FCC/ISED - TEST REPORT

Report Number	:	**709502500678-00B**	Date of Issue:	March 19, 2025
Model	:	MT01-1235-069001, MT01-1245-069002		
Product Type	:	Tubular Motor		
Applicant	:	Rollease Acmeda Inc		
Address	:	750 East Main Street, 7th Floor, Stamford CT 06902, USA		
Production Facility	:	Ningbo Dooya Mechanic & Electronic Technology Co., Ltd.		
Address	:	No.168 Shengguang Road, Luotuo, Zhenhai 315202 Ningbo,		
	:	Zhejiang province People's Republic of China		
Test Result	:	■ **Positive** ☐ **Negative**		
Total pages including Appendices	:	25		

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1 Table of Contents

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2 Report Modification Record

Alterations and additions to this report will be issued to the holders of each copy in the form of a complete document.

Issue	Description of Change	Date of Issue
709502500678-00B	First Issue	03/19/2025

3 Details about the Test Laboratory

Details about the Test Laboratory
Test Site 1

Company name:	TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch No.16 Lane, 1951 Du Hui Road, Shanghai 201108, P.R. China
Telephone:	+86 21 6141 0123
Fax:	+86 21 6140 8600
FCC Registration No.:	820234
FCC Designation Number:	CN1183
ISED CAB identifier	CN0101
IC Registration No.:	31668

4 Description of the Equipment Under Test

Product:	Tubular Motor
Model no.:	MT01-1235-069001, MT01-1245-069002
Hardware Version Identification No. (HVIN)	MT01-1235-069001, MT01-1245-069002
Product Marketing Name (PMN)	MT01-1235-069001, MT01-1245-069002
FCC ID:	2AGGZ003B9ACA5D
IC:	21769-003B9ACA5D
Options and accessories:	NA
Rating:	12V DC
RF Transmission Frequency:	433.92MHz;
No. of Operated Channel:	1
Modulation:	GFSK;
Channel list:	433.92MHz;
Antenna Type:	wire antenna
Description of the EUT:	The Equipment Under Test (EUT) is a Tubular Motor with SRD function (transceiver). We tested it and listed the worst data in this report.
Test sample no.:	SHA-886992-3 for MT01-1235-069001

The sample's mentioned in this report is/are submitted/ supplied/ manufactured by client. The laboratory therefore assumes no responsibility for accuracy of information on the brand name, model number, origin of manufacture, consignment, antenna gain or any information supplied.

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5 Summary of Test Standards

Test Standards	
FCC Part 15 Subpart C 10-1-2023 Edition	RADIO FREQUENCY DEVICES Subpart C - Intentional Radiators
RSS-Gen Issue 5 April 2018 + Amendment 1 March 2019 + Amendment 2 February 2021	General Requirements for Compliance of Radio Apparatus
RSS-210 Issue 11 June 25, 2024	RSS-210 — License-exempt Radio Apparatus: Category I Equipment

All the test methods were according to ANSI C63.10-2020.

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6 Summary of Test Results

Technical Requirements					
FCC Part 15.231 Subpart C, RSS-210 Issue 11					
Test Condition			**Pages**	**Test Site**	**Test Result**
§15.207	**RSS-GEN A8.8**	**Conducted emission AC power port**	**11-13**	**Shield room**	**Pass**
§15.205, §15.209, 15.35 (c)§15.231(b)	**RSS-210 A.1.3 RSS-GEN 8.9**	**The Field strength of Emissions**	**14-18**	**3m chamber**	**Pass**
§15.231(c)	**RSS-210 A.1.4**	**20dB and 99% Bandwidth Measurement**	**19-20**	**Shield room**	**Pass**
§15.231(a)(1)	**RSS-210 A.1.2(a)**	**Deactivation Time**	**21**	**Shield room**	**Pass**
§15.203	**RSS-Gen 6.8**	**Antenna requirement**	**--**	**See Note 2**	**Pass**

Remark
Note 1: N/A – Not Applicable. Conducted emission is not apply for battery operated device.
Note 2: The EUT uses a wire antenna. In accordance to §15.203 and RSS-Gen 5, It is considered sufficiently to comply with the provisions of this section.

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7 General Remarks

Remarks

This submittal(s) (test report) is intended for FCC ID: 2AGGZ003B9ACA5D, IC: 21769-003B9ACA5D complies with Section 15.205, 15.207, 15.209, 15.231 of the FCC Part 15, Subpart C Rules and RSS-Gen Issue 5 A1:2019+ A2:2021 and RSS-210 issue 11 June 25, 2024.

According to the client's declaration, models MT01-1235-069001 and MT01-1245-069002 are the same except for the different motor tube diameter and software.

So models MT01-1235-069001 was chosen to perform all the tests.

We tested it and listed the worst data in this report.

SUMMARY:

All tests according to the regulations cited on page 5 were

■ - Performed
☐ - **Not** Performed
The Equipment Under Test
■ - **Fulfills** the general approval requirements.
☐ - **Does not** fulfill the general approval requirements.

Sample Received Date:	January 23, 2025
Testing Start Date:	February 11, 2025
Testing End Date:	February 20, 2025

-TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch

Reviewed by:	Prepared by:	Tested by:
Hui TONG	Wenqiang LU	Tianji XU
Review Engineer	Project Engineer	Test Engineer

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8 Systems test configuration

Auxiliary Equipment Used during Test:

DESCRIPTION	MANUFACTURER	MODEL NO.(SHIELD)	S/N(LENGTH)
AC/DC Adapter	--	S24B11-120A200-Y4	--

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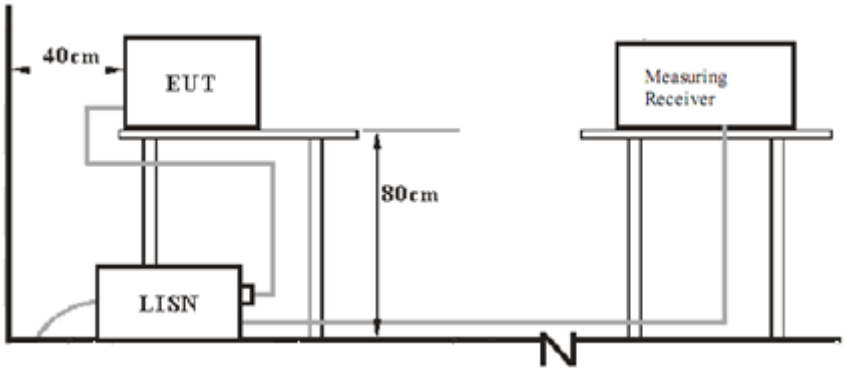
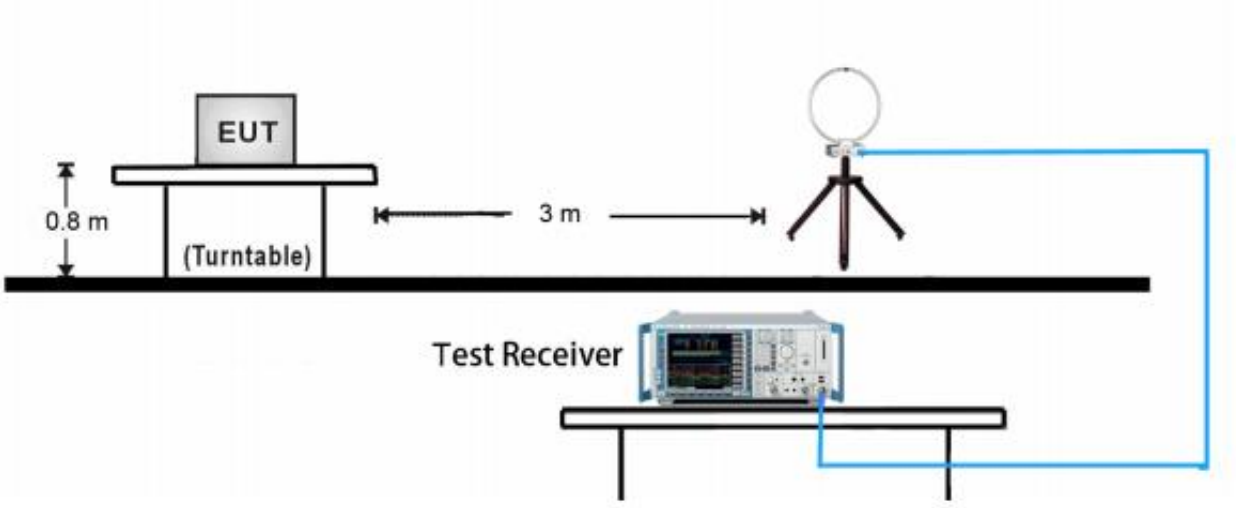
9 Test Setups

9.1 AC Power Line Conducted Emission test setups



9.2 Radiated test setups

9kHz ~ 30MHz Test Setup:



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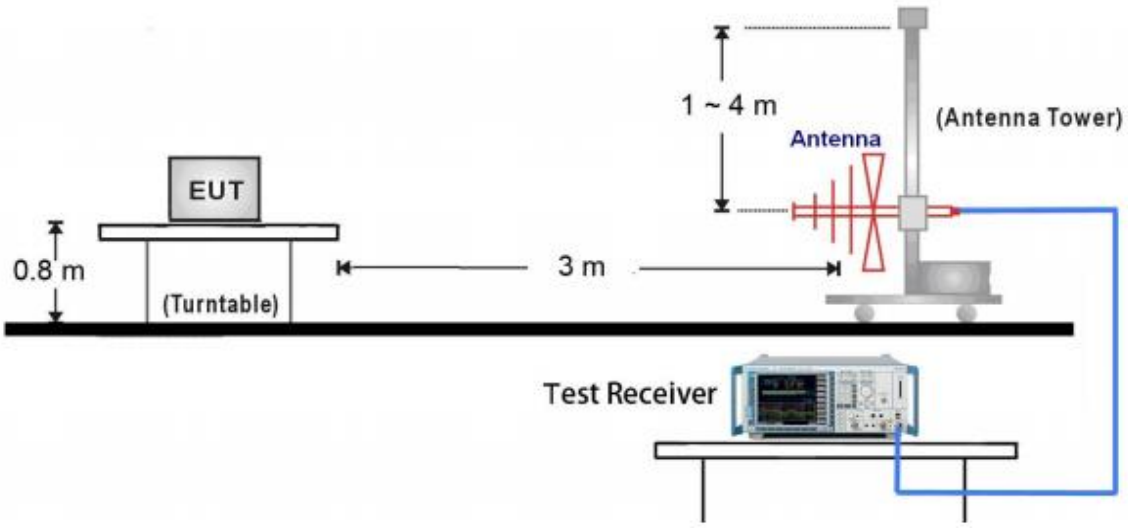
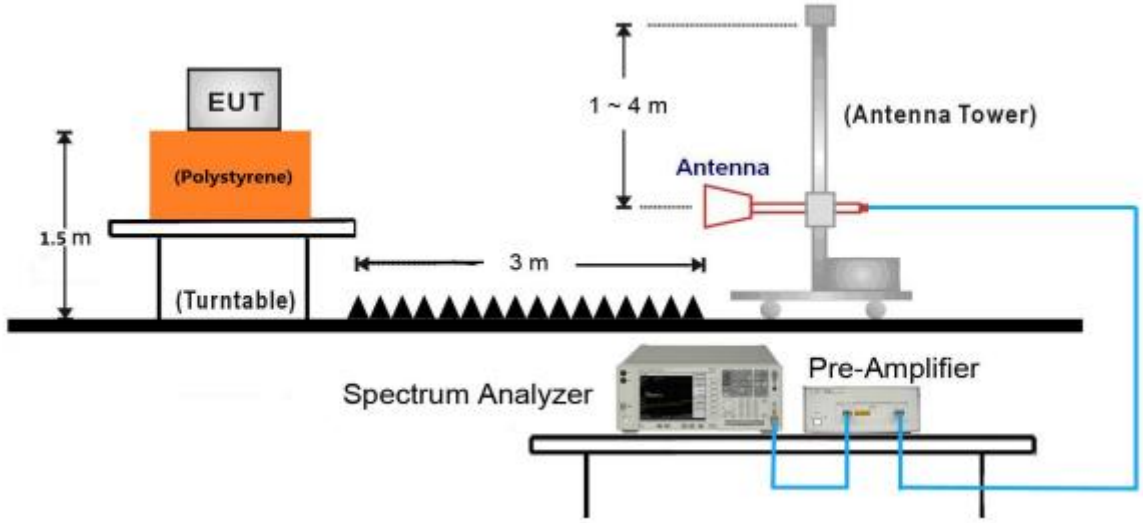
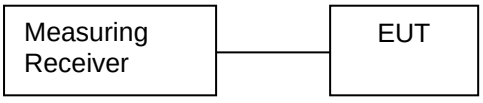
30MHz ~ 1GHz Test Setup:



Above 1GHz Test Setup:



9.3 Conducted RF test setups



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10 Test Methodology

10.1 Conducted Emission

Test Method

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

Limit

According to §15.207 and RSS-GEN Issue 5 8.8, conducted emissions limit as below:

Frequency MHz	QP Limit dBµV	AV Limit dBµV
0.150-0.500	66-56*	56-46*
0.500-5	56	46
5-30	60	50

*Decreasing linearly with logarithm of the frequency.

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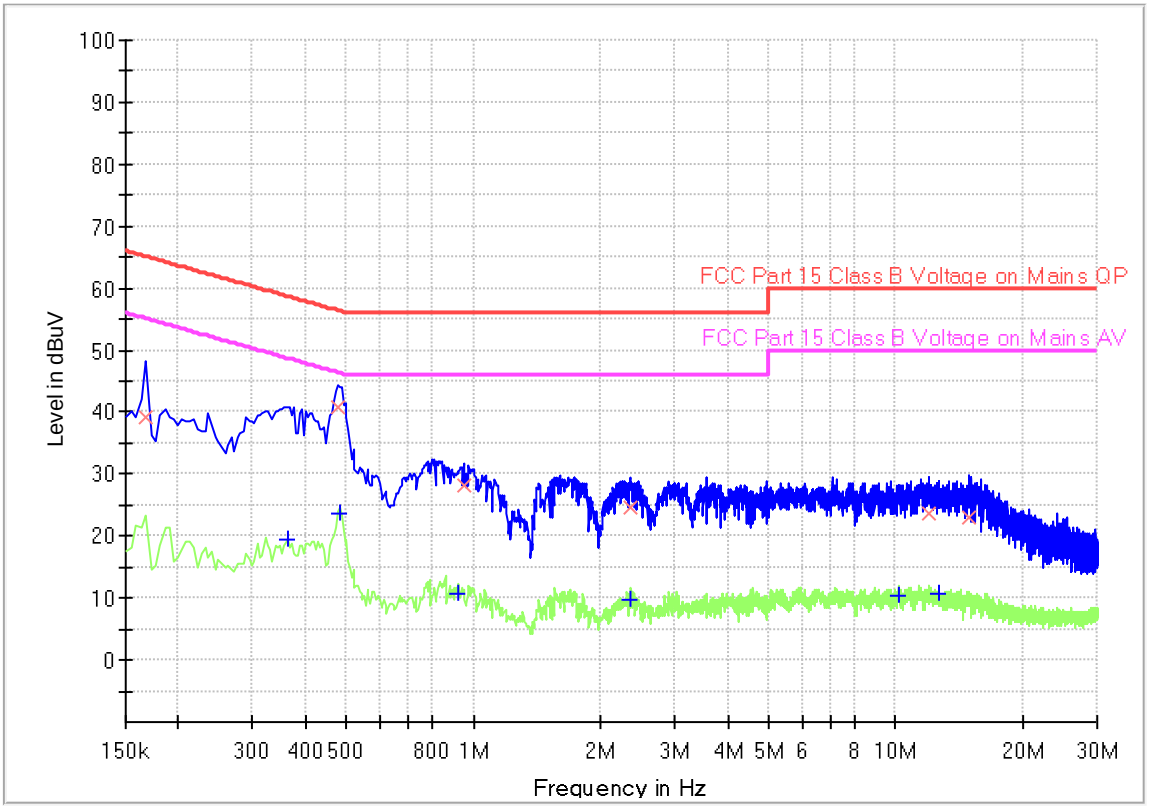
Conducted Emission Test 0.15MHz – 30MHz

Product Type	:	Tubular Motor
M/N	:	MT01-1235-069001
Operating Condition	:	Mode: Tx 433.92MHz
Test Specification	:	L-line
Comment	:	AC 120V/60Hz (by adaptor)



Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.168000	39.26	---	65.06	25.80	1000.0	9.000	L1	19.5
0.361500	---	19.31	48.69	29.38	1000.0	9.000	L1	19.5
0.478500	40.75	---	56.37	15.62	1000.0	9.000	L1	19.5
0.483000	---	23.49	46.29	22.80	1000.0	9.000	L1	19.5
0.924000	---	10.56	46.00	35.44	1000.0	9.000	L1	19.5
0.946500	28.29	---	56.00	27.71	1000.0	9.000	L1	19.5
2.341500	24.68	---	56.00	31.32	1000.0	9.000	L1	19.5
2.364000	---	9.61	46.00	36.39	1000.0	9.000	L1	19.5
10.162500	---	10.28	50.00	39.72	1000.0	9.000	L1	19.8
12.039000	23.55	---	60.00	36.45	1000.0	9.000	L1	19.8
12.610500	---	10.65	50.00	39.35	1000.0	9.000	L1	19.8
14.887500	22.84	---	60.00	37.16	1000.0	9.000	L1	19.8

Remark:
Measure Level (dBuV/m) = Reading Level (dBuV) + Correction Factor (dB)
Correction Factor (dB) = Cable Loss (dB) + LISN Factor (dB) + 10dB Attenuator
(The Reading Level is recorded by software which is not shown in the sheet)

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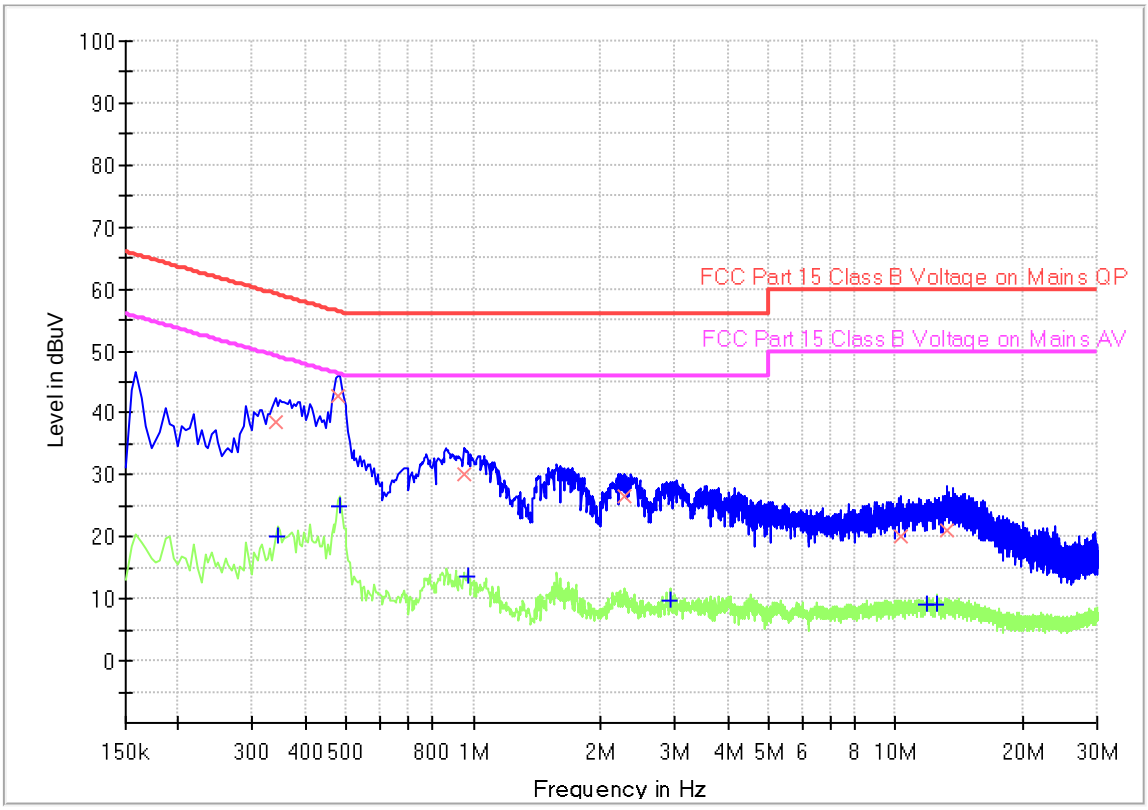
Product Type	:	Tubular Motor
M/N	:	MT01-1235-069001
Operating Condition	:	Mode: Tx 433.92MHz
Test Specification	:	N-line
Comment	:	AC 120V/60Hz (by adaptor)



Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.339000	38.42	---	59.23	20.81	1000.0	9.000	N	19.4
0.343500	---	20.20	49.12	28.92	1000.0	9.000	N	19.4
0.478500	42.59	---	56.37	13.78	1000.0	9.000	N	19.5
0.483000	---	25.10	46.29	21.19	1000.0	9.000	N	19.5
0.955500	30.22	---	56.00	25.78	1000.0	9.000	N	19.5
0.969000	---	13.71	46.00	32.29	1000.0	9.000	N	19.5
2.278500	26.42	---	56.00	29.58	1000.0	9.000	N	19.5
2.922000	---	9.58	46.00	36.42	1000.0	9.000	N	19.5
10.320000	20.08	---	60.00	39.92	1000.0	9.000	N	19.7
11.881500	---	9.11	50.00	40.89	1000.0	9.000	N	19.8
12.534000	---	9.03	50.00	40.97	1000.0	9.000	N	19.8
13.191000	21.04	---	60.00	38.96	1000.0	9.000	N	19.8

Remark:
Measure Level (dBuV/m) = Reading Level (dBuV) + Correction Factor (dB)
Correction Factor (dB) = Cable Loss (dB) + LISN Factor (dB) + 10dB Attenuator
(The Reading Level is recorded by software which is not shown in the sheet)

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10.2 Radiated Emission

Test Method

1: The EUT was place on a turn table which is 1.5m above ground plane for above 1GHz and 0.8m above ground for below 1GHz at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
2: The EUT was set 3 meters away from the interference – receiving antenna, which was mounted on the top of a variable – height antenna tower.
3: The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4: For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
5: Use the following spectrum analyzer settings According to C63.10:
9kHz -150kHz
RBW = 200Hz, VBW = 1kHz for peak measurement, Sweep = auto,
Detector function = peak, Trace = max hold.
150kHz - 30MHz
RBW = 10 kHz, VBW = 30 kHz for peak measurement, Sweep = auto,
Detector function = peak, Trace = max hold.
30MHz - 1GHz
RBW = 100 kHz, VBW = 300 kHz for peak measurement, Sweep = auto,
Detector function = peak, Trace = max hold.
For Above 1GHz
RBW = 1MHz, VBW≥3RBW for peak measurement, Sweep = auto, Detector function = peak, Trace = max hold.

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Limit

1. FCC Limit: In addition to the provisions of § 15.205, the field strength of emissions from intentional radiators operated under this section shall not exceed the following:

Fundamental frequency (MHz)	Field Strength of Fundamental (Microvolts /meter)	Field Strength of spurious emissions ((Microvolts /meter)
40.66-40.70	2,250	225
70-130	1,250	125
130-174	1,250 to 3,750 *	125 to 375 *
174-260	3,750	375
260-470	3,750 to 12, 500*	375 to 1,250*
Above 470	12,500	1,250
*Linear interpolation with frequency		

(a) The above field strength limits are specified at a distance of 3 meters. The tighter limits apply at the band edges.

(b) Intentional radiators operating under the provisions of this section shall demonstrate compliance with the limits on the field strength of emissions, as shown in the above table, based on the average value of the measured emissions. As an alternative, compliance with the limits in the above table may be based on the use of measurement instrumentation with a CISPR quasi-peak detector. The specific method of measurement employed shall be specified in the application for equipment authorization. If average emission measurements are employed, the provisions in § 15.35 for averaging pulsed emissions and for limiting peak emissions apply. Further, compliance with the provisions of § 15.205 shall be demonstrated using the measurement instrumentation specified in that section.

(c) The limits on the field strength of the spurious emissions in the above table are based on the fundamental frequency of the intentional radiator. Spurious emissions shall be attenuated to the average (or, alternatively, CISPR quasi-peak) limits shown in this table or to the general limits shown in § 15.209, whichever limit permits a higher field strength.

Limits for 15.209 Radiated emission limits

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

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2. ISED Limit:

(a) The field strength of emissions from momentarily operated intentional radiators shall not exceed the limits in table A1, based on the average value of the measured emissions. The requirements of the "Pulsed Operation" section of RSS-Gen apply for averaging pulsed emissions and limiting peak emissions. Alternatively, compliance with the limits in table A1 may be based on the use of a CISPR quasi-peak detector.

(b) Unwanted emissions shall be 10 times below the fundamental emissions field strength limits in table A1 or comply with the limits specified in RSS-Gen, whichever is less stringent.

Table A1: Permissible field strength limits for momentarily operated devices

Fundamental frequency (MHz)	Field Strength of Fundamental (Microvolts /meter @ 3m)	Field Strength of spurious emissions ((Microvolts /meter @ 3m)
70-130	1,250	125
130-174	1,250 to 3,750 *	125 to 375 *
174-260	3,750	375
260-470	3,750 to 12, 500*	375 to 1,250*
Above 470	12,500	1,250
*Linear interpolation with frequency		

General field strength limits at frequencies below 30 MHz

Frequency	Magnetic field strength (H-Field) (μA/m))	Measurement distance (meters)
9 – 490 kHz*	6.37/F (F in kHz)	300
490 – 1705 kHz	63.7/F (F in kHz)	30
1.705-30.0 MHz	0.08	30
*The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.		

Note 1: Limit 3m(dBμV/m)=Limit 300m(dBμV/m)+40Log(300m/3m) (Below 30MHz)
Note 2: Limit 3m(dBμV/m)=Limit 30m(dBμV/m)+40Log(30m/3m) (Below 30MHz)
Note 3: dBμV/m = 20log(μV/m), dBμA/m = 20log(μA/m)

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Spurious radiated emissions for transmitter

According to C63.10, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement, so AV emission value did not show in below table if the peak value complies with average limit.

Radiated Emission								
Value	Emissions Frequency **MHz**	E-Field Polarity	PK Emission **dBµV/m**	Average Factor **dB**	AV Emission **dBµV/m**	Limit **dBµV/m**	Margin	Emission Type
Below 1GHz								
PK	433.96	H	84.40	/	/	100.8	16.4	Fundamental
AV	433.96	H	84.40	-22.62	61.78	80.8	19.02	Fundamental
PK	433.92	V	70.80	/	/	100.8	30	Fundamental
AV	433.92	V	70.80	-22.62	48.18	80.8	32.62	Fundamental
PK	47.12	H	20.50	/	/	80.8	60.3	Spurious
AV	47.12	H	20.50	-22.62	-2.12	60.8	62.92	Spurious
PK	147.68	H	22.30	/	/	80.8	58.5	Spurious
AV	147.68	H	22.30	-22.62	-0.32	60.8	61.12	Spurious
PK	215.40	H	22.10	/	/	80.8	58.7	Spurious
AV	215.40	H	22.10	-22.62	-0.52	60.8	61.32	Spurious
PK	318.68	H	23.20	/	/	80.8	57.6	Spurious
AV	318.68	H	23.20	-22.62	0.58	60.8	60.22	Spurious
PK	565.48	H	28.90	/	/	80.8	51.9	Spurious
AV	565.48	H	28.90	-22.62	6.28	60.8	54.52	Spurious
PK	740.00	H	32.40	/	/	80.8	48.4	Spurious
AV	740.00	H	32.40	-22.62	9.78	60.8	51.02	Spurious
PK	35.24	V	23.50	/	/	80.8	57.3	Spurious
AV	35.24	V	23.50	-22.62	0.88	60.8	59.92	Spurious
PK	51.24	V	22.70	/	/	80.8	58.1	Spurious
AV	51.24	V	22.70	-22.62	0.08	60.8	60.72	Spurious
PK	151.36	V	23.20	/	/	80.8	57.6	Spurious
AV	151.36	V	23.20	-22.62	0.58	60.8	60.22	Spurious
PK	319.56	V	24.10	/	/	80.8	56.7	Spurious
AV	319.56	V	24.10	-22.62	1.48	60.8	59.32	Spurious
PK	729.40	V	33.50	/	/	80.8	47.3	Spurious
AV	729.40	V	33.50	-22.62	10.88	60.8	49.92	Spurious
PK	902.48	V	34.70	/	/	80.8	46.1	Spurious
AV	902.48	V	34.70	-22.62	12.08	60.8	48.72	Spurious
Above 1GHz								
PK	1257.95	H	31.70	/	/	80.8	49.1	Spurious
AV	1257.95	H	31.70	-22.62	9.08	60.8	51.72	Spurious
PK	*1504.00	H	34.16	/	/	74.00	39.84	Spurious
AV	*1504.00	H	34.16	-22.62	11.54	54.00	42.46	Spurious
PK	2075.55	H	36.48	/	/	80.8	44.32	Spurious
AV	2075.55	H	36.48	-22.62	13.86	60.8	46.94	Spurious
PK	*2487.85	H	38.35	/	/	74.00	35.65	Spurious
AV	*2487.85	H	38.35	-22.62	15.73	54.00	38.27	Spurious
PK	3467.85	H	45.08	/	/	80.8	35.72	Spurious
AV	3467.85	H	45.08	-22.62	22.46	60.8	38.34	Spurious
PK	*4348.45	H	42.33	/	/	74.00	31.67	Spurious
AV	*4348.45	H	42.33	-22.62	19.71	54.00	34.29	Spurious
PK	1267.05	V	32.58	/	/	80.8	48.22	Spurious
AV	1267.05	V	32.58	-22.62	9.96	60.8	50.84	Spurious
PK	1640.15	V	34.51	/	/	80.8	46.29	Spurious
AV	1640.15	V	34.51	-22.62	11.89	60.8	48.91	Spurious
PK	2031.45	V	36.62	/	/	80.8	44.18	Spurious
AV	2031.45	V	36.62	-22.62	14.00	60.8	46.8	Spurious
PK	2603.70	V	38.56	/	/	80.8	42.24	Spurious
AV	2603.70	V	38.56	-22.62	15.94	60.8	44.86	Spurious

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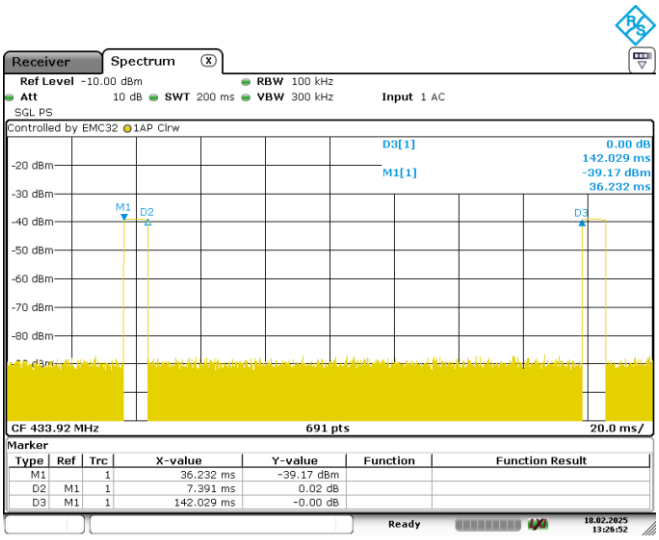
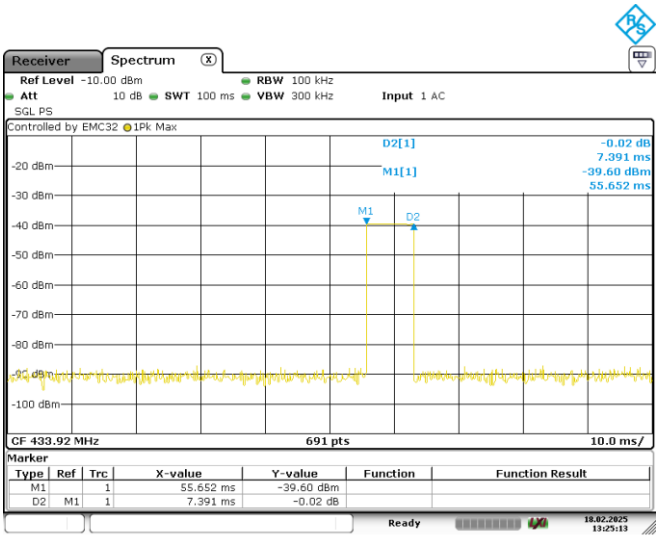
PK	3467.50	V	45.68	/	/	80.8	35.12	Spurious
AV	3467.50	V	45.68	-22.62	23.06	60.8	37.74	Spurious
PK	*4245.90	V	42.42	/	/	74.00	31.58	Spurious
AV	*4245.90	V	42.42	-22.62	19.80	54.00	34.2	Spurious

Remark:
1: AV Emission Level= PK Emission Level+20log (duty cycle)
2: Data of measurement within this frequency range shown "/" in the table above means the reading of emissions are attenuated more than 20db below the permissible limits or the field strength is too small to be measured..
3: "*" means the emission(s) appear within the restrict bands shall follow the requirement of section 15.205.
4: Corrected Amplitude = Read level + Corrector factor
Above 1GHz: Corrector factor = Antenna Factor + Cable Loss- Amplifier Gain
Below 1GHz: Corrector factor = Antenna Factor + Cable Loss
5. Correct Factor = Antenna Factor + Cable Loss (+ Amplifier, for higher than 1GHz)
6. Corrected Reading = Original Receiver Reading + Correct Factor
7. Only the worst data listed in this report

Duty Cycle = 7.391ms/100 (ms) =7.391%
Duty Cycle Factor =20log (Duty Cycle) =-22.62



Date: 18.FEB.2025 13:26:53



Date: 18.FEB.2025 13:25:14

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10.3 20dB Bandwidth Measurement

Test Method

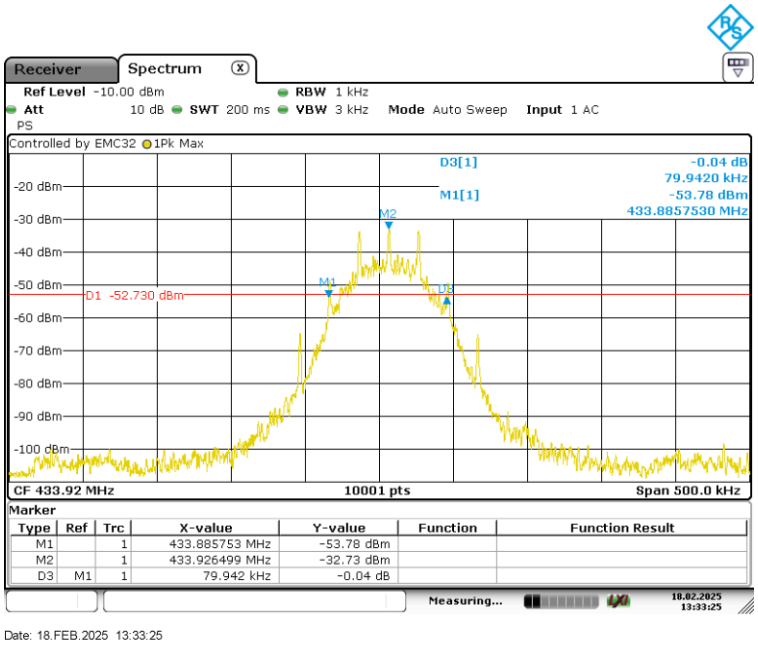
1. The EUT was placed on 0.8m height table, the RF output of EUT was connected to the test receiver by RF cable. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting and enable the EUT transmit continuously.
   Use the following test receiver settings:
   RBW = 1% to 5% of the OBW, VBW≥3RBW, Sweep = auto, Detector function = peak, Trace = max hold
3. Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. Measure the frequency difference of two frequencies that were attenuated 20 dB from the reference level. Record the frequency difference as the emission bandwidth. Record the results.

Limit

The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70MHz and below 900MHz. For devices operating above 900MHz, the emission shall be no wider than 0.5% of the center frequency. Bandwidth is determined at the points 20dB down from the modulated carrier.
The limit for the EUT = 0.25% * 433.92 MHz = 1084.8 kHz

Test Result

Channel	20dB Bandwidth (KHz)	Limit (KHz)	Result
1	79.942	≤1084.8	Pass



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10.4 99% Bandwidth Measurement

Test Method

1. The EUT was placed on 0.8m height table, the RF output of EUT was connected to the test receiver by RF cable. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting and enable the EUT transmit continuously. Use the following test receiver settings:
   RBW = 1% to 5% of the OBW, VBW≥3RBW, Sweep = auto, Detector function = peak, Trace = max hold
3. Allow the trace to stabilize. Use the 99 % power bandwidth function of the instrument. Record the results.

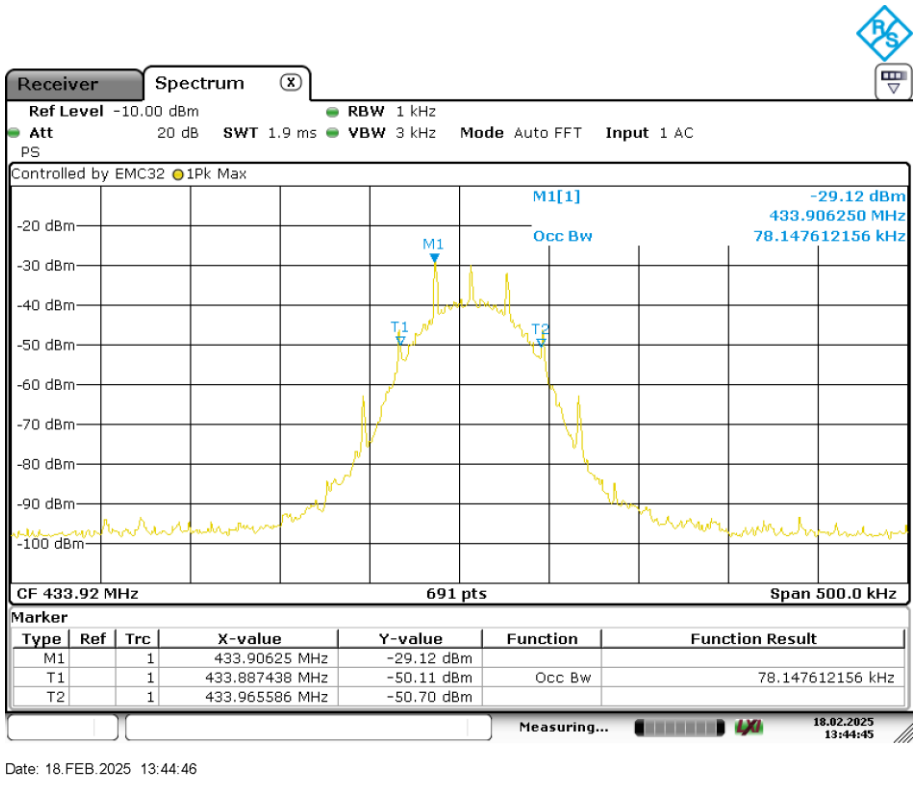
Limit

The occupied bandwidth of momentarily operated devices shall be less than or equal to 0.25% of the centre frequency for devices operating between 70 MHz and 900 MHz. For devices operating above 900 MHz, the occupied bandwidth shall be less than or equal to 0.5% of the centre frequency.
The limit for the EUT = 0.25% * 433.92 MHz = 1084.8 kHz

Test Result

Channel	99% bandwidth (kHz)	Limit (kHz)	Result
1	78.15	≤1084.8	Pass

99% bandwidth



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10.5 Deactivation Time

Test Method

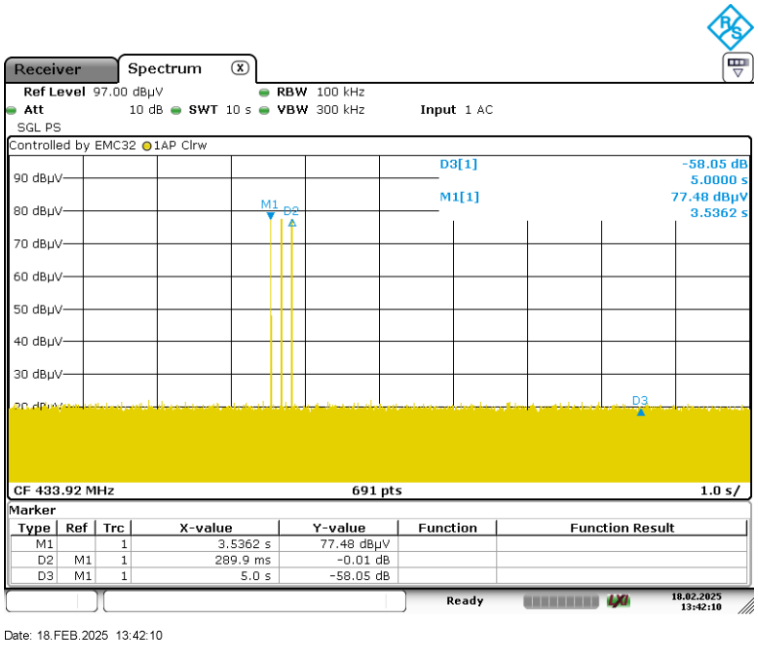
1. The EUT was placed on 0.8m height table, the RF output of EUT was connected to the test receiver by RF cable. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting and enable the EUT in transmitting mode.
3. Set center frequency of spectrum analyzer=operating frequency.
4. Set the spectrum analyzer as RBW≥OBW, VBW≥RBW, Span=0Hz, detector=peak.
5. Repeat above procedures until all frequency measured was complete.

Limit

According to FCC Part 15.231 (a) and RSS-210 A.1.2(a), the transmitter shall be complied the following requirements:
(√) (1) A manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released.

Test Result

Channel	Frequency	Deactivation Time	Limit	Result
1	433.92MHz	289.9ms	≤5s	Pass



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11 Test Equipment List

List of Test Instruments

Test Site1

RF Conductive Test

Description	Manufacturer	Model no.	Equipment ID.	Calibration Date	Calibration Due
Signal and spectrum analyzer	R&S	FSV40	S1503003-YQ-EMC	2024-8-1	2025-7-31

Conducted Emission

Description	Model no.	Manufacturer	Equipment ID.	Calibration Date	Calibration Due
EMI test receiver	ESR3	R&S	S1503001-YQ-EMC	2024-8-1	2025-7-31
2-Line V-network	ENV216	R & S	S1503103-YQ-EMC	2024-8-1	2025-7-31
Coaxial Cable	RG400	HUBER+SUHNER	CE_Cable_01	2024-8-1	2025-7-31

Radiated Emission Test

USED	Equipment Name	Model	Manufacturer	Equipment ID.	Calibration Date	Calibration Due
☒	EMI test receiver	ESR3	R&S	S1503109-YQ-EMC	2024-8-1	2025-7-31
☒	Trilog super broadband test antenna	SCHWARZBECK	VULB9168	S1808296-YQ-EMC	2024-8-30	2025-8-29
☒	Double-ridged waveguide horn antenna	HF907	R&S	S1503009-YQ-EMC	2024-4-14	2025-4-13
☒	Pre-amplifier	HPAP-9K0130	Shenzhen HzEMC	S2110423b-YQ-EMC	2024-8-1	2025-7-31
☒	Signal and spectrum analyzer	FSV40	R&S	S1503003-YQ-EMC	2024-8-1	2025-7-31
☒	Coaxial Cable	MWX221	JUNFLON	RE_Cable_01	2024-8-1	2025-7-31
☒	Coaxial Cable	RG214	HUBER+SUHNER	RE_Cable_02	2024-8-1	2025-7-31
☒	Coaxial Cable	MWX221	JUNFLON	RE_Cable_03	2024-8-1	2025-7-31
☒	Loop antenna	HFH2-Z2	R&S	S1503013-YQ-EMC	2024-6-26	2025-6-25

Measurement Software Information			
Test Item	Software	Manufacturer	Version
RE	EMC 32	Rohde & Schwarz	V10.50.40
CE	EMC 32	Rohde & Schwarz	V9.15.03

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12 System Measurement Uncertainty

For a 95% confidence level, the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 were:

System Measurement Uncertainty

Items	Extended Uncertainty
Conducted Disturbance at Mains Terminals	150kHz to 30MHz, LISN, 3.16dB
Radiated Disturbance	30MHz to 1GHz, 5.03dB (Horizontal) 5.12dB (Vertical) 1GHz to 18GHz, 5.49dB 18GHz to 40GHz, 5.63dB
Carrier power conducted measurement	50MHz~18GHz, 1.238dB
Spurious Emission Conducted Measurement	9kHz ~40GHz, 1.224dB

Measurement Uncertainty Decision Rule:

Determination of conformity with the specification limits is based on the decision rule according to IEC Guide 115: 2023, clause 4.3.3.

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13 Photographs of Test Set-ups

Refer to the < Test Setup photos >.

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14 Photographs of EUT

Refer to the < External Photos > & < Internal Photos >.

THE END

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