

TEST REPORT

of

FCC Part 15 Subpart C

☒ New Application; ☐ Class I PC; ☐ Class II PC

Product: **TPMS**
Brand: **Mobiletron**
Main Model: **TX-M001**
Series Model: **TX-M002; TX-M003; TX-M004**
FCC ID: **ULZ-TXM001**
Model Difference: **Model differences in valve type**
FCC Rule Part: **§15.231 (e)**
Applicant: **Mobiletron Electronics Co., Ltd.**
Address: **85, Sec.4, Chung-Ching Rd., Ta-Ya District,
Taichung 428, Taiwan**

Test Performed by:



International Standards Laboratory Corp. LT Lab.

TEL: +886-3-263-8888 FAX: +886-3-263-8899

No. 120, Lane 180, Hsin Ho Rd., Lung-Tan Dist., Tao Yuan City 325, Taiwan

Report No.: **ISL-26LR0069FCC**
Issue Date : **May 20, 2026**



Test results given in this report apply only to the specific sample(s) tested and are traceable to national or international standard through calibration of the equipment and evaluating measurement uncertainty herein. The uncertainty of the measurement does not include in consideration of the test result unless the customer required the determination of uncertainty via the agreement, regulation or standard document specification. This test report shall not be reproduced except in full, without the written approval of International Standards Laboratory Corp.

VERIFICATION OF COMPLIANCE

Applicant: Mobiletron Electronics CO., LTD.
Equipment Under Test: TPMS
Brand Name: Mobiletron
Model: TX-M001
Serial Models: TX-M002; TX-M003; TX-M004
Model Difference: Model differences in valve type
FCC ID: ULZ-TXM001
FCC Rule Part: §15.231 (e)
Date of Test: 2026/4/14 ~2026/5/20
Date of EUT Received: 2026/4/14

We hereby certify that:

All the tests in this report have been performed and recorded in accordance with the standards described above and performed by an independent electromagnetic compatibility consultant, International Standards Laboratory.

The test results contained in this report accurately represent the measurements of the characteristics and the energy generated by sample equipment under test at the time of the test. The sample equipment tested as described in this report is in compliance with the limits of above standards.

Prepared By: Gigi Yeh

Test By: Jason Chao
Jason Chao

Approved By: Jerry Liu
Jerry Liu / Manager

Version

Version No.	Date	Description
00	2026/05/20	Initial creation of document

Uncertainty of Measurement

Parameter	Uncertainty (k=2)
Conducted Emission (AC power line)	± 1.6 dB
Spurious emissions, radiated	± 4.8 dB
RF power, conducted	± 2.2 dB
Power Density	± 2.3 dB
RF Frequency	± 1.5 %
DC Voltage	± 2.2 %

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1. General Information

1.1 Product Description

General Information		
Product Name:	TPMS	
Brand Name:	Mobiletron	
Model Name:	TX-M001	
Serial Models:	TX-M002; TX-M003; TX-M004	
Model Difference:	Model differences in valve type	
Power Rating:	3Vdc battery cell	
	Battery	Model: CR2450W/CR2050A
433.92MHz Information		
Modular	NTM88	
Frequency Range:	Tx:433.92MHz	
Max Output Power:	ASK: 71.97 dBuV/m at 3 m FSK: 71.99 dBuV/m at 3 m	
Modulation type:	ASK and FSK	
Product HW Version:	01210784	
Product SW Version:	882304	
Product FW Version:	882304	
Test SW Version:	3.60	
RFpower setting:	default	
315MHz Information		
Modular	NTM88	
Frequency Range:	Tx:315MHz	
Max Output Power:	ASK:70.18 dBuV/m at 3 m FSK:70.42 dBuV/m at 3 m	
Modulation type:	ASK and FSK	
Product HW Version:	01210784	
Product SW Version:	882304	
Product FW Version:	882304	
Test SW Version:	3.60	
RFpower setting:	default	

	Antenna Type	Brand	Model	Peak Gain	Frequency Range	Connector Type
1	Loop Antenna	----	20010452	-10 dBi	315MHz 433MHz	----

1.2 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for FCC ID: XXXXXX filing to comply with Section 15.231 (e) of the FCC Part 15, Subpart C., Subpart C Rules filing to comply.

1.3 Test Methodology

Both conducted and radiated testing were performed according to the procedures in C63.10: 2020. Radiated testing was performed at an antenna to EUT distance 3 meters.

1.4 Test Facility

The measurement facilities used to collect the 3m Radiated Emission and AC power line conducted data are located on the address of **International Standards Laboratory Corp.** <LT Lab.> No. 120, Lane 180, Hsin Ho Rd., Lung-Tan Dist., Tao Yuan City 325, Taiwan which are constructed and calibrated to meet the FCC requirements in documents ANSI C63.10: 2020. FCC Registration Number is: 487532; Designation Number is: TW0997.

1.5 Special Accessories

Not available for this EUT intended for grant.

1.6 Equipment Modifications

Not available for this EUT intended for grant.

2. System Test Configuration

2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

2.2 EUT Exercise

The EUT (Transmitter) was tested with a test program to fix the Tx frequency that was for the purpose of the measurements. For more information please see test data and APPENDIX 1 for set-up photographs.

2.3 Test Procedure

2.3.1 Conducted Emissions (Not apply in the report)

The EUT is a placed on as turn table which is 0.8 m above ground plane. According to the requirements in Section 6.2 of ANSI C63.10: 2020. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR 16-1-1 Quasi-Peak and Average detector mode.

2.3.2 Radiated Emissions

The EUT is a placed on as turn table which is 0.8 m/1.5m(Frequency above 1GHz) above ground plane. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter(EUT) was rotated through three orthogonal axes according to the requirements in Section 6 and 11 of ANSI C63.10: 2020.

2.4 Limitation

(1) Conducted Emission

Frequency range MHz	Limits dB (uV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50
Note 1.The lower limit shall apply at the transition frequencies 2.The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.		

(2) Radiated Emission

According to (e) Intentional radiators may operate at a periodic rate exceeding that specified in paragraph (a) of this section and may be employed for any type of operation, including operation prohibited in paragraph (a) of this section, provided the intentional radiator complies with the provisions of paragraphs (b) through (d) of this section, except the field strength table in paragraph (b) of this section is replaced by the following:

Fundamental frequency (MHz)	Field strength of fundamental (microvolts/meter)	Field strength of spurious emission (microvolts/meter)
40.66-40.70	1,000	100
70-130	500	50
130-174	500 to 1,500 ¹	50 to 150 ¹
174-260	1,500	150
260-470	1,500 to 5,000 ¹	150 to 500 ¹
Above 470	5,000	500

¹Linear interpolations.

- Remark: 1. Emission level in dBuV/m = $20 \log(uV/m)$
- Measurement was performed at an antenna to the closed point of EUT distance of meters.
 - Only spurious frequency is permitted to locate within the Restricted Bands specified in provision of § 15.205
 - Emission spurious frequency which appearing within the Restricted Bands specified in provision of § 15.205, then the general radiated emission limits in § 15.209 apply.
 - For the band 130-174MHz, uV/m at 3meters = $22.72727 * F(MHz) - 2454.545$;
For the band 260-470MHz uV/m at 3meters = $16.6667 * F(MHz) - 2833.333$;
Where F is the frequency in MHz.
 - $433.92MHz$ AV limit = $16.6667 * 433.92(MHz) - 2833.333 = 4398.68 uV/m$
= 72.86dBuV/m
 - $433.92MHz$ Peak limit = AV Limit + 20dB = 92.86MHz

2.5 Configuration of Tested System

Fig. 1 Configuration of Tested System

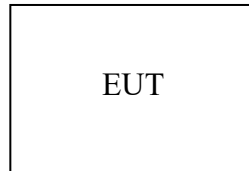


Table 2-1 Equipment Used in Tested System

Item	Equipment	Mfr/Brand	Model/ Type No.	Series No.	Data Cable	Power Cord
1.	N/A					

3. Summary of Test Results

FCC /IC Rules	Description Of Test	Result
§15.207	Conducted Emission	N/A
§15.231(e)	Radiated Emission	Compliant
§15.231(c)	20dB Bandwidth	Compliant
	Duty Cycle Test (Pulse Modulation)	N/A
§15.231(e)	transmission time, silent period	Compliant
§15.203	Antenna Requirement	Compliant

4. Description of Test Modes

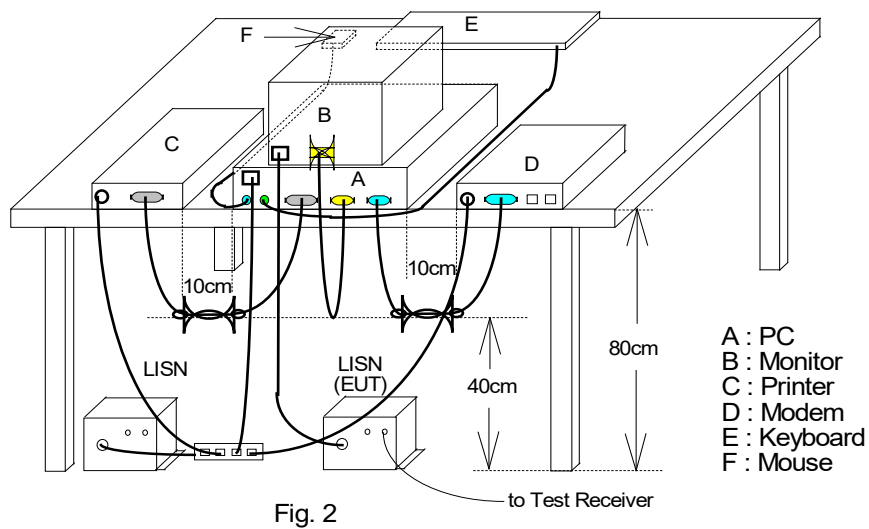
The EUT has been tested under engineering test mode condition and the EUT staying in continuous transmitting mode. The Frequency 433.92 MHz / 315MHz is chosen for testing.

5. AC Conducted Emissions Test

5.1 Measurement Procedure:

1. The EUT was placed on a table which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured were complete.

5.2 Test SET-UP (Block Diagram of Configuration)



5.3 Measurement Result:

N/A

6. Duty Cycle (Average Correction factor) Measurement

6.1 Measurement Procedure

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Set ETU normal operating mode.
3. Set SPA Center Frequency= fundamental frequency, RBW= 100kHz, VBW= 300kHz, Span =0 Hz. Adjacent sweep.
4. Set SPA View. Mark delta.

6.2 Test SET-UP (Block Diagram of Configuration)

Same as 7.2 Radiated Emission Measurement.

6.3 Measurement Equipment Used:

Same as 7.3 Radiated Emission Measurement.

6.4 Measurement Results:

433MHz

Averaging factor in dB = $20 \times \log(\text{duty cycle})$

Duty cycle = $7.6\text{ms}/100\text{ms} = 0.076$

Average Factor = $20\log(0.076) = 22.384$

315MHz

Averaging factor in dB = $20 \times \log(\text{duty cycle})$

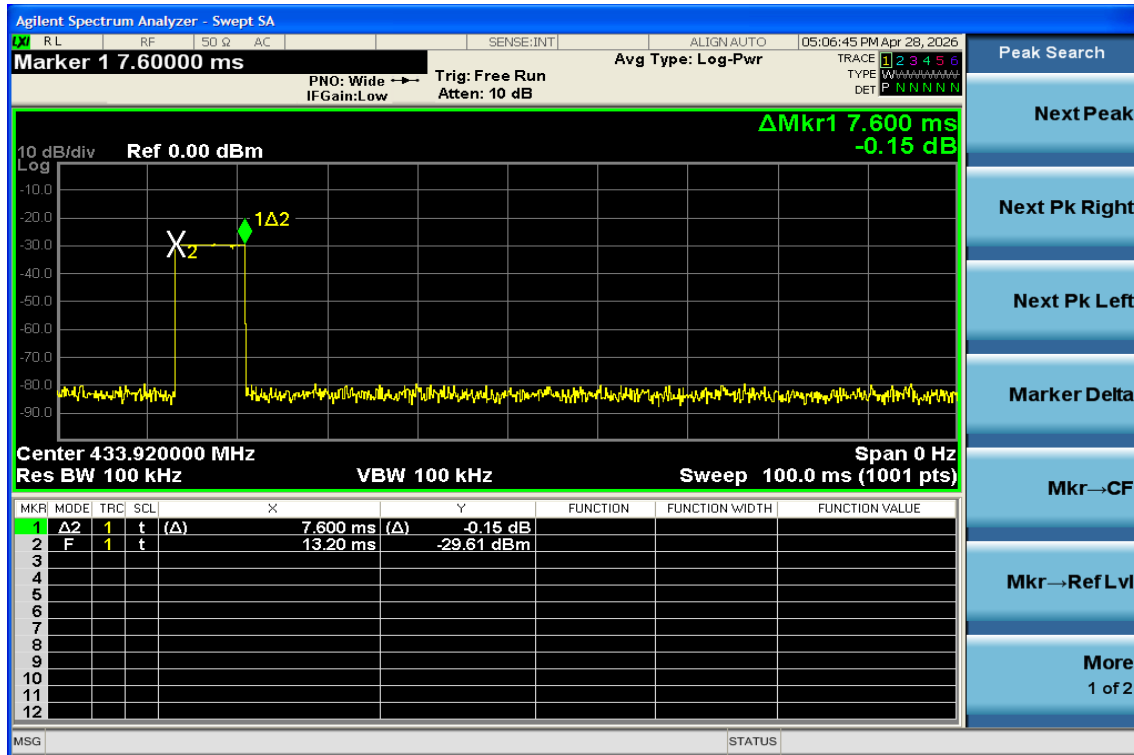
Duty cycle = $7.6\text{ms}/100\text{ms} = 0.07$

Average Factor = $20\log(0.07) = -23.0980$

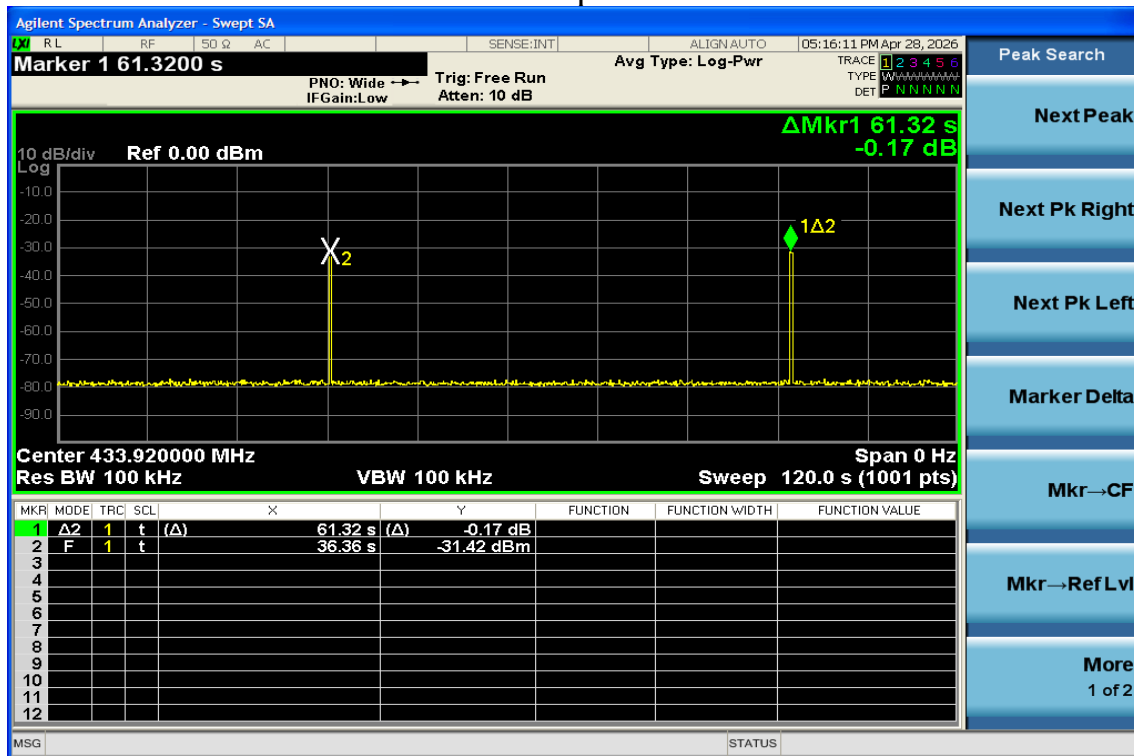
433MHz

ASK

Ton

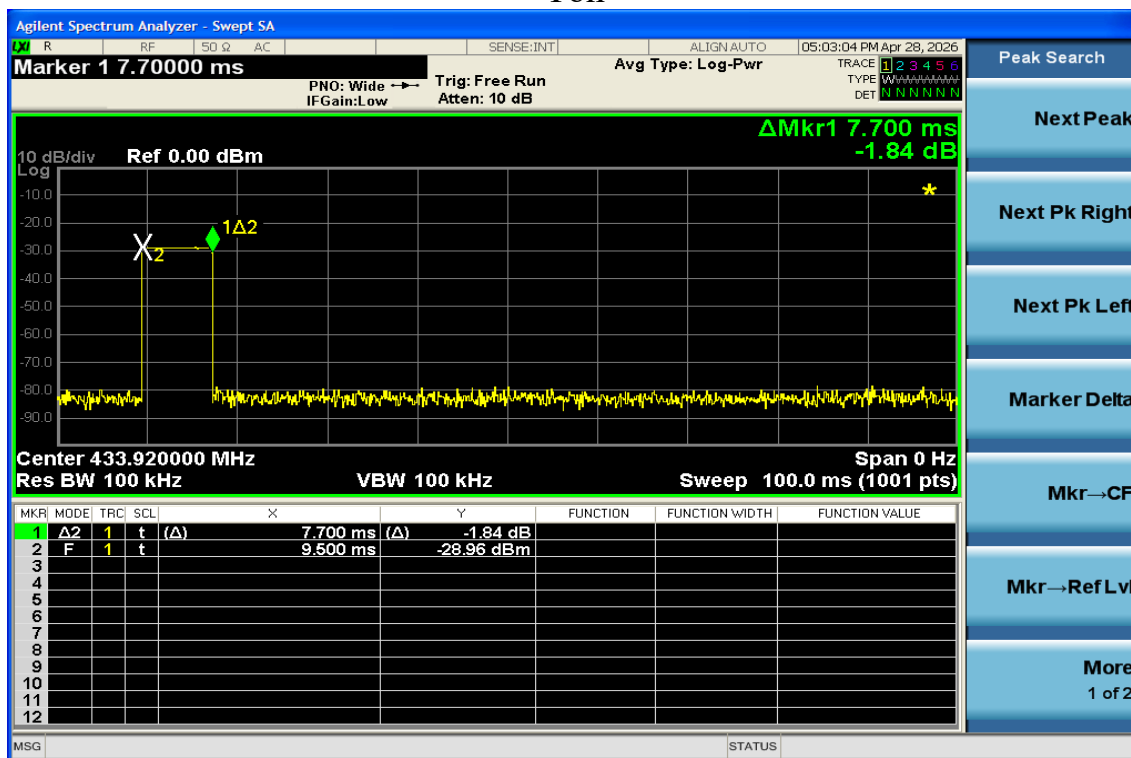


Tp

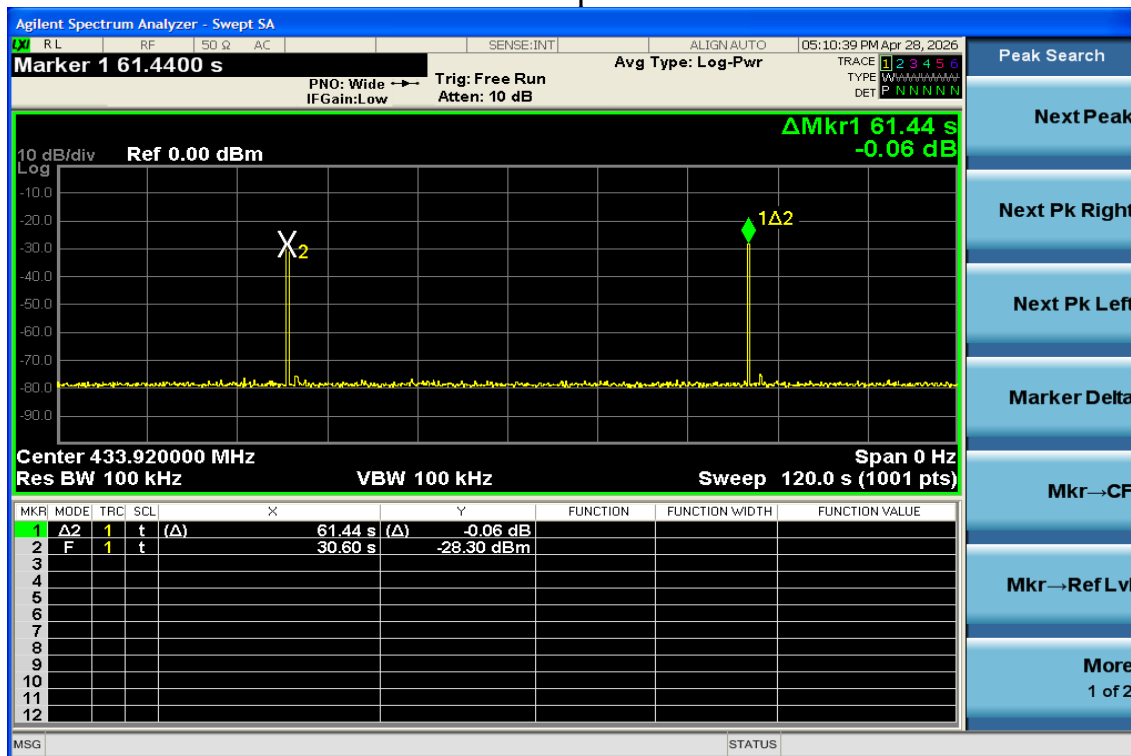


FSK

Ton



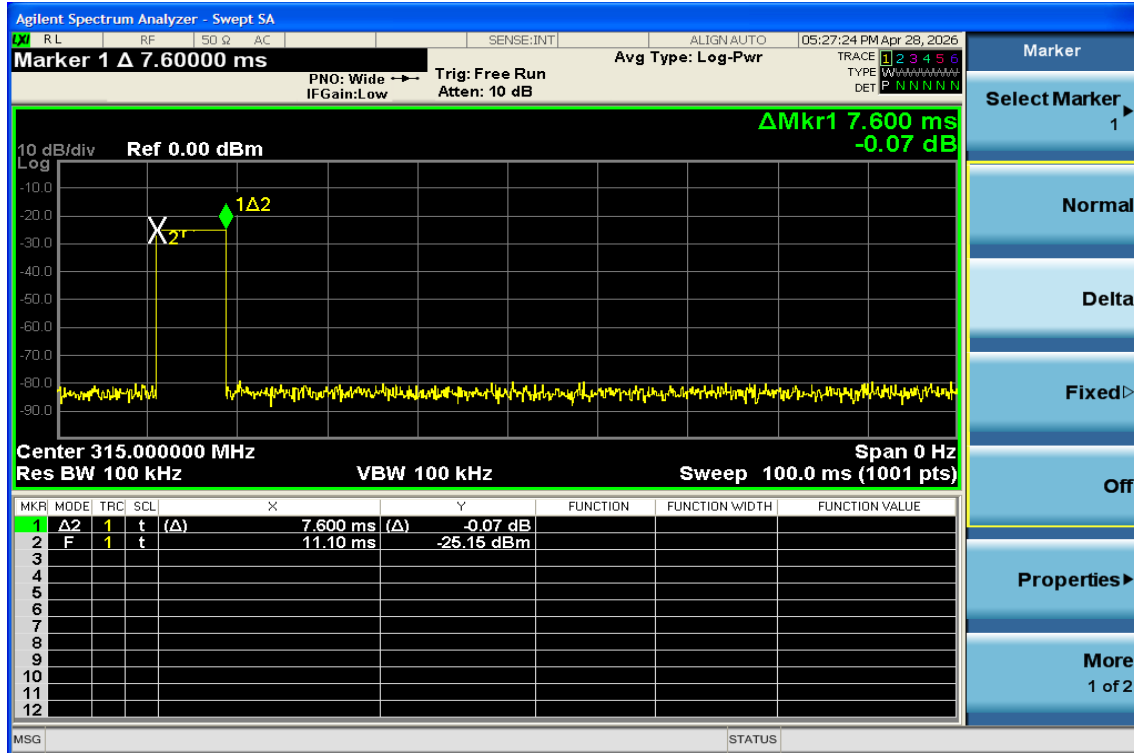
Tp



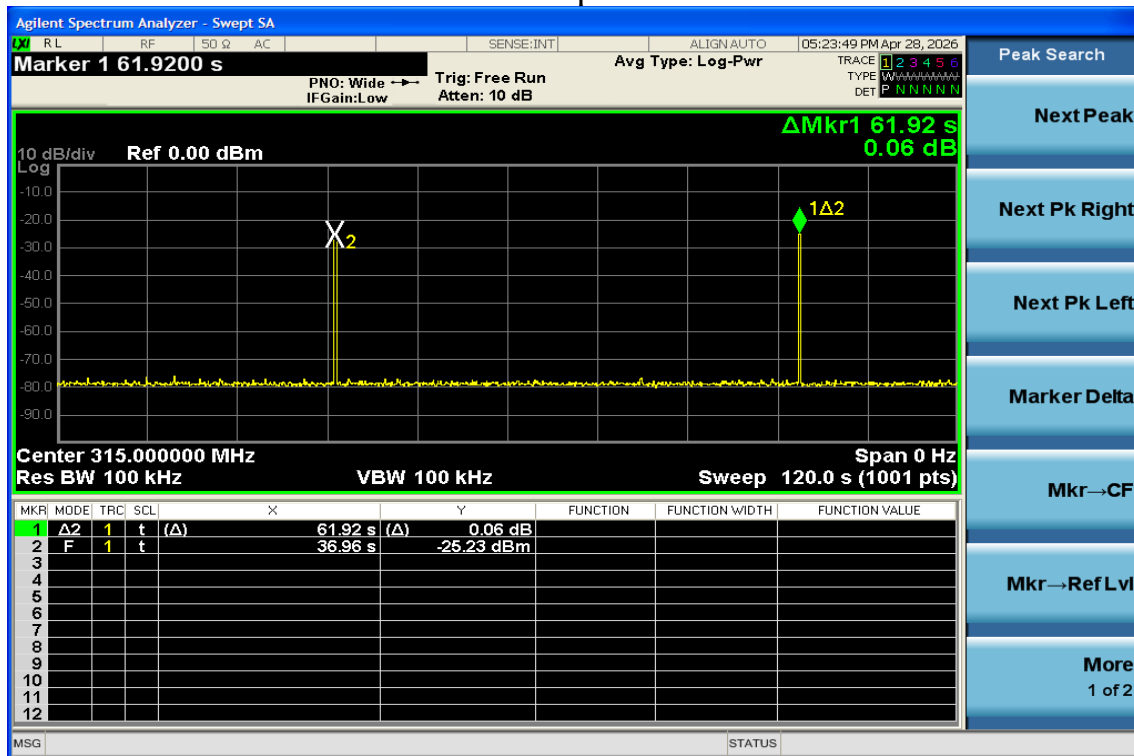
315MHz

ASK

Ton

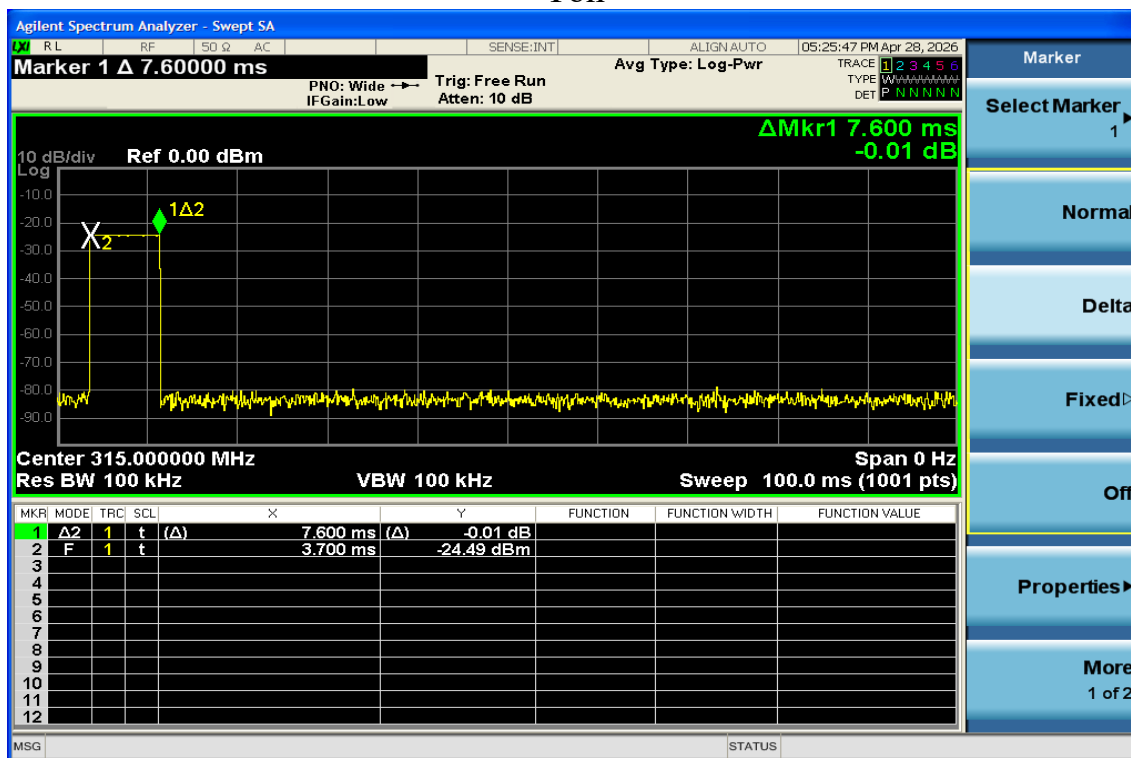


Tp

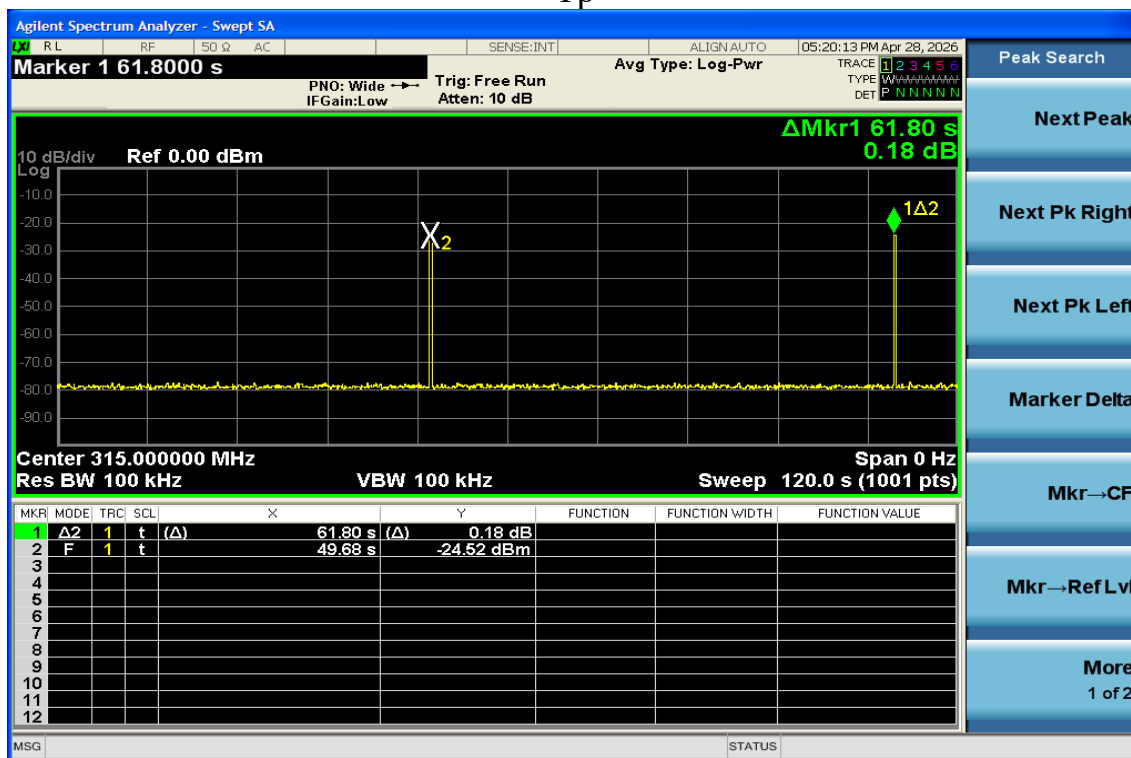


FSK

Ton



Tp



7. Radiated Emission Test

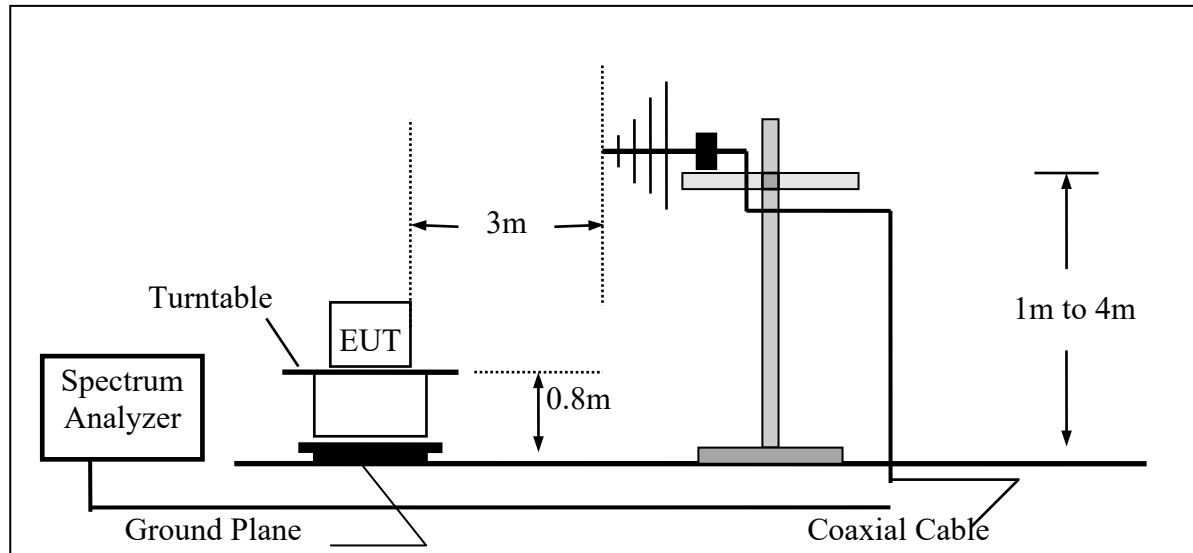
15.231 (e) Intentional radiators may operate at a periodic rate exceeding that specified in paragraph (a) of this section and may be employed for any type of operation, including operation prohibited in paragraph (a) of this section, provided the intentional radiator complies with the provisions of paragraphs (b) through (d) of this section, except the field strength table in paragraph (b) of this section is replaced by the following:

7.1 Measurement Procedure

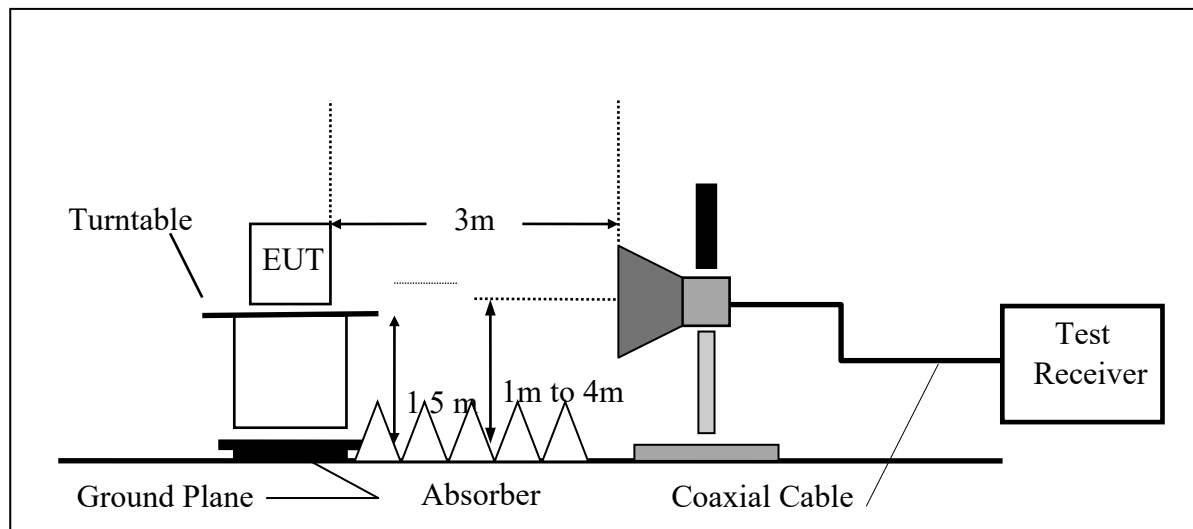
1. The EUT was placed on a turn table which is 0.8/1.5m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
4. Repeat above procedures until all frequency measured were complete.

7.2 Test SET-UP (Block Diagram of Configuration)

(A) Radiated Emission Test Set-Up, Frequency Below 1000MHz



(B) Radiated Emission Test Set-UP Frequency Over 1 GHz



7.3 Measurement Equipment Used:

Location Conducted	Equipment Name	Brand	Model	S/N	Last Cal. Date	Next Cal. Date
Chamber 19	Spectrum Analyzer	R&S	FSV40	101919	07/22/2025	07/22/2026
Chamber 19	EMI Receiver	R&S	ESR3	102461	05/12/2026	05/12/2027
Chamber 19	Loop Antenna	EM	EM-6879	271	09/25/2025	09/25/2026
Chamber 19	Bilog Antenna (30MHz-1GHz)	Schwarzbeck	VULB9168 w 5dB Att.	9168-495	11/14/2025	11/14/2026
Chamber 19	Horn antenna (1GHz-18GHz)	ETS • LINDGREN	3117	00218718	10/03/2025	10/03/2026
Chamber 19	Broadband Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170470	05/06/2026	05/06/2027
Chamber 19	Amplifier (0.1MHz-1.3GHz)	HP	8447F	3113A04621	06/19/2025	06/19/2026
Chamber 19	Preamplifier (1GHz-26GHz)	HP	8449B	3008A02471	10/29/2025	10/29/2026
Chamber 19	Preamplifier (26GHz-40GHz)	MITEQ	JS4-26004000-27-5A	818471	05/06/2026	05/06/2027
Chamber 19	RF Cable (9kHz-26.5GHz)	Huber Suhner	Sucoflex 104A	MY1394/4A & 50886/4A	07/17/2025	07/17/2026
Chamber 19	RF Cable (18GHz-40GHz)	HUBER SUHNER	Sucoflex 102	27963/2&37421/2	11/25/2025	11/25/2026
Chamber 19	MXG Vector Signal Generator	KEYSIGHT	N5182B	MY53052399	12/26/2025	12/26/2027
Chamber 19	Test Software	Audix	e3 Ver:6.120203	N/A	N/A	N/A

7.4 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CL - AG$$

Average Value = Peak Value + 20 Log (Ton/Tp)Pulse Modulation Duty Cycle Correction Factor

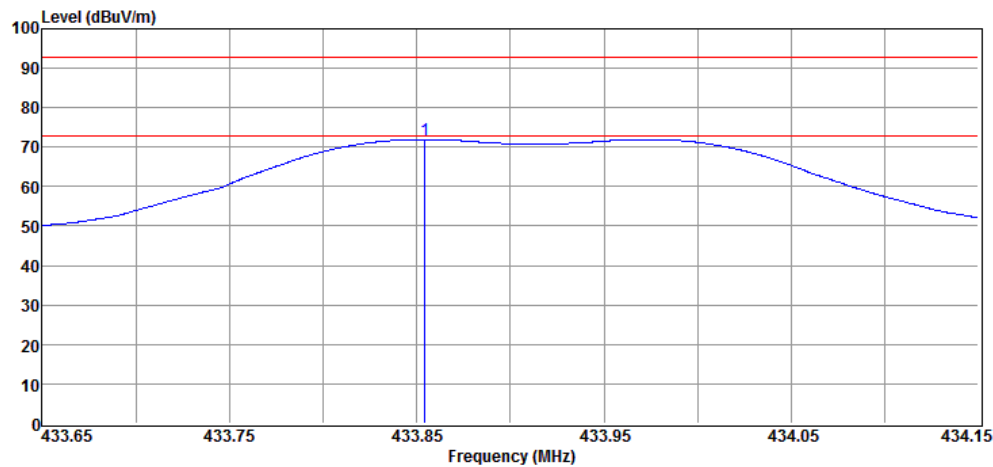
Where	FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
	RA = Reading Amplitude	AG = Amplifier Gain
	AF = Antenna Factor	

7.5 Measurement Result

Fundamental Measurement Result

International Standard Laboratory Corp.
 Company Address: No. 120, Lane 180, Hsin Ho Rd.
 Lung-Tan Dist., Tao Yuan City 325, Taiwan
 Date: 2026-05-05

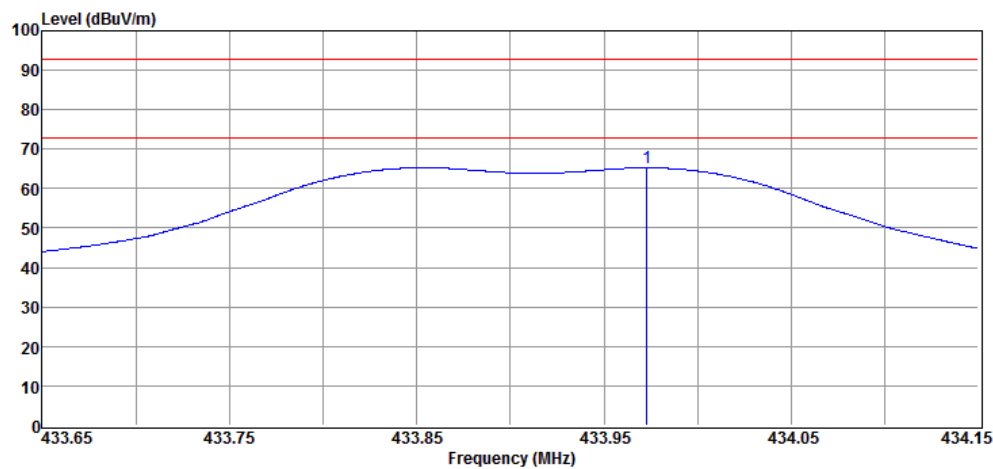
Project Number. : 26LR0069 Temp.(°C)/RH(%) : 22/58
 Test Mode : 433.92 FSK power Tested by : Jason Chao



No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	433.85	78.23	-6.24	71.99	92.86	-20.87	Peak	VERTICAL

International Standard Laboratory Corp.
 Company Address: No. 120, Lane 180, Hsin Ho Rd.
 Lung-Tan Dist., Tao Yuan City 325, Taiwan
 Date: 2026-05-05

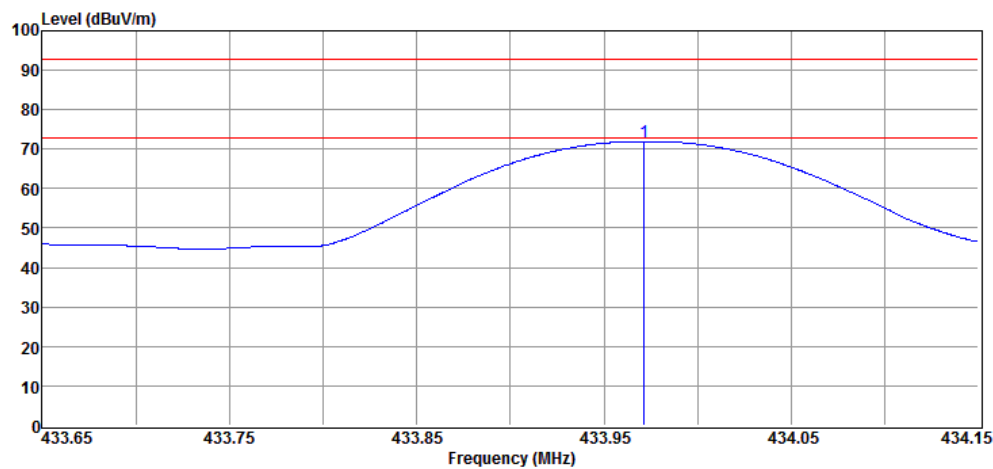
Project Number. : 26LR0069 Temp.(°C)/RH(%) : 22/58
 Test Mode : 433.92 FSK power Tested by : Jason Chao



No	Freq MHz	Reading dBUV	Factor dB/m	Level dBUV/m	Limit dBUV/m	Margin dB	Remark	Pol V/H
1	433.97	71.50	-6.23	65.27	92.86	-27.59	Peak	HORIZONTAL

International Standard Laboratory Corp.
 Company Address: No. 120, Lane 180, Hsin Ho Rd.
 Lung-Tan Dist., Tao Yuan City 325, Taiwan
 Date: 2026-05-05

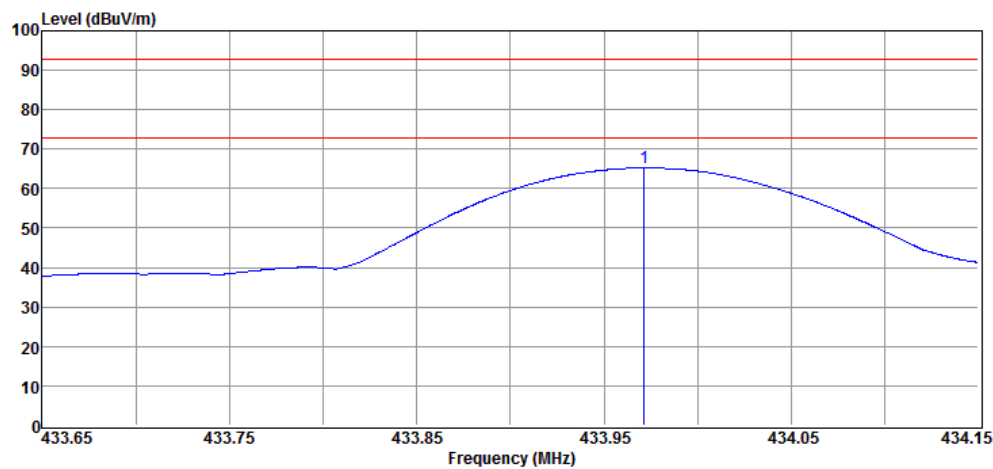
Project Number. : 26LR0069 Temp.(°C)/RH(%) : 22/58
 Test Mode : 433.92 ASK power Tested by : Jason Chao



No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	433.97	78.20	-6.23	71.97	92.86	-20.89	Peak	VERTICAL

International Standard Laboratory Corp.
 Company Address: No. 120, Lane 180, Hsin Ho Rd.
 Lung-Tan Dist., Tao Yuan City 325, Taiwan
 Date: 2026-05-05

Project Number. : 26LR0069 Temp.(°C)/RH(%) : 22/58
 Test Mode : 433.92 ASK power Tested by : Jason Chao

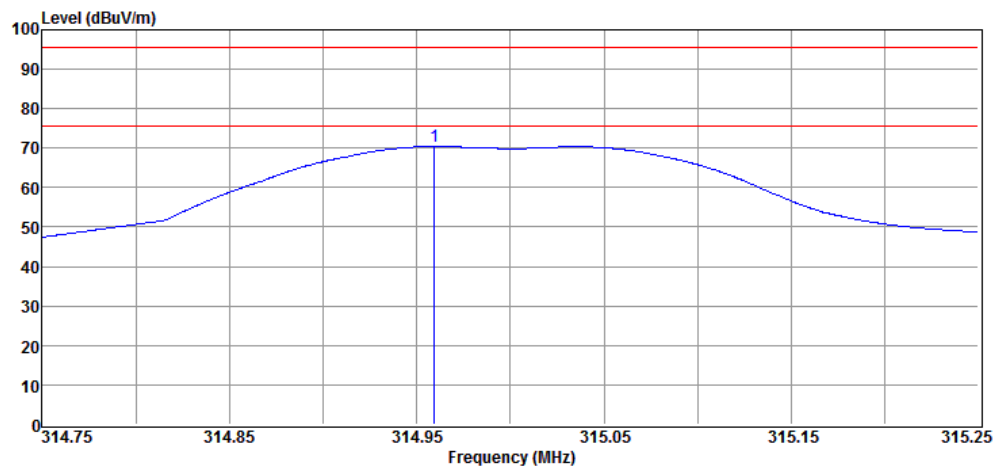


No	Freq MHz	Reading dBUV	Factor dB/m	Level dBUV/m	Limit dBUV/m	Margin dB	Remark	Pol V/H
1	433.97	71.45	-6.23	65.22	92.86	-27.64	Peak	HORIZONTAL

International Standard Laboratory Corp.
 Company Address: No. 120, Lane 180, Hsin Ho Rd.
 Lung-Tan Dist., Tao Yuan City 325, Taiwan

Date: 2026-05-05

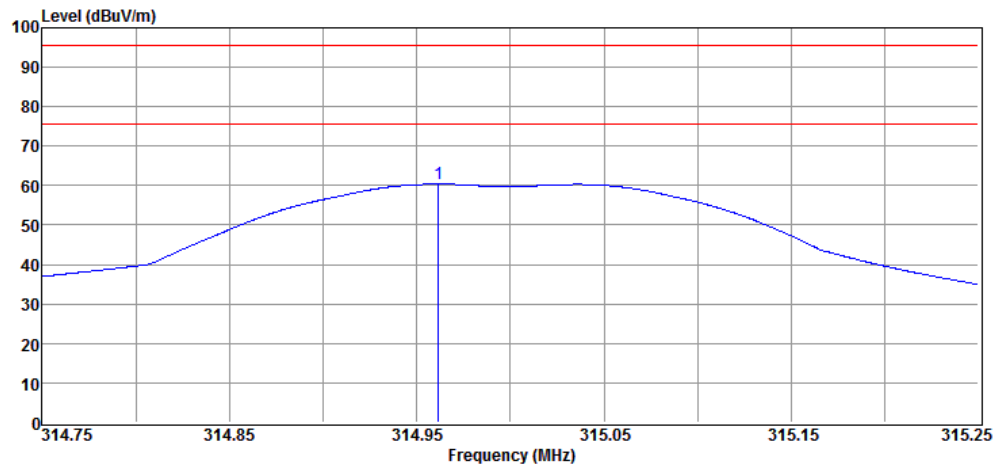
Project Number. : 26LR0069 Temp.(°C)/RH(%) : 22/58
 Test Mode : 315 FSK power Tested by : Jason Chao



No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	314.96	80.04	-9.62	70.42	95.62	-25.20	Peak	VERTICAL

International Standard Laboratory Corp.
 Company Address: No. 120, Lane 180, Hsin Ho Rd.
 Lung-Tan Dist., Tao Yuan City 325, Taiwan
 Date: 2026-05-05

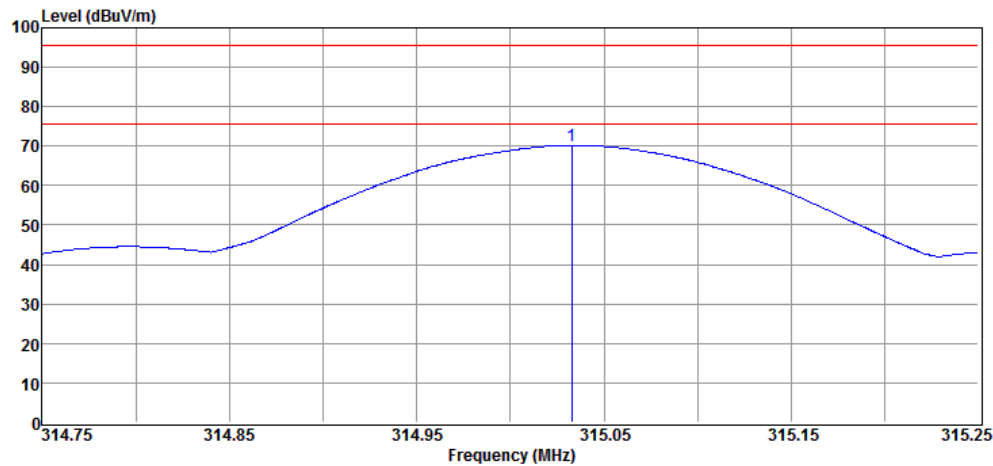
Project Number. : 26LR0069 Temp.(°C)/RH(%) : 22/58
 Test Mode : 315 FSK power Tested by : Jason Chao



No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	314.96	70.01	-9.62	60.39	95.62	-35.23	Peak	HORIZONTAL

International Standard Laboratory Corp.
 Company Address: No. 120, Lane 180, Hsin Ho Rd.
 Lung-Tan Dist., Tao Yuan City 325, Taiwan
 Date: 2026-05-05

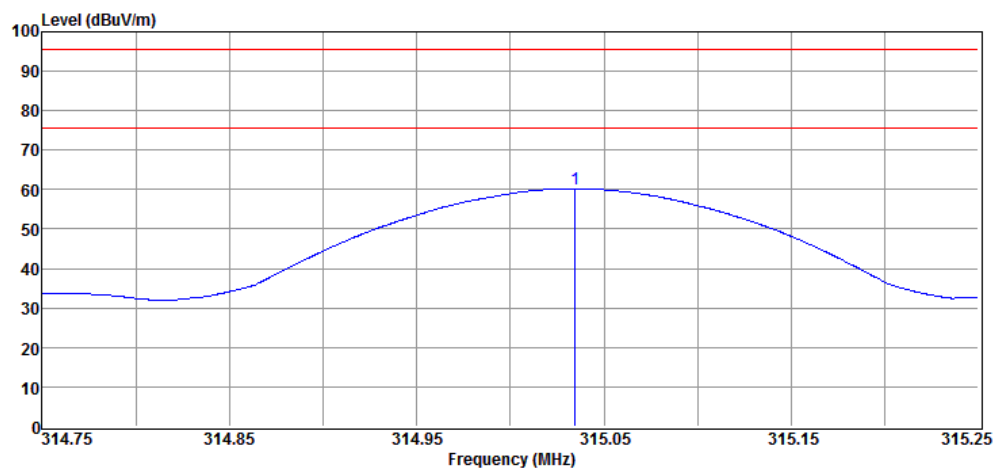
Project Number. : 26LR0069 Temp.(°C)/RH(%) : 22/58
 Test Mode : 315 ASK power Tested by : Jason Chao



No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	315.03	79.80	-9.62	70.18	95.62	-25.44	Peak	VERTICAL

International Standard Laboratory Corp.
 Company Address: No. 120, Lane 180, Hsin Ho Rd.
 Lung-Tan Dist., Tao Yuan City 325, Taiwan
 Date: 2026-05-05

Project Number. : 26LR0069 Temp.(°C)/RH(%) : 22/58
 Test Mode : 315 ASK power Tested by : Jason Chao

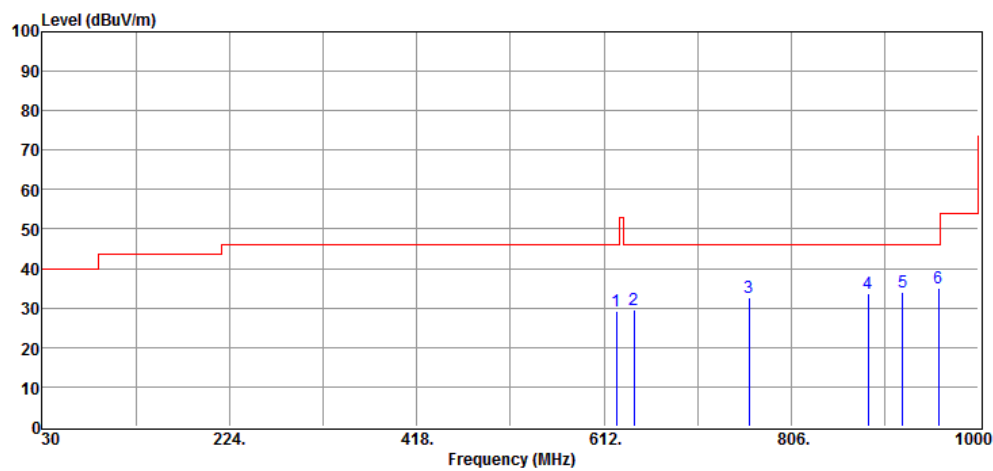


No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	315.03	69.86	-9.62	60.24	95.62	-35.38	Peak	HORIZONTAL

Radiated Spurious Emission Measurement Result (below 1GHz)

International Standard Laboratory Corp.
Company Address: No.120, Lane 180, Hsin Ho Rd.
Lung-Tan Dist., Tao Yuan City 325, Taiwan
Date: 2026-05-05

Project Number. : 26LR0069 Temp.(°C)/RH(%) : 22/58
Test Mode : 433.92 FSK TX Tested by : Jason Chao



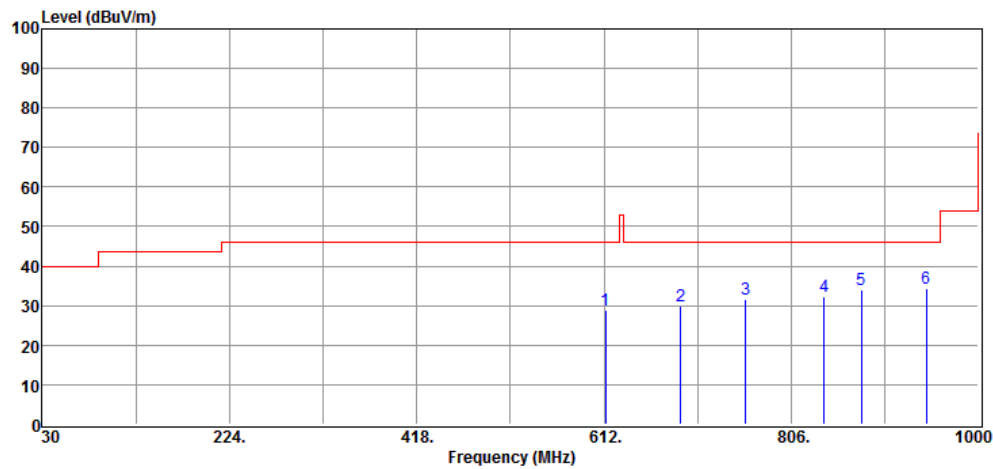
No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	624.61	31.09	-1.96	29.13	46.00	-16.87	Peak	VERTICAL
2	643.04	31.40	-1.73	29.67	46.00	-16.33	Peak	VERTICAL
3	762.35	32.03	0.66	32.69	46.00	-13.31	Peak	VERTICAL
4	885.54	31.81	1.98	33.79	46.00	-12.21	Peak	VERTICAL
5	921.43	31.15	2.94	34.09	46.00	-11.91	Peak	VERTICAL
6	958.29	31.83	3.37	35.20	46.00	-10.80	Peak	VERTICAL

International Standard Laboratory Corp.
 Company Address: No. 120, Lane 180, Hsin Ho Rd.
 Lung-Tan Dist., Tao Yuan City 325, Taiwan

Date: 2026-05-05

Project Number. : 26LR0069 Temp. (°C) / RH(%) : 22/58

Test Mode : 433.92 FSK TX Tested by : Jason Chao

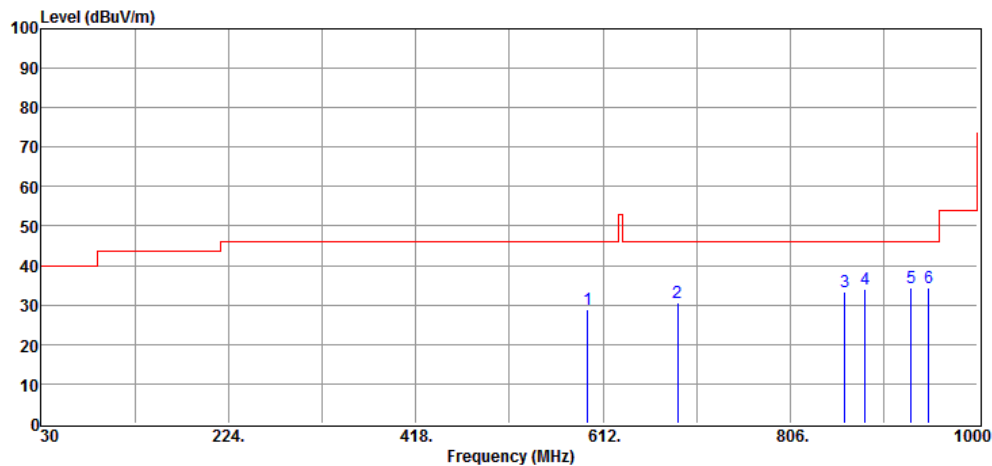


No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	613.94	30.86	-1.84	29.02	46.00	-16.98	Peak	HORIZONTAL
2	691.54	31.19	-1.19	30.00	46.00	-16.00	Peak	HORIZONTAL
3	758.47	31.11	0.65	31.76	46.00	-14.24	Peak	HORIZONTAL
4	839.95	30.73	1.63	32.36	46.00	-13.64	Peak	HORIZONTAL
5	878.75	32.02	1.91	33.93	46.00	-12.07	Peak	HORIZONTAL
6	945.68	30.93	3.41	34.34	46.00	-11.66	Peak	HORIZONTAL

International Standard Laboratory Corp.
Company Address: No. 120, Lane 180, Hsin Ho Rd.
Lung-Tan Dist., Tao Yuan City 325, Taiwan

Date: 2026-05-05

Project Number. : 26LR0069 Temp.(°C)/RH(%) : 22/58
Test Mode : 433.92 ASK TX Tested by : Jason Chao

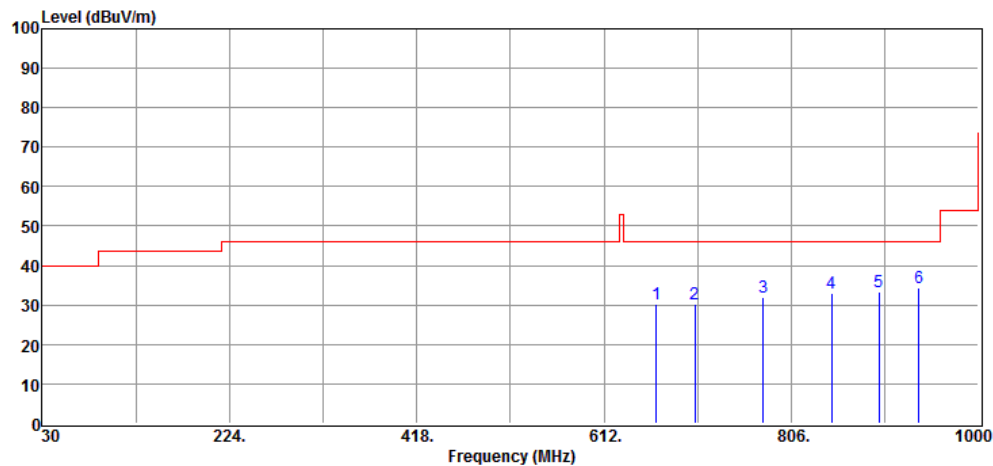


No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	596.48	31.69	-2.71	28.98	46.00	-17.02	Peak	VERTICAL
2	689.60	31.69	-1.22	30.47	46.00	-15.53	Peak	VERTICAL
3	862.26	31.66	1.60	33.26	46.00	-12.74	Peak	VERTICAL
4	883.60	32.09	1.97	34.06	46.00	-11.94	Peak	VERTICAL
5	931.13	31.28	3.07	34.35	46.00	-11.65	Peak	VERTICAL
6	949.56	30.86	3.43	34.29	46.00	-11.71	Peak	VERTICAL

International Standard Laboratory Corp.
Company Address: No. 120, Lane 180, Hsin Ho Rd.
Lung-Tan Dist., Tao Yuan City 325, Taiwan

Date: 2026-05-05

Project Number. : 26LR0069 Temp.(°C)/RH(%) : 22/58
Test Mode : 433.92 ASK TX Tested by : Jason Chao

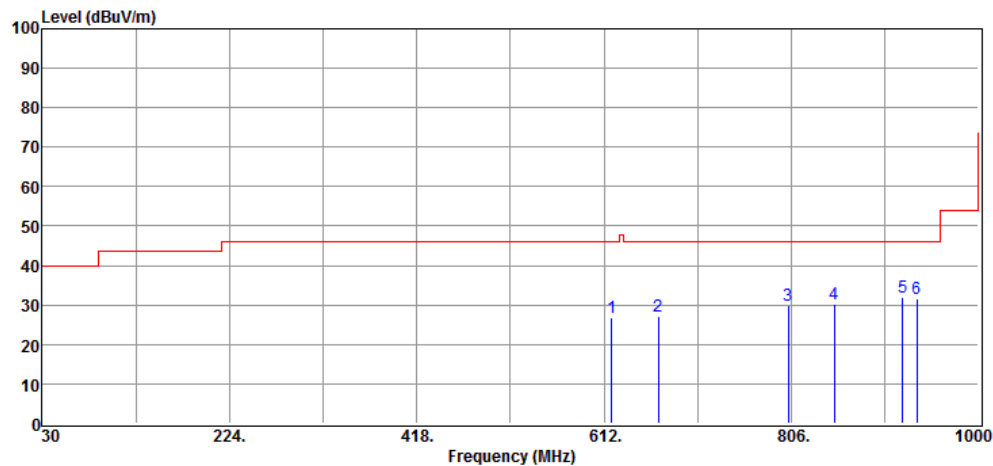


No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	666.32	31.70	-1.51	30.19	46.00	-15.81	Peak	HORIZONTAL
2	706.09	31.29	-0.97	30.32	46.00	-15.68	Peak	HORIZONTAL
3	776.90	31.08	0.75	31.83	46.00	-14.17	Peak	HORIZONTAL
4	847.71	31.44	1.61	33.05	46.00	-12.95	Peak	HORIZONTAL
5	897.18	31.21	2.10	33.31	46.00	-12.69	Peak	HORIZONTAL
6	937.92	31.01	3.24	34.25	46.00	-11.75	Peak	HORIZONTAL

International Standard Laboratory Corp.
Company Address: No. 120, Lane 180, Hsin Ho Rd.
Lung-Tan Dist., Tao Yuan City 325, Taiwan

Date: 2026-05-05

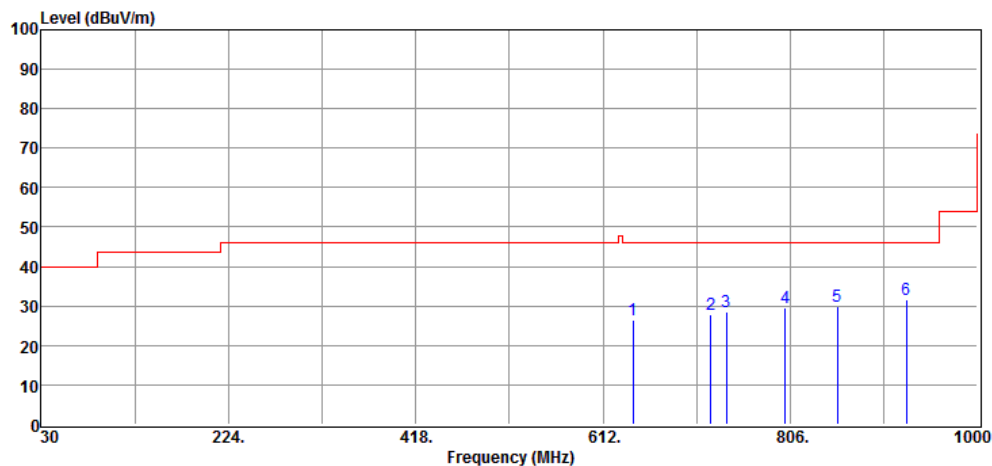
Project Number. : 26LR0069 Temp.(°C)/RH(%) : 22/58
Test Mode : 315 FSK TX Tested by : Jason Chao



No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	619.76	28.69	-1.88	26.81	46.00	-19.19	Peak	VERTICAL
2	668.26	28.77	-1.50	27.27	46.00	-18.73	Peak	VERTICAL
3	803.09	28.78	1.07	29.85	46.00	-16.15	Peak	VERTICAL
4	850.62	28.55	1.67	30.22	46.00	-15.78	Peak	VERTICAL
5	921.43	28.96	2.94	31.90	46.00	-14.10	Peak	VERTICAL
6	935.98	28.50	3.19	31.69	46.00	-14.31	Peak	VERTICAL

International Standard Laboratory Corp.
Company Address: No. 120, Lane 180, Hsin Ho Rd.
Lung-Tan Dist., Tao Yuan City 325, Taiwan
Date: 2026-05-05

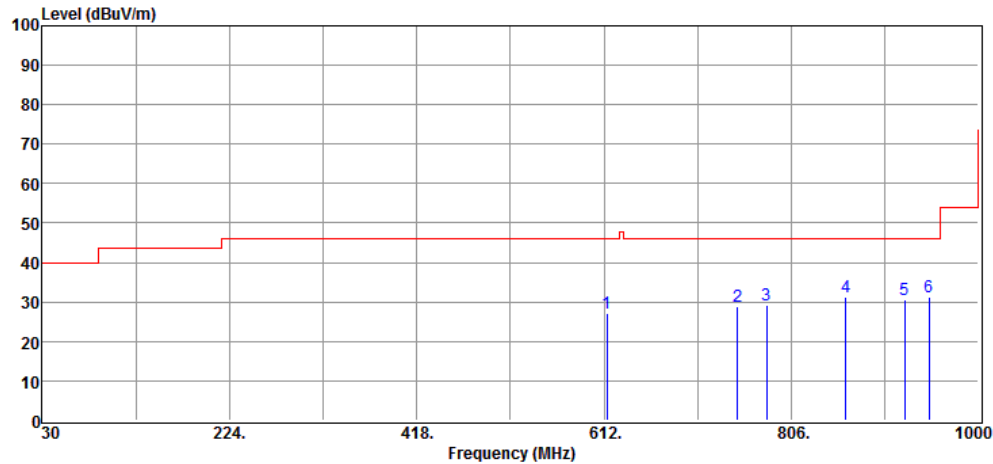
Project Number. : 26LR0069 Temp.(°C)/RH(%) : 22/58
Test Mode : 315 FSK TX Tested by : Jason Chao



No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	643.04	28.19	-1.73	26.46	46.00	-19.54	Peak	HORIZONTAL
2	723.55	28.45	-0.65	27.80	46.00	-18.20	Peak	HORIZONTAL
3	740.04	28.61	0.08	28.69	46.00	-17.31	Peak	HORIZONTAL
4	801.15	28.70	1.02	29.72	46.00	-16.28	Peak	HORIZONTAL
5	854.50	28.09	1.77	29.86	46.00	-16.14	Peak	HORIZONTAL
6	926.28	28.59	3.03	31.62	46.00	-14.38	Peak	HORIZONTAL

International Standard Laboratory Corp.
Company Address: No. 120, Lane 180, Hsin Ho Rd.
Lung-Tan Dist., Tao Yuan City 325, Taiwan
Date: 2026-05-05

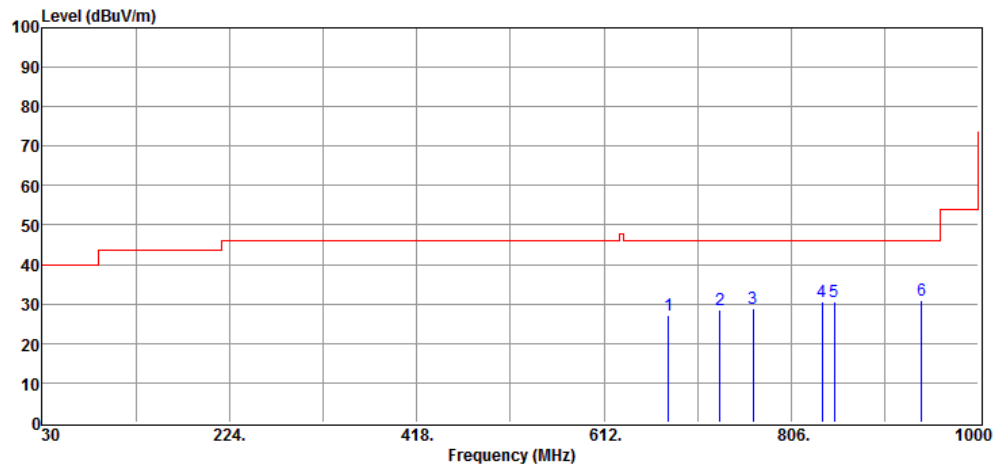
Project Number. : 26LR0069 Temp.(°C)/RH(%) : 22/58
Test Mode : 315 ASK TX Tested by : Jason Chao



No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	614.91	28.85	-1.80	27.05	46.00	-18.95	Peak	VERTICAL
2	750.71	28.35	0.52	28.87	46.00	-17.13	Peak	VERTICAL
3	780.78	28.52	0.81	29.33	46.00	-16.67	Peak	VERTICAL
4	862.26	29.55	1.60	31.15	46.00	-14.85	Peak	VERTICAL
5	923.37	27.71	2.99	30.70	46.00	-15.30	Peak	VERTICAL
6	948.59	27.93	3.42	31.35	46.00	-14.65	Peak	VERTICAL

International Standard Laboratory Corp.
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Date: 2026-05-05

Project Number. : 26LR0069 Temp.(°C)/RH(%) : 22/58
Test Mode : 315 ASK TX Tested by : Jason Chao

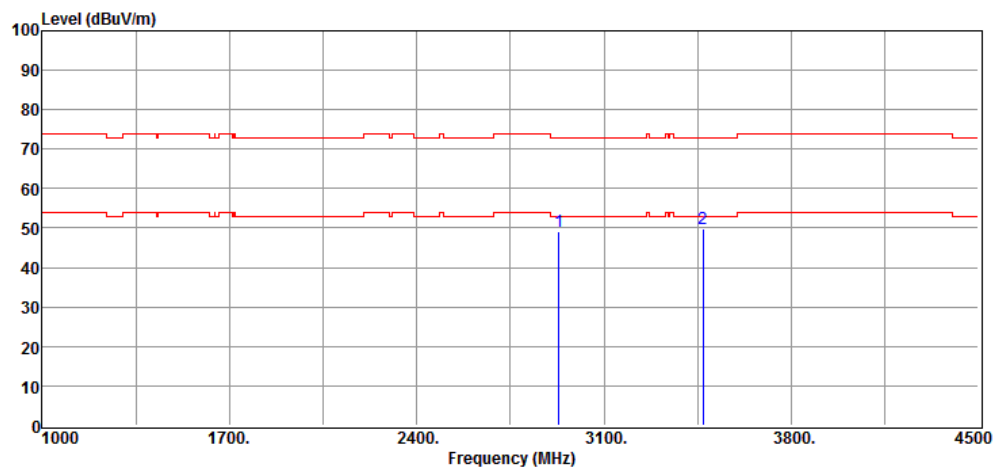


No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	678.93	28.42	-1.41	27.01	46.00	-18.99	Peak	HORIZONTAL
2	732.28	28.77	-0.41	28.36	46.00	-17.64	Peak	HORIZONTAL
3	766.23	28.27	0.68	28.95	46.00	-17.05	Peak	HORIZONTAL
4	838.01	28.95	1.55	30.50	46.00	-15.50	Peak	HORIZONTAL
5	850.62	28.93	1.67	30.60	46.00	-15.40	Peak	HORIZONTAL
6	940.83	27.67	3.31	30.98	46.00	-15.02	Peak	HORIZONTAL

Radiated Spurious Emission Measurement Result (above 1GHz)

International Standard Laboratory Corp.
Company Address: No. 120, Lane 180, Hsin Ho Rd.
Lung-Tan Dist., Tao Yuan City 325, Taiwan
Date: 2026-05-05

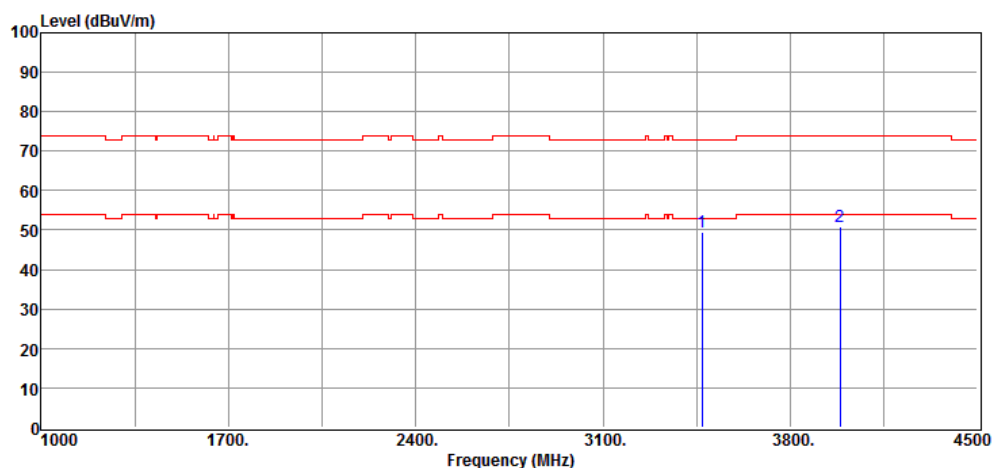
Project Number. : 26LR0069 Temp.(°C)/RH(%) : 22/58
Test Mode : 433.92 FSK TX Tested by : Jason Chao



No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	2932.00	45.08	4.00	49.08	72.87	-23.79	Peak	VERTICAL
2	3471.36	44.49	5.29	49.78	72.87	-23.09	Peak	VERTICAL

International Standard Laboratory Corp.
Company Address: No. 120, Lane 180, Hsin Ho Rd.
Lung-Tan Dist., Tao Yuan City 325, Taiwan
Date: 2026-05-05

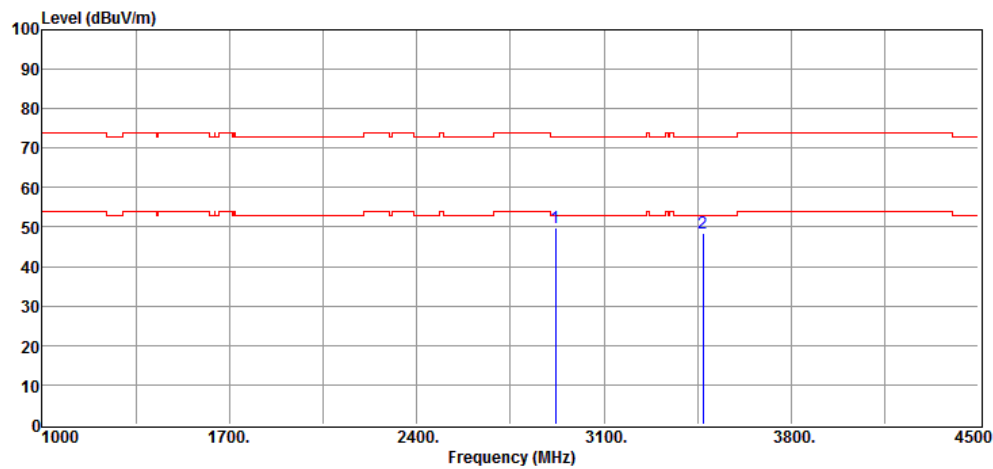
Project Number. : 26LR0069 Temp.(°C)/RH(%) : 22/58
Test Mode : 433.92 FSK TX Tested by : Jason Chao



No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	3471.36	44.19	5.29	49.48	72.87	-23.39	Peak	HORIZONTAL
2	3985.50	44.71	6.09	50.80	74.00	-23.20	Peak	HORIZONTAL

International Standard Laboratory Corp.
 Company Address: No. 120, Lane 180, Hsin Ho Rd.
 Lung-Tan Dist., Tao Yuan City 325, Taiwan
 Date: 2026-05-05

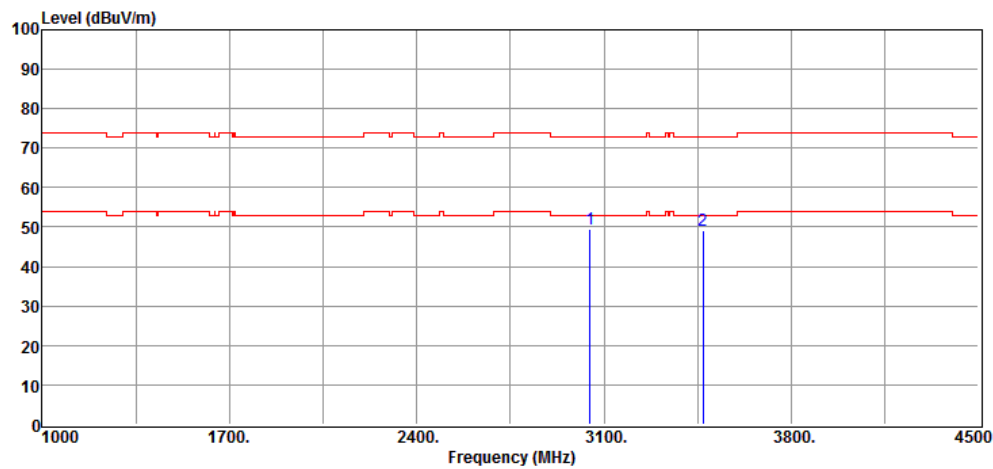
Project Number. : 26LR0069 Temp.(°C)/RH(%) : 22/58
 Test Mode : 433.92 ASK TX Tested by : Jason Chao



No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	2918.00	45.75	3.98	49.73	72.87	-23.14	Peak	VERTICAL
2	3471.36	43.04	5.29	48.33	72.87	-24.54	Peak	VERTICAL

International Standard Laboratory Corp.
Company Address: No. 120, Lane 180, Hsin Ho Rd.
Lung-Tan Dist., Tao Yuan City 325, Taiwan
Date: 2026-05-05

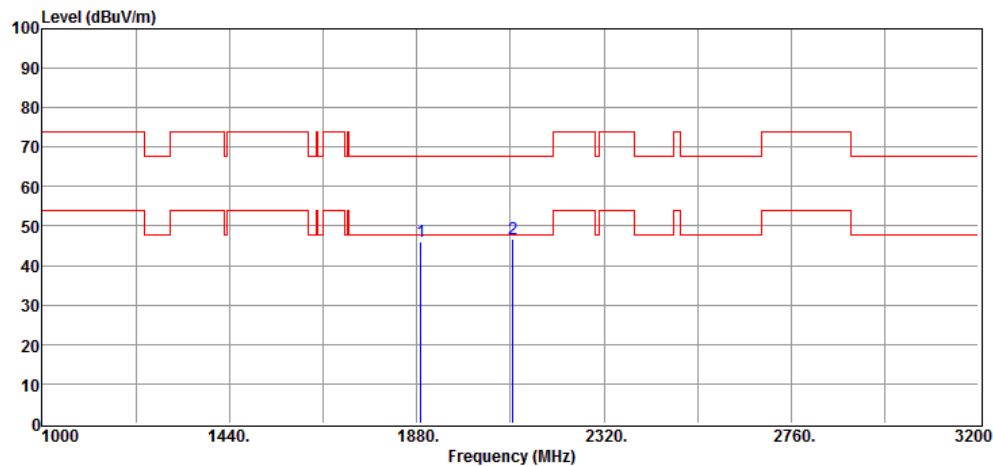
Project Number. : 26LR0069 Temp.(°C)/RH(%) : 22/58
Test Mode : 433.92 ASK TX Tested by : Jason Chao



No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	3047.50	45.11	4.34	49.45	72.87	-23.42	Peak	HORIZONTAL
2	3471.36	43.99	5.29	49.28	72.87	-23.59	Peak	HORIZONTAL

International Standard Laboratory Corp.
Company Address: No. 120, Lane 180, Hsin Ho Rd.
Lung-Tan Dist., Tao Yuan City 325, Taiwan
Date: 2026-05-05

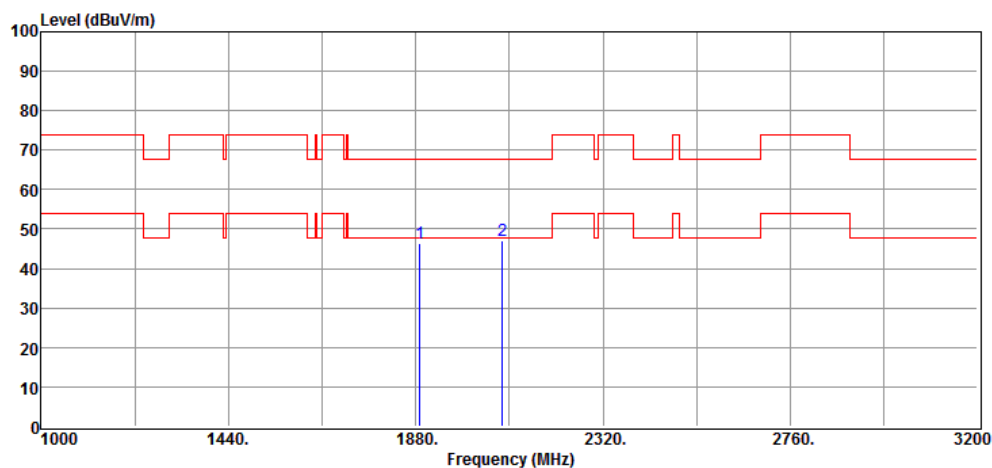
Project Number. : 26LR0069 Temp.(°C)/RH(%) : 22/58
Test Mode : 315 FSK TX Tested by : Jason Chao



No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	1890.00	44.97	1.15	46.12	67.70	-21.58	Peak	VERTICAL
2	2106.60	44.92	1.98	46.90	67.70	-20.80	Peak	VERTICAL

International Standard Laboratory Corp.
 Company Address: No. 120, Lane 180, Hsin Ho Rd.
 Lung-Tan Dist., Tao Yuan City 325, Taiwan
 Date: 2026-05-05

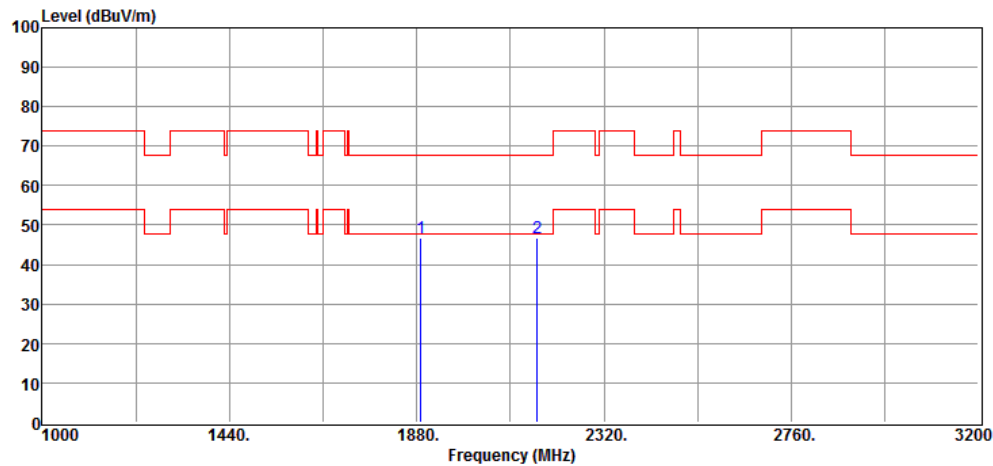
Project Number. : 26LR0069 Temp.(°C)/RH(%) : 22/58
 Test Mode : 315 FSK TX Tested by : Jason Chao



No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	1890.00	45.21	1.15	46.36	67.70	-21.34	Peak	HORIZONTAL
2	2084.60	45.14	1.79	46.93	67.70	-20.77	Peak	HORIZONTAL

International Standard Laboratory Corp.
Company Address: No. 120, Lane 180, Hsin Ho Rd.
Lung-Tan Dist., Tao Yuan City 325, Taiwan
Date: 2026-05-05

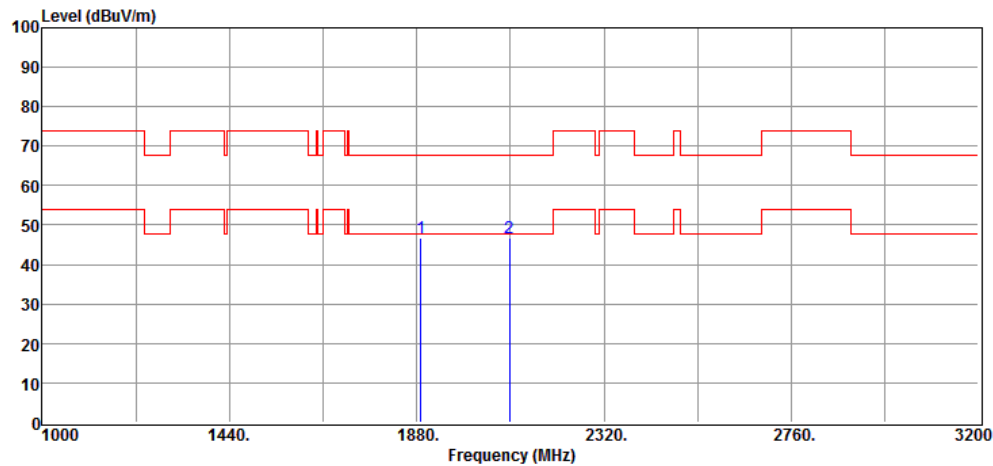
Project Number. : 26LR0069 Temp.(°C)/RH(%) : 22/58
Test Mode : 315 ASK TX Tested by : Jason Chao



No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	1890.00	45.75	1.15	46.90	67.70	-20.80	Peak	VERTICAL
2	2163.80	44.76	1.89	46.65	67.70	-21.05	Peak	VERTICAL

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 Lung-Tan Dist., Tao Yuan City 325, Taiwan
 Date: 2026-05-05

Project Number. : 26LR0069 Temp.(°C)/RH(%) : 22/58
 Test Mode : 315 ASK TX Tested by : Jason Chao



No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	1890.00	45.52	1.15	46.67	67.70	-21.03	Peak	HORIZONTAL
2	2097.80	44.73	1.96	46.69	67.70	-21.01	Peak	HORIZONTAL

8. 20dB Occupied Bandwidth

8.1 Measurement Procedure

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Set EUT as normal operation
3. Set SPA Center Frequency = fundamental frequency, RBW= 10kHz, VBW= 30kHz, Span =3MHz.
4. Set SPA Max hold. Mark peak, -20dB.

8.2 Test SET-UP (Block Diagram of Configuration)

Same as 7.2 Radiated Emission Measurement.

8.3 Measurement Equipment Used:

Same as 7.3 Radiated Emission Measurement.

8.4 Measurement Results

Refer to attached data chart.

The center frequency f_c is **433.92MHz**, according to the Rules, section 15.231(C), the Bandwidth of Center Frequency at-20dB should be calculated as following:

$$433.92 \times 0.0025 = 1.0848(\text{MHz})$$

The center frequency f_c is **315MHz**, according to the Rules, section 15.231(C), the Bandwidth of Center Frequency at-20dB should be calculated as following:

$$315 \times 0.0025 = 0.7875(\text{MHz})$$

8.5 Measurement Result:

433MHz

ASK:

64.5 kHz < limit 1.0848MHz

FSK:

181.4 kHz < limit 1.0848MHz

315MHz

ASK:

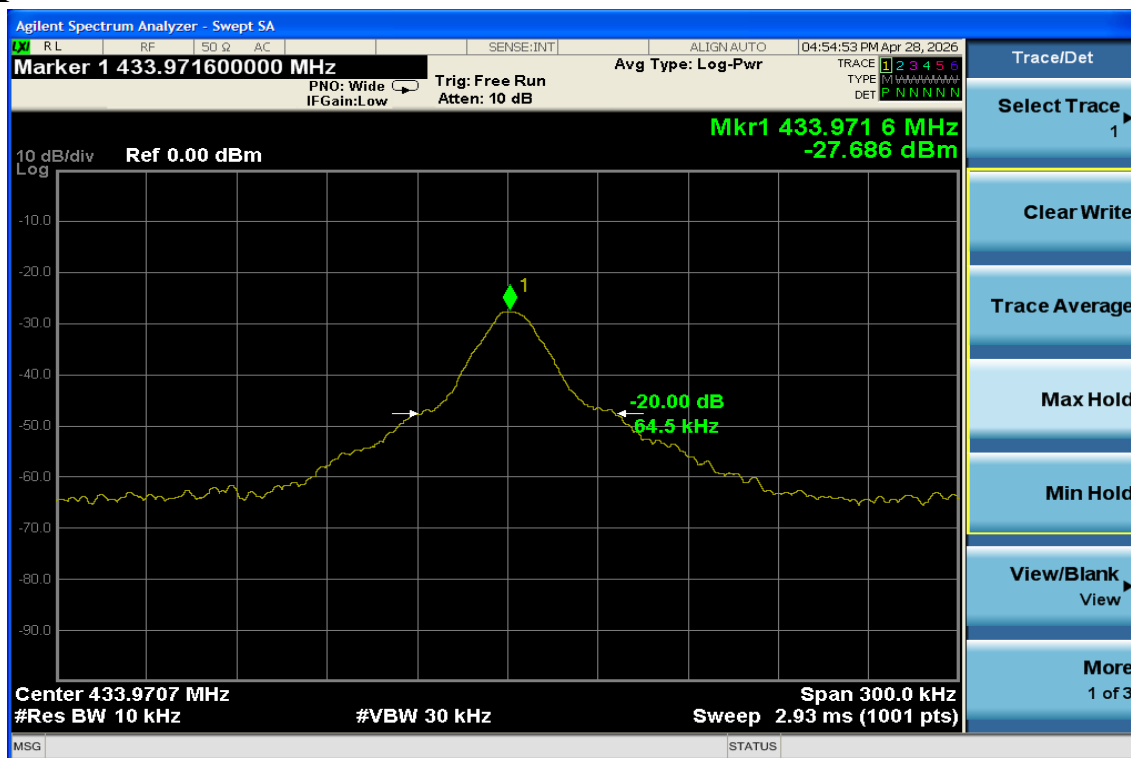
78.7 kHz < limit 0.7875MHz

FSK:

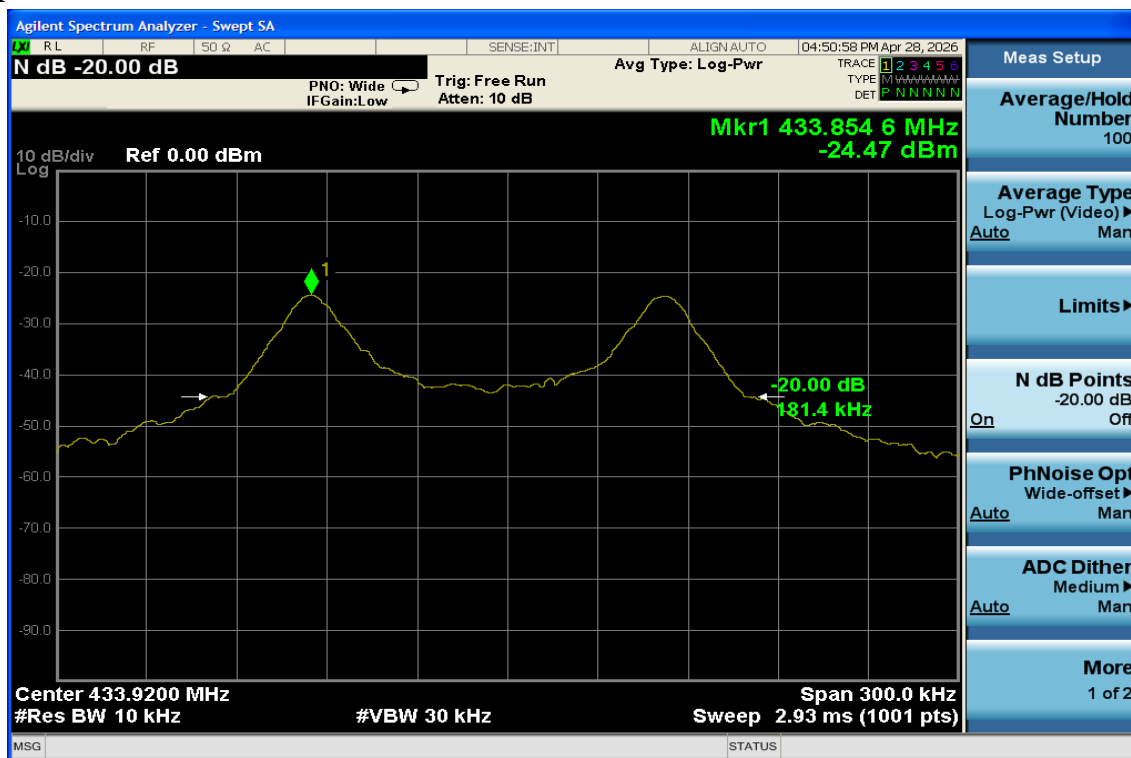
137.4 kHz < limit 0.7875MHz

20dB Band Width Test Data: 433MHz

ASK

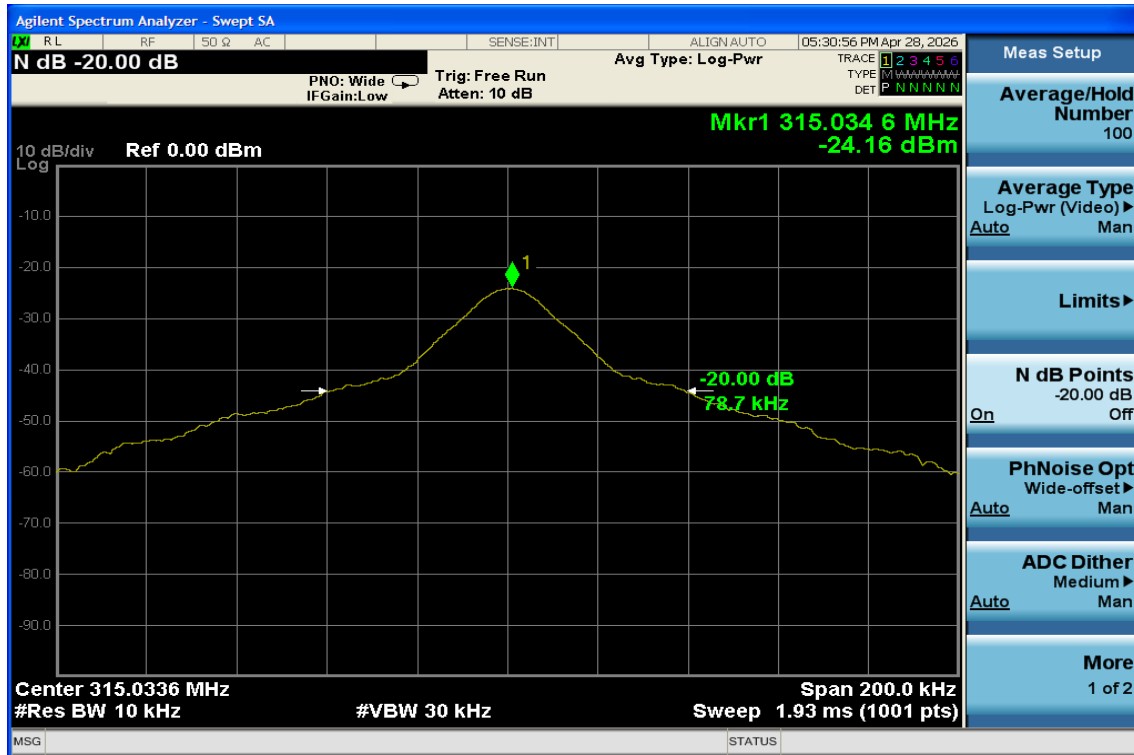


FSK

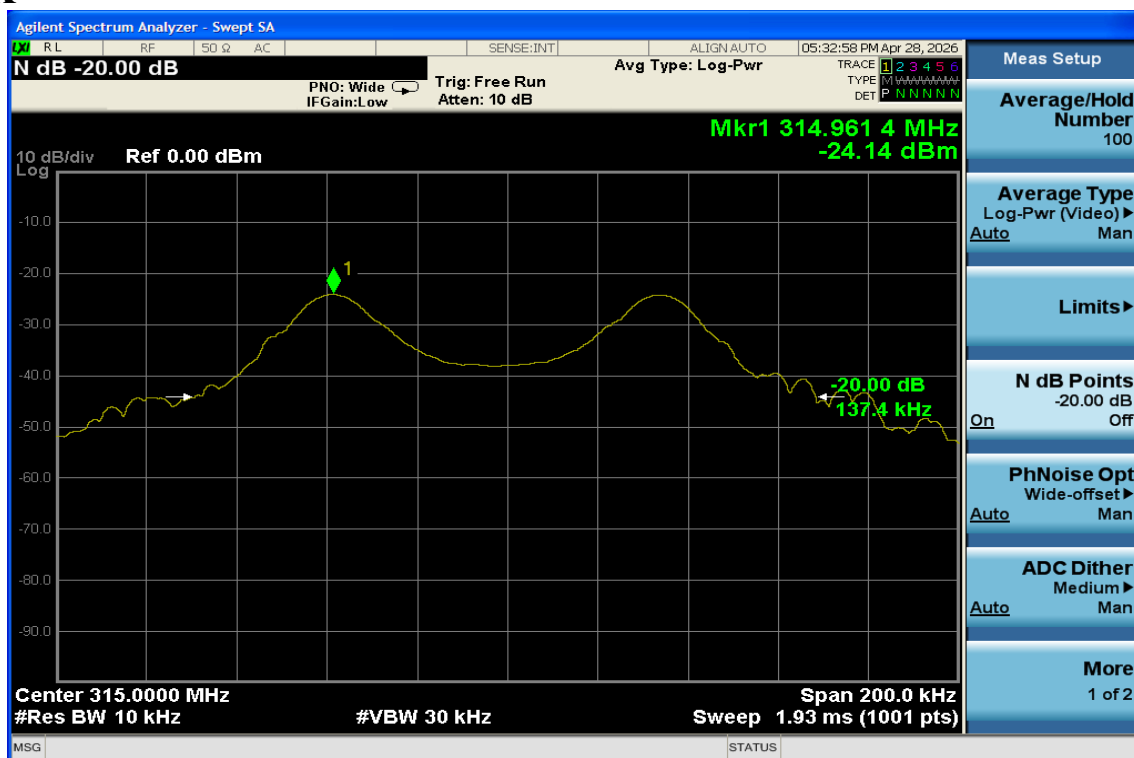


20dB Band Width Test Data: 315MHz

ASK



FSK



9. Silent Period Time Measurement:

15.231 (e)

devices operated under the provisions of this paragraph shall be provided with a means for automatically limiting operation so that the duration of each transmission shall not be greater than one second and the silent period between transmissions shall be at least 30 times the duration of the transmission but in no case less than 10 seconds.

9.1 Measurement Procedure

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Set SPA Center Frequency = fundamental frequency, RBW, VBW= 1MHz, Span =0Hz
3. Set EUT Power on as normal operation
4. Set SPA Max hold. Delta Mark.

9.2 Test SET-UP (Block Diagram of Configuration)

Same as 7.2 Radiated Emission Measurement.

9.3 Measurement Equipment Used:

Same as 7.3 Radiated Emission Measurement.

9.4 Measurement Results

Total transmission time of transmissions calculation:

433MHz:

ASK:

Ton: $0.0076s < 1s$

Tp: $61.32s$

silent period limit: $10s$ or $0.0076s * 30 = 0.228s$

T silent period = $61.32s - 0.0076s = 61.3124s > 10s$

The result: PASS

FSK:

Ton: $0.0077s < 1s$

Tp: $61.44s$

silent period limit: $10s$ or $0.0077s * 30 = 0.21s$

T silent period = $61.44s - 0.0077s = 61.4323s > 10s$

The result: PASS

315MHz

ASK:

Ton: $7.6 ms < 1s$

Tp: $61.92 s$

silent period limit: $10s$ or $0.0076s * 30 = 0.228s$

T silent period = $61.92s - 0.0076s = 61.9124s > 10s$

The result: PASS

FSK:

Ton: $7.6 ms < 1s$

Tp: $61.80 s$

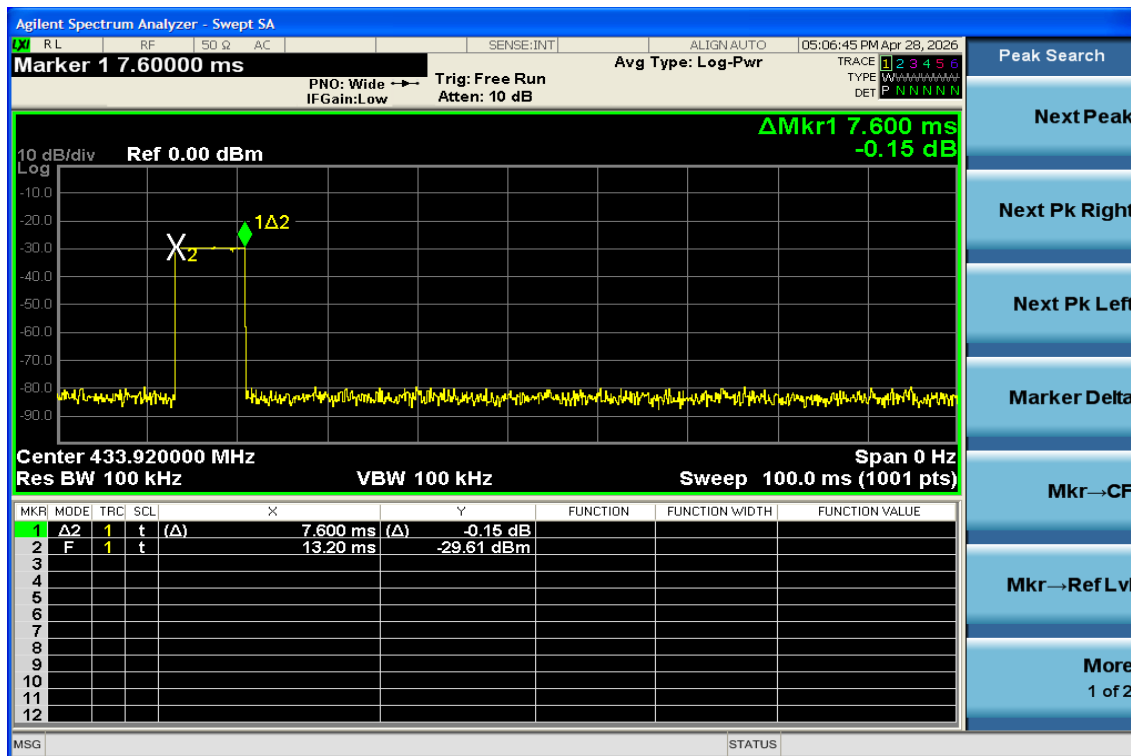
silent period limit: $10s$ or $0.0076s * 30 = 0.228s$

T silent period = $61.80s - 0.0076s = 61.7924s > 10s$

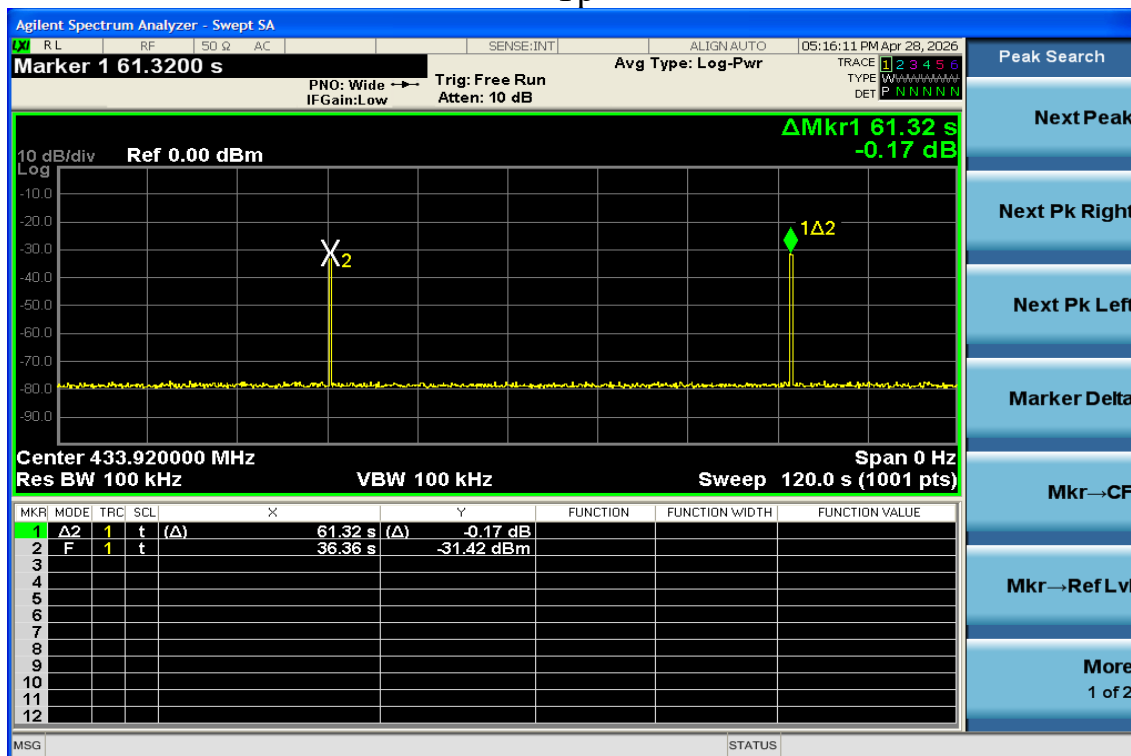
The result: PASS.

433MHz:
ASK

Ton

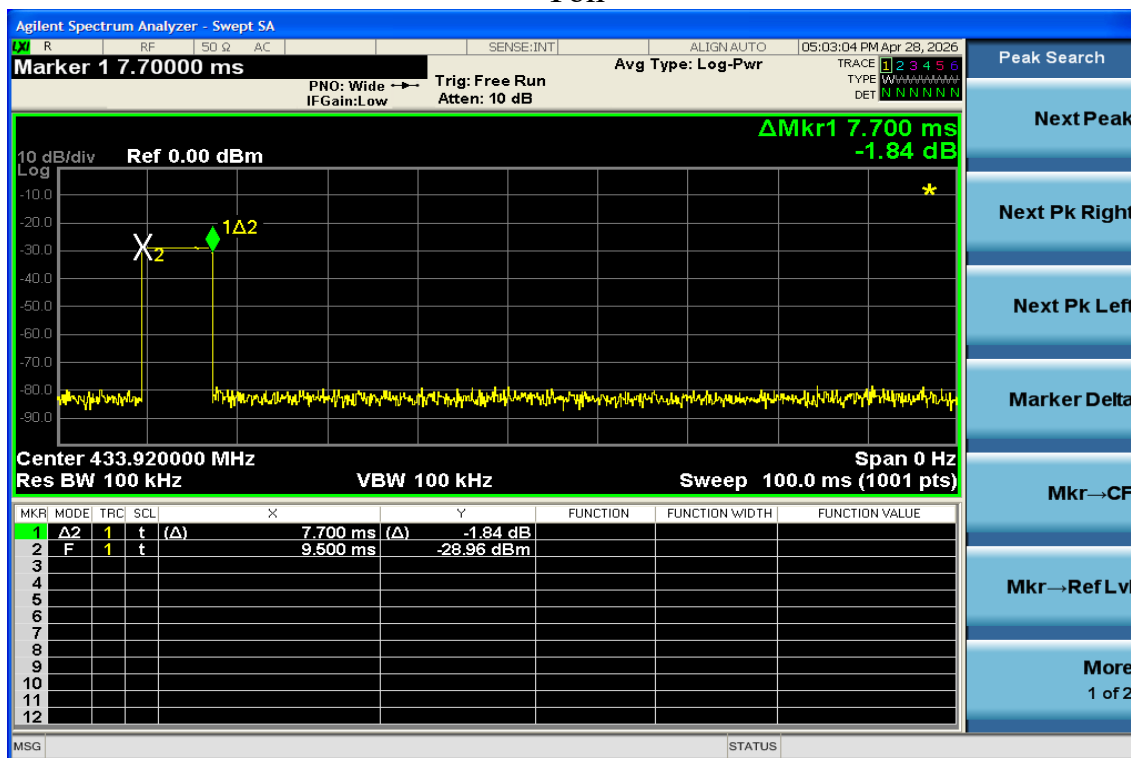


Tp

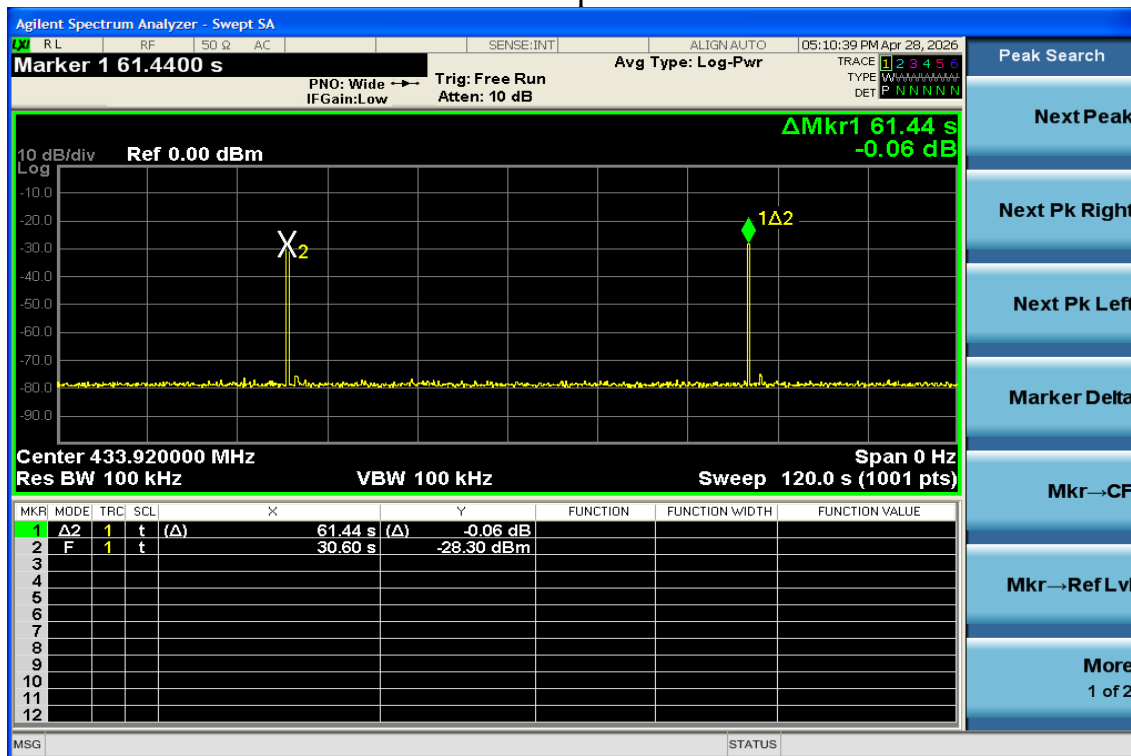


FSK

Ton



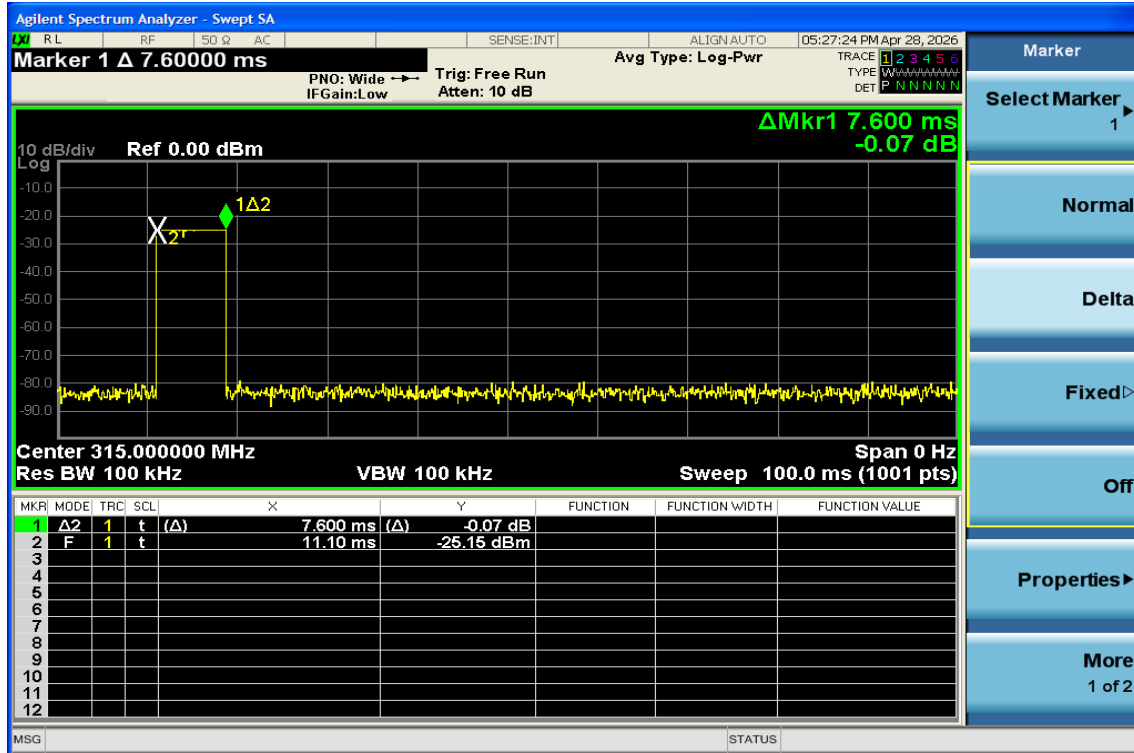
Tp



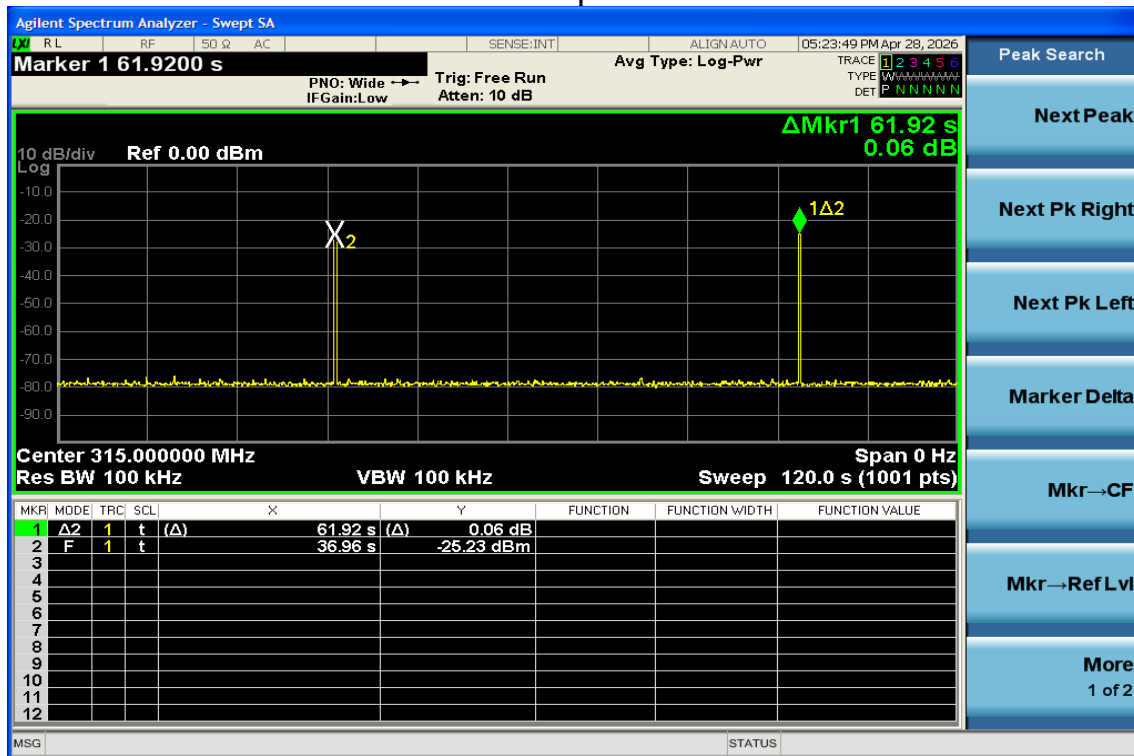
315MHz:

ASK

Ton

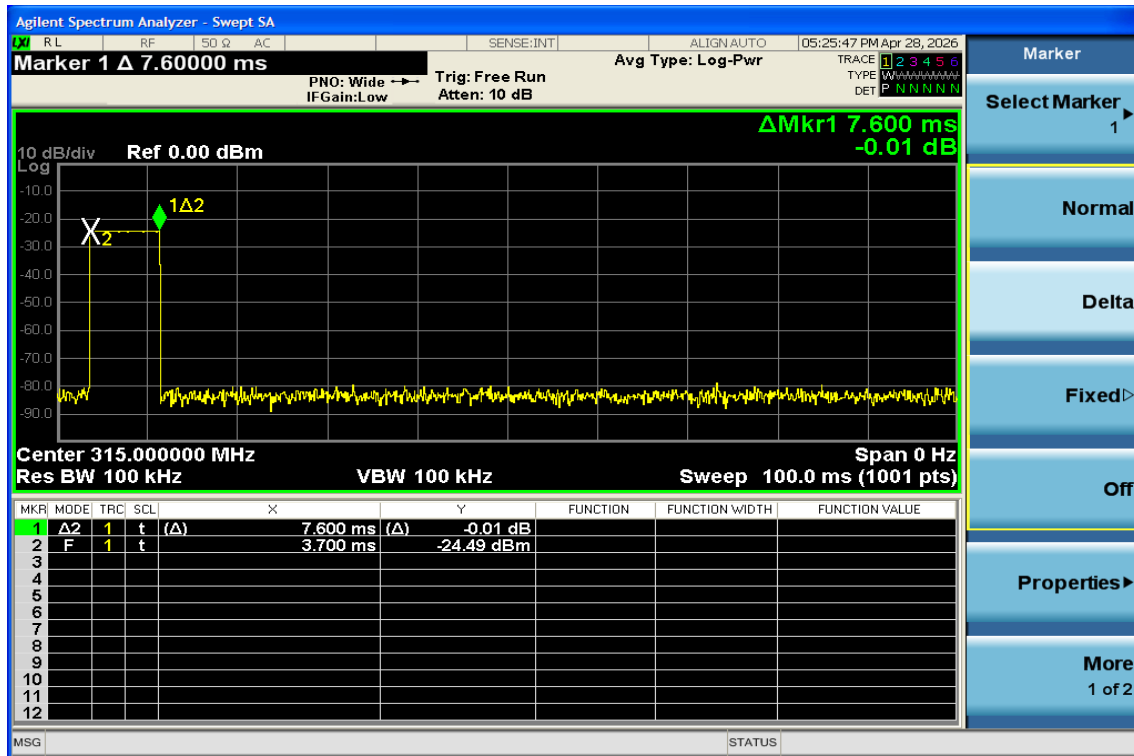


Tp



FSK

Ton



Tp

