

TEST REPORT

Product : Side Mount Garage Door Opener
Trade mark : SKYLINK
Model/Type reference : SM-001
Serial Number : S/N
Report Number : EED32P80550901
FCC ID : KUTSM001
Date of Issue : Jun. 19, 2023
Test Standards : 47 CFR Part 15 Subpart C
Test result : PASS

Prepared for:

Capital Prospect Ltd.

**Rm 03, 13/F, Block B, Veristrong Ind Bdg,
34-36 Au Pui Wan Street, Fo Tan, N.T., Hong Kong**

Prepared by:

**Centre Testing International Group Co., Ltd.
Hongwei Industrial Zone, Bao'an 70 District,
Shenzhen, Guangdong, China**

TEL: +86-755-3368 3668

FAX: +86-755-3368 3385

Compiled by:

Frazer Li

Frazer Li

Reviewed by:

Tom chen

Tom chen

Approved by:

Aaron Ma

Aaron Ma

Date:

Jun. 19, 2023



Check No.:2658200423

1 Version

Version No.	Date	Description
00	Jun. 19, 2023	Original

2 Test Summary

Test Item	Test Requirement	Test method	Result
Antenna Requirement	47 CFR Part 15 Subpart C Section 15.203	ANSI C63.10:2013	PASS
AC Power Line Conducted Emission	47 CFR Part 15 Subpart C Section 15.207	ANSI C63.10:2013	PASS
Field Strength of the Fundamental Signal	47 CFR Part 15 Subpart C Section 15.231 (b)	ANSI C63.10:2013	PASS
Spurious Emissions	47 CFR Part 15 Subpart C Section 15.231 (b)/15.209	ANSI C63.10:2013	PASS
20dB Bandwidth	47 CFR Part 15 Subpart C Section 15.231 (c)	ANSI C63.10:2013	PASS
Dwell Time	47 CFR Part 15 Subpart C Section 15.231 (a)	ANSI C63.10:2013	PASS

Remark:

Company Name and Address shown on Report, the sample(s) and sample Information were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.

3 Contents

1 VERSION	2
2 TEST SUMMARY	3
3 CONTENTS	4
4 GENERAL INFORMATION	5
4.1 CLIENT INFORMATION	5
4.2 GENERAL DESCRIPTION OF EUT	5
4.3 TEST ENVIRONMENT AND MODE	6
4.4 DESCRIPTION OF SUPPORT UNITS	6
4.5 TEST LOCATION	6
4.6 DEVIATION FROM STANDARDS	6
4.7 ABNORMALITIES FROM STANDARD CONDITIONS	6
4.8 OTHER INFORMATION REQUESTED BY THE CUSTOMER	6
4.9 MEASUREMENT UNCERTAINTY (95% CONFIDENCE LEVELS, K=2)	7
5 EQUIPMENT LIST	8
6 TEST RESULTS AND MEASUREMENT DATA	9
6.1 ANTENNA REQUIREMENT	9
6.2 CONDUCTED EMISSIONS	10
6.3 SPURIOUS EMISSIONS	13
6.3.1 Duty Cycle	13
6.3.2 Spurious Emissions	15
6.4 20dB BANDWIDTH	22
6.5 DWELL TIME	23
APPENDIX 1 PHOTOGRAPHS OF TEST SETUP	25
APPENDIX 2 PHOTOGRAPHS OF EUT	27

4 General Information

4.1 Client Information

Applicant:	Capital Prospect Ltd.
Address of Applicant:	Rm 03, 13/F, Block B, Veristrong Ind Bdg, 34-36 Au Pui Wan Street, Fo Tan, N.T., Hong Kong
Manufacturer:	Capital Prospect Ltd.
Address of Manufacturer:	Rm 03, 13/F, Block B, Veristrong Ind Bdg, 34-36 Au Pui Wan Street, Fo Tan, N.T., Hong Kong

4.2 General Description of EUT

Product Name:	Side Mount Garage Door Opener
Model No.(EUT):	SM-001
Trade Mark:	SKYLINK
Product Type:	<input type="checkbox"/> Mobile <input type="checkbox"/> Portable <input checked="" type="checkbox"/> Fix Location
Frequency Range:	317.5MHz only
Number of Channels:	1 (declared by the client)
Antenna Type:	Internal antenna
Test Power Grade:	Default
Test Software of EUT:	RF test
Power Supply:	AC 120V
Test voltage:	AC 120V
Sample Received Date:	Apr.21,2023
Sample tested Date:	May.17,2023 to Jun.01,2023

4.3 Test Environment and Mode

Operating Environment:	
Radiated Spurious Emissions:	
Temperature:	22~25.0 °C
Humidity:	50~55 % RH
Atmospheric Pressure:	1010mbar
Conducted Emissions:	
Temperature:	22~25.0 °C
Humidity:	50~55 % RH
Atmospheric Pressure:	1010mbar
Test mode:	
Transmitting mode:	Keep the EUT in transmitting mode with modulation.

4.4 Description of Support Units

The EUT has been tested independently.

4.5 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax:+86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

4.6 Deviation from Standards

None.

4.7 Abnormalities from Standard Conditions

None.

4.8 Other Information Requested by the Customer

None.

4.9 Measurement Uncertainty (95% confidence levels, k=2)

No.	Item	Measurement Uncertainty
1	Radio Frequency	7.9×10^{-8}
2	RF power, conducted	0.46dB (30MHz-1GHz)
		0.55dB (1GHz-18GHz)
3	Radiated Spurious emission test	3.3dB (9kHz-30MHz)
		4.3dB (30MHz-1GHz)
		4.5dB (1GHz-12.75GHz)
4	Conduction emission	3.5dB (9kHz to 150kHz)
		3.1dB (150kHz to 30MHz)
5	Temperature test	0.64°C
6	Humidity test	3.8%
7	DC power voltages	0.026%

5 Equipment List

Conducted disturbance Test					
Equipment	Manufacturer	Model No.	Serial Number	Cal. date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
Receiver	R&S	ESCI	100435	04-25-2023	04-24-2024
LISN	R&S	ENV216	100098	09-27-2022	09-26-2023
Capacitive voltage probe	Schwarzbeck	CVP 9222C	00124	07-13-2022	07-12-2023
ISN	TESEQ	ISN T800	30297	12-29-2022	12-28-2023
Barometer	changchun	DYM3	1188	---	---
Temperature/ Humidity Indicator	Defu	TH128	/	---	---
Test software	Fara	EZ-EMC	EMC-CON 3A1.1	---	---

3M Semi/full-anechoic Chamber					
Equipment	Manufacturer	Model No.	Serial Number	Cal. date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
3M Chamber & Accessory Equipment	TDK	SAC-3	---	05-22-2022	05-21-2025
Receiver	R&S	ESCI7	100938-003	09-28-2022	09-27-2023
Spectrum Analyzer	R&S	FSV40	101200	07-29-2022	07-28-2023
Loop Antenna	Schwarzbeck	FMZB 1519B	1519B-076	04-15-2021	04-14-2024
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	9163-618	05-22-2022 05-21-2023	05-21-2023 05-20-2024
Horn Antenna	Schwarzbeck	BBHA 9120D	9120D-1869	04-17-2021	04-16-2024
Horn Antenna	A.H.SYSTEMS	SAS-574	374	05-29-2021	05-28-2024
Preamplifier	Agilent	11909A	12-1	03-28-2023	03-27-2024
Preamplifier	EMCI	EMC051845 SE	980380	12-23-2022	12-22-2023
Preamplifier	CD	PAP-1840-60	6041.6042	07-05-2022	07-04-2023
Cable line	Fulai(7M)	SF106	5219/6A	---	---
Cable line	Fulai(6M)	SF106	5220/6A	---	---
Cable line	Fulai(3M)	SF106	5216/6A	---	---
Cable line	Fulai(3M)	SF106	5217/6A	---	---
Test software	Fara	EZ-EMC	EMEC-3A1-Pre	---	---

6 Test results and Measurement Data

6.1 Antenna Requirement

Standard requirement:	47 CFR Part 15C Section 15.203
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:	Please see Internal photos
The antenna is integrated on the main PCB and no consideration of replacement.	

6.2 Conducted Emissions

Test Requirement: 47 CFR Part 15C Section 15.207
Test Method: ANSI C63.10: 2013
Test Frequency Range: 150kHz to 30MHz

Limit:

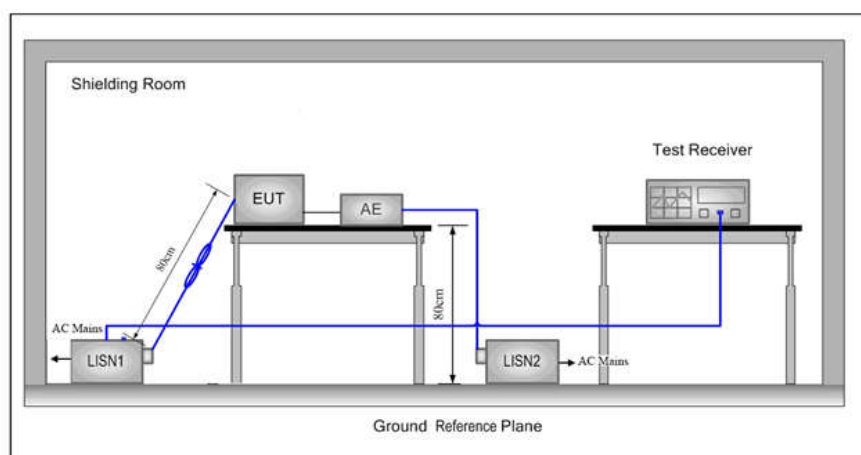
Frequency range (MHz)	Limit (dB μ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

Test Procedure:

- 1) The mains terminal disturbance voltage test was conducted in a shielded room.
- 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50 Ω /50 μ H + 5 Ω linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.
- 3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane.
- 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.
- 5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10: 2013 on conducted measurement.

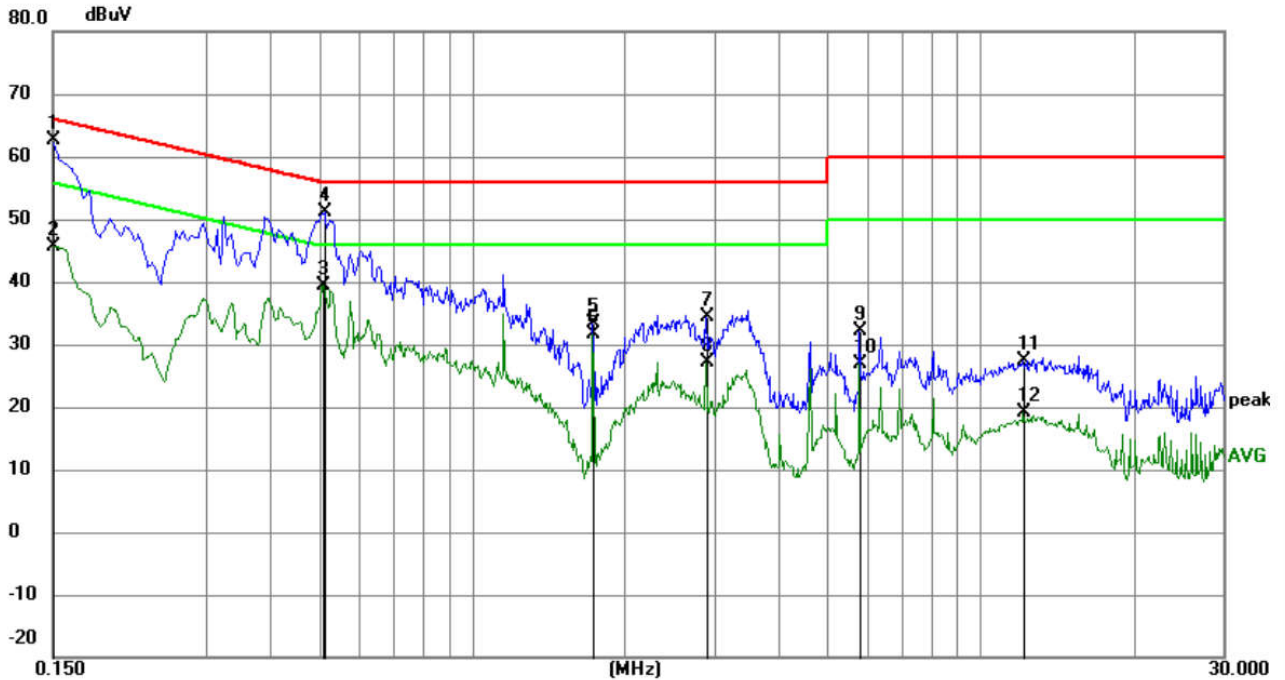
Test Setup:



Test Mode: Transmitting mode
Test Results: Pass

Measurement Data

Live line:



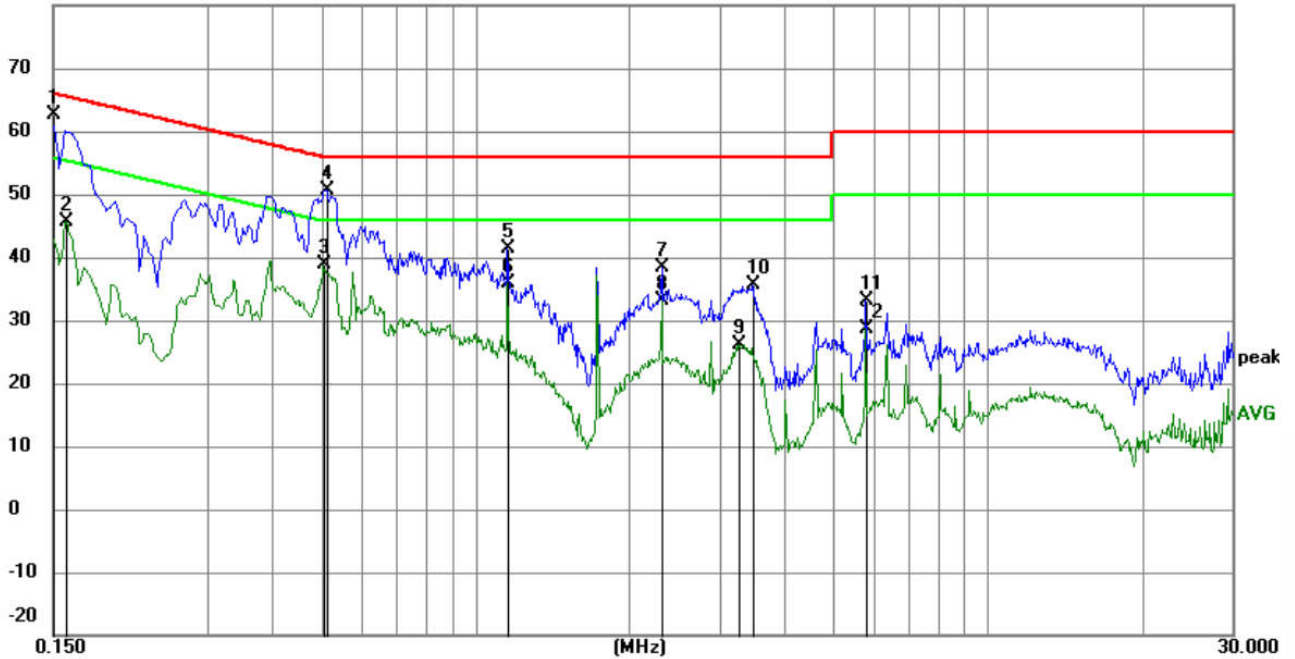
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	*	0.1500	52.77	9.87	62.64	66.00	-3.36	QP	
2		0.1500	35.81	9.87	45.68	56.00	-10.32	AVG	
3		0.5100	29.52	9.96	39.48	46.00	-6.52	AVG	
4		0.5144	41.05	9.97	51.02	56.00	-4.98	QP	
5		1.7340	23.50	9.80	33.30	56.00	-22.70	QP	
6		1.7340	21.81	9.80	31.61	46.00	-14.39	AVG	
7		2.8905	24.56	9.79	34.35	56.00	-21.65	QP	
8		2.8905	17.34	9.79	27.13	46.00	-18.87	AVG	
9		5.7840	22.23	9.78	32.01	60.00	-27.99	QP	
10		5.7840	17.21	9.78	26.99	50.00	-23.01	AVG	
11		12.1425	17.61	9.84	27.45	60.00	-32.55	QP	
12		12.1425	9.22	9.84	19.06	50.00	-30.94	AVG	

Remark:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.
3. If the Peak value under Average limit, the Average value is not recorded in the report.

Neutral line:

80.0 dBuV



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	*	0.1500	52.67	9.87	62.54	66.00	-3.46	QP	
2		0.1590	35.66	9.87	45.53	55.52	-9.99	AVG	
3		0.5055	29.01	9.96	38.97	46.00	-7.03	AVG	
4		0.5144	40.70	9.97	50.67	56.00	-5.33	QP	
5		1.1580	31.54	9.82	41.36	56.00	-14.64	QP	
6		1.1580	26.00	9.82	35.82	46.00	-10.18	AVG	
7		2.3145	28.56	9.79	38.35	56.00	-17.65	QP	
8		2.3145	23.45	9.79	33.24	46.00	-12.76	AVG	
9		3.2595	16.30	9.79	26.09	46.00	-19.91	AVG	
10		3.4890	25.75	9.78	35.53	56.00	-20.47	QP	
11		5.7795	23.29	9.78	33.07	60.00	-26.93	QP	
12		5.7795	18.74	9.78	28.52	50.00	-21.48	AVG	

Remark:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level = Receiver Reading + LISN Factor + Cable Loss.
3. If the Peak value under Average limit, the Average value is not recorded in the report.

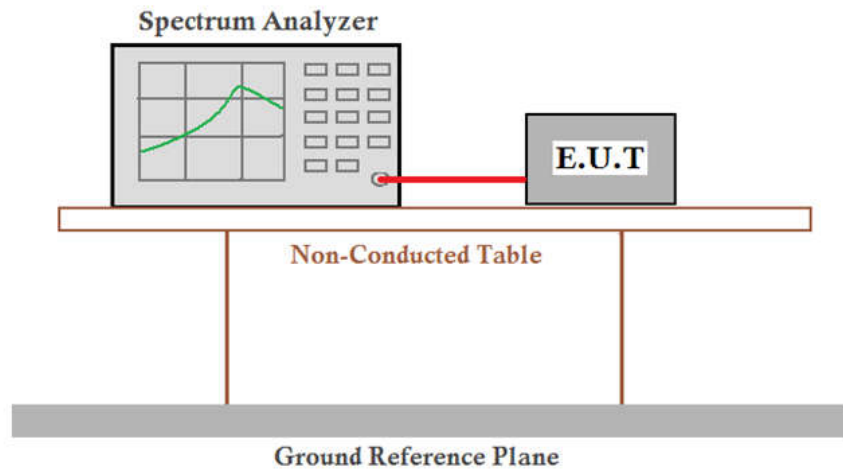
6.3 Spurious Emissions

6.3.1 Duty Cycle

Test Requirement: 47 CFR Part 15C Section 15.35 (c)

Test Method: ANSI C63.10:2013

Test Setup:



Limit: N/A
Test Mode: Transmitting mode
Test Results: Pass

The number of pulses of duration /100ms	T on time (ms)/100ms	T period (ms)	Duty cycle
100	44.203	100	0.44203

Note:

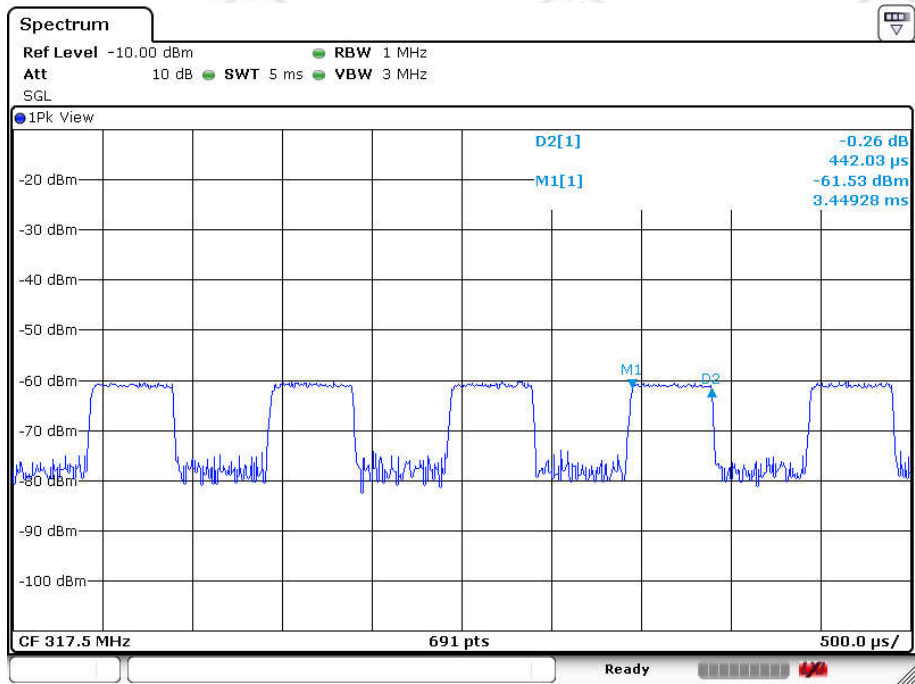
The number of pulses of duration/100ms=5*20=100

T on time(ms)/100ms=442.03us*100=44.203ms

Duty cycle=T on time / T period

Test plot as follows:

The number of pulses of duration/5ms: number is 5



Date: 1 JUN 2023 20:40:36

6.3.2 Spurious Emissions

Test Requirement: 47 CFR Part 15C Section 15.231(b) and 15.209

Test Method: ANSI C63.10: 2013

Test Site: Measurement Distance: 3m (Semi-Anechoic Chamber)

Receiver Setup:

Frequency	Detector	RBW	VBW	Remark
0.009MHz-0.090MHz	Peak	10kHz	30kHz	Peak
0.009MHz-0.090MHz	Average	10kHz	30kHz	Average
0.090MHz-0.110MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
0.110MHz-0.490MHz	Peak	10kHz	30kHz	Peak
0.110MHz-0.490MHz	Average	10kHz	30kHz	Average
0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
	Peak	1MHz	10Hz	Average

Test Setup:

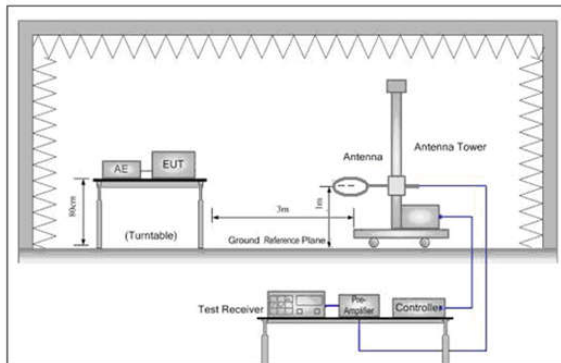


Figure 1. Below 30MHz

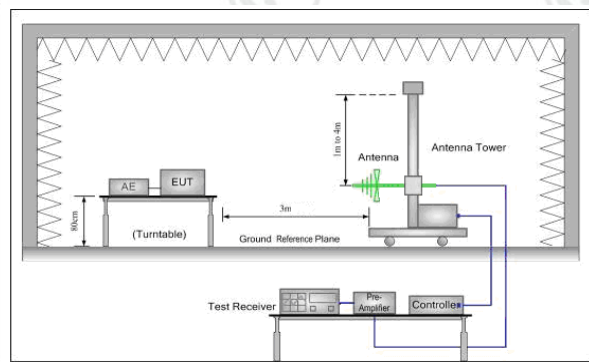


Figure 2. 30MHz to 1GHz

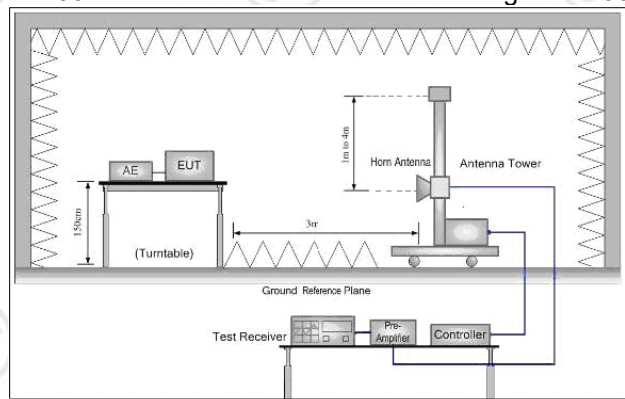


Figure 3. Above 1GHz

Test Procedure:

Below 1GHz test procedure as below:

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. 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.
- d. 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.
- 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 peak, quasi-peak or average method as specified and then reported in a data sheet.

Above 1GHz test procedure as below:

- g. Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 metre to 1.5 metre(Above 18GHz the distance is 1 meter and table is 1.5 metre).
- h. Test the EUT in the unique 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 worse case.
- j. Repeat above procedures until all frequencies measured was complete.

**Limit:
(Spurious
Emissions)**

Frequency	Field strength (microvolt/meter)	Limit (dBµV/m)	Remark	Measurement distance (m)
0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
1.705MHz-30MHz	30	-	-	30
30MHz-88MHz	100	40.0	Quasi-peak	3
88MHz-216MHz	150	43.5	Quasi-peak	3
216MHz-960MHz	200	46.0	Quasi-peak	3
960MHz-1GHz	500	54.0	Quasi-peak	3
Above 1GHz	500	54.0	Average	3

Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.

**Limit:
(Field strength of
the fundamental
signal)**

Frequency	Limit (dBµV/m @3m)	Remark
317.5MHz	75.77	Average Value
	95.77	Peak Value

Test Mode:

Transmitting mode

Test Results:

Pass

Test data:

Field Strength of the Fundamental Signal:

Average value:	
Calculate Formula:	Average value=Peak value + PDCF
	PDCF=20 log(Duty cycle)
	Duty cycle= T on time / T period
Test data:	T on time =44.203ms
	T period =100ms
	PDCF= -7.09

Antenna polarization: Horizontal						
Frequency (MHz)	Read Level (dBuV)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
317.5	26.82	17.63	44.45	95.77	-51.32	Peak
317.5	-	-	37.36	75.77	-38.41	Average

Antenna polarization: Vertical						
Frequency (MHz)	Read Level (dBuV)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
317.5	25.16	17.63	42.79	95.77	-52.98	Peak
317.5	-	-	35.70	75.77	-40.07	Average

Remark:

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor

Spurious Emissions

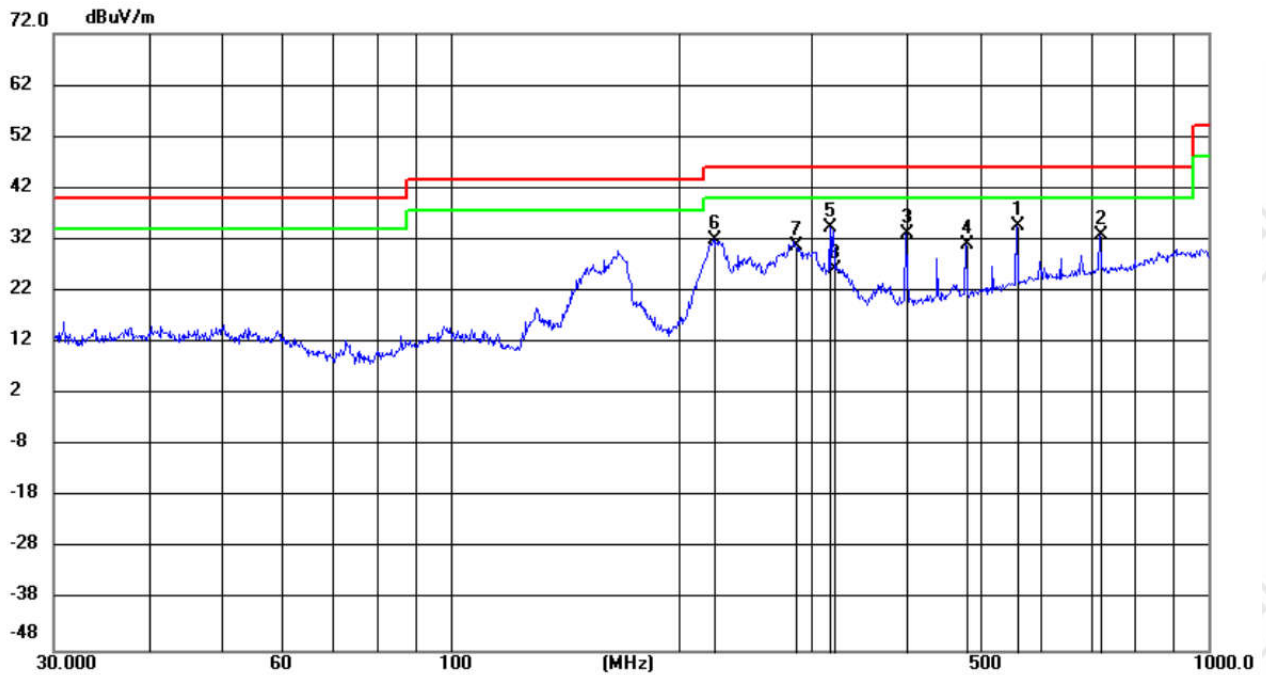
9KHz-30MHz:

9 kHz~30 MHz Field Strength of Unwanted Emissions. Quasi-Peak Measurement

The measurements with active loop antenna were greater than 20dB below the limit, so the test data were not recorded in the test report.

30MHz-1GHz & Restricted bands:

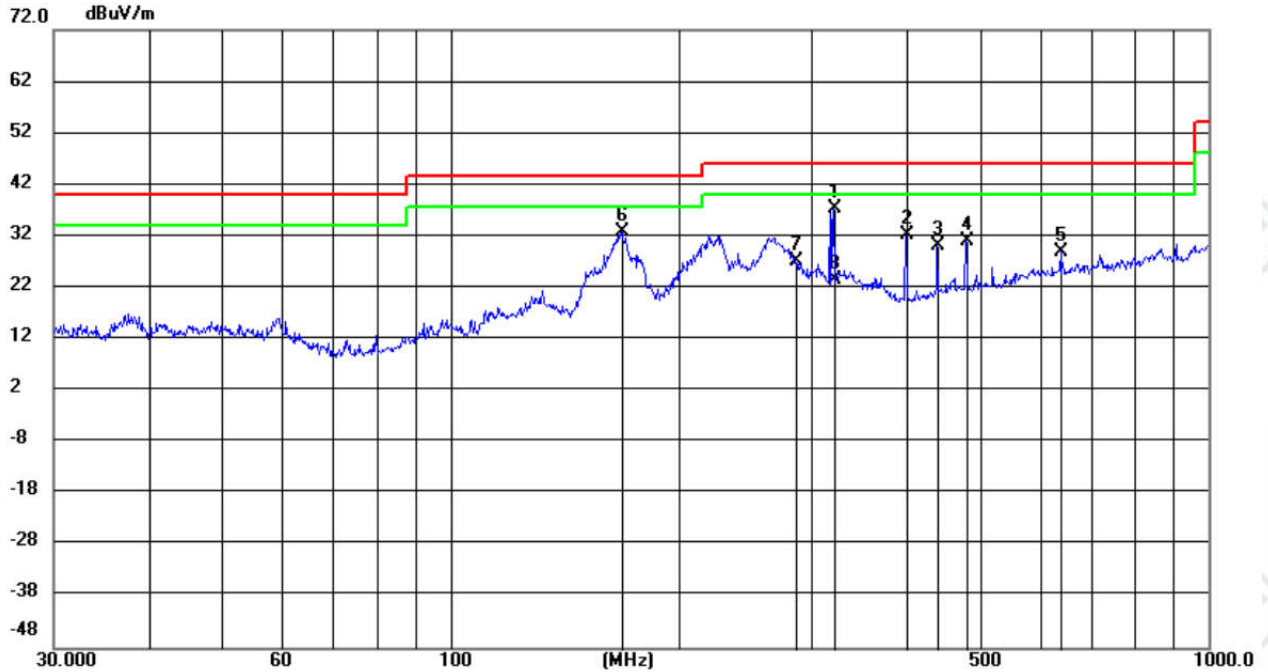
Horizontal:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	*	560.0051	11.49	23.03	34.52	46.00	-11.48	QP	100	90
2		720.0827	7.83	25.08	32.91	46.00	-13.09	QP	100	297
3		400.0108	13.87	19.39	33.26	46.00	-12.74	QP	100	236
4		480.0223	10.01	21.11	31.12	46.00	-14.88	QP	200	239
5		317.5339	16.58	17.63	34.21	46.00	-11.79	QP	200	94
6		222.7158	17.50	14.57	32.07	46.00	-13.93	QP	200	218
7		285.0000	14.04	16.73	30.77	46.00	-15.23	QP	200	220
8		322.0000	8.65	17.72	26.37	46.00	-19.63	QP	200	225

Note: No.5 is the main frequency point of product operation.

Vertical:

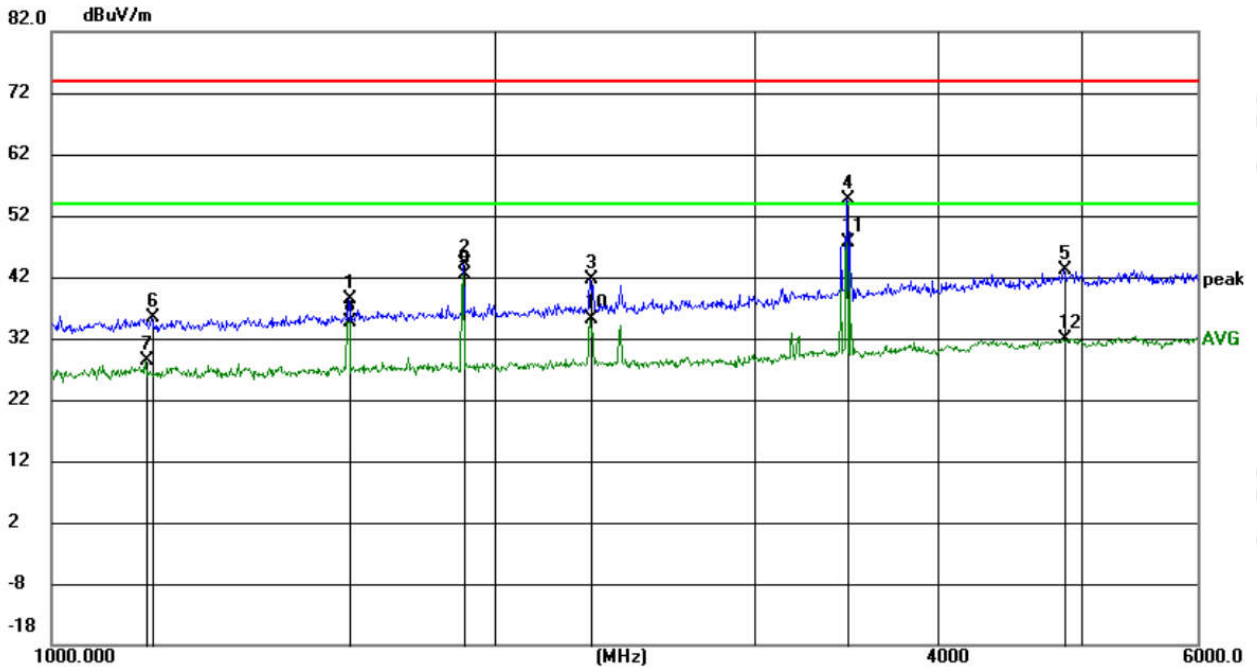


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Antenna Height cm	Table Degree degree	Comment
1	*	319.9931	19.54	17.68	37.22	46.00	-8.78	QP	100	268	
2		400.0109	12.78	19.39	32.17	46.00	-13.83	QP	100	352	
3		439.9648	9.85	20.25	30.10	46.00	-15.90	QP	100	268	
4		480.0224	9.96	21.11	31.07	46.00	-14.93	QP	100	352	
5		640.0497	4.70	24.32	29.02	46.00	-16.98	QP	100	352	
6		168.7389	21.77	11.07	32.84	43.50	-10.66	QP	100	352	
7		285.0000	10.39	16.73	27.12	46.00	-18.88	QP	100	355	
8		322.0000	5.82	17.72	23.54	46.00	-22.46	QP	100	360	

Note: No.1 is the main frequency point of product operation.

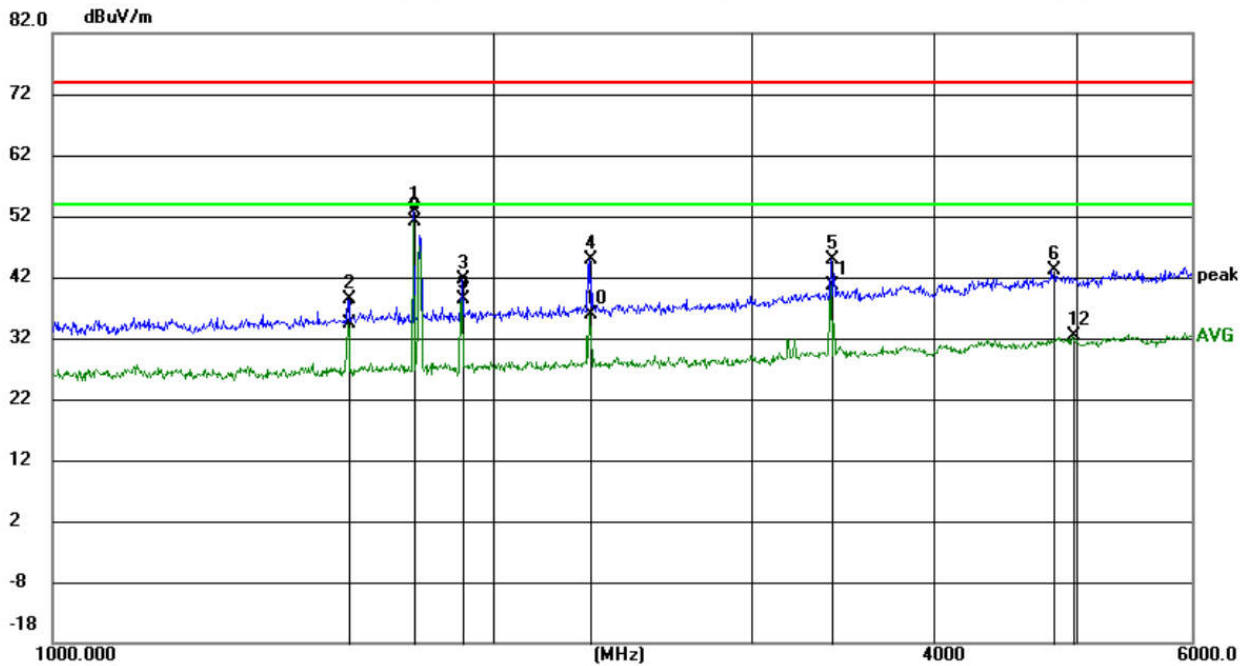
Above 1GHz:

Horizontal:



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Antenna Height cm	Table Degree	Comment
1		1593.380	51.01	-12.59	38.42	74.00	-35.58	peak	199	7	
2		1904.856	55.62	-11.48	44.14	74.00	-29.86	peak	199	73	
3		2322.755	51.58	-9.90	41.68	74.00	-32.32	peak	100	39	
4		3471.083	60.51	-5.88	54.63	74.00	-19.37	peak	100	237	
5		4868.329	45.09	-1.86	43.23	74.00	-30.77	peak	100	23	
6		1171.415	49.46	-13.97	35.49	74.00	-38.51	peak	199	139	
7		1160.136	42.42	-14.03	28.39	54.00	-25.61	AVG	199	7	
8		1593.380	47.23	-12.59	34.64	54.00	-19.36	AVG	199	7	
9		1904.856	53.74	-11.48	42.26	54.00	-11.74	AVG	199	73	
10		2322.755	44.96	-9.90	35.06	54.00	-18.94	AVG	100	39	
11	*	3471.083	53.51	-5.88	47.63	54.00	-6.37	AVG	100	237	
12		4866.584	33.86	-1.87	31.99	54.00	-22.01	AVG	199	7	

Vertical:



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Antenna Height cm	Table Degree	Comment
1		1766.294	64.79	-11.94	52.85	74.00	-21.15	peak	100	221
2		1593.380	50.91	-12.59	38.32	74.00	-35.68	peak	100	7
3		1904.856	53.04	-11.48	41.56	74.00	-32.44	peak	200	320
4		2325.462	54.83	-9.89	44.94	74.00	-29.06	peak	100	360
5		3401.815	51.27	-6.45	44.82	74.00	-29.18	peak	200	54
6		4824.477	45.30	-2.12	43.18	74.00	-30.82	peak	200	253
7		1593.380	46.93	-12.59	34.34	54.00	-19.66	AVG	100	7
8	*	1766.294	63.13	-11.94	51.19	54.00	-2.81	AVG	100	221
9		1904.856	49.93	-11.48	38.45	54.00	-15.55	AVG	200	320
10		2325.462	45.82	-9.89	35.93	54.00	-18.07	AVG	100	360
11		3401.815	47.19	-6.45	40.74	54.00	-13.26	AVG	200	54
12		4971.909	34.24	-1.79	32.45	54.00	-21.55	AVG	200	186

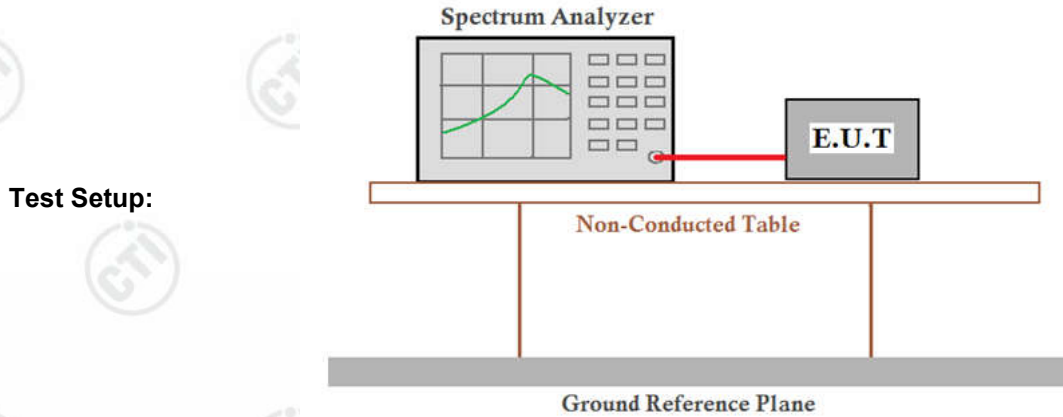
Remark:

- The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:
 Final Test Level = Receiver Reading - Correct Factor
 Correct Factor = Preamplifier Factor - Antenna Factor - Cable Factor
- Scan from 9kHz to 6GHz, the disturbance below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

6.4 20dB Bandwidth

Test Requirement: 47 CFR Part 15C Sec47 CFR Part 15 Subpart C Section15.231 (c)

Test Method: ANSI C63.10: 2013



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

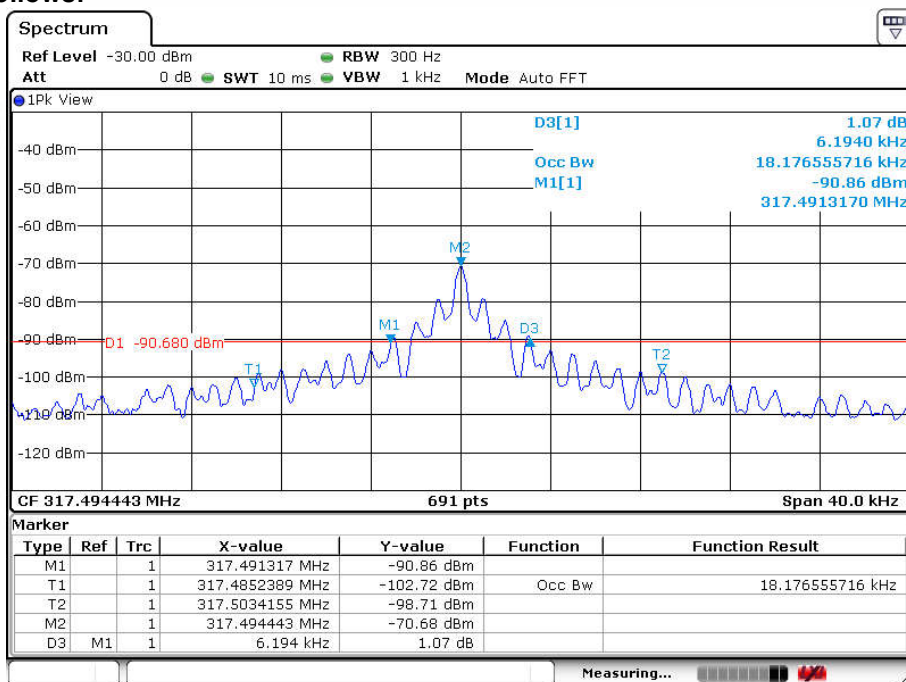
Test Mode: Transmitting mode

Test Results: Pass

Test data

20dB bandwidth (kHz)	Limit (kHz)	Results
6.1940	≤793.7500	Pass

Test plot as follows:



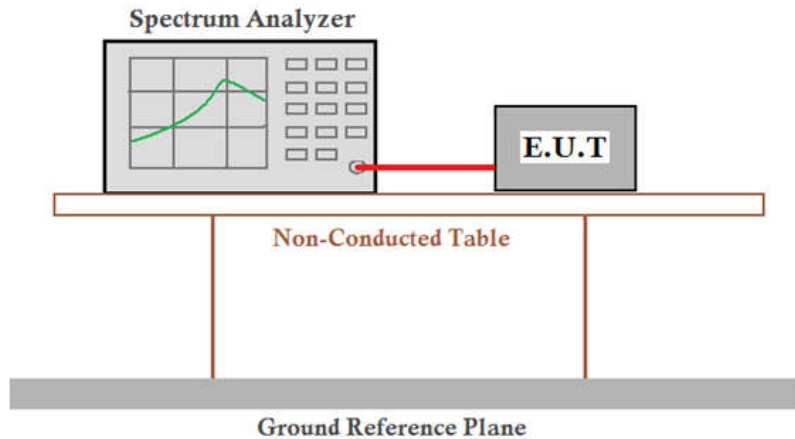
Date: 15 MAY 2023 18:23:43

6.5 Dwell Time

Test Requirement: 47 CFR Part 15C Section 15.231 (a)

Test Method: ANSI C63.10:2013

Test Setup:



Limit: Not more than 5 seconds

Test Mode: Transmitting mode

Test Results: Pass

Requirements:

1. Regulation 15.231 (a) The provisions of this Section are restricted to periodic operation within the band 40.66~40.70 MHz and above 70 MHz. Except as shown in paragraph (e) of this Section, the intentional radiator is restricted to the transmission of a control signal such as those used with alarm systems, door openers, remote switches, etc. Radio control of toys is not permitted. Continuous transmissions, such as voice or video, and data transmissions are not permitted. The prohibition against data transmissions does not preclude the use of recognition codes. Those codes are used to identify the sensor that is activated or to identify the particular component as being part of the system.

Result:

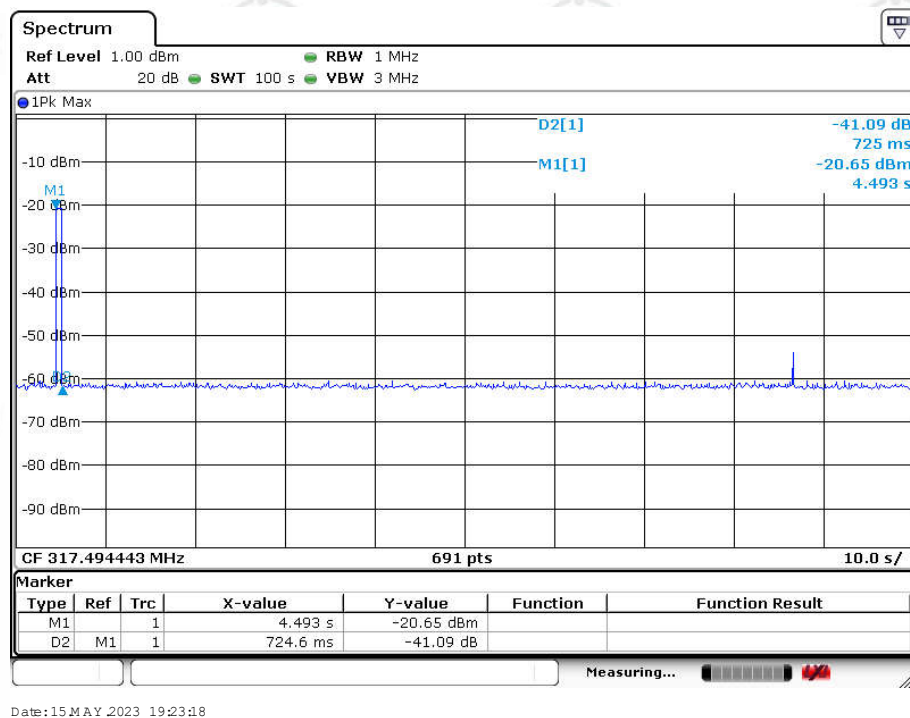
The EUT is a remote switch without audio or video transmitted.
The EUT meets the requirements of this section.

2. Regulation 15.231 (a1) A manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released.

Result:

Transmitting time (S)	Limit (S)	Results
0.7246	≤5	Pass

Test plot as follows:



3. Regulation 15.231 (a2) A transmitter activated automatically shall cease transmission within 5 seconds after activation.

Result:

The EUT does not have automatic transmission.

4. Regulation 15.231 (a3) Periodic transmissions at regular predetermined intervals are not permitted. However, polling or supervision transmissions to determine system integrity of transmitters used in security or safety applications are allowed if the periodic rate of transmission does not exceed one transmission of not more than one second duration per hour for each transmitter.

Result:

The EUT does not employ periodic transmission.

5. Regulation 15.231 (a4) Intentional radiators which are employed for radio control purposes during emergencies involving fire, security, and safety of life, when activated to signal an alarm, may operate during the pendency of the alarm condition.

Result:

This section is not applicable to the EUT.