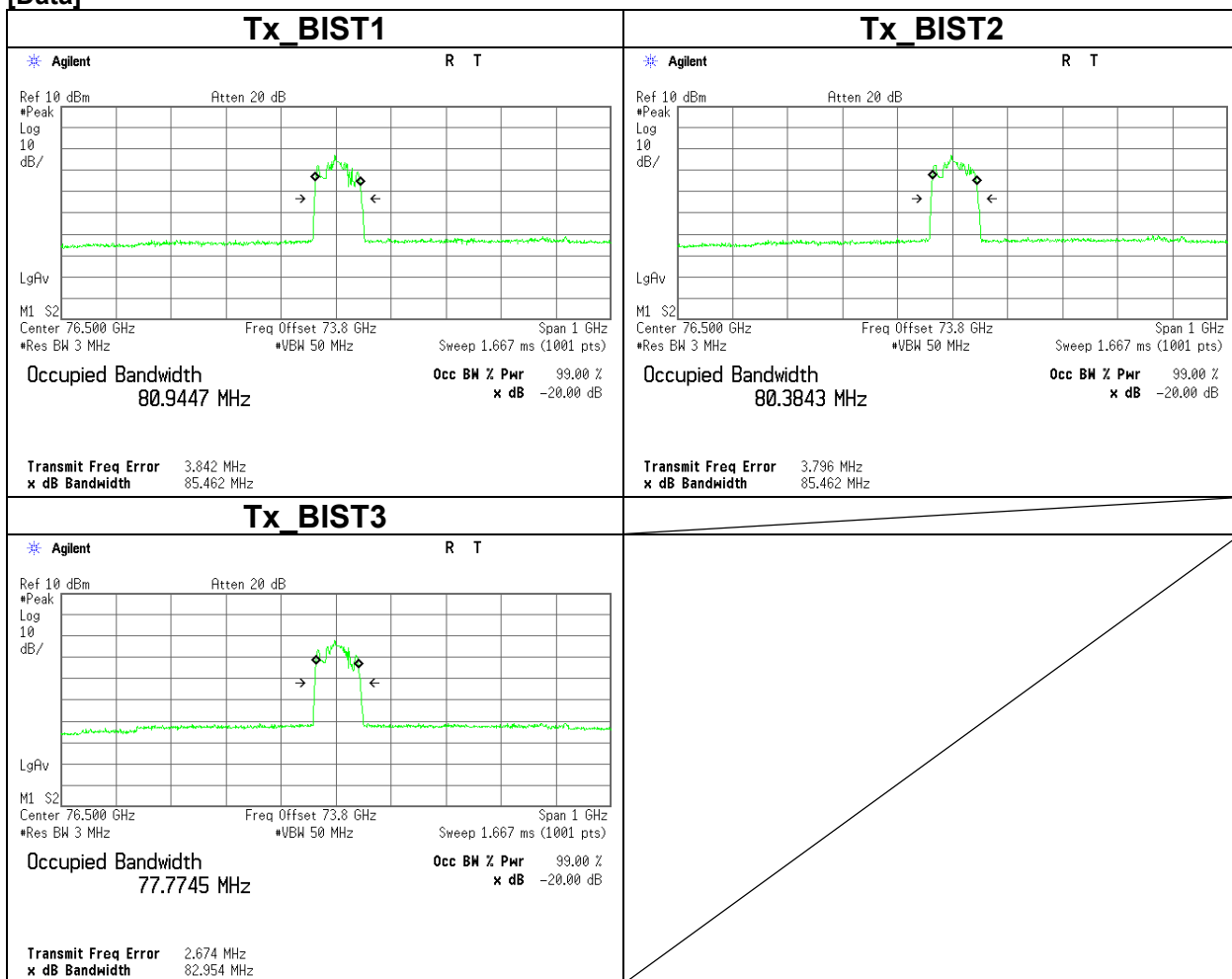
The measurement was performed with Peak detector and Max Hold since the duty cycle was not 100 %.

Occupied bandwidth

Mode	Tx_BIST			
Date	Test site	Temperature	Humidity	Engineer
January 15, 2026	SAC4	23 deg. C	37 % RH	Nachi Konegawa

Mode	Center Frequency [GHz]	99 % Occupied Bandwidth [MHz]
Tx_BIST1	76.5	80.9447
Tx_BIST2	76.5	80.3843
Tx_BIST3	76.5	77.7745

[Data]



The measurement was performed with Peak detector and Max Hold since the duty cycle was not 100 %.

Radiated Power

Mode	Tx (Mode 1)
------	-------------

Date	Test site	Temperature	Humidity	Engineer
January 13, 2026	SAC4	23 deg. C	55 % RH	Nachi Konegawa
January 14, 2026	SAC4	19 deg. C	38 % RH	Junya Okuno

Mode	Power	Freq. [GHz]	Measured Power [dBm]	Rx Ant. Gain [dBi]	Down Converter Gain [dB]	IF Cable Loss [dB]	Tested Distance [m]	FSL [dB]	Duty Factor [dB]	FMCW desensitization Factor [dB]	EIRP		Lmit	Margin	Remarks
											[dBm]	[mW]	[dBm]	[dB]	
FCM 1 Low	Average	76.300	-7.65	23.05	14.60	1.86	0.65	66.35	4.99	-	27.90	616.60	50	22.10	
	Peak	76.298	0.75	23.05	14.61	1.86	0.65	66.35	-	0.00	31.30	1348.96	55	23.70	Marker 1 *1
	Peak	76.474	0.25	23.05	14.60	1.93	0.65	66.37	-	0.00	30.90	1230.27	55	24.10	Marker 2 *1
	Peak	76.509	-3.58	23.06	14.66	1.94	0.65	66.37	-	-4.99	32.00	1584.89	55	23.00	Marker 3 *2
FCM 1 Mid	Peak	76.139	-4.06	23.05	14.67	1.80	0.65	66.33	-	-4.99	31.34	1361.44	55	23.66	Marker 4 *2
	Average	76.500	-7.49	23.06	14.64	1.94	0.65	66.37	4.99	-	28.11	647.14	50	21.89	
	Peak	76.499	0.78	23.06	14.64	1.94	0.65	66.37	-	0.00	31.39	1377.21	55	23.61	Marker 1 *1
	Peak	76.674	-0.40	23.06	14.73	2.01	0.65	66.39	-	0.00	30.21	1049.54	55	24.79	Marker 2 *1
FCM 1 High	Peak	76.712	-3.79	23.06	14.69	2.02	0.65	66.40	-	-4.99	31.87	1538.15	55	23.13	Marker 3 *2
	Peak	76.340	-3.45	23.05	14.55	1.88	0.65	66.36	-	-4.99	32.18	1651.96	55	22.82	Marker 4 *2
	Average	76.700	-7.69	23.06	14.70	2.01	0.65	66.40	4.99	-	27.95	623.73	50	22.05	
	Peak	76.698	0.23	23.06	14.70	2.01	0.65	66.40	-	0.00	30.88	1224.62	55	24.12	Marker 1 *1
FCM 2	Peak	76.873	-0.34	23.06	14.37	2.08	0.65	66.42	-	0.00	30.73	1183.04	55	24.27	Marker 2 *1
	Peak	76.909	-4.47	23.06	14.26	2.09	0.65	66.42	-	-4.98	31.70	1479.11	55	23.30	Marker 3 *2
	Peak	76.539	-3.94	23.06	14.71	1.96	0.65	66.38	-	-4.98	31.61	1448.77	55	23.39	Marker 4 *2
	Average	76.500	-14.93	23.06	14.64	1.94	0.65	66.37	12.30	-	27.98	628.06	50	22.02	
FCM 2	Peak	76.448	0.57	23.05	14.55	1.92	0.65	66.37	-	0.00	31.26	1336.60	55	23.74	Marker 1 *1
	Peak	76.916	-1.16	23.06	14.24	2.09	0.65	66.42	-	0.00	30.05	1011.58	55	24.95	Marker 2 *1
	Peak	76.937	-12.10	23.06	14.18	2.10	0.65	66.42	-	-10.71	29.89	974.99	55	25.11	Marker 3 *2
	Peak	76.039	-7.44	23.05	14.56	1.76	0.65	66.32	-	-10.71	33.74	2365.92	55	21.26	Marker 4 *2

Calculating formula:

FSL (Free Space path Loss) = $10 \cdot \log_{10}((4 \cdot \pi \cdot \text{Tested Distance} / \text{Lambda})^2)$

Average EIRP = Measured Power - Rx Ant. Gain - Down Converter Gain + IF Cable Loss + FSL + Duty Factor

Peak EIRP = Measured Power - Rx Ant. Gain - Down Converter Gain + IF Cable Loss + FSL - FMCW desensitization factor

*1 For markers 1 and 2, the sensitivity correction coefficient was not applied based on the transmission pattern (duty in the "Operational Description-Duty Cycle").

*2 For markers 3 and 4, the sensitivity correction coefficient was applied based on the transmission pattern (duty in the "Operational Description-Duty Cycle").

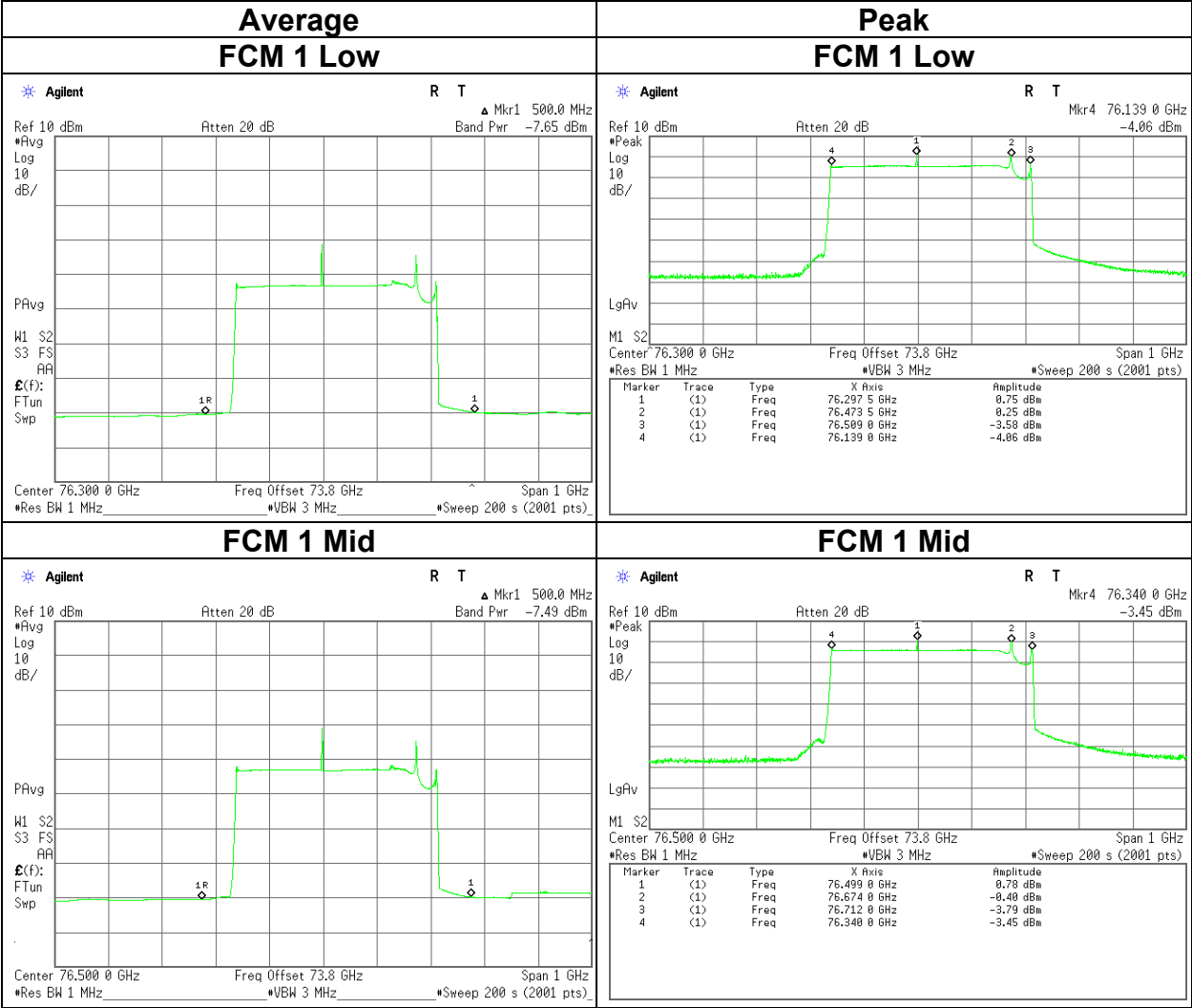
The test method referred to KDB653005 4 and 5.4.

The derivation of the Duty Factor is given in Duty data page.

The derivation of the FMCW Desensitization Factor is given in Keysight Application Note 5952 1039 Appendix B. (Refer Section 5)

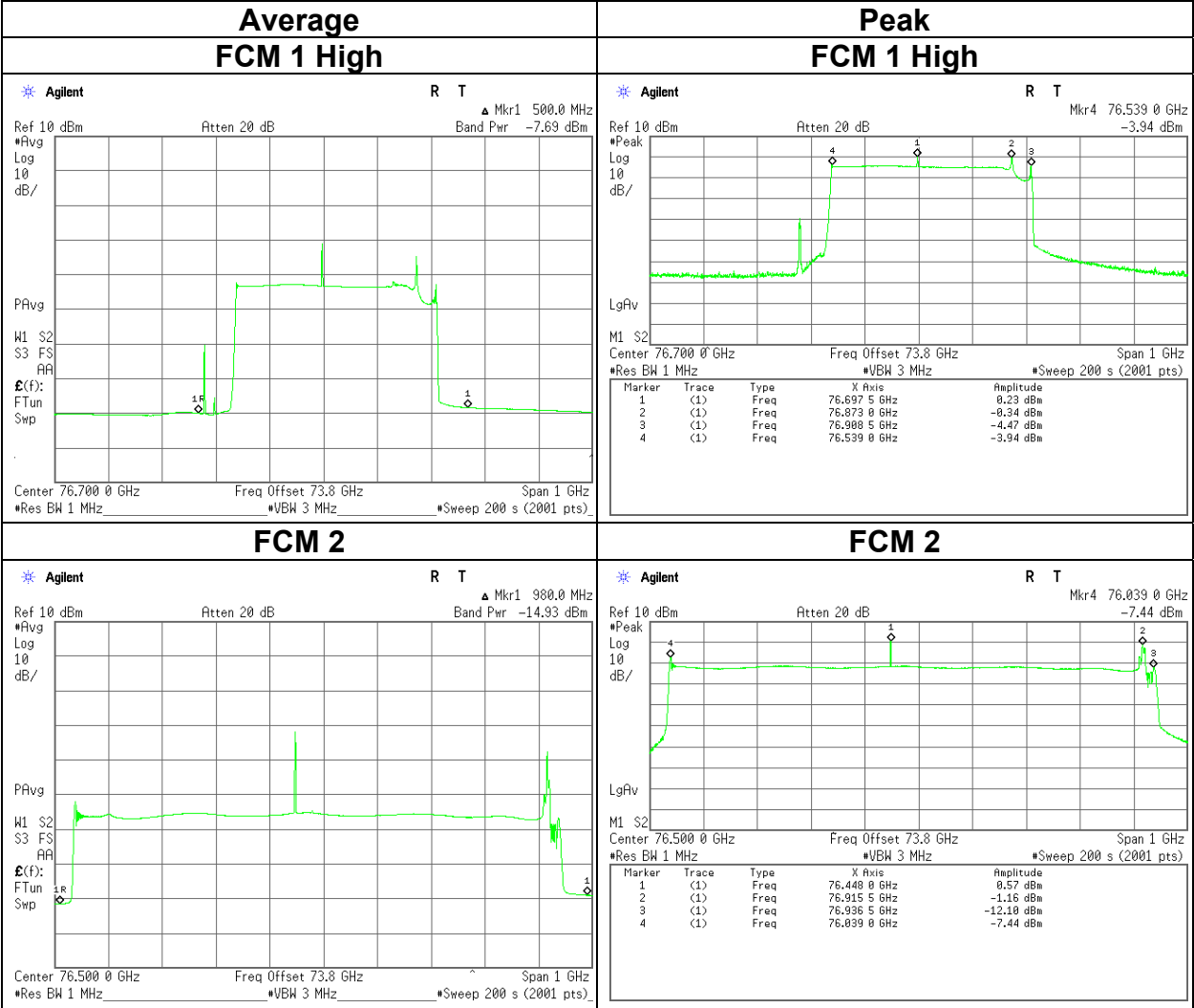
Radiated Power

[Data]



Radiated Power

[Data]



Radiated Power

Mode	Tx (Mode 2)
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Date	Test site	Temperature	Humidity	Engineer
January 13, 2026	SAC4	23 deg. C	55 % RH	Nachi Konegawa
January 14, 2026	SAC4	19 deg. C	38 % RH	Junya Okuno

Mode	Power	Freq. [GHz]	Measured Power [dBm]	Rx Ant. Gain [dBi]	Down Converter Gain [dB]	IF Cable Loss [dB]	Tested Distance [m]	FSL [dB]	Duty Factor [dB]	FMCW desensitization Factor [dB]	EIRP		Lmit	Margin	Remarks
											[dBm]	[mW]	[dBm]	[dB]	
FCM 1 Low	Average	76.300	-11.43	23.05	14.60	1.86	0.65	66.35	5.00	-	24.13	258.82	50	25.87	
	Peak	76.298	-2.65	23.05	14.61	1.86	0.65	66.35	-	0.00	27.90	616.60	55	27.10	Marker 1 *1
	Peak	76.473	-3.36	23.05	14.59	1.93	0.65	66.37	-	0.00	27.30	537.03	55	27.70	Marker 2 *1
	Peak	76.510	-7.43	23.06	14.66	1.94	0.65	66.37	-	-4.99	28.15	653.13	55	26.85	Marker 3 *2
FCM 1 Mid	Peak	76.139	-7.99	23.05	14.67	1.80	0.65	66.33	-	-4.99	27.41	550.81	55	27.59	Marker 4 *2
	Average	76.500	-11.24	23.06	14.64	1.94	0.65	66.37	5.00	-	24.37	273.53	50	25.63	
	Peak	76.498	-3.15	23.05	14.64	1.94	0.65	66.37	-	0.00	27.47	558.47	55	27.53	Marker 1 *1
	Peak	76.673	-3.81	23.06	14.73	2.00	0.65	66.39	-	0.00	26.79	477.53	55	28.21	Marker 2 *1
FCM 1 High	Peak	76.710	-7.91	23.06	14.69	2.02	0.65	66.40	-	-4.99	27.75	595.66	55	27.25	Marker 3 *2
	Peak	76.339	-7.70	23.05	14.55	1.88	0.65	66.35	-	-4.99	27.93	620.87	55	27.07	Marker 4 *2
	Average	76.700	-11.51	23.06	14.70	2.01	0.65	66.40	5.00	-	24.14	259.42	50	25.86	
	Peak	76.698	-2.70	23.06	14.70	2.01	0.65	66.40	-	0.00	27.95	623.73	55	27.05	Marker 1 *1
FCM 2	Peak	76.874	-4.22	23.06	14.37	2.08	0.65	66.42	-	0.00	26.85	484.17	55	28.15	Marker 2 *1
	Peak	76.910	-8.46	23.06	14.26	2.09	0.65	66.42	-	-4.99	27.72	591.56	55	27.28	Marker 3 *2
	Peak	76.539	-7.81	23.06	14.71	1.96	0.65	66.38	-	-4.99	27.74	594.29	55	27.26	Marker 4 *2
	Average	76.500	-19.12	23.06	14.64	1.94	0.65	66.37	12.46	-	23.95	248.31	50	26.05	
FCM 2	Peak	76.448	-3.06	23.05	14.55	1.92	0.65	66.37	-	0.00	27.63	579.43	55	27.37	Marker 1 *1
	Peak	76.916	-5.42	23.06	14.24	2.09	0.65	66.42	-	0.00	25.79	379.31	55	29.21	Marker 2 *1
	Peak	76.937	-16.36	23.06	14.18	2.10	0.65	66.42	-	-10.71	25.63	365.59	55	29.37	Marker 3 *2
	Peak	76.039	-11.65	23.05	14.56	1.76	0.65	66.32	-	-10.71	29.53	897.43	55	25.47	Marker 4 *2

Calculating formula:

FSL (Free Space path Loss) = $10 \cdot \log_{10}((4 \cdot \pi \cdot \text{Tested Distance} / \text{Lambda})^2)$

Average EIRP = Measured Power - Rx Ant. Gain - Down Converter Gain + IF Cable Loss + FSL + Duty Factor

Peak EIRP = Measured Power - Rx Ant. Gain - Down Converter Gain + IF Cable Loss + FSL - FMCW desensitization factor

*1 For markers 1 and 2, the sensitivity correction coefficient was not applied based on the transmission pattern (duty in the “Operational Description-Duty Cycle”).

*2 For markers 3 and 4, the sensitivity correction coefficient was applied based on the transmission pattern (duty in the “Operational Description-Duty Cycle”).

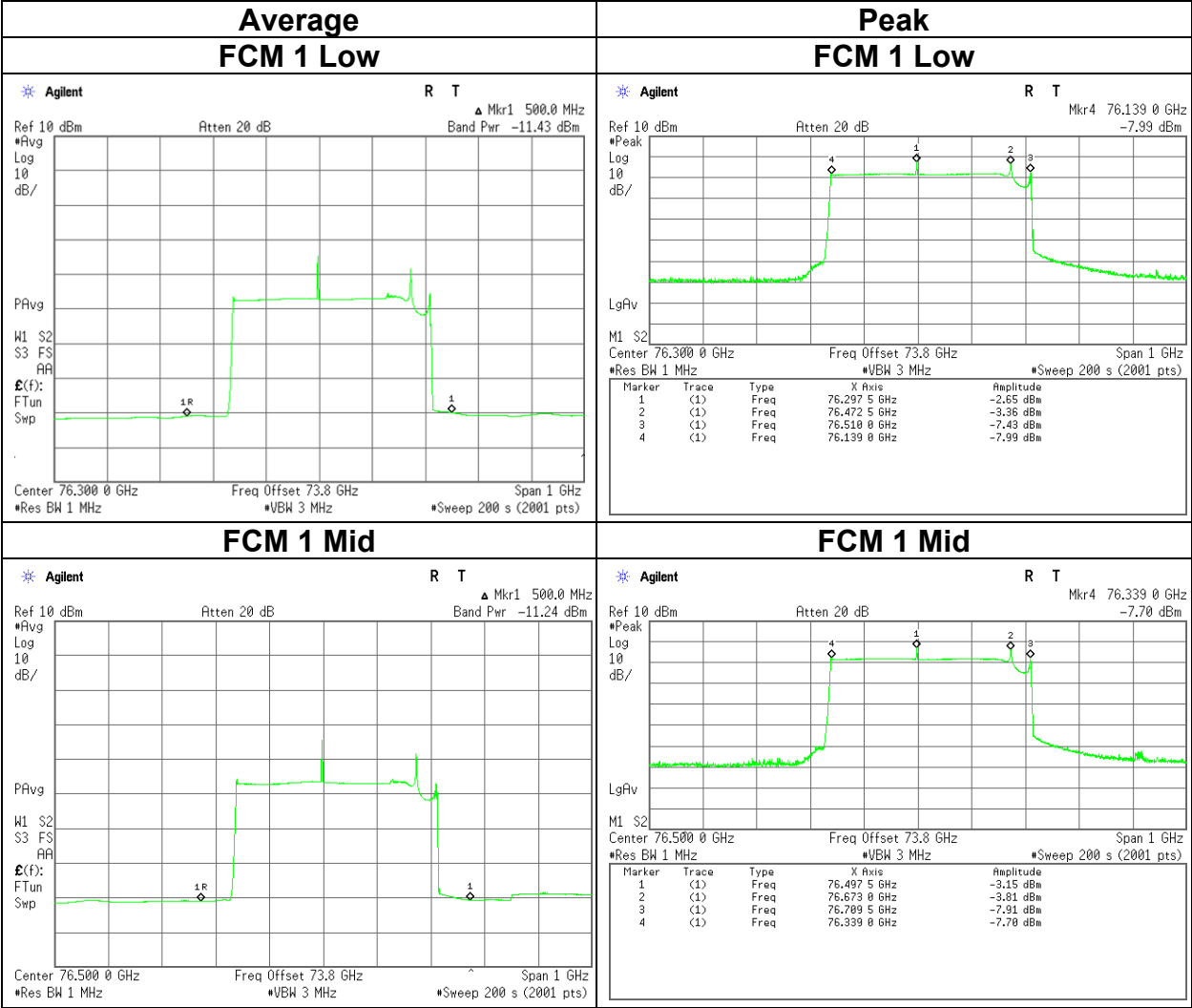
The test method referred to KDB653005 4 and 5.4.

The derivation of the Duty Factor is given in Duty data page.

The derivation of the FMCW Desensitization Factor is given in Keysight Application Note 5952 1039 Appendix B. (Refer Section 5)

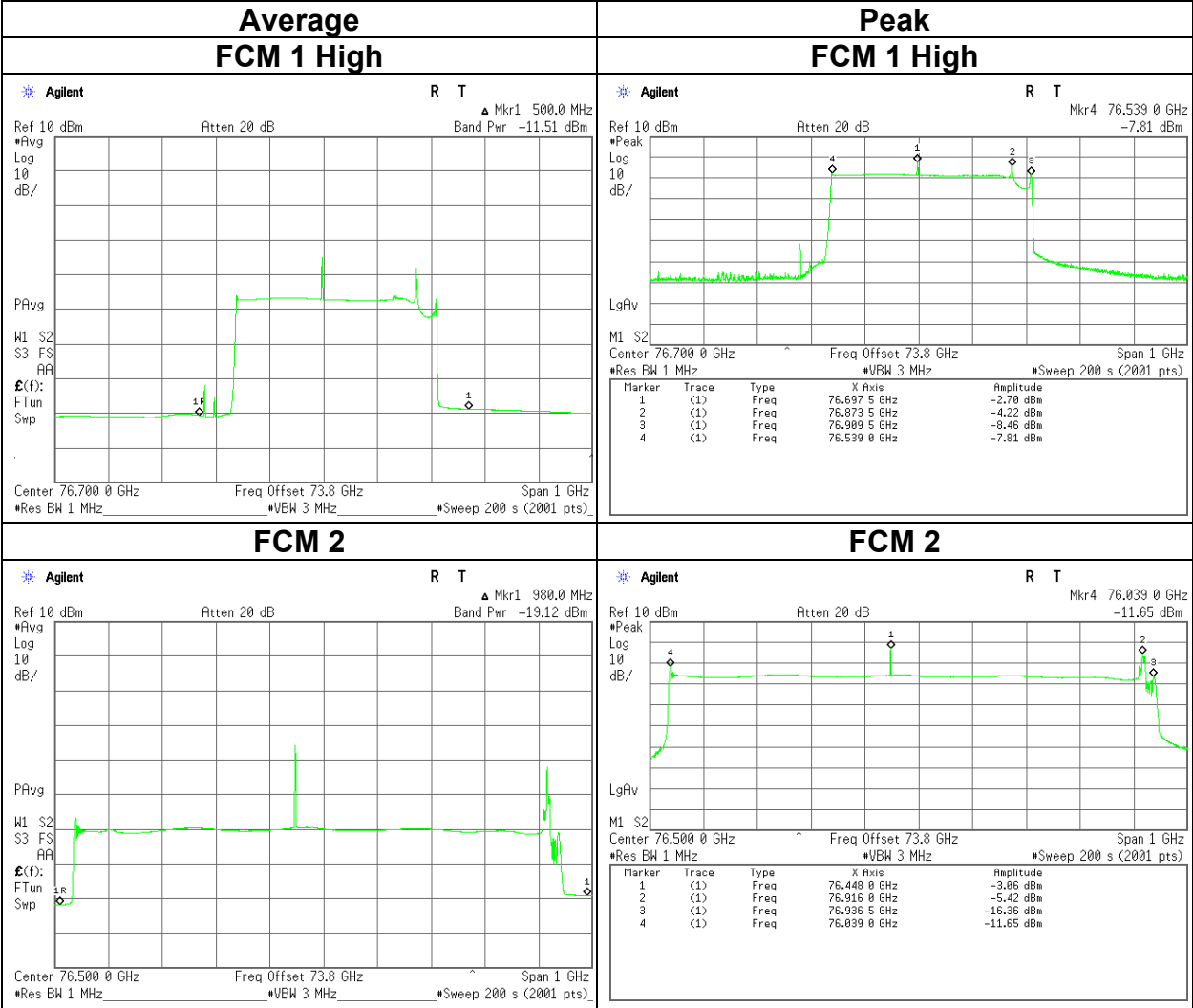
Radiated Power

[Data]



Radiated Power

[Data]



Radiated Power

Mode	Tx (Mode 3)
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Date	Test site	Temperature	Humidity	Engineer
January 13, 2026	SAC4	23 deg. C	55 % RH	Nachi Konegawa
January 14, 2026	SAC4	19 deg. C	38 % RH	Junya Okuno

Mode	Power	Freq.	Measured Power	Rx Ant. Gain	Down Converter Gain	IF Cable Loss	Tested Distance	FSL	Duty Factor	FMCW desensitization Factor	EIRP		Lmit	Margin	Remarks
		[GHz]	[dBm]	[dBi]	[dB]	[dB]	[m]	[dB]	[dB]	[dB]	[dBm]	[mW]	[dBm]	[dB]	
FCM 1 Low	Average	76.300	-18.49	23.05	14.60	1.86	0.65	66.35	5.04	-	17.11	51.40	50	32.89	
	Peak	76.298	-8.98	23.05	14.61	1.86	0.65	66.35	-	0.00	21.57	143.55	55	33.43	Marker 1 *1
	Peak	76.473	-10.61	23.05	14.59	1.93	0.65	66.37	-	0.00	20.05	101.16	55	34.95	Marker 2 *1
	Peak	76.510	-14.51	23.05	14.66	1.94	0.65	66.37	-	-4.99	21.09	128.53	55	33.91	Marker 3 *2
FCM 1 Mid	Average	76.139	-15.33	23.05	14.67	1.80	0.65	66.33	-	-4.99	20.08	101.86	55	34.92	Marker 4 *2
	Peak	76.500	-18.33	23.06	14.64	1.94	0.65	66.37	5.04	-	17.32	53.95	50	32.68	
	Peak	76.498	-8.65	23.05	14.64	1.94	0.65	66.37	-	0.00	21.97	157.40	55	33.03	Marker 1 *1
	Peak	76.673	-10.97	23.06	14.73	2.00	0.65	66.39	-	0.00	19.63	91.83	55	35.37	Marker 2 *1
FCM 1 High	Average	76.709	-14.95	23.06	14.69	2.02	0.65	66.40	-	-4.99	20.71	117.76	55	34.29	Marker 3 *2
	Peak	76.339	-14.73	23.05	14.55	1.88	0.65	66.35	-	-4.99	20.90	123.03	55	34.10	Marker 4 *2
	Peak	76.700	-18.62	23.06	14.70	2.01	0.65	66.40	5.04	-	17.07	50.93	50	32.93	
	Peak	76.698	-8.90	23.06	14.70	2.01	0.65	66.40	-	0.00	21.75	149.62	55	33.25	Marker 1 *1
FCM 2	Average	76.873	-11.86	23.06	14.37	2.08	0.65	66.42	-	0.00	19.21	83.37	55	35.79	Marker 2 *1
	Peak	76.908	-15.88	23.06	14.27	2.09	0.65	66.42	-	-4.99	20.29	106.91	55	34.71	Marker 3 *2
	Peak	76.540	-14.87	23.06	14.71	1.96	0.65	66.38	-	-4.99	20.69	117.22	55	34.31	Marker 4 *2
	Peak	76.500	-25.92	23.06	14.64	1.94	0.65	66.37	12.62	-	17.31	53.83	50	32.69	
FCM 2	Peak	76.448	-8.45	23.05	14.55	1.92	0.65	66.37	-	0.00	22.24	167.49	55	32.76	Marker 1 *1
	Peak	76.916	-12.43	23.06	14.24	2.09	0.65	66.42	-	0.00	18.78	75.51	55	36.22	Marker 2 *1
	Peak	76.937	-23.32	23.06	14.18	2.10	0.65	66.42	-	-10.71	18.68	73.79	55	36.32	Marker 3 *2
	Peak	76.040	-18.62	23.05	14.56	1.76	0.65	66.32	-	-10.71	22.57	180.72	55	32.43	Marker 4 *2

Calculating formula:

FSL (Free Space path Loss) = $10 \cdot \log_{10}((4 \cdot \pi \cdot \text{Tested Distance} / \text{Lambda})^2)$

Average EIRP = Measured Power - Rx Ant. Gain - Down Converter Gain + IF Cable Loss + FSL + Duty Factor

Peak EIRP = Measured Power - Rx Ant. Gain - Down Converter Gain + IF Cable Loss + FSL - FMCW desensitization factor

*1 For markers 1 and 2, the sensitivity correction coefficient was not applied based on the transmission pattern (duty in the “Operational Description-Duty Cycle”).

*2 For markers 3 and 4, the sensitivity correction coefficient was applied based on the transmission pattern (duty in the “Operational Description-Duty Cycle”).

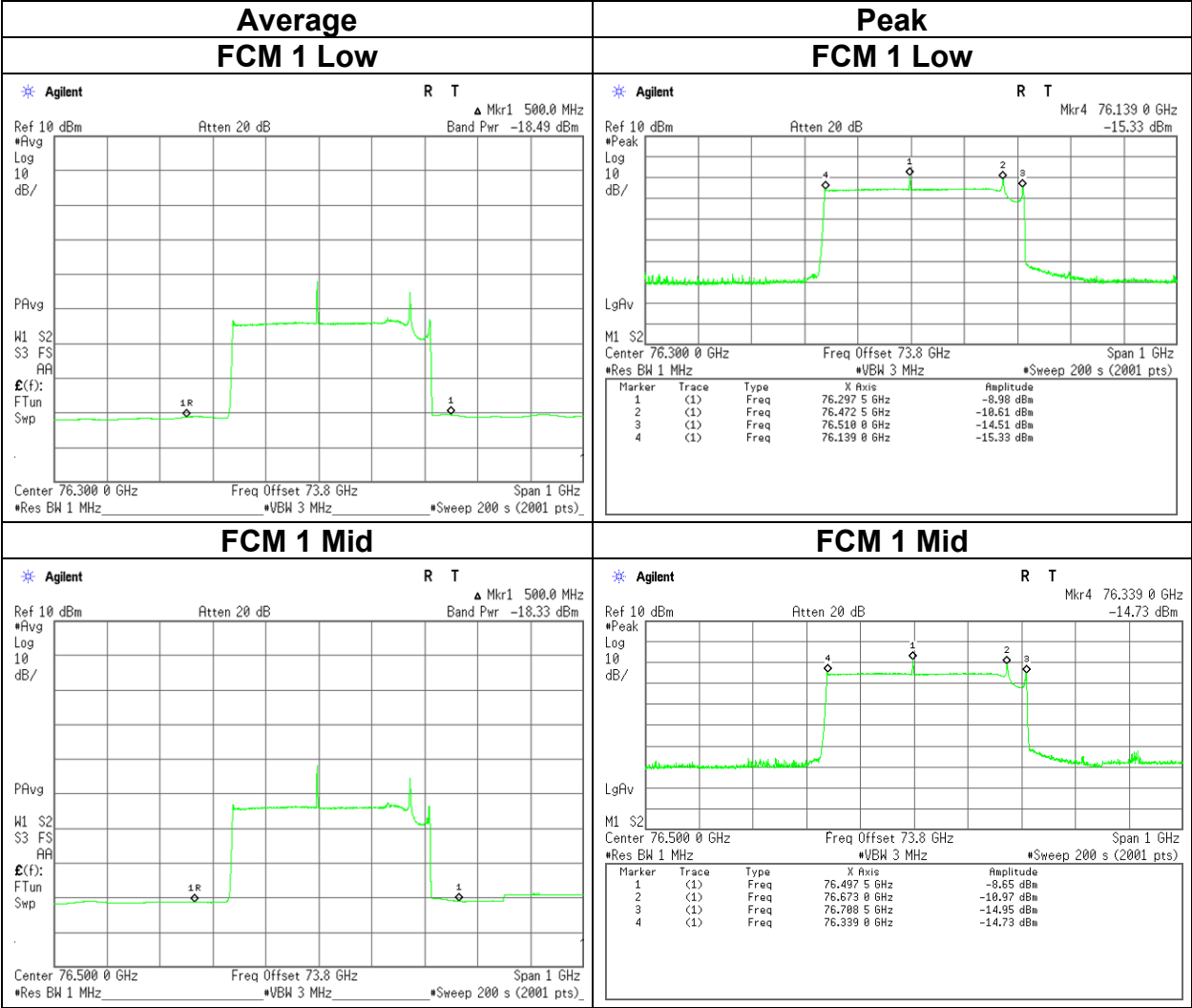
The test method referred to KDB653005 4 and 5.4.

The derivation of the Duty Factor is given in Duty data page.

The derivation of the FMCW Desensitization Factor is given in Keysight Application Note 5952 1039 Appendix B. (Refer Section 5)

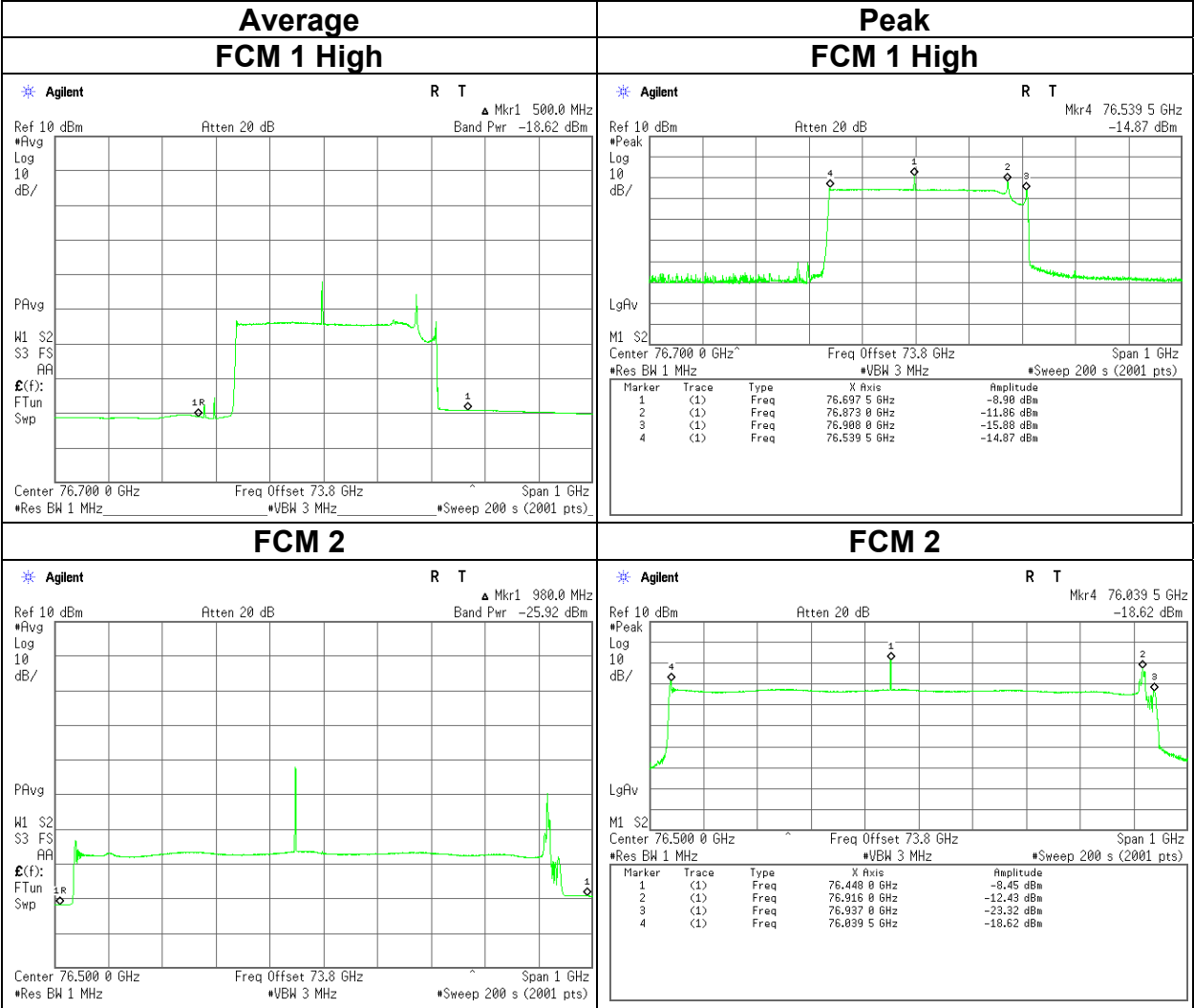
Radiated Power

[Data]



Radiated Power

[Data]



Radiated Power

Mode	Tx BIST			
Date	Test site	Temperature	Humidity	Engineer
January 14, 2026	SAC4	19 deg. C	38 % RH	Junya Okuno

Mode	Power	Freq.	Measured Power	Rx Ant. Gain	Down Converter Gain	IF Cable Loss	Tested Distance	FSL	Duty Factor	FMCW desensitization Factor	EIRP		Lmit	Margin	Remarks
		[GHz]	[dBm]	[dB]	[dB]	[dB]	[m]	[dB]	[dB]	[dB]	[dBm]	[mW]	[dBm]	[dB]	
Tx_BIST1	Average	76.500	-34.70	23.06	14.64	1.94	0.65	66.37	20.54	-	16.45	44.16	50	33.55	
	Peak	76.498	-11.26	23.05	14.64	1.94	0.65	66.37	-	-	19.36	86.30	55	35.64	Marker 1 *1
Tx_BIST2	Average	76.500	-34.60	23.06	14.64	1.94	0.65	66.37	20.54	-	16.55	45.19	50	33.45	
	Peak	76.498	-10.96	23.05	14.64	1.94	0.65	66.37	-	-	19.66	92.47	55	35.34	Marker 1 *1
Tx_BIST3	Average	76.500	-34.85	23.06	14.64	1.94	0.65	66.37	20.54	-	16.30	42.66	50	33.70	
	Peak	76.498	-11.28	23.05	14.64	1.94	0.65	66.37	-	-	19.34	85.90	55	35.66	Marker 1 *1

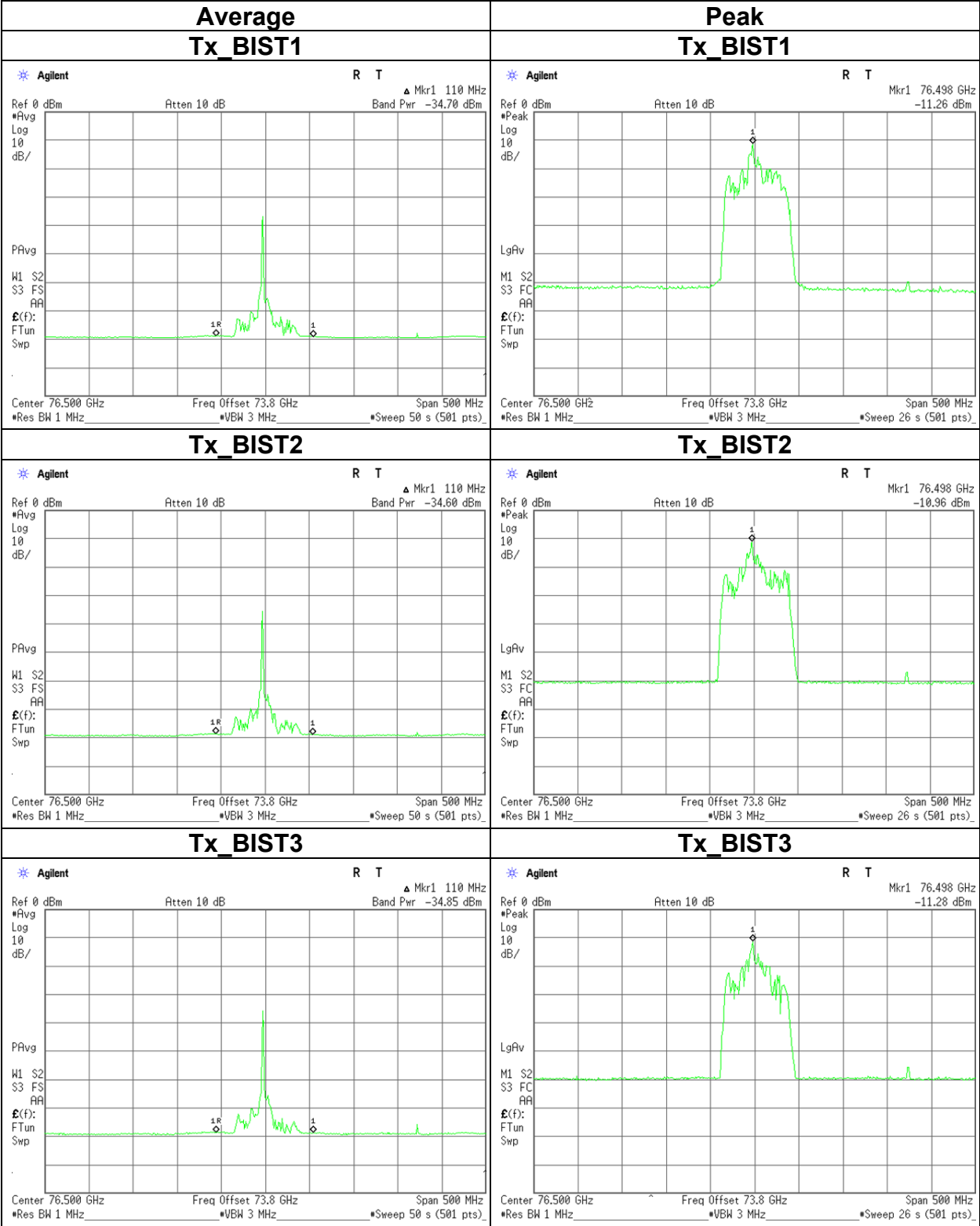
Calculating formula:
FSL (Free Space path Loss) = 10 * log10((4 * Pi * Tested Distance / Lambda) ^2)
Average EIRP = Measured Power - Rx Ant. Gain - Down Converter Gain + IF Cable Loss + FSL + Duty Factor
Peak EIRP = Measured Power - Rx Ant. Gain - Down Converter Gain + IF Cable Loss + FSL - FMCW desensitization factor

*1 For markers 1, the sensitivity correction coefficient was not applied based on the transmission pattern (duty in the “Operational Description-Duty Cycle”).

The test method referred to KDB653005 4 and 5.4.
The derivation of the Duty Factor is given in Duty data page.
The derivation of the FMCW Desensitization Factor is given in Keysight Application Note 5952 1039 Appendix B. (Refer Section 5)

Radiated Power

[Data]



Modulation characteristics

Mode	Tx (Mode 1) FCM 1 Low			
Date	Test site	Temperature	Humidity	Engineer
January 13, 2026	SAC4	23 deg. C	40 % RH	Junya Okuno

Measured

Tx On time									Tx On + Tx Off time [ms]	Duty [%]	Duty Factor [dB]
CW section						FCM 1 section [ms]	Total [ms]				
(1 of 6) [us]	(2 of 6) [us]	(3 of 6) [us]	(4 of 6) [us]	(5 of 6) [us]	(6 of 6) [us]			(Total) [us]			
17.054	28.347	299.954	17.029	28.442	233.820	624.645	15.233	15.857	50.002	31.7	4.99

Calculating formula:

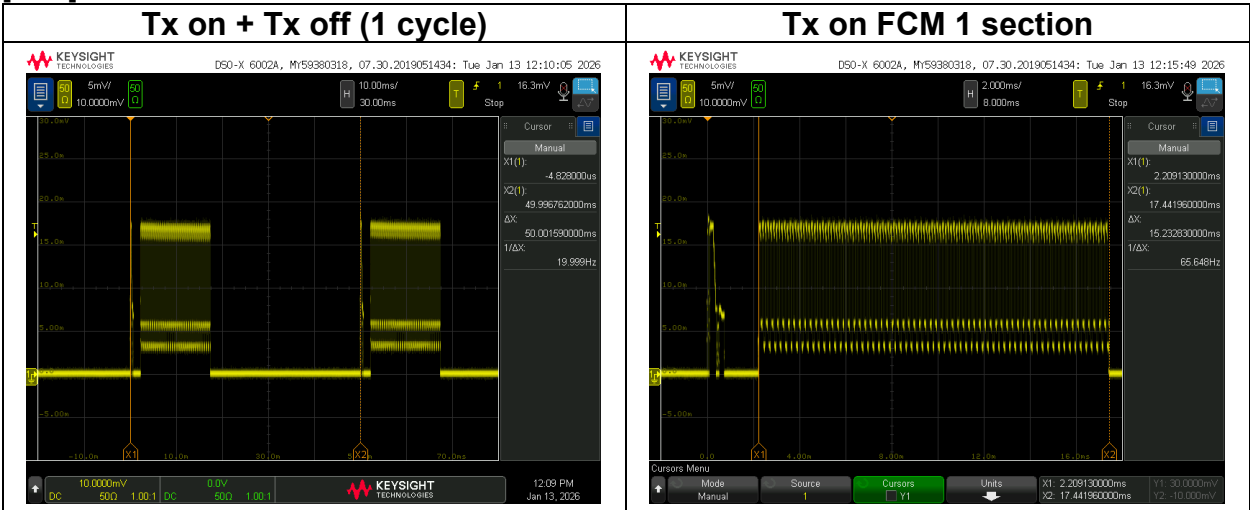
Tx On time CW section (Total) = Tx On time CW section (1 of 6) + Tx On time CW section (2 of 6) + Tx On time CW section (3 of 6) + Tx On time CW section (4 of 6) + Tx On time CW section (5 of 6) + Tx On time CW section (6 of 6)

Tx On time Total = Tx On time CW section (Total) + Tx On time FCM 1 section

Duty = (Tx On time Total / Tx On + Tx Off time) * 100

Duty factor = 10 * log (Tx On + Tx Off time / Tx On time Total)

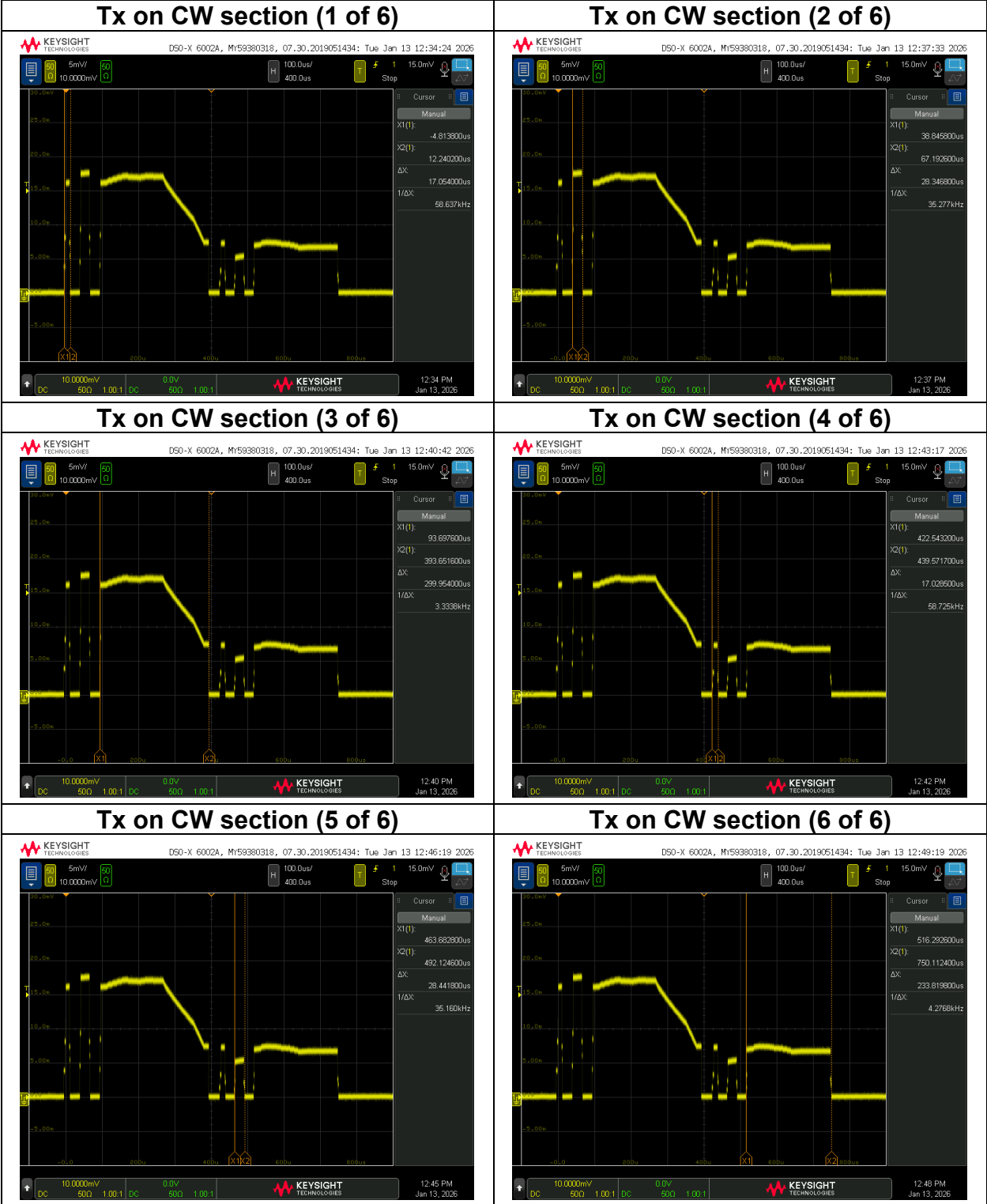
[Data]



Modulation characteristics

Mode	Tx (Mode 1) FCM 1 Low			
Date	Test site	Temperature	Humidity	Engineer
January 13, 2026	SAC4	23 deg. C	40 % RH	Junya Okuno

[Data]



Modulation characteristics

Mode	Tx (Mode 1) FCM 2			
Date	Test site	Temperature	Humidity	Engineer
January 27, 2026	SAC4	22 deg. C	35 % RH	Nachi Konegawa

Measured

Tx On time									Tx On + Tx Off time [ms]	Duty [%]	Duty Factor [dB]
CW section						FCM 2 section [ms]	Total [ms]				
(1 of 6) [us]	(2 of 6) [us]	(3 of 6) [us]	(4 of 6) [us]	(5 of 6) [us]	(6 of 6) [us]			(Total) [us]			
17.063	28.380	290.092	17.033	28.440	279.423	660.431	2.285	2.946	50.000	5.9	12.30

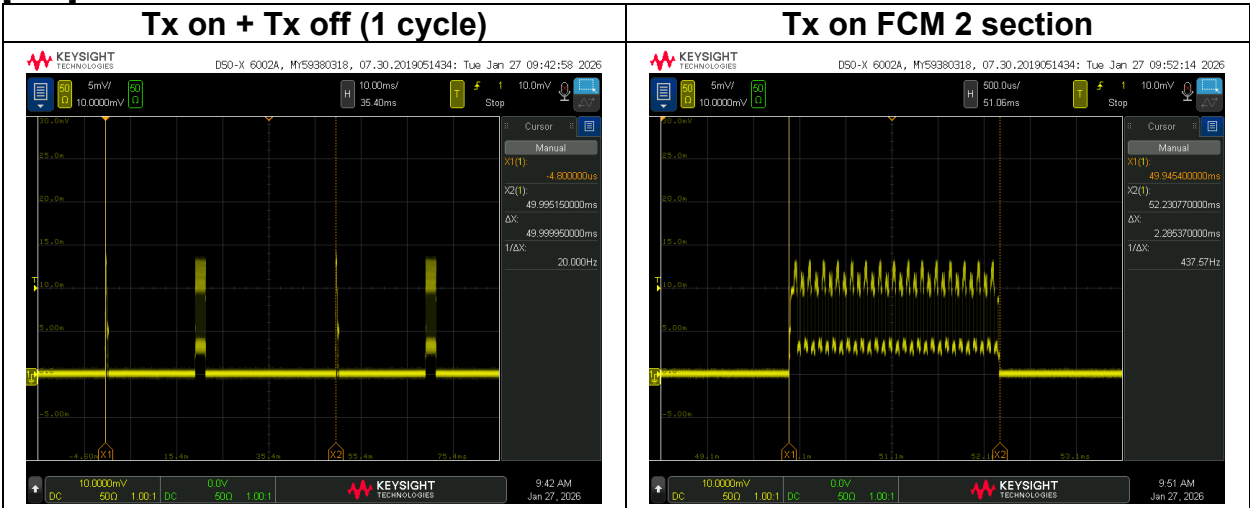
Calculating formula:

Tx On time CW section (Total) = Tx On time CW section (1 of 6) + Tx On time CW section (2 of 6) + Tx On time CW section (3 of 6) + Tx On time CW section (4 of 6) + Tx On time CW section (5 of 6) + Tx On time CW section (6 of 6)

Tx On time Total = Tx On time CW section (Total) + Tx On time FCM 2 section

$$\text{Duty} = (\text{Tx On time Total} / \text{Tx On} + \text{Tx Off time}) * 100$$
$$\text{Duty factor} = 10 * \log (\text{Tx On} + \text{Tx Off time} / \text{Tx On time Total})$$

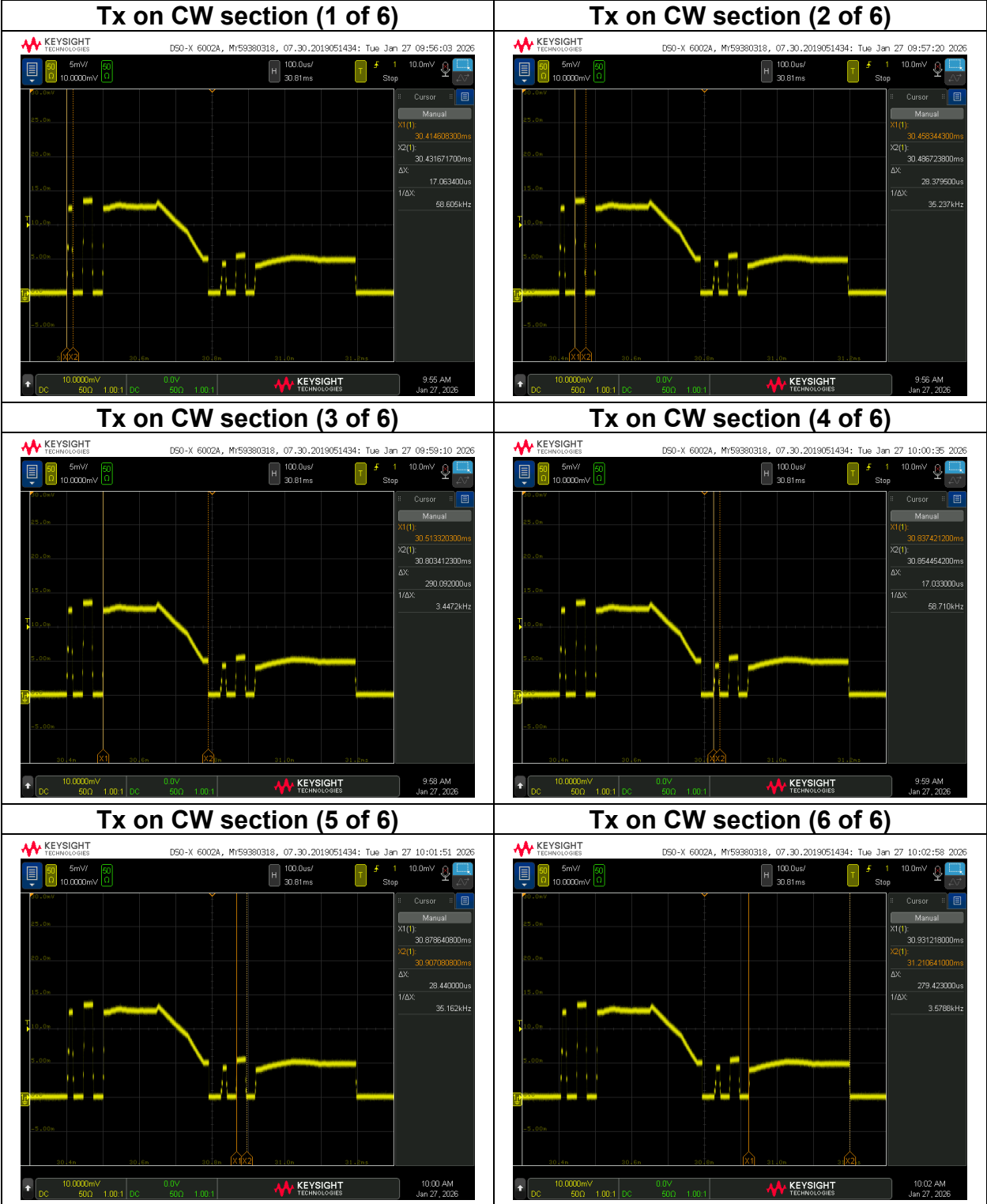
[Data]



Modulation characteristics

Mode	Tx (Mode 1) FCM 2			
Date	Test site	Temperature	Humidity	Engineer
January 27, 2026	SAC4	22 deg. C	35 % RH	Nachi Konegawa

[Data]



Modulation characteristics

Mode	Tx (Mode 2) FCM 1 Low			
Date	Test site	Temperature	Humidity	Engineer
January 13, 2026	SAC4	23 deg. C	40 % RH	Junya Okuno

Measured

Tx On time									Tx On + Tx Off time [ms]	Duty [%]	Duty Factor [dB]
CW section						FCM 1 section [ms]	Total [ms]				
(1 of 6) [us]	(2 of 6) [us]	(3 of 6) [us]	(4 of 6) [us]	(5 of 6) [us]	(6 of 6) [us]			(Total) [us]			
17.075	28.343	216.325	17.028	28.338	258.955	566.065	15.232	15.798	50.001	31.6	5.00

Calculating formula:

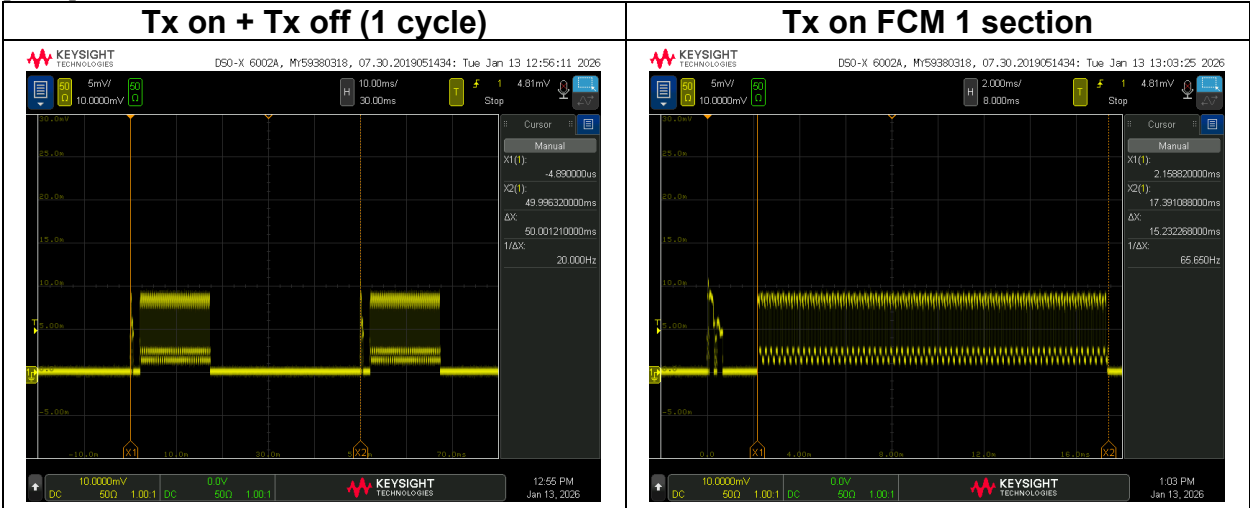
Tx On time CW section (Total) = Tx On time CW section (1 of 6) + Tx On time CW section (2 of 6) + Tx On time CW section (3 of 6) + Tx On time CW section (4 of 6) + Tx On time CW section (5 of 6) + Tx On time CW section (6 of 6)

Tx On time Total = Tx On time CW section (Total) + Tx On time FCM 1 section

Duty = (Tx On time Total / Tx On + Tx Off time) * 100

Duty factor = 10 * log (Tx On + Tx Off time / Tx On time Total)

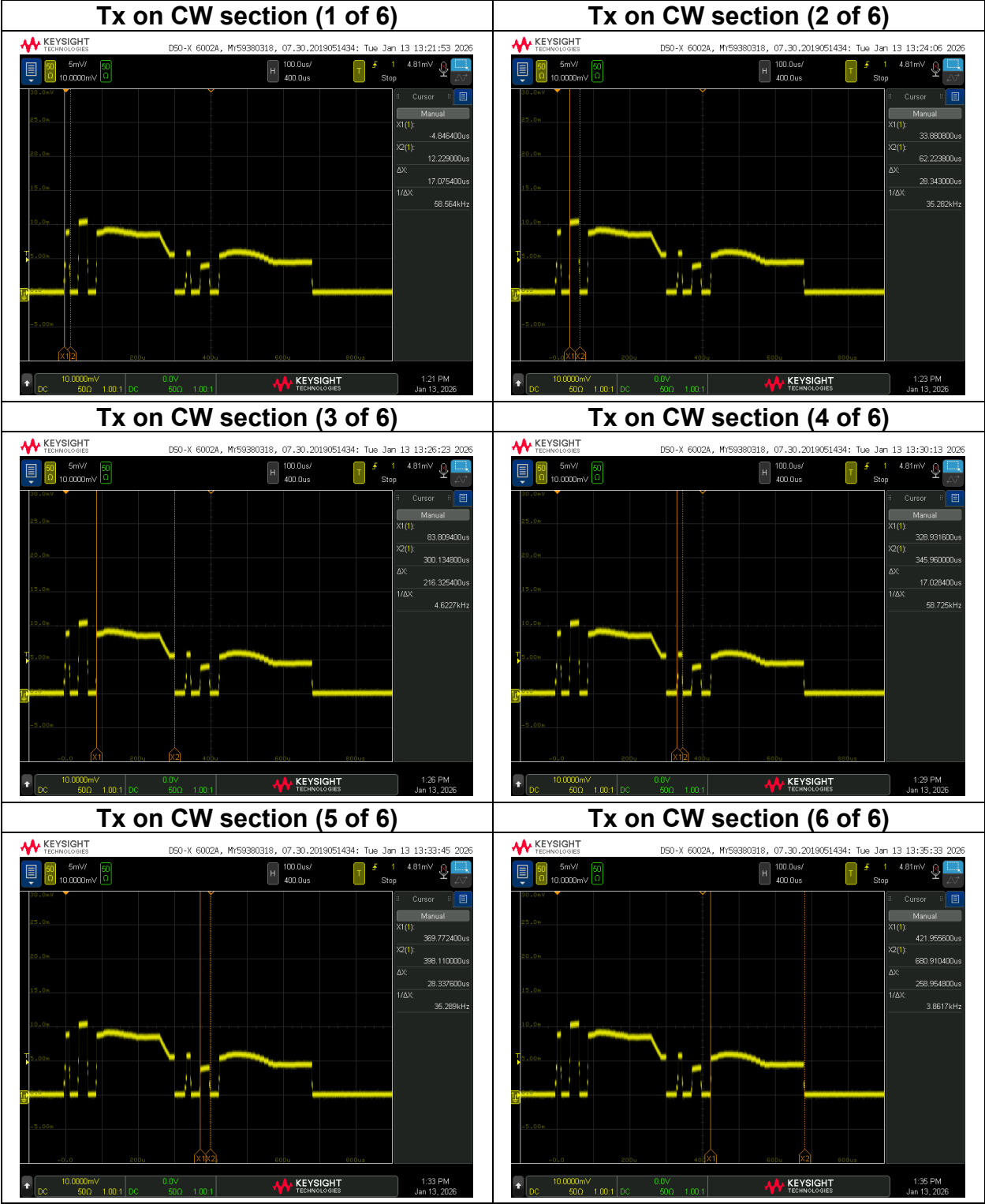
[Data]



Modulation characteristics

Mode	Tx (Mode 2) FCM 1 Low			
Date	Test site	Temperature	Humidity	Engineer
January 13, 2026	SAC4	23 deg. C	40 % RH	Junya Okuno

[Data]



Modulation characteristics

Mode	Tx (Mode 2) FCM 2			
Date	Test site	Temperature	Humidity	Engineer
January 27, 2026	SAC4	22 deg. C	35 % RH	Nachi Konegawa

Measured

Tx On time									Tx On + Tx Off time [ms]	Duty [%]	Duty Factor [dB]
(1 of 6) [us]	(2 of 6) [us]	(3 of 6) [us]	(4 of 6) [us]	(5 of 6) [us]	(6 of 6) [us]	(Total) [us]	FCM 2 section [ms]	Total [ms]			
17.086	28.415	215.983	17.038	28.510	245.380	552.413	2.283	2.836	50.000	5.7	12.46

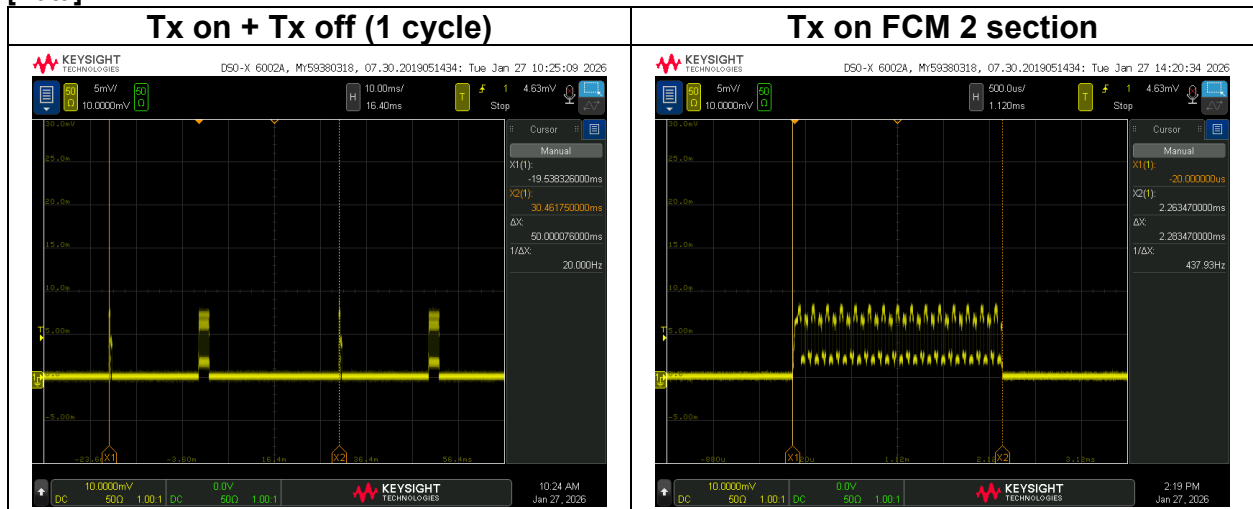
Calculating formula:

Tx On time CW section (Total) = Tx On time CW section (1 of 6) + Tx On time CW section (2 of 6) + Tx On time CW section (3 of 6) + Tx On time CW section (4 of 6) + Tx On time CW section (5 of 6) + Tx On time CW section (6 of 6)

Tx On time Total = Tx On time CW section (Total) + Tx On time FCM 2 section

$$\text{Duty} = (\text{Tx On time Total} / \text{Tx On} + \text{Tx Off time}) * 100$$
$$\text{Duty factor} = 10 * \log (\text{Tx On} + \text{Tx Off time} / \text{Tx On time Total})$$

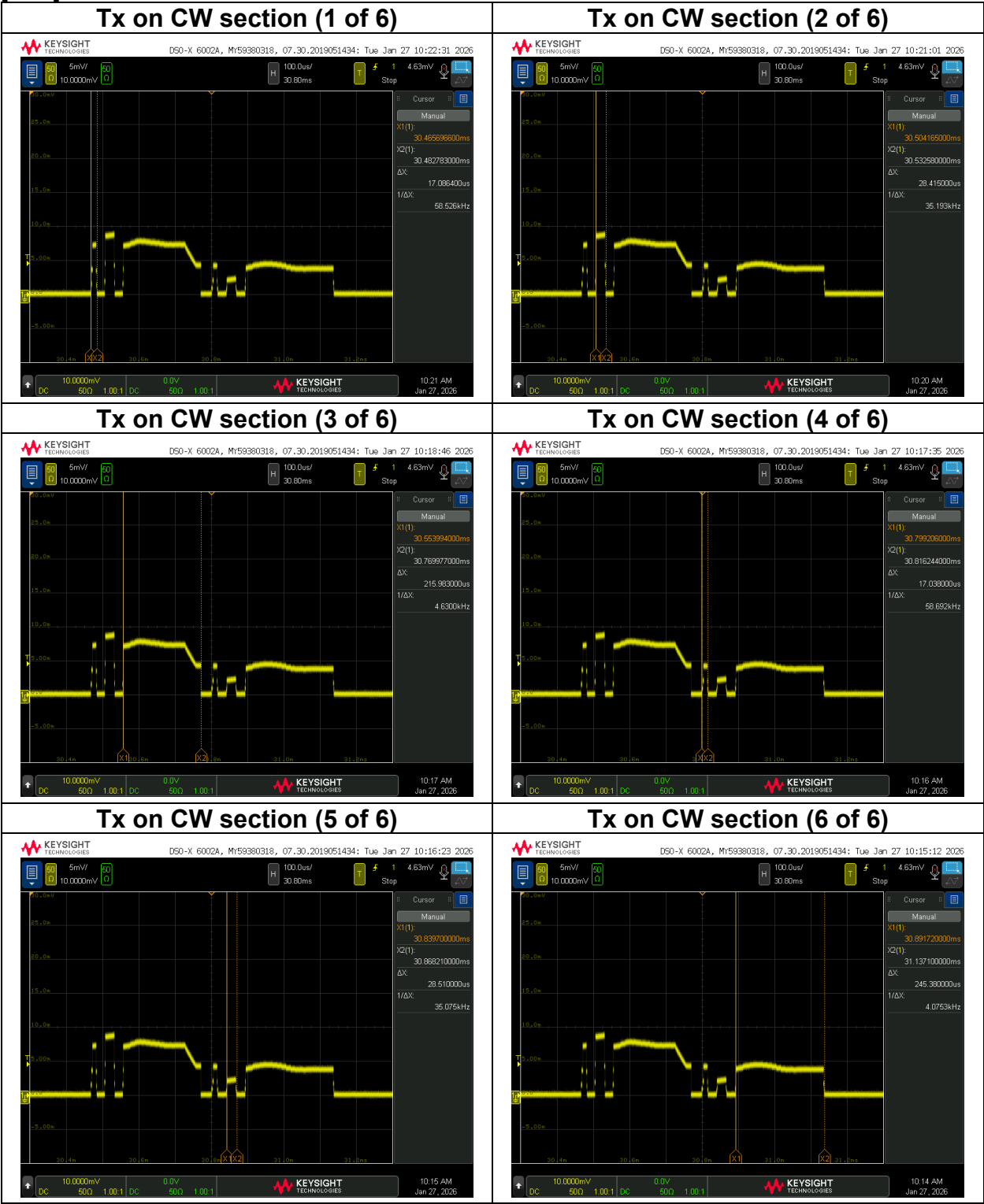
[Data]



Modulation characteristics

Mode	Tx (Mode 2) FCM 2			
Date	Test site	Temperature	Humidity	Engineer
January 27, 2026	SAC4	22 deg. C	35 % RH	Nachi Konegawa

[Data]



Modulation characteristics

Mode	Tx (Mode 3) FCM 1 Low			
Date	Test site	Temperature	Humidity	Engineer
January 13, 2026	SAC4	23 deg. C	40 % RH	Junya Okuno

Measured

Tx On time							FCM 1 section [ms]	Total [ms]	Tx On + Tx Off time [ms]	Duty [%]	Duty Factor [dB]
(1 of 6) [us]	(2 of 6) [us]	(3 of 6) [us]	(4 of 6) [us]	(5 of 6) [us]	(6 of 6) [us]	(Total) [us]					
17.022	28.351	247.822	17.017	28.314	103.563	442.088	15.230	15.672	50.002	31.3	5.04

Calculating formula:

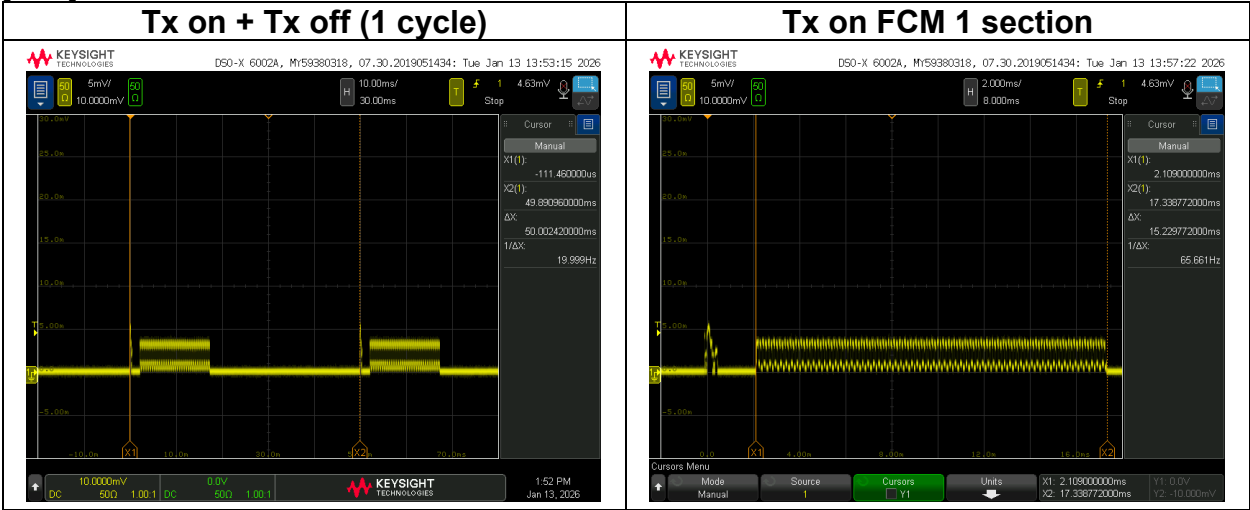
Tx On time CW section (Total) = Tx On time CW section (1 of 6) + Tx On time CW section (2 of 6) + Tx On time CW section (3 of 6) + Tx On time CW section (4 of 6) + Tx On time CW section (5 of 6) + Tx On time CW section (6 of 6)

Tx On time Total = Tx On time CW section (Total) + Tx On time FCM 1 section

Duty = (Tx On time Total / Tx On + Tx Off time) * 100

Duty factor = 10 * log (Tx On + Tx Off time / Tx On time Total)

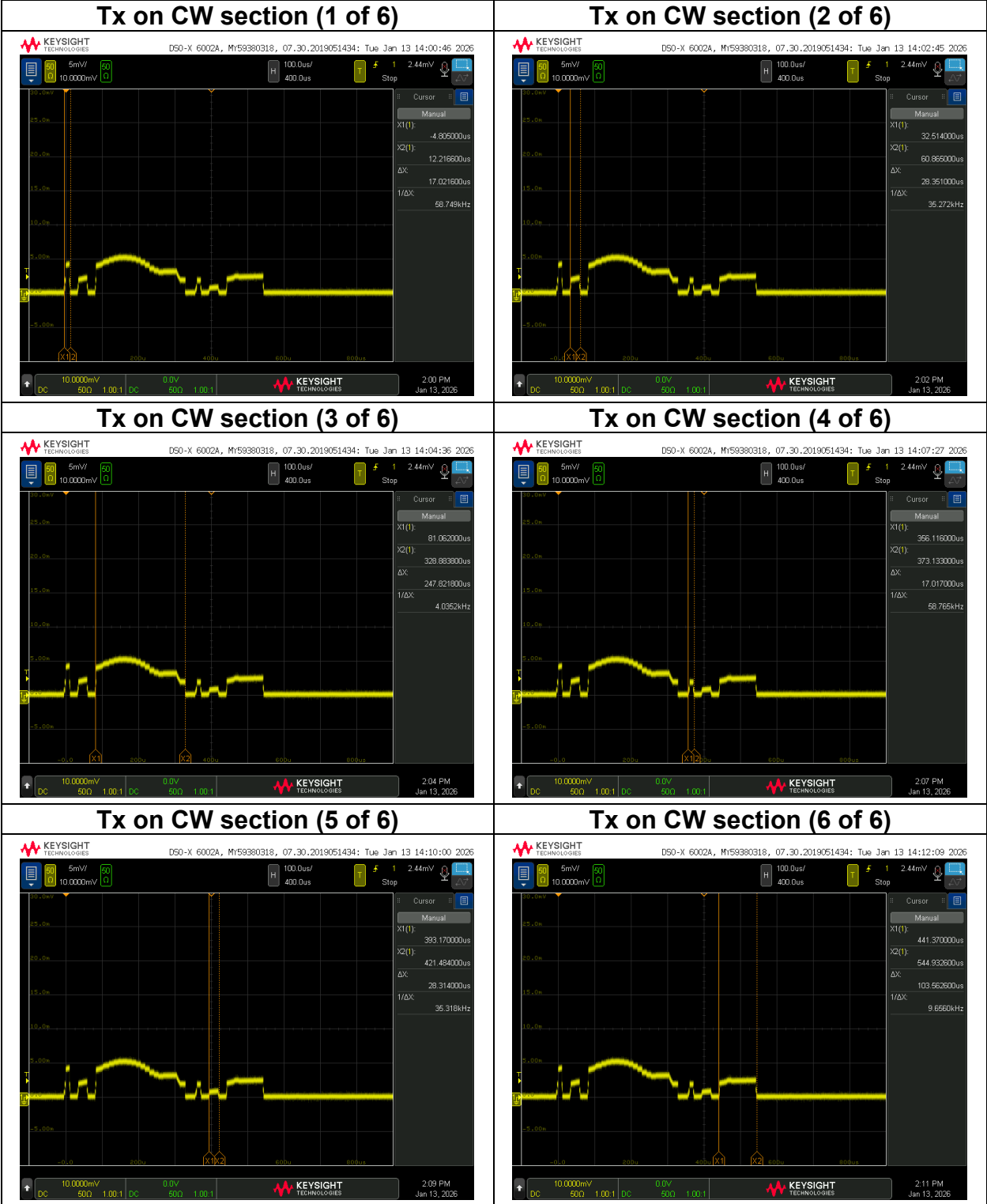
[Data]



Modulation characteristics

Mode	Tx (Mode 3) FCM 1 Low			
Date	Test site	Temperature	Humidity	Engineer
January 13, 2026	SAC4	23 deg. C	40 % RH	Junya Okuno

[Data]



Modulation characteristics

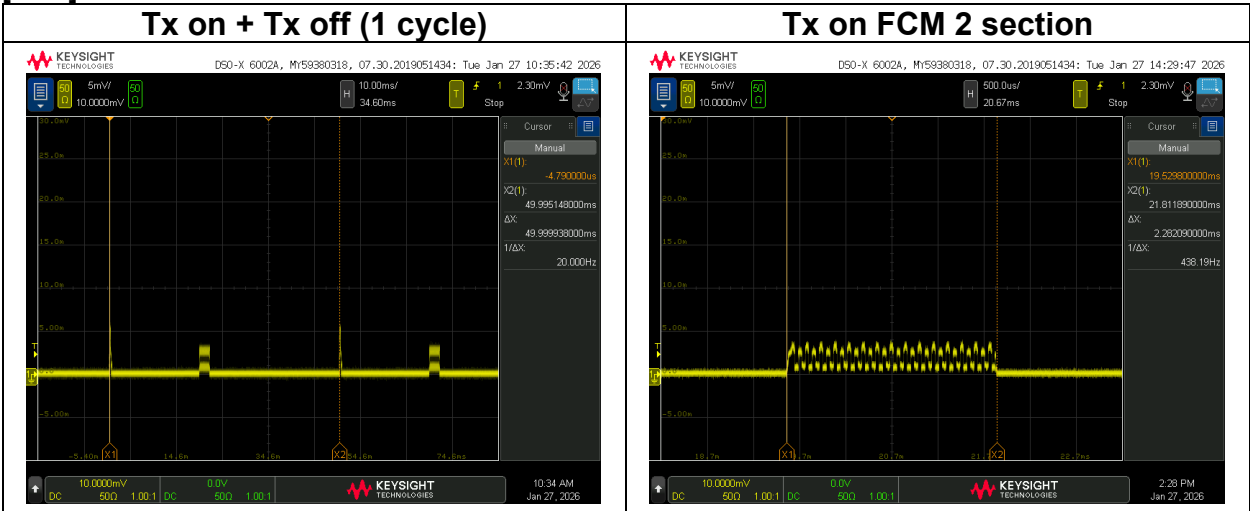
Mode	Tx (Mode 3) FCM 2			
Date	Test site	Temperature	Humidity	Engineer
January 27, 2026	SAC4	22 deg. C	35 % RH	Nachi Konegawa

Measured

Tx On time									Tx On + Tx Off time [ms]	Duty [%]	Duty Factor [dB]
CW section						FCM 2 section [ms]	Total [ms]				
(1 of 6) [us]	(2 of 6) [us]	(3 of 6) [us]	(4 of 6) [us]	(5 of 6) [us]	(6 of 6) [us]			(Total) [us]			
17.034	28.560	257.002	16.060	28.440	106.680	453.776	2.282	2.736	50.000	5.5	12.62

Calculating formula:
Tx On time CW section (Total) = Tx On time CW section (1 of 6) + Tx On time CW section (2 of 6) + Tx On time CW section (3 of 6) + Tx On time CW section (4 of 6) + Tx On time CW section (5 of 6) + Tx On time CW section (6 of 6)
Tx On time Total = Tx On time CW section (Total) + Tx On time FCM 2 section
Duty = (Tx On time Total / Tx On + Tx Off time) * 100
Duty factor = 10 * log (Tx On + Tx Off time / Tx On time Total)

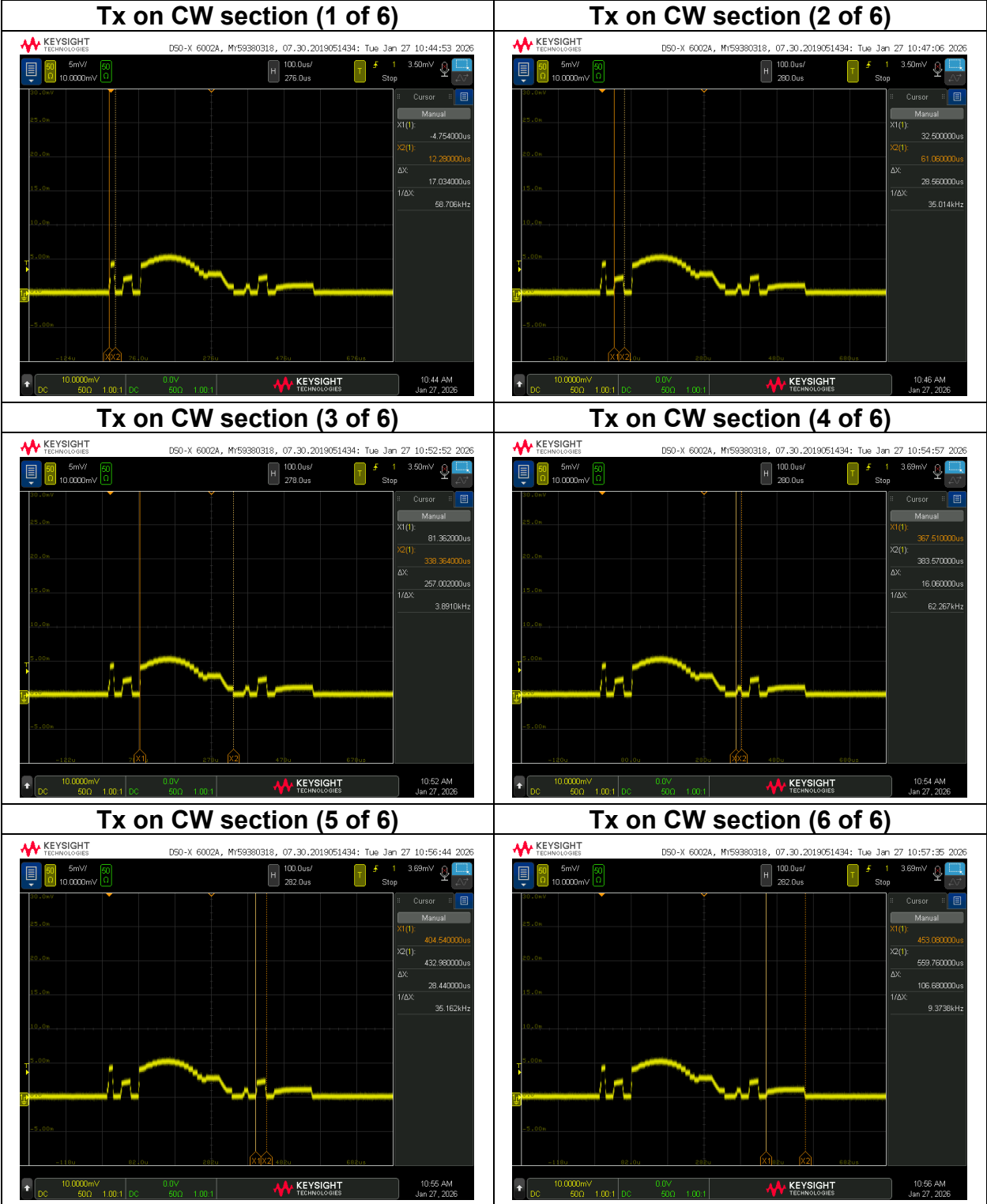
[Data]



Modulation characteristics

Mode	Tx (Mode 3) FCM 2			
Date	Test site	Temperature	Humidity	Engineer
January 27, 2026	SAC4	22 deg. C	35 % RH	Nachi Konegawa

[Data]



Modulation characteristics

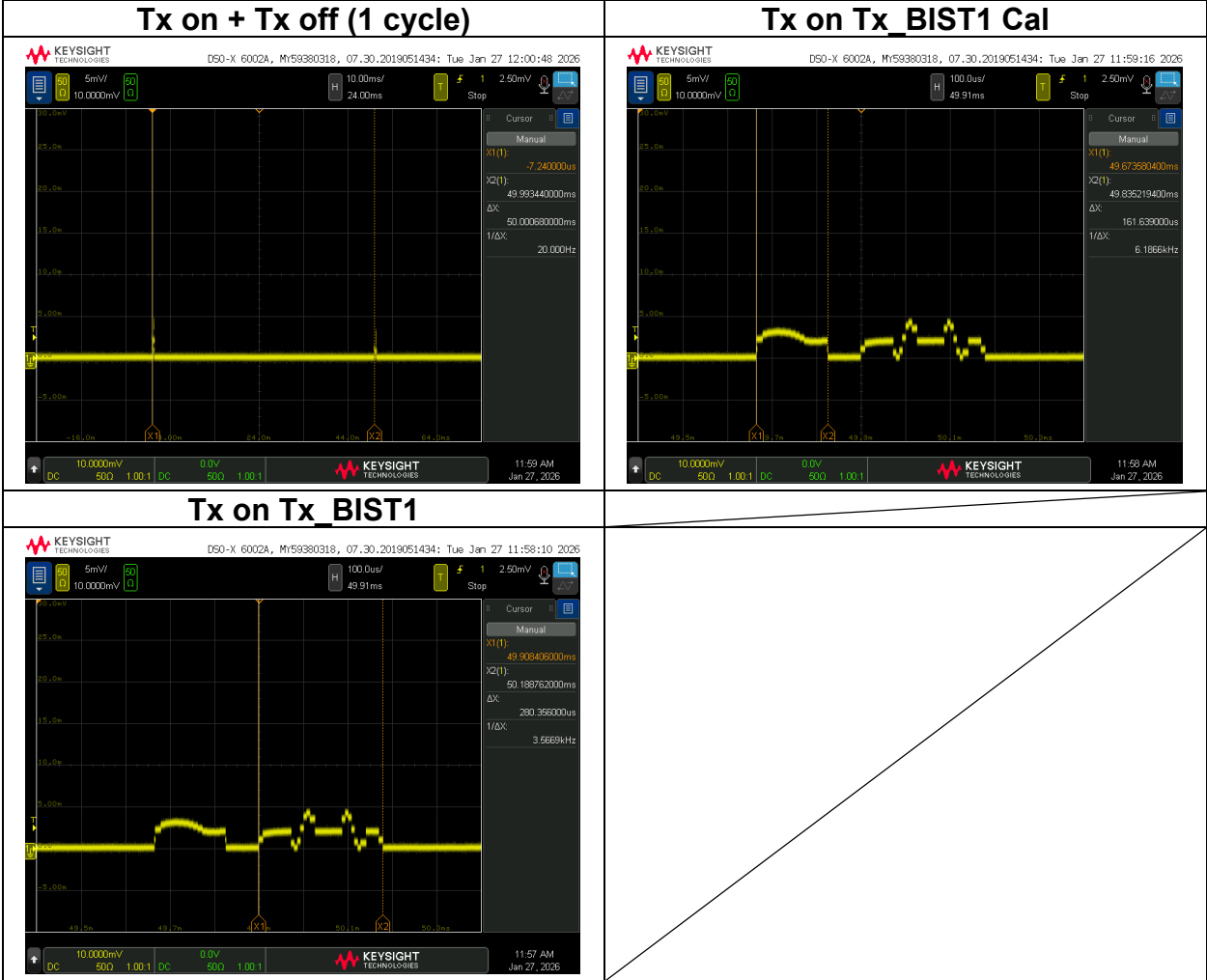
Mode	Tx BIST			
Date	Test site	Temperature	Humidity	Engineer
January 27, 2026	SAC4	22 deg. C	35 % RH	Nachi Konegawa

Measured

Tx_BIST1 Cal	Tx_BIST1	Total	Tx On + Tx Off time	Duty	Duty Factor
[us]	[us]	[ms]	[ms]	[%]	[dB]
161.639	280.356	0.442	50.001	0.9	20.54

Calculating formula:
Tx On time Total = Tx On time Tx_BIST1 Cal + Tx On time Tx_BIST1
Duty = (Tx On time Total / Tx On + Tx Off time) * 100
Duty factor = 10 * log (Tx On + Tx Off time / Tx On time Total)

[Data]



* Since all Tx_BIST transmission patterns are the same, the test was performed with Tx_BIST1 as a representative.

Field strength of spurious radiation (Below 40 GHz)

Mode	Normal operating mode (Mode 1)
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Date	Test site	Temperature	Humidity	Engineer	Measurement Range
January 21, 2026	SAC4	20 deg. C	38 % RH	Junya Okuno	10 GHz to 40 GHz
January 21, 2026	SAC4	22 deg. C	37 % RH	Yuichiro Yamazaki	1 GHz to 10 GHz
January 22, 2026	SAC4	22 deg. C	38 % RH	Yuichiro Yamazaki	30 MHz to 1 GHz
January 23, 2026	SAC4	20 deg. C	40 % RH	Junya Okuno	Below 30 MHz

Polarity	Frequency	Reading (QP / PK)	Reading (AV)	Ant. Factor	Loss	Gain	Duty Factor	Result (QP / PK)	Result (AV)	Limit (QP / PK)	Limit (AV)	Margin (QP / PK)	Margin (AV)	Remark
[Hori/Vert]	[MHz]	[dBuV]	[dBuV]	[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]	
Hori.	49.2	23.5	-	11.5	7.3	32.1	-	10.2	-	40.0	-	29.8	-	
Hori.	144.0	22.3	-	14.9	8.3	32.1	-	13.4	-	43.5	-	30.1	-	
Hori.	192.0	21.2	-	16.6	8.7	32.0	-	14.5	-	43.5	-	29.0	-	
Hori.	240.0	29.7	-	11.5	9.1	32.0	-	18.3	-	46.0	-	27.7	-	
Hori.	533.3	19.7	-	17.5	10.6	32.3	-	15.6	-	46.0	-	30.4	-	
Hori.	624.0	20.8	-	19.3	11.0	32.3	-	18.8	-	46.0	-	27.2	-	
Vert.	49.2	24.4	-	11.5	7.3	32.1	-	11.1	-	40.0	-	28.9	-	
Vert.	144.0	21.6	-	14.9	8.3	32.1	-	12.7	-	43.5	-	30.8	-	
Vert.	192.0	21.3	-	16.6	8.7	32.0	-	14.6	-	43.5	-	28.9	-	
Vert.	240.0	27.9	-	11.5	9.1	32.0	-	16.5	-	46.0	-	29.5	-	
Vert.	533.3	20.1	-	17.5	10.6	32.3	-	16.0	-	46.0	-	30.0	-	
Vert.	624.0	20.9	-	19.3	11.0	32.3	-	18.9	-	46.0	-	27.1	-	

Result (QP / PK) = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 10 GHz)) - Gain(Amplifier)

Result (AV)= Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 10 GHz)) - Gain(Amplifier) + Duty factor

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

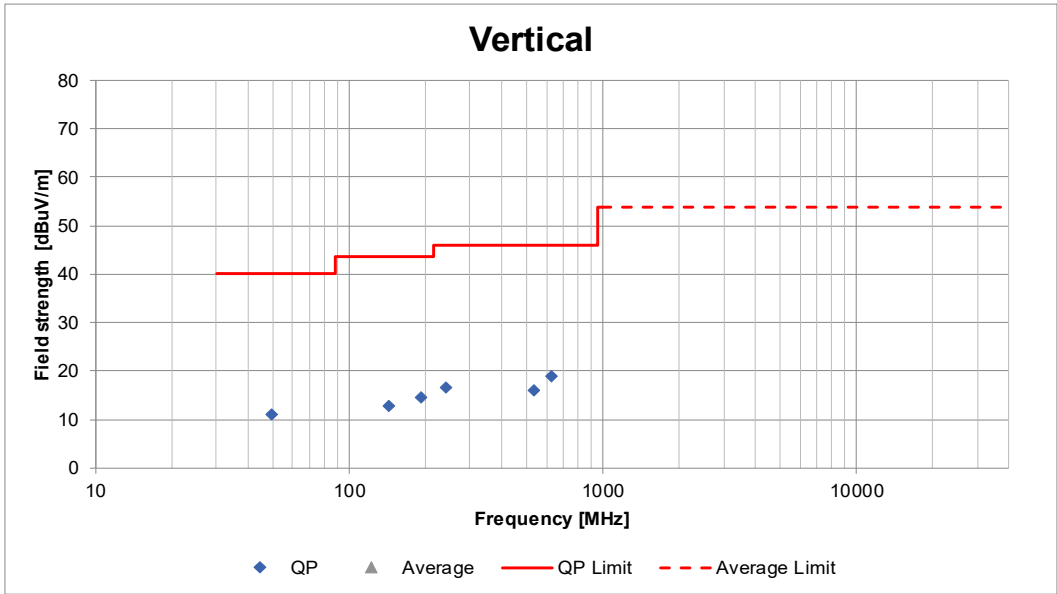
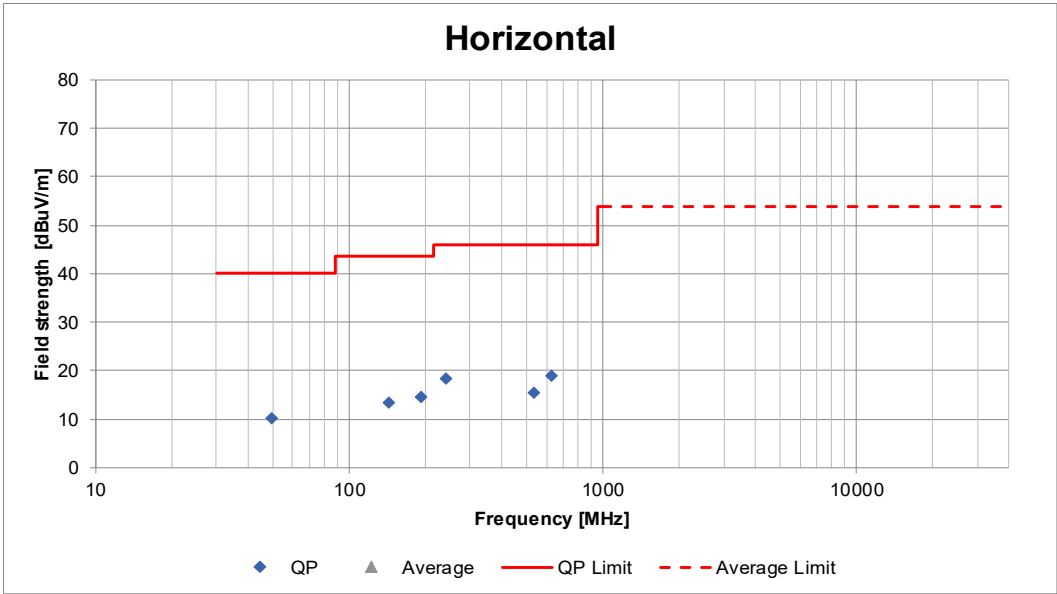
*QP detector was used up to 1GHz.

Distance factor: 10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Field strength of spurious radiation
(Below 40 GHz)
(Plot data, Worst case)

Mode	Normal operating mode (Mode 1)
------	--------------------------------

Date	Test site	Temperature	Humidity	Engineer	Measurement Range
January 21, 2026	SAC4	20 deg. C	38 % RH	Junya Okuno	10 GHz to 40 GHz
January 21, 2026	SAC4	22 deg. C	37 % RH	Yuichiro Yamazaki	1 GHz to 10 GHz
January 22, 2026	SAC4	22 deg. C	38 % RH	Yuichiro Yamazaki	30 MHz to 1 GHz
January 23, 2026	SAC4	20 deg. C	40 % RH	Junya Okuno	Below 30 MHz



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

Field strength of spurious radiation (Above 40 GHz)

Mode	Normal operating mode (Mode 1)
------	--------------------------------

Date	Test site	Temperature	Humidity	Engineer	Measurement Range
January 18, 2026	SAC4	22 deg. C	38 % RH	Yuichiro Yamazaki	75 GHz to 76 GHz
January 19, 2026	SAC4	22 deg. C	42 % RH	Junki Nagatomi	81 GHz to 83 GHz
January 19, 2026	SAC4	23 deg. C	39 % RH	Yuichiro Yamazaki	50 GHz to 75 GHz 170 GHz to 243 GHz
January 20, 2026	SAC4	22 deg. C	36 % RH	Junya Okuno	40 GHz to 50 GHz 83 GHz to 110 GHz
January 20, 2026	SAC4	21 deg. C	36 % RH	Yuichiro Yamazaki	110 GHz to 152 GHz 154 GHz to 170 GHz
January 26, 2026	SAC4	20 deg. C	40 % RH	Junki Nagatomi	152 GHz to 154 GHz

Frequency	Reading	Rx Ant. gain	Filter loss	LNA gain	Mixer conversion	IF Amp. gain	IF Cable loss	Meas. range D	FSL	EIRP		Power density at 3 m			Remarks
[GHz]	[dBm]	[dBi]	[dB]	[dB]	[dB]	[dB]	[dB]	[m]	[dB]	[dBm]		Result	Limit	Margin	
												[pW/cm ²]	[pW/cm ²]	[dB]	
48.747	-58.34	22.18	0.00	31.70	0.00	0.00	8.68	1.00	66.20	-37.34	0.00018	0.16	600	35.66	NS
50.564	-68.90	22.84	0.34	26.10	48.64	38.74	0.08	0.75	64.02	-43.50	0.00004	0.04	600	41.81	NS
64.251	-69.31	23.97	0.46	24.04	47.84	38.74	0.08	0.75	66.10	-41.58	0.00007	0.06	600	39.89	NS
68.326	-69.12	24.22	0.38	22.52	48.20	38.74	0.08	0.75	66.63	-39.30	0.00012	0.10	600	37.62	NS
73.739	-69.63	24.46	0.84	20.93	50.15	38.74	0.08	0.75	67.30	-35.40	0.00029	0.26	600	33.71	NS
75.782	-75.91	23.02	0.00	0.00	-14.86	0.00	1.64	0.65	66.29	-45.86	0.00003	0.02	600	44.17	Average Detected
82.418	-76.88	23.50	0.00	0.00	-12.17	0.00	3.54	0.65	67.02	-41.99	0.00006	0.06	600	40.31	NS
87.240	-58.29	23.79	0.67	31.17	0.00	0.00	0.00	0.50	65.24	-47.34	0.00002	0.02	600	45.66	NS
99.437	-47.31	24.44	0.40	33.11	0.00	0.00	0.00	0.50	66.37	-38.09	0.00016	0.14	600	36.41	NS
101.890	-49.96	24.50	0.30	32.11	0.00	0.00	0.00	0.50	66.58	-39.69	0.00011	0.10	600	38.00	NS
119.247	-87.85	22.62	0.00	19.01	11.36	0.00	0.66	0.50	67.95	-49.51	0.00001	0.01	600	47.83	NS
122.485	-86.39	22.72	0.00	20.09	12.46	0.00	0.66	0.50	68.18	-47.90	0.00002	0.01	600	46.21	NS
132.277	-87.09	23.01	0.00	18.93	11.92	0.00	0.66	0.50	68.85	-47.60	0.00002	0.02	600	45.91	NS
141.744	-87.86	23.22	0.00	18.61	11.87	0.00	0.66	0.50	69.45	-47.71	0.00002	0.01	600	46.02	NS
150.160	-89.88	23.33	0.00	17.42	12.22	0.00	0.66	0.50	69.95	-47.80	0.00002	0.01	600	46.11	NS
153.832	-98.31	23.36	0.00	16.96	11.14	0.00	0.66	0.50	70.16	-56.66	0.00000	0.00	600	54.98	Average Detected
154.720	-90.12	23.37	0.00	16.87	11.45	0.00	0.66	0.50	70.21	-48.04	0.00002	0.01	600	46.35	NS
162.053	-94.27	23.40	0.00	15.90	11.34	0.00	0.66	0.50	70.61	-50.95	0.00001	0.01	600	49.27	NS
172.260	-88.83	22.45	0.00	0.00	61.39	0.00	0.00	0.01	37.17	-12.72	0.05343	47.24	600	11.04	NS
184.774	-89.45	22.73	0.00	0.00	57.97	0.00	0.00	0.01	37.77	-16.44	0.02272	20.09	600	14.75	NS
187.887	-89.34	22.80	0.00	0.00	59.95	0.00	0.00	0.01	37.92	-14.27	0.03743	33.09	600	12.58	NS
194.193	-89.45	22.92	0.00	0.00	58.92	0.00	0.00	0.01	38.21	-15.25	0.02987	26.41	600	13.56	NS
204.451	-90.01	23.09	0.00	0.00	59.55	0.00	0.00	0.01	38.65	-14.89	0.03240	28.65	1000	15.43	NS
210.328	-90.21	23.17	0.00	0.00	60.48	0.00	0.00	0.01	38.90	-14.00	0.03982	35.21	1000	14.53	NS
220.539	-90.73	23.28	0.00	0.00	61.58	0.00	0.00	0.01	39.31	-13.11	0.04881	43.16	1000	13.65	NS
226.687	-90.91	23.32	0.00	0.00	61.93	0.00	0.00	0.01	39.55	-12.75	0.05307	46.92	1000	13.29	NS
234.983	-91.31	23.38	0.00	0.00	65.72	0.00	0.00	0.01	39.86	-9.10	0.12290	108.67	1000	9.64	NS
239.052	-91.55	23.39	0.00	0.00	70.25	0.00	0.00	0.01	40.01	-4.68	0.34030	300.89	1000	5.22	NS

Calculation:

FSL (Free Space path Loss) = $10 * \log ((4 * \pi * D / \lambda)^2)$

EIRP = Reading - Rx Ant. gain + Filter loss - LNA gain + Mixer conversion loss - IF Amp. gain + IF Cable loss + FSL

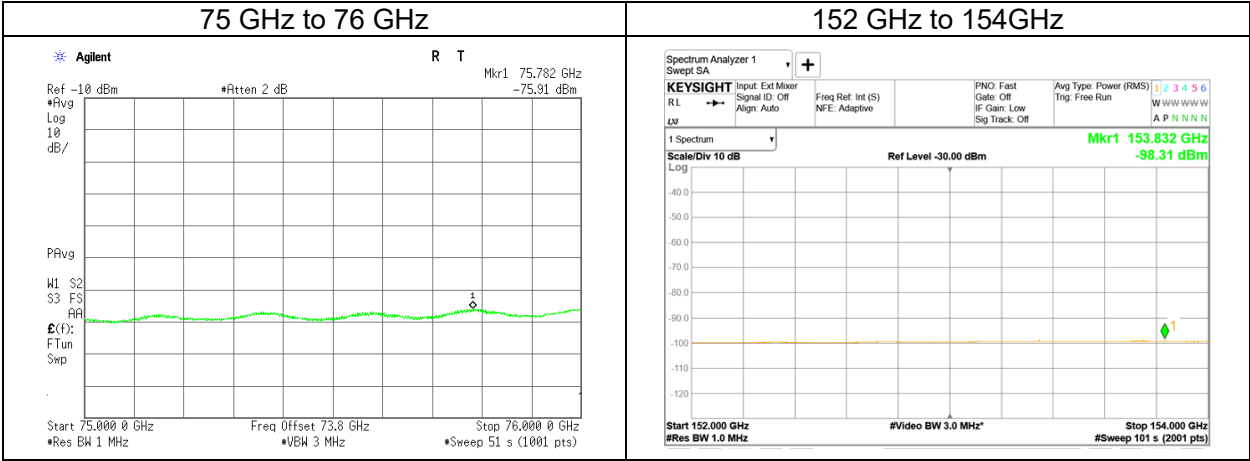
Power density Result at 3 m = $EIRP / (4 * \pi * 300^2)$

These calculation results are same as results which were calculated with formulas described in the Section 9 of ANSI C63.10-2020 / ANSI/USEMCS C63.10/Cor 1-2023.

- The equipment were not used for factor 0 dB of the data sheets.
- The Mixer conversion loss and IF Cable Loss are automatically corrected in the mixer, so the factor of data sheet were 0 dB.
- The IF Cable loss is included in Mixer loss, so the factor of data sheet were 0 dB.

NS: No signal detected.

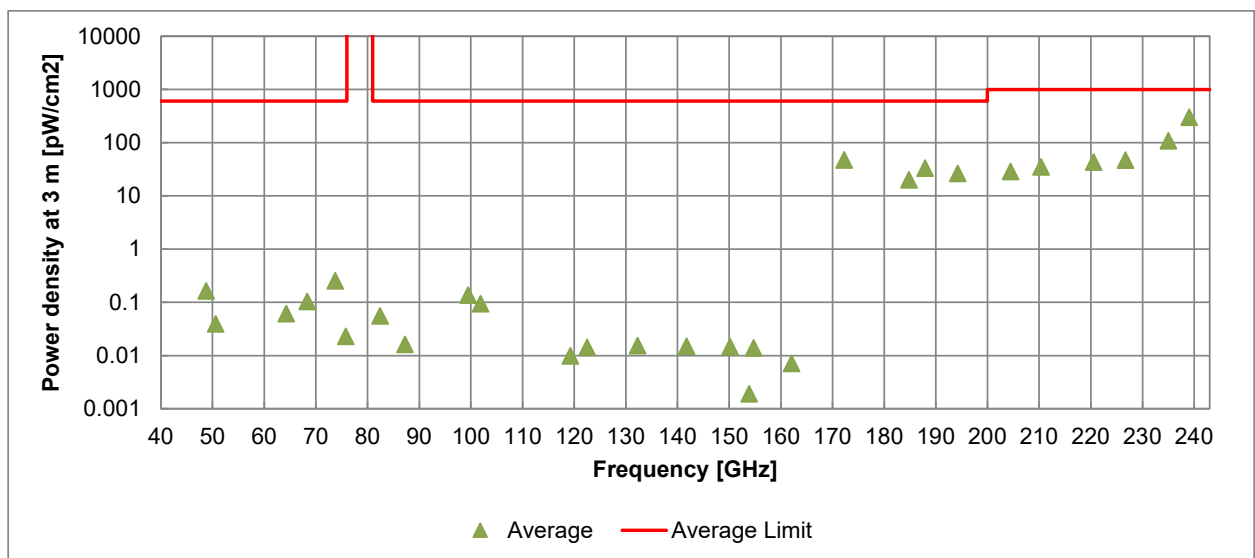
Field strength of spurious radiation
(Above 40 GHz)
(Data only for detected frequency)



Field strength of spurious radiation
(Above 40 GHz)
(Plot data, Worst case)

Mode	Normal operating mode (Mode 1)
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Date	Test site	Temperature	Humidity	Engineer	Measurement Range
January 18, 2026	SAC4	22 deg. C	38 % RH	Yuichiro Yamazaki	75 GHz to 76 GHz
January 19, 2026	SAC4	22 deg. C	42 % RH	Junki Nagatomi	81 GHz to 83 GHz
January 19, 2026	SAC4	23 deg. C	39 % RH	Yuichiro Yamazaki	50 GHz to 75 GHz 170 GHz to 243 GHz
January 20, 2026	SAC4	22 deg. C	36 % RH	Junya Okuno	40 GHz to 50 GHz 83 GHz to 110 GHz
January 20, 2026	SAC4	21 deg. C	36 % RH	Yuichiro Yamazaki	110 GHz to 152 GHz 154 GHz to 170 GHz
January 26, 2026	SAC4	20 deg. C	40 % RH	Junki Nagatomi	152 GHz to 154 GHz



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

Field strength of spurious radiation (Below 40 GHz)

Mode	Normal operating mode (Mode 2)
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Date	Test site	Temperature	Humidity	Engineer	Measurement Range
January 21, 2026	SAC4	20 deg. C	38 % RH	Junya Okuno	10 GHz to 40 GHz
January 21, 2026	SAC4	22 deg. C	37 % RH	Yuichiro Yamazaki	1 GHz to 10 GHz
January 22, 2026	SAC4	22 deg. C	38 % RH	Yuichiro Yamazaki	30 MHz to 1 GHz
January 23, 2026	SAC4	20 deg. C	40 % RH	Junya Okuno	Below 30 MHz

Polarity	Frequency	Reading (QP / PK)	Reading (AV)	Ant. Factor	Loss	Gain	Duty Factor	Result (QP / PK)	Result (AV)	Limit (QP / PK)	Limit (AV)	Margin (QP / PK)	Margin (AV)	Remark
[Hori/Vert]	[MHz]	[dBuV]	[dBuV]	[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]	
Hori.	49.2	24.7	-	11.5	7.3	32.1	-	11.4	-	40.0	-	28.6	-	
Hori.	144.0	22.0	-	14.9	8.3	32.1	-	13.1	-	43.5	-	30.4	-	
Hori.	192.0	20.8	-	16.6	8.7	32.0	-	14.1	-	43.5	-	29.4	-	
Hori.	240.0	28.5	-	11.5	9.1	32.0	-	17.1	-	46.0	-	28.9	-	
Hori.	533.3	19.4	-	17.5	10.6	32.3	-	15.3	-	46.0	-	30.7	-	
Hori.	624.0	20.6	-	19.3	11.0	32.3	-	18.6	-	46.0	-	27.4	-	
Vert.	49.2	25.0	-	11.5	7.3	32.1	-	11.7	-	40.0	-	28.3	-	
Vert.	144.0	21.3	-	14.9	8.3	32.1	-	12.4	-	43.5	-	31.1	-	
Vert.	192.0	20.7	-	16.6	8.7	32.0	-	14.0	-	43.5	-	29.5	-	
Vert.	240.0	28.6	-	11.5	9.1	32.0	-	17.2	-	46.0	-	28.8	-	
Vert.	533.3	19.5	-	17.5	10.6	32.3	-	15.4	-	46.0	-	30.6	-	
Vert.	624.0	20.7	-	19.3	11.0	32.3	-	18.7	-	46.0	-	27.3	-	

Result (QP / PK) = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 10 GHz)) - Gain(Amplifier)

Result (AV)= Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 10 GHz)) - Gain(Amplifier) + Duty factor

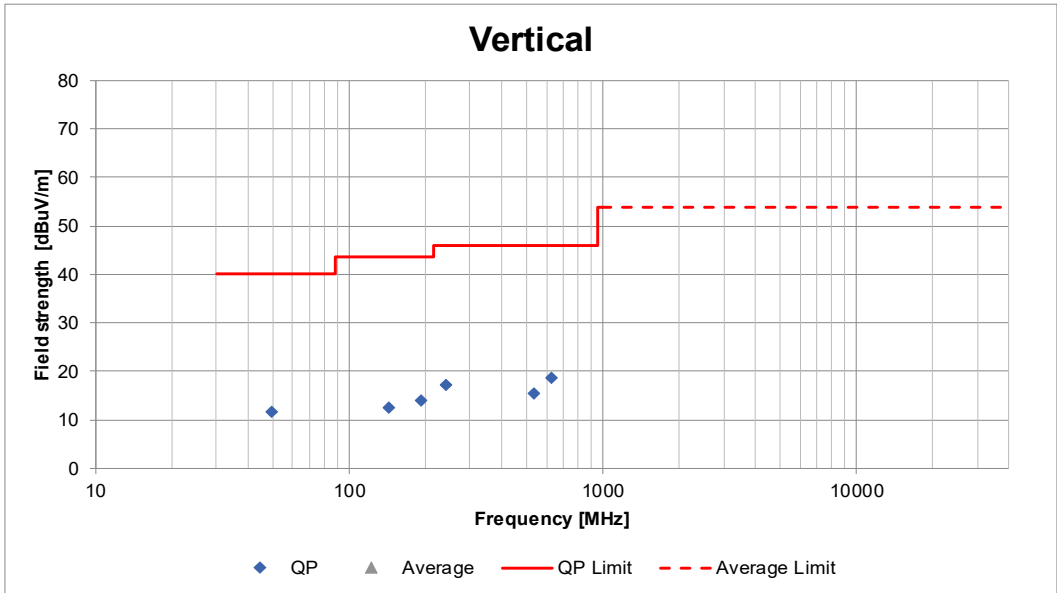
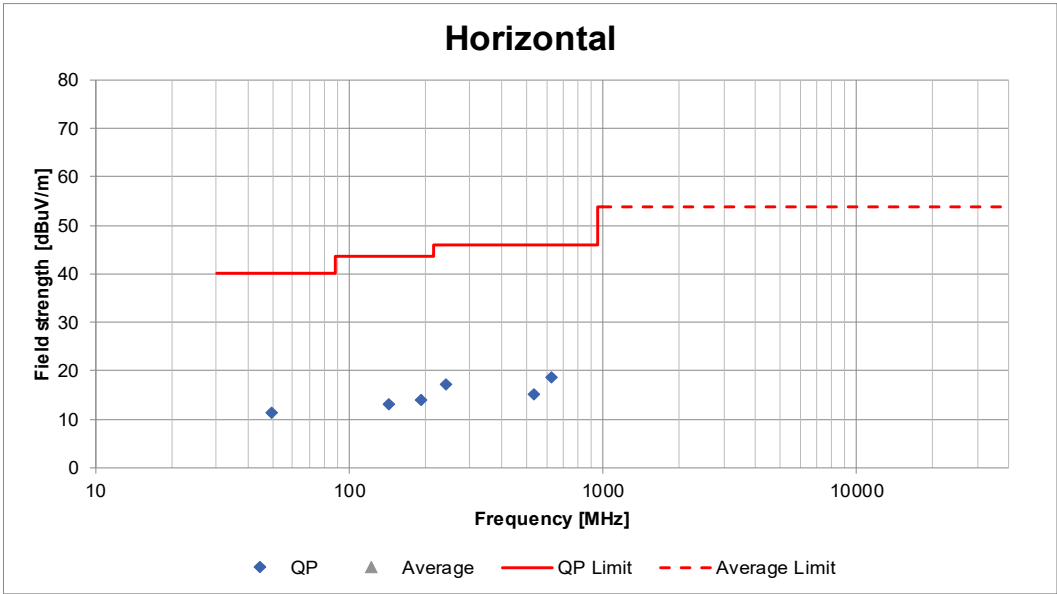
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

*QP detector was used up to 1GHz.

Distance factor: 10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Field strength of spurious radiation
(Below 40 GHz)
(Plot data, Worst case)

Mode	Normal operating mode (Mode 2)				
Date	Test site	Temperature	Humidity	Engineer	Measurement Range
January 21, 2026	SAC4	20 deg. C	38 % RH	Junya Okuno	10 GHz to 40 GHz
January 21, 2026	SAC4	22 deg. C	37 % RH	Yuichiro Yamazaki	1 GHz to 10 GHz
January 22, 2026	SAC4	22 deg. C	38 % RH	Yuichiro Yamazaki	30 MHz to 1 GHz
January 23, 2026	SAC4	20 deg. C	40 % RH	Junya Okuno	Below 30 MHz



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

Field strength of spurious radiation (Above 40 GHz)

Mode	Normal operating mode (Mode 2)
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Date	Test site	Temperature	Humidity	Engineer	Measurement Range
January 18, 2026	SAC4	22 deg. C	38 % RH	Yuichiro Yamazaki	75 GHz to 76 GHz
January 19, 2026	SAC4	22 deg. C	42 % RH	Junki Nagatomi	81 GHz to 83 GHz
January 19, 2026	SAC4	23 deg. C	39 % RH	Yuichiro Yamazaki	50 GHz to 75 GHz 170 GHz to 243 GHz
January 20, 2026	SAC4	22 deg. C	36 % RH	Junya Okuno	40 GHz to 50 GHz 83 GHz to 110 GHz
January 20, 2026	SAC4	21 deg. C	36 % RH	Yuichiro Yamazaki	110 GHz to 152 GHz 154 GHz to 170 GHz
January 26, 2026	SAC4	20 deg. C	40 % RH	Junki Nagatomi	152 GHz to 154 GHz

Frequency	Reading	Rx Ant. gain	Filter loss	LNA gain	Mixer conversion loss	IF Amp. gain	IF Cable loss	Meas. range D	FSL	EIRP		Power density at 3 m			Remarks
[GHz]	[dBm]	[dBi]	[dB]	[dB]	[dB]	[dB]	[dB]	[m]	[dB]	[dBm]	[mW]	[pW/cm ²]	[pW/cm ²]	[dB]	
48.213	-58.27	22.21	0.00	31.86	0.00	0.00	8.77	1.00	66.11	-37.46	0.00018	0.16	600	35.78	NS
50.633	-68.87	22.83	0.33	26.13	48.48	38.74	0.08	0.75	64.03	-43.65	0.00004	0.04	600	41.96	NS
62.363	-68.72	23.86	0.49	24.40	46.18	38.74	0.08	0.75	65.84	-43.13	0.00005	0.04	600	41.44	NS
66.644	-68.97	24.16	0.40	23.29	47.88	38.74	0.08	0.75	66.42	-40.38	0.00009	0.08	600	38.70	NS
73.561	-69.46	24.46	0.87	21.02	50.09	38.74	0.08	0.75	67.28	-35.36	0.00029	0.26	600	33.68	NS
75.779	-78.41	23.02	0.00	0.00	-14.86	0.00	1.64	0.65	66.29	-48.35	0.00001	0.01	600	46.67	Average Detected
81.500	-77.06	23.51	0.00	0.00	-12.27	0.00	2.68	0.65	66.92	-43.23	0.00005	0.04	600	41.55	NS
89.319	-57.88	23.87	0.52	33.19	0.00	0.00	0.00	0.50	65.44	-48.98	0.00001	0.01	600	47.30	NS
99.605	-48.25	24.46	0.40	32.93	0.00	0.00	0.00	0.50	66.39	-38.85	0.00013	0.12	600	37.17	NS
104.923	-49.71	24.60	0.40	29.39	0.00	0.00	0.00	0.50	66.84	-36.46	0.00023	0.20	600	34.78	NS
118.571	-87.18	22.59	0.00	18.97	11.47	0.00	0.66	0.50	67.90	-48.70	0.00001	0.01	600	47.02	NS
125.506	-86.95	22.81	0.00	21.24	11.48	0.00	0.66	0.50	68.39	-50.46	0.00001	0.01	600	48.78	NS
138.393	-87.69	23.15	0.00	18.70	11.00	0.00	0.66	0.50	69.24	-48.63	0.00001	0.01	600	46.95	NS
146.196	-87.99	23.29	0.00	18.11	11.16	0.00	0.66	0.50	69.72	-47.85	0.00002	0.01	600	46.16	NS
151.247	-90.11	23.34	0.00	17.05	12.16	0.00	0.66	0.50	70.01	-47.66	0.00002	0.02	600	45.98	NS
153.832	-98.27	23.36	0.00	16.96	11.14	0.00	0.66	0.50	70.16	-56.63	0.00000	0.00	600	54.94	Average Detected
154.747	-90.19	23.37	0.00	16.87	11.45	0.00	0.66	0.50	70.21	-48.11	0.00002	0.01	600	46.42	NS
162.956	-94.22	23.40	0.00	15.39	12.18	0.00	0.66	0.50	70.66	-49.51	0.00001	0.01	600	47.82	NS
175.814	-89.03	22.53	0.00	0.00	60.59	0.00	0.00	0.01	37.34	-13.62	0.04341	38.38	600	11.94	NS
180.238	-89.77	22.64	0.00	0.00	59.27	0.00	0.00	0.01	37.56	-15.58	0.02765	24.45	600	13.90	NS
192.101	-88.54	22.88	0.00	0.00	59.15	0.00	0.00	0.01	38.11	-14.16	0.03839	33.95	600	12.47	NS
194.090	-89.75	22.92	0.00	0.00	59.01	0.00	0.00	0.01	38.20	-15.46	0.02843	25.14	600	13.78	NS
207.292	-89.49	23.13	0.00	0.00	60.91	0.00	0.00	0.01	38.77	-12.93	0.05090	45.01	1000	13.47	NS
208.519	-89.82	23.14	0.00	0.00	61.33	0.00	0.00	0.01	38.82	-12.80	0.05246	46.39	1000	13.34	NS
222.390	-90.82	23.29	0.00	0.00	62.26	0.00	0.00	0.01	39.38	-12.46	0.05669	50.13	1000	13.00	NS
226.791	-91.04	23.32	0.00	0.00	61.93	0.00	0.00	0.01	39.55	-12.87	0.05161	45.63	1000	13.41	NS
233.898	-91.11	23.37	0.00	0.00	65.72	0.00	0.00	0.01	39.82	-8.93	0.12780	113.00	1000	9.47	NS
239.748	-91.45	23.39	0.00	0.00	72.42	0.00	0.00	0.01	40.04	-2.38	0.57755	510.66	1000	2.92	NS

Calculation:

FSL (Free Space path Loss) = $10 * \log ((4 * \pi * D / \lambda)^2)$

EIRP = Reading - Rx Ant. gain + Filter loss - LNA gain + Mixer conversion loss - IF Amp. gain + IF Cable loss + FSL

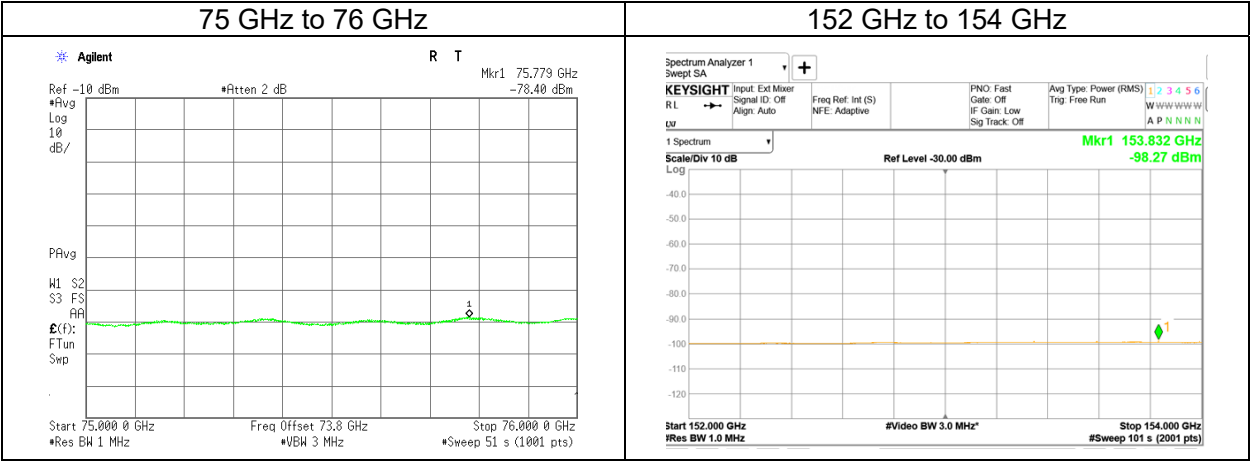
Power density Result at 3 m = $EIRP / (4 * \pi * 300^2)$

These calculation results are same as results which were calculated with formulas described in the Section 9 of ANSI C63.10-2020 / ANSI/USEMCS C63.10/Cor 1-2023.

- The equipment were not used for factor 0 dB of the data sheets.
- The Mixer conversion loss and IF Cable Loss are automatically corrected in the mixer, so the factor of data sheet were 0 dB.
- The IF Cable loss is included in Mixer loss, so the factor of data sheet were 0 dB.

NS: No signal detected.

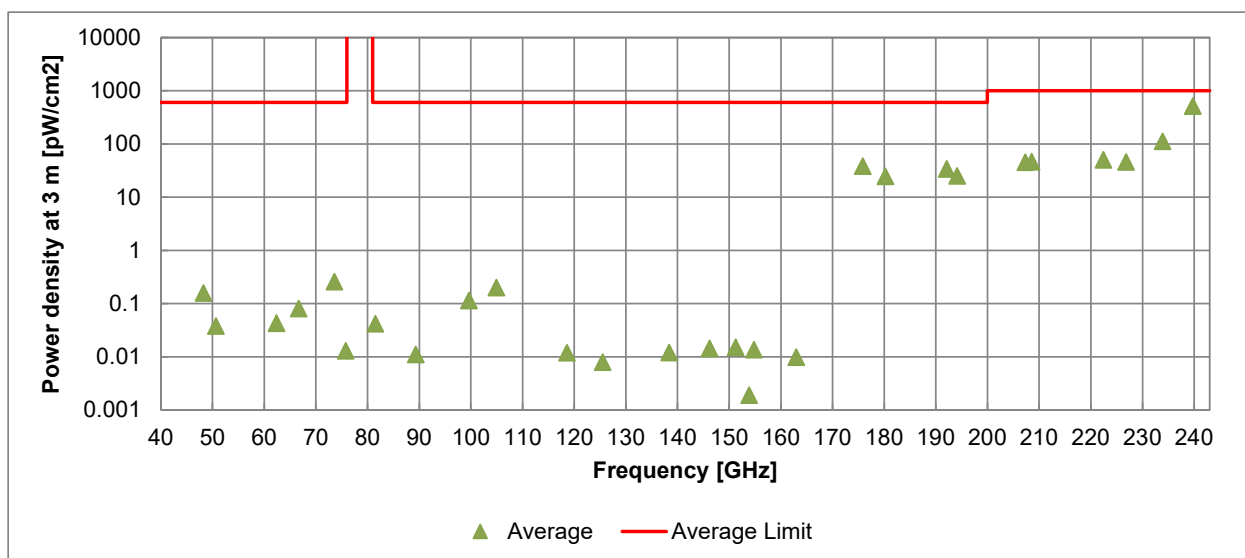
Field strength of spurious radiation
(Above 40 GHz)
(Data only for detected frequency)



Field strength of spurious radiation
(Above 40 GHz)
(Plot data, Worst case)

Mode	Normal operating mode (Mode 2)
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Date	Test site	Temperature	Humidity	Engineer	Measurement Range
January 18, 2026	SAC4	22 deg. C	38 % RH	Yuichiro Yamazaki	75 GHz to 76 GHz
January 19, 2026	SAC4	22 deg. C	42 % RH	Junki Nagatomi	81 GHz to 83 GHz
January 19, 2026	SAC4	23 deg. C	39 % RH	Yuichiro Yamazaki	50 GHz to 75 GHz 170 GHz to 243 GHz
January 20, 2026	SAC4	22 deg. C	36 % RH	Junya Okuno	40 GHz to 50 GHz 83 GHz to 110 GHz
January 20, 2026	SAC4	21 deg. C	36 % RH	Yuichiro Yamazaki	110 GHz to 152 GHz 154 GHz to 170 GHz
January 26, 2026	SAC4	20 deg. C	40 % RH	Junki Nagatomi	152 GHz to 154 GHz



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

Field strength of spurious radiation (Below 40 GHz)

Mode	Normal operating mode (Mode 3)
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Date	Test site	Temperature	Humidity	Engineer	Measurement Range
January 21, 2026	SAC4	20 deg. C	38 % RH	Junya Okuno	10 GHz to 40 GHz
January 21, 2026	SAC4	22 deg. C	37 % RH	Yuichiro Yamazaki	1 GHz to 10 GHz
January 22, 2026	SAC4	22 deg. C	38 % RH	Yuichiro Yamazaki	30 MHz to 1 GHz
January 23, 2026	SAC4	20 deg. C	40 % RH	Junya Okuno	Below 30 MHz

Polarity	Frequency	Reading (QP / PK)	Reading (AV)	Ant. Factor	Loss	Gain	Duty Factor	Result (QP / PK)	Result (AV)	Limit (QP / PK)	Limit (AV)	Margin (QP / PK)	Margin (AV)	Remark
[Hori/Vert]	[MHz]	[dBuV]	[dBuV]	[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]	
Hori.	49.2	23.7	-	11.5	7.3	32.1	-	10.4	-	40.0	-	29.6	-	
Hori.	144.0	21.9	-	14.9	8.3	32.1	-	13.0	-	43.5	-	30.5	-	
Hori.	192.0	20.0	-	16.6	8.7	32.0	-	13.3	-	43.5	-	30.2	-	
Hori.	240.0	28.0	-	11.5	9.1	32.0	-	16.6	-	46.0	-	29.4	-	
Hori.	533.3	19.7	-	17.5	10.6	32.3	-	15.6	-	46.0	-	30.4	-	
Hori.	624.0	20.9	-	19.3	11.0	32.3	-	18.9	-	46.0	-	27.1	-	
Vert.	49.2	24.4	-	11.5	7.3	32.1	-	11.1	-	40.0	-	28.9	-	
Vert.	144.0	21.9	-	14.9	8.3	32.1	-	13.0	-	43.5	-	30.5	-	
Vert.	192.0	21.5	-	16.6	8.7	32.0	-	14.8	-	43.5	-	28.7	-	
Vert.	240.0	28.3	-	11.5	9.1	32.0	-	16.9	-	46.0	-	29.1	-	
Vert.	533.3	19.8	-	17.5	10.6	32.3	-	15.7	-	46.0	-	30.3	-	
Vert.	624.0	20.5	-	19.3	11.0	32.3	-	18.5	-	46.0	-	27.5	-	

Result (QP / PK) = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 10 GHz)) - Gain(Amplifier)

Result (AV)= Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 10 GHz)) - Gain(Amplifier) + Duty factor

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

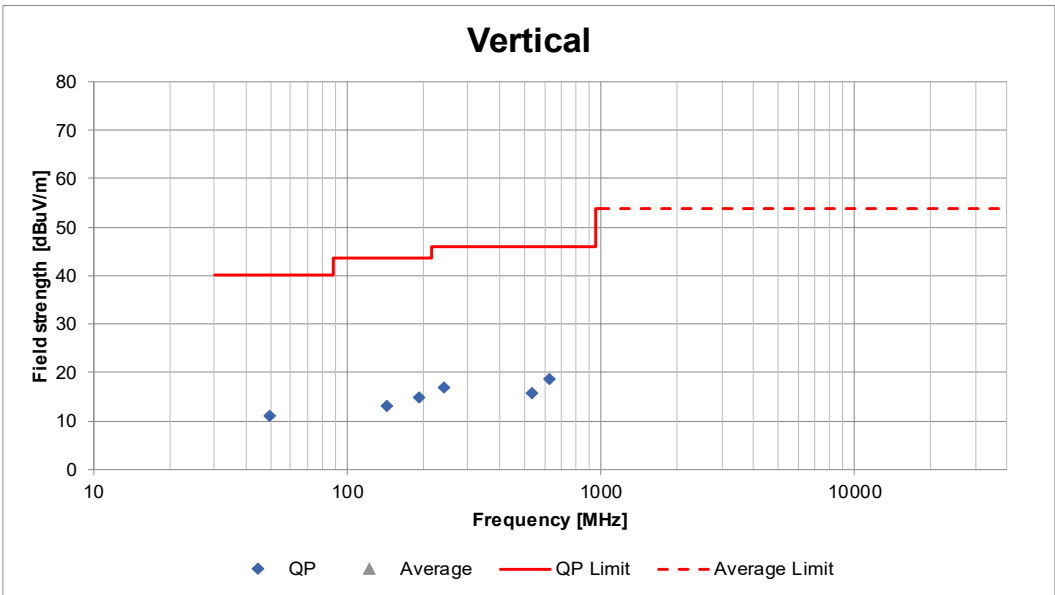
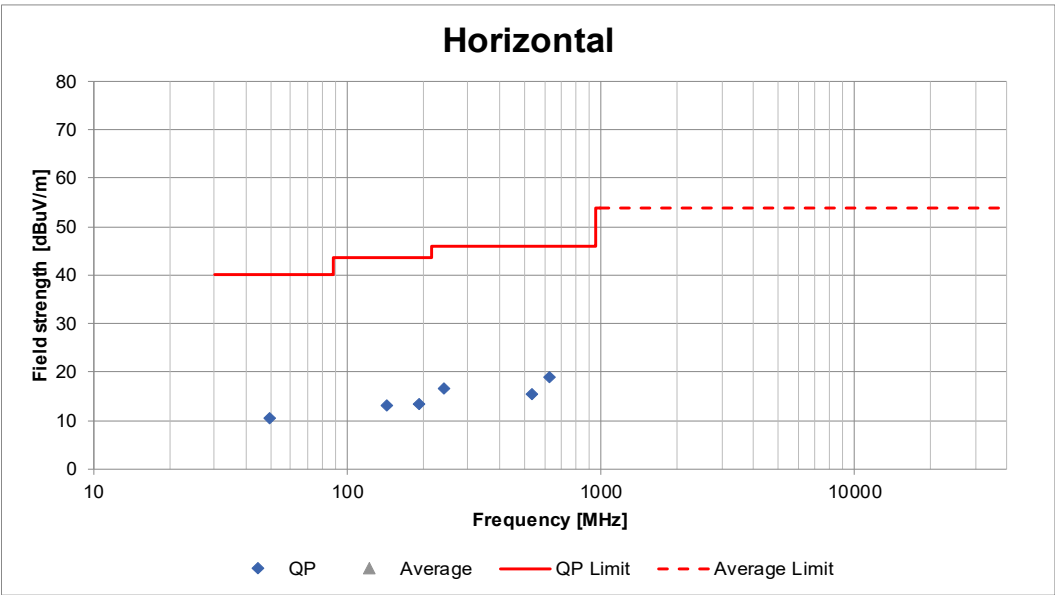
*QP detector was used up to 1GHz.

Distance factor: 10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Field strength of spurious radiation
(Below 40 GHz)
(Plot data, Worst case)

Mode	Normal operating mode (Mode 3)
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Date	Test site	Temperature	Humidity	Engineer	Measurement Range
January 21, 2026	SAC4	20 deg. C	38 % RH	Junya Okuno	10 GHz to 40 GHz
January 21, 2026	SAC4	22 deg. C	37 % RH	Yuichiro Yamazaki	1 GHz to 10 GHz
January 22, 2026	SAC4	22 deg. C	38 % RH	Yuichiro Yamazaki	30 MHz to 1 GHz
January 23, 2026	SAC4	20 deg. C	40 % RH	Junya Okuno	Below 30 MHz



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

Field strength of spurious radiation (Above 40 GHz)

Mode	Normal operating mode (Mode 3)
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Date	Test site	Temperature	Humidity	Engineer	Measurement Range
January 18, 2026	SAC4	22 deg. C	38 % RH	Yuichiro Yamazaki	75 GHz to 76 GHz
January 19, 2026	SAC4	22 deg. C	42 % RH	Junki Nagatomi	81 GHz to 83 GHz
January 19, 2026	SAC4	23 deg. C	39 % RH	Yuichiro Yamazaki	50 GHz to 75 GHz 170 GHz to 243 GHz
January 20, 2026	SAC4	22 deg. C	36 % RH	Junya Okuno	40 GHz to 50 GHz 83 GHz to 110 GHz
January 20, 2026	SAC4	21 deg. C	36 % RH	Yuichiro Yamazaki	110 GHz to 152 GHz 154 GHz to 170 GHz
January 26, 2026	SAC4	20 deg. C	40 % RH	Junki Nagatomi	152 GHz to 154 GHz

Frequency	Reading	Rx Ant. gain	Filter loss	LNA gain	Mixer conversion loss	IF Amp. gain	IF Cable loss	Meas. range D	FSL	EIRP			Power density at 3 m			Remarks
[GHz]	[dBm]	[dBi]	[dB]	[dB]	[dB]	[dB]	[dB]	[m]	[dB]	[dBm]	[mW]	[pW/cm²]	[pW/cm²]	[dB]		
48.293	-58.73	22.20	0.00	31.83	0.00	0.00	8.76	1.00	66.12	-37.88	0.00016	0.14	600	36.20	NS	
51.020	-69.12	22.80	0.29	26.30	47.59	38.74	0.08	0.75	64.10	-44.90	0.00003	0.03	600	43.21	NS	
63.418	-68.95	23.96	0.39	24.35	47.15	38.74	0.08	0.75	65.99	-42.39	0.00006	0.05	600	40.70	NS	
68.822	-69.11	24.31	0.45	22.03	48.44	38.74	0.08	0.75	66.70	-38.52	0.00014	0.12	600	36.84	NS	
74.087	-69.45	24.47	1.03	20.83	50.33	38.74	0.08	0.75	67.34	-34.72	0.00034	0.30	600	33.03	NS	
75.785	-81.29	23.02	0.00	0.00	-14.86	0.00	1.64	0.65	66.29	-51.24	0.00001	0.01	600	49.55	Average Detected	
81.500	-77.05	23.44	0.00	0.00	-12.42	0.00	3.35	0.65	66.92	-42.63	0.00005	0.05	600	40.95	NS	
86.260	-54.07	23.74	1.20	30.14	0.00	0.00	0.00	0.50	65.14	-41.61	0.00007	0.06	600	39.93	NS	
99.479	-48.74	24.44	0.40	33.07	0.00	0.00	0.00	0.50	66.38	-39.47	0.00011	0.10	600	37.79	NS	
101.829	-46.24	24.50	0.30	32.18	0.00	0.00	0.00	0.50	66.58	-36.04	0.00025	0.22	600	34.35	NS	
119.962	-87.24	22.64	0.00	18.91	11.22	0.00	0.66	0.50	68.00	-48.91	0.00001	0.01	600	47.23	NS	
127.621	-86.22	22.88	0.00	20.30	11.30	0.00	0.66	0.50	68.54	-48.90	0.00001	0.01	600	47.21	NS	
132.123	-88.23	23.00	0.00	18.87	11.89	0.00	0.66	0.50	68.84	-48.71	0.00001	0.01	600	47.03	NS	
141.596	-89.03	23.21	0.00	18.61	11.83	0.00	0.66	0.50	69.44	-48.92	0.00001	0.01	600	47.23	NS	
151.955	-90.37	23.34	0.00	17.18	11.78	0.00	0.66	0.50	70.06	-48.39	0.00001	0.01	600	46.71	NS	
153.640	-98.15	23.36	0.00	17.04	11.10	0.00	0.66	0.50	70.15	-56.64	0.00000	0.00	600	54.95	Average Detected	
154.745	-90.11	23.37	0.00	16.87	11.45	0.00	0.66	0.50	70.21	-48.03	0.00002	0.01	600	46.35	NS	
162.994	-94.71	23.40	0.00	15.36	12.19	0.00	0.66	0.50	70.66	-49.96	0.00001	0.01	600	48.27	NS	
177.117	-88.87	22.57	0.00	0.00	60.04	0.00	0.00	0.01	37.41	-13.99	0.03990	35.28	600	12.31	NS	
181.813	-89.21	22.67	0.00	0.00	59.88	0.00	0.00	0.01	37.63	-14.36	0.03662	32.38	600	12.68	NS	
188.637	-88.55	22.82	0.00	0.00	59.68	0.00	0.00	0.01	37.95	-13.73	0.04236	37.45	600	12.05	NS	
198.495	-89.67	22.99	0.00	0.00	60.12	0.00	0.00	0.01	38.40	-14.15	0.03850	34.04	600	12.46	NS	
203.646	-89.90	23.08	0.00	0.00	58.89	0.00	0.00	0.01	38.62	-15.47	0.02838	25.09	1000	16.00	NS	
209.719	-89.92	23.16	0.00	0.00	60.49	0.00	0.00	0.01	38.87	-13.72	0.04250	37.58	1000	14.25	NS	
223.120	-90.65	23.30	0.00	0.00	62.64	0.00	0.00	0.01	39.41	-11.90	0.06463	57.15	1000	12.43	NS	
224.613	-91.02	23.31	0.00	0.00	62.70	0.00	0.00	0.01	39.47	-12.16	0.06076	53.73	1000	12.70	NS	
234.298	-91.42	23.37	0.00	0.00	65.85	0.00	0.00	0.01	39.84	-9.10	0.12300	108.76	1000	9.64	NS	
239.684	-91.45	23.39	0.00	0.00	72.22	0.00	0.00	0.01	40.03	-2.58	0.55189	487.98	1000	3.12	NS	

Calculation:

FSL (Free Space path Loss) = $10 * \log ((4 * \pi * D / \lambda)^2)$

EIRP = Reading - Rx Ant. gain + Filter loss - LNA gain + Mixer conversion loss - IF Amp. gain + IF Cable loss + FSL

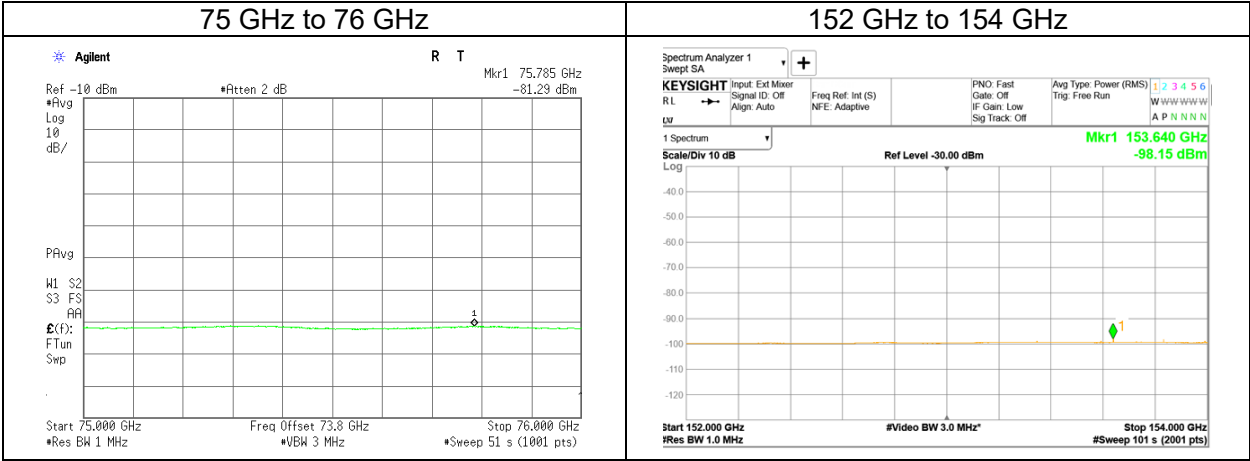
Power density Result at 3 m = EIRP / $(4 * \pi * 300^2)$

These calculation results are same as results which were calculated with formulas described in the Section 9 of ANSI C63.10-2020 / ANSI/USEMCSC C63.10/Cor 1-2023.

- The equipment were not used for factor 0 dB of the data sheets.
- The Mixer conversion loss and IF Cable Loss are automatically corrected in the mixer, so the factor of data sheet were 0 dB.
- The IF Cable loss is included in Mixer loss, so the factor of data sheet were 0 dB.

NS: No signal detected.

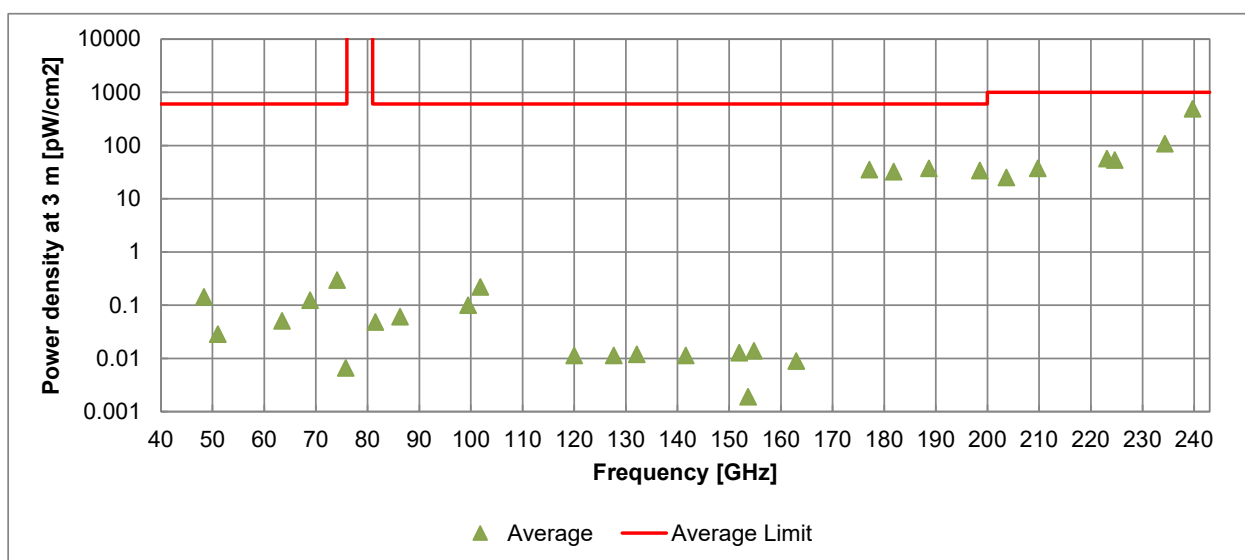
Field strength of spurious radiation
(Above 40 GHz)
(Data only for detected frequency)



Field strength of spurious radiation
(Above 40 GHz)
(Plot data, Worst case)

Mode	Normal operating mode (Mode 3)
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Date	Test site	Temperature	Humidity	Engineer	Measurement Range
January 18, 2026	SAC4	22 deg. C	38 % RH	Yuichiro Yamazaki	75 GHz to 76 GHz
January 19, 2026	SAC4	22 deg. C	42 % RH	Junki Nagatomi	81 GHz to 83 GHz
January 19, 2026	SAC4	23 deg. C	39 % RH	Yuichiro Yamazaki	50 GHz to 75 GHz 170 GHz to 243 GHz
January 20, 2026	SAC4	22 deg. C	36 % RH	Junya Okuno	40 GHz to 50 GHz 83 GHz to 110 GHz
January 20, 2026	SAC4	21 deg. C	36 % RH	Yuichiro Yamazaki	110 GHz to 152 GHz 154 GHz to 170 GHz
January 26, 2026	SAC4	20 deg. C	40 % RH	Junki Nagatomi	152 GHz to 154 GHz



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

Frequency Stability

Mode	Normal operating mode (Mode 1)			
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Date	Test site	Temperature	Humidity	Engineer
January 30, 2026	MR6	22 deg. C	38 % RH	Junya Okuno

Test Condition		Center frequency [GHz]	Frequency error [MHz]	99 % OBW [MHz]	99 % OBW		Remarks
Temperature [deg. C]	Power Supply [V]				The lower frequency [GHz]	The Upper frequency [GHz]	
50	13.2	76.5	-12.680	895.1608	76.040	76.935	
40	13.2	76.5	-12.940	894.2810	76.040	76.934	
30	13.2	76.5	-12.029	894.3880	76.041	76.935	
20	13.2	76.5	-11.110	894.4108	76.042	76.936	
20	10.2	76.5	-12.102	894.1341	76.041	76.935	85 % of the minimum operating voltage, DC 12 V * 0.85
20	13.8	76.5	-11.766	894.4067	76.041	76.935	115 % of the maximum operating voltage, DC 12 V * 1.15
10	13.2	76.5	-12.743	893.3546	76.041	76.934	
0	13.2	76.5	-11.409	893.8567	76.042	76.936	
-10	13.2	76.5	-9.855	894.1300	76.043	76.937	
-20	13.2	76.5	-9.658	894.8378	76.043	76.938	

Fundamental emissions were contained within the frequency band 76 GHz to 81 GHz during all conditions of operation.

Frequency Stability

Mode	Normal operating mode (Mode 2)			
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Date	Test site	Temperature	Humidity	Engineer
January 30, 2026	MR6	22 deg. C	38 % RH	Junya Okuno

Test Condition Temperature [deg. C]	Power Supply [V]	Center frequency [GHz]	Frequency error [MHz]	99 % OBW [MHz]	99 % OBW		Remarks
					The lower frequency [GHz]	The Upper frequency [GHz]	
50	13.2	76.5	-13.186	893.7261	76.040	76.934	
40	13.2	76.5	-12.301	894.6348	76.040	76.935	
30	13.2	76.5	-12.358	894.1935	76.041	76.935	
20	13.2	76.5	-12.257	894.0351	76.041	76.935	
20	10.2	76.5	-12.214	893.7322	76.041	76.935	85 % of the minimum operating voltage, DC 12 V * 0.85
20	13.8	76.5	-12.248	893.7974	76.041	76.935	115 % of the maximum operating voltage, DC 12 V * 1.15
10	13.2	76.5	-12.567	892.8977	76.041	76.934	
0	13.2	76.5	-11.741	892.6028	76.042	76.935	
-10	13.2	76.5	-10.276	893.8776	76.043	76.937	
-20	13.2	76.5	-9.893	893.6880	76.043	76.937	

Fundamental emissions were contained within the frequency band 76 GHz to 81 GHz during all conditions of operation.

Frequency Stability

Mode	Normal operating mode (Mode 3)			
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Date	Test site	Temperature	Humidity	Engineer
January 30, 2026	MR6	22 deg. C	38 % RH	Junya Okuno

Test Condition		Center frequency [GHz]	Frequency error [MHz]	99 % OBW [MHz]	99 % OBW		Remarks
Temperature [deg. C]	Power Supply [V]				The lower frequency [GHz]	The Upper frequency [GHz]	
50	13.2	76.5	-13.060	894.1948	76.040	76.934	
40	13.2	76.5	-12.892	893.1188	76.041	76.934	
30	13.2	76.5	-12.414	894.1688	76.041	76.935	
20	13.2	76.5	-12.531	894.0708	76.040	76.935	
20	10.2	76.5	-12.752	893.8410	76.040	76.934	85 % of the minimum operating voltage, DC 12 V * 0.85
20	13.8	76.5	-12.392	894.3009	76.040	76.935	115 % of the maximum operating voltage, DC 12 V * 1.15
10	13.2	76.5	-12.293	892.2351	76.042	76.934	
0	13.2	76.5	-11.672	892.9893	76.042	76.935	
-10	13.2	76.5	-11.363	892.5616	76.042	76.935	
-20	13.2	76.5	-9.685	894.2391	76.043	76.937	

Fundamental emissions were contained within the frequency band 76 GHz to 81 GHz during all conditions of operation.

APPENDIX 2: Test instruments

Test equipment (1/2)

Test Item	LIMS ID	Description	Manufacturer	Model	Serial	Last Calibration Date	Cal Int
RE	141217	Coaxial cable	Fujikura/Suhner/TSJ	5D-2W/SFM141/421-010/sucoform141-PE/RFM-E121(SW)	-/04178	06/24/2025	12
RE	141227	Microwave Cable	Junkosha	MMX221-00500DMSDMS	1502S305	03/03/2025	12
RE	141267	Logperiodic Antenna (200-1000MHz)	Schwarzbeck Mess-Elektronik OHG	VUSLP9111B	9111B-192	09/12/2025	12
RE	141397	Coaxial Cable	UL-ISE EMC	-	-	11/12/2025	12
RE	141425	Biconical Antenna	Schwarzbeck Mess-Elektronik OHG	VHA9103+BBA9106	VHA 91031302	08/14/2025	12
RE	141429	Temperature and Humidity Chamber	Espec	PL-2KP	14015723	08/28/2025	12
RE	141506	Horn Antenna 15-40GHz	Schwarzbeck Mess-Elektronik OHG	BBHA9170	BBHA9170307	08/13/2025	12
RE	141508	Horn Antenna 1-18GHz	Schwarzbeck Mess-Elektronik OHG	BBHA9120D	557	05/20/2025	12
RE	141517	Horn Antenna 26.5-40GHz	ETS-Lindgren	3160-10	152399	11/14/2025	12
RE	141558	Digital Tester(TRUE RMS MULTIMETER)	Fluke Corporation	115	17930030	05/13/2025	12
RE	141581	MicroWave System Amplifier	Keysight Technologies Inc	83017A	00650	10/17/2025	12
RE	141583	Pre Amplifier	SONOMA INSTRUMENT	310	260833	04/02/2025	12
RE	141585	Pre Amplifier	L3 Narda-MITEQ	MLA-10K01-B01-35	1237616	02/26/2025	12
RE	141588	Pre Amplifier	L3 Narda-MITEQ	AMF-6F-2600400-33-8P / AMF-4F-2600400-33-8P	1871355 / 1871328	01/06/2026	12
RE	141884	Spectrum Analyzer	Keysight Technologies Inc	E4448A	MY44020357	05/15/2025	12
RE	141949	Test Receiver	Rohde & Schwarz	ESCI	100767	06/30/2025	12
RE	141951	EMI Test Receiver	Rohde & Schwarz	ESR26	101408	05/07/2025	12
RE	142011	AC4 Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-10005	07/10/2025	24
RE	142017	AC4 Semi Anechoic Chamber(SVSWR)	TDK	Semi Anechoic Chamber 3m	DA-10005	04/17/2025	24
RE	142026	Diplexer	OML INC.	DPL26	-	-	-
RE	142032	Microwave Cable	Huber+Suhner	SUCOFLEX102	37511/2	-	-
RE	142036	Horn Antenna	Custom Microwave Inc.	HO6R	-	09/10/2025	12
RE	142039	Horn Antenna	Custom Microwave Inc.	HO4R	-	09/10/2025	12
RE	142041	Horn Antenna	Oshima Prototype Engineering Co.	A16-187	1	09/10/2025	12
RE	142047	Preselected Millimeter Mixer	Keysight Technologies Inc	11974V-E01	3001A00412	12/17/2025	12
RE	142050	Block Downconverter	Keysight Technologies Inc	PS-X30-W10117A	13715	12/19/2025	12
RE	142053	Harmonic Mixer	OML INC.	M04HWD	Y100709-1	12/25/2025	12
RE	142183	Measure	KOMELON	KMC-36	-	10/20/2025	12
RE	142225	Tape Measure	ASKUL	-	-	-	-
RE	142230	Measure, Tape, Steel	KOMELON	KMC-36	-	-	-
RE	142525	Detector	Keysight Technologies Inc	8473C	1822A00789	-	-
RE	151897	Microwave Cable	Huber+Suhner	SF101EA/11PC24/11PC24/2.5M	SN MY1726/1EA	04/22/2025	12
RE	154635	High Pass Filter 83 GHz - 110 GHz	Oshima Prototype Engineering Co.	A17-016	1	12/16/2025	12
RE	159919	Power Amplifier	SAGE Millimeter, Inc.	SBP-4035033018-2F2F-S1	12559-01	12/24/2025	12
RE	160324	Coaxial Cable	Huber+Suhner	SUCOFLEX 102A	MY009/2A	10/21/2025	12
RE	176027	D-Band Low Noise Amplifier	SAGE Millimeter, Inc.	SBL-1141741860-0606-EI	15235-01	07/16/2025	12
RE	178648	EMI measurement program	TSJ (Techno Science Japan)	TEPTO-DV	-	-	-

Test equipment (2/2)

Test Item	LIMS ID	Description	Manufacturer	Model	Serial	Last Calibration Date	Cal Int
RE	180544	Horn Antenna	SAGE Millimeter, Inc.	SAZ-2410-10-S1	17343-01	06/24/2025	12
RE	180607	Power Amplifier	SAGE Millimeter, Inc.	SBP-7531142515-1010-E1	17343-01	09/15/2025	12
RE	180634	Horn Antenna	SAGE Millimeter, Inc.	SAZ-2410-15-S1	17343-01	06/24/2025	12
RE	182484	Signal Analyzer	Keysight Technologies Inc	N9030B	MY57143159	05/13/2025	12
RE	186077	Wave guide Harmonic Mixer	Keysight Technologies Inc	M1971W	MY56390146	12/18/2025	12
RE	186079	Extension Module	Virginia Diodes, Inc.	SAX	SAX370	09/10/2025	12
RE	201432	WR-15 Low Pass Filter	Oshima Prototype Engineering Co.	2020-0142-02	001	09/11/2025	12
RE	207745	Coaxial Cable	UL-ISE	-	-	03/19/2025	12
RE	211944	Digital Storage Oscilloscope	Keysight Technologies Inc	DSOX6002A	MY59380318	12/09/2025	12
RE	220646	Attenuator	Huber+Suhner	6806_N-50-1	-	03/06/2025	12
RE	244710	Thermo-Hygrometer	HIOKI E. E. CORPORATION	LR5001	231202104	01/14/2026	12
RE	244712	Thermo-Hygrometer	HIOKI E. E. CORPORATION	LR5001	231202106	01/13/2026	12
RE	245788	Double Ridge Horn Antenna	Schwarzbeck Mess-Elektronik OHG	BBHA 9120 C	690	03/11/2025	12
RE	246002	Microwave Cable	Huber+Suhner	SF103/11PC35/11PC35/1000mm / SF126E/5000mm	800674(1m) / 610205(5m)	03/18/2025	12
RE	246778	Microwave Cable	Huber+Suhner	SF126E/11PC35/11PC35/2000MM	SN 537000/126E	-	-
RE	252514	Active Loop Antenna	Schwarzbeck Mess-Elektronik OHG	FMZB 1519-60 D	1519-60 D-067	10/14/2025	12
RE	254838	Microwave Cable	Huber+Suhner	SUCOFLEX102	2001316 /2	12/08/2025	12
RE	254839	Microwave Cable	Huber+Suhner	SUCOFLEX102	2001318 /2	12/05/2025	12
RE	272098	DIGITAL MULTIMETER	HIOKI E. E. CORPORATION	DT4255	250902199	11/27/2025	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: RE: Radiated Emission