TEST REPORT

Application No.:	T32620350005EM-TX
Applicant:	Skyrocket Toys LLC
Address of Applicant:	12910 Culver Blvd,Suite F,Los Angeles, CA 90066, United States of America
Manufacturer:	Skyrocket Toys LLC
Address of Manufacturer:	12910 Culver Blvd,Suite F,Los Angeles, CA 90066, United States of America
Equipment Under Test (EUT):	
EUT Name:	Sky Viper Matrix LED Stunt Drone (Remote)
Model No.:	18840TX
FCC ID:	O5318840TX
Standard(s) :	47 CFR Part 15, Subpart C 15.249
Date of Receipt:	2026-09-07
Date of Test:	2026-09-09 to 2026-09-09
Date of Issue:	2026-09-29
Test Result:	**Pass***

* In the configuration tested, the EUT complied with the standards specified above.

Jeffrey Chen
EMC Manager

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Revision Record			
Revision No.	**Date**	**Report Superseded**	**Remark**

Authorized for issue by:				
		ChunLok_Chan/Project Engineer		Date: 2026-09-28
		Jeffrey Chen /Reviewer		Date: 2026-09-29

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2 Test Summary

Radio Spectrum Technical Requirement				
Item	**Standard**	**Method**	**Requirement**	**Result**
Antenna Requirement	47 CFR Part 15, Subpart C 15.249	N/A	47 CFR Part 15, Subpart C 15.203	Pass

Radio Spectrum Matter Part				
Item	**Standard**	**Method**	**Requirement**	**Result**
Field Strength of the Fundamental Signal (15.249(a))	47 CFR Part 15, Subpart C 15.249	ANSI C63.10-2020+Cor.1-2023 Section 6.5&6.6	47 CFR Part 15, Subpart C 15.249(a)	Pass
Restricted Band Around Fundamental Frequency		ANSI C63.10-2020+Cor.1-2023 Section 6.10.5	47 CFR Part 15, Subpart C 15.205 & 15.249(d) & 15.209	Pass
Radiated Emissions Below 1GHz		ANSI C63.10-2020+Cor.1-2023 Section 6.4&6.5	47 CFR Part 15, Subpart C 15.209 & 15.249 (a),(d)	Pass
Radiated Emissions Above 1GHz		ANSI C63.10-2020+Cor.1-2023 Section 6.6	47 CFR Part 15, Subpart C 15.209 & 15.249 (a),(d)	Pass
20dB Bandwidth		ANSI C63.10-2020+Cor.1-2023 Section 6.9	47 CFR Part 15, Subpart C 15.215	Pass

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4 General Information

4.1 Details of E.U.T.

Power supply:	Remote: DC 4.5 V ('AAA' (LR 03) 1.5V size battery x 3)
Operation Frequency:	2420 MHz - 2480 MHz
Modulation Type:	GFSK
Number of Channels:	4
Antenna Type:	Wire Antenna
Antenna Gain:	0 dBi

Remark:The information in this section is provided by the applicant or manufacturer, SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.

4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
--	--	--	--
The EUT has been tested as an independent unit.			

4.3 Measurement Uncertainty

Test Item	Measurement Uncertainty
Field Strength of the Fundamental Signal (15.249(a))	± 4.7dB (30MHz-1GHz); ± 4.7dB (1GHz-6GHz)
Restricted Band Around Fundamental Frequency	± 4.7dB (30MHz-1GHz); ± 4.7dB (1GHz-6GHz)
Radiated Emissions Below 1GHz	± 3.3dB (Below 30MHz); ± 4.7dB (30MHz-1GHz)
Radiated Emissions Above 1GHz	± 4.7dB (1GHz-18GHz); ± 5.7dB (18GHz-40GHz)
20dB Bandwidth	± 3%

Remark:
The U_{lab} (lab Uncertainty) is less than $U_{cispr/ETSI}$ (CISPR/ETSI Uncertainty), so the test results
– compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
– non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.

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4.4 Test Location

All tests were performed at:

SGS Hong Kong Limited
Unit 2 and 3, G/F, Block A, Po Lung Centre,
11 Wang Chiu Road, Kowloon Bay, Kowloon, Hong Kong
Tel: +852 2774 7472 Fax: +852 2756 4480

No tests were sub-contracted.

4.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **IAS Accreditation (Lab Code: TL-817)**

SGS Hong Kong Limited has met the requirements of AC89, IAS Accreditation Criteria for Testing Laboratories, and has demonstrated compliance with ISO/IEC Standard 17025:2017, General requirements for the competence of testing and calibration laboratories. This organization is accredited to provide the services specified in the scope of accreditation maintained on the IAS website (www.iasonline.org).

The report must not be used by the client to claim product certification, approval, or endorsement by IAS, NIST, or any agency of the Federal Government.

- **FCC Recognized Accredited Test Firm(CAB Registration No.: 514599)**

SGS Hong Kong Limited has been accredited and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Designation Number: HK0015, Test Firm Registration Number: 514599.

- **Industry Canada (Site Registration No.: 26103; CAB Identifier No.: HK0015)**

SGS Hong Kong Limited has been recognized by Department of Innovation, Science and Economic Development (ISED) Canada as a wireless testing laboratory. The acceptance letter from the ISED is maintained in our files. CAB Identifier No: HK0015, Site Registration Number: 26103.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None

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5 Equipment List

Field Strength of the Fundamental Signal (15.249(a))					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
3m Semi-Anechoic Chamber	ChamPro	N/A	E229	2026/1/13	2027/1/12
Coaxial Cable	SGS	N/A	E167	2025/7/7	2027/7/6
EMI Test Receiver (9kHz to 7GHz)	Rohde & Schwarz	ESR7	E314	2026/6/10	2027/6/9
TRILOG Super Broadb. Test Antenna, (25) 30-1000 (2000) MHz	Schwarzbeck	VULB 9168	E264	2026/3/3	2028/3/2
EMC32 Test software	Rohde & Schwarz	Version 10	N/A	N/A	N/A
Signal and Spectrum Analyzer	Rohde & Schwarz	FSW26	E296	2026/8/19	2027/8/18
Horn Antenna 1 - 18GHz	Schwarzbeck	BBHA9120D	E211	2026/3/10	2028/3/9
Preamplifier 33dB, 1 - 18GHz	Schwarzbeck	BBV9718	E214	2026/7/29	2027/7/28
RF cable SMA to SMA 10000mm	HUBER+SUHNER	SF104-26.5/2*11SMA 45	E207	2025/7/16	2027/7/15
Boresight Mast Controller	ChamPro	AM-BS-4500-E	E237	N/A	N/A
Turntable with Controller	ChamPro	EM1000	E238	N/A	N/A

Restricted Band Around Fundamental Frequency					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
3m Semi-Anechoic Chamber	ChamPro	N/A	E229	2026/1/13	2027/1/12
Coaxial Cable	SGS	N/A	E167	2025/7/7	2027/7/6
EMI Test Receiver (9kHz to 7GHz)	Rohde & Schwarz	ESR7	E314	2026/6/10	2027/6/9
TRILOG Super Broadb. Test Antenna, (25) 30-1000 (2000) MHz	Schwarzbeck	VULB 9168	E264	2026/3/3	2028/3/2
EMC32 Test software	Rohde & Schwarz	Version 10	N/A	N/A	N/A
Signal and Spectrum Analyzer	Rohde & Schwarz	FSW26	E296	2026/8/19	2027/8/18
Horn Antenna 1 - 18GHz	Schwarzbeck	BBHA9120D	E211	2026/3/10	2028/3/9
Preamplifier 33dB, 1 - 18GHz	Schwarzbeck	BBV9718	E214	2026/7/29	2027/7/28
RF cable SMA to SMA 10000mm	HUBER+SUHNER	SF104-26.5/2*11SMA 45	E207	2025/7/16	2027/7/15

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Boresight Mast Controller	ChamPro	AM-BS-4500-E	E237	N/A	N/A
Turntable with Controller	ChamPro	EM1000	E238	N/A	N/A

Radiated Emissions Below 1GHz					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
3m Semi-Anechoic Chamber	ChamPro	N/A	E229	2026/1/13	2027/1/12
Coaxial Cable	SGS	N/A	E167	2025/7/7	2027/7/6
EMI Test Receiver (9kHz to 7GHz)	Rohde & Schwarz	ESR7	E314	2026/6/10	2027/6/9
LOOP Antenna	Rohde & Schwarz	HM020	E181	2024/2/3	2027/2/2
TRILOG Super Broadb. Test Antenna, (25) 30-1000 (2000) MHz	Schwarzbeck	VULB 9168	E264	2026/3/3	2028/3/2
EMC32 Test software	Rohde & Schwarz	Version 10	N/A	N/A	N/A
Boresight Mast Controller	ChamPro	AM-BS-4500-E	E237	N/A	N/A
Turntable with Controller	ChamPro	EM1000	E238	N/A	N/A

Radiated Emissions Above 1GHz					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
3m Semi-Anechoic Chamber	ChamPro	N/A	E229	2026/1/13	2027/1/12
Coaxial Cable	SGS	N/A	E167	2025/7/7	2027/7/6
EMI Test Receiver (9kHz to 7GHz)	Rohde & Schwarz	ESR7	E314	2026/6/10	2027/6/9
EMC32 Test software	Rohde & Schwarz	Version 10	N/A	N/A	N/A
Horn Antenna 1 - 18GHz	Schwarzbeck	BBHA9120D	E211	2026/3/10	2028/3/9
Signal and Spectrum Analyzer 40GHz	Rohde & Schwarz	FSV40	E235	2026/8/19	2027/8/18
Horn Antenna 15 - 40GHz	Schwarzbeck	BBHA9170	E212	2026/3/10	2029/3/9
Broadband Coaxial Preamplifier typ. 30 dB, 18-40 GHz	Schwarzbeck	BBV 9721	E266	2026/3/10	2029/3/9
Preamplifier 33dB, 1 - 18GHz	Schwarzbeck	BBV9718	E214	2026/7/29	2027/7/28
RF cable SMA to SMA 10000mm	HUBER+SUHNER	SF104-26.5/2*11SMA 45	E207	2025/7/16	2027/7/15
Boresight Mast Controller	ChamPro	AM-BS-4500-E	E237	N/A	N/A
Turntable with Controller	ChamPro	EM1000	E238	N/A	N/A

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RF Conducted Test					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
FSV40 SIGNAL ANALYZER 40GHz	Rohde & Schwarz	FSV40	E235	2026/8/19	2027/8/18
OSP	Rohde & Schwarz	OSP-B157W8	E332	2026/8/18	2027/8/17
Cable	Rohde & Schwarz	J12J103539-00-2	E239	2025/4/24	2027/4/23
WMS32 Test software	Rohde & Schwarz	N/A	Version 11	N/A	N/A

General used equipment					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
Digital temperature & humidity data logger	Shandong Renke Control Technology Co., Ltd.	COS-03	E232	2026/07/21	2027/07/20
Electronic Digital Thermometer with Hygrometer	Huner + Suhner	2074/2075	E159	2026/07/20	2027/07/19
Barometer with digital thermometer	SATO	7612-00	E218	2026/05/11	2027/05/10

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6 Radio Spectrum Technical Requirement

6.1 Antenna Requirement

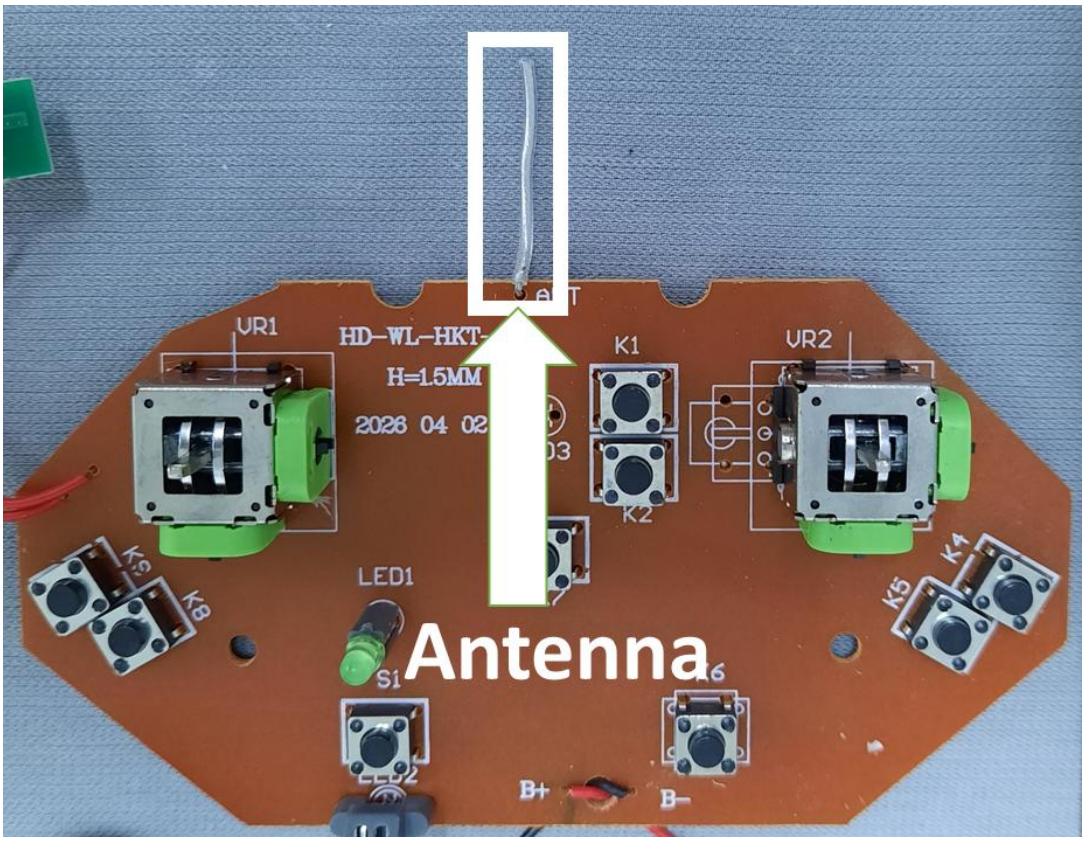
6.1.1 Test Requirement:

47 CFR Part 15, Subpart C 15.203

6.1.2 Conclusion

15.203 requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.



EUT Antenna:

The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 0dBi.

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7 Radio Spectrum Matter Test Results

7.1 Field Strength of the Fundamental Signal (15.249(a))

Test Requirement 47 CFR Part 15, Subpart C 15.249(a)
Test Method: ANSI C63.10-2020+Cor.1-2023 Section 6.5&6.6
Measurement Distance: 3m
Test Engineer: ChunLok_Chan

Limit:

Fundamental frequency(MHz)	Field strength of fundamental(millivolts/meter)	Field strength of harmonics(microvolts/meter)
902-928	50	500
2400-2483.5	50	500
5725-5875	50	500
24000-24250	250	2500
Remark: The frequencies above 1000MHz are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For fundamental frequency in “902-928MHz”, the field strength of fundamental is based on Quasi-Peak.		

7.1.1 E.U.T. Operation

Operating Environment:
Temperature: 26.7 °C Humidity: 53.7 % RH Atmospheric Pressure: 1004 mbar

7.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in transmitting with modulation mode.

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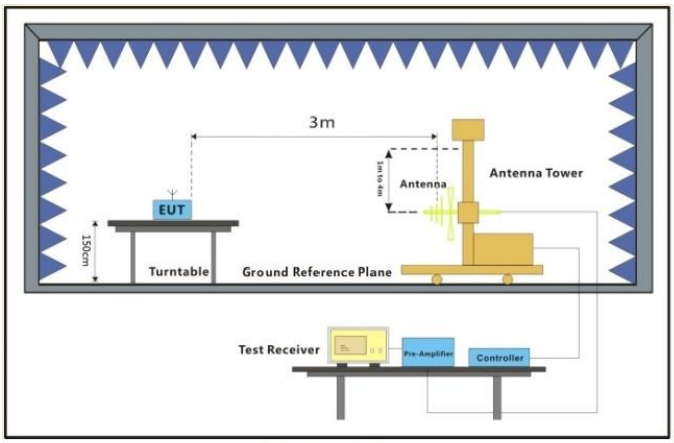
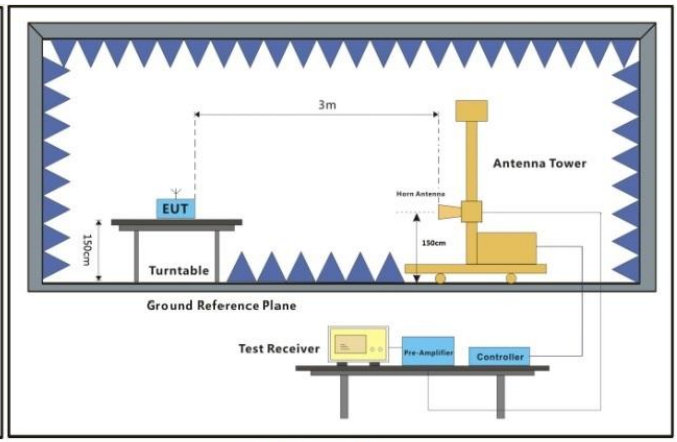
7.1.3 Test Setup Diagram



30MHz-1GHz



Above 1GHz

7.1.4 Measurement Procedure and Data

a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

c.The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

d. The antenna height 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.

e.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 (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

f.The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

g.If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

h.Test the EUT in the lowest channel, the middle channel, the Highest channel.

i.The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.

j.Repeat above procedures until all frequencies measured was complete.

Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

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7.2 Restricted Band Around Fundamental Frequency

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.249(d) & 15.209
Test Method: ANSI C63.10-2020+Cor.1-2023 Section 6.10.5
Measurement Distance: 3m
Test Engineer: ChunLok_Chan

Limit:

Frequency	Limit (dBuV/m @3m)	Remark
30MHz-88MHz	40.0	Quasi-peak Value
88MHz-216MHz	43.5	Quasi-peak Value
216MHz-960MHz	46.0	Quasi-peak Value
960MHz-1GHz	54.0	Quasi-peak Value
Above 1GHz	54.0	Average Value
Above 1GHz	74.0	Peak Value
Emission radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209,whichever is the lesser attenuation.		

7.2.1 E.U.T. Operation

Operating Environment:

Temperature: 24.8 °C Humidity: 53.8 % RH Atmospheric Pressure: 1004 mbar

7.2.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in transmitting with modulation mode.

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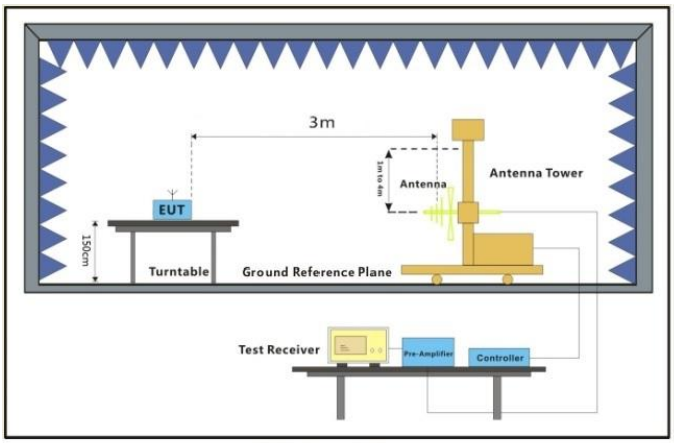
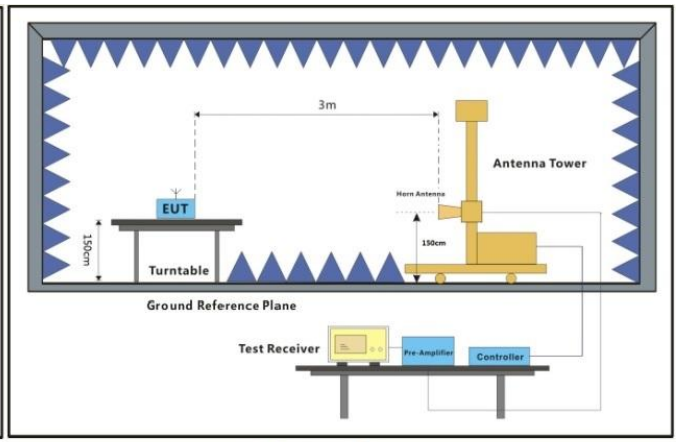
7.2.3 Test Setup Diagram



30MHz-1GHz



Above 1GHz

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7.2.4 Measurement Procedure and Data

a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8m above the ground at a semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3m or 10m away from the interference-receiving antenna, which was mounted on the variable-height antenna tower.

c. The antenna height is varied from 1m to 4m 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.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1m to 4m (for the test frequency of below 30MHz, the antenna was tuned to heights 1m) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using quasi-peak method as specified and then reported in a data sheet.

g. Test the EUT in the lowest channel, the middle channel, the Highest channel.

h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.

i. Repeat above procedures until all frequencies measured was complete.

Remark:

1. At frequencies below 1GHz, measurements may be performed at a distance different to specified in the regulations.

Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor+ Aux Factor (if applicable)

The aux factor needs to be added when measurements are performed at a distance other than the limit distance provided.

EX. Below 30MHz, Aux Factor = 40 dB/decade of distance, the aux factor is 40log(3/300) = -80dB (for 3m test distance).

EX. Above 30MHz, Aux Factor = 20 dB/decade of distance, the aux factor is 20log(10/3) = 10.46dB (for 10m test distance).

2. Scan from 9kHz to 30MHz, the disturbance below 30MHz was very low. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

3. The disturbance below 1GHz was very low and the harmonics were the highest point could be found when testing, so only the worst-case test curve is displayed.

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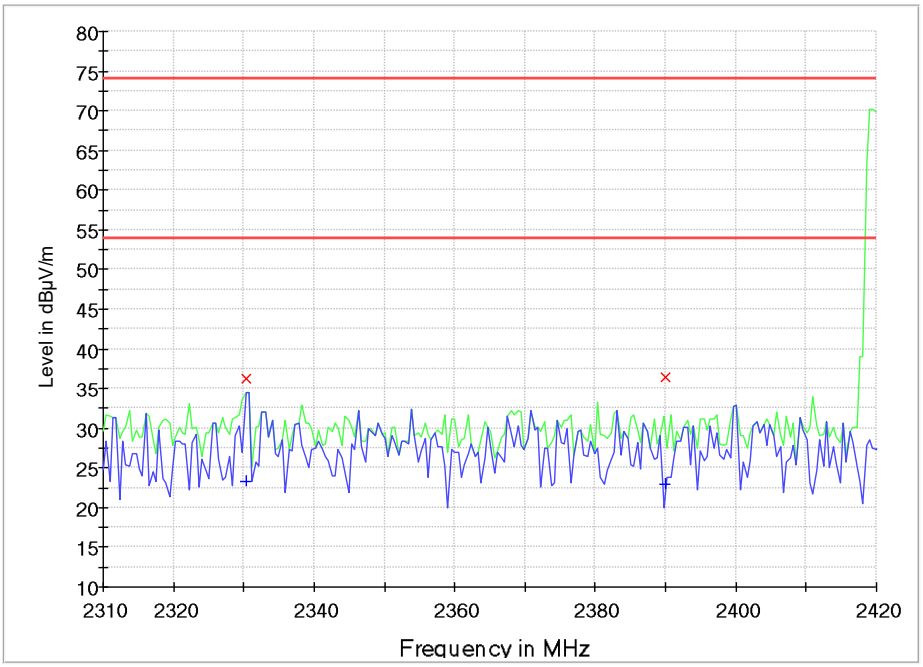
2420



Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Corr. (dB/m)
2330.250000	36.2	23.4	1000.0	1000.000	155.0	H	-1.5
2390.000000	36.5	22.9	1000.0	1000.000	155.0	H	-1.7

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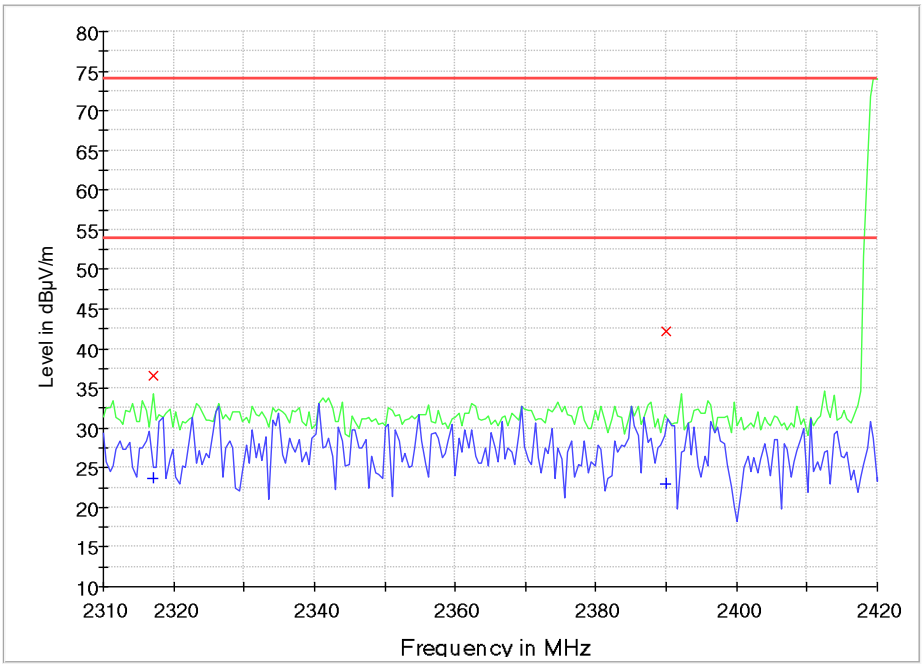

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Corr. (dB/m)
2317.027778	36.5	23.6	1000.0	1000.000	155.0	V	-1.4
2390.000000	42.2	23.0	1000.0	1000.000	155.0	V	-1.7

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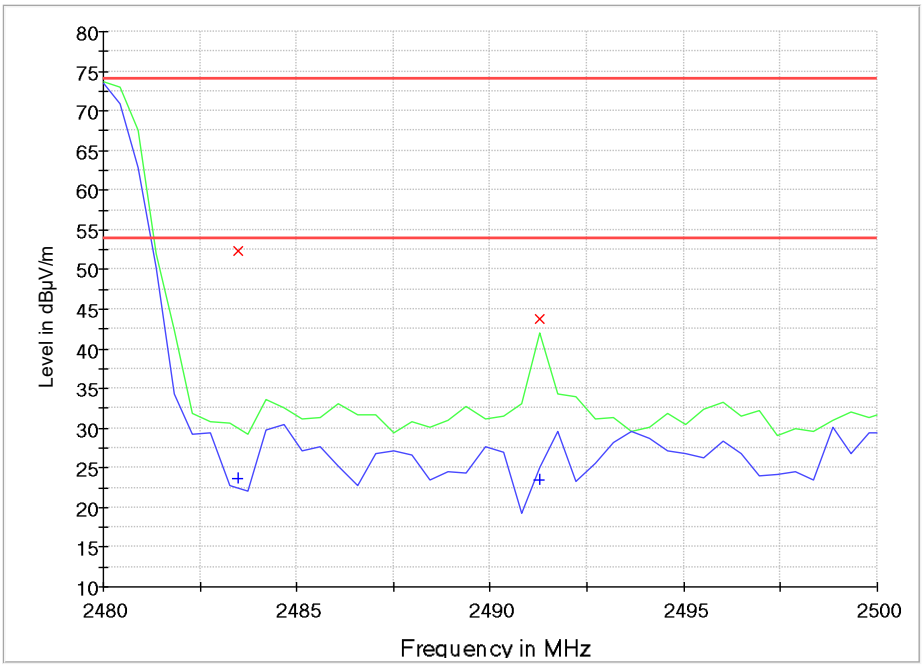
2480



Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Corr. (dB/m)
2483.500000	52.3	23.7	1000.0	1000.000	155.0	H	-1.5
2491.277778	43.9	23.4	1000.0	1000.000	155.0	H	-1.5

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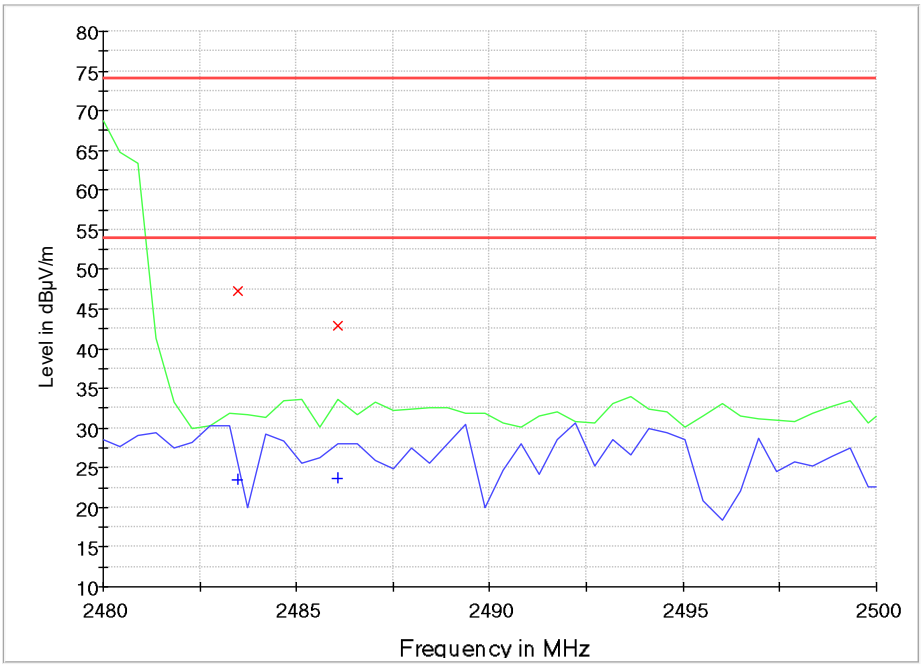

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Corr. (dB/m)
2483.500000	47.2	23.5	1000.0	1000.000	155.0	V	-1.5
2486.083333	42.9	23.6	1000.0	1000.000	155.0	V	-1.5

Peak limit = 74 dBµV/m
Average limit = 54 dBµV/m

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7.3 Radiated Emissions Below 1GHz

Test Requirement 47 CFR Part 15, Subpart C 15.209 & 15.249 (a),(d)
Test Method: ANSI C63.10-2020+Cor.1-2023 Section 6.4&6.5
Measurement Distance: 3m
Test Engineer: ChunLok_Chan

Limit:

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
960-1000	500	3

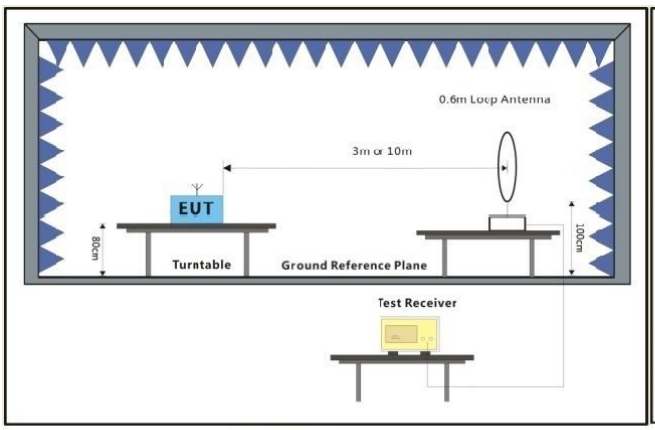
7.3.1 E.U.T. Operation

Operating Environment:
Temperature: 26.8 °C Humidity: 53.7 % RH Atmospheric Pressure: 1004 mbar

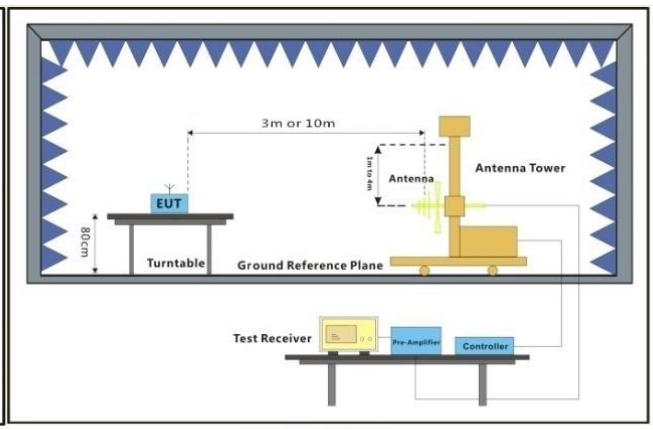
7.3.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in transmitting with modulation mode.

7.3.3 Test Setup Diagram



Below 30MHz



30MHz-1GHz

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7.3.4 Measurement Procedure and Data

a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8m above the ground at a semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3m or 10m away from the interference-receiving antenna, which was mounted on the variable-height antenna tower.

c. The antenna height is varied from 1m to 4m 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.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1m to 4m (for the test frequency of below 30MHz, the antenna was tuned to heights 1m) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using quasi-peak method as specified and then reported in a data sheet.

g. Test the EUT in the lowest channel, the middle channel, the Highest channel.

h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.

i. Repeat above procedures until all frequencies measured was complete.

Remark:

1. Scan from 9kHz to 30MHz, the disturbance below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only below points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

2. The disturbance below 1GHz was very low and the harmonics were the highest point could be found when testing, so only the worst-case test curve is displayed.

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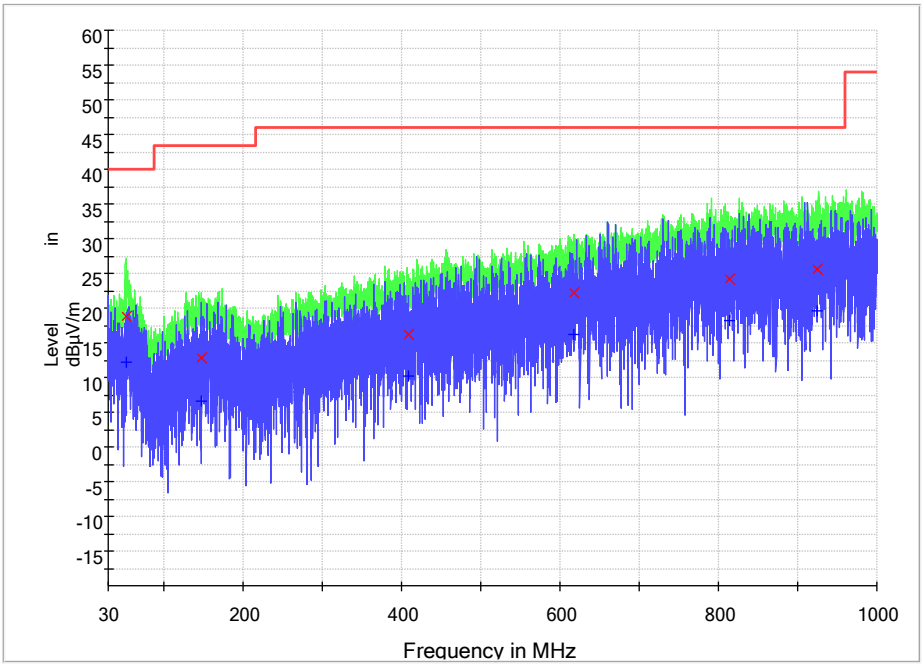
2420

Test Mode: 00; Polarity: Horizontal



Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m
51.963571	18.7	1000.0	120.000	H	20.5	21.3	40.0
148.270714	12.7	1000.0	120.000	H	20.6	30.8	43.5
408.369286	16.2	1000.0	120.000	H	23.8	29.8	46.0
617.404286	22.3	1000.0	120.000	H	28.8	23.7	46.0
814.730000	24.2	1000.0	120.000	H	31.4	21.8	46.0
925.240714	25.6	1000.0	120.000	H	32.5	20.4	46.0

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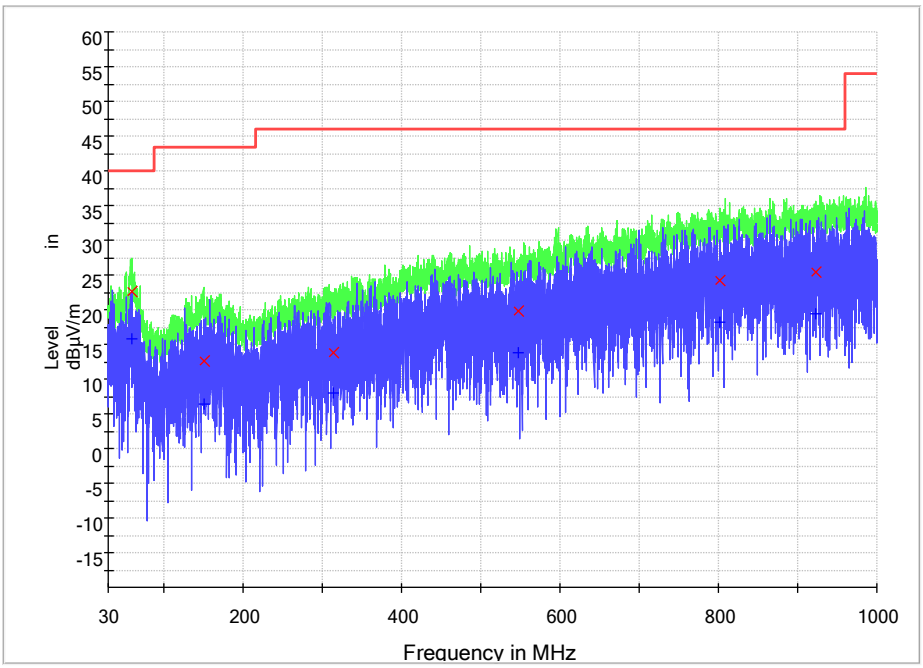
Test Mode: 00; Polarity: Vertical



Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m
59.030714	22.7	1000.0	120.000	V	20.3	17.3	40.0
150.210714	12.5	1000.0	120.000	V	20.7	31.0	43.5
313.586429	13.9	1000.0	120.000	V	21.8	32.1	46.0
547.841429	19.8	1000.0	120.000	V	27.1	26.2	46.0
802.120000	24.2	1000.0	120.000	V	31.4	21.8	46.0
922.885000	25.5	1000.0	120.000	V	32.4	20.5	46.0

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7.4 Radiated Emissions Above 1GHz

Test Requirement 47 CFR Part 15, Subpart C 15.209 & 15.249 (a),(d)
Test Method: ANSI C63.10-2020+Cor.1-2023 Section 6.6
Measurement Distance: 3m
Test Engineer: ChunLok_Chan

Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
Above 1000	500	3

7.4.1 E.U.T. Operation

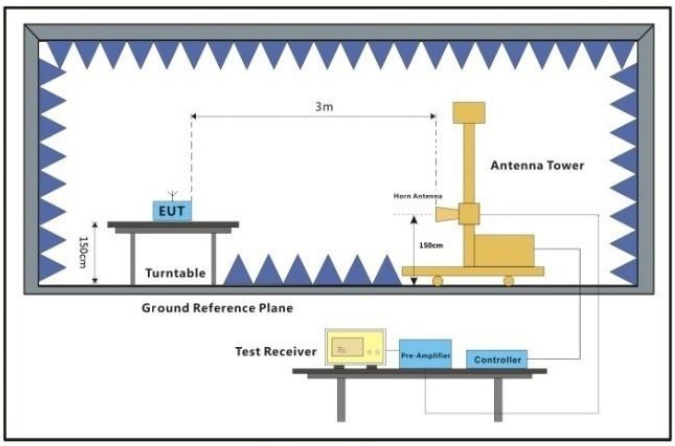
Operating Environment:

Temperature: 25.6 °C Humidity: 55.6 % RH Atmospheric Pressure: 1004 mbar

7.4.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in transmitting with modulation mode.

7.4.3 Test Setup Diagram



Above 1GHz

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7.4.4 Measurement Procedure and Data

a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5m above the ground at a 3m fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. The EUT was set 3m away from the interference-receiving antenna from 1GHz to 18GHz, and 1m away from the interference-receiving antenna above 18GHz.

b. The interference-receiving antenna was mounted on the variable-height antenna tower, with its boresight facing the EUT throughout the test.

c. The antenna height is varied from 1m to 4m 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.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1m to 4m and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. Test the EUT in the lowest channel, the middle channel, the Highest channel.

g. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.

h. Repeat above procedures until all frequencies measured was complete.

Remark:

1. Scan from 1GHz to 10th harmonic of the highest frequency or 40 GHz, whichever is lower.

2. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.

3. For the frequency above 18GHz, testing had been executed under all test modes, only the worst-case test curve is displayed in the report.

4. For devices with multiple operating modes, measurements on the middle channel is used to determine the worst-case mode(s). Only the worst-case mode with the highest output power and the mode with the highest output power spectral density for each modulation family (e.g., OFDM and direct sequence spread spectrum) is recorded in the test report.

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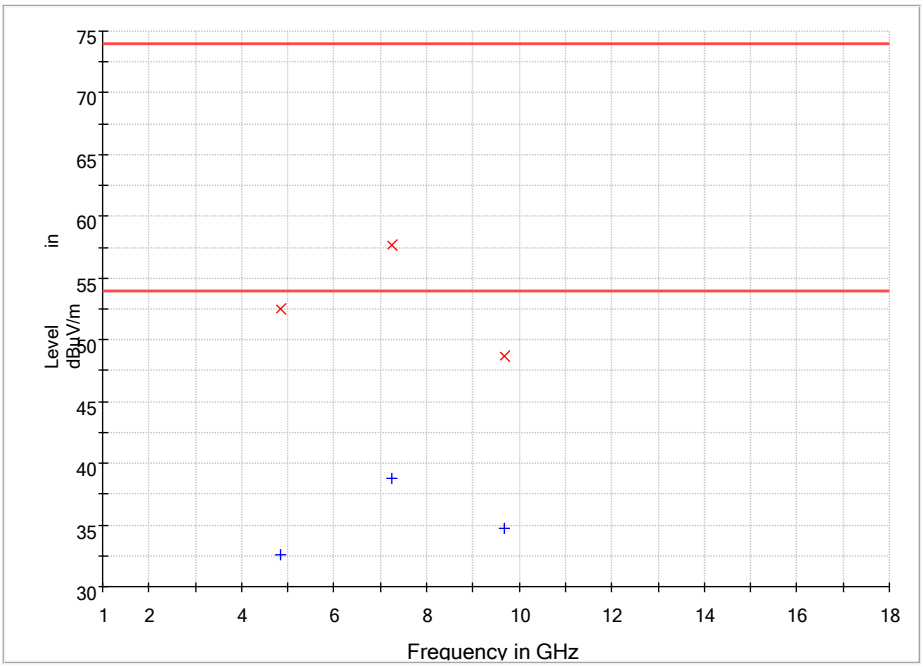
2420



Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m	Meas. Time (ms)	Bandwidth	Height	Pol	Corr. (dB/m
4840.000000	52.5	32.6	1000.0	1000.000	155.0	H	7.4
7260.000000	57.7	38.8	1000.0	1000.000	155.0	H	15.5
9680.000000	48.7	34.7	1000.0	1000.000	155.0	H	16.6

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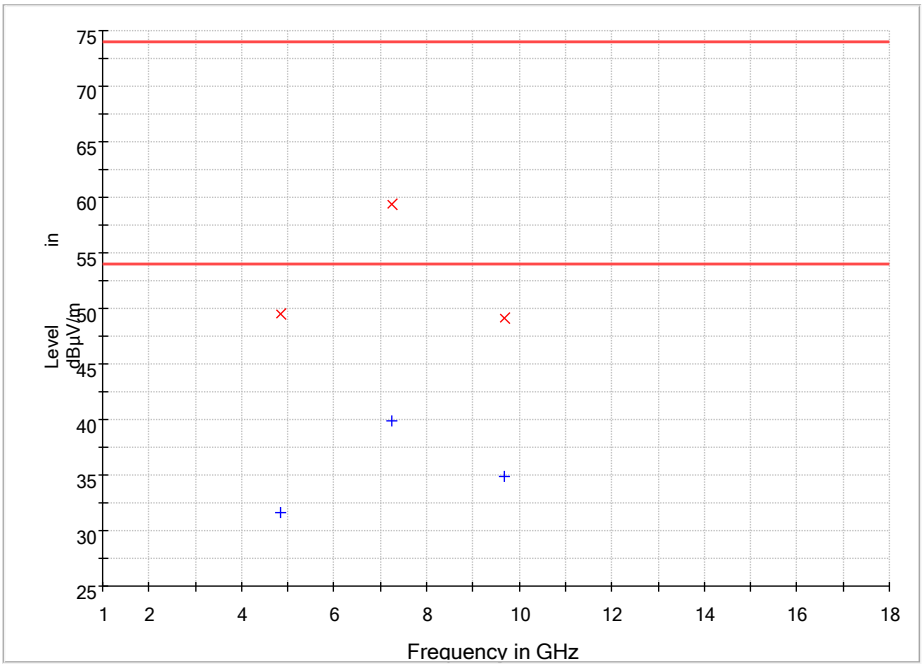

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m	Meas. Time (ms)	Bandwidth	Height	Pol	Corr. (dB/m
4840.000000	49.5	31.6	1000.0	1000.000	155.0	V	7.4
7260.000000	59.4	39.8	1000.0	1000.000	155.0	V	15.5
9680.000000	49.2	34.8	1000.0	1000.000	155.0	V	16.6

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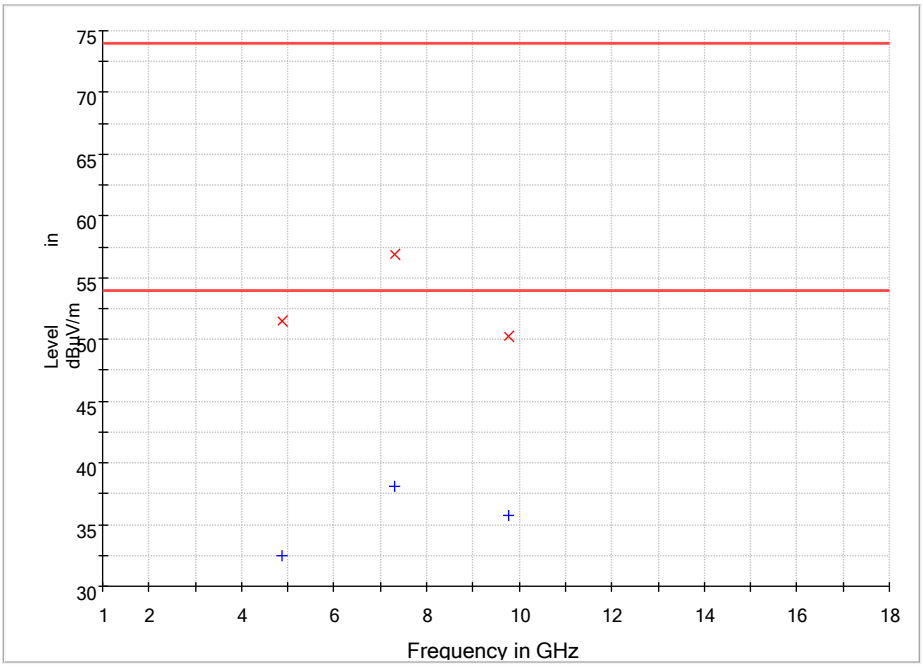
2440



Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m	Meas. Time (ms)	Bandwidth	Height	Pol	Corr. (dB/m
4880.000000	51.5	32.4	1000.0	1000.000	155.0	H	7.6
7320.000000	56.8	38.1	1000.0	1000.000	155.0	H	15.5
9760.000000	50.3	35.8	1000.0	1000.000	155.0	H	16.7

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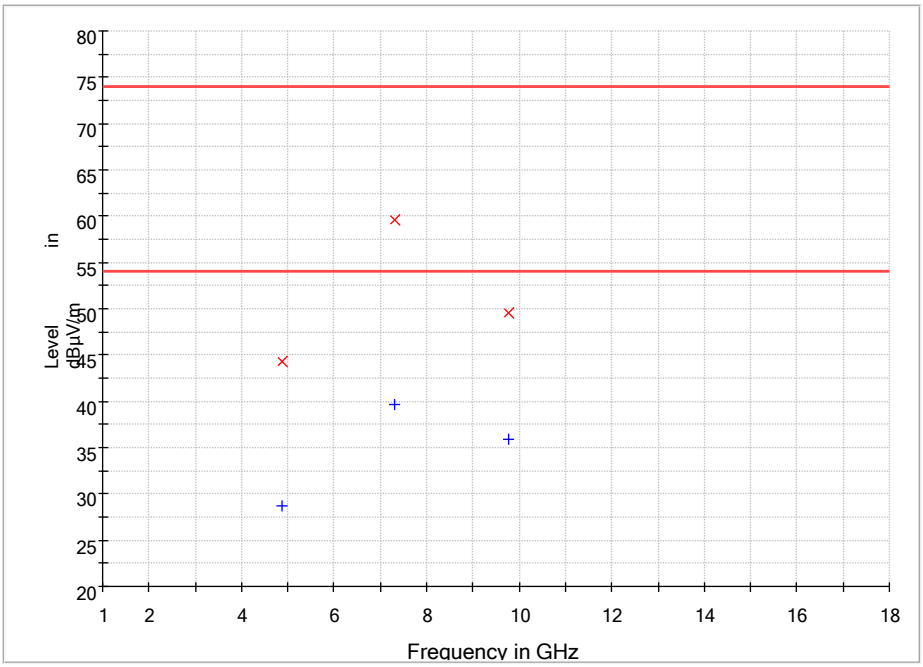

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m	Meas. Time (ms)	Bandwidth	Height	Pol	Corr. (dB/m
4880.000000	44.3	28.7	1000.0	1000.000	155.0	V	7.6
7320.000000	59.6	39.7	1000.0	1000.000	155.0	V	15.5
9760.000000	49.6	35.9	1000.0	1000.000	155.0	V	16.7

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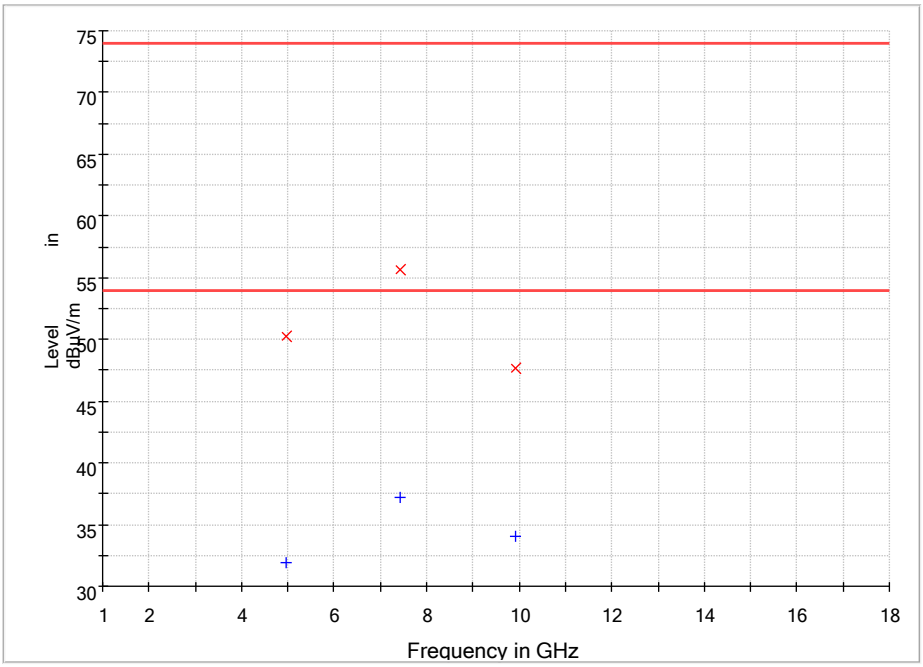

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m	Meas. Time (ms)	Bandwidth	Height	Pol	Corr. (dB/m
4960.000000	50.2	31.9	1000.0	1000.000	155.0	H	7.8
7440.000000	55.6	37.2	1000.0	1000.000	155.0	H	15.4
9920.000000	47.6	34.0	1000.0	1000.000	155.0	H	16.6

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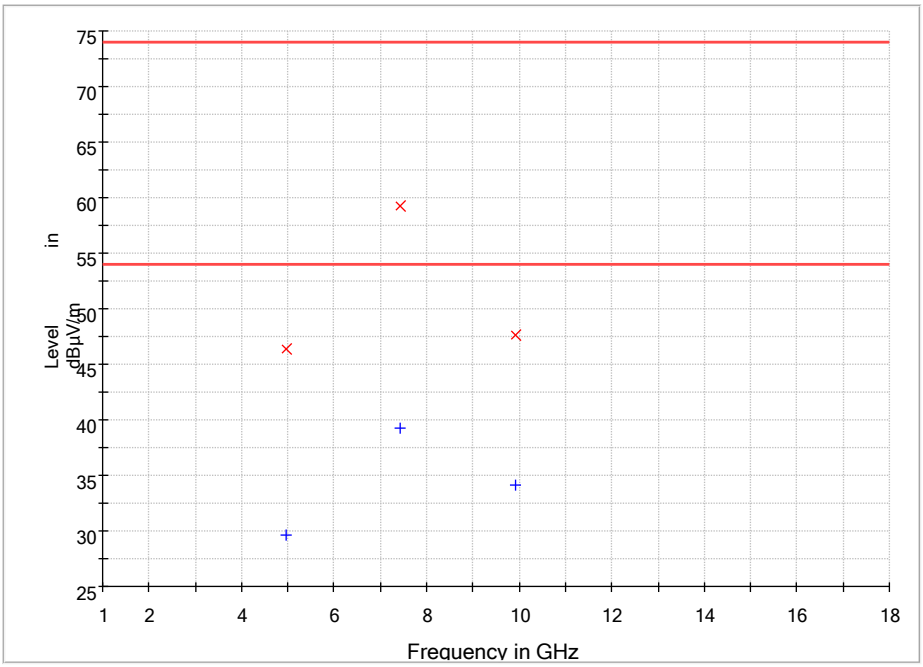

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m	Meas. Time (ms)	Bandwidth	Height	Pol	Corr. (dB/m
4960.000000	46.3	29.6	1000.0	1000.000	155.0	V	7.8
7440.000000	59.3	39.3	1000.0	1000.000	155.0	V	15.4
9920.000000	47.6	34.1	1000.0	1000.000	155.0	V	16.6

Peak limit = 74 dBµV/m
Average limit = 54 dBµV/m

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7.5 20dB Bandwidth

Test Requirement 47 CFR Part 15, Subpart C 15.215
Test Method: ANSI C63.10-2020+Cor.1-2023 Section 6.9
Test Engineer: ChunLok_Chan

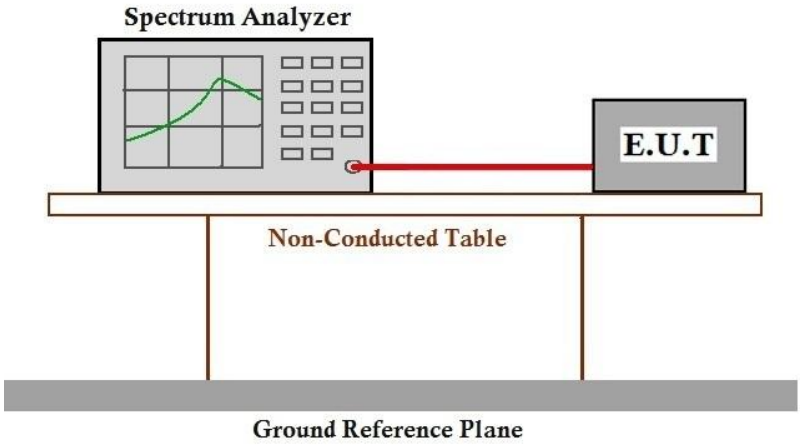
7.5.1 E.U.T. Operation

Operating Environment:
Temperature: 27.7 °C Humidity: 53.8 % RH Atmospheric Pressure: 1004 mbar

7.5.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in transmitting with modulation mode.

7.5.3 Test Setup Diagram



7.5.4 Measurement Procedure and Data

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8 EUT Constructional Details (EUT Photos)

Refer to the appendices external and internal photos.

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9 Appendix

9.1 Field Strength of the Fundamental Signal

Frequency (MHz)	Antenna Polarization	Emission Level (dBµV/m)		Limit (dBµV/m)		Remark
		Peak	Average	Peak	Average	
2420.000	H	94.0	72.4	114.0	94.0	PASS
2440.000	H	92.8	71.2	114.0	94.0	PASS
2480.000	H	91.7	70.3	114.0	94.0	PASS
2420.000	V	84.7	63.3	114.0	94.0	PASS
2440.000	V	84.3	62.7	114.0	94.0	PASS
2480.000	V	85.0	62.0	114.0	94.0	PASS

9.2 20dB Bandwidth

Frequency (MHz)	Bandwidth (MHz)	Limit (MHz)	Result
2420.000000	1.078100	---	PASS
2440.000000	1.070900	---	PASS
2480.000000	1.078100	---	PASS

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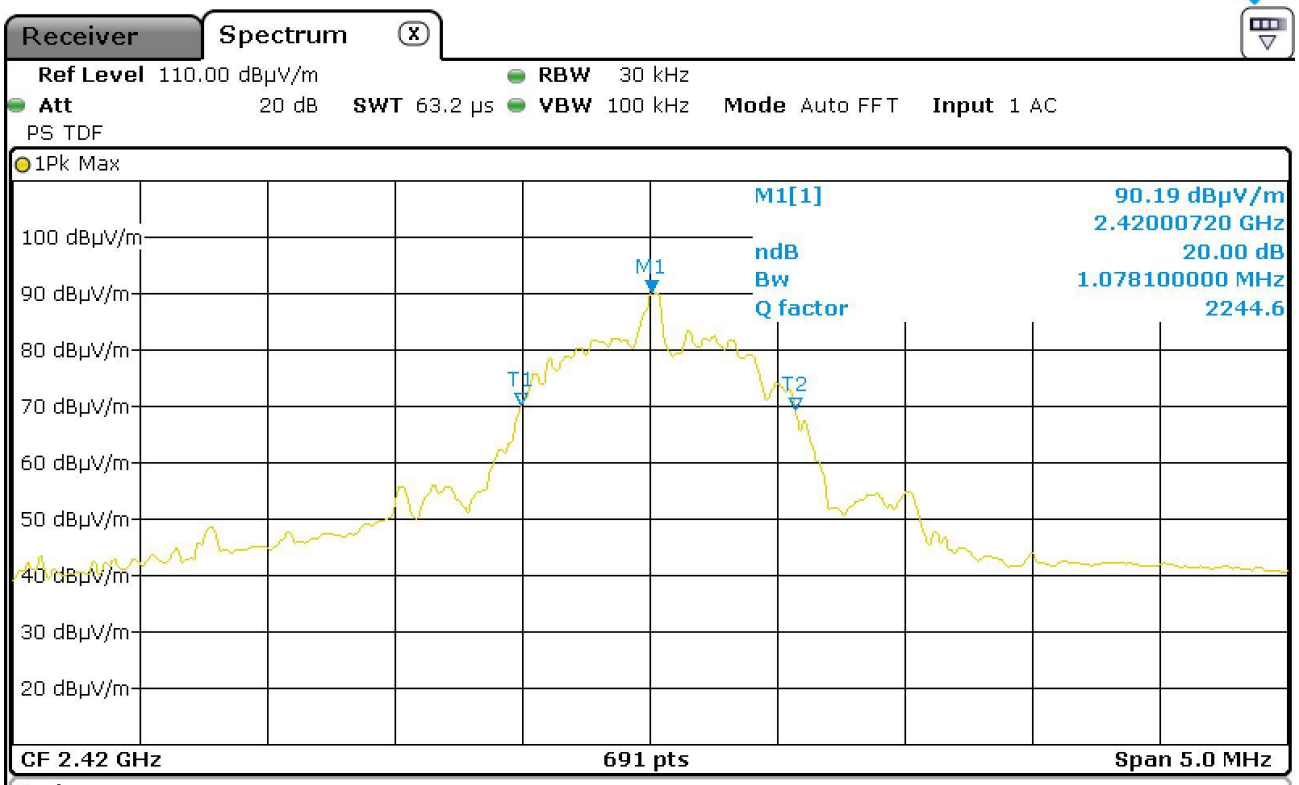

Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.4200072 GHz	90.19 dBµV/m	ndB down	1.0781 MHz
T1		1	2.4194935 GHz	70.39 dBµV/m	ndB	20.00 dB
T2		1	2.4205716 GHz	69.45 dBµV/m	Q factor	2244.6

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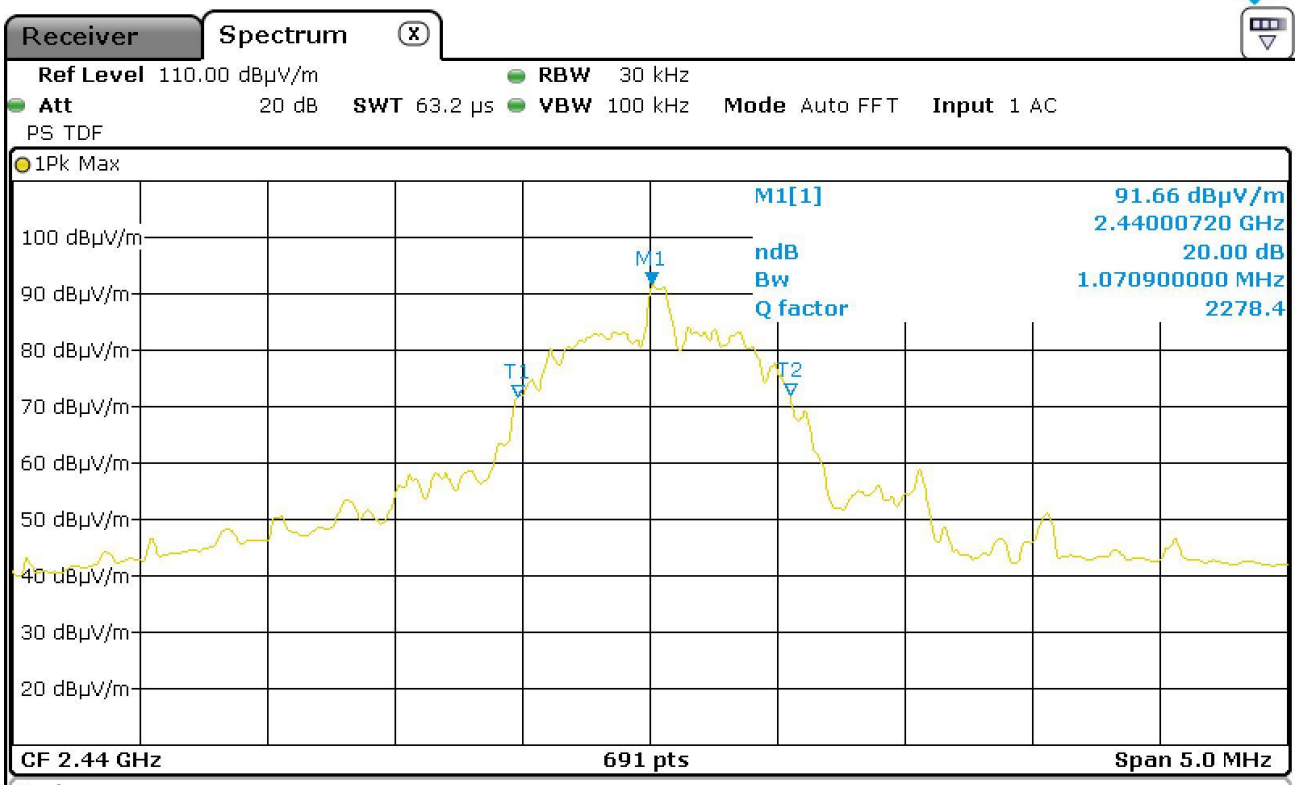

Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.4400072 GHz	91.66 dBµV/m	ndB down	1.0709 MHz
T1		1	2.439479 GHz	71.86 dBµV/m	ndB	20.00 dB
T2		1	2.4405499 GHz	71.99 dBµV/m	Q factor	2278.4

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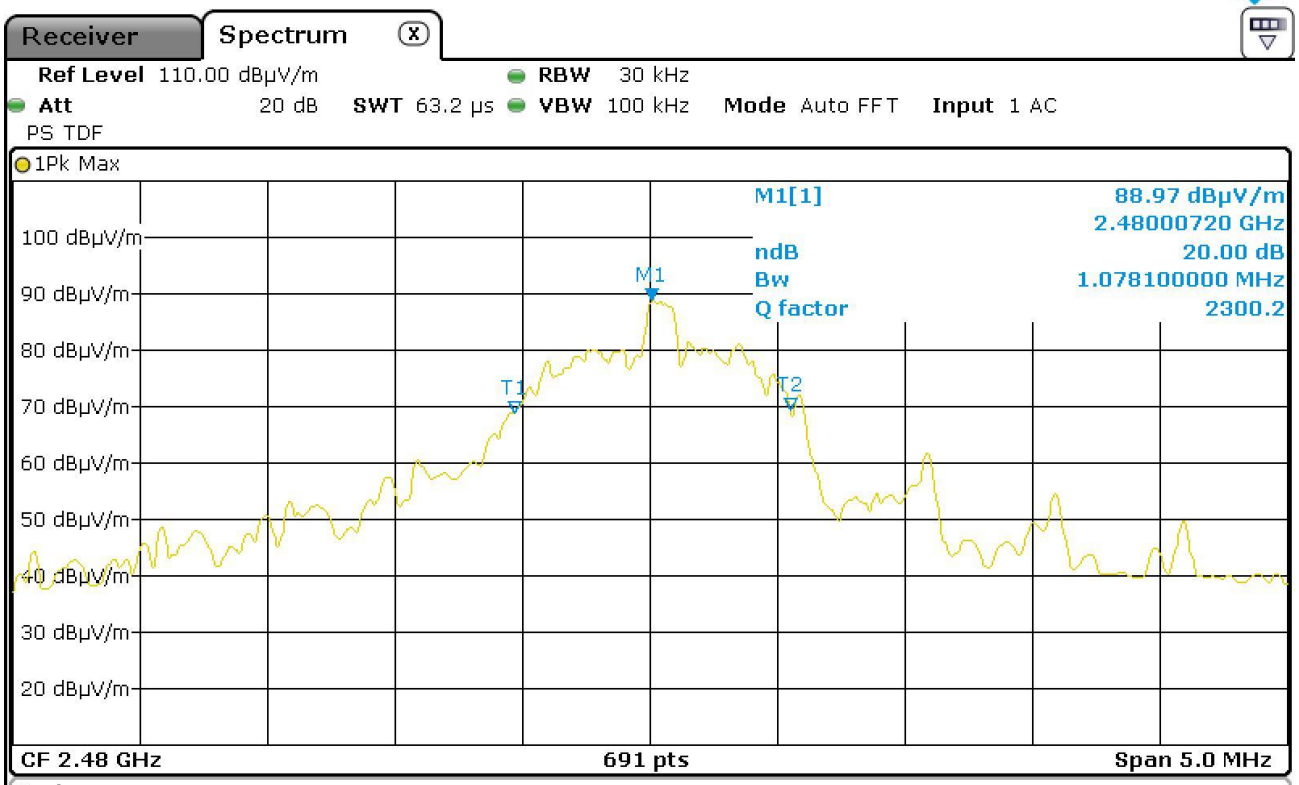

Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.4800072 GHz	88.97 dBµV/m	ndB down	1.0781 MHz
T1		1	2.4794718 GHz	68.95 dBµV/m	ndB	20.00 dB
T2		1	2.4805499 GHz	69.54 dBµV/m	Q factor	2300.2

- End of the Report -

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